



**LOWER PLATTE SOUTH**  
 natural resources district

3125 Portia Street | P.O. Box 83581 • Lincoln, Nebraska 68501-3581 | P: 402.476.2729 • F: 402.476.6454 | www.lpsnrd.org

**MEMORANDUM**

Date: February 9, 2023  
 To: Lower Platte South Natural Resources District Board of Directors  
 From: Will Inselman, Resources Coordinator *WI*  
 Subject: Minutes for Recreation, Forestry & Wildlife Subcommittee Meeting

On Tuesday, February 9, 2023, at 5:33 p.m., the Recreation, Forestry and Wildlife subcommittee met in the Large Conference Room. Subcommittee members present; Anthony Schutz – Chair, Gary Hellerich, Don Jacobson, John Yoakum, Stacie Sinclair, and Ray Stevens. Other attendees were Paul Zillig, Ken Vogel, Ariana Kennedy, and Will Inselman.

First item on the agenda was the approval of bids for the MoPac Trail resurfacing project from 262<sup>nd</sup> to 274<sup>th</sup> Street. The ballast rock (base below limestone) has been exposed on this section of the trail causing difficult travel for both foot and bike traffic. Staff provided the engineering plans and specs for the project that consists of placing limestone screenings on top of the current exposed ballast rock. Staff addressed questions about the remaining ballast on top of the trail currently and how we would deal with this prior to placing the limestone surface. We received two bids for this project, with the low bid coming from Pavers, Inc. Pavers, Inc. has done work on our trails and staff has no concerns with their ability to complete the project as specified.

**It was moved by Yoakum and seconded by Stevens and unanimously approved to recommend the Lower Platte South NRD Board of Directors approve the low bid from Pavers, Inc. in the amount of \$62,755.71 for the MoPac Trail resurfacing project from 262nd to 274th Street.**

Company	Bid Amount
Pavers, Inc.	\$62,755.71
Gana Trucking and Excavating, Inc.	\$92,862.60

Second on the agenda was the approval of bids for the headcut repair project at Schleich Community Wetland. Staff provided information on the headcut that has been forming for the last few years on the area and continues to grow and a significant rate. Staff provided the engineering design and specifications from The Flatwater Group, who was contracted to design, engineering and construction oversight for this project. Staff addressed questions about the project, history of this area, and engineering design. LPSNRD received three bids for this project, with the low bid from Yost Excavating, Inc. Staff and The Flatwater Group have worked with this company and have no concerns with this company performing the work as specified.

**It was moved by Stevens and seconded by Yoakum and unanimously approved to recommend the Lower Platte South NRD Board of Directors approve the low bid from Yost Excavating Inc. in the amount of \$119,487.00 for the Schleich Community Wetland headcut repair project.**

Company	Bid Amount
Yost Excavating, Inc.	\$119,487.00
Ray Lipsey, Inc.	\$234,930.00
MTZ Construction, LLC	\$257,917.00

Third on the agenda was the OPPD agreement to provide electrical services to the Wabash Trailhead parking lot. OPPD will be installing a light pole and light at the parking area soon. Staff relayed that there was no need for subcommittee action on this agreement.

Fourth on the agenda was an update on the status of the Bobcat Prairie seeding project motion that was tabled at last months board meeting. Staff provided the subcommittee with the options that were provided by legal counsel. The subcommittee decided that they would support the original motion that was presented to the Board of Directors at the January meeting. Director Vogel was also in attendance to provide is comments/concerns about the project and future projects. He provided guidance/advice for staff on things to consider for future prairie restoration projects. Staff had mentioned that they met with RF&W Chairperson Schutz and Director Vogel on February 2<sup>nd</sup> to discuss Director Vogel’s concerns and provide additional information about the project.

Last on the agenda, were staff updates and reports on various projects. Reports/updates: WFPO-LSC Plan EA status update, Mountain Bike Plan – Planning Committee update, Wetlands of Nebraska project roll-out.

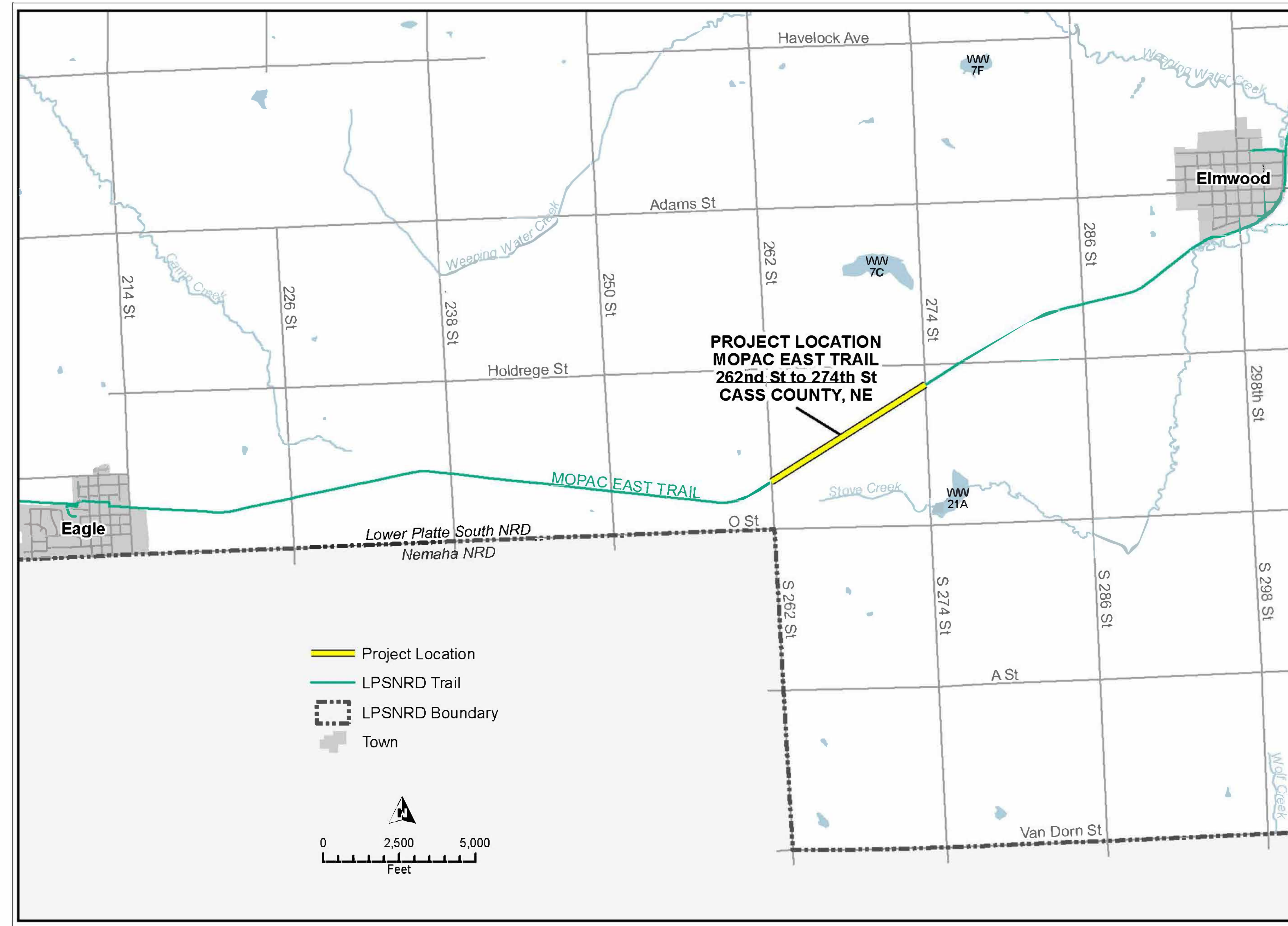
Meeting adjourned at 6:42 p.m.

PC: RF&W subcommittee file

# MOPAC EAST TRAIL 262nd ST. to 274th ST. CASS COUNTY, NE

PROJECT OFFICIALS:

MARK LINDEMANN  
ARIANA KENNEDY  
WILL INSELMAN



INDEX OF SHEETS

- SHEET 1: COVER
- SHEET 2: LOCATION MAP, CONSTRUCTION NOTES, QUANTITIES
- SHEET 3: TYPICAL SECTION

LOWER PLATTE SOUTH  
natural resources district



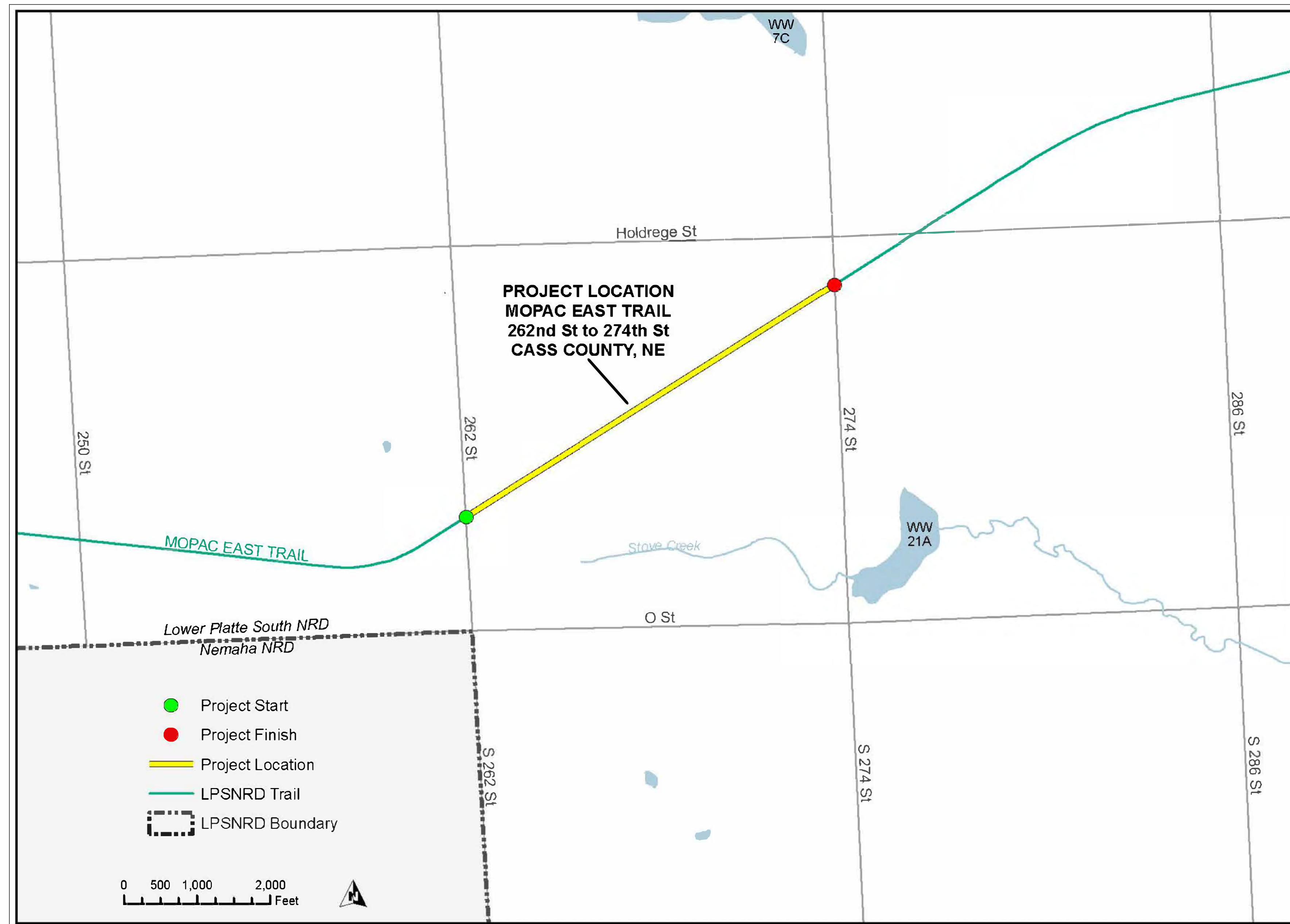
NRD PROJECT NO. XXX

MOPAC EAST 262ND TO 274TH ST.  
TRAIL RESURFACING  
CASS CO. NE

12/28/2022, MCL



SHEET NO. 1



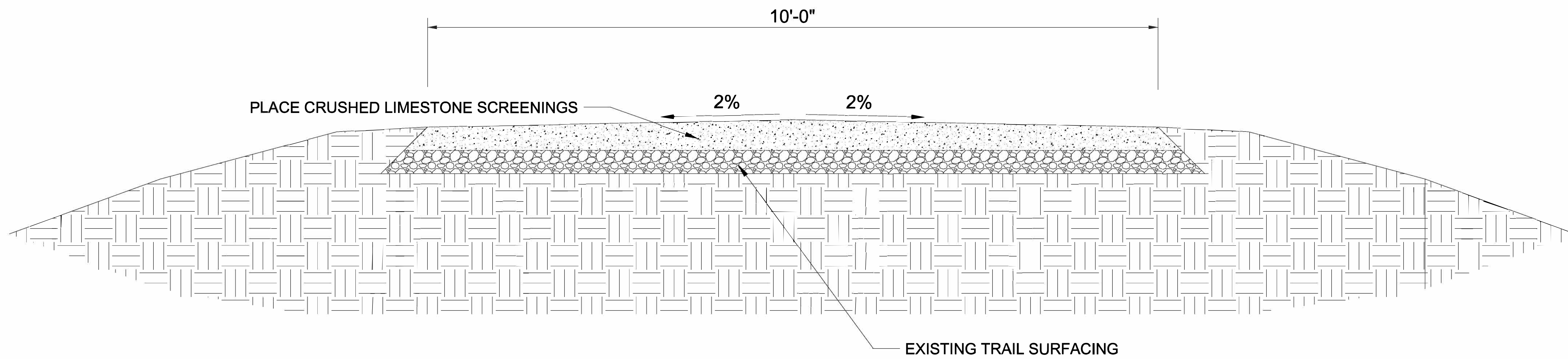
**CONSTRUCTION NOTES:**

1. THE ITEMS IDENTIFIED IN THE SCHEDULE OF APPROXIMATE QUANTITIES ARE INTENDED TO IDENTIFY THE MAJOR WORK ITEMS. ALL ITEMS NOT SPECIFICALLY MENTIONED SHALL BE CONSIDERED SUBSIDIARY TO BID ITEMS TO WHICH THEY ARE RELATED AND WILL NOT BE CONSIDERED PAY ITEMS.
2. CONTRACTOR SHALL PROVIDE BARRICADES WITH "SIDEWALK CLOSED" SIGNS AT EACH TRAIL ENTRANCE. THESE SHALL BE MAINTAINED THROUGHOUT THE PROJECT.
3. AGGREGATES USED SHALL MEET REQUIREMENTS AS STATED IN THE PLANS AND SPECIFICATIONS.
4. UPON COMPLETION OF SPREADING OPERATIONS, THE AGGREGATES SHALL BE THOROUGHLY COMPACTED. THE COMPACTION MAY BE TESTED IN ACCORDANCE WITH ASTM D 1556 OR ASTM D 2167 BY OWNER. COMPACTION SHALL BE DONE IN LIFTS NO THICKER THAN 5-INCHES.
5. NO CRUSHED CONCRETE ALLOWED FOR SURFACING.

**SCHEDULE OF APPROXIMATE QUANTITIES**

LOCATION	LENGTH (ft.)	LIMESTONE SCREENINGS (CY)	BOLLARDS (remove & reset)
262nd to 274th Street	5935	915	6





# TYPICAL SECTION

NOTE: EXISTING TRAIL VERTICAL ALIGNMENT SHALL REMAIN THE SAME.

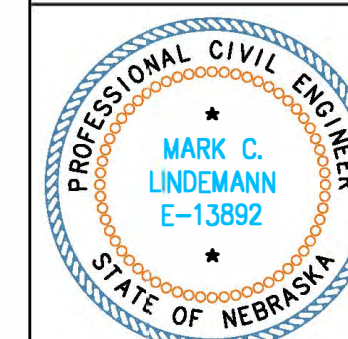
LOWER PLATTE SOUTH  
natural resources district



NRD PROJECT NO. XXX

MOPAC EAST 262ND TO 274TH ST.  
TRAIL RESURFACING  
CASS CO. NE

12/28/2022, MCL



SHEET NO. 3

**PLANS, SPECIFICATIONS AND CONTRACT DOCUMENTS FOR  
MOPAC EAST 262<sup>nd</sup> to 274<sup>th</sup> STREET  
TRAIL RESURFACING  
FOR  
LOWER PLATTE SOUTH NATURAL RESOURCES DISTRICT  
LINCOLN, NEBRASKA**

**OWNER CONTACT** Ariana Kennedy Resources Conservationist  
Lower Platte South NRD  
3125 Portia Street  
PO Box 83581  
Lincoln, NE 68521  
Phone: 402.476.2729  
Email: [ariana.kennedy@lpsnrd.org](mailto:ariana.kennedy@lpsnrd.org)

**COORDINATING PROFESSIONAL** Mark Lindemann, PE District Engineer  
Lower Platte South NRD  
3125 Portia Street  
PO Box 83581  
Lincoln, NE 68521  
Phone: 402.476.2729  
Email: [mlindemann@lpsnrd.org](mailto:mlindemann@lpsnrd.org)



**PLANS AVAILABLE** Lower Platte South NRD  
3125 Portia Street  
PO Box 83581  
Lincoln, NE 68521  
<https://www.lpsnrd.org/projects/rfps-and-bids-0>

Contact: Mark Lindemann  
Phone: 402.476.2729  
Email: [mlindemann@lpsnrd.org](mailto:mlindemann@lpsnrd.org)

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**SECTION 00 10 00**  
**INVITATION TO BID**

Sealed Proposals for the construction of "MOPAC East 262<sup>nd</sup> to 274<sup>th</sup> Street Trail Resurfacing, for the Lower Platte South NRD, Lincoln, Nebraska," will be received by the Lower Platte South NRD, at 3125 Portia Street, PO Box 83581, Lincoln, Nebraska, until 1:00 p.m. on the 2<sup>nd</sup> day of February, 2023, and thereafter will be read aloud.

The work consists of the following:

Placement of crushed limestone screenings atop of the existing crushed rock trail from 262<sup>nd</sup> to 274<sup>th</sup> Street. Other work on the project is to remove and reinstall bollards.

Proposals will be taken for said construction work listed above by linear foot prices, as an aggregate bid for the entire project.

All Proposals for said construction work must be made on blanks furnished by the ENGINEER and must be accompanied by Bid Security of not less than 5% of the amount bid. Bid Security to be made payable to the Treasurer of the Lower Platte South NRD as liquidated damages in case the bid is accepted and the bidder neglects or refuses, to enter into contract and furnish bond in accordance herewith.

Plans, Specifications and Bid Documents may be obtained from the Lower Platte South NRD website at [www.lpsnrd.org](http://www.lpsnrd.org) or at the office of the Lower Platte South NRD, Lincoln, Nebraska, and will be issued by the Lower Platte South NRD, 3125 Portia Street, P.O. Box 83581, Lincoln, NE 68501-3581, there is no charge for the Plans and Specifications.

The Lower Platte South NRD, reserves the right to waive informalities and irregularities and to make awards on bids which furnish the materials and construction that will, in their opinion serve the best interests of the Lower Platte South NRD, and also reserves the right to reject any and/or all bids.

LOWER PLATTE SOUTH NRD  
Paul Zillig, General Manager

ATTEST: Ariana Kennedy  
Resources Conservationist

PUBLISHED: Lincoln Journal Star  
January 12<sup>th</sup>, 19<sup>th</sup>, 26<sup>th</sup>, 2023

00 1000-1



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INSTRUCTIONS TO BIDDERS  
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## INSTRUCTIONS TO BIDDERS

### ARTICLE 1 - DEFINED TERMS

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1.01 Terms used in these Instructions to Bidders will have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below which are applicable to both the singular and plural thereof:

A. *Bidder*-The individual or entity who submits a Bid directly to OWNER.

B. *Issuing Office*-The office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered.

C. *Successful Bidder*-The lowest responsible Bidder submitting a responsive Bid to whom OWNER (on the basis of OWNER's evaluation as hereinafter provided) makes an award.

### ARTICLE 2 - COPIES OF BIDDING DOCUMENTS

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2.01 Complete sets of the Bidding Documents in the number and for the sum, stated in the Advertisement or Invitation to Bid shall be obtained from the Issuing Office.

2.02 Complete sets of Bidding Documents must be used in preparing Bids; neither OWNER nor ENGINEER assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

2.03 OWNER and ENGINEER in making copies of Bidding Documents available on the above terms do so only for the purpose of obtaining Bids for the Work and do not confer a license or grant for any other use.

### ARTICLE 3- QUALIFICATIONS OF BIDDERS

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3.01 To demonstrate Bidder's qualifications to perform the Work, within five days of OWNER's request, Bidder shall submit written evidence such as financial data, previous experience, present commitments, and such other data as may be requested.

### ARTICLE 4 - EXAMINATION OF BIDDING DOCUMENTS, OTHER RELATED DATA, AND SITE

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4.01 *Subsurface and Physical Conditions*

A. The Supplementary Conditions identify:

1. Those reports of explorations and tests of subsurface conditions at or contiguous to the Site that Engineer has used in preparing the Bidding Documents.

2. Those drawings of physical conditions in or relating to existing surface and subsurface structures at or contiguous to the Site (except Underground Facilities) that ENGINEER has used in preparing the Bidding Documents.

B. Copies of reports and drawings, if any, referenced in paragraph 4.01.A will be made available by OWNER to any Bidder on request. Those reports and drawings are not part of the Contract Documents, but the "technical data" contained therein upon which Bidder is entitled to rely as provided in paragraph 4.02 of the General Conditions has been identified and established in paragraph 4.02 of the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any "technical data" or any other data, interpretations, opinions or information contained in such reports or shown or indicated in such drawings.

#### 4.02 *Underground Facilities*

A. Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or contiguous to the Site is based upon information and data furnished to OWNER and ENGINEER by owners of such Underground Facilities, including OWNER, or others.

#### 4.03 *Hazardous Environmental Condition*

A. The Supplementary Conditions identify those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that ENGINEER has used in preparing the Bidding Documents.

B. Copies of reports and drawings referenced in paragraph 4.03.A will be made available by OWNER to any Bidder on request. Those reports and drawings are not part of the Contract Documents, but the "technical data" contained therein upon which Bidder is entitled to rely as provided in paragraph 4.06 of the General Conditions has been identified and established in paragraph 4.06 of the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any "technical data" or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

4.04 Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated conditions appear in paragraphs 4.02, 4.03, and 4.04 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work appear in paragraph 4.06 of the General Conditions.

4.05 On request, OWNER will provide Bidder access to the Site to conduct such examinations, investigations, explorations, tests, and studies as Bidder deems necessary for submission of a Bid. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.

4.06 Reference is made to Article 7 of the Supplementary Conditions for the identification of the general nature of other work that is to be performed at the Site by OWNER or others (such as utilities and other prime contractors) that relates to the Work for which a Bid is to be submitted. On request, OWNER will provide to each Bidder for examination access to or copies of Contract Documents (other than portions thereof related to price) for such other work.

4.07 It is the responsibility of each Bidder before submitting a Bid to:

A. examine and carefully study the Bidding Documents, including any Addenda and the other related data identified in the Bidding Documents;

B. visit the Site and become familiar with and satisfy Bidder as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;

C. become familiar with and satisfy Bidder as to all federal, state, and local Laws and Regulations that may affect cost, progress, or performance of the Work;

D. carefully study all reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in paragraph 4.02 of the General Conditions, and carefully study all reports and drawings of a Hazardous Environmental Condition, if any, at the Site which have been identified in the Supplementary Conditions as provided in paragraph 4.06 of the General Conditions;

E. obtain and carefully study, or assume responsibility for doing so, all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents, and safety precautions and programs incident thereto;

F. agree at the time of submitting its Bid that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price bid and within the times and in accordance with the other terms and conditions of the Bidding Documents;

G. become aware of the general nature of the work to be performed by OWNER and others at the Site that relates to the Work as indicated in the Bidding Documents;

H. correlate the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents;

I. promptly give ENGINEER written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by ENGINEER is acceptable to Bidder; and

J. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.

4.08 The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the Work required by the Bidding Documents and applying any specific means, methods, techniques, sequences, and procedures of construction that may be shown or indicated or expressly required by the Bidding Documents, that Bidder has given ENGINEER written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents and the written resolutions thereof by ENGINEER are acceptable to Bidder, and that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.

#### ARTICLE 5 - PRE-BID CONFERENCE

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5.01 Not Applicable.

#### ARTICLE 6 - SITE AND OTHER AREAS

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6.01 The Site is identified in the Bidding Documents. All additional lands and access thereto required for temporary construction facilities, construction equipment, or storage of materials and equipment to be incorporated in the Work are to be obtained and paid for by CONTRACTOR. Easements for permanent structures or permanent changes in existing facilities are to be obtained and paid for by OWNER unless otherwise provided in the Bidding Documents.

#### ARTICLE 7 - INTERPRETATIONS AND ADDENDA

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7.01 All questions about the meaning or intent of the Bidding Documents are to be submitted to ENGINEER in writing. Interpretations or clarifications considered necessary by ENGINEER in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by ENGINEER as having received the Bidding Documents. Questions received less than ten days prior to the date for opening of Bids may not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

7.02 Addenda may be issued to clarify, correct, or change the Bidding Documents as deemed advisable by OWNER or ENGINEER.

#### ARTICLE 8 - BID SECURITY

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8.01 A Bid must be accompanied by Bid security made payable to OWNER in an amount of 5% of Bidder's maximum Bid price and in the form of a certified or cashier's check or a Bid Bond issued by a surety meeting the requirements of paragraphs 5.01 and 5.02 of the General Conditions.

8.02 The Bid security of the Successful Bidder will be retained until such Bidder has executed the Contract Documents, furnished the required contract security and met the other conditions of

the Notice of Award. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 15 days after the Notice of Award, OWNER may annul the Notice of Award and the Bid security of that Bidder will be forfeited. The Bid security of other Bidders whom OWNER believes to have a reasonable chance of receiving the award may be retained by OWNER until the earlier of seven days after the Effective Date of the Agreement or 61 days after the Bid opening.

## ARTICLE 9 - CONTRACT TIMES

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9.01 The time for Completion and readiness for final payment is set forth in the Bid and will be entered into the Agreement or incorporated therein by reference to the specific language of the Bid. The times will be taken into consideration by OWNER during the evaluation of Bids, and it will be necessary for the apparent Successful Bidder to satisfy OWNER that it will be able to achieve Completion and be ready for final payment within the times designated in the Bid.

## ARTICLE 10 - LIQUIDATED DAMAGES

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10.01 Provisions for liquidated damages, if any, are set forth in the Agreement.

## ARTICLE 11 - SUBSTITUTE AND "OR-EQUAL" ITEMS

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11.01 The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration of possible substitute or "or-equal" items. Whenever it is specified or described in the Bidding Documents that a substitute or "or-equal" item of material or equipment may be furnished or used by CONTRACTOR, if acceptable to ENGINEER; the procedure for submission of any such application by CONTRACTOR and consideration by ENGINEER is set forth in the General Conditions and may be supplemented in the General Requirements.

## ARTICLE 12-SUBCONTRACTORS, SUPPLIERS, AND OTHERS

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12.01 If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, individuals, or entities to be submitted to OWNER in advance of a specified date prior to the Effective Date of the Agreement, the apparent Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening, submit to OWNER a list of all such Subcontractors, Suppliers, individuals, or entities proposed for those portions of the Work for which such identification is required. Such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, individual, or entity if requested by OWNER. If OWNER or ENGINEER, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, OWNER may, before the Notice of Award is given, request apparent Successful Bidder to submit a substitute.

12.02 If apparent Successful Bidder declines to make any such substitution, OWNER may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, individuals, or entities. Declining to make requested substitutions will not constitute

grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which OWNER or ENGINEER makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to OWNER and ENGINEER subject to revocation of such acceptance after the Effective Date of the Agreement as provided in paragraph 6.06 of the General Conditions.

12.03 CONTRACTOR shall not be required to employ any Subcontractor, Supplier, individual, or entity against whom CONTRACTOR has reasonable objection.

#### ARTICLE 13-PREPARATION OF BID

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13.01 The Bid form is included with the Bidding Documents. Additional copies may be obtained from ENGINEER.

13.02 All blanks on the Bid form shall be completed by printing in ink or by typewriter and the Bid signed. A Bid price shall be indicated for each Bid item listed therein, or the words "No Bid," "No Change," or "Not Applicable" entered.

13.03 A Bid by a corporation shall be executed in the corporate name by the president or a vice-president or other corporate officer. The corporate address and state of incorporation shall be shown.

13.04 A Bid by a partnership shall be executed in the partnership name and signed by a partner, whose title must appear under the signature. The official address of the partnership shall be shown.

13.05 A Bid by a limited liability company shall be executed in the name of the firm by a member. The state of formation of the firm and the official address of the firm must be shown.

13.06 A Bid by an individual shall show the Bidder's name and official address.

13.07 A Bid by a joint venture shall be executed by each joint venturer in the manner indicated on the Bid form. The official address of the joint venture must be shown.

13.08 All names shall be typed or printed in ink below the signatures.

13.09 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid form.

13.10 The address and telephone number for communications regarding the Bid shall be shown.

13.11 The OWNER may require evidence of Bidder's authority and qualification to do business in the state where the Project is located prior to award of the Contract. Bidder's state CONTRACTOR license number for the state of the Project, if any, shall also be shown on the Bid form.



## ARTICLE 14 - BASIS OF BID; EVALUATION OF BIDS

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### 14.01 *Unit Price*

A. Bidders shall submit a Bid on a unit price basis for each item of Work listed in the Bid schedule.

B. The total of all estimated prices will be determined as the sum of the products of the estimated quantity of each item and the unit price Bid for the item. The final quantities and Contract Price will be determined in accordance with paragraph 11.03 of the General Conditions.

C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between words and figures will be resolved in favor of the words.

14.02 The Bid price shall include such amounts as the Bidder deems proper for overhead and profit on account of cash allowances, if any, named in the Contract Documents as provided in paragraph 11.02 of the General Conditions.

## ARTICLE 15 - SUBMITTAL OF BID

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15.01 Each prospective Bidder is furnished one copy of the Bidding Documents with one separate unbound copy each of the Bid form, and, if required, the Bid Bond. The unbound copy of the Bid form is to be completed and submitted with the Bid security and the following data:

- A. Experience Record on form attached to bid form.
- B. Materials and Subcontractor Listing on form attached to bid form.
- C. Equipment Assessment Certification.

15.02 A Bid shall be submitted no later than the date and time prescribed and at the place indicated in the Advertisement or Invitation to Bid and shall be enclosed in an opaque sealed envelope plainly marked with the Project title and, if applicable, the designated portion of the Project for which the Bid is submitted, the name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate envelope plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid shall be addressed to (Paul Zillig, General Manager, Lower Platte South NRD, 3125 Portia Street, PO Box 83581, Lincoln, NE 68501-3581).

## ARTICLE 16-MODIFICATION AND WITHDRAWAL OF BID

---

16.01 A Bid may be modified or withdrawn by an appropriate document duly executed in the manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids.

16.02 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with OWNER and promptly thereafter demonstrates to the reasonable satisfaction of OWNER that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, that Bidder will be disqualified from further bidding on the Work.

## ARTICLE 17 - OPENING OF BIDS

---

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

## ARTICLE 18 - BIDS TO REMAIN SUBJECT TO ACCEPTANCE

---

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

## ARTICLE 19 - AWARD OF CONTRACT

---

19.01 OWNER reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. OWNER further reserves the right to reject the Bid of any Bidder whom it finds, after reasonable inquiry and evaluation, to be non-responsive. OWNER may also reject the Bid of any Bidder if OWNER believes that it would not be in the best interest of the Project to make an award to that Bidder. OWNER also reserves the right to waive all informalities and to negotiate contract terms with the Successful Bidder.

19.02 More than one Bid for the same Work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any Bidder has an interest in more than one Bid for the Work may be cause for disqualification of that Bidder and the rejection of all Bids in which that Bidder has an interest.

19.03 In evaluating Bids, OWNER will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.

19.04 In evaluating Bidders, OWNER will consider the qualifications of Bidders and may consider the qualifications and experience of Subcontractors, Suppliers, and other individuals or entities proposed for those portions of the Work for which the identity of Subcontractors,

Suppliers, and other individuals or entities must be submitted as provided in the Supplementary Conditions.

19.05 OWNER may conduct such investigations as OWNER deems necessary to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, individuals, or entities to perform the Work in accordance with the Contract Documents.

19.06 If the Contract is to be awarded, OWNER will award the Contract to the Bidder whose Bid is in the best interests of the Project.

19.07 It is intended that the OWNER will award one contract for the project.

## ARTICLE 20 - CONTRACT SECURITY AND INSURANCE

---

20.01 Article 5 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth OWNER's requirements as to performance and payment Bonds and insurance. When the Successful Bidder delivers the executed Agreement to OWNER, it must be accompanied by such Bonds and insurance certificates.

## ARTICLE 21 -SIGNING OF AGREEMENT

---

21.01 When OWNER gives a Notice of Award to the Successful Bidder, it shall be accompanied by the required number of unsigned counterparts of the Agreement with the other Contract Documents which are identified in the Agreement as attached thereto. Within 15 days thereafter, Successful Bidder shall sign and deliver the required number of counterparts of the Agreement and attached documents to OWNER: Within ten days after approval of Agreement and other Contract Documents by OWNER, OWNER shall deliver one fully signed counterpart to Successful Bidder with a complete set of the Drawings with appropriate identification.

## ARTICLE 22 - SALES AND USE TAXES

---

22.01 CONTRACTOR shall pay all sales, consumer, use, and other similar taxes required to be paid by CONTRACTOR in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work. Said taxes shall be included in Contractor's bid.

OWNER is exempt from Nebraska Sales Tax and use Taxes on materials, equipment, and labor to be incorporated into some types of work. The following types of work are examples and not all inclusive list of types of work where Contractor shall not include these taxes for materials and equipment:

Street & Road Improvements	Excavation & Grading
Drainage Improvements	Fire Hydrants
Sanitary Sewer	Swimming Pools
Wastewater Facilities	Trails

## ARTICLE 23 -RETAINAGE

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23.01 Provisions concerning retainage are set forth in the Agreement.

## ARTICLE 24 - CONTRACTS TO BE ASSIGNED

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24.01 Not Applicable

## ARTICLE 25 - PARTNERING

---

25.01 Not Applicable

## ARTICLE 26- DAVIS-BACON AND RELATED ACTS

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26.01 Not Applicable

**SECTION 00 4100**

**BID FORM**

BID FORM

PROJECT IDENTIFICATION:

NAME: MOPAC East Trail Resurfacing 262<sup>nd</sup> to 274<sup>th</sup> Street  
Lower Platte South NRD, Lincoln, NE

NAME OF BIDDER	DATE
----------------	------

THIS BID IS SUBMITTED TO: Lower Platte South NRD  
 Paul Zillig, General Manager  
 3125 Portia Street, PO Box 83581  
 Lincoln, NE 68501-3581

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

**2.01** Bidder accepts all of the terms and conditions of the Advertisement or Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. The Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of OWNER.

**3.01** In submitting this Bid, Bidder represents, as set forth in the Agreement, that:

A. Bidder has examined and carefully studied the Bidding Documents, the other related data identified in the Bidding Documents, and the following Addenda, receipt of all which is hereby acknowledged.

<u>Addendum No.</u>	<u>Addendum Date</u>
_____	_____
_____	_____
_____	_____

B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress and performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in paragraph 4.02 of the General Conditions, and (2) reports and drawings of a Hazardous Environmental Condition, if any, which has been identified in the Supplementary Conditions as provided in paragraph 4.06 of the General Conditions.

E. Bidder has obtained and carefully studied, or assumes responsibility for having done so, all additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents to be employed by Bidder, and safety precautions and programs incident thereto.

F. Bidder does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents.

G. Bidder is aware of the general nature of work to be performed by OWNER and others at the Site that relates to the Work as indicated in the Bidding Documents.

H. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents.

I. Bidder has given ENGINEER written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by ENGINEER is acceptable to Bidder.

J. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

**4.01** Bidder further represents that this Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any individual or entity to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over OWNER.

**5.01** Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

**UNIT PRICE BID SCHEDULE:**

ITEM NO.	QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	TOTAL
<b>GROUP "A" - Base Bid- Limestone Screening Resurfacing</b>					
1.			Mobilization- Subsidiary to project		
2.	6	EA	Remove & Reset Bollards		
3.		Lin. Ft	Place & Compact Limestone Screenings		
<b>TOTAL GROUP "A"</b>					
<b>ALTERNATE BID ITEMS</b>					
1.					
2.					

Unit Prices have been computed in accordance with paragraph 11.03.B of the General Conditions.

Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Bid items will be based on actual quantities provided, determined as provided in the Contract Documents.

**6.01** Bidder agrees that the start date for the Work will be March 6, 2023, and that the Work will be completed and ready for final payment in accordance with paragraph 14.07.B of the General conditions within ...**40**\_ calendar days.



**6.02** Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the times specified above, which shall be stated in the Agreement.

**7.01** The following documents are attached to and made a condition of this Bid:

A. Required Bid security in the form of a bid bond, certified check or cashier's check payable to the OWNER in the amount of 5% of the total amount bid.

B. Experience Record.

C. Materials and Subcontracting Listing.

D. Equipment Assessment Certification.

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

SUBMITTED on \_\_\_\_\_, 20\_\_.

State Contractor License No. \_\_\_\_\_. (If applicable)

Nebraska Sales Tax Option \_\_\_\_\_(Option 1, 2 or 3, if a Nebraska Project).

Federal Tax Identification Number \_\_\_\_\_

Bidder is:

An Individual

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

By: \_\_\_\_\_  
(Individual's Signature)

Doing Business as: \_\_\_\_\_

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

Phone No.: \_\_\_\_\_ Fax No.: \_\_\_\_\_

E-Mail: \_\_\_\_\_

A Partnership

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

By: \_\_\_\_\_  
(Signature of General Partner)

Doing Business as: \_\_\_\_\_

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

Phone No.: \_\_\_\_\_ Fax No.: \_\_\_\_\_

E-Mail: \_\_\_\_\_

A Corporation or Limited Liability Company

Corporation or Limited Liability Name: \_\_\_\_\_

State of Incorporation or Organization: \_\_\_\_\_

By: \_\_\_\_\_

*(Signature – Corporate Officer or Limited Liability Member)*

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

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

Attest: \_\_\_\_\_

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

Phone No.: \_\_\_\_\_ Fax No.: \_\_\_\_\_

E-Mail: \_\_\_\_\_

A Joint Venture

Joint Venturer Name: \_\_\_\_\_

By: \_\_\_\_\_  
(Signature of joint venture partner)

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

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

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

Phone No.: \_\_\_\_\_ Fax No.: \_\_\_\_\_

E-Mail: \_\_\_\_\_

By: \_\_\_\_\_  
(Signature of joint venture partner)

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

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

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

Phone No.: \_\_\_\_\_ Fax No.: \_\_\_\_\_

E-Mail: \_\_\_\_\_

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that **is a** party to the joint venture should be in the manner indicated above.)

EXPERIENCE RECORD

The following is a synopsis of experience in construction of projects similar in scope and difficulty to the MOPAC Trail Resurfacing, Lower Platte South NRD, which the Bidder has constructed within the past five years.

NAME OF BIDDER: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

PROJECT NO. 1 - PROJECT NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

PROJECT LOCATION: \_\_\_\_\_

LOCAL PROJECT CONTACT PERSON: \_\_\_\_\_ PHONE#: \_\_\_\_\_

PROJECT CONSULTING ENGINEER: \_\_\_\_\_ PHONE#: \_\_\_\_\_

PROJECT NO. 2 - PROJECT NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

PROJECT LOCATION: \_\_\_\_\_

LOCAL PROJECT CONTACT PERSON: \_\_\_\_\_ PHONE#: \_\_\_\_\_

PROJECT CONSULTING ENGINEER: \_\_\_\_\_ PHONE#: \_\_\_\_\_

PROJECT NO. 3 - PROJECT NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

PROJECT LOCATION: \_\_\_\_\_

LOCAL PROJECT CONTACT PERSON: \_\_\_\_\_ PHONE#: \_\_\_\_\_

PROJECT CONSULTING ENGINEER: \_\_\_\_\_ PHONE#: \_\_\_\_\_

**MATERIALS AND SUBCONTRACTOR LISTING**  
 Material Schedule  
 (SUPPLIER & MANUFACTURER)

1. Crushed Limestone Screenings: \_\_\_\_\_

**PROPOSED SUBCONTRACTORS**

SUBCONTRACTORS	WORK TO BE PERFORMED	APPROXIMATE DOLLAR AMOUNT
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____

SIGNED \_\_\_\_\_ COMPANY \_\_\_\_\_

BY \_\_\_\_\_ DATE \_\_\_\_\_

TYPE NAME

TITLE

**EQUIPMENT ASSESSMENT CERTIFICATION**

**BY REQUIREMENT OF STATE STATUTE 77-1323, THE FOLLOWING INFORMATION MUST BE FURNISHED BY ALL CONTRACTORS AND SUBCONTRACTORS UTILIZING ANY EQUIPMENT ON ANY AND ALL PUBLIC IMPROVEMENT CONTRACTS.**

This is to certify that all equipment to be used on Lower Platte South NRD project No. SCL.2022.004, except that acquired since assessment, has been assessed for the current year in

\_\_\_\_\_ County.

Name of Company\_\_\_\_\_

Authorized Official\_\_\_\_\_ (Signature)

Title\_\_\_\_\_

STATE OF \_\_\_\_\_

COUNTY OF \_\_\_\_\_

On the \_\_\_ day of \_\_\_\_\_, 20\_\_\_, before me personally

appeared the above named \_\_\_\_\_ and being first duly sworn

stated that the above statement is correct and true.

\_\_\_\_\_  
Notary Public

**BID BOND**

**BIDDER** (Name and Address):

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

**SURETY** (Name and Address of Principal Place of Business):

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

**OWNER** (Name and Address):

Lower Platte South NRD  
3125 Portia Street, PO Box 83581  
Lincoln, NE 68501-3581

**BID**

BID DUE DATE: \_\_\_\_\_

PROJECT (Brief Description Including Location):

MOPAC East Trail Resurfacing 262<sup>nd</sup> to 274<sup>th</sup> Street  
Lower Platte South NRD  
Lincoln NE

**BOND**

BOND NUMBER: \_\_\_\_\_

DATE (Not later than Bid due date): \_\_\_\_\_

PENAL SUM: \_\_\_\_\_ (Words) \_\_\_\_\_ (Figures)

IN WITNESS WHEREOF, Surety and Bidder, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Bid Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

BIDDER

SURETY

\_\_\_\_\_(Seal)

\_\_\_\_\_(Seal)

Bidder's Name and Corporate Seal

Surety's Name and Corporate Seal

By: \_\_\_\_\_

By: \_\_\_\_\_

Signature and Title

Signature and Title  
(Attach Power of Attorney)

Attest: \_\_\_\_\_

Attest: \_\_\_\_\_

Signature and Title

Signature and Title

- Note: (1) Above addresses are to be used for giving required notice.  
(2) Any singular reference to Bidder, Surety, OWNER or other party shall be considered plural where applicable.



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

**SECTION 00 5000**

**STANDARD FORM OF AGREEMENT  
BETWEEN OWNER & CONTRACTOR**

**EJCDC  
STANDARD FORM OF AGREEMENT  
BETWEEN OWNER AND CONTRACTOR**

**THIS AGREEMENT** is by and between Lower Platte South NRD

(hereinafter called OWNER) and \_\_\_\_\_

(hereinafter called CONTRACTOR).

OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows:

**ARTICLE 1 - WORK**

1.01 CONTRACTOR shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

Removing, re-crushing and relaying trail surfacing with new limestone screening on top. Work also includes railing, ditch cleanout and minor grading.

**ARTICLE 2 - THE PROJECT**

2.01 The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows:

MOPAC Trail Resurfacing 262<sup>nd</sup> to 274<sup>th</sup> St., Lower Platte South NRD, Lincoln, NE

**ARTICLE 3 - ENGINEER**

3.01 The Project has been designed by engineering staff at the Lower Platte South NRD who is hereinafter called ENGINEER and who is to act as OWNER's representative, assume all duties and responsibilities, and have the rights and authority assigned to ENGINEER in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

**ARTICLE 4 - CONTRACT TIMES**

4.01 *Time of the Essence*

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

4.02 *Days to Achieve Completion and Final Payment*

A. Bidder agrees that the start date for the Work will be March 6, 2023, and that the Work will be completed and ready for final payment in accordance with paragraph 14.07.B of the General conditions within 40 calendar days.

#### 4.03 Liquidated Damages

A. CONTRACTOR and OWNER recognize that time is of the essence of this Agreement and that OWNER will suffer financial loss if the Work is not completed within the times specified in paragraph 4.02 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding, the actual loss suffered by OWNER if the Work is not completed on time. Accordingly, instead of requiring any such proof, OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as a penalty), CONTRACTOR shall pay OWNER \$100 for each calendar day that expires after the time specified in paragraph 4.02 for completion and readiness for final payment until the Work is completed and ready for final payment. (Liquidated damages are calculated as per Section 108.08 of the Nebraska Department of Transportation Standards Specifications for Highway Construction 2017).

B. The CONTRACTOR agrees:

1. To pay, according to the formula listed below in this Subsection, liquidated damages for each calendar day beyond the number of calendar days authorized for completion of the contract, and

2. To authorize the ENGINEER to recommend, and OWNER to deduct liquidated damages from any money due or coming due the CONTRACTOR.

C. If no monies are due the CONTRACTOR, the OWNER shall have the right to recover liquidated damages from the CONTRACTOR, from the surety, or from both the CONTRACTOR and the surety.

D. Liquidated damages will not be assessed for any days covered by an approved time extension. Deductions or payment of liquidated damages will not release the CONTRACTOR from further obligations and liabilities to complete the entire contract.

#### Liquidated Damages Formula

$$LD = \frac{R \times C}{T}$$

where: LD = Liquidated damages per calendar day  
(rounded to the nearest dollar)  
C = Original contract amount  
(includes all work completed and unfinished)  
T = Original number of calendar days specified in the contract  
R = 0.06 for working day contracts  
R = 0.12 for calendar day contracts

#### ARTICLE 5 - CONTRACT PRICE

5.01 OWNER shall pay CONTRACTOR for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined pursuant to paragraphs 5.01.A below:

A. For all Work, at the prices stated in CONTRACTOR's Bid, attached hereto as an exhibit.

TOTAL OF ALL UNIT PRICES \_\_\_\_\_ \$ \_\_\_\_\_ (dollars)  
(use words)

As provided in paragraph 11.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by ENGINEER as provided in paragraph 9.08 of the General Conditions. Unit prices have been computed as provided in paragraph 11.03 of the General Conditions.

## ARTICLE 6 - PAYMENT PROCEDURES

### 6.01 *Submittal and Processing of Payments*

A CONTRACTOR shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by ENGINEER as provided in the General Conditions.

### 6.02 *Progress Payments; Retainage*

A. OWNER shall process progress payments on account of the Contract Price on the basis of CONTRACTOR's Applications for Payment on or about the 3<sup>rd</sup> Wednesday of each month during performance of the Work as provided in paragraphs 6.02.A.1 below. All such payments will be measured by the schedule of values established in paragraph 2.07.A of the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no schedule of values, as provided in the General Requirements:

1. Prior to Completion and readiness for final payment, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as ENGINEER may determine or OWNER may withhold, in accordance with paragraph 14.02 of the General Conditions:

a. 90% of Work completed and 90% of cost of materials and equipment not incorporated in the Work (with the balance 10% being retainage). If the Work has been 50% completed as determined by ENGINEER, and if the character and progress of the Work have been satisfactory to OWNER and ENGINEER, OWNER, on recommendation of ENGINEER, may determine that as long as the character and progress of the Work remain satisfactory to them, there will be no additional retainage on account of Work subsequently completed, in which case the remaining progress payments prior to completion and readiness for final payment will be in an amount equal to 100% of the Work completed less the aggregate of payments previously made.

### 6.03 *Final Payment*

A. Upon final completion and acceptance of the Work in accordance with paragraph 14.07 of the General Conditions, OWNER shall pay the remainder of the Contract Price as recommended by ENGINEER as provided in said paragraph 14.07.

## ARTICLE 7 - CONTRACTOR'S REPRESENTATIONS

7.01 In order to induce OWNER to enter into this Agreement CONTRACTOR makes the following representations:

A. CONTRACTOR has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.

B. CONTRACTOR has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. CONTRACTOR is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work.

D. CONTRACTOR has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in paragraph 4.02 of the General Conditions and (2) reports and drawings of a Hazardous Environmental Condition, if any, at the Site which has been identified in the Supplementary Conditions as provided in paragraph 4.06 of the General Conditions.

E. CONTRACTOR has obtained and carefully studied, or assumes responsibility for having done so, all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by CONTRACTOR, including applying the specific means, methods, techniques, sequences, and procedures of construction, if any, expressly required by the Contract Documents to be employed by CONTRACTOR, and safety precautions and programs incident thereto

F. CONTRACTOR does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.

G. CONTRACTOR is aware of the general nature of work to be performed by OWNER and others at the Site that relates to the Work as indicated in the Contract Documents.

H. CONTRACTOR has correlated the information known to CONTRACTOR, information and observations obtained from visits to the Site, reports and drawings identified in the Contract Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Contract Documents.

I. CONTRACTOR has given ENGINEER written notice of all conflicts, errors, ambiguities, or discrepancies that CONTRACTOR has discovered in the Contract Documents, and the written resolution thereof by ENGINEER is acceptable to CONTRACTOR.

J. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

## ARTICLE 8 - CONTRACT DOCUMENTS

### 8.01 *Contents*

A. The Contract Documents consist of the following:

1. This Agreement;
2. Performance Bond;
3. Payment Bond;
4. Other Bonds/Insurance Certificates;
5. General Conditions;
6. Supplementary Conditions;
7. Specifications as listed in the table of contents of the Project Manual;
8. Drawings consisting of a cover sheet and sheets numbered \_\_through\_\_, inclusive, with each sheet bearing the following general title: \_\_\_\_\_,
9. Addenda (numbers \_\_ to \_\_\_\_, inclusive);
10. Exhibits to this Agreement (enumerated as follows):
  - a. Notice to Proceed;
  - b. CONTRACTOR's Bid;
  - c. Documentation submitted by CONTRACTOR prior to Notice of Award;
11. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:
  - a. Written Amendments;
  - b. Work Change Directives;
  - c. Change Order(s).

B. The documents listed in paragraph 8.01.A are attached to this Agreement (except as expressly noted otherwise above).

C. There are no Contract Documents other than those listed above in this Article 8.

D. The Contract Documents may only be amended, modified, or supplemented as provided in paragraph 3.04 of the General Conditions.

## **ARTICLE 9 - MISCELLANEOUS**

### **9.01 *Terms***

A. Terms used in this Agreement will have the meanings indicated in the General Conditions.

### **9.02 *Assignment of Contract***

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

### **9.03 *Successors and Assigns***

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

### **9.04 *Severability***

A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon OWNER and CONTRACTOR, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

### **9.05 *Other Provisions***

A. If OWNER is a public entity in the State of Nebraska, then CONTRACTOR shall register with and use 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 pursuant to the Immigration Reform and Control Act of 1986, to determine the work eligibility status of new employees physically performing services within the State of Nebraska. CONTRACTOR shall require the same of each subcontractor.



IN WITNESS WHEREOF, OWNER and CONTRACTOR have signed this Agreement in triplicate. One counterpart each has been delivered to OWNER and CONTRACTOR. All portions of the Contract Documents have been signed or identified by OWNER and CONTRACTOR or on their behalf.

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

OWNER:

CONTRACTOR:

\_\_\_\_\_

\_\_\_\_\_

By: \_\_\_\_\_

By: \_\_\_\_\_

Attest \_\_\_\_\_

Attest \_\_\_\_\_

Address for giving notices:

Address for giving notices:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

License No. \_\_\_\_\_

(Where applicable)

Agent for service of process: \_\_\_\_\_

\_\_\_\_\_

Designated Representative:

Designated Representative:

Name: \_\_\_\_\_

Name: \_\_\_\_\_

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

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

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

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

\_\_\_\_\_

\_\_\_\_\_

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

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

Facsimile: \_\_\_\_\_

Facsimile: \_\_\_\_\_

E-Mail: \_\_\_\_\_

E-Mail: \_\_\_\_\_

**SECTION 00 5100 - NOTICE OF AWARD**

Dated \_\_\_\_\_

TO: \_\_\_\_\_  
(BIDDER)

ADDRESS: \_\_\_\_\_

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

Project: MOPAC East Trail Resurfacing 262<sup>nd</sup> to 274<sup>th</sup> St., Lower Platte South NRD. Lincoln. NE

You are notified that your Bid dated \_\_\_\_\_ for the above Project has been considered. You are the apparent Successful Bidder and have been awarded a Contract for\_\_

\_\_\_\_\_  
\_\_\_\_\_  
(Indicate total Work, alternates or sections or Work awarded)

The Contract Price of your Contract is \_\_\_\_\_ Dollars(\$ \_\_\_\_\_),

3 copies of each of the proposed Agreement (except Drawings) accompany this Notice of Award.

You must comply with the following conditions precedent within 15 days of the date you receive this Notice of Award.

1. Deliver to the OWNER 3 fully executed counterparts of the Contract Documents.
2. Deliver with the executed Contract Documents, Bonds and Certificates of Insurance as required by Contract Documents.
3. (List other conditions precedent).

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

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

Within ten days after you comply with the above conditions, OWNER will return to you one fully executed counterpart of the Contract Documents.

LOWER PLATTE SOUTH NRD  
(OWNER)

By: \_\_\_\_\_  
(AUTHORIZED SIGNATURE)

Paul Zillig, General Manager  
(TITLE)

Acknowledgement of Receipt

\_\_\_\_\_  
CONTRACTOR

By \_\_\_\_\_

Name Title

Date \_\_\_\_\_

**SECTION 00 5500 - NOTICE TO PROCEED**

Dated \_\_\_\_\_

TO: \_\_\_\_\_  
(CONTRACTOR)

ADDRESS: \_\_\_\_\_

\_\_\_\_\_

Project: MOPAC East Trail Resurfacing 262<sup>nd</sup> to 274<sup>th</sup> St., Lower Platte South NRD, Lincoln, NE

You are notified that the Contract Times under the above contract will commence to run on or before \_\_\_\_\_. By that date, you are to start performing your obligations under the Contract Documents. In accordance with Article 4 of the Agreement the date of Completion and readiness for final payment is \_\_\_\_\_

Before you may start any Work at the Site, you must  
(add other requirements)

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

LOWER PLATTE SOUTH NRD  
(OWNER)

By: \_\_\_\_\_  
(AUTHORIZED SIGNATURE)

Paul Zillig, General Manager  
(TITLE)

Acknowledgement of Receipt

\_\_\_\_\_  
CONTRACTOR

By \_\_\_\_\_  
Name Title

Date \_\_\_\_\_

## **DIVISION 00 6100**

### **BONDS AND CERTIFICATES**

The following Bonds and Certificates are required for this project.

1. Performance Bond per Paragraph 5.01 of the General Conditions.
2. Payment Bond per Paragraph 5.01 of the General Conditions.
3. Certificates of Insurance per Paragraphs 2.05 and 5.03 of the General conditions and any modifications to General Conditions.

END OF SECTION

# PERFORMANCE BOND

Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

SURETY (Name, and Address of Principal Place of Business):

OWNER (Name and Address):

Lower Platte South NRD  
3125 Portia Street, PO Box 83581  
Lincoln, NE 68501-3581

## CONTRACT

Effective Date of Agreement:

Amount:

Description (Name and Location): MOPAC East Trail Resurfacing 262<sup>nd</sup> to 274<sup>th</sup> St.  
Lower Platte South NRD, Lincoln, NE

## BOND

Bond Number:

Date (Not earlier than Effective Date of Agreement):

Amount:

Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

### CONTRACTOR AS PRINCIPAL

### SURETY

\_\_\_\_\_  
(Seal)  
Contractor's Name and Corporate Seal

\_\_\_\_\_  
(Seal)  
Surety's Name and Corporate Seal

By: \_\_\_\_\_  
Signature

By: \_\_\_\_\_  
Signature (Attach Power of Attorney)

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

Attest: \_\_\_\_\_  
Signature

Attest: \_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

Note: Provide execution by additional parties, such as joint venturers, if necessary.

1. The CONTRACTOR and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Contract, which is incorporated herein by reference.

2. If the CONTRACTOR performs the Contract, the Surety and the CONTRACTOR have no obligation under this Bond, except to participate in conferences as provided in paragraph 3.1.

3. If there is no OWNER Default, the Surety's obligation under this Bond shall arise after:

3.1 The OWNER has notified the CONTRACTOR and the Surety at the addresses described in paragraph 10 below, that the OWNER is considering declaring a CONTRACTOR Default and has requested and attempted to arrange a conference with the CONTRACTOR and the Surety to be held not later than fifteen days after receipt of such notice to discuss methods of performing the Contract. If the OWNER, the CONTRACTOR and the Surety agree, the CONTRACTOR shall be allowed a reasonable time to perform the Contract, but such an agreement shall not **waive** the OWNER'S right, if any, subsequently to declare a CONTRACTOR Default; and

3.2 The OWNER has declared a CONTRACTOR Default and formally terminated the CONTRACTOR'S right to complete the Contract. Such CONTRACTOR Default shall not be declared earlier than twenty days after the CONTRACTOR and the Surety have **received** notice as provided in paragraph 3.1; and

3.3 The OWNER has agreed to pay the Balance of the Contract Price to:

3.3.1 The Surety in accordance with the terms of the Contract;

3.3.2 Another contractor selected pursuant to paragraph 4.3 to perform the Contract.

4. When the OWNER has satisfied the conditions of paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

4.1 Arrange for the CONTRACTOR, with consent of the OWNER, to perform and complete the Contract; or

4.2 Undertake to perform and complete the Contract itself, through its agents or through independent contractors; or

4.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the OWNER for a contract for performance and completion of the Contract, arrange for a contract to be prepared for execution by the OWNER and the contractor selected with the OWNER's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the Bonds issued on the Contract, and pay to the OWNER the amount of damages as described in paragraph 6 in excess of the Balance of the Contract Price incurred by the OWNER resulting from the CONTRACTOR Default; or

4.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances;

4.4.1 After investigation, determine the amount for which it may be liable to the OWNER and, as soon as practicable after the amount is determined, tender payment therefor to the OWNER; or

4.4.2 Deny liability in whole or in part and notify the OWNER citing reasons therefor.

5. If the Surety does not proceed as provided in paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond fifteen days after receipt of an additional written notice from the OWNER to the Surety demanding that the Surety perform its obligations under this Bond, and the OWNER shall be entitled to enforce any remedy available to the OWNER. If the Surety proceeds as provided in paragraph 4.4, and the OWNER refuses the payment tendered or the Surety has denied liability, in whole or in part, without further notice the OWNER shall be entitled to enforce any remedy available to the OWNER.

6. After the OWNER has terminated the CONTRACTOR'S right to complete the Contract, and if the Surety elects to act under paragraph 4.1, 4.2, or 4.3 above, then the responsibilities of the Surety to the OWNER shall not be greater than those of the CONTRACTOR under the Contract, and the responsibilities of the OWNER to the Surety shall not be greater than those of the OWNER under the Contract. To a limit of the amount of this Bond, but subject to commitment by the OWNER of the Balance of the Contract Price to mitigation of costs and damages on the Contract, the Surety is obligated without duplication for:

6.1 The responsibilities of the CONTRACTOR for correction of defective Work and completion of the Contract;

6.2 Additional legal, design professional and delay costs resulting from the CONTRACTOR's Default, and resulting from the actions or failure to act of the Surety under paragraph 4; and

6.3 Liquidated damages, or if no liquidated damages are specified in the Contract, actual damages caused by delayed performance or non-performance of the CONTRACTOR.

7. The Surety shall not be liable to the OWNER or others for obligations of the CONTRACTOR that are unrelated to the Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the OWNER or its heirs, executors, administrators, or successors.

8. The Surety hereby **waives** notice of any change, including changes of time, to the Contract or to related subcontracts, purchase orders and other obligations.

9. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the Work or part of the Work is located and shall be instituted within two years after CONTRACTOR Default or within two years after the CONTRACTOR ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation **available** to sureties as a defense in the jurisdiction of the suit shall be applicable.

10. Notice to the Surety, the OWNER or the CONTRACTOR shall be mailed or delivered to the address shown on the signature page.

11. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted here from and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

12. Definitions.

12.1 Balance of the Contract Price: The total amount payable by the OWNER to the CONTRACTOR under the Contract after all proper adjustments have been made, including allowance to the CONTRACTOR of any amounts received or to be received by the OWNER in settlement of insurance or other Claims for damages to which the CONTRACTOR is entitled, reduced by all valid and proper payments made to or on behalf of the CONTRACTOR under the Contract.

12.2 Contract: The agreement between the OWNER and the CONTRACTOR identified on the signature page, including all Contract Documents and changes thereto.

12.3 CONTRACTOR Default: Failure of the CONTRACTOR, which has neither been remedied nor **waived**, to perform or otherwise to comply with the terms of the Contract.

12.4 OWNER Default: Failure of the OWNER, which has neither been remedied nor waived, to pay the CONTRACTOR as required by the Contract or to perform and complete or comply with the other terms thereof.

FOR INFORMATION ONLY - (Name, Address, and Telephone)

Surety Agency or Broker:

Owner's Representative (Engineer or other):

# PAYMENT BOND

Any singular reference to CONTRACTOR, Surety, OWNER, or other party shall be considered plural where applicable.

CONTRACTOR (*Name and Address*):

SURETY (*Name, and Address of Principal Place of Business*):

OWNER (*Name and Address*):

Lower Platte South NRD  
3125 Portia Street, PO Box 83581  
Lincoln, NE 68501-3581

CONTRACT

Effective Date of Agreement:

Amount:

Description (*Name and Location*): MOPAC East Trail Resurfacing 262<sup>nd</sup> to 274<sup>th</sup> St.  
Lower Platte South NRD, Lincoln, NE

BOND

Bond Number:

Date (*Not earlier than Effective Date of Agreement*):

Amount:

Modifications to this Bond Form:

Surety and CONTRACTOR, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

**CONTRACTOR AS PRINCIPAL**

**SURETY**

(Seal)

(Seal)

CONTRACTOR's Name and Corporate Seal

Surety's Name and Corporate Seal

By: \_\_\_\_\_  
Signature

By: \_\_\_\_\_  
Signature (Attach Power of Attorney)

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

Attest: \_\_\_\_\_  
Signature

Attest: \_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

*Note: Provide execution by additional parties, such as joint venturers, if necessary.*



1. CONTRACTOR and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to OWNER to pay for labor, materials, and equipment furnished by Claimants for use in the performance of the Contract, which is incorporated herein by reference.
2. With respect to OWNER, this obligation shall be null and void if CONTRACTOR:
  - 2.1 Promptly makes payment, directly or indirectly, for all sums due Claimants, and
  - 2.2 Defends, indemnifies, and holds harmless OWNER from all claims, demands, liens, or suits alleging non-payment by CONTRACTOR by any person or entity who furnished labor, materials, or equipment for use in the performance of the Contract, provided OWNER has promptly notified CONTRACTOR and Surety (at the addresses described in Paragraph 12) of any claims, demands, liens, or suits and tendered defense of such claims, demands, liens, or suits to CONTRACTOR and Surety, and provided there is no OWNER Default.
3. With respect to Claimants, this obligation shall be null and void if CONTRACTOR promptly makes payment, directly or indirectly, for all sums due.
4. Surety shall have no obligation to Claimants under this Bond until:
  - 4.1 Claimants who are employed by or have a direct contract with CONTRACTOR have given notice to Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to OWNER, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.
  - 4.2 Claimants who do not have a direct contract with CONTRACTOR:
    - 4.2.1 Have furnished written notice to CONTRACTOR and sent a copy, or notice thereof, to OWNER, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials or equipment were furnished or supplied, or for whom the labor was done or performed; and
    - 4.2.2 Have either received a rejection in whole or in part from CONTRACTOR, or not received within 30 days of furnishing the above notice any communication from CONTRACTOR by which CONTRACTOR had indicated the claim will be paid directly or indirectly; and
    - 4.2.3 Not having been paid within the above 30 days, have sent a written notice to Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to OWNER, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to CONTRACTOR.
5. If a notice by a Claimant required by Paragraph 4 is provided by OWNER to CONTRACTOR or to Surety, that is sufficient compliance.
6. Reserved.
7. Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by Surety.
8. Amounts owed by OWNER to CONTRACTOR under the Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any performance bond. By CONTRACTOR furnishing and

OWNER accepting this Bond, they agree that all funds earned by CONTRACTOR in the performance of the Contract are dedicated to satisfy obligations of CONTRACTOR and Surety under this Bond, subject to OWNER's priority to use the funds for the completion of the Work.

9. Surety shall not be liable to OWNER, Claimants, or others for obligations of CONTRACTOR that are unrelated to the Contract. OWNER shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

10. Surety hereby **waives** notice of any change, including changes of time, to the Contract or to related subcontracts, purchase orders, and other obligations.

11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the Work or part of the Work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by Paragraph 4.1 or Paragraph 4.2.3, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to Surety, OWNER, or CONTRACTOR shall be mailed or delivered to the addresses shown on the signature page. Actual receipt of notice by Surety, OWNER, or CONTRACTOR, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.

13. When this Bond has been furnished to comply with a statutory requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory requirement shall be deemed deleted here from and provisions conforming to such statutory requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory Bond and not as a common law bond.

14. Upon request of any person or entity appearing to be a potential beneficiary of this Bond, CONTRACTOR shall promptly furnish a copy of this Bond or shall permit a copy to be made.

15. Definitions

- 15.1 Claimant: An individual or entity having a direct contract with CONTRACTOR, or with a first-tier sub-CONTRACTOR of CONTRACTOR, to furnish labor, materials, or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment that part of water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Contract, architectural and engineering services required for performance of the Work of CONTRACTOR and CONTRACTOR'S subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.
- 15.2 Contract: The agreement between OWNER and CONTRACTOR identified on the signature page, including all Contract Documents and changes thereto.
- 15.3 OWNER Default: Failure of OWNER, which has neither been remedied nor waived, to pay CONTRACTOR as required by the Contract, or to perform and complete or otherwise comply with the other terms thereof.

FOR INFORMATION ONLY-(Name, Address, and Telephone)  
 Surety Agency or Broker:  
 OWNER's Representative (*Engineer or other*):

**SECTION 00 7200**  
**GENERAL CONDITIONS**

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the Controlling Law.

**STANDARD  
GENERAL CONDITIONS  
OF THE  
CONSTRUCTION CONTRACT**

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## GENERAL CONDITIONS

### ARTICLE 1 - DEFINITIONS AND TERMINOLOGY

#### 1.01 *Defined Terms:*

- A. Wherever used in the Contract Documents and printed with initial or all capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof.
1. *Addenda-Written* or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the Contract Documents.
  2. *Agreement-The* written instrument which is evidence of the agreement between OWNER and CONTRACTOR covering the Work.
  3. *Application for Payment-The* form acceptable to ENGINEER which is to be used by CONTRACTOR during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
  4. *Asbestos-Any* material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.
  5. *Bid-The* offer or proposal of a bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
  6. *Bidding Documents-The* Bidding Requirements and the proposed Contract Documents (including all Addenda issued prior to receipt of Bids).
  7. *Bidding Requirements-The* Advertisement or Invitation to Bid, Instructions to Bidders, Bid security form, if any, and the Bid form with any supplements.
  8. Bonds-Performance and payment bonds and other instruments of security.
  9. *Change Order-A* document recommended by ENGINEER which is signed by CONTRACTOR and OWNER and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.
  10. *Claim-A* demand or assertion by OWNER or CONTRACTOR seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.
  11. *Contract-The* entire and integrated written agreement between the OWNER and CONTRACTOR concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.
  12. *Contract Documents-The* Contract Documents establish the rights and obligations of the parties and include the Agreement, Addenda (which pertain to the Contract Documents), CONTRACTOR's Bid (including documentation accompanying the Bid and any post Bid documentation submitted prior to the Notice of Award) when attached as an exhibit to the Agreement, the Notice to Proceed, the Bonds, these General Conditions, the Supplementary Conditions, the Specifications and the Drawings as the same are more specifically identified in the Agreement, together with all Written Amendments, Change Orders, Work Change Directives, Field Orders, and ENGINEER's written interpretations and clarifications issued on or after the Effective Date of the Agreement. Approved Shop Drawings and the reports and drawings of subsurface and physical conditions are not Contract

Documents. Only printed or hard copies of the items listed in this paragraph are Contract Documents. Files in electronic media format of text, data, graphics, and the like that may be furnished by OWNER to CONTRACTOR are not Contract Documents.

13. *Contract Price*-The moneys payable by OWNER to CONTRACTOR for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of paragraph 11.03 in the case of Unit Price Work).
14. *Contract Times*-The number of days or the dates stated in the Agreement to:
  - a. achieve Substantial Completion; and
  - b. complete the Work so that it is ready for final payment as evidenced by ENGINEER's written recommendation of final payment.
15. *CONTRACTOR*-The individual or entity with whom OWNER has entered into the Agreement.
16. *Cost of the Work*-See paragraph 11.01.A for definition.
17. *Drawings*-That part of the Contract Documents prepared or approved by ENGINEER which graphically shows the scope, extent, and character of the Work to be performed by CONTRACTOR. Shop Drawings and other CONTRACTOR submittals are not Drawings as so defined.
18. *Effective Date of the Agreement*-The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.
19. *ENGINEER*-The individual or entity named as such in the Agreement.
20. *ENGINEER's Consultant*-An individual or entity having a contract with ENGINEER to furnish services as ENGINEER's independent professional associate or consultant with respect to the Project and who is identified as such in the Supplementary Conditions.
21. *Field Order*-A written order issued by ENGINEER which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.
22. *General Requirements*-Sections of Division 1 of the Specifications. The General Requirements pertain to all sections of the Specifications.
23. *Hazardous Environmental Condition*-The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Work.
24. *Hazardous Waste*-The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.
25. *Laws and Regulations; Laws or Regulations*-Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
26. *Liens*-Charges, security interests, or encumbrances upon Project funds, real property, or personal property.
27. *Milestone*-A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.



28. *Notice of Award*-The written notice by OWNER to the apparent successful bidder stating that upon timely compliance by the apparent successful bidder with the conditions precedent listed therein, OWNER will sign and deliver the Agreement.
29. *Notice to Proceed*-A written notice given by OWNER to CONTRACTOR fixing the date on which the Contract Times will commence to run and on which CONTRACTOR shall start to perform the Work under the Contract Documents.
30. *OWNER*-The individual, entity, public body, or authority with whom CONTRACTOR has entered into the Agreement and for whom the Work is to be performed.
31. *Partial Utilization*-Use by OWNER of a substantially completed part of the Work for the purpose for which it is intended (or a related purpose) prior to Substantial Completion of all the Work.
32. *PCBs*-Polychlorinated biphenyls.
33. *Petroleum*-Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.
34. *Project*-The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part as may be indicated elsewhere in the Contract Documents.
35. *Project Manual*-The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.
36. *Radioactive Material*-Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.
37. *Resident Project Representative*-The authorized representative of ENGINEER who may be assigned to the Site or any part thereof.
38. *Samples*-Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.
39. *Shop Drawings*-All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for CONTRACTOR and submitted by CONTRACTOR to illustrate some portion of the Work.
40. *Site*-Lands or areas indicated in the Contract Documents as being furnished by OWNER upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by OWNER which are designated for the use of CONTRACTOR.
41. *Specifications*-That part of the Contract Documents consisting of written technical descriptions of materials, equipment, systems, standards, and workmanship as applied to the Work and certain administrative details applicable thereto.
42. *Subcontractor*-An individual or entity having a direct contract with CONTRACTOR or with any other Subcontractor for the performance of a part of the Work at the Site.
43. *Substantial Completion*-The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of ENGINEER, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the

purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

44. *Supplementary Conditions*-That part of the Contract Documents which amends or supplements these General Conditions.
45. *Supplier*-A manufacturer, fabricator, supplier, distributor, material man, or vendor having a direct contract with CONTRACTOR or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by CONTRACTOR or any Subcontractor.
46. *Underground Facilities*-All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
47. *Unit Price Work*-Work to be paid for on the basis of unit prices.
48. *Work*-The entire completed construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.
49. *Work Change Directive*-A written statement to CONTRACTOR issued on or after the Effective Date of the Agreement and signed by OWNER and recommended by ENGINEER ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.
50. *Written Amendment*-A written statement modifying the Contract Documents, signed by OWNER and CONTRACTOR on or after the Effective Date of the Agreement and normally dealing with the non-engineering or non-technical rather than strictly construction-related aspects of the Contract Documents.

1.02 *Terminology:*

A. *Intent of Certain Terms or Adjectives:*

1. Whenever in the Contract Documents the terms "as allowed," "as approved," or terms of like effect or import are used, or the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of ENGINEER as to the Work, it is intended that such action or determination will be solely to evaluate, in general, the completed Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective shall not be effective to assign to ENGINEER any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 9.10 or any other provision of the Contract Documents.

- B. *Day:*
1. The word "day" shall constitute a calendar day of 24 hours measured from midnight to the next midnight.
- C. *Defective:*
1. The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it does not conform to the Contract Documents or does not meet the requirements of any inspection, reference standard, test, or approval referred to in the Contract Documents, or has been damaged prior to ENGINEER's recommendation of final payment (unless responsibility for the protection thereof has been assumed by OWNER at Substantial Completion in accordance with paragraph 14.04 or 14.05).
- D. *Furnish, Install, Perform, Provide:*
1. The word "furnish," when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
  2. The word "install," when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
  3. The words "perform" or "provide," when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
  4. When "furnish," "install," "perform," or "provide" is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of CONTRACTOR, "provide" is implied.
- E. Unless stated otherwise in the Contract Documents, words or phrases which have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

## **ARTICLE 2 - PRELIMINARY MATTERS**

### 2.01 *Delivery of Bonds:*

- A. When CONTRACTOR delivers the executed Agreements to OWNER, CONTRACTOR shall also deliver to OWNER such Bonds as CONTRACTOR may be required to furnish.

### 2.02 *Copies of Documents:*

- A. OWNER shall furnish to CONTRACTOR up to ten copies of the Contract Documents. Additional copies will be furnished upon request at the cost of reproduction.

### 2.03 *Commencement of Contract Times; Notice to Proceed:*

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

2.04 *Starting the Work:*

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

2.05 *Before Starting Construction:*

- A. *CONTRACTOR's Review of Contract Documents:* Before undertaking each part of the Work, CONTRACTOR shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. CONTRACTOR shall promptly report in writing to ENGINEER any conflict, error, ambiguity, or discrepancy which CONTRACTOR may discover and shall obtain a written interpretation or clarification from ENGINEER before proceeding with any Work affected thereby; however, CONTRACTOR shall not be liable to OWNER or ENGINEER for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless CONTRACTOR knew or reasonably should have known thereof.
- B. *Preliminary Schedules:* Within ten days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), CONTRACTOR shall submit to ENGINEER for its timely review:
  - 1. a preliminary progress schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;
  - 2. a preliminary schedule of Shop Drawing and Sample submittals which will list each required submittal and the times for submitting, reviewing, and processing such submittal; and
  - 3. a preliminary schedule of values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.
- C. *Evidence of Insurance:* Before any Work at the Site is started, CONTRACTOR and OWNER shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which CONTRACTOR and OWNER respectively are required to purchase and maintain in accordance with Article 5.

2.06 *Preconstruction Conference:*

- A Within 20 days after the Contract Times start to run, but before any Work at the Site is started, a conference attended by CONTRACTOR, ENGINEER, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in paragraph 2.05.B, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

2.07 *Initial Acceptance of Schedules:*

- A. Unless otherwise provided in the Contract Documents, at least ten days before submission of the first Application for Payment a conference attended by CONTRACTOR, ENGINEER, and others as appropriate will be held to review for acceptability to ENGINEER as provided below the schedules submitted in accordance with paragraph 2.05.B. CONTRACTOR shall have an additional ten days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to CONTRACTOR until acceptable schedules are submitted to ENGINEER.

1. The progress schedule will be acceptable to ENGINEER if it provides an orderly progression of the Work to completion within any specified Milestones and the Contract Times. Such acceptance will not impose on ENGINEER responsibility for the progress schedule, for sequencing, scheduling, or progress of the Work nor interfere with or relieve CONTRACTOR from CONTRACTOR's full responsibility therefore.
2. CONTRACTOR's schedule of Shop Drawing and Sample submittals will be acceptable to ENGINEER if it provides a workable arrangement for reviewing and processing the required submittals.
3. CONTRACTOR's schedule of values will be acceptable to ENGINEER as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

### **ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE**

#### 3.01 *Intent:*

- A. The Contract Documents are complementary; what is called for by one is as binding as if called for by all.
- B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided whether or not specifically called for at no additional cost to OWNER.
- C. Clarifications and interpretations of the Contract Documents shall be issued by ENGINEER as provided in Article 9.

#### 3.02 *Reference Standards:*

- A. Standards, Specifications, Codes, Laws, and Regulations:
  - A. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
  - B. No provision of any such standard, specification, manual or code, or any instruction of a Supplier shall be effective to change the duties or responsibilities of OWNER, CONTRACTOR, or ENGINEER, or any of their subcontractors, consultants, agents, or employees from those set forth in the Contract Documents, nor shall any such provision or instruction be effective to assign to OWNER, ENGINEER, or any of ENGINEER's Consultants, agents, or employees any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

#### 3.03 *Reporting and Resolving Discrepancies:*

- A. Reporting Discrepancies:
  1. If, during the performance of the Work, CONTRACTOR discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and any provision of any Law or Regulation applicable to the performance of the Work or of any standard, specification, manual or code, or of any instruction of any Supplier, CONTRACTOR shall report it to ENGINEER in

writing at once. CONTRACTOR shall not proceed with the Work affected thereby (except in an emergency as required by paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in paragraph 3.04; provided, however, that CONTRACTOR shall not be liable to OWNER or ENGINEER for failure to report any such conflict, error, ambiguity, or discrepancy unless CONTRACTOR knew or reasonably should have known thereof.

B. Resolving Discrepancies:

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

3.04 *Amending and Supplementing Contract Documents:*

- A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof in one or more of the following ways:
  1. a Written Amendment;
  2. a Change Order; or
  3. a Work Change Directive.
- B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:
  1. a Field Order;
  2. ENGINEER's approval of a Shop Drawing or Sample;
  3. ENGINEER's written interpretation or clarification.

3.05 *Reuse of Documents:*

- A. CONTRACTOR and any Subcontractor or Supplier or other individual or entity performing or furnishing any of the Work under a direct or indirect contract with OWNER:
  1. shall not have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of ENGINEER or ENGINEER's Consultant, including electronic media editions;
  2. shall not reuse any of such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of OWNER and ENGINEER and specific written verification or adaption by ENGINEER. This prohibition will survive final payment, completion, and acceptance of the Work, or termination or completion of the Contract. Nothing herein shall preclude CONTRACTOR from retaining copies of the Contract Documents for record purposes.

**ARTICLE 4-AVAILABILITY OF LAND: SUBSURFACE AND PHYSICAL CONDITIONS; REFERENCE POINTS**

4.01 *Availability of Lands:*

- A. OWNER shall furnish the Site. OWNER shall notify CONTRACTOR of any encumbrances or restrictions not of general application but specifically related to use of the Site with which CONTRACTOR must comply in performing the Work. OWNER will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If CONTRACTOR and OWNER are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in OWNER's furnishing the Site, CONTRACTOR may make a Claim therefore as provided in paragraph 10.05.
- B. Upon reasonable written request, OWNER shall furnish CONTRACTOR with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and OWNER's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. CONTRACTOR shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.02 *Subsurface and Physical Conditions:*

- A. Reports and Drawings: The Supplementary Conditions identify:
  - 1. those reports of explorations and tests of subsurface conditions at or contiguous to the Site that ENGINEER has used in preparing the Contract Documents; and
  - 2. those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) that ENGINEER has used in preparing the Contract Documents.
- B. Limited Reliance by CONTRACTOR on Technical Data Authorized: CONTRACTOR may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," CONTRACTOR may not rely upon or make any Claim against OWNER, ENGINEER, or any of ENGINEER's Consultants with respect to:
  - 1. the completeness of such reports and drawings for CONTRACTOR's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by CONTRACTOR, and safety precautions and programs incident thereto; or
  - 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
  - 3. any CONTRACTOR interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.03 *Differing Subsurface or Physical Conditions:*

- A. Notice: If CONTRACTOR believes that any subsurface or physical condition at or contiguous to the Site that is uncovered or revealed either:
  - 1. is of such a nature as to establish that any "technical data" on which CONTRACTOR is entitled to rely as provided in paragraph 4.02 is materially inaccurate; or
  - 2. is of such a nature as to require a change in the Contract Documents; or
  - 3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents; then CONTRACTOR shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by paragraph 6.16.A), notify OWNER and ENGINEER in writing about such condition. CONTRACTOR shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.
- B. ENGINEER's Review: After receipt of written notice as required by paragraph 4.03.A, ENGINEER will promptly review the pertinent condition, determine the necessity of OWNER's obtaining additional exploration or tests with respect thereto, and advise OWNER in writing (with a copy to CONTRACTOR) of ENGINEER's findings and conclusions.
- C. Possible Price and Times Adjustments:
1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in CONTRACTOR's cost of, or time required for, performance of the Work; subject however, to the following:
    - a. such condition must meet any one or more of the categories described in paragraph 4.03.A; and
    - b. with respect to Work that is paid for on a Unit Price Basis, any adjustment in Contract Price will be subject to the provisions of paragraphs 9.08 and 11.03.
  2. CONTRACTOR shall not be entitled to any adjustment in the Contract Price or Contract Times if:
    - a. CONTRACTOR knew of the existence of such conditions at the time CONTRACTOR made a final commitment to OWNER in respect of Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or
    - b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for CONTRACTOR prior to CONTRACTOR'S making such final commitment; .
    - c. CONTRACTOR failed to give the written notice within the time and as required by paragraph 4.03.A.
  3. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefore as provided in paragraph 10.05. However, OWNER, ENGINEER, and ENGINEER's Consultants shall not be liable to CONTRACTOR for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by CONTRACTOR on or in connection with any other project or anticipated project.

#### 4.04 *Underground Facilities:*

- A. Shown or Indicated: The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to OWNER or ENGINEER by the owners of such Underground Facilities, including OWNER, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:



1. OWNER and ENGINEER shall not be responsible for the accuracy or completeness of any such information or data; and
2. the cost of all of the following will be included in the Contract Price, and CONTRACTOR shall have full responsibility for:
  - a. reviewing and checking all such information and data,
  - b. locating all Underground Facilities shown or indicated in the Contract Documents,
  - c. coordination of the Work with the owners of such Underground Facilities, including OWNER, during construction;
  - d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. Not Shown or Indicated:

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated With reasonable accuracy in the Contract Documents, CONTRACTOR shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to OWNER and ENGINEER. ENGINEER will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, CONTRACTOR shall be responsible for the safety and protection of such Underground Facility.
2. If ENGINEER concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price of Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that CONTRACTOR did not know of and could not reasonably have been expected to be aware of or to have anticipated. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, OWNER or CONTRACTOR may make a Claim therefore as provided in paragraph 10.05.

4.05 *Reference Points: (NOT USED)*

4.06 *Hazardous Environmental Condition at Site:*

- A. *Reports and Drawings:* Reference is made to the Supplementary Conditions for the identification of those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that have been utilized by the ENGINEER in the preparation of the Contract Documents.

- B. *Limited Reliance by CONTRACTOR on Technical Data Authorized:* CONTRACTOR may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," CONTRACTOR may not rely upon or make any Claim against OWNER, ENGINEER or any of ENGINEER's Consultants with respect to:
1. the completeness of such reports and drawings for CONTRACTOR's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by CONTRACTOR and safety precautions and programs incident thereto; or
  2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
  3. any CONTRACTOR interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.
- C. CONTRACTOR shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. CONTRACTOR shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by CONTRACTOR, Subcontractors, Suppliers, or anyone else for whom CONTRACTOR is responsible.
- D. If CONTRACTOR encounters a Hazardous Environmental Condition or if CONTRACTOR or anyone for whom CONTRACTOR is responsible creates a Hazardous Environmental Condition, CONTRACTOR shall immediately:
1. secure or otherwise isolate such condition;
  2. stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by paragraph 6.16); and
  3. notify OWNER and ENGINEER (and promptly thereafter confirm such notice in writing). OWNER shall promptly consult with ENGINEER concerning the necessity for OWNER to retain a qualified expert to evaluate such condition or take corrective action, if any.
- E. CONTRACTOR shall not be required to resume Work in connection with such condition or in any affected area until after OWNER has obtained any required permits related thereto and delivered to CONTRACTOR written notice:
1. specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or
  2. specifying any special conditions under which such Work may be resumed safely. If OWNER and CONTRACTOR cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by CONTRACTOR, either party may make a Claim therefore as provided in paragraph 10.05.
- F. If after receipt of such written notice CONTRACTOR does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then OWNER may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If OWNER and CONTRACTOR cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefore as provided in paragraph 10.05. OWNER may have such deleted portion of the Work performed by OWNER's own forces or others in accordance with Article 7.

- G. To the fullest extent permitted by Laws and Regulations, OWNER shall indemnify and hold harmless CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants and the officers, directors, partners, employees, agents, other consultants, and subcontractors of each and any of them from and against" all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition:
  - 1. was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and
  - 2. was not created by CONTRACTOR or by anyone for whom CONTRACTOR is responsible. Nothing in this paragraph 4.06.E shall obligate OWNER to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- H. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold . harmless OWNER, ENGINEER, ENGINEER's Consultants, and the officers, directors, partners, employees, agents, other consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by CONTRACTOR or by anyone for whom CONTRACTOR is responsible. Nothing in this paragraph 4.06.F shall obligate CONTRACTOR to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- I. The provisions of paragraphs 4.02, 4.03, and 4.04 are not intended to apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

## **ARTICLE 5 - BONDS AND INSURANCE**

### *5.01 Performance, Payment, and Other Bonds:*

- A. CONTRACTOR shall furnish performance and payment Bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all CONTRACTOR's obligations under the Contract Documents. These Bonds shall remain in effect at least until one year after the date when final payment becomes due, except as provided otherwise by Laws or Regulations or by the Contract Documents. CONTRACTOR shall also furnish such other Bonds as are required by the Contract Documents.
- B. All Bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All Bonds signed by an agent must be accompanied by a certified copy of such agent's authority to act.
- C. If the surety on any Bond furnished by CONTRACTOR is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of paragraph 5.01.B, CONTRACTOR shall within 20 days thereafter substitute another Bond and surety, both of which shall comply with the requirements of paragraphs 5.01.B and 5.02.

### *5.02 Licensed Sureties and Insurers:*

- A All Bonds and insurance required by the Contract Documents to be purchased and maintained by OWNER or CONTRACTOR shall be obtained from surety or insurance

companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue Bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 *Certificates of Insurance:*

- A. CONTRACTOR shall deliver to OWNER, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by OWNER or any other additional insured) which CONTRACTOR is required to purchase and maintain. OWNER shall deliver to CONTRACTOR, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by CONTRACTOR or any other additional insured) which OWNER is required to purchase and maintain.

5.04 *CONTRACTOR'S Liability Insurance:*

- A. CONTRACTOR shall purchase and maintain such liability and other insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from CONTRACTOR's performance of the Work and CONTRACTOR's other obligations under the Contract Documents, whether it is to be performed by CONTRACTOR, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:
1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;
  2. claims for damages because of bodily injury, occupational sickness or disease, or death of CONTRACTOR's employees;
  3. claims for damages because of bodily injury, sickness or disease, or death of any person other than CONTRACTOR's employees;
  4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:
    - a. by any person as a result of an offense directly or indirectly related to the employment of such person by CONTRACTOR,
    - b. by any other person for any other reason;
  5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and
  6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.
- B. The policies of insurance so required by this paragraph 5.04 to be purchased and maintained shall:
1. with respect to insurance required by paragraphs 5.04.A.3 through 5.04.A.6 inclusive, include as additional insureds (subject to any customary exclusion in respect of professional liability) OWNER, ENGINEER, ENGINEER's Consultants, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;

2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;
3. include completed operations insurance;
4. include contractual liability insurance covering CONTRACTOR's indemnity obligations under paragraphs 6.07, 6.11, and 6.20;
5. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least thirty days prior written notice has been given to OWNER and CONTRACTOR and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the CONTRACTOR pursuant to paragraph 5.03 will so provide);
6. remain in effect at least until final payment and at all times thereafter when CONTRACTOR may be correcting, removing, or replacing defective Work in accordance with paragraph 13.07; and
7. with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment (and CONTRACTOR shall furnish OWNER and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to OWNER and any such additional insured of continuation of such insurance at final payment and one year thereafter).

C. The limits of liability for the insurance required by paragraph 5.04 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

1. Worker's Compensation, and related coverages under paragraphs 5.04.A.1 and A.2 of the General Conditions.

a.	State:	Statutory
b.	Applicable Federal (e.g., Longshoreman's)	Statutory
c.	Employer's Liability	
i.	Each Accident	\$ 500,000
ii.	Disease - Policy Limit	\$ 500,000
iii.	Disease - Each Employee	\$ 500,000

2. CONTRACTOR's General Liability under paragraphs 5.04.A.3 through A.6 of the General Conditions which shall include completed operations and product liability coverages and eliminate the exclusion with respect to property under the care, custody and control of CONTRACTOR. Coverage will provide explosion, collapse, and underground coverage.

a.	General Aggregate	\$2,000,000
b.	Products- Completed Operations Aggregate	\$1,000,000
c.	Personal and Advertising Injury	\$1,000,000

- d. Each Occurrence  
(Bodily Injury & Property Damage) \$1,000,000
  - e. Fire Damage (Any One Fire)  
OR Damage to Rented Premises \$50,000
  - f. Medical Expense (Any One Person) \$5,000
3. Automobile Liability under paragraph 5.04.A.6 of the General Conditions.
- a. Combined Single Limit  
Each Accident \$1,000,000
- OR
- b. Bodily Injury:  
Each Person \$500,000  
Each Accident \$1,000,000
4. Umbrella/ Excess Liability insurance on an excess and following form basis above the employer's liability, commercial general liability and comprehensive automobile liability coverages as outlined above.
- a. Excess or Umbrella Liability
    - i. General Aggregate \$2,000,000
    - ii. Each Occurrence \$2,000,000
5. OWNER and ENGINEER shall be listed on the CONTRACTOR's policy and certificates of insurance as additional insureds.

5.05 *OWNER's Liability Insurance:*

- A. In addition to the insurance required to be provided by CONTRACTOR under paragraph 5.04, OWNER, at OWNER's option, may purchase and maintain at OWNER's expense OWNER's own liability insurance as will protect OWNER against claims which may arise from operations under the Contract Documents.

5.06 *Property Insurance:*

- A. OWNER shall not be responsible for purchasing and maintaining any property insurance to protect the interests of CONTRACTOR, subcontractors, or others in the Work. Unless otherwise agreed in writing between OWNER and CONTRACTOR, and until final completion of the Work and acceptance of the Work in accordance with paragraph 14.07 of the General Conditions, all risk of loss with no right of recovery against the OWNER, ENGINEER, ENGINEER'S consultants (and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them) will be borne by CONTRACTOR, subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage, each may purchase it and maintain it at the purchaser's own expense.
- B. If property insurance is purchased, OWNER, ENGINEER, ENGINEER's consultants, CONTRACTOR, and subcontractors shall be named insureds or as additional insureds.
- C. It is the CONTRACTOR's responsibility to provide 30-day prior written notice to the

OWNER, ENGINEER and additional insureds if insurance required as set forth in paragraph 5.06 will be cancelled, materially changed or not renewed. Failure of the CONTRACTOR to provide all required insurance, or failure to provide the notice set forth in this paragraph, shall not relieve the CONTRACTOR of its insurance obligations. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with paragraph 5.06 will contain waiver provisions in accordance with paragraph 5.07.

1. include the interests of OWNER, CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an additional insured;
2. be written on a Builder's Risk "all-risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, false work, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, and such other perils or causes of loss as may be specifically required by the Supplementary Conditions;
3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);
4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by OWNER prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by ENGINEER;
5. allow for partial utilization of the Work by OWNER;
6. include testing and startup; and
7. be maintained in effect until final payment is made unless otherwise agreed to in writing by OWNER, CONTRACTOR, and ENGINEER with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.

#### 5.07 Waiver of Rights:

- A. OWNER and CONTRACTOR intend that all policies purchased in accordance with paragraph 5.06 will protect OWNER, CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or additional insureds thereunder. OWNER and CONTRACTOR waive all rights against each other and their respective officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors, ENGINEER, ENGINEER's Consultants, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by OWNER as trustee or otherwise payable under any policy so issued.
- B. OWNER waives all rights against CONTRACTOR, Subcontractors, ENGINEER,

ENGINEER's Consultants, and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them for:

1. loss due to business interruption, loss of use, or other consequential loss extending beyond *direct* physical loss or damage to OWNER's property or the Work caused by, arising out of, or resulting from fire or other peril whether or not insured by OWNER;
  2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by OWNER during partial utilization pursuant to paragraph 14.05, after Substantial Completion pursuant to paragraph 14.04, or after final payment pursuant to paragraph 14.07.
- C. Any insurance policy maintained by OWNER covering any loss, damage or consequential loss referred to in paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against CONTRACTOR, Subcontractors, ENGINEER, or ENGINEER's Consultants and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them.

5.08 *Receipt and Application of Insurance Proceeds:*

- A. Any insured loss under the policies of insurance required by paragraph 5.06 will be adjusted with OWNER and made payable to OWNER as fiduciary for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of paragraph 5.08.B. OWNER shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order or Written Amendment.
- B. OWNER as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to OWNER's exercise of this power. If such objection be made, OWNER as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties *in* interest may reach. If no such agreement among the parties in interest is reached, OWNER as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, OWNER as fiduciary shall give bond for the proper performance of such duties.

5.09 *Acceptance of Bonds and Insurance; Option to Replace:*

- A. If either OWNER or CONTRACTOR has any objection to the coverage afforded by or other provisions of the Bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by paragraph 2.05.C. OWNER and CONTRACTOR shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the Bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent Bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.



5.10 *Partial Utilization, Acknowledgment of Property Insurer:*

- A. If OWNER finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

**ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES**

6.01 *Supervision and Superintendence:*

- A. CONTRACTOR shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction, but CONTRACTOR shall not be responsible for the negligence of OWNER or ENGINEER in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents. CONTRACTOR shall be responsible to see that the completed Work complies accurately with the Contract Documents.
- B. At all times during the progress of the Work, CONTRACTOR shall assign a competent resident superintendent thereto who shall not be replaced without written notice to OWNER and ENGINEER except under extraordinary circumstances. The superintendent will be CONTRACTOR's representative at the Site and shall have authority to act on behalf of CONTRACTOR. All communications given to or received from the superintendent shall be binding on CONTRACTOR.

6.02 *Labor; Working Hours:*

- A. CONTRACTOR shall provide competent, suitably qualified personnel to survey, lay out, and construct the Work as required by the Contract Documents. CONTRACTOR shall at all times maintain good discipline and order at the Site.
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours, and CONTRACTOR will not permit overtime work or the performance of Work on Saturday, Sunday, or any legal holiday without OWNER's written consent (which will not be unreasonably withheld) given after prior written notice to ENGINEER.

6.03 *Services, Materials, and Equipment:*

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

instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 *Progress Schedule:*

- A CONTRACTOR shall adhere to the progress schedule established in accordance with paragraph 2.07 as it may be adjusted from time to time as provided below.
1. CONTRACTOR shall submit to ENGINEER for acceptance (to the extent indicated in paragraph 2.07) proposed adjustments in the progress schedule that will not result in changing the Contract Times (or Milestones). Such adjustments will conform generally to the progress schedule then in effect and additionally will comply with any provisions of the General Requirements applicable thereto.
  2. Proposed adjustments in the progress schedule that will change the Contract Times (or Milestones) shall be submitted in accordance with the requirements of Article 12. Such adjustments may only be made by a Change Order or Written Amendment in accordance with Article 12.

6.05 *Substitutes and "Or-Equals":*

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to ENGINEER for review under the circumstances described below.
1. "Or-Equal" Items: If in ENGINEER's sole discretion an item of material or equipment proposed by CONTRACTOR is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by ENGINEER as an "or-equal" item, in which case review and approval of the proposed item may, in ENGINEER's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:
    - a. in the exercise of reasonable judgment ENGINEER determines that:
      - (i) it is at least equal in quality, durability, appearance, strength, and design characteristics;
      - (ii) it will reliably perform at least equally well the function imposed by the design concept of the completed Project as a functioning whole, and;
    - b. CONTRACTOR certifies that:
      - (i) there is no increase in cost to the OWNER; and
      - (ii) it will conform substantially, even with deviations, to the detailed requirements of the item named in the Contract Documents.
  2. Substitute Items:
    - a. If in ENGINEER's sole discretion an item of material or equipment proposed by CONTRACTOR does not qualify as an "or-equal" item under paragraph 6.05.A.1, it will be considered a proposed substitute item.
    - b. CONTRACTOR shall submit sufficient information as provided below to allow ENGINEER to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefore. Requests for review of proposed substitute items of

material or equipment will not be accepted by ENGINEER from anyone other than CONTRACTOR.

- c. The procedure for review by ENGINEER will be as set forth in paragraph 6.05.A.2.d, as supplemented in the General Requirements and as ENGINEER may decide is appropriate under the circumstances.
  - d. CONTRACTOR shall first make written application to ENGINEER for review of a proposed substitute item of material or equipment that CONTRACTOR seeks to furnish or use. The application shall certify that the proposed substitute item will perform adequately the functions and achieve the results called for by the general design, be similar in substance to that specified, and be suited to the same use as that specified. The application will state the extent, if any, to which the use of the proposed substitute item will prejudice CONTRACTOR's achievement of Substantial Completion on time, whether or not use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with OWNER for work on the Project) to adapt the design to the proposed substitute item and whether or not incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed substitute item from that specified will be identified in the application, and available engineering, sales, maintenance, repair, and replacement services will be indicated. The application will also contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change, all of which will be considered by ENGINEER in evaluating the proposed substitute item. ENGINEER may require CONTRACTOR to furnish additional data about the proposed substitute item.
- B. Substitute Construction Methods or Procedures: If a specific means, method, technique, sequence, or procedure of construction is shown or indicated in and expressly required by the Contract Documents, CONTRACTOR may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by ENGINEER. CONTRACTOR shall submit sufficient information to allow ENGINEER, in ENGINEER's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The procedure for review by ENGINEER will be similar to that provided in subparagraph 6.05.A.2.
- C. Engineer's Evaluation: ENGINEER will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to paragraphs 6.05.A and 6.05.B. ENGINEER will be the sole judge of acceptability. No "or-equal" or substitute will be ordered, installed, or utilized until ENGINEER's review is complete, which will be evidenced by either a Change Order for a substitute or an approved Shop Drawing for an "or equal." ENGINEER will advise CONTRACTOR in writing of any negative determination.
- D. Special Guarantee: OWNER may require CONTRACTOR to furnish at CONTRACTOR's expense a special performance guarantee or other surety with respect to any substitute.
- E. ENGINEER's Cost Reimbursement: ENGINEER will record time required by ENGINEER and ENGINEER's Consultants in evaluating substitute proposed or submitted by CONTRACTOR pursuant to paragraphs 6.05.A.2 and 6.05.B and in making changes in the Contract Documents (or in the provisions of any other direct contract with OWNER for work on the Project) occasioned thereby. Whether or not ENGINEER approves a substitute item so proposed or submitted by CONTRACTOR, CONTRACTOR shall reimburse OWNER for the charges of ENGINEER and ENGINEER's Consultants for evaluating each such proposed substitute.

- F. CONTRACTOR's Expense: CONTRACTOR shall provide all data in support of any proposed substitute or "or-equal" at CONTRACTOR's expense.

6.06 *Concerning Subcontractors, Suppliers, and Others:*

- A. CONTRACTOR shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to OWNER as indicated in paragraph 6.06.B), whether initially or as a replacement, against whom OWNER may have reasonable objection. CONTRACTOR shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom CONTRACTOR has reasonable objection.
- B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to OWNER in advance for acceptance by OWNER by a specified date prior to the Effective Date of the Agreement, and if CONTRACTOR has submitted a list thereof in accordance with the Supplementary Conditions, OWNER's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. CONTRACTOR shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued or Written Amendment signed. No acceptance by OWNER of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of OWNER or ENGINEER to reject defective Work.
- C. CONTRACTOR shall be fully responsible to OWNER and ENGINEER for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as CONTRACTOR is responsible for CONTRACTOR's own acts and omissions. Nothing in the Contract Documents shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between OWNER or ENGINEER and any such Subcontractor, Supplier or other individual or entity, nor shall it create any obligation on the part of OWNER or ENGINEER to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.
- D. CONTRACTOR shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with CONTRACTOR.
- E. CONTRACTOR shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with ENGINEER through CONTRACTOR.
- F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control CONTRACTOR in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- G. All Work performed for CONTRACTOR by a Subcontractor or Supplier will be pursuant to an appropriate agreement between CONTRACTOR and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of OWNER and ENGINEER. Whenever any such agreement is with a Subcontractor or Supplier who is listed as an additional insured on the property insurance provided in paragraph 5.06, the agreement between the CONTRACTOR and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against OWNER, CONTRACTOR, ENGINEER, ENGINEER's Consultants, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or

causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, CONTRACTOR will obtain the same.

6.07 *Patent Fees and Royalties:*

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

6.08 *Permits:*

- A. Unless otherwise provided in the Supplementary Conditions, CONTRACTOR shall obtain and pay for all construction permits and licenses. OWNER shall assist CONTRACTOR, when necessary, in obtaining such permits and licenses. CONTRACTOR shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. CONTRACTOR shall pay all charges of utility owners for connections to the Work, and OWNER shall pay all charges of such utility owners for capital costs related thereto, such as plant investment fees.

6.09 *Laws and Regulations:*

- A. CONTRACTOR shall give all notices and comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither OWNER nor ENGINEER shall be responsible for monitoring CONTRACTOR's compliance with any Laws or Regulations.
- B. If CONTRACTOR performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, CONTRACTOR shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work; however, it shall not be CONTRACTOR's primary responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve CONTRACTOR of CONTRACTOR's obligations under paragraph 3.03.
- C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work may be the subject of an adjustment in Contract Price or Contract Times. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefore as provided in paragraph 10.05.

6.10 *Taxes:*

- A. CONTRACTOR shall pay all sales, consumer, use, and other similar taxes required to be paid by CONTRACTOR in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work. See Article 22, Section 00 2100 Instructions to Bidders.

6.11 *Use of Site and Other Areas:*

A. Limitation on Use of Site and Other Areas:

- A. CONTRACTOR shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. CONTRACTOR shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.
- B. Should any claim be made by any such owner or occupant because of the performance of the Work, CONTRACTOR shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.
- C. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultant and the officers, directors, partners, employees, agents, and other consultants of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against OWNER, ENGINEER, or any other party indemnified hereunder to the extent caused by or based upon CONTRACTOR's performance of the Work.
- B. Removal of Debris During Performance of the Work: During the progress of the Work CONTRACTOR shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.
- C. Cleaning: Prior to Substantial Completion of the Work CONTRACTOR shall clean the Site and make it ready for utilization by OWNER. At the completion of the Work CONTRACTOR shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.
- D. Loading Structures: CONTRACTOR shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall CONTRACTOR subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 *Record Documents:*

- A. CONTRACTOR shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Written Amendments, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to ENGINEER for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to ENGINEER for OWNER.

6.13 *Safety and Protection:*

- A. CONTRACTOR shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. CONTRACTOR shall take all

necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. all persons on the Site or who may be affected by the Work;
2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

B. CONTRACTOR shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. CONTRACTOR shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property. All damage, injury, or loss to any property referred to in paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by CONTRACTOR, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by CONTRACTOR (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of OWNER or ENGINEER or ENGINEER's Consultant, or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of CONTRACTOR or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them}. CONTRACTOR's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and ENGINEER has issued a notice to OWNER and CONTRACTOR in accordance with paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion}.

6.14 *Safety Representative:*

A. CONTRACTOR shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 *Hazard Communication Programs:*

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

6.16 *Emergencies:*

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

6.17 *Shop Drawings and Samples:*

A. CONTRACTOR shall submit Shop Drawings to ENGINEER for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals. All submittals will be identified as ENGINEER may require and in the number of copies

specified in the General Requirements. The data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show ENGINEER the services, materials, and equipment CONTRACTOR proposes to provide and to enable ENGINEER to review the information for the limited purposes required by paragraph 6.17.E.

- B. CONTRACTOR shall also submit Samples to ENGINEER for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals. Each Sample will be identified clearly as to material, Supplier, pertinent data such as catalog numbers, and the use for which intended and otherwise as ENGINEER may require to enable ENGINEER to review the submittal for the limited purposes required by paragraph 6.17.E. The numbers of each Sample to be submitted will be as specified in the Specifications.
- C. Where a Shop Drawing or Sample is required by the Contract Documents or the schedule of Shop Drawings and Sample submittals acceptable to ENGINEER as required by paragraph 2.07, any related Work performed prior to ENGINEER's review and approval of the pertinent submittal will be at the sole expense and responsibility of CONTRACTOR.
- D. Submittal Procedures:
  - 1. Before submitting each Shop Drawing or Sample, CONTRACTOR shall have determined and verified:
    - a. all field measurements, quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
    - b. all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work;
    - c. all information relative to means, methods, techniques, sequences, and procedures of construction and safety precautions and programs incident thereto; and
    - d. CONTRACTOR shall also have reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.
  - 2. Each submittal shall bear a stamp or specific written indication that CONTRACTOR has satisfied CONTRACTOR's obligations under the Contract Documents with respect to CONTRACTOR's review and approval of that submittal.
  - 3. At the time of each submittal, CONTRACTOR shall give ENGINEER specific written notice of such variations, if any, that the Shop Drawing or Sample submitted may have from the requirements of the Contract Documents, such notice to be in a written communication separate from the submittal; and, in addition, shall cause a specific notation to be made on each Shop Drawing and Sample submitted to ENGINEER for review and approval of each such variation.
- E. ENGINEER's Review:
  - 1. ENGINEER will timely review and approve Shop Drawings and Samples in accordance with the schedule of Shop Drawings and Sample submittals acceptable to ENGINEER. ENGINEER's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
  - 2. ENGINEER's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means,



method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

3. ENGINEER's review and approval of Shop Drawings or Samples shall not relieve CONTRACTOR from responsibility for any variation from the requirements of the Contract Documents unless CONTRACTOR has in writing called ENGINEER's attention to each such variation at the time of each submittal as required by paragraph 6.17.D.3 and ENGINEER has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample approval; nor will any approval by ENGINEER relieve CONTRACTOR from responsibility for complying with the requirements of paragraph 6.17.D.1.

F. Resubmittal Procedures:

1. CONTRACTOR shall make corrections required by ENGINEER and shall return the required number of corrected copies of Shop Drawings and submit as required new Samples for review and approval. CONTRACTOR shall direct specific attention in writing to revisions other than the corrections called for by ENGINEER on previous submittals.

6.18 *Continuing the Work:*

- A. CONTRACTOR shall carry on the Work and adhere to the progress schedule during all disputes or disagreements with OWNER. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by paragraph 15.04 or as OWNER and CONTRACTOR may otherwise agree in writing.

6.19 *CONTRACTOR's General Warranty and Guarantee:*

- A. CONTRACTOR warrants and guarantees to OWNER, ENGINEER, and ENGINEER's Consultants that all Work will be in accordance with the Contract Documents and will not be defective. CONTRACTOR's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper maintenance or operation by persons other than CONTRACTOR, Subcontractors, Suppliers, or any other individual or entity for whom CONTRACTOR is responsible; or
2. normal wear and tear under normal usage.

- B. CONTRACTOR's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of CONTRACTOR's obligation to perform the Work in accordance with the Contract Documents:

1. observations by ENGINEER;
2. recommendation by ENGINEER or payment by OWNER of any progress or final payment;
3. the issuance of a certificate of Substantial Completion by ENGINEER or any payment related thereto by OWNER;
4. use or occupancy of the Work or any part thereof by OWNER;
5. any acceptance by OWNER or any failure to do so;
6. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by ENGINEER;

7. any inspection, test, or approval by others;
8. any correction of defective Work by OWNER.

6.20 *Indemnification:*

- A. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultants, and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage:
  1. is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom; and
  2. is caused in whole or in part by any negligent act or omission of CONTRACTOR, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable, regardless of whether or not caused in part by any negligence or omission of an individual or entity indemnified hereunder or whether liability is imposed upon such indemnified party by Laws and Regulations regardless of the negligence of any such individual or entity.
- B. In any and all claims against OWNER or ENGINEER or any of their respective consultants, agents, officers, directors, partners, or employees by any employee (or the survivor or personal representative of such employee) of CONTRACTOR, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for CONTRACTOR or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. The indemnification obligations of CONTRACTOR under paragraph 6.20.A shall not extend to the liability of ENGINEER and ENGINEER's Consultants or to the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them arising out of:
  1. the preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
  2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

**ARTICLE 7 - OTHER WORK**

7.01 *Related Work at Site:*

- A. OWNER may perform other work related to the Project at the Site by OWNER's employees, or let other direct contracts therefore, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:
  - A. written notice thereof will be given to CONTRACTOR prior to starting any such other work; and
  - B. if OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times

that should be allowed as a result of such other work, a Claim may be made therefore as provided in paragraph 10.05.

- B. CONTRACTOR shall afford each other contractor who is a party to such a direct contract and each utility owner (and OWNER, if OWNER is performing the other work with OWNER's employees) proper and safe access to the Site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work and shall properly coordinate the Work with theirs. Unless otherwise provided in the Contract Documents, CONTRACTOR shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. CONTRACTOR shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of ENGINEER and the others whose work will be affected. The duties and responsibilities of CONTRACTOR under this paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of CONTRACTOR in said direct contracts between OWNER and such utility owners and other contractors.
- C. If the proper execution or results of any part of CONTRACTOR's Work depends upon work performed by others under this Article 7, CONTRACTOR shall inspect such other work and promptly report to ENGINEER in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of CONTRACTOR's Work. CONTRACTOR's failure to so report will constitute an acceptance of such other work as fit and proper for integration with CONTRACTOR's Work except for latent defects and deficiencies in such other work.

7.02 *Coordination:*

- A. If OWNER intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:
  - 1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;
  - 2. the specific matters to be covered by such authority and responsibility will be itemized; and
  - 3. the extent of such authority and responsibilities will be provided.
- B. Unless otherwise provided in the Supplementary Conditions, OWNER shall have sole authority and responsibility for such coordination.

**ARTICLE 8 - OWNER'S RESPONSIBILITIES**

8.01 *Communications to Contractor:*

- A. Except as otherwise provided in these General Conditions, OWNER shall issue all communications to CONTRACTOR through ENGINEER.

8.02 *Replacement of ENGINEER:*

- A. In case of termination of the employment of ENGINEER, OWNER shall appoint an engineer to whom CONTRACTOR makes no reasonable objection, whose status under the Contract Documents shall be that of the former ENGINEER.

8.03 *Furnish Data:*

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

- 8.04 *Pay Promptly When Due:*
- A. OWNER shall make payments to CONTRACTOR promptly when they are due as provided in paragraphs 14.02.C and 14.07.C.
- 8.05 *Lands and Easements; Reports and Tests:*
- A. OWNER's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in paragraphs 4.01 and 4.05. Paragraph 4.02 refers to OWNER's identifying and making available to CONTRACTOR copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site that have been utilized by ENGINEER in preparing the Contract Documents.
- 8.06 *Insurance:*
- A. OWNER's responsibilities, if any, in respect to purchasing and maintaining liability and property insurance are set forth in Article 5.
- 8.07 *Change Orders:*
- A. OWNER is obligated to execute Change Orders as indicated in paragraph 10.03.
- 8.08 *Inspections, Tests, and Approvals:*
- A. OWNER's responsibility in respect to certain inspections, tests, and approvals is set forth in paragraph 13.03.B.
- 8.09 *Limitations on OWNER's Responsibilities:*
- A. The OWNER shall not supervise, direct, or have control or authority over, nor be responsible for, CONTRACTOR's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of CONTRACTOR to comply with Laws and Regulations applicable to the performance of the Work. OWNER will not be responsible for CONTRACTOR's failure to perform the Work in accordance with the Contract Documents.
- 8.10 *Undisclosed Hazardous Environmental Condition:*
- A. OWNER's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in paragraph 4.06.
- 8.11 *Evidence of Financial Arrangements:*
- A. If and to the extent OWNER has agreed to furnish CONTRACTOR reasonable evidence that financial arrangements have been made to satisfy OWNER's obligations under the Contract Documents, OWNER's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

## **ARTICLE 9 -ENGINEER'S STATUS DURING CONSTRUCTION**

- 9.01 *OWNER'S Representative:*
- A. ENGINEER will be OWNER's representative during the construction period. The duties and responsibilities and the limitations of authority of ENGINEER as OWNER's representative during construction are set forth in the Contract Documents and will not be changed without written consent of OWNER and ENGINEER.
- 9.02 *Visits to Site:*
- A. ENGINEER will make visits to the Site at intervals appropriate to the various stages of construction as ENGINEER deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of CONTRACTOR's executed Work. Based on information obtained during such

visits and observations, ENGINEER, for the benefit of OWNER, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. ENGINEER will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. ENGINEER's efforts will be directed toward providing for OWNER a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, ENGINEER will keep OWNER informed of the progress of the Work and will endeavor to guard OWNER against defective Work.

- B. ENGINEER's visits and observations are subject to all the limitations on ENGINEER's authority and responsibility set forth in paragraph 9.10, and particularly, but without limitation, during or as a result of ENGINEER's visits or observations of CONTRACTOR's Work ENGINEER will not supervise, direct, control, or have authority over or be responsible for CONTRACTOR's means, methods, techniques, sequences, or procedures of construction, or safety precautions and programs incident thereto, or for any failure of CONTRACTOR to comply with Laws and Regulations applicable to the performance of the Work.

9.03 *Project Representative:*

- A. If OWNER and ENGINEER agree, ENGINEER will furnish a Resident Project Representative to assist ENGINEER in providing more extensive observation of the Work. The responsibilities and authority and limitations thereon of any such Resident Project Representative and assistants will be as provided in paragraph 9.10 and in the Supplementary Conditions. If OWNER designates another representative or agent to represent OWNER at the Site who is not ENGINEER's Consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Clarifications and Interpretations:*

- A. ENGINEER will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents as ENGINEER may determine necessary, which shall be consistent with the intent of and reasonably inferable from the Contract Documents. Such written clarifications and interpretations will be binding on OWNER and CONTRACTOR. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a written clarification or interpretation, a Claim may be made therefore as provided in paragraph 10.05.

9.05 *Authorized Variations in Work:*

- A. ENGINEER may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on OWNER and also on CONTRACTOR, who shall perform the Work involved promptly. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of a Field Order, a Claim may be made therefore as provided in paragraph 10.05.

9.06 *Rejecting Defective Work:*

- A. ENGINEER will have authority to disapprove or reject Work which ENGINEER believes to be defective, or that ENGINEER believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. ENGINEER will also have authority to require special inspection or testing of the Work as provided in paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.07 *Shop Drawings, Change Orders and Payments:*

- A. In connection with ENGINEER's authority as to Shop Drawings and Samples, see paragraph 6.17.
- B. In connection with ENGINEER's authority as to Change Orders, see Articles 10, 11, and 12.
- C. In connection with ENGINEER's authority as to Applications for Payment, see Article 14.

9.08 *Determinations for Unit Price Work:*

- A. ENGINEER will determine the actual quantities and classifications of Unit Price Work performed by CONTRACTOR. ENGINEER will review with CONTRACTOR the ENGINEER's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). ENGINEER's written decision thereon will be final and binding (except as modified by ENGINEER to reflect changed factual conditions or more accurate data) upon OWNER and CONTRACTOR, subject to the provisions of paragraph 10.05.

9.09 *Decisions on Requirements of Contract Documents and Acceptability of Work:*

- A. ENGINEER will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. Claims, disputes and other matters relating to the acceptability of the Work, the quantities and classifications of Unit Price Work, the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, and Claims seeking changes in the Contract Price or Contract Times will be referred initially to ENGINEER in writing, in accordance with the provisions of paragraph 10.05, with a request for a formal decision.
- B. When functioning as interpreter and judge under this paragraph 9.09, ENGINEER will not show partiality to OWNER or CONTRACTOR and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity. The rendering of a decision by ENGINEER pursuant to this paragraph 9.09 with respect to any such Claim, dispute, or other matter (except any which have been waived by the making or acceptance of final payment as provided in paragraph 14.07) will be a condition precedent to any exercise by OWNER or CONTRACTOR of such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations in respect of any such Claim, dispute, or other matter.

9.10 *Limitations on ENGINEER's Authority and Responsibilities:*

- A. Neither ENGINEER's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by ENGINEER in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by ENGINEER shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by ENGINEER to CONTRACTOR, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.
- B. ENGINEER will not supervise, direct, control, or have authority over or be responsible for CONTRACTOR's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of CONTRACTOR to comply with Laws and Regulations applicable to the performance of the Work. ENGINEER will not be responsible for CONTRACTOR's failure to perform the Work in accordance with the Contract Documents.
- C. ENGINEER will not be responsible for the acts or omissions of CONTRACTOR or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. ENGINEER's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by

paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with, the Contract Documents.

- E. The limitations upon authority and responsibility set forth in this paragraph 9.10 shall also apply to ENGINEER's Consultants, Resident Project Representative, and assistants.

## **ARTICLE 10 - CHANGES IN THE WORK CLAIMS**

### *10.01 Authorized Changes in the Work:*

- A. Without invalidating the Agreement and without notice to any surety, OWNER may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Written Amendment, a Change Order, or a Work Change Directive. Upon receipt of any such document, CONTRACTOR shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).
- B. If OWNER and CONTRACTOR are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefore as provided in paragraph 10.05.

### *10.02 Unauthorized Changes in the Work:*

- A. CONTRACTOR shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in paragraph 3.04, except in the case of an emergency as provided in paragraph 6.16 or in the case of uncovering Work as provided in paragraph 13.04.B.

### *10.03 Execution of Change Orders:*

- A. OWNER and CONTRACTOR shall execute appropriate Change Orders recommended by ENGINEER (or Written Amendments) covering:
  - A. changes in the Work which are:
    1. ordered by OWNER pursuant to paragraph 10.01.A,
    2. required because of acceptance of defective Work under paragraph 13.08.A or OWNER's correction of defective Work under paragraph 13.09,
    3. agreed to by the parties;
  - B. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and
  - C. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by ENGINEER pursuant to paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, CONTRACTOR shall carry on the Work and adhere to the progress schedule as provided in paragraph 6.18.A.

### *10.04 Notification to Surety:*

- A. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times) is required by the provisions of any Bond to be given to a surety, the giving of any such

notice will be CONTRACTOR's responsibility. The amount of each applicable Bond will be adjusted to reflect the effect of any such change.

#### 10.05 *Claims and Disputes:*

- A. Notice: Written notice stating the general nature of each Claim, dispute, or other matter shall be delivered by the claimant to ENGINEER and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. Notice of the amount or extent of the Claim, dispute, or other matter with supporting data shall be delivered to the ENGINEER and the other party to the Contract within 60 days after the start of such event (unless ENGINEER allows additional time for claimant to submit additional or more accurate data in support of such Claim, dispute, or other matter). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of paragraph 12.01.B. A Claim for an adjustment in Contract Time shall be prepared in accordance with the provisions of paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to ENGINEER and the claimant within 30 days after receipt of the claimant's last submittal (unless ENGINEER allows additional time).
- B. ENGINEER's Decision: ENGINEER will render a formal decision in writing within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any. ENGINEER's written decision on such Claim, dispute, or other matter will be final and binding upon OWNER and CONTRACTOR unless:
  - 1. an appeal from ENGINEER's decision is taken within the time limits and in accordance with the dispute resolution procedures set forth in Article 16; or
  - 2. if no such dispute resolution procedures have been set forth in Article 16, a written notice of intention to appeal from ENGINEER's written decision is delivered by OWNER or CONTRACTOR to the other and to ENGINEER within 30 days after the date of such decision, and a formal proceeding is instituted by the appealing party in a forum of competent jurisdiction within 60 days after the date of such decision or within 60 days after Substantial Completion, whichever is later (unless otherwise agreed in writing by OWNER and CONTRACTOR), to exercise such rights or remedies as the appealing party may have with respect to such Claim, dispute, or other matter in accordance with applicable Laws and Regulations.
- C. If ENGINEER does not render a formal decision in writing within the time stated in paragraph 10.05.B, a decision denying the Claim in its entirety shall be deemed to have been issued 31 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any.
- D. No Claim for an adjustment in Contract Price or Contract Times (or Milestones) will be valid if not submitted in accordance with this paragraph 10.05.

### **ARTICLE 11 - COST OF THE WORK; CASH ALLOWANCES; UNIT PRICE WORK**

#### 11.01 *Cost of the Work:*

- A. Costs Included: The term Cost of the Work means the sum of all costs necessarily incurred and paid by CONTRACTOR in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to CONTRACTOR will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by OWNER, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items, and shall not include any of the costs itemized in paragraph 11.01.B.



1. Payroll costs for employees in the direct employ of CONTRACTOR in the performance of the Work under schedules of job classifications agreed upon by OWNER and CONTRACTOR. Such employees shall include without limitation superintendents, foremen, and other personnel employed full time at the Site. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by OWNER.
2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to CONTRACTOR unless OWNER deposits funds with CONTRACTOR with which to make payments, in which case the cash discounts shall accrue to OWNER. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to OWNER, and CONTRACTOR shall make provisions so that they may be obtained.
3. Payments made by CONTRACTOR to Subcontractors for Work performed by Subcontractors. If required by OWNER, CONTRACTOR shall obtain competitive bids from subcontractors acceptable to OWNER and CONTRACTOR and shall deliver such bids to OWNER, who will then determine, with the advice of ENGINEER, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as CONTRACTOR's Cost of the Work and fee as provided in this paragraph 11.01.
4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
5. Supplemental costs including the following:
  - a. The proportion of necessary transportation, travel, and subsistence expenses of CONTRACTOR's employees incurred in discharge of duties connected with the Work.
  - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of CONTRACTOR.
  - c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from CONTRACTOR or others in accordance with rental agreements approved by OWNER with the advice of ENGINEER, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
  - d. Sales, consumer, use, and other similar taxes related to the Work, and for which CONTRACTOR is liable, imposed by Laws and Regulations.
  - e. Deposits lost for causes other than negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or

for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

- f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by CONTRACTOR in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of OWNER. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining CONTRACTOR's fee.
- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, expressage, and similar petty cash items in connection with the Work.
- i. When the Cost of the Work is used to determine the value of a Change Order or of a Claim, the cost of premiums for additional Bonds and insurance required because of the changes in the Work or caused by the event giving rise to the Claim.
- j. When all the Work is performed on the basis of cost-plus, the costs of premiums for all Bonds and insurance CONTRACTOR is required by the Contract Documents to purchase and maintain.

B. Costs Excluded: The term Cost of the Work shall not include any of the following items:

- 1. Payroll costs and other compensation of CONTRACTOR's officers, executives, principals (of partnerships and sole proprietorships), general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by CONTRACTOR, whether at the Site or in CONTRACTOR's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in paragraph 11.01.A.1 or specifically covered by paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the CONTRACTOR's fee.
- 2. Expenses of CONTRACTOR's principal and branch offices other than CONTRACTOR's office at the Site.
- 3. Any part of CONTRACTOR's capital expenses, including interest on CONTRACTOR's capital employed for the Work and charges against CONTRACTOR for delinquent payments.
- 4. Costs due to the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
- 5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in paragraphs 11.01.A and 11.01.B.

C. CONTRACTOR's Fee: When all the Work is performed on the basis of cost-plus, CONTRACTOR's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price

is determined on the basis of Cost of the Work, CONTRACTOR's fee shall be determined as set forth in paragraph 12.01.C.

- D. Documentation: Whenever the Cost of the Work for any purpose is to be determined pursuant to paragraphs 11.01.A and 11.01.B, CONTRACTOR will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to ENGINEER an itemized cost breakdown together with supporting data.

#### 11.02 *Cash Allowances:*

- A. It is understood that CONTRACTOR has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums as may be acceptable to OWNER and ENGINEER. CONTRACTOR agrees that:
  - 1. the allowances include the cost to CONTRACTOR (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
  - 2. CONTRACTOR's costs for unloading and handling on the Site, labor, installation costs, overhead, profit, and other expenses contemplated for the allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.
- B. Prior to final payment, an appropriate Change Order will be issued as recommended by ENGINEER to reflect actual amounts due CONTRACTOR on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

#### 11.03 *Unit Price Work:*

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by CONTRACTOR will be made by ENGINEER subject to the provisions of paragraph 9.08.
- B. Each unit price will be deemed to include an amount considered by CONTRACTOR to be adequate to cover CONTRACTOR's overhead and profit for each separately identified item.
- C. The unit price of an item of Unit Price Work shall be subject to reevaluation and adjustment under the following conditions.
  - 1. If the total cost of a particular item of Unit Price Work amounts to 15% or more of the Contract Price and the variation in the quantity of that particular item of Unit Price work performed by CONTRACTOR differs by more than 15% from the estimated quantity of such item indicated in the Agreement; and
  - 2. If there is no corresponding adjustment with respect to any other item of Work; and
  - 3. If CONTRACTOR believes that CONTRACTOR has incurred additional expense as a result thereof; or if OWNER believes that the quantity variation entitles OWNER to an adjustment in the unit price, either OWNER or CONTRACTOR may make a claim for an adjustment in the Contract Price in accordance with Article 10 if the parties are unable to agree as to the effect of any such variations in the quantity of Unit Price

Work performed.

**ARTICLE 12 - CHANGE OF CONTRACT PRICE: CHANGE OF CONTRACT TIMES**

12.01 *Change of Contract Price:*

- A. The Contract Price may only be changed by a Change Order or by a Written Amendment. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the ENGINEER and the other party to the Contract in accordance with the provisions of paragraph 10.05.
- B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:
  - 1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of paragraph 11.03 ); or
  - 2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with paragraph 12.01.C.2); or
  - 3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in paragraph 11.01) plus a CONTRACTOR's fee for overhead and profit (determined as provided in paragraph 12.01.C).
- C. CONTRACTOR's Fee: The CONTRACTOR's fee for overhead and profit shall be determined as follows:
  - 1. a mutually acceptable fixed fee; or
  - 2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
    - a. for costs incurred under paragraphs 11.01.A.1 and 11.01.A.2, the CONTRACTOR's fee shall be 15 percent;
    - b. for costs incurred under paragraph 11.01.A.3, the CONTRACTOR's fee shall be five percent;
    - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of paragraph 12.01.C.2.a is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and CONTRACTOR will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;
    - d. no fee shall be payable on the basis of costs itemized under paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;
    - e. the amount of credit to be allowed by CONTRACTOR to OWNER for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in CONTRACTOR's fee by an amount equal to five percent of such net decrease;
    - f. when both additions and credits are involved in any one change, the adjustment in CONTRACTOR's fee shall be computed on the basis of the net change in accordance with paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times:*

- B. The Contract Times (or Milestones) may only be changed by a Change Order or by a

Written Amendment. Any Claim for an adjustment in the Contract Times (or Milestones) shall be based on written notice submitted by the party making the claim to the ENGINEER and the other party to the Contract in accordance with the provisions of paragraph 10.05.

- C. Any adjustment of the Contract Times (or Milestones) covered by a Change Order or of any Claim for an adjustment in the Contract Times (or Milestones) will be determined in accordance with the provisions of this Article 12.

12.03 *Delays Beyond CONTRACTOR's Control:*

- A. Where CONTRACTOR is prevented from completing any part of the Work within the Contract Times (or Milestones) due to delay beyond the control of CONTRACTOR, the Contract Times (or Milestones) will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in paragraph 12.02.A. Delays beyond the control of CONTRACTOR shall include, but not be limited to, acts or neglect by OWNER, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

12.04 *Delays Within CONTRACTOR's Control:*

- A. The Contract Times (or Milestones) will not be extended due to delays within the control of CONTRACTOR. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of CONTRACTOR.

12.05 *Delays Beyond OWNER's and CONTRACTOR's Control:*

- A. Where CONTRACTOR is prevented from completing any part of the Work within the Contract Times (or Milestones) due to delay beyond the control of both OWNER and CONTRACTOR, an extension of the Contract Times (or Milestones) in an amount equal to the time lost due to such delay shall be CONTRACTOR's sole and exclusive remedy for such delay.

12.06 *Delay Damages:*

- A. In no event shall OWNER or ENGINEER be liable to CONTRACTOR, any Subcontractor, any Supplier, or any other person or organization, or to any surety for or employee or agent of any of them, for damages arising out of or resulting from:
  - 1. delays caused by or within the control of CONTRACTOR; or
  - 2. delays beyond the control of both OWNER and CONTRACTOR including but not limited to fires, floods, epidemics, abnormal weather conditions, acts of God, or acts or neglect by utility owners or other contractors performing other work as contemplated by Article 7.
- B. Nothing in this paragraph 12.06 bars a change in Contract Price pursuant to this Article 12 to compensate CONTRACTOR due to delay, interference, or disruption directly attributable to actions or inactions of OWNER or anyone for whom OWNER is responsible.

**ARTICLE 13 - TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK**

13.01 *Notice of Defects:*

- A. Prompt notice of all defective Work of which OWNER or ENGINEER has actual knowledge will be given to CONTRACTOR. All defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 *Access to Work:*

- A. OWNER, ENGINEER, ENGINEER's Consultants, other representatives and personnel of OWNER, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspecting, and testing. CONTRACTOR shall provide them proper and safe conditions for such access and advise them of CONTRACTOR's Site safety procedures and programs so

that they may comply therewith as applicable.

13.03 *Tests and Inspections:*

- A. CONTRACTOR shall give ENGINEER timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.
- B. OWNER shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:
  - 1. for inspections, tests, or approvals covered by paragraphs 13.03.C and 13.03.D below;
  - 2. that costs incurred in connection with tests or inspections conducted pursuant to paragraph 13.04.B shall be paid as provided in said paragraph 13.04.B; and
  - 3. as otherwise specifically provided in the Contract Documents.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, CONTRACTOR shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish ENGINEER the required certificates of inspection or approval.
- D. CONTRACTOR shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for OWNER's and ENGINEER's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to CONTRACTOR's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to OWNER and ENGINEER.
- E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by CONTRACTOR without written concurrence of ENGINEER, it must, if requested by ENGINEER, be uncovered for observation.
- F. Uncovering Work as provided in paragraph 13.03.E shall be at CONTRACTOR's expense unless CONTRACTOR has given ENGINEER timely notice of CONTRACTOR's intention to cover the same and ENGINEER has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work:*

- A. If any Work is covered contrary to the written request of ENGINEER, it must, if requested by ENGINEER, be uncovered for ENGINEER'S observation and replaced at CONTRACTOR's expense.
- B. If ENGINEER considers it necessary or advisable that covered Work be observed by ENGINEER or inspected or tested by others, CONTRACTOR, at ENGINEER's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as ENGINEER may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment. If it is found that such Work is defective, CONTRACTOR shall pay all Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and OWNER shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, OWNER may make a Claim therefore as provided in paragraph 10.05. If, however, such Work is not found to be defective, CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Times (or Milestones), or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or

extent thereof, CONTRACTOR may make a Claim therefore as provided in paragraph 10.05.

13.05 *OWNER May Stop the Work:*

- A. If the Work is defective, or CONTRACTOR fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, OWNER may order CONTRACTOR to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of OWNER to stop the Work shall not give rise to any duty on the part of OWNER to exercise this right for the benefit of CONTRACTOR, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.06 *Correction or Removal of Defective Work:*

- A. CONTRACTOR shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by ENGINEER, remove it from the Project and replace it with Work that is not defective. CONTRACTOR shall pay all Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).

13.07 *Correction Period:*

- A. If within one year after the date of Acceptance of the project or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for CONTRACTOR's use by OWNER or permitted by Laws and Regulations as contemplated in paragraph 6.11.A is found to be defective, CONTRACTOR shall promptly, without cost to OWNER and in accordance with OWNER's written instructions:
  - 1. repair such defective land or areas, or
  - 2. correct such defective Work or, if the defective Work has been rejected by OWNER, remove it from the Project and replace it with Work that is not defective, and
  - 3. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom. If CONTRACTOR does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, OWNER may have the defective Work corrected or repaired or may have the rejected Work removed and replaced, and all Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by CONTRACTOR.
- B. In special circumstances where a particular item of equipment is placed in continuous service before Acceptance of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications or by Written Amendment.
- C. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

- D. CONTRACTOR's obligations under this paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this paragraph 13.07 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work:*

- A. If, instead of requiring correction or removal and replacement of defective Work, OWNER (and, prior to ENGINEER's recommendation of final payment, ENGINEER) prefers to accept it, OWNER may do so. CONTRACTOR shall pay all Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to OWNER's evaluation of and determination to accept such defective Work (such costs to be approved by ENGINEER as to reasonableness) and the diminished value of the Work to the extent not otherwise paid by CONTRACTOR pursuant to this sentence. If any such acceptance occurs prior to ENGINEER's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and OWNER shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, OWNER may make a Claim therefore as provided in paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by CONTRACTOR to OWNER.

13.09 *OWNER May Correct Defective Work:*

- A. If CONTRACTOR fails within a reasonable time after written notice from ENGINEER to correct defective Work or to remove and replace rejected Work as required by ENGINEER in accordance with paragraph 13.06.A, or if CONTRACTOR fails to perform the Work in accordance with the Contract Documents, or if CONTRACTOR fails to comply with any other provision of the Contract Documents, OWNER may, after seven days written notice to CONTRACTOR, correct and remedy any such deficiency.
- B. In exercising the rights and remedies under this paragraph, OWNER shall proceed expeditiously. In connection with such corrective and remedial action, OWNER may exclude CONTRACTOR from all or part of the Site, take possession of all or part of the Work and suspend CONTRACTOR's services related thereto, take possession of CONTRACTOR's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which OWNER has paid CONTRACTOR but which are stored elsewhere. CONTRACTOR shall allow OWNER, OWNER's representatives, agents and employees, OWNER's other contractors, and ENGINEER and ENGINEER's Consultants access to the Site to enable OWNER to exercise the rights and remedies under this paragraph.
- C. All Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by OWNER in exercising the rights and remedies under this paragraph 13.09 will be charged against CONTRACTOR, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and OWNER shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, OWNER may make a Claim therefore as provided in paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of CONTRACTOR's defective Work.
- D. CONTRACTOR shall not be allowed an extension of the Contract Times (or Milestones) because of any delay in the performance of the Work attributable to the exercise by OWNER of OWNER's rights and remedies under this paragraph 13.09.



## **ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION**

### 14.01 *Schedule of Values:*

- A. The schedule of values established as provided in paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to ENGINEER. Progress payments on account of Unit\_ Price Work will be based on the number of units completed.

### 14.02 *Progress Payments:*

#### A. Applications for Payments:

1. At least 20 days before the date established for each progress payment (but not more often than once a month), CONTRACTOR shall submit to ENGINEER for review an Application for Payment filled out and signed by CONTRACTOR covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that OWNER has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect OWNER's interest therein, all of which must be satisfactory to OWNER.
2. Beginning with the second Application for Payment, each Application shall include an affidavit of CONTRACTOR stating that all previous progress payments received on account of the Work have been applied on account to discharge CONTRACTOR's legitimate obligations associated with prior Applications for Payment.
3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

#### B. Review of Applications:

1. ENGINEER will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to OWNER or return the Application to CONTRACTOR indicating in writing ENGINEER's reasons for refusing to recommend payment. In the latter case, CONTRACTOR may make the necessary corrections and resubmit the Application.
2. ENGINEER's recommendation of any payment requested in an Application for Payment will constitute a representation by ENGINEER to OWNER, based on ENGINEER's observations on the Site of the executed Work as an experienced and qualified design professional and on ENGINEER's review of the Application for Payment and the accompanying data and schedules, that to the best of ENGINEER's knowledge, information, and belief:
  - a. the Work has progressed to the point indicated;
  - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under paragraph 9.08, and to any other qualifications stated in the recommendation); and
  - c. the conditions precedent to CONTRACTOR's being entitled to such payment appear to have been fulfilled in so far as it is ENGINEER's responsibility to observe the Work.

3. By recommending any such payment ENGINEER will not thereby be deemed to have represented that:
    - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to ENGINEER in the Contract Documents; or
    - b. that there may not be other matters or issues between the parties that might entitle CONTRACTOR to be paid additionally by OWNER or entitle OWNER to withhold payment to CONTRACTOR.
  4. Neither ENGINEER's review of CONTRACTOR's Work for the purposes of recommending payments nor ENGINEER's recommendation of any payment, including final payment, will impose responsibility on ENGINEER to supervise, direct, or control the Work or for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for CONTRACTOR's failure to comply with Laws and Regulations applicable to CONTRACTOR's performance of the Work. Additionally, said review or recommendation will not impose responsibility on ENGINEER to make any examination to ascertain how or for what purposes CONTRACTOR has used the moneys paid on account of the Contract Price, or to determine that title to any of the Work, materials, or equipment has passed to OWNER free and clear of any Liens.
  5. ENGINEER may refuse to recommend the whole or any part of any payment if, in ENGINEER's opinion, it would be incorrect to make the representations to OWNER referred to in paragraph 14.02.B.2. ENGINEER may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in ENGINEER's opinion to protect OWNER from loss because:
    - a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
    - b. the Contract Price has been reduced by Written Amendment or Change Orders;
    - c. OWNER has been required to correct defective Work or complete Work in accordance with paragraph 13.09; or
    - d. ENGINEER has actual knowledge of the occurrence of any of the events enumerated in paragraph 15.02.A.
- C. Payment Becomes Due:
1. Ten days after presentation of the Application for Payment to OWNER with ENGINEER's recommendation, the amount recommended will (subject to the provisions of paragraph 14.02.D) become due, and when due will be paid by OWNER to CONTRACTOR.
- D. Reduction in Payment:
1. OWNER may refuse to make payment of the full amount recommended by ENGINEER because:
    - a. claims have been made against OWNER on account of CONTRACTOR's performance or furnishing of the Work;
    - b. Liens have been filed in connection with the Work, except where CONTRACTOR has delivered a specific Bond satisfactory to OWNER to secure the satisfaction and discharge of such Liens;

- c. there are other items entitling OWNER to a set-off against the amount recommended; or
  - d. OWNER has actual knowledge of the occurrence of any of the events enumerated in paragraphs 14.02.B.5.a through 14.02.B.5.c or paragraph 15.02.A.
- 2. If OWNER refuses to make payment of the full amount recommended by ENGINEER, OWNER must give CONTRACTOR immediate written notice (with a copy to ENGINEER) stating the reasons for such action and promptly pay CONTRACTOR any amount remaining after deduction of the amount so withheld. OWNER shall promptly pay CONTRACTOR the amount so withheld, or any adjustment thereto agreed to by OWNER and CONTRACTOR, when CONTRACTOR corrects to OWNER's satisfaction the reasons for such action.
  - 3. If it is subsequently determined that OWNER's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by paragraph 14.02.C.1.

14.03 *CONTRACTOR's Warranty of Title:*

- A. CONTRACTOR warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to OWNER no later than the time of payment free and clear of all Liens.

14.04 *Substantial Completion:*

- A. When CONTRACTOR considers the entire Work ready for its intended use CONTRACTOR shall notify OWNER and ENGINEER in writing that the entire Work is substantially complete (except for items specifically listed by CONTRACTOR as incomplete) and request that ENGINEER issue a certificate of Substantial Completion. Promptly thereafter, OWNER, CONTRACTOR, and ENGINEER shall make an inspection of the Work to determine the status of completion. If ENGINEER does not consider the Work substantially complete, ENGINEER will notify CONTRACTOR in writing giving the reasons therefore. If ENGINEER considers the Work substantially complete, ENGINEER will prepare and deliver to OWNER a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. OWNER shall have seven days after receipt of the tentative certificate during which to make written objection to ENGINEER as to any provisions of the certificate or attached list. If, after considering such objections, ENGINEER concludes that the Work is not substantially complete, ENGINEER will within 14 days after submission of the tentative certificate to OWNER notify CONTRACTOR in writing, stating the reasons therefore. If, after consideration of OWNER's objections, ENGINEER considers the Work substantially complete, ENGINEER will within said 14 days execute and deliver to OWNER and CONTRACTOR a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as ENGINEER believes justified after consideration of any objections from OWNER. At the time of delivery of the tentative certificate of Substantial Completion ENGINEER will deliver to OWNER and CONTRACTOR a written recommendation as to division of responsibilities pending final payment between OWNER and CONTRACTOR with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless OWNER and CONTRACTOR agree otherwise in writing and so inform ENGINEER in writing prior to ENGINEER's issuing the definitive certificate of Substantial Completion, ENGINEER's aforesaid recommendation will be binding on OWNER and CONTRACTOR until final payment.
- B. OWNER shall have the right to exclude CONTRACTOR from the Site after the date of Substantial Completion, but OWNER shall allow CONTRACTOR reasonable access to complete or correct items on the tentative list.

#### 14.05 *Partial Utilization:*

- A. Use by OWNER at OWNER's option of any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which OWNER, ENGINEER, and CONTRACTOR agree constitutes a separately functioning and usable part of the Work that can be used by OWNER for its intended purpose without significant interference with CONTRACTOR's performance of the remainder of the Work, may be accomplished prior to Substantial Completion of all the Work subject to the following conditions.
1. OWNER at any time may request CONTRACTOR in writing to permit OWNER to use any such part of the Work which OWNER believes to be ready for its intended use and substantially complete. If CONTRACTOR agrees that such part of the Work is substantially complete, CONTRACTOR will certify to OWNER and ENGINEER that such part of the Work is substantially complete and request ENGINEER to issue a certificate of Substantial Completion for that part of the Work. CONTRACTOR at any time may notify OWNER and ENGINEER in writing that CONTRACTOR considers any such part of the Work ready for its intended use and substantially complete and request ENGINEER to issue a certificate of Substantial Completion for that part of the Work. Within a reasonable time after either such request, OWNER, CONTRACTOR, and ENGINEER shall make an inspection of that part of the Work to determine its status of completion. If ENGINEER does not consider that part of the Work to be substantially complete, ENGINEER will notify OWNER and CONTRACTOR in writing giving the reasons therefore. If ENGINEER considers that part of the Work to be substantially complete, the provisions of paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
  2. No occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of paragraph 5.10 regarding property insurance.

#### 14.06 *Final Inspection:*

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

#### 14.07 *Final Payment:*

- A. Application for Payment:
1. After CONTRACTOR has, in the opinion of ENGINEER, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, Bonds, certificates or other evidence of insurance certificates of inspection, marked-up record documents (as provided in paragraph 6.12), and other documents, CONTRACTOR may make application for final payment following the procedure for progress payments.
  2. The final Application for Payment shall be accompanied (except as previously delivered) by:
    - a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by subparagraph 5.04.B.7;
    - b. consent of the surety, if any, to final payment; and
    - c. if requested by OWNER, complete and legally effective releases or waivers (satisfactory to OWNER) of all Lien rights arising out of or Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in paragraph 14.07.A2 and as approved by OWNER, CONTRACTOR may furnish receipts or releases in full and an affidavit of CONTRACTOR that:
  - a. the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and
  - b. all payrolls, material and equipment bills, and other indebtedness connected with the Work for which OWNER or OWNER's property might in any way be responsible have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, CONTRACTOR may furnish a Bond or other collateral satisfactory to OWNER to indemnify OWNER against any Lien.

B. Review of Application and Acceptance:

1. If, on the basis of ENGINEER's observation of the Work during construction and final inspection, and ENGINEER's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, ENGINEER is satisfied that the Work has been completed and CONTRACTOR's other obligations under the Contract Documents have been fulfilled, ENGINEER will, within ten days after receipt of the final Application for Payment, indicate in writing ENGINEER's recommendation of payment and present the Application for Payment to OWNER for payment. At the same time ENGINEER will also give written notice to OWNER and CONTRACTOR that the Work is acceptable subject to the provisions of paragraph 14.09. Otherwise, ENGINEER will return the Application for Payment to CONTRACTOR, indicating in writing the reasons for refusing to recommend final payment, in which case CONTRACTOR shall make the necessary corrections and resubmit the Application for Payment.

C. Payment Becomes Due:

1. Thirty days after the presentation to OWNER of the Application for Payment and accompanying documentation, the amount recommended by ENGINEER will become due and, when due, will be paid by OWNER to CONTRACTOR.

14.08 *Final Completion Delayed:*

- A. If, through no fault of CONTRACTOR, final completion of the Work is significantly delayed, and if ENGINEER so confirms, OWNER shall, upon receipt of CONTRACTOR's final Application for Payment and recommendation of ENGINEER, and without terminating the Agreement, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by OWNER for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if Bonds have been furnished as required in paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by CONTRACTOR to ENGINEER with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 *Waiver of Claims:*

- A. The making and acceptance of final payment will constitute:
1. a waiver of all Claims by OWNER against CONTRACTOR, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from CONTRACTOR's continuing obligations under the Contract Documents; and
  2. a waiver of all Claims by CONTRACTOR against OWNER other than those previously made in writing which are still unsettled.

## **ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION**

### 15.01 *OWNER May Suspend Work:*

- A. At any time and without cause, OWNER may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to CONTRACTOR and ENGINEER which will fix the date on which Work will be resumed. CONTRACTOR shall resume the Work on the date so fixed. CONTRACTOR shall be allowed an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if CONTRACTOR makes a Claim therefore as provided in paragraph 10.05.

### 15.02 *OWNER May Terminate for Cause:*

- A. The occurrence of any one or more of the following events will justify termination for cause:
  - 1. CONTRACTOR's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the progress schedule established under paragraph 2.07 as adjusted from time to time pursuant to paragraph 6.04);
  - 2. CONTRACTOR's disregard of Laws or Regulations of any public body having jurisdiction;
  - 3. CONTRACTOR's disregard of the authority of ENGINEER; or
  - 4. CONTRACTOR's violation in any substantial way of any provisions of the Contract Documents.
- B. If one or more of the events identified in paragraph 15.02.A occur, OWNER may, after giving CONTRACTOR (and the surety, if any) seven days written notice, terminate the services of CONTRACTOR, exclude CONTRACTOR from the Site, and take possession of the Work and of all CONTRACTOR's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by CONTRACTOR (without liability to CONTRACTOR for trespass or conversion), incorporate in the Work all materials and equipment stored at the Site or for which OWNER has paid CONTRACTOR but which are stored elsewhere, and finish the Work as OWNER may deem expedient. In such case, CONTRACTOR shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by OWNER arising out of or relating to completing the Work, such excess will be paid to CONTRACTOR. If such claims, costs, losses, and damages exceed such unpaid balance, CONTRACTOR shall pay the difference to OWNER. Such claims, costs, losses, and damages incurred by OWNER will be reviewed by ENGINEER as to their reasonableness and, when so approved by ENGINEER, incorporated in a Change Order. When exercising any rights or remedies under this paragraph OWNER shall not be required to obtain the lowest price for the Work performed.
- C. Where CONTRACTOR's services have been so terminated by OWNER, the termination will not affect any rights or remedies of OWNER against CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of moneys due CONTRACTOR by OWNER will not release CONTRACTOR from liability.

### 15.03 *OWNER May Terminate For Convenience:*

- A. Upon seven days written notice to CONTRACTOR and ENGINEER, OWNER may, without cause and without prejudice to any other right or remedy of OWNER, elect to terminate the Contract. In such case, CONTRACTOR shall be paid (without duplication of any items):

1. for completed and acceptable Work executed *in* accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
  2. for expenses sustained prior to the effective date of termination *in* performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;
  3. for all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and
  4. for reasonable expenses directly attributable to termination.
- B. CONTRACTOR shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *CONTRACTOR May Stop Work or Terminate:*

- A. If, through no act or fault of CONTRACTOR, the Work is suspended for more than 90 consecutive days by OWNER or under an order of court or other public authority, or ENGINEER fails to act on any Application for Payment within 30 days after *it* is submitted, or OWNER fails for 30 days to pay CONTRACTOR any sum finally determined to be due, then CONTRACTOR may, upon seven days written notice to OWNER and ENGINEER, and provided OWNER or ENGINEER do not remedy such suspension or failure within that time, terminate the Contract and recover from OWNER payment on the same terms as provided in paragraph 15.03. In lieu of terminating the Contract and without prejudice to any other right or remedy, if ENGINEER has failed to act on an Application for Payment within 30 days after *it* is submitted, or OWNER has failed for 30 days to pay CONTRACTOR any sum finally determined to be due, CONTRACTOR may, seven days after written notice to OWNER and ENGINEER, stop the Work until payment is made of all such amounts due CONTRACTOR, including interest thereon. The provisions of this paragraph 15.04 are not intended to preclude CONTRACTOR from making a Claim under paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to CONTRACTOR's stopping the Work as permitted by this paragraph.

## **ARTICLE 16 - DISPUTE RESOLUTION**

16.01 *Methods and Procedures:*

- A. Dispute resolution methods and procedures, if any, shall be as set forth in the Supplementary Conditions. If no method and procedure has been set forth, and subject to the provisions of paragraphs 9.09 and 10.05, OWNER and CONTRACTOR may exercise such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations in respect of any dispute.

## **ARTICLE 17 - MISCELLANEOUS**

17.01 *Giving Notice:*

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom *it* is intended, or *if* delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 *Computation of Times:*

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

17.03 *Cumulative Remedies:*

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

17.04 *Survival of Obligations:*

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

17.05 *Controlling Law:*

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

**ARTICLE 18 – OTHER REQUIREMENTS**

18.01. *Environmental Requirements*

- A. When constructing a project involving trenching and/or other related earth excavations, CONTRACTOR shall comply with the following environmental constraints:
  1. Wetlands -- When disposing of excess, spoil, or other construction materials on public or private property, CONTRACTOR shall not fill in or otherwise convert wetlands.
  2. Floodplains - When disposing of excess, spoil, or other construction materials on public or private property, CONTRACTOR shall not fill in or otherwise convert 100-year floodplain areas delineated on the latest Federal Emergency Management Agency Floodplain Maps.
  3. Historic Preservation -- Any excavation by CONTRACTOR that uncovers an historical or archaeological artifact shall be immediately reported to OWNER. Construction shall be temporarily halted pending the notification process and further directions issued by OWNER after consultation with the State Historic Preservation Officer (SHPO).
  4. Endangered Species - CONTRACTOR shall comply with the Endangered Species Act, which provides for the protection of endangered and/or threatened species and critical habitat. Should any evidence of the presence of endangered and/or threatened species or their critical habitat be brought to the attention of CONTRACTOR, CONTRACTOR will immediately report this evidence to OWNER. Construction shall be



temporarily halted pending the notification process and further directions issued by OWNER after consultation with the U.S. Fish and Wildlife Service.

18.02 *Clean Air Act and Water Pollution Control Act:*

- A. Where this Contract exceeds \$100,000 CONTRACTOR shall comply with all the requirements of the Clean Air Act (42 U.S.C. §7414) and Section 308 of the Water Pollution Control Act (33 U.S.C. §1318 relating to inspection, monitoring, entry, reports, and information, as well as all other requirements specified in Section 114 of the Clean Air Act and Section 308 of the Water Pollution Control Act and all regulations and guidelines issued there under after the award of the contract. In so doing the Contractor further agrees:
1. As a condition for the award of contract, to notify the Owner of the receipt of any communication from the Environmental Protection Agency (EPA) indicating that a facility to be utilized in the performance of the contract is under consideration to be listed on the EPA list of Violating Facilities. Prompt notification is required prior to contract award.
  2. To certify that any facility to be utilized in the performance of any nonexempt contractor subcontract is not listed on the EPA list of Violating Facilities pursuant to 40 CFR Part 32 as of the date of contract award.
  3. To include or cause to be included the above criteria and the requirements in every nonexempt subcontract and that the Contractor will take such action as the Government may direct as a means of enforcing such provisions.

18.03 *Wage Rate Decision, Labor Provisions and Other Agency Requirements:*

- A. During the performance of this Contract the CONTRACTOR must abide by the Davis-Bacon Act, Labor Provisions and other Federal, State, Local and Funding Agency requirements as included in Section 00 7400, Federal, State, Local and Funding Requirements.

**SECTION 01000  
SPECIAL PROVISIONS**

**PART 1 GENERAL**

These Special Provisions amend or supplement the following Specifications and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect.

The terms used in these Special Provisions will have the meanings indicated in the Specifications and Contract Documents. Additional terms used in these Special Provisions have the meanings indicated below, which are applicable to both the singular and plural thereof.

**1.01 PROJECT CONTACT**

- A. Name: Ariana Kennedy
- B. Address: 3125 Portia Street, Lincoln, NE 68501
- C. Phone Number: 402-476-2279
- D. Cell: 402-432-6836
- E. Email: [ariana.kennedy@lpsnrd.org](mailto:ariana.kennedy@lpsnrd.org)

**1.02 CONTRACT DESCRIPTION**

- A. Contract Type: Construction contract will be for the construction of Base Bid.
- B. Alternate Items will be awarded at the discretion of the Owner.

**1.03 PROJECT CONDITIONS**

- A. Existing Utilities:
  - 1. There are utilities in the vicinity of the proposed work.
  - 2. CONTRACTOR shall notify the respective utility company(s) and/or "one-call notification center" before commencing work.
  - 3. Neither OWNER nor ENGINEER assumes any responsibility for utility locations being accurately shown, or not shown on the plans.
  - 4. Any reference to utilities in the plans is approximate. CONTRACTOR shall verify the location of any existing utilities within the vicinity of the proposed work.
  - 5. CONTRACTOR shall provide notification of intent to begin construction in advance to allow utility company(s) sufficient time to locate or relocate their utilities.
  - 6. Once the location of the utility(s) has been staked, located or marked, it shall be CONTRACTOR's responsibility to protect these stakes/markings. Any costs for restaking or remarking shall be CONTRACTOR's expense.
  - 7. CONTRACTOR shall avoid damaging any utility(s). Any such damage caused by CONTRACTOR, CONTRACTOR'S employees, sub-contractors, suppliers or agents will be the responsibility of CONTRACTOR to repair at CONTRACTOR's expense. No additional compensation will be allowed for protecting utility(s) or for repair of any damage caused by CONTRACTOR, CONTRACTOR'S employees, sub-contractors, suppliers, or agents.
  - 8. CONTRACTOR shall coordinate utility relocation or reconstruction with the appropriate utility company.

#### **1.04 REPORTS**

- A. No reports were prepared for this project. Any reference to a report shall not apply.

#### **1.05 PERMITS**

- A. No permits were needed for this project.

#### **1.06 RIGHT-OF-WAY/EASEMENTS**

- A. The project will be constructed on Lower Platte South NRD (LPSNRD) property.
- B. The staging area shall be on LPSNRD property and determined by the OWNER and CONTRACTOR at the time of award. Any damage to this area shall be replaced by the CONTRACTOR at his own expense, and made acceptable to the City of Lincoln and the Lower Platte South NRD. CONTRACTOR shall limit the area of work and stored materials to be within 20 feet of the trail centerline, unless otherwise shown on plans.

#### **1.07 UNIT PRICES**

- A. Mobilization shall be subsidiary to project work.
- B. Any items or materials called out for on the plans or in these specifications that are not paid for directly or being done by the OWNER shall be considered subsidiary to direct pay items.
- C. Limestone Screenings:
  - 1. Section 32 1500 - Aggregate Surfacing, paragraph 1.04B is removed and replaced with the following:
    - a. Crushed Limestone Screenings: The measurement and payment for furnishing and installing aggregate surfacing for the trail as shown in the plans or as directed by OWNER through ENGINEER, will be made based on linear feet of material placed. The CONTRACTOR shall provide load tickets for each load of surfacing. CONTRACTOR's unit price for aggregate surfacing shall include furnishing, delivering, spreading using an asphalt laydown machine, and compacting aggregate on an approved surface and includes furnishing the necessary material, labor, equipment, tools and incidentals necessary to complete the work.

#### **1.08 CONTRACT DRAWINGS AND SPECIFICATIONS**

- A. The Plans, Specifications, Proposal, Special Provisions and all supplementary documents are intended to describe the complete work and are essential parts of the Contract. All requirements occurring in any of them are binding.
- B. In cases where there is a discrepancy in the contract documents.
  - 1. Written dimensions take precedence over scaled dimensions on plans.
  - 2. Larger scale Drawings take precedence over smaller scale Drawings.
  - 3. Section 01 1000, Special Provisions, take precedence over the plans.
  - 4. Section 01 1000, Special Provisions, take precedence over other Specification Sections.
- C. Referenced Sections
  - 1. Any Specification Section that is referenced by another Specification Section and is not included in the project specifications (see table of contents for complete listing) shall not apply to this project.

- D. At least one copy of all Plans and Specifications shall be maintained by CONTRACTOR at the project site and these shall be accessible at all times to OWNER and ENGINEER.

#### **1.09 SITE ADMINISTRATION**

- A. CONTRACTOR shall be responsible for all areas of the site used by him and by all Sub-contractors in the performance of the work. He will exert full control over the actions of all employees and other persons with respect to the use and preservation of the property and existing facilities, except such controls as may be specifically reserved to OWNER or others. CONTRACTOR has the right to exclude from the site all persons who have no purpose related to the work or its inspection, and may require all persons on the site (except OWNER'S employees) to observe the same regulations as he requires of his employees.
- B. CONTRACTOR may use the area within the limited easements, right-of-way and property owned by OWNER, as shown on the plans, for storage and staging, but must not interfere with normal operations of OWNER, without prior written approval from OWNER.

#### **1.10 POWER**

- A. All power for lighting, construction use, operation of CONTRACTOR's plant or equipment, or for any other use by CONTRACTOR, shall be provided by CONTRACTOR at his sole cost and expense and shall be considered incidental and subsidiary to other items of work for which direct payment is made. No separate payments will be made for this work.

#### **1.11 TEMPORARY FACILITIES**

- A. The following items specified in Section 01 5000 are not required on this project, but may be provided at CONTRACTOR's own cost.
  - 1. Field office
  - 2. Telephone service at
  - 3. Project identification
- B. Temporary Fencing will not be required.
- C. Temporary facilities shall be considered incidental and subsidiary to other items of work for which direct payment is made. No separate payments will be made for this work.

#### **1.12 HISTORICAL AND ARCHAEOLOGICAL:**

- A. If, during the course of construction, evidence of deposits of historical or archaeological interest is found, CONTRACTOR shall cease operations affecting the find and shall notify OWNER. No further disturbance of the deposits shall ensue until CONTRACTOR has been notified by OWNER that CONTRACTOR may proceed. Compensation to CONTRACTOR, if any, for lost time or changes in construction resulting from the find shall be determined in accordance with changed or extra work provisions of the Contract Documents.

### **PART 2 PRODUCTS**

#### **2.01 MATERIALS**

- A. Crushed Limestone Screenings:
  - 1. Shall be spread evenly and compacted using an asphalt laydown-machine. This can be done in one lift or two lifts.
  - 2. Crushed limestone for surfacing shall conform to the requirements of Section

01000-3

1033.02 and Table 1033.08 of the NDOT Standard Specification for Highway Construction.

3. The gradation requirements for the crushed rock screenings shall be as follows:

Sieve Size	% Passing
3/8"	100%
#4	85-100%
#8	53-85%
#16	33-53%

### **PART 3 EXECUTION**

#### **3.01 ACCESS REQUIREMENTS**

- A. Notices: CONTRACTOR shall provide notice to property owners and authorities:
- A. CONTRACTOR shall notify owners of adjacent property and utilities when proceeding with the work that may affect them.
  - B. When it is necessary to temporarily deny access by owners or tenants to their property, or when any utility service connection must be interrupted, CONTRACTOR shall give notices sufficiently in advance to enable the affected persons to provide for their needs. Notices shall conform to any applicable local ordinance and, whether delivered orally or in writing, will include information concerning the interruption and instructions on how to limit their inconvenience.
  - C. Utilities and other concerned agencies shall be contacted at least 48 hours prior to cutting or closing streets or other traffic areas or excavating near underground utilities or pole lines.
  - D. CONTRACTOR shall regularly advise the local law enforcement, fire and rescue authorities of the project status and coordinate with them in a manner to maximize access to property in the construction area in event of an emergency.
- B. CONTRACTOR to maintain access for the residents of the area located within the area of the project, as much as possible. CONTRACTOR shall keep driveways and entrances serving adjacent properties clear and available to the property owner or occupant at all times. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on site that obstructs access to property.
- C. CONTRACTOR shall at all times maintain public access to the neighboring buildings in the project area.
- D. CONTRACTOR shall provide temporary approaches and crossings of streets and sidewalks during construction operations. The temporary approaches and crossings shall be maintained by CONTRACTOR in good condition during construction operations.
- E. CONTRACTOR to arrange site and premises to allow work by others and OWNER.
- F. CONTRACTOR to limit shutdowns of utility services to 4 hours at a time and arrange with OWNER 48 hours in advance of any shutdowns.
- G. CONTRACTOR shall take all precautions not to damage buildings, utilities,

sidewalks, drives, trees and property that is to remain in place during and after construction activities. CONTRACTOR shall be responsible for any damage and repair at CONTRACTOR's expense.

- H. CONTRACTOR shall provide their own fencing to maintain security of the site during construction. The entire site shall be secured at all times to deter entry to the site and prevent injuries to non-construction personnel.

### **3.02 VERIFY UTILITY LOCATION**

- A. CONTRACTOR to verify depth and location of existing utilities prior to any excavation.
- B. CONTRACTOR to verify that the existing utilities are of the size and type shown in the plans prior to providing any connecting materials.

### **3.03 UNFAVORABLE CONSTRUCTION CONDITIONS**

- A. During unfavorable weather, wet ground or other unsuitable construction conditions, CONTRACTOR shall confine operations to work, which will not be affected adversely by such conditions. No portion of the work shall be constructed under conditions, which would adversely affect the quality or efficiency thereof, unless special means or precautions are taken by CONTRACTOR to perform the work in a proper and satisfactory manner.

### **3.04 TOPSOIL (NOT USED)**

### **3.05 BARRICADES, LIGHTS AND TRAFFIC CONTROL**

- A. General:
  - 1. All open trenches and other excavations shall have suitable barricades, signs, lights and other **safeguards** to provide adequate protection to the public. Obstructions such as material piles and equipment shall be provided with similar warning barricades, signs, lights and other safeguards.
  - 2. CONTRACTOR shall maintain traffic and shall provide and maintain traffic control devices in accordance with the contract documents.
  - 3. If there is no specific traffic control plan, then CONTRACTOR'S traffic control devices shall be in accordance with and shall be placed as required in the current edition of the Manual on Uniform Traffic Control Devices for Streets & Highways.
  - 4. Barricades, signs, lights and other safeguards shall be placed and maintained by CONTRACTOR during construction activities.
  - 5. CONTRACTOR shall provide all necessary devices for traffic control during construction.
- B. CONTRACTOR shall conduct operations so that all streets along the proposed project are left open to at least one lane of traffic at all times.
- C. Traffic control, including barricades, signs, lights and other safeguards shall be considered incidental and subsidiary to other items of work for which direct payment is made. No separate payments will be made for this work.

### **3.06 REMOVALS**

- A. It is not anticipated that CONTRACTOR will be required to remove concrete, asphalt and other permanent surfacing. Any removals required due to CONTRACTOR's negligence will be at CONTRACTOR's expense.
- B. CONTRACTOR shall saw-cut existing concrete, asphalt, etc. to be removed and this sawing shall be considered incidental and subsidiary to the other items of work for which direct payment is made. No separate payments will be made for this work.

- C. Where sewer and storm sewer castings are removed by CONTRACTOR, care shall be taken when removing castings so they are suitable for future reuse. The castings shall be salvaged to OWNER and shall be delivered to a site designated by OWNER.

**3.07 DISPOSAL OF REMOVALS**

- A. Concrete: Any necessary concrete removals shall be disposed of by CONTRACTOR at his own disposal site.
- B. Asphalt: Any necessary asphalt removals shall be disposed of by CONTRACTOR at his own disposal site.
- C. Drainage Pipe: Any necessary pipe removals, the CONTRACTOR shall dispose of the pipe at CONTRACTOR's own disposal site.
- D. Trees: Any necessary trees, branches and stumps to be removed will be disposed of by CONTRACTOR at his own disposal site.
- E. Miscellaneous: CONTRACTOR shall be responsible for the disposal of any miscellaneous items at CONTRACTOR's own disposal site.

**3.08 CONSTRUCTION STAKING- (NOT USED)**

**3.09 TESTING**

- A. All material testing meeting specifications will be completed and paid for by the OWNER.
- B. OWNER will be responsible for hiring Testing Agency.

**3.10 WATER**

- A. CONTRACTOR shall make arrangements to obtain water from its own source, as necessary for construction of the work.
- B. If water is required to provide the proper moisture content for compaction, the transportation and distribution of water shall be considered incidental and subsidiary to other items of work for which direct payment is made.

**3.11 TIME FRAME**

- A. Project will be completed between March 6, 2023, and April 14, 2023.

**3.12 CLEANUP**

- A. CONTRACTOR shall return all areas disturbed by construction of the project to the original grade or to the finish grade as shown on plans and shall restore the site to as clean and sightly condition as before the work began.
- B. CONTRACTOR shall keep the cleanup of the project current with the construction and shall not have any more than 300 feet of construction at any time during the project which has not been cleaned up.
- C. During construction, areas to be maintained for traffic shall be kept clear of all hazardous materials, including but not limited to construction debris, dust, and mud.
- D. The cleaning and sweeping of the streets in the construction area shall be completed prior to the completion of the project. The project cleanup shall be conducted to the satisfaction of OWNER and ENGINEER and shall be completed prior to final acceptance of the project.
- E. CONTRACTOR shall clean streets in project area whenever mud, dirt or debris is tracked onto to the streets as a result of the activities of CONTRACTOR, by his/her employees, sub-contractors, suppliers or agents.

**END OF SECTION**

**SECTION 01 2000**  
**PRICE AND PAYMENT PROCEDURES**

**PART 1 • GENERAL**

**1.01 SECTION INCLUDES**

- A. Procedures for preparation and submittal of applications for progress payments.
- B. Documentation of changes in contract price and contract time.
- C. Change procedures.
- D. Correlation of CONTRACTOR submittals based on changes.
- E. Procedures for preparation and submittal of application for final payment.

**1.02 RELATED SECTIONS**

- A. Document 00 5000 - Agreement: Contract price, retainages and monetary values of unit prices.
- B. Document 00 7200 - General Conditions and Document 00 7300 - Supplementary Conditions: Additional requirements for progress payments, final payment and changes in the work.
- C. Section 01 2200 - Unit Prices: Payment and modification procedures relating to unit prices.

**1.03 SCHEDULE OF VALUES**

- A. Submit a printed schedule for projects or items bid as a lump sum.
- B. Revise schedule to list approved change orders with each application for payment.

**1.04 APPLICATIONS FOR PROGRESS PAYMENTS**

- A. Payment Period: Submit at intervals stipulated in the agreement or arranged at preconstruction meeting.
- B. Present required information in typewritten form.
- C. Form: Provided by ENGINEER.
- D. Execute CONTRACTOR's certification by signature of authorized officer.
- E. Use data from approved schedule of values. Provide dollar value in each column for each line item for portion of work performed and for stored products.
- F. List each authorized change order as a separate line item, listing change order number and dollar amount as for an original item of work.
- G. Submit 4 copies of each application for payment to ENGINEER for review.
- H. Include the following with the application:
  - 1. Transmittal letter as specified for submittals in Section 01 3000 - Administrative Requirements.



2. Construction progress schedule, revised and current as specified in Section 01 3000 - Administrative Requirements.
  3. Affidavits and invoices attesting to on and off-site stored materials.
- I. When ENGINEER requires substantiating information, submit data justifying dollar amounts in question. Provide 1 copy of data with cover letter for each copy of submittal. Show application number and date, and line item by number and description.

#### **1.05 MODIFICATION PROCEDURES**

- A. Submit name of the individual authorized to receive change documents and who shall be responsible for informing others in CONTRACTOR's or subcontractor's employ of changes to the work.
- B. ENGINEER shall advise of minor changes in the work not involving an adjustment to contract price or contract time as authorized by the conditions of the contract by issuing supplemental instructions on letter.
- C. Work Directive Change: ENGINEER may issue a document, signed by OWNER, instructing CONTRACTOR to proceed with a change in the work for subsequent inclusion in a change order.
1. The document shall describe changes in the work and shall designate method of determining any change in contract price or contract time.
  2. Promptly execute the change in work.
- D. Notice of Change: ENGINEER may issue a document which includes a detailed description of a proposed change with supplementary or revised drawings and specifications and a change in contract time for executing the change. CONTRACTOR shall prepare and submit an estimated price quotation within 7 days.
- E. CONTRACTOR may propose a change by submitting a request for change to ENGINEER, describing the proposed change and its full effect on the work, with a statement describing the reason for the change and the effect on the contract price and contract time with full documentation.
- F. Computation of Change in Contract Amount:
1. For change requested by ENGINEER for work falling under a fixed price contract, the amount shall be based on CONTRACTOR's price quotation.
  2. For change requested by CONTRACTOR, the amount shall be based on CONTRACTOR's request for a change order as approved by ENGINEER.
  3. For predetermined unit prices and quantities, the amount shall be based on the fixed unit prices.
- G. Substantiation of Costs: Provide full information required for evaluation.
1. On request, provide the following data:
    - a. Quantities of products, labor and equipment.
    - b. Taxes, insurance and bonds.

- c. Overhead and profit.
  - d. Justification for any change in contract time.
  - e. Credit for deletions from contract, similarly documented.
- 2. Support each claim for additional costs with additional information:
  - a. Origin and date of claim.
  - b. Dates and times work was performed and by whom.
  - c. Time records and wage rates paid.
  - d. Invoices and receipts for products, equipment and subcontracts, similarly documented.
- H. Execution of Change Orders: ENGINEER shall issue change orders for signatures of parties as provided in the conditions of the contract.
- I. After execution of change order, promptly revise schedule of values and application for payment forms to record each authorized change order as a separate line item and adjust the contract price.
- J. Promptly revise progress schedules to reflect any change in contract time, revise sub-schedules to adjust times for other items of work affected by the change and resubmit.
- K. Promptly enter changes in project record documents.

#### **1.06 APPLICATION FOR FINAL PAYMENT**

- A. Prepare application for final payment as specified for progress payments, identifying total adjusted contract price, previous payments and sum remaining due.
- B. Application for final payment shall not be considered until the following have been accomplished:
  - 1. All closeout procedures specified in Section 01 7700 - Project Closeout.
  - 2. Walk through with ENGINEER and OWNER.
  - 3. All punch list items completed.
  - 4. Acceptance signed. Full execution of the recommendation of acceptance.

**PART 2 - PRODUCTS (NOT USED)**

**PART 3 - EXECUTION (NOT USED)**

**END OF SECTION**

**SECTION 01 2200**  
**UNIT PRICES**

**PART 1 • GENERAL**

**1.01 SECTION INCLUDES**

- A. Measurement and payment criteria applicable to work performed under a unit price payment method or lump sum.
- B. Defect assessment and nonpayment for rejected work.

**1.02 COSTS INCLUDED**

- A. Unit prices and lump sum prices included on the bid form shall include full compensation for all required labor, products, tools, equipment, plant, transportation, services and incidentals; erection, application or installation of an item of the work; and overhead and profit.
- B. Where a following technical specification attached to this contract document identifies a measurement and payment on an unit price basis or other method and no item is specifically listed on the bid form, such work shall be considered incidental to the contract. Full compensation shall be considered paid in listed bid items and no separate payment shall be made for incidental items of work including items not specifically identified as bid items.

**1.03 UNIT QUANTITIES SPECIFIED**

- A. Quantities indicated in the bid form are for bidding and contract purposes only. Quantities and measurements of actual work shall determine the payment amount.
- B. Refer to Article 11, Section 00 7200, Standard General Conditions.

**1.04 MEASUREMENT OF QUANTITIES**

- A. Measurement methods delineated in the individual specification sections complement the criteria of this section. In the event of conflict, the requirements of the individual specification section govern.
- B. Take all measurements and compute quantities. Measurements and quantities shall be verified by ENGINEER.
- C. Assist by providing necessary equipment, workers and survey personnel as required.
- D. Measurement Devices:
  - 1. Weigh Scales: Inspected, tested and certified by the applicable state weights and measures department within the past year.
  - 2. Platform Scales: Of sufficient size and capacity to accommodate the conveying vehicle.
  - 3. Metering Devices: Inspected, tested and certified by the applicable state department within the past year.

- E. Measurement by Weight: Concrete reinforcing steel, rolled or formed steel or other metal shapes shall be measured by handbook weights to the nearest pound. Welded assemblies shall be measured by handbook or scale weight.
- F. Measurement by Volume: Measured by cubic dimension using mean length, width and height or thickness to the nearest cubic yard.
- G. Measurement by Area: Measured by square dimension using mean length and width or radius measured to the nearest square foot or square yard.
- H. Linear Measurement: Measured by linear dimension, at the item centerline or mean chord measured to the nearest foot.
- I. Lump Sum: For each described item. Includes materials, equipment, labor, products and incidentals to provide for a complete and functional system as described in the specifications.
- J. Established Quantity (EQ): Plan quantity not field measured.

#### **1.05 PAYMENT**

- A. Payment for work governed by unit prices shall be made on the basis of the actual measurements and quantities of work which is incorporated in or made necessary by the work and accepted by ENGINEER, multiplied by the unit sum/price.
- B. Payment shall not be made for any of the following:
  - 1. Products wasted or disposed of in a manner that is not acceptable.
  - 2. Products determined as unacceptable before or after placement.
  - 3. Products not completely unloaded from the transporting vehicle.
  - 4. Products placed beyond the lines and levels of the required work.
  - 5. Products remaining on hand after completion of the work.
  - 6. Loading, hauling and disposing of rejected products.

#### **1.06 DEFECT ASSESSMENT**

- A. Replace work, or portions of the work, not conforming to specified requirements.
- B. If, in the opinion of ENGINEER, it is not practical to remove and replace the work, ENGINEER shall direct one of the following remedies:
  - 1. The defective work may remain, but the unit sum/price shall be adjusted to a *new* sum/price at the discretion of ENGINEER and accepted by OWNER.
  - 2. The defective work shall be partially repaired as per the instructions of ENGINEER; and the unit sum/price shall be adjusted to a new sum/price at the discretion of ENGINEER and accepted by OWNER.
- C. The individual specification sections may modify these options or may identify a specific formula or percentage sum/price reduction.
- D. The authority of ENGINEER to assess the defect and identify payment adjustment is final.

**PART 2 • PRODUCTS (NOT USED)**

**PART 3 • EXECUTION (NOT USED)**

**END OF SECTION**

**SECTION 01 3000**  
**ADMINISTRATIVE REQUIREMENTS**

**PART 1 • GENERAL**

**1.01 SECTION INCLUDES**

- A. Preconstruction meeting.
- B. Progress meetings.
- C. Construction progress schedule.
- D. Submittal procedures.
- E. Submittal schedule.
- F. Shop drawings.
- G. Project data.
- H. Samples.
- I. Engineers Action.
- J. Manufacturer's instructions.

**1.02 RELATED SECTIONS**

- A. Section 00 7200 - Standard General Conditions of the Construction Contract.
- B. Section 01 1000 - Special Provisions.

**1.03 PROJECT COORDINATION**

- A. Project Engineer: Lower Platte South Natural Resource District
- B. Cooperate with OWNER and ENGINEER to determine the availability of staging areas for field offices, storage of materials, parking of equipment, etc.
- C. During construction, coordinate use of site and facilities through OWNER and ENGINEER.
- D. Comply with ENGINEER's procedures for intra-project communications; submittals, reports and records, schedules, coordination drawings and recommendations; and resolution of ambiguities and conflicts.
- E. Comply with instructions of OWNER and ENGINEER for use of temporary utilities and construction facilities.
- F. Coordinate field engineering and layout work under instructions of the project ENGINEER.
- G. Make the following types of submittals to ENGINEER:
  - 1. Requests for interpretation.
  - 2. Requests for substitution.
  - 3. Shop drawings, product data and samples.
  - 4. Test and inspection reports.

5. Design data.
6. Manufacturer's instructions and field reports.
7. Applications for payment and change order requests.
8. Progress schedules.
9. Coordination drawings.
10. Closeout submittals.

## **PART 2 - PRODUCTS (NOT USED)**

## **PART 3 - EXECUTION**

### **3.01 PRECONSTRUCTION MEETING**

- A. ENGINEER shall schedule a meeting after notice of award.
- B. Attendance Required:
  1. OWNER.
  2. ENGINEER.
  3. CONTRACTOR.
  4. Subcontractors.
  5. Utilities.
- C. Agenda:
  1. Designation of project representatives for OWNER, ENGINEER and CONTRACTOR.
  2. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, change orders and contract closeout procedures.
  3. Project scheduling.
  4. Scheduling activities of subcontractors.
  5. Review scope of project and project specific items.
  6. Review other miscellaneous items as needed.
- D. Record minutes and distribute copies after meeting to participants.
- E. Refer to Article 2, Section 00 7200, Standard General Conditions for further requirements.

### **3.02 PROGRESS MEETINGS**

- A. Schedule and administer meetings throughout progress of the work with a maximum of monthly intervals.
- B. ENGINEER shall make arrangements for meetings, prepare agenda with copies for participants and preside at meetings.
- C. Attendance Required: Job superintendent, major subcontractors and suppliers, OWNER and ENGINEER, as appropriate to agenda topics for each meeting.

- D. Agenda:
1. Review minutes of previous meetings.
  2. Review of work progress.
  3. Field observations, problems and decisions.
  4. Identification of problems which impede planned progress.
  5. Review of submittals schedule and status of submittals.
  6. Review of off-site fabrication and delivery schedules.
  7. Maintenance of progress schedule.
  8. Corrective measures to regain projected schedules.
  9. Planned progress during succeeding work period.
  10. Coordination of projected progress.
  11. Maintenance of quality and work standards.
  12. Effect of proposed changes on progress schedule and coordination.
  13. Other business relating to work.
- E. CONTRACTOR shall record minutes and distribute copies within 2 days after meeting to participants, with 2 copies to ENGINEER and 1 copy each to OWNER, participants and those affected by decisions made.

### **3.03 CONSTRUCTION PROGRESS SCHEDULE**

- A. Within 10 days after the effective date of the agreement, submit preliminary schedule defining planned operations for the first 60 days of work, with a general outline for remainder of work.
- B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.
- C. Within 20 days after review of preliminary schedule, submit draft of proposed complete schedule for review.
  1. Include written certification that major contractors have reviewed and accepted proposed schedule.
- D. Within 10 days after joint review, submit complete schedule.
- E. Submit updated schedule with each application for payment.

### **3.04 SUBMITTAL PROCEDURES**

- A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.
  1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals and related activities that require sequential activity.
  2. Coordinate transmittal of different types of submittals for related elements of the work so processing will not be delayed by the need to review submittals concurrently for coordination.



- a. ENGINEER reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
3. Processing: Allow sufficient review time so that installation will not be delayed as a result of the time required to process submittals, including time for resubmittals.
  - a. Allow 2 weeks for initial review. Allow additional time if processing must be delayed to permit coordination with subsequent submittals. ENGINEER shall promptly advise CONTRACTOR when a submittal being processed must be delayed for coordination.
  - b. If an intermediate submittal is \_necessary, process the same as the initial submittal.
  - c. Allow 2 weeks for reprocessing each submittal.
  - d. No extension of contract time shall be authorized because of failure to transmit submittals to ENGINEER sufficiently in advance of the work to permit processing.
- B. Submittal Preparation: Place a permanent label or title block on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block.
  1. Provide a space to record CONTRACTOR's review and approval markings and the action taken.
  2. Include the following information on the label for processing and recording action taken.
    - a. Project name.
    - b. Date.
    - c. Name and address of ENGINEER.
    - d. Name and address of CONTRACTOR.
    - e. Name and address of subcontractor.
    - f. Name and address of supplier.
    - g. Name of manufacturer.
    - h. Number and title of appropriate specification section.
    - i. Drawing number and detail references, as appropriate.
- C. Submittal Transmittal: Package each submittal appropriately for transmittal and handling. Transmit each submittal from CONTRACTOR to ENGINEER using a transmittal form. Submittals received from sources other than CONTRACTOR shall be returned without action.
- D. Copies Required: Submit 6 copies for review unless otherwise noted in the Special Provisions.

### **3.05 SUBMITTAL SCHEDULE**

- A. After development and acceptance of CONTRACTOR'S construction schedule, prepare a complete schedule of submittals. Submit the schedule within 10 days of the date required for establishment of CONTRACTOR's construction schedule.
  - 1. Coordinate submittal schedule with the list of subcontracts, schedule of values and the list of products, as well as CONTRACTOR's construction schedule.
  - 2. Prepare the schedule in chronological order; include submittals required during the first 10 days of construction. Provide the following information:
    - a. Scheduled date for the first submittal.
    - b. Related section number.
    - c. Submittal category.
    - d. Name of subcontractor.
    - e. Description of the part of the work covered.
    - f. Scheduled date for resubmittal.
    - g. Scheduled date ENGINEER's final release or approval.
- B. Distribution: Following response to initial submittal, print and distribute copies to ENGINEER, OWNER, subcontractors and other parties required to comply with submittal dates indicated. Post copies in the project meeting room and field office.
  - 1. When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the work and are no longer involved in construction activities.
- C. Schedule Updating: Revise the schedule after each meeting or activity where revisions have been recognized or made. Issue the updated schedule concurrently with report of each meeting.
- D. Refer to Article 6.17, Section 00 7200, Standard General Conditions for further detail.

### **3.06 SHOP DRAWINGS**

- A. Submit newly prepared information drawn to accurate scale. Highlight, circle or otherwise indicate deviations from the contract documents. Do not reproduce contract documents or copy standard information as the basis of shop drawings. Standard information prepared without specific reference to the project is not considered shop drawings.
- B. Shop drawings include fabrication and installation drawings, setting diagrams, schedules, patterns, templates and similar drawings. Include the following information:
  - 1. Dimensions.
  - 2. Identification of products and materials included.

3. Compliance with specified standards.
  4. Notation of coordination requirements.
  5. Notation of dimensions established by field measurement.
  6. Sheet Size: Except for templates, patterns and similar full-size drawings, submit shop drawings on sheets at least 8 1/2 inches x 11 inches but no larger than 24 inches x 36 inches.
  7. Initial Submittal: Submit 1 black line print for ENGINEER's review.
  8. Submit 6 Black Line Prints: For review unless otherwise noted in the Special Provisions.
  9. One of the prints returned shall be marked up and maintained as a "record document".
  10. Do not use shop drawings without an appropriate final stamp indicating action taken in connection with construction.
- C. Coordination drawings are a special type of shop drawings that show the relationship and integration of different construction elements that require careful coordination during fabrication or installation to fit in the space provided or function as intended.
1. Preparation of coordination drawings may include components previously shown in detail on shop drawings or product data.
  2. Submit coordination drawings for integration of different construction elements. Show sequences and relationships of separate components to avoid conflicts in use of space.
- D. Refer to Article 6.17, Section 00 7200, Standard General Conditions for further detail.

### **3.07 PRODUCT DATA**

- A. Collect product data into a single submittal for each element of construction or system. Product data includes printed information such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams and performance curves. Where product data must be specially prepared because standard printed data is not suitable for use, submit as "shop drawings".
1. Mark each copy to show applicable choices and options. Where printed product data includes information on several products, some of which are not required, mark copies to indicate the applicable information. Include the following information:
    - a. Manufacturer's printed recommendations.
    - b. Compliance with recognized trade association standards.
    - c. Compliance with recognized testing agency standards.
    - d. Application of testing agency labels and seals.
    - e. Notation of dimensions verified by field measurement.

- f. Notation of coordination requirements.
- 2. Do not submit product data until compliance with requirements of the contract documents has been confirmed.
- 3. Submittals: Submit 4 copies of each required submittal; submit 4 copies where required for maintenance manuals. ENGINEER shall retain one and shall return the other marked with action taken and corrections or modifications required.
  - a. Unless noncompliance with contract document provisions is observed, the submittal may serve as the final submittal.
- 4. Distribution: Furnish copies of final submittal to installers, subcontractors, suppliers, manufacturers, fabricators and others required for performance of construction activities. Show distribution on transmittal forms.
  - a. Do not proceed with installation until an applicable copy of product data applicable is in the installer's possession.
  - b. Do not permit use of unmarked copies of product data in connection with construction.

### **3.08 SAMPLES**

- A. Submit full-size, fully fabricated samples cured and finished as specified and physically identical with the material or product proposed. Samples include partial sections of manufactured or fabricated components, cuts or containers of materials, color range sets, and swatches showing color, texture and pattern.
  - 1. Mount, display, or package samples in the manner specified to facilitate review of qualities indicated. Prepare samples to match ENGINEER's sample. Include the following:
    - a. Generic description of the sample.
    - b. Sample source.
    - c. Product name or name of manufacturer.
    - d. Compliance with recognized standards.
    - e. Availability and delivery time.
  - 2. Submit samples for review of kind, color, pattern and texture, for a final check of these characteristics with other elements, and for a comparison of these characteristics between the final submittal and the actual component as delivered and installed.
    - a. Where variation in color, pattern, texture or other characteristics are inherent in the material or product represented, submit multiple units (not less than 3) that show approximate limits of the variations.
    - b. Refer to other specification sections for requirements for samples that illustrate workmanship, fabrication techniques, details of assembly, connections, operation and similar construction characteristics.

3. Preliminary Submittals: Where samples are for selection of color, pattern, texture or similar characteristics from a range of standard choices, submit a full set of choices for the material or product.
    - a. Preliminary submittals shall be reviewed and returned with ENGINEER's mark indicating selection and other action.
  4. Submittals: Except for samples illustrating assembly details, workmanship, fabrication techniques, connections, operation and similar characteristics, submit 4 sets; 1 shall be returned marked with the action taken.
  5. Maintain sets of samples, as returned, at the project site for quality comparisons throughout the course of construction.
    - a. Unless noncompliance with contract document provisions is observed, the submittal may serve as the final submittal.
    - b. Sample sets may be used to obtain final acceptance of the construction associated with each set.
- B. Distribution of Samples: Prepare and distribute additional sets to subcontractors, manufacturers, fabricators, suppliers, installers and others as required for performance of the work. Show distribution on transmittal forms.
1. Field samples specified in individual sections are special types of samples. Field samples are full-size examples erected on-site to illustrate finishes, coatings or finish materials and to establish the standard by which the work will be judged.
    - a. Comply with submittal requirements to the fullest extent possible. Process transmittal forms to provide a record of activity.
- C. Compliance with specified characteristics is CONTRACTOR's responsibility.
- D. Refer to Article 6.17, Section 00 7200, Standard General Conditions for further detail.

### **3.09 ENGINEER'S ACTION**

- A. Review required submittals with reasonable promptness and in accordance with schedule, only for general conformance to design concept of project and compliance with information given in plans and specifications. Review shall not extend to means, methods, sequences, techniques, procedures of construction, safety precautions or programs incidental thereof. Review of a separate item as such shall not indicate approval of assembly in which item functions.
- B. Affix stamp and initials or signature and indicate requirements for resubmittal or review of submittal. ENGINEER's action on submittal is classified as follows:
1. No Exceptions Taken: Submittal has been reviewed and appears to be in conformance with design concept of project and plans and specifications.
  2. Make Corrections Noted: Submittal has been reviewed and appears to be in conformance with design concept of project and plans and specifications, except as noted by ENGINEER.

3. Amend and Resubmit: Submittal has been reviewed and appears not to be in conformance with design concept of project and plans and specifications. CONTRACTOR shall make corrections as required by ENGINEER and resubmit for review.
  4. Rejected - See Remarks: Submittal has not been reviewed because submittal is otherwise substantially contrary to design concept of project and plans and specifications. CONTRACTOR shall revise submittal to correct defects and resubmit for review.
  5. No action taken.
- C. Return submittals to CONTRACTOR.
  - D. ENGINEER's review of submittals shall not relieve CONTRACTOR from responsibility for any deviations from plans and specifications unless CONTRACTOR has, in writing, called ENGINEER's attention to such deviation at time of submission, and ENGINEER has given written concurrence pursuant to plans and specifications to specific deviations; nor shall any concurrence by ENGINEER relieve CONTRACTOR from responsibility for errors or omissions in submittals.
  - E. Installation, manufacture, or fabrication of items prior to final approval is at CONTRACTOR's own risk.
  - F. Refer to Article 6.17, Section 00 7200, Standard General Conditions for further detail.

### **3.10 MANUFACTURER'S INSTRUCTIONS**

- A. When required in individual specification section, submit manufacturer's printed instructions for delivery, storage, assembly, installation, start-up, adjusting and operation in quantities specified for product data.

**END OF SECTION**

## SUBMITTALS TRANSMITTAL FORM

FROM: \_\_\_\_\_  
Contractor

TRANSMITTAL NO: \_\_\_\_\_

\_\_\_\_\_  
Street Address or P.O. Box

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

\_\_\_\_\_  
City, State & Zip

PROJECT TITLE: \_\_\_\_\_

\_\_\_\_\_  
Phone Number

NRD PROJECT NO: \_\_\_\_\_

1<sup>st</sup> Submittal \_\_\_ (Indicate by X)    Resubmittal \_\_\_ (Indicate by X)

IF RESUBMITTAL, ENTER PREVIOUS DATE & SUBMITTAL NO.

Date _____	Prev. Submittal No. _____
------------	---------------------------

1. CONTRACTOR SHALL FILL IN BLOCKS 1 THRU 5 FOR EACH SUBMITTAL ITEM.
2. LIST EACH DRAWING, DATA ITEM OR SAMPLE SEPARATELY.

1. SPEC SECTION & PAR. NO.	2. ITEM DESCRIPTION	3. MANUFACTURER OR SUPPLIER	4. DRAWING OR DETAIL NO. (if appropriate)	5. SAMPLE ONLY IMARKX}	6. ENGINEER ACTION TAKEN (Ref. A-E Below)

These/This Item(s) have been checked for compliance with specification requirements and space limitations and will meet these conditions.

By(Name): \_\_\_\_\_

Signature: \_\_\_\_\_

---

**SPACE BELOW FOR NRD USE ONLY**

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REVIEW IS FOR GENERAL COMPLIANCE WITH CONTRACT DOCUMENTS. NO RESPONSIBILITY IS ASSUMED FOR CORRECTNESS OF DIMENSIONS OR DETAILS.

THE ABOVE DATA HAS BEEN REVIEWED IN ACCORDANCE WITH THE PROVISIONS OF THE PROJECT SPECIFICATIONS AND IS RETURNED WITH ACTION DESIGNATED ABOVE IN ACCORDANCE WITH THE FOLLOWING LEGEND: (Circle one of the following)

A-  
NO EXCEPTIONS  
TAKEN

B-  
MAKE CORRECTIONS  
NOTED

C-  
AMENDAND  
RESUBMIT

D-  
REJECTED-  
SEE REMARKS

E-  
NO ACTION TAKEN  
(SEE REMARKS)

REMARKS: \_\_\_\_\_

Reviewed By (ENGINEER): \_\_\_\_\_

Date: \_\_\_\_\_

**SECTION 01 4000**  
**QUALITY REQUIREMENTS**

**PART 1 • GENERAL**

**1.01 SECTION INCLUDES**

- A. Submittals - qualifications and reports.
- B. References and standards.
- C. Testing and inspection agencies.
- D. Control of installation.
- E. Tolerances.
- F. Testing and inspection.
- G. Manufacturers field service.
- H. Defect assessment.

**1.02 RELATED SECTIONS**

- A. Section 00 7200 - Standard General Conditions of the Construction Contract.
- B. Section 01 1000 - Special Provisions.
- C. Section 01 3000 -Administrative Requirements.
- D. Section 01 6000 - Product Requirements.
- E. Section 03 3000 - Cast-In-Place Concrete.
- F. Section 31 2313 - Subgrade Preparation.
- G. Section 31 2323 - Fill and Backfill.
- H. Section 31 2333 -Trenching for Utilities.
- I. Section 31 2413- Roadway Excavation and Embankment.
- J. Section 32 1216 -Asphaltic Concrete.
- K. Section 32 1313 - Portland Cement Concrete Pavement.
- L. Geotechnical Report.

**1.03 SUBMITTALS QUALIFICATIONS AND REPORTS**

- A. Testing Agency Qualifications:
  - 1. Prior to start of work, submit testing agency name, address and telephone number, and names of full-time registered ENGINEER and responsible officer.
  - 2. Submit copy of report of testing agency laboratory facilities inspection made by Materials Reference Laboratory of National Bureau of Standards during most recent inspection, with memorandum of remedies of any deficiencies reported by the inspection.



- B. Design Data: Submit for ENGINEER's knowledge as contract administrator or OWNER for the limited purpose of assessing conformance with the design concept expressed in the contract documents.
- C. Test Reports: After each test/inspection, promptly submit 2 copies of report to ENGINEER.
  - 1. Include:
    - a. Date issued.
    - b. Project title and number.
    - c. Name of inspector.
    - d. Date and time of sampling or inspection.
    - e. Identification of product and specification section.
    - f. Location in the project.
    - g. Type of test/inspection.
    - h. Date of test/inspection.
    - i. Results of test/inspection.
    - j. Conformance with contract documents.
    - k. When requested by ENGINEER, provide interpretation of results.
  - 2. Test reports are submitted for ENGINEER's knowledge as contract administrator for the limited purpose of assessing conformance with the design concept expressed in the contract documents and for OWNER's information.
- D. Certificates: When specified in individual specification sections, submit certification by the manufacturer and CONTRACTOR or installation/application subcontractor to ENGINEER in quantities specified for product data.
  - 1. Indicate that material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits and certifications as appropriate.
  - 2. Certificates may be recent or previous test results on material or product but must be acceptable to ENGINEER.
- E. Manufacturer's Instructions: When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting and finishing for OWNER's information. Indicate special procedures, perimeter conditions requiring special attention and special environmental criteria required for application or installation.
- F. Manufacturer's Field Reports: Submit reports for ENGINEER's benefit as contract administrator and for OWNER's information.
  - 1. Submit report in duplicate within 15 days of observation to ENGINEER for information.

2. Submit information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.
- G. Erection Drawings: Submit drawings for ENGINEER's benefit as contract administrator and for OWNER's information.
1. Submit for information and for the limited purpose of assessing conformance with the information given and the design concept expressed in the contract documents.
  2. Data indicating inappropriate or unacceptable work may be subject to action by ENGINEER or OWNER.

#### **1.04 REFERENCES AND STANDARDS**

- A. For products and workmanship specified by reference to a document or documents not included in the project manual, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to reference standard of date of issue current on date of contract documents, except where a specific date is established by applicable code.
- C. Obtain copies of standards where required by product specification sections.
- D. Maintain copy at project site during submittals, planning and progress of the specific work until project acceptance.
- E. Should specified reference standards conflict with contract documents, request clarification from ENGINEER before proceeding.
- F. Neither the contractual relationships nor the duties or responsibilities of the parties in contract or those of ENGINEER shall be altered from the contract documents by mention inference or otherwise in any reference document.
- G. Should plans conflict with specifications or other contract documents, request clarification from ENGINEER before proceeding.

#### **1.05 TESTING AND INSPECTION AGENCIES**

- A. As indicated in the Section 01 1000 - Special Provisions or individual specification sections, OWNER shall employ and pay for services of an independent testing agency to perform specified testing.
- B. Employment of an independent testing agency in no way relieves CONTRACTOR of obligation to perform work in accordance with requirements of contract documents.
- C. OWNER Employed Agency:
  1. All costs (including testing and other evaluations) related to the determination of defective work shall be the responsibility of the CONTRACTOR, if said work is found to be defective.
  2. Retesting of failed tests and testing to identify a failed area shall be paid for by CONTRACTOR.

## **PART 2 - PRODUCTS (NOT USED)**

## **PART 3 - EXECUTION**

### **3.01 CONTROL OF INSTALLATION**

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions and workmanship to produce work of specified quality.
- B. Comply with manufacturer's instructions, including each step in sequence.
- C. Should manufacturer's instructions conflict with contract documents, request clarification from ENGINEER before proceeding.
- D. Comply with specified standards as minimum quality for the work, except where more stringent tolerances, codes and specified requirements indicate higher standards or more precise workmanship.
- E. Work shall be performed by persons qualified to produce required and specified quality.
- F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.
- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion and disfigurement.
- H. The CONTRACTOR shall be responsible for the protection, care, and upkeep of the work, all associated storage sites, and other areas used to execute the contract.
  - 1. The CONTRACTOR shall take every precaution against injury or damage to the work due to the weather or from any other cause.
  - 2. The CONTRACTOR shall rebuild, repair, restore, and make good all injuries or damages to the work due to any cause before final acceptance at no additional cost.

### **3.02 TOLERANCES**

- A. Monitor fabrication and installation tolerance control of products to produce acceptable work. Do not permit tolerances to accumulate.
- B. Comply with manufacturer's tolerances. Should manufacturer's tolerances conflict with contract documents, request clarification from ENGINEER before proceeding.

- C. Adjust products to appropriate dimensions, position before securing products in place.

### **3.03 TESTING AND INSPECTION**

- A. See individual specification sections for testing required.
- B. Testing Agency Duties:
  - 1. Test samples of materials and mixes submitted by CONTRACTOR.
  - 2. Provide qualified personnel at site. Cooperate with ENGINEER and CONTRACTOR in performance of services.
  - 3. Perform specified sampling and testing of materials, products and mixes in accordance with specified standards.
  - 4. Ascertain compliance of materials, products and mixes with requirements of contract documents.
  - 5. Promptly notify ENGINEER and CONTRACTOR of observed irregularities or nonconformance of work or products.
  - 6. Perform additional tests and inspections required by ENGINEER.
  - 7. Attend preconstruction meetings and progress meetings.
  - 8. Submit reports of all tests/inspections specified.
- C. Limits on Testing/Inspection Agency Authority:
  - 1. Agency may not release, revoke, alter or enlarge on requirements of contract documents.
  - 2. Agency may not approve or accept any portion of the work.
  - 3. Agency may not assume any duties of CONTRACTOR.
  - 4. Agency has no authority to stop the work.
- D. CONTRACTOR's Responsibilities:
  - 1. Deliver to agency at designated location adequate samples of materials proposed to be used which require testing, along with proposed mix designs.
  - 2. Cooperate with testing agency personnel and provide access to the work.
  - 3. Provide incidental labor and facilities.
    - a. To provide access to work to be tested/inspected.
    - b. To obtain and handle samples at the site or at source of products to be tested/inspected.
    - c. To facilitate tests/inspections.
    - d. To provide storage and curing of test samples.
  - 4. Notify ENGINEER and testing agency 48 hours prior to expected time for operations requiring testing/inspection services.

- E. Retesting required because of nonconformance to specified requirements shall be performed by the same agency on instructions by ENGINEER. Payment for retesting shall be paid for by the CONTRACTOR.
- F. Refer to Article 13, Section 00 7200 - Standard General Conditions.

#### **3.04 MANUFACTURER'S FIELD SERVICES**

- A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions; conditions of surfaces and installation; quality of workmanship; start-up of equipment; test, adjust and balance of equipment as applicable; and to initiate instructions when necessary.
- B. Submit qualifications of observer to ENGINEER 30 days in advance of required observations.
  - 1. Observer subject to approval of ENGINEER.
  - 2. Observer subject to approval of OWNER.
- C. Report to ENGINEER observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturer's written instructions.

#### **3.05 DEFECT ASSESSMENT**

- A. Replace work or portions of the work not conforming to specified requirements.
- B. If, in the opinion of ENGINEER, it is not practical to remove and replace the work, ENGINEER shall direct an appropriate remedy or adjust payment.
- C. Refer to Article 13, Section 00 7200 - Standard General Conditions.

**END OF SECTION**

**SECTION 01 5000**  
**TEMPORARY FACILITIES AND CONTROLS**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. Temporary utilities.
- B. Temporary sanitary facilities.
- C. Barriers.
- D. Fencing.
- E. Security.
- F. Vehicular access and parking.
- G. Waste removal facilities and services.
- H. Project identification sign.
- I. Removal of utilities, facilities and controls.

**1.02 TEMPORARY UTILITIES**

- A. Provide and pay for all electrical power, lighting, water, heating and cooling and ventilation required for construction purposes.
- B. Existing facilities may be used subject to the OWNER's approval.
- C. New permanent facilities may not be used.

**1.03 TEMPORARY SANITARY FACILITIES**

- A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.
- B. Use of existing facilities is not permitted unless approved by OWNER.
- C. New permanent facilities may not be used during construction operations.
- D. Maintain daily in clean and sanitary condition.
- E. At end of construction, return facilities to same or better condition as originally found.

**1.04 BARRIERS**

- A. Provide barriers to prevent unauthorized entry to construction areas to allow for OWNER's use of site and to protect existing facilities and adjacent properties from damage from construction operations.
- B. Provide barricades and covered walkways required by governing authorities for public rights-of-way.
- C. Provide protection for plants designated to remain. Replace damaged plants.
- D. Protect non owned vehicular traffic, stored materials, site and structures from damage.

### **1.05 FENCING**

- A. Construction: See Section 01 1000 - Special Provisions.

### **1.06 SECURITY**

- A. Provide security and facilities to protect work, existing facilities and OWNER's operations from unauthorized entry, vandalism or theft.

### **1.07 VEHICULAR ACCESS AND PARKING**

- A. Coordinate access and haul routes with governing authorities and OWNER.
- B. Provide and maintain access to fire hydrants, free of obstructions.
- C. Provide means of removing mud from vehicle wheels before entering public right-of-way.
- D. Designated, existing on-site roads may be used for construction traffic.
- E. Provide temporary parking areas to accommodate construction personnel. When site space is not adequate, provide additional off-site parking.
- F. Existing parking areas may be used for construction parking subject to OWNER's approval.
- G. Do not allow vehicle parking on existing pavement without OWNER's approval.

### **1.08 WASTE REMOVAL**

- A. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.
- B. Provide containers with lids. Dispose of waste off-site periodically.
- C. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

### **1.09 PROJECT IDENTIFICATION**

- A. Provide project identification sign of design and construction if indicated in the drawings or Section 011000 - Special Provisions.
- B. Erect on site at location indicated.
- C. Erect on site at location established by ENGINEER.
- D. No other signs are allowed without OWNER's permission, except those required bylaw.

### **1.10 REMOVAL OF UTILITIES, FACILITIES AND CONTROLS**

- A. Remove temporary utilities, equipment, facilities and materials prior to recommendation of acceptance inspection.
- B. Remove underground installations to a minimum depth of 3 feet. Grade site as indicated.
- C. Clean and repair damage caused by installation or use of temporary work.
- D. Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

**PART 2 • PRODUCTS (NOT USED)**

**PART 3 • EXECUTION (NOT USED)**

**END OF SECTION**



**SECTION 01 5500**  
**TRAFFIC CONTROL AND BARRICADING**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. This section describes various materials, equipment and procedures involved in traffic control and barricading during construction.

**1.02 REFERENCES**

- A. Manual on Uniform Traffic Control Devices - MUTCD.
- B. National Cooperative Highway Research Program.
- C. Report 350 - NCHRP Report 350.
- D. ASTM D 4956.
- E. Nebraska Department of Transportation (NDOT), Iowa Department of Transportation (IDOT) and Wisconsin Department of Transportation (WDOT) Flagger Handbook.

**1.03 RESPONSIBILITIES**

- A. CONTRACTOR and the contracting authority have certain responsibilities whether public traffic is allowed or is prohibited during construction.
- B. CONTRACTOR shall furnish, erect, operate, maintain, move and remove all traffic control and barricading devices required by the contract documents.
- C. All traffic control and barricading shall be in accordance with the current edition of the MUTCD (Manual on Uniform Traffic Control Devices) and latest revisions.

**1.04 TRAFFIC CONTROL DEVICES**

- A. All Category I traffic control and barricading devices used on projects shall meet National Cooperative Highway Research Program (NCHRP) Report 350. Category I devices are defined as low mass, single-piece traffic cones, tubular markers, single-piece drums and delineators. No lights or signs may be attached to these devices in order for them to meet the Category I limitations. Category I devices shall be self-certified by the vendor. It shall be the responsibility of the vendor of the device to determine if the device meets the evaluation criteria of NCHRP Report 350.
- B. All Category II traffic control devices purchased for use on projects shall meet NCHRP Report 350. Category II devices are defined as vertical panels, Type II and Type III barricades; moveable skid mounted sign stands and barrels with reflected signs or lights attached. Type III barricades with attached signs used on all projects shall meet NCHRP Report 350. A list of approved Category II traffic control devices is found on the world wide web at the following URL: <http://safety.fhwa.dot.gov/fourthlevel/hardware/wzd.htm>.

## 1.05 MONITORING

- A. CONTRACTOR shall provide 24 hour per day continuous monitoring of traffic control and barricading devices.
- B. Assistance to motorists and involvement with obstructions shall continue until they are no longer an impediment to traffic and further assistance can be provided safely by others.
- C. When a vehicle or anything else is obstructing a travel lane or shoulder intended to be clear, the operator shall assist the motorist or remove the obstruction promptly and safely. If further assistance is needed, it is to be summoned.
- D. The operator shall keep a report of any events that restrict the normal traffic flow during complex operations.
- E. A copy of this report shall be provided to ENGINEER daily.
- F. CONTRACTOR shall perform the following quality control work associated with monitoring and documenting traffic control and barricading conditions daily as the project is constructed:
  - 1. Review all traffic control operations and maintain a project traffic control daily diary, which shall be submitted to ENGINEER and shall become a part of the contracting authority's project records. The diary shall include:
    - a. All reviews of traffic control devices and operations.
    - b. Approved changes to traffic control.
    - c. Incidentals affecting the efficiency and safety of traffic.
    - d. Coordinate all traffic control operations, including those of subcontractors and suppliers.

## 1.06 SIGNS

- A. Signs shall utilize retro reflective sheeting. Reflective sheeting shall meet the requirements of ASTM D 4956, including supplementary requirements, except when modified in the contract documents or this specification.
- B. Reflective sheeting shall be uniform in color and reflectivity. In a single sign or traffic control device, variations in color or reflectivity noticeable at a distance of 50 feet or more, under daytime or nighttime lighting conditions, shall be cause for rejection of the sign.
- C. Signs for traffic control and construction zones in duration for 4 calendar days or more shall be mounted on fixed posts.
- D. Signs for traffic control and construction zones in duration for less than 4 calendar days may be mounted on moveable skids or fixed posts.
- E. Fixed, post-mounted signs shall have the sign sheeting applied to rigid wood or metal and shall be mounted at a height of at least 7 feet, measured from the bottom of the sign to the near edge of the pavement. A secondary sign on the same post may be mounted 1 foot lower than specified above. Post-mounted signs shall have a clear distance 2 feet behind a curb or beyond the edge of the shoulder.

- F. Moveable skid mounted signs shall use flexible roll-up sheeting or other skid mounted sign systems that meet NCHRP 350 requirements. Moveable skid mounted signs shall be mounted at a height of at least 1 foot above the roadway.
- G. Mounting devices shall not be so substantial as to be a hazard to vehicles.
  - 1. Wood sign supports are allowed.
  - 2. U-shaped rail steel posts not exceeding 3.0 pounds per foot are allowed.
  - 3. Dual-post and triple-post configurations using these sign supports are acceptable provided that no more than 2 posts occupy any 8-foot wide path. Bracing of these posts shall not be permitted. Posts exceeding these requirements shall have breakaway features approved by ENGINEER.
- H. Signs shall be in a condition so they are effective for the intended purposes when viewed from a vehicle. For nighttime installations, the reflectance shall be adequate so that the message is clearly readable. Signs shall be maintained in a near vertical position.

#### **1.07 CHANNELIZING DEVICES**

- A. Channelizing devices shall utilize reflective sheeting.

#### **1.08 BARRICADES**

- A. Type II barricades shall be used for all pavement surfaces on interstate and multilane roadways, which include travel lanes, intersections, ramps, acceleration and deceleration lanes, crossovers and shoulders.
- B. At locations other than on interstate and multilane divided roadways, Type II barricades may be used. Type II barricades shall have a minimum length of rail of 2 feet.
- C. When Type II barricades are furnished as one of the options for channelizing devices in lieu of vertical panels, cones or drums, a 2-foot minimum length barricade may be used.
- D. Type III barricades shall be used where specifically required. They shall have a minimum length of rail of 4 feet. When used as a shoulder barricade, the minimum barricade is acceptable. Unless otherwise shown in the contract documents, other Type III barricades shall have a minimum effective length of rail of 8 feet, including locations where the barricades are staggered to permit construction or local traffic. Barricades of the minimum length may be used, side by side and rigidly fastened together by bolting or other approved methods, to make this effective length.
- E. When traffic is permitted in each direction around a Type III barricade, the Type III barricade used shall have fully reflectorized faces on both sides of the rails.
- F. Barricades shall be erected in essentially a horizontal position perpendicular to the direction of approaching traffic. When placed on the traveled way or shoulder, they shall be ballasted with sandbags placed so as not to cover any striped rail.

### **1.09 CONES, VERTICAL PANELS, DRUMS AND TUBULAR MARKERS**

- A. Cones, vertical panels, drums and tubular markers shall meet the current requirements of the MUTCD, latest revision.
- B. When used to separate two-way traffic, temporary no passing lines shall be separated by approximately 16 inches with the marker to be installed between these lines.
- C. Tubular markers shall be between 28 inches and 34 inches in height with a diameter facing traffic at least 2 inches in width. Tubular markers shall be completely faced with reflectorized white and orange sheeting. The white reflectorized sheeting shall be in 2 bands 4 inches wide with 6 inches between bands. The top band shall be no more than 2 inches from the top of the tubular marker.

### **1.10 FLAGGERS**

- A. Flaggers shall be trained about safe flagging operations that comply with Department of Roads or Transportation Flaggers Handbook, Part VI of the MUTCD and the standard specifications prior to flagging operations. Training of flaggers shall include the following:
  - 1. Issue and review the current Flaggers Handbook.
  - 2. Presentation of the current professional flagging video.
  - 3. Issue flagger training card, which shall include the following:
    - a. Employee name.
    - b. Date of training.
    - c. Name of instructor.
    - d. Expiration date of December 31 of the year following the training date.
    - e. Flaggers shall carry their flagger training card at all times and show it upon request.
  - 4. CONTRACTOR shall maintain a list of flaggers trained and the date of the training.
- B. Training shall not be required for short time, emergency or relief assignment of employees to flagging operations.
- C. Except in an emergency, flaggers shall use signs as specified in the current edition of the MUTCD, Part VI, except the signs shall be at least 24 inches wide. The sign shall be mounted on a staff with a clear distance of 6 feet above the road surface.
- D. To be visible to traffic while flagging, flaggers shall wear a soft cap or a hard hat and a vest, shirt or jacket. The colors of these articles of dress shall be orange or strong yellow-green or fluorescent versions of these colors. Combinations of these colors are acceptable.

## 1.11 LIMITATIONS

- A. All traffic control and barricading devices subject to movement by wind shall be anchored by sandbags.
- B. When a two-way road is open to public traffic during contract work, one-way traffic shall not be controlled through the work area by means of a carry through flag or other token, except during equipment failure or emergency. When voice or signal communication between flaggers at control points is difficult or not effective because of distance, sight or noise, other means shall be used. These may be two-way radios, pilot cars or traffic signals. When the normal work area exceeds 1/4 mile on projects, pilot cars shall be used; however, where necessary for short durations, the distance may be extended to 1/2 mile for better sight distance or to clear intersections or other safety considerations with approval of ENGINEER, provided a two-way radio is used for communication between flaggers.
- C. During nonworking hours, traffic control and barricading devices intended for working hours only shall be removed, covered or turned down. When traffic control devices are no longer needed, they shall be removed.
- D. During daylight hours, workers exposed to traffic in or adjacent to traffic lanes should wear a vest, shirt or jacket equal to that required for flaggers.
- E. At night, workers shall wear clothing that is similar in color to that required for flaggers and is retro reflective to be highly visible to drivers. The retro reflective clothing shall be designed to identify clearly the wearer as a person and shall be visible through the full ranges of body actions.
- F. ENGINEER may require traffic control and barricading devices to be recleaned by washing. The device shall be washed with a brush and water and with detergent or solvent as necessary. Washing shall include a supplemental or auxiliary sign, if any, the entire target area or sign face, all reflectors, and faces of warning lights which are part of that device.
- G. Entry to and exit from work areas shall be in the direction of public traffic and shall not cross open traffic lanes at other than designated locations. During hours of darkness, CONTRACTOR shall operate equipment in the traffic control zone facing in the direction of traffic flow unless otherwise specified in the traffic control plan. Darkness shall include the period from sunset to sunrise and other times when conditions such as fog, snow, sleet or rain provide insufficient lighting to clearly identify persons and vehicles on the highway at a distance of 500 feet ahead.
- H. Unless otherwise stated in the traffic control plan, CONTRACTOR shall provide for a minimum of 2 miles between traffic control zones on rural roadways. Minimum distances between traffic control zones on urban roadways shall be at the direction of ENGINEER.

## 1.12 METHOD OF MEASUREMENT

- A. When the contract documents include a pay item for traffic control and barricading, ENGINEER shall measure for payment the following items:
  - 1. Traffic Control/Barricading: This item shall be subsidiary to other items on the project.

### **1.13 BASIS OF PAYMENT**

- A. When the following item is required for traffic control and barricading, there shall be items included in the contract documents with payment as follows:
  - 1. Traffic Control/Barricading: When there is a contract item for traffic control, CONTRACTOR shall be paid the lump sum contract price. This payment shall be full compensation for erecting, maintaining, moving and removing all traffic control devices required by the contract documents, including warning lights and for furnishing all materials, labor and equipment.
- B. If traffic control and barricading is not a bid item it shall be incidental to other items on the project.
- C. All traffic control and barricading devices furnished by CONTRACTOR shall remain CONTRACTOR's property at the completion of the work and shall be removed from the site when no longer needed.

**PART 2 - PRODUCTS (NOT USED)**

**PART 3- EXECUTION (NOT USED)**

**END OF SECTION**

**SECTION 01 6000**  
**PRODUCT REQUIREMENTS**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. General product requirements.
- B. Transportation, handling, storage and protection.
- C. Product option requirements.
- D. Substitution limitations and procedures.
- E. Spare parts and maintenance materials.

**1.02 RELATED SECTIONS**

- A. Section 00 2100 - Instructions to Bidders: Substitute and "or-equivalent" items.
- B. Section 00 7200 - Standard General Conditions of the Construction Contract.
- C. Section 01 3000 - Administrative Requirements.
- D. Section 01 4000 - Quality Requirements.

**1.03 SUBMITTALS**

- A. Proposed Products List: Submit list of major products proposed for use with name of manufacturer, trade name and model number of each product.
  - 1. Submit within 10 days of the effective date of the agreement.
  - 2. For products specified only by reference standards, list applicable reference standards.
- B. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options and other data. Supplement manufacturer's standard data to provide information specific to this project.
- C. Shop Drawing Submittal : Prepared specifically for this project; marked up drawings will not be acceptable.
- D. Sample Submittals: Illustrate functional and aesthetic characteristics of the product with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
  - 1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures and patterns.
- E. Indicate utility and electrical characteristics, utility connection requirements and location of utility outlets for service for functional equipment and appliances.
- F. Refer to Section 01 3000 -Administrative Requirements for further detail.

## **PART 2 • PRODUCTS**

### **2.01 EXISTING PRODUCTS**

- A. Do not use materials and equipment removed from existing premises unless specifically required or permitted by the contract documents.
- B. Existing materials and equipment indicated to be removed, but not to be reused, relocated, reinstalled, delivered to OWNER, or otherwise indicated as to remain the property of OWNER, become the property of CONTRACTOR and shall be removed from project site.

### **2.02 NEW PRODUCTS**

- A. Provide interchangeable components of the same manufacturer for components being replaced.

### **2.03 PRODUCT OPTIONS**

- A. Products specified by reference standards or by description only. Use any product meeting those standards or description.
- B. Products specified by naming one or more manufacturers. Use a product of one of the manufacturers named and meeting specifications; no options or substitutions allowed.
- C. Products specified by naming one or more manufacturers with a provision for substitutions. Submit a request for substitution for any manufacturer not named.

### **2.04 SPARE PARTS AND MAINTENANCE PRODUCTS**

- A. Provide spare parts, maintenance and extra products of types and in quantities specified in individual specification sections.
- B. Deliver to project site; obtain receipt prior to final payment.

## **PART 3 EXECUTION**

### **3.01 SUBSTITUTION PROCEDURES**

- A. Comply with requirements in Article 11, Instructions to Bidders, Article 6, Section 6.05, of the Standard General Conditions of the Construction Contract and as specified in this section.
- B. No substitutions will be considered prior to receipt of bids unless written request for approval has been received by ENGINEER at least 10 days prior to the date for receipt of bids. Substitution requests shall be submitted by the bidder or supplier.
- C. After an award of a contract, if CONTRACTOR chooses to make a substitution for items specified and that are available, CONTRACTOR shall identify an amount to be deducted from the bid price. Cost of substitution review shall be reimbursed to OWNER and ENGINEER as per Article 6, Section 6.05E, of the Standard General Conditions of the Construction Contract.
- D. Document each request with complete data substantiating compliance of proposed substitution with contract documents.



- E. A request for substitution constitutes a representation that the submitter:
  - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
  - 2. Will provide the same warranty for the substitution as for the specified product.
  - 3. Will coordinate installation and make changes to other work which may be required for the work to be complete with no additional cost to OWNER.
  - 4. Waives claims for additional costs or time extension which may subsequently become apparent.
  - 5. Will reimburse OWNER and ENGINEER for review or redesign services associated with reapproval by authorities/consultants.
- F. Substitutions will not be considered when they are indicated or implied on shop drawings or product data submittals without separate written request or when acceptance will require revision to the contract documents.
- G. Substitution Submittal Procedure:
  - 1. Submit to ENGINEER 3 copies of Form 01 6000 Material/Equipment Substitution Request Form Prior to Letting or Form 01 6000-A Material/Equipment Substitution Request Form After Execution of Contract, whichever is applicable, for consideration. Both forms are included at the end of this Section 01 6000. Limit each request to one proposed substitution.
  - 2. Submit shop drawings, product data and certified test results attesting to the proposed product equivalence. Burden of proof is on proposer.
  - 3. ENGINEER shall notify CONTRACTOR in writing of decision to accept or reject request.

### **3.02 CONTRACTOR SUBSTITUTIONS FOR APPROVED MAJOR EQUIPMENT**

- A. Bidder shall indicate all proposed substitutions by listing in writing the substitute equipment or supplier and the addition or deduction to the base bid lump sum price for the proposed substitute item.
- B. CONTRACTOR may propose only one substitution for each item. No further substitutions will be considered.
- C. No proposed substitution for an item of approved major equipment shall be considered unless, in the opinion of ENGINEER or OWNER, it conforms to the requirements of the contract drawings and specifications in all major respects, except for make, manufacturer or other minor details.
- D. Proposed CONTRACTOR substitutions shall be deemed as equal if the substitute is the same or better quality than the product or equipment specified under the base bid in terms of its function, performance, reliability, quality and general configuration.

- E. Required substitution data shall include:
1. Product Identification:
    - a. Manufacturer's name.
    - b. Telephone number and representative contact name.
    - c. Specification section or drawing reference number of originally specified product.
  2. Manufacturer's literature clearly marked to show compliance of proposed product with contract documents.
  3. Itemized comparison of original and proposed product addressing product characteristics including, but not limited to:
    - a. Size.
    - b. Composition or materials of construction.
    - c. Weight.
    - d. Electrical or mechanical requirements.
  4. Product Experience:
    - a. Location of past projects utilizing product.
    - b. Name and telephone number of persons associated with referenced projects concerning proposed product.
    - c. Available field data and reports associated with proposed product.
  5. Data relating to changes in construction schedule.
  6. Data relating to changes in cost.
  7. Samples:
    - a. At request of ENGINEER.
    - b. Full size if requested by ENGINEER.
    - c. ENGINEER not responsible for loss or damage to samples.
  8. Data and drawing information shall be specifically prepared for this project. Sales catalog cuts or marked up drawings from previous projects are not acceptable.
- F. The design and preparation of these drawings and specifications are based on products and equipment specified under base bid. Bidder or CONTRACTOR shall be responsible for any and all changes necessary to accommodate the substitute items, including the costs for:
1. Redesign.
  2. Revision of construction documents.
  3. Additional construction administration.

### **3.03 TRANSPORTATION AND HANDLING**

- A. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.
- B. Transport and handle products in accordance with manufacturer's instructions.
- C. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.
- D. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct and products are undamaged.
- E. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement or damage.
- F. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

### **3.04 STORAGE AND PROTECTION**

- A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication.
- B. Store and protect products in accordance with manufacturer's instructions.
- C. Store with seals and labels intact and legible.
- D. Store sensitive products in weather tight, climate-controlled enclosures in an environment favorable to product.
- E. For exterior storage of fabricated products, place on sloped supports above ground.
- F. Provide bonded off-site storage and protection when site does not permit on-site storage or protection.
- G. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- H. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- I. Prevent contact with material that may cause corrosion, discoloration or staining.
- J. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement or damage.
- K. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

**END OF SECTION**

ENGINEER USE ONLY

Date Received \_\_\_\_\_

**MATERIAL/EQUIPMENT SUBSTITUTION REQUEST FORM PRIOR TO LETTING**

This form to be submitted with supporting data.

Project Description/Title \_\_\_\_\_ NRD Project No. \_\_\_\_\_

Date of Letting \_\_\_\_\_ Date of Submittal \_\_\_\_\_

Reference Specification and Section \_\_\_\_\_

Name of Bidder Submitting Substitution Request \_\_\_\_\_

Reason for Substitution Request \_\_\_\_\_

Is specified material or equipment available?

Yes  No

Has bidder procured plans and specifications from Lower Platte South NRD?

Yes  No

Has bidder reviewed instructions to bidders, general conditions and supplemental conditions regarding procedures for substitute or "or-equal" materials and equipment?

Yes  No

The contract, if awarded, will be on the basis of materials and equipment specified or described in the bidding documents, or those substitute or "or-equal" materials and equipment approved by ENGINEER and identified by addendum. The materials and equipment described in the bidding documents establish a standard of required type, function and quality to be met by any proposed substitute or "or-equal" item. No item of material or equipment shall be considered by ENGINEER as a substitute or "or-equal" unless written request for approval has been submitted by bidder and has been received by ENGINEER (submittal time and requirements as specified) prior to the date for receipt of bids. Each such request shall conform to requirements of the general conditions, supplemental conditions and instructions to bidders. The burden of proof of the merit of the proposed item is upon bidder. ENGINEER's decision of approval or disapproval of a proposed item shall be final. If ENGINEER approves any proposed item, such approval shall be set forth in an addendum issued to all prospective bidders. Bidders shall not rely upon approvals made in any other manner.

APPROVED:  YES  NO

REVIEWER: \_\_\_\_\_

Signature

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

**MATERIAL/EQUIPMENT SUBSTITUTION REQUEST FORM PRIOR TO LETTING**

This form to be submitted with supporting data.

Project Description/Title \_\_\_\_\_ NRD Project No. \_\_\_\_\_

Date of Letting \_\_\_\_\_ Date of Submittal \_\_\_\_\_

Reference Specification and Section \_\_\_\_\_

Reason for Substitution Request \_\_\_\_\_

\_\_\_\_\_

Is specified material or equipment available?  Yes  No

Has CONTRACTOR reviewed general conditions, supplemental conditions and other specified material/equipment submittal requirements regarding procedures for substitute or "equivalent" materials and equipment?  Yes  No

What cost savings will be experienced by OWNER with this substitution? \$ \_\_\_\_\_

CONTRACTOR agrees to reimburse OWNER for ENGINEER's review of substitution request if specified equipment is available?  Yes  No

Substitution requests will not be considered that are submitted by subcontractors or suppliers. The contract was awarded on the basis of materials and equipment specified or described in the contract documents, or those substitute or "or-equal" materials and equipment approved by ENGINEER and identified by addendum. The materials and equipment described in the contract documents establish a standard of required type, function and quality to be met by any proposed substitute or "or-equal" item. No item of material or equipment shall be considered by ENGINEER as a substitute or "or-equal" unless written request for approval has been submitted by CONTRACTOR and has been received by ENGINEER (submittal time and requirements as specified). Each such request shall conform to requirements of the general and supplemental conditions and any other material/equipment submittal requirements. The burden of proof of the merit of the proposed item is upon CONTRACTOR. ENGINEER's decision of approval or disapproval of a proposed item shall be final. If ENGINEER approves any proposed item, such approval shall be set forth in written notification to CONTRACTOR. CONTRACTOR shall not rely upon approvals made in any other manner.

APPROVED:  YES  NO

REVIEWER: \_\_\_\_\_

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

Signature

**SECTION 01 7000**  
**EXECUTION REQUIREMENTS**

**PART 1 • GENERAL**

**1.01 SECTION INCLUDES**

- A. Examination, preparation and general installation procedures.
- B. Preinstallation meetings.
- C. Surveying for laying out the work.
- D. Cleaning and protection.
- E. Starting of systems and equipment.
- F. Demonstration and instruction of OWNER's personnel.

**1.02 RELATED SECTIONS**

- A. Section 00 7200 - Standard General Conditions of the Construction Contract.
- B. Section 01 3000 - Administrative Requirements.
- C. Section 01 4000 - Quality Requirements.
- D. Section 01 5000 - Temporary Facilities and Controls.
- E. Section 31 2500 - Erosion Control.

**1.03 PROJECT CONDITIONS**

- A. Grade site to drain. Maintain excavations free of water. Provide, operate and maintain pumping equipment.
- B. Protect site from ponding or running water. Provide barriers as required to protect site from soil erosion.
- C. Ventilate enclosed areas to assist cure of materials, to dissipate humidity and to prevent accumulation of dust, fumes, vapors or gases.
- D. Dust Control: Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent airborne dust from dispersing into atmosphere.
- E. Erosion and Sediment Control: Plan and execute construction by methods to control surface drainage from cuts and fills and from borrow and waste disposal areas. Prevent erosion and sedimentation.
  - 1. Minimize amount of bare soil exposed at one time.
  - 2. Provide temporary measures such as berms, dikes, bale checks, silt fence, etc. to prevent erosion.
  - 3. Construct fill and waste areas by selective placement to avoid erosive surface silts or clays.
  - 4. Periodically inspect earthwork to detect evidence of erosion and sedimentation; promptly apply corrective measures.

- 5. CONTRACTOR is responsible to furnish and install any and all the measures necessary to control erosion, whether it is a pay item or not.
- F. Noise Control: Provide methods, means and facilities to minimize noise produced by construction operations.
- G. Pollution Control: Provide methods, means and facilities to prevent contamination of soil, water and atmosphere from discharge of noxious, toxic substances and pollutants produced by construction operations.
- H. Pest Control: Provide methods, means and facilities to prevent pest and insects from damaging work.
- I. Rodent Control: Provide methods, means and facilities to prevent rodents from accessing or invading premises.

#### **1.04 COORDINATION**

- A. Coordinate scheduling, submittals and work of the various sections of the project manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- B. Notify affected utility companies about proposed construction and coordinate with their requirements.
- C. Verify utility requirements and characteristics of operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to and placing in service such equipment.
- D. Coordinate space requirements, supports and installation of mechanical and electrical work which are indicated diagrammatically in the drawings. Follow routing shown for pipes, ducts and conduit as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance and for repairs.
- E. Coordinate completion and cleanup of work of separate sections.
- F. Refer to Article 2, Section 00 7200, Standard General Conditions.

### **PART 2 - PRODUCTS**

#### **2.01 MATERIALS**

- A. Water: CONTRACTOR shall make arrangements to obtain suitable water necessary for the construction of the project. CONTRACTOR will not be paid directly for water required for the project.

### **PART 3 - EXECUTION**

#### **3.01 LAYING OUT THE WORK**

- A. Verify locations of survey control points prior to starting work.
- B. Promptly notify ENGINEER of any discrepancies discovered.
- C. Control datum for survey may be indicated in the drawings.
- D. Protect survey control points prior to starting site work; preserve permanent reference points during construction.

- E. Promptly report to ENGINEER the loss or destruction of any reference point or relocation required because of changes in grades or other reasons.
- F. Utilize recognized engineering survey practices.
- G. Establish elevations, lines and levels. Locate and lay out by instrumentation and similar appropriate means:
  - 1. Site improvements, including pavements; stakes for grading, fill and topsoil placement; and utility locations, slopes and invert elevations.
  - 2. Grid or axis for structures.
- H. Periodically verify layouts by same means.
- I. Maintain a complete and accurate log of control and survey work as it progresses.

### **3.02 PROGRESS CLEANING**

- A. Maintain areas free of waste materials, debris and rubbish. Maintain site in a clean and orderly condition.
- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces and other closed or remote spaces prior to enclosing the space.
- C. Broom and vacuum clean interior areas prior to start of surface finishing and continue cleaning to eliminate dust.
- D. Collect and remove waste materials, debris and rubbish from site periodically and dispose off-site.

### **3.03 PROTECTION OF INSTALLED WORK**

- A. Protect installed work and provide special protection where specified in individual specification sections.
- B. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- C. Prohibit traffic from landscaped areas.
- D. Limiting Exposure: Supervise construction activities to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging or otherwise deleterious exposure during the construction period, no matter what the cause. Where applicable, such exposures include, but are not limited to, the following:
  - 1. Excessive static or dynamic loading.
  - 2. Excessively high or low temperatures.
  - 3. Excessively high or low humidity.
  - 4. Water or ice.
  - 5. Heavy traffic.
  - 6. Soiling, staining and corrosion.
  - 7. Unusual wear or other misuse.
  - 8. Excessive weathering.



9. Unprotected storage.
10. Improper shipping or handling.
11. Theft.
12. Vandalism.

### **3.04 STARTING SYSTEMS**

- A. Coordinate schedule for start-up of various equipment and systems.
- B. Notify ENGINEER and OWNER 7 days prior to start-up of each item.
- C. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence and for conditions that may cause damage.
- D. Verify tests, meter readings and specified electrical characteristics agree with those required by the equipment or system manufacturer.
- E. Verify that wiring and support components for equipment are complete and tested.
- F. Execute start-up under supervision of applicable CONTRACTOR personnel and manufacturer's representative in accordance with manufacturer's instructions.
- G. When specified in individual specification sections, require manufacturer to provide authorized representative to be present at site to inspect, check and approve equipment or system installation prior to start-up and to supervise placing equipment or system in operation.
- H. Submit a written report that equipment or system has been properly installed and is functioning correctly.

### **3.05 DEMONSTRATION AND INSTRUCTION**

- A. Demonstrate operation and maintenance of products to OWNER's personnel prior to date of final inspection.
- B. Demonstrate start-up, operation, control, adjustment, troubleshooting, servicing, maintenance and shutdown of each item of equipment.
- C. Provide a qualified manufacturer's representative who is knowledgeable about the project to perform demonstration and instruction of OWNER's personnel.
- D. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with OWNER's personnel in detail to explain all aspects of operation and maintenance.
- E. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.

### **3.06 ADJUSTING**

- A. Adjust operating products and equipment to ensure smooth and unhindered operation.

### **3.07 FINAL CLEANING**

- A. Execute final cleaning after items have been completed but before making final application for payment.

1. Clean areas to be occupied by OWNER prior to final completion and/or before OWNER's occupancy.
- B. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned, as recommended by the manufacturer of the equipment and/or fixtures.
- C. Clean filters, if reusable, or provide new for operating equipment.
- D. Clean site, sweep paved areas and rake clean landscaped surfaces.
- E. Remove waste and surplus materials, rubbish and construction facilities from the site.

### **3.08 MAINTENANCE SERVICE**

- A. Furnish service and maintenance of components indicated in specification sections during the warranty period.
- B. Examine system components at a frequency consistent with reliable operation. Clean, adjust and lubricate as required.
- C. Include systematic examination, adjustment and lubrication of components. Repair or replace parts whenever required. Use parts produced by the manufacturer of the original component.
- D. Maintenance service shall not be assigned or transferred to any agent or subcontractor without prior written consent of OWNER.
- E. Refer to Article 13.07, Section 00 7200, Standard General Conditions for correction period.

**END OF SECTION**

**SECTION 01 7113**  
**MOBILIZATION AND DEMOBILIZATION**

**PART 1 • GENERAL**

**1.01 SCOPE**

- A. The work shall consist of the mobilization and demobilization of CONTRACTOR's forces and equipment necessary for performing the work required under the contract.
- B. This work shall not include mobilization and demobilization for specific items of work for which payment is provided elsewhere in the contract.
- C. Mobilization shall not be considered as work in fulfilling the contract requirement for commencement of work.

**1.02 UNIT PRICES· MEASUREMENT AND PAYMENT**

- A. See Section 01 2200 - Unit Prices.
- B. Mobilization: Shall be subsidiary to work performed for placement of limestone screenings, shall include all items described in this section and any costs for insurance and bonds.

**1.03 EQUIPMENT AND MATERIALS**

- A. Mobilization shall include all activities and costs for transportation of personnel, equipment and operating supplies to the site; establishment of offices, buildings and other necessary facilities for CONTRACTOR's operations at the site; and premiums paid for performance and payment bonds, including coinsurance and reinsurance agreements as applicable.
- B. Demobilization shall include all activities and costs for transportation of personnel, equipment and supplies not included in the contract from the site, including the disassembly, removal and site cleanup of offices, buildings and other facilities assembled on the site for this contract. No separate payment will be made for demobilization.
- C. This work includes mobilization and demobilization required by the contract at the time of award. If additional mobilization and demobilization activities and costs are required during the performance of the contract as a result of changed, deleted or added items of work for which CONTRACTOR is entitled to an adjustment in contract price, compensation for such costs shall be included in the price adjustment for the item or items or work changed or added.

**PART 2 • PRODUCTS (NOT USED)**

**PART 3 • EXECUTION (NOT USED)**

**END OF SECTION**

**SECTION 01 7700**  
**PROJECT CLOSEOUT**

**PART 1 - GENERAL**

**1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of contract, including general and supplementary conditions and other specification sections, apply to this section.

**1.02 SUMMARY**

- A. This section specifies administrative and procedural requirements for project closeout including, but not limited to:
  - 1. Inspection procedures.
  - 2. Project record document submittal.
  - 3. Operation and maintenance manual submittal.
  - 4. Submittal of warranties.
  - 5. Final cleaning.
- B. Closeout requirements for specific construction activities are included in the appropriate sections.

**1.03 PRIOR TO FINAL ACCEPTANCE**

- A. Preliminary Procedures: Before requesting for certification of recommendation of acceptance, complete the following.
  - 1. If 100 percent of project completion has not been achieved, include a list of incomplete items, the value of incomplete construction and reasons the work is not complete.
  - 2. Inform OWNER of pending insurance changeover requirements.
  - 3. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications and similar documents.
  - 4. Obtain and submit releases enabling OWNER unrestricted use of the work and access to services and utilities; include occupancy permits, operating certificates and similar releases.
  - 5. Submit extra stock as specified in individual specification sections.
  - 6. The final date the recommendation of acceptance is signed by both OWNER and CONTRACTOR is the initiation date for CONTRACTOR's 1-year warranty.
- B. Inspection Procedures: On receipt of a request for inspection, ENGINEER shall either proceed with inspection or advise CONTRACTOR of unfilled requirements. ENGINEER shall advise CONTRACTOR of construction that must be completed or corrected before the recommendation of acceptance will be issued.
  - 1. ENGINEER shall repeat inspection when requested and assured that the work has been completed.

2. Results of the completed inspection shall form the basis of requirements for final acceptance.

#### **1.04 FINAL ACCEPTANCE**

- A. Preliminary Procedures: Before requesting final inspection for recommendation of acceptance and final payment, complete the following. List exceptions in the request.
  1. Submit record drawings, maintenance manuals, property survey and similar final record information.
  2. Submit the final payment request with releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.
  3. Submit an updated final statement, accounting for final additional changes to the contract sum.
  4. Submit a certified copy of ENGINEER's final inspection list of items to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance and the list has been endorsed and dated by ENGINEER.
  5. Submit consent of surety with the application for final payment, if requested by the OWNER.
  6. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
  7. Submit an affidavit stating that, to the best of CONTRACTOR's knowledge, asbestos was not used in the manufacture and fabrication of products and materials used in conjunction with the project.
  8. Submit signed and completed punch list documents to ENGINEER.
- B. Reinspection Procedure: ENGINEER shall reinspect the work upon receipt of notice that the work, including inspection list items from earlier inspections, has been completed, except items where completion has been delayed because of circumstances acceptable to ENGINEER.
  1. Upon completion of reinspection, ENGINEER shall prepare the recommendation of acceptance, or advise CONTRACTOR of work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance of the project.

#### **1.05 RECORD DOCUMENT SUBMITTALS**

- A. General: Do not use record documents for construction purposes; protect from deterioration and loss in a secure, fire-resistive location; and provide access to record documents for ENGINEER's reference during normal working hours.
- B. Record Drawings: Maintain a clean, undamaged set of blue or black line white prints of contract drawings and shop drawings. Mark the set to show the actual installation where the installation varies substantially from the work as originally shown. Mark whichever drawing is most capable of showing conditions fully and accurately; where shop drawings are used, record a cross-reference at the

- ( corresponding location on the contract drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.
1. Mark record sets with red erasable pencil; use other colors to distinguish between variations in separate categories of the work.
  2. Mark new information and/or design changes that were not shown on contract drawings or shop drawings.
  3. Note related change order numbers where applicable.
  4. Organize record drawing sheets into manageable sets; bind with durable paper cover sheets; and print suitable titles, dates and other identification on the cover of each set.
- C. Record Specifications: Maintain 1 complete copy of the project manual, including addenda, and 1 copy of other written construction documents, such as change orders and modifications issued in printed form during construction. Mark these documents to show substantial variations in actual work performed in comparison with the text of the specifications and modifications. Give particular attention to substitutions, selection of options and similar information on elements that are concealed or cannot otherwise be readily discerned later by direct observation. Note related record drawing information and product data.
1. Upon completion of the work, submit record specifications to ENGINEER for OWNER's records.
- D. Record Product Data: Maintain 1 copy of each product data submittal. Mark these documents to show significant variations in actual work performed in comparison with information submitted. Include variations in products delivered to the site and from the manufacturer's installation instructions and recommendations. Give particular attention to concealed products and portions of the work which cannot otherwise be readily discerned later by direct observation. Note related change orders and markup of record drawings and specifications.
1. Upon completion of markup, submit complete set of record product data to ENGINEER for OWNER's records.
- E. Extra Stock Submitted: Immediately prior to the date or dates of recommendation of acceptance, CONTRACTOR shall meet at the site with ENGINEER and OWNER's personnel to transmit extra stock to OWNER for storage purposes. Comply with delivery of OWNER's storage area.
- F. Miscellaneous Record Submittals: Refer to other specification sections for requirements of miscellaneous record keeping and submittals in connection with actual performance of the work. Immediately prior to the date or dates of recommendation of acceptance, complete miscellaneous records and place in good order, properly identified and bound or filed, ready for continued use and reference. Submit to ENGINEER for OWNER's records.

#### **1.06 OPERATION AND MAINTENANCE MANUAL SUBMITTAL**

- A. Maintenance Manuals: Organize operating and maintenance data into 3 sets of manageable size. Bind properly indexed data in individual heavy-duty, 3-inch, 3-ring vinyl-covered binders complete with tab sections and table of contents, with pocket folders for folded sheet information. Mark appropriate identification

on front and spine of each binder. Include the following types of information:

1. Emergency instructions.
2. Spare parts list.
3. Copies of warranties.
4. Wiring diagrams.
5. Recommend "turn around" cycles.
6. Inspection procedures.
7. Shop drawings and product data.
8. Equipment cards for all equipment furnished on project.
9. List of subcontractors and material suppliers.

## **PART 2 • PRODUCTS (NOT USED)**

## **PART 3 • EXECUTION**

### **3.01 CLOSEOUT PROCEDURES**

- A. Make submittals that are required by governing or other authorities.
  1. Provide copies to ENGINEER and OWNER.
- B. Notify ENGINEER when work is considered ready for final/partial inspection.
- C. Submit written certification that contract documents have been reviewed, work has been inspected and that work is complete in accordance with contract documents and ready for ENGINEER's review.
- D. OWNER shall occupy all of the site or facilities as indicated in the plans or as directed by OWNER and ENGINEER.
- E. Correct items of work listed in executed punch list documents and comply with requirements for access to OWNER occupied areas.
- F. Notify ENGINEER and OWNER when work is considered 100 percent complete.
- G. Complete items of work determined by ENGINEER's final inspection.
- H. Operating and Maintenance Instructions: Arrange for each installer of equipment that requires regular maintenance to meet OWNER's personnel to provide instruction in proper operation and maintenance. If installers are not experienced in procedures, provide instruction by manufacturer's representatives. Include a detailed review of the following items:
  1. Maintenance manuals.
  2. Record documents.
  3. Spare parts and materials.
  4. Tools.
  5. Identification systems.
  6. Control sequences.

7. Hazards.
  8. Cleaning.
  9. Warranties and bonds.
  10. Maintenance agreements and similar continuing commitments.
  11. Equipment cards.
  12. Lubricants and fuels.
- I. As part of instruction for operating equipment, demonstrate the following procedures:
1. Start-up.
  2. Shutdown.
  3. Emergency operations.
  4. Noise and vibration adjustments.
  5. Safety procedures.
  6. Economy and efficiency adjustments.
  7. Effective energy utilization.

### **3.02 FINAL CLEANING**

- A. General: General cleaning during construction is required by the general conditions and included in Section 01 5000 -Temporary Facilities.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal commercial building cleaning and maintenance program. Comply with manufacturer's instructions.
1. Complete the following cleaning operations before requesting inspection for certification of recommendation of acceptance.
    - a. Remove labels that are not permanent labels.
    - b. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compound and other substances that are noticeable vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials.
    - c. Clean exposed exterior and interior hard-surfaced finishes to a dust-free condition, free of stains, films and similar foreign substances. Restore reflective surfaces to their original reflective condition. Leave concrete floors broom clean.
    - d. Clean the site, including landscape development areas, of rubbish, liter and other foreign substances. Sweep paved areas broom clean; remove stains, spills and other foreign deposits. Rake grounds that are neither paved nor planted to a smooth, even-textured surface.
- C. Removal of Protection: Remove temporary protection and facilities installed for protection of the work during construction.



- D. Compliance: Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on OWNER's property. Do not discharge volatile, harmful or dangerous materials into drainage systems. Remove waste materials from the site and dispose of in a lawful manner.
1. Wipe surfaces of mechanical equipment. Remove excess lubrication and other substances. Clean plumbing fixtures to a sanitary condition.
  2. Wipe surfaces of electrical equipment. Clean light fixtures and lamps.
  3. Where extra materials of value remaining after completion of associated work have become OWNER's property, arrange for disposition of these materials as directed by ENGINEER/OWNER.

**END OF SECTION**

**SECTION 02 4113**  
**REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

**PART 1 • GENERAL**

**1.01 SECTION INCLUDES**

- A. Clearing of all tracts.
- B. Removal and disposal of all buildings, lighting, traffic signals, guardrail, structures, headwalls, culverts, bridges, abandoned pipelines or utilities, and other obstructions not designated to remain.
- C. Salvaging disposition designated material.
- D. Backfilling resulting cavities.

**1.02 RELATED SECTIONS**

- A. Section 01 1000 - Special Provisions.
- B. Section 31 2323 - Fill and Backfill.
- C. Section 31 2413 - Roadway Excavation and Embankment.

**1.03 REFERENCES**

- A. State Standard Specifications for Highway Construction, latest edition, including all current supplemental specifications.

**1.04 UNIT PRICES**

- A. See Section 01 2200 - Unit Prices for general requirements relating to unit prices.
- B. Remove Existing Structure:
  - 1. Method of Measurement and Pay Unit: By the unit (Each).
  - 2. Includes:
    - a. Removal of the structure and appurtenances.
    - b. Transport of salvage items to location designated by OWNER.
    - c. Removal and disposal of non-salvageable materials and debris from site.
    - d. Backfilling resulting cavities.

**1.05 QUALITY ASSURANCE**

- A. Perform work in accordance with State Standard Specifications.

**1.06 REGULATORY REQUIREMENTS**

- A. Conform to local, state and federal regulations for disposal of debris.
- B. CONTRACTOR to obtain, at CONTRACTOR's own expense, all permits or licenses for use and maintenance of dumps and waste sites.
- C. Coordinate removal and or relocation of work with utility owner.

- D. Conform to local, state and federal regulations for preparation and implementation of erosion control plan.

### **1.07 PROJECT CONDITIONS**

- A. Protect above and below grade utilities that remain.
- B. Protect trees, plants and other features designated to remain as final landscaping.
- C. Existing structures to remain in place until new replacement structure is complete unless noted otherwise in the drawings.
- D. Non-salvageable materials become property of CONTRACTOR.
- E. Salvageable materials shall become the property of CONTRACTOR, except those items to be salvaged and delivered to OWNER. See Section 01 1000 - Special Provisions for a listing and disposition details.
- F. Protect benchmarks, survey control points and existing structures designated to be used in place from damage or displacement.

## **PART 2 - PRODUCTS**

### **2.01 FILL MATERIAL**

- A. Backfill excavations/cavities with approved materials.

## **PART 3 - EXECUTION**

### **3.01 PREPARATION**

- A. Provide, erect and maintain temporary barriers and security devices.
- B. Protect existing landscaping materials, appurtenances and structures which are to remain.
- C. Prevent movement of adjacent structures. Provide bracing and shoring as necessary.
- D. Locate and mark location of utilities to remain.
- E. Identify waste area/salvage area for placing removed materials.

### **3.02 REMOVAL**

- A. Excavate as necessary-to perform removal.
- B. Basement walls, floors and miscellaneous structures:
  - 1. Remove walls a minimum 2 feet below finish grade.
  - 2. Break concrete floors into pieces approximately 4 square feet; leave in place.
  - 3. Backfill cavity with approved material.
- C. Bridges, Culverts and Other Drainage Structures:
  - 1. Remove abutments, piers, bents and walls entirely or to an elevation 2 feet below the subgrade, slope face or original ground level shown in the drawings or as directed by ENGINEER.

2. Remove piers in streams to 2 feet below natural stream bottom.
  3. Dismantle, without damage, salvaged items; match and mark if appropriate for reassembly. Clean and transport to designated storage area.
  4. Cut truss member joints apart to render them unfit for reuse on a public road.
- D. Manholes, Catch Basins or Inlets to be Abandoned:
1. Plug pipe connections with flowable fill.
- E. Pile Cutoff Elevation:
1. Cut off or drive pile to the elevations shown in Table 203.01 of the NOOR Standard Specifications or a minimum of 2 feet below final grade or streambed.
- F. Roadway lighting, sign lighting and traffic signals.
- G. Signs, Sign Support Structures and Foundations:
1. Removal in accordance with State Standard Specifications.

### **3.03 REMOVING PORTION OF EXISTING STRUCTURE**

- A. Cut, chip and trim connecting edges to line and grade shown in the drawings.
- B. Use care not to weaken or damage that portion of structure to be retained and used in place.
- C. Expose, clean, straighten and extend reinforcing steel into new work as shown in the drawings.

### **3.04 DISPOSAL**

- A. Remove waste material from project site promptly as it is generated by construction operations; do not permit to accumulate. Do not remove topsoil from the site.
- B. Remove brush, rubbish, spoil, excess excavated material and material not suitable for backfill to off-site location of CONTRACTOR's choice.
- C. Disposal areas shall be CONTRACTOR's responsibility and as legally permitted.
- D. Grade final cover to allow for positive surface drainage.
- E. Haul Routes:
  1. Determine haul roads with approval of agency having jurisdiction over proposed roadway.
  2. Make condition survey of haul roads prior to use and document with necessary photographs and written descriptions.
  3. Keep reasonably free from dirt, dust, mud and other debris from construction operations.
  4. Clean a minimum of twice a week.

5. Repair any damaged haul roads to match existing conditions before use.
6. No extra payment will be made for removals regardless of disposal locations.

### **3.05 SALVAGED MATERIALS**

- A. See Section 01 1000-Special Provisions.
- B. Carefully remove, load, transport, unload and store materials and items designated as salvage.
- C. Reinstall salvage material and items as shown in the drawings.

### **3.06 BACKFILL**

- A. Roadbed Embankment or Subgrade:
  1. See State Standard Specifications and Section 31 2323.
  2. See Section 31 2413 - Roadway Excavation and Embankment.
- B. Basements or Cavities:
  1. See State NDOT Standard Specifications.
- C. Compaction of Embankments - See State Standard Specifications:
  1. Embankment compaction classified Class III.

**END OF SECTION**

## SECTION 31 2200

### GRADING

#### PART 1 • GENERAL

##### 1.01 SECTION INCLUDES

- A. Removal and storage of topsoil.
- B. Rough grading for site structures.
- C. Replacement of topsoil and finish grading for planting and seeding.

##### 1.02 RELATED SECTIONS

- A. Section 01 1000 - Special Provisions.
- B. Section 01 3000 - Administrative Requirements.
- C. Section 31 1000 - Site Clearing.
- D. Section 31 2316 - Excavation.
- E. Section 31 2323 - Fill and Backfill.
- F. Section 31 2413 - Roadway Excavation and Embankment.
- G. Section 31 2500 - Erosion Control.
- H. Geotechnical report.

##### 1.03 REFERENCES

- A. State Standard Specifications for Highway Construction, latest edition, including all current supplemental specifications.

##### 1.04 UNIT PRICES

- A. See Section 01 2200 - Unit Prices for general requirements relating to unit prices for this work.
- B. Topsoil:
  - 1. Work considered subsidiary to bid item "excavation and or embankment".
  - 2. Includes excavating existing topsoil, stockpiling, scarifying substrate surface, placing topsoil where required and compacting.
  - 3. The loading, hauling and unloading of surplus material at a designated site is considered subsidiary to excavating existing topsoil.
- C. Grading:
  - 1. Measurement Method and Pay Unit: By the cubic yard or established quantity, as per the bid form.
  - 2. Grading may include excavating, placing material where required, furnishing of off-site material if required and compacting soils to the elevations indicated in the drawings.
    - a. Excavation.
    - b. Embankment.

- c. Borrow.

## **1.05 SUBMITTALS**

- A. Project Record Documents: CONTRACTOR shall accurately record actual locations of utilities remaining by horizontal dimensions, elevations or inverts, and slope gradients.
- B. See Section 01 3000 - Administrative Requirements for submittal procedure.
- C. Samples: 60-pound samples of each type of fill. Submit in airtight containers to testing laboratory unless samples are to be acquired by the testing agency.
- D. Materials Sources: Submit name of imported materials source.
- E. Fill Composition Test Reports: Results of laboratory tests on proposed and actual materials used.
- F. Compaction density test reports.

## **1.06 QUALITY ASSURANCE**

- A. Perform work in accordance with State Standard Specifications or Section 01 4000 - Quality Requirements.

## **1.07 PROJECT CONDITIONS**

- A. Protect above and below-grade utilities that remain.
- B. Protect plants, lawns, rock outcroppings, amenities and other features to remain as a portion of final landscaping.
- C. Protect benchmarks, survey control points, existing structure, fences, sidewalks, paving, curbs, batter boards and amenities from excavating equipment and vehicular traffic.

## **PART 2 - PRODUCTS**

### **2.01 MATERIALS**

- A. Topsoil: See Section 31 2323 - Fill and Backfill.
- B. Topsoil: Conforming to State Standard Specifications and/or Geotechnical Report.
- C. Topsoil: Topsoil excavated on-site or furnished by CONTRACTOR.
  - 1. Graded.
  - 2. Free of roots, rocks larger than 1/2-inch, subsoil, debris, large weeds and foreign matter.
  - 3. Loam, sandy loam, silt clay loam or clay loam humus-bearing soils.
  - 4. ENGINEER approved.
- D. Other Fill Materials: See Section 31 2323 - Fill and Backfill.
- E. General Fill: Subsoil excavated on-site.
  - 1. Graded.
  - 2. Free of lumps larger than 3 inches, rocks larger than 1 inch and debris.
- F. Granular Fill - Gravel: Free of shale, clay, friable material and debris.

- 1. Graded in accordance with State Standard Specifications and/or Geotechnical Report.
- G. Sand: Natural river or bank sand, free of silt, clay, loam, friable or soluble materials, and organic matter.
  - 1. Grade in accordance with State Standard Specifications, and/or Geotechnical Report.
- H. Water required for grading is CONTRACTOR's responsibility. The cost of furnishing water will not be a direct pay item but is to be included in other items for which payment is made.

## **PART 3 • EXECUTION**

### **3.01 EXAMINATION**

- A. Verify that survey benchmark and intended elevations for the work are as indicated.

### **3.02 PREPARATION**

- A. Identify required lines, levels, contours and datum.
- B. Stake and flag locations of known utilities.
- C. Locate, identify and protect utilities that remain from damage.
- D. Notify utility owner to remove and relocate utilities when relocation is required.
- E. Implement erosion control plan.

### **3.03 ROUGH GRADING**

- A. Remove topsoil within the limits of construction (LOC) without mixing with foreign materials and stockpile. Minimum depth of topsoil removal shall be 6 inches unless otherwise noted in the drawings.
- B. Do not remove topsoil when wet.
- C. Remove subsoil from areas to be further excavated, relandscaped or regraded.
- D. Do not remove wet subsoil unless it is subsequently processed to obtain optimum moisture content.
- E. When excavating through roots, perform work by hand and cut roots with sharp axe.
- F. See Section 31 2323 - Fill and Backfill for filling procedures.
- G. Benching Slopes: Horizontally bench existing slopes greater than 1-foot vertical rise in 4 feet to key fill material to slope for firm bearing.
- H. Stability: Replace damaged or displaced subsoil to same requirements as for specified fill.
  - 1. Do not use frozen material.
- I. Backfill to contours and elevations indicated.
- J. Fill up to subgrade elevation unless otherwise indicated.
- K. Employ a compaction method that achieves the specified density requirements.



- L. Employ a placement method that does not disturb or damage other work.
- M. Do not fill over porous, wet, frozen or spongy subgrade surfaces.
- N. Maintain optimum moisture content of fill materials to attain required compaction density. See Geotechnical Report.
- O. Granular Fill: Place and compact materials in equal, continuous layers not exceeding 6 inches compacted depth or as indicated in the Geotechnical Report.
- P. See Section 31 2413- Roadway Excavation and Embankment for procedures.

### **3.04 SOIL REMOVAL AND STOCKPILING**

- A. Stockpile topsoil to be reused on site; remove remainder from site.
- B. Stockpile subsoil to be reused on site; remove remainder from site.
- C. Stockpiles: Use areas designated on site; pile depth not to exceed 8 feet; protect from erosion.
- D. Location of site for disposal of surplus topsoil and subsoil is shown in the plans or described in Section 01 1000 - Special Provisions.

### **3.05 FINISH GRADING**

- A. Before Finish Grading:
  - 1. Verify building and trench backfilling have been inspected.
  - 2. Verify subgrade has been contoured and compacted.
- B. Remove debris, roots, branches and stones in excess of 1 inch in size. Remove soil contaminated with petroleum products.
- C. Where topsoil is to be placed, scarify surface to depth of 6 inches.
- D. In areas where vehicles or equipment have compacted soil, scarify surface to depth of 6 inches.
- E. Place topsoil in areas where seeding, sodding and planting are indicated.
- F. Place topsoil in areas indicated.
- G. Place topsoil where required to level finish grade.
- H. Place topsoil to the following compacted thicknesses:
  - 1. Areas to be Seeded with Grass: 6 inches.
  - 2. Areas to be Sodded: 4 inches.
  - 3. Shrub Beds: 8 inches.
  - 4. Flower Beds: 2 inches.
  - 5. Planter Boxes: To within 3 inches of box trim.
- I. Place topsoil during dry weather.
- J. Remove roots, weeds, rocks and foreign material while spreading.
- K. Near trees, shrubs and buildings, spread topsoil manually to prevent damage.
- L. Fine grade topsoil to eliminate uneven areas and low spots. Maintain profiles and contour of subgrade.

- M. Lightly compact placed topsoil.

### **3.06 TOLERANCES**

- A. Top Surface of Subgrade: Plus or minus 0.10 feet from required elevation.
- B. Top Surface of Finish Grade: Plus or minus 0.08 feet.

### **3.07 FIELD QUALITY CONTROL**

- A. See Section 011000-Special Provisions.
- B. See Section 01 4000 - Quality Requirements for general requirements for field inspection and testing.
- C. Compaction density testing shall be performed on compacted fill in accordance with ASTM D 1556, ASTM D 2167, ASTM D 2922 or ASTM D 3017.
- D. Results shall be evaluated in relation to compaction curve determined by testing uncompacted material in accordance with ASTM D 698 "standard proctor", ASTM D 1557 "modified proctor" or AASHTO T 180.
- E. If tests indicate work does not meet specified requirements, remove work, replace and retest, or see Section 01 4000 - Quality Requirements for procedures.
- F. Frequency of Tests:
  - 1. Test randomly.
  - 2. Under Paving, Slabs-on-Grade and Similar Construction: A minimum of 1 test for each lift of 0 to 2 feet in depth per 100' x 100' area or as determined by ENGINEER.
- G. Proof roll compacted fill at surfaces that will be under slabs-on-grade, pavers and paving.

### **3.08 CLEANING AND PROTECTION**

- A. Remove unused stockpiled topsoil and subsoil. Grade stockpile area to prevent standing water. Maintain drainage away from buildings and structures at a 2 percent grade or as indicated on the drawings.
- B. Leave site clean and raked, ready to receive landscaping.

**END OF SECTION**

## **SECTION 32 1500 AGGREGATE SURFACING**

### **PART 1 - GENERAL**

#### **1.01 SECTION INCLUDES**

- A. Aggregate surfacing.

#### **1.02 RELATED SECTIONS**

- A. Section 01 1000 - Special Provisions.
- B. Section 01 2200- Unit Prices.
- C. Section 01 3000 - Administrative Requirements.
- D. Section 01 4000-Quality Requirements.
- E. Section 01 5500 - Traffic Control.
- F. Section 01 6000 - Product Requirements.
- G. Section 01 7000- Execution Requirements.
- H. Section 01 7700 - Project Closeout.
- I. Section 31 2313 - Subgrade Preparation.
- J. Section 31 2323 - Fill and Backfill.
- K. Section 31 2413 - Roadway Excavation and Embankment.

#### **1.03 REFERENCES**

- A. State Standard Specifications for Highway Construction, English Units Edition, including all current supplemental specifications.

#### **1.04 UNIT PRICES-MEASUREMENT AND PAYMENT**

- A. New Aggregate Surfacing: The measurement and payment for furnishing and installing aggregate surfacing on existing private driveways, parking lot/areas, streets, roads or alleys, as shown in the plans or as directed by OWNER through ENGINEER, will be made based on the lineal foot of material delivered and placed. CONTRACTOR shall provide weigh scale tickets to OWNER through ENGINEER for all aggregate that is delivered and placed to resurface areas as shown in the plans or as directed by OWNER through ENGINEER. CONTRACTOR's unit price for aggregate surfacing shall include furnishing, delivering, spreading aggregate, and compaction of aggregate on an approved roadbed surface and includes furnishing the necessary material, labor, equipment, tools and incidentals necessary to complete the work.

### **1.05 QUALITY ASSURANCE**

- A. Aggregate surfacing shall meet the specifications in the Standard Specifications, for gravel and crushed rock surfacing.
- B. Submit a recent analysis from proposed aggregate source showing compliance with the specifications.

### **PART 2 - PRODUCTS {NOT USED}**

### **PART 3 - EXECUTION**

#### **3.01 INSPECTION**

- A. Verify compacted subgrade is dry and ready to receive work of this section.
- B. Verify gradients and elevations of subgrade are correct.
- C. Beginning of installation means acceptance of existing conditions.

#### **3.02 PLACING AGGREGATE SURFACING**

- A. Spread material over prepared subgrade to a total compacted thickness as shown in the plans or as specified in Section 01 1000 - Special Provisions.
- B. Level surfaces to elevations and gradients indicated.
- C. Compact placed aggregate materials by rolling.
- D. Perform hand tamping in areas inaccessible to compaction equipment.
- E. Add moisture as needed to supplement the compaction process.

**END OF SECTION**

## **SECTION 32 9219**

### **SEEDING**

#### **PART 1 - GENERAL**

##### **1.01 SECTION INCLUDES**

- A. Preparation of seedbed.
- B. Placing topsoil.
- C. Seeding, mulching and fertilizer.
- D. Hydroseeding.
- E. Maintenance.

##### **1.02 RELATED SECTIONS**

- A. Section 01 1000 - Special Provisions.
- B. Section 01 2200- Unit Prices.
- C. Section 01 3000 - Administrative Requirements.
- D. Section 01 4000 - Quality Requirements.
- E. Section 01 6000- Product Requirements.
- F. Section 01 7000 - Execution Requirements.
- G. Section 01 7113 - Mobilization and Demobilization.
- H. Section 01 7700- Project Closeout.
- I. Section 31 2200 - Grading.
- J. Section 31 2323 - Fill and Backfill.
- K. Section 31 2500 - Erosion Control.

##### **1.03 SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements.
- B. Submit from an established seed dealer or grower the certified "blue tag" for each container of seed. This tag will show percentage by weight, percentage of purity, germination and weed seed for each grass, legume and cereal crop stating botanical and common name of each species as specified.

##### **1.04 REGULATORY REQUIREMENTS**

- A. Comply with regulatory agencies for seed and fertilizer.

##### **1.05 DELIVERY, STORAGE AND HANDLING**

- A. Deliver grass seed mixture in sealed containers. Seed in damaged packaging is not acceptable. Deliver seed mixture in containers showing percentage of seed mix, year of production, net weight, date of packaging and location of packaging.
- B. Deliver fertilizer in waterproof bags showing weight, chemical analysis and

name of manufacturer.

#### **1.06 MAINTENANCE**

- A. Maintain seeded areas immediately after placement until grass/seed mix is well established and exhibits a vigorous growing condition.
- B. Fill washouts and areas of erosion with topsoil. CONTRACTOR is responsible for any and all erosion control measures necessary for the establishment of the specified seed material.
- C. Maintain erosion control.

#### **1.07 UNIT PRICE- MEASUREMENT AND PAYMENT**

- A. The work of seeding shall be a per acre, lump sum or as shown on the Bid Form for surfaces seeded in accordance with these specifications. The quantity of completed and accepted work measured as provided herein shall be paid for at the contract price for the item "seeding". This price shall be full compensation for furnishing and applying fertilizer; furnishing and sowing seed; furnishing and applying mulch materials; preparation of the seedbed; and for all materials, labor, equipment, tools and incidentals necessary to complete the work.

### **PART 2 - PRODUCTS**

#### **2.01 SOIL MATERIALS**

- A. Topsoil as specified in Section 31 2323 - Fill and Backfill.

#### **2.02 FERTILIZER**

- A. Fertilizer shall be a standard commercial inorganic product containing nitrogen, available phosphoric acid and soluble potash in a recognized plant food form. This fertilizer shall be either suspendable or soluble in water.
- B. All fertilizer shall comply with the provisions of the State and Local Regulations, with subsequent amendments or revisions thereto. Under these regulations, each brand and grade of commercial fertilizer must be registered. Each container of commercial fertilizer shall have placed on or affixed to the container, in written or printed form, the new weight and the following additional information:
  - 1. The name and address of the person guaranteeing the fertilizing.
  - 2. The brand and grade.
  - 3. The guaranteed analysis showing the minimum percentage of plant food claimed in the following order and form:
    - a. Total nitrogen - percent.
    - b. Available phosphoric acid (P<sub>2</sub>O<sub>5</sub>) - percent.
    - c. Soluble potash (K<sub>2</sub>O) - percent.
    - d. If distributed in bulk, a written or printed statement of the weight and preceding information shall accompany delivery and be supplied to ENGINEER.
- C. Any grade or mixture of grades of nitrogen and phosphoric acid fertilizer may be used providing the proportions of the minimum rate of application per acre in accordance with the specifications or as directed by ENGINEER are met.

- D. Fertilizer shall be furnished and delivered in standard bags or bulk.
- E. Rate of application of commercial inorganic fertilizer shall be 200 pounds/acre of 18-46-0, recommended by seed supplier or shown in Section 01 1000 - Special Provisions.

### **2.03 SEED MIXTURE**

- A. All seeds shall comply with applicable state and federal seed laws.
- B. The seed shall comply with the specified requirements and shall be applied at the rate shown. All seeds shall be certified blue tag. A certified blue tag and analysis tag shall be on every bag,
- C. See Section 01 1000 - Special Provisions for seed mixture.

### **2.04 WATER**

- A. Clean, fresh and free of substances or matter which could inhibit vigorous growth of grass.

## **PART 3 - EXECUTION**

### **3.01 EXAMINATION**

- A. Verify that the prepared soil base is ready to receive the work of this section.
- B. CONTRACTOR shall notify ENGINEER at least 48 hours in advance of the intended time to begin work and shall not proceed with such work until permission to do so has been granted by ENGINEER.

### **3.02 PREPARATION**

- A. Prepare subgrade in accordance with Section 31 2200 - Grading.
- B. Place topsoil in accordance with Section 31 2200 - Grading.
- C. Remove foreign materials, plants, roots, stones and debris from site. Do not bury foreign material.
- D. Remove contaminated soil.
- E. The finish grading must be approved by ENGINEER before seeding operations begin.

### **3.03 FERTILIZING**

- A. Apply fertilizer at the rate specified.
- B. Apply after smooth raking of topsoil and prior to roller compaction.
- C. Do not apply fertilizer at the same time or with the same machine as will be used to apply seed.
- D. Mix thoroughly into upper 2 inches of topsoil.
- E. Lightly water to aid the dissipation of fertilizer, if required.

### **3.04 SEEDING**

- A. The seedbed shall be prepared by loosening the soil to a depth of not less than 2 inches by discing, harrowing, raking or by other approved means. Several discings, harrowings or similar means may be required to provide a satisfactory seedbed. Discing, harrowing and raking shall be longitudinal on all slopes.
- B. Existing weed stubble and small weeds shall be cut and partially incorporated into the soil during the seedbed preparation work. All other growth of vegetation that will interfere with seeding operations shall be removed. Extreme care shall be exercised to avoid injury to trees and shrubs that have not been designated by ENGINEER to be removed.
- C. For seeding, approved mechanical power-drawn drills shall be used. Mechanical power-drawn drills shall have depth bands set to maintain a planting depth of 1/2 to 1 inch.
- D. Apply seed at the rate specified evenly in 2 intersecting directions. Rake in lightly.
- E. Planting Season: Seeding operations shall be performed only during the periods March 1 to June 30 and August 1 to December 1.
- F. Do not sow immediately following rain, when ground is too dry or frozen, or during windy periods.
- G. Apply water with fine spray immediately after each area has been sown.

### **3.05 HYDROSEEDING**

- A. Apply seeded slurry with a hydraulic seeder evenly in 2 intersecting directions at a rate of 1,500 pounds of mulch/acre.

### **3.06 MULCHING**

- A. This work shall consist of placing a mulch on areas seeded. The mulch shall be loose enough to allow sunlight to penetrate and air to slowly circulate, but thick enough to shade the ground, reduce rate of water evaporation and prevent or reduce water or wind erosion.
- B. Mulch shall be either dry cured native hay or threshed grain straw. Hay or straw shall be free from seeds of noxious weeds and relatively free from seeds of all other weeds.
- C. The mulch shall be applied at the rate of 2 tons per acre.
- D. Mulch shall be immediately applied after sowing the seed unless otherwise directed by ENGINEER. The mulch shall be applied with a mulch blowing machine or other approved methods.
- E. Immediately following the spreading of the mulch, the material shall be anchored to the soil by a V-type wheel land packer, a soil erosion mulch tiller or other suitable equipment which will secure the mulch firmly to form a soil-binding mulch.
- F. Apply water with a fine spray immediately after each area has been mulched.



### **3.07 RESEEDING**

- A. Prior to the expiration of the 1-year warranty, CONTRACTOR will be required to reseed any area that has not established a vigorous growth of specified seed mixture. ENGINEER to determine which areas are to be reseeded.

**END OF SECTION**

THIS PAGE CONCLUDES THE  
SPECIFICATIONS  
FOR THE MOPAC EAST 262<sup>nd</sup> to 274<sup>th</sup> STREET  
TRAIL RESURFACING  
FOR  
LOWER PLATTE SOUTH NRD





D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in paragraph 4.02 of the General Conditions, and (2) reports and drawings of a Hazardous Environmental Condition, if any, which has been identified in the Supplementary Conditions as provided in paragraph 4.06 of the General Conditions.

E. Bidder has obtained and carefully studied, or assumes responsibility for having done so, all additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents to be employed by Bidder, and safety precautions and programs incident thereto.

F. Bidder does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents.

G. Bidder is aware of the general nature of work to be performed by OWNER and others at the Site that relates to the Work as indicated in the Bidding Documents.

H. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents.

I. Bidder has given ENGINEER written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by ENGINEER is acceptable to Bidder.

J. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

**4.01** Bidder further represents that this Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any individual or entity to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over OWNER.

**5.01** Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

**UNIT PRICE BID SCHEDULE:**

ITEM NO.	QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	TOTAL
<b>GROUP "A" - Base Bid- Limestone Screening Resurfacing</b>					
1.	1		Mobilization- Subsidiary to project	3000	\$ 3000
2.	6	EA	Remove & Reset Bollards	377	\$ 2262
3.	5935	Lin. Ft	Place & Compact Limestone Screenings	14.76	87,600.60
<b>TOTAL GROUP "A"</b>					\$92,862.60
<b>ALTERNATE BID ITEMS</b>					
1.					
2.					

Unit Prices have been computed in accordance with paragraph 11.03.B of the General Conditions.

Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Bid items will be based on actual quantities provided, determined as provided in the Contract Documents.

**6.01** Bidder agrees that the start date for the Work will be March 6, 2023, and that the Work will be completed and ready for final payment in accordance with paragraph 14.07.B of the General conditions within ...40\_ calendar days.

**6.02** Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the times specified above, which shall be stated in the Agreement.

**7.01** The following documents are attached to and made a condition of this Bid:

A. Required Bid security in the form of a bid bond, certified check or cashier's check payable to the OWNER in the amount of 5% of the total amount bid.

B. Experience Record.

C. Materials and Subcontracting Listing.

D. Equipment Assessment Certification.

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

SUBMITTED on February 2nd, 20\_23

State Contractor License No. 23976 (If applicable)

Nebraska Sales Tax Option 1 (Option 1, 2 or 3, if a Nebraska Project).

Federal Tax Identification Number 470807468

Bidder is:

An Individual

Name (typed or printed): N/A

By: \_\_\_\_\_  
(Individual's Signature)

Doing Business as: \_\_\_\_\_  
Business Address: \_\_\_\_\_

Phone No.: \_\_\_\_\_ Fax No.: \_\_\_\_\_  
E-Mail: \_\_\_\_\_

A Partnership

Partnership Name (typed or printed): N / A

By: \_\_\_\_\_  
(Signature of General Partner)

Doing Business as: \_\_\_\_\_  
Business Address: \_\_\_\_\_

Phone No.: \_\_\_\_\_ Fax No.: \_\_\_\_\_  
E-Mail: \_\_\_\_\_

A Corporation or Limited Liability Company

Corporation or Limited Liability Name: Gana Trucking & Excavating

State of Incorporation or Organization: Nebraska

By:  \_\_\_\_\_

(Signature – Corporate Officer or Limited Liability Member)

Name (typed or printed): Jake Whitefoot

Title: Vice President

Attest:  \_\_\_\_\_

Business Address: 2200 W Panama Road  
Martell, NE 68404

Phone No.: 402-794-5000 Fax No.: 402-794-5002

E-Mail: adamr@ganatrucking.com



A Joint Venture

Joint Venturer Name: \_\_\_\_\_ N/ A \_\_\_\_\_

By: \_\_\_\_\_  
(Signature of joint venture partner)

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

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

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

Phone No.: \_\_\_\_\_ Fax No.: \_\_\_\_\_

E-Mail: \_\_\_\_\_

By: \_\_\_\_\_  
(Signature of joint venture partner)

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

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

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

Phone No.: \_\_\_\_\_ Fax No.: \_\_\_\_\_

E-Mail: \_\_\_\_\_

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above.)

EXPERIENCE RECORD

The following is a synopsis of experience in construction of projects similar in scope and difficulty to the MOPAC Trail Resurfacing, Lower Platte South NRD, which the Bidder has constructed within the past five years.

NAME OF BIDDER: Gana Trucking & Excavating Inc.

ADDRESS: 2200 W Panama Road Martell, NE

PROJECT NO. 1 - PROJECT NAME: 2221 S. 39th DATE: 10/1/2022

PROJECT LOCATION: 2221 S. 39th

LOCAL PROJECT CONTACT PERSON: Al Langdale PHONE#: 402-432-6839

PROJECT CONSULTING ENGINEER: \_\_\_\_\_ PHONE#: \_\_\_\_\_

PROJECT NO. 2 - PROJECT NAME: Homestead Trail Debris Removal DATE: 11/1/2021

PROJECT LOCATION: 25th & Martell Road to 25th & Saltillo Road

LOCAL PROJECT CONTACT PERSON: Arianna Kennedy PHONE#: 402-432-6836

PROJECT CONSULTING ENGINEER: \_\_\_\_\_ PHONE#: \_\_\_\_\_

PROJECT NO. 3 - PROJECT NAME: Mopac Trail Debris Removal DATE: 11/1/2022

PROJECT LOCATION: Elmwood, NE

LOCAL PROJECT CONTACT PERSON: Arianna Kennedy PHONE#: 402-432-6836

PROJECT CONSULTING ENGINEER: \_\_\_\_\_ PHONE#: \_\_\_\_\_

**MATERIALS AND SUBCONTRACTOR LISTING**  
 Material Schedule  
 (SUPPLIER & MANUFACTURER)

1. Crushed Limestone Screenings: Martin Marietta

**PROPOSED SUBCONTRACTORS**

SUBCONTRACTORS	WORK TO BE PERFORMED	APPROXIMATE DOLLAR AMOUNT
1. <u>Byrne &amp; Jones</u>	<u>Aggregate Placement</u>	<u>\$ 42,767</u>
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____

SIGNED  COMPANY Gana Trucking & Excavating  
 BY Jake Whotefoot VP DATE 2/2/2023  
 TYPE NAME TITLE

**EQUIPMENT ASSESSMENT CERTIFICATION**

**BY REQUIREMENT OF STATE STATUTE 77-1323, THE FOLLOWING INFORMATION MUST BE FURNISHED BY ALL CONTRACTORS AND SUBCONTRACTORS UTILIZING ANY EQUIPMENT ON ANY AND ALL PUBLIC IMPROVEMENT CONTRACTS.**

This is to certify that all equipment to be used on Lower Platte South NRD project No. SCL.2022.004, except that acquired since assessment, has been assessed for the current year in

Lancaster County.

Name of Company Gana Trucking & Excavating

Authorized Official   
(Signature)

Title VP

STATE OF Nebraska

COUNTY OF Lancaster

On the 2nd day of February, 2023, before me personally

appeared the above named Jake Whitefoot and being first duly sworn

stated that the above statement is correct and true.



  
Notary Public

BID FORM

PROJECT IDENTIFICATION:

NAME: MOPAC East Trail Resurfacing 262<sup>nd</sup> to 274<sup>th</sup> Street

Lower Platte South NRD, Lincoln, NE

Pavers Inc  
NAME OF BIDDER

02/02/2023  
DATE

THIS BID IS SUBMITTED TO: Lower Platte South NRD  
Paul Zillig, General Manager  
3125 Portia Street, PO Box 83581  
Lincoln, NE 68501-3581

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

**2.01** Bidder accepts all of the terms and conditions of the Advertisement or Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. The Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of OWNER.

**3.01** In submitting this Bid, Bidder represents, as set forth in the Agreement, that:

A. Bidder has examined and carefully studied the Bidding Documents, the other related data identified in the Bidding Documents, and the following Addenda, receipt of all which is hereby acknowledged.

<u>Addendum No.</u>	<u>Addendum Date</u>
_____	_____
_____	_____
_____	_____

B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress and performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in paragraph 4.02 of the General Conditions, and (2) reports and drawings of a Hazardous Environmental Condition, if any, which has been identified in the Supplementary Conditions as provided in paragraph 4.06 of the General Conditions.

E. Bidder has obtained and carefully studied, or assumes responsibility for having done so, all additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents to be employed by Bidder, and safety precautions and programs incident thereto.

F. Bidder does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents.

G. Bidder is aware of the general nature of work to be performed by OWNER and others at the Site that relates to the Work as indicated in the Bidding Documents.

H. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents.

I. Bidder has given ENGINEER written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by ENGINEER is acceptable to Bidder.

J. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

**4.01** Bidder further represents that this Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any individual or entity to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over OWNER.

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

**UNIT PRICE BID SCHEDULE:**

ITEM NO.	QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	TOTAL
<b>GROUP "A" - Base Bid- Limestone Screening Resurfacing</b>					
1.			Mobilization- Subsidiary to project		
2.	6	EA	Remove & Reset Bollards	350.00	2,100.00
3.		Lin. Ft	Place & Compact Limestone Screenings	10.22	60,655.70
<b>TOTAL GROUP "A"</b>					<b>62,755.71</b>
<b>ALTERNATE BID ITEMS</b>					
1.					
2.					

Unit Prices have been computed in accordance with paragraph 11.03.B of the General Conditions.

Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Bid items will be based on actual quantities provided, determined as provided in the Contract Documents.

6.01 Bidder agrees that the start date for the Work will be March 6, 2023, and that the Work will be completed and ready for final payment in accordance with paragraph 14.07.B of the General conditions within 40 calendar days.

**6.02** Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the times specified above, which shall be stated in the Agreement.

**7.01** The following documents are attached to and made a condition of this Bid:

A. Required Bid security in the form of a bid bond, certified check or cashier's check payable to the OWNER in the amount of 5% of the total amount bid.

B. Experience Record.

C. Materials and Subcontracting Listing.

D. Equipment Assessment Certification.



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

SUBMITTED on February 2<sup>nd</sup>, 2023

State Contractor License No. \_\_\_\_\_ (If applicable)

Nebraska Sales Tax Option 3 (Option 1, 2 or 3, if a Nebraska Project).

Federal Tax Identification Number 47-0813776

Bidder is:

An Individual

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

By: \_\_\_\_\_  
(Individual's Signature)

Doing Business as: \_\_\_\_\_

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

Phone No.: \_\_\_\_\_ Fax No.: \_\_\_\_\_

E-Mail: \_\_\_\_\_

A Partnership

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

By: \_\_\_\_\_  
(Signature of General Partner)

Doing Business as: \_\_\_\_\_

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

Phone No.: \_\_\_\_\_ Fax No.: \_\_\_\_\_

E-Mail: \_\_\_\_\_

A Corporation or Limited Liability Company

Corporation or Limited Liability Name: Pavers Inc  
State of Incorporation or Organization: \_\_\_\_\_

By:   
(Signature – Corporate Officer or Limited Liability Member)

Name (typed or printed): RICK WINTERS

Title: Secretary  
Attest: 

Business Address: 12303 Hwy 6  
Waverly, NE 68462

Phone No.: 402-786-5900 Fax No.: 402-786-5920

E-Mail: msidelle.pavers@paversinc.com

A Joint Venture

Joint Venturer Name: \_\_\_\_\_

By: \_\_\_\_\_  
(Signature of joint venture partner)

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

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

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

Phone No.: \_\_\_\_\_ Fax No.: \_\_\_\_\_

E-Mail: \_\_\_\_\_

By: \_\_\_\_\_  
(Signature of joint venture partner)

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

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

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

Phone No.: \_\_\_\_\_ Fax No.: \_\_\_\_\_

E-Mail: \_\_\_\_\_

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that **is** a party to the joint venture should be in the manner indicated above.)

EXPERIENCE RECORD

The following is a synopsis of experience in construction of projects similar in scope and difficulty to the MOPAC Trail Resurfacing, Lower Platte South NRD, which the Bidder has constructed within the past five years.

NAME OF BIDDER: Pavers Inc

ADDRESS: 12303 Hwy 6 Waterloo NE 68462

PROJECT NO. 1 - PROJECT NAME: 569<sup>th</sup> Resurfacing DATE: Spring of 2022

PROJECT LOCATION: 569<sup>th</sup> street

LOCAL PROJECT CONTACT PERSON: Doug Sindelar PHONE#: 402-314-2556

PROJECT CONSULTING ENGINEER: Lancaster County PHONE#: 402-441-1837

PROJECT NO. 2 - PROJECT NAME: Yankee Hill 9<sup>th</sup> Pavement Maintenance DATE: Fall of 2022

PROJECT LOCATION: Various Locations in Lancaster County

LOCAL PROJECT CONTACT PERSON: Doug Sindelar PHONE#: 402-314-2556

PROJECT CONSULTING ENGINEER: Lancaster County PHONE#: 402-441-1837  
Engineer Dept.

PROJECT NO. 3 - PROJECT NAME: 2022 Resurfacing DATE: Summer of 2022

PROJECT LOCATION: Various Locations in Cass County

LOCAL PROJECT CONTACT PERSON: Jerry Fleischman PHONE#: 402-297-2534

PROJECT CONSULTING ENGINEER: Cass County Engineer PHONE#: 402-296-9353

Older Than 5 years.

Over a 3 year period placed screenings on the Homestead Bike Trail from Cortland to Beatrice (North side) Screenings Placed with a paver.



**EQUIPMENT ASSESSMENT CERTIFICATION**

**BY REQUIREMENT OF STATE STATUTE 77-1323, THE FOLLOWING INFORMATION MUST BE FURNISHED BY ALL CONTRACTORS AND SUBCONTRACTORS UTILIZING ANY EQUIPMENT ON ANY AND ALL PUBLIC IMPROVEMENT CONTRACTS.**

This is to certify that all equipment to be used on Lower Platte South NRD project No. SCL.2022.004, except that acquired since assessment, has been assessed for the current year in

Lancaster County.

Name of Company Pavers Inc

Authorized Official [Signature]  
(Signature)

Title PM

STATE OF Nebraska

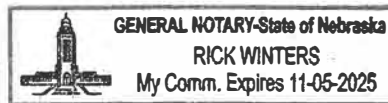
COUNTY OF Lancaster

On the 31<sup>st</sup> day of January, 20 23, before me personally

appeared the above named Mike Tidball and being first duly sworn

stated that the above statement is correct and true.

[Signature]  
Notary Public

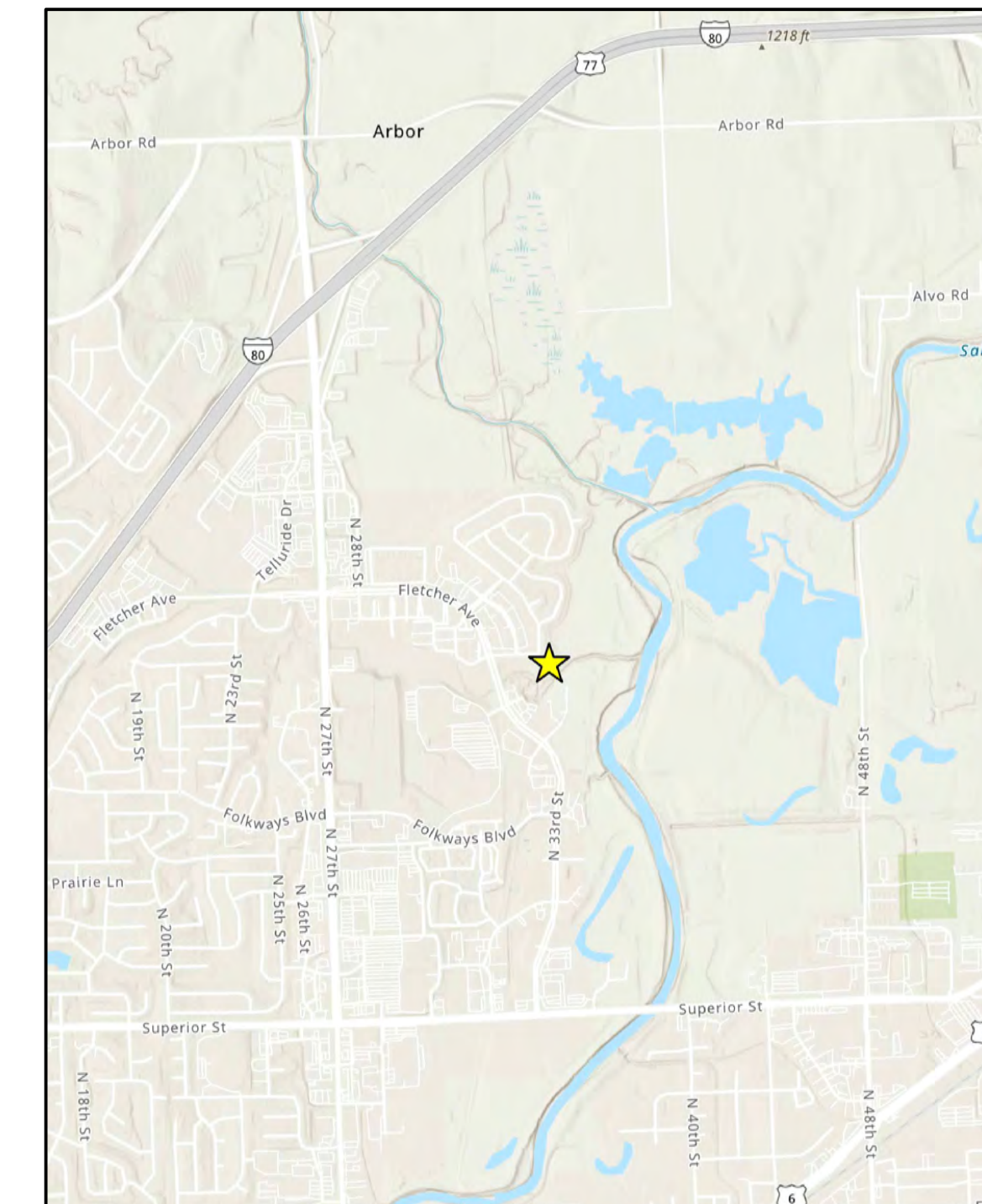




# LOWER PLATTE SOUTH NRD SCHLEICH WETLAND HEADCUT REPAIR PROJECT



 AERIAL MAP



 VICINITY MAP - CITY OF LINCOLN

## PROJECT CONTACT

LOWER PLATTE SOUTH NRD:  
3125 PORTIA STREET  
LINCOLN, NE 68521  
ATTN: WILL INSELMAN...(402) 476-2729

THE FLATWATER GROUP, INC.:  
8200 CODY DRIVE, SUITE A  
LINCOLN, NE 68512  
ATTN: JUSTIN CERMAK...(402) 435-5441

## PRIOR TO CONSTRUCTION:

CALL : 811 FOR LOCATION OF UNDERGROUND TELEPHONE, FIBER, ELECTRIC, GAS MAINS, CABLE AND CITY OF LINCOLN UTILITIES.

EXISTING UNDERGROUND AND OVERHEAD UTILITIES AND STRUCTURES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION AND THEREFORE, THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS THE RESPONSIBILITY OF THE INDIVIDUAL CONTRACTORS TO EXACTLY LOCATE AND PROTECT EACH EXISTING UTILITY BEFORE AND DURING ACTUAL CONSTRUCTION.




## INDEX OF SHEETS


1. COVER
2. SITE PLAN
3. PLAN AND PROFILE
4. DETAILS
5. EROSION CONTROL PLAN

NO.	DATE	BY	DESCRIPTION
1	10/21/22	TFG	CONCEPT DESIGN
2	12/20/22	TFG	DRAFT-FINAL DESIGN
3	1/6/23	TFG	FINAL DESIGN

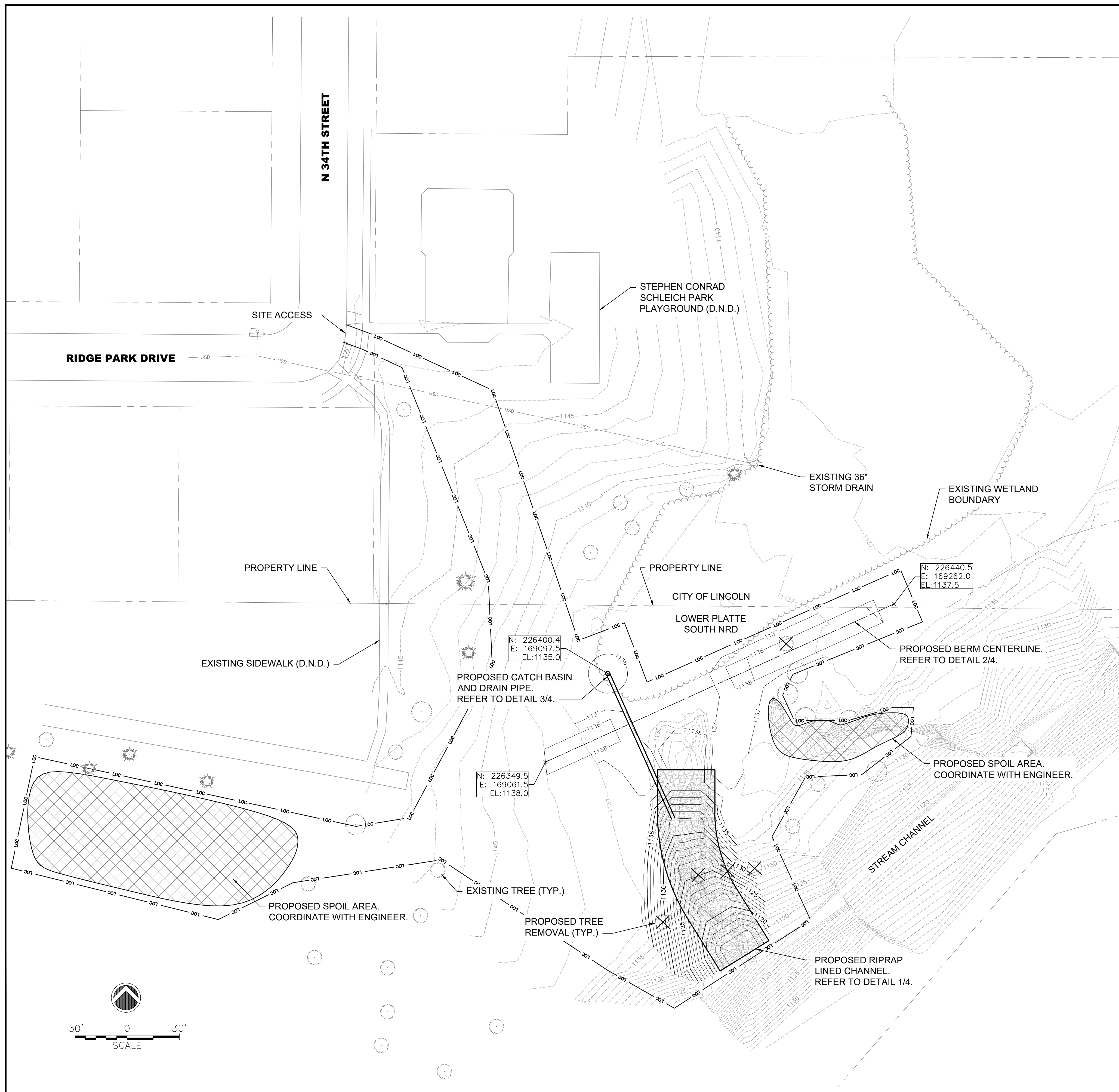
  


<p><b>SCHLEICH WETLAND HEADCUT REPAIR PROJECT</b> LOWER PLATTE SOUTH NRD LINCOLN, LANCASTER COUNTY, NEBRASKA</p>
<p><b>COVER</b></p>

	
<p>The FLATWATER GROUP Inc. 8200 Cody Drive, Suite A Lincoln, NE 68512 402-435-5441 NE Certificate of Authorization CA1145</p>	
DATE	JANUARY 2023
DESIGNED BY	JDC
DRAWN BY	JDC
CHECKED BY	RJK
PROJECT NUMBER	LPS-2022-01
SCALE	AS SHOWN
SHEET NUMBER	1 OF 5





**GENERAL NOTES**

- PUBLIC AREAS WILL BE CLOSED DURING CONSTRUCTION. CONTRACTOR SHALL TAKE NECESSARY MEASURES TO CLOSE WORK AREAS WITH CONSTRUCTION FENCE, BARRICADES OR OTHER MEASURES TO PROTECT THE PUBLIC AND SECURE THE CONSTRUCTION SITE.
- ALL WORK SHALL BE PERFORMED WITHIN THE LIMITS OF CONSTRUCTION. CONTRACTOR SHALL NOT DISTURB AREAS OUTSIDE THESE LIMITS.
- CONTRACTOR SHALL CLEAR AND GRUB ALL TREES AND VEGETATION NECESSARY TO COMPLETE WORK. HOWEVER, TREES SHALL BE LEFT UNDISTURBED WHEN POSSIBLE. VERIFY WITH ENGINEER PRIOR TO REMOVAL OF TREES AND/OR SHRUBS AND BUSHES.
- ALL TREES AND BRUSH SHALL BE DISPOSED OF OFF SITE.
- CONTRACTOR SHALL RESTORE ALL AREAS DISTURBED DURING CONSTRUCTION TO PRE-CONSTRUCTION CONDITIONS. GRASSED AREAS SHALL BE SEEDED WITH TALL-GRASS MIXTURE IN NON-MAINTAINED AREAS AND TURF-TYPE FESCUE MIXTURE IN MAINTAINED (MOWED) AREAS.
- ALL SPOIL AREA BOUNDARIES SHALL BE APPROVED BY OWNER/ENGINEER PRIOR TO CONSTRUCTION.
- BORROW/SPOIL AREAS SHALL BE FINISH GRADED SO THAT THE MAXIMUM SLOPE IN THE DISTURBED AREAS IS NO STEEPER THAN 3:1. ALL DISTURBED AREAS SHALL BE RESEED AT THE COMPLETION OF WORK.
- COORDINATE ALL HAUL ROAD LOCATIONS WITH ENGINEER PRIOR TO CONSTRUCTING.
- ALL TEMPORARY HAUL ROADS, CROSSINGS, AND CULVERTS SHALL BE REMOVED AT THE COMPLETION OF THE PROJECT UNLESS OTHERWISE DIRECTED BY THE OWNER/ENGINEER. ALL AREAS SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITIONS.
- INSTALL APPROPRIATE CONSTRUCTION SEDIMENT AND EROSION CONTROL MEASURES PRIOR TO CONSTRUCTION AND MAINTAIN THROUGHOUT THE COMPLETION OF THE PROJECT.
- ALL PAVED ROADS, CURBS AND SIDEWALKS USED DURING CONSTRUCTION SHALL BE PROTECTED AS NECESSARY TO PREVENT DAMAGE. ANY DAMAGE SHALL BE REPAIRED PRIOR TO THE END OF THE PROJECT AT NO COST TO THE OWNER.
- CONTRACTOR SHALL COMPLY WITH WEIGHT LIMIT REQUIREMENTS WHEN USING PUBLIC ROADS.

**LEGEND**

- loc — LIMITS OF CONSTRUCTION
- PROPERTY LINE
- EX. OBJECT
- USD — EX. UNDERGROUND STORM DRAIN
- ~ EX. WETLAND BOUNDARY
- PR. TYPE 'C' ROCK RIPRAP
- PR. SPOIL AREA
- ▽ EX. FLARED END SECTION
- EX. CURB INLET
- EX. CONIFEROUS TREE
- EX. DECIDUOUS TREE
- PR. TREE REMOVAL

**SCHEDULE OF QUANTITIES**

NO.	BID ITEM	UNIT	QTY
1	MOBILIZATION	LS	1
2	CONSTRUCTION STAKING	LS	1
3	EROSION AND SEDIMENT CONTROL	LS	1
4	CLEARING AND GRUBBING	LS	1
5	EXCAVATION AND DISPOSAL	CY	1,458
6	GRANULAR FILTER MATERIAL (E.Q.)	CY	79
7	ROCK RIP-RAP	TON	586
8	3" ROCK INFILL FOR RIPRAP (E.Q.)	CY	22
9	FOUNDATION MATERIAL (E.Q.)	CY	36
10	PVC CATCH BASIN W/ DOMED GRATE	EA	1
11	24" DIA. HPDE PIPE	LF	90
12	TYPE 1 SEEDING - TURF GRASS	AC	0.3
13	TYPE 2 SEEDING - NATIVE GRASSES AND FORBS	AC	1.1
14	HYDROMULCH	AC	1.4

**DETAIL CALLOUT REFERENCE**

DETAIL NUMBER  
 SHEET(S) THE REFERENCE IS FROM 3  
 SHEET THE DETAIL IS DRAWN ON 1/2/4

PLAN SET SHEET SIZES  
 FULL SIZE PLANS - ANSI D (22x34)  
 HALF SIZE PLANS - ANSI B (11X17)

NO.	DATE	BY	DESCRIPTION
1	10/21/22	TFG	CONCEPT DESIGN
2	12/20/22	TFG	DRAFT-FINAL DESIGN
3	1/6/23	TFG	FINAL DESIGN



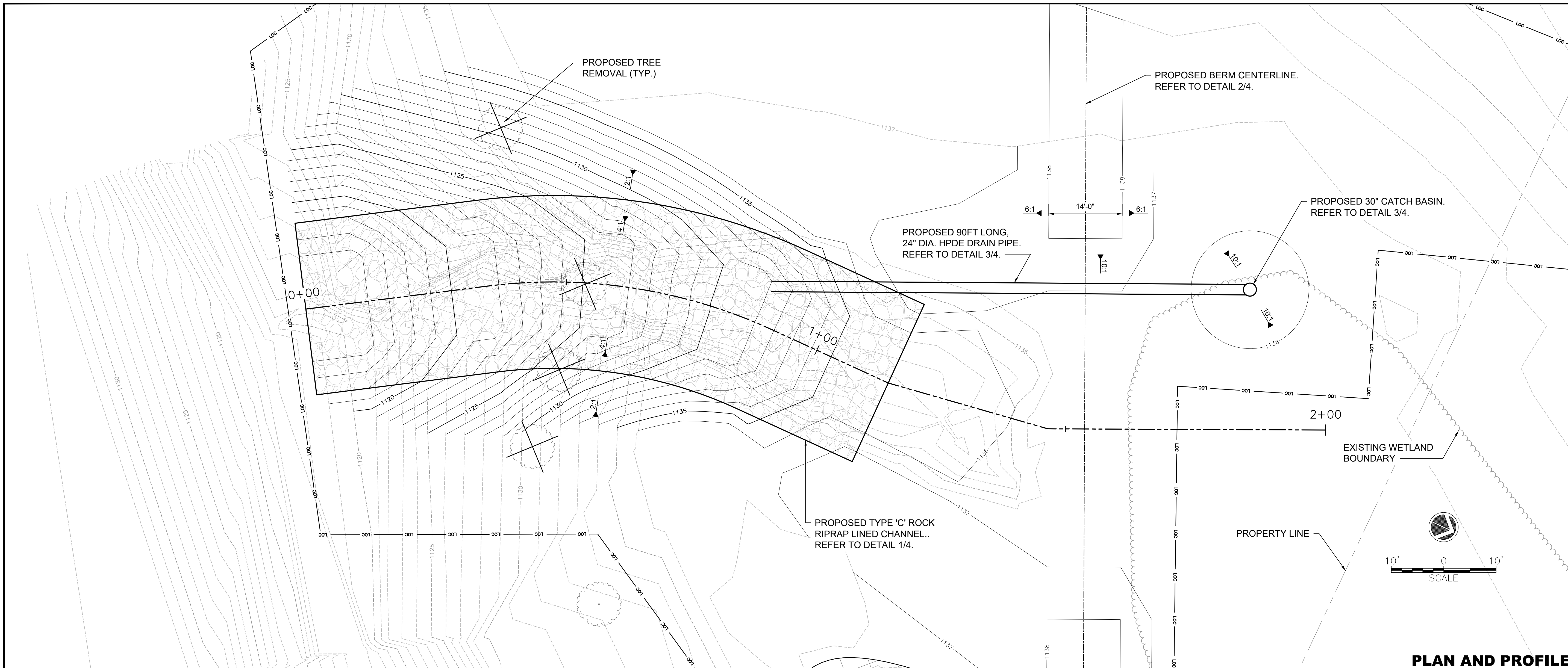
**SCHLEICH WETLAND  
 HEADCUT REPAIR PROJECT**  
 LOWER PLATTE SOUTH NRD  
 LINCOLN, LANCASTER COUNTY, NEBRASKA

**SITE PLAN**

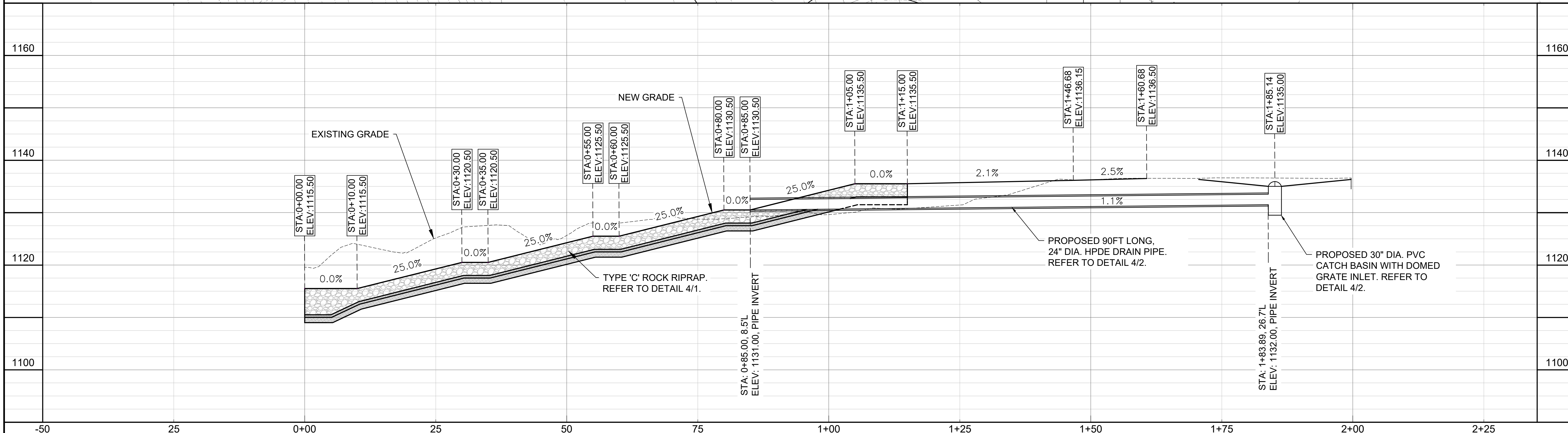


The FLATWATER GROUP Inc.  
 8200 Cody Drive, Suite A  
 Lincoln, NE 68512  
 402-435-5441  
 NE Certificate of Authorization CA1145

DATE	JANUARY 2023
DESIGNED BY	JDC
DRAWN BY	JDC
CHECKED BY	RJK
PROJECT NUMBER	LPS-2022-01
SCALE	AS SHOWN
SHEET NUMBER	2 OF 5



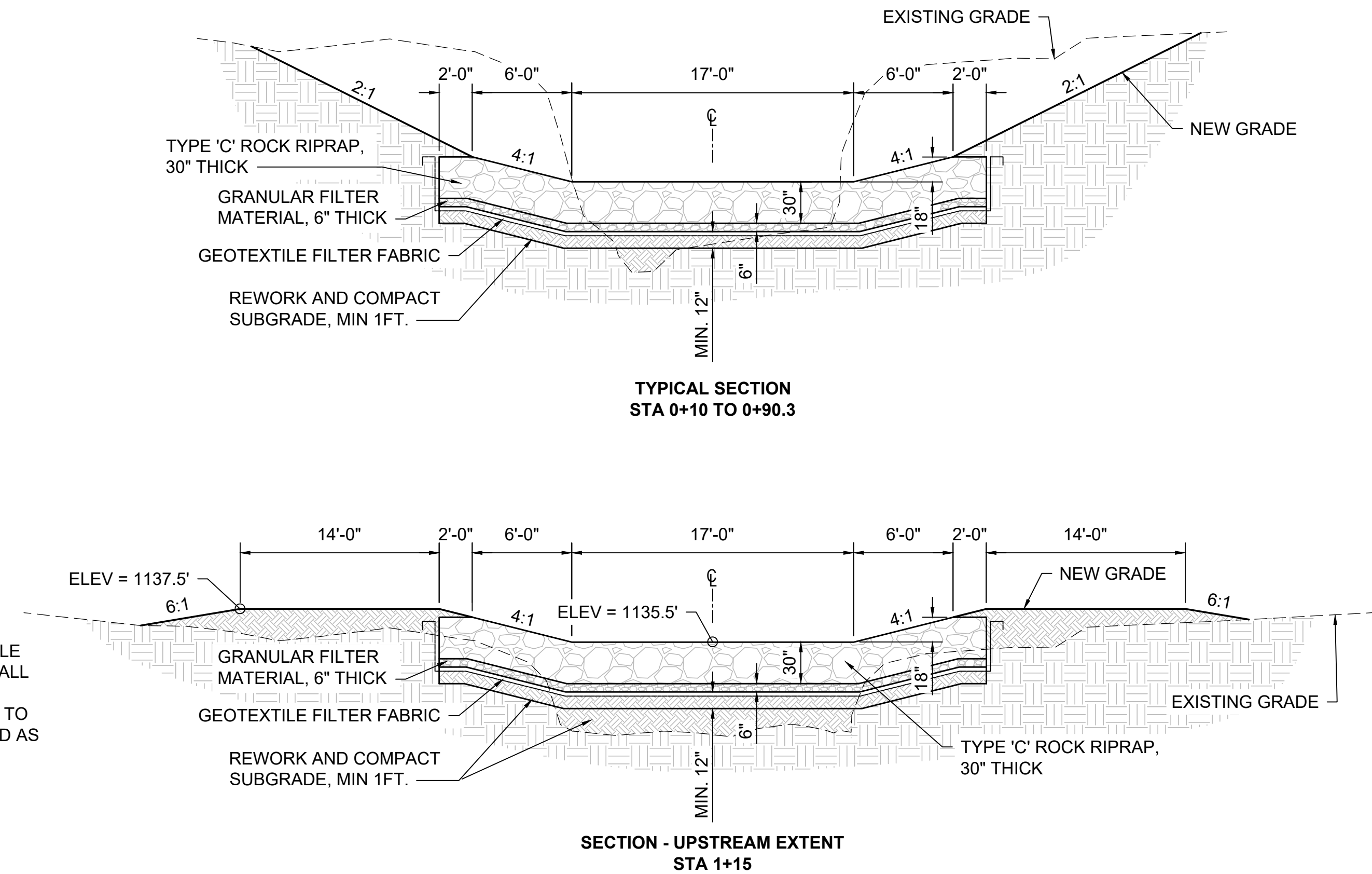
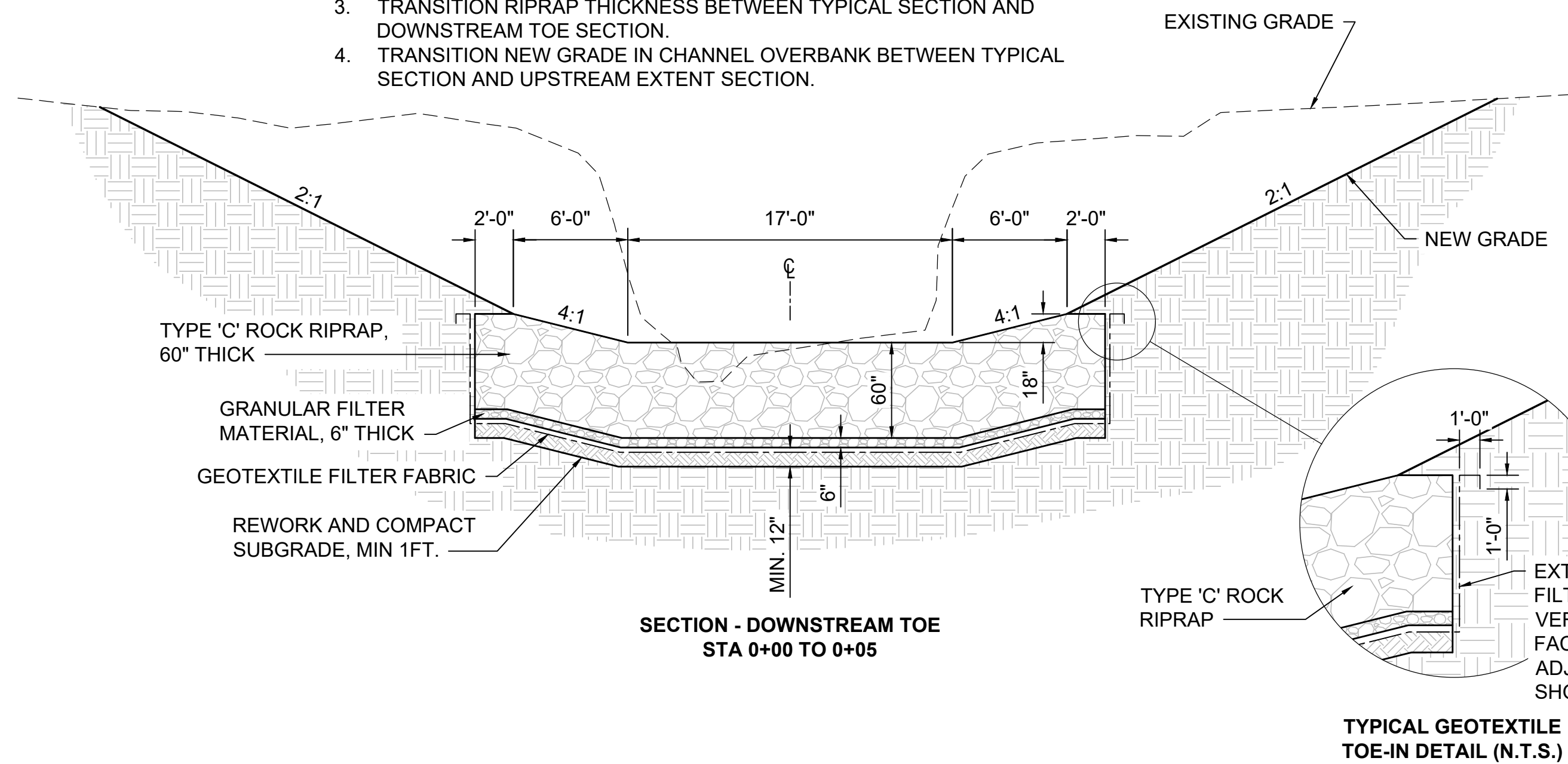
**PLAN AND PROFILE**



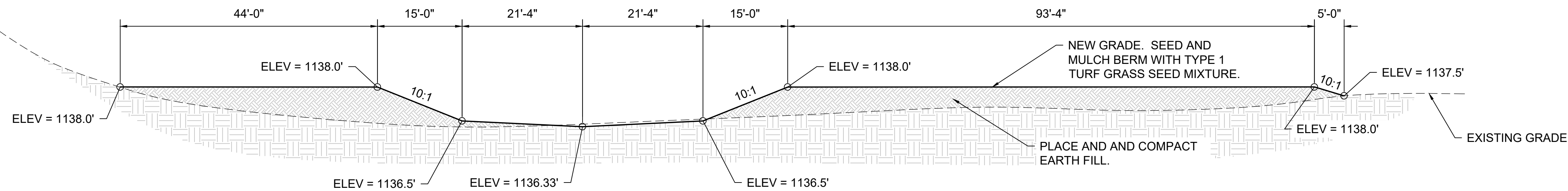
REVISIONS	DESCRIPTION	
NO.	DATE	BY
1	10/21/22	TFG
2	12/20/22	TFG
3	1/6/23	TFG
CONCEPT DESIGN		
DRAFT-FINAL DESIGN		
FINAL DESIGN		
<p><b>SCHLEICH WETLAND HEADCUT REPAIR PROJECT</b>          LOWER PLATTE SOUTH NRD          LINCOLN, LANCASTER COUNTY, NEBRASKA</p>		
<p><b>PLAN AND PROFILE</b></p>		
<p>The FLATWATER GROUP Inc.          8200 Cody Drive, Suite A          Lincoln, NE 68512          402-435-5441          NE Certificate of Authorization CA1145</p>		
DATE	JANUARY 2023	
DESIGNED BY	JDC	
DRAWN BY	JDC	
CHECKED BY	RJK	
PROJECT NUMBER	LPS-2022-01	
SCALE	AS SHOWN	
SHEET NUMBER	3 OF 5	

**GENERAL NOTES:**

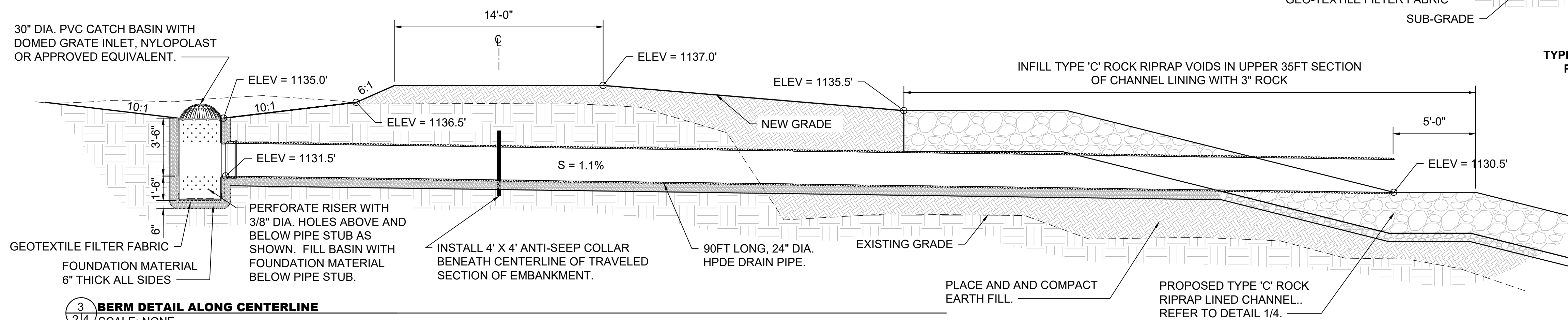
1. REWORK AND COMPACT SUBGRADE (MIN 12") PRIOR TO CONSTRUCTING RIPRAP LINING. PLACE AND COMPACT SUITABLE EARTH FILL TO RAISE SUBGRADE WHERE NECESSARY.
2. DAYLIGHT NEW GRADE AT SIDE-SLOPES SHOWN. SEED WITH TYPE 2 NATIVE GRASS AND FORBS SEED MIXTURE AND PROTECT WITH HYDROMULCH.
3. TRANSITION RIPRAP THICKNESS BETWEEN TYPICAL SECTION AND DOWNSTREAM TOE SECTION.
4. TRANSITION NEW GRADE IN CHANNEL OVERBANK BETWEEN TYPICAL SECTION AND UPSTREAM EXTENT SECTION.



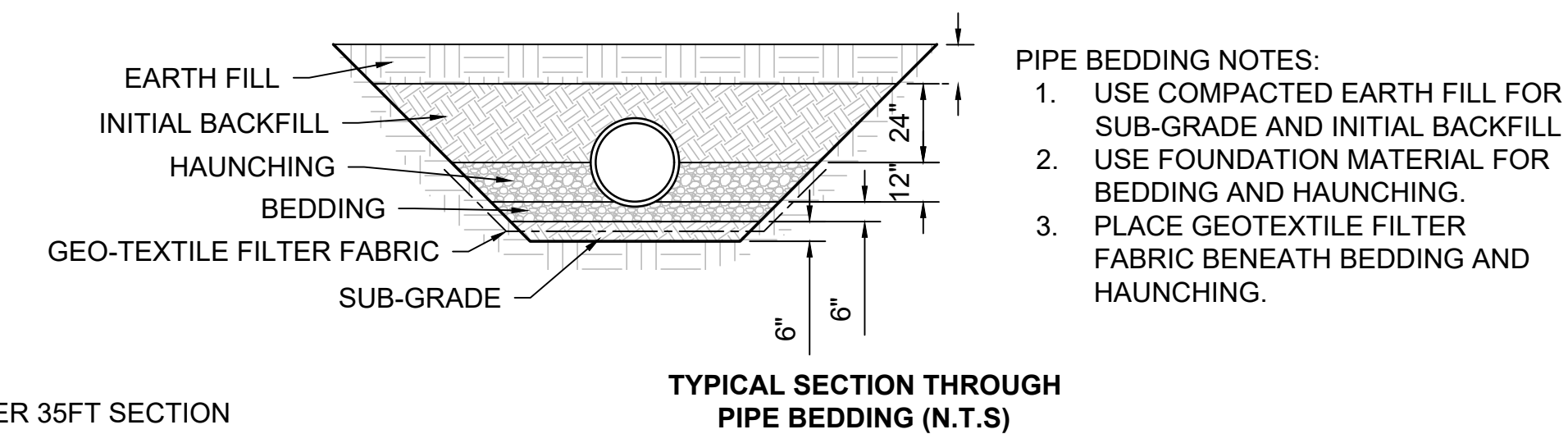
**1 RIPRAP LINED CHANNEL DETAIL**  
SCALE: 1" = 6'



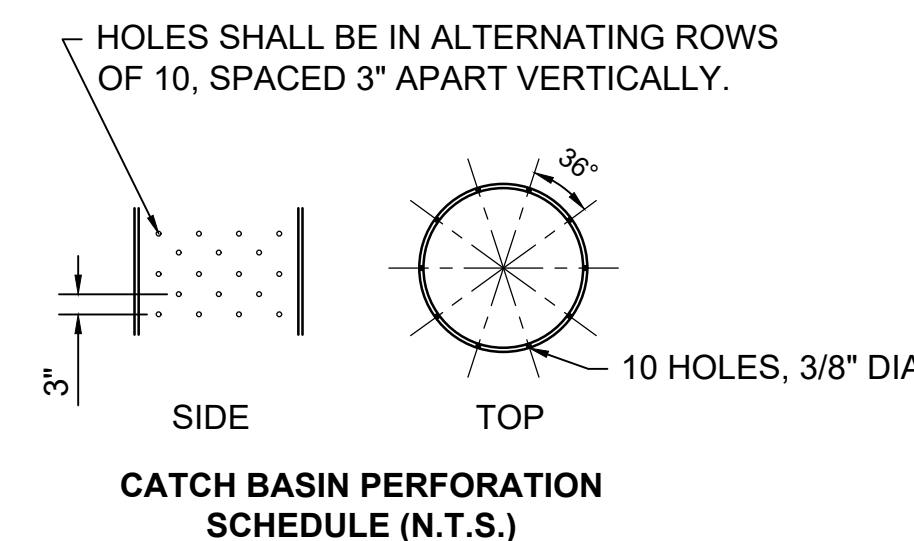
**2 BERM DETAIL ALONG CENTERLINE**  
SCALE: NONE



**3 BERM DETAIL ALONG CENTERLINE**  
SCALE: NONE



- PIPE BEDDING NOTES:**
1. USE COMPACTED EARTH FILL FOR SUB-GRADE AND INITIAL BACKFILL.
  2. USE FOUNDATION MATERIAL FOR BEDDING AND HAUNCHING.
  3. PLACE GEOTEXTILE FILTER FABRIC BENEATH BEDDING AND HAUNCHING.



NO.	DATE	BY	DESCRIPTION
1	10/21/22	TFG	CONCEPT DESIGN
2	12/20/22	TFG	DRAFT-FINAL DESIGN
3	1/6/23	TFG	FINAL DESIGN

**PROFESSIONAL CIVIL ENGINEER**  
JUSTIN D. CERMAK  
E-14535  
1/6/2023  
STATE OF NEBRASKA

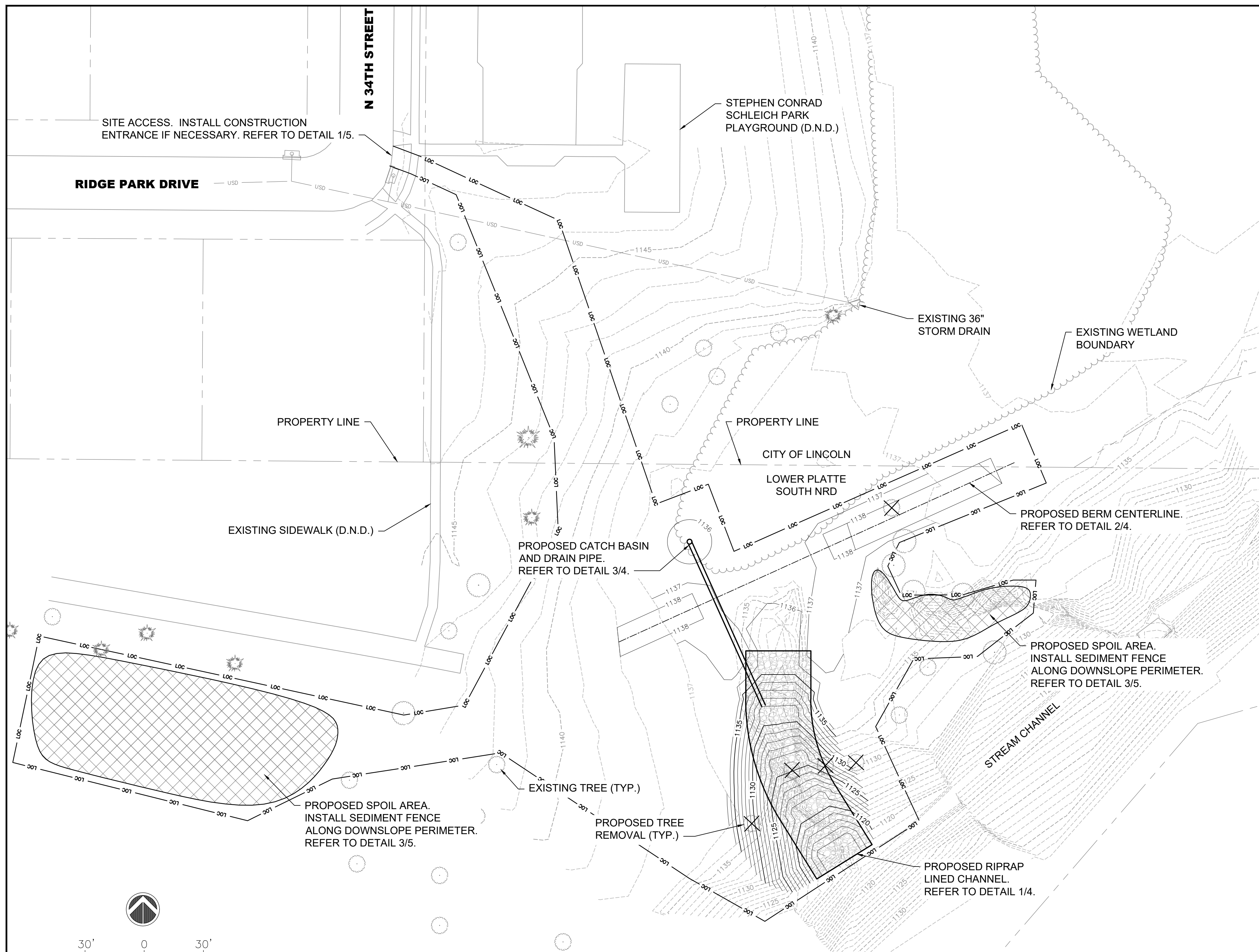
**SCHLEICH WETLAND HEADCUT REPAIR PROJECT**  
LOWER PLATTE SOUTH RD  
LINCOLN, LANCASTER COUNTY, NEBRASKA

**DETAILS**

**THE FLATWATER GROUP INC.**

The FLATWATER GROUP Inc.  
8200 Cody Drive, Suite A  
Lincoln, NE 68512  
402-435-5441  
NE Certificate of Authorization CA1145

DATE: JANUARY 2023  
DESIGNED BY: JDC  
DRAWN BY: JDC  
CHECKED BY: RJK  
PROJECT NUMBER: LPS-2022-01  
SCALE: AS SHOWN  
SHEET NUMBER: 4 OF 5



**SEDIMENT AND EROSION CONTROL NOTES:**

THE LOWER PLATTE SOUTH NRD IS CONDUCTING A HEADCUT REPAIR PROJECT ALONG AN UNNAMED TRIBUTARY TO SALT CREEK. THE WORK GENERALLY INCLUDES SITE RESTORATION INCLUDING EXCAVATION AND DISPOSAL OF EXCAVATED MATERIAL, PLACING RIPRAP AND OTHER AGGREGATES; INSTALLING CATCH BASIN AND PIPING; CONSTRUCTION OF ACCESS ROUTES, SPOIL AREA MANAGEMENT, AND OTHER MISCELLANEOUS ITEMS NECESSARY TO COMPLETE THE WORK AS DRAWN AND SPECIFIED. THIS PROJECT WILL SERVE TO ARREST ONGOING EROSION AND PROTECT UPSTREAM WETLAND HABITAT.

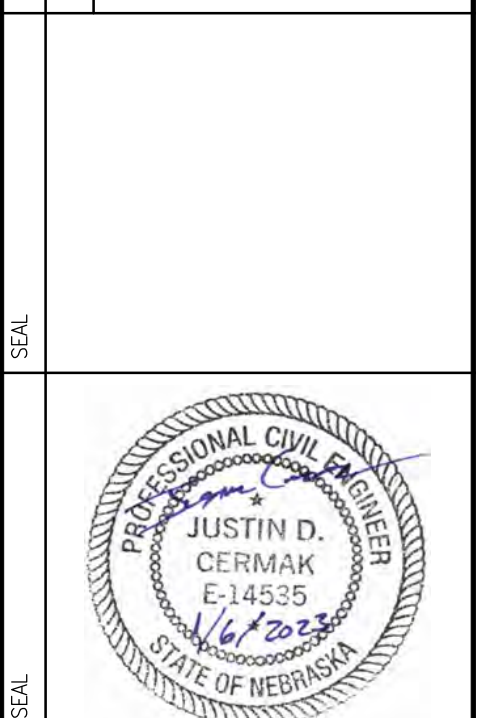
**CONSTRUCTION SEQUENCING:**  
 THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING THE CONDITIONS OF THE NPDES PERMIT AND IMPLEMENTING THE STORMWATER POLLUTION PREVENTION PLAN. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH DIVISION 800 OF THE NEBRASKA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION. THE PERMIT NUMBER, CONTACT PHONE NUMBER, AND SWPPP SHALL BE POSTED ON A SIGN BOARD AT THE CONSTRUCTION ENTRANCE. RECORDS SHALL BE MAINTAINED FOR DATES WHEN MAJOR GRADING ACTIVITIES OCCUR, CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE AND STABILIZATION MEASURES ARE INITIATED. CONSTRUCTION SEQUENCING SHALL COMMENCE AS FOLLOWS:

1. CONSTRUCTION ENTRANCES (DETAIL 2) SHALL BE INSTALLED, IF NECESSARY, AT THE LOCATIONS SHOWN ON THE PLANS. MATERIAL SHALL BE 2" - 3.5" CLEAN ROCK. RECYCLED CONTENT WILL NOT BE ACCEPTED.
2. INSTALL SEDIMENT FENCING (DETAIL 3), OR OTHER APPROVED PERIMETER CONTROL MEASURES AS NECESSARY AROUND STAGING (NOT SHOWN) AND SPOIL AREAS.
3. GRADE THE PROJECT AND CONSTRUCT STRUCTURES AS SHOWN ON THE PLANS.
4. PERFORM TEMPORARY SEEDING AND MULCHING IN ANY INACTIVE DISTURBED AREAS FOR PERIODS EXCEEDING FOURTEEN (14) CALENDAR DAYS.
5. REMOVE ANY REMAINING WASTE MATERIALS FROM CLEARING AND GRUBBING ACTIVITIES.
6. REMOVE SEDIMENT FENCE AND ANY REMAINING TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES.
7. PERFORM SEEDING AND PROTECT WITH HYDROMULCH AT THE COMPLETION OF THE PROJECT.
8. RECONSTRUCT THE CONSTRUCTION ENTRANCE FOR FUTURE SITE ACCESS.

- MAINTENANCE:**
1. UNLESS OTHERWISE INDICATED, ALL EROSION AND SEDIMENT CONTROL PRACTICES AND STORMWATER MANAGEMENT PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH DIVISION 800 OF THE NEBRASKA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
  2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE EROSION AND SEDIMENT CONTROL MEASURES UNTIL FINAL SITE STABILIZATION IS ACHIEVED.
  3. ALL SEDIMENT AND EROSION CONTROL PRACTICES WILL BE INSPECTED AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS, OR EVERY FOURTEEN (14) CALENDAR DAYS AND AFTER ANY STORM EVENT OF GREATER THAN 0.25 INCHES OF PRECIPITATION DURING ANY 24-HOUR PERIOD BY QUALIFIED PERSONNEL ESTABLISHED BY THE CONTRACTOR. ANY NECESSARY REPAIRS, SEDIMENT REMOVAL OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE BEST MANAGEMENT PRACTICES SHALL BE MADE BEFORE THE NEXT STORM EVENT AND/OR WITHIN SEVEN (7) CALENDAR DAYS FROM THE INSPECTION DATE. SEDIMENT FROM SEDIMENT TRAPS OR SEDIMENTATION PONDS MUST BE REMOVED WHEN DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT. INSPECTION REPORTS SHALL BE GENERATED AND DELAYS SHALL BE DOCUMENTED WITH SUFFICIENT DETAIL AS TO EXPLAIN THE REASON FOR THE DELAY.
  4. CONTRACTOR SHALL LIMIT THE TRACKING OF MUD AND DEBRIS ONTO NEIGHBORING ROADS. ANY ACCUMULATION OF MUD OR DEBRIS AS A RESULT OF THE CONSTRUCTION ON SHALL BE REMOVED ON A DAILY BASIS AND IMMEDIATELY AFTER SIGNIFICANT BUILDUP.
  5. FOLLOWING SOIL DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED AT CONTRACTOR'S EXPENSE WITHIN FOURTEEN (14) CALENDAR DAYS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, TOPSOIL STOCKPILES, AND ANY OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITED WHICH ARE NOT BEING USED FOR MATERIAL STORAGE, OR ON WHICH ACTUAL EARTH MOVING ACTIVITIES ARE NOT BEING PERFORMED.
  6. FINAL STABILIZATION OCCURS ONE HUNDRED EIGHTY (180) CALENDAR DAYS AFTER CONSTRUCTION ACTIVITY HAS CEASED. VEGETATIVE COVER HAS A MINIMUM 70% DENSITY, TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES HAVE BEEN REMOVED, AND PROPERTIES HAVE BEEN RETURNED TO THE PREEXISTING STATE.

REVISIONS	DESCRIPTION
CONCEPT DESIGN	
DRAFT-FINAL DESIGN	
FINAL DESIGN	

NO.	DATE	BY
1	10/21/22	TFG
2	12/20/22	TFG
3	1/6/23	TFG



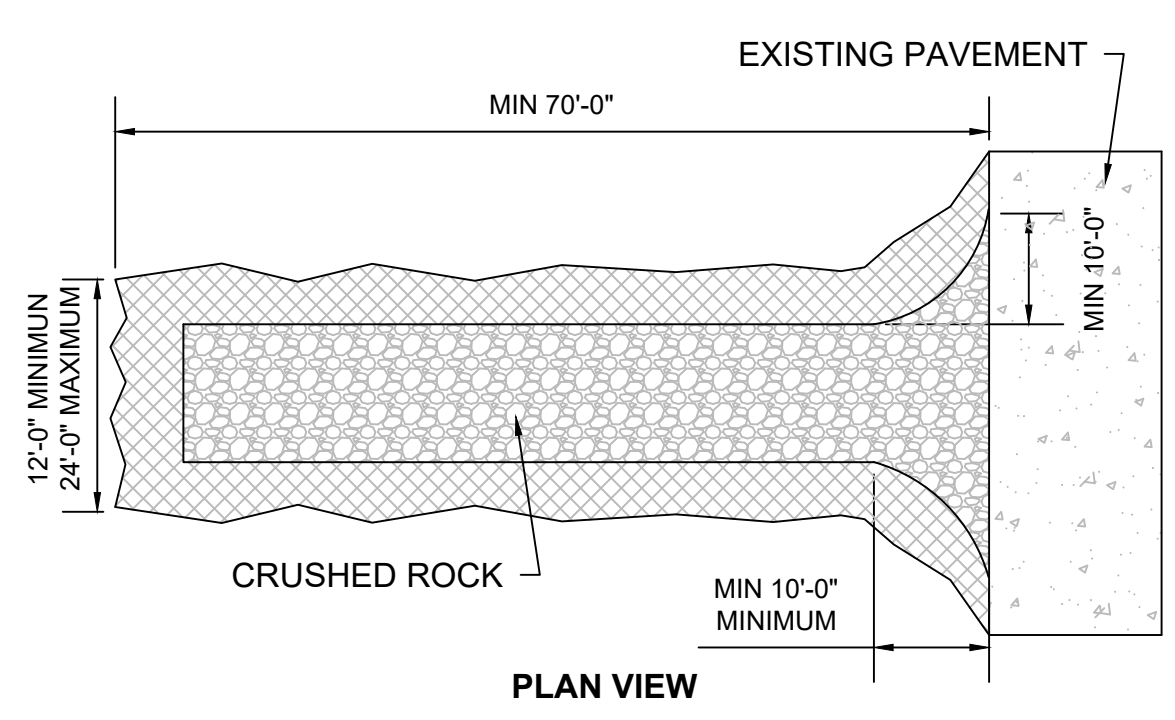
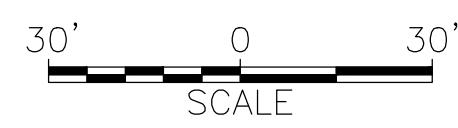
**SCHLEICH WETLAND HEADCUT REPAIR PROJECT**  
 LOWER PLATTE SOUTH NRD  
 LINCOLN, LANCASTER COUNTY, NEBRASKA

**EROSION CONTROL PLAN**

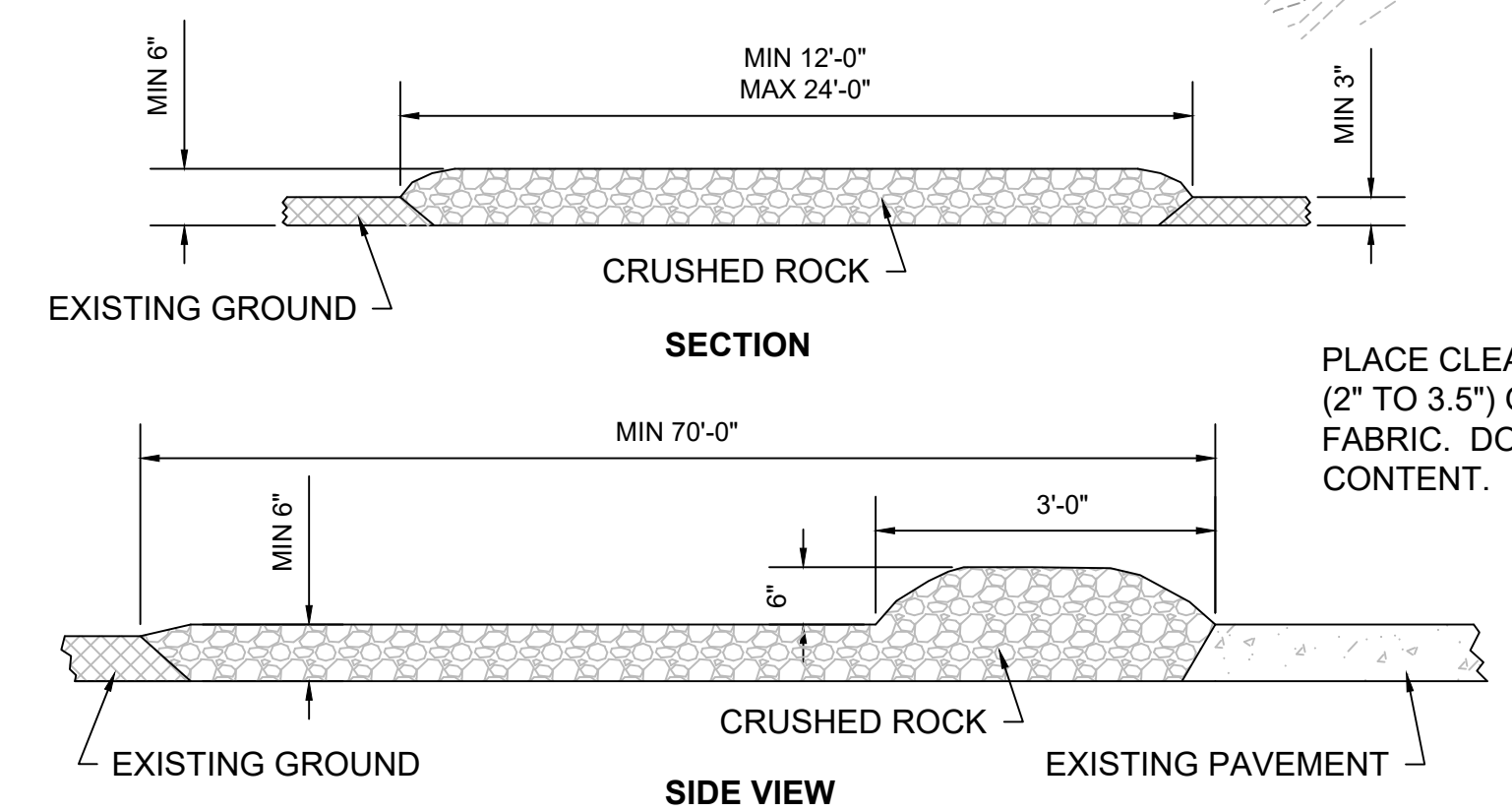


The FLATWATER GROUP Inc.  
 8200 Cody Drive, Suite A  
 Lincoln, NE 68512  
 402-435-5441  
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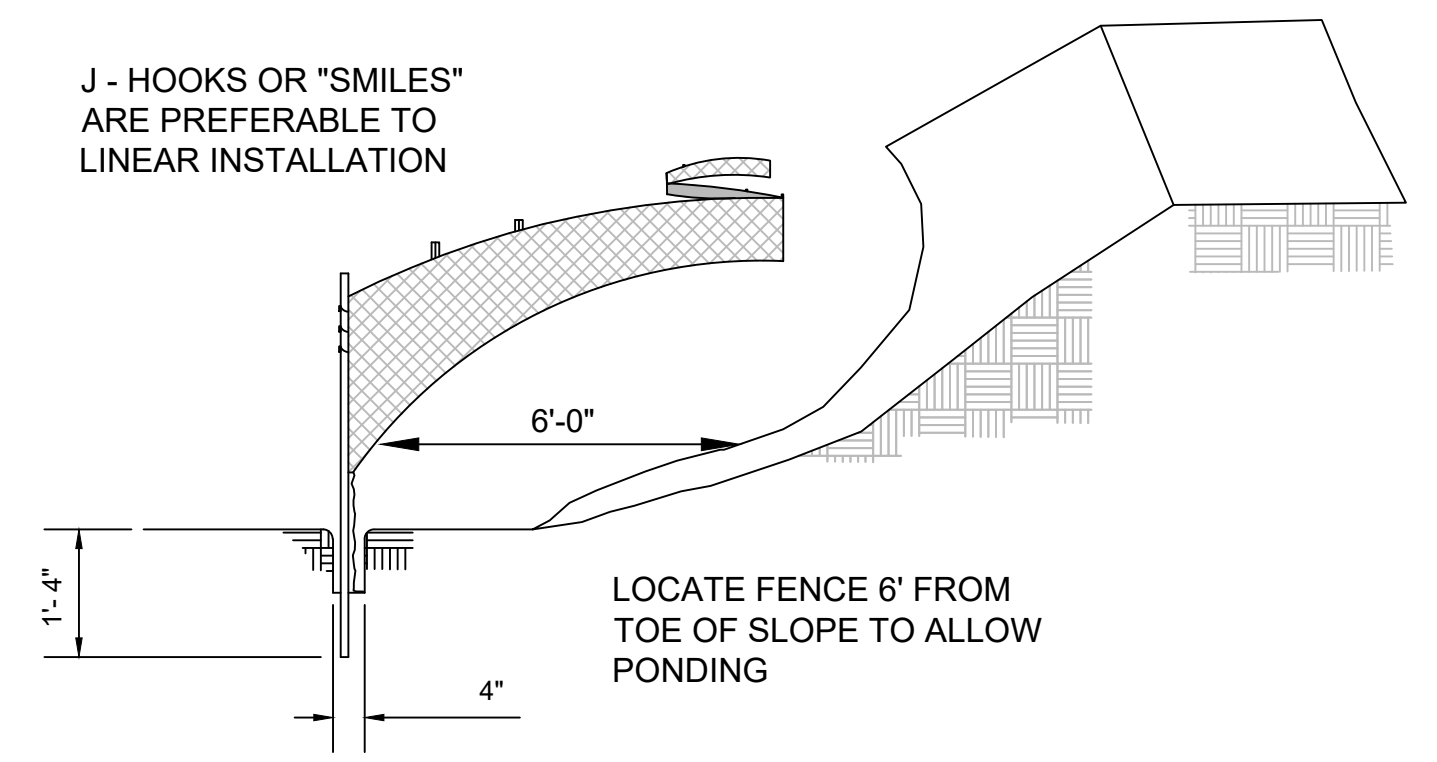
DATE	JANUARY 2023
DESIGNED BY	JDC
DRAWN BY	JDC
CHECKED BY	RJK
PROJECT NUMBER	LPS-2022-01
SCALE	AS SHOWN
SHEET NUMBER	5 OF 5



**1 CONSTRUCTION ENTRANCE**  
 5/5 NOT TO SCALE



**2 PROPOSED RIPRAP LINED CHANNEL**  
 REFER TO DETAIL 1/4.



**3 SEDIMENT FENCE**  
 5/5 NOT TO SCALE

**SPECIFICATIONS  
And  
CONTRACT DOCUMENTS**

**LOWER PLATTE SOUTH  
NATURAL RESOURCES DISTRICT**

**SCHLEICH WETLAND**

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**Headcut Repair Project**

Lincoln, Lancaster County, Nebraska



**PREPARED BY:**

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

January 6, 2023



**LOWER PLATTE SOUTH  
NATURAL RESOURCES DISTRICT**

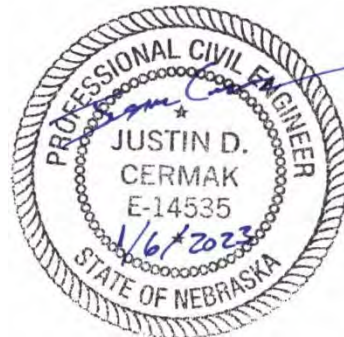


and

**The Flatwater Group  
8200 Cody Driver, Suite A  
Lincoln, Nebraska 68512**



**Technical Specifications Prepared By:**



**Bid Date: February 2<sup>nd</sup>, 2023 @ 2:00 PM**

## TABLE of CONTENTS

PROJECT:	Headcut Repair Project
SITE:	Schleich Wetland
LOCATION:	Lincoln, NE
COUNTY:	Lancaster

**NOTE:** Interruption of sequential numbering is intentional. Division and Section numbers used are consistent with the Construction Specifications Institute "MASTERFORMAT" master list of Section titles and numbers for the 16 Division format.

DIVISION	SECTION	TITLE
		TITLE PAGE TABLE OF CONTENTS ENUMERATION OF DRAWINGS
<b>0</b>		<b>BIDDING AND CONTRACT REQUIREMENTS</b>
	00010	Advertisement
	00100	Instructions to Bidders
	00300	Form of Proposal
	00500	Form of Contract
	00600	Performance & Payment Bonds
	00700	General Conditions
	00800	Supplemental Conditions
<b>1</b>		<b>GENERAL REQUIREMENTS</b>
	01005	Administrative Provisions
	01010	Summary of the Work
	01050	Field Engineering
	01200	Measure and Payment
	01300	Submittals
	01400	Quality Assurance/Quality Control
	01500	Construction Facilities & Temporary Controls
	01690	Project Record Documents
	01700	Contract Closeout
<b>2</b>		<b>SITE WORK</b>
	02100	Clearing and Grubbing
	02220	Earthwork
	02550	Site Drainage
	02693	Geotextiles
	02820	Seeding and Planting
	02850	Aggregate
	02955	Erosion Control Materials
	02990	Riprap
		<b>APPENDICES</b>
		Draft Storm Water Pollution Prevention Plan (SWPPP)

## ENUMERATION of DRAWINGS

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<b>PROJECT:</b>	Headcut Repair Project
<b>LOCATION:</b>	Schleich Wetland
<b>NEAR:</b>	Lincoln, Nebraska
<b>COUNTY:</b>	Lancaster

NUMBER			TITLE	DATE
1	of	5	Cover	January 2023
2	of	5	Site Plan	January 2023
3	of	5	Plan and Profile	January 2023
4	of	5	Details	January 2023
5	of	5	Erosion Control Plan	January 2023



## ADVERTISEMENT

Sealed Bids will be received by the Lower Platte South Natural Resources District, P.O. Box 83581, Lincoln, Nebraska, 68501-3581, for the following project at the time listed:

**BID DATE AND TIME:** February 2<sup>nd</sup>, 2023 @ 2:00 P.M.

**PROJECT:** Headcut Repair

**SITE:** Schleich Wetland

**LOCATION:** Lincoln, Lancaster County

Bids will be publicly opened, read aloud, and tabulated at the office of the Lower Platte South Natural Resources District, 3125 Portia Street, Lincoln, Nebraska at the time specified. If auxiliary aids or reasonable accommodations are needed for attendance at the bid opening, please call Will Inselman 402-476-2729. Advance notice of seven days is needed when requesting an interpreter.

Plans, Specifications and Bid Documents may be obtained from the Lower Platte South NRD website at [www.lpsnrd.org](http://www.lpsnrd.org) or at the office of the Lower Platte South NRD, Lincoln, Nebraska, and will be issued by the Lower Platte South NRD, 3125 Portia Street, P.O. Box 83581, Lincoln, NE 68501-3581, there is no charge for the Plans and Specifications. Interested parties may also contact Justin Cermak, The Flatwater Group, at 402-435-5441.

The Lower Platte South Natural Resources District reserves the right to accept or reject any or all Bids and to waive any or all informalities or irregularities.

BY: PAUL ZILLIG – 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 Supplemental 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 THEIR BID PRESENTS THAT:

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

#### B. EXAMINATION OF THE SITE

- 1. Information and data reflected in the Contract Documents with respect to Underground Facilities at or contiguous to the site is based upon information and data furnished to the Owner and Engineer by owners of such Underground Facilities or others, and Owner and Engineer do not assume responsibility for the accuracy or completeness thereof unless it is expressly provided otherwise in the Supplemental Conditions.
- 2. Before submitting a Bid, each Bidder will, at Bidder's own expense, make or obtain any additional examinations, investigations, explorations, tests and studies and obtain any additional information and data which pertain to the physical conditions (surface, subsurface and Underground Facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance, or furnishing of the Work and which Bidder deems necessary to determine its Bid for performing and furnishing of the Work in accordance with the time, price and other conditions of the Contract Documents.
- 3. On request in advance, Owner will provide each Bidder access to the site to conduct such explorations and tests as each Bidder deems necessary for submission of a Bid. Bidder shall fill all holes, clean up and restore the site to its former condition upon completion of such explorations.

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**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 shall 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 **seven 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.

**C. ADDENDA:**

1. Addenda will be available at the same locations and in the same manner as Bidding Documents. Bidders shall be responsible for checking for addenda.
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 their bid that They have received all Addenda issued, and they shall acknowledge their receipt in their bid.

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

**A. FORM AND STYLE OF BIDS:**

1. Bids shall be submitted on the forms provided in the Bidding Documents.
2. All blanks on the form shall be filled in by typewriter 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 their refusal to accept less than whatever combination of the items they 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 their 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 be a Nebraska resident agent and shall affix to the bond a certified and current copy of their 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 "BID ENCLOSED" 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.
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 their 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 any 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 Lower Platte South 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. It is the intent of the Owner to award all Work under this Project. However, the Owner reserves the right to award all or part of the Project based on Bids received and availability of Project funding. Partial awards may include the Base Bid only or any combination of the Base Bid and alternates. There is no guarantee as to the amount of Work that will be awarded under this Project. In evaluating Bids, the Owner will consider the qualifications of the Bidders, whether or not the Bids comply with the

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prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.

**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 their 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 their 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 specified in specifications.
3. The Bidder shall require the Attorney-In-Fact who executes the required bonds on behalf of the surety to be a Nebraska resident agent and to affix thereto a certified and current copy of their Power of Attorney.

**VIII. FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR.....**

**A. FORM TO BE USED:**

1. The Agreement for the Work will be written on the Form of Contract between Owner and Contractor, a copy of which is bound in the Bidding Documents. Owner reserves the right to use an alternate acceptable Form or Contract or Form of Agreement.

## FORM OF PROPOSAL

PROJECT: Headcut Repair Project  
 LOCATION: Schleich Wetland  
 CITY/COUNTY: Lincoln, Lancaster, NE

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

**BASE BID:** Complete work specified and identified on the Drawings; and all incidental work required to complete Project as drawn and specified.

Schleich Wetland Headcut Repair Project						
SITE	ACTIVITY	UNIT	QUANTITY	UNIT PRICE		EXTENDED PRICE
1	Mobilization	LS	1	\$		\$
2	Construction Staking	LS	1	\$		\$
3	Erosion and Sediment Control	LS	1	\$		\$
4	Clearing and Grubbing	LS	1	\$		\$
5	Excavation and Disposal	CY	1,458	\$		\$
6	Granular Filter Material (E.Q.)	CY	79	\$		\$
7	Rock Riprap	TON	586	\$		\$
8	3" Rock Infill for Riprap (E.Q.)	CY	22	\$		\$
9	Foundation Material (E.Q.)	CY	36	\$		\$
10	PVC Catch Basin w/Domed Grate	EA	1	\$		\$
11	24" Dia. HDPE Pipe	LF	90	\$		\$
12	Type 1 Seeding – Turf Grass	AC	0.3	\$		\$
13	Type 2 Seeding – Native Grasses and Forbs	AC	1.1	\$		\$
14	Hydromulch	AC	1.4	\$		\$
<b>TOTAL OF SCHEDULE A ITEMS 1 through 14</b> <i>Write out total amount \$ _____ Dollars</i>						\$

The undersigned agrees that the above unit prices will be the basis to make any necessary dollar amount adjustments to the Base Bid quantities both more or less, if the final work quantities differ from the work

---

shown on the Drawings.

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

**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 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 within 120 calendar days of the date of the NOTICE TO PROCEED.**

**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 Lower Platte South 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 **sixty (60) 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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CITY

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TELEPHONE

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FEDERAL IDENTIFICATION NUMBER

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COMPANY NAME

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

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SIGNATURE

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TYPE or PRINT NAME

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TITLE

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## FORM OF CONTRACT (SAMPLE)

THIS AGREEMENT entered into this \_\_\_\_\_ day of \_\_\_\_\_ in the year of TWO THOUSAND \_\_\_\_\_ by and between \_\_\_\_\_, hereinafter referred to as the "CONTRACTOR", and the LOWER PLATTE SOUTH NATURAL RESOURCES DISTRICT, at Lincoln, 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:

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 the notice to proceed. **The Contractor shall have the work under the Base Bid substantially complete within \_\_\_\_\_ 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 within \_\_\_\_\_ calendar days of the date of the NOTICE TO PROCEED.**

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.

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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 a District Employee.

The Contractor Certifies by executing this agreement that he has a *Drug Free Workplace Policy* in place 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. All litigation or questions regarding legal issues shall be controlled by the laws of the State of Nebraska.

Approved:

Lower Platte South  
Natural Resources District

By: \_\_\_\_\_

Paul Zillig  
General Manager

Date: \_\_\_\_\_

Contractor:

\_\_\_\_\_  
FIRM NAME

\_\_\_\_\_  
ADDRESS

\_\_\_\_\_  
CITY/STATE/ZIP

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

\_\_\_\_\_  
\*SIGNATURE

\_\_\_\_\_  
(PLEASE PRINT NAME)

\_\_\_\_\_  
TITLE

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

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

The "Consultant" is the consulting architect or 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 Architect/Engineer

### **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 Architect/Engineer of the District, or shall have been placed in the United States Mails addressed to the Architect/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 Architect/Engineer of the District. The Architect/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

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offered in lieu of that mentioned in the specifications and shall check and approve all shop drawings and details. He/she shall 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 Architect/Engineer. The Superintendent shall not be changed except with the consent of the Architect/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 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 Architect's/Engineer's/Consultant's attention for decision.

**6. MATERIALS - TESTS AND STANDARDS**

Samples of materials selected by the Architect/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.

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**9. OTHER CONTRACTS**

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 Architect/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

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Insurance for all of the 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 not 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 and Architect/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 shall be considered excess and non-contributory. The Commercial Automobile Liability Insurance shall be written to cover all Owned, Non-owned and Hired vehicles.

(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

Contractor agrees to purchase and maintain during the life of this Contract the following type of Insurance.

- |      |  |           |
|------|--|-----------|
| 1.   | Workers' Compensation and Employer's Liability |           |
| a.   | State  | Statutory |
| b.   | Applicable Federal (e.g., Longshoreman's)      | Statutory |
| c.   | Employer's Liability                           |           |
| i.   | Each Accident                                  | \$500,000 |
| ii.  | Disease – Policy Limit                         | \$500,000 |
| iii. | Disease – Each Employee                        | \$500,000 |



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2.	General Liability	
a.	General Aggregate	\$2,000,000.00
b.	Products – Completed Operations Aggregate	\$1,000,000.00
c.	Personal and Advertising Injury	\$1,000,000.00
d.	Each Occurrence (Bodily Injury & Property Damage)	\$1,000,000
e.	Fire Damage (Any One Fire)	\$50,000.00
f.	Medical Expense (Any One Person)	\$5,000.00

3.	Automobile Liability	
a.	Combined Single Limit Each Accident	\$1,000,000
	OR	
b.	Bodily Injury: Each Person Each Accident	\$500,000 \$1,000,000
	Bodily Injury and Property Damage including Owned, Non-owned, and Hired autos, Combined single limit	\$1,000,000.00

4.	Umbrella/Excess Liability insurance on an excess and following form basis above the employer's liability, commercial general liability and comprehensive automobile liability coverages as outlined above.	
a.	Excess or Umbrella Liability	
	i. General Aggregate	\$2,000,000
	ii. Each Occurrence	\$2,000,000

The Contractor shall furnish a certificate of insurance with liability limits shown, and Lower Platte South Natural Resources District and The Flatwater Group, Inc. (Engineer) to be named as additional insureds and a Waiver of Subrogation in favor of Lower Platte South Natural Resources District.

The Contractor agrees to indemnify, defend, and hold harmless Lower Platte South 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

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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 Contract 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 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 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 executed regularly and uninterruptedly thereafter, with such forces and by such means as will ensure 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

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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 Architect/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:

- 1) Additional work resulting from modification of the plan for the project.
- 2) Delays caused by the Owner.
- 3) 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 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 Architect/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 Architect/Engineer/consultant or are considered by either to be unskilled or otherwise objectionable, shall be instantly dismissed from the work upon notice from the Architect/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 Architect/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

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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 Architect/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 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 Owner 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 owner may require.

The Contractor shall submit to the Owner 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 Owner. 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 any time, 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

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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 Architect/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.

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 District.

The Contractor shall, immediately after completing extra work, file with the Owner, 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 otherwise 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

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entitled to payment there from. The District will render to the Contractor a proper accounting of all such funds disbursed on 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 Owner 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 Owner shall present to the Contractor a report ("punch list") listing all deficiencies found in the inspection of the Contractor's work which are to 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 Owner.

**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**

- a) 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.
- b) 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 without expense to the Owner:
  - 1) Place in satisfactory condition in every particular all of such guaranteed work, correct all defects therein, and
  - 2) 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
  - 3) Make good any work or materials, or the equipment and contents of said building or project work disturbed in fulfilling any such guarantee.

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- c) 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.
  - d) 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.
  - e) 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**

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 Consultant.

Authorized representatives of the Owner, Contractor, and the 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 Owner.

**END OF GENERAL CONDITIONS**

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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. NEBRASKA SALES TAX**

- A. The Owner is a State of Nebraska Sales Tax exempt entity for qualifying material purchases. Exempt Sales Certificates can be obtained from the Owner after award of the Contract.

**3. 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 Architect/Engineer. *The Contractor must comply with all permits and erosion control as required under the National Pollutant Discharge Elimination System (NPDES).*
- 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 Owner. No further disturbance of the deposits shall ensue until the Contractor has been notified by the Owner 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. Contractor Use of Premises.
- C. Restricted Areas.
- D. Owner Occupancy.
- E. Coordination.
- F. Reference Standards.
- G. Project Meetings.

**1.02 WORK COVERED BY CONTRACT DOCUMENTS**

The name of the project is "Schleich Wetland – Headcut Repair Project." Work covered under this contract generally includes repairing streambank headcuts through construction of a riprap lined channel, installation of site drainage structures, and associated ancillary work at Schleich Wetland in north Lincoln, Lancaster County, Nebraska.

**1.03 CONTRACT METHOD**

- A. Work shall be completed under a unit price contract as stated on completed Form of Proposal and agreed to in the Agreement.
- B. The Agreement is between the Contractor and the Lower Platte South Natural Resources District (LPSNRD, [Owner]).

**1.04 CONTRACTOR USE OF PREMISES**

- A. Contractor shall limit use of the premises to the identified work areas, staging areas, and access locations to allow for 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.
- B. Disturbance of wetland areas and other sensitive areas shall be minimized to the extent possible.

**1.05 RESTRICTED AREAS**

- A. Contractor shall not establish haul roads, staging areas, or conduct other work within wetland areas without prior approval of the Engineer. Minimize traffic in designated sensitive vegetation areas. Contractor shall not stage equipment or stockpile material in these areas.
- B. Contractor shall use extreme caution when working in areas identified as dispersive zones and areas adjacent to the banks of Salt Creek and Little Salt Creek. There are areas where visible evidence of dispersive soils is present as well as areas where they are not visible. These areas are prone to large and small holes or "jugs" which may or may not be visible. The potential exists to encounter these conditions with and/or outside any areas identified on the

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Drawings. Contractor shall conduct a walkthrough of the area where vehicle traffic will be required prior to construction and when haul routes are changed.

**1.06 OWNER OCCUPANCY**

- A. Owner will occupy premises during entire period of construction. Coordinate with Owner to minimize conflicts.
- B. Coordinate with Owner to identify specific areas of the site that require closure for safety and/or ease of operations. Closed areas shall be reopened as soon as possible.

**1.07 COORDINATION**

Work shall be coordinated with the Owner and Engineer to assure efficient and orderly sequence of completing construction elements.

**1.08 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.

**1.09 PROJECT MEETINGS**

- A. Prior to the start of construction, the Engineer and Owner will arrange a "pre-construction" meeting to be attended by the Contractor, project supervisors, and key subcontractors.
- B. Periodic meetings may be arranged during construction as needed and will be attended by the Contractor, the Engineer, the project manager, and Owner. Meetings will generally be held onsite but may be held at the offices of the Engineer or Owner.

**PART 2 - PRODUCTS**

Not Used.

**PART 3 - EXECUTION**

Not Used.

**--END OF SECTION 01005--**

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**SECTION 01010  
SUMMARY OF THE WORK**

**PART 1 GENERAL**

**1.01 REQUIREMENTS INCLUDED**

- A. Contractor shall furnish all plant, labor, permits, fees, equipment, supplies, materials, services and incidentals required to complete the work, unless otherwise specified.
- B. Mention herein or indication on the Drawings of articles, operations, or methods requires that the Contractor provide each item mentioned, indicated, or necessary as an adjunct to the item, subject to qualifications noted, and perform according to conditions required.
- C. **Scope of Work:** *The Work generally includes site restoration including excavation and disposal of excavated material, placing riprap and other aggregates; installing catch basin and piping; construction of access routes, spoil area management, and other miscellaneous items necessary to complete the Work as drawn and specified.*

**1.02 CONSTRUCTION LIMITS AND STORAGE**

- A. Refer to the Drawings for the location of the project, which is at Schleich Wetland in Lincoln, Nebraska.
- B. Contractor shall limit construction activities to the property lines indicated on the Drawings, to the general vicinity of the Work, and to approved storage areas and haul roads on the site unless otherwise approved by the Engineer or Owner. Damage, disturbance, and displacement of adjacent fences and other property shall be repaired or replaced by the Contractor at no additional cost to the Owner.
- C. Storage and stockpile areas used to store rock (riprap, gravel, crushed rock etc., shall be stripped to a depth of 12 prior to placing rock. Stripped soil shall be stockpiled and replaced after construction to cover small rocks remaining on the surface.
- D. Access to the site for LPSNRD employees shall be maintained during construction.
- E. Access to all public and private roads and premises, fire hydrants, and other public and private areas shall be maintained.
- F. Contractor shall be responsible for protecting structures, equipment, culverts, roads (paved or otherwise), and other properties not being removed or replaced or otherwise directly impacted as part of the Work under this contract. Contractor shall be responsible for repairing or replacing such items that are damaged during construction at no additional cost to the Owner.
- G. Contractor shall provide barricades, safety or warning devices, signs and warning lights required for the protection of employees, the public and property.
- H. The area drives and parking lots may be used for material and equipment deliveries and access, provided the Contractor suitably protects the areas from damage, does not interfere with use of site areas outside the construction area and maintains the access routes reasonably clean.
  - 1. Contractor shall assume full responsibility for the protection and safekeeping of products under this contract that are stored onsite during construction activities.
  - 2. Contractor shall move, without additional compensation, any material or equipment that interferes with operations of the Owner or any separate contractor or utility company.
  - 3. After construction, the Contractor shall restore public and private roads to their condition prior to construction, at no additional cost to the Owner.

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### 1.03 CONSTRUCTION DEBRIS AND TRASH

- A. All construction debris shall be removed from the site and be properly disposed of by the Contractor, unless otherwise specified or directed by the Engineer.
- B. Trash, debris, rubble, tires, and other items encountered within the construction limits shall be collected and disposed of by the Contractor as part of the Work. See also Section 02070 DEMOLITION.

### 1.04 MEASUREMENTS AND PROJECT LAYOUT

- A. Contractor is responsible for verifying all access routes, field conditions, elevations and dimensions affecting the construction of the work and is responsible for correctness of same.
- B. No extra compensation will be allowed for differences between actual elevations, dimensions or measurements indicated on drawings except for adjustments, if any, in the number of units. Differences discovered shall be reported to the Engineer for consideration before proceeding with the work.
- C. Contract Drawings:
  - 1. The Drawings indicate the general area of construction access routes and elevations; Contractor shall field verify and coordinate prior to construction.
  - 2. Adjustments in dimensions, elevations, routing, and connections shall be made for field coordination with other trades.
  - 3. All field adjustments shall be subject to the Engineer's approval.
- D. 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. Contractor shall advise others engaged in construction activities of marked lines and levels provided for their use.

### 1.05 CONSTRUCTION GUARANTEE

- A. 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 unless a longer warranty is provided on certain components of the work, the longer warranties shall apply.
- B. Contractor shall immediately correct all deficiencies reported to him without cost to the Owner within this guarantee period.

### 1.06 CODES AND REGULATIONS

- A. Applicable work shall conform to the latest edition of the codes or regulations of the following:
  - 1. American with Disabilities Act Accessibility Guidelines (ADAAG).
  - 2. Uniform Federal Accessibility Standards (UFAS).
  - 3. Applicable local building codes.

## PART 2 PRODUCTS

Not Used.

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## **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 Drawings, the Engineer shall be notified prior to conducting the work for which there is a discrepancy.

### **3.02 CONSTRUCTION SCHEDULE**

Contractor shall submit proposed project schedule that conforms to the contract requirements for completion of the work. Contractor shall update the project schedule when schedule adjustments become know. At a minimum, monthly updates shall be provided. Contractor shall provide Engineer with periodic schedule reports.

### **3.03 MOBILIZATION**

Mobilization shall include, but is not limited to, obtaining required construction permits, moving all plants and equipment to the site, furnishing and erecting plants, 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, and other items not part of the Work 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, and rubble 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 Drawings. 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 gravel and dirt roads, including entrances to public and private property, removed or damaged during construction shall be replaced with similar materials of equal thickness to match the existing adjacent undisturbed areas.
  - 3. All turfed or grassed areas disturbed during construction shall be prepared for seeding in accordance with Section 02820 SEEDING AND PLANTING, unless otherwise specified or directed by the Engineer.
  - 4. All areas used to stockpile rock shall be free of rock (large and small) on the surface at completion of work. Rock shall be removed or covered prior to seeding.
  - 5. 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.

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6. Erosion control measures installed as part of the SWPPP shall be left in place until the site is stabilized.

### **3.06 DEMOBILIZATION**

On completion of the work, Contractor shall promptly remove from the site all rubbish, unused materials, construction equipment, and temporary facilities and structures used during construction. Demobilization shall be complete prior to approval of final payment.

### **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**

- A. Protect existing infrastructure, utilities, signs, and appurtenances not designated for removal or replacement. Provide barricades, coverings, construction fence, tape, or other measures to prevent inadvertent damage.
- B. 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.
- C. Any damage Contractor may inflict on items not being removed or replaced as part of the construction shall be repaired or replaced in a prompt manner as directed by the Engineer to original condition at no expense to the Owner.
- D. Protect and maintain existing benchmarks, monuments, or other established reference points and property corners. If disturbed or destroyed, Contractor shall replace them to the full satisfaction of the Owner and Contractor's expense.

### **3.09 PERMITS**

- A. USACE Section 404 Permit and County Flood Plain permit applications have been prepared by the Owner. Copies will be provided to Contractor upon Contract award.
- B. Storm Water Pollution Prevention Plan (SWPPP) has been prepared and is attached to the Drawing set. Contractor shall be responsible for implementing and monitoring the plan including submitting required notices (notice of intent and notice of completion) and providing onsite notifications of SWPPP. Contractor shall provide a mailbox and free standing board or other device to display SWPPP and house copies of inspection reports. Displayed SWPPP shall be protected from weather.
- C. Contractor shall be responsible for obtaining any required building, electrical, or other required construction related permits not listed above.

### **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 Engineer or Owner.

### **3.11 UTILITIES**

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

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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 01050  
FIELD ENGINEERING**

**PART 1 GENERAL**

**1.01 SCOPE**

- A. This section specifies the requirements for field engineering including establishing horizontal and vertical control, baselines, and volumes for payment. This section is to be used with the requirements contained within other related sections.
- B. Contractor shall perform control surveys and surveys for measurement for payment of completed work, subject to approval by the Engineer.
- C. Contractor shall record and provide all data, in electronic format, of all construction and quantity surveys, to the Engineer for incorporation into final as-built plans.
- D. Contractor shall provide all labor, materials, equipment, and incidentals required to complete the work specified in this section.

**1.02 REFERENCE POINTS**

Benchmark reference points with coordinates and vertical control are indicated on the Drawings. Contractor shall establish additional control, including baselines, as is required for performance of the work. These shall be tied into the site reference points.

**1.03 QUALITY CONTROL**

- A. All survey, layout, and related work shall be performed and signed by a qualified individual and all surveys, layouts, and related work shall be recorded in a bound field book or electronic field book.
- B. Surveys from which measurements for payment are based and surveys verifying that completed work is in conformance to with Contract Documents shall be completely and totally performed and signed by a qualified surveyor approved by the Engineer.
- C. Contractor shall provide all electronic survey data and copies of field books and field notes to Engineer for use in preparing as-built plans.

**1.04 SUBMITTALS**

- A. Surveyor Qualifications

Prior to start of any survey work, Contractor shall submit name, address, telephone number, and qualifications of the surveyor, crew chief, superintendent and all other persons who are proposed to perform surveys or survey related duties on which measurement and payment shall be based, to the Engineer for approval. Upon request by the Engineer, Contractor shall submit documentation verifying the accuracy of the survey work.

- B. Survey Record

Contractor shall submit a survey record with computations signed by the Surveyor, certifying that elevations and locations of site constructed features and depths of excavation are in conformance, or nonconformance, with contract documents. Any nonconformance shall be subject to review and acceptance by the Engineer prior to final disposition (i.e., payment, corrective actions, etc.). Engineer may accept electronic records and computations from acceptable survey programs with proper documentation.



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C. Calibration Certificate

Contractor shall submit certificates of calibration, obtained from the Surveyor, prior to the use of any instrument.

**1.05 PROJECT RECORD DOCUMENTS**

- A. Contractor shall maintain onsite a complete, accurate log of survey work as it progresses. Contractor shall provide as-built surveys of completed work.
- B. Upon completion of the work, Contractor shall submit Record Documents to the Engineer under the provisions of Section 01690 PROJECT RECORD DOCUMENTS.

**PART 2 PRODUCTS**

**2.01 SURVEYS**

A. Control Surveys

Control surveys shall include surveys for the establishment of benchmarks and control points. All control surveys for elevation shall be plus or minus 0.01 feet and for horizontal; control angles shall be to the nearest 20 seconds plus or minus 10 seconds and measured distances shall be to plus or minus 0.01 feet.

B. Measurement Surveys

Measurement surveys shall include surveys to verify as-built construction to the lines and grades indicated on the Drawings and to establish quantities for payment. All measurement surveys for elevation shall be to the nearest 0.1 feet plus or minus 0.05 feet and for horizontal distances shall be to plus or minus 0.1 feet.

**2.02 MATERIALS AND EQUIPMENT**

- A. Contractor shall provide all materials and equipment as required to properly perform the surveys, including, but not limited to, instruments, tapes, rods, measures, mounts and tripods, stakes and hubs, nails, ribbons, other reference markers, and all else required. All material shall be of sound professional quality.
- B. All lasers, transits, and other instruments shall be calibrated and maintained in accurate calibration throughout the execution of the work. Calibration certificates shall be submitted to the Engineer prior to use of any instrument.

**PART 3 EXECUTION**

**3.01 GENERAL**

Contractor is responsible for conducting all surveys, including establishing surveying control as necessary, to construct the work to the lines and grades as indicated on the Drawings, to verify final grades, to provide quantity estimates for materials and any other surveying required to properly perform the work as specified in the Contract Documents.

**3.02 INSPECTION**

- A. Contractor shall verify with the Engineer locations of site reference and survey control points prior to starting work.
- B. Contractor shall promptly notify the Engineer of any discrepancies discovered. Contractor shall also verify layouts periodically during work.

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### **3.03 SURVEY REFERENCE POINTS**

- A. Contractor shall protect survey control points prior to starting site work and preserve permanent reference points during construction. Contractor shall not relocate site reference points without prior written approval from the Engineer.
- B. Contractor shall promptly report to the Engineer the loss, damage, or destruction of any reference point or relocation required because of changes in grades or other reasons. Contractor shall replace dislocated survey control points based on original survey control at no additional cost to the Owner.

### **3.04 SURVEY REQUIREMENTS**

- A. Contractor shall reference survey and site reference points to the provided control monuments and record locations of survey control points, with horizontal and vertical data, on Project Record Documents.
- B. Contractor shall establish lines and levels and shall locate and lay out by instrumentation and similar appropriate means, site features to be constructed including necessary stakes for cut, fill placement, and grading operations and stakes for utility locations, slopes, and invert elevations.
- C. Contractor shall, with his own forces, obtain working or construction lines or grades as needed.
- D. Contractor shall furnish all materials and accessories required for the proper location of grade points and lines.
- E. All marks given shall be carefully preserved and, if destroyed or removed without the Engineers approval, they shall be reset, if necessary, at the Contractors expense.
- F. The cost to the Contractor of all work and delays occasioned by giving lines and grades, or making other necessary measurements, will be considered as having been included in the unit and lump sum prices for items of work.
- G. It shall be the duty of the Contractor to keep the Engineer informed of the times and places at which work will be conducted in order that the Engineer may have an ample opportunity to furnish and/or check the lines and elevations with a minimum of inconvenience to the Engineer or delay to the Contractor.

### **3.05 SURVEYS FOR MEASUREMENT AND PAYMENT**

- A. Contractor shall perform surveys, in a manner acceptable to the Engineer, to determine quantities of unit cost work and percent of completed lump sum work including surveys to establish measurement reference lines and shall notify the Engineer prior to starting work. Excavations requiring measurement by volume shall be surveyed by measuring elevations along cross-sections spaced at a maximum of every 50 feet along the longitudinal direction of the excavation or at break points in the horizontal alignment of the excavation as needed to obtain a representative quantity estimate. Along each cross-section, elevations shall be measured at points of changes in slope. The Contractor's surveyor shall perform cross-section survey of excavation areas before excavation begins to verify original grade elevations.
- B. Contractor's field superintendent shall sign surveyor's field notes or shall keep duplicate field notes and shall calculate and certify quantities for payment purposes.

### **3.06 SURVEY DATA**

- A. Contractor shall provide all survey data to Engineer, both electronic and written. Data will be used to confirm construction in accordance with design documents, to confirm completed quantities, and to generate a final as-built set of plans.
- B. All deviations from the Contract Documents shall be documented and surveyed and included in the as-built survey data.

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-- END OF SECTION 01050 --

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**SECTION 01200  
MEASUREMENT AND PAYMENT**

**PART 1 GENERAL**

**1.01 SCOPE**

- A. This section specifies the basis of measurement and payment for each bid item listed on the Form of Proposal (Bid Form). Bid items for any alternates with titles identical to the Base Bid items shall use the corresponding method of measurement and payment described below.
- B. Items of 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 as specified and indicated on the Drawings shall be included under one of the Bid Items listed in Paragraph: 1.02 BID ITEMS.
- D. Descriptions of the work in this section are intended to be only general descriptions of the work. The Specifications and Drawings provide detailed descriptions of the work.
- E. All Bid Items except Establish Quantity items are subject to final quantity measurement and verification once in place prior to final payment. Load tickets or other types of documentation from suppliers may be accepted by the Engineer for interim payments. Acceptance of interim payment documentation shall not replace final measurement verification as a means of determining final quantities. **Contractor shall not exceed Contract quantities without an approved Change Order prior to the work being conducted.** Contractor shall notify the Engineer as soon as possible if he believes there is a discrepancy in the Contract quantities and the amount of work to be completed.

**1.02 BID ITEMS**

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

**Bid Item 1: Mobilization**

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, general site preparation, site restoration, 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, site security, temporary office and sanitary facilities, traffic control for construction 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 all field surveying including establishing horizontal and vertical control and baselines, performing all construction staking necessary to lay out the work; performing surveys for measurement and payment of completed work and all other items necessary to complete construction staking. Contractor shall provide all labor, materials, equipment, and incidentals required to complete the work.

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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 3: Erosion and Sediment Control**

Work under this item shall consist of implementing erosion and sediment control measures during the project as specified and identified on the Drawings and Construction Storm Water Pollution Prevent Plan. Work shall include all preparation, excavation, dewatering, backfill, silt fence installation and maintenance, construction entrances, and all materials and incidental items necessary to construct and maintain sediment controls or other best management practices (BMPs) during construction. Work shall include monitoring and maintaining erosion and sediment control measures, and removal and disposal of them after vegetation is established.

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 materials, equipment, tools, labor, and incidentals required to complete the work.

**Bid Item 4: Clearing and Grubbing**

Work under this item shall consist of clearing brush and other woody vegetation, removing trees of all types and sizes, grubbing all types and sizes of stumps and roots, removal of debris within the work limits indicated on the Drawings, and disposal of all items removed, as necessary for completion of the work as specified and indicated on the Drawings. Work shall include hauling of materials to offsite disposal location.

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 materials, equipment, tools, labor, and incidentals required to complete the work.

**Bid Item 5: Excavation and Disposal**

Work under this item shall consist of excavating material required to complete the work as identified on the Drawings and disposing of unsatisfactory and excess material at the identified disposal areas. Work includes all handling of the material including excavating, stockpiling, loading, hauling, and disposing of excavated material. Work under this item also includes over excavating unstable material beneath structures as specified.

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 areas prior to excavation and the finished excavations after excavation. Payment shall not be made for quantities of material excavated below the 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 the excavated material at the disposal areas, and all related requirements as indicated on the Drawings and as specified.

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**Bid Item 6: Granular Filter Material**

Work under this item shall consist of furnishing and placing granular filter material on a prepared subgrade on geotextile filter fabric (where specified or shown on the Drawings) at the locations and to the lines and grades indicated on the Drawings. Crushed rock shall conform to NDOT material specifications and shall be of the size and type specified and identified on the Drawings. The work shall include acquiring and hauling material to the site and stockpiling onsite as necessary, hauling material from stockpiles, including intermediate staging, to the locations required, and placing material.

Granular filter material that is accepted and used in the construction shall be measured for payment by the cubic yard in place. The quantity shall not be measured for payment but shall be considered an Established Quantity (E.Q.).

Quarry weight determinations will be accepted by the Engineer for intermediate deliveries of rock and processing of intermediate Pay Requests. The attendant at the quarry will issue tickets to the driver for each load of rock 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 area and 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 thickness or beyond the extents of crushed rock shown on the Drawings. Geotextile filter fabric specified for use beneath filter material crushed rock 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 crushed rock to the lines and grades specified and indicated on the Drawings.

**Bid Item 7: Rock Riprap**

Work under this item shall consist of furnishing and placing riprap on a prepared subgrade with geotextile filter fabric at the locations and to the lines and grades indicated on the Drawings. Riprap shall conform to NDOT specifications and shall be of the size and type specified and identified on the Drawings. The work shall include acquiring 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.

Riprap which is accepted and used in the construction shall be measured for payment by the ton in place. The weight will be determined by measuring the volume (cubic yards) of riprap placed and multiplying by 1.4 tons/cubic yard.

Quarry weight determinations will be accepted by the Engineer for intermediate deliveries of rock and processing of intermediate Pay Requests. The attendant at the quarry will issue tickets to the driver for each load of rock 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 area and 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 more than the specified thickness or beyond the extents of riprap shown on the Drawings. 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

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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: 3" Rock Infill for Riprap**

Work under this item shall consist of furnishing and placing crushed rock fill to fill voids in the completed riprap surface to the lines and grades indicated on the Drawings. Crushed rock fill shall be of the size and type specified and identified on the Drawings. The work shall include acquiring and hauling material to the site and stockpiling onsite as necessary, hauling material from stockpiles, including intermediate staging, to the locations required, and placing material to the lines and grades shown on the Drawings.

Crushed rock fill which is accepted and used in the construction shall be measured for payment by the cubic yard in place. The quantity shall not be measured for payment but shall be considered an Established Quantity (E.Q.).

Quarry weight determinations will be accepted by the Engineer for intermediate deliveries of rock and processing of intermediate Pay Requests. The attendant at the quarry will issue tickets to the driver for each load of crushed concrete/rock 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 area and 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 thickness or beyond the extents shown on the Drawings.

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 material to the lines and grades specified and indicated on the Drawings.

**Bid Item 9: Foundation Material**

Work under this item shall consist of furnishing and placing crushed rock foundation material on a prepared subgrade on geotextile filter fabric (where specified or shown on the Drawings) at the locations and to the lines and grades indicated on the Drawings. Crushed rock shall conform to NDOT specifications and shall be of the size and type specified and identified on the Drawings. The work shall include acquiring and hauling material to the site and stockpiling onsite as necessary, hauling material from stockpiles, including intermediate staging, to the locations required, and placing material.

Crushed rock foundation material that is accepted and used in the construction shall be measured for payment by the cubic yard in place. The quantity shall not be measured for payment but shall be considered an Established Quantity (E.Q.).

Quarry weight determinations will be accepted by the Engineer for intermediate deliveries of rock and processing of intermediate Pay Requests. The attendant at the quarry will issue tickets to the driver for each load of rock 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 area and 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 thickness or beyond the extents of crushed rock shown on the Drawings. Geotextile filter fabric specified for

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use beneath crushed rock 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 crushed rock to the lines and grades specified and indicated on the Drawings.

**Bid Item 10: PVC Catch Basin with Domed Grate**

Work under this item shall consist of preparing the site, excavation and backfill, furnishing and installing a premanufactured PVC catch basin with domed grate of the type and size specified, and all incidental work required to complete the work as specified and indicated on the Drawings.

The pay unit for this item is per each catch basin installed. Payment shall be made only for material incorporated into the project as specified. No payment shall be made for defective, damaged, or misaligned material. Payment shall be based on the contract unit price given in the Bid Form, as the work proceeds. This payment shall be full compensation for all material, excavation and backfill, equipment, labor, disposal, and incidentals required to complete the work.

**Bid Item 11: 24" Dia. HDPE Pipe**

Work under this item shall consist of preparing the site, excavation and backfill, furnishing and installing 24" diameter HDPE pipe, seep collars, and all incidental work required to complete the work as specified and indicated on the Drawings. Granular bedding is included in Bid Item 8 Foundation Material.

The pay unit for this item is per linear foot of pipe installed. Payment shall be based on the Contract Unit Price for the length of pipe material measured and computed to the nearest foot. Payment shall be made only for material incorporated into the project to the length specified. No payment shall be made for material placed in excess of the specified length. Payment shall be based on the contract unit price given in the Bid Form, as the work proceeds. This payment shall be full compensation for all material, excavation and backfill, equipment, labor, disposal, and incidentals required to complete the work.

**Bid Item 12: Type 1 Seeding – Turf Grass**

Work under this item shall consist of 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 as specified and indicated on the Drawings.

Seeding shall be measured for payment per acre. Payment shall be based on the contract Unit Price for the area of seeding measured and computed to the nearest 0.1 acre. Determination of the area of the seeding for payment shall be made by direct measurement completed seeded areas. Quantities in the Bid Tab include those areas identified on the Drawings to be seeded. All other areas damaged or disturbed 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. This payment shall be full compensation for all materials, equipment, tools, labor, transportation, and incidentals required to complete the work.



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**Bid Item 13: Type 2 Seeding – Native Grasses and Forbs**

Work under this item shall consist of 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 as specified and indicated on the Drawings.

Seeding shall be measured for payment per acre. Payment shall be based on the contract Unit Price for the area of seeding measured and computed to the nearest 0.1 acre. Determination of the area of the seeding for payment shall be made by direct measurement completed seeded areas. Quantities in the Bid Tab include those areas identified on the Drawings to be seeded. All other areas damaged or disturbed 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. This payment shall be full compensation for all materials, equipment, tools, labor, transportation, and incidentals required to complete the work.

**Bid Item 14: Hydromulch**

Work under this item shall consist of applying Hydromulch to all seeded areas as indicated on the Drawings. Work shall include and providing and applying the specified type of Hydromulch including all water and incidentals required to complete the work as specified and indicated on the Drawings.

Seeding shall be measured for payment per acre. Payment shall be based on the contract Unit Price for the area of seeding measured and computed to the nearest 0.1 acre. Determination of the area of the seeding for payment shall be made by direct measurement completed seeded areas. Quantities in the Bid Tab include those areas identified on the Drawings to be seeded. All other areas damaged or disturbed 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. This payment shall be full compensation for all materials, equipment, tools, labor, transportation, and incidentals required to complete the work.

**PART 2 - MATERIALS**

Not used.

**PART 3 - EXECUTION**

**3.01 GENERAL**

- A. Contractor shall not exceed quantities listed in the Bid Form for any item without written approval of the Engineer. Work that results in changes in quantities 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 quantities 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**

This section covers submittals and submittal procedures.

**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.
12. Electronic submittals (e.g., in PDF format) may be accepted in lieu of or in addition to hard copy submittals with approval of the Engineer. All other submittal requirements shall be adhered to including transmittal forms, numbering, etc.

**1.03 CONSTRUCTION SCHEDULES AND PROGRESS REPORTS**

A. Contractor shall:

1. Submit initial schedule within 7 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 APPLICATIONS 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. All payment submittals shall be signed by the Contractor.

#### **1.05 TESTING RESULTS**

A. Contractor shall submit to the Engineer, a copy of all results of material testing, quality control tests, and other tests as specified, as well as any unspecified tests the Contractor conducts. These include, but are not limited to, results from testing the following:

1. Geotextile materials.
2. Aggregate materials.
3. Concrete materials.
4. Soils.
5. Moisture/Density Curves for fill material.
6. Compacted fill/backfill.
7. Bank stabilization materials.

#### **1.06 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.
2. Submit the number of copies that Contractor requires, plus two additional copies, which will be retained by the Engineer and Owner respectively.
3. List of material items requiring submittals is as follows:
  - a. Seed mix.
  - b. Aggregates.
  - c. Riprap.
  - d. Prefabricated drainage structures and pipe.
  - e. Erosion control material.
  - f. Geotextile materials.
  - g. Others as specified.

#### **1.07 MANUFACTURER INSTALLATION INSTRUCTIONS**

A. For all products, assemblies, prefabricated structures, and other applicable components, 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 OWNER'S MANUALS AND OPERATING AND MAINTENANCE INSTRUCTIONS**

A. For all products, assemblies, prefabricated structures, and other applicable components, Contractor shall:

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1. Submit printed Owner's Manuals and Operation and Maintenance (O&M) manuals detailing operating instructions, limitations, maintenance requirements and other applicable information so that Owner has complete information for owning and operating equipment and components of the Work.
  2. Submit contact information for the manufacturer/supplier of all equipment and components including information on obtaining warranty service, replacement parts, and additional items.
  3. Typical items requiring Owner's Manuals and O & M manuals include, but are not limited to:
    - a. Wood products requiring treatment and maintenance
    - b. Gates and fences
    - c. Drainage structures, inlet boxes, water level control structures, hydraulic gates, grates, and other hydraulic appurtenances
    - d. Other prefabricated structures

#### **1.09 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.

#### **1.10 WARRANTIES**

Contractor shall submit manufacturer and/or supplier warranties for all products, materials, equipment and components incorporated into the Work. Submit warranty information and corresponding contact information for each warranty.

#### **PART 2 PRODUCTS**

Not used.

#### **PART 3 EXECUTION**

Not used.

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

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**SECTION 01400**  
**QUALITY ASSURANCE/QUALITY CONTROL**

**PART 1 GENERAL**

**1.01 SCOPE**

- A. Quality assurance/quality control (QA/QC) 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 CONTROL**

- 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, request a 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, request a 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.

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- 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.

**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 Contractors 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 Owner or 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.
- E. The Owner may conduct additional quality control tests on the materials incorporated in the work at their discretion.
  - 1. Copies of the results of all tests performed by Owner will be furnished to the Contractor upon request.
  - 2. Testing performed by the Owner in no way relieves the Contractor of the responsibility of completing the work in accordance with this Contract or conducting QC tests specified.
  - 3. If necessary, Contractor shall assist the laboratory personnel in taking tests to the extent of furnishing labor and equipment to prepare the areas for testing and curtailing operations in the vicinity of the test area during testing and to provide safe access for testing.
  - 4. Conflicting results between the Owner's tests and those made by the Contractor will be resolved by the Engineer and his decision shall be final.

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**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.
- H. Dewatering.

**1.02 WATER**

Contractor shall be responsible for procuring, transporting, and distributing water needed for construction.

**1.03 SANITARY FACILITIES**

- A. Contractor shall provide their employees with suitable temporary sanitary facilities at their 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/BARRICADES AND FENCING**

- A. Provide barricades and/or construction fencing, as required, to prevent public entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations.
- B. At a minimum, barricades and fencing shall be installed at construction entrances and as identified on the Drawings. Engineer or Owner may direct Contractor to install additional barricades and/or fencing as conditions dictate.
- C. Contractor shall be responsible for determining additional locations for barricades and fencing to protect the public and the work, and to deter access.
- D. Consult with Engineer regarding required barricade plans.

**1.07 CLEANING DURING CONSTRUCTION**

- A. Control accumulation of waste materials and rubbish. Waste and rubbish, including food containers, grease tubes, discarded tires, and other trash shall be contained in appropriate receptacles onsite. Trash and debris shall not be allowed to blow around onsite.



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- B. Periodically dispose of waste and rubbish off-site.
  - C. Onsite burning of waste and rubbish shall not be allowed

#### **1.08 REMOVAL**

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

#### **1.09 DEWATERING**

Contractor shall be responsible for all dewatering required to complete the Work in accordance with the Contract Documents.

### **PART 2 PRODUCTS**

#### **2.01 EROSION AND SEDIMENT CONTROLS**

Materials and products used for erosion and sediment controls shall be adequate to provide their intended purpose.

### **PART 3 EXECUTION**

#### **3.01 DEWATERING**

- A. Contractor shall be solely responsible for designing, constructing, and maintaining dewatering systems required to complete the Work.
- B. Discharge of dewatering water shall be to a location that will not impact completed work.
- C. Discharge of dewatering shall be in compliance with applicable rules and regulations.
- D. Engineer shall be notified prior to dewatering operations commencing.

#### **3.02 RUNOFF, EROSION, AND SEDIMENT CONTROL**

- A. Contractor shall be solely responsible for implementing, constructing, and maintaining runoff controls as outlined in the SWPPP to protect the work and minimize erosion whether or not specifically specified or indicated on the Drawings. Contractor shall incorporate any additional erosion control and sediment retention practices necessary into the Storm Water Pollution Prevention Plan (SWPPP). Earth disturbance shall not commence until 7 calendar days have elapsed from the submittal date of the construction storm water Notice of Intent (CWS-NOI) form.
- B. Excavation, grading, and moving of soil materials shall be scheduled to minimize to the extent practical, the size of areas that will be unprotected from erosion. Disturbed areas shall be restored according to the Specifications and Drawings, as soon as is feasible.
- C. Diversions, waterways, or other runoff controls shall be constructed to divert water away from work areas and/or to collect runoff from work areas to allow proper construction of work items and protect the site and work from ponding or running water. Contractor shall provide, operate, and maintain pumping equipment as necessary.
- D. Silt fences, hay bales, or other erosion control devices shall be installed as necessary, to minimize and control erosion during and subsequent to construction. Erosion controls shall remain in place during the entire construction period or as otherwise specified.
- E. Protect the work from erosion. Erosion of embankments, cuts, and natural slopes that occurs during construction of the project shall be repaired by the Contractor at no additional cost to the Owner.
- F. Protect downstream and adjacent properties, drainage channels, and streams from damage due to erosion resulting from project construction operations.

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- G. All erosion and sediment control measures shall be inspected at least every 14 days (1 month during winter if construction activities are minimal) and within 24 hours after a storm event of 0.5 inches or more, except when winter freeze up conditions preclude runoff. Any deficiencies found during these inspections shall be promptly corrected.

### **3.03 TEMPORARY CONSTRUCTION ROADS AND ENTRANCES**

- A. Contractor shall use the recommended haul routes identified on the drawings and as approved by Engineer. Should Contractor desire additional or other routes, locations, etc. he shall obtain prior approval from Engineer. Construction roads and entrances are not allowed across the dam or within the emergency spillway.
- B. Temporary roads or paths shall follow the contour of the natural terrain to the extent possible. Slopes shall not exceed 10 percent, where practical.
- C. If necessary, temporary construction entrances shall be constructed where vehicles and equipment enter the site. Entrances shall be constructed in a manner that will prevent damage to existing roads, culverts, and other existing structures. Contractor shall be responsible for repairing or replacing any such structures damaged at the temporary construction entrances. Temporary construction entrances shall be maintained in useable condition during the course of the project. Entrances shall be maintained in a condition that will prevent the tracking or flow of mud/soil onto public right-of-way.
- D. All materials spilled, dropped, washed, or tracked from vehicles onto roadways shall be removed immediately at the expense of the Contractor.

### **3.04 STAGING/MATERIAL STORAGE AREAS**

Contractor shall use the recommended staging/material storages areas identified on the drawings and as approved by Engineer. Should Contractor desire additional or other locations, etc. he shall obtain prior approval from Engineer.

### **3.05 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 01690  
PROJECT RECORD DOCUMENTS**

**PART 1 GENERAL**

**1.01 SCOPE**

This section specifies the requirements for maintenance and submittal of record documents.

**1.02 MAINTENANCE OF DOCUMENTS AND SAMPLES**

- A. Contractor shall maintain at the site for the Engineer, one record copy of:
1. Construction schedule and progress record.
  2. Technical specifications.
  3. Addendum and modifications.
  4. Change orders and other modifications to the contract.
  5. Engineer field orders.
  6. Daily work activity and quality control summary reports as applicable, including:
    - a. Test records and results.
    - b. Records of all site work.
    - c. Report on all spill incidents.
    - d. Truck load tickets and shipping papers.
    - e. Records of quantities of materials by category.
    - f. Other items as may be required by the Engineer.
- B. Record documents shall be stored apart from documents used for construction.

**1.03 RECORDING**

- A. Contractor shall record information on a set of drawings, provided by the Engineer.
- B. Information is to be recorded concurrently with construction progress. No work shall be concealed or covered in a manner that would prevent inspection until required information is recorded and approved by the Engineer.
- C. Contract Drawings and shop drawings shall be legibly marked and each item of actual construction recorded accordingly:
1. Measured depths of elements of construction in relation to survey datum.
  2. Field changes of dimension and detail.
  3. Details not on original Contract Drawings.
- D. Specifications shall be legibly marked and each item of actual construction recorded including:
1. Manufacturer, trade name, and catalog number of each product actually installed, including optional or substitute items.

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- 2. Changes made by addenda and modifications.
  - E. Contractor shall maintain manufacturer's certifications, inspection certifications, and field test records required by individual specification sections.

**1.04 SUBMITTALS**

- A. Record Documents shall be delivered at final acceptance under provisions of Section 01700 PROJECT CLOSEOUT. Two copies of the Record Documents shall be transmitted with cover letter listing:
  - 1. Date
  - 2. Project title
  - 3. Contractors name, address, and telephone number
  - 4. Number and title of each Record Document
  - 5. Signature of Contractor or authorized representative
- B. Documents must be submitted to and accepted by Engineer at completion of work as a condition of final payment.

**PART 2 PRODUCTS**

Not used.

**PART 3 EXECUTION**

Not used.

**-- END OF SECTION 01690 --**

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**SECTION 01700  
CONTRACT CLOSEOUT**

**PART 1 GENERAL**

**1.01 SCOPE**

This section specifies Contract Closeout Procedures.

**PART 2 PRODUCTS**

Not used.

**PART 3 EXECUTION**

**3.01 CLOSEOUT PROCEDURES**

- A. Engineers Review. Contractor shall submit written notification that the work substantially complete and is ready for the Engineers Review. The Engineer will then prepare a punch list of items to be completed.
- B. Substantial Completion. Substantial completion shall consist of the following:
  - 1. Prior to substantial completion, the 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. This procedure shall continue until such time when the Engineer is satisfied that 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 Engineers 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.

E. Owner's Manuals and Operation and Maintenance Manuals

1. Provide Owner's Manuals and Operation and Maintenance Manuals as specified in Section 01300 SUBMITTALS.
2. Final Payment will not be processed prior to receipt of required submittals.

F. Survey Data

Contractor shall provide all survey data, written and electronic to Engineer at completion of the Project suitable for use in compiling as-built drawings.

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

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**SECTION 02100  
CLEARING AND GRUBBING**

**PART 1 - GENERAL**

**1.01 SCOPE**

- A. This section specifies clearing and grubbing of the work area including removal of trees, stumps, woody debris, and brush. This section is to be used with the requirements contained within other related sections, including Section 02220 EARTHWORK and 02500 SITE DRAINAGE.
- B. The Contractor shall provide all labor, materials, equipment, and incidentals required to complete the work specified in this section.

**1.02 DEFINITIONS**

- A. Clearing  

Clearing shall consist of the felling, trimming, and cutting of trees into sections and the satisfactory disposal of the trees and other woody vegetation designated for removal, including down timber, snags, brush, and thickets occurring in the designated work area.
- B. Grubbing  

Grubbing shall consist of the removal and disposal of stumps, roots greater than 1 inch in diameter, and root mats from the designated work area.

**PART 2 - PRODUCTS**

Not used.

**PART 3 - EXECUTION**

**3.01 COORDINATION WITH ENGINEER**

All areas to be cleared and grubbed shall be preapproved by the Engineer prior to clearing the area. Areas for measurement and payment shall be preapproved as specified in Paragraph 3.06.

**3.02 CLEARING**

- A. Contractor shall clear trees, brush, snags and other vegetation in the designated work areas as necessary to complete the work.
- B. Contractor shall complete work in a manner so as to minimize disturbance of trees and other plantings not intended to be removed as part of the Project. Trees and vegetation to be left standing shall be protected from damage during completion of the work.
- C. In order to comply with requirements of the Migratory Bird Treaty Act of 1918 (and amendments), clearing (trees, brush, heavy stands of grasslands) shall not be conducted between the dates of May 1 and July 15 without prior approval the Engineer and without completing a migratory bird survey as described below. Contractor shall be responsible for planning their operations to comply with this Act and these specifications.
  - 1. In the event that the Contract is awarded within the above time window or Contractor chooses to conduct clearing within this window for other reasons, clearing may be allowed if the area to be cleared is inspected or surveyed by qualified personnel and a determination is made that there are no active nests in the applicable areas. Contractor shall be responsible for coordinating with Engineer and Owner to have the areas surveyed and shall not conduct clearing

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- or tree removal prior to this survey. Contractor shall provide a minimum 1 week notice to Engineer when requesting a survey.
  - 2. Areas/trees with identified active nests shall not be disturbed until after birds have fledged the nest. Generally, a 30-foot buffer will be required around active nests or nesting areas until after fledging. Areas with active nests will require a survey prior commencing clearing in those areas if within the time window above.
  - 3. Clearing may be conducted in areas if the results of the survey are negative.
- D. In order to protect the Northern Long Eared Bat (listed threatened species), trees with large crevices, peeling bark, cavities/hollows present onsite shall not be removed from June 1 through July 31.
  - E. Contractor shall plan and conduct their operations to comply with these regulations. Compliance with these regulations shall generally not be grounds for Contract extensions.

### **3.03 GRUBBING**

- A. In areas requiring excavation, Contractor shall grub and remove material to a depth necessary to complete excavation to the limits indicated and complete required work or a minimum depth of two feet below finished subgrade (three feet below finished subgrade on dam), whichever is greater. Material to be grubbed shall include stumps, roots larger than one inch in diameter, and matted roots.
- B. Excavations resulting from grubbing activities shall be backfilled with satisfactory earth fill and compacted as specified for the type of work being conducted in the grubbed area. In areas requiring amended earth fill, excavations shall be backfilled with amended earth fill as specified in Section 02220 EARTHWORK.
- C. Trees removed in areas identified as having dispersive soils shall have their stumps and roots grubbed to minimum of two feet below grade. Excavations shall be backfilled with amended earth fill as specified in Section 02220 EARTHWORK.

### **3.04 PROTECTION**

Contractor shall take precautions to protect any trees, vegetation, structures, benchmarks and survey stakes, and utilities not intended to be removed. Prior to beginning work, Contractor shall be responsible for field verifying that there are no utilities within the work area. Contractor shall be responsible for repairing and/or replacing, at no additional cost to the Owner, items that are damaged during construction that were not intended to be removed.

### **3.05 DISPOSAL OF MATERIAL**

- A. All materials resulting from clearing and grubbing activities shall be disposed of offsite in an acceptable manner at an acceptable facility, unless otherwise specified or directed by the Engineer.
- B. Onsite burning of materials shall not be allowed.

### **3.06 MEASUREMENT FOR PAYMENT**

- A. For all areas where clearing and grubbing will be required, Contractor shall verify with the Engineer the quantity of clearing and grubbing that that will be requested for payment. Quantities listed in the Bid Tab are estimated quantities. Bid tab quantities shall not be exceeded without prior approval of the Engineer.
- B. In areas where trees are clumped, the Individual clumps of trees shall be measured separately. Open areas between clumps shall not be measured for payment under the Clearing and Grubbing item.
- C. Areas requested by the Contractor and approved by the Engineer to be cleared and/or grubbed for the convenience of the Contractor (e.g., establishment of additional or alternate haul roads, staging areas, etc.) shall be considered subsidiary to the Work and



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shall not be paid for directly.

**-- END OF SECTION 02100 --**

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## SECTION 02220 EARTHWORK

### PART 1 GENERAL

#### 1.01 SCOPE

- A. This section specifies requirements for excavating material (including removal of any obstructions within the work limits), disposing of unsuitable and excess material, filling/backfilling, and placing and compacting earth as part of the work. The work shall include all necessary water (stormwater runoff, base flow, seeps, etc.) management including siphoning, bailing, draining, and/or pumping of water in the excavations and sheeting and/or shoring as necessary to complete the work. The work shall also include management of any onsite spoil areas (if any) including stripping and replacing topsoil, placing and compacting spoil, grading, and erosion control. This section also includes requirements of sub-base preparation beneath roads, parking areas and paving. This section is to be used with the requirements contained within other related sections, including Sections 02100 CLEARING AND GRUBBING, 02500 SITE DRAINAGE, 02820 SEEDING, 02693 GEOTEXTILES, 02850 AGGREGATES, and 02990 RIPRAP.
- B. Contractor shall provide all labor, materials, tools, equipment, and incidentals required to complete the work specified in this section.

#### 1.02 REFERENCES

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 C206-84 (Reapproved 1992) Standard Specification for Finishing Hydrated Lime  
ASTM C618-93 Standard Specification for Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Portland Cement Concrete  
ASTM D422 Standard Test Method for Particle-Size Analysis of Soils  
ASTM D698 Procedure A, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/cu.ft. (600 kN-m/cu.m.)  
ASTM D1556 Density of Soil in Place by the Sand-Cone Method  
ASTM D2487 Classification of Soils for Engineering Purposes (Unified Soil Classification System)  
ASTM D4253 Standard Test Methods for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table (1993)  
ASTM D4254 Standard Test Methods for Minimum Index Density and Unit Weight of Soils and Calculations of Relative Density  
ASTM D4318 Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index for Soils  
ASTM D6938 Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

##### STATE OF NEBRASKA DEPARTMENT OF TRANSPORTATION

- NDOT Standard Specifications for Highway Construction - 2017 (including subsequent supplements)

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### 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

1. Onsite materials 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 materials shall be used in completing the work to the maximum extent possible.
2. Onsite 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. Contractor, at their own expense, may exchange "dry" material from the borrow areas for wet material from excavations. Contractor shall be responsible for the cost of additional restoration required.

#### C. Unsatisfactory Materials

1. 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.
2. The upper six inches of soil onsite shall be considered unsatisfactory due to high organic content.
3. Dispersive soils shall be unsatisfactory.

#### D. Degree of Compaction

1. Unless otherwise specified, degree of compaction, excluding free-draining granular materials, 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 maximum density.
2. Degree of compaction of free-draining granular materials used as backfill shall be a percentage relative density as determined in accordance with ASTM D 4253 and D 4254.

#### E. Fill/Backfill

Any material placed to bring an area to a specific grade, including backfill for excavations. 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 the following:

1. Soil classification tests – ASTM D 2487.
2. Sieve analysis with hydrometer – ASTM D 422 test results.
3. Standard Proctor Density Tests - ASTM D 698 test results.

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4. Plasticity tests – ASTM D4318 test results.
  5. Dispersivity tests.
  6. In-Place Density – ASTM D 2922 test results.
  7. Product technical data erosion control materials.
  8. Product technical data for geotextiles.
  9. Product technical data for cellular grid materials.

- 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, Subpart P-Excavations.

## **1.06 QUALITY ASSURANCE**

Perform earthwork in compliance with applicable requirements of local, State, and Federal governing authorities having jurisdiction. Conduct testing as specified and submit results to the Engineer.

## **1.07 CONTROL OF ZEBRA MUSSELS**

- A. Due to possible introduction of Zebra Mussels and other aquatic nuisance species, the Contractor shall inspect and clean equipment prior to placement or use in water bodies:
  1. Always inspect equipment (in the broadest sense, e.g., boats, trailers, anchors, scuba gear, pumps, dredges, etc.) for visible plants and animals before transporting.
  2. Always remove visible plants and animals from equipment (expel plants, animals, and water from internal parts).
  3. Always drain water from equipment before transporting.
  4. Always clean equipment that has been in infested waters before placing in other waters.
  5. Always report questionable species to the Nebraska Game & Parks Commission, Fisheries Division, Mr. Steve Schainost; (402) 471-5443, for identification. Information is available from many sources about identification of an aquatic nuisance species; however, specimens are needed to confirm sightings. Many jurisdictions have different rules regarding possession and transport of specimens. Always ask our agency's representative (listed above) for transportation instructions prior to transportation.
  6. Always "avoid" transporting plants, animals, mud, or water to or from lakes, rivers, wetlands, and coastal waters.
  7. Always "avoid" releasing animals or plants into the wild unless the release is made into the same water body or location where the species came from.

## **PART 2 PRODUCTS**

### **2.01 EARTH FILL/BACKFILL MATERIALS**

- A. Proposed fill and backfill material shall be subject to approval of the Engineer. Contractor shall be responsible obtaining and analyzing representative samples of the proposed fill and backfill material. Contractor shall provide a map showing the location of the samples. Samples shall be analyzed for "optimum moisture content" and "maximum dry density" (ASTM D698) at a state certified geotechnical testing laboratory approved by the

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- Engineer. Results shall be submitted to the Engineer at least five days prior to placement of the material.
- B. Materials from the identified borrow areas onsite and materials from offsite sources shall be satisfactory materials free from roots, organic matter, trash, debris, and other objectionable material. Contractor shall be responsible for preparing onsite materials for use as backfill.
  - C. Controlled earth fill placed within areas to be filled (including embankments) shall be non-dispersive lean clay CL (lean clay, lean clay with sand, and sandy lean clay) materials or admixture modified cohesive fill (all with liquid limit less than 50 and a plasticity index less than 30) as classified by the Unified Soil Classification System (ASTM D 2488).
  - D. Onsite soils from spoil areas identified on the Drawings may be used with approval of the Engineer if tested by the Contractor, at his expense, to determine if they are satisfactory (non-dispersive cohesive materials). Representative soil samples (1 per 1,000 cubic yards of borrow) shall be classified in accordance with ASTM D 2488 and tested for dispersivity. Soils shall also be tested in accordance with Section 2.01 Paragraph A., above. Test results shall be submitted to the Engineer prior to placement. The use of onsite borrow from the identified spoil areas shall not result in a finished elevation lower than pre-construction elevation of the area. If the net quantity (after excavating borrow and placing spoil) of borrow material available is insufficient for the project needs, Contractor shall obtain fill material from offsite sources.
  - E. Contractor shall be responsible manipulating the water content (wetting and/or drying) as necessary to achieve proper compaction.
  - F. Earth materials that are not satisfactory as defined above, shall be disposed of at the identified onsite spoil areas or at an appropriate offsite facility.

## **2.02 GRANULAR FILL**

Granular fill shall be as specified in Section 02850 AGGREGATE.

## **2.03 GEOTEXTILES AND GEOGRIDS**

Geotextiles including geogrids shall be as specified in Section 02693 GEOTEXTILES.

## **2.04 TOPSOIL**

- A. Topsoil includes 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.
- C. Topsoil shall be stripped from spoil areas prior to use and replaced prior to seeding.

## **2.05 WATER**

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

# **PART 3 EXECUTION**

## **3.01 GENERAL 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

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- excavations.
- B. 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.
  - C. 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.
  - D. 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 P-Excavations, 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 loose material. As a minimum, Contractor shall slope all excavations to prevent these conditions.
    - 3. Avoid surcharge or excavation procedures that may result in heaving, caving, or slides.
    - 4. Maintain stockpiles and excavations in such a manner to prevent damage to onsite structures or adjoining property.
  - E. 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. Any damage caused by the Contractor's failure to make this verification and/or determination shall be repaired at no cost to the Owner. In case of damage, notify Engineer immediately. When work is being conducted in areas 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.
  - F. Positive drainage shall be maintained at all excavated and constructed locations throughout the site unless otherwise specified. Longitudinal slopes in drainage ditches and swales shall be as specified or indicated on the Drawings but in no case, shall slopes in ditches be less than 0.25%. Cross-slopes and crowns shall be a minimum of 2% to provide positive drainage off the site.

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- G. Complete restoration of all obstructions moved or removed to accommodate construction equipment or to facilitate work, shall be required, unless otherwise specified.

### **3.02 EXCAVATION FOR STRUCTURES**

- A. Unless otherwise specified or indicated on the Bid Form, excavation for installation of structures including culverts, headwalls, and wing walls, retaining walls, drain inlets, pipes, pipe culverts and supports, and other miscellaneous structures shall be considered incidental to the installation of such structures.
- B. For structures requiring the use of forms, Contractor shall excavate a volume of material large enough to contain the structure and its forms where necessary and provide access to set, strike, and inspect the forms.
- C. Contractor shall be responsible for managing water that occurs in the excavations. This includes groundwater, base stream flow, and precipitation.
  - 1. If water is encountered, Contractor shall dewater the excavation.
  - 2. After dewatering, if unstable or otherwise unsuitable soil is encountered at the elevation established for the bottom of the excavation and if the soil does not become stable within a reasonable time after attempting dewatering, the subgrade shall be stabilized as specified in Section 3.04 SUBGRADE STABILIZATION.
  - 3. If concrete is to be placed on the finished bottom of the excavation, an aggregate base shall be installed, and the water level shall be maintained at an elevation below the base of the excavation until after the concrete has been placed and set for at least 5 hours. If water percolates through the base of the excavation in spite of dewatering efforts, Contractor shall place a watertight seal course in the bottom of the excavation.
- D. Excavation for Pipe Culverts:
  - 1. Bedding is shaping the trench to the pipe's diameter, including recesses for connections. For pipe culverts where earth or granular bedding is specified, the trench width at its bottom shall be as indicated on the Drawings or at least 40 inches wider than the width of the pipe, whichever is greater. Excavation side slopes shall be sloped back at a slope of 1(H):1(V) or less to a height at least 2 feet above the top of the pipe, to allow pipe backfill to be adequately compacted against the sides of the trench.
  - 2. For pipe culverts where concrete or flowable fill bedding is specified, trench width shall be sufficient to allow for the installation, inspection, and removal of forms (if used). If no forms are used, trench excavation shall be sufficient to allow for the installation of the specified bedding.
  - 3. All earth backfill shall be placed as prescribed in Sections 3.06 BACKFILLING EXCAVATIONS and 3.07 BACKFILLING STRUCTURES.
  - 4. No part of a culvert shall rest directly in contact with rock. When rock is encountered in the bottom of a culvert excavation, the rock shall be excavated to not less than 6 inches below the lower surface of the culvert and replaced with suitable material or pipe bedding.
  - 5. If unstable soils are encountered at the base of pipe trenches, subgrade shall be stabilized as described in Section 3.04 SUBGRADE STABILIZATION.

### **3.03 PREPARATION OF EMBANKMENT AREAS**

- A. If present, water shall be drained enough in advance of grading to allow subgrade soils to dry out to the degree necessary to make area accessible to low ground pressure tracked equipment.
- B. All vegetation and the upper 0.5 feet of existing soils shall be removed from the embankment areas prior to placing fill. All roots, brush, rubbish, and other unsatisfactory

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- material within the area where fill is to be placed, shall be removed before fill is started. Organic and otherwise unsuitable material shall be removed from the footprint area of all structures unless otherwise specified.
- C. Embankment areas shall be graded and cut to the subgrade elevations identified on the Drawings. Once the exposed ground has been cut to subgrade, the areas to be filled shall be proofrolled with a loaded dump truck or similar piece of equipment to locate unstable materials. Proofrolling shall be conducted in the presence of the Engineer. Proofrolling is not required in areas where unstable soils are obvious, are expected, or uncovered during stripping of the site.
  - D. Unstable material shall be removed, and subgrade stabilized as specified in Section 3.04 SUBGRADE STABILIZATION. Replaced material shall conform to the moisture content and compaction specifications. Depending on the conditions at time of construction, the groundwater table may be near the subgrade elevation. Low-ground-pressure track-type equipment should be used to prevent excessive disturbance.
  - E. Exposed subgrade surface that does not require stabilization shall be scarified to a minimum depth of 6 inches and reworked to conform to the moisture content and compaction specifications. If embankment is specified as requiring amended earth fill, amend soil as specified and indicated on the Drawings.
  - F. If dispersive material is encountered in the subgrade, it shall be removed and replaced with non-dispersive earth fill.
  - G. 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.
  - H. Once embankment areas have been prepared and approved by the Engineer, they shall be raised to the design elevation with controlled earth fill as specified. Contractor shall provide 2 days' notice when requesting inspections of prepared fill areas.

### 3.04 SUBGRADE STABILIZATION

- A. If grading operations are performed during a wet period, subgrade stabilization may also be required under any fill placed in the vicinity of wetland cells. The depth of subgrade stabilization may vary considerably depending on time of construction and precipitation just prior to and at the time of construction. Contractor shall be responsible for planning their operations to utilize dry periods to the extent possible; and for dewatering to aid in drying work areas so as to minimize the extent of subgrade stabilization required.
- B. In all areas requiring fill, a minimum of 2 feet of controlled earth fill shall be constructed. In areas where the design indicates less than two feet of fill over existing terrain (e.g., where berms tie into existing terrain), Contractor shall over excavate material so that 2 feet of controlled fill can be constructed.
- C. Unstable soils shall be either reworked or removed and replaced with cohesive controlled earth fill conforming to the moisture content and compaction specifications presented in Section 3.11 COMPACTION.
- D. If less than 2 feet of unstable material exists below the finished subgrade elevation, unstable material shall be excavated to stable material prior to placing controlled fill. If unstable soils extend to depths greater than can be feasibly reworked or removed (generally greater than two feet), a working platform shall first be established on the unstable soils prior to placing fill. A working platform is defined as the first 1 to 2 feet of new non-dispersive, cohesive fill, placed on top of **unstable soils**, and compacted to the maximum degree possible to establish firmer subgrade conditions that will allow compaction of successive lifts to meet the compaction requirements in Section 3.11 COMPACTION.
- E. Where 2 feet or more of unstable material exists, the upper surface of working platforms shall be established a minimum of 2 feet below finished subgrade elevation. Working platform materials shall be compacted using track-type equipment. Rubber-tire equipment and vibratory compaction of the working platform materials shall not be used.
- F. Contractor may use an approved geotextile/geogrid material to stabilize subgrade if approved by the Engineer.



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1. Where soils are too unstable and/or saturated that a working platform more than 2 feet thick would be required, high-strength stabilization geotextile and/or geogrid shall be placed at the base of the excavation or area to be filled. The working platform shall then be established on top of the stabilization geotextile/geogrid. Contractor shall not operate equipment directly on stabilization geotextile/geogrid without first pushing a layer of soil over the material.
  2. Stabilization geotextile and/or geogrid shall be as specified in Section 02693 GEOTEXTILES. Coordinate with Engineer to verify type of geotextile/geogrid prior to use.
- G. Once the subgrade has been stabilized and working platforms have been established Contractor shall complete fills using non-dispersive cohesive controlled earth fill as specified and to the design elevations indicated in the Drawings.

### **3.05 STEPPING AND BENCHING EXISTING SLOPES**

- A. Existing embankment slopes that will receive new fill shall be stepped and benched in order to bond the new fill materials with existing soils. The base of each step shall be cut as nearly horizontal as possible, and the face of each bench shall be cut no steeper than 0.5 [H] to 1.0 [V].
- B. Slopes flatter than 4.5 [H] to 1.0 [V] do not require stepping and benching.

### **3.06 BACKFILLING EXCAVATIONS**

- A. Excavations shall be backfilled with satisfactory material, compacted, and smooth graded in accordance with Section 3.12 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 6 inches (maximum) in loose depth for the full width of the cross section and shall be compacted as specified. Each layer shall be compacted before the overlaying lift is placed.
- B. To facilitate the performance of backfill and compaction operations, the Contractor shall implement procedures consistent with Occupation Safety and Health Administration (OSHA) Construction Standards-CFR 29 Part 1926, Subpart P-Excavations 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 basis for controlling placement of fill and backfill on the site, excluding free-draining granular materials, are the "optimum moisture content" and "maximum dry density" as determined by ASTM D 698. 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. Engineer shall approve fill and backfill materials prior to use.
- D. Balance factors were estimated for onsite soils by the geotechnical engineer.

### **3.07 BACKFILLING STRUCTURES**

- A. All structures shall be backfilled in accordance with the following requirements:

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1. Granular backfill shall be used where specified or identified on the Drawings. Approved granular fill shall be compacted around structures in accordance with manufacturer's recommendation and/or installation requirements. At a minimum granular fill shall be compacted to a minimum of 90% maximum dry density in accordance with ASTM D698.
  2. Backfilling shall not damage any part of the structure.
  3. Approved earth materials shall be compacted as specified in Section 3.08 COMPACTION.
  4. Soil shall be placed in layers approximately 6 inches thick before compaction.
  5. Backfilling shall not be started against any structure until test specimens of the concrete develop strength of at least the design strength in compression.
  6. All form boards or other obstructions shall be removed from drain or weep holes and any other structures before backfilling.
  7. When the area to be backfilled has standing water, the area shall be drained or pumped until dry. If a suitable draining or pumping procedure cannot produce a dry area, an approved granular material may be deposited to an elevation above the water level.
  8. Contractor shall protect backfill from washing away or other erosion until the Work is complete.
  9. Contractor shall dispose of excess material offsite, at identified onsite spoil areas, or as approved by the Engineer.

B. Bedding and Backfilling Pipe Trenches

1. Bedding is shaping the trench to the pipe's diameter, including recesses for connections. For pipe culverts where bedding is specified, the trench width at its bottom shall be as indicated on the Drawings or at least 40 inches wider than the width of the pipe, whichever is greater. Excavation side slopes shall be sloped back at a slope of 1(H):1(V) or less to a minimum of 12 inches above the top of the pipe to allow pipe backfill to be adequately compacted against the sides of the trench.
2. All earth backfill shall be placed as prescribed in Section 3.06 BACKFILLING EXCAVATIONS and this Section.
3. Granular bedding shall be placed under pipes where indicated on the Drawings. Bedding shall be provided to not less than 50 percent of the total culvert height or as indicated in the Drawings. Non-dispersive cohesive backfill shall be used as backfill for the remaining volume of the trench.
4. If unstable soils are encountered at the base of pipe trenches, subgrade shall be stabilized as described in Section 3.05 SUBGRADE STABILIZATION. Granular material shall be used if water is encountered in bottom of pipe trench. Coordinate with Engineer.
5. Backfill material above the bedding layer shall consist of satisfactory material or granular material as indicated on the Drawings. Backfill shall be placed in lifts not to exceeding 6 inches loose thickness.
6. Frozen material shall not be placed in the backfill.

### 3.08 COMPACTION

- A. Except where otherwise specified, moisture content and degree of compaction shall be as follows:
1. Working platform materials and stabilization materials, if required, shall be compacted as specified in Section 3.05 SUBGRADE STABILIZATION.
  2. Controlled earth fill and backfill, including material used to replace over-excavated, material shall be compacted as follows:

Location	Soil Type	Minimum Moisture Content	Maximum Moisture Content	Minimum Compaction*
Berms and Embankments Designed to Retain Water	Inorganic, Non-Dispersive Lean Clay	Optimum	5%	98%
Bedding and Haunching for Pipes	Granular	**	**	90%
Backfill of Pipes and Subsurface Structures	Inorganic, Non-Dispersive Lean Clay	Optimum	5%	95%
Roadway Embankments and General Fill above Grade and the Water Table	Inorganic, Non-Dispersive Lean Clay	2% Below Optimum	**	95%
Stabilization Material and Road Surfacing	Crushed Rock and Gravel	**	**	100%

\*Percent of Maximum Dry Density (ASTM D 698, Procedure A)

\*\*Moisture as necessary to obtain density (near Optimum)

B. Moisture Content

1. Moisture content shall be as specified in the table above.
2. Contractor shall maintain workable moisture contents prior to and during compacting operations. 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 6 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.

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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 2922, as specified here and in Section 01400 QUALITY CONTROL. Unless otherwise directed by the Engineer, Compaction testing shall be conducted as follows:
  - a.     Compaction tests on earth embankments shall be conducted every 100 linear feet of structure (within 40 feet of each end of the structure if it is less than 200 feet in length) for every 24" of vertical fill. Tests shall also be conducted at the foundation and on the top of each embankment. A minimum of four compaction tests shall be conducted per embankment or structure requiring testing.
  - b.     One compaction test shall be conducted for each 500 square feet of granular fill (each 100 linear feet of granular fill in trenches) for every 24" of vertical fill. A minimum of 2 tests shall be conducted for each separate fill area.
  - c.     Granular surfacing for roads and/or parking areas shall not require compaction testing.

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.

### **3.09 CONSTRUCTING EARTH EMBANKMENTS**

- A.     Contractor shall construct earth embankments, including roadways identified for improvement, as specified, and indicated on the Drawings.
- B.     Contractor shall stake the center line and control points of the structures prior to construction.
- C.     Smooth transitions shall be provided between staked points. Transitions shall generally conform to the shapes indicated on the Drawings (e.g., structures indicated as curved shall have curved transitions).
- D.     Provide a smooth transition of the structure into existing ground surfaces and transition finished elevations into the corresponding elevation on the existing surface, unless otherwise specified.
- E.     Prepare areas for seeding in accordance with Section 02820 SEEDING. Contractor shall be responsible for cover crop seeding if necessary. Permanent seeding will be conducted by the Owner. Install erosion control blanket after seeding, where indicated on the Drawings.
- F.     Prepare subgrade and place top surfacing on structures within the limits and as indicated on the Drawings. Placement of crushed rock or granular surfacing shall be in accordance with Section 02850 AGGREGATE.

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### **3.10 SURFACES BENEATH CONCRETE SLABS AND SIDEWALKS**

Surfaces beneath concrete slabs and sidewalks shall be compacted to 100% relative density and graded as indicated on the Drawings. Unless otherwise indicated or specified, surfaces shall be crowned or sloped a minimum of 1 percent for drainage.

### **3.11 FINISHED EXCAVATIONS AND FILLS**

- A. All areas 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. If necessary or beneficial to the Project, minor adjustments to the lines and grades may be made at the discretion of the Engineer.
- B. Transitions between varying slopes indicated on the Drawings shall be smooth and gradual.
- C. 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.

### **3.12 FINAL GRADING**

- A. 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 armoring, surfacing, paving, and/or topsoil as specified and indicated on the Drawings.
- B. Final grades shall be free of exposed roots, debris, rubble, stones exceeding 3 inches in any dimension.
- C. Final grades shall be neatly blended into existing surrounding terrain to provide a smooth, uniform transition.
- D. Remnants of rock brought to the site as part of the project and stockpiled shall not be allowed to remain on the surface. Rock shall be removed or covered with a minimum of six inches of soil. All disturbed areas shall be seeded.

### **3.13 PROTECTION OF FINISHED WORK**

- A. Newly graded areas shall be protected from traffic and from erosion.
- B. 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.
- C. Seeded areas damaged after being finished shall be revegetated, as necessary.

### **3.14 MATERIAL DISPOSAL**

- A. All unsatisfactory and excess excavated earth material shall be disposed of at the spoil locations indicated on the Drawings or hauled offsite to an appropriate disposal facility. Contractor shall evenly place material across spoil site generally maintaining the existing terrain and drainages. Contractor shall deposit material at least 40 feet from drainage swales 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. Spoil locations shall be prepared for seeding as specified in Section 02820 SEEDING.
- B. Compaction of Spoil Pile Embankments.
  - 1. Spoil pile embankments shall generally be Class II as specified by NDOT.

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- a. Material shall be placed in successive horizontal lifts not to exceed 8 inches in depth (uncompacted), each of which shall extend the full width of the active fill area.
  - b. Each lift shall be leveled before compaction.
  - c. Each lift shall be rolled at least twice with tamping (sheepsfoot) roller, multiple-wheel pneumatic tired roller, or other equipment which will produce as good or better compaction than the equipment listed above. Engineer's approval shall be required prior to use of alternate equipment.
  - d. In all cases, the hauling shall be distributed over the entire area to assist compaction of the material.
2. When the moisture content of the spoil is too high to allow rolling or to obtain satisfactory compaction, each layer shall be disked, harrowed, or otherwise manipulated to facilitate drying until its moisture content is reduced to the point where satisfactory compaction can be obtained.
  3. When spoil embankments are to be constructed over cultivated or fallowed land, the entire area upon which the embankment is to be constructed shall be smoothed and rolled at least twice with a roller which conforms to the requirements above before the placement of any spoil material.
- C. Trees within spoil locations shall be removed prior to placing spoil material and disposed of as specified in Section 02100 CLEARING AND GRUBBING. **Coordinate with Engineer prior to removal of any trees at the spoil location so that Owner confirmation can be obtained.** The boundaries of the spoil locations may be adjusted, if necessary, to avoid removal of trees.
  - D. Finished slopes on the spoil locations shall be gradual and match the existing terrain to the extent practical. Smooth transitions shall be used between new spoil and existing ground surface. Finished slopes shall not exceed a 5:1 slope. Maximum spoil depth shall generally be approximately 3 feet in any given area except where higher berms are indicated on the Drawings. Coordinate with Engineer.
  - E. Contractor shall dispose of all non-earth material including debris, rubble, rocks, trash, and all other unsatisfactory non-earth material at an appropriate offsite disposal facility, unless otherwise specified or directed by the Engineer.
  - F. Stumps and root wads shall be disposed of as specified in Section 02100 CLEARING AND GRUBBING. At Owner's discretion, Contractor may be directed to place certain trees and stumps for use as habitat. This work shall not be measured for payment and shall be considered subsidiary to tree removal and/or clearing and grubbing bid items.

### 3.15 ROADS

#### A. Existing Roads

Existing roads shall be maintained in useable condition. Unless extended, widened, moved, or otherwise modified as part of the design, existing roads (including private landowner roads) shall be repaired to their condition prior to construction activities prior to the end of the project.

#### B. Haul Roads

1. Contractor shall limit haul routes to the limits of construction shown on the Drawings. Contractor shall limit the number and size of haul roads to the extent practical. Contractor shall be responsible for layout, preparation, grading, widening, compacting, surfacing, maintaining and other work that the Contractor deems necessary in order to operate Contractor's equipment on 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.

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2. Contractor shall be responsible for maintaining haul roads during the course of the project. Contractor shall apply water to haul roads, as necessary, to minimize dust.

### **3.16 FUGITIVE DUST CONTROL**

Contractor shall implement fugitive dust control measures as necessary during all phases of the work. Contractor shall be responsible for providing water for dust control measures. Dust control measures shall comply with any applicable rules and regulations.

### **3.17 RESTORATION**

- A. All areas disturbed during construction shall be returned to pre-construction conditions unless otherwise specified.
- B. 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 prepared for seeding in accordance with Section 02820 SEEDING, upon completion of specified work unless approved by the Engineer.
- C. Areas disturbed during construction, whether intentional or incidental, not specifically indicated on the Drawings and/or included in the Bid Tab, shall be prepared for seeding or restored and resurfaced to preconstruction conditions. These areas are in addition to the quantities indicated on the Bid Tab and shall be the responsibility of the Contractor and shall be prepared/restored at no additional cost to the Owner.

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

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## SECTION 02500 SITE DRAINAGE

### PART 1 – GENERAL

#### 1.01 SCOPE OF WORK

- A. This section specifies requirements for construction of Drainage pipe, laterals, stubs, inlets, and appurtenances normally installed as a part of these systems. Work shall also include surface preparation, trench excavation, shoring, dewatering, laying, aligning, and joining pipe, installation of appurtenances, bedding and backfilling, surface restoration, and other related work. This section shall be used with other relevant sections including 02100 CLEARING AND GRUBBING, 02200 EARTHWORK, 02693 GEOTEXTILES, and 02850 AGGREGATE.
- B. Contractor shall provide all labor, materials, tools, equipment, and incidentals required to complete the work specified in this section.

#### 1.02 REFERENCES

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)

ASTMA48	Specification for Gray Iron Castings
ASTM D422	Standard Test Method for Particle-Size Analysis of Soils
ASTM D638	Standard Test Method for Tensile Properties of Plastic
ASTM D698	Procedure A, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/cu. ft. (600 kN-m/cu. m.))
ASTM D1056	Specification for Flexible Cellular Materials - Sponge and Expanded Rubber
ASTM D1556	Density of Soil in Place by the Sand-Cone Method
ASTM D2321	Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications
ASTM D2487	Classification of Soils for Engineering Purposes (Unified Soil Classification System)
ASTM D2922	Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)
ASTM D3212	Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals
ASTM D3350	Standard Specification for Polyethylene Plastics Pipe and Fittings Material
ASTM D4253	Standard Test Methods for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table (1993)
ASTM D4254	Standard Test Methods for Minimum Index Density and Unit Weight of Soils and Calculations of Relative Density
ASTM D4318	Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index for Soils
ASTM D4976	Specification for Polyethylene Plastics Molding and Extrusion Materials
ASTM F477	Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe
ASTM F2306	Standard Specification for 12 to 60 in. Annular Corrugated Profile-Wall Polyethylene Pipe and Fittings for Gravity-Flow Storm Sewer and Subsurface Drainage Applications

#### NEBRASKA DEPARTMENT OF TRANSPORTATION



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NDOT Standard Specifications for Highway Construction - 2017 (including subsequent supplements and modifications)The following is a list of standards, which may be referenced in this section.

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO)

1. M252, Standard Specification for Corrugated Polyethylene Drainage Tubing
2. M294, Standard Specification for Corrugated Polyethylene Pipe
3. Section 18, Soil Thermoplastic Pipe Interaction Systems.

PLASTIC PIPE INSTITUTE (PPI)

1. Handbook of Polyethylene Pipe
2. TR-33, Generic Butt Fusion Joining Procedure for Field Joining of Polyethylene Pipe.

**1.03 SUBMITTALS**

- A. Submittals shall be made as specified in Section 01300 SUBMITTALS and shall include but not be limited to:
1. Pipe material including technical data sheets that show conformance to the specifications.
  2. Certification from the supplier that pipe meets specifications.
  3. Special pipe fittings, special fittings between dissimilar pipe materials, etc.
  4. Shop drawings showing the exact dimension of the joints including the permissible tolerances for each size of pipe being furnished and the size, type, and locations of gasket materials. Approval of the joint detail drawings shall not relieve Contractor of any responsibilities to meet all the requirements of these specifications, or of the responsibility for correctness of Contractor's details.
  4. Catch basin specifications and shop drawings.
  5. Grate inlet materials and specifications.

**1.04 QUALITY ASSURANCE**

- A. Manufacturers:
1. Experienced in the design, manufacture, and commercial supplying of the specific materials and items for a minimum period of five (5) years.
  2. Experienced in the design, manufacture, and commercial supplying of the specific size of materials and items for a period of one (1) year.
  3. Certify to above minimum experience requirements.
- B. All HDPE pipe and fittings shall be from a single manufacturer.
- C. Inspection of the pipe shall be made by the Engineer after delivery. The pipe shall be subject to rejection at any time on account of failure to meet any of the specification requirements. Pipe rejected after delivery shall be marked for identification and shall immediately be removed from the job.

**1.05 DELIVERY, STORAGE, AND HANDLING**

- A. Responsibility for Material:

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1. Material shall be shipped so to not cut, kink, or otherwise damage pipe during transport.
  2. Contractor shall be responsible for all materials intended for the Work that are delivered to the construction site. Payment shall not be made for materials found to be defective or damaged in handling after delivery and acceptance. Defective or damaged materials shall be removed and replaced with acceptable materials at Contractor's expense.
  3. Contractor shall be responsible for the safe and proper storage of such materials.
  4. Limit stacking of pipe to a height that will not cause excessive deformation of bottom layers of pipes under anticipated temperature conditions.
  5. Where necessary, because of ground conditions, store pipe on wooden sleepers, spaced suitably and of such widths as not to allow deformation of pipe at point of contact with sleeper or between supports.
  6. Keep pipe shaded from direct sunlight prior to installation in the trench.

**B. Pipe Acceptance**

1. In addition to any deficiencies not covered by the applicable ASTM Specifications, pipe, which has any of the following visual defects, will not be accepted.
  - a. Cracks, bubbles, pinholes, inclusions, or occlusions, which, because of their nature, degree, or extent, detrimentally affect the strength and serviceability of the pipe.

**C. Pipe Handling**

1. Pipe and accessories furnished by Contractor shall be delivered to, unloaded, and distributed at the site by Contractor. Each pipe shall be unloaded adjacent to or near the intended laying location.
  - a. Pipe fittings, specials, valves, and appurtenances shall be unloaded and stored in a manner that precludes shock or damage. Such materials shall not be dropped.
  - b. Pipe shall be handled to prevent damage to the pipe ends or to any coating or lining. Pipe shall not be skidded or rolled against adjacent pipe. Damaged coatings or lining shall be repaired or replaced by Contractor at Contractor's expense in accordance with the recommendations of the manufacturer and in a manner satisfactory to Engineer. Physical damage to the pipe or accessory shall be repaired or replaced by Contractor at Contractor's expense, and in a manner satisfactory to ENGINEER.

- D. Gasket Storage:** All gaskets shall be stored in a cool place, preferably at a temperature of less than seventy degrees Fahrenheit (70°F.), and in no case shall the gaskets be stored in the open or exposed to direct sunlight.

**PART 2 – PRODUCTS**

**2.01 HDPE PIPE**

- A. Pipe shall be of the size, type, and location, and to the lines, grades and elevations shown on the plans and constructed in accordance with these specifications.
- B. HDPE pipe, which does not conform to ASTM D3350, ASTM D 4976, ASTM F667, ASTM F894, ASTM F2306, or ASTM F2562 or to any other requirement specified herein, shall

- not be approved for storm sewer, culvert, or sanitary sewer installations.
- C. Allowable Pipe diameters for this specification shall be between eighteen (18) inches to thirty-six (36) inches unless approved by Engineer.
  - D. All material, manufacturing operations, testing, inspection, and making of HDPE pipe shall conform to the requirements of the appropriate allowable ASTM Standard Specifications, latest revision thereof, listed in Paragraph 1.02 REFERENCES.
  - E. Marking:
    - 1. The following shall be clearly marked on both the interior and exterior surface of the pipe:
      - a. Class and size.
      - b. Date of manufacture.
      - c. Name or trademark of manufacturer.
      - d. Deflection angle for bends.
  - F. The diameter indicated on the Drawings shall mean the inside diameter of the pipe.
  - G. Wall Thickness and Class of Pipe:
    - 1. The wall thickness shall comply with the appropriate ASTM specification and the class of pipe designated on the Drawings.
    - 2. HDPE pipe and fittings shall have a smooth interior and corrugated exterior. 18-inch through 36-inch pipe shall meet the requirements of AASHTO M294 Type S. The pipe shall have a full circular cross-section with annular corrugations. Pipe shall be produced to constant internal diameters.
    - 3. Pipe and fittings shall be made of high-density, high-molecular weight polyethylene material meeting the requirements of cell classification 324420C or higher in accordance with ASTM D3350. Clean rework material generated by the manufacturer's own production may be used so long as the pipe or fittings produced meet all the requirements of this specification.
  - H. Fittings and Specials:
    - 1. Elbows and fittings shall be mitered from pipe sections welded together on the interior and exterior at all junctions.
    - 2. The pipe sections forming the miters shall be cut to fit with no gap.
    - 3. Tolerances on the angle of all elbows shall be plus or minus 1 degree.
    - 4. The standard turning radius of elbows shall be 1.5 times the inside diameter. Special turning radii shall be used for special applications.
    - 5. Elbows shall conform to the following requirements:
 

Angle of Elbow (Degrees)	Number of Miters
0 to 45	1
45 to 90	2
    - 6. Elbows shall be designed to prevent joint rupture resulting from dynamic forces or application of a test pressure of 25 psi.
  - I. Joints:
    - 1. Watertight joints shall be accomplished by rubber gasket, in accordance with

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ASTM D3212.

2. Gaskets shall be closed-cell synthetic, expanded rubber meeting the requirements of ASTM D1056, Grade 2A2 or made of polyisoprene meeting ASTM F477. Gaskets shall be installed on the connection by the pipe manufacturer.
  - a. Lubricant shall have no detrimental effect on the gasket of on the pipe.
  - b. Integral bell and spigot gasketed joints shall be designed so that when assembled, the elastomeric gasket, contained in a machined groove on the pipespigot, is compressed radially in the pipe bell to form a positive seal. The joint shall be designed to avoid displacement of the gasket when installed in accordance with the manufacturer's recommendations.

J. Anchors

1. Anchors used to hold down HDPE and HDPE FES shall be percussion driven type anchors with aluminum bodies and 1/4-inch diameter (minimum) galvanized or stainless-steel aircraft cables.
2. Anchors shall have a minimum working load limit of 3,000 pounds.
3. Anchors shall be a readily available commercial product with integral cables. Additional cable required to anchor pipe shall be similar to cable supplied with anchors.
4. Cable clamps shall be galvanized or stainless steel appropriate for the size of cable used.

**2.02 PVC SURFACE DRAINAGE INLETS**

- A. Inlets and drain basins shall be manufactured PVC structures for use in stormwater conveyance.
- B. PVC surface drainage inlets shall include the drain basin type indicated on the Drawings and referenced in the specifications.
- C. The ductile iron grates for each of these fittings are to be considered an integral part of the surface drainage inlet and shall be furnished by the same manufacturer.
- D. Materials
  1. The drain basins required for this contract shall be manufactured from PVC pipe stock, utilizing a thermoforming process to reform the pipe stock to the specified configuration.
  2. The drainage pipe connection stubs shall be manufactured from PVC pipe stock and formed to provide a watertight connection with the specified pipe system. This joint tightness shall conform to ASTM D3212 for joints for drain and sewer plastic pipe using flexible elastomeric seals. The flexible elastomeric seals shall conform to ASTM F477.
  3. The pipe bell spigot shall be joined to the main body of the drain basin or catch basin. The raw material used to manufacture the pipe stock that is used to manufacture the main body and pipe stubs of the surface drainage inlets shall conform to ASTM D1784 cell class 12454.
  4. The drain basin body will be cut at the time of the final grade. No brick, stone or concrete block will be required to set the grate to the final grade height.
  5. The grates and frames furnished for all surface drainage inlets shall be ductile iron and shall be made specifically for each basin so as to provide a round bottom flange that closely matches the diameter of the surface drainage inlet. Grates for drain basins shall be capable of supporting various wheel loads where specified or indicated on the Drawings. Frames for domed inlets shall be specifically designed

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for supporting domed inlets. Ductile iron used in the manufacture of the castings shall conform to ASTM A536 grade 70-50-05. Grates and covers shall be painted black.

E. Approved Manufacturers

1. Surface drainage inlets shall be as manufactured by Nyloplast a division of Advanced Drainage Systems, Inc., or prior approved equal.

ADS® Nyloplast™  
(866) 888-8479  
www.nyloplast-us.com

**2.03 RIMS, GRATES AND FRAMES**

- A. Castings for manhole and inlet rims, grates and frames shall conform to ASTM A 48, Class 35B gray iron or better quality.
- B. Design loading shall be the same as for inlets and junction boxes.

**PART 3 – EXECUTION**

**3.01 GENERAL**

- A. Pipe and pipe coatings shall be inspected by Engineer for damage or defects before being placed in the trench. Damaged or defective pipe shall not be installed.
- B. Inlets, rims, and grates shall be inspected by Engineer for damage or defects before installing.
- B. All pipes, which do not meet the requirements of PART 2 of this section, shall be rejected and replaced at Contractor's expense.
- C. Contractor shall install inlets and storm sewer pipe of the type, diameter, load class, wall thickness, and protective coating that is specified and/or shown on the Drawings.
- D. Proper equipment, implements, tools, and facilities shall be provided and used by Contractor for safe and convenient installation of the type of pipe being installed.

**3.02 SURFACE PREPARATION**

- A. All vegetation, such as brush, sod, heavy growth of grass or weeds, decayed matter, rubbish, and other unsuitable material within the area of excavation and trench side storage shall be stripped and disposed of in accordance with the requirements of Section 02100 CLEARING AND GRUBBING.
- B. Topsoil, where present, shall be removed to a depth of 6 inches or the full depth of the topsoil whichever is less. Topsoil shall be removed from the area to be excavated and stockpiled for reuse as specified.
- C. Within unpaved roadway areas, Contractor shall strip the cover material from graveled roadways or other developed, but unpaved traffic surfaces to the full depth of the existing surfacing. The surfacing shall be stockpiled to the extent that it is acceptable and useable for restoration purposes.
- D. Within Paved Areas:
  1. The removal of pavement, sidewalks, driveways, or curb and gutter shall be performed in a neat and workmanlike manner. Concrete pavement, asphalt, sidewalks, driveways, or curb and gutter shall be cut with a power saw to full

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- thickness prior to breaking. Concrete shall be cut vertically in straightlines and avoiding acute angles.
  2. Bituminous pavement, sidewalks, driveways, or curb and gutter shall be cut with a power saw, pavement breaker, or other approved method of scoring prior to breaking or excavation. The bituminous paving shall be cut vertically, full thickness, in straight lines and avoiding acute angles.
  3. Any overbreak, separation, or other damage to the existing bituminous or concrete outside the designated cut lines shall be replaced at Contractor's expense.
  4. Excavated paving materials shall be removed from the job site and shall not be used as fill or backfill.

### **3.03 DEWATERING**

All pipe trenches and excavation for structures and appurtenances shall be kept free of water during pipe laying and other related work. The method of dewatering shall provide for a dry foundation at the final grades of excavation. Water shall be disposed of in a manner that does not inconvenience the public or result in a menace to public health. Pipe trenches shall contain enough backfill to prevent pipe flotation before dewatering is discontinued. Dewatering shall continue until such time as it is safe to allow the water to rise in the excavation.

### **3.04 INLET AND PIPE INSTALLATION**

- A. Precautions shall be taken to prevent foreign material from entering the pipe before or while it is being placed in the line. During laying operations, no debris, tools, clothing, or other materials shall be placed in the pipe. The open ends of pipe shall be closed with a watertight plug, or with other devices approved by Engineer, at times when pipe laying is not in progress.
- B. Pipe:
  1. Pipe shall be installed in accordance with these specifications, ASTM D2321, and the manufacturer's recommendations for installing the type of pipe used, unless otherwise shown on the Drawings.
  2. Pipelines shall be laid to the grades and alignment shown on the Drawings. Variation from the prescribed grade and alignment shall not exceed one-tenth (0.10) foot, and the rate of departure from, or return to, the established grade or alignment shall be not more than one (1) inch in ten (10) feet, unless approved by Engineer. No deviation from grade shall cause a depression in the sewer invert that could retain fluids or solids. Any pipe that is not in true alignment or shows undue settlement after laying shall be taken up and re-laid at Contractor's expense.
- C. Pipe Fittings:
  1. Pipe fittings shall be laid to form a close concentric joint with the adjoining pipe to avoid sudden offsets of the flowline. Pipe sections shall be joined together in accordance with the manufacturer's recommendations.
  2. Pipe fittings and appurtenances shall be carefully lowered into the trench with suitable tools or equipment to prevent damage to the pipe and protective coatings and linings; pipe and accessory materials shall not be dropped or dumped into the trench.
  3. No gaskets that show signs of deterioration, such as surface cracking or checking, shall be installed in a pipe joint. The neoprene gaskets used, when the

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air temperature is 10°F or lower shall be warmed to temperature of 60°F for a period of 30 minutes before being placed on the pipe.

D. Anchors:

1. The end section of each pipe or pipeline shall be anchored with percussion driven style anchors as specified in paragraph 2.01(I). Anchors shall be installed within two feet of the end of the pipe or at a location that does not interfere with FES installation.
2. FES sections shall be anchored near the end of the section before the flare.
3. Anchors shall be installed so that they do not cause pipe deflection, misalignment, or prevent the FES from fitting correctly.
4. Pipes terminating where rock riprap is placed on end of pipe do not require earth anchors.

E. Inlets:

1. Contractor shall excavate to the dimensions shown on the Drawings. Excavation and earth backfill shall be as specified in Section 02220 EARTHWORK.
2. Inlets shall be installed on a prepared bed (foundation) of compacted crushed rock, as specified in 02850 AGGREGATE, over geotextile filter fabric, as specified in 02693 GEOTEXTILES, at the location shown on the Drawings.
3. Backfill material shall be placed around structure as indicated on the Drawings and shall be crushed stone or other granular material meeting the requirements of class 1, class 2, or class 3 material as defined in ASTM D2321.
4. Bedding and backfill for surface drainage inlets shall be well placed and compacted uniformly in accordance with ASTM D2321.
3. Grates shall be set accurately on factory-installed rims and frames to the correct elevation so that subsequent adjustments will not be necessary.
4. Pipes shall be connected to inlet boxes/catch basins using a watertight waterstop gasket and non-shrink grout as recommended by the manufacturer. Contractor shall include connection details with submittals for pipe and inlet boxes.
5. For other installation considerations such as migration of fines, ground water, and soft foundations refer to ASTM D2321 guidelines and these specifications.
6. PVC surface drainage inlets shall be installed using conventional flexible pipe backfill materials and procedures.
7. If necessary, cut drain basin body at the time of the final grade. Do not use brick, stone, or concrete block to set the grate to the final grade height.

### 3.05 BEDDING AND BACKFILL FILLING

- A. Bedding material, as specified in 02850 AGGREGATE, shall be placed under and around all pipes as shown on the Drawings. Bedding shall be placed in a manner that will minimize separation or change in its uniform gradation. Bedding shall be distributed in 6-inch maximum layers over the full width of the trench and simultaneously on both sides of the pipe. Special care shall be taken to ensure full compaction under the haunches and joints of the pipe.
- B. Backfill compaction shall not be attained by inundation or jetting. Backfill material shall be uniformly compacted the full depth of the trench.

### 3.06 SURFACE RESTORATION

All streets, driveways, sidewalks, curbs, or other surfaces broken, cut, or damaged, or removed by Contractor shall be replaced in kind or as shown on the Drawings.

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**3.07 CLEAN UP**

- A. All rubbish, unused materials, and other non-native materials shall be removed from the job site. All excess excavation shall be disposed of as specified.

**-- END OF SECTION OF SECTION 02550 --**



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## SECTION 02693 GEOTEXTILES

### PART 1 GENERAL

#### 1.01 SCOPE

- A. This section specifies requirements for geotextiles for subsurface drainage, separation, stabilization, and permanent erosion control geotextiles used as specified and indicated on the Drawings. This section is to be used with the requirements contained within other related sections, including Sections 02220 EARTHWORK, 02500 SITE DRAINAGE, 02850 AGGREGATES, and 02990 RIPRAP.
- B. Contractor shall provide all labor, materials, equipment, and incidentals required to complete the work specified in this section.

#### 1.02 REFERENCES

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 - 2017 (including subsequent supplements)

AMERICAN ASSOCIATION OF STATE HIGHWAY TRANSPORTATION OFFICIALS

AASHTO M 288-05    Standard Specification for Geotextile Specifications for Highway Applications

### PART 2 PRODUCTS

#### 2.01 GEOTEXTILE FILTER FABRIC

- A. Filter fabric for use under riprap shall be Mirafi 180n or an equivalent non-woven product on the Rock Riprap NDOT Approved Products List.
- B. Filter fabric materials that are not on the NDOT Approved Products List may be considered for use provided a manufacturer's certificate of compliance for the proposed materials is provided to the Engineer. Material criteria are listed on the NDOT Approved Products List.
- C. Submit manufacturer's specifications and product data for material. Data shall state the length and width of fabric supplied on each roll.
- D. 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.
- E. 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.
- F. 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 edges of damaged area a minimum of 40 inches in all directions.

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## **2.02 GEOTEXTILE MATERIAL BENEATH AGGREGATE SURFACING**

The requirements for filter fabric for use under aggregate surfacing shall be the same as specified for riprap filter fabric in Paragraph 2.01.

## **2.03 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. 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 SUBGRADE PREPARATION**

- A. Subgrade preparation shall be in accordance with this section and the relevant sections for the materials under which geotextiles are installed.
- B. The surface underlying the geotextile shall be prepared to a relatively smooth condition free of obstructions, depressions, and debris. Erosion features (i.e., rills, gullies, etc.) shall be graded out of the surface before geotextile placement. Subgrade stabilization shall be conducted as specified in Section 02200 EARTHWORK.
- C. Compaction requirements shall be as specified in Section 02200 EARTHWORK.

### **3.02 GEOTEXTILE PLACEMENT**

- A. Geotextile shall be placed on the underlying surface such that the geotextile is not damaged. The fabric shall be placed so that the upstream strip of fabric will overlap the downstream strip. Material overlap for unstitched seams shall be a minimum of 40 inches.
- B. Stitched seams shall be used for applications recommended by the material supplier/manufacturer. Contractor shall be responsible for coordinating with supplier to determine their recommendations on stitching and Engineer shall be notified of recommendation.
- C. Geotextile shall be laid smooth so as to minimize tension, stress, folds, wrinkles, and creases.
- D. Geotextile shall be held in place by adequate pinning, selectively placed overlying materials, or a combination of pinning and overlying materials prior to placement of the specified overlying material.
- E. Geotextile placed on slopes and embankments and in channels shall be toed in a minimum of 24 inches or as indicated in the Drawings. Toe-in quantities are incidental to the geotextile bid items.

### **3.03 MATERIAL PLACEMENT**

Geotextile shall be covered with specified overlying materials as soon as possible, but not longer than 5 days, after placement of geotextile. Placement of overlying materials onto the geotextile shall not rupture or otherwise damage geotextile. Damaged geotextiles shall be replaced or repaired at no additional cost to the Owner.

**-- END OF SECTION 02693 --**

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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 02955 EROSION CONTROL MATERIALS.
- 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 publications are referred to in this section and others by basic designation only.

FEDERAL SEED ACT

AMS-01 - Federal Seed Act Regulations (Part 201-202)

NATURAL RESOURCES CONSERVATION SERVICE (NRCS)

NEBRASKA FIELD OFFICE TECHNICAL GUIDANCE (FOTG) - Section II, Statewide Interpretations, Pasture and Hayland Interpretations - NE-T.B. Notice 546 (November 2003)

NEBRASKA SEED LAW

Title 25, Chapter 7, Nebraska Administrative Code

#### 1.03 SUBMITTALS

- A. All submittals shall be in accordance with Section 01300 SUBMITTALS.
- B. Prior to delivery, Contractor shall submit certificates of compliance and certified laboratory test reports certifying that materials meet the requirements specified.
- C. Certified copies of the reports for seeds for mixture percentage, pure live seed, weed seed content, and germination.
- D. Certificates of inspection as required by governmental authorities.
- E. Manufacturer's Literature: Contractor shall submit copies of manufacturer's literature discussing physical characteristics, applications, guarantees, and installation.
- F. Certified Analysis: Submit manufacturer's certified analysis, or, where applicable, analysis of recognized laboratory made in accordance with methods established by the Association of Official Agriculture Chemists. Include soil amendments and fertilizer materials.
- G. Chemical Literature: Contractor shall submit manufacturer's literature for any chemical herbicide used onsite to treat vegetation including MSDS data sheets, use restrictions, manufacturer's recommendations, etc. as required.
- H. List of Sources: Submit a written list of sources where the material was produced for approval. Materials from unapproved sources will be rejected.
- I. Soil testing results: Submit results of representative soil tests for determination of fertilizer mixing proportions and application rate requirements.

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

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- A. Ship materials with certificates of inspection required by governing authorities. Comply with regulations applicable to seed and materials.
  - B. 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.
  - C. Materials shall be stored in areas that provide protection from damage. Seed shall be stored in a cool, dry location away from contaminants.
  - D. Except for bulk deliverables, materials shall not be dropped or dumped from vehicles. Materials shall be handled to prevent damage.

## **PART 2 PRODUCTS**

### **2.01 TOPSOIL**

- A. Topsoil shall be fertile, friable, natural loam, dark in color, free of subsoil, clay lumps, brush, weeds, roots, stumps, stones larger than 1-1/2" in any dimensions, debris and other extraneous or toxic matter and harmful to plant growth.
- B. Topsoil shall conform to the requirements in Section 02220 EARTHWORK.
- C. Existing topsoil shall be stripped and preserved for reuse to maximum extent possible.
- D. Imported topsoil shall be obtained from local sources and exhibit an acidity range (pH) of 6.0 to 8.5. Identify location of offsite sources.

### **2.02 SEED**

- A. Definitions of Grass Seedlots (NE T.B. Notice 546)
  - 1. Certified Grass Seedlots Blue Tag Only (Certified Grass Seed)

Includes grass seedlots certified and for varietal identity and genetic purity. To be certified, grass seedlots must also meet minimum standards for purity, viability, and weed seed content through the Nebraska Crop Improvement Association (NCIA) or official certification entities in other states. Each container has a blue label stating certification, lot number, and variety name. In order to be certified an audit trail must exist that proves the seed was produced from a field planted to Registered, Foundation, or other seed stock eligible to be certified seed. Certification is void without an official label. When grass seedlot is certified, customers are assured of high-quality grass seed that is genetically pure and has been tested for specific desirable traits such as forage quality and quantity or other desirable traits.
  - 2. Non-Certified Grass Seedlots (Non-Certified Grass Seed)

Includes all grass seedlots that are not certified, even if a variety name is stated on the seed analysis tag (label). Without exception or variance, all non-certified Warm Season grass must meet mileage requirements. The NCIA or similar entities in other states do not issue blue labels, do not inspect production fields or verify the genetic purity or quality of non-certified grass seed. However, the Nebraska State Seed Law and Federal Seed Act are both "truth in labeling laws" which require that all seed labeling (i.e., variety stated) and other information to be accurate and truthful. Labeling such as variety stated on non-certified grass seedlots, or other information that is not truthful or accurate is subject to enforcement under one or both of these.
  - 3. Source Identified Class Grass Seedlots (Yellow Tag)

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Includes grass seedlots that have a documented origin and ensures the Genus and Species is accurate. Verifies that only natural selection and that no artificial breeding and selection of traits have taken place. Source identified seed provides assurance of purity and quality of seed and is ideal for the purpose of prairie restorations when planting into similar environmental conditions within a limited distance from the original collection site.

- B. Non-certified grass seedlots shall be approved by the Engineer, prior to use. All seed specified or approved, regardless of certification, shall have appropriate seed analysis tags (labels). Seed usage shall adhere to the following requirements (NE T.B. Notice 546):
  - 1. Certified Warm and Cool Season Grasses with appropriate Variety
    - a. Varieties must be adapted to the site and climate.
    - b. No mileage limits.
  - 2. Non-Certified and Source Identified Grass Seedlots
    - a. Variety shall be stated on label.
    - b. State and county of origin shall be identified on all non-certified warm season grass seed in order to certify that mileage restrictions are met.
    - c. Warm season grass seedlots mileage restrictions:
      - 1) South – 350 miles. Southern sources shall be given preference over seed from northern sources.
      - 2) North – 250 miles.
      - 3) East or West – 300 miles.
    - d. Cool season grass seedlots mileage restrictions:
      - 1) No mileage limits (variety must be stated on label).
- C. Provide fresh, clean, new crop seed complying with the tolerance for germination and purity. All seeds shall comply with the applicable State and Federal seed laws.
- D. Seed used shall be:
  - 1. Free of primary noxious weeds;
  - 2. Free of prohibited noxious weeds subject to recognized tolerances; and
  - 3. Contain no more than 0.5% by weight of restricted noxious weeds.
- E. Contractor shall obtain from the seed dealer and furnish to the Engineer an analysis of each type and lot of seed the Contractor proposed to use. The analysis shall provide complete information on the seed as required by the State and Federal laws including the following:
  - 1. Seedlot number.
  - 2. Verification noxious weeds are not present.
  - 3. Lot number.
  - 4. Purity and germination.
  - 5. Bulk seed provided.
  - 6. Variety information.
- F. Engineer may approve use of the seed if the information on the analysis is satisfactory. Minimum percent purity (purity x germination x 100) shall be as specified in the seed mix tables. Grass seed mixtures shall comply with the compositions provided in the seeding tables, if given. If compositions are not provided, Contractor shall provide mix information based on the species provided in the tables.
- G. Unless otherwise specified, all seed weights are given as Pure Live Seed (PLS).

- H. 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.
- I. Seed mixtures shall consist of the following varieties for each type, unless otherwise specified or directed by the Engineer.
1. Mixtures shall consist of compositions typical of the local area (local ecotype).
  2. Seed shall be mixed, bagged, and tagged at the seed company.
  3. Submit seed rate and proportions to Engineer for approval prior to ordering seed.
- J. If seed does not comply with minimum requirements for purity and germination and such seed cannot be obtained, the Engineer may approve use of the seed on a basis of PLS or may authorize a suitable substitution for the seed specified.
- K. Either the germination test or Tetrazolium (TZ) test is acceptable to determine PLS for native species.
- L. Seed Mixes and Seeding Dates

Seed mixes shall generally conform to the following mixes. For all mixes, Contractor shall submit specific seed mix and rate from supplier for approval by the Engineer prior to ordering.

**Type 1 - Turf Mix (Park and Mowed Trails)**

Variety/Species	Minimum Purity (%)	Seed Rate (Pound/Acre)	Composition (+/- 2%)
Defiance Turf Type Tall Fescue	98	105	40
Talladega AT Tall Fescue	98	105	40
Turf Type Perennial Ryegrass	95	50	20

Notes:

1. Type 1 - Turf Mix to be used to restore maintained areas incidentally damaged during construction. Submit mix and seeding rates for approval by the Engineer prior to ordering. Equivalent varietal substitutions may be considered by the Engineer. All substitutions shall be approved in writing prior to ordering.
3. Seed between April 1 and May 31 and between September 1 and September 30.

**Type 2 - Native Grasses and Forbs (Wildflowers) Mix (Spoil Areas and other Non-maintained Areas)**

Variety/Species	Seed Rate (Pound/Ac.)
<b>Grasses</b>	
Big Bluestem	*
Indiangrass	*
Little Bluestem	*
Sideoats Grama	*
Switchgrass	*
Tall Dropseed	*

Virginia Wildrye	*
<b>Forbs (Wildflowers)</b>	*
Black-eyed Susan	*
Blanketflower	*
Blue Flax	*
Butterfly milkweed	*
Dwarf Red Coreopsis	*
Grayhead Coneflower	*
Illinois Bundleflower	*
Lance Leaf Coreopsis	*
Leadplant	*
Lemon Mint	*
Mexican Red Hat	*
New England Aster	*
Pale Purple Coneflower	*
Partridgepea	*
Perennial Lupine	*
Pitcher Sage	*
Plains Coreopsis	*
Prairie Blazing Star	*
Purple Coneflower	*
Purple Prairie Clover	*
Upright Coneflower	*
White Prairieclover	*
Wild Bergamot	*

\* Approximate seeding rate for grasses portion of the mix 1 PLS lb/2,000 SF (broadcast); 10 PLS lbs/acre (drilled); hydro seed rate consult supplier. Approximate seeding rate for forbs portion of the mix 1 PLS lb/3,500 SF (broadcast); 10 PLS lbs/acre (drilled); hydro seed rate consult supplier. Submit specific mix and seed rates for entire mix from supplier to Engineer for approval prior to ordering.

Notes:

1. Type 2 Mix to be used where indicated on the Drawings and to seed and restore onsite borrow and spoil areas, staging areas, and to restore other non-maintained upland areas disturbed during construction.
2. Substitutions for individual species based on recommendations of the supplier may be made with approval of the Engineer.
3. Seed between April 30 and June 30.

M. Wet, moldy, or otherwise damaged seed shall be rejected.

N. Seed suppliers shall be subject to suppliers being able to provide specified mixes. Mixes that do not meet specifications will not be considered. Seed suppliers shall be subject to approval of the Engineer.

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## 2.03 FERTILIZER

### A. Fertilizer

1. All fertilizer shall be checked and approved for acceptance prior to use. Fertilizer shall be a commercial turf product containing nitrogen, available phosphoric acid and soluble potash as required, in a recognized plant food form. All fertilizer shall comply with the provisions of the State of Nebraska Fertilizer Act of 1955, with subsequent revisions. This act requires:
  - a. Each brand and grade of commercial fertilizers must be registered by the Nebraska Department of Agriculture and Inspection.
  - b. Each container of commercial fertilizer shall have either placed on or affixed to the container in written or printed form, the net weight, and the following information:
    - 1) The name and address of the person guaranteeing the fertilizer.
    - 2) The guaranteed analysis showing the minimum percent of plant food claimed in the following form:
      - a) Total nitrogen (N) \_\_\_%
      - b) % Cold Water Insoluble Nitrogen (CWIN)(if applicable) \_\_\_%
      - c) Available Phosphoric Acid (P<sub>2</sub>O<sub>5</sub>) \_\_\_%
      - d) Soluble Potash (K<sub>2</sub>O) \_\_\_%
2. If distributed in bulk, a written or printed statement of the weight and preceding information shall accompany delivery and be supplied to the Engineer. Any grade or mixture of grades of phosphoric acid and potash fertilizer may be used providing the proportions of the minimum rate of application per acre are in accordance with these Standard Specifications or as directed by the Engineer. Components of bulk blends must be close in particle size to prevent segregation. Engineer may approve immediate use of any commercial turf or fertilizer which is registered for sale in Nebraska.

## 2.04 MULCH

### A. Mulch alternatives shall include the following:

1. Hydro-mulch: Hydro-mulch shall be evenly applied to all seeded areas at the minimum rate of 2,000 pounds per acre with a 3% tackifier and shall be applied immediately after seed application.
2. Prairie Hay: If hay shall be used, it shall be applied evenly over the seeded surface at the minimum rate of 2 tons per acre. Hay shall be obtained from local source.
3. Wheat Straw: Wheat straw shall not be used without prior approval of the Engineer. If wheat straw is allowed, it shall be applied at the rate of 3 tons per acre.
4. All materials used as mulch will be free from all noxious weed, seed-bearing stalks, or roots and shall be inspected and approved the Engineer.
5. Mulch shall be free from mold, or other deleterious materials

## 2.05 WATER

- A. Water shall not contain elements toxic to plant life.
- B. Contractor shall provide water, equipment, transportation, water tanker, hoses, sprinklers, and labor necessary for the application of water.



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**PART 3 EXECUTION**

**3.01 SEEDING AND PLANTING TIMES AND CONDITIONS**

- A. Seed shall be sown for planting as specified in Paragraph 2.03 L. of this specification unless recommendations of the seed supplier indicate that seeding can be completed outside these dates. Seeding outside these dates shall be approved by the Engineer prior to seeding.
- B. Dormant planting shall require approval from the ENGINEER. Generally, dormant seeding times are from December 15 – February 15.
- C. 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 GENERAL CONSTRUCTION METHOD**

- A. General
  - 1. 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. Areas to be drilled shall be culti-packed prior to seeding to firm seed bed and prevent over penetration of the drill.
  - 2. Seed bed shall be prepared not more than 1 day prior to the installation of seed.
  - 3. Limit preparation to areas which will be immediately seeded or planted.
- B. Site Preparation
  - 1. Where there is active vegetation growing, apply a glyphosate-based non-selective post-emergent herbicide to all areas to be seeded or planted prior to preparation. Apply per manufacturer's instructions and do not plant seed or plants until residual effect time has elapsed. Notify Engineer prior to applying herbicide and prior to planting seed or plants after application.
  - 2. Existing weed stubble and small weeds shall be cut and partially incorporated into the soil during seed bed preparation work. All other vegetation that will interfere with the seeding operations shall be removed by the Contractor. Extreme care shall be exercised to avoid injury to trees and shrubs.
  - 3. Tilling:
    - a. Slopes gentler than 3-horizontal-to-1-vertical shall be tilled to a minimum depth of 4 inches prior to seeding. On slopes between 3-horizontal-to-1-vertical and 1-horizontal-to-1-vertical, 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.
    - b. Surface crusting caused by water during the interim must be loosened prior to the seeding operation.
    - c. All soil erosion shall be filled prior to the seeding or plugging operation.
  - 4. Areas with insufficient topsoil shall have topsoil placed on area prior to seeding.
  - 5. Restore prepared areas to specified condition if eroded, settled, or otherwise disturbed after fine grading and prior to seeding or planting.

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C. Finished Grading

1. Areas to be seeded shall be filled as needed or have surplus soil removed to attain the finished grade. Grade maintained areas to a smooth, free draining and even surface with a loose, moderately course texture. All large lumps of soil shall be pulverized, raked out or removed.
2. Roll and rake, remove ridges, and fill depressions as required to drain. Drainage patterns shall be maintained as indicated on the Drawings.
3. Areas to be seeded that have been compacted by construction operations shall be completely pulverized by tillage prior to seeding. Surface crusting caused by water during the time between preparation and seeding or planting shall be loosened prior to installation.
4. Soil used for repair of erosion or grade deficiencies shall conform to topsoil requirements specified in Section 02220 EARTHWORK.
5. New surfaces shall be blended to existing areas.
6. Areas to be seeded shall have debris sticks, roots, rubbish, extraneous matter and stones larger than 1 inch in any dimension removed from the surface.
7. Finish graded areas shall be protected from damage by vehicular or pedestrian traffic and erosion.
8. Areas to be drill seeded shall be culti-packed prior to seeding to firm seed bed.

**3.03. FERTILIZING**

A. Testing

Prior to application of fertilizer, Contractor shall collect and submit for analysis 12 representative samples from spoil areas to be seeded. Results of the analysis shall be used in conjunction with guaranteed analysis of the fertilizer to specify the mixing proportions and application rate necessary to provide the correct (N-P-K) nutrients.

1. Soil samples shall be collected after the spoil areas have been brought to grade and leveled and are ready for finish grading and seeding. If additional material is placed on the spoil areas after collecting test samples, Contractor shall resample those areas at his expense.
  2. Soil samples shall be collected from the upper 6 inches of finished soil surfaces in each separate area to be seeded. Specific sample locations shall be determined by the Engineer.
  3. Samples shall be submitted to a testing laboratory certified to conduct specified tests. Laboratory shall be approved by Engineer prior to submitting samples.
  4. Test results and laboratory recommendations as to the mixing proportions and application rates shall be submitted to the Engineer prior to applying fertilizer.
  5. Test results shall be submitted to the Engineer and shall be provided to the fertilizer supplier, subcontractor (if a subcontractor is used) applying fertilizer, seed supplier, and seeding subcontractor.
- B. Fertilizer shall be applied with approved mechanical spreaders or with an approved hydraulic seeder at the rates determined based on testing or as specified in these provisions and shall cover the entire area uniformly. Any fertilizer blending shall be approved by the Engineer.
- C. Starter type fertilizer shall be incorporated into the soil prior to seeding or planting. The application rates for fertilizer shall conform to these specifications.

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### 3.04 COVER CROP

#### A. General

A cover crop may serve as an alternative to providing soil cover when seeding is not an alternative. Cover crop is intended to prevent soil erosion by wind and water. Cover crops may be used in the following situations:

1. The window for seeding or planting has passed.
2. If a quick cover is necessary to prevent erosion prior to the completion of the project.
3. To be planted in conjunction with seed to provide quicker immediate coverage until the desired specified material is established.

#### B. Early Season (Spring Cover Crop)

1. A spring cover crop is planted in early spring to provide soil cover during the spring. Alternatives include:

Type of Seed:	Application Rate lb./acre
Annual Rye	20 - 25
Winter Rye	20 - 25
Alfalfa (Ranger or Vernal)	18
Seeding Period:	March 1 - May 20
General Application:	1 to 1.5 bu/acre

2. Spring cover crops can be established by aerial seeding in the spring, as well as by drilling or broadcasting seed.

#### C. Mid-Season (Late Summer/Fall Cover Crop)

1. A mid-season cover crop is planted in late spring or early summer to provide soil cover during the late summer and fall. Alternatives include:

Type of Seed:	Application Rate lb./acre
Annual Rye	20 - 25
Alfalfa (Ranger or Vernal)	18
Seeding Period:	May 21 - July 20
General Application:	1 to 1.5 bu/acre

2. Mid-season cover crops can be established by aerial seeding in the late spring to summer, as well as by drilling or broadcasting seed.

#### D. Late Season Cover Crop (Winter Cover Crop)

1. A winter cover crop is planted in late summer or fall to provide soil cover during the winter. Plants selected need to possess enough cold tolerance to survive hard winters. Alternatives include:

Type of Seed:	Application Rate Lb./acre
Winter Rye	20 - 25
Alfalfa (Ranger or Vernal)	18
Seeding Period:	August 1 - September 30
General Application:	1 to 1.5 bu/acre

2. Winter cover crops can be established by aerial seeding in the late summer or fall, as well as by drilling or broadcasting seed.

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### 3.05 SEEDING AND MULCHING

- A. The seeding operation shall be restricted to the periods listed unless otherwise authorized by the Engineer. No work shall be accomplished when the ground is frozen, or otherwise untillable.
- B. 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.
- C. Contractor shall provide all labor, equipment and materials necessary to furnish and install seed as required by the Drawings specifications.
- D. 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.
- E. Topsoil preparation shall be as described in this section and Section 02220 EARTHWORK.
- F. Seed will be furnished in sealed, unopened, standard containers and labeled in accordance with the USDA Rules and Regulations and the Federal Seed Act. Seed shall be as specified in Paragraph 2.03.
- G. Mulching shall be applied loose enough to allow sunlight to penetrate and air to circulate slowly, but thick enough to partially shade the ground, reduce water evaporation and reduce wind and water erosion. Mulching also shall be applied in such a manner as to remain in place as per these specifications.
- H. Apply hydromulch where specified and indicated on the Drawings.
- I. Seeding Method

Seeding methods shall be as identified on the Drawings or in these specifications unless otherwise approved by the Engineer.

- 1. Turf Grass (Fescue, Bluegrass, etc.) Seeding
  - a. Seed shall be uniformly drilled using an approved drill 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. Whenever possible, the seed will be applied using a Brillion seeder or equal equipment to drill the seed into a properly prepared seedbed. The seeder will be equipped with a satisfactory feeding mechanism, an agitator, double disc furrow openers, depth bands and packer wheels. Seed will be sown to a depth of 1/4" into a properly prepared seedbed. Seed drilling will be done in 2 separate applications crossing the area at right angles to one another to guarantee proper coverage. On sloping land, the final seeding operation will follow the general contour. All seeded areas will be top-dressed with either hydro-mulch or peat moss after the seeding is completed.
  - b. In areas where the drill method of seeding cannot be used, a broadcast method may be substituted. If the broadcast method is used, the seeding rate shall be doubled, and the area shall be dragged after seeding followed by a suitable top dressing. Contractor shall be responsible for determining when drilling is not possible. No additional cost will be allowed for extra seed resulting from broadcast application.
  - c. Immediately after seeding, except for slopes 3-horizontal-to-1-vertical and greater, 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.

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2. Hydraulic Seeding (Hydro Seeding)

- a. Hydraulic seeding shall be the process by which, initially grass seed is combined with a water solution and applied to a prepared seed bed by means of a hydraulic sprayer. The material shall be a natural or cooked cellulose fiber processed from whole wood chips which will disperse readily in water, mulch, non-toxic dye and other approved additives are combined with a water solution and applied in the same manner. The mulch fibers will physically form a strong moisture-holding mat to assist in soil erosion control, while providing percolation properties and favorable microclimate conditions.
- b. Hydraulic seeding equipment shall include a pump rated and operated at 100 gallons per minute and at 100 psi pressure, unless otherwise directed or approved by the Engineer. The equipment shall have a suitable pressure gauge, and a nozzle adapted to the type of work. Storage tanks shall have a means of estimating the volume used or remaining in the tank. When using hydraulic seeding, the seed bed preparation, fertilize, and watering instructions shall be in accordance with the requirements of this chapter as stated for seeding.
- c. All equipment and materials shall be approved by the Engineer prior to the seeding operation.

J. Watering

Contractor shall be responsible for watering the seeded area(s) a minimum of 2 times per day (mid-morning and late afternoon) and for keeping the areas moist until the vegetation is established. Contractor shall be responsible for providing water and water usage until the vegetation is accepted.

K. Inspections

Contractor shall notify the Engineer for inspections of seed certification and germination.

L. Germination Inspections

When germination is complete and plants are visible, the Contractor will notify the Engineer and request a germination inspection for approval in order to begin the guarantee period. Any areas deemed by the Engineer to be thin, weak or dead shall be replaced at this time. All washouts shall be reseeded immediately after the germination inspection. No partial acceptance will be made. Contractor shall be responsible for the growth of the seeded area. Any portion of the seeded area that is not in good growing condition at the end of 30 days shall be re-seeded as specified for seeding above.

**3.06 ACCEPTANCE AND ESTABLISHMENT PERIOD**

- A. Upon completion of planting, the Engineer will inspect the seeded and planted area(s) for acceptability. Contractor will be notified of the dates of this inspection. All items of work as required in the Drawings and specifications shall have been performed prior to this inspection. Any item not completed may make a planting unacceptable. Unacceptable materials may be allowed to remain in place without payment. An inspection may be made subsequent to the final inspection to determine the acceptability of material and therefore, allowing payment for such materials.
- B. During the establishment period, Contractor shall properly maintain all materials planted under the contract. The establishment procedures shall include protective measures against pests and diseases, watering as often as required by necessity, seeding with a pre-emergent weed control or other approved means, and other establishment procedures as deemed necessary by the Engineer including the removal of any dead

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- plant material for the project. Contractor shall be responsible for watering all plant material as necessary during the establishment period.
- C. The establishment period will follow the completion of all planting and shall extend for a period of:
    - 1. SEED: 30 days
  - D. The establishment period will not begin until all the following items of work as required in the Drawings and specifications have been performed including proper installation of material, watering, fertilizing and mulching. All plant material shall be in viable growing condition when the project enters the establishment period.
  - E. Upon completion of the establishment period, the Engineer will make an inspection of the seeded and planted material to identify any material to be replaced under warranty. The inspection will normally be made during the month that the establishment period terminates. Contractor will be notified of the dates of this inspection. A list of quantities and locations will be provided to the Contractor for replacement. Replacement of materials shall occur upon receipt of this list. Plant replacement shall be at the Contractor's expense. Establishment procedures that have not been performed shall be brought to the Contractor's attention and may cause the establishment period to be extended. All replacement plant material shall receive the establishment procedures referred to in this section. Contractor will be notified in writing when his/her establishment responsibilities on the acceptable material have been terminated.

### **3.07 REPLACEMENT OF MATERIAL AND GUARANTEE PERIOD**

- A. The guarantee period for seeded and planted areas shall begin at the date of acceptance.
- B. Contractor shall guarantee all material to be in healthy and flourishing condition for a period of:
  - 1. SEED: 60 days from date of acceptance.
- C. Contractor shall replace, without cost, and as soon as weather conditions permit and within a specific planting period, all materials determined by the Engineer to be dead during or at the end of the guarantee period.
- D. Replacement material shall closely match adjacent specimens of the same species that have been planted. Replacements shall be subject to all requirements, standards, and specifications stated herein.
- E. The guarantee of all replacement plants shall extend for an additional period of:
  - 1. SEED: 60 days from date of their acceptance and installation.
- F. If replacement materials are not acceptable during or at the end of the said extended guarantee period, the Engineer may elect subsequent replacement or credit (refund) for unacceptable materials.

### **3.08 EROSION CONTROL**

- A. Erosion control material shall be installed as indicated on the Drawings and in the SWPPP.
- B. Erosion control material, where indicated or required, shall be installed in accordance with manufacturer's instructions. Placement of the erosion control material shall be accomplished without damage to installed material or without deviation of finished grade.

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**3.09 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 offsite. Adjacent paved areas shall be cleaned.

**3.10 PROTECTION OF SEEDED AREAS**

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

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

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## SECTION 02850 AGGREGATE

### PART 1 GENERAL

#### 1.01 SCOPE

- A. This section specifies requirements for placing aggregate for base courses, surface courses, seepage and drainage features, pipe installations, and other areas as specified and indicated on the Drawings. This section is to be used with the requirements contained within other related sections, including Section 02220 EARTHWORK, 02500 SITE DRAINAGE, and 02693 GEOTEXTILES.
- B. Contractor shall provide all labor, materials, equipment, and incidentals required to complete the work specified in this section.

#### 1.02 REFERENCES

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 - 2017 (including subsequent supplements)

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

ASTM D698     Procedure A, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/cu.ft. (600 kN-m/cu. m.)  
ASTM D4253    Standard Test Methods for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table (1993)  
ASTM D4254    Standard Test Methods for Minimum Index Density and Unit Weight of Soils and Calculations of Relative Density

#### 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 GRANULAR FILL

- A. Where specified or used to stabilize subgrades, act as a filter, or for pipe bedding, granular fill shall be crushed rock or clean free-draining granular materials (sands or sand-gravels) unless otherwise specified. Granular material shall be well graded to act as a filter for soil fines. Engineer shall approve gradations used for granular fill.

#### 2.02 CRUSHED ROCK

- A. Crushed rock shall conform to the material requirements of Section 1033 NDR Standard Specifications for Highway Construction.



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B. Gradations

1. Foundation, Pipe Bedding, and Pipe Haunching

Gradations for 1 1/2" crushed rock foundation, bedding, and haunching shall conform to ASTM D2321. For reference, gradation is as follows:

Size	Percent Passing
1 1/2"	100
No. 4	≤10
No. 200	<5

2. 3-inch Crushed Rock

Gradations for 3" crushed rock shall be approximately as follows

Size	Percent Passing
3"	100
2-1/2"	90-100
1-1/2"	25-60
3/4"	0-10
1/2"	0-5

3. Granular Filter Material

Gradation for granular filter material shall be AASHTO #467. For reference, gradation is as follows:

Size	Percent Passing
2 in	100
1-1/2"	95 - 100
3/4"	35 - 70
3/8"	10 - 30
No. 4	0 - 5
No. 10	*
No. 40	*
No. 200	*

\* Higher percentages of material No. 4 and smaller may be used with approval of the Engineer. No more than 5% of material shall pass No. 200 sieve.

4. Submit gradations to Engineer for approval prior to ordering materials.

**2.04 GEOTEXTILE MATERIAL (FILTER FABRIC)**

Geotextile material shall be as indicated on the Drawings and as specified in Section 02693 GEOTEXTILES.

**2.05 WATER**

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

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**PART 3 - EXECUTION**

**3.01 AGGRGATE PLACEMENT**

Aggregate shall be placed as specified in Section 02200 EARTHWORK and other applicable sections.

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

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## SECTION 02955 EROSION CONTROL MATERIALS

### PART 1 GENERAL

#### 1.01 SCOPE

This section specifies requirements for furnishing and installing erosion control blankets and turf reinforcement mats. 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

- A. Erosion control blanket (ECB) and turf reinforcement mat (TRM) manufacturers shall be pre-approved by the Engineer, prior to installation. Unless otherwise approved, manufacturers shall, at a minimum:
1. Have five years of experience as an ECB/TRM manufacturer.
  2. Have three years field experience with projects having similar applications of ECB and TRM.

#### 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 certification that products meet specifications.
  2. Manufacturer's Technical Data Sheets.
  3. Installation instructions.
  4. Warranty information.

### PART 2 PRODUCTS

#### 2.01 EROSION CONTROL BLANKET (ECB)

- A. Erosion control blankets shall conform to the following material specifications:
1. The top and bottom blanket nets shall be heavyweight UV stabilized polypropylene with an approximate weight of 3.0 lbs. ( $\pm 0.5$  lbs.) per 1000 sq. ft.
  2. The blanket itself shall be 70% ( $\pm 5\%$ ) straw fiber with an approximate weight of 0.35 lbs. /sq. yd. and 30% ( $\pm 5\%$ ) coconut fiber with an approximate weight of 0.15 lbs. /sq. yd.
  3. Thread shall be biodegradable.
  4. Product longevity shall be approximately 18-24 months.
  5. Approved products:
    - a. North American Green SC150BN.
    - b. Any product meeting above specifications that is on the current NDR approved product list.
    - c. Other approved equal.

#### 2.02 TURF REINFORCEMENT MAT (TRM)

- A. Turf reinforcement mats shall conform to the following material specifications:

- 
1. The top and bottom reinforcement nets shall be heavyweight UV stabilized polypropylene with an approximate weight of 5 lbs/1000 sq. ft.
  2. The middle net shall be extra heavyweight UV stabilized polypropylene, corrugated or crimped, with an approximate weight of 24 lbs/1000 sq. ft.
  3. The blanket itself shall be a straw/coconut matrix with a weight of 0.5 lbs/sq. yd. Matrix shall be approximately 70% straw and 30% coconut.
  4. Thread shall be UV stabilized polypropylene.
  5. Product longevity shall be 24 months.
  6. Approved products:
    - a. North American Green VMAX SC250.
    - b. Any product meeting above specifications that is on the current NDR approved product list.
    - c. Other approved equal.

## **2.03 ANCHORS**

- A. Anchors shall be biodegradable anchors or natural wood stakes of the size and length recommended by the manufacturer.
- B. Wire staples shall not be used except that wire staples may be used to anchor blankets and mats in trenches where staples will be buried. Where allowed, staples shall be a minimum of 8" x 1" x 8", 11 ga. wire U-, V-, or T-shaped staples.

## **PART 3 EXECUTION**

### **3.01 INSTALLATION**

- A. General
  1. ECB and/or TRM shall be installed after seeding has been completed. Seeding on this project is by others (Owner). Coordinate installation of erosion control with Engineer and Owner once seeding has been completed.
  2. Installation of ECB and TRM shall be according to manufacturer's instructions or the minimum requirements in paragraph B, whichever is more stringent.
- B. Minimum Requirements
  1. ECB and TRM shall be installed on the finished surface as shown on the Drawings after seeding has been completed.
  2. Finished surface shall conform to the requirements of surfaces to be seeded.
  3. The top edge of the blanket or mat shall be anchored in a 6" deep x 6" wide trench along the full width of the blanket or mat. Larger trenches may be used if approved by the Engineer. Any additional ECB or TRM material required due to the use of larger trenches shall be at the Contractor's expense and shall not reduce the specified area to be covered.
  4. Anchor the edge of blanket or mat to side of trench. Anchors shall be spaced at approximately 6" minimum along the trench.
  5. Backfill and compact trench after anchoring.
  6. Blankets and mats shall be rolled downslope, and adjacent blankets and mats shall have a 3" to 4" overlap. Seams between blankets and mats shall be anchored with an approximate 6" spacing between anchors along the full length of the seam.
  7. Bottom edge of blanket or mat shall be anchored 12" deep or as shown in the Drawings.
  8. Anchor spacing on face of blanket or mat (non-seamed areas) shall be 3' horizontally (alongside slope) and 3' vertically (downslope) for a minimum density of approximately 1 anchor/sq. yd.

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-- END OF SECTION 02955 --

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**SECTION 02990  
RIPRAP**

**PART 1 GENERAL**

**1.01 SCOPE OF WORK**

- A. This section specifies requirements for placing riprap as indicated on the Drawings. This section is to be used with the requirements contained within other related sections, including 02220 EARTHWORK, 02693 GEOTEXTILES, and 2850 AGGREGATES.
- B. Contractor shall provide all labor, materials, equipment, and incidentals required to complete the work specified in this section.

**1.02 REFERENCES**

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 D698 Procedure A, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/cu.ft. (600 kN-m/cu.m.)
- ASTM D4253 Standard Test Methods for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table (1993)
- ASTM D4254 Standard Test Methods for Minimum Index Density and Unit Weight of Soils and Calculations of Relative Density

STATE OF NEBRASKA DEPARTMENT OF TRANSPORTATION (NDOT)

- NDOT Standard Specifications for Highway Construction - 2017 (including subsequent supplements)

**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 SUBMITTALS**

- A. Submittals shall be made as specified in Section 1300 SUBMITTALS.

Certification that riprap meets specification from the supplier.

**PART 2 PRODUCTS**

**2.01 ROCK RIPRAP**

- A. Rock shall be limestone or other approved hard stone of good quality that will not disintegrate under action of air or water. It shall be clean and free from earth, clay, or refuse. The rock density shall weigh not less than 140 pounds per cubic foot.

- 
- B. Each load of rock shall be reasonably well graded from the largest to the smallest size specified. The rock shall be angular in shape to permit interlocking between the various rock sizes.
  - C. Rock riprap shall conform to NDR Type A, B, or C rock riprap, as specified. Control of gradation shall be by visual inspection to verify that the rock is reasonably well graded and conforms to the maximum, mean and minimum weights as specified.
  - D. Rock riprap shall not have a soundness loss greater than 14 percent by weight at the completion of 16 cycles of freezing and thawing when tested in accordance with NDR T 103. The rock riprap shall be prepared for the freezing and thawing tests by crushing to comply with the gradation requirements of coarse aggregate, as specified in Section 1033, Table 1033.03A, for use in Class "47B" concrete.

## **2.02 GEOTEXTILE MATERIAL**

Geotextile material shall be of the type specified or shown on the Drawings and specified in Section 02693 GEOTEXTILES.

## **2.03 SECURING PINS/STAKES**

Securing pins used to secure geotextile shall be of the size and type recommended by the manufacturer and as specified in Section 02693 GEOTEXTILES.

## **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 PREPARATION OF SURFACE/SUBGRADE**

- A. Subgrade excavation and compaction is specified in Section 02220 EARTHWORK.
- B. Slopes shall be trimmed to uniform grades as shown in the Drawings. All depressions shall be filled with suitable dry material which shall be thoroughly tamped or otherwise compacted to insure stability.

### **3.03 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 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 manufacturer's recommendations.

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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.

### **3.04 PLACEMENT OF GRANULAR FILTER MATERIAL**

A layer of granular filter material (crushed rock) as specified in Section 02850 AGGREGATES shall be evenly spread over the prepared surface and geotextile to the thickness indicated on the Drawings.

### **3.05 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.
- B. Material shall be placed and distributed so that there are no large accumulations of either the larger or smaller sizes of riprap.
- C. Height of drop onto geotextile shall be limited to 6-12 inches.
- D. Any appreciable variation from the specified thickness of the riprap shall be corrected by redistributing the material.

### **3.06 FILLING VOIDS IN RIPRAP**

- A. Where indicated on the Drawings, 3-inch crushed rock will be placed on the riprap to fill the voids and provide a relatively level surface. Prior to placing the crushed rock, the top surface of the riprap shall be leveled so that any individual piece of rock riprap does not stick up above the surrounding rock surface more than 4 inches. Rock sticking up more than 4 inches shall be pushed down or moved with any large void spaces filled with smaller rock. Extremely large pieces of riprap shall not be allowed to remain on the top surface of the structures if they interfere with placement of the crushed rock.
- B. A layer of 3-inch crushed rock shall be evenly spread over the top surface of the prepared rock core structures. 3-inch crushed rock shall be spread over the rock surface in a manner that most of the larger void spaces are filled, and loss of material placed on top will be minimized. 3-inch crushed rock shall be manipulated as necessary to ensure it is settling into the void spaces.

### **3.07 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.



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B. Riprap Surfaces

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

The Flatwater Group, Inc.



Technical Specifications Prepared By:	
	

Flatwater Group Project No. LPS-2022-01

For the

**LOWER PLATTE SOUTH  
NATURAL RESOURCES DISTRICT**



3125 Portia St. • PO Box 83581 • Lincoln, NE 68501-3581 • (402) 476-2729 • FAX: (402) 476-8454

2 February 2023

Will Inselman  
Lower Platte South NRD  
3125 Portia Street  
PO Box 83581  
Lincoln, NE 68501

**RE: Review and Recommendation of Bid Proposals for the Schleich Wetland Headcut Repair Project**

Dear Will:

The Flatwater Group, Inc. (TFG) has reviewed the bid proposals and tabulated the bids for the Schleich Wetland Headcut Repair Project. The bid opening was held at the office of Lower Platte South NRD at 2:00 PM on 2 February 2023. Three contractors submitted bid proposals for the above-mentioned Project.

Based on our review of the bids and checking the unit prices and extended prices, Yost Excavating, Inc. (Yost) is the apparent low bidder at \$119,487.00. The next highest bid was \$234,930.00 (Lipse Construction) and the highest bid was \$257,917.00 (MTZ Construction).

The Engineer's estimate of probable cost of construction was \$148,000.00. The winning bid was approximately 19 percent lower than the Engineer's estimate and 49 percent lower than the next highest bid. The primary differences affecting bid prices between the bidders were the unit prices for riprap and other rock and the mobilization items.

We have experience with Yost and he has completed other projects for the NRD including the Marsh Wren project. Based on review of the bids and discussion with the low- bid contractor, TFG recommends notification of selection for the award of a contract for the Project to Yost.

TFG also recommends that Yost be requested to submit post bid information per Section 00100 Instructions to Bidders, Paragraph VI Post Bid Information (subparagraph B. Submissions) as soon as possible. It is my opinion that a request for submission of a Contractor's Qualification Statement (subparagraph A) is not necessary based on previous experience with the Contractor.

We look forward to our continued work with you on this phase of this project. Should you have any questions do not hesitate to contact us at (402) 416-4470.

Sincerely,



Rick Krushensky, P.E.  
Construction Manager  
THE FLATWATER GROUP, INC.

ec: TFG Project File

**Bid Tabulation:**

**Schleich Wetland  
Headcut Repair Project**



**LOWER PLATTE SOUTH**  
natural resources district

Bidder		Bid Security		Ray Lipsey, Inc. 3001 W. Claire Ave. Lincoln, NE 68523 402-432-2293		MTZ Construction, LLC 330 SW 20th St. Lincoln, NE 68522 402-904-5085		Yost Excavating, Inc. 380 S 66 Rd. Nebraska City, NE 68410 402-209-1098		Engineer's Estimate	
				5%	Yes	5%	Yes	5%	Yes	5%	Yes
Item No.	Description Base Bid	Quantity	Unit	Unit Price	Total	Unit Price	Total	Unit Price	Total	Unit Price	Total
1	Mobilization	1	LS	\$20,000.00	\$20,000.00	\$20,000.00	\$20,000.00	\$12,800.00	\$12,800.00	\$15,000.00	\$15,000.00
2	Construction Staking	1	LS	\$2,500.00	\$2,500.00	\$7,600.00	\$7,600.00	\$3,000.00	\$3,000.00	\$5,000.00	\$5,000.00
3	Erosion and Sediment Control	1	LS	\$5,000.00	\$5,000.00	\$16,000.00	\$16,000.00	\$4,500.00	\$4,500.00	\$5,000.00	\$5,000.00
4	Clearing and Grubbing	1	LS	\$5,000.00	\$5,000.00	\$13,300.00	\$13,300.00	\$5,000.00	\$5,000.00	\$10,000.00	\$10,000.00
5	Excavation and Disposal	1,458	CY	\$30.00	\$43,740.00	\$39.00	\$56,862.00	\$7.00	\$10,206.00	\$15.60	\$22,749.47
6	Granular Filter Material (E.Q.)	79	CY	\$120.00	\$9,480.00	\$93.00	\$7,347.00	\$55.00	\$4,345.00	\$61.77	\$4,879.48
7	Rock Riprap	586	TON	\$190.00	\$111,340.00	\$138.00	\$80,868.00	\$81.00	\$47,466.00	\$96.97	\$56,821.75
8	3" Rock Infill for Riprap (E.Q.)	22	CY	\$120.00	\$2,640.00	\$135.00	\$2,970.00	\$65.00	\$1,430.00	\$61.77	\$1,358.84
9	Foundation Material (E.Q.)	36	CY	\$105.00	\$3,780.00	\$80.00	\$2,880.00	\$55.00	\$1,980.00	\$61.77	\$2,223.56
10	PVC Catch Basin w/Domed Grate	1	EA	\$9,500.00	\$9,500.00	\$12,000.00	\$12,000.00	\$8,900.00	\$8,900.00	\$6,750.00	\$6,750.00
11	24" Dia. HDPE Pipe	90	LF	\$150.00	\$13,500.00	\$139.00	\$12,510.00	\$74.00	\$6,660.00	\$74.36	\$6,692.40
12	Type 1 Seeding - Turf Grass	0.30	AC	\$4,500.00	\$1,350.00	\$15,000.00	\$4,500.00	\$7,000.00	\$2,100.00	\$4,436.97	\$1,331.09
13	Type 2 Seeding - Native Grasses and Forbs	1.10	AC	\$2,000.00	\$2,200.00	\$12,800.00	\$14,080.00	\$2,200.00	\$2,420.00	\$4,436.97	\$4,880.67
14	Hydromulch	1.40	AC	\$3,500.00	\$4,900.00	\$5,000.00	\$7,000.00	\$6,200.00	\$8,680.00	\$3,757.96	\$5,261.14
<b>Total Bid Price</b>											
					<b>\$234,930.00</b>		<b>\$257,917.00</b>		<b>\$119,487.00</b>		<b>\$147,948.40</b>
Rank						2		3		1	