

**CONTRACT AND SPECIFICATIONS  
MAXON LAGOON DREDGING  
CITY OF HASTINGS  
CONTRACT NO. HU 2024-28**

**Sealed Proposals Will Be Opened Promptly At  
1:30 PM, Wednesday, April 17, 2024**

**Bid Submitted By: \_\_\_\_\_**



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MAXON LAGOON DREDGING

CITY OF HASTINGS

HASTINGS, NEBRASKA

Contract No. HU 2024-28

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## ADVERTISEMENT FOR BIDS

The City of Hastings, Nebraska, will receive bids for: **Contract No. HU 2024-28: Maxon Lagoon Dredging** until 1:30 p.m. at the City of Hastings, 1228 N Denver Ave., Hastings, Nebraska, on Wednesday, April 17, 2024 at which time and place all bids will be publicly opened and read aloud. **Brief description of project: Project includes dredging 40,000 CY of sludge from a wastewater lagoon and placing in geotube dewatering containers, also included is design and construction of geotube containment.** If you plan on bidding and are not already on our approved bidders list for this project, you are REQUIRED to fill out the Plan Holders Submittal Form that is located on the City website: <https://www.cityofhastings.org/bids/> .

The Contract Documents, including plans and specifications, are on file at the City of Hastings, 1228 N Denver Avenue, Hastings, Nebraska 68901. Copies of the plans and specifications in electronic (PDF) format may be obtained by visiting the City of Hastings Website: [www.cityofhastings.org/bids](http://www.cityofhastings.org/bids). A paper copy is available for \$75.00, plus sales tax (\$5.25), plus shipping.

Each bid shall be accompanied by a certified check, drawn on a solvent bank in the State of Nebraska, or a bid bond in an amount of not less than five percent (5%) of the total bid of all contract construction costs, made payable to the City Treasurer of the City of Hastings, Nebraska, as security that the bidder to whom the contract may be awarded will enter into a contract to build all the improvements in accordance with this notice and give bond in the sum hereinafter provided for the construction of improvements.

No bid shall be withdrawn after opening of bids without the consent of the City of Hastings, Nebraska, for a period of sixty (60) days after scheduled time of closing bids.

Time is of the essence in this contract. In evaluating bid(s) received, the City will consider the timelines of completion of prior construction contracts, existing workload of bidders and available manpower that bidder commits to the project.

The successful bidder will be required to furnish a Maintenance Bond in the sum of the full amount of the Contract within ten (10) days of the date of award. No additional time will be allowed the Contractor for providing the Maintenance Bond.

DATED AT HASTINGS, NEBRASKA, this 29th day of March 2024.

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Kimberly S Jacobitz, City Clerk

## **INSTRUCTIONS TO BIDDERS**

All proposal information, including any unit price fill in sheets or other required information, shall be submitted on the proposal forms hereto attached. Copies of addenda, if any, shall be signed and attached. City of Hastings does NOT accept faxed or emailed bid returns.

Bidders shall inform themselves of all relevant matters, and, if awarded the contract, shall not be allowed any extra compensation by reason of any matter or thing concerning which such Bidder might not have fully informed themselves, prior to the bidding.

The Bidder bidding on the Specifications herein, who has exceptions to those called for in the Specifications, must so state in the space provided below and/or attach a letter explaining in detail the exceptions taken to those required in the Specifications. This letter of explanation shall become a part of the bid and shall be attached hereto. Failure by the Bidder to outline his exceptions will require the successful Bidder to comply with these Specifications.

EXCEPTIONS TO SPECIFICATIONS:

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The Purchaser will not assume obligations resulting from losses or damages until acceptance of the equipment.

Checks of unsuccessful Bidders will be returned when their bids have been rejected and they will not be retained in excess of sixty (60) days from the date bids are opened. The check of the successful Bidder will be retained until the contract is awarded. Should the successful Bidder fail to perform as the Proposal and Specifications indicate, the City may use the check as liquidated damages within fifteen (15) days after written notice is given to the party who submitted the successful bid.

If any person contemplating submitting a bid for this contract is in doubt as to the true meaning of any part of the Specifications or other proposed contract documents, he may submit to Purchaser a written request for an interpretation thereof. The person submitting the request will be responsible for its prompt delivery. Any interpretation of the proposed documents will be made only by addendum duly issued or delivered to each person receiving a set of such documents. The Purchaser will not be responsible for any other explanation or interpretation of the proposed documents.

All addendums must be signed and attached to bid documents.

**IF YOU HAVE QUESTIONS OR NEED HELP ON  
SPECIFICATIONS CONTRACT NO: HU 2024-28**

**MAXON LAGOON DREDGING**

PLEASE CONTACT ANY OF THE FOLLOWING:

**Technical Questions**

Keith Miller, P.E.  
Civil Engineer  
Ph# 402-462-3549  
Email: [bidquestions@cityofhastings.org](mailto:bidquestions@cityofhastings.org)

**General Questions or Requests**

Renae Griess  
Engineering Admin Assistant  
Ph# 402-462-3665  
Email: [bidquestions@cityofhastings.org](mailto:bidquestions@cityofhastings.org)



## **SUBMITTAL INSTRUCTIONS**

Your bid must be returned by means of hand delivery, USPS, FedEx, UPS, or other carrier. City of Hastings DOES NOT ACCEPT bids that are faxed or emailed.

**ALL the following documents are REQUIRED TO BE SUBMITTED in your bid packet:**

- 1. Cover sheet with your company's name filled in**
- 2. ALL addendums received – must be acknowledged and signed**
- 3. Bid Bond**
- 4. If “exceptions” are taken, include Instructions to Bidders**
- 5. Proposal Page(s)**

Failure to return required bid documents as instructed could subject your bid proposal to be rejected.

# IMPORTANT MAILING (OR HAND DELIVERY) INSTRUCTIONS

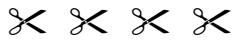
Please address your return envelope as shown in the example below. All bids must be sealed in a properly marked envelope.

To hand deliver, please drop off between the hours of 8:00am – 5:00pm Monday-Friday.

Your Return Address

City of Hastings  
Attn: Renae Griess  
1228 N Denver Avenue  
Hastings, NE 68901

**This Information MUST BE typed or written in the lower left hand corner of return envelope OR SIMPLY CUT OUT AND TAPE ON YOUR RETURN ENVELOPE**



**BID DOCUMENTS ENCLOSED**  
**ATTN: Renae Griess, Administrative Assistant**  
**Contract No: HU 2024-28**  
**Maxon Lagoon Dredging**  
**Bid Opens: Wednesday, April 17, 2024 @ 1:30 PM**

**If returning Fed-X or similar carrier, please enclose the bid in an “inner” envelope which is sealed. Please make sure BOTH envelopes are properly marked on the OUTSIDE OF THE ENVELOPE as shown in the example above.**

One bid per envelope. Bid submittal via email is not allowed. Bids must be checked in to the City of Hastings prior to 1:30 pm deadline.

**FORMAL PROPOSAL  
FOR  
MAXON LAGOON DREDGING  
CITY OF HASTINGS  
HASTINGS, NEBRASKA  
Contract No. HU 2024-28**

City of Hastings  
1228 N. Denver Ave  
Hastings, NE 68901

**Issue Date: 3/29/24      Return Date on or Before: 4/17/2024      Wednesday @ 1:30 p.m.**

The undersigned bidder, having read and examined the specifications and associated contract documents for the below designated work, does hereby propose to furnish the materials and provide the services set forth in this Proposal.

We, the undersigned, being familiar with all parts of this document, specification contract document forms do hereby agree to complete the above referenced project for City of Hastings, Hastings, Nebraska as specified to purchaser for the following firm prices.

For purposes of sales/use tax, this project is **TAX EXEMPT.**

<b>Item No.</b>	<b>Description</b>	<b>Qty</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Total Price</b>
1	Mobilization	1	LS	\$	\$
2	Sludge: Dredged and Placed in Geotextile Dewatering Tubes	40,000	yd <sup>3</sup>	\$	\$
3	Geotextile Dewatering Tube	1	LS	\$	\$
4	Polymer	1	LS	\$	\$
5	Sitework Grading and Drainage	1	LS	\$	\$
6	Containment Liner	1	LS	\$	\$
7	Seeding	90,000	ft <sup>2</sup>	\$	\$
8	Silt Fence	30	LF	\$	\$
9	48" Woven Wire Fence (Including (2) 18' Gates)	1050	LF	\$	\$
10	Gravel Surfacing	30	ton	\$	\$
11	Crushed Concrete Surfacing	30	ton	\$	\$
<b>Grand Total:</b>				\$	
<i>(grand total in words)</i>					



**FORMAL PROPOSAL  
FOR  
MAXON LAGOON DREDGING  
CITY OF HASTINGS  
HASTINGS, NEBRASKA  
Contract No. HU 2024-28**

Is Nebraska Sales/Use Tax included in the above prices (must select one)?

Yes \_\_\_\_\_ No \_\_\_\_\_

**Liquidated Damages:** The contractor shall pay a fee of \$100 per working day for failure to substantially perform work within either the specified project period or the contract completion date in accordance with Paragraph 1.806 and 1.807 of the General Conditions and Paragraph 2.002 of the Special Provisions.

City of Hastings may at its own discretion delete any project item prior to award of contract. Award will also consider alternate materials as noted in the proposal form. Award will consider lowest and best combination of alternate materials and prices.

In submitting this proposal, it is understood that the right is reserved by City of Hastings to reject any or all proposals and it is further understood that this proposal may not be withdrawn for a period of sixty (60) days after proposals are opened. It is further understood that City of Hastings reserves the right to select any or all of the items above, as they deem appropriate.

**All bid documents, including proposals, etc., must be submitted with original signatures. No copies will be accepted.**

**OFFICIAL NAME & ADDRESS**

_____	_____
Firm Name	Signature
_____	_____
Address	Typed or Printed Name
_____	_____
City, State, Zip	Title
_____	_____
Phone No.	Date
_____	_____
Fax No.	Email Address

**ALL BIDS MUST BE CHECKED IN TO THE CITY OF HASTINGS PRIOR TO 1:30 PM DEADLINE**

**AGREEMENT**

**IN WITNESS WHEREOF:** The Parties of the First and Second Parts have hereto set their hands and seals on the day and year above written.

CITY OF HASTINGS  
Party of the First Part

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

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

ATTEST:

\_\_\_\_\_  
City Clerk

CONTRACTOR  
Party of the Second Part

SEAL

\_\_\_\_\_

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

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

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

APPROVED TO FORM:

\_\_\_\_\_  
City Attorney

Note: If executed by one other than President, Partner or the individual Owner, a Power-of-Attorney authorizing execution should accompany this Contract.

## INSURANCE COVERAGE

The undersigned hereby certifies that Workmen's Compensation, Public Liability and Property Damage, and Automobile Liability and Property Damage Insurance are in force and effect in accordance with the requirements contained in "Instruction to Bidders" which is a part of this document "Bid Proposal and Specifications". We further agree to give ten (10) days notice to the City of Hastings before effective date of cancellation or reduction of any of the above coverage.

This Insurance Coverage applies only to \_\_\_\_\_

Dated \_\_\_\_\_

\_\_\_\_\_  
CONTRACTOR

By \_\_\_\_\_

Title \_\_\_\_\_

Date \_\_\_\_\_

\_\_\_\_\_  
INSURANCE COMPANY

By \_\_\_\_\_

Title \_\_\_\_\_

Address \_\_\_\_\_

Date \_\_\_\_\_

**PERFORMANCE BOND**

KNOW ALL MEN BY THESE PRESENTS:

That we, the undersigned, \_\_\_\_\_  
as principal, and \_\_\_\_\_,  
a corporation organized and existing under the laws of the State of \_\_\_\_\_,  
and duly authorized to transact business in the State of Nebraska, as surety are held and firmly  
bound unto the CITY OF HASTINGS, NEBRASKA, a municipal corporation organized and  
existing under the laws of the State of Nebraska, hereinafter referred to as CITY, in the penal sum  
of \_\_\_\_\_  
Dollars (\$ \_\_\_\_\_), lawful money of the United States, for the payment of  
which will and truly be made, we the said principal and the said surety do hereby bind ourselves,  
our heirs, executors, administrators and assigns, jointly and severally, by these presents as follows:

The condition of this obligation is such that, whereas the principal, by an instrument in  
writing attached hereto and bearing the date of \_\_\_\_\_20\_\_\_, has agreed with the CITY to  
do all work necessary and to furnish all labor, materials, supplies, tools and equipment to \_\_\_\_\_  
\_\_\_\_\_ as specified  
thereby and in the specifications, proposals and contract forming the Contract Documents attached  
thereto and made a part hereof:

NOW THEREFORE, if the principal shall well and truly in good, sufficient and in a  
workmanlike manner, and to the satisfaction of the CITY perform and complete the work required,  
and shall defend, indemnify and save harmless the CITY against all damages, claims, demands,  
expenses and charges of every kind (including claims of patent infringement) arising from any act,  
omission or neglect of said principal, his agents, servants or employees, with relation to said work,  
and shall pay all costs, charges, rentals and expenses for labor, materials, supplies and equipment  
and deliver the said improvement to the CITY completed and ready for operation and free from all  
encumbrances or claims for labor, materials or otherwise, and shall pay all other expenses lawfully  
chargeable to the CITY, and this bond shall also be for the use and benefit of all persons who may  
perform any work or labor or furnish any material in the execution of said Contract and may be  
sued on thereby in the name of any such party claiming the benefit hereof, then this obligation  
shall be void, otherwise the same shall remain in full force and effect. This obligation shall be in  
full force and effect for the full guarantee period provided in the specifications contained herein.

**PERFORMANCE BOND**

PROVIDED FURTHER, that said surety for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this bond, and it does hereby waive notice of any change, extension of time, alteration or addition to terms of the Contract, to the work or to the specifications.

PROVIDED FURTHER, that if the principal of his, their or its subcontractor or subcontractors fail to duly pay for any labor, materials team, hire sustenance, provisions, provender or any other supplies or materials used or consumed by such contractor of his, their or its subcontractors in performance of the work contracted to be done, the surety will pay the same in any amount not exceeding the sum specified in the bond together with interest as provided by law.

IT WITNESS WHEREOF, said principal and surety have hereunto set their hands and seals at \_\_\_\_\_ this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_,

This Bond is executed in triplicate counterparts.

(Seal)

Principal

Witness

Street Address

City, State, Zip

Name of Person Executing

Surety

ATTEST

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

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



# SECTION 1

## GENERAL CONDITIONS

### SECTION 1-1 - DEFINITION OF WORDS AND TERMS

Wherever in these specifications or in other contract documents the following terms or pronouns in place of them are used, the intent and meaning shall be interpreted as follows:

**1.101 Advertisement.** The advertisement for work or materials on which bids are to be received.

**1.102 Award.** The decision of the City to accept the proposal of the lowest responsible bidder for the work, subject to the execution and approval of a satisfactory contract thereof and bond to secure the performance thereof, and to such other conditions as may be specified or otherwise required by law.

**1.103 Bidder.** Any individual, firm, or corporation formally submitting a proposal for the work contemplated, acting directly or through a duly authorized representative.

**1.104 Calendar Day.** Every day shown on the calendar, except weekends and holidays included: New Year's Day, Martin Luther King Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving, Friday after Thanksgiving, ½ Day Christmas Eve, and Christmas Day.

**1.105 Change Order.** A written order to the Contractor, signed by the Engineer, ordering a change in the work from that originally shown in the plans and specifications.

**1.106 City.** The word "City" as used in these specifications refers to City of Hastings, Nebraska, Utilities Department.

**1.107 Contract.** The written agreement executed between the City and the Contractor, covering the performance of the work and the furnishing of labor and materials, by which the Contractor is bound to perform the work and furnish the labor and materials, and by which the City is obligated to compensate him therefore at the mutually established and accepted rate or price.

The contract shall include the "Notice to Bidders", these specifications, the Contractor's Bond, the general and detailed plans, the Proposal, Special Provisions, and Supplemental Agreements.

**1.108 Contract Item.** An item of work specifically described and for which a price, either unit or lump sum, is provided. It includes the performance of all work and the furnishing of all labor, equipment, and materials described in the text of a specification item included in the contract or described in any subdivision of the text of the supplemental specification or special provision of the contract.

**1.109 Contract Period.** The period from the date specified in the contract for the commencement of work to the date specified for its completion, both dates inclusive.

## SECTION 1- GENERAL CONDITIONS

**1.110 Contractor.** The party of the second part to the contract; the individual, firm, or corporation undertaking the execution of the work under the terms of the contract and acting directly or through his, their, or its agents or authorized employees.

**1.111 Easement (Right-of-Way).** A right acquired by public authority to use or control property for a designated purpose.

**1.112 Engineer.** The Director of Engineering, acting either directly or through an assistant or other representative duly authorized by the Director of Engineering, such assistant or representative acting within the scope of the particular duties assigned him, or of the authority given him.

**1.113 Extra Work.** Work performed by the Contractor in order to complete the contract in an acceptable manner but for which there is no basis of payment provided in the contract.

**1.114 Inspector.** An authorized representative of the Engineer assigned to make detailed inspection of any or all portions of the work performed and materials furnished by the Contractor.

**1.115 Laboratory.** The testing laboratory of the City or any other testing laboratory which may be designated by the Engineer.

**1.116 Maintenance Bond.** Insures the owner of a completed construction project for a specified time period against defects and faults in materials, workmanship and design.

**1.117 Notice to Bidders.** The provisions, requirements, and instructions pertaining to the work to be awarded, manner and time of submitting proposals, quantities of the major items or work required, as prepared for the information of bidders.

**1.118 Performance Bond.** The approved form of security, executed by the Contractor and his surety or sureties, guaranteeing complete execution of the contract and all supplemental agreements pertaining thereto and the payment of all legal debts pertaining to the construction of the project.

**1.119 Plans.** The official plans, profiles, working drawings, and supplemental drawings, or exact reproductions thereof, approved by the Engineer, which show the location, character, dimensions and details of the work to be done, and which are to be considered as a part of the contract supplementary to these specifications.

**1.120 Project.** The specific section of the street together with all appurtenances and construction to be performed thereon under the contract.

**1.121 Proposal.** The offer of the bidder, submitted on the prescribed proposal form, to perform the work and to furnish the labor and materials at the prices quoted by the bidder.

**1.122 Proposal Form.** The approved form on which the City requires formal bids be prepared and submitted.

**1.123 Proposal Guaranty.** The security furnished by the bidder with his proposal for a project, as a guaranty that he will enter into a contract for the work if his proposal is accepted.



## SECTION 1- GENERAL CONDITIONS

**1.124 Right-of-Way.** The land area which is reserved or secured by the City for constructing the work or for obtaining material therefore.

**1.125 Special Provisions.** Special directions, provisions or requirements peculiar to the project under consideration and not otherwise thoroughly or satisfactorily detailed or set forth in the specifications. See Section II Special Provisions.

**1.126 Specifications.** The general term comprising all the directions, provisions, and requirements contained herein, together with such as may be added or adopted as supplemental specifications or special provisions, all of which are necessary for the proper performance of the contract.

**1.127 Subcontractor.** Any individual, firm, or corporation to whom the Contractor, with the written consent of the City, sublets any part of the contract.

**1.128 Superintendent.** The representative of the Contractor, present on the work at all times during progress, authorized to receive and fulfill instructions from the Engineer and capable of superintending the work efficiently.

**1.129 Surety.** The corporate body bound with and for the Contractor for the acceptable performance of the contract and the completion of the work, and for payment of all just claims arising therefrom.

**1.130 Work.** Work shall be understood to mean the furnishing of all labor, materials, equipment, paying all applicable city, state, and federal taxes, and other incidentals necessary or convenient to the successful completion of the project by the Contractor and the carrying out of all the duties and obligations imposed by the contract if applicable.

**1.131 Working Day.** Any day, except Saturdays, Sundays, and City of Hastings holidays. Working days for a project area shall be counted consecutively from project starting date.

**1.132 Completion of the Work and Formal Acceptance by the City.** Whenever the term "completion of the work and formal acceptance by the City" is used, it refers to and means the formal acceptance of the work by the Engineer and the City at the time the Contractor has all work under the contract completed and in place. Release of the final pay estimate shall constitute formal acceptance by the City.

**1.133 Final Acceptance of the Work.** Whenever the term "final acceptance of the work" is used, it refers to and means the time when the Engineer and City finally accept the work after the expiration of the time for which the Contractor guarantees to keep the work in repair.

**1.134 Abbreviations.**

A.A.S.H.O.	American Association of State Highway Officials
A.S.M.E.	American Society of Mechanical Engineers
A.S.T.M.	American Society for Testing Materials

## SECTION 1- GENERAL CONDITIONS

A.R.E.A.	American Railway Engineering Association
A.W.S.	American Welding Society
D.O.T.	Department of Transportation, Office of Pipeline Safety
O.S.H.A.	Occupational Safety and Health Administration
A.W.W.A.	American Water Works Association

### SECTION 1-2 - PROPOSAL REQUIREMENTS AND CONDITIONS

**1.201 Contents of Proposal Forms.** Bidders will be furnished with proposal forms which will state the location and description of the contemplated work and will show the estimate of the various quantities and kinds of work to be performed or materials to be furnished, with a schedule of items for which unit bid prices are asked, and the time in which the work must be completed, and the date, time, and place of opening bids. All special provisions and required provisions will be grouped together and bound with or included through reference in the proposal form.

**1.202 Interpretation of Quantities in Proposal Forms.** The quantities listed in the proposal forms are to be considered as approximate, unless otherwise provided by special provision. It is understood that the quantities of work to be done and materials to be furnished may each be increased, diminished or omitted, as hereinafter provided, without in any way invalidating the unit bid prices, except as provided in Article 1.403.

**1.203 Examination of Plans, Specifications, Special Provisions, and Site of Work.** The bidder is required to examine carefully the site, and the proposal, plans, specifications, special provisions, and contract form, for the work contemplated, and it will be assumed that the bidder has investigated and is satisfied as to the conditions to be encountered, as to the character, quality, and quantities of work to be performed and materials to be furnished, and as to the requirements of these specifications, the special provisions, and contract. It is mutually agreed that the submission of a proposal shall be considered prima facie evidence that the bidder has made such examination.

**1.204 Preparation of Proposal.** Bidders shall submit their proposals on blank forms furnished by the Engineer, with the full name and address and the place of business or residence of the bidder. If the bidder is co-partnership, then the signature shall be by a member of the firm, with the names and addresses of each member; and if a corporation, then by an officer of the corporation in the corporate name and with the corporate name and with the corporate seal attached thereto.

All blank spaces in the form shall be fully filled; numbers shall be stated in legible figures and writing when required; the signature shall be longhand; and the complete form shall be without interlineation, alteration or erasure.

No oral, telegraphic, telephonic, faxes, or electronically mailed proposals or modifications will be considered.

When certain alternative prices, for both increasing and decreasing the cost, are required, as called for in the proposal sheet, it must be understood that all materials and workmanship required shall be the best of their respective kinds; and in all cases, shall correspond with similar

## SECTION 1- GENERAL CONDITIONS

work herein specified and, if accepted, the work shall be done under the general terms of the specifications.

**1.205 Statement of Bidder's Financial Conditions.** Any bidder may be required by the City to submit data to satisfy the City that such bidder is prepared to fulfill the contract if it is awarded to him.

**1.206 Certified Check, Cashier's Check or Bid Bond.** Each bidder must submit with his proposal a certified check, cashier's check or bid bond in the amount of not less than five percent (5%) of the amount bid, drawn to the order to the City of Hastings, Nebraska, guaranteeing the execution of the contract and bond required, within ten (10) days of the notification of award. Any certified check must be issued by a U.S. Commercial Bank.

**1.207 Filing of Proposal.** The proposal and the supporting proposal guaranty for each project shall be filed in separate but attached envelopes, so marked as to indicate their contents. All proposals shall be filed with the City at the place designated in the notice to bidders, prior to the time advertised for the opening of bids.

**1.208 Withdrawal of Proposal.** A bidder will be permitted to withdraw his proposal unopened after it has been submitted, if his request for withdrawal is made in writing and delivered personally by the bidder or his authorized representative prior to the time specified for opening bids.

**1.209 Public Opening of Proposals.** Proposals will be publicly opened and read at the time and place stipulated in the notice to bidders.

**1.210 Material Guaranty.** The bidder may be required to furnish a complete statement of the origin, composition, and manufacture of any or all materials to be used in the construction of the work, together with samples, which samples may be subjected to the tests provided for in these specifications to determine their quality and fitness for the work.

### SECTION 1-3 - AWARD OF CONTRACT

**1.301 Consideration of Proposals.** After the proposals are opened and read, they will be compared on the basis of the summation of the products of the quantities shown in the bid schedule by the unit bid prices. The results of such comparisons will be immediately available to the public.

The right is reserved to reject any and all proposals and to waive technical errors as may be deemed best for the interest of the City.

**1.302 Award of Contract.** In the award of contract, consideration will be given not only to the prices bid but also the mechanical and other equipment available to the bidder, the financial responsibility of the bidder, and his ability and experience in the performance of like or similar contracts.

## SECTION 1- GENERAL CONDITIONS

The award of alternatives proposed will be selected not only of the price but of the quality of the products provided, availability of replacement parts, repair, connection to future or existing systems, longevity, durability, function, and all other engineering and operational consideration.

Award of contracts will be made as promptly as practical after bids have been opened and read. The City reserves the right to delay the award for such time as is needed for the consideration of the bids, and for the receipt of concurrence in recommended contract awards from other governmental agencies whose concurrence may be required.

**1.303 Cancellation of Award.** The City reserves the right to cancel the award of any contract at any time before the execution of the said contract by all parties without any liability against the City.

**1.304 Return of Proposal Guaranty.** Proposal guaranties will be returned to the unsuccessful bidders by mail promptly after the signing of the contract has been made. Return to the successful bidder will be made after the signing of the contract and filing of the contract bond.

**1.305 Maintenance Bond.** *(not applicable to HU 2024-28)*

**1.306 Performance Bond.** The Contractor shall furnish a performance bond with a company having the approval of the City in an amount of one hundred percent (100%) of the contract price guaranteeing complete and faithful performance of the contract, payment of all bills of whatever nature which could become a lien against the property.

In the event that Contractor chooses to submit a bond other than the bond from contained in this package, such submission is done at the risk of the bidder. All such substituted bond forms shall contain indemnification both for performance and warranty as set out more fully in these documents.

**1.307 Failure to Execute Contract.** Failure to execute a contract and file an acceptable performance bond, as provided herein, within ten (10) days from date of award shall be just cause for the annulment of the award and the forfeiture of the certified check, bid bond, or cashier's check to the City, not as a penalty but in liquidation of damages sustained.

## SECTION 1-4 - SCOPE OF WORK

**1.401 Intent of Plans and Specifications.** The intent of the plans and specifications is to provide for the construction and completion of every detail of the work described therein. It shall be understood by the Contractor that he will furnish all labor, materials if applicable (see Section 5 paragraph 5.002 for gas main installation materials), tools, transportation, and supplies required for all or any part of the work to make each item complete in accordance with the spirit of the contract. It is understood that the apparent silence of the specifications as to any detail, or the apparent omission of a detailed description concerning any point, shall be regarded as meaning that only the best general practice is to prevail, and that only materials and workmanship of the best quality are to be used.

For the purpose of design and the preparation of the Engineer's estimate, the City may perform a reasonable amount of exploratory work to gain information relative to surface and subsurface conditions relating to types of soil, moisture content and types and extent of rock strata.

This information, when shown on the plan, represents to the best of the City's knowledge, conditions as of the date the survey was made. The appearance of this information on the plan

## SECTION 1- GENERAL CONDITIONS

will not constitute a guarantee that conditions other than those indicated will not be encountered at the time of construction.

The bidder may utilize this information as he sees fit. Any bidder interested in the work is authorized to make whatever additional investigation he considers advisable.

In making such additional investigation, the bidder is directed to the Engineer for information relating to available right-of-way. If there are, at that time, any parcels of land over which the City does not have jurisdiction, right of entry must be secured by the prospective bidder from those authorized to grant such permission.

**1.402 Special Work.** Any conditions not covered by these standard specifications are stated in the special provisions.

**1.403 Increased or Decreased Quantities of Work.** The Engineer reserves the right to alter the quantities of contract items for which there are bid prices. Such increases or decreases in quantities shall be made as he considers necessary or desirable without waiving or invalidating any of the provisions of the contract; provided, that all such alterations shall be ordered in writing and that a supplemental agreement shall be executed with the Contractor for the item or items involved, when such alterations involve an increase or decrease of more than twenty percent (20%) of the total cost of the work of any group of the contract calculated from the original proposal quantities and the contract unit prices. The Contractor shall not start on any alteration requiring a supplemental agreement until the agreement setting forth an equitable adjustment of compensation, satisfactory to both parties, shall have been executed by the Engineer and the Contractor.

**1.404 Changes in Work - Change Order.** The City reserves the right to order the performance of work of a class not contemplated in the proposal but which may be considered necessary to complete satisfactorily the work included in the contract. All change orders must be approved in writing prior to start of work.

- a. If applicable unit prices are not contained in the Agreement or if the total net change increases or decreases the total Contract Price more than twenty (20) percent, the City shall, before ordering the Contractor to proceed with desired changes, request an itemized proposal from him covering the work involved in the change after which the procedures shall be as follows:
  1. If the proposal is acceptable, the City will prepare the change order in accordance therewith for acceptance by the Contractor.
  2. If the proposal is not acceptable and prompt agreement between the two parties cannot be reached, the City may order the Contractor to proceed with the work on a cost-plus-limited basis. A cost-plus-limited basis is defined as the net cost of the Contractor's labor, materials, and insurance plus fifteen (15) percent of said net cost to cover overhead and profit, the total cost not to exceed a specified limit.
- b. Each change order shall include in its final form:
  1. A detailed description of the change in the work.

## SECTION 1- GENERAL CONDITIONS

2. The Contractor's proposal (if any) or a conformed copy thereof.
3. A definite statement as to the resulting change in the Contract Price and any impacts on project schedule.
4. The statement that all work involved in the change shall be performed in accordance with Contract requirements except as modified by the change order.

**1.405 Removal and Disposal of Structures and Obstructions.** The Contractor for bridge and culvert work shall remove any existing structure or part of structure that in any way interferes with the new construction. If specific payment for such work has not been provided in the contract, it will be paid for as extra work.

The Contractor shall remove any materials or structures found on the right-of-way which are not to remain in place or which have not been designated for use in the new construction. The removal and disposal of pipe culverts will not be paid for directly, but shall be considered as incidental work, and the cost of such removal and disposal shall be considered to be included in the contract price for other items. Pipe culverts shall be removed by methods that will cause a minimum of damage to the pipe culverts. The removal and disposal of bridges or other masonry or monolithic concrete construction will be paid for. If the contract does not contain an item for such work, it will be paid for as extra work. Whenever Hastings Utilities requires abandonment of old utility mains or services, the Contractor shall plug or cap all open ends.

**1.406 Rights In and Use of Materials Found on the Right-of-Way.** Unless stated to the contrary in the contract documents, all materials, such as stone, gravel, sand, timber, and structures or parts of structures, found on the right-of-way of the street or on land acquired for the work, are the property of the City or the City of the fee title to the land, and shall not be used or destroyed by the Contractor without special permission from the Engineer. When the Contractor is permitted to use materials found on the right-of-way, any excavations that he makes below the grade elevation shall be backfilled with other suitable materials so that the finished street will conform to the grade shown on the plans. No extra compensation will be allowed for such backfilling.

When rock excavation is encountered, any portion of rock excavation which would otherwise be deposited in waste areas and not be incorporated in the embankments may be processed and used, royalty free, by the Contractor in any other portion of the construction in which material of that quality would be acceptable. No deduction will be made from excavation quantities for rock so used.

**1.407 Right-of-Way.** Right-of-Way for the work will be provided without cost to the Contractor. Right-of-way will be made available to the Contractor on or before the date specified for the commencement of the work, unless a later date for the right-of-way to be made available to the Contractor is designated in the contract documents.

**1.408 Railroad Crossings.** Whenever the work involves construction with which railroad companies are concerned, the performance of the work is contingent upon arrangements with the railroad companies for the proposed construction. No claims will be allowed for loss or damage caused by failure to complete such arrangements. The Contractor is responsible to pay for any railroad required Contractor's fees.

## SECTION 1- GENERAL CONDITIONS

### SECTION 1-5 - CONTROL OF WORK

**1.501 Authority of Engineer.** The Engineer will decide any questions that arise with reference to the intent of the contract documents and compliance therewith. They will resolve all questions relating to materials, work, progress, disputes and mutual rights between contractors, fulfillment of contract and compensation, in accordance with the provisions of these specifications.

**1.502 Plans and Working Drawings.** The approved plans will be supplemented by such working drawings as are necessary to adequately control the work. It is mutually agreed that all authorized alterations affecting the requirements and information given in the approved plans shall be in writing.

Working drawings for any structure shall consist of such detailed plans as may be required of the Contractor for the execution of the work. These are not included in the plans furnished by the Engineer. They shall include shop details, erection plans, masonry, and form work. The Engineer's prior approval of the shop details must be obtained before any fabrication work involving these plans is performed. Erection plans, masonry layout diagrams, and plans for cribs, cofferdams, false work, centering and framework, as well as any other working drawings not previously mentioned, may be required of the Contractor and shall be subject to the Engineer's approval.

**1.503 Alteration of Plans or of Character of Work.** The Engineer shall have the right to make alterations in plans or character of work as may be considered necessary or desirable during the progress of the work to complete satisfactorily the proposed construction. Such alterations shall not be considered as a waiver of any conditions of the contract or invalidate any of the provisions thereof.

**1.504 Coordination of Plans, Specifications, Special Provisions and Supplemental Specifications.** These specifications, the supplemental specifications, the plans, special provisions, and all supplementary documents are essential parts of the contract, and a requirement occurring in one is as binding as though occurring in all. They are intended to be complimentary and to describe and provide for a complete work.

**1.505 Cooperation of Contractor.** The Contractor will be supplied a minimum of two sets of approved plans and contract assemblies, including special provisions, one set of which the contractor shall keep available on the work at all times.

The Contractor shall give the work the constant attention necessary to facilitate the progress thereof, and shall cooperate with the Engineer and other contractors in every way possible. Before any work is started, the contractor shall submit a project schedule for review. This schedule is to be updated monthly as progress may alter. Regular progress meetings may be scheduled at the discretion of the Engineer.

The Contractor shall at all times have on the jobsite, as his agent, a competent superintendent capable of reading and thoroughly understanding the plans and specifications, knowledgeable in the pertinent industry codes and standards, thoroughly experienced in the type of work being performed, who shall receive instructions from the Engineer or his authorized representatives. In the event the superintendent fails to meet the requirements, they shall be subject to replacement as requested by the Engineer.

## SECTION 1- GENERAL CONDITIONS

The superintendent shall have full authority to execute the orders or directions of the Engineer without delay, and to promptly supply such materials, equipment, tools, labor and incidentals as may be required. Such superintendent shall be furnished irrespective of the amount of work sublet.

Before starting any work under this Contract, the Contractor shall file with the City a letter signed by an officer of the company (or City, or partner, as the case may be), giving the name, address, and telephone number of the superintendent who is to represent the Contractor in all matters with prosecution of the work and who is to officially receive on behalf of the Contractor, notices or directions issued by the City or its Engineer, and act upon them as required. If, during the life of the Contract, a change in superintendents is made by the Contractor, a new letter shall be filed simultaneously with the change.

**1.506 Surveys.** Lines and elevations shall be established by the Engineer before the work commences, and the Contractor shall obtain lines and elevation from the points so set by the Engineer. The Contractor shall furnish all stakes necessary for lines and elevations and necessary cooperation for the Engineer in setting same.

All property pins, section corners, right of way monuments, permanent bench marks (brass caps), and all other survey monuments disturbed or removed by the Contractor shall be replaced by a licensed Surveyor at the expense of the Contractor. The Contractor shall take all necessary precaution to maintain in good condition all survey monuments.

The Contractor will insure the Engineer or his representative is present to verify the elevation of each sanitary sewer manhole set or tied into. The Contractor will also insure the Engineer or his representative is present to verify the location of all utilities (highways, railroads, drainage, etc.) uncovered, crossed, or otherwise exposed during the completion of the project. The Contractor shall keep the Engineer or his representative abreast of activities so adequate response by the Engineer or his representative can be made without unduly delaying the construction process. A 24 hour notice may be enforced if sufficient time is not allowed by the Engineer or his representative to conduct all necessary field surveys.

**1.507 Authority and Duties of Inspector.** The City may appoint inspectors to represent the Engineer in the inspection of all materials used in and all work done under the contract. Such inspection may extend to any part of the work and to the preparation of manufacture of the materials to be used. The Inspector will not be permitted to modify in any way the provisions of the contract documents, nor to delay the work by failing to inspect materials and work with reasonable promptness. An inspector is placed on the work to keep the Engineer informed as to its progress and the manner in which it is being done; also, to call the Contractor's attention to any infringements of the contract documents. The Inspector will not act as foreman or perform other duties for the Contractor, not improperly interfere with the management of the work. He will not be authorized to approve or accept any portion of the work. In case of dispute between the Contractor and Inspector as to quality of materials or the manner of performing the work, the Inspector shall have authority to reject materials or suspend the work until the question at issue can be decided by the Engineer. Written notice of the suspension of work will be given to the Engineer and the Contractor.

Upon the failure of Contractor or its Subcontractors to comply with any of the requirements of this Contract (but not limited to quality or safety), the City shall have the authority to stop any



portion of the work affected by such failure until such failure is remedied. If the City issues a Stop Work Order, the City shall not be liable for any costs or expenses claimed by Contractor arising out of such issuance. The construction schedule shall not be delayed or extended as a result of the City's issuance of a Stop Work Order.

**1.508 Inspection of Work.**

- a. The Contractor shall notify the City sufficiently in advance of backfilling or concealing any facilities to permit proper inspection. If any facilities are concealed without approval or consent of the City, the Contractor shall uncover for inspection and recover such facilities, all at his own expense.
- b. The Contractor shall furnish the Engineer with every reasonable facility for ascertaining whether the work is being performed in conformance with the contract documents. At any time before acceptance of the work, upon request of the Engineer, the Contractor shall remove or uncover such portions of the finished work as the Engineer may direct. After examination has been made, the Contractor shall restore such portions of the work to the standard required by the contract documents.
- c. Should it be considered necessary or advisable by the City any time before final acceptance of the entire work to make an examination of work already completed by uncovering the same, the Contractor shall on request promptly furnish all necessary facilities, labor and material. If such work is found to be defective in any important respect, due to fault of the Contractor or his Subcontractors, the Contractor shall defray all expenses of such examination and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the Contract, the actual cost of labor and material necessarily involved in the examination and replacement, plus fifteen (15) percent of such costs to cover superintendent's, general expenses and profit, shall be allowed the Contractor and he shall in addition, if completion of the work of the entire Contract has been delayed thereby, be granted a suitable extension of time on account of the additional work involved.

**1.509 Defective Work.** Any defective work shall be removed and replaced at the Contractor's expense. Should the Contractor fail or refuse to remove defective work when so ordered by the Engineer, the Engineer shall have authority to order the Contractor to suspend further operations, and may withhold payment on estimates until such defective work has been removed and replaced in accordance with the plans and specifications. Continued failure or refusal on the part of the Contractor to correct defective work promptly shall be sufficient cause for the City to declare the contract in default, and to proceed to have the work completed in accordance with Article 1.808.

**1.510 Final Inspection.** Upon written notification by the Contractor or his authorized representative that the work is completed, the Engineer shall make a final inspection within 10 days of the completion of all work included in the contract. If the work is found not to be in accordance with the contract documents, the Engineer shall provide the Contractor with a "Punch List" of the particular defects to be remedied.

Once the Engineer and Contractor determines the work is completed a written Notice by the Engineer shall be given to the Contractor within 10 days of the completion of all work items.

**1.511 Review By City.** The City, its authorized representatives and agents shall at all time have access to and be permitted to observe and review all work, materials, equipment, payrolls, personnel records, employment conditions, material invoices, and other relevant data and records pertaining to this Contract, provided, however, that all instructions and approval with respect to the work will be given to the Contractor only by the City through its authorized representatives or agents.

**1.512 Quality Control.** The contractor shall make every effort to provide control of the workmanship of the project. This shall include but not be limited to the following construction practices.

1. Concrete surfaces of sidewalks, paving, slab on grade and other related concrete work shall be smooth and constructed to the elevations as shown on the plans or as directed by the Engineer. An acceptable construction tolerance shall be agreed upon before work is to begin. The Contractor shall notify the Engineer 72 hours before any work is to begin which will involve concrete finishing.
2. Lines and grades of all pipes, conduits, casing, grading, etc. shall be constructed according to the plans or as directed by the Engineer. An acceptable construction tolerance shall be agreed upon before any pipeline, conduit installation, casing installation, or grading begins.
3. Any damages caused by the contractor are to be addressed in a timely manner. In the event the Contractor has not started to make the necessary repairs or adjustments, the City is hereby authorized to make the repairs or adjustments or to order the work to be done by a third party, the cost of the work to be paid by the Contractor.

## **SECTION 1-6 - CONTROL OF MATERIALS.**

**1.601 Source of Supply and Quality Requirements.** The materials used on the work shall meet all quality requirements of the contract. In order to expedite the inspection and testing of materials, the Contractor shall notify the Engineer of his proposed sources of materials prior to delivery. At the option of the Engineer, approval of the source or approval of materials at the source prior to delivery may be required. If it is found after trial that sources of supply for previously approved materials do not produce specified products or when conditions are such that the use of unfit materials cannot be prevented except by extraordinary inspection methods, the Contractor shall furnish materials from other sources. Before delivery is started and at any time during the process of preparation and use, the materials shall be subject to the approval of the Engineer.

All materials supplied shall be new and undamaged.

**1.602 Storage of Materials.** The Contractor shall be responsible for the care and storage of materials delivered on the work or purchased for use thereon. Any material that has been delivered on the work and has become damaged before actual incorporation in the work may be rejected by the Engineer even though it may previously have been accepted. Stored materials shall be so located as to facilitate thorough inspection.

**1.603 Unacceptable Materials.** All materials not conforming to the requirements of the specifications at the time they are to be used shall be considered as unacceptable and all such materials will be rejected and shall be removed immediately from the site of the work unless

otherwise instructed by the Engineer. No rejected material, the defects of which have been corrected, shall be used until approval has been given.

**1.604 Guarantee.** The Contractor shall guarantee the design, equipment, materials, and workmanship furnished under this Contract to be as specified and to be free from defects during the guarantee period. In addition, the equipment and materials furnished by the Contractor shall be guaranteed to be free from defects in design.

Except as otherwise prescribed by the terms of any special guarantees required by the contract documents, the guarantee period shall begin on the date of formal acceptance by the City and shall end 36 months later.

Upon notification, the Contractor shall promptly make all adjustments, repairs, or replacements which, in the opinion of the Engineer or City, arose out of defects and became necessary during the guarantee period.

The cost of all materials, parts, labor, transportation, supervision, special tools, and supplies required for replacement or repair of parts and for correction of defects shall be paid by the Contractor or by the surety.

This guarantee shall be extended to cover all repairs and replacements furnished under the guarantee, including repair for ditch settlement, and the period of the guarantee for each such repair or replacement shall be 36 months after installation or the end of the project guarantee period, whichever is later, except as otherwise prescribed by the terms of any special guarantees required by the contract documents.

If within 10 days after the City has notified the Contractor of a defect, failure, or abnormality in the work, the Contractor has not started to make the necessary repairs or adjustments, the City is hereby authorized to make the repairs or adjustments or to order the work to be done by a third party, the cost of the work to be paid by the Contractor.

In the event of an emergency where, in the judgment of the City, delay would cause serious loss or damage, repairs or adjustments may be made by the City, or a third party chosen by the City, without advance notice to the Contractor and the cost of the work shall be paid by the Contractor or by the surety.

The acceptance of the installation, or any part of it, shall not act to waive this liability on the part of the Contractor.

**1.605 "Or Equal" Clause.** Whenever, in any section of the contract documents, plans or specifications, any article, materials, or equipment is defined by describing a proprietary product or by using the name of a manufacturer or vendor, the term "or approval equal", if not inserted, shall be implied. The specified article, material, or equipment mentioned shall be understood as indicating the type, function, minimum standard or design, efficiency and quality desired, and shall not be construed in such a manner as to exclude manufacturer's products of comparable quality, design and efficiency. The Engineer shall determine the acceptability of articles, materials or equipment proposed as equals.

**1.606 Shop Drawings.** The Contractor shall submit for review and approval all shop drawings as indicated in these specifications before the beginning of construction. Failure to submit shop drawings shall suspend payment of any materials delivered or installed. This includes delivery of materials in storage. These requirements will be strictly enforced.

## **SECTION 1-7 - LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC**

**1.701 Laws to be Observed.** The Contractor shall keep himself fully informed of, and at all times, shall observe and comply with all federal and state laws, all local bylaws, ordinances, and regulations, and all orders and decrees of bodies or tribunals having any jurisdiction or authority, which in any manner affect those engaged or employed on the work, or which in any way affect the conduct of the work. The Contractor shall protect and indemnify the City and its representatives against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, whether by himself or his employees. It shall be the responsibility of the Contractor to provide all safeguards, safety devices and protective equipment and to take any other needed actions as are reasonably necessary to protect the life and health of employees on the project.

**Work Eligibility Status.** As required under Nebraska LB 403 for any contract entered into after October 1, 2009 the Contractor must register and use a federal immigration verification system, such as the E-Verify Program or an equivalent federal program designated by the United States Department of Homeland Security or other federal agency authorized to verify the work eligibility 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.

**1.702 Fair Labor Standards.** The Contractor agrees to comply with all current applicable State, Federal, and City fair labor standards in the execution of the contract.

**1.703 Permits.** The Contractor shall procure and pay for all permits, licenses and bonds necessary for the execution of his work and/or required for municipal, state and federal regulations and laws.

**1.704 Restoration of Surfaces Opened by Permit.** Upon the presentation of a duly authorized and satisfactory permit from the City, which provides that all necessary repair work will be paid for by the party to whom such permit is issued, the Engineer may authorize the Contractor to allow parties bearing such permits to make openings in the street. The Contractor shall make in an acceptable manner all necessary repairs due to such openings, and such necessary work ordered by the Engineer shall be paid for as provided in these specifications.

**1.705 Safety, Health and Sanitation.** In the performance of his contract, the Contractor shall comply with all applicable federal, state and local laws governing safety, health and sanitation.

- a. The Contractor shall exercise proper precaution at all time for the protection of persons and property and shall be responsible for all damages to persons or property either on or off the site, which occur as a result of his prosecution of the work. The safety provisions of applicable laws and building and construction codes and OSHA shall be observed, and the Contractor shall take or cause to be taken such additional safety and health measures as the City may determine to be reasonably necessary. Machinery, equipment and all hazards shall be guarded in accordance with the safety provisions of the "Manual of Accident Prevention

in Construction," published by the Associated General Contractors of America, Inc., to the extent that such provisions are not in conflict with applicable local laws. The Contractor shall comply with the latest edition of Part VI of the Manual on Uniform Traffic Control Devices. The Contractor shall install plastic fence on open holes when directed by the Inspector. The Contractor shall wear hard hats and safety glasses at all times on the construction site.

- b. The Contractor shall maintain an accurate record all cases of death, occupational disease, or injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment on work under the Contract. The Contractor shall promptly furnish the City with reports concerning these matters.
- c. The Contractor shall indemnify and hold harmless the City and the Engineer and their agents and employees from and against all claims, damages, losses and expenses including attorney's fees arising out of or resulting from the performance of the work, provided that any such claim, damage, loss or expense 1) is attributed 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 the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder.

In any and all claims against the City or the Engineer or any of their agents or employees by any employee of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under this paragraph "c" shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any Subcontractor under Workmen's Compensation acts, disability benefit acts or employee benefit acts.

The obligation of the Contractor under this paragraph "c" shall not extend to the liability of the Engineer, his agents or employees arising out of 1) the preparation or approval of maps, drawings, opinions, reports, surveys, Change Orders, designs or specifications, or 2) the giving of or failure to give directions or instructions by the Engineer, his agents or employees provided such giving or failure to give is the primary cause of the injury or damage.

The Contractor shall immediately correct any unsafe conditions identified by the City. In the event the Contractor fails to immediately correct such unsafe conditions, the City may either have the unsafe conditions corrected by others at the Contractor's expense, or direct that the work be stopped in the area of the unsafe condition; however, this right to stop/suspend the work shall not give rise to any duty on the part of the City to exercise this right.

The Contractor waives the right to bring claim for damages against the City or Engineer for the correction of unsafe conditions or work stoppages in connection with the Contractor's Safety, Health, and Accident Prevention Program or such program of another contractor. If such a claim against the City or Engineer is brought by a third party, the Contractor shall indemnify and defend

the City or Engineer against such claim. The Contractor shall submit to City of Hastings a current copy of the company safety manual before starting work.

**1.706 Claims for Labor and Materials.** The Contractor shall indemnify and save harmless the City from all claims for labor and materials furnished under this contract. When requested by the City, the Contractor shall submit satisfactory evidence that all persons, items, or corporation who have done work or furnished materials under this contract, for which the City may have become liable under the laws of the State, have been fully paid or satisfactorily secured. In case such evidence is not furnished or is not satisfactory, an amount will be retained from money due the Contractor which, in addition to any other sums that may be retained, will be sufficient, in the opinion of the City, to meet all claims of the persons, firms, and corporations as aforesaid. Such sum shall be retained until the liabilities as aforesaid are fully discharged or satisfactorily secured.

**1.707 Contractor's Insurance Coverage.** The Contractor shall not commence work under this Contract until Contractor has obtained all the insurance required under this article. Furthermore, the Contractor shall not allow any sub-contractor to commence work under this Contract until the sub-contractor has obtained the same insurance as is required of the Contractor. The sub-contractor alone shall be responsible for the sufficiency of its own insurance program.

**Certificates of Insurance.** Certificates of Insurance acceptable to the City shall be filed with the City prior to commencement of the work. These Certificates shall contain a provision that coverages afforded under the policies will not be canceled, or materially altered, until at least 30 days prior written notice has been given to the City. All insurance carried shall conform to the relevant provisions of the respective Project Documents and be with insurance companies which are rated "A, X" or better by Best's Insurance Guide, or other insurance companies of recognized responsibility satisfactory to the City.

**Additional Insureds.** Insurance coverages furnished under this Contract, with the exception of Workers' Compensation and Employer's Liability, shall include the City of Hastings and their partners, directors, officers, agents, and employees as Additional Insureds on a primary and noncontributory basis, and shall include Products and completed operations with respect to the activities of the Contractor and shall be maintained for the full duration of the project including for a period after completion to include the statute of repose.

Notwithstanding any other provision of these policies, the insurance afforded shall apply separately to each insured, with respect to any claim, suit, or judgment made or brought by or for any other insured, as though a separate policy had been issued to each, except the insurer's liability shall not be increased beyond the amount or amounts for which the insurer would have been liable had only one insured been named.

The City shall not by reason of their inclusion under these policies incur liability to the insurance carrier for payment of premium for these policies.

**Waiver Of Subrogation.** The Contractor and their sub-contractor shall require their insurance carriers, with respect to all insurance policies, to waive all rights of subrogation against the City their partners, directors, officers, agents, and employees.

**Workers' Compensation And Employer's Liability Insurance.** The Contractor shall procure, and shall maintain during the life of this Contract, Workers' Compensation Insurance as required by workers' compensation laws of the State of Nebraska and also of the state in which the sub-contractor is domiciled.

The Contractor shall also be protected against claims for injury, disease, or death of employees which, for any reason, may not fall within the provisions of a workers' compensation law. The Employer's Liability Insurance shall contain the following limits of liability:

Bodily Injury by Accident	\$500,000 each accident
Bodily Injury by Disease	\$500,000 each employee
Bodily Injury by Disease	\$500,000 policy limit

**General Liability Insurance.** This insurance shall be written per project on an "occurrence" policy form, including coverage for premises/operations, products/completed operations, broad form property damage, blanket contractual liability, independent contractor's and personal injury, with no exclusions for explosion, sudden and accidental pollution or an absolute or total pollution exclusion, collapse and underground perils. The commercial general liability policy shall also include a severability of interest clause and a cross liability clause in the event more than one entity is "named insured" under the liability policy. If applicable, this policy shall also be endorsed to include railroad protective with limits no less than replacement cost of the value of any real property covered under any rail agreement entered into by the City. If work is being done near a railroad track, the 50' railroad right of way exclusion must be deleted.

Limits of Insurance shall be as follows:

Each Occurrence Limit	\$1,000,000
Products/Completed Operations	\$2,000,000
General Aggregate Limit	\$2,000,000
Personal and Advertising Injury	\$1,000,000

**Pollution Liability – (If Applicable).**

Limits of at least: \$1,000,000 per occurrence; \$1,000,000 aggregate

If Contractor or its Sub-subcontractor's work includes but not limited to remediating, handling, processing or disposing of hazardous material including but not limited to asbestos containing materials, silica, lead, PCBs, contaminated soil, etc, coverage shall be provided for bodily injury, property damage and clean-up costs resulting for pollution conditions.

**Riggers Liability – (If applicable).** Should work involve the moving, lifting, lowering, rigging or hoisting of property or equipment Contractor shall carry Rigger's Liability Insurance to insure against physical loss or damage to the property or equipment on a Replacement Cost Basis

**Automobile Liability Insurance.** This insurance shall be written under a Business Auto Policy and shall protect the Contractor and Additional Insureds against claims arising from injuries to members of the public or damage to property of others arising from the use of automobiles whether such automobiles are owned, non-owned, or hired. Automobile insurance shall include Motor Carrier Endorsement Act MCS 90 and transportation pollution coverage if applicable. If work is being done near a railroad track, the 50' railroad right of way exclusion must be deleted.

Limit of Liability

\$1,000,000 each accident

**Umbrella Liability Policy.** This insurance shall protect the Contractor and the Additional Insureds against all claims in excess of the limits provided under the employer's liability, automobile liability, and general liability policies. The liability limits of the umbrella liability policy shall be not less than \$5,000,000 per occurrence. This policy shall be an "occurrence" type policy. However, City reserves the right to require higher limits with respect to each project.

**Professional Liability** (Applicable for contractors providing or is responsible for providing design/engineering/surveying services/or consulting services):

Limits of at least: \$1,000,000 per occurrence; \$1,000,000 aggregate

Policy shall provide for a retroactive date prior to the starting date of services for which this agreement applies. Policy shall not exclude bodily injury, property damage, or pollution liability. Coverage shall remain in force for a minimum of 3 years following substantial completion of construction through either policy renewal or the purchase of an Extended Reporting Provision. Contractor agrees to waive its rights of recovery. Subcontractor's insurer shall endorse the policy to waive subrogation against Owner and their respective agents, officers, directors and employees.

**Transportation Insurance.** Contractor shall purchase inland marine coverage at the expense of Contractor on all equipment and materials, where City has an insurable interest. Insurance shall protect for Contractor and City from physical loss of equipment while loading, unloading, in transit to jobsite, and until equipment or materials have been installed or received by City.

**Proof of Carriage of Insurance.** Satisfactory certificates of insurance shall be filed with the City prior to starting any construction work on this contract. The certificates shall state that thirty (30) days written notice shall be given to the City before any policy covered thereby is changed or canceled.

**Indemnification.** To the fullest extent permitted by laws and regulations, the Contractor shall defend, indemnify, and hold harmless the City, their officers, directors, partners, consultants, agents, and employees from and against all claims, damages, losses, and expenses, direct, indirect, or consequential (including but not limited to fees and charges of engineers, architects, attorneys, and other professionals and court and arbitration costs) arising out of or resulting from the performance of the work by the Contractor, any sub-contractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the work, or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder or arises by or is imposed by law and regulations regardless of the negligence of any such party.

In any and all claims against the City, or of any of their officers, directors, partners, consultants, agents, or employees by any employee of the Contractor, any sub-contractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the work or anyone for whose acts any of them may be liable, this indemnification obligation shall



not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the Contractor or any such sub-contractor or other person or organization under workers' or workmen's compensation acts, disability benefit acts, or other employee benefit acts, nor shall this indemnification obligation be limited in any way by any limitation on the amount or type of insurance coverage provided by the City, the Contractor, or any of their sub-contractors.

**Property Insurance A.K.A. Builder's Risk.** Unless otherwise provided, the CONTRACTOR shall purchase and maintain property insurance, a.k.a. builder's risk insurance, on the building construction project in amount thereto for entire work at site on a replacement cost basis. Such property insurance shall be maintained, unless otherwise provided in contract documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final acceptance of work by OWNERS. Insurance shall include interests of OWNERS, CONTRACTOR, SUBCONTRACTOR, and sub-subcontractors in work. This property insurance covering work will have deductible for each occurrence, which will be responsibility of CONTRACTOR.

Before an exposure to loss may occur, the CONTRACTOR will provide a copy of the property insurance policy or evidence of property insurance, upon request that includes all property insurance coverages. The CONTRACTOR will not cancel or allow such policy to expire without written notice to the other.

Waivers of Subrogation: OWNER and CONTRACTOR and all SUBCONTRACTORS waive all rights against

(1) each other and any of their subcontractors, sub-subcontractors, agents and employees, each of the other, and (2) OWNER'S or CONTRACTOR'S consultants, separate contractors, if any, and any of their subcontractors, sub-subcontractors, agents and employees, for damages caused by fire or other perils to extent covered by property insurance obtained, or other property insurance applicable to work, except such rights as they have to proceeds of such insurance held by OWNER and/or CONTRACTOR as fiduciary. OWNER and/or CONTRACTOR, as appropriate, shall require of OWNER'S and/or CONTRACTOR'S consultants, separate contractors, if any, and subcontractors, sub-subcontractors, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of other parties enumerated herein. Policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay insurance premium directly or indirectly and whether or not person or entity had an insurable interest in property damaged.

**1.708 Contractor's Responsibility for Utility Property and Services.** At points where the Contractor's operations are adjacent to properties of railway, telephone and power companies, or are adjacent to other property, to which damage might result, work shall not be commenced until all arrangements necessary for the protection thereof have been made.

The Contractor shall cooperate with any of the City's underground or overhead utility lines in their removal and rearrangement operations in order that these operations may progress in a

reasonable manner, and that duplication of rearrangement work may be reduced to a minimum, and that services rendered by those parties will not be unnecessarily interrupted.

In the event of interruption to water or utility services as a result of accidental breakage, or as a result of being exposed or unsupported, the Contractor shall promptly notify the proper authority. He shall cooperate with the said authority in the restoration of service as promptly as possible.

In no case shall interruption to water service be allowed to exist outside of working hours. Fire hydrants shall be kept accessible to the Fire Department at all times and no materials shall be kept or stockpiled within fifteen (15) feet of any fire hydrant.

The Contractor must cooperate with the utility companies and schedule his work in such a manner as to protect the existing utility facilities until the facilities are abandoned or replacement facilities are completed. In instances where partial grading is necessary before a utility can install its facilities, the Contractor shall consult with the utility and plan the work so that reasonable time can be allowed the utility for completing its work.

Contractor shall exercise particular care at all times to avoid damage to any of Hastings Utilities system or other facilities and equipment located at or near the scene of any part of the work, especially such facilities as may be in operation. Any costs for potholing prior to boring are considered subsidiary to the bid.

Contractor specifically acknowledges that it shall be responsible and liable to Hastings Utilities for all injury or damage to any such existing and operating facilities, including loss of gas or product and all repairs necessitated by any act or omission, resulting in such damages, on the part of the Contractor, his agents or employees, or any subcontractor or subcontractor's agents of employees.

Contractor shall also exercise particular care at all times to avoid damage to underground structures and lines, and specifically recognizes that it shall be held responsible for any injury or damage to unmarked or unidentified underground structures or pipelines, done by Contractor's personnel, or any subcontractor's personnel in connection with performance of the work hereunder.

Please note before beginning any excavation, the Contractor shall be responsible for contacting Diggers Hotline at 1-800-331-5666 or call 811.

**1.709 No Waiver of Legal Rights.** The City shall not be precluded or estopped by any measurement, estimate, or certificate made either before or after the completion and acceptance of the work and payment therefore, from showing the true amount and character of the work performed and materials furnished by the Contractor, nor from showing that any such measurement, estimate, or certificate is untrue or is incorrectly made, nor that the work or materials do not, in fact, conform to the contract. The City shall not be precluded or estopped, notwithstanding any such measurement, estimate or certificate and payment in accordance therewith, from recovering from the Contractor or his sureties, or both, such damage as it may sustain by reason of his failure to comply with the terms of the contract. Neither the acceptance by the City, nor any representative of the City, nor any payment for or acceptance of the whole or any part of the work, nor any extension of time, nor any possession taken by the City, shall operate as a waiver of any portion of the contract or of any power herein

reserved, or of any right to damages. A waiver of any breach of the contract shall not be held to be a waiver of any other or subsequent breach.

**1.710 Warranty of Title.** No material, supplies or equipment to be installed or furnished under this Contract shall be purchased subject to any chattel mortgage or under a conditional sale, lease-purchase or other agreement by which an interest therein or in any part thereof is retained by the seller or supplier. The Contractor shall warrant good title to all materials, supplies, and equipment installed or incorporated in the work and upon completion of all work, shall deliver the same together with all improvements and appurtenances constructed, or placed thereon, by him to the City free from any claims, liens or charges. Neither the Contractor nor any person, firm or corporation furnishing any material or labor for any work covered by this Contract shall have any right to a lien upon any improvement or appurtenance thereon.

Nothing contained in this paragraph, however, shall defect or impair the right of persons furnishing materials or labor under any law permitting such persons to look to funds due the Contractor in the hands of the City. The provisions of this paragraph shall be inserted in all subcontracts and material contracts and notice of its provisions shall be given to all persons furnishing materials for the work when no formal contract is entered into for such materials.

**1.711 Jurisdiction.** Any action in court against the Contractor or sureties on his bond, because of damages to property or individual by said Contractor, or his workmen, or because of the violation of any provision of the specifications, or on account of the failure of the Contractor to fully comply with this provision, shall be brought in the District Court of the State of Nebraska in and for Adams County.

**1.712 Care of Work.**

- a. The Contractor shall be responsible for all damages to person or property that occur as a result of his fault or negligence in connection with the prosecution of the work and shall be responsible for the proper care and protection of all materials delivered and work performed until completion and final acceptance, whether or not the same has been covered in whole or in part by payments made by the City.
- b. The Contractor shall provide sufficient competent watchmen, both day and night, including Saturdays, Sundays, and holidays, from the time the work is commenced until final completion and acceptance.
- c. In an emergency affecting the safety of life, limb or property, including adjoining property, the Contractor, without special instructions or authorization from the City, is authorized to act at his discretion to prevent such threatened loss or injury and he shall so act. He shall likewise act if instructed to do so by the City. Any compensation claimed by the Contractor on account of such emergency work will be determined by the City as provided in Section 1.404 hereof.
- d. The Contractor shall avoid damage as a result of his operations to existing sidewalks, streets, curbs, pavements, utilities (except those which are to be replaced or removed), adjoining property, etc., and he shall at his own expense completely repair any damage thereto caused by his operations.

- e. The Contractor shall shore up, brace, underpin, secure, and protect as may be necessary, all foundations and other parts of existing structures adjacent to, adjoining, and in the vicinity of the site, which may be in any way affected by the excavations or connected with the demolition and/or site clearance of the work embraced in this Contract. The Contractor shall be responsible for the giving of any and all required notices to any adjoining or adjacent property City, public & private utility companies, or other party before the commencement of any work. The Contractor shall indemnify and save harmless the City from any damages on account of settlements or the loss of lateral support of adjoining property and from all loss or expense and from all damages for which the City may become liable in consequence of such injury or damage to adjoining and adjacent structures and their premises.

## **SECTION 1-8 - EXECUTION AND PROGRESS**

**1.801 Subletting or Assigning or Contract.** The Contractor will not be permitted to sublet, assign, sell, transfer or otherwise dispose of the contract or any portion thereof, or his right, title, or interest therein; or to either legally or equitably assign any of the money payable under his contract, or his claim thereto, without the written consent of his surety and the Engineer. The Contractor will not be relieved of any responsibility through any of the above actions.

- a. The Contractor shall be as fully responsible to the City for the acts and omissions of his subcontractors, and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.
- b. Nothing contained in the Contract shall create any contractual relation between any subcontractors and the City.

**1.802 Execution of Work.** The proposal for each project will show the project period. The progress of the work shall be at a rate sufficient to complete the project within the project period. If it appears that the rate of progress is such that the project will not be completed within the project period, or if the work is not being executed in a satisfactory and workmanlike manner, the City may order the Contractor to take such steps as it considers necessary to complete the project within the period of time specified, or execute the work in a satisfactory manner.

**1.803 Limitation of Operations.** The Contractor shall conduct the work at all times in such a manner and in such sequence as will insure the least interference with traffic. He shall have due regard to the location of detours and to the provisions for handling traffic. He shall not open up work to the prejudice of work already started, and the Engineer may require the Contractor to finish a section on which work is in progress before work is started on any additional section. The Contractor shall so conduct his operations and maintain the work in such condition that adequate drainage shall be in effect at all times.

**1.804 Methods and Equipment.** The methods, equipment and appliances used shall produce a satisfactory quality of work, and shall be adequate to maintain the schedule of progress specified. Equipment used on any portion of the project shall be such that no injury to the roadway, adjacent property, or other streets will result from its use.

When the methods and equipment to be used by the Contractor in accomplishing the construction are not prescribed in the contract, the Contractor is free to use any methods or equipment that he

demonstrates, to the satisfaction of the Engineer, will accomplish the contract work in conformity with the requirements of the contract.

**1.805 Temporary Suspension of Work.** Work shall be suspended wholly or in part when, in the opinion of the Engineer, weather or other conditions are unfavorable to its satisfactory prosecution. Work shall also be suspended at the direction of the Engineer pending settlement or disputes arising out of failure of the Contractor to comply with the provisions of the contract. Written notice of suspension of work shall be given by the Engineer. When the conditions causing suspension no longer exist, such written notice shall be given to the Contractor by the Engineer. Promptly after such written notice, the Contractor shall resume prosecution of the work as provided in Article 1.802.

**1.806 Liquidated Damages.** Time is an essential element of the contract, and it is important that the work be pressed vigorously to completion.

For each working day that any work shall remain uncompleted either after the end of each project period or at the end of the contract completion date, the amount per working day specified in the proposal form will be assessed, not as a penalty but as predetermined and agreed liquidated damages. The City and Contractor specifically agree that the per working day amount to be assessed as liquidated damages is fair and reasonable and not excessive. The parties further agree that said per working day amount accurately reflect the anticipated loss and inconvenience to the public and lost revenue to or use by the City due to the project not being completed by the end of the project period or the end of the contract completion date. The City will prepare and forward to the Contractor an invoice for such liquidated damages. The final payment will be withheld by the City until the invoice is paid by the Contractor.

Due account shall be taken of any adjustment of the project period or the contract completion date granted under Article 1.807.

The assessment of liquidated damages for failure to complete the work either within each project period or the contract completion date shall not constitute a waiver of the City's right to collect for any additional damages which the City may sustain by failure of the Contractor to carry out the terms of its contract.

**1.807 Extension of Project Period or Contract Completion Date.** An extension of the project period or contract completion date may be granted only in writing by the City for any of the following reasons:

1. Additional work resulting from a modification of the plans for the project.
2. Delays caused by the City.
3. Other reasons beyond the control of the Contractor, which in the City's judgment would justify such extension.

No extension of project period or contract completion date will be allowed for variations between contract quantities and actual quantities which cannot be predetermined and which amount to less than twenty percent (20%) of the contract quantities unless approved by the Engineer.

**1.808 Abrogation.** If the Contractor abandons the work under this contract, sublets it or assigns it without the consent of the city, or if he fails to give his personal attention to it, or if it is the Engineer's opinion that he has unnecessarily or unreasonably delays or neglected the work or any part of it,

written notice to that effect is to be given to the Contractor by the Engineer. After such notice, no materials or equipment shall be removed from the work. If, within five (5) days thereafter, the Contractor does not take steps which, in the judgment of the Engineer, will insure the satisfactory completion of the work, then the City may declare this contract null and void and the security forfeited and may notify the Contractor in written to discontinue the work or any part of it; thereupon ceases the Contractor's right or possession of the ground and of all materials and equipment thereon. The City then, at its option, may enter upon and take possession of the work with all material, supplies, and equipment remaining thereon and by contract or otherwise, as the City may determine, may complete the work or the part of it designated, and charge the expense thereof to the Contractor using any materials or equipment found on the site. The expense so charged, together with all damages incurred, will be deducted from any funds due to become due under this contract, and should the unexpended balance of these funds be insufficient, the excess shall be at the cost of the Contractor and the sureties on the Contractor's bond. Neither completion of a part of the work nor the extension for any reason of the time of the completion of the work is to be considered a waiver of this right to abrogate the contract for abandonment, delay or unsatisfactory work.

**1.809 Termination of Contractor's Responsibility.** The contract shall be considered completed when the work has been accepted in writing by the City. Such acceptance shall release the Contractor from all further obligation with respect thereto, except as to conditions and requirements set forth in his bond.

**1.810 Assignment or Novation.** The Contractor shall not assign or transfer, any of its rights, duties, benefits, obligations, liabilities, or responsibilities under this Contract without the written consent of the City, provided, however, that assignments to banks, trust companies, or other financial institutions may be made without the consent of the City. No assignment or novation of this Contract shall be valid unless the assignment or novation expressly provides that the assignment of any of the Contractor's rights or benefits under the Contract is subject to a prior lien for labor performed, services rendered, and materials, tools, and equipment supplied for the performance of the work under this Contract in favor of all persons, firms or corporations rendering such labor or services or supplying such materials, tools, or equipment.

**1.811 Disputes.**

- a. All disputes arising under this Contract or its interpretation, whether involving law or fact or both, or extra work, and all claims for alleged breach of Contract shall within ten (10) days of commencement of the dispute be presented by the Contractor to the City for decision. All papers pertaining to claims shall be filed in quadruplicate. Such notice need not detail the amount of the claim but shall state the facts surrounding the claim in sufficient detail to identify the claim, together with its character and scope. In the meantime, the Contractor shall proceed with the work as directed. Any claim not presented within the time limit specified in this paragraph shall be deemed to have been waived, except if the claim is of a continuing character and notice of the claim is not given within ten (10) days of its commencement, the claim will be considered only for a period commencing ten (10) days prior to the receipt by the City of notice thereof.

- b. The Contractor shall submit in detail his claim and his proof thereof. Each decision by the governing body of the City will be in writing and will be mailed to the Contractor by registered or certified mail, return receipt requested, directed to his last known address.
- c. If the Contractor does not agree with any decision of the City, he shall in no case allow the dispute to delay the work but shall notify the City promptly that he is proceeding with the work under protest and he may then accept the matter in question from the final release.

## **SECTION 1-9 - MEASUREMENT AND PAYMENT**

**1.901 Payments.** The City, at its discretion, may include in such monthly estimates payments for materials that will eventually be incorporated in the project, provided that such materials are suitably stored on the site of the project at the time of preparing estimates for payment. Such payment is to be based upon the estimated value thereof as ascertained by the Engineer. Such material when so paid for by the City shall not be removed from the project without consent of the City and, in case of default on the part of the Contractor, the City may use or cause to be used by others these materials in construction of the project.

The City will retain five percent (5%) of the total contract amount for all work completed.

Payment of the retainage will be made within forty (45) days after project is substantially complete, provided the Contractor submits a Letter of Credit for 125% of the uncompleted work. Substantial completion will include water mains passing biological testing and placed into service. Sewer mains shall pass pressure testing and be televised with receipt of the inspection report.

The bid proposal price sheets include any and all work for each project. Any requirement shown in the drawings, but not listed separately in the proposal price sheets, are considered subsidiary to the work. This includes but is not limited to abandonments of existing utilities and any potholing required for utility locates prior to boring.

**1.902 Payments Withheld.** The City may withhold or, on account of subsequently discovered evidence, nullify the whole or a part of any certificate to such extent as may be necessary to protect itself from loss on account of:

1. Defective work not remedied.
2. Claims filed or reasonable evidence indicating probable filing of claims.
3. Failure of the Contractor to make payments properly to subcontractors for material or labor.
4. A reasonable doubt that the contract can be completed for the balance then unpaid.
5. Damage to another Contractor.
6. Damage to public or private property.

When the above grounds are removed, payment shall be made for amounts withheld because of them.

**1.903 Acceptance, Final Payment, and Release of Liability.** If final inspection reveals that all details of the work have been completed to his satisfaction, the Engineer shall tentatively accept the work, in writing, relieving the Contractor of further responsibility for the care and maintenance of the completed work and, provided that all equipment and materials have been removed from the right-of-way, shall also relieve the Contractor of further public liability. As soon as possible after tentative acceptance of the work, the Engineer shall measure the completed work and compute the quantities of work for which payment is to be made. Before final settlement is made, the City shall be satisfied with the completed work. When the Engineer is satisfied that all items of the work have been found to be consistent with the terms of the contract and specifications, a final estimate, including the retained percentage due the Contractor, shall be released for payment. Release of the final estimate shall constitute formal acceptance of the work. Acceptance by the Contractor of the final payment shall constitute release of the City and each of its officers and agents from any additional claim or liability hereunder for any act or negligence of the City or of any other person.

All prior partial estimates and payments shall be subject to correction in the final estimate and payment.

**1.904 Payment for Extra Work.** The Contractor will receive and accept payment for work performed under this contract as follows:

- a. Work Performed as Stipulated in the Contract. For all items of work performed which are covered by definite unit prices or lump sum amounts specified in the contract, the Contractor shall receive and accept compensation at the rate specified in the contract.
- b. Extra Work. Extra work ordered by the Engineer, of a quality or class not covered by the contract, will be paid for at an agreed price. For extra work ordered by the Engineer and performed on an agreed price basis, the Engineer and the Contractor shall enter into a written agreement before such work is undertaken. This agreement shall describe the extra work that is to be done and shall specify the agreed price or prices therefore.

**END OF SECTION**



## SECTION 2 SPECIAL PROVISIONS

### SECTION 2-0 - GENERAL

**2.001 General Provisions.** The general conditions are general in scope and may refer to conditions not encountered on the work covered by this contract. Any provisions of the General Provisions which pertains to a nonexistent condition and is not applicable to the work to be performed hereunder, or which conflicts with any provision of the Special Provisions shall have no meaning to the contract and shall be disregarded.

**2.002 Liquidated Damages.** It is understood and agreed that time is of the essence of the contract. Should the Contractor fail either to perform the work within any project time period or to complete the contract by the contract completion date as defined in the proposal, the Contractor shall pay to the City (amount as stated on proposal page) per working day of default unless extension of time granted by the City specifically provides for the waiving of liquidated damages (see 1.806, 1.807) for the time extension granted.

**2.003 Maintenance of Traffic.** The Contractor shall conduct his work so as to interfere as little as possible with public travel, whether vehicular or pedestrian. Whenever it is necessary to cross, obstruct or close roads, driveways and walks, whether public or private, the Contractor shall, at his own expense, provide and maintain suitable and safe bridges, detours, or other temporary expedients for the accommodation of public and private travel, and shall give reasonable notice to owners of private drives before interfering with them. Such maintenance of travel will not be required when the Contractor has obtained permission from the owner or tenant or private property, or from the authority having jurisdiction over public property involved, to obstruct traffic at the designed area.

**2.004 Provisions for Traffic Control and/or Barricading.** The Contractor shall provide barricades and maintain a means of traffic control applicable to work site conditions. The means of traffic control and barricade(s) type(s) shall be approved by City of Hastings inspector and by appropriate agency on which work is occurring, being either or combination of city, county, or state right-of-way.

The Contractor shall provide all approved barricades with lights and furnish flagmen as required. Contractor shall provide daily maintenance on all barricades, flashers, etc., during course of construction. A person will be designated by Contractor that is in their employment to be responsible for daily maintenance and shall be available 24 hours a day, seven days a week and will have a telephone number given to City of Hastings and appropriate governing agency on whose right-of-way project is taking place.

**2.005 Street Closing.** In the event it is deemed necessary for the Contractor to close any streets during the execution of his work, the Contractor shall notify the owner of such street closing 48 hours in advance, prior to any street closing due to open cut street crossing, and shall notify all vital departments to include police, fire, ambulance, sheriff, and City Engineer Departments.

## SECTION 2 – SPECIAL PROVISIONS

**2.006 Dust Control.** The Contractor shall be required to keep dusty conditions, caused by his operations, from being a source of complaint by adjacent property owners by watering down his haul routes or by other methods approved by the Engineer.

**2.007 Cover Crop.** A cover crop of winter rye will be applied at a rate of 50 lbs./acre for all seeded areas. Weight tickets shall be provided for all seed installed.

**2.008 Crop Ground Tillage.** Whenever construction of utilities impact farm ground, the Contractor shall repair all damaged areas to original grade insuring proper drainage to accommodate irrigation systems. The soil surface shall consist of a minimum of 12" of black dirt. The seed bed shall be prepared by chiseling to a depth of 12", then disking to remove clods and then final harrowing.

No additional monies will be provided for this work item. Any costs associated with this work effort shall be considered subsidiary to the installation of the utility installed.

**2.009 Fertilizer.** Prior to commencing seeding operations, the Contractor shall confer with the Engineer on the need for fertilizer. The application of fertilizer will be compensated via change order for a mutually agreed amount and quantity. Weight tickets shall be provided for all fertilizer installed.

**2.010 Working Hours.** Normal working hours will be considered to be from 8:00 a.m. to 5:00 p.m., Monday through Friday (holidays excepted: New Year's Day, Martin Luther King Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving, Friday after Thanksgiving, ½ day Christmas Eve, and Christmas Day). Any Contractor desiring other working hours must take exception to specifications for consideration by City of Hastings. Any exception must be approved or negotiated to mutual acceptance by Contractor and City of Hastings, final acceptance will be granted in writing.

**2.011 Removal and Replacement of Property Stakes.** If it is necessary to remove any property corners or markers during construction operations, the Contractor shall notify the Engineer so that the Engineer can establish reference ties. Any markers removed without notice to the Engineer shall be replaced at the Contractor's expense in accordance with the proper land surveying techniques.

**2.012 Gravel, Rock Replacement.** Contractor to replace gravel and rock in areas where existing on job site that have been removed or disturbed by work entailed in contract or disturbed by contractor for his convenience by his contractor methods. Applications rate shall be determined on job site and to satisfaction of City of Hastings engineer and/or inspector.

The following application rates shall be used unless otherwise directed and/or noted on the drawings.

<u>Location</u>	<u>Quantity</u>
Graveled County Roadways	3" Nominal thickness + 24 feet wide
Graveled City Streets	3" Nominal thickness + 24 feet wide

## SECTION 2 – SPECIAL PROVISIONS

Graveled Driveways	3" Nominal thickness + width of driveway
Limestone Driveways	3" Nominal thickness + width of driveway

**2.013 Appearance of Construction Area and Storage Site.** Contractor will be required to keep the construction area in a neat and orderly fashion that would be considered reasonable in regard to work being completed.

Where sidewalks, driveways, etc., exist, Contractor shall keep them free from debris and will be swept off at the end of the construction day. Storage site will be kept in a neat and orderly manner.

**Rev 9-17-14** No dirt will be allowed to be piled in the street overnight. Dirt piles on the terrace (or alternate locations) must meet all storm water management requirements.

Where Contractor will have a storage site for materials, equipment, etc., on property owned by City, it shall be kept in a neat and orderly manner, free from debris, accumulation of unused materials, etc. Any area used for storage, etc., shall be properly served from the public by temporary fencing if not within a fenced area.

Debris from job site must be removed same day as taken from street, yard, etc. Piling up of these materials, (i.e., concrete, brush, trees, tree limbs) will not be allowed on site.

**2.014 Construction Progress Meetings.** Construction progress meetings will be held at a predetermined time each week, time to be chosen at the preconstruction conference. City of Hastings will have in attendance the Project Engineer and Inspector. Contractor shall have Project Superintendent and job foreman present.

**2.015 Final Cleaning Up.** Upon completion of the work and before acceptance and final payment, the Contractor shall clean the street, borrow pits and all ground occupied by him in connection with the work of all rubbish, excess materials, false work, temporary structures, and equipment; all parts of the work shall be left in a neat and presentable condition.

**2.016 Preconstruction Conference.** A preconstruction conference will be held at City of Hastings offices with the contractor owner, superintendent, and job foreman prior to construction and all other city, county, state, and other necessary agencies will be notified of this meeting also.

Contractor shall submit to City a detailed construction progress schedule with major milestones prior to preconstruction meeting.

A preconstruction conference shall be arranged between the Director of Engineering and the Contractor prior to beginning construction. At this meeting the following items shall be addressed.

- a. Work by others. Coordination of work to be performed by subcontractors and other contractors performing work related to this project.
- b. Availability of land. The site and use of adjacent land shall be reviewed.

## SECTION 2 – SPECIAL PROVISIONS

- c. Project Engineer. The project engineer will be assigned by the Director of Engineering. The Contractor shall designate a construction foreman that will be responsible for communication with the project engineer.
- d. Change orders. Procedures for implementing change orders shall be reviewed.
- e. Tests and inspection. As described within these documents the Contractor shall perform all necessary tests and inspections. Any documented results shall be submitted to the project engineer. At all times the project engineer shall be allowed to inspect the work being performed.
- f. Safety and protection. The Contractor shall be responsible for all safety and necessary protection of all persons in attendance of the project site. The project engineer and other observers shall adhere to all safety precautions deemed necessary by the Contractor.
- g. Final inspection and payment. Final inspection shall be performed by the Director of Engineering and his representatives. When all aspects of this project, as described within these documents have been met, the Contractor may submit for final payment.
- h. Site security. The contractor shall erect a construction barrier around the project site. The barrier shall consist of a temporary fence with appropriate warning signs.
- i. Shop drawings, submittals. The required list of submittals shall be reviewed.

**2.017 Customer Relations.** Contractor shall exert all reasonable efforts to maintain good will for the benefit of City of Hastings with the landowners tenants, and lessees along the right-of-way and with the general public. The Contractor will not be allowed to start construction until he has adequate manpower and material to allow the job to progress smoothly and be complete in a reasonable amount of time. City of Hastings will have the authority to remove workers from the job site who exhibit horseplay and foul language to the public.

**2.018 Operations of the Contractor.** The Contractor shall confine his operations exclusively to easements and public right-of-way. If the Contractor desires to operate equipment or store materials on private property that does not have a utility easement, he must obtain permission from the property owner. Prior to release of the payment retention by the City of Hastings, the Contractor must restore the private property to original condition. If the landowner is not satisfied with the restoration, the City of Hastings will continue to hold the appropriate retention.

The quantities for seeding and sodding in the proposal include only easements and right-of-way. Any seeding and sodding required to restore areas where the Contractor has operated on private property without easements will be the responsibility of the Contractor.

**2.019 Woven Wire Fencing.** Provide new fencing as noted on the plans. The fence shall have brace posts at the end post and corner posts.

- 1) Provide new CCA (0.4lb/ft<sup>2</sup>) or creosote post.
  - a. End, corner and gate posts: 8 inches diameter x 8 feet long with a minimum set depth of 38 inches.

## SECTION 2 – SPECIAL PROVISIONS

b. Line and Anchor post: 5 inches diameter x 8 feet long with a minimum set depth of 38 inches. Line post spacing not to exceed 12 feet.

c. Brace Assemblies: Use single H-brace assemblies for spans less than 160 feet, use double H-brace assemblies for spans greater than 200 feet and not to exceed 700 feet without a braced line post assembly.

### 2) Steel T Post (line post)

a. 6-1/2 ft. Studded T-Post (1.33lb/ft with anchor plate) and rust resistant coating for above and below ground applications to be used at a ratio of 5 steel posts to 1 wood post, set depth of 18 inches.

3) Woven wire fence to be Red Brand style 989-9-11 or equal.

4) Provide standard 1-3/4 " hot dipped, galvanized staples with cut points and barbs.

Installation to be manufactures recommendation and as outlined in “Fences for the Farm” published by the University of Georgia, circular 774.

### **2.020 Swinging Gates.** Tubular construction gate.

1) 18 feet, 16 gauge tubular steel gate with 6 cross tube members and 50 inches tall, coated with rust and weather resistant coating.

**2.021 Portable Bathroom.** Contractor to supply and maintain a portable bathroom for employee use.

### **2.022 Culvert Pipe.**

1) HDPE which meets or exceeds the requirements of cell classification 324420C as defined in ASTM D3350. Can be joined with approved couplers. Minimum stiffness of 210kPa at 5% deflection with test in accordance to ASTM D2412.

2) Corrugated Metal Culvert to be 16 gauge, hot dipped galvanized, one piece length.

## **SECTION 2-1 - METHOD OF MEASUREMENT AND BASIS OF PAYMENT**

**2.101 Seeding.** Seeding of cover crop will be paid out to the closest square foot.

**2.102 Gravel Surfacing.** The resurfacing of gravel driveways, streets, access roads, county roadways, etc., shall include but not limited to sub grade preparation, sub grade compaction, sub grade trimming, placement, grading, transportation, materials, labor, and all other work and/or materials necessary to provide gravel surfacing. The Contractor shall replace all gravel surfacing lost due to the installation of utilities. The Contractor shall be reimbursed per ton as noted on the proposal. Quantities for gravel surfacing shall be computed using the average width of the resurfacing times the length and nominal thickness required. Weight tickets shall be provided for all gravel surfacing installed. Please also note any temporary gravel surfacing shall be considered subsidiary to the construction.

## SECTION 2 – SPECIAL PROVISIONS

**2.103 Crushed Concrete Surfacing.** The resurfacing of crushed concrete driveways, access roads, etc., shall include but not be limited to sub grade preparations, sub grade compaction, sub grade trimming, placement, grading, transportation, materials, labor, and all other work and/or materials to provide limestone surfacing. The Contractor shall replace all surfacing lost due to the work being completed. The Contractor shall be reimbursed at a per ton rate as noted on the proposal. Weight tickets shall be provided for all limestone surfacing installed. Please also note any temporary gravel surfacing shall be considered subsidiary to the construction.

**2.104 Storm Water Pollution Prevention Plan.** SWPPP permit to be acquired by the owner. Contractor to complete the required inspections and necessary maintenance.

**2.105 General Public Safety.** Security fencing must be placed two feet (2') from the edge of any open excavation. Fencing shall consist of four foot (4') high orange woven safety fence (snow fence) secured by steel T posts. All excavations next to a street, or in a street, must the latest revisions of the Manual for Uniform Traffic Control Devices and City of Hastings Requirements.

**END OF SECTION**

## **SECTION 3-0 GENERAL DESCRIPTION AND SCOPE OF WORK**

**3.001 General.** The City of Hastings is accepting bids for waste treatment lagoon dredging. The contractor is responsible for final design, construction, and completion. Lagoon sludge is to be pumped directly into dewatering geo-synthetic bags with the addition of polymer. The geo-synthetic bags are to be placed in an earthen containment and lined at minimum with a 16-mil reinforced polyethylene liner that is fully sealed. The containment basin shall convey the filtrate back to the lagoon that is being dredged by gravity piping. The perimeter of the containment area must be fenced with 48” woven wire.

The Bidder shall inform himself of all conditions and factors which would affect the execution of the work. No claims for financial compensation, based on the lack of such prior information (or its effect on the cost of the work), will be

### **I. Maxon Lagoon Dredging: HU 2024-28**

Activity	Schedule
Bid Opening	April 24, 2024
Contract award date	On or before, May 13, 2024
Pre-Construction Meeting followed by notice to proceed	TBD
Completion date	October 1, 2024

## **SECTION 3.1 CONTRACT ITEMS**

**3.101 Scope of Work.** The Contractor shall provide all labor, equipment, materials, and appurtenances necessary to complete the work.

The intent of these contract documents, specifications, drawings, and appendix are to provide the contractor a description of the proposed work. Final design to be completed by the contractor.

3.102 Shop Drawings. The contractor shall submit the following shop drawings:

- A. Geosynthetic liner (Section 4)
- B. Geotextile Dewatering Tube (Section 4)
- C. Polymer (Section 4)
- D. Culvert Pipe (Section 2)
- E. Containment Gravity Drainage Pipe (Section 4)
- F. Silt Fence Fabric
- G. Woven Wire Fence: Gates, Fabric, Posts, and Fasteners (Section 2)

H. Cover Crop Winter Rye Seed and tickets (Section 2)



**SECTION 4  
SLUDGE REMOVAL**

**PART 1 - GENERAL**

1.1 DESCRIPTION

- A. This work includes the removal and disposal of sludge from an existing lagoon. Sludge will be removed from the existing lagoon cells using a dredge pump and discharged into a Geotube Dewatering Container, or approved equal dewatering device.
- B. Contractor shall furnish all labor, materials, equipment, polymer, polymer feed system, and incidentals as shown, specified, and required in connection with deployment, and filling of the dewatering container.
- C. The dewatering containers shall be placed on a drainage pad with impermeable liner and containment berm. The dewatering system layout and dimensions are subject to the Contractor's proposed plan and containers sizes implemented. The filtrate shall be directed back to the lagoon via gravity drain pipe. The available area for this is shown on the reference drawing.
- D. Dewatered sludge shall be handled at a later date and is not included with this project.

1.2 SUBMITTALS

A. Plan of Construction

The Contractor must submit prior to commencing sludge removal and disposal operations:

- 1. A detailed Dewatering Plan of Construction. This plan shall include, but not be limited to, site plan, dewatering containment cell and drainage piping, geotube container layout, dredging or pumping methods, mass balance system showing density, percent solids, flow measurement all integrated into a real time controller, polymer type, polymer injection system/location, flocculation monitoring,, and filling method,
- 2. A copy of the manufacturer's installation instructions detailed for this project.
- 3. The qualifications and experience of personnel removing and disposing of sludge.
- 4. A copy of the Rapid Dewatering Test (RDT) or Geotube Dewatering Test (GDT) report for the specific material to be dewatered.
- 5. Submit fabrication drawings of the materials, equipment, and method of installation details for the complete system.
- 6. Submit manufacturer's product literature and specifications for materials utilized to construct geotube containers, including filling port details, connection details, site layout, piping, manifold, and related components.

7. Provide a mass balance of the pumping flow rates, chemical make-down, amount of dilution water, filtrate volume, density measurement, and percent solids – all integrated into a real time control system, showing a method of collection, and discharge point. Examples of system components can be found under Supporting Technologies on TenCate Web Page.
8. Details and layout of the dry or emulsion polymer make-down and metering system.

B. Materials Certification

Submit a signed certification from the geotube container manufacturer indicating the materials used meet the project specification requirements and are designed specifically for this purpose. The manufacturer must be certified to the ISO 9001:2015 standard and have an internal lab with a current GAI-LAP accreditation. Current certifications and accreditations for both must be provided.

1.3 QUALITY ASSURANCE

- A. Manufacturer shall have 5 years experience in manufacturing full size geotextile geotube tubes of 45 ft circumference or greater. Manufacturer must provide documented proof of a minimum of three completed projects with each project using their manufactured geotube container product to contain and dewater a minimum of 65,000 yd<sup>3</sup> of dredged insitu sediments for each project
- B. Installer shall be experienced in dewatering with geotextile tubes (at least 1 prior project).

1.4 PRODUCT DELIVERY, HANDLING, AND STORAGE

A. Product Delivery

Geotube container and components shall be delivered to the project site in a protective wrap or cover and each tube shall be clearly labeled. All containers greater than 1,000 pounds gross weight or to be installed in water shall be rolled on a steel pipe with the ends fitted with protective caps.

B. Product Handling

No hooks, tongs, or sharp objects shall be used for handling the containers. Also, the container should not be dragged along the ground. geotube containers should be unrolled into position as recommended by the manufacturer.

C. Product Storage

Geotube containers shall be stored in areas where water cannot accumulate, elevated off of the ground, and protected from conditions that will affect its properties or performance. Containers shall not be exposed to temperatures above 180 degrees Fahrenheit and the duration of storage time shall not exceed manufacturer's recommendation.

1.6 CONTRACTOR QUALIFICATIONS

- A. Personnel responsible for sludge removal must have experience in the removal of municipal wastewater sludge.

**PART 2 - PRODUCTS**

2.1 SLUDGE REMOVAL/DISPOSAL EQUIPMENT

- A. Furnish all equipment and materials necessary to remove and dispose of sludge from the wastewater lagoons. Assure that the equipment utilized is appropriate for the work and does not result in leakage or spillage of sludge or excess water.
- B. Assure piping and pumping equipment utilized for sludge removal is of good quality, competent materials, free of leaks, and leaking joints.
- C. Carefully handle sludge during all removal and disposal operations. Take care to clean equipment used throughout the removal and disposal process immediately upon completion and prior to relocating equipment from the removal and/or disposal sites.

2.2 DRAINAGE PIPING

- A. Pipe to convey liquid from the containment basin back to the lagoon to be ductile iron meeting AWWA C151/A21.51. Pressure class 350 shall be used for 12-inch diameter and below with sewer coat lining. Bed the pipe with gravel to achieve uniform grade, size the pipe and grade off contractor determined design criteria. A watertight seal must be installed around the penetration of the containment liner.

2.3 IMPERMEABLE GEOMEMBRANE

- A. Containment liner to be 100% sealed with no leaks. At minimum, provide a 16-mil reinforced polyethylene liner with welded seams. Liner installation per manufacturer's recommendation. Liner to meet the following:

WEAVE Woven black HDPE scrim using 1600 denier tapes  
 COATING 2.5 mil average, two sides (59 gsm, two sides)  
 COLOR Black  
 WEIGHT 7.3 oz/yd<sup>2</sup> (247 g/m<sup>2</sup>) +/- 5%

GRAB TENSILE	Warp 215 lb 956N	Weft 215 lb 956 N	ASTM D5034
TOUNGE TEAR	Warp 70 lb 311 N	Weft 70 lb 311 N	ASTM D2261
TRAPEZOIDAL TEAR	Warp 65 lb 289 N	Weft 45 lb 200 N	ASTM D4533
MULLEN BURST	400 psi 2760 kPa		ASTM D3786
HYDROSTATIC RESISTANCE	163 psi 1224 kPa		ASTM D751
MOISTURE VAPOUR TRANSMISSION	0.05 US Perms. Meets A, B & C Perm rating		ASTM E96
PERMEABILITY	<6 x 10 <sup>-8</sup> cm/sec		ASTM D4491

PUNCTURE RESISTANCE	94 lb 420 N	ASTM D4833
ACCELERATED UV WEATHERING <sup>1</sup>	>80% strength retention after 2000 hours exposure @0.77 W/m <sup>2</sup> /nm or 1200 hours exposure @ 1.35 W/m <sup>2</sup> /nm	ASTM G150 ASTM G154

Q.U.V [A-340 Lamps]; 8 hrs UV @ 60°C; 4 hrs condensation @ 50°C

## 2.4 GEOTUBE CONTAINER

- A. Geotube Container Material: The container material shall be fabricated from GT500, a “Specially Engineered Dewatering Textile” manufactured from high tenacity polypropylene multifilament and monofilament yarns, which are woven into a stable network such that the yarns retain their relative position. The Geotube container material shall be inert to biological degradation and resistant to naturally encountered chemicals, alkalis, and acids.
- B. The Geotube container shall be fabricated by sewing together mill widths of the GT500 woven engineered textile to form a tubular shape. The sewn seams shall be two parallel rows of 401 “lockstitch” with a 3/8” to 1/2” spacing between rows. The sewing thread shall be multi-ply polyester.
- C. Geotube containers 45 feet or greater in circumference must be fabricated with the mill roll length of the GT500 woven engineered textile and adjacent seams being in the circumferential direction with the closure of the Geotube container having a longitudinal seam on the bottom of the container. Each Geotube container shall be fabricated with one or more PVC filling ports located along the top centerline of the Geotube container. The filling port is comprised of approximately 1.5” thick (inside and outside) flange rings that sandwich the Geotube GT500 woven engineered textile between 1/8” thick rubber gaskets and secured with 3/4” bolts. The resulting connection strength exceeds that of a traditional sewn-in, textile filling port. In addition to the flanges, the fill port shall include a fabric sleeve that may be secured around the feed line to prevent leakage.
- D. PVC fill ports are for the attachment of the dredge or pump discharge line to the Geotube container and shall be located at intervals of no more than 100 feet, or as recommended by the manufacturer. Fill ports shall be ridged PVC with an inner port body and outer port body each comprising one or more cellular surfaces capable of distributing a force caused by the clamping of the inner port body and outer port body together with steel bolts and nuts. Fill ports shall be either 4” (GP4) or 8” (GP8) in diameter with a 30-inch long, flexible non-woven 8 oz. geotextile sleeve.
- E. “Specially Engineered Dewatering Textile” material and factory-sewn seams utilized in the construction of the Geotube container shall meet or exceed the values shown in the table below.

**GT500 Polypropylene- “Specially Engineered Dewatering Textile”**

Mechanical Properties	Test Method	Unit	Minimum Average Roll Value	
			MD	CD
Wide Width Tensile Strength (at ultimate)	ASTM D4595	kN/m (lbs/in)	78.8 (450)	109.4 (625)
Wide Width Tensile Elongation	ASTM D4595	%	20 (max.)	20 (max.)
Factory Seam Strength	ASTM D4884	kN/m (lbs/in)	70 (400)	
CBR Puncture Strength	ASTM D6241	N (lbs)	8900 (2000)	
Apparent Opening Size (AOS)	ASTM D4751	mm (U.S. Sieve)	0.43 (40)	
Water Flow Rate	ASTM D4491	l/min/m <sup>2</sup> (gpm/ft <sup>2</sup> )	813 (20)	
UV Resistance (% strength retained after 500 hrs)	ASTM D4355	%	80	

Filtration Properties	Test Method	Unit	Typical Value
Pore Size Distribution (O <sub>50</sub> )	ASTM D6767	Micron	80
Pore Size Distribution (O <sub>95</sub> )	ASTM D6767	Micron	195

Physical Properties	Test Method	Unit	Typical Value
Mass/Unit Area	ASTM D5261	g/m <sup>2</sup> (oz/yd <sup>2</sup> )	585 (17.3)
Thickness	ASTM D5199	mm (mils)	1.8 (70)

**PART 3 - EXECUTION**

3.1 GENERAL

- A. The Contractor is solely responsible for compliance with all local, state, and federal regulations pertaining to sludge removal. Any enforcement actions taken by local, state, and/or federal authorities for noncompliance with the pertinent regulations are the sole responsibility of the Contractor, including, but not limited to, any fines and work stoppages.

3.2 LAGOON DEWATERING

- A. The existing lagoon will not be dewatered. Dredging will be required.

3.3 SLUDGE HANDLING

- A. Carefully handle sludge during removal and filling of geotubes. Immediately clean sludge spills to the satisfaction of the Engineer and assure no sludge remains on any surface that it is accessible to humans or equipment.
- B. Adequately clean equipment utilized in the removal of sludge and filling of geotubes prior to removing it from the site to prevent sludge being transported through or off the construction site.
- C. Strictly limit the access of humans and animals/livestock to sludge removal and geotube areas to prevent any contact with raw sludge. Contain all sludge within the boundary of the designated geotube area and employ appropriate erosion control measures and containment procedures to ensure that sludge is not spilled to sites outside of this boundary.

3.4 ESTIMATED SLUDGE

- A. City of Hastings staff measured the sludge and water depths of the west lagoon cell on May 16, 2023.
- B. Sludge testing results can be found in the Appendix to the project manual. The estimated volume of sludge was calculated using the average results of the field measurements and are summarized in the following table.

<b>Sludge in West Lagoon (North 600' )</b>	
<b>Quantity</b>	<b>Description</b>
300,000	Area of Lagoon (sq. ft.)
3.6	Avg Depth (ft) - discarding the 10' measurement
1,066,773	ft3 (Volume of sludge in place)
<b>39,510</b>	<b>CY (Volume of sludge in place)</b>
85,341.8	Solids Volume (ft3) if lagoon is 8% solids (unknown, best estimate)
3,160.8	Solids Volume (yd3) if lagoon is 8% solids (unknown, best estimate)

- C. Actual sludge quantities may vary from the estimated value, the contractor is responsible for dredging at least 40,000 yd<sup>3</sup>.

3.5 SLUDGE REMOVAL

- A. Sludge removal includes the removal and transport of the sludge into the geotube container.
- B. A dredge pump mounted on a barge will be used to remove the sludge.
- C. Sludge disposal not included in the scope of this project. The sludge is required to be dewatered in geotube containers until the sludge can be legally hauled and pass the EPA paint filter test requirements.

3.6 DEWATERING SYTEM SITE PREPARATION

- A. Grade the site to remove any deleterious materials such as sharp objects or large protruding rocks and grub to remove all roots and vegetation.
- B. Level the site from side to side with no more than a 0.5% grade from end to end.
- C. Construct a containment berm around the dewatering site perimeter. Height of the containment berm shall be approximately 33% to 67% of the potential tube dewatering tube height.
- D. A trench shall be excavated next to the containment berm, sloped to provide drainage to the opposite (lower) side of the dewatering site.
- E. Install an impermeable geomembrane (16-mil reinforced polyethylene liner) over the entire dewatering site, including the drainage trench and the perimeter berm.
- F. A drainage medium shall be required on top of the asphalt and under the geotube containers. Acceptable materials would be Geotube Filtration Fabric (GFF) or sufficient washed crush stone to create voided area for drainage. If used, the three-dimensional, GFF shall be installed prior to placement of the geotube container and may be installed in between each layer. The GFF provides drainage beneath the geotube containers for each layer especially when stacking.
- C. Prior to placing the geotube containers, the ENGINEER shall inspect the prepared area, and no containers shall be placed thereon until the area has been favorably reviewed and approved by the engineer.
- D. The GFF must meet the specification shown in the table below.

**GFF-Geotube Filtration Fabric**

Mechanical Properties	Test Method	Unit	Typical Roll Value	
			MD	CD
Grab Tensile Strength	ASTM D 4632	N (lbs)	1891.3 (425)	1557.5 (350)
Trapezoid Tear Strength	ASTM D 4533	N (lbs)	934.5 (210)	689.8 (155)
Puncture Strength	ASTM D 4833	N (lbs)	734.3 (165)	
Mullen Burst Strength	ASTM D 3786	kPa (psi)	5511.1 (800)	
Air Flow	ASTM D 737	cfm	1300	
Thickness	ASTM D 5199	mm (mils)	4.8 (190)	

Physical Properties	Test Method	Unit	Typical Value
Weight	ASTM D 5261	g/m <sup>2</sup> (oz/y <sup>2</sup> )	342.4 (10.1)
Fiber Content			100% PP
Construction		EPI x PPI	26 x 18

### 3.7 POLYMER

- A. Polymer Testing: Rapid Dewatering Test (RDT) or Geotube Dewatering Test (GDT) should be conducted to help determine proper drainage, volume reduction, and type and dosage of conditioners and or polymers. The RDT or GDT can assist in determining filtration rates that can be compared to full- scale material flow rates. Conditioner and/or polymer are generally used to achieve the desired rate of dewatering and the clarity and quality of the effluent water. The Project Engineer must approve the chemical program. (see appendix for previous completed polymer testing).
- B. Polymer Dosing: The Chemical Control and Tracking System (CCTS) shall be capable of supplying the chemicals at the required feed rates and pressures. The CCTS shall be specified and/or customized for each application. The polymer make down system shall be capable of providing polymer at the recommended make-down percentage (typically 0.25 to 1.0 percent). If a coagulant or additional chemical is required, the feed equipment shall be capable of delivering the product at the required flow rate and pressure. All the feed equipment and related controls and automation shall be in an enclosed trailer or skid protected from the weather. The dredge line and any contact with the dredged material shall be outside of the trailer or enclosure. The chemical injection points are to be placed to minimize the time lag between the feed rate adjustment and the injection. In general, the CCTS shall be placed as close as practical to the dredge line near the Geotube piping manifold. Clean water and electrical connection shall be provided to the CCTS. At least one tote of emulsion polymer can be placed within the CCTS enclosure. The required components of the CCTS shall include:
1. Polymer make down system with progressive cavity metering pump
  2. Coagulant feed pump (where required) with pump specified to match product
  3. Operator interface and controller
  4. Remote controller to allow for remote adjustments
  5. Flow meter
  6. Slurry Density meter
  7. Slurry pump and optional grinder for density loop applications
  8. Lap top computer

### 3.8 PLACEMENT OF GEOTUBE CONTAINER

- A. Place geotube containers within the constructed containment.
- B. The unrolled geotube container should be placed on top of the drainage media and be unrolled down the length direction of the dewatering site, then unfolded if required.



- C. Fill ports should be located along the top, centerline of the unrolled Geotube container. The dimensions of the feed pipe and the opening of the ports should be measured prior to connecting the flanges.
- D. Set up the make down polymer injection system with the polymer best suited for your project. Contact geotextile tube manufacturer for more information.
- E. After injection of the required polymer into the sludge stream, a sample of the flocced material shall be collected prior to pumping the treated sludge into the dewatering tube to ensure the desired results.

### 3.9 FILLING PROCESS

- A. Following the tube placement, filling with materials from the source shall be accomplished in accordance with the approved Plan of Construction. The discharge line of the dredge pump shall be fitted with a valve or manifold system to allow for control of the rate of filling of which Geotube container will be filled. The manifold system shall be fitted with an internal mechanism such as a pinch valve to allow the Contractor to regulate the filling rate and pressure into the Geotube container. The manifold must also be fitted with a sampling port installed close to the first point of connection to the first Geotube container to enable the Contractor to sample the material being pumped to ensure the proper flocculation of conditioner or polymer are being used. Any excess discharge shall be directed away from the tubes into a designated area. Before filling, the fill ports not being used for filling shall be closed according to the manufacturer's recommendations to prevent loss of material during filling of the Geotube containers.
- B. The dredge or pump discharge pipe shall be free of protrusions that could tear the Geotube surface. The dredge or pump discharge pipe shall be supported in a manner to reduce stress on the PVC fill port. Excessive movement of the dredge or pump discharge pipe during filling can result in damage to the Geotube container or to the PVC fill port. The Connection Detail supplied by the manufacturer should be followed for the best method to affix the dredge or pump discharge pipe to the fill port. The dredge or pump discharge flow rate shall not change abruptly causing the hydraulic pulse action in the tube that would temporarily exceed fabric maximum tensile force design.
- C. The Geotube containers shall be filled as evenly as possible until the design height has been achieved. Effluent water shall be allowed to adequately drain away from the Geotube container.
- D. After the initial filling cycle, allow Geotube containers to dewater, then the Geotube containers may be filled again to the recommended height. This process can be repeated until the Geotube dewatering process is completed. Upon completion of filling the Geotube container, the Fill Port sleeves shall be closed by rolling the sleeve down to the top of the port flange and closing the clamp.
- E. Geotube container recommended filling heights will be supplied by the manufacturer.
- F. Overall compliance with the manufacturer's installation instructions is required.

**END OF SECTION**

Appendix A - Lagoon Sludge Depths

LAGOON SLUDGE DEPTHS as MEASURED in 2023

EAST (Feet)	600	0.6	2.6	2.1	2.1	1.9	1.9	2	2	2	2.1	3.6	WEST
	550	0.9	2.75	2.4	2	2	2.1	2.1	2.1	2.1	2.75	3.5	
	500	1.5	2.5	2.5	2.1	2.1	2.2	2.1	2.1	2.1	2.5	3.5	
	450	2	2.8	2.8	2.5	2.4	2.4	2.5	2.75	2.8	3	4	
	400	1.5	3	3	2.8	2.5	2.5	2.5	2.5	3.2	3.5	3.5	
	350	1.5	3.5	3.1	3	2.9	2.5	2.75	2.75	3	3.4	4	
	300	2	3.5	3.1	3.1	3.1	3	2.9	2.9	3.5	3.5	3.5	
	250	2	4	4	3.75	3.5	3.1	3.5	3.5	3.9	4	4	
	200	2.5	4.5	4.1	4	3.9	3.75	3.9	4	4	4.1	4.5	
	150	3	5	4.8	4.75	4.25	4.25	4.25	4.5	4.5	4.75	4.75	
	100	4	6	5	5	5	4.9	4.75	4.75	4.75	4.75	5	
	50	4.8	5	5	5	5	4.5	4.5	5.5	5.5	5.5	4.5	
10	2	2	4	3	1.5	1	1	1	2.5	3	2.5		
0,0		10	50	100	150	200	250	300	350	400	450	500	

(Feet)  
NORTH

Note: Rock Depths Vary from 6' to 2 foot on 10' N and E  
 Samples for sludge analysis came from cells in orange.

Sludge in West Lagoon (North 600' )	
Quantity	Description
300,000	Area of Lagoon (sq. ft.)
3.6	Avg Depth (ft) - discarding the 10' measurement
1,066,773	ft3 (Volume of sludge in place)
<b>39,510</b>	<b>CY (Volume of sludge in place)</b>
85,341.8	Solids Volume (ft3) if lagoon is 8% solids (unknown, best estimate)
3,160.8	Solids Volume (yd3) if lagoon is 8% solids (unknown, best estimate)

## APPENDIX B: POLYMER TRIAL

DEWATERING PERFORMANCE TRIAL  
HASTINGS UTILITIES PROJECT  
LAGOON DREDGING

For:  
Nutriject  
ATTN: Scott Wienands  
[scott@nutriject.com](mailto:scott@nutriject.com)

By:  
WaterSolve, LLC  
5031 68th St., SE  
Caledonia, MI 49316  
[www.gowatersolve.com](http://www.gowatersolve.com)  
616-575-8693



July 14<sup>th</sup>, 2023



## **1. Scope of Work**

WaterSolve, LLC was tasked to perform a geotextile tube dewatering performance trial and Cone Tests on “Lagoon Sludge” collected for Hasting Utilities c/o Nutriject’s “Lagoon Dredging” project. The objectives of these dewatering trials were to identify chemical conditioning program(s), identify polymer flocculant(s), and dosing rate(s) for a potential geotextile tube dewatering application. The objectives of subsequent Cone tests were to measure total solids of the flocculated, contained, and dewatered residual after passage through the geotextile tube fabric.

## **2. Materials & Methods**

One five-gallon sample of sludge was received at WaterSolve’s Laboratory (Caledonia, MI) on July 12<sup>th</sup>, 2023. Preliminary testing showed that a 1:1 (sludge: water) dilution would be needed for testing. Samples of residual were diluted, mixed, and 150-mL samples were placed in graduated, glass jars. Several polymers (emulsions) were “made-down” (200-mL) at a 0.5% concentration for this dewatering trial. Polymer (3 to 5-mL; 100 to 167-ppm) was added to a 150-mL sample with a plastic syringe and moderately tumbled five to seven times. Observations of water release rate, water clarity, and flocculent appearance were recorded on appropriate data sheets (Appendix A). Polymer(s) that flocculated and dewatered these residuals most effectively were re-evaluated with lower doses to isolate the most efficient dewatering and flocculating polymer(s). A Hach DR 2800 with a measurable limit of up to 750-mg/L suspended solids were used to measure Total Suspended Solids (TSS) after the samples were poured through the geotextile tube fabric.

Percent total solids (dry weight) of the initial samples in-situ, homogenized form, dilution, and dewatering cake (captured on the geotextile tube fabric) were measured (Appendix B).

## **3. Results**

Chemical conditioning with Solve 9244 was determined to flocculate and dewater the residual most effectively compared to the other chemical conditioning programs (Appendix A). Water release volume and flocculent appearance were good to excellent when a 5.0-mL (167-ppm, 10.7-lbs per dry ton) dose of Solve 9244 was added to a 150-mL sample.

The initial samples in-situ measured at 14.4-percent solids. The samples homogenized form measured at 8.4-percent solids on average. The homogenized samples 1:1 diluted form measured at 3.1-percent solids. After passing 1,000-mL of diluted 1:1 and conditioned (167-ppm of Solve 9244) sample through the geotextile tube fabric, percent solids increased to 15.6-percent after sixty minutes. From this 1,000-mL sample, 500-mL and 775-mL of water was released in one minute and sixty minutes, respectively, after passage through the fabric. Total



suspended solids (TSS) measurements were taken on the filtrate after passage through the geotextile tube fabric. The TSS of the filtrate measured 46-mg/L.

#### **4. Recommendations**

We recommend an application of Solve 9244 (167-ppm, 10.7-lbs/dry ton) for dewatering residuals in a geotextile tube application to pass a paint filter test for subsequent disposal. The dose may vary based on the solids concentration in the pumped line. Additional evaluation is recommended for determining optimal inline percent solids thresholds for geotextile tube performance including filtrate release and solids consolidation over time.

Solve 9244 is required to be made-down at 0.5-percent with a polymer make-down unit or aged in batch/feed tanks prior to injection into the residual line. Moderate to high mixing energy is required between the polymer introduction points and the geotextile tube containers (e.g., two to three bends in the discharge line and/or inline static mixers).

Expected time to being able to pass a Paint Filter Test is unpredictable in a geotextile tube container from these bench-scale experiments. An onsite, laboratory hanging bag or geotextile tube dewatering trial (GTDT) may be used and is recommended if the timeline for achieving project goals of dry weight solids and geotextile tube filtrate characteristics is in question for this application. Additional dewatering evaluations over time are recommended if project objectives for consolidation are greater than passing a Paint Filter Test.

Please note, while a composite sample may give us an indication of an average treatment scenario, it does not indicate pockets of concern for treatment effectiveness or areas that may require a higher or lower dose of chemistry, or contain higher in situ solids, since the areas of concern may be masked by factors of dilution from other areas.

Due to potential variability of the material, daily on-site testing and chemical conditioning verification are recommended during pumping operations.

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Appendix A - Dewatering Trial



**WaterSolve, LLC**

Clearly thinking about your water treatment!

**DEWATERING PERFORMANCE TRIAL**

Date:  
Analyst: *NM*

Customer: *Hastings Utilities C/O Nutriject*  
Location:  
Equipment in Service:

1=Best      6=Worst

Jar Number	Polymer Name	Polymer Dosage (mL)	Sample Size (mL)	Water Rel. Rate (1 - 6)	Water Clarity (1 - 6)	Floc Appearance (1 - 6)	Comments		
Polymer make-down concentration = <u>0.5</u> %									
Dilution of test sample = <u>1:1</u>									
1	9340	3	150	6	6	6			
2	9236	3		5	5	5	Cationics Better		
3									
4	127	3			5	5	4		
5	136				5	5	4		
6	137				5	5	5		
7	210B				5	5	5		
8									
9	212B					5	5	5	
10	216B					5	5	5	
11	216D					5	2	5	
12	218B					5	5	5	
13									
14	9205					4	4	3	
15	9222					5	5	5	
16	9236					5	5	5	
17	9244					4	3	4	
18	9248			3		4	5	4	
19									
20	216D			4		4	3	2	
21	9205			4		4	4	4	
22	9244			4		3	2	2	Best Cationic
23									
24									
25									
26									
27									
28									



**WaterSolve, LLC**  
Clearly thinking about your water treatment!

**DEWATERING PERFORMANCE TRIAL**

Date:  
Analyst: EE

Customer: Hastings Utilities C/O Nutriject  
Location:  
Equipment in Service:

1=Best      6=Worst

Jar Number	Polymer Name	Polymer Dosage (mL)	Sample Size (mL)	Water Rel. Rate (1-6)	Water Clarity (1-6)	Floc Appearance (1-6)	Comments	
Polymer make-down concentration = <u>0.5</u> % Dilution of test sample = <u>1:1</u>								
1	<u>9244</u>	<u>4</u>	<u>150</u>	<u>2</u>	<u>5</u>	<u>2-3</u>		
2	}	<u>5</u>	}	<u>1</u>	<u>2-3</u>	<u>2</u>	<u>Best Dose</u>	
3		<u>3</u>		<u>2</u>	<u>5</u>	<u>4</u>		
4								
5		<u>3.5</u>		<u>2</u>	<u>5</u>	<u>4</u>		
6		<u>4.0</u>		<u>2</u>	<u>3</u>	<u>2-3</u>		
7		<u>9244</u>		<u>4.5</u>	<u>2</u>	<u>3</u>		<u>3</u>
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
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28								

Cone Test / RDT: 1000 mL sample conditioned with 34 mL of 9244 poured thru Geotextile Fabric.  
Filtrate Quality: TSS- 46 mg/L      Turbidity- \_\_\_\_\_ NTU      Filtrate collected @ 1min: 500 60min: 775



**Appendix B - Percent Solids**

Customer Name/Application Hastings Utilities C/O Nutriject

Date \_\_\_\_\_ Technician \_\_\_\_\_ Oven Temperature \_\_\_\_\_

Sample ID In-Situ Dish Number 8 Dilution A

Dish (dry) = 43.080 g Dish, Sample (wet) = 92.607 g Dish, Sample (dry) = 50.227 g

Dish, sample (wet) - Dish (dry) = 49.527 (A) Dish, sample (dry) - Dish (dry) = 7.147 (B)

**Total Solids**  $B \div A \times 100 =$  14.4 % Dry Weight Solids

Sample ID Homogenized (1) Dish Number 18 Dilution A

Dish (dry) = 46.324 g Dish, Sample (wet) = 131.388 g Dish, Sample (dry) = 53.437 g

Dish, sample (wet) - Dish (dry) = 85.064 (A) Dish, sample (dry) - Dish (dry) = 7.113 (B)

**Total Solids**  $B \div A \times 100 =$  8.4 % Dry Weight Solids

Sample ID Homogenized (2) Dish Number 19 Dilution A

Dish (dry) = 44.970 g Dish, Sample (wet) = 145.421 g Dish, Sample (dry) = 53.468 g

Dish, sample (wet) - Dish (dry) = 100.451 (A) Dish, sample (dry) - Dish (dry) = 8.498 (B)

**Total Solids**  $B \div A \times 100 =$  8.5 % Dry Weight Solids

Sample ID Dilution Dish Number 16 Dilution 1:1

Dish (dry) = 44.226 g Dish, Sample (wet) = 101.369 g Dish, Sample (dry) = 46.000 g

Dish, sample (wet) - Dish (dry) = 57.143 (A) Dish, sample (dry) - Dish (dry) = 1.774 (B)

**Total Solids**  $B \div A \times 100 =$  3.1 % Dry Weight Solids

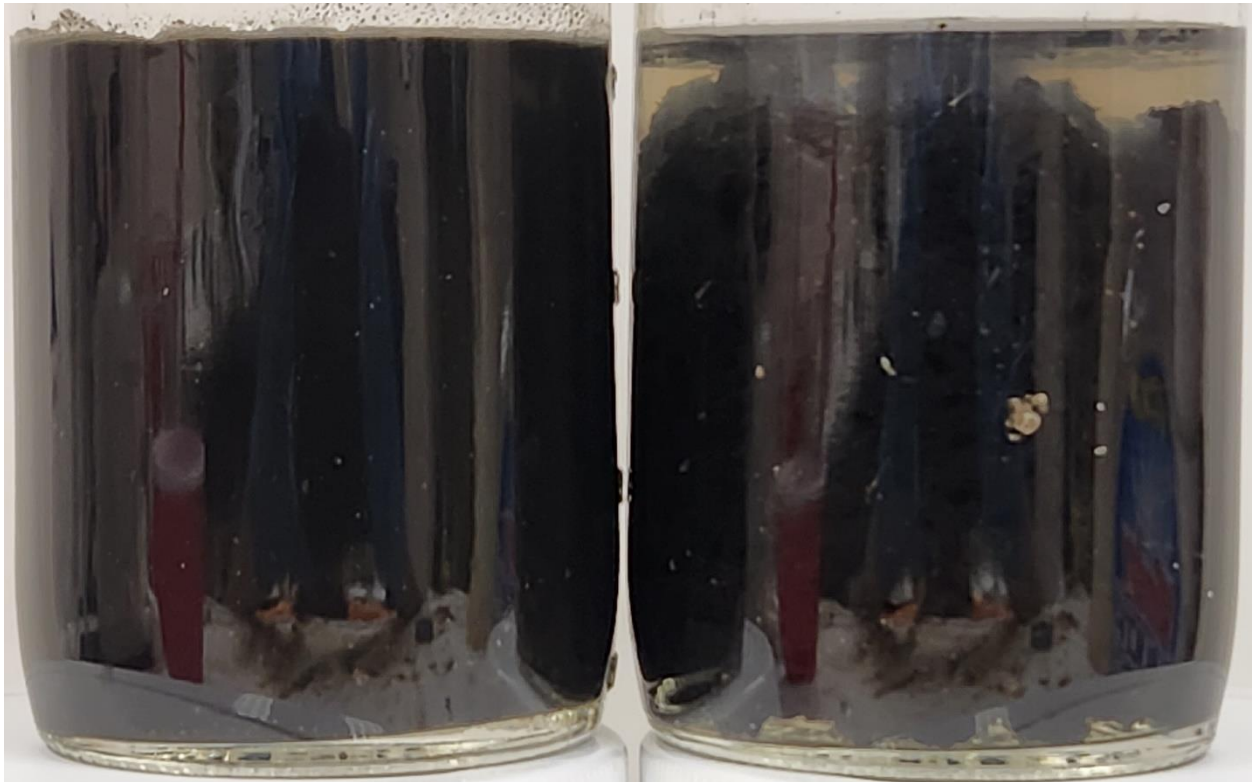
Sample ID One-hour Cake Dish Number 12 Dilution "1:1"

Dish (dry) = 49.848 g Dish, Sample (wet) = 130.574 g Dish, Sample (dry) = 62.465 g

Dish, sample (wet) - Dish (dry) = 80.726 (A) Dish, sample (dry) - Dish (dry) = 12.617 (B)

**Total Solids**  $B \div A \times 100 =$  15.6 % Dry Weight Solids

### Appendix C – Photographs



One hundred fifty milliliters of unconditioned diluted sample (left), One hundred fifty milliliters diluted sample conditioned with Solve 9244 (right).



One thousand milliliters of diluted sample conditioned with Solve 9244 was poured through geotextile tube fabric, the dewatered cake (left) and captured filtrate (right) are displayed above.



### Appendix D- Chain of Custody

		5031 68th Street SE Caledonia, MI 49316 Phone (616)575-8693 www.gowatersolve.com		<h2 style="margin: 0;">Chain of Custody Record</h2>										Pg. ____ of ____ COC# Lab									
<b>For Lab Use Only</b>																							
Received By			Client Name						Project Name						Analysis Requested						Please note any known hazardous material contained in the samples or any other helpful information about the samples below.		
Date Received			Hastings Utilities c/o Nutriject						Lagoon Dredging						Geotextile Dewatering	Settling Application	Other* (comments)	Total Suspended Solid	Turbidity	pH		Other** (comments)	Other*** (comments)
Lab Bin #			Address						Client Project No./P.O. No.														
WS Job #			City, State Zip						Contact/Report To														
Project Lab Tech.			Phone/Email						Invoice To														
			dgdownski@cityofhastings.org						ap@cityofhastings.org														
Schedule	Matrix Code	Sample Number	Field Sample ID				Container ID/Type	Sample Date	Sample Time	Comp	Grab	Matrix	Limit mg/L	Limit NTU	Limit range	Limit Units	Limit Units	Sample Comments					
			1 Lagoon Sludge				bucket	7-11-23	10:00 AM			X											
Sampled By (print)			Is this sample designated as hazardous waste per RCRA?						Sample Comments														
Daniel Gdowski			( ) No ( ) Yes (comments)																				
Sampler's Signature			Are there any other hazards or contaminants of concern?																				
			( ) No ( ) Yes (comments)																				
Company			How Shipped? Hand _____ Carrier _____ Tracking No.																				
Hastings Utilities																							
Relinquished by			Date		Time		Received by		Date		Time												
			7-11-23		11:00 AM																		
<b>Project Information</b>			Briefly describe the project objectives:																				
Type of Material/Residual			<input checked="" type="checkbox"/> Municipal Wastewater           ___ Municipal Water Treatment           ___ Lake/Pond/River Sediment (circle one)           ___ Industrial/Process           ___ Mine Drainage           ___ Other _____																				
Application			<input checked="" type="checkbox"/> Geotextile Tube Dewatering           ___ Settling           ___ Clarification           ___ Mechanical Dewatering           ___ Thickening           ___ Other _____																				
How was the sample obtained?			<input type="checkbox"/> Individual Core(s) (Best sample collection technique with only solids from core, discard overlying water, overlying water should be sent separately) <input checked="" type="checkbox"/> Composite (PLEASE NOTE, while a composite sample may give us an indication of an average treatment scenario, it does not indicate pockets of concern for treatment effectiveness or areas that may require a higher or lower dose of chemistry, or contain higher in-situ solids since the area of concern may be masked by factors of dilution from other areas)           ___ Other _____																				
Are there specific requirement or permit limitations? (i.e. filtrate turbidity, TSS, or other parameters)									Where will the filtrate/treatment effluent be discharged?						Solids concentration of sample (% dry weight solids)								
															If known _____ % In-situ _____ %								
Please draw a diagram of the body of water and identify where the samples were collected.			Project Comments																				

SDS - Available upon request.

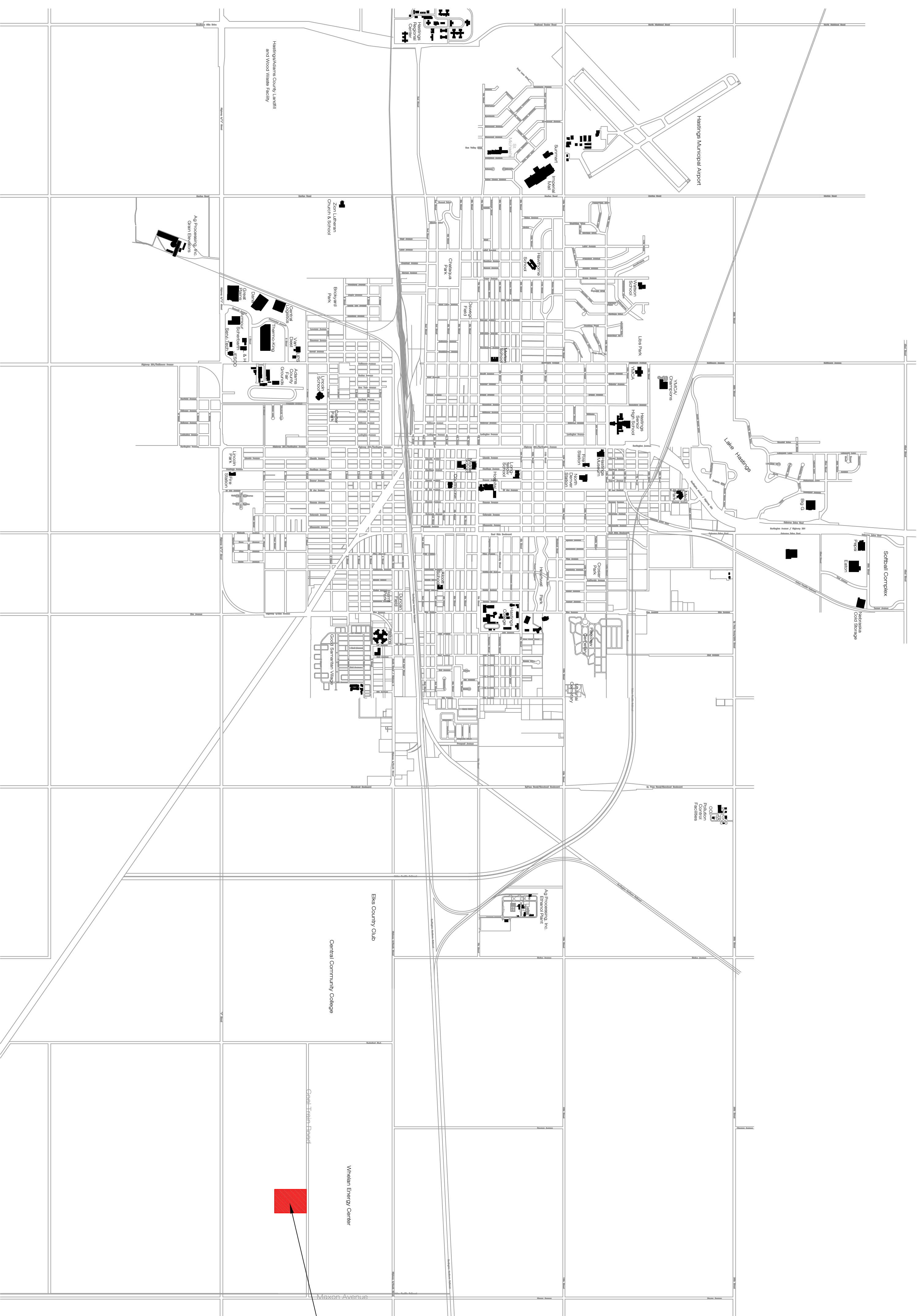


# City of Hastings Nebraska



## Maxon Lagoon Dredging Project

Contract: HU 2024-28

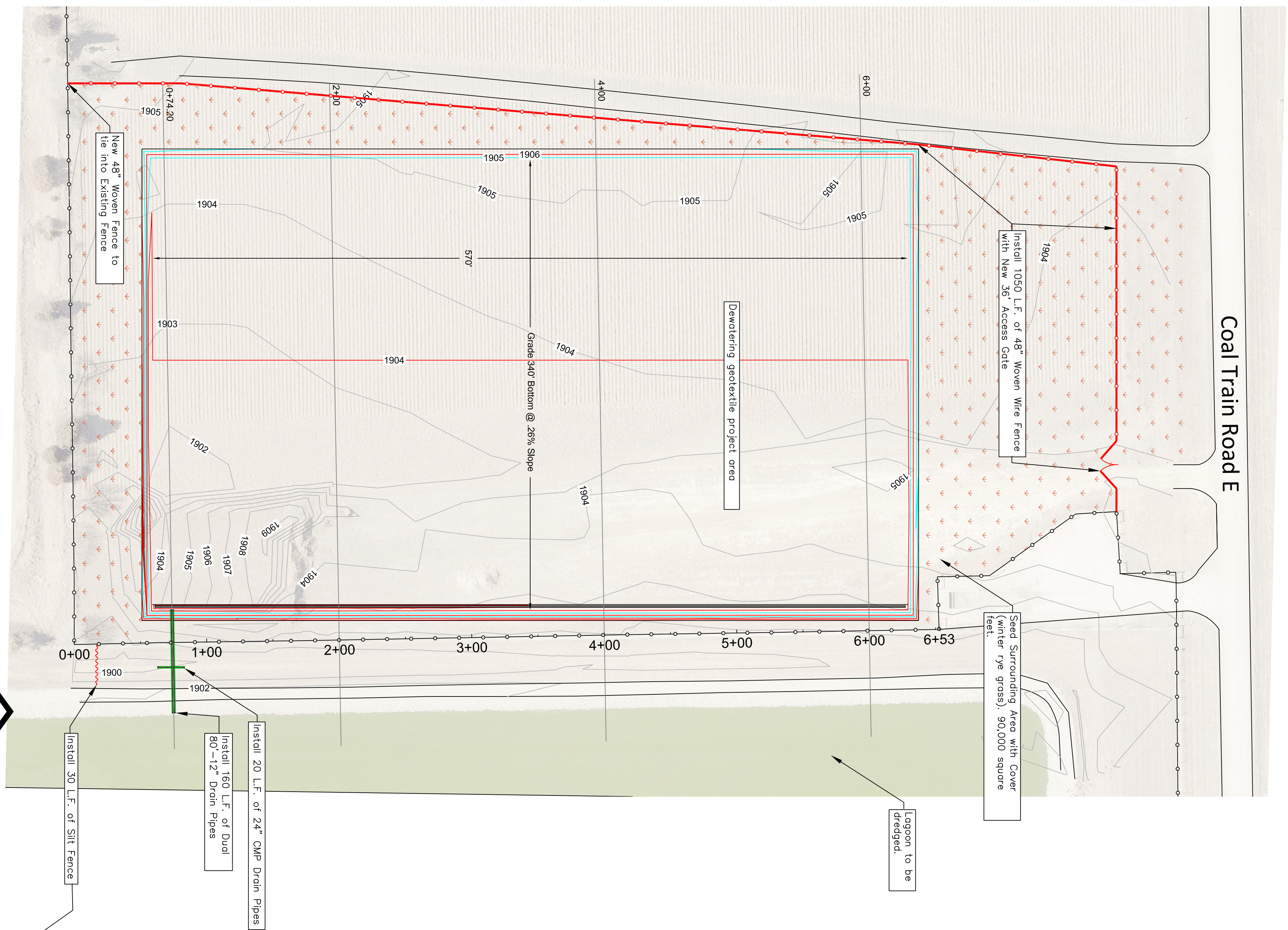


Maxon Lagoon  
Dredging Project

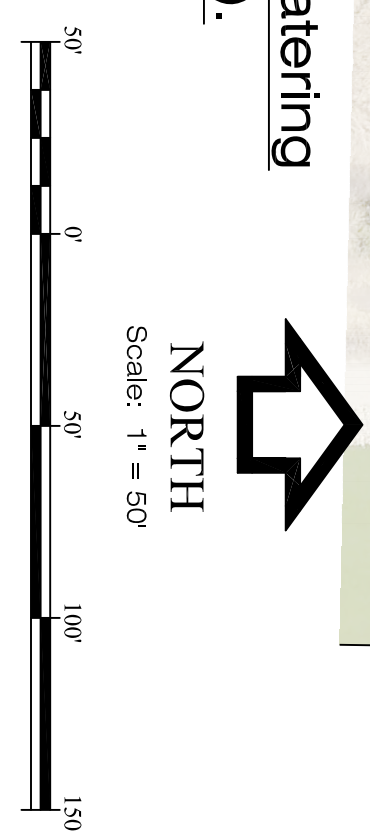


Know what's below.  
Call before you dig.

**Coal Train Road E**



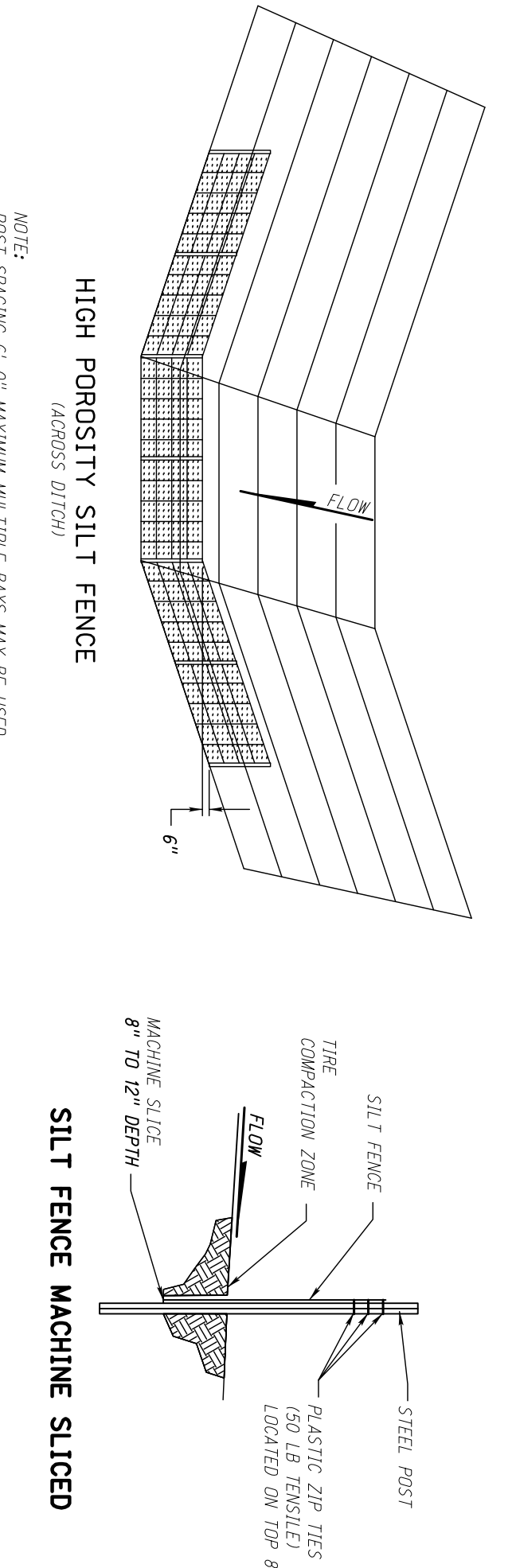
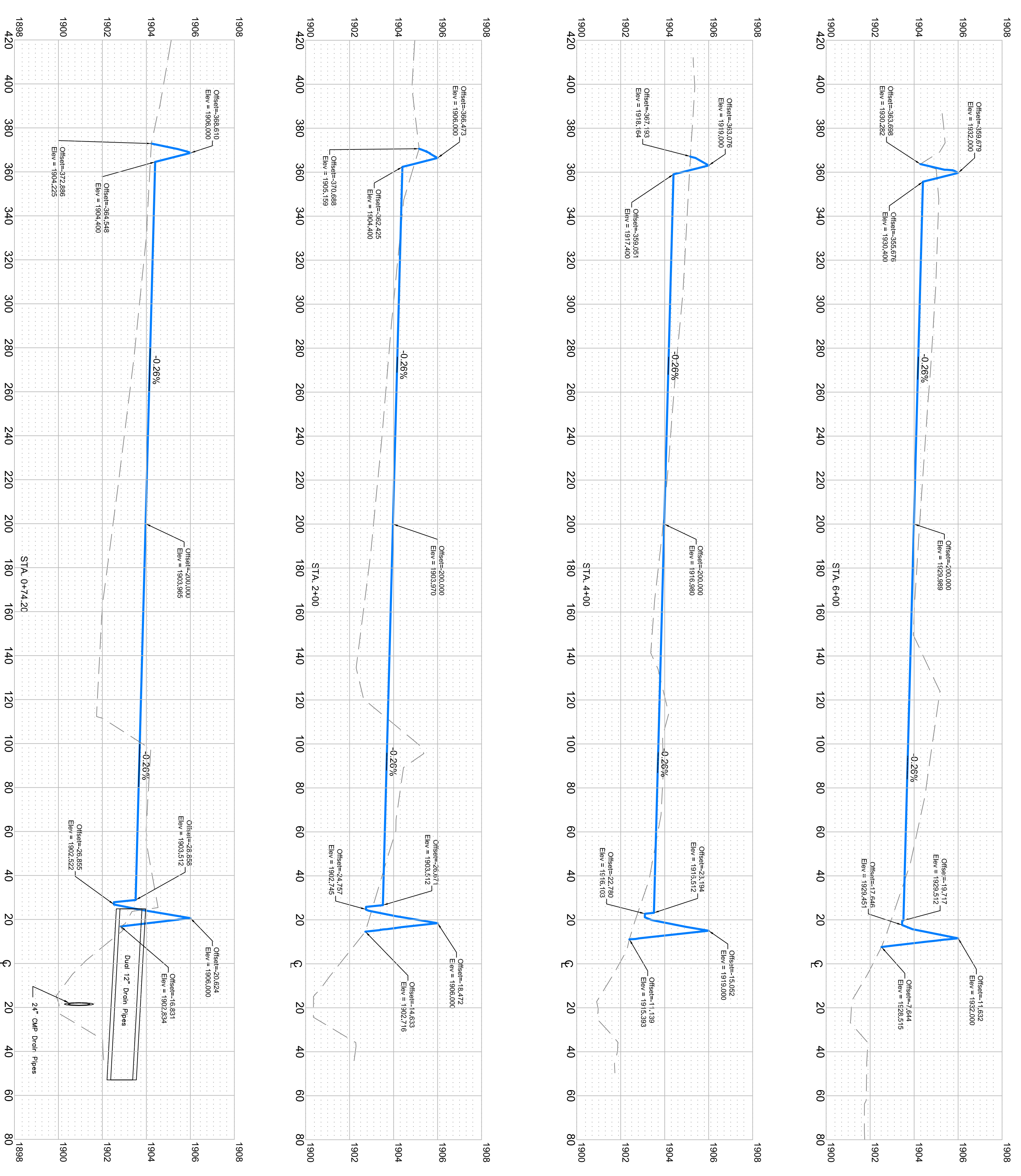
**Proposed Grading Plan for Geotextile Dewatering  
Container Install Area (reference only).**



**SUMMARY OF EARTHWORK**  
Generated by CIVIL3D

Area of Fill: 2581.09 CY
Area of Cut: 2599.59 CY
<b>Total: 18.50 CY (Cut)</b>

**Proposed Grading Cross Sections (Reference Only).**



**HASTINGS UTILITIES**

**Maxon Lagoon Dredging Project**

Drawn: K. Miller	Scale: 1" = 50'	Sheet: E. Ludken	Scale: 1" = 50'	NO. REFERENCE ONLY
Checked: B. Koenig, Miller		W.D. No.: SW-371	Drawn: B. Koenig, Miller	
Date: 3/21/2024		Report No.:	Drawn: B. Koenig, Miller	