



SPECIFICATIONS AND  
CONTRACT DOCUMENTS  
FOR

# HIKE / BIKE TRAIL NORTHWEST PHASE II

LEXINGTON, NEBRASKA

2020

Project No. 127-E1-024-19  
RTP Project No. 2019-004

**MA**  
**Miller & Associates**

Set # \_\_\_\_\_

SPECIFICATIONS AND CONTRACT DOCUMENTS FOR

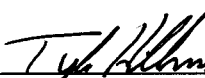
# HIKE / BIKE TRAIL NORTHWEST PHASE II

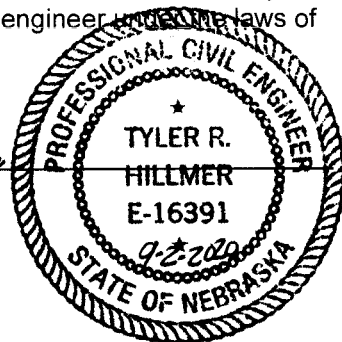
LEXINGTON, NEBRASKA

2020

Project No. 127-E1-024-19  
RTP Project No. 2019-004

I hereby certify that this document was prepared by me,  
or under my direct supervision, that I am a duly  
registered professional engineer under the laws of  
the State of Nebraska.

  
Tyler R. Hillmer, P.E.



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## ADVERTISEMENT FOR BIDS

Sealed BIDS will be received at the City Clerk's Office, 406 East 7<sup>th</sup> Street, Lexington, Nebraska on October 8, 2020, until 2:00 PM, Local Time, and then such BIDS shall be publicly opened and read aloud in the City Office for furnishing all equipment, labor, materials and appurtenances required to construct approximately 4600 SY of 6" Thick PCC Trail, 500 LF of 24" RCP Storm Sewer, and other such work as may be incidental to **HIKE / BIKE TRAIL NORTHWEST PHASE II, LEXINGTON**.

The City (Owner) reserves the right to reject any or all bids; and to waive irregularities or informalities to accept the BID it deems most beneficial. Bids received after the specified time of closing will be returned unopened. The Owner will accept only those sealed bids, either hand delivered or received via U.S. Mail or other commercial carrier. Items transmitted by facsimile or electronically will not be accepted.

The Contract Documents may be examined at the following locations:

Miller & Associates, 1111 Central Avenue, Kearney, NE 68847  
City of Lexington, 406 East 7<sup>th</sup> Street, Lexington, NE 68850

Copies of the Contract Documents may be obtained at the office of Miller & Associates, Consulting Engineers, P.C. located at 1111 Central Avenue, P.O. Box 306, Kearney, Nebraska 68847, Telephone 308/234-6456 upon payment of \$65 for each half-size set. Full-size sets of documents can be obtained for a deposit of \$85. Any PLAN HOLDER, upon returning the CONTRACT DOCUMENTS within fourteen (14) days of the BID OPENING, and in good condition, will be refunded \$15. A complete set of electronic copies of drawings, specifications, contract documents and proposal form may be obtained from [www.miller-engineers.com](http://www.miller-engineers.com) for a fee of \$30.00 (non-refundable). Once logged into the website, go to "Bidding Documents" [in the upper right-hand corner of the homepage] and you can select the set of documents to download.

Each BIDDER will be required to submit with his proposal, a certified check, cashier's check or bid bond made payable, without condition, to the City Clerk, Lexington, Nebraska, in an amount equal to five percent (5%) of the proposal.

Federal Funds will be used to assist with the development of this project. The Recreational Trails Project Number is RTP#2019-004.

The Owner is an equal opportunity employer and requires all contractors and consultants to comply with all applicable Federal and State laws and regulations.

The Owner, in accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 U.S.C 2000d to 2000d-4 and Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office the Secretary, Part 21, Nondiscrimination in Federally assisted programs of the Department of Transportation issued pursuant to such Act, hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, minority business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin, sex, age and disability/handicap in consideration for an award.

(SEAL)

**CITY OF LEXINGTON**  
(OWNER)

ATTEST:

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

By \_\_\_\_\_



# INSTRUCTIONS TO BIDDERS

## 1. Defined Terms.

Terms used in these Instructions to Bidders which are defined in the Standard General Conditions of the Construction Contract (No. 1910-8) (1990 Edition) have the meanings assigned to them in the General Conditions.

Certain additional terms used in these Instructions to Bidders have the meanings indicated below which are applicable to both the singular and plural thereof.

- 1.1. BIDDER - one who submits a Bid directly to OWNER as distinct from a sub-BIDDER, who submits a bid to a BIDDER.
- 1.2. Issuing Office - the office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered.
- 1.3. Successful BIDDER - the lowest, responsible and responsive BIDDER to whom OWNER (on the basis of OWNER'S evaluation as hereinafter provided) makes an award.
- 1.4. Bidding Documents - includes the Advertisement or Invitation to Bid, Instructions to Bidders, the Bid Form, and the proposed Contract Documents (including all Addenda issued prior to receipt of Bids).

## 2. Copies of Bidding Documents.

- 2.1. Complete sets of the Bidding Documents in the number and for the deposit sum, if any, stated in the Advertisement or Invitation to Bid may be obtained from the Issuing Office. A portion of the deposit will be refunded to each document holder of record who returns a complete set of Bidding Documents in good condition within fourteen days after opening of Bids.
- 2.2. Complete sets of Bidding Documents must be used in preparing Bids; neither OWNER nor Engineer assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- 2.3. OWNER and Engineer in making copies of Bidding Documents available on the above terms do so only for the purpose of obtaining Bids for the Work and do not confer a license or grant for any other use.
- 2.4. The Successful BIDDER will be provided with up to three (3) sets of Bidding Documents upon award of the contract, for their use when constructing the project. If the ENGINEER has additional sets available, they will be provided at no charge. If additional sets are not available by the ENGINEER, they can be reproduced for the BIDDER at BIDDER'S cost.

## 3. Qualifications of BIDDERS.

- 3.1. To demonstrate qualifications to perform the Work, each BIDDER must be prepared to submit within five days after Bid opening upon OWNER'S request detailed written evidence such as financial data, previous experience, present commitments and other such data as may be called for below (or in the Supplementary Instructions). Each Bid must contain evidence of BIDDER'S qualification to do business in the state where the Project is located or covenant to obtain such qualification prior to award of the contract.

## 4. Examination of Contract Documents and Site.

- 4.1. It is the responsibility of each BIDDER before submitting a Bid:

- 4.1.1. To examine thoroughly the Contract Documents and other related data identified in the Bidding Documents (including "technical data" referred to below);
  - 4.1.2. To visit the site to become familiar with and satisfy BIDDER as to the general, local and site conditions that may affect cost, progress, performance or furnishing of the Work;
  - 4.1.3. To consider federal, state and local Laws and Regulations that may affect cost, progress, performance or furnishing of the Work;
  - 4.1.4. To study and carefully correlate BIDDER'S knowledge and observations with the Contract Documents and such other related data; and
  - 4.1.5. To promptly notify Engineer of all conflicts, errors, ambiguities or discrepancies which BIDDER has discovered in or between the Contract Documents and such other related documents.
- 4.2. Reference is made to the Supplementary Conditions for identification of:
- 4.2.1. The initial Storm Water Pollution Prevention Plan (SWPPP) for the project.
- 4.3. Provisions concerning responsibilities for the adequacy of data furnished to prospective BIDDERS with respect to subsurface conditions, other physical conditions and Underground Facilities, and possible changes in the Contract Documents due to differing or unanticipated conditions appear in the General Conditions.
- 4.4. Before submitting a Bid each BIDDER will be responsible to obtain examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the site or otherwise, which may affect cost, progress, performance or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences or procedures of construction to be employed by BIDDER and safety precautions and programs incident thereto or which BIDDER deems necessary to determine its Bid for performing and furnishing the Work in accordance with the time, price and other terms and conditions of the Contract Documents.
- 4.5. On request, OWNER will provide each BIDDER access to the site to conduct such examinations, investigations, explorations, test and studies as each BIDDER deems necessary for submission of a Bid. BIDDER must fill all holes and clean up and restore the site to its former conditions upon completion of such explorations, investigations, tests and studies.
- 4.6. Reference is made to the Supplementary Conditions for the identification of the general nature of work that is to be performed at the site by OWNER or others (such as utilities and other prime CONTRACTORS) that relates to the work for which a Bid is to be submitted. On request, OWNER will provide to each BIDDER for examination access to or copies of Contract Documents (other than portions thereof related to price) for such work.
- 4.7. The submission of a Bid will constitute an incontrovertible representation by BIDDER that BIDDER has complied with every requirements of this Article 4, that without exception the Bid is premised upon performing and furnishing the Work required by the Contract Documents and applying the specific means, methods, techniques, sequences or procedures of construction (if any) that may be shown or indicated or expressly required by the Contract Documents, that BIDDER has given Engineer written notice of all conflicts, errors, ambiguities and discrepancies that BIDDER has discovered in the Contract Documents and the written resolutions thereof by Engineer is acceptable to BIDDER, and that the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.
- 4.8. The provisions of 1-4.1 through 4.7, inclusive, do not apply to Asbestos, Polychlorinated biphenyls (PCBs), Petroleum, Hazardous Waste or Radioactive Material covered by Paragraph 4.5 of the General Conditions.

**5. Availability of Lands for Work, etc.**

5.1. The lands upon which the Work is to be performed, rights-of-way and easements for access thereto and other lands designated for use by CONTRACTOR in performing the Work are identified in the Contract Documents. All additional lands and access thereto required for temporary construction facilities, construction equipment or storage of materials and equipment to be incorporated in the Work are to be obtained and paid for by CONTRACTOR unless indicated on the drawings. Easements for permanent structures or permanent changes in existing facilities are to be obtained and paid for by OWNER unless otherwise provided in the Contract Documents.

**6. Interpretations and Addenda.**

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

6.2. Addenda may also be issued to modify the Bidding Documents as deemed advisable by OWNER or Engineer.

**7. Bid Security.**

7.1. Each Bid must be accompanied by Bid security made payable to OWNER in an amount of five percent of BIDDER'S maximum Bid price and in the form of a certified or cashier's check or a Bid Bond on form attached, or issued by a surety meeting the requirements of Paragraph 5.1 of the General Conditions.

7.2. The Bid security of Successful BIDDER will be retained until such BIDDER has executed the Agreement, furnished the required contract security and met the other conditions of the Notice of Award, whereupon the Bid security will be returned. If the Successful BIDDER fails to execute and deliver the Agreement and furnish the required contract security within fifteen days after the Notice of Award, the amount of the BIDDER'S bid security shall become the property of the OWNER and will be retained, as damages to the OWNER. The award of the Contract may then, at the discretion of the OWNER, be made to the next lowest responsible BIDDER, or the Work may be rebid. The Bid security of other BIDDERS whom OWNER believes to have a reasonable chance of receiving the award (lowest 3 bidders) may be retained by OWNER until the earlier of the thirtieth day after the Effective Date of the Agreement or the sixtieth day after the Bid opening, whereupon Bid security furnished by such BIDDERS will be returned. Bid security with Bids which are not competitive will be returned within seven days after the Bid opening.

**8. Contract Times.**

8.1. The number of days within which, or the dates by which, the Work is to be substantially completed and also completed and ready for final payment (the term "Contract Times" is defined in Paragraph 1.12 of the General Conditions) are set forth in the Agreement (or incorporated therein by reference to the attached Bid Form).

8.2. The project shall be considered completed and ready for final payment upon submission of all final documentation, change orders, and final pay requests by the Contractor. The date of final completion is noted in the Agreement.

**9. Liquidated Damages.**

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

## **10. Substitute and "Or-Equal" Items.**

10.1. The Contract, if awarded, will be on the basis of materials and equipment described in the Drawings or specified in the Specifications without consideration of possible substitute or "or-equal" items. Whenever it is indicated in the Drawings or specified in the Specifications that a substitute or "or-equal" item of material or equipment may be furnished or used by CONTRACTOR if acceptable to Engineer, application for such acceptance will not be considered by Engineer until after the Effective Date of the Agreement. The procedure for submission of any such application by CONTRACTOR and consideration by Engineer is set forth in Paragraphs 6.7.1, 6.7.2 and 6.7.3 of the General Conditions and may be supplemented in the Supplementary Conditions.

## **11. SUBCONTRACTORS, Suppliers and Others.**

11.1. If the Supplementary Conditions require the identity of certain SUBCONTRACTORS, Suppliers and other persons and organizations (including those who are to furnish the principal items of material and equipment) to be submitted to OWNER in advance of a specified date prior to the Effective Date of the Agreement, apparent Successful BIDDER, and any other BIDDER so requested, shall within five days after Bid opening submit to OWNER a list of all such SUBCONTRACTORS, Suppliers and other persons and organizations proposed for those portions of the Work for which such identification is required. Such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such SUBCONTRACTOR, Supplier, person or organization if requested by OWNER. An OWNER or Engineer who after due investigation has reasonable objection to any proposed SUBCONTRACTOR, Supplier, other person or organization, may before the Notice of Award is given request apparent Successful BIDDER to submit an acceptable substitute, in which case apparent Successful BIDDER shall submit an acceptable substitute, that BIDDER'S Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution and OWNER may consider such price adjustment in evaluating Bids and making the contract award.

11.2. No CONTRACTOR shall be required to employ any SUBCONTRACTOR, Supplier, other person or organization against whom CONTRACTOR has reasonable objection.

## **12. Bid Form.**

12.1. The Bid Form is included with the Bidding Documents; additional copies may be obtained from Engineer (or the Issuing Office).

12.2. All blanks on the Bid Form must be completed by printing in ink or by typewriter.

12.3. Bids by corporations must be executed in the corporate name by the president or a vice-president (or other corporate officer accompanied by evidence of authority to sign) and the corporate seal must be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation must be shown below the signature.

12.4. Bids by partnerships must be executed in the partnership name and signed by a partner, whose title must appear under the signature and the official address of the partnership must be shown below the signature.

12.5. All names must be typed or printed in ink below the signature.

12.6. The Bid shall contain an acknowledgment of receipt of all Addenda (the numbers of which must be filled in on the Bid Form).

12.7. The address and telephone number for communications regarding the Bid must be shown.

12.8. Evidence of authority to conduct business as an out-of-state corporation in the state where the Work is to be performed shall be provided in accordance with Paragraph 3 above. State CONTRACTOR license number, if any, must also be shown.

12.9. Not Applicable

12.10. BIDDERS shall submit a Bid on a unit price basis for each item of Work listed in the Bid Form

12.11. The total of all estimated prices will be the sum of the products of the estimated quantity of each item and the corresponding unit price. The final quantities and Contract Price will be determined in accordance with the General Conditions.

12.12. The Bid price shall include such amounts as the BIDDER deems proper for overhead and profit on account of cash allowances named in the Contract Documents as provided in GC-11.8.

**13. Submission of Bids.**

13.1 Bids shall be submitted at the time and place indicated in the Advertisement or Invitation to Bid and shall be enclosed in an opaque sealed envelope, marked with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted) and name and address of BIDDER and accompanied by the Bid security and other required documents. If the Bid is sent through the mail or other delivery system the sealed envelope shall be enclosed in a separate envelope with the notation "BID ENCLOSED" on the face of it.

13.2 Each prospective BIDDER is furnished one copy of the Bidding Documents with one separate unbound copy each of the Bid Form and the Bid Bond. The Bidding Documents may be retained by the BIDDER. The unbound copy of the Bid Form is to be completed and submitted with the Bid security.

**14. Modification and Withdrawal of Bids.**

14.1. Bids may be modified or withdrawn by an appropriate document duly executed (in the manner that a Bid must be executed) and delivered to the place where Bids are to be submitted at any time prior to the opening of Bids.

**15. Opening of Bids.**

15.1. Bids will be opened and (unless obviously non-responsive) read aloud publicly at the place identified in the Advertisement for Bids. An abstract of the amounts of the base Bids and major alternates (if any) will be made available to BIDDERS after the opening of Bids.

**16. Bids to Remain Subject to Acceptance.**

16.1. All Bids will remain subject to acceptance for thirty-five days after the day of the Bid opening, but OWNER may, in its sole discretion, release any Bid and return the Bid security prior to that date.

16.2. If the amount of all Bids received by the OWNER in response to any invitation to Bid or solicitation of Bids exceeds allocated or budgeted funds of the OWNER available for the procurement, the OWNER may, in its discretion, elect to negotiate an adjustment of the Bid price with the responsible BIDDER in order to bring the amount Bid within the available funds of the OWNER.

**17. Award of Contract.**

17.1. OWNER reserves the right to reject any or all Bids, including without limitation the rights to reject any or all nonconforming, non-responsive, unbalanced or conditional Bids and to reject the Bid of any BIDDER if OWNER believes that it would not be in the best interest of the Project to make an award to that BIDDER, whether because the Bid is not responsive or the BIDDER is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by OWNER. OWNER also reserves the right to waive all informalities not involving price, time or changes in the Work and to negotiate contract terms with the Successful BIDDER. Discrepancies between the multiplication of units

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

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

17.3. OWNER may consider the qualifications and experience of SUBCONTRACTORS, Suppliers and other persons and organizations proposed for those portions of the Work as to which the identity of SUBCONTRACTORS, Suppliers and other persons and organizations must be submitted as provided in the Supplementary Conditions. OWNER also may consider the operating costs, maintenance requirements, performance data and guarantees of major items of materials and equipment proposed for incorporation in the Work when such data is required to be submitted prior to the Notice of Award.

17.4. OWNER may conduct such investigations as OWNER deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications and financial ability of BIDDERS, proposed SUBCONTRACTORS, Suppliers and other persons and organizations to perform and furnish the Work in accordance with the Contract Documents to OWNER'S satisfaction within the prescribed time.

17.5. If the contract is to be awarded, it will be awarded to lowest BIDDER whose evaluation by OWNER indicates to OWNER that the award will be in the best interests of the Project.

17.6. If the contract is to be awarded, OWNER will give Successful BIDDER a Notice of Award within thirty-five days after the day of the Bid opening.

## **18. Contract Security.**

18.1. Paragraph 5.1 of the General Conditions and the Supplementary Conditions set forth OWNER'S requirements as to performance and payment Bonds. When the Successful BIDDER delivers the executed Agreement to OWNER, it must be accompanied by the required performance and payment Bonds.

## **19. Signing of Agreement.**

19.1. When OWNER gives a Notice of Award to the Successful BIDDER, it will be accompanied by the required number of unsigned counterparts of the Agreement with all other written Contract Documents attached. Within fifteen days thereafter CONTRACTOR shall sign and deliver the required number of counterparts of the Agreement and attached documents to OWNER with the required Bonds. Within ten days thereafter OWNER shall deliver one fully signed counterpart to CONTRACTOR. Each counterpart is to be accompanied by a complete set of the Drawings with appropriate identification.

## **20. Prebid Conference.**

20.1. A prebid conference is not scheduled for this project.

## **21. Sales and Use Taxes.**

21.1. OWNER may be exempt from Nebraska State Sales and Use Taxes on certain materials and equipment to be incorporated in the Work. Said exempt taxes shall not be included in the Contract Price. Refer to Supplementary Conditions SC-6.15 for additional information.

## **22. Contracts to be Assigned.**

22.1. No contracts will be assigned.

## **23. Fair Labor Standards.**

23.1. The CONTRACTOR and the subcontractors shall maintain Fair Labor Standards in the performance of this Contract, as required by Nebraska Revised Statutes § 73-102 through 104 (Reissue 1990).

**24. Utilities and Utility Service.**

24.1. All existing utilities may not be shown on drawings. Any information concerning underground utilities shown on the drawings is intended to be merely an aid to the CONTRACTOR. Locations shown for all existing utilities are approximate. CONTRACTOR is responsible for locating, identifying, and taking necessary precautions to protect all utilities, as required.

24.2. Where utility overhead or underground lines and services are encountered, the CONTRACTOR shall provide temporary rerouting of said services or provide bracing, anchoring, materials, labor, equipment and incidental as required at his sole cost. Notify applicable utility authority in writing a minimum of one week prior to anticipated associated work. The CONTRACTOR may negotiate securing services of said applicable utility authority to perform said work.

**25. Governmental Requirements - See Supplementary Conditions and Governmental Requirements Section for Contractual Requirements.**

# BID FORM

PROJECT IDENTIFICATION: **HIKE / BIKE TRAIL - NORTHWEST PHASE II**

CONTRACT IDENTIFICATION AND NUMBER: **127-E1-024-19**

THIS BID IS SUBMITTED TO: **CITY OF LEXINGTON, P.O. BOX 70, 406 EAST 7<sup>TH</sup> STREET, LEXINGTON, NE 68850** *[Name and Address of OWNER]*

1. The undersigned BIDDER proposes and agrees, if this Bid is accepted, to enter into an agreement with OWNER in the form included in the Contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents for the Bid Price and within the Bid Times indicated in this Bid and in accordance with the other terms and conditions of the Contract Documents.
2. BIDDER accepts all of the terms and conditions of the Advertisement or Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for thirty-five days after the day of Bid opening. BIDDER will sign and deliver the required number of counterparts of the Agreement with the Bonds and other documents required by the Bidding Requirements within fifteen days after the date of OWNER'S Notice of Award.
3. In submitting this Bid, BIDDER represents, as more fully set forth in the Agreement, that:

- (a) BIDDER has examined and carefully studied the Bidding Documents and the following Addenda receipt all of which is hereby acknowledged: (List Addenda by Addendum Number and Date)

Number	Date
_____	_____, 20__
_____	_____, 20__
_____	_____, 20__
_____	_____, 20__

- (b) BIDDER has visited the site and become familiar with and is satisfied as to the general, local and site conditions that may affect cost, progress, performance and furnishing of the Work;
- (c) BIDDER is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress, performance and furnishing of the Work.
- (d) BIDDER has carefully studied all reports of explorations and tests of subsurface conditions at or contiguous to the site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in paragraph 4.2.1 of the General Conditions. BIDDER accepts the determination set forth in paragraph SC.4.2 of the Supplementary Conditions of the extent of the "technical data" contained in such reports and drawings upon which BIDDER is entitled to rely as provided in paragraph 4.2 of the General Conditions. BIDDER acknowledges that such reports and drawings are not Contract Documents and may not be complete for BIDDER'S purposes. BIDDER acknowledges that OWNER and



ENGINEER do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Bidding Documents with respect to Underground Facilities at or contiguous to the site. BIDDER has obtained and carefully studied (or assumes responsibility for having done so) all such additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the site or otherwise which may affect cost progress, performance or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences and procedures of construction to be employed by BIDDER and safety precautions and programs incident thereto. BIDDER does not consider that any additional examinations, investigations, explorations, tests, studies or data are necessary for the determination of this Bid for performance and furnishing of the Work in accordance with the times, price and other terms and conditions of the Contract Documents.

- (e) BIDDER is aware of the general nature of Work to be performed by OWNER and others at the site that relates to Work for which this Bid is submitted as indicated in the Contract Documents.
- (f) BIDDER has correlated the information known to BIDDER, information and observations obtained from visits to the site, reports and drawings identified in the Contract Documents and all additional examinations, investigations, explorations, tests, studies and data with the Contract Documents.
- (g) BIDDER has given ENGINEER written notice of all conflicts, errors, ambiguities or discrepancies that BIDDER has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to BIDDER and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work for which this Bid is submitted.
- (h) This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; BIDDER has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; BIDDER has not solicited or induced any person, firm or corporation to refrain from bidding; and BIDDER has not sought by collusion to obtain for itself any advantage over any other Bidder or over OWNER.

4. BIDDER will complete the Work in accordance with the Contract Documents for the following price(s):

**UNIT PRICE BID SCHEDULE**

NOTE: BID must include all applicable taxes and fees.

<i>Item No.</i>	<i>Description</i>	<i>Estimated Quantity</i>	<i>Unit</i>	<i>Unit Price</i>	<i>Total Estimated Price</i>
1	Mobilization	1	L.S.		
2	Stripping, Stockpiling , and Final Placement of Topsoil (E.Q.)	9341	S.Y.		
3	Haul and Place Embankment (E.Q.)	1632	C.Y.		
4	Overexcavation and Replacement of Unsuitable Base Material- If Required	190	C.Y.		
5	Furnish & Install Reinforced Concrete Pipe, Class III				
	a. 18" Diameter	24	L.F.		
	b. 24" Diameter	504	L.F.		
	c. 24" Diameter Flared End Sections	2	Each		
	d. Remove & Salvage & Reinstall 24" Diameter Flared End Section	1	Each		
6	Construct Concrete Headwall	2	Each		
7	Construct Junction Manhole	1	Each		
8	Construct 6" Thick P.C. Concrete Hike-Bike Trail, Type 47B-3500	4600	S.Y.		
9	Construct Concrete Header	10	L.F.		
10	Construct Trail Entrance Ramp	2	Each		
11	Drill & Grout Tie Bars	18	Each		
12	Remove & Haul				
	a. 6' Wide Concrete Flow Liner	30	L.F.		
13	Furnish & Install Sign	19	Each		
14	Adjust to Grade				
	a. Utility Box	1	Each		
	b. Valve Box	4	Each		
15	Furnish & Apply Seeding, Mulching and Fertilizer				
	a. Type B	1.90	Ac.		
16	Furnish, Install, Maintain, & Remove Erosion Control Items				
	a) Sedimentation and Erosion Control, Record Keeping, and Inspections	1	L.S.		
	b) Silt Fence	500	L.F.		
	c) Concrete Washout Pit	1	Each		

TOTAL BID FOR ALL UNIT PRICES \_\_\_\_\_

(in words) \_\_\_\_\_ (\$ \_\_\_\_\_ ) (in figures)

Unit Prices have been computed in accordance with paragraph 11.9.2 of the General Conditions.

BIDDER acknowledges that quantities are not guaranteed and final payment will be based on actual quantities determined as provided in the Contract Documents.

- 5. BIDDER agrees that the WORK will be substantially complete and completed and ready for final payment in accordance with paragraph 14.13 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

BIDDER accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the times specified in the Agreement.

- 6. The following documents are attached to and made a condition of this Bid:

- (a) Required Bid Security in the form of certified check, cashier's check or bid bond.
- (b) Governmental Requirements

- 7. Communications concerning this Bid shall be addressed to:

The address of BIDDER indicated below.

The ENGINEER'S following address:

Miller & Associates  
Consulting Engineers, P.C.  
1111 Central Avenue  
Kearney, NE 68847  
Telephone: 308/234-6456

- 8. Terms used in this Bid which are defined in the General Conditions or Instructions will have the meanings indicated in the General Conditions or Instructions.

SUBMITTED on \_\_\_\_\_, 20\_\_ by the BIDDER indicated below.

If BIDDER is

**An Individual**

By \_\_\_\_\_ (SEAL)

(Individual's Name)

doing business as \_\_\_\_\_

Business address: \_\_\_\_\_

Telephone No.: \_\_\_\_\_

DUNS No: \_\_\_\_\_

E-mail address: \_\_\_\_\_

**A Partnership**

By \_\_\_\_\_ (SEAL)  
(Firm Name)

\_\_\_\_\_  
(General Partner)

Business address: \_\_\_\_\_

Telephone No.: \_\_\_\_\_

DUNS No: \_\_\_\_\_

E-mail address: \_\_\_\_\_

**A Corporation**

By \_\_\_\_\_  
(Corporate Name)

\_\_\_\_\_  
(State of Incorporation)

By \_\_\_\_\_ (SEAL)  
(Name of Person Authorized to Sign)

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

(Corporate Seal)

Attest: \_\_\_\_\_  
(Secretary)

Business address: \_\_\_\_\_

Telephone No.: \_\_\_\_\_

DUNS No: \_\_\_\_\_

E-mail address: \_\_\_\_\_

# BID BOND

**BIDDER** (Name and Address):

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

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**OWNER** (Name and Address):

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## **BID**

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

PROJECT (Brief Description Including Location):

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## **BOND**

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

DATE (Not later than Bid Due Date): \_\_\_\_\_

PENAL SUM: \_\_\_\_\_

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

BIDDER

SURETY

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

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

By: \_\_\_\_\_  
Signature and Title

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

Attest: \_\_\_\_\_  
Signature and Title

Attest: \_\_\_\_\_  
Signature and Title

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

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



**GENERAL  
CONDITIONS**

This document has important legal consequences: consultation with an attorney is encouraged with respect to its completion or modification.

**STANDARD  
GENERAL CONDITIONS  
OF THE  
CONSTRUCTION CONTRACT**

Prepared by  
**Engineers Joint Contract Documents Committee**  
and

Issued and Published Jointly By



PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE  
*A practice division of the*  
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

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AMERICAN CONSULTING ENGINEERS COUNCIL

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AMERICAN SOCIETY OF CIVIL ENGINEERS

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CONSTRUCTION SPECIFICATIONS INSTITUTE

This document has been approved and endorsed by

The Associated General  Contractors of America

These General Conditions have been prepared for use with the Owner-Contractor Agreements (No. 1910-8-A-1 or 1910-8-A-2) (1990 Editions). Their provisions are interrelated and a change in one may necessitate a change in the others. Comments concerning their usage are contained in the Commentary on Agreements for Engineering Services and Contract Documents (No. 1910-9) (1986 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (No. 1910-17) (1990 Edition). When bidding is involved, the Standard Form of Instructions to Bidders (No. 1910-12) (1990 Edition) may be used.



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American Society of Civil Engineers  
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Construction Specifications Institute  
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# GENERAL CONDITIONS

## ARTICLE I—DEFINITIONS

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Wherever used in these General Conditions or in the other Contract Documents the following terms have the meanings indicated which are applicable to both the singular and plural thereof:

- 1.1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct or change the Bidding Requirements or the Contract Documents.
- 1.2. *Agreement*—The written contract between OWNER and CONTRACTOR covering the Work to be performed; other Contract Documents are attached to the Agreement and made a part thereof as provided therein.
- 1.3. *Application for Payment*—The form accepted by ENGINEER which is to be used by CONTRACTOR in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
- 1.4. *Asbestos*—Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.
- 1.5. *Bid*—The offer or proposal of the bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
- 1.6. *Bidding Documents*—The advertisement or invitation to Bid, instructions to bidders, the Bid form, and the proposed Contract Documents (including all Addenda issued prior to receipt of Bids).
- 1.7. *Bidding Requirements*—The advertisement or invitation to Bid, instructions to bidders, and the Bid form.
- 1.8. *Bonds*—Performance and Payment bonds and other instruments of security.
- 1.9. *Change Order*—A document recommended by ENGINEER, which is signed by CONTRACTOR and OWNER and authorizes an addition, deletion or revision in the Work, or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.
- 1.10. *Contract Documents*—The Agreement, Addenda (which pertain to the Contract Documents), CONTRACTOR's Bid (including documentation accompanying the Bid and any post Bid documentation submitted prior to the Notice of Award) when attached as an exhibit to the Agreement, the Notice to Proceed, the Bonds, these General Conditions, the Supplementary Conditions, the Specifications and the Drawings as the same are more specifically identified in the Agree-

ment, together with all Written Amendments, Change Orders, Work Change Directives, Field Orders and ENGINEER's written interpretations and clarifications issued pursuant to paragraphs 3.5, 3.6.1, and 3.6.3 on or after the Effective Date of the Agreement. Shop Drawing submittals approved pursuant to paragraphs 6.26 and 6.27 and the reports and drawings referred to in paragraphs 4.2.1.1 and 4.2.2.2 are not Contract Documents.

- 1.11. *Contract Price*—The moneys payable by OWNER to CONTRACTOR for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of paragraph 11.9.1 in the case of Unit Price Work).

- 1.12. *Contract Times*—The numbers of days or the dates stated in the Agreement: (i) to achieve Substantial Completion, and (ii) to complete the Work so that it is ready for final payment as evidenced by ENGINEER's written recommendation of final payment in accordance with paragraph 14.13.

- 1.13. *CONTRACTOR*—The person, firm or corporation with whom OWNER has entered into the Agreement.

- 1.14. *defective*—An adjective which when modifying the word Work refers to Work that is unsatisfactory, faulty or deficient, in that it does not conform to the Contract Documents, or does not meet the requirements of any inspection, reference standard, test or approval referred to in the Contract Documents, or has been damaged prior to ENGINEER's recommendation of final payment (unless responsibility for the protection thereof has been assumed by OWNER at Substantial Completion in accordance with paragraph 14.8 or 14.10).

- 1.15. *Drawings*—The drawings which show the scope, extent and character of the Work to be furnished and performed by CONTRACTOR and which have been prepared or approved by ENGINEER and are referred to in the Contract Documents. Shop drawings are not Drawings as so defined.

- 1.16. *Effective Date of the Agreement*—The date indicated in the Agreement on which it becomes effective, but if no such date is indicated it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

- 1.17. *ENGINEER*—The person, firm or corporation named as such in the Agreement.

- 1.18. *ENGINEER's Consultant*—A person, firm or corporation having a contract with ENGINEER to furnish services as ENGINEER's independent professional associate or consultant with respect to the Project and who is identified as such in the Supplementary Conditions.

- 1.19. *Field Order*—A written order issued by ENGINEER which orders minor changes in the Work in accordance with paragraph 9.5 but which does not involve a change in the Contract Price or the Contract Times.

1.20. *General Requirements*—Sections of Division I of the Specifications.

1.21. *Hazardous Waste*—The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

1.22. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, rules, regulations, ordinances, codes and orders of any and all governmental bodies, agencies, authorities and courts having jurisdiction.

1.23. *Liens*—Liens, charges, security interests or encumbrances upon real property or personal property.

1.24. *Milestone*—A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

1.25. *Notice of Award*—The written notice by OWNER to the apparent successful bidder stating that upon compliance by the apparent successful bidder with the conditions precedent enumerated therein, within the time specified, OWNER will sign and deliver the Agreement.

1.26. *Notice to Proceed*—A written notice given by OWNER to CONTRACTOR (with a copy to ENGINEER) fixing the date on which the Contract Times will commence to run and on which CONTRACTOR shall start to perform CONTRACTOR's obligations under the Contract Documents.

1.27. *OWNER*—The public body or authority, corporation, association, firm or person with whom CONTRACTOR has entered into the Agreement and for whom the Work is to be provided.

1.28. *Partial Utilization*—Use by OWNER of a substantially completed part of the Work for the purpose for which it is intended (or a related purpose) prior to Substantial Completion of all the Work.

1.29. *PCBs*—Polychlorinated biphenyls.

1.30. *Petroleum*—Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Wastes and crude oils.

1.31. *Project*—The total construction of which the Work to be provided under the Contract Documents may be the whole, or a part as indicated elsewhere in the Contract Documents.

1.32. *Radioactive Material*—Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

1.33. *Resident Project Representative*—The authorized representative of ENGINEER who may be assigned to the site or any part thereof.

1.34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

1.35. *Shop Drawings*—All drawings, diagrams, illustrations, schedules and other data or information which are specifically prepared or assembled by or for CONTRACTOR and submitted by CONTRACTOR to illustrate some portion of the Work.

1.36. *Specifications*—Those portions of the Contract Documents consisting of written technical descriptions of materials, equipment, construction systems, standards and workmanship as applied to the Work and certain administrative details applicable thereto.

1.37. *Subcontractor*—An individual, firm or corporation having a direct contract with CONTRACTOR or with any other Subcontractor for the performance of a part of the Work at the site.

1.38. *Substantial Completion*—The Work (or a specified part thereof) has progressed to the point where, in the opinion of ENGINEER as evidenced by ENGINEER's definitive certificate of Substantial Completion, it is sufficiently complete, in accordance with the Contract Documents, so that the Work (or specified part) can be utilized for the purposes for which it is intended; or if no such certificate is issued, when the Work is complete and ready for final payment as evidenced by ENGINEER's written recommendation of final payment in accordance with paragraph 14.13. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

1.39. *Supplementary Conditions*—The part of the Contract Documents which amends or supplements these General Conditions.

1.40. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman or vendor having a direct contract with CONTRACTOR or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by CONTRACTOR or any Subcontractor.

1.41. *Underground Facilities*—All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments, and any encasements containing such facilities which have been installed underground to furnish any of the following services or materials: electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems or water.

1.42. *Unit Price Work*—Work to be paid for on the basis of unit prices.

1.43. *Work*—The entire completed construction or the various separately identifiable parts thereof required to be furnished under the Contract Documents. Work includes and is the result of performing or furnishing labor and furnishing and incorporating materials and equipment into the construction, and performing or furnishing services and furnishing documents, all as required by the Contract Documents.

1.44. *Work Change Directive*—A written directive to CONTRACTOR, issued on or after the Effective Date of the Agreement and signed by OWNER and recommended by ENGINEER, ordering an addition, deletion or revision in the Work, or responding to differing or unforeseen physical conditions under which the Work is to be performed as provided in paragraph 4.2 or 4.3 or to emergencies under paragraph 6.23. A Work Change Directive will not change the Contract Price or the Contract Times, but is evidence that the parties expect that the change directed or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times as provided in paragraph 10.2.

1.45. *Written Amendment*—A written amendment of the Contract Documents, signed by OWNER and CONTRACTOR on or after the Effective Date of the Agreement and normally dealing with the nonengineering or nontechnical rather than strictly construction-related aspects of the Contract Documents.

## ARTICLE 2—PRELIMINARY MATTERS

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### *Delivery of Bonds:*

2.1. When CONTRACTOR delivers the executed Agreements to OWNER, CONTRACTOR shall also deliver to OWNER such Bonds as CONTRACTOR may be required to furnish in accordance with paragraph 5.1.

### *Copies of Documents:*

2.2. OWNER shall furnish to CONTRACTOR up to ten copies (unless otherwise specified in the Supplementary Conditions) of the Contract Documents as are reasonably necessary for the execution of the Work. Additional copies will be furnished, upon request, at the cost of reproduction.

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

2.3. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement, or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within thirty days after the Effective Date of the Agreement. In no event will the

Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

### *Starting the Work:*

2.4. CONTRACTOR shall start to perform the Work on the date when the Contract Times commence to run, but no Work shall be done at the site prior to the date on which the Contract Times commence to run.

### *Before Starting Construction:*

2.5. Before undertaking each part of the Work, CONTRACTOR shall carefully study and compare the Contract Documents and check and verify pertinent figures shown thereon and all applicable field measurements. CONTRACTOR shall promptly report in writing to ENGINEER any conflict, error, ambiguity or discrepancy which CONTRACTOR may discover and shall obtain a written interpretation or clarification from ENGINEER before proceeding with any Work affected thereby; however, CONTRACTOR shall not be liable to OWNER or ENGINEER for failure to report any conflict, error, ambiguity or discrepancy in the Contract Documents, unless CONTRACTOR knew or reasonably should have known thereof.

2.6. Within ten days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), CONTRACTOR shall submit to ENGINEER for review:

2.6.1. a preliminary progress schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;

2.6.2. a preliminary schedule of Shop Drawing and Sample submittals which will list each required submittal and the times for submitting, reviewing and processing such submittal;

2.6.3. a preliminary schedule of values for all of the Work which will include quantities and prices of items aggregating the Contract Price and will subdivide the Work into component parts in sufficient detail to serve as the basis for progress payments during construction. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.7. Before any Work at the site is started, CONTRACTOR and OWNER shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which CONTRACTOR and OWNER respectively are required to purchase and maintain in accordance with paragraphs 5.4, 5.6 and 5.7.

### *Preconstruction Conference:*

2.8. Within twenty days after the Contract Times start to run, but before any Work at the site is started, a conference



attended by CONTRACTOR, ENGINEER and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in paragraph 2.6, procedures for handling Shop Drawings and other submittals, processing Applications for Payment and maintaining required records.

*Initially Acceptable Schedules:*

2.9. Unless otherwise provided in the Contract Documents, at least ten days before submission of the first Application for Payment a conference attended by CONTRACTOR, ENGINEER and others as appropriate will be held to review for acceptability to ENGINEER as provided below the schedules submitted in accordance with paragraph 2.6. CONTRACTOR shall have an additional ten days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to CONTRACTOR until the schedules are submitted to and acceptable to ENGINEER as provided below. The progress schedule will be acceptable to ENGINEER as providing an orderly progression of the Work to completion within any specified Milestones and the Contract Times, but such acceptance will neither impose on ENGINEER responsibility for the sequencing, scheduling or progress of the Work nor interfere with or relieve CONTRACTOR from CONTRACTOR's full responsibility therefor. CONTRACTOR's schedule of Shop Drawing and Sample submissions will be acceptable to ENGINEER as providing a workable arrangement for reviewing and processing the required submittals. CONTRACTOR's schedule of values will be acceptable to ENGINEER as to form and substance.

ARTICLE 3—CONTRACT DOCUMENTS: INTENT,  
AMENDING, REUSE

*Intent:*

3.1. The Contract Documents comprise the entire agreement between OWNER and CONTRACTOR concerning the Work. The Contract Documents are complementary; what is called for by one is as binding as if called for by all. The Contract Documents will be construed in accordance with the law of the place of the Project.

3.2. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any Work, materials or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be furnished and performed whether or not specifically called for. When words or phrases which have a well-known technical or construction industry or trade meaning are used to describe Work, materials or equipment, such words or phrases shall be interpreted in accordance with that meaning. Clarifi-

cations and interpretations of the Contract Documents shall be issued by ENGINEER as provided in paragraph 9.4.

**3.3. Reference to Standards and Specifications of Technical Societies; Reporting and Resolving Discrepancies:**

3.3.1. Reference to standards, specifications, manuals or codes of any technical society, organization or association, or to the Laws or Regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard, specification, manual, code or Laws or Regulations in effect at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

3.3.2. If, during the performance of the Work, CONTRACTOR discovers any conflict, error, ambiguity or discrepancy within the Contract Documents or between the Contract Documents and any provision of any such Law or Regulation applicable to the performance of the Work or of any such standard, specification, manual or code or of any instruction of any Supplier referred to in paragraph 6.5, CONTRACTOR shall report it to ENGINEER in writing at once, and, CONTRACTOR shall not proceed with the Work affected thereby (except in an emergency as authorized by paragraph 6.23) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in paragraph 3.5 or 3.6; provided, however, that CONTRACTOR shall not be liable to OWNER or ENGINEER for failure to report any such conflict, error, ambiguity or discrepancy unless CONTRACTOR knew or reasonably should have known thereof.

3.3.3. Except as otherwise specifically stated in the Contract Documents or as may be provided by amendment or supplement thereto issued by one of the methods indicated in paragraph 3.5 or 3.6, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity or discrepancy between the provisions of the Contract Documents and:

3.3.3.1. the provisions of any such standard, specification, manual, code or instruction (whether or not specifically incorporated by reference in the Contract Documents); or

3.3.3.2. the provisions of any such Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

No provision of any such standard, specification, manual, code or instruction shall be effective to change the duties and responsibilities of OWNER, CONTRACTOR or ENGINEER, or any of their subcontractors, consultants, agents, or employees from those set forth in the Contract Documents, nor shall it be effective to assign to OWNER, ENGINEER or any of ENGINEER's Consultants, agents or employees any duty or authority to supervise or direct the furnishing or

performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of paragraph 9.13 or any other provision of the Contract Documents.

3.4. Whenever in the Contract Documents the terms "as ordered," "as directed," "as required," "as allowed," "as approved" or terms of like effect or import are used, or the adjectives "reasonable," "suitable," "acceptable," "proper" or "satisfactory" or adjectives of like effect or import are used to describe a requirement, direction, review or judgment of ENGINEER as to the Work, it is intended that such requirement, direction, review or judgment will be solely to evaluate, in general, the completed Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective shall not be effective to assign to ENGINEER any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 9.13 or any other provision of the Contract Documents.

*Amending and Supplementing Contract Documents:*

3.5. The Contract Documents may be amended to provide for additions, deletions and revisions in the Work or to modify the terms and conditions thereof in one or more of the following ways:

3.5.1. a formal Written Amendment,

3.5.2. a Change Order (pursuant to paragraph 10.4), or

3.5.3. a Work Change Directive (pursuant to paragraph 10.1).

3.6. In addition, the requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, in one or more of the following ways:

3.6.1. a Field Order (pursuant to paragraph 9.5),

3.6.2. ENGINEER's approval of a Shop Drawing or Sample (pursuant to paragraphs 6.26 and 6.27), or

3.6.3. ENGINEER's written interpretation or clarification (pursuant to paragraph 9.4).

*Reuse of Documents:*

3.7. CONTRACTOR, and any Subcontractor or Supplier or other person or organization performing or furnishing any of the Work under a direct or indirect contract with OWNER (i) shall not have or acquire any title to or ownership rights in any

of the Drawings, Specifications or other documents (or copies of any thereof) prepared by or bearing the seal of ENGINEER or ENGINEER's Consultant, and (ii) shall not reuse any of such Drawings, Specifications, other documents or copies on extensions of the Project or any other project without written consent of OWNER and ENGINEER and specific written verification or adaptation by ENGINEER.

ARTICLE 4—AVAILABILITY OF LANDS;  
SUBSURFACE AND PHYSICAL  
CONDITIONS; REFERENCE POINTS

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*Availability of Lands:*

4.1. OWNER shall furnish, as indicated in the Contract Documents, the lands upon which the Work is to be performed, rights-of-way and easements for access thereto, and such other lands which are designated for the use of CONTRACTOR. Upon reasonable written request, OWNER shall furnish CONTRACTOR with a correct statement of record legal title and legal description of the lands upon which the Work is to be performed and OWNER's interest therein as necessary for giving notice of or filing a mechanic's lien against such lands in accordance with applicable Laws and Regulations. OWNER shall identify any encumbrances or restrictions not of general application but specifically related to use of lands so furnished with which CONTRACTOR will have to comply in performing the Work. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by OWNER, unless otherwise provided in the Contract Documents. If CONTRACTOR and OWNER are unable to agree on entitlement to or the amount or extent of any adjustments in the Contract Price or the Contract Times as a result of any delay in OWNER's furnishing these lands, rights-of-way or easements, CONTRACTOR may make a claim therefor as provided in Articles 11 and 12. CONTRACTOR shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

*4.2. Subsurface and Physical Conditions:*

4.2.1. *Reports and Drawings:* Reference is made to the Supplementary Conditions for identification of:

4.2.1.1. *Subsurface Conditions:* Those reports of explorations and tests of subsurface conditions at or contiguous to the site that have been utilized by ENGINEER in preparing the Contract Documents; and

4.2.1.2. *Physical Conditions:* Those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site (except Underground Facilities) that have been utilized by ENGINEER in preparing the Contract Documents.

4.2.2. *Limited Reliance by CONTRACTOR Authorized: Technical Data:* CONTRACTOR may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," CONTRACTOR may not rely upon or make any claim against OWNER, ENGINEER or any of ENGINEER's Consultants with respect to:

4.2.2.1. the completeness of such reports and drawings for CONTRACTOR's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by CONTRACTOR and safety precautions and programs incident thereto, or

4.2.2.2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings, or

4.2.2.3. any CONTRACTOR interpretation of or conclusion drawn from any "technical data" or any such data, interpretations, opinions or information.

4.2.3. *Notice of Differing Subsurface or Physical Conditions:* If CONTRACTOR believes that any subsurface or physical condition at or contiguous to the site that is uncovered or revealed either:

4.2.3.1. is of such a nature as to establish that any "technical data" on which CONTRACTOR is entitled to rely as provided in paragraphs 4.2.1 and 4.2.2 is materially inaccurate, or

4.2.3.2. is of such a nature as to require a change in the Contract Documents, or

4.2.3.3. differs materially from that shown or indicated in the Contract Documents, or

4.2.3.4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents; then

CONTRACTOR shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as permitted by paragraph 6.23), notify OWNER and ENGINEER in writing about such condition. CONTRACTOR shall not further disturb such conditions or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

4.2.4. *ENGINEER's Review:* ENGINEER will promptly review the pertinent conditions, determine the necessity of OWNER's obtaining additional exploration or tests with respect thereto and advise OWNER in writing (with a copy to CONTRACTOR) of ENGINEER's findings and conclusions.

4.2.5. *Possible Contract Documents Change:* If ENGINEER concludes that a change in the Contract Documents is required as a result of a condition that meets one or more of the categories in paragraph 4.2.3., a Work Change Directive or a Change Order will be issued as provided in Article 10 to reflect and document the consequences of such change.

4.2.6. *Possible Price and Times Adjustments:* An equitable adjustment in the Contract Price or in the Contract Times, or both, will be allowed to the extent that the existence of such uncovered or revealed condition causes an increase or decrease in CONTRACTOR's cost of, or time required for performance of, the Work; subject, however, to the following:

4.2.6.1. such condition must meet any one or more of the categories described in paragraphs 4.2.3.1 through 4.2.3.4, inclusive;

4.2.6.2. a change in the Contract Documents pursuant to paragraph 4.2.5 will not be an automatic authorization of nor a condition precedent to entitlement to any such adjustment;

4.2.6.3. with respect to Work that is paid for on a Unit Price Basis, any adjustment in Contract Price will be subject to the provisions of paragraphs 9.10 and 11.9; and

4.2.6.4. CONTRACTOR shall not be entitled to any adjustment in the Contract Price or Times if:

4.2.6.4.1. CONTRACTOR knew of the existence of such conditions at the time CONTRACTOR made a final commitment to OWNER in respect of Contract Price and Contract Times by the submission of a bid or becoming bound under a negotiated contract; or

4.2.6.4.2. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test or study of the site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for CONTRACTOR prior to CONTRACTOR's making such final commitment; or

4.2.6.4.3. CONTRACTOR failed to give the written notice within the time and as required by paragraph 4.2.3.

If OWNER and CONTRACTOR are unable to agree on entitlement to or as to the amount or length of any such equitable adjustment in the Contract Price or Contract Times, a claim may be made therefor as provided in Articles 11 and 12. However, OWNER, ENGINEER and ENGINEER's Consultants shall not be liable to CONTRACTOR for any claims, costs, losses or damages sustained by CONTRACTOR on or in connection with any other project or anticipated project.

#### 4.3. *Physical Conditions—Underground Facilities:*

4.3.1. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the site is based on

information and data furnished to OWNER or ENGINEER by the owners of such Underground Facilities or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

4.3.1.1. OWNER and ENGINEER shall not be responsible for the accuracy or completeness of any such information or data; and

4.3.1.2. The cost of all of the following will be included in the Contract Price and CONTRACTOR shall have full responsibility for: (i) reviewing and checking all such information and data, (ii) locating all Underground Facilities shown or indicated in the Contract Documents, (iii) coordination of the Work with the owners of such Underground Facilities during construction, and (iv) the safety and protection of all such Underground Facilities as provided in paragraph 6.20 and repairing any damage thereto resulting from the Work.

4.3.2. *Not Shown or Indicated:* If an Underground Facility is uncovered or revealed at or contiguous to the site which was not shown or indicated in the Contract Documents, CONTRACTOR shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by paragraph 6.23), identify the owner of such Underground Facility and give written notice to that owner and to OWNER and ENGINEER. ENGINEER will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence of the Underground Facility. If ENGINEER concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued as provided in Article 10 to reflect and document such consequences. During such time, CONTRACTOR shall be responsible for the safety and protection of such Underground Facility as provided in paragraph 6.20. CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, to the extent that they are attributable to the existence of any Underground Facility that was not shown or indicated in the Contract Documents and that CONTRACTOR did not know of and could not reasonably have been expected to be aware of or to have anticipated. If OWNER and CONTRACTOR are unable to agree on entitlement to or the amount or length of any such adjustment in Contract Price or Contract Times, CONTRACTOR may make a claim therefor as provided in Articles 11 and 12. However, OWNER, ENGINEER and ENGINEER's Consultants shall not be liable to CONTRACTOR for any claims, costs, losses or damages incurred or sustained by CONTRACTOR on or in connection with any other project or anticipated project.

**Reference Points:**

4.4. OWNER shall provide engineering surveys to establish reference points for construction which in ENGINEER's judgment are necessary to enable CONTRACTOR to proceed with the Work. CONTRACTOR shall be responsible for laying out the Work, shall protect and preserve the established reference points and shall make no changes or relocations

without the prior written approval of OWNER. CONTRACTOR shall report to ENGINEER whenever any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points by professionally qualified personnel.

**4.5. Asbestos, PCBs, Petroleum, Hazardous Waste or Radioactive Material:**

4.5.1. OWNER shall be responsible for any Asbestos, PCBs, Petroleum, Hazardous Waste or Radioactive Material uncovered or revealed at the site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work and which may present a substantial danger to persons or property exposed thereto in connection with the Work at the site. OWNER shall not be responsible for any such materials brought to the site by CONTRACTOR, Subcontractor, Suppliers or anyone else for whom CONTRACTOR is responsible.

4.5.2. CONTRACTOR shall immediately: (i) stop all Work in connection with such hazardous condition and in any area affected thereby (except in an emergency as required by paragraph 6.23), and (ii) notify OWNER and ENGINEER (and thereafter confirm such notice in writing). OWNER shall promptly consult with ENGINEER concerning the necessity for OWNER to retain a qualified expert to evaluate such hazardous condition or take corrective action, if any. CONTRACTOR shall not be required to resume Work in connection with such hazardous condition or in any such affected area until after OWNER has obtained any required permits related thereto and delivered to CONTRACTOR special written notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (ii) specifying any special conditions under which such Work may be resumed safely. If OWNER and CONTRACTOR cannot agree as to entitlement to or the amount or extent of an adjustment, if any, in Contract Price or Contract Times as a result of such Work stoppage or such special conditions under which Work is agreed by CONTRACTOR to be resumed, either party may make a claim therefor as provided in Articles 11 and 12.

4.5.3. If after receipt of such special written notice CONTRACTOR does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then OWNER may order such portion of the Work that is in connection with such hazardous condition or in such affected area to be deleted from the Work. If OWNER and CONTRACTOR cannot agree as to entitlement to or the amount or extent of an adjustment, if any, in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a claim therefor as provided in Articles 11 and 12. OWNER may have such deleted portion of the Work performed by OWNER's own forces or others in accordance with Article 7.

4.5.4. To the fullest extent permitted by Laws and Regulations, OWNER shall indemnify and hold harmless CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's

Consultants and the officers, directors, employees, agents, other consultants and subcontractors of each and any of them from and against all claims, costs, losses and damages arising out of or resulting from such hazardous condition, provided that: (i) any such claim, cost, loss or damage is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, and (ii) nothing in this subparagraph 4.5.4 shall obligate OWNER to indemnify any person or entity from and against the consequences of that person's or entity's own negligence.

4.5.5. The provisions of paragraphs 4.2 and 4.3 are not intended to apply to Asbestos, PCBs, Petroleum, Hazardous Waste or Radioactive Material uncovered or revealed at the site.

## ARTICLE 5—BONDS AND INSURANCE

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

5.1. CONTRACTOR shall furnish Performance and Payment Bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all CONTRACTOR's obligations under the Contract Documents. These Bonds shall remain in effect at least until one year after the date when final payment becomes due, except as provided otherwise by Laws or Regulations or by the Contract Documents. CONTRACTOR shall also furnish such other Bonds as are required by the Supplementary Conditions. All Bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Audit Staff, Bureau of Government Financial Operations, U.S. Treasury Department. All Bonds signed by an agent must be accompanied by a certified copy of such agent's authority to act.

5.2. If the surety on any Bond furnished by CONTRACTOR is declared a bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of paragraph 5.1, CONTRACTOR shall within ten days thereafter substitute another Bond and surety, both of which must be acceptable to OWNER.

### *5.3. Licensed Sureties and Insurers; Certificates of Insurance:*

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

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

5.3.2. CONTRACTOR shall deliver to OWNER, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by OWNER or any other additional insured) which CONTRACTOR is required to purchase and maintain in accordance with paragraph 5.4. OWNER shall deliver to CONTRACTOR, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by CONTRACTOR or any other additional insured) which OWNER is required to purchase and maintain in accordance with paragraphs 5.6 and 5.7 hereof.

### *CONTRACTOR's Liability Insurance:*

5.4. CONTRACTOR shall purchase and maintain such liability and other insurance as is appropriate for the Work being performed and furnished and as will provide protection from claims set forth below which may arise out of or result from CONTRACTOR's performance and furnishing of the Work and CONTRACTOR's other obligations under the Contract Documents, whether it is to be performed or furnished by CONTRACTOR, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform or furnish any of the Work, or by anyone for whose acts any of them may be liable:

5.4.1. claims under workers' compensation, disability benefits and other similar employee benefit acts;

5.4.2. claims for damages because of bodily injury, occupational sickness or disease, or death of CONTRACTOR's employees;

5.4.3. claims for damages because of bodily injury, sickness or disease, or death of any person other than CONTRACTOR's employees;

5.4.4. claims for damages insured by customary personal injury liability coverage which are sustained: (i) by any person as a result of an offense directly or indirectly related to the employment of such person by CONTRACTOR, or (ii) by any other person for any other reason;

5.4.5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and

5.4.6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

The policies of insurance so required by this paragraph 5.4 to be purchased and maintained shall:

5.4.7. with respect to insurance required by paragraphs 5.4.3 through 5.4.6 inclusive, include as additional insureds (subject to any customary exclusion in respect of professional liability) OWNER, ENGINEER, ENGINEER's Consultants and any other persons or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers and employees of all such additional insureds;

5.4.8. include the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;

5.4.9. include completed operations insurance;

5.4.10. include contractual liability insurance covering CONTRACTOR's indemnity obligations under paragraphs 6.12, 6.16 and 6.31 through 6.33;

5.4.11. contain a provision or endorsement that the coverage afforded will not be cancelled, materially changed or renewal refused until at least thirty days prior written notice has been given to OWNER and CONTRACTOR and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the CONTRACTOR pursuant to paragraph 5.3.2 will so provide);

5.4.12. remain in effect at least until final payment and at all times thereafter when CONTRACTOR may be correcting, removing or replacing *defective* Work in accordance with paragraph 13.12; and

5.4.13. with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment (and CONTRACTOR shall furnish OWNER and each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued evidence satisfactory to OWNER and any such additional insured of continuation of such insurance at final payment and one year thereafter).

#### ***OWNER's Liability Insurance:***

5.5. In addition to the insurance required to be provided by CONTRACTOR under paragraph 5.4, OWNER, at OWNER's option, may purchase and maintain at OWNER's expense OWNER's own liability insurance as will protect OWNER against claims which may arise from operations under the Contract Documents.

#### ***Property Insurance:***

5.6. Unless otherwise provided in the Supplementary Conditions, OWNER shall purchase and maintain property insur-

ance upon the Work at the site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:

5.6.1. include the interests of OWNER, CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants and any other persons or entities identified in the Supplementary Conditions, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured;

5.6.2. be written on a Builder's Risk "all-risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework and Work in transit and shall insure against at least the following perils fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, and such other perils as may be specifically required by the Supplementary Conditions;

5.6.3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);

5.6.4. cover materials and equipment stored at the site or at another location that was agreed to in writing by OWNER prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by ENGINEER; and

5.6.5. be maintained in effect until final payment is made unless otherwise agreed to in writing by OWNER, CONTRACTOR and ENGINEER with thirty days written notice to each other additional insured to whom a certificate of insurance has been issued.

5.7. OWNER shall purchase and maintain such boiler and machinery insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of OWNER, CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants and any other persons or entities identified in the Supplementary Conditions, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured.

5.8. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained by OWNER in accordance with paragraphs 5.6 and 5.7 will contain a provision or endorsement that the coverage afforded will not be cancelled or materially changed or renewal refused until at least thirty days' prior written notice has been given to OWNER and CONTRACTOR and to each other additional insured to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with paragraph 5.11.

5.9. OWNER shall not be responsible for purchasing and maintaining any property insurance to protect the interests of CONTRACTOR. Subcontractors or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount, will be borne by CONTRACTOR. Subcontractor or others suffering any such loss and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

5.10. If CONTRACTOR requests in writing that other special insurance be included in the property insurance policies provided under paragraphs 5.6 or 5.7, OWNER shall, if possible, include such insurance, and the cost thereof will be charged to CONTRACTOR by appropriate Change Order or Written Amendment. Prior to commencement of the Work at the site, OWNER shall in writing advise CONTRACTOR whether or not such other insurance has been procured by OWNER.

#### 5.11. *Waiver of Rights:*

5.11.1. OWNER and CONTRACTOR intend that all policies purchased in accordance with paragraphs 5.6 and 5.7 will protect OWNER, CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants and all other persons or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds in such policies and will provide primary coverage for all losses and damages caused by the perils covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or additional insureds thereunder. OWNER and CONTRACTOR waive all rights against each other and their respective officers, directors, employees and agents for all losses and damages caused by, arising out of or resulting from any of the perils covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors, ENGINEER, ENGINEER's Consultants and all other persons or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by OWNER as trustee or otherwise payable under any policy so issued.

5.11.2. In addition, OWNER waives all rights against CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants and the officers, directors, employees and agents of any of them, for:

5.11.2.1. loss due to business interruption, loss of use or other consequential loss extending beyond direct physical loss or damage to OWNER's property or the Work caused by, arising out of or resulting from fire or other peril, whether or not insured by OWNER; and

5.11.2.2. loss or damage to the completed Project or part thereof caused by, arising out of or resulting from fire or other insured peril covered by any property insurance maintained on the completed Project or part thereof by OWNER during partial utilization pursuant to paragraph 14.10, after substantial completion pursuant to paragraph 14.8 or after final payment pursuant to paragraph 14.13.

Any insurance policy maintained by OWNER covering any loss, damage or consequential loss referred to in this paragraph 5.11.2 shall contain provisions to the effect that in the event of payment of any such loss, damage or consequential loss the insurers will have no rights of recovery against any of CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants and the officers, directors, employees and agents of any of them.

#### **Receipt and Application of Insurance Proceeds**

5.12. Any insured loss under the policies of insurance required by paragraphs 5.6 and 5.7 will be adjusted with OWNER and made payable to OWNER as fiduciary for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of paragraph 5.13. OWNER shall deposit in a separate account any money so received, and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof and the Work and the cost thereof covered by an appropriate Change Order or Written Amendment.

5.13. OWNER as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within fifteen days after the occurrence of loss to OWNER's exercise of this power. If such objection be made, OWNER as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, OWNER as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, OWNER as fiduciary shall give bond for the proper performance of such duties.

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

5.14. If either party (OWNER or CONTRACTOR) has any objection to the coverage afforded by or other provisions of the Bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within ten days after receipt of the certificates (or other evidence requested) required by paragraph 2.7. OWNER and CONTRACTOR shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the Bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent Bonds or insurance to protect such other party's interests at the expense of the party who was

required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

*Partial Utilization—Property Insurance:*

5.15. If OWNER finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, such use or occupancy may be accomplished in accordance with paragraph 14.10; provided that no such use or occupancy shall commence before the insurers providing the property insurance have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be cancelled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6—CONTRACTOR'S RESPONSIBILITIES

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*Supervision and Superintendence:*

6.1. CONTRACTOR shall supervise, inspect and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences and procedures of construction, but CONTRACTOR shall not be responsible for the negligence of others in the design or specification of a specific means, method, technique, sequence or procedure of construction which is shown or indicated in and expressly required by the Contract Documents. CONTRACTOR shall be responsible to see that the completed Work complies accurately with the Contract Documents.

6.2. CONTRACTOR shall keep on the Work at all times during its progress a competent resident superintendent, who shall not be replaced without written notice to OWNER and ENGINEER except under extraordinary circumstances. The superintendent will be CONTRACTOR's representative at the site and shall have authority to act on behalf of CONTRACTOR. All communications to the superintendent shall be as binding as if given to CONTRACTOR.

*Labor, Materials and Equipment:*

6.3. CONTRACTOR shall provide competent, suitably qualified personnel to survey, lay out and construct the Work as required by the Contract Documents. CONTRACTOR shall at all times maintain good discipline and order at the site. Except as otherwise required for the safety or protection of persons or the Work or property at the site or adjacent thereto, and except as otherwise indicated in the Contract Documents, all Work at the site shall be performed during regular working hours and

CONTRACTOR will not permit overtime work or the performance of Work on Saturday, Sunday or any legal holiday without OWNER's written consent given after prior written notice to ENGINEER.

6.4. Unless otherwise specified in the General Requirements, CONTRACTOR shall furnish and assume full responsibility for all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities and all other facilities and incidentals necessary for the furnishing, performance, testing, start-up and completion of the Work.

6.5. All materials and equipment shall be of good quality and new, except as otherwise provided in the Contract Documents. All warranties and guarantees specifically called for by the Specifications shall expressly run to the benefit of OWNER. If required by ENGINEER, CONTRACTOR shall furnish satisfactory evidence (including reports of required tests) as to the kind and quality of materials and equipment. All materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with instructions of the applicable Supplier, except as otherwise provided in the Contract Documents.

*Progress Schedule:*

6.6. CONTRACTOR shall adhere to the progress schedule established in accordance with paragraph 2.9 as it may be adjusted from time to time as provided below:

6.6.1. CONTRACTOR shall submit to ENGINEER for acceptance (to the extent indicated in paragraph 2.9) proposed adjustments in the progress schedule that will not change the Contract Times (or Milestones). Such adjustments will conform generally to the progress schedule then in effect and additionally will comply with any provisions of the General Requirements applicable thereto.

6.6.2. Proposed adjustments in the progress schedule that will change the Contract Times (or Milestones) shall be submitted in accordance with the requirements of paragraph 12.1. Such adjustments may only be made by a Change Order or Written Amendment in accordance with Article 12.

*6.7. Substitutes and "Or-Equal" Items:*

6.7.1. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be accepted by ENGINEER under the following circumstances:



6.7.1.1. *"Or-Equal"*: If in ENGINEER's sole discretion an item of material or equipment proposed by CONTRACTOR is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by ENGINEER as an "or-equal" item, in which case review and approval of the proposed item may, in ENGINEER's sole discretion, be accomplished without compliance with some or all of the requirements for acceptance of proposed substitute items.

6.7.1.2. *Substitute Items*: If in ENGINEER's sole discretion an item of material or equipment proposed by CONTRACTOR does not qualify as an "or-equal" item under subparagraph 6.7.1.1, it will be considered a proposed substitute item. CONTRACTOR shall submit sufficient information as provided below to allow ENGINEER to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. The procedure for review by the ENGINEER will include the following as supplemented in the General Requirements and as ENGINEER may decide is appropriate under the circumstances. Requests for review of proposed substitute items of material or equipment will not be accepted by ENGINEER from anyone other than CONTRACTOR. If CONTRACTOR wishes to furnish or use a substitute item of material or equipment, CONTRACTOR shall first make written application to ENGINEER for acceptance thereof, certifying that the proposed substitute will perform adequately the functions and achieve the results called for by the general design, be similar in substance to that specified and be suited to the same use as that specified. The application will state the extent, if any, to which the evaluation and acceptance of the proposed substitute will prejudice CONTRACTOR's achievement of Substantial Completion on time, whether or not acceptance of the substitute for use in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with OWNER for work on the Project) to adapt the design to the proposed substitute and whether or not incorporation or use of the substitute in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed substitute from that specified will be identified in the application and available maintenance, repair and replacement service will be indicated. The application will also contain an itemized estimate of all costs or credits that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other contractors affected by the resulting change, all of which will be considered by ENGINEER in evaluating the proposed substitute. ENGINEER may require CONTRACTOR to furnish additional data about the proposed substitute.

6.7.1.3. *CONTRACTOR's Expense*: All data to be provided by CONTRACTOR in support of any proposed "or-equal" or substitute item will be at CONTRACTOR's expense.

6.7.2. *Substitute Construction Methods or Procedures*: If a specific means, method, technique, sequence or procedure of

construction is shown or indicated in and expressly required by the Contract Documents, CONTRACTOR may furnish or utilize a substitute means, method, technique, sequence or procedure of construction acceptable to ENGINEER. CONTRACTOR shall submit sufficient information to allow ENGINEER, in ENGINEER's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The procedure for review by ENGINEER will be similar to that provided in subparagraph 6.7.1.2.

6.7.3. *Engineer's Evaluation*: ENGINEER will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to paragraphs 6.7.1.2 and 6.7.2. ENGINEER will be the sole judge of acceptability. No "or-equal" or substitute will be ordered, installed or utilized without ENGINEER's prior written acceptance which will be evidenced by either a Change Order or an approved Shop Drawing. OWNER may require CONTRACTOR to furnish at CONTRACTOR's expense a special performance guarantee or other surety with respect to any "or-equal" or substitute. ENGINEER will record time required by ENGINEER and ENGINEER's Consultants in evaluating substitutes proposed or submitted by CONTRACTOR pursuant to paragraphs 6.7.1.2 and 6.7.2 and in making changes in the Contract Documents (or in the provisions of any other direct contract with OWNER for work on the Project) occasioned thereby. Whether or not ENGINEER accepts a substitute item so proposed or submitted by CONTRACTOR, CONTRACTOR shall reimburse OWNER for the charges of ENGINEER and ENGINEER's Consultants for evaluating each such proposed substitute item.

#### *Concerning Subcontractors, Suppliers and Others:*

6.8.1. CONTRACTOR shall not employ any Subcontractor, Supplier or other person or organization (including those acceptable to OWNER and ENGINEER as indicated in paragraph 6.8.2), whether initially or as a substitute, against whom OWNER or ENGINEER may have reasonable objection. CONTRACTOR shall not be required to employ any Subcontractor, Supplier or other person or organization to furnish or perform any of the Work against whom CONTRACTOR has reasonable objection.

6.8.2. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers or other persons or organizations (including those who are to furnish the principal items of materials or equipment) to be submitted to OWNER in advance of the specified date prior to the Effective Date of the Agreement for acceptance by OWNER and ENGINEER, and if CONTRACTOR has submitted a list thereof in accordance with the Supplementary Conditions, OWNER's or ENGINEER's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the bidding documents or the Contract Documents) of any such Subcontractor, Supplier or other person or organization so identified may be revoked on the basis of reasonable objection after due investigation, in which case CONTRACTOR shall submit an acceptable substitute, the Contract Price will be adjusted by the difference in the cost occasioned by such

substitution and an appropriate Change Order will be issued or Written Amendment signed. No acceptance by OWNER or ENGINEER of any such Subcontractor, Supplier or other person or organization shall constitute a waiver of any right of OWNER or ENGINEER to reject *defective Work*.

6.9.1. CONTRACTOR shall be fully responsible to OWNER and ENGINEER for all acts and omissions of the Subcontractors, Suppliers and other persons and organizations performing or furnishing any of the Work under a direct or indirect contract with CONTRACTOR just as CONTRACTOR is responsible for CONTRACTOR's own acts and omissions. Nothing in the Contract Documents shall create for the benefit of any such Subcontractor, Supplier or other person or organization any contractual relationship between OWNER or ENGINEER and any such Subcontractor, Supplier or other person or organization, nor shall it create any obligation on the part of OWNER or ENGINEER to pay or to see to the payment of any moneys due any such Subcontractor, Supplier or other person or organization except as may otherwise be required by Laws and Regulations.

6.9.2. CONTRACTOR shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers and other persons and organizations performing or furnishing any of the Work under a direct or indirect contract with CONTRACTOR. CONTRACTOR shall require all Subcontractors, Suppliers and such other persons and organizations performing or furnishing any of the Work to communicate with the ENGINEER through CONTRACTOR.

6.10. The divisions and sections of the Specifications and the identifications of any Drawings shall not control CONTRACTOR in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

6.11. All Work performed for CONTRACTOR by a Subcontractor or Supplier will be pursuant to an appropriate agreement between CONTRACTOR and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of OWNER and ENGINEER. Whenever any such agreement is with a Subcontractor or Supplier who is listed as an additional insured on the property insurance provided in paragraph 5.6 or 5.7, the agreement between the CONTRACTOR and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against OWNER, CONTRACTOR, ENGINEER, ENGINEER's Consultants and all other additional insureds for all losses and damages caused by, arising out of or resulting from any of the perils covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, CONTRACTOR will obtain the same.

#### *Patent Fees and Royalties:*

6.12. CONTRACTOR shall pay all license fees and royalties and assume all costs incident to the use in the performance

of the Work or the incorporation in the Work of any invention, design, process, product or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of OWNER or ENGINEER its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by OWNER in the Contract Documents. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultants and the officers, directors, employees, agents and other consultants of each and any of them from and against all claims, costs, losses and damages arising out of or resulting from any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product or device not specified in the Contract Documents.

#### *Permits:*

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

#### *Laws and Regulations:*

6.14.1. CONTRACTOR shall give all notices and comply with all Laws and Regulations applicable to furnishing and performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither OWNER nor ENGINEER shall be responsible for monitoring CONTRACTOR's compliance with any Laws or Regulations.

6.14.2. If CONTRACTOR performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, CONTRACTOR shall bear all claims, costs, losses and damages caused by, arising out of or resulting therefrom; however, it shall not be CONTRACTOR's primary responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve CONTRACTOR of CONTRACTOR's obligations under paragraph 3.3.2.

#### *Taxes:*

6.15. CONTRACTOR shall pay all sales, consumer, use and other similar taxes required to be paid by CONTRACTOR in accordance with the Laws and Regulations of the place of

the Project which are applicable during the performance of the Work.

*Use of Premises:*

6.16. CONTRACTOR shall confine construction equipment, the storage of materials and equipment and the operations of workers to the site and land and areas identified in and permitted by the Contract Documents and other land and areas permitted by Laws and Regulations, rights-of-way, permits and easements, and shall not unreasonably encumber the premises with construction equipment or other materials or equipment. CONTRACTOR shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof or of any adjacent land or areas, resulting from the performance of the Work. Should any claim be made by any such owner or occupant because of the performance of the Work, CONTRACTOR shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law. CONTRACTOR shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultant and anyone directly or indirectly employed by any of them from and against all claims, costs, losses and damages arising out of or resulting from any claim or action, legal or equitable, brought by any such owner or occupant against OWNER, ENGINEER or any other party indemnified hereunder to the extent caused by or based upon CONTRACTOR's performance of the Work.

6.17. During the progress of the Work, CONTRACTOR shall keep the premises free from accumulations of waste materials, rubbish and other debris resulting from the Work. At the completion of the Work CONTRACTOR shall remove all waste materials, rubbish and debris from and about the premises as well as all tools, appliances, construction equipment and machinery and surplus materials. CONTRACTOR shall leave the site clean and ready for occupancy by OWNER at Substantial Completion of the Work. CONTRACTOR shall restore to original condition all property not designated for alteration by the Contract Documents.

6.18. CONTRACTOR shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall CONTRACTOR subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

*Record Documents:*

6.19. CONTRACTOR shall maintain in a safe place at the site one record copy of all Drawings, Specifications, Addenda, Written Amendments, Change Orders, Work Change Directives, Field Orders and written interpretations and clarifications (issued pursuant to paragraph 9.4) in good order and annotated to show all changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to ENGINEER for reference. Upon completion of

the Work, these record documents, Samples and Shop Drawings will be delivered to ENGINEER for OWNER.

*Safety and Protection:*

6.20. CONTRACTOR shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. CONTRACTOR shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

6.20.1. all persons on the Work site or who may be affected by the Work;

6.20.2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the site; and

6.20.3. other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities and Underground Facilities not designated for removal, relocation or replacement in the course of construction.

CONTRACTOR shall comply with all applicable Laws and Regulations of any public body having jurisdiction for safety of persons or property or to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such safety and protection. CONTRACTOR shall notify owners of adjacent property and of Underground Facilities and utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation and replacement of their property. All damage, injury or loss to any property referred to in paragraph 6.20.2 or 6.20.3 caused, directly or indirectly, in whole or in part, by CONTRACTOR, any Subcontractor, Supplier or any other 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, shall be remedied by CONTRACTOR (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of OWNER or ENGINEER or ENGINEER's Consultant or anyone employed by any of them or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of CONTRACTOR or any Subcontractor, Supplier or other person or organization directly or indirectly employed by any of them). CONTRACTOR's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and ENGINEER has issued a notice to OWNER and CONTRACTOR in accordance with paragraph 14.13 that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

*Safety Representative:*

6.21. CONTRACTOR shall designate a qualified and experienced safety representative at the site whose duties and

responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

#### **Hazard Communication Programs:**

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

#### **Emergencies:**

6.23. In emergencies affecting the safety or protection of persons or the Work or property at the site or adjacent thereto, CONTRACTOR, without special instruction or authorization from OWNER or ENGINEER, is obligated to act to prevent threatened damage, injury or loss. CONTRACTOR shall give ENGINEER prompt written notice if CONTRACTOR believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby. If ENGINEER determines that a change in the Contract Documents is required because of the action taken by CONTRACTOR in response to such an emergency, a Work Change Directive or Change Order will be issued to document the consequences of such action.

#### **6.24. Shop Drawings and Samples:**

6.24.1. CONTRACTOR shall submit Shop Drawings to ENGINEER for review and approval in accordance with the accepted schedule of Shop Drawings and Sample submittals (see paragraph 2.9). All submittals will be identified as ENGINEER may require and in the number of copies specified in the General Requirements. The data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials and similar data to show ENGINEER the materials and equipment CONTRACTOR proposes to provide and to enable ENGINEER to review the information for the limited purposes required by paragraph 6.26.

6.24.2. CONTRACTOR shall also submit Samples to ENGINEER for review and approval in accordance with said accepted schedule of Shop Drawings and Sample submittals. Each Sample will be identified clearly as to material, Supplier, pertinent data such as catalog numbers and the use for which intended and otherwise as ENGINEER may require to enable ENGINEER to review the submittal for the limited purposes required by paragraph 6.26. The numbers of each Sample to be submitted will be as specified in the Specifications.

#### **6.25. Submittal Procedures:**

6.25.1. Before submitting each Shop Drawing or Sample, CONTRACTOR shall have determined and verified:

6.25.1.1. all field measurements, quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers and similar information with respect thereto.

6.25.1.2. all materials with respect to intended use, fabrication, shipping, handling, storage, assembly and installation pertaining to the performance of the Work, and

6.25.1.2. all information relative to CONTRACTOR's sole responsibilities in respect of means, methods, techniques, sequences and procedures of construction and safety precautions and programs incident thereto.

CONTRACTOR shall also have reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.

6.25.2. Each submittal will bear a stamp or specific written indication that CONTRACTOR has satisfied CONTRACTOR's obligations under the Contract Documents with respect to CONTRACTOR'S review and approval of that submittal.

6.25.3. At the time of each submission, CONTRACTOR shall give ENGINEER specific written notice of such variations, if any, that the Shop Drawing or Sample submitted may have from the requirements of the Contract Documents, such notice to be in a written communication separate from the submittal; and, in addition, shall cause a specific notation to be made on each Shop Drawing and Sample submitted to ENGINEER for review and approval of each such variation.

6.26. ENGINEER will review and approve Shop Drawings and Samples in accordance with the schedule of Shop Drawings and Sample submittals accepted by ENGINEER as required by paragraph 2.9. ENGINEER's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. ENGINEER's review and approval will not extend to means, methods, techniques, sequences or procedures of construction (except where a particular means, method, technique, sequence or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions. CONTRACTOR shall make corrections required by ENGINEER, and shall return the required number of corrected copies of Shop Drawings and submit as required new Samples for review and approval. CONTRACTOR shall direct specific attention in writing to revisions other than the corrections called for by ENGINEER on previous submittals.

6.27. ENGINEER's review and approval of Shop Drawings or Samples shall not relieve CONTRACTOR from responsibility for any variation from the requirements of the Contract

Documents unless CONTRACTOR has in writing called ENGINEER's attention to each such variation at the time of submission as required by paragraph 6.25.3 and ENGINEER has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample approval; nor will any approval by ENGINEER relieve CONTRACTOR from responsibility for complying with the requirements of paragraph 6.25.1.

6.28. Where a Shop Drawing or Sample is required by the Contract Documents or the schedule of Shop Drawings and Sample submissions accepted by ENGINEER as required by paragraph 2.9, any related Work performed prior to ENGINEER's review and approval of the pertinent submittal will be at the sole expense and responsibility of CONTRACTOR.

#### *Continuing the Work:*

6.29. CONTRACTOR shall carry on the Work and adhere to the progress schedule during all disputes or disagreements with OWNER. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by paragraph 15.5 or as OWNER and CONTRACTOR may otherwise agree in writing.

#### *6.30. CONTRACTOR's General Warranty and Guarantee:*

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

6.30.1.1. abuse, modification or improper maintenance or operation by persons other than CONTRACTOR, Subcontractors or Suppliers; or

6.30.1.2. normal wear and tear under normal usage.

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

6.30.2.1. observations by ENGINEER;

6.30.2.3. recommendation of any progress or final payment by ENGINEER;

6.30.2.3. the issuance of a certificate of Substantial Completion or any payment by OWNER to CONTRACTOR under the Contract Documents;

6.30.2.4. use or occupancy of the Work or any part thereof by OWNER;

6.30.2.5. any acceptance by OWNER or any failure to do so;

6.30.2.6. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by ENGINEER pursuant to paragraph 14.13;

6.30.2.7. any inspection, test or approval by others; or

6.30.2.8. any correction of *defective* Work by OWNER.

#### *Indemnification:*

6.31. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultants and the officers, directors, employees, agents and other consultants of each and any of them from and against all claims, costs, losses and damages (including but not limited to all fees and charges of engineers, architects, attorneys and other professionals and all court or arbitration or other dispute resolution costs) caused by, arising out of or resulting from the performance of the Work, provided that any such claim, cost, loss or damage: (i) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, and (ii) is caused in whole or in part by any negligent act or omission of CONTRACTOR, any Subcontractor, any Supplier, 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 caused in part by any negligence or omission of a person or entity indemnified hereunder or whether liability is imposed upon such indemnified party by Laws and Regulations regardless of the negligence of any such person or entity.

6.32. In any and all claims against OWNER or ENGINEER or any of their respective consultants, agents, officers, directors or employees by any employee (or the survivor or personal representative of such employee) of CONTRACTOR, any Subcontractor, any Supplier, 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, the indemnification obligation under paragraph 6.31 shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for CONTRACTOR or any such Subcontractor, Supplier or other person or organization under workers' compensation acts, disability benefit acts or other employee benefit acts.

6.33. The indemnification obligations of CONTRACTOR under paragraph 6.31 shall not extend to the liability of ENGINEER and ENGINEER's Consultants, officers, directors, employees or agents caused by the professional negligence, errors or omissions of any of them.

#### *Survival of Obligations:*

6.34. All representations, indemnifications, warranties and guarantees made in, required by or given in accordance with

the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion and acceptance of the Work and termination or completion of the Agreement.

## ARTICLE 7—OTHER WORK

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### *Related Work at Site:*

7.1. OWNER may perform other work related to the Project at the site by OWNER's own forces, or let other direct contracts therefor which shall contain General Conditions similar to these, or have other work performed by utility owners. If the fact that such other work is to be performed was not noted in the Contract Documents, then: (i) written notice thereof will be given to CONTRACTOR prior to starting any such other work, and (ii) CONTRACTOR may make a claim therefor as provided in Articles 11 and 12 if CONTRACTOR believes that such performance will involve additional expense to CONTRACTOR or requires additional time and the parties are unable to agree as to the amount or extent thereof.

7.2. CONTRACTOR shall afford each other contractor who is a party to such a direct contract and each utility owner (and OWNER, if OWNER is performing the additional work with OWNER's employees) proper and safe access to the site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work and shall properly connect and coordinate the Work with theirs. Unless otherwise provided in the Contract Documents, CONTRACTOR shall do all cutting, fitting and patching of the Work that may be required to make its several parts come together properly and integrate with such other work. CONTRACTOR shall not endanger any work of others by cutting, excavating or otherwise altering their work and will only cut or alter their work with the written consent of ENGINEER and the others whose work will be affected. The duties and responsibilities of CONTRACTOR under this paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of CONTRACTOR in said direct contracts between OWNER and such utility owners and other contractors.

7.3. If the proper execution or results of any part of CONTRACTOR's Work depends upon work performed by others under this Article 7, CONTRACTOR shall inspect such other work and promptly report to ENGINEER in writing any delays, defects or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of CONTRACTOR's Work. CONTRACTOR's failure so to report will constitute an acceptance of such other work as fit and proper for integration with CONTRACTOR's Work except for latent or nonapparent defects and deficiencies in such other work.

### *Coordination:*

7.4. If OWNER contracts with others for the performance of other work on the Project at the site, the following will be set forth in Supplementary Conditions:

7.4.1. the person, firm or corporation who will have authority and responsibility for coordination of the activities among the various prime contractors will be identified;

7.4.2. the specific matters to be covered by such authority and responsibility will be itemized; and

7.4.3. the extent of such authority and responsibilities will be provided.

Unless otherwise provided in the Supplementary Conditions, OWNER shall have sole authority and responsibility in respect of such coordination.

## ARTICLE 8—OWNER'S RESPONSIBILITIES

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

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

8.3. OWNER shall furnish the data required of OWNER under the Contract Documents promptly and shall make payments to CONTRACTOR promptly when they are due as provided in paragraphs 14.4 and 14.13.

8.4. OWNER's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in paragraphs 4.1 and 4.4. Paragraph 4.2 refers to OWNER's identifying and making available to CONTRACTOR copies of reports of explorations and tests of subsurface conditions at the site and drawings of physical conditions in existing structures at or contiguous to the site that have been utilized by ENGINEER in preparing the Contract Documents.

8.5. OWNER's responsibilities in respect of purchasing and maintaining liability and property insurance are set forth in paragraphs 5.5 through 5.10.

8.6. OWNER is obligated to execute Change Orders as indicated in paragraph 10.4.

8.7. OWNER's responsibility in respect of certain inspections, tests and approvals is set forth in paragraph 13.4.

8.8. In connection with OWNER's right to stop Work or suspend Work, see paragraphs 13.10 and 15.1. Paragraph 15.2 deals with OWNER's right to terminate services of CONTRACTOR under certain circumstances.

8.9. The OWNER shall not supervise, direct or have control or authority over, nor be responsible for, CONTRACTOR's means, methods, techniques, sequences or procedures of construction or the safety precautions and programs incident thereto, or for any failure of CONTRACTOR to comply with Laws and Regulations applicable to the furnishing or performance of the Work. OWNER will not be responsible for CONTRACTOR's failure to perform or furnish the Work in accordance with the Contract Documents.

8.10. OWNER'S responsibility in respect of undisclosed Asbestos, PCBs, Petroleum, Hazardous Waste or Radioactive Materials uncovered or revealed at the site is set forth in paragraph 4.5.

8.11. If and to the extent OWNER has agreed to furnish CONTRACTOR reasonable evidence that financial arrangements have been made to satisfy OWNER's obligations under the Contract Documents, OWNER's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

#### ARTICLE 9—ENGINEER'S STATUS DURING CONSTRUCTION

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##### *OWNER's Representative:*

9.1. ENGINEER will be OWNER's representative during the construction period. The duties and responsibilities and the limitations of authority of ENGINEER as OWNER's representative during construction are set forth in the Contract Documents and shall not be extended without written consent of OWNER and ENGINEER.

##### *Visits to Site:*

9.2. ENGINEER will make visits to the site at intervals appropriate to the various stages of construction as ENGINEER deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of CONTRACTOR's executed Work. Based on information obtained during such visits and observations, ENGINEER will endeavor for the benefit of OWNER to determine, in general, if the Work is proceeding in accordance with the Contract Documents. ENGINEER will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. ENGINEER's efforts will be directed toward providing for OWNER a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and on-site observations, ENGINEER will keep OWNER informed of the progress of the Work and will endeavor to guard OWNER against defective Work. ENGINEER's visits and on-site observations are subject to all the limitations on ENGINEER's authority and responsibility set forth in paragraph 9.13, and particularly, but without limitation, during or as a result of ENGINEER's on-site visits or

observations of CONTRACTOR's Work ENGINEER will not supervise, direct, control or have authority over or be responsible for CONTRACTOR's means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of CONTRACTOR to comply with Laws and Regulations applicable to the furnishing or performance of the Work.

##### *Project Representative:*

9.3. If OWNER and ENGINEER agree, ENGINEER will furnish a Resident Project Representative to assist ENGINEER in providing more continuous observation of the Work. The responsibilities and authority and limitations thereon of any such Resident Project Representative and assistants will be as provided in paragraph 9.13 and in the Supplementary Conditions. If OWNER designates another representative or agent to represent OWNER at the site who is not ENGINEER's Consultant, agent or employee, the responsibilities and authority and limitations thereon of such other person will be as provided in the Supplementary Conditions.

##### *Clarifications and Interpretations:*

9.4. ENGINEER will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents (in the form of Drawings or otherwise) as ENGINEER may determine necessary, which shall be consistent with the intent of and reasonably inferable from Contract Documents. Such written clarifications and interpretations will be binding on OWNER and CONTRACTOR. If OWNER or CONTRACTOR believes that a written clarification or interpretation justifies an adjustment in the Contract Price or the Contract Times and the parties are unable to agree to the amount or extent thereof, if any, OWNER or CONTRACTOR may make a written claim therefor as provided in Article 11 or Article 12.

##### *Authorized Variations in Work:*

9.5. ENGINEER may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on OWNER and also on CONTRACTOR who shall perform the Work involved promptly. If OWNER or CONTRACTOR believes that a Field Order justifies an adjustment in the Contract Price or the Contract Times and the parties are unable to agree as to the amount or extent thereof, OWNER or CONTRACTOR may make a written claim therefor as provided in Article 11 or 12.

##### *Rejecting Defective Work:*

9.6. ENGINEER will have authority to disapprove or reject Work which ENGINEER believes to be defective, or

that ENGINEER believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. ENGINEER will also have authority to require special inspection or testing of the Work as provided in paragraph 13.9, whether or not the Work is fabricated, installed or completed.

*Shop Drawings, Change Orders and Payments:*

9.7. In connection with ENGINEER's authority as to Shop Drawings and Samples, see paragraphs 6.24 through 6.28 inclusive.

9.8. In connection with ENGINEER's authority as to Change Orders, see Articles 10, 11, and 12.

9.9. In connection with ENGINEER's authority as to Applications for Payment, see Article 14.

*Determinations for Unit Prices:*

9.10. ENGINEER will determine the actual quantities and classifications of Unit Price Work performed by CONTRACTOR. ENGINEER will review with CONTRACTOR the ENGINEER's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). ENGINEER's written decision thereon will be final and binding upon OWNER and CONTRACTOR, unless, within ten days after the date of any such decision, either OWNER or CONTRACTOR delivers to the other and to ENGINEER written notice of intention to appeal from ENGINEER's decision and: (i) an appeal from ENGINEER's decision is taken within the time limits and in accordance with the procedures set forth in Exhibit GC-A, "Dispute Resolution Agreement," entered into between OWNER and CONTRACTOR pursuant to Article 16, or (ii) if no such Dispute Resolution Agreement has been entered into, a formal proceeding is instituted by the appealing party in a forum of competent jurisdiction to exercise such rights or remedies as the appealing party may have with respect to ENGINEER's decision, unless otherwise agreed in writing by OWNER and CONTRACTOR. Such appeal will not be subject to the procedures of paragraph 9.11.

*Decisions on Disputes:*

9.11. ENGINEER will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. Claims, disputes and other matters relating to the acceptability of the Work or the interpretation of the requirements of the Contract Documents pertaining to the performance and furnishing of the Work and Claims under Articles 11 and 12 in respect of changes in the Contract Price or Contract Times will be referred initially to ENGINEER in writing with a request for a formal decision in accordance with this paragraph. Written notice of each such claim, dispute or other matter will be delivered by the claimant

to ENGINEER and the other party to the Agreement promptly (but in no event later than thirty days) after the start of the occurrence or event giving rise thereto, and written supporting data will be submitted to ENGINEER and the other party within sixty days after the start of such occurrence or event unless ENGINEER allows an additional period of time for the submission of additional or more accurate data in support of such claim, dispute or other matter. The opposing party shall submit any response to ENGINEER and the claimant within thirty days after receipt of the claimant's last submittal (unless ENGINEER allows additional time). ENGINEER will render a formal decision in writing within thirty days after receipt of the opposing party's submittal, if any, in accordance with this paragraph. ENGINEER's written decision on such claim, dispute or other matter will be final and binding upon OWNER and CONTRACTOR unless: (i) an appeal from ENGINEER's decision is taken within the time limits and in accordance with the procedures set forth in EXHIBIT GC-A, "Dispute Resolution Agreement," entered into between OWNER and CONTRACTOR pursuant to Article 16, or (ii) if no such Dispute Resolution Agreement has been entered into, a written notice of intention to appeal from ENGINEER's written decision is delivered by OWNER or CONTRACTOR to the other and to ENGINEER within thirty days after the date of such decision and a formal proceeding is instituted by the appealing party in a forum of competent jurisdiction to exercise such rights or remedies as the appealing party may have with respect to such claim, dispute or other matter in accordance with applicable Laws and Regulations within sixty days of the date of such decision, unless otherwise agreed in writing by OWNER and CONTRACTOR.

9.12. When functioning as interpreter and judge under paragraphs 9.10 and 9.11, ENGINEER will not show partiality to OWNER or CONTRACTOR and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity. The rendering of a decision by ENGINEER pursuant to paragraphs 9.10 or 9.11 with respect to any such claim, dispute or other matter (except any which have been waived by the making or acceptance of final payment as provided in paragraph 14.15) will be a condition precedent to any exercise by OWNER or CONTRACTOR of such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations in respect of any such claim, dispute or other matter pursuant to Article 16.

*9.13. Limitations on ENGINEER's Authority and Responsibilities:*

9.13.1. Neither ENGINEER's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by ENGINEER in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise or performance of any authority or responsibility by ENGINEER shall create, impose or give rise to any duty owed by ENGINEER to CONTRACTOR, any Subcontractor, any Supplier, any other person or organization, or to any surety for or employee or agent of any of them.



9.13.2. ENGINEER will not supervise, direct, control or have authority over or be responsible for CONTRACTOR's means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of CONTRACTOR to comply with Laws and Regulations applicable to the furnishing or performance of the Work. ENGINEER will not be responsible for CONTRACTOR's failure to perform or furnish the Work in accordance with the Contract Documents.

9.13.3. ENGINEER will not be responsible for the acts or omissions of CONTRACTOR or of any Subcontractor, any Supplier, or of any other person or organization performing or furnishing any of the Work.

9.13.4. ENGINEER's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds and certificates of inspection, tests and approvals and Other documentation required to be delivered by paragraph 14.12 will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests and approvals that the results certified indicate compliance with, the Contract Documents.

9.13.5. The limitations upon authority and responsibility set forth in this paragraph 9.13 shall also apply to ENGINEER's Consultants, Resident Project Representative and assistants.

## ARTICLE 10—CHANGES IN THE WORK

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10.1. Without invalidating the Agreement and without notice to any surety, OWNER may, at any time or from time to time, order additions, deletions or revisions in the Work. Such additions, deletions or revisions will be authorized by a Written Amendment, a Change Order, or a Work Change Directive. Upon receipt of any such document, CONTRACTOR shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

10.2. If OWNER and CONTRACTOR are unable to agree as to the extent, if any, of an adjustment in the Contract Price or an adjustment of the Contract Times that should be allowed as a result of a Work Change Directive, a claim may be made therefor as provided in Article 11 or Article 12.

10.3. CONTRACTOR shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any Work performed that is not required by the Contract Documents as amended, modified and supplemented as provided in paragraphs 3.5 and 3.6 except in the case of an emergency as provided in paragraph 6.23 or in the case of uncovering Work as provided in paragraph 13.9.

10.4. OWNER and CONTRACTOR shall execute appropriate Change Orders recommended by ENGINEER (or Written Amendments) covering:

10.4.1. changes in the Work which are (i) ordered by OWNER pursuant to paragraph 10.1, (ii) required because of acceptance of *defective* Work under paragraph 13.13 or correcting *defective* Work under paragraph 13.14, or (iii) agreed to by the parties;

10.4.2. changes in the Contract Price or Contract Times which are agreed to by the parties; and

10.4.3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by ENGINEER pursuant to paragraph 9.11;

provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, CONTRACTOR shall carry on the Work and adhere to the progress schedule as provided in paragraph 6.29.

10.5. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times) is required by the provisions of any Bond to be given to a surety, the giving of any such notice will be CONTRACTOR's responsibility, and the amount of each applicable Bond will be adjusted accordingly.

## ARTICLE 11—CHANGE OF CONTRACT PRICE

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11.1. The Contract Price constitutes the total compensation (subject to authorized adjustments) payable to CONTRACTOR for performing the Work. All duties, responsibilities and obligations assigned to or undertaken by CONTRACTOR shall be at CONTRACTOR's expense without change in the Contract Price.

11.2. The Contract Price may only be changed by a Change Order or by a Written Amendment. Any claim for an adjustment in the Contract Price shall be based on written notice delivered by the party making the claim to the other party and to ENGINEER promptly (but in no event later than thirty days) after the start of the occurrence or event giving rise to the claim and stating the general nature of the claim. Notice of the amount of the claim with supporting data shall be delivered within sixty days after the start of such occurrence or event (unless ENGINEER allows additional time for claimant to submit additional or more accurate data in support of the claim) and shall be accompanied by claimant's written statement that the adjustment claimed covers all known amounts to which the claimant is entitled as a result of said occurrence or event. All claims for adjustment in the Contract Price shall be determined by ENGINEER in accordance with paragraph 9.11 if OWNER and CONTRACTOR cannot otherwise agree on the amount involved. No claim for an adjustment in the Contract Price will

be valid if not submitted in accordance with this paragraph 11.2.

11.3. The value of any Work covered by a Change Order or of any claim for an adjustment in the Contract Price will be determined as follows:

11.3.1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of paragraphs 11.9.1 through 11.9.3, inclusive);

11.3.2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with paragraph 11.6.2);

11.3.3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under paragraph 11.3.2, on the basis of the Cost of the Work (determined as provided in paragraphs 11.4 and 11.5) plus a CONTRACTOR's fee for overhead and profit (determined as provided in paragraph 11.6).

#### *Cost of the Work:*

11.4. The term Cost of the Work means the sum of all costs necessarily incurred and paid by CONTRACTOR in the proper performance of the Work. Except as otherwise may be agreed to in writing by OWNER, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items and shall not include any of the costs itemized in paragraph 11.5:

11.4.1. Payroll costs for employees in the direct employ of CONTRACTOR in the performance of the Work under schedules of job classifications agreed upon by OWNER and CONTRACTOR. Such employees shall include without limitation superintendents, foremen and other personnel employed full-time at the site. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work after regular working hours, on Saturday, Sunday or legal holidays, shall be included in the above to the extent authorized by OWNER.

11.4.2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to CONTRACTOR unless OWNER deposits funds with CONTRACTOR with which to make payments, in which case the

cash discounts shall accrue to OWNER. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to OWNER, and CONTRACTOR shall make provisions so that they may be obtained.

11.4.3. Payments made by CONTRACTOR to the Subcontractors for Work performed or furnished by Subcontractors. If required by OWNER, CONTRACTOR shall obtain competitive bids from subcontractors acceptable to OWNER and CONTRACTOR and shall deliver such bids to OWNER who will then determine, with the advice of ENGINEER, which bids, if any, will be accepted. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work Plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as CONTRACTOR's Cost of the Work and fee as provided in paragraphs 11.4, 11.5, 11.6 and 11.7. All subcontracts shall be subject to the other provisions of the Contract Documents insofar as applicable.

11.4.4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys and accountants) employed for services specifically related to the Work.

11.4.5. Supplemental costs including the following:

11.4.5.1. The proportion of necessary transportation, travel and subsistence expenses of CONTRACTOR's employees incurred in discharge of duties connected with the Work.

11.4.5.2. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the site and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost less market value of such items used but not consumed which remain the property of CONTRACTOR.

11.4.5.3. Rentals of all construction equipment and machinery and the parts thereof whether rented from CONTRACTOR or others in accordance with rental agreements approved by OWNER with the advice of ENGINEER, and the costs of transportation, loading, unloading, installation, dismantling and removal thereof—all in accordance with the terms of said rental agreements. The rental of any such equipment, machinery or parts shall cease when the use thereof is no longer necessary for the Work.

11.4.5.4. Sales, consumer, use or similar taxes related to the Work, and for which CONTRACTOR is liable, imposed by Laws and Regulations.

11.4.5.5. Deposits lost for causes other than negligence of CONTRACTOR, any Subcontractor or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

11.4.5.6. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by CONTRACTOR in connection with the performance and furnishing of the Work (except losses and damages within the deductible amounts of property insurance established by OWNER in accordance with paragraph 5.9), provided they have resulted from causes other than the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of OWNER. No such losses, damages and expenses shall be included in the Cost of the Work for the purpose of determining CONTRACTOR's fee. If, however, any such loss or damage requires reconstruction and CONTRACTOR is placed in charge thereof, CONTRACTOR shall be paid for services a fee proportionate to that stated in paragraph 11.6.2.

11.4.5.7. The cost of utilities, fuel and sanitary facilities at the site.

11.4.5.8. Minor expenses such as telegrams, long distance telephone calls, telephone service at the site, expressage and similar petty cash items in connection with the Work.

11.4.5.9. Cost of premiums for additional Bonds and insurance required because of changes in the Work.

11.5. The term Cost of the Work shall not include any of the following:

11.5.1. Payroll costs and other compensation of CONTRACTOR's officers, executives, principals (of partnership and sole proprietorships), general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks and other personnel employed by CONTRACTOR whether at the site or in CONTRACTOR's principal or a branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in paragraph 11.4.1 or specifically covered by paragraph 11.4.4—all of which are to be considered administrative costs covered by the CONTRACTOR's fee.

11.5.2. Expenses of CONTRACTOR's principal and branch offices other than CONTRACTOR's office at the site.

11.5.3. Any part of CONTRACTOR's capital expenses, including interest on CONTRACTOR's capital employed for the Work and charges against CONTRACTOR for delinquent payments.

11.5.4. Cost of premiums for all Bonds and for all insurance whether or not CONTRACTOR is required by the Contract Documents to purchase and maintain the same (except for the cost of premiums covered by subparagraph 11.4.5.9 above).

11.5.5. Costs due to the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of *defective* Work, disposal of materials or equipment wrongly supplied and making good any damage to property.

Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in paragraph 11.4.

11.6. The CONTRACTOR's fee allowed to CONTRACTOR for overhead and profit shall be determined as follows:

11.6.1. a mutually acceptable fixed fee; or

11.6.2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

11.6.2.1. for costs incurred under paragraphs 11.4.1 and 11.4.2, the CONTRACTOR's fee shall be fifteen percent;

11.6.2.2. for costs incurred under paragraph 11.4.3, the CONTRACTOR's fee shall be five percent;

11.6.2.3. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of paragraphs 11.4.1, 11.4.2, 11.4.3 and 11.6.2 is that the Subcontractor who actually performs or furnishes the Work, at whatever tier, will be paid a fee of fifteen percent of the costs incurred by such Subcontractor under paragraphs 11.4.1 and 11.4.2 and that any higher tier Subcontractor and CONTRACTOR will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

11.6.2.4. no fee shall be payable on the basis of costs itemized under paragraphs 11.4.4, 11.4.5 and 11.5;

11.6.2.5. the amount of credit to be allowed by CONTRACTOR to OWNER for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in CONTRACTOR's fee by an amount equal to five percent of such net decrease; and

11.6.2.6. when both additions and credits are involved in any one change, the adjustment in CONTRACTOR's fee shall be computed on the basis of the net change in accordance with paragraphs 11.6.2.1 through 11.6.2.5, inclusive.

11.7. Whenever the cost of any Work is to be determined pursuant to paragraphs 11.4 and 11.5, CONTRACTOR will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in form acceptable to ENGINEER an itemized cost breakdown together with supporting data.

*Cash Allowances:*

11.8. It is understood that CONTRACTOR has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be furnished and performed for such sums as may be acceptable to OWNER and ENGINEER. CONTRACTOR agrees that:

11.8.1. the allowances include the cost to CONTRACTOR (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the site, and all applicable taxes; and

11.8.2. CONTRACTOR's costs for unloading and handling on the site, labor, installation costs, overhead, profit and other expenses contemplated for the allowances have been included in the Contract Price and not in the allowances and no demand for additional payment on account of any of the foregoing will be valid.

Prior to final payment, an appropriate Change Order will be issued as recommended by ENGINEER to reflect actual amounts due CONTRACTOR on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

**11.9. Unit Price Work:**

11.9.1. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the established unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by CONTRACTOR will be made by ENGINEER in accordance with paragraph 9.10.

11.9.2. Each unit price will be deemed to include an amount considered by CONTRACTOR to be adequate to cover CONTRACTOR's overhead and profit for each separately identified item.

11.9.3. OWNER or CONTRACTOR may make a claim for an adjustment in the Contract Price in accordance with Article 11 if:

11.9.3.1. the quantity of any item of Unit Price Work performed by CONTRACTOR differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

11.9.3.2. there is no corresponding adjustment with respect to any other item of Work; and

11.9.3.3. if CONTRACTOR believes that CONTRACTOR is entitled to an increase in Contract Price as a result

of having incurred additional expense or OWNER believes that OWNER is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

**ARTICLE 12—CHANGE OF CONTRACT TIMES**

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12.1. The Contract Times (or Milestones) may only be changed by a Change Order or a Written Amendment. Any claim for an adjustment of the Contract Times (or Milestones) shall be based on written notice delivered by the party making the claim to the other party and to ENGINEER promptly (but in no event later than thirty days) after the occurrence of the event giving rise to the claim and stating the general nature of the claim. Notice of the extent of the claim with supporting data shall be delivered within sixty days after such occurrence (unless ENGINEER allows an additional period of time to ascertain more accurate data in support of the claim) and shall be accompanied by the claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant has reason to believe it is entitled as a result of the occurrence of said event. All claims for adjustment in the Contract Times (or Milestones) shall be determined by ENGINEER in accordance with paragraph 9.11 if OWNER and CONTRACTOR cannot otherwise agree. No claim for an adjustment in the Contract Times (or Milestones) will be valid if not submitted in accordance with the requirements of this paragraph 12.1.

12.2. All time limits stated in the Contract Documents are of the essence of the Agreement.

12.3. Where CONTRACTOR is prevented from completing any part of the Work within the Contract Times (or Milestones) due to delay beyond the control of CONTRACTOR, the Contract Times (or Milestones) will be extended in an amount equal to the time lost due to such delay if a claim is made therefor as provided in paragraph 12.1. Delays beyond the control of CONTRACTOR shall include, but not be limited to, acts or neglect by OWNER, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions or acts of God. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of CONTRACTOR.

12.4. Where CONTRACTOR is prevented from completing any part of the Work within the Contract Times (or Milestones) due to delay beyond the control of both OWNER and CONTRACTOR, an extension of the Contract Times (or Milestones) in an amount equal to the time lost due to such delay shall be CONTRACTOR's sole and exclusive remedy for such delay. In no event shall OWNER be liable to CONTRACTOR, any Subcontractor, any Supplier, any other person or organization, or to any surety for or employee or agent of any of them, for damages arising out of or resulting from (i) delays caused by or within the control of CONTRACTOR, or (ii)

delays beyond the control of both parties including but not limited to fires, floods, epidemics, abnormal weather conditions, acts of God or acts or neglect by utility owners or other contractors performing other work as contemplated by Article 7.

ARTICLE 13—TESTS AND INSPECTIONS:  
CORRECTION, REMOVAL OR  
ACCEPTANCE OF DEFECTIVE WORK

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13.1. *Notice of Defects:* Prompt notice of all *defective* Work of which OWNER or ENGINEER have actual knowledge will be given to CONTRACTOR. All *defective* Work may be rejected, corrected or accepted as provided in this Article 13.

*Access to Work:*

13.2. OWNER, ENGINEER, ENGINEER's Consultants, other representatives and personnel of OWNER, independent testing laboratories and governmental agencies with jurisdictional interests will have access to the Work at reasonable times for their observation, inspecting and testing. CONTRACTOR shall provide them proper and safe conditions for such access and advise them of CONTRACTOR's site safety procedures and programs so that they may comply therewith as applicable.

*Tests and Inspections:*

13.3. CONTRACTOR shall give ENGINEER timely notice of readiness of the Work for all required inspections, tests or approvals, and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

13.4. OWNER shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:

13.4.1. for inspections, tests or approvals covered by paragraph 13.5 below;

13.4.2. that costs incurred in connection with tests or inspections conducted pursuant to paragraph 13.9 below shall be paid as provided in said paragraph 13.9; and

13.4.3. as otherwise specifically provided in the Contract Documents.

13.5. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested or approved by an employee or other representative of such public body, CONTRACTOR shall assume full responsibility for arranging and obtaining such inspections, tests or approvals, pay all costs in connection therewith, and furnish ENGINEER the required certificates of inspection, or

approval. CONTRACTOR shall also be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests or approvals required for OWNER's and ENGINEER's acceptance of materials or equipment to be incorporated in the Work, or of materials, mix designs, or equipment submitted for approval prior to CONTRACTOR's purchase thereof for incorporation in the Work.

13.6. If any Work (or the work of others) that is to be inspected, tested or approved is covered by CONTRACTOR without written concurrence of ENGINEER, it must, if requested by ENGINEER, be uncovered for observation.

13.7. Uncovering Work as provided in paragraph 13.6 shall be at CONTRACTOR's expense unless CONTRACTOR has given ENGINEER timely notice of CONTRACTOR's intention to cover the same and ENGINEER has not acted with reasonable promptness in response to such notice.

*Uncovering Work:*

13.8. If any Work is covered contrary to the written request of ENGINEER, it must, if requested by ENGINEER, be uncovered for ENGINEER's observation and replaced at CONTRACTOR's expense.

13.9. If ENGINEER considers it necessary or advisable that covered Work be observed by ENGINEER or inspected or tested by others, CONTRACTOR, at ENGINEER's request, shall uncover, expose or otherwise make available for observation, inspection or testing as ENGINEER may require, that portion of the Work in question, furnishing all necessary labor, material and equipment. If it is found that such Work is *defective*, CONTRACTOR shall pay all claims, costs, losses and damages caused by, arising out of or resulting from such uncovering, exposure, observation, inspection and testing and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and OWNER shall be entitled to an appropriate decrease in the Contract Price, and, if the parties are unable to agree as to the amount thereof, may make a claim therefor as provided in Article 11. If, however, such Work is not found to be *defective*, CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Times (or Milestones), or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement and reconstruction; and, if the parties are unable to agree as to the amount or extent thereof, CONTRACTOR may make a claim therefor as provided in Articles 11 and 12.

*OWNER May Stop the Work:*

13.10. If the Work is *defective*, or CONTRACTOR fails to supply sufficient skilled workers or suitable materials or equipment, or fails to furnish or perform the Work in such a way that the completed Work will conform to the Contract Documents, OWNER may order CONTRACTOR to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of OWNER to stop the Work

shall not give rise to any duty on the part of OWNER to exercise this right for the benefit of CONTRACTOR or any surety or other party.

#### **Correction or Removal of Defective Work:**

13.11. If required by ENGINEER, CONTRACTOR shall promptly, as directed, either correct all *defective* Work, whether or not fabricated, installed or completed, or, if the Work has been rejected by ENGINEER, remove it from the site and replace it with Work that is not *defective*. CONTRACTOR shall pay all claims, costs, losses and damages caused by or resulting from such correction or removal (including but not limited to all costs of repair or replacement of work of others).

#### **13.12. Correction Period:**

13.12.1. If within one year after the date of Substantial Completion or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work is found to be *defective*, CONTRACTOR shall promptly, without cost to OWNER and in accordance with OWNER's written instructions: (i) correct such *defective* Work, or, if it has been rejected by OWNER, remove it from the site and replace it with Work that is not *defective*, and (ii) satisfactorily correct or remove and replace any damage to other Work or the work of others resulting therefrom. If CONTRACTOR does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, OWNER may have the *defective* Work corrected or the rejected Work removed and replaced, and all claims, costs, losses and damages caused by or resulting from such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by CONTRACTOR.

13.12.2. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications or by Written Amendment.

13.12.3. Where *defective* Work (and damage to other Work resulting therefrom) has been corrected, removed or replaced under this paragraph 13.12, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

#### **Acceptance of Defective Work:**

13.13. If, instead of requiring correction or removal and replacement of *defective* Work, OWNER (and, prior to ENGINEER's recommendation of final payment, also ENGINEER) prefers to accept it, OWNER may do so. CONTRACTOR shall

pay all claims, costs, losses and damages attributable to OWNER's evaluation of and determination to accept such *defective* Work (such costs to be approved by ENGINEER as to reasonableness). If any such acceptance occurs prior to ENGINEER's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and OWNER shall be entitled to an appropriate decrease in the Contract Price, and, if the parties are unable to agree as to the amount thereof, OWNER may make a claim therefor as provided in Article 11. If the acceptance occurs after such recommendation, an appropriate amount will be paid by CONTRACTOR to OWNER.

#### **OWNER May Correct Defective Work:**

13.14. If CONTRACTOR fails within a reasonable time after written notice from ENGINEER to correct *defective* Work or to remove and replace rejected Work as required by ENGINEER in accordance with paragraph 13.11, or if CONTRACTOR fails to perform the Work in accordance with the Contract Documents, or if CONTRACTOR fails to comply with any other provision of the Contract Documents, OWNER may, after seven days' written notice to CONTRACTOR, correct and remedy any such deficiency. In exercising the rights and remedies under this paragraph OWNER shall proceed expeditiously. In connection with such corrective and remedial action, OWNER may exclude CONTRACTOR from all or part of the site, take possession of all or part of the Work, and suspend CONTRACTOR's services related thereto, take possession of CONTRACTOR's tools, appliances, construction equipment and machinery at the site and incorporate in the Work all materials and equipment stored at the site or for which OWNER has paid CONTRACTOR but which are stored elsewhere. CONTRACTOR shall allow OWNER, OWNER's representatives, agents and employees, OWNER's other contractors and ENGINEER and ENGINEER's Consultants access to the site to enable OWNER to exercise the rights and remedies under this paragraph. All claims, costs, losses and damages incurred or sustained by OWNER in exercising such rights and remedies will be charged against CONTRACTOR and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and OWNER shall be entitled to an appropriate decrease in the Contract Price, and, if the parties are unable to agree as to the amount thereof, OWNER may make a claim therefor as provided in Article 11. Such claims, costs, losses and damages will include but not be limited to all costs of repair or replacement of work of others destroyed or damaged by correction, removal or replacement of CONTRACTOR's *defective* Work. CONTRACTOR shall not be allowed an extension of the Contract Times (or Milestones) because of any delay in the performance of the Work attributable to the exercise by OWNER of OWNER's rights and remedies hereunder.

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

#### **Schedule of Values:**

14.1. The schedule of values established as provided in paragraph 2.9 will serve as the basis for progress payments and

will be incorporated into a form of Application for Payment acceptable to ENGINEER. Progress payments on account of Unit Price Work will be based on the number of units completed.

**Application for Progress Payment:**

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

**CONTRACTOR's Warranty of Title:**

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

**Review of Applications for Progress Payment:**

14.4. ENGINEER will, within ten days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to OWNER, or return the Application to CONTRACTOR indicating in writing ENGINEER's reasons for refusing to recommend payment. In the latter case, CONTRACTOR may make the necessary corrections and resubmit the Application. Ten days after presentation of the Application for Payment to OWNER with ENGINEER's recommendation, the amount recommended will (subject to the provisions of the last sentence of paragraph 14.7) become due and when due will be paid by OWNER to CONTRACTOR.

14.5. ENGINEER's recommendation of any payment requested in an Application for Payment will constitute a representation by ENGINEER to OWNER, based on ENGINEER's on-site observations of the executed Work as an experienced and qualified design professional and on ENGINEER's review of the Application for Payment and the accompanying data and schedules, that to the best of ENGINEER's knowledge, information and belief:

14.5.1. the Work has progressed to the point indicated,

14.5.2. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under paragraph 9.10, and to any other qualifications stated in the recommendation), and

14.5.3. the conditions precedent to CONTRACTOR's being entitled to such payment appear to have been fulfilled in so far as it is ENGINEER's responsibility to observe the Work.

However, by recommending any such payment ENGINEER will not thereby be deemed to have represented that: (i) exhaustive or continuous on-site inspections have been made to check the quality or the quantity of the Work beyond the responsibilities specifically assigned to ENGINEER in the Contract Documents or (ii) that there may not be other matters or issues between the parties that might entitle CONTRACTOR to be paid additionally by OWNER or entitle OWNER to withhold payment to CONTRACTOR.

14.6. ENGINEER's recommendation of any payment, including final payment, shall not mean that ENGINEER is responsible for CONTRACTOR's means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of CONTRACTOR to comply with Laws and Regulations applicable to the furnishing or performance of Work, or for any failure of CONTRACTOR to perform or furnish Work in accordance with the Contract Documents.

14.7. ENGINEER may refuse to recommend the whole or any part of any payment if, in ENGINEER's opinion, it would be incorrect to make the representations to OWNER referred to in paragraph 14.5. ENGINEER may also refuse to recommend any such payment, or, because of subsequently discovered evidence or the results of subsequent inspections or tests, nullify any such payment previously recommended, to such extent as may be necessary in ENGINEER's opinion to protect OWNER from loss because:

14.7.1. the Work is *defective*, or completed Work has been damaged requiring correction or replacement,

14.7.2. the Contract Price has been reduced by Written Amendment or Change Order,

14.7.3. OWNER has been required to correct *defective* Work or complete Work in accordance with paragraph 13.14, or

14.7.4. ENGINEER has actual knowledge of the occurrence of any of the events enumerated in paragraphs 15.2.1 through 15.2.4 inclusive.

OWNER may refuse to make payment of the full amount recommended by ENGINEER because:

14.7.5. claims have been made against OWNER on account of CONTRACTORs performance or furnishing of the Work,

14.7.6. Liens have been filed in connection with the Work, except where CONTRACTOR has delivered a specific Bond satisfactory to OWNER to secure the satisfaction and discharge of such Liens.

14.7.7. there are other items entitling OWNER to a set-off against the amount recommended, or

14.7.8. OWNER has actual knowledge of the occurrence of any of the events enumerated in paragraphs 14.7.1 through 14.7.3 or paragraphs 15.2.1 through 15.2.4 inclusive;

but OWNER must give CONTRACTOR immediate written notice (with a copy to ENGINEER) stating the reasons for such action and promptly pay CONTRACTOR the amount so withheld, or any adjustment thereto agreed to by OWNER and CONTRACTOR, when CONTRACTOR corrects to OWNER's satisfaction the reasons for such action.

#### *Substantial Completion:*

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

ENGINEER in writing prior to ENGINEER's issuing the definitive certificate of Substantial Completion, ENGINEER's aforesaid recommendation will be binding on OWNER and CONTRACTOR until final payment.

14.9. OWNER shall have the right to exclude CONTRACTOR from the Work after the date of Substantial Completion, but OWNER shall allow CONTRACTOR reasonable access to complete or correct items on the tentative list.

#### *Partial Utilization:*

14.10. Use by OWNER at OWNER's option of any substantially completed part of the Work which: (i) has specifically been identified in the Contract Documents, or (ii) OWNER, ENGINEER and CONTRACTOR agree constitutes a separately functioning and usable part of the Work that can be used by OWNER for its intended purpose without significant interference with CONTRACTOR's performance of the remainder of the Work, may be accomplished prior to Substantial Completion of all the Work subject to the following:

14.10.1. OWNER at any time may request CONTRACTOR in writing to permit OWNER to use any such part of the Work which OWNER believes to be ready for its intended use and substantially complete. If CONTRACTOR agrees that such part of the Work is substantially complete, CONTRACTOR will certify to OWNER and ENGINEER that such part of the Work is substantially complete and request ENGINEER to issue a certificate of Substantial Completion for that part of the Work. CONTRACTOR at any time may notify OWNER and ENGINEER in writing that CONTRACTOR considers any such part of the Work ready for its intended use and substantially complete and request ENGINEER to issue a certificate of Substantial Completion for that part of the Work. Within a reasonable time after either such request, OWNER, CONTRACTOR and ENGINEER shall make an inspection of that part of the Work to determine its status of completion. If ENGINEER does not consider that part of the Work to be substantially complete, ENGINEER will notify OWNER and CONTRACTOR in writing giving the reasons therefor. If ENGINEER considers that part of the Work to be substantially complete, the provisions of paragraphs 14.8 and 14.9 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

14.10.2. No occupancy or separate operation of part of the Work will be accomplished prior to compliance with the requirements of paragraph 5.15 in respect of property insurance.

#### *Final Inspection:*

14.11. Upon written notice from CONTRACTOR that the entire Work or an agreed portion thereof is complete, ENGINEER will make a final inspection with OWNER and CONTRACTOR and will notify CONTRACTOR in writing of all



particulars in which this inspection reveals that the Work is incomplete or *defective*. CONTRACTOR shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

*Final Application for Payment:*

14.12. After CONTRACTOR has completed all such corrections to the satisfaction of ENGINEER and delivered in accordance with the Contract Documents all maintenance and operating instructions, schedules, guarantees, Bonds, certificates or other evidence of insurance required by paragraph 5.4, certificates of inspection, marked-up record documents (as provided in paragraph 6.19) and other documents, CONTRACTOR may make application for final payment following the procedure for progress payments. The final Application for Payment shall be accompanied (except as previously delivered) by: (i) all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by subparagraph 5.4.13, (ii) consent of the surety, if any, to final payment, and (iii) complete and legally effective releases or waivers (satisfactory to OWNER) of all Liens arising out of or filed in connection with the Work. In lieu of such releases or waivers of Liens and as approved by OWNER, CONTRACTOR may furnish receipts or releases in full and an affidavit of CONTRACTOR that: (i) the releases and receipts include all labor, services, material and equipment for which a Lien could be filed, and (ii) all payrolls, material and equipment bills and other indebtedness connected with the Work for which OWNER or OWNER's property might in any way be responsible have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, CONTRACTOR may furnish a Bond or other collateral satisfactory to OWNER to indemnify OWNER against any Lien.

*Final Payment and Acceptance:*

14.13. If, on the basis of ENGINEER's observation of the Work during construction and final inspection, and ENGINEER's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, ENGINEER is satisfied that the Work has been completed and CONTRACTOR's other obligations under the Contract Documents have been fulfilled, ENGINEER will, within ten days after receipt of the final Application for Payment, indicate in writing ENGINEER's recommendation of payment and present the Application to OWNER for payment. At the same time ENGINEER will also give written notice to OWNER and CONTRACTOR that the Work is acceptable subject to the provisions of paragraph 14.15. Otherwise, ENGINEER will return the Application to CONTRACTOR, indicating in writing the reasons for refusing to recommend final payment, in which case CONTRACTOR shall make the necessary corrections and resubmit the Application. Thirty days after the presentation to OWNER of the Application and accompanying documentation, in appropriate form and substance and with ENGINEER's recommendation and notice of acceptability, the amount recommended by ENGINEER will become due and will be paid by OWNER to

CONTRACTOR.

14.14. If, through no fault of CONTRACTOR, final completion of the Work is significantly delayed and if ENGINEER so confirms, OWNER shall, upon receipt of CONTRACTOR's final Application for Payment and recommendation of ENGINEER, and without terminating the Agreement, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by OWNER for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if Bonds have been furnished as required in paragraph 5.1, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by CONTRACTOR to ENGINEER with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

*Waiver of Claims:*

14.15. The making and acceptance of final payment will constitute:

14.15.1. a waiver of all claims by OWNER against CONTRACTOR, except claims arising from unsettled Liens, from *defective* Work appearing after final inspection pursuant to paragraph 14.11, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from CONTRACTOR's continuing obligations under the Contract Documents; and

14.15.2. a waiver of all claims by CONTRACTOR against OWNER other than those previously made in writing and still unsettled.

ARTICLE 15—SUSPENSION OF WORK AND TERMINATION

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*OWNER May Suspend Work:*

15.1. At any time and without cause, OWNER may suspend the Work or any portion thereof for a period of not more than ninety days by notice in writing to CONTRACTOR and ENGINEER which will fix the date on which Work will be resumed. CONTRACTOR shall resume the Work on the date so fixed. CONTRACTOR shall be allowed an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if CONTRACTOR makes an approved claim therefor as provided in Articles 11 and 12.

*OWNER May Terminate:*

15.2. Upon the occurrence of any one or more of the following events:

15.2.1. if CONTRACTOR persistently fails to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the progress schedule established under paragraph 2.9 as adjusted from time to time pursuant to paragraph 6.6):

15.2.2. if CONTRACTOR disregards Laws or Regulations of any public body having jurisdiction:

15.2.2. if CONTRACTOR disregards the authority of ENGINEER; or

15.2.4. if CONTRACTOR otherwise violates in any substantial way any provisions of the Contract Documents:

OWNER may, after giving CONTRACTOR (and the surety, if any,) seven days' written notice and to the extent permitted by Laws and Regulations, terminate the services of CONTRACTOR, exclude CONTRACTOR from the site and take possession of the Work and of all CONTRACTOR's tools, appliances, construction equipment and machinery at the site and use the same to the full extent they could be used by CONTRACTOR (without liability to CONTRACTOR for trespass or conversion), incorporate in the Work all materials and equipment stored at the site or for which OWNER has paid CONTRACTOR but which are stored elsewhere, and finish the Work as OWNER may deem expedient. In such case CONTRACTOR shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds all claims, costs, losses and damages sustained by OWNER arising out of or resulting from completing the Work such excess will be paid to CONTRACTOR. If such claims, costs, losses and damages exceed such unpaid balance, CONTRACTOR shall pay the difference to OWNER. Such claims, costs, losses and damages incurred by OWNER will be reviewed by ENGINEER as to their reasonableness and when so approved by ENGINEER incorporated in a Change Order, provided that when exercising any rights or remedies under this paragraph OWNER shall not be required to obtain the lowest price for the Work performed.

15.3. Where CONTRACTOR's services have been so terminated by OWNER, the termination will not affect any rights or remedies of OWNER against CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of moneys due CONTRACTOR by OWNER will not release CONTRACTOR from liability.

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

15.4.1. for completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

15.4.2. for expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses:

15.4.3. for all claims, costs, losses and damages incurred in settlement of terminated contracts with Subcontractors, Suppliers and others; and

15.4.4. for reasonable expenses directly attributable to termination.

CONTRACTOR shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

#### *CONTRACTOR May Stop Work or Terminate:*

15.5. If, through no act or fault of CONTRACTOR, the Work is suspended for a period of more than ninety days by OWNER or under an order of court or other public authority, or ENGINEER fails to act on any Application for Payment within thirty days after it is submitted or OWNER fails for thirty days to pay CONTRACTOR any sum finally determined to be due, then CONTRACTOR may, upon seven days' written notice to OWNER and ENGINEER, and provided OWNER or ENGINEER do not remedy such suspension or failure within that time, terminate the Agreement and recover from OWNER payment on the same terms as provided in paragraph 15.4. In lieu of terminating the Agreement and without prejudice to any other right or remedy, if ENGINEER has failed to act on an Application for Payment within thirty days after it is submitted, or OWNER has failed for thirty days to pay CONTRACTOR any sum finally determined to be due, CONTRACTOR may upon seven day's written notice to OWNER and ENGINEER stop the Work until payment of all such amounts due CONTRACTOR, including interest thereon. The provisions of this paragraph 15.5 are not intended to preclude CONTRACTOR from making claim under Articles 11 and 12 for an increase in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to CONTRACTOR's stopping Work as permitted by this paragraph.

#### ARTICLE 16—DISPUTE RESOLUTION

If and to the extent that OWNER and CONTRACTOR have agreed on the method and procedure for resolving disputes between them that may arise under this Agreement, such dispute resolution method and procedure, if any, shall be as set forth in Exhibit GC-A, "Dispute Resolution Agreement," to be attached hereto and made a part hereof. If no such agreement on the method and procedure for resolving such disputes has been reached, and subject to the provisions of paragraphs 9.10, 9.11, and 9.12, OWNER and CONTRACTOR may exercise

such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations in respect of any dispute.

ARTICLE 17—MISCELLANEOUS

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*Giving Notice:*

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

*Computation of Times:*

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

17.2.2. A calendar day of twenty-four hours measured from midnight to the next midnight will constitute a day.

*Notice of Claim:*

17.3. Should OWNER or CONTRACTOR suffer injury or damage to person or property because of any error, omission or

act of the other party or of any of the other party's employees or agents or others for whose acts the other party is legally liable, claim will be made in writing to the other party within a reasonable time of the first observance of such injury or damage. The provisions of this paragraph 17.3 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitations or repose.

*Cumulative Remedies:*

17.4. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto, and, in particular but without limitation, the warranties, guarantees and obligations imposed upon CONTRACTOR by paragraphs 6.12, 6.16, 6.30, 6.31, 6.32, 13.1, 13.12, 13.14, 14.3 and 15.2 and all of the rights and remedies available to OWNER and ENGINEER thereunder, are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee or by other provisions of the Contract Documents, and the provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right and remedy to which they apply.

*Professional Fees and Court Costs Included:*

17.5. Whenever reference is made to "claims, costs, losses and damages," it shall include in each case, but not be limited to, all fees and charges of engineers, architects, attorneys and other professionals and all court or arbitration or other dispute resolution costs.

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**SUPPLEMENTARY  
CONDITIONS**

## SUPPLEMENTARY CONDITIONS

**GENERAL** These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract (No. 1910-8, 1990 ed.) and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect.

**SC-1.1** The terms used in these Supplementary Conditions which are defined in the Standard General Conditions of the Construction Contract (No. 1910-8, 1990 ed.) have the meanings assigned to them in the General Conditions.

**SC-1.27** Add the following language at the end of the paragraph "OWNER" in Article 1 Definitions of the General Conditions: "Whenever the word "OWNER" is used in the Contract Documents, it shall be understood to be the City of Lexington, Nebraska."

**SC-1.46** Add the following definitions to Article 1- DEFINITIONS: " "Shall" In the interest of conciseness, some sentences, statements, and clauses used in the Specification exclude any form of the verb "shall" normally expressed in a verb phrase as "furnish," "install," "provide," "perform," "construct," "erect," "comply," "apply," "submit," or similar "verb", but any such sentences, statements, and clauses shall be interpreted to include the applicable form of the phrase "The CONTRACTOR shall" and the requirements described therein shall be interpreted as mandatory elements of the Agreement."

**SC-2.1** Add the following to Article 2- DELIVERY OF BONDS: "The CONTRACTOR shall deliver documents requested by OWNER'S attorney, when requested, for OWNER'S review and completion of the Certificate of Owner's Attorney, as included in the contract documents, certifying to the execution of the agreements and that said CONTRACTOR representatives have full power and authority to execute said agreements on behalf of the CONTRACTOR."

**SC-2.2** Amend the first sentence of paragraph 2.2 of the General Conditions to read as follows: "OWNER shall furnish to CONTRACTOR up to four copies" and as so amended paragraph 2.2 remains in effect.

**SC-3.2** Add the following language at the end of paragraph 3.2. of the General Conditions: "All items necessary or incidental to completely construct or erect the Work shall be furnished, whether called for in the Specifications and not shown on the Drawings, or anything shown or mentioned on the Drawings and not mentioned in the Specifications, shall be of like effect as if shown or mentioned in both.

Information or Instructions to Bidders and Special or Supplementary General Conditions shall take priority over General Conditions. In case of disagreement between the Drawings and Specifications, or within either document itself, the better quality or greater quantity of Work resulting in a greater cost shall be estimated and included in the bid and Contract Price."

**SC-4.1** Add the new paragraphs immediately after paragraph 4.1. of the General Conditions which is to read as follows: "If it is necessary or desirable that the CONTRACTOR use or occupy land outside of the OWNER's right-of-ways, the CONTRACTOR shall obtain at his own expense and without liability to others written consent from or execute a written agreement with the OWNER and tenant of such land permitting such occupation.

The CONTRACTOR shall be responsible for all damage to crops, pavement, sidewalks and other property outside the boundaries of the right-of-ways and shall make satisfactory settlement for such damage directly with the property owner and tenant involved, as their interests in such damage may require.

**SC-4.2** In the preparation of your BID, the CONTRACTOR may refer to:

4.2.1. The initial Storm Water Pollution Prevention Plan (SWPPP) for the project, prepared by the ENGINEER. BIDDER may use the SWPPP to draw his own conclusions regarding the extent of work required to comply with the SWPPP.

Copies of this SWPPP that are not included with Bidding Documents may be examined at the ENGINEER's office during regular business hours. This SWPPP is not part of the Contract Documents, but the technical data contained therein upon which CONTRACTOR is entitled to rely as provided in Section 4.2 of the General Conditions and as identified and established above are incorporated therein by reference. CONTRACTOR is not entitled to rely upon other information and data utilized by ENGINEER and ENGINEER'S CONSULTANT in the preparation of the Drawings and Specifications.

**SC-4.3.1.1** Add the following language at the end of paragraph 4.3.1.1. of the General Conditions: "Information on the existing Underground Facilities owned by the OWNER were provided by the OWNER. The OWNER accepts the responsibility for the completeness of such data or information shown for his self-owned Underground Facilities."

**SC-4.4** Add the following new paragraph immediately after paragraph 4.4 of the General Conditions: "The CONTRACTOR shall be responsible for laying out the work from the established reference points. The OWNER will pay the ENGINEER for staking. The CONTRACTOR will be responsible for verifying construction staking prior to construction. The CONTRACTOR will not be allowed extensions of time or damages because of delays caused by insufficient line and grade unless the ENGINEER has been notified 3 working days in advance. Relocation or restoration of stakes shall be performed at the CONTRACTOR'S EXPENSE. The ENGINEER can provide digital data at the awarded CONTRACTOR's request, and upon execution of appropriate data-use agreement. Data will not be available during the bidding process unless previously authorized by the OWNER."

**SC-5.4** The limits of liability for the insurance required by Paragraph 5.4 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

5.4.1 and 5.4.2 Workers' Compensation, etc. under Paragraphs 5.4.1 and 5.4.2 of the General Conditions:

(1)	State: Nebraska	Statutory
(2)	Applicable Federal (e.g. Longshoreman)	Statutory
(3)	Employer's Liability: \$100,000 each accident/\$500,000 aggregate policy limit for disease/\$100,000 each disease.	

**SC-5.4.3, 5.4.4 and 5.4.5** COMMERCIAL GENERAL LIABILITY INSURANCE under paragraphs 5.4.3 through 5.4.5 of the General Conditions which shall also include completed operations and property liability coverages and eliminate the exclusion with respect to property under the care, custody and control of CONTRACTOR:

(1)	\$2,000,000	General Aggregate [Except Products - Completed Operations]
(2)	\$2,000,000	General Aggregate [Products - Completed Operations]
(3)	\$1,000,000	[Personal & Advertising Injury]



(4)	\$1,000,000	Each Occurrence [Bodily Injury & Property Damage]
(5)	Property Damage Liability Insurance will Provide Explosion, Collapse, and Underground Coverage where applicable	

**SC-5.4.6** Automobile Liability: OWNED, NON-OWNED AND HIRED AUTOMOBILES

(1)	Liability: \$1,000,000 \$1,000,000	Combined Single Limit Each Accident
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**SC-5.4.7** Umbrella Liability:

(1)	Excess Liability \$2,000,000 \$2,000,000	General Aggregate Each Occurrence
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**SC-5.4.8** The City of Lexington and Miller & Associates, Consulting Engineers, P.C. shall be listed as an additional insured for all coverage required under SC-5.4.3 through SC-5.4.6 and all other insurance requirements required for these Contract Documents, for the entire duration of the contract period.

The certificate holder on the Certificate of Insurance shall be as follows:

City of Lexington  
P.O. Box 70  
406 East 7th Street  
Lexington, NE 68850

**SC-5.4.10** The Contractual Liability required by Paragraph 5.4.10 of the General Conditions shall provide coverage for not less than the following amounts:

(1)	\$1,000,000 \$1,000,000	General Aggregate Each Occurrence [Bodily Injury & Property Damage]
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**SC-5.6** Delete Paragraph 5.6 in its entirety and insert the following in its place:

"A. Contractor shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof.

1. This insurance shall:

- a. include the interests of Owner, Contractor, Subcontractors, Engineer and any other individuals or entities identified herein, and the officers, directors, partners, employees, agents and other consultants and subcontractors of any of them each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured;
- b. in addition to the individuals and entities specified, include as additional insureds, the following:
  - 1) The City of Lexington and Miller & Associates, Consulting Engineers, P.C.,

- c. be written on a Builder's Risk "all-risk" / Installation Floater, or open peril or special causes of loss policy form that shall at least include insurance for physical loss and damage to the Work, temporary buildings, falsework, and materials and equipment in transit;
  - d. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);
  - e. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;
  - f. allow for partial utilization of the Work by Owner;
  - g. include testing and startup; and
  - h. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor and Engineer with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.
2. Contractor shall be responsible for any deductible or self-insured retention.
  3. The policies of insurance required to be purchased and maintained by Contractor in accordance with this Paragraph SC-5.6 shall comply with the requirements of paragraph 5.8 of the General Conditions."

**SC-6.2.1** Add a new paragraph immediately after 6.2 of the General Conditions: "The CONTRACTOR warrants and represents that he/she/it has policies in place governing the actions of the CONTRACTOR and any employees or agents or the CONTRACTOR regarding sexual harassment. The CONTRACTOR agrees to defend, indemnify and hold harmless the OWNER for actions of the CONTRACTOR or CONTRACTOR'S employees or agents in the execution of this agreement with the OWNER and its officers, employees and agents. The CONTRACTOR also understands and agrees that any violation of this provision will constitute sufficient cause to terminate the agreement."

**SC-6.9.3** Add a new paragraph immediately after paragraph 6.9.2 of the General Conditions: "6.9.3. OWNER or ENGINEER may furnish to any such Subcontractor, Supplier or other person or organization, to the extent practicable, information about amounts paid to CONTRACTOR in accordance with CONTRACTOR'S Application for Payment on account of the particular Subcontractor's Supplier's, other person's or other organizations work."

**SC-6.14.2** Add a new paragraph immediately after paragraph 6.14.2 of the General Conditions: "The CONTRACTOR shall give all notices and comply with all Laws and Regulations referenced and bound with the Contract Documents."

**SC-6.15** Add the following language at the end of paragraph 6.15 of the General Conditions: "Taxes shall be included in the BID for non-exempt materials and equipment. The OWNER will appoint the CONTRACTOR to be its agent to purchase materials and equipment which are determined to be exempt from tax as outlined by the Nebraska Department of Revenue. The CONTRACTOR is responsible for calculating the labor and material sales tax correctly, as required by the Nebraska Department of Revenue. CONTRACTOR is also responsible for reporting the appropriate information to the Nebraska Department of Revenue."



**SC-6.19** Add the following new paragraphs at the end of paragraph 6.19. of the General Conditions: "CONTRACTOR shall also measure exact location of all existing buried utilities encountered during construction and any below grade structures, including all water service, sewer services, gas services, telephone power lines, etc. Reference each item to a minimum of three (3) permanent reference points such as property corners, buildings, trees, fire hydrants, street curbs, and other fixed structures. In addition to reference points, provide station location, depth of bury and additional pertinent information which will be required for locating items in the future.

The OWNER has the right to retain up to 5% of the Contract Amount until proper Record Documents are submitted to the ENGINEER for OWNER."

**SC-6.20** Add the following language to paragraph 6.20.3 of the General Conditions: "Other property at the site or adjacent thereto shall include, but not be limited to the following:

- (1) Gravel surfaced drives and roads
- (2) Signs, fences, gates, mailboxes, drainage culverts and headwalls
- (3) Overhead and underground telephone and power lines
- (4) Topsoil, seeding and sodding
- (5) Gas lines and services
- (6) Sewer and water lines and services
- (7) Lawn sprinkler systems

**SC-6.20A** Add the following: "All practices, materials, supplies, and equipment shall comply with the Federal Occupational Safety and Health Act, as well as any pertinent Federal, State and/or local safety or environmental codes."

**SC-6.20B** Add the following: "LB 403 Contract Provisions - NEW EMPLOYEE WORK ELIGIBILITY STATUS: The CONTRACTOR is required and hereby agrees to use a federal immigration verification system to determine the work eligibility status of new employees physically performing services within the State of Nebraska. The CONTRACTOR hereby agrees to contractually require any Sub-contractor to use a federal immigration verification system to determine the work eligibility status of new employees physically performing services within the State of Nebraska. A federal immigration verification system means the electronic verification of the work authorization program authorized by the Illegal Immigration Reform and Immigrant Responsibility Act of 1996, 8 U.S.C. 1324a, known as the E-Verify Program, or an equivalent federal program designated by the United States Department of Homeland Security or other federal agency authorized to verify the work eligibility status of a newly hired employee. The Contractor hereby attests to the truth of the following certifications, and agrees as follows:

Nebraska Revised Statute Section 4-114. Contractor certifies compliance with the provisions of Section 4-114 and, hereby certifies that this Contractor shall register with and use a federal immigration verification system to determine the work eligibility of new employees physically performing services within the State of Nebraska. Contractor agrees to require all Sub-contractors by contractual agreement to require the same registration and verification process.

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

1. The CONTRACTOR must complete the United States Citizenship Attestation Form and provide to the OWNER. The form is available on the Nebraska Department of Labor website at [www.dol.nebraska.gov](http://www.dol.nebraska.gov).
2. If the CONTRACTOR indicates on such attestation form that he or she is a qualified alien, the CONTRACTOR agrees to provide the US Citizenship and Immigration Services documentation required to verify the CONTRACTOR's lawful presence in the United States using the Systematic Alien Verification for Entitlements (SAVE) Program.

3. The CONTRACTOR understands and agrees that lawful presence in the United States is required and the CONTRACTOR may be disqualified or the contract terminated if such lawful presence cannot be verified as required by Neb. Rev. Stat. §4-108."

**SC-7.5** Add the following language to paragraph 7.5 of the General Conditions: "Should CONTRACTOR cause damage to the work or property of any separate CONTRACTOR at the site, or should any claim arising out of CONTRACTOR'S performance of the Work at the site be made by any separate CONTRACTOR against CONTRACTOR, OWNER, ENGINEER, ENGINEER'S Consultants, the Construction Coordinator or any other person. CONTRACTOR shall promptly attempt to settle with such other CONTRACTOR by agreement, or to otherwise resolve the dispute by arbitration or at law, CONTRACTOR shall to the fullest extent, permitted by Laws and Regulations, indemnify and hold OWNER, ENGINEER, ENGINEER'S Consultants and the Construction Coordinator harmless from and against all claims, damages, losses and expenses (including, but not limited to fees of engineers, architects, attorneys and other professionals and court and arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any separate CONTRACTOR against OWNER, ENGINEER, ENGINEER'S Consultants or the Construction Coordinator to the extent based on a claim arising out of CONTRACTOR'S performance of the Work. Should a separate CONTRACTOR cause damage to the Work or property of CONTRACTOR or should the performance of Work by any separate CONTRACTOR at the site give rise to any other claim, CONTRACTOR shall not institute any action, legal or equitable, against OWNER, ENGINEER, ENGINEER'S Consultants or the Construction Coordinator or permit any action against any of them to be maintained and continued in its name or for its benefit in any court or before any arbiter which seeks to impose liability on or to recover damages from OWNER, ENGINEER, ENGINEER'S Consultants or the Construction Coordinator on account of any such damage or claim. If CONTRACTOR is delayed at any time in performing or furnishing Work by any act or neglect of a separate CONTRACTOR and OWNER and CONTRACTOR are unable to agree as to the extent of any adjustment in Contract Times attributable thereto, CONTRACTOR may make a claim for an extension of times in accordance with Article 12. An extension of the Contract Times shall be CONTRACTOR'S exclusive remedy with respect to OWNER, ENGINEER, ENGINEER'S Consultants and Construction Coordinator for any delay, disruption, interference or hindrance caused by any separate CONTRACTOR. This paragraph does not prevent recovery from OWNER, ENGINEER, ENGINEER'S Consultant or Construction Coordinator for activities that are their respective responsibilities.

**SC-9.3** Add the following language at the end of paragraph 9.3 of the General Conditions: "If the OWNER and ENGINEER agree, ENGINEER may conduct employee interviews to assist the labor compliance officer to monitor Davis Bacon Act."

**SC-9.10** Delete Paragraph 9.10 of the General Conditions in its entirety and insert the following in its place: "ENGINEER will have authority to determine the actual quantities and classifications of items of Unit Price Work performed by CONTRACTOR, and the written decisions of ENGINEER on such matters will be final, binding on OWNER and CONTRACTOR and not subject to appeal (except as modified by ENGINEER to reflect changed factual conditions)."

**SC-11.9.3** Paragraph 11.9.3. of the General Conditions is hereby deleted in its entirety and the following is substituted in its place: "The unit price of an item of Unit Price Work shall be subject to reevaluation and adjustment under the following conditions:

11.9.3.1 if the total cost of a particular item of Unit Price Work amounts to 15% or more of the Contract Price and the variation in the quantity of that particular item of Unit Price Work performed by CONTRACTOR differs by more than 25% from the estimated quantity of such item indicated in the Agreement; and

11.9.3.2 if there is no corresponding adjustment with respect to any other item of Work; and

11.9.3.3 if CONTRACTOR believes that CONTRACTOR has incurred additional expense as a result thereof; or if OWNER believes that the quantity variation entitles it to an adjustment in the unit price, either OWNER or CONTRACTOR may make a claim for an adjustment in the Contract Price in accordance with Article 11 if the parties are unable to agree as to the effect of any such variations in the quantity of Unit Price Work performed."

**SC-13.12.1** In the first sentence of paragraph 13.12.1 of the General Conditions delete "Substantial completion" and replace with "final payment under the Agreement".

**SC-14.2** Add new paragraphs immediately after paragraph 14.2. of the General Conditions which is to read as follows: "Payment for materials and equipment stored will be subject to the following limitations:

- 1) Amount of the bill of sale or invoice for the item
- 2) The unit price bid for the material or equipment item(s), if the unit price on the bill or sale or invoice exceeds the unit price bid
- 3) The quantity bid in the unit price bid schedule, if the quantity on the bill of sale or invoice exceeds the quantity bid.

The CONTRACTOR may request in writing to the OWNER, after fifty (50) percent of the work has been completed, to reduce retainage to five (5) percent on the current and remaining progress payments. The OWNER at his sole discretion may reduce the retainage. When the Work is substantially complete, the retainage may be reduced upon request to the OWNER. Again, the OWNER at his sole discretion may reduce the retainage."

**SC-16** Article 16 of the General Conditions is hereby deleted in its entirety.

**SC-17.6** Add the following paragraphs:

*"Governmental Requirements*

**A. COPELAND ANTI-KICKBACK ACT**

The CONTRACTOR agrees that he will not induce, by any means, any person employed in the construction, completion or repair of public work to give up any part of the compensation to which he is otherwise entitled.

**B. ACCESS TO RECORDS**

The CONTRACTOR agrees that the OWNERS, the Federal grantor agency (NPS), the Comptroller General of the United States, or any of their duly authorized representatives shall have access to any books, documents, papers, and records of the CONTRACTOR which are directly pertinent to a specific program for the purpose of making audit, examination, excerpts and transcriptions.

**C. FEDERAL WATER POLLUTION CONTROL ACT**

The CONTRACTOR is required to comply with the provisions of the Clean Air Act of 1970 (42 U.S.C. 1857 et.seq.)."

**D. ADDITIONAL REQUIREMENTS REQUIRED BY FUNDING AGENCY**

1. Any wetlands or potential wetlands that have not been expressly permitted for impacts by the US Army Corps of Engineers, or the case of isolated wetland by the Nebraska Department of Environment and Energy, shall be avoided by all Contractor related activities.

2. If potential hazardous materials are encountered during construction, work shall cease at that location until a hazardous materials expert has reviewed the location and completed any necessary remediation. In the event hazardous materials are encountered, FHWA shall be contacted.
3. If potential historic, archaeological or paleontological resources are encountered during construction, work shall cease at that location until a cultural resource expert has reviewed the location, completed any necessary recordation, and coordinated with the Historical Society and FHWA.
4. In compliance with Executive Order 11312 regarding Invasive Species, all equipment brought on site will be inspected and/or cleaned to remove any plant debris and seed prior to arriving on site. In addition, all areas disturbed by construction that are not permanently stabilized will be seeded using a mix of seed from species naturally occurring within the general area and/or native planting (except for actively landscaped areas). Non-native seed can be used to provide immediate, temporary cover provided the species has no potential to establish permanently in the area. Landscaped plantings will not include species considered invasive or noxious by the Department of Agriculture.
5. If the project will disturb more than 1 acre of soil, a storm water pollution prevention plan will be created prior to construction and will be implemented during construction.
6. If vegetation removal will occur between February 1<sup>st</sup> and July 15, a wildlife biologist will be contracted to complete a migratory bird survey prior to the vegetation removal. Any nests containing eggs or young shall be avoided until the nesting activities are complete.
7. The project shall be designed and constructed following the requirements of the American With Disabilities Act. ADA accessibility shall also be maintained during construction and operation of the facility.
8. The scope of work and limits of construction are not subject to change without an environmental review and approved by NGPC and FHWA.

# SPECIAL CONDITIONS

## PART 1- GENERAL

### 1.01 PROJECT SIGNS

- A. CONTRACTOR may furnish and install one of CONTRACTOR'S standard signs approved by OWNER, if desired by the CONTRACTOR.
- B. CONTRACTOR shall install trail signs as required by the funding agency, and detailed within the Specifications and Drawings.

### 1.02 SITE MAINTENANCE

- A. Keep site clean of debris, rubble and paper. Store and stockpile materials in an orderly manner and protect against damage
- B. The CONTRACTOR shall keep a sufficient clearance around fire hydrants to permit their full and effective use in case of fire. The CONTRACTOR shall keep natural drainage and watercourses unobstructed or provide other equal courses effectively placed.
- C. All streets and driveways must be provided with full vehicular access throughout construction except during trenching, pipe installation and backfilling. Upon completion of backfilling at all driveway crossings, install gravel surfacing and maintain in good condition. Unless otherwise noted, driveway crossings may be open cut and taken out of service temporarily, but must be backfilled and gravel surfacing installed at the completion of each days work to ensure full vehicular access.

### 1.03 ORDER OF CONSTRUCTION

- A. The order of construction is at the option of the CONTRACTOR(s). Any street closures must be coordinated with the OWNER and the CONTRACTOR is responsible to publish in the local newspaper any proposed street closures.
- B. At no time shall the CONTRACTOR or his employees modify operation of the existing storm sewer, wastewater or water systems or start construction modifications without approval of the OWNER except in emergency to prevent or minimize damage.
- C. Construction operations will be scheduled to allow the OWNER'S Water Supply to remain in service throughout the project. Connection with existing line shall be made at a time and under conditions which will least interfere with service to the effected customers.
- D. The CONTRACTOR shall select the order of work and establish the schedule for construction, subject to review of the OWNER and ENGINEER.
- E. Construction operations, except sawing and cutting, shall be limited to daylight hours, unless approved otherwise in writing by the Engineer.

1.04 PROJECT MEETINGS

- A. The ENGINEER shall conduct construction meetings, if necessary, between:
  - 1. CONTRACTOR'S Project Manager.
  - 2. CONTRACTOR'S Project Superintendent.
  - 3. OWNER'S designated Representative(s) and Project ENGINEER'S designated Representative(s).
- B. Meetings will be conducted at City Office.
- C. The ENGINEER shall take meeting minutes, review minutes with participants at meetings, and submit copies of meeting minutes to participants.
- D. The ENGINEER shall schedule meetings for most convenient time frame.
- E. The CONTRACTOR shall have present progress available on "Record" drawings, as required by General Conditions, Paragraph 6.19.

1.05 TESTING

- A. Except as set out in other sections of Contract Documents, payment for soil, concrete and other testing is as follows:
  - 1. In place field density tests for soils and concrete shall be provided by the Engineer or as directed by the Engineer. Passing tests are at no cost to the Contractor. Failing tests or re-tests are at the cost shown in the table below and will be invoiced to the Contractor by the Engineer. The minimum frequency of testing required is provided in the table below:

<b>Soils Testing (In Place Density, Nuclear or Balloon)</b>		
<i>Description</i>	<i>Frequency</i>	<i>Cost</i>
Trenching (Horizontal)	100 ft +	\$25 per Test
Trenching (Vertical)	3 ft +	\$25 per Test
Embankment	400 SY and/or 2 vertical ft.	\$25 per Test
Subgrade	180 SY	\$25 per Test

<b>Concrete Testing</b>		
<i>Description</i>	<i>Frequency</i>	<i>Cost</i>
Slump	100 CY	\$15 per Test
Air Content	100 CY	\$20 per Test
Casting Cylinders (Compressive Strength)	100 CY	\$20 per Test
Temperature	100 CY	\$5 per Test

- 2. Concrete testing shall be conducted for each day concrete is placed for pours smaller than 100 cy or every 100 cy for continuous pours.
- 3. Should the Engineer perform a test other than these specified locations or frequency and the test passes, the fee shall be waived. However, if the test fails, it will be billed to the Contractor at the rates shown within this section, until the tests pass. Separate required proctor curves shall be obtained by the Contractor at no additional cost to the Owner or Engineer.

4. If the Contractor provides fill materials for trench and embankment that was not originally tested or is different, the Contractor is responsible for providing Proctor curves to the Owner/Engineer at no additional cost to the Owner or Engineer.

1.06 DATA AND MEASUREMENT

- A. The data given herein and shown on the drawings are as accurate as could be obtained, their accuracy is not guaranteed. The CONTRACTOR must verify all levels, locations, measurements, and dimensions on the job site and adapt his work into the exact construction. Scale measurements taken from prints are not considered for more than reference, the larger scale drawings take precedence over the smaller scale, and shop drawings take precedence over all others.



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# **GOVERNMENTAL REQUIREMENTS**



## **GOVERNMENTAL REQUIREMENTS – RECREATIONAL TRAILS PROGRAM**

Equal Employment Opportunity Executive Order #11246 Clause	1
Copeland “Anti-Kickback” Act; Contract Work Hours and Safety Standard Act	2
Clean Water, Clean Air, Executive Order (E.O.) 11738 and EPA Regulations Provision; Disadvantaged Business Enterprises	3
Drug Free Workplace Act of 1988; Buy America Provisions – Section 165 of Surface Transportation Act of 1982, as Amended; Civil Rights Act of 1964 – Title VI; Rehabilitation Act of 1973 – Section 504; Age Discrimination Act of 1975	4
Executive Order 12549 – Debarment and Suspension	5-6
Compliance with Rules and Regulations – Title 42 Sec 2000d-1	7
Federal-Aid Construction Contracts	8-19
Wage Decision	20-28
Signage	29-30

**EQUAL EMPLOYMENT OPPORTUNITY  
EXECUTIVE ORDER #11246 CLAUSE**

During the performance of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, with regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to the following; employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions in this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.

(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under section 202 of Executive Order #11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The contractor will comply with all provisions of Executive Order No. 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations and orders.

(6) In the event of the contractor's noncompliance with the non-discrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order #11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The contractor will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontractor or purchase order as the contracting agency may direct as a means of enforcing such provisions including sanctions for non-compliance. Provided, however, that in the event the contract becomes involved in, or threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

## **COPELAND "ANTI-KICKBACK" ACT**

As stated in 24 CFR part 85.36

All contracts and subgrants for construction or repair shall include a provision for compliance with the Copeland "Anti-Kickback" Act (18 USC 874) as supplemented in Department of Labor regulations (29 CFR, Part 3). This Act provides that each contractor or subgrantee shall be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he is otherwise entitled. The grantee shall report all suspected or reported violations to the grantor agency.

## **CONTRACT WORK HOURS AND SAFETY STANDARD ACT**

Contracts awarded by grantees and subgrantees in excess of \$2,000 for construction contracts and in excess of \$2,500 for other contracts which involve the employment of mechanics or laborers shall comply with Section 103 and 107 of the Contract Work Hours and Safety Standard Act (40 USC 327-330) as supplemented by Department of Labor Regulations contained in 29 CFR Parts 3, 5, and 5a.

Under Section 103 of the Act, the Contractor and any of his subcontractors, shall be required to compute the wages of every mechanic and laborer on the basis of a standard work week of forty hours. Work in excess of the standard work week is permissible, provided the worker is compensated at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in any work week.

Section 107 of the Act provides that no laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous to his health and safety, as determined under construction, safety and health standards promulgated by the Secretary of Labor. These requirements do not apply to the purchase of supplies or materials or articles ordinarily available on the open market.

This material is presented in the Labor Standard Handbook 1344.1 Rev. 1. The provisions should be contained in each bid document and referenced in each contract.

**CLEAN WATER, CLEAN AIR, EXECUTIVE ORDER (E.O.) 11738 AND EPA  
REGULATIONS PROVISION**

Compliance with Air and Water Acts:

This agreement is subject to the requirements of the Clean Air Act, as amended, 42 USC 1857 et. Seq., the Federal Water Pollution Control Act, as amended, 33 USC 1251 et. Seq. and the regulations of the Environmental Protection Agency with respect thereto, at 40 CFR Part 15, as amended from time to time.

The Contractors and any of its subcontractors for work funded under this Agreement which is in excess of \$100,000, agree to comply with all applicable standards and orders, or requirement issued under Section 306 of the Clean Air Act (42 USC 1847(h)), Section 508 of the Clean Air Act (33 USC 1368), Executive Order 11738, and Environmental Protection Agency regulations (40 CFR Part 15).

**DISADVANTAGED BUSINESS ENTERPRISES**

A. Policy:

The Contractor agrees to ensure that disadvantaged business enterprises as defined in 49 CFR Part 26 shall have a "level playing field" and equal opportunity to participate in the performance of contracts financed in whole or in part with Federal funds under this contract. Consequently, the disadvantaged business requirements of 49 CFR Part 26 are hereby made a part of and incorporated by this reference into this contract.

B. Disadvantaged Business Enterprises Obligation

The Contractor agrees to ensure that disadvantaged business enterprises as defined in 49 CFR Part 26 have a "level playing field" and equal opportunity to participate in the performance of contracts and subcontracts financed in whole or in part with Federal funds provided under this agreement. In this regard, the Contractor shall take all necessary and reasonable steps in accordance with 49 CFR Part 26 to ensure that disadvantaged business enterprises have a "level playing field" and equal opportunity to compete for and perform contracts. The Contractor shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of FHWA assisted contracts.

Failure of the Contractor to carry out the requirements set forth above shall constitute breach of contract and, after the notification of the FHWA, may result in termination of the agreement or contract by the Owner or such remedy as the Owner deems appropriate.

### **DRUG FREE WORKPLACE ACT OF 1988**

The Contractor will or will continue to provide a drug-free workplace policy and will inform employees of the policy. Contractor must also supply owner with a copy of their "Drug Free Workplace Policy."

### **BUY AMERICA PROVISIONS-SECTION 165 OF SURFACE TRANSPORTATION ACT OF 1982, AS AMENDED**

Section 165 of the Surface Transportation Assistance Act of 1982, as amended, 49 CFR parts 660 and 661 impose Buy American provisions on the procurement of foreign products and materials. Contractors must use American made products in the construction of this project.

### **CIVIL RIGHTS ACT OF 1964- TITLE VI**

No person shall, on the ground of race, color or national origin be excluded from participation, be denied benefits of, or be subjected to discrimination under any program receiving Federal financial assistance.

### **REHABILITATION ACT OF 1973- SECTION 504**

No qualified individual with a disability shall be, solely by reason of his or her disability, be excluded in the participation of, or be denied benefits of, or be subject to discrimination under any program receiving Federal assistance.

### **AGE DISCRIMINATION ACT OF 1975**

Federally funded projects shall clearly prohibit discrimination on the basis of age. No person on the basis of age shall be excluded from participation in, denied the benefits of, or subjected to discrimination under any program receiving Federal financial assistance.

## EXECUTIVE ORDER 12549- DEBARMENT AND SUSPENSION

Source: The provisions of Executive Order 12549 of Feb. 18, 1986, appear at 51 FR 6370, 3 CFR, 1986 Comp., p. 189, unless otherwise noted.

By the authority vested in me as President by the Constitution and laws of the United States of America, and in order to curb fraud, waste, and abuse in Federal programs, increase agency accountability, and ensure consistency among agency regulations concerning debarment and suspension of participants in Federal programs, it is hereby ordered that:

- Sec. 1.** (a) To the extent permitted by law and subject to the limitations in Section 1(c), Executive departments and agencies shall participate in a system for debarment and suspension from programs and activities involving Federal financial and nonfinancial assistance and benefits. Debarment or suspension of a participant in a program by one agency shall have government-wide effect. (b) Activities covered by this Order include but are not limited to: grants, cooperative agreements, contracts of assistance, loans, and loan guarantees. (c) This Order does not cover procurement programs and activities, direct Federal statutory entitlements or mandatory awards, direct awards to foreign governments or public international organizations, benefits to an individual as a personal entitlement, or Federal employment.
- Sec. 2.** To the extent permitted by law, Executive departments and agencies shall: (a) Follow government-wide criteria and government-wide minimum due process procedures when they act to debar or suspend participants in affected programs. (b) Send to the agency designated pursuant to Section 5 identifying information concerning debarred and suspended participants in affected programs, participants who have agreed to exclusion from participation, and participants declared ineligible under applicable law, including Executive Orders. This information shall be include in the list to be maintained pursuant to Section 5. (c) Not allow a party to participate in any affected program if any Executive department or agency has debarred, suspended, or otherwise excluded (to the extent specified in the exclusion agreement) that party from participation in an affected program. AN agency may grant an exception permitting a debarred, suspended, or excluded party to participate in a particular transaction upon a written determination by the agency head or authorized designee stating the reason(s) for deviating from this Presidential policy. However, I intend that exceptions to this policy should be granted only infrequently.
- Sec. 3.** Executive departments and agencies shall issue regulations governing their implementation of this Order that shall be consistent with the guidelines issued under Section 6. Proposed regulations shall be submitted to the Office of Management and Budget for review within four months of the date of the guidelines issued under Section 6. The Director of the Office of Management and Budget may return for reconsideration proposed regulations that the Director

believes are inconsistent with the guidelines. Final regulations shall be published within twelve months of the date of the guidelines.

- Sec. 4.** There is hereby constituted the Interagency Committee on Debarment and Suspension, which shall monitor implementation of this Order. The Committee shall consist of representatives of agencies designated by the Director of the Office of Management and Budget.
- Sec. 5.** The Director of the Office of Management and Budget shall designate a Federal agency to perform the following functions: maintain a current list of all individuals and organizations excluded from program participation under this Order, periodically distribute the list to Federal agencies, and study the feasibility of automating the list; coordinate with the lead agency responsible for government-wide debarment and suspension of contractors; chair the Interagency Committee established by Section 4; and report periodically to the Director on implementation of this Order, with the first report due within two years of the date of the Order.
- Sec. 6.** The Director of the Office of Management and Budget is authorized to issued guidelines to Executive departments and agencies that govern which programs and activities are covered by this Order, prescribe government-wide criteria and government-wide minimum due process procedures, and set forth other related details for the effective administration of the guidelines.
- Sec. 7.** The Director of the Office of Management and Budget shall report to the President within three years of the date of this Order on Federal agency compliance with the Order, including the number of exceptions made under Section 2(c), and shall make recommendations as are appropriate further to curb fraud, waste, and abuse.

## **COMPLIANCE WITH RULES AND REGULATIONS-TITLE 42 SEC 2000d-1**

Federal agencies which are empowered to extend financial assistance to any project are authorized and directed to effectuate the provisions of Section 2000d-1. By the termination of or refusal to grant or continue assistance under such program to any recipient where there has been an express finding on record, an opportunity for hearing of failure to comply with these aforementioned guidelines, such termination shall be limited to the political entity or other recipient to where finding is made. No action shall be taken by the agency until the appropriate person(s) of the failure to comply has been advised, and has been determined that compliance cannot be secured by voluntary means. In the case of termination, the agency will provide a full written report on the circumstances and the grounds for such action. No such action shall become effective until 30 days have elapsed after filing of such report.



**REQUIRED CONTRACT PROVISIONS  
FEDERAL-AID CONSTRUCTION CONTRACTS**

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

**ATTACHMENTS**

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

**II. NONDISCRIMINATION**

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

**I. GENERAL**

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

**1. Equal Employment Opportunity:** Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under

this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

**2. EEO Officer:** The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

**3. Dissemination of Policy:** All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

**4. Recruitment:** When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

**5. Personnel Actions:** Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

**6. Training and Promotion:**

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

**7. Unions:** If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

**8. Reasonable Accommodation for Applicants / Employees with Disabilities:** The contractor must be familiar

with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

**9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment:** The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

**10. Assurance Required by 49 CFR 26.13(b):**

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

**11. Records and Reports:** The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

### III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

### IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

#### 1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions

of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or

will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program. Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

## 2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

## 3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-

Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

#### 4. Apprentices and trainees

##### a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly

rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

##### b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

- d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

**5. Compliance with Copeland Act requirements.** The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

**6. Subcontracts.** The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

**7. Contract termination: debarment.** A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

**8. Compliance with Davis-Bacon and Related Act requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

**9. Disputes concerning labor standards.** Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

**10. Certification of eligibility.**

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

**V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT**

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

**1. Overtime requirements.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

**2. Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

**3. Withholding for unpaid wages and liquidated damages.** The FHWA or the contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

**4. Subcontracts.** The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

## VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

- (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
- (2) the prime contractor remains responsible for the quality of the work of the leased employees;
- (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
- (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is

evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

## VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

## VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:



"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

#### **IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT**

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.

2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

#### **X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION**

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

##### **1. Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this

covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

\*\*\*\*\*

## **2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:**

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

### **2. Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which

this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the

department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

\* \* \* \* \*

**Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:**

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

\* \* \* \* \*

**XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING**

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS  
PREFERENCE FOR APPALACHIAN DEVELOPMENT  
HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS  
ROAD CONTRACTS**

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

"General Decision Number: NE20200030 01/03/2020

Superseded General Decision Number: NE20190030

State: Nebraska

Construction Type: Highway

Counties: Arthur, Banner, Box Butte, Chase, Cherry, Cheyenne, Dawes, Dawson, Deuel, Dundy, Frontier, Furnas, Garden, Gosper, Grant, Hayes, Hitchcock, Hooker, Keith, Kimball, Lincoln, Logan, McPherson, Morrill, Perkins, Red Willow, Scotts Bluff, Sheridan, Sioux and Thomas Counties in Nebraska.

HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.80 for calendar year 2020 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.80 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2020. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number      Publication Date  
0                              01/03/2020

\* ENGI0571-005 01/01/2013

	Rates	Fringes
OPERATOR: Trencher.....	\$ 20.83	9.60
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\* SUNE2011-026 08/29/2011

	Rates	Fringes
CARPENTER, Excludes Form Work....	\$ 16.39	
CEMENT MASON/CONCRETE FINISHER...	\$ 13.66	
ELECTRICIAN.....	\$ 19.84	
FORM WORKER		
Arthur, Banner, Box Butte,		
Chase, Cherry, Cheyenne,		
Dawes, Dawson, Deuel,		
Dundy, Frontier, Furnas,		
Garden, Gosper, Grant,		
Hayes, Hitchcock, Hooker,		
Keith, Kimball, Logan,		
McPherson, Morrill,		
Perkins, Red Willow,		
Scotts Bluff, Sheridan,		
Sioux, & Thomas Counties....	\$ 14.87	
Lincoln County.....	\$ 15.10	
HIGHWAY/PARKING LOT STRIPING:		
Laborer		
Arthur, Banner, Box Butte,		
Chase, Cherry, Cheyenne,		
Dawes, Dawson, Deuel,		
Dundy, Frontier, Furnas,		
Garden, Gosper, Grant,		
Hayes, Hitchcock, Hooker,		
Keith, Kimball, Logan,		
McPherson, Morrill,		
Perkins, Red Willow,		
Scotts Bluff, Sheridan,		
Sioux, & Thomas Counties....	\$ 11.20	
Dawson County.....	\$ 11.83	
Lincoln County.....	\$ 12.60	
IRONWORKER, REINFORCING.....	\$ 17.93	
LABORER (COMMON OR GENERAL)		
Arthur, Banner, Dawes,		
Deuel, Dundy, Furnas,		
Gosper, Grant, Hayes,		
Hitchcock, Hooker,		
Kimball, Logan, McPherson,		
Perkins, Red Willow,		
Sioux, Thomas Counties.....	\$ 10.23	
Box Butte County.....	\$ 10.01	
Chase County.....	\$ 10.19	
Cherry County.....	\$ 11.21	
Cheyenne County.....	\$ 11.67	
Dawson County.....	\$ 9.96	
Frontier County.....	\$ 10.18	
Garden & Morrill Counties...	\$ 9.68	
Keith County.....	\$ 10.44	

Lincoln County.....\$ 10.45  
 Scotts Bluff County.....\$ 9.74  
 Sheridan County.....\$ 9.52

LABORER (TRAFFIC  
 CONTROL-FLAGGER & CONE/BARREL  
 SETTER)

Arthur, Banner, Chase,  
 Dawes, Deuel, Dundy,  
 Frontier, Furnas, Gospher,  
 Grant, Hayes, Hooker,  
 Keith, Kimball, Logan,  
 McPherson, perkins, Red  
 Willow, Sioux, Thomas  
 Counties.....\$ 9.66  
 Box Butte County.....\$ 8.30  
 Cherry County.....\$ 9.50  
 Cheyenne County.....\$ 9.81  
 Dawson County.....\$ 9.75  
 Garden & Morrill Counties...\$ 9.30  
 Hitchcock County.....\$ 9.00  
 Lincoln County.....\$ 10.04  
 Scotts Bluff County.....\$ 10.39  
 Sheridan County.....\$ 8.85

LABORER: Landscape &  
 Irrigation.....\$ 8.30

LABORER: Mason Tender -  
 Cement/Concrete.....\$ 10.02

Operating Engineers: (Skid  
 Loader).....\$ 11.17

OPERATOR: Asphalt Plant.....\$ 14.07

OPERATOR: Backhoe Loader  
 Combo.....\$ 14.00

OPERATOR:  
 Backhoe/Excavator/Trackhoe.....\$ 14.04

OPERATOR: Broom/Sweeper.....\$ 10.92

OPERATOR: Bulldozer.....\$ 14.16

OPERATOR: Compactor.....\$ 10.05

OPERATOR: Concrete Saw.....\$ 12.88

OPERATOR: Crane  
 Arthur, Banner, Box Butte,  
 Chase, Cherry, Cheyenne,  
 Dawes, Dawson, Deuel,  
 Dundy, Frontier, Furnas,  
 Garden, Gosper, Grant,  
 Hayes, Hitchcock, Hooker,  
 Keith, Kimball, Logan,

McPerson, Morrill,  
 Perkins, Red Willow,  
 Scotts Bluff, Sheridan,  
 Sioux & Thomas Counties.....\$ 19.66  
 Lincoln County.....\$ 20.39

OPERATOR: Loader

Arthur, Banner, Box Butte,  
 Chase, Cherry, Cheyenne,  
 Dawes, Dawson, Deuel,  
 Dundy, Frontier, Furnas,  
 Gosper, Grant, Hayes,  
 Hitchcock, Hooker, Keith,  
 Kimball, Logan, McPherson,  
 Perkins, Red Willow,  
 Scotts Bluff, Sheridan,  
 Sioux, & Thomas Counties....\$ 13.17  
 Garden & Morrill Counties...\$ 12.55  
 Lincoln County.....\$ 13.83

OPERATOR: Mechanic.....\$ 15.46

OPERATOR: Milling Machine.....\$ 12.80

OPERATOR: Paver (Asphalt,  
 Aggregate, and Concrete)

Arthur, Banner, Box Butte,  
 Chase, Cherry, Cheyenne,  
 Dawes, Dawson, Deuel,  
 Dundy, Frontier, Furnas,  
 Garden, Gosper, Grant,  
 Hayes, Hitchcock, Hooker,  
 Keith, Kimball, Logan,  
 McPherson, Morrill,  
 Perkins, Red Willow,  
 Scotts Bluff, Sheridan,  
 Sioux, & Thomas Counties....\$ 12.68  
 Lincoln County.....\$ 12.50

OPERATOR: Roller

Arthur, Banner, Chase,  
 Dawes, Dawson, Deuel,  
 Dundy, Frontier, Furnas,  
 Gosper, Grant, Hayes,  
 Hitchcock, Hooker, Keith,  
 Kimball, Logan, McPherson,  
 Perkins, Red Willow,  
 Scotts Bluff, Sheridan,  
 Sioux, & Thomas Counties....\$ 12.67  
 Box Butte County.....\$ 12.50  
 Cherry County.....\$ 12.68  
 Cheyenne County.....\$ 13.18  
 Garden & Morrill County.....\$ 13.29  
 Lincoln County.....\$ 12.20

2.61

OPERATOR: Scraper.....\$ 13.57

OPERATOR: Screed



Arthur, Banner, Chase,  
 Cherry, Cheyenne, Dawes,  
 Dawson, Deuel, Dundy,  
 Frontier, Furnas, Garden,  
 Gosper, Grant, Hayes,  
 Hitchcock, Hooker, Keith,  
 Kimball, Lincoln, Logan,  
 McPherson, Morrill,  
 Perkins, Red Willow,  
 Scotts Bluff, Sheridan,  
 Sioux, & Thomas Counties....\$ 12.35  
 Box Butte County.....\$ 11.00

OPERATOR: Tractor

Arthur, Banner, Box Butte,  
 Chase, Cherry, Cheyenne,  
 Dawes, Deuel, Dundy,  
 Frontier, Furnas, Garden,  
 Gosper, Grant, Hayes,  
 Hitchcock, Hooker, Keith,  
 Kimball, Lincoln, Logan,  
 McPherson, Morrill,  
 Perkins, Red Willow,  
 Scotts Bluff, Sheridan,  
 Sioux, & Thomas Counties....\$ 12.64  
 Dawson County.....\$ 12.50  
 Scotts Bluff.....\$ 13.38

POWER EQUIPMENT OPERATOR:

Concrete Texture Cure  
 Machine.....\$ 11.11  
 Distributor.....\$ 14.00

TRUCK DRIVER, Includes Dump  
and Tandem Truck

Arthur, Banner, Box Butte,  
 Chase, Cherry, Cheyenne,  
 Dawes, Dawson, Deuel,  
 Dundy, Frontier, Furnas,  
 Garden, Gosper, Grant,  
 Hayes, Hitchcock, Hooker,  
 Keith, Kimball, Lincoln,  
 Logan, McPherson, Morrill,  
 Perkins, Red Willow,  
 Scotts Bluff, Sheridan,  
 Sioux, & Thomas Counties....\$ 11.57  
 Cherry County.....\$ 12.17  
 Sheridan County.....\$ 10.66

TRUCK DRIVER: Lowboy Truck.....\$ 14.36

TRUCK DRIVER: Oil  
Distributor Truck.....\$ 13.25

TRUCK DRIVER: Semi-Trailer  
Truck

Arthur, Banner, Chase,  
 Cherry, Cheyenne, Dawes,



A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

#### Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

#### Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

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WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations  
 Wage and Hour Division  
 U.S. Department of Labor  
 200 Constitution Avenue, N.W.  
 Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator  
 U.S. Department of Labor  
 200 Constitution Avenue, N.W.  
 Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
 U.S. Department of Labor  
 200 Constitution Avenue, N.W.  
 Washington, DC 20210

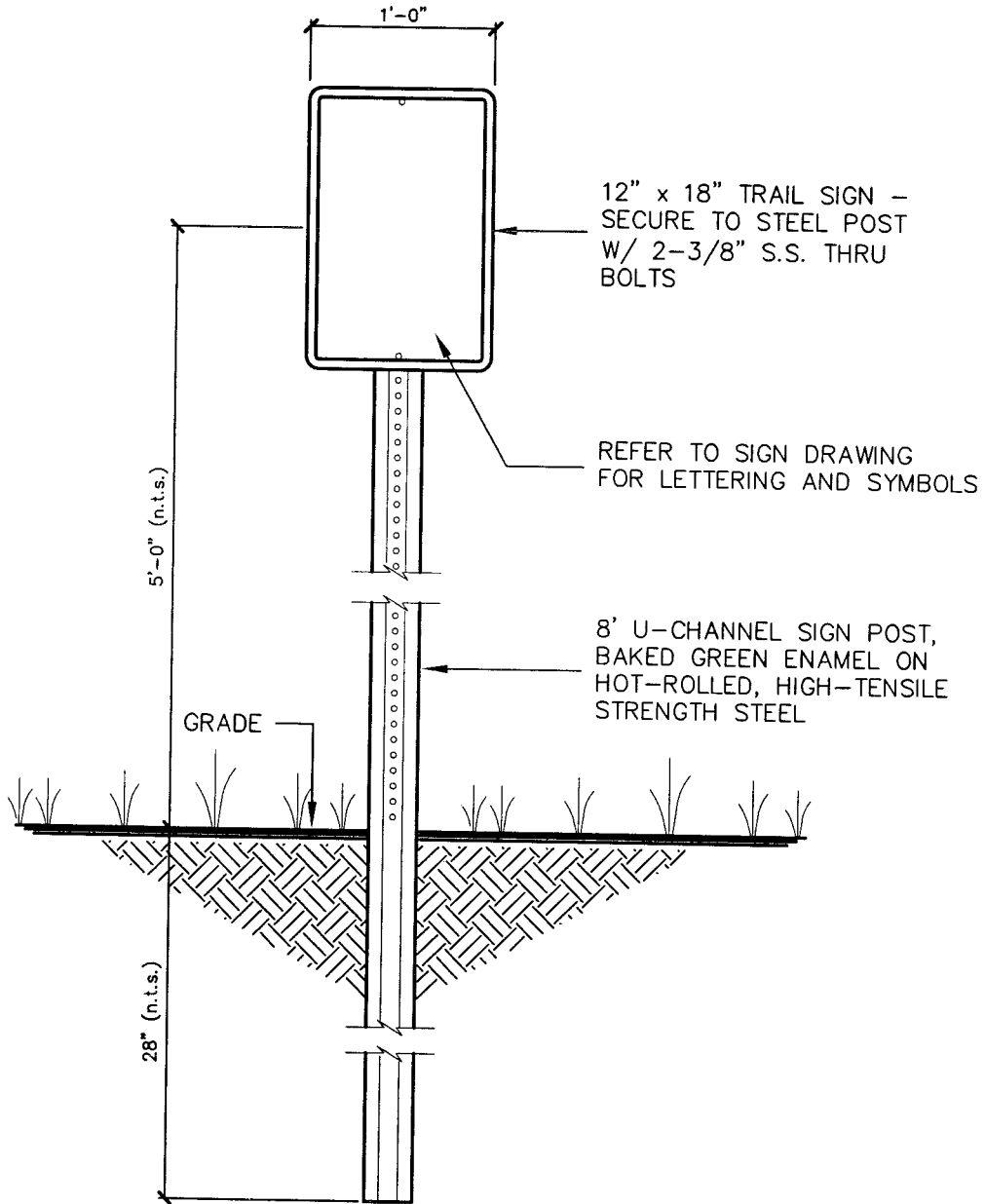
4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

"

TRAIL SIGN SHALL BE REFLECTIVE SHEETING  
ON .080 ALUMINUM, WITH LETTERING AND  
SYMBOLS ON WHITE BACKGROUND



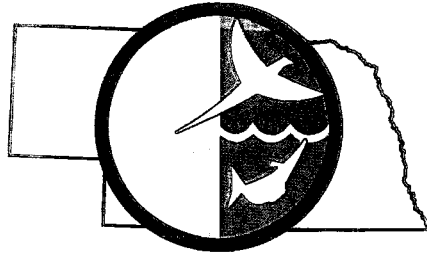
**TRAIL SIGN**  
NO SCALE

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS  
FOR APPROVAL PRIOR TO FABRICATION  
IN ACCORDANCE WITH SECTION 22

PREPARED BY:



MILLER & ASSOCIATES  
CONSULTING ENGINEERS, P.C.  
1111 CENTRAL AVENUE  
KEARNEY, NE 68847



**NEBRASKA GAME AND  
PARKS COMMISSION**



U.S. Department  
of Transportation  
**Federal Highway  
Administration**

**THIS TRAIL WAS FUNDED BY THE  
RECREATIONAL TRAILS PROGRAM OF  
THE FEDERAL HIGHWAY  
ADMINISTRATION, ADMINISTERED BY  
NEBRASKA GAME AND PARKS  
COMMISSION.**



**CONTRACT  
DOCUMENTS**



## NOTICE OF AWARD

Dated \_\_\_\_\_, 2020

TO: \_\_\_\_\_

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

**OWNER'S CONTRACT NO.** 127-E1-024-19

**CONTRACT FOR** HIKE / BIKE TRAIL - NORTHWEST PHASE II

You are notified that your Bid dated \_\_\_\_\_, 2020 for the above Contract has been considered. You are the apparent successful bidder and have been awarded a contract for (Indicate total Work, alternates or sections of Work awarded)

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

Six (6) copies of each of the proposed Agreement accompany this Notice of Award. Six (6) sets of the Drawings and Specifications will be delivered separately or otherwise made available to you immediately.

You must comply with the following conditions precedent within fifteen days of the date of this Notice of Award, that is by \_\_\_\_\_, 2020.

1. You must deliver to the OWNER a minimum of five (5) fully executed counterparts of the Agreement.
2. You must deliver with the executed Agreement the Contract Security (Bonds) as specified in the Instructions to Bidders (paragraph 18), General Conditions (paragraph 5.1) and Supplementary Conditions (paragraph SC-5.1).

3. (List other conditions precedent).

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

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

**CITY OF LEXINGTON**  
(OWNER)

BY \_\_\_\_\_

**ACCEPTANCE OF AWARD**

\_\_\_\_\_  
(CONTRACTOR)

BY \_\_\_\_\_  
(AUTHORIZED SIGNATURE)

\_\_\_\_\_  
(TITLE)

\_\_\_\_\_  
(DATE)

## **AGREEMENT BETWEEN OWNER AND CONTRACTOR**

THIS AGREEMENT is dated as of the \_\_\_\_ day of \_\_\_\_\_ in the year 2020 by and between the **CITY OF LEXINGTON, P.O. BOX 70, 406 EAST 7<sup>TH</sup> STREET, LEXINGTON, NE 68850** (hereinafter called OWNER) and \_\_\_\_\_ (hereinafter called CONTRACTOR).

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

### **Article 1. WORK.**

CONTRACTOR shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows: **HIKE / BIKE TRAIL - NORTHWEST PHASE II**

### **Article 2. ENGINEER.**

The Project has been designed by Miller & Associates, Consulting Engineers, P.C. who is hereinafter called ENGINEER and who is to act as OWNER'S representative, assume all duties and responsibilities and have the rights and authority assigned to ENGINEER in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

### **Article 3. CONTRACT TIME.**

3.1. The Work will be substantially completed on or before September 1, 2021, and completed and ready for final payment in accordance with paragraph 14.13 of the General Conditions on or before October 1, 2021.

3.2. Liquidated Damages. OWNER and CONTRACTOR recognize that time is of the essence of this Agreement and that OWNER will suffer financial loss if the Work is not completed within the times specified in paragraph 3.1 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. They also recognize the delays, expense and difficulties involved in proving the actual loss suffered by OWNER if the Work is not completed on time. Accordingly, instead of requiring any such proof, OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as a penalty) CONTRACTOR shall pay OWNER \$500.00 for each day that expires after the time specified in paragraph 3.1 for Substantial Completion until the Work is substantially complete. After Substantial Completion, if CONTRACTOR shall neglect, refuse or fail to complete the remaining Work within the time specified in paragraph 3.1 for completion and readiness for final payment or any proper extension thereof granted by OWNER, CONTRACTOR shall pay OWNER \$500.00 for each day that expires after the time specified in paragraph 3.1 for completion and readiness for final payment.

### **Article 4. CONTRACT PRICE.**

4.1. OWNER shall pay CONTRACTOR for completion of the Work in accordance with the Contract Documents an amount in current funds according to CONTRACTOR'S BID as attached.

As provided in paragraph 11.9 of the General Conditions estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by ENGINEER as provided in paragraph 9.10 of the General Conditions. Unit prices have been computed as provided in paragraph 11.9.2 of the General Conditions.

#### **Article 5. PAYMENT PROCEDURES.**

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

5.1. Progress Payments. OWNER shall make progress payments on account of the Contract Price on the basis of CONTRACTOR'S Applications for Payment as recommended by ENGINEER, on or about the first day of each month during construction as provided in paragraphs 5.1.1 and 5.1.2. below. All such payments will be measured by the schedule of values established in paragraph 2.9 of the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no schedule of values, as provided in the General Requirements.

5.1.1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below, but, in each case, less the aggregate of payments previously made and less such amounts as ENGINEER shall determine, or OWNER may withhold, in accordance with paragraph 14.7 of the General Conditions.

90% of work completed and 90% of materials and equipment not incorporated in the Work (but delivered, suitably stored and accompanied by documentation satisfactory to OWNER as provided in paragraph 14.2 of the General Conditions).

5.1.2. Upon Substantial Completion, in an amount sufficient to increase total payments to CONTRACTOR to 90% of the Contract Price (with the balance being retainage), less such amounts as ENGINEER shall determine, or OWNER may withhold, in accordance with paragraph 14.7 of the General Conditions.

5.2. Final Payment. Upon final completion and acceptance of the Work in accordance with paragraph 14.13 of the General Conditions, OWNER shall pay the remainder of the Contract Price as recommended by ENGINEER as provided in said paragraph 14.13.

#### **Article 6. INTEREST.**

All moneys not paid when due as provided in Article 14 of the General Conditions shall bear interest at a maximum rate of allowed by law at the place of the project.

#### **Article 7. CONTRACTOR'S REPRESENTATIONS.**

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

7.1. CONTRACTOR has examined and carefully studied the Contract Documents (including the Addenda listed in paragraph 8) and the other related data identified in the Bidding Documents including "technical data."

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

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

7.4. CONTRACTOR has carefully studied all reports of explorations and tests of subsurface conditions at or contiguous to the site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in paragraph 4.2.1 of the General Conditions. CONTRACTOR accepts the determination set forth in paragraph SC.4.2 of the Supplementary Conditions of the extent of the "technical data" contained in such reports and drawings upon which CONTRACTOR is entitled to rely as provided in paragraph 4.2 of the General Conditions. CONTRACTOR acknowledges that such reports and drawings are not Contract Documents and may not be complete for CONTRACTOR'S purposes. CONTRACTOR acknowledges that OWNER and ENGINEER do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Contract Documents with respect to Underground Facilities at or contiguous to the site. CONTRACTOR has obtained and carefully studied (or assumes responsibility for having done so) all such additional supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences and procedures of construction to be employed by CONTRACTOR and safety precautions and programs incident thereto. CONTRACTOR does not consider that any additional examinations, investigations, explorations, tests, studies or data are necessary for the performance and furnishing of the Work at the Contract Price, within the Contract Times and in accordance with the other terms and conditions of the Contract Documents.

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

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

7.7. CONTRACTOR has given ENGINEER written notice of all conflicts, errors, ambiguities or discrepancies that CONTRACTOR has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to CONTRACTOR, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

## **Article 8. CONTRACT DOCUMENTS.**

The Contract Documents which comprise the entire agreement between OWNER and CONTRACTOR concerning the Work consist of the following:

- 8.1. This Agreement (pages A-1 to A-\_\_\_\_, inclusive).
- 8.2. Exhibits to this Agreement (Certificate of Insurance).
- 8.3. Performance, Payment and other Bonds

- 8.4. Notice of Award.
- 8.5. General Conditions (pages 1 to 42, inclusive).
- 8.6. Supplementary and Special Conditions (pages SC-1 to SC-\_\_\_, and SPC-1 to SPC-\_\_\_, inclusive).
- 8.6.1 Governmental Requirements
- 8.7. Advertisement or Invitation to Bid
- 8.8. Instruction to Bidders
- 8.9. Specifications bearing the title **HIKE / BIKE TRAIL - NORTHWEST PHASE II** and consisting of \_\_\_ divisions and \_\_\_ pages, as listed in table of contents thereof.
- 8.10. Drawings, consisting of a cover sheet and sheets numbered \_\_\_ through \_\_\_ , inclusive with the following general title: **HIKE / BIKE TRAIL - NORTHWEST PHASE II**
- 8.11. Addenda numbers \_\_\_ to \_\_\_ , inclusive.
- 8.12. CONTRACTOR's Bid (pages B-1 to B-\_\_\_, inclusive) as attached
- 8.13. Documentation submitted by CONTRACTOR prior to Notice of Award (pages \_\_\_ to, \_\_\_ inclusive).
- 8.14. The following which may be delivered or issued after the Effective Date of the Agreement and are not attached hereto: All Written Amendments and other documents amending, modifying, or supplementing the Contract Documents pursuant to paragraphs 3.5 and 3.6 of the General Conditions.
- 8.15. The documents listed in paragraphs 8.2 et seq. above are attached to this Agreement.

There are no Contract Documents other than those listed above in this Article 8. The Contract Documents may only be amended, modified or supplemented as provided in paragraphs 3.5 and 3.6 of the General Conditions.

#### **Article 9. MISCELLANEOUS.**

- 9.1. Terms used in this Agreement which are defined in Article I of the General Conditions will have the meanings indicated in the General Conditions.
- 9.2. No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.
- 9.3. OWNER and CONTRACTOR each binds itself, its partners, successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect of all covenants, agreements and obligations contained in the Contract Documents.
- 9.4. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon OWNER and CONTRACTOR, who agree that the Contract Documents shall be reformed to

replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

9.5. The CONTRACTOR shall comply with and continue to comply with Fair Labor Standards in the pursuit of his business and in the execution of this Agreement. CONTRACTOR will comply with Executive Order 11246, as Amended.

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

This Agreement will be effective on \_\_\_\_\_, 2020 (which is the Effective Date of the Agreement).

OWNER **CITY OF LEXINGTON**

CONTRACTOR \_\_\_\_\_

By \_\_\_\_\_

By \_\_\_\_\_

[SEAL]

[CORPORATE SEAL]

Attest \_\_\_\_\_

Attest \_\_\_\_\_

*Address for giving notices*  
P.O. Box 70  
406 East 7th Street  
Lexington, NE 68850

*Address for giving notices*

# Construction Performance Bond

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

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

OWNER (Name and Address):

**CITY OF LEXINGTON  
P.O. BOX 70  
406 EAST 7<sup>TH</sup> STREET  
LEXINGTON, NE 68850**

CONSTRUCTION CONTRACT

Date:

Amount:

Description (Name and Location): **HIKE / BIKE TRAIL - NORTHWEST PHASE II**

BOND

Date (Not earlier than Construction Contract Date):

Amount:

Modifications to this Bond Form:

CONTRACTOR AS PRINCIPAL

Company:                      (Corp. Seal)

SURETY

Company:                      (Corp. Seal)

Signature: \_\_\_\_\_  
Name and Title: \_\_\_\_\_

Signature: \_\_\_\_\_  
Name and Title: \_\_\_\_\_

CONTRACTOR AS PRINCIPAL

Company:                      (Corp. Seal)

SURETY

Company:                      (Corp. Seal)

Signature: \_\_\_\_\_  
Name and Title: \_\_\_\_\_

Signature: \_\_\_\_\_  
Name and Title: \_\_\_\_\_



1. The Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.
2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except to participate in conferences as provided in Subparagraph 3.1.
3. If there is no Owner Default, the Surety's obligation under this Bond shall arise after:
  - 3.1. The Owner has notified the Contractor and the Surety at its address described in Paragraph 10 below, that the Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with the Contractor and the Surety to be held not later than fifteen days after receipt of such notice to discuss methods of performing the Construction Contract. If the Owner, the Contractor and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default; and
  - 3.2. The Owner has declared a Contractor Default and formally terminated the Contractor's right to complete the contract. Such Contractor Default shall not be declared earlier than twenty days after the Contractor and the Surety have received notice as provided in Subparagraph 3.1; and
  - 3.3. The Owner has agreed to pay the Balance of the Contract Price to the Surety in accordance with the terms of the Construction Contract or to a contractor selected to perform the Construction Contract in accordance with the terms of the contract with the Owner.
4. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
  - 4.1. Arrange for the Contractor, with consent of the Owner, to perform and complete the Construction Contract; or
  - 4.2. Undertake to perform and complete the Construction Contract itself, through its agents or through independent contractors; or
  - 4.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and the contractor selected with the Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 6 in excess of the Balance of the Contract Price incurred by the Owner resulting from the Contractor's default; or
  - 4.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances;
    1. After investigation, determine the amount for which it may be liable to the Owner and as soon as practicable after the amount is determined, tender payment therefor to the Owner; or
    2. Deny liability in whole or in part and notify the Owner citing reasons therefor.
5. If the Surety does not proceed as provided in Paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond fifteen days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Subparagraph 4.4, and the Owner refuses the payment tendered or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.
6. After the Owner has terminated the Contractor's right to complete the Construction Contract, and if the Surety elects to act under Subparagraph 4.1, 4.2 or 4.3 above, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. To the limit of the amount of this Bond, but subject to

commitment by the Owner of the Balance of the Contract Price to mitigation of costs and damages on the Construction Contract, the Surety is obligated without duplication for:

- 6.1. The responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
  - 6.2. Additional legal, design professional and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 4; and
  - 6.3. Liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.
7. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, or successors.
8. The Surety hereby waives notice of any change, including changes of time to the Construction Contract or to related subcontracts, purchase orders and other obligations.
9. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
10. Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the signature page.
11. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this bond shall be construed as a statutory bond and not as a common law bond.
12. Definitions.
- 12.1. Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made, including allowance to the Contractor of any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.
  - 12.2. Construction Contract: The Agreement between the Owner and the Contractor identified on the signature page, including all Contract Documents and changes thereto.
  - 12.3. Contractor Default: Failure of the Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Construction Contract.
  - 12.4. Owner Default: Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract or to perform and complete or comply with the other terms thereof.

## Construction Payment Bond

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

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CONTRACTOR (Name and Address): \_\_\_\_\_ SURETY (Name and Principal Place of Business): \_\_\_\_\_

OWNER (Name and Address):

**CITY OF LEXINGTON  
P.O. BOX 70  
406 EAST 7<sup>TH</sup> STREET  
LEXINGTON, NE 68850**

CONSTRUCTION CONTRACT

Date:

Amount:

Description (Name and Location): **HIKE / BIKE TRAIL - NORTHWEST PHASE II**

BOND

Date (Not earlier than Construction Contract Date):

Amount:

Modifications to this Bond Form:

CONTRACTOR AS PRINCIPAL

Company: \_\_\_\_\_ (Corp. Seal)

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

Name and Title: \_\_\_\_\_

SURETY

Company: \_\_\_\_\_ (Corp. Seal)

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

Name and Title: \_\_\_\_\_

CONTRACTOR AS PRINCIPAL

Company: \_\_\_\_\_ (Corp. Seal)

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

Name and Title: \_\_\_\_\_

SURETY

Company: \_\_\_\_\_ (Corp. Seal)

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

Name and Title: \_\_\_\_\_

1. The Contractor and the surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner to pay for labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference.
2. With respect to the Owner, this obligation shall be null and void if the Contractor:
  - 2.1. Promptly makes payment, directly or indirectly, for all sums due Claimants, and
  - 2.2. Defends, indemnifies and holds harmless the Owner from claims, demands, liens or suits by any person or entity whose claim, demand, lien or suit is for payment for labor, materials or equipment furnished for use in the performance of the Construction Contract, provided the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 12) of any claims, demands, liens or suits and tendered defense of such claims, demands, liens or suits to the Contractor and the Surety, and provided there is no Owner Default.
3. With respect to Claimants, this obligation shall be null and void if the Contractor promptly makes payment, directly or indirectly, for all sums due.
4. The Surety shall have no obligation to Claimants under this Bond until:
  - 4.1. Claimants who are employed by or have a direct contract with the Contractor have given notice to the Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to the Owner, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.
  - 4.2. Claimants who do not have a direct contract with the Contractor:
    1. Have furnished written notice to the Contractor and sent a copy, or notice thereof, to the Owner, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials were furnished or supplied or for whom the labor was done or performed; and
    2. Have either received a rejection in whole or in part from the Contractor, or not received within 30 days of furnishing the above notice any communication from the Contractor by which the Contractor has indicated the claim will be paid directly or indirectly; and
    3. Not having been paid within the above 30 days, have sent a written notice to the Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to the Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to the Contractor.
5. If a notice required by Paragraph 4 is given by the Owner to the Contractor or to the Surety, that is sufficient compliance.
6. When the Claimant has satisfied the conditions of Paragraph 4, the Surety shall promptly and at the Surety's expense take the following actions:
  - 6.1. Send an answer to the Claimant, with a copy to the Owner, within 45 days after receipt of the claim, stating the amounts that are undisputed and that basis for challenging any amounts that are disputed.
  - 6.2. Pay or arrange for payment of any undisputed amounts.
7. The Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.
8. Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any Construction Performance Bond. By the Contractor

furnishing and the Owner accepting this bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and the Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

9. The Surety shall not be liable to the Owner, Claimants or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.
10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.
11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the work or part of the work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by Subparagraph 4.1 or Clause 4.2(iii), or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
12. Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the signature page. Actual receipt of notice by Surety, the Owner or the Contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.
13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in the bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is, that this Bond shall be construed as a statutory bond and not as a common law bond.
14. Upon request by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.
15. **DEFINITIONS**
  - 15.1. Claimant: An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.
  - 15.2. Construction Contract: The agreement between the Owner and the Contractor identified on the signature page, including all Contract Documents and changes thereto.
  - 15.3. Owner Default: Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract or to perform and complete or comply with the other terms thereof.



# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b>	<b>CONTACT NAME:</b> <b>PHONE (A/C, No, Ext):</b> _____ <b>FAX (A/C, No):</b> _____ <b>E-MAIL ADDRESS:</b> _____  <table style="width: 100%; border: none;"> <tr> <td style="width: 80%; border: none; text-align: center;">INSURER(S) AFFORDING COVERAGE</td> <td style="width: 20%; border: none; text-align: center;">NAIC #</td> </tr> </table>	INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER(S) AFFORDING COVERAGE	NAIC #		
<b>INSURED</b>	<b>INSURER A :</b> _____ <b>INSURER B :</b> _____ <b>INSURER C :</b> _____ <b>INSURER D :</b> _____ <b>INSURER E :</b> _____ <b>INSURER F :</b> _____		

**COVERAGES**

**CERTIFICATE NUMBER:**

**REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
	<b>GENERAL LIABILITY</b> <input type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR  GEN'L AGGREGATE LIMIT APPLIES PER <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC						EACH OCCURRENCE \$ DAMAGE TO RENTED PREMISES (Ea occurrence) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ GENERAL AGGREGATE \$ PRODUCTS - COMP/OP AGG \$ \$
	<b>AUTOMOBILE LIABILITY</b> <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> HIRED AUTOS  <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS						COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
	<b>UMBRELLA LIAB</b> <input type="checkbox"/> OCCUR <b>EXCESS LIAB</b> <input type="checkbox"/> CLAIMS-MADE DED <input type="checkbox"/> RETENTION \$						EACH OCCURRENCE \$ AGGREGATE \$ \$
	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICE/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A					<input type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER E L EACH ACCIDENT \$ E L DISEASE - EA EMPLOYEE \$ E L DISEASE - POLICY LIMIT \$
DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)							

**CERTIFICATE HOLDER**

**CANCELLATION**

_____	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.  AUTHORIZED REPRESENTATIVE
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## CERTIFICATE OF OWNER'S ATTORNEY

I, the undersigned, \_\_\_\_\_, the duly authorizing and acting legal representative of the City of Lexington, do hereby certify as follows:

I have examined the attached contract, certificates of insurance, and surety bonds and the manner of execution thereof, and I am of the opinion that each of the aforesaid agreements has been duly executed by the proper parties thereto acting through their duly authorized representatives; that said representatives have full power and authority to execute said agreements on behalf of the respective parties named thereon; and that the foregoing agreements constitute valid and legally binding obligations upon the parties executing the same in accordance with terms, conditions, and provisions thereof and the certificate of insurance and surety bonds are in compliance with the attached contract.

\_\_\_\_\_  
Owner's Attorney Signature

\_\_\_\_\_  
Date

# NOTICE TO PROCEED

Dated: \_\_\_\_\_, 2020

TO: \_\_\_\_\_

ADDRESS \_\_\_\_\_

**OWNER'S CONTRACT NO. 127-E1-024-19**

**CONTRACT FOR HIKE / BIKE TRAIL - NORTHWEST PHASE II**

You are notified that the Contract Times under the above contract will commence to run on \_\_\_\_\_, 2020. By that date, you are to start performing your obligations under the Contract Documents. In accordance with Article 3 of the Agreement the dates of Substantial Completion and completion and readiness for final payment are \_\_\_\_\_, 2021 and \_\_\_\_\_, 2021.

Before you may start any Work at the site, paragraph 2.7 of the General Conditions provides that you and OWNER must each deliver to the other (with copies to ENGINEER and other identified additional insured parties) certificates of insurance which each is required to purchase and maintain in accordance with the Contract Documents.

Also before you may start any Work at the site, you must (add other requirements)

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**CITY OF LEXINGTON**  
(OWNER)

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## **ACCEPTANCE OF NOTICE**

\_\_\_\_\_  
(CONTRACTOR)

\_\_\_\_\_  
(AUTHORIZED SIGNATURE)

\_\_\_\_\_  
(TITLE)

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



# SPECIFICATIONS

## **STORM SEWERS**

**5.00 SCOPE** - Work covered by this section of the specifications shall consist of furnishing all plant, labor, equipment, appliances and materials, and of performing all operations in connection with construction of storm sewers including appurtenant structures complete in accordance with these specifications and applicable drawings.

**5.10 GENERAL** - Installation of storm sewer lines and construction of structures shall conform with the lines and grades shown on applicable drawings or established by the Engineer.

Contractor shall provide, erect and maintain necessary barricades, suitable and sufficient lights, danger signals, signs, and other traffic control devices. Contractor shall take necessary precautions to protect work and safeguard the public. Streets closed to traffic shall be protected by effective barricades and obstructions shall be illuminated during hours of darkness. Warning signs shall be provided to control and direct traffic properly.

Latest revisions of the standard specifications referred to herein prevailing at the time of the bid opening shall prevail.

**5.20 MATERIALS - REINFORCED CONCRETE STORM SEWER PIPE** - Reinforced concrete pipe shall be a minimum of Class III, American Society of Testing Materials Designation C-76. The following ASTM Designations shall apply to size and type of pipe or appurtenances specified on applicable drawings;

**5.20a Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe, ASTM Designation C-76,**

**5.20b Reinforced Concrete Low-Head Pressure Pipe, ASTM Designation C-361,**

**5.20c Joints for Circular Concrete Sewer and Culvert Pipe, ASTM Designation C-443,**

**5.20d Precast Reinforced Concrete Manhole Sections, ASTM Designation C-478,**

**5.20e Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe, ASTM Designation C-506,**

**5.20f Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe, ASTM Designation C-507.**

**5.21 JOINTING MATERIALS** - All reinforced concrete storm sewer pipe joints shall be made with cold applied bituminous joint filler unless otherwise specified.

**5.21a BITUMINOUS JOINT FILLER** - Plastic bituminous compound shall be homogeneous plastic bituminous paste; such as, "Tufflex", "Plastico", or an approved equal. Joint material shall not be heated when placed. Sufficient amount of jointing compound shall be spread around bell of pipe to allow complete filling of annular space between pipes when pulled into place. All joints shall be pointed and smoothed from inside pipe.

**5.21b LIFT HOLE PLUGS** - Lifting holes in concrete pipe sections, if approved by the Engineer, shall be securely plugged using a "Popit Lift Hole Plug", or equal. Plug to be designed to be pounded into the lift hole without damage to the concrete pipe. Plug to fit snugly inside the hole, and provide a watertight seal. Grouting of lifting holes will only be permitted after review by the Engineer of materials, methods and protection of grouted plug as proposed by the Contractor.

**5.21c RUBBER GASKET JOINTS** - Rubber gasket joints shall conform to ASTM Designation C-443. Joints for Circular Concrete Sewer and Culvert Pipe, Using Rubber Gaskets.

**5.22 TESTING OF CONCRETE PIPING MATERIALS** - Contractor shall submit two (2) certified copies of test results indicating compliance with ASTM Designation C-497; Testing Concrete Pipe to the Engineer. Reinforced concrete pipe shall be tested for strength by the three-edge bearing test to produce a crack of 0.01 inch. Engineer will inspect all pipe at point of delivery for the purpose of culling and rejecting pipe that fails to meet requirements of these specifications. Also, inspection of the following but not limited to:

1. Fractures passing through shell
2. Defects indicating imperfect proportioning, mix, and molding
3. Damaged ends
4. Honeycomb or open texture
5. Reinforcement exposure

**5.30 EXCAVATION, TRENCHING, BEDDING AND BACKFILLING** - Storm sewer excavation, trenching and backfilling shall conform to the requirements of Section 6, "Excavation, Trenching, Bedding, and Backfilling."

**5.40 CAST-IN-PLACE REINFORCED CONCRETE STRUCTURES** - Inlet construction shall consist of air entrained Portland cement concrete constructed on a 6" prepared subgrade in accordance with these specifications. This work shall conform with lines and grades, thickness, and typical cross sections shown on the applicable drawings or established by the Engineer.

**5.41 CONCRETE** - Portland Cement Concrete for cast-in-place structures shall be State of Nebraska Department of Roads Class 47B, air-entrained. Concrete shall meet requirements of ASTM C-94, Standard Specifications for Ready-Mixed Concrete; or CSA A23-1, Concrete Materials and Methods of Concrete Construction. Cement factor shall not be less than specified on the Table of Proportions, and water-cement ratio shall not exceed 0.45. Substitution of fly ash for cement will not be permitted.

**TABLE OF PROPORTIONS**

Class Concrete	Pounds Cement Per C.Y. (Fixed)	Type Concrete	Lbs. Total Agg. Per 100 Lbs. Cement		Type Coarse Aggregate	Min. Compressive Strength Lbs./Sq.In.		Ratio of Coarse Agg. To Total Agg. (Percent)
			(Min)	(Max)		(7-Day)	(28-Day)	
47B	564 (6sx)	Air-entrained	510	555	Limestone	2100	3600	30+3

**5.42 PORTLAND CEMENT** - Portland cement shall be TYPE I or TYPE II.

Cement which has a temperature of over 180 degrees F shall not be used.

Portland cement shall not contain more than sixty-five hundredths of one percent (0.65%) equivalent alkali.

Equivalent alkali referred to herein is hereby defined as the sum of the sodium oxide (Na<sub>2</sub>O) and potassium oxide (K<sub>2</sub>O), calculated as sodium oxide (equivalent alkali as Na<sub>2</sub>O - Na<sub>2</sub>O + 0.658 K<sub>2</sub>O).

**5.43 AIR-ENTRAINING AGENT** - Air-entraining admixture shall conform to the requirements of ASTM C-260. Concrete shall contain 6% to 8% entrained air by volume.

**5.44 AGGREGATE** - Fine aggregate shall have maximum size of one (1) inch (2.5 cm) and shall be a mixture of sand and gravel. Coarse aggregate shall have maximum size of one and one half inch (3.75 cm) and shall be crushed limestone. All aggregates shall be composed of clean, hard, durable and uncoated particles free from injurious amounts of soft, flaky particles, shale, alkali, organic or other deleterious materials.

Aggregate shall be supplied from a source having current Nebraska Department of Roads (NDOR) approval for use on NDOR projects. Sampling and testing procedures shall conform to the following:

Specification for Concrete Aggregates	ASTM C33
Abrasion	AASHTO T96
Freeze/Thaw Soundness	AASHTO T103

Fine aggregate shall not have a soundness loss greater than 10% by weight at the end of 5 cycles using sodium sulfate solution. Coarse aggregate shall not have a soundness loss greater than 8% by weight at the completion of 16 cycles of alternate freezing and thawing. Limestone aggregate shall not have a percentage of wear greater than 40% based on the Los Angeles Abrasion Test.

The aggregate shall contain no more than 0.5% clay lumps by weight. Coarse aggregate shall contain no more than 3.5% by weight any combination of clay lumps, shale and soft particles.

Gradation limits for fine and coarse aggregate are specified in Section 5.44a and 5.44b of this specification.

**5.44a GRADATION LIMITS** - Gradation limits for 47B fine aggregate are:

<u>RANGE</u>	<u>SIEVE</u>	<u>TARGET</u>
NONE	retained on 1 inch Sieve	0%
3-23%	retained on #4 Sieve	13%
30-50%	retained on #10 Sieve	40%
60-84%	retained on #30 Sieve	72%
97-100%	retained on #200 Sieve	98.5%

**5.44b GRADATION LIMITS** - Gradation limits for 47B coarse aggregate are:

<u>RANGE</u>	<u>SIEVE</u>	<u>TARGET</u>
NONE	retained on 1 1/2 inch Sieve	0%
1-8%	retained on 1 inch Sieve	0%
10-34%	retained on 3/4 inch Sieve	22%
55-85%	retained on 3/8 inch Sieve	70%
85-100%	retained on #4 Sieve	94%
94-100%	retained on #20 Sieve	97%

**5.45 WATER** - Water used in mixing or curing shall be potable, clean and free of soil, acids, alkalies, salts, organic matter, or other substances harmful to concrete.

**5.46 SLUMP** - The concrete shall have uniform consistency and slump. The slump shall be between 1 and 3 inches for hand vibrated concrete.

**5.46a WORKABILITY** - Concrete shall be of such consistency and composition that it can be worked readily into the forms and around the reinforcement without excessive spading and without permitting the materials to segregate or free water to collect on the surface. Slump shall be in accordance with Section 5.46.

The proportions shall be adjusted to secure the lowest water-cement ratio that is consistent with good workability, a plastic, cohesive mixture, and one which is within the specified slump range.

To avoid unnecessary changes in consistency, the aggregate shall be obtained from a source that will ensure uniform quality, moisture content, and grading during any single day's operation. Materials shall be handled in such a manner that variations in moisture content will not interfere with production of concrete of the specified degree of uniformity and slump.

**5.47 MIXING** - Ready-mixed concrete shall be mixed and delivered in accordance with the requirements of AASHTO M-157 or CSA A23-1. Concrete shall be delivered to the site and discharged within 1 1/2 hours after introduction of the cement to the aggregates. In hot weather or under conditions contributing to quick stiffening of the concrete, or when the temperature of the concrete is 85 degrees F or above, the time between the introduction of the cement to the aggregates and discharge shall not exceed 45 minutes.

**5.48 ADMIXTURES** - No admixtures shall be used in the concrete without prior approval of Owner, and all approved admixtures shall conform to applicable AASHTO, ASTM and CSA requirements.

Air-entraining agents shall have proven compatibility with all local concrete materials, including cement, and shall be capable of providing in the concrete the required air contents and air-void system known to produce durable, scale-resistant concrete.

Admixtures other than air-entraining agents shall not be used until trial mixes with job materials have shown them to be compatible at job temperatures. Trial mixes must also show that desired properties will be imparted to the fresh concrete without any subsequent loss of strength or durability in the hardened concrete.

**5.48a FLY ASH** - Substitution of fly ash for cement will not be permitted.

**5.48b WATER REDUCING, SET CONTROLLING ADMIXTURE** - The use of a water reducing, set controlling admixture in the concrete will be allowed only by prior approval of the Architect/Engineer. If a water reducing, set controlling admixture is used, the cement content may be reduced by an amount up to 1/2 sack (47 lbs.) of cement per cubic yard of concrete, depending upon the results obtained by the reduction in the mix water.

**5.49 REINFORCING STEEL** - Reinforcing steel if specified shall conform as follows:

**5.49a DEFORMED REINFORCING BARS** - Reinforcing bars shall conform to the requirement of ASTM A-615, Grade 40 and shall be used for tie bars that are to be bent and restraightened during construction.

**5.49b DOWEL BARS** - Shall be plain round bars conforming to ASTM A-615 and shall be free from deformations restricting slippage in the concrete. Before delivery to the work site, one-half the length of each dowel bar shall be painted with one coat of lead or tar paint.

**5.49c WELDED WIRE FABRIC** - Shall conform to ASTM A-185.

**5.50 JOINT MATERIALS** - Shall be in accordance with construction standards and specified as follows:

**5.50a EXPANSION JOINTS** - Expansion joints shall be non-extruding preformed joint fillers of bituminous pre-molded fiber, and shall conform to ASTM Designation M-33, M-153 Type III Standard Specifications and AASHTO Designation M-58-42 and M-59-42.

**5.50b JOINT SEALING MATERIAL** - The hot pour joint material shall be rubber-asphalt type and shall be melted in a double jacket kettle equipped with an agitator for stirring the material during melting and pouring. The rubber-asphalt shall meet Federal Specifications SS-S-164 or subsequent revisions.

**5.50c METAL SUPPORTS** - Metal chairs used to support tiebars or reinforcing bars shall be wire bar type supports, complying with PS 7-66, unless otherwise indicated. For slabs on grade, use supports with sand plates or horizontal runners where wetted base materials will not support chair legs.

Metal assembly used to support dowel bars shall be so constructed and of such strength that the bars shall be held in true alignment and plane at all times. The assembly shall be reviewed by the Engineer before construction starts.

**5.51 CONCRETE PLACEMENT** - Concrete shall be placed by formed methods.

**5.51a FORMED METHOD** - Forms shall be of wood, metal, or other suitable material that is straight and free from warp having sufficient strength to resist the pressures generated by the plastic concrete pouring processes without displacement; except that wooden forms shall have at least 2 inch commercial thickness and of sufficient tightness to prevent leakage of mortar.

Forms shall extend the full depth of concrete. Forms shall be braced and staked to remain in both horizontal and vertical alignment until their removal. Forms shall be cleaned and coated with an approved form release agent before concrete is placed against them.

Concrete shall be deposited into the forms without segregation and then mechanically vibrated for thorough consolidation. No concrete shall be placed against concrete that has taken its initial set unless the specified joint is provided. Concrete shall not be transported by means of mechanical vibration.

**5.51b ALIGNMENT AND GRADE** - The alignment and grade elevations of the forms shall be checked by the Contractor and the necessary corrections made by the Contractor before placing the concrete. When any form has been disturbed or any subgrade thereunder has been unstable, the subgrade shall be recompacted under that section, the form reset and checked.

**5.51c FORM REMOVAL** - Remove forms without damage to concrete after the concrete has sufficient strength. Forms to remain in place a minimum of 12 hours. Required backfilling shall begin a minimum of 7 days after concrete placement, after the concrete has sufficient strength. Backfill shall be in accordance with Section 5.70g.

**5.51d PLACING REINFORCING STEEL** - When reinforcement is required, it shall be placed as shown on the drawings.

All reinforcing metal must be kept clean and free from foreign material that will prevent the proper bond with the concrete. Welded sheet fabric and welded bar mats shall be furnished in flat sheets and shall be handled carefully during the placing and kept straight until installed.

Bars used shall be parallel to the centerline and surface of the slab or walls. Tolerance of this placement shall be plus or minus 1/4 inch both horizontally and vertically.

To install welded fabric, or welded mats of reinforced bars, a layer of concrete shall be placed upon the subgrade to such a depth that when struck off and vibrated, its surface will be at the elevation specified

for the reinforcing metal to be installed. Each layer shall be struck off with a template of a design and construction reviewed by the Engineer. When the reinforcing metal is properly placed, it shall be covered at once, before the bottom course has taken any initial set, with a layer of concrete so deposited and distributed thereover that the slab shall have the required thickness.

The Contractor will be required to furnish suitable metal supports of a type and design approved by the Engineer for all steel reinforcing bars and for all dowel bars. No direct payment will be made for such work but will be considered as subsidiary work and the cost thereof included in the unit price for the Bid items for which payment is made.

## **5.52 FINISHING**

**5.52a FINAL SURFACE FINISH** - Plastic concrete shall be finished smooth by means of a wood float for floor and roof slabs. Chamfer required as shown on the drawings or at exposed corners.

**5.53 PROTECTION** - Protect new surfaces and appurtenances from traffic for minimum of 7 days unless cylinder breaks exceed 3500 psi @ 3 days. Erect and maintain warning signs, lights, watchmen to direct traffic.

Contractor shall have materials available at all times to protect the surface of the plastic concrete against the rain. These materials shall consist of waterproof paper or plastic sheeting.

When it is expected that, during the progress of the work, the temperature may fall below 40 degrees Fahrenheit, a sufficient supply of straw, hay, grass, or other material suitable in the judgment of the Engineer, must be maintained on hand, to cover the concrete and to sufficiently protect the surface and edges against freezing until it is at least 10 days old. In such case, at the discretion of the Engineer, wetting and spraying may be permitted. Manure shall not be used as a protection for green concrete. Whenever the temperature falls below 40 degrees Fahrenheit, freshly finished concrete shall be protected by frames enclosed by canvas or other type of housing and the temperature of the air surrounding the concrete shall be maintained at not less than 45 degrees Fahrenheit. Sufficient heating apparatus, such as lanterns, suitable stoves or steam equipment, shall be furnished and maintained by the Contractor. Any concrete showing injury or freezing or uncovering shall be removed and replaced at the expense of the Contractor.

Repair or replace parts of structures damaged by traffic, or other causes occurring prior to final acceptance. Protect concrete against public traffic, construction traffic and traffic caused by employees and agents.

No equipment shall be driven or moved across new surfaces unless such equipment is rubber-tired and only if surface is designed for and capable of sustaining loads to be imposed by the equipment. Tracked vehicles and equipment shall not be driven over new or existing surfaces.

**5.54 CURING** - Concrete shall be cured for at least 3 days after placement to protect it against loss of moisture, rapid temperature change, and mechanical injury.

Applying white liquid membrane curing compound complying with ASTM C-309 for curing, sealing, and moisture retention. Perform application in accordance with manufacturer's directions but at a rate of not more than 400 square feet per gallon. Apply within 4 hours after finishing or as soon as surface moisture has dissipated.

## **5.55 COLD AND HOT WEATHER CONCRETING**

**5.55a COLD WEATHER** - Except by specific written authorization, cease concrete placing when descending air temperature, in shade and away from artificial heat falls below 40 degrees F. Do not resume until ambient temperature has risen to 40 degrees F.

If placing is authorized maintain temperature of mix between 60 and 80 degrees F. Heat aggregates, water or both. Water temperature may not exceed 175 degrees F, aggregates, 150 degrees F.

Remove and replace frost damaged concrete.

Salt or other antifreeze is not permitted.

Comply with ACI 306.

**5.55b HOT WEATHER** - Except by specific written authorization, cease concrete placing when plastic mix temperature cannot be maintained under 90 degrees F.

Aggregate or water or both may be cooled. Cool water with crushed ice; aggregates by evaporation of water spray.

Never batch cement hotter than 160 degrees F.

Comply with ACI 305.

## **5.60 CONCRETE TESTING**

**5.61 CONCRETE TESTING SERVICE** - Contractor shall employ and pay for services of testing laboratory acceptable to Engineer to perform materials evaluation, testing, and design of concrete mixes.

**5.62 CERTIFICATES** - Certificates, signed by material producer and Contractor stating that materials meet the requirements of this specification, may be submitted in lieu of material testing when approved by Engineer.

**5.63 MIX DESIGN** - Before any concrete is placed, the Contractor, at no expense will furnish a mix design of the concrete he proposes to furnish for the project. The design shall indicate water cement ratio, sieve analysis of the aggregate to be used, amount of air entraining agent required, slump and 7 and 28 day compressive strength in pounds per square inch.

**5.64 QUALITY CONTROL** - Owner shall pay for engineer to perform sampling and testing during concrete placement.

- A. Sampling: ASTM C172
- B. Slump: ASTM C143, one test for each strength test at point of discharge and as required to assure specified slump is not exceeded.
- C. Air Content: ASTM C31, one for each strength test.
- D. Compressive Strength: ASTM C39, one set of three 6 inch x 12 inch concrete cylinders for each strength of concrete per day's placement, or every 50 cubic yards placed; test one at 7 days, 2 at 28 days.
- E. When total quantity of a given class of concrete is less than 25 cubic yards strength tests may be waived by Engineer if experience indicates evidence of satisfactory strength.



- F. Density and Moisture Tests: A sufficient number of density tests of the subgrade may be ordered by the Engineer to determine that the subgrade complies with the specification. These tests will be made by an approved testing laboratory and will be paid for by the Owner. Failing tests will be paid for by the Contractor.
- G. Report test results in writing to Engineer promptly.

**5.70 PIPE INSTALLATION** - Pipe shall be installed in compliance with the manufacturer's recommendations and approval of the Engineer. Pipe laying shall proceed upgrade so that the spigot ends point in the direction of flow. All pipes shall be laid with ends abutting and true to line and grade. The pipe shall be matched so that when laid, they will form a sewer with a smooth, uniform invert. Sockets shall be carefully cleaned before pipes are lowered into trenches. Any pipe which has been disturbed after being laid shall be taken up, the joints cleaned and the pipe properly relaid.

**5.70a LOWERING OF PIPE MATERIAL INTO TRENCH** - Proper implements, tools and facilities satisfactory to the Engineer shall be provided and used by the Contractor for the safe and convenient performance of the work. All pipe shall be carefully lowered into the trench piece-by-piece by means of a derrick, ropes or other suitable tools or equipment, in such a manner as to prevent damage. Under no circumstances shall pipe materials be dropped or dumped into the trench.

If damage occurs to any pipe in handling, the damage shall be immediately brought to the attention of the Engineer.

**5.70b INSPECTION BEFORE INSTALLATION** - All pipe shall be carefully examined for cracks and other defects while suspended above the trench immediately before installation into final position. Spigot ends shall be examined as this area is most vulnerable to damage from handling. Defective pipe or fitting shall be laid aside for inspection by the Engineer.

**5.70c PLUGGING OF PIPE DURING INSTALLATION** - Each time pipe laying work is stopped, the pipe shall be closed with a suitable plug to exclude water, foreign material and other objects. If any water, mud or foreign material should enter the new sewer, or any existing sewer connected thereto, the Contractor shall remove same at his expense and he shall be liable for any damage that may result thereby. Mud, water, etc, to be removed shall be pumped out of the sewer and shall not be flushed down into another sewer line.

**5.70d PLACEMENT OF PIPE** - Pipe lines or runs intended to be straight shall be so laid. Deflections from a straight line or grade, made necessary by vertical curves or horizontal curves or offsets, shall not exceed the amount of deflection recommended by the pipe manufacturer.

If the specified or required alignment required deflections in excess of those stipulated above, the Contractor shall provide either special bends as approved by the Engineer, or pipes in shorter lengths; in such length and number, that the angular deflections at any joint, as represented by the specified maximum deflections, are not exceeded.

As each length of pipe is placed in the trench, the spigot end shall be centered in the bell and the pipe forced into place with a slow steady pressure without jerky or jolting movements and brought to correct line and grade. The pipe shall be secured into place with approved compacted backfill material. Precautions shall be taken to prevent dirt from entering the joint space.

**5.70e CUTTING OF PIPE** - The cutting of pipe for fittings and closure pieces shall be done in a neat and workmanlike manner without damage to the pipe leaving a smooth end at right angles to the horizontal axis of the pipe. The cutting method used shall be approved by the Engineer prior to any cuts.

**5.70f UNSUITABLE CONDITIONS FOR LAYING PIPE** - No pipe shall be laid, when in the opinion of the Engineer, trench conditions are unsuitable. Under no circumstances shall the pipe be laid in water.

**5.70g BACKFILLING** - Required backfilling operations shall begin a minimum of 7 days after concrete placement. Backfilling operations shall be in accordance with Section 6, "Excavation, Trenching, Bedding and Backfilling."

**5.70h BRIDGING OF PIPE** - Concrete bridging may be required by the Engineer under certain conditions. The Engineer shall determine the size and location of concrete bridging to avoid settlement of pipe being installed or settlement of existing underground utility pipes. In certain instances, the Engineer may require the complete encasement of pipe by concrete. The size and location of these encasements shall be determined by the Engineer.

**5.70i ENCASEMENT PIPE** - Whenever it is necessary to provide an encasement or sleeve pipe for the storm sewer, it shall be placed by boring, jacking or other approved methods to provide a snug fit against undisturbed soil. Placement shall be to line and grade. In addition, no encasement or sleeve pipe shall be installed without sealing the ends of the pipe with a 3-sack grout mix to prevent debris from entering. Encasement or sleeve pipe size, length, type, and sidewall thickness will be determined by the Engineer, shown on the drawings or as specified in the required permit.

**5.70j JUNCTION MANHOLES** - Manholes shall be constructed from precast reinforced concrete manhole section or cast-in-place reinforced concrete. Manhole sections shall be constructed in accordance with ASTM Designation C-478. See Manhole Detail Drawings for further details on cast in place manholes. All precast manhole section joints shall be filled with the previous specified bituminous joint filler.

**5.71 TESTING** - All work performed under this specification shall be inspected, tested and approved. Tests shall be made in the presence of the Engineer. The Contractor shall provide all necessary equipment and shall perform all work required in connection with the tests at the expense of the Contractor.

**5.71a LIGHT TEST** - A light test shall be performed on all lines as follows. A light held in a pipe at one manhole shall be visible from the next manhole as a full circle of light. Sewer line sections not meeting the above test shall be relaid and the test repeated.

**5.71b AIR TEST** - This test will be performed according to ASTM C828, stated procedures and under the supervision of the Engineer for gasket type joint pipe. If leakage is above the specified amount, the storm sewer shall be repaired and retested at the expense of the Contractor.

Equipment used shall meet the following minimum requirements: a) Pneumatic plugs shall have a sealing length equal to or greater than the diameter of the pipe to be tested; b) Pneumatic plugs shall resist internal testing pressure without requiring external bracing or blocking; c); All air used shall pass through a single control unit; d) These individual hoses shall be used for the following connections: (1) From control unit to pneumatic plugs for inflation, (2) From control unit to sealed line for introducing low pressure air, (3) From sealed line to control unit for continually monitoring the air pressure inside the pipe being tested.

Procedures: All pneumatic plugs shall be seal tested before being used in the actual test installation. One length of pipe shall be laid on the ground and sealed at both ends with the pneumatic plugs to be checked. Air shall be pressurized to 25 psig. The sealed pipe shall be pressurized to 5 psig. The plugs shall hold against this pressure without movement of the plugs out of the pipe.

After a manhole to manhole reach of the pipe has been backfilled and cleaned and the pneumatic plugs are checked by the above procedures, the plugs shall be placed in the line and inflated to 25 psig. Low pressure air shall be introduced into this sealed line until the internal air pressure reaches 4 psig greater than the average back pressure of any groundwater that may be over the pipe.

At least two minutes shall be allowed for the air pressure to stabilize.

After the stabilization period (3.5 psig minimum pressure in the pipe), the air hole from the control unit to the air supply shall be disconnected. The portion of the line being tested shall be termed "acceptable" if the time required in minutes for the pressure to decrease from 3.5 psig to 2.5 psig (greater than average back pressure of any groundwater that may be over the pipe) shall not be less than the time shown for the given diameters in the following table:

<u>Pipe Diameter in Inches</u>	<u>Time (Minutes)/100 Feet</u>
12	1.8
15	2.1
18	2.4
21	3.0
24	3.6
27	4.2
30	4.8
33	5.4
36	6.0
39	6.6
42	7.3

In areas where groundwater is known to exist, the Contractor shall determine the water elevation prior to running the test.

The height of water over the invert of the pipe shall be divided by 2.3 to establish the pounds of pressure that will be added to all readings. (For example, if the height of the water is 11 1/2 feet, then the added pressure will be 5 psig. This increases the 3.5 psig to 8.5 psig, and the 2.5 psig to 7.5 psig. The allowable drop of one pound and the timing will remain the same.)

If the pressure drops more than 1.0 psi during the test time, the line is presumed to have failed. Contractor shall, at his own expense, determine the source of leakage. He shall then repair or replace all defective materials and/or workmanship. Air testing shall then be performed on the repaired line to meet the above specifications.

**5.71c TELEVISION INSPECTION** - If required in the detailed specifications or if the pipe tests outlined in the previous sections fail, mobile closed circuit television inspection shall be required to determine if any defects such as open joints, breaks, cracks, intrusions, depositions, settling or other misalignment have occurred in the sewer line during the course of construction and prior to final acceptance. Inspection of the line and appurtenances by closed circuit television shall be displayed continuously on a television monitor. Permanent photographs of the television image shall be made to record all defects in the work and their accurate location. Defects in the sewer line or appurtenances shall be repaired or replaced by the Contractor, as directed by the Engineer, at no additional cost to the Owner. One copy of the television inspection report and photographs shall be provided to the Owner by the Contractor.

The quality of the television inspection shall be such as to enable the television inspection operator to photograph the monitor. Whenever defects are detected, such defects shall be photographed. If, in the opinion of the Engineer, the quality of the image of the monitor is such that defects in the line are not

detectable, inspection operations shall cease, repairs or adjustments made to the equipment inspection by television shall commence.

If required by the detailed specifications, the unit price named in the Bid for Television Inspection shall be full compensation for continuous television monitoring and permanent photographs of the television image in all defective areas. If required, due to failing test, the cost of television inspection shall be borne by the Contractor.

**5.80 SUBMITTALS** - Manufacturer's specifications with installation instructions for proprietary materials including pipe, joint material, concrete mixes, reinforcing details.

Sieve analysis and density curves for soils encountered.

Laboratory tests and evaluation reports must also be submitted.

**5.81 CLEANUP** - Insure all cleanup work is completed in a condition acceptable under these specifications. In case the cleanup work has not been done within the specified time, the Contractor will not begin any new work until the said delayed cleanup work has been done.

**5.90 METHOD OF MEASUREMENT AND PAYMENT** - On lump sum and unit price contracts, cost of all items described in this section and shown on the drawings complete and in place, shall be contract price as set forth in the Bid. Items not specifically listed on the Bid or defined by this specification shall be considered subsidiary to construction and direct payment will not be made for these items.

**5.91 STORM SEWER PIPE** - Sewer pipe will be measured on surface of ground along the centerline of sewer. Measurement on sewer line will be continuous through inlets, manholes and encasement pipe.

Payment will be made at unit price set forth in BID for measured number of linear feet of completed storm sewer in place. Costs for jointing all pipe shall be included in Bid for the applicable type of pipe. No additional payment will be made for underground pipes or other utility structures encountered.

**5.92 INLET STRUCTURES** - Inlet structures will be paid for at unit price set forth in Bid. There shall be no separate payment for casings, manhole rings and covers, steps, and incidentals not listed as a Bid item.

**5.93 MANHOLES** - Manholes will be paid for at unit prices as set forth in Bid. Measurements of manholes will be made from top elevation manhole cover to invert elevation of lowest storm sewer in manhole.

There shall be no separate payment for manhole rings and covers, steps, and incidentals not listed as a Bid item.

**5.96 CONNECTIONS TO EXISTING STRUCTURES** - Connections to existing structures will not be measured but shall be paid for at lump sum price as set forth in Bid.

**5.97 HEADWALLS AND MISCELLANEOUS STRUCTURES** - Headwalls and miscellaneous structures will be paid for at unit price set forth in BID. Measurement will be for the structure, complete in place, as shown on the Drawings.

**END OF SECTION 5**

## **EXCAVATION, TRENCHING, BEDDING AND BACKFILLING**

**6.00 SCOPE** - The work covered by this specification consists of furnishing all labor, tools, materials, equipment and performing all operations in connection with excavation, trenching, bedding and backfilling for all underground utilities including in part; sanitary sewers, sewer stubouts, storm sewers, culverts, water mains, water services, gas mains, gas services and all other underground structures unless otherwise provided for on the drawings or in the detailed specifications.

**6.10 GENERAL** - The Contractor shall be responsible for the protection of the pipe during construction and preserving the existing street surfaces. Unless otherwise specified herewithin or specified as a Bid item, no separate payment will be made for excavation, trenching, bedding, backfilling and incidental work as they are considered subsidiary to the items of the Bid.

Where construction of utilities requires cutting and replacing sidewalk, rigid pavement, or asphalt concrete pavement, the cutting shall be accomplished by the use of a concrete saw. The minimum depth of vertical saw cut shall be one inch or 1/6 of the thickness of the pavement, whichever is greater. The remaining depth of the pavement section may be removed as the Contractor elects, subject to the approval of the Engineer. Any damage done outside removal areas by the Contractor shall be repaired at the expense of the Contractor. The location of cuts and the extent of removal will be as directed by the Engineer, or as indicated on the drawings. Waste will be disposed of at a site approved by the Engineer. Direct payment will not be made for sawing, but it shall be considered subsidiary to the items in the BID for which payment is made. Extra widths of pavement removal without authorization of the Engineer, shall not be a pay item.

The Contractor shall be responsible for removing, replacing, relocating or maintaining all road signs, street signs, traffic signs and mailboxes and providing prior notice to the Owner.

No trees shall be removed without written instructions from the Engineer unless tree removal is indicated on the Drawings. No separate payment will be made for tree removal and the cost shall be included in the BID.

Comply to local requirements and specific requirements of State of Nebraska. Special attention is directed to Title 29 Labor, Part 1518 - "Safety and Health Regulations for Constructions" and detailed requirements of Subpart P "Excavations, Trenching and Shoring."

**6.20 PROTECTION OF EXISTING UTILITIES AND PROPERTIES** - Verify existence, location and elevation of all underground and overhead utilities along the route of the work. Omissions from or inclusion of locations on the drawings is not to be considered as the nonexistence of or a definite location of existing utilities.

Take the necessary precautions to protect existing utilities from damage due to his operations. Any damage to utilities will be repaired at the Contractor's expense. The Contractor shall not interrupt service for utilities unnecessarily. If utilities need to be interrupted, 24-hour notification to the Owner of the utility shall be given. Excavated material shall be kept trimmed in such a manner to be of as little inconvenience as possible to the public and the adjoining property owners. Any damage shall be immediately corrected by the Contractor. At street crossings, sidewalks, and other points where necessary, trenches shall be bridged in a secure manner so as to prevent serious interruption of travel, and to provide access to fire hydrants, public land and private premises.

**6.21 ABANDONMENT OF UTILITIES** - Where indicated on the drawings, all utilities to be abandoned such as water and sewer shall be sealed and plugged with concrete plugs unless special detailed drawings are prepared.

**6.22 REFERENCE PROTECTION** - Protect and maintain bench marks, monuments or other established points and reference points. If disturbed or destroyed, replace items to full satisfaction of Owner and Controlling Agency.

**6.30 TRENCH EXCAVATION** - Trench excavation shall be open cut to the depth shown on the drawings. Topsoil shall be stockpiled. The amount of open or unfilled or uncompacted trench shall not exceed 300 lineal feet (91.5m) , unless otherwise instructed by the Engineer, and failure to comply with this requirement shall be cause for shutdown of the entire project until such backfilling is performed.

Do not open greater length of trench than can be effectively utilized under existing conditions and with the forces at hand. Once trench is opened, proceed immediately and with dispatch to place specified materials in trench, or to otherwise utilize trench for intended purpose. Schedule work and order materials so that trenches are not left open for a longer period than is reasonably necessary. Any trench or portion of trench, which is opened and remains idle for longer than one calendar day, as determined by the Owner, may be directed to be immediately refilled, without completion of work, at no additional cost to the Owner. Said trench may not be reopened until Owner is satisfied that work associated with trench will be prosecuted with dispatch.

**6.30a EXCAVATION, APPURTENANCES** - Excavate for appurtenant structures to provide at least 12 in. (minimum) clear distance between outer surface and embankment and in full observation to Safety Rules.

**6.31 TRENCH WIDTH** - Trenches shall be excavated only to a width sufficient to provide a free working space on each side of the pipe at the bottom for backfilling and compacting around the pipe. Widths shall comply with State requirements for trenching, provide adequate working space and pipe clearances for proper pipe installation, jointing, and embedment. However, cut trench walls vertically from bottom of trench to 1 foot above top of pipe. In no case shall trench width at top of pipe or conduit exceed outside diameter of utility service by the following dimensions:

<i>Pipe Diameter Size</i>	<i>Excess Dimension</i>
33 inches and less	18 inches
more than 33 inches	24 inches

Cutting trench banks on slopes to reduce earth load to prevent sliding and caving will be permitted only in areas where the increased trench width will not interfere with surface features, encroach on right-of-way limits or require additional removal and replacements. Slopes shall not extend lower than one foot above the top of the pipe.

Where, for any reason, the width of the lower portion of the trench as excavated at any point exceeds the maximum permitted in the foregoing tables, either pipe of adequate strength, special pipe embedment, or arch concrete encasement, as required by loading conditions and as determined by the Engineer, shall be furnished and installed by and at the expense of the Contractor.

**6.32 DEWATERING** - Trenches shall be kept free from water. Unless dewatering is specified in the BID, no separate payment will be made for dewatering as it will be included in the BID for pipe installation.

**6.33 SHEETING, SHORING, AND BRACING** - Trenches shall be sheeted, shored, and braced as necessary to comply with all applicable laws, codes, ordinances, rules and regulations. Compliance with this requirement shall rest solely with the Contractor. Such sheeting, shoring and bracing shall not be

removed until backfilling has progressed to such a stage that no damage to utilities or structures will result from its removal.

Brace trenches running near walls or columns, to prevent any settlement or other disturbance of walls or columns. Make trench excavation that runs parallel to footing bottom with maximum slope of one to one.

**6.34 TUNNELING** - Permission for tunnel work may be granted by the Engineer for crossing under crosswalks, driveways, or existing utility lines, but such tunnels shall not exceed twenty (20) feet (6.0m) in length.

**6.35 COMMON EXCAVATION** - Excavation shall comprise of and include the satisfactory removal and disposal of all materials not classified as unclassified excavation, and shall include clay, silt, sand, gravel, hard pan, loose shale, and other loose stone in masses and boulders measuring less than one-half cubic yard in volume.

**6.36 UNCLASSIFIED EXCAVATION** - Excavation shall comprise of and include the satisfactory removal and disposition of all boulders measuring one-half cubic yard or more in volume, rock material in ledges, bedded deposits, and unstratified masses which cannot be removed without systematic drilling or blasting, concrete or masonry structures, unless otherwise specified, and conglomerate deposits which cannot be removed without systematic drilling or blasting. Dispose of material at site approved by Owner. Separate payment will be made for this item according to the unit price per lineal foot of trench as in the BID or as negotiated or agreed upon.

**6.40 BEDDING** - The type of bedding shall be as specified or Class C (see Standard Bedding Detail) unless specifically modified in the Detailed Specifications or as noted on the drawings.

**6.41 GENERAL PREPARATION OF SUBGRADE** - When the excavation is in firm earth, care shall be taken to avoid excavations below the established grade. If this should occur, the area so excavated shall be backfilled in two-inch lifts and thoroughly compacted with approved mechanical tampers to the required densities.

In case of unclassified excavation or unstable trench conditions, the excavation shall be carried to a minimum depth of 6 inches (15.3 cm) below grade and backfilled to grade with approved fill, free from rocks, roots, sod or vegetable matter, and shall be firmly tamped in place in two-inch lifts to the required densities. Formed bell holes in trench such that only barrel of pipe is supported by bedding material.

**6.42 CLASSES OF BEDDING** - The Contractor shall use special care in placing this portion of the backfill so as to avoid injuring or moving the pipe. Embedment material must be placed and compacted uniformly on each side of the pipe to prevent lateral displacement. The Engineer will determine in the field, following excavation, which sections of pipe shall receive granular bedding. The earth shall be thoroughly compacted in and around the pipe and joints with hand tamping bars and approved mechanical tampers.

**6.42a CONCRETE CRADLE BEDDING, CLASS A** - The Contractor shall provide for the bedding of a ditch conduit in which the lower part of the conduit is bedded in a cradle constructed of 2000 psi (140.7 kg/sq cm) concrete or better, having a minimum thickness under the pipe of one-fourth its outside diameter. The cradle shall be poured as a unit without horizontal construction joints. The remainder of the conduit is entirely surrounded to a height of 12 inches (30.5 cm) above its top by densely compacted backfill placed in lifts not exceeding 4 inches (10.2 cm) in thickness.

**6.42b FIRST CLASS BEDDING, CLASS B** - The Contractor shall provide for the bedding of a ditch conduit in which the pipe is carefully bedded on fine granular materials in an earth foundation that is carefully shaped to fit the lower part of the pipe for a width of at least 60% of its breadth, and in which the

remainder of the conduit is entirely surrounded to a height of 12 inches (30.5 cm) above its top by densely compacted backfill that is carefully placed to fill completely all spaces under and adjacent to the pipe in lifts not exceeding 4 inches (10.2 cm) in thickness.

**6.42c ORDINARY BEDDING, CLASS C** - The Contractor shall provide for the bedding of a ditch conduit in which the pipe is bedded with "ordinary" care in an earth foundation shaped to fit the lower part of the pipe. The lower 50% of outside breadth shall be to 95% of Standard density, ASTM D-698 or 75% Relative density, D-2049 and in which the remainder of the pipe is surrounded to a height of at least 12 inches (30.5 cm) above its top by compacted backfill at above specified density. Carefully place and fill all spaces under and adjacent to the pipe in lifts not exceeding 8 inches (20 cm) loose measurement in thickness.

**6.42d SPECIAL BEDDING, CLASS D** - This is a method of bedding a ditch conduit in which little or no care is exercised to shape the foundation to fit the lower part of the pipe. The trench bottom should be true and even so that the barrel of the pipe will have soil support for its full length. No bell holes are required.

**6.50 BACKFILLING** - All backfill, unless otherwise specified shall be compacted to a minimum of 95% of Standard density ASTM D-698 at optimum moisture, -1% to +3% or a minimum of 75% Relative density, ASTM D-2049. Backfilling shall be carefully performed to restore the original surface to the satisfaction of the Engineer. No backfilling will be allowed until all tests have been performed and until the system installed conforms to the specific requirements. The Engineer, at his option, may authorize backfilling before all tests have been completed. All backfill shall be done in accordance with approved mechanical methods. All backfill around new and existing sanitary manholes, storm manholes, curb inlets, fire hydrants and valve boxes shall be performed in maximum 8" lifts by an Engineer approved hand operated mechanical device.

**6.50a COMPACTED BACKFILL UNDER PAVEMENTS** - Trench backfill shall be compacted for the full depth of trench under street, parking, road, driveway, and sidewalk pavements. The remainder of the backfill material above the top of the conduit bedding shall be deposited in approximately 8 inch (20 cm) layers, loose measurement and compacted to the required densities. The Contractor is responsible for restoring any pavement or surfacing disturbed by his work in accordance with these contract documents.

Observe specific pipe or conduit manufacturer's recommendations regarding methods of backfilling and compaction.

**6.50b COMMON TRENCH BACKFILL** - Perform remaining backfill in accordance with drawings and for particular locations described.

Place backfill in lift thicknesses capable of being compacted to densities specified. Maximum lift thickness shall be 2 feet (0.6m) but shall be a minimum of 3 feet (0.9 m) above top of pipe.

Observe specific pipe or conduit manufacturer's recommendations regarding methods of backfilling minimum cover above pipe and compaction methods.

Exercise extreme care in backfilling operations to avoid displacing joints and appurtenances or causing any horizontal or vertical misalignment, separation, or distortion. Repair damages, distortions or misalignments to full satisfaction of Engineer.

**6.50c SPECIAL BACKFILL METHODS** - Water flushing for consolidation of backfill is not permitted.



**6.51 BACKFILL MATERIAL** - All backfill material shall be free from frozen earth, large clods or stones, cinders, ashes, refuse, vegetable or organic material or other foreign material that is, in the opinion of the Engineer, unsuitable.

**6.51a BACKFILL MOISTURE CONTROL** - Where subgrade or layer of soil material must be moisture conditioned before compaction, uniformly apply water to surface of subgrade, or layer of soil material, to prevent free water appearing on surface during or subsequent to compaction operations.

Remove and replace, or scarify and air dry, soil material that is too wet to permit compaction to specified density. Soil material that has been removed because it is too wet to permit compaction may be stockpiled or spread and allowed to dry. Assist drying by disking, harrowing or pulverizing until moisture content is reduced to a satisfactory value.

**6.51b BACKFILL EXCAVATED MATERIAL** - When the type of backfill material is not specified, backfill with the excavated material, provided that such material consists of loam, clay, sand, gravel or other materials that in the opinion of the Engineer, are suitable for backfilling. All differing soil types shall be separated during excavation. Additional tests, specified in Section 6.50, shall be provided by the Contractor for mixed soil.

**6.51c BACKFILL GRAVEL** - All gravel used for backfill shall consist of natural bank gravel having durable particles graded from fine to coarse in a reasonable uniform combination with no boulders or stones larger than 2 inches (5 cm) in size. It shall not contain a total of more than 10% by weight of loam or clay. No more than 15% shall pass a No. 200 sieve.

## **6.52 CONDUIT TRENCH BACKFILL**

**6.52a SANITARY SEWER TRENCH BACKFILL** - Backfilling of sanitary sewers shall be in accordance with Sections 6.40 and 6.50 of this Specification.

**6.52b WATER AND GAS LINE TRENCH BACKFILL** - Backfilling for water and gas lines shall be in accordance with the latest revisions of the AWWA Standards, or Sections 6.40 and 6.50 of this Specification when applicable.

**6.52c STORM SEWER TRENCH BACKFILL** - Backfilling for storm sewer pipe shall be in accordance with Section 6.40 and 6.50 of this Specification.

**6.53 STRUCTURE BACKFILL** - No backfill shall be made until the concrete in any structure has set sufficiently to prevent damage to the structure. At such time backfill shall be in accordance with Section 6.50 and 6.50a of the Specification.

**6.54 EXCESS EXCAVATED MATERIALS DISPOSAL** - Except as otherwise permitted, all excess excavated materials shall be disposed at a site approved of by the Owner.

Broken concrete and other debris resulting from pavement or sidewalk removal, excavated rock, junk, and debris encountered in excavation work and other similar waste materials, shall be disposed of away from the site of the work. The disposal of waste, debris and excess excavated materials, including hauling, handling, grading, and surfacing shall be a subsidiary obligation of the Contractor and no separate payment will be made thereof.

**6.55 BORROW** - Borrow required to bring trench to original grade shall be supplied by the Contractor. The borrow shall be approved by the Engineer.

**6.56 FINAL GRADING AND TOPSOILING** - After other outside work has been finished, and backfilling and embankments completed and compacted, all areas on the site of the work which are to be graded shall be established to grade at indicated elevations, slopes, and contours. If elevations are not indicated, existing elevations shall be matched. After areas to be topsoiled have been approved for final grading, the surface shall be loosened and made ariable by cross-discing or other approved methods, to a full depth of at least 2 inches (5 cm) to permit blending of topsoil to the subgrade. Rake all stones and debris 2 inches (5 cm) or more in any dimension and remove from site after discing. Spread topsoil at least to a depth of 6 inches (15 cm) to the top surface being at final grade. When finished, surface shall be free of stones and debris 1 inch (2.5 cm) or more in any direction.

Use of graders or other power equipment will be permitted for final grading and dressing of slopes, provided the result is uniform and equivalent to hand work. All surfaces shall be graded to secure effective drainage. If additional soil is required to be supplemented or disposed, it shall be a subsidiary obligation of the Contractor.

**6.58 LABORATORY TESTING** - Perform laboratory tests to insure that embedment and backfill materials comply with specified requirements shall be made by an independent testing laboratory at the expense of the Contractor. The following tests will be required:

a. One Standard Density test (ASTM D-698) for cohesive soils for each type of embedment or backfill material proposed.

b. One Relative Density test (ASTM D-2049) for cohesionless soils for each type of embedment or backfill material proposed.

**6.59 SETTLEMENT** - The Contractor shall be responsible for all settlement of backfill, fills, and embankments which may occur within one year after final completion of the contract under which the work was performed.

The Contractor shall make, or cause to be made, all repairs or replacements made necessary by settlement within 10 days after notice from the Engineer or Owner.

**6.60 CLEAN-UP** - Upon completion of the installation of the utility, all debris and surplus resulting from the work shall be removed. The Contractor shall restore all damaged gravel surfaced drives, storm drains, fences, signs, mailboxes, etc., to a condition equal to or better than original.

**6.61 CONSTRUCTION RIGHT-OF-WAY** - The Contractor shall contain his work to public street and highway right-of-ways, and easements or shall be liable to damage claims for any damages resulting from his operation.

**6.70 MEASUREMENT AND PAYMENT** - Unless otherwise specified, no separate payment will be made for Excavation, Trenching, Bedding, Backfilling and related work as they are included in the Bid for pipe installation. Removing and replacing or maintaining street signs, traffic signs and mail boxes shall not be paid directly but shall be considered subsidiary to any or all items.

**6.71 PAVEMENT, DRIVEWAYS AND SIDEWALKS** - Pavement, driveways and sidewalks shall be measured for removal and replacement according to the widths and lengths shown on the drawings or as designated by the Engineer. Payment for removal and replacement of pavement shall be at the contract unit price per square yard of the material removed and replaced and shall be at the specified thickness indicated on the drawings. Payment for removal and replacement of driveways and sidewalks shall be at the contract unit price per square foot of the material removed and shall be at the thickness indicated on the drawings. No payment will be made for pavement, driveways and sidewalks removed beyond the width indicated on the drawings or designated by the Engineer. Widths removed in excess of

the removal areas detailed by the Engineer, shall be at the Contractor's expense. All concrete sawing shall not be paid for directly, but shall be considered subsidiary to the contract replacements in the Bid.

***END OF SECTION 6***

# PORTLAND CEMENT CONCRETE PAVEMENT

**12.00 SCOPE** - Work covered by this specification shall consist of furnishing tools, labor, materials, equipment and supervision necessary to construct Portland Cement Concrete Pavement complete in place in accordance with this section of specifications and applicable drawings.

**12.10 GENERAL** - Pavement shall consist of air-entrained Portland cement concrete constructed on prepared subgrade in accordance with these specifications. This work shall conform with lines and grades, thickness, and typical cross-sections shown on applicable drawings or established by the Engineer.

Contractor shall provide, erect and maintain necessary barricades, suitable and sufficient lights, danger signals, signs, and other traffic control devices. He shall take necessary precautions to protect the work and safeguard the public. Streets closed to traffic shall be protected by effective barricades and obstructions shall be illuminated during hours of darkness. Warning signs shall be provided to control and direct traffic properly.

The latest revisions of the standards referred to herein existing at the time of the bid opening shall prevail.

## **12.20 EARTHWORK**

**12.21 CLEARING AND GRUBBING** - Except for trees, shrubs and grasses which are to be preserved as indicated on the drawings, or as designated by the Engineer, all trees, stumps, hedges, shrubs, weeds, grass, other herbaceous vegetation and rubbish shall be removed from the project site and from borrow pits furnished by the contracting authority. This work shall be classified as follows:

- a) Clearing shall consist of the removal and disposal of all obstructions such as foundations, walls, fences, buildings, rubbish, etc., to a depth of at least 12 inches below subgrade elevation.
- b) Clearing shall consist of the cutting, removal and disposal of all trees 6 inches or more in diameter. Trees of less than 6 inches in diameter will be considered as general clearing.
- c) Grubbing shall consist of the removal and disposal of stumps, including roots to a depth of at least 18 inches below the subgrade elevation.
- d) Hedge removal shall consist of the pulling or grubbing and disposal of hedges or other shrubs planted close together in rows. If any individual tree of those composing a hedge has a diameter greater than 6 inches, it shall be measured separately as a tree.
- e) Weed and rubbish removal shall consist of the removal and disposal of all weeds, grass, other herbaceous vegetation and all rubbish encountered on the work.

**12.22 SITE PREPARATION** - This work shall consist of removal and disposal of all crosswalks, private walks, driveway approaches, curbs, curb and gutter and headers as indicated on the plans or as directed by the Engineer. All reinforcing steel shall be cleaned, straightened and extended into the new pavement.

Topsoil shall be carefully removed and deposited in storage piles. Topsoil shall be kept separate from other excavated materials and shall be piled free from roots, stones, and other undesirable materials.

**12.23 EXCAVATION** - Common excavation shall include excavation of every description and of whatever substances encountered within the limits of the project and shall be performed by the Contractor to lines and grades as indicated on drawings.

Contractor shall at his own expense submit a sieve analysis and density curve in accordance with ASTM D-698 or ASTM D-4253 of material proposed for Engineer's review.

Except as otherwise permitted by the Engineer, all excavated areas shall be excavated in such manner as will afford adequate drainage. All suitable material removed from the excavations shall be used, insofar as practicable, in the formation of embankments, backfill, and for such other purposes as directed by the Engineer, and replaced with suitable materials. All excavated materials which are considered unsuitable and any surplus shall be disposed of by the Contractor at his own expense, unless it is required by the Owner, in which case it shall be placed by the Contractor without extra cost within a distance of one thousand feet (1,000) beyond the corporate limits as directed by the Engineer. Written approval shall be obtained from the Engineer before overhaul is made.

**12.24 EMBANKMENT** - Embankments shall be constructed by depositing, placing, and compacting materials of acceptable quality above the natural ground or other surface in accordance with the lines, grades, and cross sections shown on the drawings, and as required by the Engineer.

Before any embankments are placed, all clearing, tree removal, sod and topsoil removal over the entire area shall be performed as directed by the Engineer.

Sod within the area shall be removed to a depth of 6 inches. Trees, except those designated to be saved, and all stumps shall be removed. All trees designated to be saved shall be protected carefully during clearing and subsequent construction operation.

All roots, stumps, and other debris shall be removed from the site. All depressions resulting from the removal of stumps, roots, and debris shall be filled with suitable materials and compacted to make the surface conform to the surrounding ground.

Topsoil shall be excavated and stockpiled as directed by the Engineer.

Each layer of the embankment material not to exceed 8 inches in loose depth shall be disced sufficiently to break down oversized clods, thoroughly mix the different materials, secure a uniform moisture content and insure uniform density and proper compaction. Each layer shall be thoroughly compacted by roller or vibratory equipment suitable for the type of embankment material.

All fill material shall be reasonably free from roots or other organic material, trash, frozen material, and free from all stones having a maximum dimension greater than 7 inches. Stones larger than 3 inches, maximum dimension, shall not be permitted in the upper 6 inches.

Compaction shall be accomplished by sheepfoot rollers, pneumatic rollers, or other equipment approved to achieve specified density. The Contractor shall add moisture to or dry by aeration each layer as may be necessary to meet requirements for compaction. Materials shall not be placed in embankments or fills when the moisture content exceeds 3% above or is 1% below optimum moisture content.

Compaction of fills and embankments shall be as follows:

A. Under roadway and extending two (2) feet beyond proposed curb line measured perpendicular from the centerline shall be compacted to a density of not less than 95% maximum dry density as measured by ASTM D-698, or 75% relative density as determined by ASTM D-4253.

B. All other embankments or fills shall be compacted to not less than 90% maximum dry density as measured by ASTM D-698, or 70% relative density as determined by ASTM D-4253.

Testing of compliance for compaction will be done by the Owner.

**12.25 BORROW** - Contractor shall be responsible for locating suitable borrow material for constructing embankments or for other portions of work. Borrow material for use in embankment shall consist of clean, inorganic lean clays or sandy lean clays (CL) having a liquid limit of less than 40 and a plasticity index between 10 and 25. Contractor shall at his own expense submit a sieve analysis and density curve in accordance with ASTM D-698 or ASTM D-4253 of borrow material proposed for Engineer's review.

**12.26 SUBGRADE** - The 6 inches below constructed slabs shall be known as pavement subgrade. Subgrade shall be excavated or filled with suitable material to required grades and lines. Keep subgrade smooth, compacted and moist when concrete is placed.

**12.26a SUBGRADE PREPARATION** - Subgrade shall be scarified, harrowed, air dried, wetted and/or compacted to 95% of maximum dry density obtained at optimum moisture content, -1% to +3% as determined by procedure outlined in ASTM D-698, or 75% relative density as determined by ASTM D-4253. Testing of compliance for compaction will be done by the Owner.

Before placing concrete, the subgrade shall be tested for conformity with the cross-sections shown in these contract specifications. Contractor shall remove or add material to bring all portions of subgrade to correct elevation. Subgrade preparation procedure shall then be repeated and conformity tests taken again.

**12.26b FAULTY FOUNDATION** - Work of correcting faulty foundation conditions below the 6 inches of subgrade depth will be performed on an "Extra Work" basis unless such conditions are caused by Contractor's own operations. Faulty foundation caused by Contractor's operations shall be corrected at the Contractor's expense.

**12.26c GRANULAR FOUNDATION COURSE** - This work shall consist of the construction of a compacted foundation course of granular material to the lines, grades, and dimensions shown on the drawings on a previously prepared and approved subgrade.

**12.27 ADJUSTMENT OF MANHOLES AND STORM SEWER INLETS** - All manholes encountered, whether shown on the drawings or not, shall be brought to the proper grade by removing the castings and adjusting the tops of the existing manholes by removal or addition of concrete or brick, as the case may be, and resetting the frames and covers.

Any rings and/or covers which are broken to such an extent as to be unserviceable due to no fault of the Contractor, shall be replaced with materials supplied by the Owner. Payment for adjustment of manholes shall include salvaging of existing ring and cover and hauling it to the salvage area. Any manhole rings and/or covers which are broken by the Contractor will be replaced with a ring or cover at the expense of the Contractor.

Brick masonry shall consist of the type of brick satisfactory to the Engineer, laid in 1:2 cement mortar. All brick must be wetted before being laid. All joints shall be completely filled with mortar and shall not be less than 1/4 inch and not more than 1/2 inch in thickness.

**12.28 ADJUSTMENT OF VALVE BOXES** - All valve boxes shall be adjusted to line and grade by removing the castings and adjusting the tops of the existing boxes or by addition of the proper extension, as the case may be, and resetting the castings.

**12.30 CONCRETE** - Concrete shall be State of Nebraska Department of Transportation Class 47B Air-entrained. Concrete shall meet requirements of ASTM C-94, Standard Specifications for Ready-Mixed Concrete; or CSA A23-1, Concrete Materials and Methods of Concrete Construction. Cement factor shall not be less than specified on the Table of Proportions, and water-cement ratio shall not exceed 0.45 for

47B. Substitution of fly ash for cement will be permitted only as indicated in the Nebraska Department of Transportation Standard Specifications for Highway Construction, current edition.

**TABLE OF PROPORTIONS**

Class Concrete	Pounds Cement Per C.Y. (Fixed)	Type Concrete	Lbs. Total Aggregate Per C.Y.		Type Coarse Aggregate	Compressive Strength Lbs/Sq.In.		Ratio of Coarse Agg. To Total Agg. Percent
			(Min)	(Max)		7-Day	28-Day	
47B	564 (6 sx)	Air- Entrained	2850	3150	Limestone	2400	3600	30±3

**12.30a HIGH EARLY STRENGTH CONCRETE, TYPE 47B-HE** – When required by the Bid or as directed by the Engineer, quick set, high early strength concrete shall conform to the following:

Cement shall be 752 pounds (8 sacks) of Portland cement per cubic yard of concrete.

Water/cement ratio shall not exceed 0.40 for 47B-HE concrete. A water reducing admixture, such as Plastiment, shall be used in the amount of 3 ounces of water reducing agent per sack of cement or as otherwise recommended by the manufacturer.

Air entraining admixture shall be added to produce six (6) to eight and one-half (8.5) percent air in the concrete.

A non-calcium chloride accelerator shall be added to the mix when the air temperature is less than 70 degrees at the time of placement.

Slump shall be 1-1/2 to 2 inches at the plant.

The concrete shall be in the transit mixer no longer than one (1) hour after mixing has begun.

Rigid control of the above concrete is an absolute necessity. The concrete shall be hauled to the project in a transit mixer and then the non-calcium chloride accelerator shall be added to the mix and mixed in three minutes just prior to placing it in the area to be repaired. Subject to Engineer's approval, the non-calcium chloride accelerator may be added at the batch plant. The surface shall be sprayed with an impervious curing compound and then covered with polyethylene sheets and thick insulating boards. Insulating boards and polyethylene sheeting shall be maintained for at least 48 hours.

When the ambient air temperature is above 70 Degrees F the insulating boards and polyethylene sheeting may be waived.

High early strength concrete shall achieve a 48-hour compressive strength of at least 3500 psi.

If the specified 48-hour compressive strength has been achieved the pavement shall be opened to traffic. If the specified 48-hour compressive strength has not been achieved the pavement shall remain closed to traffic until the pavement has achieved the specified 48-hour compressive strength and a pay reduction factor shall be applied in accordance with the Pay Reduction Factor Table.

Concrete Strength Pay Factor Table	
Percent of Design Concrete Compressive Strength	Pay Factor
Greater than 99.9	100
Greater than 98.5 to 99.9	99.75
Greater than 97.5 to 98.5	99.50
Greater than 96.0 to 97.5	99.00
Greater than 94.0 to 96.0	98.00
Greater than 92.0 to 94.0	97
Greater than 90.0 to 92.0	94
Greater than 88.0 to 90.0	90
Greater than 86.0 to 88.0	86
Greater than 84.0 to 86.0	81
Greater than 82.0 to 84.0	76
Greater than 80.0 to 82.0	70
Less than 80.0	See Paragraph immediately following this Table

The Engineer will evaluate the concrete's expected use and may allow concrete with a compressive strength of less than 80 percent of the design strength (after 28 days) to be left in place and paid for at 40 percent of the bid price or may require the unit to be removed and replaced.

**12.31 PORTLAND CEMENT** - Portland cement shall be TYPE IP.

Cement which has a temperature of over 175 degrees F shall not be used.

Portland cement shall not contain more than sixty five hundredths of one percent (0.65%) equivalent alkali.

Equivalent alkali referred to herein is hereby defined as the sum of the sodium oxide (Na<sub>2</sub>O) and potassium oxide (K<sub>2</sub>O), calculated as sodium oxide (K<sub>2</sub>O), calculated as sodium oxide (equivalent alkali as Na<sub>2</sub>O = Na<sub>2</sub>O + 0.658 K<sub>2</sub>O).

**12.32 AIR-ENTRAINING AGENT** - Air-entraining admixture shall conform to the requirements of ASTM C-260. Concrete shall contain the following entrained air by volume as determined by ASTM C-138 or ASTM C-231:

Application	Air Content % (Min. - Max.)
Slip Forming	6.5 - 9.0
Hand-Paving and Substructures	6.0 - 8.5

**12.33 AGGREGATE** - Fine aggregate shall have maximum size of one (1) inch (2.5 cm) and shall be a mixture of sand and gravel composed of clean, hard, durable and uncoated particles.

Coarse aggregates shall have maximum size of one and one-half inches (3.75 cm) and shall be crushed limestone composed of clean, hard, durable and uncoated particles.

Aggregate shall be supplied from a source having current Nebraska Department of Transportation (NDOT) approval for use on NDOT projects. Sampling and testing procedures shall conform to the following:



Specification for Concrete Aggregates  
Abrasion  
Freeze/Thaw Soundness

ASTM C-33  
AASHTO T96  
AASHTO T103

Fine aggregate shall not have a soundness loss greater than 10% by weight at the end of 5 cycles using sodium sulfate solution. Coarse aggregate shall not have a soundness loss greater than 8% by weight at the completion of 16 cycles of alternate freezing and thawing. Limestone aggregate shall not have a percentage of wear greater than 40% based on the Los Angeles Abrasion Test.

The aggregate shall contain no more than 0.5% clay lumps by weight. Coarse aggregate shall contain no more than 3.5% by weight any combination of clay lumps, shale and soft particles.

Gradation limits for fine and coarse aggregate are specified in Section 12.33a and 12.33b of this Specification.

**12.33a GRADATION LIMITS** - Gradation limits for 47B fine aggregate (Class B) are:

<b>RANGE</b>	<b>SIEVE</b>	<b>TARGET</b>
NONE	retained on 1 inch Sieve	0%
3-23%	retained on #4 Sieve	13%
30-50%	retained on #10 Sieve	40%
60-84%	retained on #30 Sieve	72%
97-100%	retained on #200 Sieve	98.5%

**12.33b GRADATION LIMITS** - Gradation limits for 47B coarse aggregate (Class E) are:

<b>RANGE</b>	<b>SIEVE</b>	<b>TARGET</b>
NONE	retained on 1 ½ inch Sieve	0%
0-8%	retained on 1 inch Sieve	0%
10-34%	retained on ¾ inch Sieve	22%
55-85%	retained on 3/8 inch Sieve	70%
88-100%	retained on #4 Sieve	94%
94-100%	retained on #20 Sieve	98.5%

**12.34 WATER** - Water used in mixing or curing shall be potable, clean and free of soil, acids, alkalis, salts, organic matter, or other substances harmful to concrete.

**12.35 SLUMP** - The concrete shall have uniform consistency and slump. The slump shall be between 1 and 3 inches for hand vibrated concrete. Slump shall be between 1/2 and 2 inches for concrete placed by a slipform/extrusion machine.

**12.35a WORKABILITY** - Concrete shall be of such consistency and composition that it can be worked readily into the forms and around the reinforcement without excessive spading and without permitting the materials to segregate or free water to collect on the surface. Slump shall be in accordance with 12.35.

The proportions shall be adjusted to secure the lowest water-cement ratio that is consistent with good workability, a plastic, cohesive mixture, and one which is within the specified slump range.

To avoid unnecessary changes in consistency, the aggregate shall be obtained from a source which will ensure uniform quality, moisture content, and grading during any single day's operation. Materials shall be handled in such a manner that variations in moisture content will not interfere with production of concrete of the specified degree of uniformity and slump.

**12.36 MIXING** - Ready-mixed concrete shall be mixed and delivered in accordance with the requirements of AASHTO M-157 or CSA A23-1. Concrete shall be delivered to the site and discharged

within 1 1/2 hours after introduction of the cement to the aggregates. In hot weather or under conditions contributing to quick stiffening of the concrete, or when the temperature of the concrete is 85 degrees F or above, the time between the introduction of the cement to the aggregates and discharge shall not exceed 45 minutes.

**12.37 ADMIXTURES** - No admixtures shall be used in the concrete without prior approval of Owner, and all approved admixtures shall conform to applicable AASHTO, ASTM and CSA requirements.

Air-entraining agents shall have proven compatibility with all local concrete materials, including cement, and shall be capable of providing in the concrete the required air contents and air-void system known to produce durable, scale-resistant concrete.

Admixtures other than air-entraining agents shall not be used until trial mixes with job materials have shown them to be compatible at job temperatures. Trial mixes must also show that desired properties will be imparted to the fresh concrete without any subsequent loss of strength or durability in the hardened concrete.

**12.37a FLY ASH** - Substitution of fly ash for cement will be permitted only as indicated in the NDOT Standard Specifications for Highway Construction, current edition.

**12.37b WATER REDUCING, SET CONTROLLING ADMIXTURE** - The use of a water reducing, set controlling admixture will be allowed in accordance with ASTM C-494 Standards and the manufacturer's recommendations.

**12.38 REINFORCING STEEL** - Reinforcing steel if specified shall conform to latest as follows:

**12.38a DEFORMED REINFORCING BARS** - Reinforcing steel shall conform to the requirement of ASTM A-615, Grade 40 and shall be used for tie bars that are to be bent and restraightened during construction.

**12.38b DOWEL BARS** - Shall be plain round bars conforming to ASTM A-615 and shall be free from deformations restricting slippage in the concrete. Before delivery to the work site, one-half the length of each dowel bar shall be painted with one coat of lead or tar paint.

**12.38c WELDED WIRE FABRIC** - Shall conform to ASTM A-185.

**12.39 JOINT MATERIALS** - Shall be in accordance with construction standards and specified as follows:

**12.39a EXPANSION JOINTS** - Expansion joints shall be non-extruding preformed joint fillers of bituminous pre-molded fiber, and shall conform to ASTM Designation M-33, M-153 Type III Standard Specifications and AASHTO Designation M-58-42 and M-59-42.

**12.39b JOINT SEALING MATERIAL** - The hot pour joint material shall be rubber-asphalt type and shall be melted in a double jacket kettle equipped with an agitator for stirring the material during melting and pouring. The rubber-asphalt shall meet Federal Specifications SS-S-164 or subsequent revisions.

**12.39c METAL SUPPORTS** - Metal chairs used to support tiebars or reinforcing bars shall be channel shaped, pressed out of sheet steel of not less than twelve (12) gage metal.

Metal assembly used to support dowel bars shall be so constructed and of such strength that the bars shall be held in true alignment and plane at all times. The assembly shall be reviewed by the Engineer before construction starts.

**12.39d EXPANSION TUBES** - Metal dowel caps or tubes shall be manufactured from thirty-two (32) gage steel sheet metal, shall be indented to provide limiting stop for the dowel bar, and shall provide unobstructed expansion space of not less than one inch to permit movement of the dowel bars. They shall be of proper size to fit the specified bars tightly and when oiled shall be watertight.

## **12.40 JOINTS**

**12.41 CONTRACTION JOINTS** - Contraction joints shall be constructed where specified on the applicable contract drawings and shall conform to the Contraction Joint Detail. Contraction joints shall be square joints at spacing as shown on applicable contract drawings. All contraction joints shall be saw-cut and filled with joint sealing material as specified. Depth and width of saw-cut will be shown on contract drawings.

**12.42 PLANNED CONSTRUCTION JOINTS** - Planned construction joints shall fall at contraction joints as shown on the applicable contract drawings. Planned joints shall conform to the Keyed and Tied Construction Joint Detail. All planned construction joints shall be saw-cut and filled with joint sealing material as specified. Depth and width of saw-cut will be shown on contract drawings.

**12.43 EMERGENCY CONSTRUCTION JOINTS** - Emergency construction joints shall be allowed only in the middle third of planned joint interval. Emergency joints shall conform to the Keyed and Tied Construction Joint Detail. All emergency joints shall be saw-cut and filled with joint sealing material as specified. Depth and width of saw-cut will be shown on contract drawings.

**12.44 LONGITUDINAL JOINTS** - Longitudinal joints shall be constructed where specified on the applicable contract drawings and shall conform to the appropriate Longitudinal Joint Detail. All Longitudinal joints shall be saw-cut and filled with joint sealing material as specified. Depth and width of saw-cut will be shown on contract drawings.

**12.45 EXPANSION JOINTS** - Expansion joints shall be constructed where specified on the applicable contract drawings and shall conform to the Expansion Joint Detail. All expansion joints shall be sealed with joint sealing material as specified. The joint shall extend entirely through the pavement and the joint filler shall be placed so the top edge will be one-half inch below the surface of the finished pavement. No section of the joint material shall be shorter than the width of pavement strip between longitudinal joints. The Contractor shall remove any concrete within the expansion joint gap that may have occurred during paving operations, especially along the back of curb.

**12.46 APPURTENANCES** - Block out or box out at manholes, inlets, curb returns at driveways and intersecting streets and at other locations as necessary to facilitate construction as needed to maintain 1 ft. minimum clearance. Provide for joint construction as specified.

Adjust manholes, inlets, valve boxes and any other utility appurtenances to design grade prior to placing concrete pavement.

**12.50 CONCRETE PLACEMENT** - Mainline concrete shall be placed by an approved slipform/extrusion machine. Pavement that is not mainline may be placed by formed methods. The concrete shall be deposited on the prepared subgrade in such a manner as to require a minimum of rehandling so that there shall be no separation of the mortar and the aggregate, and shall be distributed to the required depth and for the entire width of the pavement by shoveling or other approved methods, struck off and finished, as hereinafter provided. Rakes shall not be used in handling concrete. The concrete shall be deposited on the subgrade between the forms in position and in such quantity as to make a uniform layer of about 1 inch greater than the required finished thickness. Placing shall be continuous between transverse joints without use of intermediate bulkheads. Necessary hand spreading shall be done with

shovels only. Workmen shall not walk in plastic concrete with boots or shoes coated with earth or foreign substances. Plastic concrete shall be deposited as needed to expansion and contraction joints without disturbing them. Plastic concrete shall not be dumped onto a joint assembly.

Concrete shall be thoroughly consolidated against and along faces of all forms and along full length and both sides of all joint assemblies, by vibrating. Vibrators shall not come in contact with a joint assembly, the subgrade or a side form. Vibrator shall never be operated longer than 15 seconds in any one location.

The vibrating may be accomplished by the use of a mechanical finish machine, vibratory screeds, vibrating units of internal rotating type, or various combinations of these units to produce consolidation. The internal vibrating type shall be mechanically driven by electricity, compressed air or mechanical connection, to produce a speed in the unit of 6,000 revolutions per minute. The operations of depositing the concrete and compacting shall be so conducted that the concrete shall be smooth and dense, free from honeycomb and free from pockets of segregated aggregate. At the end of the day, or in case of an unavoidable interruption of more than 30 minutes, a transverse construction joint shall be placed at the point of stopping work, provided that the section of which the work has been suspended shall not be less than 10 feet in length. Sections less than 10 feet in length shall be removed. The joints shall be conformed to the requirements for construction joints, as prescribed elsewhere in the specifications.

Concrete shall not be placed when stormy or inclement weather prevents good workmanship. In no case shall concrete be placed upon frozen subgrade. No concrete shall be placed without specific permission of the Engineer when the air temperature is at or below 40 degrees F.

**12.51 CONFORMITY OF SUBGRADE** - Subgrade shall be fine graded and checked ahead for at least 1/2 day of paving operations.

Disturbed grade shall be properly recompacted. If any traffic is allowed to use the prepared grade, the grade shall be checked and corrected before placing concrete.

Construction equipment shall not operate in paving lane when conditions of the Project will permit operations from outside lane. Paving lane rutting or subgrade material displacement from equipment operation shall be cause for the Contractor to provide lighter trucks or suitable runways.

Trucks, on site mixers, transit mix trucks, and other heavy equipment shall not be used on previously paved lanes until the concrete is at least seven days old and the field-cured concrete has a flexural strength of 550 psi.

**12.52 MACHINE PLACEMENT** – Mainline pavement construction shall be done with the use of an approved self-propelled paving machine of the slipform/extrusion type. Hand operated or tractor drawn strike off and finish equipment will not be permitted for the mainline pavement construction. Slip form/extrusion machine shall be so designed as to place, spread, consolidate, screed and finish concrete in one complete pass in such a manner as to minimize hand finishing necessary to provide a dense and homogeneous concrete section. The slip form/extrusion machine shall be electronically controlled for both horizontal alignment and vertical grade by the use of string lines and sensors. The paving machine will not be allowed to operate off of the sub-grade for vertical control. Machine shall shape, vibrate and or extrude the concrete for the full width and depth of the concrete section being placed. It shall be operated with a continuous forward movement. Operations of mixing, delivery and spreading concrete shall be so coordinated as to provide uniform progress, with stopping and starting of the machine held to a minimum. Slip form/extrusion machine shall not be permitted to ride on or be driven on previously place concrete until concrete has cured a minimum of 3 days and achieved 85% of specified 28-day compressive strength.

**12.53 FORMED METHOD** - Hand operated or tractor drawn strike off and finish equipment will not be permitted for the mainline pavement construction, but may be used for intersections, asymmetric paving sections, or as approved by the Engineer in writing.

Outside forms shall be of metal, of depth equal to the design thickness of the pavement at its edge, and straight and free from warp. When integral curb is required, the additional height represented by the curb may be obtained by bolting extra forms upon the top of the main form. Wood forms of flexible or curved metal forms of proper radii shall be used for curves having radii of less than 100 feet. The forms shall be neatly, tightly and securely pinned and staked to the line and grade furnished by the Engineer. They shall not at any time show a variation of more than 1/8 inch in a 10 foot length from the true plane of top of form. Shimming with loose earth, pebbles, etc. will not be permitted. Forms shall be cleaned and oiled before concrete is placed against them.

Concrete shall be deposited into the forms without segregation and then mechanically vibrated for thorough consolidation. No concrete shall be placed against concrete that has taken its initial set unless the specified joint is provided. Concrete shall not be transported by means of mechanical vibration.

When pavement is being laid contiguous to previously finished concrete pavement of the same finished grade elevation or contiguous to previously finished independent curb and gutter, such finished pavement or independent curb and gutter may be made to serve as side forms for the implements for striking, tamping and finishing, so far as such may be found suitable in the opinion of the Engineer or authorized representative.

**12.53a ALIGNMENT AND GRADE** - The alignment and grade elevations of the forms shall be checked by the Contractor and the necessary corrections made by the Contractor before placing the concrete. When any form has been disturbed or any subgrade thereunder has been unstable, the subgrade shall be recompacted under that section, the form reset and checked.

**12.53b FORM REMOVAL** - Forms shall be removed without damage to concrete after the concrete has sufficient strength.

**12.54 PLACING REINFORCING STEEL** - When reinforcement is required, it shall be placed as shown on the drawings.

All reinforcing metal must be kept clean and free from foreign material that will prevent the proper bond with the concrete. Welded sheet fabric and welded bar mats shall be furnished in flat sheets and shall be handled carefully during the placing and kept straight until installed.

The reinforcement shall be placed so that the extreme longitudinal member will be located not more than 3 inches from the edges of the slab section, and the ends of all longitudinal members shall extend to within 2 inches of the ends of the slab sections. Adjacent sheets of welded fabric and welded bar mats shall be lapped not less than 12 inches when the lap is made at a right angle to the centerline of the pavement. When sheets are permitted to be lapped parallel to the centerline, the lap shall be not less than 12 inches. The wire fabric or bar mats shall be wired together at all laps. The spacing between the wiring of longitudinal laps shall not exceed 24 inches.

To install welded fabric, or welded mats of reinforcing bars, a layer of concrete shall be placed upon the subgrade to such a depth that when struck off and vibrated, its surface will be at the elevation specified for the reinforcing metal to be installed. Each layer shall be struck off with a template of a design and construction reviewed by the Engineer. When the reinforcing metal is properly placed, it shall be covered at once, before the bottom course has taken any initial set, with a layer of concrete so deposited and distributed thereover that the pavement shall have the required thickness and crown.

The Contractor will be required to furnish suitable metal supports of a type and design approved by the Engineer for all steel reinforcing bars and for all dowel bars. The work will not be paid for directly but will

be considered as subsidiary work and the cost thereof included in the unit price for the several items of concrete, concrete pavement, or of reinforcing steel for pavement.

The Contractor may use mechanical means for placing the welded steel wire fabric. The placement machine shall be specifically designed for this purpose.

When the welded steel wire fabric is placed by mechanical methods, the Contractor may elect to place the concrete in one operation to the full depth and width as shown in the typical cross sections, and in accordance with the drawings and specifications.

**12.55 FLOATING AND SCRAPING** - Concrete shall be struck off and consolidated by mechanical finishing machine method such that after final finishing it shall be at the exact elevation shown on the drawings. The finishing machine shall be provided with a screed which will consolidate the concrete by pressure. When hand finishing is used the pavement shall be struck off and consolidated by vibrating screed. When forward motion of the vibrating screed is stopped the vibration shall be disengaged.

After concrete has been struck off and consolidated it shall be scraped with a straight-edge 10 feet long equipped with a handle to permit operation from the edge of the pavement.

Use of long handled wood floats shall be restricted to correcting unevenness not taken care of by straight-edge tool. Pavement shall be checked with a 10 foot straight-edge so there will not be depressions in which water may stand.

**12.55a EDGING** - Before final finishing is completed the edges of the slab shall be edged with a 1/4 inch radius edging tool.

**12.55b FINAL SURFACE FINISH** - Contractor shall not add water to surface of concrete to assist in finishing operations. Burlap drag or broom shall be used for final finishing. Burlap drag shall be at least 3 feet wide and long enough to cover entire pavement width. Burlap drag shall be kept clean and saturated while in use. Burlap shall be dragged in the direction on which pavement is placed. Broom finish shall be done with stiff bristled broom drawn from center to edge of pavement with adjacent strokes slightly overlapped to produce surface corrugations of uniform appearance and about 1/16 inch in depth.

**12.56 CURBS** - Curbs shall be required along the edges of streets where shown on contract drawings, except at such locations as the Engineer may direct. Depressed curbs shall be provided at all driveway entrances and at such other locations as designated by the Engineer. Cross-section of curbs shall be in accordance with Integral Curb Detail.

Curbs shall be formed integrally with pavement using slipform or extrusion equipment or placed immediately after finishing operation of the formed method.

Special care shall be taken so that the curb construction does not lag behind the pavement construction and form a "cold joint". Place concrete in forms and consolidate with a mechanical vibrator. In placing concrete curb, sufficient spading shall be done to secure adequate bond with the paving slab and eliminate all voids in the curb.

Curbs shall be formed to the cross section as shown on the drawings with a mule or templates supported on the side forms, and shaped with a float not less than 4' in length. Bring to proper surface by running a straightedge over steel templates with sawing motion, to fill holes and depressions. Immediately after using the straightedge, float surface with a wood float to draw cement to surface. Edge with appropriate tool.

Just before the concrete takes its initial set, brush the surface with a soft bristle brush to remove trowel marks and leave a uniform appearance. Brush from the top of the curb to the pavement edge of gutter in one continuous motion.

The finished surface of the curb and gutter shall be checked by the use of the 10' straightedge and corrected, if necessary. While the concrete is still plastic, the drainage at the gutter should be checked by pouring water at the gutter summit and observing its flow to the inlet. In order to prevent damage to the concrete surface, water should be poured onto a piece of burlap or curing paper.

Upon removal of forms, fill honeycombed or unevenly filled sections immediately with cement mortar and backfill in not more than 6 inch layers after application of cement mortar. Make certain that expansion joints are cleaned of concrete, both at bottom of gutter and back of curb.

**12.56a INTEGRAL CURB JOINTS** - In the construction of transverse joints of concrete integral curb pavement, special care must be taken to see that all transverse joints extend continuously through the pavement and curb. Insure expansion and contraction joints in curb match joints in pavement.

**12.57 PROTECTION** - Protect newly paved surfaces and appurtenances from traffic for minimum of 14 days. Erect and maintain warning signs, lights, watchmen to direct traffic.

Contractor shall have materials available at all times to protect the surface of the plastic concrete against the rain. These materials shall consist of waterproof paper or plastic sheeting. For slipform construction, materials such as wood planks or forms to protect the edges shall also be required.

When it is expected that, during the progress of the work, the temperature may fall below 40 degrees Fahrenheit, a sufficient supply of straw, hay, grass, or other material suitable in the judgment of the Engineer, must be maintained on hand, to cover the concrete and to sufficiently protect the surface and edges against freezing until it is at least 10 days old. In such case, at the discretion of the Engineer, wetting and spraying may be omitted. Manure shall not be used as a protection for green concrete. Whenever the temperature falls below 40 degrees Fahrenheit, freshly finished concrete shall be protected by frames enclosed by canvas or other type of housing and the temperature of the air surrounding the concrete shall be maintained at not less than 45 degrees Fahrenheit. Sufficient heating apparatus, such as lanterns, suitable stoves or steam equipment, shall be furnished and maintained by the Contractor. Any concrete showing injury by freezing or uncovering shall be removed and replaced at the expense of the Contractor.

Repair or replace parts of pavement damaged by traffic, or other causes occurring prior to final acceptance. Protect concrete pavement against public traffic, construction traffic and traffic caused by employees and agents.

No equipment shall be driven or moved across newly paved surfaces unless such equipment is rubber-tired and only if paved surface is designed for and capable of sustaining loads to be imposed by the equipment. Tracked vehicles and equipment shall not be driven over new or existing paved surfaces.

**12.58 CURING** - Concrete shall be cured for at least 3 days after placement to protect it against loss of moisture, rapid temperature changes, and mechanical injury.

Apply white liquid membrane curing compound complying with ASTM C-309 for curing, sealing, and moisture retention. Perform application in accordance with manufacturer's directions but at a rate of not more than 400 square feet per gallon. Apply within 4 hours after finishing or as soon as surface moisture has dissipated. Curing shall include back of curb and all exposed surfaces.

**12.59 SAWING AND SEALING** - All joints, spaced at intervals shown in the drawings, shall be sawed. In order to prevent uncontrolled cracking, the Engineer may require selected joints to be sawed as soon as the concrete becomes sufficiently hardened to permit the sawing of a clean cut joint and to preclude the possibility of tearing and raveling. When selected joints have been sawed first, the time and sequence of sawing the remaining contraction joints shall be as determined by the Engineer. The sawing of all contraction joints, regardless of sequence, shall be completed in a timely manner to prevent premature or random cracking.

The sawed joints must be to the depth, spacing and locations called for in the drawings. Water may be used on the saw blades during the cutting operations. The sawing of any joint shall be discontinued if a crack occurs at or near the joint location prior to the time of sawing. Sawing shall be discontinued when a crack develops ahead of the saw. Cracks developing before sawing commences or cracks developing ahead of the saw shall be routed to a depth of approximately one and one-half inches and not to exceed approximately one-half inch in width. When cutting the pavement slab, a chalked or other suitable line or guide shall be used to insure cutting in a true line. Where there are gutter or integral curbs, they must also be cut to the proper depths to prevent erratic cracking.

Immediately after the joints have been sawed or the premature cracks have been routed, they shall be cleaned thoroughly to remove all dirt and loose material. The joints then shall be dried thoroughly and sealed.

The joint sealing filler shall be poured to seal the joints across the top and down the ends of the joints. A block or form shall be used to hold the poured joint sealing material in the joint at each end until it has cooled and set.

The joints to be sealed shall be free of all dirt, spills or other materials. If the concrete is cured with impervious membrane compounds, adequate precautions shall be taken to avoid application of the curing material to the surfaces of the concrete which will be in contact with the joint sealing filler. In the event that the curing membrane has been permitted to cover or coat any part of the surface of the concrete pavement in any joint, which will come into contact with the joint sealing filler, the Contractor shall remove the membrane from the affected areas. Surfaces to be sealed shall be cleaned thoroughly of all loose scale, dirt and other foreign matter with a jet of compressed air, and if necessary, by flushing with water. If water has been used on the saw blade during the cutting operation, the cleaning shall include flushing with water by use of a high pressure hose and thoroughly drying before pouring the joint sealing filler. Any other joints flushed with water shall also be thoroughly dried before pouring the joint filler.

The joint sealing filler shall be melted uniformly and with constant stirring in an asphalt kettle of such design that direct flames are not applied to the immediate surfaces of the kettle which are in contact with the joint sealing filler. The material shall be furnished or prepared in pieces of such size and shape that the material can be melted readily to the proper pouring consistency. The manufacturer's recommendations for mixing, application and temperature restrictions shall be strictly followed. In no case shall the temperature exceed the maximum recommended by the manufacturer. When proper pouring consistency is attained, the joints shall be filled as shown in the drawings, through the use of pressure type applicator, of design approved by the Engineer, and equipped with a nozzle which will fit into the joints. Precautions shall be taken to prevent spilling material on surfaces of the pavement adjacent to the joint.

**12.60 BACKFILLING** - Required backfilling operations shall begin a minimum of 7 days after concrete placement. Excavated materials shall be refilled with suitable materials to the required elevations. Fill material shall be thoroughly tamped in layers.



All excess concrete and debris shall be removed from excavation behind curb line before backfilling. The area between the curb and sidewalk or property line where no sidewalks exist, shall be graded in a neat and orderly manner.

Backfilling or shouldering shall be considered as a part of the selected placement of the excess earth excavation or a part of the earth embankment construction and as such no separate payment shall be made.

**12.61 FINAL GRADING AND TOPSOILING** - After other outside work has been finished, and backfilling and embankments completed and compacted, all areas on the site of the work which are to be graded shall be established to grade at indicated elevations, slopes, and contours. If elevations are not indicated, existing elevations shall be matched. The Contractor shall supply and place 6" of topsoil in all areas to be seeded or 4" of topsoil prior to the placement of all sod.

After areas to be topsoiled have been approved for final grading, the surface shall be loosened and made friable by cross-discing or other approved methods, to a full depth of at least 2 inches (5 cm) to permit blending of topsoil to the subgrade. Each layer of the embankment material not to exceed 8 inches in loose depth shall be disc'd sufficiently to break down oversized clods, thoroughly mix the different materials, secure a uniform moisture content and insure uniform density and proper compaction. Each layer shall be thoroughly compacted by roller or vibratory equipment suitable for the type of embankment material. Rake up all stones and debris 2 inches (5 cm) or more in any dimension and remove from site after discing. Spread topsoil to obtain a depth of 6 inches (15 cm), the surface being at final grade. When finished, surface shall be free from roots or other organic material, trash, frozen material, excessive gravel, and free of stones and debris, 1 inch (2.5 cm) or more in any direction.

Use of graders or other power equipment will be permitted for final grading and dressing of slopes, provided the result is uniform and equivalent to hand work. All surfaces shall be graded to secure effective drainage. If additional soil is required to be supplemented or disposed, it shall be a subsidiary obligation of the Contractor.

The areas between curbs and/or sidewalks and property lines; adjacent to driveways, shall be final graded and topsoiled.

**12.62 PAINTING AND MARKING** - Stripe and mark pavement equal to existing stripes and marks following sufficient cure time for pavement and as directed by Owner.

Apply 6 inch wide stripe with self contained striping machine to a clean and dry pavement surface when temperature is above 40 degrees F. and precipitation is not expected during drying period.

Use yellow or white paint as approved complying with Fed. Spec. TT-P-115C.

**12.63 OPENING TO TRAFFIC** - No section of pavement shall be opened to traffic until approval has been given by the Engineer or authorized representative. The time for opening pavement will be based on the length of time the pavement is in place and on the strength of the concrete as determined from compressive strength specimens made during the progress of the work. The general public may be allowed on the pavement when the concrete has reached a minimum age of 14 days or when the concrete has reached an age of 7 days and developed a compressive strength of 3600 psi when tested in accordance with AASHTO T 22.

The Contractor's forces may be allowed on the pavement for the purpose of cleanup work and sealing procedures any time after the concrete has reached a minimum age of 3 days and a compressive strength of 3000 psi in accordance with ASTM testing methods.

Slipform pavers and ready-mix trucks may be allowed on the pavement after the concrete has reached a minimum age of 3 days and a compressive strength of 3400 psi in accordance with ASTM testing methods.

If the contractor elects to increase the early strength of the concrete by adding cement and/or reducing the water/cement ratio, then the pavement may be opened to traffic after 48 hours provided it has attained a compressive strength of 3600 psi.

When unsatisfactory results or changed conditions make it necessary, the Engineer may establish different requirements for the time the Contractor's forces may be allowed on the pavement. The Engineer may order that any section of the project shall not remain closed to traffic for a period of more than 14 consecutive days after the concrete pavement has been placed. Before any area can be open the joints must be completed in accordance to the section "Sawing and Sealing" of these specifications.

**12.64 CLEANUP** - Insure all cleanup work is completed in a condition acceptable under these specifications within two weeks after pavement has been opened to traffic.

In case the cleanup work has not been done within the specified time, the Contractor will not begin any new work until the said delayed cleanup work has been done.

### **12.65 COLD AND HOT WEATHER CONCRETING**

**12.65a COLD WEATHER** - Except by specific written authorization, cease concrete placing when descending air temperature, in shade and away from artificial heat falls below 40 degrees F. Do not resume until ambient temperature has risen to 40 degrees F.

If placing is authorized maintain temperature of mix between 60 and 80 degrees F. Heat aggregates, water or both. Water temperature may not exceed 175 degrees F, aggregates, 150 degrees F.

Remove and replace frost damaged concrete.

Salt or other antifreeze is not permitted.

Comply with ACI 306.

**12.65b HOT WEATHER** - Except by specific written authorization, cease concrete placing when plastic mix temperature cannot be maintained under 90 degrees F.

Aggregates or water or both may be cooled. Cool water with crushed ice; aggregates by evaporation of water spray.

Never batch cement hotter than 175 degrees F.

Comply with ACI 305.

**12.66 PAVEMENT PATCHING, REMOVAL AND REPLACEMENT** - Where pavement patching is necessary, or concrete slabs are removed and replaced, insure work complies with following requirements:

A. Backfill to comply with material and density requirements as mentioned elsewhere in this specifications. Compact to 95 percent of standard density, as per ASTM D-698, or 75% relative density as per ASTM D-4253.

B. Remove and replace pavement in full panel section along existing joint lines.

C. Drill and grout number 4 rebar on 30" centers on all sides of the patch in accordance with details on the Drawings.

D. Prior to placing patch, saw cut edge of existing pavement to 1/4 depth and remove pavement to provide a vertical face for a straight and true joint.

E. Expansion joints, contraction joints, etc. shall be placed to match the original joint layout or as directed by the Engineer.

## **12.70 TESTING**

**12.71 CONCRETE TESTING SERVICE** - Contractor shall employ and pay for services of testing laboratory acceptable to Engineer and Owner to perform materials evaluation, testing, and design of concrete mixes.

**12.72 CERTIFICATES** - Certificates, signed by material producer and Contractor stating that materials meet the requirements of these specifications, may be submitted in lieu of material testing when approved by Engineer.

**12.73 MIX DESIGN** - Before any concrete is placed, the Contractor, at no expense will furnish a mix design of the concrete he proposes to furnish for the project. The design shall indicate water cement ratio, sieve analysis of the aggregate to be used, amount of air entraining agent required, slump and 7 and 28 day compressive strength in pounds per square inch.

**12.74 QUALITY CONTROL** – The Engineer will perform sampling and testing during concrete placement.

A. Sampling: ASTM C-172.

B. Slump: ASTM C-143, one test for each strength test at point of discharge and as required to assure specified slump is not exceeded.

C. Air Content: ASTM C-173 or ASTM C-231 or ASTM C-138, one for each strength test.

D. Compressive Strength: ASTM C-31 and ASTM C-39, one set of three 4 inch x 8 inch concrete cylinders for each strength of concrete per day's placement, or every 100 cubic yards placement, test one at 7 days, 2 at 28 days.

E. When total quantity of a given class of concrete is less than 25 cubic yards strength tests may be waived by Engineer if experience indicates evidence of satisfactory strength.

F. Density and Moisture Tests: A sufficient number of field density tests of the subgrade may be ordered by the Engineer to determine that the subgrade complies with the specification. These tests will be made by an approved testing laboratory and will be paid for by the Owner. Failing tests will be paid for by the Contractor.

**12.75 REQUIREMENTS FOR THICKNESS** - It is the intent that the pavement shall be constructed to the exact thickness as shown on the drawings. Determination of pavement thickness shall be based on cores taken from a unit of pavement surface area. The method of measuring the cores shall be in accordance with ASTM Standard Methods. Determination of thickness and requirements relative to deficient thickness shall be as specified herein:

A. Length and width of Units. Units will be considered separately and are defined as 750 linear feet of pavement for each separately placed width starting at the end of the pavement. The last unit for the width under consideration shall be 750 feet plus the fractional part of 750 feet remaining. When the length of a separately placed width is less than 750 feet, the length of the unit shall be the actual length. A separately placed width is defined as the width between field constructed longitudinal joints, between a longitudinal construction joint and the edge, or between two pavement edges, as the case may be. Exceptions to the pavement length shall be considered as exceptions in the unit length. In cases of separately placed intersection or blockouts, the normal width of pavement on either side shall be considered as continuing through in the same manner as would be applicable if the section under consideration had been placed continuously through the section. At the option of the Engineer, cores may not be taken from irregular areas, from a lane less than eight feet in width, or for an entire contract involving less than 5,000 square yards of pavement.

B. Cores. Cores shall be taken from within each unit of the pavement at random locations to be selected by the Engineer. When computing the thickness of a unit which has a deficiency of more than 3.0% from the specified thickness, not less than three cores shall be taken. Special cores may also be taken in any locations where the Engineer has reason to believe deficiencies in materials or workmanship may exist.

C. Determination of Thickness. The thickness of the pavement at the cored points shall be the average caliper measurement of the cores taken at the respective points. At such point as the Engineer may select in each unit, one core will be taken. If the core so taken is not deficient by more than 3.0% from the specified thickness, full payment will be made. If the core is deficient in the thickness by more than 3.0% but not more than 8.0% from the specified thickness, two additional cores will be taken from the area within the unit at approximately 250 foot intervals from the initial core when the unit length is 750 feet and intervals approximately equal to one-third the unit length for units more or less than 750 feet in length. The average thickness of three cores will then be determined. If the average thickness of these three cores is not deficient by more than 3.0% from the specified thickness, full payment will be made. If the average thickness of the three cores is deficient more than 3.0% but not more than 8.0% from the specified thickness, an adjusted unit price will be paid for the pavement unit, excluding any area deficient more than 8.0%, in accordance with Table I. In calculating the average thickness of the pavement in a unit, measurements which are in excess of the specified thickness will be considered as the specified thickness and measurements which are less than the specified thickness by more than 8.0% will not be included in the average. In event that the initial or designated additional cores are deficient in excess of 8.0%, the thickness used for determining the average will be considered as the design thickness minus 8.0%. Exploratory cores for determining limits of deficiencies of more than 8.0% or special cores will not be used in determining average thickness.

**TABLE I  
PAY DEDUCTIONS**

<i>Average Thickness Deficiency in percent of specified thickness</i>	<i>Percent of Contract Unit Price</i>
0-3.0	100.0
3.1-3.2	84.0
3.3-3.4	83.2
3.5-3.6	82.4
3.7-3.8	81.6
3.9-4.0	80.8
4.1-4.2	80.0
4.3-4.4	79.2
4.5-4.6	78.4
4.7-4.8	77.6

<b>Average Thickness Deficiency in percent of specified thickness</b>	<b>Percent of Contract Unit Price</b>
4.9-5.0	76.8
5.1-5.2	76.0
5.3-5.4	75.2
5.5-5.6	74.4
5.7-5.8	73.6
5.9-6.0	72.8
6.1-6.2	72.0
6.3-6.4	71.2
6.5-6.6	70.4
6.7-6.8	69.6
6.9-7.0	68.8
7.1-7.2	68.0
7.3-7.4	67.2
7.5-7.6	66.4
7.7-7.8	65.6
7.9-8.0	64.8
Above 8.0	No Pay

D. Thickness Deficient more than 8.0%. When the measurement of any core is less than specified thickness by more than 8.0% the actual thickness of the pavement in this area will be determined by taking exploratory cores by the following procedure, unless, in the judgment of the Engineer, this method of taking cores shall be varied to obtain a better check of the pavement. Cores shall be taken five feet on either side of the location of the deficient core parallel to the center line of the pavement. If both of these cores are within the 8.0% tolerance, no further special borings for this individual zone deficiency will be made. If either one or both of these cores are not within the 8.0% tolerance the procedure will be to cut cores in the following order on either side of the original short core parallel to the center line of the pavement: 25 feet, 50 feet, the same to be measured from the location of the original core found to be deficient in thickness, then at 50 foot intervals until a thickness within the 8.0% tolerance is found in both directions. On either side of the original short core, the procedure will then be to make a boring approximately one-half the distance between the first core which comes within the 8.0% tolerance and the core nearest it which is below the 8.0% tolerance. The preceding procedure shall be repeated within the unit until the location (plus or minus five feet) at which the pavement comes within the 8.0% tolerance is located. When the thickness of the pavement is deficient more than 8.0% and the judgment of the Engineer is that the area of such deficiency should not be removed and replaced, there will be no payment for the area retained.

All cores shall be filled with the original specified material, protected and cured. The contractor shall bear all cost of borings and such cost shall be included in the Bid.

**12.76 SUBMITTALS** - The Contractor will submit the following:

Sieve analysis and density curves for soils encountered and proposed borrow.

Manufacturer's specifications with installation instructions for proprietary materials including reinforcement and forming accessories, admixtures, joint materials, hardeners, curing materials, and other items. Concrete mix design and material certificates.

Submit samples of fabricated jointing materials and devices.

Submit references and qualifications of paving sub-contractor if sub-contractor is to do the work.

Submit shop drawings of reinforcing details.

Laboratory tests and evaluation reports must also be submitted.

**12.80 MEASUREMENT AND PAYMENT** - The following methods of measurement and payment to the Contractor will be used unless otherwise specified. Items not specifically listed in the Bid or defined by this specification shall be considered subsidiary to construction and direct payment will not be made for these items.

**12.81 CLEARING AND GRUBBING** - Clearing and grubbing of trees larger than 6 inches in diameter will be measured for payment by counting the actual number of trees removed. The diameters of trees will be computed by measuring the circumference at height of 18 inches above the ground and dividing this circumference by 3.14. Payment shall be made at the contract unit price per each tree at the diameter or group of diameters shown in the Bid. No payment will be made for trees less than 6 inches in diameter.

Stumps will be measured for payment by taking the average diameter at cutoff. Payment shall be made at the contract unit price per each stump at the diameter or group of diameters shown in the Bid.

Hedge removal will be measured for payment in lineal feet of a row of hedges.

Weeds, rubbish and other herbaceous vegetation will not be measured for payment, but will be considered as subsidiary to the item for which payment is made.

**12.82 SITE PREPARATION** - Crosswalks, private walks and driveways approaches lying within the area between construction lines will be measured in their original position "of items to be removed", and will be measured for payment in square feet.

Existing straight curb, and curb and gutter to be removed will be measured for payment by length in linear feet. Measurements for the straight curb will be made along the front face of the curb and measurements for curb and gutter will be made along the flowline of the gutter.

Removal of existing pavement headers will be measured for payment by length in linear feet.

Compaction over all existing utility lines will be measured for payment as a single unit, except when in clay soil, excavation, additional materials and recompaction over utility lines will be paid for as additional excavation.

No payment will be made for removal or replacement in excess of quantities shown on the drawing unless authorized by the Engineer prior to the removal.

**12.83 COMMON EXCAVATION** - When listed as a bid item final measurement of excavation shall not be made. The quantity shown on the plans shall be an established quantity and shall be the basis of payment at the contract unit price per cubic yard bid for Common Excavation. Such payment shall be full compensation for all stripping of vegetation, conservation of top soil, excavation, embankment, compaction, incorporation of water when required, materials, equipment, tools, labor and incidentals necessary to complete the work. When Common Excavation is listed as a bid item separate payment for embankment will not be made, as this is considered subsidiary to earthwork measured as Common Excavation.

**12.84 EMBANKMENT** - When listed as a bid item final measurement of embankment shall not be made. The quantity shown on the plans shall be an established quantity and shall be the basis of payment at the contract unit price per cubic yard bid for Embankment. Embankment is the amount of material to be placed and compacted to complete the required section. Quantities are established by average end areas of the cross-sections with no balance factor used. Such payment shall be full compensation for all

excavation loading, hauling, spreading, compacting and other materials, equipment, tools, labor and incidentals necessary to complete the work in conformance with these Specifications and accepted by the Engineer. When Embankment is listed as a bid item separate payment for excavation will not be made, as this is considered subsidiary to earthwork measured as embankment.

**12.85 BORROW** - Separate payment for borrow will not be made, as this is considered subsidiary to earthwork measured as embankment.

**12.86 SUBGRADE PREPARATION** – Unless specifically listed as a bid item, subgrade preparation shall be subsidiary to the pavement construction and no separate payment will be made as such.

**12.87 GRANULAR FOUNDATION COURSE** - Granular foundation course will be measured for payment by area in square yards or cubic yards, as denoted in the Bid.

**12.88 ADJUSTING MANHOLES, INLETS AND VALVE BOXES** - Adjusting manholes and inlets to grade will be measured for payment as a single unit for each manhole that is adjusted to grade as shown in the drawings or as directed by the Engineer.

**12.89 PORTLAND CEMENT CONCRETE PAVEMENT** - Quantity of pavement measured for payment shall be the specified width multiplied by the measured length calculated in square yards of full-depth pavement placed. Number of square yards shall be determined by the Engineer. Quantity of accepted pavement shall be measured as above provided and shall be paid for at contract unit price per square yard as called for in Bid. Price shall constitute full compensation for joints, joint filler, sawing, curbs, dowels and reinforcing required in the contract drawings; placing, finishing, curing and all labor, equipment, tools, incidentals and testing necessary to complete these items.

**12.90 INTEGRAL CURB** - Integral curb will be measured for payment by length in linear feet. Measurement will be made along the back side of the curb.

**12.91 BEAMS** - Concrete pavement beams will be measured for payment by length in linear feet.

**12.92 HEADERS** - Concrete headers constructed as part of the paving project or district will be measured for payment by length in linear feet.

**12.93 TRANSVERSE EXPANSION AND MISCELLANEOUS JOINTS** - Transverse expansion joints and all miscellaneous joints using pre-molded bituminous fiber will be considered incidental to the paving construction, and not as a separate pay item.

**12.94 MISCELLANEOUS** - Any item listed in the Bid and not delineated in the specifications will be measured in the most workmanlike manner for payment according to the designation listed such as cubic yards, square feet, square yards, linear feet, gallons, each, etc.

**12.95 CONCRETE TESTING** - The testing of cylinders shall be paid for by the Contractor.

The Engineer may require testing of coarse and fine aggregates and cement before they are used in the work. If so ordered, the Contractor shall pay the cost thereof.

***END OF SECTION 12***

## **SHOP DRAWINGS, PROJECT DATA & SAMPLES**

**22.00 GENERAL** - Contractor shall furnish all labor, materials, tools, equipment, and perform all work and services necessary for or incidental to the furnishing, processing, delivery, reproduction and other necessary functions incidental to scheduling and handling of shop drawings, project data and samples as indicated on drawings and or as specified, in accordance with provisions of the Contract Documents, and completely coordinate with work of all trades.

A. Although such work is not specifically shown or specified, all supplementary or miscellaneous items, appurtenances and devices incidental to or necessary for completion of work under this section shall be furnished and performed as part of this work.

B. See appropriate sections for specific items for which data and/or samples are required. See General Conditions for additional information.

**22.10 SUBMITTALS - ADDRESS** - Submit all items to:

MILLER & ASSOCIATES,  
CONSULTING ENGINEERS, P.C.  
1111 Central Avenue  
Kearney, NE 68847

Or [lschmidt@miller-engineers.com](mailto:lschmidt@miller-engineers.com)

**22.20 SUBMITTALS - GENERAL** -

A. Prime Contractor shall be responsible for and make all submissions. Transmit all items with a letter of transmittal.

B. Transmittals will be consecutively numbered.

- (1) An item that is resubmitted will retain the original number but with an added suffix letter starting at A.
- (2) The scope of a transmittal shall not change on any re-submittals.
- (3) Only one specification division should be covered by one letter of transmittal.
- (4) Sufficient catalog information together with cuts and technical data must be submitted to allow an evaluation to be made to determine that the item submitted is in compliance with the specifications.

C. Drawings or other submittals transmitted to the Engineer by other than the Prime Contractor will be returned to the Prime Contractor without action of any kind. Drawings will not be returned to subcontractors.

D. Submit items sufficiently in advance of date required to allow reasonable time for review, and to allow for resubmission, if necessary. Items not submitted in accordance with the provisions of this specification will be returned, without action, for resubmission.

E. Provide within 60 days after approvals are received six (6) Operation - Maintenance Manuals, and warranties in a separate transmittal. Transmittal numbers for Operation - Maintenance Manuals shall be original number of approved item plus suffix "O-M". No action will be taken on manuals or warranties.



**22.30 SUBMITTALS/REVIEW - SHOP DRAWINGS -**

A. Engineer will review Contractor's shop drawings and related submittals (as indicated below) with respect to the ability of the detailed work, when complete, to be a properly functioning integral element of the overall system designed by Engineer.

B. Before submitting a shop drawing or any related material to Engineer, Contractor shall: review each such submission for conformance with the means, methods, techniques, sequences, and operations of construction, and safety precautions and programs incidental thereto, all of which are the sole responsibility of Contractor; approve each such submission before submitting it; and so, stamp each such submission before submitting it with the following:

This shop drawing has been reviewed by [Name of Contractor] and approved with respect to the means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incidental thereto. [Name of Contractor] also warrants that this shop drawing complies with contract documents and comprises no variations thereto.

By \_\_\_\_\_  
Date \_\_\_\_\_

Engineer shall assume that no shop drawing or related submittal comprises a variation unless Contractor advises otherwise via a written instrument which is acknowledged by Engineer in writing.

C. In the event that Engineer will require more than fourteen (14) working days to perform review, Engineer shall so notify Contractor.

D. The shop drawing and related material (if any) called for as follows:

- (1) Concrete Mix Design
- (2) Seeding Mixtures
- (3) Signage
- (4) RCP Storm Sewer

E. Submit to previously indicated address. Identify drawings as to manufacturer, item, use, type, project designation, specification section or drawing detail reference, and other pertinent information.

F. If submitting in hard copy format, submit five prints of each drawing. Three copies will be retained by the Engineer. Submit in a round mailing tube; do not fold.

G. If submitting electronically, one copy will be returned.

H. Allow clear space for Engineer stamping on right hand side. Any marks by Contractor shall be duplicated on all copies submitted.

I. Submit standard items like equipment brochures, cuts of fixtures, or standard catalog sheets or pages. Indicate exact item or model and all proposed options. Include scale details, sizes, dimensions, performance characteristics, capacities, wiring diagrams, controls and other pertinent data.

**22.40 SUBMITTALS - SAMPLES -**

A. Submit two (2) each to address indicated above. Identify samples as to: manufacturer, item, use, type, project designation, specification section or drawing detail reference, color, range, texture, finish and other pertinent data.

B. Forward with transmittal letters. Include brochures, shop drawings and installation instructions. Contractor to stamp his approval on samples or transmittals as indication of his checking and verification of dimensions and coordination with interrelated items. Resubmit samples of rejected items.

C. Approved samples submitted or constructed, constitute criteria for judging completed work. Finish work or items not equal to samples will be rejected.

D. Samples may be retained for comparison purposes and the Contractor shall remove samples when directed. Contractor shall pay all costs of furnishing and removing samples.

**22.50 RETURN - SHOP DRAWING** - Engineer shall return shop drawings and related material with comments provided that each submission has been called for and is stamped by Contractor as indicated above. Engineer shall return without comment material not called for or which has not been approved by Contractor.

Manufacture or fabrication of items prior to final approval is at Contractor's own risk.

***END OF SECTION 22***

## **EROSION AND SEDIMENT CONTROL**

**30.00 SCOPE** - The work covered by this specification consists of furnishing all labor, tools, materials, equipment and performing all operations in connection with sediment and erosion control unless otherwise provided for on the drawings or in the Detailed Specifications.

**30.20 NPDES STORMWATER PERMIT** – The Owner will apply to obtain coverage under the general National Pollutant Discharge Elimination System (NPDES) permit (Number NER160000) for storm water discharge. The Contractor will be the designated operator during the construction. The Owner has prepared the initial Storm Water Pollution Prevention Plan (SWPPP) for the project. The Contractor, as Operator, shall be responsible for installing and maintaining any and all necessary erosion and sediment control measures, and performing all necessary work directed as a result of regular inspections of the site and all control measures, in accordance with the permit conditions. The Contractor has been designated as the party responsible for maintaining and updating the SWPPP, including conducting regular site inspections and maintaining all records, in accordance with the SWPPP and the General Permit.

Any fines, penalties or judgments levied against the Owner as a result of the Contractor's failure to comply with the terms and conditions of these specifications, the permit, or the SWPPP, shall be borne solely by the Contractor. The Contractor shall be responsible for following the General Permit and SWPPP plan during the contract duration until final completion is achieved. Upon final completion of the project, according to the Contract Documents, the Contractor shall become the operator for the purposes of the permit for the duration of the SWPPP. The Contractor shall turn over all notes and inspection paperwork to the Owner.

This item shall be considered incidental to the project. No separate payment shall be made. Bid items for best management practices are included in the Bid.

**30.21 NPDES SIGNAGE** – The Contractor will be required to furnish, install, and maintain a sign on the project site in accordance with the NPDES general permit and these drawings and specification. If a detail is included in the Drawings, the detail drawing will take precedence over these specifications.

The sign shall be mounted on a 4x4 treated post with the top of the sign approximately 6.5' above ground. The post shall be plumb and have a minimum bury depth of 2.5'.

The sign face shall be 2' x 3' minimum. Sign shall be composed of flat aluminum sheet background with white face and black lettering. Sign shall comply with requirements of NDOR Standard Specifications for Highway Construction, 2007 Edition, Section 417, for Type A signs.

If this item is included as a Bid item, payment will be made at the unit bid price for each sign installed. If no Bid item is included, this item shall be considered incidental to construction, and no separate payment will be made.

**30.30 TEMPORARY EROSION AND POLLUTION CONTROL** - The Contractor shall exercise every reasonable precaution throughout the life of the contract to prevent silting of rivers, streams, impoundments, the project site, and adjacent property owners. Construction of drainage facilities, as well as performance of other contract work which will contribute to the control of siltation, shall be carried out in conjunction with earthwork operations or as soon thereafter as is practicable.

The Contractor shall take sufficient precautions to prevent pollution of streams, lakes, reservoirs, groundwater, the project site, and adjacent property owners with petroleum products, chemicals, or other materials used or stored on site.

All construction debris shall be disposed of in such a manner that it cannot enter any waterway. Waste excavation shall not be deposited in or near rivers, streams, or impoundments to prevent it from washing away during times of high water or runoff.

The Contractor shall properly maintain all erosion control measures. All erosion resulting from the Contractor's operations and the elements must be corrected at the Contractor's expense until final completion is achieved according to the Contract Documents. After final completion, the Contractor will continue to be responsible for maintenance and will remove the measures when appropriate. Signage and rain gauges shall be removed by the Owner.

Temporary Erosion and Pollution Control shall be considered incidental to the project. No separate payment shall be made for this item.

**30.31 RAIN GAUGE** – The Contractor shall provide a rain gauge on site, properly anchored, in a location agreed upon by the Owner and Engineer. This item shall be considered incidental to the project. No separate payment shall be made.

**30.40 TEMPORARY EROSION CONTROL MAT** - This item shall include all labor, materials, and equipment necessary to install temporary erosion control mat as indicated on the drawings and noted in this specification.

The erosion control mat shall be a machine-produced mat of 100% agricultural straw with a functional longevity of approximately 12 months. The blanket shall be of consistent thickness with the straw evenly distributed over the entire area of the mat. The mat shall be covered on the top side with a lightweight photodegradable polypropylene netting having an approximate 0.50 x 0.50 inch mesh and be sewn together on 1.50 inch centers (50 stitches per roll width) with degradable thread.

The mat shall be manufactured with a colored line or thread stitched along both outer edges (approximately 2 to 5 inches [5 to 12.5 cm] from the edge) to ensure proper material overlapping.

Straw erosion control mat shall be S75 as manufactured by North American Green, American Excelsior Co., AEC Premier Straw Single Net, Propex, Inc. Landlok 51, or equivalent, and shall have the following properties:

**MATERIAL CONTENT**

Matrix	100% Straw Fiber (0.50 lbs/yd <sup>2</sup> )
Netting	One side only, lightweight photodegradable (2.10 lbs/1,000 ft <sup>2</sup> approximate weight)
Thread	Degradable

Contractor shall first prepare the subsoil and seed the area over which the temporary erosion control mat will be placed. This shall be completed in accordance with the seeding specifications for the particular type of seed to be placed in that location, found elsewhere in these specifications. Following the seeding operations, the Contractor shall roll the erosion control mat and anchor with staples as shown in the drawings and in accordance with manufacturer's recommendations.

Payment for this item will be made at the unit price bid for the number of square yards of temporary erosion control mat installed. Measurement will not include areas of overlap, as these areas will be considered subsidiary to this item. Anchoring, stapling, and all other items necessary to complete the installation in place shall be considered subsidiary to this item, and no separate payment shall be made.

**30.50 SILT FENCE** - This item shall include all labor, materials, and equipment necessary to construct silt fence in accordance with the details and at the locations directed by the Engineer. Silt fence material shall be on the Nebraska Department of Roads (NDOR) Approved Products List for low porosity silt fence.

The Contractor shall excavate a trench to the width and depth shown on the drawings. The silt fence shall be placed in the trench and anchored as shown, and then backfilled and compacted to match the existing ground elevation. Fabric shall then be attached to the stakes as shown in the drawings. Pins shall be 11-gauge steel wire with a one-inch or larger throat, with minimum 6-inch legs.

The Contractor shall remove and dispose of silt that accumulates near the silt fence during construction operations and at completion of the project. At a minimum, silt shall be removed when it reaches a depth of 1/2 of the height of the fence, or when the fence is in need of repair. The silt fence shall be maintained in good working condition throughout the life of the project. Contractor shall remove silt fence when the area above the fence has been stabilized by a 70% cover of permanent vegetation.

Payment shall be made at the unit price bid for the number of lineal feet of silt fence installed. Payment will be made for the initial installation only. Maintenance of silt fence, including repairing or replacing silt fence that has been damaged or otherwise rendered ineffective, shall be at no cost to the Owner or Engineer. Removal of silt fence upon adequate stabilization of the site is incidental to this item, should it occur prior to final completion of the project. After final completion, the Contractor will continue maintenance and will remove the silt fence when appropriate.

**30.60 SILT CHECKS** - This item shall include all labor, materials, and equipment necessary to construct silt checks in accordance with the drawings and at the locations directed by the Engineer. Silt checks are to be generally located transversely across ditches, swales, and channels, with the intended purpose of slowing the flow of water, causing sediment to settle out and preventing erosion of the channel reach.

Silt checks may be constructed using bales, rock or concrete riprap, or other proprietary materials. Silt checks shall be installed in accordance with the drawings, details, and/or manufacturer's recommendations.

The Contractor shall remove and dispose of silt that accumulates near the silt checks during construction operations and at completion of the project. At a minimum, silt shall be removed when it reaches a depth of 1/2 of the height of the check, or when the check is in need of repair or is no longer effective in controlling erosion from the site. The silt checks shall be maintained in good working condition throughout the life of the project. Contractor shall remove silt checks when the area above the fence has been stabilized by 70% cover of permanent vegetation, should it occur prior to final completion of the project. Removal of silt checks upon adequate stabilization of the site is incidental to this item. After final completion, the Contractor will continue maintenance and will remove the measures when appropriate.

Maintenance of silt checks, including repairing or replacing silt checks that have been damaged or otherwise rendered ineffective, shall be at no cost to the Owner or Engineer. When listed as a Bid item on the Bid form, silt checks shall be paid for at the unit price bid for the number of lineal feet of silt checks installed. When not listed as a Bid item, this work shall be considered incidental to construction, and no separate payment will be made.

**30.65 COIR WATTLES** – When included as a bid item or when shown on the drawings, this item shall include labor, equipment, and materials necessary to install coir wattles or other proprietary erosion control products around existing curb opening or grate inlets on existing pavement. Coir wattles shall be composed of coconut fibers woven into a densely packed log. Wattles shall be placed as shown on the drawings or as directed by the Engineer. Minimum diameter shall be 9 inches.

This item shall include all necessary maintenance of the wattles during the project, including but not limited to removal of accumulated sediment, replacement of missing or damaged wattles, and other maintenance as required. The Contractor shall take every precaution to prevent the wattles from plugging the inlets or otherwise causing water to back up in the area. Contractor shall remove wattles from the job site upon completion of the project or upon final stabilization.

When listed as a Bid item on the Bid form, Coir Wattles shall be paid for at the unit price bid for the number of lineal feet of wattles installed. When not listed as a Bid item, this work shall be considered incidental to construction, and no separate payment will be made.

**30.68 ROCK CONSTRUCTION ROAD** – This item shall include all labor, materials, and equipment necessary to construct, maintain, and remove a stabilized rock construction access road. The road shall be used for all vehicles leaving the site to prevent tracking sediment on to adjacent streets. Construction of the road shall be in accordance with the details on the drawings. The road shall be maintained throughout the construction project to be effective in removing sediment from vehicles leaving the site. Maintenance shall include but not be limited to removing accumulated sediment, replacing rock used for the road when clogged with sediment, and all other necessary measures. If sediment is tracked from the site to adjacent roadways, the Contractor shall remove sediment and clean adjacent roads at no additional cost to the Owner. Adjacent roads shall be examined and cleaned if necessary each day, or as directed by the Engineer.

When included as a bid item in the bid form, this item shall be paid for at the unit price bid for the number of square yards of Rock Construction Road constructed, maintained, and removed. If not listed as a bid item, this item shall be considered incidental to the construction project, and no separate payment will be made.

**30.70 TEMPORARY STABILIZATION MEASURES** - This item shall include all labor, materials, and equipment necessary to temporarily stabilize areas of the site disturbed by construction activities. Any disturbed area (where vegetation, paving, etc. has been removed and bare soil is exposed) including stockpiles that will be left idle for a period of 14 days or longer must be stabilized. Temporary stabilization measures may include temporary seeding, mulching, erosion control mat, soil binders, or other measures approved by the Engineer to temporarily stabilize the exposed soil and reduce the risk of erosion from the site. Temporary seeding shall include seeding with a cover crop mix of wheat or oats at a rate of 15 lbs. per acre. Mulching shall include spreading native prairie hay free of weeds at a rate of 4000 pounds per acre over the exposed soil. Mulch shall be anchored using a straight serrated disc machine or other methods approved by the Engineer. Erosion control mat shall be installed in accordance with Section 30.40 above. Soil Binders shall be installed in accordance with the manufacturer's recommendations.

Contractor shall monitor areas that have been temporarily stabilized to ensure that the temporary stabilization methods are effective. Correct or repair areas where erosion is noted, and re-stabilize the area.

Temporary stabilization measures, if listed in the Bid, will be paid at the unit price bid for the number of units installed. If no Bid item is listed in the Bid form, this item will be considered incidental to construction, and no separate payment will be made.

**30.80 OTHER SEDIMENT CONTROL MEASURES** – The Contractor shall install other sediment control measures as indicated on the Drawings or as directed by the Engineer. Contractor shall install and maintain these measures in accordance with manufacturer's recommendations as indicated by the Engineer. If there is a Bid item for other measures, payment will be made at the unit price bid for the quantity installed. Separate payment will not be made for maintenance. If there is no Bid item, the work will be paid for at a price agreed upon prior to installation as additional work.

**30.85 CONCRETE WASHOUT PIT** – The Contractor shall construct a concrete truck washout pit on the site. The Contractor shall determine the necessary size required for the expected amount of concrete washout they will have on the project, and build the washout accordingly. No concrete washout will be permitted to be discharged on the site other than in a washout pit.

When listed as a Bid item in the Bid form, this item shall include all labor material, and equipment necessary to construct, maintain, and remove the concrete washout basin. If no Bid item is listed on the

Bid form, this item will be considered incidental to other items in the Bid, and no separate payment will be made.

***END OF SECTION 30***

## SEEDING AND MULCHING - TYPE B, KENTUCKY BLUEGRASS, FESCUE, BUFFALO

**33.00 SCOPE** - The work shall consist of furnishing all labor, equipment, and materials for seeding a permanent grass mixture on all disturbed areas as described in Section 33.90. All disturbed areas shall be reseeded with the same seed as the area disturbed.

**33.10 GENERAL** - The seeding and related operations shall be performed at such times as designated in Section 33.90 of this specification.

**33.20 LIME** - Limestone, where required, shall be standard agricultural ground limestone with a moisture content not in excess of 10 percent. The rate of application shall be as specified on the drawings or in Section 33.90.

**33.30 FERTILIZER** - The fertilizer, where required, shall be a regular commercial fertilizer (including liquid form) meeting the requirements of the applicable state laws, and shall be in such physical condition to insure uniform application over the area to be fertilized. Rates of application per acre shall be as specified on the drawings or in Section 33.90. Organic fertilizers may be used when specifically authorized in Section 33.90.

**33.40 SEED** - The seed shall be delivered to the site in tagged and labeled bags to show the percentage of purity and germination. The seed shall have been tested within six months prior to the date of seeding and shall conform to the latest seed laws of the United States and of the state. Species, the source of production if native grasses are used, and rates of seeding shall be as specified on the drawings or in Section 33.90.

**33.50 PREPARATION OF SEEDBED** - The entire area to be seeded shall be reasonably smooth and all washes and gullies shall be filled to conform to the desired cross section before actual seedbed preparation is begun. At this stage of the operation, the required fertilizer and lime shall be applied uniformly and incorporated into the top 3 inches of the soil with suitable tillage equipment. In special areas the seedbed preparation shall be as shown on the drawings or as specified in Section 33.90. The Contractor shall suspend operations when the soil is too wet or too dry.

**33.60 SOWING THE SEED** - Unless otherwise specified, the seeding operation shall be performed immediately after preparation of the seedbed. The seed shall be drilled or broadcast with approved types of equipment that will insure uniform distribution of the seed.

**33.70 MULCHING** - The required mulching shall be performed as soon as possible after seeding unless otherwise specified. The mulch shall be applied uniformly over the area. The type, rate, and methods of anchoring shall be as specified on the drawings or in Section 33.90.

**33.90 CONSTRUCTION DETAILS** - Items of work to be performed in conformance with the specification and the construction details therefor are:

**33.90a** The appropriate area to be fertilized, seeded and mulched will be all areas shown on the drawings and areas disturbed by the Contractor.

**33.90b** The fertilizers shall comply with the applicable portions of Section 8, 1973 Standard Nebraska Department of Roads Specifications. All fertilizers listed below are required.

Rates of application of commercial inorganic fertilizer shall be:



	<b>Rate of Application Per Acre (Minimum)</b>
<b>Available Nitrogen (N<sub>2</sub>)</b>	19 to 36 pounds
<b>Available Phosphoric Acid (P<sub>2</sub>O<sub>5</sub>)</b>	92 to 96 pounds

Rate of application of granular sulphur coated urea fertilizer shall be:

Nitrogen (total available) 0 pounds

**33.90c** The seedbed shall be prepared with a three-inch surface layer that will be loose enough to allow satisfactory penetration of the mulch anchoring machine. Several discing, harrowings or similar means may be required to provide a satisfactory seedbed. Discing, harrowing and raking shall be longitudinal on all slopes.

**33.90d** The grass mixture to be furnished will be uniformly drilled on all areas accessible to machinery. On areas not accessible to machinery, the seed may be uniformly broadcast, and will be covered by use of a harrow.

**33.90e** The grass drill used to drill the seed will be of such construction that it can handle light fluffy seeds, will have double disc furrow openers spaced not more than 10 inches apart, and be equipped with depth bands to allow placement of the seed from 1/2 inch to one inch deep. (Nisbet drill or equivalent) Land Roller type of seeding equipment is not acceptable.

**33.90f** Seed mixture to be furnished and seeded will consist of:

For the area consisting of roadway slopes, right-of-way areas and disturbed areas; type "B" in accordance with Nebraska Department of Roads, Standard Specifications. For residential yards match existing.

Seed shall comply with the following requirements and shall be applied at the rates shown:

<b>Type "B"</b>	<b>Minimum Purity (%)</b>	<b>Broadcast or Hydraulic Seeder Application Rate in Pounds Pure Live Seed/Acre</b>	<b>Approved Mech. Drill Application Rate in Pure Seed/Acre</b>
Perennial ryegrass – Linn	85		8
Slender wheatgrass	85		5
K-31 Fescue	85		5
Western Wheatgrass- Arriba, Flintlock, Barton	85		7
Blue Grama-NE, KS, CO, MN, SD	30		2.5
Buffalo Grasses-Sharp's Improved, Cody, Bison, Texoka	80		5
Sideoats Grama – El Reno, Butte	75		4
Sand lovegrass – Nebraska-27, native	90		0.6
Oats/Wheat*	90		17
<b>Bluegrass</b>			
Kentucky Bluegrass	95-98	87	87
<b>Fescue</b>			
Turf-Type Tall Fescue	95-98	210	210
<b>Buffalo</b>			
Sharp's Appr'd II Buffalo	95-99	44	44
Sharp Shooter Buffalo	95-99	44	44

\*Wheat in the fall

All seed shall be origin Nebraska, adjoining states, or as specified. Contractor proposing to use a substitute variety, or origin shall submit for Engineer's consideration a seed tag representing the seed which shows the variety, origin, and analysis of the seed.

Seeding operations shall be performed only during the periods between March 1st and June 10th, and between August 31st and December 31st, except by written permission of the Engineer. Work shall not be performed when the ground is frozen, wet or otherwise unillable, or when even distribution of materials cannot be obtained.

**33.90g** Mulching. Area to be mulched will be the same as seeded listed above. Mulching operations may be either before or after grass seeding operations, as designated by the Engineer.

Native prairie hay may be used as mulching material. It must be relatively free of weeds. Hay must not contain noxious weed plants or noxious weed seed. Hay of the following species or mixtures of species is preferred: Big bluestem, little bluestem, indiagrass, prairie cordgrass, western wheatgrass, sideoates grama or switchgrass. Minor amounts of other species that occur in the native prairie will be acceptable.

Rate of application will be 4000 pounds per acre. Anchoring will be done immediately after application and will be accomplished by using a straight serrated disc machine (similar to the Imco Landscape Soil Erosion Mulch Tiller) with discs spaced not more than 8 inches apart, weighted to press the mulch into

the soil. The mulch material to be firmly anchored in the soil. Operations of the mulch anchoring machine on slopes to be on the approximate contour whenever possible.

Straw, if approved, as a mulch material shall be applied at the rate of 5,000 pounds per acre.

**33.90h** Maintenance, Final Acceptance and Guarantee Remulch with new mulch in areas where mulch has been disturbed by wind or maintenance operations sufficiently to nullify its purpose. Anchor as required to prevent displacement. Replant and/or resod bare, dead, or dying areas, using the same materials and methods specified.

Guarantee all seeded areas for a period of one year from date of acceptance.

**33.91** **METHOD OF MEASUREMENT AND PAYMENT** - On lump sum and unit price contracts, cost of all items described in this section and shown on the drawings complete and in place shall be at contract price as set forth in the Bid. Items not specifically listed in the Bid or defined by this specification shall be considered subsidiary to construction and direct payment will not be made for these items.

For unit price contracts the areas seeded or seeded and mulched will be measured in units of acres and tenths. Payment for seeding or seeding and mulching will be made at the contract unit price, and such payment will constitute full compensation for all materials, labor and equipment and all other items necessary and incidental to completion of the work.

***END OF SECTION 33***

## DETAILED SPECIFICATIONS

**DS.0 SCOPE** - These Detailed Specifications shall be part of this specification and its purpose herewithin is to supplement and/or supersede the previous specifications of these Contract Documents.

**DS.1 MOBILIZATION** - This item shall include all costs to the Contractor connected with but not limited to preparatory work, the movement of personnel, equipment, supplies, and incidentals, bonding, insurance, overhead and any other related fixed cost items or work or operations which must be performed or costs which are incurred prior to the commencement of the work on various phases of the project.

By payment of mobilization as a fixed cost, the Contractor shall not be allowed an adjustment to the contract bid prices as a result of the addition of, reduction of, or the elimination of any item or group of items from the contract other than those specified in paragraph SC-11.9.3 of the Supplementary Conditions.

Mobilization shall be paid as a percentage based upon the percentage of the contract work completed as set forth below.

1. Partial Payment will be made as follows:
  - a. When 5% of the original contract amount (excluding the Mobilization item), is earned, 50% of the lump sum amount for Mobilization will be paid, subject to the limitations listed under Paragraph 2 below.
  - b. When 10% of the original contract amount (excluding the Mobilization item), is earned, 100% of the lump sum amount for Mobilization will be paid, subject to the limitations listed under Paragraph 2 below.
2. The lump sum amount paid for Mobilization shall be subject to the following limitations:
  - a. If the total contract amount is \$100,000 or less, the total amount paid for mobilization shall not exceed 10% of the total contract amount.
  - b. If the total contract amount is greater than \$100,000, the total amount paid for mobilization shall not exceed \$10,000, plus 3% of the total contract amount above \$100,000.
  - c. The total sum of all payments shall not exceed the original contract amount bid for mobilization item, regardless of the fact that the contractor may have, for any reason, shutdown his work on the project or moved equipment away from the project and then back again.

Payment shall be a lump sum basis at the unit price bid for mobilization.

**DS.2 ESTABLISHED QUANTITIES** - If the Bid, Contract Provisions, Specifications, or Agreement, provide that payment is to be made on established quantities, final measurement will not be made unless authorized alterations, as hereinafter described in the specifications are made. If no alterations are made, the Contractor will be paid for these established quantities in accordance with these specifications. If alterations are authorized, final measurements will be made over the affected sections or areas of the project in accordance with the pertinent section of the specifications.

**DS.3 EXISTING UTILITIES** - According to Section 6.20 of this specification, the Contractor shall verify the elevations of the existing utilities prior to initiation of pipe laying and undercrossing operations. No direct payment shall be made for the Contractor's operations.

**DS.4 STRIPPING, STOCKPILING AND FINAL PLACEMENT OF TOPSOIL, ESTABLISHED QUANTITY** - This item shall include all labor, materials, equipment and other items necessary and

incidental to stripping the topsoil in the area of trail construction. Topsoil shall be stripped off of the areas of within the limits of construction to a minimum depth of 6 inches and temporarily stockpiled in areas as determined by the Engineer. Areas of trail construction shall be topped with 6" of salvaged topsoil to promote vegetative growth. Topsoil not utilized for placement on the project will become the property of the Owner.

Payment for stripping of topsoil will be made at the unit price per square yard of area which is stripped for topsoil salvage. This item will be an established quantity and will be paid for at the quantity as established in the bid and not physically measured in the field. No change in quantity will be considered by the Owner unless there has been a significant change in alignment, grade or scope of work.

**DS.5 EARTHWORK MEASURED IN EMBANKMENT, E.Q.** – This item shall include all labor, materials, and equipment necessary to import cohesive soil and place and compact in embankment and fill areas as designated on the Drawings. A compaction factor has not been applied to compute the quantities shown on the Plans. The Contractor shall apply his own compaction factor and adjust his bid accordingly.

Earthwork measured in embankment will be measured by the cubic yard in place in the embankment by the method of average end areas of material in place. No allowance will be made for any surplus material outside the limits of the typical cross sections or for any materials required to correct settlement of the embankment.

The Contractor will be responsible for furnishing, hauling, locating, placing and compacting borrow material. Non-cohesive or granular borrow material will not be accepted.

Embankment construction shall be done in accordance with Standard Specification No. 12, "Portland Cement Concrete Pavement". The Contractor shall at his expense submit sieve analysis and standard proctor curves for the materials encountered as set forth in Standard Specification No. 6, "Excavation, Trenching, Bedding and Backfilling" and Standard Specification No. 12, "Portland Cement Concrete Pavement". Embankment areas to be seeded within the limits of construction shall be covered with 6" of salvaged topsoil to promote vegetative growth.

The Engineer shall coordinate all density and moisture tests. Any failing or retests will be the responsibility of the Contractor for payment of these tests. The frequency of testing shall be as indicated in Standard Specification No. 6, "Excavation, Trenching, Bedding and Backfilling," and in Standard Specification No. 12, "Portland Cement Concrete Pavement".

Payment for this item will be made at the unit price per cubic yard of embankment in place. This item will be an established quantity and will be paid for at the quantity as established in the bid and not physically measured in the field. No change in quantity will be considered by the Owner unless there has been a significant change in alignment, grade or scope of work. This quantity shall also include the 6" of topsoil placement as outlined in DS.4.

**DS.6 OVEREXCAVATION AND REPLACEMENT OF UNSUITABLE BASE MATERIAL (IF REQUIRED)** – This item shall include all labor, materials, and equipment necessary to excavate unsuitable base material beyond the limits of the established subgrade and replace with select cohesive material. The Contractor shall remove, as directed by the Engineer, that material which is determined to be unsuitable for base.

Unsuitable material excavated by the Contractor shall be disposed of by the Contractor as directed by the Engineer. Contractor is responsible for finding, purchasing, furnishing, hauling and placing the material to be used for replacement.

This item may or may not be required depending upon the actual conditions encountered during construction, and if required, the actual quantity used may vary substantially from the estimated quantity. Overexcavation of unsuitable base material will be required as determined by the Engineer. Quantity of

excavated and replacement material shall be measured by the cubic yard in place by the average end area method.

No adjustments to the quantity will be made for compaction factor of the replacement material and the Contractor shall adjust his bid price accordingly.

Payment will be made at the unit price bid for the computed number of cubic yards of material excavated and shall include its replacement with select cohesive material compacted to specifications.

**DS.7 LANDFILL DISPOSAL FEES** - Waste delivered to the Lexington Area Landfill Site will be charged to the Contractor on a per ton basis.

**DS.8 FURNISH AND INSTALL WARNING AND DIRECTIONAL SIGNS, COMPLETE IN PLACE** - This item shall include all labor, materials, equipment and other items necessary for installation of trail signage as illustrated on the details in the Drawings. Sign placement shall be according to the details. Signs shall conform to: Manual on Uniform Traffic Control Devices – 2003 Addition, Part 9, Traffic Controls for Bicycle Facilities.

Sign posts shall conform to the Standard Specifications for Hot Rolled Carbon Sheet Steel, structural quality ASTM designation A570-79. Yield strength of the steel shall be 60,000 psi minimum. Posts shall be square tubing and manufactured from galvanized steel meeting ASTM A-525 or AASHTO M-120 coating requirements.

All posts shall have 7/16" diameter pre-drilled, pre-punched, or die punched knockouts on 1" centers full length of posts on all four sides. Hole drilling or die punching shall be performed prior to coating.

Sign posts shall be 1-3/4"x14 gauge. Minimum depth of bury for the sign posts shall be 4'-0". Length of posts varies from 10' to 12' as required for specific locations.

A Trail Funding is required to be installed according to the Governmental Requirements in the specifications, and located according to the drawings.

Payment for this item shall be at the unit price for each sign installed as indicated in the Bid.

**DS.9 CONSTRUCT 6" THICK P.C. CONCRETE TRAIL ENTRANCE RAMP, TYPE 47B-3500** - This item shall include furnishing, forming, placing, consolidating, finishing, and curing concrete trail entrance ramp in accordance with detail drawings and section 12 in the specifications. This item shall include any saw cutting, concrete removals, excavation, rebar tie bars, expansion joint, and concrete required to construct entrance. The entrance shall be constructed to meet ADA requirements. The ADA detectable warning panels will be provided by the Owner to be installed by Contractor. Where the curb and gutter is to be replaced the contractor shall ensure a straight, clean saw cut is made for removals; before new curb and gutter is constructed there shall be #4 18" tie bars drilled into the existing pavement @ 4' spacing. 1" Expansion joint shall be placed behind the back of curb according to the detail drawings. There shall be no separate payment made for traffic control signage and barricades, as this shall be considered incidental to trail construction.

Payment will be made at the unit price bid for each entrance ramp constructed.

**DS.10 CONCRETE MIX** - For all concrete placed on this project, the cement used shall meet current Nebraska Department of Transportation (NDOT) requirements for Type IP.

**DS.11 CONSTRUCT CONCRETE HEADER** – This item shall include furnishing, forming, placing, consolidating, finishing, and curing concrete header as per the Detail on the Drawings. Concrete used in header construction shall be the same as that specified for the street pavement construction.

Payment will be made at the unit price bid for the measured lineal feet of header constructed.

**DS.12 DRILL AND GROUT TIE-BARS** – This item shall include all labor, equipment, and materials necessary to drill into existing pavement slab at locations indicated on the Plans and grout in tie-bards as per the Detail on the Plan Drawings.

Payment will be at the unit price bid for the number of bars installed.

**DS.13 ADJUST TO GRADE EXISTING MANHOLE** – This item shall include all labor, equipment, and materials needed to raise or lower cast iron manhole frames to grade, including any modifications necessary to the existing manhole structure. The existing ring and cover shall be salvaged and reused when possible.

Payment will be made at the unit price bid each for the number of manhole ring and covers adjusted to grade.

**DS.14 ADJUST TO GRADE EXISTING WATER VALVE BOX** – This item shall include all labor, materials, and equipment needed to raise or lower the cast iron water valve boxes to grade. The Contractor is to salvage the existing valve boxes during the earth excavation or pavement removal operation. Any valve boxes damaged during the pavement removal are to be replaced by the Contractor at his expense.

Payment for adjusting water valve box to grade shall include salvage and reuse of the existing valve box.

Payment will be at the unit price bid for the number of water valve boxes adjusted to grade.

**DS.15 CONSTRUCT JUNCTION MANHOLE** – This item shall include all materials, labor, and equipment necessary to construct reinforced concrete junction manholes as per the Details on the Drawings. Concrete used for the construction of junction manholes shall be the same as that specified for pavement construction.

Payment will be at the unit price bid each for the number of junction manholes constructed.

**DS.16 FURNISH AND INSTALL REINFORCED CONCRETE STORM SEWER PIPE, CLASS III** – This item shall include all labor, materials, and equipment necessary to complete the installation of Class III reinforced concrete storm sewer pipe at the sizes and locations indicated on the Drawings. Materials and installation shall conform to the requirements of Standard Specifications No. 5 "Storm Sewers".

Payment will be made at the unit price bid for the measured lineal feet of pipe installed.

**DS.17 CONSTRUCT HEADWALL** – This item shall include all labor, equipment, and materials necessary to construct reinforced concrete headwall on the size of pipe indicated as per the Detail shown on the Plans.

Payment will be made at the unit price bid for the counted number of reinforced concrete headwalls constructed.

**DS.18 COATING FOR CAST IRON CASTINGS** – All cast iron castings furnished are to be coated with standard asphalt base paint, either shop coated or field coated as applicable. Sandblast prior to painting.

**DS.19 PROPERTY PINS** – The Contractor will be required to replace property pins that are anticipated to be destroyed by the construction operations. The cost of replacement shall be considered incidental to the construction. The contractor shall also replace at this own expense any additional property pins that he damages as a result of his construction operations.

**DS.20 CONCRETE PLACEMENT** – Concrete Pavement for the trail mainline may be placed by an approved slip form/extrusion machine or by using the formed method as described in Section 12.

**DS.21 FILL FOR DITCH** – The required fill for the drainage ditch located from Sta. 37+50 to 42+03 is included in the embankment quantity in the Bid. The ditch may be filled in before pipe installation occurs, resulting in the Contractor being required to excavate and backfill to facilitate pipe installation; or if the Contractor has installed the pipe prior to the ditch being filled, the Contractor will be required to backfill the pipe with the provided borrow material.

**DS.22 SEEDING** - Areas to be seeded, according to Section 33, are as indicated on the Drawings. Damage outside of the right-of-ways construction limits will be at the Contractor's expense.

**DS.23 SUBSTANTIAL COMPLETION** - The project shall be considered substantially complete when the following conditions are met:

1. The Trail is opened to the public.
2. All signs are installed.
3. Storm Sewer is installed and operational.

**DS.24 TRAFFIC CONTROL** - This item shall include all labor equipment and materials necessary to furnish and install the indicated traffic control devices and maintain them in proper condition throughout the project and remove them at the completion of the project. This item shall also include relocation of the devices as required throughout the project at no additional compensation.

All traffic control devices are to be constructed, installed, and maintained in accordance with Nebraska Department of Transportation Standard Specification for Highway Construction 2007 Edition and the U.S. Department of Transportation, Federal Highway Administration, Manual on Uniform Traffic Control Devices, Current Edition. Controls shall also conform to NDOT Standard Plans 920, 921, 922, and 923.

This item shall be considered incidental to the project and no separate payment shall be made.

***END OF SECTION***



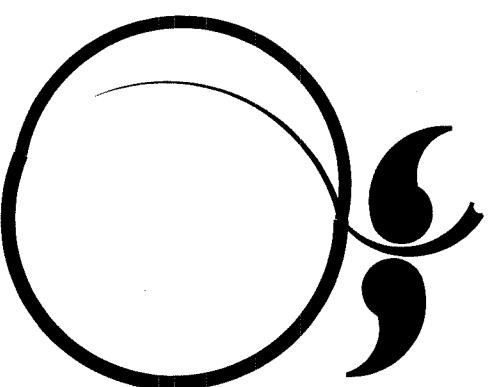
THIS PAGE CONCLUDES  
THE  
SPECIFICATIONS  
FOR

**HIKE / BIKE TRAIL - NORTHWEST PHASE II**  
LEXINGTON, NEBRASKA



DRAWINGS FOR

# HIKE/BIKE TRAIL NORTHWEST PHASE II



INDEX OF DRAWINGS	
SHT. NO.	DESCRIPTION
1	TITLE SHEET & INDEX
2	LOCATION MAP & NOTES
3	HIKE/BIKE TRAIL SIGNS
4-12	HIKE/BIKE TRAIL PLAN & PROFILE
13	TYPICAL CROSS SECTIONS
14	DETAILS
15	DETAILS
16	EROSION CONTROL DETAILS
17	EROSION CONTROL PLAN
XI-X14	CROSS SECTIONS

## LEXINGTON, NEBRASKA 2020

M&A PROJECT NO. 127-E1-024-19

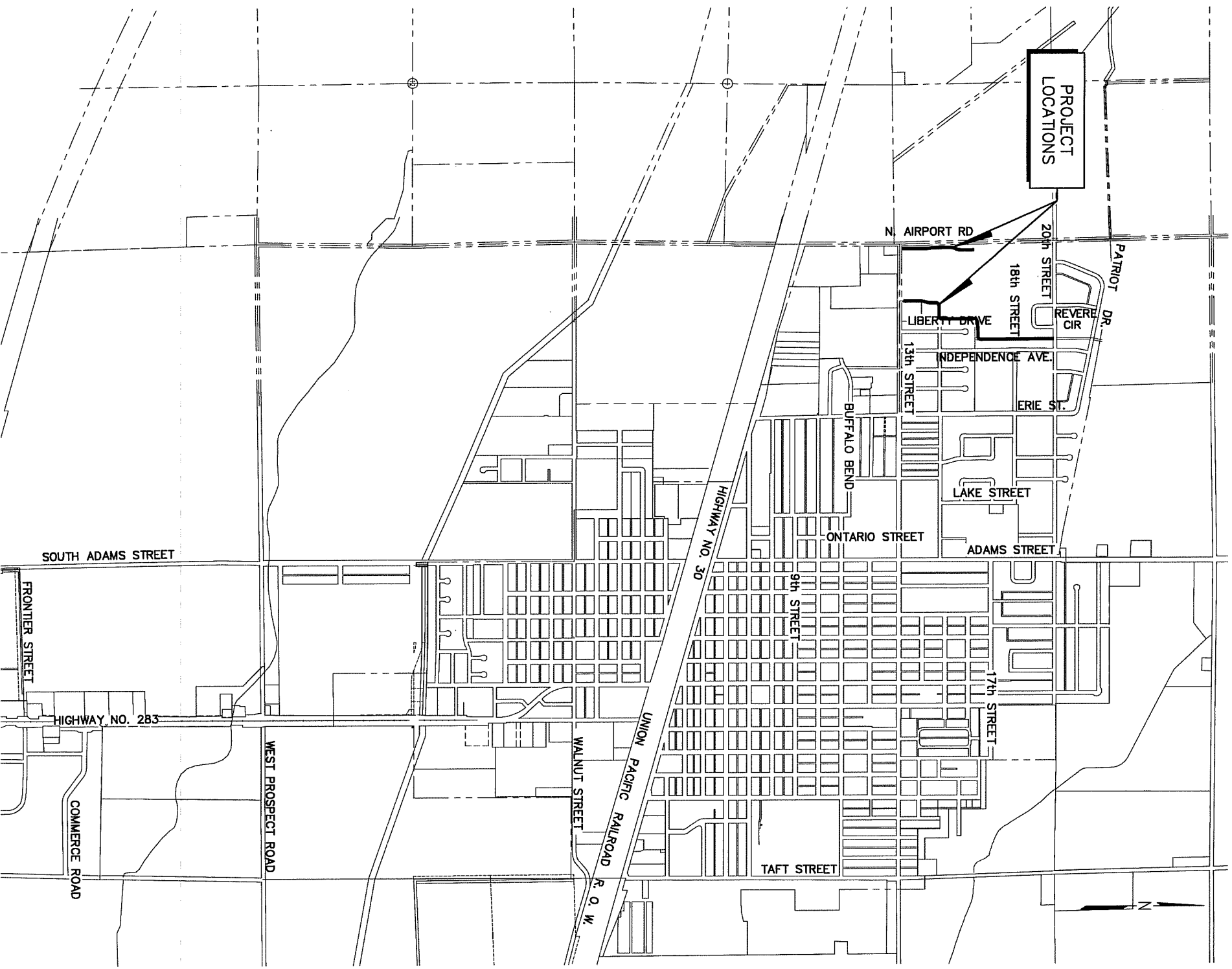
RTP PROJECT NO. 2019-004



**M&A** MILLER & ASSOCIATES Consulting Engineers P.C.  
1111 Central Avenue - Kearney, NE 68847

UTILITIES  
DIGGERS HOT LINE  
8-1-1

SET NO. \_\_\_\_\_  
DRAWING NO. 37031



LEXINGTON, NEBRASKA

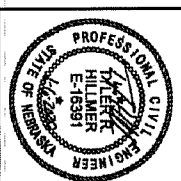
**LEGEND**

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	HEDGE ROW, TREELINE, WOODS		PROPERTY LINE
	HEDGES, BUSHES, SHRUBS OR WOODS		CENTERLINE
	DECIDUOUS TREE AND TRUNK SIZE		SECTION LINE
	CONIFEROUS TREE AND TRUNK SIZE		RIGHT-OF-WAY
	GAS METER OR REGULATOR		PERMANENT EASEMENT
	WATER METER		CONSTRUCTION EASEMENT
	PROPOSED WATER VALVE		WATER MAIN AND SIZE
	EXISTING WATER VALVE		STORM SEWER AND SIZE
	PROPOSED FIRE HYDRANT		SANITARY SEWER AND SIZE
	EXISTING FIRE HYDRANT		OVERHEAD ELECTRICAL LINE
	ELECTRICAL BOX		UNDERGROUND ELECTRICAL LINE
	POWER POLE		UNDERGROUND GAS LINE
	POWER POLE WITH LIGHT		UNDERGROUND CABLE TV LINE
	GUY WIRE		UNDERGROUND FIBER OPTIC LINE
	TRAFFIC LIGHT		EXISTING GROUND CONTOUR
	TELEPHONE RISER		NEW GROUND CONTOUR
	STREET SIGN		DRAINAGE COURSE OR FLOW LINE
	MAILBOX		CURB INLET
	SECTION CORNER		GRATE INLET
	CONTROL POINT, TBM		MANHOLE
	PROPERTY PIN		CLEANOUT
	CULVERT		MONITOR WELL LOCATION
	RAILROAD TRACKS		
	BASE LINE		
	FENCE		

**NOTES:**

1. CONTRACTOR IS TO COORDINATE ALL STREET CLOSINGS WITH THE CITY OF LEXINGTON, NOTIFY FIRE/RESCUE DEPARTMENT, AND ALL ADJOINING PROPERTY OWNERS 72 HOURS PRIOR TO CLOSING STREETS OR DRIVES, OR AS NOTED IN THE SPECIFICATIONS.
2. THE LOCATION OF ALL AERIAL AND UNDERGROUND UTILITY FACILITIES MAY NOT BE INDICATED IN THESE DRAWINGS. UNDERGROUND UTILITIES, WHETHER INDICATED OR NOT, WILL BE LOCATED AND FLAGGED BY THE UTILITIES AT THE REQUEST OF THE CONTRACTOR.
3. NO EXCAVATION WILL BE PERMITTED IN THE AREA OF UNDERGROUND UTILITY FACILITIES UNTIL ALL SUCH FACILITIES HAVE BEEN LOCATED AND IDENTIFIED TO THE SATISFACTION OF ALL PARTIES AND THEN ONLY WITH EXTREME CARE TO AVOID ANY POSSIBILITY OF DAMAGE TO THE UTILITY FACILITY.
4. ALL SIGNS, MAILBOXES, CULVERTS, GUYWIRES, FENCES, AND PROPERTY PINS ENCOUNTERED DURING THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED TO ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
5. THE QUANTITIES OF EACH ITEM LISTED ON THE BID SCHEDULE MAY VARY FROM THE TOTAL QUANTITIES. THE CITY MAY ADD OR DELETE FROM THE PROJECT, PORTIONS OF IMPROVEMENTS.
6. SAW CUTTING OF PAVEMENT IS REQUIRED FOR REMOVAL AND IS INCIDENTAL TO THE PROJECT. ADDITIONAL SAW CUTTING BEYOND THAT WHICH IS INDICATED ON THE DRAWINGS MAY BE REQUIRED.
7. TOPSOIL SHALL BE REMOVED, STOCKPILED AND REPLACED FOR ALL EXCAVATION AREAS.
8. CONTRACTOR SHALL GUARD AND PROTECT ALL TREES, SHRUBS, FENCES, AND OTHER ITEMS NOT SPECIFICALLY MARKED FOR REMOVAL.
9. THE CONTRACTOR MAY CLOSE THE ROAD TO ALL BUT LOCAL TRAFFIC SUBJECT TO THE CONDITIONS PRESCRIBED IN THE STANDARD SPECIFICATIONS.
10. THE CONTRACTOR SHALL COORDINATE WITH CITY AND FIND A SUITABLE LOCATION BEYOND THE LIMITS OF THE RIGHT-OF-WAY TO DISPOSE OF EXCESS MATERIAL.

HIKE/BIKE TRAIL NORTHWEST PHASE II  
**LOCATION MAP & NOTES**  
 LEXINGTON, NEBRASKA



**VERIFY SCALES**

BAR IS ONE INCH ON ORIGINAL DRAWING  
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

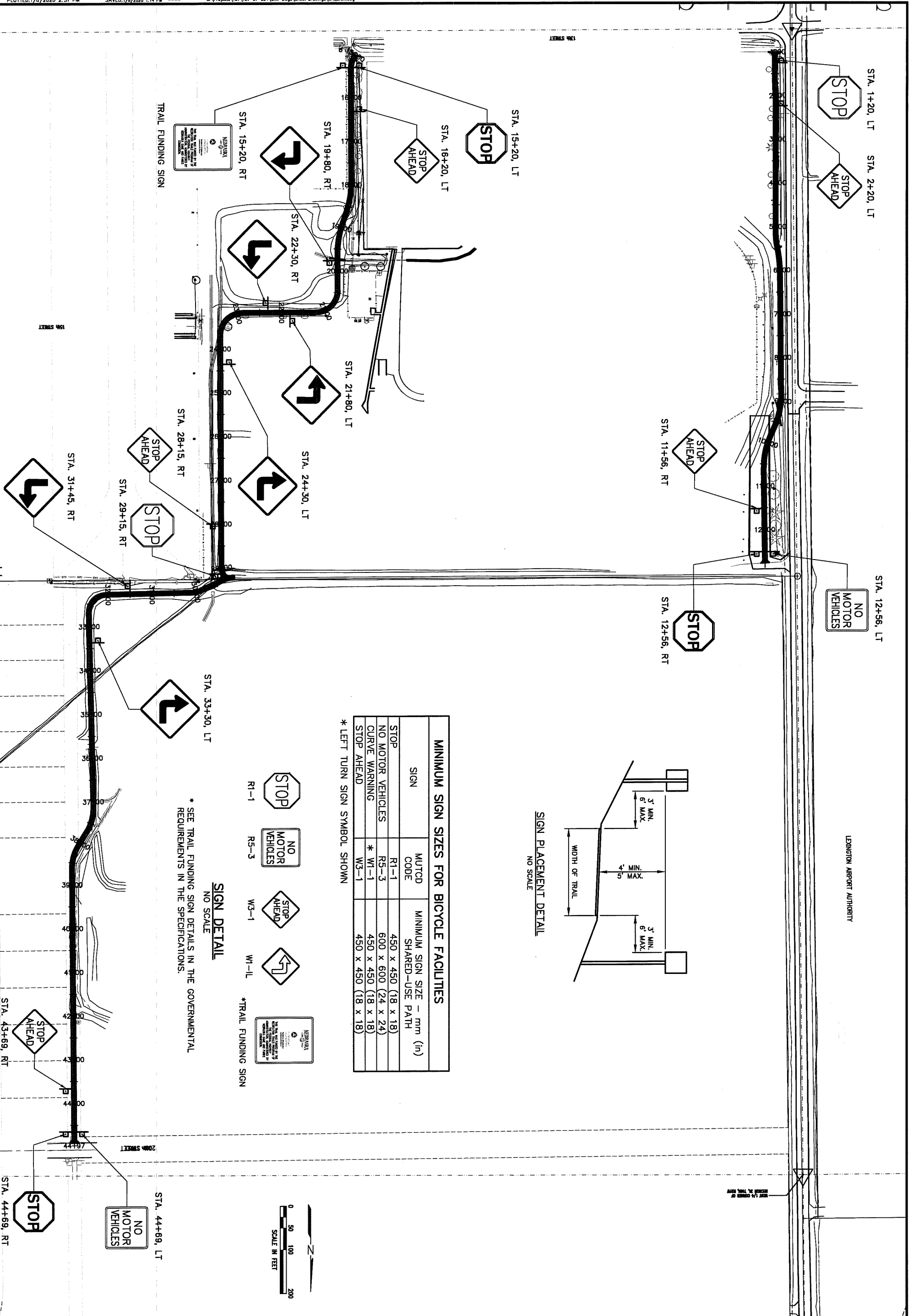
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PROJECT NO. 127-E1-024

DATE: JANUARY 2020  
 FIELD BOOK: M&A DWG NO. 37030  
 DRAWN BY: APRV/D BY: TBM  
 LAD  
 SHEET 2

**M&A**  
 Miller & Associates  
 Consulting Engineers, P.C.  
 Kearney, NE (402) 224-6456  
 McCook, NE (402) 345-3710

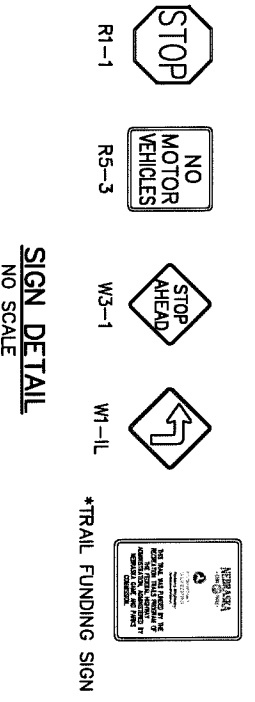
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**MINIMUM SIGN SIZES FOR BICYCLE FACILITIES**

SIGN	MUTCD CODE	MINIMUM SIGN SIZE - mm (in)
STOP	R1-1	450 x 450 (18 x 18)
NO MOTOR VEHICLES	R5-3	600 x 600 (24 x 24)
CURVE WARNING	* W1-1	450 x 450 (18 x 18)
STOP AHEAD	W3-1	450 x 450 (18 x 18)

\* LEFT TURN SIGN SYMBOL SHOWN



\* SEE TRAIL FUNDING SIGN DETAILS IN THE GOVERNMENTAL REQUIREMENTS IN THE SPECIFICATIONS.



DATE: JANUARY 2020  
FIELD BOOK: M&A DWG NO. 37029  
DRAWN BY: APRV/TJ: TRH  
ADD: TRH  
SHEET: 3

HIKE/BIKE TRAIL NORTHWEST PHASE II  
**HIKE/BIKE TRAIL SIGNS**  
LEXINGTON, NEBRASKA

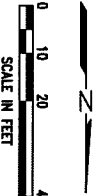
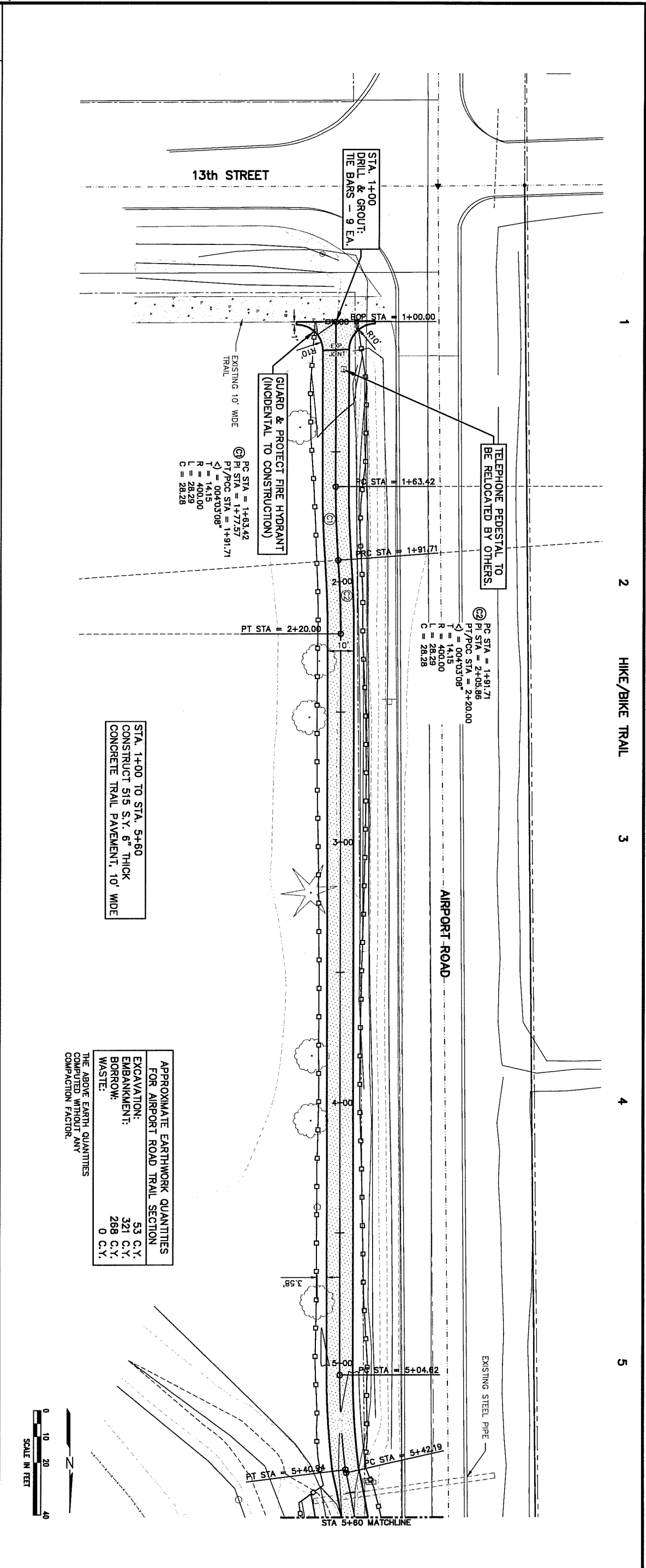
REVISIONS

BY

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**Miller & Associates**  
Consulting Engineers, P.C.  
Kearney, NE (308) 224-6456  
McCook, NE (308) 345-3710

EXISTING GROUND ELEV.	PROPOSED GROUND ELEV.	STATION
2394		0+00
2396		1+00
2398		2+00
2400		3+00
2402		4+00
2404		5+00
2406		5+60
2408		5+60
2408	2403.00	2408
2406	2402.44	2406
2404	2401.94	2404
2402	2401.66	2402
2400	2401.59	2400
2398	2401.58	2398
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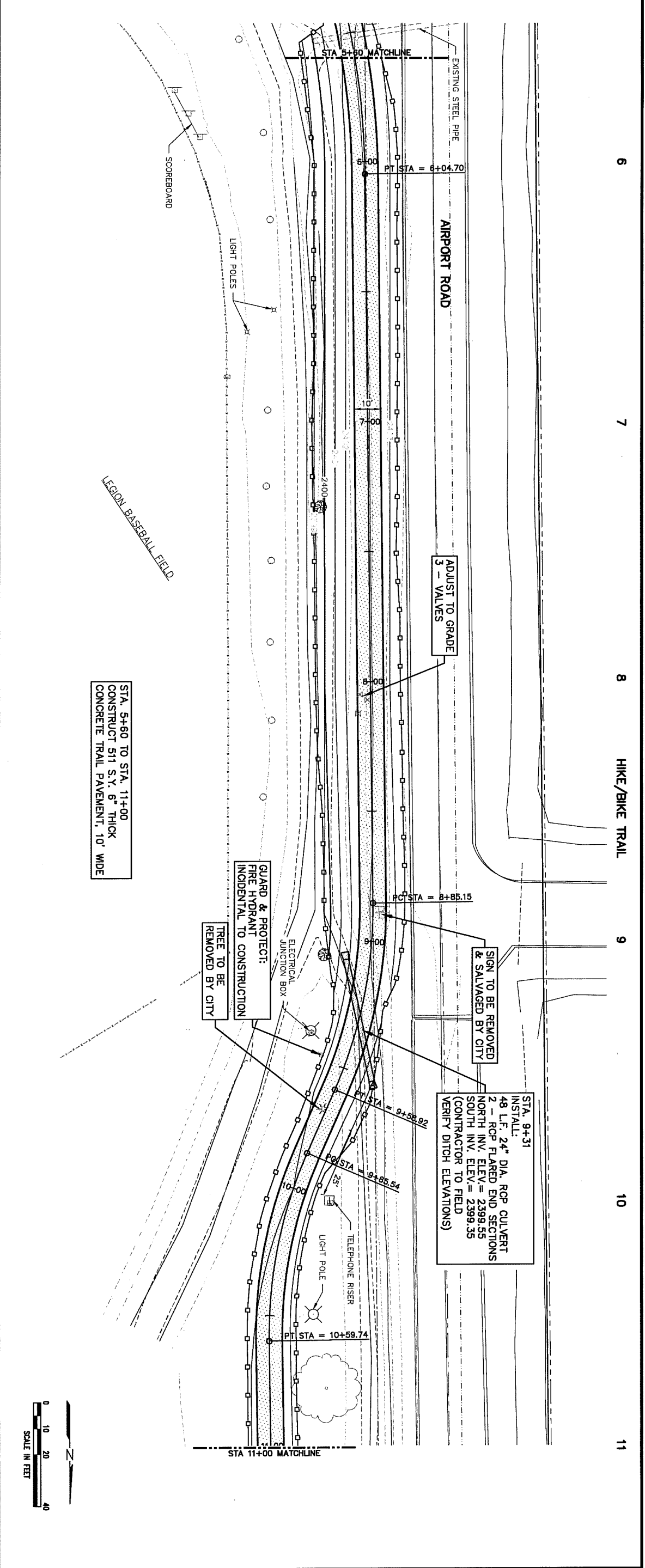


HIKE/BIKE TRAIL NORTHWEST PHASE II  
**HIKE/BIKE TRAIL PLAN**  
 LEXINGTON, NEBRASKA

PROFESSIONAL CIVIL ENGINEER  
 TALENT HILLIER E-16391  
 STATE OF NEBRASKA  
 VERIFIER SCALES  
 BAR IS ONE INCH ON ORIGINAL DRAWING  
 IF THIS SHEET ADJUST SCALES ACCORDINGLY.  
 SCALE: 1"=20'  
 PROJECT NO. 127-E1-024  
 DATE: JANUARY 2020  
 FIELD BOOK WAA DMC NO. 37028  
 DRAWN BY: APR/VO BY: RPH  
 DMM

MILLER & ASSOCIATES  
 Consulting Engineers, P.C.  
 Kearney, NE (800) 234-6456  
 McCook, NE (800) 345-3710

Station	Proposed Ground Elev.	Existing Ground Elev.
2408	2402.10	2401.8
	2402.15	2401.9
	2402.20	2401.9
	2402.26	2402.0
	2402.31	2402.0
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	2402.52	2402.2
	2402.45	2402.2
	2402.38	2402.1
	2402.30	2402.1
	2402.22	2400.5
	2402.15	2400.1
	2402.08	2401.4
	2402.00	2401.7
	2402.04	2401.6
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2394	2394	2394



DATE: JANUARY 2020	PROJECT NO: 127-E1-024
FIELD BOOK: M&A DWG NO. 37027	SCALE: 1"=20'
DRAWN BY: APR/VJ/BJ	VERIFICATION SCALES:
CHKD BY: TRH	BAR IS ONE INCH ON ORIGINAL DRAWING
SHEET 5	IF NOT ONE INCH ON THIS SHEET, INDICATE SCALES ACCORDINGLY.



**HIKE/BIKE TRAIL NORTHWEST PHASE II**  
**HIKE/BIKE TRAIL PLAN**  
 LEXINGTON, NEBRASKA

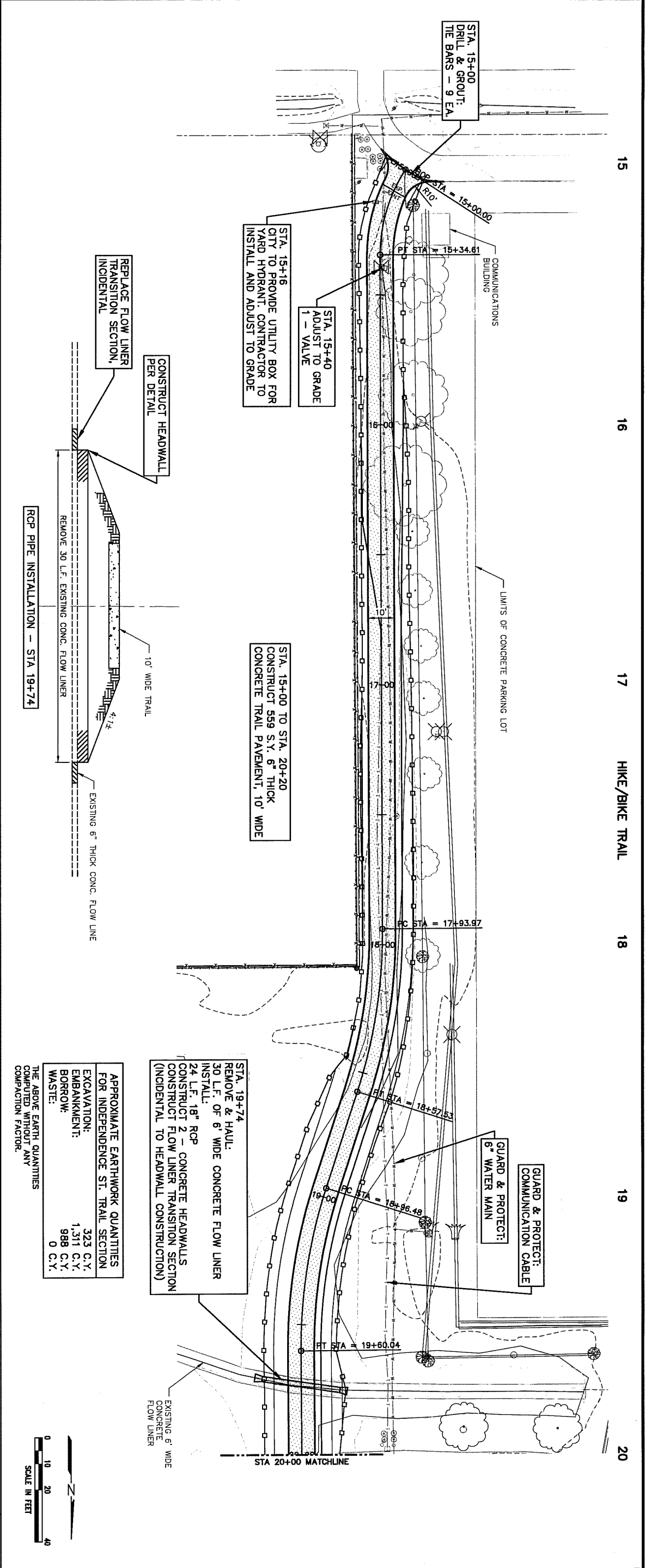
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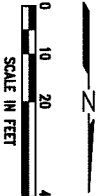
EXISTING GROUND ELEV.	PROPOSED GROUND ELEV.	STATION
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2494	2400	2400
2496	2400	2400
2498	2400	2400
2500	2400	2400



APPROXIMATE EARTHWORK QUANTITIES FOR INDEPENDENCE ST. TRAIL SECTION

EXCAVATION:	323 C.Y.
EMBANKMENT:	1,311 C.Y.
BORROW:	988 C.Y.
WASTE:	0 C.Y.

THE ABOVE EARTH QUANTITIES COMPUTED WITHOUT ANY COMPACTION FACTOR.



## HIKE/BIKE TRAIL NORTHWEST PHASE II

# HIKE/BIKE TRAIL PLAN

### LEXINGTON, NEBRASKA

**VERIFICATION SCALES**

BAR IS ONE INCH ON ORIGINAL DRAWING

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SCALE: 1"=20'

PROJECT NO. 127-E1-024

DATE: JANUARY 2020

FIELD BOOK: MAA OMC NO. 37025

DRAWN BY: ARVD/BR

CHKD BY: TRH

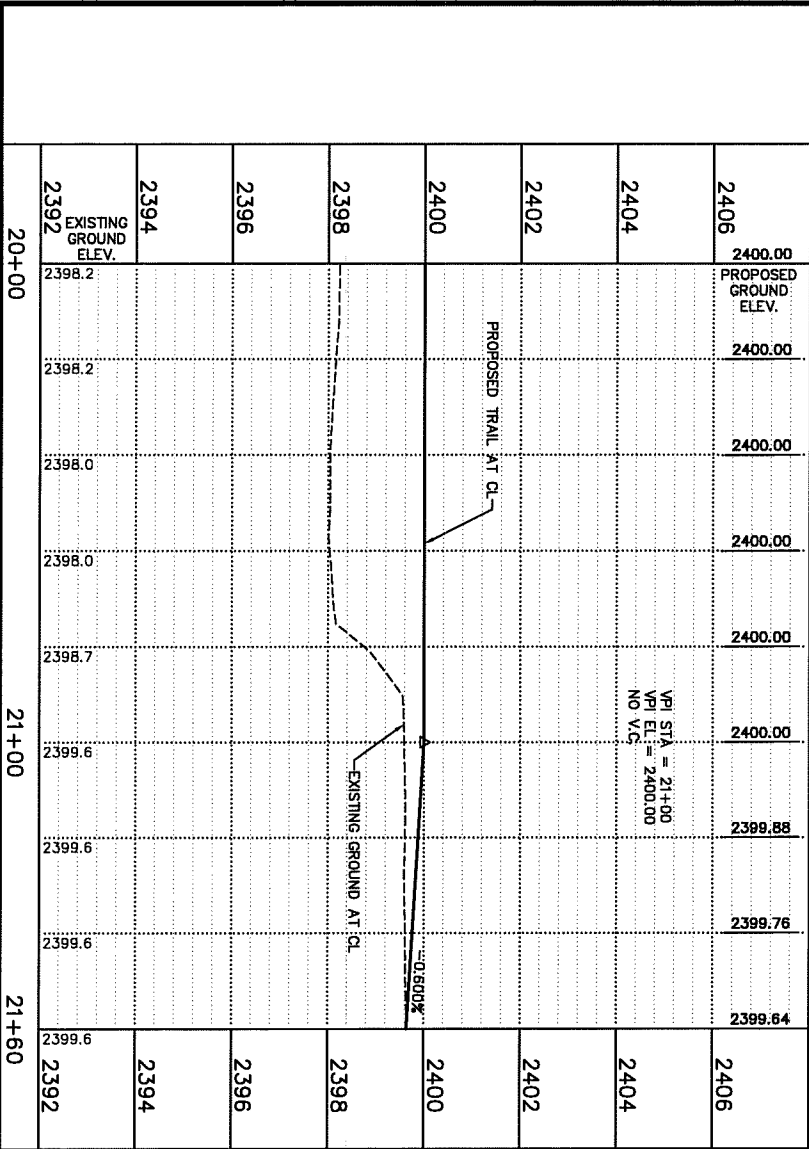
SHEET 7

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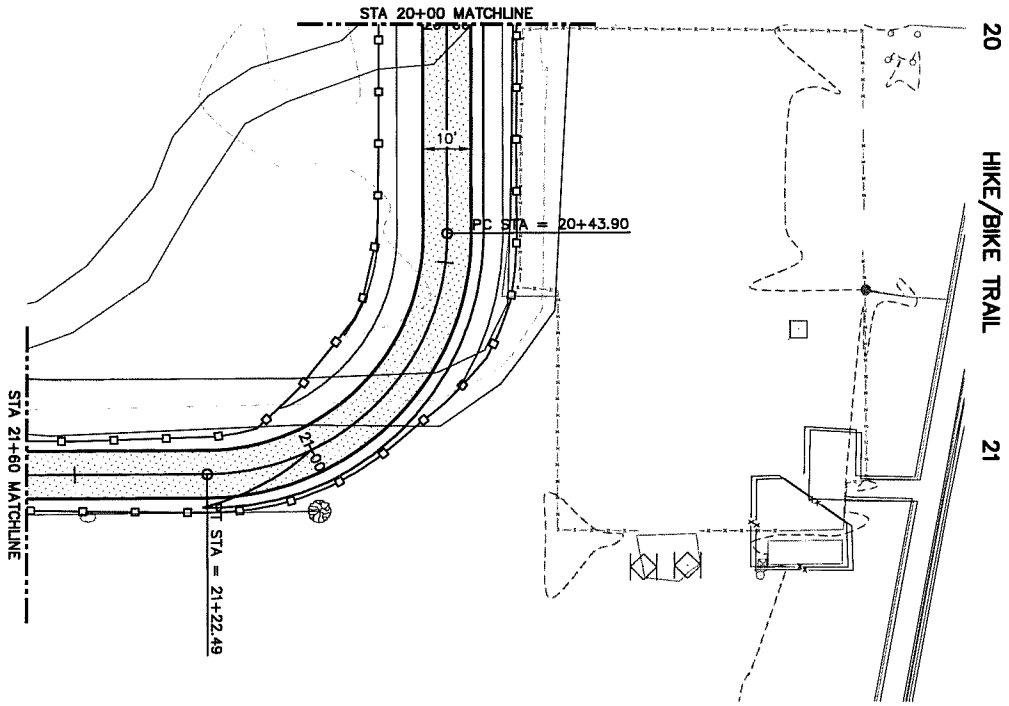
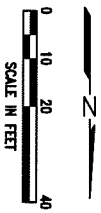
Miller & Associates  
Consulting Engineers P.C.  
Kansas, NE (909) 224-6458  
Nebraska, NE (689) 345-9710

REVISIONS	BY

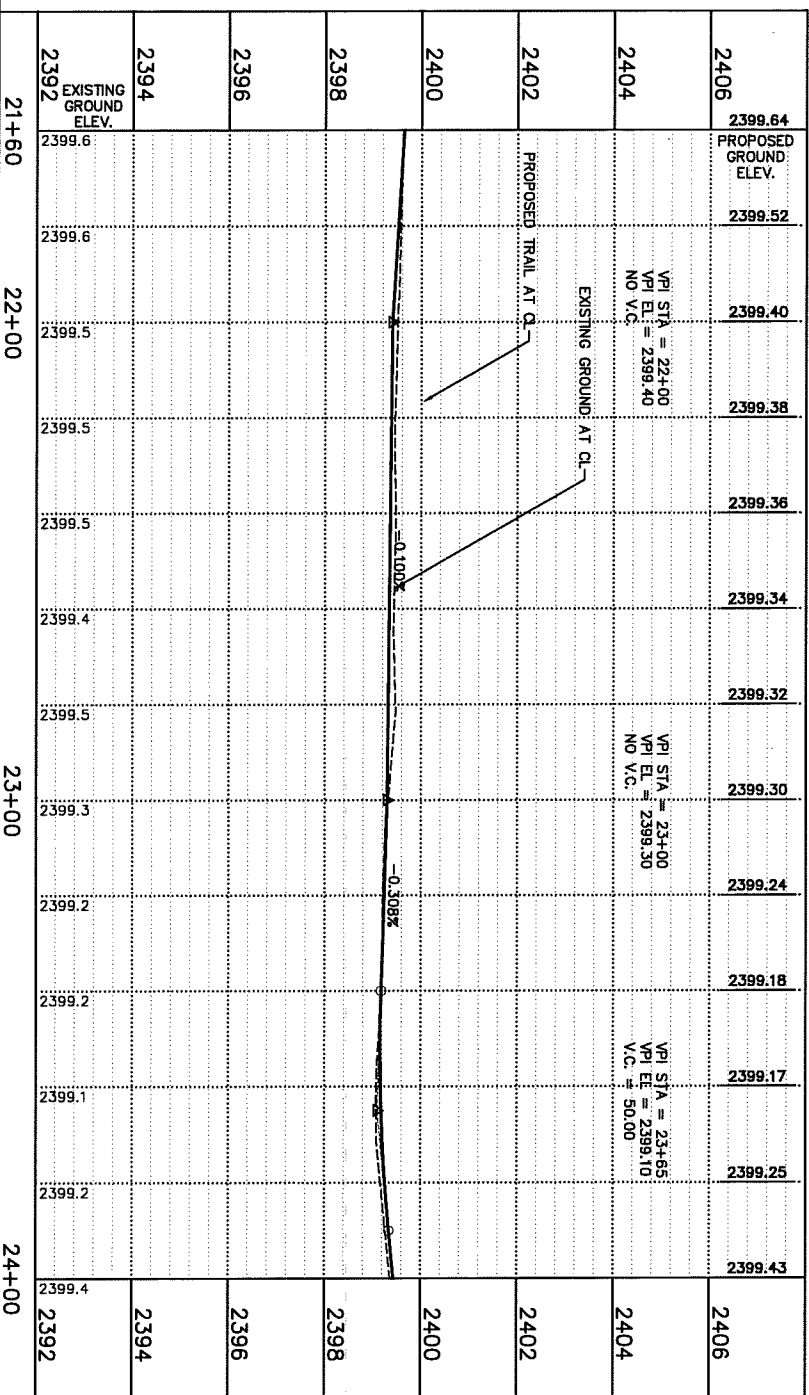




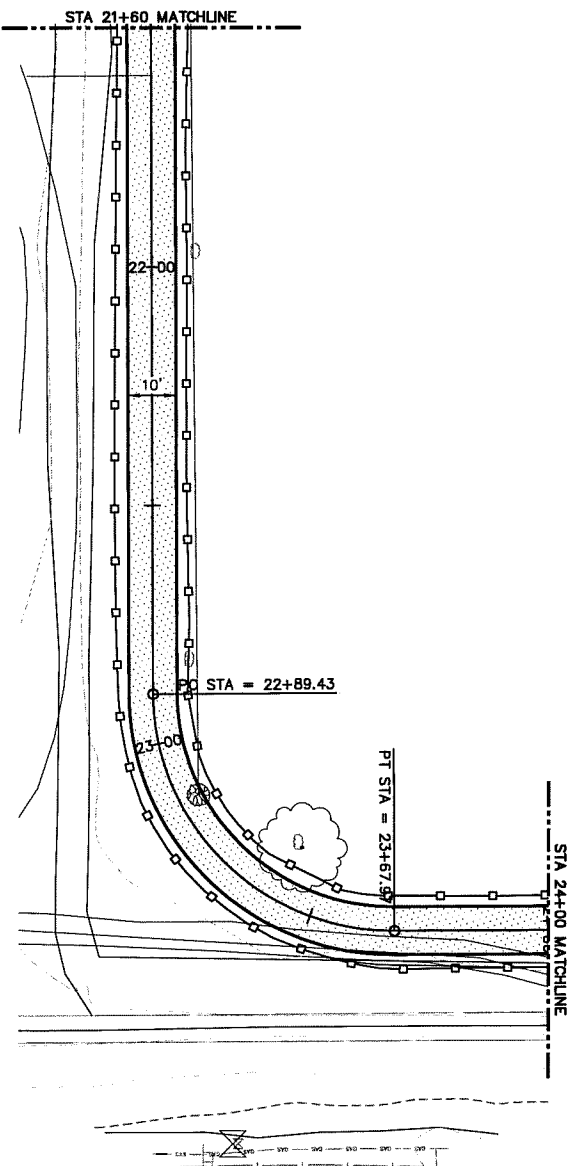
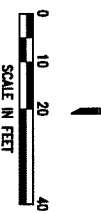
STA. 20+00 TO STA. 21+60  
CONSTRUCT 178 S.Y. 6" THICK  
CONCRETE TRAIL PAVEMENT, 10' WIDE



20 HIKE/BIKE TRAIL 21



STA. 21+60 TO STA. 24+00  
CONSTRUCT 267 S.Y. 6" THICK  
CONCRETE TRAIL PAVEMENT, 10' WIDE



22 HIKE/BIKE TRAIL 23

**PROFESSIONAL CIVIL ENGINEER**  
 THOMAS HILLIER  
 E-76397  
 STATE OF NEBRASKA

VERIFIED SCALES  
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 SCALE: 1"=20'

PROJECT NO. 127-E1-024  
 DATE: JANUARY 2020  
 FIELD BOOK M&A DWG NO. 37024  
 DRAWN BY: APT/VD BY: TRH  
 DTM  
 SHEET 8

## HIKE/BIKE TRAIL NORTHWEST PHASE II

# HIKE/BIKE TRAIL PLAN

## LEXINGTON, NEBRASKA

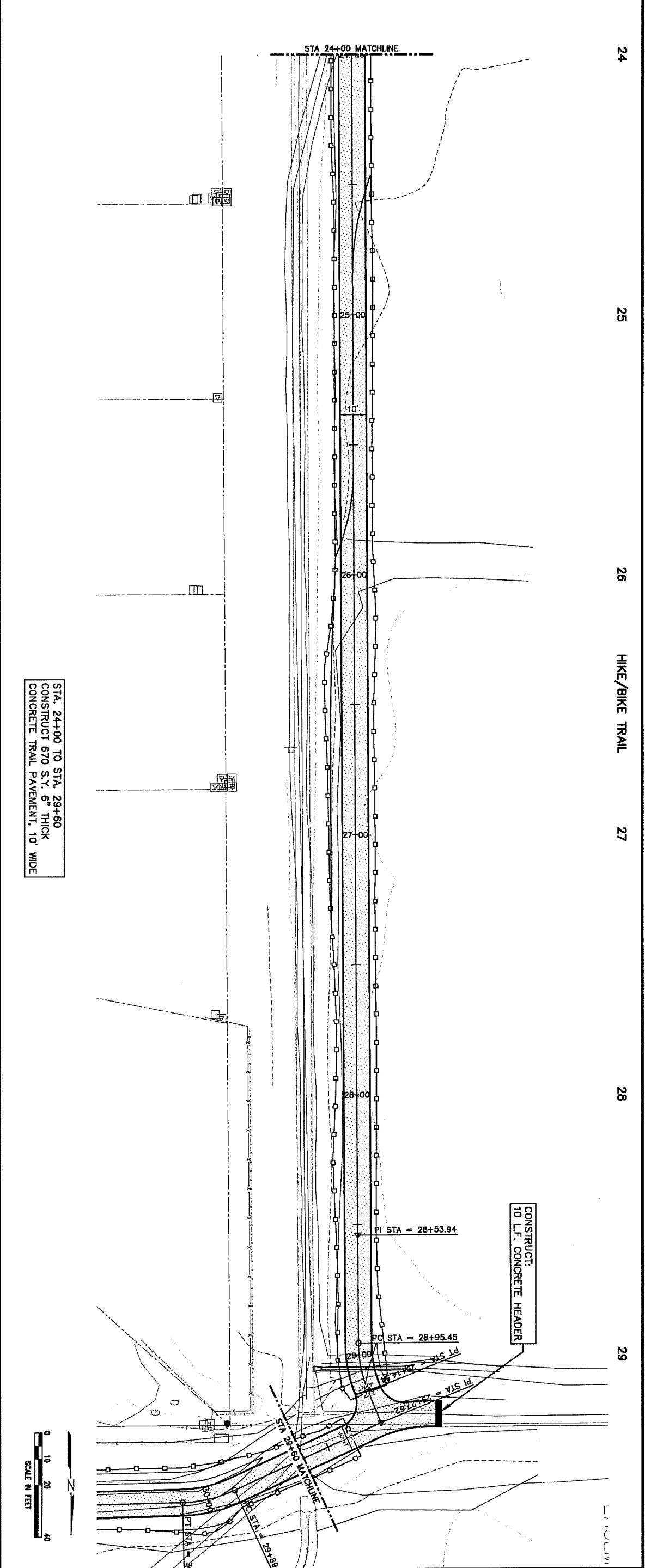
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 McCook, NE (308) 345-3710

REVISIONS

BY

2406	2399.43	PROPOSED GROUND ELEV.	2399.62	
			2399.81	
			2399.94	
2404		VPI STA = 24+60 VPI EL = 2400.00 V.C. = 50.00	2400.00	
			2400.00	
			2400.00	
			2400.00	
			2400.05	
2402		VPI STA = 25+85 VPI EL = 2400.00 V.C. = 50.00	2400.20	
			2400.44	
			2400.62	
			2400.70	
			2400.72	
			2400.72	
			2400.73	
			2400.74	
			2400.75	
			2400.75	
			2400.76	
			2400.77	
			2400.78	
			2400.78	
			2400.80	
2400		VPI STA = 29+00 VPI EL = 2400.80 V.C. = 50.00	2400.89	
			2401.10	
			2401.40	
			2401.70	
2398				
2396				
2394				
2392				



STA. 24+00 TO STA. 29+60  
CONSTRUCT 670 S.Y. 6" THICK  
CONCRETE TRAIL PAVEMENT, 10' WIDE

HIKE/BIKE TRAIL NORTHWEST PHASE II  
**HIKE/BIKE TRAIL PLAN**  
 LEXINGTON, NEBRASKA

REVISIONS BY

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 Kearney, NE (402) 234-6486  
 McCook, NE (402) 248-5710

PROFESSIONAL CIVIL ENGINEER  
 T. MILLER  
 LICENSE NO. E-158391

DATE: JANUARY 2020  
 FIELD BOOK: IMA DMC NO. 37023  
 DRAWN BY: AP/VD  
 CHECKED BY: TRH

PROJECT NO. 17-E1-024  
 SCALE: 1"=20'

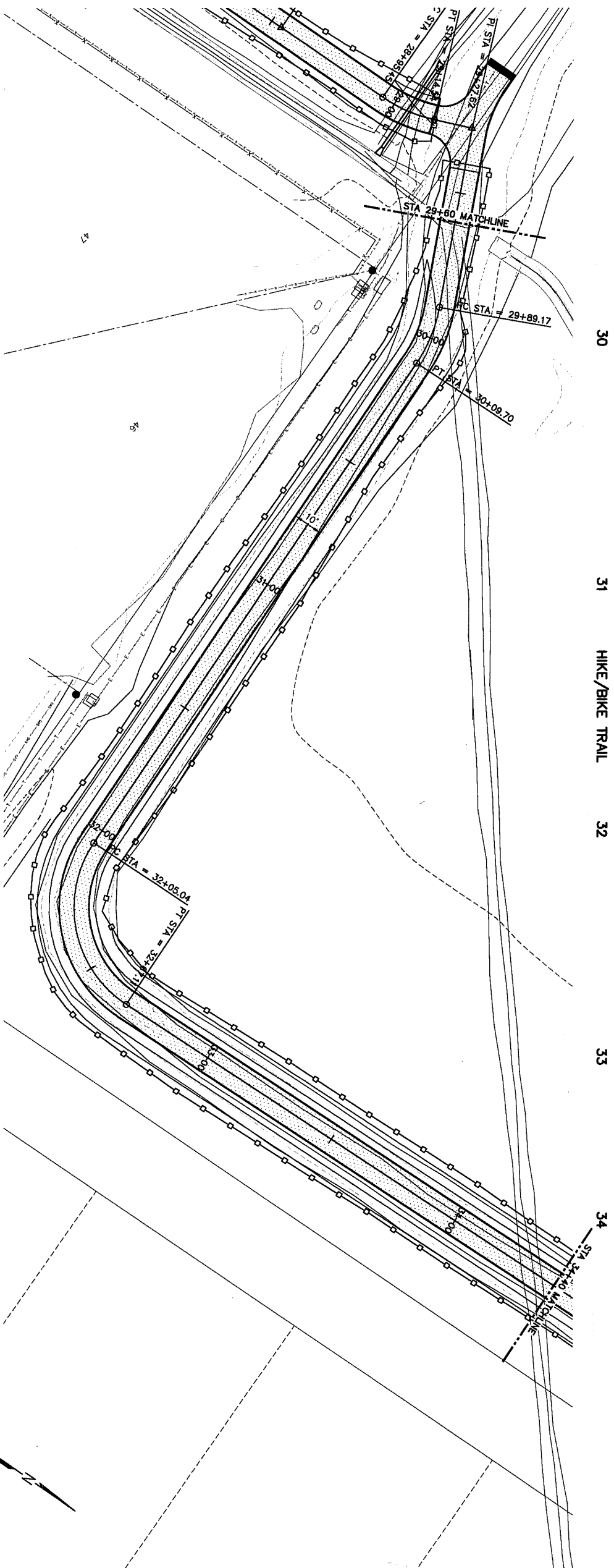
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SHEET 9

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2408	2401.70	PROPOSED GROUND ELEV.	2401.91	
2406	VPI STA = 29+80 VPI EL. = 2402.00 V.C. = 50.00		2402.01	
2404			2402.04	
2402			2402.05	
2398			2402.07	
2396			2402.09	
2394	EXISTING GROUND ELEV.		2402.11	
29+60			2402.13	
30+00			2402.15	
31+00			2402.16	
32+00			2402.18	
33+00			2402.20	
34+00			2402.21	
34+40			2402.22	
			2402.23	
			2402.23	
			2402.24	
			2402.25	
			2402.26	
			2402.27	
			2402.28	
			2402.29	
			2402.30	
			2402.31	
2408				2408
2406	VPI STA = 32+00 VPI EL. = 2402.20 NO V.C.			2406
2404				2404
2402				2402
2398				2398
2396				2396
2394				2394

STA. 29+60 TO STA. 34+40  
CONSTRUCT 533 S.Y. 6" THICK  
CONCRETE TRAIL PAVEMENT, 10' WIDE



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 SCALE: 1"=20'

PROJECT NO. 17-EI-024  
 DATE: JANUARY, 2020  
 FIELD BOOK: M&A DWG NO. 37022  
 DRAWN BY: ARYD BR  
 DWM  
 SHEET 10

**HIKE/BIKE TRAIL NORTHWEST PHASE II**  
**HIKE/BIKE TRAIL PLAN**  
 LEXINGTON, NEBRASKA

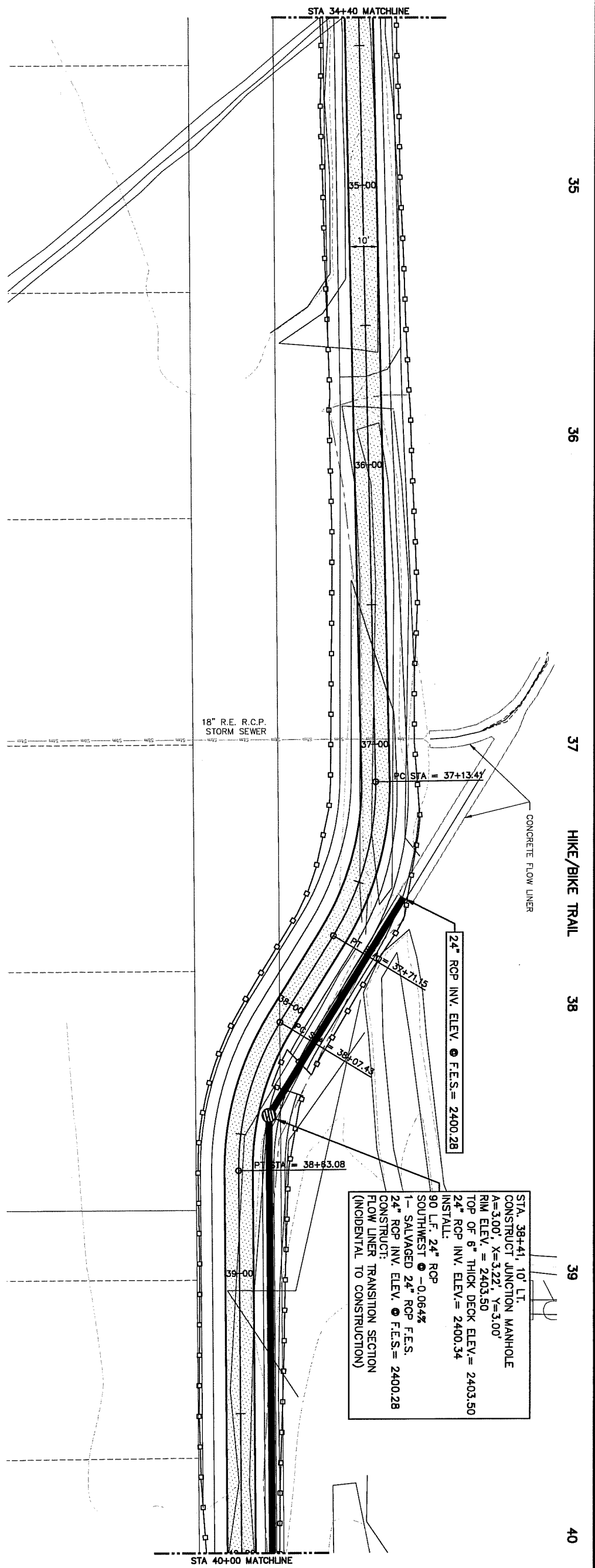
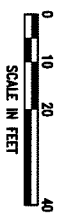
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REVISIONS  
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EXISTING GROUND ELEV.	PROPOSED GROUND ELEV.
2394	2402.31
2401.8	2402.34
2401.8	2402.37
2402.0	2402.39
2402.0	2402.42
2401.8	2402.45
2401.7	2402.47
2401.6	2402.50
2401.0	2402.62
2401.8	2402.74
2401.6	2402.85
2401.4	2402.97
2401.5	2403.09
2401.5	2403.21
2401.5	2403.32
2401.4	2403.44
2401.2	2403.50
2400.9	2403.50
2401.6	2403.50
2401.5	2403.50
2401.6	2403.50
2401.6	2403.50
2401.8	2403.50
2401.7	2403.50
2401.6	2403.50
2401.5	2403.50
2401.3	2403.50
2401.3	2403.50
2401.7	2403.50
2401.7	2403.50
2401.9	2403.50
2402.1	2403.50
2394	2402.31

STA. 34+40 TO STA. 40+00  
CONSTRUCT 622 S.Y. 6" THICK  
CONCRETE TRAIL PAVEMENT, 10' WIDE



STA. 38+41, 10' LT.  
CONSTRUCT JUNCTION MANHOLE  
A=3.00', X=3.22', Y=3.00'  
RIM ELEV. = 2403.50  
TOP OF 6" THICK DECK ELEV. = 2403.50  
24" RCP INV. ELEV. = 2400.34  
INSTALL:  
90 L.F. 24" RCP  
SOUTHWEST @ -0.064%  
1- SALVAGED 24" RCP F.E.S.  
24" RCP INV. ELEV. @ F.E.S. = 2400.28  
CONSTRUCT: TRANSITION SECTION  
FLOW LINER (INCIDENTAL TO CONSTRUCTION)

## HIKE/BIKE TRAIL NORTHWEST PHASE II

# HIKE/BIKE TRAIL PLAN

## LEXINGTON, NEBRASKA

**VERIFY SCALES**

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SCALE: 1"=20'

PROJECT NO. 12-E1-024

DATE: JANUARY 2020

FIELD BOOK: MAY DWG NO. 37021

DRAWN BY: ARYD BY: TRH

SHEET 11

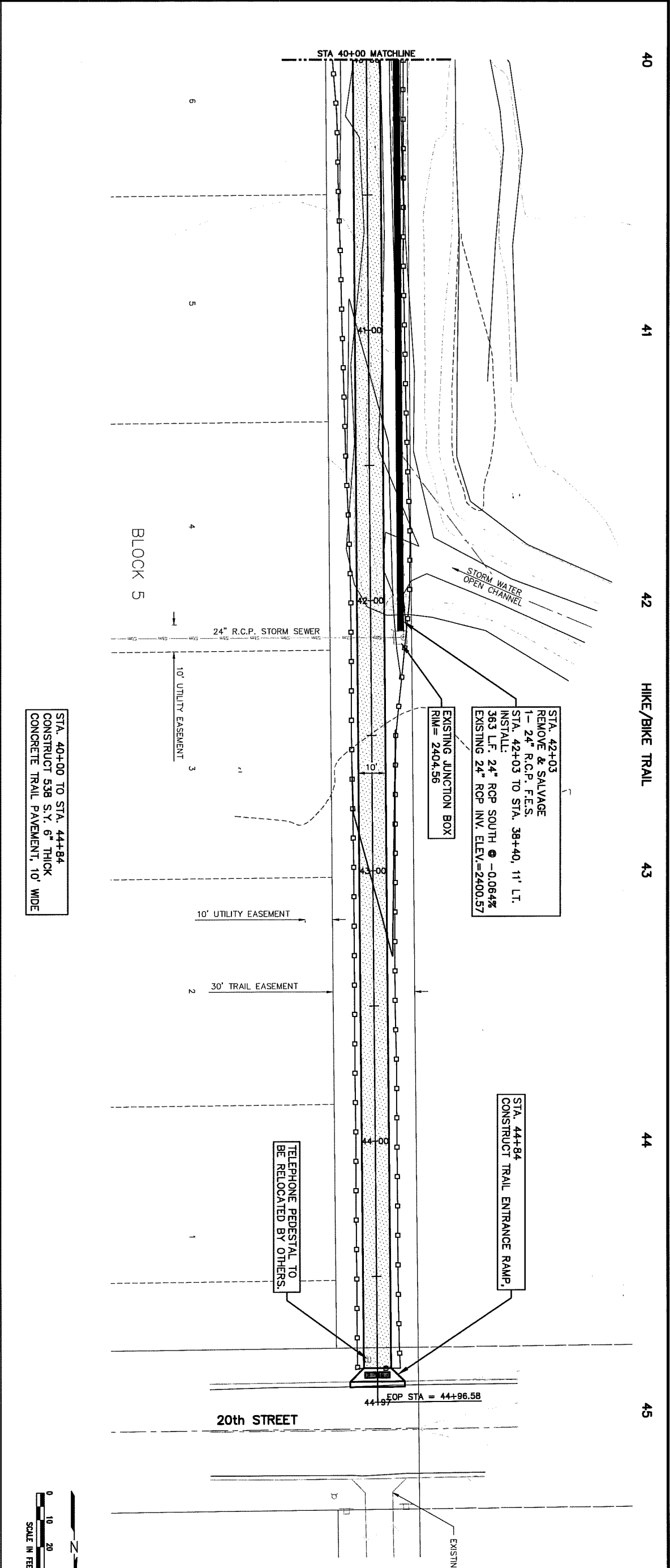
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**REVISIONS**

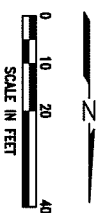
NO.	DATE	DESCRIPTION

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McCook, NE (309) 345-3710

Station	Elevation	Notes
2396	2402.1	EXISTING GROUND ELEV.
2398	2402.3	
2400	2402.5	
2402	2402.7	
2404	2402.7	
2406	2402.9	
2408	2403.0	
2410	2403.1	
	2403.50	PROPOSED GROUND ELEV.
	2403.50	
	2403.61	
	2403.71	
	2403.82	
	2403.92	
	2404.03	
	2404.13	
	2404.24	
	2404.34	
	2404.45	
	2404.55	
	2404.66	
	2404.76	
	2404.87	
	2404.97	
	2405.08	
	2405.18	
	2405.29	
	2405.39	
	2405.50	
	2405.52	
	2405.55	
	2405.57	
	2405.60	
2396	2405.7	EXISTING GROUND ELEV.



STA. 40+00 TO STA. 44+84  
CONSTRUCT 538 S.Y. 6" THICK  
CONCRETE TRAIL PAVEMENT, 10' WIDE



Station	Elevation	Notes
2396	2402.1	EXISTING GROUND ELEV.
2398	2402.3	
2400	2402.5	
2402	2402.7	
2404	2402.7	
2406	2402.9	
2408	2403.0	
2410	2403.1	
	2403.50	PROPOSED GROUND ELEV.
	2403.50	
	2403.61	
	2403.71	
	2403.82	
	2403.92	
	2404.03	
	2404.13	
	2404.24	
	2404.34	
	2404.45	
	2404.55	
	2404.66	
	2404.76	
	2404.87	
	2404.97	
	2405.08	
	2405.18	
	2405.29	
	2405.39	
	2405.50	
	2405.52	
	2405.55	
	2405.57	
	2405.60	
2396	2405.7	EXISTING GROUND ELEV.

**HIKE/BIKE TRAIL NORTHWEST PHASE II**  
**HIKE/BIKE TRAIL PLAN**  
 LEXINGTON, NEBRASKA



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DATE: JANUARY 2020  
 FIELD BOOK: M&A DWG NO. 37070  
 DRAWN BY: ARYD BR  
 DWG NO: TRH

PROJECT NO: 17-E1-024  
 SCALE: 1"=20'

**PROFESSIONAL CIVIL ENGINEER**  
**TYLER HILLMER**  
 E-158398  
 STATE OF NEBRASKA

**Miller & Associates**  
 Consulting Engineers, P.C.  
 Kearney, NE (800) 234-8458  
 McCook, NE (800) 346-3710

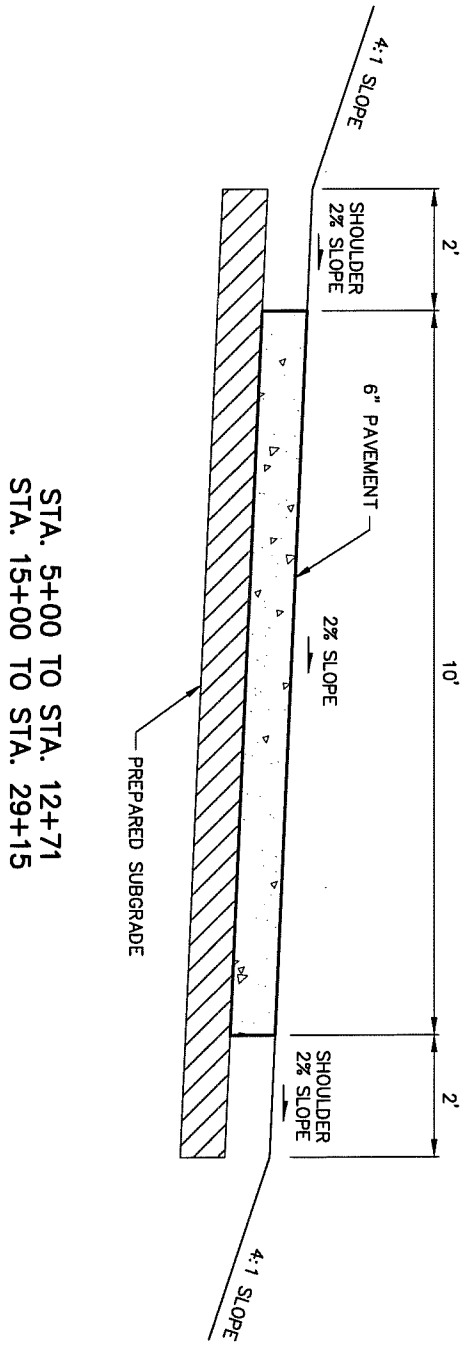
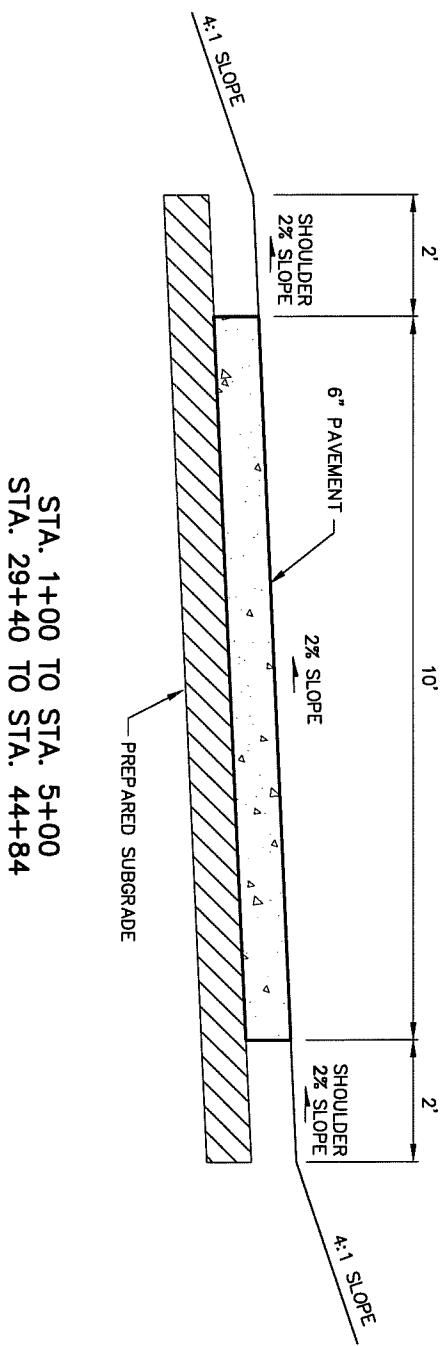
REVISIONS

NO.	BY	DATE	DESCRIPTION

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## TYPICAL CROSS SECTIONS



REVISIONS	BY

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McCook, NE (402) 545-2710

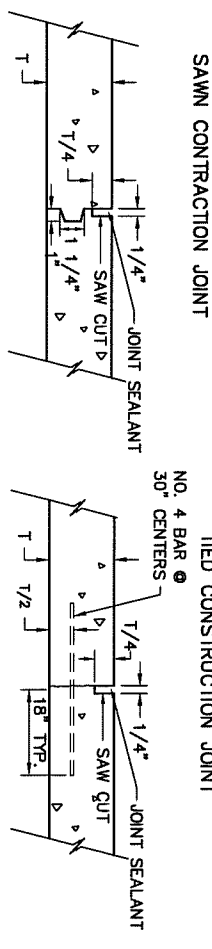
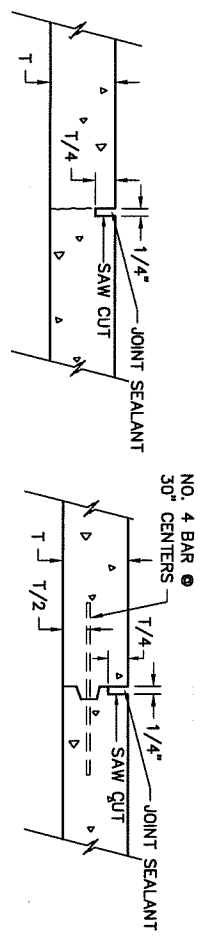
### HIKE/BIKE TRAIL NORTHWEST PHASE II TYPICAL CROSS SECTIONS LEXINGTON, NEBRASKA

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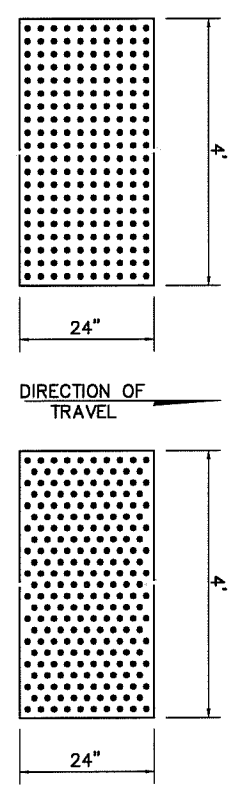
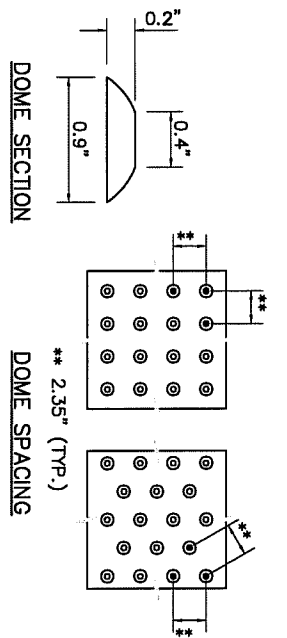


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SCALE: AS SHOWN

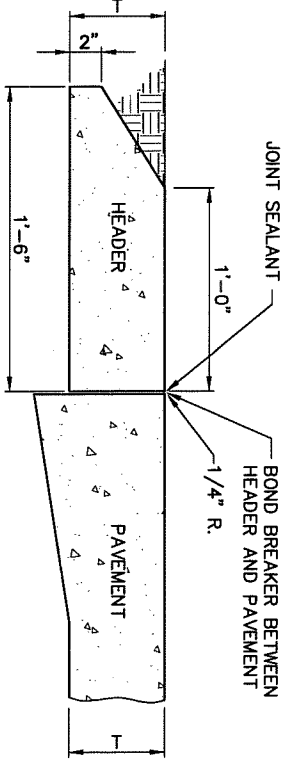
PROJECT NO.	127-E1-024
DATE	JANUARY, 2020
FIELD BOOK	MAA DWG NO. 37019
DRAWN BY:	ARRVD BR: TRH
CHKD BY:	
SHEET	13



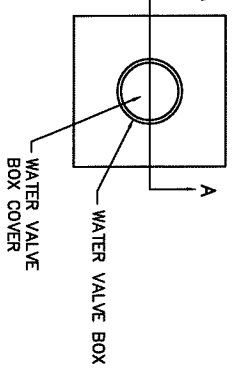
**CONCRETE JOINT DETAIL**  
NO SCALE



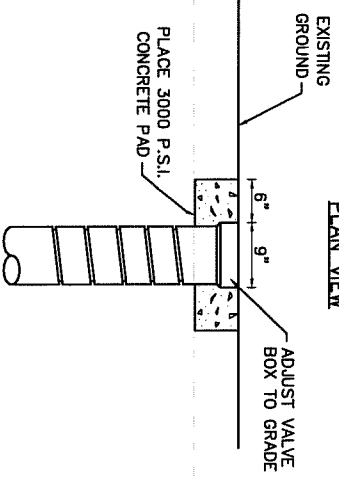
**DETECTABLE WARNING DETAILS**  
(TO BE PROVIDED BY OWNER)



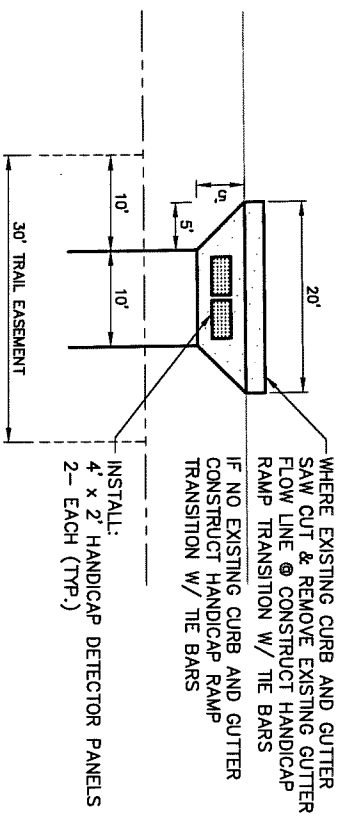
**TYPICAL HEADER**  
NO SCALE



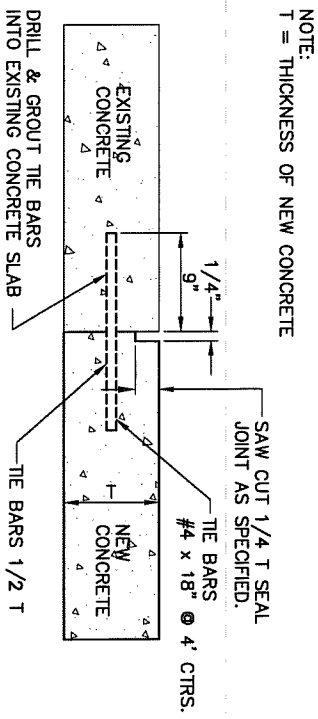
**SECTION A-A**



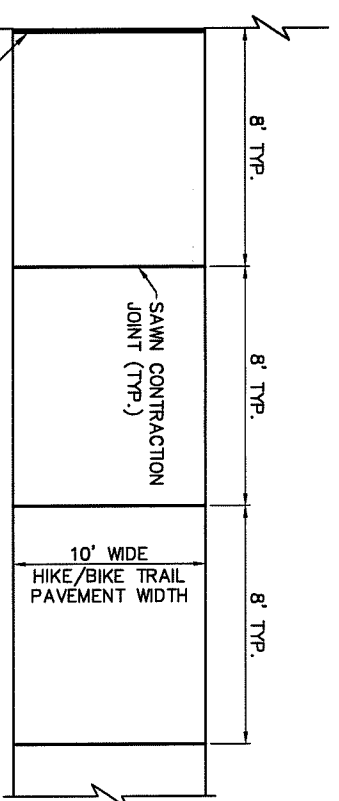
**STANDARD VALVE BOX ADJUSTMENT DETAIL**  
NO SCALE



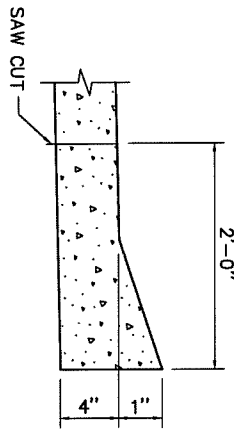
**TRAIL ENTRANCE RAMP DETAIL**  
STA. 45+08



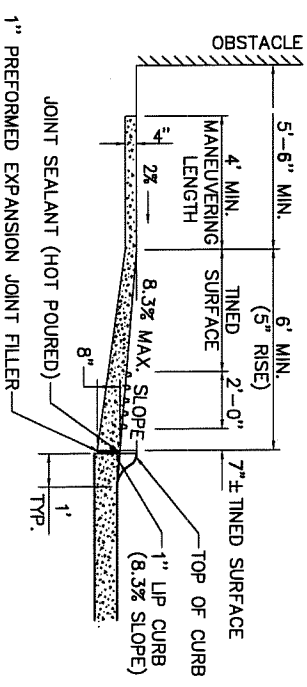
**TIE BAR DETAIL**  
NO SCALE



**JOINT SPACING**  
NO SCALE



**1" CONCRETE LIP CURB DETAIL**



**SECTION B-B  
TYPICAL RAMP PROFILE**

NOTES:  
THE SURFACE OF ALL CURB RAMPS SHALL BE TIED TRANSVERSELY TO THE SLOPE OF THE CURB RAMP. THE TIES SHALL PRODUCE GROOVES APPROXIMATELY 1/8" WIDE AND 3/16" DEEP ON 1/2" CENTERS. ALL FLARES AND WINGS SHALL BE BROOMED.  
CARE SHALL BE TAKEN TO ASSURE A UNIFORM GRADE ON THE CURB RAMP, FREE OF SAGS AND SHORT GRADE CHANGES.  
THE RAMP FLARES SHALL BE CONSTRUCTED AS SHOWN ON DETAIL.

THE SLOPE OF SIDEWALKS APPROACHING CURB RAMPS (OR THEIR FLARES) SHALL BE FLAT ENOUGH TO PROVIDE RECOVERY AREAS FOR WHEELCHAIRS ENTERING OR EXITING THE RAMPS.

THE WORK OF CONSTRUCTING THESE RAMPS SHALL BE MEASURED AND PAID FOR AS A PART OF THE WORK FOR "CONCRETE SIDEWALKS", "CONCRETE MEDIUM SURFACING" OR "CONCRETE BIKEWAY". THE WORK OF MODIFICATION OF NEW OR EXISTING CURB WILL NOT BE PAID FOR DIRECTLY, BUT WILL BE CONSIDERED SUBSIDIARY TO OTHER ITEMS OF WORK FOR WHICH DIRECT PAYMENT IS MADE.

MAXIMUM PERCENT OF SLOPES ARE RELATIVE TO THE SLOPE OF THE ADJACENT SIDEWALK.

DETECTABLE WARNINGS SHALL EXTEND THE FULL WIDTH OF THE CURB RAMP. THEY SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 2" FROM THE CURB LINE.  
\* INDICATES 2% SLOPE TOWARDS STREET.

**HIKE/BIKE TRAIL NORTHWEST PHASE II  
DETAILS  
LEXINGTON, NEBRASKA**

**REVISIONS**

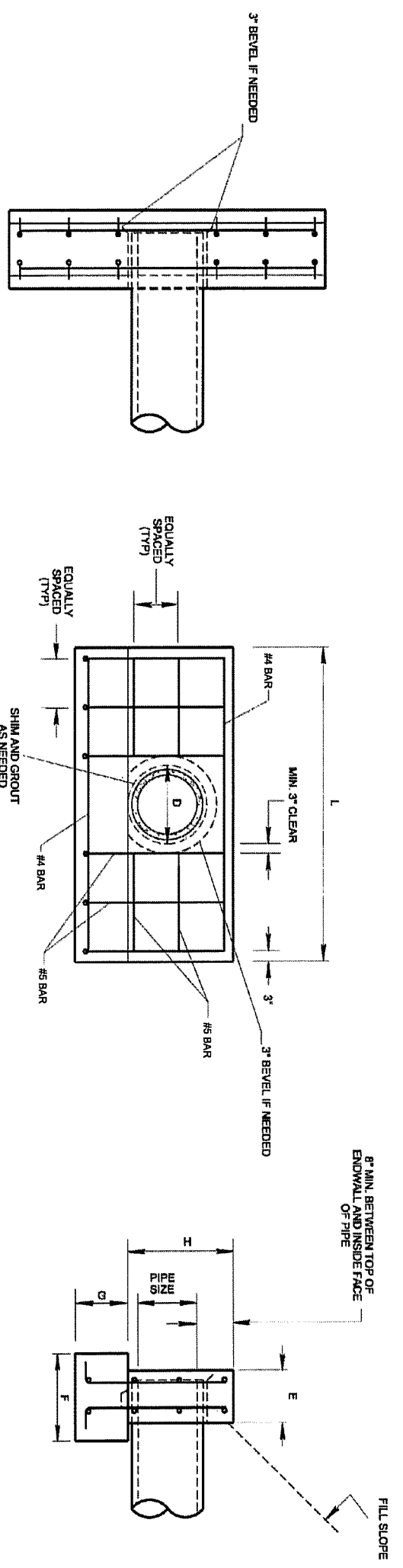
NO.	DATE	BY	DESCRIPTION

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Consulting Engineers, P.C.  
Kenney, NE (800) 234-6456  
Mechan, NE (800) 345-5710

**PROFESSIONAL ENGINEER**  
DINZO MILLER  
E-16597

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DATE: JANUARY 2020  
FIELD BOOK: WAA DWG NO. 3701B  
DRAWN BY: ARYD BY:  
CHKD BY: TH  
SHEET 14



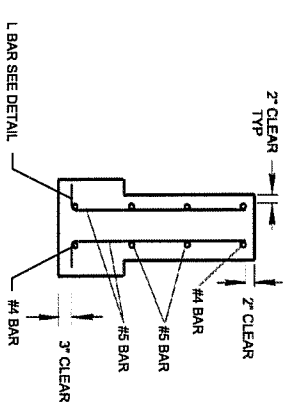
PLAN

FRONT ELEVATION

SIDE ELEVATION

PIPE SIZE	WALL			FOOTING			CONC. C.Y.	REINFORCING STEEL LB
	D	L	H	E	F	G		
18"	6'-0"	2'-6"	1'-3"	1'-3"	2'-1"	1'-3"	1.0	45
24"	8'-0"	3'-3"	1'-4"	1'-4"	2'-2"	1'-4"	1.5	70
30"	10'-0"	3'-10"	1'-8"	1'-8"	2'-4"	1'-8"	2.0	93

DIMENSIONS AND ESTIMATED QUANTITIES FOR STRAIGHT CONCRETE ENDWALL

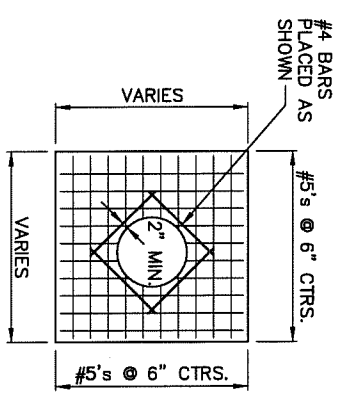


REINFORCEMENT DETAILS

L BAR DETAIL

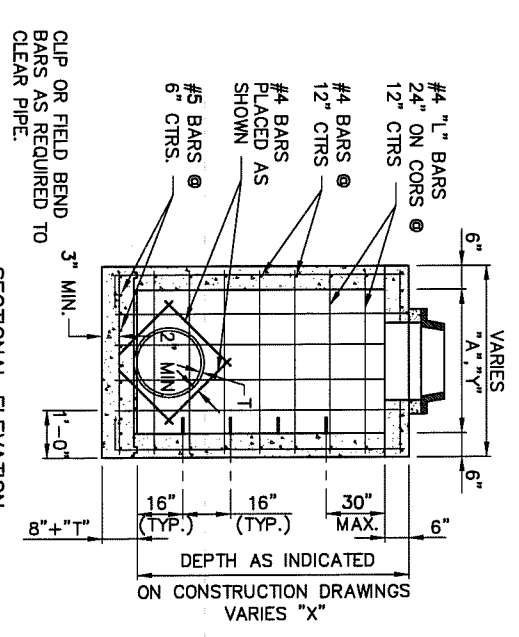
CONCRETE HEADWALL  
NO SCALE

- NOTES:
1. MAXIMUM SIZE PIPE TO BE USED - 36" I.D.
  2. TOTAL DEPTH OF MANHOLE SHALL BE AS SPECIFIED ON CONSTRUCTION DRAWINGS.
  3. MANHOLE RING AND COVER SHALL BE DEETTER 1030, OR APPROVED EQUAL, IN ROAD-WAY OR DEETER 2000, OR APPROVED EQUAL, FOR OTHER CONDITIONS.
  4. MINIMUM COVER SHALL BE 2" EXCEPT AS SHOWN, FROM THE FACE OF CONCRETE TO SURFACE OF ANY REINFORCING BARS.
  5. CAST IRON STEP SHALL BE INSTALLED WHEN THE "X" DIMENSION IS 4'-6" OR GREATER.



PLAN OF COVER

JUNCTION MANHOLE DETAIL  
NO SCALE



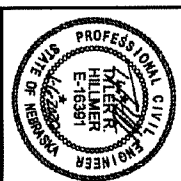
SECTIONAL ELEVATION

REVISIONS

NO.	DESCRIPTION	DATE	BY

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McCook, NE (402) 243-3710

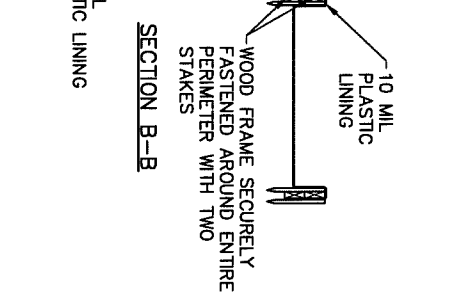
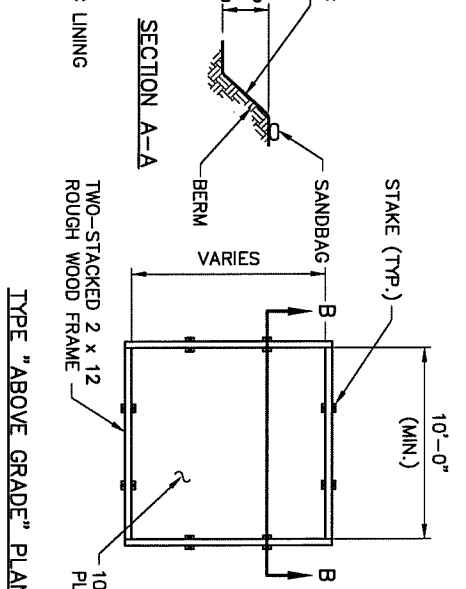
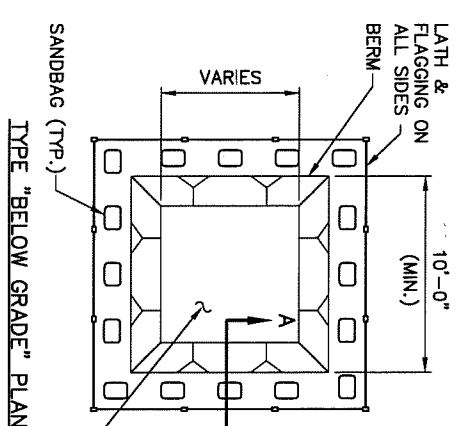
HIKE/BIKE TRAIL NORTHWEST PHASE II  
**DETAILS**  
LEXINGTON, NEBRASKA



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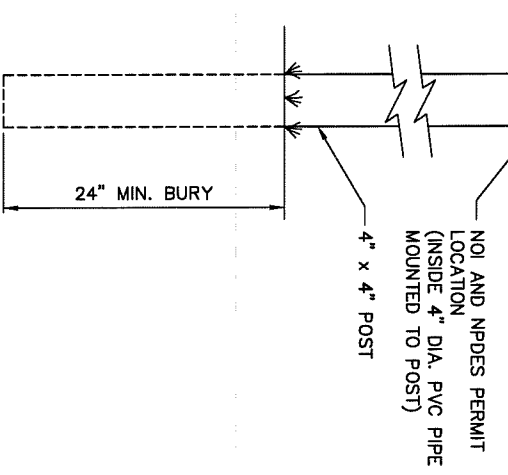
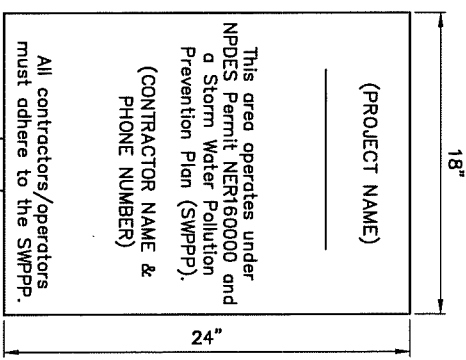
PROJECT NO. 127-EI-024  
DATE: JANUARY 2020  
FIELD BOOK: W&A DWG NO. 37017  
DRAWN BY: TRH  
APPROV. BY: TRH



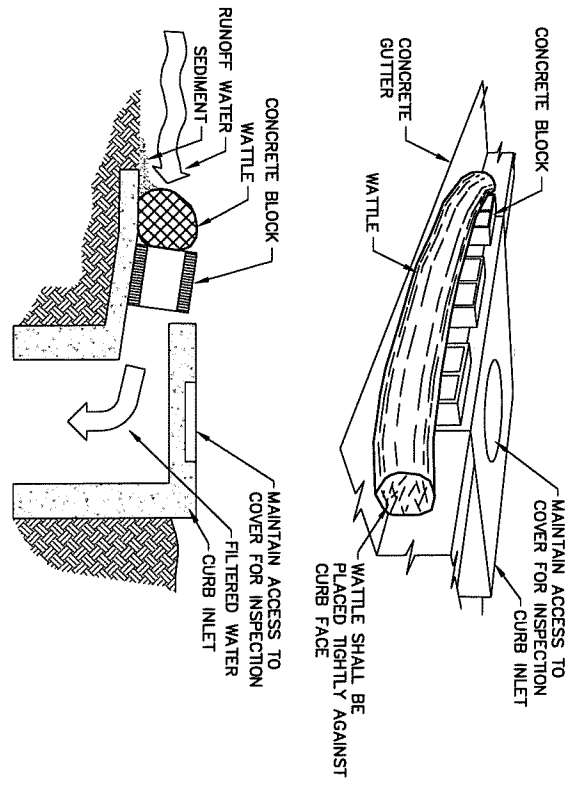


- NOTES:**
1. ACTUAL LAYOUT DETERMINED IN FIELD.
  2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FEET OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
  3. CONTRACTOR TO DETERMINE ACTUAL SIZE REQUIRED TO MEET THE NEEDS FOR THE VOLUME OF CONCRETE TRUCK WASHOUT WATER ANTICIPATED PLUS RAINFALL.

**CONCRETE WASHOUT PIT**  
NO SCALE

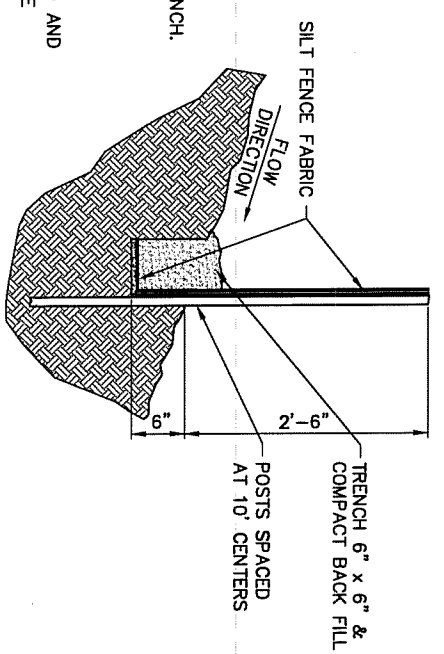
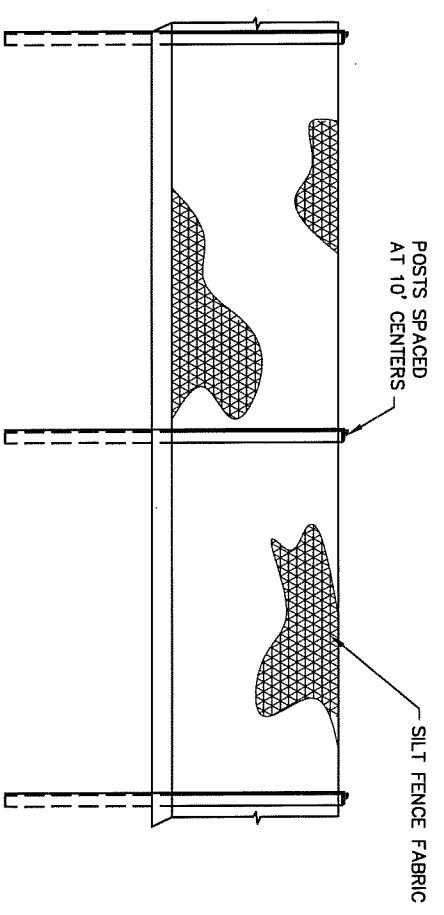


**SWPPP & PERMIT SIGN**  
NO SCALE



- NOTES:**
1. THIS METHOD OF INLET PROTECTION IS APPLICABLE AT CURB INLETS WHERE PONDING IN FRONT OF THE STRUCTURE IS NOT LIKELY TO CAUSE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS.
  2. DEPENDING ON THE OPENING OF THE INLET, THE CONCRETE BLOCK MAY HAVE TO BE PLACED VERTICAL.

**CURB INLET PROTECTION**  
NO SCALE



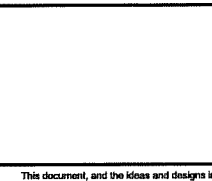
- INSTALLATION:**
1. DIG A 6" X 6" TRENCH.
  2. PLACE POSTS INTO GROUND WITH FABRIC ON UPSTREAM SIDE OF POST. PLACE FABRIC IN TRENCH.
  3. USE EXCAVATED SOIL TO BACK FILL TRENCH.
  4. WHEN CONNECTING TWO SECTIONS OF FABRIC OVERLAP A MINIMUM OF 6' AND USE 2 COMMON POSTS ON SPLICE.
  5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL SHALL BE REMOVED WHEN 1/3 OF THE EXPOSED FABRIC IS COVERED.

**STANDARD SILT FENCE**  
NO SCALE

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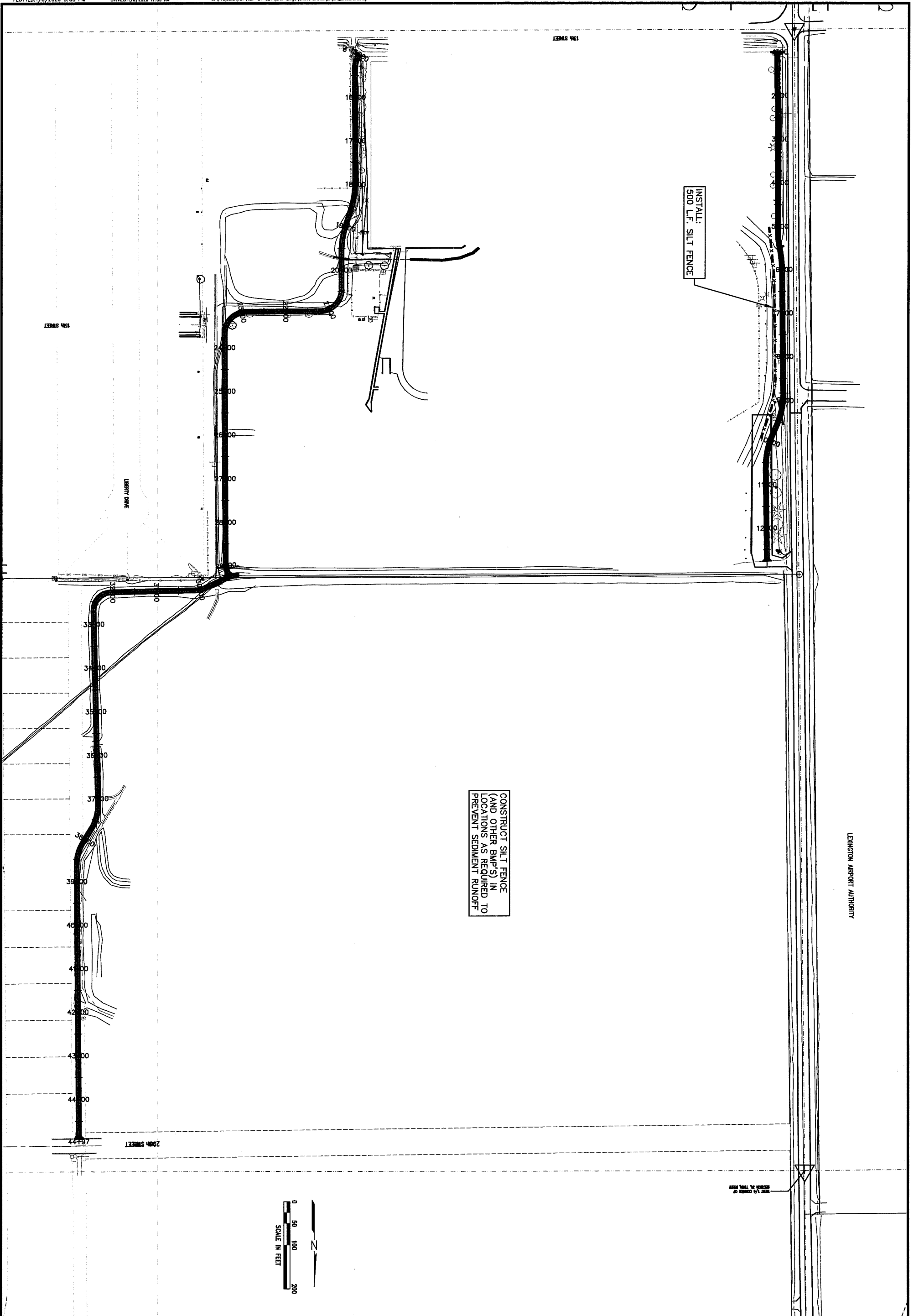
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**EROSION CONTROL DETAILS**  
LEXINGTON, NEBRASKA



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APPROV BY: TRH  
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LEXINGTON AIRPORT AUTHORITY

CONSTRUCT SILT FENCE  
(AND OTHER BMP'S) IN  
LOCATIONS AS REQUIRED TO  
PREVENT SEDIMENT RUNOFF

INSTALL:  
500 L.F. SILT FENCE



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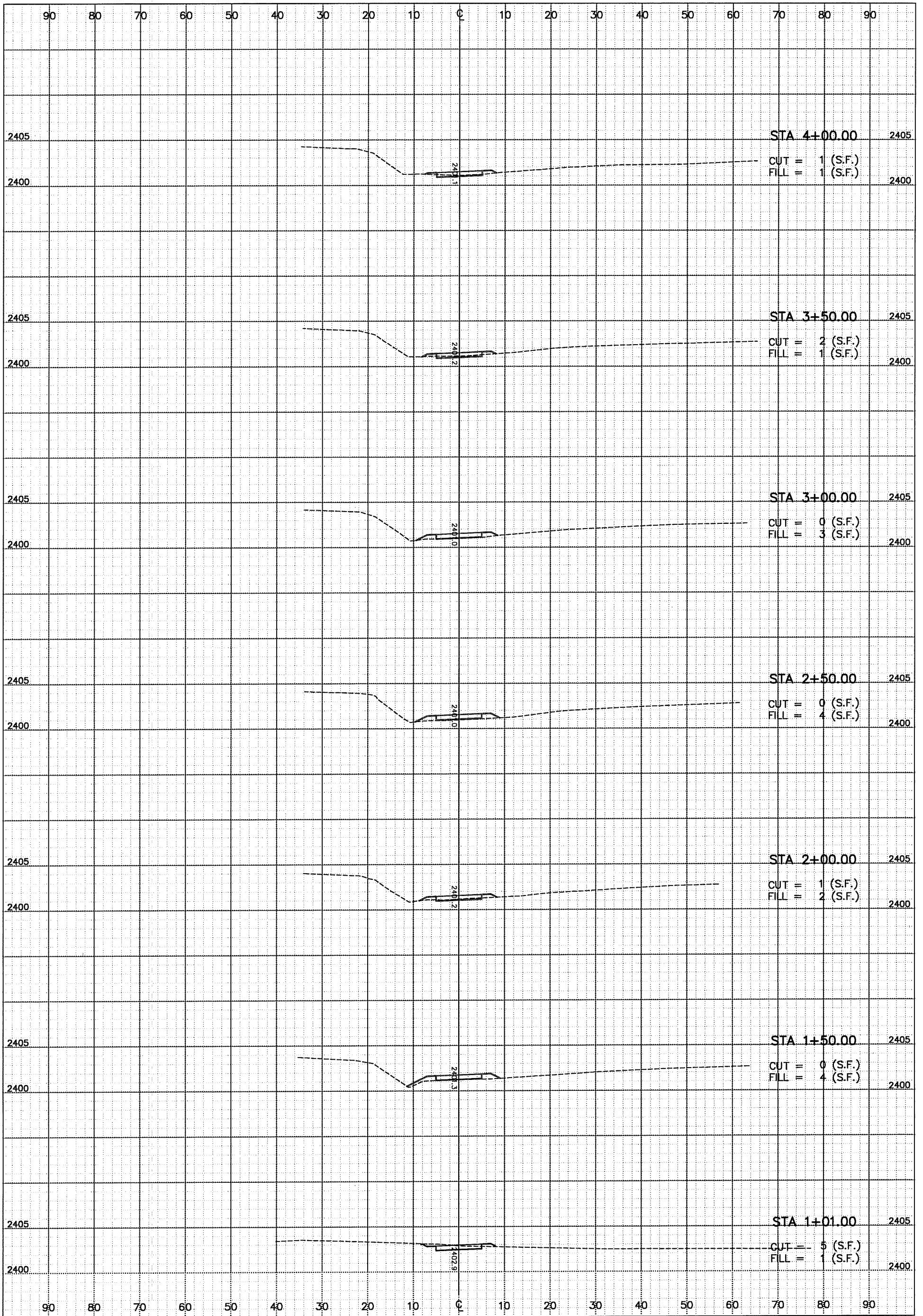
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**EROSION CONTROL PLAN**  
LEXINGTON, NEBRASKA



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PROJECT NO. 127-E1-024

**PROFESSIONAL CIVIL ENGINEER**  
 MILLER HILLNER  
 E-10591

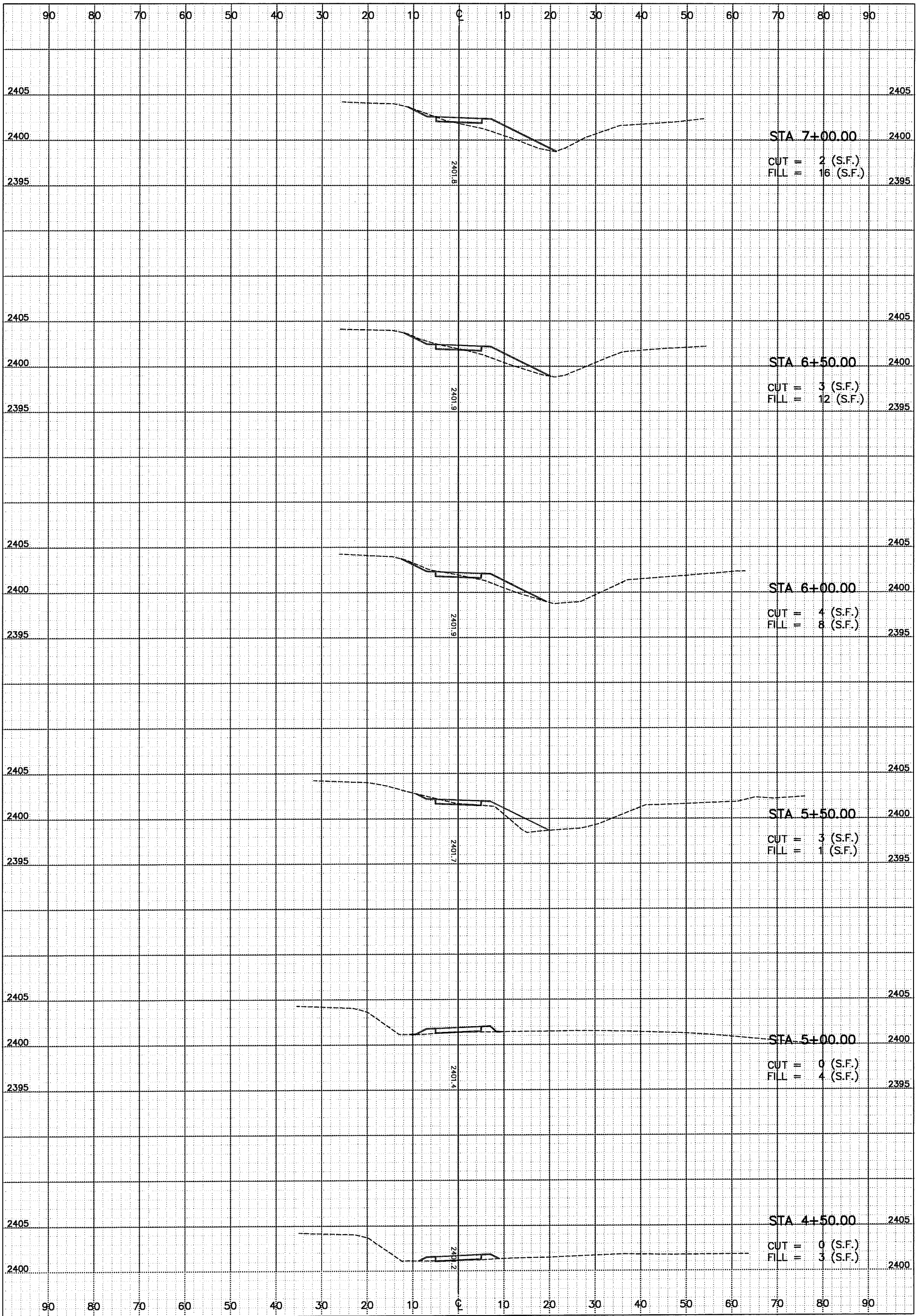
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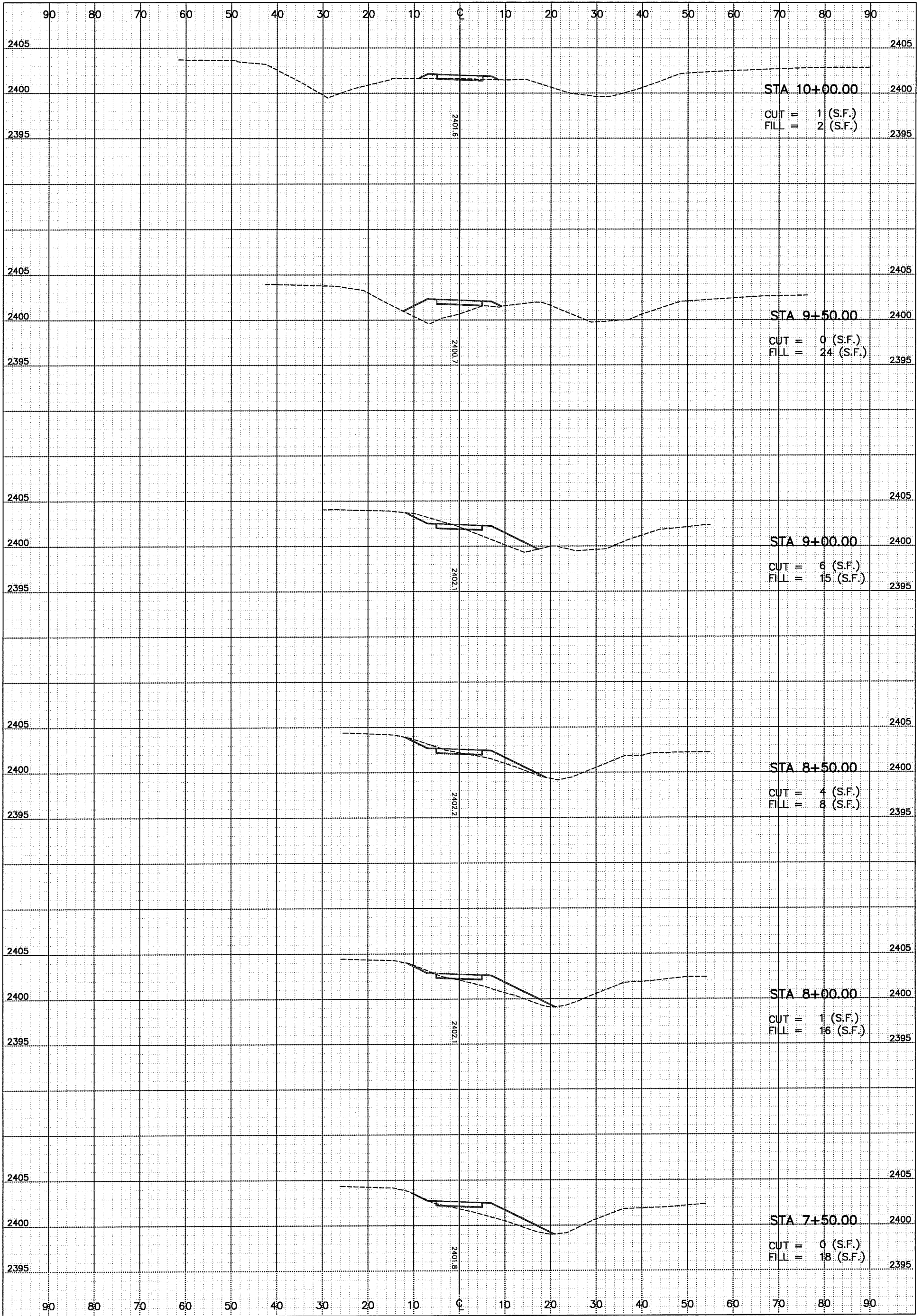
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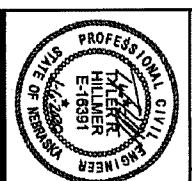
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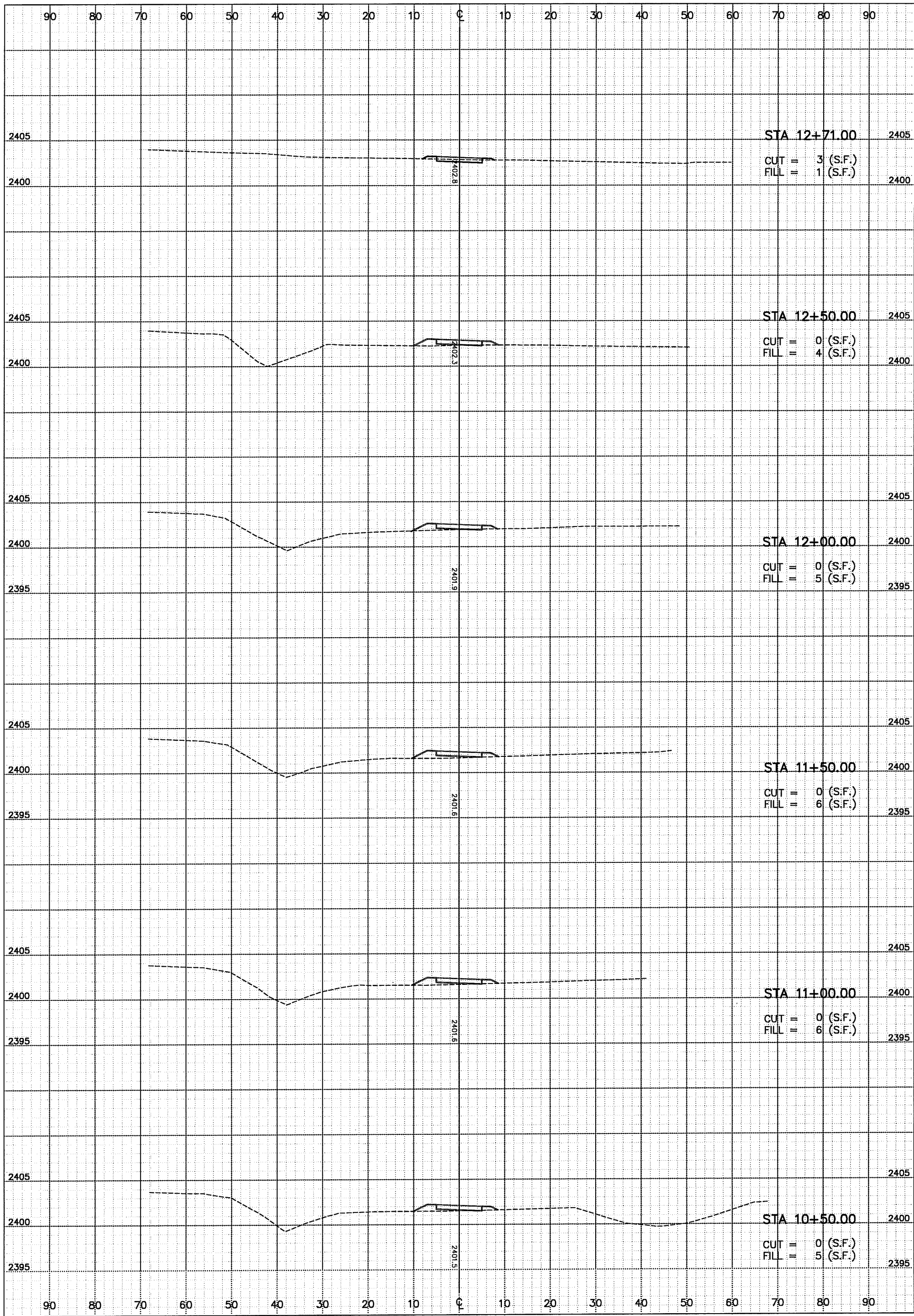


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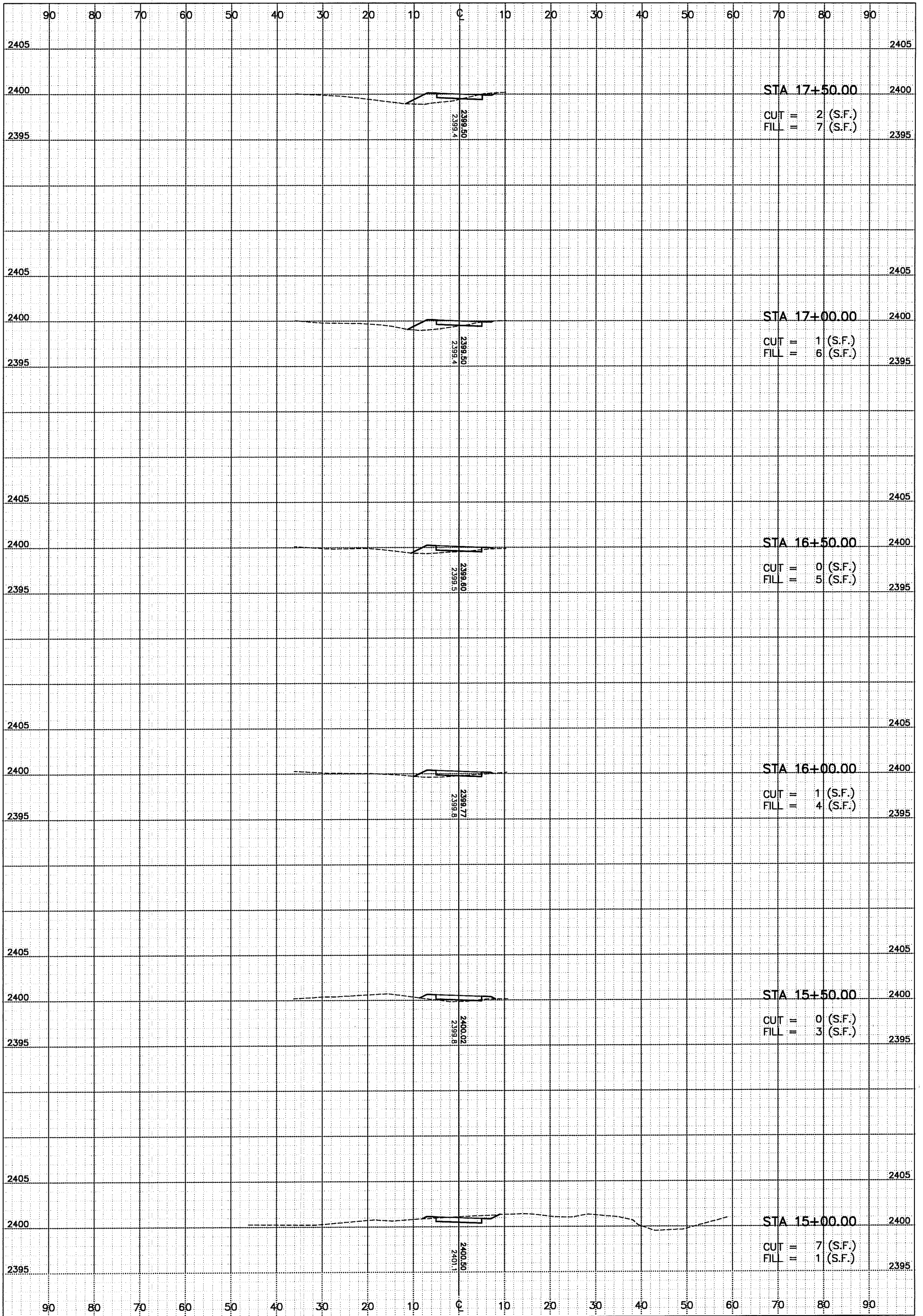


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**CROSS SECTIONS - AIRPORT ROAD**  
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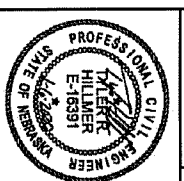
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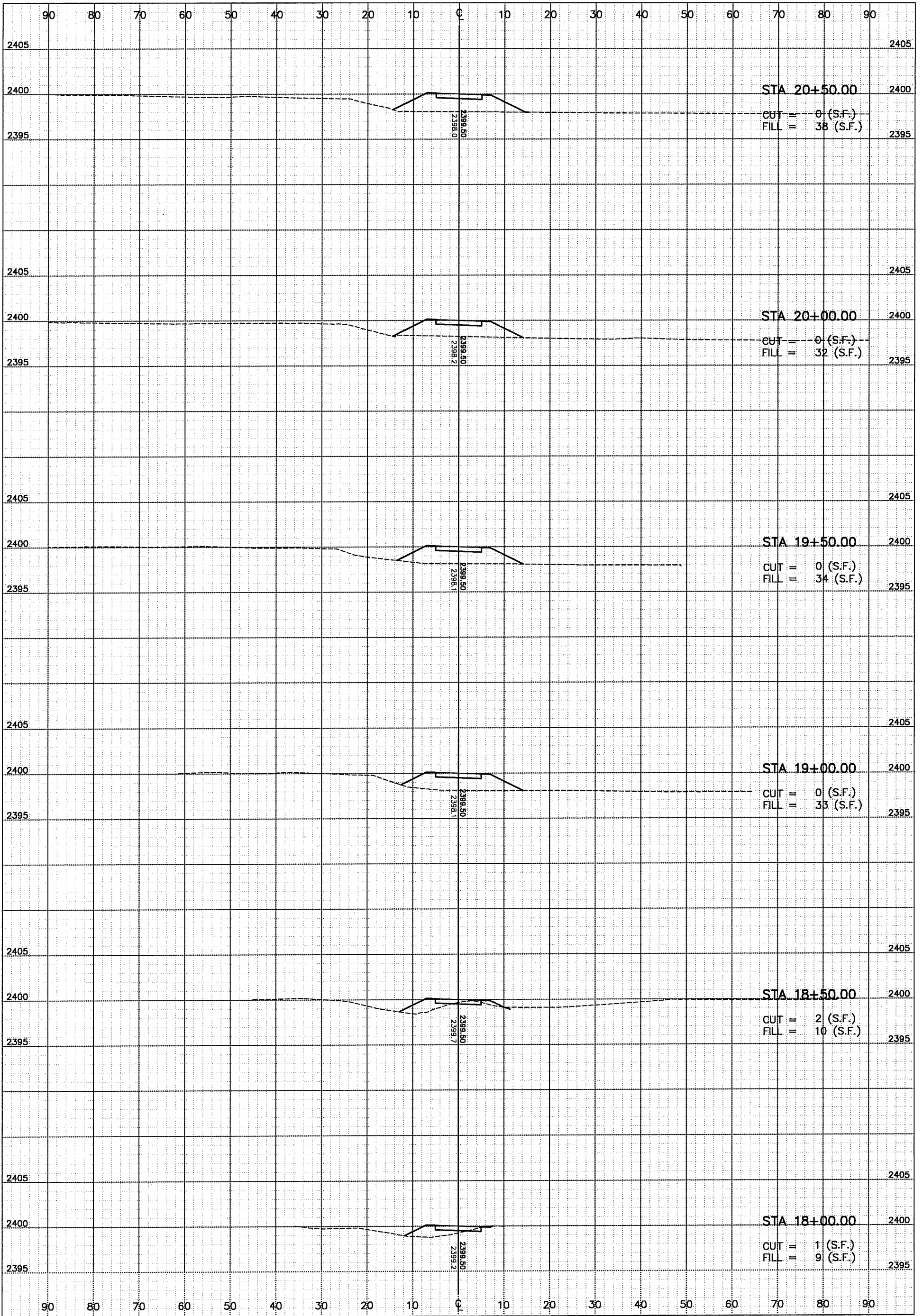
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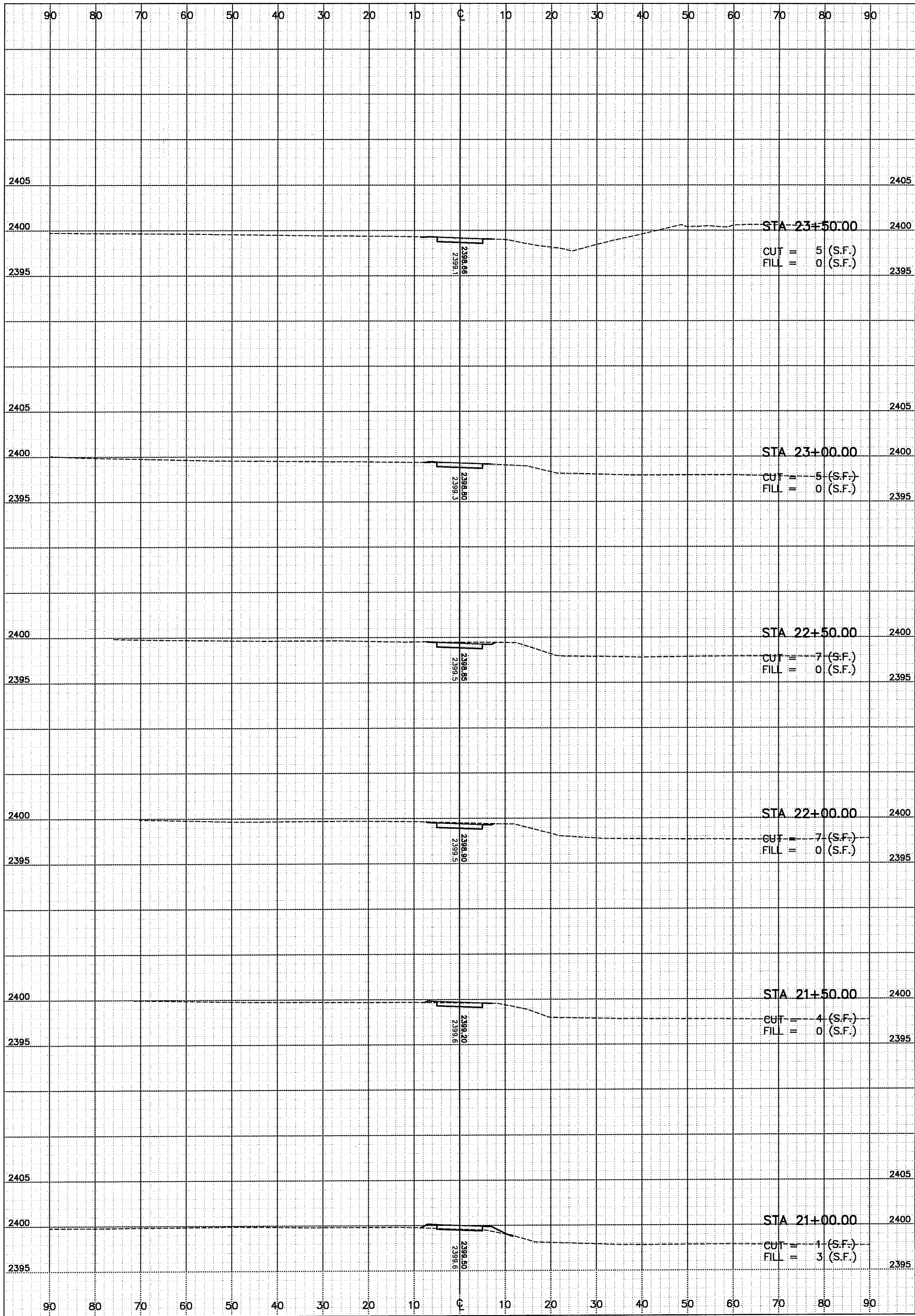
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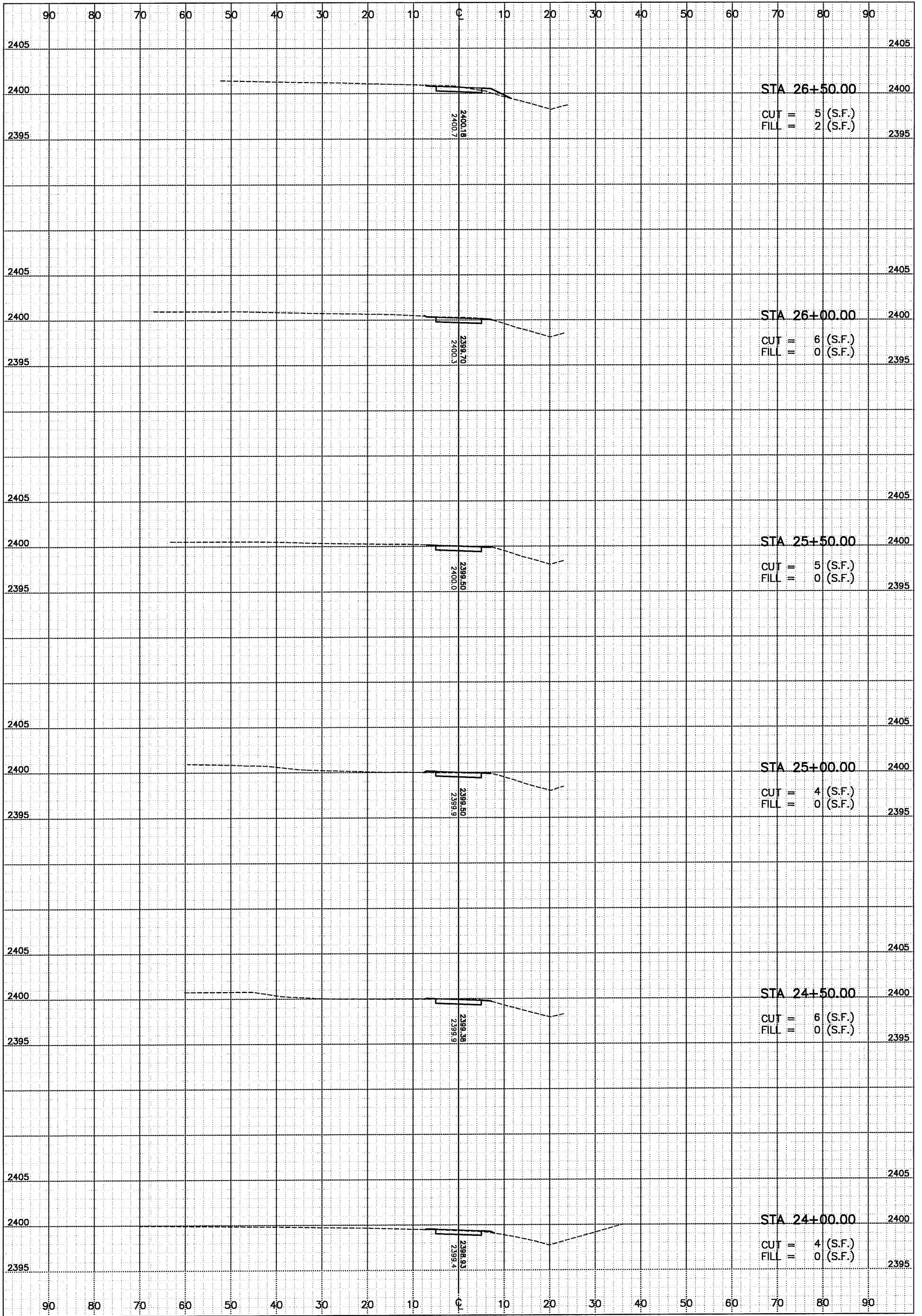


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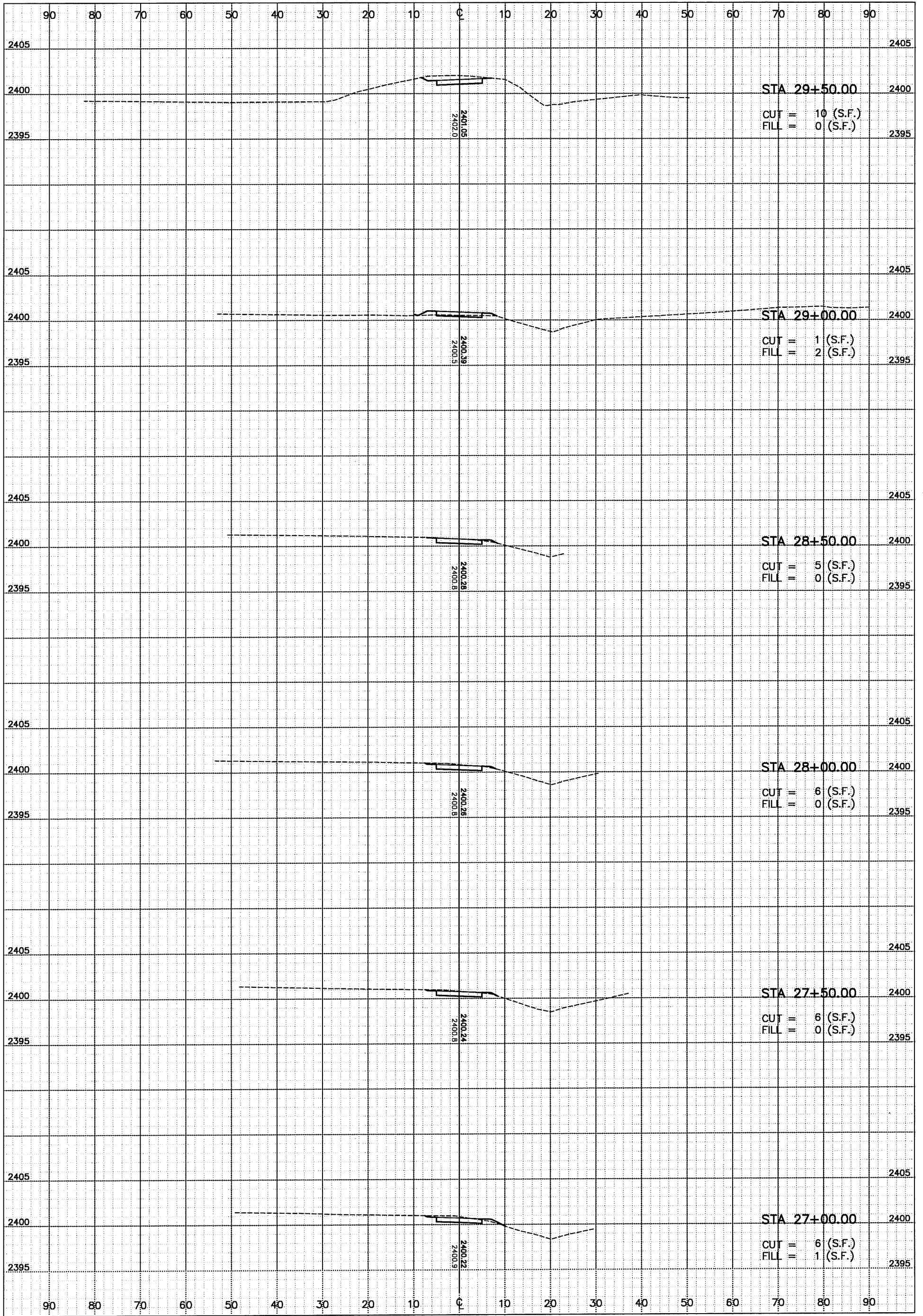


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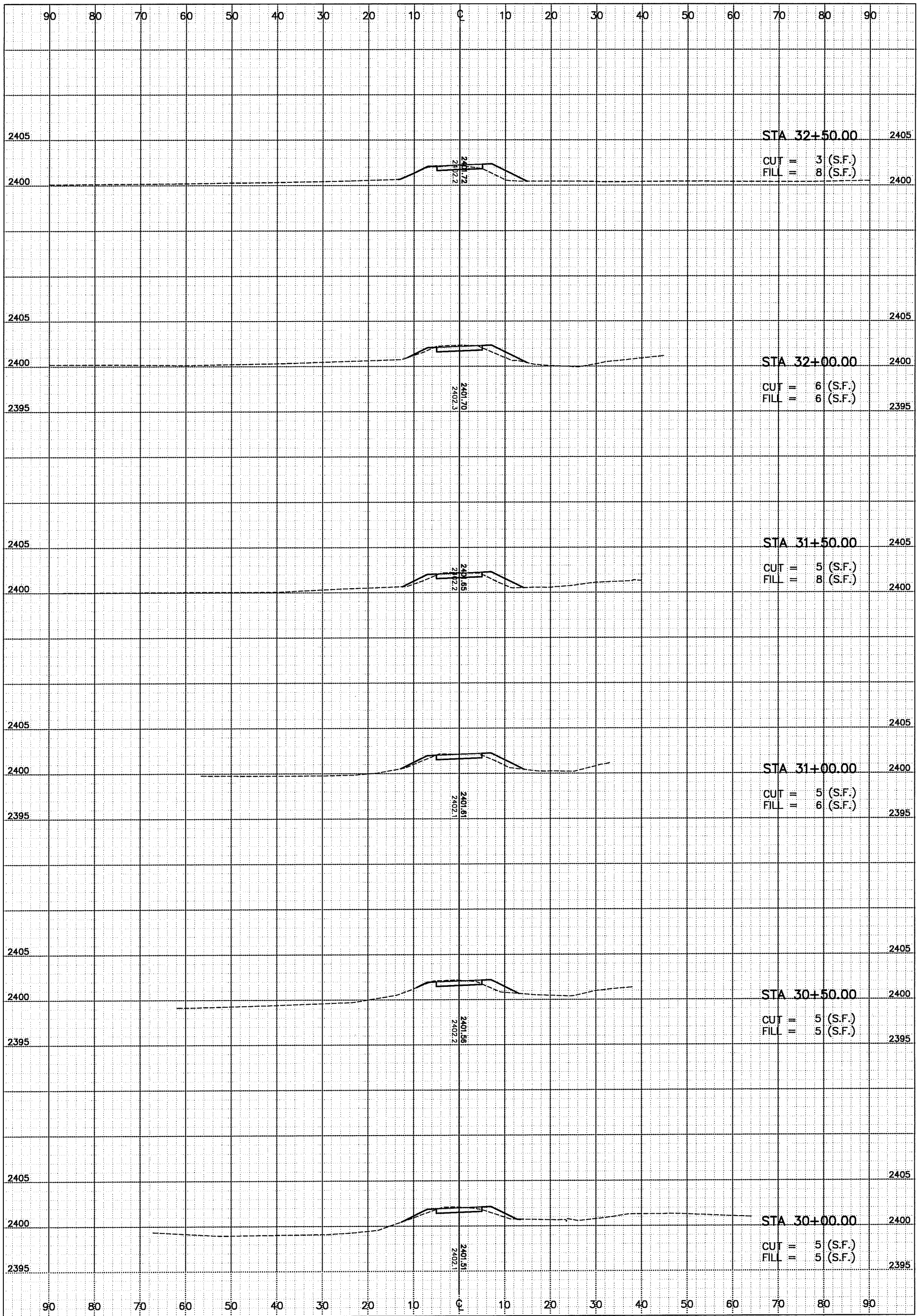
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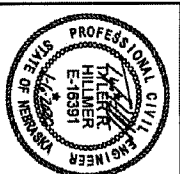
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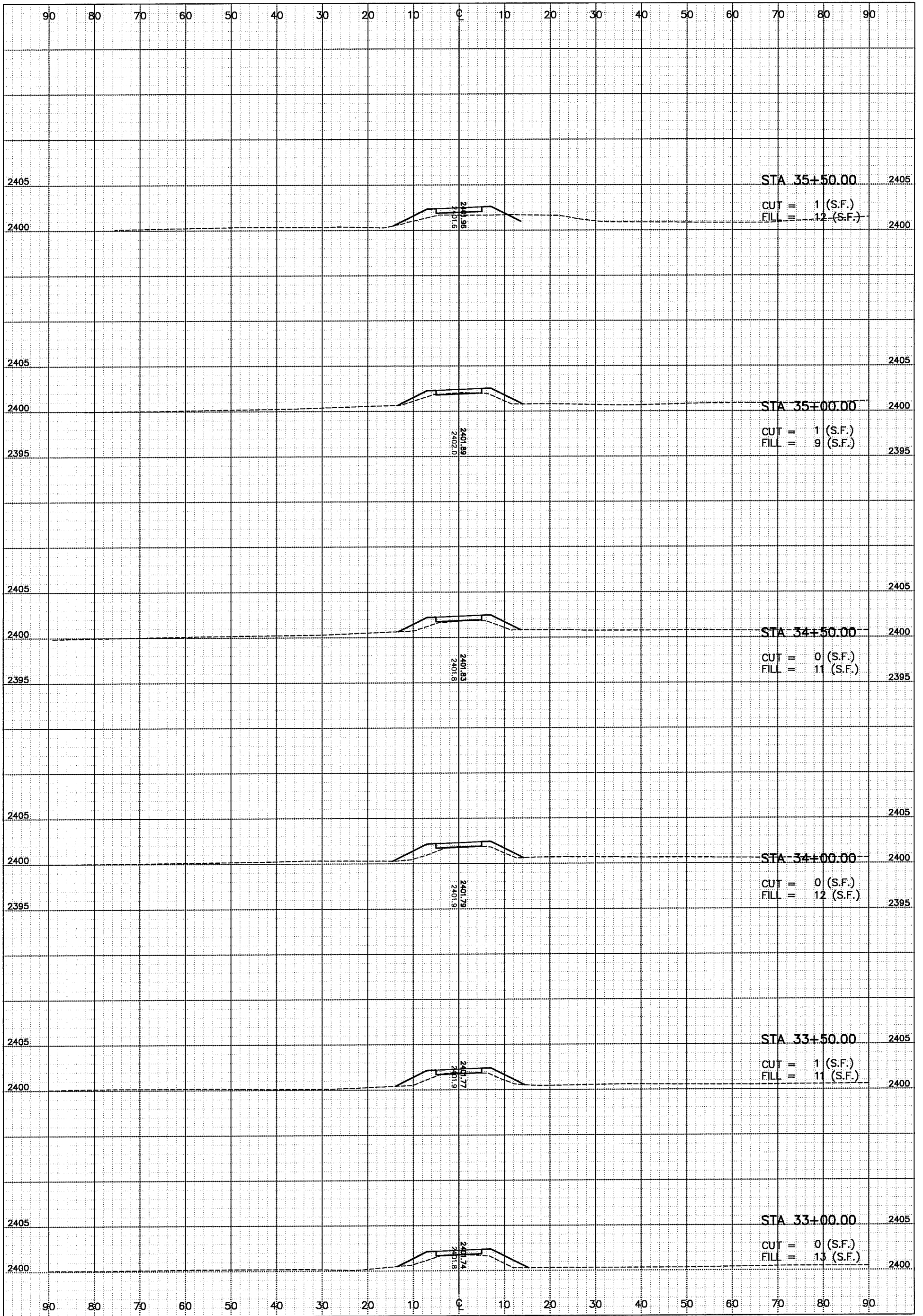


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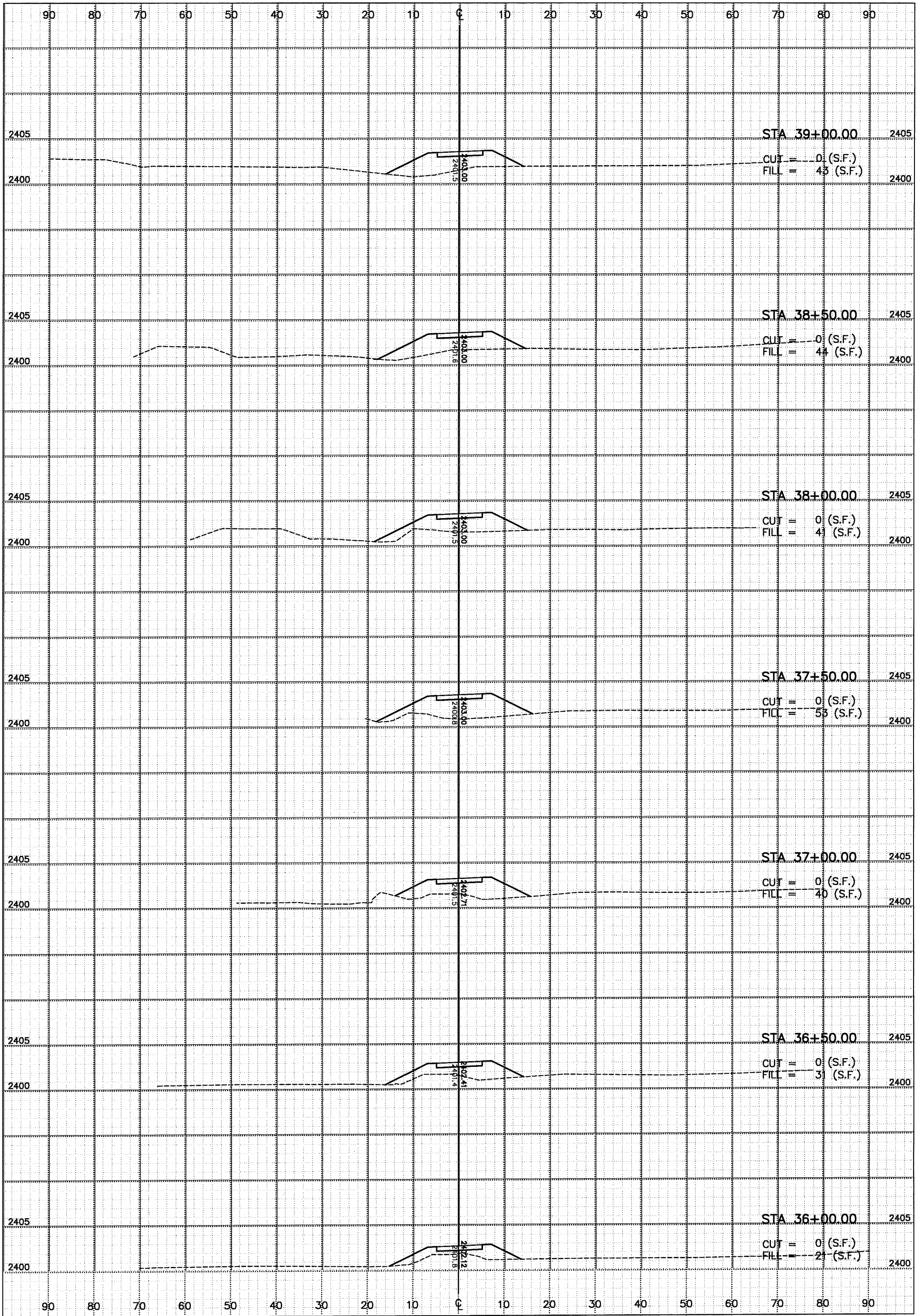


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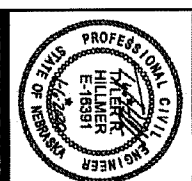
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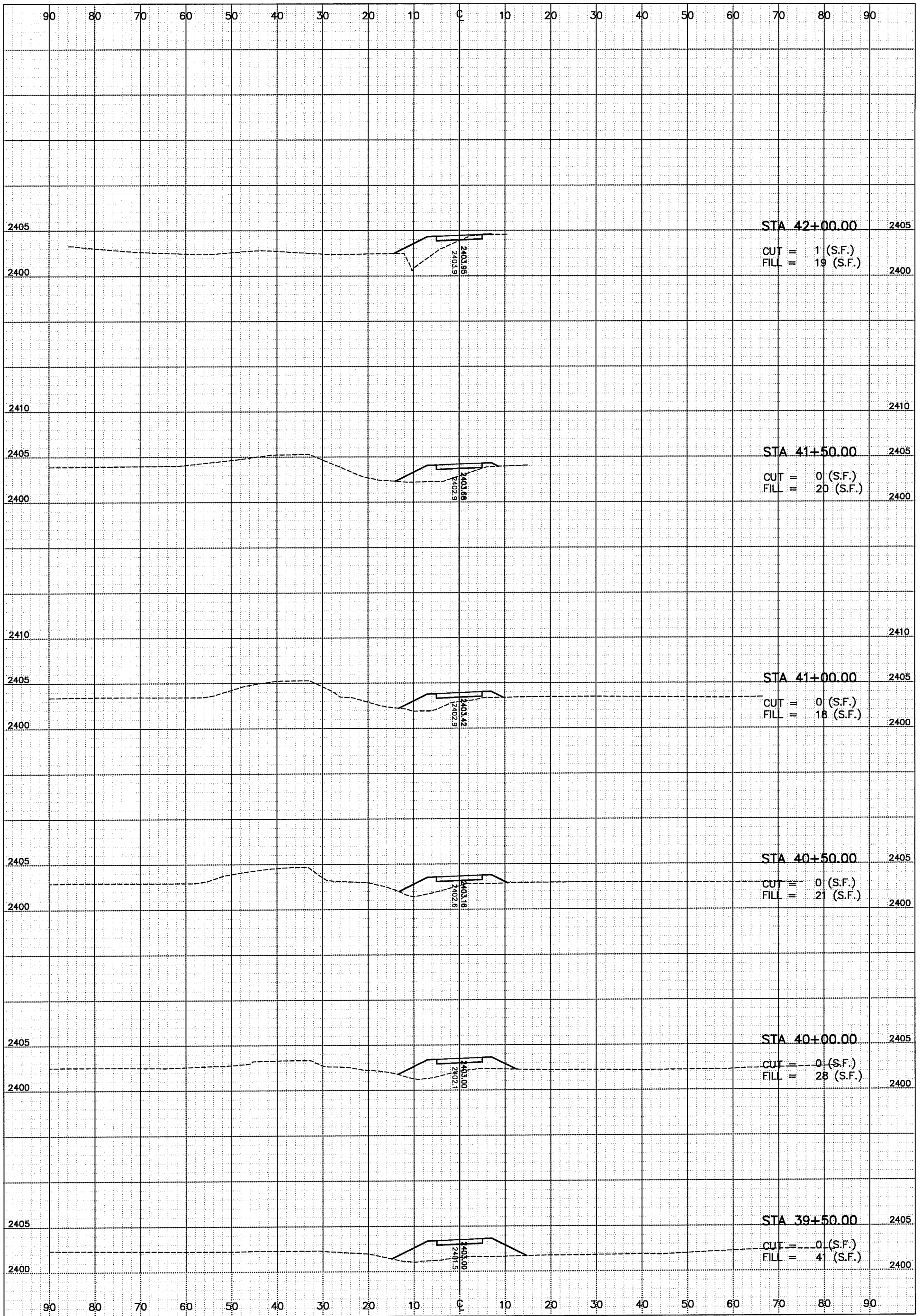
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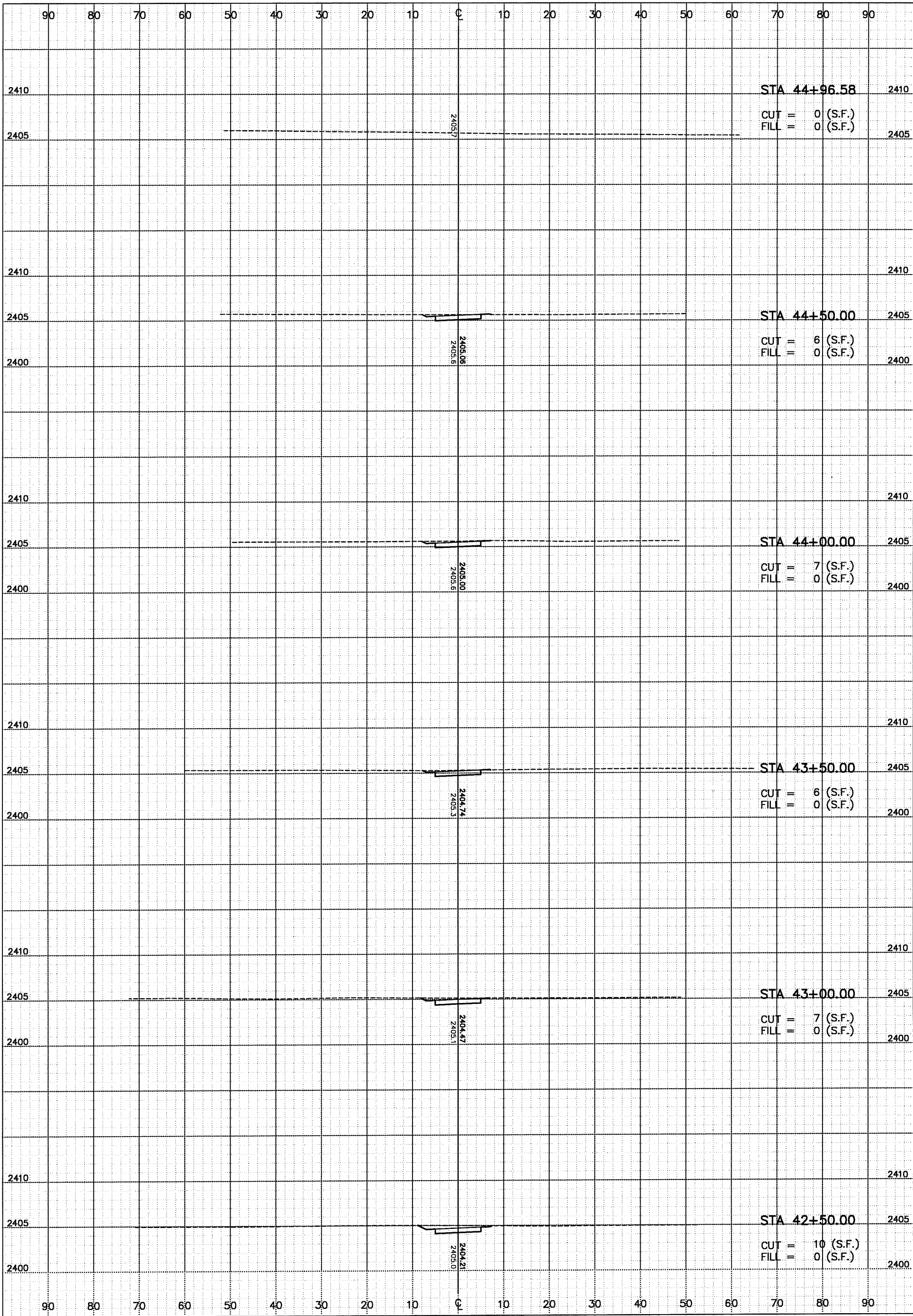
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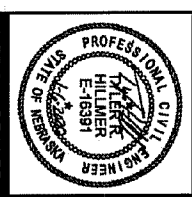
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