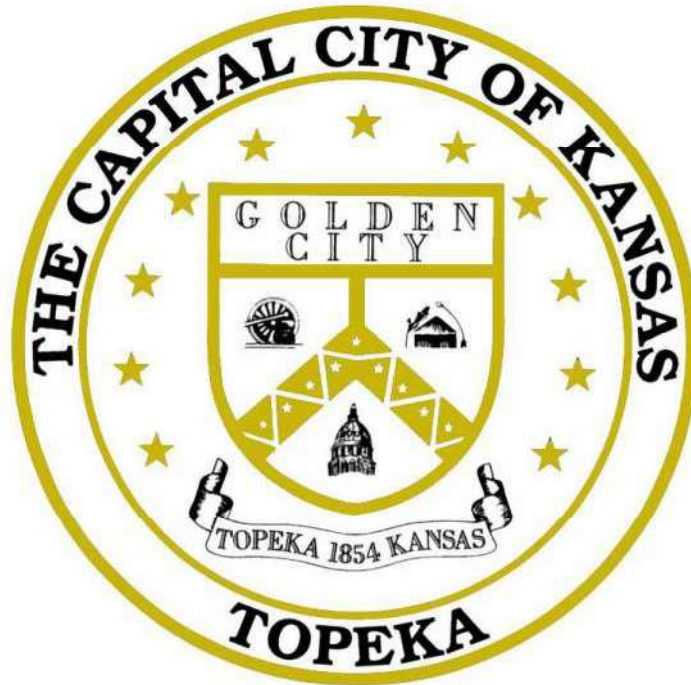


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# PROJECT MANUAL

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**BRIDGE IMPROVEMENT PROJECT NO. 121005.00  
SE 29TH STREET OVER BUTCHER CREEK  
STREET IMPROVEMENT PROJECT NO. 701039.00  
SE 29TH STREET-S. KANSAS AVE. TO SE ADAMS ST.  
WATERLINE REPLACEMENT PROJECT NO. 281250.04  
STORM SEWER REPLACEMENT PROJECT NO. 501081.27 &  
501107.02  
SANITARY SEWER REPLACEMENT PROJECT NO.  
291129.01**

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*FINNEY & TURNIPSEED*

TRANSPORTATION & CIVIL ENGINEERING, L.L.C.  
610 SW 10TH STREET, SUITE 200  
TOPEKA, KANSAS 66612

# PROJECT MANUAL

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**DOCUMENT 020**  
**INVITATION TO BID**

1. **CITY OF TOPEKA PROJECT:** Bridge, Street Improvement & Waterline, Storm, & Sanitary Sewer Replacement SE 29th St Butcher Creek 121005.00, 701039.00, 281250.04, 501081.27, 501127.02, 281129.01
2. **BIDS RECEIVED UNTIL:** 2:00 P.M., Local Time, March 12, 2026 electronically using the Topeka Vendor Access website: <https://cityoftopakaks.tylerportico.com/va/vendor-access/bids> or by delivering physical hard copies prior to Closing at the office of the Contracts & Procurement Division, City Hall, 215 SE 7<sup>th</sup> Street, Room B60, Topeka, Kansas 66603.
3. **BID CLOSING:** Will be public following the receipt of bids at the office of the Contracts & Procurement Division, City Hall, 215 SE 7<sup>th</sup> Street, Room B60, Topeka, Kansas 66603.
4. **DESCRIPTION OF MAJOR UNITS OF WORK:**

Pavement Removal	12,392 S.Y.
Unclassified Excavation	7,363 C.Y.
9" Reinforced Concrete Pavement	7,077 S.Y.
36" Storm Sewer (RCP), Class II	674 L.F.
12" RJ PVC Waterline, PC 235	3,151 L.F.
Encasement Pipe (20"x0.375" Steel) By Boring, Jacking or Tunneling (not a complete list)	200 L.F.
5. **DESIGN ENGINEER:** Finney & Turnipseed, Transportation & Civil Engineering, LLC, 610 SW 10<sup>th</sup> Street, Suite 200 Topeka, Kansas 66612
6. **BID DOCUMENTS:** Electronic copies (PDF's) of the bid documents (plans and specifications) and any addenda are available using the Topeka Vendor Access website. Register online at <https://cityoftopakaks.tylerportico.com/va/vendor-access/registration> .
7. **BID SECURITY REQUIREMENTS:** All bids must be accompanied by a cashier's check or a bid bond for not less than five percent (5%) of the amount bid (including alternates), made payable to the City of Topeka, Kansas. The original bid security shall be provided to the office of Contracts and Procurement before the 2:00 closing date.
8. **PRE-BID CONFERENCE:** A pre-bid conference will be held at N/A . Representatives of the Design Engineer and Owner will be present to answer questions. Attendance is N/A (mandatory or optional). If indicated as optional, attendance is highly encouraged for bidders to attend in order to understand the expectations and details involved in the project and contract.
9. **SUBMITTALS:** Bid submittal requirements are explained in Document 100: Instructions to Bidders.
10. **BID QUESTIONS:** All questions **must** be submitted using the **Bid Question Submittal Form (Excel)** included in the Bid Attachments. Bidders shall **download the form**, enter their questions directly into the **Q# fields** (handwritten submissions will not be accepted), and **email the completed Excel file** to [procurement@topeka.org](mailto:procurement@topeka.org) no later than **ten (10) days prior** to the bid closing date and time, unless otherwise stated in the bid documents.

The email subject line shall read: **Bid Number ##### – Questions.**

If more than forty (40) questions are required, bidders may insert additional rows as needed. The form must be submitted as an **MS Excel (.xls or .xlsx)** file.

Responses to questions will be issued by addendum and posted in the Bid Attachments as a **PDF** titled:

**Bid Number ##### – Answers to Bid Question Submittal Form.**

11. **Plan Holder List:** Contractors seeking to be included on the Plan Holders List **must** complete the **Plan Holders Information Form (Excel Worksheet)** included in the Bid Attachments. Contractors **shall download the form**, enter their **business name, contact name, phone number, and email address**, and **email the completed Excel file** to [procurement@topeka.org](mailto:procurement@topeka.org) no later than **ten (10) days** prior to the bid closing date, unless otherwise stated in the bid documents.

The email subject line shall read: **Bid Number ##### – Plan Holders Request.**

A **complete Plan Holders List** will be published in the Bid Attachments as a PDF titled:

**Bid Number ##### – Plan Holders List.**

## **DOCUMENT 100 INSTRUCTIONS TO BIDDERS**

### 1. Defined Terms.

Terms used in these Instructions to Bidders shall have the meanings assigned to them in the General Conditions. The term "Successful Bidder" means the lowest, qualified, responsible Bidder to whom Owner (on the basis of Owner's evaluation as hereinafter provided) makes an award.

### 2. Copies of Bidding Documents.

- 2.1. Complete sets of the Bidding Documents in the number and for the purchase sum, if any, stated in the Invitation may be obtained from the office designated in the Invitation to Bid.
- 2.2. Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Design Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- 2.3. Owner and Design Engineer in making copies of Bidding Documents available on the above terms do so only for the purpose of obtaining Bids on the Work and do not confer a license or grant for any other use.

### 3. Qualifications of Bidders.

To demonstrate qualifications to perform the Work, the apparent low Bidder must be prepared to submit within five days of Owner's request written evidence of the types set forth in the General or Supplementary Conditions, such as financial data, previous experience and evidence of authority to conduct business in the jurisdiction where the Project is located. Any information furnished pursuant to this section shall be deemed confidential and will not be disclosed by the Owner. Each Bid must contain evidence of Bidder's qualification to do business in the State of Kansas or covenant to obtain such qualification prior to award of the contract.

### 4. Examination of Contract Documents and Site.

- 4.1. Before submitting a Bid, each Bidder must (a) examine the Contract Documents thoroughly, (b) visit the site to familiarize himself with local conditions that may in any manner affect cost, progress or performance of the Work, (c) familiarize himself with federal, state and local laws, ordinances, rules and regulations that may in any manner affect cost, progress or performance of the Work; and (d) study and carefully correlate Bidder's observations with the Contract Documents.
- 4.2. Reference is made to the Supplementary Conditions for the identification of those reports of investigations and tests of subsurface and latent physical conditions at the site or otherwise affecting cost, progress or performance of the Work which have been relied upon by Engineer in preparing the Drawings and Specifications. Owner will make copies of such reports available to any Bidder requesting them. These reports are not guaranteed as to accuracy or completeness, nor are they part of the Contract Documents. Before submitting his Bid each Bidder will, at his own expense, make such additional investigations and tests as the Bidder may deem necessary to determine his Bid for performance of the Work in accordance with the time, price and other terms and conditions of the Contract Documents.

43. On request Owner will provide each Bidder access to the site to conduct such investigations and tests as each Bidder deems necessary for submission of his Bid.

44. The lands upon which the Work is to be performed, rights-of-way for access thereto and other lands designated for use by Contractor in performing the Work are identified in the Supplementary Conditions, Specifications or Drawings.

45. The submission of a Bid will constitute an incontrovertible representation by the Bidder that he has complied with every requirement of this Article 4 and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms, and conditions for performance of the Work.

## 5. Interpretations.

All questions about the meaning or intent of the Contract Documents shall be submitted only through the City of Topeka's e-Procurement System at least 10 calendar days prior to the opening of Bids. All questions and answers will be posted to the Bid Event. Questions and answers that result in a material change to the scope of work or quantities will require issuance of an addendum. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

## 6. Bid Security.

61. Bid Security shall be made payable to Owner, in an amount of five percent of the Bidder's maximum Bid price (including alternates) and in the form of a certified or cashier's check or a Bid Bond issued by a Surety meeting the requirement of paragraph 5.1 of the General Conditions. All forms of Bid Security must be delivered in original form. Facsimile transmission of Bid Security documents will not be accepted.

62. The Bid Security of the Successful Bidder will be retained until such Bidder has executed the Agreement and furnished the required Contract Security, whereupon it will be returned; if the successful Bidder fails to execute and deliver the Agreement and furnish the required Contract Security within 10 days of the award of contract, Owner may annul the award and the Bid Security of that bidder will be forfeited to the Owner.

The Bid Security of any Bidder whom Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the seventh day after the "Effective date of the Agreement" (which term is defined in the General Conditions) or the forty-sixth day after the Bid opening, whichever is earliest. Bid Security of other Bidders will be returned within seven days of the Bid opening.

## 7. Contract Time.

The number of days within which or the date by which the Work is to be completed (the Contract Time) is set forth in the Agreement.

## 8. Liquidated Damages.

Provisions for liquidated damages are set forth in the Agreement.

## 9. Substitute Material and Equipment.

The Contract, if awarded, will be on the basis of material 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 submittal 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 which may be supplemented in the Specifications.

#### 10. Subcontractors, etc.

10.1. The total amount of the work performed by all Subcontractors cannot exceed seventy percent (70%) of the Total Bid as reflected in Document 330.

10.2. Bidder must submit to Owner, as part of their Bid Form, a complete list of all Subcontractors and other persons and organizations (including those who will be furnishing the principal items of material and equipment) proposed to be used by the bidder to complete this project. Failure by the Bidder to provide this list with the cost amount for each Subcontractor shall render the bid nonresponsive. If the total amount of the work performed by all Subcontractors exceeds seventy (70%) of the Total Bid, the bid will be rejected. If requested by the Owner, the Successful Bidder shall submit to the owner, in writing, an experience statement with pertinent information as to similar projects and other evidence of qualifications for each such Subcontractor, person and organization listed on the Bid Form. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor, other person or organization, either Owner or Engineer may before giving the award of contract, request the apparent Successful Bidder to submit an acceptable substitute without an increase in Bid Price. If the apparent Successful Bidder declines to make any such substitution, the contract shall not be awarded to such Bidder, but his declining to make any such substitution will not constitute grounds for sacrificing his Bid Security. Any Subcontractor, other person or organization so listed and to whom Owner or Engineer does not make written objection prior to the giving the award of contract, will be deemed acceptable to Owner and Engineer. Substitutions to this list of acceptable Subcontractors and other persons and organizations after the apparent Successful Bidder has been awarded a contract by the Owner will not be allowed without the written approval of the Owner or Engineer.

10.3. No Contractor shall be required to employ any Subcontractor, other person or organization against whom he has reasonable objection.

10.4. No Subcontractor who is on the Owner's "List of Suspended Contractors" as of the date of the opening of Bids may be employed by the Contractor on the project. A current list of suspended contractors may be obtained from the Contracts and Procurement Division.

#### 11. Bid Form.

11.1. The Bid Form is included in this Project Manual. The Project Manual will be posted to the electronic Bid Event.

11.2. Bid Forms must be completed in the electronic Bid Event.

11.3. 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 shall be shown below the signature. Signature pages shall be submitted electronically as instructed in the Bid Event.

11.4. 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. Signature pages shall be submitted electronically as instructed in the Bid Event.

11.5. All names must be typed or printed below the signature, unless instructed in the electronic Bid Event.

11.6. The Bid shall contain an acknowledgment of receipt of all Addenda (the numbers of which shall be filled in on the Bid Form). Signed Addenda forms shall be uploaded to the Bid Event by the bidder.

11.7. The address to which communications regarding the Bid are to be directed must be shown, if different than that required above.

## 12. Submission of Bids.

12.1. Bids shall be submitted only through the City of Topeka's e-Procurement System.

12.2. Bids shall be submitted at or before the stated time of closing. Bids received after the closing time indicated in the Invitation to Bid will be rejected.

The City attempts to maintain continuous access to the supplier portal. However, from time to time, Bidder understands that access may be interrupted or prevented due to maintenance, site problems, Internet problems, or problems experienced by the user due to Bidder's computer system. Bidder acknowledges that City makes no warranties that the supplier portal will be uninterrupted or error-free. Regardless of the source of any problem, Bidder acknowledges that it is Bidder's sole responsibility to ensure that its bid is timely received. Because of the discrepancies inherent in timing mechanisms (e.g. cell phone, computers, mobile devices), Bidder acknowledges that the bid time will be determined based upon the time indicated on the City server for the Strategic Sourcing application. If Bidder does not submit its bid at or before the time indicated on the City server for the strategic source application, the bid will be electronically rejected by the Strategic Sourcing application as untimely.

Bidder acknowledges that the City shall not be liable for any direct, indirect, incidental, special, consequential or exemplary damages, including but not limited to, damages for loss of profits, goodwill, use, data or other intangible losses resulting from: (i) the use or the inability to use the supplier portal; (ii) unauthorized access to or alteration of the user's transmissions or data; or (iii) any other matter relating to the supplier portal.

12.3. Bids will not be accepted from any Contractor who is on the Owner's "List of Suspended Contractors" as of the date of the Opening of Bids. Bids received from suspended Contractors will automatically be rejected and returned unopened.

12.4. Bids that do not conform to the Affirmative Action and Notification of MBE and WBE requirements shall be deemed non-responsive and will not be accepted in accordance with paragraphs 23 and 24 of this Instructions To Bidders.

## 13. Modification and Withdrawal of Bids.

13.1. 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.

13.2. If, within twenty-four hours after Bids are opened, any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of his Bid, Owner may, at its sole discretion, allow that bidder to withdraw his Bid and the Bid Security will be returned.

14. Opening of Bids.

Bids will be opened publicly and read aloud.

15. Bids to Remain Open.

All Bids shall remain open for sixty (60) days after the day of the bid opening, but Owner may, in his sole discretion, release any Bid and return the Bid Security prior to that date.

16. Award of Contract.

16.1. Owner reserves the right to reject any and all Bids, to waive any and all informalities and to negotiate contract terms with the Successful Bidder within the limitations of the Code of the City of Topeka. Owner reserves the right to reject all nonconforming, nonresponsive or conditional Bids. Discrepancies in the indicated multiplication of unit prices and quantities shall be resolved in favor of the correct multiplication based on the unit prices indicated. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

16.2. In evaluating Bids, Owner shall consider the qualifications of the Bidders, whether or not the Bids comply with the prescribed requirements and alternates and unit prices if requested in the Bid forms. It is Owner's intent to accept alternates (if any are accepted) in the order in which they are listed in the Bid form but Owner may accept them in any order or combination.

16.3. Owner may consider the qualifications, experience and financial ability of Subcontractors and other persons and organizations (including those who are to furnish the principal items of material or equipment) proposed for those portions of the Work as to which the identity of Subcontractors and other persons and organizations must be submitted as provided in the General Conditions. Operating costs, maintenance considerations, performance data and guarantees of materials and equipment may also be considered by Owner.

16.4. Owner reserves the right to reject the Bid of any Bidder who does not pass any such evaluation to Owner's satisfaction.

16.5. If the contract is to be awarded it will be awarded to the lowest Bidder whose evaluation by Owner indicates to Owner that the award will be in the best interests of the Owner.

16.6. If the contract is to be awarded, Owner will notify the Successful Bidder within thirty days after the day of the Bid opening.

17. Performance and Other Bonds.

Paragraph 5.1 of the General Conditions sets forth Owner's requirements as to performance and other Bonds. When the Successful Bidder delivers the executed Agreement to Owner, it shall be accompanied by the required Contract Security.

## 18. Signing of Agreement.

When Owner notifies the Successful Bidder of the award of contract, it will be accompanied by at least three unsigned counterparts of the Agreement and all other Contract Documents. Within ten days thereafter Contractor shall sign and deliver all counterparts of the Agreement to Owner with all other Contract Documents attached. The Contractor shall also submit certificates of insurance in accordance with paragraph 2.1 of the General Conditions and an estimated construction schedule in accordance with paragraph 2.6 of the General Conditions with the executed Agreement. Within ten days thereafter Owner will deliver all fully signed counterparts to Contractor.

## 19. Sales Taxes.

19.1. For all projects, payment of Kansas State Sales Tax or Compensating (Use) tax is not necessary and should not be included in unit prices bid for materials to be incorporated in the work. The City of Topeka will furnish an exemption certificate (including exemption certificate number) obtained from the Sales and Compensating Tax Division of the Department of Revenue of the State of Kansas to the Contractor, Subcontractor or repairmen making purchases of any tangible personal property to be incorporated in this project. The Contractor, Subcontractor or repairmen must furnish all suppliers with a copy of the properly executed exemption certificate secured for this project. He may reproduce as many copies of the certificate as he may need.

## 20. State Registration of Out-of-State Contractors.

Bidders are advised that K.S.A. 79-1008, 79-1009 requires the registration of out-of-state contractors with the Director of Revenue for collection of tax.

## 21. Non-Resident Bidders.

Attention is directed to Section 16-113 and 16-114 of the Kansas Statutes Annotated which requires that any Non-Resident Contractor who undertakes the construction of any public improvement to be paid for out of public funds, must appoint in writing and file with the Kansas Secretary of State, some person (resident in Shawnee County, Kansas) on whom service may be had in any civil action which may arise out of such contractual relation.

## 22. Equal Employment Opportunity.

It is the policy of the City of Topeka, Kansas to require that all contracts of the City and its agencies include specific provisions to ensure equal employment opportunity ~~and that all Contractors provide evidence of the adoption of an affirmative action program.~~ To comply with these requirements, all persons wishing to enter into a contract with the City shall abide by the following conditions:

### 22.1. Comply with K.S. A. 44-1030 requiring that:

- a. The Contractor shall observe the provisions of the Kansas act against discrimination and shall not discriminate against any person in the performance of work under the present contract because of race, religion, color, sex, physical handicap unrelated to such person's ability to engage in the particular work, national origin or ancestry;
- b. In all solicitations or advertisements for employees, the Contractor shall include the phrase, "equal opportunity employer," or a similar phrase to be approved by the commission;

- c. If the Contractor fails to comply with the manner in which the Contractor reports to the commission in accordance with the provisions of K.S.A. 44-1031, the Contractor shall be deemed to have breached the present contract and it may be cancelled, terminated or suspended, in whole or in part, by the Owner;
- d. If the Contractor is found guilty of a violation of the Kansas act against discrimination under a decision or order of the commission which has become final, the Contractor shall be deemed to have breached the present contract and it may be cancelled, terminated or suspended, in whole or in part, by the Owner; and
- e. The Contractor shall include the provisions of paragraphs (a) through (d) inclusively of this subsection 22.1. in every sub-contract or purchase order so that such provisions will be binding upon such Subcontractor or vendor.

22.2. Guarantee that during the performance of any City contract or agreement the Contractor, Subcontractor, vendor, or supplier of the City shall comply with all provisions of the Civil Rights Act of 1964, The Equal Employment Opportunity Act of 1972, ~~Executive Order 11246~~, Age Discrimination in Employment Act of 1967, ~~Part 20 Title 41 of the Code of Federal Regulations~~, Rehabilitation Act of 1973, ~~City Ordinance No. 14218~~ and/or any laws, regulations or amendments as may be promulgated thereunder.

23. Affirmative Action Program.

**Redacted**

All persons seeking to enter into a contract with the City of Topeka shall submit in writing to the Contracts and Procurement Division-Contract Compliance an affirmative action program. Such program shall be approved and on file with the Contracts and Procurement Division-Contract Compliance prior to the bid opening. Failure to maintain an approved affirmative action program on file prior to the bid opening shall deem the bid non-responsive and it will not be accepted.

An Affirmative Action program means a positive program designed to ensure that a good faith effort will be made to employ applicants and to treat employees equally without regard to their race, sex, religion, color, national origin, age, ancestry or handicap. An affirmative action program shall include, where applicable, but not be limited to, the following: recruitment, recruitment advertising, employment, upgrading, promotion, demotion, transfer, lay-off, termination, rates of pay, other terms or conditions of employment, selection for training, and apprenticeship. It shall include goals, methodology and a timetable for implementation of the program, when appropriate. Goals for participation on City projects shall be 9% minority and 6.9% female. All Subcontractors performing work to fulfill all or any part of a General Contractors obligation are subject to these affirmative action provisions. General Contractors shall be responsible for ensuring compliance by their Subcontractors.

**Redacted**

**Redacted**

Any person who so desires may file an affirmative action program annually which shall apply to all bids which such person shall make during the calendar year next succeeding the date of such filing. However, annual submission of the affirmative action program shall not excuse any person from submission of a work force analysis or other requirements for utilization of minority and/or female employees in a work force either concurrently with or prior to any contract bid or proposal. Any annual submission shall be subject to review by the Contracts and Procurement Division-Contract Compliance and shall be amended at such time and in such manner as the Contracts and Procurement Division-Contract Compliance may require.

**Redacted**

24. Notification of Minority Business Enterprises (MBE) and Women Business Enterprises (WBE). It is the policy of the City of Topeka that minority and women business enterprises shall have the opportunity to participate in the performance of contracts and subcontracts. The Contractor shall take the necessary steps, as herein established, to ensure that MBE's and WBE's have the opportunity to compete for and perform subcontract work. In this regard, the Contractor shall demonstrate a good faith effort by any one of the following methods:

- a. Complete and submit the Notification of Available Subcontract Work form, Document No. 840, ten (10) days prior to the bid opening.

If a portion of the work on this project is to be subcontracted, the bidder shall submit the Notification of Available Subcontract Work form so as to be received by the Contracts and Procurement Division-Contract Compliance, City Hall, 215 E. 7th Street, Topeka, Kansas 66603, ten (10) days prior to the bid opening date. A bidder shall certify the timely delivery of the form either by hand delivery or by fax signed by an authorized employee of the Contracts and Procurement Division-Contract Compliance. Once the Notification of Available Subcontract Work forms are received by the Contracts and Procurement Division-Contract Compliance, they will be mailed to interested minority and women owned businesses as notification of subcontracting opportunities.

- b. Demonstrate a good faith effort to offer minority and women business enterprises an opportunity to compete for subcontracts.

A bidder may satisfy the requirements of this section by presenting documentation that demonstrates good faith efforts to notify MBE's and WBE's of available subcontracting opportunities on the project being bid. Such documentation may include, but not be limited to the following: advertisement in general circulation, trade associations, or minority focus media of subcontracting opportunities, written notice to MBE's and WBE's soliciting their participation in the contract, and evidence of efforts to negotiate with MBE's or WBE's to perform work under this contract.

- c. Demonstrate participation by minority and/or women business enterprises as subcontractors on the project.

A bidder may satisfy the requirements of this section by submitting documentation of MBE and/or WBE participation as subcontractors on the project comparable to the known availability of qualified MBE's and WBE's.

For purposes of assessing this section, the successful contractor shall be required, upon request, to submit names and addresses of minority owned and women owned businesses that are subcontractors, a description of the work to be performed, and an aggregate dollar amount of participation by each named MBE and WBE subcontractor.

## 25. Wage Rates.

The Wage Rate Determination included in this Project Manual, Document No. 850, will be applicable to the project *only if state or federal law requires payment of wages higher than the minimum wage. If Document No. 850 Wage Rate Determination is not included in the Project Manual, then Davis Bacon wages shall not be required for the project.* These wages must be paid unconditionally to each class of worker for the duration of the project, unless they are changed by Addendum. The Wage Rate Determination shall be accounted for when preparing the bid. If your company pays fringe benefits to approved plans, funds or programs, it is necessary that verification of payment of these benefits be made to the Contracts and Procurement Division-Contract Compliance with the first payroll. Any

company not affiliated with an approved plan, fund or program must pay both the base pay and all fringe benefits to each employee in cash. Any worker who works more than 40 hours a week must be paid 1 ½ times the base pay plus all fringe benefits.

Certified payrolls must be submitted on a weekly basis by the prime contractor and all his subcontractors to the Contracts and Procurement Division-Contract Compliance. Failure to do so will result in any payment being withheld until the prime contractor and all his subcontractors are in compliance with this section. A report must be submitted for every week until the job is complete even if no work is performed, fill out a payroll report, sign it and write across it "No Work Performed This Week".

Final payment on this project will not be released until all information has been correctly submitted to the Contracts and Procurement Division-Contract Compliance. The Contractor shall be responsible for the submittal of all Subcontractors' wage determination information.

## 26. Standard Technical Specifications.

This project shall be subject to the applicable sections of the "Standard Technical Specifications" of the City of Topeka, Kansas, latest edition with any addenda thereto, except as modified or supplemented by specifications contained in this Project Manual.

**DOCUMENT 101**  
**MODIFICATIONS TO INSTRUCTIONS TO BIDDERS**

These modifications to the Instruction to Bidders amend or supplement the Instruction to Bidders, Document 100, of this Project Manual, as listed below. All provisions which are not so amended or supplemented shall remain in full force and effect.

**DOCUMENT 530A  
DATE CERTAIN  
AGREEMENT**

**THIS AGREEMENT** is dated as of \_\_\_\_\_, by and between the City of Topeka (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 Project for which the Work under the Contract Documents is to be performed is: Bridge Improvement Project No. 121005.00 – SE 29th Street over Butcher Creek, Street Improvement Project No. 701039.00 SE 29<sup>th</sup> Street -S Kansas Ave. to SE Adams St., Waterline Replacement Project No. 281250.04, Storm Sewer Replacement Project No. 501081.27 & 501107.02, Sanitary Sewer Replacement Project No. 291129.01, Traffic Signal Improvement Project No. 141037.01.

**Article 2. Engineer.**

The project has been designed by Finney & Turnipseed, Transportation & Civil Engineering L.L.C. The City Engineer \_\_\_\_\_ (Specify Design Engineer or City Engineer) is hereinafter designated as the Engineer and 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 actual Contract Time will commence on and be completed by the dates set forth on the Start Work Order, signed by Contractor and City of Topeka Project Manager. Any issuance by Owner of Stop Work Order, or Resume Work Order, or Revised Start Work Order will control Contract Time as defined herein.

3.2 The Contract Time is estimated to commence with an issuance of a Work Order by the Owner on or March 2, 2026 , provided the Contractor complies with the required submittal times for the executed Agreement and its counterparts, and be substantially completed for work designated in Part A on or before September 25, 2026, and be substantially completed for work designated in Part B on or before November 27, 2026, and substantially completed for work designated in Part C on or before May 14, 2027 and be completed and ready for final completion and payment in accordance with paragraph 14.13 of the General Conditions on or before June 7, 2027. Said dates are subject to revision and will be controlled by the issuance by Owner of Stop Work Order, or Resume Work Order, or Revised Start Work Order.

3.3. Incentive-Disincentive Provision. The project will result in significant adverse impact to the traveling public in the form of increased time and cost to negotiate detours around the project location. Therefore, an incentive-disincentive provision shall be applicable to the Contract Time stipulated for substantial completion in paragraph 3.1. Substantial Completion, for the purposes of this incentive-disincentive provision is specifically defined in the Supplementary Conditions.

3.3.1. The Contractor will receive an incentive payment of \$ 0.00 per day for each day or part thereof that the project is substantially complete prior to 12:00 mid-night on the date stipulated for substantial completion in paragraph 3.1. The incentive payments will be made up to a maximum limit of \$ 0.00 for a maximum of 0 days prior to the date of substantial completion.

3.3.2. The Contractor will be assessed as a disincentive the per day amount stipulated in paragraph 3.3.1 above for each day or part thereof that the project is not substantially complete by 12:00 mid-night on the date stipulated for substantial completion in paragraph 3.2. The disincentive assessment will continue until the Engineer notifies the Owner of substantial completion in accordance with the provisions of paragraph 14.8 of the General Conditions. The Owner may deduct the total accrued disincentive assessment from the final payment due to the Contractor if sufficient monies are available. Otherwise, the Contractor shall pay to the Owner the total accrued disincentive assessment.

3.4. Extensions of Time. This paragraph replaces paragraph 12.2 of the General Conditions.

3.4.1. No extension of Contract Time beyond the date stipulated for substantial completion in paragraph 3.1 shall be considered for reasons including, but not limited to, variations between actual and bid quantities, availability of materials and equipment, abnormal weather conditions, addition of extra work contiguous with the project and normal coordination with the work of others.

3.4.2. If the Contractor believes that any item of Work or event has unreasonably delayed or prevented Contractor's progress and ability to substantially complete the Work within the stipulated time, Contractor may make a claim therefor in accordance with paragraph 12.1 of the General Conditions.

3.5. 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 complete and ready for final payment by the date 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 in a legal proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty) Contractor shall pay Owner according to the following schedule:

<b>Contract Amount</b>	<b>Substantial Completion Liquidated Damages</b>	<b>Final Completion Liquidated Damages</b>
\$0 to \$25,000	\$150	\$150
\$25,001 to \$50,000	\$250	\$250
\$50,001 to \$100,000	\$400	\$400
\$100,001 to \$500,000	\$750	\$750
\$500,001 to \$1,000,000	\$1,250	\$750
\$1,000,001 to \$1,500,000	\$2,000	\$1,250
\$1,500,001 to \$2,000,000	\$2,500	\$1,500
\$2,000,001 to \$5,000,000	\$3,000	\$2,000
\$5,000,001 to \$10,000,000	\$5,000	\$3,000
\$10,000,001 and up	\$7,000	\$4,000

For each day that expires after the time specified in paragraph 3.2 for Substantial and Final Completion. The Owner may deduct the total accrued liquidated damages from the final payment due to the Contractor.

**Article 4. Contract Price.**

Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents in current funds as per the Contractor's Bid, which is attached as an exhibit to this Agreement.

**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 within thirty-five (35) days following the end of the period for which payment is being requested, provided the application for payment is submitted within seven (7) days following the end of the period. Periods shall end the 15th of each month. All progress payments will be based on the number of units or estimated percentage of the Work completed in accordance with paragraph 14.1 of the General Conditions.

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.

- (1) 90% of Work completed. If the project has been 50% completed as determined by Engineer, and if the character and progress of the Work have been satisfactory to Owner and Engineer upon written request by the Contractor, Owner, may determine that as long as the character and progress of the Work remain satisfactory to them, that the retainage on account of Work completed be reduced

or eliminated. Reduction or elimination of the retainage will be at the sole discretion of the Owner.

- (2) 0 % 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 95% of the Contract Price, 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, including timely submission of an Application for Final Payment, Owner shall pay the remainder of the Contract Price as recommended by Engineer as provided in said paragraph 14.13. Contractor agrees that failure to timely submit a Final Application for Payment pursuant to paragraph 14.13(a) will result in forfeiture of any remaining amounts due.

5.3. Interest. All monies not paid when due hereunder shall not bear interest.

#### **Article 6. Contractor's Representations.**

In order to induce Owner to enter into this Agreement, Contractor represents that he fully complies with the requirements stated in paragraphs 3b. through 3g. of the Bid Form, which is attached as an exhibit to this Agreement.

#### **Article 7. Contract Documents.**

The Contract Documents which comprise the entire agreement between Owner and Contractor concerning the Work consist of the following:

- 7.1. This Agreement.
- 7.2. Performance and other Bonds contained in this Project Manual.
- 7.3. Work Order.
- 7.4. General Conditions contained in this Project Manual.
- 7.5. Supplementary Conditions contained in this Project Manual, if any.
- 7.6. The City of Topeka Standard Technical Specifications for Sewers, Streets, Sidewalks and Miscellaneous Construction of the City of Topeka, Kansas, current edition, with any addenda thereto.
- 7.7. Specifications contained in this Project Manual, if any.
- 7.8. Project Drawings, bearing the following title: Bridge Improvement Project No. 121005.00 – SE 29th Street over Butcher Creek, Street Improvement Project No. 701039.00 SE 29<sup>th</sup> Street -S Kansas Ave. to SE Adams St., Waterline Replacement Project No. 281250.04, Storm

Sewer Replacement Project No. 501081.27 & 501107.02, Sanitary Sewer Replacement Project No. 291129.01, Traffic Signal Improvement Project No. 141037.01

7.9. Addenda \_\_\_\_\_ to \_\_\_\_\_, inclusive.

7.10. Contractor's Bid, including all attachments to Bid, which is attached as an exhibit to this Agreement.

7.11. Equal Employment Opportunity and ~~Affirmative Action Program~~ requirements stated in the Instructions to Bidders.

7.12. Notification of Minority and Women Business Enterprises requirements stated in the Instructions to Bidders.

Redacted

7.13. Wage Rate Determination will only be inserted if wage rates are required by state or federal law (where the state or federal funding source) requires the City to enforce wage rates for project.

7.14. The following which may be delivered or issued after the Effective Date of the Agreement and are not attached hereto: All Change Orders and other documents amending, modifying, or supplementing the Contract Documents pursuant to paragraphs 3.4 and 3.5 of the General Conditions.

There are no Contract Documents other than those listed above in this Article 7. The Contract Documents may only be amended, modified or supplemented as provided in paragraphs 3.4 and 3.5 of the General Conditions.

**Article 8. Suspension of Contractor.**

8.1. Contractor will be placed on Owner's "List of Suspended Contractors" for a period of time from the date of written notification by Owner if Contractor fails to perform in accordance with specific provisions stated in paragraph 8.2 of this Article 8. The period of Suspension shall be established as follows:

First Suspension - 1 year

Second Suspension - 2 years

Third Suspension - Permanent

During the period of suspension, the Contractor will not be permitted to submit a bid to Owner to perform Work either directly or indirectly or as a subcontractor.

8.2. The Contractor shall be suspended upon written notification by Owner:

8.2.1. If Contractor exceeds the Contract Times for substantial completion or final payment as indicated in paragraph 3.1, plus any extensions thereof made in accordance with Article 12 of the General Conditions, by more than ten (10) days or 15%, whichever is greater, or

8.2.2. Upon occurrence of any of the events stated in paragraph 15.2 of the General Conditions.

8.2.3. If Contractor fails to complete any outstanding “One-Year Correction Period” work, as defined in paragraph 13.12 of the General Conditions, on previously completed projects within 90 calendar days of written notification by the Owner, the Contractor will be placed on Owners “List of Suspended Contractors”, as defined in paragraph 8.1, Article 8. Suspension of Contractor, and shall remain suspended until such time as the corrective work has been certified as complete in writing by the Owner.

**Article 9. Miscellaneous.**

9.1. Terms used in this Agreement which are defined in Article 1 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.

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

**CITY OF TOPEKA, KANSAS**

\_\_\_\_\_  
**CONTRACTOR NAME**

\_\_\_\_\_  
Robert M. Perez, Ph.D., City Manager

\_\_\_\_\_  
Authorized Signer

ATTEST:

\_\_\_\_\_  
Brenda Younger, City Clerk

APPROVED AS TO FORM AND LEGALITY  
DATE \_\_\_\_\_ BY \_\_\_\_\_

C&P DIRECTOR  
\_\_\_\_\_

**DOCUMENT 700**

**GENERAL CONDITIONS**

**FOR**

**CITY OF TOPEKA**

**DEPARTMENT OF PUBLIC WORKS**

**CONSTRUCTION PROJECTS**

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## GENERAL CONDITIONS

### ARTICLE 1 - DEFINITIONS

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:

**Addenda** - Written or graphic instruments issued prior to the opening of Bids which clarify, correct or change the bidding documents or the Contract Documents.

**Agreement** - The written agreement 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.

**Application for Payment** - A form acceptable to the Engineer which is to be used by Contractor in requesting progress or final payments and which is to include such supporting documentation as is required by the Contract Documents.

**Bid** - The offer or proposal of the bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

**Bonds** - Bid, performance and payment bonds and other instruments of security.

**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 Time, issued on or after the Effective Date of the Agreement.

**City Engineer** - The City Engineer of the City of Topeka or authorized representatives of the Engineering Division or the Utilities Department of the City of Topeka.

**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 Award of contract) the Bonds, these General Conditions, the Supplementary Conditions, the Specifications and the Drawings as the same are more specifically identified in the Agreement, together with all amendments, modifications and supplements issued pursuant to paragraphs 3.4 and 3.5 on or after the Effective Date of the Agreement.

**Contract Price** - The moneys payable by Owner to Contractor under the Contract Documents as stated in the Agreement.

**Contract Time** - The number of days or the date stated in the Agreement for the completion of the Work.

**Contractor** - The person, firm or corporation with whom Owner has entered into the Agreement.

**Defective** - An adjective which when modifying the word Work refers to Work that is unsatisfactory, faulty or deficient, or 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).

**Design Engineer** - The person, firm or corporation responsible for the design of the project and named as such in the Agreement.

**Drawings** - The drawings which show the character and scope of the work to be performed and which have been prepared or approved by Engineer and are referred to in the Contract Documents.

**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.

**Engineer** - The Engineer shall be either the Design Engineer or the City Engineer as designated in the Agreement.

**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 Time unless subsequently agreed to by Change Order.

**Final Acceptance** - The date when the Owner accepts in writing that the construction of the project is complete in accordance with the Contract Documents such that the entire project can be utilized for the purposes for which it is intended and Contractor is entitled to final payment.

**Final Completion** - The date when the construction of the project is complete and all identified incomplete or defective items of work have been corrected to the satisfaction of the Engineer.

**Force Account Work** - Work authorized and approved by the Owner to be paid on the basis of actual cost in accordance with paragraphs 11.4 through 11.7.

**Contracts and Procurement Division-Contract Compliance** - The Contracts and Procurement Division-Contract Compliance, and their authorized representatives, acting within the authority delegated to them.

**Laws and Regulations; Laws or Regulations** - Laws, rules, regulations, ordinances, codes and/or orders.

**Owner** - The City of Topeka, Kansas with whom Contractor has entered into the Agreement and for whom the Work is to be provided.

**Partial Utilization** - Placing a portion of the Work in service for the purpose for which it is intended (or a related purpose) before reaching Substantial Completion for all the Work.

**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.

**Project Representative** - The authorized representative of Engineer who is assigned to the site or any part thereof.

**Shop Drawings** - All drawings, diagrams, illustrations, schedules and other data which are specifically prepared by or for Contractor to illustrate some portion of the Work and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other information prepared by a Supplier and submitted by Contractor to illustrate material or equipment for some portion of the Work.

**Specifications** - The City of Topeka Standard Technical specifications or the portion 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.

**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.

**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 notice 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 there be no such certificate issued, when final payment is due in accordance with paragraph 14.13. The terms "Substantially Complete" and "Substantially Completed" as applied to any Work refer to Substantial Completion thereof.

Supplementary Conditions - The part of the Contract Documents which amends, modifies or supplements these General Conditions, other provisions of the Contract Documents, the Standard Technical Specifications or the Drawings.

Supplier - A manufacturer, fabricator, supplier, distributor, materialman or vendor.

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.

Unit Price Work - Work to be paid for on the basis of unit prices.

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

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 6.22. A Work Change Directive may not change the contract Price or the Contract time, 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 parties as to its effect, if any, on the Contract Price or Contract Time as provided in paragraph 10.2.

Work Order - A written notice given by Owner to Contractor fixing the date on which the Contract Time will commence to run and on which Contractor shall start to perform Contractor's obligations under the Contract Documents.

## ARTICLE 2 - PRELIMINARY MATTERS

### Delivery of Bonds, Evidence of Insurance and Licenses:

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. Contractor shall also deliver with the executed Agreements certificates of insurance which Contractor is required to purchase and maintain in accordance with paragraphs 5.3 through 5.7. All Certificates of Insurance shall utilize the ACORD 25-S form, most recent revision date. Further Contractor shall deliver all Licenses required in accordance with paragraph 6.13.

### Copies of Documents:

2.2. Owner shall furnish to Contractor up to eight (8) 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. The deposit check for Plans of the successful bidder will be retained.

### Commencement of Contract Time:

2.3. The Contract Time will commence to run on the day indicated on the Work Order. A Work Order may be issued at any time within thirty days after the Effective Date of the Agreement. In no event will the Contract time commence to run later than the seventy-fifth day after the day of bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

### Starting the Project:

2.4. Contractor shall start to perform the Work on the date when the Contract Time commences to run, but no Work shall be done at the site prior to the date on which the Contract time commences to run, unless otherwise authorized in writing.

### 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 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 or discrepancy in the Contract Documents, unless Contractor had actual knowledge thereof or should reasonably have known thereof.

## Schedule Requirements:

2.6.1. The Contractor shall submit, with the executed Agreement and Contract Documents, a schedule of proposed construction operations which is acceptable to the Owner for any project with a substantial completion time greater than 60 days or with a calendar date completion time as defined in paragraph 3.1 of the Agreement; however, on any project for which more than one pay estimate will be submitted, a schedule of proposed construction operations shall be submitted. The schedule shall comply with all provisions of this specification. The schedule shall be a bar graph type schedule which identifies the target starting and completion dates for each bid item of the Work. The schedule shall indicate completion of the various parts of the Work and the total project within the times called out in the Agreement.

The schedule will be used to monitor the performance of the Contractor and shall be monitored and updated monthly or more frequently if deemed necessary by the Engineer during the course of the project. Contractor shall submit the updated and/or revised project schedule with the monthly pay estimate in accordance with paragraph 14.2. Should the Work fall significantly (20%) behind schedule, the Contractor shall submit a revised schedule detailing corrective measures to be taken to complete the project within the time limits specified in the Agreement. Owner may require Contractor to add to his equipment or construction forces, as well as increase the working hours, if operations fall behind schedule at any time during the construction period. Owner may require Contractor to reimburse Owner for all costs, including charges of Engineer and Owner's professional consultants, caused by any increase in Contractor's allowable working hours as defined below. Owner may deduct such costs from any payment due Contractor.

The following requirements shall be taken into consideration in preparing the schedule of construction operations: No Work shall be done between the hours of 8:00 p.m. and 6:00 a.m., nor on Saturdays, Sundays, or legal holidays, without permission of Owner, except such Work as may be necessary for the proper care, maintenance, and protection of the Project, or in the case of an emergency. Such permission may be granted or denied at the complete discretion and convenience of the Owner and, if granted, may be revoked at any time if the Contractor fails to maintain adequate equipment and supervision for the proper prosecution and control of the Work and all operations performed thereunder, or if the Contractor fails to comply with any conditions of the Owner's authorization.

2.6.2. The Contractor shall submit to the Engineer, prior to the date of the Preconstruction Conference, a schedule of Shop Drawing submissions which shall include the items of materials and equipment for which shop drawings are required by the specifications. For each required shop drawing, the date shall be given for intended submission of the drawing to Engineer for review and the date required for its return to avoid delay in any activity beyond the scheduled start date. Sufficient time shall be allowed for initial review, correction and resubmission, and final review of all shop drawings. In no case will a schedule be acceptable which allows less than 15 days for each review by Engineer.

2.6.3. Before any Work at the site is started, Contractor shall deliver to Owner certificates of insurance (and other evidence of insurance requested by Owner) which Contractor is required to purchase and maintain in accordance with paragraphs 5.3 through 5.7.

Preconstruction Conference:

2.7. Within twenty days after the Effective Date of the Agreement, but before Contractor starts the Work at the site, a conference attended by Contractor, Engineer and others as appropriate will be held to discuss the schedules referred to in paragraph 2.6, to discuss procedures for handling Shop Drawings and other submittals and for processing Applications for Payment, and to establish a working understanding among the parties as to the Work. The Contractor's representative shall be the resident superintendent or an individual fully qualified and knowledgeable of the Contractor's field operations.

Contracts and Procurement Division-Contract Compliance representatives will be present at the preconstruction conference to discuss with the Contractor duties and obligations arising from Equal Employment Opportunity, Affirmative Action, requirements of local labor utilization, payment of the current Wage Determinations, and other matters coming within the purview of the Contracts and Procurement Division-Contract Compliance.

### **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 all applicable laws and ordinances.

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 as being required to produce the intended result will be supplied whether or not specifically called for.

3.3. When words which have a well-known technical or trade meaning are used to describe Work, materials or equipment such words shall be interpreted in accordance with that meaning. Reference to standard 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). However, no provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change the duties and responsibilities of Owner, Contractor or Engineer, or any of their consultants, agents or employees from those set forth in the Contract Documents, nor shall it be effective to assign to 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 contrary to the provisions of paragraph 9.15 or 9.16. Clarifications

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

3.4. If, during the performance of the Work, Contractor finds a conflict, error or discrepancy in the Contract Documents, Contractor shall so report to Engineer in writing at once and before proceeding with the Work affected thereby shall obtain a written interpretation or clarification from Engineer; however, Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof or should reasonably have known thereof.

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 Change Order (pursuant to paragraph 10.4),

or

3.5.2. A Work Change Directive (pursuant to paragraph 10.1).

As indicated in paragraphs 11.2 and 12.1, Contract Price and Contract Time may only be changed by a Change Order.

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. Neither Contractor nor any Subcontractor or Supplier or other person or organization performing or furnishing any of the Work under a direct or indirect contract with Owner shall 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 Design Engineer; and they shall not reuse any of them on extensions of the Project or any other project without written consent of Owner and Design Engineer and specific written verification or adaptation by Design Engineer.

## **ARTICLE 4 - AVAILABILITY OF LANDS; PHYSICAL CONDITIONS; CONSTRUCTION LAYOUT**

### 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. 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. Temporary easements will be provided to accommodate normal construction methods and the Contractor may be required to protect designated structures or vegetation from damage. The Contractor may provide additional lands required for temporary construction facilities and storage of materials and equipment at his own expense. Evidence, in writing, of permission to occupy or use areas outside the limits of public right-of-way or easements provided by the Owner shall be supplied to the Engineer. If Contractor believes that any delay in Owner's furnishing these lands, rights-of-way or easements entitles Contractor to an extension of the Contract Time, Contractor may make a claim therefor as provided in Article 12.

### Physical Conditions:

4.2.1. Explorations and Reports: Reference is made to the Supplementary Conditions for identification of those reports of explorations and tests of subsurface conditions at the site that have been utilized by Design Engineer in preparation of the Contract Documents. These reports are not guaranteed as to accuracy or completeness, nor are they part of the Contract Documents. Contractor shall have full responsibility with respect to subsurface conditions at the site.

4.2.2. Existing Structures: Reference is made to the Supplementary Conditions for identification of those drawings of physical conditions in or relating to existing surface and subsurface structures (except Underground Facilities referred to in paragraph 4.3) which are at or contiguous to the site that have been utilized by the Design Engineer in preparation of the contract Documents. Contractor may rely upon the accuracy of the technical data contained in such drawings, but not for the completeness thereof for Contractor's purposes. Except as indicated in the immediately preceding sentence and in paragraph 4.2.6, Contractor shall have full responsibility with respect to physical conditions in or relating to such structures.

4.2.3. Report of Differing Conditions: If Contractor believes that:

4.2.3.1. Any technical data on which Contractor is entitled to rely as provided in paragraphs 4.2.1 and 4.2.2 is inaccurate, or

4.2.3.2. Any physical condition uncovered or revealed at the site differs materially from that indicated, reflected or referred to in the Contract Documents,

Contractor shall, promptly after becoming aware thereof and before performing any Work in connection therewith (except in an emergency as permitted by paragraph 6.22), notify Owner and Engineer in writing about the inaccuracy or difference.

4.2.4. Engineer's Review: Engineer will promptly review the pertinent conditions, determine the necessity of obtaining additional explorations 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 Document Change: If Engineer concludes that there is a material error in the Contract Documents or that because of newly discovered conditions 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 the consequences of the inaccuracy or difference.

4.2.6. Possible Price and Time Adjustments: In each such case, an increase or decrease in the Contract Price or an extension or shortening of the Contract Time, or any combination thereof, will be allowable to the extent that they are attributable to any such inaccuracy or difference. If Owner and Contractor are unable to agree as to the amount or length thereof, a claim may be made therefor as provided in Articles 11 and 12.

#### 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 Design 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 Design Engineer shall not be responsible for the accuracy or completeness of any such information or data; and,

4.3.1.2. Contractor shall have full responsibility for reviewing and checking all such information and data, for locating all Underground Facilities shown or indicated in the Contract Documents, for coordination of the Work with the owners of such Underground Facilities during construction, for the safety and protection thereof as provided in paragraph 6.20 and repairing any damage thereto resulting from the Work, the cost of all of which will be considered as having been included in the Contract Price.

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 and which Contractor could not reasonably have been expected to be aware of, Contractor shall promptly after becoming aware thereof and before performing any Work affected thereby (except in an emergency as permitted by paragraph 6.22), identify the Owner of such Underground Facility and give written notice thereof to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility to determine the extent to which the Contract Documents should be modified to reflect and document the consequences of the existence of the Underground Facility, and the Contract Documents will be amended or supplemented to the extent necessary. 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 Time, 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 which Contractor could not reasonably have been expected to be aware of. If the parties are unable to agree as to the

amount or length thereof, Contractor may make a claim therefor as provided in Articles 11 and 12.

Reference Points:

4.4.1 Engineer shall provide engineering surveys to establish reference points and benchmarks for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall protect and preserve the established reference points and benchmarks and shall make no changes or relocations without the prior written approval of Engineer. 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.

4.4.2. The Contractor shall protect from physical disturbance all monuments and benchmarks of the City, County, State or Federal Government without the prior written approval of the Owner or until they have been removed, witnessed or otherwise disposed of by the Engineer.

Construction Layout:

4.5. When there is no bid item for contractor provided staking, the City Engineer or the Design Engineer, as designated at the pre-construction conference, will provide construction layout (staking) of all improvements at no cost to the Contractor. The Contractor shall be responsible for scheduling staking and shall provide the Engineer with at least 48 hours notice prior to the time staking is required. The Contractor must satisfy himself as to the meaning of all stakes and marks prior to start of any construction activity based on those stakes. The Engineer assumes no liability for stakes that are misinterpreted by the Contractor or are damaged due to any activity. Once stakes are set and marked, it is the Contractor's responsibility to preserve them from all types of damage, and in the event of his failure to do so, he shall pay the Engineer to reset the stakes.

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

Performance and Other Bonds:

5.1. Contractor shall furnish performance and payment Bonds, each in an amount 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 otherwise provided by Law or Regulation or by the Contract Documents. The performance bond shall acknowledge the one year correction period in accordance with the requirements of Article 13. All Bonds shall be in the forms prescribed by Law or Regulation or by the Contract Documents and be executed by such sureties who 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 Accounts, U.S. Treasury Department. All Bonds signed by an agent must be accompanied by a certified copy of the 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 five days thereafter substitute another Bond and Surety, both of which must be acceptable to Owner.

Contractor's Liability Insurance:

5.3. Contractor shall purchase and maintain such commercial general liability and other insurance as is appropriate for the Project 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, by any Subcontractor, 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:

5.3.1. Claims under workers' or workmen's compensation, disability benefits and other similar employee benefit acts, as per state and federal statutory requirements.

5.3.2. Employers Liability Insurance covering claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees with a \$500,000.00 each person, limit.

5.3.3. Claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;

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

5.3.5. Claims arising out of operation of Laws or Regulations for damages because of bodily injury or death of any person or for damage to property; and

5.3.6. The commercial general liability insurance required under paragraphs 5.3.3 through 5.3.5 shall have the following specific coverages:

(1) General Liability:

1.	Each Occurrence	\$1,000,000
2.	Personal and Advertising Injury	\$1,000,000
3.	Products and Completed Operations Aggregate	\$1,000,000
4.	General Aggregate	\$2,000,000
5.	Rented Premises	\$ 100,000
6.	Medical Expenses	\$ 5,000

(2) Excess Liability:

Bodily Injury and Property Damage Combined:

\$1,000,000 Each Occurrence  
\$1,000,000 Annual Aggregate

The commercial general liability insurance shall include completed operations insurance. Property Damage liability insurance shall be provided with coverages for explosion, collapse and underground hazards, where applicable. The Owner shall be named as an additional insured on the Contractor's general liability policy.

(3) Automobile Liability:

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. Coverages for hired car and employee non-owned auto liability shall also be provided. The coverage limits shall be:

Combined Single Limit for Each Occurrence	\$1,000,000
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(4) Contractual Liability Insurance:

5.4. The commercial general liability insurance required by paragraph 5.3 will include contractual liability insurance applicable to Contractor's obligations under the Contract Documents.

(5) Property Insurance:

5.5. Contractor shall purchase and maintain property insurance upon the Work at the site to the full insurable value thereof (subject to such deductible amounts as required by Laws and Regulations) for all projects which include construction of or modification to above ground structures. This insurance shall include the interests of Owner, Contractor and Subcontractors all of whom shall be listed as insured or additional insured parties, shall insure against the perils of fire and extended coverage and shall include "all risk" insurance for physical loss and damage including theft, vandalism and malicious mischief, collapse and water damage, and shall include damages, losses and expenses arising out of or resulting from any insured loss or incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers, architects, attorneys and other professionals). If not covered under the "all risk" insurance, Contractor shall purchase and maintain similar property insurance on portions of the Work stored on and off the site or in transit when such portions of the Work are to be included in an Application for Payment.

5.6. Contractor shall purchase and maintain such boiler and machinery insurance or additional property insurance as may be required by Laws and Regulations which will include the interests of Owner, Contractor and Subcontractors all of whom shall be listed as insured or additional insured parties.

Owners Liability Insurance:

5.7. Contractor, at his sole expense, shall purchase Owner's Protective Liability Insurance and provide owner with the original policy. This insurance shall be maintained in full force and effect for the duration of the Contract by Contractor and shall name the Owner as the named Insured. This insurance shall have the following limits:

Each Occurrence	\$1,000,000
General Aggregate	\$1,000,000

This insurance shall protect Owner against any and all claims and liabilities for injury to or death of persons, or damage to property caused in whole or in part by, or alleged to have been caused in whole or in part by, the negligent acts or omissions of Contractor or Subcontractors or any agent, servant, worker or employee of Contractor or Subcontractor arising from the operations or Work for the project.

Notice of Cancellation:

5.8. All of the policies of insurance so required to be purchased and maintained (or the certificates) in accordance with paragraphs 5.3 through 5.7 shall contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least thirty (30) days prior written notice has been given to Owner. All such insurance shall remain in effect until final payment and at all times thereafter when Contractor may be correcting, removing or replacing defective Work in accordance with paragraph 13.12. In addition, Contractor shall maintain such completed operations insurance for one year after final payment and furnish Owner with evidence of continuation of such insurance at final payment.

Receipt and Application of Proceeds:

5.9. Any insured loss under the policies of insurance required by paragraphs 5.5 and 5.6 will be adjusted with Owner and made payable to Owner as trustee for the insured, as their interests may appear, subject to the requirements of any applicable mortgage clause and of paragraph 5.12, 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.

5.10. Owner as trustee 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 trustee shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If required in writing by any party in interest, Owner as trustee shall, upon the occurrence of an insured loss, give bond for the proper performance of such duties.

Acceptance of Insurance:

5.11. If Owner has any objection to the coverage afforded by or other provisions of the insurance required to be purchased and maintained by Contractor in accordance with paragraphs 5.3 through 5.7 on the basis of its not complying with the Contract Documents, Owner shall notify Contractor in writing thereof within thirty days of the date of delivery of such certificates to Owner in accordance with paragraph 2.1. Contractor shall provide to Owner such additional information in respect of insurance provided by Contractor as Owner may reasonably request. Failure by Owner to give any such notice of objection within the time provided shall constitute acceptance of such insurance purchased by Contractor as complying with the Contract Documents.

Partial Utilization - Property Insurance:

5.12. 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 the changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or lapse on account of any such partial use or occupancy.

## **ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES**

Supervision and Superintendence:

6.1. Contractor shall supervise 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 selection of a specific means, method, technique, sequence or procedure of construction which is indicated in and required by the Contract Documents. Contractor shall be responsible to see that the finished 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 given 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 perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the site. Except in connection with 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 the allowable working hours as defined in paragraph 2.6.1. Contractor will not permit overtime work or the performance of

Work on Saturday, Sunday or any legal holiday without Engineer's prior consent.

6.4. Unless otherwise specified in the Supplementary Conditions, 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. 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 the instructions of the applicable Supplier except as otherwise provided in the Contract Documents; but no provision of any such instructions will 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 9.15 or 9.16.

6.5.1. Salvaged Materials. All materials designated for salvage during the progress of the Work and or specified to be reused in new construction, shall remain the property of the Owner. Salvaged materials shall be delivered and neatly piled at any point within the City Limits which is designated by the Owner or Engineer. Transportation and handling shall be at the Contractor's expense. Salvaged materials will be considered to be in the custody of the Contractor, and he will be held responsible for their care and protection and must cover any losses resulting from damage, theft, or misappropriation while they remain on the job site or while en route to the place of storage.

6.5.2. Storage of Materials. All materials delivered to and stored on the project site shall be neatly placed to minimize obstruction and allow for convenient inspection. No materials or equipment shall be stored within five (5) feet of fire hydrants or trees which are to be protected. All fire hydrants shall remain readily accessible to the Fire Department throughout the project unless otherwise approved by the Owner.

#### Adjusting Progress Schedule:

6.6. Contractor shall submit to Engineer for acceptance as defined in paragraph 2.6.1, any adjustments in the progress schedule to reflect the impact thereon of new developments; these will conform generally to the progress schedule then in effect and additionally will comply with any other provisions of the Contract Documents applicable thereto.

### Substitutes of "Or-Equal" Items:

6.7.1. Whenever materials or equipment are specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the naming of the item is intended to establish the type, function and quality required. Unless the name is followed by words indicating that no substitution is permitted, materials or equipment of other Suppliers may be accepted by Engineer if sufficient information is submitted by Contractor to allow Engineer to determine that the material or equipment proposed is equivalent or equal to that named. The procedure for review by Engineer will include the following. Requests for review of substitute items of material and 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 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 and of equal substance to that specified and be suited to the same use as that specified. 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 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 shall be considered by Engineer in evaluating the proposed substitute. Engineer may require Contractor to furnish at Contractor's expense additional data about the proposed substitute.

6.7.2. If a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, sequence, technique or procedure of construction acceptable to Engineer, if Contractor submits sufficient information to allow Engineer to determine that the substitute proposed is equivalent to that indicated or required by the Contract Documents. The procedure for review by Engineer will be similar to that provided in paragraph 6.7.1. as applied by Engineer.

6.7.3. Engineer will be allowed a reasonable time within which to evaluate each proposed substitute. Engineer will be the sole judge of acceptability, and no 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.

### 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 have the ability to substitute a Subcontractor which is not adequately performing Work provided the Owner and Engineer consent to the substitution. Further, Contractor shall not be entitled to an increase in Contract Time or Contract Price for substitution of a Subcontractor. Contractor shall not employ any Subcontractor who does not possess the licenses necessary to furnish the Work or who is on the Owner's "List of Suspended Contractors" at the date of the Opening of Bids. 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 Owner requests the identity of certain Subcontractors, Suppliers or other persons or organizations (including those who are to furnish the principal items of materials and 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 said request, 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. 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.

6.8.3. The total amount of the work performed by Subcontractors shall not exceed seventy (70) percent of the total Contract Price as determined based on the units of work to be performed by Subcontractors at the actual unit prices contained in the Agreement. The determination of the amount of work to be performed by the Subcontractors shall be made at the time of bid evaluation and award. For the purposes of this paragraph 6.8.3, "work" shall include all services, labor, equipment and materials associated with each specific item of the contract. The purchase of materials by the Contractor for use by Subcontractors in completing the project shall not be credited toward the amount of work performed by the Contractor. If Engineer has reason to believe that any unit price contained in the agreement does not represent a reasonable price for the Work involved with the specific item, Contractor shall furnish full documentation of the unit price(s) determination in accordance with the provisions of paragraphs 11.4, 11.5 and 11.6. If deemed necessary by the Engineer, the unit price shall be adjusted, the purposes of determining subcontractor participation only, based on a determination of costs in accordance with paragraphs 11.4, 11.5 and 11.6. If specific units of Work involve more than one Subcontractor, Contractor shall provide documentation which enables Engineer to determine the portion of the unit price attributable to each Subcontractor. If it is determined during the course of the Work that the aggregate amount of the work being performed by subcontractors exceeds seventy (70) percent of the Contract Price, Contractor shall take appropriate actions to comply with the requirements of this paragraph 6.8.3.

6.9. 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 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 monies due any such Subcontractor, Supplier or other person or organization except as may otherwise be required by Laws and Regulations.

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 will be pursuant to an appropriate agreement between Contractor and the Subcontractor which specifically binds the Subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Contractor shall pay each Subcontractor a just share of any insurance moneys received by Contractor on account of losses under policies issued pursuant to paragraphs 5.5 and 5.6.

#### 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. Contractor shall indemnify and hold harmless Owner and Engineer and anyone directly or indirectly employed by either of them from and against all claims, damages, losses and expenses (including attorney's fees and court costs) arising out of 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, and shall defend all such claims in connection with any alleged infringement of such rights.

#### Licenses and Permits:

6.13.1. Contractor shall obtain and keep in effect all licenses necessary for furnishing and performance of the Work. Contractor shall furnish Owner with a copy of all required licenses.

6.13.2. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all other construction permits and licenses specifically including all permits required for work in highways, railroads and regulation of other governmental agencies. 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. Specifically, the Contractor shall observe all applicable provisions of K.S.A. 44-201 and any amendments thereto in effect as of the Effective Date of Agreement.

6.14.2. If Contractor observes that the Specifications or Drawings are at variance with any Laws or Regulations, Contractor shall give Engineer prompt written notice thereof, and any necessary changes will be authorized by one of the methods indicated in

paragraph 3.4. If Contractor performs any Work knowing or having reason to know that it is contrary to such Laws or Regulations, and without such notice to Engineer, Contractor shall bear all costs arising therefrom; however, it shall not be Contractor's primary responsibility to make certain that the Specifications and Drawings are in accordance with such Laws and Regulations.

Taxes:

6.15. For all projects, payment of the Kansas State Sales Tax or Compensating Tax is not required. The City of Topeka will furnish an exemption certificate (including exemption certificate number) obtained from the Sales and Compensating Tax Division, of the Department of Revenue of the State of Kansas to the Contractor, Subcontractor or repairman making purchases of any tangible personal property to be incorporated in this project. The Contractor, Subcontractor or repairman must furnish all suppliers with a copy of the properly executed exemption certificate secured for this project. He may reproduce as many copies of the certificate as he may need.

Use of Premises:

6.16. Contractor shall confine construction equipment, the storage of materials and equipment and the operations of workers to the Project 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 land or areas contiguous thereto, resulting from the performance of the Work. Should any claim be made against Owner or Engineer by any such owner or occupant because of the performance of the work, Contractor shall promptly attempt to settle with such other party by agreement or otherwise resolve the claim at law. Contractor shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold Owner and Engineer 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 costs) arising directly indirectly or consequentially out of any action, legal or equitable, brought by any such other party against Owner or Engineer to the extent based on a claim arising out of 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, and shall leave the site clean and ready for occupancy by Owner. 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.

Documents On-Site:

6.19. Contractor shall maintain in a safe place at the site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders and written interpretations and clarifications (issued pursuant to paragraph 9.4) in good order. These documents together with all approved samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference.

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 employees on the Work and other persons and organizations who may be affected thereby;

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 the 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. 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 Design Engineer or anyone employed by either of them or anyone for whose acts either of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor). Contractor's duties and responsibilities for the safety and 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).

6.21. Contractor shall designate a responsible representative at the site whose duty shall be the prevention of accidents. This person shall be Contractor's superintendent unless otherwise designated in writing by Contractor to Owner.

Emergencies:

6.22. 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 Engineer or Owner, 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 in response to an emergency, a Work Change Directive or Change Order will be issued to document the consequences of the changes or variations.

#### Shop Drawings and Samples:

6.23. After checking and verifying all field measurements, Contractor shall submit to Engineer for review and approval in accordance with the accepted schedule of Shop Drawing submissions (see paragraph 2.6.2), or for other appropriate action if so indicated in the Supplementary Conditions, five copies (unless otherwise specified) of all Shop Drawings, which will bear a stamp or specific written indication that Contractor has satisfied Contractor's responsibilities under the Contract Documents with respect to the review of the submission. All submissions will be identified as Engineer may require. 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 enable Engineer to review the information as required.

6.24. Contractor shall also submit to Engineer for review and approval with such promptness as to cause no delay in Work, all samples required by the Contract Documents. All samples will be identified clearly as to material, Supplier, pertinent data such as catalog numbers and the use for which intended.

6.25.1. Before submission of each Shop Drawing or sample Contractor shall have determined and verified all quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers and similar data with respect thereto and reviewed or 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. At the time of each submission, Contractor shall give Engineer specific written notice of each variation that the Shop Drawings or samples may have from the requirements of the Contract Documents, and, in addition, shall cause a specific notation to be made on each Shop Drawing submitted to Engineer for review and approval of each such variation.

6.26. Engineer will review and approve with reasonable promptness Shop Drawings and samples, but Engineer's review and approval will be only for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents and shall not extend to means, methods, techniques, sequences or procedures of construction (except where a specific means, method, technique, sequence or procedure of construction is indicated in or required 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 6.25.2 and Engineer has given written approval of each such variation by a 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 errors or omissions in the Shop Drawings or from responsibility for having complied with the provisions of paragraph 6.25.1.

6.28. Where a Shop Drawing or sample is required by the Specifications, any related Work performed prior to Engineer's review and approval of the pertinent submission will be 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 Contractor and Owner may otherwise agree in writing.

#### Indemnification:

6.30. To the fullest extent permitted by Laws and Regulations Contractor shall indemnify and hold harmless Owner and Engineer and their consultants, agents and employees from and against all claims, damages, losses and expenses, direct, indirect or consequential (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court costs) arising out of or resulting from the performance of the Work, provided that any such claim, damage, loss or expense (a) 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 (b) is caused in whole or in part by any negligent act or omission of Contractor, any Subcontractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder or arises by or is imposed by Law and Regulations regardless of the negligence of any such party.

6.31. In any and all claims against Owner or Engineer or any of their consultants, agents or employees by any employee of Contractor, any Subcontractor, 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 6.30 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 or other person or organization under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts.

6.32. The obligations of Contractor under paragraph 6.30 shall not extend to the liability of Engineer, Engineer's consultants, agents or employees arising out of the preparation or approval of maps, drawings, opinions, reports, surveys, Change Orders, design or specifications.

#### Coordination with Utilities.

6.33. The Contractor shall notify in writing responsible representatives of public utilities, railroads, or any other facilities or property that will be affected by his operations. Such notice shall be given in a timely manner before beginning work. The Contractor shall thereafter coordinate his work with the work necessary to protect or relocate such utilities, property or facilities, and cooperate to the fullest extent to avoid damage or service interruptions. For obtaining underground utility locations, the Contractor shall utilize the Kansas One-Call service or other appropriate entity

#### Public Convenience.

6.34. The Contractor shall notify owners of adjacent property and cooperate with them in the protection of their property. Access to driveways, houses and buildings, and temporary approaches and crossings of streets and sidewalks shall be provided, unless otherwise directed by the Engineer, and kept in good condition.

#### Traffic Control.

6.35. The Contractor shall comply with all pertinent requirements set forth in the drawing "Typical Traffic Control Through Construction Areas", of the Contract Documents, and as directed by the Engineer. The Contractor shall obtain approval of traffic control devices and methods from the City of Topeka Traffic Engineer at least three (3) days prior to beginning work. All barricades, signs, lights and traffic control devices of any nature shall conform with current requirements of the "Manual on Uniform Traffic Control Devices for Streets and Highways."

#### Emergency Project Identification:

6.36. The Contractor, at the discretion of the Engineer, shall erect in a prominent place on the project a legible sign printed in letters and figures not less than three (3) inches high, showing the name of the Contractor, his Topeka address, and the phone numbers of responsible personnel for day or night emergency contact.

#### Relations Between Contractor and Labor:

6.37. The Contractor and any Subcontractors shall take ~~affirmative~~ action to insure that employees are treated without regard to their race, religion, creed, color, sex, physical handicaps (which is unrelated to the ability to perform a particular job or occupation), national origin, ancestry or age. Such actions shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruiting or recruitment, advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship. The Contractor and any Subcontractors shall agree to post, in a conspicuous place available to employees and applicants for employment, notices to be provided by the Contracts and Procurement Division-Contract Compliance setting forth the provisions of this paragraph.

The Contractor or any Subcontractor shall provide all Affirmative Action Information including an Affirmative Action Program, weekly payroll schedules, and other documentation as may be specified in this Project Manual, necessary to implement the construction compliance requirements of the United States Government and ordinances of the City of Topeka, Kansas. It shall be no excuse that the employer has a collective bargaining agreement with any union providing for exclusive referral or apprenticeship systems that such Affirmative Action Information was not provided.

The failure of the Contractor or any Subcontractor to comply with non-discrimination requirements of this Specification shall be grounds for cancellation, termination or suspension of the Contract in whole or in part by the Owner and the Contractor or Subcontractor may be declared ineligible for further Contracts with the Owner until satisfactory proof of intent to comply shall be accepted by the Owner.

Wage Rates:

6.38. The wage rate for employees of a Contractor or Subcontractor shall not be less than the minimum wage prescribed by federal or state law unless higher compensation is required by federal or state law.

Sanitary Conveniences:

6.39. The Contractor shall provide all necessary privy accommodations for the use of his employees and shall maintain the same in a clean and sanitary condition. He shall not create or permit any nuisance to the public or to residents in the vicinity of the work.

## ARTICLE 7 - OTHER WORK

### Related Work at Site:

7.1. Owner may perform other work related to the Project at the site by Owner's own forces, have other work performed by utility owners or let other direct contracts therefor which may contain General Conditions similar to these. If the fact that such other work is to be performed was not noted in the Supplementary Conditions, written notice thereof will be given to Contractor prior to starting any such other work; and, 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 extent thereof, Contractor may make a claim therefor as provided in Articles 11 and 12. If the Work of others is identified in the Supplementary Conditions or elsewhere in the Contract Documents, coordination with said Work shall be considered a requirement of this project and as such Contractor shall not be entitled to an extension of Contract Time or Price for coordination with the Work of others.

7.2. Contractor shall afford each utility owner and other Contractor who is a party to such a direct contract (or 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 work, and shall properly connect and coordinate the Work with theirs. 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.

7.3. If any part of Contractor's Work depends for proper execution or results upon the work of any such other contractor or utility owner (or Owner), Contractor shall inspect and promptly report to Engineer in writing any delays, defects or deficiencies in such work that render it unavailable or unsuitable for such proper execution and results. Contractor's failure so to report will constitute an acceptance of the other work as fit and proper for integration with Contractor's Work except for latent or non-apparent defects and deficiencies in the other work.

### Coordination:

7.4. If Owner contracts with others for the performance of other work on the Project at the site, the person or organization who will have authority and responsibility for coordination of the activities among the various prime contractors will be identified in the Supplementary Conditions, and the specific matters to be covered by such authority and responsibility will be itemized, and the extent of such authority and responsibilities will be provided, in the Supplementary Conditions. Unless otherwise provided in the Supplementary Conditions, neither Owner nor Engineer shall have any authority or responsibility in respect of such coordination.

## **ARTICLE 8 - OWNER'S RESPONSIBILITIES**

8.1. 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 after 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, 4.4 and 4.5. 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 in existing structures which have been utilized by Design Engineer in preparing the Drawings and Specifications.

8.5. Owner is obligated to execute Change Orders as indicated in paragraph 10.4.

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

8.7. 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.

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

Owner's Representative:

9.1. Engineer will be Owner's representative during the construction period. The Engineer for these purposes may be either the Design Engineer or the City Engineer as designated in the Agreement. 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 to observe the progress and quality of the executed Work and to determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not 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 to the Contract Documents.

## Project Representation:

9.3. Engineer will furnish a Project Representative to assist Engineer in observing the performance of the Work. The Project Representative may be required by Engineer or Owner to provide full-time observation of the Work. The Project Representative is Engineer's Agent, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding his actions. The Project Representative's dealings in matters pertaining to the on-site Work shall in general be only with Engineer and Contractor, and dealings with subcontractors shall only be through or with the full knowledge of Contractor. Written communication with Owner will be only through or as directed by Engineer.

### 9.3.1 The Project Representative will:

- (1) Serve as Engineer's liaison with Contractor, working principally through Contractor's superintendent and assisting him in understanding the intent of the Contract Documents and assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-site operations.
- (2) As requested by Engineer, assist in obtaining from Owner additional details or information, when required at the job site for proper execution of the Work.
- (3) Conduct on-site observations and testing of the Work in progress to assist Engineer in determining if the Work is proceeding in accordance with the Contract Documents and that completed Work will conform to the Contract Documents.
- (4) Be responsible for the maintenance of record documents showing changes made during construction.

9.3.2 The duties and responsibilities and the authority of the Project Representative as Engineer's Agent during construction shall not exceed in any case those of the Engineer as Owner's representative during construction. Except on written instructions of Engineer, the Project Representative may not authorize any deviation from the Contract Documents or approve any substitute materials or equipment.

9.3.3 Specifically omitted from the Project Representative's duties are any review of the Contractor's safety precautions, or the means, methods, sequences or procedures required for the Contractor to perform the work but not relating to the final or completed Project. Omitted design or review services include, but are not limited to, shoring, scaffolding, underpinning, temporary retainment, excavations, and any erection methods and temporary bracing.

## 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 or reasonably inferable from the overall intent of the Contract Documents. If Contractor believes that a written clarification or interpretation justifies an increase in the Contract Price or an extension of the Contract Time and the parties are unable to agree to the amount or extent thereof, Contractor may make a 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 Time and are consistent with the overall intent of 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. A Field Order may authorize a change in the Work which results in a minor change in the quantity of specific unit price items included in the Agreement. If Contractor believes that a Field Order justifies an increase in the Contract Price, other than minor variations in quantities for Unit Price items, or an extension of the Contract Time and the parties are unable to agree as to the amount or extent thereof, Contractor may make a 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, and 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 responsibility for Shop Drawings and samples, see paragraphs 6.23 through 6.28 inclusive.

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

9.9. In connection with Engineer's responsibilities in respect of Applications for Payment, etc., see Article 14.

#### Determinations of Quantities:

9.10. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer written decisions 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 party to the Agreement and to Engineer written notice of intention to appeal from such a decision.

#### 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 Time will be referred initially to Engineer in writing with a request for a formal decision in accordance with this paragraph, which Engineer will render in writing within a reasonable time. Written notice of each such claim, dispute and other matter will be delivered by the claimant to Engineer and the other party

to the Agreement promptly (but in no event later than fifteen days) after the occurrence of the event or after the end of the period of events giving rise thereto, and written supporting data will be submitted to Engineer and the other party within thirty days after such occurrence unless Engineer allows an additional period of time to ascertain more accurate data in support of the claim.

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 and 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 14.16) 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.

Limitations on Engineer's Responsibilities:

9.13. Neither Engineer's authority to act under this Article 9 or elsewhere in the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority shall give rise to any duty or responsibility of Engineer to Contractor, any Subcontractor, any Supplier, or any other person or organization performing any of the Work, or to any surety for any of them.

9.14. 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 the Work for compliance with 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 9.15 or 9.16.

9.15. Engineer will not be responsible for Contractor's means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, and Engineer will not be responsible for Contractor's failure to perform or furnish the Work in accordance with the Contract Documents.

9.16. 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.

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

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; these will be authorized by 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 increase or decrease in the Contract Price or an extension or shortening of the Contract Time 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 Time with respect to any Work performed that is not required by the Contract Documents as amended, modified and supplemented as provided in paragraphs 3.4 and 3.5, except in the case of an emergency as provided in paragraph 6.22 and except in the case of uncovering Work as provided in paragraph 13.9.

10.4. Owner and Contractor shall execute appropriate Change Orders covering:

10.4.1. Changes in the Work which are ordered by Owner pursuant to paragraph 10.1, are required because of acceptance of defective Work under paragraph 13.13 or correcting defective Work under paragraph 13.14, or are agreed to by the parties;

10.4.2. Changes in the Contract Price or Contract Time which are agreed to by the parties; and

10.4.3. Changes in the Contract Price or Contract Time 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 Time) 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**

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 his expense without change in the Contract Price.

11.2. The Contract Price may only be changed by a Change Order. Any claim for an increase or decrease 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 fifteen days) after the occurrence of the 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 thirty 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 claimant's written statement that the amount claimed covers all known amounts (direct, indirect and consequential) to which the claimant is entitled as a result of the occurrence of said 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. Failure to submit a claim for an adjustment in the Contract Price in accordance with this paragraph 11.2. will invalidate said claim.

11.3. The value of any Work covered by a Change Order or of any claim for an increase or decrease in the Contract Price shall be determined in one of the following ways:

11.3.1. Where the Work involved is covered by unit prices contained in the Contract Documents, by application of 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. By mutual acceptance of a lump sum (which may include an allowance for overhead and profit not necessarily in accordance with paragraph 11.6.2.1.)

11.3.3. On the basis of the cost of the Work or a Force Account (determined as provided in paragraphs 11.4 and 11.5) plus a Contractor's Fee for overhead and profit (determined as provided in paragraphs 11.6 and 11.7)

#### 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. 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' or workmen's compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. Such employees shall include superintendents and foremen at the site. 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 all 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 by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from Subcontractors acceptable to Contractor and shall deliver such bids to Owner who will then determine, with the advice of Engineer, which bids will be accepted. If a 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 shall be determined in the same manner as Contractor's Cost of the Work. 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 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. Equipment/machinery costs shall be apportioned to the actual time the equipment/machinery is in operation to perform the work. Down time or standby time shall not be charged to the Owner by the Contractor.

11.4.5.4. Any applicable taxes related to the Work, and for which Contractor is liable, imposed by Laws and Regulations.

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

11.4.5.6. 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.

11.4.5.7. 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 manager, 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 Overhead and 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 sub-paragraph 11.4.5.7 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.

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

Contractor's Fee:

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 if none can be agreed upon,

11.6.2. 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 paragraphs 11.4.3 and 11.4.4 the Contractor's Fee shall be five percent; and if a subcontract is on the basis of Cost of the Work Plus a fee, the subcontractor fee for overhead and profit shall be fifteen percent;

11.6.2.3. No fee shall be payable on the basis of costs itemized under paragraph 11.4.5;

11.6.2.4. The amount of credit to be allowed by Contractor to Owner for any such change which results in a net decrease in cost will be the amount of the actual net decrease plus a deduction in Contractor's Fee by an amount equal to ten percent of the net decrease; and

11.6.2.5. 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 11.6.2.4, inclusive.

Force Account Work:

11.7. Whenever a change in the Work and Contract Price are authorized to be done on the basis of a Force Account, the cost of said Work shall be paid for pursuant to the requirements of paragraphs 11.4 through 11.6 and this paragraph 11.7. The Contractor and the Engineer or his designated Project Representative shall compare and agree on all records for labor, material and equipment furnished on a daily basis. All applications for payment of Force Account Work shall be accompanied by fully documented and itemized breakdowns of all types of costs incurred together with supporting data. Supporting data shall include copies of all invoices for actual materials incorporated in the Work, equipment rentals, subcontractor itemized invoices, etc.

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 done by such Subcontractors or Suppliers and for such sums within the limit of the allowances as may be acceptable to 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. No demand for additional payment on account of any thereof 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.

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 prices 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. The unit price of an item of Unit Price Work shall be subject to reevaluation and adjustment if the total cost of a particular item of Unit Price Work amounts to five percent (5%) or more of the Contract Price based on the original bid and the variation in the quantity of that particular item of Unit Price Work performed by Contractor differs by more than twenty percent (20%) from the bid quantity of such item indicated in the Agreement unless otherwise specified in the Supplementary Conditions. Contractor may make a claim for an increase in the Contract Price in accordance with Article 11 if the parties are unable to agree as to the amount of any such increase.

## **ARTICLE 12 - CHANGE OF CONTRACT TIME**

12.1 The Contract Time may only be changed by a Change Order or a Written Amendment. Any claim for an extension or shortening of the Contract Time 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 fifteen days) after the occurrence of the event or after the end of the period of events 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 thirty days after such occurrence (unless Engineer allows an additional period of time to ascertain more accurate data in support of the claim). All claims for adjustment in the Contract Time shall be determined by Engineer in accordance with paragraph 9.11 if Owner and Contractor cannot otherwise agree. Failure to submit a claim for an adjustment in the Contract Time in accordance with the requirements of this paragraph 12.1. will invalidate said claim.

12.2 The Contract Time will be extended in an amount equal to time lost due to delays beyond the control of Contractor if a claim is made therefor as provided in this Article 12. Such delays shall include, but not be limited to, acts or neglect by Owner or others performing additional work as contemplated by Article 7, or to fires, floods, labor disputes not the fault of the Contractor, coordination with the work of others, abnormal weather conditions, acts of God, and delays caused by subcontractors and suppliers if the delays are beyond the control of the subcontractor or supplier.

12.2.1. Inclement weather shall be defined as precipitation and/or temperature conditions which prevent substantial work on the project for more than 50% of the full number of hours in the normal daily schedule as determined by the Engineer. Abnormal weather shall be defined as inclement weather in excess or variation of the normal monthly averages for the specific type of inclement weather condition. Requests for an extension of contract time due to abnormal weather conditions will be considered by the Engineer, subject to the following requirements:

- (1) Any individual request shall cover a minimum of one full calendar month or portion thereof if at the beginning or ending of the project time. Requests shall be submitted no more frequently than monthly.

(2) Each request shall fully document the specific date and nature of each inclement weather day in the period for which the request is made.

(3) Each request shall document the normal monthly average number of days for inclement weather conditions being considered based on the following table:

<u>Month</u>	<u>Normal monthly average Inclement weather days</u>
January	8
February	7
March	7
April	6
May	4
June	4
July	4
August	4
September	5
October	6
November	7
December	7

(4) Each request shall document the number of normal schedule days (weekdays) in the period during which substantial work could have proceeded, but did not at Contractor's choice.

(5) Each request shall document the number of non-normal schedule days (Saturdays, Sundays and holidays, unless otherwise authorized by the Engineer) in the period during which inclement weather defined in (2) above occurred.

(6) The determination of the number of extension days due to abnormal weather shall be made based on the number of inclement weather days determined in (2) above less the number of days determined in (3), (4) and (5) above.

12.3. All time limits stated in the Contract Documents are of the essence of the Agreement. The provisions of this Article 12 shall not exclude recovery for damages (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court costs) for delay by either party.

Computation of Time:

12.4.1. 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.

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

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

### Warranty and Guarantee:

13.1. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Prompt notice of all defects shall be given to Contractor. All defective Work, whether or not in place, may be rejected, corrected or accepted as provided in this Article 13.

### Access to Work:

13.2. Engineer and Engineer's representatives, other representatives of Owner, testing agencies and governmental agencies with jurisdictional interests will have access to the Work at all reasonable times for their observation, inspecting and testing. Contractor shall provide proper and safe conditions for such access.

### Tests and Inspections:

13.3. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests or approvals.

13.4. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) to specifically be inspected, tested or approved, Contractor shall assume full responsibility therefore, pay all costs in connection therewith and furnish Engineer the required certificates of inspection, testing or approval. Contractor shall also be responsible for and shall pay all costs in connection with any inspection or testing required in connection with Owner's or Engineer's acceptance of a Supplier of materials or equipment proposed to be incorporated in the Work, or of materials or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. The cost of all inspections, tests and approvals in addition to the above which are required by the Contract Documents shall be paid by Owner (unless otherwise specified).

13.5. All inspections, tests or approvals other than those required by Laws or Regulations of any public body having jurisdiction shall be performed by organizations acceptable to Owner and Contractor (or by Engineer if so specified).

13.6. If any Work (including the work of others) that is to be inspected, tested or approved is covered without written concurrence of Engineer, it must, if requested by Engineer, be uncovered for observation. Such uncovering shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.7. Neither observations by Engineer nor inspections, tests or approvals by others shall relieve Contractor from Contractor's obligations to perform the Work in accordance with the Contract Documents.

### Uncovering Work:

13.8. If any Work is covered contrary to the written request of or without the approval 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 bear all direct, indirect and consequential costs of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction, (including but not limited to fees and charges of engineers, architects, attorneys and other professionals), 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, 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 Time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing 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 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 non-defective Work. Contractor shall bear all direct, indirect and consequential costs of such correction or removal (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) made necessary thereby.

#### One Year Correction Period:

13.12. If within one year after the date of Final 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, either correct such defective Work, or, if it has been rejected by Owner, remove it from the site and replace it with non-defective work. 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 direct, indirect and consequential costs of such removal and replacement (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) will be paid by Contractor. In special circumstances where a particular portion is placed in continuous service before Final 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.

#### 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 bear all direct, indirect and consequential costs attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness and to include but not be limited to fees and charges of engineers, architects, attorneys and other professionals). 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 or deducted from amounts owed to Contractor.

#### Owner May Correct Defective Work:

13.14. If Contractor fails within a reasonable time after written notice of Engineer to proceed to correct and 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. To the extent necessary to complete 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, 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 such access to the site as may be necessary to enable Owner to exercise the rights and remedies under this paragraph. All direct, indirect and consequential costs of Owner in exercising such rights and remedies will be charged against Contractor in an amount approved as to reasonableness by Engineer, 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 direct, indirect and consequential costs will include but not be limited to fees and charges of engineers, architects, attorneys and other professionals, all court costs and all costs of repair and 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 Time because of any delay in performance of the Work attributable to the exercise by Owner of Owner's rights and remedies hereunder.

#### Owner May Regulate Work:

13.15. The Owner shall have the authority to regulate the amount of work which may be open or under construction in advance of the completed portions of the Work. The sequence of construction shall be approved by the Engineer prior to construction if not specifically covered in the Contract Documents.

## ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

### Basis of Payment:

14.1. Progress payments for unit price contracts shall be based on the number of units completed. If a number of units are partially completed, the estimated percentage of the partially completed units times the number of units shall determine the completed units for that item. Lump sum items shall be paid based on the estimated percentage of completion at the end of each progress payment period.

### Application for Progress Payment:

14.2 Contractor shall submit to Engineer for review an Application for Payment filled out and signed by the 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. All applications for payment shall include an updated and/or revised project schedule conforming to the requirements of paragraph 2.6.1. Contractor shall submit the Application for Payment within seven (7) days following the end of the period for which payment is being requested. 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 and proof of payment for said materials warranting that Owner has received the materials and equipment free and clear of all liens, charges, security interests and encumbrances (which are hereinafter in these General Conditions referred to as "Liens") and evidence that the materials and equipment are covered by appropriate property insurance and/or 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 seven (7) days after receipt of each Application for Payment, both indicate in writing, a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reason for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application. Engineer will, within seven (7) days, review the resubmitted application as detailed above. Twenty-One (21) days after presentation of the Application for Payment with Engineer's recommendation for approval, 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 Work in progress as an experienced and qualified design professional and on Engineer's review of the Application for Payment and the accompanying data and schedules that the Work has progressed to the point indicated; that, to the best of Engineer's knowledge, information and belief, the quality of the Work is 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 that Contractor is entitled to payment of the amount recommended.

14.6. Engineer's recommendation of final payment will constitute an additional representation by Engineer to Owner that the conditions precedent to Contractor's being entitled to final payment as set forth in paragraph 14.13 have been fulfilled.

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 such representations to the Owner. 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 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. Of Engineer's actual knowledge of the occurrence of any of the events enumerated in paragraphs 15.2.1 through 15.2.9 inclusive.

Owner may refuse to make payment of the full amount recommended by Engineer because claims have been made against Owner on account of Contractor's performance or furnishing of the Work or Liens have been filed in connection with the Work or there are other items entitling Owner to a set-off against the amount recommended, but Owner must give Contractor immediate written notice stating the reasons for such action.

#### Substantial Completion:

14.8. When Contractor considers the entire Work ready for its intended use Contractor shall notify 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 notice 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 and Contractor a notice of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a list of items to be

completed or corrected before final payment. At the time of delivery of the notice 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 operation, safety, maintenance, insurance and warranties.

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 list.

Partial Utilization:

14.10 The Owner shall have the right to take possession of and use any finished part of the Works when it can be established by the Owner and Engineer that the part in question constitutes a separately functioning and usable part of the Work that can be used by Owner without significant interference with Contractor's performance of the remainder of 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, Contractor will certify to Owner and Engineer that said part of the Work is substantially complete. Engineer will then issue a notice of Substantial Completion for said part of the Work. The provisions of paragraphs 14.8 and 14.9 will apply with respect to said Substantial Completion and the division of responsibility in respect thereof and access thereto.

14.10.2. Owner may at any time notify Contractor in writing of Owner's intent to take over operation or use of any such part of the Work although it is not substantially complete. Engineer shall make an inspection of that part of the work to determine its status of completion and prepare a list of items remaining to be completed or corrected thereon before final payment. Engineer shall submit said list together with a written recommendation as to the division of responsibilities pending final payment between Owner and Contractor with respect to operation, safety, maintenance, insurance, warranties and guarantees for that part of the Work which will become binding upon Owner and Contractor at the time when Owner takes over such operation or use. During such operation or use and prior to Substantial Completion of such part of the Work, Owner shall allow Contractor reasonable access to complete or correct items on said list and to complete other related Work.

If Contractor believes that Owner's action to take possession of and use said part of the Work justifies an increase in the Contract Price or an extension of the Contract Time and the parties are unable to agree to the amount or extent thereof, Contractor may make a claim therefor as provided in Article 11 or Article 12.

14.10.3. No occupancy or separate operation of part of the Work will be accomplished prior to compliance with the requirements of paragraph 5.12 in respect of property insurance.

### Final Inspection:

14.11. Upon 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 remedy such deficiencies.

### Final Application for Payment:

14.12. After Contractor has completed all such corrections to the satisfaction of Engineer and delivered all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection, marked-up record documents (as provided in paragraph 6.19) and other documents - all as required by the Contract Documents, and after Engineer has indicated that the Work is acceptable (subject to the provisions of paragraph 14.16), Contractor may make application for final payment following the procedure for progress payments. The final Application for Payment shall be accompanied by all documentation called for in the Contract Documents, together with 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 thereof and as approved by Owner, Contractor may furnish receipts or releases and receipts in full; an affidavit of Contractor that the releases include all labor, services, material and equipment for which a Lien could be filed, and that 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; and consent of the surety, if any, to final payment. If any Subcontractor or Supplier fails to furnish a release or receipt in full, Contractor may furnish a Bond or other collateral satisfactory to Owner to indemnify Owner against any Lien. The Contractor shall also be responsible for correct submittal of all payroll information to the satisfaction of the Contracts and Procurement Division-Contract Compliance prior to submittal of the application for final payment.

### Final Payment and Acceptance; Deadline for Submission of Final Application for Payment:

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 - all 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, including compliance with Section 14.13(a), Engineer will, within seven (7) days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application to Owner. If Engineer does not recommend payment, Engineer will return the Application to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor may make the necessary corrections and resubmit the application unless Contractor has forfeited payment pursuant to Section 14.13(a). Except as provided by Section 14.13(a), thirty (30) days after presentation to Owner of the application and accompanying documentation, in appropriate form and substance, and with Engineer's recommendation, the amount recommended by Engineer will become due and will be paid by Owner to Contractor.

14.13(a) Final Application for Payment; Deadline. If the Contractor has not submitted a final application for payment within sixty 60 days from the date of the Engineer's determination that the Work is acceptable pursuant to Section 14.12, the Owner will notify the Contractor, in writing, that a final application must be submitted within thirty (30) days from the date of the notification or else the Contractor will be deemed to have forfeited any remaining amounts due.

14.13(b) Forfeiture of Payment. Contractor agrees that failure to timely submit a Final Application for Payment pursuant to Section 14.13(a) will result in forfeiture of any remaining amounts due.

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.

Contractor's Continuing Obligation:

14.15. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. Neither recommendation of any progress or final payment by Engineer, nor the notice of Substantial Completion, nor any payment by Owner to Contractor under the Contract Documents, nor any use or occupancy of the Work or any part thereof by Owner, nor any act of acceptance by Owner nor any failure to do so, nor any review and approval of a Shop Drawing or sample submission, nor the issuance of a notice of acceptability by Engineer pursuant to paragraph 14.13, nor any correction of defective Work by Owner will constitute an acceptance of Work not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents (except as provided in paragraph 14.16).

Waiver of Claims:

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

14.16.1. 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 or from failure to comply with the Contract Documents or the terms of any special guarantees specified therein; however, it will not constitute a waiver by Owner of any rights in respect of Contractor's continuing obligations under the contract Documents; and

14.16.2. 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

### Owner May Suspend Work:

15.1. Owner may, at any time and without cause, suspend the work, or any portion thereof, for a period of not more than 120 days, by notice in writing to Contractor and Engineer. Contractor shall resume the Work on the date fixed by Owner by notice in writing to Contractor and Engineer. Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to any suspension by Owner without cause and in excess of 120 days 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 commences a voluntary case under any chapter of the bankruptcy Code (Title 11, United States Code), as now or hereafter in effect, or if Contractor takes any equivalent or similar action by filing a petition or otherwise under any other federal or state law in effect at such time relating to the bankruptcy or insolvency;

15.2.2. If a petition is filed against Contractor under any chapter of the Bankruptcy Code as now or hereafter in effect at the time of filing, or if a petition is filed seeking any such equivalent or similar relief against Contractor under any other federal or state law in effect at the time relating to bankruptcy or insolvency;

15.2.3. If Contractor makes a general assignment for the benefit of creditors;

15.2.4. If a trustee, receiver, custodian or agent of Contractor is appointed under applicable law or under contract, whose appointment or authority to take charge of property of Contractor is for the purpose of enforcing a Lien against such property or for the purpose of general administration of such property for the benefit of Contractor's creditors;

15.2.5. If Contractor admits in writing an inability to pay its debts generally as they become due;

15.2.6. 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 2.6 as revised from time to time);

15.2.7. If Contractor disregards Laws or Regulations of any public body having jurisdiction;

15.2.8. If Contractor disregards the authority of Engineer; or

15.2.9. If Contractor otherwise violates in any substantial way any provisions of the Contract Documents;

Owner may, after giving Contractor (and the surety, if there be one) 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, 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 the direct, indirect and consequential costs of completing the Work (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court costs) such excess will be paid to Contractor. If such costs exceed such unpaid balance, Contractor shall pay the difference to Owner. Such costs incurred by Owner will be approved as to reasonableness by Engineer and incorporated in a Change Order, but 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, elect to abandon the Work and terminate the Agreement. In such case, Contractor shall be paid for all Work executed and any expense sustained plus reasonable termination expenses, which will include, but not be limited to, direct, indirect and consequential costs (including, but not limited to, fees and charges of engineers, architects, attorneys and other professionals and court costs).

**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 120 days by Owner or under an order of court or other public authority, or Engineer fails to act on any Application for Payment within forty-five (45) days after it is submitted, or Owner fails for forty-five (45) days after submittal of the application to pay Contractor any sum finally determined to be due provided that Contractor has complied with all appropriate requirements of these Contract Documents, then Contractor may, upon seven days' written notice to Owner and Engineer, terminate the Agreement and recover from Owner payment for all Work executed and any expense sustained plus reasonable termination expenses. In addition and in lieu of terminating the Agreement, if Engineer has failed to act on an Application for Payment or Owner has failed to make any payment as aforesaid, Contractor may upon seven days' written notice to Owner and Engineer stop the Work until payment of all amounts then due. The provisions of this paragraph shall not relieve Contractor of the obligations under paragraph 6.29 to carry on the Work in accordance with the progress schedule and without delay during disputes and disagreements with Owner.

## ARTICLE 16 - MISCELLANEOUS

### Giving Notice:

16.1. 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 regular mail postage prepaid, to the last business address known to the giver of the notice.

### General:

16.2. 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 16.2 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitations or repose.

16.3. 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 6.30, 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 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. All representations, warranties and guarantees made in the Contract Documents will survive final payment and termination or completion of the Agreement.

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Footnote: These General Conditions are based on the "Standard General Conditions of the Construction Contract", prepared by the Engineers Joint Contract Documents Committee, EJCDC No.1910-8 (1983 Edition). Deletions and additions have been made to the referenced document as deemed appropriate for use by the City of Topeka.

**DOCUMENT 820  
SUPPLEMENTARY CONDITIONS**

These Supplementary Conditions amend, modify, or supplement the General Conditions for City of Topeka Department of Public Works Construction Projects, Document 700, other provisions of the Contract Documents, the Standard Technical Specifications, or the Drawings, as indicated below. All provisions which are not so amended, modified, or supplemented shall remain in full force and effect.

**The Technical Specifications for this City of Topeka Project shall be the City of Topeka and Shawnee County Standard Technical Specifications. The Standard Specifications for State Road and Bridge Construction, Kansas Department of Transportation, Edition of 2015, as amended by the Project Special Provisions shall be applicable.**

**SC-1 PROJECT SCHEDULE:** The Contractor shall use the following dates in preparation of the Progress Schedule and critical dates that are part of this Contract:

Description	Date
Substantial Completion for PART A Waterline construction of all Phases I, II, III & IV except as noted in the Waterline Construction Phasing Details) Includes all waterline construction from Station 15+73.9 to Station 29+00, plus Phase III of the waterline improvements.	End of business on Friday, September 25, 2026
Substantial Completion for PART B, Phases 1A, 1B and 1C. Includes all construction from Station 15+75 to Station 29+00. The closure of NB Kansas Avenue in Phase 1 B shall be limited to 21 calendar days or liquidated damages of \$5,000 per calendar day shall be assessed for each day that exceeds 21 calendar days in which NB Kansas Avenue is not opened to through traffic. The beginning of Part B construction may overlap Part A Construction except the total closure of 29 <sup>th</sup> Street to all traffic cannot exceed 180 calendar days or liquidated damages of \$5,000 per calendar day shall be assessed for each day that exceeds 180 calendar days in which SE 29 <sup>th</sup> Street is not opened to through traffic (one lane each direction).	End of business on Friday November 27, 2026
Substantial Completion for PART C Within Part C construction: Phases 2A and 2B must be substantially complete by February 26, 2027. Phase 3 closure shall be limited to 75 calendar days or liquidated damages of \$5,000 per calendar day shall be assessed for each day that exceeds 75 calendar days and shall be substantially complete by April 30, 2027. Phase 3 may overlap with Phase 2B. Phase 4 must be substantially complete by May 14, 2027.	End of business on Friday May 14, 2027
Final Completion	End of business on Friday June 11, 2027

For the **PART A** work to be considered Substantially Complete, all work shall be complete and accepted and the roadway opened for use in the configuration laid out in the plan phasing details. For the **PART B** work to be considered Substantially Complete, all work shall be complete and accepted and the roadway open for use in the configuration laid out in the plan phasing details.

For the **PART C** work to be considered Substantially Complete, all work shall be complete and accepted and the roadway open for unrestricted use. The Contractor shall complete any cleanup work to reach Final Completion.

**SC-2 WAGE RATES:** No State or Federal Funding will be used for this project. City of Topeka funds only. No Davis Bacon or prevailing wages required.

**SC-3 BID ITEMS:** The following bid items shall be completed according to the Standard Specifications for State Road and Bridge Construction, Kansas Department of Transportation, Edition of 2015, or as amended by the plans or Project Special Provisions:

Mobilization

Removal of Existing Structures

Concrete (Grade 4.0) (AE)

Reinforcing Steel (Grade 60)

Drilling and Grouting

Bridge Backwall Protection System

Foundation Stabilization (Set Price)

Geotextile (Erosion Control)

Soil Erosion Mix

Erosion Control (Class 1, Type C)

Erosion Control (Class 2, Type E)

Temporary Ditch Check (Rock)

Biodegradable Log (20")

Filter Sock (18")

**KANSAS DEPARTMENT OF TRANSPORTATION  
SPECIAL PROVISION TO THE  
STANDARD SPECIFICATIONS, 2015 EDITION**

Delete SECTION 402 and replace with the following:

**SECTION 402**

**STRUCTURAL CONCRETE**

**402.1 DESCRIPTION**

Provide the grades of concrete specified in the Contract Documents.  
This specification is specific to Structural Concrete. See **SECTION 401** for general concrete requirements.

**402.2 MATERIALS**

Provide materials that comply with the applicable requirements.

General Concrete.....	<b>SECTION 401</b>
Aggregate .....	<b>DIVISION 1100</b>
Admixtures, and Plasticizers .....	<b>DIVISION 1400</b>
Fibrous Reinforcement for Concrete .....	<b>DIVISION 1700</b>
Cement, Fly Ash, Silica Fume, Slag Cement and Blended Supplemental Cementitious.....	<b>DIVISION 2000</b>
Water .....	<b>DIVISION 2400</b>

**402.3 CONCRETE MIX DESIGN**

**a. General.** Design structural concrete mixes as specified in the Contract Documents.

**b. Concrete Mix Design.** Two options are available for mix design procedures. Use the procedures outlined in **SECTION 401** to design structural concrete mixes.

**c. Concrete Strength Requirements.** Design concrete to meet the strength requirements of **SECTION 401**.

**d. Portland Cement, Blended Hydraulic Cement, and Individual and Blended Supplemental Cementitious Materials.** Unless specified otherwise in the Contract Documents, select the type of portland cement, blended hydraulic cement and individual and blended supplemental cementitious materials according to **SECTION 401**.

**e. Structural Concrete Specific Requirements.** Design concrete to meet the following requirements:

- (1) Maximum water to cementitious ratio of 0.45 and a minimum cementitious content of 480 lbs per cubic yard.
- (2) Air entrained concrete with a target air content of  $6.5 \pm 1.5$  percent as specified in **subsection 401.3i**.
- (3) Determine the air loss due to pumping operations once in the AM and once in the PM. Determine the difference between the air content from concrete sampled before the pump, and concrete sampled after pumping. Make adjustment to the mix to compensate for the pumping of the concrete.
- (4) Concrete permeability requirements according to **TABLE 402-1**.
- (5) Use 1.5 lbs/cy of approved microfibers in Bridge Overlays Mix Design.

<b>TABLE 402-1: REQUIREMENTS FOR STRUCTURAL CONCRETE</b>			
	<b>Volume of Permeable Voids, maximum</b>	<b>Surface Resistivity, minimum</b>	<b>Rapid Chloride Permeability, maximum</b>
Use Low Permeability Concrete (LPC) for Bridge Overlays	9.5%	27.0 kΩ-cm	1000 Coulombs
Use Moderate Permeability Concrete (MPC) for specified Full Depth Bridge Decks.	11.0%	13.0 kΩ-cm	2000 Coulombs
Use Standard Permeability Concrete (SPC) for all other structural concrete not specified as Low or Moderate Permeability.	12.5%	9.0 kΩ-cm	3000 Coulombs

(5) Test data from KT-73 tested at 28 days, KT-79 tested at 28 days, or AASHTO T-277 tested at 56 days. Provide test results on a minimum of 1 set of 3 cylinders for each mix, tested at the highest water to cementitious ratio that meets **subsections 401.3e.** and **401.3i.** Submit accelerated cure procedures for the Engineer’s approval. The use of supplemental cementitious materials may be necessary to meet permeability requirements. See **SECTION 401.**

(6) Use Quality Requirements for Structural Aggregates as listed in **SECTION 1102,** Aggregates For Concrete Not Placed on Grade.

(7) Use gradation requirements for aggregates as listed in **SECTION 1102,** Aggregates For Concrete Not Placed on Grade.

(8) Use MA-6 optimized gradation for Low Permeability Concrete for Bridge Overlays.

(9) ASTM C-1567 may be required if supplementary cementitious materials (SCMs) other than silica fume are utilized. See **subsection 401.3j.** for requirements.

**f. Slump.**

(1) Designate a slump for each concrete mix design that is required for satisfactory placement of the concrete application. Reject concrete with a slump that limits the workability or placement of the concrete.

(2) If the designated slump is 3 inches or less, the tolerance is  $\pm 3/4$  inch, or limited by the maximum allowable slump for the individual type of construction.

(3) If the designated slump is greater than 3 inches the tolerance is  $\pm 25\%$  of the designated slump.

(4) For drilled shafts the target slump just prior to being pumped into the drilled shaft is 9 inches. If the slump is less than 8 inches, redose the concrete with admixtures as permitted in **subsection 401.3k.**

7-15-2024 C&M (RAB)

Sep - 2024 Letting

**KANSAS DEPARTMENT OF TRANSPORTATION  
 SPECIAL PROVISION TO THE  
 STANDARD SPECIFICATIONS, 2015 EDITION**

Delete SECTION 401 and replace with the following:

**SECTION 401**

**GENERAL CONCRETE**

**401.1 DESCRIPTION**

Provide the grades of concrete specified in the Contract Documents.  
 See SECTION 402 for specific requirements for Structural Concrete.  
 See SECTION 403 for specific requirements for On Grade Concrete.  
 See SECTION 404 for specific requirements for Prestressed Concrete.

**401.2 MATERIALS**

Provide materials that comply with the applicable requirements.

Aggregate .....	<b>DIVISION 1100</b>
Admixtures and Plasticizers .....	<b>DIVISION 1400</b>
Grade 2 Calcium Chloride.....	<b>DIVISION 1700</b>
Cement, Fly Ash, Natural Pozzolans, Silica Fume, Slag Cement and Blended Supplemental Cementitious.....	<b>DIVISION 2000</b>
Water .....	<b>DIVISION 2400</b>

**401.3 CONCRETE MIX DESIGN**

**a. General.** Design the concrete mixes specified in the Contract Documents.

Do not place any concrete on the project until the Engineer approves the concrete mix designs. Once the Engineer approves the concrete mix design, do not make changes to the mix design without the Engineer's approval.

Produce all concrete according to the approved mix designs.

Take full responsibility for the actual proportions of the concrete mix, even if the Engineer assists in the design of the concrete mix.

Provide aggregate gradations that comply with **DIVISION 1100** and Contract Documents.

Admixture dosage rate requirements for mix design approval and field production are provided in

**subsection 401.3k.**

If desired, contact the DME for available information to help determine approximate proportions to produce concrete having the required characteristics on the project.

Submit all concrete mix designs to the Engineer for review and approval. Submit completed volumetric mix designs on KDOT Form No. 694 and all required attachments at least 60 days prior to placement of concrete on the project. The Engineer will provide an initial review of the design within 5 business days following submittal.

Include the following information:

(1) Test data from KT-73 tested at 28 days, KT-79 tested at 28 days or AASHTO T-277 tested at 56 days. Provide test results on a minimum of 1 set of 3 cylinders for each mix, tested at the highest water to cementitious material ratio that meets **subsection 401.3h**. Submit accelerated cure procedures for the Engineer's approval.

(2) Test data from ASTM C1567 for blended cements meeting **subsection 401.3j**. for all concrete utilizing all actual materials proposed for use on the project at designated percentages.

(3) Single point grading for the combined aggregates along with a plus/minus tolerance for each sieve. Use plus/minus tolerances to perform quality control checks and by the Engineer to perform aggregate grading verification testing. The tests may be performed on the combined materials or on individual aggregates, and then theoretically combined to determine compliance.

(4) Laboratory 28-day compressive strength test results on a minimum of 1 set of 3 cylinders produced from the mix design with the highest water to cementitious ratio for the project, utilizing all actual materials proposed for use on the project at designated percentages. The average compressive strength shall exceed the strength requirements for the Grade specified in the Contract Documents as determined by **subsection 401.3b**. Perform compressive strength tests according to KT-76.

(5) Historical mix production data for the plant producing concrete for the project to substantiate the standard deviation selected for use in **subsection 401.3b.**, if applicable.

(6) Necessary materials to enable the Engineer to test the mix properties, if applicable.

(7) Batching sequence for all mix components including chemical admixtures. Describe the sequence step-by-step including typical mixing times. Consider the location of the concrete plant in relation to the job site, and identify when and at what location the water reducer or plasticizer is added to the concrete mixture.

Submit complete mix design data including proportions and sources of all mix ingredients, and the results of strength and permeability tests representing the mixes proposed for use. The data may come from previous KDOT project records or a laboratory regularly inspected by Cement and Concrete Reference Laboratory (CCRL). Data from other sources will only be accepted if testing was conducted or witnessed by personnel certified in Hardened Concrete Properties (HCP) according to the Policy and Procedures Manual for The Certified Inspection and Testing (CIT) Training Program.

After initial review, the Engineer will perform any testing necessary to verify the design. This may include a 3-cubic yard test batch at the producing plant. Do not make changes to the Approved Concrete Mix Design without the Engineer's approval. Limited adjustments may be made to admixture dosages and aggregate proportions in accordance with **subsection 401.3i.** and **subsection 403.4e.** These adjustments must be recorded and submitted to the Engineer.

Mix designs will remain approved when verification testing for strength and permeability conducted within the last 12 months indicate continued compliance with the specifications and percentages of constituents including aggregate and cementitious materials and product, type and supplier of admixtures remain the same. Test results on the same mix from other sources are acceptable.

Improvements in concrete strength, workability, durability and permeability are possible if the combined aggregate grading is optimized. Procedures found in ACI 302.1 or other mix design techniques, approved by the Engineer, are acceptable in optimizing the mix design.

Delay the commencement of tests for temperature, slump, and air content and molding of field cylinders from 4 to 4½ minutes after the sample has been taken from a continuous mixer. If a batch type mixer is used, take the tests at the point of placement and begin testing immediately.

**b. Required Compressive Strength for Concrete Mix Design.** The required compressive strength for mix design approval shall be based on previous data from similar mix designs or according to **subsection 401.1b.(2)**.

(1) Concrete Mix Design Based on Previous Data. Provide concrete mix designs based on previous 28-day compressive strength test data from similar concrete mixtures. Similar mixtures are within 1000 psi of the specified 28-day compressive strength, and are produced with the same type and sources of cementitious materials, admixtures and aggregates.

Consider sand sources the same, provided they are not more than 25 miles apart on the same river and no tributaries enter the river between the 2 points. Consider crushed locations similar if they are mined in one continuous operation, and there is no significant change in geology. Mixes that have changes of more than 10% in proportions of cementitious materials, aggregates or water content are not considered similar.

Air entrained mixes are not considered similar to non-air entrained mixes.

Mixes tested with admixtures are not the same as mixes tested without those admixtures.

Test data should represent at least 30 separate batches of the mix. One set of data is the average of at least 2 cylinders from the batch. The data shall represent a minimum of 45 days of production within the past 12 months.

Do not include data over 1 year old. When fewer than 30 data sets are available, the standard deviation of the data must be corrected to compensate for the fewer data points.

Provide a 4000 psi concrete with a  $f'_{cr}$  greater than or equal to 5200 psi. Otherwise provide a concrete mix design that will permit no more than 5% of the 28-day compressive strength tests to fall below the specified 28-day compressive strength ( $f'c$ ) based on equation A, and no more than 1% of the 28-day compressive strength tests to fall below the specified 28-day compressive strength ( $f'c$ ) by more than 500 psi based on equation B.

Equation A:  $f'_{cr} = f'c + 1.62 * k * s$

Equation B:  $f'_{cr} = (f'c - 500) + 2.24 * k * s$

Where:  $f'_{cr}$  = average 28-day compressive strength required to meet the above criteria.  
 $f'c$  = specified 28-day compressive strength  
 $s$  = standard deviation of test data  
 $k$  = constant based on number of data points  
 $n$  = number of data points  
 $k = 1.3 - n / 100$ , where  $15 < n < 30$   
 $k = 1$ , where  $n > 30$

Provide a concrete mix design that has an average compressive strength that is equal to the larger of Equation A or Equation B. Submit all supporting test data with the mix design.

(2) All Other Concrete Mix Designs. For concrete mixes that have fewer than 15 data points, or if no statistical data is available, use Equations A and B to calculate  $f'_{cr}$  using the following values.

$s = 20\%$  of the specified 28-day compressive strength ( $f'c$ )  
 $k = 1$

**c. Portland Cement and Blended Hydraulic Cement.** Unless specified otherwise in the Contract Documents, select the type of portland cement or blended hydraulic cement according to **TABLE 401-1**.

<b>TABLE 401-1: PORTLAND CEMENT &amp; BLENDED HYDRAULIC CEMENT</b>	
<b>Concrete for:</b>	<b>Type of Cement Allowed</b>
On Grade Concrete	Type IP(x) Portland-Pozzolan Cement Type IS(x) Portland- Slag Cement Type IT(Ax)(By) Ternary Blended Cement Type IL(x) Portland-Limestone Cement <sup>1</sup> Type II Portland Cement
All Concrete other than On Grade Concrete.	Type I Portland Cement Type IP(x) Portland-Pozzolan Cement Type IS(x) Portland- Slag Cement Type IT(Ax)(By) Ternary Blended Cement Type IL(x) Portland Limestone Cement <sup>1</sup> Type II Portland Cement
High Early Strength Concrete	Type III Portland Cement Type I, IP(x), IS(x), IT(Ax)(By), Type IL(x) <sup>1</sup> or II Cement may be used if strength and time requirements are met.

Note 1 – Type IL(x) Portland Limestone Cement will have between 5-15% limestone content produced by intergrinding, blending, or a combination of intergrinding and blending at the Cement Manufacturer’s facility.

**d. Blended Cement Concrete.** When approved by the Engineer, the concrete mix design may include SCMs such as fly ash, natural pozzolans, slag cement, silica fume or blended SCM from an approved source as a partial replacement for portland cement or blended hydraulic cement except where controlled in **SECTIONS 402, 403 or 404**. Obtain the Engineer’s approval before substituting SCMs for Type III cement. Changes in SCM or cement will require a new mix design approval.

- (1) Cements meeting **SECTION 2001** are not field blended cements.
- (2) Cements with SCMs added at the concrete mixing plant are field blended cements.
- (3) Supplementary materials can be combined with cement to create field blended cements. Do not exceed allowable substitution rates noted in **TABLE 401-2**. Substitute 1 pound of SCM for 1 pound of cement. Limestone used in Type 1L cements is not an SCM and cannot be field blended.
- (4) SCMs in prequalified cements are to be included in the total combined substitution rate.

<b>TABLE 401-2: ALLOWABLE SUBSTITUTION RATE FOR SUPPLEMENTARY CEMENTITIOUS MATERIAL.</b>	
<b>Material</b>	<b>Substitution Rate*</b>
Slag Cement	40% Maximum
Fly Ash	25% Maximum
Blended SCM	25% Maximum
Natural Pozzolans	25% Maximum
Silica Fume	5% Max
Total Combined	50%

\* Total Substitution Rate includes material in preblended cements and blended SCMs.

(5) When used, add silica fume with other cementitious materials during batching procedures. If the silica fume cannot be added to the cementitious materials, add the loose silica fume to the bottom of the stationary drum that is wet, but has no standing water, before adding the dry materials. The Engineer may approve shreddable bags on a performance basis, only when a central batch mixing process is used. If so, add the bags to half of the mixing water and mix before adding cementitious materials, aggregate and remainder of water.

Mix silica fume modified concrete for a minimum of 100 mixing revolutions.

**e. Strength.** Design concrete to meet **TABLE 401-3**.

<b>TABLE 401-3: CONCRETE STRENGTH REQUIREMENTS</b>	
<b>Specified 28 Day Compressive Strengths, minimum, psi <i>f'c</i></b>	
<b>Grade of Concrete:</b>	<b>Non Air Entrained/Air Entrained Concrete</b>
Grade 7.0	7,000
Grade 6.0	6,000
Grade 5.0	5,000
Grade 4.5	4,500
Grade 4.0	4,000
Grade 3.5	3,500
Grade 3.0	3,000
Grade 2.5	2,500

**f. High Early Strength Concrete (HESC).** Design the high early strength concrete mix to comply with strength and time requirements specified in the Contract Documents.

Unless otherwise specified, design high early strength concrete for pavement at a minimum of 1 of the Contractor’s standard deviations above 2400 psi (cylinders) at 24 hours. If no statistics are available, design a HESC with a compressive strength greater or equal to 2880 psi.

Submit complete mix design data including proportions and sources of all mix ingredients, and the results of time and strength tests representing the mixes proposed for use. The strength and time data may come from previous KDOT project records or from an independent laboratory, and shall equal or exceed the strength and time requirements listed in the Contract Documents.

**g. Slump.** Designate a slump for each concrete mix design that is required for satisfactory placement of the concrete application not to exceed 5 inches except where controlled by maximum allowable slumps stated in **SECTIONS 402, 403 and 404**. Reject concrete with a slump that limits the workability or placement of the concrete.

**h. Permeability.** Supply concrete meeting the permeability requirements specified in **SECTION 402** for structural concrete and **SECTION 403** for on grade concrete. Permeability testing from KT-73 tested at 28 days, KT-79 tested at 28 days or AASHTO T-277 tested at 56 days is required for all bridge overlays, Moderate Permeability Concrete, and any project with over 250 cubic yards of concrete (this includes structural concrete, on grade concrete etc.). The field verification test procedure must be the same test procedure as the mix design approval test.

There are no permeability requirements for concrete for prestressed concrete members as specified in **SECTION 404**.

**i. Air Content.** Determine air content by KT-18 (Pressure Method) or KT-19 (Volumetric Method). With the exception of concrete for pavement as shown in **SECTION 403**, use the middle of the specified air content range of  $6.5 \pm 1.5\%$  for the design of air entrained concrete. Maximum air content is 10%. Take immediate steps to reduce the air content whenever the air content exceeds 8%.

**j. Alkali Silica Reactivity.** If the concrete mix design includes supplemental cementitious materials (SCMs), provide mortar expansion test results from ASTM C1567 as part of mix design approval unless meeting the minimum requirements shown in **TABLE 401-4**. Use the project’s mix design concrete materials at their designated percentages. Provide a mix with a maximum expansion of 0.10% at 16 days after casting. Provide ASTM C1567 results on an annual basis.

<b>TABLE 401-4: MINIMUM SCM CONTENT REQUIRED TO WAIVE ASTM C1567 TESTING</b>					
<b>Type of Coarse Aggregate Sweetener (refer to TABLE 1102-2 or TABLE 1116-1)</b>	<b>Are the Fine and Intermediate (if used) Aggregate Sources on PQL 3.1?</b>	<b>Proportion Required by Percent Weight of Total Cementitious Material</b>			
		<b>Slag Cement</b>	<b>Class C Fly Ash</b>	<b>Class F Fly Ash</b>	<b>Silica Fume</b>
Crushed Sandstone, Crushed Limestone, Crushed Dolomite, Siliceous Aggregate on PQL 3.1, or Siliceous Aggregate not on PQL 3.1	No	ASTM C1567 Testing Required		25%	Any*
Any combination of Crushed Limestone, Crushed Dolomite, Crushed Sandstone, and Siliceous Aggregate on PQL 3.1	Yes	Any*	15%	Any*	Any*

\*Subject to the maximum allowable percentages in **TABLE 401-2**.

**ASTM C1567 Testing can be waived for ternary (3 cementitious materials) mix designs with approval of the KDOT Bureau of Research.**

**k. Admixtures for Acceleration, Air-Entraining, Plasticizing, Set Retardation and Water Reduction.** Verify that the admixtures used are compatible and will work as intended without detrimental effects. Use the dosages recommended by the admixture manufacturers. Incorporate and mix the admixtures into concrete mixtures according to the manufacturer’s recommendations. Determine the quantity of each admixture for the concrete mix design.

(1) Accelerating Admixture. When specified in the Contract Documents, or in situations that involve contact with reinforcing steel and require early strength development to expedite opening to traffic, a non-chloride accelerator may be approved. The Engineer may approve the use of a Type C or E accelerating admixture. A Grade 2 calcium chloride accelerator may be used when patching an existing pavement more than 10 years old.

Add the calcium chloride by solution (the solution is considered part of the mixing water).

- For a minimum cure of 4 hours at 60°F or above, use 2% (by dry weight of cement) calcium chloride.

- For a minimum cure of 6 hours at 60°F or above, use 1% (by dry weight of cement) calcium chloride.

(2) Air-Entraining Admixture. When specified, use an air-entraining admixture in the concrete mixture. If another admixture is added to an air-entrained concrete mixture, determine if it is necessary to adjust the air-entraining admixture dosage to maintain the specified air content.

(3) Water-Reducers and Set-Retarders. A water-reducing admixture for improving workability may be required. If unfavorable weather or other conditions adversely affect the placing and finishing properties of the concrete mix, the Engineer may allow the use of water-reducers and set-retarders. Verify that the admixtures will work as intended without detrimental effects. If the Engineer approves the use of water-reducers and set-retarders, their continued use depends on their performance.

(4) Plasticizer Admixture. A plasticizer is defined as an admixture that produces flowing concrete, without further addition of water, and/or retards the setting of concrete. Flowing concrete is defined as having a slump equal to or greater than 7 ½ inches while maintaining a cohesive nature.

Manufacturers of plasticizers may recommend mixing revolutions beyond the limits specified in **subsection 401.8**. If necessary, address the additional mixing revolutions in the concrete mix design. The Engineer may allow up to 60 additional revolutions when plasticizers are designated in the mix design.

Before the concrete mixture with a slump equal to or greater than 7 ½ inches is used on the project, conduct tests on at least 1 full trial batch of the concrete mix design in the presence of the Engineer to determine the adequacy of the dosage and the batching sequence of the plasticizer to obtain the desired properties. Determine the air content of the trial batch both before and after the addition of the plasticizer. Monitor the slump, air content, temperature and workability at regular intervals of the time period from when the plasticizer is added until the estimated time of completed placement. At the discretion of the Engineer, if all the properties of the trial batch remain within the specified limits, the trial batch may be used in the project.

Do not add water after plasticizer is added to the concrete mixture.

(5) Field Adjustment to Admixtures. Limited adjustments to the dosage rate of accelerators, set-retarders, water reducers, and air-entraining admixtures are permitted to compensate for environmental changes during placement without a new concrete mix design or trial batch. Test the concrete for temperature, air content, and slump whenever changes are made to the dosage rates to ensure continued compliance with the specifications. The allowable adjustments are based on the dose used in the Approved Concrete Mix Design and according to the following:

- Do not exceed the accelerator dosage used in the Approved Concrete Mix Design. The accelerator dosage may be reduced or eliminated as needed. Redosing accelerators is not permitted.
- The water reducer dosage used in the Approved Concrete Mix Design sets the minimum permitted dose for use in the field. The water reducer dose may be increased from that shown in the Approved Concrete Mix Design provided that the slump does not to exceed the maximum designated slump. Slump reduction may be obtained by withholding a portion of the mix water as specified in **subsection 401.8a**.
- Redosing of water reducers and air-entraining admixtures is permitted to control slump or air content in the field, when approved by the Engineer, time and temperature limits are not exceeded, and at least 30 mixing revolutions remain before redosing. Redose according to manufacturer's recommendations.
- Set retarders may be added as needed during production. Do not include set retarders in the Concrete submitted for Mix Design Approval. Redosing retarders is not permitted. Paperwork for submitted mix designs (Form 694) with no (zero) water reducer and/or set retarder in the original Concrete submitted for Mix Design Approval must show the manufacturer of the admixtures that may be included in the Project Concrete.

#### **401.4 REQUIREMENTS FOR COMBINED MATERIALS**

##### **a. Measurements for Proportioning Materials.**

(1) Cement. Measure cement as packed by the manufacturer. A sack of cement is considered as 0.04 cubic yards weighing 94 pounds net. Measure bulk cement by weight. In either case, the measurement must be accurate to within 0.5% throughout the range of use.

(2) Supplemental Cementitious Materials. Supplemental cementitious materials proportioning and batching equipment is subject to the same controls as required for cement. Provide positive cut off with no leakage from the cut off valve. Cementitious materials may be weighed accumulatively with the cement or separately. If weighed accumulatively, weigh the cement first.

(3) Water. Measure the mixing water by weight or by volume accurate to within 1% throughout the range of use.

(4) Aggregates. Measure the aggregates by weight, accurate to within 0.5% throughout the range of use.

(5) Admixtures. Measure liquid admixtures by weight or volume, accurate to within 3% of the quantity required. If liquid admixtures are used in small quantities in proportion to the cement as in the case of air-entraining agents, use readily adjustable mechanical dispensing equipment capable of being set to deliver the required quantity and to cut off the flow automatically when this quantity is discharged.

**b. Testing of Aggregates.**

(1) Production of On Grade Concrete Aggregate (OGCA). If OGCA is required, notify the Engineer in writing at least 2 weeks in advance of producing the aggregate. Include the source of the aggregate and the date production will begin. Failure to notify the Engineer, as required, may result in rejection of the aggregate for use as OGCA. Maintain separate stockpiles for OGCA at the quarry and at the batch site and identify them accordingly.

(2) Testing Aggregates at the Batch Site. Provide the Engineer with reasonable facilities at the batch site for obtaining samples of the aggregates. Provide adequate and safe laboratory facilities at the batch site allowing the Engineer to test the aggregates for compliance with the specified requirements.

KDOT will sample and test aggregates from each source to determine their compliance with specifications. Do not batch the concrete mixture until the Engineer has determined that the aggregates comply with the specifications. KDOT will conduct sampling at the batching site, and test samples according to the Sampling and Testing Frequency Chart in Part V. For QC/QA contracts, establish testing intervals within the specified minimum frequency.

After initial testing is complete, and the Engineer has determined that the aggregate process control is satisfactory, use the aggregates concurrently with sampling and testing as long as tests verify compliance with specifications. When batching, sample the aggregates as near the point of batching as feasible. Sample from the stream as the storage bins or weigh hoppers are loaded. If samples cannot be taken from the stream, take them from approved stockpiles, or use a template and sample from the conveyor belt. If test results indicate an aggregate does not comply with specifications, cease concrete production using that aggregate. Unless a tested and approved stockpile for that aggregate is available at the batch plant, do not use any additional aggregate from that source and specified grading until subsequent testing of that aggregate indicate compliance with specifications. When tests are completed and the Engineer is satisfied that process control is satisfactory, production of concrete using aggregates tested concurrently with production may resume.

**c. Handling of Materials.**

(1) Approved stockpiles are permitted only at the batch plant and only for small concrete placements or for maintaining concrete production. Mark the approved stockpile with an "Approved Materials" sign. Provide a suitable stockpile area at the batch plant so that aggregates are stored without detrimental segregation or contamination. At the plant, limit stockpiles of tested and approved coarse, fine and intermediate aggregate to 250 tons each, unless approved for more by the Engineer. If mixed aggregate is used, limit the approved stockpile to 500 tons, the size of each being proportional to the amount of each aggregate to be used in the mix.

Load aggregates into the mixer such that no material foreign to the concrete or material capable of changing the desired proportions is included.

(2) Segregation. Do not use segregated aggregates. Previously segregated materials may be thoroughly re-mixed and used when representative samples taken anywhere in the stockpile indicated a uniform gradation exists.

(3) Cement and Supplemental Cementitious. Protect cement and supplemental cementitious materials in storage or stockpiled on the site from any damage by climatic conditions which would change the characteristics or usability of the material.

(4) Moisture. Provide aggregate with a moisture content of  $\pm 0.5\%$  from the average of that day. If the moisture content in the aggregate varies by more than the above tolerance, take whatever corrective measures are necessary to bring the moisture to a constant and uniform consistency before placing concrete. This may be accomplished by handling or manipulating the stockpiles to reduce the moisture content, or by adding moisture to the stockpiles in a manner producing uniform moisture content through all portions of the stockpile.

Handheld moisture-determining devices are permitted. For plants equipped with an approved accurate moisture-determining device capable of continuously determining the free moisture in the aggregates, and provisions made for batch-to-batch correction of the amount of water and the weight of aggregates added, the requirements relative to manipulating the stockpiles for moisture control will be waived. Approval and accuracy of the moisture-determining device is based on daily comparisons with KT-24 or ASTM C566 and at the discretion of the Engineer. Any procedure used will not relieve the producer of the responsibility for delivering concrete of uniform slump within the limits specified.

(5) Separation of Materials in Tested and Approved Stockpiles. Only use KDOT Approved Materials. Provide separate means for storing materials approved by KDOT. If the producer elects to use KDOT Approved Materials for non-KDOT work, during the progress of a project requiring KDOT Approved Materials, inform the Engineer and agree to pay all costs for additional material testing.

Clean all conveyors, bins and hoppers of any unapproved materials before beginning the manufacture of concrete for KDOT work.

#### **401.5 MORTAR AND GROUT**

**a. General.** Follow the proportioning requirements in **subsections 401.5b.** and **c.** for mortar and grout unless otherwise specified in the Contract Documents, including altering the proportions when a minimum strength is specified.

**b. Mortar.** Mortar is defined as a mixture of cementitious materials, FA-M aggregate and water, which may contain admixtures, and is typically used to minimize erosion between large stones or to bond masonry units.

Proportion mortar for laying stone for stone rip-rap, slope protection, stone ditch lining or pavement patching at 1 part of portland cement and 3 parts of FA-M aggregate by volume with sufficient water to make a workable and plastic mix.

Proportion mortar for laying brick, concrete blocks or stone masonry at ½ part masonry cement, ½ part portland cement and 3 parts FA-M aggregate, either commercially produced masonry sand or FA-M, by volume with sufficient water to make a workable and plastic mix.

Do not use air-entraining agents in mortar for masonry work.

The Engineer may visually accept the sand used for mortar. The Engineer may visually accept any recognized brand of portland cement or masonry cement that is free of lumps.

**c. Grout.** Grout is defined as a mixture of cementitious materials with or without aggregate or admixtures to which sufficient water is added to produce a pouring or pumping consistency without segregation of the constituent materials and meeting the applicable specifications.

#### **401.6 COMMERCIAL GRADE CONCRETE**

If the Contract Documents allow the use of commercial grade concrete for designated items, then use a commercial grade mixture from a ready mix plant approved by the Engineer.

The Engineer must approve the commercial grade concrete mixture. Approval of the commercial grade mixture is based on these conditions:

- All materials are those normally used for the production and sale of concrete in the vicinity of the project.
- The mixture produced is that normally used for the production and sale of concrete in the vicinity of the project.
- The mixture produced contains a minimum cementitious content of 6 sacks (564 lbs) of cementitious material per cubic yard of concrete.
- The water-cementitious ratio is as designated by the Engineer. The maximum water-cementitious ratio permitted may not exceed 0.50 pounds of water per pound of cementitious material including free water in the aggregate.
- Type I, II, III, IP, IS, 1L or IT cement may be used unless otherwise designated. Fly ash, natural pozzolans, slag cement and blended supplemental materials may be substituted for the required minimum cement content as specified in **subsection 401.3**. No additives other than air entraining agent will be allowed. The Contractor will not be required to furnish the results of strength tests when submitting mix design data to the Engineer.
- In lieu of the above, approved mix designs (including optimized) for all other grades of concrete, Grade 3.0 or above, are allowable for use as commercial grade concrete, at no additional cost to KDOT.

Exercise good engineering judgment in determining what equipment is used in proportioning, mixing, transporting, placing, consolidating and finishing the concrete.

Construct the items with the best current industry practices and techniques.

Before unloading at the site, provide a delivery ticket for each load of concrete containing the following information:

- Name and location of the plant.
- Time of batching concrete.
- Mix proportions of concrete (or a mix designation approved by the Engineer).
- Number of cubic yards of concrete batched.

Cure the various items placed, as shown in **DIVISION 700**.

The Engineer may test commercial grade concrete by molding sets of 3 cylinders. This is for informational purposes only. No slump or unit weight tests are required.

#### **401.7 CERTIFIED CONCRETE**

If KDOT inspection forces are not available on a temporary basis, the Engineer may authorize the use of concrete from approved concrete plants. Approval for this operation is based on certification of the plant and plant personnel, according to KDOT standards. KDOT's approval may be withdrawn any time that certification procedures are not followed. Contact the DME for additional information.

The Engineer will not authorize the use of certified concrete for major structures such as bridges, RCB box bridges, RCB culverts, permanent main line and ramp pavement or other structurally, critical items.

Each load of certified concrete must be accompanied by a ticket listing mix proportions, time of batching and setting on revolution counter, total mixing revolutions and must be signed by certified plant personnel.

#### **401.8 MIXING, DELIVERY AND PLACEMENT LIMITATIONS**

**a. Concrete Batching, Mixing and Delivery.** Follow approved mix designs and batching sequences. Batch and mix the concrete in a central mix plant, in a truck mixer or in a drum mixer at the work site. Provide plant capacity and delivery capacity sufficient to maintain continuous delivery at the rate required. The delivery rate of concrete during concreting operations must provide for the proper handling, placing and finishing of the concrete.

Seek the Engineer's approval of the concrete plant/batch site before any concrete is produced for the project. The Engineer will inspect the equipment, the method of storing and handling of materials, the production procedures and the transportation and rate of delivery of concrete from the plant to the point of use. The Engineer will grant approval of the concrete plant/batch site based on compliance with the specified requirements. The Engineer may, at any time, rescind permission to use concrete from a previously approved concrete plant/batch site upon failure to comply with the specified requirements.

Clean the mixing drum before it is charged with the concrete mixture. Charge the batch into the mixing drum such that a portion of the water is in the drum before the aggregates and cementitious material. Uniformly flow materials into the drum throughout the batching operation. All mixing water must be in the drum by the end of the first 15 seconds of the mixing cycle. Keep the throat of the drum free of accumulations restricting the flow of materials into the drum.

Do not exceed the rated capacity (cubic yards shown on the manufacturer's plate on the mixer) of the mixer when batching the concrete. The Engineer may allow an overload of up to 10% above the rated capacity for central mix plants and drum mixers at the work site, provided the concrete test data for strength, segregation and uniform consistency are satisfactory, and no concrete is spilled during the mixing cycle.

Operate the mixing drum at the speed specified by the mixer's manufacturer (shown on the manufacturer's plate on the mixer).

Mixing time is measured from the time all materials, except water, are in the drum. If it is necessary to increase the mixing time to obtain the specified percent of air in air-entrained concrete, the Engineer will determine the mixing time.

If the concrete is mixed in a central mix plant or a drum mixer at the work site, mix the batch between 1 to 5 minutes at mixing speed. Do not exceed the maximum total 60 mixing revolutions. Mixing time begins after all materials, except water, are in the drum, and ends when the discharge chute opens. Transfer time in multiple drum mixers is included in mixing time. Mix time may be reduced for plants utilizing high performance mixing drums provided thoroughly mixed and uniform concrete is being produced with the proposed mix time. Performance of the plant must conform to Table A1.1 of ASTM C94, Standard Specification for Ready Mixed Concrete. Five of the 6 tests listed in Table A1.1 must be within the limits of the specification to indicate that uniform concrete is being produced.

If the concrete is mixed in a truck mixer, mix the batch between 70 and 100 revolutions of the drum or blades at mixing speed. After the mixing is completed, set the truck mixer drum at agitating speed. Unless the mixing unit is equipped with an accurate device indicating and controlling the number of revolutions at mixing speed, perform the mixing at the batch plant and operate the mixing unit at agitating speed while travelling from the plant to the work site. Do not exceed 300 total revolutions (mixing and agitating). An additional 60 mixing revolutions may be allowed by the Engineer when plasticizers are designated in the mix design.

If a truck mixer or truck agitator is used to transport concrete that was completely mixed in a stationary central mixer, agitate the concrete while transporting at the agitating speed specified by the manufacturer of the equipment (shown on the manufacturer’s plate on the equipment). Do not exceed 200 total revolutions (additional re-mixing and agitating).

Provide a batch slip including batch weights of every constituent of the concrete and time for each batch of concrete delivered at the work site, issued at the batching plant that bears the time of charging of the mixer drum with cementitious materials and aggregates. Include quantities, type, product name and manufacturer of all admixtures on the batch ticket.

On paving projects and other high-volume work, the Engineer will evaluate the haul time, and whether tickets will be collected for every load. Thereafter, random checks of the loads will be made. Maintain all batch tickets when not collected.

When non-agitating equipment is used for transportation of concrete, place within 30 minutes of adding the cement to the water. Provide approved covers for protection against the weather when required by the Engineer.

When agitating equipment is used for transportation of the concrete, place concrete within the time and temperature conditions shown in **TABLE 401-5**.

<b>TABLE 401-5: AMBIENT AIR TEMPERATURE AND AGITATED CONCRETE PLACEMENT TIME</b>		
<b>T = Ambient Air Temperature at Time of Batching (°F)</b>	<b>Time limit agitated concrete must be placed within, after the addition of cement to water (hours)</b>	<b>Admixtures</b>
T < 75	1 ½	All Cases
75 ≤ T < 90	1	None
75 ≤ T < 90	1 ½	Set Retarder
<b>T<sub>c</sub> = Concrete Temperature at time of placement (°F)</b>	<b>Time limit agitated concrete must be placed within, after the addition of cement to water (hours)</b>	<b>Admixtures</b>
90 ≤ T <sub>c</sub> *	¾	All Cases
Other conditions contributing to quick stiffening of concrete	¾	All Cases

Do not use concrete that has developed its initial set. Regardless of the speed of delivery and placement, the Engineer will suspend the concreting operations until corrective measures are taken, if there is evidence that the concrete cannot be adequately consolidated.

Weather conditions and the use of admixtures can affect the set times for the concrete. Do not use the time limits and total revolutions as the sole criterion for rejection of concrete. Exceed the time limits and total revolutions only after demonstrating that the properties of the concrete can be improved. Evaluation of the consistency and workability should be taken into consideration. Reject concrete that cannot be adequately consolidated.

Adding water to concrete after the initial mixing is prohibited, with this exception:

If the concrete is delivered to the work site in a truck mixer, the Engineer will allow water (up to 2 gallons per cubic yard) be withheld from the mixture at the batch site, and if needed, added at the work site to adjust the slump to the specified requirements. Determine the need for additional water as soon as the load arrives at the construction site. Use a calibrated water-measuring device to add the water, and add the water to the entire load. Do not add more water than was withheld at the batch site. After the additional water is added, turn the drum or blades an additional 20 to 30 revolutions at mixing speed. The Engineer will supervise the adding of water to the load, and will allow this procedure only once per load. Conduct all testing for acceptance and produce any required cylinders after all water or admixtures have been added.

Do not add water at the work site if the slump is within the designated slump tolerance, even if water was withheld.

Do not add water at the work site if the percent air is above 8%, regardless of the slump, even if water was withheld.

Do not withhold and add water if plasticizer is added to the concrete mixture at the batch site.

If at any time during the placement of concrete it is determined that redosing with water is adversely affecting the properties of the concrete, the concrete will be rejected and the Engineer will suspend the practice.

**b. Placement Limitations.**

(1) Placing Concrete at Night. Do not mix, place or finish concrete without sufficient natural light, unless an adequate, artificial lighting system approved by the Engineer is provided.

(2) Placing Concrete in Cold Weather. Submit a cold weather concrete plan for approval to the Engineer prior to placing concrete in cold weather.

Unless authorized by the Engineer, discontinue mixing and concreting operations when the descending ambient air temperature reaches 40°F. Do not begin concreting operations until an ascending ambient air temperature reaches 35°F and is expected to exceed 40°F.

If the Engineer approves the cold weather concrete plan, aggregates may be heated by either steam or dry heat system before placing them in the mixer. Use an apparatus that heats the mass uniformly and is so arranged as to preclude the possible occurrence of overheated areas which might injure the materials. Do not heat aggregates directly by gas or oil flame or on sheet metal over fire. Aggregates that are heated in bins, by steam-coil or water-coil heating, or by other methods not detrimental to the aggregates may be used. The use of live steam on or through binned aggregates is prohibited. Unless otherwise authorized, maintain the temperature of the mixed concrete between 50 to 90°F at the time of placing. Do not, under any circumstances, continue concrete operations if the ambient air temperature is less than 20°F.

If the ambient air temperature is 35°F or less at the time the concrete is placed, the Engineer may require that the water and the aggregates be heated to between 70 and 150°F.

Do not place concrete on frozen subgrade or use frozen aggregates in the concrete.

Make adjustments for potential longer set time and slower strength gain for concrete with SCMs. Adjust minimum time requirements as stated in **SECTION 710** for concrete used in structures. For concrete paving, be aware of the effect that the use of SCMs (except silica fume) may have on the statistics and moving averages.

#### **401.9 INSPECTION AND TESTING**

Unless otherwise designated in the Contract Documents or by the Engineer, obtain samples of fresh concrete for the determination of slump, weight per cubic yard and percent of air from the final point of placement.

The Engineer will cast, store and test strength and permeability test specimens in sets of 3.

KDOT will conduct the sampling and test the samples according to **DIVISION 2500** and the Sampling and Testing Frequency Chart in Part V. For QC/QA contracts, establish testing intervals within the specified minimum frequency.

The Engineer will reject concrete that does not comply with specified requirements.

The Engineer will permit occasional deviations below the specified cementitious content, if it is due to the air content of the concrete exceeding the designated air content, but only up to the maximum tolerance in the air content.

Continuous operation below the specified cementitious content for any reason is prohibited.

As the work progresses, the Engineer reserves the right to require the Contractor to change the proportions if conditions warrant such changes to produce a satisfactory mix. Any such changes may be made within the limits of the specifications at no additional compensation to the Contractor.

**APPENDIX A – NON-MANDATORY INFORMATION****SUGGESTED GUIDELINES FOR MEETING KDOT'S PERMEABILITY SPECIFICATIONS****General:**

Water and chlorides permeate through the mortar and paste of the concrete mixes. They do not readily permeate through the larger aggregates. Permeability can be improved by decreasing the mortar and paste of the concrete mix and increasing the coarse aggregate portions.

The use of optimized mix designs, blended cements, and/or supplementary cementitious materials (SCMs) can reduce the permeability of concrete. **SECTIONS 1102 and 1116**, Aggregates for Concrete describes optimized aggregate gradations for concrete mixes. Additional testing for alkali silica reaction (ASR) is required when SCMs are used in concrete as per **SECTION 401**. The amount of SCMs required to pass the ASR testing may be different than the amount required to comply with the permeability specifications. SCMs may also lower the necessary water cement (w/c) ratio and may slow set times and strength gain.

Optimizing the coarse aggregate gradations can decrease permeability. This includes mixes with more than 60% retained on the # 8 sieve and gradations with fineness modulus above 4.75. A fineness modulus of over 5.0 can yield even better results. Use the largest practical nominal maximum size aggregate allowed.

In general, keeping the w/c ratio below 0.43 may help meet the permeability specifications, as may lower cementitious content mixes when using Type I/II cements. These two properties control the paste in the mix. Concrete mixes with less than 25% paste (as displayed on KDOT Form 694) are more likely to pass the permeability specifications. Acceptable concrete can be mixed with paste contents of 23% or lower. Water cement ratios below 0.39 often do not provide enough water for all constituents to properly react, especially when admixtures are used, and may be counterproductive. High early strength concrete mixes using Type III cement and higher cementitious contents have also been able to pass the Standard Permeability requirements because of their low w/c ratios.

In general, the use of water reducers is helpful in reducing the paste content. Material compatibilities, following the admixture suppliers' recommendations for dosage rates, and the order of introduction of the chemicals into the mix are paramount to meeting KDOT specifications. Contractors should work with their admixture suppliers to find an admixture that works well with their combination of materials.

Changes made to an approved mix design will change the permeability, especially additional water, or redosing water that was withheld from the mix at a concrete plant. It is also recommended that concrete producers verify their mixes with a minimum of 3 cubic yards after doing their laboratory mix designs.

**Standard Permeability Concrete (SPC) Requirements:**

Volume of Permeable Voids 12.0% max, or  
Surface Resistivity 9.0 k $\Omega$ -cm min, or  
RCPT 3000 Coulombs max.

The SPC requirements may be met without the use of optimized mix designs, blended cements or SCMs. With certain aggregates, 25% slag cement will be required to pass the ASR testing. With other aggregates, a minimum of 40% slag cement by weight of total cementitious materials is usually needed. Some fly ashes require a minimum of 25% of the total cementitious material to pass the ASR test. Class C fly ash will react differently than Class F fly ash.

Some people believe that lower absorption aggregates have a better chance of meeting the permeability specification, but higher absorption aggregates have been used in concrete mixes utilizing these guidelines and have met the SPC specifications. KDOT has found that the properties of the concrete are often more important than the absorption of the aggregate when meeting this specification.

**Moderate Permeability Concrete (MPC) Requirements:**

Volume of Permeable Voids 11.0% max, or  
Surface Resistivity 13.0 k $\Omega$ -cm min, or  
RCPT 2000 Coulombs max.

Concrete mixes for MPC will require aggregates with a minimum Soundness of 0.95, a maximum LA Wear of 40, and a minimum Acid Insoluble Residue of 85%. These aggregates, by nature, are harder aggregates with very low absorption. MPC may rely more heavily on optimized gradations, blended cements or SCMs in order to meet the specification. Consideration could be given to ternary blends of cementitious materials, using more than one

SCM, or combining a blended cement with an additional SCM. Combinations of 25% to 30% slag cement with as little as 10% to 25% Class C fly ash have been very effective in keeping permeabilities below the level required for MPC. Incorporation of 20% Class F Fly Ash will often satisfy the requirements of the MPC specification.

**Low Permeability Concrete (LPC) Requirements:**

Volume of Permeable Voids 9.5% max, or  
Surface Resistivity 27.0 k $\Omega$ -cm min, or  
RCPT 1000 Coulombs max.

LPC will also use harder aggregates with very low absorption. These mixes must be optimized with the MA-6 gradation. Mix designs with 5% silica fume and 95% Type I/II cement often meet the LPC requirements. These mixes have traditionally been known as silica fume concrete. Ternary mix designs are useful in meeting these requirements. Consider using 3% to 5% silica fume with 25% to 30% slag cement, or 25% to 30% slag cements with 10% to 25% Class C fly ash. Class F fly ash alone may also be effective in reducing the permeability to these levels.

Contact KDOT's Bureau of Research or the District Office for additional guidance in meeting the Permeability Specifications.

**KANSAS DEPARTMENT OF TRANSPORTATION  
 SPECIAL PROVISION TO THE  
 STANDARD SPECIFICATIONS, 2015 EDITION**

Delete SECTION 710 and replace with the following:

**SECTION 710**

**CONCRETE STRUCTURE CONSTRUCTION**

**710.1 DESCRIPTION**

Construct concrete structures according to the Contract Documents. When Bridge Deck Grooving is a bid item in the contract, perform the grooving as shown in the Contract Documents.

**BID ITEMS**

- Concrete (\*) (\*\*) (\*\*\*) (\*\*\*\*)
- Bridge Deck Grooving
- \*Grade of Concrete
- \*\*AE (air-entrained), if specified
- \*\*\*Aggregate, if specified
- \*\*\*\*MPC (Moderate Permeability Concrete), if specified

**UNITS**

- Cubic Yard
- Square Yard

**710.2 MATERIALS**

Provide materials that comply with the applicable requirements.

Concrete <sup>+</sup> .....	<b>SECTIONS 401 &amp; 402</b>
Aggregates for Concrete Not On Grade .....	<b>SECTION 1102</b>
Concrete Curing Materials .....	<b>DIVISION 1400</b>
Joint Sealing Compounds .....	<b>DIVISION 1500</b>
Type B Preformed Expansion Joint Filler .....	<b>DIVISION 1500</b>
Preformed Elastomeric Compression Joint Seals .....	<b>DIVISION 1500</b>
Bridge Number Plates .....	<b>DIVISION 1600</b>

<sup>+</sup> If Moderate Permeability Concrete (MPC) is not specified, the concrete shall meet the requirements for Standard Permeability Concrete.

**710.3 CONSTRUCTION REQUIREMENTS**

**a. Falsework and Forms.** Construct falsework and forms according to **SECTION 708**.

**b. Handling and Placing Concrete.** At a project progress meeting prior to placing concrete, discuss with the Engineer the method and equipment used for deck placement; include the equipment for controlling the evaporation rate and concrete temperature, procedures used to minimize the evaporation rate, method to place saturated burlap within the specified 15 minute limit. Provide plans to maintain a continuous supply of concrete throughout placement with an adequate quantity of concrete to complete the deck and filling diaphragms and end walls without cold joints.

Fogging using hand-held equipment may be required by the Engineer during unanticipated delays in the placing, finishing or curing operations. If fogging is required by the Engineer, do not allow water to drip, flow or puddle on the concrete surface during fogging, placement of absorptive material, or at any time before the concrete has achieved final set.

When required, produce a fog spray from nozzles that atomize the droplets and a system capable of keeping a large surface area damp without depositing excess water. Use high pressure equipment that generates a minimum of 1200 psi at 2.2 gpm, or low pressure equipment having nozzles capable of supplying a maximum flow rate of 1.6 gpm. Complete all floating before fogging.

Use a method and sequence of placing concrete approved by the Engineer. Do not place concrete until the forms and reinforcing steel have been checked and approved. Before placing concrete, clean all forms of debris. Drive all foundation piling in any one pier or abutment before concrete is poured in any footing or column of that pier or abutment.

On bridges skewed greater than 10°, place concrete on the deck forms across the deck on the same skew as the bridge, unless approved otherwise by State Bridge Office (SBO). Operate the bridge deck finishing machine on the same skew as the bridge, unless approved otherwise by the SBO.

Maintain environmental conditions on the entire bridge deck such that the evaporation rate is less than 0.2 lb/sq ft/hr. This may require placing the deck at night, in the early morning or on another day. The evaporation rate (as determined in the American Concrete Institute Manual of Concrete Practice 305R, Chapter 2) is a function of air temperature, concrete temperature, wind speed and humidity.

Just prior to and at least once per hour during placement of the concrete, the Engineer will measure and record the air temperature, concrete temperature, wind speed and humidity on the bridge deck. The Engineer will take the air temperature, wind and humidity measurements approximately 12 inches above the surface of the deck. With this information, the Engineer will determine the evaporation rate by using KDOT software or by using **FIGURE 710-1** (Figure 2.1.5 from the American Concrete Institute Manual of Concrete Practice 305R, Chapter 2).

When the evaporation rate is equal to or above 0.2 lb/ft<sup>2</sup>/hr, take actions (such as cooling the concrete, installing wind breaks, sun screens etc.) to create and maintain an evaporation rate less than 0.2 lb/ft<sup>2</sup>/hr on the entire bridge deck.

Place concrete to avoid segregation of the materials and displacement of the reinforcement. Do not deposit concrete in large quantities at any point in the forms, and then run or work the concrete along the forms.

Deposit the concrete in the forms in horizontal layers. Perform the work rapidly and continuously between predetermined planes. Vibrate through each plane.

Fill each part of the form by depositing the concrete as near to the final position as possible. If the chutes for placement of concrete are on steep slopes, equip them with baffle boards or assemble in short lengths that reverse the direction of movement. Do not drop concrete in the forms a distance of more than 5 feet, unless confined by clean, smooth, closed chutes or pipes.

Work the coarse aggregate back from the forms and around the reinforcement without displacing the bars. After initial set of the concrete, do not disturb the forms, or place any strain on the ends of projecting reinforcement.

If placing concrete by pumping, place the concrete in the pipeline to avoid contamination or separation of the concrete, or loss of air by fitting the pump with a concrete brake (e.g. french horn or bladder valve) at the end of the pump boom. Obtain sample concrete for slump and air test requirements at the discharge end of the piping.

Do not use chutes, troughs or pipes made of aluminum.

Uniformly consolidate the concrete without voids.

Accomplish consolidation of the concrete on all span bridges that require finishing machines by means of a mechanical device on which internal (spud or tube type) concrete vibrators of the same type and size are mounted (**subsection 154.2**). Observe special requirements for vibrators in contact with epoxy coated reinforcing steel as specified in **subsection 154.2**. Provide stand-by vibrators for emergency use to avoid delays in case of failure.

Operate the mechanical device so vibrator insertions are made on a maximum spacing of 12-inch centers over the entire deck surface. Provide a uniform time per insertion of all vibrators of 3 to 15 seconds, or until the course aggregate particles are fully embedded, unless otherwise designated by the Engineer. Provide positive control of vibrators using a timed light, buzzer, automatic control. Smoothly extract the vibrators from the concrete at a rate to avoid leaving any large voids or holes in the consolidated concrete. Do not drag the vibrators horizontally through the concrete.

Use hand held vibrators (**subsection 154.2**) in inaccessible and confined areas such as along hubguards. When required, supplement vibrating by hand spading with suitable tools to provide required consolidation.

Reconsolidate any voids left by workers.

Deposit concrete in water, only with approval from the Engineer. Do not place concrete in running water.

Use forms that are reasonably watertight to hold concrete deposited under water. Increase the minimum cement factor of the grade of concrete being deposited in water by 10%, obtaining approximately a 6-inch slump. Carefully deposit the concrete in place, in a compact mass, using a tremie pumped through piping, bottom-dumping bucket or other approved method that does not permit the concrete to fall through the water. Do not pump water from the inside of the foundation forms while concrete is being placed. Do not disturb the concrete after being deposited. If necessary to prevent flooding, place a seal of concrete through a closed chute or tremie, and allow it to set.

Continuously place concrete in any floor slab until complete, unless shown otherwise in the Contract Documents.

The method used for transporting concrete batches, materials or equipment over previously placed single pour (non-overlaid) floor slabs or floor units, or over units of structures of continuous design types is subject to approval by the Engineer.

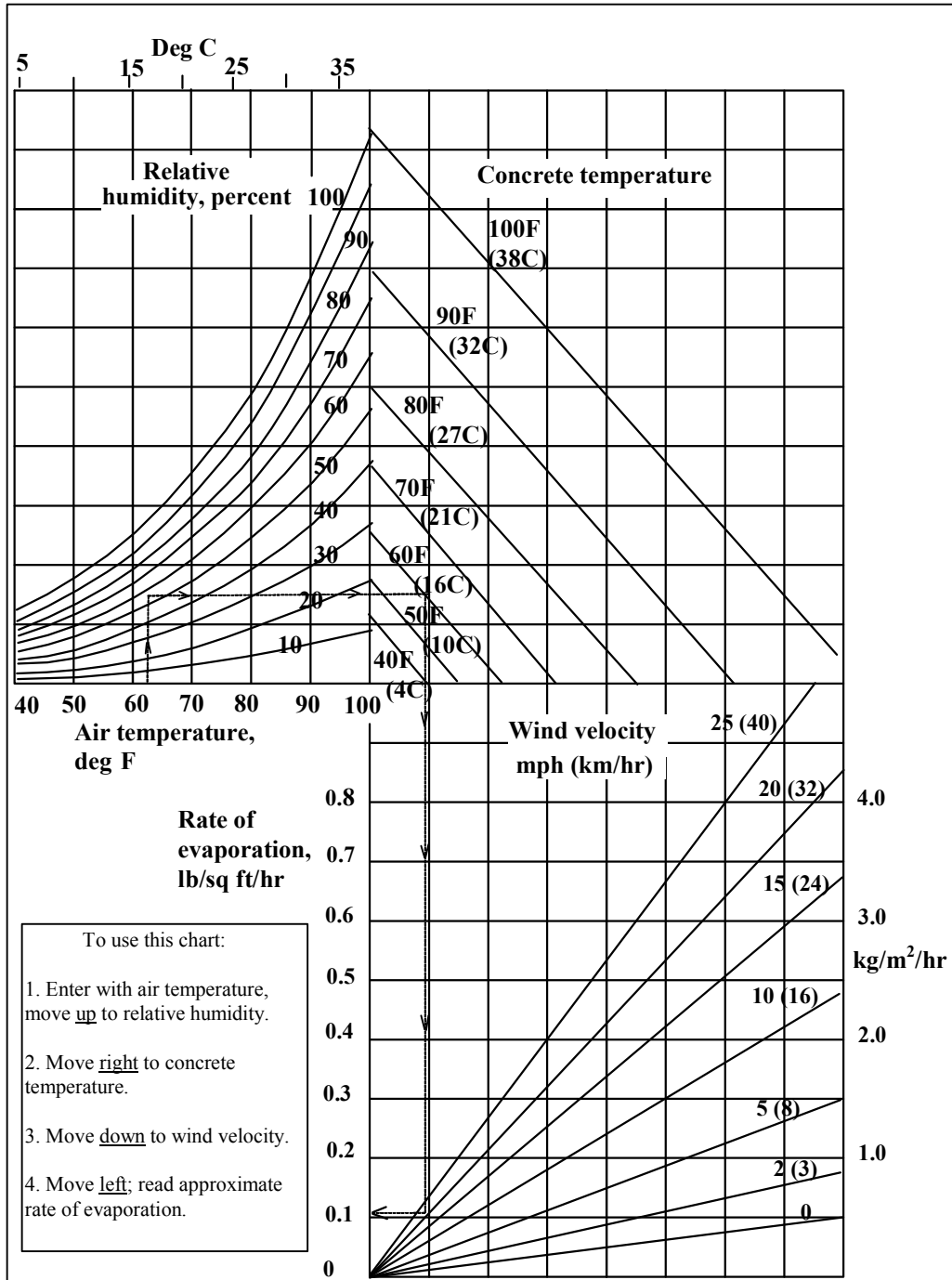
Do not operate bridge deck finishing equipment on previously placed concrete spans until:

- A minimum of 72 hours on structures that are fully supported with falsework;
- A minimum of 72 hours on structures with concrete girder spans with concrete decks; and
- A minimum of 96 hours on structures with steel girder spans with concrete decks.

The time delays begin after the day's pour has been completed.

Follow **TABLE 710-2** for load limitations after concrete placement. Prior to permitting approved traffic on the bridge deck, construct temporary bridge approaches and maintain them in a condition to prevent damage to the bridge ends.

**FIGURE 710-1: STANDARD PRACTICE FOR CURING CONCRETE**



Effect of concrete and air temperatures, relative humidity, and wind velocity on the rate of evaporation of surface moisture from concrete. This chart provides a graphic method of estimating the loss of surface moisture for various weather conditions. To use the chart, follow the four steps outlined above. When the evaporation rate exceeds 0.2 lb/ft<sup>2</sup>/hr (1.0 kg/m<sup>2</sup>/hr), measures shall be taken to prevent excessive moisture loss from the surface of unhardened concrete; when the rate is less than 0.2 lb/ft<sup>2</sup>/hr (1.0 kg/m<sup>2</sup>/hr) such measures may be needed. When excessive moisture loss is not prevented, plastic cracking is likely to occur.

**c. Construction Joints, Expansion Joints and End of Wearing Surface (EWS) Treatment.** Locate the construction joints as shown in the Contract Documents. If construction joints are not shown in the Contract Documents, submit proposed locations for approval by the Engineer.

If the work of placing concrete is delayed and the concrete has taken its initial set, stop the placement, saw the nearest construction joint approved by the Engineer and remove all concrete beyond the construction joint. On post-tensioned structures construct a stepped joint as shown in the Contract Documents.

When the Contract Documents show a construction joint in the wall of the RCB 3 inches above the floor, the Contractor has the option of constructing the joint as shown on the Contract Documents, or constructing the joint level with the floor of the RCB. When the Contract Documents show a construction joint in the wall of the RFB 2 inches above the floor haunch, the Contractor has the option of constructing the joint as shown on the Contract Documents, or even with the top of the floor haunch of the RFB.

If dowels, reinforcing bars or other tie devices are not required by the Contract Documents, make a key in the construction joint. Construct keyed joints by embedding water-soaked beveled timbers of a size shown on the Contract Documents, into the soft concrete. Remove the timber when the concrete has set. When resuming work, thoroughly clean the surface of the concrete previously placed, and when required by the Engineer roughen the key with a steel tool. Before placing concrete against the keyed construction joint, the joint shall be cleaned of surface laitance, curing compound, and all other foreign material, use of abrasive blasting may be required to achieve the level of cleanliness required. Thoroughly wash the surface of the keyed joint with clean water, and allow the joint to dry to a saturated surface dry condition immediately prior to placing fresh concrete against the joint key.

(1) Bridges With Tied Approaches. When concrete is placed at the bridge EWS, embed 3 (½-inch by 8-inch) bolts to hold a header board for each traffic lane into the vertical surface of the EWS. Finish the surface of the EWS using an edging tool with a ¼ inch radius. Immediately after the vertical forms on the EWS are removed, protect the exposed EWS by bolting a wooden header (minimum dimension of 2 ⅝ inches by 7 ½ inches) to the exposed vertical surface of the EWS. Extend the header board the full width of the EWS, or use 1 section of header board for each lane of traffic. Shape the header board to comply with the crown of the bridge surface, and install it flush with the concrete wearing surface. Do not bend the reinforcing steel which will tie the approach slab to the EWS or damage the concrete at the EWS.

(2) Bridges Without Tied Approaches. Place the concrete for the approach slab, and at the end of the approach slab away from the EWS place bolts and attach a header board in the same manner required for bridges with tied approaches. If the Contractor needs to drive on the bridge before the approach slabs can be placed and cured construct a temporary bridge from the approach over the EWS capable of supporting the anticipated loads. The method of bridging must be approved by the Engineer.

**d. Finishing.** Finish all top surfaces, such as the top of retaining walls, curbs, abutments and rails, with a wooden float by tamping and floating, flushing the mortar to the surface and provide a uniform surface, free from pits or porous places. Trowel the surface producing a smooth surface, and brush lightly with a damp brush to remove the glazed surface.

Strike off bridge decks with a self-propelled finishing machine, which may be manually operated by winches to reach a temporary bulkhead when approved by the Engineer. The screed on the finish machine must be self-oscillating, and operate or finish from a position either on the skew or transverse to the bridge roadway centerline.

On decks skewed greater than 10°, operate the finishing machine on the same skew as the bridge, unless approved otherwise by the SBO. Before placing concrete, position the finisher throughout the proposed placement area allowing the Engineer to verify the reinforcing steel positioning.

Irregular sections may be finished by other methods approved by the Engineer. Reinforced concrete box bridges that will be under fill may be struck off by other approved methods.

Float and straightedge the wearing surface so the finished surface is at the cross-section shown in the Contract Documents. Do not add water to the surface of concrete. Do not float the concrete surface if fogging has commenced.

Secure a smooth riding bridge deck, correcting surface variations exceeding ⅛ inch in 10 feet by use of an approved profiling device, or other method approved by the Engineer.

Straightedge decks that are to receive an overlay, leaving them with an acceptable float or machine pan finish.

For decks not receiving an overlay, and without the bid item Bridge Deck Grooving, finish the deck with the rough burlap drag.

For decks not receiving an overlay, and with the bid item Bridge Deck Grooving, see **subsection 710.3f.** for grooving requirements.

Obtain reasonably true and even concrete surfaces, free from stone pockets, excessive depressions or projections on the surface. Strike off with a straightedge and float the concrete in bridge seats and walls flush with the finished top surface.

As soon as the forms are removed and the concrete is ready to hone, rub the concrete surfaces that are not in an acceptable condition, or are designated in the Contract Documents to be surface finished to a smooth and uniform texture with a carborundum brick and clean water. Remove the loose material formed on the surface, due to

the rubbing with a carborundum brick as soon as it dries. The finished surface shall be free from all loose material. Do not use a neat cement wash.

Give handrails, handrail posts, the deck side, and the top and end of all curbs, except curbs of structures having the top of curb below the final shoulder elevation of the road, an acceptable troweled or floated finish. This includes the back of the inside rails of side by side structures, or any rails easily viewed by the traveling public.

Remove the forms as early as possible, and perform the float finish while the concrete is still green. Use mortar during the float finish operation to fill in air and water voids and supplement the float finish. Keep surfaces requiring a rubbed finish moist before and during the rubbing. Do not use a mortar coating after the concrete has cured.

Unless otherwise provided in the Contract Documents, all reasonably true and even surfaces, obtained by use of a form lining, which are of a uniform color, free from stone pockets, honeycomb, excessive depressions or projections beyond the surface, are considered as acceptable surfaces, and a rubbed surface finish is not required.

The Engineer may require the use of a dry carborundum brick for straightening moulding lines, removing fins or requiring a rubbed surface finish on all portions of the structure that do not present an acceptable surface even though a form lining is used.

**e. Curing and Protection.**

(1) General. Cover concrete surfaces according to **TABLE 710-1**. Cure all pedestrian walkway surfaces in the same manner as the bridge deck. The determination of the time requirement for curing commences after all the concrete for the placement is in place and finished. During cold weather, the specified time limits may be increased at the discretion of the Engineer, based upon the amount of protection and curing afforded the concrete.

Maintain a damp surface until the saturated burlap is placed. Fully saturate burlap before placing on concrete surface. Cover all concrete surfaces with saturated burlap within 15 minutes after finishing the concrete, do not mar concrete during placement of the saturated burlap. When times of delay are expected to exceed 15 minutes, cover all concrete that has been placed, but not finished, with saturated burlap. Maintain the curing so that moisture is always present at the concrete surface.

Place and weight down the saturated burlap so it will remain in intimate contact with the surface covered.

When an impermeable sheeting material is used, lap each unit 18 inches with the adjacent unit. Place and weight down the impermeable sheeting material so it will remain in intimate contact with the surface covered. When any burlap or impermeable sheeting material becomes perforated or torn, immediately repair it, or discard and replace it with acceptable material.

<b>TABLE 710-1: MINIMUM CURE TIMES AND CURING MEDIUMS</b>		
<b>Type of Work</b>	<b>Minimum Cure Time (days)</b>	<b>Curing Medium and Use</b>
Bridge decks (full-depth decks with multi-layer polymer overlays) Bridge subdecks (decks with overlays)	14 Wet	Saturated burlap covered with white polyethylene sheeting during the 14-day period. See <b>subsection 710.3e.(5)</b> .
Bridge decks (full-depth decks with no overlay) Bridge Overlays (new and existing structures)	14 Wet  Plus  7 Curing Membrane	Saturated burlap covered with white polyethylene sheeting during the 14-day period. See <b>subsection 710.3e.(5)</b> . After the wet cure period, apply 2 coats of Type 2 white liquid membrane forming compound. Place the first coat within 30 minutes of removing the sheeting and saturated burlap. Spray the second coat immediately after and at right angles to the first application. Protect the curing membrane against marring for a minimum of 7 days. The Engineer may limit work during this 7-day period.
Other unformed or exposed surfaces	7 Curing Membrane	Apply 2 coats of Type 2 white liquid membrane forming compound. Place the first coat immediately after completion of the concrete finish just as the surface water disappears. Spray the second coat immediately after and at right angles to the first application. Protect the curing membrane against marring for a minimum of 7 days. The Engineer may limit work during this 7-day period. Should the compound be subjected to continuous damage, the Engineer will require saturated burlap, white polyethylene sheeting or other approved impermeable material to be applied at once for the remainder of the cure time.
Formed sides and ends of bridge wearing surfaces and bridge curbs Other formed surfaces	4 Formed	Formed surfaces will be considered completely cured upon the Engineer's permission to remove the forms, providing the forms have been in place for a minimum of 4 days. If forms are removed before the end of the 4-day cure period, cure the surface with an application of Type 1-D liquid membrane forming compound.

(2) Liquid Membrane Forming Compounds. Use spraying equipment capable of supplying a constant and uniform pressure to provide uniform distribution at the rates required. Agitate the liquid membrane forming compound continuously during application. The surface must be kept wet from the time it is finished until the liquid membrane forming compound is applied. Apply liquid membrane forming compound at a minimum rate per coat of 1 gallon per 200 square feet of concrete surface.

Give marred or otherwise damaged applications an additional coating.

If rain falls on the newly coated concrete before the film has dried sufficiently to resist damage from the rain, or if the film is damaged by any other means, apply a new coat of the membrane to the affected portion equal in curing value to the original application.

(3) Bridge Subdecks and Decks. Provide a work bridge to facilitate application of all curing materials. Maintain the curing so that moisture is always present at the concrete surface.

Maintain the saturated burlap in a fully wet condition using misting hoses, self-propelled, machine-mounted fogging equipment with effective fogging area spanning the deck width, moving continuously across the entire burlap-covered surface, or other approved devices until the concrete has set sufficiently to allow foot traffic. At that time, place soaker hoses on the saturated burlap, and supply running water continuously to maintain continuous saturation of

all burlap material to the entire concrete surface. For bridge decks with superelevation, place a minimum of 1 soaker hose along the high edge of the deck to keep the entire deck wet during the curing period.

If the concrete surface temperature is above 90°F, do not use polyethylene sheeting in direct sunshine during the day for the first 24 hours of the specified curing period (**TABLE 710-1**). White polyethylene sheeting may be used at night to maintain the required damp condition of the burlap. When polyethylene sheeting is used over the saturated burlap at night during the first 24 hours and the concrete surface temperature is above 90°F, place the polyethylene sheeting a maximum of 1 hour before sunset, and remove the polyethylene sheeting within 1 hour after sunrise. After the first 24 hours, the polyethylene sheeting may be left in place continuously for the remainder of the curing period provided the saturated burlap is kept saturated.

Construction loads on the new bridge subdeck, new one-course deck or any concrete overlay are subject to the limitations in **TABLE 710-2**. The use of supplemental cementitious materials will require additional time before specified loading is allowed.

<b>TABLE 710-2: CONCRETE LOAD LIMITATIONS ON BRIDGE DECKS</b>		
<b>Days after concrete is placed</b>	<b>Element</b>	<b>Allowable Loads</b>
1*	Subdeck, one-course deck or concrete overlay	Foot traffic only.
3*	One-course deck or concrete overlay	Work to place reinforcing steel or forms for the bridge rail or barrier.
7*, Δ	Concrete overlays	Legal Loads; Heavy stationary loads with the Engineer's approval.***
10 *, Δ (15)**, Δ	Subdeck, one-course deck or post-tensioned haunched slab bridges	Light truck traffic (gross vehicle weight less than 5 tons).****
14 *, Δ (21)**, Δ	Subdeck, one-course deck or post-tensioned haunched slab bridges	Legal Loads; Heavy stationary loads with the Engineer's approval.***Overlays on new decks.
28	Bridge decks	Overloads, only with the State Bridge Engineer's approval.***

\*Maintain the specified wet cure at all times (**TABLE 710-1**).

\*\* All haunched slab structures.

\*\*\* Submit the load information to the appropriate Engineer. Information that will be required is the weight of the material and the footprint of the load, or the axle (or truck) spacing and the width, the size of each tire (or track length and width) and their weight.

\*\*\*\*An overlay may be placed using pumps or conveyors until legal loads are allowed on the bridge.

Δ Increase time period by 3 days when supplemental cementitious materials are used October 1 thru April 30.

(4) Surfaces Requiring Rubbed Finish. Apply Type 1-D liquid membrane-forming compound immediately after the surface is completed, and while the concrete is still damp.

(5) Cold Weather Curing. If concrete is placed in cold weather, comply with **SECTION 401**.

If concrete is placed and the ambient air temperature is expected to drop below 40°F during the entire specified curing period, prior to beginning concrete placement, provide materials on site to maintain the concrete temperature between 40 and 90°F as measured on the surface of the concrete. Suitable materials consist of straw, additional burlap or other blanketing materials or housing and artificial heat.

Keep the surface of the concrete moist by the use of an approved moisture barrier such as saturated burlap or polyethylene sheeting or both as defined in **TABLE 710-1**. Maintain the moisture barrier in intimate contact with the concrete during the entire specified curing period.

(6) Thermal Shock. After the completion of the required curing period, remove the curing and protection to prevent rapid cooling of the concrete so that the concrete temperature does not fall more than 25°F during the first 24 hours.

(7) If concrete is placed in cofferdams and subsequently flooded with ground water, the specified curing conditions are waived providing the surface of the water does not freeze.

**f. Grinding and Grooving.** Correct surface variations exceeding 1/8 inch in 10 feet by use of an approved profiling device, or other methods approved by the Engineer after the curing period. Perform grinding on hardened concrete after the specified curing membrane period (**TABLE 710-1**) to achieve a plane surface and grooving of the final wearing surface as shown in the Contract Documents. Apply the corrective measure to the full width of the lane. The corrected areas shall have uniform texture and appearance. The beginning and ending of the corrected areas shall be squared normal to centerline of the paved surface.

If at least 25% of the traveled way of the deck needs ground to correct surface variations, grind the entire deck.

Use a self-propelled grinding machine with diamond blades mounted on a multi-blade arbor. Avoid using equipment that causes excessive ravels, aggregate fractures or spalls. Remove from the project and properly dispose of the material. Do not allow the grinding slurry to flow across lanes being used by traffic, onto shoulder slopes, into streams, lakes, ponds or other bodies of water, or gutters or other drainage facilities. Do not place grinding slurry on foreslopes.

After any required grinding is complete and after the specified curing membrane period (**TABLE 710-1**), give the surface a suitable texture by transverse grooving. Use diamond blades mounted on a self-propelled machine that is designed for texturing pavement. Transverse grooving of the finished surface may be done with equipment that is not self-propelled providing that the Contractor can show proficiency with the equipment. Use equipment that does not cause strain, excessive raveling, aggregate fracture, spalls, disturbance of the transverse or longitudinal joint, or damage to the existing concrete surface. Make the grooving approximately  $\frac{3}{16}$  inch in width at  $\frac{3}{4}$  inch centers and the groove depth approximately  $\frac{1}{8}$  inch. Terminate the transverse bridge deck grooving approximately 2 feet in from the base of the rail, and 1 foot from any deck drains or other appurtenances.

If after corrective measures are made, more than  $\frac{1}{2}$  inch of the deck was ground at any location, the Engineer may require a multi-layer polymer concrete overlay over the whole deck, according to **SECTION 729**, at no additional cost to KDOT.

**g. Removal of Forms and Falsework.** Do not remove forms and falsework without the Engineer's approval. During cold weather, the specified time limits may be increased at the discretion of the Engineer, based upon the amount of protection and curing afforded the concrete.

Do not remove forms and falsework until the minimum amount of time required for strength gain has elapsed regardless if the concrete is fully cured per **TABLE 710-1**.

If forms are removed before expiration of the cure period, maintain the cure as provided in **DIVISION 700**. Remove forms on handrails, ornamental work and other vertical surfaces that require a rubbed finish as soon as the concrete has hardened sufficiently that it shall not be damaged.

Under normal conditions, the Engineer will allow removal of forms and falsework according to **TABLE 710-3**. The determination of the time requirement for the removal of forms commences after all the concrete for the placement is in place and finished. If high early strength concrete is used, the specified time limits may be decreased as determined by the Engineer, and agreed upon before placing the concrete.

TABLE 710-3: MINIMUM STRENGTH GAIN TIME BEFORE REMOVAL OF FORMS & FALSEWORK (DAYS)							
Type of Work	Span Length (feet)						
	Less than 10	10 or less	Greater than 10	10 to 20	20 + to 30	Greater than 20	Greater than 30
Cantilevered Piers - Formwork (supporting the pier beam) supported on column		7 <sup>Δ</sup> [4]*	10 <sup>Δ</sup> [6]*				
Column Bent Piers - Falsework supporting pier beam**	4 <sup>Δ</sup>			7 <sup>Δ</sup> [4]*		10 <sup>Δ</sup> [6]*	
Forms and Falsework under slabs, beams, girders, arches and brackets***	4 <sup>Δ</sup>			7 <sup>Δ</sup> [4] <sup>+</sup>	10 <sup>Δ</sup> [6] <sup>+</sup>		15 <sup>Δ</sup> [10] <sup>+</sup>
RCB and RFB top slabs not re-shored		7 <sup>Δ</sup> [4] <sup>+</sup>		7 <sup>Δ</sup> [4] <sup>+</sup>		10 <sup>Δ</sup> [6] <sup>+</sup>	
Type of Work							Time (Days) <sup>++</sup>
Walls, Wing Walls and vertical sides of RCB and RFB structures							4 <sup>Δ</sup> [3]*
Footing Supported on Piles - minimum cure before erecting forms and reinforcing steel for columns							4 <sup>Δ</sup> [2]*
Spread Footing founded in rock – minimum before erecting forms and reinforcing steel for columns							2 <sup>Δ</sup>
Columns for cantilevered piers - 1. minimum before supporting forms and reinforcing steel for the pier beam on the column. 2. minimum before placing concrete for the pier beam							4 <sup>Δ</sup> [2] <sup>+</sup> 7 <sup>Δ</sup> [4] <sup>+</sup>
Columns for bent piers - 1. minimum before erecting formwork and reinforcing steel for the pier beam 2. minimum before placing concrete for the pier beam							2 <sup>Δ</sup> 4 <sup>Δ</sup> [2]*
Drilled shafts - minimum before erecting forms and reinforcing steel for the columns							2 <sup>Δ</sup>
Floors for RCB and RFB structures on rock or a seal course - minimum before erecting forms and reinforcing steel							2 <sup>Δ</sup>
Floors for RCB and RFB structures on soil or foundation stabilization - minimum before erecting forms and reinforcing steel							4 <sup>Δ</sup> [2]*
Do not remove forms or falsework from post tensioned elements until all applied post tensioning forces are transferred.							NA

\* Contractors may reduce the time required before form removal to the number of days shown in brackets, provided the concrete is shown to have attained a minimum strength of 65% of the specified f'c. To accomplish this, prepare the necessary cylinders, obtain the services of an approved laboratory to break them at the appropriate time and provide a report to the Engineer. Field cure the cylinders alongside and under the same curing conditions, as the concrete they represent.

\*\* Do not set girders or beams on the pier beams until the falsework under the pier beams is removed.

\*\*\* Remove the formwork from subdecks or one-course decks within 6 weeks after the deck has been placed.

<sup>+</sup> Contractors may reduce the time required before form removal to the number of days shown in brackets, provided the concrete is shown to have attained a minimum strength of 75% of the specified f'c. To accomplish this, prepare the necessary cylinders, obtain the services of an approved laboratory to break them at the appropriate time and provide a report to the Engineer. Field cure the cylinders alongside and under the same curing conditions, as the concrete they represent.

<sup>Δ</sup> Increase the time period 3 days when supplemental cementitious materials are used October 1 thru April 30.

<sup>++</sup> See SECTION 204.

Reshoring of RCB and RFB (classified as culverts or bridges) top slab will be permitted if the Contractor uses traveling forms or to reduce the minimum time shown in TABLE 710-2. At the Preconstruction Conference, submit calculations, sealed by a Professional Engineer, to the Engineer that show that the concrete tensile stress is below  $0.23 \sqrt{f'_c}$  (ksi) and the shoring has sufficient capacity.

In determining the time for the removal of forms, give consideration to the location and character of the structure, weather and other conditions influencing the setting of concrete. If forms are removed before expiration of the cure period, maintain the cure as provided in DIVISION 700.

For additional requirements regarding forms and falsework, see **SECTION 708**.

**i. Bridge Number Marking.** When designated in the Contract Documents, place bridge numbers on bridges by the use of plates recessed in the concrete during construction, using plates constructed as shown in the Contract Documents. The date placed on the plates is the year in which the structure is completed.

#### **710.4 MEASUREMENT AND PAYMENT**

The Engineer will measure the various grades of concrete placed in the structure by the cubic yard. No deductions are made for reinforcing steel and pile heads extending into the concrete. When shown as a bid item in the contract, the Engineer will measure for payment bridge deck grooving by the square yard.

Payment for the various grades of "Concrete" and "Bridge Deck Grooving" at the contract unit prices is full compensation for the specified work.

01-30-18 BSGS/R (JPJ/MLL)  
May-18 Letting

**KANSAS DEPARTMENT OF TRANSPORTATION  
 SPECIAL PROVISION TO THE  
 STANDARD SPECIFICATIONS, EDITION 2015**

Delete SECTION 902 and replace with the following:

**SECTION 902  
 TEMPORARY EROSION AND SEDIMENT CONTROL**

**902.1 DESCRIPTION**

Install, maintain and remove temporary erosion and pollution control devices as required during the construction of the project.

**BID ITEMS**

Temporary Berm (Set Price)  
 Temporary Slope Drain  
 Silt Fence  
 Biodegradable Log (\*\*\*)  
 Synthetic Sediment Barrier  
 Filter Sock (\*\*\*)  
 Temporary Ditch Check (Rock)  
 Temporary Inlet Sediment Barrier  
 Temporary Sediment Basin  
 Temporary Stream Crossing  
 Sediment Removal (Set Price)  
 Temporary Fertilizer (\*\*)  
 Temporary Seed (\*\*)  
 Soil Erosion Mix  
 Erosion Control (\*)(\*\*)  
 Mulching  
 Water (Erosion Control) (Set Price)  
 Geotextile (Erosion Control)

**UNITS**

Linear Foot  
 Linear Foot  
 Linear Foot  
 Linear Foot  
 Linear Foot  
 Linear Foot  
 Cubic Yard  
 Each  
 Cubic Yard  
 Each  
 Each  
 Cubic Yard  
 Pound  
 Pound  
 Pound  
 Square Yard  
 Ton  
 M Gallon  
 Square Yard

\* Class  
 \*\* Type  
 \*\*\* Size

**902.2 MATERIALS**

Provide erosion control devices, sediment barriers, fertilizers, seeds, soil erosion mix, erosion control materials and mulch that comply with **DIVISION 2100**.

Provide aggregate that complies with aggregate ditch lining,  $D_{50} = 6$  inches, **DIVISION 1100**. Existing aggregate from the project may be used under this specification, provided all applicable physical requirements are met.

Provide water for erosion control that complies with **DIVISION 2400**.

Provide geotextile (erosion control) that complies with **DIVISION 1700** for separation geotextile.

Provide aggregate filler that complies with Filter Course Type I, **DIVISION 1114**. The Engineer will accept this material on the basis of visual inspection at the point of usage.

Provide metal pipe, plastic pipe or flexible rubber pipe for temporary slope drains. The Engineer will accept the material for temporary slope drain based on the condition of the pipe and visual inspection of the installed drain.

**902.3 CONSTRUCTION REQUIREMENTS**

**a. General.** If the contract does not include temporary erosion and sediment control bid items, and such work is required, items will be added as provided for in **SECTION 104**.

Use [KDOT's Temporary Erosion Control Manual](#) and standard plan sheets or approved alternate reference documents as a guide for the design, installation and maintenance of temporary erosion and sediment control best management practices (BMPs.).

Alternate BMP references include:

- EPA – Stormwater Menu of BMP:  
(<http://water.epa.gov/polwaste/npdes/swbmp/Construction-Site-Stormwater-Run-Off-Control.cfm> )
- Mn/DOT – Erosion and Sediment Control Pocketbook Guide:  
(<http://www.dot.state.mn.us/environment/erosion/pdf/2006mndotecfieldhandbook.pdf>)
- NDOR – Construction Stormwater Pocket Guide:  
(<http://www.transportation.nebraska.gov/environment/guides/Const-Strmwtr-Pocket%20Guide.pdf>)
- Additional reference material available on KDOT's internet website:  
(<http://www.ksdot.org/bureaus/burconsmain/Connections/swppp.asp>).

**b. Temporary Berms.** Use temporary berms to divert storm runoff to stabilized slopes or temporary slope drains. Construct temporary berms as shown in the Contract Documents. Compact the berms until no further consolidation is observed, using a dozer track, grader wheel or other equipment.

**c. Temporary Slope Drains.** Use temporary slope drains to carry storm runoff down fill slopes and cut backslopes. Construct the temporary slope drains as shown in the Contract Documents.

**d. Silt Fence.** Install silt fence for slope barriers or ditch checks as shown in the SWPPP. When conditions warrant, supplement the temporary silt fence with a support fence. Reduce the post spacing and drive the posts further in the ground in low and soft, swampy areas. Remove and dispose of sediment deposits when the deposit approaches  $\frac{1}{3}$  the height of the silt fence.

Dispose of sediment on the project at locations approved by the Engineer. When necessary, stabilize the material as directed by the Engineer.

**e. Biodegradable Logs.** Install biodegradable logs for slope barriers or ditch checks as shown in the SWPPP. Remove and dispose of sediment deposits when the deposit approaches  $\frac{1}{2}$  the height of the biodegradable log.

Do not use straw logs for ditch checks or inlet sediment barriers.

Dispose of sediment on the project at locations approved by the Engineer. When necessary, stabilize the material as directed by the Engineer.

**f. Synthetic Sediment Barriers.** Install synthetic sediment barriers for slope barriers or ditch checks as shown in the SWPPP. Remove and dispose of sediment deposits when the deposit approaches  $\frac{1}{2}$  the height of the barrier.

Dispose of sediment on the project at locations approved by the Engineer. When necessary, stabilize the material as directed by the Engineer.

**g. Filter Sock.** Install filter socks with approved filler as shown in the SWPPP. Use coarse aggregate filler for protection of curb and gutter inlets.

**h. Temporary Ditch Check (Rock).** Use rock and aggregate filler to construct temporary rock ditch checks as shown in the SWPPP or the Contract Documents. When deposits reach approximately  $\frac{1}{2}$  the height of the temporary rock ditch check, remove and dispose of the accumulated sediment. Aggregate filler may be part of an aggregate ditch lining.

Dispose of sediment on the project at locations approved by the Engineer. When necessary, stabilize the material as directed by the Engineer.

**i. Temporary Inlet Sediment Barrier.** Use any of the materials listed in the Contract Documents or the SWPPP to construct temporary inlet sediment barriers. Prefabricated protection devices or alternative systems may be used with the Engineer's approval. Provide the Engineer with a complete description, literature, test reports, etc. on the proposed system. Submit this information with the SWPPP documents for approval under **subsection 901.3.c.**

When temporary silt fence is used, reduce post spacing and drive the posts further into the ground in low and soft, swampy areas. Remove and dispose of the sediment when deposits reach approximately  $\frac{1}{3}$  the height of the silt fence.

When synthetic sediment barriers are used, remove and dispose of the sediment when deposits reach approximately  $\frac{1}{2}$  the height of the barrier.

Dispose of sediment on the project at locations approved by the Engineer. When necessary, stabilize the material as directed by the Engineer.

**j. Temporary Sediment Basins.** Before constructing a temporary sediment basin, clear the area of all vegetation. Construct the temporary sediment basin with a wide cross-section and a minimum grade, as shown in the Contract Documents. Dispose of excess excavated material.

Remove and dispose of the accumulated sediment when deposits reach approximately 20% of the basin capacity.

Dispose of sediment on the project at locations approved by the Engineer. When necessary, stabilize the material as directed by the Engineer.

**k. Temporary Stream Crossing.**

(1) General. When the Contractor's operations require a temporary stream crossing, and one is not shown in the Contract Documents, the Contractor may install the crossing at no cost to KDOT. Comply with all applicable rules and regulations, obtain all required permits and provide copies of all permits to the Field Engineer. An unanticipated stream crossing may require a permit from the Corps of Engineers if work is performed within Waters of the U.S. and/or a stream obstruction permit from the Kansas Department of Agriculture if the crossing is in a designated stream.

Before beginning work in the streambed, record existing stream channel elevations.

Construct temporary stream crossings as shown in the Contract Documents or the SWPPP.

Place 1 pipe buried 6 inches into the stream bottom, in the lowest point of the channel to allow the passage of aquatic organisms, with additional pipes placed along the remainder of the stream channel bottom such that ordinary high water (OHW) flows designated in the Contract Documents shall flow through the pipes without overtopping the crossing. If the OHW is not designated in the Contract Documents, the Engineer will determine the OHW. The OHW means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

Submit to the Engineer for review and approval, the design flow calculations to determine the number and diameter of pipes required. A minimum 12 inch diameter pipe is required.

Place pipes parallel to flow.

Cover pipes with a minimum of 12 inches of clean aggregate fill.

Dispose of sediment on the project at locations approved by the Engineer. When necessary, stabilize the material as directed by the Engineer.

(2) Maintenance. At a minimum, perform weekly inspections to verify that drift and debris are not blocking the flow of water through the pipes. Perform additional inspections, as needed. Remove drift and debris when blockage occurs. Repair eroded areas, if necessary, to prevent washout and allow passage of flows.

(3) Removal. Remove the temporary crossing and all materials as soon as no longer needed. Restore the disturbed bed and bank area of the stream channel to its pre-existing elevations.

**l. Temporary Fertilizer, Seed and Mulch.** Repair any rills, gullies or other erosion damage prior to seeding. Prepare the seedbed, fertilize, seed and mulch according to **DIVISION 900**. Apply the temporary fertilizer, seed and mulch at the rates shown in the Contract Documents. Apply water to seeded and mulched areas when approved by the Stormwater Compliance Engineer or Local Public Authority to promote the establishment of vegetation in critical areas.

**m. Soil Erosion Mix.** Prepare the seedbed, fertilize and seed according to **DIVISION 900**. Lightly hand rake broadcasted seed before placement of the erosion control.

Only use the soil erosion mix under Erosion Control (Class 1) or Erosion Control (Class 2).

There are no seasonal placement limitations for the soil erosion mix.

**o. Erosion Control.** After seeding and fertilizing according to **DIVISION 900**, install erosion control according to the manufacturer's requirements for edge and junction overlaps, staple size and staple pattern. Installation areas shall be free of erosion rills, rocks, clods or other debris that may cause "tenting" or otherwise inhibit uniform contact.

When shown in the plans, install erosion control materials within the time allowed for temporary stabilization under **subsection 901.3b**.

Use Erosion Control materials for the stabilization of all steep slopes (2 ½:1 or steeper) where construction activities have permanently or temporarily ceased and will not resume for a period exceeding 7 calendar days

(1) Areas with Erosion Control (Class 1). Place the Erosion Control (Class 1) on slopes according to the SWPPP. Do not mulch over the Erosion Control (Class 1).

(2) Areas with Erosion Control (Class 2). Place the Erosion Control (Class 2) in channels, ditches or areas of concentrated flow according to the SWPPP.

Do not cover erosion control materials with soil or mulch unless recommended by the manufacturer and approved by the Engineer.

Apply water to completed erosion control installations when approved by the Stormwater Compliance Engineer or Local Public Authority to promote the establishment of vegetation in critical areas.

**p. Geotextile (Erosion Control).** Install geotextile (erosion control) as a temporary measure to protect steep slopes and other areas where timely installation of the permanent (aggregate or concrete) slope protection is impractical. The installation area should be free of rills, rocks, clods or other debris. Secure geotextile to the ground with staples or other similarly effective methods to achieve uniform contact with minimal "tenting."

Remove geotextile prior to placement of the permanent slope protection.

Install geotextile (erosion control) as a temporary measure to protect temporary slopes, soil stockpiles and other areas where mulching or other means of stabilization is impractical. Preparation of the slopes and the method of securing the fabric shall be as approved by the Engineer.

**q. Maintenance and Removal of Temporary Erosion and Pollution Control Devices.** Maintain the effectiveness of the temporary erosion and pollution control devices as long as required to contain sediment runoff. Monitor temporary erosion and pollution control devices daily.

Remove the temporary devices according to the SWPPP or when directed by the Engineer. After removing the temporary erosion and pollution control devices, remove and dispose of the silt accumulation. Grade, fertilize, seed and mulch any bare areas.

When temporary erosion and pollution control devices are installed according to the Contract Documents, SWPPP, or as approved by the Engineer and such devices are no longer effective because of deterioration or functional incapacity, payment will be made for replacement of these devices, as directed by the Engineer. No payment will be made for replacing temporary erosion control devices that become ineffective because of improper installation, lack of maintenance or the Contractor's failure to pursue timely installation of permanent erosion control devices according to the Contract Documents.

#### **902.4 MEASUREMENT AND PAYMENT**

The Engineer will measure temporary berms, temporary slope drains, silt fence, biodegradable logs, synthetic sediment barriers, and filter sock by the linear foot. The Engineer will measure the top of the device from point to point or each bend/turn in the device, add them together from beginning to end to come up with the total linear feet per device. The length installed up side slopes beyond a point level from the top of the device in the ditch bottom will not be measured for payment.

The Engineer will measure temporary rock ditch checks by the cubic yard.

The Engineer will measure each temporary inlet sediment barrier.

The Engineer will measure each temporary stream crossing when shown as a bid item in the contract.

The Engineer will measure temporary sediment basins by the cubic yard excavated to construct the basin.

The Engineer will measure sediment removal by the cubic yard of sediment removed. If the quantity of sediment removal is approximately 50 cubic yards or greater in one location, the Engineer may pay for sediment removal by force account (**SECTION 109**) rather than paying the contract set price for the bid item "Sediment Removal". Whether paid as a set price or by force account, the Engineer will not pay for a quantity or cost that is incurred because of the Contractor's failure to install seed timely or failure to remove sediment timely as **SECTION 901** requires.

The Engineer will measure temporary fertilizer, temporary seed and soil erosion mix by the pound.  
 The Engineer will measure erosion control by the square yard.  
 The Engineer will measure mulching by the ton.

The Engineer will measure water used for establishment of vegetation by the M Gallon using calibrated tanks or meters.

The Engineer will measure geotextile (erosion control) by the square yard.

Payment for the various items of temporary erosion and pollution control is full compensation for the specified work. Contract unit prices will govern regardless of overruns or underruns of the estimated quantity unless specifically stated otherwise.

Payment for "Sediment Removal (Set Price)" at the contract set unit prices is full compensation for the specified work.

The Engineer will not measure for separate payment any erosion control devices or seeding installed in Contractor-Furnished borrows and waste locations or plant site locations outside the project limits.

**SECTION 904  
 SEEDING**

**Page 900-13, delete subsection 904.3a and replace with the following:**

**a. Seeding Seasons.**

(1) Projects less than 1 acre (bid item "Seeding" per lump sum). Seed the area anytime of the year with the seed specified in the Contract Documents.

(2) Projects 1 acre or greater (bid item "Seed (\*)" or "(Hydro)(\*)" per pound). Determine the seeding season using **TABLE 904-1**.

<b>TABLE 904-1: GRASS &amp; WILDFLOWER SEEDING SEASONS</b>	
<b>Type</b>	<b>Season</b>
Cool Season Grasses	February 15 thru April 20 August 15 thru September 30
Warm Season Grasses and Wildflowers	November 15 thru June 1

If cool season grasses are mixed with warm season grasses, seed the area during the seeding season for warm season grasses.

Seed the project during the proper seeding season to protect the finished grading. This may require seeding different parts of the project at different times or seasons. Complete permanent seeding during the first season after the grading work is finished. Complete the area once the seeding operations begin in an area.

The Environmental Scientist or Stormwater Compliance Engineer may extend the seeding season a few days in special situations depending on area and weather conditions.

**Page 900-14, delete subsection 904.3e and replace with the following:**

**e. Seeding/Lump Sum.** This item is only used on projects with less than 1 acre of seeding.

Prepare the seedbed, fertilize, seed and mulch all disturbed or cultivated areas within the right-of-way and construction easements according to **DIVISION 900**. This item includes all seeding and mulching necessary to meet stabilization requirements in **SECTION 901**, and includes both temporary and final surfaces. Multiple mobilizations may be required depending on how the Contractor pursues the work.

**KANSAS DEPARTMENT OF TRANSPORTATION  
SPECIAL PROVISION TO THE  
STANDARD SPECIFICATIONS, 2015 EDITION**

Delete SECTION 1102, and replace with the following:

**SECTION 1102**

**AGGREGATES FOR CONCRETE NOT PLACED ON GRADE**

**1102.1 DESCRIPTION**

This specification is for coarse aggregates, intermediate aggregates, fine aggregates, mixed aggregates (coarse, intermediate and fine material) and miscellaneous aggregates for use in construction of concrete not placed on grade.

For Intermediate Aggregates and Mixed Aggregates, consider any aggregate with 30% or more retained on the No. 8 sieve to be Coarse Aggregate.

**1102.2 REQUIREMENTS**

**a. Quality of Individual Aggregates.**

(1) Provide Aggregates for Concrete that comply with **TABLE 1102-1**. Crushed Aggregates with less than 20% material retained on the 3/8” sieve must be produced from a source complying with these requirements prior to crushing. Fine Aggregates for Concrete have additional Quality Requirements stated in **subsection 1102.2e.(2)**.

<b>TABLE 1102-1: QUALITY REQUIREMENTS FOR CONCRETE AGGREGATES</b>				
<b>Concrete Classification</b>	<b>Soundness (min.)</b>	<b>Wear (max.)</b>	<b>Absorption (max.)</b>	<b>Acid Insoluble<sup>5</sup> (min.)</b>
Grade xx (AE)(SW) <sup>1</sup>	0.90	40	-	-
Grade xx (AE)(SA) <sup>2</sup>	0.90	40	2.0	-
Grade xx (AE)(AI) <sup>3</sup>	0.90	40	-	85
Grade xx (AE)(PB) <sup>4</sup>	0.90	40	3.0	-
Bridge Overlays	0.95	40	-	85
All Other Concrete	0.90	50	-	-

<sup>1</sup>Grade xx (AE)(SW) - Structural concrete with select coarse aggregate for wear.

<sup>2</sup>Grade xx (AE)(SA) - Structural concrete with select coarse aggregate for wear and absorption.

<sup>3</sup>Grade xx (AE)(AI) - Structural concrete with select coarse aggregate for wear and acid insolubility.

<sup>4</sup>Grade xx (AE)(PB) - Structural concrete with select aggregate for use in prestressed concrete beams.

<sup>5</sup>Acid Insoluble requirement does not apply to calcite cemented sandstone.

- Soundness (KTMR-21) requirements do not apply to aggregates having less than 10% material retained on the No. 4 sieve.
- Wear (AASHTO T 96) requirements do not apply to aggregates having less than 10% retained on the No. 8 sieve.
- Absorption KT-6 Procedure I for material retained on the No. 4 sieve. Apply the maximum absorption to the portion retained on the No. 4 sieve.

(2) To prevent Alkali Silica Reactions (ASR) all predominately siliceous aggregate must comply with the Wetting & Drying Test requirements or be used with a Coarse Aggregate Sweetener per **TABLE 1102-2**, or will require Supplemental Cementitious Materials (SCM). If using SCM’s meet the requirements of **subsection 401.3j**.

Wetting & Drying Test of Siliceous Aggregate for Concrete (KTMR-23)

Concrete Modulus of Rupture:

- At 60 days, minimum ..... 550 psi
- At 365 days, minimum ..... 550 psi

Expansion:

- At 180 days, maximum..... 0.050%
- At 365 days, maximum..... 0.070%

Aggregates produced from the following general areas are exempt from the Wetting and Drying Test:

- Blue River Drainage Area.
- The Arkansas River from Sterling, west to the Colorado state line.
- The Neosho River from Emporia to the Oklahoma state line.

(3) Coarse Aggregate Sweetener. Types and proportions of aggregate sweeteners to be used with Mixed Aggregates are listed in **TABLE 1102-2**.

<b>TABLE 1102-2: COARSE AGGREGATE SWEETENER</b>	
<b>Type of Coarse Aggregate Sweetener</b>	<b>Proportion Required by Percent Weight</b>
Crushed Sandstone*	40 (minimum)
Crushed Limestone or Dolomite*	40 (minimum)
Siliceous Aggregates meeting <b>subsection 1102.2a.(2)</b>	40 (minimum)
Siliceous Aggregates not meeting <b>subsection 1102.2a.(2)</b> **	30 (maximum)

\*Waive the minimum portion of Coarse Aggregate Sweetener for all intermediate and fine aggregates that comply with the wetting and drying requirements for Siliceous Aggregates.

\*\*To be used only with intermediate and fine aggregates that comply with the wetting and drying requirements of Siliceous Aggregates. If none of the aggregates comply with the wetting and drying requirements of Siliceous Aggregates, or Coarse Aggregate Sweeteners do not comply with **TABLE 1102-2**, then the mix must contain Supplemental Cementitious Material(s); and meet the requirements of **subsection 401.3j**.

(4) Deleterious Material. Maximum allowed deleterious substances by weight are:

- Clay lumps and friable particles (KT-7) ..... 1.0%
- Coal (AASHTO T 113)..... 0.5%
- Shale or Shale-like material (KT-8)..... 0.5%
- Sticks (wet) (KT-35)..... 0.1%
- Total allowable deleterious ..... 1.5%

**b. Mixed Aggregates.**

(1) Composition. Provide coarse, intermediate, and fine aggregates in a combination necessary to meet **subsection 1102.2b.(2)**. Use a proven optimization method such as ACI 302.1 or other method approved by the Engineer. Aggregates may be from a single source or combination of sources.

(2) Product Control.

(a) Gradations such as those shown in **TABLE 1102-3** have proven satisfactory in reducing water demand while providing good workability. Adjust mixture proportions whenever individual aggregate grading varies during the course of the work. Use the gradations shown in **TABLE 1102-3**, or other gradation approved by the Engineer.

Optimization is not required for Commercial Grade Concrete. The Engineer may waive the optimization requirements if the concrete meets all the requirements of **DIVISION 400**.

Follow these guidelines:

1. Do not permit the percent retained on two adjacent sieve sizes to fall below 4%;
2. Do not allow the percent retained on three adjacent sieve sizes to fall below 8%; and
3. When the percent retained on each of two adjacent sieve sizes is less than 8%, the total percent retained on either of these sieves and the adjacent outside sieve should be at least 13%. (for example, if both the No. 4 and No. 8 sieves have 6% retained on each, then:
  - 1) the total retained on the 3/8 in. and No. 4 sieves should be at least 13%, and
  - 2) the total retained on the No. 8 and No. 16 sieves should be at least 13%.)

TABLE 1102-3: ALLOWABLE GRADING FOR MIXED AGGREGATES FOR CONCRETE													
Type	Usage	Percent Retained - Square Mesh Sieves											
		1 ½"	1"	¾"	½"	⅜"	No. 4	No. 8	No. 16	No. 30	No. 50	No. 100	No. 200
MA-3	Optimized All Concrete		0	2-12	Note <sup>1</sup>	Note <sup>1</sup>	Note <sup>1</sup>	Note <sup>1</sup>	Note <sup>2</sup>	Note <sup>2</sup>	Note <sup>2</sup>	95-100 <sup>3</sup>	98-100 <sup>4</sup>
MA-4	Optimized All Concrete	0	2-12	Note <sup>1</sup>	Note <sup>1</sup>	Note <sup>1</sup>	Note <sup>1</sup>	Note <sup>1</sup>	Note <sup>2</sup>	Note <sup>2</sup>	Note <sup>2</sup>	95-100 <sup>3</sup>	98-100 <sup>4</sup>
MA-5	Optimized All Concrete		0	2-12	8 min	22-34		55-65		75 min		95-100	98-100
MA-6	Optimized for Bridge Overlays		0	0	2-12	Note <sup>1</sup>	Note <sup>1</sup>	Note <sup>1</sup>	Note <sup>2</sup>	Note <sup>2</sup>	Note <sup>2</sup>	95-100 <sup>3</sup>	98-100 <sup>4</sup>
MA-7	Contractor Design KDOT Approved <sup>5</sup>	±2	±2	±6	±6	±6	±5	±5	±4	±4	±4	95-100	98-100

<sup>1</sup>Retain a maximum of 22% (24% for MA-6) and a minimum of 6% of the material on each individual sieve.

<sup>2</sup>Retain a maximum of 15% and a minimum of 6% of the material on each individual sieve.

<sup>3</sup>Retain a maximum of 7% on the No. 100 sieve.

<sup>4</sup>Retain a maximum of 2% on the No. 200 sieve.

<sup>5</sup>Tolerances from approved mix design gradation.

- (b) Optimization Requirements for all Gradations, except MA-7.
  - Actual Workability must be within ± 5 of Target Workability.

Where:     W<sub>A</sub> = Actual Workability  
               W<sub>T</sub> = Target Workability  
               CF = Coarseness Factor

1. Determine the Grading according to KT-2
2. Calculate the Coarseness Factor (CF) to the nearest whole number.

$$CF = \frac{+3/8'' \text{ Material \% Retained}}{+ \# 8 \text{ Material \% Retained}} \times 100$$

3. Calculate the Actual Workability (W<sub>A</sub>) to the nearest whole number as the percent material passing the #8 sieve.

$$W_A = 100 - \% \text{ retained on \#8 sieve}$$

4. Calculate the Target Workability (W<sub>T</sub>) to the nearest whole number where

For 517 lbs cement per cubic yard of concrete

$$W_T = 46.14 - (CF/6)$$

For each additional 1 lb of cement per cubic yard, subtract 2.5/94 from the Target Workability.

Maintain an Actual Workability within ± 5 of the Target Workability for the combined aggregate.

(c) Deleterious Substances. **Subsection 1102.2a.(4)**, as applicable.

(d) Uniformity of Supply. Designate or determine the fineness modulus (grading factor) for each aggregate according to the procedure listed Part V, Section 5.10.5-Fineness Modulus of Aggregates (Gradation Factor) before delivery, or from the first 10 samples tested and accepted. Provide aggregate that is within ±0.20 of the average fineness modulus.

Provide a single point grading for the combined aggregates along with a plus/minus tolerance for each sieve. Use plus/minus tolerances to perform quality control checks and by the Engineer to perform aggregate grading verification testing. The tests may be performed on the combined materials or on individual aggregates, and then theoretically combined to determine compliance.

- (3) Handling of All Aggregates.

- (a) Segregation. Before acceptance testing, remix all aggregate segregated by transit or stockpiling.
- (b) Stockpiling.
  - Maintain separation between aggregates from different sources, with different gradings or with a significantly different specific gravity.
  - Transport aggregate in a manner that promotes uniform grading.
  - Do not use aggregates that have become mixed with earth or foreign material.
  - Stockpile or bin all washed aggregate produced or handled by hydraulic methods for 12 hours (minimum) before batching. Rail shipment exceeding 12 hours is acceptable for binning provided the car bodies permit free drainage.
  - Provide additional stockpiling or binning in cases of high or non-uniform moisture.
  - Stockpile accepted aggregates in layers 3 to 5 feet thick. Berm each layer so that aggregates do not "cone" down into lower layers.

**c. Coarse Aggregates for Concrete.**

(1) Composition. Provide coarse aggregate that is crushed or uncrushed gravel or crushed stone meeting the quality requirements of **subsection 1102.2a**. Consider limestone, calcite cemented sandstone, rhyolite, quartzite, basalt and granite as crushed stone.

Mixtures utilizing siliceous aggregate not meeting **subsection 1102.2a(2)** may require supplemental cementitious materials to prevent Alkali Silica Reactions. Provide the results of mortar expansion tests of ASTM C 1567 using the project’s mix design concrete materials at their designated percentages. Provide a mix with a maximum expansion of 0.10% at 16 days after casting. Provide the results to the Engineer at least 15 days before placement of concrete on the project.

(2) Product Control. Use gradations such as those in **TABLE 1102-4** which have been shown to work in Optimized Mixed Aggregates, or some other gradation approved by the Engineer that will provide a combined aggregate gradation meeting **subsection 1102.2b**.

(3) Deleterious Substances. **Subsection 1102.2a(4)**, as applicable.

<b>TABLE 1102-4: ALLOWABLE GRADING FOR COARSE AGGREGATES</b>									
<b>Type</b>	<b>Composition</b>	<b>Percent Retained - Square Mesh Sieves</b>							
		<b>1½"</b>	<b>1"</b>	<b>¾"</b>	<b>½"</b>	<b>⅜"</b>	<b>No. 4</b>	<b>No. 8</b>	<b>No. 200</b>
SCA-1	Siliceous Gravel or Crushed Stone	0	0-10	14-35	-	50-75	-	95-100	98-100
SCA-2	Siliceous Gravel or Crushed Stone			0	0-35	30-70	75-100	95-100	98-100
SCA-4	Siliceous Gravel or Crushed Stone		0	0-20				95-100	98-100

**d. Intermediate Aggregate for Concrete.**

(1) Composition. Provide intermediate aggregate for mixed aggregates (IMA) that is crushed stone, natural occurring sand, or manufactured sand meeting the quality requirements of **subsection 1102.2a**.

(2) Product Control. Provide IMA grading when necessary to provide a combined aggregate gradation meeting **subsection 1102.2b**.

(3) Deleterious Substances. **Subsection 1102.2a(4)**, as applicable.

(4) Organic Impurities (AASHTO T 21). The color of the supernatant liquid is equal to or lighter than the reference standard solution.

**e. Fine Aggregates for Concrete.**

(1) Composition.

(a) Type FA-A. Provide either singly or in combination natural occurring sand resulting from the disintegration of siliceous or calcareous rock, or manufactured sand produced by crushing predominately siliceous materials meeting the quality requirements of **subsection 1102.2a**, and **1102.2e(2)**.

(b) Type FA-C. Provide crushed siliceous aggregate, steel slag, or chat that is free of dirt, clay, and foreign or organic material.

(2) Additional Quality Requirements for FA-A.

(a) Mortar strength and Organic Impurities. If the DME determines it is necessary, because of unknown characteristics of new sources or changes in existing sources, provide fine aggregates that comply with the following:

- Mortar Strength (KTMR-26). Compressive strength when combined with Type III (high early strength) cement:
    - At age 24 hours, minimum ..... 100%\*
    - At age 72 hours, minimum ..... 100%\*
- \*Compared to strengths of specimens of the same proportions, consistency, cement and standard 20-30 Ottawa sand.
- Organic Impurities (AASHTO T 21). The color of the supernatant liquid is equal to or lighter than the reference standard solution.

(b) Provide FA-C for Multi/Single-Layer and Slurry Polymer Concrete Overlay complying with **TABLE 1102-5**. Provide FA-F for High Friction Surface complying with **TABLE 1102-5**.

<b>TABLE 1102-5: QUALITY REQUIREMENTS FOR MULTI/SINGLE-LAYER AND SLURRY POLYMER CONCRETE OVERLAY</b>		
<b>Property</b>	<b>Requirement</b>	<b>Test Method</b>
Soundness, minimum	0.92	KTMR-21
Wear, maximum	30%	AASHTO T 96
Acid Insoluble Residue, minimum	55%	KTMR-28
Uncompacted Voids Fine Aggregate, minimum	45	KT-50
Moisture Content, maximum	0.2%	KT-11

(3) Product Control.

(a) Size Requirements. Provide FA-C for Multi/Single-Layer and Slurry Polymer Concrete Overlays complying with **TABLE 1102-6**. Provide FA-F for High Friction Surface complying with **TABLE 1102-6**. Provide FA-A that comply with **TABLE 1102-6** or some other gradation approved by the Engineer that will provide a combined aggregate gradation meeting **subsection 1102.2.b**.

<b>TABLE 1102-6: GRADING REQUIREMENTS FOR FINE AGGREGATES FOR CONCRETE</b>								
<b>Type</b>	<b>Percent Retained-Square Mesh Sieves</b>							
	<b>3/8"</b>	<b>No. 4</b>	<b>No. 8</b>	<b>No. 16</b>	<b>No. 30</b>	<b>No. 50</b>	<b>No. 100</b>	<b>No. 200</b>
FA-A	0	0-10	0-27	15-55	40-77	70-93	90-100	98-100
FA-C	0	0	25-70	95-100	98-100	98-100	98-100	98-100
FA-F	0	0	0-15	95-100	98-100	98-100	98-100	98-100

(b) Deleterious Substances.

- Maximum allowed deleterious substances by weight are :
  - Coal (AASHTO T113) ..... 0.5%
  - Sticks (wet) (KT-35) ..... 0.1%
  - Sum of all deleterious .....0.5%

**f. Miscellaneous Aggregates for Concrete.**

(1) Aggregates for Mortar Sand, Type FA-M.

(a) Composition. Provide aggregates for mortar sand, Type FA-M that is natural occurring sand.

(b) Quality.

- Mortar strength and Organic Impurities. If the DME determines it is necessary, because of unknown characteristics of new sources or changes in existing sources, provide aggregates for mortar sand, Type FA-M that comply with the following:
  - Mortar Strength (KTMR-26). Compressive strength when combined with Type III (high early strength) cement:
    - At age 24 hours, minimum ..... 100%\*

- At age 72 hours, minimum ..... 100%\*
- \* Compared to strengths of specimens of the same proportions, consistency, cement and standard 20-30 Ottawa sand.
- Organic Impurities (AASHTO T 21). The color of the supernatant liquid is equal to or lighter than the reference standard solution.

(c) Product Control.

- Size Requirements. Provide aggregates for mortar sand, Type FA-M that comply with **TABLE 1102-7**.

TABLE 1102-7: GRADING REQUIREMENTS FOR MORTAR SAND								
Type	Percent Retained - Square Mesh Sieves							Gradation Factor
	No. 4	No. 8	No. 16	No. 30	No. 50	No. 100	No. 200	
FA-M	0	0-2	0-30	20-50	50-75	90-100	98-100	1.70-2.50

- Deleterious Substances. **Subsection 1102.2a.(4)**, as applicable.

(2) Lightweight Aggregate.

(a) Composition. Provide a lightweight aggregate consisting of expanded shale, clay or slate produced from a uniform deposit of raw material.

(b) Quality.

- Soundness, minimum (KTMR-21) ..... 0.90
- Loss on Ignition ..... 5%

(c) Product Control.

- Size Requirements. Use gradations such as those in **TABLES 1102-4** and **1102-6** which have been shown to work in Optimized Mixed Aggregates, or some other gradation approved by the Engineer that will provide a combined aggregate gradation meeting **subsection 1102.2b**.
- Deleterious Substances. **Section 1102.2a.(4)** as applicable.
- Organic Impurities (AASHTO T 21). The color of the supernatant liquid is equal to or lighter than the reference standard solution.
- Unit Weight (dry, loose weight) (max.) ..... 1890 lbs/cu yd

(d) Concrete Making Properties. Drying shrinkage of concrete specimens prepared with lightweight aggregate proportioned as shown in the Contract Documents cannot exceed 0.07%.

(e) Uniformity of Supply. Designate or determine the fineness modulus (grading factor) according to procedure listed in Part V, Section 5.10.5-Fineness Modulus of Aggregates (Gradation Factor) before delivery, or from the first 10 samples tested and accepted. Provide aggregate that is within  $\pm 0.20$  of the average fineness modulus.

(f) Proportioning Materials. Submit mix designs for concrete using lightweight aggregate to Construction and Materials for approval prior to use.

(g) Stockpile accepted aggregates in layers 3 to 5 feet thick. Berm each layer so that aggregates do not "cone" down into lower layers.

**1102.3 TEST METHODS**

Test aggregates according to the applicable provisions of **SECTION 1115**.

**1102.4 PREQUALIFICATION**

Aggregates for concrete must be prequalified according to **subsection 1101.4**.

**1102.5 BASIS OF ACCEPTANCE**

The Engineer will accept aggregates for concrete based on the prequalification required by this specification and **subsection 1101.5**.

**KANSAS DEPARTMENT OF TRANSPORTATION  
SPECIAL PROVISION TO THE  
STANDARD SPECIFICATIONS, EDITION 2015**

Delete SECTIONS 1401 and 1402 and replace with the following:

**SECTION 1401**

**AIR-ENTRAINING ADMIXTURES FOR CONCRETE**

**1401.1 DESCRIPTION**

This specification covers admixtures for use as air-entraining agents to be added to concrete mixtures. An air-entraining agent is defined as an admixture that is used as an ingredient of concrete, added to the batch immediately before or during mixing, for the purpose of entraining air.

**1401.2 REQUIREMENTS**

Provide material that complies with AASHTO M 154 for compressive and flexural strength, and resistance to freezing and thawing (relative durability).

**1401.3 TEST METHODS**

As specified in AASHTO M 154. Tests for bleeding, time of set, and length change are not required.

**1401.4 PREQUALIFICATION**

a. Each air-entraining admixture must be prequalified. Submit a written request to be evaluated for prequalification to the Bureau Chief of Construction and Materials. Provide the following for each brand and type of material to be evaluated:

- (1) Name and address of the manufacturer.
- (2) Brand name of the material.
- (3) Two copies of the most recent test report from AASHTO's National Transportation Product Evaluation Program (NTPEP). Include evidence that the product being submitted is identical to the one reported in the NTPEP related test report. Test results will be evaluated in relation to applicable requirements of AASHTO M 154. Test results can be no more than 60 months out of date when submitted to KDOT.

- (4) An infra-red spectrum of the admixture which was used in the NTPEP laboratory tests.
- (5) A one-liter sample from production of each brand and type of admixture being offered.

b. The manufacturer will be advised of the results of the review of the test results and test reports.

c. The Bureau of Construction and Materials will maintain a list of prequalified air-entraining admixtures. Products that have been prequalified by the above procedures will remain prequalified, as long as the formulation and manufacturing processes remain unchanged, and field experience indicates that the admixture functions appropriately. KDOT reserves the right to remove products from the list of prequalified air-entraining admixtures for concrete that are not active in NTPEP's DataMine as of April 1, 2019. Changes in the formulation, manufacturing process, or failure of the admixture to function appropriately will require a new prequalification.

**1401.5 BASIS OF ACCEPTANCE**

a. Prequalification as set forth under **subsection 1401.4**.

b. Receipt and approval of a Type C certification as specified in **DIVISION 2600**.

**SECTION 1402****CHEMICAL ADMIXTURES FOR CONCRETE****1402.1 DESCRIPTION**

This specification covers chemical admixtures to be added to concrete mixtures during mixing operations for the purposes listed below:

**a. Type A – Water Reducing Admixture.** An admixture that reduces the quantity of mixing water required to produce concrete of a given consistency.

**b. Type B – Set Retarding Admixture.** An admixture that retards the setting of concrete.

**c. Type C - Accelerating Admixture.** An admixture that accelerates the setting of concrete.

**d. Type D – Water Reducing-Set Retarding Admixture.** An admixture that reduces the quantity of mixing water required to produce concrete of a given consistency, and retards the setting of concrete.

**e. Type E - Water Reducing and Accelerating Admixture.** An admixture that reduces the quantity of mixing water required to produce concrete of a given consistency, and accelerates the setting of concrete.

**f. Type F – Water-Reducing, High Range Admixture.** An admixture that reduces the quantity of mixing water required to produce concrete of a given consistency by 12% or greater.

**g. Type G – Water Reducing, High Range, and Retarding Admixture.** An admixture that reduces the quantity of mixing water required to produce concrete of a given consistency by 12% or greater, and retards the setting of concrete.

**h. Type S – Specific Performance Admixture.** An admixture that provides a desired performance characteristic(s) other than reducing water content, or changing the time of setting of concrete, or both, without any adverse effects on the fresh, hardened, or durability properties of concrete.

**i. Type I – Plasticizing Admixture.** An admixture that produces flowing concrete without further addition of water.

**j. Type II – Plasticizing and Set Retarding Admixture.** An admixture that produces flowing concrete without further addition of water, and retards the setting of concrete.

NOTE: Flowing concrete is defined as having a slump equal to or greater than 7 ½ inches.

**1402.2 REQUIREMENTS**

**a.** Provide Type A, B, C, D, E, F, G, and S admixtures that comply with AASHTO M 194.

**b.** Provide Type I and II plasticizing admixtures that comply with ASTM C 1017.

**1402.3 TEST METHODS**

**a.** Test Type A, B, C, D, E, F, G, and S admixtures as specified in AASHTO M 194, with the following exception:

Provisional qualification, as stated in Table 1, Note C, will not be considered until at least 6 months of data has been established.

**b.** Test Type I and II plasticizing admixtures as specified in ASTM C 1017.

**1402.4 PREQUALIFICATION**

a. Each brand and type of admixture covered by this specification must be prequalified. Submit a written request to be evaluated for prequalification to the Engineer of Tests in the Bureau of Construction and Materials. Provide the following for each brand and type of material to be evaluated:

- (1) Name and address of the manufacturer.
- (2) Brand name of the material.
- (3) Type of material as defined in **subsection 1402.1**.
- (4) The chloride content of the admixture and whether or not chloride was added during its manufacture.
- (5) Recommended manner and time of adding the admixture to the concrete batch.
- (6) Laboratory Testing

AASHTO M 194. Two copies of the most recent test report from AASHTO's National Transportation Product Evaluation Program (NTPEP). Include evidence that the product being submitted is identical to the one reported in the NTPEP related test report. Test results will be evaluated in relation to the requirements of AASHTO M 194. Provisional qualification will be considered once the 6-month compressive strength data is available on the NTPEP website. Final (includes 1-year data) test results can be no more than 60 months out of date when submitted.

ASTM C 1017. Two copies of a certified test report prepared by a laboratory regularly inspected by the Cement and Concrete Reference Laboratory (CCRL) of the National Institute of Standards and Technology, showing test results complying with the requirements of ASTM C 1017. Also, include evidence that the laboratory is regularly inspected by CCRL. Test results are to be no more than 36 months out of date when submitted to KDOT.

- (7) An infra-red spectrum of the admixture which was used in the laboratory tests.
- (8) A one-liter sample from production of each brand and type of admixture being offered.

b. The manufacturer will be advised of the results of the review of the test results and test reports.

c. The Bureau of Construction and Materials will maintain a list of prequalified chemical admixtures for concrete. Products that have been prequalified by the above procedures will remain prequalified, as long as the formulation and manufacturing processes remain unchanged, and field experience indicates that the admixture functions appropriately. KDOT reserves the right to remove AASHTO M 194 covered products from the list of prequalified chemical admixtures for concrete that are not active in NTPEP's DataMine as of April 1, 2019. Changes in the formulation, manufacturing process, or failure of the admixture to function appropriately will require a new prequalification.

**1402.5 BASIS OF ACCEPTANCE**

a. Prequalification as set forth under **subsection 1402.4**.

b. Receipt and approval of a Type C certification as specified in **DIVISION 2600**.

02-07-18 C&M (CFN)

Jun-18 Letting

**KANSAS DEPARTMENT OF TRANSPORTATION  
SPECIAL PROVISION TO THE  
STANDARD SPECIFICATIONS, 2015 EDITION**

**SECTION 1404**

**LIQUID MEMBRANE FORMING COMPOUNDS**

**1404.1 DESCRIPTION**

This specification covers liquid membrane forming compounds (also referred to as concrete curing compounds) suitable for spraying on horizontal and vertical concrete surfaces to retard the loss of water during the early hardening period and subsequent curing period.

**1404.2 REQUIREMENTS**

a. Provide liquid membrane forming compound that complies with ASTM C 309 for Type 1-D, clear or translucent with fugitive dye, or Type 2, white pigmented compound.

b. Type 2 white pigmented compound will be further classified into Type 2 (Wax Based) and Type 2 (Other). This is to allow specifying of wax-based compound for certain applications where a bond breaker is desired. Either formulation base may be supplied except when wax based is specified.

c. Do not allow water-emulsion based material to freeze. Material that has been subjected to freezing temperatures will be rejected.

**1404.3 TEST METHODS**

Test materials in accordance with ASTM C 309. Fingerprinting and screening of verification samples by infrared spectroscopy is done according to ASTM E 1252.

Water emulsion-based material is not subject to the long-term settling test by the freeze thaw cycling method.

Wax-based material for Cement Treated Base (CTB) with the following exceptions:

Moisture Loss, kg/sq m (max.).....	0.60
Daylight Reflectance (min.).....	50%

**1404.4 PREQUALIFICATION**

Submit two 1-quart samples of material and a copy of the manufacturer’s test results on samples of the same lot of material to the Engineer of Tests. Include a copy of the Material Safety Data Sheet (MSDS). For Type 2 white pigmented compounds, include a statement regarding whether the formulation is wax based or other, unless it is specifically addressed in the MSDS.

Samples will be tested for compliance with this specification. The manufacturer will be notified of the test results on the samples submitted.

Results of tests from the AASHTO National Transportation Product Evaluation Program (NTPEP) will be accepted in lieu of the sample requested above. Include the most recent NTPEP test report along with the other documentation requested. Include evidence that the product being offered is identical to the one reported in the NTPEP report.

Manufacturers whose products comply with this specification will be placed on a prequalified list. Manufacturers will remain on the list as long as the results of verification samples and performance in the field are satisfactory. Any changes in formulation will require re-submittal for prequalification testing.

Effective March 1, 2020, all liquid membrane forming compounds must be listed with the NTPEP. To be NTPEP listed by March 1, 2020, product testing must have occurred in 2017, 2018, or 2019. Retesting every three years as detailed in the NTPEP Concrete Curing Compounds (CCC) work plan is required to maintain prequalification. Failure to retest and a consequent removal from the NTPEP website will result in the product’s removal from the list of

prequalified products. Follow the instructions on the NTPEP's website ([www.ntpep.org](http://www.ntpep.org)) to participate in the CCC evaluation program.

**1404.5 BASIS OF ACCEPTANCE**

- a. Prequalification as required by **subsection 1404.4** above.
- b. Receipt and approval of a Type C certification as specified in **DIVISION 2600**.

09-25-18 C&M (CFN)  
Feb-19 Letting

**KANSAS DEPARTMENT OF TRANSPORTATION  
SPECIAL PROVISION TO THE  
STANDARD SPECIFICATIONS, 2015 EDITION**

Delete SECTION 2004 and replace with the following:

**SECTION 2004**

**FLY ASH and NATURAL POZZOLANS FOR USE IN CONCRETE**

**2004.1 DESCRIPTION**

This specification covers fly ash and natural pozzolans that may be used as a partial replacement for portland cement and blended hydraulic cement in concrete, when allowed by other parts of the Contract Documents.

**2004.2 REQUIREMENTS**

- a. Fly ash and natural pozzolan sources must be prequalified.
- b. Provide material that complies with the chemical and physical requirements of ASTM C 618, Type F, C or N. The supplementary optional physical requirements apply, except that with the "Effectiveness in Controlling Alkali-Silica Reaction," based on ASTM C618-15, Table 3, the expansion of the test mixture as a percentage of the low-alkali cement control at 14 days may not exceed 120%. Conduct this testing with 15% fly ash and a Type I/II cement with an alkali content between 0.40% and 0.60%.
- c. The quality-monitoring program must comply with the minimum sampling and testing frequencies established in ASTM C 311. This frequency may be altered slightly with the approval of the Bureau Chief of Construction and Materials, provided the monitoring intent of ASTM C 311 is met or exceeded.
- d. There are other requirements that must be met for the fly ash or natural pozzolan and cement mixture in addition to those cited above for qualification of the fly ash or natural pozzolan alone. Additional testing will be required for specific applications. Consult the Contract Documents before proposing the use of fly ash or natural pozzolan in concrete.

**2004.3 TEST METHODS**

Sample and test materials according to ASTM C 311. Field sample according to Part V, KT-29.

**2004.4 PREQUALIFICATION**

**a. Becoming Prequalified.**

- (1) Manufacturers desiring to provide material under this specification are to submit the following to the Engineer of Tests:
  - (a) A copy of the quality control plan for the source. The plan should include information on where and how sampling is performed, frequency, and what standards (ASTM, AASHTO, etc.) are used.
  - (b) A 2-gallon sample representative of material intended for use on KDOT projects.
  - (c) Complete instructions on the use of the material and a Safety Data Sheet (SDS).
  - (d) Certified test results of fly ash or natural pozzolans produced during the 6 months immediately before the prequalification request. Show the high, low and average values or statistical analysis for each month.
  - (e) Written information regarding the sources of coal utilized in the production of fly ash for the preceding 6 months, and that anticipated for the future. For natural pozzolans, provide a statement noting the location of the parent material(s) and the source (ie: pumice, volcanic ash deposits, calcined clay, etc.).

(f) Provide evidence that the quality control laboratory is accredited by a national accrediting body, such as AASHTO Resource, and regularly inspected receiving satisfactory ratings by the Cement and Concrete Reference Laboratory (CCRL).

(g) For natural pozzolans, provide evidence that no detrimental effects of the product will occur when used in typical KDOT mix designs. This documentation shall be a comparison of testing results of either laboratory produced mix or actual production mix with one mix utilizing the natural pozzolan and another mix as a control without the natural pozzolan. All materials utilized should be durable so the comparison of using the natural pozzolan will highlight any detrimental effects that might occur. The coarse aggregates utilized shall be from KDOT PQL 3.4.

Results of the comparison should meet the following requirements:

- ASTM C39, Compressive strength at 7 and 28 days: 90% or better of control
- ASTM C78, Flexural Strength at 7 and 28 days: 95% or better of control
- ASTM C157, Length Change up to 56 days: 95% to 105% of control or less than -0.04% to 0.04% at 56 days.
- ASTM C666, Freeze-Thaw Resistance up to 300 cycles: a durability factor greater than 95.
- ASTM C1202, Rapid Chloride Permeability: 50% or lower of control

(2) The Engineer of Tests will test the submitted sample and review the information submitted by the source, for compliance with the Contract Documents. The Engineer of Tests will notify the source of the results in writing. Suppliers complying with all requirements will be placed on a list of prequalified fly ash and natural pozzolan sources maintained by the Bureau of Construction and Materials.

(3) Prequalification of the source of fly ash will be based on material produced when the power plant is using specific materials, equipment and processes. Prequalification of the source for natural pozzolans will be based on the original location of the parent material, equipment and processes.

(4) Any change in materials for both fly ash and natural pozzolans, materials sources, equipment or processes voids the source prequalification, and a new prequalification will be required.

**b. Maintaining Prequalified Status.** After a source has gained prequalified status, the source will be permitted to furnish materials for use on KDOT projects provided the following conditions are met:

(1) Submit quality monitoring test reports monthly for all monitoring samples.

(2) Use an approved laboratory to conduct quality control tests. The laboratory will be considered approved if it is properly equipped, has the capabilities to perform the tests required by the Contract Documents and is a quality control laboratory accredited by a national accrediting body, such as AASHTO Resource, and regularly inspected receiving satisfactory ratings by the Cement and Concrete Reference Laboratory (CCRL). Continued approval of the control laboratory and the source will depend on satisfactory comparison of its test results with the results obtained by the KDOT Materials and Research Center.

(3) The source has not changed materials, material sources, equipment, or processes since prequalification.

#### 2004.5 BASIS OF ACCEPTANCE

a. Prequalification as specified in **subsection 2004.4.**

b. A proper certification must accompany each shipment of fly ash or natural pozzolan. Provide to the Field Engineer 2 copies of the bill of lading which includes the following certification statement and the signature of a responsible company representative.

#### Certification Statement

**The material herein has been sampled and tested as prescribed by KDOT and complies with the applicable specification requirements for Class \_\_\_ fly ash or natural pozzolan.**

Date \_\_\_\_\_ Signed \_\_\_\_\_

Identify the bills of lading with a project number, and denote the source, the type and the quantity in the shipment. Retain these copies at the project or ready mix plant for the Field Engineer's records.

In the case of more than one project being supplied by a ready mix plant, the plant must provide the Field Engineer with a copy of the bill of lading, or a signed listing of the bills of lading representing the material incorporated in each project.

**Note:** Verification samples will be obtained by KDOT personnel at the project site at the rate of one per year, for each source supplying material to that District's projects. Test results which do not comply with the Contract Documents may be considered sufficient cause to rescind approval to furnish materials on a certification basis.

06-21-2024 C&M (CL, RAB)  
Sep-2024 Letting

**KANSAS DEPARTMENT OF TRANSPORTATION  
SPECIAL PROVISION TO THE  
STANDARD SPECIFICATIONS, 2015 EDITION**

Delete SECTION 2007 and replace with the following:

**SECTION 2007**

**SLAG CEMENT FOR USE IN CONCRETE AND MORTARS**

**2007.1 DESCRIPTION**

This specification covers slag cement for use in concrete and mortars.

**2007.2 REQUIREMENTS**

Provide material that complies with the requirements of ASTM C 989, "Slag Cement for Use in Concrete and Mortars."

**2007.3 TEST METHODS**

As specified in ASTM C 989.

**2007.4 PREQUALIFICATION**

a. Manufacturers desiring to provide material under this specification are to submit the following to the Engineer of Tests:

- (1) A 2-gallon prequalification sample of each product they wish to prequalify.
- (2) Complete instructions on the use of the material and a Safety Data Sheet (SDS).
- (3) Copies of quality control test reports for the 6 months prior to the date of submittal to substantiate a history of satisfactory quality control. Also, provide evidence that the quality control laboratory is accredited by a national accrediting body, such as AASHTO Resource, and regularly inspected receiving satisfactory ratings by the Cement and Concrete Reference Laboratory (CCRL).

b. If the prequalification samples comply with the requirements of **subsection 2007.2**, and the other submittals are satisfactory, the name of the product will be placed on a list of prequalified products maintained by the Bureau of Construction and Materials.

c. Semi-annual results of the producer's quality control testing, as defined above, are required to be forwarded to the Bureau of Construction and Materials to maintain status on the prequalified list. A prequalified plant will retain its prequalified status as long as test results of verification samples obtained by KDOT and quality control test results obtained by the producer indicate that the plant is exercising acceptable quality control.

d. A terminal established by a prequalified plant will be considered prequalified to supply slag cement under this specification.

**2007.5 BASIS OF ACCEPTANCE**

a. Prequalification as required by **subsection 2007.4**.

b. Receipt and approval of a Type C certification as specified in **DIVISION 2600**.

c. Verification samples will be taken by each District, at the rate of one per year, for each slag producer supplying material to that District's projects.

**BNSF RAILWAY COMPANY  
CONTRACTOR AGREEMENT, INSURANCE AND FLAGGING**

**PROJECT NOS: 121005.00, 701039.00 & 281250.04**

**PROJECT SCOPE: SE 29<sup>th</sup> STREET - CULVERT, STORM SEWER AND WATERLINE  
REPLACEMENT**

**LINE SEGMENT 7102, KANSAS DIVISION, TOPEKA SUBDIVISION; MP 53.27**

**CITY OF TOPEKA, SHAWNEE COUNTY, KS.**

**I. PURPOSE OF PROJECT SPECIAL PROVISION**

- A. This Project Special Provision requires the Contractor to execute the attached Agreement with BNSF Railway Company before the Contractor may enter upon any Railroad right-of-way to perform work on the above Project.
- B. This Project Special Provision modifies the insurance requirements of the Kansas Department of Transportation's Standard Specifications for State Road and Bridge Construction (2015 Edition) as required by this agreement.

**II. CONTRACTOR'S AGREEMENT WITH BNSF RAILWAY COMPANY**

- A. The Contractor's Agreement is attached to this Project Special Provision and incorporated in the contract for the above Project.
- B. The Agreement includes without limitation, contract obligations for commercial general liability insurance, railroad protective liability insurance, flagging, and safety requirements.
- C. The Contractor shall not terminate this Agreement without first obtaining the Secretary's permission to terminate this agreement.
- D. BNSF Railway Company may enforce any and all rights given to them in this Agreement.

**III. INSURANCE**

- A. The Contractor shall obtain all insurances required in this Agreement, in the Forms and with the endorsements specified, including without limitation the endorsement that amends the definition of insured contract to remove any exclusion or other limitation for any work being done within 50 feet of railroad property.
- B. For the benefit of the Contractor and the Insurance Companies in the determination of a premium for the RPL to be carried for and on behalf of the BNSF Railway Company, the approximate ratio of the estimated contract cost of construction to be performed on, over or under the insured railroad's property or within fifty (50) feet of the insured railroad's tracks on which railroad trains run, to the total contract cost is 40%.

C. The Contractor shall directly furnish an acceptable certificate of insurance from an authorized representative evidencing the required coverage, endorsements, and amendments. All certificate of insurance and not just Railroad Protective Liability Insurance shall be submitted to BNSF Railway Company's authorized representative indicated under the "INSURANCE" section of this Agreement.

D. For tracking purposes, the Contractor shall notify the City Engineer by an email of the date the Agreement and the Railroad Protective Liability Policy are submitted to BNSF Railway Company.

E. The Contractor shall also provide a copy of the Railroad Protective Liability Policy to the Engineering Division, City of Topeka, 620 SE Madison, 2nd Floor, Topeka, Kansas 66607.

PROJECT NOS: 121005.00, 701039.00 & 281250.04 – SE 29<sup>th</sup> Street - Culvert, Storm Sewer and Waterline Replacement

CITY OF TOPEKA, SHAWNEE COUNTY, KS.

TYPE: CULVERT, STORM SEWER AND WATERLINE REPLACEMENT

**BNSF RAILWAY COMPANY  
FLAGGING  
REQUIREMENTS**

FOR THE BENEFIT OF PROSPECTIVE BIDDERS, the City of Topeka has obtained the requirements of the Burlington Northern and Santa Fe Railway Co. in relation to the protection of its traffic, the conditions under which such protection will be required, the rates of pay, working hours, and other information relating to services necessary to protect railroad traffic during the construction operations.

**1.01 General:**

- **1.01.01** The Contractor must cooperate with **BNSF RAILWAY COMPANY**, hereinafter referred to as "**Railway**" where work is over or under on or adjacent to Railway property and/or right-of-way, hereafter referred to as "Railway Property", during **Project Nos. 121005.00, 701039.00 and 281250.04 -SE 29<sup>th</sup> Street over Bucher Creek (DOT#0059495)** along BNSF in Topeka, Shawnee County.
- **1.01.02** The Contractor must execute and deliver to the Railway duplicate copies of the Exhibit "C-1" Agreement, in the form attached hereto, obligating the Contractor to provide and maintain in full force and effect the insurance called for under Section 3 of said Exhibit "C-1". Questions regarding procurement of the Railroad Protective Liability Insurance should be directed to **Rosa Martinez** at Marsh, USA, 214-303-8519.
- **1.01.03** The Contractor must plan, schedule, and conduct all work activities so as not to interfere with the movement of any trains on Railway Property.
- **1.01.04** The Contractor's right to enter Railway's Property is subject to the absolute right of Railway to cause the Contractor's work on Railway's Property to cease if, in the opinion of Railway, Contractor's activities create a hazard to Railway's Property, employees, and/or operations. Railway will have the right to stop construction work on the Project immediately and without prior notice if any of the following events take place:  
(i) Contractor (or any of its subcontractors) performs the Project work in a manner contrary to the plans and specifications approved by Railway; (ii) Contractor (or any of its subcontractors), in Railway's opinion, prosecutes the Project work in a manner which is hazardous to Railway property, facilities or the safe and expeditious movement of railroad traffic; or (iii) the insurance described in the attached Exhibit C-1 is canceled during the course of the Project. Railway will have the right to stop construction work on the Project after written notice to both CITY OF TOPEKA and Contractor in the event of a material breach of this agreement or terms of the easement agreement. The work stoppage will continue until all necessary actions are taken by Contractor or its subcontractor to rectify the situation to the satisfaction of Railway's Division Engineer or until additional insurance has been delivered to and accepted by Railway. Any such work stoppage under this provision will not give rise to any liability on the part of Railway. Railway's right to stop the work is in addition to any other rights Railway may have including, but not limited to, actions or suits for damages or lost profits. In the event that Railway desires to stop construction work on the Project, Railway agrees to immediately notify the following individual in writing:

City of Topeka  
Engineering Division  
620 SE Madison Street  
Topeka, KS 66607 785.368.3842

- **1.01.05** The Contractor is responsible for determining and complying with all Federal, State and Local Governmental laws and regulations, including, but not limited to environmental laws and regulations (including but not limited to the Resource Conservation and Recovery Act, as amended; the Clean Water Act, the Oil Pollution Act, the Hazardous Materials Transportation Act, CERCLA), and health and safety laws and regulations. The Contractor hereby indemnifies, defends and holds harmless Railway for, from and against all fines or penalties imposed or assessed by Federal, State and Local Governmental Agencies against the Railway which arise out of Contractor's work under this Agreement.
- **1.01.06** The Contractor must notify Citvof Topeka at 785-368-3842 and Railway's Manager Public Projects, email kara.brockamp@bnsf.com, at least thirty (30) calendar days before commencing any work on Railway Property.
- **1.01.07** For any bridge demolition and/or falsework above any tracks or any excavations located within any part of the excavations located within, whichever is greater, twenty-five (25) feet of the nearest track or intersecting a slope from the plane of the top of rail on a 2 horizontal to 1 vertical slope beginning at eleven (11) feet from centerline of the nearest track, both measured perpendicular to center line of track, the Contractor must furnish the Railway five sets of working drawings showing details of construction affecting Railway Property and tracks. The working drawing must include the proposed method of installation and removal of falsework, shoring or cribbing, not included in the contract plans and two sets of structural calculations of any falsework, shoring or cribbing. For all excavation and shoring submittal plans, the current "BNSF-UPRR Guidelines for Temporary Shoring" must be used for determining the design loading conditions to be used in shoring design, and all calculations and submittals must be in accordance with the current "BNSF-UPRR Guidelines for Temporary Shoring". All submittal drawings and calculations must be stamped by a registered professional engineer licensed to practice in the state the project is located. All calculations must take into consideration railway surcharge loading and must be designed to meet American Railway Engineering and Maintenance-of-Way Association (previously known as American Railway Engineering Association) Coopers E-80 live loading standard. All drawings and calculations must be stamped by a registered professional engineer licensed to practice in the state the project is located. The Contractor must not begin work until notified by the Railway that plans have been approved. The Contractor will be required to use lifting devices such as, cranes and/or winches to place or to remove any falsework over Railway's tracks. In no case will the Contractor be relieved of responsibility for results obtained by the implementation of said approved plans.
- **1.01.08** Subject to the movement of Railway's trains, Railway will cooperate with the Contractor such that the work may be handled and performed in an efficient manner. The Contractor will have no claim whatsoever for any type of damages or for extra or additional compensation in the event his work is delayed by the Railway.

## **1.02 Contractor Safety Orientation**

- **1.02.01** No employee of the Contractor, its subcontractors, agents or invitees may enter Railway Property without first having completed Railway's Engineering Contractor Safety Orientation, found on the web site [www.bnsfcontractor.com](http://www.bnsfcontractor.com). The Contractor must ensure that each of its employees, subcontractors, agents or invitees completes Railway's Engineering Contractor Safety Orientation through internet sessions before any work is performed on the Project on Railroad right of way. Additionally, the Contractor must ensure that each and every one of its employees, subcontractors, agents or invitees possesses a card certifying completion of the Railway Contractor Safety Orientation before entering Railway Property. The Contractor is responsible for the cost of the Railway Contractor Safety Orientation. The Contractor must renew the Railway Contractor Safety Orientation annually. Further clarification can be found on the web site or from the Railway's Representative.

## **1.03 Railway Requirements**

- **1.03.01** The Contractor must take protective measures as are necessary to keep railway facilities, including track ballast, free of sand, debris, and other foreign objects and materials resulting from his operations. Any damage to railway facilities resulting from Contractor's operations will be repaired or replaced by Railway and the cost of such repairs or replacement must be paid for by the Agency.
- **1.03.02** The Contractor must notify the Railway's Division Engineer [**DE Name at Phone #**] and provide blasting plans to the Railway for review seven (7) calendar days prior to conducting any blasting operations adjacent to or on Railway's Property.
- **1.03.03** The Contractor must abide by the following temporary clearances during construction:
  - 15'-0" Horizontally from centerline of nearest track
  - 21'-6" Vertically above top of rail
  - 27'-0" Vertically above top of rail for electric wires carrying less than 750 volts
  - 28'-0" Vertically above top of rail for electric wires carrying 750 volts to 15,000 volts
  - 30'-0" Vertically above top of rail for electric wires carrying 15,000 volts to 20,000 volts
  - 34'-0" Vertically above top of rail for electric wires carrying more than 20,000 volts
- **1.03.04** Upon completion of construction, the following clearances shall be maintained:
  - 25' Horizontally from centerline of nearest track
  - 23' 6" Vertically above top of rail
- **1.03.05** Any infringement within State statutory clearances due to the Contractor's operations must be submitted to the Railway and to the **City of Topeka** and must not be undertaken until approved in writing by the Railway, and until the **City of Topeka** has obtained any necessary authorization from the State Regulatory Authority for the infringement. No extra compensation will be allowed in the event the Contractor's work is delayed pending Railway approval, and/or the State Regulatory Authority's approval.
- **1.03.06** In the case of impaired vertical clearance above top of rail, Railway will have the option of installing tell-tales or other protective devices Railway deems necessary for protection of Railway operations. The cost of tell-tales or protective devices will be borne by the Agency.
- **1.03.07** The details of construction affecting the Railway's Property and tracks not included in the contract plans must be submitted to the Railway by the **Contractor** for approval before work is undertaken and this work must not be undertaken until approved by the Railway.
- **1.03.08** At other than public road crossings, the Contractor must not move any equipment or materials across Railway's tracks until permission has been obtained from the Railway. The Contractor must obtain a "Temporary Construction Crossing Agreement" from the Railway prior to moving his equipment or materials across the Railways tracks. The temporary crossing must be gated and locked at all times when not required for use by the Contractor. The temporary crossing for use of the Contractor will be constructed and, at the completion of the project, removed at the expense of the Contractor.
- **1.03.09** Discharge, release or spill on the Railway Property of any hazardous substances, oil, petroleum, constituents, pollutants, contaminants, or any hazardous waste is prohibited, and Contractor must immediately notify the **Railway's Resource Operations Center at 1(800) 832-5452**, of any discharge, release or spills in excess of a reportable quantity. Contractor must not allow Railway Property to become a treatment, storage or transfer facility as those terms are defined in the Resource Conservation and Recovery Act or any state analogue.
- **1.03.10** The Contractor upon completion of the work covered by this contract, must promptly remove from the Railway's Property all of Contractor's tools, equipment, implements and other materials, whether brought upon said property by said Contractor or any Subcontractor, employee or agent of Contractor or of any Subcontractor, and must cause Railway's Property to be left in a condition acceptable to the Railway's representative.

**1.04 Contractor Roadway Worker on Track Safety Program and Safety Action Plan:**

- **1.04.01** Each Contractor that will perform work within 25 feet of the centerline of a track must develop and implement a Roadway Worker Protection/On Track Safety Program and work with Railway Project Representative to develop an on-track safety strategy as described in the guidelines listed in the on-track safety portion of the Safety Orientation. This Program must provide Roadway Worker protection/on track training for all employees of the Contractor, its subcontractors, agents or invitees. This training is reinforced at the job site through job safety briefings. Additionally, each Contractor must develop and implement the Safety Action Plan, as provided for on the web site [www.bnsfcontractor.com](http://www.bnsfcontractor.com), which will be made available to Railway prior to commencement of any work on Railway Property. During the performance of work, the Contractor must audit its work activities. The Contractor must designate an on-site Project Supervisor who will serve as the contact person for the Railway and who will maintain a copy of the Safety Action Plan, safety audits, and Material Safety Datasheets (MSDS), at the job site.

**1.05 Railway Flagger Services:**

- **1.05.01** The Contractor must give Railway's **Roadmaster John Lorenzo ([john.lorenzo@bnsf.com](mailto:john.lorenzo@bnsf.com))**, **Railway's Signal Supervisor Richard Klaudt ([Richard.klaudt@bnsf.com](mailto:Richard.klaudt@bnsf.com))** and **third party flagging service RailPros ([BNSFinfo@railpros.com](mailto:BNSFinfo@railpros.com))** a minimum of thirty (30) calendar days advance notice when flagging services will be required so that the Roadmaster can make appropriate arrangements (i.e., bulletin the flagger's position). If flagging services are scheduled in advance by the Contractor and it is subsequently determined by the parties hereto that such services are no longer necessary, the Contractor must give the Roadmaster five (5) working days advance notice so that appropriate arrangements can be made to abolish the position pursuant to union requirements.
- **1.05.02** Unless determined otherwise by Railway's Project Representative, Railway flagger will be required and furnished when Contractor's work activities are located over, under and/or within twenty-five (25) feet measured horizontally from centerline of the nearest track and when cranes or similar equipment positioned beyond 25-feet from the track centerline could foul the track in the event of tip over or other catastrophic occurrence, but not limited thereto for the following conditions:
  - **1.05.02a** When, upon inspection by Railway's Representative, other conditions warrant.
  - **1.05.02b** When any excavation is performed below the bottom of tie elevation, if, in the opinion of Railway's representative, track or other Railway facilities may be subject to movement or settlement.
  - **1.05.02c** When work in any way interferes with the safe operation of trains at timetable speeds.
  - **1.05.02d** When any hazard is presented to Railway track, communications, signal, electrical, or other facilities either due to persons, material, equipment or blasting in the vicinity.
  - **1.05.02e** Special permission must be obtained from the Railway before moving heavy or cumbersome objects or equipment which might result in making the track impassable.
- **1.05.03** Flagging services will be performed by qualified Railway flaggers.
  - **1.05.03a** Flagging crew generally consists of one employee. However, additional personnel may be required to protect Railway Property and operations, if deemed necessary by the Railways Representative.
  - **1.05.03b** Each time a flagger is called, the minimum period for billing will be the eight (8) hour basic day.
  - **1.05.03c** The cost of flagger services provided by the Railway will be borne by **City's Contractor**. The

estimated cost for one (1) flagger is approximately between \$1200.00-\$2,000.00 for an eight (8) hour basic day with time and one-half or double time for overtime, rest days and holidays. The estimated cost for each flagger includes vacation allowance, paid holidays, Railway and unemployment insurance, public liability and property damage insurance, health and welfare benefits, vehicle, transportation, meals, lodging, radio, equipment, supervision and other costs incidental to performing flagging services. Negotiations for Railway labor or collective bargaining agreements and rate changes authorized by appropriate Federal authorities may increase actual or estimated flagging rates. **THE FLAGGING RATE IN EFFECT AT THE TIME OF PERFORMANCE BY THE CONTRACTOR HEREUNDER WILL BE USED TO CALCULATE THE ACTUAL COSTS OF FLAGGING PURSUANT TO THIS PARAGRAPH.**

- **1.05.03d** The average train traffic on this route is **9** freight trains **2** passenger trains per 24-hour period.

### **1.06 Contractor General Safety Requirements**

- **1.06.01** Work in the proximity of railway track(s) is potentially hazardous where movement of trains and equipment can occur at any time and in any direction. All work performed by contractors within 25 feet of any track must be in compliance with FRA Roadway Worker Protection Regulations.
- **1.06.02** Before beginning any task on Railway Property, a thorough job safety briefing must be conducted with all personnel involved with the task and repeated when the personnel or task changes. If the task is within 25 feet of any track, the job briefing must include the Railway's flagger, as applicable, and include the procedures the Contractor will use to protect its employees, subcontractors, agents or invitees from moving any equipment adjacent to or across any Railway track(s).
- **1.06.03** Workers must not work within 25 feet of the centerline of any track without an on-track safety strategy approved by the Railway's Project Representative. When authority is provided, every contractor employee must know: (1) who the Railway flagger is, and how to contact the flagger, (2) limits of the authority, (3) the method of communication to stop and resume work, and (4) location of the designated places of safety. Persons or equipment entering flag/work limits that were not previously job briefed, must notify the flagger immediately, and be given a job briefing when working within 25 feet of the center line of track.
- **1.06.04** When Contractor employees are required to work on the Railway Property after normal working hours or on weekends, the Railway's representative in charge of the project must be notified. A minimum of two employees must be present at all times.
- **1.06.05** Any employees, agents or invitees of Contractor or its subcontractors under suspicion of being under the influence of drugs or alcohol, or in the possession of same, will be removed from the Railway's Property and subsequently released to the custody of a representative of Contractor management. Future access to the Railway's Property by that employee will be denied.
- **1.06.06** Any damage to Railway Property, or any hazard noticed on passing trains must be reported immediately to the Railway's representative in charge of the project. Any vehicle or machine which may come in contact with track, signal equipment, or structure (bridge) and could result in a train derailment must be reported immediately to the Railway representative in charge of the project and to the Railway's Resource Operations Center at 1(800) 832-5452. Local emergency numbers are to be obtained from the Railway representative in charge of the project prior to the start of any work and must be posted at the job site.
- **1.06.07** For safety reasons, all persons are prohibited from having pocket knives, firearms or other deadly weapons in their possession while working on Railway's Property.
- **1.06.08** All personnel protective equipment (PPE) used on Railway Property must meet applicable OSHA and ANSI specifications. Current Railway personnel protective equipment requirements are listed on the web site, [www.bnsfcontractor.com](http://www.bnsfcontractor.com), however, a partial list of the requirements include: a) safety glasses with

permanently affixed side shields (no yellow lenses); b) hard hats; c) safety shoe with: hardened toes, above-the-ankle lace-up and a defined heel; and d) high visibility retro-reflective work wear. The Railway's representative in charge of the project is to be contacted regarding local specifications for meeting requirements relating to hi-visibility work wear. Hearing protection, fall protection, gloves, and respirators must be worn as required by State and Federal regulations. **(NOTE – Should there be a discrepancy between the information contained on the web site and the information in this paragraph, the web site will govern.)**

- **1.06.09 THE CONTRACTOR MUST NOT PILE OR STORE ANY MATERIALS, MACHINERY OR EQUIPMENT CLOSER THAN 25'-0" TO THE CENTER LINE OF THE NEAREST RAILWAY TRACK. MATERIALS, MACHINERY OR EQUIPMENT MUST NOT BE STORED OR LEFT WITHIN 250 FEET OF ANY HIGHWAY/RAIL AT-GRADE CROSSINGS OR TEMPORARY CONSTRUCTION CROSSING, WHERE STORAGE OF THE SAME WILL OBSTRUCT THE VIEW OF A TRAIN APPROACHING THE CROSSING. PRIOR TO BEGINNING WORK, THE CONTRACTOR MUST ESTABLISH A STORAGE AREA WITH CONCURRENCE OF THE RAILWAY'S REPRESENTATIVE.**
- **1.06.10** Machines or vehicles must not be left unattended with the engine running. Parked machines or equipment must be in gear with brakes set and if equipped with blade, pan or bucket, they must be lowered to the ground. All machinery and equipment left unattended on Railway's Property must be left inoperable and secured against movement. (See internet Engineering Contractor Safety Orientation program for more detailed specifications)
- **1.06.11** Workers must not create and leave any conditions at the work site that would interfere with water drainage. Any work performed over water must meet all Federal, State and Local regulations.
- **1.06.12** All power line wires must be considered dangerous and of high voltage unless informed to the contrary by proper authority. For all power lines the minimum clearance between the lines and any part of the equipment or load must be; 200 KV or below - 15 feet; 200 to 350 KV - 20 feet; 350 to 500 KV - 25 feet; 500 to 750 KV - 35 feet; and 750 to 1000 KV - 45 feet. If capacity of the line is not known, a minimum clearance of 45 feet must be maintained. A person must be designated to observe clearance of the equipment and give a timely warning for all operations where it is difficult for an operator to maintain the desired clearance by visual means.

#### **1.07 Excavation:**

- **1.07.01** Before excavating, the Contractor must determine whether any underground pipelines, electric wires, or cables, including fiber optic cable systems are present and located within the Project work area. The Contractor must determine whether excavation on Railway's Property could cause damage to buried cables resulting in delay to Railway traffic and disruption of service to users. Delays and disruptions to service may cause business interruptions involving loss of revenue and profits. Before commencing excavation, the Contractor must contact **BNSF's Field Engineering Representative Ngwang Sherpa (Ngawang.sherpa@bnsf.com)**. All underground and overhead wires will be considered HIGH VOLTAGE and dangerous until verified with the company having ownership of the line. **It is the Contractor's responsibility to notify any other companies that have underground utilities in the area and arrange for the location of all underground utilities before excavating.**
- **1.07.02** The Contractor must cease all work and notify the Railway immediately before continuing excavation in the area if obstructions are encountered which do not appear on drawings. If the obstruction is a utility and the owner of the utility can be identified, then the Contractor must also notify the owner immediately. If there is any doubt about the location of underground cables or lines of any kind, no work must be performed until the exact location has been determined. There will be no exceptions to these instructions.
- **1.07.03** All excavations must be conducted in compliance with applicable OSHA regulations and, regardless of depth, must be shored where there is any danger to tracks, structures or personnel.

- **1.07.04** Any excavations, holes or trenches on the Railway's Property must be covered, guarded and/or protected when not being worked on. When leaving work site areas at night and over weekends, the areas must be secured and left in a condition that will ensure that Railway employees and other personnel who may be working or passing through the area are protected from all hazards. All excavations must be back filled as soon as possible.

**1.08 Hazardous Waste, Substances and Material Reporting:**

- **1.08.01** If Contractor discovers any hazardous waste, hazardous substance, petroleum or other deleterious material, including but not limited to any non-containerized commodity or material, on or adjacent to Railway's Property, in or near any surface water, swamp, wetlands or waterways, while performing any work under this Agreement, Contractor must immediately: (a) notify the Railway's Resource Operations Center at 1(800) 832-5452, of such discovery; (b) take safeguards necessary to protect its employees, subcontractors, agents and/or third parties; and (c) exercise due care with respect to the release, including the taking of any appropriate measure to minimize the impact of such release.

**1.09 Personal Injury Reporting**

- **1.09.01** The Railway is required to report certain injuries as a part of compliance with Federal Railroad Administration (FRA) reporting requirements. Any personal injury sustained by an employee of the Contractor, subcontractor or Contractor's invitees while on the Railway's Property must be reported immediately (by phone mail if unable to contact in person) to the Railway's representative in charge of the project. The Non-Employee Personal Injury Data Collection Form contained herein is to be completed and sent by Fax to the Railway at 1(817) 352-7595 and to the Railway's Project Representative no later than the close of shift on the date of the injury.



## NON-EMPLOYEE PERSONAL INJURY DATA COLLECTION

(If injuries are in connection with rail equipment accident/incident, highway rail grade crossing accident or automobile accident, ensure that appropriate information is obtained, forms completed and that data entry personnel are aware that injuries relate to that specific event.)

Injured Person Type:

- Passenger on train (C)
- Non-employee (N)  
*(i.e., emp of another railroad, or, non-BNSF emp involved in vehicle accident, including company vehicles)*
- Contractor/safety sensitive (F)
- Contractor/non-safety sensitive (G)
- Volunteer/safety sensitive (H)
- Volunteer/other non-safety sensitive (I)
- Non-trespasser (D) - to include highway users involved in highway rail grade crossing accidents who did not go around or through gates
- Trespasser (E) - to include highway users involved in highway rail grade crossing accidents who went around or through gates
- Non-trespasser (J) - Off railroad property

If train involved, Train ID:

\_\_\_\_\_

Transmit attached information to Accident/Incident Reporting Center by:

Fax 1-817-352-7595

or by Phone 1-800-697-6736

or email to: [Accident-Reporting.Center@BNSF.com](mailto:Accident-Reporting.Center@BNSF.com)

Officer Providing Information:

\_\_\_\_\_  
(Name)

\_\_\_\_\_  
(Employee No.)

\_\_\_\_\_  
(Phone #)

**REPORT PREPARED TO COMPLY WITH FEDERAL ACCIDENT REPORTING REQUIREMENTS AND PROTECTED FROM DISCLOSURE PURSUANT TO 49 U.S.C. 20903 AND 83 U.S.C. 490**

### NON-EMPLOYEE PERSONAL INJURY DATA COLLECTION

INFORMATION REQUIRED TO BE COLLECTED PURSUANT TO FEDERAL REGULATION. IT SHOULD BE USED FOR COMPLIANCE WITH FEDERAL REGULATIONS ONLY AND IT IS NOT INTENDED TO PRESUME ACCEPTANCE OF RESPONSIBILITY OR LIABILITY.

1. Accident City/St: \_\_\_\_\_ 2. Date: \_\_\_\_\_ Time: \_\_\_\_\_  
County: \_\_\_\_\_ 3. Temperature: \_\_\_\_\_ 4. Weather: \_\_\_\_\_  
(if non BNSF location)

Mile Post / Line Segment: \_\_\_\_\_

5. Driver's License No (and state) or other ID: \_\_\_\_\_ **SSN (required):** \_\_\_\_\_

6. Name (last, first, mi): \_\_\_\_\_

7. Address: \_\_\_\_\_ City: \_\_\_\_\_ St: \_\_\_\_\_ Zip: \_\_\_\_\_

8. Date of Birth: \_\_\_\_\_ and/or Age: \_\_\_\_\_ Gender: \_\_\_\_\_  
(if available)

Phone Number: \_\_\_\_\_ Employer: \_\_\_\_\_

9. Injury: \_\_\_\_\_ 10. Body Part: \_\_\_\_\_  
(i.e., Laceration, etc.) (i.e., Hand, etc.)

11. Description of Accident (To include location, action, result, etc.): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

12. Treatment:  
 First Aid Only  
 Required Medical Treatment \_\_\_\_\_  
 Other Medical Treatment \_\_\_\_\_

13. Dr. Name: \_\_\_\_\_ Date: \_\_\_\_\_

14. Dr. Address:  
Street: \_\_\_\_\_ City: \_\_\_\_\_ St: \_\_\_\_\_ Zip: \_\_\_\_\_

15. Hospital Name: \_\_\_\_\_

16. Hospital Address:  
Street: \_\_\_\_\_ City: \_\_\_\_\_ St: \_\_\_\_\_ Zip: \_\_\_\_\_

17. Diagnosis: \_\_\_\_\_

**REPORT PREPARED TO COMPLY WITH FEDERAL ACCIDENT REPORTING REQUIREMENTS AND PROTECTED FROM DISCLOSURE PURSUANT TO 49 U.S.C. 20903 AND 83 U.S.C. 490**

**EXHIBIT "C-1"**

**Agreement Between  
BNSF RAILWAY COMPANY  
and the  
CONTRACTOR**

**Railway Permits:** 24W-20928 and 24W-21821  
**Agency Project:** Project No: 121005.00, 701039.00 & 281250.04  
SE 29<sup>th</sup> Street - Culvert, Storm Sewer and Waterline Replacement

\_\_\_\_\_ hereinafter called "Contractor", has entered into two license agreements (hereinafter called "Agreement") dated \_\_\_\_\_ with **City of Topeka** for the performance of certain work in connection the following project: **Project No. 121005.00, 701039.00 & 281250.04, on SE 29<sup>th</sup> Street at Butcher Creek (DOT#0059495), along BNSF in Topeka, Shawnee County.** Performance of such work will necessarily require Contractor to enter **BNSF RAILWAY COMPANY** (hereinafter called "Railway") right of way and property (hereinafter called "Railway Property"). The Agreement provides that no work will be commenced within Railway Property until the Contractor employed in connection with said work for **CITY OF TOPEKA** (i) executes and delivers to Railway an Agreement in the form hereof, and (ii) provides insurance of the coverage and limits specified in such Agreement and Section 3 herein. If this Agreement is executed by a party who is not the Owner, General Partner, President or Vice President of Contractor, Contractor must furnish evidence to Railway certifying that the signatory is empowered to execute this Agreement on behalf of Contractor.

Accordingly, in consideration of Railway granting permission to Contractor to enter upon Railway Property and as an inducement for such entry, Contractor, effective on the date of the Agreement, has agreed and does hereby agree with Railway as follows:

**1) RELEASE OF LIABILITY AND INDEMNITY**

Contractor hereby waives, releases, indemnifies, defends and holds harmless Railway for all judgments, awards, claims, demands, and expenses (including attorneys' fees), for injury or death to all persons, including Railway's and Contractor's officers and employees, and for loss and damage to property belonging to any person, arising in any manner from Contractor's or any of Contractor's subcontractors' acts or omissions for any work performed on or about Railway's property or right-of-way. **THE LIABILITY ASSUMED BY CONTRACTOR WILL NOT BE AFFECTED BY THE FACT, IF IT IS A FACT, THAT THE DESTRUCTION, DAMAGE, DEATH, OR INJURY WAS OCCASIONED BY OR CONTRIBUTED TO BY THE NEGLIGENCE OF RAILWAY, ITS AGENTS, SERVANTS, EMPLOYEES OR OTHERWISE IN ACCORDANCE WITH KANSAS COMPARATIVE FAULT PRINCIPLES. THE LIABILITY ASSUMED BY CONTRACTOR WILL INCLUDE LIABILITY FOR THE ACTS OR OMISSIONS OF RAILWAY EMPLOYEES ASSIGNED TO AND PERFORMING WORK FOR THE PROJECT , EXCEPT TO THE EXTENT THAT SUCH CLAIMS ARE PROXIMATELY CAUSED BY THE INTENTIONAL MISCONDUCT OR GROSS NEGLIGENCE OF RAILWAY EMPLOYEES ASSIGNED TO AND PERFORMING WORK FOR THE PROJECT.**

**THE INDEMNIFICATION OBLIGATION ASSUMED BY CONTRACTOR INCLUDES ANY CLAIMS, SUITS OR JUDGMENTS BROUGHT AGAINST RAILWAY UNDER THE FEDERAL EMPLOYEE'S LIABILITY ACT, INCLUDING CLAIMS FOR STRICT LIABILITY UNDER THE SAFETY APPLIANCE ACT OR THE LOCOMOTIVE INSPECTION ACT, WHENEVER SO CLAIMED.**

Contractor further agrees, at its expense, in the name and on behalf of Railway, that it will adjust and settle all claims made against Railway, and will, at Railway's discretion, appear and defend any suits or actions of law or in equity brought against Railway on any claim or cause of action arising or growing out of or in any manner connected with any liability assumed by Contractor under this Agreement for which Railway is liable or is alleged to be liable. Railway will give notice to Contractor, in writing, of the receipt or dependency of such claims and thereupon Contractor must proceed to adjust and handle to a conclusion such claims, and in the event of a suit being brought against Railway, Railway may forward summons and complaint or other process in connection therewith to Contractor, and Contractor, at Railway's discretion, must defend, adjust, or settle such suits and protect, indemnify, and save harmless Railway from and against all damages, judgments, decrees, attorney's fees, costs, and expenses growing out of or resulting from or incident to any such claims or suits.

In addition to any other provision of this Agreement, in the event that all or any portion of this Article shall be deemed to be inapplicable for any reason, including without limitation as a result of a decision of an applicable court, legislative enactment or regulatory order, the parties agree that this Article shall be interpreted as requiring

Contractor to indemnify Railway to the fullest extent permitted by applicable law. **THROUGH THIS AGREEMENT THE PARTIES EXPRESSLY INTEND FOR CONTRACTOR TO INDEMNIFY RAILWAY FOR RAILWAY'S ACTS OF NEGLIGENCE BY RAILWAY EMPLOYEES ASSIGNED TO AND PERFORMING WORK FOR THIS PROJECT.**

It is mutually understood and agreed that the assumption of liabilities and indemnification provided for in this Agreement survive any termination of this Agreement.

2) **TERM**

This Agreement is effective from the date of the Agreement until (i) the completion of the project set forth herein, and (ii) full and complete payment to Railway of any and all sums or other amounts owing and due hereunder.

3) **INSURANCE**

Contractor shall, at its sole cost and expense, procure and maintain during the life of this Agreement the following insurance coverage:

A. Commercial General Liability insurance. This insurance shall contain broad form contractual liability with a combined single limit of a minimum of \$5,000,000 each occurrence and an aggregate limit of at least \$10,000,000 but in no event less than the amount otherwise carried by the Contractor. Coverage must be purchased on a post 2004 ISO occurrence form or equivalent and include coverage for, but not limit to the following:

- ◆ Bodily Injury and Property Damage
- ◆ Personal Injury and Advertising Injury
- ◆ Fire legal liability
- ◆ Products and completed operations

This policy shall also contain the following endorsements, which shall be indicated on the certificate of insurance:

- ◆ The definition of insured contract shall be amended to remove any exclusion or other limitation for any work being done within 50 feet of railroad property.
- ◆ Waiver of subrogation in favor of and acceptable to Railway.
- ◆ Additional insured endorsement in favor of and acceptable to Railway.
- ◆ Separation of insureds.
- ◆ The policy shall be primary and non-contributing with respect to any insurance carried by Railway.

It is agreed that the workers' compensation and employers' liability related exclusions in the Commercial General Liability insurance policy(s) required herein are intended to apply to employees of the policy holder and shall not apply to **Railway** employees.

No other endorsements limiting coverage as respects obligations under this Agreement may be included on the policy with regard to the work being performed under this agreement.

B. Business Automobile Insurance. This insurance shall contain a combined single limit of at least \$1,000,000 per occurrence, and include coverage for, but not limited to the following:

- ◆ Bodily injury and property damage
- ◆ Any and all vehicles owned, used or hired

The policy shall also contain the following endorsements or language, which shall be indicated on the certificate of insurance:

- ◆ Waiver of subrogation in favor of and acceptable to Railway.
- ◆ Additional insured endorsement in favor of and acceptable to Railway.
- ◆ Separation of insureds.
- ◆ The policy shall be primary and non-contributing with respect to any insurance carried by Railway.

C. Workers Compensation and Employers Liability insurance including coverage for, but not limited to:

- ◆ Contractor's statutory liability under the worker's compensation laws of the state(s) in which the work is to be performed. If optional under State law, the insurance must cover all employees anyway.
- ◆ Employers' Liability (Part B) with limits of at least \$500,000 each accident, \$500,000 by disease policy limit, \$500,000 by disease each employee.

This policy shall also contain the following endorsements or language, which shall be indicated on the certificate of insurance:

- ◆ Waiver of subrogation in favor of and acceptable to Railway.

D. Railroad Protective Liability insurance naming only the **Railway** as the Insured with coverage of at least \$5,000,000 per occurrence and \$10,000,000 in the aggregate. The policy Must be issued on a standard ISO form CG 00 35 12 04 and include the following:

- ◆ Endorsed to include the Pollution Exclusion Amendment
- ◆ Endorsed to include the Limited Seepage and Pollution Endorsement.
- ◆ No other endorsements restricting coverage may be added.
- ◆ The original policy must be provided to the **Railway** prior to performing any work or services under this Agreement
- ◆ Definition of "Physical Damage to Property" shall be endorsed to read: "means direct and accidental loss of or damage to all property owned by any named insured and all property in any named insured' care, custody, and control arising out of the acts or omissions of the contractor named on the Declarations.

In lieu of providing a Railroad Protective Liability Policy, Licensee may participate (if available) in Railway's Blanket Railroad Protective Liability Insurance Policy.

Other Requirements:

Contractor agrees to waive its right of recovery against **Railway** for all claims and suits against **Railway**. In addition, its insurers, through the terms of the policy or policy endorsement, waive their right of subrogation against **Railway** for all such claims and suits. Contractor further waives its right of recovery, and its insurers also waive their right of subrogation against **Railway** for loss of its owned or leased property or property under Contractor's care, custody or control. Allocated Loss Expense shall be in addition to all policy limits for coverages referenced above.

Contractor is not allowed to self-insure without the prior written consent of **Railway**. If granted by **Railway**, any self-insured retention or other financial responsibility for claims shall be covered directly by Contractor in lieu of insurance. Any and all **Railway** liabilities that would otherwise, in accordance with the provisions of this Agreement, be covered by Contractor's insurance will be covered as if Contractor elected not to include a deductible, self-insured retention or other financial responsibility for claims.

Prior to commencing services, Contractor shall furnish to **Railway** an acceptable certificate(s) of insurance from an authorized representative evidencing the required coverage(s), endorsements, and amendments. The certificate should be directed to the following address:

BNSF Railway Company  
c/o CertFocus  
P.O. Box 140528  
Kansas City, MO 64114\_  
Toll Free: 877-576-2378  
Fax number: 817-840-7487  
Email: [BNSF@certfocus.com](mailto:BNSF@certfocus.com)  
[www.certfocus.com](http://www.certfocus.com)

Contractor shall notify **Railway** in writing at least 30 days prior to any cancellation, non-renewal, substitution or material alteration.

Any insurance policy shall be written by a reputable insurance company acceptable to **Railway** or with a current Best's Guide Rating of A- and Class VII or better, and authorized to do business in the state(s) in which the service is to be provided.

If coverage is purchased on a "claims made" basis, Contractor hereby agrees to maintain coverage in force for a minimum of three years after expiration, cancellation or termination of this Agreement. Annually Contractor agrees to provide evidence of such coverage as required hereunder.

Contractor represents that this Agreement has been thoroughly reviewed by Contractor's insurance agent(s)/broker(s), who have been instructed by Contractor to procure the insurance coverage required by this Agreement.

Not more frequently than once every five years, **Railway** may reasonably modify the required insurance coverage to reflect then-current risk management practices in the railroad industry and underwriting practices in the insurance industry.

If any portion of the operation is to be subcontracted by Contractor, Contractor shall require that the subcontractor shall provide and maintain insurance coverage(s) as set forth herein, naming **Railway** as an additional insured, and shall require that the subcontractor shall release, defend and indemnify **Railway** to the same extent and under the same terms and conditions as Contractor is required to release, defend and indemnify **Railway** herein.

Failure to provide evidence as required by this section shall entitle, but not require, **Railway** to terminate this Agreement immediately. Acceptance of a certificate that does not comply with this section shall not operate as a waiver of Contractor's obligations hereunder.

The fact that insurance (including, without limitation, self-insurance) is obtained by Contractor shall not be deemed to release or diminish the liability of Contractor including, without limitation, liability under the indemnity provisions of this Agreement. Damages recoverable by **Railway** shall not be limited by the amount of the required insurance coverage.

In the event of a claim or lawsuit involving **Railway** arising out of this agreement, Contractor will make available any required policy covering such claim or lawsuit.

These insurance provisions are intended to be a separate and distinct obligation on the part of the Contractor. Therefore, these provisions shall be enforceable and Contractor shall be bound thereby regardless of whether or not indemnity provisions are determined to be enforceable in the jurisdiction in which the work covered hereunder is performed.

For purposes of this section, **Railway** shall mean "Burlington Northern Santa Fe LLC", "BNSF Railway Company" and the subsidiaries, successors, assigns and affiliates of each.

#### 4) **EXHIBIT "C" CONTRACTOR REQUIREMENTS**

The Contractor must observe and comply with all provisions, obligations, requirements and limitations contained in the Agreement, and the Contractor Requirements set forth on Exhibit "C" attached to the Agreement and this Agreement, including, but not be limited to, payment of all costs incurred for any damages to Railway roadbed, tracks, and/or appurtenances thereto, resulting from use, occupancy, or presence of its employees, representatives, or agents or subcontractors on or about the construction site.

#### 5) **TRAIN DELAY**

Contractor is responsible for and hereby indemnifies and holds harmless Railway (including its affiliated railway companies, and its tenants) for, from and against all damages arising from any unscheduled delay to a freight or

passenger train caused exclusively by the Contractor, its subcontractors, Railroad employees assigned to and performing work for the Project, or a combination thereof which affects Railway's ability to fully utilize its equipment and to meet customer service and contract obligations. Contractor will be billed, as further provided below, for the economic losses arising from loss of use of equipment, contractual loss of incentive pay and bonuses and contractual penalties resulting from such unscheduled train delays, whether caused by Contractor, or subcontractors, or by the Railroad employees assigned to and performing work for the Project. Railway agrees that it will not perform any act to unnecessarily cause train delay.

For loss of use of equipment, Contractor will be billed the current freight train hour rate per train as determined from Railway's records. Any disruption to train traffic may cause delays to multiple trains at the same time for the same period.

Additionally, the parties acknowledge that passenger, U.S. mail trains and certain other grain, intermodal, coal and freight trains operate under incentive/penalty contracts between Railway and its customer(s). Under these arrangements, if Railway does not meet its contract service commitments, Railway may suffer loss of performance or incentive pay and/or be subject to penalty payments. Contractor is responsible for any train performance and incentive penalties or other contractual economic losses actually incurred by Railway which are attributable to a train delay caused by Contractor or its subcontractors.

The contractual relationship between Railway and its customers is proprietary and confidential. In the event of a train delay covered by this Agreement, Railway will share information relevant to any train delay to the extent consistent with Railway confidentiality obligations. Damages for train delay are currently \$382.20 per hour per incident. The rate then in effect at the time of performance by the Contractor hereunder will be used to calculate the actual costs of train delay pursuant to this agreement.

Contractor and its subcontractors must give Railway's representatives **John Lorenzo ([john.lorenzo@bnsf.com](mailto:john.lorenzo@bnsf.com)) and Richard Klaudt ([Richard.klaudt@bnsf.com](mailto:Richard.klaudt@bnsf.com))** and third party flagging service RailPros ([BNSFinfo@railpros.com](mailto:BNSFinfo@railpros.com)) (4) four weeks advance notice of the times and dates for proposed work windows. Railway and Contractor will establish mutually agreeable work windows for the project. Railway has the right at any time to revise or change the work windows due to train operations or service obligations. Railway will not be responsible for any additional costs or expenses resulting from a change in work windows. Additional costs or expenses resulting from a change in work windows shall be accounted for in Contractor's expenses for the project.

Contractor and subcontractors must plan, schedule, coordinate and conduct all Contractor's work so as to not cause any delays to any trains.

IN WITNESS WHEREOF, each of the parties hereto has caused this Agreement to be executed by its duly authorized officer the day and year first above written.

\_\_\_\_\_

Contractor

**BNSF Railway Company**

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

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

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

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

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

Manager Public Projects

Contact Person: \_\_\_\_\_

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

City: \_\_\_\_\_

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

Fax: \_\_\_\_\_

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

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

**BNSF RAILWAY COMPANY  
REQUEST FOR INSPECTOR COORDINATOR AND RWIC FIELD SERVICES**

**PERMIT NOS. 24W-20928 AND 24W-21821  
PROJECT NOS: 121005.00, 701039.00 & 281250.04  
PROJECT SCOPE: SE 29<sup>th</sup> STREET - CULVERT, STORM SEWER AND WATERLINE  
REPLACEMENT**

**LINE SEGMENT 7102, KANSAS DIVISION, TOPEKA SUBDIVISION; MP 53.27  
CITY OF TOPEKA, SHAWNEE COUNTY, KS**

**I. PURPOSE OF PROJECT SPECIAL PROVISION**

- A. The City of Topeka has fully executed two (2) utility license agreements with BNSF Railway Company. (BNSF). No encroachment above, below or on BNSF Right-of-Way will be allowed without the presence of an Inspector Coordinator and Roadway Worker in Charge (RWIC). Contractor must contact Wilson & Company (BNSF's Scheduling Agent) to arrange for these services. Please refer to Sections 7.1, 7.2, and 11.1 of the agreements.
- B. Contractor shall execute and provide payment bear the cost of the Inspector Coordinator and Roadway Worker in Charge (RWIC).

**II. REQUESTING REQUIRED SERVICES**

1. Complete the online [Request for Inspector Coordinator and RWIC Field Services Form](https://form.jotform.com/WilsonCo/ICRequestForm) (<https://form.jotform.com/WilsonCo/ICRequestForm>). A separate form must be completed and submitted for each individual executed permit number.
2. After receipt of the completed form, Wilson & Company will provide you with a Pre-Payment Invoice (PPI) for inspection & RWIC services.
3. After payment is made and confirmed, Wilson & Company will coordinate with you or your designee to schedule construction. Note that BNSF requires a 15-day advanced notification of project start from Wilson & Company for all utility construction projects.
4. A positive balance of pre-paid inspection and/or RWIC days are required throughout the entire duration of the project to maintain continuation of services.
5. Subsequent to receipt of payment, Wilson & Company will serve as BNSF's scheduling agent to schedule inspection and RWIC services, coordinate locates of BNSF-owned signal and telecom wire, and contact the BNSF Roadmaster.

6. A copy of the executed agreement must be available upon request at job site(s) allowing authorization to do the work.
7. No encroachment above, below or on BNSF Right-of-Way will be allowed without the presence of an Inspector Coordinator and RWIC.
8. Contractor must ensure that all your employees and contractors who will be working on the utility installation/construction site on BNSF Railway property complete the required Safety Orientation Program courses (i.e., General Requirements, Authorized Practices, Work on or Near Track, Contractor Safety Action Plan, and Roadway Worker Protection) at [www.BNSFContractor.com](http://www.BNSFContractor.com) and have valid badges . Personnel who are unable to display a valid badge or do not have appropriate PPE (hard hat, safety glasses with side shield, orange ANSI Class II safety vest, and lace-up steel toe boots) will not be allowed to access BNSF property. If you have any questions regarding the Safety Orientation training and certification, please contact support at 866-599-2482.
9. Prior to construction, consult the [BNSF Utility Accommodation Policy](#) to review the requirements for utility installations on BNSF property.

**BEFORE YOU DIG, CALL 1-800-533-2891.**

## PIPELINE LICENSE

THIS PIPELINE LICENSE ("**License**") is made to be effective May 21, 2025 (the "**Effective Date**") by and between **BNSF RAILWAY COMPANY**, a Delaware corporation ("**Licensor**") and **CITY OF TOPEKA**, a Kansas municipality ("**Licensee**").

In consideration of the mutual covenants contained herein, the parties agree to the following:

### GENERAL

1. Grant of License. Licensor hereby grants Licensee a non-exclusive license, subject to all rights, interests, and estates of third parties, including, without limitation, any leases, use rights, easements, liens, or other encumbrances, and upon the terms and conditions set forth below, to construct and maintain, in strict accordance with the drawings and specifications approved by Licensor as part of Licensee's application process (the "**Drawings and Specifications**"), one (1) pipelines, 15x12, inches in diameter inside an RCB,RCP casing (collectively, the "**Pipeline**"), across or along Licensor's rail corridor at or near the station of Topeka, County of Shawnee, State of Kansas, Line Segment 7102, Mile Post 53.27 as shown on the attached Drawing No. 90678, dated September 6, 2024, attached hereto as Exhibit "A" and incorporated herein by reference (the "**Premises**").
2. Term. This License shall commence on the Effective Date and shall continue for a period of twenty-five (25) years, subject to prior termination as hereinafter described.
3. Existing Improvements. Licensee shall not disturb any improvements of Licensor or Licensor's existing lessees, licensees, easement beneficiaries or lien holders, if any, or interfere with the use, repair, maintenance or replacement of such improvements.
4. Use of the Premises. Licensee shall use the Premises solely for construction, maintenance, and use of the Pipeline in accordance with the Drawings and Specifications. The Pipeline shall carry stormwater, and Licensee shall not use the Pipeline to carry any other material or use the Premises for any other purpose. Licensee is expressly prohibited from using or allowing any telecommunication facilities or equipment within the Premises, or using or allowing the use of the Premises for any other purpose.
5. Alterations. Except as set forth in this License, Licensee may not make any alterations to the Premises or permanently affix anything to the Premises or any buildings or other structures adjacent to the Premises without Licensor's prior written consent.

### COMPENSATION

6. License Fee. Licensee shall pay Licensor, prior to the Effective Date, a one-time payment (in lieu of recurring periodic fixed license fees) in the amount the sum of Thirteen Thousand Three Hundred and Five Dollars No/100 Dollars (\$13,305.00) as compensation for the use of the Premises.
7. Costs and Expenses.
  - 7.1 For the purpose of this License, "cost" or "costs" and "expense" or "expenses" includes, but is not limited to, actual labor and material costs including all assignable additives, and material and supply costs at current value where used.
  - 7.2 Licensee agrees to reimburse Licensor (pursuant to the terms of **Section 8** below) for all costs and expenses incurred by Licensor in connection with Licensee's use of the Premises or the presence, construction and maintenance of the Pipeline, including but not limited to the furnishing of Licensor's flaggers and any vehicle rental costs incurred, inspection coordination, safety, mobilization and/or other observation services described in this License (collectively, the "**Services**"). Licensee shall bear the cost of the Services, when deemed necessary by Licensor's representative. Flagging costs shall include, but not be limited to, the following: pay for at least an eight (8) hour basic day with time and one-half or double time for overtime, rest days and holidays (as applicable); vacation allowance; paid holidays (as applicable); railway and

unemployment insurance; public liability and property damage insurance; health and welfare benefits; transportation; meals; lodging and supervision. Negotiations for railway labor or collective bargaining agreements and rate changes authorized by appropriate Federal authorities may increase flagging rates. Flagging rates in effect at the time of performance by the flaggers will be used to calculate the flagging costs pursuant to this **Section 7**.

- 7.3 Licensor, at its sole discretion, may elect to designate a third party (the "**Scheduling Agent**"), to perform and/or arrange for the performance of the Services.
8. **Payment Terms.** All invoices are due thirty (30) days after the date of invoice. If Licensee fails to pay any monies due to Licensor within thirty (30) days after the invoice date, then Licensee shall pay interest on such unpaid sum from the due date until paid at an annual rate equal to the lesser of (i) the prime rate last published in *The Wall Street Journal* in the preceding December plus two and one-half percent (2-1/2%), or (ii) the maximum rate permitted by law.

### **LICENSOR'S RESERVED RIGHTS**

9. **Reserved Rights of Use.** Licensor excepts and reserves the right, to be exercised by Licensor and any other parties who may obtain written permission or authority from Licensor:
- 9.1 to maintain, use, operate, repair, replace, modify and relocate any utility, power or communication pipe/lines/cables and appurtenances (other than the Pipeline) and other facilities or structures of like character upon, over, under or across the Premises existing as of the Effective Date;
- 9.2 to construct, maintain, renew, use, operate, change, modify and relocate any tracks or additional facilities, structures and related appurtenances upon, over, under or across the Premises; or
- 9.3 to use the Premises in any manner as Licensor in its sole discretion deems appropriate, provided Licensor uses all commercially reasonable efforts to avoid material interference with the use of the Premises by Licensee for the purpose specified in **Section 4** above.
10. **Right to Require Relocation.** If at any time during the term of this License, Licensor desires the use of its rail corridor in such a manner as would, in Licensor's reasonable opinion, be interfered with by the Pipeline, Licensee shall, at its sole expense, within thirty (30) days after receiving written notice from Licensor to such effect, make such changes in the Pipeline as in the sole discretion of Licensor may be necessary to avoid interference with the proposed use of Licensor's rail corridor, including, without limitation, the relocation of the Pipeline, or the construction of a new pipeline to replace the Pipeline. Notwithstanding the foregoing, Licensee agrees to make all emergency changes and minor adjustments, as determined by Licensor in its sole discretion, to the Pipeline promptly upon Licensor's request.

### **LICENSEE'S OPERATIONS**

11. **Construction and Maintenance of the Pipeline.**
- 11.1 Licensee shall not enter the Premises or commence construction unless accompanied by Licensor's representative, the Scheduling Agent or its designee. Licensee shall notify Licensor's representative or the Scheduling Agent at ROWCoordinator@BNSF.com at least ten (10) business days prior to installation of the Pipeline and prior to entering the Premises for any subsequent maintenance thereon. Only in the event of emergency, Licensee shall notify Licensor's Roadmaster of entry onto the Premises, at the telephone 785-435-5422, as soon as practicable and shall promptly thereafter follow up with written notice of such entry to the email provided above.
- 11.2 Licensee's on-site supervisors shall retain/maintain a fully executed copy of this License at all times while on the Premises.
- 11.3 While on the Premises, Licensee shall use only public roadways to cross from one side of Licensor's tracks to the other.

- 11.4 Any contractors or subcontractors performing work on the Pipeline or entering the Premises on behalf of Licensee shall be deemed servants and agents of Licensee for purposes of this License.
- 11.5 Under no conditions shall Licensee be permitted to conduct any tests, investigations or any other activity using mechanized equipment and/or machinery, or place or store any mechanized equipment, tools or other materials, within twenty-five (25) feet of the centerline of any railroad track on the Premises unless Licensee has obtained prior written approval from Licensor. Licensee shall, at its sole cost and expense, perform all activities on and about the Premises, including without limitation all construction and maintenance of the Pipeline, in such a manner and of such materials as not at any time to endanger or interfere with (i) the existence or use of present or future tracks, roadbeds, or property of Licensor, (ii) the safe operation and activities of Licensor or existing third parties, or (iii) the rights or interests of third parties. If ordered to cease using the Premises at any time by Licensor's personnel due to any hazardous condition, Licensee shall immediately do so. Notwithstanding the foregoing right of Licensor, the parties agree that Licensor has no duty or obligation to monitor Licensee's use of the Premises to determine the safe nature thereof, it being solely Licensee's responsibility to ensure that Licensee's use of the Premises is safe. Neither the exercise nor the failure by Licensor to exercise any rights granted in this Section will alter the liability allocation provided by this License.
- 11.6 Licensee shall, at its sole cost and expense, construct and maintain the Pipeline in such a manner and of such material that the Pipeline will not at any time endanger or interfere with (i) the existence or use of present or future tracks, roadbeds, or property of Licensor, (ii) the safe operation and activities of Licensor or existing third parties, or (iii) the rights or interests of third parties. The construction of the Pipeline shall be completed within one (1) year of the Effective Date, and any subsequent maintenance shall be completed within one (1) year of initiation. Within fifteen (15) days after completion of the construction of the Pipeline or the performance of any subsequent maintenance thereon, Licensee shall, at Licensee's own cost and expense, restore the Premises to substantially their state as of the Effective Date, unless otherwise approved in advance by Licensor in writing. On or before expiration or termination of this License for any reason, Licensee shall, at its sole cost and expense, surrender the Premises to Licensor pursuant to the terms and conditions set forth in **Section 24** hereof.
- 11.7 Licensor may direct one or more of its field engineers or inspectors to observe or inspect the construction and/or maintenance of the Pipeline at any time for compliance with the Drawings and Specifications and Legal Requirements (defined below). Licensee shall reimburse Licensor for the cost of such observation or inspection related services pursuant to **Section 8**. If ordered at any time to halt construction or maintenance of the Pipeline by Licensor's personnel due to non-compliance with the Drawings and Specifications or any other hazardous condition, Licensee shall immediately do so. Notwithstanding the foregoing right of Licensor, the parties agree that Licensor has no duty or obligation to observe or inspect, or to halt work on, the Pipeline, it being solely Licensee's responsibility to ensure that the Pipeline is constructed and maintained in strict accordance with the Drawings and Specifications and in a safe and workmanlike manner in compliance with all terms hereof. Neither the exercise of, nor the failure by Licensor to exercise, any right granted by this Section will alter in any way the liability allocation provided by this License. If at any time Licensee shall, in the sole judgment of Licensor, fail to properly perform its obligations under this **Section 11**, Licensor may, at its option and at Licensee's sole expense, arrange for the performance of such work as it deems necessary for the safety of its operations and activities. Licensee shall promptly reimburse Licensor for all costs and expenses of such work, pursuant to the terms of **Section 8**. Licensor's failure to perform any obligations of Licensee shall not alter the liability allocation hereunder.

12. Boring and Excavation.

- 12.1 Prior to Licensee conducting any boring, excavation, or similar work on or about any portion of the Premises, Licensee shall contact the applicable State's call-before-you-dig utility location service to have 3<sup>rd</sup> parties mark the location of utilities. Licensee shall explore the proposed location for such work with hand tools to a depth of at least three (3) feet below the surface of the

ground to determine whether pipelines or other structures exist below the surface, provided, however, that in lieu of the foregoing hand-tool exploration, Licensee shall have the right to use suitable detection equipment or other generally accepted industry practice (e.g., consulting with the United States Infrastructure Corporation) to determine the existence or location of pipelines and other subsurface structures prior to drilling or excavating with mechanized equipment. Licensee shall request information from Licensor concerning the existence and approximate location of Licensor's underground lines, utilities, and pipelines at or near the vicinity of the proposed Pipeline by contacting Licensor's Telecommunications Helpdesk, currently at 1-800-533-2891 (option 1, then option 7), at least ten (10) business days prior to installation of the Pipeline. Upon receiving Licensee's timely request, Licensor will provide Licensee with the information Licensor has in its possession regarding any existing underground lines, utilities, and pipelines at or near the vicinity of the proposed Pipeline and, if applicable, identify the location of such lines on the Premises pursuant to Licensor's standard procedures. Licensor does not warrant the accuracy or completeness of information relating to subsurface conditions of the Premises and Licensee's operations will be subject at all times to the liability provisions herein.

- 12.2 For all bores greater than 26-inch diameter and at a depth less than 10.0 feet below bottom of rail, a soil investigation must be performed by Licensee and reviewed by Licensor prior to construction. This study is to determine if granular material is present, and to prevent subsidence during the installation process. If the investigation determines in Licensor's reasonable opinion that granular material is present, Licensor may select a new location for Licensee's use, or may require Licensee to furnish for Licensor's review and approval, in Licensor's sole discretion, a remedial plan to deal with the granular material. Once Licensor has approved any such remedial plan in writing, Licensee shall, at Licensee's sole cost and expense, carry out the approved plan in accordance with all terms thereof and hereof.
- 12.3 No wells shall be installed without prior written approval from Licensor.
- 12.4 Any open hole, boring, or well constructed on the Premises by Licensee shall be safely covered and secured at all times when Licensee is not working in the actual vicinity thereof. Following completion of that portion of the work, all holes or borings constructed on the Premises by Licensee shall be:
- 12.4.1 filled in to surrounding ground level with compacted bentonite grout; or
- 12.4.2 otherwise secured or retired in accordance with any applicable Legal Requirement. No excavated materials may remain on Licensor's property for more than ten (10) days, but must be properly disposed of by Licensee in accordance with applicable Legal Requirements.

## LIABILITY AND INSURANCE

### 13. Liability and Indemnification.

- 13.1 For purposes of this License: (a) "**Indemnitees**" means Licensor and Licensor's affiliated companies, partners, successors, assigns, legal representatives, officers, directors, shareholders, employees, and agents; (b) "**Liabilities**" means all claims, liabilities, fines, penalties, costs, damages, losses, liens, causes of action, suits, demands, judgments, and expenses (including, without limitation, court costs, reasonable attorneys' fees, costs of investigation, removal and remediation, and governmental oversight costs) environmental or otherwise; and (c) "**Licensee Parties**" means Licensee and Licensee's officers, agents, invitees, licensees, employees, or contractors, or any party directly or indirectly employed by any of them, or any party they control or exercise control over.
- 13.2 **TO THE FULLEST EXTENT PERMITTED BY LAW, LICENSEE SHALL, AND SHALL CAUSE ITS CONTRACTOR TO, RELEASE, INDEMNIFY, DEFEND AND HOLD HARMLESS INDEMNITEES FOR, FROM, AND AGAINST ANY AND ALL LIABILITIES OF ANY NATURE,**

**KIND, OR DESCRIPTION DIRECTLY OR INDIRECTLY ARISING OUT OF, RESULTING FROM, OR RELATED TO (IN WHOLE OR IN PART):**

- 13.2.1 **THIS LICENSE, INCLUDING, WITHOUT LIMITATION, ITS ENVIRONMENTAL PROVISIONS,**
  - 13.2.2 **ANY RIGHTS OR INTERESTS GRANTED PURSUANT TO THIS LICENSE,**
  - 13.2.3 **LICENSEE'S OCCUPATION AND USE OF THE PREMISES,**
  - 13.2.4 **THE ENVIRONMENTAL CONDITION AND STATUS OF THE PREMISES CAUSED BY OR CONTRIBUTED TO BY LICENSEE, OR**
  - 13.2.5 **ANY ACT OR OMISSION OF ANY LICENSEE PARTY.**
- 13.3 **TO THE FULLEST EXTENT PERMITTED BY LAW, LICENSEE NOW AND FOREVER WAIVES AND WILL INDEMNIFY, DEFEND, AND HOLD THE INDEMNITEES HARMLESS FROM ANY AND ALL CLAIMS THAT BY VIRTUE OF ENTERING INTO THIS LICENSE, LICENSOR IS A GENERATOR, OWNER, OPERATOR, ARRANGER, OR TRANSPORTER FOR THE PURPOSES OF THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT, AS AMENDED ("CERCLA") OR OTHER ENVIRONMENTAL LAWS (DEFINED BELOW). NOTHING IN THIS LICENSE IS MEANT BY EITHER PARTY TO CONSTITUTE A WAIVER OF ANY INDEMNITEE'S COMMON CARRIER DEFENSES AND THIS LICENSE SHOULD NOT BE SO CONSTRUED. IF ANY AGENCY OR COURT CONSTRUES THIS LICENSE TO BE A WAIVER OF ANY INDEMNITEE'S COMMON CARRIER DEFENSES, LICENSEE AGREES TO INDEMNIFY, HOLD HARMLESS, AND DEFEND INDEMNITEES FOR ANY LIABILITIES RELATED TO THAT CONSTRUCTION OF THIS LICENSE. IN NO EVENT AS BETWEEN LICENSOR AND LICENSEE AS TO USE OF THE PREMISES AS CONTEMPLATED BY THIS LICENSE SHALL LICENSOR BE RESPONSIBLE TO LICENSEE FOR THE ENVIRONMENTAL CONDITION OF THE PREMISES.**
- 13.4 **IF ANY EMPLOYEE OF ANY LICENSEE PARTY ASSERTS THAT HE OR SHE IS AN EMPLOYEE OF ANY INDEMNITEE, TO THE FULLEST EXTENT PERMITTED BY LAW, LICENSEE SHALL, AND SHALL CAUSE ITS CONTRACTOR TO, RELEASE, INDEMNIFY, DEFEND, AND HOLD THE INDEMNITEES HARMLESS FROM AND AGAINST ANY LIABILITIES ARISING OUT OF OR RELATED TO (IN WHOLE OR IN PART) ANY SUCH ASSERTION INCLUDING, BUT NOT LIMITED TO, ASSERTIONS OF EMPLOYMENT BY AN INDEMNITEE RELATED TO THE FOLLOWING OR ANY PROCEEDINGS THEREUNDER: THE FEDERAL EMPLOYERS' LIABILITY ACT, THE SAFETY APPLIANCE ACT, THE LOCOMOTIVE INSPECTION ACT, THE OCCUPATIONAL SAFETY AND HEALTH ACT, THE RESOURCE CONSERVATION AND RECOVERY ACT, AND ANY SIMILAR STATE OR FEDERAL STATUTE.**
- 13.5 **THE FOREGOING OBLIGATIONS OF LICENSEE SHALL NOT APPLY TO THE EXTENT LIABILITIES ARE PROXIMATELY CAUSED BY THE GROSS NEGLIGENCE OR WILLFUL MISCONDUCT OF ANY INDEMNITEE, BUT SHALL APPLY TO ALL OTHER LIABILITIES, INCLUDING THOSE ARISING FROM OR ATTRIBUTED TO ANY OTHER ALLEGED OR ACTUAL NEGLIGENCE, INTENTIONAL ACTS, OR STRICT LIABILITY OF ANY INDEMNITEE.**
- 13.6 **Upon written notice from Licensor, Licensee agrees to assume the defense of any lawsuit or other proceeding brought against any Indemnatee by any entity, relating to any matter covered by this License for which Licensee has an obligation to assume liability for and/or save and hold harmless any Indemnatee. Licensee shall pay all costs and expenses incident to such defense, including, but not limited to, reasonable attorneys' fees, investigators' fees, litigation and appeal expenses, settlement payments, and amounts paid in satisfaction of judgments.**

14. Personal Property Risk of Loss. **ALL PERSONAL PROPERTY, INCLUDING, BUT NOT LIMITED TO, FIXTURES, EQUIPMENT, OR RELATED MATERIALS UPON THE PREMISES WILL BE AT THE RISK OF LICENSEE ONLY, AND NO INDEMNITEE WILL BE LIABLE FOR ANY DAMAGE THERETO OR THEFT THEREOF, WHETHER OR NOT DUE IN WHOLE OR IN PART TO THE NEGLIGENCE OF ANY INDEMNITEE.**

15. Insurance. Licensee shall, at its sole cost and expense, procure and maintain during the term of this License the following insurance coverage:

15.1 Commercial General Liability "CGL" Insurance.

- a. The policy will provide a minimum of \$5,000,000 per occurrence and an aggregate limit of at least \$10,000,000 but in no event will the coverage be in an amount less than the amount otherwise carried by Licensee. Coverage must be purchased on a post 2004 ISO occurrence form or equivalent and include coverage for, but not limited to, the following:
  - Bodily Injury and Property Damage
  - Personal Injury and Advertising Injury
  - Fire legal liability
  - Products and completed operations
  - Sudden and accidental pollution coverage
  - Contractual Liability for an "Insured Contract" consistent with the definition under the standard ISO general liability policy form.
- b. This policy will include the following endorsements or language, which shall be indicated on or attached to the certificate of insurance:
  - The definition of "Insured Contract" will be amended to remove any exclusion or other limitation for any work being done within 50 feet of Licensor's property;
  - Waiver of subrogation in favor of and acceptable to Licensor;
  - Additional insured endorsement in favor of and acceptable to Licensor and Jones Lang LaSalle Brokerage, Inc. to include coverage for ongoing and completed operations;
  - Separation of insureds;
  - The policy shall be primary and non-contributing with respect to any insurance carried by Licensor.
- c. The parties agree that the workers' compensation and employers' liability related exclusions in the CGL policy(s) are intended to apply to employees of the policyholder and will not apply to Licensor's employees.
- d. No other endorsements that limit coverage with respect to Licensee's obligations under this agreement may be included on the policy.

15.2 Business Automobile Insurance.

- a. The insurance will provide minimum coverage with a combined single limit of at least \$1,000,000 per accident, and include coverage for, but not limited to the following:
  - Bodily injury and property damage.
  - Any and all vehicles owned, used or hired.
- b. The policy will include the following endorsements or language, which will be indicated on or attached to the certificate of insurance:
  - Waiver of subrogation in favor of and acceptable to Licensor;
  - Additional insured endorsement in favor of and acceptable to Licensor;
  - Separation of insureds;
  - The policy shall be primary and non-contributing with respect to any insurance carried by Licensor.

15.3 Workers' Compensation and Employers' Liability Insurance.

- a. The policy will provide coverage of all employees performing any part of the installation or maintenance of the Pipeline including coverage for, but not limited to:
  - Licensee's statutory liability under the workers' compensation laws of the state(s) in which the work or services under this agreement are to be performed. The policy will cover all of Licensee's employees, regardless of whether such coverage is optional under the law of that state(s).
  - Employers' Liability (Part B) with limits of at least \$500,000 each accident, \$500,000 by disease policy limit, \$500,000 by disease each employee.
- b. The policy will include contain the following endorsements or language, which shall be indicated on or attached to the certificate of insurance:
  - Waiver of subrogation in favor of and acceptable to Licensor.

15.4 Railroad Protective Liability Insurance. The policy will name only Licensor as the Insured and will provide coverage of at least \$5,000,000 per occurrence and \$10,000,000 in the aggregate. The coverage obtained under this policy shall only be effective during the initial installation and/or construction of the Pipeline. **THE CONSTRUCTION OF THE PIPELINE SHALL BE COMPLETED WITHIN ONE (1) YEAR OF THE EFFECTIVE DATE.** If further maintenance of the Pipeline is needed at a later date, an additional Railroad Protective Liability Insurance Policy shall be required. The policy will be issued on a standard ISO form CG 00 35 12 04 and include the following:

- Endorsed to include the Pollution Exclusion Amendment.
- Endorsed to include the Limited Seepage and Pollution Endorsement.
- Endorsed to remove any exclusion for punitive damages.
- Endorsed to include Evacuation Expense Coverage Endorsement.
- No other endorsements restricting coverage may be added.
- The original policy must be provided to Licensor and Licensee shall not perform any work or services of any kind under this agreement until Licensor has reviewed and approved the policy.
- The definition of "Physical Damage to Property" will be endorsed to read: "means direct and accidental loss of or damage to all property owned by any named insured and all property in any named insured's care, custody and control (including, but not limited to rolling stock and their contents, mechanical construction equipment or motive power equipment, railroad tracks, roadbeds, catenaries, signals, tunnels, bridges and buildings) arising out of the acts or omissions of the contractor named on the Declarations."

In lieu of providing a Railroad Protective Liability Policy, for a period of one (1) year from the Effective Date, Licensee may participate in Licensor's Blanket Railroad Protective Liability Insurance Policy available to Licensee or its contractor. The limits of coverage are the same as above. The cost is \$1266.00.

- Licensee may **elect** to participate in Licensor's Blanket Policy;
- Licensee **declines** to participate in Licensor's Blanket Policy.

15.5 Intentionally Deleted:

15.6 Other Requirements:

- 15.6.1 Where allowable by law, no exclusion for punitive damages may be included in any policy.
- 15.6.2 Licensee agrees to waive its right of recovery against Licensor for all claims and suits against Licensor. In addition, Licensee's insurers, through the terms of the policy or policy endorsement, waive their right of subrogation against Licensor for all claims and suits. Licensee further waives its right of recovery, and its insurers also waive their right of

subrogation against Licensor for loss of Licensee's owned or leased property or property under Licensee's care, custody, or control.

- 15.6.3 Allocated Loss Expense, including but not limited to defense costs and expenses, will be in addition to all policy limits for coverage under the insurance requirements.
- 15.6.4 Licensee is not allowed to self-insure without the prior written consent of Licensor. If Licensor allows Licensee to self-insure, Licensee shall directly cover any self-insured retention or other financial responsibility for claims in lieu of insurance. Any and all Licensor liabilities that would otherwise be covered by Licensee's insurance in accordance with the provisions of this agreement, will be covered as if Licensee elected not to include a self-insured retention or other financial responsibility for claims.
- 15.6.5 Prior to entering the Premises or commencing any work related to the installation or subsequent maintenance of the Pipeline, Licensee shall furnish to Licensor an acceptable certificate(s) of insurance from an authorized representative evidencing the required coverage(s), endorsements, and amendments.
- 15.6.6 Licensee shall notify BNSF in writing at least 30 days prior to any cancellation, non-renewal, substitution or material alteration of any insurance requirement.
- 15.6.7 Any insurance policy shall be written by a reputable insurance company acceptable to Licensor or with a current Best's Guide Rating of A- and Class VII or better, and authorized to do business in the state(s) in which the service is to be provided.
- 15.6.8 If the coverage provided by any of the insurance policies required by this agreement is purchased on a "claims made" basis, Licensee hereby agrees to maintain coverage in force for a minimum of three years after expiration, cancellation or termination of this agreement.
- 15.6.9 Licensee agrees to provide evidence to Licensor that it has the required coverage in place at least annually or in the event of a renewal or material change of coverage
- 15.6.10 Licensee represents that this License has been thoroughly reviewed by Licensee's insurance agent(s)/broker(s), and that Licensee has instructed them to procure the insurance coverage required by this License.
- 15.6.11 Not more frequently than once every five years, Licensor may, at its discretion, reasonably modify the insurance requirements to reflect the then-current risk management practices in the railroad industry and underwriting practices in the insurance industry.
- 15.6.12 If Licensee will subcontract any portion of the operation, Licensee shall require that the subcontractor provide and maintain insurance coverage(s) as set forth herein, naming Licensor as an additional insured. In addition, Licensee shall require that the subcontractor shall release, defend and indemnify Licensee to the same extent and under the same terms and conditions as Licensee is required to release, defend and indemnify Licensor under this agreement.
- 15.6.13 Failure to provide evidence as required by this section shall entitle, but not require, Licensor to terminate this License immediately. Acceptance of a certificate that does not comply with this section shall not operate as a waiver of Licensee's obligations hereunder.
- 15.6.14 The fact that Licensee obtains insurance (including, without limitation, self-insurance) shall not release or diminish Licensee's liabilities or obligations including, without limitation, the liabilities and obligations under the indemnity provisions of the License. Damages recoverable by Licensor shall not be limited by the amount of the required insurance coverage.

- 15.6.15 In the event of a claim or lawsuit involving BNSF arising out of this Agreement, Licensee will make the policy covering such claims or lawsuits available to BNSF.
- 15.6.16 If Licensee maintains broader coverage and/or higher limits than the minimum requirements in this Agreement, BNSF requires and shall be entitled to the broader coverage and/or the higher limits. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to BNSF.
- 15.6.17 These insurance provisions are intended to be a separate and distinct obligation on the part of the Licensee. Therefore, these provisions shall be enforceable and Licensee shall be bound thereby regardless of whether or not indemnity provisions are determined to be enforceable in the jurisdiction in which the work or services are performed under this License.
- 15.6.18 For purposes of this **Section 15**, Licensor shall mean "Burlington Northern Santa Fe, LLC", "BNSF Railway Company" and the subsidiaries, successors, assigns and affiliates of each.

## **COMPLIANCE WITH LAWS, REGULATIONS, AND ENVIRONMENTAL MATTERS**

### 16. Compliance with Laws, Rules, and Regulations.

- 16.1 Licensee shall observe and comply with any and all applicable federal, state, local, and tribal laws, statutes, regulations, ordinances, orders, covenants, restrictions, or decisions of any court of competent jurisdiction ("**Legal Requirements**") relating to the construction, maintenance, and use of the Pipeline and the use of the Premises.
- 16.2 Prior to entering the Premises, Licensee shall and shall cause its contractor(s) to comply with all of Licensor's applicable safety rules and regulations. Licensee must ensure that each of its employees, contractors, agents or invitees entering upon the Premises completes the safety orientation program at the Website "www.BNSFcontractor.com" (the "**Safety Orientation**") within one year prior to entering upon the Premises. Additionally, Licensee must ensure that each and every employee of Licensee, its contractors, agents and invitees possess a card certifying completion of the Safety Orientation prior to entering upon the Premises. Licensee must renew (and ensure that its contractors, agents or invitees, as applicable, renew) the Safety Orientation annually.
- 16.3 Licensee shall obtain on or before the date it or its contractor enters the Premises, any and all additional rights-of way, easements, licenses and other agreements relating to the grant of rights and interests in and/or access to the Premises (collectively, the "**Rights**") and such other rights, licenses, permits, authorizations, and approvals (including without limitation, any necessary local, state, federal or tribal authorizations and environmental permits) that are necessary in order to permit Licensee to construct, maintain, own and operate the Pipeline and otherwise to perform its obligations hereunder in accordance with the terms and conditions hereof.
- 16.4 Licensee shall either require that the initial stated term of each such Rights be for a period that does not expire, in accordance with its ordinary terms, prior to the last day of the term of this License or, if the initial stated term of any such Right expires in accordance with its ordinary terms on a date earlier than the last day of the term of this License, Licensee shall, at its cost, exercise any renewal rights thereunder, or otherwise acquire such extensions, additions and/or replacements as may be necessary, in order to cause the stated term thereof to be continued until a date that is not earlier than the last day of the term of this License.
- 16.5 Upon the expiration or termination of any Right that is necessary in order for Licensee to own, operate or use the Pipeline in accordance with the terms and conditions of this License, this License thereby shall automatically expire upon such expiration or termination of the Right.

17. Environmental.

- 17.1 Licensee shall strictly comply with Environmental Laws (as defined below). Licensee shall not maintain a treatment, storage, transfer or disposal facility, or underground storage tank, as defined by Environmental Laws on the Premises. Licensee shall not release or suffer the release of oil or Hazardous Materials (as defined below) on or about the Premises.
- 17.2 Except as specifically set forth in Section 4 of this License, Licensee covenants that it will not handle or transport Hazardous Materials through the Pipeline or on Licensor's property. Upon request by Licensor, Licensee agrees to furnish Licensor with proof, satisfactory to Licensor, that Licensee is in compliance with the provisions of this **Section 17.2**.
- 17.3 Licensee shall give Licensor immediate notice to Licensor's Resource Operations Center at (800) 832-5452 of any known (i) release of Hazardous Materials on, from, or affecting the Premises, (ii) violation of Environmental Laws, or (iii) inspection or inquiry by governmental authorities charged with enforcing Environmental Laws with respect to Licensee's use of the Premises. Licensee shall use its best efforts to immediately respond to any release on, from, or affecting the Premises. Licensee also shall give Licensor prompt notice of all measures undertaken on behalf of Licensee to investigate, remediate, respond to or otherwise cure such release or violation.
- 17.4 If Licensor has notice from Licensee or otherwise of a release or violation of Environmental Laws arising in any way with respect to the Pipeline which occurred or may occur during the term of this License, Licensor may require Licensee, at Licensee's sole risk and expense, to take timely measures to investigate, remediate, respond to or otherwise cure such release or violation affecting the Premises or Licensor's right-of-way.
- 17.5 Licensee shall immediately report to Licensor's Resource Operations Center at (800) 832-5452 any conditions or activities upon the Premises known to Licensee which create a risk of harm to persons, property or the environment and shall take all reasonable actions necessary to prevent injury to persons, property, or the environment arising out of such conditions or activities; provided, however, that Licensee's reporting to Licensor shall not relieve Licensee of any obligation whatsoever imposed on it by this License. Licensee shall promptly respond to Licensor's request for information regarding said conditions or activities.
- 17.6 During the term of this License, Licensor may, at Licensor's option, require Licensee to conduct an environmental audit, including but not limited to sampling, of the Premises through an environmental consulting engineer acceptable to Licensor, at Licensee's sole cost and expense, to determine if any noncompliance or environmental damage to the Premises has occurred during occupancy thereof by Licensee. The audit shall be conducted to Licensor's satisfaction and a copy of the audit report shall promptly be provided to Licensor for its review. Licensee shall pay all expenses for any remedial or corrective action that may be required as a result of said audit to correct any noncompliance or environmental damage, and Licensee shall diligently pursue and complete all necessary work prior to termination of this License. Licensee's obligations under this Section 17.6 shall survive termination of this License.
- 17.7 Notwithstanding anything in this Section 17, the parties agree that Licensor has no duty or obligation to monitor Licensee's use of the Premises to determine Licensee's compliance with Environmental Laws, it being solely Licensee's responsibility to ensure that Licensee's use of the Premises is compliant. Neither the exercise nor the failure by Licensor to exercise any rights granted in this Section will alter the liability allocation provided by this License.
- 17.8 "**Environmental Law(s)**" shall mean any federal, state, local, or tribal law, statute, ordinance, code, rule, regulation, policy, common law, license, authorization, decision, order, or injunction which pertains to health, safety, any Hazardous Material, or the environment (including but not limited to ground, air, water, or noise pollution or contamination, and underground or above-ground tanks) and shall include, without limitation, CERCLA 42 U.S.C. §9601 et seq.; the Resource Conservation and Recovery Act, 42 U.S.C. §6901 et seq.; the Hazardous Materials Transportation Act, 49 U.S.C. §5101 et seq.; the Federal Water Pollution Control Act, 33 U.S.C.

§1251 et seq.; the Clean Air Act, 42 U.S.C. §7401 et seq.; the Toxic Substances Control Act, 15 U.S.C. §2601 et seq.; the Safe Drinking Water Act, 42 U.S.C. §300f et seq.; the Emergency Planning and Community Right-to-Know Act, 42 U.S.C. 11001 et seq.; the Federal Insecticide, Fungicide and Rodenticide Act, 7 U.S.C. 136 to 136y; the Oil Pollution Act, 33 U.S.C. 2701 et seq.; and the Occupational Safety and Health Act, 29 U.S.C. 651 et seq.; all as have been amended from time to time, and any other federal, state, local, or tribal environmental requirements, together with all rules, regulations, orders, and decrees now or hereafter promulgated under any of the foregoing, as any of the foregoing now exist or may be changed or amended or come into effect in the future.

- 17.9 **"Hazardous Material(s)"** shall include but shall not be limited to any substance, material, or waste that is regulated by any Environmental Law or otherwise regulated by any federal, state, local, or tribal governmental authority because of toxic, flammable, explosive, corrosive, reactive, radioactive or other properties that may be hazardous to human health or the environment, including without limitation asbestos and asbestos-containing materials, radon, petroleum and petroleum products, urea formaldehyde foam insulation, methane, lead-based paint, polychlorinated biphenyl compounds, hydrocarbons or like substances and their additives or constituents, pesticides, agricultural chemicals, and any other special, toxic, or hazardous (i) substances, (ii) materials, or (iii) wastes of any kind, including without limitation those now or hereafter defined, determined, or identified as "hazardous chemicals", "hazardous substances," "hazardous materials," "toxic substances," or "hazardous wastes" in any Environmental Law.

### **DISCLAIMER OF WARRANTIES**

18. No Warranties.

18.1 **LICENSOR'S DUTIES AND WARRANTIES ARE LIMITED TO THOSE EXPRESSLY STATED IN THIS LICENSE AND SHALL NOT INCLUDE ANY IMPLIED DUTIES OR IMPLIED WARRANTIES, NOW OR IN THE FUTURE. NO REPRESENTATIONS OR WARRANTIES HAVE BEEN MADE BY LICENSOR OTHER THAN THOSE CONTAINED IN THIS LICENSE. LICENSEE HEREBY WAIVES ANY AND ALL WARRANTIES, EXPRESS OR IMPLIED, WITH RESPECT TO THE PREMISES OR WHICH MAY EXIST BY OPERATION OF LAW OR IN EQUITY, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, HABITABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

18.2 **LICENSOR MAKES NO WARRANTY, REPRESENTATION OR CONDITION OF ANY KIND, EXPRESS OR IMPLIED, CONCERNING (A) THE SCOPE OF THE LICENSE OR OTHER RIGHTS GRANTED HEREUNDER TO LICENSEE OR (B) WHETHER OR NOT LICENSEE'S CONSTRUCTION, MAINTENANCE, OWNERSHIP, USE OR OPERATION OF THE PIPELINE WILL VIOLATE OR INFRINGE UPON THE RIGHTS, INTERESTS AND ESTATES OF THIRD PARTIES, INCLUDING, WITHOUT LIMITATION, ANY LEASES, USE RIGHTS, EASEMENTS AND LIENS OF ANY THIRD PARTY.**

19. Disclaimer of Warranty for Quiet Enjoyment. **LICENSOR DOES NOT WARRANT ITS TITLE TO THE PREMISES NOR UNDERTAKE TO DEFEND LICENSEE IN THE PEACEABLE POSSESSION OR USE THEREOF. NO COVENANT OF QUIET ENJOYMENT IS MADE.**

20. Eviction at Risk of Licensee. In case of the eviction of Licensee by anyone owning, claiming title to, or claiming any interest in the Premises, or by the abandonment by Licensor of the affected rail corridor, Licensor shall not be liable (i) to refund Licensee any compensation paid hereunder, except for the pro-rata part of any recurring charge paid in advance, or (ii) for any damages or costs Licensee sustains in connection with the eviction.

### **LIENS AND TAXES**

21. Liens and Charges. Licensee shall promptly pay and discharge any and all liens arising out of any construction, alterations or repairs done, suffered or permitted to be done by Licensee on the Premises. Licensor is hereby authorized to post any notices or take any other action upon or with respect to the

Premises that is or may be permitted by law to prevent the attachment of any such liens to the Premises; provided, however, that failure of Licensor to take any such action shall not relieve Licensee of any obligation or liability under this **Section 21** or any other Section of this License.

22. **Taxes.** Licensee shall pay when due any taxes, assessments or other charges (collectively, "**Taxes**") levied or assessed by any governmental or quasi-governmental body upon the Pipeline or any other improvements constructed or installed on the Premises by or for Licensee (collectively, the "**Improvements**") or any Taxes levied or assessed against Licensor or the Premises that are attributable to the Improvements.

### **DEFAULT, TERMINATION, AND SURRENDER**

23. **Default and Termination.** In addition to and not in limitation of Licensor's right to terminate for failure to provide evidence of insurance as required pursuant to the terms of **Section 15**, the following events are also deemed to be events of default pursuant to which Licensor has the right to terminate as set forth below:

23.1 If default shall be made in any of Licensee's covenants, agreements, or obligations contained in this License and Licensee fails to cure said default within thirty (30) days after written notice is provided to Licensee by Licensor, or in case of any assignment or transfer of this License in violation of **Section 26** below, Licensor may, at its option, terminate this License by serving five (5) days' notice in writing upon Licensee. Notwithstanding the foregoing, Licensor shall have the right to terminate this License immediately if Licensee fails to provide evidence of insurance as required in **Section 15**.

23.2 Should Licensee not comply fully with the obligations of **Section 17** regarding the handling or transporting of Hazardous Materials, notwithstanding anything contained in any other provision of this License, Licensor may, at its option, terminate this License by serving five (5) days' notice in writing upon Licensee.

23.3 Any waiver by Licensor of any default or defaults shall not constitute a waiver of the right to terminate this License for any subsequent default or defaults, nor shall any such waiver in any way affect Licensor's ability to enforce any Section of this License. The remedies set forth in this **Section 23** shall be in addition to, and not in limitation of, any other remedies that Licensor may have at law or in equity.

23.4 In addition to and not in limitation of Licensor's rights to terminate this License for failure to provide evidence of insurance or occurrence of defaults as described above, this License may be terminated by either party, at any time, by serving thirty (30) days' written notice of termination upon the other party. Such termination shall not release either party hereto from any liability or obligation under the License, whether of indemnity or otherwise, resulting from any acts, omissions or events happening prior to the date of termination or thereafter in case by the terms of the License it is provided that anything shall or may be done after termination hereof.

24. **Surrender of the Premises.**

24.1 On or before expiration or termination of this License for any reason, Licensee shall, at its sole cost and expense:

24.1.1 if so directed by Licensor in writing, remove the Improvements, the Pipeline and all appurtenances thereto, or, at the sole discretion of Licensor, fill and cap or otherwise appropriately decommission the Pipeline with a method satisfactory to Licensor;

24.1.2 report and restore any damage to the Premises or Licensor's other property arising from, growing out of, or connected with Licensee's use of the Premises;

24.1.3 remedy any unsafe conditions on the Premises created or aggravated by Licensee; and

- 24.1.4 leave the Premises in substantially the condition which existed as of the Effective Date, or as otherwise agreed to by Licensor.
- 24.2 Upon any expiration or termination of this License, if Licensee fails to surrender the Premises to Licensor or if Licensee fails to complete its obligations under **Section 24.1** above (the "**Restoration Obligations**"), Licensee shall have a limited license to enter upon the Premises solely to the extent necessary for Licensee to complete the Restoration Obligations, and all liabilities and obligations of Licensee hereunder shall continue in effect until the Premises are surrendered and the Restoration Obligations are completed. Neither termination nor expiration shall release Licensee from any liability or obligation under this License, whether of indemnity or otherwise, resulting from any acts, omissions or events happening prior to the date of termination, or, if later, the date when Licensee surrenders the Premises and all of the Restoration Obligations are completed.
- 24.3 If Licensee fails to complete the Restoration Obligations within thirty (30) days after the date of such termination of its tenancy, then Licensor may, at its election, either: (i) remove the Pipeline and the other Improvements or otherwise restore the Premises, and in such event Licensee shall, within thirty (30) days after receipt of bill therefor, reimburse Licensor for cost incurred, (ii) upon written notice to Licensee, take and hold the Pipeline and the other Improvements and personal property as its sole property, without payment or obligation to Licensee therefor, or (iii) specifically enforce Licensee's obligation to restore and/or pursue any remedy at law or in equity against Licensee for failure to so restore. Further, if Licensor has consented to the Pipeline and the other Improvements remaining on the Premises following termination, Licensee shall, upon request by Licensor, provide a bill of sale in a form acceptable to Licensor conveying the Pipeline and the other Improvements to Licensor for no additional consideration.

#### **MISCELLANEOUS**

25. Successors and Assigns. All provisions contained in this License shall be binding upon, inure to the benefit of, and be enforceable by the respective successors and assigns of Licensor and Licensee to the same extent as if each such successor and assign was named a party to this License.
26. Assignment.
- 26.1 Licensee may not sell, assign, transfer, or hypothecate this License or any right, obligation, or interest herein (either voluntarily or by operation of law, merger, or otherwise) without the prior written consent of Licensor, which consent may not be unreasonably withheld or delayed by Licensor. Any attempted assignment by Licensee in violation of this **Section 26** shall be a breach of this License and, in addition, shall be voidable by Licensor in its sole and absolute discretion.
- 26.2 For purposes of this **Section 26**, the word "assign" shall include without limitation (a) any sale of the equity interests of Licensee following which the equity interest holders of Licensee immediately prior to such sale own, directly or indirectly, less than 50% of the combined voting power of the outstanding voting equity interests of Licensee, (b) any sale of all or substantially all of the assets of (i) Licensee and (ii) to the extent such entities exist, Licensee's parent and subsidiaries, taken as a whole, or (c) any reorganization, recapitalization, merger or consolidation involving Licensee. Notwithstanding the foregoing, any reorganization, recapitalization, merger or consolidation following which the equity interest holders of Licensee immediately prior to such reorganization, recapitalization, merger or consolidation own, directly or indirectly, at least 50% of the combined voting power of the outstanding voting equity interests of Licensee or any successor thereto or the entity resulting from such reorganization, recapitalization, merger or consolidation shall not be deemed an assignment. THIS LICENSE SHALL NOT RUN WITH THE LAND WITHOUT THE EXPRESS WRITTEN CONSENT OF LICENSOR, SUCH CONSENT TO BE IN LICENSOR'S SOLE DISCRETION.
- 26.3 Notwithstanding the provisions of **Section 26.1** above or anything contained in this License to the contrary, if Licensee sells, assigns, transfers, or hypothecates this License or any interest herein in contravention of the provisions of this License (a "**Purported Assignment**") to another party (a "**Purported Transferee**"), the Purported Transferee's enjoyment of the rights and privileges

granted under this License shall be deemed to be the Purported Transferee's agreement to be bound by all of the terms and provisions of this License, including but not limited to the obligation to comply with the provisions of **Section 15** above concerning insurance requirements. In addition to and not in limitation of the foregoing, Licensee, for itself, its successors and assigns, shall indemnify, defend and hold harmless Licensor for all Liabilities of any nature, kind or description of any person or entity directly or indirectly arising out of, resulting from or related to (in whole or in part) a Purported Assignment. The provisions of this **Section 26.3** shall survive the expiration or earlier termination of this License.

26.4 Licensor shall have the right to transfer and assign, in whole or in part, all of its rights and obligations under this License, and upon any such transfer or assignment, Licensor shall be released from any further obligations hereunder, and Licensee agrees to look solely to the successor in interest of Licensor for the performance of such obligations.

27. **Notices.** Any notice, invoice, or other writing required or permitted to be given hereunder by one party to the other shall be in writing and the same shall be given and shall be deemed to have been served and given if (i) placed in the United States mail, certified, return receipt requested, or (ii) deposited into the custody of a nationally recognized overnight delivery service, addressed to the party to be notified at the address for such party specified below, or to such other address as the party to be notified may designate by giving the other party no less than thirty (30) days' advance written notice of such change in address.

If to Licensor: Jones Lang LaSalle Brokerage, Inc.  
 2650 Lou Menk Drive, MOB2  
 Fort Worth, TX 76131  
 Attn: Permits/Licenses

with a copy to: BNSF Railway Company  
 2650 Lou Menk Dr.  
 Fort Worth, TX 76131  
 Attn: Senior Manager Real Estate

If to Licensee: City of Topeka  
 620 SE Madison Avenue  
 Topeka, KS 66607  
 Attn: \_\_\_\_\_

28. **Survival.** Neither termination nor expiration will release either party from any liability or obligation under this License, whether of indemnity or otherwise, resulting from any acts, omissions or events happening prior to the date of termination or expiration, or, if later, the date when the Pipeline and the other Improvements are removed and the Restoration Obligations are completed in accordance with the terms hereof.

29. **Recordation.** It is understood and agreed that this License shall not be placed or allowed to be placed on public record.

30. **Applicable Law.** All questions concerning the interpretation or application of provisions of this License shall be decided according to the substantive laws of the State of Texas without regard to conflicts of law provisions.

31. **Severability.** To the maximum extent possible, each provision of this License shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this License shall be prohibited by, or held to be invalid under, applicable law, such provision shall be ineffective solely to the extent of such prohibition or invalidity, and this shall not invalidate the remainder of such provision or any other provision of this License.

32. **Integration.** This License is the full and complete agreement between Licensor and Licensee with respect to all matters relating to Licensee's use of the Premises, and supersedes any and all other agreements between the parties hereto relating to Licensee's use of the Premises as described herein. However,

nothing herein is intended to terminate any surviving obligation of Licensee or Licensee's obligation to defend and hold Licensor harmless in any prior written agreement between the parties.

33. Joint and Several Liability. If Licensee consists of two or more parties, all the covenants and agreements of Licensee herein contained shall be the joint and several covenants and agreements of such parties.
34. Waiver. The waiver by Licensor of the breach of any provision herein by Licensee shall in no way impair the right of Licensor to enforce that provision for any subsequent breach thereof.
35. Interpretation.
- 35.1 This License shall be interpreted in a neutral manner, and not more strongly for or against any party based upon the source of the draftsmanship; both parties hereby agree that this License shall not be subject to the principle that a contract would be construed against the party which drafted the same. Article titles, headings to sections and paragraphs and the table of contents (if any) are inserted for convenience of reference only and are not intended to be a part or to affect the meaning or interpretation hereof. The exhibit or exhibits referred to herein shall be construed with and as an integral part of this License to the same extent as if they were set forth verbatim herein.
- 35.2 As used herein, "include", "includes" and "including" are deemed to be followed by "without limitation" whether or not they are in fact followed by such words or words of like import; "writing", "written" and comparable terms refer to printing, typing, lithography and other means of reproducing words in a visible form; references to any person are also to that person's successors and permitted assigns; "hereof", "herein", "hereunder" and comparable terms refer to the entirety hereof and not to any particular article, section, or other subdivision hereof or attachment hereto; references to any gender include references to the masculine or feminine as the context requires; references to the plural include the singular and vice versa; and references to this License or other documents are as amended, modified or supplemented from time to time.
36. Counterparts. This License may be executed in multiple counterparts, each of which shall, for all purposes, be deemed an original but which together shall constitute one and the same instrument, and the signature pages from any counterpart may be appended to any other counterpart to assemble fully executed documents, and counterparts of this License may also be exchanged electronically and any electronic version of any party's signature shall be deemed to be an original signature for all purposes.
37. Licensor's Representative. Jones Lang LaSalle Brokerage, Inc. is acting as representative for BNSF Railway Company.

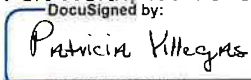
**END OF PAGE – SIGNATURE PAGE FOLLOWS**

This License has been duly executed by the parties hereto as of the Effective Date.

**LICENSOR:**

**BNSF Railway Company**, a Delaware corporation

By: Jones Lang LaSalle Brokerage, Inc.  
2650 Lou Menk Drive, MOB2  
Fort Worth, TX 76131

By:   
495C9951FFCB45A...

By: Patricia Villegas

Title: Vice President, Permits

**LICENSEE:**

**City of Topeka**, a Kansas municipality

By:   
09A473571A5843A...

By: Robert M. Perez

Title: City Manager

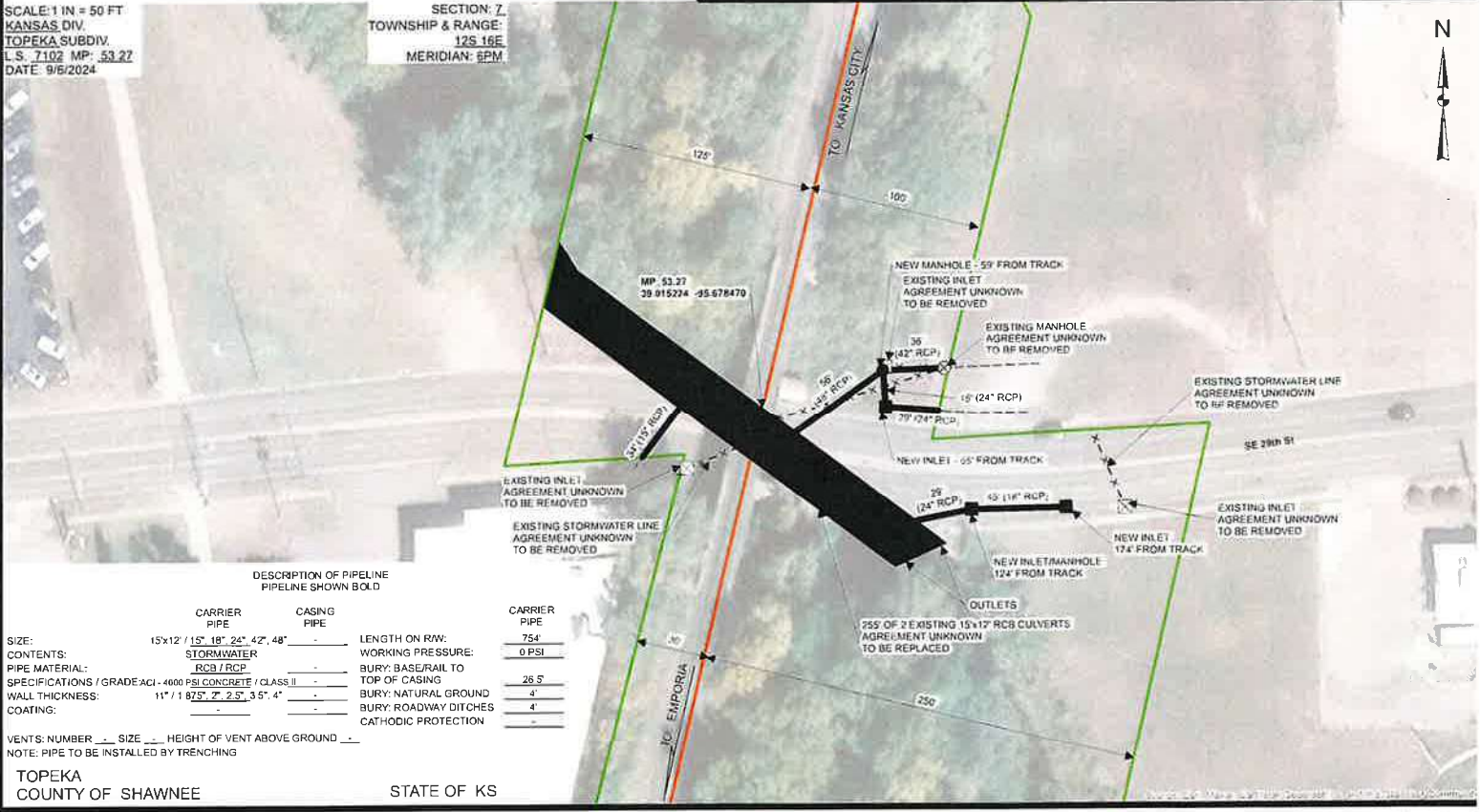
Design Envelope ID: 43B53A30-F932-4F8B-9945-9F40DD1183EF

TRACKING NO: 24W-20828

# EXHIBIT "A"

SCALE: 1 IN = 50 FT.  
 KANSAS DIV.  
 TOPEKA SUBDIV.  
 L.S. 7102 MP: 53.27  
 DATE: 9/6/2024

SECTION: 7  
 TOWNSHIP & RANGE:  
 12S 16E  
 MERIDIAN: 6PM



DESCRIPTION OF PIPELINE  
 PIPELINE SHOWN BOLD

	CARRIER PIPE	CASING PIPE	LENGTH ON RW:	CARRIER PIPE
SIZE:	15" x 12" / 15", 18", 24", 42", 48"	-		754
CONTENTS:	STORMWATER	-	WORKING PRESSURE:	0 PSI
PIPE MATERIAL:	RCB / RCP	-	BURY: BASE RAIL TO TOP OF CASING	26.5'
SPECIFICATIONS / GRADE:	ACI - 4000 PSI CONCRETE / CLASS II	-	BURY: NATURAL GROUND	4'
WALL THICKNESS:	11" / 1 8/16", 2", 2.5", 3.5", 4"	-	BURY: ROADWAY DITCHES	4'
COATING:	-	-	CATHODIC PROTECTION	-

VENTS: NUMBER \_\_\_ SIZE \_\_\_ HEIGHT OF VENT ABOVE GROUND \_\_\_  
 NOTE: PIPE TO BE INSTALLED BY TRENCHING

TOPEKA  
 COUNTY OF SHAWNEE  
 STATE OF KS

REVISION 1

DRAWN BY: JNC DRAWING NO: 906

## PIPELINE LICENSE

THIS PIPELINE LICENSE ("**License**") is made to be effective April 14, 2025 (the "**Effective Date**") by and between **BNSF RAILWAY COMPANY**, a Delaware corporation ("**Licensor**") and **CITY OF TOPEKA**, a Kansas municipality ("**Licensee**").

In consideration of the mutual covenants contained herein, the parties agree to the following:

### GENERAL

1. **Grant of License.** Licensor hereby grants Licensee a non-exclusive license, subject to all rights, interests, and estates of third parties, including, without limitation, any leases, use rights, easements, liens, or other encumbrances, and upon the terms and conditions set forth below, to construct and maintain, in strict accordance with the drawings and specifications approved by Licensor as part of Licensee's application process (the "**Drawings and Specifications**"), one (1) pipeline, 12 inches in diameter inside a 20 inch steel casing (collectively, the "**Pipeline**"), across or along Licensor's rail corridor at or near the station of Topeka, County of Shawnee, State of Kansas, Line Segment 7102, Mile Post 53.27 as shown on the attached Drawing No. 91477, dated August, 22, 2024, attached hereto as **Exhibit "A"** and incorporated herein by reference (the "**Premises**").
2. **Term.** This License shall commence on the Effective Date and shall continue for a period of twenty-five (25) years, subject to prior termination as hereinafter described.
3. **Existing Improvements.** Licensee shall not disturb any improvements of Licensor or Licensor's existing lessees, licensees, easement beneficiaries or lien holders, if any, or interfere with the use, repair, maintenance or replacement of such improvements.
4. **Use of the Premises.** Licensee shall use the Premises solely for construction, maintenance, and use of the Pipeline in accordance with the Drawings and Specifications. The Pipeline shall carry domestic water, and Licensee shall not use the Pipeline to carry any other material or use the Premises for any other purpose. Licensee is expressly prohibited from using or allowing any telecommunication facilities or equipment within the Premises, or using or allowing the use of the Premises for any other purpose.
5. **Alterations.** Except as set forth in this License, Licensee may not make any alterations to the Premises or permanently affix anything to the Premises or any buildings or other structures adjacent to the Premises without Licensor's prior written consent.

### COMPENSATION

6. **License Fee.** Licensee shall pay Licensor, prior to the Effective Date, a one-time payment (in lieu of recurring periodic fixed license fees) in the amount the sum of Five Thousand Seven Hundred and No/100 Dollars (\$5,700.00) as compensation for the use of the Premises.
7. **Costs and Expenses.**
  - 7.1 For the purpose of this License, "cost" or "costs" and "expense" or "expenses" includes, but is not limited to, actual labor and material costs including all assignable additives, and material and supply costs at current value where used.
  - 7.2 Licensee agrees to reimburse Licensor (pursuant to the terms of **Section 8** below) for all costs and expenses incurred by Licensor in connection with Licensee's use of the Premises or the presence, construction and maintenance of the Pipeline, including but not limited to the furnishing of Licensor's flaggers and any vehicle rental costs incurred, inspection coordination, safety, mobilization and/or other observation services described in this License (collectively, the "**Services**"). Licensee shall bear the cost of the Services, when deemed necessary by Licensor's representative. Flagging costs shall include, but not be limited to, the following: pay for at least an eight (8) hour basic day with time and one-half or double time for overtime, rest days and holidays (as applicable); vacation allowance; paid holidays (as applicable); railway and

unemployment insurance; public liability and property damage insurance; health and welfare benefits; transportation; meals; lodging and supervision. Negotiations for railway labor or collective bargaining agreements and rate changes authorized by appropriate Federal authorities may increase flagging rates. Flagging rates in effect at the time of performance by the flaggers will be used to calculate the flagging costs pursuant to this **Section 7**.

7.3 Licensor, at its sole discretion, may elect to designate a third party (the "**Scheduling Agent**"), to perform and/or arrange for the performance of the Services.

8. **Payment Terms.** All invoices are due thirty (30) days after the date of invoice. If Licensee fails to pay any monies due to Licensor within thirty (30) days after the invoice date, then Licensee shall pay interest on such unpaid sum from the due date until paid at an annual rate equal to the lesser of (i) the prime rate last published in *The Wall Street Journal* in the preceding December plus two and one-half percent (2-1/2%), or (ii) the maximum rate permitted by law.

### **LICENSOR'S RESERVED RIGHTS**

9. **Reserved Rights of Use.** Licensor excepts and reserves the right, to be exercised by Licensor and any other parties who may obtain written permission or authority from Licensor:

9.1 to maintain, use, operate, repair, replace, modify and relocate any utility, power or communication pipe/lines/cables and appurtenances (other than the Pipeline) and other facilities or structures of like character upon, over, under or across the Premises existing as of the Effective Date;

9.2 to construct, maintain, renew, use, operate, change, modify and relocate any tracks or additional facilities, structures and related appurtenances upon, over, under or across the Premises; or

9.3 to use the Premises in any manner as Licensor in its sole discretion deems appropriate, provided Licensor uses all commercially reasonable efforts to avoid material interference with the use of the Premises by Licensee for the purpose specified in **Section 4** above.

10. **Right to Require Relocation.** If at any time during the term of this License, Licensor desires the use of its rail corridor in such a manner as would, in Licensor's reasonable opinion, be interfered with by the Pipeline, Licensee shall, at its sole expense, within thirty (30) days after receiving written notice from Licensor to such effect, make such changes in the Pipeline as in the sole discretion of Licensor may be necessary to avoid interference with the proposed use of Licensor's rail corridor, including, without limitation, the relocation of the Pipeline, or the construction of a new pipeline to replace the Pipeline. Notwithstanding the foregoing, Licensee agrees to make all emergency changes and minor adjustments, as determined by Licensor in its sole discretion, to the Pipeline promptly upon Licensor's request.

### **LICENSEE'S OPERATIONS**

11. **Construction and Maintenance of the Pipeline.**

11.1 Licensee shall not enter the Premises or commence construction unless accompanied by Licensor's representative, the Scheduling Agent or its designee. Licensee shall notify Licensor's representative or the Scheduling Agent at ROWCoordinator@BNSF.com at least ten (10) business days prior to installation of the Pipeline and prior to entering the Premises for any subsequent maintenance thereon. Only in the event of emergency, Licensee shall notify Licensor's Roadmaster of entry onto the Premises, at the telephone 785-435-5422, as soon as practicable and shall promptly thereafter follow up with written notice of such entry to the email provided above.

11.2 Licensee's on-site supervisors shall retain/maintain a fully executed copy of this License at all times while on the Premises.

11.3 While on the Premises, Licensee shall use only public roadways to cross from one side of Licensor's tracks to the other.

- 11.4 Any contractors or subcontractors performing work on the Pipeline or entering the Premises on behalf of Licensee shall be deemed servants and agents of Licensee for purposes of this License.
- 11.5 Under no conditions shall Licensee be permitted to conduct any tests, investigations or any other activity using mechanized equipment and/or machinery, or place or store any mechanized equipment, tools or other materials, within twenty-five (25) feet of the centerline of any railroad track on the Premises unless Licensee has obtained prior written approval from Licensor. Licensee shall, at its sole cost and expense, perform all activities on and about the Premises, including without limitation all construction and maintenance of the Pipeline, in such a manner and of such materials as not at any time to endanger or interfere with (i) the existence or use of present or future tracks, roadbeds, or property of Licensor, (ii) the safe operation and activities of Licensor or existing third parties, or (iii) the rights or interests of third parties. If ordered to cease using the Premises at any time by Licensor's personnel due to any hazardous condition, Licensee shall immediately do so. Notwithstanding the foregoing right of Licensor, the parties agree that Licensor has no duty or obligation to monitor Licensee's use of the Premises to determine the safe nature thereof, it being solely Licensee's responsibility to ensure that Licensee's use of the Premises is safe. Neither the exercise nor the failure by Licensor to exercise any rights granted in this Section will alter the liability allocation provided by this License.
- 11.6 Licensee shall, at its sole cost and expense, construct and maintain the Pipeline in such a manner and of such material that the Pipeline will not at any time endanger or interfere with (i) the existence or use of present or future tracks, roadbeds, or property of Licensor, (ii) the safe operation and activities of Licensor or existing third parties, or (iii) the rights or interests of third parties. The construction of the Pipeline shall be completed within one (1) year of the Effective Date, and any subsequent maintenance shall be completed within one (1) year of initiation. Within fifteen (15) days after completion of the construction of the Pipeline or the performance of any subsequent maintenance thereon, Licensee shall, at Licensee's own cost and expense, restore the Premises to substantially their state as of the Effective Date, unless otherwise approved in advance by Licensor in writing. On or before expiration or termination of this License for any reason, Licensee shall, at its sole cost and expense, surrender the Premises to Licensor pursuant to the terms and conditions set forth in **Section 24** hereof.
- 11.7 Licensor may direct one or more of its field engineers or inspectors to observe or inspect the construction and/or maintenance of the Pipeline at any time for compliance with the Drawings and Specifications and Legal Requirements (defined below). Licensee shall reimburse Licensor for the cost of such observation or inspection related services pursuant to **Section 8**. If ordered at any time to halt construction or maintenance of the Pipeline by Licensor's personnel due to non-compliance with the Drawings and Specifications or any other hazardous condition, Licensee shall immediately do so. Notwithstanding the foregoing right of Licensor, the parties agree that Licensor has no duty or obligation to observe or inspect, or to halt work on, the Pipeline, it being solely Licensee's responsibility to ensure that the Pipeline is constructed and maintained in strict accordance with the Drawings and Specifications and in a safe and workmanlike manner in compliance with all terms hereof. Neither the exercise of, nor the failure by Licensor to exercise, any right granted by this Section will alter in any way the liability allocation provided by this License. If at any time Licensee shall, in the sole judgment of Licensor, fail to properly perform its obligations under this **Section 11**, Licensor may, at its option and at Licensee's sole expense, arrange for the performance of such work as it deems necessary for the safety of its operations and activities. Licensee shall promptly reimburse Licensor for all costs and expenses of such work, pursuant to the terms of **Section 8**. Licensor's failure to perform any obligations of Licensee shall not alter the liability allocation hereunder.

## 12. Boring and Excavation.

- 12.1 Prior to Licensee conducting any boring, excavation, or similar work on or about any portion of the Premises, Licensee shall contact the applicable State's call-before-you-dig utility location service to have 3<sup>rd</sup> parties mark the location of utilities. Licensee shall explore the proposed location for such work with hand tools to a depth of at least three (3) feet below the surface of the

ground to determine whether pipelines or other structures exist below the surface, provided, however, that in lieu of the foregoing hand-tool exploration, Licensee shall have the right to use suitable detection equipment or other generally accepted industry practice (e.g., consulting with the United States Infrastructure Corporation) to determine the existence or location of pipelines and other subsurface structures prior to drilling or excavating with mechanized equipment. Licensee shall request information from Licensor concerning the existence and approximate location of Licensor's underground lines, utilities, and pipelines at or near the vicinity of the proposed Pipeline by contacting Licensor's Telecommunications Helpdesk, currently at 1-800-533-2891 (option 1, then option 7), at least ten (10) business days prior to installation of the Pipeline. Upon receiving Licensee's timely request, Licensor will provide Licensee with the information Licensor has in its possession regarding any existing underground lines, utilities, and pipelines at or near the vicinity of the proposed Pipeline and, if applicable, identify the location of such lines on the Premises pursuant to Licensor's standard procedures. Licensor does not warrant the accuracy or completeness of information relating to subsurface conditions of the Premises and Licensee's operations will be subject at all times to the liability provisions herein.

- 12.2 For all bores greater than 26-inch diameter and at a depth less than 10.0 feet below bottom of rail, a soil investigation must be performed by Licensee and reviewed by Licensor prior to construction. This study is to determine if granular material is present, and to prevent subsidence during the installation process. If the investigation determines in Licensor's reasonable opinion that granular material is present, Licensor may select a new location for Licensee's use, or may require Licensee to furnish for Licensor's review and approval, in Licensor's sole discretion, a remedial plan to deal with the granular material. Once Licensor has approved any such remedial plan in writing, Licensee shall, at Licensee's sole cost and expense, carry out the approved plan in accordance with all terms thereof and hereof.
- 12.3 No wells shall be installed without prior written approval from Licensor.
- 12.4 Any open hole, boring, or well constructed on the Premises by Licensee shall be safely covered and secured at all times when Licensee is not working in the actual vicinity thereof. Following completion of that portion of the work, all holes or borings constructed on the Premises by Licensee shall be:
- 12.4.1 filled in to surrounding ground level with compacted bentonite grout; or
- 12.4.2 otherwise secured or retired in accordance with any applicable Legal Requirement. No excavated materials may remain on Licensor's property for more than ten (10) days, but must be properly disposed of by Licensee in accordance with applicable Legal Requirements.

## LIABILITY AND INSURANCE

### 13. Liability and Indemnification.

- 13.1 For purposes of this License: (a) "**Indemnitees**" means Licensor and Licensor's affiliated companies, partners, successors, assigns, legal representatives, officers, directors, shareholders, employees, and agents; (b) "**Liabilities**" means all claims, liabilities, fines, penalties, costs, damages, losses, liens, causes of action, suits, demands, judgments, and expenses (including, without limitation, court costs, reasonable attorneys' fees, costs of investigation, removal and remediation, and governmental oversight costs) environmental or otherwise; and (c) "**Licensee Parties**" means Licensee and Licensee's officers, agents, invitees, licensees, employees, or contractors, or any party directly or indirectly employed by any of them, or any party they control or exercise control over.
- 13.2 **TO THE FULLEST EXTENT PERMITTED BY LAW, LICENSEE SHALL, AND SHALL CAUSE ITS CONTRACTOR TO, RELEASE, INDEMNIFY, DEFEND AND HOLD HARMLESS INDEMNITEES FOR, FROM, AND AGAINST ANY AND ALL LIABILITIES OF ANY NATURE,**

**KIND, OR DESCRIPTION DIRECTLY OR INDIRECTLY ARISING OUT OF, RESULTING FROM, OR RELATED TO (IN WHOLE OR IN PART):**

- 13.2.1 **THIS LICENSE, INCLUDING, WITHOUT LIMITATION, ITS ENVIRONMENTAL PROVISIONS,**
  - 13.2.2 **ANY RIGHTS OR INTERESTS GRANTED PURSUANT TO THIS LICENSE,**
  - 13.2.3 **LICENSEE'S OCCUPATION AND USE OF THE PREMISES,**
  - 13.2.4 **THE ENVIRONMENTAL CONDITION AND STATUS OF THE PREMISES CAUSED BY OR CONTRIBUTED TO BY LICENSEE, OR**
  - 13.2.5 **ANY ACT OR OMISSION OF ANY LICENSEE PARTY.**
- 13.3 **TO THE FULLEST EXTENT PERMITTED BY LAW, LICENSEE NOW AND FOREVER WAIVES AND WILL INDEMNIFY, DEFEND, AND HOLD THE INDEMNITEES HARMLESS FROM ANY AND ALL CLAIMS THAT BY VIRTUE OF ENTERING INTO THIS LICENSE, LICENSOR IS A GENERATOR, OWNER, OPERATOR, ARRANGER, OR TRANSPORTER FOR THE PURPOSES OF THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT, AS AMENDED ("CERCLA") OR OTHER ENVIRONMENTAL LAWS (DEFINED BELOW). NOTHING IN THIS LICENSE IS MEANT BY EITHER PARTY TO CONSTITUTE A WAIVER OF ANY INDEMNITEE'S COMMON CARRIER DEFENSES AND THIS LICENSE SHOULD NOT BE SO CONSTRUED. IF ANY AGENCY OR COURT CONSTRUES THIS LICENSE TO BE A WAIVER OF ANY INDEMNITEE'S COMMON CARRIER DEFENSES, LICENSEE AGREES TO INDEMNIFY, HOLD HARMLESS, AND DEFEND INDEMNITEES FOR ANY LIABILITIES RELATED TO THAT CONSTRUCTION OF THIS LICENSE. IN NO EVENT AS BETWEEN LICENSOR AND LICENSEE AS TO USE OF THE PREMISES AS CONTEMPLATED BY THIS LICENSE SHALL LICENSOR BE RESPONSIBLE TO LICENSEE FOR THE ENVIRONMENTAL CONDITION OF THE PREMISES.**
- 13.4 **IF ANY EMPLOYEE OF ANY LICENSEE PARTY ASSERTS THAT HE OR SHE IS AN EMPLOYEE OF ANY INDEMNITEE, TO THE FULLEST EXTENT PERMITTED BY LAW, LICENSEE SHALL, AND SHALL CAUSE ITS CONTRACTOR TO, RELEASE, INDEMNIFY, DEFEND, AND HOLD THE INDEMNITEES HARMLESS FROM AND AGAINST ANY LIABILITIES ARISING OUT OF OR RELATED TO (IN WHOLE OR IN PART) ANY SUCH ASSERTION INCLUDING, BUT NOT LIMITED TO, ASSERTIONS OF EMPLOYMENT BY AN INDEMNITEE RELATED TO THE FOLLOWING OR ANY PROCEEDINGS THEREUNDER: THE FEDERAL EMPLOYERS' LIABILITY ACT, THE SAFETY APPLIANCE ACT, THE LOCOMOTIVE INSPECTION ACT, THE OCCUPATIONAL SAFETY AND HEALTH ACT, THE RESOURCE CONSERVATION AND RECOVERY ACT, AND ANY SIMILAR STATE OR FEDERAL STATUTE.**
- 13.5 **THE FOREGOING OBLIGATIONS OF LICENSEE SHALL NOT APPLY TO THE EXTENT LIABILITIES ARE PROXIMATELY CAUSED BY THE GROSS NEGLIGENCE OR WILLFUL MISCONDUCT OF ANY INDEMNITEE, BUT SHALL APPLY TO ALL OTHER LIABILITIES, INCLUDING THOSE ARISING FROM OR ATTRIBUTED TO ANY OTHER ALLEGED OR ACTUAL NEGLIGENCE, INTENTIONAL ACTS, OR STRICT LIABILITY OF ANY INDEMNITEE.**
- 13.6 **Upon written notice from Licensor, Licensee agrees to assume the defense of any lawsuit or other proceeding brought against any Indemnatee by any entity, relating to any matter covered by this License for which Licensee has an obligation to assume liability for and/or save and hold harmless any Indemnatee. Licensee shall pay all costs and expenses incident to such defense, including, but not limited to, reasonable attorneys' fees, investigators' fees, litigation and appeal expenses, settlement payments, and amounts paid in satisfaction of judgments.**

14. **Personal Property Risk of Loss.** ALL PERSONAL PROPERTY, INCLUDING, BUT NOT LIMITED TO, FIXTURES, EQUIPMENT, OR RELATED MATERIALS UPON THE PREMISES WILL BE AT THE RISK OF LICENSEE ONLY, AND NO INDEMNITEE WILL BE LIABLE FOR ANY DAMAGE THERETO OR THEFT THEREOF, WHETHER OR NOT DUE IN WHOLE OR IN PART TO THE NEGLIGENCE OF ANY INDEMNITEE.

15. **Insurance.** Licensee shall, at its sole cost and expense, procure and maintain during the term of this License the following insurance coverage:

15.1 **Commercial General Liability "CGL" Insurance.**

- a. The policy will provide a minimum of \$5,000,000 per occurrence and an aggregate limit of at least \$10,000,000 but in no event will the coverage be in an amount less than the amount otherwise carried by Licensee. Coverage must be purchased on a post 2004 ISO occurrence form or equivalent and include coverage for, but not limited to, the following:
  - Bodily Injury and Property Damage
  - Personal Injury and Advertising Injury
  - Fire legal liability
  - Products and completed operations
  - Contractual Liability for an "Insured Contract" consistent with the definition under the standard ISO general liability policy form.
- b. This policy will include the following endorsements or language, which shall be indicated on or attached to the certificate of insurance:
  - The definition of "Insured Contract" will be amended to remove any exclusion or other limitation for any work being done within 50 feet of Licensor's property;
  - Waiver of subrogation in favor of and acceptable to Licensor;
  - Additional insured endorsement in favor of and acceptable to Licensor and Jones Lang LaSalle Brokerage, Inc. to include coverage for ongoing and completed operations;
  - Separation of insureds;
  - The policy shall be primary and non-contributing with respect to any insurance carried by Licensor.
- c. The parties agree that the workers' compensation and employers' liability related exclusions in the CGL policy(s) are intended to apply to employees of the policyholder and will not apply to Licensor's employees.
- d. No other endorsements that limit coverage with respect to Licensee's obligations under this agreement may be included on the policy.

15.2 **Business Automobile Insurance.**

- a. The insurance will provide minimum coverage with a combined single limit of at least \$1,000,000 per accident, and include coverage for, but not limited to the following:
  - Bodily injury and property damage.
  - Any and all vehicles owned, used or hired.
- b. The policy will include the following endorsements or language, which will be indicated on or attached to the certificate of insurance:
  - Waiver of subrogation in favor of and acceptable to Licensor;
  - Additional insured endorsement in favor of and acceptable to Licensor;
  - Separation of insureds;
  - The policy shall be primary and non-contributing with respect to any insurance carried by Licensor.

15.3 Workers' Compensation and Employers' Liability Insurance.

- a. The policy will provide coverage of all employees performing any part of the installation or maintenance of the Pipeline including coverage for, but not limited to:
  - Licensee's statutory liability under the workers' compensation laws of the state(s) in which the work or services under this agreement are to be performed. The policy will cover all of Licensee's employees, regardless of whether such coverage is optional under the law of that state(s).
  - Employers' Liability (Part B) with limits of at least \$500,000 each accident, \$500,000 by disease policy limit, \$500,000 by disease each employee.
- b. The policy will include contain the following endorsements or language, which shall be indicated on or attached to the certificate of insurance:
  - Waiver of subrogation in favor of and acceptable to Licensor.

15.4 Railroad Protective Liability Insurance. The policy will name only Licensor as the Insured and will provide coverage of at least \$5,000,000 per occurrence and \$10,000,000 in the aggregate. The coverage obtained under this policy shall only be effective during the initial installation and/or construction of the Pipeline. **THE CONSTRUCTION OF THE PIPELINE SHALL BE COMPLETED WITHIN ONE (1) YEAR OF THE EFFECTIVE DATE.** If further maintenance of the Pipeline is needed at a later date, an additional Railroad Protective Liability Insurance Policy shall be required. The policy will be issued on a standard ISO form CG 00 35 12 04 and include the following:

- Endorsed to include the Pollution Exclusion Amendment.
- Endorsed to include the Limited Seepage and Pollution Endorsement.
- Endorsed to remove any exclusion for punitive damages.
- Endorsed to include Evacuation Expense Coverage Endorsement.
- No other endorsements restricting coverage may be added.
- The original policy must be provided to Licensor and Licensee shall not perform any work or services of any kind under this agreement until Licensor has reviewed and approved the policy.
- The definition of "Physical Damage to Property" will be endorsed to read: "means direct and accidental loss of or damage to all property owned by any named insured and all property in any named insured's care, custody and control (including, but not limited to rolling stock and their contents, mechanical construction equipment or motive power equipment, railroad tracks, roadbeds, catenaries, signals, tunnels, bridges and buildings) arising out of the acts or omissions of the contractor named on the Declarations."

In lieu of providing a Railroad Protective Liability Policy, for a period of one (1) year from the Effective Date, Licensee may participate in Licensor's Blanket Railroad Protective Liability Insurance Policy available to Licensee or its contractor. The limits of coverage are the same as above. The cost is \$1266.00.

- Licensee may **elect** to participate in Licensor's Blanket Policy;
- Licensee **declines** to participate in Licensor's Blanket Policy.

15.5 Intentionally deleted.

15.6 Other Requirements:

- 15.6.1 Where allowable by law, no exclusion for punitive damages may be included in any policy.
- 15.6.2 Licensee agrees to waive its right of recovery against Licensor for all claims and suits against Licensor. In addition, Licensee's insurers, through the terms of the policy or policy endorsement, waive their right of subrogation against Licensor for all claims and suits. Licensee further waives its right of recovery, and its insurers also waive their right of

subrogation against Licensor for loss of Licensee's owned or leased property or property under Licensee's care, custody, or control.

- 15.6.3 Allocated Loss Expense, including but not limited to defense costs and expenses, will be in addition to all policy limits for coverage under the insurance requirements.
- 15.6.4 Licensee is not allowed to self-insure without the prior written consent of Licensor. If Licensor allows Licensee to self-insure, Licensee shall directly cover any self-insured retention or other financial responsibility for claims in lieu of insurance. Any and all Licensor liabilities that would otherwise be covered by Licensee's insurance in accordance with the provisions of this agreement, will be covered as if Licensee elected not to include a self-insured retention or other financial responsibility for claims.
- 15.6.5 Prior to entering the Premises or commencing any work related to the installation or subsequent maintenance of the Pipeline, Licensee shall furnish to Licensor an acceptable certificate(s) of insurance from an authorized representative evidencing the required coverage(s), endorsements, and amendments.
- 15.6.6 Licensee shall notify BNSF in writing at least 30 days prior to any cancellation, non-renewal, substitution or material alteration of any insurance requirement.
- 15.6.7 Any insurance policy shall be written by a reputable insurance company acceptable to Licensor or with a current Best's Guide Rating of A- and Class VII or better, and authorized to do business in the state(s) in which the service is to be provided.
- 15.6.8 If the coverage provided by any of the insurance policies required by this agreement is purchased on a "claims made" basis, Licensee hereby agrees to maintain coverage in force for a minimum of three years after expiration, cancellation or termination of this agreement.
- 15.6.9 Licensee agrees to provide evidence to Licensor that it has the required coverage in place at least annually or in the event of a renewal or material change of coverage
- 15.6.10 Licensee represents that this License has been thoroughly reviewed by Licensee's insurance agent(s)/broker(s), and that Licensee has instructed them to procure the insurance coverage required by this License.
- 15.6.11 Not more frequently than once every five years, Licensor may, at its discretion, reasonably modify the insurance requirements to reflect the then-current risk management practices in the railroad industry and underwriting practices in the insurance industry.
- 15.6.12 If Licensee will subcontract any portion of the operation, Licensee shall require that the subcontractor provide and maintain insurance coverage(s) as set forth herein, naming Licensor as an additional insured. In addition, Licensee shall require that the subcontractor shall release, defend and indemnify Licensee to the same extent and under the same terms and conditions as Licensee is required to release, defend and indemnify Licensor under this agreement.
- 15.6.13 Failure to provide evidence as required by this section shall entitle, but not require, Licensor to terminate this License immediately. Acceptance of a certificate that does not comply with this section shall not operate as a waiver of Licensee's obligations hereunder.
- 15.6.14 The fact that Licensee obtains insurance (including, without limitation, self-insurance) shall not release or diminish Licensee's liabilities or obligations including, without limitation, the liabilities and obligations under the indemnity provisions of the License. Damages recoverable by Licensor shall not be limited by the amount of the required insurance coverage.

- 15.6.15 In the event of a claim or lawsuit involving BNSF arising out of this Agreement, Licensee will make the policy covering such claims or lawsuits available to BNSF.
- 15.6.16 If Licensee maintains broader coverage and/or higher limits than the minimum requirements in this Agreement, BNSF requires and shall be entitled to the broader coverage and/or the higher limits. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to BNSF.
- 15.6.17 These insurance provisions are intended to be a separate and distinct obligation on the part of the Licensee. Therefore, these provisions shall be enforceable and Licensee shall be bound thereby regardless of whether or not indemnity provisions are determined to be enforceable in the jurisdiction in which the work or services are performed under this License.
- 15.6.18 For purposes of this **Section 15**, Licensor shall mean "Burlington Northern Santa Fe, LLC", "BNSF Railway Company" and the subsidiaries, successors, assigns and affiliates of each.

## **COMPLIANCE WITH LAWS, REGULATIONS, AND ENVIRONMENTAL MATTERS**

### 16. Compliance with Laws, Rules, and Regulations.

- 16.1 Licensee shall observe and comply with any and all applicable federal, state, local, and tribal laws, statutes, regulations, ordinances, orders, covenants, restrictions, or decisions of any court of competent jurisdiction ("**Legal Requirements**") relating to the construction, maintenance, and use of the Pipeline and the use of the Premises.
- 16.2 Prior to entering the Premises, Licensee shall and shall cause its contractor(s) to comply with all of Licensor's applicable safety rules and regulations. Licensee must ensure that each of its employees, contractors, agents or invitees entering upon the Premises completes the safety orientation program at the Website "www.BNSFcontractor.com" (the "**Safety Orientation**") within one year prior to entering upon the Premises. Additionally, Licensee must ensure that each and every employee of Licensee, its contractors, agents and invitees possess a card certifying completion of the Safety Orientation prior to entering upon the Premises. Licensee must renew (and ensure that its contractors, agents or invitees, as applicable, renew) the Safety Orientation annually.
- 16.3 Licensee shall obtain on or before the date it or its contractor enters the Premises, any and all additional rights-of way, easements, licenses and other agreements relating to the grant of rights and interests in and/or access to the Premises (collectively, the "**Rights**") and such other rights, licenses, permits, authorizations, and approvals (including without limitation, any necessary local, state, federal or tribal authorizations and environmental permits) that are necessary in order to permit Licensee to construct, maintain, own and operate the Pipeline and otherwise to perform its obligations hereunder in accordance with the terms and conditions hereof.
- 16.4 Licensee shall either require that the initial stated term of each such Rights be for a period that does not expire, in accordance with its ordinary terms, prior to the last day of the term of this License or, if the initial stated term of any such Right expires in accordance with its ordinary terms on a date earlier than the last day of the term of this License, Licensee shall, at its cost, exercise any renewal rights thereunder, or otherwise acquire such extensions, additions and/or replacements as may be necessary, in order to cause the stated term thereof to be continued until a date that is not earlier than the last day of the term of this License.
- 16.5 Upon the expiration or termination of any Right that is necessary in order for Licensee to own, operate or use the Pipeline in accordance with the terms and conditions of this License, this License thereby shall automatically expire upon such expiration or termination of the Right.

17. Environmental.

- 17.1 Licensee shall strictly comply with Environmental Laws (as defined below). Licensee shall not maintain a treatment, storage, transfer or disposal facility, or underground storage tank, as defined by Environmental Laws on the Premises. Licensee shall not release or suffer the release of oil or Hazardous Materials (as defined below) on or about the Premises.
- 17.2 Except as specifically set forth in Section 4 of this License, Licensee covenants that it will not handle or transport Hazardous Materials through the Pipeline or on Licensor's property. Upon request by Licensor, Licensee agrees to furnish Licensor with proof, satisfactory to Licensor, that Licensee is in compliance with the provisions of this **Section 17.2**.
- 17.3 Licensee shall give Licensor immediate notice to Licensor's Resource Operations Center at (800) 832-5452 of any known (i) release of Hazardous Materials on, from, or affecting the Premises, (ii) violation of Environmental Laws, or (iii) inspection or inquiry by governmental authorities charged with enforcing Environmental Laws with respect to Licensee's use of the Premises. Licensee shall use its best efforts to immediately respond to any release on, from, or affecting the Premises. Licensee also shall give Licensor prompt notice of all measures undertaken on behalf of Licensee to investigate, remediate, respond to or otherwise cure such release or violation.
- 17.4 If Licensor has notice from Licensee or otherwise of a release or violation of Environmental Laws arising in any way with respect to the Pipeline which occurred or may occur during the term of this License, Licensor may require Licensee, at Licensee's sole risk and expense, to take timely measures to investigate, remediate, respond to or otherwise cure such release or violation affecting the Premises or Licensor's right-of-way.
- 17.5 Licensee shall immediately report to Licensor's Resource Operations Center at (800) 832-5452 any conditions or activities upon the Premises known to Licensee which create a risk of harm to persons, property or the environment and shall take all reasonable actions necessary to prevent injury to persons, property, or the environment arising out of such conditions or activities; provided, however, that Licensee's reporting to Licensor shall not relieve Licensee of any obligation whatsoever imposed on it by this License. Licensee shall promptly respond to Licensor's request for information regarding said conditions or activities.
- 17.6 During the term of this License, Licensor may, at Licensor's option, require Licensee to conduct an environmental audit, including but not limited to sampling, of the Premises through an environmental consulting engineer acceptable to Licensor, at Licensee's sole cost and expense, to determine if any noncompliance or environmental damage to the Premises has occurred during occupancy thereof by Licensee. The audit shall be conducted to Licensor's satisfaction and a copy of the audit report shall promptly be provided to Licensor for its review. Licensee shall pay all expenses for any remedial or corrective action that may be required as a result of said audit to correct any noncompliance or environmental damage, and Licensee shall diligently pursue and complete all necessary work prior to termination of this License. Licensee's obligations under this Section 17.6 shall survive termination of this License.
- 17.7 Notwithstanding anything in this Section 17, the parties agree that Licensor has no duty or obligation to monitor Licensee's use of the Premises to determine Licensee's compliance with Environmental Laws, it being solely Licensee's responsibility to ensure that Licensee's use of the Premises is compliant. Neither the exercise nor the failure by Licensor to exercise any rights granted in this Section will alter the liability allocation provided by this License.
- 17.8 "**Environmental Law(s)**" shall mean any federal, state, local, or tribal law, statute, ordinance, code, rule, regulation, policy, common law, license, authorization, decision, order, or injunction which pertains to health, safety, any Hazardous Material, or the environment (including but not limited to ground, air, water, or noise pollution or contamination, and underground or above-ground tanks) and shall include, without limitation, CERCLA 42 U.S.C. §9601 et seq.; the Resource Conservation and Recovery Act, 42 U.S.C. §6901 et seq.; the Hazardous Materials Transportation Act, 49 U.S.C. §5101 et seq.; the Federal Water Pollution Control Act, 33 U.S.C.

§1251 et seq.; the Clean Air Act, 42 U.S.C. §7401 et seq.; the Toxic Substances Control Act, 15 U.S.C. §2601 et seq.; the Safe Drinking Water Act, 42 U.S.C. §300f et seq.; the Emergency Planning and Community Right-to-Know Act, 42 U.S.C. 11001 et seq.; the Federal Insecticide, Fungicide and Rodenticide Act, 7 U.S.C. 136 to 136y; the Oil Pollution Act, 33 U.S.C. 2701 et seq.; and the Occupational Safety and Health Act, 29 U.S.C. 651 et seq.; all as have been amended from time to time, and any other federal, state, local, or tribal environmental requirements, together with all rules, regulations, orders, and decrees now or hereafter promulgated under any of the foregoing, as any of the foregoing now exist or may be changed or amended or come into effect in the future.

- 17.9 **"Hazardous Material(s)"** shall include but shall not be limited to any substance, material, or waste that is regulated by any Environmental Law or otherwise regulated by any federal, state, local, or tribal governmental authority because of toxic, flammable, explosive, corrosive, reactive, radioactive or other properties that may be hazardous to human health or the environment, including without limitation asbestos and asbestos-containing materials, radon, petroleum and petroleum products, urea formaldehyde foam insulation, methane, lead-based paint, polychlorinated biphenyl compounds, hydrocarbons or like substances and their additives or constituents, pesticides, agricultural chemicals, and any other special, toxic, or hazardous (i) substances, (ii) materials, or (iii) wastes of any kind, including without limitation those now or hereafter defined, determined, or identified as "hazardous chemicals", "hazardous substances," "hazardous materials," "toxic substances," or "hazardous wastes" in any Environmental Law.

### **DISCLAIMER OF WARRANTIES**

18. No Warranties.

18.1 **LICENSOR'S DUTIES AND WARRANTIES ARE LIMITED TO THOSE EXPRESSLY STATED IN THIS LICENSE AND SHALL NOT INCLUDE ANY IMPLIED DUTIES OR IMPLIED WARRANTIES, NOW OR IN THE FUTURE. NO REPRESENTATIONS OR WARRANTIES HAVE BEEN MADE BY LICENSOR OTHER THAN THOSE CONTAINED IN THIS LICENSE. LICENSEE HEREBY WAIVES ANY AND ALL WARRANTIES, EXPRESS OR IMPLIED, WITH RESPECT TO THE PREMISES OR WHICH MAY EXIST BY OPERATION OF LAW OR IN EQUITY, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, HABITABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

18.2 **LICENSOR MAKES NO WARRANTY, REPRESENTATION OR CONDITION OF ANY KIND, EXPRESS OR IMPLIED, CONCERNING (A) THE SCOPE OF THE LICENSE OR OTHER RIGHTS GRANTED HEREUNDER TO LICENSEE OR (B) WHETHER OR NOT LICENSEE'S CONSTRUCTION, MAINTENANCE, OWNERSHIP, USE OR OPERATION OF THE PIPELINE WILL VIOLATE OR INFRINGE UPON THE RIGHTS, INTERESTS AND ESTATES OF THIRD PARTIES, INCLUDING, WITHOUT LIMITATION, ANY LEASES, USE RIGHTS, EASEMENTS AND LIENS OF ANY THIRD PARTY.**

19. Disclaimer of Warranty for Quiet Enjoyment. **LICENSOR DOES NOT WARRANT ITS TITLE TO THE PREMISES NOR UNDERTAKE TO DEFEND LICENSEE IN THE PEACEABLE POSSESSION OR USE THEREOF. NO COVENANT OF QUIET ENJOYMENT IS MADE.**

20. Eviction at Risk of Licensee. In case of the eviction of Licensee by anyone owning, claiming title to, or claiming any interest in the Premises, or by the abandonment by Licensor of the affected rail corridor, Licensor shall not be liable (i) to refund Licensee any compensation paid hereunder, except for the pro-rata part of any recurring charge paid in advance, or (ii) for any damages or costs Licensee sustains in connection with the eviction.

### **LIENS AND TAXES**

21. Liens and Charges. Licensee shall promptly pay and discharge any and all liens arising out of any construction, alterations or repairs done, suffered or permitted to be done by Licensee on the Premises. Licensor is hereby authorized to post any notices or take any other action upon or with respect to the

Premises that is or may be permitted by law to prevent the attachment of any such liens to the Premises; provided, however, that failure of Licensor to take any such action shall not relieve Licensee of any obligation or liability under this **Section 21** or any other Section of this License.

22. Taxes. Licensee shall pay when due any taxes, assessments or other charges (collectively, "**Taxes**") levied or assessed by any governmental or quasi-governmental body upon the Pipeline or any other improvements constructed or installed on the Premises by or for Licensee (collectively, the "**Improvements**") or any Taxes levied or assessed against Licensor or the Premises that are attributable to the Improvements.

### **DEFAULT, TERMINATION, AND SURRENDER**

23. Default and Termination. In addition to and not in limitation of Licensor's right to terminate for failure to provide evidence of insurance as required pursuant to the terms of **Section 15**, the following events are also deemed to be events of default pursuant to which Licensor has the right to terminate as set forth below:

- 23.1 If default shall be made in any of Licensee's covenants, agreements, or obligations contained in this License and Licensee fails to cure said default within thirty (30) days after written notice is provided to Licensee by Licensor, or in case of any assignment or transfer of this License in violation of **Section 26** below, Licensor may, at its option, terminate this License by serving five (5) days' notice in writing upon Licensee. Notwithstanding the foregoing, Licensor shall have the right to terminate this License immediately if Licensee fails to provide evidence of insurance as required in **Section 15**.
- 23.2 Should Licensee not comply fully with the obligations of **Section 17** regarding the handling or transporting of Hazardous Materials, notwithstanding anything contained in any other provision of this License, Licensor may, at its option, terminate this License by serving five (5) days' notice in writing upon Licensee.
- 23.3 Any waiver by Licensor of any default or defaults shall not constitute a waiver of the right to terminate this License for any subsequent default or defaults, nor shall any such waiver in any way affect Licensor's ability to enforce any Section of this License. The remedies set forth in this **Section 23** shall be in addition to, and not in limitation of, any other remedies that Licensor may have at law or in equity.
- 23.4 In addition to and not in limitation of Licensor's rights to terminate this License for failure to provide evidence of insurance or occurrence of defaults as described above, this License may be terminated by either party, at any time, by serving thirty (30) days' written notice of termination upon the other party. Such termination shall not release either party hereto from any liability or obligation under the License, whether of indemnity or otherwise, resulting from any acts, omissions or events happening prior to the date of termination or thereafter in case by the terms of the License it is provided that anything shall or may be done after termination hereof.

24. Surrender of the Premises.

- 24.1 On or before expiration or termination of this License for any reason, Licensee shall, at its sole cost and expense:
- 24.1.1 if so directed by Licensor in writing, remove the Improvements, the Pipeline and all appurtenances thereto, or, at the sole discretion of Licensor, fill and cap or otherwise appropriately decommission the Pipeline with a method satisfactory to Licensor;
- 24.1.2 report and restore any damage to the Premises or Licensor's other property arising from, growing out of, or connected with Licensee's use of the Premises;
- 24.1.3 remedy any unsafe conditions on the Premises created or aggravated by Licensee; and

- 24.1.4 leave the Premises in substantially the condition which existed as of the Effective Date, or as otherwise agreed to by Licensor.
- 24.2 Upon any expiration or termination of this License, if Licensee fails to surrender the Premises to Licensor or if Licensee fails to complete its obligations under **Section 24.1** above (the "**Restoration Obligations**"), Licensee shall have a limited license to enter upon the Premises solely to the extent necessary for Licensee to complete the Restoration Obligations, and all liabilities and obligations of Licensee hereunder shall continue in effect until the Premises are surrendered and the Restoration Obligations are completed. Neither termination nor expiration shall release Licensee from any liability or obligation under this License, whether of indemnity or otherwise, resulting from any acts, omissions or events happening prior to the date of termination, or, if later, the date when Licensee surrenders the Premises and all of the Restoration Obligations are completed.
- 24.3 If Licensee fails to complete the Restoration Obligations within thirty (30) days after the date of such termination of its tenancy, then Licensor may, at its election, either: (i) remove the Pipeline and the other Improvements or otherwise restore the Premises, and in such event Licensee shall, within thirty (30) days after receipt of bill therefor, reimburse Licensor for cost incurred, (ii) upon written notice to Licensee, take and hold the Pipeline and the other Improvements and personal property as its sole property, without payment or obligation to Licensee therefor, or (iii) specifically enforce Licensee's obligation to restore and/or pursue any remedy at law or in equity against Licensee for failure to so restore. Further, if Licensor has consented to the Pipeline and the other Improvements remaining on the Premises following termination, Licensee shall, upon request by Licensor, provide a bill of sale in a form acceptable to Licensor conveying the Pipeline and the other Improvements to Licensor for no additional consideration.

#### **MISCELLANEOUS**

25. **Successors and Assigns.** All provisions contained in this License shall be binding upon, inure to the benefit of, and be enforceable by the respective successors and assigns of Licensor and Licensee to the same extent as if each such successor and assign was named a party to this License.
26. **Assignment.**
- 26.1 Licensee may not sell, assign, transfer, or hypothecate this License or any right, obligation, or interest herein (either voluntarily or by operation of law, merger, or otherwise) without the prior written consent of Licensor, which consent may not be unreasonably withheld or delayed by Licensor. Any attempted assignment by Licensee in violation of this **Section 26** shall be a breach of this License and, in addition, shall be voidable by Licensor in its sole and absolute discretion.
- 26.2 For purposes of this **Section 26**, the word "assign" shall include without limitation (a) any sale of the equity interests of Licensee following which the equity interest holders of Licensee immediately prior to such sale own, directly or indirectly, less than 50% of the combined voting power of the outstanding voting equity interests of Licensee, (b) any sale of all or substantially all of the assets of (i) Licensee and (ii) to the extent such entities exist, Licensee's parent and subsidiaries, taken as a whole, or (c) any reorganization, recapitalization, merger or consolidation involving Licensee. Notwithstanding the foregoing, any reorganization, recapitalization, merger or consolidation following which the equity interest holders of Licensee immediately prior to such reorganization, recapitalization, merger or consolidation own, directly or indirectly, at least 50% of the combined voting power of the outstanding voting equity interests of Licensee or any successor thereto or the entity resulting from such reorganization, recapitalization, merger or consolidation shall not be deemed an assignment. THIS LICENSE SHALL NOT RUN WITH THE LAND WITHOUT THE EXPRESS WRITTEN CONSENT OF LICENSOR, SUCH CONSENT TO BE IN LICENSOR'S SOLE DISCRETION.
- 26.3 Notwithstanding the provisions of **Section 26.1** above or anything contained in this License to the contrary, if Licensee sells, assigns, transfers, or hypothecates this License or any interest herein in contravention of the provisions of this License (a "**Purported Assignment**") to another party (a "**Purported Transferee**"), the Purported Transferee's enjoyment of the rights and privileges

granted under this License shall be deemed to be the Purported Transferee's agreement to be bound by all of the terms and provisions of this License, including but not limited to the obligation to comply with the provisions of **Section 15** above concerning insurance requirements. In addition to and not in limitation of the foregoing, Licensee, for itself, its successors and assigns, shall indemnify, defend and hold harmless Licensor for all Liabilities of any nature, kind or description of any person or entity directly or indirectly arising out of, resulting from or related to (in whole or in part) a Purported Assignment. The provisions of this **Section 26.3** shall survive the expiration or earlier termination of this License.

26.4 Licensor shall have the right to transfer and assign, in whole or in part, all of its rights and obligations under this License, and upon any such transfer or assignment, Licensor shall be released from any further obligations hereunder, and Licensee agrees to look solely to the successor in interest of Licensor for the performance of such obligations.

27. **Notices.** Any notice, invoice, or other writing required or permitted to be given hereunder by one party to the other shall be in writing and the same shall be given and shall be deemed to have been served and given if (i) placed in the United States mail, certified, return receipt requested, or (ii) deposited into the custody of a nationally recognized overnight delivery service, addressed to the party to be notified at the address for such party specified below, or to such other address as the party to be notified may designate by giving the other party no less than thirty (30) days' advance written notice of such change in address.

If to Licensor: Jones Lang LaSalle Brokerage, Inc.  
2650 Lou Menk Drive, MOB2  
Fort Worth, TX 76131  
Attn: Permits/Licenses

with a copy to: BNSF Railway Company  
2650 Lou Menk Dr.  
Fort Worth, TX 76131  
Attn: Senior Manager Real Estate

If to Licensee: City of Topeka  
215 SE 7<sup>th</sup> Street, City Clerk's Office  
Topeka, KS 66603

28. **Survival.** Neither termination nor expiration will release either party from any liability or obligation under this License, whether of indemnity or otherwise, resulting from any acts, omissions or events happening prior to the date of termination or expiration, or, if later, the date when the Pipeline and the other Improvements are removed and the Restoration Obligations are completed in accordance with the terms hereof.

29. **Recordation.** It is understood and agreed that this License shall not be placed or allowed to be placed on public record.

30. **Applicable Law.** All questions concerning the interpretation or application of provisions of this License shall be decided according to the substantive laws of the State of Texas without regard to conflicts of law provisions.

31. **Severability.** To the maximum extent possible, each provision of this License shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this License shall be prohibited by, or held to be invalid under, applicable law, such provision shall be ineffective solely to the extent of such prohibition or invalidity, and this shall not invalidate the remainder of such provision or any other provision of this License.

32. Integration. This License is the full and complete agreement between Licensor and Licensee with respect to all matters relating to Licensee's use of the Premises, and supersedes any and all other agreements between the parties hereto relating to Licensee's use of the Premises as described herein. However, nothing herein is intended to terminate any surviving obligation of Licensee or Licensee's obligation to defend and hold Licensor harmless in any prior written agreement between the parties.
33. Joint and Several Liability. If Licensee consists of two or more parties, all the covenants and agreements of Licensee herein contained shall be the joint and several covenants and agreements of such parties.
34. Waiver. The waiver by Licensor of the breach of any provision herein by Licensee shall in no way impair the right of Licensor to enforce that provision for any subsequent breach thereof.
35. Interpretation.
- 35.1 This License shall be interpreted in a neutral manner, and not more strongly for or against any party based upon the source of the draftsmanship; both parties hereby agree that this License shall not be subject to the principle that a contract would be construed against the party which drafted the same. Article titles, headings to sections and paragraphs and the table of contents (if any) are inserted for convenience of reference only and are not intended to be a part or to affect the meaning or interpretation hereof. The exhibit or exhibits referred to herein shall be construed with and as an integral part of this License to the same extent as if they were set forth verbatim herein.
- 35.2 As used herein, "include", "includes" and "including" are deemed to be followed by "without limitation" whether or not they are in fact followed by such words or words of like import; "writing", "written" and comparable terms refer to printing, typing, lithography and other means of reproducing words in a visible form; references to any person are also to that person's successors and permitted assigns; "hereof", "herein", "hereunder" and comparable terms refer to the entirety hereof and not to any particular article, section, or other subdivision hereof or attachment hereto; references to any gender include references to the masculine or feminine as the context requires; references to the plural include the singular and vice versa; and references to this License or other documents are as amended, modified or supplemented from time to time.
36. Counterparts. This License may be executed in multiple counterparts, each of which shall, for all purposes, be deemed an original but which together shall constitute one and the same instrument, and the signature pages from any counterpart may be appended to any other counterpart to assemble fully executed documents, and counterparts of this License may also be exchanged electronically and any electronic version of any party's signature shall be deemed to be an original signature for all purposes.
37. Licensor's Representative. Jones Lang LaSalle Brokerage, Inc. is acting as representative for BNSF Railway Company.

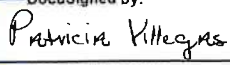
**END OF PAGE – SIGNATURE PAGE FOLLOWS**

This License has been duly executed by the parties hereto as of the Effective Date.

**LICENSOR:**

**BNSF Railway Company**, a Delaware corporation

By: Jones Lang LaSalle Brokerage, Inc.  
2650 Lou Menk Drive, MOB2  
Fort Worth, TX 76131

By: DocuSigned by:  
  
495C9951FFCB45A  
By: Patricia Villegas

Title: Vice President, Permits

**LICENSEE:**

**City of Topeka**, a Kansas municipality

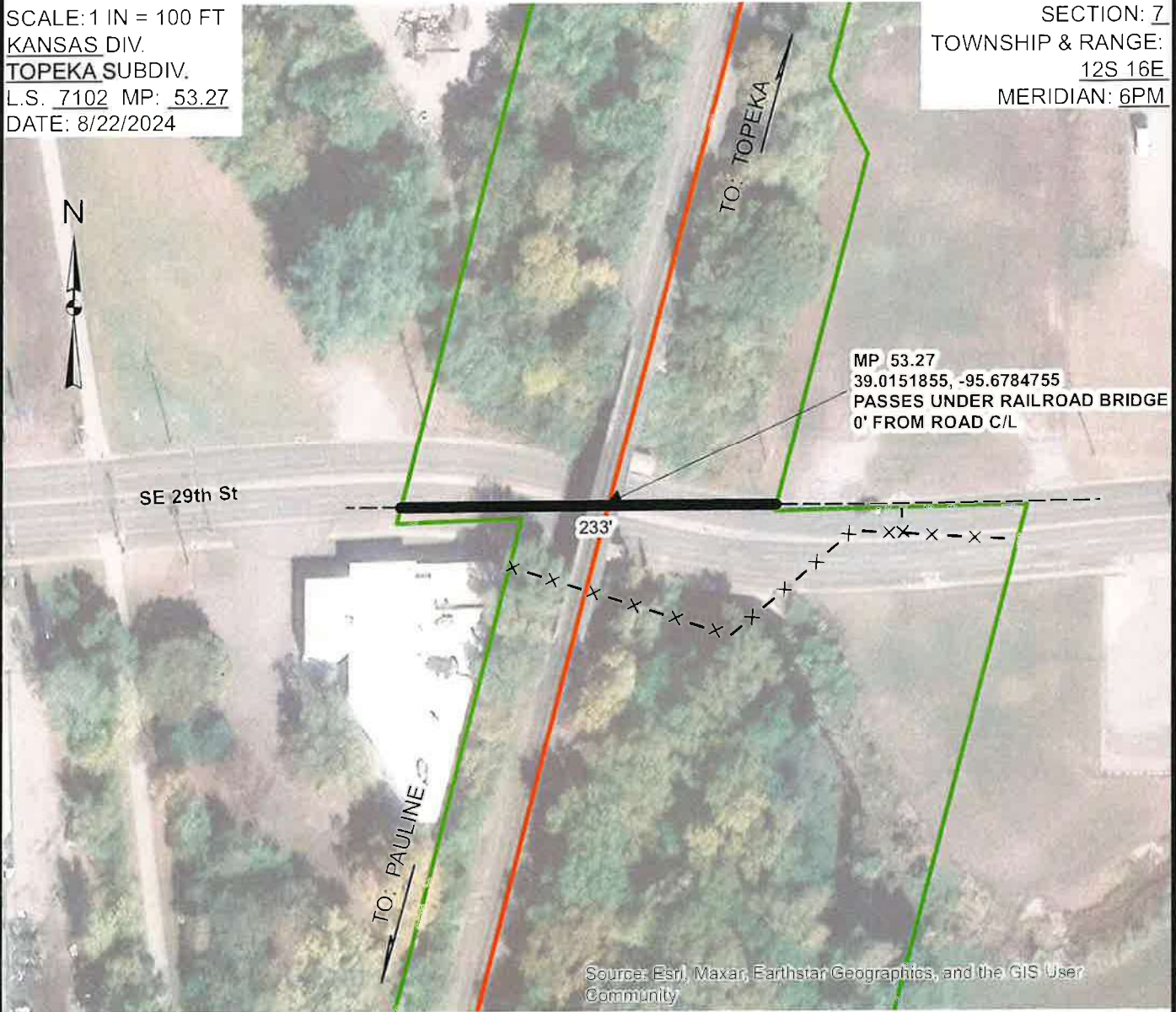
By: Signed by:  
  
D4A273671A5B43A  
By: Robert M. Perez

Title: City Manager

# EXHIBIT "A"

SCALE: 1 IN = 100 FT  
 KANSAS DIV.  
 TOPEKA SUBDIV.  
 L.S. 7102 MP: 53.27  
 DATE: 8/22/2024

SECTION: 7  
 TOWNSHIP & RANGE:  
 12S 16E  
 MERIDIAN: 6PM



— X EXISTING WATER PIPELINE UNDER AGREEMENT AT-101756 TO BE REMOVED

DESCRIPTION OF PIPELINE PIPELINE SHOWN BOLD

	CARRIER PIPE	CASING PIPE		CARRIER PIPE	CASING PIPE
SIZE:	12"	20"	LENGTH ON R/W:	233'	233'
CONTENTS:	DOMESTIC WATER		WORKING PRESSURE:	80 PSI	
PIPE MATERIAL:	PVC	STEEL	BURY: BASE/RAIL TO TOP OF CASING		43.27'
SPECIFICATIONS / GRADE:	C900	ASTM 139 GRADE B	BURY: NATURAL GROUND		18.9'
WALL THICKNESS:	0.733"	0.375"	BURY: ROADWAY DITCHES		18.9'
COATING:	COAL TAR	COAL TAR	CATHODIC PROTECTION		YES

VENTS: NUMBER    - SIZE    - HEIGHT OF VENT ABOVE GROUND    -  
 NOTE: CASING TO BE JACKED OR DRY BORED ONLY

TOPEKA  
 COUNTY OF SHAWNEE

STATE OF KS

JPM

SPECIAL PROVISIONS  
TO THE  
STANDARD TECHNICAL SPECIFICATIONS  
EDITION OF FEBRUARY 2013(Revised May 2016)  
and LATEST REVISIONS

- I. NOTE: Whenever these Special Provisions conflict with the Standard Technical Specifications, these Special Provisions shall govern.

SECTION 1000  
WORK BY OTHERS

PART 1 GENERAL

1.01 City Water Mains

- A. Water mains damaged by the Contractor shall be repaired by the Contractor in accordance with the requirements of the Topeka Utilities Infrastructure Division and paid for by the Contractor.
- B. The opening and closing of distribution system valves shall be performed only by Topeka Water Services Division personnel. This includes existing city valves and Contractor-installed valves that control the flow of potable or non-potable water.

1.02 Corporation Stop Taps

- A. The Contractor will perform all taps and install the corporation stops for all service connections, temporary air releases, and manual air release blow-offs. The Contractor will furnish all materials for this work.
- B. The Contractor shall coordinate the installation of corporation stops with the Topeka Water Services Division. Where possible the corporation stop shall be tapped to the main before the pipeline installation.
- C. The Contractor will furnish permanent pipe plugs at all temporary air release corporation stops. Contractor shall coordinate removal of the temporary corporation stops with the Topeka Water Services Division.

1.03 Taps to Existing Lines

- A. The Topeka Water Services Division will perform all taps larger than 2" to existing mains that are required for main sleeve and valve connections. All taps 2" or less shall be performed by the Contractor.
- B. The Contractor shall furnish and install all non-brass connection fittings, bolts, glands, gaskets, etc. as specified for tapping the existing mains.
- C. The Topeka Water Services Division will perform the wet-tap after inspection and approval of installation of the tapping sleeve and valve. If the existing service tap is in good working order, it shall reused.
- D. Contractor will complete the blocking and make the necessary connection between the newly installed tapping sleeve and valve and the new main, set the valve box, backfill and compact the excavation, and perform finish grading as required.

#### 1.04 Reconnection of Existing Service Lines

- A. The reconnection of existing service lines to new mains will be the responsibility of the Contractor.
- B. The Contractor shall provide all excavation, backfill, grading, and seeding as required for tapping the new main, boring under the roadway (and trenching if necessary), and shall make the connection at the tap.
- C. The Contractor shall remove and replace the street pavement for service lines installed by trenching only if the service line cannot be bored. Removal and replacement of pavement will be paid for under the bid item for removal and replacement of the type of pavement removed.
- D. When necessary, the Contractor shall relocate the existing meter setting or install a new meter setting as noted. The Contractor shall provide all excavation, backfilling, and removal of abandoned meter setting, which is to be salvaged to the Topeka Water Services Division.

#### 1.05 Detours and Traffic Control

- A. The Contractor shall submit his proposed schedule of work to the Topeka Utilities Division and coordinate the traffic control plan for restricting traffic flow along SE 29th Street during construction of the new water main. The plan will be prepared and submitted to the Engineer and approved before starting work.
- B. All signing and barricades shall be provided and maintained by the Contractor.

#### 1.06 Electric Power Poles

- A. Lines and power poles needing to be temporarily supported and/or braced, or noted to be relocated, shall be taken care of by the electric utility at no charge to the Owner. The Contractor shall coordinate the temporary bracing or relocation of the poles with the electric utility to eliminate delays in construction.

#### 1.07 Gas Lines

- A. Gas lines damaged by the Contractor shall be repaired by the gas utility at no cost to the Owner and paid for by the Contractor.
- B. Gas lines needing to be relocated shall be moved by the gas utility at no charge to the Contractor. The Contractor shall coordinate the relocation with the gas utility to eliminate the relocation delays in construction.

#### 1.08 Buried Telephone Company Cables and/or Conduit

- A. Buried telephone and communication cables and/or conduit damaged by the Contractor shall be repaired by the owner of the buried cables and/or conduit at no cost to the Owner and paid for by the Contractor.

1.09 Buried Cable Television Lines and/or Conduit

- A. Buried cable television lines and/or conduit damaged by the Contractor shall be repaired by the owner of the buried lines and/or conduit at no cost to the Owner and paid for by the Contractor.

END OF SECTION

SPECIAL PROVISIONS TO THE  
STANDARD TECHNICAL SPECIFICATIONS  
EDITION OF FEBRUARY 2013(Revised May 2016)  
and LATEST REVISIONS

- II. NOTE: Whenever these Special Provisions conflict with the Standard Technical Specifications, these Special Provisions shall govern.

SECTION 1100  
OWNER-FURNISHED PRODUCTS

PART 1 GENERAL

1.01 MATERIALS

For this project, the owner will pre-purchase and supply the following additional Materials to be installed by the contractor:

- A. Valves(only)
- B. Brass for materials to be permanently installed below grade (e.g. service saddles, corps, meter connection fittings)
- C. Brass for testing (e.g. saddles, corps, caps, plugs)

The contractor shall still be responsible for purchasing:

- D. Bolts, glands, gaskets, valve box/ring/cover, etc. For valve installation
- E. Non-brass connection fittings
- F. All materials for flushing, bac-t testing

1.02 WATER

- A. The Owner will furnish water necessary for the initial filling, flushing, and disinfection of the new water lines. The Owner will also furnish water necessary for one (1) additional flushing and disinfection if the initial disinfection is not confirmed by bacteriological analysis. Additional water required in excess of the above required for proper disinfection will be billed to the Contractor at the prevailing rate for 100 cubic feet or part thereof.
- B. Contractor shall notify the Owner two working days in advance of the date water is required.

1.03 TESTING

- A. Owner will obtain water samples from new water lines after flushing and disinfection for analysis by the Topeka Water Services Division laboratory for chlorine and bacteriological requirements. The Topeka Water Services Division will conduct the initial test and one (1) additional test for each section of water main installed at no cost to the Contractor. Additional testing will be billed to the Contractor at the cost to the City for collection and analysis of the water samples.
- B. The Contractor shall notify the Owner two working days in advance of the date samples can be taken. Samples shall be taken no later than Thursday AM of a given week.

1.04 WATER METERS

- A. The Water Services Division will furnish water meters with remote read system for installation by the Contractor.

END OF SECTION

SPECIAL PROVISIONS TO THE  
STANDARD TECHNICAL SPECIFICATIONS  
EDITION OF FEBRUARY 2013(Revised May 2016)  
and LATEST REVISIONS

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SECTION 1200  
TRENCHLESS PIPE INSTALLATION & PIPE ENCASEMENT

PART 1 -GENERAL

1.01 REFERENCES

A. American Society for Testing and Materials (ASTM):

1. A139 Electric-Fusion (Arc)-Welded Steel Pipe (NPS 4 and Over).

B. American Water Work Association (AWWA):

1. C605 Standard for Underground Installation of PVC and PVCO Pressure Pipe and Fittings for Water.

1.02 QUALITY ASSURANCE

A. Products: All products shall be new and unused except as may be requested for testing and shall be the product of a reputable manufacturer regularly engaged in the manufacture of the product. Where two or more units of the same class are required, these units shall be products of a single manufacturer.

1.03 SUBMITTALS

A. Manufacturer's Literature: Descriptive data of material, installation methods, and procedures.

B. Certificates: Manufacturer's certification that products meet specification requirements

C. Directional Drilling:

1. Alternate procedures for directional boring from Drawings and Specifications.
2. Source of water for drilling.
3. Provide MSDS for slurry materials proposed.
4. Drilling fluid disposal plan.

1.04 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Store materials to prevent physical damage.

B. Protect materials during transportation and installation to avoid physical damage.

## PART 2 -MATERIALS

### 2.01 STEEL CASING (ENCASEMENT) PIPE

- A. Electric-Fusion (ARC) Welded Steel Boring Pipe in conformance with ASTM A139.
- B. Grade B, 35,000 psi minimum yield strength.
- C. Minimum Casing Size and Wall Thickness:  
Carrier Pipe Casing Size Wall Thickness, Inches Location  
12" PVC 20" OD 0.375" Roadway/Drive/As Specified

### 2.02 STRAIGHT-SEAM (SPIRAL-SEAM WILL NOT BE ACCEPTED).

- A. Red Mill Primer on exterior of pipe only.

### 2.03 FUSIBLE PVC CASING (ENCASEMENT) PIPE

- A. Materials used for the manufacture of fusible PVC pipe shall be as specified in Section 8 of the "City of Topeka and Shawnee County Standard Technical Specifications."
- B. Pressure class 235.
- C. Joint Type: Thermal Heat Fused.

### 2.04 CASING SPACERS

- A. Casing spacers shall be PSI Model S12G-2, 12" wide 304 stainless steel band with 2" wide glass reinforced plastic runners as manufactured by Pipeline Seal and Insulator Co., Houston, Texas or approved equal. Carrier pipe shall be centered in casing pipe.

### 2.05 CASING END SEALS

- A. Casing end seals shall be PSI Model C Custom Pull-On or approved equal.

### 2.06 LINK SEALS

- A. Link seals shall be Thunderline Link-Seals and shall be used at each end of casing pipe between casing and carrier pipe. Link-Seals hardware shall be 316 stainless steel.

### 2.07 CARRIER PIPE

- A. Carrier pipe shall be as specified in Section 8 of the "City of Topeka and Shawnee County Standard Technical Specifications."

## 2.09 CONCRETE

A. Concrete shall be Class B as specified in the "City of Topeka and Shawnee County Standard Technical Specifications"

## PART 3 EXECUTION

### 3.01 GENERAL

A. Contractor shall exercise caution during boring operations to protect existing utilities and roadbeds. Contractor will be responsible for field verifying location and elevation of all utility lines to be crossed prior to start of boring operations. Contractor will be held responsible for damage to existing utilities from the boring operations.

B. Contractor shall excavate, sheet and shore the boring pit excavation as required to provide working spaces and backstop for the installation of the casing pipe and/or carrier pipe.

C. Contractor shall be responsible for any damages to the roadway and railroad roadbed or right-of-way caused by his operations. Damage shall be repaired by the Contractor and paid for by the Contractor.

D. Casing pipe and/or carrier pipe installation shall be done in such a way as to not impede, interfere or endanger traffic on the road.

E. Alignment and elevation control is critical to installation of the casing pipe and/or carrier. The installation of the casing pipe and/or carrier pipe shall be at the line and grade (plus or minus 3 inches) at which the waterline is to be installed, as shown on the Drawings. If the installation of the casing pipe or boring is stopped or out of alignment tolerances, the casing shall be cut-off and the boring filled with concrete grout. If equipment is to be abandoned, Contractor shall install a new casing pipe adjacent to abandoned casing at the proper grade and alignment as approved by the Engineer. The boring Contractor will be boring in the vicinity of other existing and future utilities.

### 3.02 STEEL CASING (ENCASEMENT) PIPE INSTALLATION

A. Installation of the steel casing pipe for the new water line shall be by jacking the casing pipe through the dry bored augured tunnel hole immediately behind the tunneling operation at the elevations and alignment shown on the Drawings.

B. The dry bored augured tunneled hole shall not be more than one (1) inch greater diameter than the outside diameter of the casing pipe.

C. Joints in casing pipe installed by boring shall be continuously welded to provide a positive seal against infiltration or exfiltration.

### 3.03 CARRIER PIPE INSTALLATION IN CASING PIPE

- A. Inspect each length and reject damaged lengths. All pipe shall be laid with ends abutting and true to line and grade and shall be fitted and matched so that when laid together they will form a smooth and uniform invert.
- B. Install new ductile iron water mains with corrosive protection.
- C. Attach casing spacers at a maximum spacing of 6'-0", using four (4) spaces per pipe joint as detailed on the Drawings. After water main is in place, install link seal at each end of casing before installing end seal.
- D. Install synthetic rubber encasement end seals after completion of carrier pipe installation.

### 3.04 HORIZONTAL DIRECTIONAL DRILLING – RJ/FUSIBLE PVC WATER LINE

- A. Prior to any drill operation commencing, Contractor shall submit to the Engineer the composition of all drilling fluids proposed for use. No fluid will be approved or utilized that does not comply with permit requirements and environmental regulations. Contractor shall be responsible for locating and obtaining a suitable water source, subject to Engineer approval. Contractor will be required to provide all transportation, piping and pumps necessary to get the water from the source to the drilling rig.
- B. Contractor shall provide all equipment, labor, and materials necessary to directionally drill the fusible PVC or RJ PVC pipeline as indicated on the Drawings and documents incorporated herein.
- C. Contractor shall drill a pilot hole while making a continuous directional survey. The directional survey shall consist of a tracking device capable of locating the azimuth (left/right control) and inclination (up/down control). The accuracy of the tracking device shall be adequate to control the bore location at all times (+/- 0.5 feet left or right and -1/+1 feet in length). A record of the directional survey shall be completed during pilot hole drilling with data tabulated every 30 feet. The survey record must indicate azimuth within +/- 5 degrees and inclination within +/- 3 degrees. This documentation must be presented and accepted by Engineer prior to payment for any drilling.
- D. The pilot hole should penetrate at the point of entry and exit at an angle between 8-12 degrees. The radius of curvature of the bore should be at least 100 times the diameter of the line pipe or the drill pipe, whichever is larger. The pilot hole shall be plotted against the proposed design plan and profile prior to commencing further Work to ensure that the pilot hole is within allowable tolerances. If a portion of the bore is out of the given tolerance, the segment shall be re-drilled.
- E. Once a successful pilot hole has been drilled, the reamer shall be installed for pre-reaming operations. As the reamer is pulled to the rig side, joints of drill pipe are added as the reamer makes its way back to the drilling rig. Once the drilled hole has been

enlarged, the pipeline can be pulled through. In general, the final bore should be one and one-half times the outside diameter of the product line. Matching the type of reamer for the soil conditions and the amount of drilling fluid pumped downhole is critical to the process and shall be reviewed with the Engineer's resident inspector prior to commencing operations.

F. Contractor shall provide all necessary equipment and labor to lift and pull the pipe string into position. Contractor shall provide padded pipe cradles and rollers to protect the coating of the pipe during pullback. The line pipe shall be connected to the drill pipe using a swivel to prevent rotational torque from spinning the pipe. A reamer will normally be placed between the pullhead and drill string to ensure that the hole remains open and to allow more lubricating fluid to be pumped into the hole during pullback. The pullback shall be completed in one continuous operation with the line pipe welded, tested, and mounted on rollers prior to beginning the pullback, if possible.

G. Contractor shall monitor the slurry return throughout the drilling operations. If at any time during the boring operation, circulation is lost, contractor shall employ the best effort to reestablish annular circulation. Contractor shall contain fluids brought to the surface with hay bales, sand bags and silt fences. The fluids shall be pumped into a vessel and returned to the rig site. If fluid volume is such that small pumps are not sufficient for removal, drilling operations shall be suspended until surface return volumes can be brought under control. Once the surface fluids have been collected, the affected area shall be diluted with fresh water and the remaining fluid will be allowed to dry and dissipate naturally.

H. Contractor shall be responsible for collecting the drilling fluid and the disposal of excess drilling fluid in compliance with all environmental regulations, right-of-way and workspace agreements, and permit requirements. The drilling fluid disposal plan noted above shall define procedures for separation of drilling cuttings from slurry liquids if necessary to meet requirements for slurry disposal as outlined in the plan. All drill pits used by Contractor shall be lined. The drill site shall be restored in accordance to the clean up section of these Specifications.

### 3.05 PIPELINE INSTALLATION

A. The new pipeline shall be installed as soon as possible upon completion of the horizontal directional boring. Pipelines shall extend beyond the ends of the boring holes to the pipeline station as shown on the Drawings.

END OF SECTION

SPECIAL PROVISIONS TO THE  
STANDARD TECHNICAL SPECIFICATIONS  
EDITION OF FEBRUARY 2013(Revised May 2016)  
and LATEST REVISIONS

- VI. NOTE: Whenever these Special Provisions conflict with the Standard Technical Specifications, these Special Provisions shall govern.

SECTION 1300  
MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.01 METHODS OF MEASUREMENT AND BASIS FOR PAYMENT

A. All Work to be performed under this Contract shall be paid for at the lump sum or unit prices stated in the Bid Form of the accepted bidder. Unit price payments will be based upon measurement of installed items and executed Work as hereinafter described. Payment for the lump sum and unit price items shall constitute full compensation for furnishing all labor, materials, tools, tests, equipment, and incidentals required to complete the Work as described, in accordance with the Drawings and Specifications. Any material, equipment, or operation not specifically mentioned shall be considered to be incidental to the lump sum or unit price pay item to which it pertains. Final payment will only be made for completed and accepted Work.

B. The methods of measurement and basis of payment of all items listed in the proposal are set forth in the City of Topeka Standard Technical Specifications, except for those listed in or modified by this section.

1.02 WATER AND SANITARY MAIN SYSTEMS

A. Pipe

1. Measurement will be made by the linear foot to the nearest foot of D.I.P., PVC, PVCO, and Fusible PVC pipe installed, completed, and accepted. Final quantities will be computed from pipe manufacturers invoice amounts delivered to the jobsite, less waste and excess pipe.

2. Payment will be made for the unit price bid per linear foot for each size and type of D.I.P., PVC, PVCO, and Fusible PVC in place, completed and accepted, which price shall include all pipe, joint materials, tracer wire, tracer boxes, corrosion protection (D.I.P. only), trenching, horizontal directional drilling (Fusible PVC), sheeting and shoring, cutting and fitting, laying, bedding, jointing, testing, backfilling, compaction, earthwork, grading, and any other incidental items required to complete the Work as detailed and specified.

B. Make Connection to Existing Water Line

1. Measurement will be made for each connection to an existing waterline where noted on the Drawings, completed and accepted.

2. Payment will be made at the unit price bid for each connection to an existing waterline, which price shall include excavation, coordination with the Water Services Department,

cutting of existing pipe, support of existing pipe, salvage and removal of items when noted (unless paid for elsewhere), plugging of abandoned mains with concrete, backfilling, compaction, and any other incidental items required to complete the Work as detailed and specified. New pipe, fittings, valves, and other items specifically noted on the Drawings will be paid for under their respective Bid Items.

C. Encasement Pipe

1. Measurement will be made by the linear foot for the installation of the encasement pipe at the location shown on the Drawings, completed and accepted.
2. Payment will be made at the price bid per linear foot for the encasement pipe, which price shall include encasement pipe, casing spacers, link seals, end seals, and any other incidental items required to complete the Work as detailed and specified. Carrier pipe, tracer wire, and corrosive protection (D.I.P. only) will be paid for under Bid Item(s) covered by in Paragraph A.

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

**DOCUMENT 330  
BID FORM**

TO: The City of Topeka, Kansas  
Contracts & Procurement Division  
215 S.E. 7th St., Room 60  
Topeka, Kansas 66603

Project No. and Description: Bridge Improvement Project No. 121005.00 – SE 29th Street over Butcher Creek, Street Improvement Project No. 701039.00 SE 29<sup>th</sup> Street -S Kansas Ave. to SE Adams St., Waterline Replacement Project No. 281250.04, Storm Sewer Replacement Project No. 501081.27 & 501107.02, Sanitary Sewer Replacement Project No. 291129.01, Traffic Signal Improvement Project No. 141037.01 .

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 Contract Price and within the Contract Time 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 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 sixty (60) days after the day of Bid opening. Bidder will sign and submit the Agreement with the Bonds and other documents required by the Bidding Requirements within ten days after receipt of the award of contract and Contract Documents from the Owner.

3. In submitting this Bid, Bidder represents, as more fully set forth in the Agreement, that:

a. Bidder has examined copies of all the bidding Documents and of the following Addenda (receipt of all which is hereby acknowledged):

Date	Number
_____	_____
_____	_____
_____	_____
_____	_____

b. Bidder has familiarized itself with the nature and extent of the Contract Documents, Work, site, locality, and all local conditions and Laws and Regulations that in any manner may affect cost, progress, performance or furnishing of the Work.

c. Bidder has studied carefully all reports and drawings of subsurface conditions and drawings of physical conditions which are identified in the Supplementary Conditions as provided in paragraph 4.2 of the General Conditions, and accepts the determination set forth

in the Supplementary Conditions (if applicable) of the extent of the technical data contained in such reports and drawings upon which Bidder is entitled to rely.

d. Bidder has obtained and carefully studied (or assumes responsibility for obtaining and carefully studying) all such examinations, investigations, explorations, tests and studies (in addition to or to supplement these referred to in (c) above) which pertain to the subsurface or physical conditions at the site or otherwise may affect the cost, progress, performance or furnishing of the Work as Bidder considers necessary for the performance or furnishing of the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of paragraph 4.2 of the General Conditions; and no additional examinations, investigations, explorations, tests, reports or similar information or data are or will be required by Bidder for such purposes.

e. Bidder has reviewed and checked all information and data shown or indicated on the Contract Documents with respect to existing Underground Facilities at or contiguous to the site and assumes responsibility for the accurate location of said Underground Facilities. No additional examinations, investigations, explorations, tests, reports or similar information or data in respect of said Underground Facilities are or will be required by Bidder in order to perform and furnish the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of paragraph 4.3 of the General Conditions.

f. Bidder has correlated the results of all such observations, examinations, investigations, explorations, tests, reports and studies with the terms and conditions of the Contract Documents.

g. Bidder has given Engineer (either the Design Engineer or the City Engineer as defined in Article 2 of the Agreement) written notice of all conflicts, errors or discrepancies that it has discovered in the Contract Documents and the written resolution thereof by Engineer is acceptable to Bidder.

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.

Project No. and Description: Bridge Improvement Project No. 121005.00 – SE 29th Street over Butcher Creek, Street Improvement Project No. 701039.00 SE 29<sup>th</sup> Street -S Kansas Ave. to SE Adams St., Waterline Replacement Project No. 281250.04, Storm Sewer Replacement Project No. 501081.27 & 501107.02, Sanitary Sewer Replacement Project No. 291129.01, Traffic Signal Improvement Project No. 141037.01 .

4. Bidder will complete the Work for the following price(s):

Item No.	Description	Quantity	Unit	Unit Price	Extension
	<b>Project No. 701039.00</b>				
1	Contractor Construction Staking	1	L.S.		
2	Mobilization	1	L.S.		
3	Removal of Existing Structures	1	L.S.		
4	Clearing and Grubbing	1	L.S.		
5	Removal of Large Trees	8	Each		
6	Pavement Removal	12,392	SY		
7	Rock Excavation	300	CY		
8	Unclassified Excavation	7,363	CY		
9	Embankment	2,638	CY		
10	6" Subgrade Treatment (Cement)	4,858	SY		
11	Temporary Surfacing Material (AB-3)	200	Tons		
12	Concrete Safety Barrier (Type II)	80	LF		
13	Barrier Curb Transition (AE)	120	LF		
14	Combined Curb & Gutter, Type I	2,141	LF		
15	Combined Curb & Gutter, Type II	411	LF		
16	Combined Curb & Gutter, Type III	88	LF		
17	4" Concrete Sidewalk, 5'-0" Wide	1,705	SF		
18	5" Concrete Sidewalk, 10'-0" Wide	5,889	SF		
19	Combined Sidewalk Retaining Wall	89.8	LF		
20	Sidewalk Ramp	593	SF		
21	9" Reinforced Concrete Pavement	7,077	SY		
22	5" Patterned Colored Concrete Pavement	286	SF		
23	8" Concrete Driveway	3,527	SF		
24	8.75" Asphaltic Concrete	4,034	SY		
25	3" Asphaltic Concrete	4,622	SY		
26	Cold Milling	15,126	SY		
27	2" Asphaltic Concrete	15,126	SY		
28	Pedestrian Signal Modification	1	LS		
29	Project Sign Type B	2	Each		
30	2" Conduit	3,345	LF		
31	Pull Box	2	Each		
32	Removal of Existing Pavement Markings	350	LF		
33	Pavement Marking(Thermoplastic)(Yellow)(4 inch)	5,166	LF		
34	Pavement Marking(Thermoplastic)(White)(4 inch)	2,056	LF		
35	Pavement Marking(Thermoplastic)(White)(24 inch)	946	LF		
36	Monument Box	3	each		
37	Adjust Existing Manhole Cover	1	each		
38	Fence (Chain Link)(4')(Special)	95.5	LF		
39	Soil Erosion Mix	37.5	lbs.		
40	Erosion Control (Class 1)(Type C)	505	SY		

Item No.	Description	Quantity	Unit	Unit Price	Extension
41	Erosion Control (Class 2)(Type E)	1,146	SY		
42	Temporary Ditch Check (Rock)	71	CY		
43	Biodegradable Log (20")	250	LF		
44	Filter Sock (18")	250	LF		
45	Geotextile (Erosion Control)	3,200	SY		
46	Silt Fence	500	LF		
47	Temporary Seeding and Mulching	1	Acre		
48	Seeding, Fertilizing and Mulching	1	Acre		
49	Traffic Control	1	L.S.		
50	Railroad Flagman	120	Each/day		
	<b>Project No. 141037.01</b>				
51	Traffic Signal Installation	1	LS		
52	Traffic Signal Detection Modification	1	LS		
	<b>Project No. 121005.00</b>				
53	Concrete Surface Repair	250	SF		
54	Concrete Grade 4.0 (AE)	90.7	CY		
55	Reinforcing Steel Grade 60	18,110	Lbs.		
56	Drilling and Grouting	126	Each		
57	Bridge Backwall Protection System	438	SY		
58	Foundation Stabilization (Set Price)	50	CY		
59	Class II Stone Riprap	164	SY		
	<b>Project No. 501081.27 &amp; 501107.02</b>				
60	6" Integral Curb	409	LF		
61	Area Inlet, Type II-P (Yard Grate)	1	Each		
62	Area Inlet-Manhole, Type II-P (Yard Grate)	1	Each		
63	Additional Depth, Area Inlet-Manhole, Type II-P	1.3	VF		
64	Curb Inlet, Type I, L=6 FT.	1	Each		
65	Curb Inlet, Type I, L=8 FT.	10	Each		
66	Curb Inlet, Type I, L=10 FT.	1	Each		
67	Additional Depth, Curb Inlet Type I, L=8 FT.	5.4	VF		
68	Curb Inlet-Manhole, Type I, L=8 FT.	3	Each		
69	Curb Inlet-Manhole, Type I, L=10 FT.	1	Each		
70	Additional Depth, Curb Inlet-Manhole Type I, L=8 FT.	2.4	VF		
71	Additional Depth, Curb Inlet-Manhole Type I, L=10 FT.	1.0	VF		
72	4 FT. Dia. Standard Manhole, Type II (0'-6')	1	Each		
73	5 FT. Dia. Standard Manhole, Type II (0'-6')	6	Each		
74	8 FT. Dia. Standard Manhole, Type II (0'-6')	2	Each		
75	5 FT. Dia. Additional Depth for Std. Manhole, Type II	6.4	VF		
76	8 FT. Dia. Additional Depth for Std. Manhole, Type II	9.7	VF		
77	5 FT. Dia. Standard Manhole, Type I (0'-6')	1	Each		
78	6 FT. Dia. Standard Manhole, Type I (0'-6')	1	Each		
79	6 FT. Dia. Additional Depth for Std. Manhole, Type I	2.5	VF		
80	Inlet Repair	2	Each		
81	15" Storm Sewer (RCP), Class III	98	LF		
82	15" Storm Sewer (RCP), Class II	366	LF		
83	18" Storm Sewer (RCP), Class II	290	LF		
84	24" Storm Sewer (RCP), Class II	409	LF		
85	30" Storm Sewer (RCP), Class II	311	LF		
86	36" Storm Sewer (RCP), Class II	674	LF		
87	42" Storm Sewer (RCP), Class II	123	LF		
88	48" Storm Sewer (RCP), Class II	54	LF		

Item No.	Description	Quantity	Unit	Unit Price	Extension
89	54" Storm Sewer (RCP), Class II	54	LF		
90	15" End Section RC)	1	Each		
91	Connection to Existing Structure	21	Each		
92	CCTV Inspection of Storm Sewer Pipe	2,382	LF		
	<b>Project No. 281250.04</b>				
93	SUPPLEMENTARY BORROW MATERIAL	250	CY		
94	6" ASPHALTIC CONCRETE	32	Tons		
95	16" RJ PVC WATERLINE, PC 235	8	L.F.		
96	12" RJ PVC FIRELINE, PC 305	250	L.F.		
97	12" RJ PVC FIRELINE, PC 305 BY BORING, JACKING, OR TUNNELING	45	L.F.		
98	12" RJ PVC WATERLINE, PC 235	3,151	L.F.		
99	12" RJ PVC WATERLINE, PC 235 BY BORING, JACKING, OR TUNNELING	200	L.F.		
100	10" RJ PVC WATERLINE, PC 235	10	L.F.		
101	10" RJ PVC FIRELINE, PC 305	6	L.F.		
102	8" RJ PVC WATERLINE, PC 235	101	L.F.		
103	8" RJ PVC WATERLINE, PC 235 BY HDD	44	L.F.		
104	8" RJ PVC WATERLINE, PC 235 BY BORING, JACKING, OR TUNNELING	51	L.F.		
105	6" RJ PVC WATERLINE, PC 235	343	L.F.		
106	6" RJ PVC FIRELINE, PC 305	49	L.F.		
107	6" RJ PVC WATERLINE, PC 235 BY HDD	361	L.F.		
108	2" SERVICE LINE	116	L.F.		
109	1.5" SERVICE LINE	168	L.F.		
110	1" SERVICE LINE	818	L.F.		
111	ENCASEMENT PIPE (20"X0.375" STEEL) BY BORING, JACKING, OR TUNNELING	200	L.F.		
112	16" RESTRAINED COUPLING	1	EACH		
113	12"x12" TEE	4	EACH		
114	12"x8" TEE	4	EACH		
115	12"x6" TEE	11	EACH		
116	12" THRUST COLLAR ON EXISTING	1	EACH		
117	12" 90° BEND	7	EACH		
118	12" 45° VERTICAL BEND(TOP)	2	EACH		
119	12" 45° VERTICAL BEND(BOTTOM)	2	EACH		
120	12" 22.5° BEND	4	EACH		
121	12" 22.5° VERTICAL BEND(BOTTOM)	2	EACH		
122	12" 11.25° BEND	1	EACH		
123	12" BUTTERFLY VALVE(OWNER FURNISHED) AND BOX(CONTRACTOR FURNISHED)	11	EACH		
124	12" SWIVEL x SOLID ADAPTER	12	EACH		
125	12" RESTRAINED COUPLING	7	EACH		
126	12"x10" REDUCER	2	EACH		
127	10" THRUST COLLAR ON EXISTING	1	EACH		
128	10" RESTRAINED COUPLING	3	EACH		
129	10" GATE VALVE(OWNER FURNISHED) AND BOX(CONTRACTOR FURNISHED)	1	EACH		
130	10"x10" TAPPING SLEEVE	1	EACH		
131	8" 90° BEND	6	EACH		
132	8" 45° BEND	1	EACH		

Item No.	Description	Quantity	Unit	Unit Price	Extension
133	8" SWIVEL x SOLID ADAPTER	4	EACH		
134	8" RESTRAINED COUPLING	3	EACH		
135	8" GATE VALVE(OWNER FURNISHED) AND BOX(CONTRACTOR FURNISHED)	4	EACH		
136	8" THRUST COLLAR ON EXISTING	4	EACH		
137	8"x8" TAPPING SLEEVE	1	EACH		
138	6" SWIVEL x SOLID ADAPTER	13	EACH		
139	6"x6" TEE	2	EACH		
140	6" 90° BEND	9	EACH		
141	6" 22.5° VERTICAL BEND(TOP)	1	EACH		
142	6" THRUST COLLAR ON EXISTING	4	EACH		
143	6" RESTRAINED COUPLING	4	EACH		
144	6" GATE VALVE(OWNER FURNISHED) AND BOX(CONTRACTOR FURNISHED)	14	EACH		
145	FIRE HYDRANT	9	EACH		
146	FIRE HYDRANT ADDITIONAL BURY DEPTH	27.5	V.F.		
147	12"x2" TAPPING SADDLE AND CORP STOP	4	EACH		
148	12"x1.5" TAPPING SADDLE AND CORP STOP	4	EACH		
149	12"x1" TAPPING SADDLE AND CORP STOP	15	EACH		
150	8"x1" TAPPING SADDLE AND CORP STOP	1	EACH		
151	6"x1" TAPPING SADDLE AND CORP STOP	3	EACH		
152	INSTALL 2" METER, METER BOX/PIT AND TOP(OWNER FURNISHED)	4	EACH		
153	INSTALL 1.5" METER, METER BOX/PIT AND TOP(OWNER FURNISHED)	4	EACH		
154	INSTALL 1" METER, METER BOX/PIT AND TOP(OWNER FURNISHED)	8	EACH		
155	INSTALL 5/8" METER, METER BOX/PIT AND TOP(OWNER FURNISHED)	11	EACH		
156	MAKE CONNECTION TO 12" PVC WATERLINE; STA. 16+09.36	1	L.S.		
157	MAKE CONNECTION TO 12" PVC WATERLINE; STA. 16+28.47, 24.57' RT.	1	L.S.		
158	MAKE CONNECTION TO 10" CI FIRELINE; STA. 52+87.05	1	L.S.		
159	MAKE CONNECTION TO 10" CI WATERLINE; STA. 23+52, 11.64' RT.	1	L.S.		
160	MAKE CONNECTION TO 10" CI WATERLINE; STA. 24+55.8, 14.8' RT.	1	L.S.		
161	MAKE CONNECTION TO 8" CI WATERLINE; STA. 31+50.77, LT.	1	L.S.		
162	MAKE CONNECTION TO 8" PVC WATERLINE; STA. 35+55.49, LT.	1	L.S.		
163	MAKE CONNECTION TO 8" DI WATERLINE; STA. 36+11.01, RT.	1	L.S.		
164	MAKE CONNECTION TO 6" CI WATERLINE; STA. 38+88.91, LT.	1	L.S.		
165	MAKE CONNECTION TO 6" CI WATERLINE; STA. 42+16.27, LT.	1	L.S.		
166	MAKE CONNECTION TO 12" CI WATERLINE; STA. 42+44.46, LT.	1	L.S.		

Item No.	Description	Quantity	Unit	Unit Price	Extension
167	MAKE CONNECTION TO 6" CI FIRELINE; STA. 44+46.88, RT.	1	L.S.		
168	MAKE CONNECTION TO 6" PVC WATERLINE; STA. 45+53.06 LT.	1	L.S.		
169	MAKE CONNECTION TO 16" DI WATERLINE; STA. 48+96.97, LT.	1	L.S.		
170	MAKE CONNECTION TO 12" DI WATERLINE; STA. 48+96.70	1	L.S.		
171	MAKE CONNECTION TO 8" PVC WATERLINE; STA. 48+91.94, LT.	1	L.S.		
<b>Project No. 291129.01</b>					
172	12" Asphaltic Concrete	48	Tons		
173	10" Sanitary Sewer (PVC)	729	L.F.		
174	8" Sanitary Sewer (PVC)	395	L.F.		
175	5 FT. DIA. Standard Manhole, Type I (0'-6')	2	EACH		
176	4 FT. DIA. Standard Manhole, Type I (0'-6')	6	EACH		
177	5 FT. DIA. Additional Depth for Std. Manhole, Type I	5.7	V.F.		
178	4 FT. DIA. Additional Depth for Std. Manhole, Type I	14.3	V.F.		
179	Inside Drop for Manhole	3	EACH		
180	Connection To Existing Structure	11	EACH		
181	Service (WYE) Connection, 4"	5	EACH		
182	CCTV Inspection of Sanitary Sewer Pipes	1,094	L.F.		
183	Bypass Pumping	1	L.S.		

**TOTAL BID** ..... \$ \_\_\_\_\_

5. Quantities are estimated. Final payment will be based on actual quantities unless otherwise stated in the Contract Documents.
6. Bidder agrees that the Work will be substantially complete in accordance with the time requirements given in the Agreement and General Conditions.
7. Bidder accepts the provisions of the Agreement for Liquidated Damages in the event of failure to complete the work on time.
8. The following documents are attached to and made a condition of this Bid:
  - a. Required Bid Security in the form of a certified or bank check or a bid bond in accordance with the provisions of the Instructions to Bidders.
  - b. List of Subcontractors; Costs and Suppliers.

9. The terms used in this Bid which are defined in the General Conditions included as part of the Contract Documents have the meanings assigned to them in the General Conditions.

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

\_\_\_\_\_  
Name of Bidder a(n) \_\_\_\_\_  
(individual, partnership, corporation)

\_\_\_\_\_  
Address of Bidder

\_\_\_\_\_  
Telephone Number

By: \_\_\_\_\_, (Corporate Seal)  
Authorized Person

\_\_\_\_\_  
Title

Project Number: 121005.00, 701039.00, 281250.01, 501081.27 & 501107.02, 291129.01

Contractor's Name: \_\_\_\_\_

**List of Subcontractors; Costs**

The Bidder is required to identify each Subcontractor and the Subcontractor's cost. Do not list alternate subcontractors for the same work. The Contractor shall list only one subcontractor for each such portion of Work as is defined by the Contractor in his bid. Contractor shall not substitute any person as subcontractor in the place of a subcontractor listed below, except as provided in Document 100.

The Bidder understands that if Bidder fails to specify a subcontractor for any portion of the Work to be performed under the contract or specifies more than one subcontractor for the same portion of the Work, Bidder shall be deemed to have agreed that Bidder is fully qualified to perform that portion and cannot sublet or subcontract that portion of the Work, except as provided in Document 100.

Subcontractor: \_\_\_\_\_  
Amount: \_\_\_\_\_ (\$ \_\_\_\_\_ )  
(words)

Subcontractor: \_\_\_\_\_  
Amount: \_\_\_\_\_ (\$ \_\_\_\_\_ )  
(words)

Subcontractor: \_\_\_\_\_  
Amount: \_\_\_\_\_ (\$ \_\_\_\_\_ )  
(words)

Subcontractor: \_\_\_\_\_  
Amount: \_\_\_\_\_ (\$ \_\_\_\_\_ )  
(words)

Subcontractor: \_\_\_\_\_  
Amount: \_\_\_\_\_ (\$ \_\_\_\_\_ )  
(words)

Subcontractor: \_\_\_\_\_  
Amount: \_\_\_\_\_ (\$ \_\_\_\_\_ )  
(words)

Project Number: 121005.00, 701039.00, 281250.01, 501081.27 & 501107.02, 291129.01, 141037.01

Contractor's Name: \_\_\_\_\_

**List of Suppliers (cont.)**

Each Supplier performing more than 5 % of the Total Bid shall also be furnished. Do not list alternate suppliers for the same work.

Supplier  
Name: \_\_\_\_\_  
Material: \_\_\_\_\_

Supplier  
Name: \_\_\_\_\_  
Material: \_\_\_\_\_

Supplier  
Name: \_\_\_\_\_  
Material: \_\_\_\_\_

Supplier  
Name: \_\_\_\_\_  
Material: \_\_\_\_\_

Supplier  
Name: \_\_\_\_\_  
Material: \_\_\_\_\_

Supplier  
Name: \_\_\_\_\_  
Material: \_\_\_\_\_

Supplier  
Name: \_\_\_\_\_  
Material: \_\_\_\_\_

Supplier  
Name: \_\_\_\_\_  
Material: \_\_\_\_\_

Supplier  
Name: \_\_\_\_\_  
Material: \_\_\_\_\_

Supplier

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

Material: \_\_\_\_\_

Supplier

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

Material: \_\_\_\_\_

# Performance Bond

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

CONTRACTOR (Name and Address):

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

OWNER (Name and Address): City of Topeka  
215 SE 7<sup>th</sup> Street  
Topeka, KS 66603

**CONTRACT**

Date:

Amount:

Description (Name and Location): Bridge Improvement Project No. 121005.00 – SE 29th Street over Butcher Creek, Street Improvement Project No. 701039.00 SE 29<sup>th</sup> Street -S Kansas Ave. to SE Adams St., Waterline Replacement Project No. 281250.04, Storm Sewer Replacement Project No. 501081.27 &, 501107.02, Sanitary Sewer Replacement Project No. 291129.01, Traffic Signal Improvement Project No. 141037.01

**BOND**

Date (Not earlier than Contract Date):

Amount:

Modifications to this Bond Form:

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

CONTRACTOR AS PRINCIPAL

Company: (Corp. Seal)

SURETY

Company: (Corp. Seal)

Signature: \_\_\_\_\_  
Name and Title:

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

(Space is provided below for signatures of additional parties, if required.)

CONTRACTOR AS PRINCIPAL

Company: (Corp. Seal)

SURETY

Company: (Corp. Seal)

Signature: \_\_\_\_\_  
Name and Title:

Signature: \_\_\_\_\_  
Name and Title:

EJCDC No. 1910-28-A (1996 Edition)

Originally prepared through the joint efforts of the Surety Association of America, Engineers Joint Contract Documents Committee, the Associated General Contractors of America, and the American Institute of Architects.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

5. If the Surety does not proceed as provided in paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond fifteen days after receipt of an additional written notice from the OWNER to the Surety demanding that the Surety perform its obligations under this Bond, and the OWNER shall be entitled to enforce any remedy available to the OWNER. If the Surety proceeds as provided in paragraph 4.4, and the OWNER refuses the payment tendered or the Surety has denied liability, in

whole or in part, without further notice the OWNER shall be entitled to enforce any remedy available to the OWNER.

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

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

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

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

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

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

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

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

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

12. Definitions.

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

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

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

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

(FOR INFORMATION ONLY---Name, Address and Telephone)  
AGENT or BROKER: OWNER'S REPRESENTATIVE (Engineer or other party):

# Payment Bond

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

CONTRACTOR (Name and Address):

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

OWNER (Name and Address): City of Topeka  
215 SE 7<sup>th</sup> Street  
Topeka, KS 66603

**CONTRACT**

Date:

Amount:

Description (Name and Location): Bridge Improvement Project No. 121005.00 – SE 29th Street over Butcher Creek, Street Improvement Project No. 701039.00 SE 29<sup>th</sup> Street -S Kansas Ave. to SE Adams St., Waterline Replacement Project No. 281250.04, Storm Sewer Replacement Project No. 501081.27&, 501107.02, Sanitary Sewer Replacement Project No. 291129.01, Traffic Signal Improvement Project No. 141037.01

**BOND**

Date (Not earlier than Contract Date):

Amount:

Modifications to this Bond Form:

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

CONTRACTOR AS PRINCIPAL

Company: (Corp. Seal)

Signature: \_\_\_\_\_  
Name and Title:

SURETY

Company: (Corp. Seal)

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

(Space is provided below for signatures of additional parties, if required.)

CONTRACTOR AS PRINCIPAL

Company: (Corp. Seal)

Signature: \_\_\_\_\_  
Name and Title:

SURETY

Company: (Corp. Seal)

Signature: \_\_\_\_\_  
Name and Title:

EJCDC No. 1910-28-B (1996 Edition)

Originally prepared through the joint efforts of the Surety Association of America, Engineers Joint Contract Documents Committee, the Associated General Contractors of America, and the American Institute of Architects.

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 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 all claims, demands, liens or suits by any person or entity who furnished labor, materials or equipment for use in the performance of the Contract, provided the OWNER has promptly notified the CONTRACTOR and the Surety (at the addresses described in paragraph 12) of any claims, demands, liens or suits and tendered defense of such claims, demands, liens or suits to 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 addresses 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 had 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 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 the 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 Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any 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 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 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 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 a court of competent jurisdiction in the location in which the Work or part of the Work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by paragraph 4.1 or paragraph 4.2.3, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the 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 Contract was 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.

14. Upon request of 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 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. 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 Contract or to perform and complete or comply with the other terms thereof.

(FOR INFORMATION ONLY---Name, Address and Telephone)  
AGENT or BROKER: OWNER'S REPRESENTATIVE (Engineer or other party):

