

**SPECIFICATIONS FOR
Standard Addition Water Main Replacement - Phase II**

**for
City of Carlinville
Macoupin County, Illinois**

CDBG-Public Infrastructure Grant No. 16-242003

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Expires: November 30, 2019**

**Date: January 2018
File: 02159-405**

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City of Carlinville
Carlinville, IL
Standard Addition Water Main Replacement - Phase II

ADVERTISEMENT FOR BIDS

Sealed Bids for the construction of the Standard Addition Water Main Replacement - Phase II, will be received by Deanna Demuzio, Mayor, City of Carlinville, at the office of the City of Carlinville, 550 North Broad Street, Carlinville, IL 62626 until 2:00 p.m. local time on February 12, 2018, at which time the Bids received will be publicly opened and read. The Project consists of installing approximately 2,350 lineal feet of 6-inch water main and appurtenances.

A Pre-Bid meeting will be held at 10:00 a.m. on January 25, 2018 at the office of the City of Carlinville, 550 North Broad Street, Carlinville, IL, 62626.

Bids will be received for a single prime Contract. Bids shall be on a lump sum and unit price basis, with additive alternate bid items as indicated in the Bid Form.

The Issuing Office for the Bidding Documents is: Heneghan and Associates, P.C. 1004 State Highway 16, Jerseyville, IL 62052, contact Ronnie Paul – 618-498-6418 – rmppaul@heneghanassoc.com. Prospective Bidders may examine the Bidding Documents at the Issuing Office on Mondays through Fridays between the hours of 8:00am and 4:30pm, and may obtain copies of the Bidding Documents from the Issuing Office as described below.

Bidding Documents also may be examined at Heneghan and Associates, P.C. 1004 State Highway 16, Jerseyville, IL 62052; Southern Illinois Builders Association, 1468 Green Mount Road, O'Fallon, Illinois 62269; Dodge/Agc Plan Room, 6330 Knox Industrial Drive, St. Louis, Missouri 63139; online at Heneghan and Associates Website - http://haengr.com/projects_water.html and www.dodge.construction.com; the office of the City of Carlinville, 550 North Broad Street, Carlinville, IL 62626 on Mondays through Fridays between the hours of 8:30 a.m. and 4:00 p.m.; and the office of the Engineer, Heneghan and Associates, P.C. 1004 State Highway 16, Jerseyville, IL 62052, on Mondays through Fridays between the hours of 8:00am and 4:30pm.

Bidding Documents may be obtained from the Issuing Office during the hours indicated above. Bidding Documents are available at http://haengr.com/projects_water.html (as portable document format (PDF) files) for a non-refundable charge of \$ 10.00. Alternatively, printed Bidding Documents may be obtained from the Issuing Office either via in-person pick-up or via mail, upon Issuing Office's receipt of payment for the Bidding Documents. The non-refundable cost of printed Bidding Documents is \$ 60.00 per set, payable to "Heneghan and Associates, P.C.", plus a \$10.00 non-refundable shipping charge. Upon Issuing Office's receipt of payment, printed Bidding Documents will be sent via the prospective Bidder's delivery method of choice. The date that the Bidding Documents are transmitted by the Issuing Office will be considered the prospective Bidder's date of receipt of the Bidding Documents. Partial sets of Bidding Documents will not be available from the Issuing Office. Neither Owner nor Engineer will be responsible for full or partial sets of Bidding Documents, including Addenda if any, obtained from sources other than the Issuing Office.

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ARTICLE 1 – DEFINED TERMS

- 1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:

A. *Issuing Office* – The office from which the Bidding Documents are to be issued.

ARTICLE 2 – COPIES OF BIDDING DOCUMENTS

- 2.01 Complete sets of the Bidding Documents may be obtained from the Issuing Office in the number and format stated in the advertisement or invitation to bid.
- 2.02 Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- 2.03 Owner and Engineer, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids for the Work and do not authorize or confer a license for any other use.

ARTICLE 3 – QUALIFICATIONS OF BIDDERS

- 3.01 To demonstrate Bidder's qualifications to perform the Work, after submitting its Bid and within 2 days of Owner's request, Bidder shall submit (a) written evidence establishing its qualifications such as financial data, previous experience, and present commitments, and (b) the following additional information:
- A. Evidence of Bidder's authority to do business in the state where the Project is located.
- 3.02 A Bidder's failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.
- 3.03 No requirement in this Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder's qualifications.
- 3.04 Bidder is advised to carefully review those portions of the Bid Form requiring Bidder's representations and certifications.

ARTICLE 4 – SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER'S SAFETY PROGRAM; OTHER WORK AT THE SITE

4.01 *Site and Other Areas*

- A. The Site is identified in the Bidding Documents. By definition, the Site includes rights-of-way, easements, and other lands furnished by Owner for the use of the Contractor. Any additional lands required for temporary construction facilities, construction equipment, or storage of materials and equipment, and any access needed for such additional lands, are to be obtained and paid for by Contractor.

4.02 *Existing Site Conditions*

- A. Subsurface and Physical Conditions; Hazardous Environmental Conditions
1. Subsurface and Physical Conditions; Hazardous Environmental Conditions: None Available.
 2. Geotechnical Baseline Report: No Geotechnical Baseline Report is Available.

- B. Underground Facilities: Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or adjacent to the Site are set forth in the Contract Documents and are based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner, or others.
- C. Adequacy of Data: Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions, and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated subsurface or physical conditions appear in Paragraphs 5.03, 5.04, and 5.05 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work, appear in Paragraph 5.06 of the General Conditions.

4.03 *Site Visit and Testing by Bidders*

- A. Bidder shall conduct the required Site visit during normal working hours, and shall not disturb any ongoing operations at the Site.
- B. Bidder is not required to conduct any subsurface testing, or exhaustive investigations of Site conditions.
- C. On request, and to the extent Owner has control over the Site, and schedule permitting, the Owner will provide Bidder access to the Site to conduct such additional examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a successful Bid. Owner will not have any obligation to grant such access if doing so is not practical because of existing operations, security or safety concerns, or restraints on Owner's authority regarding the Site.
- D. Bidder shall comply with all applicable Laws and Regulations regarding excavation and location of utilities, obtain all permits, and comply with all terms and conditions established by Owner or by property owners or other entities controlling the Site with respect to schedule, access, existing operations, security, liability insurance, and applicable safety programs.
- E. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.

4.04 *Owner's Safety Program*

- A. Site visits and work at the Site may be governed by an Owner safety program. As the General Conditions indicate, if an Owner safety program exists, it will be noted in the Supplementary Conditions.

4.05 *Other Work at the Site*

- A. Reference is made to Article 8 of the Supplementary Conditions for the identification of the general nature of other work of which Owner is aware (if any) that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) and relates to the Work contemplated by these Bidding Documents. If Owner is party to a written contract for such other work, then on request, Owner will provide to each Bidder access to examine such contracts (other than portions thereof related to price and other confidential matters), if any.

ARTICLE 5 – BIDDER'S REPRESENTATIONS

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

- A. examine and carefully study the Bidding Documents, and any data and reference items identified in the Bidding Documents;
- B. visit the Site, conduct a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfy itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;
- C. become familiar with and satisfy itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work;
- D. carefully study all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings;
- E. consider the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs;
- F. agree, based on the information and observations referred to in the preceding paragraph, that at the time of submitting its Bid no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents;
- G. become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents;
- H. promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer is acceptable to Bidder;
- I. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work; and
- J. agree that the submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 6 – PRE-BID CONFERENCE

- 6.01 A pre-Bid conference will be held at the time and location stated in the invitation or advertisement to bid. Representatives of Owner and Engineer will be present to discuss the Project. Bidders are encouraged to attend and participate in the conference. Engineer will transmit to all prospective Bidders of record such Addenda as Engineer considers necessary in response to questions arising at the conference. Oral statements may not be relied upon and will not be binding or legally effective.

ARTICLE 7 – INTERPRETATIONS AND ADDENDA

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

ARTICLE 8 – BID SECURITY

- 8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of 5 percent of Bidder's maximum Bid price (determined by adding the base bid and all alternates) and in the form of a certified check, bank money order, or a Bid bond (on the form included in the Bidding Documents) issued by a surety meeting the requirements of Paragraphs 6.01 and 6.02 of the General Conditions.
- 8.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract Documents, furnished the required contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be released. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 15 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited. Such forfeiture shall be Owner's exclusive remedy if Bidder defaults.
- 8.03 The Bid security of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of seven days after the Effective Date of the Contract or 91 days after the Bid opening, whereupon Bid security furnished by such Bidders will be released.
- 8.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within seven days after the Bid opening.

ARTICLE 9 – CONTRACT TIMES

- 9.01 The number of days within which, or the dates by which, **[Milestones are to be achieved and]** the Work is to be substantially completed, and completed and ready for final payment, are set forth in the Agreement.

ARTICLE 10 – LIQUIDATED DAMAGES

- 10.01 Provisions for liquidated damages, if any, for failure to timely attain a Milestone, Substantial Completion, or completion of the Work in readiness for final payment, are set forth in the Agreement.

ARTICLE 11 – SUBSTITUTE AND "OR-EQUAL" ITEMS

- 11.01 The Contract for the Work, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents, and those "or-equal" or substitute materials and equipment subsequently approved by Engineer prior to the submittal of Bids and identified by Addendum. No item of material or equipment will be considered by Engineer as an "or-equal" or substitute unless written request for approval has been submitted by Bidder and has been received by Engineer at least 15 days prior to the date for receipt of Bids in the case of a proposed substitute and 5 days prior in the case of a proposed "or-equal." Each such request shall comply with the requirements of Paragraphs 7.04 and 7.05 of the General Conditions. The

burden of proof of the merit of the proposed item is upon Bidder. Engineer's decision of approval or disapproval of a proposed item will be final. If Engineer approves any such proposed item, such approval will be set forth in an Addendum issued to all prospective Bidders. Bidders shall not rely upon approvals made in any other manner. Substitutes and "or-equal" materials and equipment may be proposed by Contractor in accordance with Paragraphs 7.04 and 7.05 of the General Conditions after the Effective Date of the Contract.

- 11.02 All prices that Bidder sets forth in its Bid shall be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of "or-equal" or substitution requests are made at Bidder's sole risk.
- 11.03 If an award is made, Contractor shall be allowed to submit proposed substitutes and "or-equals" in accordance with the General Conditions.

ARTICLE 12 – SUBCONTRACTORS, SUPPLIERS, AND OTHERS

- 12.01 If required by the bid documents. The apparent Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening, submit to Owner a list of the Subcontractors or Suppliers proposed for the following portions of the Work: ***[drafter should here list key categories of the Work; depending on the Project this might include electrical, fire protection, major equipment items, etc.].***

If requested by Owner, such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, or other individual or entity. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, in which case apparent Successful Bidder shall submit a substitute, Bidder's Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.

- 12.02 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, or other individuals or entities. Declining to make requested substitutions will constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to subsequent revocation of such acceptance as provided in Paragraph 7.06 of the General Conditions.
- 12.05 Contractor shall not be required to employ any Subcontractor, Suppliers, individuals, or entity against whom Contractor has reasonable objection.
- 12.06 The Contractor shall not award work to Subcontractor(s) in excess of the limits stated in SC 7.06.

ARTICLE 13 – PREPARATION OF BID

- 13.01 The Bid Form is included with the Bidding Documents.
 - A. All blanks on the Bid Form shall be completed in ink and the Bid Form signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price shall be indicated for each section, Bid item, alternate, adjustment unit price item, and unit price item listed therein.

- B. If the Bid Form expressly indicates that submitting pricing on a specific alternate item is optional, and Bidder elects to not furnish pricing for such optional alternate item, then Bidder may enter the words “No Bid” or “Not Applicable.”
- 13.02 A Bid by a corporation shall be executed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation shall be shown.
- 13.03 A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The partnership’s address for receiving notices shall be shown.
- 13.04 A Bid by a limited liability company shall be executed in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the firm’s address for receiving notices shall be shown.
- 13.05 A Bid by an individual shall show the Bidder’s name and address for receiving notices.
- 13.06 A Bid by a joint venture shall be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The joint venture’s address for receiving notices shall be shown.
- 13.07 All names shall be printed in ink below the signatures.
- 13.08 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.
- 13.09 Postal and e-mail addresses and telephone number for communications regarding the Bid shall be shown.
- 13.10 The Bid shall contain evidence of Bidder’s authority and qualification to do business in the state where the Project is located, or Bidder shall covenant in writing to obtain such authority and qualification prior to award of the Contract and attach such covenant to the Bid. Bidder’s state contractor license number, if any, shall also be shown on the Bid Form.

ARTICLE 14 – BASIS OF BID

- 14.01 *Base Bid with Alternates*
- A. Bidders shall submit a Bid on a lump sum basis for the base Bid and include a separate price for each alternate described in the Bidding Documents and as provided for in the Bid Form. The price for each alternate will be the amount added to or deleted from the base Bid if Owner selects the alternate.
 - B. In the comparison of Bids, alternates will be applied in the same order of priority as listed in the Bid Form.
- 14.02 *Unit Price*
- A. Bidders shall submit a Bid on a unit price basis for each item of Work listed in the unit price section of the Bid Form.
 - B. The “Bid Price” (sometimes referred to as the extended price) for each unit price Bid item will be the product of the “Estimated Quantity” (which Owner or its representative has set forth in the Bid Form) for the item and the corresponding “Bid Unit Price” offered by the Bidder. The total of all unit price Bid items will be the sum of these “Bid Prices”; such total will be used by Owner for Bid comparison purposes. The final quantities and Contract Price will be determined in accordance with Paragraph 13.03 of the General Conditions.

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

14.03 Allowances

- A. For cash allowances the Bid price shall include such amounts as the Bidder deems proper for Contractor's overhead, costs, profit, and other expenses on account of cash allowances, if any, named in the Contract Documents, in accordance with Paragraph 13.02.B of the General Conditions.

ARTICLE 15 – SUBMITTAL OF BID

- 15.01 With each copy of the Bidding Documents, a Bidder is furnished one separate unbound copy of the Bid Form, and, if required, the Bid Bond Form. The unbound copy of the Bid Form is to be completed and submitted with the Bid security and the other documents required to be submitted under the terms of Article 7 of the Bid Form.
- 15.02 A Bid shall be received no later than the date and time prescribed and at the place indicated in the advertisement or invitation to bid and shall be enclosed in a plainly marked package with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), the name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate package plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid shall be addressed to Deanna Demuzio.
- 15.03 Bids received after the date and time prescribed for the opening of bids, or not submitted at the correct location or in the designated manner, will not be accepted and will be returned to the Bidder unopened.

ARTICLE 16 – MODIFICATION AND WITHDRAWAL OF BID

- 16.01 A Bid may be withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids. Upon receipt of such notice, the unopened Bid will be returned to the Bidder.
- 16.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 16.01 and submit a new Bid prior to the date and time for the opening of Bids.
- 16.03 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, that Bidder will be disqualified from further bidding on the Work.

ARTICLE 17 – OPENING OF BIDS

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

ARTICLE 18 – BIDS TO REMAIN SUBJECT TO ACCEPTANCE

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

ARTICLE 19 – EVALUATION OF BIDS AND AWARD OF CONTRACT

- 19.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible. If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes of the Bid, then the Owner will reject the Bid as nonresponsive; provided that Owner also reserves the right to waive all minor informalities not involving price, time, or changes in the Work.
- 19.02 If Owner awards the contract for the Work, such award shall be to the responsible Bidder submitting the lowest responsive Bid.
- 19.03 Evaluation of Bids
- A. In evaluating Bids, Owner will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.
 - B. In the comparison of Bids, alternates will be applied in the same order of priority as listed in the Bid Form. To determine the Bid prices for purposes of comparison, Owner shall announce to all bidders a “Base Bid plus alternates” budget after receiving all Bids, but prior to opening them. For comparison purposes alternates will be accepted, following the order of priority established in the Bid Form, until doing so would cause the budget to be exceeded. After determination of the Successful Bidder based on this comparative process and on the responsiveness, responsibility, and other factors set forth in these Instructions, the award may be made to said Successful Bidder on its base Bid and any combination of its additive alternate Bids for which Owner determines funds will be available at the time of award.
 - A. Bid prices will be compared after adjusting for differences in time of Substantial Completion (total number of calendar days to substantially complete the Work) designated by Bidders. The adjusting amount will be determined at the rate set forth in the Agreement for liquidated damages for failing to achieve Substantial Completion, or such other amount that Owner has designated in the Bid Form.
 - 1. The method for calculating the lowest bid for comparison will be the summation of the Bid price shown in the Bid Form plus the product of the Bidder-specified time of Substantial Completion (in calendar days) times the rate for liquidated damages **[or other Owner-designated daily rate]** (in dollars per day).
 - 2. This procedure is only used to determine the lowest bid for comparison and contractor selection purposes. The Contract Price for compensation and payment purposes remains the Bid price shown in the Bid Form.
- 19.04 In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors and Suppliers proposed for those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.
- 19.05 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors or Suppliers.

ARTICLE 20 – BONDS AND INSURANCE

- 20.01 Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner’s requirements as to performance and payment bonds and insurance. When the Successful Bidder delivers the

Agreement (executed by Successful Bidder) to Owner, it shall be accompanied by required bonds and insurance documentation.

ARTICLE 21 – SIGNING OF AGREEMENT

21.01 When Owner issues a Notice of Award to the Successful Bidder, it shall be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within 15 days thereafter, Successful Bidder shall execute and deliver the required number of counterparts of the Agreement (and any bonds and insurance documentation required to be delivered by the Contract Documents) to Owner. Within ten days thereafter, Owner shall deliver one fully executed counterpart of the Agreement to Successful Bidder, together with printed and electronic copies of the Contract Documents as stated in Paragraph 2.02 of the General Conditions.

ARTICLE 22 – SALES AND USE TAXES

22.01 Owner is exempt from Illinois state sales and use taxes on materials and equipment to be incorporated in the Work. Said taxes shall not be included in the Bid. Refer to Paragraph SC-7.09 of the Supplementary Conditions for additional information.

ARTICLE 23 – CONTRACTS TO BE ASSIGNED

23.01 Not Applicable.

ARTICLE 24 – WAGE RATE REQUIREMENTS

24.01 If the contract price is in excess of \$100,000, provisions of the Contract Work Hours and Safety Standards Act at 29 CFR 5.5(b) apply.

BID FORM

City of Carlinville

Standard Addition Water Main Replacement - Phase II

02159-405

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ARTICLE 1 – BID RECIPIENT

- 1.01 This Bid is submitted to:

Deanna Demuzio, Mayor

City of Carlinville

550 North Broad Street, Carlinville, IL 62626

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

ARTICLE 2 – BIDDER'S ACKNOWLEDGEMENTS

- 2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 90 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER'S REPRESENTATIONS

- 3.01 In submitting this Bid, Bidder represents that:

- A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

Addendum No.

Addendum, Date

_____	_____
_____	_____
_____	_____
_____	_____

- B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
- C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.
- D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.
- E. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost,

progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.

- F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.
- G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
- H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.
- I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.
- J. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
 - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;
 - 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
 - 3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
 - 4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 5 – BASIS OF BID

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

DATE & TIME: February 12, 2018 at 2:00 p.m.

LOCATION: City of Carlinville, City Hall

PROJECT: STANDARD ADDITION WATER MAIN REPLACEMENT - PHASE II

H&A FILE NO.:02159-405

ITEMS - BASE BID "A"		QUANTITY	UNIT	UNIT PRICE	ESTIMATED TOTAL PRICE
1	6"PVC Pipe, C900, DR 18	2345	L.F.	\$	\$
2	6" C900 DR-18 RJ PVC Within Casing	80	L.F.	\$	\$
3	12" PVC Pipe, CL160, SDR 26 - Septic Encasement	60	L.F.	\$	\$
4	6" Gate Valve with Box	15	Each	\$	\$
5	Cut and Cap Existing Water Main	5	Each	\$	\$
6	Connect/Reconnect Existing Main or Existing Gate Valve	6	Each	\$	\$
7	1" Service Line (Copper or P.E.)	650	L.F.	\$	\$
8	Re-Connect Existing Service to New Main	65	Each	\$	\$
9	6"x6" Tapping Sleeve with 6" Gate Valve with Box	1	Each	\$	\$
10	8"x6" Tapping Sleeve with 6" Gate Valve with Box	2	Each	\$	\$
11	4" Line Stop	2	Each	\$	\$
12	6" Line Stop	2	Each	\$	\$
13	5-1/4" Fire Hydrant	7	Each	\$	\$
14	Remove and Salvage Existing Fire Hydrant	2	Each	\$	\$
15	Close and Bury Existing Gate Valve	3	Each	\$	\$
16	Bituminous Pavement Removal and Replacement	155	Sq Yd	\$	\$
17	Concrete Pavement Removal and Replacement (6" PCC)	8	Sq Yd	\$	\$
18	Sidewalk Removal and Replacement (4" PCC)	151	Sq Ft	\$	\$
19	Curb Removal and Replacement	83	Cu Yd	\$	\$
20	Compacted Rock Backfill	1341	Each	\$	\$
21	Replace Curb Stop with Curb Stop	39	Each	\$	\$
22	Bacteriological Sampling	3	Each	\$	\$

TOTAL BID AMOUNT: _____

ALTERNATE # A:

The OWNER is considering changing the existing curb stops affected by the base project to meter assemblies. The CONTRACTOR shall provide a unit bid price for the following alternate line items. The Alternate #A bid items will be in addition to the Base Bid if Alternate #A is chosen.

ITEMS - ALTERNATE BID "A"		QUANTITY	UNIT	UNIT PRICE	ESTIMATED TOTAL PRICE
A-1	Replace Curb Stop with Meter	20	Each	\$	\$

ARTICLE 6 – TIME OF COMPLETION

- 6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.
- 6.03 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 – ATTACHMENTS TO THIS BID

- 7.01 The following documents are submitted with and made a condition of this Bid:
- A. Required Bid security;
 - B. List of Proposed Subcontractors;
 - C. List of Proposed Suppliers;
 - D. List of Project References;
 - E. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such license within the time for acceptance of Bids;
 - F. Contractor's License No.: [REDACTED] [or] Evidence of Bidder's ability to obtain a State Contractor's License and a covenant by Bidder to obtain said license within the time for acceptance of Bids;
 - G. Required Bidder Qualification Statement with supporting data; and
 - H. If bid amount exceeds \$10,000, signed Compliance Statement (RD400-6). Refer to specific equal opportunity requirements set forth in the Supplemental General Conditions;
 - I. If Bid amount exceeds \$25,000, signed Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – Lower Tier Covered Transactions (AD-1048);
 - J. If Bid amount exceeds \$100,000, signed RD Instructions 1940-Q, Exhibit A-1, Certification for Contracts, Grants, and Loans.

ARTICLE 8 – DEFINED TERMS

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

ARTICLE 9 – BID SUBMITTAL

BIDDER: *[Indicate correct name of bidding entity]*

By:

[Signature]

[Printed name]

(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:

[Signature]

[Printed name]

Title:

Submittal Date:

Address for giving notices:

Telephone Number:

Fax Number:

Contact Name and e-mail address:

Bidder's License No.:

(where applicable)

BID BOND

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

BIDDER (*Name and Address*):

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

OWNER (*Name and Address*):

City of Carlinville
550 North Broad Street, Carlinville, IL 62626

BID

Bid Due Date:

Description (*Project Name— Include Location*): Standard Addition Water Main Replacement
Phase II Install approximately 2,350 lineal feet of 6-inch water main and appurtenances

BOND

Bond Number:

Date:

Penal sum _____ \$ _____
(Words) (Figures)

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

BIDDER

SURETY

Bidder's Name and Corporate Seal

Surety's Name and Corporate Seal

By:

Signature

By:

Signature (Attach Power of Attorney)

Print Name

Print Name

Title

Title

Attest:

Signature

Attest:

Signature

Title

Title

Note: Addresses are to be used for giving any required notice.

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

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

QUALIFICATIONS STATEMENT

THE INFORMATION SUPPLIED IN THIS DOCUMENT IS CONFIDENTIAL TO THE EXTENT
PERMITTED BY LAWS AND REGULATIONS

1. SUBMITTED BY:

Official Name of Firm:

Address:

2. SUBMITTED TO:

3. SUBMITTED FOR:

Owner:

Project Name:

TYPE OF WORK:

4. CONTRACTOR'S CONTACT INFORMATION

Contact Person:

Title:

Phone:

Email:

5. AFFILIATED COMPANIES:

Name: _____

Address: _____

6. TYPE OF ORGANIZATION:

☐ SOLE PROPRIETORSHIP

Name of Owner: _____

Doing Business As: _____

Date of Organization: _____

☐ PARTNERSHIP

Date of Organization: _____

Type of Partnership: _____

Name of General Partner(s): _____

☐ CORPORATION

State of Organization: _____

Date of Organization: _____

Executive Officers:

- President: _____

- Vice President(s): _____

- Treasurer: _____

- Secretary: _____

☐ LIMITED LIABILITY COMPANY

State of Organization:

Date of Organization:

Members:

☐ JOINT VENTURE

Sate of Organization:

Date of Organization:

Form of Organization:

Joint Venture Managing Partner

- Name:

- Address:

Joint Venture Managing Partner

- Name:

- Address:

Joint Venture Managing Partner

- Name:

- Address:

7. LICENSING

Jurisdiction: _____

Type of License: _____

License Number: _____

Jurisdiction: _____

Type of License: _____

License Number: _____

8. CERTIFICATIONS

CERTIFIED BY:

Disadvantage Business Enterprise: _____

Minority Business Enterprise: _____

Woman Owned Enterprise: _____

Small Business Enterprise: _____

Other (_____): _____

9. BONDING INFORMATION

Bonding Company: _____

Address: _____

Bonding Agent: _____

Address: _____

Contact Name: _____

Phone: _____

Aggregate Bonding Capacity: _____

Available Bonding Capacity as of date of this submittal: _____

EJCDC® C-451, Qualifications Statement.

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10. FINANCIAL INFORMATION

Financial Institution: _____

Address: _____

Account Manager: _____

Phone: _____

INCLUDE AS AN ATTACHMENT AN AUDITED BALANCE SHEET FOR EACH OF THE
LAST 3 YEARS

11. CONSTRUCTION EXPERIENCE:

Current Experience:

List on **Schedule A** all uncompleted projects currently under contract (If Joint Venture list each participant's projects separately).

Previous Experience:

List on **Schedule B** all projects completed within the last 5 Years (If Joint Venture list each participant's projects separately).

Has firm listed in Section 1 ever failed to complete a construction contract awarded to it?

☐ YES ☐ NO

If YES, attach as an Attachment details including Project Owner's contact information.

Has any Corporate Officer, Partner, Joint Venture participant or Proprietor ever failed to complete a construction contract awarded to them in their name or when acting as a principal of another entity?

☐ YES ☐ NO

If YES, attach as an Attachment details including Project Owner's contact information.

Are there any judgments, claims, disputes or litigation pending or outstanding involving the firm listed in Section 1 or any of its officers (or any of its partners if a partnership or any of the individual entities if a joint venture)?

☐ YES ☐ NO

If YES, attach as an Attachment details including Project Owner's contact information.

12. SAFETY PROGRAM:

Name of Contractor's Safety Officer: _____

Include the following as attachments:

Provide as an Attachment Contractor's (and Contractor's proposed Subcontractors and Suppliers furnishing or performing Work having a value in excess of 10 percent of the total amount of the Bid) OSHA No. 500- Log & Summary of Occupational Injuries & Illnesses for the past 5 years.

Provide as an Attachment Contractor's (and Contractor's proposed Subcontractors and Suppliers furnishing or performing Work having a value in excess of 10 percent of the total amount of the Bid) list of all OSHA Citations & Notifications of Penalty (monetary or other) received within the last 5 years (indicate disposition as applicable) - IF NONE SO STATE.

Provide as an Attachment Contractor's (and Contractor's proposed Subcontractors and Suppliers furnishing or performing Work having a value in excess of 10 percent of the total amount of the Bid) list of all safety citations or violations under any state all received within the last 5 years (indicate disposition as applicable) - IF NONE SO STATE.

Provide the following for the firm listed in Section V (and for each proposed Subcontractor furnishing or performing Work having a value in excess of 10 percent of the total amount of the Bid) the following (attach additional sheets as necessary):

Workers' compensation Experience Modification Rate (EMR) for the last 5 years:

YEAR	_____	EMR	_____
YEAR	_____	EMR	_____
YEAR	_____	EMR	_____
YEAR	_____	EMR	_____
YEAR	_____	EMR	_____

Total Recordable Frequency Rate (TRFR) for the last 5 years:

YEAR	_____	TRFR	_____
YEAR	_____	TRFR	_____
YEAR	_____	TRFR	_____
YEAR	_____	TRFR	_____
YEAR	_____	TRFR	_____

Total number of man-hours worked for the last 5 Years:

YEAR	_____	TOTAL NUMBER OF MAN-HOURS	_____
YEAR	_____	TOTAL NUMBER OF MAN-HOURS	_____
YEAR	_____	TOTAL NUMBER OF MAN-HOURS	_____
YEAR	_____	TOTAL NUMBER OF MAN-HOURS	_____
YEAR	_____	TOTAL NUMBER OF MAN-HOURS	_____

Provide Contractor's (and Contractor's proposed Subcontractors and Suppliers furnishing or performing Work having a value in excess of 10 percent of the total amount of the Bid) Days Away From Work, Days of Restricted Work Activity or Job Transfer (DART) incidence rate for the particular industry or type of Work to be performed by Contractor and each of Contractor's proposed Subcontractors and Suppliers) for the last 5 years:

YEAR	_____	DART	_____
YEAR	_____	DART	_____
YEAR	_____	DART	_____
YEAR	_____	DART	_____
YEAR	_____	DART	_____

13. EQUIPMENT:

MAJOR EQUIPMENT:

List on **Schedule C** all pieces of major equipment available for use on Owner's Project.

I HEREBY CERTIFY THAT THE INFORMATION SUBMITTED HERewith, INCLUDING ANY ATTACHMENTS, IS TRUE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

NAME OF ORGANIZATION: _____

BY: _____

TITLE: _____

DATED: _____

NOTARY ATTEST:

SUBSCRIBED AND SWORN TO BEFORE ME

THIS _____ DAY OF _____, 20__

NOTARY PUBLIC - STATE OF _____

MY COMMISSION EXPIRES: _____

REQUIRED ATTACHMENTS

1. Schedule A (Current Experience).
2. Schedule B (Previous Experience).
3. Schedule C (Major Equipment).
4. Audited balance sheet for each of the last 3 years for firm named in Section 1.
5. Evidence of authority for individuals listed in Section 7 to bind organization to an agreement.
6. Resumes of officers and key individuals (including Safety Officer) of firm named in Section 1.
7. Required safety program submittals listed in Section 13.
8. Additional items as pertinent.

SCHEDULE A

CURRENT EXPERIENCE

Project Name	Owner's Contact Person	Design Engineer	Contract Date	Type of Work	Status	Cost of Work
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				

SCHEDULE B

PREVIOUS EXPERIENCE (Include ALL Projects Completed within last 5 years)

Project Name	Owner's Contact Person	Design Engineer	Contract Date	Type of Work	Status	Cost of Work
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				

SCHEDULE B

PREVIOUS EXPERIENCE (Include ALL Projects Completed within last 5 years)

Project Name	Owner's Contact Person	Design Engineer	Contract Date	Type of Work	Status	Cost of Work
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				
	Name: Address: Telephone:	Name: Company: Telephone:				

SCHEDULE C - LIST OF MAJOR EQUIPMENT AVAILABLE

[illegible]

NON-COLLUSION AFFIDAVIT OF PRIME BIDDER

State of _____)

County of _____) ss.

_____, being first duly sworn, deposes and says that:

1. He is _____ of _____ the Bidder that has submitted the attached Bid;
2. He is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid;
3. Such Bid is genuine and is not a collusive or sham Bid;
4. Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived, or agreed, directly or indirectly, with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached Bid or of any other Bidder, or to fix any overhead, profit or cost element of the Bid price or the Bid price of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the **City of Carlinville** (Local Public Agency) or any person interested in the proposed Contract; and
5. The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees or parties in interest, including this affiant.

(Signed) _____

(Name & Title)

Subscribed and sworn to before me this

_____ day of _____, 20____.

(Notary Public)

My Commission Expires: _____

NOTICE OF AWARD

Date of Issuance:

Owner:	City of Carlinville	Owner's Contract No.:	
Engineer:	Heneghan and Associates, P.C.	Engineer's Project No.:	02159-405
Project:	Standard Addition Water Main Replacement -Phase II	Contract Name:	

Bidder:

Bidder's Address:

TO BIDDER:

You are notified that Owner has accepted your Bid dated _____ for the above Contract, and that you are the Successful Bidder and are awarded a Contract for:

Standard Addition Water Main Replacement - Phase II: Install approximately 2,350 lineal feet of 6-inch water main and appurtenances.

The Contract Price of the awarded Contract is: \$ _____ [note if subject to unit prices, or cost-plus]

Four (4) unexecuted counterparts of the Agreement accompany this Notice of Award, and one copy of the Contract Documents accompanies this Notice of Award, or has been transmitted or made available to Bidder electronically.

2 sets of the Drawings will be delivered separately from the other Contract Documents.

You must comply with the following conditions precedent within 15 days of the date of receipt of this Notice of Award:

1. Deliver to Owner Four (4) counterparts of the Agreement, fully executed by Bidder.
2. Deliver with the executed Agreement(s) the Contract security performance and payment bonds and insurance documentation as specified in the Instructions to Bidders and General Conditions, Articles 2 and 6.
3. Other conditions precedent (if any):

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

Within ten days after you comply with the above conditions, Owner will return to you one fully executed counterpart of the Agreement, together with any additional copies of the Contract Documents as indicated in Paragraph 2.02 of the General Conditions.

Owner: _____

Authorized Signature

By: _____

Title: _____

Copy: Engineer

THIS AGREEMENT is by and between City of Carlinville ("Owner") and
("Contractor").

EJCDC® C-520, Agreement Between Owner and Contractor for Construction Contract (Stipulated Price).
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and American Society of Civil Engineers. All rights reserved. Page 1 of 7

1. Substantial Completion: Contractor shall pay Owner \$800.00 or actual damages whichever is greater for each day that expires after the time (as duly adjusted pursuant to the Contract) specified in Paragraph 4.02.A above for Substantial Completion until the Work is substantially complete.
2. Completion of Remaining Work: After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Time (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner \$800.00 or actual damages whichever is greater for each day that expires after such time until the Work is completed and ready for final payment.
3. Liquidated damages for failing to timely attain Substantial Completion and final completion are not additive and will not be imposed concurrently.

4.04 *Special Damages*

[Deleted]

ARTICLE 5 – CONTRACT PRICE

- 5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents the amounts that follow, subject to adjustment under the Contract:
- A. For all Work, at the prices stated in Contractor's Bid, attached hereto as an exhibit.

ARTICLE 6 – PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

- A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 *Progress Payments; Retainage*

- A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment on or about the **3rd Monday** day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.
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 Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract
 - a. ~~90 percent of Work completed (with the balance being retainage); if the Work has been 50 percent completed as determined by Engineer, and if the character and progress of the Work have been satisfactory to Owner and Engineer, then as long as the character and progress of the Work remain satisfactory to Owner and Engineer, there will be no additional retainage; and~~

- b. 90 percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).
- B. Upon Substantial Completion of the entire construction to be provided under the Contract Documents, Owner shall pay an amount sufficient to increase total payments to Contractor to 95 percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less 200 percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.

6.03 *Final Payment*

- A. Upon final completion and acceptance of the Work in accordance with Paragraph 15.06 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer as provided in said Paragraph 15.06.

ARTICLE 7 – INTEREST

7.01 All amounts not paid when due shall bear interest at the maximum legal rate.

ARTICLE 8 – CONTRACTOR'S REPRESENTATIONS

- 8.01 In order to induce Owner to enter into this Contract, Contractor makes the following representations:
- A. Contractor has examined and carefully studied the Contract Documents, and any data and reference items identified in the Contract Documents.
 - B. Contractor has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
 - C. Contractor is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.
 - D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the General Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the General Conditions, especially with respect to Technical Data in such reports and drawings.
 - E. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; and the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (3) Contractor's safety precautions and programs.
 - F. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.

- G. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.
- H. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
- I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
- J. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

ARTICLE 9 – CONTRACT DOCUMENTS

9.01 *Contents*

- A. The Contract Documents consist of the following:
 - 1. This Agreement (pages 1 to █, inclusive).
 - 2. Performance bond (pages █ to █, inclusive).
 - 3. Payment bond (pages █ to █, inclusive).
 - 4. Other bonds.
 - a. █ (pages █ to █, inclusive).
 - 5. General Conditions (pages █ to █, inclusive).
 - 6. Specifications as listed in the table of contents of the Project Manual.
 - 7. Drawings (not attached but incorporated by reference) consisting of █ sheets with each sheet bearing the following general title: █ [or] the Drawings listed on the attached sheet index.
 - 8. Addenda (numbers █ to █, inclusive).
 - 9. Exhibits to this Agreement (enumerated as follows):
 - a. Contractor's Bid (pages █ to █, inclusive).
 - 10. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
 - a. Notice to Proceed.
 - b. Work Change Directives.
 - c. Change Orders.
 - d. Field Orders.
- B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).
- C. There are no Contract Documents other than those listed above in this Article 9.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in the General Conditions.

ARTICLE 10 – MISCELLANEOUS

10.01 *Terms*

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

10.02 *Assignment of Contract*

- A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is 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.

10.03 *Successors and Assigns*

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

10.04 *Severability*

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

10.05 *Contractor's Certifications*

- A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 10.05:
 - 1. “corrupt practice” means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Contract execution;
 - 2. “fraudulent practice” means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
 - 3. “collusive practice” means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and
 - 4. “coercive practice” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

10.06 *Other Provisions*

- A. Owner stipulates that if the General Conditions that are made a part of this Contract are based on EJCDC® C-700, Standard General Conditions for the Construction Contract, published by the Engineers Joint Contract Documents Committee®, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or “track changes” (redline/strikeout), or in the Supplementary Conditions.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

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

OWNER:

CONTRACTOR:

By: _____

By: _____

Title: _____

Title: _____

(If Contractor is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest: _____

Attest: _____

Title: _____

Title: _____

Address for giving notices:

Address for giving notices:

License No.: _____
(where applicable)

(If Owner is a corporation, attach evidence of authority to sign. If Owner is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of this Agreement.)

CERTIFICATE OF OWNER'S ATTORNEY AND AGENCY CONCURRENCE

CERTIFICATE OF OWNER'S ATTORNEY

PROJECT NAME: Standard Addition Water Main Replacement – Phase II

CONTRACTOR NAME:

I, the undersigned, _____, the duly authorized and acting legal representative of _____, do hereby certify as follows: I have examined the attached Contract(s) and performance and payment bond(s) and the manner of execution thereof, and I am of the opinion that each of the aforesaid agreements is adequate and has been duly executed by the proper parties thereto acting through their duly authorized representatives; that said representatives have full power and authority to execute said agreements on behalf of the respective parties named thereon; and that the foregoing agreements constitute valid and legally binding obligations upon the parties executing the same in accordance with the terms, conditions, and provisions thereof.

Name Date

PERFORMANCE BOND

CONTRACTOR *(name and address):*

SURETY *(name and address of principal place of business):*

OWNER *(name and address):*

City of Carlinville

550 North Broad Street, Carlinville, IL 62626

CONSTRUCTION CONTRACT

Effective Date of the Agreement:

Amount:

Description *(name and location):* Install approximately 2,350 lineal feet of 6-inch water main and appurtenances

BOND

Bond Number:

Date *(not earlier than the Effective Date of the Agreement of the Construction Contract):*

Amount:

Modifications to this Bond Form: ☐ None ☐ See Paragraph 16

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

CONTRACTOR AS PRINCIPAL

SURETY

Contractor's Name and Corporate Seal *(seal)*

Surety's Name and Corporate Seal *(seal)*

By: _____
Signature

By: _____
Signature *(attach power of attorney)*

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

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

2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.

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

3.1 The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;

3.2 The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and

3.3 The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

5. 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:

5.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

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

5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence,

to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

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

5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or

5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven 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 5.4, and the Owner refuses the payment 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.

7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:

7.1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

7.2 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 5; and

7.3 liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.

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

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

11. 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 a declaration of 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 periods of limitations 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 page on which their signature appears.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in 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. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

14. Definitions

14.1 Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims

for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

14.2 Construction Contract: The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

14.3 Contractor Default: Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

14.4 Owner Default: Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

14.5 Contract Documents: All the documents that comprise the agreement between the Owner and Contractor.

15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

16. Modifications to this Bond are as follows:

PAYMENT BOND

CONTRACTOR *(name and address)*:

SURETY *(name and address of principal place of business)*:

OWNER *(name and address)*:

City of Carlinville
550 North Broad Street, Carlinville, IL 62626

CONSTRUCTION CONTRACT

Effective Date of the Agreement:

Amount:

Description *(name and location)*: Install approximately 2,350 lineal feet of 6-inch water main and appurtenances

BOND

Bond Number:

Date *(not earlier than the Effective Date of the Agreement of the Construction Contract)*:

Amount:

Modifications to this Bond Form: ☐ None ☐ See Paragraph 18

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

CONTRACTOR AS PRINCIPAL

SURETY

Contractor's Name and Corporate Seal

Surety's Name and Corporate Seal

By: _____
Signature

By: _____
Signature *(attach power of attorney)*

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond shall arise after the following:
 - 5.1 Claimants who do not have a direct contract with the Contractor,
 - 5.1.1 have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
 - 5.1.2 have sent a Claim to the Surety (at the address described in Paragraph 13).
 - 5.2 Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
 - 7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
 - 7.2 Pay or arrange for payment of any undisputed amounts.
 - 7.3 The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.
8. The Surety's total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.
9. Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.

11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
12. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, 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.
13. Notice and Claims to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.
14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.
16. **Definitions**
 - 16.1 **Claim:** A written statement by the Claimant including at a minimum:
 1. The name of the Claimant;
 2. The name of the person for whom the labor was done, or materials or equipment furnished;
 3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
 4. A brief description of the labor, materials, or equipment furnished;
 5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
 6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
 - 16.2 **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 Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond shall be to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.
 - 16.3 **Construction Contract:** The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.
 - 16.4 **Owner Default:** Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
 - 16.5 **Contract Documents:** All the documents that comprise the agreement between the Owner and Contractor.
7. The total amount of previous payments received by the Claimant; and
8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.
17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.
18. Modifications to this Bond are as follows:



United States Department of Agriculture

AD-1048

**Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
Lower Tier Covered Transactions**

The following statement is made in accordance with the Privacy Act of 1974 (5 U.S.C. § 552(a), as amended). This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension, and 2 C.F.R. §§ 180.300, 180.355, Participants' responsibilities. The regulations were amended and published on August 31, 2005, in 70 Fed. Reg. 51865-51880. Copies of the regulations may be obtained by contacting the Department of Agriculture agency offering the proposed covered transaction.

According to the Paperwork Reduction Act of 1995 an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0505-0027. The time required to complete this information collection is estimated to average 15 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. The provisions of appropriate criminal and civil fraud privacy, and other statutes may be applicable to the information provided.

(Read Instructions On Page Two Before Completing Certification)

- A. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency;
- B. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

ORGANIZATION NAME

PR/AWARD NUMBER OR PROJECT NAME

NAME(S) AND TITLE(S) OF AUTHORIZED REPRESENTATIVE(S)

SIGNATURE(S)

DATE

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Instructions for Certification

- (1) By signing and submitting this form, the prospective lower tier participant is providing the certification set out on page 1 in accordance with these instructions.
- (2) The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension or debarment.
- (3) The prospective lower tier participant shall provide immediate written notice to the person(s) to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
- (4) The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549, at 2 C.F.R. Parts 180 and 417. You may contact the department or agency to which this proposal is being submitted for assistance in obtaining a copy of those regulations.
- (5) The prospective lower tier participant agrees by submitting this form that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.
- (6) The prospective lower tier participant further agrees by submitting this form that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transactions," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
- (7) A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the System for Award Management (SAM) database.
- (8) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- (9) Except for transactions authorized under paragraph (5) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

NOTICE TO PROCEED

Owner:	City of Carlinville	Owner's Contract No.:	
Contractor:		Contractor's Project No.:	
Engineer:	Heneghan and Associates, P.C.	Engineer's Project No.:	02159-405
Project:	Standard Addition Water Main Replacement - Phase II	Contract Name:	
		Effective Date of Contract:	

TO CONTRACTOR:

Owner hereby notifies Contractor that the Contract Times under the above Contract will commence to run on [_____, 20__]. *[see Paragraph 4.01 of the General Conditions]*

On that date, Contractor shall start performing its obligations under the Contract Documents. No Work shall be done at the Site prior to such date. In accordance with the Agreement, [the date of Substantial Completion is _____, and the date of readiness for final payment is _____] **or** [the number of days to achieve Substantial Completion is _____, and the number of days to achieve readiness for final payment is _____].

Before starting any Work at the Site, Contractor must comply with the following:
[Note any access limitations, security procedures, or other restrictions]

Owner: _____

By: _____
Title: _____
Date Issued: _____

Copy: Engineer

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.
 3. *Application for Payment*—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 5. *Bidder*—An individual or entity that submits a Bid to Owner.
 6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.
 7. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.
 8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract. [The Change Order form to be used on this Project is EJCDC C-941.](#)
 9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times, or both; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.
 10. *Claim*—(a) A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein: seeking an adjustment of Contract Price or Contract Times, or both; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract; or (b) a demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision

regarding a Change Proposal; or seeking resolution of a contractual issue that Engineer has declined to address. A demand for money or services by a third party is not a Claim.

11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to (a) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. (“CERCLA”); (b) the Hazardous Materials Transportation Act, 49 U.S.C. §§5501 et seq.; (c) the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq. (“RCRA”); (d) the Toxic Substances Control Act, 15 U.S.C. §§2601 et seq.; (e) the Clean Water Act, 33 U.S.C. §§1251 et seq.; (f) the Clean Air Act, 42 U.S.C. §§7401 et seq.; or (g) any other federal, state, or local statute, law, rule, regulation, ordinance, resolution, code, order, or decree regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
12. *Contract*—The entire and integrated written contract between the Owner and Contractor concerning the Work.
13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents. .
15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
17. *Cost of the Work*—See Paragraph 13.01 for definition.
18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.
20. *Engineer*—The individual or entity named as such in the Agreement.
21. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
22. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated in the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, does not establish a Hazardous Environmental Condition.
23. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
24. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.

25. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date or by a time prior to Substantial Completion of all the Work.
26. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.
27. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.
28. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.
29. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.
30. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.
31. *Project Manual*—The written documents prepared for, or made available for, procuring and constructing the Work, including but not limited to the Bidding Documents or other construction procurement documents, geotechnical and existing conditions information, the Agreement, bond forms, General Conditions, [Supplementary Conditions](#), and Specifications. The contents of the Project Manual may be bound in one or more volumes.
32. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative or "RPR" includes any assistants or field staff of Resident Project Representative.
33. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
34. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer's review of the submittals and the performance of related construction activities.
35. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.
36. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.
37. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands furnished by Owner which are designated for the use of Contractor.

38. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
39. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
40. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof.
41. *Successful Bidder*—The Bidder whose Bid the Owner accepts, and to which the Owner makes an award of contract, subject to stated conditions.
42. *Supplementary Conditions*—~~The part of the Contract that amends or supplements these General Conditions.~~ [N/A](#)
43. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
44. *Technical Data*—Those items expressly identified as Technical Data [in these Standard General Conditions](#)~~in the Supplementary Conditions~~, with respect to either (a) subsurface conditions at the Site, or physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) or (b) Hazardous Environmental Conditions at the Site. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then the data contained in boring logs, recorded measurements of subsurface water levels, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical or environmental report prepared for the Project and made available to Contractor are hereby defined as Technical Data with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06.
45. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including but not limited to those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, fiber optic transmissions, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
46. *Unit Price Work*—Work to be paid for on the basis of unit prices.
47. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.
48. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer,

ordering an addition, deletion, or revision in the Work. A Work Change Directive cannot change Contract Price or Contract Times without a subsequent Change Order.

49. Abnormal Weather Conditions—Conditions of extreme or unusual weather for a given region, elevation, or season as determined by Engineer. Extreme or unusual weather that is typical for a given region, elevation, or season should not be considered Abnormal Weather Conditions.

1.02 Terminology

- A. The words and terms discussed in the following paragraphs are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives:*
1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.
- C. *Day:*
1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective:*
1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - a. does not conform to the Contract Documents; or
 - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - c. 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 15.03 or 15.04).
- E. *Furnish, Install, Perform, Provide:*
1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
 2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
 4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words “furnish,” “install,” “perform,” or “provide,” then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.
- F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

- A. *Bonds*: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of Contractor’s Insurance*: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each named insured and additional insured (as identified in the [Standard General Conditions](#)~~Supplementary Conditions~~ or elsewhere in the Contract), the certificates and other evidence of insurance required to be provided by Contractor in accordance with Article 6.
- C. *Evidence of Owner’s Insurance*: After receipt of the executed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each named insured and additional insured (as identified in the [Standard General Conditions](#)~~Supplementary Conditions~~ or otherwise), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 *Copies of Documents*

- A. Owner shall furnish to Contractor four printed copies of the Contract [Documents](#)(including one fully executed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.
- B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 *Before Starting Construction*

- A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise specifically required by the Contract Documents), Contractor shall submit to Engineer for timely review:
 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
 2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 *Initial Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.03.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.
 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
 3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may transmit, and shall accept, Project-related correspondence, text, data, documents, drawings, information, and graphics, including but not limited to Shop Drawings and other submittals, in electronic media or digital format, either directly, or through access to a secure Project website.
- B. If the Contract does not establish protocols for electronic or digital transmittals, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. When transmitting items in electronic media or digital format, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items resulting from the recipient's use of software application packages, operating systems, or

computer hardware differing from those used in the drafting or transmittal of the items, or from those established in applicable transmittal protocols.

ARTICLE 3 – DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic or digital versions of the Contract Documents (including any printed copies derived from such electronic or digital versions) and the printed record version, the printed record version shall govern.
- D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.
- E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.

3.02 *Reference Standards*

- A. Standards Specifications, Codes, Laws and Regulations
 - 1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
 - 2. No provision of any such standard specification, manual, reference standard, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

- A. *Reporting Discrepancies:*
 - 1. *Contractor's Verification of Figures and Field Measurements:* Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict,

error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract Documents issued pursuant to Paragraph 11.01.

2. *Contractor's Review of Contract Documents:* If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract Documents issued pursuant to Paragraph 11.01.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies:*

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

3.04 *Requirements of the Contract Documents*

- A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work thereunder.
- B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.
- C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly give written notice to Owner and Contractor that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

- A. Contractor and its Subcontractors and Suppliers shall not:
 - 1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media editions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or
 - 2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

ARTICLE 4 – COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

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

4.02 *Starting the Work*

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

4.03 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument 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 or property monuments by professionally qualified personnel.

4.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.
 - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 11.
- B. 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, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Times and Contract Price. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
 1. severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
 2. ~~abnormal weather conditions~~; [Abnormal Weather Conditions](#);
 3. acts or failures to act of utility owners (other than those performing other work at or adjacent to the Site by arrangement with the Owner, as contemplated in Article 8); and
 4. acts of war or terrorism.
- D. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5.
- E. Paragraph 8.03 governs delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.
- F. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor.
- G. Contractor must submit any Change Proposal seeking an adjustment in Contract Price or Contract Times under this paragraph within 30 days of the commencement of the delaying, disrupting, or interfering event.

ARTICLE 5 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.
- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 *Use of Site and Other Areas*

- A. *Limitation on Use of Site and Other Areas:*
 - 1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
 - 2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.12, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or at law; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.
- B. *Removal of Debris During Performance of the Work:* During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste

materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

- C. *Cleaning*: Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.
- D. *Loading of Structures*: Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

5.03 *Subsurface and Physical Conditions*

- A. No Reports of explorations or tests of subsurface conditions at or adjacent to the Site, or drawings of physical conditions relating to existing surface or subsurface structures at the Site, are known to the Owner.

~~B.— *Reports and Drawings*: The Supplementary Conditions identify:~~

- ~~1.— those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site;~~
- ~~2.— those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities); and~~
- ~~3.— Technical Data contained in such reports and drawings.~~

~~C.— *Reliance by Contractor on Technical Data Authorized*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:~~

- ~~1.— the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or~~
- ~~2.— other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or~~
- ~~— any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.~~

~~— The following reports of explorations and tests of subsurface conditions at or adjacent to the Site are known to Owner:~~

~~— Report dated [May 21, 2013, prepared by Aye and Bea, Consulting Engineers, Philadelphia, Pa., entitled: "Results of Investigation of Subsoil Conditions and Professional Recommendations for Foundations of Iron Foundry at South and Front Streets, Pembritg, NJ", consisting of 42 pages.] The Technical Data contained in such report upon whose accuracy Contractor may rely are [here indicate any such Technical~~

~~Data, or state "none." [or] [those indicated in the definition of Technical Data in the General Conditions.]~~

~~Report dated [May 2, 2000, prepared by Ecks, Wye and Tsze, Inc., Baltimore, Md., entitled: "Tests of Water Quality in Mixer River at Pembrig, NJ", consisting of 26 pages.] The Technical Data contained in such report upon whose accuracy Contractor may rely are [here indicate any such Technical Data, or state "none." [or] [as indicated in the definition of Technical Data in the General Conditions.]]~~

~~The following drawings of physical conditions relating to existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities) are known to Owner:~~

~~Drawings dated [March 2, 2000, of Route 24A Overpass Abutment, prepared by Dea & Associates, Inc., Wilmington, Del., entitled: "Record Drawings: Route No. 24A Overpass Abutment", consisting of 12 sheets numbered 001 to 012, inclusive.] None of the contents of such drawings is Technical Data on whose accuracy Contractor may~~

B. ~~may examine copies of reports and drawings identified immediately above that were not included with the Bidding Documents at [redacted] [insert location] during regular business hours, or may request copies from Engineer, at the cost of reproduction~~

5.04 Differing Subsurface or Physical Conditions

- A. *Notice by Contractor:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site either:
1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate; or
 2. is of such a nature as to require a change in the Drawings or Specifications; or
 3. differs materially from that shown or indicated in the Contract Documents; or
 4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

- B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine the necessity of Owner's obtaining additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A above; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.

- C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. *Possible Price and Times Adjustments:*
1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, or both, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. such condition must fall within any one or more of the categories described in Paragraph 5.04.A;
 - b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,
 - c. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
 2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
 - a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise; or
 - b. the existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
 - c. Contractor failed to give the written notice as required by Paragraph 5.04.A.
 3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.
 4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.

5.05 *Underground Facilities*

- A. *Contractor's Responsibilities:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or adjacent to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the [Standard General Conditions](#)~~Supplementary Conditions~~:

1. Owner and Engineer do not warrant or guarantee the accuracy or completeness of any such information or data provided by others; and
 2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
 - a. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
 - b. locating all Underground Facilities shown or indicated in the Contract Documents as being at the Site;
 - c. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
 - d. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. *Notice by Contractor:* If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer.
- C. *Engineer's Review:* Engineer will promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the Underground Facility in question; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and advise Owner in writing of Engineer's findings, conclusions, and recommendations. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
- D. *Owner's Statement to Contractor Regarding Underground Facility:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question, addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.
- E. *Possible Price and Times Adjustments:*
1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, or both, to the extent that any existing Underground Facility at the Site that was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated the existence or actual location of the Underground Facility in question;

- ## 5.06 Hazardous Environmental Conditions at Site

~~B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. Except for such reliance on~~

~~Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:~~

- ~~1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or~~
 - ~~2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or~~
 - ~~3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.~~
- ~~C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.~~
- ~~D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.~~
- ~~E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set off against payments to account for the associated costs.~~
- ~~F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.~~
- ~~G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set off.~~

- ~~H. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.~~
- ~~I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.H shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.~~
- ~~J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.~~
- ~~K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.~~

ARTICLE 6 – BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of all of Contractor's obligations under the Contract. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, ~~the Supplementary Conditions~~, or other specific provisions of the Contract. Contractor shall also furnish such other bonds as are required ~~by the Supplementary Conditions or~~ other specific provisions of the Contract.
- B. All bonds shall be in the form prescribed by the Contract except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable

Reinsuring Companies” as published in Circular 570 (as amended and supplemented) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual’s authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

- C. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds in the required amounts.
- D. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or its right to do business is terminated in any state or jurisdiction where any part of the Project is located, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the bond and surety requirements above.
- E. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner’s termination rights under Article 16.
- F. Upon request, Owner shall provide a copy of the payment bond to any Subcontractor, Supplier, or other person or entity claiming to have furnished labor or materials used in the performance of the Work.

6.02 Insurance—General Provisions

- A. Owner and Contractor shall obtain and maintain insurance as required in this Article ~~and in the Supplementary Conditions.~~
- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue insurance policies for the required limits and coverages. ~~Unless a different standard is indicated in the Supplementary Conditions, all~~ All companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.
- C. Contractor shall deliver to Owner, with copies to each named insured and additional insured (as identified in this Article, ~~in the Supplementary Conditions,~~ or elsewhere in the Contract), certificates of insurance establishing that Contractor has obtained and is maintaining the policies, coverages, and endorsements required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies and endorsements, and documentation of applicable self-insured retentions and deductibles. Contractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.
- D. Owner shall deliver to Contractor, with copies to each named insured and additional insured (as identified in this Article, ~~the Supplementary Conditions,~~ or elsewhere in the Contract), certificates of insurance establishing that Owner has obtained and is maintaining the policies, coverages, and endorsements required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies and endorsements, and documentation of applicable self-insured retentions and deductibles. Owner may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.

- E. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, shall not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
- F. If either party does not purchase or maintain all of the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.
- G. If Contractor has failed to obtain and maintain required insurance, Owner may exclude the Contractor from the Site, impose an appropriate set-off against payment, and exercise Owner's termination rights under Article 16.
- H. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price shall be adjusted accordingly.
- I. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests.
- J. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner and other individuals and entities in the Contract.

6.03 *Contractor's Insurance*

- A. *Workers' Compensation:* Contractor shall purchase and maintain workers' compensation and employer's liability insurance for:
 - 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts.
 - 2. United States Longshoreman and Harbor Workers' Compensation Act and Jones Act coverage (if applicable).
 - 3. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees (by stop-gap endorsement in monopolist worker's compensation states).
 - 4. Foreign voluntary worker compensation (if applicable).
- B. *Commercial General Liability—Claims Covered:* Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against:
 - 1. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees.
 - 2. claims for damages insured by reasonably available personal injury liability coverage.
 - 3. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.
- C. *Commercial General Liability—Form and Content:* Contractor's commercial liability policy shall be written on a 1996 (or later) ISO commercial general liability form (occurrence form) and include the following coverages and endorsements:

1. Products and completed operations coverage:
 - a. Such insurance shall be maintained for three years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured (as identified ~~in the Supplementary Conditions or~~ elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.
 2. Blanket contractual liability coverage, to the extent permitted by law, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
 3. Broad form property damage coverage.
 4. Severability of interest.
 5. Underground, explosion, and collapse coverage.
 6. Personal injury coverage.
 7. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together); or CG 20 10 07 04 and CG 20 37 07 04 (together); or their equivalent.
 8. For design professional additional insureds, ISO Endorsement CG 20 32 07 04, "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent.
- D. *Automobile liability:* Contractor shall purchase and maintain automobile liability insurance against claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy shall be written on an occurrence basis.
- E. *Umbrella or excess liability:* Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer's liability, commercial general liability, and automobile liability insurance described in the paragraphs above. Subject to industry-standard exclusions, the coverage afforded shall follow form as to each and every one of the underlying policies.
- F. *Contractor's pollution liability insurance:* Contractor shall purchase and maintain a policy covering third-party injury and property damage claims, including clean-up costs, as a result of pollution conditions arising from Contractor's operations and completed operations. This insurance shall be maintained for no less than three years after final completion.
- G. *Additional insureds:* The Contractor's commercial general liability, automobile liability, umbrella or excess, and pollution liability policies shall include and list as additional insureds Owner and Engineer, ~~and any individuals or entities identified in the Supplementary Conditions;~~ include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds; and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby (including as applicable those arising from both ongoing and completed operations) on a non-contributory basis. Contractor shall obtain all necessary endorsements to support these requirements.
- H. *Contractor's professional liability insurance:* If Contractor will provide or furnish professional services under this Contract, through a delegation of professional design services or otherwise, then Contractor shall be responsible for purchasing and maintaining applicable professional liability insurance. This insurance shall provide protection against claims arising

out of performance of professional design or related services, and caused by a negligent error, omission, or act for which the insured party is legally liable. It shall be maintained throughout the duration of the Contract and for a minimum of two years after Substantial Completion. If such professional design services are performed by a Subcontractor, and not by Contractor itself, then the requirements of this paragraph may be satisfied through the purchasing and maintenance of such insurance by such Subcontractor.

- I. *General provisions:* The policies of insurance required by this Paragraph 6.03 shall:
 1. include at least the specific coverages provided in this Article.
 2. be written for not less than the limits of liability provided in this Article ~~and in the Supplementary Conditions~~, or required by Laws or Regulations, whichever is greater.
 3. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed, or renewal refused until at least 10 days prior written notice has been given to Contractor. Within three days of receipt of any such written notice, Contractor shall provide a copy of the notice to Owner, Engineer, and each other insured under the policy.
 4. remain in effect at least until final payment (and longer if expressly required in this Article) and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract Documents.
 5. be appropriate for the Work being performed and provide protection from claims that may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable.
- J. The coverage requirements for specific policies of insurance must be met by such policies, and not by reference to excess or umbrella insurance provided in other policies.
- K. The limits of liability for the insurance required by Paragraph 6.03 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:
 1. Workers' Compensation, and related coverages under Paragraphs 6.03.A.1 and A.2 of the General Conditions:

State:	<u>Statutory</u>
Federal, if applicable (e.g., Longshoreman's):	<u>Statutory</u>
Jones Act coverage, if applicable:	
Bodily injury by accident, each accident	\$ <u>1,000,000</u>
Bodily injury by disease, aggregate	\$ <u>1,000,000</u>
Employer's Liability:	
Bodily injury, each accident	\$ <u>100,000</u>
Bodily injury by disease, each employee	\$ <u>100,000</u>
Bodily injury/disease aggregate	\$ <u>500,000</u>

~~For work performed in monopolistic states, stop-gap liability coverage shall be endorsed to either the worker's compensation or commercial general liability policy with a minimum limit of:~~

\$ _____

Foreign voluntary worker compensation

Statutory

2. Contractor's Commercial General Liability under Paragraphs 6.03.B and 6.03.C of the General Conditions:

General Aggregate \$ 2,000,000

Products - Completed Operations Aggregate \$ 1,000,000

Personal and Advertising Injury \$ 1,000,000

Each Occurrence (Bodily Injury and Property Damage) \$ 1,000,000

3. Automobile Liability under Paragraph 6.03.D. of the General Conditions:

Bodily Injury:

Each person \$ 1,000,000

Each accident \$ 1,000,000

Property Damage:

Each accident \$ 1,000,000

~~for~~

~~Combined Single Limit of~~ \$ _____

4. Excess or Umbrella Liability:

Per Occurrence \$ 5,000,000

General Aggregate \$ 5,000,000

5. Contractor's Pollution Liability:

Each Occurrence \$ 1,000,000

General Aggregate \$ 1,000,000



If box is checked, Contractor is not required to provide Contractor's Pollution Liability insurance under this Contract

6. Additional Insureds: Owner and Engineer

7. Contractor's Professional Liability:

Each Claim	\$ <u>N/A</u>
Annual Aggregate	\$ <u>N/A</u>

8. *Waiver of Subrogation – ~~{OWNER}~~City of Carlinville and Heneghan and Associates, P.C. shall be additional insured on a direct primary basis on the Waiver of Subrogation*

6.04 Owner's Liability Insurance

- A. In addition to the insurance required to be provided by Contractor under Paragraph 6.03, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.
- B. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.

6.05 Property Insurance

- A. *Builder's Risk:* ~~Unless otherwise provided in the Supplementary Conditions,~~ Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the full insurable replacement cost thereof (subject to such deductible amounts as may be ~~provided in the Supplementary Conditions or~~ required by Laws and Regulations). This insurance shall:
 - 1. include the Owner and Contractor as named insureds, and all Subcontractors, ~~and any individuals or entities required by the Supplementary Conditions~~ to be insured under such builder's risk policy, as insureds or named insureds. For purposes of the remainder of this Paragraph 6.05, Paragraphs 6.06 and 6.07, ~~and any corresponding Supplementary Conditions,~~ the parties required to be insured shall collectively be referred to as "insureds."
 - 2. be written on a builder's risk "all risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire; lightning; windstorm; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; flood; collapse; explosion; debris removal; demolition occasioned by enforcement of Laws and Regulations; and water damage (other than that caused by flood); ~~and such other perils or causes of loss as may be specifically required by the Supplementary Conditions.~~ If insurance against mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; or flood, are not commercially available under builder's risk policies, by endorsement or otherwise, such insurance may be provided through other insurance policies acceptable to Owner and Contractor.
 - 3. cover, as insured property, at least the following: (a) the Work and all materials, supplies, machinery, apparatus, equipment, fixtures, and other property of a similar

nature that are to be incorporated into or used in the preparation, fabrication, construction, erection, or completion of the Work, including Owner-furnished or assigned property; (b) spare parts inventory required within the scope of the Contract; and (c) temporary works which are not intended to form part of the permanent constructed Work but which are intended to provide working access to the Site, or to the Work under construction, or which are intended to provide temporary support for the Work under construction, including scaffolding, form work, fences, shoring, falsework, and temporary structures.

4. cover expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects).
 5. extend to cover damage or loss to insured property while in temporary storage at the Site or in a storage location outside the Site (but not including property stored at the premises of a manufacturer or Supplier).
 6. extend to cover damage or loss to insured property while in transit.
 7. allow for partial occupation or use of the Work by Owner, such that those portions of the Work that are not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
 8. allow for the waiver of the insurer's subrogation rights, as set forth below.
 9. provide primary coverage for all losses and damages caused by the perils or causes of loss covered.
 10. not include a co-insurance clause.
 11. include an exception for ensuing losses from physical damage or loss with respect to any defective workmanship, design, or materials exclusions.
 12. include performance/hot testing and start-up.
 13. be maintained in effect, subject to the provisions herein regarding Substantial Completion and partial occupancy or use of the Work by Owner, until the Work is complete.
- B. *Notice of Cancellation or Change:* All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 6.05 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured.
- C. *Deductibles:* The purchaser of any required builder's risk or property insurance shall pay for costs not covered because of the application of a policy deductible.
- D. *Partial Occupancy or Use by Owner:* If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide notice of such occupancy or use to the builder's risk insurer. The builder's risk insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy; rather, those portions of the Work that are occupied or used by Owner may come off the builder's risk policy, while those portions of the Work not yet occupied or used by Owner shall remain covered by the builder's risk insurance.

- E. *Additional Insurance*: If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.05, it may do so at Contractor's expense.
- F. *Insurance of Other Property*: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, such as tools, construction equipment, or other personal property owned by Contractor, a Subcontractor, or an employee of Contractor or a Subcontractor, then the entity or individual owning such property item will be responsible for deciding whether to insure it, and if so in what amount.

6.06 *Waiver of Rights*

- A. All policies purchased in accordance with Paragraph 6.05, expressly including the builder's risk policy, shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any insureds thereunder, or against Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all Subcontractors, ~~all individuals or entities identified in the Supplementary Conditions as insureds,~~ and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
- B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for:
 - 1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and
 - 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 6.06.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them.
- D. Contractor shall be responsible for assuring that the agreement under which a Subcontractor performs a portion of the Work contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, ~~all individuals or entities identified in the Supplementary~~

~~Conditions as insureds,~~ the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by builder's risk insurance and any other property insurance applicable to the Work.

6.07 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of insurance required by Paragraph 6.05 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.
- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.05 shall distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the money so received applied on account thereof, and the Work and the cost thereof covered by Change Order, if needed.

ARTICLE 7 – CONTRACTOR'S RESPONSIBILITIES

7.01 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.02 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

B.C. Contractor shall be responsible for the cost of any overtime pay or other expense incurred by the Owner for Engineer's services (including those of the Resident Project Representative, if any), Owner's representative, and construction observation services, occasioned by the

performance of Work on Saturday, Sunday, any legal holiday, or as overtime on any regular work day. If Contractor is responsible but does not pay, or if the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments under Article 15.

7.03 *Services, Materials, and Equipment*

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

7.04 *"Or Equals"*

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. ~~Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted,~~ Contractor may request that Engineer authorize the use of other items of material or equipment, or items from other proposed suppliers under the circumstances described below.
 - 1. If Engineer in its sole discretion determines that an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer shall deem it an "or equal" item. For the purposes of this paragraph, a proposed item of material or equipment will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that:
 - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
 - 2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
 - 3) it has a proven record of performance and availability of responsive service;
~~and~~
 - 4) it is not objectionable to Owner-; and
 - 5) Must be compatible with existing components and equipment.

- b. Contractor certifies that, if approved and incorporated into the Work:
 - 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.
- B. *Contractor's Expense*: Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.
- C. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal", which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.
- D. *Effect of Engineer's Determination*: Neither approval nor denial of an "or-equal" request shall result in any change in Contract Price. The Engineer's denial of an "or-equal" request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents.
- E. *Treatment as a Substitution Request*: If Engineer determines that an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the proposed item as a substitute pursuant to Paragraph 7.05.

7.05 Substitutes

- A. Unless the specification or description of an item of material or equipment required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of material or equipment under the circumstances described below. To the extent possible such requests shall be made before commencement of related construction at the Site.
 - 1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of material or equipment from anyone other than Contractor.
 - 2. The requirements for review by Engineer will be as set forth in Paragraph 7.05.B, ~~as supplemented by the Specifications~~, and as Engineer may decide is appropriate under the circumstances.
 - 3. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:
 - a. shall certify that the proposed substitute item will:
 - 1) perform adequately the functions and achieve the results called for by the general design,
 - 2) be similar in substance to that specified, and

- 3) be suited to the same use as that specified.
 - b. will state:
 - 1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times,
 - 2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and
 - 3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
 - c. will identify:
 - 1) all variations of the proposed substitute item from that specified, and
 - 2) available engineering, sales, maintenance, repair, and replacement services.
 - d. shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.
- B. *Engineer's Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.
- C. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- D. *Reimbursement of Engineer's Cost:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.
- E. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute at Contractor's expense.
- F. *Effect of Engineer's Determination:* If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.05.D, by timely submittal of a Change Proposal.

7.06 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor shall not award work valued at more than fifty percent of the Contract Price to Subcontractor(s), without prior written approval of the Owner.
- B. Contractor shall retain specific Subcontractors, Suppliers, or other individuals or entities for the performance of designated parts of the Work if required by the Contract to do so.
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable, during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within five days.
- E. Owner may require the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors, Suppliers, or other individuals or entities for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor, Supplier, or other individual or entity so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity.
- F. If Owner requires the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, or both, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.
- G. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.
- H. On a monthly basis Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- I. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions.
- J. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors, Suppliers, and all other individuals or entities performing or furnishing any of the Work.

- K. Contractor shall restrict all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed herein.
- L. 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.
- M. All Work performed for Contractor by a Subcontractor or Supplier shall be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer.
- N. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor on account of Work performed for Contractor by the particular Subcontractor or Supplier.
- O. Nothing in the Contract Documents:
 - 1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier, or other individual or entity; nor
 - 2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

7.07 *Patent Fees and Royalties*

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

7.08 *Permits*

- A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work

7.09 *Taxes*

- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.
- B. Owner is exempt from payment of sales and compensating use taxes of the State of Illinois and of cities and counties thereof on all materials to be incorporated into the Work.
 - 1. Owner will furnish the required certificates of tax exemption to Contractor for use in the purchase of supplies and materials to be incorporated into the Work.
 - ~~1-2.~~ Owner's exemption does not apply to construction tools, machinery, equipment, or other property purchased by or leased by the Contractor, or to supplies or materials not incorporated into the Work.

7.10 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It shall not be Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Owner or Contractor may give notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then

within 30 days of such notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.11 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

7.12 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
 - 1. all persons on the Site or who may be affected by the Work;
 - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 - 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify Owner; the owners of adjacent property, Underground Facilities, and other utilities; and other contractors and utility owners performing work at or adjacent to the Site, when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.
- C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. ~~The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.~~
- D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
- E. All damage, injury, or loss to any property referred to in Paragraph 7.12.A.2 or 7.12.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any

Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

- F. Contractor's duties and responsibilities for safety and protection 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 15.06.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).
- G. Contractor's duties and responsibilities for safety and protection shall resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.13 *Safety Representative*

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

7.14 *Hazard Communication Programs*

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

7.15 *Emergencies*

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

7.16 *Shop Drawings, Samples, and Other Submittals*

- A. *Shop Drawing and Sample Submittal Requirements:*
 - 1. Before submitting a Shop Drawing or Sample, Contractor shall have:
 - a. reviewed and coordinated the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
 - c. determined and verified the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.
 - 2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that submittal, and that Contractor approves the submittal.

3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be set forth in a written communication separate from the Shop Drawings or Sample submittal; and, in addition, in the case of Shop Drawings by a specific notation made on each Shop Drawing submitted to Engineer for review and approval of each such variation.
- B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals. Each submittal will be identified as Engineer may require.
1. *Shop Drawings:*
 - a. Contractor shall submit the number of copies required in the Specifications.
 - b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.D.
 2. *Samples:*
 - a. Contractor shall submit the number of Samples required in the Specifications.
 - b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 7.16.D.
 3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.
- C. *Other Submittals:* Contractor shall submit other submittals to Engineer in accordance with the accepted Schedule of Submittals, and pursuant to the applicable terms of the Specifications.
- D. *Engineer's Review:*
1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
 2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions or programs incident thereto.
 3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
 4. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and

Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will document any such approved variation from the requirements of the Contract Documents in a Field Order.

5. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 7.16.A and B.
6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, shall not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
7. Neither Engineer's receipt, review, acceptance or approval of a Shop Drawing, Sample, or other submittal shall result in such item becoming a Contract Document.
8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.D.4.

E. *Resubmittal Procedures:*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.
2. Contractor shall furnish required submittals with sufficient information and accuracy to obtain required approval of an item with no more than three submittals. Engineer will record Engineer's time for reviewing a fourth or subsequent submittal of a Shop Drawings, sample, or other item requiring approval, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges.
3. If Contractor requests a change of a previously approved submittal item, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

7.17 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 2. normal wear and tear under normal usage.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:

1. observations by Engineer;
 2. recommendation by Engineer or payment by Owner of any progress or final payment;
 3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 4. use or occupancy of the Work or any part thereof by Owner;
 5. any review and approval of a Shop Drawing or Sample submittal;
 6. the issuance of a notice of acceptability by Engineer;
 7. any inspection, test, or approval by others; or
 8. any correction of defective Work by Owner.
- D. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract shall govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage 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 but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. The indemnification obligations of Contractor under Paragraph 7.18.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:
1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

7.19 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable Laws and Regulations.
- B. If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.
- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this paragraph, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 7.16.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria specified by Owner or Engineer.

ARTICLE 8 – OTHER WORK AT THE SITE

8.01 *Other Work*

- A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.
- B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any utility work at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford each other contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or

alter others' work with the written consent of Engineer and the others whose work will be affected.

- D. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 8, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

8.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be ~~set forth in the Supplementary Conditions or~~ provided to Contractor prior to the start of any such other work:
 - 1. the identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;
 - 2. an itemization of the specific matters to be covered by such authority and responsibility; and
 - 3. the extent of such authority and responsibilities.
- B. ~~Unless otherwise provided in the Supplementary Conditions,~~ Owner shall have sole authority and responsibility for such coordination.

8.03 *Legal Relationships*

- A. If, in the course of performing other work at or adjacent to the Site for Owner, the Owner's employees, any other contractor working for Owner, or any utility owner causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment shall take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract. When applicable, any such equitable adjustment in Contract Price shall be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due to Contractor, and assign to such other contractor or utility owner the Owner's contractual

rights against Contractor with respect to the breach of the obligations set forth in this paragraph.

- C. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due to Contractor.
- D. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9 – OWNER'S RESPONSIBILITIES

9.01 *Communications to Contractor*

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

9.02 *Replacement of Engineer*

- A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents shall be that of the former Engineer.

9.03 *Furnish Data*

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

9.04 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

9.05 *Lands and Easements; Reports, Tests, and Drawings*

- A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.
- B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.
- C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 *Insurance*

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 *Change Orders*

- A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *Limitations on Owner's Responsibilities*

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

9.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *Evidence of Financial Arrangements*

- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents (including obligations under proposed changes in the Work).

9.12 *Safety Programs*

- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.
- B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ARTICLE 10 – ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *Owner's Representative*

- A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.

10.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On

the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.08. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 *Project Representative*

A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 10.08. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent, or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

B. The Resident Project Representative (RPR) will be Engineer's representative at the Site, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding RPR's actions.

1. General: RPR's dealings in matters pertaining to the Work in general shall be with Engineer and Contractor. RPR's dealings with Subcontractors shall only be through or with the full knowledge and approval of Contractor. RPR shall generally communicate with Owner only with the knowledge of and under the direction of Engineer.
2. Schedules: Review the progress schedule, schedule of Shop Drawing and Sample submittals, and Schedule of Values prepared by Contractor and consult with Engineer concerning acceptability.
3. Conferences and Meetings: Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings, and prepare and circulate copies of minutes thereof.
4. Liaison:
 - a. Serve as Engineer's liaison with Contractor. Working principally through Contractor's authorized representative or designee, assist in providing information regarding the provisions and intent of the Contract Documents.
 - b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.
 - c. Assist in obtaining from Owner additional details or information, when required for proper execution of the Work.
5. Interpretation of Contract Documents: Report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.
6. Shop Drawings and Samples:
 - a. Record date of receipt of Samples and Contractor-approved Shop Drawings.

- b. Receive Samples which are furnished at the Site by Contractor, and notify Engineer of availability of Samples for examination.
 - c. Advise Engineer and Contractor of the commencement of any portion of the Work requiring a Shop Drawing or Sample submittal for which RPR believes that the submittal has not been approved by Engineer.
- 7. Modifications: Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report such suggestions, together with RPR's recommendations, if any, to Engineer. Transmit to Contractor in writing decisions as issued by Engineer.
- 8. Review of Work and Rejection of Defective Work:
 - a. Conduct on-Site observations of Contractor's work in progress to assist Engineer in determining if the Work is in general proceeding in accordance with the Contract Documents.
 - b. Report to Engineer whenever RPR believes that any part of Contractor's work in progress is defective, will not produce a completed Project that conforms generally to the Contract Documents, or will imperil the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise Engineer of that part of work in progress that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.
- 9. Inspections, Tests, and System Start-ups:
 - a. Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate Owner's personnel, and that Contractor maintains adequate records thereof.
 - b. Observe, record, and report to Engineer appropriate details relative to the test procedures and systems start-ups.
- 10. Records:
 - a. Prepare a daily report or keep a diary or log book, recording Contractor's hours on the Site, Subcontractors present at the Site, weather conditions, data relative to questions of Change Orders, Field Orders, Work Change Directives, or changed conditions, Site visitors, deliveries of equipment or materials, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to Engineer.
 - b. Record names, addresses, fax numbers, e-mail addresses, web site locations, and telephone numbers of all Contractors, Subcontractors, and major Suppliers of materials and equipment.
 - c. Maintain records for use in preparing Project documentation.
- 11. Reports:
 - a. Furnish to Engineer periodic reports as required of progress of the Work and of Contractor's compliance with the Progress Schedule and schedule of Shop Drawing and Sample submittals.

- b. Draft and recommend to Engineer proposed Change Orders, Work Change Directives, and Field Orders. Obtain backup material from Contractor.
- c. Immediately notify Engineer of the occurrence of any Site accidents, emergencies, acts of God endangering the Work, force majeure or delay events, damage to property by fire or other causes, or the discovery of any Constituent of Concern or Hazardous Environmental Condition.

12. Payment Requests: Review applications for payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to Engineer, noting particularly the relationship of the payment requested to the Schedule of Values, Work completed, and materials and equipment delivered at the Site but not incorporated in the Work.

13. Certificates, Operation and Maintenance Manuals: During the course of the Work, verify that materials and equipment certificates, operation and maintenance manuals and other data required by the Contract Documents to be assembled and furnished by Contractor are applicable to the items actually installed and in accordance with the Contract Documents, and have these documents delivered to Engineer for review and forwarding to Owner prior to payment for that part of the Work.

14. Completion:

- a. Participate in Engineer's visits to the Site to determine Substantial Completion, assist in the determination of Substantial Completion and the preparation of a punch list of items to be completed or corrected.
- b. Participate in Engineer's final visit to the Site to determine completion of the Work, in the company of Owner and Contractor, and prepare a final punch list of items to be completed and deficiencies to be remedied.
- c. Observe whether all items on the final list have been completed or corrected and make recommendations to Engineer concerning acceptance and issuance of the notice of acceptability of the work.

C. The RPR shall not:

- 1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).
- 2. Exceed limitations of Engineer's authority as set forth in the Contract Documents.
- 3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers.
- 4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of Contractor's work.
- 5. Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.
- 6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
- 7. Accept Shop Drawing or Sample submittals from anyone other than Contractor.
- ~~1-8.~~ Authorize Owner to occupy the Project in whole or in part.

10.04 *Rejecting Defective Work*

- A. Engineer has the authority to reject Work in accordance with Article 14.

10.05 *Shop Drawings, Change Orders and Payments*

- A. Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, are set forth in Paragraph 7.16.
- B. Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, are set forth in Paragraph 7.19.
- C. Engineer's authority as to Change Orders is set forth in Article 11.
- D. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.06 *Determinations for Unit Price Work*

- A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

10.07 *Decisions on Requirements of Contract Documents and Acceptability of Work*

- A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.08 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.
- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 15.06.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 10.08 shall also apply to the Resident Project Representative, if any.

10.09 *Compliance with Safety Program*

- A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs (if any) of which Engineer has been informed.

ARTICLE 11 – AMENDING THE CONTRACT DOCUMENTS; CHANGES IN THE WORK

11.01 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
 - 1. *Change Orders:*
 - a. If an amendment or supplement to the Contract Documents includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order. A Change Order also may be used to establish amendments and supplements of the Contract Documents that do not affect the Contract Price or Contract Times.
 - b. Owner and Contractor may amend those terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, without the recommendation of the Engineer. Such an amendment shall be set forth in a Change Order.
 - 2. *Work Change Directives:* A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.04 regarding change of Contract Price. Contractor must submit any Change Proposal seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 30 days after the completion of the Work set out in the Work Change Directive. Owner must submit any Claim seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 60 days after issuance of the Work Change Directive.
 - 3. *Field Orders:* Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.02 *Owner-Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Such changes shall be supported by Engineer's recommendation, to the extent the change involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical

matters. Such changes may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work shall be performed under the applicable conditions of the Contract Documents. Nothing in this paragraph shall obligate Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.03 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.

11.04 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment of Contract Price shall comply with the provisions of Article 12.
- B. An adjustment in the Contract Price will be determined as follows:
 - 1. where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03); or
 - 2. where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.04.C.2); or
 - 3. where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.04.C).
- C. *Contractor's Fee*: When applicable, the Contractor's fee for overhead and profit shall be determined as follows:
 - 1. a mutually acceptable fixed fee; or
 - 2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. for costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee shall be 15 percent;
 - b. for costs incurred under Paragraph 13.01.B.3, the Contractor's fee shall be five percent;
 - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.01.C.2.a and 11.01.C.2.b is that the Contractor's fee shall be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.A.1 and 13.01.A.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the

Subcontractor that actually performs the Work, a fee of five percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted work the maximum total fee to be paid by Owner shall be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the work;

- d. no fee shall be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
- e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
- f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 11.04.C.2.a through 11.04.C.2.e, inclusive.

11.05 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment in the Contract Times shall comply with the provisions of Article 12.
- B. An adjustment of the Contract Times shall be subject to the limitations set forth in Paragraph 4.05, concerning delays in Contractor's progress.
- B.C. The Contractor shall be responsible for the cost of any additional expenses occurred by the Owner as a result of the time extension, including but not limited to Engineering Services, Resident Project Representative, Owner's Representative, Legal, Administrative, any other costs incurred, etc.

11.06 *Change Proposals*

- A. Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; appeal an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; contest a set-off against payment due; or seek other relief under the Contract. The Change Proposal shall specify any proposed change in Contract Times or Contract Price, or both, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents.
 - 1. *Procedures:* Contractor shall submit each Change Proposal to Engineer promptly (but in no event later than 30 days) after the start of the event giving rise thereto, or after such initial decision. The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal. The supporting data shall be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event. Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal.
 - 2. *Engineer's Action:* Engineer will review each Change Proposal and, within 30 days after receipt of the Contractor's supporting data, either deny the Change Proposal in whole, approve it in whole, or deny it in part and approve it in part. Such actions shall be in

writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

3. *Binding Decision:* Engineer's decision will be final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- B. *Resolution of Certain Change Proposals:* If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice shall be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

11.07 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders covering:
 1. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
 2. changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
 3. changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.02, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters; and
 4. changes in the Contract Price or Contract Times, or other changes, which embody the substance of any final and binding results under Paragraph 11.06, or Article 12.
- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of this Paragraph 11.07, it shall be deemed to be of full force and effect, as if fully executed.

11.08 *Notification to Surety*

- A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

ARTICLE 12 – CLAIMS

12.01 *Claims*

- A. *Claims Process:* The following disputes between Owner and Contractor shall be submitted to the Claims process set forth in this Article:
1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;
 2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents; and
 3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters.
- B. *Submittal of Claim:* The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim shall rest with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, or both, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.
- C. *Review and Resolution:* The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim shall be stated in writing and submitted to the other party, with a copy to Engineer.
- D. *Mediation:*
1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate shall stay the Claim submittal and response process.
 2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process shall resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process shall resume as of the date of the conclusion of the mediation, as determined by the mediator.
 3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.
- E. *Partial Approval:* If the party receiving a Claim approves the Claim in part and denies it in part, such action shall be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.
- F. *Denial of Claim:* If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial

of the Claim shall be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.

- G. *Final and Binding Results:* If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim shall be incorporated in a Change Order to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

ARTICLE 13 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 *Cost of the Work*

- A. *Purposes for Determination of Cost of the Work:* The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:
1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or
 2. To determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.
- B. *Costs Included:* Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 13.01.C, and shall include only the following items:
1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.
 2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.
 3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to

Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.

4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
5. Supplemental costs including the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.
 - c. Rentals of all construction equipment and machinery, and the parts thereof, whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
 - d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
 - e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
 - f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 6.05), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.
 - g. The cost of utilities, fuel, and sanitary facilities at the Site.
 - h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.
 - i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.

- C. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:
1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.
 2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
 3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
 4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
 5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.
- D. *Contractor's Fee:* When the Work as a whole is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 11.04.C.
- E. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

13.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.
- B. *Cash Allowances:* Contractor agrees that:
1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.
- C. ~~[Deleted]Contingency Allowance: Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.~~

- D. 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.

13.03 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. 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. Payments to Contractor for Unit Price Work will be based on actual quantities.
- C. 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.
- D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of the following paragraph.
- E. The unit price of an item of Unit Price Work shall be subject to reevaluation and adjustment under the following conditions: Within 30 days of Engineer's written decision under the preceding paragraph, Contractor may submit a Change Proposal, or Owner may file a Claim, seeking an adjustment in the Contract Price if:
 - 1. If the extended price of a particular item of Unit Price Work amounts to 5 percent or more of the Contract Price (based on estimated quantities at the time of Contract formation) and the variation in the quantity of that particular item of Unit Price Work actually furnished or performed by Contractor differs by more than 25 percent from the quantity of such item indicated in the Agreement; and the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement;
 - 2. If there is no corresponding adjustment with respect to any other item of Work; and there is no corresponding adjustment with respect to any other item of Work; and
 - 3. If Contractor believes that Contractor has incurred additional expense as a result thereof, Contractor may submit a Change Proposal, or if Owner believes that the quantity variation entitles Owner to an adjustment in the unit price, Owner may make a Claim, seeking an adjustment in the Contract Price. Contractor believes that it is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price, and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 14 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

14.01 Access to Work

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction will have access to the

Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply therewith as applicable.

14.02 *Tests, Inspections, and Approvals*

- A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work shall be governed by the provisions of Paragraph 14.05.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.
- D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:
 - 1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
 - 2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
 - 3. by manufacturers of equipment furnished under the Contract Documents;
 - 4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
 - 5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests shall be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

- E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.
- F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering shall be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 *Defective Work*

- A. *Contractor's Obligation:* It is Contractor's obligation to assure that the Work is not defective.

- B. *Engineer's Authority*: Engineer has the authority to determine whether Work is defective, and to reject defective Work.
- C. *Notice of Defects*: Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.
- D. *Correction, or Removal and Replacement*: Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.
- E. *Preservation of Warranties*: When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.
- F. *Costs and Damages*: In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs, losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work shall be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

14.05 *Uncovering Work*

- A. Engineer has the authority to require special inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.
- B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.
- C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then 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, and provide all necessary labor, material, and equipment.

1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.
2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *Owner May Stop the Work*

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

14.07 *Owner May Correct Defective Work*

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace rejected Work as required by Engineer, 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, then Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or 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, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.
- C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

ARTICLE 15 – PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 *Progress Payments*

- A. *Basis for Progress Payments:* The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.
- B. *Applications for Payments:*
1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a ~~bill of sale, invoice, or other~~ documentation warranting that Owner has received the materials and equipment free and clear of all Liens, and evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.
 2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
 3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement. No payments will be made that would deplete the retainage, place in escrow any funds that are required for retainage, or invest the retainage for the benefit of the Contractor. The Application for Payment form to be used on this Project is EJCDC C-620.
- C. *Review of Applications:*
1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
 2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the

Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and

- c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
 - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
 - a. to supervise, direct, or control the Work, or
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid on account of the Contract Price, or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.
6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
 - a. the Work is defective, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or
 - e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due:*

- ~~1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.~~
1. The Application for Payment with Engineer's recommendations will be presented to the Owner and Agency for consideration. If both the Owner and Agency find the Application for Payment acceptable, the recommended amount less any reduction under the provisions of Paragraph 15.01.E will become due twenty (20)(10) business days after the application is approved at the Owner's regular meeting, transfer of corresponding funds to the Owner's bank account and the Owner will make payment to the Contractor.

E. *Reductions in Payment by Owner:*

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
 - a. claims have been made against Owner on account of Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages on account of Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;
 - b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
 - c. Contractor has failed to provide and maintain required bonds or insurance;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
 - e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
 - f. the Work is defective, requiring correction or replacement;
 - g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - h. the Contract Price has been reduced by Change Orders;
 - i. an event that would constitute a default by Contractor and therefore justify a termination for cause has occurred;
 - j. liquidated damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;
 - k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
 - l. there are other items entitling Owner to a set off against the amount recommended.
2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate

written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed shall be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.

3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 15.01.C.1 and subject to interest as provided in the Agreement.

15.02 Contractor's Warranty of Title

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, ~~no later than seven days after the time of payment by Owner.~~ no later than the time of payment by Owner.

15.03 Substantial Completion

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.

- B. Promptly after Contractor's notification, 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 some or all of the Work has been determined not to be at a point of Substantial Completion and will require re-inspection or re-testing by Engineer, the cost of such re-inspection or re-testing, including the cost of time, travel and living expenses, shall be paid by Contractor to Owner. If Contractor does not pay, or the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under Article 15.

- B-C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which shall fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.

- ~~C-D.~~ At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.
- ~~D-E.~~ After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- ~~E-F.~~ Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 *Partial Use or Occupancy*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:
1. At any time Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through E for that part of the Work.
 2. At any time Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
 3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
 4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.05 regarding builder's risk or other property insurance.

15.05 *Final Inspection*

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

15.06 *Final Payment*

A. *Application for Payment:*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.11), and other documents, Contractor may make application for final payment.
2. The final Application for Payment shall be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents;
 - b. consent of the surety, if any, to final payment;
 - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.
 - d. a list of all disputes that Contractor believes are unsettled; and
 - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.

B. *Engineer's Review of Application and Acceptance:*

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the Application for Payment to Owner for payment. Such recommendation shall account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to the provisions of Paragraph 15.07. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

- C. *Completion of Work*: The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment.
- D. *Payment Becomes Due*: Thirty days after the presentation to Owner of the final Application for Payment and accompanying documentation, the amount recommended by Engineer (less any further sum Owner is entitled to set off against Engineer's recommendation, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions above with respect to progress payments) will become due and shall be paid by Owner to Contractor.

15.07 *Waiver of Claims*

- A. The making of final payment will not constitute a waiver by Owner of claims or rights against Contractor. Owner expressly reserves claims and rights arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 15.05, from Contractor's failure to comply with the Contract Documents or the terms of any special guarantees specified therein, from outstanding Claims by Owner, or from Contractor's continuing obligations under the Contract Documents.
- B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted or appealed under the provisions of Article 17.

15.08 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents, or by any specific provision of the Contract Documents), any Work is found to be defective, or if the repair of any damages to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas used by Contractor as permitted by Laws and Regulations, is found to be defective, then Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 - 1. correct the defective repairs to the Site or such other adjacent areas;
 - 2. correct such defective Work;
 - 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
 - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting therefrom.
- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others).
- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.

- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.
- E. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16 – SUSPENSION OF WORK AND TERMINATION

16.01 *Owner May Suspend Work*

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension. Any Change Proposal seeking such adjustments shall be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:
 - 1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule);
 - 2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
 - 3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
 - 4. Contractor's repeated disregard of the authority of Owner or Engineer.
- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) ten days written notice that Owner is considering a declaration that Contractor is in default and termination of the contract, Owner may proceed to:
 - 1. declare Contractor to be in default, and give Contractor (and any surety) notice that the Contract is terminated; and
 - 2. enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, 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 complete the Work as Owner may deem expedient.
- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within seven days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the

Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

- F. 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, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.
- G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond shall govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate For Convenience*

- A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and
 - 3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid on account of loss of anticipated overhead, profits, or revenue, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until

payment is made of all such amounts due Contractor, including interest thereon. The provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

ARTICLE 17 – FINAL RESOLUTION OF DISPUTES

17.01 *Methods and Procedures*

- A. *Disputes Subject to Final Resolution:* The following disputed matters are subject to final resolution under the provisions of this Article:
 - 1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full; and
 - 2. Disputes between Owner and Contractor concerning the Work or obligations under the Contract Documents, and arising after final payment has been made.
- B. *Final Resolution of Disputes:* For any dispute subject to resolution under this Article, Owner or Contractor may:
 - 1. elect in writing to invoke the dispute resolution process provided for in [these Standard General Conditions](#)~~the Supplementary Conditions~~; or
 - 2. agree with the other party to submit the dispute to another dispute resolution process; or
 - 3. if no dispute resolution process is provided for in [these Standard General Conditions](#) ~~the Supplementary Conditions~~ or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18 – MISCELLANEOUS

18.01 *Giving Notice*

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:
 - 1. delivered in person, by a commercial courier service or otherwise, to the individual or to a member of the firm or to an officer of the corporation for which it is intended; or
 - 2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the sender of the notice.

18.02 *Computation of Times*

- A. When any period of time is referred to in the Contract 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.

18.03 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or

by other provisions of the Contract. 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.

18.04 *Limitation of Damages*

- A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 *No Waiver*

- A. A party's non-enforcement of any provision shall not constitute a waiver of that provision, nor shall it affect the enforceability of that provision or of the remainder of this Contract.

18.06 *Survival of Obligations*

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

18.07 *Controlling Law*

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

18.08 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

18.09 Tribal Sovereignty

- A. No provision of this Agreement will be construed by any of the signatories as abridging or debilitating any sovereign powers of the {insert name of Tribe} Tribe; affecting the trust-beneficiary relationship between the Secretary of the Interior, Tribe, and Indian landowner(s); or interfering with the government-to-government relationship between the United States and the Tribe.

ARTICLE 19 – FEDERAL REQUIREMENTS

19.01 Agency Not a Party

- A. This Contract may be funded in part with funds provided by an agency. Neither agency, nor any of its departments, entities, or employees is a party to this Contract.

19.02 Contract Approval

- A. Owner and Contractor will furnish Owner's attorney such evidence as required so that Owner's attorney can complete and execute the following "Certificate of Owner's Attorney" (Exhibit GC-A) before Owner submits the executed Contract Documents to Agency for approval.

19.03 Conflict of Interest

- A. Contractor may not knowingly contract with a supplier or manufacturer if the individual or entity who prepared the plans and specifications has a corporate or financial affiliation with the supplier or manufacturer. Owner's officers, employees, or agents shall not engage in the

award or administration of this Contract if a conflict of interest, real or apparent, would be involved. Such a conflict would arise when: (i) the employee, officer or agent; (ii) any member of their immediate family; (iii) their partner or (iv) an organization that employs, or is about to employ, any of the above, has a financial interest in Contractor. Owner's officers, employees, or agents shall neither solicit nor accept gratuities, favors or anything of monetary value from Contractor or subcontractors.

19.04 Gratuities

- A. If Owner finds after a notice and hearing that Contractor, or any of Contractor's agents or representatives, offered or gave gratuities (in the form of entertainment, gifts, or otherwise) to any official, employee, or agent of Owner or Agency in an attempt to secure this Contract or favorable treatment in awarding, amending, or making any determinations related to the performance of this Contract, Owner may, by written notice to Contractor, terminate this Contract. Owner may also pursue other rights and remedies that the law or this Contract provides. However, the existence of the facts on which Owner bases such findings shall be an issue and may be reviewed in proceedings under the dispute resolution provisions of this Contract.
- B. In the event this Contract is terminated as provided in paragraph 19.04.A, Owner may pursue the same remedies against Contractor as it could pursue in the event of a breach of this Contract by Contractor. As a penalty, in addition to any other damages to which it may be entitled by law, Owner may pursue exemplary damages in an amount (as determined by Owner) which shall not be less than three nor more than ten times the costs Contractor incurs in providing any such gratuities to any such officer or employee.

19.05 Audit and Access to Records

- A. Owner, Agency, the Comptroller General of the United States, or any of their duly authorized representatives, shall have access to any books, documents, papers, and records of the Engineer which are pertinent to the Agreement, for the purpose of making audits, examinations, excerpts, and transcriptions. Engineer shall maintain all required records for three years after final payment is made and all other pending matters are closed.

19.06 Small, Minority, and Women's Businesses

- A. If Contractor intends to let any subcontracts for a portion of the work, Contractor shall take affirmative steps to assure that small, minority and women's businesses are used when possible as sources of supplies, equipment, construction, and services. Affirmative steps shall consist of: (1) including qualified small, minority and women's businesses on solicitation lists; (2) assuring that small, minority and women's businesses are solicited whenever they are potential sources; (3) dividing total requirements when economically feasible, into small tasks or quantities to permit maximum participation of small, minority, and women's businesses; (4) establishing delivery schedules, where the requirements of the work permit, which will encourage participation by small, minority and women's businesses; (5) using the services and assistance of the Small Business Administration and the Minority Business Development Agency of the U.S. Department of Commerce; (6) requiring each party to a subcontract to take the affirmative steps of this section; and (7) Contractor is encouraged to procure goods and services from labor surplus area firms.

19.07 Anti-Kickback

- A. Contractor shall comply with the Copeland Anti-Kickback Act (18 USC 874 and 40 USC 276c) as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Buildings or Public Works Financed in Whole or in Part by Loans or

Grants of the United States"). The Act provides that Contractor or subcontractor shall be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public facilities, to give up any part of the compensation to which they are otherwise entitled. Owner shall report all suspected or reported violations to Agency.

19.08 Clean Air and Pollution Control Acts

- A. If this Contract exceeds \$100,000, Compliance with all applicable standards, orders, or requirements issued under section 306 of the Clean Air Act (42 U.S.C. 1857(h) and 42 USC 7401et. seq.), section 508 of the Clean Water Act (33 U.S.C. 1368) and Federal Water Pollution Control Act (33 USC 1251 et seq.), Executive Order 11738, and Environmental Protection Agency regulations (40 CFR part 15) is required. Contractor will report violations to the Agency and the Regional Office of the EPA.

19.09 State Energy Policy

- A. Contractor shall comply with the Energy Policy and Conservation Act (P.L. 94-163). Mandatory standards and policies relating to energy efficiency, contained in any applicable State Energy Conservation Plan, shall be utilized.

19.10 Equal Opportunity Requirements

- A. If this Contract exceeds \$10,000, Contractor shall comply with Executive Order 11246, "Equal Employment Opportunity," as amended by Executive Order 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and as supplemented by regulations at 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor."
- B. Contractor's compliance with Executive Order 11246 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative active obligations required by the Standard Federal Equal Employment Opportunity Construction Contract Specifications, as set forth in 41 CFR Part 60-4 and its efforts to meet the goals established for the geographical area where the Contract is to be performed. The hours of minority and female employment and training must be substantially uniform throughout the length of the Contract, and in each trade, and Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting Contractor's goals shall be a violation of the Contract, the Executive Order, and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.
- C. Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the Contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the subcontractor; employer identification number; estimated dollar amount of subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the Contract is to be performed.

19.11 Restrictions on Lobbying

- A. Contractor and each subcontractor shall comply with Restrictions on Lobbying (Public Law 101-121, Section 319) as supplemented by applicable Agency regulations. This Law applies to the recipients of contracts and subcontracts that exceed \$100,000 at any tier under a Federal loan that exceeds \$150,000 or a Federal grant that exceeds \$100,000. If applicable, Contractor must complete a certification form on lobbying activities related to a specific

Federal loan or grant that is a funding source for this Contract. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 USC 1352. Each tier shall disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Certifications and disclosures are forwarded from tier to tier up to the Owner. Necessary certification and disclosure forms shall be provided by Owner.

19.12 Environmental Requirements

When constructing a Project involving trenching and/or other related earth excavations, Contractor shall comply with the following environmental conditions:

- A. Wetlands – When disposing of excess, spoil, or other construction materials on public or private property, Contractor shall not fill in or otherwise convert wetlands.
- B. Floodplains – When disposing of excess, spoil, or other construction materials on public or private property, Contractor shall not fill in or otherwise convert 100 year floodplain areas delineated on the latest Federal Emergency Management Agency Floodplain Maps, or other appropriate maps, i.e., alluvial soils on NRCS Soil Survey Maps.
- C. Historic Preservation – Any excavation by Contractor that uncovers an historical or archaeological artifact shall be immediately reported to Owner and a representative of Agency. Construction shall be temporarily halted pending the notification process and further directions issued by Agency after consultation with the State Historic Preservation Officer (SHPO).
- D. Endangered Species – Contractor shall comply with the Endangered Species Act, which provides for the protection of endangered and/or threatened species and critical habitat. Should any evidence of the presence of endangered and/or threatened species or their critical habitat be brought to the attention of Contractor, Contractor will immediately report this evidence to Owner and a representative of Agency. Construction shall be temporarily halted pending the notification process and further directions issued by Agency after consultation with the U.S. Fish and Wildlife Service.
- E. Mitigation Measures – If the project had an Environmental Report, Environmental Assessment, or Environmental Impact Statement to meet the requirements of the National Environmental Policy Act, compliance with the mitigation measures, if any, in that document are hereby included as a condition of this contract. {These mitigation measures are as follows: None.}

ARTICLE 20 – STATE OF ILLINOIS REQUIREMENTS

20.01 State Prevailing Wage Rate Requirements

- A. The Contractor shall be required to pay a minimum of the State Prevailing Wage Rates for the project area, in accordance with Illinois State Law.

20.02 Employment of Illinois Workers on Public Works

- A. If at the time this contract is executed, or if during the term of this contract, there is excessive unemployment in Illinois as defined in the employment of Illinois Workers on Public Works Act,

30ILCS 570-0.01 et seq., as two consecutive months of unemployment exceeding 5%, the Contractor agrees to employ Illinois Laborers. An Illinois Laborer is defined as any person who has resided in Illinois for at least thirty (30) days and intends to become or remain an Illinois resident.

20.03 *Substance Abuse Prevention on Public Works Projects Act*

- A. The Contractor shall be required to comply with the Substance Abuse Prevention on Public Works Projects Act (Public Act 095-0635; HB 1855). As such, the Contractor may be required to sign the Owner's Substance Abuse Prevention Program Certification.

ARTICLE 21 – OTHER REQUIREMENTS

21.01 *Certified Payroll*

- A. Contractor shall submit Certified Payroll to the Owner with each pay request.

Wage Rates

IL170017 MOD 14 REVISED 12/08/17 IL17

***** THIS WAGE DETERMINATION WAS REPLACED ON 12/08/17*****

General Decision Number: IL170017 09/08/2017

Superseded General Decision Number: IL20160017

State: Illinois

Construction Types: Heavy and Highway

Counties: Bond, Calhoun, Clinton, Greene, Jersey, Macoupin, Madison, Monroe, Montgomery, St Clair and Washington Counties in Illinois.

MACOUPIN (upper 1/2) & MONTGOMERY (upper 1/2, INCLUDING WAGGONER, STANDARD CITY, & NORTH THEREOF) COUNTIES:

HEAVY CONSTRUCTION PROJECTS (including Sewer & Water Line Construction & Drainage Projects) & HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects, and railroad construction; bascule, suspension & spandrel arch bridges; bridges designed for commercial navigation; bridges involving marine construction, other major bridges).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.20 for calendar year 2017 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.20 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2017. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/06/2017
1	01/13/2017
2	01/27/2017
3	02/03/2017
4	04/28/2017
5	05/19/2017
6	06/02/2017
7	06/23/2017
8	06/30/2017
9	07/14/2017
10	07/21/2017
11	07/28/2017
12	08/04/2017
13	08/25/2017
14	09/08/2017

CARP0270-015 05/01/2017

	Rates	Fringes
CARPENTER.....	\$ 32.15	25.97

PILEDRIVERMAN.....	\$ 33.15	25.97
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 CARP0270-023 05/01/2017

GREENE COUNTY

	Rates	Fringes
CARPENTER.....	\$ 32.15	25.97
PILEDRIVERMAN.....	\$ 33.15	25.97

 CARP0500-001 05/07/2017

CLINTON, MONROE, and WASHINGTON COUNTIES

	Rates	Fringes
Carpenter & Piledrivermen.....	\$ 37.35	16.85

 CARP0500-003 05/07/2017

ST. CLAIR COUNTY

	Rates	Fringes
Carpenter and Piledriver.....	\$ 37.35	16.85

 CARP0664-003 05/07/2017

MADISON COUNTY

	Rates	Fringes
Carpenter and Piledriver.....	\$ 37.35	16.85

 CARP0664-006 05/07/2017

BOND, CALHOUN, and JERSEY COUNTIES

	Rates	Fringes
CARPENTER.....	\$ 37.35	16.85

 ELEC0146-012 06/01/2016

MONTGOMERY COUNTY (East of Butler Grove, Grisham, Hillsboro & Raymond Twps)

	Rates	Fringes
ELECTRICIAN.....	\$ 36.27	16.36

 ELEC0193-003 05/31/2017

MACOUPIN (Barr, Girard, Nilwood, North & South Otter, North & South Palmyra and Virden Twps), AND MONTGOMERY (Bois D' Arc, Harvel and Pitman Twps) COUNTIES

	Rates	Fringes
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ELECTRICIAN.....\$ 35.44 4.5%+\$16.25

* ELEC0193-011 04/05/2017

MACOUPIN (Townships of Scottville, North Palmyra, North Otter, Virden, Girard, Barr, South Palmyra, South Otter, and Nilwood) and MONTGOMERY (Townships of Bois D'Arc, Pitman, and Harvel) COUNTIES

	Rates	Fringes
Line Construction		
Groundman - Equipment Operator (Class I, all crawler type equipment larger than D-4, 15 ton crane or larger).....	\$ 45.05	29.5% + \$5.25
Groundman - Truck Driver (with winch, may operate diggers, 5th wheel type trucks, crawler-type equipment, D-4 and smaller, backhoe 3/4 yard and under, rubber tire and crawler w/end loader, and may drive bucket truck and live boom type line trucks).	\$ 34.34	29.5% + \$5.25
Groundman - Truck Driver (without winch).....	\$ 32.37	29.5% + \$5.25
Groundman (Class A).....	\$ 30.84	29.5% + \$5.25
Lineman & Substation Tech...	\$ 50.06	29.5% + \$5.25

ELEC0309-002 11/28/2016

BOND (Westside), CLINTON, GREENE (ALL WORK PERFORMED ON THE ILLINOIS POWER COMPANY PROPERTY), JERSEY (ALL WORK PERFORMED ON THE ILLINOIS POWER COMPANY PROPERTY), MACOUPIN (EXCEPT North 1/3 & Southwest Corner), MADISON (EXCEPT East ALTON, ALTON, WOOD RIVER & HARTFORD), MONROE, MONTGOMERY (East of ROUNDTREE, IRVING & East FORK TWP.), RANDOLPH (PORTION OF RED BUD TOWNSHIP), ST. CLAIR, and WASHINGTON (OKAWVILLE & VENEDY TWPS.) COUNTIES

	Rates	Fringes
LINE CONSTRUCTION		
Cable Splicer; Lineman		
Welder.....	\$ 43.86	20.70
Groundman Equipment		
Operator.....	\$ 42.65	45.29%
Groundman Truck Driver.....	\$ 34.81	45.29%
Groundman.....	\$ 31.84	45.29%
Lineman.....	\$ 49.05	45.29%

* ELEC0309-003 08/28/2017

BOND (Western Half), CLINTON (EXCLUDES HUEY, HOFFMAN, & VIC.), MACOUPIN (EXCLUDES BRIGHTON TWP., ATHENVILLE, SCOTTVILLE, GIRARD & AREA N. THEREOF), MADISON (EXCLUDES ALTON, E. ALTON, HARTFORD & WOOD RIVER), MONROE, MONTGOMERY (WEST OF BUTLER

GROVE, GRISHAM, HILLSBOROUGH & RAYMOND TWPS), ST. CLAIR and
WASHINGTON (VENEDY TWP) COUNTIES

	Rates	Fringes
ELECTRICIAN.....	\$ 39.79	50.35%

ELEC0649-002 01/02/2017

CALHOUN, GREENE, JERSEY, MACOUPIN (SOUTHWEST CORNER), AND
MADISON (E. ALTON, ALTON, WOOD RIVER & HARTFORD) COUNTIES

	Rates	Fringes
Line Construction		
BLASTER.....	\$ 49.59	29% + 7.25
EQUIPMENT OPERATOR.....	\$ 42.62	29% + 7.25
GROUNDMAN - TRUCK DRIVER		
W/WINCH.....	\$ 32.04	29% + 7.25
GROUNDMAN - TRUCK DRIVER		
WO/WINCH.....	\$ 28.40	29% + 7.25
GROUNDMAN.....	\$ 27.68	29% + 7.25
LINEMAN; AND LINEMAN HOLE		
BORING MACHINE OPERATOR.....	\$ 49.98	29% + 7.25

ELEC0649-008 01/02/2017

CALHOUN, GREEN, JERSEY, MACOUPIN (SOUTHWEST CORNER), AND
MADISON (ALTON, E. ALTON, HARTFORD & WOOD RIVER) COUNTIES

	Rates	Fringes
ELECTRICIAN.....	\$ 41.15	21.60

ELEC0702-002 07/03/2017

ALEXANDER, CLAY, CRAWFORD, EDWARDS, EFFINGHAM, FRANKLIN,
FAYETTE (Excludes portion North Avena), GALLATIN, HAMILTON,
HARDIN, JACKSON, JASPER, JEFFERSON, JOHNSON, LAWRENCE, MARION,
MASSAC, PERRY, POPE, PULASKI, RANDOLPH (Except Red Bud Twps),
RICHLAND, SALINE, UNION, WABASH, WAYNE, WHITE, AND WILLIAMSON
COUNTIES;

CLARK, COLES (Southern Half), CUMBERLAND, MOULTRIE (Whitley
TWP), and SHELBY (Except West of Holland, Prairie, Richland, &
Windsor TWPS) COUNTIES;

BOND (Eastern Half), and WASHINGTON (OKAWVILLE & VENDY TWPS)
COUNTIES

	Rates	Fringes
Line Construction		
Groundman - Class A.....	\$ 30.36	29%+6.68
Groundman - Equipment		
Operator Class II (all		
other equipment).....	\$ 36.89	29%+6.68
Heavy - Equipment Operator		
Class I (all crawler type		
equipment D-4 and larger)...	\$ 41.33	29%+6.68

Lineman.....	\$ 51.84	29%+6.68
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ELEC0702-017 06/01/2017

BOND (Eastern Half), CLINTON (Huey, Hoffman, & Vicinity), AND
WASHINGTON (Except Venedy TWP) COUNTIES

	Rates	Fringes
ELECTRICIAN.....	\$ 42.73	21.08

ENGI0520-005 08/01/2017

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
Group 01.....	\$ 36.20	31.35
Group 02.....	\$ 35.07	31.35
Group 03.....	\$ 30.59	31.35
Group 04.....	\$ 30.65	31.35
Group 05.....	\$ 30.32	31.35
Group 06.....	\$ 38.75	31.35
Group 07.....	\$ 39.05	31.35
Group 08.....	\$ 39.33	31.35
Group 09.....	\$ 37.20	31.35
Group 10.....	\$ 38.20	31.35
Group 11.....	\$ 38.20	31.35
Group 12.....	\$ 39.20	31.35

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Cranes, Draglines, Shovels, Skimmer Scoops, Clamshells or Derrick Boats, Pile Drivers, Crane-Type Backhoes, Asphalt Plant Operators, Concrete Plant Operators, Dredges, Asphalt Spreading Machines, Screws on Asphalt Spreading Machines, All Locomotives, Cable Ways or Tower Machines, Hoists, Hydraulic Backhoes, Ditching Machines, or Backfiller, Cherrypickers, overhead Cranes, Roller, Steam or Gas, Concrete Pavers, Excavator Concrete Breakers, Concrete Pumps, Bulk Cement Plants, Cement Pumps, DerrickType Drills, Boat Operators, Motor Graders or Pushcats, Scoops or Toumapulls, Bulldozers, Endloaders or Fork Lifts, Power Blade or Elevating Graders, Winch Cats, Boom or Winch Trucks or Boom Tractors, Pipe Wrapping or Painting Machines, Asphalt Plant Engineer, Journeyman Lubricating Engineer, Drills (other than derrick type), Mud Jacks, or Well Drilling Machines, Boring Machines or Track Jacks, Mixers, Conveyors (two), Air Compressors (two) Water Pumps, regardless of size (two), Welding Machines (two), Siphons or Jets (two), Winch Head or Apparatuses (two), Light Plants (two), Waterblasters (two), all Tractors, regardless of size (straight tractor only), Fireman on Stationary Boilers, Automatic Elevators, Form Grading Machines, Finishing Machines, Power Sub-Grader or Ribbon Machines, Longitudinal Floats, Distributor Operators on Trucks, Winch Heads or Apparatuses (one), Mobil Track air and heaters (two to five), Heavy Equipment Greaser, Relief Operator, Assistant Master Mechanic and Heavy Duty Mechanic, concrete saws of all types and sizes with their attachments, gobhoppers, excavators all sizes, the repair, greasing, and fueling of all diesel hammers, the operation,

set-up and cleaning of bid wells, concrete placement booms, the alterations, repair of all barges, water blasters of all sizes and their clutches, mobile lifts, hydraulic jacks where used for hoisting, diesel or gas powered flashing signs used for traffic control, micro pavers, log skidders, iceolators used on and off of pipeline, condor cranes, drill rigs of all sizes, bow boats, survey boats, ross carriers, bob-cats and all their attachments, skid steer loaders and all their attachments, creter crane, direct drive electric motors the bolting and unbolting the adjusting and shimming, (dewatering jobs, whirley crane, conveyor belts) etc., batch plants (all sizes), roto mills, conveyors systems of any size and any configuration, hydroseeders and strawblowers all sizes, operation, repair, service of all vibratory hammers, all power pacs and their controls regardless of location, curtains or brush burning machines, stump cutter machines, grout machines regardless of size, Nail launchers when mounted on a machine or self-propelled, con-cover machines, Goldhofer and similar S.P.M.T. (self-propelled modular transpmiers) heavy transport units and all Operators (except those listed below).

Group 2: Assistant Operators

GROUP 3: Air Compressor One; Water Pump regardless of size One; Welding Machine One; 1-Bag Mixer One; Conveyor One; Siphon or Jet; Light Plant One; Heater One; Immobile Track Air One

GROUP 4: Firemen on Whirlies and Asphalt Spreader Oiler; Heavy Equipment Oilers; Truck Cranes; Monigans; Large over 65 tons capacity; Concrete Plant Oiler and Black Top Plant Oiler

GROUP 5: Oilers

GROUP 6: Operators on equipment with Booms, including Jibs, 100 ft and over, but less than 150 ft

GROUP 7: Operators on equipment with Booms, including Jibs, 150 ft and over, but less than 200 ft

GROUP 8: Operators on equipment with Boomns, including Jibs, 200 ft and over; Tower Cranes, and Whirley Cranes

GROUP 9: Certified crane Operators, Below 17.5 tons, when requested by the Contractor or required by the Owner.

GROUP 10: Certified crane Operators 17.5 tons and above, when requested by the Contractor or required by the Owner.

GROUP 11: Master Mechanic

GROUP 12: Licensed Boat Pilot

ENGI0520-012 08/01/2017

INCLUDING BUILDING CONSTRUCTION ON HEAVY INDUSTRIAL SITES &
HEAVY CONSTRUCTION EXCEPT DREDGING AND RIVER WORK

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
Group 01.....	\$ 37.70	31.35
Group 02.....	\$ 36.57	31.35
Group 03.....	\$ 32.09	31.35
Group 04.....	\$ 32.15	31.35
Group 05.....	\$ 31.82	31.35
Group 06.....	\$ 40.25	31.35
Group 07.....	\$ 40.55	31.35
Group 08.....	\$ 40.83	31.35
Group 09.....	\$ 38.70	31.35
Group 10.....	\$ 39.70	31.35
Group 11.....	\$ 39.70	31.35
Group 12.....	\$ 40.70	31.35

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Cranes, Draglines, Shovels, Skimmer Scoops, Clamshells or Derrick Boats, Pile Drivers, Crane-Type Backhoes, Asphalt Plant Operators, Concrete Plant Operators, Dredges, Asphalt Spreading Machines, Screws on Asphalt Spreading Machines, All Locomotives, Cable Ways or Tower Machines, Hoists, Hydraulic Backhoes, Ditching Machines, or Backfiller, Cherrypickers, overhead Cranes, Roller, Steam or Gas, Concrete Pavers, Excavator Concrete Breakers, Concrete Pumps, Bulk Cement Plants, Cement Pumps, Derrick-Type Drills, Boat Operators, Motor Graders or Pushcats, Scoops or Tournapulls, Bulldozers, Endloaders or Fork Lifts, Power Blade or Elevating Graders, Winch Cats, Boom or Winch Trucks or Boom Tractors, Pipe Wrapping or Painting Machines, Asphalt Plant Engineer, Journeyman Lubricating Engineer, Drills (other than derrick type), Mud Jacks, or Well Drilling Machines, Boring Machines or Track Jacks, Mixers, Conveyors (two), Air Compressors (two) Water Pumps, regardless of size (two), Welding Machines (two), Siphons or Jets (two), Winch Head or Apparatuses (two), Light Plants (two), Waterblasters (two), all Tractors, regardless of size (straight tractor only), Fireman on Stationary Boilers, Automatic Elevators, Form Grading Machines, Finishing Machines, Power Sub-Grader or Ribbon Machines, Longitudinal Floats, Distributor Operators on Trucks, Winch Heads or Apparatuses (one), Mobil Track air and heaters (two to five), Heavy Equipment Greaser, Relief Operator, Assistant Master Mechanic and Heavy Duty Mechanic, concrete saws of all types and sizes with their attachments, gob-hoppers, excavators all sizes, the repair, greasing, and fueling of all diesel hammers, the operation, set-up and cleaning of bidwells, concrete placement booms, the alterations, repair of all barges, water blasters of all sizes and their clutches, mobile lifts, hydraulic jacks where used for hoisting, diesel or gas powered flashing signs used for traffic control, micro pavers, log skidders, iceolators used on and off of pipeline, condor cranes, drill rigs of all sizes, bow boats, survey boats, ross carriers, bob-cats and all their attachments, skid steer loaders and all their attachments, creter crane, direct drive electric motors the bolting and unbolting the adjusting and shimming, (dewateringjobs, whirley crane, conveyor belts) etc., batch plants (all sizes), roto mills, conveyors systems of any size and any configuration,

hydroseeders and straw-blowers all sizes, operation, repair, service of all vibratory hammers, all power pacs and their controls regardless of location, curtains or brush burning machines, stump cutter machines, grout machines regardless of size, Nail Launchers when mounted on a machine or self-propelled, con-cover machines, Goldhofer and similar S.P.M.T. (self-propelled modular transporters) heavy transport units and all Operators (except those listed below).

GROUP 2: Assistant Operators

GROUP 3: Air Compressors (one), Water Pumps, regardless of size (one), Water-blasters (one), Welding Machine (one), Mixers (one bag), Conveyor (one), Siphon or Jet (one), Light Plant (one), Heater (one), Immobile Track Air (one), and Self-Propelled Walk Behind Rollers.

GROUP 4: Fireman on Whirlies and Heavy Equipment Oilers, Truck Cranes, Dredges, Monigans, Large Cranes - (Over 65-ton rated capacity) Concrete Plant Oiler, Blacktop Plant oiler and Creter Crane Oiler (when required), barge tenders, oilers on drill rigs used for caisson or for pile driving.

GROUP 5: Oilers

GROUP 6: Operators on equipment with Booms, including Jibs, 100 ft and over, but less than 150 ft

GROUP 7: Operators on equipment with Booms, including Jibs, 150 ft and over, but less than 200 ft

GROUP 8: Operators on equipment with Boomns, including Jibs, 200 ft and over; Tower Cranes, and Whirley Cranes

GROUP 9: Certified crane Operators, Below 17.5 Tons, when requested by the Contractor or required by the Owner

GROUP 10: Celiified crane Operators 17.5 Tons and above, when requested by the Contractor or required by the Owner

GROUP 11: Master Mechanic

GROUP 12: Licensed Boat Pilot

IRON0046-006 05/01/2017

GREENE (NORTHERN HALF), MACOUPIN (NORTH OF SUMMERVILLE), AND MONTGOMERY (NORTH OF LITCHFIELD & HILLSBORO) COUNTIES

	Rates	Fringes
IRONWORKER.....	\$ 32.52	25.45

IRON0392-003 08/01/2017

BOND, CALHOUN, CLINTON, GREENE (SOUTHERN HALF), JERSEY, MACOUPIN (SUMMERVILLE & SOUTH THEREOF), MADISON, MONROE, MONTGOMERY (LITCHFIELD, HILLSBORO, & SOUTH THEREOF), ST. CLAIR,

and WASHINGTON COUNTIES

	Rates	Fringes
IRONWORKER.....	\$ 32.25	26.38

IRON0396-006 01/02/2012

BRIDGES, LOCKS, and DAMS ON THE MISSISSIPPI RIVER

	Rates	Fringes
IRONWORKER.....	\$ 31.98	19.11

LABO0044-001 08/01/2017

MADISON COUNTY (Southwest)

	Rates	Fringes
LABORER		
Group 1.....	\$ 25.76	27.48
Group 2.....	\$ 26.26	27.48
Group 3.....	\$ 27.26	27.48

LABORER CLASSIFICATIONS:

GROUP 1 - General Laborer

GROUP 2 - Asbestos Abatement Worker and Hazardous Waste
Worker; Lead Base Paint Worker

GROUP 3 - Dynamite Man

LABO0044-002 08/01/2017

MADISON COUNTY (GLEN CARBON)

	Rates	Fringes
LABORER		
GROUP 1.....	\$ 25.76	27.48
GROUP 2.....	\$ 26.26	27.48
GROUP 3.....	\$ 27.26	27.48

LABORERS CLASSIFICATIONS

GROUP 1 - General Laborers.

GROUP 2 - Brick Mason and Plasterer Tenders.

GROUP 3 - Dynamite and Powder Men.

LABO0100-001 08/01/2017ST CLAIR COUNTY (East St. Louis,Alcoa, Brooklyn,Cahokia,
Caseyville,Centreville, Dupo, Fairmont City, French Village,
Midway, Maplewood, National City)

	Rates	Fringes
LABORERS		
Group 1.....	\$ 30.79	22.45
Group 2.....	\$ 31.29	22.45
Group 3.....	\$ 32.29	22.45

LABORER CLASSIFICATIONS:

GROUP 1 - General Laborer

GROUP 2 - Asbestos Abatement Worker and Hazardous Waste
Worker; Lead Base Paint Worker, Hod Carrier

GROUP 3 - Dynamite Man

LABO0196-001 08/01/2017

MONROE COUNTY

	Rates	Fringes
LABORERS		
Group 1.....	\$ 27.66	25.58
Group 2.....	\$ 28.16	25.58

LABORER CLASSIFICATIONS:

GROUP 1 - General Laborer

GROUP 2 - Asbestos Abatement Worker and Hazardous Waste
Worker; Lead Base Paint Worker; Dynamite Man

LABO0218-001 08/01/2017

BOND (Greeneville), CALHOUN (Hardin), GREENE (Roadhouse),
JERSEY (Jerseyville), and MADISON (Alton) COUNTIES

	Rates	Fringes
LABORERS		
Group 1.....	\$ 30.59	22.65
Group 2.....	\$ 31.09	22.65
Group 3.....	\$ 32.09	22.65

LABORER CLASSIFICATIONS:

GROUP 1 - General Laborer

GROUP 2 - Asbestos Abatement Worker and Hazardous Waste
Worker; Lead Base Paint Worker

GROUP 3 - Dynamite Man

LABO0218-004 08/01/2017

JERSEY COUNTY (Jerseyville)

	Rates	Fringes
LABORER		
GROUP 1.....	\$ 30.59	22.65
GROUP 2.....	\$ 31.09	22.65
GROUP 3.....	\$ 32.09	22.65

LABORER CLASSIFICATIONS

GROUP 1 - General Laborers.

GROUP 2 - Brick Mason and Plasterer Tenders.

GROUP 3 - Dynamite and Powder Men.

LABO0218-005 08/01/2017

GREENE COUNTY (Roadhouse)

	Rates	Fringes
LABORER		
GROUP 1.....	\$ 30.59	22.65
GROUP 2.....	\$ 31.09	22.65
GROUP 3.....	\$ 32.09	22.65

LABORER CLASSIFICATIONS

GROUP 1 - General Laborers.

GROUP 2 - Brick Mason and Plasterer Tenders.

GROUP 3 - Dynamite and Powder Men.

LABO0218-006 08/01/2017

CALHOUN COUNTY (Hardin)

	Rates	Fringes
LABORER		
GROUP 1.....	\$ 30.59	22.65
GROUP 2.....	\$ 31.09	22.65
GROUP 3.....	\$ 32.09	22.65

LABORERS CLASSIFICATIONS

GROUP 1 - General Laborers.

GROUP 2 - Brick Mason and Plasterer Tenders.

GROUP 3 - Dynamite and Powder Men.

LABO0338-002 08/01/2017

MADISON COUNTY (Wood River)

Rates	Fringes
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LABORERS

Group 1.....	\$ 30.13	23.11
Group 2.....	\$ 30.63	23.11
Group 3.....	\$ 31.63	23.11

LABORER CLASSIFICATIONS:

GROUP 1 - General Laborer

GROUP 2 - Asbestos Abatement Worker and Hazardous Waste Worker; Lead Base Paint Worker

GROUP 3 - Dynamite Man

LABO0397-001 08/01/2017

MADISON COUNTY (Southeast)

	Rates	Fringes
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LABORERS

Group 1.....	\$ 30.79	22.45
Group 2.....	\$ 31.29	22.45
Group 3.....	\$ 32.29	22.45

LABORER CLASSIFICATIONS:

GROUP 1 - General Laborer

GROUP 2 - Asbestos Abatement Worker and Hazardous Waste Worker; Lead Base Paint Worker

GROUP 3 - Dynamite Man

LABO0397-002 08/01/2017

MADISON COUNTY (GRANITE CITY and Vicinity)

	Rates	Fringes
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LABORERS

Group 1.....	\$ 30.79	22.45
Group 2.....	\$ 31.29	22.45
Group 3.....	\$ 32.29	22.45

LABORER CLASSIFICATIONS:

GROUP 1 - General Laborer

GROUP 2 - Asbestos Abatement Worker and Hazardous Waste Worker; Lead Base Paint Worker

GROUP 3 - Dynamite Man

LABO0397-003 08/01/2017

MADISON COUNTY (Edwardsville, Marine, and Livingston)

	Rates	Fringes
LABORER		
GROUP 1.....	\$ 30.79	22.45
GROUP 2.....	\$ 31.29	22.45
GROUP 3.....	\$ 32.29	22.45

LABOREER CLASSIFICATIONS

GROUP 1 - General Laborers.

GROUP 3 - Brick Mason and Plasterer Tenders.

GROUP 4 - Dynamite and Powder Men.

LABO0459-001 08/01/2017

ST. CLAIR COUNTY (South)

	Rates	Fringes
LABORERS		
Group 1.....	\$ 28.63	24.61
Group 2.....	\$ 29.13	24.61
Group 3.....	\$ 30.13	24.61

LABORER CLASSIFICATIONS:

GROUP 1 - General Laborer

GROUP 2 - Asbestos Abatement Worker and Hazardous Waste
Worker; Lead Base Paint Worker

GROUP 3 - Dynamite Man

LABO0459-004 08/01/2017

ST. CLAIR COUNTY (Belleville)

	Rates	Fringes
Hod Carrier.....	\$ 29.13	24.61

LABO0581-002 08/01/2017

CLINTON COUNTY (Carlyle)

	Rates	Fringes
LABORERS		
Group 1.....	\$ 26.46	26.78
Group 2.....	\$ 26.96	26.78

LABORER CLASSIFICATIONS:

GROUP 1 - General Laborer

GROUP 2 - Asbestos Abatement Worker and Hazardous Waste
Worker; Lead Base Paint Worker; Dynamite Man

LABO0622-002 08/01/2017

BOND COUNTY (Greenville)

	Rates	Fringes
LABORERS		
Group 1.....	\$ 26.50	26.74
Group 2.....	\$ 27.00	26.74
Group 3.....	\$ 28.00	26.74

LABORER CLASSIFICATIONS:

GROUP 1 - General Laborer

GROUP 2 - Asbestos Abatement Worker and Hazardous Waste
Worker; Lead Base Paint Worker

GROUP 3 - Dynamite Man

LABO0622-003 08/01/2017

BOND COUNTY (Except the Northside)

	Rates	Fringes
LABORERS		
GROUP 1.....	\$ 26.50	26.74
GROUP 2.....	\$ 27.00	26.74
GROUP 3.....	\$ 28.00	26.74

LABORER CLASSIFICATIONS

GROUP 1 - General Laborer

GROUP 2 - Asbestos Abatement Worker and Hazardous Waste
Worker; Lead Base Paint Worker

GROUP 3 - Dynamite Man

LABO0670-001 08/01/2017

ST CLAIR (O'Fallon, Scott Air Force Base, Shiloh, Lebanon &
Vincinity), CLINTON (Trenton & Vicinity), and MADISON (Troy)
COUNTIES

	Rates	Fringes
LABORERS		
Group 1.....	\$ 28.05	25.19
Group 2.....	\$ 28.55	25.19
Group 3.....	\$ 29.55	25.19

LABORER CLASSIFICATIONS:

GROUP 1 - General Laborer

GROUP 2 - Asbestos Abatement Worker and Hazardous Waste

Worker; Lead Base Paint Worker

Group 3 - Dynamite Man

LABO0670-004 08/01/2017

MADISON COUNTY (St. Jacob)

	Rates	Fringes
LABORER		
GROUP 1.....	\$ 28.05	25.19
GROUP 2.....	\$ 28.55	25.19
GROUP 3.....	\$ 29.55	25.19

LABORER CLASSIFICATIONS

GROUP 1 - General Laborers.

GROUP 2 - Brick Mason and Plasterer Tenders.

GROUP 3 - Dynamite and Powder Men.

LABO0674-001 08/01/2002

MADISON COUNTY (St. Jacob)

	Rates	Fringes
LABORER		
GROUP 1.....	\$ 29.45	1.60
GROUP 2.....	\$ 29.70	1.60
GROUP 3.....	\$ 29.95	1.60
GROUP 4.....	\$ 29.45	1.60

LABORER CLASSIFICATIONS

GROUP 1 - General Laborers.

GROUP 2 - Work in Septic tanks, cess pools, or dry wells (old or new); All feeders, mixers and nozzle men on gunnite or sandblasting work; When handling creosoted material; Raking or luting asphalt; Burning or cutting with torch; Working on Bottom of Sewer Trenches on Final Grading, Laying or Caulking of performed sectional Sewer Pipe; High time (20 feet or over) where exposed to an open fall; Operator of motor buggies; Any work performed in or on all types of cased wells; Cooking, mixing and applying of mastic such as sulfa-seal and/or other coal derivatives

GROUP 3 - Brick Mason and Plasterer Tenders.

GROUP 4 - Dynamite and Powder Men.

LABO0742-001 08/01/2017

ST. CLAIR (Mascoutah) and CLINTON (New Baden) COUNTIES

Rates	Fringes
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LABORERS

Group 1.....	\$ 26.37	26.87
Group 2.....	\$ 26.87	26.87
Group 3.....	\$ 27.87	26.87

LABORER CLASSIFICATIONS:

GROUP 1 - General Laborer

GROUP 2 - Asbestos Abatement Worker and Hazardous Waste
Worker; Lead Base Paint Worker

GROUP 3 - Dynamite Man

LABO0968-001 08/01/1997

CALHOUN COUNTY (Hardin)

	Rates	Fringes
LABORER		
GROUP 1.....	\$ 25.80	.60
GROUP 2.....	\$ 26.05	.60
GROUP 3.....	\$ 26.30	.60
GROUP 4.....	\$ 27.325	.60

LABORERS CLASSIFICATIONS

GROUP 1 - General Laborers.

GROUP 2 - Work in Septic tanks, cess pools, or dry wells (old
or new); All feeders, mixers and nozzle men on gunnite or
sandblasting work; When handling creosoted material;
Ranking or luting asphalt; Burning or cutting with torch;
Working on Bottom of Sewer Trenches on Final Grading,
Laying or Caulking or performed sectional Sewer Pipe; High
time (20 feet or over) where exposed to an open fall;
Operator of motor buggies; Any work performed in or on all
types of cased wells; Cooking, mixing and applying of
mastic such as sulfa-seal and/or other coal derivatives

GROUP 3 - Brick Mason and Plasterer Tenders.

GROUP 4 - Dynamite and Powder Men.

LABO1084-001 08/01/2017

BOND (Sorento) and MONTGOMERY COUNTIES

	Rates	Fringes
LABORERS		
Group 1.....	\$ 25.74	27.50
Group 2.....	\$ 26.24	27.50
Group 3.....	\$ 27.24	27.50

LABORER CLASSIFICATIONS:

GROUP 1 - General Laborer

GROUP 2 - Asbestos Abatement Worker and Hazardous Waste
Worker; Lead Base Paint Worker

GROUP 3 - Dynamite Man

PAIN0058-002 05/01/2017

	Rates	Fringes
PAINTER (Bridge).....	\$ 32.45	17.12
Epoxy or Toxic-Lead-Based Paint Work-\$1.00 Premium		

PLAS0090-001 08/01/2017

BOND, CALHOUN, CLINTON (WESTERN HALF EAST TO BUT NOT INCLUDE
CARYLE), GREENE, JERSEY, MACOUPIN, MADISON, MONROE, MONTGOMERY,
and ST. CLAIR COUNTIES

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 33.90	24.25

PLAS0090-005 08/01/2017

Clinton County

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 33.90	24.25

PLAS0143-007 08/01/2015

WASHINGTON COUNTY

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 35.50	19.70

TEAM0050-006 05/01/2017

BOND. CLINTON, MONROE, ST CLAIR, WASHINGTON COUNTIES

	Rates	Fringes
TRUCK DRIVER		
Group 1.....	\$ 36.26	18.51
Group 2.....	\$ 36.77	18.51
Group 3.....	\$ 37.05	18.51
Group 4.....	\$ 37.36	18.51
Group 5.....	\$ 38.35	18.51

CLASSIFICATIONS:

GROUP 1: Drivers on 2 axles hauling less than 9 tons; air
compressor & welding machines and brooms, including those
pulled by separate units; Truck Driver Helper, warehouse
employees; Mechanic Helpers; greasers and tiremen; pick-up
trucks when hauling material, tools, or workers to and from

and on the job site; and forklifts up to 6,000 lb capacity.

GROUP 2: 2 or 3 axles hauling more than 9 tons but hauling less than 16 tons; A-frame winch trucks; hydrolift trucks; Vactor Trucks or similar equipment when used for transportation purposes; Forklift over 6,000 lb.capacity; winch trucks; and four axle combination units.

GROUP 3: 2, 3 or 4 Axles hauling 16 tons or more; 5-Axles or more combination units; drivers on water pulls; articulated dump trucks; mechanics and working forepersons.

GROUP 4: Low Boy and Oil Distributors.

GROUP 5: Drivers who require special protective clothing while employed on hazardous waste work.

TEAM0525-004 05/01/2017

CALHOUN, GREENE (South of a direct line that extends East from Pike County through Hillview/Whitehall to Macoupin County),
JERSEY, MACOUPIN, MADISON, MONTGOMERY COUNTIES

	Rates	Fringes
TRUCK DRIVER		
Group 1.....	\$ 36.26	18.51
Group 2.....	\$ 36.77	18.51
Group 3.....	\$ 37.05	18.51
Group 4.....	\$ 37.36	18.51
Group 5.....	\$ 38.35	18.51

CLASSIFICATIONS:

GROUP 1: Drivers on 2 axles hauling less than 9 tons; air compressor & welding machines and brooms, including those pulled by separate units; Truck Driver Helper, warehouse employees; Mechanic Helpers; greasers and tiremen; pick-up trucks when hauling material, tools, or workers to and from and on the job site; and forklifts up to 6,000 lb capacity.

GROUP 2: 2 or 3 axles hauling more than 9 tons but hauling less than 16 tons; A-frame winch trucks; hydrolift trucks; Vactor Trucks or similar equipment when used for transportation purposes; Forklift over 6,000 lb.capacity; winch trucks; and four axle combination units.

GROUP 3: 2, 3 or 4 Axles hauling 16 tons or more; 5-Axles or more combination units; drivers on water pulls; articulated dump trucks; mechanics and working forepersons.

GROUP 4: Low Boy and Oil Distributors.

GROUP 5: Drivers who require special protective clothing while employed on hazardous waste work.

TEAM0916-004 05/01/2017

GREENE (North of a direct line that extends East from Pike

County through Hillview/Whitehall to Macoupin County) COUNTY

	Rates	Fringes
TRUCK DRIVER		
Group 1.....	\$ 36.26	18.51
Group 2.....	\$ 36.77	18.51
Group 3.....	\$ 37.05	18.51
Group 4.....	\$ 37.36	18.51
Group 5.....	\$ 38.35	18.51

CLASSIFICATIONS:

GROUP 1: Drivers on 2 axles hauling less than 9 tons; air compressor & welding machines and brooms, including those pulled by separate units; Truck Driver Helper, warehouse employees; Mechanic Helpers; greasers and tiremen; pick-up trucks when hauling material, tools, or workers to and from and on the job site; and forklifts up to 6,000 lb capacity.

GROUP 2: 2 or 3 axles hauling more than 9 tons but hauling less than 16 tons; A-frame winch trucks; hydrolift trucks; Vactor Trucks or similar equipment when used for transportation purposes; Forklift over 6,000 lb.capacity; winch trucks; and four axle combination units.

GROUP 3: 2, 3 or 4 Axles hauling 16 tons or more; 5-Axles or more combination units; drivers on water pulls; articulated dump trucks; mechanics and working forepersons.

GROUP 4: Low Boy and Oil Distributors.

GROUP 5: Drivers who require special protective clothing while employed on hazardous waste work.

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within

the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the

classifications was union data. EXAMPLE: UAVG-OH-0010
08/29/2014. UAVG indicates that the rate is a weighted union
average rate. OH indicates the state. The next number, 0010 in
the example, is an internal number used in producing the wage
determination. 08/29/2014 indicates the survey completion date
for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of
each year, to reflect a weighted average of the current
negotiated/CBA rate of the union locals from which the rate is
based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can
be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on
a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests
for summaries of surveys, should be with the Wage and Hour
Regional Office for the area in which the survey was conducted
because those Regional Offices have responsibility for the
Davis-Bacon survey program. If the response from this initial
contact is not satisfactory, then the process described in 2.)
and 3.) should be followed.

With regard to any other matter not yet ripe for the formal
process described here, initial contact should be with the
Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an
interested party (those affected by the action) can request
review and reconsideration from the Wage and Hour Administrator
(See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the
interested party's position and by any information (wage
payment data, project description, area practice material,
etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an
interested party may appeal directly to the Administrative

Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====

END OF GENERAL DECISION



Change Order Summary

Payment of: \$ _____
 (Line 8 or other - attach explanation of the other amount)

is recommended by: _____ (Engineer) _____ (Date)

Payment of: \$ _____
 (Line 8 or other - attach explanation of the other amount)

is approved by: _____ (Owner) _____ (Date)

Approved by: _____
 Funding or Financing Entity (if applicable) (Date)

Progress Estimate - Unit Price Work

Contractor's Application

[illegible]

Stored Material Summary

Contractor's Application

[illegible]

PAYROLL NO.

FOR WEEK ENDING

PROJECT AND LOCATION

PROJECT OR CONTRACT NO.

(1)	(2)	(3)	OT OR ST	(4) DAY AND DATE	(5)	(6)	(7)	(8) DEDUCTIONS						(9)							
NAME AND INDIVIDUAL IDENTIFYING NUMBER (e.g., LAST FOUR DIGITS OF SOCIAL SECURITY NUMBER) OF WORKER	NO. OF WITHHOLDING EXEMPTIONS	WORK CLASSIFICATION									TOTAL HOURS	RATE OF PAY	GROSS AMOUNT EARNED	FICA	WITH- HOLDING TAX			OTHER	TOTAL DEDUCTIONS	NET WAGES PAID FOR WEEK	
				HOURS WORKED EACH DAY																	
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While completion of Form WH-347 is optional, it is mandatory for covered contractors and subcontractors performing work on Federally financed or assisted construction contracts to respond to the information collection contained in 29 C.F.R. §§ 3.3, 5.5(a). The Copeland Act (40 U.S.C. § 3145) contractors and subcontractors performing work on Federally financed or assisted construction contracts to "furnish weekly a statement with respect to the wages paid each employee during the preceding week." U.S. Department of Labor (DOL) regulations at 29 C.F.R. § 5.5(a)(3)(ii) require contractors to submit weekly a copy of all payrolls to the Federal agency contracting for or financing the construction project, accompanied by a signed "Statement of Compliance" indicating that the payrolls are correct and complete and that each laborer or mechanic has been paid not less than the proper Davis-Bacon prevailing wage rate for the work performed. DOL and federal contracting agencies receiving this information review the information to determine that employees have received legally required wages and fringe benefits.

Public Burden Statement

We estimate that it will take an average of 55 minutes to complete this collection, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. If you have any comments regarding these estimates or any other aspect of this collection, including suggestions for reducing this burden, send them to the Administrator, Wage and Hour Division, U.S. Department of Labor, Room S3502, 200 Constitution Avenue, N.W. Washington, D.C. 20210

(over)

Date _____

I, _____
(Name of Signatory Party) (Title)

do hereby state:

(1) That I pay or supervise the payment of the persons employed by _____ on the _____
(Contractor or Subcontractor); that during the payroll period commencing on the _____
(Building or Work) day of _____, _____, and ending the _____ day of _____, _____, all persons employed on said project have been paid the full weekly wages earned, that no rebates have been or will be made either directly or indirectly to or on behalf of said _____ from the full
(Contractor or Subcontractor)

weekly wages earned by any person and that no deductions have been made either directly or indirectly from the full wages earned by any person, other than permissible deductions as defined in Regulations, Part 3 (29 C.F.R. Subtitle A), issued by the Secretary of Labor under the Copeland Act, as amended (48 Stat. 948, 63 Stat. 108, 72 Stat. 967; 76 Stat. 357; 40 U.S.C. § 3145), and described below:

(2) That any payrolls otherwise under this contract required to be submitted for the above period are correct and complete; that the wage rates for laborers or mechanics contained therein are not less than the applicable wage rates contained in any wage determination incorporated into the contract; that the classifications set forth therein for each laborer or mechanic conform with the work he performed.

(3) That any apprentices employed in the above period are duly registered in a bona fide apprenticeship program registered with a State apprenticeship agency recognized by the Bureau of Apprenticeship and Training, United States Department of Labor, or if no such recognized agency exists in a State, are registered with the Bureau of Apprenticeship and Training, United States Department of Labor.

(4) That:
(a) WHERE FRINGE BENEFITS ARE PAID TO APPROVED PLANS, FUNDS, OR PROGRAMS

- in addition to the basic hourly wage rates paid to each laborer or mechanic listed in the above referenced payroll, payments of fringe benefits as listed in the contract have been or will be made to appropriate programs for the benefit of such employees, except as noted in section 4(c) below.

(b) WHERE FRINGE BENEFITS ARE PAID IN CASH

- Each laborer or mechanic listed in the above referenced payroll has been paid, as indicated on the payroll, an amount not less than the sum of the applicable basic hourly wage rate plus the amount of the required fringe benefits as listed in the contract, except as noted in section 4(c) below.

(c) EXCEPTIONS

EXCEPTION (CRAFT)	EXPLANATION

REMARKS:

NAME AND TITLE	SIGNATURE

THE WILLFUL FALSIFICATION OF ANY OF THE ABOVE STATEMENTS MAY SUBJECT THE CONTRACTOR OR SUBCONTRACTOR TO CIVIL OR CRIMINAL PROSECUTION. SEE SECTION 1001 OF TITLE 18 AND SECTION 231 OF TITLE 31 OF THE UNITED STATES CODE.

PARTIAL WAIVER OF LIEN

To All Whom It May Concern:

WHEREAS, the undersigned has been employed by (A) _____
_____ to
furnish labor and materials for (B) _____
_____..under
a contract (C) _____ for the
improvement of the premises described as (D) _____
_____ in the
_____ (City-Village) of _____, County of _____, State of _____ of which
_____ is the Owner.

NOW, THEREFORE, this _____ day of _____, 20____, for and in consideration of the sum of
(E) _____ Dollars (\$_____)

paid simultaneously herewith, the receipt whereof is hereby acknowledged by the undersigned, the undersigned does hereby waive and release to the extent only of the aforesaid amount, any lien rights to, or claim of lien with respect to and on said above-described premises, and the improvements thereon, and on the monies or other considerations due or to become due from the owner, by virtue of said contract, on account of labor, services, materials, fixtures, apparatus or machinery furnished by the undersigned to or for the above-described premises, but only to the extent of the payment aforesaid.

(SEAL)

(F) _____

(name of sole ownership, corporation or partnership)

(Affix corporate
Seal here)

(SEAL)

(Signature)

TITLE: _____

INSTRUCTIONS FOR PARTIAL WAIVER

- (A) Name person or firm with whom you agreed to furnish either labor, or services, or materials, or both.
- (B) Fill in nature and extent of work: strike the word labor or the word materials if not in your contract.
- (C) If you have more than one contract on the same premises, describe the contract by number, if available, date and extent of work.
- (D) Furnish an accurate enough description of the improvement and location of the premises so that it can be distinguished from any other property.
- (E) Amount shown should be the amount actually received on that date.
- (F) If waiver is for a corporation, corporate name should be used, corporate seal affixed and title of officer signing waiver should be set forth; if waiver is for a partnership, the partnership name should be used, partner should sign and designate himself as partner.

Construction Industry Affairs Committee of Chicago.

FINAL WAIVER OF LIEN

To All Whom It May Concern:

WHEREAS, the undersigned has been employed by (A) _____
_____ to
furnish labor and materials for (B) _____
_____..under
a contract (C) _____ for the
improvement of the premises described as (D) _____
_____ in the
_____ (City-Village) of _____, County of _____, State of _____ of which
_____ is the Owner.

NOW, THEREFORE, this _____ day of _____, 20____, for and in consideration of the sum of
(E) _____ Dollars (\$_____)

paid simultaneously herewith, the receipt whereof is hereby acknowledged by the undersigned, the undersigned does hereby waive and release any lien rights to, or claim of lien with respect to and on said above-described premises, and the improvements thereon, and on the monies or other considerations due or to become due from the owner, on account of labor, services, materials, fixtures, apparatus or machinery heretofore or which may hereafter be furnished by the undersigned to or for the above-described premises, by virtue of said contract.

(F) _____ (SEAL)
(name of sole ownership, corporation or partnership)

(Affix corporate
Seal here)

(Signature) (SEAL)

TITLE: _____

INSTRUCTIONS FOR FINAL WAIVER

- (A) Person or firm with whom you agreed to furnish either labor, or services, or materials, or both.
- (B) Fill in nature and extent of work: strike the word labor or the word materials if not in your contract.
- (C) If you have more than one contract on the same premises, describe the contract by number, if available, date and extent of work.
- (D) Furnish an accurate enough description of the improvement and location of the premises so that it can be distinguished from any other property.
- (E) Amount shown should be the amount actually received and equal to total amount of contract as adjusted.
- (F) If waiver is for a corporation, corporate name should be used, corporate seal affixed and title of officer signing waiver should be set forth; if waiver is for a partnership, the partnership name should be used, partner should sign and designate himself as partner.

Approved By The
Construction Industry Affairs Committee (CIAC).

CERTIFICATE OF SUBSTANTIAL COMPLETION

Owner: City of Carlinville	Owner's Contract No.:
Contractor:	Contractor's Project No.:
Engineer: Heneghan and Associates, P.C.	Engineer's Project No.: 02159-405
Project: Standard Addition Water Main Replacement – Phase II	Contract Name:

This [preliminary] [final] Certificate of Substantial Completion applies to:

☐ All Work ☐ The following specified portions of the Work:

Date of Substantial Completion

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor, and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Work or portion thereof designated above is hereby established, subject to the provisions of the Contract pertaining to Substantial Completion. The date of Substantial Completion in the final Certificate of Substantial Completion marks the commencement of the contractual correction period and applicable warranties required by the Contract.

A punch list of items to be completed or corrected is attached to this Certificate. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract.

The responsibilities between Owner and Contractor for security, operation, safety, maintenance, heat, utilities, insurance, and warranties upon Owner's use or occupancy of the Work shall be as provided in the Contract, except as amended as follows: *[Note: Amendments of contractual responsibilities recorded in this Certificate should be the product of mutual agreement of Owner and Contractor; see Paragraph 15.03.D of the General Conditions.]*

Amendments to Owner's responsibilities: ☐ None
☐ As follows

Amendments to Contractor's responsibilities: ☐ None
☐ As follows:

The following documents are attached to and made a part of this Certificate: *[punch list; others]*

This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents, nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract.

EXECUTED BY ENGINEER:	RECEIVED:	RECEIVED:
By: _____ (Authorized signature)	By: _____ Owner (Authorized Signature)	By: _____ Contractor (Authorized Signature)
Title: _____	Title: _____	Title: _____
Date: _____	Date: _____	Date: _____

Work Change Directive No.

Date of Issuance:

Effective Date:

Owner:

Owner's Contract No.:

Contractor:

Contractor's Project No.:

Engineer:

Engineer's Project No.:

Project:

Contract Name:

Contractor is directed to proceed promptly with the following change(s):

Description:

Attachments: *[List documents supporting change]*

Purpose for Work Change Directive:

Directive to proceed promptly with the Work described herein, prior to agreeing to changes on Contract Price and Contract Time, is issued due to: *[check one or both of the following]*

- ☐ Non-agreement on pricing of proposed change.
- ☐ Necessity to proceed for schedule or other Project reasons.

Estimated Change in Contract Price and Contract Times (non-binding, preliminary):

Contract Price	\$	[increase] [decrease].
----------------	----	------------------------

Contract Time	days	[increase] [decrease].
---------------	------	------------------------

Basis of estimated change in Contract Price:

- | | |
|---|-------------------------------------|
| <input type="checkbox"/> Lump Sum | <input type="checkbox"/> Unit Price |
| <input type="checkbox"/> Cost of the Work | <input type="checkbox"/> Other |

RECOMMENDED:

AUTHORIZED BY:

RECEIVED:

By:

By:

By:

Engineer (Authorized Signature)

Owner (Authorized Signature)

Contractor (Authorized
Signature)

Title:

Title:

Title:

Date:

Date:

Date:

Approved by Funding Agency (if applicable)

By:

Date:

Title:

Date of Issuance:
Owner: City of Carlinville
Contractor:
Engineer: Heneghan and Associates, P.C.
Project: Standard Addition Water Main Replacement
Phase II

Effective Date:
Owner's Contract No.:
Contractor's Project No.:
Engineer's Project No.: 02159-405
Contract Name:

The Contract is modified as follows upon execution of this Change Order:

Description:

Attachments: *[List documents supporting change]*

CHANGE IN CONTRACT PRICE	CHANGE IN CONTRACT TIMES <i>[note changes in Milestones if applicable]</i>
Original Contract Price: \$ _____	Original Contract Times: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
[Increase] [Decrease] from previously approved Change Orders No. ____ to No. ____: \$ _____	[Increase] [Decrease] from previously approved Change Orders No. ____ to No. ____: Substantial Completion: _____ Ready for Final Payment: _____ days
Contract Price prior to this Change Order: \$ _____	Contract Times prior to this Change Order: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
[Increase] [Decrease] of this Change Order: \$ _____	[Increase] [Decrease] of this Change Order: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
Contract Price incorporating this Change Order: \$ _____	Contract Times with all approved Change Orders: Substantial Completion: _____ Ready for Final Payment: _____ days or dates

RECOMMENDED:	ACCEPTED:	ACCEPTED:
By: _____ Engineer (if required)	By: _____ Owner (Authorized Signature)	By: _____ Contractor (Authorized Signature)
Title: _____	Title: _____	Title: _____
Date: _____	Date: _____	Date: _____

Approved by Funding Agency (if applicable)

By: _____ Date: _____
Title: _____

Field Order No. _____

Date of Issuance:

Effective Date:

Owner:

Owner's Contract No.:

Contractor:

Contractor's Project No.:

Engineer:

Engineer's Project No.:

Project:

Contract Name:

Contractor is hereby directed to promptly execute this Field Order, issued in accordance with General Conditions Paragraph 11.01, for minor changes in the Work without changes in Contract Price or Contract Times. If Contractor considers that a change in Contract Price or Contract Times is required, submit a Change Proposal before proceeding with this Work.

Reference:

Specification(s)

Drawing(s) / Detail(s)

Description:

Attachments:

ISSUED:

RECEIVED:

By:

Engineer (Authorized Signature)

By:

Contractor (Authorized Signature)

Title:

Title:

Date:

Date:

Copy to: Owner

WATER AND SEWER LINE CONSTRUCTION STANDARDS AND POLICIES

**Established by the
ILLINOIS DEPARTMENT OF AGRICULTURE**

The following standards and policies will serve to minimize the negative agricultural impacts that may result due to water and sewer line construction.

The standards and policies only apply to construction activities occurring partially or wholly on privately owned agricultural land. They do not apply to construction activities occurring on highway or railroad right-of-way, or on publicly owned land. The only exceptions are the construction standards relating to the repair of drainage tile (Item No. 3). The tile line construction standards shall be implemented regardless of where drainage tile is encountered.

Conditions

The mitigative actions specified in the construction standards and policies will be implemented in accordance with the conditions listed below:

- A. All mitigative actions are subject to change by landowners, provided such changes are acceptable to the Project Sponsor.
- B. The Project Sponsor may negotiate with landowners to carry out the mitigative actions that landowners wish to perform themselves. The landowners will receive the area commercial rate for their labor and machinery costs.
- C. All mitigative actions, unless otherwise specified, will be implemented within 45 days of completion of water or sewer line facilities on any affected property, weather and landowner permitting. Temporary repairs will be made by the Project Sponsor during the construction process as needed to minimize the risk of additional property damage that may result from an extended construction time period.
- D. All mitigative actions will extend to associated future construction, maintenance, and repairs.
- E. The Project Sponsor will provide a copy of the Water and Sewer Line Construction Standards and Policies to all owners of agricultural land that will be impacted by water and/or sewer line construction, and will do at the time of easement contract negotiations.

Definitions

Project Sponsor	- Entity proposing the construction of water or sewer lines and their related appurtenances.
Agricultural land	- Land used for cropland, pastureland, managed woodlands, truck gardens, orchards, nurseries, and other related agricultural enterprises dependent upon soil integrity.
Cropland	- Land used for growing row crops, small grains, or hay; includes land which was formerly used as cropland, but is currently in a government set-aside or conservation reserve program.

- Water or Sewer Line - Includes water transmission and distribution lines, sewer trunk lines, sewer gravity flow lines, interceptors, or force mains and any related appurtenances.
- Landowner - Person(s) responsible for making decisions regarding the restoration of the land adversely impacted by a water or sewer line.
- Prime Farmland - Agricultural land comprised of soils that are defined by the USDA Natural Resources Conservation Service as being "Prime" soils (generally considered the most productive soils with the least input of nutrients and management).
- Right-of-Way - Includes the permanent and temporary easements that the Project Sponsor acquires for the purpose of constructing water or sewer lines across privately owned land.

WATER AND SEWER LINE CONSTRUCTION STANDARDS AND POLICIES

1. Water and Sewer Line Depth

- A. All water and sewer lines which are placed in trenches 24 inches in width or less will be buried with a minimum of 42 inches (**60 inches are suggested by the Illinois Department of Agriculture**) of top cover where they cross cropland.
- B. All water and sewer lines that are placed in trenches greater than 24 inches in width will be buried with 60 inches of topcover where they cross cropland.
- C. In terrain where bedrock prevents the placement of any water or sewer lines at the depths specified in 1.A. or 1.B. above, the water or sewer lines will be buried as deep as is practicable and feasible.

2. Topsoil Replacement

The following standards apply only when water and sewer lines are buried in trenches that are greater than 24 inches wide.

- A. The actual depth of the topsoil, will first be stripped from the area to be excavated for a water or sewer line trench, all bore pits, and other areas of excavation.
- B. All subsoil material that is removed from the trench will be placed in a second stockpile that is separate from the topsoil stockpile.
- C. In backfilling the trench and other excavated areas, the stockpiled subsoil material will be placed back into the trench first. The topsoil will be replaced last so that it remains the top layer of soil.
- D. The topsoil and subsoil must be replaced within the trench and other excavated area so that after settling occurs, the land's original contour (with an allowance for settling) will be achieved.

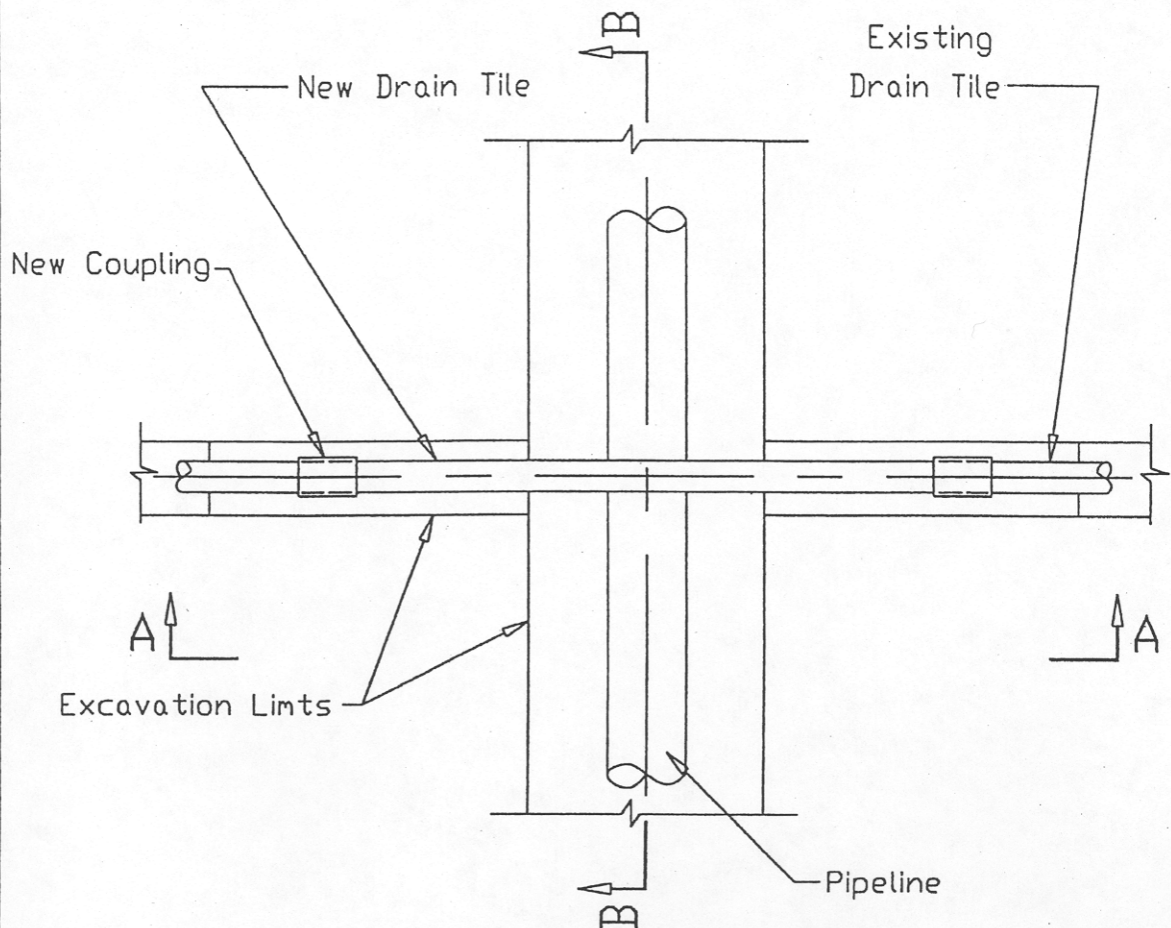
- E. The subsoil displaced by the water or sewer line must be hauled off the landowner's premises or disposed of on the landowner's premises at a location that is acceptable to the landowner.

3. Repair Of Damaged Tile Lines

If underground drainage tile is damaged by water or sewer line construction, it must be repaired in a manner that assures the tile line's proper operation at the point of repair. The following standards and policies shall apply to the tile line repairs.

- A. The Project Sponsor will endeavor to locate all tile lines prior to water or sewer line construction so repairs can be made if necessary. The Project Sponsor will contact affected landowners/tenants for their knowledge of tile line locations prior to any water or sewer line construction. All identified tile lines will be flagged to alert construction crews to the possible need for tile line repairs.
- B. All tile lines shall be repaired with materials of the same or better quality as that which was damaged.
- C. All damaged tile lines shall be immediately and temporarily repaired until such time that permanent repairs can be made.
- D. Where tile lines are severed by water or sewer line trenches, non-compactable support must be added around the repaired tile lines in accordance with the attached detail drawings.
 - 1. Within the trench, maximum rock size shall be 1 1/2 inch river gravel or 1 inch crushed stone for backfill under all tile lines.
 - 2. There must be a minimum of one foot of separation between a tile line and the water or sewer line whether the line passes over or under the tile line.
 - 3. In no instance will the grade of a tile line be changed.
- E. Heavy construction equipment working within a water or sewer line right-of-way may crush shallow drainage tile. All tile lines intersecting the water or sewer line trench will be probed laterally for their entire length within the water or sewer line right-of-way to check for damaged tile. Probing must occur immediately prior to the permanent repair of any severed tile lines. If tile lines are found to be damaged, they must be repaired so they operate as well after construction as before construction began, and in a manner that is acceptable to the landowner.
- F. All permanent tile line repairs must be made within 14 days of the date the damage occurred, weather and landowner permitting. If the landowner elects to make his/her own tile repairs, such damage payments will be negotiated with the Project Sponsor and must also be made within 14 days of the date of the completed repair work.
- G. The Project Sponsor will remain liable for a period of three (3) years following the completion of the water or sewer lines to ensure that all tile line repairs do not fail. The Project Sponsor will not be responsible for tile line repairs that the Project Sponsor pays the landowner to perform.

FIELD TILE REPAIR



EXCAVATION PLAN

NOTES:

1. Coarse aggregate shall be gravel, crushed gravel, pit run gravel or crushed stone and shall conform to the requirements of IDOT Standard Specification for Road and Bridge Construction Article 1004.01 and CA-18 gradation.
2. Geotextile may be woven or non-woven and shall conform to the requirements of Class 1 in the attached table 1 or 2. In addition, when pipeline trench depth exceeds 10 feet, puncture strength (ASTM D 483) shall be 150 lbs or greater.
3. New tile should be equal to or better than existing tile. Dual Wall polyethylene tubing conforming to ASHTO M-252 or M-294 may be used where existing tile is rigid conduit (clay or concrete).

AUTOCAD2000

REFERENCE

Project _____
 Designed _____ Date _____
 Checked _____ Date _____
 Approved _____ Date _____



NATURAL RESOURCES
 CONSERVATION SERVICE
 ILLINOIS

STANDARD DWG. NO.

IL-ENG-150A

SHEET 1 OF 2

DATE: 12/98

FIELD TILE REPAIR


The diagram illustrates a cross-section of a field tile repair. A central section of the original tile pipe is replaced with a new drain tile. The new drain tile is shown with a minimum length of 6 feet. It is connected to the existing tile pipes using couplings. The area around the new tile is filled with coarse aggregate, and the entire assembly is covered with geotextile fabric. The backfill is shown on the sides of the existing tile pipes. The diagram also indicates a minimum 3-foot distance between the new drain tile and the existing tile pipes.

Labels in the diagram include:

- Backfill
- Existing Tile Pipe
- New Drain Tile
- 6' Min
- Coupling
- 3' Min
- Coarse Aggregate
- Geotextile Fabric

SECTION A-A

This diagram illustrates a cross-section of a pipeline trench. The trench is filled with coarse aggregate, which is reinforced with geotextile fabric. The aggregate is divided into three layers, each with a height of 1 foot. The total height of the aggregate is 3 feet. The trench is 2 feet wide at the top and 2 feet wide at the bottom. The total width of the trench is $2y + 2'$. The trench is covered with a layer of earthfill, which is at least 6 inches thick. A drain tile is located at the bottom of the trench, with a 2-foot diameter. The diagram also shows a pipeline running horizontally through the center of the trench. Labels include: Earthfill, Drain Tile, Coarse Aggregate, Geotextile Fabric, Pipeline, and dimensions 1, 2', 6" Min, and $2y + 2'$.

<h2 style="margin: 0;"><u>SECTION B-B</u></h2>	
<p>REFERENCE _____</p> <p>Project _____</p> <p>Designed _____ Date _____</p> <p>Checked _____ Date _____</p> <p>Approved _____ Date _____</p>	<div style="display: flex; align-items: center;">  <div> <p>NATURAL RESOURCES CONSERVATION SERVICE ILLINOIS</p> </div> </div> <div style="text-align: right; padding-top: 10px;"> <p>STANDARD DWG. NO. IL-ENG-150B</p> <p>SHEET 2 OF 2</p> <p>DATE: 12/98</p> </div>

Material Specification 592—Geotextile

1. Scope

This specification covers the quality of geotextiles.

2. General requirements

Fibers (threads and yarns) used in the manufacture of geotextile shall consist of synthetic polymers composed of a minimum of 85 percent by weight polypropylenes, polyesters, polyamides, polyethylene, polyolefins, or polyvinylidene-chlorides. They shall be formed into a stable network of filaments or yarns retaining dimensional stability relative to each other. The geo-textile shall be free of defects and conform to the physical requirements in tables 592–1 and 592–2. The geotextile shall be free of any chemical treatment or coating that significantly reduces its porosity. Fibers shall contain stabilizers and/or inhibitors to enhance resistance to ultraviolet light.

Thread used for factory or field sewing shall be of contrasting color to the fabric and made of high strength polypropylene, polyester, or polyamide thread. Thread shall be as resistant to ultraviolet light as the geotextile being sewn.

3. Classification

Geotextiles shall be classified based on the method used to place the threads or yarns forming the fabric. The geotextiles will be grouped into woven and nonwoven types.

Woven—Fabrics formed by the uniform and regular interweaving of the threads or yarns in two directions. Woven fabrics shall be manufactured from monofilament yarn formed into a uniform pattern with distinct and measurable openings, retaining their position relative to each other. The edges of fabric shall be selvaged or otherwise finished to prevent the outer yarn from unraveling.

Nonwoven—Fabrics formed by a random placement of threads in a mat and bonded by heat-bonding, resin-bonding, or needle punching. Nonwoven fabrics shall be manufactured from individual fibers formed into a random pattern with distinct, but variable small openings, retaining their position

relative to each other when bonded by needle punching, heat, or resin bonding. The use of nonwovens other than the needle punched geotextiles is somewhat restricted (see note 3 of table 592–2).

4. Sampling and testing

The geotextile shall meet the specified requirements (table 592–1 or 592–2) for the product style shown on the label. Product properties as listed in the latest edition of the "Specifiers Guide," Geotechnical Fabrics Report, (Industrial Fabrics Association International, 1801 County Road BW, Roseville, MN 55113-4061) and that represent minimum average roll values, are acceptable documentation that the product style meets the requirements of these specifications.

For products that do not appear in the above directory or do not have minimum average roll values listed, typical test data from the identified production run of the geotextile will be required for each of the specified tests (tables 592–1 or 592–2) as covered under clause AGAR 452.236-76.

5. Shipping and storage

The geotextile shall be shipped/transported in rolls wrapped with a cover for protection from moisture, dust, dirt, debris, and ultraviolet light. The cover shall be maintained undisturbed to the maximum extend possible before placement.

Each roll of geotextile shall be labeled or tagged to clearly identify the brand, class, and the individual production run in accordance with ASTM D 4873.

Table 592–1 Requirements for woven geotextiles

Property	Test method	Class I	Class II & III	Class IV
Tensile strength (pounds) ^{1/}	ASTM D 4632 grab test	200 minimum in any principal direction	120 minimum in any principal direction	180 minimum in any principal direction
Elongation at failure (percent) ^{1/}	ASTM D 4632 grab test	<50	<50	<50
Puncture (pounds) ^{1/}	ASTM D 4833	90 minimum	60 minimum	60 minimum
Ultraviolet light (% residual tensile strength)	ASTM D 4355 150-hr exposure	70 minimum	70 minimum	70 minimum
Apparent opening size (AOS)	ASTM D 4751	As specified, but no smaller than 0.212 mm (#70) ^{2/}	As specified, but no smaller than 0.212 mm (#70) ^{2/}	As specified, but no smaller than 0.212 mm (#70) ^{2/}
Percent open area (percent)	CWO-02215-86	4.0 minimum	4.0 minimum	1.0 minimum
Permittivity sec ⁻¹	ASTM D 4491	0.10 minimum	0.10 minimum	0.10 minimum

1/ Minimum average roll value (weakest principal direction).

2/ U.S. standard sieve size.

Note: CWO is a USACE reference.

Table 592–2 Requirements for nonwoven geotextiles

Property	Test method	Class I	Class II	Class III	Class IV ^{3/}
Tensile strength (lb) ^{1/}	ASTMD 4632 grab test	180 minimum	120 minimum	90 minimum	115 minimum
Elongation at failure (%) ^{1/}	ASTMD 4632	≥ 50	≥ 50	≥ 50	≥ 50
Puncture (pounds)	ASTMD 4833	80 minimum	60 minimum	40 minimum	40 minimum
Ultraviolet light (% residual tensile strength)	ASTMD 4355 150-hr exposure	70 minimum	70 minimum	70 minimum	70 minimum
Apparent opening size (AOS)	ASTMD 4751	As specified max. #40 ^{2/}	As specified max. #40 ^{2/}	As specified max. #40 ^{2/}	As specified max. #40 ^{2/}
Permittivity sec ⁻¹	ASTMD 4491	0.70 minimum	0.70 minimum	0.70 minimum	0.10 minimum

1/ Minimum average roll value (weakest principal direction).

2/ U.S. standard sieve size.

3/ Heat-bonded or resin-bonded geotextile may be used for classes III and IV. They are particularly well suited to class IV. Needle-punched geotextiles are required for all other classes.

4. Rock Removal

- A. The top 42 inches of a water or sewer line trench will not be backfilled with soil containing rocks that are larger than 3 inches in any dimension.
- B. If trenching, blasting, or boring operations are required through rocky terrain, suitable precautions will be taken to eliminate the potential for rocks to become interspersed with the soil material that is placed back in the trench.
- C. Rocks and/or soil containing rocks that are larger than 3 inches in any dimension must be hauled off the landowner's premises or disposed of on the landowner's premises at a location that is mutually acceptable to the landowner and the Project Sponsor.

5. Removal Of Construction Debris

All construction-related debris and material will be removed from the landowner's property. (Note: Such material to be removed would include litter generated by the construction crews.)

6. Compaction, Rutting, Fertilization, Liming

- A. When water and sewer lines are buried in trenches that are **greater than 24 inches in width**:
 - 1. Compaction will be alleviated on the trench and any adjacent work areas that are traversed by construction equipment. Cropland will be ripped at least 18 inches deep and pasture and woodland will be ripped or chiseled at least 12 inches deep.
 - 2. Any other areas of the right-of-way which are traversed by construction equipment and related vehicles will be ripped or chiseled at least 12 inches deep.
 - 3. At least 3 passes will be made over all lands to be ripped and/or chiseled.
 - 4. All cropland that has been disturbed by construction activities will be limed and fertilized where necessary in order to benefit the current and/or next year's agricultural production or vegetative cover to control soil erosion.
- B. When water and sewer lines are buried in trenches **less than 24 inches wide**, all right-of-way that has been traversed by construction equipment and related vehicles will be chiseled at least 12 inches deep with at least 3 passes being made.
- C. All ripping and chiseling will be done at a time when the soils are dry enough for normal tillage operations to occur on undisturbed cropland adjacent to the areas to be tilled.

7. Land Leveling

- A. The Project Sponsor will remain liable, for a period of two (2) years following the completion of a water or sewer line, to restore any right-of-way to its original elevation and contour should uneven settling occur or surface drainage problems develop due to inaccurate land leveling immediately following a water or sewer line's construction.
- B. The Project Sponsor will provide the landowners with a telephone number and address that may be used to alert the Project Sponsor of the need to perform additional land leveling services.

8. Prevention Of Soil Erosion

- A. The Project Sponsor will work with landowners to prevent excessive erosion on lands disturbed by construction. Reasonable methods will be implemented to control erosion. This is not a requirement, however, if the land across which a water or sewer line is constructed is bare cropland that the landowner intends to leave bare until the next crop is planted.
- B. If the landowner and Project Sponsor cannot agree upon a reasonable method to control erosion on the landowner's right-of-way, the Project Sponsor will follow the recommendations of the appropriate county Soil and Water Conservation District if the landowner so requests.

9. Repair Of Damaged Soil Conservation Practices

All soil conservation practices (such as terraces, grassed waterways, filter strips, concrete structures, dams, etc.) that are damaged by water or sewer line construction will be restored to at least their pre-construction condition.

10. Damages To Private Property

- A. With the exception of tile line repairs, the Project Sponsor will repair, replace, or pay to repair or replace damaged private property within 45 days, weather and landowner permitting, after a water or sewer line has been constructed across any affected property.
- B. Similar relief for damages will be extended by the Project Sponsor for any construction-related damages that occur off of the established water or sewer line right-of-way.
- C. The Project Sponsor will remain liable to correct damages to private property beyond the initial construction of a water or sewer line, to those damages incurred by future construction, operation, maintenance, and repairs.

11. Clearing Of Trees And Brush From The Easement

- A. If trees are to be removed from the right-of-way, the Project Sponsor will consult with the landowner to see if there are trees of commercial or other value to the landowner.
- B. If there are trees of commercial or other value to the landowner, the Project Sponsor will allow the landowner the right to retain ownership of the trees with the disposition of the trees to be negotiated prior to the commencement of land clearing.
- C. The Project Sponsor will follow the landowner's desires which are consistent with any applicable laws or ordinances regarding the disposal of trees, brush, and stumps of no value to the landowner by burning, burial, etc., or complete removal from any affected property.

12. Interference With Irrigation Systems

- A. If a water or sewer line intersects an operational (or soon to be operational) spray irrigation system, the Project Sponsor will establish with the landowner an acceptable amount of time the irrigation system may be out of service.

- B. If an irrigation system interruption results in crop damages, either on the water or sewer line right-of-way or off the right-of-way, the landowner will be compensated for all such crop damages.
- C. If it is feasible and mutually acceptable to the Project Sponsor and the landowner, temporary measures will be implemented to allow an irrigation system to continue to operate across land on which a water or sewer line is also being constructed.

13. Ingress And Egress Routes

Prior to any water or sewer line construction, the Project Sponsor and the landowner will reach a mutually acceptable agreement on the route that will be utilized for entering and leaving the water or sewer line right-of-way should access to the right-of-way not be practical or feasible from adjacent segments of the water or sewer line right-of-way or from public highway or railroad right-of-way.

14. Temporary Roads

- A. The location of temporary roads to be used for construction purposes will be negotiated with the landowner.
- B. If temporary roads must be constructed, they will be designed to not impede surface drainage soil erosion on or near the temporary roads will be minimized.
- C. Upon abandonment, temporary roads may be left intact through mutual agreement of the landowner and the Project Sponsor.
- D. If the temporary roads are to be removed, the right-of-way upon which the temporary roads are constructed will be returned to their previous use and restored to the same or better condition as existed prior to their construction.

15. Weed Control

- A. On any right-of-way over which the Project Sponsor has jurisdiction as to the surface use of such land (well heads, pump or lift stations, valve sites, etc.), the Project Sponsor will provide for weed control in a manner that does not allow for the spread of weeds onto adjacent lands used as cropland.
- B. The Project Sponsor will remain liable for the costs incurred by owners of land adjacent to surface facilities when the landowners must control weeds on their land which have spread from land accommodating water or sewer line surface facilities.

16. Pumping Of Water From Open Trenches

- A. In the event it becomes necessary to pump water from open trenches, the Project Sponsor will pump the water in a manner that will avoid damaging adjacent agricultural land. Such damages include, but are not limited, inundation of crops for more than 24 hours and the deposition of sediment and gravel in fields, pastures, ditches, and any water bodies or water courses.
- B. If it is impossible to avoid water-related damages as described in 16.A. above, the Project Sponsor will compensate the landowners for the damages or will correct the

damages so as to restore the agricultural land, water courses, etc. to their pre-existing condition.

- C. All pumping of water shall comply with existing drainage laws, local ordinances relating to such activities, and provisions of the Clean Water Act.

17. Aboveground Facilities

Aboveground facilities shall be located so they will not be a hindrance to ongoing agricultural activities occurring on the lands adjacent to the facilities. First priority shall be made to locating aboveground facilities on right-of-way that is not used as cropland. If this is not feasible, such facilities shall be located so as to incur the least hindrance to the adjacent cropping operations (i.e., located in field corners or areas where at least one side is not used for cropping purposes).

18. Advance Notice Of Access To Private Property

- A. The Project Sponsor will provide the landowner or tenant with a minimum of 24 hours prior notice before accessing his/her property for the purpose of constructing a water or sewer line.
- B. Prior notice shall first consist of a personal contact or a telephone contact, whereby the landowner or tenant is informed of the Project Sponsor's intent to access the land. If the landowner or tenant cannot be reached in person or by telephone, the Project Sponsor will mail or hand deliver to the landowner or tenant's home a dated, written notice of the Project Sponsor's intent. The landowner or tenant need not acknowledge receipt of the written notice before the Project Sponsor can enter the landowner's property.

19. Reporting Of Inferior Agricultural Impact Mitigation Work

Prior to the installation of any water or sewer line, the landowners will be provided with a number they can call to alert the Project Sponsor should landowners observe inferior work relating to the agricultural impact mitigation work which is performed on their property.

20. Indemnification

For any water or sewer line installation, the Project Sponsor will indemnify all landowners, their heirs, successors, legal representatives, and assigns from and against all claims, injuries, suits, damages, costs, losses, and expenses including legal fees resulting from or arising out of the construction, maintenance, removal, repair, use or existence of a water or sewer line, whether heretofore or hereafter constructed, including damage to a water or sewer line or any of its appurtenances and the leaking of its contents, except where claims, injury, suits, damages, costs, losses, and expenses are caused by the negligence or intentional acts of the landowners, their heirs, successors, legal representatives, and assigns.

CDBG PROVISIONS

FEDERAL LABOR STANDARDS PROVISIONS

201. APPLICABILITY

The Project or Program to which the work covered by this Contract pertains is being assisted by the United States of America and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

202. MINIMUM WAGE RATES FOR LABORERS AND MECHANICS

All laborers and mechanics employed upon the work covered by this Contract shall be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are made mandatory by law and such other payroll deductions as are permitted by the applicable regulations issued by the Secretary of Labor, United States Department of Labor, pursuant to the Anti-Kickback Act hereinafter identified), the full amount due at time of payment computed at wage rates not less than those contained in the wage determination decision of said Secretary of Labor (**a copy of which is attached and herein incorporated by reference**), regardless of any contractual relationship which may be alleged to exist between the Contractor or any subcontractor and such laborers and mechanics. All laborers and mechanics employed upon such work shall be paid in cash, except that payment may be by check if the employer provides or secures satisfactory facilities approved by the Local Public Agency or Public Body for the cashing of the same without cost or expense to the employee. For the purpose of this clause, contributions made or costs reasonably anticipated under Section 1 (b) (2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section 5.5. (a) (1) (iv) of Title 29, Code of Federal Regulations. Also for the purpose of this clause, regular contributions made or costs incurred for more than a weekly period under plans, funds, or programs, but covering the particular weekly period, are deemed to be constructively made or incurred during such weekly period.

203. UNDERPAYMENTS OF WAGES OR SALARIES

In case of underpayment of wages by the Contractor or by any subcontractor to laborers or mechanics employed by the Contractor or subcontractor upon the work covered by this Contract, the Local Public Agency or Public Body in addition to such other rights as may be afforded it under this Contract shall withhold from the Contractor, out of any payments due the Contractor, so much thereof as the Local Public Agency or Public Body may consider necessary to pay such laborers or mechanics the full amount of wages required by this Contract. The amount so withheld may be disbursed by the Local Public Agency or Public Body, for and on account of the Contractor or the subcontractor (as may be appropriate), to the respective laborers or mechanics to whom the same is due or on their behalf to funds / or programs for any type of fringe benefit prescribed in the applicable wage determination.

204. ANTICIPATED COSTS OF FRINGE BENEFITS

If the Contractor does not make payments to a trustee or other third person, he may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing fringe benefits under a plan or program of a type expressly listed in the wage determination decision of the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program. A copy of any findings made by the Secretary of Labor in respect to fringe benefits being provided by the Contractor must be submitted to the Local Public Agency or Public Body with the first payroll filed by the Contractor subsequent to receipt of the findings.

205. OVERTIME COMPENSATION REQUIRED BY CONTRACT WORK HOURS AND SAFETY STANDARDS ACT (76 State. 357-360: Title 40 U.S.C., Sections 327-332)

- a. Overtime Requirements. No Contractor or subcontractor contracting for any part of the Contract work which may require or involve the employment of laborers or mechanics, including watchmen and guards, shall require or permit any laborer or mechanic in any workweek in which he is employed on such work to work in excess of 40 hours in such work week unless such laborer or mechanic receives compensation at a rate not less than one and one-half times his basic rate of pay for all hours worked in excess of 40 hours in such work week, as the cases may be.
- b. Violation: Liability for Unpaid Wages Liquidated Damages. In the event of any violation of the clause set forth in paragraph (a), the Contractor and any subcontractor responsible therefor shall be liable to any affected employee for his unpaid wages. In addition such Contractor and subcontractor shall be liable to the United States for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic employed in violation of the clause set forth in paragraph (a), in the sum of \$10 for each calendar day on which such employee was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by the clause set forth in paragraph (a).
- c. Withholding for Liquidated Damages. The Local Public Agency or Public Body shall withhold or cause to be withheld, from any moneys payable on account of work performed by the Contractor or subcontractor, such sums as may administratively be determined to be necessary to satisfy any liabilities of such Contractor or subcontractor for liquidated damages as provided in the clause set forth in paragraph (b).
- d. Subcontracts. The Contractor shall insert in any subcontracts the clauses set forth in paragraphs (a), (b), and (c) of this Section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts which they may enter into, together with a clause requiring this insertion in any further subcontracts that may in turn be made.

206. APPRENTICES AND TRAINEES

- a. Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Manpower Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen in any craft classification shall not be greater than the ratio permitted to the contractor as to his entire force under the registered program. Any employee listed on a payroll at an apprentice wage rate, who is not a trainee as defined in paragraph 2, below, or is not registered or otherwise employed as stated above, shall be paid the wage rate determined by the Secretary of Labor for the classification of work he actually performed. The contractor or subcontractor will be required to furnish to the contracting officer or a representative of the Wage-Hour Division of the U.S. Department of Labor written evidence of the registration of his program and apprentices as well as the appropriate ratios and wage rates (expressed in percentages to the journeymen hourly rates), for the area of construction prior to using any apprentices on the contract work. The wage rate paid apprentices shall be not less than the appropriate percentage of the journeyman's rate contained in the applicable wage determination.
- b. Trainees. Except as provided in 29 CAR 5.15 trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification, by the U.S. Department of Labor, Manpower Administration, Bureau of Apprenticeship and Training. The ratio of trainees to journeymen shall not be greater than permitted under the plan approved by the Bureau of Apprenticeship and Training. Every trainee must be paid at not less than the rate specified in the approved program for his level of progress. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Bureau of Apprenticeship and Training shall be paid not less than the wage rate determined by the Secretary of Labor for the classification or work he actually performed. The Contractor or subcontractor will be required to furnish the contracting officer or representative of the Wage-Hour Division of the U.S. Department of Labor written evidence of the certification of his program, the registration of the trainees, and the ratios and wage rates prescribed in that program. In the event the Bureau of Apprenticeship and Training withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

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

207. EMPLOYMENT OF CERTAIN PERSONS PROHIBITED

No person under the age of sixteen years and no person who, at the time, is serving sentence in a penal or correctional institution shall be employed on the work covered by this Contract.

208. REGULATIONS PURSUANT TO SO-CALLED COPELAND ANTI-KICKBACK ACT

The Contractor shall comply with the applicable regulations of the Secretary of Labor, United States Department of Labor, made pursuant to the Copeland Anti-Kickback Act (Title 40 U.S.C., Section 276c), and any amendment or modifications thereof, shall cause appropriate provisions to be inserted in subcontracts to insure compliance there-with by all subcontractors subject thereto, and shall be responsible for the submission of affidavits required by subcontractor thereunder, except as said Secretary of Labor may specifically provide for reasonable limitations, variations, tolerance, and exemptions from the requirements thereof.

209. EMPLOYMENT OF LABORERS OR MECHANICS NOT LISTED IN AFORESAID WAGE DETERMINATION DECISION

Any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the Contract will be classified or reclassified conformably to the wage determination by the Local Public Agency or Public Body, and a report of the action taken shall be submitted by the Local Public Agency or Public Body, through the Secretary of Housing and Urban Development, to the Secretary of Labor, United States Department of Labor. In the event the interested parties cannot agree on the proper classification or reclassification of a particular class of laborers and mechanics to be used, the question accompanied by the recommendation of the Local Public Agency or Public Body shall be referred, through the Secretary of Housing and Urban Development, to the Secretary of Labor for final determination.

210. FRINGE BENEFITS NOT EXPRESSED AS HOURLY WAGE RATES

The Local Public Agency or Public Body shall require, whenever the minimum wage rate prescribed in the Contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly wage rate and the Contractor is obligated to pay cash equivalent of such a fringe benefit, and hourly cash equivalent thereof to be established. In the event the fringe benefit expressed as an hourly cash equivalent cannot be determined, the Local Public Agency shall refer its recommendation through HUD to DOL for determination.

211. POSTING WAGE DETERMINATION DECISIONS AND AUTHORIZED WAGE DEDUCTIONS

The applicable wage poster of the Secretary of Labor, United States Department of Labor, and the applicable wage determination decisions of said Secretary of Labor with respect to the various classification of laborers and mechanics employed and to be employed upon the work covered by this Contract, and a statement showing all deductions, if any, in accordance with the provisions of this Contract, to be made from wages actually earned by persons so employed or to be employed in such classifications, shall be posted at appropriate conspicuous points at the site of the work.

212. COMPLAINTS, PROCEEDINGS, OR TESTIMONY BY EMPLOYEES

No laborer or mechanic to whom the wage, salary, or other labor standards provisions of this Contract are applicable shall be discharged or in any other manner discriminated against by the Contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable under or relating to the labor standards applicable under this Contract to his employer.

213. CLAIMS AND DISPUTES PERTAINING TO WAGE RATES

Claims and disputes pertaining to wage rates or to classifications of laborers and mechanics employed upon the work covered by this Contract shall be promptly reported by the Contractor in writing to the Local Public Agency or Public Body for referral by the latter through the Secretary of Labor, United States Department of Labor, whose decision shall be final with respect thereto.

214. QUESTIONS CONCERNING FEDERAL STATUTES AND REGULATIONS

All questions arising under this Contract which relate to the application or interpretation of (a) the aforesaid Anti-Kickback Act, (b) the Contract Work Hours and Safety Standards Act, (c) the aforesaid Davis-Bacon Act, (d) the regulations issued by the Secretary of Labor, United States Department of Labor, pursuant to said Acts, or (e) the labor standards provisions of any other pertinent Federal statute, shall be referred, through the Local Public Agency or Public Body and the Secretary of Housing and Urban Development, to the Secretary of Labor, United States Department of Labor, for said Secretary's appropriate ruling or interpretation which shall be authoritative and may be relied upon for the purposes of this Contract.

215. PAYROLLS AND BASIC PAYROLL RECORDS OF CONTRACTOR AND SUBCONTRACTORS

The Contractor and each subcontractor shall prepare his payrolls on forms satisfactory to and in accordance with the instructions to be furnished by the Local Public Agency or Public Body. The Contractor shall submit weekly to the Local Public Agency or Public Body two certified copies of all payrolls of the Contractor and of the subcontractors, it being understood that the Contractor shall be responsible for the submission of copies of payrolls of all subcontractors. Each such payroll shall

contain the AWeekly Statement of Compliance@ set forth in Section 3.3 of Title 29, Code of Federal Regulations. The payrolls and basic payroll records of the Contractor and each subcontractor covering all laborers and mechanics employed upon the work and preserved for a period of 3 years thereafter. Such payrolls and basic payroll records shall contain the name and address of each such employee, his correct classification, rate of pay (including rates of contributions or costs anticipated of the types described in Section 1 (b) (2) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made, and actual wages paid. In addition, whenever the Secretary of Labor has found under Section 5.5 (a) (iv) of Title 29. Code of Federal Regulations, that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1 (b) (2) (B) of the Davis-Bacon Act, the Contractor or subcontractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual costs incurred in providing such benefits. The Contractor and each subcontractor shall make his employment records with respect to persons employed by him upon the work covered by this Contract available for inspection by authorized representatives of the Secretary of Housing and Urban Development, the Local Public Agency or Public Body, and the United State Department of Labor. Such representatives shall be permitted to interview employees of the Contractor or of any subcontractor during working hours on the job.

216. SPECIFIC COVERAGE OF CERTAIN TYPES OF WORK BY EMPLOYEES

The transporting of materials and supplies to or from the site of the Project or Program to which this Contract pertains by the employees of the Contractor or of any subcontractor, and the manufacturing or furnishing of materials, articles, supplies, or equipment on the site of the Project or Program to which this Contract pertains by persons employed by the Contractor or by any subcontractor shall, for the purposes of this Contract, and without limiting the generality of the foregoing provisions of this Contract, be deemed to be work to which these Federal Labor Standards Provisions are applicable.

217. INELIGIBLE SUBCONTRACTORS

The Contractor shall not subcontract any part of the work covered by this Contract or permit subcontracted work to be further subcontracted without the Local Public Agency's or Public Body's prior written approval of the subcontractor. The Local Public Agency or Public Body will not approve any subcontractor for work covered by this Contract who is at the time ineligible under the provisions of any applicable regulations issued by the Secretary of Labor, United States Department of Labor or the Secretary of Housing and Urban Development, to receive an award of such subcontract.

218. PROVISIONS TO BE INCLUDED IN CERTAIN SUBCONTRACTS

The Contractor shall include or cause to be included in each subcontract covering any of the work covered by this Contract, provisions which are consistent with these Federal Labor Standards Provisions and also a clause requiring the subcontractors to include such provisions in any lower tier

subcontracts which they may enter into, together with a clause requiring such insertion in any further subcontracts that may in turn be made.

219. BREACH OF FOREGOING FEDERAL LABOR STANDARDS PROVISIONS

In addition to the causes for termination of this Contract as herein elsewhere set forth, the Local Public Agency or Public Body reserves the right to terminate this Contract if the Contractor or any subcontractor whose subcontract covers any of the work covered by this Contract shall breach any of these Federal Labor Standards Provisions may also be grounds for debarment as provided by the applicable regulations issued by the Secretary of Labor, United States Department of Labor.

CDBG REQUIREMENTS

CDBG REQUIREMENTS

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U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

CERTIFICATION OF BIDDER REGARDING EQUAL EMPLOYMENT OPPORTUNITY

INSTRUCTIONS

This certification is required pursuant to Executive Order 11246 (30 F.R. 12319-25). The implementing rules and regulations provide that any bidder or prospective contractor, or any of their proposed subcontractors, shall state as an initial part of the bid or negotiations of the contract whether it has participated in any previous contract or subcontract subject to the equal opportunity clause; and, if so, whether it has filed all compliance reports due under applicable instructions.

Where the certification indicates that the bidder has not filed a compliance report due under applicable instructions, such bidder shall be required to submit a compliance report within seven calendar days after bid opening. No contract shall be awarded unless such report is submitted.

CERTIFICATION BY BIDDER

NAME AND ADDRESS OF BIDDER (Include ZIP Code)

-
1. Bidder has participated in a previous contract or subcontract subject to the Equal Opportunity Clause.
☐ Yes ☐ No
-
2. Compliance reports were required to be filed in connection with such contract or subcontract.
☐ Yes ☐ No
-
3. Bidder has filed all compliance reports due under applicable instructions.
☐ Yes ☐ No ☐ None Required
-
4. Have you ever been or are you being considered for sanction due to violation of Executive Order 11246, as amended?
☐ Yes ☐ No

NAME AND TITLE OF SIGNER (Please type)

SIGNATURE

DATE

Replaces Form HUD-1238.CD-1, which is obsolete.

HUD-950.1(11-78)
(Revised 4/01)

3-6-23

**CERTIFICATION OF BIDDER REGARDING SECTION 3
AND SEGREGATED FACILITIES**

Standard Addition Water Main Replacement-
Phase II. Install Approximately 2,350 L.F. of
Water Main and Appurtenances for the City of
Carlinville, Macoupin County, Illinois
CDBG Project Nos. 16-242003
Project Name and Number

Name of Prime Contractor

The undersigned hereby certifies that

- a. Section 3 provisions are included in the Contract
- b. A written Section 3 plan was prepared and submitted as part of the bid proceedings.
- c. No segregated facilities will be maintained, as required by Title IV of the Civil Rights Act of 1964.

Name and Title of Signer (Print or Type)

Signature

Date

3-6-24

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

**CERTIFICATION BY PROPOSED SUBCONTRACTOR REGARDING
EQUAL EMPLOYMENT OPPORTUNITY**

<hr/>	<hr/>
NAME OF PRIME CONTRACTOR	CDBG Project Nos. 16-242003 PROJECT NUMBER

INSTRUCTIONS

This certification is required pursuant to Executive Order 11246 (30 F.R. 12319-25). The implementing rules and regulations provide that any bidder or prospective contractor, or any of their proposed subcontractors, shall state as an initial part of the bid or negotiations of the contract whether it has participated in any previous contract or subcontract subject to the equal opportunity clause; and, if so, whether it has filed all compliance reports due under applicable instructions.

Where the certification indicates that the subcontractor has not filed a compliance report due under applicable instructions, such subcontractor shall be required to submit a compliance report before the owner approves the subcontract or permits work to begin under the subcontract.

SUBCONTRACTOR'S CERTIFICATION

NAME AND ADDRESS OF SUBCONTRACTOR (Include ZIP Code)

-
- | | |
|-------|--|
| 1. | Bidder has participated in a previous contract or subcontract subject to the Equal Opportunity Clause.
<input type="checkbox"/> Yes <input type="checkbox"/> No |
| <hr/> | |
| 2. | Compliance reports were required to be filed in connection with such contract or subcontract.
<input type="checkbox"/> Yes <input type="checkbox"/> No |
| <hr/> | |
| 3. | Bidder has filed all compliance reports due under applicable instructions, including SF-100.
<input type="checkbox"/> Yes <input type="checkbox"/> No |
| <hr/> | |
| 4. | Have you ever been or are you being considered for sanction due to violation of Executive Order 11246, as amended?
<input type="checkbox"/> Yes <input type="checkbox"/> No |
-

NAME AND TITLE OF SIGNER (Please type)

SIGNATURE

DATE

**CERTIFICATION OF PROPOSED SUBCONTRACTOR REGARDING
SECTION 3 AND SEGREGATED FACILITIES**

Standard Addition Water Main Replacement-
Phase II. Install Approximately 2,350 L.F. of
Water Main and Appurtenances for the City of
Carlinville, Macoupin County, Illinois
CDBG Project Nos. 16-242003

Name of Subcontractor

Project Name and Number

The undersigned hereby certifies that

- a. Section 3 provisions are included in the Contract
- b. A written Section 3 plan was prepared and submitted as part of the bid proceedings (if bid equals or exceeds \$100,000).
- c. No segregated facilities will be maintained, as required by Title VI of the Civil Rights Act of 1964.

Name and Title of Signer (Print or Type)

Signature

Date

**U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAM**

**CONTRACTOR'S CERTIFICATION CONCERNING
LABOR STANDARDS AND PREVAILING WAGE REQUIREMENTS**

TO (Appropriate Recipient):

Date

CDBG Project Nos. 16-242003
Standard Addition Water Main Replacement-
Phase II. Install Approximately 2,350 L.F of
Water Main and Appurtenances for the City of
Carlinville, Macoupin County, Illinois

1. The undersigned, having executed a contract with _____ for the construction of the above-identified project, acknowledges that:

- a. The Labor Standards provisions are included in the aforesaid contract;
- b. Correction of any infractions of the aforesaid conditions, including infractions by any of his subcontractors and any lower tier subcontractors, is his responsibility;

2. He certifies that:

- a. Neither he nor any firm, partnership or association in which he has substantial interest is designated as an ineligible contractor by the Comptroller General of the United States pursuant to Section 5.6(b) of the Regulations of the Secretary of Labor, Part 5 (29 CFR, Part 5) or pursuant to Section 3(a) of the Davis-Bacon Act, as amended (40 U.S.C.276a-2[a]).
- b. No part of the aforementioned contract has been or will be subcontracted to any subcontractor if such subcontractor or any firm, corporation, partnership or association in which such subcontractor has a substantial interest is designated as an ineligible contractor pursuant to any of the aforementioned regulatory or statutory provisions.

3. He agrees to obtain and forward to the aforementioned recipient within ten days after the execution of any subcontract, including those executed by his subcontractors and any lower tier subcontractors, a Subcontractor's Certification Concerning Labor Standards and Prevailing Wage Requirements executed by the subcontractors.

4. He certifies that:

- a. The legal name and the business address of the undersigned are:

- b. The undersigned is:

☐ A SINGLE PROPRIETORSHIP ☐ A CORPORATION ORGANIZED IN THE STATE OF _____
☐ A PARTNERSHIP ☐ OTHER ORGANIZATION

- c. The name, title and address of the owner, partners or officers of the undersigned are:

NAME

TITLE

ADDRESS

HUD-1421 (6-75)

3-6-27

- d. The names and addresses of all other persons, both natural and corporate, having a substantial interest in the undersigned, and the nature of the interest are (If none, so state):

NAME	ADDRESS	NATURE OF INTEREST

- e. The names, addresses and trade classifications of all other building construction contractors in which the undersigned has a substantial interest are (If none, so state):

NAME	ADDRESS	TRADE CLASSIFICATION

(Contractor)

Date _____ By _____

WARNING

U.S. Criminal Code, Section 1010, Title 18, U.S.C. provides in part: "Whoever . . . makes, passes, utters or publishes any statement, knowing the same to be false . . . shall be fined not more than \$5,000 or imprisoned not more than two years, or both."

**U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAM**

**SUBCONTRACTOR'S CERTIFICATION
CONCERNING LABOR STANDARDS & PREVAILING WAGE REQUIREMENTS**

TO (Appropriate Recipient):	Date CDBG Project Nos. <u>16-242003</u> Standard Addition Water Main Replacement- Phase II. Install Approximately 2,350 L.F. of Water Main and Appurtenances for the City of Carlinville, Macoupin County, Illinois
-----------------------------	--

PROJECT NAME

1. The undersigned, having executed a contract with _____
(CONTRACTOR or SUBCONTRACTOR)
_____ for _____
(NATURE OF WORK)

in the amount of \$_____ in the construction of the above-identified project, certifies that:

- a. The Labor Standards Provisions of The Contract For Construction are included in the aforesaid contract.
 - b. Neither he nor any firm, corporation, partnership or association in which he has a substantial interest is designated as an ineligible contractor by the Comptroller General of the United States pursuant to Section 5.6(b) of the regulations of the Secretary of Labor, Part 5(29 CFR, Part 5) or pursuant to Section 3(a) of the Davis-Bacon Act, as amended (40 U.S.C.276a-2(a)).
 - c. No part of the aforementioned contract has been or will be subcontracted to any subcontractor if such subcontractor or any firm, corporation, partnership or association in which such subcontractor has a substantial interest is designated as an ineligible contractor pursuant to the aforesaid regulatory or statutory provisions.
2. He agrees to obtain and forward to the contractor, for transmittal to the recipient, within ten days after the execution of any Lower tier subcontract, a Subcontractor's Certification Concerning Labor Standards and Prevailing Wage Requirements, executed by the Lower tier subcontractor, in duplicate.

The workmen will report for duty on or about _____ (Date)

3. He certifies that:
- a. The Legal name and the business address of the undersigned are:
 - b. The undersigned is:
☐ A SINGLE PROPRIETORSHIP ☐ A CORPORATION ORGANIZED IN THE STATE OF _____
☐ A PARTNERSHIP ☐ OTHER ORGANIZATION (DESCRIBED):

c. THE NAME, TITLE AND ADDRESS OF THE OWNER, PARTNERS OR OFFICERS OF THE UNDERSIGNED ARE:

NAME	TITLE	ADDRESS

3-6-29

- d. The names and addresses of all other persons, both natural and corporate, having a substantial interest in the undersigned, and the nature of the interest are (If none, so state):

NAME	ADDRESS	NATURE OF INTEREST
------	---------	--------------------

- e. The names, addresses and trade classifications of all other building construction contractors in which the undersigned has a substantial interest are (If none, so state):

NAME	ADDRESS	TRADE CLASSIFICATION
------	---------	----------------------

Subcontractor: _____

By: _____ Date: _____
(Signature)

WARNING

U.S. CRIMINAL CODE, SECTION 1010, TITLE 18, U.S.C., PROVIDES IN PART: "WHOEVER. . . MAKES, PASSES, UTTERS OR PUBLISHES ANY STATEMENT, KNOWING THE SAME TO BE FALSE . . . SHALL BE FINED NOT MORE THAN \$5,000 OR IMPRISONED NOT MORE THAN TWO YEARS, OR BOTH."

Section 3 Plan Format

_____ agrees to implement the
(Name of Contractor)
following specific affirmative action steps directed at increasing the utilization of lower income residents and businesses located within the County of Macoupin.

- a. To ascertain from the locality's CDBG program official the exact boundaries of the Section 3 covered project area and where advantageous, seek the assistance of local officials in preparing and implementing the affirmative action plan.
- b. To attempt to recruit from within the county the necessary number of lower income residents through: Local advertising media, signs placed at the proposed site for the project, and community organizations and public or private institutions operating within or serving the project area such as Service Employment and Redevelopment (SER), Opportunities Industrialization Center (OIC), Urban League, Concentrated Employment Program, Hometown Plan, or U.S. Employment Service.
- c. To maintain a list of all lower income area residents who have applied either on their own or on referral from any source, and to employ such persons, if otherwise eligible and if a vacancy exists.
- *d. To insert this Section 3 plan in all bid documents, and to require all bidders on subcontracts to submit a Section 3 affirmative action plan including utilization goals and the specific steps planned to accomplish these goals.
- e. To formally contact unions, subcontractors and trade associations to secure their cooperation for this program.
- f. To insure that all appropriate project area business concerns are notified of pending subcontractual opportunities.
- g. To maintain records, including copies of correspondence, memoranda, etc., which document that all of the above affirmative action steps have been taken.
- h. To appoint or recruit an executive official of the company or agency as Equal Opportunity Officer to coordinate the implementation of this Section 3 plan.
- i. To list on Table A, information related to subcontracts.

*Loans, grants, contracts and subsidies for less than \$100,000 will be exempt.

Section 3 Plan (cont'd)

- J. To list on Table B, all projected workforce needs for all phases of this project by occupation, trade, skill level and number of positions.

As officers and representatives of _____
(Name of Contractor)

We the undersigned have read and fully agree to this Affirmative Action Plan, and become a party to the full implementation of this program.

Signature

Title

Date

Signature

Title

Date

PROPOSED SUBCONTRACTS BREAKDOWN - TABLE A

FOR THE PERIOD COVERING _____, 20____ through _____, 20____

(Duration of the CDBG-Assisted Project)

[illegible]

*The Project Area is coextensive with the City/Village/County of Carlinville boundaries.

COMPANY

Project Name	Project Number
Standard Addition Water Main Replacement – Phase II. Install Approximately 2,350 L.F. of Water Main and Appurtenances for the City of Carlinville, Macoupin County, Illinois.	<u>CDBG Project Nos. 16-242003</u>

EEO Officer (Signature) _____

Date _____

ESTIMATED PROJECT WORKFORCE BREAKDOWN - TABLE B

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5
JOB CATEGORY	TOTAL EST. POSITIONS	NO. POSITIONS BY PERMANENT EMPLOYEES	NO. POSITIONS NOT CURRENTLY OCCUPIED	NO. POSITIONS TO BE FILLED WITH L.I.P.A.R.*
OFFICERS/SUPERVISORS				
PROFESSIONALS				
TECHNICIANS				
HOUSING SALES/RENTAL MANAGEMENT.				
OFFICE CLERICAL				
SERVICE WORKERS				
OTHERS				
TRADE:				
JOURNEYMAN				
HELPERS				
APPRENTICES				
MAXIMUM NO. TRAINEES				
OTHERS				
TRADE:				
JOURNEYMAN				
HELPERS				
APPRENTICES				
MAXIMUM NO. TRAINEES				
OTHERS				
TRADE:				
JOURNEYMAN				
HELPERS				
APPRENTICES				
MAXIMUM NO. TRAINEES				
OTHERS				
TOTALS:				

*Lower Income Project Area Residents.

Individuals residing within the City/County of Carlinville whose family income does not exceed 80% of the median income in the SMSA.

COMPANY

NON-COLLUSION AFFIDAVIT OF PRIME BIDDER

State of _____)

County of _____) ss.

_____, being first duly sworn, deposes and says that:

1. He is _____ of _____
the Bidder that has submitted the attached Bid;
2. He is fully informed respecting the preparation and contents of the attached Bid
and of all pertinent circumstances respecting such Bid;
3. Such Bid is genuine and is not a collusive or sham Bid;
4. Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived, or agreed, directly or indirectly, with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached Bid or of any other Bidder, or to fix any overhead, profit or cost element of the Bid price or the Bid price of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the **City of Carlinville** (Local Public Agency) or any person interested in the proposed Contract; and
5. The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees or parties in interest, including this affiant.

(Signed)

(Name & Title)

Subscribed and sworn to before me this

_____ day of _____, 20____.

(Notary Public)

My Commission Expires: _____

U. S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
CERTIFICATE FROM CONTRACTOR APPOINTING OFFICER OR EMPLOYEE
TO SUPERVISE PAYMENT OF EMPLOYEES

GRANTEE City of Carlinville

CDBGGRANT Nos. 16-242003

Project Name:

Date: _____

Standard Addition Water Main Replacement – Phase II. Install Approximately 2,350 L.F. of Water Main and Appurtenances for the City of Carlinville, Macoupin County, Illinois.

Location Macoupin County, Illinois

(I) (We) hereby certify that (I am) (we are) the (prime contractor) (subcontractor) for *1 _____ in connection with the above mentioned construction project, and that (I) (we) have appointed *2 _____, whose signature appears below, to supervise the payment of (my) (our) employees, beginning *3 _____. This person is in a position to have full knowledge of the facts set forth in the payroll documents and in the statement of compliance required by the so-called Kick-Back Statute which he/she is to execute with (my)(our) full authority and approval until such time as (I)(we) submit to the *4 _____ a new certificate appointing some other person for the purposes hereinabove stated.

(Identifying Signature of Appointee)

(Name of Firm or Corporation)

Attest (if required):

Name (Type or Print)

By

Name (Type or Print)

(Signature)

By

(Signature)

(Title)

By

(Title)

Note: This certificate must be executed by an authorized officer of a corporation or by a member of a partnership, and shall be executed prior to and be submitted with the first payroll. Should the appointment be changed, a new certificate must accompany the first payroll for which the new appointee executes a statement of compliance required by the Kick-Back Statute.

*1 Specify "General Construction", "Plumbing", "Roofing", etc.

*2 Name of employee, typed or printed.

*3 Date

*4 Grantee, General Contractor, or Subcontractor

CERTIFICATION REGARDING LOBBYING

CERTIFICATION FOR CONTRACTS, GRANTS, LOANS AND COOPERATIVE AGREEMENTS

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all* subawards at all tiers (including subcontracts, subgrants and contracts under grants, loans, and cooperative agreements) and that all* subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

CDBG-Public Infrastructure Grant

Grantee/Contractor Organization

Program/Title

Name of Certifying Official

Signature

Date

*Note In these instances, "All," in the Final Rule is expected to be clarified to show that it applies to covered contract/grant transactions over \$100,000 (per OMB).

Approved by OMB

(See reverse for public burden disclosure.)

CRL-18

DISCLOSURE OF LOBBYING ACTIVITIES
CONTINUATION SHEET

Approved by OMB
0348-0046

Reporting Entity: _____ Page _____ of _____

Authorized for Local Reproduction
Standard Form - LLL -A

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Use the SF-LLL-A Continuation Sheet for additional information if the space on the form is inadequate. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.
2. Identify the status of the covered Federal action.
3. Identify the appropriate classification of this report. If this is a followup report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
4. Enter the full name, address, city, state and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
5. If the organization filing the report in item 4 checks "Subawardee", then enter full name, address, city, state and zip code of the prime Federal recipient. Include Congressional District, if known.
6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.
8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitation for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP-DE-90-001"
9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
10. (a) Enter the full name, address, city, state and zip code of the lobbying entity engaged by the reporting entity identified in item 4 to influence the covered Federal action.

(b) Enter the full names of the individual(s) performing services, and include full address if different from 10 (a). Enter Last Name, First Name, and Middle Initial (MI).
11. Enter the amount of compensation paid or reasonably expected to be paid by the reporting entity (item 4) to the lobbying entity (item 10). Indicate whether the payment has been made (actual) or will be made (planned). Check all boxes that apply. If this is a material change report, enter the cumulative amount of payment made or planned to be made.
12. Check the appropriate box(es). Check all boxes that apply. If payment is made through an in-kind contribution, specify the nature and value of the in-kind payment.
13. Check the appropriate box(es). Check all boxes that apply. If other, specify nature.
14. Provide a specific and detailed description of the services that the lobbyist has performed, or will be expected to perform, and the date(s) of any services rendered. Include all preparatory and related activity, not just time spent in actual contact with Federal officials. Identify the Federal official(s) or employee(s) contacted or the officer(s), employee(s), or Member(s) of Congress that were contacted.
15. Check whether or not a SF-LLL-A Continuation Sheet(s) is attached.
16. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, D.C. 20503.

Technical Specifications

General Information

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Section 10

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General Information

Section 10

10.01. ABBREVIATIONS

ADD	Addition	INF	Inflow
AI	Area Inlet	INV	Invert
ANSI	American National Standards Institute	IPS	Iron Pipe Size
ASA	American Standards Association	LA	Lane
ASTM	American Society for Testing and Materials	LF	Lineal Foot
ATG	Adjust to Grade	MAX	Maximum
AVE	Avenue	MH	Manhole
AWWA	American Water Works Association	MJ	Mechanical Joint
BC	Back of Curb	MIN	Minimum
BM	Benchmark	MIP	Male Iron Pipe
BK	Book	N/F	Now and Former
BLVD	Boulevard	NO	Number
BLDG	Building	PG	Page
BPS	Booster Pump Station	PVMT	Pavement
CB	County Highway Bore	POC	Point of Commencement
CL	Centerline	POB	Point of Beginning
CJ	Construction Joint	PC	Point of Curvature (Roads)
CONC	Concrete	PC	Pressure Class (Water and Sewer)
CMP	Corrugated Metal Pipe	PE	Polyethylene
CF	Cubic Foot	PI	Point of Intersection
CY	Cubic Yard	PT	Point of Tangent
CI	Curb Inlet (Roads)	PVC	Polyvinyl Chloride
CI	Cast Iron (Water and Sewer)	PE	Private Entrance (Roads)
CIOD	Cast Iron Outside Diameter	PE	Polyethylene Pipe
CTS	Copper Tube Size	PL	Property Line
DR	Drive	PS	Pipe Stiffness
DI	Ductile Iron	RR	Railroad
ESMT	Easement	RCP	Reinforced Concrete Pipe
EJ	Expansion Joint	ROW	Right of Way
FT	Feet	RPR	Resident Project Representative
FES	Flared End Section	SAN	Sanitary
FB	Flat Bottom	SB	State Highway Bore
FL	Flow Line	SDR	Standard Dimension Ratio
FIP	Female Iron Pipe	SF	Square Feet
GI	Grated Inlet	SY	Square Yard
GST	Ground Storage Tank	STA	Station
HDPE	High-Density Polyethylene Pipe	SWPPP	Storm Water Pollution Prevention Plan
IDOT	Illinois Department of Transportation	TB	Township Road Bore
IHPA	Illinois Historic Preservation Agency	TBM	Temporary Bench Mark
IN	Inches	TYP	Typical

TOC	Top of Curve	TSM	Temporary Seed and Mulch
TOA	Top of Asphalt	UFR	Uni-Flange Restraint
TBR	To Be Removed	VCP	Vitreous Clay Pipe
TBR&R	To Be Removed and Replaced		

10.02. AWWA SPECIFICATIONS TITLES

C-104-ANSI A21.4-Standard for Cement-Mortar Lining
C-105-ANSI A21.5-Standard for Polyethylene Encasement for Ductile-Iron Pipe Systems
C-110-ANSI A21.10-Standard for Ductile-Iron and Gray-Iron Fittings
C-111-ANSI A21.11-Standard for Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings
C-115-ANSI A21.15-Standard for Flanged Ductile Iron Pipe with Threaded Flanges
C-150-ANSI A21.50-Standard for Thickness Design for Ductile-Iron Pipe
C-151-ANSI A21.51-Standard for Ductile-Iron Pipe, Centrifugally Cast
C-153-ANSI A21.53-Standard for Ductile-Iron Compact Fittings for Water Service
C-502-Standard for Dry-Barrel Fire Hydrants
C-509-Standard for Resilient –Seated Gate Valves for Water Supply Service
C-515-Standard for Reduced-Wall, Resilient-Seated Gate Valves for Water Supply Service
C-550-Protective Epoxy Interior Coating for Valves and Hydrants
C-606-Standard for Grooved and Shouldered Joints

10.03. DEFINED INFORMATION

OWNER – City of Carlinville

Selected Granular Backfill –CA-6 or equal

Standard Specifications for Water and Sewer Main Construction in Illinois ("Standard Water and Sewer Specs")

10.04. REQUIRED SUBMITTALS

On Submittals, please mark the product model number and the options and/or sizes you will be using. Also, please mark all standards required in the specifications. If the specifications are not marked up, preferably by highlighter, then they will be returned as rejected. Please provide a copy of all standards that a material references for our review and concurrence. The minimum number of submittals is 4, one for the CONTRACTOR and 3 to remain with the ENGINEER. The ENGINEER will not make copies of the submittals to return to the CONTRACTOR.

10.04.01 Water Main

WATER MAIN			Manufacturer	Model No.	Equal Accepted	Section	Submittal Required
1		Anchor Coupling	---	---	---	51.09.15	YES
2		Casing	---	---	---		YES
3		Casing Spacers				51.09.17	
	a	Water main 6-inch or smaller	CCI Pipeline Systems	---	YES		YES
4		Combination Air Release				51.09.07	
	a	1"	APCO Valve and Primer Combination OR Val-Matic	NA	NO **		NO
5		Copper Tracer Wire				51.09.10	
	a	Bores	Copperhead Industries, Inc.	1245EHS	NO **		YES
	b	Trenching	Copperhead Industries, Inc.	1430HS	NO **		YES
	c	Connectors	Copperhead Industries, Inc.	3WB-01	NO **		YES
6		End Seals	ENGINEER				YES
7		Fittings				51.07	
	a	Ductile Iron - Compact Fittings	Tyler/Union OR US	---	NO **		YES
	b	Ductile Iron - Flanged Fittings	Tyler/Union OR US	---	NO **		NO
	c	RJ-PVC Expansion Coupling	---	---	---		YES
	d	HDPE Fittings	---	---	---		NO
8		Gate Valves				51.09.04	
	a	3 inch to 12 inch	Mueller OR Equal M&H	Mueller A-2360-20	NO**		YES
9		Hydrants				59.09.02	
	a	2 1/4" Flushing Hydrant	Mueller	A-411	NO**		NO
	b	4 1/2" Flushing Hydrant	Mueller OR equal Kennedy OR Clow Medalian	Mueller A-420, Super Centurion 250	YES		NO
	c.	5 1/4" Fire Hydrant	Mueller	A-420, Super Centurion 250	NO**		YES
10		Pipe					
	a	HDPE	---	---	---	51.06	NO
	b	PVC	---	---	---	51.03	YES
	c	Restrained Joint PVC	---	---	---	51.04	YES
	d	Ductile Iron	---	---	---	51.05	NO
	e	Restrained Joint Ductile Iron	Griffin	Snap-Lok	YES	51.05.C	NO
	f	Ductile Iron River Crossing Pipe	Griffin	River Crossing Pipe	YES	51.05.D	NO
	g	Copper Service Line	---	---	---	51.09.01	YES
	h	PE Service Line	---	---	---	51.09.01	YES
11		Pipe Restraining Glands				51.09.14	
	a	Ductile Iron	Ford/Uni-Flange (MegaLug is not an equal)	Series 1500	YES		YES
	b	PVC	Ford/Uni-Flange	Series 1400	YES		YES

12		Saddle	Mueller	---	NO **	51.10.03	YES
13		Sampling Station	Kupferle Foundry	Eclipse No. 88	YES	51.09.09	NO
14		Stainless Steel Taping	Smith OR Blair OR Ford	---	YES	51.09.12	YES
15		Tracer Wire Access					
	a	Marker	Rhino	TVPT90BB2	YES	51.09.11	NO
16		Valve Box	Tyler OR Sigma (equal in weight)	Tyler 6850	NO **	51.09.05	YES
17		Valve Box Marker					
	a	Marker	Rhino	TVPA72BB	YES	51.09.06	NO
18		Meter Equipment					
	a	Corporation Stop - 1"	Mueller OR Ford	---	NO **	51.10.02	YES
19		Meter Skin/Insulation	Municipal and Contractor Ceiling Products		YES	51.09.07	YES
20		Butterfly	DeZurik or Henry Pratt Co. ++	---	YES	51.09.03	NO
21		Meter				51.10.04	
	a	5/8 x 3/4 inch meter	7-1/2".		NO **		YES
22		Meter Yoke					
	a	5/8 x 3/4 inch & 1 inch meters	Ford	VBHH9221W44-44B	NO **	51.10.06	YES
23		Meter Box					
	a	5/8 x 3/4 inch meter	Tufcor Plus (Depth x ID)	30" x 21"	NO **	51.10.07	YES
24		Meter Lid					
	a	5/8 x 3/4 inch meter	Mueller h-10810-mbc-20t		NO **	51.10.08	YES
25		Curb Stop					
	a	Curb Stop -1"	Mueller b-25155-1 or 3/4		NO **		YES
26		Curb Stop Box	Mueller h-10300-8-4		NO**		YES

* Respectively

** no like, equivalent, or "or-equal" item or substitution permitted.

*** A.R.I. is located in Kfar charuv, 12932 Israel

++Milliken valves will not be allowed.

10.04.02 Elevated Tank

Intentionally Blank

10.04.03 Booster Pump Station

Intentionally Blank

10.04.04 Ground Storage Tank

Intentionally Blank

10.04.05 Water Treatment Plant

Intentionally Blank

10.04.06 Pressure Reducing Station

Intentionally Blank

10.04.07 Sewer Main

General Requirements

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General Requirements

Section 11

11.01. SCOPE OF WORK

The work, as proposed, includes the furnishing of all labor, materials, equipment, transportation and performing of all operations required to construct improvements for the OWNER, all as shown on the Drawings and/or as herein specified. In case of conflict between the Drawings and project specifications, the CONTRACTOR shall notify the ENGINEER prior to bidding, to clarify the discrepancy and obtain a decision on which document governs. If the CONTRACTOR or any of his subcontractors fail to notify the ENGINEER prior to bidding, then the CONTRACTOR shall provide and install the intended material or equipment at no additional cost to the contract price.

It shall be the responsibility of the CONTRACTOR to furnish and install complete and working systems to perform the intended purposes as required by the Drawings and these specifications. The CONTRACTOR shall be responsible for all details which may be necessary to properly install, adjust, and place into operation the complete installation, including the location of all water main installation, and shall include the costs of all such details in the bid.

The CONTRACTOR shall guarantee that the material furnished shall be properly installed and shall perform the duty for which it is intended. CONTRACTOR shall guarantee all materials, workmanship, and completed installation to be first class in every particular and shall, at his own expense, furnish and replace any part or parts that may prove defective in material, equipment, or workmanship within one year from the date of substantial completion, in accordance with the Standard General Conditions Section 15.08 (Correction Period) of this Contract.

This work shall be governed by an IEPA permit for construction. This permit shall be obtained for the CONTRACTOR by the OWNER before any construction operations begin. The OWNER will also obtain the necessary easements, NPDES permits, and highway permits to construct the improvements. The CONTRACTOR shall familiarize himself with all requirements as to traffic control, flagmen, maintenance of trench, advance warning signs, etc., as required by state and local highway departments.

The CONTRACTOR is responsible for conforming with the requirements of all applicable health and safety regulations and precautions as required by local, state and federal regulatory agencies including, but not limited to OSHA, IEPA and IDOL. In accordance with the requirements of the OSHA regulations for construction, the CONTRACTOR shall provide and require the use of personal protective and lifesaving equipment for all persons working in or about the project.

11.02. STRUCTURES AND UTILITIES ENCOUNTERED

Various underground and surface structures may or may not be shown on the Drawings. The location and dimensions of such structures, where given, do not purport to be absolutely correct. The structures are plotted on the Drawings for the information of the CONTRACTOR, but information so given is not to be construed as a representation that such structures will be found or encountered as plotted. Other structures may also be encountered which are not shown on the Drawings.

The CONTRACTOR shall maintain in operating condition all utilities encountered in this work. Any existing utilities damaged as a result of this construction shall be repaired to the satisfaction of the

owner of the utility at the CONTRACTOR's expense, whether or not said utilities are shown on the Drawings. Existing utilities may be relocated with the approval of the owner of the utility. This relocation shall be at the CONTRACTOR's expense, done according to the requirements of the utility owner and shall be sufficient to clear the proposed improvement.

Before beginning work in an area, the CONTRACTOR shall contact JULIE at 800-892-0123 and any other non-JULIE member companies maintaining utilities, pipelines, transmission lines, and any other potential obstacles in the project area and request their assistance in field locating their utilities in that area. The CONTRACTOR, however, shall be solely responsible for the location of utilities. The utilities shown are for informational purposes only and the OWNER and the ENGINEER do not imply that the information is complete. **All down time and expense to determine the exact location and/or exposing of any and all utilities will be incidental to the contract.**

The CONTRACTOR shall be entirely responsible for all injuries to water pipes, water services, electric conduits, gas lines and services, existing drains or sewers, field tiles, sump pump drain lines, poles carrying currents, telephone or telegraph lines, railroad bridges and tracks, streets, pavements, sidewalks, curbs, fences, culverts, buildings, trees larger than 6 inches in diameter, or other structures of any kind met with during the prosecution of the work, whether on public or private property.

All such structures or utilities which are damaged or removed to allow construction shall be restored to a condition at least equivalent to that which existed at the commencement of the work unless additional written arrangements are made satisfactory to the owner of said property. The CONTRACTOR shall care for and maintain all such structures or utilities encountered, and where service by them is interrupted, he shall provide and maintain temporary service until repair is complete and full service is restored. Repair of and restoration of service from essential structures or utilities shall be prompt; in these cases, if repair is unnecessarily delayed or unsatisfactory in the judgment of the OWNER, the OWNER may have the repairs made and may deduct the cost thereof from payments due the CONTRACTOR. All costs associated with structures or utilities encountered, including removal, replacement, repair, temporary service, or complications to proposed work shall be incidental to the project and shall be performed without any increase in the Contract Price.

Any drainage tiles, drainage ditches, or storm sewers interfered with by the construction of the improvement shall be rerouted around the improvement in such a way as to maintain the drainage of areas upstream and downstream of the improvements; any such work shall be approved by the OWNER and shall be done by the CONTRACTOR without any increase in the Contract Price.

Existing trees and shrubs within easements and rights-of-way shall be protected from damage, and when such trees or shrubs are in the way of construction, the OWNER may instruct the CONTRACTOR to prune branches interfering with the work, or remove and dispose of trees or shrubs, or transplant trees or shrubs out of the way of the construction and the Contract Price shall not be increased for the performance of such work.

The CONTRACTOR shall be liable for damage to trees and shrubs which were to have been protected as directed by the OWNER, unless such damages are determined by the OWNER to have been unavoidable, and moneys due the CONTRACTOR may be withheld to cover such damages.

11.03. WATER LINE DAMAGE

In addition to the discussion under Structures and Utilities Encountered, the following shall apply: If located/marked or unmarked, existing or proposed water lines or service lines are damaged or leak due to the CONTRACTOR's construction procedures, emergency temporary repairs shall be made

immediately. The CONTRACTOR shall permanently repair the water lines or service lines within 24 hours of receiving verbal notice from the OWNER. If the CONTRACTOR does not perform the repairs within the required time period, the OWNER may perform the repair and bill the CONTRACTOR for actual costs for administration, labor, equipment and materials related to such repairs including, but not limited to administration, labor, equipment, and material.

The OWNER is responsible for issuing a boil order.

These criteria shall be in force seven days per week, including holidays and shall extend through the construction period and the one year guarantee period.

The CONTRACTOR shall discuss the location of all existing water service lines, well lines, sanitary service lines, etc., with the local property owners, perform test digs, etc., to satisfy himself as to the location of these lines prior to bidding and/or construction, as damage and repair work to these lines are incidental to the contract.

The CONTRACTOR shall give two days advanced notice of any planned construction method that temporarily closes a water main resulting in a need for a boil order. The CONTRACTOR shall furnish the material labor and equipment to collect and test all boil order samples that may be required as a result of the temporary line closure.

11.04. PAYMENT FOR WATER USED

Payment for water used by the CONTRACTOR to flush, test, chlorinate, and place in service the water lines and service connections shall not be billed to the CONTRACTOR by the OWNER. Losses of water due to water line breaks or leaks, accidental or otherwise, during construction and the warranty period shall be estimated and billed to the CONTRACTOR at \$5.00 per thousand gallons. If excessive flushing, from failed samples, is encountered the OWNER may estimate amount of excess water used and it will be billed to the CONTRACTOR at \$5.00 per thousand gallons.

11.05. STANDARD SPECIFICATIONS

The Standard Water and Sewer Specifications referenced in these specifications refer to the current edition of the Standard Specifications for Water and Sewer Main Construction in Illinois. In case of conflict with the Standard Water and Sewer Specifications, these Technical Provisions shall govern.

11.06. RIGHTS-OF-WAY AND EASEMENTS

The OWNER has secured the necessary public right-of-way permits and/or as many private easements as possible, for the construction of the work. These documents are on file with the ENGINEER and should be reviewed by all bidders prior to the bid date. All bidders are responsible for including in their bid, all costs associated with or caused by any easements involved in the project. The CONTRACTOR (successful bidder) shall be furnished copies of these documents prior to construction so that he may contain his construction activities to the permissible areas listed in each easement. The CONTRACTOR shall also be furnished copies of any additional private easements obtained between the bid date and the start of construction. In addition, some easements that are signed may not allow installation on 100 percent of the particular property (i.e., you may have to go to the road right-of-way to avoid trees, or abide by some other restriction).

Some property owners have restrictive clauses in their easement regarding trees and shrubbery, fences, private utilities, width of easement, forcing construction in road right-of-way, etc... The CONTRACTOR shall comply with these restrictive clauses. It is entirely the CONTRACTOR'S responsibility to be aware of all restrictions and easements, and no increase in the contract price shall be allowed for any construction methods, landowner notifications, etc., necessary to comply with the restrictions. Note that the restricted easements are indicated on the plan sheets with an "®". The CONTRACTOR shall refer to the individual easements for details regarding the restriction(s). The easements will be available for CONTRACTOR review at the City of Carlinville City Hall. and at the pre-bid meeting.

In general, the CONTRACTOR shall prepare bids as if all Public R.O.W. will be utilized. If directed by ENGINEER the CONTRACTOR must clear trees and immediately after clearing properly dispose of the brush off-site unless he can make some other arrangement with the landowner. Any other arrangements agreed to by the CONTRACTOR and the landowner must be made in writing and a copy of the written agreement, signed by the CONTRACTOR and landowner given to the ENGINEER

Highway crossings may be involved in this project, and where necessary, the OWNER has secured all the necessary permits for the various crossings. The CONTRACTOR shall familiarize himself with and abide by all requirements as to traffic flow, flagmen, maintenance of trench, advance warning signs, etc., as required. The CONTRACTOR shall execute and maintain in force, all bonds as required by IDOT or other county or township entities.

The CONTRACTOR shall perform the work in accordance with the provisions of the various county, township, and state permits.

The CONTRACTOR's attention is called to the fact that the water main construction will involve, in most cases, public Right-of-Way and that all improvements such as drainage ditches, plantings, culverts, active utilities, signs, outbuildings, drain tiles, and any other miscellaneous, privately and/or publicly owned, property shall be restored to a condition equal to or better than their existing state of repair. Should it become necessary that the CONTRACTOR relocate/remove any obstruction encountered throughout construction he shall consult with the ENGINEER's Resident Project Representative (RPR) before proceeding.

The CONTRACTOR shall be responsible and liable for all damages and claims caused by his operations to shrubs, trees, flowers, lawns, fences, gardens, orchards, nursery stock, etc., unless directed by the ENGINEER with the exceptions of growing cash crops (i.e., legumes, corn, soybeans, wheat). No additional compensation will be allowed for the above beyond the contract unit prices for the specified items of work listed in the Bid Schedule.

11.07. EQUIPMENT AND PRODUCTS

Whenever equipment is identified on the drawings or in the specifications by reference to manufacturer's name and/or trade names and **IS** accompanied by an "or equal" statement, it is intended merely to establish a standard, and any equipment of other manufacturers which will perform adequately the services imposed by the general design will be considered equally acceptable provided, in the opinion of the ENGINEER, the function, material, and service is equal.

Whenever equipment is identified on the drawings or in the specifications by reference to a specific manufacturer's name and/or trade names and **IS NOT** accompanied by an "or equal" statement, then only the referenced product may be used in the project. This is to maintain uniformity for certain items in OWNER's system.

The ENGINEER reserves the right to require a statement from the manufacturer of any products or equipment that the specific products or equipment have been inspected and tested and conform to the specifications.

For the purposes of standardization, all of the equipment for a single system shall be furnished by a single manufacturer except as noted or approved by the ENGINEER (i.e., all flushing hydrants shall be the same type and from the same manufacturer). Fabricated assemblies shall be shipped in the largest convenient section permitted by carrier regulations, and adequately match marked by proper assembly.

The CONTRACTOR shall be responsible for supplying spare equipment parts as provided in these specifications and providing for the proper storage of same so that they are kept in operable condition.

The CONTRACTOR shall furnish for review complete equipment shop drawings in accordance with the General Conditions before installing any equipment. Drawings shall be provided by the equipment manufacturer and shall show all dimensions and details for correct installation of the equipment.

11.08. MANUFACTURER'S REPRESENTATIVE

Intentionally Blank

11.09. SOIL BORING DATA

Intentionally Blank

11.10. CLEANING UP

During construction the CONTRACTOR shall clean up as the work proceeds. The premises, easements, and rights-of-way shall be kept free of accumulations of waste materials and earth, rubbish, and other debris resulting from the work, except as stated in section 11.06. Disposal of waste above and, including but not limited to, scrap pipe, material packaging, (boxes, plastic wrappers, banding, boards) lunch bags, to go containers, beverage containers, etc. shall not be in the trench or on ground. The CONTRACTOR shall secure all trenches by the end of each working day before leaving the site, especially along road right-of-way areas, driveways, and residential yard areas.

If in the judgment of the OWNER the CONTRACTOR fails to keep the sites clean as described hereinabove, the OWNER may halt the construction and/or construction payments until the sites have been cleaned up to the satisfaction of the OWNER. All trees and brush removed in establishing an area for water main installation shall be removed and properly disposed of off-site unless the CONTRACTOR can make some other arrangement with the landowner. Such agreements shall be made in writing, signed by both the CONTRACTOR and the landowner, and a copy of the signed agreement shall be given to the ENGINEER. The brush disposal shall be continuous with the land clearing operations. The CONTRACTOR has five (5) working days from notification from the OWNER and/or ENGINEER that the brush disposal is unsatisfactory to remedy the situation. If after this period of time the brush removal is still not satisfactory, the OWNER has the right to hire an outside agency to dispose of the brush in a timely manner and then costs shall be withheld from the final clean-up/seeding retainage funds.

Final clean-up, grading, and permanent seeding shall be performed in accordance with the dates specified in Section 31.06.B.

At the completion of the project, the CONTRACTOR will remove all waste materials, rubbish and debris from and about the premises as well as all tools, scaffolding and surplus materials, and will leave the site clean and ready for occupancy by the OWNER. Pipe banding and other construction debris may not be left on top of or buried in the trench. The CONTRACTOR shall be liable for any damage caused to, yards, pets, equipment, etc. due to construction debris left in, on or around the project. The CONTRACTOR will restore to their original conditions those portions of the site not designated for alteration by the Contract Documents.

Open burning of debris will not be permitted unless specifically authorized in writing by the OWNER, and then only following state, municipal or other local codes, ordinances, rules or regulations.

11.11. LOCATION OF THE WORK

The water main shall be constructed on the City Right-of-Way unless directed otherwise by the OWNER/ENGINEER.

Pipeline alignment and appurtenance locations shall be verified with the on-site project representative and/or OWNER prior to the start of each day's construction. IDOT/County/City/Township supervisors shall pre-approve valve and hydrant locations when installed on their respective right-of-ways.

11.12. COORDINATION WITH LOCAL ROADWAY OFFICIALS

It shall be the CONTRACTOR's responsibility to contact the local township roadway commissioners, IDOT, and county highway engineer and/or Village or City Personnel to coordinate the installation of water mains, water main boring operations, etc., on public easement under their jurisdiction. It shall be the CONTRACTOR's responsibility to be aware of specific roadway permits for other site-specific conditions. The CONTRACTOR shall include in his bid all costs associated with special roadway repair requirements, traffic flow requirements, construction scheduling requirements, etc.

11.13. COORDINATION WITH LOCAL ELECTRICAL AND TELEPHONE UTILITIES

Intentionally Blank

11.14. CONSTRUCTION SEQUENCE

Although this is a small project, it is in the best interest of the OWNER to place the entire extension into operation as construction proceeds. Therefore, once the water main has been installed, it shall be pressure tested, disinfected, and all service connections installed by the CONTRACTOR prior to the CONTRACTOR leaving the job site. If the CONTRACTOR fails to place the water main in service prior to leaving the job site, the OWNER may assess "Liquidated Damages".

11.15. CONTRACT RESPONSIBILITY

Intentionally Blank

11.16. COORDINATION WITH ARCHAEOLOGICAL CONSULTANT

The IHPA has been contacted regarding this project and they do not expect or any historic properties to be affected.

11.17. COORDINATION WITH RAILROAD COMPANIES

Intentionally Blank

11.18. COORDINATION WITH RESIDENT PROJECT REPRESENTATIVE

The CONTRACTOR shall notify the Resident Project Representative or ENGINEER of the proposed work schedule prior to each day. Any work accomplished without the Resident Project Representative being present due to improper notification, shall be re-done, re-exposed, etc., to the satisfaction of the Resident Project Representative, and shall be incidental to the CONTRACT price.

11.19. JULIE LOCATES

It shall be the CONTRACTOR'S responsibility to locate any water main or service line installed as part of this project, prior to Substantial Completion. Any costs associated with these JULIE locates shall be included in the bid.

11.20. ROAD RESTORATION

Road Restoration shall be as specified in Section 31.04.

Roadways shall be open cut only as indicated on the plan sheets, and or as directed by the OWNER/ENGINEER.

Any water main installed by open cutting the roadway with a backhoe, or equal (i.e., by a method other than trenching), shall first require the existing surface to be neatly saw-cut prior to removing any surface materials. In general maximum trench width for open cutting any roadway shall be 2 feet. All open cut roadways shall be backfilled by the CONTRACTOR with SELECT GRANULAR BACKFILL (CA-6 or equal) for the full depth and width of the trench, including bedding, up to the original grade level for a temporary gravel surface. The temporary surface shall be replaced with HMA when the project has been completed. The CONTRACTOR shall also maintain trench settlement after the initial open cut crossing is performed for the duration of the warranty period. SELECT GRANULAR BACKFILL for water main road crossings shall be paid to the CONTRACTOR at the Contract unit price per Cubic Yard for "Compacted Rock Backfill", measured in place. The prices shall include all equipment, labor, materials, traffic safety control, placement and compaction of granular backfill, surface treatment, and all other miscellaneous work as necessary.

11.21. NPDES PERMIT COMPLIANCE

No NPDES permit is required for this project. Although no permit is required, it is expected the CONTRACTOR shall take all necessary precautions to prevent soil erosion and sedimentation as if a full SWPPP and NPDES permit were in place. The erosion control measures shall generally adhere to section 31.09.

11.22. CONTRACTOR REPRESENTATION AT MONTHLY COUNCIL MEETINGS

The CONTRACTOR shall have a representative present only upon request at the monthly meetings of the City of Carlinville to answer questions presented by the Council during construction, and continuing through the completion of all final cleanup operations. Costs for attendance at meetings shall be incidental to the contract price.

11.23. OWNER'S STOP-WORK AUTHORITY

See General Conditions 14.06

11.24. MAILBOX RELOCATION

Intentionally Blank

11.25. TRAFFIC CONTROL

When any section of road is closed to through traffic the CONTRACTOR shall notify all appropriate authorities (City Personnel, School Bus Garage, Police and Fire Protection).

When any section of road is closed to traffic, the CONTRACTOR shall provide, erect, and maintain barricades, red flags, signs and lights at each end of the closed section and at all intersecting roads, in accordance with the Illinois Manual of Uniform Traffic Control Devices and per the IDOT permit (when applicable) unless alternate methods are approved by the OWNER or ENGINEER.

If during the progress of the WORK it is necessary to provide access to private property along the road, the CONTRACTOR shall provide, erect, and maintain, within the closed portion of the road, such barricades, signs, flags, and lights as may be necessary to protect the WORK and to safeguard local traffic. No open or unfilled trenches will be left unattended or overnight, unless approved by OWNER.

The cost of furnishing and maintaining barricades, warning signs, red flags, and lights as required herein shall be incidental to the CONTRACT and no extra compensation will be allowed.

11.26. ACCESS ROAD

Intentionally Blank

11.27. SIGNAGE

All traffic/street signs in conflict with construction methods shall be salvaged and re-erected. They shall be stored indoors at the contractor's shop or at a location provided by the City of Carlinville. The signs shall then be re-erected to meet IDOT standards. All signs shall be re-erected to the original height and at the same location as found before construction began.

Concrete

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Concrete

Section 21

21.01. SCOPE OF WORK

Portland cement shall comply with the Standard Specification for Portland Cement, ASTM C150, or Standard Specification for Air-Entraining Portland Cement, ASTM C175 and shall be Type I or IA.

21.02. CONCRETE AGGREGATES

Concrete aggregates shall conform to specifications for Concrete Aggregates, ASTM C33, except that aggregates failing to meet these specifications but which have been shown by special test or actual service to produce concrete of the required quality, may be used under paragraph 21.08 of this section where authorized by the ENGINEER.

21.03. WATER

Water used in mixing concrete shall be clean and free from deleterious amounts of acids, alkalis, or organic materials.

21.04. REINFORCEMENT (METAL)

Reinforcing bars shall conform to the requirements of tentative specifications for minimum requirements for the Deformations of Deformed Steel Bars for Concrete Reinforcement, ASTM-A-615/615M, and of tentative specifications for Billet-Steel Bars for Concrete Reinforcement, ASTM-A-615/615M, or tentative specifications for Rail-Steel Bars for Concrete Reinforcement, ASTM-A-616, or tentative specification for Axle-Steel Bars for Concrete Reinforcement, ASTM-A-617/617M.

Welded wire fabric or cold-drawn wire for concrete reinforcement shall conform to the requirements of standard specifications for Cold-Drawn Steel Wire for Concrete Reinforcement, ASTM-A, or standard specifications for Welded Steel Wire Fabric for Concrete Reinforcement, ASTM-A-185.

21.05. MATERIAL STORAGE

Cement, aggregates and reinforcement shall be stored at the batch plant or work site in such a manner as to prevent deterioration or intrusion of foreign matter. Any material which has deteriorated or which has been damaged shall not be used for concrete.

21.06. CONCRETE QUALITY

The allowable stresses for design are based on the specified minimum 28 day compressive strength of the concrete or on the specified minimum compressive strength at the earlier age at which the concrete may be expected to receive its full load. The strength of concrete, at specified ages for

which all parts of the structure were designed, are shown on the drawings. Where not specified in the drawings, minimum 28 day compressive strength of the concrete shall be 3500 psi.

21.07. STRENGTH OF CONCRETE

The determination of the proportions of cement, aggregate and water to attain the required strength, shall be made by one of the following methods.

Method I: When no preliminary tests of the materials to be used are made, the water content per sack of cement shall not exceed the values in the following table. Method II shall be employed when artificial aggregates or admixtures are used.

Assumed Strength of Concrete Mixtures

Water Content in U.S. Gals. per Sack of Cement	Assumed Compressive Strength at 28-day psi
7-3/4	2500
6-3/4	3000
6	3500
5-1/2	3750

NOTE: In interpreting this table, surface water contained in the aggregate must be included as part of the mixing water in computing the water content.

Method II: Proportions of the materials and water content, other than those shown in the above table, may be used provided that the strength quality of the concrete proposed for use, shall be established by tests, which shall be made in advance of the beginning of operations, using the consistencies suitable for the work and in accordance with Standard Method of Making Concrete Compression and Flexure Test Specimens in the Laboratory, ASTM-C-192, and with Standard Method of Test for Compressive Strength of Molded Concrete Cylinders, ASTM-C-39.

A curve representing the relation between the water content and the average 28 day compressive strength, or earlier strength at which the concrete is to receive its full working load shall be established for a range or earlier strength at which the concrete is to receive its full working load shall be established for range of values including all the compressive strengths called for on the drawings. The curve shall be established by at least 3 points, each point representing average values from at least 4 test specimens. Amount of water used in the concrete, as determined for a curve, shall correspond to a strength which is 15 percent greater than that called for on the drawings. No substitutions shall be made in the materials used on the work without additional tests in accordance, herewith, to show that the quality of the concrete is satisfactory.

21.08. CONCRETE PROPORTIONS AND CONSISTENCY

The proportions of aggregate to cement for any concrete shall be such as to produce a mixture which will work readily into the corners and angles of the forms and around reinforcement with the methods of placing employed on the work but without permitting the material to segregate or excess free water to collect on the surface.

The combined aggregates shall be of such composition of size that when separated on the No. 4 sieve (fine aggregate) shall not be less than 30 percent or more than 50 percent of the total unless otherwise required by the ENGINEER.

The method of measuring concrete materials shall be such that the proper proportions can be accurately controlled and easily checked at anytime during the work. The received measurement shall be width rather than volume. Measurements of materials for ready-mixed concrete shall conform to the Tentative Specifications for Ready-Mixed Concrete, ASTM-C.

21.09. TESTS ON CONCRETE

The CONTRACTOR shall employ and furnish an independent, qualified, testing agency, suitable to the ENGINEER and OWNER, for the purposes of all required testing of materials, certification of proper concrete placement during pour and work accomplished. All test results shall be reported to the ENGINEER and the CONTRACTOR on the same day the tests are made.

Technicians representing the testing agency shall inspect the materials and manufacture of concrete and shall report their findings to the ENGINEER and the CONTRACTOR. When it appears that the material furnished or work performed by the CONTRACTOR fails to fulfill specification requirements, the technician shall direct the attention of the ENGINEER and the CONTRACTOR to such failure.

The technician shall not act as foreman or perform other duties for the CONTRACTOR. Work will be checked as it progresses, but failure to detect any defective work or materials shall not in any way prevent later rejection when such defect is discovered, nor shall it obligate the ENGINEER for final acceptance. Technicians are not authorized to revoke, alter, relax, enlarge, or release any requirement of the specifications nor to approve or accept any portion of the work.

During the progress of the work compression test specimens shall be made and cured in accordance with Standard Method of Making and Curing concrete Compression and Flexure Test Specimens in the Field, ASTM-C-31.

Not less than 3 specimens shall be made for each test, nor less than 1 test for each day's pour or for each 50 cubic yards of concrete of each class. Specimens shall be cured under laboratory conditions except that when, in the opinion of the ENGINEER, there is a possibility of the surrounding air temperature falling below 40 degrees F the ENGINEER may require additional specimens to be cured under job conditions.

Specimens shall be tested in accordance with Standard Methods of Tests for Compressive Strength of Molded Concrete Cylinders, ASTM-C-39.

The standard age of test shall be 7 days and 28 days.

If the average strength of the laboratory control cylinders for any portion of the structure falls below the compressive strengths called for on the drawings, the ENGINEER shall have the right to require conditions of temperature and moisture necessary to secure the required strength and may require tests in accordance with Standard Method of Securing, Preparing and Testing Specimens of Hardened Concrete for Compressive and Flexural Strengths, ASTM-C-42 or order load tests to be made on the portions of structure so affected.

21.10. PREPARATION OF EQUIPMENT AND PLACE OF DEPOSIT

Before placing concrete, all equipment for mixing and transporting the concrete shall be cleaned, all debris or ice shall be removed from the places to be occupied by the concrete. Forms shall be thoroughly wetted (except in freezing weather) or oiled and masonry filler units that will be in contact with concrete shall be well drenched (except in freezing weather) and the reinforcement shall be thoroughly cleaned of ice or other coatings.

21.11. MIXING OF CONCRETE

The concrete shall be mixed until there is a uniform distribution of the materials and shall be discharged completely before the mixer is recharged.

For job mix concrete, the mixer shall be rotated at a speed recommended by the manufacturer and mixing shall be continued for at least 1 minute after all materials are in the mixer.

Ready-mixed concrete shall be mixed and delivered in accordance with the requirements set forth in Tentative Specifications for Ready-Mixed Concrete, ASTM-C-94.

21.12. CONVEYING

Concrete shall be conveyed from the mixer to the place of final deposit by methods which will prevent the separation or loss of the materials.

Equipment for chuting, pumping and pneumatically conveying concrete shall be of such size and design as to insure a practically continuous flow of concrete at the delivery end without separation of the materials.

21.13. DEPOSITING

Concrete shall be deposited as nearly as practicable in its final position to avoid segregation due to re-handling or flowing. The concreting shall be carried on at such a rate that the concrete is at all times plastic and flows readily into the space between the bars. No concrete that has partially hardened or been contaminated by foreign material shall be deposited on the work, or shall re-tempered concrete be used.

When concreting is once started, it shall be carried on as a continuous operation until the placing of the panel or level. When construction joints are necessary, they shall be made in accordance with paragraph 21.22, this section.

All concrete shall be thoroughly compacted by suitable means during the operation of placing. Whenever practical the concrete shall be compacted with an internal mechanical vibrator of such construction that 4,500 cycles per minute shall be transmitted to the concrete. The CONTRACTOR shall have, on the job site, a sufficient number of vibrators to insure that compaction can be started immediately after the concrete has been deposited in the forms.

The concrete shall be thoroughly worked around the reinforcement and embedded fixtures and into the corners of the forms.

Where conditions make compacting difficult or where the reinforcement is congested, batches of mortar containing the same proportions of cement to sand; as used in the concrete, shall first be deposited in the forms.

21.14. CURING

Provisions shall be made for maintaining concrete in a moist condition for at least 5 days after the placement of the concrete. Curing may be obtained by any one of the approved “Methods of Curing” subject to approval of the ENGINEER.

No structures, structural members, or other appurtenances shall be placed upon any foundation concrete for a minimum of 7 days after the foundation pour is completed, and the 7 day cylinder test results have been reported to the ENGINEER.

21.15. COLD WEATHER REQUIREMENTS

Adequate equipment shall be provided for heating the concrete materials and protecting the concrete during freezing or near-freezing weather. No frozen materials containing ice shall be used.

All concrete material and all reinforcement, forms, fillers, and ground with which the concrete is to come in contact shall be free from frost. Whenever the temperature of the surrounding air is below 40 degrees F all concrete placed in the forms shall have a temperature of between 50 degrees F and 70 degrees F, and adequate means shall be provided for maintaining a temperature of not less than 70 degrees F for 3 days or 50 degrees F for 5 days. The housing, covering or other protection used in connection with the curing shall remain in place and intact at least 24 hours after the artificial heating is discontinued. Salt or other chemicals shall not be used to prevent freezing. If the temperature of the surrounding air is less than 50 degrees F, the CONTRACTOR shall use a temperature recording device to record the temperature to prove the temperature was not less than 70 degrees F for 3 days or 50 degrees F for 5 days and provide a means to visually check the air temperature under the insulating blanket. The method for cold weather pouring and curing shall be approved by the ENGINEER and OWNER prior to concrete placement.

21.16. FORMS

Forms shall conform to the shape, lines and dimensions of the members, as shown on the drawings, and shall be substantial and sufficiently tight to prevent leakage of mortar. Any mortar that is leaked between and/or around forms or permanent surfaces shall be mechanically smoothed.

Forms shall be properly braced or tied together so as to maintain position and shape.

21.17. REMOVAL OF FORMS

Forms shall be removed in such a manner as to insure the complete safety of the structure. In no case shall the supporting forms or shoring be removed until the members have acquired sufficient strength to support safely their weight and the load thereon. In addition, forms shall remain in place a minimum of 24 hours after the end of the concrete pour.

21.18. CLEANING AND BENDING REINFORCEMENT

Metal reinforcement, at the time concrete is placed, shall be free from all rust, scale or other coatings that will destroy or reduce the bond.

Bends for stirrups and ties shall be made around a pin having a diameter not less than 2 times the minimum thickness of the bar. Bends for other bars shall be made around a pin having a diameter not less than 6 times the minimum thickness of the bar, except that for bars larger than 1 inch, the pin shall be not less than 8 times the minimum thickness of the bar. All bars shall be bent cold.

21.19. PLACING REINFORCEMENT

Metal reinforcement shall be accurately placed in accordance with the plans and shall be adequately secured in position by concrete or metal chairs and spacers.

21.20. SPLICES (REINFORCEMENT)

In general, splices in area of critical stress shall be avoided. Splices shall provide sufficient lap to transfer the stress between bars by bond and shear.

21.21. CONCRETE PROTECTION OF REINFORCEMENT

The reinforcement shall be protected by the thickness of concrete as shown on the drawings. Where not otherwise shown, the thickness of concrete over the reinforcement shall be as follows:

- A. Where concrete is deposited against the ground without the use of forms, not less than 3 inches.
- B. Where concrete is exposed to the weather, or exposed to the ground, but placed in forms, not less than 2 inches for bars more than 5/8 inches in diameter and 1-1/2 inches for bars 5/8 inches or less in diameter.
- C. In slabs and walls not exposed to the ground or to the weather, not less than 3/4 inch.
- D. In beams, girders and columns not exposed to the ground or to the weather, not less than one and 1-1/2 inches. In all cases the thickness of concrete over the reinforcement shall be in accordance with ACI 318, or its latest revision. Exposed reinforcement bars intended for future use shall be protected from corrosion by concrete or other adequate coverings.

21.22. CONSTRUCTION JOINTS

Joints not indicated on the drawings shall be so made and located as to not impair the strength of the structure. Where a joint is to be made, the surface of the concrete shall be thoroughly cleaned. In addition, vertical joints shall be thoroughly wetted and coated with a neat cement grout immediately before placing new concrete.

When deemed appropriate by the ENGINEER, the CONTRACTOR will dowel construction joints. The ENGINEER will specify the size, location, and placement.

21.23. CLEAN-UP OF FINAL SURFACES

The surface of the concrete shall be free of spalling and holes. The CONTRACTOR shall be responsible for filling in the holes with a method and materials approved by the ENGINEER and

OWNER. Any mortar that leaks through or around a form shall be mechanically removed to provide a smooth surface matching the surround concrete surface.

SURFACE REPLACEMENT AND SITE WORK

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SURFACE REPLACEMENT AND SITE WORK

Section 31

31.01. SCOPE OF WORK

Surface restoration shall be as specified in Section 21 of the Standard Water and Sewer Specifications. All surfaces shall be restored to at least the original condition prior to construction unless otherwise noted in these specifications. All lawn, pasture, and timber areas that are disturbed shall be final graded, fertilized, and seeded as specified (Section 31.06.B Permanent Seeding), and shall be incidental to the total contract price. A rubber-tired bobcat or similar utility tractor shall be utilized for both initial and final grading work in residential yard areas to minimize property damage; backhoes, dozers, etc., will not be allowed in yards.

Payment for clean-up will be incidental to the unit price of water main installation. To ensure that Final Clean-up/Seeding progresses in a timely manner, the OWNER shall withhold a sum equal to 12 percent of the installed cost of all water mains, until all final Clean-Up/Seeding work is satisfactory. This Clean-Up retainage is in addition to the standard overall project retainage and shall be used to hire a local contractor to complete any unsatisfactory work. Final Payment of the clean-up retainage will only be approved when the OWNER is satisfied with Final Clean-up/Seeding work.

Backfill for all traveled roadway, driveways, sidewalks, or other traveled surfaces, shall be made for the full depth and width of the trench with material specified for SELECT GRANULAR BACKFILL (CA-6 or equal). Only compacted SELECT GRANULAR BACKFILL shall be allowed in the trench, including bedding. This work shall be paid as "Compact Rock Backfill" per cubic yard as measured in place. The trench width shall not exceed 2 feet, unless otherwise approved by the ENGINEER. Outside normal business hours or when the CONTRACTOR is not on-site, the OWNER can add rock, if needed, and withhold from the CONTRACTOR'S retainage for their labor, equipment, and material.

In cases where water mains are crossing open areas where early settlement is not critical, backfill, from the centerline of the pipe to the surface, shall be made by any acceptable method which will not dislodge or damage the pipe or cause bridging action in the trench. Only select excavated materials free from clods or stones (larger than 3 inches) shall be used in backfilling up to 12 inches above the top of the pipe. Excess material shall be neatly rounded over the top of the trench to allow settlement of the trench. In final clean-up operations, the CONTRACTOR shall reshape the surface to level out any uneven settlement that has occurred. This shall be the case unless otherwise shown on the plans or as directed by the ENGINEER. The CONTRACTOR shall reshape any trenches within 3 days of written notice by OWNER or ENGINEER, or the OWNER can hire an outside contractor to complete the work and withhold the cost from the CONTRACTOR'S retainage.

Due to the location of much of the work around private property and within public thoroughfares, the CONTRACTOR's attention is called to the General Conditions of these specifications. It is imperative that the project sites be promptly maintained in a reasonably clean condition and that it not present any hazard or prolonged inconvenience to individual property owners or the public in general.

All areas trenched/disturbed between May 1 and December 31 shall be cleaned up, final graded, and permanent seeded by May 21 of the following year. All areas trenched/disturbed between January 1 and April 30 shall be cleaned up, final graded, and permanent seeded by September 30 of the same year. Failure to meet these guidelines will result in Liquidated Damages being assessed against the CONTRACTOR, at the established daily rate.

At the completion of the project, the CONTRACTOR will remove all waste materials, rubbish and debris from and about the premises as well as all tools, and surplus materials, and will leave the site clean and ready for occupancy by the OWNER. The CONTRACTOR will restore to their original conditions those portions of the site not designated for alteration by the Contract Documents.

The CONTRACTOR shall be responsible for obtaining all material storage locations and where not stored on OWNER's property, damage, or contamination (due to crop spraying or otherwise) that may occur and for clean-up at said sites; all incidental to the Contract price.

31.02. RIGHT-OF-WAY CLEARING

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31.03. EARTHWORK

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31.04. PAVING AND SURFACING

A. General

Restoration of surfaces shall include the removal of the existing surface, the disposal of surplus material, and the construction of new surfaces as indicated on the plans or specifications. The type of surface restoration required shall be shown on the plans.

The maximum trench width shall be as follows

2 feet unless otherwise approved by the OWNER/ENGINEER.

B. Removal of Pavement, Sidewalk, Driveway, and Curb

1. General

Wherever the pipe is located along or across an improved surface, the width of the trench shall be held as nearly as possible to the maximum width specified above in section 31.04.A. Where brick or concrete pavement, sidewalk, driveway or curbing is cut, the width of the cut shall exceed the actual width of the top of the trench by twelve (12) inches on each side or a total of two (2) feet. Exposed surfaces of Portland cement, oil and chip surface, asphalt, or asphaltic concrete shall be cut with a pavement saw before breaking. Care shall be taken in cutting to insure that a straight joint is sawed.

2. Payment

Work under this section is incidental to the CONTRACT.

C. Temporary Surface Above Excavation

1. General

Wherever pipes are constructed under traveled roadways, driveways, sidewalks, or other traveled surfaces, the temporary surface shall be placed over the top of the excavation as soon as possible after compaction. The temporary surface shall be SELECT GRANULAR BACKFILL - compacted CA-6. The top of the temporary surface shall be smooth and meet the grade of the

adjacent undisturbed surface. The temporary surface shall be maintained at the CONTRACTOR'S expense until final restoration of street surface is completed as specified. No permanent restoration of street surface shall be initiated until authorized by the ENGINEER, OWNER, or owner of street. The temporary surfacing shall be required over the entire width of the excavation but any width in excess of the specified width shall not be used in computing payment quantities.

2. Measurement

- a. No measurement for temporary surface will be made.
- b. Measurement for the Compacted Rock Backfill shall be in cubic yards of the actual excavation (length times average width times average depth) for locations of Hot Taps, Line Stops, Cut and Caps, etc. For typical trench locations the measurement shall be in cubic yards (length times average width times average depth) with a maximum width as specified in section 31.04.A.

3. Payment

Cost of furnishing, placing and maintaining and removing the temporary surface as described will be incidental to the bid unit price for "Removal and Replacement of ... (existing surface)". Payment for the Compacted Rock Backfill as described above shall be paid for at the CONTRACT unit price per cubic yard for "Compacted Rock Backfill - (Trench Backfill)".

D. Trench installed under Rock Driveway, Road, and Parking Lot

1. General

Wherever pipes are constructed under rock roadways, driveways, sidewalks, parking lots, or other rock surfaces, the trench shall be filled with compacted CA-6. The top of the trench surface shall be smooth and meet the grade of the adjacent undisturbed surface. The permanent surface shall be maintained at the CONTRACTOR'S expense until the end of the warranty period.

2. Measurement

Measurement for payment purposes will be computed by using the actual length, width, (maximum width as specified in 31.04.A) and average depth of the trench for which rock surface is placed less the depth of 6" surface coarse.

3. Payment

Cost of furnishing, placing and maintaining and removing the rock surface as described will be paid for at the CONTRACT unit price per cubic yard for "Compacted Rock Backfill."

E. Trench installed under Rock Alley Road

1. General

Wherever pipes are constructed under rock roadways, driveways, sidewalks, parking lots, or other rock surfaces, the trench shall be filled with compacted CA-6. The top of the trench surface shall be smooth and meet the grade of the adjacent undisturbed surface. The permanent surface shall be maintained at the CONTRACTOR'S expense until the end of the warranty period.

2. Measurement

Measurement for payment purposes will be computed by using the actual length, width, (maximum width as specified in 31.04.A) and average depth of the trench for which rock surface is placed less the depth of 6" surface coarse.

3. Payment

Cost of furnishing, placing and maintaining and removing the rock surface as described will be paid for at the CONTRACT unit price per cubic yard for "Compacted Rock Backfill."

F. Replacement of Permanent Type Pavement, Sidewalks, Curbs, Gutters, and Structures

1. General

The CONTRACTOR shall restore (unless otherwise specified or ordered by the ENGINEER) all permanent type pavements, sidewalks, driveways, curbs, gutters, shrubbery, fences, poles and other property and surface structures removed or disturbed during or as a result of construction operations to a condition which is equal in appearance and quality to the condition that existed before the WORK began. The surface of all improvements shall be constructed of the same material and match in appearance the surface of the improvement which was removed.

2. P.C. Concrete Pavement Surface

Where the existing pavement surface is Portland Cement Concrete, The pavement replacement shall consist of ten (10) inch unreinforced P.C. concrete pavement unless otherwise indicated on the plans. The ENGINEER can choose to match existing concrete thickness and reinforcement and require the new surface to be "doweled" to existing concrete pavement. Portland Cement Concrete shall conform to the applicable provisions of these specifications and shall have a compressive strength of thirty-five hundred (3,500) pounds per square inch at twenty-eight (28) days. Construction methods for Portland Cement Concrete pavement shall conform to the current requirements of the "Standard Specifications for Road and Bridge Construction" of the IDOT for Portland Cement Concrete pavement. Pavement joints in the replacement surface shall conform to and match the joints in the adjacent pavement area.

3. Hot Mix Asphalt Pavement Surface – Rigid Base

Where the existing pavement surface is hot mix asphalt and the base consists of a rigid material such as brick, Portland Cement Concrete, soil cement, natural cement or a combination of these materials, the base replacement shall consist of eight (8) inch (200 mm) Portland Cement concrete base course unless otherwise indicated on the plans. Portland Cement concrete shall conform to applicable provisions of these specifications and shall have a compressive strength of thirty-five hundred (3,500) pounds per square inch at twenty-eight (28) days. Construction methods for Portland Cement Concrete base course shall conform to the current requirements of the "Standard Specifications for Road and Bridge Construction" of the IDOT for Portland Cement Concrete base course. The surface replacement shall consist of a bituminous prime coat and two (2) layers one and one half (1-1/2) minimum thicknesses totaling a three (3) inch minimum thickness hot mix asphalt surface course conforming to the IDOT current "Standard Specifications for Road and Bridge Construction" for Hot Mix Asphalt Surface Course. The CONTRACTOR shall submit a mix design to the ENGINEER for approval. The mix design shall have been used and approved on an IDOT project. The ENGINEER can choose to match existing concrete thickness and reinforcement and require the new surface to be "doweled" to existing concrete pavement and minimum (2) layers of Hot Mix Asphalt meeting existing thickness.

4. Hot Mix or Bituminous Treated Surface over a Flexible Base.

Where the existing pavement is hot mix asphalt or bituminous surface treatment and the base consists of a flexible material such as gravel or crushed stone, the base replacement shall consist of a minimum of eight (8) inch compacted thickness of material unless otherwise indicated on the plans and shall conform to either one of the following course aggregate materials as described in the IDOT "Standard Specifications for Road and Bridge Construction."

- a. CA6
- b. CA9
- c. CA10

Placing and compacting of the base course material shall conform to the methods described in the above-referenced specifications for aggregate base course. The surface replacement shall consist of a bituminous prime coat and a two (2) layer hot mix asphalt surface plant mix totaling three (3) inches in thickness conforming to the IDOT "Standard Specifications for Road and Bridge Construction".

5. Brick Pavement Surface

- a. An eight (8) inch Portland Cement Concrete base reinforced unless otherwise indicated on the plans. Portland Cement Concrete shall conform to applicable provisions of these specifications and shall have a compressive strength of thirty-five hundred (3,500) pounds per square inch in twenty-eight (28) days. Construction methods for Portland Cement Concrete base shall conform to the current requirements of the IDOT's "Standard Specifications for Road and Bridge Construction" for Portland Cement Concrete base course.
- b. A three-fourth (3/4) inch sand cushion.
- c. Brick wearing surface. Sound brick which is removed shall be cleaned and reused. When additional bricks are required they shall conform as is reasonably possible, to the color, size and quality of existing brick. Jointing material for brick wearing surface shall be the same as used in the adjacent existing brick surface. The finished surface shall be smooth, well designed, and meet the grade of adjacent existing surfaces.

6. Concrete Sidewalks, Driveways, Curb, Curb and Gutter, and Steps

Where necessary or shown on the plans, to remove and replace concrete sidewalk, driveways, curb and curb and gutter, replacements shall be made as follows:

Concrete sidewalks, driveways, curbs and curb and gutter shall be replaced with concrete meeting the applicable provisions of these specifications and having a compressive strength of not less than thirty-five hundred (3,500) pounds per square inch at twenty-eight (28) days. Minimum thickness shall be the greater of existing surface or four (4) inches for sidewalks and six (6) inches for driveways unless otherwise indicated on the Plans. Walks on slopes 10:1 or steeper shall be constructed with steps conforming to the slope. The steps shall have a six (6) inch riser and a twelve (12) inch minimum tread. Sidewalks shall be replaced with sidewalks and ramps in full compliance with all ADA regulations. CONTRACTOR is responsible for any redesign needs to ensure the replacement sidewalk/s is/are in full compliance with all current ADA requirements including transition to existing sidewalk. This work shall be included in the contract bid price for "Removal and Replacement Side walk". No additional compensation will be allowed.

Curb or curb and gutter dimensions and cross-sections shall conform, as nearly as possible, with the existing installations. One-half (1/2) inch preformed expansion joints shall be placed at intervals not exceeding fifty (50) feet and at the junctions with existing work or as shown on the plans. Sidewalks shall be finished to match existing adjacent sidewalk surfaces, unless otherwise specified or directed by the ENGINEER.

Concrete mix, reinforcement, base, contraction joints, and curing shall conform to the current requirements of the IDOT's "Standard Specifications for Road and Bridge Construction" for Portland Cement Concrete base course.

7. Brick Sidewalks and Driveways

Brick sidewalks or driveways shall be replaced with brick, using salvaged materials when in good condition. Where shown on the plans, or directed by the ENGINEER, brick sidewalks or driveways shall be replaced with concrete in accordance with Section 31.04.A, in which case payment shall be made at the unit prices bid for concrete sidewalk or driveway replacement.

8. Measurement

Removal and replacement of permanent pavements and driveways will be measured for payment in square yards. Removal and replacement of sidewalks will be measured for payment in square feet.

Removal and replacement of curb, or curb and gutter, crossing a pipe will be measured for payment in feet. The length will be measured along the flow line of the curb, or curb and gutter, and will be limited to the distance specified in Section 31.02.A.

Except as otherwise shown on the plans or directed by the ENGINEER, payment quantities for sidewalk, driveways, curb and curb and gutter removal and replacement where actually removed and replaced and where such items are parallel or approximately parallel to the proposed pipe line, shall be included only when the distance from the edge of the trench (as determined from the assumed top of pipe trench widths shown on the Plans) is less than three (3) feet from the edge of the sidewalk, driveway, curb or curb and gutter. Where the items are at a greater distance from the trench, any damage shall be replaced at the CONTRACTOR'S expense. Where sidewalk parallel to a proposed pipe line is to be removed and replaced, the ENGINEER will determine the extent of such removal and replacement. The CONTRACTOR may elect to construct the conduit in a tunnel with the approval of the ENGINEER. In such an event, he/she shall be compensated by payment of the amounts of driveways, sidewalks, or curbs and gutters which would have been measured for payment had open cut methods been employed.

9. Payment

Payment for "Pavement Removal and Replacement" of the appropriate material will be made at the CONTRACT unit price per square yard for the type of pavement or driveway replaced. Payment for removal and replacement of concrete or brick sidewalk will be made at the CONTRACT Unit price per square foot for "Concrete or Brick Sidewalk Removal and Replacement". Payment for removal and replacement of concrete curb or concrete curb and gutter will be made at the CONTRACT unit price per foot for "Curb or Curb and Gutter Removal and Replacement".

31.05. SITE IMPROVEMENTS

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31.06. LANDSCAPING

A. General

The CONTRACTOR shall be responsible for the repair of any damage to structures or equipment resulting from landscaping operations, and shall remove excess soil and other debris from the site before final acceptance of the project.

The CONTRACTOR is responsible for keeping all plants in good growing condition until final acceptance of the project, including watering as necessary for seed germination and continued plant growth. Non-potable water may be used.

Plants that die before final acceptance must be replaced. The cost of replacement plants shall be borne by the CONTRACTOR except for replacement for loss from vandalism or physical damage by animals, fire, etc., or losses due to "Acts of God". Dry weather is excluded from "Act of God"

B. Permanent Seeding

The work shall consist of furnishing all labor, equipment, and materials for seeding a permanent grass mixture on all road ditches, structure sites, and yards, within the work area limits which are disturbed during completion of work. The surfaces of earthen embankments shall also be seeded when necessary. Permanent seeding will only be performed during the following periods:

Fall: August 1 - September 30

Spring: March 1 - May 21

All areas trenched between May 1 and December 31 shall be permanent seeded by May 21 of the following year. All areas trenched between January 1 and April 30 shall be permanent seeded by September 30 of the same year. Failure to meet these guidelines will result in Liquidated Damages being assessed against the CONTRACTOR, at the established daily rate.

1. Fertilizer - Immediately prior to seeding preparation, fertilizer shall be placed over the areas to be seeded. The fertilizer shall be a complete commercial fertilizer of organic base containing, in available form by weight, 6% Nitrogen, 12% Phosphorous, and 12% Potash. It shall be free flowing and suitable for application with approved equipment, delivered to the site in bags or other convenient containers, each fully labeled with the following:

- a. Name and address of manufacturer.
- b. Name brand or trademark.
- c. Number of net pounds of ready mixed materials in the package.
- d. Chemical composition of analysis.
- e. Producer's guarantee of composition.

Fertilizer shall be evenly distributed with an approved mechanical spreader at a rate of 500 pounds per acre.

If a heavy or long rain (as judged by the ENGINEER) should fall on the plant site after fertilizer has been applied but before the seedbed has been prepared, the CONTRACTOR shall re-fertilize those areas affected, at no additional compensation.

2. Seedbed Preparation - All gullies and washes shall be filled to conform to the desired shape and the entire area to be seeded shall be reasonably smooth before actual seedbed preparation is begun. Stones larger than 4 inches in diameter, sticks, stumps, and other debris will be removed. At this point, the required fertilizer shall be applied uniformly. Immediately after application of the fertilizer, the area to be seeded shall be finely pulverized to a minimum depth of 3 inches either by spading and raking or by plowing, discing, harrowing, or other methods approved by the ENGINEER. The CONTRACTOR shall suspend operations when the soil is too wet, too dry, frozen or otherwise untillable. Seeded areas shall not be compacted through their use for such purposes as access roads or parking areas after seedbed preparation is completed. If rain should pack the seedbed prior to seeding, it shall be prepared again at no additional compensation.
3. Seed - Seeding shall be done immediately after seedbed preparation. The seed shall be applied at a uniform rate over the entire area. Grass seed shall be fresh, clean, and new crop seed composed of the following varieties mixed in the proportion by weight as shown, and testing the minimum percentages of purity and germination indicated. All seed used shall be labeled in accordance with U.S. Department of Agriculture Rules and Regulations under the Federal Act in effect at the time of the installation of the work involved under seeding operations. All seed shall be furnished in sealed standard containers. Seed may be mixed by dealer or by an approved method on the site. Weed seed shall not exceed .35% by weight of the total amount supplied. If seed is mixed on the site, dealer's guaranteed analysis for each variety must be furnished. Individual varieties must be delivered in separate unopened original containers should the CONTRACTOR desire to mix the seed on the site.

The mixture of grass seed used for seeding areas flatter than 3:1 slopes shall consist of the following proportions by weight per acre:

Name	Lbs	Percent	Percent
	Per Acre	Purity	Germination
Turf Type			
Fescue	75	98	85
Perennial			
Ryegrass	20	98	90

Areas with slopes 3:1 or steeper shall have an additional seeding of the following kind and quantity of seed:

Name	Lbs	Percent	Percent
	per acre	Purity	Germination
Perennial			
Ryegrass	30	98	90

The mixture of grass seed used for seeding the inside area of the earthen water retaining structures shall consist of the following proportions by weight per acre:

	Lbs	Percent	
Name	per acre	Purity	Germination
Reed Canary			
Grass	15	98	90
Tall Fescue	15	98	90

4. Seeding Materials - No seed shall be sown during high winds or when the ground is not in proper condition for seeding (as judged by the ENGINEER). The ENGINEER shall examine and approve any equipment to be used. Prior to starting work, seeders shall be calibrated and adjusted to sow seeds at the proper seeding rate. The ENGINEER shall be notified 48 hours prior to beginning the seeding operations so the trial seeding runs can be made to insure the proper seeder calibration.

Within 12 hours after seeding, the area shall be rolled at right angles to the runoff with an approved type roller or cultipacker to compact the seedbed and place the seed in contact with the soil.

5. Mulching - Immediately after rolling of the seedbed, mulch shall be applied to all the earthen embankments, road ditches, drainage swales and any slopes of 3:1 or steeper. Mulching will not be required on the remaining areas of the site. Mulch shall be straw of wheat, rye, oats, or other approved stalks and shall be air dried. Hay will not be permitted. Mulch shall be hand or machine applied in a loose enough layers to permit air to circulate but compact enough to reduce erosion. If baled mulch is used, care shall be taken that the material is in a loosened condition and contains no lumps or knots of compacted material.
6. Watering - Immediately after the seeding operation is complete, the CONTRACTOR shall maintain a daily sprinkling schedule of several hours until such time as the seed commences to grow. Sprinklers approved by the ENGINEER will be used. Dosing with open ended or nozzled hoses will not be permitted.
7. Reseeding and Maintenance - Seeding operations shall be repeated until a satisfactory uniform stand of grass is secured. Damage resulting from erosion, gulleys, washouts, or other causes shall be repaired by filling with topsoil, tamping, refertilizing and reseeding by the CONTRACTOR at no additional compensation. The CONTRACTOR shall mow and maintain all seeded areas until final acceptance of the project.
8. Crop Reduction Plan (CRP) Seeding - The CONTRACTOR shall contact the local NRCS office and receive approval of grass seed and fertilizer mixtures prior to placing any seed or fertilizer on any CRP land.

C. Planting

1. General - Planting shall be as specified in the Illinois Standard Specifications for Road and Bridge Construction except as amended herein. In case of conflict with the Standard Specifications, these Specifications shall govern.

Ball rooted plants are designated BR, and balled and burlapped plants B&B. When plants of the kinds or sizes specified are not available within a reasonable distance, substitutions may be

made upon request by the CONTRACTOR, if approved by the OWNER or the ENGINEER. Plants larger than specified in the plant list may be used if approved by the ENGINEER, but the contract unit price may not be increased. If larger plants are approved, the spread of roots or ball of earth shall be increased in proportion to the size of the plant.

2. Fertilizing - Fertilizing shall conform to the Illinois Standard Specifications for Road and Bridge Construction, and shall contain 6% Nitrogen, 12% Phosphorous, and 12% Potash by weight.
3. Planting Materials - Materials used for planting trees shall be as follows:
 - a. Bracing - materials used for staking, bracing, or guying shall conform to the Illinois Standard Specifications for Road and Bridge Construction except as amended herein. Buying and staking trees shall be done as directed by the ENGINEER.
 - b. Hose - Hose, if used, shall be two-ply fiber-bearing garden hose, not less than 1/2 inch inside diameter.
 - c. Wrapping Material - Wrapping material shall be first quality, heavy waterproof crepe paper manufactured for tree wrapping.
 - d. Mulch - Mulch shall be wood chips or ground bark.
4. Pruning - Each tree and shrub shall be pruned in accordance with AAN Standards of the Illinois Standard Specifications for Road and Bridge Construction.
5. Maintenance - Plant care shall be in accordance with the Illinois Standard Specifications for Road and Bridge Construction and as specified herein. The CONTRACTOR shall be responsible for maintenance of each plant immediately after planting until final acceptance of the project.

31.07. FENCING

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31.08. DEMOLITION, SALVAGE, AND ABANDONMENT

This work shall consist of the removal and satisfactory disposal of existing structures or portions thereof, as shown on the Drawings and specified herein. Removal operations, whether complete or partial, shall be conducted with the least interference to the water distribution process, and shall not be started until permitted by the ENGINEER. The CONTRACTOR's attention is directed to Section 11.02.

Materials that are to be salvaged shall be carefully inventoried, removed, and stockpiled on the site where designated by the OWNER. If the CONTRACTOR damages or destroys such material, he shall restore or replace it without additional compensation.

Materials that are not to be salvaged and stockpiled shall become the property of the CONTRACTOR, and he/she shall remove and dispose of them away from the site. The salvage value of the material shall be considered in determining the contract price.

Except as otherwise specified, existing structures to be demolished shall be removed to at least 2 foot below the proposed elevation shown for the subgrade or ground surface, and all portions below this elevation that interfere with construction, as determined by the ENGINEER, shall be removed.

When structures are to be partially removed, the CONTRACTOR shall be responsible for any damage done to the portions that are to remain. Old concrete or masonry shall be carefully removed by drilling, chipping, or other methods approved by the ENGINEER, leaving a surface that will permit a neat joint with new construction, or otherwise be satisfactory for the purpose intended. Expansion structures shall be as shown on the Drawings. Where existing bars are to extend from the remaining portions of the existing structures into new construction, the concrete shall be removed, leaving the projecting bars clean and undamaged. Where projecting bars are not to extend into the new construction, they shall be cut off flush.

All existing pipe that will no longer be used shall have the ends securely grouted and sealed with a lean concrete slurry for a distance of at least 10 feet from the ends of the pipe; or the pipe ends shall be properly capped.

31.09. EROSION CONTROLS

An NPDES permit for construction site activities is not required for this project, total land disturbance is expected to be less than one acre. However the OWNER requires all erosion controls to be installed as if a full SWPPP and NPDES permit were in place.

In addition to the erosion controls shown on the Drawings the CONTRACTOR shall exercise all precautions and take whatever measures necessary to prevent soil erosion. Earthwork operations shall be planned so that the exposure of bare soil is minimized, both as to extent and duration. The CONTRACTOR will be responsible for installing and maintaining the erosion control measures as necessitated by field conditions and construction methods. Erosion control measures shall generally adhere to this specification section. All disturbed areas not to be re-disturbed for more than 14 days shall be stabilized within 7 days. All costs associated for the erosion control measures implemented will be included in the CONTRACTOR'S unit bid price for the BMP installed as described in these specifications. Additionally, maintenance of the erosion control measures, as required, will be incidental to the total contract price.

If, in the opinion of the OWNER or ENGINEER, excessive soil erosion is occurring due to construction methods or other factors that are controllable by the CONTRACTOR, the CONTRACTOR shall immediately remedy the problem under the ENGINEER's direction; remedial measures may include, but not be limited to the following: installation of inlet protection, pre-manufactured ditch checks, silt retention fences, construction of temporary sediment ponds, reseeding, intermediate mulching, regrading, and removal of earth stockpiles. In such instances, all remedial measures required to prevent soil erosion and the associated maintenance of such measures shall be incidental to the total contract price. Any and all fines received by the OWNER regarding NPDES and erosion control will be passed to the CONTRACTOR and is incidental to the contract.

A. Trench Stabilization

When slopes exhibit excessive erosion, and as directed by the ENGINEER or OWNER or as shown on the Drawings, and described in the SWPPP, erosion checks shall be installed at necessary intervals to prevent ditch washout.

Erosion checks shall be of the following types and payment will be as indicated:

1. Planks, 8 inches to 10 inches wide, shall be placed with 2 inches to 4 inches exposed. Planks shall be approximately 3 feet wider than the trench or ditch and shall be staked into solid ground at both ends. A sufficient number of plank, shall be supplied to serve as a sediment barrier for the entire width of the trench or ditch. The CONTRACTOR will be paid the unit bid price for each ditch check regardless of the number of planks needed.
2. Crushed gravel shall be placed in the top 15 inches of the trench for sufficient trench length to prevent washout and shall be paid for at the CONTRACTOR's unit bid price per lineal foot.
3. Dirt Berms (a shallow dam of dirt 18" H X 24" W X 15' L) shall be placed at a 35 degree angle to the trench flow line to divert water from eroding the trench line and associated backfill. The CONTRACTOR will be paid the unit bid price for each.
4. Mulch, straw, or some other material approved by the ENGINEER shall be spread along trench surface to provide protection for uncompacted earth, and shall be paid for at the CONTRACTOR'S unit bid price per lineal foot.
5. Pre-manufactured Check Dams shall be installed perpendicular to the trench or ditch as per the manufacturers recommendations. A sufficient number of check dams shall be supplied to serve as a sediment barrier for the entire width of the trench or ditch. The CONTRACTOR will be paid the unit bid price for each ditch check regardless of the number of check dams needed.
6. Silt fence shall be installed as per the NRCS specifications and shall be placed across the trench or ditch perpendicular to the slope as necessary to prevent the loss of sediment. The CONTRACTOR will be paid the unit bid price per lineal foot for Silt Fence.
7. Temporary seeding of the trench lines may be used to control erosion provided the temporary seeding activity corresponds with effective seeding/germination time periods. Where temporary seeding is shown on the Drawings for ditch crossings, either with other erosion control measures or as a standalone measure, the CONTRACTOR shall bid a price for EACH site. The CONTRACTOR shall visit each site as necessary to determine the amount of material and labor required. The CONTRACTOR'S bid price for each site shall hold true if additional sites are added during construction. Where temporary seeding is required due to slopes in pastures and timbers, the temporary seeding shall be paid for at the CONTRACTOR'S unit bid price per lineal foot. Temporary seeding that is paid per lineal foot must be approved by the ENGINEER.

Should erosion checks installed not be adequate, additional erosion checks shall be installed until the trench is stabilized. All NECESSARY erosion checks will be paid for as set forth in the CONTRACTOR'S unit bid prices.

B. Slope Stabilization

Where slope stabilization cannot be maintained due to steepness of the grade and/or physical limitations encountered (flowing water at ditch crossing), erosion controls shall be installed as directed by the ENGINEER and/or as shown on the Drawings and described in the SWPPP:

1. Erosion control blanket constructed of 70% agricultural straw, 30% coconut fiber, encased between two natural fiber, biodegradable nets, installed per the manufacturer's recommendation. This blanket is to be used where rip rap is not an option. Erosion blanket is to be North American Green SC 150 BN, or equal. Placement of erosion blanket will be paid at the CONTRACTOR's unit bid price per square foot.

2. Silt fence shall be installed as per the NRCS specifications. Where silt fence is placed to contain sediment from runoff from slopes, hills, berms, or spoil piles, place the silt fence along the contour of the slope, the base of the slope, or as shown on the plans and shall be placed as necessary to prevent loss of sediment. Silt fence shall be paid at the CONTRACTORS unit bid price per lineal foot.
3. Temporary seeding of the trench lines may be used to control erosion provided the temporary seeding activity corresponds with effective seeding/germination time periods. Where temporary seeding is required due to slopes in pastures and timbers, the temporary seeding shall be paid for at the CONTRACTOR'S unit bid price per lineal foot. Temporary seeding that is paid per lineal foot must be approved by the ENGINEER.

C. Perimeter Protection

Where required by the site and/or construction practices, and as shown on the Drawings and described in the SWPPP, perimeter protection measures shall be implemented to prevent the migration of sediment off site.

1. Where required silt fence shall be installed as per the NRCS specifications. Where silt fence is placed to contain sediment from runoff from slopes, hills, berms, or spoil piles, place the silt fence along the contour of the slope, the base of the slope, or as shown on the plans or the perimeter of the property as necessary to prevent loss of sediment. Silt fence shall be paid at the CONTRACTORS unit bid price per lineal foot.
2. Temporary sediment basins shall be constructed as shown on the drawings or as directed by the ENGINEER and shall be paid at the CONTRACTOR'S lump sum bid price.

D. Inlet Protection

Various inlet protection practices are used where storm drain inlets are to be operational during construction operations and before permanent stabilization of the disturbed drainage area, to protect from receiving sediment-laden run off from the construction site. The methods of inlet protection are effective for areas that are paved and areas under construction. Sheet flow or concentrated flows are permitted with these methods. These methods of inlet protection are not applicable for direct discharges from pumps unless the pump discharges are treated prior to discharging to the inlets. The inlet protection practice shall be constructed in a manner meeting the requirements for the different types of inlet protection required.

1. Storm inlets in paved areas requiring protection shall utilize a Gutter Buddy "or equal" type BMP and shall be installed per manufacturer's recommendation.
2. Storm inlets not in paved areas requiring protection shall utilize a silt filter fence, triangular silt dike, or other method approved by the OWNER/ENGINEER. The BMP shall be installed per manufacturer's recommendation. Straw/hay bales will not be allowed as a standalone BMP.

Properly installed inlet protection BMPs or methods approved by the OWNER/ENGINEER shall be paid at the CONTRACTOR's unit bid price per each inlet.

Additional erosion control practices may be used with prior approval from the ENGINEER and OWNER. Payment for additional erosion control practices will be negotiated as necessary. Maintenance of all erosion control structures must be performed by the CONTRACTOR at no additional cost to the owner.

31.10. ROCK EXCAVATION

Rock excavation includes removal and disposal of rock material encountered that cannot be removed by conventional methods. Rock material includes boulders 1/2 Cu. Yd. or more in volume, and rock in beds, ledges, unstratified masses, and conglomerate deposits. When excavation of the rock material requires systematic use of pneumatic or hydraulic tools or a rock trencher, rock excavation shall be allowed under guidelines of this section of Specifications and Section 20-2.05 of the Standard Specifications, and paid for at the rate specified in the Bid Schedule. Shale, boulders (less than 1/2 Cu.Yd. in size), sandstone, gravel, and similar rocky material that can be removed by conventional methods **WILL NOT** be considered as rock excavation nor allowed for payment. Where blasts are made, the excavation shall be covered with brush, timber, or matting to prevent danger to life and property, and the CONTRACTOR shall secure a special permit from the local governmental authorities for blasting when required. Care shall be taken not to damage adjacent structures, property, or site improvements; or weaken the bearing capacity of rock subgrade when using explosives. Before starting work in areas where rock excavation will be required, the existing condition of adjoining properties shall be verified. Photographs shall be taken to record any existing settlement or cracking of structures, pavements, and other improvements. A list of such damages shall be prepared, verified by dated videos and signed by the CONTRACTOR and others conducting the investigation.

For water main excavations for PVC pipe up to 12 inches in diameter, rock shall be excavated to a width of at least 18 inches more than the inside diameter for PVC pipe, for the entire depth of the excavation. Rock excavation for pipe will be at least 6 inches below the bottom of the pipe and at least 3 inches below the bottom of the bell of a joint. For water main excavations for PVC pipe 14 inches in diameter and greater, rock shall be excavated to a width of at least 24 inches more than the inside diameter for PVC pipe, for the entire depth of the excavation. Rock excavation for pipe will be at least 9 inches below the bottom of the pipe and at least 6 inches below the bottom of the bell of a joint. Before the pipe is laid, the base of the excavation shall be replaced with a cushion of SELECT GRANULAR BACKFILL. All irregularities of the rock are to be filled with compacted granular backfill as well. In addition, "soft" rock (i.e., rock not allowed for payment as rock excavation, but that can be removed by conventional methods) shall be properly bedded with a cushion of SELECT GRANULAR BACKFILL, to avoid rough edges or other irregularities from damaging the water pipe.

The CONTRACTOR, on encountering rock via the trenching/open cut method, shall sufficiently uncover various spot locations to assure the overall extent of rock in that particular location. The CONTRACTOR, on encountering rock via the directional boring method, shall sufficiently prove the overall extent of rock in that particular location by either accurate records of the pressure at the bore head or uncovering spot locations as directed by the ENGINEER/OWNER. In either case he shall immediately notify the ENGINEER/OWNER, who either (1) will approve rock excavation in that area as necessary, or (2) will provide the CONTRACTOR with an alternate water line routing which could produce a location that eliminates the necessity of all/part of the rock excavation.

The CONTRACTOR must understand that if it is the ENGINEER'S/OWNER'S decision to relocate the water main to avoid the encountered rock, a reasonable time lapse to obtain alternate routing would be necessary. All direct costs involved in re-routing of the water line to a different location to avoid rock excavation will be borne by the OWNER.

It shall be the CONTRACTOR's responsibility to dispose of all excavated rock off site, to clean up debris, and to provide earthen or granular backfill to replace that rock material removed. This work is included in the unit price for Rock Excavation. The CONTRACTOR has five working days from original excavation to remove the rock off site. If after this period of time the rock is not removed from

the site, the OWNER has the right to hire an outside agency to remove the rock in a timely manner and these costs shall be withheld from the final Clean-Up/Seeding retainage funds.

Rock excavation by the trenching/open cut method shall be paid for at the contract unit price per cubic yard determined by measuring the average length, width, and depth of the area of rock removal. However, the OWNER will pay for no more than 18 inches plus the I.D. of the water main for trench width and 48 inches plus the ID of the water main for trench depth, for water main up to 12 inches; or 24 inches plus the I.D. of the water main for trench width and 60 inches plus the I.D. of the water main for trench depth for water main 14 inches in diameter and greater; whether in rock or in a combination of rock and earth. In addition, only Rock Excavation as defined above will be included in the measurement for a particular vertical and/or horizontal profile (i.e., soil or soil/rock material overlaying, intermixed with, or underlaying solid rock will not be included), even if a rock trencher is utilized for the area of removal in question.

Rock Excavation by the directional boring method shall be paid for at the contract unit price per cubic yard determined by measuring/estimating the average volume (diameter of rock cutter & estimated length of rock) of the rock removal. However, the OWNER will pay for no more than 1.3 times the diameter of the pipe. In addition, only Rock Excavation as defined above will be included in the measurement for a particular vertical and/or horizontal profile (i.e., soil or soil/rock material overlaying, intermixed with, or underlaying solid rock will not be included), even if a rock cutter is utilized for the area of removal in question. Once the quantity for rock excavation for a particular area has been measured in the field and submitted by the CONTRACTOR and approved for payment by the OWNER, the CONTRACTOR waives any and all rights to request a change in the quantity in the future.

31.11. UNSUITABLE BACKFILL MATERIAL

All backfill material up to a height of 12 inches above the pipe shall be free from rocks greater than 3 inches in diameter and 5 inches in length, frozen material, clubs, stumps, debris, etc.

Where there is a deficiency of suitable backfill material due to a rejection of part or all of the excavated material as unsatisfactory for backfill purposes, the CONTRACTOR shall furnish satisfactory backfill material wasted from trench excavation in other locations or from other sources furnished by the CONTRACTOR.

Where creek gravel, shelf rock, boulders, etc., removed by conventional methods, are encountered in the pipe installation process, all loose rock shall be removed from the bottom of the trench before the pipe is laid. The pipe shall be bedded in 6 inches of suitable backfill material. The initial backfill up to a depth of 12 inches above the pipe shall consist of suitable backfill.

The CONTRACTOR shall be responsible for disposal (hauling away) of any/all unsuitable backfill material that may not be utilized on the job site. The CONTRACTOR has 5 working days from original excavation to remove the unsuitable backfill material off site. If after this period of time the unsuitable backfill material is not removed from the site, the OWNER has the right to hire an outside agency to remove the unsuitable backfill material in a timely manner and these costs shall be withheld from the final Clean-Up/Seeding retainage funds.

Backfill furnished and work performed (including disposal operations) under these circumstances shall be paid for at the contract unit price per linear foot for "Unsuitable Backfill Material", as determined by measurement in the field.

INSTALLATION OF WATER MAIN AND APPURTENANCES

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INSTALLATION OF WATER MAIN AND APPURTENANCES

Section 41

41.01. SCOPE OF WORK

The work to be performed under this section shall include all materials, labor, equipment, and all other facilities necessary for the installation of the water mains by the trench method and for the installation of appurtenances as shown on the drawings and/or herein specified.

41.02. CONSTRUCTION METHODS

Construction methods recommended in the current edition of the Standard Specifications for Water and Sewer Main Construction in Illinois, as far as applicable, shall be followed. In case of conflict with the Standard Water and Sewer Specifications, these Technical Provisions shall govern. Installation methods shall also conform to the manufacturer's recommendations for the type of pipe being installed, unless specified differently in this Section. All construction and installation shall also comply with the most recent version of the Illinois State Plumbing Code.

For installation criteria specific to the material type of water main to be utilized, refer to Section 51 "Water Main, Fittings, and Appurtenances" of these Specifications.

For installation criteria regarding the boring or boring and jacking of water mains and service lines, refer to Section 54 of these Specifications.

41.03. EXCAVATION (TRENCH METHOD)

The trench shall be excavated so that the water main will have a minimum of 42 inches of cover, unless otherwise indicated on the plans, a road or railroad permit. Where a firm foundation is not encountered at the grade established, due to soft, spongy or other unsuitable soil, all such unsuitable soil under the pipe and for the width of the trench shall be removed and replaced with well compacted SELECT GRANULAR BACKFILL, hereafter referred to as "bedding".

The cost of furnishing and placing bedding for the purpose as described above, will be considered as incidental work and no additional compensation will be allowed.

41.04. BACKFILLING (TRENCH METHOD)

Where water mains are crossing open areas where early settlement is not critical, backfill shall be made by any acceptable method which will not dislodge or damage the pipe or cause bridging action in the trench. Excavated material or material from other sources furnished by the CONTRACTOR free from clods (larger than 3 inches) or rock/stones shall be used in backfilling up to 12 inches above the top of the pipe (initial backfill). Excess material shall be neatly rounded over the top of the trench as directed by the ENGINEER to allow for settlement of the trench. In final cleanup operations, the CONTRACTOR shall reshape the surface to level out any uneven settlement that has occurred.

For backfilling under rigid and non-rigid surfaces, including sidewalks, streets, roadways, gravel driveways, and gravel entrances, bedding and initial backfill shall be with SELECT GRANULAR BACKFILL (CA-6 or equal). The initial backfill material shall be worked around and beneath the water pipe and properly compacted in suitable quantities until the pipe is completely covered and stabilized, before the final backfill is permitted. The final backfill shall be as indicated on the plans, deposited for the remaining depth of the trench/excavation, and compacted to the satisfaction of the ENGINEER.

Backfilling shall not be done in freezing weather without the permission of the ENGINEER, and it shall not be made with frozen materials. No backfill shall be made where the materials already in the trench are frozen.

Backfilling operations at fittings, gate valves, and hydrant locations shall not occur until all materials and work have been viewed by the OWNER, ENGINEER, or the Resident Project Representative.

No wood shall be allowed in the trench to shim or block out the water main, control the bend of a pipe, or discarded in the trench. The CONTRACTOR

41.05. DRAINAGE DITCH / CREEK CROSSINGS

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41.06. WATER MAINS AND WATER SERVICE LINES NEAR SEWERS

See Standard Specifications for Water and Sewer Construction.

41.07. PRESSURE TESTING OF WATER MAIN AND EQUIPMENT

All tests and testing equipment, including a pressure gauge with maximum graduations of 5 psi and approved by the RPR, shall be provided by the CONTRACTOR at no cost to the OWNER. Prior to performance of the test all air shall be expelled from the pipeline to the satisfaction of the ENGINEER. This may be accomplished by means of hydrants or other means. If required, taps shall be made at high points where air relief valves are not called for on the drawings. Such taps shall be plugged after testing is complete. Pressure test and leakage test procedures should comply with the Standard Specifications, Section 41-2.14 and AWWA C600 and C605 except for the following; “A key criterion for the pressure test is that the measured water pressure within the main (after reaching the required test pressure) should not vary by more than 5 psi during the duration of the test.” shall be replaced with the following: “A key criterion for the pressure test is that the measured water pressure within the main(after reaching the required test pressure) should not vary from starting pressure during the duration of the test.”. The leakage test is not an acceptable formal test for passing a water main, only the pressure test is allowable.

Pressure 50% in excess of working pressure, as measured at the point of lowest elevation, shall be applied for not less than 1 hour, and all pipe, fittings, valves, hydrants, and joints shall be carefully examined for defects. Leaking joints shall be remade and then retested.

The CONTRACTOR shall have the full test pressure applied to the water main segment, and verify that the water main segment is holding pressure, prior to notifying the resident project representative

to observe the formal 1 hour pressure test. Pressure test observation requests after 3:30 P.M. will be performed the next working day.

In the event air is admitted to the pipeline after being expelled for the hydrostatic tests, such air shall be removed prior to completion of the system and acceptance by the OWNER. The air may be removed by the methods described in above. In no case shall the system be placed in operation prior to the removal of the air.

41.08. DISINFECTION OF WATER MAIN AND EQUIPMENT

A. Preliminary Flushing -

Per Section 41 of the Standard Specifications, disinfection of all water mains shall be carried out in accordance with AWWA C651. The main shall be flushed as thoroughly as possible with the water pressure and outlets available. The CONTRACTOR shall remove all of the internals of any hydrant during initial flushing of the water main, in order to prevent rocks, dirt, etc., from damaging the working parts of the hydrants. Flushing shall be done after the pressure test has been made. Even with utilizing these flushing procedures, care should be used in laying the pipe to keep heavier solids and foreign material out of the pipe. All flushing operations shall be coordinated with the OWNER's licensed operator and may be regulated by the OWNER's licensed operator to prevent water loss/pressure to their customers. The CONTRACTOR may not be able to flush multiple hydrants simultaneously, and should bid this portion of the work accordingly.

In addition, 2 "pigs" shall be flushed through each segment of water main to aid in the removal of any solids, air, and foreign material. The pigs shall be marked for easy identification and inserted at the point of connection for each line segment, and an additional two pigs shall be inserted at each branch of the main line (i.e., all new water main installed shall be pigged). Retrieval of the pigs and discharge of the water from the initial flushing operation shall be located a minimum of 20 feet away from the water main trench and in such a location that ensures all of the flushed water travels away from the water main. The discharge end of the pipe shall be a minimum of 18 inches above the ground before and during flushing. The pigs shall not be reused. Used pigs shall be provided to the OWNER. The CONTRACTOR shall devise a labeling plan and a diagram for the routing of the pigs and submit the plan to the OWNER's Operator/ENGINEER for review/approval before the installation of any water main. All pigs shall be inserted and retrieved in the presence of the Resident Project Representative. All work associated with "Pigging" shall be included in the bid price per lineal foot for PVC water main and no additional compensation will be allowed.

During flushing operations, the CONTRACTOR shall use means to direct the flush water to the nearest natural drainage ditch or waterway. Dissipaters, splash blocks, and/or other appropriate measures shall be incorporated in the flushing procedure to prevent excessive soil erosion as required by the NPDES permit for construction site activities (See Section 11.21). The CONTRACTOR will not be permitted to flush without the use of fire hose and shall bid this portion of the work accordingly.

B. Bio-Penetrant Application

Not used on this job.

C. Requirements of Chlorination –

Before being placed in service, all new mains or extensions to existing mains, shall be chlorinated, so that a chlorine residual of not less than 25 ppm remains in the water after 24 hours of standing in the pipe.

D. Point of Application –

The preferred point of application of the chlorinating agent is at the beginning of the pipeline extension, or any valve section of it, and through a corporation stop inserted in the top of the newly laid pipe.

E. Rate of Application –

Water from the existing distribution system or other source of supply, shall be controlled so as to flow slowly into the newly laid pipeline during the application of chlorine. The rate of chlorine mixture flow shall be in such proportion to the rate of water entering the pipe that the chlorine dose applied to the water entering the newly laid pipe shall meet the requirements listed in Section 41.08.C above. This may be expected with an application of 50 ppm, although some conditions may require more.

F. Preventing Reverse Flow –

Valves shall be manipulated so that the strong chlorine solution in the line being treated will not flow back into the line supplying the water.

G. Disinfection of Valves and Hydrants –

In the process of disinfecting newly laid pipe, all valves, or other appurtenances, shall be operated while the pipeline is filled with the chlorinating agent.

H. Disinfection of Booster Pumps, Pressure Reducing Valves, etc. –

In the process of disinfecting newly laid pipe, all booster pumps, pressure reducing valves, or other equipment or appurtenances, shall be operated while the pipeline is filled with the chlorinating agent.

I. Final Flushing and Testing –

Following disinfection, all treated water shall be thoroughly flushed from the newly laid pipeline at its extremities until the replacement water throughout its length shall, upon test, be proved comparable in quality to the water served the public from the existing water supply system. All flushing operations shall be coordinated with the OWNER's licensed operator and may be regulated by the OWNER's licensed operator to prevent water loss/pressure to their customers.

After flushing, water samples collected on 2 separate days, at least 48 hours apart, from the treated piping systems at the designated testing points (indicated on the Sampling Plan included with the plan sheets), shall show satisfactory bacteriological results. The OWNER shall be present to witness the collection of all samples. Continuous flushing between the two samples shall not be allowed. Bacteriological analysis must be performed by a laboratory approved by the Illinois Environmental Protection Agency. The CONTRACTOR shall perform all testing and provide all bacteriological analysis results to the ENGINEER.

Once the CONTRACTOR has successfully obtained the 2 required new construction bacteriological samples, the OWNER, at their discretion and within 48 hours, may at will, collect routine bacteriological samples from the same sample point for analysis. If the OWNER's test fails, then the CONTRACTOR shall repeat the new construction sample testing process for that

specific location until both the CONTRACTOR's and the OWNER's samples pass. Any re-testing work by the CONTRACTOR shall be incidental to the Contract price.

All disinfection work and bacteriological sampling work shall be performed in the presence of the Resident Project Representative. The OWNER shall be present to witness the collection of all samples. Payment for bacteriological sampling will be made to the CONTRACTOR based on his line item bid price for each sample location. The CONTRACTOR's bid price for each sampling location shall include all necessary materials and labor to obtain 2 consecutive passing samples as described above.

41.09. THRUST BLOCKS

All bends of 11-1/4 degrees or greater, and all tees, plugs, reducers, fire hydrants, and flushing hydrants shall be thrust protected to prevent movement of the lines under pressure. Blocking shall be Portland Cement Concrete poured in accordance with Section 41.-2.10 of the Standard Specifications, or precast, solid blocking for small diameter pipe where the undisturbed soil is extremely firm and stable. Thrust blocking shall be sized and placed as shown in the plans details and extend from the fitting to the undisturbed soil. Pipe and fitting joints shall remain accessible for repairs. Where unstable soil conditions exist, all deflections in the pipe from a straight line shall be provided thrust blocking in accordance with the manufacturer's recommendations. Concrete for reaction or thrust blocks shall have a 28 day compressive strength of not less than 3,000 psi. No wooden wedges, treated or otherwise, shall be allowed for shims for the blocking under any circumstance.

PCC thrust blocking shall have a 6-inch minimum distance from the fitting. This distance is to be occupied by an independent solid concrete block that may be more easily removed to allow for maintenance/removal of the fitting without need to bust, chip, or otherwise compromise the PCC blocking.

PVC pipe may not be used in lieu of concrete blocks. Where a fitting is used to make a vertical bend, the fitting shall be anchored to a thrust block braced against undisturbed soil. The thrust block should have enough resistance to withstand upward thrusts at fitting.

No additional compensation shall be made to the CONTRACTOR for any thrust blocking techniques, equipment or labor.

41.10. DEWATERING

The CONTRACTOR shall at all times during construction provide and maintain ample means and devices with which to promptly remove and properly dispose of all water entering the trenches or excavation. All trenches or excavation shall be kept dry until construction is complete. No foreign water shall be allowed to enter any pipe which has been laid. No water shall be allowed to stand over concrete until the concrete has set for at least 24 hours. This refers to thrust blocks, anchorages, foundations, etc..

Any pumped or "dipped" water shall not be discharged into nearby storm water inlets without proper sediment protection either discharge sock or other inlet protection.

If well pointing or the installation of temporary drains are required to complete the work, they shall be provided by the CONTRACTOR. The pumped water shall not be discharged into nearby storm water inlets without proper sediment protection either discharge sock or other inlet protection.

No additional compensation shall be made to the CONTRACTOR for any dewatering techniques, equipment or labor.

41.11. ADJUSTING UTILITIES

All utilities, including wiring, light standards, signal lights, sewers, private water lines, buried telephone cable, underground gas lines, etc., affecting the construction of the proposed improvement shall be adjusted at the CONTRACTOR's expense. It shall be the CONTRACTOR's responsibility to determine the exact location of all utilities. All adjustments shall be done as specified by the Owner of the utility. If the CONTRACTOR damages any utility not requiring adjustment, he shall replace or repair it as required by the utility owner and no additional compensation will be allowed. No attempt has been made on the drawings to show all utilities or their exact locations. (See Section 11.02 of these specifications.)

41.12. REMOVING FIRE/FLUSHING HYDRANTS

Where indicated on the drawings or requested by the OWNER or ENGINEER, existing fire/flushing hydrants shall be removed where an existing water main is to be abandoned. The CONTRACTOR shall remove and salvage the existing fire/flush hydrant. The contractor shall leave it in a convenient location for pick up by the City. This work shall be paid under "Remove and Salvage Existing Hydrant".

41.13. ABANDON EXISTING GATE VALVE

Where indicated on the drawings or requested by the OWNER or ENGINEER, an existing gate valve's valve box shall be removed where an existing water main is to be abandoned. The CONTRACTOR shall shut off the valve and remove the top 2 feet of the valve box and back fill with rock or dirt as required by its location. This work shall be paid under "Bury Existing Gate Valve".

41.14. CUTTING-IN TEES, VALVES, AND CAPS

Where indicated on the drawings or requested by the OWNER or ENGINEER, tees, gate valves and/or caps of the appropriate size shall be cut-in to the existing water main. The CONTRACTOR's bid price for "Connections/Caps to Existing Water Main" shall include locating the existing water main (and other appropriate utilities); shutting off the flow of water at nearby valves or with line stops as necessary, and as indicated on the Drawings; installation at the new location complete with all necessary appurtenances; pressure testing and disinfection as appropriate; and all other associated tasks. CONTRACTOR shall coordinate the schedule of each line stop with the OWNER/ENGINEER.

41.15. INSTALLING OFFSET FIRE/FLUSHING HYDRANTS WITH GATE VALVE

Where indicated on the Drawings or requested by the OWNER or ENGINEER, fire/flushing hydrants shall be installed “offset” from the main line. As shown in detail on the Drawings, a tee or cross with anchor coupling, gate valve, and blind flange shall be utilized at the end of the water main “run” and/or second “branch” unless continuing with water main. From the branch, the CONTRACTOR shall install an anchor coupling(s), with lengths as shown on the general fitting detail in the plans, gate valve, and hydrant. In general, the offset is requested in areas likely to be extended in the future, for ease of construction, or in areas for future ease of maintenance. The CONTRACTOR’S bid price for installing offset fire/flushing hydrants shall include the tee, blind flange, gate valve(s), anchor couplings, and fire/flushing hydrant (with locking mechanism when specified or indicated on drawings); complete with blocking, gravel, all necessary reducers and/or enlargers, and other appurtenances necessary for complete connection; pressure testing and disinfection as appropriate; and all other associated tasks.

41.16. WATER MAIN CONNECTION TO STRUCTURES

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41.17. DRAIN TILE REPAIR

The bid item for “Drain Tile Repair”, will be paid to the CONTRACTOR only when a tile is not located or is improperly located, and the CONTRACTOR then damages and properly fixes the tile. If a tile is located to within 18 inches on either side of the mark (as for JULIE locates) and the CONTRACTOR damages the tile, then the CONTRACTOR shall fix the tile and no payment will be allowed under this bid item. In addition, no payment will be allowed for CONTRACTOR down time to hand dig or otherwise search for a marked field tile, whether accurately located or not.

The bid price for “Field Drain Repair” shall include all necessary labor and material including pipe, couplings, and gravel backfill/support as shown on the drawings and documentation of the repair including pictures of the damage and pictures of the repair. Failure of proper documentation may result in withholding of payment.

41.18. OPEN-CUT STEEL CASING

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41.19. OPEN-CUT PVC CASING

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41.20. OPEN-CUT SEPTIC ENCASEMENT.

Where called for on the Drawings, the water main shall be installed in PVC casing (see Section 51.02 for material requirements) of the size shown on the Construction Drawings. As there are currently no known structures or other limiting factors in these areas, the PVC casing may be installed in an open trench. Backfill for Open-Cut PVC Casing Pipe shall be as specified in Section 41.04 and will be incidental to the unit price of the PVC casing pipe installation and no additional compensation will be allowed. Measurement in lineal feet shall be made along the centerline of the PVC casing as installed.

The Water main installed through the casing pipe shall be RJ PVC pipe as specified in Section 51 of these specifications and sized as shown on the Drawings. Payment for the RJ PVC installed in the casing shall be based on the unit price of the bid schedule line item "RJ PVC within Casing Pipe" for the appropriate size and pressure classification of RJ pipe utilized. Casing spacers shall be used for the full length of the casing. Also, either end seals or a method approved by the OWNER shall be used to seal the end of the casing. All RJ pipe placed in PVC casing pipe shall utilize casing spacers as specified in Section 51.07.13. Payment for the restrained joint pipe through the casing shall be as specified in Section 54.09.

41.21. REMOVE AND REPLACE STORM SEWER

Where indicated on the plans, the CONTRACTOR shall remove VCP storm sewer and replace with equivalent nominal sized PVC SDR 26, CL 160. The CONTRACTOR'S bid unit price for "Remove VCP and Replace With PVC SDR 26, CL 160" (of the appropriate size) shall include all labor equipment and material to install and connect the new storm sewer pipe to the adjacent inlets/manholes. Any surface replacement or compact rock backfill will be paid separately.

41.22. INSTALL BLIND FLANGE ON EXISTING GATE VALVE

Where indicated on plans or directed by OWNER the CONTRACTOR shall install a blind flange onto an existing gate valve. The CONTRACTOR shall include all labor, equipment and material to fully complete the installation of the blind flange. Any surface replacement or compact rock backfill will be paid separately.

INSTALLATION OF SEWER MAIN AND APPURTENANCES

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INSTALLATION OF SEWER MAIN AND APPURTENANCES

Section 42

42.01. SCOPE OF WORK

The work to be performed under this section shall include all materials, labor, equipment, and all other facilities necessary for the installation of the sewer mains by the trench method and for the installation of appurtenances as shown on the drawings and/or herein specified.

42.02. CONSTRUCTION METHODS

Construction methods recommended in the current edition of the Standard Specifications for Water and Sewer Main Construction in Illinois, as far as applicable, shall be followed. In case of conflict with the Standard Water and Sewer Specifications, these Technical Provisions shall govern. Installation methods shall also conform to the manufacturer's recommendations for the type of pipe being installed, unless specified differently in this Section. All construction and installation shall also comply with the most recent version of the Illinois State Plumbing Code.

For installation criteria specific to the material type of sewer main to be utilized, refer to Section 52 "Sewer Main, Fittings, and Appurtenances" of these Specifications.

For installation criteria regarding the boring or boring and jacking of sewer mains and service lines, refer to Section 54 of these Specifications.

42.03. EXCAVATION (TRENCH METHOD)

The trench shall be excavated so that the sewer main will have proper bedding and haunching, and when applicable shall match existing line and grade of the existing sewer main to be replaced. Where a firm foundation is not encountered at the grade established, due to soft, spongy or other unsuitable soil, all such unsuitable soil under the pipe and for the width of the trench shall be removed and replaced with well compacted select granular backfill, hereafter referred to as "trench backfill".

The cost of furnishing and placing trench backfill for the purpose as described above, will be considered as incidental work and no additional compensation will be allowed.

The OWNER shall be responsible to set line and grade reference stakes at each proposed manhole. The CONTRACTOR shall be responsible for checking and following said reference stakes. It will be the CONTRACTOR'S responsibility to coordinate the staking activities with the owner. The CONTRACTOR shall provide a minimum of one weeks (seven (7) days) notice to the OWNER prior to the start of construction to allow the OWNER to begin the sewer main staking operations. Once the staking has been completed, it shall be the CONTRACTOR'S responsibility to protect the stakes and the information contained at each station. If the CONTRACTOR requests that any part of the staking operation be redone for any reason, the restaking efforts will be performed at the CONTRACTOR'S expense and no additional compensation will be allowed.

Where existing sewer main is being replaced, the CONTRACTOR shall be responsible to match the existing line and grade of the existing sewer and no staking shall be required.

The CONTRACTOR shall use a laser as a guide for construction. The CONTRACTOR shall check his grade as he progresses to assure that he is on line and grade. Any discrepancies from the plans or existing alignment shall be corrected by the CONTRACTOR. The Contractor shall record the measurements of actual sewer main invert elevations at inlets/manholes and between inlets/manholes at 100-foot intervals.

42.04. BACKFILLING (TRENCH METHOD)

Backfill for gravity sewer installation shall be comply with ASTM D 2321-89, Class IA, IB, II, or III. Backfill shall occur in 4 steps.

- A. First is Bedding the pipe with 4 to 8 inches of Select Granular Backfill and is incidental to the contract price
- B. Second is haunching the pipe, Select Granular Backfill to its springline with Select Granular Backfill and is incidental to the contract price
- C. Third backfill from springline to 12 inches, or height as recommend by soils report, above the pipe with Select Granular Backfill and is incidental to the contract price
- D. Remaining to top of surface with excavated material unless otherwise specified below.

Where sewer mains are crossing open areas where early settlement is not critical, excavated material or material from other sources furnished by the CONTRACTOR free from clods (larger than three inches (3")) and rock/stones shall be used for final backfill. Excess material shall be neatly rounded over the top of the trench as directed by the ENGINEER to allow for settlement of the trench. In final cleanup operations, the CONTRACTOR shall reshape the surface to level out any uneven settlement that has occurred. Backfill is incidental to the contract price

For gravity sewer installation, backfill for all driveways, alleys, and driving surfaces (unless otherwise shown on the Drawings, permits, or called for in These Specifications) shall be made with SELECT GRANULAR BACKFILL(CA-6 or equal) for the final backfill. SELECT GRANULAR BACKFILL will be paid for by CONTRACTOR's bid unit price for "Compacted Rock Backfill" per cubic yard above the initial backfill (initial backfill is incidental to the unit price for pipe installed).

For force main sewer installation, materials used for repair of gravel driveway surfaces shall be incidental to the unit price of sewer main installation. Backfill for all gravel driveways, gravel parking lots, and gravel field entrances (unless otherwise shown on the Plans, permits, or called for in These Specifications) shall be made for the full depth and width of the trench with material specified for SELECT GRANULAR BACKFILL (CA-6 or equal). Only SELECT GRANULAR BACKFILL shall be allowed in the trench. This work shall be incidental to the unit price of sewer main installation.

For backfilling forced main or gravity sewer main under rigid and non-rigid surfaces, including sidewalks, streets, roadways, gravel driveways, and gravel field entrances, initial backfill shall be with the material described above. The final backfill shall be SELECT GRANULAR BACKFILL (CA-6 or equal) deposited for the remaining depth of the trench/excavation and compacted to the satisfaction of the ENGINEER.

Backfilling shall not be done in freezing weather without the permission of the ENGINEER, and it shall not be made with frozen materials. No backfill shall be made where the materials already in the trench are frozen.

Backfilling operations at fittings, valves, and connections to manholes or other structures shall not occur until all materials and work have been viewed by the OWNER, ENGINEER, or the Resident Project Representative.

No wood shall be allowed in the trench to shim or block out the sewer main, control the bend of a pipe, or discarded in the trench.

Restoration of surfaces shall be performed in accordance with Division II, Section 21 of the Standard Water and Sewer Specifications except as hereinafter supplemented or modified:

All surfaces shall be restored to at least as good of condition or better than which existed prior to construction. This restoration work must be done in such a manner that the private property or public owner will issue approval.

All lawn areas disturbed shall be final graded, fertilized, seeded, and mulched according to Section 31 of These Specifications.

All paved driveways and streets disturbed during construction operations shall be repaired with SELECT GRANULAR BACKFILL to serve as a temporary drive surface. The CONTRACTOR shall maintain the temporary surface as needed, but at least once every seven calendar days. SELECT GRANULAR BACKFILL for temporary surface shall be incidental to the contract.

Restoration of surfaces shall be as specified in Section 31 of these specifications except as herein supplemented or modified:

42.05. DRAINAGE DITCH / CREEK CROSSINGS

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42.06. SEWERS NEAR WATER MAINS AND WATER SERVICE LINES

See Standard Specifications for Water and Sewer Construction.

42.07. TESTING OF SEWER MAIN AND EQUIPMENT

All tests and testing equipment shall be provided by the CONTRACTOR at no cost to the OWNER.

When pressure tests are to be conducted the CONTRACTOR shall have the full test pressure applied to the sewer main segment, and verify that the sewer main segment is holding pressure, prior to notifying the resident project representative to observe the formal pressure test of the duration required. Pressure test observation requests after 3:30 P.M. will be performed the next working day.

A. Gravity Pipe

In reference to Section 31-1.12 Standard Specifications for Water and Sewer Main Construction in Illinois, 6th ed., 2009, "Testing and Inspection for Acceptance of Sanitary Sewers," ALL (100%) of the sewers shall be tested for leakage using the pressure air testing method. The time required for a pressure drop from 3.5 to 2.5 PSIG shall not be less than the time specified in the Air Test Table No.3 - "Air Test Table for Sanitary Sewer Leakage Testing", Section 370. APPENDIX C of the Title 35, Subtitle C, Chapter II, Part 370, "Illinois Recommended Standards for Sewage Works".

If approved by the ENGINEER, the infiltration test may be used if the water table is 18 inches or higher above the crown of the pipe and the exfiltration by water test may be used if the water table is less than 18 inches above the crown of the pipe.

In addition to the leakage test ALL sewers may be subjected to Video Taping. The ENGINEER can request the lines to be video taped at any time during construction. All lines may be televised by the end of the project. Each section of sanitary sewer line shall be cleaned of dirt and debris, then captured and removed at the next downstream manhole. The contractor shall add water to the pipeline prior to the video inspection to help identify deficiencies. The recording shall be made using a color camera, self propelled or other, having sufficient light to show detail of problem areas and joints. Camera shall have a swivel head to look up each service connection. Camera speed shall not exceed three feet per second. If problem areas or concerns are seen by the operator, then the camera shall be backed up and an extended look at the area will be recorded. All recordings will have location (i.e. manhole # to manhole #), time, date, and footage displayed. A minimum of two copies of the tapes and two written inspection reports shall be furnished to the Engineer and Owner. The Video Taping will be paid for on a unit price per installed footage basis.

Lamping tests may be required by the ENGINEER/OWNER at any time during construction an/or testing of the sewers. All sewers not passing the lamping tests shall be considered unsatisfactory and shall be repaired by the CONTRACTOR at no additional compensation.

Deflection testing shall be conducted in accordance with the Standard Water & Sewer Specifications, Section 31-1.12.

All sewers not passing any of the above referenced tests shall be considered unsatisfactory and shall be repaired by the Contractor at no additional compensation.

B. Pressure Pipe

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42.08. THRUST BLOCKS

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42.09. DEWATERING

The CONTRACTOR shall at all times during construction provide and maintain ample means and devices with which to promptly remove and properly dispose of all water entering the trenches or excavation. All trenches or excavation shall be kept dry until construction is complete. No foreign water shall be allowed to enter any pipe which has been laid. No water shall be allowed to stand over concrete until the concrete has set for at least 24 hours. This refers to thrust blocks, anchorages, foundations, manhole collars etc. If well pointing or the installation of temporary drains are required to complete the work, they shall be provided by the CONTRACTOR.

No additional compensation shall be made to the CONTRACTOR for any dewatering techniques, equipment or labor.

42.10. UTILITIES ENCOUNTERED

All utilities, including wiring, light standards, signal lights, sewers, private water lines, buried telephone cable, underground gas lines, etc., affecting the construction of the proposed improvement shall be adjusted at the CONTRACTOR's expense. It shall be the CONTRACTOR's responsibility to determine the exact location of all utilities. All adjustments shall be done as specified by the OWNER of the utility. If the CONTRACTOR damages any utility not requiring adjustment, he shall replace or repair it as required by the OWNER and no additional compensation will be allowed. No attempt has been made on the drawings to show all utilities or their exact locations. See also Section 11.02 of these specifications.

The locations of the sewers, conduits, and structures, as shown on the drawings, have been selected to provide the least possible interference with, or the crossing of, existing utilities. The OWNER reserves the right to make minor variations in the location of these items during construction, to make any change or differing conditions discovered during construction, and no additional payment will be allowed the CONTRACTOR for such shifts in alignment.

42.11. CUTTING-IN TEES, VALVES, AND CAPS

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42.12. SEWER MAIN CONNECTION TO STRUCTURES

The CONTRACTOR shall furnish all labor, materials, fittings, tools, and equipment necessary for the complete installation of the necessary piping, valves, and appurtenances to make a water tight connection between the proposed sewer main and the proposed or existing structure (manhole, wet well, etc.), as shown on the Drawings. This work shall be paid at the CONTRACTOR's unit bid price for "Connect Sewer Pipe to Existing Structure".

42.13. CONNECTION TO EXISTING LIFT STATION OR MANHOLE

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42.14. SERVICE LATERALS AND RISERS

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42.15. SEPTIC TANK DECOMMISSIONING

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42.16. DRAIN TILE REPAIR

The bid item for "Drain Tile Repair", will be paid to the CONTRACTOR only when a tile is not located or is improperly located, and the CONTRACTOR then damages and properly fixes the tile.

If a tile is located to within 18 inches on either side of the mark (as for JULIE locates) and the CONTRACTOR damages the tile, then the CONTRACTOR shall fix the tile and no payment will be allowed under this bid item. In addition, no payment will be allowed for CONTRACTOR down time to hand dig or otherwise search for a marked field tile, whether accurately located or not.

The bid price for “Drain Tile Repair” shall include all necessary labor and material including pipe, couplings, and gravel backfill/support as shown on the drawings and documentation of the repair including pictures of the damage and pictures of the repair. Failure of proper documentation may result in withholding of payment.

42.17. OPEN-CUT STEEL CASING

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42.18. OPEN-CUT PVC CASING

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WATER MAIN, FITTINGS, AND APPURTANENCES

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WATER MAIN, FITTING, AND APPURTANENCES

Section 51

51.01. SCOPE OF WORK

The CONTRACTOR shall furnish all equipment, material, labor, standard fittings, skills, special fittings, couplings, etc., for the satisfactory installation of waterline.

The CONTRACTOR shall bid a lineal foot price for the various different sizes, diameters and pressure ratings as indicated on the bidding proposal. All ductile iron fittings, couplings, adaptors, lubricants, gaskets, restrainers, and similar items shall be included in the bid price per lineal foot for water main and no additional compensation will be allowed for these items.

51.02. GENERAL INFORMATION

- A. All pipe shall meet the specifications of the National Sanitation Foundation (NSF). The pipe manufacturer shall furnish certification in sufficient copies that the pipe supplied is in compliance with all requirements as specified herein.
- B. Any bend in the water main greater than 11-degrees will require a mechanical joint, ductile iron elbow fitting with restrainers and/or blocking.
- C. Samples of pipe, physical and chemical data sheets, shall be submitted to the ENGINEER, upon request, for approval and his approval shall be obtained before pipe is purchased.
- D. The pipe shall be homogeneous throughout and free from cracks, holes, foreign inclusions or other defects. The pipe shall be as uniform as commercially practical in color.
- E. Pipe must be delivered to the job site by means which will adequately support it and not subject it to undue stresses. In particular, the load shall be so supported that the bottom rows of pipe are not damaged by crushing. Pipe shall be unloaded carefully and strung or stored as close to the final point of placement as is practical. Pipe strung for installation in the field may not be placed more than 3 days in advance of the installation process.
- F. Pipe shall be protected from truck and equipment exhaust during transportation, handling and storage.
- G. Pipe shall be protected from crop spraying while stored on-site, or strung for installation, prior to installation.
- H. The workmanship, pipe dimensions and tolerances, outside diameters, wall thickness, eccentricity, sustained pressures, burst pressures, flattening, extrusion quality, marking and all other requirements of the Commercial Standards, CS 256-63 shall be followed.
- I. At all times when work is not in progress, all open ends of pipe and fittings shall be securely closed with plugs or caps so that no trench water, earth, animal, or other substances may enter the pipe or fittings.

- J. Ductile iron pipe shall not be pushed through bore holes at highway and railroad crossings. The CONTRACTOR may install ductile iron pipe inside of steel casing that has been bored and jacked provided:
1. That the highway or railroad to be crossed amends the permit to allow ductile iron pipe as the carrier.
 2. The CONTRACTOR, at his own expense, provides the increased casing pipe size required.

51.03. WATER MAIN PIPE – PVC SLIP JOINT

- A. This section of the specifications covers rigid polyvinyl chloride pipe, hereinafter called PVC pipe.
1. The water main shall be Polyvinyl Chloride (PVC) pipe and push-on gasketed joints, in accordance with Section 40 of the Standard Water and Sewer Specifications.
 2. ASTM Specification D 1784, shall be conformed with in all respects.
- B. PVC Pipe (3 to 12 inch)
1. SDR-DR-PR PVC Pipe: SDR (Standard Dimension Ratio) - DR (Dimension Ratio) - PR (Pressure Rated) PVC pipe shall be Type I, grade 1 or 2, with a hydrostatic design stress of 2,000 psi for water at 73.4°F, designated as PVC 1120 or PVC 1220.
 2. PVC pipe with SDR ratings of 13.5, 17, 21, and 26 shall conform to the latest revision of ASTM Specification D2241. PVC pipe with DR ratings of 14, 18, and 25 shall conform to the latest revision of AWWA C900. PVC Pipe with PR (pressure Rated) shall conform to the latest revision of AWWA C905.
 3. Miscellaneous lengths of pipe can also be supplied plain end and joints made with the use of a double gasket coupling. These couplings shall be provided with pipe stops and have a pressure rating of 200 psi working pressure.
- C. PVC Pipe (14 to 48 inch)
- Intentionally Blank

51.04. WATER MAIN PIPE – RESTRAINED JOINT PVC

- A. This section of the specifications covers rigid restrained-joint polyvinyl chloride pipe, hereinafter called RJ pipe.
1. The CONTRACTOR must use PVC RJ pipe for drainage ditch crossings, road crossings, and creek crossings as well as all directional bores (including water main inside of casing pipe), as shown on the contract drawings.
 2. The RJ pipe shall be furnished with twin gasket couplings, nylon splines, rubber rings and lubricant. The rubber rings shall be shipped in place in the coupling.
 3. For 3 inch to 12 inch RJ pipe, the transition from RJ pipe to PVC or ductile iron pipe shall be made by the use of a manufacturer supplied expansion coupling. This coupling shall be restrained-joint by IPS or CIOD as required to match existing adjacent pipe system or

adjacent pipe system specified. Only the installation of full sticks of RJ pipe with factory grooves shall be permitted.

51.05. WATER MAIN PIPE – DUCTILE IRON PIPE

All ductile iron pipe shall be manufactured in accordance with all requirements of AWWA Standard C-151. Standard laying length is either 18 feet or 20 feet. All pipe shall meet the following thickness requirements:

Pipe Size (Nominal I.D.)	Minimum Thickness	Thickness Class	Pressure Class
3 inch	0.25 inch	51	
4 inch	0.26 inch	51	
6 inch	0.25 inch	50	
8 inch	0.27 inch	50	
12 inch	0.28 inch		350
16 inch	0.34 inch		350

The inside of the pipe shall be cement lined in accordance with AWWA Specification C-104, ANSI A 21.4, with a bituminous seal coat. All exterior surfaces of ductile iron pipe shall have a bituminous coating of either coaltar or asphalt base at least one mil thick.

Where/if the water main crosses an existing petroleum pipeline, slip-joint ductile iron pipe with hydrocarbon resistant gaskets shall be used for a length as required to obtain at least 25 feet clear distance from the water main to the petroleum pipeline.

Pipe joints shall be manufactured in accordance with the following specifications:

- A. Mechanical joint pipe shall be furnished with applicable gaskets, glands, and bolts. Bolts shall be of Cor Blue or an equivalent ASTM A 242 material. Joint shall be in accordance with AWWA Standard C 110 and C 111.
- B. Slip-joint pipe shall be furnished with gaskets and lubricant, and be in accordance with AWWA Standard C 111.
- C. Restrained-Joint pipe joint shall be furnished with gaskets, restraining ring, and lubricant, and be in accordance with AWWA Standard C 153 and C 111 per Section 10.03.01.10.e.
- D. River Crossing Pipe shall be ductile iron manufactured in accordance with the requirements of ANSI/AWWA C151/A21.51. Push-on joints for such pipe shall meet the requirements of ANSI/AWWA C111/A21.11, allow deflection of up to 15°, and be per Section 10.03.01.10.f. Pipe thicknesses shall be equal to manufacturer's standard.

Polyethylene encasement shall be used on all ductile iron pipes and the polyethylene encasement shall conform to ANSI/AWWA C 105/A21.5 Standards. Polyethylene material will deteriorate rapidly when exposed to direct sunlight. Store all polyethylene encasement out of the sunlight. If during the installation period it is anticipated that the polyethylene encasement will be exposed to sunlight for more than two weeks (ie. Open trench) Type C (black) polyethylene material must be used.

Where/if the water main crosses an existing petroleum pipeline, slip-joint ductile iron pipe with hydrocarbon resistant gaskets shall be used for a length as required to obtain at least 25 feet clear distance from the water main to the petroleum pipeline.

51.06. HDPE PIPE

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51.07. WATER MAIN FITTING

All ductile iron fittings shall conform to AWWA C 153, AWWA C 110, and AWWA C 111, 2 inch to 48 inch, for 250 psi water pressure plus water hammer. All fittings except plugs and sleeves shall be cement lined to conform to AWWA C 104 with a bituminous seal coat. Sleeves and plugs shall be bituminous seal coated. Application gaskets, standard transition gasket (SMJ gasket) for IPS PVC or universal gasket for CIOD PVC, mechanical joint restraining glands, and bolts shall be furnished. All bolts shall be Cor Blue or an equivalent ASTM A 242 material. Sleeves and plugs shall be bituminous seal coated.

- A. Fittings include hydrants, gate valves, tees, elbows, crosses, reducers, caps, plugs, and wyes.
- B. **All fittings associated with PVC or DI water main installation shall be ductile iron. All ductile iron fittings shall be mechanical-joint and utilize mechanical-joint restraining glands where anchor couplings are not required.**
- C. Pressure rating of fittings shall be equal to or greater than the specified pipe.
- D. Fittings shall be per Section 10.03.01.7.
- E. Backfill operations at fittings, gate valves, hot taps, points of connection, line stops, hydrant locations, etc., shall not occur until all materials and work have been viewed by the OWNER or RPR.
- F. PVC Expansion Couplings shall be allowed when transitioning from PVC to RJ PVC Pipe. The expansion couplings shall be provided by the manufacturer and be RJ on one end and slip joint on the other. The fitting shall be of the same material as the pipe, and in no case shall have thinner walls than that of the pipe furnished. The fitting for gasketed joint, RJ PVC pipe shall be molded in one (1) piece.

Ductile Iron Expansion Couplings shall be a ductile iron sleeve with a restrained-joint fitting on one side and slip-joint fitting on the other side.

- G. Fittings for use with HDPE

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51.08. WATER MAIN PIPE LAYING

- A. General: Only competent persons at laying water main pipe shall be employed on this phase of the work, and complete suitable equipment necessary for the execution of same is required. Any incompetency observed by the OWNER must be removed at his request, and where improper

equipment or lack of same appears to be impairing the quality or speed of the work, such adjustments in same shall be made to the OWNER's satisfaction.

The pipe, fittings, and appurtenances shall be placed in the trench with care. Under no circumstances shall pipe or other materials be dropped or dumped into the trench. The pipe shall not be dragged in a manner which would cause scratching on the surface of the pipe and will be considered cause for rejection. Pipe shall be installed in accordance with the manufacturer's recommendations, and with the Standard Specifications for Water and Sewer Main Construction in Illinois.

A full length of pipe shall be used where slip-joint pipe connects to a fitting or appurtenance. Where a full length of pipe cannot be utilized for any reason, a UFR Series 1350 joint restraint, for PVC or equal for DI, manufactured by The Ford Meter Box Company, Inc, shall be used at the first joint from the fitting such that the length of restrained pipe is greater than or equal to 20 feet.

All joints that result in a change of direction shall be restrained with a solid concrete thrust block in such a fashion so that the weight and thrust is transferred to the undisturbed soils of the trench. These solid thrust blocks shall be made of concrete and placed so that adequate bearing against undisturbed soil is provided.

- B. Pipe Cleaning During Laying Operation: If dirt or dust has been introduced into the length of pipe, a thorough cleaning of the pipe shall be done just before the joint of pipe is installed. At this time a visual check shall be made by placing the pipe in an inclined position to assure that all foreign matter and dirt is removed from the inside of the pipe. The pipe shall be kept clean during and after laying. At the termination of pipe laying, the open end of the pipeline shall be closed off by a suitable cover until laying operations are resumed.
- C. Inspection of Material During Construction: Any materials not meeting the specifications, or obviously faulty material, shall be rejected by the ENGINEER and removed from the job site by the CONTRACTOR. When ordered by the ENGINEER, joints may be cut from the pipeline for inspection. All ductile iron installation, whether pipe or fittings, shall be reviewed by the Resident Project Representative before the trench is backfilled. Failure to allow for this observation shall result in the exposing of the pipe for review, and shall be incidental to the contract price.
- D. Fluid Tight Joints: All dirt, debris, and moisture shall be removed from the surfaces to be jointed. Make sure the gasket is not twisted or turned to prevent proper sealing in the groove. Apply the lubricant to the gasket surface and to the spigot end of the pipe. The joint is made by one quick easy motion making sure the guide mark has reached the end of the fitting. For restrained-joint pipe, the contractor should then insert the nylon spline through the spline hole in the assembled joint which engages with the spline groove in the pipe end.
- E. Breaks in Pipe or Joints: All breaks in pipe and/or joints shall be repaired to the satisfaction of the ENGINEER and at the expense of the CONTRACTOR. The defective pipe or fittings shall be removed and replaced. Repair clamps will not be permitted.
- F. Cutting Pipe: Cutting of RJ pipe shall not be allowed; only the installation of full length pipe shall be allowed. The only exception to this is when restrained-joint pipe is connecting to a fitting. In this case the restrained-joint pipe may be cut to the necessary length and appropriate UFR used on the restrained-joint at the fitting.

- G. Bed and Cover: Each section of pipe in the trench shall rest upon the pipe bed for the full length of its barrel. The bottom of the trench shall be free from rocks, clods, or other sharp-edged objects. The subgrade upon which the pipe is placed shall consist of material suitable for supporting the pipe without excessive settlement or stress development.

If the pipe is to be laid in a trench having a rock bottom, bedding shall be as specified in Section 31.10.

Initial and final backfill shall be as specified in Section 41.04.

Service lines and laterals must be assembled so that no strain is placed on the pipe during or after backfill operation. After laying of the pipe is completed, it shall be center loaded with backfill to prevent arching and whipping under pressure. Center loading should be done carefully so that joints will be completely exposed for examination during testing, unless conditions warrant complete backfill before testing.

- H. Preliminary Pressure Testing: At the ENGINEER's option during the general construction period the following pressure testing procedure shall be followed:

After the PVC pipe is assembled trench side or in the trench, a test of not less than 50% above the system's anticipated working pressure shall be applied with either air or water. After two consecutive tests have been performed without any failure, the CONTRACTOR at his option and with the ENGINEER's approval may discontinue testing until the system is completed. A hydrostatic test shall then be run as outlined in paragraph I, this section.

If there is a change of laying conditions, technique or personnel after the testing has been discontinued the CONTRACTOR should, and at the ENGINEER's request will, test additional sections to provide assurance that this change is satisfactory.

- I. Pressure Testing: Hydrostatic and pressure testing shall conform with Section 41, "Pressure Testing of Water Main and Equipment".
- J. Measurement and Payment: Payment for all work described in this section shall be included in the CONTRACTOR's bid price for the respective sizes of lines, pressure class, and material type, as shown in the Bid Schedule. Measurement in lineal feet shall be made along the centerline of the trench through all valves and fittings.
- K. Service Connections: All service connections shall be made by means of tees, tapped couplings, service clamps and other fittings approved by the ENGINEER. The water main shall not be tapped for the installation of service connections until flushing and "pigging" of the main has been completed as specified in Section 41.08. The use of solvent weld plastic saddles will not be permitted. Whenever corporation stops are placed in plastic lines after conducting hydrostatic tests, a visual inspection of the saddle and corporation stop shall be made to ensure the system is free of leaks.
- L. Polyethylene encasement shall be used to wrap the ductile iron pipe prior to installation. See section 51.03 for specifications on the polyethylene encasement.

51.09. WATER MAIN APPURTENANCES

51.09.01 SERVICE LINE

Polyethylene service pipe and tubing shall be rated for use with water at 73.4°F at a maximum working pressure of 200 psi. The Standard Dimension Ratio (SDR) shall be 9 for CTS tubing

sizes. The average outside diameter, minimum wall thickness and respective tolerances for any cross-section shall be as specified in ASTM D 2737. Pipe and fittings shall be rated at the same pressure class, or greater, as the water main at the connection point. Service lines shall not be tapped to the water main until flushing and pigging of the main has been completed. All compression fittings **must** use a stainless steel insert. Unless otherwise approved by the OWNER or ENGINEER the service line shall be one continuous piece (no splices) from the corp stop to the service meter/curb stop connection.

Service line will be paid per lineal feet as measured in place from the water main to the existing service connection. The CONTRACTOR shall reconnect the services in a timely manner to minimize the disruption of service.

51.09.02 HYDRANT

The hydrant shall have male connections with National Standard hose coupling threads. The opening of all hydrants shall be counterclockwise. An arrow shall be cast or stamped on the top indicating the direction to open. The operating nut shall be National Standard pentagon. The main valve opening shall be designed so that removal of all working parts can be accomplished without excavating. Furthermore, the main valve assembly, drain ring, and drain ring housing shall be connected to the shoe by drain ring housing bolts, allowing easy maintenance, repair, or replacement of the entire barrel assembly without water shut-off. CONTRACTOR shall provide all necessary reducers and/or enlargers for complete connection, and shall be included in the bid price for flushing/fire hydrants. The connection between the Hydrant and the adjacent fitting, tee, or gate valve shall be made up utilizing appropriately sized PVC piping and restraining glands as specified.

Hydrants shall be set at such elevations that the connecting pipe will not have less cover than the main water main. Blocking shall be as described on the drawings. Not less than 7 cubic feet of clean gravel shall be placed around the base of the hydrant to insure drainage. A woven, nylon, polypropylene fabric shall be placed over the gravel to prevent infiltration of soil into the drainage field. The backfill around the hydrant shall be thoroughly compacted to the grade line. Hydrants shall have the interior cleaned of all foreign matter before installation. Stuffing boxes shall be tightened and the hydrant shall be inspected in working condition. The CONTRACTOR shall remove all of the internals of the hydrant during initial flushing of the water main, in order to prevent rocks, dirt, etc., from damaging the working parts of the hydrants. All hydrants shall be set plumb and one hose connection shall face the road, or to the satisfaction of the OWNER or ENGINEER. Hydrants shall be painted with 1 primer coat of red paint and 2 red finish coats.

The hydrant must employ a compression type main valve which closes with pressure. The operating nut is to be made of bronze or cast iron. The operating threads and thrust collar shall be sealed from the waterway by one or more "O" rings and shall be lubricated from a sealed, self-contained lubricant reservoir. Upper and lower stems shall be jointed with a cast iron coupling with stainless steel pins.

There shall be a minimum of 2 drain ports. These drains shall be of bronze. The drain valves shall be rubber or leather faced and shall work automatically with the main valve and permit draining of the barrel with the main valve closed. Springs must be bronze or stainless steel if springs are utilized in drain valve assembly.

The hydrant seat must be bronze with a machined seating surface. The main valve assembly shall be seated in a subseat of all bronze material so as to provide bronze to bronze engagement

of the valve seat ring and to provide a drainage channel of non-ferrous material. This bushing must be locked in place mechanically to prevent rotation or accidental removal.

Where a hydrant is installed adjacent to a road bore, ditch crossing, or other utility crossings the depth of bury required may be different than that listed below. In these instances, the CONTRACTOR shall provide the appropriate depth of bury at no additional cost to the OWNER.

All work, materials, equipment, and labor to install Hydrants as described above shall be included in the CONTRACTOR's bid unit price for "Fire Hydrant".

1. 2-1/4 inch Flushing Hydrants

Flushing hydrants shall be a post type suitable for 48 inch bury as per Section 10.04.01.9.a. The hydrant shall be designed for 150 lbs. working pressure and 300 lbs. hydrostatic test pressure. The hydrant must employ a compression type main valve which closes with pressure. The operating nut is to be made of bronze or cast iron. The hydrant shall have a 2-1/4 inch barrel, a single, 2-1/2 inch hose nozzle with National Standard thread and a 3 inch ring/fluid tight inlet connection, to adapt to any size PVC water main. The hydrant shall be joined to the water main by a mechanical joint shoe sized to match the water main and a Large End Mechanical Joint Reducer when necessary.

2. 4-1/2 inch Flushing Hydrants

4-1/2 inch flushing hydrants shall have a base connection as required for the type and size of pipe used in the water main construction. The hydrant shall be designed for 200 lbs. working pressure and 400 lbs. hydrostatic test pressure. Hydrants shall be of the dry barrel type, with breakable body traffic model, conforming to AWWA C502, and shall have a valve opening at least 4-1/2 inches in diameter. The flush hydrant shall be designed for a minimum of 48 inch bury. The hydrant shall have two 2-1/2 inch hose connections. The main valve opening shall not be less than 4-1/2 inches.

The safety flange shall be set approximately 4 inches above ground level. All 4-1/2 flush hydrants shall be per Section 10.04.01.9.b. with 6 inch mechanical joint base shoe.

3. Fire Hydrants

Fire hydrants shall have a base connection as required for the type and size of pipe used in the water main construction. The hydrant shall be designed for 200 lbs. working pressure and 400 lbs. hydrostatic test pressure. Hydrants shall be of the dry barrel type, with breakable body traffic model, conforming to AWWA C502, and shall have a valve opening at least 5-1/4 inches in diameter. The fire hydrant shall be designed for a minimum of 48 inch bury. The hydrant shall have two 2-1/2 inch hose connections, and one 5-1/4 inch pumper connection

The main valve opening shall not be less than 5-1/4 inches.

The safety flange shall be set approximately 4 inches above ground level.

All fire hydrants shall be per Section 10.04.01.9.c.

51.09.03 BUTTERFLY VALVES

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51.09.04 GATE VALVES

Gate valves shall be designed for a minimum water working pressure of 250 psi. Valves shall be resilient wedge, non-rising stem type, and shall be used with the type of pipe and joint to be installed. Gate valves shall have a clear waterway equal to the full nominal diameter of the valve and shall be opened by turning counterclockwise. The operating nut shall have an arrow, cast in the metal, indicating the direction of opening. Each valve shall have the maker's initials, and pressure ratings cast on the body. Prior to shipment from the factory, each valve shall be tested by hydraulic pressure equal to twice the water working pressure.

2 inch-12 inch gate valves shall conform to AWWA Standards C509 & C550 and shall be per Section 10.04.01.8.a with 'O' ring seals 14 inch-36 inch gate valves shall conform to AWWA Standards C550, & C515 and shall be per Section 10.04.01.8.b with 'O' ring seals and a 90° bevel gear actuator.

Gate valves shall have mechanical joints. No “push-on” joints will be allowed. All bolts for the bonnet shall be stainless steel. All bolts for the retainer glands shall be Cor Blue or an equivalent ASTM A 242 material. The valve, below the operating nut, shall be wrapped in 4 mil plastic. The plastic wrap shall cover the bonnet, the mechanical joint glands, bolts, and valve body. This work shall be included in the CONTRACTOR’S unit price for “Gate Valves with Box” of the various sizes as shown on the plans and listed in the Bid Form.

51.09.05 VALVE BOXES

Valve boxes shall be ductile iron. Boxes shall be of the extension type with screw adjustment and flared base. The minimum thickness of metal shall be 3/16 inch. The word “WATER” shall be cast in the cover. Boxes shall be installed over each gate valve. The boxes shall be of such a length that will permit adjustment in length, without full extension, to the depth of cover required over the pipe at the valve location. The CONTRACTOR shall supply extension stems, as necessary, where the water main is installed deeper than normal due to utilities, convenience, etc. This work shall be incidental to the Contract.

Valves and valve boxes shall be installed at locations determined by the OWNER or his representative. Valves not set at that location shall be relocated by the CONTRACTOR at no cost to the OWNER. Valves shall be set plumb. Valve boxes shall be centered on the valve. Back fill shall be carefully tamped around each valve box to a distance of 4 feet on all sides of the box or to the undisturbed trench face if less than 4 feet. Gate valve boxes shall be per Section 10.04.01.16.

Approval of location must be given by city/village when valve boxes are located on public R.O.W.

All valve boxes for valves 4 inch to 12 inch shall be installed upon the valve with the use of a Gate Valve Adaptor as manufactured by Adaptor Inc., or equal, to stabilize the valve box, and shall be incidental to the contract price. All valve boxes for valves 14 inch to 24 inch shall be centered over the operating nut and installed upon a level surface of rock, compacted around the bevel gear and operating nut, to stabilize the valve box. The compacted rock shall be incidental to the Contract. Substantial completion will not be issued to the CONTRACTOR until it has been verified by the OWNER that all gate valves can be accessed and operated with a standard valve wrench.

Gate Valve Boxes and Adaptors shall be included in the CONTRACTOR'S unit price for "Gate Valves with Box" of the various sizes as shown on the plans and listed in the Bid Form.

51.09.06 VALVE BOX MARKERS

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51.09.07 COMBINATION AIR RELEASE VALVE

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51.09.08 PLUGS AND CAPS

Standard plugs shall be inserted into the bells of all dead end pipes, tees, or crosses. Spigot ends shall be capped.

All Corporation Stops not used as part of the normal operation of the distribution system including but not limited to points of disinfection shall be capped at the corporation stop before final back fill.

51.09.09 SAMPLE STATIONS

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51.09.10 COPPER TRACER WIRE

Copper tracer wire shall be installed with all PVC raw and finished water main, and service lines (up to the service meter and/or curb stop). The wire shall be copper-clad steel wire coated with HDPE and shall be connected to all valves and brought up into each valve box (on the exterior of the box, and doubled-over under the cover on the interior), and shall be connected to all hydrants and service meter pits/curb stops, creating a continuous wire throughout all water main and appurtenances. All splices of tracer wire shall utilize direct bury splice kits per Section 10.04.01.5.c. During installation of the connector, the CONTRACTOR shall tie the tracer wire into a knot and leave approximately 4 inches to be inserted into the connector per manufacture's specifications. The CONTRACTOR shall install tracer wire per Section 10.04.01.5.a. for water main installed by trenching and per Section 10.04.01.5.b. for water main installed by directional boring. The Contractor shall include in his bid price for water main installation all costs associated with tracer wire installation.

Substantial completion will not be issued to the CONTRACTOR until it has been verified by the OWNER that all tracer wire is continuous and can be field located with the OWNER's locating equipment.

51.09.11 TRACER WIRE ACCESS POINTS

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51.09.12 TAPPING SLEEVE

Tapping sleeves shall be all stainless steel per ASTM A-240, type 304 with the exception of the flange, which may be epoxy-coated ductile iron per ASTM 536. The sleeves shall be corrosion resistant, lightweight, and provide a full circumferential seal. A stainless steel test plug shall also be provided as part of the sleeve for pressure testing prior to tapping the pipe. Bolts shall be 18-8 stainless fusion bonded bolts, and nuts shall be 304 stainless fluoropolymer coated to prevent galling. Tapping sleeves shall be per Section 10.04.01.14. The CONTRACTOR's bid price for installing a tapping sleeve and gate valve shall include the sleeve and the valve of the size specified, as well as all necessary tasks for a complete connection.

51.09.13 LMI SERVICE LINE

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51.09.14 DUCTILE IRON RESTRAINT GLANDS

Restraint for PVC and ductile iron pipe joined with standardized mechanical joint fittings shall be incorporated in the design of the follower gland and the PVC pipe restraining glands shall provide full circle contact and support of the pipe wall. Restraint shall be accomplished by a series of ring segments mechanically retained inside the gland housing and designed to grip the pipe wall in an even and uniform manner. The gland bolts shall be Cor Blue or an equivalent ASTM-A242 High Strength, low alloy material. Restraining ring segments shall be actuated by bolts featuring twist off heads. All components of the restrainer and restraint segments shall be of high strength ductile iron, ASTM A536, Grade 65-45-12. Restraining devices shall be UL Listed/FM Approved on AWWA C-900 PVC pipe and shall be certified by an independent testing facility as meeting or exceeding ASTM F1674-96 Standard Test Method for Joint Restraint Devices for PVC Pipe. Restraining devices shall be per Section 10.04.01.11.a. with standard transition gaskets (SMJ) for PVC IPS or universal gasket for PVC CIOD pipe and for Ductile Iron pipe shall be per Section 10.04.01.11.b. Joint restraints shall be used at all fittings, gate valves, and hydrants, not requiring an anchor coupling, and shall be incidental to the contract price. Restraints shall be rated at a minimum of 200 psi.

51.09.15 ANCHOR COUPLING

Restraint of ductile iron pipe between gate valves and between tees or other fittings and gate valves shall be accomplished utilizing anchor couplings. Anchor couplings shall be designed to conform to the following provisions;

DI Pipe Barrel:	ANSI/AWWA C151/A21.51 Class 53
Groove Depth:	AWWA C606 Table 1
DI Retaining Ring:	ANSI/AWWA C151/A21.51
DI Swivel Follower:	ANSI/AWWA C110/A21.10 Compatible.

Wall thickness beneath the groove shall exceed the minimum referenced in ANSI/AWWA C150/A21.50 Table 50.13 "Thickness for Internal Pressure", for 350 psi rating plus a surge allowance of 100 psi. The pipe shall be furnished with a bituminous exterior coating per ANSI/AWWA C151/A21.51 and cement mortar lined and seal coated per ANSI/AWWA C104/A21.4.

51.09.16 SEPTIC ENCASEMENT MATERIAL

Where called for on the Drawings, the water main shall be installed in PVC casing (see Section 51.03 or 51.04 for material requirements) of the size shown on the Construction Drawings. The length of septic encasement of a said size shall be determined using the Standard Specifications for Water & Sewer Main Construction in Illinois for the different arrangements of the sewer line being crossed. The septic encasement may be installed in an open trench. Backfill for septic encasement shall be specified in Section 41.04 and will be incidental to the unit price of the septic encasement installation and no additional compensation will be allowed. Measurement in lineal feet shall be made along with centerline of the septic encasement as installed. The carrier pipe shall be RJ pipe when the length is greater than 40 feet. Casing spacers shall be used inside casing pipe. The ends of the casing shall be sealed with either end seals or a method approved by the OWNER. Payment for septic encasement shall include the PVC septic encasement,

casing spacers, and end seals and will be paid per the bid schedule item for “PVC Septic Encasement” of said size. If the length of the casing is greater than 40 feet, payment for the RJ PVC carrier pipe shall be paid based on the unit price on the bid schedule for “Restrained-Joint PVC within casing” of said size. The payment length of the restrained joint PVC pipe shall be the next length greater than the length of the casing pipe that will allow for the use of full 20 feet sections of restrained-joint PVC pipe. The cost of expansion coupling, casing spacers, and end seals shall be incidental. If the length of the casing is less than 40 feet, payment for the PVC carrier pipe shall be paid based on the unit price on the bid schedule for “PVC” of said size and pressure classification.

51.09.17 CASING SPACERS

Casing spacers for water main 6 inch and smaller shall be a polyethylene casing spacer which is injection molded from high density polyethylene as per Section 10.04.01.3.a . The compressive strength shall be greater than 3,100 psi and tensile strength shall be greater than 3,100 psi. During installation, either lock washers or lock nuts shall be used when bolting the spacers together.

The casing spacers for water main larger than 6 inch shall be bolt on style with a shell made of two sections of T-304 stainless steel or some other non-corrosive metal. All nuts and bolts are to be 18-8 stainless steel or equivalent non-corrosive material. The runners shall be made of ultra high molecular weight polymer with high abrasion resistance and a low coefficient of friction. Casing spacers shall be per Section 10.04.01.3.b. During installation, either lock washers or lock nuts shall be used when bolting the spacers together.

Casing spacers shall be installed on 6 foot centers or 3 to a 20ft. pipe segment and shall be included in bid price for “PVC Septic Encasement”

51.09.18 WATER SERVICE CONNECTION

After the OWNER receives the IEPA Operating Permit but prior to changing any existing service supply from the existing main to the new main, the CONTRACTOR shall give the OWNER two days’ notice to allow the OWNER opportunity to notify the affected water customer/s.

All service connections shall be made as close to the existing service connection as practical. All material, labor, and necessary equipment shall be included in the CONTRACTOR’s unit price for “Re-connect Existing Service to New Main” with the exception of the service line, bore service line, and (when applicable) replace curb stop with curb stop or replace curb stop with meter.

The existing service line on city’s side of the curb stop/meter (unless otherwise described below) is to be replaced from the new main to the curb stop/meter, with minimal disturbance to the curb stop/meter.

If the city’s service line is lead sweated/soldered to the curb stop/meter, and there is no way to replace/remake the connection of the existing service line to the existing curb stop/meter, then and only then will the curb stop/meter assembly be replaced.

If the service line on the private side of the curb stop/meter is lead, the CONTRACTOR is to minimize disturbance to the existing line on the private side during reconnection of the new curb stop /meter to the existing service line.

When necessary to replace the curb stop per criteria above the CONTRACTOR shall include all material, labor and equipment required to remove, connect, and replace the curb stop with the curb stop and box as specified in Sec 10.04.01. of these specifications.

When necessary to replace a Meter per criteria above the CONTRACTOR shall include all material, labor and equipment required to remove, connect, and replace the meter assembly and meter pit with lid as specified in Sec 10.04.01. of these specifications.

51.09.19 CORPORATION STOPS

For pressure regulating and non-pressure regulating service connections measuring 5/8" x 3/4" and 1", a corporation stop size of 1 inch shall be used. The ball valve shall be brass, shall be per Section 10.04.01.18.a., taper thread by Conductive Compression Connection for CTS tubing, and shall be of ball valve design for use with a compression fitting and stainless steel insert. No flaring of polyethylene pipe will be allowed.

For pressure regulating and non-pressure regulating service connections measuring 1-1/2" and 2" a corporation stop size of 2 inch shall be used. The ball valve shall be brass, shall be per Section 10.04.01.18.b, taper thread by Packed Joint outlet for PVC pipe, and shall be of ball valve design. A 2 inch gate valve (per Section 10.03.01.18.c. MJ) with a valve box shall be installed near the corporation stop.

CONTRACTOR is to notify the resident project representative of any lead service lines on the private side of curb stops.

51.09.20 SERVICE CLAMP/SADDLE

Service clamps shall be bronze, strap-type as required for the size of corporation stop as specified, and shall be per Section 10.04.01.12 and as approved by the ENGINEER. The use of solvent weld plastic saddles will not be permitted. The service clamps shall be located on the pipe such that the tap location is between 8 and 10 o'clock or between 2 and 4 o'clock as seen on the cross section of the pipe unless physical elements of the trench warrant otherwise and the deviation is approved by the ENGINEER. Corporation stops shall be installed before conducting hydrostatic tests or while at working pressure.

51.09.21 METER

The meter shall conform to the latest revision of AWWA C700 Standard for Cold Water Meters - Displacement Type. They shall be provided with straight reading registers, Touch-Read capabilities, or dual Touch-Read and Radio-Read capabilities, as specified in the bid schedule, indicating gallons. The Touch-Read and Radio-Read Meter Reading Systems shall comply with all design, performance, and material requirements of the appropriate AWWA Standard, as most recently revised.

The meters with dual read capabilities (Radio-Read and Touch-Read) shall consist of a meter onto which a dual port touchcoupler Meter Transceiver Unit (MXU) is attached. Single port meters require a single port touchcoupler MXU, per Section 10.04.01.21.i.

The MXU shall be closed and installed in the retainer of the plastic meter lid and the TouchPad installed in a 1 7/8" hole drilled (by the CONTRACTOR) in the edge of the plastic meter lid. All costs associated with providing fully functioning dual-read meters shall be included in the appropriate bid item. See also the detail provided on the Contract Drawings.

51.09.22 REGULATOR

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51.09.23 METER YOKE ASSEMBLY

The meter yoke assembly shall be of all copper and bronze/brass construction and be equipped with all necessary spacer tubes and spuds. The assembly shall incorporate a dual check valve and shall be such that a compression fitting is used. The meter yoke shall have a copper riser which elevates the meter above the service line per meter and coppersetter as specified below. A ball angle meter valve shall be installed which has a lock wing that can be padlocked in the closed position. A double check backflow preventer shall be located on top.

The meter swivel nut for both the angle stop valve and the discharge elbow shall be equipped with a saddle and saddle nuts to assist in meter and gasket installation. Meter settings will be similar to the typical detail drawing for a 5/8" x 3/4" service connection.

Only compression fittings with stainless steel inserts shall be used. **No flaring** of polyethylene pipe will be allowed.

The CONTRACTOR shall install a No. 4 re-bar and tie wire, or equal, with each yoke and meter, or other approved means for providing lateral support to the assembly. After the installation of the rebar, a piece of one inch polyethylene service line shall cover the rebar remaining above grade to prevent contact of two unlike metals. This shall be included in the bid price for each service connection.

The meter yoke per Section 10.04.01.22 shall be manufactured to fit the particular meter and pressure regulator furnished per Sections 10.04.01.20 and 10.04.01.18.e.

51.09.24 METER BOX

The CONTRACTOR shall furnish and install a meter box as shown on the drawings and as approved by the ENGINEER. The meter box shall be PVC profiled-wall, as per Specification 10.04.01.23. The meter box shall be supported on a minimum of 4 bricks.

51.09.25 METER COVER

The meter box cover shall be per Section 10.04.01.24. Lids shall overlap the frame and be lockable. The lids shall have a recess suitable for an electronic meter reading antenna. The lid shall be cast iron with hole cut to fit electronic reading antenna. Refer to Section 10.04.01.24 for specific requirements pertaining to services of different sizes. The meter box cover shall be a per Section 10.04.01.24. Lids shall overlap the frame and be lockable. The lids shall have a recess suitable for an electronic meter reading antenna. The lid shall be cast iron with hole cut to fit electronic reading antenna. Refer to Section 10.04.01.24 for specific requirements pertaining to services of different sizes. The meter box cover shall be a per Section 10.04.01.24. Lids shall overlap the frame and be lockable. The lids shall have a recess suitable for an electronic meter reading antenna. The lid shall be cast iron with hole cut to fit electronic reading antenna. Refer to Section 10.04.01.24 for specific requirements pertaining to services of different sizes.

51.09.26 LINE STOP

Where indicated on plans a Line Stop shall be installed to stop flow for cutting, capping, connecting, etc. All labor, equipment, and material to perform the intended line stop shall be included in the CONTRACTOR's bid unit price for "Line Stop" of said size.

Piping and Appurtenances

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Piping and Appurtenances

Section 52

52.01. SCOPE OF WORK

The work to be performed under this section of the specifications shall include all labor, materials, equipment and transportation necessary for furnishing and installing piping and appurtenances shown on the drawings and specified herein.

The CONTRACTOR shall be responsible for all materials furnished under this section, and storage of same, until the date of substantial completion. He shall replace at his expense all materials found to be defective or damaged in handling or storage. The CONTRACTOR shall, if requested by the ENGINEER, furnish certificates, affidavits of compliance, test reports or samples for check analysis for any of the materials specified herein.

Specification references made herein for manufactured materials, such as pipe, fittings, and joints, refer to the designations for the American Water Works Association (AWWA), the American Standards Association (ASA), the American Society for Testing and Materials (ASTM), and the American National Standards Institute (ANSI).

All sewer mains and sewer laterals shall be constructed in accordance with the Standard Specifications for Water and Sewer Main Construction in Illinois.

In case of conflict with the Standard Water Sewer Specifications, these Technical Provisions shall govern.

Although they may not be specifically shown on the drawings or called for elsewhere in the Technical Provisions, the CONTRACTOR shall include in his bid price the cost of all fittings, piping supports, and miscellaneous appurtenances needed to provide a secure, workable pipe and valve system. Equipment suction and discharge piping and other exposed piping shall be supported by concrete pedestals, piers, adjustable pipe supports, thrust restraints, hangers, and tie rods as necessary to insure a stable installation. Adjustable pipe supports or piers shall be arranged to relieve attached equipment of all strain due to the weight of the pipe, fittings, valves, and the contents of the pipe. Pipe supports shall be stanchion saddle type. Hanger shall be adjustable wrought clevis or adjustable wrought ring type.

52.02. GENERAL INFORMATION

A. Piping Systems

1. Gravity Pipe - The following items shall be considered "gravity pipe": gravity mains, trunk lines, laterals, collectors, service lines, risers, and any other piping intended to carry wastewater or sludge by gravity flow or non-mechanically induced pressure. Where a specific pipe material or pipe joint is shown on the drawings, only that material or joint shall be used.
 - a. Exposed or Unsupported Gravity Pipe - The pipe shall be considered exposed or unsupported whenever it is inside a structure, submerged above ground elevation,

or any location where the pipe must be strong enough to span a distance between installed supports.

(1) Ductile Iron – Flanged or Grooved Joint

- b. Buried Gravity Pipe - The pipe shall be considered buried if placed below grade and fully supported by the earth. Other types of pipe not covered in these technical provisions will be considered for use as buried gravity pipe; in general, these pipes are recently developed and are not presently covered by specifications from national testing organizations such as ANSI, ASTM, or ASA. Examples include spiral wound PVC pipe and spiral wound Polyethylene pipe. Use of such piping shall require the written approval of the ENGINEER prior to bidding; this approval will be based on his review of the pipe specifications. These specifications shall be submitted no later than fourteen (14) calendar days prior to the bid date, and they shall provide complete information on pipe raw materials, design and stiffness, marking, workmanship, fittings, joints, and installation.

(1) PVC – Slip Joint Pipe

(2) RJ PVC – Gasketed, Restrained or Mechanically Restrained Joint

B. Standard Drawings

Unless otherwise shown on the drawings, or called for in Technical Provisions, the Standard Drawings contained in Division VI of the Standard Water and Sewer Specifications shall apply.

52.03. PIPE MATERIAL, FITTINGS, AND JOINTS

- A. This section of the specifications covers rigid polyvinyl chloride pipe, hereinafter called PVC pipe.

1. The sewer main shall be Polyvinyl Chloride (PVC) pipe and push-on gasketed joints, in accordance with Section 30 of the Standard Water and Sewer Specifications.
2. ASTM Specification D 1784, shall be conformed with in all respects.
3. Freedom pipe will not be allowed on this project.

B. PVC Slip Joint Pipe (4 to 15 inch)

1. Gravity and Drain Pipe: PVC pipe and fittings shall be as specified in the Standard Water and Sewer Specifications under Division III, Sec. 30-4.04 for gravity and drain pipe; the minimum wall thickness shall be based on SDR 35 for diameters up to 15".

All joints shall conform to the latest revision of ASTM Specification D3212.

Unless otherwise shown on the drawings or specified herein, 4 to 15 inch PVC gravity pipe shall be:

- a. Polyvinyl Chloride (PVC) Pipe shall conform to ASTM D3034; minimum acceptable pipe classification of SDR 35; push-on gasketed joint.

C. PVC Slip Joint Pipe (18 to 48 inch)

1. Gravity and Drain Pipe: PVC pipe and fittings shall be as specified in the Standard Water and Sewer Specifications under Division III, Sec. 30-4.04 for gravity and drain pipe; the manufacturer shall recommend a wall thickness to be approved by the ENGINEER.

Unless otherwise shown on the drawings or specified herein, 18 to 48 inch PVC gravity pipe shall be:

- a. Polyvinyl Chloride (PVC) Pipe shall conform to ASTM F679; minimum acceptable pipe classification of PS 46, SDR 35; push-on gasketed joint.

D. PVC Restrained Joint

This section of the specifications covers rigid restrained-joint polyvinyl chloride pipe, hereinafter called RJ pipe.

The CONTRACTOR must use PVC Restrained-Joint pipe for drainage ditch crossings, road crossings, and creek crossings as well as all directional bores (including sewer main inside of casing pipe), as shown on the contract drawings.

The Restrained Joint pipe shall be furnished with twin gasket couplings, nylon splines, rubber rings, and lubricant. The rubber rings shall be shipped in place in the coupling.

The transition from Restrained Joint pipe to PVC or ductile pipe shall be made by the use of a manufacturer supplied expansion coupling. This coupling shall be Restrained Joint PVC by IPS. Only the installation of full joints of RJ pipe with factory grooves shall be permitted.

1. Gravity Pipe - The pipe shall be PVC, with a hydrostatic design stress of 4000 psi for water at 73.4 degrees F, designated as PVC 1120 or 1220, Class 12454 and made to iron pipe size diameters. SDR rating shall be a minimum of SDR 26 for 4 inch through 12 inch diameter pipe.

As shown on the drawings and specified herein, 4 to 15 inch PVC gravity RJ pipe shall be:

- a. Restrained Joint (PVC) Pipe, SDR 26, for installation in directional boring and/or bore and jacked casing installations.
- b. Restrained Joint (PVC) Pipe, SDR 21, for installation in directional boring and/or bore and jacked casing installations.

52.04. PIPE LAYING

A. General

1. Pipe laying, jointing, and testing for gravity and drain pipe shall be as specified in Division III, Section 31 of the Standard Water and Sewer Specifications except as herein supplemented or modified:

Instead of the requirements called for under Section 31-1.01, "Survey Line and Grade," the following shall apply:

The CONTRACTOR shall be responsible for checking and following grades between existing structures. The CONTRACTOR shall use a laser as a guide for

construction. The CONTRACTOR shall check his grade as he progresses to assure that he is on line and grade. Any discrepancies from the plans shall be corrected by the CONTRACTOR.

The CONTRACTOR shall carefully preserve bench marks, reference points and stakes and, in case of willful or careless destruction, shall be charged with the resulting expense and shall be responsible for any mistake that may be caused by their unnecessary loss or disturbance.

The locations of the sewers, conduits, and structures, as shown on the drawings, have been selected to provide the least possible interference with, or the crossing of, existing utilities. The OWNER reserves the right to make minor variations in the location of these items during construction, to make any change or differing conditions discovered during construction, and no additional payment will be allowed the CONTRACTOR for such shifts in alignment.

The CONTRACTOR's attention is called to the General Condition regarding surveys, permits, and regulations.

2. Only competent persons at laying sewer main pipe shall be employed on this phase of the work, and complete suitable equipment necessary for the execution of same is required. Any incompetency observed by the OWNER must be removed at his request, and where improper equipment or lack of same appears to be impairing the quality or speed of the work, such adjustments in same shall be made to the OWNER's satisfaction.

The pipe, structures, fittings, and valves shall be placed in the trench with care. Under no circumstances shall pipe or other materials be dropped or dumped into the trench. The pipe shall not be dragged in a manner which would cause scratching on the surface of the pipe and will be considered cause for rejection. Pipe shall be installed in accordance with the manufacturer's recommendations, and with the Standard Specifications for Water and Sewer Main Construction in Illinois.

3. Pipe Cleaning During Laying Operation: If dirt or dust has been introduced into the length of pipe, a thorough cleaning of the pipe shall be done just before the joint of pipe is installed. At this time a visual check shall be made by placing the pipe in an inclined position to assure that all foreign matter and dirt is removed from the inside of the pipe. The pipe shall be kept clean during and after laying. At the termination of pipe laying, the open end of the pipeline shall be closed off by a suitable cover until laying operations are resumed.
4. Inspection of Material During Construction: Any materials not meeting the specifications, or obviously faulty material, shall be rejected by the ENGINEER and removed from the job site by the CONTRACTOR. When ordered by the ENGINEER, joints may be cut from the pipeline for inspection. All ductile iron installation, whether pipe or fittings, shall be reviewed by the Resident Project Representative before the trench is backfilled. Failure to allow for this observation shall result in the exposing of the pipe for review, and shall be incidental to the contract costs.
5. Fluid Tight Joints: All dirt, debris and moisture shall be removed from the surfaces to be jointed. Make sure the gasket is not twisted or turned to prevent proper sealing

- in the groove. Apply the lubricant to the gasket surface and to the spigot end of the pipe. The joint is made by one quick easy motion making sure the guide mark has reached the end of the fitting. For restrained-joint pipe, the contractor should then insert the nylon spline through the spline hole in the assembled joint which engages with the spline groove in the pipe end.
6. Breaks in Pipe or Joints: All breaks in pipe and/or joints shall be repaired to the satisfaction of the ENGINEER and at the expense of the CONTRACTOR. The defective pipe or fittings shall be removed and replaced. Repair clamps will **not** be permitted.
 7. Cutting Pipe: Cutting of RJ pipe shall **not** be allowed; only the installation of full length joints shall be allowed.
 8. Bed and Cover:
Shall be per Section 31 and 42 of These Specifications.
 9. Measurement and Payment: Payment for all work described in this section shall be included in the CONTRACTOR's bid price for the respective sizes of lines, pressure class, and material type, as shown in the Bid Schedule. Measurement in lineal feet shall be made along the centerline of the trench through all valves and fittings, starting and ending at the face of structures.
 10. Service Connections: Intentionally Blank

52.05. PIPE APPURTENANCE

A. Manholes

Intentionally Blank

BORING WATER MAINS AND SERVICES

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BORING WATER MAINS AND SERVICES

Section 54

54.01. SCOPE OF WORK

The CONTRACTOR shall furnish all equipment, machinery, labor and materials necessary to perform all operations in connection with the conventional boring and pulling or directional boring of water mains, casings, and service lines of the required diameter and type of material at locations that may be designated at time of construction. Permits required by the State, County, and Township Highway Departments, railroads, and waterway authorities will be acquired by the OWNER.

The CONTRACTOR shall be responsible for notification of appropriate officials as required by Highway and Railroad permits. The CONTRACTOR shall be responsible for all restrictions of the respective Highway and Railroad permits.

The CONTRACTOR is responsible for any charges by the railroad(s) for flagmen, foremen, engineering observers, and others; and by IDOT and others during the course of the work; and shall include such costs in his bid price.

54.02. TRAFFIC AND SAFETY

The contractor shall use all safety procedures, equipment, and planning necessary to perform the conventional bores or directional bores for installation of the water mains and service lines. The boring procedure is to avoid disturbance of the travel surface, and shall not cause any inconvenience to the traveling public. At all locations where traffic must be maintained, the operations shall be carried on without encroachment upon the traveled way by either the excavation, by the storage of materials or equipment, or by the use of construction equipment. All stipulations of the highway and/or railroad departments shall be adhered to along with the approval of the OWNER.

54.03. CONSTRUCTION DETAILS

The CONTRACTOR is reminded that his work must remain within the construction easement, as specified on each individual easement and/or public R.O.W. **Any construction activity outside the easements/public R.O.W. provided is solely at the CONTRACTOR's risk, responsibility, and liability. Including cost associated with the removal and reinstalling of said water main(s), services, and appurtenances on to private easement or right-of-way which ever may occur.**

All sheeting, bracing, shoring, and other materials necessary for the complete installation of the main lines and service lines under roadways and driveways shall be of sufficient strength and construction to handle the loads that are to be imposed upon them.

The alignment and elevation of the forward end of the boring shall be checked and if it does not meet the requirements of the permit, the auger will be pulled and a new boring made at no additional cost to the OWNER.

The CONTRACTOR shall fill over excavation of bore and recovery pits at entrance and exit of water main through bore hole or casing with **compacted** sand or CA-6 to the bottom of the water main giving a sound foundation for the water main preventing the water main from shearing/shifting as the backfill settles. Payment for the sand or CA-6 shall be considered incidental to the contract price for bores.

54.04. BASIS OF PAYMENT

All work associated with conventional borings including the use of benonite, polymers, soups or a combination there of will be paid for at the contract unit price per lineal foot of the diameter as specified on the plans, and as detailed in the following sections. All work associated with directional borings will be paid for at the lump sum contract prices for each specific bore. The prices shall include all excavation, boring, equipment, labor, materials, dewatering, traffic safety control, placement and compaction of granular backfill, and other miscellaneous work as necessary. Note that an approximate bore length has been indicated on the plans for each particular bore; however, the actual payment length will be determined in the field, per the specifications in the following sections.

No payment will be allowed for additional bore lengths for the CONTRACTOR's convenience, due to utilities or otherwise, beyond that described in the following sections.

54.05. BORING WATER MAINS UNDER ROADWAYS AND DRIVEWAYS

A. Materials

Where indicated on the plans and in the Bidding Schedule the CONTRACTOR shall provide boring by the lineal foot for passage under roadways and driveways. No casing pipe shall be furnished or placed under this item of work. All water main for bores shall be restrained-joint PVC with expansion couplings at both ends (see also Section 51 of these Specifications) which are located exterior to the bore under the roadway.

B. Payment

This work will be paid for at the contract unit price per lineal foot for BORING WATER MAINS of the diameter as specified on the plans, measured in place, up to a maximum length beyond the edge of the roadway or driveway surface, as follows:

State Highways	15 feet
County Highways	15 feet
Township/City Roadways	5 feet
Driveways	2 feet

Although the payment lengths may be less than these specified distances, depending on field conditions and actual boring lengths, no payment for borings will be allowed beyond these specified distances.

Payment for the restrained-joint PVC installed shall be based on the unit price of the bid schedule line item, "Restrained-Joint PVC - Bores" for the appropriate size and pressure classification of restrained-joint PVC pipe utilized. The payment length of the restrained-joint PVC pipe shall be equal to the pay length determined for each bore and then rounded up to the next full length of pipe,

measured in lineal footage, when the main extends in a straight line in at least one direction. The payment length of the restrained-joint PVC pipe shall be equal to the length between fittings when there is a fitting adjacent to each end of the bore. If the CONTRACTOR elects to use additional restrained-joint pipe, The difference will be paid at the normal PVC pipe price being installed adjacent to the bore. The cost of expansion couplings shall be incidental to the “Restrained-Joint PVC - Bores” price.

Any cracking or damage caused by the boring operation to the traveled surfaces (regardless of the soil and/or rock type encountered) shall be repaired or replaced, at the CONTRACTOR’s expense, as required by the OWNER.

54.06. BORING SERVICE LINES UNDER ROADWAYS

A. General

An auger slightly larger than the diameter of the service line to be installed shall be used. Jacking or dry augering are acceptable methods. Jetting or tunneling are prohibited.

After an acceptable boring has been made, the auger will be removed and a threaded coupling installed to which the specified service line will be attached and then pulled to the open cut excavation.

B. Materials

Service lines under IDOT regulated roads may be copper or polyethylene, as defined by the IDOT permits. Service line shall be continuous, without joints, from the corporation stop to the meter yoke/curb stop. All other service lines shall be copper or polyethylene (see also Section 51.09.01 of the specifications).

C. Payment

This work will be paid for at the contract unit price per lineal foot for BORING SERVICE LINES as specified on the plans and measured in place, regardless of type of material or diameter of pipe, up to a maximum length beyond the edge of the roadway or driveway surface as follows:

State Highways	15 feet
County Highways.....	15 feet
Township /City Roadways.....	5 feet
Driveways.....	2 feet

Although the payment lengths may be less than these specified distances, depending on field conditions and actual boring lengths, no payment for borings will be allowed beyond these specified distances.

The CONTRACTOR shall receive normal payment for the service line that is to be placed in the bore hole under the roadway.

Payment for service line and service line bores will not be made until the CONTRACTOR has completed the entire service connection installation and it is ready for use.

Any cracking or damage caused by the boring operation to the traveled surfaces (regardless of the soil and/or rock type encountered) shall be repaired or replaced, at the CONTRACTOR’s expense, as required by the OWNER, the ENGINEER, or the property owner.

D. Directional Boring Service Line

A drill head slightly larger than the diameter of the service line to be installed shall be used. No backreamers or expanders will be used in boring service line. Directional bore, jacking, or dry augering are acceptable methods. Jetting, or tunneling are prohibited. No joints will be allowed under the roadway.

If the CONTRACTOR optionally directional bores any service line areas for his convenience, no payment will be allowed for directional boring. He shall receive normal payment for SERVICE LINES as detailed in Section 54.06.C.

54.07. BORE AND JACK CASING PIPE

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54.08. DIRECTIONAL BORING - WATER MAIN

A. General

Where indicated on the plans and in the Bidding Schedule, the CONTRACTOR shall provide directional boring of water mains of the diameter as specified, for passage under roadways, driveways, waterways, and/or thru private property. No casing pipe shall be furnished or placed under this item of work. All water main for directional bores shall be RJ PVC with expansion couplings at both ends(see also Section 51 of these specifications).

B. Payment

This work shall be paid for at the lump sum contract prices for each specific directional bore of the diameters and locations as specified on the plans. The length of the bore indicated on the plans is an estimated length for IEPA purposes only, and also constitutes the minimum length that will be allowed physically for the directional bore. The CONTRACTOR shall determine an actual length for each bore based on his particular construction methods during the bidding preparation process.

The lump sum bid price for each specific bore shall include all necessary items for a complete directional bore crossing, including mobilization and setup, directional bore operations, any and all RJ PVC pipe, 18 inch expansion couplings at both ends, tracer wire, etc.. The CONTRACTOR will not receive any additional payment for the PVC water main that is to be placed in the bore hole under the roadway, driveway, waterway or thru private property over and above the lump sum bid price. If the CONTRACTOR optionally directional bores any main line area for his convenience, no payment will be allowed under the bid item DIRECTIONAL BORING WATER MAINS. However, he shall be paid based on the unit price of the type of pipe that was originally specified to be installed in that area.

C. Specified Distance from the Edge of the Pavement

Open cut excavation will not be allowed within the specified distance from the edge of the traveled surface. All stipulations of the various highway departments shall be adhered to along with the approval of the OWNER. The following minimum distances will be maintained from the edges of the following various roadway or driveway surfaces for all directional bores (water mains and service lines):

State Highways	15 feet
County Highways	15 feet
Township/City Roadways	10 feet
Driveways	5 feet

D. Specified Distance for Waterways

Since waterway surfaces and streambed/streambank profiles occur in such a variety of configurations, and since CONTRACTOR's may employ a number of methods for directional boring depending on pipe installation angle, convenience, etc., it is not possible to come up with a single rule for specified directional bore distances. An estimated directional bore length has been indicated on the plans for IEPA purposes for each particular directional bore, and also constitutes the minimum length that will be allowed physically for the directional bore. However, the The payment conditions listed in Section 54.08.B shall apply. In all cases, open cut excavations for bore pits shall remain at least 20 feet from top of stream banks.

E. Procedures

The CONTRACTOR shall use water, bentonite, polymer, or bentonite/polymer mixture for the mud mixture needed for the directional boring procedure and shall include the costs of these items in his unit bid price. The CONTRACTOR shall use the mixture required by the type of soil encountered.

The CONTRACTOR shall use the backreamer needed to satisfy the conditions of the directional bore and the type of soil encountered. Spiral or coned backreamers are designed to push foreign objects such as rocks and tree roots out of the way or off to the side of the directional bore path. The surface area of the cone shaped backreamers is large so this will create a lot of drag. The wing cutter, which allows the mixed material to flow through, provides the best result in mixing.

For 8 inch diameter or smaller pipe, a reamer larger than 1.5 times the diameter of the pipe should not be used without the permission of the ENGINEER. For 10 inch diameter or larger pipe, a reamer of 1.3 times the diameter of the pipe or smaller is required, unless given permission by the ENGINEER.

It is recommended that the pipe follow immediately behind the backreamer or expander because the directional bore hole will start to close up instantly after the backreamer or expander is pulled through. This allows limited time, depending on the soil condition, to push the pipe in the hole. When trying to push the pipe in the closing hole, the pipe could bend. When this occurs the pipe will be under a considerable amount of tension and compression and could result in the shattering of the pipe. The pipe under the roadway could also be damaged from this compression stress on the pipe.

F. Damaged Pavement

There are several factors that affect the disfiguration of the ground surface of a directional bore. The depth of the directional bore under the surface is critical. The increase in depth of the directional bore will decrease the chance of the pavement bulging. Hydra-lock is another factor that could cause surface damage.

Hydra-lock is created during pull back, when not enough mud is pumped into the hole or poor mud mixture is used. During hydra-lock, fluid that is being pumped out of the backreamer is completely contained within the hole, rather than flowing out of the inlet and/or outlet hole. Without an escape route, the fluid being pumped into the hole becomes pressurized, acting like a hydraulic cylinder -

the pressure prevents the pipe from moving until the fluid finds an escape route. This may cause cracking or disfiguration at the surface to release the pressure. Any cracking or damage caused by the directional boring operation to the traveled surfaces (regardless of the soil and/or rock type encountered) shall be repaired or replaced, at the CONTRACTOR's expense, as required by the OWNER, the ENGINEER, or the property owner.

G. Surface and Utility Impairments

All utilities, including wiring, light standards, signal lights, sewers, private water service lines, buried telephone cable, underground gas lines, field tiles, etc., affecting the construction of the proposed improvement shall be adjusted at the CONTRACTOR's expense. It shall be the CONTRACTOR's responsibility to determine the exact location of all utilities. All adjustments shall be done as specified by the OWNER of the utility. If the CONTRACTOR damages any utility not requiring adjustment, he shall replace or repair it as required by the OWNER or by the ENGINEER and no additional compensation will be allowed. No attempt has been made on the drawings to show all utilities or their exact locations.

54.09. DIRECTIONAL BORING - CASING PIPE

A. General

Where indicated on the plans and in the Bidding Schedule, the CONTRACTOR shall provide directional boring of casing pipe of the diameter and type as specified, for passage under roadways, driveways, waterways, and/or thru private property. No water main shall be furnished or placed under this item of work. All casing pipe for directional bores shall be as shown in the plans. The void between the water main and the casing pipe shall be sealed at both ends by a method approved by the OWNER.

Certain installation practices are necessary to protect the water main that is required to go through the casing pipe. These practices are necessary to prevent the pipe from resting on the joints, and provide for retrieval if repairs are necessary in the future. Prior to inserting the water main in the casing, casing spacers of the bolt on style shall be installed. Casing spacers shall be as specified in Section 51.09.13 and Section 10.03.01.3.

RJ PVC, pipe shall be used inside of the casing pipe, with expansion couplings at both ends exterior to the casing (see also Section 51 of these Specifications).

B. Payment

This work shall be paid for at the lump sum contract prices for each specific directional bore of the diameters and locations as specified on the plans. The length of the bore indicated on the plans is an estimated length only, and also constitutes the minimum length that will be allowed physically for the directional bore. The CONTRACTOR shall determine an actual length for each bore based on his particular construction methods during the bidding preparation process.

The lump sum bid price for each specific bore shall include all necessary items for a complete directional bore, including mobilization and setup, directional bore operations, any and all RJ PVC pipe, tracer wire, etc..

When steel casing pipe is used under township or county roads, the ENGINEER may allow the CONTRACTOR to choose which method of boring to be used. If the CONTRACTOR decides to use the directional bore method over the bore and jack method, then payment will be based on the lineal foot unit bid price for "Bore and Jack Steel Casing" and this cost shall include all necessary

items for a complete directional bore, including mobilization and setup, directional bore operations, any and all casing pipe, tracer wire, expansion couplings, casing spacers and end seals etc.. The payment length shall be the length listed on the plan sheet for the Bore and Jack.

Payment for the RJ PVC installed in the casing shall be based on the unit price of the bid schedule line item, "Restrained-Joint PVC within casing pipe", for the appropriate size and pressure classification of RJ PVC pipe utilized. The payment length of the RJ PVC pipe shall be the next length greater than the length of the casing pipe that will allow for the use of full 20 feet sections of RJ PVC pipe (as shown on the Drawings). The cost of expansion couplings, casing spacers and end seals shall be incidental.

C. Procedures

The CONTRACTOR shall use water, bentonite, polymer, or bentonite/polymer mixture for the mud mixture needed for the directional boring procedure and shall include the costs of these items in his unit bid price. The CONTRACTOR shall use the mixture required by the type of soil encountered.

The CONTRACTOR shall use the backreamer needed to satisfy the conditions of the directional bore and the type of soil encountered. Spiral or coned backreamers are designed to push foreign objects such as rocks and tree roots out of the way or off to the side of the directional bore path. The surface area of the cone shaped backreamers is large so this will create a lot of drag. The wing cutter, which allows the mixed material to flow through, provides the best result in mixing.

For 8 inch diameter or smaller pipe, a reamer larger than 1.5 times the diameter of the pipe should not be used without the permission of the ENGINEER. For 10 inch diameter or larger pipe, a reamer of 1.3 times the diameter of the pipe or smaller is required, unless given permission by the ENGINEER.

It is recommended that the pipe follow immediately behind the backreamer or expander because the directional bore hole will start to close up instantly after the backreamer or expander is pulled through. This allows limited time, depending on the soil condition, to push the pipe in the hole. When trying to push the pipe in the closing hole, the pipe could bend. When this occurs the pipe will be under a considerable amount of tension and compression and could result in the shattering of the pipe. The pipe under the roadway could also be damaged from this compression stress on the pipe.

D. Damaged Pavement

There are several factors that affect the disfiguration of the ground surface of a directional bore. The depth of the directional bore under the surface is critical. The increase in depth of the directional bore will decrease the chance of the pavement bulging. Hydra-lock is another factor that could cause surface damage.

Hydra-lock is created during pull back, when not enough mud is pumped into the hole or poor mud mixture is used. During hydra-lock, fluid that is being pumped out of the backreamer is completely contained within the hole, rather than flowing out of the inlet and/or outlet hole. Without an escape route, the fluid being pumped into the hole becomes pressurized, acting like a hydraulic cylinder - the pressure prevents the pipe from moving until the fluid finds an escape route. This may cause cracking or disfiguration at the surface to release the pressure. Any cracking or damage caused by the directional boring operation to the traveled surfaces (regardless of the soil and/or rock type encountered) shall be repaired or replaced, at the CONTRACTOR's expense, as required by the OWNER, the ENGINEER, or the property owner.

E. Surface and Utility Impairments

All utilities, including wiring, light standards, signal lights, sewers, private water service lines, buried telephone cable, underground gas lines, field tiles, etc., affecting the construction of the proposed improvement shall be adjusted at the CONTRACTOR's expense. It shall be the CONTRACTOR's responsibility to determine the exact location of all utilities. All adjustments shall be done as specified by the OWNER of the utility. If the CONTRACTOR damages any utility not requiring adjustment, he shall replace or repair it as required by the OWNER or by the ENGINEER and no additional compensation will be allowed. No attempt has been made on the drawings to show all utilities or their exact locations.

IEPA Permit

02159-800
IEPA Permit

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 North Grand Avenue, East; Post Office Box 19276; Springfield, IL 62794-9276

Division of Public Water Supplies

Telephone 217/782-1724

PUBLIC WATER SUPPLY CONSTRUCTION PERMIT

SUBJECT: CARLINVILLE (Macoupin County -1170150)

Permit Issued to:
Mayor and City Council
550 North Broad Street
Carlinville, IL 62626



PERMIT NUMBER: 1209-FY2015

DATE ISSUED: July 1, 2015

PERMIT TYPE: Water Main

The issuance of this permit is based on plans and specifications prepared by the engineers/architects indicated, and are identified as follows. This permit is issued for the construction and/or installation of the public water supply improvements described in this document, in accordance with the provisions of the "Environmental Protection Act", Title IV, Sections 14 through 17, and Title X, Sections 39 and 40, and is subject to the conditions printed on the last page of this permit and the ADDITIONAL CONDITIONS listed below.

FIRM: Heneghan & Associates, P.C.

NUMBER OF PLAN SHEETS: 11

TITLE OF PLANS: "Standard Addition Water Main Replacement - Phase I & II"

PROPOSED IMPROVEMENTS:

Installation of approximately 4,710 feet of 6-inch water main.

ADDITIONAL CONDITIONS:

1. All water main shall be satisfactorily disinfected prior to use. In accordance with the requirements of AWWA C651-05, at least one set of samples shall be collected from every 1,200 feet of new water main plus one set from the end of the line and from each branch. Satisfactory disinfected shall be demonstrated in accordance with the requirements of 35 III. Adm. Code 652.203.
2. There are no further conditions to this permit.

DCC:MPH:wm

cc: Heneghan & Associates, P.C.
Springfield Region

David C. Cook, P.E.
Acting Manager Permit Section
Division of Public Water Supplies

STANDARD CONDITIONS FOR CONSTRUCTION/DEVELOPMENT PERMITS
ISSUED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

The Illinois Environmental Protection Agency Act (Illinois Compiled Statutes, Chapter 111-1/2, Section 1039) grants the Environmental Protection Agency authority to impose conditions on permits which it issues.

These standard conditions shall apply to all permits which the Agency issues for construction or development projects which require permits under the Division of Water Pollution Control, Air Pollution Control, Public Water Supplies and Land and Noise Pollution Control. Special conditions may also be imposed by the separate divisions in addition to these standard conditions.

1. Unless this permit has been extended or it has been voided by a newly issued permit, this permit will expire one year after this date of issuance unless construction or development on this project has started on or prior to that date. (See below)
2. The construction or development of facilities covered by this permit shall be done in compliance with applicable provisions of Federal laws and regulations, the Illinois Environmental Protection Act, and Rules and Regulations adopted the Illinois Pollution Control Board.
3. There shall be no deviations from the approved plans and specifications unless a written request for modification of the project, along with plans and specifications as required, shall have been submitted to the Agency and a supplemental written permit issued.
4. The permittee shall allow any agent duly authorized by the Agency upon the presentation of credentials:
 - a. to enter at reasonable times the permittee's premises where actual or potential effluent, emission or noise sources are located or where any activity is to be conducted pursuant to this permit.
 - b. to have access to and copy at reasonable times any records required be kept under the terms and conditions of this permit.
 - c. to inspect at reasonable times, including during any hours of operation of equipment constructed or operated under this permit, such equipment or monitoring methodology or equipment required to be kept, used, operated, calibrated and maintained under this permit.
 - d. to obtain and remove at reasonable times samples of any discharge or emission of pollutants.
 - e. to enter at reasonable times and utilize any photographic, recording, testing, monitoring or other equipment for the purpose of preserving, testing, monitoring, or recording any activity, discharge, or emission authorized by this permit.
5. The issuance of this permit:
 - a. shall not be considered as in any manner affecting the title of the permits upon which the permitted facilities are to be located;
 - b. does not release the permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the proposed facilities;
 - c. does not release the permittee from compliance with the other applicable statutes and regulations of the United States, of the State of Illinois, or with applicable local laws, ordinances and regulations;
 - d. does not take into consideration or attest to the structural stability of any units or parts of the project;
 - e. in no manner implies or suggests that the Agency (or its officers, agents or employees) assumes any liability directly or indirectly for any loss due to damage, installation, maintenance, or operation of the proposed equipment or facility.
6. These standard conditions shall prevail unless modified by special conditions.
7. The Agency may file a complaint with Board of modification, suspension or revocation of a permit:
 - a. upon discovery that the permit application misrepresentation or false statements or that all relevant facts were not disclosed; or
 - b. upon finding that any standard or special conditions have been violated; or
 - c. upon any violation of the Environmental Protection Act or any Rules or Regulation effective thereunder as a result of the construction or development authorized by this permit.

For Division of Public Water Supply Construction Permits, construction on this project, once started, may continue for four years before this permit expires. A request for extension shall be filed at least 90 day prior to the permit expiration date.

