

**CONTRACT DOCUMENTS AND SPECIFICATIONS**

**for the**

**Repairing and Repainting the Interior and Exterior of**

**One 500,000 Gallon Steel Elevated Tank**

**“52<sup>nd</sup> Street Tower”**

**Lawrence, Indiana**

**for**

**City of Lawrence Utilities**

**Lawrence, Indiana**

**Prepared by**

**Tank Industry Consultants  
7740 West New York Street  
Indianapolis, Indiana 46214**

**TIC 20.204.H214.002**

**November 17, 2021**

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**for**

**City of Lawrence Utilities  
9201 Harrison Park Court  
Lawrence, Indiana 46216**

**November 17, 2021**

**Engineer**

**Tank Industry Consultants  
7740 West New York Street  
Indianapolis, Indiana 46214**

**Certified by:**

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**Gregory R. “Chip” Stein, P.E.  
Registered Professional Engineer, No. 920018  
State of Indiana**

**TIC 20.204.H214.002**

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## NOTICE TO BIDDERS

Notice is hereby given that City of Lawrence Utilities, Lawrence, Indiana hereinafter referred to as the OWNER, by and through its Utility Services Board, shall receive sealed bids for the following waterworks improvements:

500,000 Gallon Steel Elevated Tank, in Lawrence, Indiana: The complete cleaning and repainting of the interior surfaces, the spot cleaning and spot coating of the exterior surfaces damaged by repairs and new items, and washing the exterior of the 52nd Street Tower and Oaklandon Road Tower. Additional Work items include: repair of concrete foundations and grout; replacement of riser insert plate, riser manhole, tower ladder, shell and roof ladder, balcony safety railing, clog-resistant roof vent pallet and screening, and inlet/outlet pipe protective cover; installation of notched-tubular safe-climbing devices, vandal deterrent, balcony safety railing self-closing gate, and transition cone safety railing; modification of access opening in balcony floor; removal of cable-type safe-climbing devices; and including other miscellaneous repairs. The Bidders attention is directed to the Detailed Technical Specifications for a complete description of the Work and the Project.

**Bids Advertised-** November 23 and 30, 2021

**Written Questions Due-** December 13, 2021 at 4:00 p.m., local time

**Response to Questions Due-** December 15, 2021 at 5:00 p.m., local time

**Bids Due-** December 17, 2021 at 1:30 p.m., local time

**Bid Opening-** December 17, 2021 at 2:00 p.m., local time

Bids shall be received at the City of Lawrence Utility Operations Office, 9201 Harrison Park Court, Lawrence, Indiana 46216, until **December 17, 2021 at 1:30 p.m., local time**. Said bids will then be publicly opened and read aloud at 52nd Street Elevated Storage Tank Project Bid Opening meeting at **2:00 p.m., local time on December 17, 2021** at the Lawrence Government Center located at 9001 East 59th Street, Lawrence, Indiana 46216. Any bid received later than 1:30 p.m., local time shall be returned unopened. The work shall be performed in the early Fall 2022.

Plans and Specifications shall be downloaded from the City's website at:

<https://www.cityoflawrence.org/projects>.

Plans and specifications shall be acquired by one of the means mentioned above to be eligible to bid on this contract. The contract documents, plans, specifications, and evaluation report will be available on the City of Lawrence website at <https://www.cityoflawrence.org/projects>; at the office of Mr. Scott Salsbery, City of Lawrence Utilities, 9201 Harrison Park Court, Lawrence, Indiana 46216; and in the office of the ENGINEER, Tank Industry Consultants - Headquarters: 7740 West New York Street, Indianapolis, Indiana 46214-2988, telephone 317/271-3100, FAX 317/271-3300, until the bid opening. The contract documents, plans, specifications, and evaluation report may be reviewed at the above locations by appointment only.

Color copies of the photographs contained in the evaluation report may be obtained from Tank Industry Consultants by United States Priority Mail Service, for a non-refundable sum of one hundred dollars (\$100) per set. Next day delivery service by United States Express Mail Service, Federal Express, or UPS Next Day Mail will be available from Tank Industry Consultants for a non-refundable surcharge of

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fifty dollars (\$50) above the cost of the photographs. Checks for color copies of the photographs are to be made out to and delivered to Tank Industry Consultants, 7740 West New York Street, Indianapolis, Indiana 46214 and may be combined with the checks for the bid documents.

Any person, firm or corporation who submits a proposal MUST submit a BID BOND in the amount of five percent (5%), made payable to the City of Lawrence.

The successful Contractor will be required to furnish a Performance Bond in the amount of one hundred percent (100%) of the contract price within ten (10) days after award of the contract and a two (2) year Maintenance Bond in the amount of thirty percent (30%) of the contract price prior to completion and final payment of the contract.

Bids may be held by the Utility Services Board for a period not to exceed sixty (60) calendar days from the public opening. No Contractor may withdraw his proposal within sixty (60) days after the actual date of the opening thereof.

The City of Lawrence Utility Services Board reserves the right to ask for clarification for any bid submitted. In comparing bids, consideration will not be confined to price only. **The successful bid will be the one that is judged to best serve the interests of the City of Lawrence when price, product, safety, quality and delivery are considered.** The Utility Services Board reserves the right to reject any proposal, to waive technicalities or irregularities therein, to delete any bid item or items and to award a contract on the proposal that in their judgment is most advantageous to the City of Lawrence. The Utility Services Board also reserves the right to add and/or remove projects; or shorten and/or lengthen project limits, based upon funding requirements and availability.

All materials furnished and labor performed incident to and required for the proper and satisfactory execution of the contracts shall be furnished and performed in accordance with the requirements of the drawings and specifications, and any addenda thereto, prepared by Tank Industry Consultants, 7740 West New York Street, Indianapolis, Indiana 46214, FAX 317/271-3300.

Bidders are notified that it is the policy of the City of Lawrence to strive to achieve the following participation goals on this project through reasonable and good faith efforts:

1. To utilize minority-owned business enterprises for public works projects, procurement of goods, and services for the city in a dollar amount equal to at least 15% of monies spent by the city.
2. To utilize woman-owned business enterprises for public works projects, procurement of goods, and services for the city in a dollar amount equal to at least 8% of monies spent by the city.
3. To utilize veteran-owned business enterprises for public works projects, procurement of goods, and services for the city in a dollar amount equal to at least 3% of monies spent by the city.
4. To utilize disability-owned business enterprises for public works projects, procurement of goods, and services for the city in a dollar amount equal to at least 1% of monies spent by the city.

Bidders are required to undertake reasonable good-faith efforts to achieve the City's XBE goals and shall provide documentation of the efforts made, including contact information, business type, and date of contact(s) for all the XBE's that were contacted. The City's HR Director will review, or cause to be

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reviewed, the Bidder's submissions of good-faith efforts and may request additional information. Submissions that do not demonstrate reasonable, good-faith efforts may be rejected.

The Bidder's attention is directed to the Instructions to Bidders for the following information:

1. Requirements for Bid Security
2. Qualifications of Bidders

The Bidder's attention is directed to the Agreement for Time of Completion and Liquidated Damages requirements.

The Bidder's attention is directed to the General Conditions for the requirements of the Qualifications of Insurers and Sureties.

OWNER reserves the right to waive all irregularities in any Bid, and to accept any Bid which is deemed most favorable to the OWNER.

END OF SECTION

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# INSTRUCTIONS TO BIDDERS

## 1. DEFINED TERMS

- 1.1. Terms used in these Instructions to Bidders will have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below which are applicable to both the singular and plural thereof:
- A. *Bidder* – The individual or entity who submits a bid directly to the OWNER, as distinct from a Sub-Bidder, who submits a bid to the BIDDER.
  - B. *Successful Bidder* – The lowest responsible Bidder submitting a responsive Bid to whom OWNER (on the basis of the OWNER'S evaluation as herein provided) makes an award.
  - C. *Bidding Documents* – The Bidding Requirements (Notice to Bidders, Instructions to Bidders, Bid Form with any supplements, and Bid Security) and the proposed Contract Documents (including all Addenda issued prior to the receipt of Bids).

## 2. COPIES OF BIDDING DOCUMENTS

- 2.1. No refund shall be given for returned sets of Bidding Documents or color photographs.
- 2.2. Complete sets of Bidding Documents must be used in preparing Bids; neither OWNER nor ENGINEER assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- 2.3. OWNER and ENGINEER in making copies of Bidding Documents available on the above terms do so only for the purpose of obtaining Bids for the Work and do not confer a license or grant for any other use.

## 3. QUALIFICATIONS OF BIDDERS

- 3.1. To demonstrate qualifications to perform the Work, each BIDDER must complete the Bid Form in its entirety and submit with the Bid a completed Bidder's Financial Statement. Each Bid must contain evidence of Bidder's qualification to do business in the state where the Project is located or covenant to obtain such qualification prior to award of the contract.
- 3.2. **Each BIDDER must demonstrate that they have been in business under their current business name for a minimum of 5 years prior to the date of receipt of bids. Failure to comply with this requirement may entitle the OWNER to reject the Bid.**
- 3.3. **Each BIDDER shall submit information on the 5 most recently completed, similar projects, including tank size, cost, and schedule. Failure to comply with this requirement may entitle the OWNER to reject the Bid.**

#### 4. **EXAMINATION OF CONTRACT DOCUMENTS AND SITE**

##### 4.1. Subsurface and Physical Conditions

###### A. The Supplementary Conditions identify:

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

###### B. Copies of reports and drawings referenced in paragraph 4.1.A will be made available by OWNER to any Bidder on request. Those reports and drawings are not part of the Contract Documents, but the “technical data” contained therein upon which Bidder is entitled to rely as provided in paragraph 4.02 of the General Conditions has been identified and established in paragraph 4.02 of the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any “technical data” or any other data, interpretations, opinions or information contained in such reports or shown or indicated in such drawings.

##### 4.2. Underground Facilities

###### A. Information and data reflected in the Contract Documents with respect to existing Underground Facilities at or contiguous to the site is based upon information furnished to OWNER and ENGINEER by Owners of such Underground Facilities, including OWNER, or others.

##### 4.3. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated conditions appear in Paragraphs 4.02, 4.03, and 4.04 of the General Conditions.

##### 4.4. On request in advance and after submittal of Bidder’s evidence of insurance coverage meeting the limits designated in the Supplementary Conditions, OWNER will provide each BIDDER access to the site to conduct such examinations, investigations, explorations, tests, and studies as BIDDER deems necessary for submission of a Bid. BIDDER shall fill all holes, clean up and restore the site to its former condition upon completion of such explorations, investigations, tests and studies.

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

- 4.6. It is the responsibility of each BIDDER before submitting a Bid to:
- A. examine and carefully study the Bidding Documents, including any Addenda and the other related data identified in the Bidding Documents;
  - B. visit the Site and become familiar with and satisfy Bidder as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;
  - C. become familiar with and satisfy Bidder as to all federal, state and local Laws and Regulations that may affect cost, progress, or performance of the Work;
  - D. obtain and carefully study (or assume responsibility for doing so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by the Bidder, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents, and safety precautions and programs incident thereto;
  - E. agree at the time of submitting its Bid that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price bid and within the times and in accordance with the other terms and conditions of the Bidding Documents;
  - F. 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;
  - G. correlate the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents;
  - 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; and
  - I. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.
- 4.7. The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the Work required by the Bidding Documents and applying any specific means, methods, techniques, sequences, and procedures of construction that may be shown or indicated or expressly required by the Bidding Documents, that Bidder has given ENGINEER written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents and the written resolutions thereof by the ENGINEER are acceptable to Bidder, and that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.

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- 4.8. Every contract to which the state or any of its political or civil subdivisions is a party, including franchises granted to public utilities, shall contain a provision requiring the contractor and his subcontractors not to discriminate against any employee or applicant for employment to be employed in the performance of such contract, with respect to his hire, tenure, terms, conditions, or privileges of employment or any matter directly or indirectly related to employment, because of his race, religion, color, sex, disability, national origin, or ancestry.

## 5. **SITE AND OTHER AREAS**

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

## 6. **INTERPRETATIONS AND ADDENDA**

- 6.1. All questions about the meaning or intent of the Bidding Documents are to be submitted to ENGINEER in writing. Interpretations or clarifications considered necessary by ENGINEER in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by ENGINEER as having received the Bidding Documents. Questions received less than ten (10) days prior to the opening of Bids may not be answered. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.
- 6.2. Addenda may also be issued to clarify, correct, or change the Bidding Documents as deemed advisable by OWNER or ENGINEER.

## 7. **BID SECURITY**

- 7.1. A bid must be accompanied by Bid security made payable to OWNER in an amount of five percent (5%) of the BIDDER'S Total Amount Bid and in the form of a Bid Bond issued by a surety meeting the requirements of Paragraph 5.01 and 5.02 of the General Conditions or a certified or bank check.
- 7.2. The Bid security of the Successful Bidder will be retained until such Bidder has executed the Contract Documents, furnished the required contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be returned. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within fifteen (15) days after the Notice of Award, OWNER may annul the Notice of Award and the Bid security of that Bidder will be forfeited up to the difference in bids between the Successful Bidder and the next acceptable Bidder. The Bid security of other Bidders whom the OWNER believes to have reasonable chance of receiving the award may be retained by the OWNER until the earlier of seven days after the Effective Date of the Agreement or the expiration of the period that bids are subject to acceptance, whereupon Bid security furnished by such Bidders will be returned.
- 7.3. Bid security with Bids which are not competitive will be returned within seven (7) days after the Bid opening.

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8. **LETTER OF SURETY**

- 8.1. Each bid must be accompanied by a letter of surety executed by the BIDDER'S surety company stating that if the Bidder is awarded the project, the surety will execute a performance bond and a labor & material payment bond each in the amount equal to one hundred percent (100%) of the contract.

9. **CONTRACT TIME**

- 9.1. The numbers of days within which, or the dates by which, the Work is to be (a) substantially completed and (b) also completed and ready for final payment are set forth in the Agreement.

10. **LIQUIDATED DAMAGES**

- 10.1. Provisions for liquidated damages are set forth in the Agreement.

11. **SUBSTITUTE AND "OR-EQUAL" ITEMS**

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

12. **SUBCONTRACTORS, SUPPLIERS AND OTHERS**

- 12.1. The identity of certain Subcontractors, Suppliers and other persons and organizations (including those who are to furnish the principal items of material and equipment) shall be submitted with the Bid Form. Such a list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, person or organization if requested by OWNER. If OWNER or ENGINEER after due investigation has reasonable objection to any proposed Subcontractor, Supplier, other person or organization, either OWNER or ENGINEER may, before the Notice of Award is given, require the apparent Successful Bidder to submit an acceptable substitute, in which case the apparent Successful Bidder shall submit an acceptable substitute, Bidder's 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.
- 12.2. If apparent Successful Bidder declines to make any such substitution, OWNER may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, individuals, or entities. Declining to make requested substitutions will not constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which OWNER or ENGINEER makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to OWNER and ENGINEER subject to revocation of such acceptance after the Effective Date of the Agreement as provided in paragraph 6.06 of the General Conditions.

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

### 13. **BID FORM**

13.1. The Bid Form is included with the Bidding Documents. Additional copies may be obtained from the ENGINEER or OWNER at the cost stipulated in the Notice to Bidders.

13.2. All blanks on the Bid Form must be completed by printing in black or blue ink or by typewriter with a black or blue ribbon and the Bid signed. A Bid price shall be indicated for each Bid Item listed therein, or the words "No Bid," "No Change," or "Not Applicable" entered.

13.3. A Bid by a corporation shall be executed in the corporate name by the president or a vice-president or other corporate officer accompanied by evidence of authority to sign. The corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown below the signature.

13.4. 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 official address of the partnership shall be shown below the signature.

13.5. A Bid by a limited liability company shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm shall be shown below the signature.

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

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

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

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

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

13.11. All items and questions in the Bid Form shall be answered completely and accurately prior to submitting the Bid. Failure to provide the information requested in the Bid Form may entitle the OWNER to reject the Bid.

13.12. The Bid shall contain evidence of Bidder's authority and qualification to do business in the state where the Project is located or covenant to obtain such qualification prior to award of the Contract. Bidder's state contractor license number for the state of the Project, if any, shall also be shown on the Bid Form.

## 14. **BASIS OF BID; EVALUATION OF BIDS**

### 14.1. Lump Sum

- A. Bidders shall submit a Bid on a lump sum basis for the Base Bid and include a separate price for each alternate, if any, described in the Bidding Documents as provided for in the Bid Form. The price for each alternate will be the amount added to the Base Bid if OWNER selects the alternate.

### 14.2. Unit Price

- A. Bidders shall submit a Bid on a unit price basis for each unit price item of Work listed in the Bid Form.
- B. The total of all estimated prices will be determined as the sum of the products of the estimated quantity of each item and the unit price Bid for the item. The final quantities and Contract Price will be determined in accordance with paragraph 11.03 of the General Conditions.
- C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between words and figures will be resolved in favor of the words.

## 15. **SUBMITTAL OF BID**

- 15.1. A Bid shall be submitted no later than the date and time prescribed and at the place indicated in the advertisement or invitation to Bid and shall be enclosed in an opaque sealed envelope plainly marked with the Project title, the name and address of the Bidder, and shall be accompanied by the Bid security and other required documents. If the Bid is sent through the mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate envelope plainly marked on the outside with the notation "BID ENCLOSED." The Bidder is solely responsible for the timely arrival of all bids, whether hand delivered or forwarded by mail. City of Lawrence Utilities and Tank Industry Consultants accept no responsibility for lost or misdirected bids. Prospective Bidders are furnished one copy of the Bidding Documents. The Bidder shall return the bound copy of the Bidding and Contract Documents completely executed in accordance with the advertisement or invitation to Bid and Instructions to Bidders.

## 16. **MODIFICATION AND WITHDRAWAL OF BID**

- 16.1. A Bid may be modified or withdrawn by an appropriate document duly executed in the manner that a Bid must be executed and delivered to the place where the Bids are to be submitted prior to the date and time for the opening of Bids.
- 16.2. If, within twenty-four hours after Bids are opened, any Bidder files a duly signed written notice with OWNER and promptly thereafter demonstrates to the reasonable satisfaction of OWNER that there was a material and substantial mistake in the preparation of 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.

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**17. OPENING OF BIDS**

- 17.1. 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 Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

**18. BIDS TO REMAIN SUBJECT TO ACCEPTANCE**

- 18.1. 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 that date.

**19. AWARD OF CONTRACT**

- 19.1. OWNER reserves the right to reject any and all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. OWNER further reserves the right to reject the Bid of any Bidder whom it finds, after reasonable inquiry and evaluation, to be non-responsible. OWNER may also reject the Bid of any Bidder if OWNER believes that it would not be in the best interest of the Project to make an award to that Bidder. OWNER also reserves the right to waive all informalities not involving price, time, or changes in the Work and to negotiate contract terms with the Successful Bidder.
- 19.2. More than one Bid for the same Work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any Bidder has an interest in more than one Bid for the Work may be cause for disqualification of that Bidder and the rejection of all Bids in which that Bidder has an interest.
- 19.3. In evaluating Bids, OWNER will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.
- 19.4. In evaluating Bids, OWNER will consider the qualifications of Bidders and may consider the qualifications and experience of Subcontractors, Suppliers, and other individuals or entities proposed for those portions of the Work for which the identity of Subcontractors, Suppliers, and other individuals or entities must be submitted as provided in the Supplementary Conditions.
- 19.5. OWNER may conduct such investigations as OWNER deems necessary to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, individuals, or entities to perform the Work in accordance with the Contract Documents.
- 19.6. If the contract is to be awarded, OWNER will award the Contract to the Bidder whose Bid is in the best interests of the Project.

**20. CONTRACT SECURITY AND INSURANCE**

- 20.1. Article 5 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth OWNER'S requirements as to performance and payment Bonds and insurance. When the Successful Bidder delivers the executed Agreement to OWNER, it must be accompanied by the required performance and payment bonds and necessary insurances.

21. **SIGNING OF AGREEMENT**

21.1. OWNER is exempt from Indiana 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 6.10 of the Supplementary Conditions for additional information.

22. **SALES AND USE TAXES**

22.1. OWNER is exempt from Indiana 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 6.10 of the Supplementary Conditions for additional information.

END OF INSTRUCTIONS TO BIDDERS

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**E-Verify Affidavit**

Pursuant to Indiana Code 22-5-1.7-11, the Contractor entering into a contract with the Owner is required to enroll in and verify the work eligibility status of all its newly hired employees through the E-Verify program. The Contractor is not required to verify the work eligibility status of all its newly hired employees through the E-Verify program if the E-Verify program no longer exists.

The undersigned, on behalf of the Contractor, being first duly sworn, deposes and states that the Contractor does not knowingly employ an unauthorized alien. The undersigned further affirms that, prior to entering into its contract with the Owner, the undersigned Contractor will enroll in and agrees to verify the work eligibility status of all its new hired employees through the E-Verify program

(Contractor): \_\_\_\_\_

By (Written Signature): \_\_\_\_\_

(Printed Name) \_\_\_\_\_

(Title): \_\_\_\_\_

*Important – Notary Signature and Seal Required in the Space Below*

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

SS:

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

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_,  
20\_\_\_\_.

My commission expires: \_\_\_\_\_ (Signed) \_\_\_\_\_

Residing in \_\_\_\_\_ County, State of \_\_\_\_\_

## BID FORM

**PROJECT IDENTIFICATION:** Repairing and Repainting the Interior and Exterior of One 500,000 Gallon Steel Elevated Tank, "52<sup>nd</sup> Street Tower," in Lawrence, Indiana. The BIDDER is referred to the following Detailed Technical Specifications for the complete Scope of Work.

**CONTRACT IDENTIFICATION AND NUMBER:** \_\_\_\_\_

**THIS BID IS SUBMITTED TO:** City of Lawrence Utilities  
9201 Harrison Park Court  
Lawrence, Indiana 46216

**ATTENTION:** Mr. Scott Salsbery

- 1.01 The undersigned BIDDER proposes and agrees, if this Bid is accepted, to enter into an agreement with OWNER in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices indicated in this Bid and within the times indicated in the Contract Agreement and in accordance with the other terms and conditions of the Bidding Documents.
- 2.01 BIDDER accepts all of the terms and conditions of the Notice to Bidders, and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of OWNER.
- 3.01 In submitting this Bid, BIDDER represents, as more fully set forth in the Agreement, that:
- A. BIDDER has examined and carefully studied the Bidding Documents, the other related data identified in the Bidding Documents, and the following Addenda, receipt of all which is hereby acknowledged.

<u>Addendum Number</u>	<u>Addendum Date</u>
_____	_____
_____	_____
_____	_____
_____	_____

- B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
- C. Bidder is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work.
- D. BIDDER has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in paragraph 4.02 of the General Conditions, and (2) reports and drawings of a

00300-1

Hazardous Environmental Condition, if any, which has been identified in the Supplementary Conditions as provided in paragraph 4.06 of the General Conditions.

- E. BIDDER has obtained and carefully studied (or assumes responsibility for having done so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the work or which relate to any aspect of the means, methods, techniques, sequences, and procedures or construction to be employed by Bidder, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents to be employed by Bidder, and safety precautions and programs incident thereto.
  - F. Bidder does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents.
  - G. Bidder is aware of the general nature of work to be performed by OWNER and others at the Site that relates to the Work as indicated in the Bidding Documents.
  - H. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents.
  - I. Bidder has given ENGINEER written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by ENGINEER is acceptable to Bidder.
  - J. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.
- 4.01 Bidder further represents that this Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any individual or entity to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over OWNER.
- 5.01 In submitting this bid, BIDDER provides the following history of BIDDER company experience.
- A. What year did the Bidder start operating under its present name? \_\_\_\_\_

B. What similar public works projects has your organization completed?

CONTRACT AMOUNT	CLASS OF WORK	WHEN COMPLETED	NAME, ADDRESS & PHONE # OF OWNER

C. What similar public works projects is your organization now in process of construction?

CONTRACT AMOUNT	CLASS OF WORK	WHEN COMPLETED	NAME, ADDRESS & PHONE # OF OWNER

D. Have you ever failed to complete any work awarded to you? \_\_\_\_\_

If so, where and why? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

E. List references from private firms for which you have performed similar work.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

6.01 BIDDER will supply sufficient and detailed information to the following statements and questions on the pages supplied.

- A. Explain your plan or layout for performing proposed work. Describe crew size and equipment necessary to complete project in required time.

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- B. If you intend to sublet any portion of the Work, state the name and address of each Subcontractor, equipment to be used by the Subcontractor, and whether you expect to require a performance bond.

C. What equipment do you intend to use for the proposed project?

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D. Have you made contracts or received offers for all materials within prices used in preparing your proposal?

(CIRCLE ONE) YES NO

7.01 Attachment of BIDDER'S most recent twelve-month financial statement is mandatory. Any bid submitted without said financial statement as required shall thereby be rendered invalid. The financial statement provided hereunder to the governing body awarding the contract must be specific enough in detail so that said governing body can make a proper determination of the BIDDER'S capability for completing the project if awarded.

8.01 Bidder will complete the Work for the following listed Work items for the prices listed on the BIDDER'S PROPOSAL:

Bid Item 1: (Base Bid for 500,000 Gallon Elevated Tank)  
(Lump Sum)

The complete cleaning and repainting of the interior surfaces, the spot cleaning and spot coating of the exterior surfaces damaged by repairs and new items, and washing the exterior of the 52nd Street Tower and Oaklandon Road Tower. Additional Work items include: repair of concrete foundations and grout; replacement of riser insert plate, riser manhole, tower ladder, shell and roof ladder, balcony safety railing, clog-resistant roof vent pallet and screening, and inlet/outlet pipe protective cover; installation of notched-tubular safe-climbing devices, vandal deterrent, balcony safety railing self-closing gate, and transition cone safety railing; modification of access opening in balcony floor; removal of cable-type safe-climbing devices; and including other miscellaneous repairs. All of this Work shall be in accordance with the **Detailed Technical Specifications**.

Bid Item 2: (Unit Price)  
(Add or Deduct from the **Total Amount Bid**)

Repair Welding: After the initial abrasive blast cleaning, any pits defined for pit welding by the FIELD OBSERVER shall be repaired by welding. All areas of apparent seam deterioration shall be initially abrasive blast cleaned, and any seam corrosion or undercut defined by the FIELD OBSERVER shall be repaired by arc-gouging and welding. **The number of man-hours of repair welding shall be paid for by the unit price per man-hour listed on the BIDDER'S PROPOSAL.**

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Bid Item 3: (Unit Price)  
(Add or Deduct from the **Total Amount Bid**)

Pit Filling and Surfacing: After the specified surface preparation, any pits, rough areas or seams defined for pit filling or surfacing by the FIELD OBSERVER shall be filled with solventless polyamide epoxy seam sealer of the type recommended by the supplier of the interior paint system. Costs for all labor, equipment, supplies, rigging, and other associated costs for application of the solventless polyamide epoxy seam sealer shall be included in the unit price per gallon. **The number of gallons of pit filling shall be paid for by the unit price per gallon listed on the BIDDER'S PROPOSAL.**

Bid Item 4: (Unit Price)  
(Add or Deduct from the **Total Amount Bid**)

Interior Chipping and/or Grinding: Any irregular surfaces, including but not limited to surface protrusions, burrs, fitting scars, sharp edges or corners, weld spatter, weld overlap and rough weld beads shall be removed from all interior surfaces of the tank in accordance with the **Detailed Technical Specifications**. **The number of chipping and/or grinding man-hours on the tank interior shall be paid for by the unit price per man-hour listed on the BIDDER'S PROPOSAL.**

Bid Item 5: (Unit Price)  
(Add or Deduct from the **Total Amount Bid**)

Additional Work: It is felt that the **Detailed Technical Specifications** adequately describe the work to be performed; however, in the event that during the course of the work it is found that additional work is required and it is authorized in writing by the ENGINEER and the OWNER, this work shall be paid for at the following price per single man-hour, including all welding, equipment, normal rigging, labor, supplies, overhead, insurance, and profit. **The number of unanticipated additional work man-hours shall be paid for by the unit price per man-hour listed on the BIDDER'S PROPOSAL.**

Alternate Bid Item 6: (Lump Sum)  
(Add to the **Total Amount Bid**)

Alternate Ultra-High Solids Polyurethane Interior Coating: If selected by the OWNER, the approved coatings for the interior surfaces shall be an ultra-high solids polyurethane coating in accordance with the Detailed Technical Specifications. **The difference in cost of applying this polyurethane coating instead of the epoxy coating of the Base Bid shall be paid for by the lump sum price listed on the BIDDER'S PROPOSAL.**

Alternate Bid Item 7: (Lump Sum)  
(Add to the **Total Amount Bid**)

**Dehumidification: If selected by the OWNER, the furnishing, installation, and operation of dehumidification equipment in accordance with the Detailed Technical Specifications shall be paid for by the lump sum price listed on the BIDDER'S PROPOSAL.**

Note: The BIDDER shall use either black or blue ink or typewriter (black ribbon) in completing the Proposal Form. Each line item amount must be given. Failure to do so will result in disqualification of BIDDER.

BIDDERS are reminded that they must bid on the issued plans and specifications, as amended. Any deviation, conditions or attachments made by the BIDDER himself thereto may render the Bid nonresponsive and be cause for its rejection.

Bid Security to be based on the **TOTAL AMOUNT BID** and shall be the percentage indicated in the Instructions to Bidders.

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## BIDDER'S PROPOSAL

### Repairing and Repainting the Interior and Exterior of One 500,000 Gallon Steel Elevated Water Tank "52<sup>nd</sup> Street Tower" Lawrence, Indiana

#### Statement of Estimated Quantities and Proposal Prices

Item No.	Item Description	Est. Qnty.	Unit	Unit Price	Bid Amount
1	Base Bid	1	Lump Sum	N.A.	\$ _____
2	Repair Welding <u>If Required</u>	40	man-hour	\$ _____	\$ _____
3	Pit Filling <u>If Required</u>	5	gallon	\$ _____	\$ _____
4	Interior Chipping & Grinding <u>If Required</u>	85	man-hour	\$ _____	\$ _____
5	Additional Work <u>If Required</u>	100	man-hour	\$ _____	\$ _____

**TOTAL AMOUNT BID** \$ \_\_\_\_\_  
(Items 1 through 5 inclusive)

**TOTAL AMOUNT BID** \_\_\_\_\_  
(written in words)

#### Statement of Estimated Quantities and Proposal Prices for Alternate Bid Items

Item No.	Item Description	Est. Qnty.	Unit	Unit Price	Bid Amount
6	Alternate Ultra-High Solids Polyurethane Interior Coating <u>If Selected</u>	1	Lump Sum	N.A.	\$ _____
7	Dehumidification <u>If Selected</u>	1	Lump Sum	N.A.	\$ _____

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

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

The proposed REPAIR SUBCONTRACTOR is:

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name

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street

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city

state

zip

The proposed DISPOSAL SUBCONTRACTOR is:

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name

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street

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city

state

zip

- 9.01 Bidder agrees that the Work will be substantially completed, and completed and ready for final payment in accordance with paragraph 14.07.B. of the General Conditions on or before the dates and within the number of calendar days indicated in the Agreement.
- 10.01 Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the time specified in the Agreement.
- 11.01 The following documents are attached and made part of this Bid:
- A. Bid For Public Work - Form 96;
  - B. Required Bid security in the form of a Bid Bond issued by a surety meeting the requirements of Paragraph 5.1 of the General Conditions, or in the form of a certified or bank check. Bid security shall list Indiana Agent for Service of Process;
  - C. Required Letter from Surety;
  - D. A tabulation of Subcontractors, Suppliers and other individuals and entities required to be identified in this Bid;
  - E. Required BIDDER'S most recent twelve-month financial statement;
  - F. Proposed cleaning and painting methods;
  - G. Name(s) of the CONTRACTOR'S COMPETENT PERSON(S);

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H. All items and questions in this Bid Form shall be answered completely and accurately prior to submitting this Bid. Failure to provide the information requested in this Bid Form may entitle the OWNER to reject the Bid.

12.01 Communications concerning this Bid shall be addressed to:

Tank Industry Consultants  
7740 West New York Street  
Indianapolis, Indiana 46214  
FAX 317/271-3300  
Attention: Mr. Aman Anand, or Mr. Gregory R. "Chip" Stein, P.E.

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

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

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

If Bidder is:

An Individual

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

By: \_\_\_\_\_ (SEAL)  
*(Individual's signature)*

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

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

Phone No.: \_\_\_\_\_ FAX No.: \_\_\_\_\_

A Partnership

Partnership Name: \_\_\_\_\_ (SEAL)

By: \_\_\_\_\_  
*(Signature of general partner – attach evidence of authority to sign)*

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

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

Phone No.: \_\_\_\_\_ FAX No.: \_\_\_\_\_

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A Corporation

Corporation Name: \_\_\_\_\_ (SEAL)

State of Incorporation: \_\_\_\_\_

Type (General Business, Professional, Service, Limited Liability): \_\_\_\_\_  
\_\_\_\_\_

By: \_\_\_\_\_ (SEAL)  
*(Signature – attach evidence of authority to sign)*

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

Title: \_\_\_\_\_ (CORPORATE SEAL)

Attest: \_\_\_\_\_  
*(Signature of Corporate Secretary)*

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

Phone No.: \_\_\_\_\_ FAX No.: \_\_\_\_\_

Date of Qualification to do business is \_\_\_\_\_

A Joint Venture

Joint Venturer Name: \_\_\_\_\_ (SEAL)

By: \_\_\_\_\_  
*(Signature of joint venturer partner – attach evidence of authority to sign)*

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

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

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

\_\_\_\_\_

Phone No.: \_\_\_\_\_ FAX No.: \_\_\_\_\_

Joint Venturer Name: \_\_\_\_\_ (SEAL)

By: \_\_\_\_\_  
*(Signature of joint venturer partner – attach evidence of authority to sign)*

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

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

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

\_\_\_\_\_

Phone No.: \_\_\_\_\_ FAX No.: \_\_\_\_\_

Phone and FAX Number, and Address for receipt of official communications:

\_\_\_\_\_

\_\_\_\_\_

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



# CONTRACTOR'S BID FOR PUBLIC WORK - FORM 96

State Form 52414 (R2 / 2-13) / Form 96 (Revised 2013)

Prescribed by State Board of Accounts

## PART I

*(To be completed for all bids. Please type or print)*

Date (month, day, year): \_\_\_\_\_

1. Governmental Unit (Owner): \_\_\_\_\_

2. County : \_\_\_\_\_

3. Bidder (Firm): \_\_\_\_\_

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

City/State/ZIPcode: \_\_\_\_\_

4. Telephone Number: \_\_\_\_\_

5. Agent of Bidder (if applicable): \_\_\_\_\_

Pursuant to notices given, the undersigned offers to furnish labor and/or material necessary to complete the public works project of \_\_\_\_\_

(Governmental Unit) in accordance with plans and specifications prepared by \_\_\_\_\_

\_\_\_\_\_ and dated \_\_\_\_\_ for the sum of  
\_\_\_\_\_ \$ \_\_\_\_\_

The undersigned further agrees to furnish a bond or certified check with this bid for an amount specified in the notice of the letting. If alternative bids apply, the undersigned submits a proposal for each in accordance with the notice. Any addendums attached will be specifically referenced at the applicable page.

If additional units of material included in the contract are needed, the cost of units must be the same as that shown in the original contract if accepted by the governmental unit. If the bid is to be awarded on a unit basis, the itemization of the units shall be shown on a separate attachment.

The contractor and his subcontractors, if any, shall not discriminate against or intimidate any employee, or applicant for employment, to be employed in the performance of this contract, with respect to any matter directly or indirectly related to employment because of race, religion, color, sex, national origin or ancestry. Breach of this covenant may be regarded as a material breach of the contract.

### CERTIFICATION OF USE OF UNITED STATES STEEL PRODUCTS

*(If applicable)*

I, the undersigned bidder or agent as a contractor on a public works project, understand my statutory obligation to use steel products made in the United States (I.C. 5-16-8-2). I hereby certify that I and all subcontractors employed by me for this project will use U.S. steel products on this project if awarded. I understand that violations hereunder may result in forfeiture of contractual payments.

## ACCEPTANCE

The above bid is accepted this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, subject to the following conditions: \_\_\_\_\_

Contracting Authority Members:


### PART II

*(For projects of \$150,000 or more – IC 36-1-12-4)*

Governmental Unit: \_\_\_\_\_

Bidder (Firm) \_\_\_\_\_

Date (month, day, year): \_\_\_\_\_

These statements to be submitted under oath by each bidder with and as a part of his bid. Attach additional pages for each section as needed.

### SECTION I EXPERIENCE QUESTIONNAIRE

1. What public works projects has your organization completed for the period of one (1) year prior to the date of the current bid?

Contract Amount	Class of Work	Completion Date	Name and Address of Owner

2. What public works projects are now in process of construction by your organization?

Contract Amount	Class of Work	Expected Completion Date	Name and Address of Owner

3. Have you ever failed to complete any work awarded to you? \_\_\_\_\_ If so, where and why?

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4. List references from private firms for which you have performed work.

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### SECTION II PLAN AND EQUIPMENT QUESTIONNAIRE

1. Explain your plan or layout for performing proposed work. *(Examples could include a narrative of when you could begin work, complete the project, number of workers, etc. and any other information which you believe would enable the governmental unit to consider your bid.)*

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2. Please list the names and addresses of all subcontractors *(i.e. persons or firms outside your own firm who have performed part of the work)* that you have used on public works projects during the past five (5) years along with a brief description of the work done by each subcontractor.

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3. If you intend to sublet any portion of the work, state the name and address of each subcontractor, equipment to be used by the subcontractor, and whether you will require a bond. However, if you are unable to currently provide a listing, please understand a listing must be provided prior to contract approval. Until the completion of the proposed project, you are under a continuing obligation to immediately notify the governmental unit in the event that you subsequently determine that you will use a subcontractor on the proposed project.

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4. What equipment do you have available to use for the proposed project? Any equipment to be used by subcontractors may also be required to be listed by the governmental unit.

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5. Have you entered into contracts or received offers for all materials which substantiate the prices used in preparing your proposal? If not, please explain the rationale used which would corroborate the prices listed.

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### SECTION III CONTRACTOR'S FINANCIAL STATEMENT

Attachment of bidder's financial statement is mandatory. Any bid submitted without said financial statement as required by statute shall thereby be rendered invalid. The financial statement provided hereunder to the governing body awarding the contract must be specific enough in detail so that said governing body can make a proper determination of the bidder's capability for completing the project if awarded.



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**BID OF**

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(Contractor)

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(Address)

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**FOR**  
**PUBLIC WORKS PROJECTS**  
**OF**

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Filed \_\_\_\_\_

Action taken \_\_\_\_\_

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**LETTER FROM SURETY**

TO: City of Lawrence Utilities  
9201 Harrison Park Court  
Lawrence, Indiana 46216

RE: Repairing and Repainting the Interior and Exterior of One 500,000 Gallon Steel Elevated Tank,  
“52<sup>nd</sup> Street Tower,” in Lawrence, Indiana

Gentlemen:

\_\_\_\_\_ of \_\_\_\_\_  
(CONTRACTOR) (ADDRESS)

\_\_\_\_\_ is submitting a proposal  
for the above captioned project. If \_\_\_\_\_ is awarded the contract for this  
(CONTRACTOR)  
Work, \_\_\_\_\_ will execute a Performance Bond and Labor  
(SURETY)  
& Material Payment Bond each in the amount equal to 100% of the said contract.

Yours very truly,

\_\_\_\_\_  
(SURETY)

by \_\_\_\_\_  
(Typed or Printed)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Title)

\_\_\_\_\_  
(Date)

Surety's Indiana Agent for Service of Process:

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

## LISTING OF SUPPLIERS

The undersigned, bidding on the Repairing and Repainting the Interior and Exterior of One 500,000 Gallon Steel Elevated Tank, "52<sup>nd</sup> Street Tower," in Lawrence, Indiana plans to use the material suppliers and materials as follows: (Deviations from specified materials are allowed only in accordance with paragraph 6.05 of the General Conditions.)

Paint Manufacturer: \_\_\_\_\_

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

Local Representative: \_\_\_\_\_

Damaged Exterior Surfaces: Epoxy/Polyurethane System

Spot First Coat: \_\_\_\_\_

Spot Second Coat: \_\_\_\_\_

Spot Third Coat: \_\_\_\_\_

Interior Surfaces: Epoxy System

First Coat: \_\_\_\_\_

Second Coat: \_\_\_\_\_

Third Coat: \_\_\_\_\_

Solventless Epoxy Seam Sealer Manufacturer: \_\_\_\_\_

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

Local Representative: \_\_\_\_\_

Solventless Epoxy Seam Sealer Material: \_\_\_\_\_

Flexible Sealant Manufacturer: \_\_\_\_\_

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

Local Representative: \_\_\_\_\_

Flexible Sealant Material: \_\_\_\_\_

\_\_\_\_\_  
BIDDER

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

**NOTICE OF AWARD**

Dated \_\_\_\_\_, 20\_\_

TO: \_\_\_\_\_  
(Bidder)

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

OWNER'S Contract No. \_\_\_\_\_ ENGINEER'S Project No.: TIC \_\_.\_\_.H214.002  
Project: \_\_\_\_\_  
Contract For:

**Repairing and Repainting the Interior and Exterior of  
One 500,000 Gallon Steel Elevated Tank  
"52<sup>nd</sup> Street Tower"  
Lawrence, Indiana**

You are notified that your Bid dated \_\_\_\_\_, 20\_\_ for the above Contract has been considered. You are the apparent Successful Bidder and have been awarded the contract for the above named Project, which specifically includes the following Bid Item Numbers:

- 1. Base Bid (Lump Sum)..... \$
- 2. Repair Welding (40 man-hours \* \$\_\_\_\_\_ per man-hour)..... \$
- 3. Pit Filling (5 gallons \* \$\_\_\_\_\_ per gallon) ..... \$
- 4. Chipping & Grinding (85 man-hours \* \$\_\_\_\_\_ per man-hour)..... \$
- 5. Unanticipated Additional Work (100 man-hours \* \$\_\_\_\_\_ per man-hour)..... \$
- 6. Alternate Ultra-High Solids Polyurethane Interior Coating (Lump Sum) ..... \$
- 7. Alternate Dehumidification (Lump Sum) ..... \$

The Contract Price of your Contract is \_\_\_\_\_  
\_\_\_\_\_ and 00/100 Dollars (\$ \_\_\_\_\_).

Three copies of each of the proposed Contract Documents accompany this Notice of Award.

You must comply with the following conditions precedent within fifteen days of the date of this Notice of Award, that is by \_\_\_\_\_, 20\_\_.

- 1. Deliver to Tank Industry Consultants three fully executed counterparts of the Contract Documents. Each of the Contract Documents must bear your signature on the signature page of the Agreement.
- 2. Deliver with the executed Contract Documents the Contract Security (Bonds) as specified in the Instructions to Bidders (Article 20), and General Conditions (paragraph 5.01).

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3. The OWNER (City of Lawrence Utilities) and ENGINEER (Tank Industry Consultants) shall be endorsed as Additional Insured on all General Liability, Automobile Liability & Excess Liability policies per paragraph SC-5.04.7 of the Supplementary Conditions.
4. (List other conditions precedent.)

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

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

Tank Industry Consultants  
(Engineer)

BY: \_\_\_\_\_  
(Authorized Signature)

\_\_\_\_\_  
(Title)

FOR: City of Lawrence Utilities  
(Owner)

Copy to OWNER

# AGREEMENT

**THIS AGREEMENT** is by and between City of Lawrence Utilities (hereinafter called OWNER), and \_\_\_\_\_ (hereinafter called CONTRACTOR).

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

## **ARTICLE 1 -- WORK**

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

The complete cleaning and repainting of the 500,000 gallon steel elevated tank , in Lawrence, Indiana on the interior surfaces, the spot cleaning and spot coating of the exterior surfaces damaged by repairs and new items, and washing the exterior of the 52nd Street Tower and Oaklandon Road Tower. Additional Work items include: repair of concrete foundations and grout; replacement of riser insert plate, riser manhole, tower ladder, shell and roof ladder, balcony safety railing, clog-resistant roof vent pallet and screening, and inlet/outlet pipe protective cover; installation of notched-tubular safe-climbing devices, vandal deterrent, balcony safety railing self-closing gate, and transition cone safety railing; modification of access opening in balcony floor; removal of cable-type safe-climbing devices; and including other miscellaneous repairs.

## **ARTICLE 2 – THE PROJECT**

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

Repairing and Repainting the Interior and Exterior of One 500,000 Gallon Steel Elevated Tank, "52<sup>nd</sup> Street Tower," Lawrence, Indiana.

## **ARTICLE 3 -- ENGINEER**

3.01. The Project has been designed by Tank Industry Consultants who is hereinafter called ENGINEER and who is to act as OWNER'S representative, assume all duties and responsibilities and have the rights and authority assigned to ENGINEER in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

## **ARTICLE 4 -- CONTRACT TIME**

### **4.01. Time of the Essence**

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

### **4.02. Days to Achieve Substantial Completion and Final Payment**

- A. The Work on the 500,000 gallon steel elevated tank shall be Substantially Completed within seventy-five (75) calendar days after the date when the Contract Times commence to run as provided in paragraph 2.03 of the General Conditions, and completed and ready for final payment in accordance with paragraph 14.07 of the General Conditions within ninety (90) calendar days after the date when the Contract Times commence to run.

### **4.03. Liquidated Damages**

- A. OWNER and CONTRACTOR recognize that time is of the essence of this Agreement and that OWNER will suffer financial loss and the OWNER'S ability to provide the public with a safe drinking water supply may be impaired if the Work is not completed within the times specified in paragraph 4.02 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by OWNER if the Work is not completed on time. Accordingly, instead of requiring any such proof, OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as penalty) CONTRACTOR shall pay the OWNER seven hundred dollars (\$700) for each calendar day that expires after the time specified in paragraph 4.02 for Substantial Completion until the Work is substantially complete. After Substantial Completion, if CONTRACTOR shall neglect, refuse, or fail to complete the remaining Work within the Contract Time or any proper extension thereof granted by OWNER, CONTRACTOR shall pay the OWNER one hundred twenty-five dollars (\$125) for each calendar day that expires after the time specified in paragraph 4.02 for completion and readiness for final payment until the Work is completed and ready for final payment.

## **ARTICLE 5 -- CONTRACT PRICE**

### **5.01. OWNER shall pay CONTRACTOR for completion of the Work in accordance with the Contract Documents an amount in current funds as follows:**

- A. For all Work, at the prices state 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 14 of the General Conditions. Applications will be processed by ENGINEER as provided in

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the General Conditions. **No separate payment shall be made for bonds, insurance, design, drawings, mobilization, containment of the cleaning and/or painting debris, or paint materials not incorporated into the Work.** Applications for Payment shall be submitted on a suitable form acceptable to ENGINEER and OWNER such as the form bound in these Contract Documents or AIA Documents G702 and G703.

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 each month during performance of the Work as provided in paragraph 6.02.A.1. below. All such payments will be measured by the schedule of values established in paragraph 2.07.A of the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no schedule of values, as provided in the General Requirements:
  - 1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below, but, in each case, less the aggregate of payments previously made and less such amounts as ENGINEER shall determine, or OWNER may withhold, in accordance with paragraph 14.02 of the General Conditions.
    - a. 95% of Work completed.

6.03. Final Payment

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

**ARTICLE 7 -- CONTRACTOR'S REPRESENTATION**

- 7.01. In order to induce OWNER to enter into this Agreement, CONTRACTOR makes the following representations:
- A. CONTRACTOR has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.
  - B. CONTRACTOR has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
  - C. CONTRACTOR is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work.
  - D. CONTRACTOR has studied carefully all reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in paragraph 4.02 of the General Conditions.

- E. CONTRACTOR has obtained and carefully studied (or assumes responsibility for having done so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by CONTRACTOR, including applying the specific means, methods, techniques, sequences, and procedures of construction, if any, expressly required by the Contract Documents to be employed by CONTRACTOR, and safety precautions and programs incident thereto.
- F. CONTRACTOR does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.
- G. CONTRACTOR is aware of the general nature of work to be performed by OWNER and others at the Site that relates to the Work as indicated in the Contract Documents.
- H. CONTRACTOR has correlated the information known to CONTRACTOR, information and observations obtained from visits to the Site, reports and drawings identified in the Contract Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Contract Documents.
- I. CONTRACTOR has given ENGINEER written notice of all conflicts, errors, ambiguities, or discrepancies that CONTRACTOR has discovered in the Contract Documents, and the written resolution thereof by the ENGINEER is acceptable to the CONTRACTOR.
- J. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
- K. Pursuant to Indiana Code 22-5-1.7-11, the Contractor entering into a contract with the Owner is required to enroll in and verify the work eligibility status of all its newly hired employees through the E-Verify program. The Contractor is not required to verify the work eligibility status of all its newly hired employees through the E-Verify program if the E-Verify program no longer exists.
- L. The Contractor does not knowingly employ an unauthorized alien. The undersigned further affirms that, prior to entering into its contract with the Owner, the undersigned Contractor will enroll in and agrees to verify the work eligibility status of all its new hired employees through the E-Verify program
- M. Every contract to which the state or any of its political or civil subdivisions is a party, including franchises granted to public utilities, shall contain a provision requiring the contractor and his subcontractors not to discriminate against any employee or applicant for employment to be employed in the performance of such contract, with respect to his hire, tenure, terms, conditions, or privileges of employment or any matter directly or indirectly related to employment, because of his race, religion, color, sex, disability, national origin, or ancestry.

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## ARTICLE 8 -- CONTRACT DOCUMENTS

### 8.01. Contents

- A. The Contract Documents consist of the following:
  - 1. This Agreement (pages 00510-1 to 00510-7, inclusive);
  - 2. Performance Bond;
  - 3. Labor & Material Payment and all other required Bonds;
  - 4. Certificate of Insurance;
  - 5. Supplementary Conditions;
  - 6. General Conditions;
  - 7. Specifications as listed in the table of contents of the Project Manual;
  - 8. Drawings bound with the specifications;
  - 9. Addenda (numbers \_\_\_\_ to \_\_\_\_, inclusive);
  - 10. Exhibits to this Agreement:
    - a. Notice of Award;
    - b. Notice to Proceed;
    - c. Contractor's Bid Form;
    - d. Bid Bond;
    - e. E-Verify Affidavit;
    - f. Documentation submitted by CONTRACTOR prior to Notice of Award;
  - 11. The following which may be delivered or issued after the Effective Date of the Agreement and are not attached hereto:
    - a. Written Amendments;
    - b. Work Change Directives;
    - c. Change Order(s).
- B. The documents listed in paragraph 8.01.A are attached to this Agreement (except as expressly noted otherwise above).
- C. There are no Contract Documents other than those listed above in this Article 8.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in paragraph 3.04 of the General Conditions.

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## ARTICLE 9 -- MISCELLANEOUS

### 9.01. Terms

- A. Terms used in this Agreement will have the meanings indicated in the Supplementary Conditions, or if not contained in the Supplementary Conditions they will have the meanings indicated in the General Conditions.

### 9.02. Assignment of Contract

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

### 9.03. Successors and Assigns

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

### 9.04. Severability

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

### 9.05. Other Provisions

- A. The CONTRACTOR agrees to protect, defend, and save harmless the OWNER and ENGINEER against any demand for payment for the use of any patented material, process, article, or device that may enter into the manufacture, construction, or form a part of the Work covered by this agreement; and the CONTRACTOR further agrees to indemnify and save harmless the OWNER and ENGINEER from suits or actions of every nature and description brought against them for, or on account of any injuries or damages received or sustained by any party or parties, by, or from the acts of the CONTRACTOR, his servants, or agents.

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

This Agreement will be effective on \_\_\_\_\_, 20\_\_\_\_ (which is the Effective Date of the Agreement).

**OWNER**

**CONTRACTOR**

City of Lawrence Utilities

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

[CORPORATE SEAL]

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

Address for giving notices

City of Lawrence Utilities

9201 Harrison Park Court

Lawrence, Indiana 46216

(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 Owner-Contractor Agreement.)

Designated Representative:

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

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

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

\_\_\_\_\_

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

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

\_\_\_\_\_

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

[CORPORATE SEAL]

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

Address for giving notices

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

License No.: \_\_\_\_\_  
(Where applicable)

Indiana Agent for Service of Process:  
\_\_\_\_\_  
\_\_\_\_\_

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

Designated Representative:

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

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

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

\_\_\_\_\_

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

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

# NOTICE TO PROCEED

Dated \_\_\_\_\_, 20\_\_

TO: \_\_\_\_\_  
(Bidder)

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

OWNER'S Contract No. \_\_\_\_\_ ENGINEER'S Project No.: TIC 20.204.H214.002  
Contract For:

**Repairing and Repainting the Interior and Exterior of  
One 500,000 Gallon Steel Elevated Tank  
"52<sup>nd</sup> Street Tower"  
Lawrence, Indiana**

You are notified that the Contract Time under the above contract will commence to run on \_\_\_\_\_, 20\_\_\_. By that date, you are to start performing your obligations under the Contract Documents. In accordance with Article 4 of the Agreement, the date of Substantial Completion is \_\_\_\_\_, 20\_\_ and the date of readiness for final payment is \_\_\_\_\_, 20\_\_.

Before you may start any Work at the site, you must Submit a Proposed Construction Bar Chart or Schedule indicating the various start and finish dates of the different phases of the project. This chart should also include the estimated dollar amount of each phase. The estimated dollar amount of mobilization, bonds, and insurance shall be pro-rated into respective phases. The Bar Chart or Schedule shall, as a minimum, include the following phases:

1. Move onto site and rig tank, including containment
2. Repair Work
3. Interior cleaning and priming
4. Interior intermediate coating
5. Interior finish coating
6. Tank disinfection
7. Exterior spot cleaning and spot priming
8. Exterior spot intermediate coating
9. Exterior spot finish coating
10. Site clean-up

Tank Industry Consultants  
(Engineer)

BY: \_\_\_\_\_  
(Authorized Signature)

\_\_\_\_\_  
(Title)

FOR: \_\_\_\_\_  
(Owner)

Copy to OWNER

00520-1

**CHANGE ORDER**

Distribution to: OWNER X  
ENGINEER X  
CONTRACTOR X  
FIELD X  
OTHER \_\_\_\_\_

PROJECT: 52<sup>nd</sup> Street Tower  
Lawrence, Indiana

CHANGE ORDER NUMBER:

TO: (Contractor)

INITIATION DATE:

ENGINEER'S PROJECT NO: 20.204.H214.002

CONTRACT DATE:

You are directed to make the following changes in the Contract Documents:

**No other work is changed by this Change Order. All materials shall be as specified and approved.**

Not valid until signed by both the Owner and Engineer.

Signature of the Contractor indicates his/her agreement herewith, including any adjustment in the Contract Sum or Contract Time.

The original Contract Sum was ..... \$  
Net change by previously authorized Change Orders ..... \$  
The Contract Sum prior to this Change Order was..... \$  
The Contract Sum will be (increased) (decreased) (unchanged) by this Change Order. \$  
The new Contract Sum including this Change Order will be..... \$  
The Contract Time will be (increased)(decreased)(unchanged) by ..... ( ) Days  
The Date of Substantial Completion as of the date of this Change Order therefore is... \_\_\_\_\_

**Authorization:**

**RECOMMENDED by Engineer:**

Tank Industry Consultants  
7740 West New York Street  
Indianapolis, Indiana 46214

**APPROVED by Owner:**

City of Lawrence Utilities  
9201 Harrison Park Court  
Lawrence, Indiana 46216

**ACCEPTED by Contractor:**

By: \_\_\_\_\_  
ENGINEER (Authorized Signature)

By: \_\_\_\_\_  
OWNER (Authorized Signature)

By: \_\_\_\_\_  
CONTRACTOR (Authorized Signature)

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

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

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

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

# STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and



AMERICAN CONSULTING  
ENGINEERS COUNCIL



AMERICAN SOCIETY OF  
CIVIL ENGINEERS

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

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AMERICAN CONSULTING ENGINEERS COUNCIL

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AMERICAN SOCIETY OF CIVIL ENGINEERS

This document has been approved and endorsed by

The Associated General



Contractors of America

Construction Specifications Institute



These General Conditions have been prepared for use with the Owner-Contractor Agreements (No. 1910-8-A-1 or 1910-8-A-2) (1996 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the EJCDC User's Guide (No. 1910-50). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (No. 1910-17) (1996 Edition).

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National Society of Professional Engineers  
1420 King Street, Alexandria, VA 22314

American Consulting Engineers Council  
1015 15th Street N.W., Washington, DC 20005

American Society of Civil Engineers  
345 East 47th Street, New York, NY 10017

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## GENERAL CONDITIONS

### ARTICLE 1 - DEFINITIONS AND TERMINOLOGY

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#### 1.01 *Defined Terms*

A. Wherever used in the Contract Documents and printed with initial or all capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof.

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

2. *Agreement*--The written instrument which is evidence of the agreement between OWNER and CONTRACTOR covering the Work.

3. *Application for Payment*--The form acceptable to ENGINEER which is to be used by CONTRACTOR during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Asbestos*--Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

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

6. *Bidding Documents*--The Bidding Requirements and the proposed Contract Documents (including all Addenda issued prior to receipt of Bids).

7. *Bidding Requirements*--The Advertisement or Invitation to Bid, Instructions to Bidders, Bid security form, if any, and the Bid form with any supplements.

8. *Bonds*--Performance and payment bonds and other instruments of security.

9. *Change Order*--A document recommended by ENGINEER which is signed by CONTRACTOR and OWNER and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the

Contract Times, issued on or after the Effective Date of the Agreement.

10. *Claim*--A demand or assertion by OWNER or CONTRACTOR seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

11. *Contract*--The entire and integrated written agreement between the OWNER and CONTRACTOR concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*--The Contract Documents establish the rights and obligations of the parties and include the Agreement, Addenda (which pertain to the Contract Documents), CONTRACTOR's Bid (including documentation accompanying the Bid and any post Bid documentation submitted prior to the Notice of Award) when attached as an exhibit to the Agreement, the Notice to Proceed, the Bonds, these General Conditions, the Supplementary Conditions, the Specifications and the Drawings as the same are more specifically identified in the Agreement, together with all Written Amendments, Change Orders, Work Change Directives, Field Orders, and ENGINEER's written interpretations and clarifications issued on or after the Effective Date of the Agreement. Approved Shop Drawings and the reports and drawings of subsurface and physical conditions are not Contract Documents. Only printed or hard copies of the items listed in this paragraph are Contract Documents. Files in electronic media format of text, data, graphics, and the like that may be furnished by OWNER to CONTRACTOR are not Contract Documents.

13. *Contract Price*--The moneys payable by OWNER to CONTRACTOR for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of paragraph 11.03 in the case of Unit Price Work).

14. *Contract Times*--The number of days or the dates stated in the Agreement to: (i) achieve Substantial Completion; and (ii) complete the Work so that it is ready for final payment as evidenced by ENGINEER's written recommendation of final payment.

15. *CONTRACTOR*--The individual or entity with whom OWNER has entered into the Agreement.

16. *Cost of the Work*--See paragraph 11.01.A for definition.

17. *Drawings*--That part of the Contract Documents prepared or approved by ENGINEER which graphically shows the scope, extent, and character of the Work to be performed by CONTRACTOR. Shop Drawings and other CONTRACTOR submittals are not Drawings as so defined.

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

19. *ENGINEER*--The individual or entity named as such in the Agreement.

20. *ENGINEER's Consultant*--An individual or entity having a contract with ENGINEER to furnish services as ENGINEER's independent professional associate or consultant with respect to the Project and who is identified as such in the Supplementary Conditions.

21. *Field Order*--A written order issued by ENGINEER which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.

22. *General Requirements*--Sections of Division 1 of the Specifications. The General Requirements pertain to all sections of the Specifications.

23. *Hazardous Environmental Condition*--The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Work.

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

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

26. *Liens*--Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

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

28. *Notice of Award*--The written notice by OWNER to the apparent successful bidder stating that upon timely compliance by the apparent successful bidder with the conditions precedent listed therein, OWNER will sign and deliver the Agreement.

29. *Notice to Proceed*--A written notice given by OWNER to CONTRACTOR fixing the date on which the Contract Times will commence to run and on which CONTRACTOR shall start to perform the Work under the Contract Documents.

30. *OWNER*--The individual, entity, public body, or authority with whom CONTRACTOR has entered into the Agreement and for whom the Work is to be performed.

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

32. *PCBs*--Polychlorinated biphenyls.

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

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

35. *Project Manual*--The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

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

37. *Resident Project Representative*--The authorized representative of ENGINEER who may be assigned to the Site or any part thereof.

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

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

40. *Site*--Lands or areas indicated in the Contract Documents as being furnished by OWNER upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by OWNER which are designated for the use of CONTRACTOR.

41. *Specifications*--That part of the Contract Documents consisting of written technical descriptions of materials, equipment, systems, standards, and workmanship as applied to the Work and certain administrative details applicable thereto.

42. *Subcontractor*--An individual or entity having a direct contract with CONTRACTOR or with any other Subcontractor for the performance of a part of the Work at the Site.

43. *Substantial Completion*--The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of ENGINEER, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

44. *Supplementary Conditions*--That part of the Contract Documents which amends or supplements these General Conditions.

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

46. *Underground Facilities*--All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases,

steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

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

48. *Work*--The entire completed construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

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

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

## 1.02 Terminology

### A. Intent of Certain Terms or Adjectives

1. Whenever in the Contract Documents the terms "as allowed," "as approved," or terms of like effect or import are used, or the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of ENGINEER as to the Work, it is intended that such action or determination will be solely to evaluate, in general, the completed Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The

use of any such term or adjective shall not be effective to assign to ENGINEER any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 9.10 or any other provision of the Contract Documents.

B. *Day*

1. The word "day" shall constitute a calendar day of 24 hours measured from midnight to the next midnight.

C. *Defective*

1. The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it does not conform to the Contract Documents or does not meet the requirements of any inspection, reference standard, test, or approval referred to in the Contract Documents, or has been damaged prior to ENGINEER's recommendation of final payment (unless responsibility for the protection thereof has been assumed by OWNER at Substantial Completion in accordance with paragraph 14.04 or 14.05).

D. *Furnish, Install, Perform, Provide*

1. The word "furnish," when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word "install," when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words "perform" or "provide," when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.

4. When "furnish," "install," "perform," or "provide" is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of CONTRACTOR, "provide" is implied.

E. Unless stated otherwise in the Contract Documents, words or phrases which have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

## ARTICLE 2 - PRELIMINARY MATTERS

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### 2.01 *Delivery of Bonds*

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

### 2.02 *Copies of Documents*

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

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

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

### 2.04 *Starting the Work*

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

### 2.05 *Before Starting Construction*

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

B. *Preliminary Schedules:* Within ten days after the Effective Date of the Agreement (unless otherwise specified

in the General Requirements), CONTRACTOR shall submit to ENGINEER for its timely review:

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

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

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

C. *Evidence of Insurance:* Before any Work at the Site is started, CONTRACTOR and OWNER shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which CONTRACTOR and OWNER respectively are required to purchase and maintain in accordance with Article 5.

#### 2.06 *Preconstruction Conference*

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

#### 2.07 *Initial Acceptance of Schedules*

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

1. The progress schedule will be acceptable to ENGINEER if it provides an orderly progression of the Work to completion within any specified Milestones and the Contract Times. Such acceptance will not impose on ENGINEER responsibility for the progress schedule, for sequencing, scheduling, or progress of the Work nor interfere with or relieve CONTRACTOR from CONTRACTOR's full responsibility therefor.

2. CONTRACTOR's schedule of Shop Drawing and Sample submittals will be acceptable to ENGINEER if it provides a workable arrangement for reviewing and processing the required submittals.

3. CONTRACTOR's schedule of values will be acceptable to ENGINEER as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

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

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#### 3.01 *Intent*

A. The Contract Documents are complementary; what is called for by one is as binding as if called for by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided whether or not specifically called for at no additional cost to OWNER.

C. Clarifications and interpretations of the Contract Documents shall be issued by ENGINEER as provided in Article 9.

#### 3.02 *Reference Standards*

##### A. *Standards, Specifications, Codes, Laws, and Regulations*

1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids),

except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard, specification, manual or code, or any instruction of a Supplier shall be effective to change the duties or responsibilities of OWNER, CONTRACTOR, or ENGINEER, or any of their subcontractors, consultants, agents, or employees from those set forth in the Contract Documents, nor shall any such provision or instruction be effective to assign to OWNER, ENGINEER, or any of ENGINEER's Consultants, agents, or employees any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

### 3.03 Reporting and Resolving Discrepancies

#### A. Reporting Discrepancies

1. If, during the performance of the Work, CONTRACTOR discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and any provision of any Law or Regulation applicable to the performance of the Work or of any standard, specification, manual or code, or of any instruction of any Supplier, CONTRACTOR shall report it to ENGINEER in writing at once. CONTRACTOR shall not proceed with the Work affected thereby (except in an emergency as required by paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in paragraph 3.04; provided, however, that CONTRACTOR shall not be liable to OWNER or ENGINEER for failure to report any such conflict, error, ambiguity, or discrepancy unless CONTRACTOR knew or reasonably should have known thereof.

#### B. Resolving Discrepancies

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

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

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

### 3.04 Amending and Supplementing Contract Documents

A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof in one or more of the following ways: (i) a Written Amendment; (ii) a Change Order; or (iii) a Work Change Directive.

B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways: (i) a Field Order; (ii) ENGINEER's approval of a Shop Drawing or Sample; or (iii) ENGINEER's written interpretation or clarification.

### 3.05 Reuse of Documents

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

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

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### 4.01 Availability of Lands

A. OWNER shall furnish the Site. OWNER shall notify CONTRACTOR of any encumbrances or restrictions not of general application but specifically related to use of the Site with which CONTRACTOR must comply in performing the Work. OWNER will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If CONTRACTOR and OWNER are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in OWNER's furnishing the Site, CONTRACTOR may make a Claim therefor as provided in paragraph 10.05.

B. Upon reasonable written request, OWNER shall furnish CONTRACTOR with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and OWNER's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

C. CONTRACTOR shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

#### 4.02 *Subsurface and Physical Conditions*

A. *Reports and Drawings:* The Supplementary Conditions identify:

1. those reports of explorations and tests of subsurface conditions at or contiguous to the Site that ENGINEER has used in preparing the Contract Documents; and

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

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

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

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

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

#### 4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If CONTRACTOR believes that any subsurface or physical condition at or contiguous to the Site that is uncovered or revealed either:

1. is of such a nature as to establish that any "technical data" on which CONTRACTOR is entitled to rely as provided in paragraph 4.02 is materially inaccurate; or

2. is of such a nature as to require a change in the Contract Documents; or

3. differs materially from that shown or indicated in the Contract Documents; or

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

then CONTRACTOR shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by paragraph 6.16.A), notify OWNER and ENGINEER in writing about such condition. CONTRACTOR shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *ENGINEER's Review:* After receipt of written notice as required by paragraph 4.03.A, ENGINEER will promptly review the pertinent condition, determine the necessity of OWNER's obtaining additional exploration or tests with respect thereto, and advise OWNER in writing (with a copy to CONTRACTOR) of ENGINEER's findings and conclusions.

#### C. *Possible Price and Times Adjustments*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in CONTRACTOR's cost of, or time required for, performance of the Work; subject, however, to the following:

a. such condition must meet any one or more of the categories described in paragraph 4.03.A; and

b. with respect to Work that is paid for on a Unit Price Basis, any adjustment in Contract Price will be subject to the provisions of paragraphs 9.08 and 11.03.

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

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

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

c. CONTRACTOR failed to give the written notice within the time and as required by paragraph 4.03.A.

3. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in paragraph 10.05. However, OWNER, ENGINEER, and ENGINEER's Consultants shall not be liable to CONTRACTOR for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by CONTRACTOR on or in connection with any other project or anticipated project.

#### 4.04 *Underground Facilities*

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

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

2. the cost of all of the following will be included in the Contract Price, and CONTRACTOR shall have full responsibility for:

a. reviewing and checking all such information and data,

b. locating all Underground Facilities shown or indicated in the Contract Documents,

c. coordination of the Work with the owners of such Underground Facilities, including OWNER, during construction, and

d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

#### B. *Not Shown or Indicated*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, CONTRACTOR shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to OWNER and ENGINEER. ENGINEER will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, CONTRACTOR shall be responsible for the safety and protection of such Underground Facility.

2. If ENGINEER concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that CONTRACTOR did not know of and could not reasonably have been expected to be aware of or to have anticipated. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, OWNER or CONTRACTOR may make a Claim therefor as provided in paragraph 10.05.

#### 4.05 *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.

#### 4.06 *Hazardous Environmental Condition at Site*

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

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

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

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

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

C. CONTRACTOR shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. CONTRACTOR shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by CONTRACTOR, Subcontractors, Suppliers, or anyone else for whom CONTRACTOR is responsible.

D. If CONTRACTOR encounters a Hazardous Environmental Condition or if CONTRACTOR or anyone for whom CONTRACTOR is responsible creates a Hazardous

Environmental Condition, CONTRACTOR shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by paragraph 6.16); and (iii) notify OWNER and ENGINEER (and promptly thereafter confirm such notice in writing). OWNER shall promptly consult with ENGINEER concerning the necessity for OWNER to retain a qualified expert to evaluate such condition or take corrective action, if any.

E. CONTRACTOR shall not be required to resume Work in connection with such condition or in any affected area until after OWNER has obtained any required permits related thereto and delivered to CONTRACTOR written notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If OWNER and CONTRACTOR cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by CONTRACTOR, either party may make a Claim therefor as provided in paragraph 10.05.

F. If after receipt of such written notice CONTRACTOR does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then OWNER may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If OWNER and CONTRACTOR cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in paragraph 10.05. OWNER may have such deleted portion of the Work performed by OWNER's own forces or others in accordance with Article 7.

G. To the fullest extent permitted by Laws and Regulations, OWNER shall indemnify and hold harmless CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants and the officers, directors, partners, employees, agents, other consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by CONTRACTOR or by anyone for whom CONTRACTOR is responsible. Nothing

in this paragraph 4.06.E shall obligate OWNER to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

H. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultants, and the officers, directors, partners, employees, agents, other consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by CONTRACTOR or by anyone for whom CONTRACTOR is responsible. Nothing in this paragraph 4.06.F shall obligate CONTRACTOR to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

I. The provisions of paragraphs 4.02, 4.03, and 4.04 are not intended to apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

## ARTICLE 5 - BONDS AND INSURANCE

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

A. CONTRACTOR shall furnish performance and payment Bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all CONTRACTOR's obligations under the Contract Documents. These Bonds shall remain in effect at least until one year after the date when final payment becomes due, except as provided otherwise by Laws or Regulations or by the Contract Documents. CONTRACTOR shall also furnish such other Bonds as are required by the Contract Documents.

B. All Bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All Bonds signed by an agent must be accompanied by a certified copy of such agent's authority to act.

C. If the surety on any Bond furnished by CONTRACTOR is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements

of paragraph 5.01.B, CONTRACTOR shall within 20 days thereafter substitute another Bond and surety, both of which shall comply with the requirements of paragraphs 5.01.B and 5.02.

### 5.02 *Licensed Sureties and Insurers*

A. All Bonds and insurance required by the Contract Documents to be purchased and maintained by OWNER or CONTRACTOR shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue Bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

### 5.03 *Certificates of Insurance*

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

### 5.04 *CONTRACTOR's Liability Insurance*

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

1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;
2. claims for damages because of bodily injury, occupational sickness or disease, or death of CONTRACTOR's employees;
3. claims for damages because of bodily injury, sickness or disease, or death of any person other than CONTRACTOR's employees;

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

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

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

B. The policies of insurance so required by this paragraph 5.04 to be purchased and maintained shall:

1. with respect to insurance required by paragraphs 5.04.A.3 through 5.04.A.6 inclusive, include as additional insureds (subject to any customary exclusion in respect of professional liability) OWNER, ENGINEER, ENGINEER's Consultants, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;

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

3. include completed operations insurance;

4. include contractual liability insurance covering CONTRACTOR's indemnity obligations under paragraphs 6.07, 6.11, and 6.20;

5. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least thirty days prior written notice has been given to OWNER and CONTRACTOR and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the CONTRACTOR pursuant to paragraph 5.03 will so provide);

6. remain in effect at least until final payment and at all times thereafter when CONTRACTOR may be

correcting, removing, or replacing defective Work in accordance with paragraph 13.07; and

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

#### 5.05 *OWNER's Liability Insurance*

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

#### 5.06 *Property Insurance*

A. Unless otherwise provided in the Supplementary Conditions, OWNER shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:

1. include the interests of OWNER, CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an additional insured;

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

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

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

5. allow for partial utilization of the Work by OWNER;

6. include testing and startup; and

7. be maintained in effect until final payment is made unless otherwise agreed to in writing by OWNER, CONTRACTOR, and ENGINEER with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.

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

C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to OWNER and CONTRACTOR and to each other additional insured to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with paragraph 5.07.

D. OWNER shall not be responsible for purchasing and maintaining any property insurance specified in this paragraph 5.06 to protect the interests of CONTRACTOR, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by CONTRACTOR, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

E. If CONTRACTOR requests in writing that other special insurance be included in the property insurance policies provided under paragraph 5.06, OWNER shall, if possible, include such insurance, and the cost thereof will be charged to CONTRACTOR by appropriate Change Order or Written Amendment. Prior to commencement of the Work

at the Site, OWNER shall in writing advise CONTRACTOR whether or not such other insurance has been procured by OWNER.

#### 5.07 *Waiver of Rights*

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

B. OWNER waives all rights against CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultants, and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them for:

1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to OWNER's property or the Work caused by, arising out of, or resulting from fire or other peril whether or not insured by OWNER; 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 utilization pursuant to paragraph 14.05, after Substantial Completion

pursuant to paragraph 14.04, or after final payment pursuant to paragraph 14.07.

C. Any insurance policy maintained by OWNER covering any loss, damage or consequential loss referred to in paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against CONTRACTOR, Subcontractors, ENGINEER, or ENGINEER's Consultants and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them.

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

A. Any insured loss under the policies of insurance required by paragraph 5.06 will be adjusted with OWNER and made payable to OWNER as fiduciary for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of paragraph 5.08.B. OWNER shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order or Written Amendment.

B. OWNER as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to OWNER's exercise of this power. If such objection be made, OWNER as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, OWNER as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, OWNER as fiduciary shall give bond for the proper performance of such duties.

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

A. If either OWNER or CONTRACTOR has any objection to the coverage afforded by or other provisions of the Bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by paragraph 2.05.C. OWNER and CONTRACTOR shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the Bonds and insurance required

of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent Bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

#### 5.10 *Partial Utilization, Acknowledgment of Property Insurer*

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

### ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

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#### 6.01 *Supervision and Superintendence*

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

B. At all times during the progress of the Work, CONTRACTOR shall assign a competent resident superintendent thereto who shall not be replaced without written notice to OWNER and ENGINEER except under extraordinary circumstances. The superintendent will be CONTRACTOR's representative at the Site and shall have authority to act on behalf of CONTRACTOR. All communications given to or received from the superintendent shall be binding on CONTRACTOR.

## 6.02 Labor; Working Hours

A. CONTRACTOR shall provide competent, suitably qualified personnel to survey, lay out, and construct the Work as required by the Contract Documents. CONTRACTOR shall at all times maintain good discipline and order at the Site.

B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours, and CONTRACTOR will not permit overtime work or the performance of Work on Saturday, Sunday, or any legal holiday without OWNER's written consent (which will not be unreasonably withheld) given after prior written notice to ENGINEER.

## 6.03 Services, Materials, and Equipment

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

B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All warranties and guarantees specifically called for by the Specifications shall expressly run to the benefit of OWNER. If required by ENGINEER, CONTRACTOR shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

## 6.04 Progress Schedule

A. CONTRACTOR shall adhere to the progress schedule established in accordance with paragraph 2.07 as it may be adjusted from time to time as provided below.

1. CONTRACTOR shall submit to ENGINEER for acceptance (to the extent indicated in paragraph 2.07) proposed adjustments in the progress schedule that will not result in changing the Contract Times (or Milestones). Such adjustments will conform generally to the progress schedule then in effect and additionally will comply with

any provisions of the General Requirements applicable thereto.

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

## 6.05 Substitutes and "Or-Equals"

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

1. "Or-Equal" Items: If in ENGINEER's sole discretion an item of material or equipment proposed by CONTRACTOR is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by ENGINEER as an "or-equal" item, in which case review and approval of the proposed item may, in ENGINEER's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment ENGINEER determines that: (i) it is at least equal in quality, durability, appearance, strength, and design characteristics; (ii) it will reliably perform at least equally well the function imposed by the design concept of the completed Project as a functioning whole, and;

b. CONTRACTOR certifies that: (i) there is no increase in cost to the OWNER; and (ii) it will conform substantially, even with deviations, to the detailed requirements of the item named in the Contract Documents.

### 2. Substitute Items

a. If in ENGINEER's sole discretion an item of material or equipment proposed by CONTRACTOR does not qualify as an "or-equal" item under

paragraph 6.05.A.1, it will be considered a proposed substitute item.

b. CONTRACTOR shall submit sufficient information as provided below to allow ENGINEER to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by ENGINEER from anyone other than CONTRACTOR.

c. The procedure for review by ENGINEER will be as set forth in paragraph 6.05.A.2.d, as supplemented in the General Requirements and as ENGINEER may decide is appropriate under the circumstances.

d. CONTRACTOR shall first make written application to ENGINEER for review of a proposed substitute item of material or equipment that CONTRACTOR seeks to furnish or use. The application shall certify that the proposed substitute item will perform adequately the functions and achieve the results called for by the general design, be similar in substance to that specified, and be suited to the same use as that specified. The application will state the extent, if any, to which the use of the proposed substitute item will prejudice CONTRACTOR's achievement of Substantial Completion on time, whether or not use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with OWNER for work on the Project) to adapt the design to the proposed substitute item and whether or not incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed substitute item from that specified will be identified in the application, and available engineering, sales, maintenance, repair, and replacement services will be indicated. The application will also contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change, all of which will be considered by ENGINEER in evaluating the proposed substitute item. ENGINEER may require CONTRACTOR to furnish additional data about the proposed substitute item.

B. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is shown or indicated in and expressly

required by the Contract Documents, CONTRACTOR may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by ENGINEER. CONTRACTOR shall submit sufficient information to allow ENGINEER, in ENGINEER's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The procedure for review by ENGINEER will be similar to that provided in subparagraph 6.05.A.2.

C. *Engineer's Evaluation:* ENGINEER will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to paragraphs 6.05.A and 6.05.B. ENGINEER will be the sole judge of acceptability. No "or-equal" or substitute will be ordered, installed or utilized until ENGINEER's review is complete, which will be evidenced by either a Change Order for a substitute or an approved Shop Drawing for an "or equal." ENGINEER will advise CONTRACTOR in writing of any negative determination.

D. *Special Guarantee:* OWNER may require CONTRACTOR to furnish at CONTRACTOR's expense a special performance guarantee or other surety with respect to any substitute.

E. *ENGINEER's Cost Reimbursement:* ENGINEER will record time required by ENGINEER and ENGINEER's Consultants in evaluating substitute proposed or submitted by CONTRACTOR pursuant to paragraphs 6.05.A.2 and 6.05.B and in making changes in the Contract Documents (or in the provisions of any other direct contract with OWNER for work on the Project) occasioned thereby. Whether or not ENGINEER approves a substitute item so proposed or submitted by CONTRACTOR, CONTRACTOR shall reimburse OWNER for the charges of ENGINEER and ENGINEER's Consultants for evaluating each such proposed substitute.

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

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

A. CONTRACTOR shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to OWNER as indicated in paragraph 6.06.B), whether initially or as a replacement, against whom OWNER may have reasonable objection. CONTRACTOR shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom CONTRACTOR has reasonable objection.

B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or

entities to be submitted to OWNER in advance for acceptance by OWNER by a specified date prior to the Effective Date of the Agreement, and if CONTRACTOR has submitted a list thereof in accordance with the Supplementary Conditions, OWNER's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. CONTRACTOR shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued or Written Amendment signed. No acceptance by OWNER of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of OWNER or ENGINEER to reject defective Work.

C. CONTRACTOR shall be fully responsible to OWNER and ENGINEER for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as CONTRACTOR is responsible for CONTRACTOR's own acts and omissions. Nothing in the Contract Documents shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between OWNER or ENGINEER and any such Subcontractor, Supplier or other individual or entity, nor shall it create any obligation on the part of OWNER or ENGINEER to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

D. CONTRACTOR shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with CONTRACTOR.

E. CONTRACTOR shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with ENGINEER through CONTRACTOR.

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

G. All Work performed for CONTRACTOR by a Subcontractor or Supplier will be pursuant to an appropriate agreement between CONTRACTOR and the Subcontractor

or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of OWNER and ENGINEER. Whenever any such agreement is with a Subcontractor or Supplier who is listed as an additional insured on the property insurance provided in paragraph 5.06, the agreement between the CONTRACTOR and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against OWNER, CONTRACTOR, ENGINEER, ENGINEER's Consultants, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, CONTRACTOR will obtain the same.

#### 6.07 *Patent Fees and Royalties*

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

#### 6.08 *Permits*

A. Unless otherwise provided in the Supplementary Conditions, CONTRACTOR shall obtain and pay for all construction permits and licenses. OWNER shall assist CONTRACTOR, when necessary, in obtaining such permits

and licenses. CONTRACTOR shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. CONTRACTOR shall pay all charges of utility owners for connections to the Work, and OWNER shall pay all charges of such utility owners for capital costs related thereto, such as plant investment fees.

#### 6.09 *Laws and Regulations*

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

B. If CONTRACTOR performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, CONTRACTOR shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work; however, it shall not be CONTRACTOR's primary responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve CONTRACTOR of CONTRACTOR's obligations under paragraph 3.03.

C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work may be the subject of an adjustment in Contract Price or Contract Times. If OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in paragraph 10.05.

#### 6.10 *Taxes*

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

#### 6.11 *Use of Site and Other Areas*

##### A. *Limitation on Use of Site and Other Areas*

1. CONTRACTOR shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not

unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. CONTRACTOR shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

2. Should any claim be made by any such owner or occupant because of the performance of the Work, CONTRACTOR shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

3. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultant, and the officers, directors, partners, employees, agents, and other consultants of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against OWNER, ENGINEER, or any other party indemnified hereunder to the extent caused by or based upon CONTRACTOR's performance of the Work.

B. *Removal of Debris During Performance of the Work:* During the progress of the Work CONTRACTOR shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

C. *Cleaning:* Prior to Substantial Completion of the Work CONTRACTOR shall clean the Site and make it ready for utilization by OWNER. At the completion of the Work CONTRACTOR shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

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

#### 6.12 *Record Documents*

A. CONTRACTOR shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Written Amendments, Change Orders, Work

Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to ENGINEER for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to ENGINEER for OWNER.

#### 6.13 *Safety and Protection*

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

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

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

responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and ENGINEER has issued a notice to OWNER and CONTRACTOR in accordance with paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

#### 6.14 *Safety Representative*

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

#### 6.15 *Hazard Communication Programs*

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

#### 6.16 *Emergencies*

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

#### 6.17 *Shop Drawings and Samples*

A. CONTRACTOR shall submit Shop Drawings to ENGINEER for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals. All submittals will be identified as ENGINEER may require and in the number of copies specified in the General Requirements. The data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show ENGINEER the services, materials, and equipment CONTRACTOR proposes to provide and to enable ENGINEER to review the information for the limited purposes required by paragraph 6.17.E.

B. CONTRACTOR shall also submit Samples to ENGINEER for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample

submittals. Each Sample will be identified clearly as to material, Supplier, pertinent data such as catalog numbers, and the use for which intended and otherwise as ENGINEER may require to enable ENGINEER to review the submittal for the limited purposes required by paragraph 6.17.E. The numbers of each Sample to be submitted will be as specified in the Specifications.

C. Where a Shop Drawing or Sample is required by the Contract Documents or the schedule of Shop Drawings and Sample submittals acceptable to ENGINEER as required by paragraph 2.07, any related Work performed prior to ENGINEER's review and approval of the pertinent submittal will be at the sole expense and responsibility of CONTRACTOR.

#### D. *Submittal Procedures*

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

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

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

c. all information relative to means, methods, techniques, sequences, and procedures of construction and safety precautions and programs incident thereto; and

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

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

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

Drawing and Sample submitted to ENGINEER for review and approval of each such variation.

#### E. *ENGINEER's Review*

1. ENGINEER will timely review and approve Shop Drawings and Samples in accordance with the schedule of Shop Drawings and Sample submittals acceptable to ENGINEER. ENGINEER's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. ENGINEER's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

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

#### F. *Resubmittal Procedures*

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

#### 6.18 *Continuing the Work*

A. CONTRACTOR shall carry on the Work and adhere to the progress schedule during all disputes or disagreements with OWNER. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except

as permitted by paragraph 15.04 or as OWNER and CONTRACTOR may otherwise agree in writing.

#### 6.19 *CONTRACTOR's General Warranty and Guarantee*

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

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

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

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

#### 6.20 *Indemnification*

A. To the fullest extent permitted by Laws and Regulations, CONTRACTOR shall indemnify and hold harmless OWNER, ENGINEER, ENGINEER's Consultants, and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them from

and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage:

1. is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom; and
2. is caused in whole or in part by any negligent act or omission of CONTRACTOR, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable, regardless of whether or not caused in part by any negligence or omission of an individual or entity indemnified hereunder or whether liability is imposed upon such indemnified party by Laws and Regulations regardless of the negligence of any such individual or entity.

B. In any and all claims against OWNER or ENGINEER or any of their respective consultants, agents, officers, directors, partners, or employees by any employee (or the survivor or personal representative of such employee) of CONTRACTOR, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for CONTRACTOR or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

C. The indemnification obligations of CONTRACTOR under paragraph 6.20.A shall not extend to the liability of ENGINEER and ENGINEER's Consultants or to the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them arising out of:

1. the preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

## ARTICLE 7 - OTHER WORK

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### 7.01 *Related Work at Site*

A. OWNER may perform other work related to the Project at the Site by OWNER's employees, or let other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:

1. written notice thereof will be given to CONTRACTOR prior to starting any such other work; and

2. if OWNER and CONTRACTOR are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in paragraph 10.05.

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

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

### 7.02 *Coordination*

A. If OWNER intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:

1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;

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

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

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

## ARTICLE 8 - OWNER'S RESPONSIBILITIES

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### 8.01 *Communications to Contractor*

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

### 8.02 *Replacement of ENGINEER*

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

### 8.03 *Furnish Data*

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

### 8.04 *Pay Promptly When Due*

A. OWNER shall make payments to CONTRACTOR promptly when they are due as provided in paragraphs 14.02.C and 14.07.C.

### 8.05 *Lands and Easements; Reports and Tests*

A. OWNER's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in paragraphs 4.01 and 4.05. Paragraph 4.02 refers to OWNER's identifying and making available to CONTRACTOR copies of reports of explorations

and tests of subsurface conditions and drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site that have been utilized by ENGINEER in preparing the Contract Documents.

#### 8.06 *Insurance*

A. OWNER's responsibilities, if any, in respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

#### 8.07 *Change Orders*

A. OWNER is obligated to execute Change Orders as indicated in paragraph 10.03.

#### 8.08 *Inspections, Tests, and Approvals*

A. OWNER's responsibility in respect to certain inspections, tests, and approvals is set forth in paragraph 13.03.B.

#### 8.09 *Limitations on OWNER's Responsibilities*

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

#### 8.10 *Undisclosed Hazardous Environmental Condition*

A. OWNER's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in paragraph 4.06.

#### 8.11 *Evidence of Financial Arrangements*

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

## ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION

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### 9.01 *OWNER'S Representative*

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

### 9.02 *Visits to Site*

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

B. ENGINEER's visits and observations are subject to all the limitations on ENGINEER's authority and responsibility set forth in paragraph 9.10, and particularly, but without limitation, during or as a result of ENGINEER's visits or observations of CONTRACTOR's Work ENGINEER will not supervise, direct, control, or have authority over or be responsible for CONTRACTOR's means, methods, techniques, sequences, or procedures of construction, or 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.

### 9.03 *Project Representative*

A. If OWNER and ENGINEER agree, ENGINEER will furnish a Resident Project Representative to assist ENGINEER in providing more extensive observation of the Work. The responsibilities and authority and limitations thereon of any such Resident Project Representative and assistants will be as provided in paragraph 9.10 and in the Supplementary Conditions. If OWNER designates another

representative or agent to represent OWNER at the Site who is not ENGINEER's Consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

#### 9.04 *Clarifications and Interpretations*

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

#### 9.05 *Authorized Variations in Work*

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

#### 9.06 *Rejecting Defective Work*

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

#### 9.07 *Shop Drawings, Change Orders and Payments*

A. In connection with ENGINEER's authority as to Shop Drawings and Samples, see paragraph 6.17.

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

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

#### 9.08 *Determinations for Unit Price Work*

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

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

A. ENGINEER will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. Claims, disputes and other matters relating to the acceptability of the Work, the quantities and classifications of Unit Price Work, the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, and Claims seeking changes in the Contract Price or Contract Times will be referred initially to ENGINEER in writing, in accordance with the provisions of paragraph 10.05, with a request for a formal decision.

B. When functioning as interpreter and judge under this paragraph 9.09, ENGINEER will not show partiality to OWNER or CONTRACTOR and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity. The rendering of a decision by ENGINEER pursuant to this paragraph 9.09 with respect to any such Claim, dispute, or other matter (except any which have been waived by the making or acceptance of final payment as provided in paragraph 14.07) will be a condition precedent to any exercise by OWNER or CONTRACTOR of such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations in respect of any such Claim, dispute, or other matter.

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

A. Neither ENGINEER's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by ENGINEER in good faith either to exercise or not exercise such authority

or responsibility or the undertaking, exercise, or performance of any authority or responsibility by ENGINEER shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by ENGINEER to CONTRACTOR, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

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

C. ENGINEER will not be responsible for the acts or omissions of CONTRACTOR or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. ENGINEER's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with, the Contract Documents.

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

## ARTICLE 10 - CHANGES IN THE WORK; CLAIMS

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### 10.01 *Authorized Changes in the Work*

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

B. If OWNER and CONTRACTOR are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change

Directive, a Claim may be made therefor as provided in paragraph 10.05.

### 10.02 *Unauthorized Changes in the Work*

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

### 10.03 *Execution of Change Orders*

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

1. changes in the Work which are: (i) ordered by OWNER pursuant to paragraph 10.01.A, (ii) required because of acceptance of defective Work under paragraph 13.08.A or OWNER's correction of defective Work under paragraph 13.09, or (iii) agreed to by the parties;

2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and

3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by ENGINEER pursuant to paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, CONTRACTOR shall carry on the Work and adhere to the progress schedule as provided in paragraph 6.18.A.

### 10.04 *Notification to Surety*

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

## 10.05 *Claims and Disputes*

A. *Notice:* Written notice stating the general nature of each Claim, dispute, or other matter shall be delivered by the claimant to ENGINEER and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. Notice of the amount or extent of the Claim, dispute, or other matter with supporting data shall be delivered to the ENGINEER and the other party to the Contract within 60 days after the start of such event (unless ENGINEER allows additional time for claimant to submit additional or more accurate data in support of such Claim, dispute, or other matter). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of paragraph 12.01.B. A Claim for an adjustment in Contract Time shall be prepared in accordance with the provisions of paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to ENGINEER and the claimant within 30 days after receipt of the claimant's last submittal (unless ENGINEER allows additional time).

B. *ENGINEER's Decision:* ENGINEER will render a formal decision in writing within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any. ENGINEER's written decision on such Claim, dispute, or other matter will be final and binding upon OWNER and CONTRACTOR unless:

1. an appeal from ENGINEER's decision is taken within the time limits and in accordance with the dispute resolution procedures set forth in Article 16; or

2. if no such dispute resolution procedures have been set forth in Article 16, a written notice of intention to appeal from ENGINEER's written decision is delivered by OWNER or CONTRACTOR to the other and to ENGINEER within 30 days after the date of such decision, and a formal proceeding is instituted by the appealing party in a forum of competent jurisdiction within 60 days after the date of such decision or within 60 days after Substantial Completion, whichever is later (unless otherwise agreed in writing by OWNER and CONTRACTOR), to exercise such rights or remedies as the appealing party may have with respect to such Claim, dispute, or other matter in accordance with applicable Laws and Regulations.

C. If ENGINEER does not render a formal decision in writing within the time stated in paragraph 10.05.B, a decision denying the Claim in its entirety shall be deemed to have been issued 31 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any.

D. No Claim for an adjustment in Contract Price or Contract Times (or Milestones) will be valid if not submitted in accordance with this paragraph 10.05.

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

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### 11.01 *Cost of the Work*

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

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

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to CONTRACTOR unless OWNER deposits funds with CONTRACTOR with which to make payments, in which case the cash discounts shall accrue to OWNER. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to OWNER, and CONTRACTOR shall make provisions so that they may be obtained.

3. Payments made by CONTRACTOR to Subcontractors for Work performed by Subcontractors. If required by OWNER, CONTRACTOR shall obtain competitive bids from subcontractors acceptable to OWNER and CONTRACTOR and shall deliver such bids to OWNER, who will then determine, with the advice of ENGINEER, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as CONTRACTOR's Cost of the Work and fee as provided in this paragraph 11.01.

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

5. Supplemental costs including the following:

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

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

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

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

e. Deposits lost for causes other than negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable,

and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by CONTRACTOR in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of OWNER. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining CONTRACTOR's fee.

g. The cost of utilities, fuel, and sanitary facilities at the Site.

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

i. When the Cost of the Work is used to determine the value of a Change Order or of a Claim, the cost of premiums for additional Bonds and insurance required because of the changes in the Work or caused by the event giving rise to the Claim.

j. When all the Work is performed on the basis of cost-plus, the costs of premiums for all Bonds and insurance CONTRACTOR is required by the Contract Documents to purchase and maintain.

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

1. Payroll costs and other compensation of CONTRACTOR's officers, executives, principals (of partnerships and sole proprietorships), general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by CONTRACTOR, whether at the Site or in CONTRACTOR's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in paragraph 11.01.A.1 or specifically covered by paragraph 11.01.A.4, all of which are to be

considered administrative costs covered by the CONTRACTOR's fee.

2. Expenses of CONTRACTOR's principal and branch offices other than CONTRACTOR's office at the Site.

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

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

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in paragraphs 11.01.A and 11.01.B.

C. *CONTRACTOR's Fee:* When all the Work is performed on the basis of cost-plus, CONTRACTOR's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, CONTRACTOR's fee shall be determined as set forth in paragraph 12.01.C.

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

#### 11.02 *Cash Allowances*

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

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

2. CONTRACTOR's costs for unloading and handling on the Site, labor, installation costs, overhead, profit, and other expenses contemplated for the allow-

ances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

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

#### 11.03 *Unit Price Work*

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by CONTRACTOR will be made by ENGINEER subject to the provisions of paragraph 9.08.

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

C. OWNER or CONTRACTOR may make a Claim for an adjustment in the Contract Price in accordance with paragraph 10.05 if:

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

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

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

ARTICLE 12 - CHANGE OF CONTRACT PRICE;  
CHANGE OF CONTRACT TIMES

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12.01 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order or by a Written Amendment. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the ENGINEER and the other party to the Contract in accordance with the provisions of paragraph 10.05.

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

1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of paragraph 11.03 ); or

2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with paragraph 12.01.C.2); or

3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in paragraph 11.01) plus a CONTRACTOR's fee for overhead and profit (determined as provided in paragraph 12.01.C).

C. *CONTRACTOR's Fee*: The CONTRACTOR's fee for overhead and profit shall be determined as follows:

1. a mutually acceptable fixed fee; or

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

a. for costs incurred under paragraphs 11.01.A.1 and 11.01.A.2, the CONTRACTOR's fee shall be 15 percent;

b. for costs incurred under paragraph 11.01.A.3, the CONTRACTOR's fee shall be five percent;

c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no

fixed fee is agreed upon, the intent of paragraph 12.01.C.2.a is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and CONTRACTOR will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

d. no fee shall be payable on the basis of costs itemized under paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;

e. the amount of credit to be allowed by CONTRACTOR to OWNER for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in CONTRACTOR's fee by an amount equal to five percent of such net decrease; 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 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

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

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

12.03 *Delays Beyond CONTRACTOR's Control*

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

Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

#### 12.04 *Delays Within CONTRACTOR's Control*

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

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

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

#### 12.06 *Delay Damages*

A. In no event shall OWNER or ENGINEER be liable to CONTRACTOR, any Subcontractor, any Supplier, or any other person or organization, or to any surety for or employee or agent of any of them, for damages arising out of or resulting from:

1. delays caused by or within the control of CONTRACTOR; or

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

B. Nothing in this paragraph 12.06 bars a change in Contract Price pursuant to this Article 12 to compensate CONTRACTOR due to delay, interference, or disruption directly attributable to actions or inactions of OWNER or anyone for whom OWNER is responsible.

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

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#### 13.01 *Notice of Defects*

A. Prompt notice of all defective Work of which OWNER or ENGINEER has actual knowledge will be given

to CONTRACTOR. All defective Work may be rejected, corrected, or accepted as provided in this Article 13.

#### 13.02 *Access to Work*

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

#### 13.03 *Tests and Inspections*

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

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

1. for inspections, tests, or approvals covered by paragraphs 13.03.C and 13.03.D below;

2. that costs incurred in connection with tests or inspections conducted pursuant to paragraph 13.04.B shall be paid as provided in said paragraph 13.04.B; and

3. as otherwise specifically provided in the Contract Documents.

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

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

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

F. Uncovering Work as provided in paragraph 13.03.E shall be at CONTRACTOR's expense unless CONTRACTOR has given ENGINEER timely notice of CONTRACTOR's intention to cover the same and ENGINEER has not acted with reasonable promptness in response to such notice.

#### 13.04 *Uncovering Work*

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

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

#### 13.05 *OWNER May Stop the Work*

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

the Work shall not give rise to any duty on the part of OWNER to exercise this right for the benefit of CONTRACTOR, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

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

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

#### 13.07 *Correction Period*

A. If within one year after the date of Substantial Completion or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for CONTRACTOR's use by OWNER or permitted by Laws and Regulations as contemplated in paragraph 6.11.A is found to be defective, CONTRACTOR shall promptly, without cost to OWNER and in accordance with OWNER's written instructions: (i) repair such defective land or areas, or (ii) correct such defective Work or, if the defective Work has been rejected by OWNER, remove it from the Project and replace it with Work that is not defective, and (iii) satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom. If CONTRACTOR does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, OWNER may have the defective Work corrected or repaired or may have the rejected Work removed and replaced, and all Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by CONTRACTOR.

B. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that

item may start to run from an earlier date if so provided in the Specifications or by Written Amendment.

C. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

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

### 13.08 *Acceptance of Defective Work*

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

### 13.09 *OWNER May Correct Defective Work*

A. If CONTRACTOR fails within a reasonable time after written notice from ENGINEER to correct defective Work or to remove and replace rejected Work as required by ENGINEER in accordance with paragraph 13.06.A, or if CONTRACTOR fails to perform the Work in accordance with the Contract Documents, or if CONTRACTOR fails to comply with any other provision of the Contract Documents, OWNER may, after seven days written notice to CONTRACTOR, correct and remedy any such deficiency.

B. In exercising the rights and remedies under this paragraph, OWNER shall proceed expeditiously. In

connection with such corrective and remedial action, OWNER may exclude CONTRACTOR from all or part of the Site, take possession of all or part of the Work and suspend CONTRACTOR's services related thereto, take possession of CONTRACTOR's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which OWNER has paid CONTRACTOR but which are stored elsewhere. CONTRACTOR shall allow OWNER, OWNER's representatives, agents and employees, OWNER's other contractors, and ENGINEER and ENGINEER's Consultants access to the Site to enable OWNER to exercise the rights and remedies under this paragraph.

C. All Claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by OWNER in exercising the rights and remedies under this paragraph 13.09 will be charged against CONTRACTOR, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and OWNER shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, OWNER may make a Claim therefor as provided in paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of CONTRACTOR's defective Work.

D. CONTRACTOR shall not be allowed an extension of the Contract Times (or Milestones) because of any delay in the performance of the Work attributable to the exercise by OWNER of OWNER's rights and remedies under this paragraph 13.09.

## ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

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### 14.01 *Schedule of Values*

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

## 14.02 *Progress Payments*

### A. *Applications for Payments*

1. At least 20 days before the date established for each progress payment (but not more often than once a month), CONTRACTOR shall submit to ENGINEER for review an Application for Payment filled out and signed by CONTRACTOR covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that OWNER has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect OWNER's interest therein, all of which must be satisfactory to OWNER.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of CONTRACTOR stating that all previous progress payments received on account of the Work have been applied on account to discharge CONTRACTOR's legitimate obligations associated with prior Applications for Payment.

3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

### B. *Review of Applications*

1. ENGINEER will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to OWNER or return the Application to CONTRACTOR indicating in writing ENGINEER's reasons for refusing to recommend payment. In the latter case, CONTRACTOR may make the necessary corrections and resubmit the Application.

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

a. the Work has progressed to the point indicated;

b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under paragraph 9.08, and to any other qualifications stated in the recommendation); and

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

3. By recommending any such payment ENGINEER will not thereby be deemed to have represented that: (i) inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to ENGINEER in the Contract Documents; or (ii) that there may not be other matters or issues between the parties that might entitle CONTRACTOR to be paid additionally by OWNER or entitle OWNER to withhold payment to CONTRACTOR.

4. Neither ENGINEER's review of CONTRACTOR's Work for the purposes of recommending payments nor ENGINEER's recommendation of any payment, including final payment, will impose responsibility on ENGINEER to supervise, direct, or control the Work or for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for CONTRACTOR's failure to comply with Laws and Regulations applicable to CONTRACTOR's performance of the Work. Additionally, said review or recommendation will not impose responsibility on ENGINEER to make any examination to ascertain how or for what purposes CONTRACTOR has used the moneys paid on account of the Contract Price, or to determine that title to any of the Work, materials, or equipment has passed to OWNER free and clear of any Liens.

5. ENGINEER may refuse to recommend the whole or any part of any payment if, in ENGINEER's opinion, it would be incorrect to make the representations to OWNER referred to in paragraph 14.02.B.2. ENGINEER may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests,

revise or revoke any such payment recommendation previously made, to such extent as may be necessary in ENGINEER's opinion to protect OWNER from loss because:

- a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
- b. the Contract Price has been reduced by Written Amendment or Change Orders;
- c. OWNER has been required to correct defective Work or complete Work in accordance with paragraph 13.09; or
- d. ENGINEER has actual knowledge of the occurrence of any of the events enumerated in paragraph 15.02.A.

#### C. *Payment Becomes Due*

1. Ten days after presentation of the Application for Payment to OWNER with ENGINEER's recommendation, the amount recommended will (subject to the provisions of paragraph 14.02.D) become due, and when due will be paid by OWNER to CONTRACTOR.

#### D. *Reduction in Payment*

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

- a. claims have been made against OWNER on account of CONTRACTOR's performance or furnishing of the Work;
- b. Liens have been filed in connection with the Work, except where CONTRACTOR has delivered a specific Bond satisfactory to OWNER to secure the satisfaction and discharge of such Liens;
- c. there are other items entitling OWNER to a set-off against the amount recommended; or
- d. OWNER has actual knowledge of the occurrence of any of the events enumerated in paragraphs 14.02.B.5.a through 14.02.B.5.c or paragraph 15.02.A.

2. If OWNER refuses to make payment of the full amount recommended by ENGINEER, OWNER must give CONTRACTOR immediate written notice (with a copy to ENGINEER) stating the reasons for such action and promptly pay CONTRACTOR any amount remaining after deduction of the amount so withheld.

OWNER shall promptly pay CONTRACTOR the amount so withheld, or any adjustment thereto agreed to by OWNER and CONTRACTOR, when CONTRACTOR corrects to OWNER's satisfaction the reasons for such action.

3. If it is subsequently determined that OWNER's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by paragraph 14.02.C.1.

#### 14.03 *CONTRACTOR's Warranty of Title*

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

#### 14.04 *Substantial Completion*

A. When CONTRACTOR considers the entire Work ready for its intended use CONTRACTOR shall notify OWNER and ENGINEER in writing that the entire Work is substantially complete (except for items specifically listed by CONTRACTOR as incomplete) and request that ENGINEER issue a certificate of Substantial Completion. Promptly thereafter, OWNER, CONTRACTOR, and ENGINEER shall make an inspection of the Work to determine the status of completion. If ENGINEER does not consider the Work substantially complete, ENGINEER will notify CONTRACTOR in writing giving the reasons therefor. If ENGINEER considers the Work substantially complete, ENGINEER will prepare and deliver to OWNER a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. OWNER shall have seven days after receipt of the tentative certificate during which to make written objection to ENGINEER as to any provisions of the certificate or attached list. If, after considering such objections, ENGINEER concludes that the Work is not substantially complete, ENGINEER will within 14 days after submission of the tentative certificate to OWNER notify CONTRACTOR in writing, stating the reasons therefor. If, after consideration of OWNER's objections, ENGINEER considers the Work substantially complete, ENGINEER will within said 14 days execute and deliver to OWNER and CONTRACTOR a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as ENGINEER believes justified after consideration of any objections from OWNER. At the time of delivery of the tentative certificate of Substantial Completion ENGINEER will deliver to OWNER and CONTRACTOR a written recommendation as to division of responsibility.

ties pending final payment between OWNER and CONTRACTOR with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless OWNER and CONTRACTOR agree otherwise in writing and so inform ENGINEER in writing prior to ENGINEER's issuing the definitive certificate of Substantial Completion, ENGINEER's aforesaid recommendation will be binding on OWNER and CONTRACTOR until final payment.

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

#### 14.05 *Partial Utilization*

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

1. OWNER at any time may request CONTRACTOR in writing to permit OWNER to use any such part of the Work which OWNER believes to be ready for its intended use and substantially complete. If CONTRACTOR agrees that such part of the Work is substantially complete, CONTRACTOR will certify to OWNER and ENGINEER that such part of the Work is substantially complete and request ENGINEER to issue a certificate of Substantial Completion for that part of the Work. CONTRACTOR at any time may notify OWNER and ENGINEER in writing that CONTRACTOR considers any such part of the Work ready for its intended use and substantially complete and request ENGINEER to issue a certificate of Substantial Completion for that part of the Work. Within a reasonable time after either such request, OWNER, CONTRACTOR, and ENGINEER shall make an inspection of that part of the Work to determine its status of completion. If ENGINEER does not consider that part of the Work to be substantially complete, ENGINEER will notify OWNER and CONTRACTOR in writing giving the reasons therefor. If ENGINEER considers that part of the Work to be substantially complete, the provisions of paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

2. No occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of paragraph 5.10 regarding property insurance.

#### 14.06 *Final Inspection*

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

#### 14.07 *Final Payment*

##### A. *Application for Payment*

1. After CONTRACTOR has, in the opinion of ENGINEER, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, Bonds, certificates or other evidence of insurance certificates of inspection, marked-up record documents (as provided in paragraph 6.12), and other documents, CONTRACTOR may make application for final payment following the procedure for progress payments.

2. The final Application for Payment shall be accompanied (except as previously delivered) by: (i) all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by subparagraph 5.04.B.7; (ii) consent of the surety, if any, to final payment; and (iii) complete and legally effective releases or waivers (satisfactory to OWNER) of all Lien rights arising out of or Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in paragraph 14.07.A.2 and as approved by OWNER, CONTRACTOR may furnish receipts or releases in full and an affidavit of CONTRACTOR that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which OWNER or OWNER's property might in any way be responsible have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, CONTRACTOR may furnish a Bond or other collateral satisfactory to OWNER to indemnify OWNER against any Lien.

## B. *Review of Application and Acceptance*

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

## C. *Payment Becomes Due*

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

### 14.08 *Final Completion Delayed*

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

### 14.09 *Waiver of Claims*

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

1. a waiver of all Claims by OWNER against CONTRACTOR, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from CONTRACTOR's continuing obligations under the Contract Documents; and

2. a waiver of all Claims by CONTRACTOR against OWNER other than those previously made in writing which are still unsettled.

## ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

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### 15.01 *OWNER May Suspend Work*

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

### 15.02 *OWNER May Terminate for Cause*

A. The occurrence of any one or more of the following events will justify termination for cause:

1. CONTRACTOR's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the progress schedule established under paragraph 2.07 as adjusted from time to time pursuant to paragraph 6.04);

2. CONTRACTOR's disregard of Laws or Regulations of any public body having jurisdiction;

3. CONTRACTOR's disregard of the authority of ENGINEER; or

4. CONTRACTOR's violation in any substantial way of any provisions of the Contract Documents.

B. If one or more of the events identified in paragraph 15.02.A occur, OWNER may, after giving CONTRACTOR (and the surety, if any) seven days written notice, terminate

the services of CONTRACTOR, exclude CONTRACTOR from the Site, and take possession of the Work and of all CONTRACTOR's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by CONTRACTOR (without liability to CONTRACTOR for trespass or conversion), incorporate in the Work all materials and equipment stored at the Site or for which OWNER has paid CONTRACTOR but which are stored elsewhere, and finish the Work as OWNER may deem expedient. In such case, CONTRACTOR shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by OWNER arising out of or relating to completing the Work, such excess will be paid to CONTRACTOR. If such claims, costs, losses, and damages exceed such unpaid balance, CONTRACTOR shall pay the difference to OWNER. Such claims, costs, losses, and damages incurred by OWNER will be reviewed by ENGINEER as to their reasonableness and, when so approved by ENGINEER, incorporated in a Change Order. When exercising any rights or remedies under this paragraph OWNER shall not be required to obtain the lowest price for the Work performed.

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

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

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

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

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

3. for all claims, costs, losses, and damages (including but not limited to all fees and charges of

engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and

4. for reasonable expenses directly attributable to termination.

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

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

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

## ARTICLE 16 - DISPUTE RESOLUTION

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### 16.01 *Methods and Procedures*

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

## ARTICLE 17 - MISCELLANEOUS

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### 17.01 *Giving Notice*

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

### 17.02 *Computation of Times*

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

### 17.03 *Cumulative Remedies*

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

### 17.04 *Survival of Obligations*

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

### 17.05 *Controlling Law*

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

## **SUPPLEMENTARY CONDITIONS TO THE STANDARD**

### **GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT**

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract (No. 1910-8, 1996 Edition) and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect.

The terms used in these Supplementary Conditions will have the meanings indicated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings indicated below, which are applicable to both the singular and plural thereof.

#### **SC-1.01 DEFINITIONS**

A.43 The term SUBSTANTIAL COMPLETION is amended to mean the tank is cleaned, painted, cured, disinfected, and ready for service.

The term FINAL COMPLETION is amended to mean the tank is cleaned, painted, cured, disinfected, and ready for service and all site work, clean-up, disposal, etc. is completed.

#### **SC-2.02 COPIES OF DOCUMENTS**

Amend the first sentence of paragraph 2.02 of the General Conditions to read as follows:

A. OWNER shall furnish to CONTRACTOR up to five (5) copies of the Contract Documents as are reasonably necessary for the execution of the Work. Additional copies may be obtained from the ENGINEER for the cost of printing and delivery of the additional copies so obtained.

and as so amended paragraph 2.02 remains in effect.

#### **SC-2.03 COMMENCEMENT OF CONTRACT TIMES; NOTICE TO PROCEED**

Amend the last two sentences of paragraph 2.03 of the General Conditions to read as follows:

A. A Notice to Proceed may be given at any time after the Effective Date of the Agreement.

and as so amended paragraph 2.03 remains in effect.

### **SC-2.03 COMMENCEMENT OF CONTRACT TIMES; E-VERIFY REPORTING**

Add the following new paragraph after 2.03A:

- B. E-Verify Reporting: Contractor shall be solely responsible for complying with the E-Verify Reporting requirements in IC 5-16-13-11 throughout the contract time. Before starting construction, Contractor shall collect and submit the E-Verify case verification numbers for each individual who will be working on the project and who is required to be verified under IC 22-5-1.7 (effective July 1, 2011), from all contractors of any tier (as defined in IC 5-16-13-4).

### **SC-3.03 RESOLVING DISCREPANCIES**

Add the following language at the end of paragraph 3.03.B.1.b of the General Conditions to read as follows:

- B.1.c In resolving conflicts, errors and discrepancies, the ENGINEER shall give precedence in the following order, except as may be otherwise specifically stated:
1. Agreement
  2. Modifications
  3. Addenda
  4. Supplementary Conditions
  5. General Conditions
  6. Detailed Technical Specifications
  7. Drawings
  8. CONTRACTOR'S Bid Form
  9. Figure Dimensions
  10. Scale Dimensions

### **SC-4.02 SUBSURFACE AND PHYSICAL CONDITIONS**

In the preparation of Drawings and Specifications, ENGINEER has utilized:

- A. The following report of exploration of conditions at the site of the Work:
- A.2 A Summarized Tank Information Sheet will be made available for review and an evaluation report of the 500,000 gallon steel elevated tank dated September 15, 2017 with color photographs prepared by Tank Industry Consultants covering the evaluation of the tank is available for review in the office of the OWNER and in the office of the ENGINEER. The information contained in such sheets and reports is not considered technical in nature, rather the ENGINEER'S opinion of the condition of the site and structure. Therefore, CONTRACTOR is not entitled to rely on any information contained in such sheets and reports. Such information and reports are made available to BIDDER as a courtesy only.

It is further agreed and understood that the BIDDER or the CONTRACTOR will not use any information made available to him/her, or obtained by any examination made by him/her, in any manner as a basis or ground of claim or demand of any nature against the OWNER or ENGINEER arising from or by reason of any variance which may exist between the information offered and the actual materials and structures encountered during the construction work.

#### SC-5.04 CONTRACTOR'S LIABILITY INSURANCE

Add the following new paragraph immediately after paragraph 5.04.B:

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

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

Employer Liability:

- |    |                         |                           |
|----|-------------------------|---------------------------|
| a. | Each Accident:          | \$500,000                 |
| b. | Disease - Each Employee | \$500,000                 |
| c. | Disease - Policy Limit  | \$500,000 Each Occurrence |

2. Contractor's Liability Insurance under paragraphs 5.04.A.3 through 5.04.A.6 of the General Conditions which shall include completed operations and product liability coverages and eliminate the exclusion with respect to property under the care, custody and control Contractor:

- |    |   |                  |
|----|---|------------------|
| a. | General Aggregate: (Except Product-Completed Operations)  |                  |
|    | \$2,000,000   | Annual Aggregate |
| b. | Products-Completed Operations:  |                  |
|    | \$2,000,000   | Annual Aggregate |
| c. | Personal and Advertising Injury, with employment exclusion deleted:   |                  |
|    | \$1,000,000   | Each Occurrence  |
| d. | Each Occurrence (Bodily Injury and Property Damage):  |                  |
|    | \$1,000,000   | Each Occurrence  |
| e. | Property Damage liability insurance will provide Explosion, Collapse and Underground coverages where applicable |                  |
| f. | <u>Excess Liability</u> : (Umbrella Form)   |                  |
|    | 1) \$3,000,000  | Each Occurrence  |
|    | 2) \$3,000,000  | Annual Aggregate |

3. Automobile Liability under paragraph 5.04.A.6 of the General Conditions:
  - a. Bodily Injury:
 

\$1,000,000	Per Person
\$1,000,000	Per Accident
  - b. Property Damage:
 

\$1,000,000	Per Accident
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  - c. or a Combined Single Limit (CSL):
 

\$1,000,000	
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4. The Contractual Liability required by paragraph 5.04.B.4 of the General Conditions shall provide coverage for not less than the following amounts:
 

Bodily Injury and Property Damage:	
\$1,000,000	Each Occurrence
\$2,000,000	Annual Aggregate
5. The following and each of their officers, directors, agents, and employees must be endorsed as additional insured on all General Liability, Automobile Liability, and Excess Liability policies.
  - a. City of Lawrence Utilities; and
  - b. Tank Industry Consultants
6. The Completed Operations Liability Insurance coverage required by SC-5.04 shall be provided for a period of at least two years after completion of the Project.

**SC-6.03 SERVICES, MATERIALS AND EQUIPMENT**

Add the following sentence at the end of paragraph 6.03.A of the General Conditions to read as follows:

CONTRACTOR shall be responsible for all material furnished by OWNER and shall replace at CONTRACTOR'S expense all such material damaged in handling.

**SC-6.03 QUALITY AND INSTALLATION OF MATERIALS AND EQUIPMENT**

Add the following sentences at the end of paragraph 6.03.B of the General Conditions to read as follows:

In addition, all chemicals used during project construction, or furnished for project operation, whether herbicide, pesticide, disinfectant, polymer, reactant or other classification, must show approval of either EPA or USDA. Use of all such chemicals and disposal of residues shall be in strict conformance with the instructions of the applicable Supplier except as otherwise provided in the Contract Documents.

## **SC-6.06 CONCERNING SUBCONTRACTORS, SUPPLIERS AND OTHERS**

Add the following sentences at the beginning of paragraph 6.06.A of the General Conditions to read as follows:

- A. Subcontracting of the cleaning and painting shall not be allowed. If a SUBCONTRACTOR is used, the name and address of the proposed SUBCONTRACTOR shall be stated in the **Bid Form**.

## **SC-6.07 PATENT FEES AND ROYALTIES**

Delete the second sentence of paragraph 6.07 of the General Conditions in its entirety.

## **SC-6.10 TAXES**

Delete paragraph 6.10 of the General Conditions in its entirety and insert the following in its place:

The OWNER shall issue a sales tax exemption certificate to the CONTRACTOR for the entire Project. This Project is not subject to Municipal, State, or Federal Use or Sales Taxes. The Contract Price will be based upon a complete exemption from these taxes, and if later determined that a tax must be paid by CONTRACTOR, the Contract Price will be adjusted to reflect this liability of OWNER.

## **SC-6.11 USE OF SITE AND OTHER AREAS**

Amend the second sentence of paragraph 6.11.C of the General Conditions to read as follows:

- C. At the completion of the Work CONTRACTOR shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition or to the satisfaction of OWNER all property not designated for alteration by the Contract Documents before final payment will be issued.

and as so amended paragraph 6.11.C remains in effect.

### **SC-6.11.C.1, 6.11.C.2, 6.11.C.3, 6.11.C.4 USE OF SITE AND OTHER AREAS**

Add the following four (4) paragraphs immediately after paragraph 6.11.C of the General Conditions to read as follows:

- C.1. In addition to the cleaning up requirements set forth in the General Conditions, CONTRACTOR shall keep the working areas free at all times of tools, materials and equipment not essential to the progress of the work. Debris, waste materials, and rubbish

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shall be properly disposed of and not allowed to accumulate. If CONTRACTOR should fail to do this, OWNER will make necessary arrangements to effect the cleanup by others and will back charge the cost to CONTRACTOR. If such action becomes necessary on the part of and in the opinion of OWNER, OWNER will not be responsible for the inadvertent removal of material which CONTRACTOR would not have disposed of had CONTRACTOR effected the required cleanup.

- C.2. Where material or debris has washed or flowed into or been placed in watercourses, ditches, gutters, drains, catch-basins, or elsewhere as result of CONTRACTOR'S operations, such material or debris shall be entirely removed and satisfactorily disposed of during progress of the Work, and the ditches, channels, drains, etc., kept in a clean and neat condition.
- C.3. CONTRACTOR shall restore or replace; when and as directed, any public or private property damaged by his/her work, equipment, or employees to a condition at least equal to that existing immediately prior to the beginning of operations. Suitable materials, equipment, and methods shall be used for such restoration. Final payment for this Contract shall be withheld until all claims are resolved.
- C.4. CONTRACTOR shall provide chemical toilet and wash-up facilities immediately adjacent to the tank. The facilities shall be kept clean, in sanitary working condition, and shall be free of offensive odors. Upon completion of the work, the facilities shall be removed from the site.

### **SC-6.13 SAFETY AND PROTECTION**

Amend the first sentence of paragraph 6.13.B of the General Conditions to read as follows:

- B. CONTRACTOR shall comply with all applicable Laws and Regulations (including, but not limited to all rules and regulations promulgated under OSHA and the State where the Work is to be performed) 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.

and as so amended paragraph 6.13.B remains in effect.

### **SC-6.20 INDEMNIFICATION**

Add the following paragraphs immediately after paragraph 6.20.C of the General Conditions to read as follows:

- C.3. Limitation of Liability: The CONTRACTOR and all Subcontractors agree to limit the liability of the OWNER and ENGINEER, due to the ENGINEER'S professional negligent acts, errors, or omissions, such that the total aggregate liability of the OWNER and ENGINEER to those named shall not exceed fifty thousand dollars (\$50,000), or 5% of the contract award amount, whichever is greater.

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- C.4. The CONTRACTOR agrees to protect, defend, and save harmless the OWNER and ENGINEER against any demand for payment for the use of any patented material, process, article, or device that may enter into the manufacture, construction, or form a part of the work covered by this agreement; and the CONTRACTOR further agrees to indemnify and save harmless the OWNER and ENGINEER from suits or actions of every nature and description brought against them for, or on account of any injuries or damages received or sustained by any party or parties, by, or from the acts or omissions of the CONTRACTOR, his/her servants, or agents.

#### **SC-14.02 APPLICATIONS FOR PAYMENTS**

Delete paragraph 14.02.A.1 of the General Conditions in its entirety and insert the following in its place:

- A.1. At least twenty days before each progress payment is scheduled (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. Payment for bonds, insurance, design, drawings, mobilization, containment of the cleaning and/or painting debris, and materials and equipment not incorporated into the Work shall not be allowed.

#### **SC-14.04 SUBSTANTIAL COMPLETION**

Amend the first sentence of paragraph 14.04 of the General Conditions to read as follows:

When CONTRACTOR considers the tank ready for its intended use (the structure is painted, the paint is cured, the structure is disinfected, and the structure is ready for service) CONTRACTOR shall notify OWNER and ENGINEER in writing that the tank is substantially complete (except for items specifically listed by CONTRACTOR as incomplete) and request that ENGINEER issue a certificate of Substantial Completion for the tank. Substantial completion date shall be considered when disinfection is accomplished. However if the laboratory test results are not satisfactory, then the additional days required to re-disinfect and purge the tank of bacteria or any VOC's shall be considered as calendar days until additional samples are submitted for laboratory testing. One tank of water for the disinfection shall be furnished by the OWNER at no charge to the CONTRACTOR. Additional water shall be furnished at current municipal water rates charged by the OWNER and shall be paid for by the CONTRACTOR.

and as so amended paragraph 14.04 remains in effect.

#### **SC-14.04 SUBSTANTIAL COMPLETION**

Add the following new subparagraph to paragraph 14.04:

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.

## **SC-ARTICLE 18 – MISCELLANEOUS**

Add the following new paragraphs as Article A18:

### **SC-18.09 Occupational Safety and Health Act of 1970**

- A. These construction documents and the joint and several phases of construction hereby contemplated are to be governed, at all times, by applicable provisions of the federal laws, including but not limited to, the latest amendments of the following:

Williams Steiger Occupational Safety and Health Act of 1980, Public Law 91 596.

Part 1910 Occupational Safety and Health Standards, Chapter XVII of Title 29, code of Federal Regulations.

Indiana Occupational Safety and Health Administration (IOSHA) OSHA Safety and Health Standards for the Construction Industry (29 CFR Part 1926) with Amendments as of August 1, 1991 Including 29 CFR Part 1910 General Industry Safety and health Standards Applicable to Construction.

### **SC-18.13 Public Works Qualification Requirements**

For contracts over \$300,000.00, Contractor must be qualified under either IC 4-13.6-4 or IC 8-23-10 (Indiana Department of Administration or Indiana Department of Transportation) before doing any work on a public works project.

### **SC-18.14 Liquidated Damages**

In the event the Contractor fails to complete satisfactorily the entire work contemplated and provided for under this contract on or before the dates of completion determined as described elsewhere herein, the Owner shall, in the form of a Change Order, deduct from the monies due the Contractor the sums as outlined in Article 3 of the “Sample Form” of the Agreement. If the monies due the Contractor are less than the amount of such liquidated damages, then the Contractor or his surety shall pay the balance to the Owner.

**END OF SUPPLEMENTARY CONDITIONS**

00800-8

# DETAILED TECHNICAL SPECIFICATIONS

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## Repairing and Repainting the Interior and Exterior of One 500,000 Gallon Steel Elevated Tank “52<sup>nd</sup> Street Tower” Lawrence, Indiana

### A. Description of Tank

The 500,000 gallon steel elevated tank is located at 9802 East 52nd Street in Lawrence, Indiana 46235. The tank is approximately 134 ft 6 in. to top capacity level, and approximately 55 ft in diameter. It is a 6 column elevated tank of welded steel construction. The tank was erected by Universal Tank & Iron Works in 1973 under serial number 5962.500.

### B. Scope of Work

Bids will be solicited for the complete cleaning and repainting of the tank on the interior surfaces, the spot cleaning and spot coating of the exterior surfaces damaged by repairs and new items, and washing the exterior of the 52<sup>nd</sup> Street Tower and Oaklandon Road Tower. Additional Work items include: repair of concrete foundations and grout; replacement of riser insert plate, riser manhole, tower ladder, shell and roof ladder, balcony safety railing, clog-resistant roof vent pallet and screening, and inlet/outlet pipe protective cover; installation of notched-tubular safe-climbing devices, vandal deterrent, balcony safety railing self-closing gate, and transition cone safety railing; modification of access opening in balcony floor; removal of cable-type safe-climbing devices; including other miscellaneous repairs and incidental items such as coordination with the OWNER, first anniversary evaluation, disposal of debris, site restoration, etc. The above description shall serve as general information only and shall not be construed to limit the contractor's responsibility or obligation to comply with the Contract Documents and Detailed Technical Specifications. The Bidder is referred to the following Detailed Technical Specifications for the complete scope of Work.

### C. Definition of Parties

The term OWNER in this specification shall mean the City of Lawrence Utilities.

The term PROJECT REPRESENTATIVE in this specification shall mean Mr. Scott Salsbery, City of Lawrence Utilities, 9201 Harrison Park Court, Lawrence, Indiana 46216, telephone 317/542-0511.

The term ENGINEER in this specification shall mean Tank Industry Consultants - Headquarters: 7740 West New York Street, Indianapolis, Indiana 46214-2988, telephone 317/271-3100, FAX 317/271-3300.

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The term FIELD OBSERVER in this specification shall mean Tank Industry Consultants - Headquarters: 7740 West New York Street, Indianapolis, Indiana 46214-2988, telephone 317/271-3100, FAX 317/271-3300; or another designated representative of the OWNER.

The term CONTRACTOR'S COMPETENT PERSON(S) in this specification shall mean a representative of the CONTRACTOR who is capable of identifying existing and predictable hazards in the surroundings or working conditions that are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them. The name(s) of the CONTRACTOR'S COMPETENT PERSON(S) shall be submitted for review prior to performing any Work.

**D. Evaluation Report and Site Inspection by Bidder**

A Summarized Tank Information Sheet shall be made available to all Bidders. An evaluation report of the 500,000 gallon steel elevated tank dated September 15, 2017, complete with color photographs, may be reviewed at the office of the PROJECT REPRESENTATIVE; or at the office of the ENGINEER, by appointment. Interpretation of this data is the responsibility of the Bidder. Although reasonable care was used in making and reporting this evaluation and the Summarized Tank Information Sheet, conditions may be encountered which vary from those as reported therein. **Submitting a Bid on the forms bound with the Contract Documents shall acknowledge that the tank and site have been inspected by the Bidder and the evaluation report has been reviewed by the Bidder or that the right to do so has been waived.** Persons desiring to access the tank must provide evidence of insurance coverage to the OWNER as outlined in the Supplementary Conditions of the Contract Documents.

**E. Additional Insured**

The CONTRACTOR shall list 1) City of Lawrence Utilities; 2) Tank Industry Consultants; and each of their officers, agents, and employees as additional insured on all insurance policies (except worker's compensation and employers' liability) and coverage which are required by the OWNER as specified in the Contract Documents.

**F. General Specifications for Repairing and Repainting the Tank**

1. Submittals: Five sets of Submittals shall be submitted to the ENGINEER for review at least two weeks prior to performing any Work. Submittals shall at a minimum include the items listed on the Submittal Check List included with these Specifications. A separate cover sheet such as the form bound in these Specifications, including the Item Number from the Submittal Check List, the Specification Section of reference for each submittal, and a brief description of each submittal included, shall be provided by the CONTRACTOR for each separate item submitted. Review of these submittals shall not relieve the CONTRACTOR from responsibility for compliance with the specifications or for the adequacy of the repair,

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cleaning, and/or painting methods. The CONTRACTOR shall incorporate the submittal review process time and make the necessary scheduling adjustments so that completion of the Work within the Contract Time is not affected.

2. Repair Standards: All design and repairs shall be in accordance with the local building code. All design and welding shall be done in accordance with AWWA D100-11 Standard for Welded Steel Tanks for Water Storage. Where tolerances, stresses, details, and modifications are not limited or provided by the AWWA Standard, the applicable sections of the following American Petroleum Institute (API) Standards shall apply. Unless otherwise specified, all steel structural and bar components shall be fabricated from new ASTM A-36 material, all steel plate components shall be fabricated from new ASTM A-36 material, and all steel pipe shall be fabricated from new ASTM A-53 material.
  - a. API Standard 650, Welded Tanks for Oil Storage, Twelfth Edition, Includes Errata 1 (2013), Errata 2 (2014), and Addendum 1 (2014) and Addendum 2 (2016)
  - b. API Standard 653, Tank Inspection, Repair, Alteration, and Reconstruction, Fifth Edition (2014)
  
3. Painting Standards: All Work shall be done in accordance with the following requirements. The SSPC-Vis 1-02, the SSPC-Vis 3-04, and the SSPC-Vis 4-01 shall also be used taking into account staining from prior paint applications. The SSPC Standards SSPC-SP 6, Commercial Blast Cleaning and SSPC-SP 10, Near-White Blast Cleaning shall be modified to apply to each square inch instead of the approximately 9 square inch area indicated in paragraph 2.6 of each of these standards and shall be referred to hereinafter as SSPC-SP 6, Commercial Blast Cleaning (modified) and SSPC-SP 10, Near-White Blast Cleaning (modified). Where the foregoing standards, recommendations, and specifications are conflicting, said conflicts shall be brought to the attention of the ENGINEER. Manufacturer's published product data shall be adhered to unless changed in writing by the home office of the manufacturer.
  - a. SSPC: The Society for Protective Coatings (SSPC)
    - (1) Steel Structures Painting Manual (Volume 1, 4th Edition and Volume 2, 2012 Edition, including Commentary Sections and Appendices).
    - (2) SSPC-AB 1 “Mineral and Slag Abrasives”
    - (3) SSPC-AB 2 “Specification for Cleanliness of Recycled Ferrous Metallic Abrasives”
    - (4) SSPC-AB 3 “Newly Manufactured or Re-Manufactured Steel Abrasives”
    - (5) SSPC-VIS 1-02 "Visual Standard for Abrasive Blast Cleaned Steel"
    - (6) SSPC-VIS 3-04 "Visual Standard for Power- and Hand-Tool Cleaned Steel"

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- (7) SSPC-VIS 4-01 "Guide and Reference Photographs for Steel Surfaces Prepared by Waterjetting"
- (8) SSPC-VIS 5-01 "Guide and Reference Photographs for Steel Surfaces Prepared by Wet Abrasive Blast Cleaning"
- (9) SSPC-Guide 6 (CON) “Guide for Containing Debris Generated During Paint Removal Operations”
- (10) SSPC-PA 2 “Measurement of Dry Paint Thickness with Magnetic Gages”
- (11) SSPC-PA Guide 10 “Guide to Safety and Health Requirements for Industrial Painting Projects”
- (12) SSPC-SP 12, Surface Preparation and Cleaning of Steel and Other Hard Materials by High- and Ultrahigh-Pressure Water Jetting Prior to Recoating
- (13) SSPC-SP 13, Surface Preparation of Concrete
- (14) SSPC-SP 14, Industrial Blast Cleaning
- (15) SSPC-SP 15, Commercial Grade Power Tool Cleaning
- b. American Water Works Association Standards
  - (1) AWWA D100-11, Standard for Welded Steel Tanks for Water Storage
  - (2) AWWA D102-14, Standard for Coating Steel Water-Storage Tanks
  - (3) AWWA C652-19, Disinfection of Water-Storage Facilities
- c. NSF International (NSF)
  - (1) ANSI/NSF Standard 61 "Drinking Water System Components - Health Effects"
- d. the paint manufacturer's published product data
- e. these Detailed Technical Specifications
4. Welder's Certification: All welders and welding operators shall be certified in accordance with ASME, Section IX or AWS D1.1 (tests as described in AWS B2.1) to the procedures and processes required to accomplish the Work. Welder's certification papers shall be furnished to the FIELD OBSERVER for review prior to the commencement of welding on the tank.
5. Verification of Dimensions: CONTRACTOR shall verify all dimensions prior to fabrication or ordering any materials or parts needed for this Project. No additional compensation will

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be made to the CONTRACTOR for items that have to be modified, cut, or replaced because of inadequate dimensions used in ordering or fabricating items.

6. Subcontracting: Subcontracting of the cleaning and/or painting shall not be allowed. If a SUBCONTRACTOR is used for other Work, the name and address of the proposed SUBCONTRACTOR shall be stated in the **Bid Form**.
7. Schedule Submittal: Within two weeks after receipt of the Notice to Proceed and prior to starting the Work, the CONTRACTOR shall submit a bar chart or progress schedule indicating the anticipated schedule of the following functions:
  - a. move onto site and rig tank
  - b. repair Work (concrete and steel)
  - c. cleaning and priming interior surfaces
  - d. intermediate painting interior surfaces
  - e. finish painting interior surfaces
  - f. spot cleaning and spot priming exterior surfaces
  - g. spot intermediate painting exterior surfaces
  - h. spot finish painting exterior surfaces
  - i. tank disinfection
  - j. site clean-up.

Also indicated on the bar chart or progress schedule shall be the anticipated progress payment schedule of values. The bar chart and payment request schedule shall be updated monthly and submitted with the payment request. **No separate payment shall be made for bonds, insurance, design, drawings, mobilization, containment of the cleaning and/or painting debris, or paint materials not incorporated into the Work.**

8. Notification: The CONTRACTOR shall notify the OWNER and the ENGINEER at least seven (7) days before starting the Work at the site. The CONTRACTOR shall reconfirm the commencement of Work with the OWNER and ENGINEER twenty-four (24) hours prior to starting Work at the site.
9. Work Schedule: The repairing, cleaning and painting of the tank shall be accomplished in such a way as to minimize the length of time the tank is out of service and to minimize the number of days required for observing the repairing, cleaning and painting operations. **The CONTRACTOR'S attention is directed to the Agreement concerning Contract Time and Liquidated Damages.**
10. Times for Work: No repairing, cleaning or painting is to be done in the night period between sunset and sunrise. The times for Work shall also comply with local, state, and federal regulations and laws regarding days of week, noise, and interference with activities of surrounding property owners. The following exceptions may apply:

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- a. Repair Work: Should tank interior temperatures be excessive for personnel welfare during daylight hours or should other job conditions make nighttime Work beneficial to the CONTRACTOR and OWNER, written permission may be granted by the ENGINEER and OWNER to conduct repair Work at night. This permission shall only be granted if the CONTRACTOR provides the proper lighting and safety equipment and informs the neighboring occupants and property owners.
  - b. Cleaning and Painting Work: Should tank interior temperatures be excessive for paint application or personnel welfare during daylight hours or should other job conditions make nighttime Work beneficial to the CONTRACTOR and OWNER, written permission may be granted by the ENGINEER and OWNER to conduct Work at night. This permission shall only be granted if the necessary steel temperature, air temperature, humidity and dew point conditions are present and recorded during the application and initial drying or curing of the coatings. Also, the CONTRACTOR must provide the proper lighting and safety equipment and informs the neighboring occupants and property owners.
11. Tank Empty for Painting: The tank shall be empty during all surface preparation, application, and curing of the coating.
  12. Operation of Valves and Equipment: All operations which would include closing valves, switching, starting, stopping, or removal from service of any equipment shall be done by the OWNER'S personnel. If the CONTRACTOR desires the OWNER to close valves, operate switches, start, stop, or remove any equipment from service, the CONTRACTOR shall submit a written request to the OWNER, and if the OWNER determines that such action will not adversely affect the operations of the OWNER to provide water, then the OWNER may close valves, operate switches, start, stop, or remove the equipment from service. Such requests shall be directed to the PROJECT REPRESENTATIVE so interruptions, if any, of the OWNER'S operations or systems will be no longer than necessary. The CONTRACTOR shall have a full complement of personnel working on a daily basis until the Work causing the interruption is completed. All Work performed under this Agreement shall be performed in close cooperation with the OWNER.
  13. Site Security: When not working on the tank or site (such as during the evening, weekends, holidays, or rain days), the CONTRACTOR shall secure all openings in the tank (greater than 8 in.), the tower ladder, and access or rigging devices. Openings in the tank needed during ventilation of the tank shall be secured with bars, grating, or other means to allow sufficient air flow through the opening. The CONTRACTOR shall lock the site fence to prevent unauthorized personnel from gaining access to the site, the interior of the tank, and the CONTRACTOR'S equipment and supplies. The CONTRACTOR shall be solely responsible for the security of the site, tank, equipment, and supplies during both working and non-working hours.
  14. Public Safety: CONTRACTOR shall protect the public from harm caused by the CONTRACTOR'S actions and performance of the work. Prior to start of work or

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mobilization on site, the CONTRACTOR shall submit a site-specific Public Safety Plan based on the CONTRACTOR'S selected work methods. The Public Safety Plan shall include necessary plans and procedures to protect the general public from harm. The Plan should include such items, but not be limited to, requirements for safety exclusion zones, warning sign type and placements, protective barriers, safety and warning devices, devices for daylight and nighttime protection, and all devices required by state and local requirements. CONTRACTOR shall include a site plan summarizing the requirements of the Public Safety Plan for the specific work on the tank. CONTRACTOR'S Plan shall include the name of the Competent Person responsible for enforcing the Public Safety Plan.

15. Traffic Control Plan: The CONTRACTOR shall permit traffic to pass around the Project site with the least possible inconvenience or delay. The CONTRACTOR shall maintain existing roads and streets within the Project limits, keeping them open, and in good, clean, and safe condition at all times. If any traffic lane closures are necessary, the CONTRACTOR shall provide all flaggers, signs, and other traffic control devices necessary to warn and protect the public at all times from injury or damage as a result of the CONTRACTOR'S operations that may occur on highways, roads, and streets. The CONTRACTOR shall submit a traffic control plan. If no disruption of traffic is anticipated, then the CONTRACTOR shall submit a statement indicating this.
16. Water Supply: Water for the purpose of this contract, other than filling the tank upon completion, must be obtained by the CONTRACTOR through direct local arrangements with the OWNER. The CONTRACTOR shall furnish and install all necessary temporary piping and valves in connection with such water supply. Water shall be furnished from the OWNER at no cost to the CONTRACTOR as long as the amount of water used remains within reason. All connections to the public water system shall contain a back-flow prevention device approved by the OWNER. One tank of water for the disinfection shall be furnished by the OWNER at no charge to the CONTRACTOR. Additional water for disinfection shall be furnished at current municipal water rates charged by the OWNER and shall be paid for by the CONTRACTOR.
17. Electrical Supply: The CONTRACTOR shall pay all fees, obtain necessary permits, and have meters installed for power and lights as may be required for the prosecution of this Work. The CONTRACTOR shall furnish and install all necessary temporary service drops, wiring, connections, etc. necessary for temporary service required by the CONTRACTOR. All costs associated with any temporary electric service required by the CONTRACTOR shall be included in the Base Bid.
18. OWNER Performed Repairs: The CONTRACTOR shall cooperate with the OWNER who may be conducting other operations on or near the tank. The CONTRACTOR shall clean and paint all areas added or disturbed by the OWNER on the tank and attached accessories.
19. Furnishing and Installation of Items: Any reference in these specifications to furnishing an item or installing an item shall mean the item shall be both furnished and installed by the CONTRACTOR, unless specifically stated otherwise. Replacement shall mean the removal

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and legal disposal of the existing items, and furnishing and installation of the new items specified.

20. Contractor Supervision: The CONTRACTOR shall provide a competent superintendent, satisfactory to the OWNER, for the Work at all times during working hours with full authority to act for him/her. The on-site superintendent shall not be replaced without prior written notification and written approval of the ENGINEER. The CONTRACTOR shall also provide an adequate staff for the proper coordination and expedition of his/her Work. Should, in the opinion of the OWNER, any language barrier exist between the on-site superintendent and the OWNER or FIELD OBSERVER, the CONTRACTOR shall employ a qualified full-time interpreter or provide a new on-site superintendent at no additional cost to the OWNER. The on-site superintendent shall be bi-lingual if any workers are not proficient in English.
21. Observation: The OWNER plans to engage Tank Industry Consultants or another designated representative of the OWNER, to perform full-time observation of the repair Work, cleaning, and painting. However, the OWNER reserves the right to engage only intermittent observation services. The CONTRACTOR shall notify and make available to the FIELD OBSERVER for observation of the fit-up of any new and/or replacement parts prior to welding and following post-weld cleanup. The CONTRACTOR shall notify and make available to the FIELD OBSERVER for observation all surfaces to be coated. The dry film thickness (DFT) of each coat shall be measured in accordance with SSPC Paint Application Specification No. 2 (SSPC-PA 2-97). However, if it is determined to be in the best interest of the OWNER, the FIELD OBSERVER may make DFT measurements in excess of the amounts stated in SSPC-PA 2.
22. Destructive Testing of Coatings: If disputes arise concerning the quality of the applied coatings, adhesion tests, Tooke Gage analysis, or some other form of destructive testing may be used to resolve the dispute.
23. Accessibility for Observation: All Work shall be made accessible to the FIELD OBSERVER using the CONTRACTOR'S rigging and equipment. If assistance is required for the FIELD OBSERVER to safely access the Work, the CONTRACTOR shall furnish labor to assist the FIELD OBSERVER. The cost of this labor shall be included in the base contract amount.
24. First Anniversary Inspection: A First Anniversary Inspection shall be performed as provided for in paragraph 13.07 of the General Conditions. The CONTRACTOR'S Performance Bond or a separate Maintenance Bond shall be in force until after any remedial work is performed. The First Anniversary Inspection as described in Section 5.2 of AWWA D102-11 shall apply. The CONTRACTOR shall perform the following duties at the First Anniversary Inspection:
  - a. The CONTRACTOR shall perform the inspection, and shall furnish an experienced foreman, laborer, and rigging for the inspection.

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- b. Washout: The CONTRACTOR shall washout the interior of the container and riser for the one year evaluation the day prior to the evaluation. All debris from the interior of the container and riser shall be legally disposed of by the CONTRACTOR at no additional cost to the OWNER.
  - c. The CONTRACTOR shall be prepared to perform minor touch-up operations.
  - d. The CONTRACTOR shall have at least one gallon of each of the exterior primer, intermediate coating, and finish coating at the time of the inspection along with power cleaning tools and "Scotch-Brite" abrasive disks for spot cleaning.
  - e. The CONTRACTOR shall also have at least one new, unopened, quart kit of AquataPoxy A-61 Paint (manufactured by Raven Lining Systems, Tulsa, Oklahoma, telephone 800/324-2810) to touch up the interior surfaces. The FIELD OBSERVER shall determine if the coating failures are extensive enough to require the use of the specified epoxy coatings to touch up the interior surfaces.
  - f. Repairs: Spot repairs shall be made by the CONTRACTOR before returning the tank to service. Repairs requiring extensive Work and rigging may be delayed until a time mutually agreeable to the OWNER and CONTRACTOR.
  - g. Disinfection: It is the CONTRACTOR'S responsibility to disinfect the tank in accordance with AWWA C652-19 until two consecutive satisfactory water samples are reported from the OWNER'S selected laboratory.
  - h. Costs: All costs associated with the First Anniversary Inspection, including the wash-out and disinfection, shall be included in the Base Bid price. The performance of this inspection and/or any remedial work shall not relieve the CONTRACTOR of any responsibility for defects in materials or workmanship that may or may not be evident during the anniversary inspection.
  - i. Date of Inspection: Failure of OWNER to establish a First Anniversary Inspection date will not relieve the CONTRACTOR of the responsibility to repair the interior and exterior coating systems.
25. Welding Repairs: All welding to the interior or exterior of the tank is to be made prior to all painting operations. Any resulting burrs, weld spatter, sharp edges, corners, or rough welds which would cause difficulty in applying a holiday-free coating shall be ground smooth. This grinding is considered incidental to the welding work and is to be included in the Base Bid. After grinding, these areas shall be cleaned to produce the profile recommended by the manufacturer of the coating system. (See Welding and Cutting Precautions paragraph in the GENERAL HEALTH, SAFETY, AND ENVIRONMENTAL REQUIREMENTS Section of these specifications for more requirements on welding.)

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26. Cleaning Areas of Welding and/or Grinding: It shall be necessary to remove the coating prior to the welding of the new items to the tank. All areas that have been welded and/or ground smooth shall be cleaned prior to painting to provide proper profile for the coating system. Areas to be welded shall be welded prior to the final cleaning and painting of surfaces within the heat-affected zone. The heat-affected zone includes the opposite side of the plate or member being welded. Even if not specifically mentioned as a part of the Work under this Agreement, those areas of paint or coatings in the heat-affected zone of areas not specified to be painted shall be cleaned and painted in accordance with the requirements listed in these Detailed Technical Specifications.
27. Quality of Paint Application: All cleaning and painting shall be done in a workmanlike manner. **Curing times and ventilation requirements of the paint manufacturer shall be strictly adhered to by the CONTRACTOR.** In addition to the minimum and maximum dry film requirements, all sags, runs, dry spray, pinholes, craters, roller nap, or other irregularities shall be removed and repaired. CONTRACTOR shall perform all necessary inspections and quality control required by the coating manufacturer and obtain certification from the coating manufacturer for honoring coating manufacturer warranties.
28. Protection of Cabinets and Building: Before cleaning on any portion of the tank, all cabinets on the site and the utility building adjacent to the tank shall be covered to prevent the entry of blasting abrasive, dust or paint and so they can continue to function as required. Any cabinets which cannot be covered will be designated by the OWNER. The covering shall be removed from the cabinets while the cabinets are cleaned, painted, and the coating cures in accordance with the exterior painting section of these specifications. Any blasting, cleaning, or paint debris inside these cabinets shall be removed by the CONTRACTOR prior to completion of the Work.
29. Protecting Equipment: The electric meter, other electrical apparatus, and other equipment on the tank and utility poles on the site, including all wiring, shall be protected from all damage and dust or other deleterious material infiltration during the operations of the CONTRACTOR. The obstruction lights on the roof of the tank shall be protected from damage. The antennas on the roof of the tank shall also be protected from damage. The operation of the equipment shall be continued during the repair, cleaning, and painting operations. Any items damaged by the operations of the CONTRACTOR shall be replaced in kind or acceptably repaired by the CONTRACTOR at no cost to the OWNER.
30. Protecting Antenna Equipment: The antennas on the roof of the tank and the cables extending up the column and shell to the roof and across the roof shall be protected from all damage and dust or other deleterious material infiltration during the operations of the CONTRACTOR. **The antennas shall remain in service during the Project.** The operation of the equipment shall be continued during the repair, cleaning, and painting operations. Any items damaged by the operations of the CONTRACTOR shall be replaced in kind or acceptably repaired by the CONTRACTOR at no cost to the OWNER. The CONTRACTOR is advised that the cables for the microwave dish antennas are very expensive to replace and any damage to the cables shall require their replacement. The

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galvanized antenna brackets shall not be painted under this Contract. Any damage to the galvanized brackets while cleaning the adjacent areas of the steel tank shall be spot cleaned and painted in accordance with the Specifications for Cleaning and Painting the Tank Exterior Section of these specifications. The carbon steel antenna brackets shall be cleaned and painted in accordance with these specifications. The cost of protecting the antenna equipment and working around the antenna equipment shall be listed in **Base Bid**.

31. Fire Watch: All equipment and wiring shall be protected from sparks, fire, weld spatter or other potential heat and/or ignition sources. CONTRACTOR shall have a trained employee equipped with proper fire suppression equipment stationed on the ground at all times that personnel are cutting, welding, or grinding on the tank or structure.
32. Painting Environment: All temperature and humidity requirements of the paint manufacturer's published product data shall be followed. In addition, no painting shall be done when: 1) the relative humidity is greater than 85%; or 2) the temperature of the steel is or is expected to be less than 5°F above the dew point temperature during the application and until the coating has cured to resist moisture in accordance with the manufacturer's published product data; or 3) the ambient or steel temperature is below 35°F or is expected to drop below 35°F during the initial cure of the coating. The CONTRACTOR shall have wet bulb-dry bulb measuring equipment and steel temperature measuring equipment on the job at all times. Readings shall be recorded at the beginning and end of each painting session and at no less than 2-hour intervals. Wind velocities during exterior painting shall be compatible for the quality application of the exterior coatings.
33. Minimum Temperature of Coatings to be Mixed: Prior to mixing, each component shall be a minimum of 75° F. The mixed coatings shall also be maintained at a minimum of 65° F during application. All costs associated with keeping the coating material at the minimum specified temperature shall be included in the Base Bid.
34. Mixing of Coatings: Each component shall be thoroughly mixed on-site with a power agitator to ensure no solids or settled material remains on the bottom of the container before combining the components together. Accurate measuring apparatus shall be used to carefully measure each component by volume into a clean container in accordance with the manufacturer's published product data. The container shall be large enough to hold all components to be mixed, including thinner. **The combined material shall be thoroughly mixed with a power agitator to achieve a uniform consistency. Adherence to proper induction times for the combined coating material in accordance with the manufacturer's published product data shall be accomplished by the CONTRACTOR. No coating shall be applied until the minimum induction time has been reached.**
35. Application and Damages: The materials shall be applied in accordance with the manufacturer's published product data and such that the end results are in compliance with these specifications (including all others inferred by reference). Application equipment (including air and airless sprayers, rollers and brushes) shall be good quality, in good condition and shall be as recommended by the coating manufacturer. Techniques shall be

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used which will not allow coating droplets, etc. to travel more than 30 ft from the base of the tank. **Painting of exterior surfaces shall be utilized only when the wind velocity and direction, and temperature and humidity are such that paint damage will not occur to real estate or personal property.** Prior to the cleaning or coating of any surface, the CONTRACTOR shall present a written plan for review by the ENGINEER and PROJECT REPRESENTATIVE concerning how abrasive and/or paint damage to automobiles and property will be handled, including a process for quick removal of the abrasive or paint, and who will do the Work. This review in no way shall relieve the CONTRACTOR from the responsibility of settling claims for damage, but is intended as an avenue to expedite and minimize said claims.

36. Approval of Coatings: All coatings shall be acceptable to the US EPA, IDEM and/or the controlling local health and environmental regulatory agencies. All interior coating materials, solvents, and other additives shall comply with the ANSI/NSF Standard 61 "Drinking Water System Components - Health Effects." If the manufacturer's product data sheets indicate that the interior coating materials comply with ANSI/NSF Standard 61, then a separate letter from the manufacturer is not required. All coatings to be used shall be listed as to manufacturer and number or description on the Listing of Suppliers, which shall be included with the Bid. The interior and exterior coatings shall be furnished by the same manufacturer unless specifically stated otherwise in these Detailed Technical Specifications. Only thinners recommended and furnished by the paint manufacturer shall be used. The specified coatings are intended to be standards of quality. Alternate coatings, materials, and manufacturers will only be considered after award of the Contract in accordance with the Instructions to Bidders. If alternate coatings are submitted for review, the submittal shall include the following information:
- a. A complete description of the proposed substitute,
  - b. The material for which it is to be substituted,
  - c. A letter from the coating manufacturer certifying that the coating meets or exceeds the coatings specified,
  - d. Price,
  - e. Performance and test data from the laboratory and field (including QUV/UVB testing for the exterior finish coat),
  - f. Coverage,
  - g. Life,
  - h. Manufacturer's field support capabilities.
37. Coating Materials and Thinners: All coatings and thinners shall be new and furnished for this job. They shall be delivered from the coating manufacturer to the job site in the original factory sealed containers which are clearly and properly labeled by the coating manufacturer showing the manufacturer's name, product number, type of coating, batch number, and expiration date. The materials shall be stored, handled, and used in accordance with all manufacturer's published product data, including all requirements listed on the Safety Data

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Sheets (SDS). Provide adequate storage facilities. Store coating materials within minimum and maximum ambient temperatures in accordance with the manufacturer's recommendations. Temperature of the coating prior to and during mixing shall be within the range stated in the manufacturers published product data. The amounts delivered shall provide the proper coverage rates, taking into account normal application loss.

38. Coating Thickness: The thickness of each type coating is essential to the system's integrity. The addition of mils in a succeeding coat of a different generic type or formulation to make up for thin preceding coat(s) shall not be allowed. If a thicker finish coat is needed to hide the underlying darker color on the exterior of the tank, a thicker coat may be applied, but it shall not exceed the maximum allowable thickness recommended by the coating manufacturer. When undercoats or other conditions show through the final coat, additional coats shall be applied until the coating film is of uniform finish, color, and appearance. Under no circumstances shall the dry film thickness of an individual coat or of the total coating system exceed the coating manufacturer's maximum allowable thickness limit. Dry mil thickness greater than the coating manufacturer's maximum allowable thickness shall be considered unacceptable and shall be removed by the CONTRACTOR at no additional cost to the OWNER.
39. Lead and Other Heavy Metal Restrictions in Coatings: Coatings which contain more than 0.025% by weight of lead (or any lead compounds), cadmium, or chromium in the cured coating for each coat applied shall not be used. The CONTRACTOR shall submit documentation from the coating manufacturer stating that their coatings are in compliance with this requirement in addition to other requirements of these specifications.
40. Surface Conditions: The surfaces to be painted shall be free from mud, oil, grease, dust, moisture, salts, and other foreign material which would cause adhesion or other problems in the finished product. The manufacturer's published product data concerning the time between coats and the preparation of the previously painted surfaces shall be followed. If field tests by the FIELD OBSERVER find questionable amounts of contamination on the steel surfaces or painted surfaces to be topcoated, a representative of the home office of the paint manufacturer may be called to examine the surfaces in question and determine if the surfaces are in accordance with these Detailed Technical Specifications and the manufacturer's published product data.
41. Schedule of Coating Application: The primer shall not be applied closer than 6 in. to the edge of an uncleaned surface. If the recoat cycle of the primer prevents completely cleaning and priming the tank before applying the intermediate coat, then the CONTRACTOR shall submit, in writing, a schedule for coating application which will avoid damage to the intermediate and finish coats when applied close to uncleaned surfaces.
42. Restoration: The CONTRACTOR shall restore and/or replace paving, curbing, sidewalks, gutters, shrubbery, fences, sod, or other disturbed surfaces and structures to a condition equal to that before the Work began and to the satisfaction of the ENGINEER and shall furnish all labor and materials incidental thereto.

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43. Closeout Procedures: Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for ENGINEER’S observation. Provide submittals to ENGINEER that are required by governing or other authorities. The CONTRACTOR shall submit all documentation to OWNER and ENGINEER necessary for proper completion of the Project. This documentation shall include, but not be limited to, all manifests, abrasive testing results, soil testing results, etc. Submit Application for Final Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.

**G. General Health, Safety, and Environmental Requirements**

1. Compliance with Requirements: The CONTRACTOR shall comply with all applicable requirements of the Occupational Safety and Health Act of 1970 (Public Law 91-596) and will hold the OWNER and ENGINEER harmless from any civil or criminal penalties imposed as a result of the CONTRACTOR'S noncompliance with such requirements. No additional compensations for changes in the laws, regulations, or the interpretation thereof shall be granted by the OWNER. The CONTRACTOR shall be responsible for complying with all laws and regulations, even if not specifically listed in these Specifications.
2. Emergency Information: The CONTRACTOR shall construct a plywood sign covered with a weatherproof, clear plastic cover and supported by wood posts. The CONTRACTOR shall post information on the plywood sign concerning emergency medical, fire, rescue and hazardous waste phone numbers from which personnel on the site can obtain information if needed. The CONTRACTOR shall also list the name and number of a representative of the CONTRACTOR who can be reached 24 hours a day in case of an emergency. The emergency information shall be in a central position, located so it is visible and accessible 24 hours a day. The emergency information shall be posted the entire length of time that the CONTRACTOR is performing Work at the tank site.
3. Confined Space Entry: The CONTRACTOR shall comply with and have documented Confined Entry Space Procedures available at the tank site at all times as required by OSHA 29 CFR 1926 Subpart AA. The CONTRACTOR shall also comply with any state and/or local requirements which are more restrictive than the federal requirements.
4. Safety Data Sheets: Safety Data Sheets (SDS) shall be posted at the job site for each chemical product on the job site, including but not limited to coatings, thinners, other solvents, disinfecting agents, abrasives, welding materials, and flexible sealant material.
5. Safety and Health: The CONTRACTOR shall comply with safe working practices for abrasive blasting, cleaning, burning, welding, and handling lead-based and nonlead-based coated steel, and all health and safety regulations and requirements of Federal OSHA, state and local health regulatory agencies, Safety Data Sheets (SDS), SSPC-PA Guide 10, and the paint and abrasive manufacturers. This compliance shall be accomplished without supervision from the OWNER, ENGINEER, FIELD OBSERVER, or other direct or indirect

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agents of the OWNER. Should vents, holes, rigging attachments, or any other modification, cutting, or welding be required to meet safety standards or otherwise accomplish the Work, they may be accomplished at the expense of the CONTRACTOR upon submitting of details in writing to, and with subsequent permission by the ENGINEER.

6. Rigging Attachments: All rigging attachments present on the tank shall be carefully evaluated by the CONTRACTOR immediately prior to use for the type and magnitude of loads which CONTRACTOR intends to impose on them. Any rigging attachments installed on the tank by the CONTRACTOR shall be removed at the completion of Work and areas damaged by the removal of these attachments shall be cleaned and painted in accordance with these specifications. The CONTRACTOR assumes all responsibility for use of any existing or added attachments.
7. Welding and Cutting Precautions: No welding or flame cutting through the existing coating system shall be permitted, unless adequate worker protection is provided in accordance with the instructions in ANSI Z49.1, "Safety in Welding and Cutting."
8. Compliance with Environmental Regulations: Compliance with local, state and federal regulations concerning emissions, transportation or disposal of solid, particulate, liquid, or gaseous matter as a result of the cleaning, painting, or other operations under this Agreement shall be the responsibility of the CONTRACTOR. This compliance shall be accomplished without supervision from the OWNER, ENGINEER, FIELD OBSERVER, or other direct or indirect agents of the OWNER. No additional compensations for changes in the laws, regulations, or the interpretation thereof shall be granted by the OWNER. No burning of trash (including abrasive bags or other paper or wood products) on the site shall be permitted. All shielding, abrasive retrieval, or other methods of using precautions required by the regulating agencies shall also be accomplished at no additional cost to the OWNER unless otherwise provided herein. **Any fines or damages imposed on the OWNER, ENGINEER, or FIELD OBSERVER by any regulatory agency or court as a result of the CONTRACTOR'S noncompliance with environmental or nuisance regulations or any other applicable standard shall be paid or reimbursed by the CONTRACTOR.**
9. Attractive Nuisances and Cleanup: The job site shall be kept in a clean and safe condition at all times. Hazards or attractive nuisances shall be protected at all times. Upon completion of the Work, the job site and all nearby sites impacted by the Work activities shall be left clean of all debris, cleaning residue, or any other items resulting from the operations of the CONTRACTOR. The cost of any cleanup that must be done by the OWNER shall be deducted from funds due the CONTRACTOR. Impervious drip pans or double layers of plastic sheeting (each at least 6 mil thick) shall be placed under any compressors, generators, paint pumps, mixers, welding machines, etc. to prevent oils, solvents, organic compounds, or other contaminants from leaching into the soil. Fuel storage tanks, thinners, and other potentially hazardous materials shall be placed inside secondary containment structures to prevent contaminants from leaching into the soil. **Any oils, solvents, organic compounds, or contaminants spilled on the site during the process of the Work shall be immediately removed and cleaned up by the CONTRACTOR.** Any earth contaminated by a spill

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**shall also be removed and replaced with new certified clean material to the satisfaction of the OWNER and the ENGINEER. If the OWNER has to remove the oils, solvents, organic compounds, contaminants, or earth, the OWNER may deduct the costs of removal and clean-up from the total contract amount owed the CONTRACTOR.**

10. Authority of CONTRACTOR'S COMPETENT PERSON(S): The CONTRACTOR'S COMPETENT PERSON(S) shall have the complete support of top management and written authority to ensure these operations are carried out in accordance with compliance plans and governmental regulations, independent of production pressures. The CONTRACTOR'S COMPETENT PERSON(S) may have additional responsibilities and carry out other work assignments, but shall not routinely be a member of the crew that actually performs paint removal work.
  
11. Responsibility of CONTRACTOR'S COMPETENT PERSON(S): The CONTRACTOR'S COMPETENT PERSON(S) shall be responsible for overseeing job site safety and paint removal operations without supervision of the OWNER, ENGINEER, and/or FIELD OBSERVER. Responsibilities shall include:
  - a. Ensuring that a hazard communication program has been conducted for the CONTRACTOR'S personnel on site.
  - b. Ensuring that the Confined Entry Space Procedures are followed.
  - c. Ensuring that employees are wearing personal protective equipment and are trained in the use of such equipment in accordance with all OSHA and EPA regulations.
  - d. Ensuring that employees are utilizing fall protection and are trained in accordance with all OSHA regulations.
  - e. Daily inspection and approval of the rigging equipment and scaffolding utilized.
  - f. Ensuring that the engineering controls in use are in operating condition and functioning properly.
  - g. Ensuring that fugitive emissions to air, water, or soil are minimized and that handling of all waste streams is in compliance with applicable regulations and contract specifications.
  - h. Controlling access to the work site and ensuring that contaminated control boundaries are marked off.
  - i. Maintaining project documentation.
  
12. Safety Analysis Forms and Meetings: The CONTRACTOR is required to thoroughly review all phases of the project and complete and submit the “Job Safety Analysis” and the “Contractor Safety Checklist” prior to mobilizing to the site. Each subcontractor shall

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submit these forms for their work at the site as well. The CONTRACTOR shall update the forms as the project progresses or if there is a change of personnel at the site. Once the site work begins, the CONTRACTOR’S COMPETENT PERSON shall complete the “Daily Jobsite Safety Survey Report” and a “Contractor Daily Sign-in Form” to be presented to the FIELD OBSERVER at the end of each day. The CONTRACTOR shall hold daily safety meetings to discuss specific activities and events for the day and the safety ramifications. This shall be recorded each day, with a list of the attendees.

13. Sanitary Facilities: The CONTRACTOR shall, at the beginning of the Work, provide on the premises suitable temporary sanitary toilet, wash-up, and changing facilities for the use of workers and shall maintain same in a sanitary condition and remove same when directed by the OWNER. The cost of these sanitary facilities shall be included in the Base Bid. The CONTRACTOR is advised that the OWNER is in the business of providing potable water and the CONTRACTOR'S sanitary arrangements shall not endanger the OWNER’S facilities.
14. Electrical Hazards: The CONTRACTOR shall at a minimum take the following safety measures to prevent accidents due to electrical hazards:
  - a. Electric Service Deactivation: The OWNER shall deactivate and lock out the electric service to the tank. Electric service for the obstruction light shall be reactivated by the CONTRACTOR each evening before sunset and deactivated by the CONTRACTOR in the morning before starting Work. Proper lock-out, tag-out procedures shall be performed by the CONTRACTOR each time the obstruction light is reactivated or deactivated. The CONTRACTOR shall verify the deactivated status of the electric service to the tank prior to beginning each day's Work functions and throughout the work day. The verification of the electric service deactivation is the sole responsibility of the CONTRACTOR and shall be accomplished without supervision from the OWNER, ENGINEER, FIELD OBSERVER, or other direct or indirect agents of the OWNER.
  - b. Electric Service Wiring: The CONTRACTOR shall be aware of the electric service wiring attached to and located adjacent to the tank. The CONTRACTOR shall relocate, deactivate, or provide necessary electric shock hazard protective devices to prevent exposure of workers and/or equipment to electric shock hazards. The CONTRACTOR shall verify that there is sufficient electric shock hazard protection for the workers and equipment prior to and throughout each working period on the job. The verification of the electric shock hazard protection is the sole responsibility of the CONTRACTOR and shall be accomplished without supervision from the OWNER, ENGINEER, FIELD OBSERVER, or other direct or indirect agents of the OWNER.
15. Abrasive: The approved abrasive for cleaning shall meet the following requirements:
  - a. The abrasive for the **exterior** and **interior** surfaces shall be a commercially available, non-metallic, expendable abrasive.

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- b. All expendable abrasives shall meet the minimum requirements of SSPC-AB 1, and all abrasives shall meet the requirements of Class A (of SSPC-AB 1) for silica content (crystalline silica less than 1% by weight before blasting). The crystalline silica content shall be determined by the use of infrared spectroscopy or by other analytical procedures, such as wet chemical or X-ray diffraction analyses. The abrasive shall also be of a grit size to produce a 1.5 mil to 2.5 mil profile. The prime coat shall be applied to achieve the specified dry mil thickness above the actual profile and to prevent the peaks in the profile from rusting. However, the maximum coating thickness applied shall be in accordance with the coating manufacturer's recommendations. The abrasive shall be properly stored, and it shall be free from contaminants, including but not limited to excessive fine particles, paint, earth, regulated heavy metals, moisture, oil, or chlorides, which can cause premature failure of the coating. Use of abrasive on the exterior of the tank shall be based not only on its compliance with the technical application of the coatings, but also on its lack of nuisance to surrounding property. The CONTRACTOR shall submit manufacturer's published product data sheets for the type of abrasive, grade, and the resulting profile of the abrasive to be used for review prior to the start of any cleaning operations. The CONTRACTOR shall also submit a letter from the coating manufacturer certifying that the resulting profile of the abrasive is acceptable for their coating product.
- c. All expendable abrasive shall be new and furnished for this job. All abrasive shall be properly stored on skids or in a covered container. The abrasive shall be covered to protect the abrasive from water and weather. Do not allow abrasive to rest directly in contact with the ground.
- d. The steel grit shall meet the requirements of SSPC-AB 3, Newly Manufactured or Re-Manufactured Steel Abrasives, and be approved for use by the manufacturer of the blasting, media recovery, and separation equipment. The initial quantity of grit shall consist of an artificial working mix determined by the CONTRACTOR to produce an acceptable profile in accordance with these specifications. **Any used steel grit used on this Project shall be sampled before use by the FIELD OBSERVER and the CONTRACTOR and the CONTRACTOR shall have the samples sent to a laboratory for inductively coupled plasma-atomic emission spectrometry analyses for total lead. The steel grit shall not be used until the results of the inductively coupled plasma-atomic emission spectrometry analyses testing are submitted to the OWNER and indicate that the total lead levels are less than 250 ppm (<0.025%).**

Blast Media Recovery and Separation System:

- (1) Equipment Requirements: The equipment provided for the spent abrasive recovery and media separation shall be a portable commercial recycling abrasive blast machine. The re-used abrasive shall comply with the requirements of SSPC-AB 2, Specification for Cleanliness of Recycled Ferrous Metallic Abrasives. The system shall be capable of recovering the abrasive, and

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returning the spent cleaning debris to a dust separator which shall be an integrated part of the machine. The waste material shall be placed in hazardous container drums in accordance with the Removal and Disposal of Cleaning Residue paragraph of this specification.

- (2) Equipment Characteristics: As a minimum, the vacuum system used to recover the spent blasting material shall contain the following:
- i. A double-chambered ASME pressure vessel, which can effectively recycle blast media on a continuous basis, with no interruption, except for air filter back-flushing, media loading to the machine, and removal of collected dust and spent cleaning debris.
  - ii. A dust filter back-flushing system.
  - iii. An air drying system consisting of an air-cooled aftercooler, sling separator, and desiccant drier.
16. Containing Cleaning Debris and Overspray: The CONTRACTOR shall ensure that no spent cleaning/blasting debris, dust, overspray, coating droplets, or emissions of any kind escape to the atmosphere and travel farther than 20 ft from the base of the tank, or any lesser distance required to avoid contamination of adjacent buildings, work sites and parking lots. **For the spot cleaning the CONTRACTOR may utilize power-tool cleaning techniques or localized containment in order to meet the same containment criteria (primarily lack of emissions) as that of other types of containment. All overspray and paint droplets shall be contained on the tank site within the distance listed above.** The OWNER reserves the right to stop work or to require additional or different containment methods if the CONTRACTOR'S operations create a nuisance beyond the tank site property line in the sole opinion of the OWNER, the ENGINEER, the OWNER'S designated representative, any regulatory agency, or neighbor. All costs of providing an adequate containment system shall be included by the CONTRACTOR in the Bid.
17. Removal and Disposal of Cleaning Residue: Drop tubes depositing the interior cleaning materials from the manhole near the tank bottom to the ground shall be furnished by the CONTRACTOR. The cleaning debris shall be cleaned up and stored daily in leak-proof covered dumpsters/containers lined with polyethylene. Each cover shall be designed and installed to keep all rainwater from entering the dumpster/container or the contents. All operations associated with this project shall be in conformance with the Occupational Safety and Health Act (OSHA) of 1970 and all regulations and standards promulgated under this Act, as well as all applicable state and local standards and regulations governing worker safety and health.
- a. The material shall be legally disposed of by the CONTRACTOR in accordance with local, state, and federal laws. The CONTRACTOR shall be responsible for removing and properly transporting all the material from the project site. The material shall be transported in containers approved by the United States Environmental Protection

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Agency (USEPA) and local, state, and federal regulations. Bidders should prepare their **Base Bid** to include the cost of the transporting of the combined paint and spent cleaning material to a landfill and any disposal costs at that facility. All testing required by regulations or by the selected waste hauler or landfill, including any follow-up testing and the collection of the samples, shall be done at the CONTRACTOR'S expense. Copies of all manifests, testing results and treatment procedure documents shall be sent to the ENGINEER and OWNER.

- b. All dumpsters/containers and labeling of the dumpsters/containers shall adhere to the US Department of Transportation's regulations (49 CFR Part 172) and the HMTA.

## **H. Specifications for Repairs and Additions to the Tank**

1. Construction Drawing Submittals: Five sets of Construction Drawings (or other information) of all fabricated items shall be submitted for review. Drawings submitted shall at a minimum include the following:
  - a. Details of the riser insert plate installation if different from that shown in Drawing RIP.
  - b. Details of the 30 in. diameter flanged and bolted riser manhole and davit if different than shown in Drawings RSM1 and RSM2.
  - c. Details of the new ladders if different than that shown in Drawings LR1 through LR3.
  - d. Catalog cuts, installation, operation and maintenance instructions for the new ladder safe-climbing devices.
  - e. Details of the new ladder vandal deterrent if different than that shown in Drawing LV.
  - f. Details of the new balcony safety railing and balcony access if different from that shown in Drawing BR.
  - g. Details of the new transition cone safety railing if different from that shown in Drawing TR.
  - h. Details of the protective pipe covers if different from that shown in Drawing PC1 and Drawing PC2.
  - i. Details of roof rigging openings if different from that shown in Drawing RO.
2. Man-Hours: For unit price work paid for per single man-hour, only time worked performing the specified action, i.e. welding or grinding, and only the time of the person performing the specified action shall be recorded as man-hours to be paid under the unit price item. Costs for all equipment, supplies, normal rigging and associated time required, supervision,

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Competent Person, overhead, insurance, and profit shall be included in the Base Bid or distributed within the unit price Bid Item to be based upon man-hours used in actual performance of the specified action.

3. Initial Abrasive Blast Cleaning for Evaluation of Pitting: All areas of apparent pitting shall be initially abrasive blast cleaned for evaluation of pitting by the FIELD OBSERVER. The cost of this initial abrasive blast cleaning shall be included in the **Base Bid**.
4. Repair Welding: After the initial abrasive blast cleaning, any pits defined for pit welding by the FIELD OBSERVER shall be repaired by welding. All areas of apparent seam deterioration shall be initially abrasive blast cleaned, and any seam corrosion or undercut defined by the FIELD OBSERVER shall be repaired by arc-gouging or grinding the deteriorated weld seam (if determined necessary by the FIELD OBSERVER) and welding. **The number of man-hours of repair welding shall be paid for by the unit price in Bid Item 2.**
5. Pit Filling and Surfacing: After the specified surface preparation, any pits, rough areas or seams defined for pit filling or surfacing by the FIELD OBSERVER shall be filled with solventless polyamide epoxy seam sealer of the type recommended by the supplier of the interior paint system. The epoxy seam sealer shall be applied neatly and smoothly to the steel surfaces and any rough areas of the seam sealer shall be sanded smooth prior to the application of the coating system. Costs for all labor, equipment, supplies, rigging, and other associated costs for application of the solventless polyamide epoxy seam sealer shall be included in the unit price per gallon. **The number of gallons of pit filling shall be paid for by the unit price in Bid Item 3.**
6. Interior Chipping and/or Grinding: Any irregular surfaces defined by the FIELD OBSERVER, including but not limited to surface protrusions, burrs, fitting scars, sharp edges or corners, weld spatter, weld overlap and rough weld beads shall be removed from the interior surfaces of the tank, including appurtenances, by chipping and/or grinding these irregular surfaces to a smooth curve. The protruding parts of lugs or brackets shall be removed and ground flush. The objective of chipping and/or grinding is to eliminate irregular surfaces to provide a surface that is sufficiently smooth for the application of a uniform thickness coating without voids and free from defects. This chipping and/or grinding is also intended to make it easier for the interior coating to pass the holiday test. **The number of chipping and/or grinding man-hours on the tank interior shall be paid for by the unit price in Bid Item 4.**
7. Legal Disposal/Recycling of Removed Steel or Appurtenances: Any existing steel plate, members, or appurtenances of the tank specified to be removed or replaced shall be removed and legally disposed of or recycled by the CONTRACTOR.
8. Concrete Repair: Any chipped concrete corners (greater than 1 in. loss), cracks (greater than 1/16 in. wide), and other failed areas of concrete indicated by the FIELD OBSERVER shall be chipped to sound concrete so that the edge of the chipped-out area is at least 60° with the

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surface of the concrete. Then these areas shall be prepared by cleaning to remove all paint, coating materials, dust, laitance, grease, or other bond-inhibiting materials. The CONTRACTOR shall apply a patch of Emaco R350 from Master Builders, Euco Verticote from Euclid Chemical Company, SikaRepair 223 from Sika Corporation, or equal allowed in writing by the ENGINEER. The materials shall be prepared and applied in accordance with the manufacturer's instructions. The patched areas shall conform to the original contour of the concrete foundation  $\pm 1/8$  in. After the patching material has hardened sufficiently for the removal of any forms, etc., a water-based curing compound shall be applied to the surfaces of the repaired area. The curing compound shall be a water-based material such as Kure-N-Seal W, Aqua-Cure from Euclid Chemical Company, or equal allowed in writing by the ENGINEER. This concrete repair shall be performed a minimum of 28 days prior to the cleaning and painting of the concrete to allow the concrete patching material to cure in accordance with the manufacturer's recommendations.

9. Grout Repair: The grout which is between the base plates and the concrete foundations shall be tested by the CONTRACTOR under the observation of the FIELD OBSERVER by using a sharp 16 oz. hammer. Any missing or loosened portions of grout shall be replaced with a nonshrinking, nonstaining, high-strength structural grout material. The material shall be Master Builders' MASTERFLOW 928, Euclid Chemical Company's EUCO N-S Grout, L&M Construction Chemicals' DURAGROUT, Sika Corporation's SikaGrout 212, or equal allowed in writing by the ENGINEER. The final contour of the grout shall be vertical and flush with the outer edge of the base plates, and shall not overlap the outer edge of the base plates. After the grout has hardened sufficiently for the application of a curing compound, a water-based curing compound shall be applied to the exposed grout surfaces. The curing compound shall be a water-based material such as MASTERKURE 200W from Master Builders, AQUA-CURE from Euclid Chemical Company, L & M CURE from L&M Construction Chemicals, Inc., or equal allowed in writing by the ENGINEER. After cleaning and painting, any separation between the base plates and the grout greater than 1/32 in. shall be filled with Sikaflex-1a from Sika Corporation, or equal allowed in writing by the ENGINEER.
10. Install Washer Under Anchor Bolt Nut: The misaligned anchor bolt at the riser shall have a heavy plate washer installed. The CONTRACTOR shall remove the existing anchor bolt nut, install heavy plate washer of sufficient diameter to cover the base plate gap and reinstall the anchor bolt nut.
11. Replace Insert Plate at Bottom of Riser: There was an insert plate with rectangular corners located in the bottom can of the riser which shall be replaced. The size of the insert plate shall be verified by the CONTRACTOR prior to the replacement of the insert plate. The CONTRACTOR shall remove the section of the bottom riser can around the existing insert plate and shall furnish and install a new insert plate in the riser in accordance with American Petroleum Institute (API) Standard 653, API Standard 650, AWWA D100-11, and Drawing RIP. The existing insert plate and a section of the riser around the insert plate shall be removed from the bottom of the riser and legally recycled by the CONTRACTOR. A new steel plate section, the same thickness as the existing riser can, approximately 1/2 in. thick,

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or no more than 1/8 in. thicker than the existing plate, shall be furnished and installed in accordance with Drawing RIP. The new steel plate shall be inserted in the cut opening and double butt-welded to the riser. CONTRACTOR shall have radiographs taken of the completed insert plate weld seam as required by API 653. All testing shall be performed in the presence of the FIELD OBSERVER. The cost of the radiographs and testing shall be included in the **Base Bid**. The CONTRACTOR shall submit the following information for review by AW and ENGINEER **prior** to cutting or welding on the riser:

- a. Size of cutout and new insert plate and clearance from existing vertical weld seams and anchor bolts.
  - b. The proposed method (i.e. plasma arc, saw, flame cut, carbon arc-gouge, etc.) and sequence for cutting the opening in the riser and making cut backs.
  - c. Details of the weld joint preparation for the riser and insert plate, including process for grinding and beveling (how the bevel will be made).
  - d. Description of weld procedures of all joints and attachment welds, including any preheating or post weld heat treating requirements, rod size, etc.
  - e. Description of weld sequence for installing the insert plate.
  - f. Details of the proposed non-destructive examination (NDE) plan with the number and location of x-rays, magnetic particle testing, visual testing, dye penetrant testing, etc.
  - g. Welder credentials and certifications.
  - h. Weld qualification procedures.
12. Riser Manhole: The CONTRACTOR shall furnish and install a 30 in. diameter riser manhole in compliance with AWWA D100-11 and Drawing RSM1 in place of the existing approximately 18 in. x 24 in. riser manhole. The manhole cover shall be supported by a davit in accordance with Drawing RSM2. The location shall be as directed by the FIELD OBSERVER. The CONTRACTOR shall have the manhole reinforcing plate air leak tested at 15 psig maximum in accordance with API Standard 653, Tank Inspection, Repair, Alteration, and Reconstruction, Fifth Edition (2014) and API Standard 650, Welded Tanks for Oil Storage, Twelfth Edition, Includes Errata 1 (2013), Errata 2 (2014), and Addendum 1 (2014) and Addendum 2 (2016). This testing shall be performed in the presence of the FIELD OBSERVER. The cost of this testing shall be included in the Base Bid. After the pressure test the tell tale holes shall be tapped and plugged with brass plugs.
13. Conduits and Cables Along Ladders: The existing conduits and clamps along the ladders shall be relocated being sure to provide a minimum clear spacing of 3 in. from the ladder side rails so that the hands of the ladder climbing personnel sliding along the ladder side rails are not obstructed by the conduits and clamps.

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14. New Ladders: The tower ladder and shell and roof ladder shall be replaced. The existing ladders and brackets shall be completely removed, legally recycled, and any remains ground flush. New ladders and brackets conforming to OSHA 1910.23, OSHA 1926.1053, AWWA D100-11, and Drawings LR1 through LR3 shall be furnished and installed. Adequate clearance for the climber in accordance with OSHA 1910.23 Ladders (ANSI A14.3, Safety Code for Fixed Ladders) shall be provided. The ladders shall be secured to the adjacent structure with steel bar brackets welded to the side rail and to the structure with complete structural welds. **Any necessary temporary protective devices for compliance with Federal OSHA requirements, all state and local safety regulations, and safe working practices shall be furnished and maintained by the CONTRACTOR.** The locations of the new ladders shall be as follows:
- a. Tower Ladder: An approved tower ladder shall extend from 18 ft above grade upward to 48 in. above the tank container balcony.
  - b. Shell and Roof Ladder: An approved stationary ladder shall extend from the balcony floor to the top of the tank, providing safe access to the roof manhole. The new shell and roof ladder shall be fabricated in a smooth curve and shall follow the contour of the container.
15. Ladder Safe-Climbing Devices: The existing ladder safe-climbing device shall be removed before cleaning and painting operations begin. After the finish coat of paint has cured, new tubular galvanized steel safe-climbing devices shall be furnished and installed. The rail shall deflect less than 1/8 in. when subjected to the weight of a 250 pound person leaning back on the ladder, supported only by the device and the rail. In addition to the rail and mounting hardware; two harnesses (ANSI Class III full body harness), two sleeves or trolleys and two 5 ft long lanyards shall be furnished. The lanyards shall have a small hook on one end for attachment to a "D" ring on the harness. The other end of each lanyard shall have a large hook with a minimum 1-1/4 in. opening for quick hookup. The equipment shall be furnished by North Safety Products of Toronto, Ontario, Canada, 800-836-8006 (Saf-T-Climb tubular galvanized steel), or an equal allowed in writing by the ENGINEER. The CONTRACTOR shall submit catalog cuts, and installation, operation and maintenance instructions to the ENGINEER for written approval prior to construction. **Any necessary temporary protective devices for compliance with Federal OSHA requirements, all state and local safety regulations, and safe working practices shall be furnished and maintained by the CONTRACTOR.** North Safety Products part numbers have been listed below, but in each case an equal allowed in writing by the ENGINEER shall be permitted. The locations of the new ladder safe-climbing devices shall be as follows:
- a. Tower Ladder: A new galvanized ladder safe-climbing device, (North Safety Products part #526-101-001), shall be installed from 36 in. from the bottom of the ladder to 54 in. above the floor of the balcony.
  - b. Shell and Roof Ladder: A new galvanized ladder safe-climbing device, (North Safety Products part #526-101-001), shall be installed on the shell and roof ladder starting

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36 in. above the balcony floor and extending to the top of the roof ladder. The new shell and roof ladder safe-climbing device shall be fabricated in a smooth curve and shall follow the contour of the shell and roof ladder.

- c. Dismount Section: A new galvanized 8 ft long minimum dismount section, Saf-T-Pivot Dismount Section (North Safety Products part #527-101-001), shall be installed at the top of the tower ladder. The dismount section shall allow the climber to swing around from the ladder to the balcony to gain safe footing before disconnecting from the safe-climbing device. The dismount section shall extend 4 ft 6 in. minimum above the balcony and shall be connected to the ladder with two clamps.
  
16. Vandal Deterrent: A new lockable shield shall be furnished and installed on the ladder in accordance with Drawing LV. The device shall be Ladder Gate Climb Preventative Shield, manufactured by R. B. Industries, Greensboro, NC, or equal allowed in writing by the ENGINEER. Additional plates, bars, and brackets shall be installed adjacent to the ladder gate in accordance with Drawing LV, so as to fill the area between the ladder side rails and the column for the length of the ladder gate. Alternatively instead of the aluminum plates at CONTRACTOR’S option 3/16 in. steel plates may be welded to the ladder braces adjacent to the ladder gate, so as to fill the area between the ladder side rails and the column for the length of the ladder gate. All intersections between these plates with the ladder side rails, ladder brackets, and column shall be seal welded on all sides.
  
17. Balcony Safety Railing: The existing safety railing on the balcony shall be replaced with a new minimum of 43 in. to maximum of 44 in. high safety railing with two intermediate rails as shown in Drawing BR. All balcony safety railing intersections shall be seal welded all around. The handrail and mid-rail shall be rolled to an approximately 58 ft radius to match the curvature of the existing railing.
  
18. Balcony Access Opening and Seal Existing Opening: The existing debris on the balcony floor shall be removed and legally disposed of or recycled by the CONTRACTOR. An opening in the balcony railing shall be constructed to comply with present OSHA standards and in accordance with Drawing BR. The clear opening to the left of the safe-climbing device shall be 22 in. to 24 in. wide. New vertical posts of steel angle with coped ends shall be furnished and installed by welding with continuous fillet welds at all joint intersections. The balcony safety railing access opening from the tower ladder shall be equipped with a spring-operated safety gate, FabEnCo Safety Gate Model XL71-30PC, or equal allowed in writing by the ENGINEER, to provide closure of the rail opening while personnel are on the balcony. The existing approximately 24 in. diameter opening in the balcony floor shall be sealed with a steel plate double butt-welded to the existing floor. The plate shall be the same thickness as the existing floor, approximately 1/4 in.
  
19. Transition Cone Safety Railing: A new safety railing with a height of 42 in. minimum to 44 in. maximum with two intermediate rails shall be furnished and installed around the transition cone opening in the bowl as shown in Drawing TR. All transition cone safety

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railing intersections shall be seal welded from the top and bottom sides. The handrail and intermediate rails shall be rolled to encircle the transition cone opening.

20. Clog-Resistant Vent HDPE Pallet and New Pallet Screen: The aluminum clog-resistant vent on the roof shall be removed by the CONTRACTOR and protected from the cleaning and painting operations. The existing aluminum clog-resistant vent on the roof shall be disassembled and the existing vacuum pallet for the vent replaced. The pallet shall be 1/2 in. thick linear high density poly-ethylene (HDPE) and shall be sized and installed to eliminate the existing gaps at the existing pallets. The size of the pallets shall be verified prior to fabrication. The proper movement of the vent pallets shall be verified by the CONTRACTOR. The existing screen for the pressure pallet for the existing aluminum clog-resistant vent shall be replaced with a new 24 x 24 mesh aluminum screen with new nylon fasteners to secure the screen to the pallet ring. The size of the pallet shall be verified prior to fabrication. After curing of the finish coat the existing aluminum vent shall be reinstalled on the bolting flange by the CONTRACTOR and the proper operation of the vent pallets verified. Any items damaged by the removal and replacement of the vent shall be replaced by the CONTRACTOR at no cost to the OWNER. After the completion of the application and curing of the paint, a new 1/4 in. thick gasket shall be furnished and installed between the existing roof vent and steel flange. The gasket shall be made from commercial grade neoprene, meeting ASTM D2000-86E, Type BC, with a 70A durometer rating, and black color.
21. Protective Pipe Covers: The existing protective cover on the inlet/outlet pipe shall be removed and legally disposed of or recycled by the CONTRACTOR. New protective covers shall be furnished and installed on the existing approximately 12 in. diameter inlet/outlet pipe and approximately 6 in. diameter drain pipe in the bottom of the riser. The inlet/outlet pipe cover shall conform to the design and dimensions shown in Drawing PC1 and the drain pipe cover shall conform to the design and dimensions shown in Drawing PC2. The CONTRACTOR shall verify the pipe diameters prior to fabrication of the covers.
22. Roof Rigging Openings: Approximately 10 threaded outlets shall be installed in the roof of the tank. The couplings shall be installed at a maximum spacing of 20 ft on center and shall be located above the top capacity level. The threaded outlets shall be Phoenix #132 heavy tank flat flange (manufactured by Phoenix Forging Company, 610/264-2861) as shown in Drawing RO. The flanges shall be welded on the outside of the tank with continuous fillet welds and sealed on the interior with a flexible polyurethane sealant, Sikaflex-1A, or equal allowed in writing by ENGINEER. Malleable iron pipe plugs (hot-dipped galvanized with the threads wiped) shall be furnished and installed after the completion of the painting. The threads on the plugs shall be covered with teflon tape or teflon paste prior to threading into the couplings.
23. Manhole Gasket: After the completion of the application and curing of the interior paint, a new 1/4 in. thick gasket shall be furnished and installed in the new 30 in. diameter flanged and bolted riser manhole. The gasket shall be made from commercial grade neoprene, meeting ASTM D2000-86E, Type BC, with a 70A durometer rating, and black color.

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24. Locking Manhole and Ladder Vandal Deterrent: The roof manhole entering the container and the ladder vandal deterrent shall be locked at the completion of the Work, using padlocks furnished by the OWNER.

**I. Specifications for Spot Cleaning and Spot Coating Exterior Areas Damaged by Repairs and New Items**

1. Surfaces to be Shop Cleaned and Shop Primed: Any new items for the exterior of the tank shall be shop cleaned and shop primed in accordance with the paragraphs in this Section.
2. Shop Preparation: Clean all steel surfaces of the new exterior accessories in the shop to SSPC-SP6, Commercial Blast Cleaning (modified).
3. Black Light in Shop: If the potential exists for grease or oil on the steel surfaces in the shop, the CONTRACTOR shall evaluate the steel in the shop by black light to verify any presence of grease or oil on the surface. If present, the grease and/or oil shall be properly removed from the steel surface.
4. Rough Areas: These paragraphs apply to rough areas created during the fabrication processes. This shall be included in the **Base Bid**.
  - a. Burrs, weld spatter, sharp edges, corners or rough welds which would cause difficulty in achieving a defect-free coating shall be chipped or ground smooth.
  - b. It is not the intent to have the welds or scars chipped and/or ground flush. The objective of the chipping and/or grinding is to eliminate sharp edges, corners, and overlaps in order to provide a surface for the application of a uniform thickness coating without voids.
  - c. These chipped and/or ground areas shall be cleaned to provide the proper surface profile for the paint.
5. Shop Priming: Within eight (8) hours of the shop cleaning and before the formation of rust, the exterior steel surfaces cleaned in the shop (SSPC-SP6) shall be primed with the specified shop primer, with the exception of a 2 in. wide margin at the edges to be field welded. After the application of the prime coat, any seams, plate edges, joints, rough areas, bolt heads and nuts, remains of erection lugs and scars, corners, member intersections, and other deviations from smooth surfaces shall be primed by brush using 10% thinned material in a contrasting color to the primer.
6. Field Surface Preparation and Debris Removal: All areas of exterior coating damaged during the repairs, shall be spot cleaned to SSPC-SP 11, Power Tool Cleaning to Bare Metal. Coating surfaces surrounding the spot cleaned areas shall be sanded or scarified to provide a proper surface profile in the existing coating for the adherence of the spot prime

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coat. The paint and cleaning debris shall be promptly stored in leak-proof covered dumpsters on the site and disposed of in accordance with the Removal and Disposal of Cleaning Residue paragraph of these Specifications.

7. Spot Priming:

a. Not later than during the same day and before the formation of rust, the spot cleaned exterior surfaces (SSPC-SP 11) shall be spot primed with the specified primer.

b. Stripe Coat: Special attention shall be given to welds, lapped joints, bolt heads and nuts, threads, corners, member intersections, and other deviations from smooth surfaces. These areas shall be spot primed by brush with a 10% thinned coat, after the initial spot priming.

8. Spot Intermediate Coat: The spot primed areas shall then be given one spot intermediate coat of paint. The color shall differ from the primer and shall be slightly darker than that chosen for the finish coat, being dark enough to visually assure application of the finish coat, and light enough to allow proper hiding. (An intermediate coat lighter than the finish coat shall not be permitted due to the inability to distinguish between the lighter intermediate and the highlights of the finish).

9. Spot Finish Coat: The spot intermediate coated areas shall then be given a final spot coat of the selected paint matching the color of the existing exterior finish coat.

10. New Item Coatings: Acceptable coating manufacturers and specifications for the new exterior items follow; however, the CONTRACTOR is advised that all manufacturers presented below must certify that the coatings furnished are in compliance with these Specifications.

a. **Induron Coatings, Inc., Birmingham, AL 35201**

(shop) Induraguard SG Epoxy	2.0 - 4.0 mils
(field) Perma-Clean II Epoxy	2.0 - 3.0 mils
(field) Indurethane Semi-Gloss Plus (semi-gloss)	2.0 - 3.0 mils
Total System Dry Thickness	6.0 - 10.0 mils

b. **Sherwin Williams Company, Cleveland, OH 44115**

(shop) Macropoxy 646	2.0 - 4.0 mils
(field) Macropoxy 646	2.0 - 3.0 mils
(field) Acrolon 218 HS (semi-gloss)	2.0 - 3.0 mils
Total System Dry Thickness	6.0 - 10.0 mils

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**c. Tnemec Company, Inc., Kansas City, MO 64141**

(shop)	Series N69 Hi-Build Epoxoline II	2.0 - 4.0 mils
(field)	Series 27 Typoxy	2.0 - 3.0 mils
(field)	Series 1075 Endura-Shield II (semi-gloss)	2.0 - 3.0 mils
	Total System Dry Thickness	6.0 - 10.0 mils

11. Coatings for Areas Damaged by Repairs: Acceptable coating manufacturers and specifications for the exterior surfaces damaged by the repairs follow; however, the CONTRACTOR is advised that all manufacturers presented below must certify that the coatings furnished are in compliance with these Specifications.

**a. Induron Coatings, Inc., Birmingham, AL 35201**

(spot)	Induramastic 85	3.0 - 5.0 mils
(spot)	Perma-Clean II Epoxy	2.0 - 3.0 mils
(spot)	Indurethane Semi-Gloss Plus (semi-gloss)	2.0 - 3.0 mils
	Total System Dry Thickness	7.0 - 11.0 mils

**b. Sherwin Williams Company, Cleveland, OH 44115**

(spot)	Epoxy Mastic Aluminum II	3.0 - 5.0 mils
(spot)	Macropoxy 646	2.0 - 3.0 mils
(spot)	Acrolon 218 HS (semi-gloss)	2.0 - 3.0 mils
	Total System Dry Thickness	7.0 - 11.0 mils

**c. Tnemec Company, Inc., Kansas City, MO 64141**

(spot)	135 Chembuild	3.0 - 5.0 mils
(spot)	Series 27 Typoxy	2.0 - 3.0 mils
(spot)	Series 1075 Endura-Shield II (semi-gloss)	2.0 - 3.0 mils
	Total System Dry Thickness	7.0 - 11.0 mils

**J. Specifications for Cleaning and Painting the Tank Interior**

1. Surfaces to be Cleaned and Painted: All interior surfaces of the container, including (but not limited to) the roof, manholes, weir box, riser, threads, bolts, nuts, pins, brackets, seams, corners, etc., and the inside of the roof vent flange (with the exception of all surfaces of the vent interior and exterior, all screens, and all clog-resistant pallet materials, i.e. polyethylene, teflon, etc.), shall be cleaned and painted in accordance with the paragraphs in this Section. The exterior of the attachment flange to the roof shall be cleaned and painted in accordance with Specifications for Cleaning and Painting the Tank Exterior. The vent screens and the clog-resistant pallet materials shall be protected from the application of all coatings.
2. Cleaning Tank and Debris Removal: The OWNER will remove all water from the tank which will drain by gravity through the drain line. The CONTRACTOR shall remove all

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standing water, mud, and debris from the tank prior to starting work. All loose rust, loose paint, and dirt shall be removed from the tank interior prior to the beginning of cleaning operations. This debris shall be promptly stored in leak-proof covered dumpsters/containers on the site and disposed of in accordance with the Removal and Disposal of Cleaning Residue paragraph of the GENERAL HEALTH, SAFETY, AND ENVIRONMENTAL REQUIREMENTS Section of these Detailed Technical Specifications. This debris shall be kept separate from the exterior paint and cleaning debris. Any water that enters the tank through leaking valves throughout the course of the Project shall be collected and removed from the tank by the CONTRACTOR at no additional cost to the OWNER.

3. Cleaning and Painting: The interior surfaces mentioned above in paragraph 1 of this Section shall be cleaned to a degree of cleanliness equivalent to SSPC-SP 10, Near-White Blast Cleaning (modified) by a method approved by the ENGINEER and OWNER. The paint and cleaning debris shall be promptly stored in leak-proof covered dumpsters/containers on the site and disposed of in accordance with the Removal and Disposal of Cleaning Residue paragraph of the GENERAL HEALTH, SAFETY, AND ENVIRONMENTAL REQUIREMENTS Section of these Detailed Technical Specifications. This debris shall be kept separate from the exterior paint and cleaning debris. The sequencing and timing of the areas to be cleaned and painted shall be done in a manner to complete the Work in accordance with these Detailed Technical Specifications and within Contract Time.
  - a. Prime Coat: Before the formation of rust and after observation of the surface by the FIELD OBSERVER, all cleaned surfaces shall be primed with the first coat specified below.
  - b. Stripe Coat: After the application of the first coat, all seams, all edges, rods, rough areas, deviations from smooth surfaces, pits, bolt heads and nuts, remains of erection lugs and scars, and corners shall be primed by brush and/or roller using 10% thinned material in a contrasting color to the primer. The 10% thinned material shall be worked sufficiently into all cracks, crevices, and seams. Initial spray application of the stripe coat shall not be permitted.
  - c. Intermediate Coat: After the recommended curing period of the prime coat and stripe coat, a second full intermediate coat shall be applied.
  - d. Finish Coat: After the recommended curing period for the intermediate coat, a third full finish coat shall be applied by spray.
4. Alternate Ultra-High Solids Polyurethane Finish Coat: If **Alternate Bid Item 6** is selected by the OWNER, the approved coating for the interior surfaces shall be an ultra-high solids polyurethane coating. After abrasive blast cleaning, the interior surfaces shall be cleaned of all dust, overspray, abrasive, and other contaminants which might cause premature coating failure and given one finish coat of the specified ultra-high solids polyurethane coating. All cleaned surfaces shall be primed with the first coat specified below. All seams, rough areas, deviations from smooth surfaces, pits, bolt heads and nuts, remains of erection lugs and

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scars, and corners shall be coated with the ultra-high solids coating using 4-way passes and squeegeing of the product to ensure that all surfaces receive the specified film thickness. Each worker applying the product shall have a certificate of qualification for application of the product from the coating manufacturer’s technical services. Equipment shall have a letter from the coating manufacturer’s technical services stating the equipment is appropriate for the use intended in applying the material. All heating of equipment, mixture ratios, storage requirements, and other requirements as set forth in the product data sheets shall be followed.

5. Seam Sealer: After cleaning, seam sealer is to be applied to the roof vent intersection, roof manhole, tank manhole intersection, piping intersections, and the unwelded horizontal lap seams in the riser to seal these intersections from moisture. It shall be applied in a workmanlike manner, being beveled at approximately 45°. **The cost of this seam sealing is to be included in the Base Bid, separate from other applications using seam sealer which may be listed in the SPECIFICATIONS FOR REPAIRS AND ADDITIONS TO THE TANK section of these Detailed Technical Specifications and included as a separate bid item.** At the CONTRACTOR'S option, the Tnemec Series 215 Surfacing Epoxy may be applied after the priming of the surface, providing no rust has formed on any uncoated surfaces (such as crevices between plates). This material shall be recommended by the manufacturer of the interior paint system.
  - a. Aquatapoxy,
  - b. Sherwin Williams Steel-Seam FT910,
  - c. Tnemec Series 215 Surfacing Epoxy,
  - d. or other material favorably reviewed in writing by the ENGINEER.
6. Compliance with ANSI/NSF Standard 61: The approval of potable water tank interior coatings and sealers shall be based on written certification of compliance with ANSI/NSF Standard 61 and compliance with the requirements of state agencies. Adequate manufacturer's published product data concerning the transportation, storage, mixing, thinning, pot life, application, and curing shall be furnished to ensure that the finished product complies with ANSI/NSF Standard 61.
7. Certification: Manufacturers presented below must certify that their coatings furnished are in compliance with the Specifications.
8. Coatings: Acceptable coating manufacturers and specifications for the interior surfaces of the steel water storage tank follow, and are intended to comply with the requirements of AWWA D102-17 Inside System No. 2, Three-Coat, Two-Component Catalyzed High Build Epoxy System with the exception that the brush post-priming of the seams and potential holiday areas is required.

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**a. Induron Coatings, Inc., Birmingham, AL 35201**

(1)	PE-70 (White)	4.0 - 6.0 mils
(2)	PE-70 (Beige)	3.0 - 5.0 mils
(3)	PE-70 (White)	5.0 - 6.0 mils
Total System Dry Thickness		12.0 - 17.0 mils

**b. Sherwin Williams Company, Cleveland, OH 44115**

(1)	Macropoxy 646 PW (White)	4.0 - 6.0 mils
(2)	Macropoxy 646 PW (Blue)	3.0 - 5.0 mils
(3)	Macropoxy 646 PW (White)	5.0 - 6.0 mils
Total System Dry Thickness		12.0 - 17.0 mils

**c. Tnemec Company, Inc., Kansas City, MO 64141**

(1)	N140F-15BL (Tank White) Pota-Pox Plus	4.0 - 6.0 mils
(2)	N140F-1255 (Beige) Pota-Pox Plus	3.0 - 5.0 mils
(3)	N140F-15BL (Tank White) Pota-Pox Plus	5.0 - 6.0 mils
Total System Dry Thickness		12.0 - 17.0 mils

9. Alternate Ultra-High Solids Polyurethane Interior Coating: If **Alternate Bid Item 6** is selected by the OWNER, the approved coatings for the interior surfaces shall be an ultra-high solids polyurethane coating. It shall be capable of being spray applied at the specified thickness in a single application. It shall be monolithic, flexible membrane that is corrosion, abrasion, and impact resistant.

**a. Tnemec Company, Inc., Kansas City, MO 64141**

(1)	Elasto-Shield 406 (Off-White)	25.0 - 35.0 mils
Total System Dry Thickness		25.0 - 35.0 mils

**b. Sherwin Williams Company, Cleveland, OH 44115**

(1)	Poly-Cote 115	25.0 - 35.0 mils
Total System Dry Thickness		25.0 - 35.0 mils

10. Underwater Epoxy: The following manufacturer's underwater curing epoxy paints/gels for use at the First Anniversary Inspection are acceptable for this Project:

**a. Raven Lining Systems, Tulsa, OK 74106**

(1)	AquataPoxy A-6 Paint (White)	8.0 - 12.0 mils
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11. Flexible Sealant: After the curing of the finish coat of paint, Sikaflex-1a flexible polyurethane sealant (or equal allowed in writing by the ENGINEER) shall be applied to the unwelded lapped container roof seams. It shall be applied in a workmanlike manner, being beveled at approximately 45°. The color of the sealant shall be white. The sealant shall

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have the approval for use in potable water from the US EPA, ANSI/NSF, and any applicable local health regulatory agency.

12. Holiday Testing: All interior coatings, including those above the top capacity level, shall be checked with a holiday detector by the CONTRACTOR. Testing shall be done in accordance with Section 5.1.3 of AWWA D102-14 and NACE SP0188 in the presence of the FIELD OBSERVER and shall be performed utilizing a surfactant. Any voids indicated shall be repaired by applying more of the finish coat of paint by brush or roller. The repaired areas shall be retested after the appropriate curing time. The coating system must pass the holiday test regardless of the mil thickness existing.
13. Curing: **Each coat shall be properly cured before the application of any subsequent coats.** The interior area coating shall be completely cured and the tank shall not be filled with water until approved by the ENGINEER and OWNER. The exterior coating on the opposite side of water bearing surfaces shall be completely cured and the tank shall not be filled with water until approved by the ENGINEER and OWNER. CONTRACTOR shall perform solvent rub tests, pencil hardness tests, or other industry recognized testing procedures recommended by the coating manufacturer to determine the coatings have cured prior to filling the tank. A letter from the CONTRACTOR certifying their testing results and that the interior wet coating has cured such that it is ready for immersion service shall be submitted to the ENGINEER and OWNER prior to filling the tank. The CONTRACTOR shall monitor the torus bottom plate temperature during the interior coating curing to verify that minimum steel temperature requirements are satisfied.
14. Ventilation: Forced ventilation shall be supplied to the interior of the tank for a period of time equal to the paint manufacturer's recommended recoat times for the prime coat and for a continuous period of at least 48 hours after the final coat has been applied. Adequate ventilation of the container bottom, riser, and other low lying areas of the tank and container shall be provided by the CONTRACTOR as required for solvent release and coating cure. This ventilation shall, at a minimum, be in accordance with AWWA D102 and shall be submitted for review. The CONTRACTOR shall furnish, install, and operate the equipment that is necessary to provide forced ventilation to aid curing. If supplementary heating or dehumidification is required to effect curing, the CONTRACTOR shall furnish, install, and operate the equipment to perform the supplementary heating required at no additional cost to the OWNER.
15. Dehumidification: If **Alternate Bid Item 7** is selected by the OWNER, the CONTRACTOR shall furnish, install, and operate dehumidification equipment to maintain a minimum of 25° F dew point depression between the internal steel surface (skin temperature) and the internal ambient air dew point temperature, and a low relative humidity (maximum 40%) inside the tank. This dehumidification shall permit continuous cleaning of the tank interior and shall hold the blast cleanliness until coating application, as well as facilitate coating cure. The CONTRACTOR shall provide propane powered units at the site for dehumidification at no cost to the OWNER. The size and type of the dehumidification units shall be designed by the manufacturer of the dehumidification units to comply with

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these requirements. The units shall be equipped with a monitor, and the CONTRACTOR shall submit records of the temperature and humidity conditions to the ENGINEER and OWNER verifying the specified conditions were maintained by the dehumidification units. Dehumidification shall be supplied by one of the following firms:

- a. Dehumidification Technologies, Inc. - 866/736-8348, or
- b. An equal reviewed in writing by the OWNER.

**The furnishing, installation, and operation of dehumidification equipment shall be paid for by the lump sum price in Alternate Bid Item 7.**

16. Diesel Powered Equipment: Due to possible contamination of the surfaces to be painted, diesel powered equipment shall not be used inside the tank.
17. Recoat Cycle: The CONTRACTOR shall review the manufacturer's published product data for minimum and maximum recoat times for the interior coating system selected for use. No succeeding coat shall be applied prior to the minimum recoat time of the preceding coat. If the maximum recoat window is exceeded **prior** to application of the succeeding coat, then the CONTRACTOR shall prepare the interior surfaces in accordance with the manufacturer's published product data prior to the application of the next coat. The cost for this additional surface preparation shall be borne by the CONTRACTOR with no additional cost to the OWNER. The Contract Time shall not be increased as a result of this additional surface preparation.
18. Inlet/Outlet, Drain, and Overflow Piping: The CONTRACTOR shall be responsible for assuring that no foreign material including, but not limited to paint, abrasive, rags, or tools enter the inlet/outlet, drain, or overflow piping during the execution of the Work. Any material found in this piping at the time the tank is placed back into service shall be removed at the expense of the CONTRACTOR. To aid in preventing the entrance of foreign material, the CONTRACTOR shall drain the pipe and either lower the protective cover to the top of the pipe, tack weld a plate over the inlet/outlet pipe or place an expandable plug in the pipe. If a plate is tack welded over the pipe, the plate shall completely cover the pipe and shall not be removed until the interior and exterior painting is complete. After the plate is removed the damaged areas of coating and weld burrs shall be ground smooth and recoated in accordance with the applicable paragraphs in these **Detailed Technical Specifications**. If an expandable plug is inserted in the pipe, the plug shall be placed approximately 18 in. down in the pipe to allow for proper coating of the inlet/outlet pipe. The inlet/outlet pipe interior shall be cleaned and painted approximately 1 pipe diameter below the top of the pipe.

**Repairing and Repainting the Interior and Exterior of  
One 500,000 Gallon Steel Elevated Tank  
“52<sup>nd</sup> Street Tower”  
Lawrence, Indiana**

**K. Disinfection of the Tank and Piping**

1. Standards: The disinfection of the tank and piping shall comply with the following standards:
  - a. American Water Works Association (AWWA) - ANSI/AWWA C652-19, “Disinfection of Water-Storage Facilities.”
2. Cleaning: After curing and prior to disinfecting, the CONTRACTOR shall wash the tank interior with potable water. All equipment, including brooms, brushes, spray equipment, and worker's boots, shall be disinfected before they are used to clean the water storage facility. The CONTRACTOR shall supply an adequate flow of water (20 gpm minimum) with sufficient pressure (60 psi minimum at the nozzle) to wash thoroughly all the interior surfaces, including those surfaces above the top capacity level. All residue shall be removed from the tank and riser and shall be disposed of properly.
3. Disinfection: It is the CONTRACTOR'S responsibility to flush and disinfect the tank until two consecutive satisfactory water samples are reported from the OWNER'S selected laboratory. Method 3 (Section 4.3.3) or Method 2 (Section 4.3.2) of AWWA C652-19 shall be used. The OWNER shall take and send in the samples to the laboratory, but shall assume no responsibility for the sampling technique or the care of the samples. The stored tank water shall comply with current state and US EPA standards for organic, inorganic, and biological contaminants as influenced by the operations of the CONTRACTOR.

**L. Specifications for Washing Exteriors of 52<sup>nd</sup> Street Tower and Oaklandon Road Tower Tanks**

1. Tank Information: 52<sup>nd</sup> Street Tower is a 500,000 gallon steel elevated tank located at 9802 East 52nd Street in Lawrence, Indiana 46235. Oaklandon Road Tower is a 500,000 gallon steel single pedestal spheroid elevated tank located at 11818 65th Street in Lawrence, Indiana.
2. Scrubbing and Washing Complete Exterior: The complete exterior of the tanks shall be cleaned by applying a suitable emulsifier (detergent or surfactant) solution to the surface, scrubbing the surface with a soft bristled broom to remove chalking and other surface contaminants, and pressure washing using potable water at no more than 2000 psi minimum. The cleaning and pressure washing shall continue until chalk, oil, grease, dirt, or other deleterious material are removed. Tri-sodium phosphate or other fungicide shall be added to the water to ensure that all living organisms on the tanks are eliminated and effectively removed. All residue of the cleaning agent shall be removed. Any runoff or contaminants shall not be allowed to come in contact with any natural drainage ditches or streams, and must be collected and disposed of by the CONTRACTOR in accordance with the Removal and Disposal of Cleaning Residue paragraph of the GENERAL HEALTH, SAFETY, AND

**Repairing and Repainting the Interior and Exterior of  
One 500,000 Gallon Steel Elevated Tank  
“52<sup>nd</sup> Street Tower”  
Lawrence, Indiana**

ENVIRONMENTAL REQUIREMENTS Section of these Detailed Technical Specifications.

3. Protection of Existing Coating: The scrubbing and pressure of washing performed shall be limited by the CONTRACTOR to prevent damage to the existing coating on the tanks. Any areas of coating failure shall be brought to the attention of the OWNER.
4. Locking Gates, Doors, and Vandal Deterrents: Any gates, doors, and ladder vandal deterrents shall be locked at the completion of the Work, using padlocks furnished by the OWNER.

**M. Unanticipated Additional Work (Bid Item 5)**

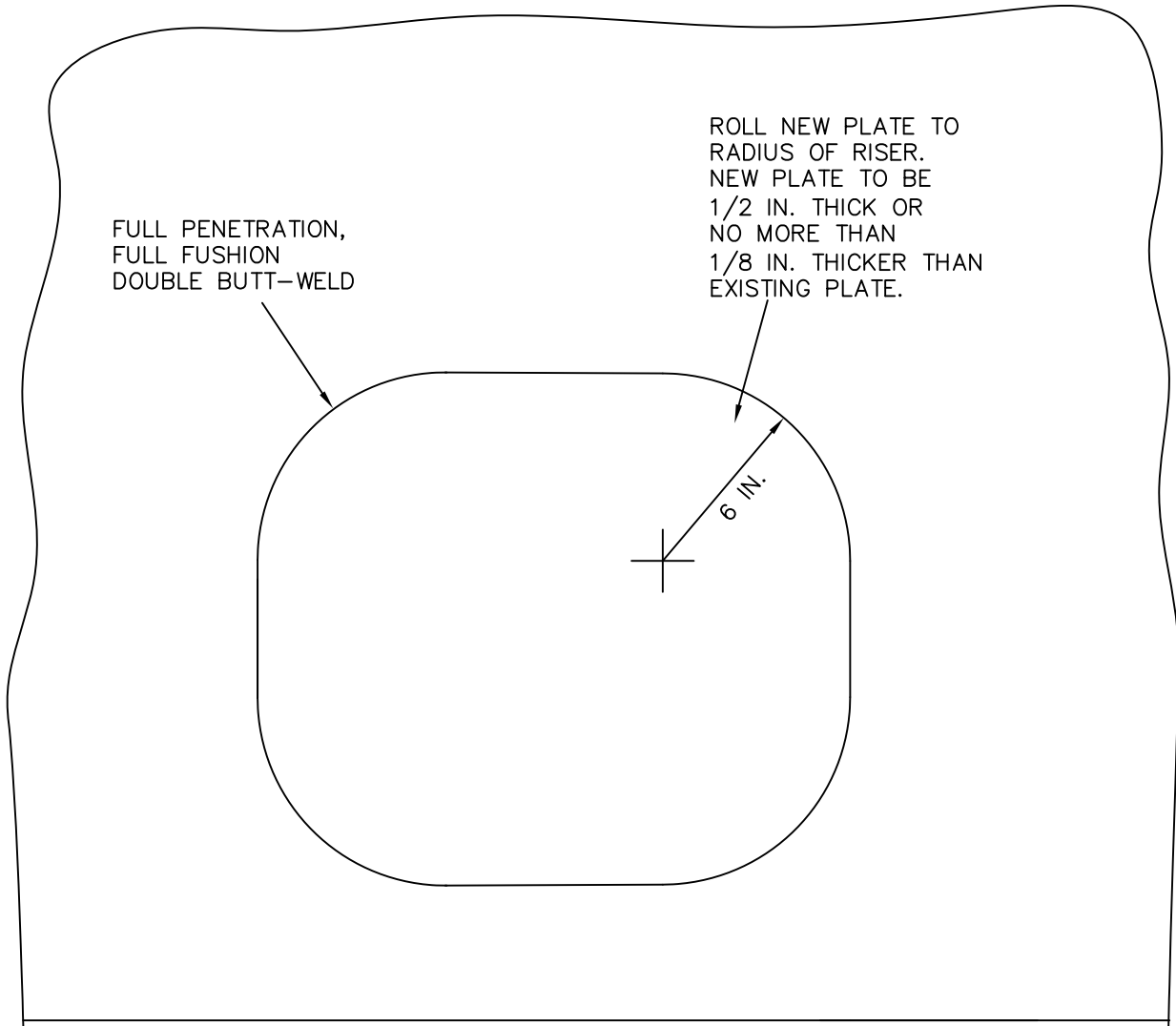
It is believed that these Detailed Technical Specifications adequately describe the Work to be performed. If during the Work, it is found that additional Work is required and it is authorized in writing by the ENGINEER and OWNER, **this Work shall be paid for per single man-hour, including all welding, equipment, normal rigging, labor, supplies, overhead, insurance, and profit. The number of unanticipated additional work man-hours shall be paid for by the unit price in Bid Item 5.**

END OF DETAILED TECHNICAL SPECIFICATIONS

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# RISER INSERT PLATE

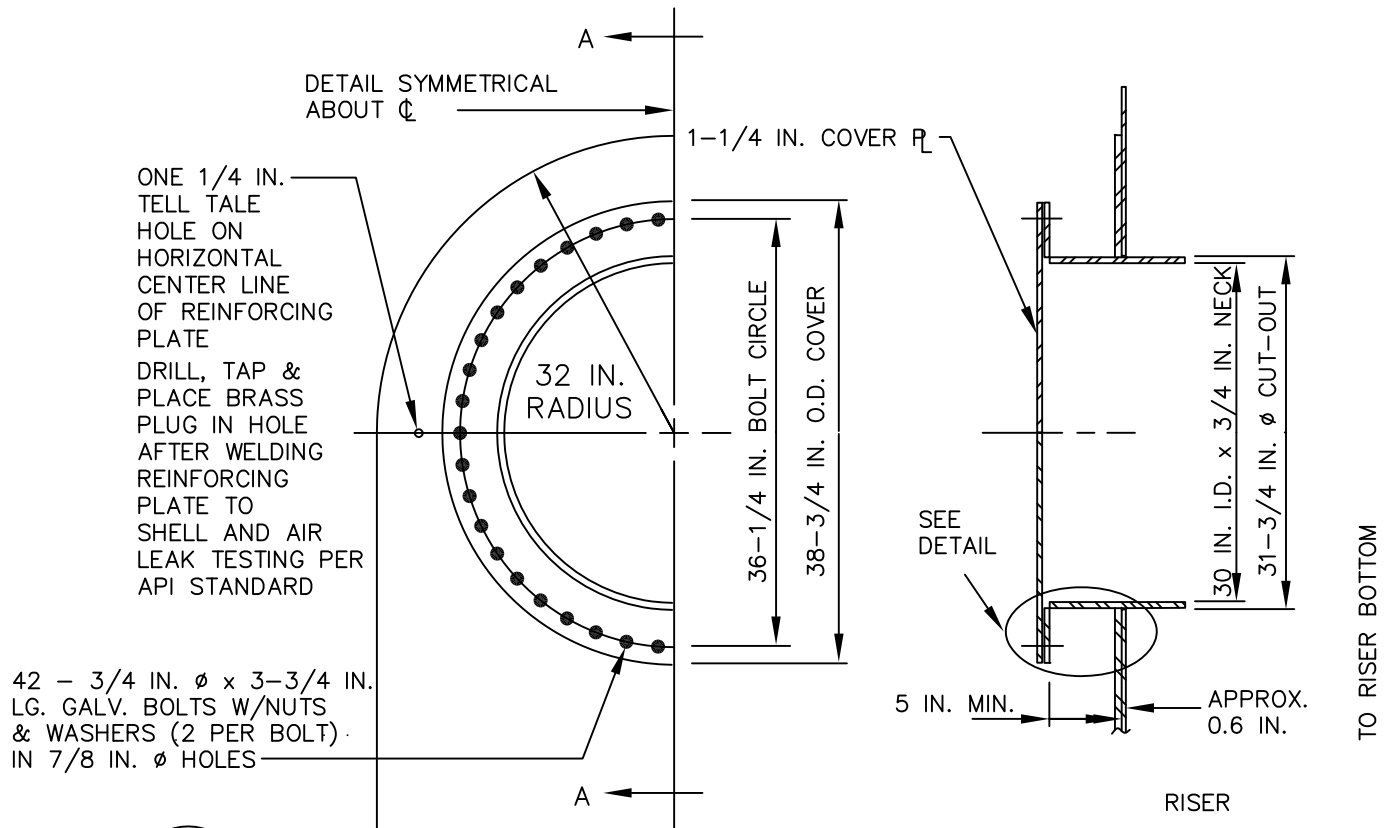
NOTE: RADIOGRAPHS SHALL BE PERFORMED FOR THE COMPLETED INSERT PLATE WELD IN ACCORDANCE WITH API 653.



NOT TO SCALE

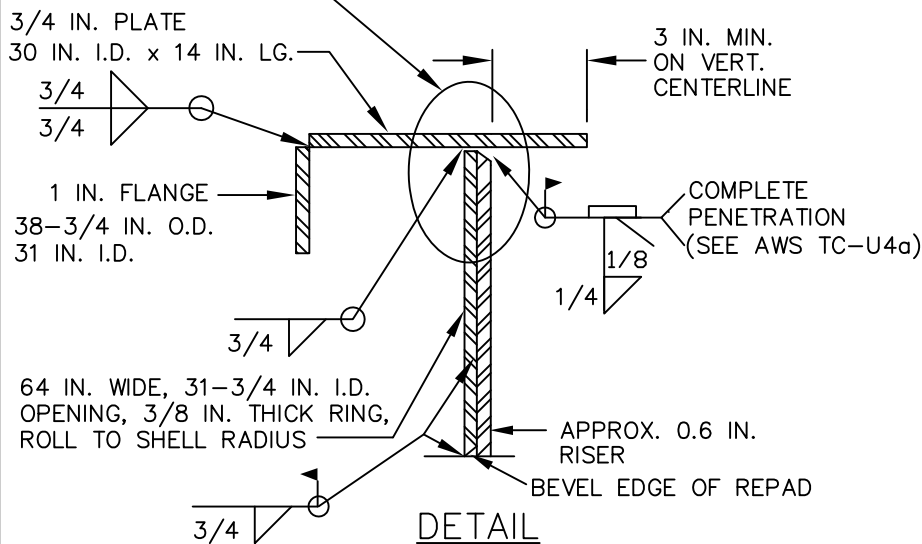
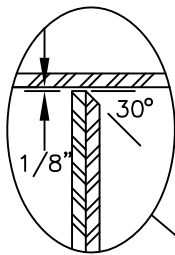
# 30 INCH DIAMETER MANHOLE

## RISER



## ELEVATION

## SECTION A-A

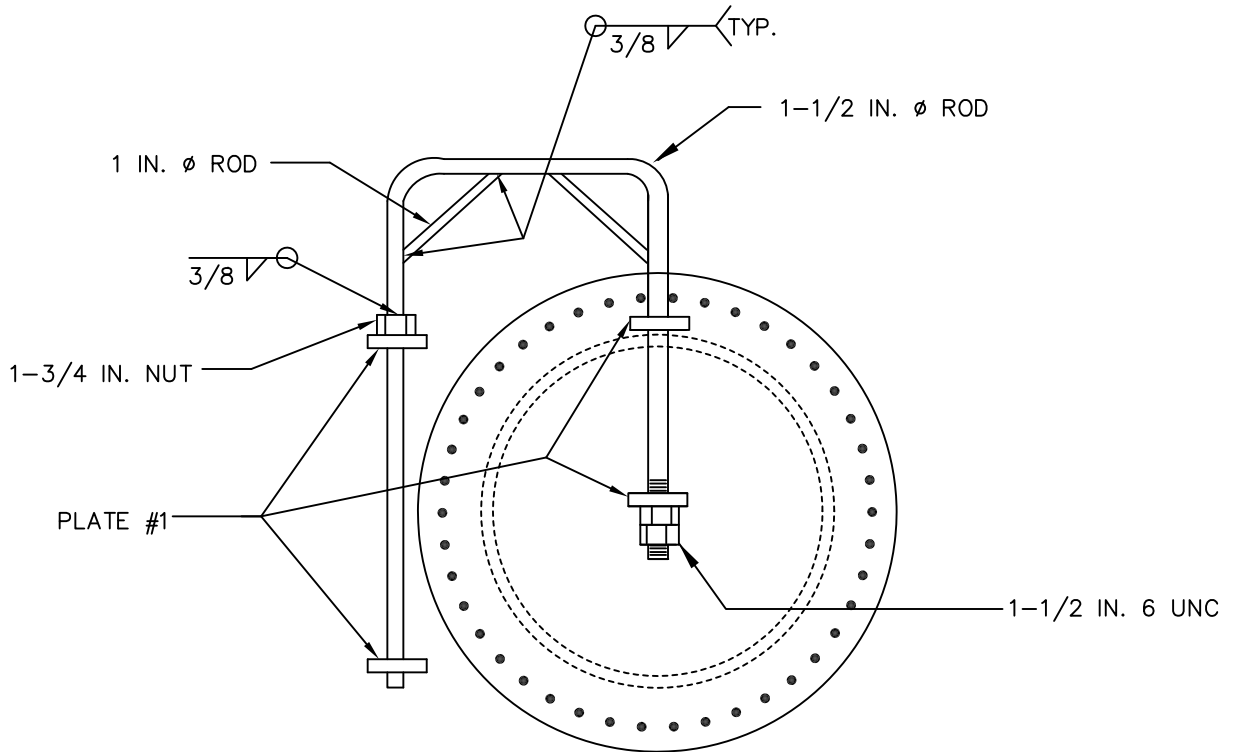


### NOTES:

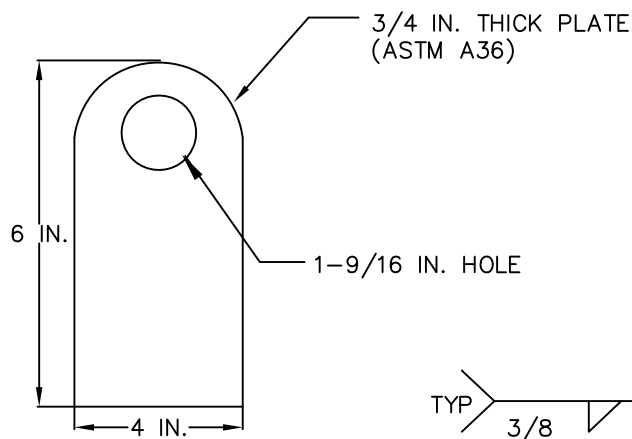
1. MANHOLE COVER TO HAVE 2 LIFTING HANDLES OF 5/8 IN. DIAMETER ROD.
2. MANHOLE GASKET TO BE 1/4 IN. THICK NEOPRENE, FULL FACE.
3. FILLETS AND OTHER WELDS SHALL BE A MINIMUM OF 10 IN. AWAY FROM BUTT-WELDED SEAMS AND REPAD DETAIL SHALL BE IN ACCORDANCE WITH API 650.
4. BEVEL EDGE OF CUT-OUT AS SHOWN.
5. ROUND AND GRIND ALL SHARP CORNERS.
6. ALL MATERIAL TO BE ASTM A36, UNLESS OTHERWISE INDICATED.
7. ALL WELDING ROD SHALL BE E70XX.
8. TRIM NECK INSIDE RISER TO MAINTAIN MINIMUM PROJECTION INTO RISER AND TO LIMIT PROJECTION INTO RISER.

NOT TO SCALE

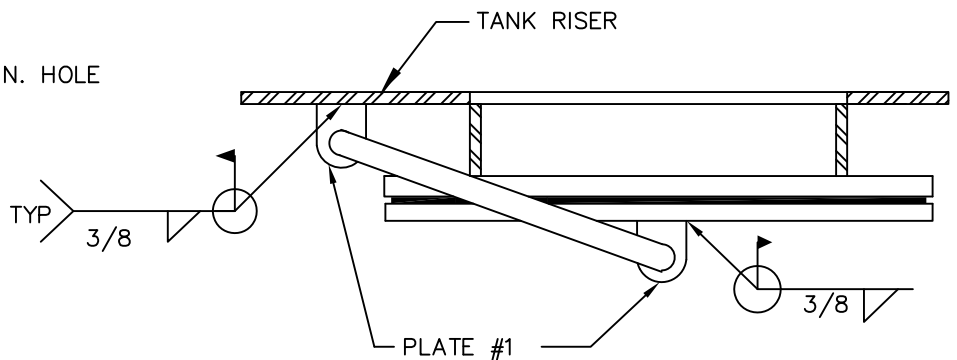
# RISER MANHOLE DAVIT



REINFORCING PLATE NOT SHOWN FOR CLARITY.

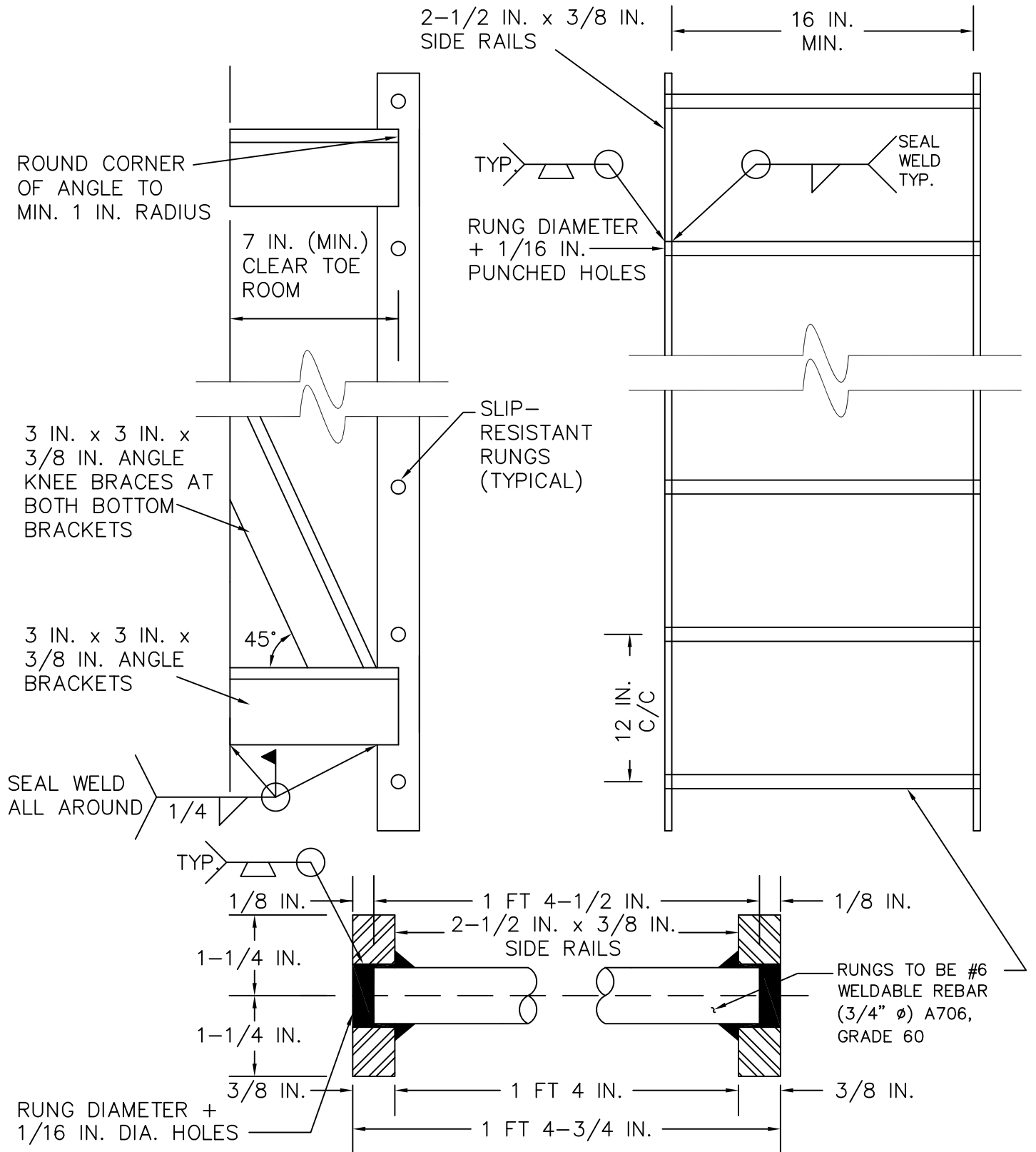


**PLATE #1**  
(4 REQ'D)



NOT TO SCALE

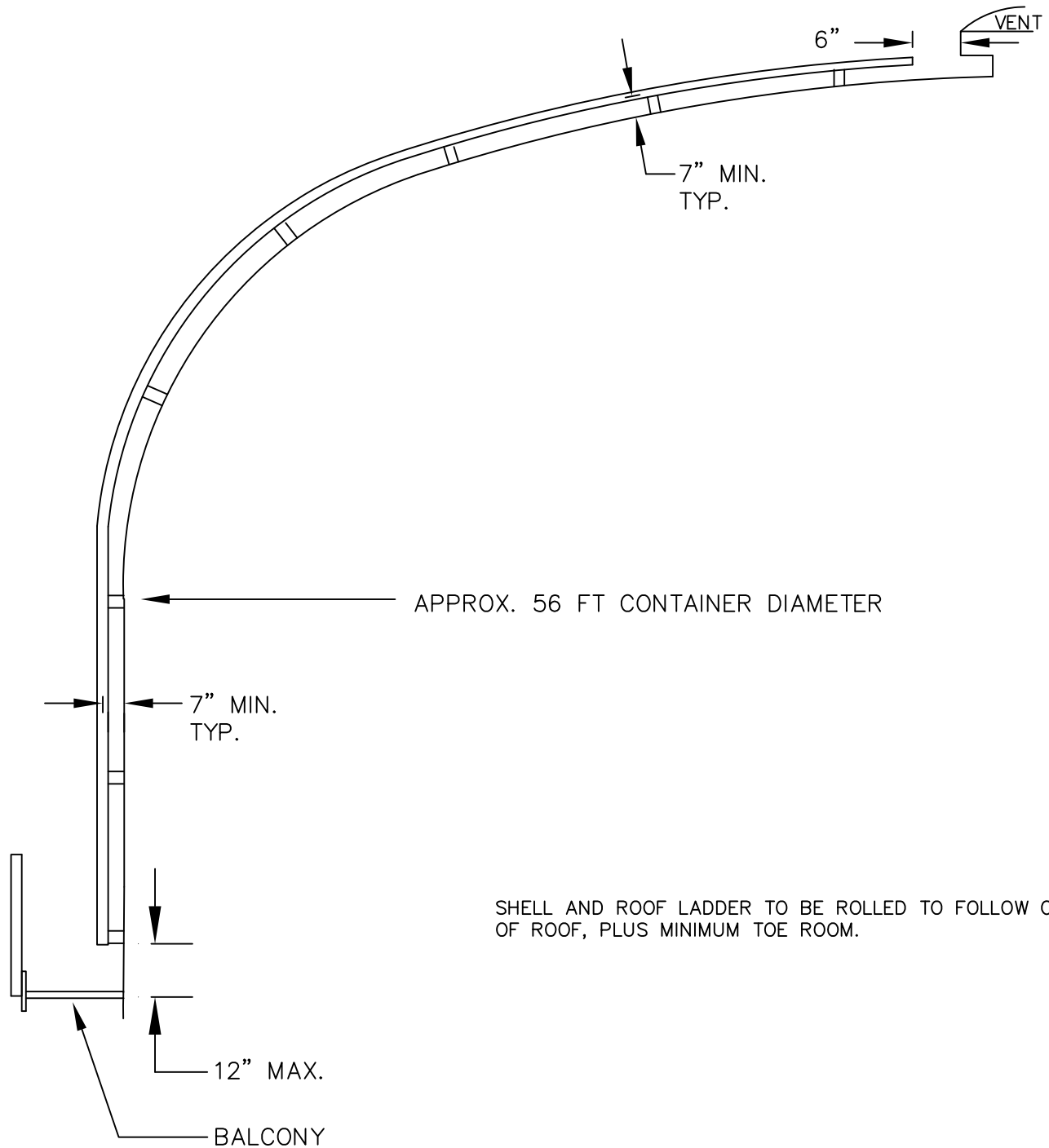
# EXTERIOR TOWER LADDER



NOT TO SCALE

# SHELL AND ROOF LADDER

NOTE: ALL DIMENSIONS TO BE VERIFIED  
BY CONTRACTOR PRIOR TO FABRICATION



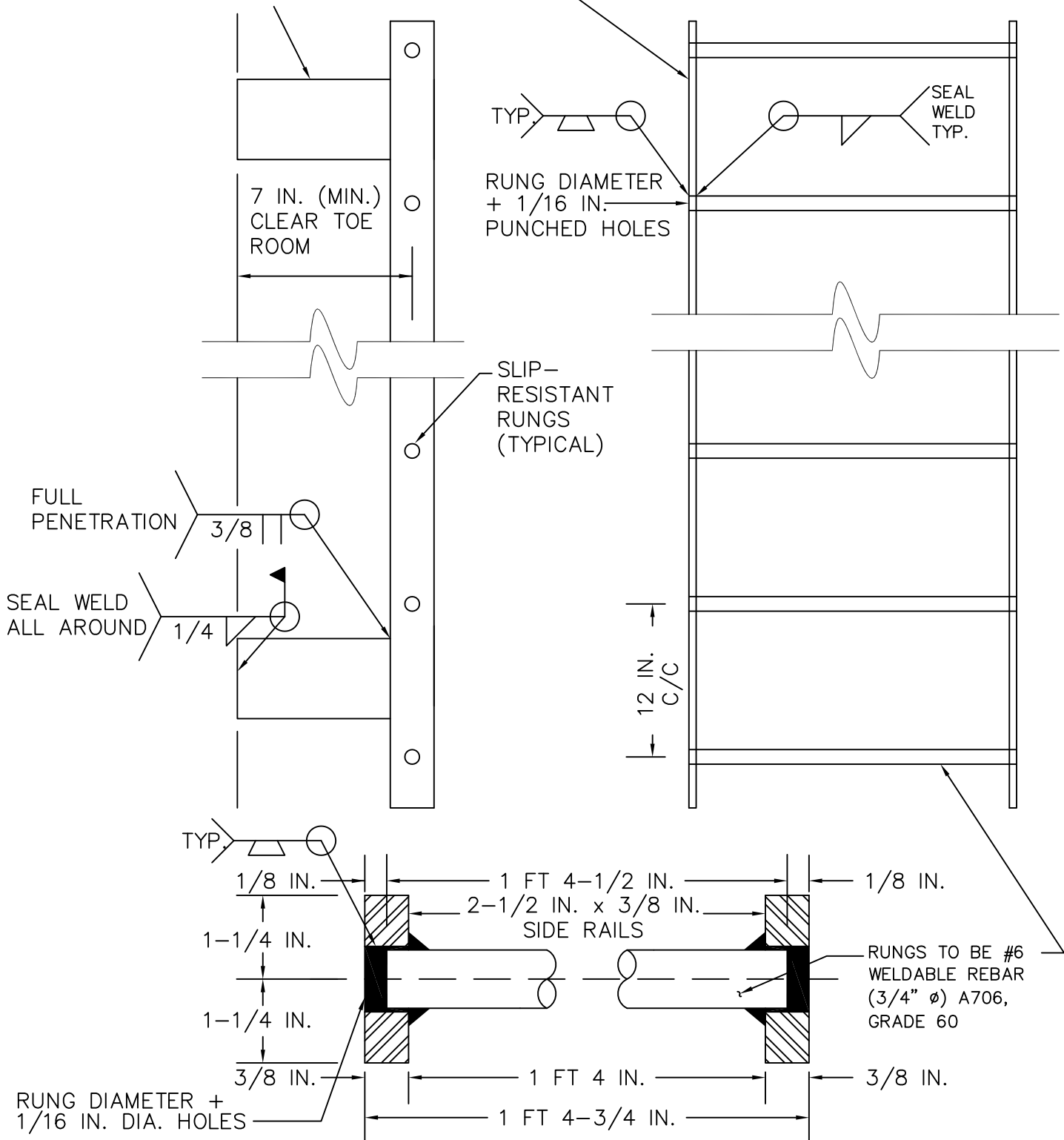
NOT TO SCALE

# EXTERIOR SHELL AND ROOF LADDER

3 IN. x 3/8 IN. x  
6-1/2 IN. (MIN.)  
SPACED @ 10 FT (MAX.)

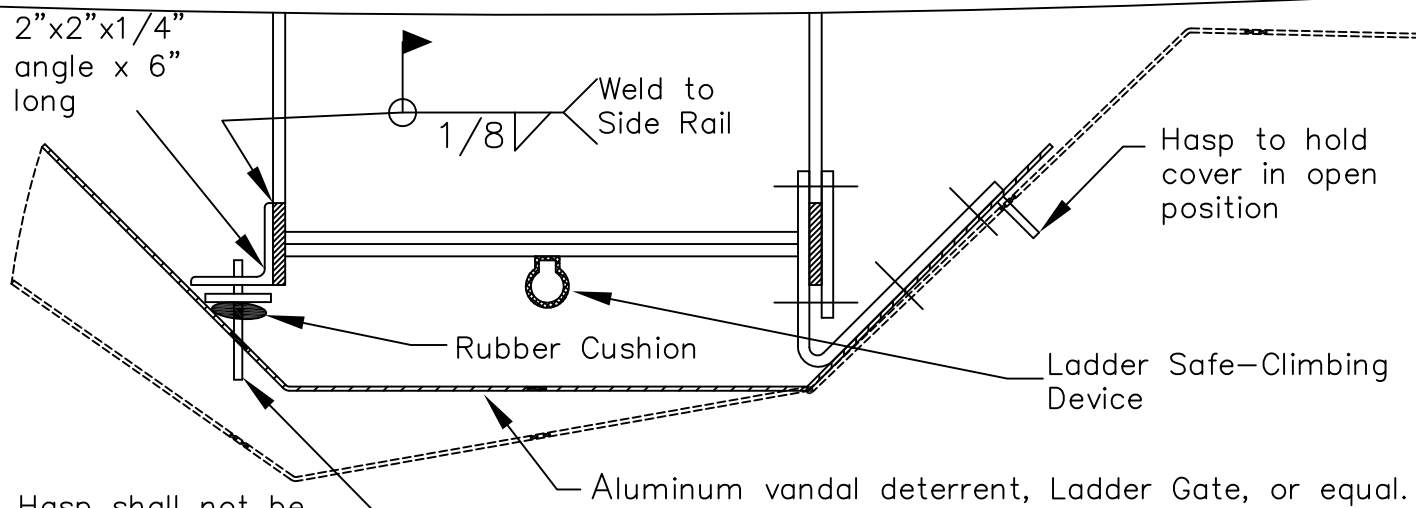
2-1/2 IN. x 3/8 IN.  
SIDE RAILS

16 IN.  
MIN.



NOT TO SCALE

# Vandal Deterrent, Hasp, and Side Plates

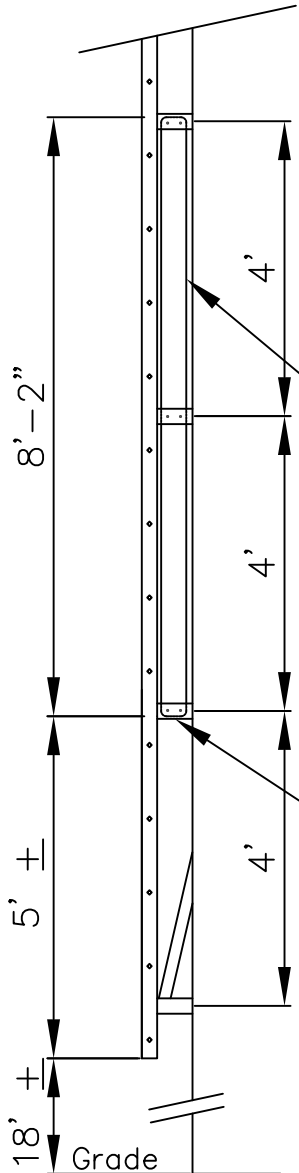


Hasp shall not be mounted on ladder rung.

Grind all edges to 1/16" radius, min.  
 Round all corners to 1" radius, min.  
 All welds continuous, unless otherwise noted.

Bolt vandal deterrent and side plates to ladder and brackets after finish coat of paint has cured.

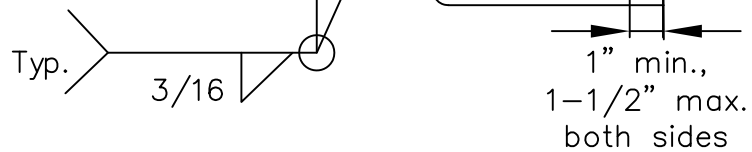
1/2"  $\phi$  x 1-1/4" long galv. bolts, nuts, and washers. Bolt through ladder brackets and not ladder side rail. Two bolts per bracket.



Detail

1/4" aluminum side plate x 8'-2" long

2-1/2" x 3/8", flat bar or two 3/4" square bars welded between ladder brackets at bottom of vandal deterrent.



# BALCONY RAILING

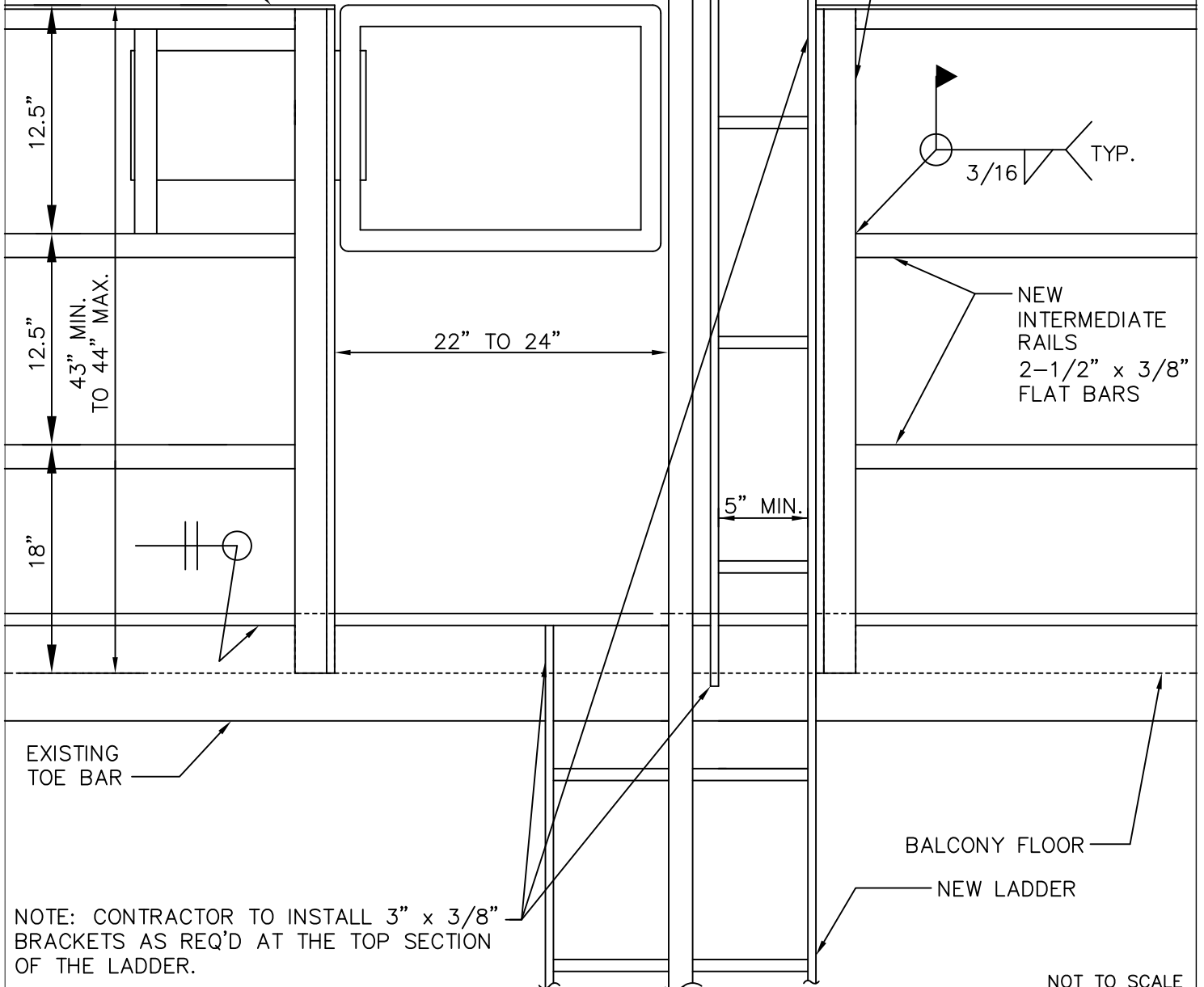
SPRING-OPERATED SAFETY GATE WITH STAINLESS STEEL SPRING, GALVANIZED STEEL CONSTRUCTION PAINTED WITH YELLOW SAFETY COLOR. GATE TO BE 18 IN. WIDE AND MOUNTED ON BALCONY SAFETY RAILING. GATE TO BE FABENCO MODEL XL71-30PC OR EQUAL.

NEW HANDRAIL  
3" x 2-1/2"  
x 1/4", ANGLE

2 IN. MIN.  
TO CENTER  
OF DEVICE

SAFE-CLIMBING DEVICE PIVOT  
DISMOUNT SECTION, SAF-T-PIVOT  
DISMOUNT SECTION OR EQUAL  
SAFE-CLIMBING DEVICE TO BE  
CENTERED ON LADDER.  
VERIFY OPERATION OF SLEEVE.

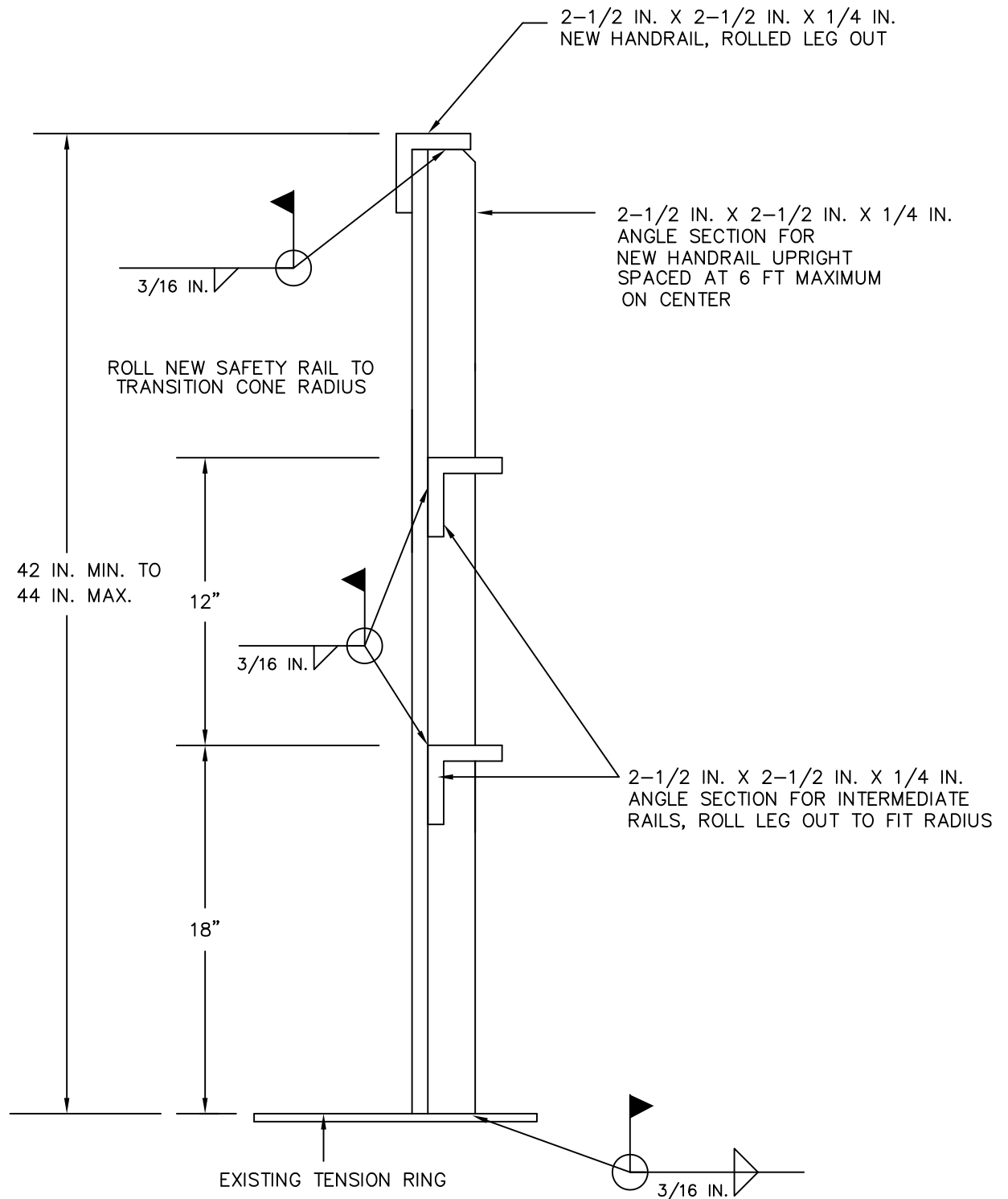
NEW POSTS. 2-1/2" x  
2-1/2" x 1/4", ANGLE.  
SPACED AT 5 FT  
MAXIMUM



NOTE: CONTRACTOR TO INSTALL 3" x 3/8" BRACKETS AS REQ'D AT THE TOP SECTION OF THE LADDER.

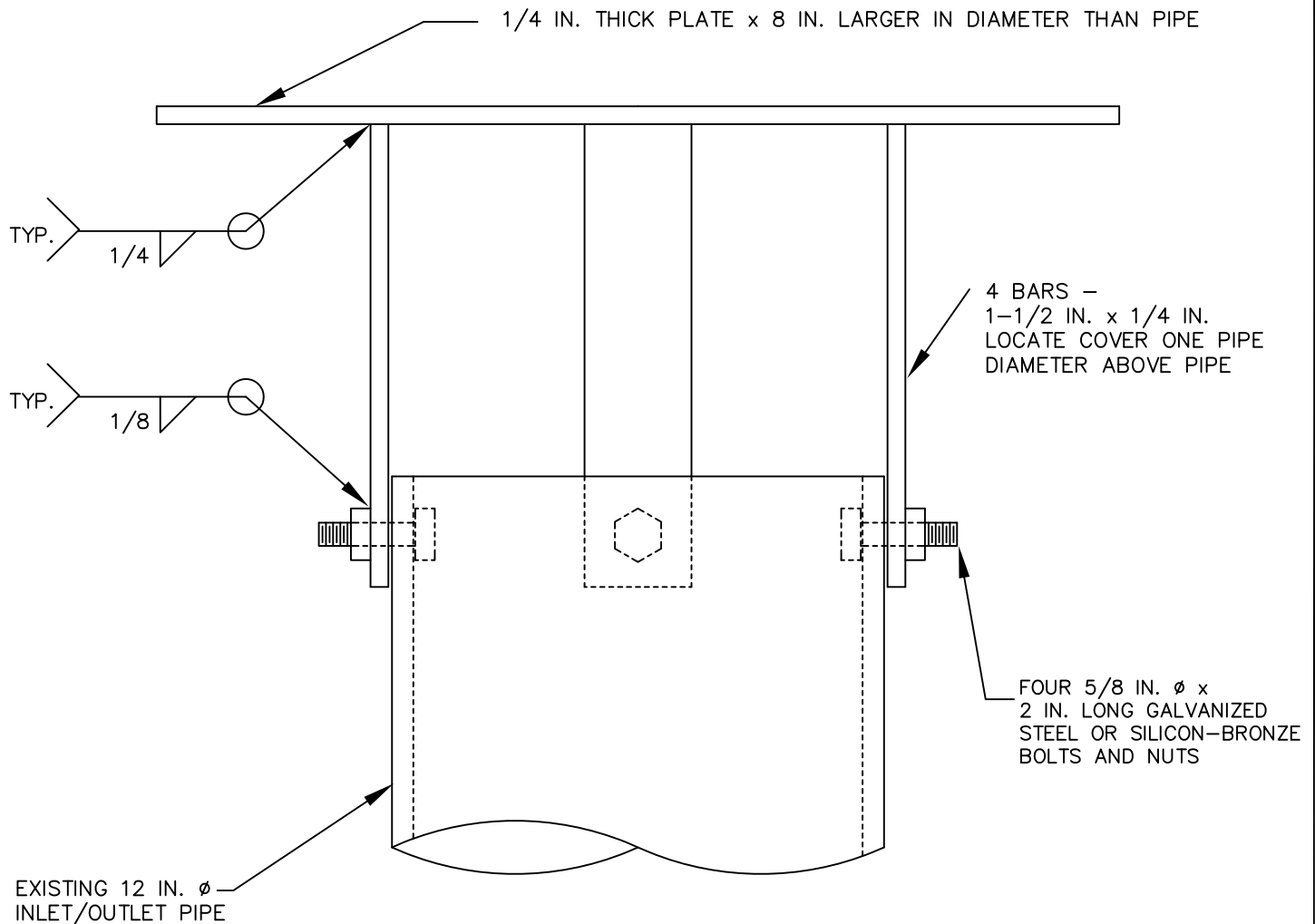
NOT TO SCALE

# TRANSITION CONE SAFETY RAILING



NOTE: CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO FABRICATION

# PROTECTIVE COVER FOR INLET/OUTLET PIPE



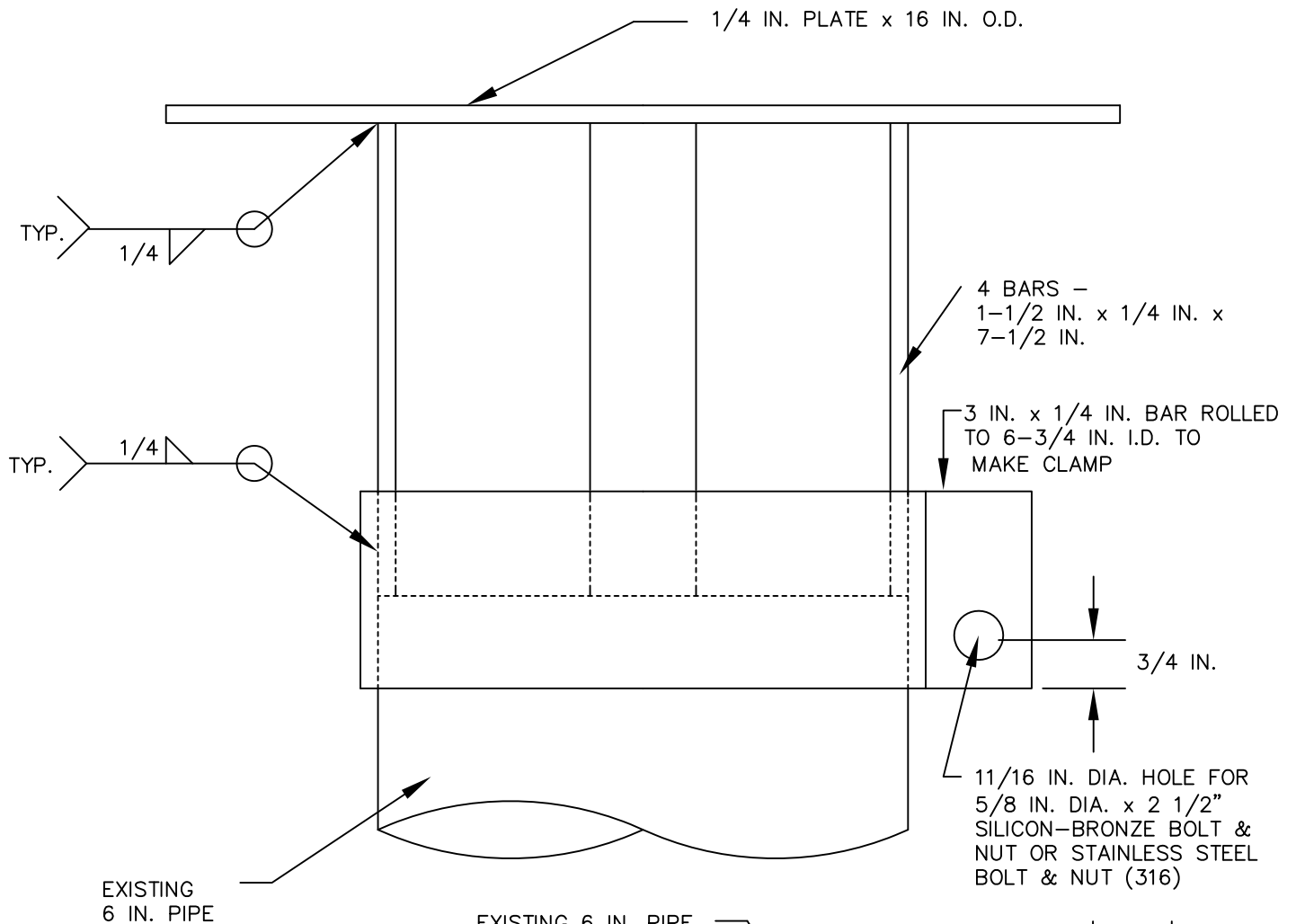
**NOTE:**

1. PAINT AND CURE PRIOR TO ASSEMBLY
2. THE PROTECTIVE COVER SHALL BE AT A LENGTH OF AT LEAST ONE INLET/OUTLET PIPE DIAMETER ABOVE THE TOP OF THE PIPE.
3. CONTRACTOR TO DETERMINE PIPE SIZE PRIOR TO FABRICATION.

IF THE COVER IS CONSTRUCTED IN TWO HALVES TO FIT THROUGH THE MANHOLE, THEN THE COVER SHALL BE WELDED TOGETHER WITH FULL PENETRATION BUTT-WELDS.

NOT TO SCALE

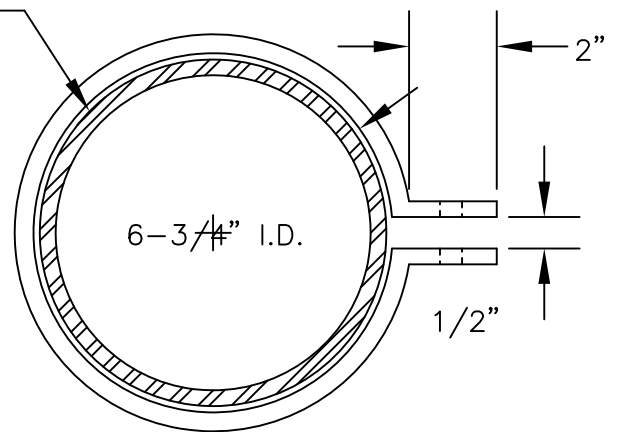
# PROTECTIVE COVER FOR DRAIN PIPE



**NOTE:**

1. PAINT AND CURE PRIOR TO ASSEMBLY
2. THE PROTECTIVE COVER SHALL BE AT A LENGTH OF AT LEAST ONE INLET/OUTLET PIPE DIAMETER ABOVE THE TOP OF THE PIPE.
3. CONTRACTOR TO VERIFY PIPE SIZE PRIOR TO FABRICATION.
4. THE LENGTH OF THE INLET/OUTLET PIPE MAY BE ADJUSTED SO THAT THE TOP OF THE COVER SHALL NOT BE ABOVE THE BOTTOM OF THE RISER MANHOLE.

EXISTING 6 IN. PIPE

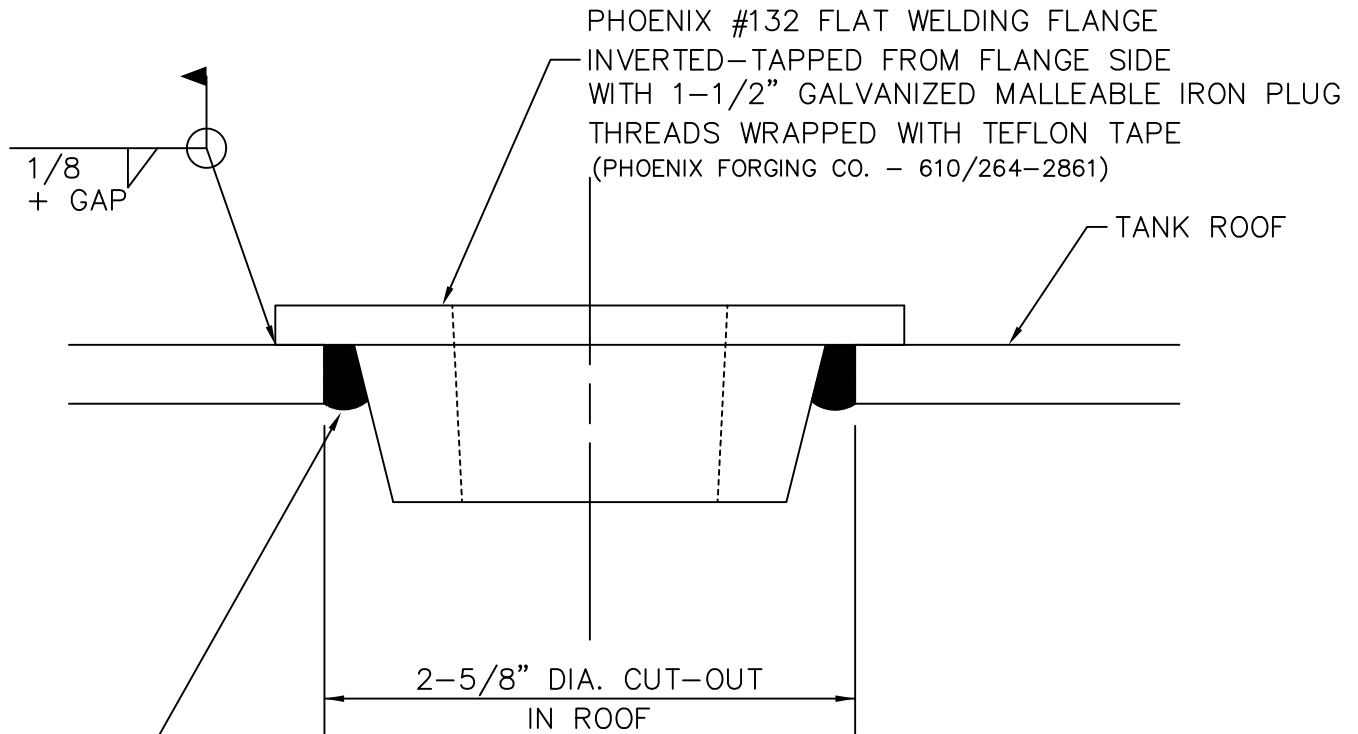


PLAN VIEW  
OF CLAMP

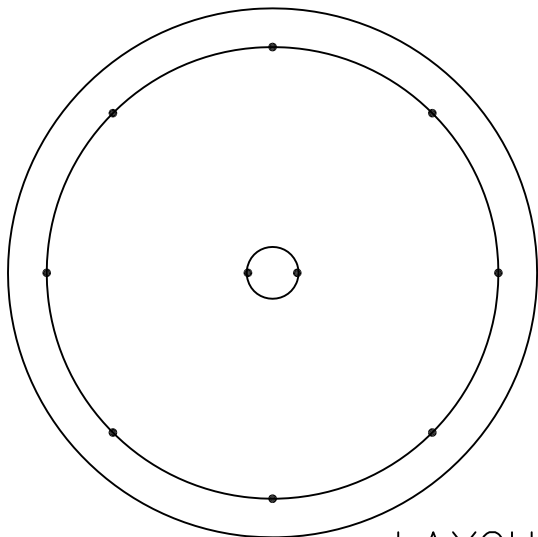
NOT TO SCALE

# ROOF RIGGING OPENING

NOTE: THE COUPLING SHALL BE WELDED IN PLACE WITH THE PLUG INSTALLED TO ALLEVIATE WARPING OF THE COUPLING THREADS



APPLY FLEXIBLE POLYURETHANE SEALANT TO INTERIOR JOINT AFTER COUPLING IS INSTALLED AND AFTER PAINT IS CURED. NO COUPLINGS SHALL BE INSTALLED BELOW THE TOP CAPACITY LEVEL.



LAYOUT

RADIUS	# OF COUPLINGS
4'	2
20'	8
TOTAL	10

RADIUS DIMENSIONS ARE APPROXIMATE

# SUMMARIZED TANK INFORMATION SHEET

## “52<sup>nd</sup> Street Tower”

**ENGINEER:** Tank Industry Consultants  
**TANK OWNER:** City of Lawrence Utilities  
**CAPACITY:** 500,000 gallons  
**HEIGHT:** 134 ft 6 in. to TCL  
**DIAMETER:** approximately 55 ft  
**TYPE:** welded steel 6-column elevated tank with torus roof  
**ERECTION DATE:** 1973, Universal Tank & Iron Works  
**CONTRACT NUMBER:** 5962.500  
**TANK LOCATION:** 9802 East 52nd Street in Lawrence, Indiana 46235

**PAINT SYSTEMS:** Generic Type (appeared to be the following)

**Exterior:** polyurethane  
**Interior:** epoxy

### Analyses Results:

	Cadmium		Chromium		Lead	
	mg/kg	percent	mg/kg	percent	mg/kg	percent
<b>Exterior</b>	<25	<0.0025%	<250	<0.025%	<250	<0.025%

Samples of the exterior coating were sent to a laboratory for inductively coupled plasma-atomic emission spectrometry analyses only to determine if there is lead, chromium, and cadmium present in the coating samples. To limit the damage to the existing coatings, only small areas were tested. This small number of samples and the difficulty of retrieving all primer from the steel profile may cause the tests performed to not accurately represent the total coating system. Variations in thickness, types of coatings applied, and the interim cleaning and painting operations will also affect the actual readings. The reliability of the results is also dependent on the amount of primer included in the sample.

**DISCLAIMER:** The information contained in this Summarized Tank Information Sheet is not considered technical in nature. Therefore, the Contractor is not entitled to rely on any information contained in such reports. Interpretation of this data is the responsibility of the Bidder. Such information is made available to the Bidder as a courtesy only. It is further agreed and understood that the Bidder or the Contractor will not use any information made available to him, or obtained by any examination made by him, in any manner as a basis or ground of claim or demand of any nature against the Owner or Engineer arising from or by reason of any variance which may exist between the information offered and the actual materials and structures encountered during the construction work.

**REFERENCES:** A complete scope of Work can be found in the Detailed Technical Specifications. Additional information about the tank may be found in the evaluation report (TIC 17.050.H214.002) dated September 15, 2017. The information contained in this evaluation report is also not considered technical in nature.

# SUMMARIZED TANK INFORMATION SHEET

## “OAKLANDON ROAD TOWER”

**ENGINEER:** Tank Industry Consultants  
**TANK OWNER:** City of Lawrence Utilities  
**CAPACITY:** 500,000 gallons  
**HEIGHT:** 106 ft 6 in. to BCL and 144 ft to TCL  
**TYPE:** welded steel single pedestal spheroid elevated tank  
**ERECTION DATE:** 1983, Universal Tank & Iron Works, Inc.  
**SERIAL NUMBER:** 7101-500  
**TANK LOCATION:** 11818 65th Street off of Oaklandon Road in Lawrence, Indiana

**PAINT SYSTEMS:** Generic Type (appeared to be the following)

**Exterior:** polyurethane  
**Interior Dry:** epoxy  
**Interior Wet:** epoxy

### Analyses Results:

	Cadmium		Chromium		Lead	
	mg/kg	Percent	mg/kg	Percent	mg/kg	percent
<b>Exterior Red &amp; Yellow</b>	<25	<0.0025%	<250	<0.025%	<250	<0.025%
<b>Exterior White</b>	<25	<0.0025%	<250	<0.025%	<250	<0.025%
<b>Interior Dry</b>	<25	<0.0025%	9,030	0.903%	308	0.0308%
<b>Interior Wet</b>	<25	<0.0025%	<250	<0.025%	<250	<0.025%

Samples of the exterior, interior dry, and interior wet coatings were sent to a laboratory for atomic absorption analyses only to determine if there is lead, chromium, and cadmium present in the coating samples. To limit the damage to the existing coatings, only small areas were tested. This small number of samples and the difficulty of retrieving all primer from the steel profile may cause the tests performed to not accurately represent the total coating system. Variations in thickness, types of coatings applied, and the interim cleaning and painting operations will also affect the actual readings. The reliability of the results is also dependent on the amount of primer included in the sample.

**DISCLAIMER:** The information contained in this Summarized Tank Information Sheet is not considered technical in nature. Therefore, the Contractor is not entitled to rely on any information contained in such reports. Interpretation of this data is the responsibility of the Bidder. Such information is made available to the Bidder as a courtesy only. It is further agreed and understood that the Bidder or the Contractor will not use any information made available to him, or obtained by any examination made by him, in any manner as a basis or ground of claim or demand of any nature against the Owner or Engineer arising from or by reason of any variance which may exist between the information offered and the actual materials and structures encountered during the construction work.

**REFERENCES:** A complete scope of Work can be found in the Detailed Technical Specifications. Additional information about the tank may be found in the evaluation report (TIC 17.050.H214.001) dated April 17, 2017. The information contained in this evaluation report is also not considered technical in nature.

**APPLICATION FOR PAYMENT NO. \_\_\_\_\_**

To: City of Lawrence Utilities (OWNER)  
From: \_\_\_\_\_ (CONTRACTOR)  
Contract: \_\_\_\_\_  
Project: Repairing and Repainting the Interior and Exterior of One 500,000 Gallon Steel  
Elevated Tank, "52<sup>nd</sup> Street Tower," in Lawrence, Indiana  
OWNER'S Contract No. \_\_\_\_\_ ENGINEER'S Project No. \_\_\_\_\_.H214.002  
For Work accomplished through the date of: \_\_\_\_\_.

1.	Original Contract Price:	\$ _____
2.	Net Change by Change Orders and Written Amendments (+ or -):	\$ _____
3.	Current Contract Price (1 plus 2):	\$ _____
4.	Total Completed and stored to date:	\$ _____
5.	Retainage (per Agreement):	
	_____ % of completed Work:     \$ _____	
	_____ % of stored material:     \$ _____	
	Total Retainage:	\$ _____
6.	Total completed and stored to date less retainage (4 minus 5):	\$ _____
7.	Less previous Application for Payments:	\$ _____
8.	<b>DUE THIS APPLICATION (6 MINUS 7):</b>	<b>\$ _____</b>

Accompanying Documentation: \_\_\_\_\_

CONTRACTOR'S Certification:

The undersigned CONTRACTOR certifies that (1) all previous progress payments received from OWNER on account of Work done under the Contract referred to above have been applied on account to discharge CONTRACTOR'S legitimate obligations incurred in connection with Work covered by prior Applications for Payment numbered 1 through \_\_\_\_\_ inclusive; (2) title of all Work, materials, and equipment incorporated in said Work or otherwise listed in or covered by this Application for Payment will pass to OWNER at time of payment free and clear of all Liens, security interests, and encumbrances (except such as are covered by a Bond acceptable to OWNER indemnifying OWNER against any such Lien, security interest or encumbrance); and (3) all Work covered by this Application for Payment is in accordance with the Contract Documents and not defective.

Dated \_\_\_\_\_  
\_\_\_\_\_ CONTRACTOR

By: \_\_\_\_\_  
State of \_\_\_\_\_  
County of \_\_\_\_\_  
Subscribed and sworn to before me this \_\_\_\_\_  
day of \_\_\_\_\_, \_\_\_\_\_

\_\_\_\_\_  
Notary Public  
My Commission expires: \_\_\_\_\_

Payment of the above AMOUNT DUE THIS APPLICATION is recommended.

Dated \_\_\_\_\_  
\_\_\_\_\_ ENGINEER

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

# **APPLICATION FOR PAYMENT**

## **INSTRUCTIONS**

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### **A. GENERAL INFORMATION**

The sample form of Schedule of Values is intended as a guide only. Many projects require a more extensive form with space for numerous items, descriptions of Change Orders, identification of variable quantity adjustments, summary of materials and equipment stored at the site, and other information. It is expected that a separate form will be developed by Engineer and Contractor at the time Contractor's Schedule of Values is finalized. Note also that the format for retainage must be changed if the Contract permits (or the law provides), and Contractor elects to deposit securities in lieu of retainage. Refer to Article 14 of the General Conditions for provisions concerning payments to Contractor.

### **B. COMPLETING THE FORM**

The Schedule of Values, submitted and reviewed as provided in paragraphs 2.05.B.3 and 2.07 of the General Conditions, should be reproduced as appropriate in the space indicated on the Application for Payment form. Note that the cost of materials and equipment is often listed separately from the cost of installation. Also, note that each Unit Price is deemed to include Contractor's overhead and profit.

All Change Orders affecting the Contract Price should be identified and included in the Schedule of Values as required for progress payments.

The form is suitable for use in the Final Application for Payment as well as for Progress Payments; however, the required accompanying documentation is usually more extensive for final payment. All accompanying documentation should be identified in the space provided on the form.

### **C. LEGAL REVIEW**

All accompanying documentation of a legal nature, such as Lien waivers, should be reviewed by an attorney, and Engineer should so advise Owner.

Project

TIC Job Number .H214.002

Period From \_\_\_\_\_ to \_\_\_\_\_  
Application No. \_\_\_\_\_ Date: \_\_\_\_\_

Description of Work	Unit Price	Estimated Quantity	Scheduled Value	Work Completed		%	Total Completed & Stored to Date	Balance to Finish	Retainage
				Previous Application	This Period				
1.	\$		\$	\$	\$		\$	\$	\$
2.									
3.									
4.									
5.									
6.									
7.									
8.									
9.									
10.									
11.									
12.									
13.									
14.									
15.									
16.									
17.									
18.									
19.									
20.									
21.									
22.									
23.									
24.									
25.									
26.									
27.									
28.									
29.									
30.									
<b>TOTAL</b>			\$	\$	\$		\$	\$	\$

Note: Total Schedule of Values Amount should equal the current Contract Price.



## Job Safety Analysis Form

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### INSTRUCTIONS FOR COMPLETING JOB SAFETY ANALYSIS FORM

---

Job Safety Analysis (JSA) is an important accident prevention tool that works by finding hazards and eliminating or minimizing them *before* the job is performed, and *before* they have a chance to become accidents. Use your JSA for job clarification and hazard awareness, as a guide in new employee training, for periodic contacts and for retraining of senior employees, as a refresher on

jobs which run infrequently, as an accident investigation tool, and for informing employees of specific job hazards and protective measures.

Set priorities for doing JSAs: jobs that have a history of many accidents, jobs that have produced disabling injuries, jobs with high potential for disabling injury or death, and new jobs with no accident history.

Here's how to do each of the three parts of a Job Safety Analysis:

SEQUENCE OF BASIC JOB STEPS	POTENTIAL HAZARDS	RECOMMENDED ACTION OR PROCEDURE
<p>Break the job down into steps. Each of the steps of a job should accomplish some major task. The task will consist of a <i>set</i> of movements. Look at the first set of movements used to perform a task, and then determine the next logical set of movements. For example, the job might be to move a box from a conveyor in the receiving area to a shelf in the storage area. How does that break down into job steps? Picking up the box from the conveyor and putting it on a handtruck is one logical set of movements, so it is one job step. Everything related to that one logical set of movements is part of that job step.</p> <p>The next logical set of movements might be pushing the loaded handtruck to the storeroom. Removing the boxes from the truck and placing them on the shelf is another logical set of movements. And finally, returning the handtruck to the receiving area might be the final step in this type of job.</p> <p>Be sure to list all the steps in a job. Some steps might not be done each time—checking the casters on a handtruck, for example. However, that task is part of the job as a whole, and should be listed and analyzed.</p>	<p>Identify the hazards associated with each step. Examine each step to find and identify hazards—actions, conditions, and possibilities that could lead to an accident.</p> <p>It's not enough to look at the obvious hazards. It's also important to look at the entire environment and discover every conceivable hazard that might exist.</p> <p>Be sure to list health hazards as well, even though the harmful effect may not be immediate. A good example is the harmful effect of inhaling a solvent or chemical dust over a long period of time.</p> <p>It's important to list <i>all</i> hazards. Hazards contribute to accidents, injuries and occupational illnesses.</p> <p>In order to do part three of a JSA effectively, you must identify potential and existing hazards. That's why it's important to distinguish between a hazard, an accident and an injury. Each of these items has a specific meaning:</p> <p><b>Hazard</b> – A potential <i>danger</i>. Oil on the floor is a <i>hazard</i>.  <b>Accident</b> – An unintended <i>happening</i> that may result in injury, loss or damage. Slipping on the oil is an <i>accident</i>.  <b>Injury</b> – the <i>result</i> of an accident. A sprained wrist from the fall would be an <i>injury</i>.</p> <p>Some people find it easier to identify possible accidents and illnesses and work back from them to the hazards. If you do that, you can list the accident and illness types in parentheses following the hazard. But be sure you focus on the <i>hazard</i> for developing recommended actions and safe work procedures.</p>	<p>Using the first two columns as a guide, decide what actions are necessary to eliminate or minimize the hazards that could lead to an accident, injury, or occupational illness.</p> <p>Among the actions that can be taken are: 1) engineering the hazard out; 2) providing personal protective equipment; 3) job instruction training; 4) good housekeeping; and 5) good ergonomics (positioning the person in relation to the machine or other elements in the environment in such a way as to eliminate stresses and strains.)</p> <p>List recommended safe operating procedures on the form, and also list required or recommended personal protective equipment for each step of the job.</p> <p>Be specific. Say <i>exactly</i> what needs to be done to correct the hazard, such as "lift, using your leg muscles." Avoid general statements like "be careful."</p> <p>Give a recommended action or procedure for <i>every</i> hazard.</p> <p>If the hazard is a serious one, it should be corrected immediately. The JSA should then be changed to reflect the new conditions.</p>

**APPENDIX**

**CONSTRUCTION - CONTRACTOR SAFETY CHECKLIST**

**Project:** \_\_\_\_\_

**Location:** \_\_\_\_\_

**General Contractor:** \_\_\_\_\_

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

**This safety checklist references the Code of Federal Regulations (CFR) Title 29 Part 1926.**

Safety Submittals

- The Contractor shall submit the Contractor’s Company Safety Plan, Site Specific Safety Plan (IIPP), and Job Safety Analysis.

Worksite Safety

- The Contractor shall provide general and health provisions with environmental controls in accordance with CFR Title 29 Part 1926 Subpart A, Subpart B, Subpart C, Subpart D, and other applicable Subparts, including state and local requirements.
- The Contractor shall provide traffic control in accordance with Public agency requirements as shown on the approved Traffic Control Plan for the project.
- Will the Contractor have a first aid kit on the job site?     **YES**                     **NO**
- Will the Contractor enforce a drug free workplace?     **YES**                     **NO**

Personal Safety

- The Contractor shall provide personal protective and life saving equipment in accordance with CFR Title 29 Part 1926 Subpart E and other applicable Subparts, including state and local requirements.

Fire Protection and Prevention

- The Contractor shall provide fire protection and prevention equipment in accordance with CFR Title 29 Part 1926 Subpart F and other applicable Subparts, including state and local requirements.
- Has Contractor developed fire prevention program     **YES**                     **NO**  
29CFR 1926.24

Electrical Safety

- The Contractor shall ensure all electrical conductors and equipment are approved and in accordance with CFR Title 29 Part 1926 Subpart K and other applicable Subparts, including state and local requirements.
- Will contractor ensure all pull boxes, junction boxes, and fitting are covered. If metal covers are used, they shall be grounded.  YES  NO  
29CFR 1926.405(b) (2)
- Will contractor maintain a Lockout and tagging of circuits?  YES  NO  
29CFR 1926.417

Hazard Communication

- The contractor shall insure that the hazards of all chemicals produced or imported are evaluated, and that information concerning their hazards is transmitted to employers and employees. This transmittal of information shall include container labeling and other forms of warning, material safety data sheets (MSDS) and employee training.

Location of contractor MSDS on site: \_\_\_\_\_.

The Contractor shall conform with the provisions of CFR Title 29 Part 1910.1200 (e)(1), (e)(2), (f)(1),(g)(1),(h)(1) and (2)(i) through (iii) made applicable to construction by 1926.59, and other applicable Subparts, including state and local requirements.

Signs, Signals, and Barricades

- The Contractor shall provide signs, signals, and barricades in accordance with CFR Title 29 Part 1926 Subpart G and other applicable Subparts, including state and local requirements.

Material and Equipment Safety

- The Contractor shall handle, store, stack, rack, block, interlock, use and dispose of materials in accordance with CFR Title 29 Part 1926 Subpart H and other applicable Subparts, including state and local requirements.
- Will contractor use power industrial trucks (forklifts) on site?  YES  NO
- Have power industrial truck (forklift) operators received training?  YES  NO  
29CFR 1910.178(I) (1)
- Where will the Contractor's materials, equipment and vehicles will be stored and parked?

---

**Address**

---

**Address**

Hand and Power Tool Safety

- The Contractor shall ensure all hand and power tools and similar equipment, whether furnished by the employer or the employee, shall be maintained in a safe condition in accordance with CFR Title 29 Part 1926 Subpart I and other applicable Subparts, including state and local requirements.

Welding and Cutting Safety

- The Contractor shall ensure suitable fire extinguishing equipment is available and maintained in accordance with CFR Title 29 Part 1926 Subpart J and other applicable Subparts, including state and local requirements.

Scaffolding Safety

- The Contractor shall ensure all scaffolding is designed, erected, and maintained in accordance with CFR Title 29 Part 1926 Subpart L and other applicable Subparts, including state and local requirements.
- Will contractor erect or dismantle scaffolding?  YES  NO  
29CFR 1926.451(e) (9) (i)
- Contractor's scaffolding erection/ dismantling competent person for project is:

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**Name and Phone Number**

Confined Space Entry

- The Contractor's working in confined spaces shall comply with CFR Title 29 Part 1926 Subpart AA, Confined Spaces in Construction.
- Contractor working in confined spaces?  YES  NO
- Contractor has a confined space program in place?  YES  NO
- Contractor's confined space competent person for project is:

---

**Name and Phone Number**

Fall Safety

- The Contractor shall provide fall protection in accordance with CFR Title 29 Part 1926 Subpart M and other applicable Subparts, including state and local requirements.
- Has a competent person trained affected employees?  YES  NO  
29CFR 1926.503(a)(2)
- Contractor's fall safety competent person for this project is:

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**Name and Phone Number**

Crane, Derricks, Hoists, Elevators, and Conveyor Safety

- The Contractor shall ensure hoisting equipment is inspected, maintained, and operated in accordance with CFR Title 29 Part 1926 Subpart N and other applicable Subparts, including state and local requirements.
- Contractor will use authorized, qualified employees to operate cranes, including mobile and tower cranes or hoisting apparatus.  YES  NO  
8 CCR 5006, 5006.1

Trenching/Excavation Safety

- The Contractor shall conduct all excavations in accordance with CFR Title 29 Part 1926 Subpart P and other applicable Subparts including state and local requirements.
- Will a competent person be on site conducting inspections?  YES  NO  
1926.651(k)(l)
- Contractor's excavation safety competent person for this project is:

---

**Name and Phone Number**

Steel Erection Safety

- The Contractor shall ensure steel erection is in accordance with CFR Title 29 Part 1926 Subpart R and other applicable Subparts including state and local requirements.
- Has Contractor provided a training program for all employees exposed to fall hazards? 1926.761(b)(2)  YES  NO

Other

- The Contractor shall incorporate all applicable Subparts of the CFR Title 29 Part 1926, including state and local requirements as required for the project.

*The topics covered above are intended as generic, non-exhaustive overview of hazards related to plant construction. This checklist does not alter or absolve the Contractor from compliance responsibilities set forth in the OSHA standards themselves, and the Occupational Safety and Health Act. By signing below, the contractor is NOT absolved from full responsibility for complying with all local, state, federal regulations.*

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**Authorized Contractor Representative (Sign and Date)**

# DAILY JOBSITE SAFETY SURVEY REPORT

To be completed by Contractor and submitted to Resident Project Representative on a daily basis

Job # \_\_\_\_\_ Job Name/Location \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Contractor Competent  
Person (Printed)

Contractor  
Competent Person  
(signature)

O.K.	Y	N	NA	C
<b>Corrective Action Required</b>				
Not Inspected, N/A				
Corrected				
<b>1. Personal Protective Equipment Worn</b>				
Hard Hats				
Eye Protection				
Hearing Protection				
Respirators				
Protective Clothing				
Protective Footwear				
Fall Protection				
<b>2. Housekeeping</b>				
Waste/Hazardous Waste Properly Stored				
Waste testing completed				
Debris Removal				
Daily Site Clean-Up				
<b>3. Ladders/Stairs</b>				
Ladders in good condition				
Ladders tied off				
Extends 36" above landing				
<b>4. Open Floors and sides</b>				
Perimeter guardrail in place				
Floor Openings covered / protected				
<b>5. Scaffolds</b>				
Guardrails, toeboards, access points in place.				
Rigged IAW OSHA requirements				
In good condition and inspect.				

O.K.	Y	N	NA	C
<b>Corrective Action Required</b>				
Not Inspected, N/A				
Corrected				
<b>7. Fire Protection</b>				
Adequate extinguishers in place.				
Flammable material properly stored.				
Fire watch in place for Welding/Cutting.				
<b>8. Tools</b>				
Good condition				
Tool guards in place.				
Power Cords in good condition.				
Temporary Power Boxes in good condition.				
<b>9. Site/Public Protection</b>				
Fences in place.				
Barricades in place.				
Safety signage posted.				
<b>10. Weather Hazard</b>				
High Winds				
Rain				
Temperature (Too High or Too Low)				
<b>10. First Aid</b>				
Trained Personnel on site.				
Kits/Supplies on site and maintained.				
Sanitation/Water available to workforce.				
<b>11. Programs/Information</b>				
JSA Reviewed with workforce.				
New Hire Orientation				
Hazardous Substances identified and MSDS sheets available.				
Safety Meetings conducted weekly.				
Safety Signs Posted.				

**6. Electrical**

Adequate Lighting				
Grounded/GFCI protected				
Cords, plugs & receptacles in good condition.				

**12. Confined Space Entry:**

Gas testing conducted.		
Permit Required confined space?		
Non permit required confined space?		

Number of Men in Crew: \_\_\_\_\_

Names of Crew Members:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Work Day Safety Comments:

Any safety accidents/incidents during the work day ?

Were the accidents/incidents reported to the appropriate parties ?



**SUBMITTAL CHECK LIST**

<u>Sub. No.</u>	<u>Item</u>	<u>Submit By</u>	<u>Date Received</u>	<u>Date Reviewed</u>	<u>Previous Sub. No.</u>	<u>Status</u>
1.	Insurance Certificate	CD				
2.	Proposed Method of Containment w/ P.E. Stamp	CD + 15 days				
3.	Details of Reinforcing Pads Between Tank and Attachments	CD + 15 days				
4.	Name of Competent Person	CD + 15 days				
5.	A letter (on company letterhead) from the Contractor stating/certifying that the Contractor's Competent Person(S) has/have received training in accordance with local, state, and federal regulations	CD + 15 days				
6.	Documentation of Training for Support Personnel	CD + 15 days				
7.	Welder(s) Certification (submitted at site)	prior to welding				
8.	Work Safety Program	CD + 15 days				
9.	Personnel Air Monitoring Program	CD + 15 days				
10.	Confined Space Entry Procedure	CD + 15 days				
11.	Traffic Control Plan	CD + 15 days				
12.	Public Safety Plan	CD + 15 days				
13.	Bar Chart or Progress Schedule	CD + 15 days				
14.	Schedule of Values	CD + 15 days				
15.	Submittal for Times of Work	CD + 15 days				
16.	Descriptive written plan concerning how abrasive and/or paint damage to automobiles and property will be handled, including a process for quick removal of the abrasive or paint, and who will do the Work	CD + 15 days				
17.	Details of repairs if <b>different</b> from drawings	CD + 20 days				
18.	Exterior Spot Prime Coat - Supplier, Type, PDS	CD + 20 days				
19.	Exterior Spot Intermediate Coat - Supplier, Type, PDS	CD + 20 days				
20.	Exterior Spot Finish Coat - Supplier, Type, PDS	CD + 20 days				
21.	Interior & Metal Piping Prime Coat - Supplier, Type, PDS	CD + 20 days				
22.	Interior & Metal Piping Intermediate Coat - Supplier, Type, PDS	CD + 20 days				
23.	Interior & Metal Piping Finish Coat - Supplier, Type, PDS	CD + 20 days				
24.	Inaccessible Area Prime Coat - Supplier, Type, PDS	CD + 20 days				
25.	Seam Sealer - Supplier, Type, PDS	CD + 20 days				
26.	Flexible Sealant - Supplier, Type, PDS	CD + 20 days				
27.	Solventless, Underwater-Curing Epoxy - Supplier, Type, PDS	CD + 20 days				
28.	Thinners - Supplier, Type, MSDS	CD + 20 days				
29.	Disinfectant - Supplier, Type, MSDS	CD + 20 days				
30.	Cleaning Products such as Detergent, Surfactant, and Fungicide - letter from coating manufacturer's HQ stating the product is compatible and PDS	CD + 20 days				
31.	Abrasives - Supplier, Type, MSDS, and Size	CD + 20 days				
32.	Abrasives - letter from coating manufacturer's HQ stating the Resulting Abrasive Profile is acceptable	CD + 20 days				
33.	Concrete Repair Material - Supplier, Type, MSDS	CD + 20 days				
34.	Grout - Supplier, Type, MSDS	CD + 20 days				
35.	Waste Hauler Spill Contingency Plan	CD + 20 days				

Status Abbreviations \*\* NEN = No Exceptions Noted, MCN = Make Corrections Noted, R&R = Revise & Resubmit, REJ = Rejected, See Comments, NAR = No Action Required by Engineer or Owner  
 CD = Contract Date --- All Submittals Shall be Received Prior to Contractor Starting Work

**SUBMITTAL CHECK LIST**

<u>Sub. No.</u>	<u>Item</u>	<u>Submit By</u>	<u>Date Received</u>	<u>Date Reviewed</u>	<u>Previous Sub. No.</u>	<u>Status</u>
36.	Plan for Forced Ventilation for Interior Wet Coating Cure	CD + 20 days				
37.	Compliance with ANSI/NSF Standard 61 (if not stated on PDS)	CD + 20 days				
38.	Certification from manufacturer that <b>Alternate Coating Materials Meet the Specifications</b>	CD + 20 days				
39.	Certification from manufacturer that all coating materials contain less than 0.025% by weight of lead (or any lead compounds), cadmium, and chromium in the cured coating for each coat applied	CD + 20 days				
40.	Catalog Cuts, Installation, and Operation Instructions of Ladder Safe-Climbing Device	CD + 20 days				
41.	Catalog Cuts of Conduit Clamps	CD + 20 days				
42.	Catalog Cuts of Siphon Pipe Air Check Valve	CD + 20 days				
43.	Catalog Cuts of New Vandal Deterrent	CD + 20 days				
44.	Steel Grit Total Lead Tests	CD + 20 days				
45.	Certification that the interior coating has cured such that it is ready for immersion service	prior to filling tank				

Status Abbreviations \*\* NEN = No Exceptions Noted, MCN = Make Corrections Noted, R&R = Revise & Resubmit, REJ = Rejected, See Comments, NAR = No Action Required by Engineer or Owner  
 CD = Contract Date --- All Submittals Shall be Received Prior to Contractor Starting Work

**Submittal Cover Sheet**

**52<sup>nd</sup> Street Tower**

\_\_\_\_\_  
(Name of Contractor)

City of Lawrence Utilities  
9201 Harrison Park Court  
Lawrence, Indiana 46216

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
(City, State Zip)

Tank Industry Consultants  
7740 West New York Street  
Indianapolis, Indiana 46214

5 Sets of Each Submittal Included  
1 set of reviewed submittals returned to CONTRACTOR  
1 set of reviewed submittals forwarded to OWNER

TIC Project No.: \_\_\_\_\_.\_\_\_\_.H214.002

Submittal No.	Date

**SUBMITTAL**

Checklist Item No.	Specification Section	Description

**Review is for General Compliance with Contract Documents and Specifications.  
No Responsibility is Assumed for Correctness of Dimensions or Details.**

- \_\_\_\_\_ **No Exceptions Noted**
- \_\_\_\_\_ **No Action Required by Engineer or Owner**
- \_\_\_\_\_ **Make Corrections Noted**
- \_\_\_\_\_ **Revise & Resubmit**
- \_\_\_\_\_ **Rejected – See Comments**

**Tank Industry Consultants**

**By: \_\_\_\_\_ Date: \_\_\_\_\_**

SCS