

the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which shall fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.
- E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 Partial Use or Occupancy

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:
 - 1. At any time Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through E for that part of the Work.
 - 2. At any time Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.05 regarding builder's risk or other property insurance.

15.05 Final Inspection

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

15.06 Final Payment

A. *Application for Payment:*

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

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

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

C. *Completion of Work:* The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment.

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

15.07 Waiver of Claims

A. The making of final payment will not constitute a waiver by Owner of claims or rights against Contractor. Owner expressly reserves claims and rights arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 15.05, from Contractor's failure to comply with the Contract Documents or the terms of any special guarantees specified therein, from outstanding Claims by Owner, or from Contractor's continuing obligations under the Contract Documents.

B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted or appealed under the provisions of Article 17.

15.08 Correction Period

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents, or by any specific provision of the Contract Documents), any Work is found to be defective, or if the repair of any damages to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas used by Contractor as permitted by Laws and Regulations, is found to be defective, then Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. correct the defective repairs to the Site or such other adjacent areas;
2. correct such defective Work;
3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and

4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting therefrom.
- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others).
- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.
- E. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16 – SUSPENSION OF WORK AND TERMINATION

16.01 Owner May Suspend Work

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

16.02 Owner May Terminate for Cause

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:
 1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule);
 2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
 3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
 4. Contractor's repeated disregard of the authority of Owner or Engineer.

- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) ten days written notice that Owner is considering a declaration that Contractor is in default and termination of the contract, Owner may proceed to:
 - 1. declare Contractor to be in default, and give Contractor (and any surety) notice that the Contract is terminated; and
 - 2. enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.
- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within seven days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.
- F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.
- G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond shall govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 Owner May Terminate For Convenience

- A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and

3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid on account of loss of anticipated overhead, profits, or revenue, or other economic loss arising out of or resulting from such termination.

16.04 Contractor May Stop Work or Terminate

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

ARTICLE 17 – FINAL RESOLUTION OF DISPUTES

17.01 Methods and Procedures

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

ARTICLE 18 – MISCELLANEOUS

18.01 Giving Notice

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

18.02 Computation of Times

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

18.03 Cumulative Remedies

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 Limitation of Damages

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

18.05 No Waiver

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

18.06 Survival of Obligations

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

18.07 Controlling Law

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

18.08 Headings

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

Supplementary Conditions

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract, EJCDC® C-700 (2013 Edition). All provisions that are not so amended or supplemented remain in full force and effect.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added thereto.

ARTICLE 1 – 1 – DEFINITIONS AND TERMINOLOGY

1.01 1.01 Defined Terms

- A. If the Contract will include a Geotechnical Baseline Report (see Article 5 below), include the following definitions:

SC 1.01. Add to the list of definitions in Paragraph 1.01.A by inserting the following as numbered items in their proper alphabetical positions:

Geotechnical Baseline Report (GBR) — The interpretive report prepared by or for Owner regarding subsurface conditions at the Site, and containing specific baseline geotechnical conditions that may be anticipated or relied upon for bidding and contract administration purposes, subject to the controlling provisions of the Contract, including the GBR's own terms. The GBR is a Contract Document.

Geotechnical Data Report (GDR) — The factual report that collects and presents data regarding actual subsurface conditions at or adjacent to the Site, including Technical Data and other geotechnical data, prepared by or for Owner in support of the Geotechnical Baseline Report. The GDR's content may include logs of borings, trenches, and other site investigations, recorded measurements of subsurface water levels, the results of field and laboratory testing, and descriptions of the investigative and testing programs. The GDR does not include an interpretation of the data. If opinions, or interpretive or speculative non-factual comments or statements appear in a document that is labeled a GDR, such opinions, comments, or statements are not operative parts of the GDR and do not have contractual standing. Subject to that exception, the GDR is a Contract Document.

SC 1.01.A.3 Add the following at the end of the last sentence of Paragraph 1.01.A.3:

The Application for Payment form to be used on this project is EJCDC C-620 (2013), or RD Form 1927-7.

SC 1.01.A.8 Add the following language at the end of the last sentence of Paragraph 1.01.A.8:

The Change Order form to be used on this Project is EJCDC C-941 or RD Form 1927-7. Agency approval is required before Change Orders are effective or eligible for payment.

SC 1.01.A.48 Add the following language at the end of the last sentence of Paragraph 1.01.A.48:

A Work Change Directive cannot change Contract Price or Contract Times without a subsequent Change Order.

SC 1.01.A.49 Add the following new Paragraph after Paragraph 1.01.A.48:

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

SC 1.01.A.50 Add the following new Paragraph after Paragraph 1.01.A.49:

Agency – The Project is financed in whole or in part by USDA Rural Utilities Service pursuant to the Consolidated Farm and the Rural Development Act (7 USC Section 1921 et seq.) The Rural Utilities Service programs are administered through the USDA Rural Development offices; therefore, the Agency for these documents is USDA Rural Development.

ARTICLE 2 – 2 – PRELIMINARY MATTERS

2.01 *2.01 Delivery of Bonds and Evidence of Insurance*

A. Paragraph 2.01.B of the General Conditions requires that Contractor furnish certificates of insurance. Paragraph 6.02.C states that upon request by Owner or other named or additional insureds, Contractor must provide evidence of insurance such as copies of required policies and endorsements, and documentation of applicable self-insured retentions and deductibles. Parallel provisions apply to Owner and the insurance that Owner is required to provide. Rather than relying on this two-step process (delivery of certificates of insurance at the outset; subsequent requests for additional evidence of insurance), some contract drafters may elect to require from the outset that copies of the insurance policies, rather than certificates of insurance, be delivered to the other party. If exchange of copies of insurance policies is required, the following should be used:

SC 2.01 Delete Paragraphs 2.01 B. and C. in their entirety and insert the following in their place:

- B. Evidence of Contractor’s Insurance: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner copies of the policies of insurance (including all endorsements, and identification of applicable self-insured retentions and deductibles) required to be provided by Contractor in Article 6. Contractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.**
- C. Evidence of Owner’s Insurance: After receipt from Contractor of the executed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor copies of the policies of insurance to be provided by Owner under Article 6 (if any). Owner may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.**

2.02 *2.02 Copies of Documents*

SC 2.02.A. Amend the first sentence of Paragraph 2.02.A. to read as follows:

Owner shall furnish to Contractor five (5) copies of the Contract Documents (including one fully executed counterpart of the Agreement), and one copy in electronic portable document format (PDF).

SC-2.06 Electronic Transmittals

SC 2.06.B Delete Paragraph 2.06.B and replace it with the term [Deleted].

ARTICLE 4 – COMMENCEMENT AND PROGRESS OF THE WORK

SC-4.01 Commencement of Contract Times; Notice to Proceed

SC 4.01.A Amend the last sentence of Paragraph 4.01.A by striking out the following words:

In no event will the Contract Times commence to run later than the ninetieth day after the day of Bid opening or the thirtieth day of the Effective Date of the Contract, whichever date is earlier.

SC-4.05 Delays in Contractor's Progress

SC 4.05.C.2 Amend Paragraph 4.05.C.2 by striking out the following text: "abnormal weather conditions;" and inserting the following text:

Abnormal Weather Conditions;

ARTICLE 3 – 5 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

3.01 *5.03 Subsurface and Physical Conditions*

SC/GBR-5.03 and 5.04. Delete Paragraphs 5.03 and 5.04 of the General Conditions in their entireties and replace with the following provisions:

SC/GBR-5.03 Subsurface and Physical Conditions

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

1. those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site (other than any Geotechnical Data Report or Geotechnical Baseline Report), and Technical Data contained in such reports. Such reports are as follows:
 - a. Report dated *[NOT APPLICABLE]* The Technical Data contained in such report upon whose accuracy Contractor may rely are [those indicated in the definition of Technical Data in the General Conditions.]
2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities), and Technical Data contained in such drawings. Such drawings are as follows: (Not Applicable)
3. Contractor may examine copies of reports and drawings identified immediately above that were not included with the Bidding Documents at Monarch Engineering, Inc. 556 Carlton Drive, Lawrenceburg, KY 40342 during regular business hours, or may request copies from Engineer, at the cost of reproduction.

B. Reliance by Contractor on Technical Data Authorized:

Contractor may rely upon the accuracy of the Technical Data contained in such reports and drawings, but such reports and drawings are not Contract Documents. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

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

C. Geotechnical Baseline Report:

1. This Contract contains a Geotechnical Baseline Report ("GBR"), identified as follows: *[NOT APPLICABLE]*. This Contract also contains a Geotechnical Data Report (GDR), identified as follows: (Not Applicable)
2. The GBR and GDR are incorporated as Contract Documents. The GBR and GDR are to be used in conjunction with other Contract Documents, including the Drawings and Specifications. If there is a conflict between the terms of the GBR and the GDR, the GBR's terms shall prevail.
3. The GBR describes certain select subsurface conditions that are anticipated to be encountered by Contractor during construction in specified locations (referred to here in the Supplementary Conditions as "Baseline Conditions"). These may include ground, geological, groundwater, and other subsurface geotechnical conditions, and baselines of anticipated Underground Facilities or subsurface structures.
4. The Baseline Conditions shall be used to assist in the administration of the Contract's differing site conditions clause at locations where subsurface conditions have been baselined. If a condition is baselined in the GBR, then only the pertinent Baseline Conditions shall be used to determine whether there is a differing site condition; and no other indication of that condition in the Contract Documents or Technical Data, or of a condition that describes, quantifies, or measures a similar characteristic of the subsurface, shall be used for the differing site condition determination.
5. The Baseline Conditions shall not be used to make differing site conditions determinations at locations that have not been baselined in the GBR, or at any location with respect to subsurface conditions that the Baseline Conditions do not address. If Underground Facilities or Hazardous Environmental Conditions are expressly addressed in the Baseline Conditions, then comparison to such Baseline Conditions shall be the primary means of determining (a) whether an Underground Facility was shown or indicated with reasonable accuracy, as provided in Paragraph 5.05 of the General Conditions, or (b) whether a Hazardous Environmental Condition was shown or indicated in the Contract

Documents as indicated in Paragraph 5.06.H of the General Conditions. As indicated in Paragraph SC-5.04 below, the GDR shall be the primary resource for differing site conditions determinations in cases in which the GBR is inapplicable.

6. The descriptions of subsurface conditions provided in the GBR are based on geotechnical investigations, laboratory tests, interpretation, interpolation, extrapolation, and analyses. Neither Owner, Engineer, nor any geotechnical or other consultant warrants or guarantees that actual subsurface conditions will be as described in the GBR, nor is the GBR intended to warrant or guarantee the use of specific means or methods of construction.
7. The behavior of the ground during construction depends substantially upon the Contractor's selected means, methods, techniques, sequences, and procedures of construction. If ground behavior conditions are baselined in the GBR, they are based on stated assumptions regarding construction means and methods.
8. The GBR shall not reduce or relieve Contractor of its responsibility for the planning, selection, and implementation of safety precautions and programs incident to Contractor's means, methods, techniques, sequences, and procedures of construction, or to the Work.

SC/GBR-5.04 Differing Subsurface or Physical Conditions

- A. **Notice:** If Contractor believes that any subsurface condition that is uncovered or revealed at the Site:
 1. differs materially from conditions shown or indicated in the GBR; or
 2. differs materially from conditions shown or indicated in the GDR, to the extent the GBR is inapplicable; or
 3. differs materially from conditions shown or indicated in Contract Documents other than the GBR or GDR, to the extent the GBR and GDR are inapplicable; or
 4. to the extent the GBR and GDR are inapplicable, is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate; or
 5. to the extent the GBR and GDR are inapplicable, is of such a nature as to require a change in the Drawings or Specifications; or
 6. to the extent the GBR and GDR are inapplicable, 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 conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

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

C. Owner's Statement to Contractor Regarding Site Condition:

After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption or continuation of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.

D. Possible Price and Times Adjustments:

- 1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, or both, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:**
 - a. such condition must fall within any one or more of the categories described in Paragraph SC/GBR 5.04.A;**
 - b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03 of the General Conditions; and,**
 - c. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.**
- 2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:**
 - a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise; or**
 - b. the existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or**
 - c. Contractor failed to give the written notice as required by Paragraph SC/GBR 5.04.A.**

3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.
4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.

3.02 5.06 *Hazardous Environmental Conditions at Site*

SC 5.06 Delete Paragraphs 5.06.A and 5.06.B in their entirety and insert the following:

- A. No reports or drawings related to Hazardous Environmental Conditions at the Site are known to Owner.
- B. Not Used.

ARTICLE 4 – 6 – BONDS AND INSURANCE

4.01 6.02 *Insurance—General Provisions*

SC-6.02 Add the following paragraph immediately after Paragraph 6.02.B:

1. Contractor may obtain worker's compensation insurance from an insurance company that has not been rated by A.M. Best, provided that such company (a) is domiciled in the state in which the project is located, (b) is certified or authorized as a worker's compensation insurance provider by the appropriate state agency, and (c) has been accepted to provide worker's compensation insurance for similar projects by the state within the last 12 months.

4.02 6.03 *Contractor's Liability Insurance*

SC 6.03 Add the following new paragraph immediately after Paragraph 6.03.J:

K. The limits of liability for the insurance required by Paragraph 6.03 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

1. Workers' Compensation, and related coverages under Paragraphs 6.03.A.1 and A.2 of the General Conditions:

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

Bodily injury/disease aggregate	\$ <u>1,000,000</u>
For work performed in monopolistic states, stop-gap liability coverage shall be endorsed to either the worker's compensation or commercial general liability policy with a minimum limit of:	
	\$ <u>1,000,000</u>
Foreign voluntary worker compensation	<u>Statutory</u>
2. Contractor's Commercial General Liability under Paragraphs 6.03.B and 6.03.C of the General Conditions:	
General Aggregate	\$ <u>2,000,000</u>
Products - Completed Operations Aggregate	\$ <u>2,000,000</u>
Personal and Advertising Injury	\$ <u>1,000,000</u>
Each Occurrence (Bodily Injury and Property Damage)	\$ <u>1,000,000</u>
3. Automobile Liability under Paragraph 6.03.D. of the General Conditions:	
Bodily Injury:	
Each person	\$ <u>Statutory</u>
Each accident	\$ <u>Statutory</u>
Property Damage:	
Each accident	\$ _____
<i>[or]</i>	
Combined Single Limit of	\$ <u>1,000,000</u>
4. Excess or Umbrella Liability:	
Per Occurrence	\$ <u>5,000,000</u>
General Aggregate	\$ <u>5,000,000</u>
5. Contractor's Pollution Liability:	
Each Occurrence	\$ <u>1,000,000</u>
General Aggregate	\$ <u>1,000,000</u>

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

6. Additional Insureds: In addition to Owner and Engineer, include as additional insureds the following: (Not Applicable)

7. Contractor's Professional Liability:

Each Claim	\$ <u>1,000,000</u>
Annual Aggregate	\$ <u>1,000,000</u>

ARTICLE 5 – 7 – CONTRACTOR'S RESPONSIBILITIES

5.01 7.02 Labor; Working Hours

SC-7.02.B. Add the following new subparagraphs immediately after Paragraph 7.02.B:

1. Regular working hours will be determined at the preconstruction conference.
2. Owner's legal holidays are determined at the preconstruction conference.

5.02 7.04 "Or Equals"

SC 7.04.A Amend the third sentence of Paragraph 7.04.A by striking out the following words:

Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item is permitted.

SC 7.04.A.1 Amend the last sentence of Paragraph 7.04.A.1.a.3 by striking out "and"; and adding a period at the end of the Paragraph 7.04.A.1.a.3.

SC 7.04.A.1 Delete Paragraph 7.04.A.1.a.4 in its entirety and insert the following in its place:

[Deleted]

SC-7.06 Concerning Subcontractors, Suppliers and Others

SC 7.06.A Amend Paragraph 7.06.A by adding the following text to the end of the Paragraph:

The Contractor shall not award work valued at more than fifty percent of the Contract Price to Subcontractor(s).

SC 7.06.B Delete Paragraph 7.06.B in its entirety and insert the following in its place:

[Deleted]

SC 7.06.E Amend the second sentence of Paragraph 7.06.E by striking out "Owner may also require Contractor to retain specific replacements; provided, however, that".

ARTICLE 6 – 10 – ENGINEER’S STATUS DURING CONSTRUCTION

6.01 10.03 *Project Representative*

SC-10.03 Add the following new paragraphs immediately after Paragraph 10.03.A:

- B.** The Resident Project Representative (RPR) will be Engineer's representative at the Site, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding RPR's actions.
1. **General:** RPR's dealings in matters pertaining to the Work in general shall be with Engineer and Contractor. RPR's dealings with Subcontractors shall only be through or with the full knowledge and approval of Contractor. RPR shall generally communicate with Owner only with the knowledge of and under the direction of Engineer.
 2. **Schedules:** Review the progress schedule, schedule of Shop Drawing and Sample submittals, and Schedule of Values prepared by Contractor and consult with Engineer concerning acceptability.
 3. **Conferences and Meetings:** Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings, and prepare and circulate copies of minutes thereof.
 4. **Liaison:**
 - a. Serve as Engineer’s liaison with Contractor. Working principally through Contractor’s authorized representative or designee, assist in providing information regarding the provisions and intent of the Contract Documents.
 - b. Assist Engineer in serving as Owner’s liaison with Contractor when Contractor’s operations affect Owner’s on-Site operations.
 - c. Assist in obtaining from Owner additional details or information, when required for proper execution of the Work.
 5. **Interpretation of Contract Documents:** Report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.
 6. **Shop Drawings and Samples:**
 - a. Record date of receipt of Samples and Contractor-approved Shop Drawings.
 - b. Receive Samples which are furnished at the Site by Contractor, and notify Engineer of availability of Samples for examination.
 - c. Advise Engineer and Contractor of the commencement of any portion of the Work requiring a Shop Drawing or Sample submittal for which RPR believes that the submittal has not been approved by Engineer.
 7. **Modifications:** Consider and evaluate Contractor’s suggestions for modifications in Drawings or Specifications and report such suggestions, together with RPR’s recommendations, if any, to Engineer. Transmit to Contractor in writing decisions as issued by Engineer.

8. **Review of Work and Rejection of Defective Work:**
 - a. **Conduct on-Site observations of Contractor's work in progress to assist Engineer in determining if the Work is in general proceeding in accordance with the Contract Documents.**
 - b. **Report to Engineer whenever RPR believes that any part of Contractor's work in progress is defective, will not produce a completed Project that conforms generally to the Contract Documents, or will imperil the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise Engineer of that part of work in progress that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.**
9. **Inspections, Tests, and System Start-ups:**
 - a. **Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate Owner's personnel, and that Contractor maintains adequate records thereof.**
 - b. **Observe, record, and report to Engineer appropriate details relative to the test procedures and systems start-ups.**
10. **Records:**
 - a. **Prepare a daily report or keep a diary or log book, recording Contractor's hours on the Site, Subcontractors present at the Site, weather conditions, data relative to questions of Change Orders, Field Orders, Work Change Directives, or changed conditions, Site visitors, deliveries of equipment or materials, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to Engineer.**
 - b. **Record names, addresses, fax numbers, e-mail addresses, web site locations, and telephone numbers of all Contractors, Subcontractors, and major Suppliers of materials and equipment.**
 - c. **Maintain records for use in preparing Project documentation.**
11. **Reports:**
 - a. **Furnish to Engineer periodic reports as required of progress of the Work and of Contractor's compliance with the Progress Schedule and schedule of Shop Drawing and Sample submittals.**
 - b. **Draft and recommend to Engineer proposed Change Orders, Work Change Directives, and Field Orders. Obtain backup material from Contractor.**
 - c. **Immediately notify Engineer of the occurrence of any Site accidents, emergencies, acts of God endangering the Work, force majeure or delay events, damage to property by fire or other causes, or the discovery of any Constituent of Concern or Hazardous Environmental Condition.**

12. **Payment Requests:** Review applications for payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to Engineer, noting particularly the relationship of the payment requested to the Schedule of Values, Work completed, and materials and equipment delivered at the Site but not incorporated in the Work.
 13. **Certificates, Operation and Maintenance Manuals:** During the course of the Work, verify that materials and equipment certificates, operation and maintenance manuals and other data required by the Contract Documents to be assembled and furnished by Contractor are applicable to the items actually installed and in accordance with the Contract Documents, and have these documents delivered to Engineer for review and forwarding to Owner prior to payment for that part of the Work.
 14. **Completion:**
 - a. Participate in Engineer's visits to the Site to determine Substantial Completion, assist in the determination of Substantial Completion and the preparation of a punch list of items to be completed or corrected.
 - b. Participate in Engineer's final visit to the Site to determine completion of the Work, in the company of Owner and Contractor, and prepare a final punch list of items to be completed and deficiencies to be remedied.
 - c. Observe whether all items on the final list have been completed or corrected and make recommendations to Engineer concerning acceptance and issuance of the notice of acceptability of the work.
- C. The RPR shall not:
1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).
 2. Exceed limitations of Engineer's authority as set forth in the Contract Documents.
 3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers.
 4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of Contractor's work.
 5. Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.
 6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
 7. Accept Shop Drawing or Sample submittals from anyone other than Contractor.
 8. Authorize Owner to occupy the Project in whole or in part.

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

SC 11.07 Execution of Change Orders

SC 11.07.C Add the following new Paragraph after Paragraph 11.07.B:

All Contract Change Orders must be concurred by Agency before they are effective or can be eligible for reimbursement.

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

SC-13.02 Allowances

SC 13.02.C Delete Paragraph 13.02.C in its entirety and insert the following in its place:

[Deleted]

6.02 13.03 *Unit Price Work*

SC 13.03.E Delete Paragraph 13.03.E in its entirety and insert the following in its place:

- E. The unit price of an item of Unit Price Work shall be subject to reevaluation and adjustment under the following conditions:**
- 1. if the extended price of a particular item of Unit Price Work amounts to 25 percent or more of the Contract Price (based on estimated quantities at the time of Contract formation) and the variation in the quantity of that particular item of Unit Price Work actually furnished or performed by Contractor differs by more than 25 percent from the estimated quantity of such item indicated in the Agreement; and**
 - 2. if there is no corresponding adjustment with respect to any other item of Work; and**
 - 3. if Contractor believes that Contractor has incurred additional expense as a result thereof, Contractor may submit a Change Proposal, or if Owner believes that the quantity variation entitles Owner to an adjustment in the unit price, Owner may make a Claim, seeking an adjustment in the Contract Price.**

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

6.03 15.01 *Progress Payments*

SC 15.01.B Amend the second sentence of Paragraph 15.01.B.1 by striking out the following text: “a bill of sale, invoice or other”.

SC 15.01.B.3 Add the following language at the end of the Paragraph 15.01.B.3:

No payments will be made that would deplete the retainage, place in escrow any funds that are required for retainage, or invest the retainage for the benefit of the Contractor.

SC 15.01.B.4 Add the following new Paragraph after Paragraph 15.01.B.3:

The Application for Payment form to be used on this Project is EJCDC C-620 unless another form is agreed upon by the Engineer, Owner and Agency. The Agency must approve all Applications for Payment before payment is made.

SC 15.01.D.1 Delete Paragraph 15.01.D.1 in its entirety and insert the following in its place:

The Application for Payment with Engineer’s recommendations will be presented to the Owner and Agency for consideration. If both the Owner and Agency find the Application for Payment acceptable, the recommended amount less any reduction under the provisions of Paragraph

15.01.E will become due and payable twenty (20) days after the Application for Payment is presented to the Owner, and the Owner will make payment to the Contractor.

SC-15.02 Contractor's Warranty of Title

SC 15.02.A Amend Paragraph 15.02.A by striking out the following text: "no later than seven days after the time of payment by Owner" and insert:

"no later than the time of payment by Owner."

ARTICLE 17 – 17 – FINAL RESOLUTION OF DISPUTES

SC-17.02 Add the following new paragraph immediately after Paragraph 17.01.

SC-17.02 Arbitration

- A. All matters subject to final resolution under this Article will be decided by arbitration in accordance with the rules of the selected arbitration agency, subject to the conditions and limitations of this paragraph. This agreement to arbitrate and any other agreement or consent to arbitrate entered into will be specifically enforceable under the prevailing law of any court having jurisdiction.**
- B. The demand for arbitration will be filed in writing with the other party to the Contract and with the selected arbitrator or arbitration provider, and a copy will be sent to Engineer for information. The demand for arbitration will be made within the specific time required in this Article, or if no specified time is applicable within a reasonable time after the matter in question has arisen, and in no event shall any such demand be made after the date when institution of legal or equitable proceedings based on such matter in question would be barred by the applicable statute of limitations. The demand for arbitration should include specific reference to Paragraph SC-17.02.D below.**
- C. No arbitration arising out of or relating to the Contract shall include by consolidation, joinder, or in any other manner any other individual or entity (including Engineer, and Engineer's consultants and the officers, directors, partners, agents, employees or consultants of any of them) who is not a party to this Contract unless:
 - 1. the inclusion of such other individual or entity is necessary if complete relief is to be afforded among those who are already parties to the arbitration; and**
 - 2. such other individual or entity is substantially involved in a question of law or fact which is common to those who are already parties to the arbitration and which will arise in such proceedings.****
- D. The award rendered by the arbitrator(s) shall be consistent with the agreement of the parties, in writing, and include a concise breakdown of the award, and a written explanation of the award specifically citing the Contract provisions deemed applicable and relied on in making the award.**
- E. The award will be final. Judgment may be entered upon it in any court having jurisdiction thereof, and it will not be subject to modification or appeal, subject to provisions of the Laws and Regulations relating to vacating or modifying an arbitral award.**

- F. **The fees and expenses of the arbitrators and any arbitration service shall be shared equally by Owner and Contractor.**

ARTICLE 18 – MISCELLANEOUS

SC-18.09 Tribal Sovereignty

SC 18.09 Add the following new paragraph after Paragraph 18.08:

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

ARTICLE 19 – FEDERAL REQUIREMENTS

SC 19.01 Add the following language as Paragraph 19.01 with the title “Agency Not a Party”:

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

SC 19.02 Add the following sections after Article 19.01 with the title “Contract Approval”:

- A. Owner and Contractor will furnish Owner’s attorney such evidence as required so that Owner’s attorney can complete and execute the following “Certificate of Owner’s Attorney” (Attachment GC-A) before Owner submits the executed Contract Documents to Agency for approval.
- B. Guidance Note: Amend Paragraph 10.03 using one of the two alternatives presented in C-800’s section 10.03 (Either the Engineer will provide RPR services on the Project, with specific authority and responsibilities, or Engineer will not provide RPR services).

SC 19.03 Add the following language after Article 19.02.B with the title “Conflict of Interest”:

- A. Contractor may not knowingly contract with a supplier or manufacturer if the individual or entity who prepared the plans and specifications has a corporate or financial affiliation with the supplier or manufacturer. Owner’s officers, employees, or agents shall not engage in the award or administration of this Contract if a conflict of interest, real or apparent, would be involved. Such a conflict would arise when: (i) the employee, officer or agent; (ii) any member of their immediate family; (iii) their partner or (iv) an organization that employs, or is about to employ, any of the above, has a financial interest in Contractor. Owner’s officers, employees, or agents shall neither solicit nor accept gratuities, favors or anything of monetary value from Contractor or subcontractors.

SC 19.04 Add the following language after Article 19.03.A with the title “Gratuities”:

- A. If Owner finds after a notice and hearing that Contractor, or any of the Contractor’s agents or representatives, offered or gave gratuities (in the form of entertainment, gifts, or otherwise) to any official, employee, or agent of Owner or Agency in an attempt to secure this Contract or favorable treatment in awarding, amending, or making any determinations related to the performance of this Contract, Owner may, by written notice to Contractor, terminate this Contract. Owner may also pursue other rights and remedies that the law or this Contract provides. However, the existence of the facts on which Owner bases such findings shall be an issue and may be reviewed in proceedings under the dispute resolution provisions of this Contract.

- B. In the event this Contract is terminated as provided in Paragraph 19.04.A, Owner may pursue that same remedies against Contractor as it could pursue in the event of a breach of this Contract by Contractor. As a penalty, in addition to any other damages to which it may be entitled by law, Owner may pursue exemplary damages in an amount (as determined by Owner) which shall not be less than three nor more than ten times the costs Contractor incurs in providing any such gratuities to any such officer or employee.

SC 19.05 Add the following language after Article 19.04.B with the title “Audit and Access to Records”:

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

SC 19.06 Add, the following language after Article 19.05.A with the title “Small, Minority and Women’s Businesses”:

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

SC 19.07 Add the following after Article 19.06.A with the title “Anti-Kickback”:

- A. Contractor shall comply with the Copeland Anti-Kickback Act (18 USC 874 and 40 USC 276c) as supplemented by Department of Labor regulations (29 CFR Part 3, “Contractors and Subcontractors on Public Buildings or Public Works Financed in Whole or in Part by Loans or Grants of the United States”). The Act provides that Contractor or subcontractor shall be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public facilities, to give up any part of the compensation to which they are otherwise entitled. Owner shall report all suspected or reported violations to Agency.

SC 19.08 Add the following after Article 19.07.A with the title “Clean Air and Pollution Control Acts”:

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

SC 19.09 Add the following after Article 19.08 with the title “State Energy Policy”:

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

SC 19.10 Add the following after Article 19.09 with the title “Equal Opportunity Requirements”:

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

SC 19.11 Add the following after Article 19.10.C with the title “Restrictions on Lobbying”:

- A. Contractor and each subcontractor shall comply with Restrictions on Lobbying (Public Law 101-121, Section 319) as supplemented by applicable Agency regulations. This Law applies to the recipients of contracts and subcontracts that exceed \$100,000 at any tier under a Federal loan that exceeds \$150,000 or a Federal grant that exceeds \$100,000. If applicable, Contractor must complete a certification form on lobbying activities related to a specific Federal loan or grant that is a funding source for this Contract. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 USC 1352. Each tier shall disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Certifications and disclosures are forwarded from tier to tier up to the Owner. Necessary certification and disclosure forms shall be provided by Owner.

SC 19.12 Add the following after Article 19.11.A with the title “Environmental Requirements”:

- A. When constructing a project involving trenching and/or other related earth excavations, Contractor shall comply with the following environmental conditions:
- 1) Wetlands – When disposing of excess, spoil, or other construction materials on public or private property, Contractor shall not fill in or otherwise convert wetlands.
 - 2) Floodplains – When disposing of excess, spoil, or other construction materials on public or private property, Contractor shall not fill in or otherwise convert 100 year floodplain areas delineated on the latest Federal Emergency Management Agency Floodplain Maps, or other appropriate maps, e.g., alluvial soils on NRCS Soil Survey Maps.
 - 3) Historic Preservation – Any excavation by Contractor that uncovers an historical or archaeological artifact shall be immediately reported to Owner and a representative of Agency. Construction shall be temporarily halted pending the notification process and further directions issued by Agency after consultation with the State Historic Preservation Officer (SHPO).
 - 4) Endangered Species – Contractor shall comply with the Endangered Species Act, which provides for the protection of endangered and/or threatened species and critical habitat. Should any evidence of the presence of endangered and/or threatened species or their critical habitat be brought to the attention of Contractor, Contractor will immediately report this evidence to Owner and a representative of Agency. Construction shall be temporarily halted pending the notification process and further directions issued by Agency after consultation with the U.S. Fish and Wildlife Service.
 - 5) Mitigation Measures – The following environmental mitigation measures are required on this Project: The list of environmental mitigation measures will be delivered to the Contractor at the preconstruction conference.

PERFORMANCE BOND

CONTRACTOR *(name and address)*:

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

OWNER *(name and address)*:

CONSTRUCTION CONTRACT

Effective Date of the Agreement:

Amount:

Description *(name and location)*:

BOND

Bond Number:

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

Amount:

Modifications to this Bond Form: None See Paragraph 16

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

CONTRACTOR AS PRINCIPAL

SURETY

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

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

By: _____
Signature

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

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

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

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.
2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond shall arise after:
 - 3.1 The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;
 - 3.2 The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
 - 3.3 The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.
4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.
5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
 - 5.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;
 - 5.2 Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;
 - 5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or
 - 5.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:
 - 5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or
 - 5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.
6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.
7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:
 - 7.1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
 - 7.2 additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and
 - 7.3 liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.
8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.
9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.

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

11. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.

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

14. Definitions

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

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

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

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

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

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

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

16. Modifications to this Bond are as follows:

PAYMENT BOND

CONTRACTOR *(name and address)*:

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

OWNER *(name and address)*:

CONSTRUCTION CONTRACT

Effective Date of the Agreement:

Amount:

Description *(name and location)*:

BOND

Bond Number:

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

Amount:

Modifications to this Bond Form: None See Paragraph 18

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

CONTRACTOR AS PRINCIPAL

SURETY

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

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

By: _____
Signature

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

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

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

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

the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

13. Notice and Claims to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.
14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

16. Definitions

16.1 **Claim:** A written statement by the Claimant including at a minimum:

1. The name of the Claimant;
2. The name of the person for whom the labor was done, or materials or equipment furnished;
3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
4. A brief description of the labor, materials, or equipment furnished;
5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
7. The total amount of previous payments received by the Claimant; and
8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.

16.2 **Claimant:** An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond shall be to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

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

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

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

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

18. Modifications to this Bond are as follows:

Form RD 1924-18 (Rev. 6-97)		UNITED STATES DEPARTMENT OF AGRICULTURE RURAL DEVELOPMENT FARM SERVICE AGENCY PARTIAL PAYMENT ESTIMATE		CONTRACT NO. _____ PARTIAL PAYMENT ESTIMATE NO. _____ PAGE _____	
OWNER: _____		CONTRACTOR: _____		PERIOD OF ESTIMATE FROM _____ TO _____	
CONTRACT CHANGE ORDER SUMMARY				ESTIMATE	
No.	Agency Approval Date	Amount			
		Additions	Deductions		
				1. Original Contract _____ 2. Change Orders \$0.00 3. Revised Contract (1 + 2) \$0.00 4. Work Completed* _____ 5. Stored Materials* _____ 6. Subtotal (4 + 5) \$0.00 7. Retainage* _____ 8. Previous Payments _____ 9. Amount Due (6-7-8) \$0.00	
TOTALS		\$0.00	\$0.00		
NET CHANGE		\$0.00	\$0.00	* Detailed breakdown attached	
CONTRACT TIME					
Original (days) _____ Revised _____ Remaining _____		On Schedule <input type="checkbox"/> Yes <input type="checkbox"/> No		Starting Date _____ Projected Completion _____	
CONTRACTOR'S CERTIFICATION: The undersigned Contractor certifies that to the best of their knowledge, information and belief the work covered by this payment estimate has been completed in accordance with the contract documents, that all amounts have been paid by the contractor for work for which previous payment estimates was issued and payments received from the owner, and that current payment shown herein is now due.			ARCHITECT OR ENGINEER'S CERTIFICATION: The undersigned certifies that the work has been carefully inspected and to the best of their knowledge and belief, the quantities shown in this estimate are correct and the work has been performed in accordance with the contract documents.		
Contractor _____ By _____ Date _____			Architect or Engineer _____ By _____ Date _____		
APPROVED BY OWNER: Owner _____ By _____ Date _____			ACCEPTED BY AGENCY: The review and acceptance of this estimate does not attest to the correctness of the quantities shown or that the work has been performed in accordance with the contract documents. By _____ Title _____ Date _____		

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0575-0042. The time required to complete this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information.

PPE-2

TYPICAL UNIT PRICE BREAKDOWN *

ITEM	DESCRIPTION	CONTRACT (revised)			THIS PERIOD		TOTAL TO DATE		% COMPLETE
		QUANTITY	UNIT PRICE	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT	
				\$0.00		\$0.00		\$0.00	0
				\$0.00		\$0.00		\$0.00	0
				\$0.00		\$0.00		\$0.00	0
				\$0.00		\$0.00		\$0.00	0
				\$0.00		\$0.00		\$0.00	0
				\$0.00		\$0.00		\$0.00	0
				\$0.00		\$0.00		\$0.00	0
				\$0.00		\$0.00		\$0.00	0
				\$0.00		\$0.00		\$0.00	0
				\$0.00		\$0.00		\$0.00	0
				\$0.00		\$0.00		\$0.00	0
				\$0.00		\$0.00		\$0.00	0
				\$0.00		\$0.00		\$0.00	0
				\$0.00		\$0.00		\$0.00	0
				\$0.00		\$0.00		\$0.00	0
TOTALS				\$0.00		\$0.00		\$0.00	0

TYPICAL LUMP SUM PRICE BREAKDOWN *

TYPICAL STORED MATERIALS AND RETAINAGE BREAKDOWN *

ITEM	DESCRIPTION	SCHEDULED VALUE	WORK COMPLETED		% COMPLETE	MATERIALS STORED AT END OF THIS PAYMENT PERIOD			
			THIS PERIOD	TO DATE		DESCRIPTION	QUANTITY	UNIT VALUE	AMOUNT
					0				\$0.00
					0				\$0.00
					0				\$0.00
					0				\$0.00
					0	RETAINAGE			
					0		THIS ESTIMATE	PERCENT	RETAINED
					0			%	
					0	WORK COMPLETED:			
					0	STORED MATERIALS:			
					0	OTHER (explain)			
TOTALS		\$0.00	\$0.00	\$0.00	0	TOTAL			\$0.00

* As a minimum, detailed breakdowns should contain this information.

Form RD 1924-7
(Rev. 2/97)

FORM APPROVED
OMB NO.0575-0042

UNITED STATES DEPARTMENT OF AGRICULTURE
RURAL DEVELOPMENT AND
FARM SERVICE AGENCY

CONTRACT CHANGE ORDER

ORDER NO.	1
DATE	
STATE	KY
COUNTY	ROCKCASTLE

CONTRACT FOR:
CONTRACT 13: "DOG WALK" WATER STORAGE TANK
REHABILITATION

OWNER:
WESTERN ROCKCASTLE WATER ASSOCIATION

TO:

You are hereby requested to comply with the following changes in the contract plans and specifications:

Description of Changes (Supplemental Plans and Specifications Attached)	DECREASE in Contract Price	INCREASE in Contract Price
TOTALS		
NET CHANGE IN CONTRACT PRICE		

JUSTIFICATION:

The amount of the Contract will be (Decreased) (Increased) By the Sum of: _____
Dollars _____

The Contract Total Including this and previous Change Orders will be: _____
Dollars _____

The Contract Period Provided for Completion will be (Increased) (Decreased) (Unchanged): _____ Days

This document will become a supplement to the contract and all provisions will apply hereto.

Requested	_____	(Western Rockcastle Water Association)	_____	(Date)
Recommended	_____	(Monarch Engineering, Inc.)	_____	(Date)
Accepted	_____	(Contractor)	_____	(Date)
Approved	_____	(USDA Rural Development)	_____	(Date)

This information will be used as a record of any changes to the original construction contract.

NOTICE TO PROCEED

TO:

DATE:

Project:

Western Rockcastle Water Association
C13: "Dog Walk" Water Storage Tank Rehab

You are hereby notified to commence WORK in accordance with the Agreement dated _____, 2023, on or before _____, 2023. In accordance with the Agreement, the date of substantial completion shall therefore be _____, 2023, and the number of days needed to achieve readiness for final payment is 60 days.

Before starting work at the site, Contractor must comply with the following:
(Note any access limitations, security procedures, or other restrictions)

Western Rockcastle Water Association

By: Darrell Whitaker

Title: President

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged

by _____, this ____ day of _____, 2023.

By: _____

Title: _____

CERTIFICATE OF SUBSTANTIAL COMPLETION

Owner:	Western Rockcastle Water Association	Owner's Contract No.:	
Contractor:		Contractor's Project No.:	
Engineer:	Monarch Engineering, Inc.	Engineer's Project No.:	1935
Project:	Contract 13: "Dog Walk" Water Storage Tank Rehabilitation	Contract Name:	

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

- All Work The following specified portions of the Work:

Date of Substantial Completion

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

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

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

Amendments to Owner's responsibilities: None
 As follows

Amendments to Contractor's responsibilities: None
 As follows:

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

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

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

COMPLIANCE STATEMENT

This statement relates to a proposed contract with _____

(Name of borrower or grantee)

who expects to finance the contract with assistance from either the Rural Housing Service (RHS), Rural Business-Cooperative Service (RBS), or the Rural Utilities Service (RUS) or their successor agencies, United States Department of Agriculture (whether by a loan, grant, loan insurance, guarantee, or other form of financial assistance). I am the undersigned bidder or prospective contractor, I represent that:

1. I have, have not, participated in a previous contract or subcontract subject to Executive Order 11246 (regarding equal employment opportunity) or a preceding similar Executive Order.
2. If I have participated in such a contract or subcontract, I have, have not, filed all compliance reports that have been required to file in connection with the contract or subcontract.
 If the proposed contract is for \$50,000 or more: or If the proposed nonconstruction contract is for \$50,000 or more and I have 50 or more employees, I also represent that:
3. I have, have not previously had contracts subject to the written affirmative action programs requirements of the Secretary of Labor.
4. If I have participated in such a contract or subcontract, I have, have not developed and placed on file at each establishment affirmative action programs as required by the rules and regulations of the Secretary of Labor.

I understand that if I have failed to file any compliance reports that have been required of me, I am not eligible and will not be eligible to have my bid considered or to enter into the proposed contract unless and until I make an arrangement regarding such reports that is satisfactory to either the RHS, RBS or RUS, or to the office where the reports are required to be filed.

I also certify that I do not maintain or provide for my employees any segregated facilities at any of my establishments, and that I do not permit my employees to perform their services at any location, under my control, where segregated facilities are maintained. I certify further that I will not maintain or provide for my employees any segregated facilities at any of my establishments, and that I will not permit my employees to perform their services at any location, under my control, where segregated facilities are maintained. I agree that a breach of this certification is a violation of the Equal Opportunity clause in my contract. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and wash rooms, restaurants and other eating areas time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color, or national origin, because of habit, local custom, or otherwise. I further agree that (except where I have obtained identical certifications for proposed subcontractors for specific time periods) I will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity clause; that I will retain such certifications in my files; and that I will forward the following notice to such proposed subcontractors (except where the proposed subcontractors have submitted identical certifications for specific time periods):

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays the valid OMB control number. The valid OMB control number for this information collection is 0575-0018. The time required to complete this information collection is estimated to average 10 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

**NOTICE TO PROSPECTIVE SUBCONTRACTORS OF REQUIREMENTS FOR
CERTIFICATIONS OF NON-SEGREGATED FACILITIES**

A certification of Nonsegregated Facilities, as required by the May 9, 1967, order (32F.R. 7439, may 19, 1967) on Elimination of Segregated Facilities, by the Secretary of Labor, must be submitted prior to the award of a subcontract exceeding \$ 10,000 which is not exempt from the provisions of the Equal Opportunity clause. The certification may be submitted either for each subcontract or for all subcontracts during a period (i.e., quarterly, semiannually, or annually).

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

DATE _____

(Signature of Bidder or Prospective Contractor)

Address (including Zip Code)

U.S. DEPARTMENT OF AGRICULTURE

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

This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension, 7 CFR part 3017, Section 3017.510, Participants' responsibilities. The regulations were published as Part IV of the January 30, 1989, Federal Register (pages 4722-4733). Copies of the regulations may be obtained by contacting the Department of Agriculture agency with which this transaction originated.

(BEFORE COMPLETING CERTIFICATION, READ INSTRUCTIONS ON REVERSE)

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

Organization Name

PR/Award Number or Project Name

Name(s) and Title(s) of Authorized Representative(s)

Signature(s)

Date

Form AD-1048 (1/92)

Instructions for Certification

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

CERTIFICATION FOR CONTRACTS, GRANTS AND LOANS

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

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

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

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

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

(name)

(date)

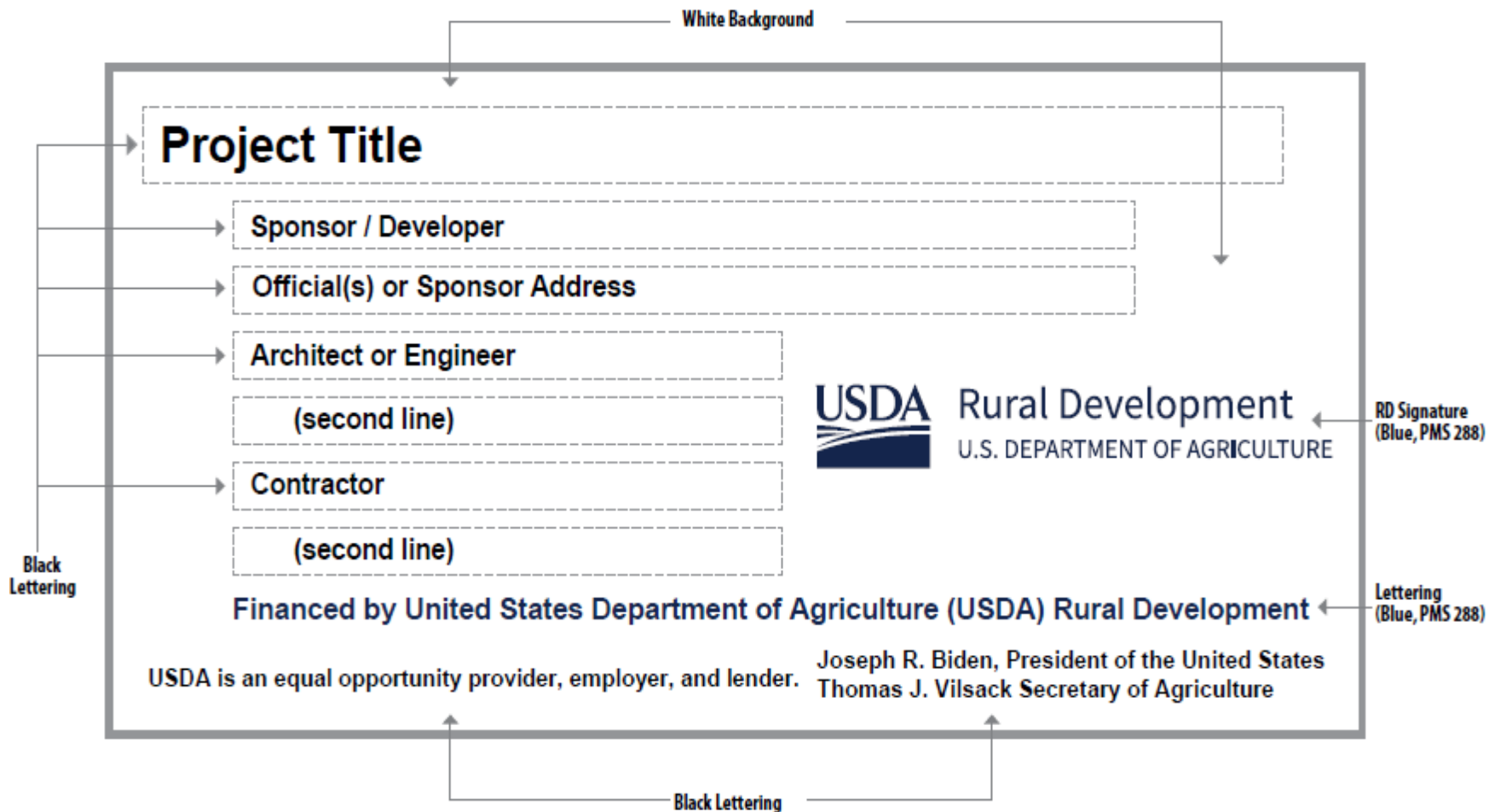
(title)

oOo

TEMPORARY CONSTRUCTION SIGN FOR RURAL DEVELOPMENT PROJECTS

Recommended Fonts: Helvetica or Arial

CS-6



SIGN DIMENSIONS : 1200 mm x 2400 mm x 19 mm (approx. 4' x 8' x 3/4")
PLYWOOD PANEL (APA RATED A-B GRADE-EXTERIOR)

CERTIFICATE OF OWNER'S ATTORNEY AND AGENCY CONCURRENCE

CERTIFICATE OF OWNER'S ATTORNEY

PROJECT NAME: Contract 13: "Dog Walk" Water Storage Tank Rehabilitation

CONTRACTOR NAME: _____

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

Name Date

AGENCY CONCURRENCE

As lender or insurer of funds to defray the costs of this Contract, and without liability for any payments thereunder, the Agency hereby concurs in the form, content, and execution of this Agreement.

Agency Representative Date

Name

ENGINEER'S CERTIFICATION OF FINAL PLANS AND SPECIFICATIONS

PROJECT NAME: CONTRACT 13 : "Dog Walk" Tank Rehabilitation

The final Drawings and Specifications, other assembled Construction Contract Documents, bidding-related documents (or requests for proposals or other construction procurement documents), and any other Final Design Phase deliverables, comply with all requirements of the U.S. Department of Agriculture, Rural Utilities Service, to the best of my knowledge and professional judgment.

If the Engineers Joint Contract Documents Committee (EJCDC) documents have been used, all modifications required by RUS Bulletin 1780-26 have been made in accordance the terms of the license agreement, which states in part that the Engineer "must plainly show all changes to the Standard EJCDC Text, using 'Track Changes' (redline/strikeout), highlighting, or other means of clearly indicating additions and deletions." Such other means may include attachments indicating changes (e.g. Supplementary Conditions modifying the General Conditions).

Deron S. Byrne

Engineer

Date

6/15/2021

Deron S. Byrne, P.E., Principal/Project Engineer

Name and Title

AMERICAN IRON AND STEEL COMPLIANCE STATEMENT

"Section 746 of Title VII of the Consolidated Appropriations Act of 2017 (Division A- Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act, 2017) and subsequent statues mandating domestic preference applies an American Iron and Steel requirement to this project.

All parties are required to comply with these requirements and to ensure that all iron and steel products used on this project are produced in the United States. The term "iron and steel products" means the following products made of primarily iron or steel: lined or unlined pipes and fittings, manhole covers and other municipal castings, hydrants, tanks, flanges, pipe clamps and restraints, valves, structural steel, reinforced precast concrete, and construction materials."

RD Specialist Signature

Date

Printed Name

Borrower Signature or Approved Representative

Date

Darrell Whitaker, President, WRWA

Printed Name

Engineer's Signature

Date

Deron S. Byrne, P.E., Monarch Engineering, Inc.

Printed Name

Contractor's Signature

Date

Printed Name

ENGINEER'S CERTIFICATION LETTER

DATE:

RE: APPLICANT: WESTERN ROCKCASTLE WATER ASSOCIATION
PROJECT NAME
CONTRACT NUMBER: 1935

I hereby certify that to the best of my knowledge and belief, iron and steel products referenced in the Plans, Specifications, and Bidding Documents for this project comply with Section 746 of Title VII of the Consolidated Appropriations Act of 2017 and any subsequent statutes mandating domestic preference or are the subject of a waiver approved by the Secretary of Agriculture or designee. This certification is not intended to be a warranty in any way, but rather the designer's professional opinion that to the best of their knowledge, the products comply.

I hereby commit that to the best of my ability, all iron and steel products that will be referenced in the Bid Addenda, Executed contracts, and Change Orders will comply with Section 746 of the Title VII of the Consolidated Appropriations Act, 2017 and any subsequent statutes mandating domestic preference or are/will be the subject of a waiver approved by the Secretary of Agriculture or designee.

MONARCH ENGINEERING, INC.

Name of Engineering Firm (Print)

By Authorized Representative (Signature)

PRINCIPAL / PROJECT ENGINEER

Title

This document is to be submitted prior to Agency authorization for Advertisement for Bids.

CONTRACTOR'S CERTIFICATION LETTER

DATE:

**RE: APPLICANT
PROJECT NAME
CONTRACT NUMBER**

I hereby certify that, to the best of my knowledge and belief, all iron and steel products installed for this project by my company and by any and all subcontractors and manufacturers my company has contracted with for this project, comply with Section 746 of Title VII of the Consolidated Appropriations Act of 2017 and any subsequent statutes mandating domestic preference or are the subject of a waiver approved by the Secretary of Agriculture or designee.

Name of Construction Company (Print)

By Authorized Representative (Signature)

Title

This certification is to be submitted upon completion of the project to the project engineer.

MANUFACTURER'S CERTIFICATION LETTER

Date:

Company Name:

Company Address:

Subject: AIS Step Certification for Project (X), Owner's Name, and Contract Number

I, (company representative), certify that the (melting, bending, galvanizing, cutting, etc.) processes for (manufacturing or fabricating) the following products and/or material shipped or provided for the subject project is in full compliance with the mandated AIS requirements.

Item, Products and/or Materials, and location of delivery (City, State)

- 1.
- 2.
- 3.

Such process for AIS took place in the following location:

City, State

This certification is to be submitted upon request to interested parties (e.g. municipalities, consulting engineers, general contractors, etc.)

If any of the above compliance statements change while providing materials to this project, please immediately notify the person(s) who is requesting to use your product(s).

Authorized Company Representative

(Note: Authorized signature shall be manufacturer's representative and not the materials distributor or supplier)

EXAMPLES OF MUNICIPAL CASTINGS *(includes but not limited to):*

Access Hatches
Ballast Screen
Benches (Iron or Steel)
Bollards
Cast Bases
Cast Iron Hinged Hatches, Square and Rectangular
Cast Iron Riser Rings
Catch Basin Inlet
Cleanout/Monument Boxes
Construction Covers and Frames
Curb Corner Guards
Curb Openings
Detectable Warning Plates
Downspout Shoes (Boot, Inlet)
Drainage Grates, Frames and Curb Inlets
Inlets
Junction Boxes
Lampposts
Manhole Covers, Rings and Frames, Risers
Meter Boxes
Service Boxes
Steel Hinged Hatches, Square and Rectangular
Steel Riser Rings
Trash Receptacles
Tree Grates
Tree Guards
Trench Grates
Valve Boxes, Covers and Risers

EXAMPLES OF CONSTRUCTION MATERIALS (included but not limited to)

Wire rod, bar, angles
Concrete reinforcing bar, wire, wire cloth
Wire rope and cables
Tubing
Framing
Joists
Trusses
Fasteners (i.e., nuts and bolts)
Welding rods
Decking
Grating
Railings
Stairs
Access ramps
Fire escapes
Ladders
Wall panels
Dome structures
Roofing
Ductwork
Surface drains
Cable hanging systems
Manhole steps
Fencing and fence tubing
Guardrails
Doors
Stationary screens

EXAMPLES OF NON-CONSTRUCTION MATERIALS- (includes but not limited to):

(Note: includes appurtenances necessary for their intended use and operation and are not subject to AIS requirements)

Pumps
Motors
Gear Reducers
Drives (including variable frequency drives (VFD's))
Electric/pneumatic/manual accessories used to operate valves (such as electric valve actuators).
Mixers
Gates (e.g. sluice and slide gates)
Motorized screens (such as traveling screens)
Blowers/aeration equipment
Compressors
Meters (flow and water meters)
Sensors
Controls and switches
Supervisory control data acquisition (SCADA)
Membrane filtration systems (includes RO package plants)
Filters
Clarifier arms and clarifier mechanisms
Rakes
Grinders
Disinfection systems
Presses (including belt presses)
Conveyors
Cranes
HVAC (excluding network)
Water heaters
Heat exchangers
Generators
Cabinetry and housing (such as electrical boxes/enclosures)
Lighting fixtures
Electrical conduit
Emergency life systems
Metal office furniture
Shelving
Laboratory equipment
Analytical instrumentation
Dewatering equipment

INFORMATIONAL CHECKLIST FOR PROJECT SPECIFIC WAIVER REQUEST

Please reference the specifications of the product.

Information	<input type="checkbox"/>	Note
<p>General</p> <ul style="list-style-type: none"> • Waiver request includes the following information: <ul style="list-style-type: none"> — Description of the foreign and domestic construction materials — Unit of measure — Quantity — Price — Date that product is needed (e.g. time of delivery or availability) — Location of the construction project — Name and address of the proposed supplier — A detailed justification for the use of foreign construction materials • Waiver request was submitted according to the instructions in the memorandum • Assistance recipient made a good faith effort to solicit bids for domestic iron and steel products, as demonstrated by language in requests for proposals, contracts, and communications with the prime 		
<p>Cost Waiver Requests</p> <ul style="list-style-type: none"> • Waiver request includes the following information: <ul style="list-style-type: none"> — Comparison of overall cost of project with domestic iron and steel products to overall cost of project with foreign iron and steel products (Exhibit J) — Relevant excerpts from the bid documents used by the contractors to complete the comparison — Supporting documentation indicating that the contractor made a reasonable survey of the market, such as a description of the process for identifying suppliers and a list of contacted suppliers 		
<p>Availability Waiver Requests</p> <ul style="list-style-type: none"> • Waiver request includes the following supporting documentation necessary to demonstrate the availability, quantity, and/or quality of the materials for which the waiver is requested: <ul style="list-style-type: none"> — Supplier information or pricing information from a reasonable number of domestic suppliers indicating availability/delivery date for construction materials — Documentation of the assistance recipient's efforts to find available domestic sources, such as a description of the process for identifying suppliers and a list of contacted suppliers. — Date that product is needed (e.g. time of delivery or availability) to provide justification — Relevant excerpts from project plans, specifications, and permits indicating the required quantity and quality of construction materials • Waiver request includes a statement from the prime contractor and/or supplier confirming the non-availability of the domestic construction materials for which the waiver is sought • Has the State received other waiver requests for the materials described in this waiver request, for comparable projects? 		

EXAMPLE COST TABLE FOR A PROJECT COST WAIVER

AIS/Non-AIS Cost Comparison Table									
Specification	Item or Description	Quantity	Unit	Unit Price	Cost if applying AIS	Cost if a waiver to AIS is applied			
					\$ -	\$ -			
					\$ -	\$ -			
					\$ -	\$ -			
					\$ -	\$ -			
					\$ -	\$ -			
					\$ -	\$ -			
					\$ -	\$ -			
					\$ -	\$ -			
					\$ -	\$ -			
					\$ -	\$ -			
					\$ -	\$ -			
					\$ -	\$ -			
					\$ -	\$ -			

TOTAL COST:

\$0.00 \$0.00

AIS Materials Tracking

Project Name: _____

Contract Number: _____

Engineer: Monarch Engineering, Inc. _____

Name and Title: Deron S. Byrne, P.E. _____

Signature and Date: _____

Contractor: _____

Name and Title: _____

Signature and Date: _____

Total Cost of Materials as Specified in the Bid Tabs:	0
Allowable Total De Minimus Amount (5% of all mate	0
Total Cost of De Minimus Items	0
Remaining Amount Allowed for Future De Minimus Items	0

Note 1: No single De Minimus item can be greater than 1% of total materials cost.
Note 2: All listed qualifying AIS must have a manufacturer's certification unless a waiver is obtained.

No.	Bid Item No.	Detailed Description of Qualifying or De Minimus Material	Quantity Delivered	Date Delivered	Manufacturer's Name City, State of Production	Certification Date	De Minimus Only		Minor Components Only	
							Cost per Item	Total Item Cost	Cost per Item	Cost of minor components
1	1-5	M.J. Fittings & Restraints								
2	1-5	M.J. Bolts & Nuts								
3	1-5	Tracer Wire Access Boxes								

AIS-10

TECHNICAL SPECIFICATIONS

**WESTERN ROCKCASTLE WATER ASSOCIATION
ROCKCASTLE COUNTY, KENTUCKY**

**CONTRACT 13:
“DOG WALK” WATER STORAGE TANK REHABILITATION**



PROJECT NO. 1935

SEPTEMBER 2023

M
Monarch Engineering, Inc.

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SECTION 2 – TEMPORARY WATER STORAGE TANK Section 2-1

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SECTION 1- WATER STORAGE TANK REHABILITATION

1.0 Scope of Work. The CONTRACTOR shall be responsible for all labor, materials and equipment necessary for the repair, cleaning, abrasive blast cleaning, surface preparation, and recoating of all interior and exterior surfaces of a 150,000 gallon elevated water storage tank identified as the “Dog Walk” Water Storage Tank located at the intersection of Kentucky Highway 39 and Kentucky Highway 618 in Dog Walk, Kentucky, southeast Lincoln County, Kentucky.

The tank was erected in 2001 by Caldwell Tanks, Inc. The following general information is available regarding the the existing structure:

Overall Height:	129’-0”
Style/Shape:	Double Ellipsoid
Diameter:	32’-0”
Head Range:	28’-3”
Capacity:	150,000 gallons

A preliminary inspection of the tank was conducted in June of 2017 by Mid-South Tank Consultants. A detail report outlining the inspection findings are included as part of the Contract Documents. The inspection report details the existing structural, sanitary, safety and coating conditions of the tank. In addition, it provides recommendations for repairs and rehabilitation which were used in the preparation of these Specifications.

The intent of the exterior cleaning specification is to sweep blast all surfaces by blasting in accordance with SSPC-SP7. Rusted and failed areas will be blasted to a commercial finish in accordance with SSPC-SP6.

The intent of the interior surface preparation is to remove the existing coating by blasting to a near white metal finish in accordance with SSPC-SP10.

“DOG WALK” TANK: The interior and exterior coating systems installed in 2001 do not contain lead per the coating manufacturer. No special handling of the blast residue will be required.

The CONTRACTOR shall be responsible for all cost associated with sampling, worker protection, environmental pollution control, handling of debris, laboratory analysis and waste disposal.

Standard Water Storage Tank Specifications – The materials, design, fabrication, surface preparation, coating applications and testing shall conform to current standards as follows:

1. AWWA Standard for Welded Steel Storage Tanks for Water Storage, AWWA D100, of the American Works Association.
2. AWWA D102 – Standard for Painting Steel Water Storage Tanks
3. AWWA C652 – Standard for Disinfection of Steel Water Storage Tanks
4. SSPC – Steel Structures Painting Council Manuals

1.1 Work Included.

- A. Preparation of all surfaces scheduled to receive finishes
- B. Collection, handling, analysis, and disposal of debris
- C. Tank repairs and modifications
- D. Coating application to all surfaces
- E. Cleaning
- F. Testing and disinfection

1.1.1 Related Work and Applicable Requirements Specified Elsewhere. ALL BIDDING REQUIREMENTS, CONTRACT FORM, CONDITIONS OF THE CONTRACT, AND GENERAL REQUIREMENTS, shall apply to all work included in this section.

1.2 Applicable Publications, Standards & References. All work on the water storage tank shall fully conform to the requirements of the latest published editions of the following Specifications, Codes and Standards. The following apply and may be referenced in this Section.

1.2.1 American National Standards Institute (ANSI) / National Sanitation Foundation (NSF).

61 Drinking Water System Components - Health Effects

1.2.2 American Water Works Association (AWWA).

D100-11 Welded Steel Tanks for Water Storage

D102-11 Coating Steel Water Storage Tanks

C652-11 Disinfection of Water-Storage Facilities

AWWA M2 Manual of Water Supply Practices: Steel Water Storage Tanks

1.2.3 American Society for Testing Materials (ASTM).

B117 Salt Spray (FOG)

D149 Dielectric Strength

D522 Flexibility

D3353 Hardness

D4060 Abrasion

D4141 Weathering

D4541 Adhesion

D4585 Condensing Humidity

G53 QUV Exposure

1.2.4 Society for Protective Coatings (SSPC).

PA2 Measurement of Dry Coating Thickness with Magnetic Gages.

- PA5 Guide to Maintenance Painting Programs
- SP6 Commercial Blast Cleaning.
- SP10 Near-White Metal Blast Cleaning.
- SP11 Power Tool Cleaning to Bare Metal
- SP15 Commercial Grade Power Tool Cleaning Systems and Specifications, Vol. 2, Sixth Ed.
- Guide 6 I (CON), Guide to Containing Debris Generated During Paint Removal Operations
- Guide 7 (DIS), Guide for the Disposal of Lead Contaminated Surface Preparation Debris

1.2.5 National Association of Corrosion Engineers (NACE).

- 2 Near-White Metal Blast Cleaning
- 3 Commercial Blast Cleaning
- SP0188-06 Discontinuity (Holiday) Testing of New Protective Coatings on Conductive Substrates.

1.2.6 Code of Federal Regulations (CFR).

- 29 CFR 1910 Occupational Safety and Health Standards
- 29 CFR 1910.134 Respiratory Protection
- 29 CFR 1910.1020 Access to Employee Exposure and Medical Records
- 29 CFR 1910.1025 Lead
- 29 CFR 1910.1200 Hazardous Communication
- 29 CFR 1926 Safety and Health Regulations for Construction
- 29 CFR 1926.62 Interim Final Standard on Lead Exposure in Construction
- 40 CFR 50 National Primary & Secondary Ambient Air Quality Standards
- 40 CFR 261 Identification and Listing of Hazardous Waste
- 40 CFR 268 Land Disposal Restrictions

1.3 Definitions.

1.3.1 Definitions of Painting Terms. All painting related terms shall be defined by ASTM D 16, unless otherwise specified.

1.3.2 Dry Film Thickness (DFT). Thickness of a coat of cured paint measured in mils (1/1000 inch).

1.4 Submittals. Before beginning the work the CONTRACTOR shall provide the ENGINEER with the following information:

1.4.1 Product Data. Submit manufacturer's product data for each coating, including full name of each product, generic description, complete technical data, complete performance data, surface preparation, application instructions and standard warranty information. For each coating, provide samples of the color specified for OWNER approval.

In addition, submit manufacturer's product data for all miscellaneous products proposed for use including but not limited to: abrasive materials, solvents, thinners, safety equipment etc.

1.4.2 Applicator's Quality Assurance. Submit list of a minimum of five (5) completed projects of similar size and complexity to that to be performed herein. Include for each project:

- Project name and location;
- Owner and contact information;
- Prime Contractor and contact information;
- Engineer and contact information;
- Coating Manufacturer and contact information;
- Project description including physical characteristics of the tank including approximate area of coating application, site conditions, time of year work was completed, preparation requirements, coatings utilized to complete the project, and the dollar amount of the contract.
- Date of completion.

1.5 Quality Assurance.

1.5.1 Manufacturer's Qualifications. The coating manufacturer shall specialize in manufacture of coatings with a minimum of 10 years successful experience. The manufacture shall be able to demonstrate successful performance on comparable projects. Coatings and coating application accessories shall be products of a single manufacturer.

1.5.2 Applicator's Qualifications. The applicator shall be experienced in application of specified coatings for a minimum of five (5) years on projects of similar size and complexity to that to be performed herein. The applicator shall employ persons trained for application of specified coatings. All coating application equipment, tools, pressure settings, and techniques shall be in accordance with manufacturer's instructions.

1.6 Testing. The CONTRACTOR shall have on the project site the following testing equipment. Equipment shall be in calibration and proper working order. Equipment shall be used in accordance with the manufacturers' instructions or as directed by the ENGINEER. The ENGINEER shall be notified of time of testing so that he might be present to witness testing. The CONTRACTOR shall keep a daily log of environmental conditions, work schedule, and any other pertinent information. The log shall be turned over to the ENGINEER at the end of the project to be included in the permanent record.

1.6.1 Testing Equipment & Procedures.

Sling Psychrometer: Relative humidity and dew point readings shall be taken at intervals throughout the days work. Readings shall be taken at the start of the mornings work, mid day and afternoon. Should environmental conditions change, additional reading shall be taken to assure that coatings are being applied under the conditions as outlined by the coatings manufacturer.

Surface Temperature Thermometer: Surface temperatures shall be taken in areas where work is being performed. Surface temperature shall be that as specified by the coatings manufacturer.

Replica Tape & Micrometer: Testex X-Course Replica Tape shall be employed to determine the surface profile of blasted surfaces. The degree of surface cleanliness and blast profile of steel surfaces shall conform to that specified herein.

Wet Film Thickness Measurements: Wet film thickness readings for successive coats shall be taken as soon as possible at a frequency of at least one per 100 square feet.

Dry Film Thickness Measurements: Dry film thickness reading shall be taken with a properly calibrated (per the manufacturer's instructions) Type 1 (magnetic) or Type 2 (electromagnetic) instrument. Dry film thickness reading will be taken and recorded in the in a frequency and manner as dictated by the ENGINEER. At a minimum, dry film thickness readings shall be taken prior to the application of each successive coat at a frequency of at least one per 100 square feet. The CONTRACTOR shall provide ladders, rigging, etc. as necessary to allow the ENGINEER to spot check paint thickness of each coat.

Holiday Detection: After completion of the interior coating system, interior surfaces shall be holiday detected in accordance with ASTM G 62 low voltage holiday detection. Holiday detector shall be a Tinker & Rasor Model M-1 or equal. Areas found to have holidays shall be marked and repaired in accordance with the paint manufacturer's instructions. The ENGINEER shall be notified of time of testing so that he might be present to witness testing.

1.7 Delivery, Storage, and Handling.

1.7.1 Delivery. Paint and other materials shall be delivered in unbroken containers bearing the designated name, manufacturer, specification number, color name and number, batch or lot number, date of manufacture, and directions for use.

1.7.2 Storage. Materials shall be stored in a clean, dry area, and within temperature range in accordance with Coating Manufacturer's instructions. All containers shall remain sealed until ready for use. Materials shall not be used beyond Coating Manufacturer's shelf life limits.

1.7.3 Handling. Protect materials during handling and application to prevent damage or contamination. Take precautionary measures to prevent fire hazards.

1.8 Environmental Requirements.

1.8.1 Weather.

Air and Surface Temperatures: Prepare surfaces and apply and cure coatings within air and surface temperature range in accordance with Coating Manufacturer's instructions.

Surface Temperature: Maintain surfaces temperatures a minimum of 5 degrees F (3 degrees C) above dew point at the time of final surface preparation, material mixing,

and application.

Relative Humidity: Prepare surfaces and apply and cure coatings within relative humidity range in accordance with Coating Manufacturer's instructions.

Precipitation: Do not prepare surfaces or apply coatings in rain, snow, fog, or mist.

Wind: Do not spray coatings if wind velocity is above Coating Manufacturer's limit.

Lighting: Provide a minimum of 25 foot candles (270 lx.) of lighting on surfaces during blasting and coating application procedures.

1.8.2 Ventilation. Provide adequate continuous ventilation and heating facilities during coating evaporation stage in confined or enclosed areas in accordance with AWWA D102-06, Section A.7.5. Forced air ventilation and heating shall be maintained for a minimum of four (4) days following interior coating application to assist in the curing process.

1.8.3 Dust and Contaminants. Schedule coating works in an effort avoid excessive dust and airborne contaminants. Protect work areas from excessive dust and airborne contaminants during coating application and curing.

1.9 Containment, Collection and Disposal of Debris. The CONTRACTOR shall provide a containment system to prevent the migration of any hazardous blast media, dust and paint residue onto or from the property of the OWNER. The containment system shall meet the appropriate SSPC Class to provide the highest level of emission control required by governmental regulations and include the cover panels, screens, tarps, scaffolds, supports and shrouds used to enclose an entire work area. Refer to SSPC-Guide 6 (CON) Guide for Containing Debris Generated During Paint Removal Operations. Containment and collection shall be in accordance with applicable federal, state and local requirements.

The CONTRACTOR shall place waterproof plastic sheeting on the ground surrounding the exterior of the tank, which is bermed to a sufficient depth to contain all debris generated in the blast cleaning process. The CONTRACTOR shall be responsible for removing, handling and disposal of any soil that is contaminated with lead from his operations and replacement with uncontaminated soil.

For disposal of surface preparation debris, refer to SSPC-Guide 7 (DIS) Guide for the Disposal of Lead-Contaminated Surface Preparation Debris. All surface preparation debris must be disposed of in accordance with applicable federal, state and local regulations. The CONTRACTOR shall be responsible for all cost associated with containment and waste disposal that may result from the execution of this project.

The CONTRACTOR shall submit a concise Containment Procedures Plan with their bid detailing how spent abrasive blast debris and coatings will be confined to the tank site.

1.10 Coating Materials. All coatings shall be manufactured by TNEMEC COMPANY, INC., THE SHERWIN-WILLIAMS COMPANY, or Approved Equal.

1.10.1 Interior Coating System.

- System Type: *Zinc / Epoxy / Epoxy.*
- AWWA D102 Paint System: *ICS-5.*
- Surface Preparation: *SSPC-SP 10 / NACE No. 2. (Surface profile of 1.5-2.0 mils)*
- Primer: *Tnemec Series 94-H2O Hydro-Zinc or Sherwin-Williams Corothane I Galvapac Zinc Primer, DFT 2.5 to 3.5 mils.*
- Filler & Sealer: *All interior lapped seams shall be sealed with Sika Flex-1A after the finish coat is applied. Gapped or skip welded seams below the high water level, sharp-edges and pits of 1/16" deep or deeper shall be filled with Tnemec Series 215 Surfacing Epoxy (for potable water contact).*
- Weld Seams (Stripe Coat): *Tnemec Series 20HS Pota-Pox or Sherwin-Williams Macropoxy 646 PW, DFT 4.0 to 6.0 mils. Color to contrast with primer and finish coat*
- Intermediate Coat: *Tnemec Series 20HS-39BL "Deft Blue" Pota-Pox or Sherwin-Williams Macropoxy 646 PW, DFT 4.0 to 6.0 mils. Color to contrast with primer and finish coats*
- Finish Coat: *Tnemec Series 20HS-15BL "Tank White" Pota-Pox or Sherwin-Williams Macropoxy 646 PW, DFT 4.0 to 6.0 mils. Finish coat color shall be Tank White, or similar*
- Total DFT: *Minimum 12.0 mils.*

**NOTE: TNEMEC Series 44-700 Epoxy Accelerator may be used when air, material or surface temperature is anticipated to be between 35° F and 60° F during application and/or curing.*

1.10.2 Exterior Coating System.

- System Type: *Zinc / Polyurethane / Fluoropolymer*
- AWWA D102 Paint System: *OCS-5.*
- Surface Preparation: *SSPC-SP 10 / NACE No. 2.*
- Primer: *Immediately after blasting and before any rusting occurs (8 Hours minimum), apply one coat of TNEMEC Series 135 CHEM-BUILD primer to all surfaces at a DFT of 3.0 to 5.0 mils.*
- Weld Seams (Stripe Coat): *Tnemec Series 1075 Endura-Shield II or Sherwin-*

Williams Acrolon 218 HS Acrylic Polyurethane, DFT 2.0 to 3.0 mils. Color to contrast with primer and finish coat

- Intermediate Coat: *Tnemec Series 73-Color Endura-Shield or Sherwin-Williams Acrolon 218 HS Acrylic Polyurethane, DFT 2.0 to 3.0 mils. Color to contrast with primer and finish coats.*
- Finish Coat and Logo: *Tnemec Series 700 Hydroflon or Sherwin-Williams Fluorokem HS Fluoropolymer Urethane, DFT 2.0 to 3.0 mils. Color to be selected by the OWNER.*
- Total DFT: *Minimum 8.0 mils.*

1.10.3 Alternate Manufactures. Equivalent products by other manufacturers are acceptable, providing they meet or exceed all performance criteria of the specified materials. No products shall be considered that would decrease film thickness or offer a change in generic type of coating specified.

In the event the CONTRACTOR submits a different paint, the CONTRACTOR shall submit complete data with bid including performance data as determined by an independent testing laboratory and mark bid as alternate to base bid. The CONTRACTOR shall submit a price for base bid also in order for the OWNER to review cost savings for using an alternate paint.

Products for each specified function and system shall be of a single manufacturer.

1.11 Execution.

1.11.1 Examination. Examine areas and conditions under which coating systems are to be applied. Notify the ENGINEER of conditions which would adversely affect the appearance or performance of the coating systems and which cannot be put into an acceptable condition by required repairs or surface preparation. Do not begin surface preparation or coating application until unacceptable areas or conditions have been corrected and authorization to proceed is given by the ENGINEER.

1.11.2 Protection and Safety Precautions. Take all precautions necessary to avoid adversely affecting the surrounding environment with blast media or paint particle drift or overspray. All of the CONTRACTOR'S activities shall comply with federal, state, and local requirements for environmental pollution control.

The CONTRACTOR is responsible for protection of all surrounding areas and surfaces not scheduled to be coated from damage during surface preparation and application of coatings. Immediately remove coatings that fall on surrounding areas and surfaces not scheduled to be coated.

Adequate protection of any level controls, telemetry equipment, antennas, etc. from paint and other damage is a requirement. The tank inlet/outlet and overflow pipe shall be plugged and protected at all time during the execution of the work. Methods shall be as

required to prevent damage and entrance of blast media, paint and debris. The CONTRACTOR shall repair damage as a result of inadequate or unsuitable protection as directed by the ENGINEER.

All of the CONTACTORS activities and equipment used on the job site must be in compliance with federal, state, and local law. Defective or substandard equipment shall not be used. Hoist, ladders, electrical equipment, scaffolding, and hand or power tools must meet safety standards. Inspect all tank surfaces, ladders, and rigging connections before they are used. Any excessively deteriorated parts shall be repaired or replaced before use.

1.11.3 Criteria for Controls over Worker Protection. OSHA requirements for worker protection as outlined in 29 CFR 1910.1025 Lead and OSHA Booklet 3126 Working with Lead in the Construction Industry shall be strictly followed.

The CONTRACTOR shall provide the necessary protection as required by the applicable federal, state and local laws for the removal of the paint linings for his personnel and for the OWNER/ENGINEER representative who will be observing the work. This includes, but is not limited to, exposure monitoring, respiratory protection, compliance program, protective work clothing, worker personal hygiene, project housekeeping, worker medical surveillance/blood lead level tests, employee information and training, project signs and proper project record keeping. The CONTRACTOR shall be responsible for all associated costs of the above mentioned items and those costs associated with the testing required to insure worker/observer protection as required by the applicable federal, state and local laws.

The CONTRACTOR shall submit a detailed worker protection plan to the ENGINEER at least 10 days prior to beginning work. This plan shall comply with the most current OSHA and other governmental agency standards for workers exposed to lead. This plan shall include, but not be limited to, the following programs that the CONTRACTOR will implement for this project:

- Employee exposure monitoring
- Respiratory protection
- Personal hygiene
- Medical surveillance
- Employee training
- Protective work clothing
- Housekeeping
- Warning signs
- Verification of compliance

The CONTRACTOR shall also submit current manufacturer's product data sheets as well as Material Safety Data Sheets. Also, have these documents available to all employees at the job site.

1.11.4 Surface Preparation. All steel surfaces are to be prepared in accordance with Coating Manufacturer's instructions and these specifications.

All interior and exterior surfaces shall be abrasive blast cleaned by near-white blast cleaning, removing all mill scale, rust, dirt, paint or foreign matter by the recommended methods outlined in the Steel Structures Painting Council's Specification SSPC-SP10 and NACE No. 2 to establish a blast profile of 1.5 to 2.5 mils.

All paint particles and used blast media containing paint particles shall be collected and removed from the tank site by the CONTRACTOR in accordance with federal, state and local requirements.

Abrasive materials shall be selected to produce the required anchor pattern and no evidence of a polished or peened surface will be accepted. The compressed air used for blasting shall be free of water and oil. Blasting shall not be performed when the surface temperature is less than 5°F above the dew point to prevent the formation of rust bloom.

Where practical, the CONTRACTOR shall complete all welding and interior and exterior repairs authorized by the ENGINEER, except for the caulking, prior to applying the primer. Interior and exterior welds, burning or repairs on or affecting previously blast cleaned areas shall be re-blasted to duplicate to surrounding area.

The CONTRACTOR shall coat all abrasive blast-cleaned surfaces with primer immediately following the blast cleaning activities before visible rust forms on surface. If rust or any other visible contamination appears as a result of delay in primer application, the surface shall be re-cleaned to specified surface preparation.

All dust, blasting debris and contaminates shall be removed from the surface prior to painting.

1.11.5 Coating Application. Coatings shall be applied in accordance with Coating Manufacturer's instructions. Coatings, including multi-component materials, shall be mixed and thinned in accordance with Coating Manufacturer's instructions. Mixed coatings shall not be used beyond pot life limits. Care should be taken to keep containers closed when not in use to avoid contamination.

Coating application equipment, tools, pressure settings, and techniques shall be in accordance with manufacturer's instructions. A Manufacturer's representative shall be available at all times to provide technical assistance and guidance for surface preparation and application of coating system

Immediately after blasting and before any rusting occurs (max. 8 hours), the prime coat shall be applied to all surfaces. After sufficient cure of the prime coat, apply a stripe coat to critical locations on steel such as welds, corners, and edges. The stripe coat shall be applied using a brush or a roller, no exceptions. Application of the intermediate and finish coats shall be applied only after the sufficient cure time has elapsed. Any surface and touch-up welds, burned and abraded areas, etc. shall be prepared with specified primer before applying full field coats.

Coatings shall be uniformly applied at the spreading rate required to achieve specified DFT. Workmanship shall be of first class quality. Finish painting shall show no drips, runs, sags, holidays, or other defects. The finish coat shall be free from noticeable laps or brush marks. Paint during application shall be continuously stirred. Paint shall be thoroughly worked into all joints, corners, and well brushed out over all surfaces. Should any coat of paint be judged unsatisfactory, the CONTRACTOR shall remove the coat(s) as necessary and repaint as directed by the ENGINEER at no cost to the OWNER.

It shall be the responsibility of the contractor to locate and avoid damage to any and all existing water, gas, sewer, electric, telephone, and other utilities, structures, residences or appurtenances. The CONTRACTOR shall repair or pay for all damages caused by his operations or his personnel to existing utilities, structures, appurtenances, or properties, either below ground or above ground and shall settle in full all damage suites which may arise as a result of his operations.

1.11.6 Unsatisfactory Application. Coatings shall be free of runs, bridges, shiners, laps, or other imperfections. If coatings display improper finish, color, or insufficient film thickness, the surface shall at a minimum be cleaned and top coated with the specified material to obtain the specified color and coverage. Any visible areas of chipped, peeled, or abraded paint shall be hand or power-sanded, feathering the edges. The areas shall then be primed and finish coated in accordance with the specifications.

Evidence of any unsatisfactory conditions shall be cause for rejection. Any defects in the coating system shall be repaired by the Contractor per written recommendations of the coating manufacturer.

1.11.7 Tank Lettering/Logo. The tank shell shall be lettered on one side with the wording "WESTERN ROCKCASTLE WATER ASSOCIATION". The size of the letters shall match that of the existing lettering. Letter color shall be selected by the owner. A detailed illustration of the lettering scheme, depicting all applicable dimensions, details, colors, etc. shall be prepared by the CONTRACTOR and submitted to the ENGINEER for approval.

1.12 Inspections. The CONTRACTOR shall provide inspections and associated documentation which verify the following:

- Coatings and other materials are provided as specified.
- Environmental conditions are as specified.
- Surface preparation and application are completed as specified.
- The DFT of each coat and total DFT of each coating system are as specified using wet film and dry film gauges.
- All coatings are inspected for film characteristics or defects that would adversely affect performance of coating systems.
- Exterior coatings are inspected for film characteristics or defects that adversely affect appearance.
- Steel immersion surfaces are tested for holidays on using a holiday detector in

accordance with NACE SP0188-06.

The degree of surface cleanliness and blast profile of steel surfaces shall conform to the specifications detailed in earlier sections. Reference SSPC or NACE visual standards and consult Testex tape to verify anchor pattern.

Wet film thickness readings for successive coats shall be taken as soon as possible at a frequency of at least one per 100 square feet. Dry film thickness readings of steel surfaces shall be taken prior to the application of successive coats with a non-destructive magnetic type gauge in accordance with SSPC-PA-2

The final film is to be visually inspected and shall be free of sags, runs, wrinkles, and other excessive film building characteristics and surface defects.

All interior coated steel surfaces shall receive holiday testing with a Tinker and Razor Model M-1, or equivalent, low voltage holiday detector. Any areas failing this test shall be marked and receive additional repair coats until satisfactory test results are achieved.

1.12.1 Inspection Log. The CONTRACTOR shall maintain a contemporaneous daily inspection log to be used as a permanent record for the project and to compliment the periodic inspections by the OWNER'S representative. The CONTRACTOR'S daily inspection log shall be available at any time to the ENGINEER/OWNER or their representative and an updated copy shall be included with each pay request. The CONTRACTOR'S inspection log shall include:

- Daily record of materials stored and used on site.
- Ambient conditions: minimum of three measurements daily of air and surface temperature, dew point, wind speed and direction, precipitation, etc.
- Production record: personnel on-site, hours worked, location of surface preparation and painted surfaces and materials used at each work area.
- In-process quality control observations as described in this section to include surface cleanliness, surface profile, wet film thickness, dry film thickness, visual defects, time between cleaning and priming, and time between coats.

1.12.2 Acceptance of Work. All surface preparation and repairs shall be approved by the ENGINEER before primer is applied. The CONTRACTOR shall request acceptance of each coat before applying the next coat and shall correct work that is not acceptable and request re-inspection. All rigging is to remain in place, and the CONTRACTOR shall aid in the use of rigging for all inspections by the ENGINEER or his representative.

The Coating Manufacturer's representative shall be readily available to provide technical assistance and guidance for surface preparation, application, and repair of coating systems.

1.13 Repairs. All repairs shall be made in a manner to constitute a permanent repair. Any welding shall be done by qualified personnel. Welders must be certified by ASME requirements in all positions. Provide written documentation (in triplicate) to the Engineer pertaining to the welder(s) current certification status. Any welding on the tank shall be in

conformance with requirements of AWWA Standard for welded steel tanks for water storage (AWWA D100-11). Sharp edges can cause premature coating failure. All sharp edges, weld spatter, and burrs shall be ground of flush. Care shall be taken to avoid damage to seams, plates and pipe connections which could result in leakage. The CONTRACTOR shall guarantee the water tank to be free from leakage upon completion of his work.

Immediately after blast cleaning the tank interior and exterior surfaces, an inspection shall be made by the ENGINEER/OWNER or their Representative in the presence of the CONTRACTOR to determine if any additional repair items will be authorized by the ENGINEER as additional work to be paid for at the Unit Bid prices for tank repairs. This includes those items below, which have estimate quantities such as seam caulking (linear feet), edge/pit filling (square feet), or pit welding (square inches).

The list of required repairs is as follows:

- Any welding on the tank shall be in conformance with requirements of AWWA Standard for welded steel tanks for water storage (AWWA D100-84).
- Sharp edges can cause premature coating failure. All sharp edges, weld spatter and burrs should be ground flush. (estimated 2 hours)
- Fill sharp edged pits and pits (1/16" or deeper) with Tnemec Series 215 Surfacing Epoxy (estimated 10 SF).
- Remove the existing oval manway at the base of the riser pipe. Install a 30" diameter bolted flange manway. The manway shall be secured with stainless steel bolts and washers and brass nuts. A new rubber gasket shall be provided.
- Install removable stainless-steel chains across the opening in the balcony handrail at the top of the leg ladder. Lower the top bracket of the fall prevention cable so a climber can safely step onto the balcony.
- Install a 42" high corral type handrail around the opening at the top of the riser pipe to prevent a fall.
- Remove the inoperable level indicator and float if SCADA system is being used. If there is no SCADA system, then replace all cables with new stainless steel cables.
- Install an 18" diameter corral on the roof of the tank. Relocate all antennas to the corral. Remove the cables from the leg ladder siderails. Bundle the cables and support them to the rubber standoffs.
- Provide and install an aluminum climb prevention shield at the base of the ladder leg to prevent unauthorized access to the tank.
- Install a lock provided by the Water Association for the roof access hatch.
- Remove the existing 24" diameter steel vent pipe cover. Bolt an aluminum cover to the existing steel pipe flange.
- Install anew stainless steel insect screen between the blind flange on the 6" overflow pipe.
- Caulk all roof lapped seams with Sika Flex-1A. (Estimated quantity 123 LF)

1.14 Cleaning. Following completion of repairs and application of all new coatings, the CONTRACTOR shall remove all scaffolding, planks, tools, rags, blast media and all other materials not part of the structural or operating facilities of the tank. The walls, floor, roof and operating facilities of the tank shall be thoroughly cleaned and washed by use of a high-pressure water jet, sweeping, scrubbing and other effective means. All water, debris, and foreign materials accumulated during this cleaning operation shall be flushed out or otherwise removed from the tank. The bottom of the tank and the inlet/outlet piping shall be thoroughly cleaned and flushed out.

1.15 Disinfection. Following cure of the tank interior final coat of paint and prior to placing the tank into service, disinfect the storage tank in general accordance with Method 2 as described in AWWA C652-02 Section 4.3.2 with the following exceptions required by the KY Division of Water:

1. The initial solution to consist of a minimum concentration of free chlorine of 250 mg/l.
2. The initial spray application to be repeated at no less than one hour from the end of the previous application.
3. The tank shall be drained of the heightened chlorine concentration no less than 30 minutes from the completion of the last spray application.

1.16 Bacteriological Sampling & Testing. After disinfection is complete and before the tank is placed in service, water from the full facility shall be sampled and tested in accordance with AWWA Standard C652-02, Section 5.1 Bacteriological Sampling and Testing. Should the test results indicate the presence of bacteria in the sampled water, re-conduct the disinfection process in full. Water for subsequent tests will be paid for by the CONTRACTOR.

1.17 Clean Up. Upon completion of the work, all staging, scaffolding, and containers shall be removed from the site and/or destroyed in an approved and legal manner. Paint spots, oil, or stains upon adjacent surfaces shall be completely removed, and the entire job site left free of all debris and be clean and acceptable as determined by the ENGINEER and OWNER.

1.18 Warranty. The CONTRACTOR shall guarantee its work for a period of two years from the completion date defined in the contract documents to the extent that it will repair any defects caused by faulty application, workmanship or material furnished under the specifications.

The OWNER will set a date for an inspection of the repairs and coating systems at or near the warranty expiration date. The OWNER shall be responsible for draining the tank prior to the inspection as well as maintaining system operation and pressure during the inspection and remedial work, if any. The inspection shall be in accordance with AWWA D102-11 and be attended by OWNER, ENGINEER, CONTRACTOR, and a representative of the Coating Manufacturer. Any deficiencies in coating systems as will be repaired as determined by ENGINEER in accordance with the Coating Manufacturer's instructions. Should a failure occur to 25% of the painted surface, either interior or exterior, the entire surface shall be blast cleaned and recoated in accordance with these specifications.

1.19 Tank Inspection Report. As previously noted herein above, an inspection of the subject tank was performed by Mid-South Tank Consultants on June 30, 2017. The full report from that inspection has been made part of the Contract Documents.

1.20 Payment. Payment shall be included in the payment for work to which it is subsidiary to the bid schedule.

SECTION 2- TEMPORARY WATER STORAGE TANK

1.0 Scope of Work. The CONTRACTOR shall be responsible for furnishing (rental) a portable hydro-pneumatic tank system for the duration of time that the existing 150,000 gallon elevated “Dog Walk” Water Storage Tank is out of service for rehabilitation. The temporary tank system shall remain in service from the time the existing tank has been taken out of service to the time the existing tank is ready to be put back into service. Temporary water storage tank shall consist of portable hydro-pneumatic tanks, connections to fire/flush hydrants, hoses, pressure switches, and appurtenances to maintain service while existing tank is out of service for rehabilitation.

1.1 Sizing of Temporary Tank. The following are general questions and answers for sizing a temporary storage tank:

1. Population on System? **2,456**
2. Number of taps on System? **920**
3. Any Customers/business that require a lot of water or a certain pressure requirement? **No**
4. How many gallons does the system use per day? **180,000 to 200,000 Gallons**
5. Number of water storage tanks in this system? **One (1)**
6. Tank name: **Dog Walk Tank**
Tank Location: **LAT: 37° 22' 49.32" N; LONG: 84° 30' 36.62"**, intersection of **KY HWY 39 & KY HWY 618, Dog Walk, KY (Lincoln County)**.
Capacity of tank: **150,000 Gallon Elevated Tank**
Height of tank: **=/- 130 Ft, Location: LAT: 37° 22' 49.32" N; LONG: 84° 30' 36.62"**
7. Does the tank have a single inlet/outlet pipe or is there two lines per tank? **Single Inlet/Outlet** What are the pipe sizes going into and leaving the tanks? **6-Inch**
8. What is the elevation at the base of tank? **1281.00'**
9. What is the lowest elevation on this system? **1100.00'**
10. What is the highest elevation on this system? **1301.00'**
11. How is the water delivered to this system? **Pump Station**
12. How Many pumps pump to the tank? **Two (2)**
13. What is the GPM of each pump? **208 GPM**
14. Do the pumps alternate? **Yes**
15. Do the pumps ever run at the same time? **No**
16. Where are the pumps getting the water from? **Water is purchased through a different system (City of Mt. Vernon)**
17. What is the Elevation of the pump station? **1190.00'**
18. What is the pressure before the pumps? **75 psi**
19. What is the operating pressure after the pumps? **105 psi**
20. What size line is feeding the pumps? **8-Inch**
21. What size line is the pump/pumps pushing into? **8-Inch**
22. How is/are the pump/pumps controlled? **Pressure Switch with Telemetry to start and stop.**

23. Are there any delays in the communication between the pump controls and the pumps? **Yes, about a minute.**
24. What is the current setting for the pumps to turn on? **18.5 ft.** Off? **26.5 ft.**
25. Will the pump controls remain live with the existing tank off line? **Yes**
26. Any other systems pulling from this system? **No**
27. Any connection points to the system at the existing tank? **No**
28. Any connections to the system at the pump station? **No**
29. Are the threads on the fire hydrants in this system NST/NH threads? **Yes**
30. What size ports on the fire hydrants? How many of each size? **Two (2) 2 1/2-Inch Nozzles and One (1) 4 1/2-Inch Pumper**
31. Does this Potable water system have to maintain a fire suppression system? **No**

1.2 Rental Company/Manufacturer and Contact of Temporary Tank System (or Approved Equal):

Portable Water Systems, LLC (Representative of Tomcat Consultants)
8473 Riverland Ave. S.W.
Navarre, Ohio 44662
Phone 330-756-4009 Fax 330-756-3144
Contact: Michael Ritterbeck, mritterbeck@cpstankassist.com

1.3 Payment. Payment shall be included in the payment for work to which it is subsidiary to the bid schedule.



Mid-South Tank Consultants

P.O. Box 11083 • Jackson, Tennessee 38308-0118

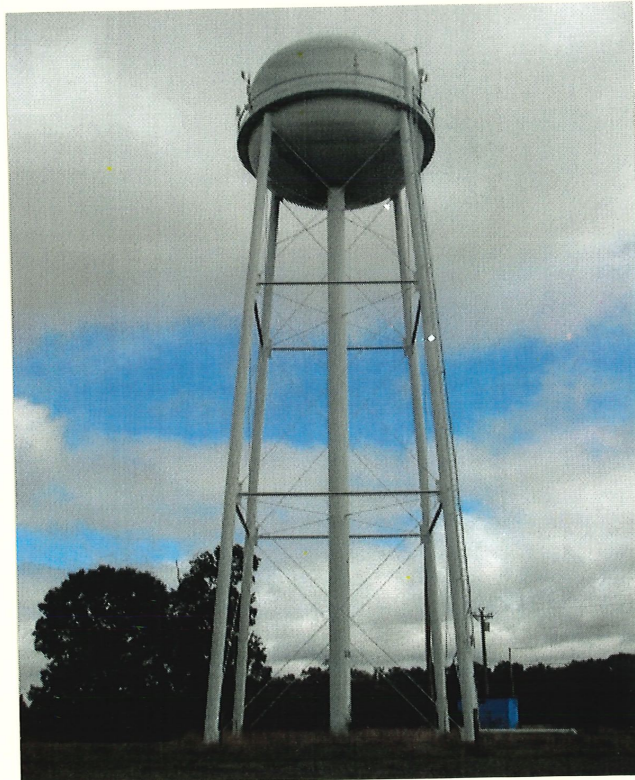
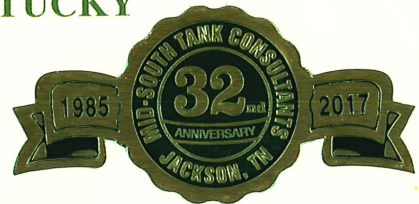
(270) 559-4727

PRELIMINARY INSPECTION REPORT

DOG WALK TANK ROCKCASTLE COUNTY, KENTUCKY

JUNE 30, 2017

150,000-GALLON ELEVATED



Prepared for:

Monarch Engineering
556 Carlton Drive
Lawrenceburg, Kentucky 40342-9788

Western Rockcastle Water Asso.
435 US Highway 150
Mt. Vernon, Kentucky 40456

Inspection, specification and contract management for new and existing tanks.

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INSPECTION SUMMARY

DOG WALK TANK 150,000-GALLON ELEVATED

ROCKCASTLE COUNTY, KENTUCKY

June 30, 2017

Capacity:	150,000 Gallons	Type Const:	Welded Steel
Builder:	Caldwell Tanks, Inc.	Elev. To Overflow:	129'-0"
Built:	2001 Contract # E-4909	Tank Diameter:	32'-0"
Riser Pipe:	3' diameter	Head Range:	28'-3"
Tower:	(4) Tubular legs 20" diameter w/ two sets of double channel struts	Tank:	Double Ellipsoidal

GENERAL:

On June 30, 2017, Mid-South Tank Consultants inspected the 150,000 gallon elevated tank identified as "Dog Walk" located in Rockcastle County, Kentucky and cleaned the lower interior by pressure washing. The inspection was performed in accordance with the proposal approved by Mr. Deron Byrne of Monarch engineering. Based on the areas that were accessed, the following report describes the structural integrity, sanitary, safety, and coating conditions. This report also includes recommendations for repair and maintenance. The tank was last painted in 2001 following erection.

STRUCTURAL:

Foundations: The concrete foundations for all the support legs and the riser were well exposed and in good structural condition without spalling or significant cracking.

Erosion and/or Settling: No erosion was noted around any of the legs or riser foundation.

Column Flanges: The flanges are sound condition, active corrosion cells were noted along the flange to anchor bolt nut interface.

Anchor Bolts: All anchor bolts appear to be structurally sound. Each leg has two 1 $\frac{3}{4}$ " anchor bolts. The riser has four 1" bolts. None of the bolts have anchor chairs.

Tower Members: All 20" diameter legs are in proper alignment and free of any structural deficiencies. The urethane finish coat is chalky, but intact and maintaining protection of the substrate. The epoxy coating still has good adhesion and has an average thickness of 10.5 mils. All windage rods (1.5") and struts were in good condition. Struts were constructed from two perpendicular channels (6" & 5"). All joints were in good condition.

Riser Pipe: The 36" diameter welded steel pipe is in good structural condition. The exterior coating has experienced minor erosion and is chalky. Blotchy corrosion was noted. The existing coating still exhibits very good adhesion. The upper riser has a light layer of mildew. The average dry film thickness (DFT) was 8.08 mils. The interior coating was in fair condition with only small rust nodules being noted in the lower section. The riser pipe does not have a ladder. A 42" tall handrail should be installed around the top of the riser pipe to prevent an accidental fall.

Tank Shell: Exterior → The coating continues to provide good protection to the steel. The finish coat has started to deteriorate becoming somewhat chalky and has lost its gloss. The average dry film thickness (DFT) was 9.19 mils on the shell. The adhesion of the existing coating to the steel is good on the majority of the surfaces making the tank satisfactory for over coating. Interior → The epoxy coating was in good condition. The coating was heavily stained. The shell had only a few scattered points of rust. Several areas of coating delamination were present on the lower tank surfaces. The adhesion test performed in accordance with ASTM D3359 revealed that the coating exhibits poor adhesion to the steel with a rating of 1B. The interior coating should last 2-4 years, but should not be overcoated. The coating thickness averaged 12.47 mils.

Exterior Ladders: The tank and leg ladders were structurally sound. The roof ladder is welded in place. The leg ladder extends to the balcony kick plate. An opening in the handrail allows easy and safe access to the balcony.

Interior Ladders: The interior ladder is in good structural condition. The carbon steel bolts that connect it to the clips at the top should be replaced with stainless steel bolts. The upper level rungs and rails were rusty.

Safety Climbing Devices: The exterior and interior ladders have cable type fall prevention safety devices that were in good condition.

Balcony: The balcony is 24" wide with a 42" tall handrail and a 4" kick plate. The handrail is constructed of a 2" x 2" angle top rail and a 1½" flat bar mid rail on 2" x 2" angle posts. The balcony is in good condition.

Vents: The existing 24" diameter vent pipe is in excellent condition. Rust is present on the inside of the pipe. The vent cover is steel and is rusty on the inside. A new aluminum vent cover should be installed.

Roof: Exterior ⇒ The urethane finish coat has become chalky. No significant corrosion or coating failures were noted. The coating has an average thickness of 13.63 mils.
Interior ⇒ The roof coating is in very good condition without any significant failures. Minor crevice corrosion was noted along the lapped joint seams. The joints should be sealed with caulk.

Aviation Light: None.

Overflow Pipe: The 6" overflow pipe exits the tank at the upper shell and is in good structural condition without coating failure. The 6" diameter pipe extends down through the balcony, down the southwest leg to a discharge point two feet above the splash pad. The pipe has an insect screen behind a bolted flange and a flap valve.

Siphon pipe: N/A

Welds: No structurally unsound welds or connections were observed.

Bolts: All bolts that could be inspected appear structurally sound.

Rivets: N/A

Pins: All pins appeared to be structurally sound.

Manways: The riser has a 18" oval two bolt manway. A new 36" diameter bolted flange manway should be installed. The fill pipe extends 12" above the base of the riser and has a protective milk stool cover.

Level indicator: The level indicator was NOT functioning properly. The target, float and cable were in poor condition. The float does NOT have guide cables.

Leaks: None.

SANTITARY:

- Fence:** The site is located in a pasture that is fenced to contain the cattle.
- Gate:** There is one vehicle gate on the east side.
- Locks:** The leg ladder does not have a climb prevention shield. The roof hatch was not locked.
- Overflow
Screen & Flap:** The discharge point of the overflow pipe has a sound insect screen and a flap valve.
- Vent Screen:** The roof vent outer expanded metal screen and inner stainless steel screens are in sound condition. The outer screen is rusty.
- Access Hatch:** The hatch is a 30" diameter AWWA approved type with a drip-proof lid. The hatch is in good condition with minor pinpoint rust on the inside of the lid. The interior ladder is located just below the hatch frame. Access to the ladder was satisfactory.
- Access Hatch
Lock:** The access hatch is lockable but was NOT locked.
- Evidence of
Foreign Matter:** None.
- Evidence of
Vandalism:** None.
- Sediment:** There was a 1/2" thick ring of sediment around the mud drum. All interior water-bearing surfaces were stained. Pressure washing removed the bulk of the stains.
- Silt Stop:** The fill pipe extends 12" above the riser floor and has a protective cover.

COATING:

Exterior Surfaces:

Exterior Coating

Condition:

The tank was painted after erection in 2001 with an epoxy/epoxy/polyurethane system. The finish coat of light blue urethane is deteriorating and has become somewhat chalky. The chalkiness creates a dull appearance. The lower tank has a light layer of mildew. The existing coating exhibits good adhesion with a rating of 4B. The average dry film thickness (DFT) was 9.19 mils on the shell and 13.63 mils on the roof. The existing coating is satisfactory for over coating after sweep blasting per SSPC-SP7 using DuPont StarBlast abrasive. Sweep blasting will expose any areas where the coating exhibits poor adhesion thus allowing the unsound coating to be completely removed. The existing coating was not tested for lead content since it was manufactured in 2001.

Interior Surfaces:

Interior Coating

Condition:

The interior was last coated with epoxy in 2001. The existing coating is in good condition. A few rust spots were noted along the lapped roof seams and a few point failures were noted on the shell and lower knuckle. The pressure washer removed the coating in scattered locations on the lower knuckle. Significant rust was visible in the riser especially in the lower half. The coating has poor adhesion with a rating of 1B and had an average thickness of 11.2 mils. The coating has 1-2 more years of useful life and afterwards will need to be completely removed by abrasive blasting to near white metal in accordance with SSPC-SP10. The existing coating was not tested for lead content since it was manufactured in 2001.

SAFETY NOTES:

1. Install removable stainless steel chains across the opening in the balcony handrail at the top of the leg ladder. Lower the top bracket of the fall prevention cable so a climber can safely step onto the balcony.
2. Install a 42" tall handrail around the opening at the top of the riser pipe to prevent a fall.
3. Install an aluminum climb prevention shield at the base of the leg ladder.

REPAIRS:

1. Fill sharp edge pits and pits deeper than 1/16" with Tnemec series 215 Surfacing Epoxy. (Est. 10 SF)
2. Sharp edges can cause premature coating failure. All sharp edges, weld spatter and burrs should be ground flush.
3. Remove the existing oval manway at the base of the riser pipe. Install a 30" diameter bolted flange manway. The manway shall be secured with stainless steel bolts and washers and brass nuts. A new rubber gasket shall be provided.
4. Remove the inoperable level indicator and float if a SCADA system is being used. If there is no SCADA system then replace all cables with new stainless steel cables.
5. Install an 18' diameter corral on the roof of the tank. Relocate all antennas to the corral. Remove the cables from the leg ladder siderails. Bundle the cables and support them to the ladder standoffs.
6. Install a lock provided by the Water District for the roof access hatch.
7. Remove the existing 24" diameter steel vent pipe cover. Bolt an aluminum cover to the existing steel pipe flange.
8. Install a new stainless steel insect screen between the bolted flanges on the 6" overflow pipe.
9. Caulk all roof lapped seams with Sika Flex-1A. (Estimated quantity 123')

RECOMMENDATIONS:

The existing interior coating is still providing fair protection to the majority of the steel surfaces. The existing coating should continue to provide protection for the next 1-2 years. At that time, we recommend the complete removal of the existing coating system by abrasive blast cleaning to near white metal followed by the application of a 10 to 15 mil high-performance zinc/epoxy/epoxy system which is NSF-approved for potable water contact in approximately five years. In addition all roof lap joints and gaps should be sealed with Sika Flex-1A flexible caulk. Properly applied, this system should provide 15 to 20 years of service with minimal maintenance.

The existing exterior finish coat of urethane is still providing protection, but is deteriorating and has become somewhat chalky. The existing coating system has good adhesion to the steel substrate. We recommend that all surfaces be cleaned by sweep blasting per SSPC-SP7. Failed areas or areas where unsound coating is encountered shall be blasted to bare metal per SSPC-SP6. An epoxy/urethane/fluoropolymer polyurethane system should be applied to provide a durable coating and to restore a high gloss new look. The recommended system

should be applied at 6.5 to 9.5 mils. The coating manufacturer guarantees this coating system to maintain its gloss and color to within 80% of the original value for 15 years. Properly applied, this coating system should provide at least 15 to 20 years of corrosion resistant service.

We recommend that the above refurbishment work be performed within the next 1-3 years.

2

The exterior and interior coating systems installed in 2001 when the tank was erected do not contain lead per the coating manufacturer.

3

BUDGET ESTIMATE FOR CLEANING & REPAINTING

DOG WALK TANK

ROCKCASTLE COUNTY, KENTUCKY

CLEAN & PAINT TANK INTERIOR

- *Estimated Surface Area:* 5,100 SF
- *Surface Preparation:* SSPC-SP10 Near-White Blast Cleaning all surfaces.
- *Prime Coat:* Aromatic urethane, zinc-rich urethane at 2.5-3.5 mils DFT.
- *Intermediate Coat:* Polyamidoamine epoxy at 4-6 mils DFT.
- *Stripe Coat:* Polyamidoamine epoxy at 2-3 mils DFT (roller applied) to weld seams and edges.
- *Finish Coat:* Polyamidoamine epoxy at 4-6 mils DFT.

ESTIMATED COST FOR INTERIOR.....\$45,900

CLEAN & PAINT TANK EXTERIOR

- *Estimated Surface Area:* 9,900 SF
- *Surface Preparation:* Sweep blast of all surfaces in accordance with SSPC-SP7. Failed surfaces shall be cleaned per SSPC-SP6.
- *Prime Coat:* Modified polyamidoamine epoxy at 3-5 mils DFT.
- *Intermediate Coat:* Aliphatic acrylic polyurethane at 2-3 mils DFT.
- *Finish Color Coat:* Fluoropolymer polyurethane at 2-4 mils DFT.

ESTIMATED COST FOR EXTERIOR\$86,600

ESTIMATED COST FOR REPAIRS.....\$36,000

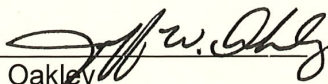
ALLOWANCE FOR HIDDEN REPAIRS\$500

**TOTAL ESTIMATED COST TO CLEAN,
REPAIR AND REPAINT THE TANK.....\$169,000**

REPAIRS

1. Fill sharp edge pits and pits deeper than 1/16" with Themec series 215 Surfacing Epoxy. (Est. 10 SF)

2. Sharp edges can cause premature coating failure. All sharp edges, weld spatter and burrs should be ground flush.
3. Remove the existing oval manway at the base of the riser pipe. Install a 30" diameter bolted flange manway. The manway shall be secured with stainless steel bolts and washers and brass nuts. A new rubber gasket shall be provided.
4. Install removable stainless steel chains across the opening in the balcony handrail at the top of the leg ladder. Lower the top bracket of the fall prevention cable so a climber can safely step onto the balcony.
5. Install a 42" tall handrail around the opening at the top of the riser pipe to prevent a fall.
6. Remove the inoperable level indicator and float if a SCADA system is being used. If there is no SCADA system then replace all cables with new stainless steel cables.
7. Install an 18' diameter corral on the roof of the tank. Relocate all antennas to the corral. Remove the cables from the leg ladder siderails. Bundle the cables and support them to the ladder standoffs.
8. Install an aluminum climb prevention shield at the base of the leg ladder.
9. Install a lock provided by the Water District for the roof access hatch.
10. Remove the existing 24" diameter steel vent pipe cover. Bolt an aluminum cover to the existing steel pipe flange.
11. Install a new stainless steel insect screen between the bolted flanges on the 6" overflow pipe.
12. Caulk all roof lapped seams with Sika Flex-1A. (Estimated quantity 123')



Jeff W. Oakley
NACE #319 Level III Certified Coating Inspector

Date: June 30, 2017

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TECHNICAL GUIDE SPECIFICATION

REPAIR, CLEANING AND PAINTING DOG WALK TANK

ROCKCASTLE COUNTY, KENTUCKY

PART I: GENERAL

1.01 SCOPE

- A. This specification covers repair, preparation of surfaces, performance and completion of painting of all interior and exterior surfaces of a 150,000 gallon elevated water storage tank located in Rockcastle County, Kentucky.
- B. The elevated tank was erected in the 2001 by Caldwell Tanks, Inc. The following are some general design criteria for the tank:
 - 2. Overall Height: 129'-0"
 - 2. Shape: Double Ellipsoidal
 - 3. Bowl Diameter: 32'
 - 4. Head Range: 28'-3"
 - 5. Capacity: 150,000 gallons
- C. The intent of the exterior cleaning specification is to sweep blast all surfaces by blasting in accordance with SSPC-SP7. Rusted and failed areas will be blasted to a commercial finish in accordance with SSPC-SP6.
- D. The intent of the interior surface preparation is to remove all of the existing coating by blasting to a near-white metal finish in accordance with SSPC-SP10.
- E. The exterior and interior coating systems installed in 2001 do not contain lead per the coating manufacturer.
- F. The CONTRACTOR shall be responsible for all costs associated with sampling, worker protection, environmental pollution control, handling of debris, laboratory analysis and waste disposal.

1.02 WORK INCLUDED

- A. Preparation of surfaces, which are to receive finishes.
- B. Collection, handling and disposal of debris.
- C. Tank repairs.
- D. Finishes for surfaces.
- E. Testing and cleaning.

1.03 RELATED WORK AND APPLICABLE REQUIREMENTS SPECIFIED ELSEWHERE

ALL BIDDING REQUIREMENTS, CONTRACT FORM, CONDITIONS OF THE CONTRACT, AND GENERAL REQUIREMENTS shall apply to all work included in this section.

1.04 REFERENCE DOCUMENTS AND STANDARDS

- A. Coating manufacturer's printed instructions.
- B. American Society of Testing Materials
 - 1. ASTM B117 **Salt Spray (FOG)**
 - 2. ASTM D149 **Dielectric Strength**
 - 3. ASTM D522 **Flexibility**
 - 4. ASTM D3353 **Hardness**
 - 5. ASTM D4060 **Abrasion**
 - 6. ASTM D4141C **Weathering**
 - 7. ASTM D4541 **Adhesion**
 - 8. ASTM D4585 **Condensing Humidity**
 - 9. ASTM G53 **QUV Exposure**
- C. American National Standards Institute/National Sanitation Foundation
 - 1. ANSI/NSF Standard 61 **Listed Drinking Water System Components - Health Effects**
- D. American Water Works Association
 - 1. AWWA Standard C652-92 **Disinfection**
 - 2. ANSI/AWWA D100-84 **Welded Steel Tanks**
 - 3. ANSI/AWWA D102-97 **Coating Steel Water Storage Tanks**
 - 4. AWWA M2 Manual of Water Supply Practices: **Steel Water Storage Tanks**
- E. Code of Federal Regulations
 - 1. 29 CFR 1910 **Occupational Safety and Health Standards** (General Industry Standards)
 - 2. 29 CFR 1910.134 **Respiratory Protection**
 - 3. 29 CFR 1910.1020 **Access to Employee Exposure and Medical Records**
 - 4. 29 CFR 1910.1200 **Hazard Communication**
 - 5. 29 CFR 1926 **Safety and Health Regulations for Construction** (Construction Industry Standards)
 - 6. 40 CFR 50 **National Primary and Secondary Ambient Air Quality Standards**
 - 7. 40 CFR 261 **Identification and Listing of Hazardous Waste**
 - 8. 40 CFR 258 **Land Disposal Restrictions**
- F. Society for Protective Coatings
 - 1. SSPC **Systems and Specifications, Vol. 2, Sixth Ed.**
 - 2. SSPC-PA2 **Paint Thickness Measurement**

3. SSPC-PA5 Guide to Maintenance Painting Programs

1.05 SUBMITTALS

- A. Manufacturer's descriptive data describing each product to include solids by volume, performance data and manufacturer's recommendations for mixing, thinning and curing.
- B. Manufacturer's certified test reports confirming compliance with the specified performance requirements under Section 2.01.
- C. Color cards showing color availability for each finish coat.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to job site in factory-sealed, original-labeled containers.
- B. Store materials in a protected area at a temperature between 35° F and 110° F.

1.07 ENVIRONMENTAL CONDITIONS

- A. Provide adequate continuous ventilation and sufficient heating facilities to maintain temperatures above the minimum shown on the manufacturer's product data sheets.
- B. Provide minimum 25 foot candles (270 lx.) of lighting on surfaces to be finished.

1.08 PROTECTION AND SAFETY PRECAUTIONS

- A. Take all precautions necessary to avoid adversely affecting the surrounding environment with blast media or paint particle drift or overspray. All of the CONTRACTOR'S activities shall comply with federal, state and local requirements for environmental pollution control.
- B. Plug and protect the tank inlet/outlet and overflow pipe at all times during the execution of the work to prevent damage and the entrance of blast media and debris.
- C. Adequately protect the level controls from paint and damage. Repair damage as a result of inadequate or unsuitable protection.
- D. All of the CONTRACTOR'S activities and equipment used on the job site must be in compliance with federal, state and local law. Defective or substandard equipment shall not be used. Hoists, ladders, electrical equipment, scaffolding and hand or powered tools must meet safety standards.
- E. Inspect all tank surfaces, ladders, and rigging connections before they are used. Any excessively deteriorated parts shall be repaired or replaced before use.

PART II: PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Specified products are those manufactured by TNEMEC Co., Inc. The representative for this project is:
- J.D. Petro & Associates, LLC
P.O. Box 420
Franklin, Indiana 46131
Phone: 317-736-6566
- B. Equivalent products by other manufacturers are acceptable, providing they meet or exceed all performance criteria of the specified materials. No products shall be considered that would decrease film thicknesses or offer a change in generic type of coating specified.
- C. Before submitting a bid based on a coating other than the specified system, submit to the Owner for approval at least 10 days prior to the bid date all pertinent data on the substitution coating including performance data as determined by an independent testing laboratory.
- D. Products for each specified function and system shall be of a single manufacturer.

2.02 MATERIALS

- A. Rust-inhibitive, zinc-rich urethane interior (potable water) primer: TNEMEC Series 94-H₂O HYDRO-ZINC.
- B. Polyamide epoxy interior intermediate coat: TNEMEC Series 20HS-39BL POTA-POX.
- C. Polyamide epoxy interior finish coat: TNEMEC Series 20HS-15BL POTA-POX.
- D. Low temperature, fast-cure polyamide epoxy primer and finish: TNEMEC Series 44-700 Epoxy Accelerator.
- E. Solventless epoxy filler and surfacer for pit and seam repairs: TNEMEC Series 215 SURFACING EPOXY.
- F. Urethane Accelerator: TNEMEC Series 44-710.
- G. Modified Polyamidoamine epoxy exterior spot primer and full intermediate coat: TNEMEC Series 135-Color CHEM-BUILD.
- H. Aliphatic acrylic polyurethane gloss exterior intermediate coat: TNEMEC Series 73-Color ENDURA-SHIELD.
- I. Fluoropolymer polyurethane high gloss exterior finish coat: TNEMEC Series 700-Color HYDROFLON.

2.03 MATERIAL PREPARATION

- A. Mix and thin materials according to manufacturer's latest printed instructions.
- B. Do not use materials beyond manufacturer's recommended shelf life.
- C. Do not use mixed materials beyond manufacturer's recommended pot life.

PART III: EXECUTION

3.01 PRE-WORK INSPECTION

- A. Examine surfaces to be coated and report conditions that would adversely affect appearance or performance of coating systems and which cannot be put into an acceptable condition by preparatory work specified in Section 3.02.
- B. Do not proceed with field surface preparation and coating application until surface is acceptable or authorization to proceed is given by the OWNER.

3.02 SURFACE PREPARATION

- A. **Interior Surface Preparation:** Remove all visible oil, wax, grease, soil, dirt and other soluble contaminants in accordance with SSPC-SP1 prior to blast cleaning. All surfaces shall be cleaned by near-white blast cleaning, removing all mill scale, rust, dirt, paint or foreign matter by recommended methods outlined in the Steel Structures Painting Council's Specification SSPC-SP10 and NACE No. 2 to establish a blast profile of 1.5 to 2.5 mils.
- B. **Exterior Surface Preparation:** All exterior steel surfaces shall be abrasive blast cleaned by Sweep Blast Cleaning in accordance with the recommended methods outlined in the Society for Protective Coatings' Specification SSPC-SP7 (NACE No. 4). Rusted or failed areas shall be abrasive blast cleaned to a commercial finish in accordance with the recommended methods outlined in the Society for Protective Coatings' Specification SSPC-SP6 (NACE No. 3). The blast media shall be DuPont StarBlast.
- C. All paint particles and used blast media containing paint particles shall be collected and removed from the tank site by the CONTRACTOR in accordance with federal, state and local requirements.
- D. Blasting shall not be performed when the surface temperature is less than 5°F above the dew point to prevent the formation of rust bloom.
- E. The compressed air used for blasting shall be free of water and oil.
- F. All dust, blasting debris and contaminants shall be removed from the surface prior to painting.
- G. Where practical, the CONTRACTOR shall complete all welding and other interior and exterior repairs authorized by the ENGINEER/OWNER, except for the caulking, prior to applying the primer.

3.03 INTERIOR COATING SYSTEM

- A. **Prime Coat:** Immediately after blasting and before any rusting occurs (12 hours maximum) apply TNEMEC Series 94-H₂O HYDRO-ZINC at a dry film thickness of 2.5 to 3.5 mils to all steel surfaces.
- B. **Seams:** All roof lap seams shall be sealed with Sika Flex-1A after the finish coat is applied. Gapped or skip weld seams below the high water level shall be caulked after priming with TNEMEC Series 215 SURFACING EPOXY.
- C. **Intermediate Coat:** Apply one complete coat of TNEMEC Series 20HS-39BL "Delft Blue" POTA-POX* to all primed surfaces at a dry film thickness of 4.0 to 6.0 mils.
- D. **Finish Coat:** Apply one complete coat of TNEMEC Series 20HS-15BL "Tank White" POTA-POX* to all intermediate coated surfaces at a dry film thickness of 4.0 to 6.0 mils.

**NOTE: TNEMEC Series 44-700 Epoxy Accelerator may be used when the air, material or surface temperature is anticipated to be between 35°F and 60°F during application and/or curing.*

3.04 EXTERIOR COATING SYSTEM

- A. **Prime Coat:** Immediately after blasting and before any rusting occurs (8 hours minimum), apply one coat of TNEMEC Series 135 CHEM-BUILD primer to all surfaces at a dry film thickness of 3.0 to 5.0 mils.
- B. **Intermediate Coat:** Apply TNEMEC Series 73-Color ENDURA-SHIELD at 2.0 - 3.0 mils DFT to all surfaces. Color to be as recommended by the paint Manufacturer.
- C. **Finish Coat and Graphics:** Apply TNEMEC Series 700-Color HYDROFLON at 2.0 - 3.0 mils DFT to all exterior surfaces.

3.05 APPLICATION

- A. Prepare surface and touch-up welds, burned and abraded areas with specified primer before applying full field coats.
- B. Mix, thin and apply each coating at the rate and manner specified by the manufacturer's current product data sheet.
- C. Finish coats shall be uniform in color and sheen without streaks, laps, runs, sags or missed areas.
- D. Allow the interior coating to cure a minimum of 7 days before being subjected to immersion.

3.06 INSPECTION

- A. Degree of surface cleanliness and blast profile of steel surfaces shall conform to the specifications detailed in Sections 3.02. Reference SSPC or NACE visual standards and consult Testex tape to verify anchor pattern.

- B. Wet film thickness readings for successive coats shall be taken as soon as possible at a frequency of at least one per 100 square feet.
- C. Dry film thickness readings of steel surfaces shall be taken prior to the application of successive coats with a nondestructive magnetic type gauge in accordance with SSPC-PA-2.
- D. All interior coated steel surfaces shall receive holiday testing with a Tinker Razor Model M-1, or equivalent, low voltage holiday detector. Any areas failing this test shall be marked and receive an additional repair coat in accordance with Section 3.03 - INTERIOR COATING SYSTEM until satisfactory test results are achieved.
- E. The final film is to be visually inspected and shall be free of sags, runs, wrinkles and other excessive film-build characteristics and surface defects.
- F. The CONTRACTOR shall maintain a contemporaneous daily inspection log to be used as a permanent record for the project and to compliment the periodic inspections by the OWNER'S representative. The contractor's inspection log shall include:
 - 1. Daily record of materials stored and used on-site.
 - 2. Ambient conditions: min. of three measurements daily of air and surface temperature, dew point, wind speed and direction, precipitation, etc.
 - 3. Production record: personnel on-site, hours worked, location of surface preparation and painted areas and materials used at each work area.
 - 4. In-process quality control observations as described in this section to include surface cleanliness, surface profile, wet film thickness, dry film thickness, visual defects, time between cleaning and priming and time between coats.
- G. The CONTRACTOR'S daily inspection log shall be made available at any time to the ENGINEER / OWNER or their representative and an updated copy shall be included with each pay request.

3.07 ACCEPTANCE OF WORK

All surface preparation and repairs shall be approved by the OWNER before primer is applied. The CONTRACTOR shall request acceptance of each coat before applying next coat and shall correct work that is not acceptable and request re-inspection. All rigging to remain in place, and CONTRACTOR shall aid in use of rigging for all inspections by OWNER'S Representative.

3.08 REPAIRS

- A. Immediately after blast cleaning the tank interior surfaces, an inspection shall be made by the ENGINEER/OWNER or Representative in the presence of the CONTRACTOR to determine if any additional repair items will be authorized by the OWNER as additional work to be paid for at the Unit Bid prices for tank repair. This includes pit welding (sq. ft.), seam welding (lin. ft.) or patch welding (sq. ft.)