



ENGINEERING
ARCHITECTURE
FIELD SERVICES

**ENLARGED HEPZIBAH PUBLIC SERVICE DISTRICT
HARRISON COUNTY, WEST VIRGINIA**

WATER SYSTEM IMPROVEMENTS

ADDENDUM #2

September 27, 2022

THRASHER PROJECT #101-010-01231

TO WHOM IT MAY CONCERN:

A Non-Mandatory Pre-Bid Conference was held on Wednesday, September 21st, 2022 for the above-referenced project and a copy of the sign in sheet is included in this Addendum. The following are clarifications and responses to questions posed by contractors for the above reference project.

A. GENERAL

1. The Bid Opening Requirements (BOR) have been revised as part of this Addendum. The WV Jobs Act does not apply, and the American Iron and Steel Certification has been included. **CONTRACTOR MUST USE THE REVISED BID OPENING REQUIREMENT CHECKLIST IN PREPARATION OF THE BID.**
2. **DAVIS BACON WAGES HAVE BEEN INCLUDED AS PART OF THIS ADDENDUM. THE DAVIS BACON WAGE RATE ATTACHMENT HAS BEEN ADDED AS PART OF THIS ADDENDUM.**
3. **AMERICAN IRON AND STEEL REQUIREMENTS APPLY TO THIS CONTRACT. THE AMERICAN IRON AND STEEL ATTACHMENT HAS BEEN ADDED AS PART OF THIS ADDENDUM. CONTRACTOR MUST COMPLETE THE AIS CERTIFICATION AS A BID OPENING REQUIRMENT, INCLUDED AS PART OF THIS ADDENDUM.**
4. **THE INDEX HAS BEEN REVISED AS PART OF THIS ADDENDUM.**
5. **DISADVANTAGE BUSINESS ENTERPRISE (DBE) UTILIZATION REQUIREMENTS APPLY TO THIS CONTRACT AND HAVE BEEN INCLUDED AS PART OF THIS ADDENDUM (BOR 8 - BOR 11). CONTRACTOR MUST COMPLETE THE DBE BUSINESS ENTERPRISE**

CERTIFICATION AS A BID OPENING REQUIREMENT, INCLUDED AS PART OF THIS ADDENDUM.

B. SPECIFICATIONS

Contract Document Section C-200 – Instructions to Bidders has been updated to include Article 24.02 and Article 28 – Federal Requirements.

Contract Document Section C-800 – Supplementary General Conditions has been Revised to Include Article 19 – Federal Requirements.

Davis Bacon Requirements (DB) have been included as part of this Addendum.

American Iron and Steel Requirements (AIS) have been included as part of this Addendum.

Specification Section 011000 – Summary has been updated as a part of this Addendum.

Specification Section 012000 – Price and Payment has been updated as a part of this Addendum.

Specification Section 274100 – Iridium – Cellular Telemetry has been added as a part of this Addendum.

Specification Section 331219 – Water Utility Distribution Fire Hydrants has been updated as a part of this Addendum.

C. DRAWINGS

The Index has been updated as a part of this Addendum.

Sheet 9 has been updated as a part of this Addendum.

Sheet 15 has been updated as a part of this Addendum.

Sheet 16 has been updated as part of this Addendum.

Sheet 17 has been updated as part of this Addendum.

Sheet 21 has been updated as part of this Addendum.

Sheet 22 has been updated as part of this Addendum.

D. QUESTIONS AND RESPONSES

QUESTION

1. What is the Engineer's Estimate?

RESPONSE

\$1,450,000.00

QUESTION

2. How long is the Bid Hold period for this project?

RESPONSE

There is a 90 day Bid Hold before the closing date. The Contractor has the ability to request a winter shutdown if the proper documentation is presented. The Owner will review the request at that time.

QUESTION

3. Is a project sign required for this project?

RESPONSE

Yes, a project sign is required for this project. The required sign template is included as an Attachment to the Supplementary General Conditions

QUESTION

4. Will the materials for the project be tax exempt?

RESPONSE

Yes, the District will provide its tax exemption number to the Contractor upon closing.

QUESTION

5. Do wage rates apply to this project?

RESPONSE

Yes, Davis Bacon Wage Rates apply. Information on the wage rates is included as a part of this Addendum.

QUESTION

6. Can you please provide the dimensions for the check valve manhole and PRV vault?

RESPONSE

The Check Valve manhole is a 4' diameter by 6' tall flattop manhole. Dimensions can be found on Plan Sheet #2.

The PRV vault is an 11'-0"x6'-0"x5'-6" precast vault. Dimensions can be found on Plan Sheet #18.

QUESTION

7. Do the American Iron and Steel requirements apply to this project?

RESPONSE

Yes. Additional information has been included as part of this Addendum.

QUESTION

8. Is a field office required for this project?

RESPONSE

Yes.

QUESTION

9. Is there a specific Rip Rap size for ditches over 5% regarding WVDOH note #6?

RESPONSE

Rip Rap stone shall be in accordance with WVDOH Standard Specifications and the Accommodation of Utilities.

QUESTION

10. Can we use signals for traffic control?

RESPONSE

Yes, it is the Contractor's responsibility to obtain approval of the Contractor's traffic plan from WVDOH. All equipment proposed shall be in accordance with WVDOH standards.

QUESTION

11. Has the PSD identified any proposed storage areas?

RESPONSE

It is the Contractor's responsibility to secure a storage area. The PSD has identified a lot owned by the PSD adjacent to the old office building.

QUESTION

12. On Plan Sheet #3 is the ¾" poly service tubing bore and jack or open cut?

RESPONSE

The ¾" poly service tubing on Plan Sheet #3 are both bore and jack and open cut as labeled.

QUESTION

13. Are the Plan Sheet references on Plan Sheets #16 and #17 correct?

RESPONSE

Plan Sheet references on Plan Sheets #16 and #17 have been updated as part of this Addendum.

QUESTION

14. Should pipe bedding be AASHTO 10 per detail on D1 or #8 per specification?

RESPONSE

Pipe Bedding shall be AASHTO 10 per detail on D1

QUESTION

15. What's the difference between Subsequent backfill and Subgrade listed in specs?

RESPONSE

Subgrade is required on "improved" areas such as roads. Please refer to WVDOH Standard Specifications for subgrade requirements

Subsequent backfill is described in Specification Section 310513 – Soils for Earthwork.

QUESTION

16. Specification Section 310516 is referenced in Specification 331219-3, 2.2B, but is not included in the Specifications?

RESPONSE

Specification Section 331219 has been revised to remove the reference to Specification section 310516.

QUESTION

17. What aggregate should be used for the ARV's?

RESPONSE

Contractor shall use clean graded limestone

QUESTION

18. What shall be included in the Lump Sum Bid Item #34 - Telemetry?

RESPONSE

The Telemetry pay item includes the Iridium Satellite Telemetry equipment purchase and all necessary appurtenances for a complete installation. Please see revised Specification Section 012000.

QUESTION

19. Is there a constructability plan for constructing the water line behind the guard rail on Plan Sheet #1?

RESPONSE

The Engineer does not dictate means and methods. Dump Rock is required upon installation for slope protection.

QUESTION

20. Are all permits, including wetlands, provided by the Owner?

RESPONSE

Yes.

QUESTION

21. Where is the 2" SDR-17 line on Sheet 15?

RESPONSE

Sheet 15 has been revised to show the 2" Line and tie-in point.

QUESTION

22. What Bid Item shall be used for water line installed in casing?

RESPONSE

Per Specification Section 012000 – pipe installed in casing is included in the unit bid quantity for pipe.

QUESTION

23. What are the backfill requirements for installed water line?

RESPONSE

Backfill shall be in accordance with the details on Plan Sheet #D1. All backfill shall meet the requirements of WVDOH

QUESTION

24. Who is responsible for applying for the electrical service to the Spelter Tank?

RESPONSE

The application is the responsibility of the Owner.

QUESTION

25. Who is responsible for draining the Spelter Water Storage Tank prior to the valve installation?

RESPONSE

The Owner will coordinate with Contractor to drain the tank prior to the work being completed.

QUESTION

26. Who is responsible for the Bacteria samples when testing the installed water line?

RESPONSE

The Owner will take the samples, but the cost of the testing is the responsibility of the Contractor.

E. CLARIFICATIONS

1. The bidding process is a two (2) envelope system. Envelope No. 1 Labeled “Bid Opening requirements” must have the following information presented on the front:

THE BID OPENING REQUIREMENT CHECKLIST HAS CHANGED. YOU MUST USE THE REVISED BOR-1 AND BOR -7 through BOR 11 AS PART OF YOUR BID.

Name and address of Bidder

Bid on Enlarged Hepzibah Public Service District Water System Improvements
Received by the Enlarged Hepzibah Public Service District

Envelope No. 2 labeled “Bid Proposal” shall be placed inside of Envelope #1

Envelope No. 1 will be opened first and the Bid Opening Requirement items will be checked for compliance as outlined on the Bid Opening Checklist (BOR-1). If such documents are found to be in order, Envelope No. 2 “Bid Proposal”, will be opened and will be publicly read aloud. If the documents required to be contained in Envelope No. 1 **are not in order**, Envelope No. 2 “Bid Proposal”, **will not be opened** and the Bid will be considered non-responsive.

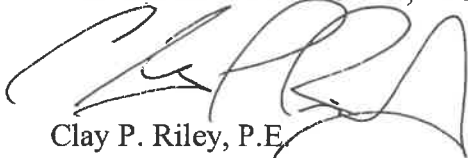
2. Due to Hydraulics of system, there is a specific sequence of events that must be followed:
 - Contractor shall complete work on Meadowbrook Road (Sheet 14 & 15) first.
 - Once work on Meadowbrook Road is completed, Contactor shall begin work on Spelter Tank upgrades (Sheet 9).
 - After the Spelter Tank Upgrades have been completed, Contractor shall complete work on Route 19 at the DOH Garage (Sheet 1).
 - Once work is complete on Sheets 1,9,14 & 15, Contractor can begin installation of water lines on sheets 3,4,5,6,7 & 8.
 - Contractor shall note that work performed on sheets 3,4, & 5 shall be performed on consecutive days including weekends until completed and water service is restored.
3. Mailed/Shipped bid packages shall be sent to The Thrasher Group, Inc., 600 White Oaks Blvd Bridgeport, Harrison County, West Virginia 26330. The Thrasher Group’s phone number is (304) 304-624-4108. Bidders should not assume guaranteed early (10:30 am) delivery is available and shall be mailed/shipped in sufficient time. It is the Bidder’s responsibility to deliver the Bid on time.
4. All work is to be coordinated through the Engineer and the PSD to ensure no disruption in service to the existing water distribution system.

5. Engineer's Approved Equal means material, equipment, or method approved by the engineer for use in the work, as being acceptable as an equivalent in essential attributes to the material, equipment, or method specified in the Contract Documents.
6. This project is subject to American Iron and Steel Requirements, the Certification is included in the Revised Bid Opening Requirements.
7. This project is subject to Davis Bacon Wage Requirements.

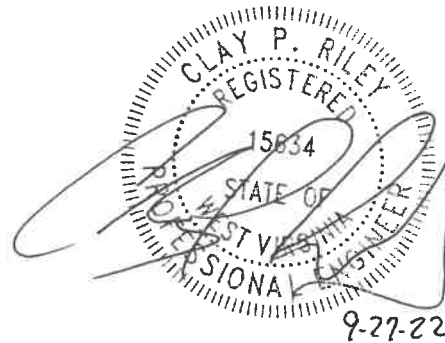
If you have any questions or comments, please feel free to contact me at your earliest convenience. As a reminder, bids will be received until 2:00 p.m. on Tuesday, October 4th, 2022 at 600 White Oaks Blvd Bridgeport, WV. Good luck to everyone and thank you for your interest in the project.

Sincerely,

THE THRASHER GROUP, INC.



Clay P. Riley, P.E.
Project Manager



Enclosures: Pre-Bid Sign-In Sheet
Index
C-200 Instructions to Bidders
Bid Opening Requirements (BOR)
C-800 Supplementary General Conditions
American Iron and Steel Requirement (AIS)
Davis Bacon Wage Requirements (DB)
Specification Sections: 11000 – Summary
12000 – Price and Payment
274100 – Iridium-Cellular Telemetry
331219 – Water Utility Distribution Fire Hydrants
Region VI Wage Rates
Plan Sheets - Index, #9, #15, #16, #17, #21, and #22

**ENLARGED HEPZIBAH PUBLIC SERVICE DISTRICT
HARRISON COUNTY, WEST VIRGINIA
PROPOSED WATER SYSTEM IMPROVEMENTS PROJECT**

PRE-BID CONFERENCE
Wednesday, September 21, 2022

Thrasher Project #010-01231

Name	Representing	Phone #	Email Address
Logan Anastas	Thrasher		
Kylka Radcliff	Thrasher		
Kevin Short	Enlarged Hepzibah		
Tim Carr	JF ALLEN	304 614 3179	tcarr@jfallenc.com
Trent Shepherd	Wolfes Excavating	304-771-7906	tshpherd@wolfesexcavating.com
Joe Beckner	AJ Burk	304-694-5200	Jbeckner@AJBurk.com R.Haver@AJBurk.com
Shelby Johnson	Region VI PDC	304-534-0492	SJohnson@regionvi.com
Kent Rowles	Region VI PDC	304 306-5693 ^{X1-2}	Krollinse@regionvi.com
Bill Saunders	CORE & MAIN	304-612-3140	William.Saunders@ CoreandMain.com

Name	Representing	Phone #	Email Address
Jeremy Wilkins	Brian Handwerker Contracting	304-413-3109	seemeyw@bblallenc.com
Chris Decker	Laurita Inc.	304-216-9759	Chrisdeckca@laurita.com
Tracy Curtis	Green River Group, LLC	304-203-4623	tracyscurtis@yahoo.com
David Wilson	Bear Contracting LLC	304-326-0160	dwilson@bear-contracting.com
Brand Burns	Corner Stone Phyllis	304-677-5670	Bburnis@cornerstonephllis.com
Stephen Tott	Blue Gold Development	304-244-9036	info@bluegolddevelopmentllc.com
KEVIN SHORT	ENLARGED Hepzibah PSD	304-844-6497	KEVIN@SUDVILLEPSD.COM

**ENLARGED HEPZIBAH PUBLIC SERVICE DISTRICT
HARRISON COUNTY, WEST VIRGINIA
FOR THE
WATER SYSTEM IMPROVEMENTS**

- I N D E X -

BIDDING DOCUMENTS

Advertisement for Bids	C-111
Instructions to Bidders	C-200
Bid Opening Requirements	BOR
Bid Forms	C-410

CONDITIONS OF WORK

Notice of Award	C-510
Agreement	C-520
Performance Bond	C-610
Payment Bond	C-615
Notice to Proceed	C-550
Contractor's Application for Payment	C-620
Change Order	C-941
Field Order	C-942
Work Change Directive	C-940
Certificate of Substantial Completion	C-625
General Conditions	C-700
Supplementary Conditions	C-800
Additional Supplemental General Conditions	ASGC
American Iron and Steel	AIS
Davis Bacon Contract Requirements	DB

TECHNICAL SPECIFICATIONS

Summary	011000
Price And Payment Procedures	012000
Substitution Procedures	012500
Contract Modification Procedures	012600
Administrative Requirements	013000
Project Management and Coordination	013100
Construction Progress Schedule	013216
Photographic Documentation	013233
Submittal Procedures	013300
Quality Requirements	014000
References	014200
Temporary Facilities and Controls	015000
Traffic Control	015700
Product Requirements	016000
Execution And Closeout Requirements	017000
Construction Waste Management and Disposal	017419
Project Record Documents	017839
Commissioning	019100
Cast-in-place Concrete	033000
Basic Electrical Materials and Methods	260500
Iridium-Cellular Telemetry	274100
Soils For Earthwork	310513
Site Clearing	311000

Excavation	312316
Trenching	312316.13
Dewatering	312319
Erosion And Sedimentation Controls	312500
Asphalt Paving	321216
Sidewalks	321623
Turf And Grasses	329200
Seeding and Mulching Table	329200.01-
Disinfection Of Water Utility Piping Systems	330110.58
Disinfection Of Water Utility Storage Tanks	330110.59
Precast Concrete Valve Vaults and Meter Boxes	330517
Utility Horizontal Directional Drilling	330523.13
Utility Identification	330526
Public Water Utility Distribution Piping	331113
Water Utility Distribution Equipment	331200
Water Service Connections	331213
Water Utility Distribution Valves	331216
Water Utility Distribution Fire Hydrants	331219
Boring And Jacking	331400
Pressure-Regulating Valves	400567.36

WAGE RATES

ACCOMMODATION OF UTILITIES ON HIGHWAY RIGHT OF WAY

INSTRUCTIONS TO BIDDERS

ARTICLE 1 – DEFINED TERMS

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

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

ARTICLE 2 – COPIES OF BIDDING DOCUMENTS

2.01 Complete sets of the Bidding Documents may be obtained from the Issuing Office in the number and format stated in the advertisement or invitation to bid.

2.02 Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

2.03 Owner and Engineer, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids for the Work and do not authorize or confer a license for any other use.

ARTICLE 3 – QUALIFICATIONS OF BIDDERS

3.01 To demonstrate Bidder's qualifications to perform the Work, after submitting its Bid and within seven (7) days of Owner's request, Bidder shall submit (a) written evidence establishing its qualifications such as financial data, previous experience, and present commitments, and (b) the following additional information:

A. [Evidence of Bidder's authority to do business in the state where the Project is located.]

B. [Bidder's state or other contractor license number, if applicable.]

C. [Subcontractor and Supplier qualification information; coordinate with provisions of Article 12 of these Instructions, "Subcontractors, Suppliers, and Others."]

D. [Other required information regarding qualifications]

3.02 A Bidder's failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.

3.03 No requirement in this Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder's qualifications.

3.04 Bidder is advised to carefully review those portions of the Bid Form requiring Bidder's representations and certifications.

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

4.01 *Site and Other Areas*

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

4.02 *Existing Site Conditions*

A. Subsurface and Physical Conditions; Hazardous Environmental Conditions

1. The Supplementary Conditions identify:
 - a. those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site.
 - b. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).
 - c. reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site.
 - d. Technical Data contained in such reports and drawings.
2. Owner will make copies of reports and drawings referenced above available to any Bidder on request. These reports and drawings are not part of the Contract Documents, but the Technical Data contained therein upon whose accuracy Bidder is entitled to rely, as provided in the General Conditions, has been identified and established in the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any Technical Data or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.
3. If the Supplementary Conditions do not identify Technical Data, the default definition of Technical Data set forth in Article 1 of the General Conditions will apply.

- ~~4. Geotechnical Baseline Report: The Bidding Documents contain a Geotechnical Baseline Report (GBR). The GBR describes certain select subsurface conditions that are anticipated to be encountered by Contractor during construction in specified locations (“Baseline Conditions”). The GBR is a Contract Document.~~

~~The Baseline Conditions in the GBR are intended to reduce uncertainty and the degree of contingency in submitted Bids. However, Bidders cannot rely solely on the Baseline Conditions. Bids should be based on a comprehensive approach that includes an independent review and analysis of the GBR, all other Contract Documents, Technical Data, other available information, and observable surface conditions. Not all potential subsurface conditions are baselined.~~

~~Nothing in the GBR is intended to relieve Bidders of the responsibility to make their own determinations regarding construction costs, bidding strategies, and Bid prices, nor of the responsibility to select and be responsible for the means, methods, techniques, sequences, and procedures of construction, and for safety precautions and programs incident thereto.~~

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

4.03 *Site Visit and Testing by Bidders*

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

4.04 *Owner's Safety Program*

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

4.05 *Other Work at the Site*

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

ARTICLE 5 – BIDDER’S REPRESENTATIONS

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

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

ARTICLE 6 – PRE-BID CONFERENCE

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

ARTICLE 7 – INTERPRETATIONS AND ADDENDA

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

ARTICLE 8 – BID SECURITY

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

ARTICLE 9 – CONTRACT TIMES

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

ARTICLE 10 – LIQUIDATED DAMAGES

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

ARTICLE 11 – SUBSTITUTE AND “OR-EQUAL” ITEMS

- 11.01** The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents, and those “or-equal” or substitute or materials and equipment subsequently approved by Engineer prior to the submittal of Bids and identified by Addendum. No item of material or equipment will be considered by Engineer as an “or-equal” or substitute unless written request for approval has been submitted by Bidder and has been received by Engineer at least 15 days prior to the date for receipt of Bids. Each such request shall comply with the requirements of Paragraphs 7.04 and 7.05 of the General Conditions. The burden of proof of the merit of the proposed item is upon Bidder. Engineer’s decision of approval or disapproval of a proposed item will be final. If Engineer approves any such proposed item, such approval will be set forth in an Addendum issued to all prospective Bidders. Bidders shall not rely upon approvals made in any other manner.
- 11.02** All prices that Bidder sets forth in its Bid shall be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of “or-equal” or substitution requests are made at Bidder’s sole risk.
- 11.03** If an award is made, Contractor shall be allowed to submit proposed substitutes and “or-equals” in accordance with the General Conditions

ARTICLE 12 – SUBCONTRACTORS, SUPPLIERS, AND OTHERS

12.01 [DELETED]

12.02 [DELETED]

- 12.03** If required by the bid documents. The apparent Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening, submit to Owner a list of the Subcontractors or Suppliers proposed for those portions of the work for which, such identification is required.

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

- 12.04** If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, or other individuals or entities. Declining to make requested substitutions will constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which Owner or Engineer makes no written objection prior to the giving of

the Notice of Award will be deemed acceptable to Owner and Engineer subject to subsequent revocation of such acceptance as provided in Paragraph 7.06 of the General Conditions.

- 12.05** Contractor shall not be required to employ any Subcontractor, Supplier, individual, or entity against whom Contactor has reasonable objection.
- 12.06** The Contractor shall not award work to Subcontractor(s) in excess of the limits stated in SC 7.06.
- 12.07** The Contractor cannot subcontract over fifty percent (50%) of the project.

ARTICLE 13 – PREPARATION OF BID

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

ARTICLE 14 – BASIS OF BID

14.01 *Lump Sum*

- A. Bidders shall submit a Bid on a lump sum basis as set forth in the Bid Form.

14.02 *Unit Price*

- A. Bidders shall submit a Bid on a unit price basis for each item of Work listed in the unit price section of the Bid Form.
- B. The “Bid Price” (sometimes referred to as the extended price) for each unit price Bid item will be the product of the “Estimated Quantity” (which Owner or its representative has set forth in the Bid Form) for the item and the corresponding “Bid Unit Price” offered by the Bidder. The total of all unit price Bid items will be the sum of these “Bid Prices”; such total will be used by Owner for Bid comparison purposes. The final quantities and Contract Price will be determined in accordance with Paragraph 13.03 of the General Conditions.
- C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

14.03 *Allowances*

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

~~14.04 *Price Plus Time Bids* [DELETED]~~

ARTICLE 15 – SUBMITTAL OF BID

~~15.01~~ With each copy of the Bidding Documents, ~~a Bidder is furnished one separate unbound copy of the Bid Form, and, if required, the Bid Bond Form. The unbound~~ A copy of the Bid Form is to be completed and submitted with the Bid security and the other documents required to be submitted under the terms of Article 7 of the Bid Form.

15.02 A Bid shall be received no later than the date and time prescribed and at the place indicated in the advertisement or invitation to bid and shall be enclosed in a plainly marked package with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), the name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate package plainly marked on the outside with the notation “BID ENCLOSED.” A mailed Bid shall be addressed to Owner at address in Article 1.01 of Bid Form, unless stated otherwise.

15.03 Bids received after the date and time prescribed for the opening of bids, or not submitted at the correct location or in the designated manner, will not be accepted and will be returned to the Bidder unopened.

ARTICLE 16 – MODIFICATION AND WITHDRAWAL OF BID

16.01 A Bid may be withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the

date and time for the opening of Bids. Upon receipt of such notice, the unopened Bid will be returned to the Bidder.

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

ARTICLE 17 – OPENING OF BIDS

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

ARTICLE 18 – BIDS TO REMAIN SUBJECT TO ACCEPTANCE

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

ARTICLE 19 – EVALUATION OF BIDS AND AWARD OF CONTRACT

- 19.01** Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible. If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes of the Bid, then the Owner will reject the Bid as nonresponsive; provided that Owner also reserves the right to waive all minor informalities not involving price, time, or changes in the Work.
- 19.02** If Owner awards the contract for the Work, such award shall be to the responsible Bidder submitting the lowest responsive Bid.
- 19.03** Evaluation of Bids
- A. In evaluating Bids, Owner will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.
 - B. For the determination of the apparent low Bidder when unit price bids are submitted, Bids will be compared on the basis of the total of the products of the estimated quantity of each item and unit price Bid for that item, together with any lump sum items.
 - C. [DELETED]
- 19.04** In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors and Suppliers proposed for those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.

- 19.05** Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors or Suppliers.

ARTICLE 20 – BONDS AND INSURANCE

- 20.01** Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance and payment bonds and insurance. When the Successful Bidder delivers the Agreement (executed by Successful Bidder) to Owner, it shall be accompanied by required bonds and insurance documentation.

ARTICLE 21 – SIGNING OF AGREEMENT

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

ARTICLE 22 – SALES AND USE TAXES

- 22.01** Owner is exempt from West Virginia state sales and use taxes on materials and equipment to be incorporated in the Work. (Exemption No. to be supplied after award of contract.) Said taxes shall not be included in the Bid. Refer to Paragraph SC-7.09 of the Supplementary Conditions for additional information.

ARTICLE 23 – ~~CONTRACTS TO BE ASSIGNED~~ [DELETED]

ARTICLE 24 – WAGE RATE REQUIREMENTS

- 24.01** If the contract price is in excess of \$100,000, provisions of the Contract Work Hours and Safety Standards Act at 29 CFR5.5 (b) apply.
- 24.02** **Contractors are required to comply with all laws pertaining to prevailing wage rates for the federal wage rates issued in accordance with the Davis Bacon Act.**

ARTICLE 25 – CONTRACTOR'S LICENSE

- 25.01** All Bidders are required to have a West Virginia Contractor's License per Section §21-11-11 of the West Virginia Code. The prospective bidder's license number must be included in the first envelope as per the Bid Opening Checklist. All subcontractors shall furnish their contractor's license number to the prime contractor prior to the award of the contract.

ARTICLE 26 – WORKER'S COMPENSATION INSURANCE

- 26.01** The Contractor shall carry full coverage of Worker's Compensation insurance during the life of this Contract. If the Contractor's Insurance does not cover the employees of sub-contractors,

such sub-contractors shall provide insurance coverage for their employees. The Contractor shall furnish the Owner with certificates of coverage for their employees, both his own and his sub-contractors, employed on the project.

ARTICLE 27 – PUBLIC LIABILITY AND PROPERTY DAMAGE INSURANCE

27.01 The Contractor must take out and maintain during the life of this Contract public liability insurance in the amount outlined in the Supplementary Conditions. In each, The Thrasher Group, Inc., and the Enlarged Hepzibah Public Service District, are to be a named insured on the policy provided.

ARTICLE 28 – FEDERAL REQUIREMENTS

28.01 Federal requirements at Article 19 of the Supplementary Conditions apply to this Contract.

28.02 American Iron and Steel requirements apply to this project. The Contractor acknowledges to and for the benefit of the Owner that it understands the goods and services under this Agreement are being funded with monies made available by federal funding programs that have statutory requirements commonly known as “American Iron and Steel;” that requires all of the iron and steel products used in the project to be produced in the United States (“American Iron and Steel Requirement”) including iron and steel products provided by the Contactor pursuant to this Agreement. The Contractor hereby represents and warrants to and for the benefit of the Owner that:

- (a) the Contractor has reviewed and understands the American Iron and Steel Requirement,
- (b) all of the iron and steel products used in the project will be and/or have been produced in the United States in a manner that complies with the American Iron and Steel Requirement, unless a waiver of the requirement is approved, and
- (c) the Contractor will provide any further verified information, certification or assurance of compliance with this paragraph, or information necessary to support a waiver of the American Iron and Steel Requirement, as may be requested by the Owner or the State. Notwithstanding any other provision of this Agreement, any failure to comply with this paragraph by the Contractor shall permit the Owner to recover as damages against the Contractor any loss, expense, or cost (including without limitation attorney’s fees) incurred by the Owner resulting from any such failure (including without limitation any impairment or loss of funding, whether in whole or in part, from the State or any damages owed to the State by the Owner). While the Contractor has no direct contractual privity with the State, as a lender to the Owner for the funding of its project, the Owner and the Contractor agree that the State is a third-party beneficiary and neither this paragraph (nor any other provision of this Agreement necessary to give this paragraph force or effect) shall be amended or waived without the prior written consent of the State.

**PROPOSED
WATER SYSTEM IMPROVEMENTS
FOR THE
ENLARGED HEPZIBAH PUBLIC SERVICE DISTRICT
HARRISON COUNTY, WEST VIRGINIA
THRASHER PROJECT #010-01231**

A two envelope system will be used. Envelope No. 1 will be opened first and the Bid Opening Requirement items checked for compliance, as outlined on this page. If such documents are found to be in order, sealed Envelope No. 2 “Bid Proposal”, which shall also be placed inside of Envelope #1, will then be opened and will be publicly read aloud. If the documents required to be contained in Envelope No. 1 are not in order, Envelope No. 2 “Bid Proposal” will not be opened and the Bid will be considered non-responsive and will be returned to the Bidder. At that time, the Owner will declare the Bidder non-responsive

BID OPENING REQUIREMENT CHECKLIST

Item	Completed Satisfactory (Check if completed)
1. Bid submitted on time	_____
2. Bid Bond (Sample BOR-2 & 3)	_____
3. Certification of receipt of all addenda to Plans and Specifications (BOR-4)	_____
4. West Virginia Code §21-1D-5 Drug Free Workplace Conformance Affidavit (BOR-5 & 6)	_____
5. American Iron and Steel Requirement (BOR-7)	_____
6. Disadvantaged (Small, Minority, and Women’s) Business Enterprises Certification (BOR 8-11)	_____
7. Copy of Contractor's License included.	_____

BID BOND

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

BIDDER (*Name and Address*):

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

OWNER (*Name and Address*):

Enlarged Hepzibah Public Service District
Drawer H
Hepzibah, WV 26369

BID

Bid Due Date:
Description: Water System Improvements

BOND

Bond Number:
Date:
Penal sum

_____ \$ _____
(Words) (Figures)

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

BIDDER

SURETY

Bidder's Name and Corporate Seal (Seal)

Surety's Name and Corporate Seal (Seal)

By: _____
Signature

Print Name

Title

Attest: _____
Signature

Title

By: _____
Signature (Attach Power of Attorney)

Print Name

Title

Attest: _____
Signature

Title

*Note: Addresses are to be used for giving any required notice.
Provide execution by any additional parties, such as joint venturers, if necessary.*

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

**PROPOSED
WATER SYSTEM IMPROVEMENTS**

FOR THE

**ENLARGED HEPZIBAH PUBLIC SERVICE DISTRICT
HARRISON COUNTY, WEST VIRGINIA**

Certification of Receipt of Addenda

In submitting this Bid, Bidder represents, as more fully set forth in the Agreement, that:

(a) Bidder has examined copies of all the Contract Documents and the following addenda:

Date

Number

Signature

Date

Name and Title of Signer
(Please Type)

To Be Submitted in Envelope No. 1
Item No. 3 on Checklist

WEST VIRGINIA CODE 21-1D-5 PROVIDES THAT ANY SOLICITATION FOR A PUBLIC IMPROVEMENT CONSTRUCTION CONTRACT REQUIRES EACH VENDOR THAT SUBMITS A BID FOR THE WORK TO SUBMIT AT THE SAME TIME AN AFFIDAVIT OF COMPLIANCE WITH THE BID. THE ENCLOSED DRUG-FREE WORKPLACE AFFIDAVIT MUST BE SIGNED AND SUBMITTED IN THE FIRST ENVELOPE AS EVIDENCE OF THE VENDOR'S COMPLIANCE WITH THE PROVISIONS OF ARTICLE 1D, CHAPTER 21 OF THE WEST VIRGINIA CODE. FAILURE TO SUBMIT THE SIGNED DRUG-FREE WORKPLACE AFFIDAVIT IN THE FIRST ENVELOPE SHALL RESULT IN DISQUALIFICATION OF SUCH BID.



**State of West Virginia
DRUG FREE WORKPLACE CONFORMANCE AFFIDAVIT
West Virginia Code §21-1D-5**

STATE OF WEST VIRGINIA,

COUNTY OF _____, TO-WIT:

I, _____, after being first duly sworn, depose and state as follows:

1. I am an employee of _____; and,
(Company Name)

2. I do hereby attest that _____
(Company Name)

maintains a valid written drug free workplace policy and that such policy is in compliance with **West Virginia Code** §21-1D.

The above statements are sworn to under the penalty of perjury.

By: _____

Title: _____

Company Name: _____

Date: _____

Taken, subscribed and sworn to before me this _____ day of _____, _____.

By Commission expires _____

(Seal)

(Notary Public)

THIS AFFIDAVIT MUST BE SUBMITTED WITH THE BID IN ORDER TO COMPLY WITH WV CODE PROVISIONS. FAILURE TO INCLUDE THE AFFIDAVIT WITH THE BID SHALL RESULT IN DISQUALIFICATION OF THE BID.

CONTRACTOR'S
AMERICAN IRON AND STEEL
CERTIFICATION

As the contractor for the Enlarged Hepzibah Public Service District Water System Improvements project, I certify that I have read, understand and will comply with the “American Iron and Steel (AIS)” requirements of section 436 of P.L. 113-76, Consolidated Appropriations Act, 2014 (Act) that requires federal funding assistance recipients to use iron and steel products that are produced in the United States for projects for the construction, alteration, maintenance, or repair of a public water system or treatment works.

Name (Printed)

Company

Name (Signature)

Date

DISADVANTAGED BUSINESS ENTERPRISE (DBE) UTILIZATION

REQUIREMENT

EPA Federal regulation 40 CFR Part 33 – Procurement Under Assistance Agreements stated that loan recipients and contractors must comply with the six affirmative steps as outlined in 33.240, and any other requirements of the State.

DEFINITIONS

Procurement is the acquisition through order, purchase, lease or barter of supplies, equipment, construction or services needed to accomplish Federal assistance programs.

Disadvantaged business enterprises (DBE) are comprised of minority, women, and small business enterprises.

A minority business enterprise (MBE) is a business concern that is (1) at least 51 percent owned by one or more minority individuals, or, in the case of a publicly owned business, at least 51 percent of the stock is owned by one or more minority individuals and (2) whose daily business operations are managed and directed by one or more minority owners.

U.S. citizenship is required. Recipients shall presume that minority individuals include Black Americans, Hispanic Americans, Native Americans, Asian Pacific Americans, or other groups whose members are found to be disadvantaged by the Small Business Act or by the Secretary of Commerce under Section 5 of Executive Order 11625.

A woman business enterprise (WBE) is a business concern that is (1) at least 51 percent owned by one or more women, or in the case of a publicly owned business, at least 51 percent of the stock is owned by one or more women and (2) whose daily business operations are managed and directed by one or more women owners.

Business firms which are 51 percent owned by minorities or women, but are in fact managed and operated by non-minority individuals do not qualify for meeting DBE procurement goals.

A Subcontract includes all construction, modification, and service work contracted for by the bidder in the execution of the work under this contract.

AFFIRMATIVE STEPS

Recipients shall ensure, to the fullest extent possible, that positive efforts are made to utilize small businesses, including those in rural areas, minority-owned firms, and women-owned business enterprises. To accomplish this goal, contractors must demonstrate positive efforts to comply with the following six (6) affirmative steps:

1. Ensure that small businesses, minority-owned firms, and women-owned business enterprises are used to the fullest extent practicable.
2. Make information available on forthcoming opportunities and arrange time frames for purchases and contracts to encourage and facilitate participation by small businesses, minority-owned firms, and women-owned business enterprises.
3. Consider in the contract process whether firms competing for larger contracts intend to subcontract with small businesses, minority-owned firms, and women-owned business enterprises. Where feasible divide total requirements into smaller tasks to permit maximum participation by small businesses, minority-owned firms, and women-owned business enterprises.
4. Establish delivery schedules which encourage participation by small businesses, minority-owned firms, and women-owned business enterprises.
5. A preferred list of DBE firms must be obtained from one of the sources listed below:
SOURCE FOR ENGINEERING CONSULTANTS AND CONSTRUCTION SERVICES:
WV DOH website:
 - <http://www.transportation.wv.gov/eo/DBE/Pages/DBEContractorListing.aspx>
 - <https://transportation.wv.gov/crc/DBE/Pages/default.aspx>**SOURCE FOR ALL OTHER PROFESSIONAL SERVICES:**
Central Contractor Registration website: <https://www.dol.gov/general/business-ccr>
6. If the contractor awards sub-agreements, require the subcontractor to comply with steps (1) through (5) of this section.

FAIR SHARE GOALS

The bidder agrees that he/she shall make “positive efforts” to subcontract at least 7% (2% MBE/5% WBE) of the total value of the contract. The fair share objective shall be obtained in conformance with the six (6) affirmative steps as outlined.

SPECIFIC POSITIVE EFFORTS

The bidder’s commitment to the fair share for MBE/WBE business participation constitutes a commitment that it will make positive efforts to meet the fair share. No bidder shall be found to be in noncompliance solely on the account of failure to meet the fair share objective.

Bidders which fail to achieve the fair share and fail to make positive efforts to achieve the fair share may have their bids rejected as non-responsive. Bidders must demonstrate their positive efforts by documentation which includes at least the following:

Documentation of the “affirmative steps” efforts shall include at least the following:

1. Documentation of efforts to solicit the participation of DBE firms. These efforts should include a list of firms contacted, copies of solicitation letters, copies of legal advertisements, etc.
2. Documentation of whether any offers were received from DBE firms.
3. Follow-up letters, phone logs, etc. to determine why no interest was shown in bidding.
4. When MBE/WBE/DBE firm proposal is utilized, include the following:
 - Name of firm
 - Address
 - Telephone number
 - Contact person
 - Type of firm (MBE/WBE/DBE)
 - Type of service(s) provided
 - Amount of subcontract
5. If MBE/WBE/DBE firm making a proposal is not utilized, an explanation as to why a contract is not to be awarded shall be provided.
6. Provide additional information which documents bidder’s assurances that positive steps were taken to comply with the six (6) affirmative steps.

The above documentation shall be submitted to the project engineer within seven (7) calendar days after the bid opening. If this documentation is not submitted within seven (7) calendar days, or if submitted incomplete, the contractor will be declared non-responsive at that time.

The attached SRF MBE/WBE/DBE Certification shall be signed by the contractor’s designated person and included in the first envelope of the two-envelope bid.

Upon contract award, the contractor is required to submit the SRF Subcontracting Tracking form **monthly** until the contract is complete. Reports are still required when there is no subcontracting activity. Any contractor that does not submit the subcontracting form with their invoices should not be reimbursed for costs included on that invoice until they submit the form.

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 – DEFINITIONS AND TERMINOLOGY

SC-1.01 *Defined Terms*

- 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.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.

- 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 the Engineer. Extreme or unusual weather that is typical for a given region, elevation, or season should not be considered Abnormal Weather Conditions.

ARTICLE 2 – PRELIMINARY MATTERS

SC-2.01 Delivery of Bonds and Evidence of Insurance

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.**

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

ARTICLE 4 - COMMENCEMENT AND PROGRESS OF THE WORK

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 sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the contractor, whichever date is earlier.

SC-4.05.C2. Amend Paragraph 4.05.C.2 by striking out the following text: “abnormal weather conditions;” and inserting the following text:

Abnormal Weather Conditions;

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

SC-5.03 Subsurface and Physical Conditions

SC 5.03 Delete Paragraphs 5.03.A and 5.03.B in their entirety and insert the following:

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

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 6 – BONDS AND INSURANCE

SC-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.

SC-6.03 Contractor’s 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 \$ N/A

Bodily injury by disease, aggregate \$ N/A

Employer’s Liability:

Bodily injury, each accident \$ 500,000

Bodily injury by disease, each employee \$ 500,000

Bodily injury/disease aggregate \$ 500,000

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:

\$ N/A

Foreign voluntary worker compensation Statutory

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

General Aggregate	\$ <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>1,000,000</u>
Each accident	\$ <u>1,000,000</u>

Property Damage:

Each accident	\$ <u>1,000,000</u>
---------------	---------------------

[or]

Combined Single Limit of	\$ <u>1,000,000</u>
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4. **Excess or Umbrella Liability:**

Per Occurrence	\$ <u>3,000,000</u>
General Aggregate	\$ <u>3,000,000</u>

5. **Contractor's Pollution Liability:**

Each Occurrence	\$ <u>N/A</u>
General Aggregate	\$ <u>N/A</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:** Funding agency and Regional Planning and Development Council.

7. **Contractor's Professional Liability:**

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

SC-6.05 Property Insurance

SC-6.05.A.1 Add the following new subparagraph after subparagraph 6.05.A.1:

- a. **In addition to Owner, Contractor, and all Subcontractors, include as insureds the following: Engineer**

SC-6.05.A. Add the following to the list of items in Paragraph 6.05.A, as numbered items:

15. **include for the benefit of Owner loss of profits and soft cost coverage including, without limitation, fixed expenses and debt service for a minimum of 12 months with a maximum deductible of 30 days, plus attorneys fees and engineering or other consultants' fees, if not otherwise covered;**
16. **include, in addition to the Contract Price amount, the value of the following equipment and materials to be installed by the Contractor but furnished by the Owner or third parties:**
 - a. None
 - b. None
17. **include by express endorsement coverage of damage to Contractor's equipment.**

ARTICLE 7 – CONTRACTOR'S RESPONSIBILITIES

SC-7.02 Labor; Working Hours

SC-7.02.B. Amend the first and second sentences of Paragraph 7.02.B to state "...all Work at the Site shall be performed during regular working hours, 6:00 a.m. through 6:00 p.m. Contractor will not perform Work on a Saturday, Sunday, or any state or federal holiday. No Work shall be performed the week of Thanksgiving or Christmas without permission from the Engineer."

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), without prior written approval of the Owner.

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".

SC-7.09 Taxes

SC 7.09 Add a new paragraph immediately after Paragraph 7.09.A:

- B. **If the Owner is a public entity, Owner is exempt from payment of sales and compensating use taxes of the State of West Virginia and of cities and counties thereof on all materials to be incorporated into the Work.**
 1. **Owner will furnish the required certificates of tax exemption to Contractor for use in the purchase of supplies and materials to be incorporated into the Work.**

2. Contractor may be required to pay taxes when purchasing supplies and material, and subsequently be reimbursed through the State Tax Department.
3. Owner's exemption does not apply to construction tools, machinery, equipment, or other property purchased by or leased by Contractor, or to supplies or materials not incorporated into the Work.

SC-7.12 Safety and Protection

SC-7.12 Insert the following after the second sentence of Paragraph 7.12.C:

The following Owner safety programs are applicable to the Work: None.

ARTICLE 10 – ENGINEER'S STATUS DURING CONSTRUCTION

SC-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.
- D. A Listing of the Duties, Responsibilities, and Limitations of Authority of the Project Representative is attached to these Supplementary Conditions as Attachment A.

ARTICLE 11 - Amending the Contract Documents; Changes in the Work

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

All Contract Change Orders must be concurred in by Agency before they are effective.

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

SC-13.01 Cost of the Work

SC 13.01.B.5.c Delete Paragraph 13.01.B.5.c in its entirety and insert the following in its place:

- c. **Construction Equipment and Machinery:**
 - 1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
 - 2) Costs for equipment and machinery owned by Contractor will be paid at a rate shown for such equipment in rate books generally recognized as the industry standard for said equipment and machinery. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs. Costs will include the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, shall cease to accrue when the use thereof is no longer necessary for the changed Work. Equipment or machinery with a value of less than \$1,000 will be considered small tools.

EJCDC® C-800 (Rev. 1), Guide to the Preparation of Supplementary Conditions.

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SC-13.02 Allowances

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

[Deleted]

SC-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 5 percent or more of the Contract Price (based on estimated quantities at the time of Contract formation) and the variation in the quantity of that particular item of Unit Price Work actually furnished or performed by Contractor differs by more than 25 percent from the 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 – PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

SC-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.2 The Affidavit for Payment is provided in Attachment E to these Supplementary Conditions.**
- SC-15.01.B.3 Add the following language at the end of 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 The Application for Payment form to be used on this Project is EJCDC C-620. 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 be

due thirty (30) 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.”

SC-15.03 Substantial Completion

SC 15.03.B Add the following new subparagraph to Paragraph 15.03.B:

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

ARTICLE 17 – FINAL RESOLUTION OF DISPUTES - [DELETED]

ARTICLE 18 – MISCELLANEOUS

SC-18.09 Permits

SC 18.09 Add the following:

- A. The permits obtained by the Engineer on behalf of the Owner and by the Owner are ~~included in these Contract Documents and Detailed Specifications~~ available upon request. It shall be the responsibility of the Contractor to adhere to all of the requirements of these permits. Failure to do so may result in fines and/or penalties by/from the agencies having jurisdiction. Such fines shall be solely the responsibility of the Contractor.
- B. All other permits and licenses shall be the responsibility of the Contractor.
- C. The Owner will pay all West Virginia Division of Highways bonding and inspection fees.
- D. The Owner will pay all utility service and connection fees unless otherwise indicated in the Drawings.

SC-18.10 Warranty Period

SC 18.10 Add the following:

- A. The Contractor shall warrant and guarantee that all Work under this Contract shall not be defective for a period of one (1) year from the date of final acceptance by the Owner.
- B. Other product specific warranties may be required under other Sections of these Specifications.

SC-18.11 Existing Utilities

SC 18.11 Add the following:

- A. All underground and above ground utilities depicted in the Drawings are shown at approximate locations based on the best available information. Exact locations, depths, materials, and sizes of all existing and/or private utilities shall be verified in the field by the Contractor with a representative of the appropriate public and/or private entity.**
- B. The Contractor shall notify Miss Utility at 1-800-245-4848 or 811 or WV811.com and shall have all utilities marked in the project area prior to commencing excavation. See the flier included as Attachment B to these Supplementary Conditions.**
- C. There shall be no additional compensation for the inconvenience or delay resulting from having to work around existing facilities either shown in the Drawings or not shown in the Drawings and discovered during construction.**

SC-18.12 Project Sign

SC 18.12 Add the following:

- A. The Contractor shall provide and install a project sign in accordance with the detail provided as Attachment C to these Supplementary Conditions.**
- B. The project sign(s) shall be approved by the Engineer prior to fabrication and installation.**
- C. The location of the project sign(s) shall be as directed by the Owner.**
- D. The Contractor shall maintain the project sign(s) until project acceptance by the Owner.**
- E. Two (2) project signs will be required. One (1) sign shall be placed at the northernmost section of the project and one (1) shall be placed at the southernmost section of the project.**

SC-18.13 Abnormal Weather Conditions Monthly Calculation Sheet

SC 18.13 Add the following:

- A. The Abnormal Weather Conditions Monthly Calculation Sheet is provided in Attachment D to these Supplementary Conditions. It shall be completed, signed, and attached to and submitted with each and every Application for Payment, whether Abnormal Weather Condition days are experienced or not.**
- B. No Application for Payment will be considered without inclusion of the Abnormal Weather Conditions Monthly Calculation Sheet.**

SC-18.14 Affidavit

SC-18.14 Add the following:

- A. The Contractor shall provide a notarized copy of the Affidavit of Payment, provided as Attachment E, with each pay application**
- B. No Application for Payment will be considered after Contractor receives its**

first payment without inclusion of the Affidavit.

ARTICLE 19 – FEDERAL REQUIREMENTS

SC-19.01 *Debarment and Suspension (Executive Orders 12549 and 12689)*

SC-19.01 Add the following:

- A. A contract award (see 2 CFR 180.220) must not be made to parties listed on the governmentwide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), “Debarment and Suspension.” SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.

SC-19.02 *American Iron and Steel*

SC-19.02 Add the following:

- A. Section 436 of P.L. 113-76, Consolidated Appropriations Act, 2014 (Act) that requires federal funding recipients and subsequent statutes mandating domestic preference applies an American Iron and Steel requirement to this project. All iron and steel products used in this project must be produced in the United States for projects for the construction, alteration, maintenance, or repair of a public water system or treatment works. The term “iron and steel products” means the following products made primarily of 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.

SC-19.03 *Small, Minority and Women’s Businesses*

SC-19.03 Add the following:

- A. If Contractor intends to let any subcontracts for a portion of the work, Contractor will take all necessary affirmative steps to assure that minority businesses, women's business enterprises, and labor surplus area firms are used when possible. Affirmative steps will include:
 - 1. Placing qualified small and minority businesses and women's business enterprises on solicitation lists;
 - 2. Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;
 - 3. Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises;

4. **Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises;**
5. **Using the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce.**

SC-19.04 *Environmental Requirements*

SC-19.04 Add the following:

- 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 (Standard Flood Hazard Area) 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 - Applicants shall ensure that Contractors maintain a copy of the following inadvertent discovery plan onsite for review:**
 - a. **If during the course of any ground disturbance related to any Project, any post review discovery, including but not limited to, any artifacts, foundations, or other indications of past human occupation of the area are uncovered, shall be protected by complying with 36 CFR § 800.13(b)(3) and (c) and shall include the following:**
 - i. **All Work, including vehicular traffic, shall immediately stop within a 50 ft. radius around the area of discovery. The Contractor shall ensure barriers are established to protect the area of discovery and notify the Engineer to contact the appropriate Personnel. The Engineer shall engage a Secretary of the Interior (SOI) qualified professional archeologist to quickly assess the nature and scope of the discovery; implement interim measures to protect the discovery from looting and vandalism; and establish broader barriers if further historic and/or precontact properties, can reasonably be expected to occur.**
 - ii. **The Personnel shall notify the appropriate RD environmental staff member, the Federal Preservation Officer (FPO), and State Historic Preservation Office (SHPO) immediately. Indian tribe(s) or Native Hawaiian Organization (NHOs) that have an interest in the area of discovery shall be contacted immediately.**

The SHPO may require additional tribes or NHOs who may have an interest in the area of discovery also be contacted. The notification shall include an assessment of the discovery provided by the SOI qualified professional archeologist.

iii. When the discovery contains burial sites or human remains, the Contractor shall immediately notify the appropriate personnel who will contact the environmental staff member, FPO, and the SHPO. The relevant law enforcement authorities shall be immediately contacted by onsite personnel to reduce delay times, in accordance with tribal, state, or local laws including 36 CFR Part 800.13; 43 CFR Part 10, Subpart B; and the Advisory Council on Historic Preservation's Policy Statement Regarding treatment of Burial Sites, Human Remains, or Funerary Objects (February 23, 2007).

iv. When the discovery contains burial sites or human remains, all construction activities, including vehicular traffic shall stop within a 100 ft. radius of the discovery and barriers shall be established. The evaluation of human remains shall be conducted at the site of discovery by a SOI qualified professional. Remains that have been removed from their primary context and where that context may be in question may be retained in a secure location, pending further decisions on treatment and disposition. The radius may expand based on the SOI professional's assessment of the discovery and establish broader barriers if further subsurface burial sites, or human remains can reasonably be expected to occur. In consultation with the SHPO and interested tribes or NHOs, a plan shall be developed for the treatment of native human remains.

v. Work may continue in other areas of the undertaking where no historic properties, burial sites, or human remains are present. If the inadvertent discovery appears to be a consequence of illegal activity such as looting, the onsite personnel shall contact the appropriate legal authorities immediately if the landowner has not already done so.

vi. Work may not resume in the area of the discovery until a notice to proceed has been issued. A notice to proceed shall not be issued until it has been determined that the appropriate local protocols and consulting parties have been consulted.

vii. Inadvertent discoveries on federal and tribal land shall follow the processes required by the federal or tribal entity.

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

Revised per Addendum #2
September 27, 2022
**notification process and further directions issued by Agency after
consultation with the U.S. Fish and Wildlife Service.**

American Iron and Steel Requirement P.L. 113-76, Section 436

P.L. 113-76, Consolidated Appropriations Act, 2014 (Act), includes an “American Iron and Steel (AIS)” requirement in section 436 that requires federal funding assistance recipients to use iron and steel products that are produced in the United States for projects for the construction, alteration, maintenance, or repair of a public water system or treatment works.

The Act states:

Sec. 436. (a)(1) None of the funds made available by a State water pollution control revolving fund as authorized by title VI of the Federal Water Pollution Control Act (33 U.S.C. 1381 et seq.) or made available by a drinking water treatment revolving loan fund as authorized by section 1452 of the Safe Drinking Water Act (42 U.S.C. 300j-12) shall be used for a project for the construction, alteration, maintenance, or repair of a public water system or treatment works unless all of the iron and steel products used in the project are produced in the United States.

(2) In this section, the term “iron and steel products” means the following products made primarily of 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.

(b) Subsection (a) shall not apply in any case or category of cases in which the Administrator of the Environmental Protection Agency (in this section referred to as the “Administrator”) finds that—

(1) applying subsection (a) would be inconsistent with the public interest;

(2) iron and steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality; or

(3) inclusion of iron and steel products produced in the United States will increase the cost of the overall project by more than 25 percent.

(c) If the Administrator receives a request for a waiver under this section, the Administrator shall make available to the public on an informal basis a copy of the request and information available to the Administrator concerning the request, and shall allow for informal public input on the request for at least 15 days prior to making a finding based on the request. The Administrator shall make the request and accompanying information available by electronic means, including on the official public Internet Web site of the Environmental Protection Agency.

(d) This section shall be applied in a manner consistent with United States obligations under international agreements.

(e) The Administrator may retain up to 0.25 percent of the funds appropriated in this Act for the Clean and Drinking Water State Revolving Funds for carrying out the provisions described in subsection (a)(1) for management and oversight of the requirements of this section.

(f) This section does not apply with respect to a project if a State agency approves the engineering plans and specifications for the project, in that agency's capacity to approve such plans and specifications prior to a project requesting bids, prior to the date of the enactment of this Act.

The following guidance excerpt has been provided from EPA:

(Complete guidance may be downloaded from: <https://www.epa.gov/cwsrf/state-revolving-fund-american-iron-and-steel-ais-requirement>)

Covered Iron and Steel Products

11) What is an iron or steel product?

Projects that must comply with the AIS requirement, an iron or steel product is one of the following made primarily of iron or steel that is permanently incorporated into the public water system or treatment works:

- Lined or unlined pipes or fittings;
- Manhole Covers;
- Municipal Castings (defined in more detail below);
- Hydrants;
- Tanks;
- Flanges;
- Pipe clamps and restraints;
- Valves;
- Structural steel (defined in more detail below);
- Reinforced precast concrete; and
- Construction materials (defined in more detail below).

12) What does the term 'primarily iron or steel' mean?

'Primarily iron or steel' places constraints on the list of products above. For one of the listed products to be considered subject to the AIS requirements, it must be made of greater than 50% iron or steel, measured by cost. The cost should be based on the material costs.

13) Can you provide an example of how to perform a cost determination?

For example, the iron portion of a fire hydrant would likely be the bonnet, body and shoe, and the cost then would include the pouring and casting to create those components. The other material costs would include non-iron and steel internal workings of the fire hydrant (i.e., stem, coupling, valve, seals, etc.). However, the assembly of the internal workings into the hydrant body would not be included in this cost calculation. If one of the listed products is not made primarily of iron or steel, United States (US) provenance is not required. An exception to this definition is reinforced precast concrete, which is addressed in a later question.

14) If a product is composed of more than 50% iron or steel, but is not listed in the above list of items, must the item be produced in the US? Alternatively, must the iron or steel in such a product be produced in the US?

The answer to both question is no. Only items on the above list must be produced in the US. Additionally, the iron or steel in a non-listed item can be sourced from outside the US.

15) What is the definition of steel?

Steel means an alloy that includes at least 50 percent iron, between .02 and 2 percent carbon, and may include other elements. Metallic elements such as chromium, nickel, molybdenum, manganese, and silicon may be added during the melting of steel for the purpose of enhancing properties such as corrosion resistance, hardness, or strength. The definition of steel covers carbon steel, alloy steel, stainless steel, tool steel and other specialty steels.

16) What does ‘produced in the United States’ mean?

Production in the United States of the iron or steel products used in the project requires that all manufacturing processes, including application of coatings, must take place in the United States, with the exception of metallurgical processes involving refinement of steel additives. All manufacturing processes includes processes such as melting, refining, forming, rolling, drawing, finishing, fabricating and coating. Further, if a domestic iron and steel product is taken out of the US for any part of the manufacturing process, it becomes foreign source material. However, raw materials such as iron ore, limestone and iron and steel scrap are not covered by the AIS requirement, and the material(s), if any, being applied as a coating are similarly not covered. Non-iron or steel components of an iron and steel product may come from non-US sources. For example, for products such as valves and hydrants, the individual non-iron and steel components do not have to be of domestic origin.

17) Are the raw materials used in the production of iron or steel required to come from US sources?

No. Raw materials, such as iron ore, limestone, scrap iron, and scrap steel, can come from non-US sources.

18) If an above listed item is primarily made of iron or steel, but is only at the construction site temporarily, must such an item be produced in the US?

No. Only the above listed products made primarily of iron or steel, permanently incorporated into the project must be produced in the US. For example trench boxes, scaffolding or equipment, which are removed from the project site upon completion of the project, are not required to be made of U.S. Iron or Steel.

19) What is the definition of ‘municipal castings’?

Municipal castings are cast iron or steel infrastructure products that are melted and cast. They typically provide access, protection, or housing for components incorporated into utility owned drinking water, storm water, wastewater, and surface infrastructure. They are typically made of grey or ductile iron, or steel.

Examples of municipal castings are:

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 and 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; and
Valve Boxes, Covers and Risers.

20) What is ‘structural steel’?

Structural steel is rolled flanged shapes, having at least one dimension of their cross-section three inches or greater, which are used in the construction of bridges, buildings, ships, railroad rolling stock, and for numerous other constructional purposes. Such shapes are designated as wide-flange shapes, standard I-beams, channels, angles, tees and zees. Other shapes include H-piles, sheet piling, tie plates, cross ties, and those for other special purposes.

21) What is a ‘construction material’ for purposes of the AIS requirement?

Construction materials are those articles, materials, or supplies made primarily of iron and steel, that are permanently incorporated into the project, not including mechanical and/or electrical components, equipment and systems. Some of these products may overlap with what is also considered “structural steel”. This includes, but is not limited to, the following products: 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, and stationary screens.

22) What is not considered a ‘construction material’ for purposes of the AIS requirement?

Mechanical and electrical components, equipment and systems are not considered construction materials. Mechanical equipment is typically that which has motorized parts and/or is powered by a motor. Electrical equipment is typically any machine powered by electricity and includes components that are part of the electrical distribution system. The following examples (including their appurtenances necessary for their intended use and operation) are NOT considered construction materials: pumps, motors, gear reducers, drives (including variable frequency drives (VFDs)), electric/pneumatic/manual accessories used to operate valves (such as electric valve actuators), mixers, gates, motorized screens (such as traveling screens), blowers/aeration equipment, compressors, meters, sensors, controls and switches, supervisory control and data acquisition (SCADA), membrane bioreactor systems, membrane filtration systems, filters, clarifiers and clarifier mechanisms, rakes, grinders, disinfection systems, presses (including belt presses), conveyors, cranes, HVAC (excluding ductwork), water heaters, heat exchangers, generators, cabinetry and housings (such as electrical boxes/enclosures), lighting fixtures, electrical conduit, emergency life systems, metal office furniture, shelving, laboratory equipment, analytical instrumentation, and dewatering equipment.

23) If the iron or steel is produced in the US, may other steps in the manufacturing process take place outside of the US, such as assembly?

No. Production in the US of the iron or steel used in a listed product requires that all manufacturing processes must take place in the United States, except metallurgical processes involving refinement of steel additives.

24) What processes must occur in the US to be compliant with the AIS requirement for reinforced precast concrete?

While reinforced precast concrete may not be at least 50% iron or steel, in this particular case, the reinforcing bar and wire must be produced in the US and meet the same standards as for any other iron or steel product. Additionally, the casting of the concrete product must take place in the US. The cement and other raw materials used in concrete production are not required to be of domestic origin.

If the reinforced concrete is cast at the construction site, the reinforcing bar and wire are considered to be a construction material and must be produced in the US.

Certification and Compliance

The attached “Contractor’s American Iron and Steel Certification” must be executed and included in Envelope 1 of the bid package. Failure to complete the certification will result in Envelope 2 remaining sealed and the bid being returned. The contractor will supply to the loan recipient manufacturers’ certifications for each iron and steel item documenting/asserting that all manufacturing processes occurred in the United States. Such certifications will be submitted with shop drawings, and must include the following key items:

1. Specific project reference.
2. Specific list of products.
3. Location of manufacturing (city and state).
4. EPA’s AIS Requirement reference.
5. Signature of company representative.
6. **If a product has multiple manufacturers**, AIS Step Certifications are required that list which step(s) were completed by each manufacturer, in addition to the items listed above.

For additional information on the EPA’s AIS Requirements and examples of manufacturers’ AIS certifications, please see the following links:

- EPA’s AIS website <https://www.epa.gov/cwsrf/state-revolving-fund-american-iron-and-steel-ais-requirement>
- EPA’s webinar “AIS Requirements for State Revolving Funds – AIS Certification Letters” https://www.epa.gov/sites/production/files/2020-08/documents/lunch_and_learn_certification_letters_july_2020.pdf

Waiver Process

The statute permits EPA to issue waivers for a case or category of cases where EPA finds (1) that applying these requirements would be inconsistent with the public interest; (2) iron and steel products are not produced in the US in sufficient and reasonably available quantities and of a satisfactory quality; or (3) inclusion of iron and steel products produced in the US will increase the cost of the overall project by more than 25 percent.

In order to implement the AIS requirements, EPA has developed an approach to allow for effective and efficient implementation of the waiver process to allow projects to proceed in a timely manner. The framework is described in the guidance document found at: <https://www.epa.gov/cwsrf/american-iron-and-steel-requirement-waiver-process>

Approved and denied waivers may be reviewed at: <https://www.epa.gov/cwsrf/american-iron-and-steel-requirement-approved-project-waivers> and <https://www.epa.gov/cwsrf/american-iron-and-steel-requirement-withdrawn-or-denied-waivers>

De Minimis Materials Waiver

The EPA has granted a nationwide waiver of the AIS requirements of the Consolidated Appropriations Act under the authority of Section 436(b)(1) (public interest waiver) for de minimis incidental components of eligible infrastructure projects. For many of these incidental components, the country of manufacture and the availability of alternatives is not always readily or reasonably identifiable prior to procurement in the normal course of business; for other incidental components, the country of manufacture may be known but the miscellaneous character in conjunction with the low cost, individually and (in total) as typically procured in bulk, mark them as properly incidental. Examples of incidental components could include small washers, screws, fasteners (i.e., nuts and bolts), miscellaneous wire, corner bead, ancillary tube, etc. Examples of items that are clearly not incidental include significant process fittings (i.e., tees, elbows, flanges, and brackets), distribution system fittings and valves, force main valves, pipes for sewer collection and/or water distribution, treatment and storage tanks, large structural support structures, etc.

Funds used for such de minimis incidental components cumulatively may comprise no more than a total of 5 percent of the total cost of the total materials used in and incorporated into a project; the cost of an individual item may not exceed 1 percent of the total cost of the total materials used in and incorporated into a project. Contractors who wish to use this waiver should determine the costs of all items installed or supplied for the project. The contractor must retain relevant documentation (i.e., invoices) for each of these items in their project files, and must summarize the items in monthly draw requests to the owner: the total cost of all materials, the total cost of “incidental” materials, and the calculations by which they determined the percentage of incidental products installed or supplied for the project. None of the products specifically listed as “Covered Iron and Steel Products” are incidental. None of the products identified in detail in the technical specifications are considered incidental.

Construction Contract Language

All contracts must have a clause requiring compliance with the AIS requirements of the Act. The following is an example of what could be included in all contracts in projects that use federal funds. No claim regarding the legality of this clause with regard to federal, state or local laws is made.

The Contractor acknowledges to and for the benefit of__ (“Owner”) that it understands the goods and services under this Agreement are being funded with monies made available by federal funding programs that have statutory requirements commonly known as “American Iron and Steel;” that requires all of the iron and steel products used in the project to be produced in the United States (“American Iron and Steel Requirement”) including iron and steel products provided by the Contactor pursuant to this Agreement. The Contractor hereby represents and warrants to and for the benefit of the Owner that (a) the Contractor has reviewed and understands the American Iron and Steel Requirement, (b) all of the iron and steel products used in the project will be and/or have been produced in the United States in a manner that complies with the American Iron and Steel Requirement, unless a waiver of the requirement is approved, and (c) the Contractor will provide any further verified information, certification or assurance of compliance with this paragraph, or information necessary to support a waiver of the American Iron and Steel Requirement, as may be requested by the Owner or the State. Notwithstanding any other provision of this Agreement, any failure to comply with this paragraph by the Contractor shall permit the Owner to recover as damages against the Contractor any loss, expense, or cost (including without limitation attorney’s fees) incurred by the Owner resulting from any such failure (including without limitation any impairment or loss of funding, whether in whole or in part, from the State or any damages owed to the State by the Owner). While the Contractor has no direct contractual privity with the State, as a lender to the Owner for the funding of its project, the Owner and the Contractor agree that the State is a third-party beneficiary and neither this paragraph (nor any other provision of this Agreement necessary to give this paragraph force or effect) shall be amended or waived without the prior written consent of the State.

CONTRACTOR'S
AMERICAN IRON AND STEEL
CERTIFICATION

As the contractor for the _____
project, I certify that I have read, understand and will comply with the “American Iron and Steel (AIS)” requirements of section 436 of P.L. 113-76, Consolidated Appropriations Act, 2014 (Act) that requires federal funding assistance recipients to use iron and steel products that are produced in the United States for projects for the construction, alteration, maintenance, or repair of a public water system or treatment works.

Name (Printed)

Company

Name (Signature)

Date

De Minimis Log

The following information is provided as a sample De Minimis log for AIS compliance. The TWDB makes no claims regarding the legality of the De Minimis log with respect to AIS compliance.

Figure 1 - Information contained in the log example: Owner Name, Project Name, TWDB SRF Number, Contractor Name, Total Project Cost, Total Material Cost followed by data entered for each of the following categories: Item Number, Iron or Steel Product, Unit Cost, Quantity, Total Cost, Percent of Total Material Cost Less Than One Percent, Cumulative Cost, Percent of Total Material Cost Less Than Five Percent.

American Iron and Steel
de minimis log

Owner Name: City
Project Name: CID 01 - Project
TWDB SRF No.: #####
Contractor Name: Contractor

Total Project Cost: \$130,000.00
Total Material Cost: \$100,000.00

Item No.	Iron or Steel Product	Unit Cost	Quantity	Total Cost	% Mat Cost (< 1%)	Cum Cost	% Mat Cost (< 5%)
1	Steel Door	\$400.00	1	\$ 400.00	0.40%	\$ 400.00	0.40%
2	Bolts	\$100.00	1	\$ 100.00	0.10%	\$ 500.00	0.50%
3	Welding rods	\$30.00	1	\$ 30.00	0.03%	\$ 530.00	0.53%
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							

Davis Bacon Contract Requirements

3. Contract and Subcontract provisions.

(a) The Recipient shall insure that the **subrecipient(s)** shall insert in full in any contract in excess of \$2,000 which is entered into for the actual construction, alteration and/or repair, including painting and decorating, of a public building or public work, or building or work financed in whole or in part from Federal funds or in accordance with guarantees of a Federal agency or financed from funds obtained by pledge of any contract of a Federal agency to make a loan, grant or annual contribution (except where a different meaning is expressly indicated), and which is subject to the labor standards provisions of any of the acts listed in § 5.1, the following clauses:

(1) Minimum wages.

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

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in § 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph (a)(1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

Subrecipients may obtain wage determinations from the U.S. Department of Labor's web site, www.wdol.gov.

(ii)(A) The **subrecipient(s)**, on behalf of EPA, shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The EPA award official shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

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

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

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

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

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the and the **subrecipient(s)** do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the award official shall refer the questions, including the views of all interested parties and the recommendation of the State award official, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

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

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

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

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

(3) Payrolls and basic records.

(i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

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

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

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

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

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

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

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

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

(4) Apprentices and trainees--

(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator

determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

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

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

(6) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the EPA determines may be appropriate, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

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

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

(9) Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7.

Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and **Subrecipient(s)**, State, EPA, the U.S. Department of Labor, or the employees or their representatives.

(10) Certification of eligibility.

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

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

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

4. **Contract Provision for Contracts in Excess of \$100,000.**

(a) Contract Work Hours and Safety Standards Act. The **subrecipient** shall insert the following clauses set forth in paragraphs (a)(1), (2), (3), and (4) of this section in full in any contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by Item 3, above or 29 CFR [4.6](#). As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

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

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

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

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (a)(1) through (4) of this section and also a clause requiring the subcontractors to include these

clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (a)(1) through (4) of this section.

(b) In addition to the clauses contained in Item 3, above, in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in [29 CFR 5.1](#), the **Subrecipient** shall insert a clause requiring that the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Further, the **Subrecipient** shall insert in any such contract a clause providing that the records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the (write the name of agency) and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

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SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Project information.
2. Work covered by Contract Documents.
3. Phased construction.
4. Work under separate contracts.
5. Access to site.
6. Coordination with occupants.
7. Work restrictions.
8. Specification and drawing conventions.
9. Miscellaneous provisions.

B. Related Requirements:

1. Section 015000 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

1.2 PROJECT INFORMATION

A. Project Identification: Proposed Water System Improvements Project.

1. Project Location: Harrison County, West Virginia.

B. Owner: Enlarged Hepzibah Public Service District

1. Owner's Representative: Kevin Short

C. Engineer: The Thrasher Group

1. Senior Project Manager – Clay P. Riley, P.E.
2. Project Manager – Kylea Radcliff
3. Project Engineer – Logan Alastanos

1.3 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of Project is defined by the Contract Documents and consists of the following:

1. The replacement of sections of pipe in the existing water system including customer water meter settings, fire hydrants, isolation gate valves, a check valve to prevent flow from exiting the Greater Hepzibah system, new pressure reducing valves at the connection to the Clarksburg system, a new solenoid control valve and mixer at the

Spelter Tank, and restoration to any disturbed areas to return them to preconstruction conditions.

2. 1 LS Mobilization/Demobilization; 1 LS Videotaping of Project Area; 1 LS Erosion and Sediment Controls; 1,775 LF 8" PVC C900 DR-18; 40 LF 8" DI CL-50 P.JT.; 4,450 LF 8" HDPE D.I.P.S DR-11; 375 LF 8" HDPE D.I.P.S DR-11 Horizontal Directional Drill; 3,260 LF Remove and Replace Existing C.I.P. w/new 8" HDPE D.I.P.S DR-11; 475 LF 6" PVC C900 DR-18; 270 LF 2" PVC SDR-17; 615 LF 1" Poly. SVC. TBG. (Open Cut); 700 LF 3/4" Poly. SVC. TBG. (Open Cut); 175 LF 3/4" Poly. SVC. TBG. (Bore and Jack); 155 LF 16" STL. CSG. (Open Cut); 175 LF 16" STL. CSG. (Bore and Jack); 25 LF 4" STL. CSG. (Open Cut); 6 EA 8" M.JT. Gate Valve, Complete w/ Box and Lid; 1 EA 6" M.JT. Gate Valve, Complete w/ Box and Lid; 3 EA 2" M.JT. Gate Valve, Complete w/ Box and Lid; 2 EA Fire Hydrant Assembly, Complete; 3 EA 2" Post Flushing Hydrant Assembly, Complete; 2 EA Remove Existing Fire Hydrant, Complete; 1 EA Check Valve Vault, Complete; 1 EA 2" Meter Vault Pit, Complete; 4 EA Tie-Into Existing 8" C.I. Waterline, Complete; 1 EA Tie-Into Existing 2" Waterline, Complete; 7 EA Cut and Plug Ex. 8" Waterline; 5 EA Cut and Plug Ex. Waterline; 3 EA Tie-Into Existing Waterline, Complete; 1 EA Tie-Into Existing 6" Waterline, Complete; 27 EA Reconnection of Existing Customer Service; 3 EA Air Release Valve Installed at High Point; 1 LS Spelter Tank Upgrades; 1 LS Telemetry; 4 EA HDPE Concrete Anchors; 1 LS Meadowbrook PRV Vault, Complete; 1 LS Bridgeport Master Meter Vault Upgrades, Complete; 120 LF Stream Bank Slope Protection; 1,200 LF WVDOH Type "B" Trench Repair; 750 LF 2" HMA Overlay, Complete with Roto-Milling and Pavement Markings; 75 LF HMA Driveway/Road Repair; 45 LF Gravel Driveway/Road Repair; 9,200 LF Reclamation.

B. Type of Contract.

1. Project will be constructed under a single prime contract.

1.4 ACCESS TO SITE

- A. General: Contractor shall have limited use of Project site for construction operations as indicated on Drawings by the Contract limits and as indicated by requirements of this Section.
- B. Use of Site: Limit use of Project site to work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.

1.5 COORDINATION WITH OCCUPANTS

- A. Property Owners: Owner will occupy site and existing building(s) during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations.
 1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used

facilities without written permission from Owner and approval of authorities having jurisdiction.

2. Notify Owner not less than 48 hours in advance of activities that will affect Owner's operations.

1.6 WORK RESTRICTIONS

- A. Work Restrictions, General: Comply with restrictions on construction operations.

1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.

- B. On-Site Work Hours: Limit work in the existing building to normal business working hours of 7:00 a.m. to 7:00 p.m., Monday through Friday, unless otherwise indicated.

- C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:

1. Notify Owner not less than two days in advance of proposed utility interruptions.

- D. Environmental Protection

1. Applicable Regulations

- a. The Contractor and his subcontractors, in the performance of this Contract, shall comply with all applicable Federal, State and local laws and regulations concerning environmental pollution control and abatement as well as the specific requirements stated elsewhere in the Contract Documents.

- b. Water Pollution

- 1) The Contractor shall take all precautions necessary to avoid pollution of water in adjacent watercourses or water storage areas including wells.
- 2) All earthwork, equipment movement, control of water in excavations and other operations which may create silting shall be conducted in a manner to keep water pollution to an absolute minimum.
- 3) Water used during the contract work which has become polluted with oil, harmful or objectionable chemicals, sewage or other pollutants shall be disposed of in a manner that will not affect nearby waters and land. The Contractor shall not, under any circumstances, discharge pollutants into any watercourse.

- c. Noise, Vibration, and Odors: Coordinate operations that may result in high level of noise and vibration, odors, or other disruption to Owner occupancy with Owner.

- 1) Notify Owner not less than two days in advance of proposed disruptive operations.

- E. Controlled Substances: Use of controlled substances on Project Site is not permitted.

1.7 SPECIFICATION AND DRAWING CONVENTIONS

- A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
 2. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
- B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.
- C. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:
1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
 2. Abbreviations: Materials and products are identified by abbreviations published as part of the U.S. National CAD Standard] [and] [scheduled on Drawings.
 3. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.
- D. Plans and Working Drawings
1. Approved plans will show the location, profile, typical cross section, structures except as hereinafter specified, incidental items, and a summary of all items appearing in the proposal. Any deviations which may be required by the construction will be determined by the Engineer and authorized by him in writing. The Contractor shall keep one set of approved plans available of the work at the project site at all times.
 2. Plans will show details necessary to give a comprehensive idea of the construction contemplated. Any information which may be shown on drawings regarding results obtained from test borings will be a record of conditions encountered at the place where such test borings were made, as nearly as these conditions could be interpreted by the Engineer observing the operations. The Contractor shall interpret the data in the light of his own experience. The Contractor is not bound to accept or rely on the data shown on the drawings, but may make additional borings and investigations, including test piles, to satisfy himself concerning the lengths of piles and the conditions governing or entering into the construction of foundations.
 3. The plans may show the construction depths and dimensions on which the estimate of quantities is based. These depths and dimensions, however, are subject to variations as necessary to the Engineer, and the right is expressly reserved to increase or diminish the dimensions and depths as the Engineer may determine.
 4. The Contractor shall submit to the Engineer for approval additional calculation sheets, shop details, and other working drawings required for the construction of any part of the work; and prior to the approval of such plans, any work done or materials ordered shall be at the Contractor's risk.

5. Working drawings for concrete structures shall consist of detailed plans required for the successful execution of the work and which are not included in the plans furnished by the Engineer. These may include plans for drainage structures, falsework, bracing, centering and formwork, masonry layout diagrams, and diagrams for reinforced concrete structures and bent reinforcement.
6. The Contractor shall furnish the Engineer copies of the working drawings for approval and for construction purposes, and upon completion of the work the original tracings of working drawings shall be delivered to the Engineer. The drawings are to be on tracing paper, in ink or in pencil. The size of all drawings and prints shall be 22 inches by 34 inches or 24 inches by 36 inches, including margins.
7. It is expressly understood that the Engineer's approval of the Contractor's working drawings relate to the requirements for strength and general arrangement, and approval will not relieve the Contractor of responsibility for omissions, errors in dimensions, shop fits, field connections, etc., for quantity of materials, or of his responsibility under the contract for the successful completion of the work.
8. The contract price shall include the cost of furnishing all working drawings, and the Contractor will be allowed no extra compensation for such drawings.

E. Conformity with Plans and Specifications

1. All work performed and all materials furnished shall be in reasonably close conformity with the lines, grades, cross sections, dimensions, and material requirements, including tolerances, shown on the plans or indicated in the specifications.
2. Should the Engineer determine the materials or the finished product does not conform with the specifications or the plans, he will then make a determination if the work will be accepted and remain in place. In this event, the Engineer will document the basis of acceptance by contract modification which will provide for an adjusted payment. All nonconforming material or construction judged to be inadequate for the use intended shall either be reworked or removed and replaced at no expense to the Owner.

F. Errors or Omissions in Plans

1. The Contractor shall take no advantage of any apparent error or omission in the plans or specifications. In the event the Contractor discovers such an error or omission, he shall immediately notify the Engineer. The Engineer will then make such corrections and interpretations necessary for fulfilling the intent of the plans and specifications.

1.8 MISCELLANEOUS PROVISIONS

A. Environmental Protections

1. The Contractor and subcontractors, in the performance of this Contract, shall comply with all applicable Federal, State and local laws and regulations concerning environmental pollution control and abatement as well as the specific requirements stated elsewhere in the Contract Documents.
2. The Contractor shall take all precautions necessary to avoid pollution of water in adjacent watercourses or water storage areas including wells.
3. All earthwork, equipment movement, control of water in excavations and other operations which may create silting shall be conducted in a manner to keep water pollution to an absolute minimum.

4. Water used during the contract work which has become polluted with oil, harmful or objectionable chemicals, sewage or other pollutants shall be disposed of in a manner that will not affect nearby waters and land. The Contractor shall not, under any circumstances, discharge pollutants into any watercourse.

B. Noise and Air Pollution

1. The Contractor shall take all precautions necessary to avoid noise and air pollution during the course of the Contract.

C. Dust Control

1. The Contractor shall maintain all work areas free from dust which would contribute to air pollution. Approved temporary methods of stabilization consisting of sprinkling, chemical treatment, or similar methods will be permitted to control dust. Sprinkling, where used, must be repeated at such intervals to keep all parts of the disturbed area at least damp at all times. Dust control shall be performed as the work proceeds and whenever the dust nuisance of hazard occurs.
2. The Contractor shall keep clean all roads used in his operations. Trucks hauling excavated materials, cement, sand, stone or other loose materials from or to the Site, shall be tight so that no spillage will occur. Before trucks start away from the site, their loads shall be carefully trimmed to prevent spillage.

D. Cost of Utilities

1. There are overhead and buried utility lines in the vicinity of the work areas. The plans may or may not show existing utilities. However, it is the Contractor's responsibility to contact each utility to verify the exact location of all utilities and to contact Miss Utility of West Virginia before digging at 1-800-245-4848 and to post signs in all office trailers.

E. Cooperation by Contractor

1. The Contractor shall give the work constant attention necessary to facilitate the progress thereof, and shall cooperate with the Engineer, his inspectors, other contractors, and utilities in every way possible.
2. The Contractor shall have on the work at all times, as his agent, a competent superintendent capable of reading and thoroughly understanding the Plans and Specifications, and thoroughly experienced in the type of Work being performed, who shall receive instructions from the Engineer or his authorized representatives. The superintendent shall have full authority to execute orders or directions of the Engineer without delay, and to promptly supply such materials, equipment tools, labor, and incidentals as may be required. Such superintendence shall be furnished irrespective of the amount of work sublet.
3. The Contractor shall furnish the Engineer with a list of addresses and telephone numbers of his personnel who may be reached in case of emergency during hours when no work is to be performed. On weekends, holidays, during suspensions of work, and during storms the Contractor shall alert his personnel to stand by and shall inform the Engineer of these arrangements made. On call personnel shall be on call for 24 hours a day, 7 days a week for duration of construction and 6 months after completion of Contract.

4. The Contractor shall provide all reasonable facilities and furnish the Owner, through the Engineer, the information, assistance, and samples required by the Engineer and Inspector for proper inspecting or testing of materials and workmanship.
5. To ensure proper coordination between the work of the Contractor and the work of funding agencies, permitting agencies, and utility providers, a pre-construction conference may be conducted. The Owner, or Owners agent, will arrange for the notification to parties of interest of the time and place of the meeting. The Contractor or his representative, authorized to make decisions for him in regard to the scheduling of the proposed work, is required to attend the meeting. A report of the pre-construction conference may be prepared and distributed by the Engineer to all represented at the meeting. The meeting may be recorded to preserve the actual record.

F. Construction Sequence of Events

1. Videotaping of Project Area.
2. Contractor shall install project field office including all utilities.
3. Contractor shall notify Miss Utility, 1-800-245-4848 for existing utility locations.
4. Install all necessary sediment and erosion control measures.
5. Mobilization.
6. Contractor shall complete work on Meadowbrook Road (Sheet 14 & 15) first.
7. Once work on Meadowbrook Road is completed, Contactor shall begin work on Spelter Tank upgrades (Sheet 9).
8. After the Spelter Tank Upgrades have been completed, Contractor shall complete work on Route 19 at the DOH Garage (Sheet 1).
9. Once work is complete on Sheets 1,9,14 & 15, Contractor can begin installation of water lines on sheets 3,4,5,6,7 & 8.
 - a. Contractor shall note that work performed on sheets 3,4, & 5 shall be performed on consecutive days including weekends until completed and water service is restored.
10. Contractor shall install all valves, fittings, hydrants, flushing hydrants, meter settings, and other appurtenances as waster line installation progresses.
11. Contractor shall complete the installation of all main line road bores.
12. Contractor Shall Conduct all necessary line flushing, pressure testing and sterilization, to be coordinated with the Enlarged Hepzibah PSD and the Clarksburg Water Board.
13. After all flushing, testing and sterilization of lines and structures are complete, and test results are satisfactory, Contractor shall place the system online.
14. Contractor shall coordinate all connections or Tie-Ins to existing system with the Enlarged Hepzibah PSD Personnel.
15. Contractor shall complete all surface restorations.
16. Contractor Shall complete all work on final punch list.
17. Contractor shall complete all final clean up.
18. Contractor shall submit record drawings for work installed in accordance with Section 01700 – Project Closeout.
19. Demobilization and project completion.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

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SECTION 012000 - PRICE AND PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract Documents, including General and Supplementary Conditions, Division 01, and all related Specification Sections, apply to this Section.

1.2 SECTION INCLUDES

- A. Schedule of Values.
- B. Application for Payment.
- C. Change procedures.
- D. Defect assessment.
- E. Measurement and Payment.
- F. Alternates.

1.3 SCHEDULE OF VALUES

- A. Submit printed schedule on Progress Estimate schedule on EJCDC C-620.
- B. Submit Schedule of Values in duplicate within twenty (20) days after date established in Notice to Proceed.
- C. Format: Identify each line item with number and title of major Specification Section. Contractor shall submit a balanced Schedule of Values. The total value of activities shall equal the identifiable Contract Price. The Schedule of Values shall be accompanied by a proposed cash flow for the duration of the Project. Line items shall be broken down as appropriate and listed as units. Overhead and profit shall be prorated to all the activities.
 - 1. Unless otherwise specified, the Schedule of Values shall include the following percentages for each of the listed activities:
 - a. Mobilization, Bonds, Insurance, and Demobilization: no greater than 5 percent
 - b. As-Built Drawings: no less than 1 percent
 - c. Punchlist: no less than 2 percent
 - d. Final Bound O&M Manuals: no less than 1 percent
 - e. All Spare Parts Values not specifically assigned elsewhere : no less than 0.5 percent
 - f. Testing: no less than 1 percent

2. Schedules whose non-equipment related cash flow exceeds 10 percent of the total Contract amount (exclusive of equipment) in any one (1) month, or 45 percent of the total Contract amount (exclusive of equipment) in any three (3) consecutive months shall be deemed unacceptable and require revision. Exceptions may be granted at the discretion of the Engineer for unusual circumstances or non-routine construction.
 3. If, in the opinion of Engineer or Owner, the Schedule of Values is unbalanced, Contractor shall submit documentation substantiating the cost allocations of those activities believed to be unbalanced. No pay requests will be accepted until the Schedule of Values submittals has been marked "No Exceptions Taken" or "Make Corrections Noted" by Engineer.
- D. Include within each line item, direct proportional amount of Contractor's overhead and profit.
- E. Revise schedule to list approved Change Orders with each Application for Payment.

1.4 APPLICATION FOR PAYMENT

- A. Submit six (6) copies of each Application for Payment on EJCDC C-620 – Contractor's Application for Payment.
- B. Content and Format: Use Schedule of Values for listing items in Application for Payment.
- C. Submit updated construction schedule and payment schedule with each Application for Payment.
- D. Payment Period: Submit at intervals stipulated in the Agreement.
- E. Submit submittals with transmittal letter as specified in Section 013300 - Submittal Procedures.
- F. Substantiating Data: When Engineer requires substantiating information, submit data justifying dollar amounts in question. Include the following with Application for Payment:
 1. Partial release of Liens from major Subcontractors and vendors.
 2. Record Documents as specified in Section 017000 - Execution and Closeout Requirements, for review by Owner, which will be returned to Contractor.
 3. Affidavits attesting to off-Site stored products.
 4. Construction Progress Schedule, revised and current as specified in Section 013300 - Submittal Procedures.

1.5 CHANGE PROCEDURES

- A. Submittals: Submit name of individual who is authorized to receive change documents and is responsible for informing others in Contractor's employ or Subcontractors of changes to the Work.
- B. Carefully study and compare Contract Documents before proceeding with fabrication and installation of Work. Promptly advise Engineer of any error, inconsistency, omission, or apparent discrepancy.

- C. Requests for Interpretation (RFI) and Clarifications: Allot time in construction scheduling for liaison with Engineer; establish procedures for handling queries and clarifications.
 - 1. Use Request for Information Form for requesting interpretations (provided by Engineer upon request).
 - 2. Engineer may respond with a direct answer on the Request for Information form, separate Engineer Response, EJCDC C-942 - Field Order, or EJCDC C-940 - Work Change Directive Form.
- D. Engineer will advise of minor changes in the Work not involving adjustment to Contract Sum/Price or Contract Time by issuing supplemental instructions on EJCDC C-942.
- E. Engineer may issue Notice of Change including a detailed description of proposed change with supplementary or revised Drawings and Specifications, a change in Contract Time for executing the change with stipulation of overtime Work required and with the period of time during which the requested price will be considered valid. Contractor will prepare and submit estimate within ten (10) days.
- F. Contractor may propose changes by submitting a request for change to Engineer, describing proposed change and its full effect on the Work. Include a statement describing reason for the change and the effect on Contract Sum/Price and Contract Time with full documentation and a statement describing effect on the Work by separate or other Contractors.
- G. Stipulated Sum/Price Change Order: Based on Proposal Request or Work Change Directive and Contractor's maximum price quotation or Contractor's request for Change Order as approved by Engineer.
- H. Unit Price Change Order: For Contract unit prices and quantities, the Change Order will be executed on a fixed unit price basis. For unit costs or quantities of units of that which are not predetermined, execute Work under Work Directive Change. Changes in Contract Sum/Price or Contract Time will be computed as specified for Time and Material Change Order.
- I. Work Change Directive: Engineer may issue directive, on EJCDC C-940 - Work Change Directive, instructing Contractor to proceed with change in the Work, for subsequent inclusion in a Change Order. Document will describe changes in the Work and designate method of determining any change in Contract Sum/Price or Contract Time. Promptly execute change.
- J. Time and Material Change Order: Submit itemized account and supporting data after completion of change, within time limits indicated in Conditions of the Contract. Engineer will determine change allowable in Contract Sum/Price and Contract Time as provided in Contract Documents.
- K. Maintain detailed records of Work done on time and material basis. Provide full information required for evaluation of proposed changes and to substantiate costs for changes in the Work.
- L. Document each quotation for change in Project Cost or Time with sufficient data to allow evaluation of quotation.
- M. Change Order Forms: EJCDC C-941 - Change Order.

- N. Execution of Change Orders: Engineer will issue Change Orders for signatures of parties as provided in Conditions of the Contract.
- O. Correlation of Contractor Submittals:
 - 1. Promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as separate line item and adjust Contract Sum/Price.
 - 2. Promptly revise Progress Schedules to reflect change in Contract Time, revise sub-schedules to adjust times for other items of Work affected by the change, and resubmit.
 - 3. Promptly enter changes in Record Documents.

1.6 DEFECT ASSESSMENT

- A. Replace the Work, or portions of the Work, not conforming to specified requirements.
- B. If, in the opinion of Engineer or Owner, it is not practical to remove and replace the Work, Engineer or Owner will direct appropriate remedy or adjust payment.
- C. The defective Work may remain, but unit sum/price will be adjusted to new sum/price at discretion of Owner.
- D. Defective Work will be partially repaired according to instructions of Engineer, and unit sum/price will be adjusted to new sum/price at discretion of Owner.
- E. Individual Specification Sections may modify these options or may identify specific formula or percentage sum/price reduction.
- F. Authority of Owner to assess defects and identify payment adjustments is final.
- G. Nonpayment for Rejected Products: Payment will not be made for rejected products for any of the following reasons:
 - 1. Products wasted or disposed of in a manner that is not acceptable.
 - 2. Products determined as unacceptable before or after placement.
 - 3. Products not completely unloaded from transporting vehicle.
 - 4. Products placed beyond lines and levels of the required Work.
 - 5. Products remaining on hand after completion of the Work.
 - 6. Loading, hauling, and disposing of rejected products.

1.7 MEASUREMENT AND PAYMENT

- A. General Requirements
 - 1. Contractor shall take measurements and compute quantities. Resident Project Representative and Engineer will verify measurements and quantities.
 - 2. Unit Quantities: Quantities and measurements indicated on Bid Form are for Contract purposes only. Actual quantities provided shall determine payment.
 - a. When actual Work requires more or fewer quantities than those quantities indicated, provide required quantities at Contracted unit sum/prices.

- b. When actual Work requires 25 percent or greater change in quantity than those quantities indicated, Owner or Contractor may claim a Contract Price adjustment.
3. Payment Includes: Full compensation for required labor, products, tools, equipment, plant and facilities, transportation, services and incidentals; erection, application, or installation of item of the Work; overhead and profit.
4. Final payment for Work governed by unit prices will be made on basis of actual measurements and quantities accepted by Engineer multiplied by unit sum/price for Work incorporated in or made necessary by the Work.

B. Measurement of Quantities

1. Weigh Scales: Inspected, tested, and certified by applicable West Virginia weights and measures department within past year.
2. Platform Scales: Of sufficient size and capacity to accommodate conveying vehicle.
3. Metering Devices: Inspected, tested, and certified by applicable West Virginia department within past year.
4. Measurement by Weight: Concrete reinforcing steel, rolled or formed steel, or other metal shapes will be measured by handbook weights. Welded assemblies will be measured by handbook or scale weight.
5. Measurement by Volume: Measured by cubic dimension using mean length, width, and height or thickness.
6. Measurement by Area: Measured by square dimension using mean length and width or radius.
7. Linear Measurement: Measured by linear dimension, at item centerline or mean chord.
8. Stipulated Sum/Price Measurement: Items measured by weight, volume, area, or linear means or combination, as appropriate, as completed item or unit of the Work.

C. Unit Price Schedule:

1. Bid Item 1 – Mobilization/Demobilization
 - a. This item shall include the performance of construction preparatory operations, including the movement of equipment and personnel to and from the Project Site, establishment and decommissioning of Contractor's Field Office, storage buildings, and other facilities necessary to conduct Work under this Contract. This bid item is to include payment of all bonding costs incurred by the contractor. Also included in this bid item are materials, the project sign, and equipment unloading, transporting and reloading. The balance of the lump sum bid item shall be considered demobilization and shall be paid at contract close out.
 - b. The bid for Mobilization/Demobilizations shall be lump sum.
 - c. Partial Payments of the LS Bid amount for mobilization/demobilization shall be as follows:
 - 1) Partial Payments of the lump sum Bid amount for mobilization/demobilization shall be as follows:
 - 2) One-third of the amount Bid for Mobilization/Demobilization will be released to the Contractor as the first estimate payable, not less than fifteen (15) days after the start of Work at the Project Site.
 - 3) The second one-third of the amount Bid for Mobilization/Demobilization shall be released at 50% complete.

- 4) The third one-third of the amount Bid for Mobilization/Demobilization shall be released at final completion.
2. Bid Item 2 - Videotaping of Project Area
 - a. The cost of this work shall be included in a lump sum bid item. Such payment shall constitute full compensation for labor, materials, equipment and other cost associated to provide a complete documentation.
 - b. Videotaping shall include the entire construction area affected, including any Contractor secured waste site and material storage or staging areas. The measurement for this bid items shall be based on a complete video recording on a DVD of the entire project area.
3. Bid Item 3 - Erosion and Sediment Control
 - a. The cost for this Work shall be Lump Sum.
 - b. This Bid item shall include all costs associated with erosion and sedimentation controls including all materials and labor for installation, maintenance, and removal.
 - c. The cost of this Work shall be paid for at the lump sum Bid price for all erosion and sedimentation controls at all locations directly and/or indirectly disturbed by the Work.
4. Bid Item 4 - 8" C-900 DR-18 Water Line
 - a. The pipe installed under this item shall be measured and paid for by the linear feet of pipe for each of the types and sizes as specified on the plans or as directed by the Engineer and installed complete in place. The measurements under this item shall be the length of various sizes and classes of pipe and fittings installed in place and accepted and shall be measured in the horizontal plane along the centerline of each pipe installed, measured centerline of tie-in to centerline of tie-in.
 - b. The quantities determined as provided above will be paid for at the contract unit prices bid for the items listed in the Proposal Form. Prices and payments shall be full compensation for excavation, bedding, backfilling, warning tape, tracer wire, and furnishing all materials and doing all the work herein prescribed in a workmanlike and acceptable manner, including all labor, tools, equipment, supplies, testing and incidentals necessary to complete the work.
 - c. Fittings, whether used in ductile iron, PVC, or HDPE, will be paid for as part of linear foot of pipe, if shown on the plans or not.
 - d. Any tie-ins to existing service lines, cutting and capping of existing lines or abandonments of existing services are to be considered incidental to the unit cost of installing the water line unless specifically identified in the Bid Schedule
 - e. The bid for 8" C-900 DR-18 Water Line shall be Linear Feet.
5. Bid Item 5 – 8" DI CL-50 P.J.T.
 - a. The pipe installed under this item shall be measured and paid for by the linear feet of pipe for each of the types and sizes as specified on the plans or as directed by the Engineer and installed complete in place. The measurements under this item shall be the length of various sizes and classes of pipe and fittings installed in place and accepted and shall be measured in the horizontal plane along the

- centerline of each pipe installed, measured centerline of tie-in to centerline of tie-in.
- b. The quantities determined as provided above will be paid for at the contract unit prices bid for the items listed in the Proposal Form. Prices and payments shall be full compensation for excavation, bedding, backfilling, warning tape, tracer wire, and furnishing all materials and doing all the work herein prescribed in a workmanlike and acceptable manner, including all labor, tools, equipment, supplies, testing and incidentals necessary to complete the work.
 - c. Fittings, whether used in ductile iron, PVC, or HDPE, will be paid for as part of linear foot of pipe, if shown on the plans or not.
 - d. Any tie-ins to existing service lines, cutting and capping of existing lines or abandonments of existing services are to be considered incidental to the unit cost of installing the water line unless specifically identified in the Bid Schedule.
 - e. The bid for 8" DI CL-50 P.J.T. shall be Linear Feet.
6. Bid Item 6 - 8" HDPE DIPS DR11 (Open Cut)
- a. The pipe installed under this item shall be measured and paid for by the linear feet of pipe for each of the types and sizes as specified on the plans or as directed by the Engineer and installed complete in place. The measurements under this item shall be the length of various sizes and classes of pipe and fittings installed in place and accepted and shall be measured in the horizontal plane along the centerline of each pipe installed, measured centerline of tie-in to centerline of tie-in.
 - b. The quantities determined as provided above will be paid for at the contract unit prices bid for the items listed in the Proposal Form. Prices and payments shall be full compensation for excavation, bedding, backfilling, warning tape, tracer wire, and furnishing all materials and doing all the work herein prescribed in a workmanlike and acceptable manner, including all labor, tools, equipment, supplies, testing and incidentals necessary to complete the work.
 - c. Fittings, whether used in ductile iron, PVC, or HDPE, will be paid for as part of linear foot of pipe, if shown on the plans or not.
 - d. Any tie-ins to existing service lines, cutting and capping of existing lines or abandonments of existing services are to be considered incidental to the unit cost of installing the water line unless specifically identified in the Bid Schedule
 - e. The bid for 8" HDPE DIPS DR11 (Open Cut) Water Line shall be Linear Feet.
7. Bid Item 7 - 8" HDPE DIPS DR11 (HDD)
- a. The pipe installed under this item shall be measured and paid for by the linear feet of pipe for each of the types and sizes as specified on the plans or as directed by the Engineer and installed complete in place. The measurements under this item shall be the length of various sizes and classes of pipe and fittings installed in place and accepted and shall be measured in the horizontal plane along the centerline of each pipe installed, measured centerline of tie-in to centerline of tie-in.
 - b. The quantities determined as provided above will be paid for at the contract unit prices bid for the items listed in the Proposal Form. Prices and payments shall be full compensation for excavation, bedding, backfilling, warning tape, tracer wire, and furnishing all materials and doing all the work herein prescribed in a workmanlike and acceptable manner, including all labor, tools, equipment, supplies, testing and incidentals necessary to complete the work.

- c. Fittings, whether used in ductile iron, PVC, or HDPE, will be paid for as part of linear foot of pipe, if shown on the plans or not.
 - d. The bid for 8" HDPE DIPS DR11 (HDD) Water Line shall be Linear Feet.
8. Bid Item 8 - Remove and Replace Existing C.I.P. w/ New 8" HDPE D.I.P.S DR-11
- a. The pipe installed under this item shall be measured and paid for by the linear feet of pipe for each of the types and sizes as specified on the plans or as directed by the Engineer and installed complete in place. The measurements under this item shall be the length of various sizes and classes of pipe and fittings installed in place and accepted and shall be measured in the horizontal plane along the centerline of each pipe installed, measured centerline of tie-in to centerline of tie-in.
 - b. The quantities determined as provided above will be paid for at the contract unit prices bid for the items listed in the Proposal Form. Prices and payments shall be full compensation for excavation, bedding, backfilling, warning tape, tracer wire, and furnishing all materials and doing all the work herein prescribed in a workmanlike and acceptable manner, including all labor, tools, equipment, supplies, testing and incidentals necessary to complete the work.
 - c. Fittings, whether used in ductile iron, PVC, or HDPE, will be paid for as part of linear foot of pipe, if shown on the plans or not.
 - d. The bid price shall also include all costs associated with the removal and proper disposal of the existing pipe.
 - e. Any tie-ins to existing service lines, cutting and capping of existing lines or abandonments of existing services are to be considered incidental to the unit cost of installing the water line unless specifically identified in the Bid Schedule
 - f. The bid for Remove and Replace Existing C.I.P. w/ New 8" HDPE D.I.P.S DR-11 shall be Linear Feet.
9. Bid Item 9 - 6" C-900 DR-18 Water Line
- a. The pipe installed under this item shall be measured and paid for by the linear feet of pipe for each of the types and sizes as specified on the plans or as directed by the Engineer and installed complete in place. The measurements under this item shall be the length of various sizes and classes of pipe and fittings installed in place and accepted and shall be measured in the horizontal plane along the centerline of each pipe installed, measured centerline of tie-in to centerline of tie-in.
 - b. The quantities determined as provided above will be paid for at the contract unit prices bid for the items listed in the Proposal Form. Prices and payments shall be full compensation for excavation, bedding, backfilling, warning tape, tracer wire, and furnishing all materials and doing all the work herein prescribed in a workmanlike and acceptable manner, including all labor, tools, equipment, supplies, testing and incidentals necessary to complete the work.
 - c. Fittings, whether used in ductile iron, PVC, or HDPE, will be paid for as part of linear foot of pipe, if shown on the plans or not.
 - d. Any tie-ins to existing service lines, cutting and capping of existing lines or abandonments of existing services are to be considered incidental to the unit cost of installing the water line unless specifically identified in the Bid Schedule
 - e. The bid for 6" AWWA C-900 DR-18 Water Line shall be Linear Feet.

10. Bid Item 10 – 2” PVC SDR-17 Water Line
 - a. The pipe installed under this item shall be measured and paid for by the linear feet of pipe for each of the types and sizes as specified on the plans or as directed by the Engineer and installed complete in place. The measurements under this item shall be the length of various sizes and classes of pipe and fittings installed in place and accepted and shall be measured in the horizontal plane along the centerline of each pipe installed, measured centerline of tie-in to centerline of tie-in.
 - b. The quantities determined as provided above will be paid for at the contract unit prices bid for the items listed in the Proposal Form. Prices and payments shall be full compensation for excavation, bedding, backfilling, warning tape, tracer wire, and furnishing all materials and doing all the work herein prescribed in a workmanlike and acceptable manner, including all labor, tools, equipment, supplies, testing and incidentals necessary to complete the work.
 - c. Fittings, whether used in ductile iron, PVC, or HDPE, will be paid for as part of linear foot of pipe, if shown on the plans or not.
 - d. Any tie-ins to existing service lines, cutting and capping of existing lines or abandonments of existing services are to be considered incidental to the unit cost of installing the water line unless specifically identified in the Bid Schedule
 - e. The bid for 2” PVC SDR-17 Water Line shall be Linear Feet.

11. Bid Item 11 - 1” Polyethylene Service Tubing (Open Cut)
 - a. The pipe installed under this item shall be measured and paid for by the linear feet of pipe for each of the types and sizes as specified on the plans or as directed by the Engineer and installed compete in place. The measurements under this item shall be the length of the various sizes and classes of pipe and fittings installed in place and accepted and shall be measured in the horizontal plane along the centerline of each pipe installed, measured centerline of tie-in to centerline of tie-in.
 - b. The quantities determined as provided above, will be paid for at the contract unit prices bid for the items listed in the Bid Schedule, which prices and payments shall be full compensation for excavation, bedding, backfilling, warning tape, tracer wire and furnishing all materials and doing all the work herein prescribed in a workmanlike and acceptable manner, including all labor, tools, equipment, supplies, testing and incidentals necessary to complete the work.
 - c. Fitting, whether used in ductile iron, PVC or HDPE, will be paid for as part of linear foot of pipe, if shown on the plan or not.
 - d. Any tie-ins to existing service lines, cutting and capping of existing lines, or abandonments of existing services are to be considered incidental to the unit cost of installing the water line unless specifically identified in the Bid Schedule.
 - e. The bid for 1” Polyethylene Service Tubing (Open Cut) shall be Linear Feet.

12. Bid Item 12 – 3/4” Polyethylene Service Tubing (Open Cut)
 - a. The pipe installed under this item shall be measured and paid for by the linear feet of pipe for each of the types and sizes as specified on the plans or as directed by the Engineer and installed compete in place. The measurements under this item shall be the length of the various sizes and classes of pipe and fittings installed in place and accepted and shall be measured in the horizontal plane along the centerline of each pipe installed, measured centerline of tie-in to centerline of tie-in.

- b. The quantities determined as provided above, will be paid for at the contract unit prices bid for the items listed in the Bid Schedule, which prices and payments shall be full compensation for excavation, bedding, backfilling, warning tape, tracer wire and furnishing all materials and doing all the work herein prescribed in a workmanlike and acceptable manner, including all labor, tools, equipment, supplies, testing and incidentals necessary to complete the work.
 - c. Fitting, whether used in ductile iron, PVC or HDPE, will be paid for as part of linear foot of pipe, if shown on the plan or not.
 - d. Any tie-ins to existing service lines, cutting and capping of existing lines, or abandonments of existing services are to be considered incidental to the unit cost of installing the water line unless specifically identified in the Bid Schedule.
 - e. The bid for 3/4" Polyethylene Service Tubing (Open Cut) shall be Linear Feet.
13. Bid Item 13 – 3/4" Polyethylene Service Tubing (Bore and Jack)
- a. The pipe installed under this item shall be measured and paid for by the linear feet of pipe for each of the types and sizes as specified on the plans or as directed by the Engineer and installed complete in place. The measurements under this item shall be the length of the various sizes and classes of pipe and fittings installed in place and accepted and shall be measured in the horizontal plane along the centerline of each pipe installed, measured centerline of tie-in to centerline of tie-in.
 - b. The quantities determined as provided above, will be paid for at the contract unit prices bid for the items listed in the Bid Schedule, which prices and payments shall be full compensation for excavation, bedding, backfilling, warning tape, tracer wire and furnishing all materials and doing all the work herein prescribed in a workmanlike and acceptable manner, including all labor, tools, equipment, supplies, testing and incidentals necessary to complete the work.
 - c. Fitting, whether used in ductile iron, PVC or HDPE, will be paid for as part of linear foot of pipe, if shown on the plan or not.
 - d. Any tie-ins to existing service lines, cutting and capping of existing lines, or abandonments of existing services are to be considered incidental to the unit cost of installing the water line unless specifically identified in the Bid Schedule.
 - e. The bid for 3/4" Polyethylene Service Tubing (Bore and Jack) shall be Linear Feet.
14. Bid Item 14 - 16" Steel Casing (Open Cut)
- a. Measurement and Payment for installation of steel casing using the open cut construction method shall be for the overall length of the casing pipe satisfactorily installed. Payment shall include all labor and materials necessary for, and incidental to, the construction of the crossing, including excavation, sheeting, bracing, backfilling, grouting, link seal, blocking, etc. and all required fittings. Payment shall be for casing pipe only. Carrier pipe shall be paid by the unit bid price per foot. Unauthorized footage beyond those called for in the plans and specifications shall not be compensated for.
 - b. The bid for 16" Steel Casing (Open Cut) shall be Linear Feet.
15. Bid Item 15 - 16" Steel Casing (Bore & Jack)
- a. Measurement and Payment for boring and jacking shall be for the overall length of casing satisfactorily installed. Payment shall include all labor and material necessary for and incidental to the construction of the crossing, including excavation, sheeting, bracing, backfilling, grouting, link seal, blocking, etc. and

- all required fittings. Payment shall be for casing pipe only. Unauthorized footage beyond those called for in the plans and specifications shall not be compensated for.
- b. The bid for 16" Steel Casing (Bore and Jack) shall be Linear Feet.
16. Bid Item 16 - 4" Steel Casing (Open Cut)
 - a. Measurement and Payment for installation of steel casing using the open cut construction method shall be for the overall length of the casing pipe satisfactorily installed. Payment shall include all labor and materials necessary for, and incidental to, the construction of the crossing, including excavation, sheeting, bracing, backfilling, grouting, link seal, blocking, etc. and all required fittings. Payment shall be for casing pipe only. Carrier pipe shall be paid by the unit bid price per foot. Unauthorized footage beyond those called for in the plans and specifications shall not be compensated for.
 - b. The bid for 4" Steel Casing (Open Cut) shall be Linear Feet.
 17. Bid Item 17 - 8" M.JT. Gate Valve, Complete w/ Box and Lid
 - a. The Contractor's Unit Bid Price for new gate valves shall include the purchase an installation of the valve including the poured concrete thrust block, cast iron riser box, concrete stabilization block around the riser box, centering rings, mud plugs, and valve markers.
 - b. The bid for 8" M.JT. Gate Valve, Complete w/ Box and Lid shall be Each.
 18. Bid Item 18 - 6" M.JT. Gate Valve, Complete w/ Box and Lid
 - a. The Contractor's Unit Bid Price for new gate valves shall include the purchase an installation of the valve including the poured concrete thrust block, cast iron riser box, concrete stabilization block around the riser box, centering rings, mud plugs, and valve markers.
 - b. The bid for 6" M.JT. Gate Valve, Complete w/ Box and Lid shall be Each.
 19. Bid Item 19 - 2" M.JT. Gate Valve, Complete w/ Box and Lid
 - a. The Contractor's Unit Bid Price for new gate valves shall include the purchase an installation of the valve including the poured concrete thrust block, cast iron riser box, concrete stabilization block around the riser box, centering rings, mud plugs, and valve markers.
 - b. The bid for 2" M.JT. Gate Valve, Complete w/ Box and Lid shall be Each.
 20. Bid Item 20 – Fire Hydrant Assembly, Complete
 - a. The cost for this work shall be paid for at the per each bid price for the fire hydrant assembly specified.
 - b. The cost of a fire hydrant assembly shall include, but not be limited to, concrete thrust blocking, swivel hydrant tee, end of main line plug (as required), mechanical joint retainer restraints at mechanical joint connections, a gate valve (including a valve box with lid, a concrete foundation, a valve box adaptor, and a concrete stabilizing block), a fire hydrant (including plastic barrier, concrete thrust blocking, concrete foundations, and clean graded limestone), up to fifteen feet (15') of water line, all thread rods with coal tar coating, traceable wire and related appurtenances (where required in the Drawings and/or Specifications), detectable warning tape, and all other appurtenances required in the Drawings and/or Specifications.
 - c. The bid for Fire Hydrant Assembly, Complete shall be Each.

21. Bid Item 21 - 2" Post Flushing Hydrant Assembly, Complete
 - a. The Contractor's Unit Bid Price for 2" post flushing hydrant assembly shall include the purchase and installation of the 2" post flushing hydrant, 2" gate valve, mechanical joint reducer (if needed) and up to 10' length of 2" waterline between the 2" gate valve and the flushing hydrant and all appurtenances as shown on the details of the contract drawings.
 - b. The bid for 2" Post Flushing Hydrant Assembly, Complete shall be Each.

22. Bid Item 22 - Remove Existing Fire Hydrant, Complete
 - a. The cost for this work shall be paid for at the contract unit bid price(s) for all required labor, excavation, materials, dewatering, equipment and all other costs associated with performing the Work of Removal of Existing Fire Hydrant. These items shall be disposed of by the Contractor or delivered to the Owner, at the Owner's request, to a pre-determined location, at no additional cost to the Owner.
 - b. This Bid Item shall include reclamation of disturbed area(s) to match adjacent landscaping.
 - c. The bid for Remove Existing Fire Hydrant, Complete shall be Each.

23. Bid Item 23 - Check Valve Vault, Complete
 - a. This Bid item shall include all required labor, equipment, excavation, bedding, placement of valve vault, connection to existing water lines, backfill, compaction, and all other costs associated with the complete installation of the Check Valve Vault as shown on the Plans.
 - b. The bid for Check Valve Vault, Complete shall be Each.

24. Bid Item 24 - 2" Meter Vault Pit, Complete
 - a. This Bid Item shall include all required labor, excavation, materials, equipment and all other costs associated with the installation of the 2" Meter Vault Pit including all appurtenances as indicated on Drawings and shall be paid at the contract unit price bid price per each.
 - b. This Bid Item shall include the purchase and installation of the meter, well, lid, coppersetter, ductile iron fittings shown on plans, and 5 linear feet of 2" PVC water line.
 - c. The 2" Meter Vault Pit shall include 6" of clean stone placed in the bottom of the meter well.
 - d. The bid for 2" Meter Vault Pit, Complete shall be Each.

25. Bid Item 25 - Tie-Into Existing 8" C.I. Water Line, Complete
 - a. The Contractor's Unit Bid Price for Tie-Into Existing 8" C.I. Water Line, Complete shall include the purchase and installation of all required material in order to perform the tie-in or hot tap as shown. This Unit Bid Price shall include the location and excavation of the water line, all required gate valves, all fittings (including reducers), and the necessary ductile iron solid sleeve(s) or dresser coupling(s), stainless steel tapping sleeve(s), thrust blocking, bedding, backfilling, etc.
 - b. The bid for Tie-Into Existing 8" C.I. Water Line, Complete shall be Each.

26. Bid Item 26 - Tie-Into Existing 2" Water Line, Complete
 - a. The Contractor's Unit Bid Price for Tie-Into Existing 2" Water Line, Complete shall include the purchase and installation of all required material in order to perform the tie-in or hot tap as shown. This Unit Bid Price shall include the

- location and excavation of the water line, all required gate valves, all fittings (including reducers), and the necessary ductile iron solid sleeve(s) or dresser coupling(s), stainless steel tapping sleeve(s), thrust blocking, bedding, backfilling, etc.
- b. The bid for Tie-Into Existing 2" Water Line, Complete shall be Each.
27. Bid Item 27 – Cut and Plug Existing 8" Water Line
- a. The Contractor's Unit Bid Price for Cut and Plug Existing 8" Water Line shall include the work required to properly cut sections of existing water line.
- b. The Bid for Cut and Plug Existing 8" Water Line shall be Each.
28. Bid Item 28 – Cut and Plug Existing Water Line
- a. The Contractor's Unit Bid Price for Cut and Plug Existing Water Line shall include the work required to properly cut sections of existing water line.
- b. The Bid for Cut and Plug Existing Water Line shall be Each.
29. Bid Item 29 - Tie-Into Existing Water Line, Complete
- a. The Contractor's Unit Bid Price for Tie-Into Existing Water Line shall include the purchase and installation of all required material in order to perform the tie-in or hot tap as shown. This Unit Bid Price shall include the location and excavation of the water line, all required gate valves, all fittings (including reducers), and the necessary ductile iron solid sleeve(s) or dresser coupling(s), stainless steel tapping sleeve(s), thrust blocking, bedding, backfilling, etc.
- b. The bid for Tie-Into Existing Water Line, Complete shall be Each.
30. Bid Item 30 - Tie-Into Existing 6" Water Line, Complete
- a. The Contractor's Unit Bid Price for Tie-Into Existing 6" Water Line shall include the purchase and installation of all required material in order to perform the tie-in or hot tap as shown. This Unit Bid Price shall include the location and excavation of the water line, all required gate valves, all fittings (including reducers), and the necessary ductile iron solid sleeve(s) or dresser coupling(s), stainless steel tapping sleeve(s), thrust blocking, bedding, backfilling, etc.
- b. The bid for Tie-Into Existing 6" Water Line, Complete shall be Each.
31. Bid Item 31 – Reconnection of Existing Customer Service
- a. This Bid Item shall include all required labor, excavation, materials, equipment and all other costs associated with the reconnection of existing customer service lines to the new meter settings including all appurtenances as indicated on Drawings and surface repair if another bid item does not cover repair such as flowerbeds, walls, shrubs, fencing, etc., testing, and incidentals. All fittings and piping necessary to make connection between new meter setting and existing customer service line used shall also be included.
- b. The bid for Reconnection of Existing Customer Service shall be Each.
32. Bid Item 32 - Air Release Valve Installed at High Point
- a. The Contractor's Unit Bid Price for air release valve shall include the purchase and installation of the 3/4" A.R.I. air release valve, well, and lid, 3/4" corporation stop and saddle, 3/4" Type K copper connecting tubing between the corporation stop and the 3/4" ball valve all as shown in the plans. Air releases shall all include one (1) cubic foot of clean crusher run stone in bottom of well.
- b. The bid for Air Release Valve Installed at High Point shall be Each.

33. Bid Item 33 - Spelter Tank Upgrades
 - a. The Contractor's unit bid price for this item shall include the purchase and installation of all work performed at the Spelter Tank as shown on sheets 9-13 of the drawings.
 - b. This Bid Item shall include the purchase and installation of all electric wiring and conduits, all valves, removal of existing fence, new chain link fence and gate, new control panel, cleaning of existing tank, new solenoid control valve, cleaning of existing valve vault, all necessary piping, fittings and all necessary appurtenances to complete work as shown on drawings.
 - c. This Bid Item shall include reclamation of disturbed area(s) to match adjacent landscaping.
 - d. The bid for Spelter Tank Upgrades shall be Lump Sum.

34. Bid Item 34 - Telemetry
 - a. This Bid item shall include all labor, materials, equipment and other costs associated with the purchase and installation of the satellite telemetry for the Spelter Tank and Hepzibah Tank as specified on the drawings.
 - b. Connection to electrical utility is to be considered incidental.
 - c. The bid for Telemetry shall be Lump Sum.

35. Bid Item 35 - HDPE Concrete Anchors
 - a. This Bid item shall include all required labor, materials, excavation, concrete, rebar, fused flex restraint or wall collar, equipment and all other costs associated with the installation of the HDPE Concrete Wall Anchors and other appurtenances as indicated on Drawings.
 - b. The bid for HDPE Concrete Anchors shall be Each.

36. Bid Item 36 - Meadowbrook PRV Vault, Complete
 - a. The Contractor's unit bid price for this item shall include the purchase and installation of all equipment and materials necessary for the complete installation and operation of the PRV station as shown on the plans.
 - b. The cost for this work shall be paid for at the contract unit bid price(s) for the size, type, and classification of pressure reducing valves specified and all related appurtenances as shown in the detail(s) in the plans as well as all required labor, excavation, materials, dewatering, equipment and all other costs associated with performing the Work.
 - c. This Bid Item shall include the purchase and installation of all valves, fittings, and piping including drains shown on the Drawings as well as the concrete vault.
 - d. This Bid Item shall include reclamation of disturbed area(s) to match adjacent landscaping.
 - e. The bid for Meadowbrook PRV Vault, Complete shall be Lump Sum.

37. Bid Item 37 - Bridgeport Master Meter Vault Upgrades, Complete
 - a. This Bid Item shall include all costs including but not limited to labor, materials, and equipment associated with the complete installation of the Bridgeport Master Meter Vault as shown on the drawings.
 - b. This Bid Item shall include all valves, meters, pipe, fittings, piping, tie ins, and all necessary appurtenances.
 - c. The bid for Bridgeport Master Meter Vault Upgrades, Complete shall be Lump Sum.

38. Bid Item 38 - Stream Bank Slope Protection
 - a. Measurement and Payment for this item shall be included in the linear foot bid price for stream bank slope protection and shall include all stone, fabric, excavation, and labor required to stabilize the stream bank slope as required.

39. Bid Item 39 - WVDOH Type "B" Trench Repair
 - a. The Bid item installed shall be measured and paid for at the unit price Bid per linear feet of trench repair measured along the centerline of the pipe. Width of repair will not be considered.
 - b. This Bid item shall include all required labor, materials, equipment and all other costs associated with trench repair including but not limited to traffic control, milling as necessary in order to prevent an unacceptable drainage pattern, heal in joints, saw cutting existing pavement and removal and proper disposal of existing asphalt.
 - c. No payment will be made for temporary paving required during construction. All asphalt repair work shall be included in this linear foot Bid Price.

40. Bid Item 40 - 2" HMA Overlay, Complete with Roto-Milling and Pavement Markings
 - a. This Bid Item shall include all required labor, materials, equipment, and all other costs associated with removal and disposal of existing asphalt pavement, milling, and 2" asphalt pavement overlay.
 - b. All costs required for disposal shall be included in the unit price. Asphalt pavement removal and repair shall be minimized to an area sufficient to complete the work as shown in the plan set. No payment will be made for temporary paving required during construction or asphalt repair as a result of damage beyond the limits of construction.
 - c. Existing asphalt pavement and associated materials will be disposed of in accordance with all local, state, and federal regulations.
 - d. The bid for 2" HMA Overlay, Complete with Roto-Milling and Pavement Markings shall be Linear Feet.

41. Bid Item 41 - HMA Driveway/Road Repair
 - a. HMA Driveway/Road Repair shall be paid for on a linear foot basis measured along the center line of the pipe or length of paved area disturbed as shown on the plans or directed by the Engineer.
 - b. Width shall not be considered. The Contractor shall repair all pavement disturbed as determined by the Engineer or his representative. Pavement disturbed by the Contractor where water line was not installed shall be replaced at the Contractor's expense.
 - c. Stone base or flowable fill shall be included in the price of the pavement repair as called for in the plans.
 - d. Stone materials, and the maintenance thereof, shall be included in the price of the pavement repair when the pavement is not replaced immediately.
 - e. All areas of pavement disturbed due to any of the Contractor's operations which are not along the centerline of the water line construction shall also be satisfactorily repaired, at no additional cost to the Owner.
 - f. Straight, perpendicular saw cuts between the existing asphalt or concrete surfaces shall be included in the Contractor's Unit Bid Price for this work.
 - g. Payment for trench repair shall include at a minimum, the width of the excavation. Payment for footages that have less than the excavation width shall be prorated per linear foot.

SECTION 274100 - SATELLITE-CELLULAR TELEMETRY CONTROL SYSTEM

PART 1 – GENERAL

1.1 SUMMARY

- A. The Contractor shall provide all labor, materials, equipment and incidentals as shown, specified and required to furnish, install, calibrate, test, start-up and place in satisfactory operation a complete Cloud based Supervisory Control and Data Acquisition (SCADA) System.
- B. The SCADA system shall be completely compatible with the existing Sun Valley PSD telemetry.
- C. The SCADA system shall consist of three sub-systems: a Central Server, a web-based user interface and the Remote Terminal Units (RTU's) of various sizes.
The SCADA system shall be manufactured by High Tide Technologies, LLC, or engineer pre-approved equal.
- D. The SCADA system shall communicate with the internet via a network of roaming low altitude satellites which constantly circumnavigate the earth from the north pole to south pole, returning from south pole to north pole.
Satellite purveyors which communicate based on satellites which circumnavigate along the equator shall not be considered acceptable for this project.
- E. The scope of the Hepzibah PSD Telemetry project shall include the following Telemetry Remote Terminal Units(RTUs):
 - 1- RTU and accessories for Hepzibah Tank
 - 1- RTU and accessories for Spelter Tank
- F. The telemetry system shall be capable of seamlessly adding an unlimited number of additional pump station sites, tank sites, master meter sites, control valve sites in the future.
- G. The proposals by the telemetry system supplier shall include 1 year of communication fees in initial system price. The owners shall not be required to pay for the communication package for a period of three years after completion of system start up.

1.2 GENERAL

- A. The Central server shall consist of a cluster of servers providing various data processing, web server and database functions. The system shall be scalable to add more servers as the demands on the system increase.
- B. The web-based user interface software shall provide all the functions necessary for the Owner to interact with the data from the remote units as well as execute configuration and control commands.
- C. RTU's shall be furnished and installed at each of the monitored sites. The Manufacturer shall have available several models of RTU's which will accommodate a wide variety of Input and Output requirements.
- D. Alternation or the booster pumps shall be performed by the pump system control panel, not the telemetry system.

1.3 QUALIFICATIONS

- A. The SCADA System shall be furnished by a single Supplier who shall assume responsibility for providing a complete and integrated system.
- B. Manufacturers Qualifications: Only manufacturers who have been regularly engaged in the supply of SCADA equipment for at least 10 years and capable of meeting the following criteria need respond:
 1. Have completed a minimum of ten (10) successful combination cellular/satellite telemetry system applications throughout the regions – no exceptions. Each system must have individual cellular RTUs and individual satellite RTUs functioning independently, reporting directly to the system server and integrated seamlessly into the control system and displayed on the web interface.
- C. The system shall accommodate future system expansion incorporating either satellite RTUs or cellular RTUs without requiring special configuration of either the existing telemetry system or the future expansion. The future expansion shall be integrated seamlessly into the website display.
- D. Polling type SCADA systems shall not be considered as equal.
- E. Provide the OWNER with references and phone numbers of each of the three satellite telemetry systems. A minimum of two names per each CELLULAR-SATELLITE TELEMETRY SYSTEM reference shall be provided. References will be contacted and completed work verified by the ENGINEER and OWNER
- F. Acknowledge that shipment of the CELLULAR-SATELLITE TELEMETRY SYSTEM RTU nodes and related equipment shall be authorized only by the ENGINEER and OWNER group – no exceptions.
- G. Utilize only UL listed and rated components in enclosure manufacture.
- H. Provide 100 percent of all hardware and software technical manuals to the ENGINEER and OWNER in digital format. The manuals shall be in Adobe pdf format.
- I. Provide all system concept, layout, design, and telemetry setup notes in Microsoft Word or Excel formats to the ENGINEER and OWNER.
- J. Provide all final enclosure layouts and electrical wiring diagrams in Adobe pdf. version 2002 on CD to the ENGINEER and OWNER – no exceptions.
- K. Provide complete bill-of-materials (BOMs) and enclosure layouts that are numerically cross-referenced together for each SATELLITE TELEMETRY SYSTEM node. All BOMs shall contain the standard factory supplied part numbers instead of proprietary numbers – no exceptions.
- L. Provide a warranty and emergency support for a period of not less than one (1) year after the ENGINEER and OWNER accept each satellite telemetry system node.
- M. Provide primary technical support to the OWNER by full-time qualified staff members only. Temporary or part-time staff members do not qualify as full time employees. Technical support provided by manufactures representatives, salespersons or local distributors is not acceptable - no exceptions.
- N. SECURITY: To assure the security and privacy of customer data, the proposed manufacturer shall be certified in accordance with SOC2 Type2 at a minimum. Developed by the American Institute

of Certified Public Accountants (AICPA), SOC 2 certification is widely recognized as a gold standard for data security and requires companies to establish and follow strict information security policies and procedures. By achieving Type 2 certification, an independent third party has validated the design of the manufacturers' controls relevant to security, availability, and confidentiality. Successful Type 2 examination demonstrates their commitment to data security through the practices and procedures it follows for protecting against unauthorized access, maintaining the availability of its service, and protecting the confidential information of its customers. Telemetry supplier must submit a written copy of their SOC 2 security certification to the engineer for approval.

1.4 CUSTOMER SERVICE

- A. The Manufacturer shall provide 24-hour, seven days a week phone support access to the Owner by the Manufacturer's customer support personnel. Customer support personnel shall provide assistance with software, communications and hardware as required by the Owner. The Manufacturer shall provide the Owner with a toll-free number to contact their customer support personnel.
- B. The Manufacturer shall charge a maximum monthly service & communication fee of \$50 per month per site.
- C. No additional fees shall be charged by the Manufacturer for configuring the Owner's software for his applications.
- D. No additional fees shall be charged for phone support by the Manufacturer or their service personnel.
- E. The Owner shall not be charged for Software Licenses, Tag Licenses, Software Upgrades, Server Maintenance.
- F. The SCADA system shall archive any and all data which is monitored by the SCADA system and the Owner shall be able to access all data via the web page without assistance by the SCADA provider. The Owner shall be able to view, print out, generate graphs, generate spread sheets of any archived data without assistance of any kind by the Scada provider.

1.5 INSTALLER QUALIFICATIONS

- A. Only Installers who have been regularly engaged in the installation of SCADA equipment and have completed the Manufacturer's installer certification course need respond.

1.6 DEFINED TELEMETRY SITES:

A. HEPZIBAH TANK

SPECIFIED RTU MODEL: HTT 1100

I/O

- AI Tank Level
- Output to control solenoid valve open/close (Valve and power by others)
- Input from valve to indicate position of the valve.

TELEMETRY RTU: HTT1100 utilizing cellular telemetry.

Mount RTU on support structure adjacent to valve vault.

MODEM: CELLULAR Compatible, Multitech Dragonfly Modem

POWER SUPPLY: 110 volt, 1 phase AC power.

Antenna: Omni Directional Cellular TRA6927M3PBN-001

- o Length of Coaxial Cable: 50 FT
- o Mount antenna on top of tank handrail.

PRESSURE TRANSDUCER: 4-20 mA pressure transducer mounted in transducer panel to be supplied by Telemetry Supplier

SURGE ARRESTORS: Include surge arrestor on each co-ax antenna cable, power supply and each analog input.

B. SPELTER TANK

SPECIFIED RTU MODEL: HTT 1100

I/O

- AI Tank Level
- Output to control solenoid valve open/close (Valve and power by others)
- Input from valve to indicate position of the valve.

TELEMETRY RTU: HTT1100 utilizing cellular telemetry.

Mount RTU on support structure adjacent to valve vault.

MODEM: CELLULAR Compatible, Multitech Dragonfly Modem

POWER SUPPLY: 110 volt, 1 phase AC power.

Antenna: Omni Directional Cellular TRA6927M3PBN-001

- o Length of Coaxial Cable: 50 FT
- o Mount antenna on top of tank handrail.

PRESSURE TRANSDUCER: 4-20 mA pressure transducer mounted in transducer panel to be supplied by Telemetry Supplier

SURGE ARRESTORS: Include surge arrestor on each co-ax antenna cable, power supply and each analog input.

PART 2 – PRODUCTS

2.1 CENTRAL SERVER

- A. The Central Server core shall be configured as a cluster of servers, each performing different tasks. Key functions shall be running on multiple servers thus providing redundancy in the event of

hardware failures. The entire cluster shall be hosted in a server-hosting center with power, network and hardware redundancy built in.

2.2 WEB-BASED USER INTERFACE SOFTWARE

- A. Compatibility: The system shall be compatible with modern web browsers on various operating systems including computers, tablets and smartphones.
- B. Access and Security: Access to the customer's user interface shall begin with a username and password screen. The web interface shall utilize fully encrypted data and passwords via standard HTTPS technology – the same level of security used by online banking applications. The person designated by the Owner as the “administrator” shall have authority to manage usernames and passwords as well as control and change certain parameters related to their system.
- C. Levels of Access: Four levels of access shall be provided. VIEWERS shall only have permission to view the system data. OPERATORS shall be able to view and acknowledge alarms. SUPERVISORS shall be able to perform all the functions of the operators as well as change parameters in the system and manually turn pumps on and off. ADMINISTRATORS shall be able to perform all the functions of the supervisors as well as create and delete users from the system. Administrators shall also be able to assign which contacts will receive alarms.
- D. User Limits: The Owner shall be able to create as many users as needed and all users shall be able to be logged in simultaneously. No additional charge shall be assessed on the number of users or viewers.
- E. User Interface Types:
 - 1. The system shall provide options to the Owner for either tabular or graphical status representations of the installations.
 - 2. Larger systems shall be able to be broken down into segments or zones for easy navigation and display. Size, location and layout of objects on the screen shall be customizable by the software provider upon Owner request.
 - 3. The software shall be capable of showing location and status of each RTU installation on maps, given Owner supplied addresses or coordinates.
- F. The system shall have robust Alarming Capabilities, including the following features:
 - 1. The ability to send alarms via voice calls, text messages or emails.
 - 2. The ability to configure a preferred alarm delivery order with delays between each level and each operator.
 - 3. The ability to accept acknowledgments via voice or text at the time the alarm is delivered or via the web interface at any time.
 - 4. The ability for users to view a list of alarm histories for each installation including which user acknowledged the alarm.
 - 5. The ability to set any alarm recipient to be “Nagged” by calling them every 10 minutes until someone acknowledges the alarm.
 - 6. The ability to set shifts and days off for each alarm recipient and set day and night shift alarm notifications.
 - 7. The ability to have audible and visual alarms pop up on the computer that is logged in to the system.
 - 8. The ability to alarm the user if the RTU has stopped communicating with the host servers.

- G. Auto Refresh: The web interface shall automatically refresh when new data or alarms are reported.
- H. Data Analytics and Graphing: The system shall provide various menus to allow users to view historical data on pop-up graphs. Users shall have the ability to set the time range of the graphs and zoom in to view events of the past. When a user's mouse is held over a data point, the details of that data point shall appear on the screen.
- I. Raw Data Downloads: The user shall be able to dump raw data in tabular format for offline analysis that can be imported into a spreadsheet for further analysis.
- J. Report Generation: The user shall have the ability to download formatted spreadsheet reports of various functions, without assistance from the telemetry supplier.
- K. The software shall also provide the ability to automatically fill in the owner's report forms in standard Excel formatted files.
- L. Screen Configuration: The Manufacturer shall provide a service to configure graphic and tabular screen layouts, particular locations and sizes of graphical objects to match the customer's requirements.
- M. Service History: The system shall provide a mechanism for the user to enter freeform service history information for all RTU sites.
- N. The system shall be capable of providing Automatic and Manual Controls as listed below:
 - 1. Ability for one Tank to control one or more remotely located pump stations and valves based on tank level or system pressures. This should be performed in either round robin or lead/lag configurations.
 - 2. Ability to automatically cause the digital input from one RTU to be replicated on the digital output of another RTU (when digital outputs are available).
 - 3. Ability to automatically cause the analog input level at one RTU to be replicated on the analog output of another RTU (when analog outputs are available).
 - 4. Ability for the user to set analog threshold alarms and controls and have them downloaded to the RTU. These include levels, pressures, flow rates and any physical sensor that outputs an analog signal. This feature shall apply to RTU's with analog input capability.
 - 5. Ability for supervisors or administrators to manually control digital outputs that are connected to valves or pumps on RTU's that are equipped with outputs.

2.3 REMOTE TERMINAL UNITS (RTU)

- A. General: RTU's shall be A/C or Solar powered depending on the model, as designated by the Owner. The RTU's shall be available as either a kit that can be mounted in existing cabinets or supplied in a NEMA 4X enclosure with a raised door supported by stainless steel hinges on the left and a stainless steel latch configured for a padlock (supplied by Owner). The electronic components provided shall be din-rail mounted for easy replacement without removal of the enclosure. AC power supplies and solar regulators shall be modular and easily replaceable in the field.

B. The Manufacturer shall have the following types of RTU's available or equivalent:

Option	DIs	AIs	DOs	AOs	Networks	Applications
HTT1100	8	4 inc. + 4 opt.	4 opt.		Sat, Cell, IP	Lift Stations, Tanks, Meters, Valves, Pressure, Boosters etc.
HTT3100	28	6 inc + 4 opt.	4	2	Sat, Cell, IP	Larger Lift Stations, Boosters, Small Plants
HTT4100	28+	12+	8	opt.	Cell, IP	Plant Monitoring

1. Solar power shall be available as requested for HTT201 and HTT1100.
2. Back-up battery power shall be available for all but HTT4100 and GPG in the event that AC power is lost. When in battery backup mode the unit will at a minimum have enough power to send out a power fail alarm and on some options actually maintain full functionality for a small number of days.

C. The Manufacturer shall have the following types of Inputs and Outputs available:

1. Digital inputs compatible with either open collector or dry contact sources. Optional 115V or 230V instrumentation relays to mount in the enclosures when required.
2. Counter inputs. Four of the digital inputs configurable as pulse counters for flow monitoring equipment or rain gauges.
3. Analog inputs configurable to accept either 0-5V or 4-20ma and 0-20ma inputs. For 4-20ma and 0-20ma inputs, the sense resistor shall be 250ohms and removable for voltage sensors. 4-20ma inputs configurable to accept 2-wire, 3-wire or 4-wire sensors. Battery backed up 24V loop power shall also be available as well as analog inputs with optional integrated surge protection available.
4. Digital Outputs. RTU's with digital outputs configured with din-rail mounted Form-C relays capable of switching up to 5A at 250V.
5. Analog Outputs. RTU's with analog outputs capable of syncing 4-20ma outputs under RTU control.
6. Modbus Master. At least one type RTU shall have an RS-232 port that can be configured as a Modbus Master for reading data from third-party PLC or sensor equipment.

D. Two-way Communications: The RTU shall have capability to both send alarms and scheduled reports up to the server as well as receive commands from the server at any time. All functional configurations and alarm thresholds shall be able to be sent from the server without visiting the RTU.

- E. Digital Alarm Functions: The RTU shall be able to report status changes or alarms on any digital input. All analog inputs may be configurable as digital or alarm inputs.
1. Pseudo alarms shall be available to report when two or more selected digital inputs are in the alarm state at the same time.
 2. Whenever a digital alarm occurs the status shall be reported to the server after a programmable validation delay.
- F. The RTU shall have the following Analog Input Monitoring Functions:
1. Reports analog input levels on programmable schedules ranging from 1 min to several hours.
 2. Ability of the user to configure up to four separate alarm thresholds for each analog input. The RTU shall send an extra report to the server whenever the analog level passes through any of the alarm thresholds. Alarm thresholds shall be continuously monitored regardless of the reporting interval.
 3. Ability to configure the RTU to sample the analog input only when one or more digital inputs are active. This may be used to monitor pump amps or flow rate only when a pump is running.
 4. Ability to report an alarm when an analog reading falls too rapidly such as tank level falling due to system leak.
- G. Local Pump Alternator/Controller. The RTU shall include a software pump controller with the following functions built in and configurable over the communications channel:
1. Local control for up to three pumps.
 2. Local alternation, lead lag or round robin control behavior.
 3. A maximum number of pumps running setting that actively turns off pumps to stay below the maximum.
 4. Back up timers that can be set for maximum ON time or maximum OFF time or both. The maximum on setting can be configured to turn all pumps off or to force alternation.
 5. Ability to set a time of day where the RTU turns pumps ON for a fixed duration of time.
 6. Alarm the server if a pump is called for but does not start.
 7. Ability to turn a pump ON or OFF based on local analog input alarm thresholds. This can be used for functions like low suction cut-off, local altitude valve control or local alarm light activation.
- H. Flow Meter Functions. The RTU shall support the following features associated with flow meters:
1. Four internal 32-bit pulse counters stored in non-volatile memory.
 2. Ability to report the counter totals on intervals ranging from 1 minute to daily.
 3. Ability to convert two of the counter inputs pulse rates to a flow rate and report to the server in the form of an instantaneous flow rate reading.
 4. Ability to take two of the Analog inputs connected to flow rate outputs of meters and integrate the signal to create a pseudo totalizer simulating a pulse counter. This will be used when pulse outputs are not available from the flow meters.
- I. Rain Gauge Monitoring. The RTU counter inputs shall be able to support tipping bucket rain gauge instruments with the following reporting features:
1. Ability to report rainfall in 15 min resolutions.
 2. Graph rain on the web interface in hourly, daily and monthly increments.
- J. Wastewater Pump Station Functions. The RTU shall support the following pump station monitoring functions:

1. Ability to accumulate and report start and runtime statistics for up to five pumps. The statistics may be scheduled to report to the server on intervals between hourly and daily.
 2. Ability to report an alarm if a single pump run cycle exceeds a threshold set by the user.
 3. Optional flow estimation based on wet well geometries and pump on/off levels.
 - a. Works for either float or level based installations
 - b. Pump Capacity calculation
 - c. Station output flow rate and totalization
 - d. Station inflow rate estimation
- K. Power Monitoring. The RTU shall support the following power related functions:
1. All units shall have battery backup that keeps the core functions active for at least two days. Depending on what option is installed, some I/O's will continue to function normally.
 2. Alarms shall be sent to the server when power loss is detected.
 3. For solar RTU's or A/C powered RTU's running on battery, alarms shall be sent to the server when the battery reaches a critical low level. Solar units shall also report if no charging voltage is received for 4 days as an indication that the panel may be stolen or defective.
- L. Ease of Replacement. Main electronics' modules shall have the following features:
1. Main electronic modules shall be din-rail mounted for easy removal and replacement.
 2. All power and I/O connectors shall be two-part pluggable terminals so that when a module is replaced no wires have to be removed from the terminals.
 3. The same basic RTU shall be used for all communications options with no I/O configuration changes.
- M. Antenna Options:
1. Cellular options shall include an antenna that is internal to the enclosure, an omnidirectional antenna external to the enclosure or a directional (higher gain) antenna external to the enclosure.
 2. Satellite RTU's shall require an external 3-inch stub antenna with a bracket and either a 15, 30 or 50-foot external cable.
 3. IP units shall only require standard 10baseT RG6 Internet patch cable connection.
- N. Expansion and Accessories. The RTU's shall have the following optional factory-installed accessories available:
1. Din-rail mounted main power surge arrestor.
 2. Din-rail mounted Analog or Digital signal surge arrestors.
 3. RTU's with four Analog inputs shall have an optional expansion module to add four additional 4-20ma analog inputs.
 4. Enclosure heaters and thermostats.
 5. Local digital displays for analog inputs.
 6. RTU's with a programming port through which qualified installers may upgrade internal software without returning the equipment to the factory.
- O. Communication Platforms:
1. RTU's may be configured with either low earth orbit satellite (Iridium), GSM cellular (ATT or International), CDMA cellular (Verizon) or IP (Internet) as designated by the Owner to communicate bi-directionally from the RTU to the Central Server.

2.4 BASIS OF DESIGN

- A. The satellite telemetry system is based on Iridium satellite modems, ANSI C protocol Software – no exceptions.
- B. **SECURITY:** To demonstrate the security and privacy of customer data, the proposed manufacturer shall be certified in accordance with SOC2 Type1 at a minimum. Developed by the American Institute of Certified Public Accountants(AICPA), SOC 2 certification is widely recognized as a gold standard for data security and requires companies to establish and follow strict information security policies and procedures. By achieving Type 1 certification, an independent third party has validated the design of the manufacturers’ controls relevant to security, availability, and confidentiality. Successful Type 1 examination demonstrates their commitment to data security through the practices and procedures it follows for protecting against unauthorized access, maintaining the availability of its service, and protecting the confidential information of its customers

2.5 MODEM REQUIREMENTS

A. Satellite Modems

- 1. The modems shall use the mobile frequency designated by the IRIDIUM Satellite System.
- 2. The modems shall be able to be programmed.
- 3. The communication protocol shall be IRIDIUM Satellite Communication standard.
- 4. The modems shall be model IRDM IRIDIUM9602.or approved equal.
- 5. One modem shall be installed at each of the sites.
- 6. Antennas
- 7. Omni-directional antennas shall be tuned specifically for the IRIDIUM Satellite frequency bands, MAXTENA Model M1621HCT-SMA, or approved equal
- 8. Proper grounding shall be provided as part of price proposed at each site, including wiring,conduit, clamps, and any other item for state-of-the-art grounding.
- 9. One antenna shall be installed at each of the sites.

B. Cellular Modems

- 1. The modems shall use the mobile frequency designated by the AT&T Systems or Verizon Mobile CDMA.
- 2. The modems shall be able to be programmed.
- 3. The communication protocol shall be UDP standard.
- 4. The modems shall be Novatel Wireless Model SA-G+ HPSA/CDMA/1xRTT Telemetry Platform or approved equal.
- 5. One modem shall be installed at each of the specified sites. See Part 1.4.C.1-6 of this specification.

C. Antenna Cable Lengths

- 1. The following minimum standard cable lengths shall be used during the bidding process
- 2. Tank sites – see individual Tank RTU spec.
- 3. Booster Pump – See individual Booster Pump RTU spec.
- 4. The actual as-installed cable lengths may be more or less per site.

D. Antenna Mounting

1. All antennas shall be mounted with stainless steel band clamps to a 1.5" diameter PVC conduit pipe and fastened to a support structure (provided by the Owner) using uni-strut fasteners, per the telemetry supplier's instructions.
2. The mounting of the antennas shall be in such a manner to prevent welding, drilling or other corrosion and stress inducing modifications, or damage to paint systems.
3. All antennas shall utilize non-load bearing structures such as safety rails or new mounting posts for mounting points.
4. Antennas shall be mounted in a manner so that cables and antennas do not interfere with safety equipment or harnesses while climbing up or on the structures.
5. Cutting into a structural member is not acceptable.
6. All antennas shall be mounted to insure the most obstructed view of the sky at the remote sites.

E. Antenna Connection Sealing

1. All weather exposed antenna co-ax cable connections shall be sealed with Scotch 2228 Rubermastic Rubber Tape in accordance with the manufacturer's recommendations, no exceptions.

F. Antenna Cable Surge suppression.

All antennas shall include 1- CITEL P8AX Series Model P8AX09 bulkhead mounted antenna co-ax surge suppressor.

G. Anti-Condensation Heater

1. All tank site RTUs(except solar) shall include 1- Genesis Automation Model RC016 Small Heater anti-condensation heater.

2.6 SITE COMMUNICATIONS

A. Methods

1. Each RTU shall be capable of communicating with the High Tide Technologies central server.

2.7 SITE CONTROL

A. Control Methods

1. The control of the typical remote booster pump shall be based upon the comparison of adjustable setpoints and dynamic tank levels. The pump shall be able to be controlled by the tank of interest. Provide override pump control from the web based software.
2. Each booster pump location shall have an operator interface on the web based software for display of local alarm messages, pump status, relevant remote tank levels, and setpoints.
3. The ability to operate pumps manually will be by Owner provided Hand-Off-Auto (H-O-A) switches.
4. When the switch is in the "Hand" position, the pump shall be manually controlled by the switch and without the aid of a functioning RTU controller.
5. When the switch is in the "Auto" position, the RTU or controller shall automatically control the pump.
6. The status of all H-O-A switches shall be observed on the web based software interface.

2.8 PROGRAMMABLE RTU PROCESSOR

- A. Provide a High Tide Technologies system, or equal. The control system shall consist of individual RTUs located at each monitoring location. The capability shall exist to allow for expansion of the system by the addition of hardware and/or software. Program development is the responsibility of the Manufacturer of the satellite telemetry system.
- B. All hardware of the RTU shall operate at an ambient temperature of minus 25 to 60 degrees C (-4 to 140 degrees F), with an ambient temperature rating for storage of minus 40 to plus 60 degrees C.
- C. All RTU hardware shall function continuously in the relative humidity range of 5 to 95 percent with no condensation.
- D. Each RTU shall have at least one dedicated serial port.
- E. Processor Hardware
 - 1. The user program, data, and operating system shall include EEPROM or equivalent for backed memory storage.
 - 2. Each processor shall contain enough base memory for at least 30% growth room after the program has been completed and tested.
 - 3. The front enclosure of the processor shall include a serial port.
 - 4. All system modules, local and remote chassis shall be designed to provide for free airflow convection cooling. No internal fans or other means of cooling, except heat sinks, shall be permitted.
- F. RTU Power Supplies
 - 1. The RTU power supplies shall operate in compliance with an electrical service of 85-265 VAC, single phase, in the frequency range from 47 to 63 Hz.
 - 2. The manufacturer shall, if electrical power is unavailable, provide a solar powered RTU.
 - 3. The RTU shall have an integral AC to DC power converter, unless solar power is required.
 - 4. The power supply shall monitor the incoming line voltage for proper levels. When the power supply is wired to utilize AC input, the system shall function properly within the range of 85 to 265 VAC. In addition, the power supply shall provide surge protection and isolation.
 - 5. In addition to the electronic protection described above the power supply shall offer a failsafe fuse that is not accessible by the customer.
 - 6. The RTU shall include Phoenix Contact Model PT 2-PE/S-120AC-ST SURGE ARRESTORS.
- G. RTU Networking and Communications
 - 1. RTUs in the satellite telemetry system shall have standard communications that support ASCII or Modbus protocols(3000only).
 - 2. The RTU shall standard programming instructions that allows bi-directional satellite messaging with the central server.
 - 3. The RTUs shall support both scheduled and unscheduled communications between the central server.
- H. Digital Inputs
 - 1. Number of Digital Inputs: SEE SITE DESCRIPTIONS in Part 1.4.C.1-6 of this specification
 - 2. All digital inputs shall be optically isolated
 - 3. Ambient Operating Temperature Rating: Minus 20° C to 60° C.

I. Digital Outputs

1. Number of Digital Outputs: SEE SITE DESCRIPTIONS in Part 1.4.C.1-6 of this specification
2. Digital outputs shall be Dry Contact Relays.
3. Ambient Operating Temperature Rating: 0° C to 60° C.

J. Analog Inputs

1. Input Type: voltage.
2. Number of Analog Inputs: (**) See Part 1.4.C.1-6 of this specification.
3. Input Power: Loop Power.
4. Current/Voltage Ranges: 0-5 dc or 4-20 mA
5. Resolution: 10 bits.
6. Ambient Operating Temperature Rating: Minus 20° C to 60° C.

2.9 RTU SYSTEM ENCLOSURES

- A. The system enclosure shall contain the RTU, complete with inputs/outputs, power supplies, surge protection, terminals and all associated wiring. The enclosures shall come pre-assembled with all associated components mounted and wired.
- B. Remote Terminal Enclosures:
 1. One (1) molded NEMA 4 rated enclosure. Enclosures shall be lockable, PVC NEMA 4X , unless specifically specified as NEMA 4X stainless steel.

2.10 DC POWER SUPPLIES

- A. Regulated: Solid-State
- B. Input: 85-230 volts ac, single phase, 60 hertz.
- C. Output: 13.8 VDC
- D. Output Current: 3.0 A
- E. Ambient Temperature Range: Minus 20 to 50° C.
- F. Mounting: Din Rail
- G. Primary Protection: Internal fuse
- H. Additional Protection: Over-current protection for secondary
- I. Shielded Twisted Pair
 1. Tinned, soft copper and insulated with nylon-jacked polyvinyl chloride.
 2. Color code each conductor pair.3. Twist conductors into pairs with a 1-1/2-to 2-1/2-inch lay.
 3. Code each pair with a unique pair number.
 4. 100 percent shielded coverage, aluminum-polyester.
 5. No. 22 AWG.
 6. No. 22 AWG stranded copper drain wire.

7. Rated 300 volts, 60 degrees C.

- J. Conductors: General internal wiring of specified electrical enclosures. Group and neatly route conductors within enclosures.
1. All wiring internal to the supplied enclosures/enclosures shall be machine tool wiring rated MTW/AWM/TFF with an insulation rating of at 600-volts and UL approved - no exceptions.

2.11 OUTPUT RELAYS

- A. Mounting: Din Rail
- B. Relay Rating: 24- 240 volts, 5 amperes.
- C. Contacts: SPDT.
- D. Coil Voltage: 24 Volt.

2.12 ANALOG SURGE PROTECTION

- A. Provide surge protector on 4-20mA inputs and outputs to each RTU. Provide the following:
- B. Shall be CITEL DLA-243 DC Signal Line Surge Protector

2.13 AC SURGE PROTECTION

- A. Provide surge protector on 120 AC incoming power to each RTU. Provide the following:
Shall be Phoenix Contact Model PT 2-PE/S-120AC-ST with PT-BE/FM Base

2.14 CO-AX SURGE PROTECTION

- A. Provide bulkhead mounted surge protector on Antenna Co-ax to each RTU. Provide the following:
Shall be Citel Model P8AX09-B/MF.

2.15 ANTI-CONDENSATION HEATERS

- A. AC POWERED TANK RTUs: Stego 011469-00
- B. EXTERIOR SOLENOID VALVE STATION RTUs: Stego 011469-00
- C. INTERIOR BOOSTER STATION RTUs: Not Required

2.16 SPARE PARTS

- A. NIC

2.17 FIELD INSTRUMENTS

- A. All of the OWNER's existing field instrumentation shall be integrated into the manufacturer's satellite telemetry system. Any broken or malfunctioning instrumentation shall be brought to the attention of the ENGINEER and the OWNER'S attention immediately for replacement by the OWNER.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Install all equipment in accordance with ANSI C2, ANSI/NFPA 70 and the requirements specified herein.

3.2 WIRING

- A. Install conductors and cables in conduit, unless indicated otherwise.
- B. Complete raceway systems and remove obstructions before pulling conductors into place. Avoid damaging insulation during conductor installation. Use an approved lubricating compound as required to facilitate pulling wires.

3.3 SPLICES AND TERMINATIONS

- A. Make up both mechanically and electrically tight.
- B. Provide with a flashover or insulation value at least 100 percent in excess of wire insulation.
- C. Make splices and terminations in junction boxes.
- D. Make connections in No. 10 AWG and smaller conductors with insulated pressure connectors or wire nut connections.
- E. Use terminal blocks of the proper voltage for interconnecting or splicing control cables, communication cables, and other conductors. Mount terminal blocks in a cabinet and label terminals properly.

3.4 TESTING

- A. Performance Verification Test: Conduct performance verification tests to demonstrate that control system maintains set-points, and that system is programmed for the correct sequence of operation. Conduct performance verification test one day after work is installed of continuous RTU systems operation and before final acceptance of work. Performance verification test shall demonstrate the following:
 1. Field Testing: Calibrate field equipment and verify equipment and system operation before placing the system on-line.
 2. Calibration Accuracy and Operation of Inputs Test: Check for proper calibration and operation of each input instrument. Document each reading for the test report.
 3. RTU Startup and Memory Test: Demonstrate that programming is not lost after a power failure, and RTU controllers automatically resume proper control after a power failure.
 4. Surge Protection: Show that surge protection, meeting the requirements of this specification, has been installed on incoming power to the digital controllers and on communications lines.

4.4 FIELD TESTS

- A. Demonstrate compliance of the control system with the contract documents. Furnish personnel, equipment, instrumentation, and supplies necessary to perform calibration and site testing. Ensure that tests are performed by competent employees regularly employed in the testing and calibration of instrumentation systems.
- B. Notify the Owner of any defective products and workmanship disclosed by the tests.
- C. Testing will include the field and the performance verification tests. Field tests shall demonstrate proper calibration of input devices, and the operation of specific equipment. Performance verification test shall ensure proper execution of the sequence of operation and proper tuning of control loops.
- D. Test each device such that each item will function not less than five times.
- E. Tests are subject to oversight and approval by the Owner.

END OF SECTION

SECTION 331219 - WATER UTILITY DISTRIBUTION FIRE HYDRANTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Fire Hydrants.
2. Post Flushing Hydrant

B. Related Requirements:

1. Section 033000 - Cast-in-Place Concrete: Concrete for thrust restraints.
2. Section 312316.13 - Trenching: Trenching, backfilling, and compaction requirements.
3. Section 331300 - Disinfecting of Water Utility Distribution: Flushing and disinfection requirements.

1.2 REFERENCE STANDARDS

A. American Water Works Association:

1. AWWA C502 - Dry-Barrel Fire Hydrants.
2. AWWA C503 - Wet-Barrel Fire Hydrants.
3. AWWA C550 - Protective Interior Coatings for Valves and Hydrants.
4. AWWA C600 - Installation of Ductile-Iron Mains and Their Appurtenances.

B. National Fire Protection Association:

1. NFPA 291 - Recommended Practice for Fire Flow Testing and Marking of Hydrants.

1.3 COORDINATION

- A. Section 013000 - Administrative Requirements: Requirements for coordination.

1.4 SUBMITTALS

- A. Section 013300 - Submittal Procedures: Requirements for submittals.
- B. Product Data: Submit manufacturer's latest published literature, including illustrations, installation and maintenance instructions, and parts lists.
- C. Manufacturer Instructions: Submit detailed instructions on installation requirements, including storage and handling procedures.
- D. Field Quality-Control Submittals: Indicate results of Contractor-furnished tests and inspections.

1.5 CLOSEOUT SUBMITTALS

- A. Section 017000 - Execution and Closeout Requirements: Requirements for submittals.
- B. Project Record Documents: Record actual locations of fire hydrants and service valves.
- C. Operation and Maintenance Data: Submit data for hydrants.

1.6 QUALITY ASSURANCE

- A. Perform Work according to ANSI/AWWA C502 standards.

1.7 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this Section.
- B. Installer: Company specializing in performing Work of this Section.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Section 016000 - Product Requirements: Requirements for transporting, handling, storing, and protecting products.
- B. Prepare hydrants and accessories for shipment according to AWWA standards and seal hydrant and ends to prevent entry of foreign matter.
- C. Inspection: Accept materials on Site in manufacturer's original packaging and inspect for damage.
- D. Storage:
 - 1. Store materials in areas protected from weather, moisture, or potential damage.
 - 2. Do not store materials directly on ground.
- E. Handle materials in a way that prevents damage to interior and exterior surfaces.

PART 2 - PRODUCTS

2.1 FIRE HYDRANTS

- A. Manufacturers:
 - 1. M&H Valve Company Style 129 Model # 6054 86M3 129R NSTLA
 - 2. Substitutions: As approved by the Engineer.
- B. Dry-Barrel Breakaway Type:

1. Comply with AWWA C502.
2. Body: Cast iron.
3. Valve: Compression type.
4. Burial Depth: As indicated on Drawings.
5. Inlet Connection Size: 6 inches.
6. Valve Opening: 5-1/4 inches in diameter.
7. End Connections: Mechanical joint.
8. Bolts and Nuts: Galvanized steel.
9. Interior Coating: Comply with AWWA C550.
10. Direction of Opening: Counterclockwise unless otherwise indicated.

C. Hose Connections:

1. One pumper, two hose nozzles.
2. Obtain thread type and size from local fire department.
3. Attach nozzle caps by separate chains.

D. Finishes:

1. Color: As determined by the owner.

2.2 ACCESSORIES

- A. Concrete for Thrust Restraints: Concrete type as specified in Section 033000 - Cast-in-Place Concrete.

2.3 POST FLUSHING HYDRANTS

A. Manufacturers:

1. Eclipse Model#602362M1
2. Substitutions: As approved by the Engineer.

B. Dry-Barrel Breakaway Type:

1. Comply with AWWA C502.
2. Body: Cast iron.
3. Valve: Compression type.
4. Burial Depth: As indicated on Drawings.
5. Inlet Connection Size: 2 inches.
6. Valve Opening: 2-1/2 inches in diameter.
7. End Connections: Mechanical joint.
8. Bolts and Nuts: Galvanized steel.
9. Interior Coating: Comply with AWWA C550.
10. Direction of Opening: Counterclockwise unless otherwise indicated.

C. Finishes:

1. Color: As determined by the owner.

2.4 ACCESSORIES

- A. Concrete for Thrust Restraints: Concrete type as specified in Section 033000 - Cast-in-Place Concrete.
- B. Aggregate: Aggregate for hydrant drainage as specified in Section 310516 - Aggregates for Earthwork.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Section 017000 - Execution and Closeout Requirements: Requirements for installation examination.
- B. Verify exact location and size of hydrants from Drawings.
- C. Obtain clarification and directions from Engineer prior to execution of Work.
- D. Verify that invert elevations are as indicated on Drawings prior to excavation and installation of fire hydrants.

3.2 PREPARATION

- A. Section 017000 - Execution and Closeout Requirements: Requirements for installation preparation.
- B. Conduct operations not to interfere with, interrupt, damage, destroy, or endanger integrity of surface or subsurface structures, utilities, and landscape in immediate or adjacent areas.
- C. Identify required lines, levels, contours, and datum locations.
- D. Locate, identify, and protect from damage utilities to remain.
- E. Do not interrupt existing utilities without permission and without making arrangements to provide temporary utility services.

3.3 INSTALLATION

- A. Perform trench excavation, backfilling, and compaction as specified in Section 312316.13 - Trenching.
- B. Provide support blocking and drainage gravel while installing fire hydrants; do not block drain hole.

- C. Set fire hydrants plumb with pumper nozzle facing roadway.
- D. Set fire hydrants with centerline of pumper nozzle 18 inches above finished grade, and with safety flange not more than 6 inches nor less than 2 inches above grade.
- E. Paint hydrants according to color scheme of local authorities having jurisdiction.
- F. After hydrostatic testing, flush hydrants and check for proper drainage.
- G. Disinfection of Water Piping System:
 - 1. Flush and disinfect system as specified in Section 331300 - Disinfecting of Water Utility Distribution.

3.4 FIELD QUALITY CONTROL

- A. Section 014000 - Quality Requirements: Requirements for inspecting and testing.
- B. Pressure test system according to AWWA C600 and following:
 - 1. Test Pressure: Not less than 200 psig or 50 psi in excess of maximum static pressure, whichever is greater.
 - 2. Conduct hydrostatic test for at least two hours.
 - 3. Slowly fill section to be tested with water and expel air from piping at high points.
 - 4. Install corporation cocks at high points.
 - 5. Close air vents and corporation cocks after air is expelled.
 - 6. Raise pressure to specified test pressure.
 - 7. Observe joints, fittings, and valves under test.
 - 8. Remove and replace cracked pipes, joints, fittings, and valves that show visible leakage and retest.
 - 9. Correct visible deficiencies and continue testing at same test pressure for additional two hours to determine leakage rate, maintaining test pressure within plus or minus 5.0 psi.
 - 10. Leakage is defined as quantity of water supplied to piping as necessary to maintain test pressure during testing period.
 - 11. Compute maximum allowable leakage using following formula:
 - a. $L = SD \times \sqrt{P}/C$
 - 1) L = testing allowance, gph
 - 2) S = length of pipe tested, feet
 - 3) D = nominal diameter of pipe, inches
 - 4) P = average test pressure during hydrostatic test, psig
 - 5) C = 148,000
 - b. If pipe under test contains sections of various diameters, calculate allowable leakage from sum of computed leakage for each size.
 - 12. If test of pipe indicates leakage greater than that allowed, locate source of leakage, make corrections, and retest until leakage is within allowable limits.

13. Correct visible leaks regardless of quantity of leakage.

END OF SECTION 331219

ENLARGED HEPZIBAH WATER IMPROVEMENTS

Rate Check: 9/19/2022

REGION VI PLANNING & DEVELOPMENT COUNCIL; Kent E. Rollins (304) 366-5693x102 krollins@regionvi.com

HEAVY PROJECT WAGE RATE SHEET

County: HARRISON COUNTY, WV

Wage US: WV20220054 mod 3

8/5/22

Decisions: WV: 2015 Heavy/Highway

9/30/15

void 5/12/16

Pre-Bid 9/21/22

Bid 10/4/22

Project Number: _____

Classifications Anticipated	Federal				State			
	Base	Fringe	TOTAL	OT Rate	Base	Fringe	TOTAL	OT Rate
Boilmkr Pipefitter Pres	\$35.86 +	\$19.30 =	\$55.16	\$73.09			\$0.00	\$0.00
Bricklvr CemMason Harr	\$31.63 +	\$21.26 =	\$52.89	\$68.71			\$0.00	\$0.00
Carp Pres	\$29.00 +	\$22.41 =	\$51.41	\$65.91			\$0.00	\$0.00
CemMsn Mar	\$31.63 +	\$21.26 =	\$52.89	\$68.71			\$0.00	\$0.00
Electr Harr	\$36.25 +	\$18.73 =	\$54.98	\$73.11			\$0.00	\$0.00
Ironwkr Harr	\$34.44 +	\$24.61 =	\$59.05	\$76.27			\$0.00	\$0.00
Millwrt Ironwkr Harr	\$34.44 +	\$24.61 =	\$59.05	\$76.27			\$0.00	\$0.00
Painter Pres	\$32.12 +	\$16.65 =	\$48.77	\$64.83			\$0.00	\$0.00
Pipeftr not Pipeftr Pres	\$35.86 +	\$19.30 =	\$55.16	\$73.09			\$0.00	\$0.00
Laborer LabFrmn, Pipelayer 3	\$26.32 +	\$16.75 =	\$43.07	\$56.23			\$0.00	\$0.00
LayerHlpr, AsphRaker 2	\$26.17 +	\$16.75 =	\$42.92	\$56.01			\$0.00	\$0.00
Whacker, Chnsw,Form 2	\$26.17 +	\$16.75 =	\$42.92	\$56.01			\$0.00	\$0.00
Asph Rkr, Carp msnTndr 2	\$26.17 +	\$16.75 =	\$42.92	\$56.01			\$0.00	\$0.00
Mulch-Seed 1	\$25.26 +	\$16.75 =	\$42.01	\$54.64			\$0.00	\$0.00
Demol,Water 1	\$25.26 +	\$16.75 =	\$42.01	\$54.64			\$0.00	\$0.00
Flag 1	\$25.26 +	\$16.75 =	\$42.01	\$54.64			\$0.00	\$0.00
OP 1 Crane,OpFrmn,Mmech 1	\$38.95 +	\$19.55 =	\$58.50	\$77.98			\$0.00	\$0.00
OP 2 Mech, 2	\$36.19 +	\$19.55 =	\$55.74	\$73.84			\$0.00	\$0.00
Bkhoe, Excav, DZR,Pvr,Drl 2	\$36.19 +	\$19.55 =	\$55.74	\$73.84			\$0.00	\$0.00
Bore, SkdStr, Trmch,Fork 2	\$36.19 +	\$19.55 =	\$55.74	\$73.84			\$0.00	\$0.00
OP 3 Roller,Screed 3	\$35.08 +	\$19.55 =	\$54.63	\$72.17			\$0.00	\$0.00
OP 4 Oiler 4	\$31.62 +	\$19.55 =	\$51.17	\$66.98			\$0.00	\$0.00
Team I Single Axle Trucks Pres	\$30.98 +	\$15.98 =	\$46.96	\$62.45			\$0.00	\$0.00
Team II Tandem & Tri-Axle	\$31.77 +	\$15.98 =	\$47.75	\$63.64			\$0.00	\$0.00
Team III Off Highway	\$31.77 +	\$15.98 =	\$47.75	\$63.64			\$0.00	\$0.00

This chart in no way eliminates or alters the Davis-Bacon or State of WV published wage determinations, but has the intended use in assisting Engineering Cost Estimation and Analysis within Region VI Counties.

CONTRACTOR,

Please highlight the classifications and rates that you anticipate paying during this Project.

Submitted by:

Contractor Signature

Date

Contractor Printed Name

Company Name

Approved by:

Labor Compliance Officer

Date

LABOR STANDARDS NOTES FOR PRE-BID CONFERENCE
Enlarged Hepzibah Water Improvement
9/21/2022

Potential Bidders have received the most current US DOL Davis-Bacon **HEAVY** Wage Rates for the project area.

Any missing or unenforceable rates will have interjections from the LM Area.

The West Virginia Division of Labor Published Wage Rates for Heavy, Highway, Building, and Residential have been repealed effective May 12, 2016.

A Compilation Chart being provided to you during this bid process allows all potential bidders to compare at-a-glance dominancy, and a ready method for Engineer cost analysis and employee anticipation of compensation.

Should there be any modification to published wage rates, a revised compilation will provide ready basis for bid modification. Said compilation serves in no way to override or eliminate the published wage determinations. The current Bid Date precludes any further modification applicability.

The successful bidder will be expected to submit directly to the REGION VI PDC Labor Compliance Officer **CERTIFIED WEEKLY PAYROLLS** (not weakly) for the Prime and any and all subcontractors.

Davis-Bacon stipulation for failure to comply consists of a **\$10** per-employee per-day liquidated damages, and include the possibility of disbarment if found to be intentional or habitual. Overtime requirements **always** apply.

Eligibility of employees for federal or state funds will also be verified, and files will need to be accurate and current; no illegal participation or innapropriate child labor will be permitted.

All necessary documentation for the Prime and subcontractors will be the sole responsibility of the Prime contractor.

The Contractor is by state law subject for collection of subcontractor arrears for Workers Compensation.

Good Luck!!

Any questions; call KENT ROLLINS at **304-366-5693x102**

"General Decision Number: WV20220054 08/05/2022

Superseded General Decision Number: WV20210054

State: West Virginia

Construction Type: Heavy

County: Harrison County in West Virginia.

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

STREAMLINED FOR
REDISTRIBUTION BY
REGION VI PDC
304 366 5693 X 102
ELECT SZFWCR

ENLARGED
HEPZIBAH WTR

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	<ul style="list-style-type: none"> Executive Order 14026 generally applies to the contract. The contractor must pay all covered workers at least \$15.00 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2022.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	<ul style="list-style-type: none"> Executive Order 13658 generally applies to the contract. The contractor must pay all covered workers at least \$11.25 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2022.

US DOL INTERJECTS FOR MISSING OR UNENFORCEABLE RATES FROM OTHER COUNTY IN LABOR MARKET AREA. PRESTON IS PROMINENT. HGR

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Modification Number	Publication Date
0	01/07/2022
1	02/18/2022
2	02/25/2022
3	08/05/2022

* ELEC0307-008 05/30/2022

82¢ INCL

	Rates	Fringes	
ELECTRICIAN.....	\$ 36.25	18.73	54 ⁹⁸

ENGI0132-015 12/01/2021

	Rates	Fringes	
POWER EQUIPMENT OPERATOR:			
GROUP 1.....	\$ 38.95	19.55	58 ⁵⁰
GROUP 2.....	\$ 36.19	19.55	55 ⁷⁴
GROUP 3.....	\$ 35.08	19.55	54 ⁶³
GROUP 4.....	\$ 31.62	19.55	51 ¹⁷

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Cranes (All types), Boom trucks, Loaders of six (6) cubic yard capacity and over, Excavators and shovels with an operating weight of one hundred ten thousand (110,000) pounds and over. **6+**

GROUP 2: Loaders up to six (6) cubic yard capacity, **0-6** Bulldozers, Bobcat/Skid Steer/Skid Loader, Forklift, Drill, Excavators and shovels with an operating weight of up to one hundred ten thousand (110,000) pounds.

GROUP 3: Roller, **EXCAV 0-551, BHOE, MECH, TRENCHER, SCRAVER**

GROUP 4: Oiler

IRON0549-012 12/01/2021

	Rates	Fringes	
IRONWORKER, ORNAMENTAL, REINFORCING AND STRUCTURAL.....	\$ 34.44	24.61	59 ⁰⁵

LAB00379-021 12/01/2020

	Rates	Fringes	
LABORER: 3	26³²	16⁷⁵	43⁰⁷
GROUP 2	\$ 26.32	16.50	42 ⁹²
GROUP 2-1	\$ 25.26	16.50	42 ⁰¹

GROUP **2**: Chain Saw, Concrete Worker, Hand Held Drill, Form Work, Grade Checker, Signal Man. **LAY FLPR, ASPH PAVER**

GROUP **2-1**: Flagger, **WATER, DEMOL**

3 Pipelayer, **LAY FORM**

	Rates	Fringes	
PLAS0926-001 06/01/2018 PAINTER (PREST)	32¹²	16⁰⁵	48⁷⁷

	Rates	Fringes	
CEMENT MASON/CONCRETE FINISHER... +bricklay	\$ 31.63	21.26	52 ⁸⁹

	Rates	Fringes	
* UAVG-WV-0010 01/01/2019 Pipe BOILERMAKER/FITER (PRESTON)	35⁸⁶	19³⁰	55¹⁶

LABORER (Mason Tender -

Pg 2

Cement/Concrete) <i>L-2</i>	\$ 26.17	16.50	42.92

* UAVG-WV-0012 01/01/2019 CARPENTER (PREST)	29.00	22.41	51.41
	Rates	Fringes	
POWER EQUIPMENT OPERATOR <i>0-2</i>	36.19	19.55	55.74
(Mechanic).....	\$ 35.45	18.30	

SUWV2012-052 08/13/2012

	Rates	Fringes	
LABORER: Common or General.....	\$ 22.11	10.34	32.45
LABORER: Pipelayer.....	\$ 22.34	10.95	33.29
OPERATOR: Backhoe.....	\$ 24.39	15.50	39.89
Truck Driver: Single and Double Axle Dump Trucks.....	\$ 22.76	10.90	33.66

UNEMPLOYABLE

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.	TEAMSTER (PREST)	FUT	30.98	15.98	46.96
		OFFRO	31.77	"	47.75
		Pickup	30.98	"	45.99
		TRACTOR	31.77	"	47.75
		SINGLE AXL	30.98	"	46.96

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

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (11)).

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

Union Rate Identifiers

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

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

Survey Rate Identifiers

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

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

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

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

WAGE DETERMINATION APPEALS PROCESS

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

Pg 4

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

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

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

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

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

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

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

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

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

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

=====
END OF GENERAL DECISIO"

DRAWING INDEX

COVER)	COVER SHEET
SHEET #INDEX)	MAIN INDEX SHEET
SHEET #NOTES)	PROJECT NOTES
SHEET #ROW)	RIGHT OF WAY LIST (IF APPLICABLE)
SHEET #SL)	SHEET LAYOUT/PROJECT LOCATION MAP
SHEET #1)	WATER LINE IMPROVEMENTS PLAN SHEET
SHEET #2)	PROPOSED CHECK VALVE PLAN AND SECTION
SHEET #3)	WATER LINE IMPROVEMENTS PLAN SHEET
SHEET #4)	WATER LINE IMPROVEMENTS PLAN SHEET
SHEET #5)	WATER LINE IMPROVEMENTS PLAN SHEET
SHEET #6)	WATER LINE IMPROVEMENTS PLAN SHEET
SHEET #7)	WATER LINE IMPROVEMENTS PLAN SHEET
SHEET #8)	WATER LINE IMPROVEMENTS PLAN SHEET
SHEET #9)	SPELTER TANK UPGRADES
SHEET #10)	EX. ALTITUDE VAULT EX. COND. PLAN & SEC.
SHEET #11)	PROPOSED DEMOLITION PLAN
SHEET #12)	PRO. VAULT UPGRADE PLAN & SECTION
SHEET #13)	PROPOSED SITE UPGRADE DETAILS
SHEET #14)	WATER LINE IMPROVEMENTS PLAN SHEET
SHEET #15)	WATER LINE IMPROVEMENTS PLAN SHEET
SHEET #16)	WATER LINE IMPROVEMENTS PLAN SHEET
SHEET #17)	PROPOSED SITE PLAN
SHEET #18)	PROPOSED VAULT PLAN & SECTIONS
SHEET #19)	HEPZIBAH TANK PROJECT LOCATION MAP
SHEET #20)	HEPZIBAH TANK UPGRADES
SHEET #21)	HEPZIBAH TANK PROPOSED CONTROLS
SHEET #22)	SPELTER TANK PROPOSED CONTROLS
SHEET #DET-1)	TYPICAL WATER LINE DETAILS
SHEET #DET-2)	TYPICAL WATER LINE DETAILS
SHEET #DET-3)	TYPICAL WATER LINE DETAILS
SHEET #DET-4)	TYPICAL WATER LINE DETAILS
SHEET #DET-5)	TYPICAL WATER LINE DETAILS
SHEET #DET-6)	TYPICAL WATER LINE DETAILS
SHEET #DET-7)	SEDIMENT & EROSION CONTROL DETAILS
SHEET #DET-8)	SEDIMENT & EROSION CONTROL DETAILS
SHEET #DET-9)	SEDIMENT & EROSION CONTROL DETAILS

WATER CONSTRUCTION MATERIAL NOTES

- ALL FITTINGS SHALL BE FUSED JOINT HDPE AND MECHANICAL JOINT AND SHALL INCLUDE THRUST BLOCKING.
- ALL GATE VALVES SHALL BE MECHANICAL JOINT AND SHALL INCLUDE MECHANICAL JOINT RETAINER RESTRAINTS, MECHANICAL JOINT TO HDPE ADAPTERS AND ALL ITEMS SHOWN IN THE DETAILS AND/OR DESCRIBED IN THE SPECIFICATIONS.
- ALL MAIN LINE TIE - INS SHALL INCLUDE THE COST TO FURNISH AND INSTALL A GATE VALVE IN ADDITION TO THE REQUIRED FITTINGS.
- ALL FOUR INCH (4") TO TWELVE INCH (12") PVC WATER LINE SHALL BE AWWA C900 PRESSURE CLASS DR-18, AND HDPE D.I.P.S. DR-11.
- ALL SERVICE TUBING SHALL BE ASTM D2737 PE 4710 POLYETHYLENE PLASTIC TUBING, DR-9 (250 PSI), COPPER TUBE SIZED.

ANTICIPATED CONSTRUCTION SEQUENCE OF EVENTS:

- VIDEOTAPING OF PROJECT AREA.
- CONTRACTOR SHALL INSTALL PROJECT FIELD OFFICE INCLUDING ALL UTILITIES.
- CONTRACTOR SHALL NOTIFY MISS UTILITY, 1-800-245-4848 FOR EXISTING UTILITY LOCATIONS.
- INSTALL ALL NECESSARY SEDIMENT AND EROSION CONTROL MEASURES.
- MOBILIZATION.
- CONTRACTOR SHALL COMPLETE WORK ON MEADOWBROOK ROAD (SHEET 14 & 15) FIRST.
- ONCE WORK ON MEADOWBROOK ROAD IS COMPLETED, CONTRACTOR SHALL BEGIN WORK ON SPELTER T TANK UPGRADES (SHEET 9).
- AFTER THE SPELTER TANK UPGRADES HAVE BEEN COMPLETED, CONTRACTOR SHALL COMPLETE WORK ON ROUTE 19 AT THE DOH GARAGE (SHEET 1).
- ONCE WORK IS COMPLETE ON SHEETS 1,9,14 & 15, CONTRACTOR CAN BEGIN INSTALLATION OF WATER LINES ON SHEETS 3,4,5,6,7 & 8.
 - CONTRACTOR SHALL NOTE THAT WORK PERFORMED ON SHEETS 3,4, & 5 SHALL BE PERFORMED ON CONSECUTIVE DAYS INCLUDING WEEKENDS UNTIL COMPLETED AND WATER SERVICE IS RESTORED.
- CONTRACTOR SHALL INSTALL ALL VALVES, FITTINGS, HYDRANTS, FLUSHING HYDRANTS, METER SETTINGS, AND OTHER APPURTENANCES AS WASTER LINE INSTALLATION PROGRESSES.
- CONTRACTOR SHALL COMPLETE THE INSTALLATION OF ALL MAIN LINE ROAD BORES.
- CONTRACTOR SHALL CONDUCT ALL NECESSARY LINE FLUSHING, PRESSURE TESTING AND STERILIZATION, TO BE COORDINATED WITH THE ENLARGED HEPZIBAH PSD AND THE CLARKSBURG WATER BOARD.
- AFTER ALL FLUSHING, TESTING AND STERILIZATION OF LINES AND STRUCTURES ARE COMPLETE, AND TEST RESULTS ARE SATISFACTORY, CONTRACTOR SHALL PLACE THE SYSTEM ONLINE.
- CONTRACTOR SHALL COORDINATE ALL CONNECTIONS OR TIE-INS TO EXISTING SYSTEM WITH THE ENLARGED HEPZIBAH PSD PERSONNEL.
- CONTRACTOR SHALL COMPLETE ALL SURFACE RESTORATIONS.
- CONTRACTOR SHALL COMPLETE ALL WORK ON FINAL PUNCH LIST.
- CONTRACTOR SHALL COMPLETE ALL FINAL CLEAN UP.
- CONTRACTOR SHALL SUBMIT RECORD DRAWINGS FOR WORK INSTALLED IN ACCORDANCE WITH SECTION 01700 -PROJECT CLOSEOUT.
- DEMOBILIZATION AND PROJECT COMPLETION.

UTILITY AGENCIES SERVING PROJECT AREA

WEST VIRGINIA DIVISION OF HIGHWAYS

WEST VIRGINIA DIVISION OF HIGHWAYS, DISTRICT #4
P.O. BOX 2570
CLARKSBURG, WV 26301
304-842-1577
MISS UTILITY
1-800-245-4848

GAS
EQUITABLE GAS COMPANY
P.O. BOX 1550
U.S. ROUTE 19 SOUTH
CLARKSBURG, WV 26301-1550
TOLL FREE-1-800-924-2840

GAS
DOMINION HOPE
48 COLUMBIA BLVD.
CLARKSBURG, WV 26301
(800)-688-4673

ELECTRIC
FIRST ENERGY
2608 FAIRMONT AVE.
FAIRMONT, WV 25314
1-888-554-4877

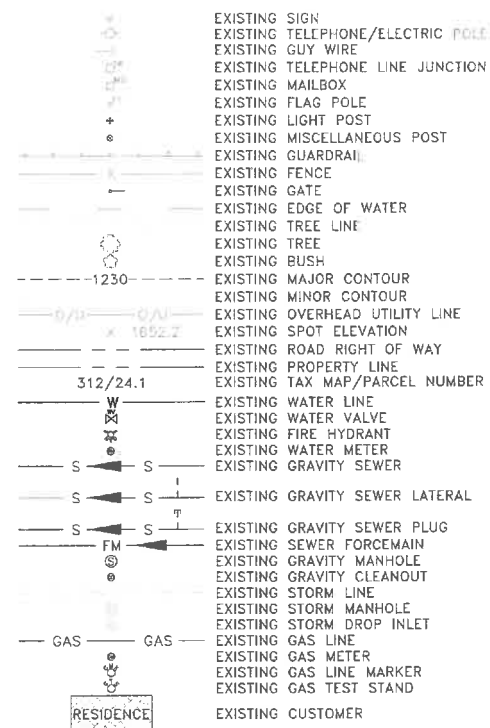
WATER
ENLARGED HEPZIBAH P.S.D.
18 SABLE CIRCLE
REYOLDSVILLE, WV 26422
304-623-9609
SEWER:
ENLARGED HEPZIBAH P.S.D.
18 SABLE CIRCLE
REYOLDSVILLE, WV 26422
304-623-9609

RESPONSE TEAMS:
NATIONAL RESPONSE CENTER FOR REPORTING CHEMICAL OR OIL SPILLS
1-800-424-8802
STATE EMERGENCY SPILL NOTIFICATION
1-800-642-3074
AMBULANCE, FIRE, LAW ENFORCEMENT
911

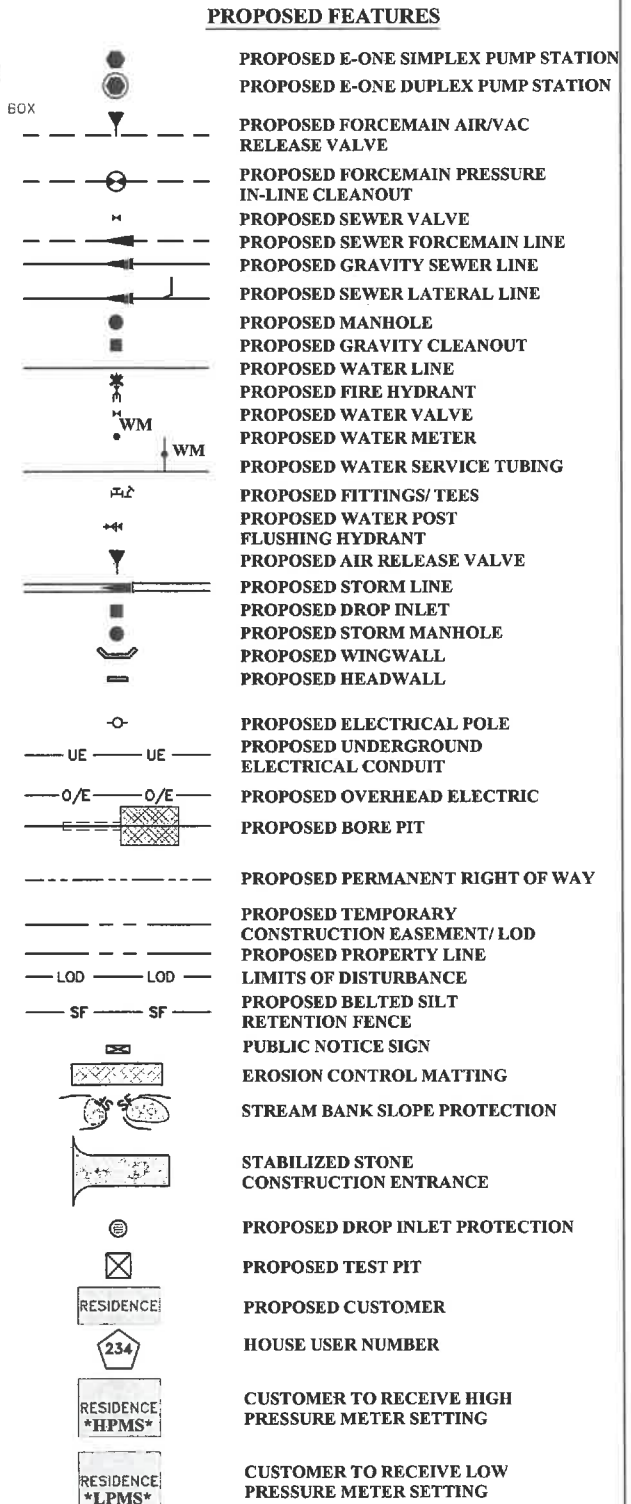
EROSION & SEDIMENT CONTROL NOTES:

- ALL EROSION AND SEDIMENT MEASURES TO BE IN ACCORDANCE WITH WEST VIRGINIA ONLINE BMP MANUAL FOR STANDARD GUIDELINES AND SPECIFICATIONS AVAILABLE AT: [HTTP://WWW2.WVDEP.ORG/DWVM/STORMWATER/INDEX.HTML](http://www2.wvdep.org/dwvm/stormwater/index.html)
- EROSION AND SEDIMENT CONTROL MEASURES HAVE BEEN SHOWN ON PLANS AND DETAILED IN SPECIFICATIONS.
- DISTURBED AREA TO BE STABILIZED WITH TEMPORARY AND FINAL SEEDING AS DESCRIBED IN SPECIFICATIONS.
- WHERE CONSTRUCTION ACTIVITY WILL RESUME ON A PORTION OF THE SITE WITHIN 14 DAYS FROM WHEN ACTIVITIES CEASED, (E.G., THE TOTAL TIME PERIOD THAT CONSTRUCTION ACTIVITY IS TEMPORARILY HALTED IS LESS THAN 14 DAYS) THEN STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE BY THE FOURTH DAY AFTER CONSTRUCTION ACTIVITIES HAVE TEMPORARILY CEASED. AREAS WHERE THE SEED HAS FAILED TO GERMINATE ADEQUATELY (UNIFORM PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70%) WITHIN 30 DAYS AFTER SEEDING AND MULCHING MUST BE RE-SEEDED IMMEDIATELY, OR A SOON AS WEATHER CONDITIONS ALLOW.
- TEMPORARY CONSTRUCTION RIGHT OF WAY LINE REPRESENTS LIMITS OF DISTURBANCE.
- WHERE A SINGLE LINE IS SHOWN, THERE WILL BE A 10' L.O.D (5' EACH SIDE)
- TRENCHES AND BORE PIT SHALL BE BACKFILLED AND STABILIZED AT THE END OF EACH WORKING DAY.
- 18" COMPOST FILTER SOCK MAY BE USED IN LIEU OF BELTED SILT FENCE.
- INSPECTION FREQUENCY OF EROSION AND SEDIMENT CONTROLS SHALL BE PERFORMED ONCE EVERY FOUR CALENDAR DAYS AND/ OR WITHIN 24 HOURS AFTER A PRECIPITATION EVENT OF 0.25 INCHES OR GREATER.
- BMP REPAIR SHALL BE COMPLETED IMMEDIATELY OR WITHIN 24 HOURS AFTER IDENTIFICATION.
- ALL DROP INLETS AND STORM DRAINS SHALL BE PROTECTED WITH ADEQUATE EROSION AND SEDIMENT CONTROLS TO PREVENT ANY SEDIMENT FROM ENTERING THE DRAINS.

EXISTING FEATURES



LEGEND



WVIJDC# 2019W-1819

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1	SS	04/26/20	Revised ES and Easements
2	SS	05/26/20	Revised per WDEP comments, received 05/27/20
3	SS	07/16/20	Revised per WDOH comments, received 05/29/20
1	PL	9-22	ADDENDUM #2



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DRAWN: A. SAYRE	CHECKED: DATE:
APPROVED: DATE:	SURVEY DATE:
SURVEY BY:	FIELD BOOK No.:

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BRIDGEPORT WV 26330
www.thrashereng.com

PHONE (304) 624-4108 FAX (304) 624-7831

PHASE No.	CONTRACT No.	PROJECT No.
		010-1231

ENLARGED HEPZIBAH P.S.D.
PROPOSED WATER SYSTEM IMPROVEMENTS PROJECT
HARRISON COUNTY, WEST VIRGINIA
MAIN INDEX SHEET

SHEET No.

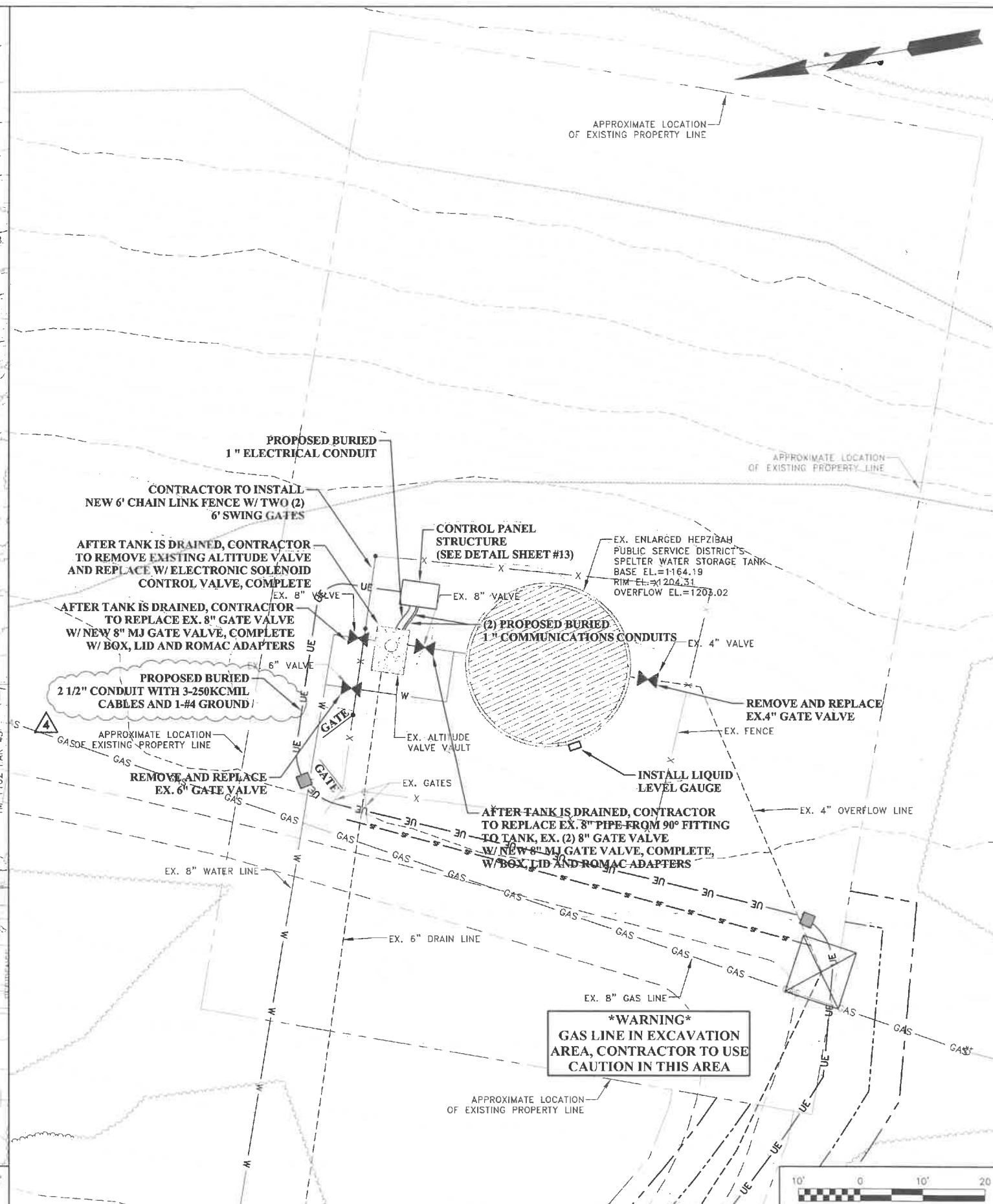
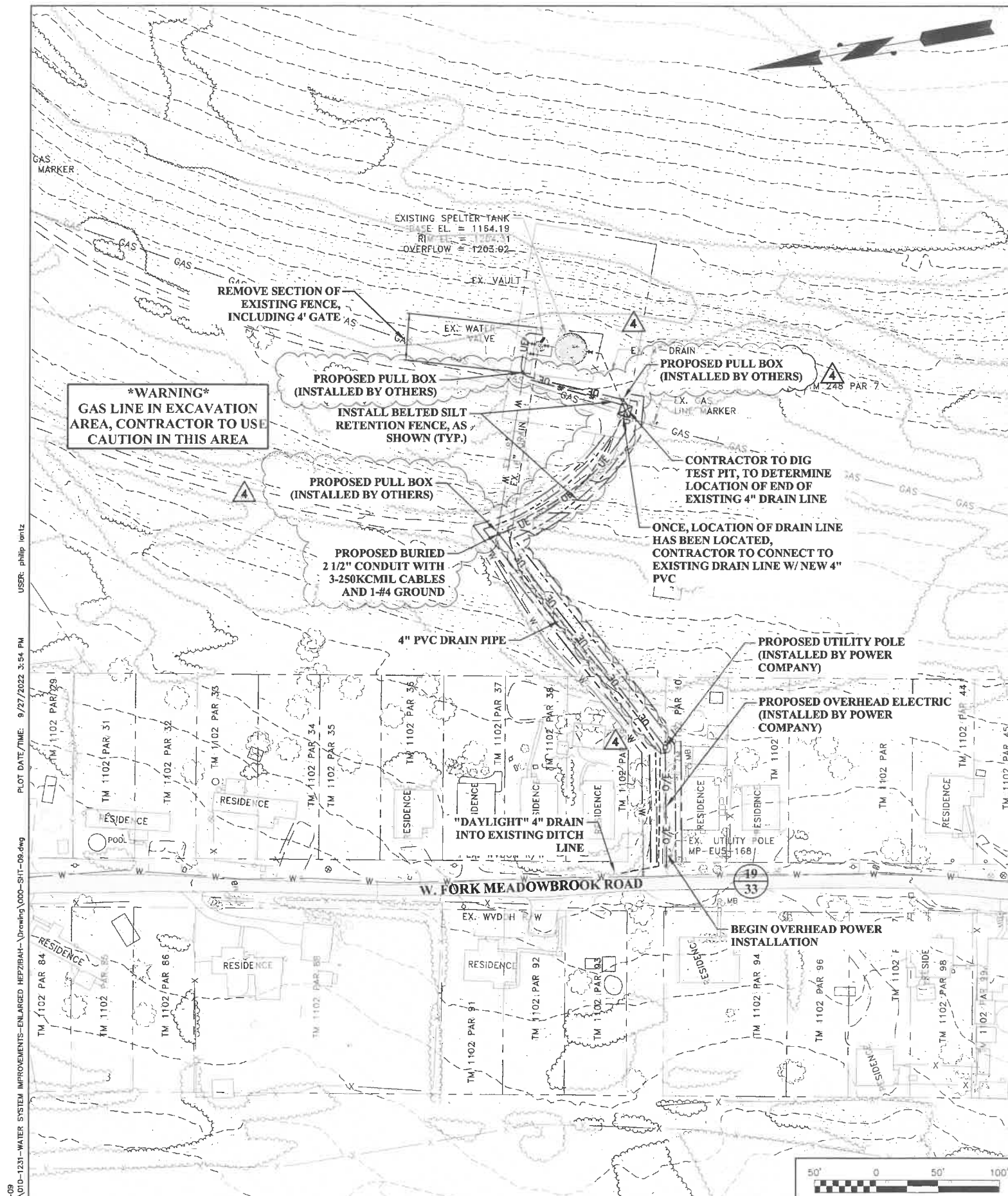
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USER: philip.lantz

PLOT DATE/TIME: 9/27/2022 3:28 PM

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LAYOUT TAB: SHT-09
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 PLOT DATE/TIME: 9/27/2022 3:54 PM
 USER: philip_toniz

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2	SS	05/28/20	Revised per WVDOP comments, received 05/27/20
3	SS	07/16/20	Revised per WVDCH comments, received 05/29/20
4	AM	09/27/22	ADDENDUM #2



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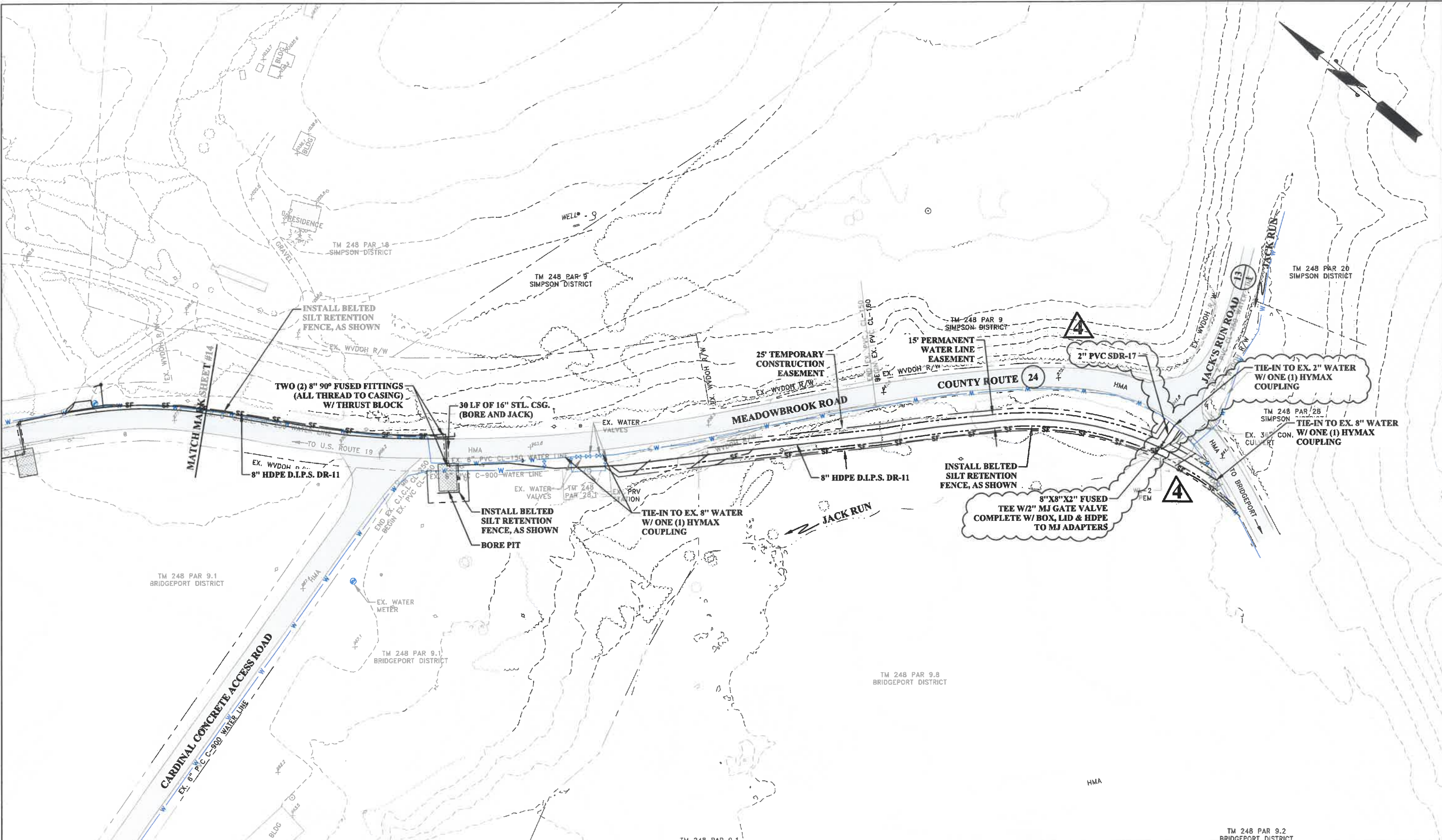
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PHASE No.
 CONTRACT No.
 PROJECT No.
010-1231

**ENLARGED HEPZIBAH P.S.D.
 PROPOSED WATER SYSTEM
 IMPROVEMENTS PROJECT
 HARRISON COUNTY, WEST VIRGINIA
 WATER LINE IMPROVEMENTS PLAN SHEET**

SHEET No.
9

USDR: cation & hurry
 PLOT DATE/TIME: 9/27/2022 8:20 AM
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3	SS	07/16/20	Revised per WVDH comments, received 05/29/20
4	AH	09/27/22	ADDENDUM #2



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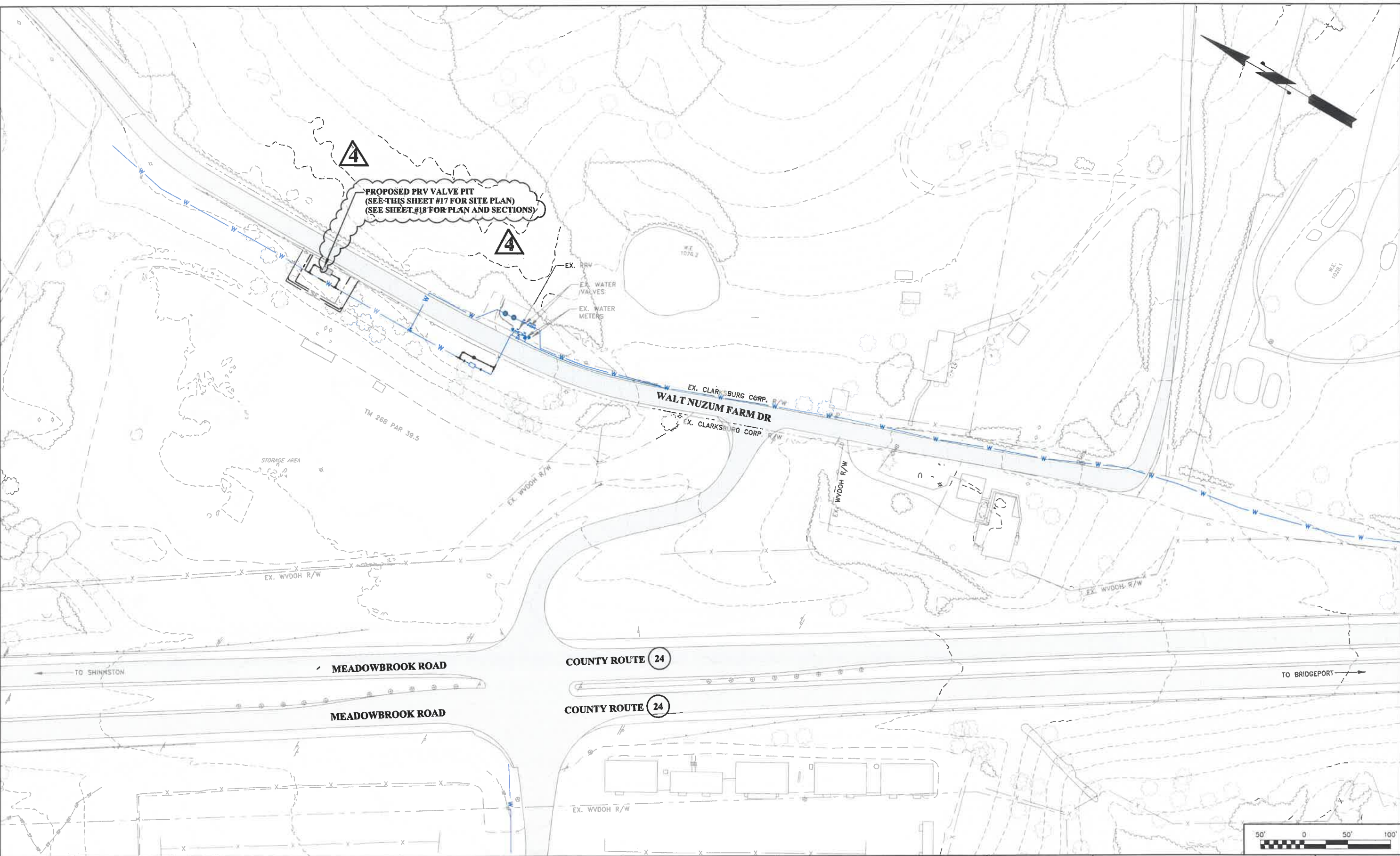
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PHASE No.	
CONTRACT No.	
PROJECT No.	010-1231

**RECONNECTION OF
 EXISTING CUSTOMER'S SERVICE**
 ENLARGED HEPZIBAH P.S.D.
 PROPOSED WATER SYSTEM
 IMPROVEMENTS PROJECT
 HARRISON COUNTY, WEST VIRGINIA
 PLAN SHEET

SHEET No.
15

LAYOUT FILE: SHEET 16
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 USER: ashon c. buray



NO.	BY	DATE	DESCRIPTION
1	SS	04/28/20	Revised ES and Easements
2	SS	05/28/20	Revised per WVDEP comments, received 05/27/20
3	SS	07/16/20	Revised per WVDOH comments, received 05/29/20
4	AH	09/27/22	ADDENDUM #2



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 APPROVED: DATE:
 SURVEY DATE:
 SURVEY BY:
 FIELD BOOK No.:

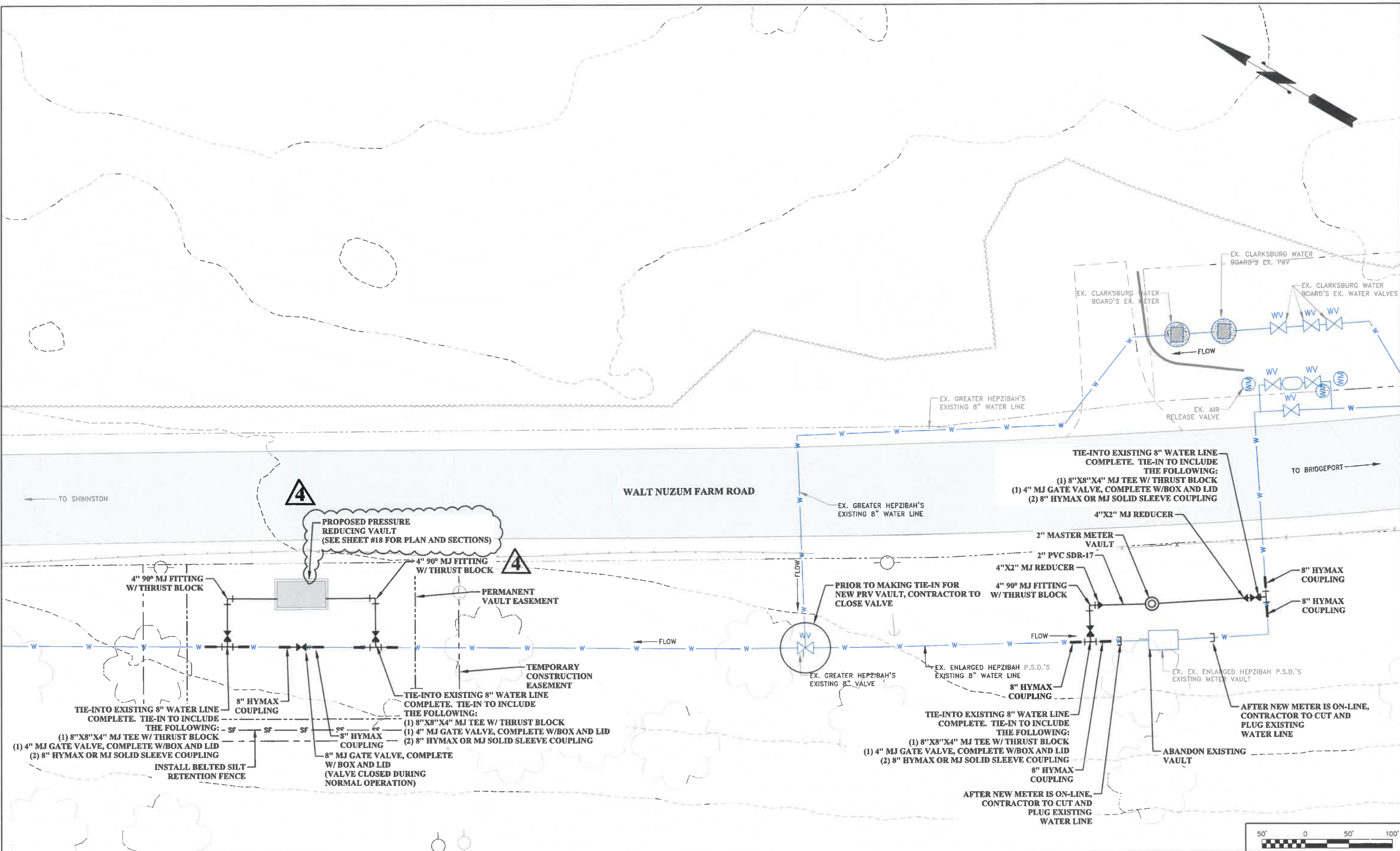
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PHASE No.
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010-1231

**ENLARGED HEPZIBAH P.S.D.
 PROPOSED WATER SYSTEM
 IMPROVEMENTS PROJECT
 HARRISON COUNTY, WEST VIRGINIA
 WATER LINE IMPROVEMENTS PLAN SHEET**

SHEET No.
16

LAYOUT TAB: SHEET 17
 CAD FILE: R:\010\010-1231-WATER SYSTEM IMPROVEMENTS-ENLARGED HEPZIBAH-DRENING\000-SHT-16.dwg
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 USER: ashley a. hursey



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3	SS	07/16/20	Revised per WVDOP comments, received 05/29/20
4	AH	09/27/22	ADDENDUM #2



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CONTRACT No.	
PROJECT No.	010-1231

**ENLARGED HEPZIBAH P.S.D.
 PROPOSED WATER SYSTEM
 IMPROVEMENTS PROJECT
 HARRISON COUNTY, WEST VIRGINIA
 PROPOSED SITE PLAN**

SHEET No.
17

HTT TELEMETRY VALVE STATION

RTU MOUNTED ON SUPPORT PLATFORM

FOLLOWING INFORMATION IS REQUIRED:

ANTENNA CO-AX CABLE LENGTH REQUIRED: 30 FT

INTRUSION ALARM SWITCH REQUIRED? _____

INDICATE POWER SOURCE AVAILABLE:

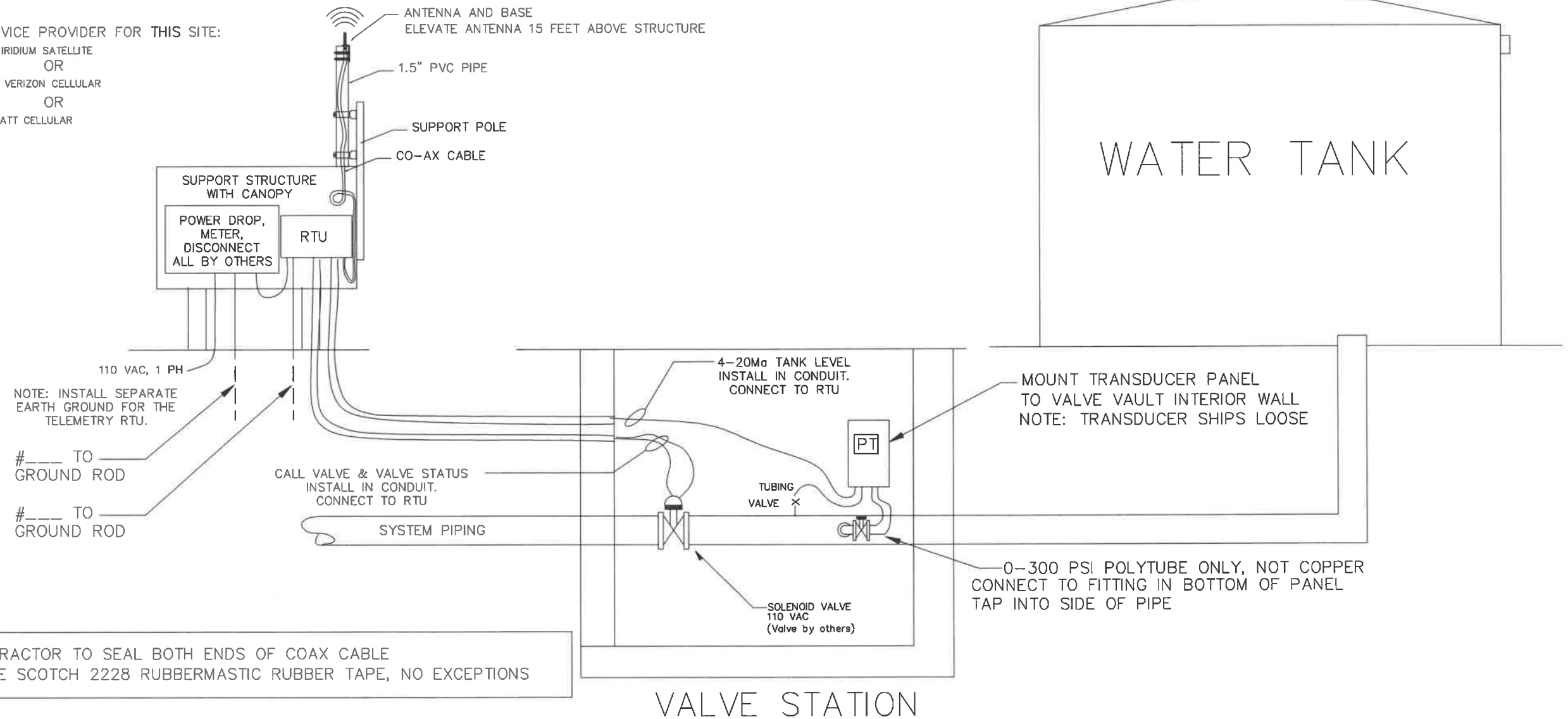
- OPTION A: AC POWER OR
- OPTION B: SOLAR POWER

ANTENNA LOCATION OPTIONS: INDICATE WHICH WILL BE USED:

- OPTION A: MOUNTED ON POLE AT GRADE

SERVICE PROVIDER FOR THIS SITE:

- IRIDIUM SATELLITE OR
- VERIZON CELLULAR OR
- ATT CELLULAR



CONTRACTOR TO SEAL BOTH ENDS OF COAX CABLE
USE SCOTCH 2228 RUBBERMASTIC RUBBER TAPE, NO EXCEPTIONS

SYSTEM NAME: HEPZIBAH PSD
SITE NAME: HEPZIBAH TANK

LAYOUT HAS SHEET-01 CAD FILE AT: C:\D:\010-1231-WATER SYSTEM IMPROVEMENTS-ENLARGED HEPZIBAH-Drawing\000-SHT-19.dwg PLOT DATE/TIME: 9/19/2022 2:15 PM USER: pntip/entz

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2	SS	05/28/20	Revised per WVEEP comments, received 05/27/20
3	SS	07/16/20	Revised per WVOOH comments, received 05/29/20
4	PL	9-22	ADDENDUM #2 (NEW SHEET)



SCALE: AS NOTED	DATE: 12/19
DRAWN: A. SAYRE	DATE:
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APPROVED:	DATE:
SURVEY DATE:	
SURVEY BY:	
FIELD BOOK No.:	

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BRIDGEPORT WV 26330
www.thrashereng.com

PHONE (304) 624-4108 FAX (304) 624-7831

PHASE No.	
CONTRACT No.	
PROJECT No.	010-1231

ENLARGED HEPZIBAH P.S.D.
PROPOSED WATER SYSTEM
IMPROVEMENTS PROJECT
HARRISON COUNTY, WEST VIRGINIA
HEPZIBAH TANK PROPOSED CONTROLS

SHEET No.	21
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HTT TELEMETRY VALVE STATION

RTU MOUNTED ON SUPPORT PLATFORM

FOLLOWING INFORMATION IS REQUIRED:

ANTENNA CO-AX CABLE LENGTH REQUIRED: 30 FT

INTRUSION ALARM SWITCH REQUIRED? _____

INDICATE POWER SOURCE AVAILABLE:

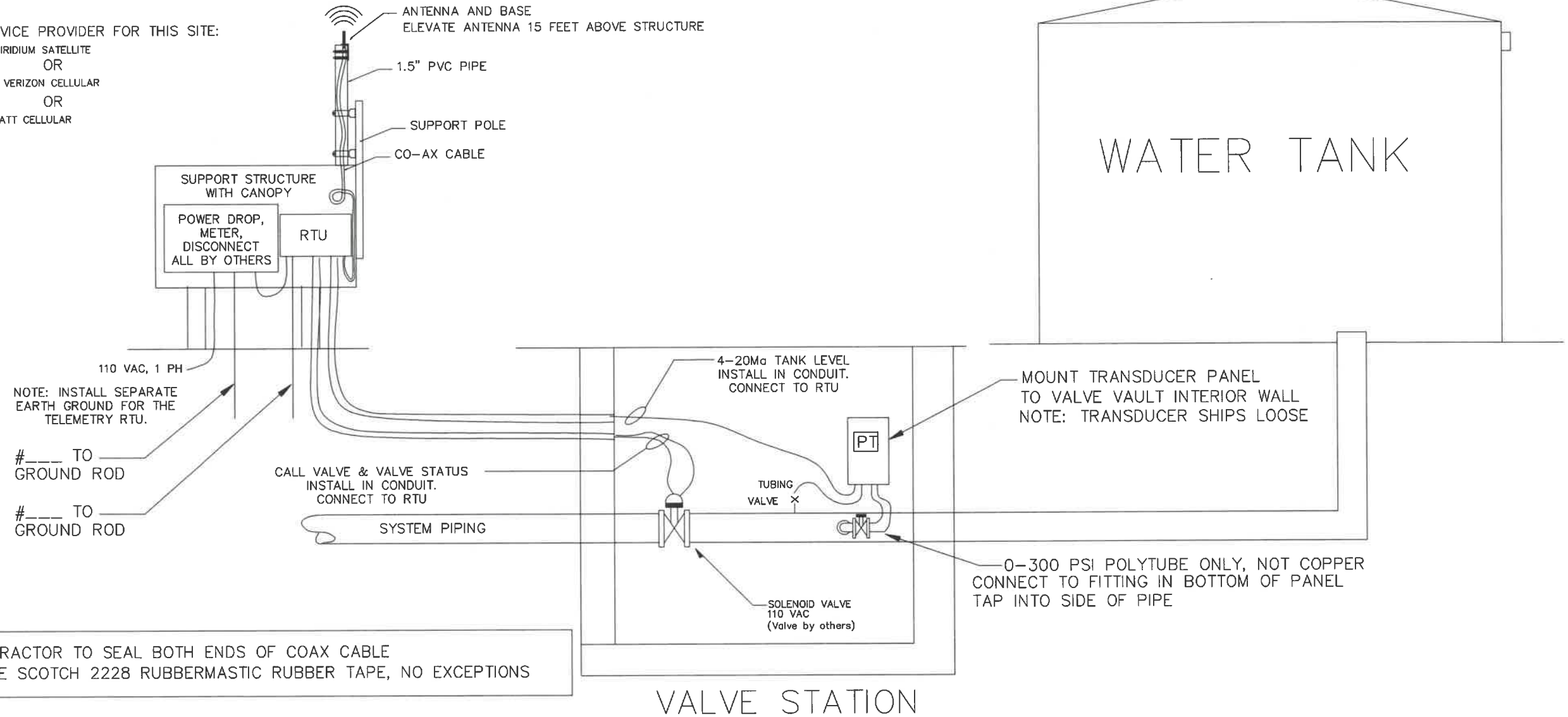
- OPTION A: AC POWER
OR
 OPTION B: SOLAR POWER

ANTENNA LOCATION OPTIONS: INDICATE WHICH WILL BE USED:

- OPTION A: MOUNTED ON POLE AT GRADE

SERVICE PROVIDER FOR THIS SITE:

- IRIDIUM SATELLITE
OR
 VERIZON CELLULAR
OR
 ATT CELLULAR



NOTE: INSTALL SEPARATE EARTH GROUND FOR THE TELEMETRY RTU.

___ TO GROUND ROD

___ TO GROUND ROD

CONTRACTOR TO SEAL BOTH ENDS OF COAX CABLE
USE SCOTCH 2228 RUBBERMASTIC RUBBER TAPE, NO EXCEPTIONS

SYSTEM NAME: HEPZIBAH PSD

SITE NAME: SPELTER TANK

LAYOUT TAB: SHEET-22
CAD FILE: R:\010\010-1231-WATER SYSTEM IMPROVEMENTS-ENLARGED HEPZIBAH-Drawing\000-SHT-19.dwg
PLOT DATE/TIME: 9/19/2022 2:14 PM
USER: philip.lantz

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1	SS	04/28/20	Revised ES and Easements
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3	SS	07/16/20	Revised per WVDOP comments, received 05/29/20
4	PL	9-22	ADDENDUM #2 (NEW SHEET)



SCALE: AS NOTED
DRAWN: A. SAYRE
CHECKED: _____
APPROVED: _____
SURVEY DATE: _____
SURVEY BY: _____
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