WATER TREATMENT PLANT EXPANSION

FOR

BOWLING GREEN MUNICIPAL UTILITIES

ADDENDUM NO. 4

ISSUE DATE: November 12, 2018
BID DATE: November 15, 2018

STATE OF KENTUCKY
RICHARD J.
CHAPPELL
25520
LICENSED
PROFESSIONAL ENGINEER

11-12-2018

SMITH SECKMAN REID, INC.
2995 Sidco Drive
Nashville, TN 37204
615-383-1113

SSR No. 16-41-027.0

ADDENDUM NO. 3
November 12, 2018

BID DATE: November 15, 2018

TO ALL CONTRACTORS AND SUPPLIERS:

The attention of all prospective bidders for the subject project is directed to the following additions, deletions and modifications to the Contract Documents.

This Addendum consists of 9 pages, with attachments.

Attachments consisting of the following:

1. Bidder Question Log – **This log is for informational purposes only and is not part of the Contract Documents.**
2. Section 00 41 00 – Bid Form.
3. Section 01 22 00 – Pages 4 to 6.
4. Section 06 40 00 – Architectural Woodwork
5. Replacement Drawings:
    a. CU1.1

Addendum Item	Page or Drawing	Location and Description of Change
S-1.	00 01 10 – 3	After 06 10 00 Rough Carpentry, add “06 40 00 Architectural Woodwork”.
S-2.	00 41 00	Delete Section 00 41 00 in its entirety and replace with the **attached Section 00 41 00**.
S-3.	01 22 00 – 4 to 6	Delete pages 4, 5, and 6 in their entirety and replace with the attached pages 4, 5, and 6.
S-4.	05 31 23 – 3	Delete Article 3.02.D in its entirety and replace with the following: **“D. Fasten deck to steel support members with galvanized Tek screws and galvanized washers in accordance with details on Contract Drawings.”**

Addendum Item	Page or Drawing	Location and Description of Change
S-5.	05 51 00 – 1	Delete Article 1.01.A.2 in its entirety and replace with the following: **"1. Treads for fiberglass stairs are made using specialty manufactured extruded plank treads as indicated. Treads for aluminum stairs are to be grating type as described in Section 05 53 00."**
S-6.	05 51 00 – 3	Delete Article 2.03.D in its entirety.
S-7.	05 52 00 – 4	In Article 2.04.A, delete "6 feet" and replace with **"4 feet"**.
S-8.	05 52 00 – 4	In Article 2.05.A.1, delete "M32" and replace with **"M12"**.
S-9.	05 52 00 – 4	In Article 2.05.A.2, delete "M10" and replace with **"M12"**.
S-10.	05 52 00 – 6	Delete Article 3.04.F.1 in its entirety and replace with the following: **"1. Support wall rails on brackets spaced maximum 4 feet on centers for aluminum as measured on horizontal projection."**
S-11.	06 40 00	Add attached Section 06 40 00 Architectural Woodwork.
S-12.	13 34 24 – 5	In Article 1.04.B.1.b.1.c, delete phrase "or straight (refer to drawings)".
S-13.	13 34 24 – 6	After Article 1.04.B.1.i, add the following: **"1) PEMB manufacturers are not necessarily responsible for furnishing perforated metal wall panels. If said perforated panels are not furnished by PEMB manufacturer, panels shall be provided by Contractor in coordination with PEMB manufacturer at no additional cost to Owner."**
S-14.	13 34 24 – 18	At end of 2.04.A.1.a, add the following: **"Coating shall be applied to all surfaces of metal roof panels".**
S-15.	13 34 24 – 18	At end of 2.05.A.1.a, add the following: **"Coating shall be applied to all surfaces of metal roof panels".**
S-16.	13 34 24 – 19	Delete Article 2.04.B and related subparagraphs in their entirety and renumber subsequent paragraphs accordingly.
S-17.	33 11 00 – 20	Delete Article 2.10.A in its entirety and replace with the following: **"A. All chemical piping located outdoors or below grade shall be double containment piping."**
S-18.	43 21 17 – 6	Delete Article 1.07.B.1 in its entirety and renumber all subsequent paragraphs accordingly.

Addendum Item	Page or Drawing	Location and Description of Change
S-19.	43 21 17 – 13	After Article 2.02.G.6, add the following: **"a. For Low Service Pump, provide vortex suppressor in lieu of vortex suppressor baffles."**

Addendum Item	Page or Drawing	Location and Description of Change
D-1.	G-02	After Miscellaneous Note No. 5, add the following: **"17. AS MIOX IS CONSIDERED A NON-HAZARDOUS SUBSTANCE, USE OF DOUBLE CONTAINMENT PIPE FOR THIS SERVICE IS NOT REQUIRED ANYWHERE ON THIS PROJECT. REFER TO SHEET G-09 FOR PIPE REQUIREMENTS FOR MIOX.** **18. DOUBLE CONTAINMENT PIPING IS NOT REQUIRED FOR INTERIOR CHEMICAL LINES. DOUBLE CONTAINMENT PIPING IS REQUIRED FOR ALL EXTERIOR AND BURIED COAGULANT LINES.** **19. STEEL PIPE SHALL BE PERMITTED ONLY FOR FIRE SUPPRESSION SYSTEM PIPING AND THEN ONLY WHEN INDICATED ON CONTRACT DRAWINGS OR DESCRIBED IN DIVISION 21 SPECIFICATIONS. USE OF STEEL PIPE FOR ANY OTHER POTABLE WATER SERVICE IS NOT PERMITTED.**
D-2.	CS1.1	Delete all references to "NEW 3' MAN GATE" and "NEW 5' MAN GATE" and replace with **"NEW 4' MAN GATE"**.
D-3.	CS1.1A	Delete all references to "NEW 3' MAN GATE" and "NEW 5' MAN GATE" and replace with **"NEW 4' MAN GATE"**.
D-4.	CS1.1A	Modify new fencing on south side of site as shown on this drawing to match fencing as shown on Sheet CS1.1, namely in the area of the existing entrance located to the south and east of the existing filter building.
D-5.	C5.1	In Section 1, add following note: **"CONCRETE FOOTING SHALL BE CONTINUOUS AND EXTEND FULLY UNDER ALL FENCE SECTIONS."**
D-6.	C5.1	In Section 5, after 6' TYP.", add **"OR 8' TYP. ACCEPTABLE"**.
D-7.	C5.1	Delete all references to "AEGIS II INVINCIBLE" or similar callouts and replace with **"IMPASSE II"**.
D-8.	CU1.1	Delete Drawing CU1.1 in its entirety and replace with **attached Drawing CU1.1**.
D-9.	CU3.1	Add General Note to apply to entire sheet: **"FOR PURPOSES OF BIDDING, CONTRACTOR SHALL ASSUME THAT ALL EXISTING UTILITIES MUST REMAIN IN SERVICE DURING CONSTRUCTION."**

Addendum Item	Page or Drawing	Location and Description of Change
D-10.	CU3.2	Add General Note to apply to entire sheet: **"FOR PURPOSES OF BIDDING, CONTRACTOR SHALL ASSUME THAT ALL EXISTING UTILITIES MUST REMAIN IN SERVICE DURING CONSTRUCTION."**
D-11.	CU5.4	For Manhole Detail, at end of Note No. 1, add **"THIS REQUIREMENT SHALL NOT APPLY TO RCP STORM WATER PIPING (STILL APPLIES TO ALL NON-RCP STROM WATER PIPING)."**
D-12.	A1.2-08	Delete all callouts "24-GAUGE GALVALUME METAL ROOF W/ SCREW-DOWN FASTENERS (COORDINATE WITH PEMB MANUF.)" and replace with **"24-GAUGE VERTICAL-RIB STANDING SEAL METAL ROOF WITH GALVALUME BASE AND THREE-COAT FLUOROPOLYMER FINISH (SEE SECTION 13 34 24; COORDINATE WITH PEMB MANUF.)"**.
D-13.	A1.2-08A	Delete all callouts "24-GAUGE GALVALUME METAL ROOF W/ SCREW-DOWN FASTENERS (COORDINATE WITH PEMB MANUF.)" and replace with **"24-GAUGE VERTICAL-RIB STANDING SEAL METAL ROOF WITH GALVALUME BASE AND THREE-COAT FLUOROPOLYMER FINISH (SEE SECTION 13 34 24; COORDINATE WITH PEMB MANUF.)"**.
D-14.	A2.1-08	Delete all callouts "24-GAUGE GALVALUME METAL ROOF W/ SCREW-DOWN FASTENERS (COORDINATE WITH PEMB MANUF.)" and replace with **"24-GAUGE VERTICAL-RIB STANDING SEAL METAL ROOF WITH GALVALUME BASE AND THREE-COAT FLUOROPOLYMER FINISH (SEE SECTION 13 34 24; COORDINATE WITH PEMB MANUF.)"**.
D-15.	A2.1-08	Delete all callouts "ALUMINUM GUTTER SYSTEM" and replace with **"GUTTERS IN ACCORDANCE WITH SECTIONS 13 34 24 AND 07 62 00"**.
D-16.	A2.1-08A	Delete all callouts "24-GAUGE GALVALUME METAL ROOF W/ SCREW-DOWN FASTENERS (COORDINATE WITH PEMB MANUF.)" and replace with **"24-GAUGE VERTICAL-RIB STANDING SEAL METAL ROOF WITH GALVALUME BASE AND THREE-COAT FLUOROPOLYMER FINISH (SEE SECTION 13 34 24; COORDINATE WITH PEMB MANUF.)"**.
D-17.	A2.1-08A	Delete all callouts "ALUMINUM GUTTER SYSTEM" and replace with **"GUTTERS IN ACCORDANCE WITH SECTIONS 13 34 24 AND 07 62 00"**.

Addendum Item	Page or Drawing	Location and Description of Change
D-18.	A2.2-08A	Delete all callouts "24-GAUGE GALVALUME METAL ROOF W/ SCREW-DOWN FASTENERS (COORDINATE WITH PEMB MANUF.)" and replace with **"24-GAUGE VERTICAL-RIB STANDING SEAL METAL ROOF WITH GALVALUME BASE AND THREE-COAT FLUOROPOLYMER FINISH (SEE SECTION 13 34 24; COORDINATE WITH PEMB MANUF.)"**.
D-19.	A3.2-08	After General Note No. 5, add the following: **"6. REFERENCES TO SOLAR SCREEN ON DRAWINGS REFER TO PRODUCT(S) SPECIFIED IN SECTION 10 71 13."**
D-20.	A2.1-09	In General Note No. 4, delete last sentence in its entirety and replace with **"ONLY OPERABLE WINDOW IS CENTER UNIT SHOWN IN SOUTH ELEVATION (THIS SHEET)."**
D-21.	A1.1-10	For 7'x7' removable grating, delete "FRP" and replace with **"ALUMINUM"**.
D-22.	S0.1	Add following General Note regarding micropiles: **"FOR MICROPILE DESIGN LOAD CRITERIA PROVIDED ON INDIVIDUAL DRAWINGS, NEGATIVE VALUES REFER TO TENSION LOADS, POSITIVE VALUES REFER TO COMPRESSION LOADS, AND PLUS/MINUS VALUES INDICATE BOTH TENSION AND COMPRESSION LOADS TO BE UTILIZED IN THE MICROPILE DESIGN. WHEN MORE THAN ONE DESIGN LOADING CASE IS PROVIDED, MICROPILES SHALL BE DESIGNED TO WITHSTAND ALL THE LOADS UNDER ALL DESIGN LOADING CASES PROVIDED."**
D-23.	S0.6	In Detail No. 9, Guard Rail Detail, add the following: **"FOR HORIZONTAL MOUNTING SURFACES, USE OF 1/2"X2" THD'D STUDS IN LIEU OF SPECIFIED 5/8" STUDS (REQUIRED FOR VERTICAL MOUNTING SURFACES) SHALL BE PERMITTED".**
D-24.	S3.1-08	Add following General Note to sheet which shall apply to all Structure No. 8 sheets: **"1. PILE CAP FOR STRUCTURE NO. 8 SHALL BE 36 INCHES THICK REGARDLESS OF WHAT THICKNESS CAP SCALES ON DRAWINGS."**
D-25.	S3.1-08	In Section 1, delete dimension of "2'-9"" for the distance from bottom of pile cap to bottom of sludge hopper and replace with **"2'-3""**.

Addendum Item	Page or Drawing	Location and Description of Change
D-26.	D1.1-09	For callout of 3-inch PVC drain pipe indicated to be routed to the new reclamation basin, after “3” PVC-DR”, delete “TO RECLAIM. BASIN” and replace with **“TO MH DR3-2”**.
D-27.	D1.1-09A	For callout of 3-inch PVC drain pipe indicated to be routed to the new reclamation basin, after “3” PVC-DR”, delete “TO RECLAIM. BASIN” and replace with **“TO MH DR3-2”**.
D-28.	D1.2-09	For callout of 2-inch PVC drain pipe indicated to be routed to the new reclamation basin, delete entire callout and replace with **“3” PVC-DR TO MH DR3-2”**.
D-29.	D1.2-09A	Add callout **“3” PVC-DR TO MH DR3-2”** similar to those shown on D1.1-09 and D1.1-09A.
D-30.	D1.1-09	Delete the approximately 250 square feet of grating shown on the west end of the pipe gallery that is not reflected on Sheet S1.3-09 and replace with concrete to match Sheet S1.3-09.
D-31.	D1.2-09	Delete the approximately 250 square feet of grating shown on the west end of the pipe gallery that is not reflected on Sheet S1.3-09 and replace with concrete to match Sheet S1.3-09.
D-32.	D1.2-09A	Delete the approximately 250 square feet of grating shown on the west end of the pipe gallery that is not reflected on Sheet S1.3-09 and replace with concrete to match Sheet S1.3-09.
D-33.	D1.1-10	For day tank overflow, delete all references to “2”” and replace with **“4””**.
D-34.	D1.1-10A	For day tank overflow, delete all references to “2”” and replace with **“4””**.
D-35.	D3.1-10	For day tank overflow, delete all references to “2”” and replace with **“4””**.
D-36.	D3.2-10	For day tank overflow, delete all references to “2”” and replace with **“4””**.
D-37.	D3.3-10	For day tank overflow, delete all references to “2”” and replace with **“4””**.
D-38.	D6.1	For day tank overflow, delete all references to “2”” and replace with **“4””**.

Addendum Item	Page or Drawing	Location and Description of Change
D-39.	ED5.1	For Primary Service Entrance Pullbox Detail, after Note No. 3, add the following: **"5. CONTRACTOR SHALL BE RESPONSIBLE FOR PURCHASING BOXES IN ACCORDANCE WITH THIS DETAIL, INCLUDING CLARIFYING NOTES.** **6. ADDITIONAL REQUIREMENTS AND CLARIFICATIONS FOR PULLBOXES – (A) PULLBOXES SHALL BE PROVIDED WITH ACCESS COVER; (B) PULLBOXES LOCATED WITHIN PAVED AREAS ARE TO BE CONSTRUCTED SO THAT TOP OF BOX/COVER ARE FLUSH WITH TOP OF PAVEMENT; THOSE PULLBOXES LOCATED IN UNPAVED AREAS SHALL EB CONSTRUCTED SO THAT TOP OF BOX/COVER IS 4 INCHES ABOVE FINISHED GRADE; (C) NO SPLICE BOXES ARE INTENDED TO BE INSTALLED ON TOP OF BOX; (D) PULLBOXES, COVER, AND MEANS OF ACCESSING THE INTERIOR OF THE BOX THROUGH THE COVER SHALL BE DESIGNED FOR H-20 LOADS; (E) PULLBOXES INCLUDING BOX, TOP, AND ACCESS COVER SHALL BE SEALED WATERTIGHT."**

END OF ADDENDUM NO. 4

Receipt of this Addendum shall be indicated in the space provided on the Bid Form.

Smith Seckman Reid, Inc.
2995 Sidco Drive
Nashville, TN 37204
(615) 383-1113

Smith Seckman Reid, Inc.

BIDDER QUESTION LOG

Project Name: BGMU Water Treatment Plant Expansion
Project Number: 16-41-0270.0

This log represents questions received during the bidding process. These questions may or may not have been answered by addendum. This log is being provided for informational purposes only and shall not be considered part of the Contract Documents.

NO.	QUESTION
1.	Does this project require any type of wage rate to be paid?
2.	The current bid date for this project is November 8, 2018. Due to the nature, complexity, and overall scope of the project, please revise the bid date (to November 21, 2018). As the project documents have just become available within the past few days, additional time is needed so bidders can properly evaluate the details of the work. Further, with the mandatory Pre-Bid Meeting scheduled for October 18, 2018, providing additional time is even more important. (Additionally, another large water plant in Owensboro is scheduled to bid on October 16, 2018, which further complicates the current situation.) Please consider this request and advise as quickly as possible.
3.	By chance, have you any information available regarding changes in the date of the Pre-Bid Meeting for the above subject project? Also, changes in the Bid Date?
4.	Does the TDH specified in Section 43 21 17 Item 1.04.B.2 include lift or does the supplier need to add lift in the head calculation? The preliminary selections were made without including lift; however, the max HP specified would indicate the head referenced from the discharge flange. If the head specified is actually bowl, please confirm as we can quote motors smaller than specified.
5.	For the Low Service pumps, the selection would be the 29ELL-1 with 400HP motors if the TDH is at the discharge flange. If at the low liquid level, we can keep the selection as the 25EPM-1 with 300HP motors.
6.	For the Backwash pumps, the preliminary selection is the 20ENY-1. This is based on a 6’ long can. Please let us know if a different length is required as it may impact the selection. Efficiency at the secondary point is 52.8% vs the specified minimum of 60%. We don’t have an option that meets efficiency at the secondary point because it is so far back on the curve. This will likely be the case for other suppliers as well. This is a one stage pump vs spec minimum of 2 stages.
7.	What is the elevation of the bottom of the backwash cans? Drawing D3.2-09 appears to show the cans extending past the floor elevation of 459ft. However Drawing D3.1-09 appears to show the bottom of the cans at elevation 459ft.
8.	Is the job VFD required for the factory performance tests? Section 01 61 00 requires the job VFD, but Section 43 21 17 just says job motor. Job motor only requirement is recommended since suppliers would have to include service from the VFD supplier if testing with a job VFD. Also, this will be difficult to coordinate since the Contractor/Integrator is providing the drives.

2995 Sidco Dr., Nashville, TN 37204
Tel: 615.383.1113 · Fax: 615.386.8469 · www.ssr-inc.com

BIDDER QUESTION LOG

<table>
<tr><th>NO.</th><th>QUESTION</th></tr>
<tr><td>9.</td><td>Flowserve will have to take exception to the Performance Affidavit (Section 01 61 00, Item 1.07). Flowserve will sign an affidavit stating that we will supply equipment per the specification; however, we will not take responsibility for the design and functionality of the system, or equipment outside of our scope of supply. We will furnish the equipment as specified. Below is a markup that more closely align our responsibility to our scope of supply. Please advise if these modifications would be acceptable.

1.07 PERFORMANCE AFFIDAVITS
A. Contractor shall submit manufacturer’s Performance Affidavits for equipment to be furnished as indicated in individual equipment specification section and in accordance with Section 01
33 00.

B. By these affidavits, each manufacturer must certify to Contractor and Owner, jointly, that he has examined Section 43 21 17 of Contract Documents and that equipment, apparatus or process he offers to furnish shall meet in every way performance requirements set forth <s>or implied</s> in above referenced section of the Contract Documents. Equipment design, manufacturing, and assembly specifications are an integral part of performance affidavit. Contractor must transmit to Engineer three (3) copies of affidavit given him by manufacturer or supplier along with initial Shop Drawing submittals. Performance Affidavit must be signed by an <s>officer</s> person of authority of basic corporation, partnership or company manufacturing equipment and witnessed by a notary public. Shop Drawings, if required, shall not be reviewed prior to receipt of an acceptable Performance Affidavit, which shall have following format:

Addressed to: (Contractor) and Location of Project
Reference: (Project Name)
Text: “ (Manufacturer’s Name) has examined Contract Documents and hereby certifies that (Product) described in Section(s)
________________________________ of Contract Documents:

1. Product meets in every way performance requirements and design specifications set forth in Section 43 21 17 of Contract Documents.
2. Contract documents show and/or describe all equipment, components, accessories, and connections necessary <s>for a complete operating system</s> specified in in above referenced Section.
3. <s>Manufacturer shall provide within 30 days after date of Notice of Award a list of any equipment, components, accessories, or connections which are required for a complete
operating system but are not shown or described in Contract Documents</s>.
4. Manufacturer has unitary responsibility over product including components not of his manufacture that are within manufacturer’s scope of supply.”

Signature: <s>Corporate officers</s> shall be <s>Vice President, or higher (unless statement authorizing signature is attached)</s> a person of authority.
Notary: Signature(s) must be notarized.</td></tr>
<tr><td>10.</td><td>Note 17 on G-02 requires all yard lines to be restrained joint. Some lines in the pipe schedule on drawing G-09 are listed as push-on joint. Are lines listed as push-on non-restrained or are they restrained joint?</td></tr>
<tr><td>11.</td><td>2.01.H on spec page 33 11 00 – 8 requires 316SS bolts. 6.f.2 on spec page 33 11 00 – 11 requires 304SS bolts. Are 304SS bolts required for exposed and 316SS required for submerged?</td></tr>
<tr><td>12.</td><td>MISCELLANEOUS Note 3 on drawing G-02 requires non-metallic pipe within 4 feet of finished floor to be DI. Will non-metallic piping concrete encased under finished floor be required to be ductile iron also.</td></tr>
<tr><td>13.</td><td>Are there any domestic requirements for the iron and steel on this project such as “AIS” or “Buy American”?</td></tr>
</table>

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BIDDER QUESTION LOG

NO.	QUESTION
14.	Detail “BURIED VALVE OPERATOR DETAIL” on drawing CU5.4 shows a mechanical joint coupling next to a buried MJ valve. Are mechanical couplings required at all buried valves as shown in the detail?
15.	Please provide the manufacturer and model # of the valve that requires the actuator to be replaced on sheet D1.1-03.
16.	Spec section 33 12 00 2.06 F. states that the plugs for plug valves shall be completely coated in viton. Please define exactly which chemical sludge lines this shall be required on. Is it only required on lines specifically called out as SLDG?
17.	Spec section 33 11 00 2.01 H states that bolts, nuts, washers and fasteners inside sewage wet wells or other spaces exposed to raw sewage and hydrogen sulfide gases, submerged, or in all areas designated as wet and/or corrosive in section 01 61 00 to be 316 stainless steel. Spec section 33 11 00 2.02 D. 6. states to provide 304 stainless steel hardware for the same scenarios state above. Please clarify if the hardware shall be 304 stainless steel or 316 stainless steel.
18.	Spec section 31 23 23 1.02 A. defines that the influence area shall be within planes sloped downward and outward at 60-degree angle from horizontal measured from 1-foot outside outermost edge at surface of roadways or shoulder. Spec section 31 23 23 3.04 F. states to use type IV trench detail when under base slab or within base slab influence area. Use type IV foundation for pipe within influent area, under base slab or parallel to base slab and within base slab influence area per 31 23 23 3.04 I. Please confirm the type IV trench detail shall be used for pipe within the influence area of roadways also?
19.	The profile view on sheet CG1.2A calls out manhole A3 to be 96" diameter. The drainage structure table on the same page calls out manhole A3 to be 120". Please clarify the intended diameter for manhole A3.
20.	The depths of the precast structures depicted in the profile view on sheet CG1.2A depict different depths than what are shown in the drainage structure table. Please clarify the intended depths for all A series precast structures.
21.	Please confirm contractor shall include cost for the future expansion of the pretreatment in the base bid, see sheet CU1.1, D1.1-08 and D1.1-08A. Should contractor include tees, risers and blind flanges for 12"/8" drain under 15 MGD pretreatment? Should this line also be concrete encased, including pipe under the 15 MGD pretreatment? Note 10 on sheet CU1.1 states that all pipe entering or leaving a structure shall have (2) joints within four (4) feet from wall of structure. Is contractor required to account for this in the base bid and at the 15 MGD expansion?
22.	Section 33 11 00 2.02 D. 1. b. states that all gravity sewer lines shall have push-on and plain-end joints as described herein unless otherwise scheduled or unless described otherwise in the Contract Documents. Sheet CU1.1 calls for drains to be tested per procedure C (spec 33 13 00 1.04, ie 30 minutes at 50psi). At this pressure and the diameters of the drain lines there is a high probability that the push on joints will not pass this test. Please advise if restrained joint pipe shall be used for all drain lines or if procedure D or G as outlined in section 33 13 00 is acceptable.
23.	On Sheet A2.1-08 the South Elevation of the pretreatment building shows a band at the walkway elevation (499.00) similar in appearance to the Cast Stone (Type 3) bands lower in the same elevation. Section 2 on Sheet S3.1-08 shows the walkway with a cast-in-place overhang at this elevation. The renderings on Sheet A9.2 do not indicate the intent to be an overhang. Please provide a detail clarifying this elevation to be either the cast stone band or the concrete overhang.
24.	Unit Masonry Section 04 25 00 2.01.D calls for insulation inserts (KORFIL or equal) to be installed at the block producer’s plant. Section 07 21 00 – Building Insulation provides a specification for Loose-Fill Insulation in Paragraph 2.04 and provides direction in Paragraph 3.09.D on how/where to install the Loose-Fill Insulation. Further, the detailed wall-section views for the Filter Building and the Electrical Building specifically call out “Loose-Fill Insulation In All CMU Perimeter Walls”. Please confirm that Loose-Fill Insulation in accordance with Section 07 21 00 and the Details is required for this Project.
25.	Please confirm which detail is correct for the Electrical Building Foundation Detail; Detail 2 on Sheet A3.1-12 or Detail 2 on Sheet S5.1-12.

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BIDDER QUESTION LOG

NO.	QUESTION
26.	On Drawings CS1.1 and CS1.1A the existing asphalt to the South East of the Existing Filter Building is shown to be milled and overlaid, however Drawing CU1.1 shows multiple new pipe lines being run through this area which will destroy most of the pavement in this area. Please confirm that these areas disturbed by the new piping should be new asphalt pavement and not a mill and overlay.
27.	Please confirm that Clean Earth Fill as outline in Spec Section 31 23 23 is acceptable as structural backfill at the Chemical Storage Building, Filter Building, Pretreatment Building and Reclamation Basin while No. 57 stone is called out on the corresponding drawings.
28.	Please provide available as-built drawings of pipelines & structures scheduled for demolition. Specifically, record drawings of the Equalization Tank will assist with estimating the demolition work.
29.	Drawing CD1.1 calls for the demolishing the 4.5'x7' elliptical storm pipe and backfilling the trench with No. 57 crushed stone. For demolition of other site utilities shown on Drawing CD1.2, please confirm backfill requirements shall adhere to specification section 31 23 23, backfill for underground piping.
30.	Please clarify the fill concrete specification: Drawing S1.0-08, Note 12 lists lean concrete strength at 3,000 PSI. Specification Section 03 31 00, 2.01.B. has fill concrete, Mix D, specified as 2,500 PSI.
31.	Drawing S1.0-13, Reclamation Basin Foundation Plan does not show any micropiles, but the drawing has micropile notes and denotes the foundation slab as a “pile cap”. Please confirm.
32.	Please provide available as-built drawings of pipelines & structures scheduled for demolition. Specifically, record drawings of the Equalization Tank will assist with estimating the demolition work.
33.	Sheet CD1.2 depicts an existing line very close to manholes DR1-8 and DR1-9 (shown on sheet CU1.1 near the NE side of the existing filter building). Please provide the depth, diameter, type of pipe and service of the existing line, or provide as-builts.
34.	Sheet CU1.1 has a note that states to connect to the existing line at MH DR1-9 (between the existing sedimentation basins and the existing filter building). The line from MH DR1-9 to the existing flocculation basins appears to be new (it is darkened). The line from MH DR1-9 to the existing manhole appears to remain in place. Should MH DR1-9 be a doghouse style manhole and the existing lines remain in place?
35.	Please confirm it is acceptable to install a solid sleeve at every manhole/structure in order to meet the requirement of 2 joints at all manholes/structures per sheet CU5.4, note 1 and CU1.1 note 10 respectively.
36.	Some manholes are specific as to the type of frame and cover on the drawings. Please confirm that all frame and covers that are not specifically called out as bolted, gasketed, etc. frame and covers shall require a standard frame and cover.
37.	Sheet D5.9 (in the top plan view) states that the hatch shall be insulated from underneath. Please advise what type of insulation to use and provide installation details.
38.	Sheet CU1.1 states that MH FW2-1 (near the SW side of the existing filter building) shall be a doghouse manhole. It doesn’t appear this line is going to be installed over an existing pipe that shall be tied in to the new system. Please advise if it is acceptable to use a standard manhole. If not, please advise the diameter and material of the existing line this manhole shall be installed over.
39.	Sheet CU1.1 has two notes that require a new sample pump with line to new lab to be installed in the combined filter effluent vault and manhole FW2-1. Please provide a detail with specific information. For example, do we just follow the sample line connection detail on sheet D5.3? Will a flange x flange spool be required inside the manhole/vault? Will a tapping saddle be required?
40.	Please provide the diameter of the sample pipe required at the combined effluent vault and manhole FW2-1 and any valves that may be required.

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BIDDER QUESTION LOG

NO.	QUESTION
41.	Spec section 33 12 00 2.24 G states that stationary rods shall be provided and cotter pinned to valve nut when valve boxes are longer than 7 feet and a T-handle stationary rod key shall be provided. Please provide a manufacturer or details on the T-handle stationary rod key.
42.	Several pipe lines fall within the area of influence as defined in spec section 31 23 23 1.02 A. Please confirm that the pipe lines that fall within the area of influence shall be encased in concrete per trench type IV and spec section 31 23 23 3.04 F. A marked up drawing can be provided so the additional cost can be analyzed, if necessary.
43.	Section B on sheet D3.1-08 references sheet C5.8. Please provide sheet C5.8.
44.	Please confirm that the base bid shall include caps for the future expansion to 15 MGD on the (4) 24" lines to the future pretreatment structure.
45.	Please advise where the water service line connection detail on sheet CU5.3 shall apply.
46.	Please advise where the concrete plug for utility line abandonment detail on sheet CU5.4 shall apply. Note 2 says the detail can only be used with written permission from engineer. Does that mean this detail does not apply to this project?
47.	The fire hydrant detail on sheet CU5.5 depicts a valve box. Please provide further details on the type of valve box ie cmu block, brick, precast box, etc.
48.	Sheet P1.1-10 depicts a 4" fire service branch to the chemical building. Please advise if there are any licenses or permits required to install this line.
49.	Sheet CU1.1 depicts a 4" natural gas line. This pipe ties in at (2) different locations. Being that one of the tie ins are outside the gate, will the natural gas company install this line? If not can you provide a contact with the gas company so details can be worked out? For example, will the gas company purge the line so we can cut the pipe for our tie in, where are valves located in the existing line so we can estimate how much of the line shall be purged prior to the tie in.
50.	Please confirm any special permitting or licensing requirements to install natural gas in Kentucky?
51.	Sheet G-09 calls for the steel (natural gas) pipe to be schedule 80 threaded steel. Spec section 33 11 00 2.07 B. and section 33 11 00 2.11 B. require schedule 40 threaded steel. Please clarify which schedule pipe to use for the steel (natural gas) lines.
52.	Spec section 33 11 00 2.07 K. requires the steel pipe to be coated with coal tar enamel, hot applied in accordance with AWWA C203. The pipe interior shall be prime coated and then followed by a hot coat of coal tar enamel Type 1. Please confirm this coating is not required for the natural gas lines.
53.	Spec section 33 11 00 2.11 E requires gas cocks to be installed for all equipment. It doesn’t appear we are connecting any natural gas to equipment. Please confirm that no gas cocks shall be required on this project.
54.	Sheet CU1.1 depicts a 3" MIOX line being routed near the combined filter effluent box. There is a note that says to cap the existing 3" MIOX and tie into the existing line. Please clarify if the 3" MIOX shall be injected into the 54" FW2 line. If so, please provide a detail of how to inject the MIOX into the 54" pipe ie tapping saddle, use existing chemical injectors, etc.
55.	33 11 00 2.11. D. requires drip pockets at low points. Please provide a detail for the drip pockets and define the quantity of drip pockets required.
56.	We find the Life Safety plans designate fire extinguishers, but we find no material specifications provided.
57.	There is little topsoil located onsite, is it acceptable to use native soils?
58.	Please indicate which Level Spreader Detail is to be used on sheet CE1.3.

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NO.	QUESTION
59.	We find an error. The Table of Contents calls out specification section 43 41 43 – HDPE Chemical Storage Tanks. The specification provided in the documents has a section number 46 41 43.
60.	Sheet D1.1-02, Bottom Plan View; Where note calls for new 12" debris drain line to utilize link seal, and references SHT. 5.1, please specify if penetration is to be installed is "Typical Sleeve Thru Existing Structural Detail"? Is core hole with no sleeve and link seal acceptable?
61.	In reviewing specification section 33 11 00 and definitions for "Flex" and "Expansion" couplings, shouldn't the 24" Flex Coupling called out SHT. D3.1-02 be an Expansion Coupling? Same question for 3" Flex Coupling called out SHT. D1.1-02.
62.	Can the engineer/owner provide by addendum the Model and Serial No. for the existing sodium permanganate pump to aid contractor in price new pump. States to "match" existing.
63.	We understand the new sodium permanganate storage tank and hard piping between storage tank and pumps is part of the allowance. Please confirm our understanding to be correct.
64.	Can the engineer/owner provide the Model and Serial No. for the existing potassium permanganate pump by addendum to aid contractor in price new "spare" pump and shelf. Note on D3.2-02 states to furnish "identical" to existing.
65.	We believe your labeling of the pictures on SHT. D1.2-02 appear in error. Photo P3 should be P4, and Photo P4 should be P3.
66.	We would appreciate your consideration for changing the specified Flomotion Systems peristaltic pump model sizes. During some e-mail correspondence this past summer with Luke, this change was recommended but I could not find where a response was received. We noted when reviewing the peristaltic pump spec (43 21 17) that the recommended pump selection was not listed. We are recommending the lower flow pumps be model FS25 and the higher flow pumps be model FS32. Of note, each pump would cover the specified flow ranges but the pumps will also operate in better spots on the curves. There would be less of a chance for motor overheating, etc. when the pumps have to be turned down for lower flow demands. Also, BGMU would save quite a bit of money in O&M due to reduced hose cost.
67.	Does the city of Bowling Green and/or Warren county require a building permit for this project? If so, are the fees based on the total amount of the project or just the value of the building? Can you provide a bid allowance for these fees?
68.	Please clarify pipe material required for NP lines shown on plumbing drawings. Plumbing spec section 22 11 16 requires buried 4"-12" to class 52 DI with C110 fittings. Pipe Schedule om drawing G-09 allows either class 350 DI or DR18 PVC per spec section 33 11 00. Also SCH80 PVC is required for < 4" per G-09 Pipe Schedule but spec section 22 11 16 appears to require CPVC or Copper. Can you please clarify what is required for the exposed and buried NP piping shown on the plumbing piping?
69.	Spec 33 11 00 suggests that gravity pipe and fittings to be push-on. Can you confirm that push-on fittings are required for gravity lines? If push-on fittings are required for gravity lines, will the 42x30" RJ REDUCER shown on profile for 30" PROCESS DRAIN "DR1" on drawing CU3.1 be required to be restrained push-on or can it be MJ with Megalugs?
70.	As I stated at the pre-bid meeting, Leitchfield KY is bidding a project on 11/15/18 at 3PM CST. We understand from the engineer Cann-Tech LLC that due to federal funding deadlines, the bid date is firm and will not move. We therefore would request you bid your project the day before on 11/14 in lieu of 11/15. In closing, having had adequate time to start work on a bid proposal for your project, we are not opposed to the bid date remaining on 11/8.
71.	On Sheet ES1.1Keyed Note #9 & #10 reference running 1" conduit to CP-10 for future use. This should be labelled as 1" conduit to CP-08 for future use.

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NO.	QUESTION
72.	On Sheet E6.1, the one line diagram list MCC-1 trip rating as 600 Amps while on sheet E8.2, MSB panel directory shows the MCC-1 trip rating as 800 Amps. Which is correct?
73.	On Sheet E6.1, the one line diagram list ACHU's trip rating as 400 Amps while on sheet E8.2, MSB panel directory shows the ACHU's trip rating as 300 Amps. Which is correct?
74.	On Sheet E6.1, the one line diagram list the (2) two 150 Hp Backwash Pumps trip ratings of 250 Amps while on sheet E8.2, MSB panel directory shows the (2) two Backwash Pumps trip rating as 300 Amps. Which is correct?
75.	On Sheet E6.1, the one line diagram list the (2) two 75 Hp Blowers trip ratings of 125 Amps while on sheet E8.2, MSB panel directory shows the (2) two 75 Hp Blowers trip rating as 200 Amps. Which is correct?
76.	Are the area light fixtures shown on sheets EL1.1-11 Chemical Storage and EL1.1-13 Reclamation Basin the same fixtures on the site plan sheet ES1.1? The area fixtures at the Chemical Storage sheet EL1.1-11 do not match what is shown on sheet ES1.1.
77.	Can the engineers provide catalog numbers for the light fixtures on the luminaire on sheet E0.2?
78.	Would you consider naming Hydro Gate as an acceptable manufacturer for the hydraulic gates for the Bowling Green WTP project. They are a Mueller company and sister company to Pratt, who are named on several of the valves, and have been making gates that meet the current specification for a long time.
79.	Can the engineer/owner provide As-Builts for the existing EQ tank.
80.	Section 3 on sheet C5.1 says to "see note 3". There are no notes on C5.1. Please advise.
81.	Section 1 on sheet C5.1, Typical Wall Section, shows a continuous footing and section C shows a masonry knee wall. However, section 5, Typical Elevation, does not show a masonry knee wall. Please provide locations and top of masonry wall elevations for the new fence knee wall per section C on sheet C5.1.
82.	Section 1 on sheet C5.1 calls for 3" square anchor post, but section 5 calls for 4" post. Please advise which size is required.
83.	Specification section 031100 - 2.01-F Lists Form liner materials. Can you provide the locations that are to receive this finish?
84.	Can you confirm that Specification section 031100 – 3.08-A.6a Form offset for exposed concrete of 1/32" is correct? This is significantly more stringent than ACI Class A tolerance of 1/8"
85.	The floor finish schedule on Architectural drawing A8.1 lists a floor finish of densified concrete. Can you provide a densifier product specification for this finish?
86.	Specification section 033100 – 2.03-D.4 & .5 list corrosion inhibiting admixtures. Can you clarify where these admixtures are required to be used for this project?
87.	Can you provide the location(s) on this project that are to receive Type H floor finish per the floor finishes schedule listed in Specification section 033500 – 3.04-C.
88.	When will the next addendum be issued and will there be a bid date push?
89.	Can you provide engineer estimates or owner's budgets for both the 7.5 MGD base bid and 15 MGD alternate bid?
90.	In the statements made at the pre-bid meeting regarding blasting, we understood 75' was the distance to existing structures without exception. In Section 31 23 17, page 9, we find it states shall not blast within 25' from utilities, building footings, hazardous areas, above grade structure, etc. The 75' distance is stated to apply specifically to the raw water and filtered water piping. Can you please clarify?
91.	Per our review of the plan notes on sheet S3.3-8, confirm it is your intent that the holes in the baffle walls are to be cored after the walls are installed, and it is not expected the holes will be formed utilization cast sleeves.

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92.	Does the Detail No. 4 for additional reinforcing at wall openings on sheet S0.5 apply to the openings in the baffle walls?
93.	Per sheet D1.3-08 & 08A, will it be expected a cast sleeve is used to form these openings?
94.	Specification Section 41 22 00 calls for a 1-ton capacity jib crane at the Chemical Building. Sheet S1.2-10 calls for a 500# capacity jib crane. What is the correct capacity?
95.	Is the 3-ton capacity jib crane to be installed in the Filter Building Pipe Gallery (Sht. S1.3-09) intended to be an I-beam mounted or a floor mount jib?
96.	Per the Project Specifications, Section 01 45 29.1.02.A and Section 31 63 33.1.05.B.3, Items in this section appear to overlap with the Statement of Special Inspections in regards to Concrete Construction (Table 1705.3.6), Concrete Masonry Construction (Table 1704.5.3.1.E & F and Table 1704.5.3.3), Soils (Table 1705.6.4), and Cast-In-Place Deep Foundations (Table 1704.8). Are all items in Statement of Special Inspections assumed to be provided by Special Inspection Agency in addition to Owner Material Testing?
97.	Would you consider bidding the foundation system as an allowance?
98.	On the bid form do BOTH items #2- Micropiles and #3 – Concrete Fill need to be added to the total bid; as only one will be used?
99.	We were kinda wondering about the Addendum pertaining to the above subject project. Might you have any thoughts on its status?
100.	Drawing D1.1-10 indicates 3 sample lines. Can you define the sample suction points so that we can route the piping. It appears one point might be at Dog House MH FW2-1 and one at the New Combined Filter Effluent Vault. Is this correct? Where is the 3rd point?
101.	Reference CU1.1, Should there be a valve in the water line at the fire hydrant located at the NE corner of New Pretreatment Structure?
102.	Reference CU1.1, What is the dark line from Existing Basin 3,4,5,6 to MH DR1-9?
103.	Reference CU5.3, How many utility markers are required?
104.	Reference G-09, The buried natural gas Schedule 80 black steel. Does it need to be milled wrapped? Is HDPE acceptable?
105.	Reference CU1.1 and Pipe Table on G-9, Is the 24" and 36" overflow which is also labeled DR6 from the new treatment structure to manhole DR6-2 to be RJ joints or Push joints with standard gaskets?
106.	Is MH DR1-9 and MH DR2-1 to be doghouse manholes? How long can the drain systems be shut down?
107.	Is MH SS1-1 to be a doghouse manhole? How long can the 24" SS line be shut down?
108.	Reference CU1.1 where 10" FM enters existing manhole, The referenced detail is not shown on C5.4. Also, Is a drop connection required here?
109.	Reference spec section 33 11 00 paragraph 3.05.V, Does the gasket connection at the manhole count as a joint?
110.	Can the alignment of the 72" RCP be shifted 15' to 20' to the north (i.e. plan north)? The excavation will be into Nashville Road even if a box is used.
111.	On sheet EP1.1-09, All of the Actuators are shown to be 120VAC fed from Panel "LB". This is also the same for the Actuator on sheet EP1.2-09. The Panel Directory for Panel "LB" on sheet E8.1 only has (3) three breakers listed for each filter in lieu of the required (6) six breakers. How are we to provide the additional 15 circuits? This also applies to the Actuators in the Alternate area being fed from Panel "LE".

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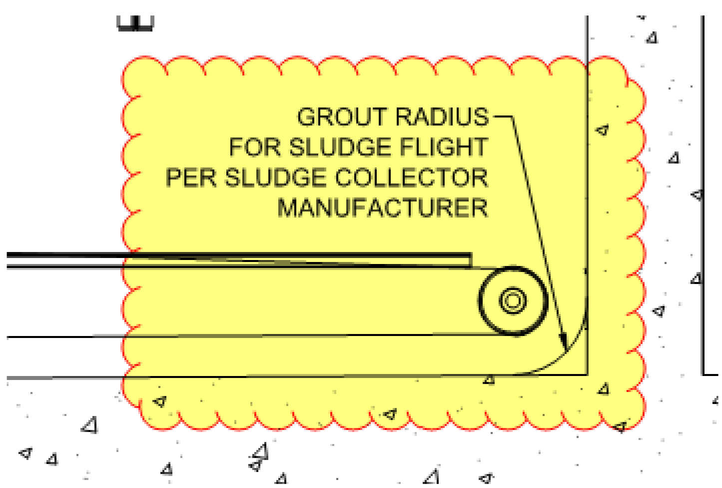
NO.	QUESTION
112.	Sheet EP1.1-11 has the tag HT-CP-01 (Heat Trace Control Panel #1). Is this panel to be located in this area?
113.	Where is HT-CP-02 (Heat Trace Control Panel #2) to be located?
114.	Specifications 40 41 13 calls for the sump pump discharge piping at the Reclamation Basin. What heat trace control panel is to feed the heat trace for this piping? There is no conduit or wiring shown. Is this to be ran in the Duct Bank with other conduits?
115.	Could the engineers provide a schedule showing what gets heat trace and what control panel is to control each heat trace cable?
116.	Is a cover required for the Primary Service Entrance Rated Pull Box Keynote 5 sheet ED1.1 and Detail sheet ED5.1 or is it the intent for an above ground splice box to mount to the top of the pull box?
117.	Sheet I1.1-10 shows Flow Meters COAGP1-5 and MIOXP7 and P12. Do these have separately mounted transmitters?
118.	The specifications calls for VFD cable between VFD's and motors. The Process Equipment Schedule shows individual conductors. Is VFD cable required? If so, some conduits feeding these motors need to be resized for VFD cable. I.E. Flash Mix CHM-SEL-FMX-M3 Process Equipment Schedule show 3 #6 #10G in 10"C. 1"C is to small per NEC for Belden #6 VFD cable.
119.	After reviewing Addendum #2, it is Flomotion's recommendation that the specified peristaltic pump model be changed from FS40 to FS32 for CHM-MIOX-P8/9/15. The specified min to max flow range falls into the continuous duty range of the FS32 and the FS40 would not be able to achieve the specified low end output. The FS32 pump curve is attached for your review. Please let me know if you have any questions or need additional information.
120.	Section D on drawing D3.1-08 shows a grouted fillet at the sludge collector. Can you provide a structural detail for this condition? 
121.	Drawing C5.5 has a concrete curb detail. Can you clarify the locations that receive this type of curb?
122.	We find a trench detail on sheet C5.4 – "Asphalt Pavement Trench Repair". To clarify, does this detail apply to all piping under pavement, both under existing pavement and new? If requirements different for piping under new pavement or existing in plant, please provide trench detail for these locations.
123.	Sheet CU5.3 includes a Utility Marker Detail. Please advise where this detail is required.

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124.	Would the owner be willing to provide to bidders the photos shown during the prebid of the excavation near the combined filter effluent line tie in location on the backside of the existing filter building? We understand the Power point will not be distributed, however the photos would be very helpful.
125.	Question – Will ALL VFDs require VFD cable on output or only as indicated on drawings? Spec Section 26 05 19 (2.05)B and C – B. Indicates all VDFs to have VDF cable on output C. VFD cable as indicated on drawings Drawings E8.1 MCC schedule Note #1 specifically call out VFD cable for REC- P1 and REC-P2. VFD cable not indicated for these or other VFDs on sheets E0.3 or E0.3A
126.	Specification section 031100 – 3.08-A.6a states that Form offset between adjacent pieces of formwork for exposed concrete shall be 1/32". This strict tolerance is not listed in ACI 117 Specifications for Tolerances for Concrete Construction and Materials Commentary nor is this tolerance listed in ACI 347 Recommended practice for Concrete formwork. ASCC Position Statement #18 states that "Finish and architectural details used should be compatible with the concrete tolerances which are achievable." The measures required to attempt to meet the specified tolerance of 1/32 will be costly to the project. Can this specification be revisited? ACI 347.3R-13 Chapter 3 Formed Concrete Surface Descriptions has recommendations as well as a list of Concrete Surface Categories (CSC) shown in Table 3.1a. Can the specification be amended to align with one of these categories? Please address by addendum if this can be changed.

Table 3.1a—Description of formed concrete surface categories (CSC)

Formed concrete surface category*			Description	CSC requirements†‡ Texture	Surface void ratio§ a	Surface void ratio§ na	Color uniformity‖ a	Color uniformity‖ na	Additional requirements Surface irregularities	Construction and facing-joint	Mockup#	Form-facing category**	Relative costs
Concrete surface finish with	Basic requirements	CSC1	Concrete surfaces in areas with low visibility or of limited importance with regard to formed concrete surface requirements, used or covered with subsequent finish materials.	T1	SVR1	SVR1	CU1	CU1	SI1	CJ1	Optional	FC1	Low
	Normal requirements	CSC2	Concrete surfaces where visual appearance is of moderate importance.	T2	SVR2	SVR1	CU1	CU1	SI2	CJ2	Optional	FC1	Average
	Special requirements	CSC3	Concrete surfaces that are in public view or where appearance is important, such as exterior or interior exposed building elements.	T3	SVR3	SVR2	CU2	CU2	SI3	CJ3	Highly recommended	FC2	High
		CSC4	Concrete surfaces where the exposed concrete is a prominent feature of the completed structure or visual appearance is important.	T4	SVR4	SVR3	CU2	CU3	SI4	CJ4	Should be required	FC3	Very high

*For matching requirements of formed concrete surface categories, please refer to the following notes and tables.

†The appearance of the formed concrete surface should only be judged in its entirety, not by looking at separate criteria only. The failure of one agreed criterion according to this guide should not result in the obligation to repair deviations if the overall positive image of the structure or the building is not disturbed.

‡These requirements/features are described in detail in Table 3.1b.

§Void area of pores of surface. Refer to Table 3.1d; legend: a = absorbent form facing; and na = nonabsorbent form facing.

‖The general impression of existing or not existing discolorations can usually be seen only after a longer period of time and for at least 8 weeks. The uniformity of coloring should be judged from the common viewing distance (Chapter 7).

#If required, additional mockups should be prepared.

NO.	QUESTION
127.	Drawing S1.4-09 has a note that states "Walls in pipe gallery shall be poured monolithically for full length. G.C. shall submit a mass concrete study for walls." Please confirm our interpretation below that that the only walls that need to be poured monolithically are the following: (1) Gallery foundation wall along K-line between 7 & 12 line only (One Placement).; (2) Gallery Foundation wall along H-line between 7 & 12 line only (Another placement). Please clarify if any other foundation walls need to be placed monolithically per this note.
128.	Specification 03 35 00 Section 3.04B Wall Finishes schedule references a Type V Grout rubbed finish. This Type V finish is not listed in the schedule can you please add this finish in the Wall Finish schedule.

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NO.	QUESTION
129.	Specification 03 35 00 Section 3.01C Rubbed wall finishes states that the walls shall be rubbed with a carborundum brick no later than the day following form removal. Section 03 11 00 3.09.C states that wall forms shall not be removed for at least 24 hours. A rubbed finish with a carborundum brick after the concrete has hardened for 24 hours is not achievable. Please add Type V grout rubbed finish to be utilized in lieu of rubbing with a carborundum brick.
130.	Per sheet D5.1, the detail for a DI wall pipe in a new wall illustrates a through wall spool. Can at the contractor's option, a DI wall pipe be installed flush to face of the walls with tapped studs?
131.	Which structures/areas are to have a Lightning Protection System?
132.	There are several instruments at the Chemical Storage Area that are called to be wired to CP-100 on the Instrument Wire and Cable Schedule. This conduit and wiring is not shown on the Duct Bank Schedule. Should this be installed in Duct Bank Q-Q?
133.	We can only guarantee performance based upon turbidity. We are given no filter influent criteria. The given raw water criteria is the water they are pulling from their source prior to any chemical treatment/clarification. We cannot guarantee such parameters as Fe, Mn, TOC etc. due to not having any of the equipment required to reduce those parameters. They need to do chemical treatment upstream to meet some of the parameters if their concentration is above the effluent requirement. In general, we can meet the turbidity as long as the upstream process is working optimally. The entire plant design and operation impacts effluent parameters and we only have the filters and no control of anything else. Can the filter performance affidavit be adjusted to be specific to turbidity since the other parameters are dependent upon the performance of other upstream unit processes?
134.	DI Wall Pipes – Pressure rated Thrust Collars versus Standard Wall Collars: SPEC: 33-11-00-24, 2.15, F.5 We've calculated that furnishing 250psi Thrust Collars for every DIP Wall Pipe on this project will add approximately $19,000 over the cost of conventional Wall Collars. Since none of these Wall Pipes will experience high pressure, we'd like to confirm if this spec is intended or possibly an oversight?
135.	Two Pipe Joints within 4 feet of every Manhole and Structure: SPEC: Addendum #2, Item #D-4, New Note #10 for Sheet G-02 Please clarify if our interpretation of this requirement is correct – see attached hand sketch. Also, we are assuming this spec only applies to pipes OUTSIDE the footprint of structures, since pipes UNDER structures get encased in concrete.
136.	Restrained Ductile Iron Pipe Joints: Page 11 Addendum #2 We interpret that the definition of pressurized pipe on this job translates to only the 36" Raw Water, 10" Plant Water, and 6" Plant Water. For those three lines, we will quote Restrained Joint pipe. Since all other lines are gravity, we will quote Push-On pipe. Correct? We also interpret that all Fittings & Valves shall be Restrained Joint regardless of line/service/pressure.
137.	Ductile Iron Pressure Class: RE: Pipe Schedule on Sheet G-09 Pipe schedule calls for all DIP to be Pressure Class 350 regardless of size or service. PC350 is the standard for sizes 4" thru 12". With the exception of the 36" Raw Water line, every other line on this job is gravity. Did you intend to require PC350 for the large diameter gravity lines?
138.	A conflict exists between what is stated in Sections 00 72 00 and 00 73 00 and General Note 1 on Sheet G-02. Please delete Note 1 from Sheet G-02.

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NO.	QUESTION
139.	A conflict exists between what is stated in Sections 00 72 00 and 00 73 00 and General Note 11 on Sheet G-02. Please delete Note 11 from Sheet G-02.
140.	A conflict exists between what is stated in Sections 00 72 00 and 00 73 00 and General Note 28 on Sheet G-02. Please delete Note 28 from Sheet G-02.
141.	Please delete Note 26 from Sheet G-02.
142.	Please delete Note 35 from Sheet G-02. Sections 00 72 00 and 00 73 00 contain provisions for payment of Engineer-directed work.
143.	Please provide a detail clarifying Note 41 on Sheet G-02.
144.	Clarification S-18 in Addendum No. 2 states the Contractor and their approved testing agency shall be paid for special inspections and associated testing based on actual services provided and invoiced. Please revise the Bid Form to include Cash Allowances for Special Inspections and quality control testing specified in Section 01 45 29.
145.	Regarding Section 31 23 17 3.07 E, the Contractor cannot discern what “additional” supervision and monitoring the Owner may require during construction. Please consider revising the Bid Form to include a Cash Allowance for Owner-directed blast monitoring.
146.	Specification Section 23 31 13, Part 1.01 states that round ducts are included in this section, but only rectangular duct is specified. The contract drawings call for both round and rectangular duct. Provide specifications for round sheet metal duct.
147.	The contract drawings do not show any FRP duct requirements, however there is FRP duct specified in Section 23 31 17. Confirm FRP duct is not required for this contract or clarify where it will be required.
148.	In the lower left corner of the slab on Sheet S1.5-09, there appear to be beams that are not marked. Please provide beam numbers for all those shown.
149.	S1.0-12 – Electrical Building, the General Notes on Sheet S0.1 state 10 Mil Vapor Barrier. Section 03 31 00 – 10 indicates Moistop 12 Mil by Forti-Fiber Corp. Please confirm the 10 Mil vapor barrier is acceptable?
150.	Please provide a specification for the fiber reinforcing required in the concrete Mix CF, Concrete Floor Topping with Fiber Reinforcing?
151.	Please Confirm the Owner prepares and pays for SWPPP (KPDES Permit) in accordance with Spec. 01 57 13-1.05.B. The Contractor will be signatory in compliance.
152.	Sheet D1.1-10 depicts (1) 4" conduit for that shall include (2) 1/2" HDPE lime lines. Sheet D1.1-11 depicts (2) separate 4" conduits, each carrying (1) 1/2" HDPE lime line. Please confirm (1) one 4” conduit is required per sheet D1.1-10.
153.	Sheet D1.1-10 depicts a 1" x 3" DCPVC-COAG line. Sheet D3.1-10 calls out a 1" PVC-COAG line to the filter building (not dual containment CPVC). This line is not shown on sheet CU1.1, D1.1-09, or D1.1-11. Please clarify the diameter/diameters, pipe material and to where this line shall be routed.
154.	Sheet D1.1-10 depicts (3) sample lines to the new chemical building. (1) sample line comes from CFE as depicted on sheet CU1.1 and (1) sample line comes from doghouse MH FW2-1. Please advise where the 3rd sample line shall be routed from.
155.	Sheet I6.1-02 depicts a different pipe arrangement than sheet D1.1-02. For example, sheet I6.1-02 depicts a line from what appears to be the suction column for LOW2-P9 to the 24" discharge line. What diameter and service is this line? Also, sheet I6.1-02 depicts (4) valves on the 24" discharge line and sheet D1.1-02 only depicts a butterfly valve and an oil cushioned check valve. Please clarify the type and quantity of valves required on the 24" discharge line. Sheet I6.1-02 depicts a 24"x20" reducer at the pump and sheet D1.1-02 does not depict the reducer. Is a 24"x20" reducer required at the pump?

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NO.	QUESTION
156.	Note 5, on sheet D1.2-02 states that all piping for carbons system shall be PC 350 (MJ) or class 53 (flanged) ductile iron pipe. The pipe schedule on sheet G-09 allows the use of PVC and HDPE as well for the PAC lines. Ductile iron pipe is not available in diameters less than 3" diameter. Please confirm the contractor has the option to provide PVC or HDPE for pipe diameters less than 3".
157.	Please confirm base slabs bearing on rock require a minimum of 6" of pug mix base stone on top of rock bearing in accordance with Section 31 23 17 3.14.A. Please confirm it is acceptable to dress the top of rock, including the overblast with pug mix base stone.
158.	Please confirm that Asphalt Detail C5.4 Typical Asphalt Pavement Detail is to be used for all new asphalt pavement shown on Drawing CS1.1 and not Asphalt Detail C5.5 Typical Road/Parking Section Detail.
159.	Paragraph 13 34 24 2.03.H indicates the structural steel should be primed with red oxide primer. This conflicts with the requirements of Section 09 96 00. Should the structural steel for the PEMB comply with the requirement of Section 09 96 00?
160.	Note 4 in the pipe assembly injection detail on sheet D5.4 states that all the MIOX feed lines shall be 2". Sheet D1.1-02 calls out 1" for the MIOX feed lines. Please clarify the diameter of the MIOX feed lines.
161.	Sheet D3.1-08, section A states to provide 8" blind flanges. Sheet D3.8-08 states to provide blind flanges but also shows mud valves. At the flocculation basins, please confirm a total of (6) manual operated mud valves shall be included in the 7.5 MGD bid and (6) manual operated mud valves shall be included in the 15 MGD bid.
162.	The drainage structure data table on sheet CG1.2A states to provide a downstream defender (6' manhole) for structure B3. Please provide a detail for this manhole or advise if this shall be a standard 6'-0" diameter manhole per sheet CU5.4.
163.	All of the sheets with an "A" at the end of the name on sheet G-01 are linked to the 15 MGD add alternate. Please advise if sheet CG1.2A shall be included with the base bid.
164.	Sheet D3.2-08, section E has a note for a 4" DIP DR line (near bottom left side of section E). Sheet D1.1-10 has 2 notes for a 4" DIP DR line (near the top of sheet). This line is not depicted on sheets P1.1-08, I6.1-08 or I6.3-08A. Please advise if a 4" DR line is required and provide a drawing so this line can be included.
165.	Section E on sheet D3.2-08 (near the bottom left side of detail E) depicts an image near the bottom of the 18" fitting. Section B on sheet D3.1-10 does not to depict this image. Please clarify what this symbol represents.
166.	Note 7 on sheet D1.1-08 states to heat trace and insulate all MIOX feed lines. Spec section 40 41 13 3.05 B. 6. states that only exterior MIOX/sodium hypochlorite shall be insulated. Spec section 40 41 13 2.05 G. 1. states that all above grade chemical lines shall be heat traced. Please confirm that the MIOX feed lines within the conditioned chemical building shall not be heat traced or insulated.
167.	Please confirm that all chemical lines within a conditioned building shall not require heat trace or insulation.
168.	Sheets I6.1-08 and I6.3-08A depict a 12" DIP - DR line connected to the 18" DIP - RW line (bottom left side of drawings). The "D" drawings do not depict this line (see all "D" drawings for structure "10" and structure "08", chemical building and pretreatment building, respectively).
169.	A 15% tariff will go into effect on January 1st, 2019 on products from China. Will a provision be made in the bid proposal for this?
170.	Please specify what is required for buried restrained couplings on DI? For example, will a dresser type coupling with anchor pins be allowed or will you require EBAA's Mega-Coupling restrained coupling with wedge restraints?

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NO.	QUESTION
171.	Regarding 43 21 17: The spec indicates that the pumps shall be product lubed in the pump schedule (this indicates that the pumps shall be open Lineshaft construction). But 2.02.C.2 – says a cast iron tension box shall be provided (this indicates enclosed Lineshaft construction). Also 2.02.G.4 – says that Lineshaft bearings which serve as couplings for shaft tubing…(this indicated enclosed Lineshaft construction). Please have the engineer clarify. Having open Lineshaft construction will save on cost and more importantly will save on weight (which is a big concern for the low service pump). Also note that we are not supplying the VFD. The pump spec says the pump manufacturer shall size and specify the VFDs (this is not our area of expertise, this is best left to the engineer). Please make sure contractors are aware that we will not be supplying controls or VFDs (plus $ can be saved by the local vendors supplying these).
172.	Below is the note from the Pipe Schedule on drawing G-09. It requires fittings, valves and specialties to be restrained on drains. Pipe joints are not specified to be restrained. If you want restrained Push-on pipe joints, please issue an addendum to include restrained pipe joints. Several contractors I'm dealing with read below as pipe joints do not require restraint. GRAVITY DRAIN LINES WITHIN A CORROSIVE SPACE SHALL BE PVC; JOINTS OF ALL FITTINGS, VALVES, AND SPECIALTIES IN ANY PIPE SEGMENTS BETWEEN MANHOLES OR OTHER STRUCTURES SHALL BE RESTRAINED. USE PVC ONLY WHERE INDICATED ON PIPING PLAN; SEE SPECS FOR REQUIRED S
173.	In response to addendum #2 item S-18: How much are we to include in our bid for special inspections and testing? Should this be an allowance item?
174.	Conduit schedules for duct bank legend and process equipment legend are in conflict. Example Duct bank # 64 calls for (1) 2" feeding chm-sel-fmx 3 and 4 Process legend calls for (1) 1" conduit for # 3 and (1) 1" conduit #4 Also conflicts with mechanical equipment schedule Example WH-11-1 DUCT BANK LEGEND – 4" MECH EQ SCHEDULE – 2"
175.	What brand and model fire alarm panel is existing.
176.	Spec Section 42 21 43-3 Transformer Pad NP 3085 MT listed. Does not fit the duty, see attached NS 3102 MT 463 Filter Building NP 3102 MT listed. This selection okay. See attached NS 3102 MT 464 Reclaim Basin Inlet NP 3085 MT listed. Does not fit the duty. See attached NS 3085 SH 453 Reclaim Basin Disch. NP 3085 SH listed. Does not fit the duty. See attached Concertor DP N80-500 42 21 39-3 &4 lists submersible pumps with primary duty point at 1500GM @ 42ft. TDH and secondary point at 750GPM @ 9ft. TDH. Could the primary point really be 750GPM @ 42ft. TDH? Considering this is supposed to be an 8" pump, this seems a better fit. D1.1-13 shows rails and discharge elbow for future decant pump REC-P3. Listed as Flygt 3203MT, could this be Flygt model 3202MT w/ 8" Discharge which is the better fit? The first three pumps called for a NP which is a submersible guide rail pump, which we believe should be the NS which is a submersible hose connection. The attached extract calls for no guide rails needed. Plus several of the models selected do not meet the required duty points.

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<table>
<tr><th>NO.</th><th>QUESTION</th></tr>
<tr><td>177.</td><td>Can you tell me if the second addendum has been released yet? Also, I would like an update bidder list if possible.</td></tr>
<tr><td>178.</td><td>Per keyed note #2 on sheet EP1.2-10, “Contractor shall furnish and install Fire Protection Alarm Control Panel for (7) seven Flow and Tamper Switches. Control Panel to signal a single alarm to CP-08 if flow is present on any device. Coordinate with Plumbing drawings for switch locations. Control Panel shall communicate with existing fire alarm system and be capable of providing automated alert to BGMU Dispatch. New Panel shall be equivalent to existing Plant Fire Alarm Control System. Coordinate with BGMU Dispatch for necessary information.” Will you provide a specification for the New Fire Protection Control Panel and Dialer for automated alert?</td></tr>
<tr><td>179.</td><td>With the possibility that several micropiles may not be necessary, several micropile specialty contractors are requesting a change to the bid form. Suggested modification:
<table>
<tr><th>ITEM NO.</th><th>SPEC SECTION</th><th>DESCRIPTION</th><th>EST. QTY & UNITS (A)</th><th>UNIT PRICE, $ (B)</th><th>ITEM TOTAL, $ (A X B)</th></tr>
<tr><td>2</td><td>31 63 33 and Drawings</td><td>Micropiles, per installed pile (based on 8 inch diameter 20 feet average depth, includes 10 feet embedded in rock)</td><td>__EA</td><td></td><td></td></tr>
<tr><td>2a.</td><td>31 63 33 and Drawings</td><td>Micropiles, additional cased length required beyond the initial 10 foot with Bid Item No. 2</td><td>__LF</td><td></td><td></td></tr>
<tr><td>2b.</td><td>31 63 33 and Drawings</td><td>Micropiles, Additional Grout required beyond 200% of the theoretical volume required with Bid Item No. 2</td><td>__CF</td><td></td><td></td></tr>
<tr><td>2c.</td><td>31 63 33 and Drawings</td><td>Micropiles - Verification Load Testing of Piles</td><td>__EA</td><td></td><td></td></tr>
<tr><td>2d.</td><td>31 63 33 and Drawings</td><td>Micropiles - Proof testing of micropiles</td><td>__EA</td><td></td><td></td></tr>
<tr><td>2e.</td><td>31 63 33 and Drawings</td><td>Micropiles - mobilization of micropile specialty contractor</td><td>__EA</td><td></td><td></td></tr>
</table>
</td></tr>
<tr><td>180.</td><td>Regarding the prohibition of handrail anchors after concrete placement (e.g. Add#2 item D-4, Note 8), installing anchors into templates prior to pouring slabs and walls adds cost to the project both in the concrete forming and handrail installation phases of the work. Additional manhours are needed to build and set the templates for anchor bolts. Those manhours as well as the template material generate additional cost. Similarly, when installing handrail, the need to accommodate even the smallest variation from plan makes the use of panelized handrail impractical, slowing the process down, requiring more labor costs. Nearly every section of handrail will need to be custom cut and fit between each of the post locations. To save time, cost and to accommodate shop assembled handrail modules that are allowed in 05 52 00 pg.2, please allow chemical adhesive anchoring system for handrail and guardrail systems.</td></tr>
<tr><td>181.</td><td>The Parapet Detail (03) for the Electrical Building on Sheet A3.1-12 does not appear to coordinate with details SKS-8 and SKS-9 shown on Sheet S5.1-12. Please provide a structural detail clarifying the parapet wall construction atop the continuous tube steel and bent plate.</td></tr>
</table>

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NO.	QUESTION
182.	Regarding Cash Allowances – GC 11.02 B.1.b requires the Contractor's costs for unloading and handling on the site, labor, installation, overhead, profit, and other expenses contemplated for the Cash Allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid. We are unable to determine the cost or fees to be included in the Contract Price (outside of the allowances) without a defined scope of work. On previous projects cash allowances have been utilized for pre-negotiated equipment purchases, third party scopes of work including inspections, testing and permit costs. We recommend replacing these Cash Allowances as Contingency Allowances or removing this requirement for cash allowances.
183.	Specification 33 12 00-17, 2.09 AIR AND VACUUM VALVES, calls for Owners standard APCO valves. Please provide a model number for these valves.
184.	Addendum Item S-36 of Addendum 2 calls for piping within 25 feet of back of curb to use type III backfill per Kentucky Transportation Cabinet. Does this apply to all paved roads and parking areas within the plant? Is Type III Backfill in the Addendum 2 response S-36 referring to Type III Bedding in specification 31 23 23 – 11, 3.04 E?
185.	Wanted to check on the sales and use taxes (Part 22) regarding the referenced project. It states that all work with the exception of the purchase of the Low Service Pump No. 9 and the site fencing modifications is exempt from state sales tax. In Kentucky, "Machinery for New and Expanded Industry" is exempt with several exceptions that are referenced in KRS Chapter 139. Not all products/materials are exempt. I have attached the guidelines for KRS Chapter 139 for your information. The contractor has to complete a "Machinery for New and Expanded Industry" Exemption form that the owner and the contractor has to complete and sign that indicates the value and the function of the equipment that is actually being purchased for the project. This form is forwarded to the manufacturer so they will not charge the sales tax. The contractor has to keep the exemption form on file and show proof as to why the sales tax was exempt if audited by the Kentucky Sales and Use Department. Just wanted some clarification regarding the sales tax prior to project bidding.
186.	I apologize for asking questions this late...I've been hounding the factory. I received the following comments from Snyder Industries regarding the HDPE tanks (spec section 43 41 17). 1.04: Performance and Design Criteria - B : Our comparable Snyder tank is 1100 gallon, 64" x 90". Drawing is attached. 1.06: Source Quality Assurance - C : No shop testing available. Hydro testing and ASTM documentation will be quoted. 1.07: Delivery, Handling, and Storage - A.2 : Clear plastic is not an option. Snyder only wraps in opaque white. We do not recommend visual inspections to be done through any type of wrap. All packaging should be removed for inspections upon initial delivery. 2.02: Equipment Design - A.9 : Lifting lugs are not molded into this size tank and bolt on lugs are not available. Snyder recommends using a spreader bar through the tank lid to lift the tank. 2.02: Equipment Design - A.11 : BOSS fittings are made by PolyProcessing. We will quote bolted fittings with flange adapters for sidewall connections. Snyder Industries is named as an approved supplier but I wanted to check with you on these items. Any feedback that you can provide would be much appreciated.
187.	Hey guys, I have an NSF question regarding the FRP tanks in Bowling Green. In looking over these specs, page 8 is calling for an NSF certification. Belding doesn't have an NSF certification, Design Tanks does, but they won't stamp something NSF if its chemicals. Please advise if the NSF is required?
188.	The proposed layout for grating shown on Sheet Number S1.3-09 differs from what is shown on Sheet Number D1.1-09. (Sheet Number D1.1-09 shows approximately 225 SF of grating on the right side of the drawing that is not shown on Sheet Number S1.3-09.) Please clarify what is intended.
189.	The "Typical Asphalt Pavement Detail" shown on Sheet Number C5.4 differs from the "Typical Road/Parking Section Detail" shown on Sheet Number C5.5. Please clarify the correct pavement details.
190.	Sheet Number CS1.1 shows new fence crossing an existing entrance from Nashville Road. Sheet Number CS1.1A shows a slightly different fence layout, but no fence is shown across the existing entrance. Please clarify what is intended at these locations.

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NO.	QUESTION
191.	Section 13 34 24 calls for standing seam roof panels, but the Architectural drawings indicate screw-down fasteners are required. Please clarify what is intended.
192.	In Section 13 34 24, the standing seam roof specifications indicate both vertical and trapezoidal standing seam roof systems are acceptable. Please confirm this to be correct.
193.	In Section 13 34 24, roofing specifications indicate fluoropolymer coating is required, but drawings indicate Galvalume is required. Please confirm what is intended.
194.	On Sheet Number A2.1-09, Note 4 indicates the Owner will confirm which windows are to be operable and which windows are to be fixed. Please provide this information.
195.	In Section 13 34 24, roof specifications indicate the roof material is to be 0.028 inches thick. Please provide the gauge that is required for this material.
196.	On Sheet Number A3.2-08, Detail 01 shows the Perforated Metal Panels (Section 07 42 00) on the exterior of the building, and also a Solar Screen with Aluminum Framing system and steel columns. Please confirm the "Solar Screen" refers to Section 10 71 13 (Decorative Façade Screen Structure).
197.	Section 13 34 24, Article 1.04.1.i. indicates the exterior wall system consists of PEMB custom and standard metal wall panels in front of a fabric solar screen. Notes on drawing sheets indicate the wall panels are to be supplied by Hendricks (per Section 07 42 00). Please confirm Section 13 34 24 is incorrect, and the PEMB supplier does not supply wall panels at this building. (The PEMB supplier will supply structural steel columns and roof panels.)
198.	On Sheet Number S3.1-08, Section 1 depicts the pier cap on the left side at Elevation 478.75. As this pier cap is 36" thick (per Sheet Number S1.0-08), the bottom of the pier cap would be at Elevation 475.75. The distance between the bottom of this pier cap and the top of the sludge hopper slab (Elevation 473.50) would be 2.25 feet. However, this distance is shown to be 2'-9" in the section cut. Please confirm the correct elevations and thicknesses of structure elements.
199.	How will the excavation of existing material, from bottom of pile cap elevation to top of competent rock, be paid in the event this volume is replaced with lean concrete?
200.	In Addendum No. 2, re-issued Sheet Number A8.1 identifies Section 06 40 00 as the specification for window sills. Please provide this specification section.
201.	Sheet Number CS1.1A depicts a "New 3' Man Gate" crossing a "New 4' Sidewalk" at the front entrance. Please confirm the intended items at this location.
202.	Sheet Number C5.1 depicts Aegis II Invincible fence products. Section 32 31 19, Article 2.03.A, identifies Impasse II fence product details. Please clarify the correct products.
203.	On Sheet Number S0.6, Detail 6 depicts the use of Tek screws to attach the metal roof deck to support members. (This Detail is also referenced on Sheet Number S1.6-09.) Section 05 31 23, Article 3.02.D., indicates the metal deck is to be welded to support members. Please clarify what is intended.
204.	With reference to Section 13 34 24, please confirm all primary and secondary framing members are to be factory-primed only (not galvanized) from the PEMB manufacturer.
205.	Section 13 34 24, Article 1.04.B.1.b.1.c. mentions straight columns and tapered columns, and references the drawings. The drawings appear to indicate tapered columns are intended, but it is not clear. Please confirm the intended column type.
206.	On Sheet C5.1, Detail 5 depicts the ornamental fence in 6-foot wide panels. The fence manufacturer supplies the fence in 8-foot wide panels. Will the use of 8-foot wide panels be acceptable?

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NO.	QUESTION
207.	On Sheet C5.1, Detail 1 depicts the typical wall section and Section “C” is taken through the detail. As Section “C” (and the knee wall) was deleted in Addendum No. 2, will any type of concrete footing be required beneath the fence?
208.	In Section 00 21 13, Article 13.15 states the Bidder shall submit a Drug-Free Work Place Affidavit as part of his bid. Please provide the applicable document for the Bidder to complete and submit.
209.	On Sheets CU3.1 and CU3.2, it appears the 18” process drain (“DR1”) and the 30” process drain (“DR2”) will be installed beneath existing utility items. Please clarify which existing utilities can be removed and which ones have to remain in service.
210.	Please clarify any requirement for concrete thrust blocks on process lines where horizontal bends occur. If any, please provide applicable details and sizing information.
211.	Section 00 21 13, Articles 12.3. and 12.4., and Article 15.1.B., indicate the Bidders are to submit the List of Subcontractors with their bid, and also provide additional information (experience, license number, etc.) for the listed subcontractors. As the selection of these subcontractors will not be made until the final moments before the bid deadline, please allow submission of the supplemental information at a later date. Additionally, as there are no license numbers associated with a Kentucky Contractor’s License, please allow submission of proof of the listed subcontractors’ licensure at the later date.
212.	Section 00 52 00, Article 4.03 indicates Liquidated Damages shall be $1,000 per day. Article 4.04 indicates Engineering Charges shall be $2,500 per day, in addition to the Liquidated Damages. As these amounts seem excessive, please review this issue and revise the Engineering Charges, if applicable.
213.	Section 00 73 00, Article SC-12.02.C., indicate weather and\or neglect of the utility owner or other contractors shall not be deemed as cause for consideration of an extension of the contract time. As abnormal weather and its effects are certainly beyond the control of the Contractor, please review this issue and allow abnormal weather to be considered as a cause for consideration of a contract time extension.

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NO.	QUESTION
214.	Please see the attached summary of Micropile load capacities, and confirm this information is correct for bidding purposes. ASSUMED MICROPILE LOAD CAPACITIES □ 7.5 MGD New Pretreatment Structure o 150 K Compression o 10 K Tension o 5.5 K Lateral o 8" diameter micropile □ 15 MGD New Pretreatment Structure o 150 K Compression o 10 K Tension o 5.5 K Lateral o 8" diameter micropile □ New Filter Building o 150 K Compression o 10 K Tension o 5.5 K Lateral o 8" diameter micropile □ New Chemical Building o 150 K Compression o 10 K Tension o 5.5 K Lateral o 8" diameter micropile □ Chemical Storage Building o 60 K Compression o 10 K Tension o 8.5 K Lateral o 6" diameter micropile □ Electrical Building o 55 K Compression o 5.5 K Lateral o 6" diameter micropile □ Transformer Pad o 55 K Compression o 5.5 K Lateral o 6" diameter micropile □ Generator Pad o 55 K Compression o 5.5 K Lateral o 6" diameter micropile □ Reclamation Basin (Valve Vault) o 170 K Compression o 9.0 K Lateral o 6" diameter micropile □ Reclamation Basin El. 468 o 75 K Compression o 5 K Lateral o 6" diameter micropile

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BIDDER QUESTION LOG

NO.	QUESTION
215.	Per Addendum No. 2, Item S-18, the Contractor will be reimbursed by the Owner for all testing services that are invoiced. Since all of the invoiced costs will be reimbursed, please provide a bid allowance for this arrangement instead of requiring the bidders to estimate the cost of the services for the entire project. This will allow all bidders to utilize the same price information in their bids, and will provide savings to the Owner.
216.	We were hoping to bid the valves similar to the Franklin WTP with Val-matic on the butterfly valves. I see Val-matic was added for the air valves, would they be acceptable on the butterfly's as well?
217.	One last question regarding the HDPE tanks (sorry)...the spec (46 41 43 / 2.02 / B / 3) calls for a 4" overflow and the drawings (D6.1, D3.1-10, D3.2-10, D3.3-10) show a 2" overflow. Please clarify which size is preferred.
218.	We have asked the engineers about the primary service entrance pullbox a couple times. They reference to coordinate purchase and installation of pullbox with owner. I am needing to know what our cost for the (2) two pullboxes will be.
219.	Per Section 05 52 00 Handrails and railing 1.03B post spacing Maximum Four Feet, 2.04.A vertical post spaced at 6'-0" on center maximum, and 3.04.F brackets space on 6 ft. centers for steel and 5 Ft. centers for aluminum. Please provide correct spacing for handrail post aluminum. Finishes section 2.05 A aluminum pipe is indicated with Brush Finish per M32 this is more expensive and usually not desired, clear anodized is usually preferred please verify.
220.	I can find no details for handrail in drawings can they be provided in addendum.
221.	Per addendum 2 epoxy anchors and wedge anchors are not allowed for installation of handrail can engineer provide acceptable detail for installation of handrail on concrete walls and slabs.
222.	So the two questions they had were to verify the NSF stamp isn't necessary. Also, is it ok on the RTP1 QC, they have their own internal RTP1 standards they do their documentation with, would that be ok?
223.	We ran across a Dodge report on subject project. We were contacted by someone for some pricing on ornamental. We were just trying to verify that there is an ornamental requirement for project and the exact bid date. The Dodge report we saw had a date of 11/8. Thanks for any help.

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NO.	QUESTION
224.	Below is a list of each micropile group, and the interpretation of the loadings based off the drawings. Please review and confirm that this interpretation is correct o 7.5 MGD New Pretreatment Structure ▪ 150 K Compression ▪ 10 K Tension ▪ 5.5 K Lateral ▪ 8" diameter micropile o 15 MGD New Pretreatment Structure ▪ 150 K Compression ▪ 10 K Tension ▪ 5.5 K Lateral ▪ 8" diameter micropile o New Filter Building ▪ 150 K Compression ▪ 10 K Tension ▪ 5.5 K Lateral ▪ 8" diameter micropile o New Chemical Building ▪ 150 K Compression ▪ 10 K Tension ▪ 5.5 K Lateral ▪ 8" diameter micropile o Chemical Storage Building ▪ 60 K Compression ▪ 10 K Tension ▪ 8.5 K Lateral ▪ 6" diameter micropile o Electrical Building ▪ 55 K Compression ▪ 5.5 K Lateral ▪ 6" diameter micropile
225.	In reference to Instructions to Bidder, Part 22.1 and GC/SC 6.10.B where it states "Equipment directly related to the production of potable water for use on this project is exempt from state sales tax", please define for equipment that is tax exempt, should the sales tax be 1) left out of the bid, or 2) carried in the bid and then returned to the Owner after purchase? Some research into the laws in Kentucky regarding sales and use taxes confirms that the Owner's tax-exempt status does not translate or cannot pass through to the contractor for materials purchased for capital improvements. The Owner would need to directly purchase the materials and equipment to utilize their tax-exempt status. Please confirm that the Bidding Contractors should account for sales tax on all materials purchased for the project in their Bid Price.
226.	Spec section 40 41 13 3.02. M. provides requirements for buried pipe insulation. Please confirm there is no buried pipe insulation required on the project.
227.	Spec section 33 11 00 2.10 states all chemical piping located outdoors or below grade and all interior chemical piping located outside designated chemical rooms or more than 4 feet above finished floor elevation whether inside or outside a designated chemical room shall be double containment piping. Please define which areas are designated chemical rooms.
228.	Per sheet G-09 double containment is not required on the MIOX lines. Some of the MIOX lines shall be routed outside the structure and over the pretreatment. Please confirm double containment pipe is not required on the MIOX lines outside the structure. Sheet D1.3-10 states to use standard 2" SCH 80 PVC.

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NO.	QUESTION
229.	Please confirm the COAG lines are not required to be double containment inside the building. Sheet G-09 gives both options (dual contained PVC and standard PVC) and is not clear whether to use standard PVC or dual contained PVC inside structures. Sheet
230.	Addendum item S-39 from addendum #2 states to add "for potable water service". The pipe schedule on sheet G-09 does not allow steel pipe. Please advise what potable water services shall be steel pipe.
231.	Sheet D1.1-09 states to route the 3" force main to the reclamation basin. Please confirm this line shall be routed directly to MH DR3-2 then the flow will go to the new reclamation basin.
232.	Sheet CU5.4 note 1 states on all pipes at all manholes, and all underground structures, two (2) pipe joints shall be installed within 4'-0" from outside face of manhole or structure wall. Please advise how to satisfy this requirement on the 72" and 15" RCP lines.
233.	Please confirm that all buried DIP shall be PC 350 per the pipe schedule on sheet G-09.
234.	The drawings call for the micropiles to have the following designated loading: Case #1 – Axial = 150K ; Lateral = 5.5 K and Case #2 – Axial = -10 K; Lateral = 5.5 K. Does the -10 K mean 10 K in tension only ? and is the 150 K compression only ? Is there a certain amount of each case?
235.	Drawing S1.0-12, note 2 states the micropile diameter is 6”. The bid form is based on 8” diameter micropiles. Please clarify.
236.	Please clarify if stair treads are to be aluminum grating or aluminum plank. The drawings do not indicate and the specifications reference both.
237.	In the Chemical Building there is a 7’-0”x7’-0” panel called out, on drawing S1.2-10, it is call for it to be aluminum, but on drawing A1.1-10 is calls for fiberglass. Please clarify.
238.	43 21 17-1.07.B.1: Confirm that there are no below slab discharge flange connections on any pumps.
239.	43 21 17-2.02.G.6: Confirm that a vortex suppressor baffle is not required to be installed in the bottom of the RWPS.
240.	46 41 11 – 3.01.D: Please clarify the number of oil changes that the Contractor is required to complete. Understand the two week oil change, but after that, the responsibility should carry over to the Owner.
241.	46 41 31 – 3.01.F: Please clarify the number of oil changes that the Contractor is required to complete. Understand the two week oil change, but after that, the responsibility should carry over to the Owner.
242.	Addendum #3 item D-46, states that the use of wall pipes installed flush to wall surfaces requiring use of tapped studs shall not be permitted. Use of “Typical Wall Pipe Detail” as stated on drawing sheet D5.1 would require formwork to be cut to install pipes as walls are being placed. Areas like the filter walls need to be gang formed for time and safety reasons. Can the “Typical Wall Sleeve Detail” be used instead of the wall pipes? This would allow for a flush wall sleeve to be poured in place and the penetration link sealed. If not, can the pipe penetrations be boxed out and the pipe be grouted in place after the walls are poured? Past experience would tell us that the “Typical Wall Sleeve Detail” would work best for this application.

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BIDDER QUESTION LOG

NO.	QUESTION
243.	Below is taken from Chapter 17 (Special Inspections and Tests), Section 1704, of the 2018 Kentucky Building Code: 1704.2 Special inspections and tests. Special inspections are required for all buildings and structures that require the services of a registered design professional per Section 107, Section 122 and Table 122.1. Where application is made to the building official for construction as specified in Section 105, the owner or the owner's authorized agent, other than the contractor, shall employ one or more approved agencies to provide special inspections and tests during construction on the types of work specified in Section 1705 and identify the approved agencies to the building official. These special inspections and tests are in addition to the inspections by the building official that are identified in Section 110.
244.	I had asked a few questions about the PEMB for the Bowling Green WTP Expansion to Dugan & Meyers and have not seen any answers. I have looked at the specifications it calls out for 2 different types of standing seam roof systems, then on the drawings it calls out for screw down roof panels. On the drawings it calls out for the roof panel to have a Kynar paint finish for the underside of exposed metal roof. Usually when this is called out, it calls it out as a liner panel. The gutter system is called out for an aluminum gutter system as well, that is usually a sheet metal gutter. Can you help me with this?
245.	The detail on sheet ED5.1 shows poured in place concrete, 4" above grade and there is nothing about a cover. I was totally confused.
246.	Can ½" threaded studs be used for Horizontal application.

2995 Sidco Dr., Nashville, TN 37204
Tel: 615.383.1113 · Fax: 615.386.8469 · www.ssr-inc.com

SECTION 00 41 00

BID FORM

ARTICLE 1 - BID RECIPIENT

1.1 This bid is submitted by:

Bidder's Name: ____

1.2 This bid is submitted to:

Owner:	BOWLING GREEN MUNICIPAL UTILITIES
Address:	801 Center Street Bowling Green, KY 42102
Project Title:	Water Treatment Plant Expansion
RFB#:	2018-1

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

ARTICLE 2 - BIDDER ACKNOWLEDGEMENTS

2.1 Bidder accepts all of the terms and conditions of the Advertisement or Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. The Bid will remain subject to acceptance for sixty (60) days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

2.2 Bidder, as specified in paragraph 15.4 of the Instructions to Bidders, does hereby agree to a 30-day extension of the period for acceptance of Bids from expiration of the specified 60-day period after the scheduled Bid opening (total of 90 days) and that, if awarded the Contract, the 30-day extension shall be at no change in the Contract Price.

ARTICLE 3 - BIDDER REPRESENTATIONS

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

A. Bidder has examined and carefully studied the Bidding Documents, the other related data identified in the Bidding Documents, and the following Addenda, receipt of all which is hereby acknowledged.

Addendum No.	**Addendum Date**

B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local and Site conditions that may affect cost, progress, and performance of Work.

C. Bidder is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress and performance of the Work.

D. Bidder agrees that he is solely responsible for verifying the exact nature, character, quality, and quantity of all conditions to be encountered.

E. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in paragraph 4.02 of the General Conditions; and (2) reports and drawings of a Hazardous Environmental Condition, if any, which has been identified in paragraph 4.06 of the General Conditions.

F. Bidder has obtained and carefully studied (or assumes responsibility for having done so) all additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents to be employed by Bidder, and safety precautions and programs incident thereto.

G. Bidder does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents.

H. Bidder agrees that he shall neither have nor assert against the Owner or Engineer any claim for damages for extra work or otherwise or for relief from any obligation of these Contract Documents based upon the failure by the Owner or Engineer to obtain or to furnish additional subsurface information or to furnish all subsurface information in the Owner's or Engineer's possession or based upon any inadequacy or inaccuracy of the information furnished.

I. Bidder agrees that all subsurface information is made available only as a convenience, without express or implied representation, assurance, or guarantee that the information is adequate, complete, or correct, or that it represents a true picture of the subsurface conditions to be encountered, or that all pertinent subsurface information in the possession of the Owner or Engineer has been furnished. Bidder must interpret such information according to his own judgment.

J. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

K. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents.

L. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by Engineer is acceptable to Bidder.

M. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

N. Bidder has examined the Contract Documents and has acquired sufficient knowledge of the required work to the extent that Bidder clearly understands his obligations and responsibilities.

O. Bidder has coordinated with and obtained from equipment manufacturers and suppliers as required by individual specification sections and as deemed necessary by Bidder general arrangement drawings, process and instrumentation diagrams (P&IDs), electrical and instrumentation wiring, cabling and conduit requirements, plumbing and process piping and valve requirements, ancillary equipment requirements, and any other information necessary for Bidder to adequately price materials and labor required to be provided both by the equipment manufacturer and by the Bidder to provide fully functional equipment and systems.

P. Bidder has contacted proper authorities having jurisdiction over utilities which are involved in project and ascertained from said authorities locations at which each separate utility may be made available to project site.

ARTICLE 4 - FURTHER REPRESENTATIONS

4.1 Bidder further represents that:

A. Bidder represents that this Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over Owner.

E. Bidder shall execute and submit a copy of the attached Non-Collusion Affidavit of Prime Bidder and List of Proposed Subcontractors (Section 00 45 14) with the Bid.

F. Bidder, by submitting his Bid, agrees that he is satisfied with and will at no time dispute the estimated quantities stated in the Bid as a proper means of comparing bids.

G. Bidder states that he is financially solvent and that he is experienced in and competent to perform the type of work or to furnish the plant, materials, supplies or equipment, to be so performed or furnished by him.

H. Bidder states that he is familiar with all Federal, State, and local Laws, ordinances and regulations, which may in any way affect the work or those employed therein, including, but not limited to, any special acts relating to the work or to the project of which it is a part.

I. Bidder states that such temporary and permanent work required by the Contract Documents as is to be done by him can be satisfactorily constructed and used for the purpose for which it is intended, and that such construction will not injure any person or damage any property.

J. Bidder acknowledges and accepts the Owner's right to waive any and all Bid requirements and formalities.

ARTICLE 5 - BID PRICES

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

BID FORM – TOTAL BASE BID **WATER TREATMENT PLANT EXPANSION**					
SCHEDULE A – LUMP SUM BID ITEMS					
ITEM NO.	**DESCRIPTION**				**ITEM TOTAL**
1.	Water treatment plant expansion to 7.5 MGD, including modifications to existing raw water intake and combined filtered lines. Scope includes new conventional treatment (flash, flocculation, sedimentation and filtration basins), electrical building, chemical storage, and reclamation basin for entire plant sludge. <u>This lump sum shall **exclude** unit price items and allowance items listed below</u>.				$
SCHEDULE B – UNIT PRICE ITEMS					
ITEM NO.	**SPEC SECTION**	**DESCRIPTION**	**EST. QTY AND UNITS (A)**	**UNIT PRICE, $ (B)**	**ITEM TOTAL, $ (A X B)**
2.	31 63 33 and Drawings	Micropiles (based on 8 inch diameter, 20 feet average depth, includes 10 feet imbedded in rock)	8,500 LF		
3.	31 63 33 and Drawings	Micropiles (based on 6 inch diameter, 20 feet average depth, includes 10 feet imbedded in rock)	3,020 LF		
4.	Drawings	Lean Concrete/Flowable Fill for below foundation system and associated unclassified excavation and subsequent offsite disposal of excavated material	10,000 CY		
SCHEDULE C – ALLOWANCE ITEMS					

ITEM NO.	DESCRIPTION	ITEM TOTAL
5.	Construction Contingency Allowance	$1,750,000.00
6.	Cash Allowance for replacing existing 36-inch butterfly valve on existing plant raw water line (located in Area 3 Existing Chemical Building) and associated gear box, and related appurtenances necessary to accept new motor actuator.	$50,000.00
7.	Contingency Allowance for SCADA monitors and other plant control area appurtenances and office furniture	$60,000.00
8.	Contingency Allowance for office and conference room equipment and furniture	$75,000.00
9.	Contingency Allowance for Owner-directed additional landscaping and related site improvements.	$200,000.00
10.	Contingency Allowance for site-wide site security equipment including wiring and accessories	$100,000.00
11.	Contingency Allowance for laboratory casework, resin countertops with integral sink, furniture, and accessories	$75,000.00
12.	Cash Allowance for lab equipment, instruments, and accessories	$100,000.00
13.	Contingency Allowance for existing chemical feed system modifications (this allowance precludes work currently shown on Contract Documents and is only for additional work as requested by Owner or not shown on Contract Documents)	$250,000.00
14.	Contingency Allowance to add hydropneumatic booster pump system to Raw Water Pump Station, including all electrical, instrumentation and control, piping, valves, and appurtenances.	$40,000.00
15.	Contingency Allowance to fully replace existing heating, ventilating, and/or air conditioning systems at Raw Water Pump Station No. 2 with new heating, ventilating, and/or air conditioning systems.	$100,000.00
16.	Contingency Allowance to mill and overlay new asphalt surface coat within areas of new and existing sites not shown on Contract Drawings to receive new pavement. Extent of mill and overlay to be determined by Owner and Engineer.	$30,000.00
17.	Contingency Allowance for modifications to Warren County Water District meter vault located near northwest corner of existing filter building.	$75,000.00

TOTAL BASE BID	
DESCRIPTION	**TOTAL BASE BID PRICE**
Total Base Bid (Sum Total of Items 1 thru 17), (in figures)	$______________________________
Total Base Bid (in words) ______________________________ ______________________________	

BID FORM – TOTAL ALTERNATE BID WATER TREATMENT PLANT EXPANSION		
SCHEDULE A – LUMP SUM BID ITEMS		
ITEM NO.	**DESCRIPTION**	**ITEM TOTAL**
1.	Water treatment plant expansion to 15 MGD, including modifications to existing raw water intake and combined filtered lines. Scope includes new conventional treatment (flash, flocculation, sedimentation and filtration basins), electrical building, chemical storage, and reclamation basin for entire plant sludge. <u>This lump sum shall **exclude** unit price items and allowance items listed below</u>.	$

SCHEDULE B – UNIT PRICE ITEMS					
ITEM NO.	**SPEC SECTION**	**DESCRIPTION**	**EST. QTY AND UNITS (A)**	**UNIT PRICE, $ (B)**	**ITEM TOTAL, $ (A X B)**
2.	31 63 33 and Drawings	Micropiles (based on 8 inch diameter, 20 feet average depth, includes 10 feet imbedded in rock)	12,500 LF		
3.	31 63 33 and Drawings	Micropiles (based on 6 inch diameter, 20 feet average depth, includes 10 feet imbedded in rock)	3,020 LF		

4.	Drawings	Lean Concrete/Flowable Fill for below foundation system and associated unclassified excavation and subsequent offsite disposal of excavated material	15,000 CY		

SCHEDULE C – ALLOWANCE ITEMS

ITEM NO.	DESCRIPTION	ITEM TOTAL
5.	Construction Contingency Allowance	$2,500,000.00
6.	Cash Allowance for replacing existing 36-inch butterfly valve on existing plant raw water line (located in Area 3 Existing Chemical Building) and associated gear box, and related appurtenances necessary to accept new motor actuator.	$50,000.00
7.	Contingency Allowance for SCADA monitors and other plant control area appurtenances and office furniture	$60,000.00
8.	Contingency Allowance for office and conference room equipment and furniture	$75,000.00
9.	Contingency Allowance for Owner-directed additional landscaping and related site improvements.	$200,000.00
10.	Contingency Allowance for site-wide site security equipment including wiring and accessories	$100,000.00
11.	Contingency Allowance for laboratory casework, resin countertops with integral sink, furniture, and accessories	$75,000.00
12.	Cash Allowance for lab equipment, instruments, and accessories	$100,000.00
13.	Contingency Allowance for existing chemical feed system modifications (this allowance precludes work currently shown on Contract Documents and is only for additional work as requested by Owner or not shown on Contract Documents)	$250,000.00
14.	Contingency Allowance to add hydropneumatic booster pump system to Raw Water Pump Station, including all electrical, instrumentation and control, piping, valves, and appurtenances.	$40,000.00
15.	Contingency Allowance to fully replace existing heating, ventilating, and/or air conditioning systems at Raw Water Pump Station No. 2 with new heating, ventilating, and/or air conditioning systems.	$100,000.00

16.	Contingency Allowance to mill and overlay new asphalt surface coat within areas of new and existing sites not shown on Contract Drawings to receive new pavement. Extent of mill and overlay to be determined by Owner and Engineer.	$30,000.00
17.	Contingency Allowance for modifications to Warren County Water District meter vault located near northwest corner of existing filter building.	$75,000.00

TOTAL ALTERNATE BID	
DESCRIPTION	**TOTAL ALTERNATE BID PRICE**
Total Alternate Bid (Sum Total of Items 1 thru 17), (in figures)	$______________________________
Total Alternate Bid (in words) ____ ____	

5.2 Contractor shall include unit prices and associated totals for Unit Price Item Nos. 2, 3, and 4 as well as all allowance items and lump sum bid items in TOTAL BASE BID and TOTAL ALTERNATE BID.

5.3 All specific cash allowances are included in the price(s) set forth above and have been computed in accordance with paragraphs 11.02, respectively, of the General Conditions. All specific cash allowances are described in Section 01 22 00 of the Contract Documents.

5.4 The Total Base Bid and Total Alternate Bid shall be the prices submitted for furnishing of all labor, materials and equipment for the construction work required for a complete operating installation as described in the Contract Documents for the 7.5 MGD water treatment plant expansion and the 15 MGD water treatment plant expansion, respectively, including all items of equipment listed in the following Tabulation of Bid Equipment Items. The Total Base Bid and Total Alternate Bid shall be deemed to be full compensation for all required labor, products, tools, equipment, plant, transportation, testing, inspection, services, incidentals, administrative procedures, applicable taxes, permit fees, overhead, profit, and other miscellaneous expenses for construction of the 7.5 MGD water treatment plant expansion and the 15 MGD water treatment plant expansion, respectively. The Total Base Bid or Total Alternate Bid submitted by the successful bidder shall become the Contract Price as determined by the Owner.

5.5 In connection with the Tabulation of Bid Equipment Items as it relates to the Total Base Bid and Total Alternate Bid, the Bidder expressly agrees to the following provisions:

A. That Schedule A – Lump Sum Bid Items of the Total Base Bid and Total Alternate Bid includes the furnishing and installation of all equipment, materials and systems detailed in the Tabulation of Bid Equipment Items as well as all other equipment, materials and systems detailed in the Contract Documents.

B. The items listed in "A Item" Column of the Tabulation of Bid Equipment Items are those allowable for determination of the Contractor's Total Base Bid and Total Alternate Bid. These items are hereby defined as “A Items”. In the event more than one “A Item” is listed on the Tabulation of Bid Equipment Items, the Bidder shall circle the “A Item” which he proposes to use.

C. If Bidder circles more than one manufacturer for an item number or fails to circle a manufacturer for each item number, the Bidder may be declared non-responsive and his bid may not be accepted. In the event the Bidder does not circle an “A Item” or circles more than one, the Owner reserves the right to select an “A Item” with no change in the Total Base Bid or Total Alternate Bid prices.

D. That any changes in the selected Suppliers resulting from non-compliance with the Contract Drawings and Specifications shall be made at no additional expense to the Owner.

SCHEDULE E – TABULATION OF BID EQUIPMENT ITEMS

ITEM NO.	DESCRIPTION	“A ITEM” MANUFACTURER
1.	43 21 17: Vertical Turbine Pumps	Flowserve Peerless Goulds (Xylem)
2.	46 41 11: Flash Mix Equipment	Philadelphia Lightnin
3.	46 90 19: Flash Mixing Baffles	NEFCO Warminster
4.	46 41 31: Vertical Paddle Wheel Flocculator Equipment	JMS MRI
5.	46 43 11: Chain-and-Flight Sludge Collectors	Evoqua Brentwood
6.	46 43 76: Plate Settlers	MRI JMS
7.	46 61 26: High-Rate Sand Filtration System	Leopold DeNora
8.	46 36 43: Lime Feed System	Burnett Lime Company

SCHEDULE E – TABULATION OF BID EQUIPMENT ITEMS

ITEM NO.	DESCRIPTION	"A ITEM" MANUFACTURER
9.	43 41 45: FRP Chemical Storage Tanks	PlasTanks Belding Justin
10.	43 41 43: HDPE Chemical Storage Tank	Poly Processing Tanks Snyder
11.	46 33 44: Peristaltic Pumps	Watson Marlow FloMotion
12.	46 33 66: Chemical Transfer Pumps	Finish Thompson March Warrender
13.	33 12 00: Valves (Magmeters)	Endress Hauser Krohne Rosemont
14.	09 96 00: Painting	Tnemec Sherwin-Williams Carboline
15.	26 29 23: Variable Frequency Motor Controllers (Low Voltage)	ABB Mitsubishi Schneider Square D Eaton

SCHEDULE E – TABULATION OF BID EQUIPMENT ITEMS		
ITEM NO.	DESCRIPTION	"A ITEM" MANUFACTURER
16.	26 18 39: Variable Frequency Motor Controllers (Medium Voltage)	Eaton ABB GE

5.6 Basis of Award:

A. Award of the Contract will be made on the basis of the lowest, responsive, responsible Total Base Bid or Total Alternate Bid, at Owner's discretion, as described in the Instructions to Bidders.

B. The lowest responsive, responsible Bid will be the Total Base Bid Amount or the Total Alternate Bid Amount of the Bidder meeting all the requirements of the Contract Documents.

C. The Total Base Bid and Total Alternate Bid shall include the cost of furnishing, installing and placing into operation all circled "A Items" listed in the Tabulation of Bid Equipment.

ARTICLE 6 - TIME OF COMPLETION

6.1 Bidder agrees that the Work will be substantially completed and completed and ready for final payment in accordance with paragraph 14.07 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.2 Bidder accepts the provisions of the Agreement as to liquidated damages and Engineer's charges for delay in completion in the event of failure to complete the Work within the Contract Times as stated in the Agreement.

ARTICLE 7 - ATTACHMENTS TO THIS BID

7.1 The following documents are attached to and made a condition of this Bid:

A. Required Bid security in the form of; (indicate which):

❒ A certified or bank check in an amount of five percent (5%) of Bidder's maximum Bid price;

❒ A Bid bond issued by a surety in an amount of five percent (5%) of Bidder's maximum Bid price and meeting the requirements of Paragraphs 5.01 and 5.02 of the General Conditions.

B. Required Bidder Qualification Questionnaire (Section 00 45 13).

C. Non-Collusion Affidavit of Prime Bidder.

D. List of Proposed Subcontractors (Section 00 45 14).

E. Bidder's Breakdown of Lump Sum Bid Price (located at the end of this bid form) from the three (3) lowest bidders within 24 hours of the bid opening. Breakdown shall be per Division number as described in Table of Contents (Section 00 01 10), except as otherwise noted.

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

ARTICLE 8 - BID SUBMITTAL

8.1 This bid is:

Submitted on ____ 20 _______.

State Contractor License No.____. (If applicable)

If Bidder is:

An Individual

Name (typed or printed): ______________________________

By: ______________________________ (SEAL)
(Individual's signature)

Doing business as: ______________________________

Business address: ______________________________

Phone No.: ______________ FAX No.: ______________

A Partnership

Partnership Name: ______________________________ (SEAL)

By: ______________________________
(Signature of general partner – attach evidence of authority to sign)

Name (typed or printed): ______________________________

Business address: ______________________________

____

Phone No.: ______________ FAX No.: ______________

A Corporation

Corporation Name: ______________________________ (SEAL)

State of Incorporation: ______________________________

Type (General Business, Professional, Service, Limited Liability): ______________

By: ______________________________

Name (typed or printed): ______________________________

Title: ______________________________ (CORPORATE SEAL)

Attest: ______________________________
(Signature of Corporate Secretary)

Business address: ______________________________

____

Phone No.: ______________ FAX No.: ______________

Date of Qualification to do business is ______________________________

A Joint Venture

Joint Venturer Name: ____ (SEAL)

By: ____

(Signature of joint venture partner – attach evidence of authority to sign)

Name (typed or printed): ____

Title: ____

Business address: ____

____

Phone No.: _____________________ FAX No.: _____________________________

Joint Venturer Name: ____ (SEAL)

By: ____

(Signature of joint venture partner – attach evidence of authority to sign)

Name (typed or printed): ____

Title: ____

Business address: ____

____

Phone No.: _____________________ FAX No.: _____________________________

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

____

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

BIDDER AFFIDAVIT ON COMPLIANCE
WITH DRUG-FREE WORKPLACE

STATE OF ______________________

COUNTY OF ____________________

NOW COMES AFFIANT, who being duly sworn, deposes and says:

1. He/She is the principal officer for ____________________________________

____
(Insert name and address of bidding entity.)

2. That the bidding entity has submitted a bid to Bowling Green Municipal Utilities for the construction of the project titled:

Water Treatment Plant Expansion

3. That Affiant certifies that the bidding entity has in effect, at the time of submission of its bid to perform the construction referred to above, a drug-free workplace program that complies with Kentucky Labor Cabinet requirements 803 KAR 25:280.

4. That the affidavit is made on personal knowledge.

Further Affiant says not.

____
AFFIANT

____
PRINTED NAME AND TITLE OF OFFICER

____
SIGNATURE BY PRINCIPLE OFFICER

Sworn to and subscribed before me a Notary Public for the above state and county, on this _______ day of ___________________________, 20 ____.

____
NOTARY PUBLIC

My commission expires: ________________

NONCOLLUSUION AFFIDAVIT OF PRIME BIDDER

State of ________________________)
) ss.
County of _______________________)

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

(1) He is ____ of _________________

____, the Bidder who has submitted the attached Bid;

(2) He is fully informed respecting the preparation and contents of the attached Bid and of all the pertinent circumstances respecting such Bid;

(3) Such Bid is genuine and is not a collusive or sham Bid;

(4) Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees, or parties in interest , including this affiant, has in any way colluded, conspired, connived, or agreed, directly or indirectly, with any other Bidder, firm, or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such Contract, or has in any manner, directly or indirectly , sought by agreement or collusion or communication or conference with any other Bidder, firm, or person, to fix the price or prices in the attached Bid or of any other Bidder, or to fix any overhead, profit, or cost element of the Bid price or the Bid prices of any other Bidder, or to secure through any collusion, conspiracy, connivance, or unlawful agreement any advantage against the Owner or any person interested in the Contract; and

(5) The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance, or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

By: ___________________________________ Title: ______________________________

SUBSCRIBED AND SWORN TO before me this _______ day of __________________, 20______.

By: _______________________________________

My commission expires _________________, 20____

BIDDER’S BREAKDOWNS OF LUMP SUM BID PRICES

The following breakdowns of the Total Base Bid and Total Alternate Bid **shall be submitted to Owner within 24 hours after bid opening (not to be submitted with bid).** The price breakdowns shall be fairly apportioned between the various parts of the work. The information will be reviewed along with the bid proposals but will not serve as the Basis of Award.

BREAKDOWN OF LUMP SUM TOTAL BASE BID PRICE		
ITEM NO.	**DESCRIPTION OR SPECIFICATION DIVISION**	**ITEM TOTAL**
1.	Division 01 - General Requirements	($__________________)
2.	Division 02 - Existing Conditions	($__________________)
3.	Division 03 – Concrete	($__________________)
4.	Division 04 – Masonry	($__________________)
5.	Division 05 – Metals	($__________________)
6.	Division 06 - Wood, Plastics, and Composites	($__________________)
7.	Division 07 - Thermal and Moisture Protection	($__________________)
8.	Division 08 – Openings	($__________________)
9.	Division 09 – Finishes	($__________________)
10.	Division 10 – Specialties	($__________________)
11.	Division 11 – Equipment	($__________________)
12.	Division 13 - Special Construction	($__________________)

BREAKDOWN OF LUMP SUM TOTAL BASE BID PRICE		
ITEM NO.	DESCRIPTION OR SPECIFICATION DIVISION	ITEM TOTAL
13.	Division 21 - Fire Suppression	($__________________)
14.	Division 22 – Plumbing	($__________________)
15.	Division 23 - Heating, Ventilating, and Air Conditioning (HVAC)	($__________________)
16.	Division 26 – Electrical (except VFDs; see below)	($__________________)
17.	Division 26 – Medium-Voltage VFDs (Section 26 18 39)	($__________________)
18.	Division 26 – Low-Voltage VFDs (Section 26 29 23)	($__________________)
19.	Division 27 – Communications	($__________________)
20.	Division 31 – Earthwork (excluding micropiles)	($__________________)
21.	Division 31 – Micropiles (Section 31 63 33)	($__________________)
22.	Division 32 - Exterior Improvements	($__________________)
23.	Division 33 – Utilities	($__________________)
24.	Division 35 - Waterway and Marine Construction	($__________________)
25.	Division 40 - Process Integration	($__________________)
26.	Division 41 - Material Processing and Handling Equipment	($__________________)

BREAKDOWN OF LUMP SUM TOTAL <u>BASE</u> BID PRICE		
ITEM NO.	**DESCRIPTION OR SPECIFICATION DIVISION**	**ITEM TOTAL**
27.	Division 43 - Process Gas and Liquid Handling, Purification, and Storage Equipment (excluding Division 43 equipment listed below)	($___________________)
28.	Division 43 – Vertical Turbine Pumps (Section 43 21 17)	($___________________)
29.	Division 43 – Submersible Pumps (Section 43 21 39)	($___________________)
30.	Division 43 – Sump Pumps (Section 43 21 43)	($___________________)
31.	Division 43 – HDPE Chemical Storage Tanks (Section 43 41 43)	($___________________)
32.	Division 43 – FRP Chemical Storage Tanks (Section 43 41 45)	($___________________)
33.	Division 46 - Water and Wastewater Equipment (excluding Division 46 equipment listed below)	($___________________)
34.	Division 46 – Peristaltic Pumps (Section 46 33 44)	($___________________)
35.	Division 46 – Chemical Transfer Pumps (Section 46 33 66)	($___________________)
36.	Division 46 – Lime Feed System (Section 46 36 43)	($___________________)
37.	Division 46 – Flash Mix Equipment (Section 46 41 11)	($___________________)
38.	Division 46 – Vertical Paddle Wheel Flocculator Equipment (Section 46 41 31)	($___________________)
39.	Division 46 – Chain-and-Flight Sludge Collectors (Section 46 43 11)	($___________________)

BREAKDOWN OF LUMP SUM TOTAL BASE BID PRICE		
ITEM NO.	DESCRIPTION OR SPECIFICATION DIVISION	ITEM TOTAL
40.	Division 46 – Plate Settlers (Section 46 43 76)	($___________________)
41.	Division 46 – High-Rate Sand Filtration System (Section 46 61 26)	($___________________)

BREAKDOWN OF LUMP SUM TOTAL ALTERNATE BID PRICE		
ITEM NO.	**DESCRIPTION OR SPECIFICATION DIVISION**	**ITEM TOTAL**
1.	Division 01 - General Requirements	($__________________)
2.	Division 02 - Existing Conditions	($__________________)
3.	Division 03 – Concrete	($__________________)
4.	Division 04 – Masonry	($__________________)
5.	Division 05 – Metals	($__________________)
6.	Division 06 - Wood, Plastics, and Composites	($__________________)
7.	Division 07 - Thermal and Moisture Protection	($__________________)
8.	Division 08 – Openings	($__________________)
9.	Division 09 – Finishes	($__________________)
10.	Division 10 – Specialties	($__________________)
11.	Division 11 – Equipment	($__________________)
12.	Division 13 - Special Construction	($__________________)
13.	Division 21 - Fire Suppression	($__________________)
14.	Division 22 – Plumbing	($__________________)

BREAKDOWN OF LUMP SUM TOTAL <u>ALTERNATE</u> BID PRICE		
ITEM NO.	**DESCRIPTION OR SPECIFICATION DIVISION**	**ITEM TOTAL**
15.	Division 23 - Heating, Ventilating, and Air Conditioning (HVAC)	($__________________)
16.	Division 26 – Electrical (except VFDs; see below)	($__________________)
17.	Division 26 – Medium-Voltage VFDs (Section 26 18 39)	($__________________)
18.	Division 26 – Low-Voltage VFDs (Section 26 29 23)	($__________________)
19.	Division 27 – Communications	($__________________)
20.	Division 31 – Earthwork (excluding micropiles)	($__________________)
21.	Division 31 – Micropiles (Section 31 63 33)	($__________________)
22.	Division 32 - Exterior Improvements	($__________________)
23.	Division 33 – Utilities	($__________________)
24.	Division 35 - Waterway and Marine Construction	($__________________)
25.	Division 40 - Process Integration	($__________________)
26.	Division 41 - Material Processing and Handling Equipment	($__________________)
27.	Division 43 - Process Gas and Liquid Handling, Purification, and Storage Equipment (excluding Division 43 equipment listed below)	($__________________)
28.	Division 43 – Vertical Turbine Pumps (Section 43 21 17)	($__________________)

BREAKDOWN OF LUMP SUM TOTAL <u>ALTERNATE</u> BID PRICE		
ITEM NO.	**DESCRIPTION OR SPECIFICATION DIVISION**	**ITEM TOTAL**
29.	Division 43 – Submersible Pumps (Section 43 21 39)	($__________________)
30.	Division 43 – Sump Pumps (Section 43 21 43)	($__________________)
31.	Division 43 – HDPE Chemical Storage Tanks (Section 43 41 43)	($__________________)
32.	Division 43 – FRP Chemical Storage Tanks (Section 43 41 45)	($__________________)
33.	Division 46 - Water and Wastewater Equipment (excluding Division 46 equipment listed below)	($__________________)
34.	Division 46 – Peristaltic Pumps (Section 46 33 44)	($__________________)
35.	Division 46 – Chemical Transfer Pumps (Section 46 33 66)	($__________________)
36.	Division 46 – Lime Feed System (Section 46 36 43)	($__________________)
37.	Division 46 – Flash Mix Equipment (Section 46 41 11)	($__________________)
38.	Division 46 – Vertical Paddle Wheel Flocculator Equipment (Section 46 41 31)	($__________________)
39.	Division 46 – Chain-and-Flight Sludge Collectors (Section 46 43 11)	($__________________)
40.	Division 46 – Plate Settlers (Section 46 43 76)	($__________________)
41.	Division 46 – High-Rate Sand Filtration System (Section 46 61 26)	($__________________)

END OF SECTION

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a. Contingency Allowances:

1) Contingency Allowance for Construction Contingencies:

a) Allow stipulated sum of one million seven hundred fifty thousand dollars ($1,750,000.00).

(1) If Owner chooses alternate to build 15 mgd of new plant capacity in lieu of base bid 7.5-mgd capacity, allowance shall be increased to two million five hundred thousand dollars ($2,500,000.00).

b) Description: This item shall constitute contingency allowance for miscellaneous changes to Work as authorized by Engineer and Owner, and is for sole use of Owner to cover unanticipated costs.

2) Contingency Allowance for SCADA System & Control Room:

a) Allow a stipulated sum of sixty thousand dollars ($60,000.00).

b) Description: This contingency allowance is for SCADA monitors, other plant control area appurtenances, and control room furniture.

3) Contingency Allowance for Offices and Conference Rooms:

a) Allow a stipulated sum of seventy-five thousand dollars ($75,000.00).

b) Description: This contingency allowance shall be used for office and conference room equipment, furniture, and accessories.

4) Contingency Allowance for Owner-directed Additional Landscaping and Related Site Improvements:

a) Allow stipulated sum of two hundred thousand dollars ($200,000.00).

b) Description: This contingency allowance shall be used for additional landscaping and site improvements not shown on Contract Documents as chosen by Owner. This allowance shall not be used for any other purpose including required site rehabilitation work. Any landscaping or site improvements to be made under this sum shall not in any way relieve Contractor from his obligations under these Contract Documents to fully restore and rehabilitate any and all work sites to conditions required under these Contract Documents.

c) Choice of landscaper and materials shall be approved by Owner and Engineer prior to commencing work under this allowance.

5) Contingency Allowance for Security Equipment:

a) Allow stipulated sum of one hundred thousand dollars ($100,000.00).

b) Description: This contingency allowance shall be used for security equipment including cameras and keycard entry.

6) Contingency Allowance for Laboratory Furnishing:

a) Allow stipulated amount of seventy five thousand dollars ($75,000.00).

b) Description: This contingency allowance shall be used for furnishing laboratory's casework, resin countertops with integral sink, furniture, and accessories.

7) Contingency Allowance for Chemical Feed System Modifications:

a) Allow stipulated sum of two hundred and fifty thousand dollars ($250,000.00)

b) Contingency allowance shall be used for existing chemical feed system modifications (this allowance precludes work currently shown on Contract Documents and is only for additional work as requested by Owner or not shown on Contract Documents). All modifications for the existing sodium permanganate and potassium permanganate feed systems shall be covered under this allowance, except for new piping to new and existing feed points in Raw Water Pump Station No. 2 and providing of new feed pumps and necessary appurtenances to make those pumps operational which shall be covered by Contractor in their bid and at no additional cost to Owner.

8) Contingency Allowance for Hydropneumatic System:

a) Allow stipulated sum of forty thousand dollars ($40,000.00).

b) Contingency allowance shall be used for providing a hydropneumatic booster pump system for Raw Water Pump Station No. 2 to boost pressure inside said pump station, including all required and recommended electrical, instrumentation and control, piping, valves, and appurtenances at request of Owner.

9) Contingency Allowance for new Raw Water Pump Station No. 2 HVAC System:

a) Allow stipulated sum of one hundred thousand dollars ($100,000.00).

b) Contingency allowance shall be used for providing new heating, ventilating, and/or air conditioning systems at Raw Water Pump Station No. 2 to replace existing system(s) that fail to keep variable frequency drives in this station sufficiently cool. Work to be done at request of Owner.

10) Contingency Allowance for Asphalt Mill and Overlay:

a) Allow stipulated sum of thirty thousand dollars ($30,000.00).

b) Contingency Allowance shall be used to mill of 2.5 inches of asphalt and overlay 2.5 inches of replacement asphalt surface mix within areas not shown on Contract Drawings to receive new pavement. Extent of mill and overlay to be determined by Owner and Engineer.

11) Contingency Allowance for Modifications to Existing Warren County Water District Meter Vault:

a) Allow stipulated sum of seventy-five thousand dollars ($75,000.00).

b) Contingency Allowance shall be used for providing modifications to existing Warren County Water District meter vault and associated appurtenances located near northwest corner of existing filter building as directed by Owner and Engineer.

b. Cash Allowances:

1) Cash Allowance for Replacing Existing Valves:

a) Allow stipulated sum of fifty thousand dollars ($50,000.00).

b) Description: This cash allowance should be used for replacing existing 36-inch butterfly valve on existing plant raw water line (located in Area 3 Existing Chemical Building) and associated gear box, and related appurtenances necessary to accept new motor actuator.

2) Cash Allowance for Laboratory Equipment:

a) Allow stipulated sum of one hundred thousand dollars ($100,000.00).

b) Description: Cash allowance shall be used for Filter building laboratory equipment including lab equipment, instruments, and accessories.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 06 40 00

ARCHITECTURAL WOODWORK

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. Solid surface counter tops and vertical surfaces.

2. Miscellaneous trimwork.

B. Related Sections:

1. Section 06 10 00 – Rough Carpentry.

1.02 REFERENCES

Reference	Title
ANSI A135.4.	Basic Hardboard.
ANSI A208.1	Mat Formed Wood Particleboard.
ASTM E84	Test Method for Surface Burning Characteristics of Building Materials.
AWI	Quality Standards.
AWPA C2	American Wood Preservers Association – Lumber, Timbers, Bridge Ties and Mine Ties - Preservative Treatment by Pressure Process.
AWPA C20	American Wood Preservers Association – Structural Lumber Fire Retardant Treatment by Pressure Process.
BHMA A156.9	Cabinet Hardware.
FS MMM-A-130	Adhesive, Contact.
HPMA HP	Hardware Plywood Manufacturer's Association – American Standard for Hardwood and Decorative Plywood.
NEMA LD3	National Electric Manufacturers Association – High Pressure Decorative Laminates.
NHLA	National Hardwood Lumber Association
NWWDA I.S.4	National Wood Window and Door Association – Water Repellant Preservative Treatment for Millwork.
PS 1	Construction and Industrial Plywood.
PS 20	American Softwood Lumber Standard.
ANSI/BHMA A156.9	Cabinet Hardware.

1.03 SUBMITTALS

A. Submittals shall be in accordance with Contract Documents including Section 01 33 00.

B. At a minimum, submittals shall contain, but not be limited to, following information to establish compliance with these specifications:

1. Shop Drawings in accordance with Section 01 33 00.

a. Additional shop drawing requirements

1) Plans, elevations, and sections; details at a large scale; show location of each item, identify components used, and indicate method of attachment.

2) Show field measurements.

3) Product data, including instructions for fabrication

4) Color samples for selection

5) Maintenance data.

b. Samples:

1) Lumber – Samples of each species and cut; 1-1/2 by 8 inch pieces.

2) Veneered Products – Samples conveying range of appearance to be expected; 6 by 12 inch pieces.

3) Factory Finish Samples – 8 by 10 inch step samples, finished, for each finish and color, showing each coat required.

c. Manufactured Wood Products:

1) Product data.

2) Maintenance data.

d. Solid Phenolic:

1) Product data.

2) Maintenance data.

e. Rigid Cast Acrylic Plastic:

1) Product data, including instructions for fabrication.

2) Color samples for selection.

3) Maintenance data.

f. Fire-Retardant Treatment Materials:

1) Product data.

2) Treating plant's certification that treatment complies with specified requirements.

3) Maintenance data.

g. Fabricator Qualifications: For information only.

2. Manufacturer’s Certification in accordance with Section 01 61 00.

3. Manufacturer’s installation instructions.

4. Manufacturer’s equipment warranty in accordance with Section 01 78 36.

1.04 SOURCE QUALITY ASSURANCE

A. Quality of Materials and Workmanship: Provide woodwork that complies with requirements of “Architectural Woodwork Quality Standards", published by Architectural Woodwork Institute (AWI) (hereinafter referred to as "woodworking standard").

B. Quality of Factory Finishing: Provide factory finishes that comply with Section 01500, "Architectural Woodwork Quality Standards".

C. Fabricator Qualifications:

1. All Work of this Section shall be fabricated by a single firm.

D. Standard for Testing Fire-Retardant Materials: Where fire-retardant woodwork is indicated, provide products which, when tested in accordance with ASTM E 84, have maximum flame spread as indicated and maximum smoke developed of 450.

1. Acceptable testing agencies:

a. Underwriters Laboratories Inc. (UL).

b. Other agencies acceptable to authorities having jurisdiction.

E. Installer Qualifications: Fabricator shall install his own work.

F. Pre-installation Meeting: Before delivery of woodwork, have the woodwork installer meet with the entity responsible for operation of the HVAC system (or temporary HVAC system) to explain the necessity for maintenance of the design temperature and humidity in woodwork storage and installation areas. Before installation of woodwork, have the woodwork installer meet with installers of related and adjacent work to discuss sequence of installation, protective measures, and consequences of damage to woodwork.

1.05 DELIVERY, HANDLING AND STORAGE

A. Packing, Shipping, Handling, and Unloading:

1. Equipment shall be shipped and handled in accordance with requirements of Section 01 61 00 of these specifications.

2. Protect pre-finished aluminum surfaces with wrapping or strippable coating. Do not use adhesive papers or sprayed coatings which bond when exposed to sunlight or weather.

B. Storage and Protection:

1. Equipment shall be stored and protected in accordance with requirements of Section 01 61 00 of these specifications.

1.06 PROJECT CONDITIONS

A. Maintain final design temperature and humidity in areas where woodwork is installed.

B. Fit woodwork to actual construction. Take field measurements before fabricating woodwork.

C. Coordinate installation of woodwork with other work to avoid damage.

D. Coordination Data:

1. Furnish locations and types of all blocking and other anchors to be built into substrates to installers of such work.

2. Furnish treatment manufacturer's instructions for fabrication, handling, storage, installation, and finishing of treated wood materials to fabricators and installers.

1.07 WARRANTIES AND BONDS

A. Warranty shall be in accordance with Section 01 78 36.

B. Warranties shall be acceptable only from equipment manufacturer. Warranties from suppliers or installers shall not be acceptable. Warranties not provided by manufacturers and for terms described in these Contract Documents shall be basis to reject equipment.

PART 2 PRODUCTS

2.01 ARCHITECTURAL WOODWORK

A. Solid Surface Countertops and Sills:

1. Profile: As indicated in Construction Drawings.

2. Finish: As indicated in Construction Drawings.

3. Locations: As indicated in Construction Drawings.

B. Resilient Trim:

1. Profile: As indicated in Construction Drawings.

2. Finish: As indicated in Construction Drawings.

3. Locations: As indicated in Construction Drawings.

2.02 WOOD MATERIALS

A. Lumber: Species and grade as specified in woodworking standard, unless otherwise indicated.

1. Comply with applicable requirements of AWI Section 100.

2. Moisture content at time of fabrication: Not greater than optimum moisture content as specified in woodworking standard.

3. Provide lumber dressed on all exposed faces, unless otherwise indicated.

4. Do not use twisted, warped, bowed, or otherwise defective lumber.

5. Sizes indicated are nominal, unless otherwise indicated.

6. Do not mark or color lumber, except where such marking will be concealed in finish work.

7. Fire-retardant treated lumber: Pressure-treated using treatment materials indicated, complying with AWPA C20, kiln-dried to specified moisture content after treatment using methods which will not discolor, warp, or otherwise impair appearance.

   a. Maintain moisture content required, before and after treatment.

b. Mark materials only with testing agency's removable paper marking, unless marking will be concealed when installed.

c. Do not use treated lumber that is discolored or does not meet requirements of the woodworking standard.

B. Plywood: Types, grades, and cores as specified in the woodworking standard, except as otherwise specified in this Section.

1. Comply with applicable requirements of AWI Section 200.

2. Fire-retardant, particleboard-core plywood: Untreated veneer faces on fire-retardant treated particleboard; maximum flame spread rating of 25.

C. Particleboard: ANSI A208.1, M-2, or better; exterior glue when used in counters with sinks.

D. Medium Density Fiberboard: ANSI A208.2, Product Class MD.

2.03 MISCELLANEOUS MATERIALS

A. Solid Surface Counter Tops: Solid, homogeneous, rigid, cast sheet of plastic resin and minerals.

1. Thicknesses and configurations as indicated in Construction Drawings.

2. Exact pattern and color to be determined.

3. Acceptable product(s):

a. Wilsonart (Group 3).

b. "Avonite"; Avonite Inc.

c. "Corian"; E. I. du Pont de Nemours and Company, Inc.

d. "Fountainhead"; Nevamar Division, International Paper.

e. "Gibraltar"; Ralph Wilson Plastics Company.

f. "Surell"; Formica Corporation.

B. Wood Filler for Transparent Finish Woodwork: Match final finish color.

C. Accessories, Adhesives, Etc. for Fire-Retardant Assemblies: As required by classification or listing.

D. Fasteners: Style, size, material, and finish as required for the purpose.

2.04 FABRICATION

A. Fabricate in sizes and shapes indicated and using details indicated.

B. Complete fabrication and assembly in shop.

1. Disassemble units if too large for convenient shipping or installation.

2. For applied fixtures and fittings, cut openings in shop.

3. For field-applied hardware, drill mounting holes in shop.

4. Ease edges of solid lumber members, unless otherwise noted, using:

    a. 1/16 inch radius for members 1 inch or less nominal thickness.

    b. 1/8 inch radius for members more than 1 inch nominal thickness.

C. Fabricate rigid cast plastic sheets in accordance with manufacturer's instructions; make hairline, rigid joints.

D. Standing and Running Trim: Miter exposed ends of members to match profile.

1. Rout out backs of flat members over 2 inches wide, unless ends are exposed.

2. Kerf backs of flat members over 4 inches wide, except where ends are exposed.

PART 3 EXECUTION

3.01 PREPARATION

A. Verify that blocking and backings have been installed at appropriate locations for anchorage.

B. If shop-fabricated items are not fully fabricated, complete fabrication.

3.02 INSTALLATION – GENERAL

A. Do not begin installation of interior woodwork until potentially damaging construction operations are complete in the installation area.

B. Field Joinery: Comply with requirements of the woodworking standard for shop joinery.

C. Make joints neatly, with uniform appearance.

D. Install woodwork in correct location, plumb and level, without rack or warp.

1. Install with no variation in flushness of adjoining surfaces.

E. Conceal all shims.

F. Touch-up shop finishes at field cuts.

G. Secure woodwork to blocking or use anchors indicated.

1. Where anchorage method is not indicated, conceal all fasteners.

2. Where exposed nailing is indicated, use finishing nails, countersink, and fill.

3. All window sills shall be secured both by adhesive and concealed screw type fasteners to wood blocking below.

4. All wood base and wood chair rail shall be secured by concealed screw type fasteners to wood blocking.

H. Fire-Retardant Treated Wood: Fabricate and install as recommended by treatment manufacturer and within limitations of fire retardant listing.

I. Repair damaged and defective woodwork to eliminate visual and functional defects; where repair is not possible, replace woodwork.

J. Touch up shop-applied finishes where damaged or soiled.

K. Standing and Running Trim: Use longest pieces available and as few joints as possible.

1. Stagger joints in built-up trim members.

2. Use diagonal (scarfed) joints in lengths of trim.

3. Cope or miter at inside corners and miter at outside corners; fit tightly.

4. Allow variation in plumb and level: Not more than 1/8 inch in 8 feet.

3.03 CLEANING

A. Clean exposed and semi exposed surfaces.

3.04 PROTECTION

A. Protect architectural woodwork from damage and maintain design environmental conditions.

END OF SECTION

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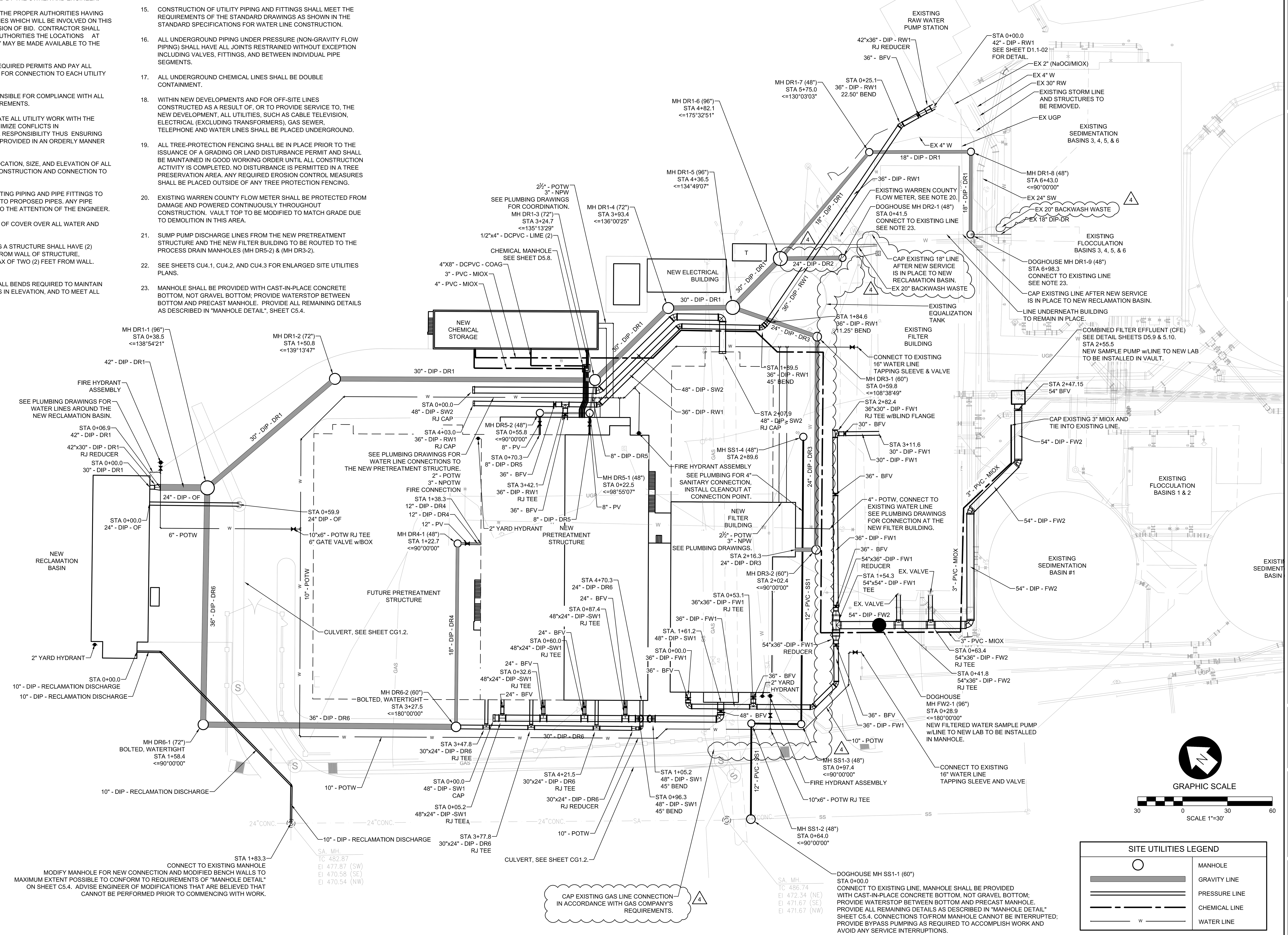
SITE UTILITIES NOTES:

1. REFER TO THE PLUMBING DRAWINGS AND SPECIFICATIONS FOR THE UTILITY PIPING REQUIREMENTS WITHIN 5 FEET OF PROPOSED STRUCTURES.
2. EXISTING UTILITIES WHICH ARE NOT SHOWN, THAT ARE DISCOVERED DURING EXCAVATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BY THE CONTRACTOR FOR PROPER COORDINATION. CONTRACTOR SHALL REMOVE, REWORK, AND/OR REROUTE THE EXISTING UTILITIES AS DIRECTED BY THE OWNER AND ENGINEER.
3. CONTRACTOR SHALL CONTACT THE PROPER AUTHORITIES HAVING JURISDICTION OVER THE UTILITIES WHICH WILL BE INVOLVED ON THIS PROJECT PRIOR TO TO SUBMISSION OF BID. CONTRACTOR SHALL ASCERTAIN FROM THE LOCAL AUTHORITIES THE LOCATIONS AT WHICH EACH SEPARATE UTILITY MAY BE MADE AVAILABLE TO THE FACILITY.
4. CONTRACTOR SHALL OBTAIN REQUIRED PERMITS AND PAY ALL PRESCRIBED FEES NECESSARY FOR CONNECTION TO EACH UTILITY INVOLVED.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH ALL STATE AND LOCAL CODE REQUIREMENTS.
6. CONTRACTOR SHALL COORDINATE ALL UTILITY WORK WITH THE VARIOUS TRADES SO AS TO MINIMIZE CONFLICTS IN JURISDICTIONS AND INDIVIDUAL RESPONSIBILITY THUS ENSURING ALL NECESSARY UTILITIES ARE PROVIDED IN AN ORDERLY MANNER TO SERVICE THIS PROJECT.
7. CONTRACTOR SHALL VERIFY LOCATION, SIZE, AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION AND CONNECTION TO ALL PROPOSED UTILITIES.
8. CONTRACTOR TO INSPECT EXISTING PIPING AND PIPE FITTINGS TO ENSURE PROPER CONNECTION TO PROPOSED PIPES. ANY PIPE DEFECTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
9. MAINTAIN A MINIMUM OF 3 FEET OF COVER OVER ALL WATER AND CHEMICAL SOLUTIONS LINES.
10. ALL PIPE ENTERING OR LEAVING A STRUCTURE SHALL HAVE (2) JOINTS WITHIN FOUR (4) FEET FROM WALL OF STRUCTURE, THE FIRST JOINT SHALL BE A MAX OF TWO (2) FEET FROM WALL.
11. CONTRACTOR SHALL PROVIDE ALL BENDS REQUIRED TO MAINTAIN SMOOTH FLOW LINES, CHANGES IN ELEVATION, AND TO MEET ALL TRANSITIONS.
12. FOR CONNECTION BETWEEN NEW AND EXISTING PIPING, CUT BACK EXISTING PIPING AND MAKE CONNECTION WITH NEW FITTING. ALL CONNECTIONS BETWEEN OLD AND NEW PIPES SHALL BE OF THE RESTRAINED JOINT TYPE.
13. CONTRACTOR SHALL PROVIDE ADAPTORS FOR TRANSITIONS BETWEEN DIFFERENT PIPE TYPES.
14. CONTRACTOR SHALL VERIFY AND COORDINATE ALL EXISTING ELEVATIONS, LOCATIONS, SIZE, AND TYPE OF MATERIAL WITH NEW PIPING PRIOR TO CONSTRUCTION.
15. CONSTRUCTION OF UTILITY PIPING AND FITTINGS SHALL MEET THE REQUIREMENTS OF THE STANDARD DRAWINGS AS SHOWN IN THE STANDARD SPECIFICATIONS FOR WATER LINE CONSTRUCTION.
16. ALL UNDERGROUND PIPING UNDER PRESSURE (NON-GRAVITY FLOW PIPING) SHALL HAVE ALL JOINTS RESTRAINED WITHOUT EXCEPTION INCLUDING VALVES, FITTINGS, AND BETWEEN INDIVIDUAL PIPE SEGMENTS.
17. ALL UNDERGROUND CHEMICAL LINES SHALL BE DOUBLE CONTAINMENT.
18. WITHIN NEW DEVELOPMENTS AND FOR OFF-SITE LINES CONSTRUCTED AS A RESULT OF, OR TO PROVIDE SERVICE TO, THE NEW DEVELOPMENT, ALL UTILITIES, SUCH AS CABLE TELEVISION, ELECTRICAL (EXCLUDING TRANSFORMERS), GAS SEWER, TELEPHONE AND WATER LINES SHALL BE PLACED UNDERGROUND.
19. ALL TREE-PROTECTION FENCING SHALL BE IN PLACE PRIOR TO THE ISSUANCE OF A GRADING OR LAND DISTURBANCE PERMIT AND SHALL BE MAINTAINED IN GOOD WORKING ORDER UNTIL ALL CONSTRUCTION ACTIVITY IS COMPLETED. NO DISTURBANCE IS PERMITTED IN A TREE PRESERVATION AREA. ANY REQUIRED EROSION CONTROL MEASURES SHALL BE PLACED OUTSIDE OF ANY TREE PROTECTION FENCING.
20. EXISTING WARREN COUNTY FLOW METER SHALL BE PROTECTED FROM DAMAGE AND POWERED CONTINUOUSLY THROUGHOUT CONSTRUCTION. VAULT TOP TO BE MODIFIED TO MATCH GRADE DUE TO DEMOLITION IN THIS AREA.
21. SUMP PUMP DISCHARGE LINES FROM THE NEW PRETREATMENT STRUCTURE AND THE NEW FILTER BUILDING TO BE ROUTED TO THE PROCESS DRAIN MANHOLES (MH DR5-2) & (MH DR3-2).
22. SEE SHEETS CU4.1, CU4.2, AND CU4.3 FOR ENLARGED SITE UTILITIES PLANS.
23. MANHOLE SHALL BE PROVIDED WITH CAST-IN-PLACE CONCRETE BOTTOM, NOT GRAVEL BOTTOM; PROVIDE WATERSTOP BETWEEN BOTTOM AND PRECAST MANHOLE. PROVIDE ALL REMAINING DETAILS AS DESCRIBED IN "MANHOLE DETAIL", SHEET C5.4.



SITE UTILITIES LEGEND	
○	MANHOLE
	GRAVITY LINE
	PRESSURE LINE
	CHEMICAL LINE
— W —	WATER LINE

SSR Smith Seckman Reid, Inc.
2995 Sidco Drive
Nashville, TN 37204
(615) 383-1113
FAX: (615) 386-8469
www.ssr-inc.com

STAMP

REVISIONS

DESCRIPTION	BY	DATE
ADDENDUM NO. 4		11/12/18
ADDENDUM NO. 3		11/05/18
BID SET		09/28/18

BGMU WATER
CONNECTING BOWLING GREEN

PROJECT TITLE

Bowling Green, Kentucky
Water Treatment Plant Expansion

DRAWN BY	TFG
DESIGNED BY	LGW
CHECKED BY	RJC

SHEET TITLE

SITE UTILITIES PLAN

PROJECT NUMBER	
16410270	
DATE	SCALE
09/28/2018	AS NOTED
SHEET NUMBER	
CU1.1	

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