ADDENDUM NO. 4

SPECIFICATIONS AND CONTRACT DOCUMENTS

BURKESVILLE WASTEWATER TREATMENT PLANT IMPROVEMENTS
CITY OF BURKESVILLE, KY

GRW PROJECT NO. 4667

July 16, 2020

GENERAL

1. APPENDIX B

A. Please note that Appendix B was added per Addendum No 2 for reference of existing door and window conditions only. Refer to the plans drawings and specification for which items that are to be replaced or that are to remain, as well as the proposed materials for the new items that are to be installed.

SPECIFICATIONS

1. SPECIFICATIONS SECTION 409413 – PROCESS CONTROL COMPUTERS AND PERIPHERALS

A. Two computer workstations are not required for this project. A single workstation meeting the hardware and software requirements in section 2.1 is required.

2. SPECIFICATIONS SECTION 462542 – HANDWHEEL OPERATED SCUM TROUGH

A. Add the attached Specification Section 462542 – HANDWHEEL OPERATED SCUM TROUGH in its entirety.

3. SPECIFICATIONS SECTION 465116 – SUBMERSIBLE ASPIRATING EQUIPMENT

A. Modify Paragraph 1.4 Manufacturer Item A. to read as follows.

A. Horizontally mixing aspirating aerators shall be manufactured Aeration Industries International (AIRE-O2), Chaska, MN, Fluence Water (Tornado), Minneapolis, MN or equal.

DRAWINGS

1. DRAWING – SHEET M-01-102

A. Add Construction Note No. 5

5. .Contractor shall replace all 1 ½" grating inside of the Pretreatment facilities. This includes both areas in front of the static screens and in the grit influent channel. Grating on the elevated grit collection and distribution box areas shall be replaced as needed to accommodate new equipment.

2. **DRAWING – SHEET E-01-103**

B. Drawing E-01-103 shall be replaced with revised addendum drawing included herein.
   - Note the areas shown clouded. Electrical devices and circuits have been added for new HVAC equipment.

3. **DRAWING – SHEET E-00-102**

C. Refer to drawing E-00-102. Drawing scale shall be changed to 1"=50'-0".

GRW ENGINEERS, INC.

Michael Jacobs, P.E.
Project Manager

ATTACHMENTS:

Specification Section 462542
Drawing E-01-103
Plan Holder's List

SECTION 462542 - HAND WHEEL OPERATED SCUM TROUGH

PART 1 - GENERAL

1.1 SCOPE OF WORK:

A. Provide all labor, materials, equipment and services required to furnish and install two (2) new hand wheel operated scum troughs as shown on the Drawings and/or specified herein.

1.2 SUBMITTALS

A. Descriptive literature, catalog cuts, and dimensional prints clearly indicating all dimensions and materials of construction, shall be submitted on all items specified herein to the Engineer for review before ordering. Comply with provisions of Section 013323.

B. At the time of submission, the Contractor shall, in writing, call Engineer's attention to any deviations that the submittals may have from the requirements of the Engineer's Contract Drawings and Specifications.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Equipment Systems specified in this Section shall be product of Viking Chains Group, Amwell, or equal.

2.2 MATERIALS:

A. Materials of pipe construction shall be 316 Stainless Steel

1. Service and Installation Conditions:

B. All components shall be designed for suitable installation in a concrete tank.

C. The slotted scum trough pipes shall be specifically designed for collection of scum and floatables with in a Municipal Wastewater Treatment Plant.

2.3 PERFORMANCE AND DESIGN REQUIREMENTS:

A. The slotted scum pipe skimmer shall be capable of spanning the width of the baffle walls within a maximum deflection limited to 1/16-inch (both empty and full) and shall allow for uniform flow of scum its entire length.

B. The slotted scum pipe shall be suitable for installation in concrete basins with dimensions and maximum water depth as shown on the drawings.

C. A 60-degree slot shall be cut symmetrically about the vertical axis of the pipe with the edges serving as a weir over which the skimmings flow into the pipe when the pipe is rotated. The edges of the slot shall be parallel to the longitudinal axis of the pipe. At regular intervals of not more than 2'-6", 2" wide bands of the full pipe periphery shall be left in the pipe to act as stiffeners.

D. The revolving pipe shall be supported at each end such that a slight vertical or horizontal misalignment shall not interfere with the operation of the pipe. The pipe shall be supported and rotate on wall mounted Cast Iron bearings. The bearing insert shall be made of an ultra-high molecular weight polyethylene (UHMW) material. Neoprene Gaskets shall be furnished with the open-end supports to provide watertight connections to the tank walls without grouting.

E. A suitable watertight seal shall be provided between the rotating pipe and the wall mounted bearing. The seal shall be constructed that it remains effective even in a slight misalignment. The seal shall not be affected by grease, mild acids, or alkalis. The seal shall be renewable.

2.4 SKIMMER DRIVE

A. The revolving scum skimming pipe shall be Hand Wheel driven by means of a vertical shaft and a vertical worm gear drive, and shall be capable of skimming in both the forward and reverse modes. The worm gear drive shall consist of a UHMW, cut tooth worm gear wheel and a Nylon cut tooth double threaded worm rigidly mounted on a structural steel support. The worm shaft shall revolve in cast iron bearings with UHMW inserts and the worm shall revolve on a corrosion resistant Nylon bushing. The revolving pipe shall be free to float inside the worm wheel so that slight misalignment of the pipe will not affect the mesh of the worm and worm wheel.

B. Recesses in the worm shall engage the worm wheel teeth that are bolted to the pipe to turn the pipe as the worm is turned. The vertical pipe stem shall be secured to the worm shaft in such a manner that a slight misalignment will not affect the mesh of the worm and worm wheel. The worm reduction shall provide an adequate mechanical advantage so that a slight pressure on the hand-wheel will turn the pipe and allow easy, accurate adjustment.

C. A pedestal mounted Hand wheel operator shall be provided to operate the worm gear drive. The pipe stem shall be fabricated to complement the physical requirements of the pedestal and hand wheel. Compatibility of the worm gear drive mechanism, pedestal mount, and hand wheel is the unit responsibility of the supplier and the overall responsibility of the Contractor.

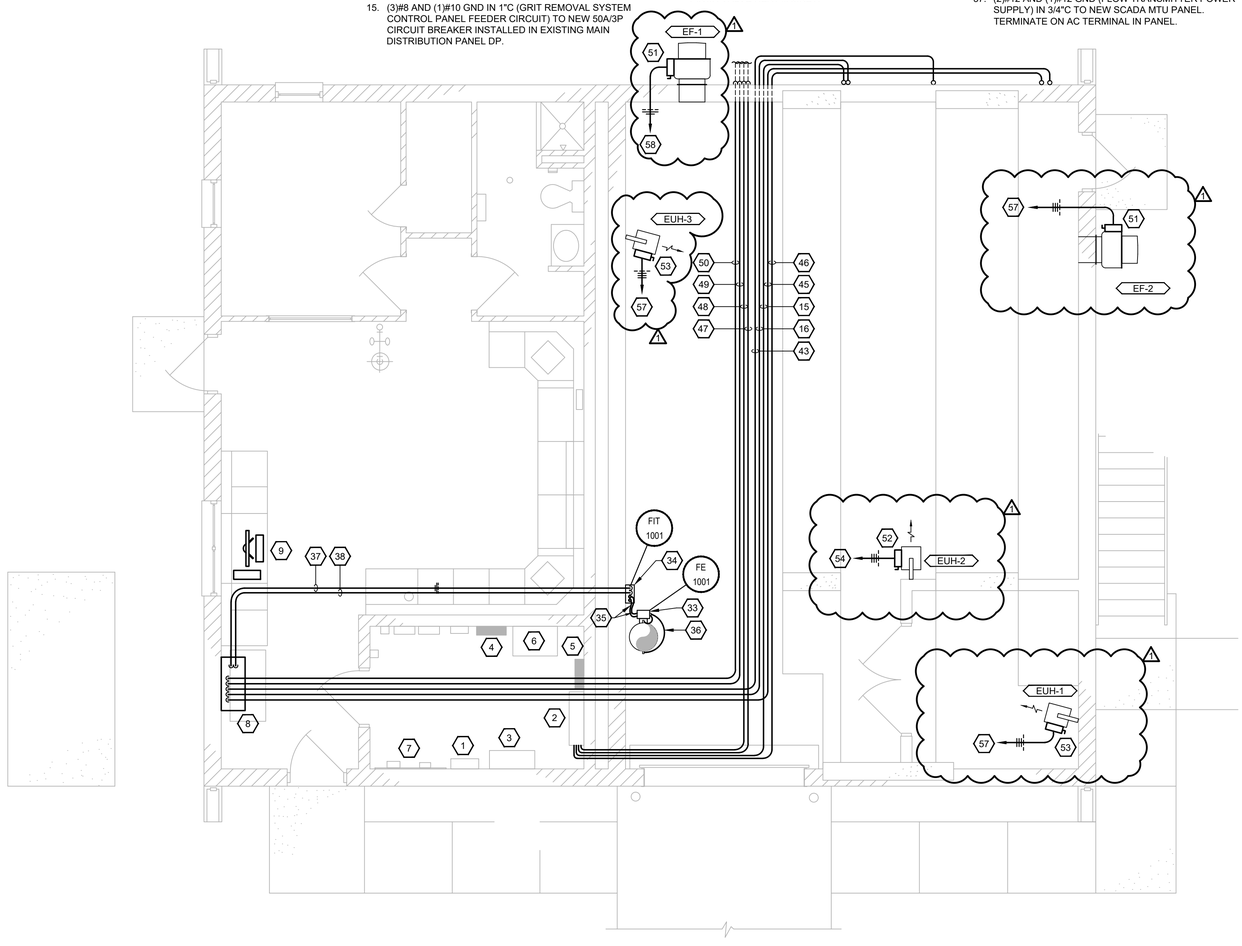
D. All parts of the mechanism shall be amply proportioned for all stress that may occur during fabrication, erections and intermittent or continuous operation. Workmanship of shall be of high grade in all respects.

GENERAL NOTES:

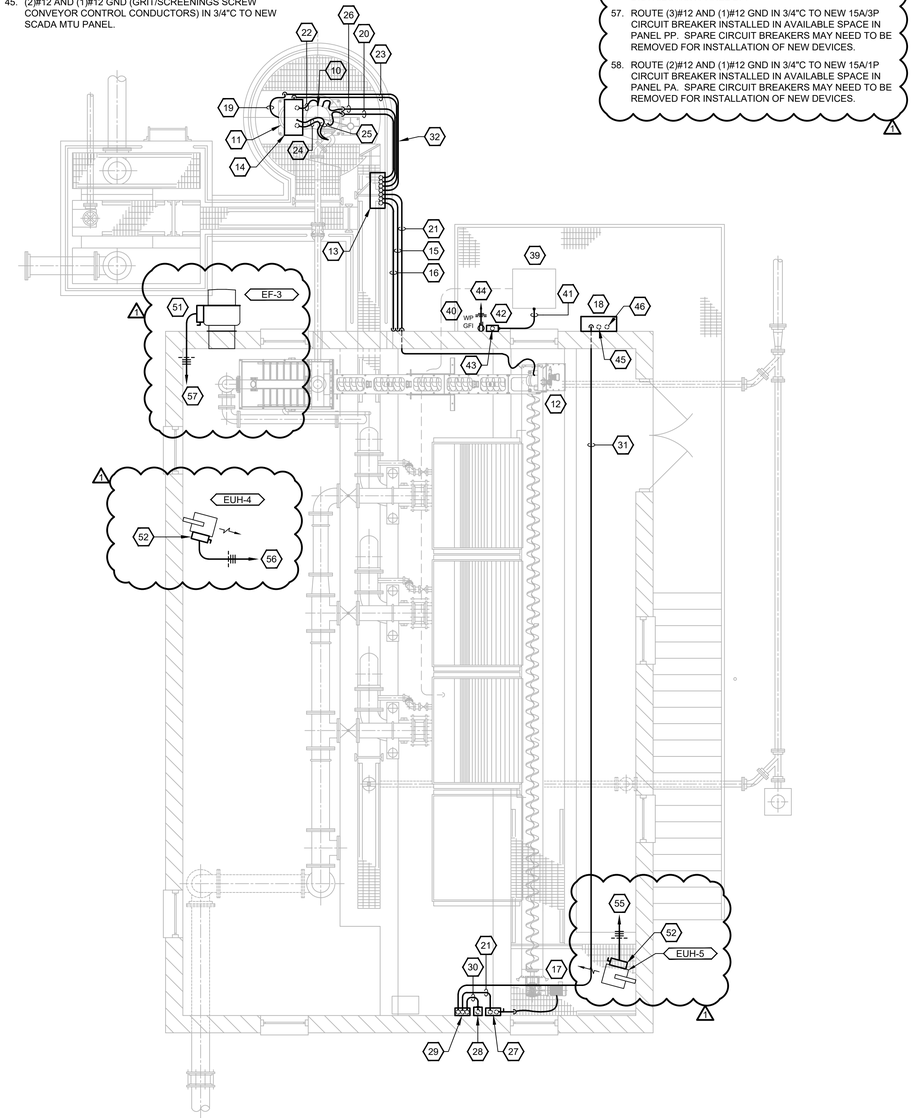
1. THE PRETREATMENT FACILITY SCREENING AREA (UPPER AND LOWER LEVEL) IS CLASSIFIED AS CLASS I, DIVISION 2, GROUP C AND D AREAS PER NFPA 820. ANY EQUIPMENT LOCATED WITHIN THE CLASSIFIED AREA SHALL BE UL LISTED FOR THAT AREA. ALL WIRING METHODS SHALL CONFORM TO THE REQUIREMENTS OF NEC ARTICLE 500 AND 501.
2. ALL CONDUITS ENTERING HAZARDOUS LOCATIONS, AS NOTED IN PRECEDING NOTE, SHALL HAVE SEAL FITTINGS BEFORE ENTRANCE INTO AREA. CONDUITS LEAVING HAZARDOUS LOCATIONS SHALL HAVE SEAL FITTINGS AFTER LEAVING THE HAZARDOUS AREA.
3. ALL EXPOSED CONDUITS SHALL BE ALUMINUM ONLY (NO EXCEPTIONS).
4. INSTALL SEAL FITTING IN CONDUITS LEAVING CONTROL PANEL TO HAZARDOUS LOCATION (DOES NOT APPLY WHERE CONDUIT PASSES THROUGH HAZARDOUS AREA WITH CONTINUOUSLY WITH NO COUPLINGS, FITTINGS, ETC).
5. INSTALL NEW EXTERIOR LED FIXTURES IN EXISTING LOCATIONS AS SHOWN. CONTRACTOR MAY REUSE THE EXISTING BACKBOX AND CONDUIT PATHWAY INTO BUILDING.

SHEET KEYNOTES:

1. EXISTING 400A/3P MAIN SERVICE CIRCUIT BREAKER.
2. EXISTING MAIN DISTRIBUTION PANELBOARD DP (800A MLO, 480/277V, 3-PHASE, 4-WIRE).
3. EXISTING AUTOMATIC TRANSFER SWITCH (400A, 480V, 3-PHASE, 3-POLE).
4. EXISTING PANELBOARD PA (200A MCB, 208/120V, 3-PHASE, 4-WIRE).
5. EXISTING PANELBOARD PP (225A MLO, 480/277V, 3-PHASE, 4-WIRE).
6. EXISTING DRY-TYPE TRANSFORMER T-2 (45KVA, 480V X 208/120V, 3-PHASE).
7. EXISTING TELEPHONE BACKBOARD AND EQUIPMENT.
8. NEW SCADA SYSTEM MAIN TERMINAL UNIT (MTU). SEE I-SERIES DRAWINGS FOR FURTHER DETAILS/REQUIREMENTS.
9. NEW DESKTOP SCADA/HMI WORKSTATION.
10. GRIT REMOVAL SYSTEM GRIT PUMP (15 HP).
11. GRIT REMOVAL SYSTEM PADDLE DRIVE (1 HP).
12. GRIT REMOVAL SYSTEM SCREW CONVEYOR (1HP).
13. GRIT REMOVAL SYSTEM MAIN CONTROL PANEL (FURNISHED UNDER DIVISION 46) - RACK/HANDRAIL MOUNTED. SEE DETAIL SHEET E-00-502 FOR MOUNTING REQUIREMENTS.
14. GRIT REMOVAL SYSTEM VACUUM PRIMING PANEL (FURNISHED UNDER DIVISION 46).
15. (3)#8 AND (1)#10 GND IN 1"C (GRIT REMOVAL SYSTEM CONTROL PANEL FEEDER CIRCUIT) TO NEW 50A/3P CIRCUIT BREAKER INSTALLED IN EXISTING MAIN DISTRIBUTION PANEL DP.
16. (16)#12 AND (1)#12 GND (GRIT REMOVAL SYSTEM CONTROL CONDUCTORS) IN 1"C TO NEW SCADA MTU PANEL.
17. GRIT/SCREENINGS SCREW CONVEYOR (460V, 3-PHASE, 1HP).
18. GRIT/SCREENINGS SCREW CONVEYOR CONTROL PANEL. REMOVAL SYSTEM MAIN CONTROL PANEL - WALL MOUNTED.
19. (3)#8, (1)#10 GND (GRIT PUMP POWER CONDUCTORS) IN 3/4"C. FINAL SECTION OF CONDUIT AT MOTOR SHALL BE LIQUIDTIGHT FLEXIBLE TYPE.
20. (3)#12, (1)#12 GND (GRIT PADDLE DRIVE POWER CONDUCTORS) IN 3/4"C. FINAL SECTION OF CONDUIT AT MOTOR SHALL BE LIQUIDTIGHT FLEXIBLE TYPE.
21. (3)#12, (1)#12 GND (SCREW CONVEYOR POWER CONDUCTORS) IN 3/4"C. FINAL SECTION OF CONDUIT AT MOTOR SHALL BE LIQUIDTIGHT FLEXIBLE TYPE.
22. (2)#12, (1)#12 GND (VACUUM PRIMING PIPING HEAT TRACE POWER CONDUCTORS) IN 3/4"C. FINAL SECTION OF CONDUIT SHALL BE LIQUIDTIGHT FLEXIBLE TYPE.
23. (2)#12, (1)#12 GND (VACUUM PRIMING PANEL POWER CONDUCTORS) IN 3/4"C. FINAL SECTION OF CONDUIT SHALL BE LIQUIDTIGHT FLEXIBLE TYPE.
24. (2)#12, (1)#12 GND (PINCH VALVE HEAT TRACE POWER CONDUCTORS) IN 3/4"C. FINAL SECTION OF CONDUIT SHALL BE LIQUIDTIGHT FLEXIBLE TYPE.
25. MANUFACTURER SUPPLIED HEAT TRACE CABLE FOR PINCH VALVE HEAT JACKET.
26. (5)#12 AND (1)#12 GND (PRIMING SENSOR AND RELAY) IN 3/4"C. FINAL SECTION OF CONDUIT SHALL BE LIQUIDTIGHT FLEXIBLE TYPE.
27. NEMA 7 ENCLOSED 30A/600V/4-WIRE NON-FUSED DISCONNECT - WALL MOUNTED.
28. NEMA 7 ENCLOSED START/STOP PUSHBUTTON STATION FOR GRIT/SCREENINGS SCREW CONVEYOR - WALL MOUNTED.
29. NEMA 7 JUNCTION BOX - WALL MOUNTED.
30. (2)#12 AND (1)#12 GND (START/STOP PUSHBUTTON) IN 3/4"C.
31. (3)#12, (1)#12 GND (SCREW CONVEYOR POWER CONDUCTORS) AND (2)#12 (START/STOP PUSHBUTTON) IN 1"C TO SCREW CONVEYOR CONTROL PANEL.
32. ROUTE CONDUITS ALONG SIDE OF WALKWAY (TYPICAL).
33. 8" ELECTROMAGNETIC FLOW METER. SEE SPECIFICATION SECTION 409134.
34. TRANSMITTER FOR ELECTROMAGNETIC FLOWMETER - WALL MOUNTED.
35. SIGNAL AND COIL CABLES (FURNISHED BY MANUFACTURER) AND #10 AWG GROUND WIRE FROM FLOW METER TO TRANSMITTER.
36. INSTALL GROUNDING DISKS (NOT SHOWN) ON FLOWMETER. PROVIDE BARE #10 AWG COPPER GROUND CONDUCTORAND CONNECT TO GROUNDING DISKS, PIPE FLANGE, AND METER TERMINAL BOX AS REQUIRED.
37. (2)#12 AND (1)#12 GND (FLOW TRANSMITTER POWER SUPPLY) IN 3/4"C TO NEW SCADA MTU PANEL. TERMINATE ON AC TERMINAL IN PANEL.
38. (1)#16 STP (4-20mAdc INFLUENT FLOW SIGNAL) IN 3/4"C TO NEW SCADA MTU PANEL.
39. REFRIGERATED EFFLUENT SAMPLER.
40. DEDICATED RECEPTACLE FOR EFFLUENT SAMPLER SAMPLER RECEPTACLE- RACK MOUNTED. SEE DETAIL SHEET E-00-502 FOR MOUNTING REQUIREMENTS.
41. 16-PIN UNTERMINATED SAMPLER CONNECT CABLE FOR CONNECTION TO EXTERNAL INSTRUMENTATION DEVICES (FURNISHED WITH SAMPLER).
42. QUICK DISCONNECT BOX FOR SPLICING SAMPLER 16-PIN CONNECT CABLE (FURNISHED WITH SAMPLER) - RACK MOUNTED. SEE DETAIL SHEET E-00-503 FOR MOUNTING REQUIREMENTS.
43. (1)#16 STP (INFLUENT FLOW SIGNAL) IN 3/4"C FROM QUICK DISCONNECT BOX TO NEW SCADA MTU PANEL.
44. (2)#12 AND (1)#12 GND IN 3/4"C FROM DEDICATED SAMPLER RECEPTACLE TO NEW 20A/1P BREAKER INSTALLED IN EXISTING PANELBOARD PA.
45. (2)#12 AND (1)#12 GND (GRIT/SCREENINGS SCREW CONVEYOR CONTROL CONDUCTORS) IN 3/4"C TO NEW SCADA MTU PANEL.
46. (3)#12 AND (1)#12 GND IN 3/4"C (GRIT/SCREENINGS SCREW CONVEYOR CONTROL PANEL FEEDER CIRCUIT) TO NEW 15A/3P CIRCUIT BREAKER INSTALLED IN EXISTING MAIN DISTRIBUTION PANEL DP.
47. (3)#10 AND (1)#10 GND (AERATOR NO. 3 CONTROL PANEL FEEDER CIRCUIT) IN 3/4"C FROM EXISTING DISTRIBUTION PANEL DP IN PRETREATMENT/ADMINISTRATION BUILDING TO AERATOR NO. 3 CONTROL PANEL. SEE SITE PLAN FOR CONTINUATION.
48. (3)#10 AND (1)#10 GND (AERATOR NO. 4 CONTROL PANEL FEEDER CIRCUIT) IN 3/4"C FROM EXISTING DISTRIBUTION PANEL DP IN PRETREATMENT/ADMINISTRATION BUILDING TO AERATOR NO. 4 CONTROL PANEL. SEE SITE PLAN FOR CONTINUATION.
49. (2)#12, (1)#12 GND (OXIDATION DITCH ROTOR NO. 1 STATUS) + (2)#12, (1)#12 GND (OXIDATION DITCH ROTOR NO. 2 STATUS) + (4)#12, (1)#12 GND (GENERATOR STATUS AND ALARM) AND IN 1"C TO FROM SCADA SYSTEM MTU PANEL TO UNDERGROUND PULL BOX. SEE SITE PLAN FOR CONTINUATION.
50. (1) 6-STRAND 62.5/125 MICRON MM FIBER OPTIC CABLE (LOOSE TUBE, OUTDOOR RATED) IN 2"C FROM SCADA SYSTEM MTU PANEL TO RAS PUMP STATION LEVEL CONTROL PANEL. SEE SITE PLAN FOR CONTINUATION.
51. NEMA 7 DISCONNECT SWITCH FURNISHED WITH EQUIPMENT AND INSTALLED BY CONTRACTOR.
52. 60A/600V/3-PHASE NON-FUSED DISCONNECT (NEMA 7 ENCLOSED).
53. 30A/600V/3-PHASE NON-FUSED DISCONNECT (NEMA 7 ENCLOSED).
54. ROUTE (3)#6 AND (1)#10 GND IN 1"C TO NEW 60A/3P CIRCUIT BREAKER INSTALLED IN AVAILABLE SPACE IN DISTRIBUTION PANEL DP.
55. ROUTE (3)#8 AND (1)#10 GND IN 3/4"C TO NEW 40A/3P CIRCUIT BREAKER INSTALLED IN AVAILABLE SPACE IN DISTRIBUTION PANEL DP.
56. ROUTE (3)#10 AND (1)#10 GND IN 3/4"C TO NEW 35A/3P CIRCUIT BREAKER INSTALLED IN AVAILABLE SPACE IN DISTRIBUTION PANEL DP.
57. ROUTE (3)#12 AND (1)#12 GND IN 3/4"C TO NEW 15A/3P CIRCUIT BREAKER INSTALLED IN AVAILABLE SPACE IN PANEL PP. SPARE CIRCUIT BREAKERS MAY NEED TO BE REMOVED FOR INSTALLATION OF NEW DEVICES.
58. ROUTE (2)#12 AND (1)#12 GND IN 3/4"C TO NEW 15A/1P CIRCUIT BREAKER INSTALLED IN AVAILABLE SPACE IN PANEL PA. SPARE CIRCUIT BREAKERS MAY NEED TO BE REMOVED FOR INSTALLATION OF NEW DEVICES.



1 EXISTING PRETREATMENT FACILITY
FIRST FLOOR PLAN - ELECTRICAL NEW WORK
SCALE: 1/4"=1'-0"



2 EXISTING PRETREATMENT FACILITY
SECOND FLOOR PLAN - ELECTRICAL NEW WORK
SCALE: 1/4"=1'-0"

PLAN NORTH

BID DOCUMENTS

GRW PROJECT NO. 4667

CLIENT PROJECT NO.

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EXISTING PRETREATMENT FACILITY -
ELECTRICAL NEW WORK PLANS

BURKESVILLE WWTP IMPROVEMENTS
CITY OF BURKESVILLE, KENTUCKY

REVISIONS			
NO.	DESCRIPTION	DATE	BY
1	ADDENDUM NO. 4	7/15/20	CTC

THIS MARK SHOULD MEASURE EXACTLY 1" WHEN PLOTTED
SCALE CHECK:

DESIGNED:	CTC
DRAWN:	CTC
REVIEWED:	CTC
APPROVED:	CTC

DATE: JUNE, 2020

SCALE: AS SHOWN

SHEET NO.

E-01-103

PLOTTED BY: TCantrell

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FILE NAME: G:\4667-BurkWWTPImp\Working Drawings\AutoCAD\4667-E-01-103.dwg

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Burkesville Wastewater Treatment Plant Improvements
City of Burkesville
GRW Project No. 4667-01
Bids July 21 , 2020 2pm Local Time
Plan Holders List

Company Name	Contact Name	Address	City	State	ZIP Code	Quantity	Phone Number	FAX	Email Address
Builder's Exchange KY	Mary Beth Hewett	2300 Meadow Dr	Louisville	KY	40218	1-d	502-459-9800	502-459-9803	mhewett@bxkentucky.com
Builder's Exchange TN	Kendra Buhlig	301 Perimeter Park Dr	Nashville	TN	37211	1-d	615-690-7200	615-690-7201	kendra@bxtn.org
Construct Connect	Jennifer Rodes	3825 Edwards Rd	Cincinnati	OH	45209	1-d	513-458-8637		content@constructconnect.com
Dodge Data	Darlene Mann	4300 beltway place	Arlington	TX	76018	1-d	405-455-1699	609-336-2767	darlene.baker-mann@construction.com
Herrick Company	Ryan Gabbard	2176 Waddy Rd	Lawrenceburg	KY	40342	1-h/d	502-839-3484	5002-839-0939	ryanhci@dcr.net
J Cumby Construction	Justin Cumby	165 W. Broad St.	Cookeville	TN	38501	1-h/d	931-526-5158	931-526-5171	justin@jcumbyconstruction.com
J.L. Davis Electrical	Jimmy Davis	po box 1028	Barbourville	KY	40906	1-d	606-546-8491	606-546-8561	jldeci@hotmail.com
Judy Construction	Owen Yocum	103 South Church St,	Cynthiana	KY	41031	1-h/d	859-234-6900	859-234-3480	owen@judyconstructionco.com
Norris Brother Excavating	Justin Jacob	22 Northside Ln	Crossville	TN	38571	1-h/d	931-277-5665	931-277-5495	norrisbrosexcavating@hotmail.com
Pace Contracting	Latavia Scott	15415 Shelbyville Rd.	Louisville	KY	40245	1-h/d	502-815-4142	502-583-6375	lscott@pacecontractingllc.com
Southern Sales Company	Tom Herndon	2937 Kraft Dr.	Nashville	KY	37204	1-d	615-254-0066	615-254-0791	duganm@wrogers.com
The Blue Book	Kathy Stein	800 E. Main St.	Jefferrson Valley	NY	10535	1-d	800-431-2584		kstein@mail.thebluebook.com
W. Rogers Company	Dugan McDermott	649 Bizzell Dr	Lexington	KY	40510	1-h/d	859-410-7221		tomh@southernsalesinc.com

6/30/2020