

ADDENDUM NO. 5

City of Chattanooga
Moccasin Bend WWTP Secondary Clarifier Upgrades
Contract No. W-14-006-201
For Bids Due: September 1, 2016, 2:00 pm (Addendum No. 3)

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ADDENDUM INSTRUCTIONS

Contractors submitting Proposals for the above-named Project shall take note of the following changes, additions, deletions, clarifications, etc. in the Contract Documents, which shall become a part of and have precedence over anything contrarily shown or described in the Contract Documents, and all such shall be taken into consideration and be included in the Contractor's Bid Proposal. Where changes, additions, deletions, clarifications, etc. are made to portions of an article, paragraph, or subparagraph, the unaltered provisions of that article, paragraph, subparagraph, or clause shall remain in effect.

RECEIPT OF THIS ADDENDUM MUST BE ACKNOWLEDGED BY ENTRY OF THE ADDENDUM NUMBER IN THE REQUISITE SPACE ON THE BID FORM. FAILURE OF A BIDDER TO ACKNOWLEDGE THIS ADDENDUM MAY CAUSE THE BID TO BE REJECTED AS INCOMPLETE.

CHANGES TO SPECIFICATIONS AND CONTRACT DOCUMENTS

1. TABLE OF CONTENTS
 - A. Add Section 002115 Iran Divestment Act Disclosure.
2. SECTION 002113 – INSTRUCTIONS TO BIDDERS
 - A. Article 15, Paragraph 15.01. Add the following paragraphs:
 - “G. Request for Bidder Information
 - H. Contractor's Identification
 - I. Iran Divestment Act Disclosure“
 - B. Article 17, Paragraph 17.03. Delete “proposal forms attached to Specifications, together with the Contract Documents” and replace with “unbound proposal forms, together with documents listed in Article 15.01 of this Section”.
3. SECTION 002115 – IRAN DIVESTMENT ACT DISCLOSURE
 - A. Add Section 002115 attached to this Addendum.
4. SECTION 004100 – BID FORM
 - A. Delete this Section in its entirety and replace with the attached Section 004100.
5. SECTION 01025 – MEASUREMENT AND PAYMENT

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- A. Paragraph 1.03.D.8. Add the following sentence to the end of paragraph: “Use of this allowance shall be at the discretion of the Owner.”
- 6. SECTION 01200 – PROJECT MEETINGS
 - A. Page 01200-2, Paragraph 1.03.B. Replace two instances of “Contractor” with “Owner’s Representative”.
- 7. SECTION 01461 – TEMPORARY BYPASS PIPING
 - A. Page 01461-3, Paragraph 2.02.D. In the third sentence, delete “Contractor purchased materials for the temporary piping system” and replace with “temporary piping, discharge structure(s), pipe supports or other appurtenances”.
- 8. SECTION 01700 – TEMPORARY BYPASS PIPING
 - A. Page 01700-3, Paragraph 1.01.D.1. Delete the paragraph in its entirety and replace with the following paragraph:

“Equipment start-up period, for the training of plant personnel, shall begin after satisfactory completion and acceptance of the field tests, but before the start of the operational test. If no operational test is specified for the equipment, the start-up period shall begin coincidentally with the certified date of substantial completion for the part of the work for which the equipment is included. If the equipment is not covered by a certificate of substantial completion for a part of the work, and an operational test is not specified for the equipment, the period shall begin upon substantial completion of the project.”
 - B. Page 01700-3, Paragraph 1.01.D.3.b. Add the following to the end of the paragraph:

“The Owner will pay for fuel, power and chemicals consumed during the successful operational test. If any part of the operational test is unsuccessful and additional testing is required, Contractor shall be responsible for paying for all fuel, power and chemicals consumed during the additional testing.”
- 9. SECTION 02200 – EARTHWORK
 - A. Paragraph 2.02.A. Add to end of paragraph: “Topsoil shall be free from rocks and aggregates 1-inch in greatest dimension or larger, roots 4-inch in greatest dimension or larger, rubbish, and other deleterious materials. Existing topsoil to be reused shall meet the specified requirements before being placed.”
- 10. SECTION 02500 – SURFACE RESTORATION
 - A. Paragraph 3.02.E. Delete paragraph and replace with the following: “All stones, roots over 4-inches, rubbish, and other deleterious materials shall be removed by a

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Harley Rake, Rock Hound, or other mechanical device and disposed of at the Contractors expense.”

11. SECTION 11130 – SUBMERSIBLE NON-CLOG PUMPS (CLARIFIER DRAIN PUMPS)
 - A. Paragraph 2.02.J. Delete the first two sentences and replace with the following: “Each pump shall be cooled by surrounding media or by an integral, self-supplying cooling system that is adequately designed to cool the motor without an external cooling source, as specified herein or as recommended by the manufacturer. If a pump with a cooling jacket is provided, the cooling jacket shall be of cast-iron construction and shall surround the stator housing.”
 - B. Paragraph 3.02.6.f. After the first sentence, add the following: “If the pump is not provided with a cooling jacket, the pump may be submerged up to the minimum submergence limit stated in the approved shop drawing..”
12. SECTION 11165 – PERISTALTIC METERING PUMPS
 - A. Paragraph 1.02.B. Change “Actual Pumping Range” to “Pump Capable Pumping Range”.
 - B. Attachment. Delete the attachment (manufacturer’s scope of supply) in its entirety and replace with the attachment attached to this Addendum.
13. SECTION 11460 – SECONDARY CLARIFIER EQUIPMENT
 - A. Paragraph 1.06.C. In the second sentence, change “rotate the two unitube solids collector headers” to “rotate the unitube solids collector header”.
 - B. Paragraph 1.06.C. In the third sentence, change “The headers” to “The header” and delete “twice”.
 - C. Paragraph 2.17.A. Delete “• One (1) complete set of shear pins” in its entirety.
14. SECTION 13207 – POLYETHYLENE STORAGE TANKS
 - A. Paragraph 1.06.A. In the last sentence, change “hypochlorite” to “bisulfite”.
15. SECTION 15390 – SCHEDULES
 - A. Page 15390-7, Electrically Operated Valve Schedule. Add the following row:

TAG NO.	VALVE TYPE	OPERATOR TYPE	SIZE (in)	FLOW	MAX DIFFERENTIAL PRESSURE (psi)	CLASS	SERVICE	LOCATION
PV-5170	PLUG	OPEN/CLOSE	4	225 GPM	25	150	WAS	RAS PUMP STATION

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- B. Page 15390-7, Electrically Operated Valve Schedule. Replace Note (1) with the following: "4-20mA POSITIONER".
 - C. Page 15390-7, Electrically Operated Valve Schedule. Delete Note (2) in its entirety.
16. SECTION 17701 – MAGNETIC FLOW METERS
- A. Attachment. Delete the attachment (manufacturer's scope of supply) in its entirety and replace with the attachment attached to this Addendum.

CHANGES TO THE CONTRACT DRAWINGS

- 1. DRAWING C01
 - A. Add "(NO WORK IN THIS AREA)" after "INTERNAL LIMITS OF DISTURBANCE" in every location.
- 2. DRAWING C10
 - A. Add "(NO WORK IN THIS AREA)" after "INTERNAL LIMITS OF DISTURBANCE" in every location.
- 3. DRAWING C11
 - A. Add "(NO WORK IN THIS AREA)" after "INTERNAL LIMITS OF DISTURBANCE" in every location.
- 4. DRAWING C12
 - A. Add "(NO WORK IN THIS AREA)" after "INTERNAL LIMITS OF DISTURBANCE" in every location.
- 5. DRAWING C20
 - A. Add "(NO WORK IN THIS AREA)" after "INTERNAL LIMITS OF DISTURBANCE" in every location.
- 6. DRAWING C21
 - A. Add "(NO WORK IN THIS AREA)" after "INTERNAL LIMITS OF DISTURBANCE" in every location.
- 7. DRAWING C22
 - A. Add "(NO WORK IN THIS AREA)" after "INTERNAL LIMITS OF DISTURBANCE" in every location.

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8. DRAWING C30
 - A. Add “(NO WORK IN THIS AREA)” after “INTERNAL LIMITS OF DISTURBANCE” in every location.
9. DRAWING C31
 - A. Add “(NO WORK IN THIS AREA)” after “INTERNAL LIMITS OF DISTURBANCE” in every location.
 - B. Note 1: Add the following to the end of the note: “TOP OF CHANNEL AND BOTTOM OF PIPE OPENING ELEVATIONS OF MIXED LIQUOR CHANNEL ARE APPROXIMATELY 660.80 AND 652.38 RESPECTIVELY. CONTRACTOR SHALL VERIFY ELEVATIONS, DIMENSIONS AND CONFIGURATION FOR NEW GATES BEFORE SHOP DRAWING SUBMISSION.”
10. DRAWING C32
 - A. Add “(NO WORK IN THIS AREA)” after “INTERNAL LIMITS OF DISTURBANCE” in every location.
11. DRAWING C33
 - A. Add “(NO WORK IN THIS AREA)” after “INTERNAL LIMITS OF DISTURBANCE” in every location.
12. DRAWING C34
 - A. Add “(NO WORK IN THIS AREA)” after “INTERNAL LIMITS OF DISTURBANCE” in every location.
13. DRAWING C35
 - A. Add “(NO WORK IN THIS AREA)” after “INTERNAL LIMITS OF DISTURBANCE” in every location.
14. DRAWING M504
 - A. Reference Section B (Grid 3,B): Change Bottom LIT Sensor EL from “629.50” to “630.50”.
15. DRAWING M505
 - A. Section C: For 36-inch ML and 42-inch ML pipes change centerline elevation from “654.50” to “654.30 +/-”.

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16. DRAWING S502
 - A. Modify Partial Top Plan to provide Effluent Box fall protection as shown in Attachment A5S502A of this Addendum.
17. DRAWING S503
 - A. Section B: For 42-inch ML pipe change centerline elevation from “654.50” to “654.30 +/-”.
18. DRAWING S505
 - A. Modify Section F to provide Effluent Box fall protection as shown in Attachment A5S505A of this Addendum.
19. DRAWING E02
 - A. Reference Grid E1: Modify as shown in Attachment A5E02A of this Addendum.
 - B. Reference Grid A4: For switchgear shown just north of Plant Water Pump Station, replace “SWITCHGEAR” with “PLANT WATER PUMP STATION SWITCHGEAR”.
 - C. Reference Grid F7: For switchgear shown just north of Secondary Clarifiers Nos. 11-14, replace “SWITCHGEAR” with “I&I SWITCHGEAR”.
 - D. Note 3: Replace “E06” with “E08”.
20. DRAWING E03
 - A. Reference Grid B3: In callout for Clarifier No. 15 Valve/Meter Box, change “E507” to “E508”.
 - B. Reference Grid C3: Delete text: “FUTURE RAS PUMP STATION”
 - C. Reference Grid D4: Under “RAS PUMP STATION” change “E501” to “E500”.
 - D. Reference Grid B4: In callout for Clarifier No. 16 Valve/Meter Box, change “E507” to “E508”.
 - E. Note 2: Replace “E06” with “E08”.
 - F. Add “(NO WORK IN THIS AREA)” after “INTERNAL LIMITS OF DISTURBANCE” in every location.
21. DRAWING E04
 - A. Note 2. Replace last sentence with the following: “POLES 13X, 13A THRU 13F, 14, AND 15 TO BE REMOVED.”

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- B. Note 11. Replace last sentence with the following: “CONTRACTOR SHALL END NEW OVERHEAD LINES A2 AND B2 AT THIS POLE.”
- C. Reference Grid F3: Change conduit designator from “23” to “31”.
- D. Reference Grid C5: In Site Detail – E04, change existing pole designator from “15G” to “13G”.
22. DRAWING E05
- A. Replace Drawing E05 with the revised drawing attached to this Addendum.
23. DRAWING E06
- A. Note 4: Add “and rerouted to new pole 15A” to end of last sentence.
- B. Reference Grid D3 (and immediate adjacent areas): Modify as shown in Attachment A5E06A of this Addendum.
- C. Reference Grid C3: Change designator from “C-1007” to “C-1008”.
- D. Reference Grid D5: Change designator from “C-1007” to “C-1008”.
- E. Reference Grid E5: Change designator from “C-1007” to “C-1008”.
- F. Reference Grid E6: Change designator from “C-1007” to “C-1008”.
- G. Reference Grid D6 (and immediate adjacent areas): Modify as shown in Attachment A5E06AA of this Addendum.
24. DRAWING E07
- A. Add Note 16: “EXISTING FIBER OPTIC CABLE ROUTED OVER ROOF OF MAINTENANCE GARAGE TO TRAINING CENTER TO REMAIN AS IS.”
- B. Reference Grid E3 (and immediate adjacent areas): Modify as shown in Attachment A5E07A of this Addendum.
- C. Reference Grid F8: Change designator from “C-0011” to “C-1011”.
25. DRAWING E08
- A. Insert the following row to be included with DB-04:
- | | | | | |
|--|--------|----|------------|----------------------------|
| | P-0043 | 1" | LP-DECHLOR | UG DIST. SWGR. (I&I BLDG.) |
|--|--------|----|------------|----------------------------|
- B. Insert the following row to be included with DB-11:
- | | | | | |
|--|--------|----|-----------------|-------------------------------|
| | P-0057 | 1" | HANDHOLE HH-P50 | CLARIFIER NO. 15 FIT-5000 DSW |
|--|--------|----|-----------------|-------------------------------|
- C. Insert the following row to be included with DB-12:

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	P-0059	1"	HANDHOLE HH-P501	CLARIFIER NO. 16 FIT-5001 DSW
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D. Insert the following rows to be included with DB-13:

	P-0005	3"	MCC-CC2 MCB	MCC-CC2
	P-0056	1"	LP-CC2	HANDHOLE HH-P501

E. Insert the following rows to be included with DB-18:

	P-0055	1"	LP-CC2	CLARIFIER DRAIN PS 120V PULLBOX
	C-0103	2"	PLC-RAS 2	RAIN PUMP STATION FIT PULLBOX

F. Insert the following row to be included with DB-23:

	P-0043	1"	LP-DECHLOR	UG DIST. SWGR. (I&I BLDG.)
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G. Add DB-31 and insert the following rows for DB-31:

DB-31	P-1014	3"	POLE 109	UG DIST. SWGR. (I&I BLDG.)
	P-1015	3"	POLE 109	UG DIST. SWGR. (I&I BLDG.)
	P-1016	3"	POLE 109	UG DIST. SWGR. (I&I BLDG.)

H. In conduit schedule, for Conduit C-1022, add "Via MH-C1001, MH-C1002" in Remarks column.

26. DRAWING E500

- A. Reference Grid E4 (and immediate adjacent areas): Modify as shown in Attachment A5E500A of this Addendum.
- B. Add Note 14: "HANG LEVEL SWITCH THROUGH GRATING TO WITHIN 6" OF FLOOR BELOW. ROUTE LEVEL SWITCH CABLE THROUGH SST CORD GROUPE TO TERMINAL BLOCKS IN SST NEMA 4X JUNCTION BOX."
- C. Reference Grid B6: Delete text and leader for "WAS PUMP NO. 3 (P-1580)".

27. DRAWING E503

- A. Reference Grid D-F, 4-5 (and immediate adjacent areas): Modify as shown in Attachment A5E503A of this Addendum.
- B. Reference Grid A-B, 4-5 (and immediate adjacent areas): Modify as shown in Attachment A5E503B of this Addendum.

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- C. Reference Grid A-B, 5-6 (and immediate adjacent areas): Modify as shown in Attachment A5E503C of this Addendum.
- 28. DRAWING E505
 - A. Note 1: Replace “MCC-CC2” with “MCC-CC”.
- 29. DRAWING E506
 - A. Note 1: Delete “WITH FRP BACKBOARD” from first sentence.
 - B. Reference Grid E5 (and immediate adjacent areas): Modify as shown in Attachment A5E506A of this Addendum.
- 30. DRAWING E507
 - A. CLASS 1, DIV.2 AREAS notes: Add third bullet: “3 FEET HORIZONTALLY, 18 INCHES HIGH AROUND OPEN HATCH”.
- 31. DRAWING E508
 - A. Reference Grid E5 (and immediate adjacent areas): Modify as shown in Attachment A5E508A of this Addendum.
 - B. Reference Grid B5 (and immediate adjacent areas): Modify as shown in Attachment A5E508B of this Addendum.
 - C. Add Note 3: “ROUTE ACUTATOR POWER AND CONTROLS CONDUIT AS RIGID CONDUIT TO EDGE OF HATCH OPENING. TRANSITION TO FLEXIBLE CONDUIT TRHOUGH CENTER OF HATCH OPENING TO ACTUATOR.”
- 32. DRAWING E509
 - A. Note 3: Replace “E508” with “E510”.
 - B. Note 4: Replace “600 KCMIL” with “(2) 350 KCMIL”.
- 33. DRAWING E510
 - A. Panel Schedule LP-CC2, Circuit 11 (WAS PUMP DISCHARGE FIT-5190): Replace “P-0066” with “P-0065”.
- 34. DRAWING E511
 - A. For Conduit P-0056, in the To column, replace “C-501” with “P-501”.
 - B. For Conduit C-0016, in the From column, replace “No.” with “No. 4”.
 - C. For Conduit C-0017, in the From column, replace “No.” with “No. 4”.

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- D. For Conduit C-0018, in the From column, replace "No." with "No. 4".
- E. For Conduit C-0019, in the To column, replace "No." with "No. 4".
- F. For Conduit C-0020, in the From column, replace "No." with "No. 4" and in the To column, replace "No." with "No. 4".
- G. For Conduit C-0023, in the To column, replace "No. 4" with "No. 5" and in the Conductors column replace "14#16" with "16#14".
- H. For Conduit C-0024, in the To column, replace "No. 4" with "No. 5".
- I. For Conduit C-0025, in the From column, replace "No." with "No. 5".
- J. For Conduit C-0026, in the From column, replace "No." with "No. 5" and in the To column, replace "No." with "No. 5".
- K. For Conduit C-0027, in the From column, replace "No." with "No. 5".
- L. For Conduit C-0028, in the From column, replace "No. 4" with "No. 5" and in the To column, replace "No." with "No. 5".
- M. For Conduit C-0029, in the From column, replace "No." with "No. 5" and in the To column, replace "No." with "No. 5".
- N. For Conduit C-0030, delete row and replace with the following row:

C-0030	3/4"	PLC-RAS 2	CP-CDPS	4#14, #14 GND
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- O. For Conduit C-0031, delete row and replace with the following row:

C-0031	3/4"	PLC-RAS 2	CP-CDPS	2(2/C #16 TSH), #14 GND
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- P. For Conduit C-0032, in the To column, replace "No. 4" with "No. 6".
- Q. For Conduit C-0033, in the To column, replace "No. 4" with "No. 6".
- R. For Conduit C-0034, in the From column, replace "No." with "No. 6".
- S. For Conduit C-0035, in the From column, replace "No." with "No. 6" and in the To column, replace "No." with "No. 6".
- T. For Conduit C-0036, in the From column, replace "No." with "No. 6".
- U. For Conduit C-0037, in the From column, replace "No. 4" with "No. 6" and in the To column, replace "No." with "No. 6".
- V. For Conduit C-0038, in the From column, replace "No." with "No. 6" and in the To column, replace "No." with "No. 6".
- W. For Conduit C-0070, delete row and replace with the following row:

C-0070	3/4"	PLC-RAS 2	LSH-5240 JBOX	4#14, #14 GND
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- A. For Conduit C-0091, in the Conductors column, delete “16#14” and replace with “18#14”.
- B. For Conduit C-0102, delete row and replace with the following row:

C-0102	-	LSH-5240 JBOX	LSH-5240	MFGR CABLE
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36. DRAWING 517

- A. Reference Grid F8 (and immediate adjacent areas): Modify as shown in Attachment A5E517A of this Addendum.

37. DRAWING E518

- A. Reference Grid E2: (and immediate adjacent areas): Modify as shown in Attachment A5E518A of this Addendum.
- B. Reference Grid E5: (and immediate adjacent areas): Modify as shown in Attachment A5E518B of this Addendum.

38. DRAWING E770

- A. Reference Grid B4: Delete the redundant call out for “FIT-7750” below “SEE NOTE 5”.
- B. Reference Grid B6 (and immediate adjacent areas): Change “VFD” to “LCP” for VFD-7741, VFD-7742, and VFD-7743.

39. DRAWING E771

- A. Reference Grid B-C, 5-6 (and immediate adjacent areas): Modify as shown in Attachment A5E771A of this Addendum.
- B. Note 1: Replace text of Note 1 with “NOT USED”.
- C. Note 2: Replace text of Note 2 with “NOT USED”.

40. DRAWING E774

- A. For Conduit P-0037, delete text in Size, From, To, and Conductors columns and add “NOT USED” in Conductors column.
- B. For Conduit P-0038, delete text in Size, From, To, and Conductors columns and add “NOT USED” in Conductors column.
- C. For Conduit P-0045, in Conductors column, replace “4#12” with “2#12”.
- D. For Conduit C-0048, in From column, delete “PLC-DECHLOR” and replace with “CONTACT TANK CCT-7 PULLBOX”.

41. DRAWING E775

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- A. Reference Grid C4 (and immediate adjacent areas): Modify as shown in Attachment A5E775A of this Addendum.
 - B. Reference Grid E7 (and immediate adjacent areas): Modify as shown in Attachment A5E775B of this Addendum.
42. DRAWING I502
- A. Reference Grid C2 (and immediate adjacent areas): Modify as shown in Attachment A5I502A of this Addendum.

QUESTIONS BY CONTRACTORS

The following questions have been posed by potential bidders for this project. The clarifications are provided for information only and are not made part of the Contract Documents. Where necessary, modifications to the Contract Documents have been made by addenda.

1. *QUESTION:* Reference spec Section 00 21 13-17.03.A regarding submission of the proposal forms “attached to Specifications, together with the Contract Documents”: Please clarify the proposal forms’ submission requirements.

CLARIFICATION: Hardcopies for proposal submission are to be generated by the bidder from the electronic documents provided. The items to be submitted with the Bid are listed in Section 00 21 13, Article 15. Additional clarifications are included in this Addendum.

2. *QUESTION:* Reference Sections 00 72 00-6.22, 00 73 00-9.03.B.2, and 01200-1.03.B regarding who is responsible for presiding at meetings and recording/distributing meeting minutes: Section 01200 assigns responsibility to the Contractor but Sections 00 72 00 and 00 73 00 assign responsibility to the Owner, Engineer, and/or RPR. Please clarify who is responsible for these tasks.

CLARIFICATION: Section 01200 has been updated in this Addendum to clarify.

3. *QUESTION:* Reference Section 01460-2.01.C.8, 2.01.H.1, and 3.02.C regarding fuel usage for the temporary bypass pumping system. Is it the intent that the Owner pay for fuel up to the “maximum” rates and that the “bypass pumping supplier” (the GC) pay for usage above these rates?

CLARIFICATION: Clarification regarding payment for Temporary Bypass Pumping is found in Section 01025.1.09.B.

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4. *QUESTION:* Reference Section 01460-3.02.D regarding “not impeding traffic” or “not impeding the Owner’s ability to conduct operations” with regard to the area of the Equalization Basin PS, 84” piping, and bypass suction/discharge pipelines: What portions of the WWTP roads must be left open at all times in the vicinity of the Equalization Basin PS, 84” piping, and bypass pumping system?

CLARIFICATION: The intent of these requirements is to ensure that operations are not affected by construction and traffic is not affected in a way that impedes the Owner’s ability to conduct operations. It is understood that part of the road between the Equalization Basins and the Oxygenation Tanks will be blocked for a short period of time while the temporary bypass pumping system is operating. See Section 01520 and the Civil Drawings for additional detail.

5. *QUESTION:* Reference Section 01461 with regard to the bypass “piping” system: What portions of the WWTP roads must remain open at all times?

CLARIFICATION: The intent of these requirements is to ensure that operations are not affected by construction and traffic is not affected in a way that impedes the Owner’s ability to conduct operations. It is understood that part of the road between the Equalization Basins and the Oxygenation Tanks will be blocked for a short period of time while the temporary bypass piping system is operating. See Section 01520 and the Civil Drawings for additional detail.

6. *QUESTION:* Reference Section 01461-2.02.D regarding Owner’s retainage of Contractors “purchased” materials for the temporary piping system: Please clarify.

CLARIFICATION: Owner retaining of temporary bypass piping materials has been clarified in this Addendum.

7. *QUESTION:* Reference Section 01700-1.01.D.3.b and 1.01.5 regarding the 30-day period of “consecutive and continuous days of satisfactory operation” required to attain “substantial completion”, please confirm that a 30-day period of “satisfactory operation” is required to attain “substantial completion”.

CLARIFICATION: Confirmed – this is also clarified in this Addendum.

8. *QUESTION:* Confirm that the Contractor will be responsible for the consumption of fuel, power, and chemicals during the “completion of a minimum of thirty (30) consecutive and continuous days of satisfactory operation” period.

CLARIFICATION: Payment for fuel, power and chemicals consumed during operational test has been clarified in this Addendum.

ADDENDUM NO. 5

City of Chattanooga
Moccasin Bend WWTP Secondary Clarifier Upgrades
Contract No. W-14-006-201
For Bids Due: September 1, 2016, 2:00 pm (Addendum No. 3)

9. *QUESTION:* What overtime RPR costs, if any, will be waived by the Owner to accommodate accelerated construction methods/schedules in order to meet mandated construction timelines – in particular, for meeting “substantial completion”

CLARIFICATION: Refer to the General Conditions and Supplementary Conditions for requirements regarding RPR overtime and other Owner costs due to extended work hours.

10. *QUESTION:* Who dictates and/or is allowed to utilize the “Engineer Overtime Inspection” allowance for this project?

CLARIFICATION: Use of this allowance shall be at the discretion of the Owner. A clarification has been added to the relevant specifications in this Addendum.

11. *QUESTION:* Reference Section 11165-1.02.B regarding “Maximum Capacity” (300 gph) and “Actual Pumping Range” (15-588 gph) for this pump. Something is amiss – please clarify.

CLARIFICATION: Pump capacity is clarified in this Addendum.

12. *QUESTION:* Reference the Scope of Supply and quote from Watson Marlow for the Sodium Hypochlorite feed pump: The scope/quote states that the pump is utilized for metering Sodium Bisulfite, not Sodium Hypochlorite. Please Clarify.

CLARIFICATION: The manufacturer scope of supply attached to Section 11165 is being replaced as part of this Addendum.

13. *QUESTION:* Reference the Scope of Supply and quote from Watson Marlow for the Sodium Hypochlorite feed pump: The scope/quote references Spec Section 463300 – Liquid Chemical Feed Systems, not Section 11165 – Peristaltic Metering Pumps.

CLARIFICATION: The manufacturer scope of supply attached to Section 11165 is being replaced as part of this Addendum.

14. *QUESTION:* Reference the Scope of Supply and quote from Watson Marlow for the Sodium Hypochlorite feed pump: The scope/quote states that the Maximum Discharge Pressure is 50 PSI, not 60 psig.

CLARIFICATION: The manufacturer scope of supply attached to Section 11165 is being replaced as part of this Addendum.

ADDENDUM NO. 5

City of Chattanooga
Moccasin Bend WWTP Secondary Clarifier Upgrades
Contract No. W-14-006-201
For Bids Due: September 1, 2016, 2:00 pm (Addendum No. 3)

15. *QUESTION:* Reference the Scope of Supply and quote from Watson Marlow for the Sodium Hypochlorite feed pump: The scope/quote states the incorrect flow rate.

CLARIFICATION: The manufacturer scope of supply attached to Section 11165 is being replaced as part of this Addendum.

16. *QUESTION:* Reference the Scope of Supply and quote from Watson Marlow for the Sodium Hypochlorite feed pump: The scope/quote for the spare parts does not appear to match the specs.

CLARIFICATION: The manufacturer scope of supply attached to Section 11165 is being replaced as part of this Addendum.

17. *QUESTION:* Reference the Scope of Supply and quote from Watson Marlow for the Sodium Hypochlorite feed pump: The scope/quote appears to not include freight costs to the jobsite.

CLARIFICATION: Terms and conditions in the Scope of Supply (Item 8. Delivery) attached to Section 11165 indicate that delivery is F.O.B.

18. *QUESTION:* Reference Section 13207-1.06. This spec section implies that the tank is to be suitable/warranted for use with sodium hypochlorite but is actually being used for sodium bisulfite. Please confirm.

CLARIFICATION: Tank contents have been updated in this Addendum.

19. *QUESTION:* Can a 60 day administrative period be added to the contract before NTP?

CLARIFICATION: A 60 day administrative period cannot be added before Notice to Proceed without compressing the contract durations.

20. *QUESTION:* What is meant by this cross-hatching and notation "Internal Limits of Disturbance"?

CLARIFICATION: The hatched area is considered outside of the limits of disturbance for this project since no work is required in this area. This has been clarified in this Addendum.

21. *QUESTION:* What is the top and bottom of channel elevations at SG-5005 and SG-5006?

CLARIFICATION: Elevations of the mixed liquor channel are noted in changes to the Drawings included in this addendum. Additional information is available in Contract 28G record drawings provided as reference with the Bid Documents.

ADDENDUM NO. 5

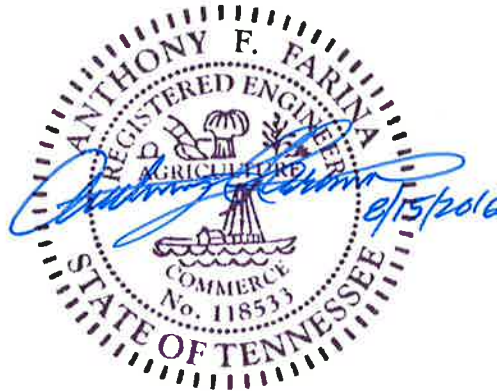
City of Chattanooga
Moccasin Bend WWTP Secondary Clarifier Upgrades
Contract No. W-14-006-201
For Bids Due: September 1, 2016, 2:00 pm (Addendum No. 3)

22. *QUESTION*: Until what date will questions during bidding be accepted?

CLARIFICATION: Questions will be accepted until August 25, 2016. An addendum with responses and applicable changes will be issued on August 29, 2016. Refer to Instructions to Bidders for more information regarding submission of questions.

++ END OF ADDENDUM ++

ISSUED: August 15, 2016



ADDENDUM NO. 5

City of Chattanooga
Moccasin Bend WWTP Secondary Clarifier Upgrades
Contract No. W-14-006-201
For Bids Due: September 1, 2016, 2:00 pm (Addendum No. 3)

ADDENDUM ATTACHMENTS

Chapter No. 817 (HB0261/SB0377). “Iran Divestment Act” enacted.

Vendor Disclosure and Acknowledgement

By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief that each bidder is not on the list created pursuant to § 12-12-106.

(SIGNED) _____

(PRINTED NAME) _____

(BUSINESS NAME) _____

(DATE) _____

**MOCCASIN BEND WWTP SECONDARY CLARIFIER UPGRADES
CONTRACT NUMBER W-14-006-201**

ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:

City of Chattanooga, Tennessee
Purchasing Department
101 E. 11th Street, Suite G13
Chattanooga, Tennessee 37402

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

ARTICLE 2 – BIDDER’S ACKNOWLEDGEMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for period of time after the Bid opening as stated in the Advertisement for Bids, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER’S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents 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 which is hereby acknowledged.

<u>Addendum No.</u>	<u>Addendum Date</u>
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

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

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

- D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) that have been identified in SC-4.02 as containing reliable "technical data," and (2) reports and drawings of Hazardous Environmental Conditions, if any, at the Site that have been identified in SC-4.06 as containing reliable "technical data."
- E. Bidder has considered the information known to Bidder; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents; and (3) Bidder's safety precautions and programs.
- F. Based on the information and observations referred to in Paragraph 3.01.E above, Bidder does not consider that 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 required, and in accordance with the other terms and conditions of the Bidding Documents.
- G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
- H. Bidder has 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.
- I. 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.
- J. Where this Bid Form contains the provision for a bid based on a lump sum price, the Bidder shall be responsible for having prepared its own estimate of the quantities necessary for the satisfactory completion of the Work specified in these Contract Documents and for having based the lump sum price bid on its estimate of quantities.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

- A. 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 collusive 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 engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process;
 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
 3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
 4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 5 – BASIS OF BID

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

Item No.	Description	Estimated Qty.	Unit	Unit Price	Total Price
1.	Furnishing all products, materials and equipment and performing all labor necessary to complete and put into operation the Moccasin Bend WWTP Secondary Clarifier Upgrades, including all work shown on the Drawings and/or specified and not included in Items 2 through 4 below, the total amount of:	Lump Sum			\$
2.	Temporary Bypass Pumping or Piping				
	<i>Temporary Bypass Pumping</i>				
a.	Rental / Operation	1	LS	\$	\$
b.	Pump System Installation	1	LS	\$	\$
c.	Pump System Installation Mobilization	1	LS	\$	\$
d.	Pump System Tear Down	1	LS	\$	\$
e.	Pump System Tear Down Mobilization	1	LS	\$	\$
f.	Additional Monthly Rate	1	MO	\$	
g.	Additional Weekly Rate	1	WK	\$	
h.	Additional Daily Rate	1	DAY	\$	
	<i>Temporary Bypass Piping</i>				
a.	Temporary Piping Purchase / Rental	1	LS	\$	\$
b.	New Piping	1	LS	\$	\$
c.	Temporary Structure(s)	1	LS	\$	\$
d.	Additional Monthly Rate	1	MO	\$	
e.	Additional Weekly Rate	1	WK	\$	
f.	Additional Daily Rate	1	DAY	\$	
3.	Allowances				
a.	Construction Materials Testing	ALLOWANCE			\$ 30,000.00
b.	Utility Conflict Resolution	ALLOWANCE			\$ 5,000.00
c.	Construction Verification Surveying	ALLOWANCE			\$ 5,000.00
d.	Peristaltic Pump Equipment	ALLOWANCE			\$ 48,268.00
e.	Magnetic Flow Meter Equipment	ALLOWANCE			\$ 103,067.42
f.	Outdoor Switchgear Equipment	ALLOWANCE			\$ 276,282.00

g.	SCADA Integration	ALLOWANCE				\$	95,000
h.	Engineer Overtime Inspection	ALLOWANCE				\$	50,000.00
i.	Owner's Use	ALLOWANCE				\$	50,000.00
*** Additional Work If Ordered By The Engineer ***							
4.	Contingency Items						
a.	Undercutting and Aggregate Backfill	10	CY	\$			
b.	Concrete	10	CY	\$			
c.	Concrete Reinforcing Steel	100	LB	\$			
d.	Reinforcing Steel Anti-Corrosion Coating	500	LF	\$			
e.	Concrete Waterproof Crack Repair	100	LF	\$			
f.	Concrete Structural Crack Repair	100	LF	\$			

BID TOTAL, ITEMS 1 THROUGH 4, INCLUSIVE, THE AMOUNT OF _____

_____ DOLLARS (\$_____).

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

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

ARTICLE 6 – TIME OF COMPLETION

- 6.01 Bidder agrees that the Work will be substantially complete and will be 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.
- 6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 – ATTACHMENTS TO THIS BID

- 7.01 The following documents are submitted with and made a condition of this Bid:
- A. Statement of Bidders Qualifications
 - B. Affidavit of No Collusion by Prime Bidder
 - C. Drug-Free Workplace Affidavit
 - D. Attestation Regarding Personnel Used in Contract Performance
 - E. Certification By Proposed Prime or Subcontractor Regarding Equal Employment Opportunity
 - F. Certification Regarding Debarment, Suspension and Other Responsibility Matters

ARTICLE 8 – DEFINED TERMS

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

ARTICLE 9 – BID SUBMITTAL

9.01 This Bid submitted by:

An Individual

Name (typed or printed): _____

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

Doing business as: _____

Attest: _____
(Notary)

Name (typed or printed): _____

A Partnership

Partnership Name: _____ (SEAL)

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

Name (typed or printed): _____

Attest: _____
(Signature of another Partner)

Name (typed or printed): _____

A Corporation

Corporation Name: _____ (SEAL)

State of Incorporation: _____

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

By: _____
(Signature)

Name (typed or printed): _____

Title: _____
(CORPORATE SEAL)

Attest: _____
(Signature of Corporate Secretary)

Name (typed or printed): _____

Date of Qualification to do business in Tennessee is _____

A Joint Venture

Name of Joint Venturer: _____

First Joint Venturer Name: _____ (SEAL)

By: _____
(Signature of first joint venture partner)

Name (typed or printed): _____

Title: _____

Second Joint Venturer Name: _____ (SEAL)

By: _____
(Signature of second joint venture partner)

Name (typed or printed): _____

Title: _____

(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.)

All Bidders shall complete the following:

Bidder's Business address: _____

Phone: _____ Facsimile: _____

Primary Contact: _____

E-mail: _____

Submitted on _____, 201__.

State Contractor License No. _____.

This document was prepared in part from material (EJCDC C-410 Suggested Bid Form for Construction Contracts) which is copyrighted as indicated below:

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(202) 347-7474
www.acec.org

American Society of Civil Engineers
1801 Alexander Bell Drive, Reston, VA 20191-4400
(800) 548-2723
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(703) 548-3118
www.agc.org

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Watson-Marlow Pumps Group

SCOPE OF SUPPLY

ENVIRONMENTAL DIVISION

Watson-Marlow, Inc.

37 Upton Technology Park

Wilmington, MA 01887

Phone: (978) 658-6168

Fax: (978) 658-0041

<http://www.watson-marlow.com>

August 9, 2016

TO: All Bidders
SUBJECT: Watson Marlow Inc.—Scope of Supply
QUOTE #: WMB 13458 Rev 2
PROJECT: Chattanooga WWTP
LOCATION: Chattanooga, TN
ENGINEER: Hazen & Sawyer
BID DUE: September 1, 2016

Specification Sections Included: 11165 – Peristaltic Metering Pumps

Equipment Included:

Quantity One (1) Watson-Marlow/Bredel Model Bredel 32 Peristaltic Hose Pumps for metering Sodium Hypochlorite into a system with Maximum Discharge Pressure 60 PSI

- Required Flow Rate : 3-300 GPH (0.05-5 GPM)
- Flow/Revolution: 0.165 Gallon
- Fully Supported Cast Iron Rotor Assembly with Adjustable Aluminum Pressing Shoes
- High Strength Twin Bearing Hub
- Carbon Steel Bolted Cover with Sight Window
- Pump Supports: Galvanized Steel
- Pump Hardware, Hose Clamps: 316SS
- 32mm EPDM Hose with 1.5" 316SS 150# ANSI Flanges and PVC Inserts
- NSF Listed Glycerin/Glycol Lubricant
- High Lubricant Level Sensor
- Buffer Zone Seals Lubricant Inside Pumphead to Protect Gearing
- Direct Coupled In-Line Gearing, 2-Stage Gearing, 49 RPM Output Speed @ 1750rpm input
- Baldor 3 HP Inverter Duty, AC Motor, 1750 RPM, 145TC, TENV, 230/460VAC-3 Phase, 60 Hz., 1,000:1 CT Speed Range, with 5-26VDC Encoder
- Factory Standard Paint, Color: Bredel Red
- Pumps in Position 2 (Ports Facing Right)
- Each Pump to include Custom Nameplate B/W Phenolic.

Ancillary Equipment for Bredel 32:

- Quantity One (1) VALCOM Make 85200 Series Clear Acrylic Calibration Column, 7.834 Gallon Capacity, 8" Dia. X 36" Length, Top and Bottom CPVC with 1" FNPT Process Connections.
- Quantity Two (1) Discharge Side Pressure Relief Valves, GRIFFCO Make, 1-1/2" FNPT, CPVC, PTFE/Viton, Two per Pump

- Quantity One (1) Discharge Side Pressure Gauge (4.5" Dial) + 1 SPDT Pressure Switch installed on a common Diaphragm Seal, One Per Pump.
- Quantity One (1) Blacoh Suction Side Pulse Stabilizer, 175 Cu. Inch, Flat Top, PVC Housing, Hypalon Bladder, 2" FNPT Process Connections, One Per Pump.
- Quantity One (1) Blacoh Discharge Side Pulsation Dampener, 175 Cu. Inch, Flat Top, PVC Housing, Hypalon Bladder, 2" FNPT Process Connections, One Per Pump.
- Quantity One (1) Hipco Y Strainer, 1-1/2" PVC, FKM Seals, with 1/32" Perforated Plastic Screen, One Per Pump
- Quantity One (1) Custom Control panel with 3 HP VFD, One Per Pump
- Quantity Four (4) SPARE 32mm EPDM Hoses.
- Quantity Four (4) SPARE 1 Gallon Cans of Hose Lubricant. 0.92 Gallon required per hose change per Pump.

Total Start-Up Service days by WMPG: Trip (2 Travel Days), 2 Onsite Days

Total Price: **\$ 48,268.00**

Watson-Marlow is the Engineer's approved manufacturer of this pumping equipment. All above equipment is in accordance with the specification referenced with the following notes considered:

General: Watson-Marlow is an equipment supplier, not a contractor or system integrator and assumes no roles of the contractor or system integrator. Watson-Marlow will only assume system responsibility for the items we supply. Entire system responsibility will be the responsibility of the others.

General: Watson-Marlow only offers the equipment listed above in this Scope Letter. All other equipment, including but not limited to Chemical Feed Power Panels / or Any other Panels, Pre-piped SKIDs, Piping, Tanks, Calibration Columns, Pressure Relief Valves, Pulsation Dampeners, Solenoid Valves, Isolation Valves, Check Valves, Back Pressure Valves, Shut-Off Valves, Tank Outlet Flexible Connections, Delivery Connections Couplings, Piping and Fittings, Expansion Joints, Vent Piping, Vent Screen and Protective Equipment other than in this scope, are the responsibility of others.

General: Watson-Marlow will not be providing Anchor Bolts, Installation Hardware, Calculations, Sizing and/or load calculations. All Anchoring items, Hardware required for Installations and services and/ or load calculations are the responsibility of the contractor.

11165 - Section 1.02.B.: Two different pump flow ranges are listed: 3-300 GPH, and 15-588 GPH. This pump has been sized for the former range.

This proposal includes only equipment mentioned herein and does not include, nor infers inclusion of, any additional equipment, piping, valves, anchor bolts, anchoring calculations, seismic calculations, pump stands/shelves/supports, control panels, wiring and wiring diagrams, services, etc. regardless of its relation to the quoted equipment. The specifications listed above

are the only specifications which shall apply to this proposal either directly or by reference. Any additional specifications, with equipment or requirements specified therein, that are not specifically included as part of this proposal are excluded from this offering. Watson-Marlow 520 and 620 series cased drive pumps are manufactured with compliance to American ETL Standards (UL610101A-1), and are compliant with the applicable CE directives and carry the CE mark. All other Watson-Marlow cased drives pumps are manufactured with compliance to CE directives and carry the CE mark. No other testing or manufacturing standards are marked on the equipment. Watson-Marlow offers this proposal as an Equipment Supplier exclusively, not as a Contractor or Sub-Contractor.

Pricing does not include any applicable taxes.

Watson-Marlow will prepare the required submittals for equipment specifically listed under this scope letter. Typical shop drawings will be available for shipment 4 weeks after receipt of written Purchase Order. Watson-Marlow will not finalize procurement or shipment of equipment until full written approval of the shop drawings/submittals has been received.

Watson-Marlow offers field service strictly in accordance with the number of trips and onsite 8-hour man-days offered in this proposal. Watson-Marlow cannot commit to availability of a service technician without two (2) weeks advanced notice in writing of required on site dates.

Above equipment is offered within the terms and conditions set forth by Watson-Marlow. Enclosed terms and conditions will apply to any purchase order resulting from this proposal unless alternate terms and conditions are specifically negotiated in writing and are signed/accepted by Watson-Marlow at the time of purchase. In no event will consequential and/or liquidated damages be accepted by Watson-Marlow.

To facilitate speedy order processing, please list purchaser contact, telephone, and fax number and reference this quotation number. If you are a first time customer of Watson-Marlow, Inc. please provide with your order a copy of your trade references and, if tax exempt, please provide a resale or tax exemption certificate. Purchase order should be sent to the attention of the Contract Administrator, and payment remitted to:

***Watson Marlow Inc.
PO Box 536285
Pittsburgh, PA 15253-5904***

Quote Validity: 180 Days from date of issue

Shipment after receipt of written approval of submittals and release for shipment: 8-10 Weeks

Sincerely,

Chris Miller

Chris Miller, Central District Sales Manager

Prepared by: Max Symmes - Project Engineer



Terms and Conditions

Industrial, Sanitary, and Environmental Engineered Projects

Ordering and Payment:

Please make out purchase orders to:
Watson-Marlow, Inc.
37 Upton Drive
Wilmington, MA 01887

Please send remit payment to:
Watson-Marlow, Inc.
P.O. Box 536285
Pittsburgh PA 15253-5904

If you are a first time customer of Watson-Marlow, Inc. please provide with your order a copy of your trade references and, if tax exempt, please also provide a resale or tax exemption certificate and, if applicable, provide a copy of the Payment Bond.

1. **LEGAL EFFECT:** The following terms and conditions are a part of this Quotation, and will be a part of any order ("Order") resulting from this Quotation. Additional or different terms of Buyer's purchase order or other form of acceptance or any other form of Buyer are rejected in advance and shall not become a part of the Order. This Quotation is not an offer. All offers to purchase from Buyer or orders or contracts of sale resulting from this Quotation are subject to final acceptance in writing by an authorized representative at Seller's Wilmington office.

Seller's rights and remedies under this Quotation and the Order are in addition to, not in substitution of, all other rights and remedies available to Seller under any applicable provision of law, regulation or court decision. Seller may suspend its performance of the Order if Buyer defaults in the performance of its duties under the Order or under any other agreement between the Buyer and Seller.

No employee, agent, dealer, or distributor of Seller has any authority to change or enlarge the terms of this Quotation or the Order. No change shall be valid unless it is in writing and signed by an authorized officer of Seller.

In the event that any provision of these terms and conditions is deemed to be invalid or unenforceable, the parties agree that such invalidity or unenforceability shall not invalidate or render unenforceable the remainder of these terms and conditions, and the remaining terms and conditions shall continue in full force and effect. The terms of any Order resulting from this Quotation shall be interpreted and enforced in accordance with the laws of Massachusetts.

2. **ASSIGNMENT:** Buyer may not assign or transfer any of its rights under this Quotation or the Order without Seller's written consent. However, Seller may freely assign or transfer its rights under this Quotation of the Order.

3. **CANCELLATION:** Buyer cannot cancel or alter the Order without the Seller's written consent. If Seller grants such consent, Buyer will reimburse Seller for all of Seller's losses and expenses caused by such cancellation or alteration, including without limitation all of Seller's additional costs caused by changes in design or specifications, or by product revisions, and all consequential damages incurred by Seller as a result of such cancellation or alteration. If Buyer cancels the Order, Buyer shall pay Seller (i) minimum cancellation charge of 15 percent of the purchase price; and (ii) any damages and expenses described in this paragraph that exceed 15 percent of the purchase price.

4. **PRICES:**

- A. At Seller's option, prices for items of equipment included in this Quotation, other than equipment covered by Paragraph 4.B. will be increased in accordance with Clause 1 below.

Clause 1—The price for each item of equipment will be escalated by the ratio of the published price for such item (after applicable discounts) in effect at the time of shipment, over the published price for such item (after applicable discounts) in effect at the date of this Quotation.

- B. Prices for items of equipment purchased by Seller from third parties which are not covered by Seller's published prices and which are separately identified in this Quotation (such as motors, engines, controls, etc.) will be increased by the ratio of Seller's purchase price at the time of shipment over Seller's purchase price at the time of this Quotation.

5. TERMS OF PAYMENT: Unless otherwise specified in our Quotation, the terms of payment shall be as follows:

- A. For all orders under \$500,000, the terms of payment shall be, upon credit approval as follows;
 - 90% net 30 days
 - 10% at startup, not to exceed 120 days after shipment
- B. For all orders above \$500,000, the terms of payment shall be, upon credit approval as follows;
 - 15% upon Buyer's notice of release to manufacture
 - 75% net 30 days
 - 10% at startup, not to exceed 120 days after shipment

15% cancellation charge if order is canceled after generation of submittals.

These terms apply to partial and complete shipments. Buyer agrees to make full payment under these terms without setoff. If any proceeding is initiated by or against Buyer under any bankruptcy or insolvency law, or if, in Seller's judgment, Buyer's financial condition at the time the equipment is ready for shipment does not warrant the extension of credit to Buyer, Seller may require full payment, in cash, prior to making shipment. If Seller does not receive full cash payment within fifteen (15) days after it notifies Buyer that such payment is required and that the equipment is ready for shipment, Seller may cancel the Order as to any unshipped item. In that event, Buyer will pay Seller the cancellation charges, damages and expenses, as described in Paragraph 3.

Seller may assess interest on all amounts past due at the highest lawful rate, or an annual rate of eighteen percent (18%), whichever rate is lower. Buyer will pay all costs and expenses, including reasonable attorney's fees, incurred by Seller in collecting any amounts due, including interest.

The date for shipment or completion of manufacture of the equipment may be changed only with Seller's written consent. If shipment is delayed at Buyer's request, Buyer will make any payments due under the order as if the equipment had been shipped on the date when it was ready for shipment. If completion of manufacture is delayed at Buyer's request, Seller may require payment according to percentage of completion. Buyer shall have the risk of loss with respect to equipment held for Buyer, and Seller may charge Buyer for storage.

6. TAXES: Prices do not include any present and future sales, use, occupation, license, excise, and other taxes or fees with respect to the manufacture, sale, or delivery of the equipment. If Seller pays any such taxes, the amount of such payment will be added to the purchase price. Buyer will pay all such taxes and fees unless the amounts of such taxes and fees are included in the purchase price at the proper rate, or Buyer furnishes a proper exemption certificate.

7. ACTS OF GOD: Seller shall in no event be liable for delays in delivery of the equipment or other failures to perform caused by fires, acts of God, strikes, labor difficulties, acts of terrorism, governmental or military authorities, delays in transportation or procuring materials, or causes of any kind beyond Seller's control.

8. DELIVERY: Except as otherwise specified in this Quotation, delivery will be F.O.B., Seller's point of shipment. Buyer will pay all transportation charges. Buyer will accept delivery within thirty (30) days after Seller notifies Buyer that the equipment is ready for shipment. If Buyer does not furnish exact shipping instructions, Seller will select, in its discretion, the means of shipment. Seller will not be liable for any loss resulting from such selection. The time of delivery is an estimate only, and Seller may change such time if it does not receive the information and approvals necessary to proceed with the manufacture of the equipment.

Buyer agrees to inspect all deliveries immediately. Any claim for shortages must be made in writing within ten (10) days after Buyer receives a shipment, and if not made, shall be deemed waived. Any other claim by Buyer, other than claims under the warranty stated in Paragraph 13, shall be made within thirty (30) days after Buyer receives shipment, and if not made shall be deemed waived. Seller is not responsible for loss or damage in transit after having received an "In Good Order" receipt from the carrier. Buyer will make all claims for loss or damage in transit against the carrier.

Buyer is fully responsible for (including payment of the cost of) installation and start-up of all equipment sold under the Order.

9. TITLE AND LIEN RIGHTS: The equipment will remain personal property, regardless of how it is installed or affixed to any realty or structure. After delivery to Buyer, Seller will have all such rights, including security interests and liens, in the equipment as lawfully may be conferred upon Seller by contract under any applicable provision of law. Buyer agrees to cooperate fully with Seller in the filing of any financing statements or other documents necessary to perfect such interests and liens.

If Buyer defaults in its obligations under the Order before the price (including any notes given therefore) of the equipment has been fully paid in cash, Seller may take any and all actions permitted by law to protect its interests including, where permissible, repossession of such equipment.

10. PATENT INFRINGEMENT: Seller will defend Buyer and the user of the equipment against any claim that any equipment and parts of Seller's manufacture furnished under the Order infringe upon any published United States patent, and Seller will pay all damages and costs awarded by a court of competent jurisdiction with respect to such claim. The Buyer or user must promptly notify Seller of any such claim, and cooperate fully with Seller in the defense of such claim, or Seller will have no duty under this paragraph. Buyer will defend and indemnify Seller against patent infringement claims relating to equipment and parts that are not manufactured by Seller to the same extent as Seller agrees to defend and indemnify Buyer with respect to patent infringement claims relating to equipment and parts of Seller's manufacture.

11. SALES FOR EXPORT: In the case of sales for export, Buyer or Seller, whichever is the proper party under the applicable statute or regulation, will procure, and arrange for any necessary extensions of, all required export, import or other licenses or authorizations. If Buyer, as the proper party, fails to arrange for such licenses or authorizations prior to or by the scheduled date of shipment, Seller may at its option treat any such failure as a cancellation of the Order and, upon notice from Seller, Buyer will pay Seller the cancellation charges, damages and expenses, as described in Paragraph 3.

12. INSURANCE: Buyer shall bear all risk of and responsibility for damage or loss to the equipment after seller delivers the equipment to the carrier at its point of shipment. Buyer agrees to provide and maintain adequate insurance for the equipment supplied under the Order to fully protect Seller's interest during the time between delivery and final payment. Loss or damage by fire or other causes during such period shall not relieve Buyer from its obligations under the Order.

13. WARRANTY: Seller warrants from date of startup of equipment (and its component parts) of its own manufacture against defects in materials and workmanship under normal use and service as follows;

OEM Products	one year
100 Series Cased Drives	two years
200 Series Cased Drives	two years
300 Series Cased Drives	two years
400 Series Cased Drives	two years
520 Series Cased Drives	five years
620 Series Cased Drives	five years
720 Series Cased Drives	five years
800 Series	two years

Bredel CIP Hosepumps	one year
Bredel Hosepumps	two years

Startup must be performed by a Watson-Marlow, Inc. authorized field service technician and be performed within one year from date of shipment otherwise warranty period will be based on date of shipment. Excluded from warranty are consumable items such as fuses, motor brushes, rollers or shoes and tubing.

Seller does not warrant accessories or components that are not manufactured by Seller however, to the extent possible, Seller agrees to assign to Buyer its rights under the original manufacturer's warranty, without recourse to Seller. Buyer must give Seller notice in writing of any alleged defect covered by this warranty (together with all identifying details, including the serial number, the type of equipment, and the date of purchase) within thirty (30) days of the discovery of such defect during the warranty period. No claim more than 30 days after the expiration of the warranty period shall be valid.

If requested by Seller, any equipment (or its component parts) must be promptly returned to Seller prior to any attempted repair, or sent to an authorized service station designated by Seller, and Buyer shall prepay all shipping expenses. Seller shall not be liable for any loss or damage to goods in transit, nor will any warranty claim be valid unless the returned goods are received intact and undamaged as a result of shipment. Repaired or replaced material returned to customer will be shipped F.O.B., Seller's factory. Seller will not give Buyer credit for parts or equipment returned to Seller, and will not accept delivery of any such parts or equipment, unless Buyer has obtained Seller's approval in writing.

During the warranty period, upon request by Buyer and approval by Seller, Seller will provide a factory authorized field service technician for labor to repair or replace the damaged product on site. Should the damage not be covered under warranty, the Buyer is responsible for all travel and labor costs associated with the on-site service. All costs associated with on-site service performed by someone other than an authorized Watson-Marlow field service technician is the sole responsibility of the Buyer.

The warranty extends to repaired or replaced parts of Seller's manufacture for ninety (90) days or for the remainder of

the original warranty period applicable to the equipment or parts being repaired or replaced. This warranty applies to the repaired or replaced part and is not extended to the product or any other component of the product being repaired.

Seller may substitute new equipment or improve part(s) of any equipment judged defective without further liability. All repairs or services performed by Seller, which are not covered by this warranty, will be charged in accordance with Seller's standard prices then in effect.

THIS WARRANTY IS THE SOLE WARRANTY OF SELLER AND SELLER HEREBY EXPRESSLY DISCLAIMS AND BUYER WAIVES ALL OTHER WARRANTIES EXPRESSED, IMPLIED IN LAW OR IMPLIED IN FACT, INCLUDING ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Seller's sole obligation under this warranty shall be, at its option, to repair or replace any equipment (or its component parts) which has a defect covered by this warranty, or to refund the purchase price of such equipment or part. Under the terms of this warranty, Seller shall not be liable for (a) consequential, collateral, special or liquidated losses or damages; (b) equipment conditions caused by normal wear and tear, abnormal conditions of use, accident, neglect, or misuse of said equipment; (c) the expense of, and loss or damage caused by, repairs or alterations made by anyone other than the Seller; (d) damage caused by abrasive materials, chemicals, scale deposits, corrosion, lightning, improper voltage, mishandling, or other similar conditions; (e) any loss, damage, or expense relating to or resulting from installation, removal or reinstallation of equipment; (f) any unauthorized labor costs or charges incurred in repairing or replacing defective equipment or parts, including the cost of reinstalling parts that are repaired or replaced by Seller; (g) any expense of shipment of equipment or repaired or replacement parts; or (h) any other loss, damage or expense of any nature.

14. **CONDITION TO WARRANTY WORK:** If Buyer is in default (including, but not limited to, the failure of Buyer to maintain a current account with Seller) under the Order or any other agreement between Buyer and Seller, Buyer's rights under the warranty shall be suspended and the original warranty period will not be extended.

15. **PERFORMANCE:** Equipment performance is not warranted or guaranteed unless separately agreed to by Seller in accordance with its guarantee policy. Performance curves and other information submitted to Buyer are approximate and no warranty or guarantee shall be deemed to arise as a result of such submittal. All testing shall be done in accordance with Seller's standard policy.

16. **LIABILITY LIMITATIONS:** Under no circumstances shall the Seller have any liability under the Order or otherwise for liquidated damages or for collateral, consequential or special damages or for loss of profits, or for actual losses or for loss of production or progress of construction, regardless of the cause of such damages or losses. In any event, Seller's aggregate total liability under the Order or otherwise shall not exceed the contract price. Buyer agrees to indemnify and hold harmless Seller from all claims by third parties in excess of these limitations.

17. **COMPLIANCE WITH LAW:** Since the compliance with the various Federal, State, and Local laws and regulations concerning occupational health and safety and pollution are affected by the use, installation and operation of the equipment and other matters over which Seller has no control, Seller assumes no responsibility for compliance with those laws and regulations, whether by way of indemnity, warranty, or otherwise.

18. **BONDS.** Buyer shall furnish to Seller a payment bond (the "Bond") in an amount equal to the greater of (a) the full amount of the Buyer's payment obligations under the Order or (b) the total amount of all payment obligations under the Project in which the equipment to be sold by Seller to Buyer hereunder (the "Project") is to be used or incorporated. The Bond shall guarantee to the Seller the Buyer's prompt and full payment and full performance of all the terms and conditions of the Order. The terms of the Payment Bond shall provide that Seller shall have the right to demand payment by the issuer of the Bond directly to Seller of all outstanding amounts payable by Buyer to Seller under the Order (including purchase price, service and installation charges and cancellation fees) ninety (90) days or less after the due date thereof. The Bond shall be executed in a form and by a surety or sureties reasonably satisfactory to the Seller. Bond premiums are the sole responsibility of the Buyer.

19. The Bond shall be security for the performance by Buyer of its obligations and liabilities under the Order, and shall not relieve Buyer from any of such obligations and liabilities. Failure to deliver the Bond in compliance with this Section 18 shall be deemed a material breach by Buyer under the Order. Delivery of the Bond shall be a condition to commencement or performance by Seller of its obligations under this Order, provided that such commencement or performance by Seller shall not be deemed a waiver of any of Seller's rights or Buyer's obligations under this Section 18

20. Prior to the installation of the equipment sold by Seller under the Order and its incorporation into the Project, such equipment shall be subject to a security interest in favor of Seller to secure all obligations and liabilities of Buyer under the Order. Seller is hereby authorized to take such action, including filing of financing statements under the Uniform Commercial Code covering such equipment, as Seller shall deem necessary and appropriate to evidence and perfect such security interest.

ABB, Inc.
C/O American Control Service

125 East County Line Rd.

Warminster, PA 18974

Phone: 256-735-0013

Quotation# 429619

Date: 04/20/2016
Requested By: City of Chattanooga

Attention to:

Prepared by: Justin Gobble
Payment Terms: Net 30

Quote Validity: 3/31/2017

Address: 455 Moccasin Bend Rd.

City, State & Zip: Chattanooga, TN
Phone:
E-Mail:

Shipping Leadtime: See below (In Days)
FOB Point: China / Warminster, PA
Freight Charges: Prepaid & Add
Taxes: As required
Terms & Conditions: Per attached ABB General
Terms & Conditions

Your Inquiry: Moccasin Bend Sodium Bisulfite Project

Clarifications:

1. **Startup & Commissioning has been included for two (2) separate, one (1) day trips.**
 - a. **Training shall be one (1), eight (8) hour day, immediately following the conclusion of the 2nd start-up trip.**
2. **T & C's TBD & agreed to prior to order; at this time, payment terms are 'Net 30.' Terms & Conditions will be in accordance with contract documents once formally accepted by ABB at time of purchase.**
3. **Contractor to verify proper cable length & sizing for each meter installation.**
4. **Warranty is two (2) years from date of shipment on the magnetic flowmeters.**
5. **Submittals & O&M Manuals shall be provided electronically via manufacturer approved documents, readily available via: www.abb.com/measurement**

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Quotation# 429619

Line	Quantity	Product Code	Lead Time	Unit Price(USD)	Extended Price(USD)
100	2	FEW325.900.H.1.D.4.C2.B.1.B.1.A.4.P.3. B.3.A.1-.JK..M5V3.CWM	54	23,315.09	46,630.18
200	2	FEW325.350.H.1.D.4.A1.B.1.B.1.A.3.P.3. B.3.A.1-.JB..M5V3.CWM.T3	35	6,858.43	13,716.86
300	3	FEW325.200.H.1.D.4.A1.B.1.B.1.A.3.P.3. B.3.A.1-.JB..M5V3.CWM.T3	10	4,226.31	12,678.93
400	1	FEW325.100.H.1.D.4.A1.B.1.B.1.A.3.P.3. B.3.A.1-.JB..M5V3.CWM.T3	10	3,176.30	3,176.30
500	1	FEM325.040.E.1.J.0.W1.Y.1.K.1.B.3.P.3. B.0.Y.1-AY.F6.T3.AH.M5	15	5,577.50	5,577.50
600	2	FEM325.015.E.1.J.0.W1.Y.1.K.1.B.3.P.3. B.0.Y.1-AY.F6.T3.AH.M5	15	5,577.50	11,155.00
700	2	V8000-EX-E	0	1,840.00	3,680.00
800	3	V8000-SU-2	0	1,280.00	3,840.00
900	1	FZC500	18	972.86	972.86
1000	1	FZA100	28	412.75	412.75
1100	2	DA_GBSH.00.00	20	244.12	488.24
1200	4	DA_GBSH.00.00	20	184.70	738.80
TOTAL:					103,067.42

Quotation# 429619

SECTION (B)

Item 100

WaterMaster FEW325 Electromagnetic Flowmeter system, full bore, DN 700 ... DN 2400 (28 ... 96 in.), remote mount, hazardous area design

Code	Quantity	Unit Price	Total Price
FEW325.900.H.1.D.4.C2.B.1.B.1.A.4.P.3.B.3.A.1-.JK..M5V3.CWM	2	23,315.09	46,630.18

FEW325

- Bore Diameter	900	DN 900 (36 in.)
- Liner Material	H	Hard Rubber
- Electrode Design	1	Standard
- Measuring Electrodes Material	D	Hastelloy C-4 (2.4610)
- Grounding Accessories	4	2x Potential Equalizing Rings (Stainless Steel)
- Process Connection Type	C2	Flanges AWWA C207 Class D
- Process Connection Material	B	Carbon steel
- Usage Certifications	1	Standard (without PED)
- Calibration Type	B	High accuracy factory calibration
- Temperature Range of Installation / Ambient Temperature Range	1	Standard design / -20 ... 60 °C (-4 ... 140 °F)
- Name Plate	A	Adhesive label
- Signal Cable Length and Type	4	30 m (approx. 100 ft) cable
- Explosion Protection Certification	P	usFMc Div. 2
- Protection Class Transmitter / Protection Class Sensor	3	IP 67 (NEMA 4X) / IP 68 (NEMA 6P), cable fitted and potted
- Cable Conduits	B	NPT 1/2 in.
- Power Supply	3	100 ... 230 V AC, 60 Hz
- Input and Output Signal Type	A	HART + 20 mA + Pulse + Contact output
- Configuration Type / Diagnostics Type	1	Parameters set to factory defaults / Standard diagnostic functions activated
- Lay Length	JK	1.3 D Lay Length
- Documentation Language	M5	English (standard)
- Verification Type	V3	VeriMaster
- Potable Water and Food & Beverage Approvals	CWM	NSF material approval

Quotation# 429619

SECTION (B)

Item 200

WaterMaster FEW325 Electromagnetic Flowmeter system, full bore, DN 10... DN 600 (3/8 ... 24 in.),remote mount

Code	Quantity	Unit Price	Total Price
FEW325.350.H.1.D.4.A1.B.1.B.1.A.3.P.3.B.3.A.1-.JB..M5V3.CWM.T3	2	6,858.43	13,716.86

FEW325

- Bore Diameter	350	DN 350 (14 in.)
- Liner Material	H	Hard rubber
- Electrode Design	1	Standard
- Measuring Electrodes Material	D	Hastelloy C-4 (2.4610)
- Grounding Accessories	4	2x Potential Equalizing Rings (Stainless Steel
- Process Connection Type	A1	Flanges ANSI / ASME B16.5 / 16.47 series A Class 150
- Process Connection Material	B	Carbon steel
- Usage Certifications	1	Standard (without PED)
- Calibration Type	B	High accuracy factory calibration
- Temperature Range of Installation / Ambient Temperature Range	1	Standard design / -20 ... 60 °C (-4 ... 140 °F)
- Name Plate	A	Adhesive label
- Signal Cable Length and Type	3	20 m (approx. 60 ft) cable
- Explosion Protection Certification	P	usFMc Div. 2
- Protection Class Transmitter / Protection Class Sensor	3	IP 67 (NEMA 4X) / IP 68 (NEMA 6P), cable fitted and potted
- Cable Conduits	B	NPT 1/2 in.
- Power Supply	3	100 ... 230 V AC, 60 Hz
- Input and Output Signal Type	A	HART + 20 mA + Pulse + Contact output
- Configuration Type / Diagnostics Type	1	Parameters set to factory defaults / Standard diagnostic functions activated
- Lay Length	JB	ISO Lay Length
- Documentation Language	M5	English (standard)
- Verification Type	V3	VeriMaster
- Potable Water and Food & Beverage Approvals	CWM	NSF material approval
- Number of Testpoints	T3	3 Points

Quotation# 429619

SECTION (B)

Item 300

WaterMaster FEW325 Electromagnetic Flowmeter system, full bore, DN 10... DN 600 (3/8 ... 24 in.),remote mount

Code	Quantity	Unit Price	Total Price
FEW325.200.H.1.D.4.A1.B.1.B.1.A.3.P.3.B.3.A.1-.JB..M5V3.CWM.T3	3	4,226.31	12,678.93

FEW325

- Bore Diameter	200	DN 200 (8 in.)
- Liner Material	H	Hard rubber
- Electrode Design	1	Standard
- Measuring Electrodes Material	D	Hastelloy C-4 (2.4610)
- Grounding Accessories	4	2x Potential Equalizing Rings (Stainless Steel
- Process Connection Type	A1	Flanges ANSI / ASME B16.5 / 16.47 series A Class 150
- Process Connection Material	B	Carbon steel
- Usage Certifications	1	Standard (without PED)
- Calibration Type	B	High accuracy factory calibration
- Temperature Range of Installation / Ambient Temperature Range	1	Standard design / -20 ... 60 °C (-4 ... 140 °F)
- Name Plate	A	Adhesive label
- Signal Cable Length and Type	3	20 m (approx. 60 ft) cable
- Explosion Protection Certification	P	usFMc Div. 2
- Protection Class Transmitter / Protection Class Sensor	3	IP 67 (NEMA 4X) / IP 68 (NEMA 6P), cable fitted and potted
- Cable Conduits	B	NPT 1/2 in.
- Power Supply	3	100 ... 230 V AC, 60 Hz
- Input and Output Signal Type	A	HART + 20 mA + Pulse + Contact output
- Configuration Type / Diagnostics Type	1	Parameters set to factory defaults / Standard diagnostic functions activated
- Lay Length	JB	ISO Lay Length
- Documentation Language	M5	English (standard)
- Verification Type	V3	VeriMaster
- Potable Water and Food & Beverage Approvals	CWM	NSF material approval
- Number of Testpoints	T3	3 Points

Quotation# 429619

SECTION (B)

Item 400

WaterMaster FEW325 Electromagnetic Flowmeter system, full bore, DN 10... DN 600 (3/8 ... 24 in.),remote mount

Code	Quantity	Unit Price	Total Price
FEW325.100.H.1.D.4.A1.B.1.B.1.A.3.P.3.B.3.A.1-.JB..M5V3.CWM.T3	1	3,176.30	3,176.30

FEW325

- Bore Diameter	100	DN 100 (4 in.)
- Liner Material	H	Hard rubber
- Electrode Design	1	Standard
- Measuring Electrodes Material	D	Hastelloy C-4 (2.4610)
- Grounding Accessories	4	2x Potential Equalizing Rings (Stainless Steel
- Process Connection Type	A1	Flanges ANSI / ASME B16.5 / 16.47 series A Class 150
- Process Connection Material	B	Carbon steel
- Usage Certifications	1	Standard (without PED)
- Calibration Type	B	High accuracy factory calibration
- Temperature Range of Installation / Ambient Temperature Range	1	Standard design / -20 ... 60 °C (-4 ... 140 °F)
- Name Plate	A	Adhesive label
- Signal Cable Length and Type	3	20 m (approx. 60 ft) cable
- Explosion Protection Certification	P	usFMc Div. 2
- Protection Class Transmitter / Protection Class Sensor	3	IP 67 (NEMA 4X) / IP 68 (NEMA 6P), cable fitted and potted
- Cable Conduits	B	NPT 1/2 in.
- Power Supply	3	100 ... 230 V AC, 60 Hz
- Input and Output Signal Type	A	HART + 20 mA + Pulse + Contact output
- Configuration Type / Diagnostics Type	1	Parameters set to factory defaults / Standard diagnostic functions activated
- Lay Length	JB	ISO Lay Length
- Documentation Language	M5	English (standard)
- Verification Type	V3	VeriMaster
- Potable Water and Food & Beverage Approvals	CWM	NSF material approval
- Number of Testpoints	T3	3 Points

Quotation# 429619

SECTION (B)

Item 500

Minimag FEM325 Remote Electromagnetic Flowmeter, Wafer style process connection

Code	Quantity	Unit Price	Total Price
FEM325.040.E.1.J.0.W1.Y.1.K.1.B.3.P.3.B.0.Y. 1-AY.F6.T3.AH.M5	1	5,577.50	5,577.50

Complete With

FET325

FEM325

- Bore Diameter	040	DN 40 (1-1/2 in.)
- Liner Material	E	ETFE
- Electrode Design	1	Standard
- Measuring Electrodes Material	J	Platinum-Iridium
- Grounding Accessories	0	Without
- Process Connection Type	W1	Wafer
- Process Connection Material	Y	Without process connection, without gasket, without mounting bracket
- Usage Certifications	1	Standard without PED certificate
- Calibration Type	K	Standard factory calibration - With ScanMaster
- Temperature Range of Installation / Ambient Temperature Range	1	Standard design / -4 ... 145 °F (-20 ... 62 °C)
- Name Plate	B	Stainless steel
- Signal Cable Length and Type	3	20 m (60 ft) standard cable
- Explosion Protection Certification	P	usFMc Div 2 Zone 2
- Protection Class Transmitter / Protection Class Sensor	3	IP 67 (NEMA 4X) / IP 68 (NEMA 6P), cable fitted and potted
- Cable Conduits	B	NPT 1/2 in.
- Power Supply	0	Without
- Input and Output Signal Type	Y	Without
- Configuration Type / Diagnostics Type	1	Parameters set to factory defaults / Standard diagnostic functions activated
- Accessories	AY	None
- Power Frequency	F6	60 Hz (If the Sensor is ordered without a Transmitter, the line frequency has to be

ABB, Inc.
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125 East County Line Rd.

Warminster, PA 18974

Phone: 256-735-0013

Quotation# 429619

- Number of Testpoints	T3	specified here) 3 points
- Hardware Kit	AH	Hardware Kit (ANSI 150 only)
- Documentation Language	M5	English

Complete With

FET325

FET325 Electromagnetic Flowmeter. remote transmitter. for ProcessMaster / HygienicMaster.
hazardous area design

- Temperature Range of Installation / Ambient Temperature Range	1	Standard design / -20 ... 60 °C (-4 ... 140 °F)
- Name Plate	C	Stainless steel and TAG plate (stainless steel)
- Signal Cable Length and Type	0	Without signal cable
- Explosion Protection Certification	P	usFMc Div 2 Zone 2
- Protection Class Transmitter / Protection Class Sensor	1	IP 67 (NEMA 4X) / IP 67 (NEMA 4X)
- Cable Conduits	B	NPT 1/2 in.
- Power Supply	3	100 ... 230 V AC. 60 Hz
- Input and Output Signal Type	B	HART + 20 mA passive + Pulse + Contact I/
- Configuration Type / Diagnostics Type	1	Parameters set to factory defaults / Standard diagnostic functions activated
- Documentation Language	M5	English
- Housing Type	H1	One compartment housing

ABB, Inc.

C/O American Control Service

125 East County Line Rd.

Warminster, PA 18974

Phone: 256-735-0013

Quotation# 429619

SECTION (B)

Item 600

Minimag FEM325 Remote Electromagnetic Flowmeter, Wafer style process connection

Code	Quantity	Unit Price	Total Price
FEM325.015.E.1.J.0.W1.Y.1.K.1.B.3.P.3.B.0.Y. 1-AY.F6.T3.AH.M5	2	5,577.50	11,155.00

Complete With

FET325

FEM325

- Bore Diameter	015	DN 15 (1/2 in.)
- Liner Material	E	ETFE
- Electrode Design	1	Standard
- Measuring Electrodes Material	J	Platinum-Iridium
- Grounding Accessories	0	Without
- Process Connection Type	W1	Wafer
- Process Connection Material	Y	Without process connection, without gasket, without mounting bracket
- Usage Certifications	1	Standard without PED certificate
- Calibration Type	K	Standard factory calibration - With ScanMaster
- Temperature Range of Installation / Ambient Temperature Range	1	Standard design / -4 ... 145 °F (-20 ... 62 °C)
- Name Plate	B	Stainless steel
- Signal Cable Length and Type	3	20 m (60 ft) standard cable
- Explosion Protection Certification	P	usFMc Div 2 Zone 2
- Protection Class Transmitter / Protection Class Sensor	3	IP 67 (NEMA 4X) / IP 68 (NEMA 6P), cable fitted and potted
- Cable Conduits	B	NPT 1/2 in.
- Power Supply	0	Without
- Input and Output Signal Type	Y	Without
- Configuration Type / Diagnostics Type	1	Parameters set to factory defaults / Standard diagnostic functions activated
- Accessories	AY	None
- Power Frequency	F6	60 Hz (If the Sensor is ordered without a Transmitter, the line frequency has to be specified here)

ABB, Inc.
C/O American Control Service

125 East County Line Rd.

Warminster, PA 18974

Phone: 256-735-0013

Quotation# 429619

- Number of Testpoints	T3	3 points
- Hardware Kit	AH	Hardware Kit (ANSI 150 only)
- Documentation Language	M5	English

**Complete With
FET325**

FET325 Electromagnetic Flowmeter. remote transmitter. for ProcessMaster / HygienicMaster.
hazardous area design

- Temperature Range of Installation / Ambient Temperature Range	1	Standard design / -20 ... 60 °C (-4 ... 140 °F)
- Name Plate	C	Stainless steel and TAG plate (stainless steel)
- Signal Cable Length and Type	0	Without signal cable
- Explosion Protection Certification	P	usFMc Div 2 Zone 2
- Protection Class Transmitter / Protection Class Sensor	1	IP 67 (NEMA 4X) / IP 67 (NEMA 4X)
- Cable Conduits	B	NPT 1/2 in.
- Power Supply	3	100 ... 230 V AC. 60 Hz
- Input and Output Signal Type	B	HART + 20 mA passive + Pulse + Contact I/
- Configuration Type / Diagnostics Type	1	Parameters set to factory defaults / Standard diagnostic functions activated
- Documentation Language	M5	English
- Housing Type	H1	One compartment housing

ABB, Inc.
C/O American Control Service

125 East County Line Rd.
Warminster, PA 18974
Phone: 256-735-0013

Quotation# 429619

SECTION (B)

Item	700			
Travel & Living Expenses per Trip Eastern Time Zone				
Code		Quantity	Unit Price	Total Price
V8000-EX-E		2	1,840.00	3,680.00

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Quotation# 429619

SECTION (B)

Item	800			
Start up & Commissioning Full Day On-site				
Code		Quantity	Unit Price	Total Price
V8000-SU-2		3	1,280.00	3,840.00

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SECTION (B)

Item	900			
FZC500 ScanMaster - Diagnostic and Verification Software				
Code		Quantity	Unit Price	Total Price
FZC500		1	972.86	972.86

ABB, Inc.
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Quotation# 429619

SECTION (B)

Item	1000			
FZA100 Infrared Service Port Adapter				
Code		Quantity	Unit Price	Total Price
FZA100		1	412.75	412.75

ABB, Inc.
C/O American Control Service

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Quotation# 429619

SECTION (B)

Item	1100			
FF Magmeters				
Code		Quantity	Unit Price	Total Price
DA_GBSH.00.00.052-0005-HC.1.5" Hast C.Grounding Ring.SR4000US		2	244.12	488.24

052-0005-HC
1.5" Hast C
Grounding Ring
SR4000US

DA_GBSH

- Characteristic A	00	00
- Characteristic B	00	00
- Special Characteristic 1	052-0005-HC	
- Special Characteristic 2	1.5" Hast C	
- Special Characteristic 3	Grounding Ring	
- Special Characteristic 4	SR4000US	

ABB, Inc.
C/O American Control Service

125 East County Line Rd.

Warminster, PA 18974

Phone: 256-735-0013

Quotation# 429619

SECTION (B)

Item 1200

FF Magmeters

Code	Quantity	Unit Price	Total Price
DA_GBSH.00.00.052-0001-HC.0.5" Hast C.Grounding Ring.SR4000US	4	184.70	738.80

052-0001-HC
0.5" Hast C
Grounding Ring
SR4000US

DA_GBSH

- Characteristic A	00	00
- Characteristic B	00	00
- Special Characteristic 1	052- 0001- HC	
- Special Characteristic 2	0.5" Hast C	
- Special Characteristic 3	Ground ing Ring	
- Special Characteristic 4	SR400 0US	

ABB, Inc. C/O American Control Service

125 East County Line Rd.

Warminster, PA 18974

Phone: 256-735-0013

Quotation# 429619

ABB INC. GENERAL TERMS AND CONDITIONS OF SALE

1. General. The terms and conditions contained herein, together with any additional or different terms contained in ABB's Proposal, if any, submitted to Purchaser (which Proposal shall control over any conflicting terms), shall govern the sale of the Equipment and Services hereunder.
2. Prices.
 - (a) Unless otherwise specified in writing, all Proposals expire thirty (30) days from the date thereof.
 - (b) Unless otherwise stated herein, Services prices are based on normal business hours (8 a.m. to 5 p.m. Monday through Friday). Overtime and Saturday hours will be billed at one and one-half (1 1/2) times the normal rates.
 - (c) The price does not include any federal, state or local property, license, privilege, sales, use, excise, gross receipts, or other like taxes which may now or hereafter be applicable. Purchaser agrees to pay or reimburse ABB for such taxes.
 - (d) The price includes customs duties and other importation or exportation fees, if any, at the rates in effect on the date of ABB's Proposal. Any change after that date in such duties, fees, or rates, shall increase the price by the amount of such change.
3. Payment.
 - (a) Unless specified to the contrary in writing by ABB, payment terms are net cash, payable without offset, in United States Dollars, 30 days from date of invoice by wire transfer to the account designated by ABB in its Proposal.
 - (b) If in the judgment of ABB the financial condition of Purchaser at any time prior to delivery does not justify the terms of payment specified, ABB may require payment in advance, payment security satisfactory to ABB, or a letter of credit from a bank acceptable to ABB.
 - (c) Purchaser shall pay, in addition to the overdue payment, a late charge equal to the lesser of 1 1/2% per month or any part thereof or the highest applicable rate allowed by law on all such overdue amounts plus interest.
4. Changes.
 - (a) Any changes requested by Purchaser affecting the ordered scope of work must be accepted by ABB and resulting adjustments to affected provisions, including price, schedule, and guarantees mutually agreed to by ABB and Purchaser.
 - (b) ABB may, at its expense, make such changes in the Equipment or Services as it deems necessary, in its sole discretion, to conform the Equipment or Services to the applicable specifications. If Purchaser objects to such changes, it shall notify ABB in writing within ten (10) days of the date of such changes. If no such notice is received, ABB shall be deemed to have accepted such changes.
5. Delivery.
 - (a) All Equipment manufactured, assembled or warehoused in the continental United States is delivered F.O.B. point of shipment. Equipment shipped from outside the continental United States is delivered F.O.B. point of destination.
 - (b) If the scheduled delivery of Equipment is delayed by Purchaser or by Force Majeure, ABB may move the Equipment to storage for the account of and at the risk of Purchaser whereupon it shall be deemed to be delivered.
 - (c) Shipping and delivery dates are contingent upon Purchaser's timely approvals and delivery by Purchaser of any documentation required for ABB's performance hereunder.
 - (d) Claims for shortages or other errors in delivery must be made in writing to ABB within ten days of delivery. Equipment may not be returned except with the prior written consent of and subject to terms specified in ABB's Proposal.
6. Title & Risk of Loss. Except with respect to Software (for which title shall not pass, use being licensed) title to Equipment shall remain in ABB until fully paid for. Notwithstanding any agreement with respect to title, risk of loss shall pass to Purchaser at the time of delivery of the Equipment to the site.
7. Inspection, Testing and Acceptance.
 - (a) Any inspection by Purchaser of Equipment on ABB's premises shall be scheduled in advance to be performed during normal working hours.
 - (b) If the order provides for factory acceptance testing, ABB shall notify Purchaser when ABB will conduct such testing prior to shipment. Unless Purchaser states specific objections in writing within ten (10) days of the date of such testing, ABB shall be deemed to have accepted the Equipment.
 - (c) If the order provides for site acceptance testing, testing will be performed by ABB personnel to verify that the Equipment has arrived at site complete, without physical damage, and in good operating condition.
8. Warranties and Remedies.
 - (a) Equipment and Services Warranty. ABB warrants that Equipment (excluding Software, which is warranted as specified in paragraph (d) below) shall be delivered free of defects in material and workmanship and shall conform to the applicable specifications for the Equipment and Services.
 - (b) Equipment and Services Remedy. If a nonconformity to the foregoing warranty is discovered in the Equipment or Services during the applicable Warranty Remedy Period, as specified above, under normal and customary conditions of use, ABB shall, at its option and its own expense, repair, replace, or refund the purchase price of the Equipment or Services.
 - (c) Exceptions. ABB shall not be responsible for providing working access to the nonconforming Equipment, including disassembly and re-assembly of non-ABB supplied equipment, or for providing transportation to or from the site of the Equipment.
 - (d) Software Warranty and Remedies. ABB warrants that, except as specified below, the Software will, when properly installed, execute in accordance with ABB's published specification. If a nonconformity to the specification is discovered, ABB shall, at its option and its own expense, repair, replace, or refund the purchase price of the Software.
 - (e) THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES OF QUALITY AND PERFORMANCE, WHETHER WRITTEN, ORAL OR IMPLIED, AND ALL OTHER WARRANTIES.
9. Patent Indemnity.
 - (a) ABB shall defend at its own expense any action brought against Purchaser alleging that the Equipment or the use of the Equipment to practice any process for which such Equipment is specified by ABB (a "Process") infringes a patent.
 - (b) ABB shall have no obligation hereunder and this provision shall not apply to: (i) any other equipment or processes, including Equipment or Processes which have been modified or combined with other equipment or processes; (ii) any process which is not a Process as specified in ABB's Proposal; (iii) any process which is not a Process as specified in ABB's Proposal; (iv) any process which is not a Process as specified in ABB's Proposal.
 - (c) If, in any such action, the Equipment is held to constitute an infringement, or the practice of any Process using the Equipment is finally enjoined, ABB shall, at its option and its own expense, procure for Purchaser the right to use the Equipment or the Practice, or to indemnify Purchaser for costs, damages, or expenses arising out of or related to the action.
 - (d) To the extent that said Equipment or any part thereof is modified by Purchaser, or combined by Purchaser with equipment or processes not furnished hereunder (except to the extent that ABB is a contributory infringer), ABB shall have no obligation hereunder.
10. Limitation of Liability.
 - (a) In no event shall ABB, its suppliers or subcontractors be liable for special, indirect, incidental or consequential damages, whether in contract, warranty, tort, negligence, strict liability or otherwise, including, but not limited to, lost profits, lost business, lost data, or lost time.
 - (b) All causes of action against ABB arising out of or relating to this Agreement or the performance or breach hereof shall expire unless brought within one year of the time of accrual thereof.
 - (c) In no event, regardless of cause, shall ABB be liable for penalties or penalty clauses of any description or for indemnification of Purchaser or others for costs, damages, or expenses arising out of or related to the action.
11. Laws and Regulations. ABB does not assume any responsibility for compliance with federal, state or local laws and regulations, except as expressly set forth herein, and compliance with any laws and regulations shall be the responsibility of Purchaser.
12. OSHA. ABB warrants that the Equipment will comply with the relevant standards of the Occupational Safety and Health Act of 1970 ("OSHA") and the regulations promulgated thereunder as of the date of the delivery of the Equipment to the site.
13. Software License.
 - (a) ABB owns all rights in or has the right to sublicense all of the Software, if any, to be delivered to Purchaser under this Agreement. As part of the sale made hereunder Purchaser hereby obtains a limited license to use the Software.
 - (b) Nothing in this Agreement shall be deemed to convey to Purchaser any title to or ownership in the Software or the intellectual property contained therein in whole or in part, nor to designate the Software a "work made for hire" or to vest in Purchaser any right in the Software or the intellectual property contained therein.
14. Inventions and Information. Unless otherwise agreed in writing by ABB and Purchaser, all right, title and interest in any inventions, developments, improvements or modifications of or for Equipment and Services shall remain the property of ABB.
15. Force Majeure. ABB shall neither be liable for loss, damage, detention or delay nor be deemed to be in default for failure to perform when prevented from doing so by causes beyond its reasonable control including, but not limited to, acts of God, war, terrorism, strikes, labor disputes, or other events beyond ABB's control.
16. Cancellation. Any order may be cancelled by Purchaser only upon prior written notice and payment of termination charges, including but not limited to, all costs identified to the order incurred prior to the effect of cancellation.
17. Termination. No termination by Purchaser for default shall be effective unless, within fifteen (15) days after receipt by ABB of Purchaser's written notice specifying such default, ABB shall have failed to initiate corrective action.
18. Export Control.
 - (a) Purchaser represents and warrants that the Equipment and Services provided hereunder and the "direct product" thereof are intended for civil use only and will not be used, directly or indirectly, for the production of nuclear, chemical, or biological weapons.
 - (b) If applicable, ABB shall file for a U.S. export license, but only after appropriate documentation for the license application has been provided by Purchaser. Purchaser shall furnish such documentation within a reasonable time.
19. Assignment. Any assignment of this Agreement or of any rights or obligations under the Agreement without prior written consent of ABB shall be void.
20. Nuclear Insurance - Indemnity. For applications in nuclear projects, the Purchaser and/or its end user customer shall have complete insurance protection against liability and property damage resulting from a nuclear incident.
21. Resale. If Purchaser resells any of the Equipment, the sale terms shall limit ABB's liability to the buyer to the same extent that ABB's liability to Purchaser is limited hereunder.
22. Entire Agreement. This Agreement constitutes the entire agreement between ABB and Purchaser. There are no agreements, understandings, restrictions, warranties, or representations between ABB and Purchaser other than those set forth in this Agreement.
 - (a) ABB warrants that the Equipment and Services provided hereunder and the "direct product" thereof are intended for civil use only and will not be used, directly or indirectly, for the production of nuclear, chemical, or biological weapons.
 - (b) All causes of action against ABB arising out of or relating to this Agreement or the performance or breach hereof shall expire unless brought within one year of the time of accrual thereof.
 - (c) In no event, regardless of cause, shall ABB be liable for penalties or penalty clauses of any description or for indemnification of Purchaser or others for costs, damages, or expenses arising out of or related to the action.
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 - (b) Nothing in this Agreement shall be deemed to convey to Purchaser any title to or ownership in the Software or the intellectual property contained therein in whole or in part, nor to designate the Software a "work made for hire" or to vest in Purchaser any right in the Software or the intellectual property contained therein.
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 - (b) If applicable, ABB shall file for a U.S. export license, but only after appropriate documentation for the license application has been provided by Purchaser. Purchaser shall furnish such documentation within a reasonable time.

ABB, Inc.
C/O American Control Service

125 East County Line Rd.

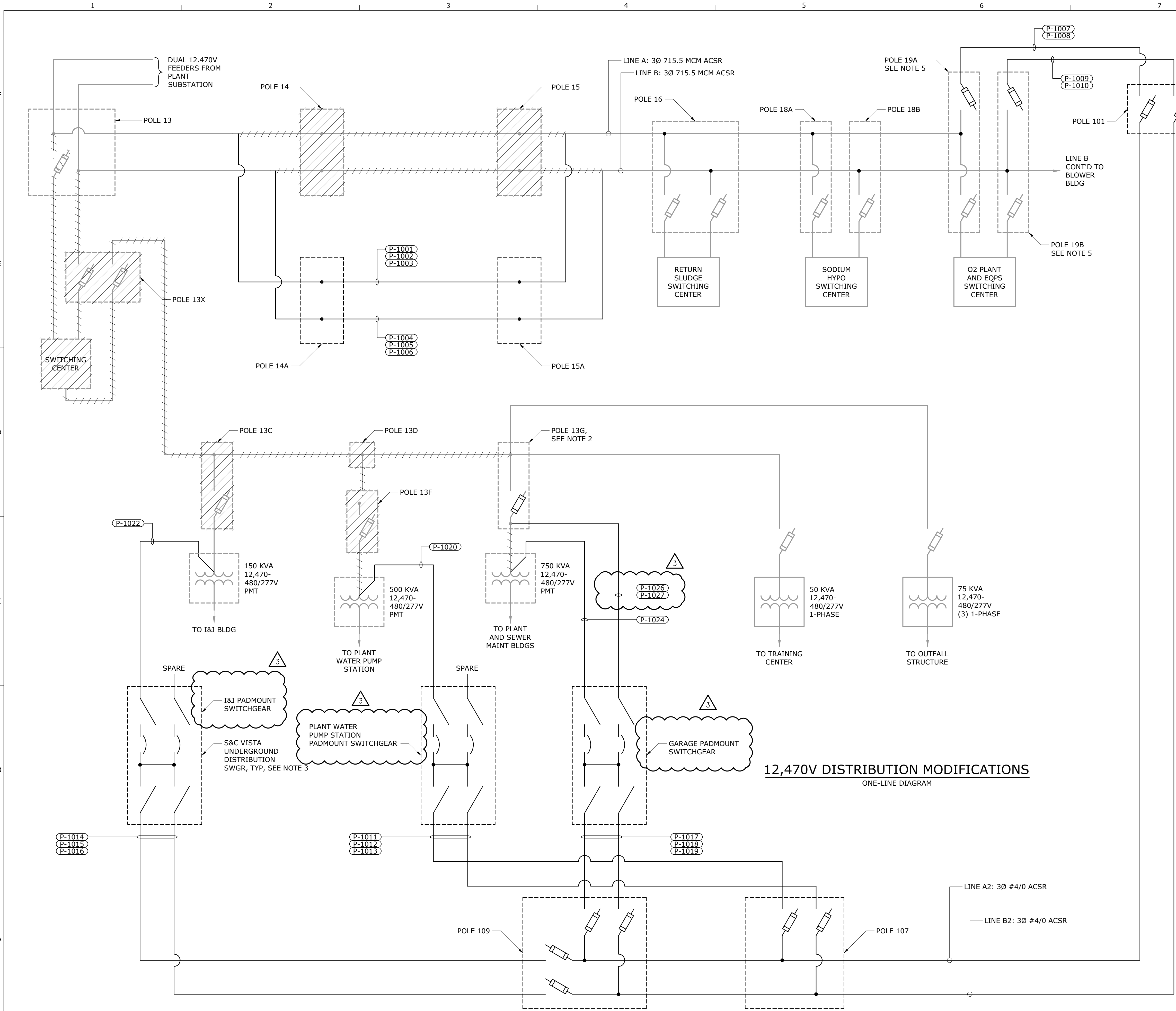
Warminster, PA 18974

Phone: 256-735-0013

Quotation# 429619

19. Assignment. Any assignment of this Agreement or of any rights or obligations under the Agreement without prior written consent of ABB shall be void.
20. Nuclear Insurance – Indemnity. For applications in nuclear projects, the Purchaser and/or its end user customer shall have complete insurance protection against liability and property damage resulting from a
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22. Entire Agreement. This Agreement constitutes the entire agreement between ABB and Purchaser. There are no agreements, understandings, restrictions, warranties, or representations between ABB and Purc

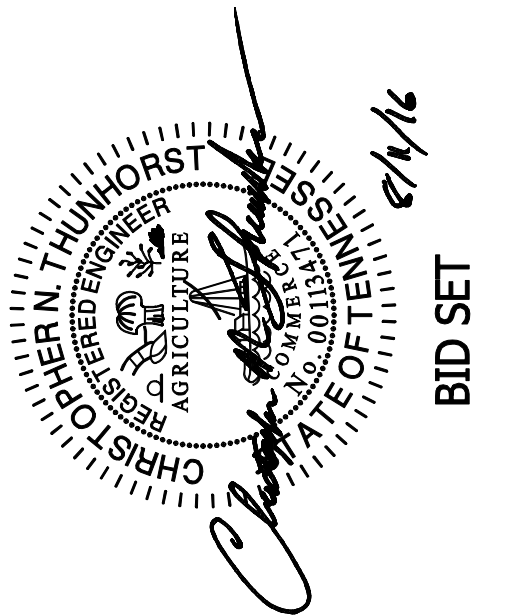
CREATED: 8/15/2016 LAST SAVED: 8/15/2016 BY: BMEDWARDS PLOT DATE: 8/15/2016



- NOTES:**
1. REFER TO 12470V DISTRIBUTION MODIFICATIONS SITE PLAN, DWG. E04, FOR IDENTIFICATION OF CIRCUITS.
 2. REUSE EXISTING POLE 13G AND OVERHEAD LINES TO TRAINING CENTER AND OUTFALL STRUCTURE. RE-FUSE EXISTING FUSED CUTOUTS FOR 100A.
 3. SEE 12,470V DISTRIBUTION MODIFICATIONS SITE PLAN, DWG. E04, FOR MORE DETAIL ON UNDERGROUND DISTRIBUTION SWITCHGEAR.
 4. NOT ALL POLES ARE SHOWN FOR CLARITY.
 5. ADD FUSED SWITCH ON SPARE CROSS ARM SPACE.

Hazen

HAZEN AND SAWYER
545 MAINSTAY DRIVE, SUITE 320
NASHVILLE, TN 37228
PHONE 615-783-1515



BID SET

MOCCASIN BEND WASTEWATER TREATMENT PLANT
SECONDARY CLARIFIER UPGRADES
CITY OF CHATTANOOGA, TN
CONSENT DECREE PROGRAM



REV	DATE	REVISION DESCRIPTION
3	08/2016	ADDENDUM #5
2	07/2016	BID SET
1	04/2016	REGULATORY SUBMITTAL

THIS LINE IS ONE INCH LONG WHEN PLOTTED FULL SCALE

THIS DRAWING MUST BE USED IN CONJUNCTION WITH THE APPLICABLE OR GOVERNING TECHNICAL SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS.

PROJECT NO: 50037-003

DATE: JULY 2016

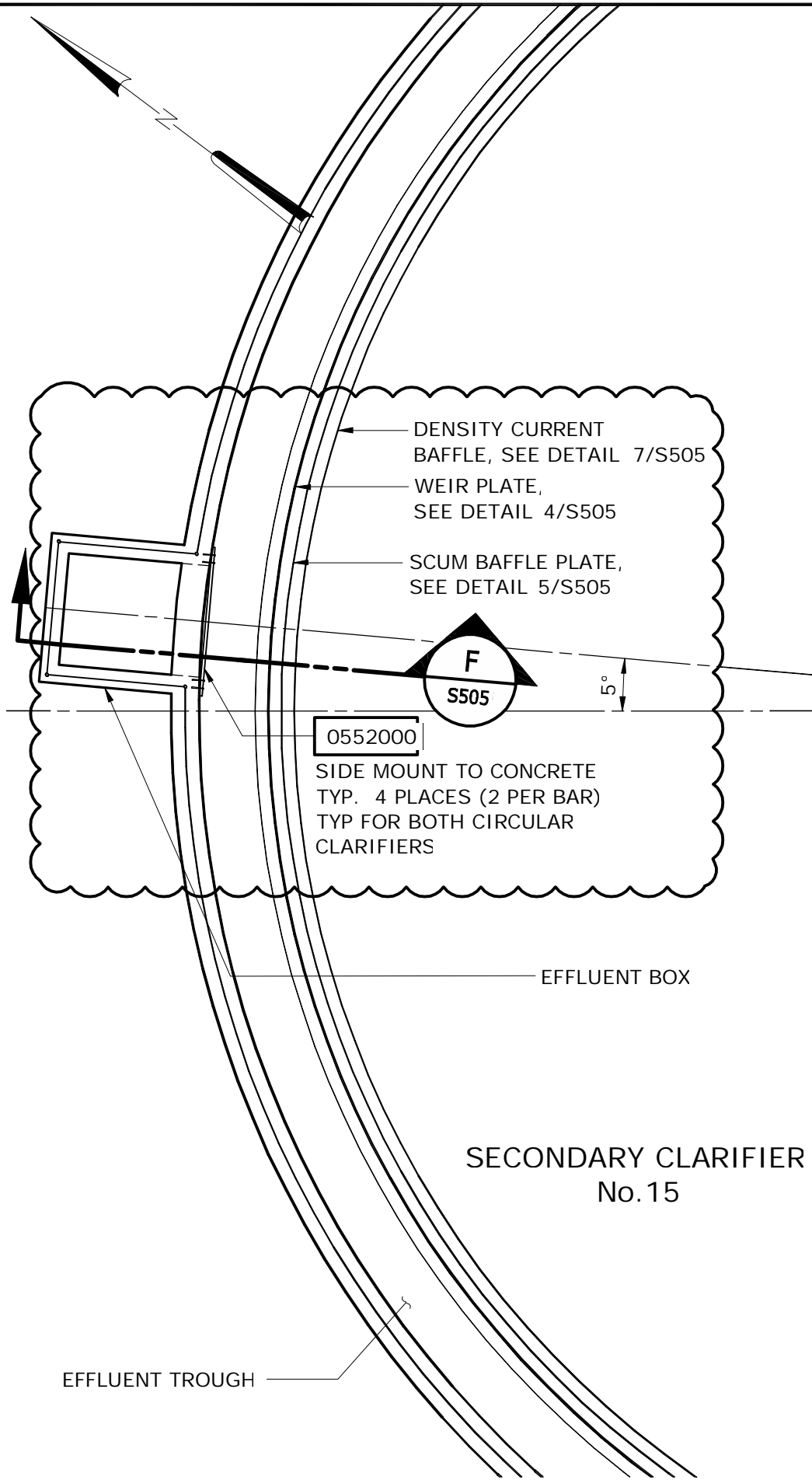
DISC. LEAD:	DESIGNER:	CHECKER:
CNT	DWE	BDB

SHEET TITLE

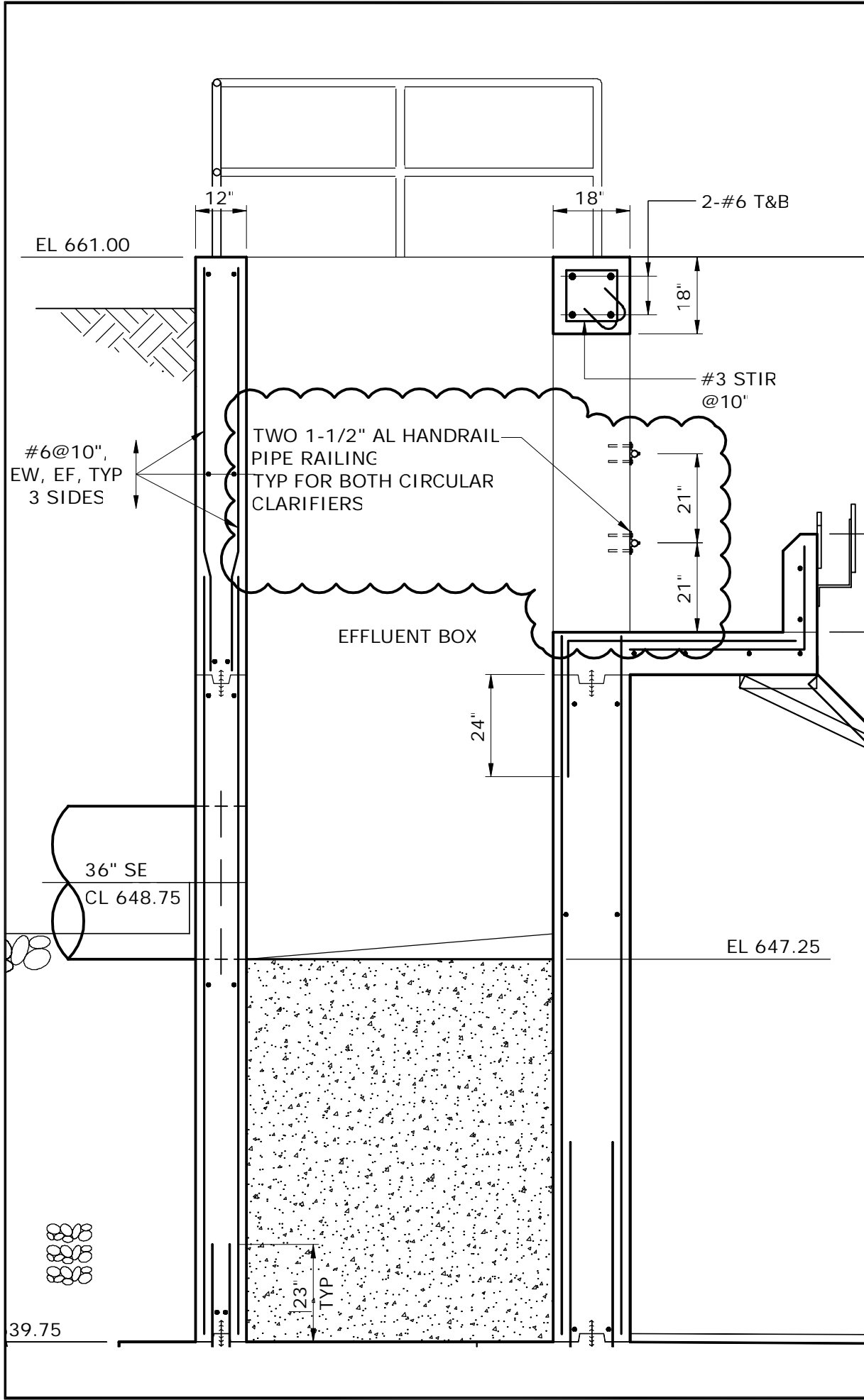
ELECTRICAL
12,470V DISTRIBUTION
MODIFICATIONS ONE-LINE

SHEET

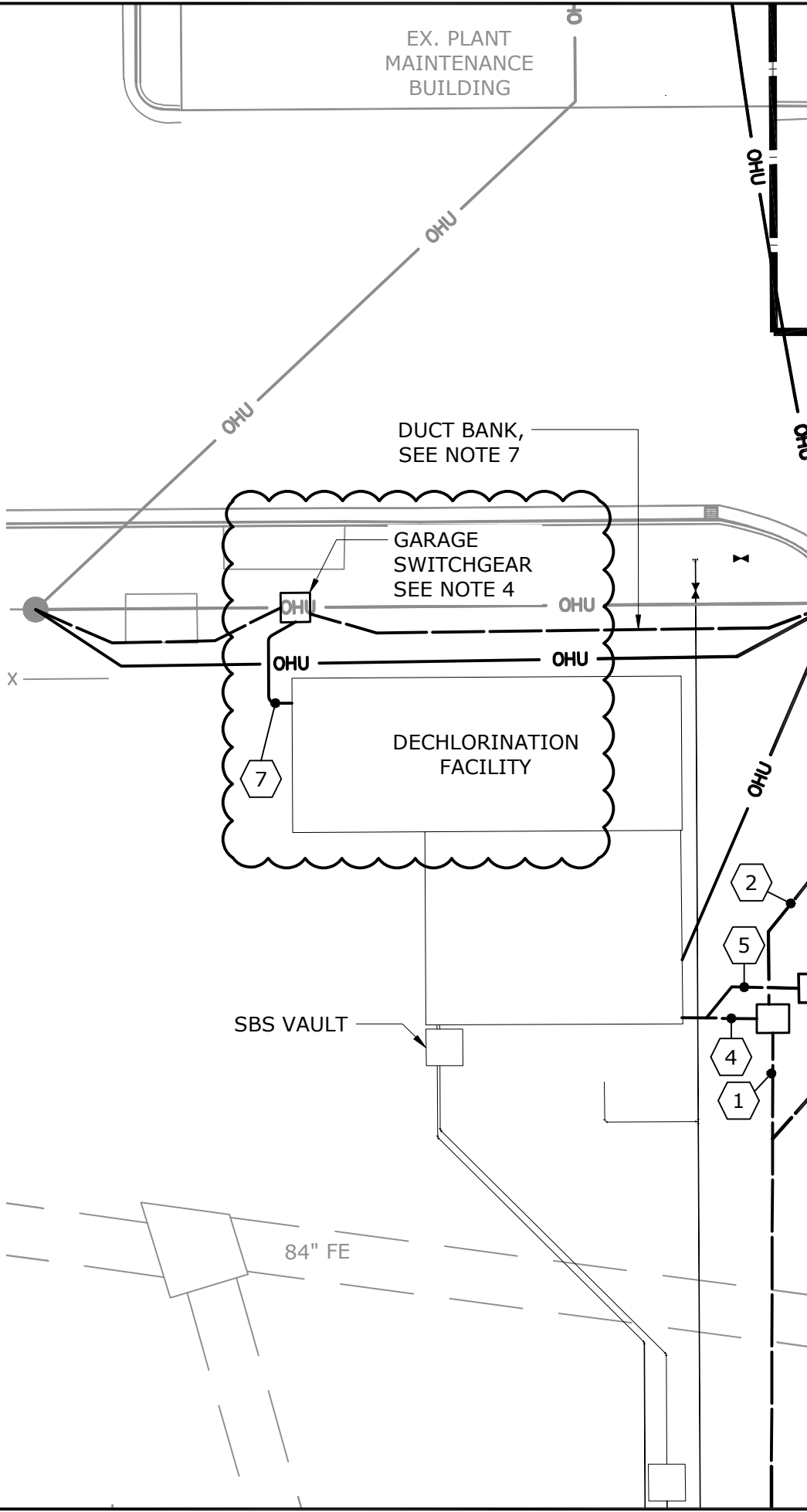
E05



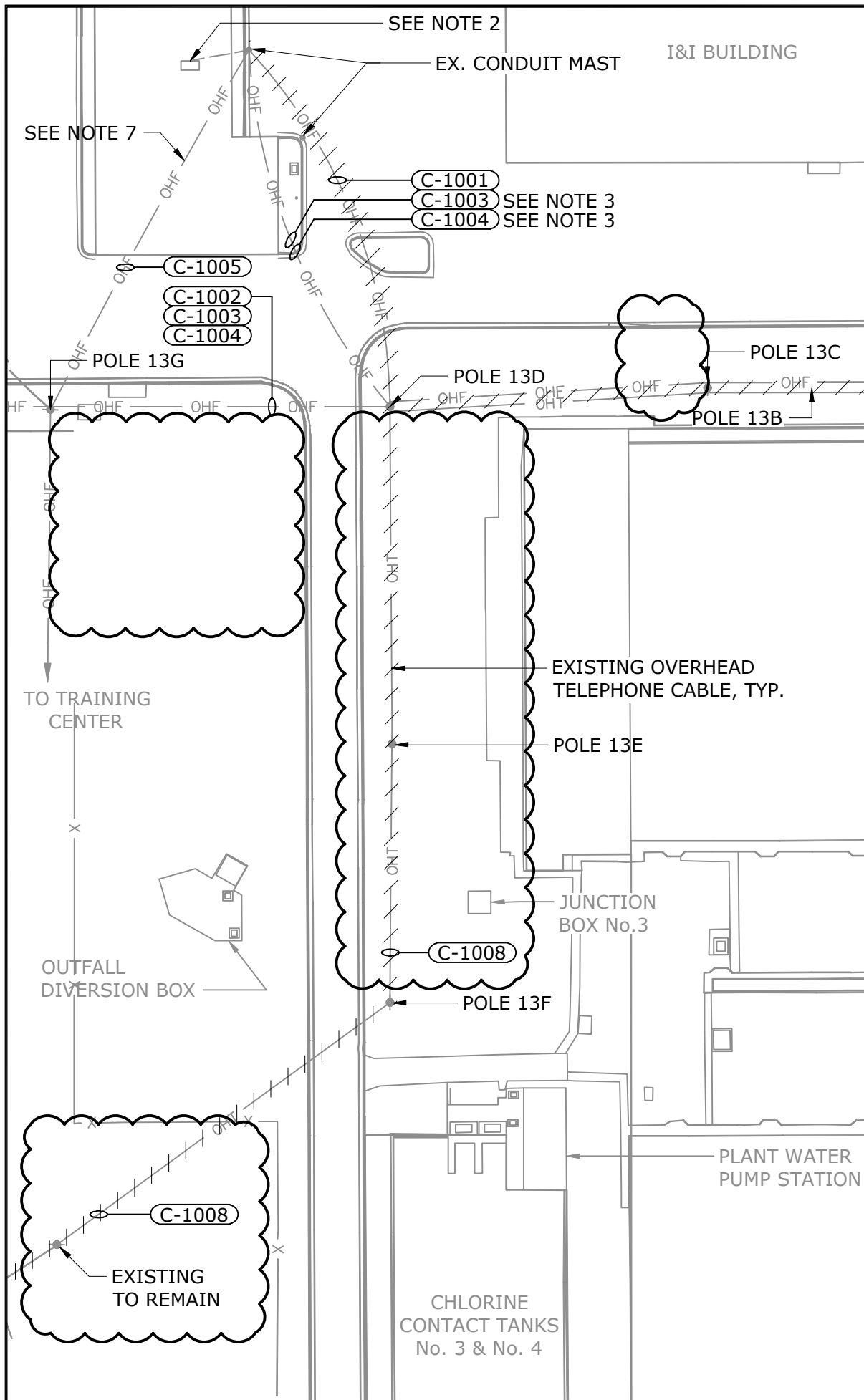
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ATTACHMENT NO. A5S502A	BY WGL	SECONDARY CLARIFIER UPGRADES MOCCASIN BEND WASTEWATER TREATMENT PLANT		CONTRACT NUMBER W-14-006-201	SHEET 1 OF 1



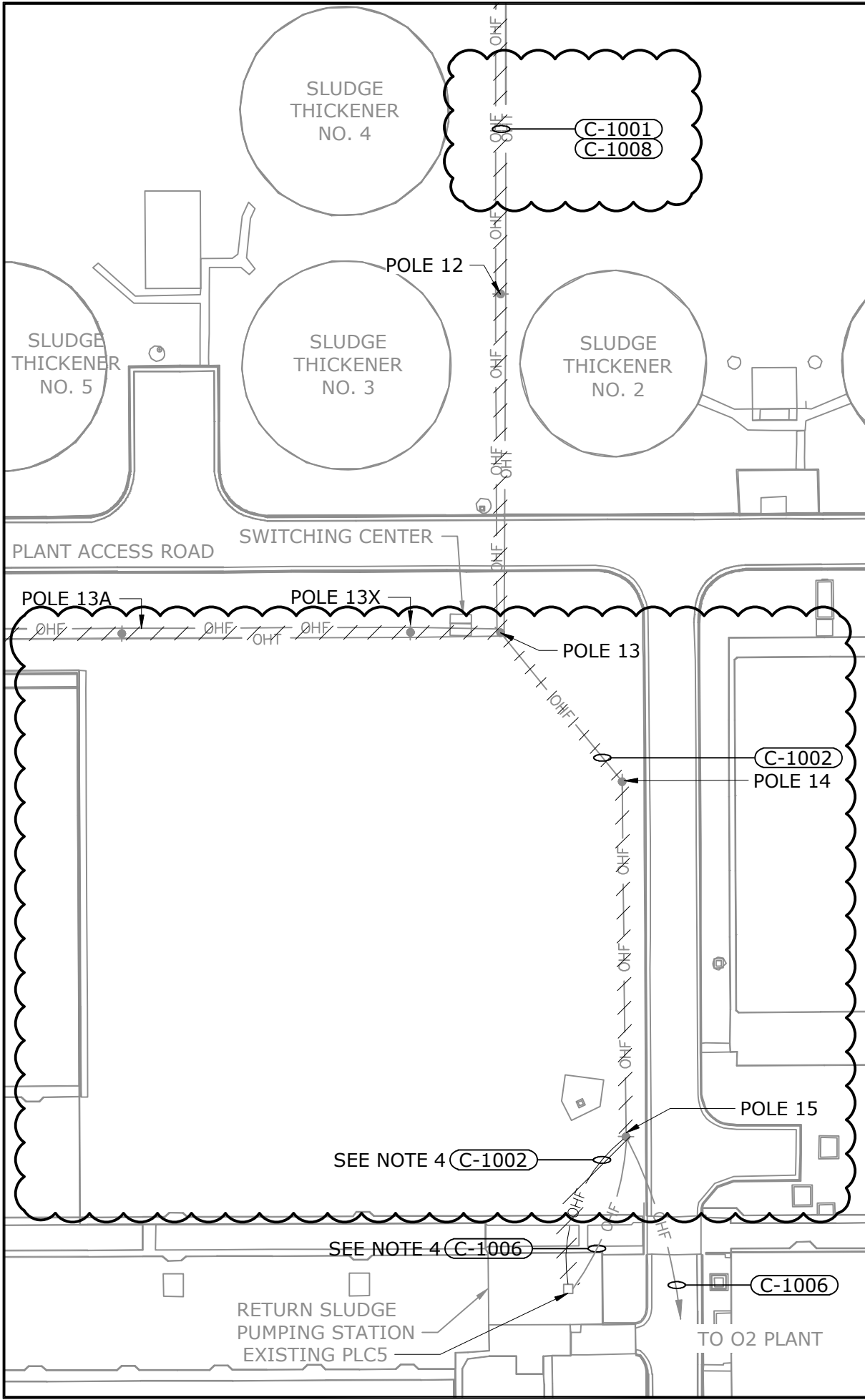
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ATTACHMENT NO. A5S505A	BY WGL	SECONDARY CLARIFIER UPGRADES MOCCASIN BEND WASTEWATER TREATMENT PLANT		CONTRACT NUMBER W-14-006-201	SHEET 1 OF 1



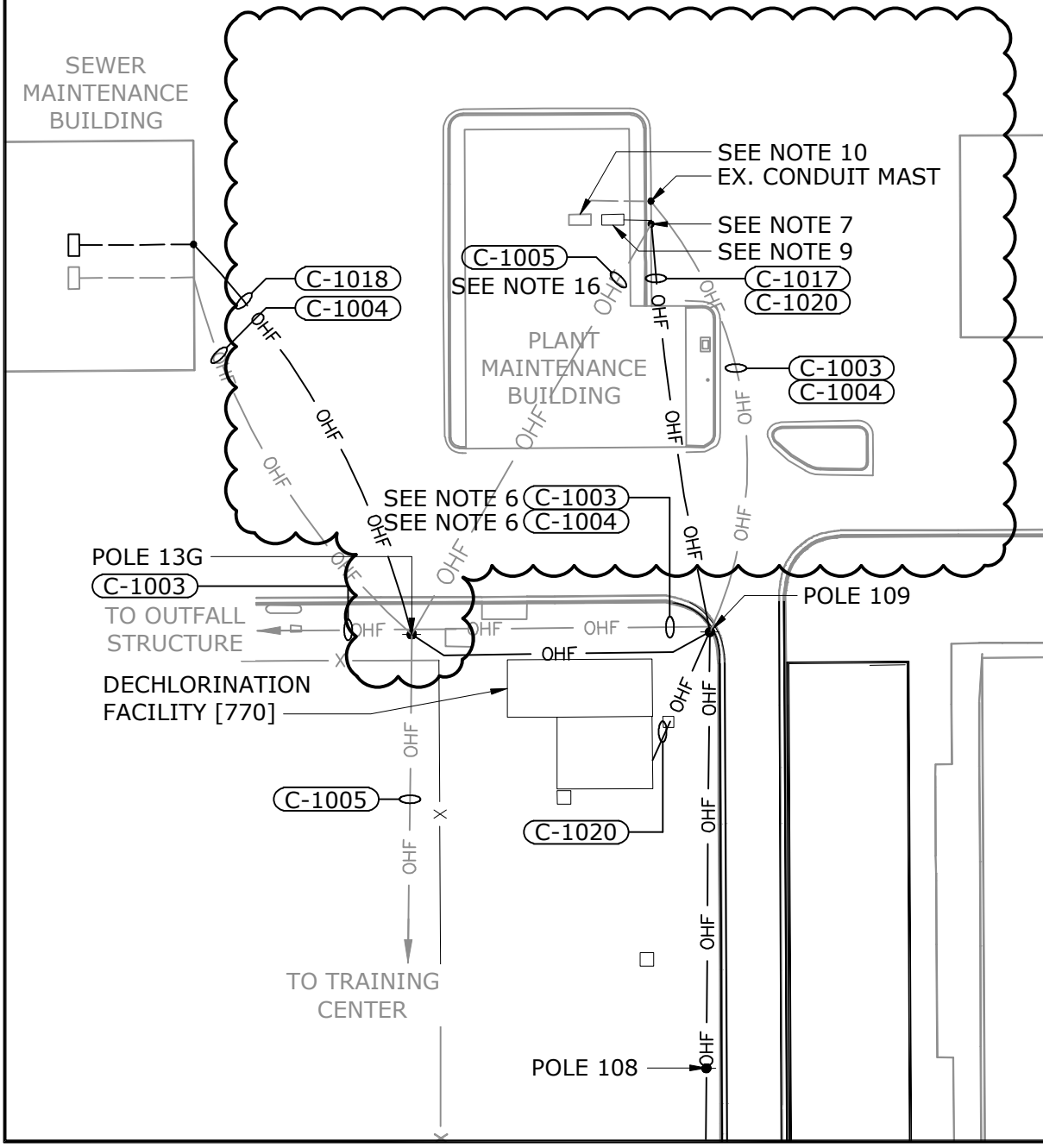
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ADDENDUM NO. 5	DATE 08/3/16	CITY OF CHATTANOOGA, TN CONSENT DECREE PROGRAM		HAZEN JOB NUMBER 50037-003	REFER TO CONTRACT DRAWING NUMBER E06
ATTACHMENT NO. A5E06A	BY DWE	SECONDARY CLARIFIER UPGRADES MOCCASIN BEND WASTEWATER TREATMENT PLANT		CONTRACT NUMBER W-14-006-201	SHEET 1 OF 2

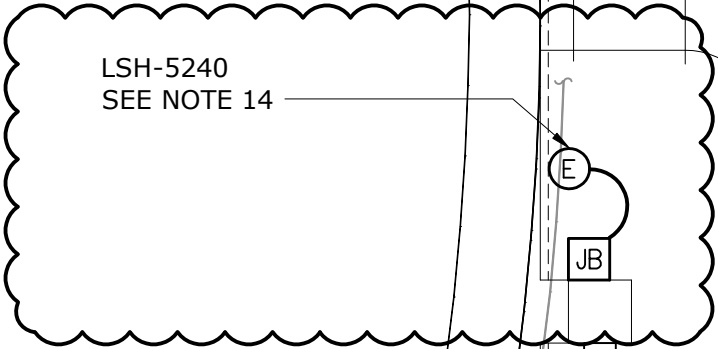


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ADDENDUM NO. 5	DATE 08/3/16	CITY OF CHATTANOOGA, TN CONSENT DECREE PROGRAM		HAZEN JOB NUMBER 50037-003	REFER TO CONTRACT DRAWING NUMBER E07
ATTACHMENT NO. A5E07A	BY DWE	SECONDARY CLARIFIER UPGRADES MOCCASIN BEND WASTEWATER TREATMENT PLANT		CONTRACT NUMBER W-14-006-201	SHEET 1 OF 1

SECONDARY CLARIFIER No.15
(SC-5015)



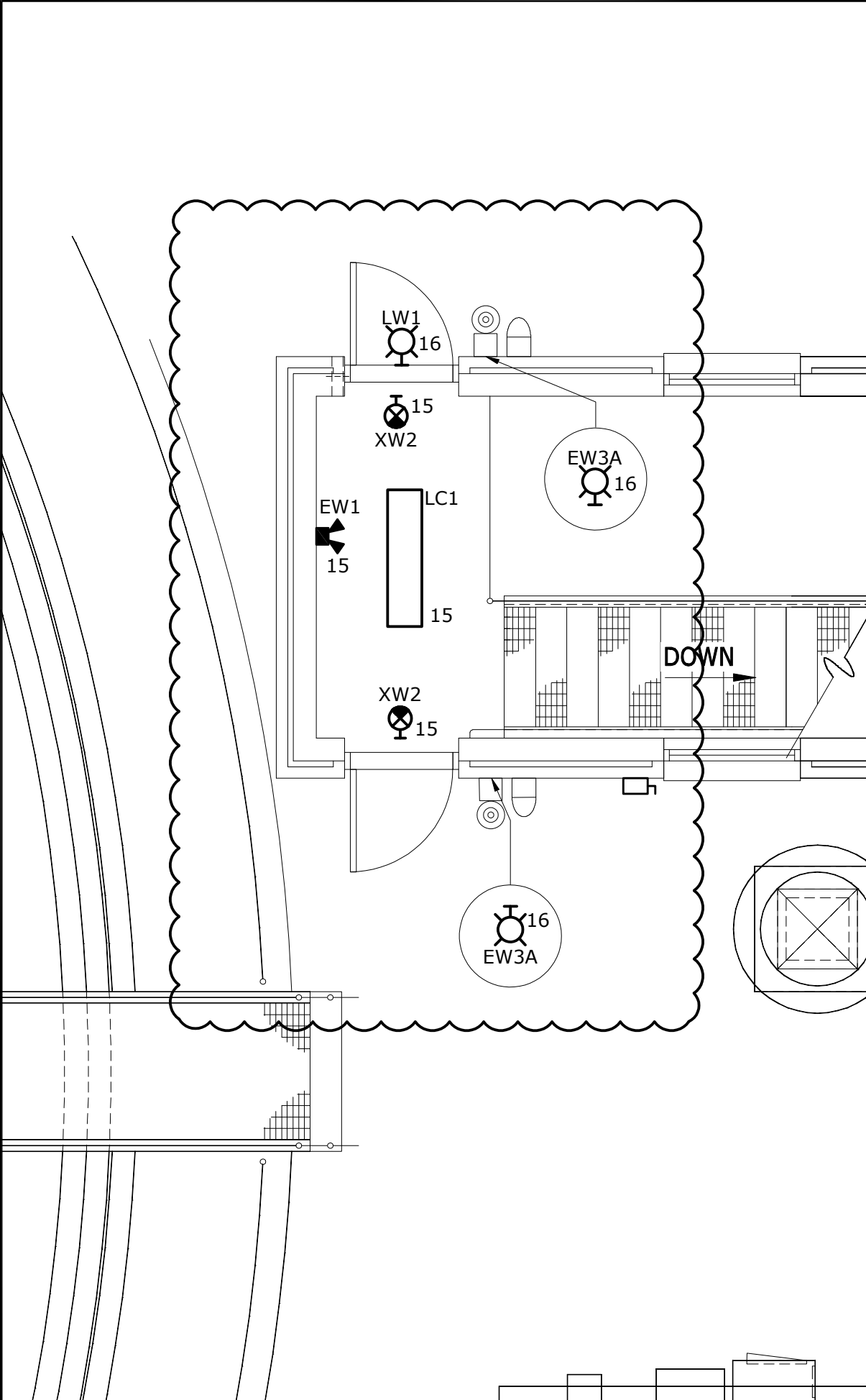
SEE NOTE 8
RAS-HRCP-1

LSH-5240
SEE NOTE 14

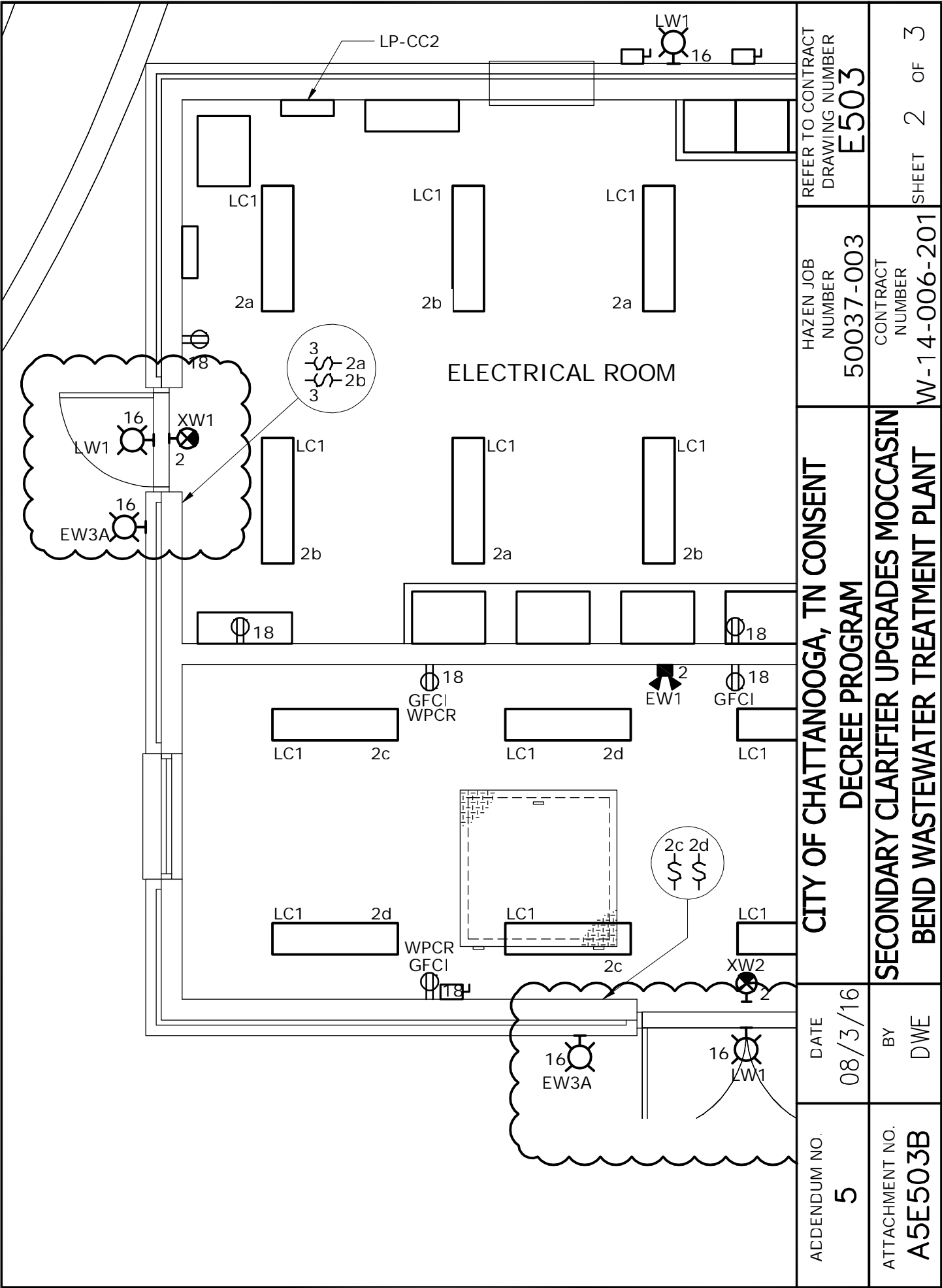
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SEE NOTE 2, TYP.

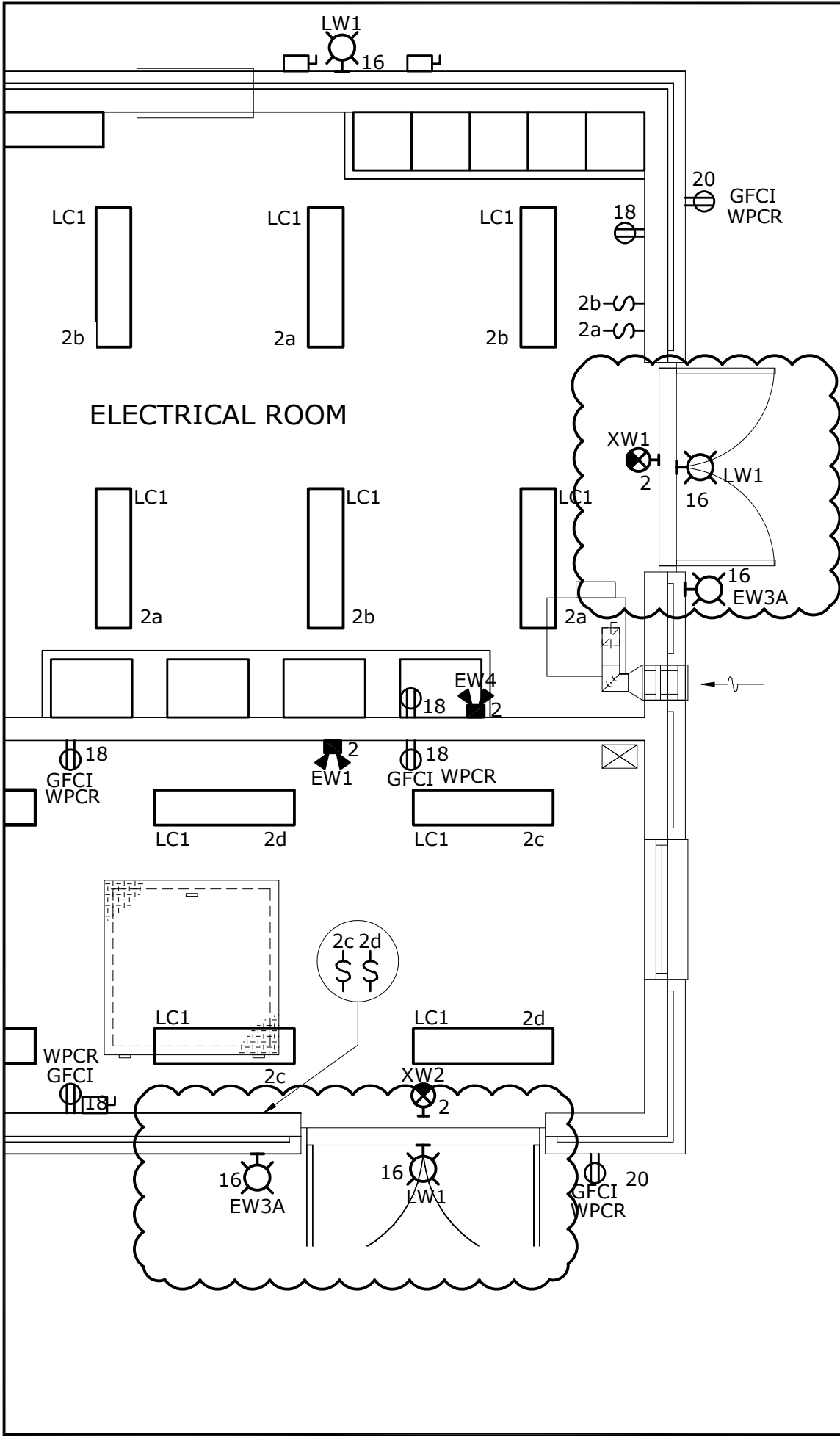
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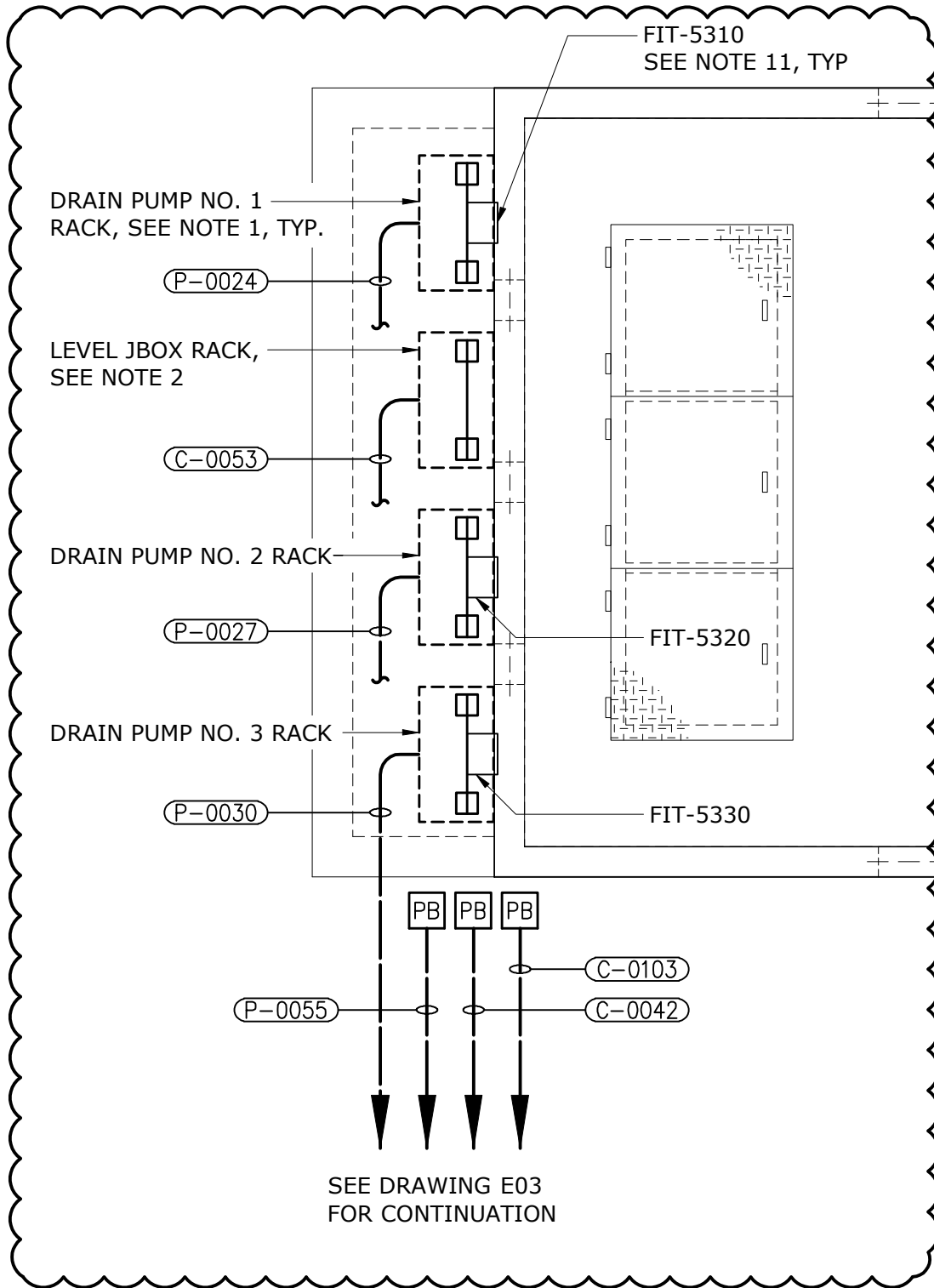
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ADDENDUM NO. 5	DATE 08/3/16	CITY OF CHATTANOOGA, TN CONSENT DECREE PROGRAM		HAZEN JOB NUMBER 50037-003	REFER TO CONTRACT DRAWING NUMBER E503
ATTACHMENT NO. A5E503B	BY DWE	SECONDARY CLARIFIER UPGRADES MOCCASIN BEND WASTEWATER TREATMENT PLANT		CONTRACT NUMBER W-14-006-201	SHEET 2 OF 3



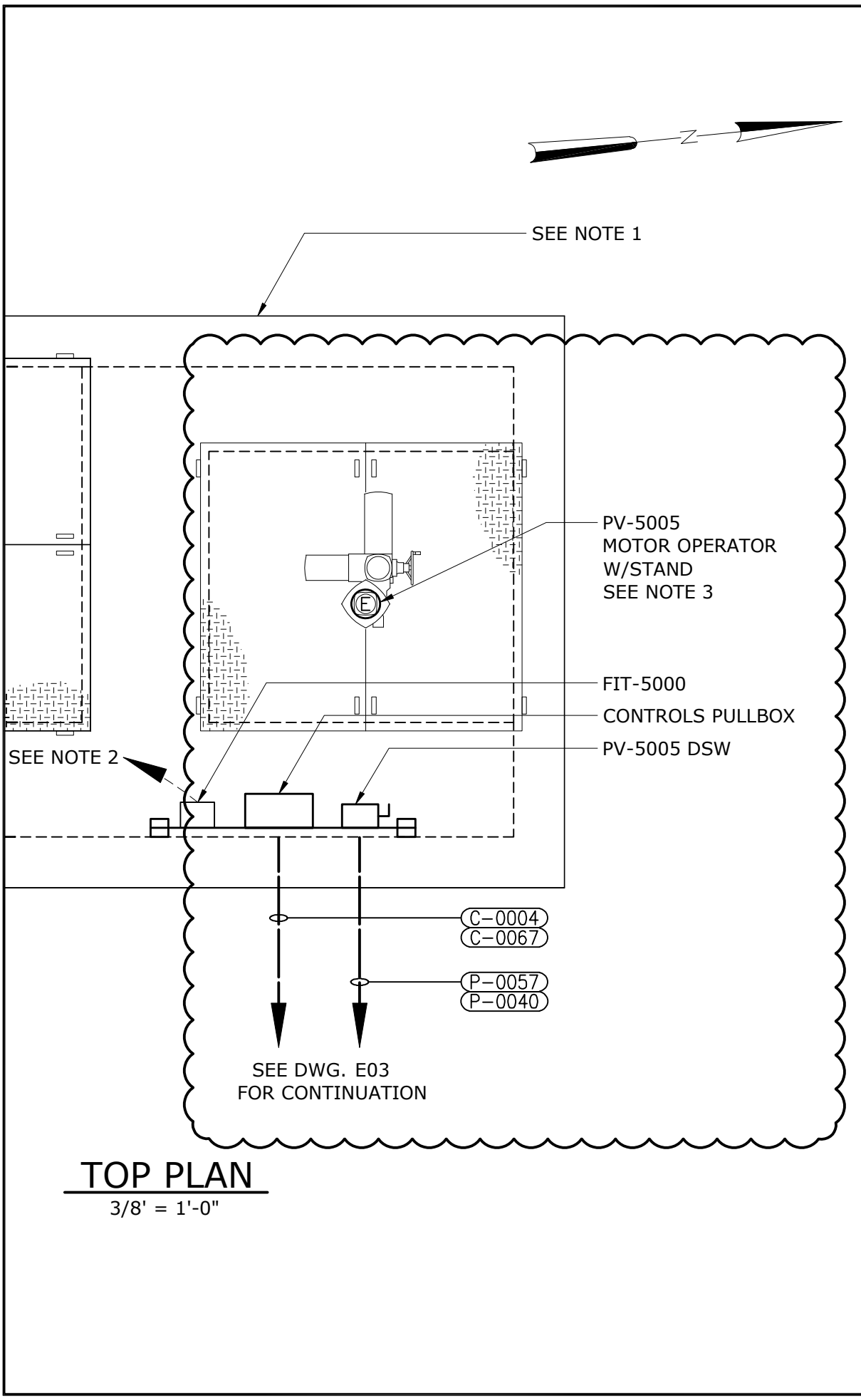
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ATTACHMENT NO. A5E503C	BY DWE	SECONDARY CLARIFIER UPGRADES MOCCASIN BEND WASTEWATER TREATMENT PLANT	CONTRACT NUMBER W-14-006-201	SHEET 3 OF 3



TOP PLAN

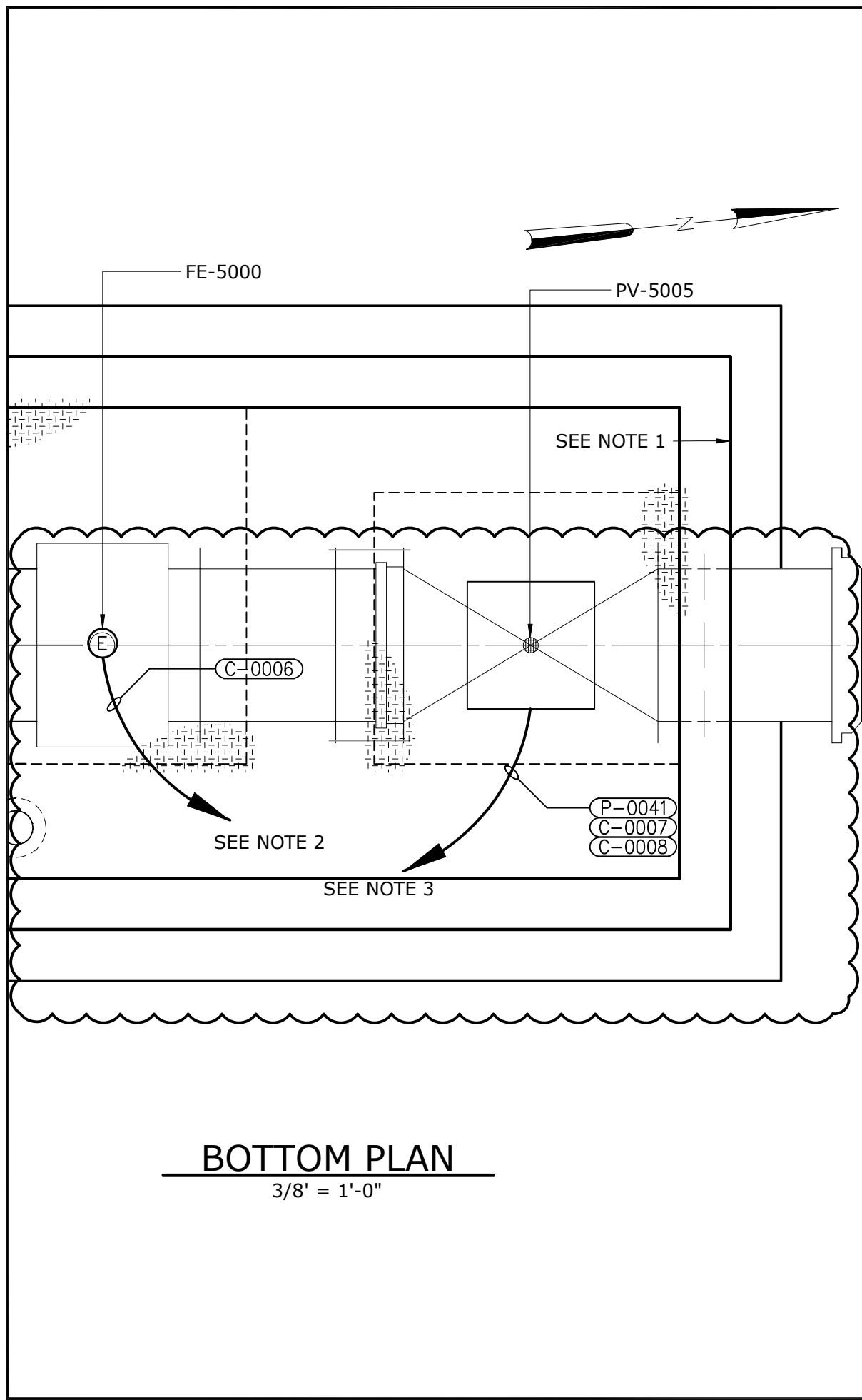
3/8" = 1'-0"

ADDENDUM NO. 5	DATE 08/3/16	CITY OF CHATTANOOGA, TN CONSENT DECREE PROGRAM	HAZEN JOB NUMBER 50037-003	REFER TO CONTRACT DRAWING NUMBER E506
ATTACHMENT NO. A5E506A	BY DWE	SECONDARY CLARIFIER UPGRADES MOCCASIN BEND WASTEWATER TREATMENT PLANT	CONTRACT NUMBER W-14-006-201	SHEET 1 OF 1

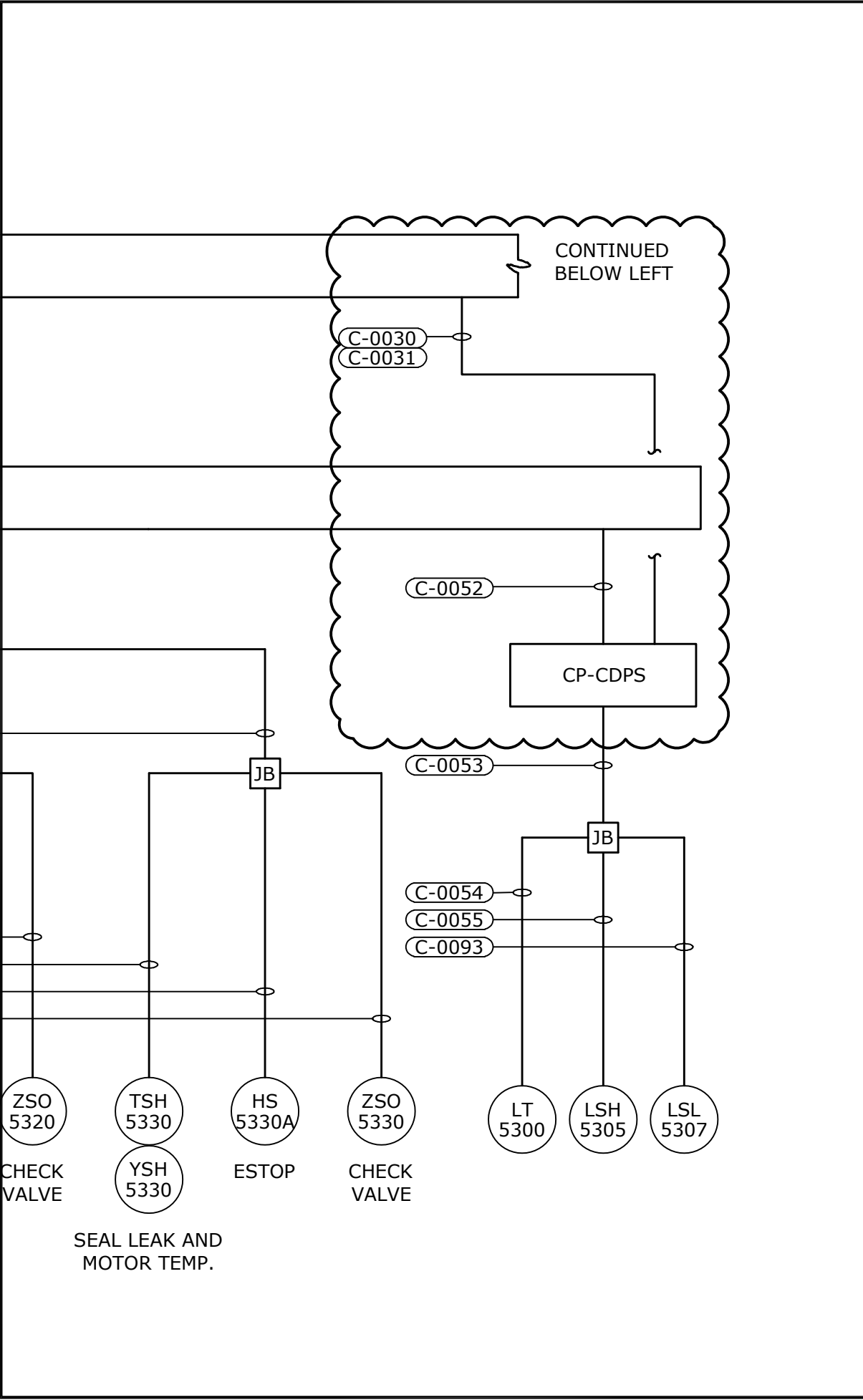


TOP PLAN
3/8" = 1'-0"

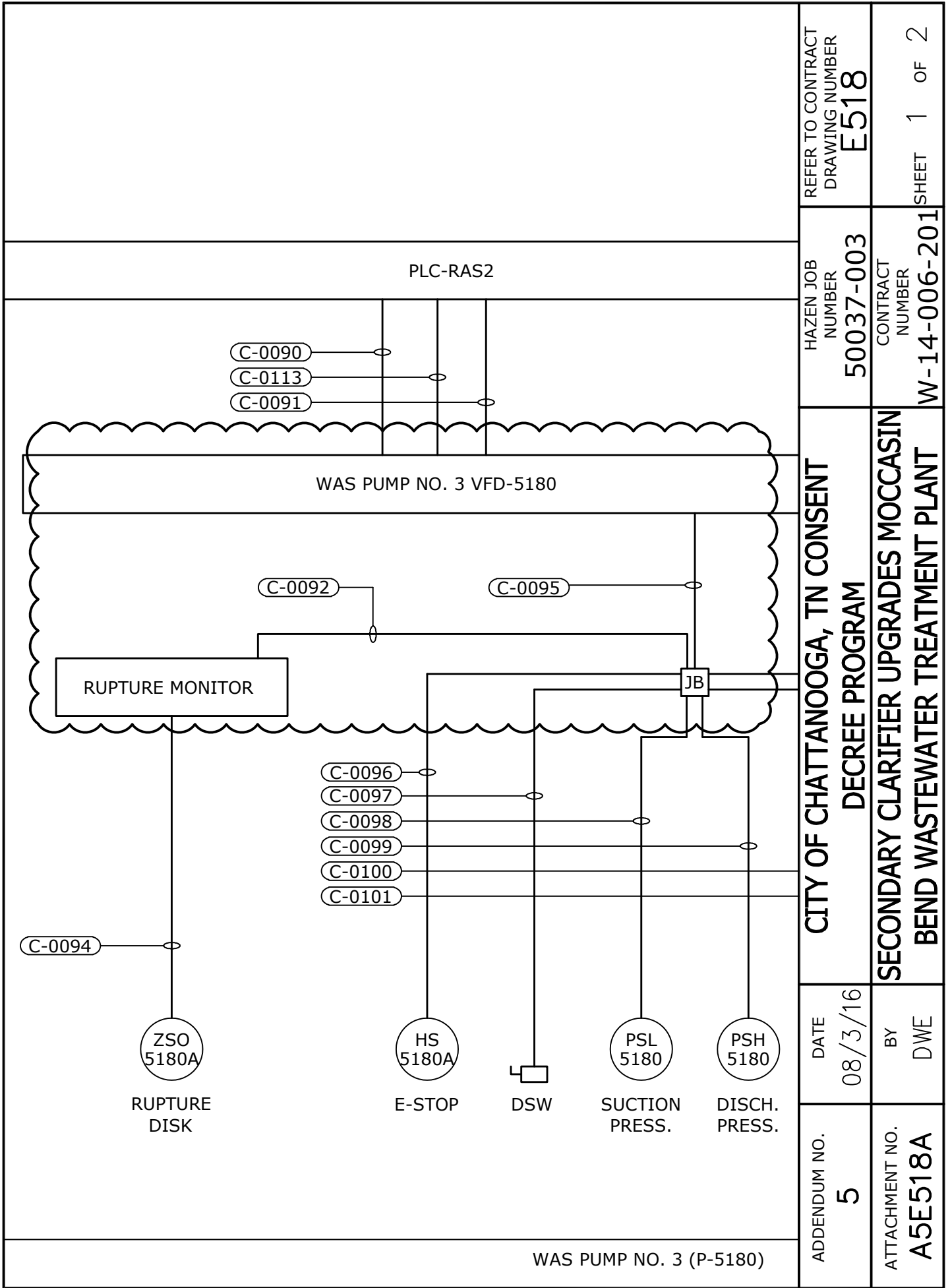
ADDENDUM NO. 5	DATE 08/3/16	CITY OF CHATTANOOGA, TN CONSENT DECREE PROGRAM	HAZEN JOB NUMBER 50037-003	REFER TO CONTRACT DRAWING NUMBER E508
ATTACHMENT NO. A5E508A	BY DWE	SECONDARY CLARIFIER UPGRADES MOCCASIN BEND WASTEWATER TREATMENT PLANT	CONTRACT NUMBER W-14-006-201	SHEET 1 OF 2

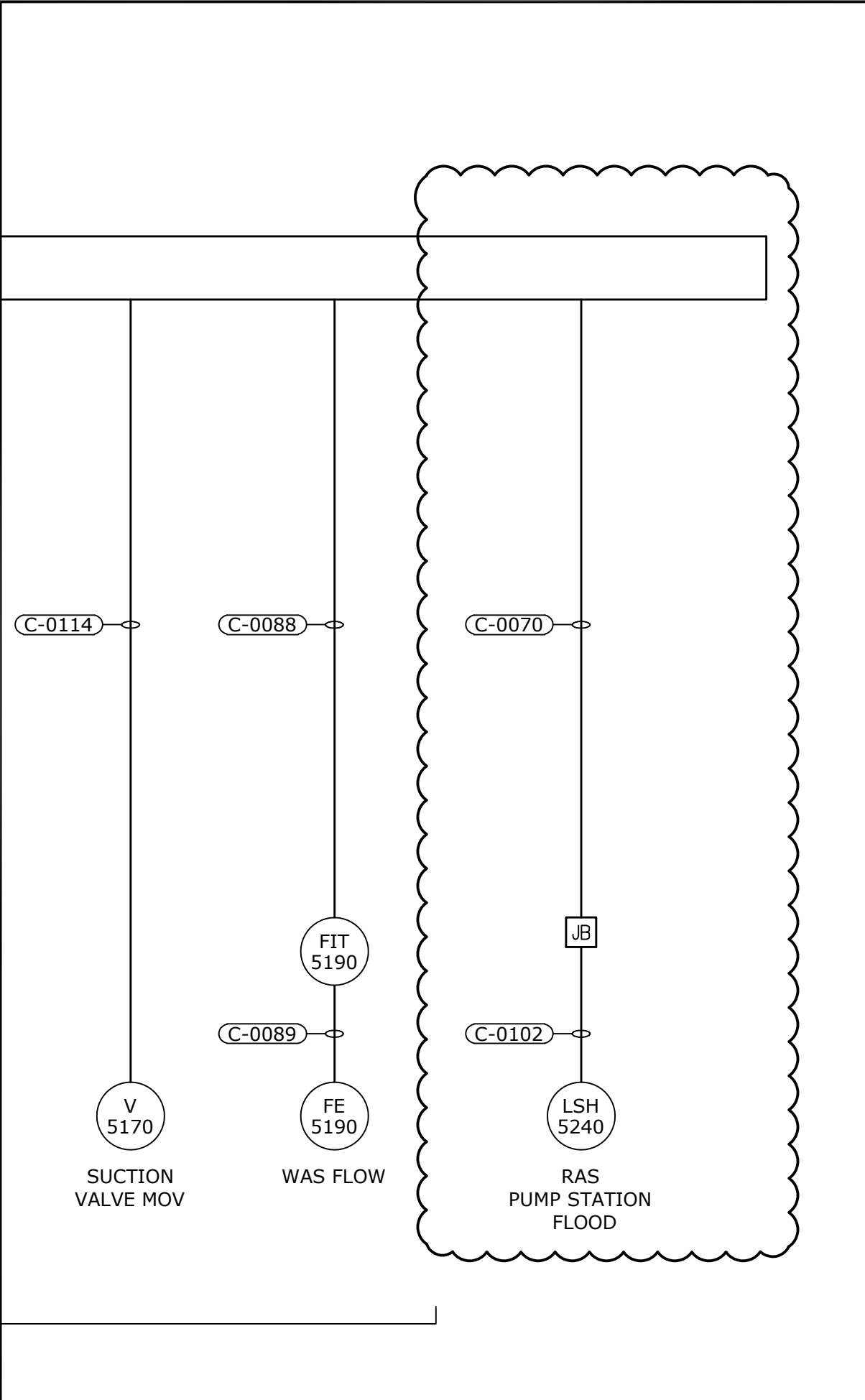


ADDENDUM NO. 5	DATE 08/3/16	CITY OF CHATTANOOGA, TN CONSENT DECREE PROGRAM	HAZEN JOB NUMBER 50037-003	REFER TO CONTRACT DRAWING NUMBER E508
ATTACHMENT NO. A5E508B	BY DWE	SECONDARY CLARIFIER UPGRADES MOCCASIN BEND WASTEWATER TREATMENT PLANT	CONTRACT NUMBER W-14-006-201	SHEET 2 OF 2

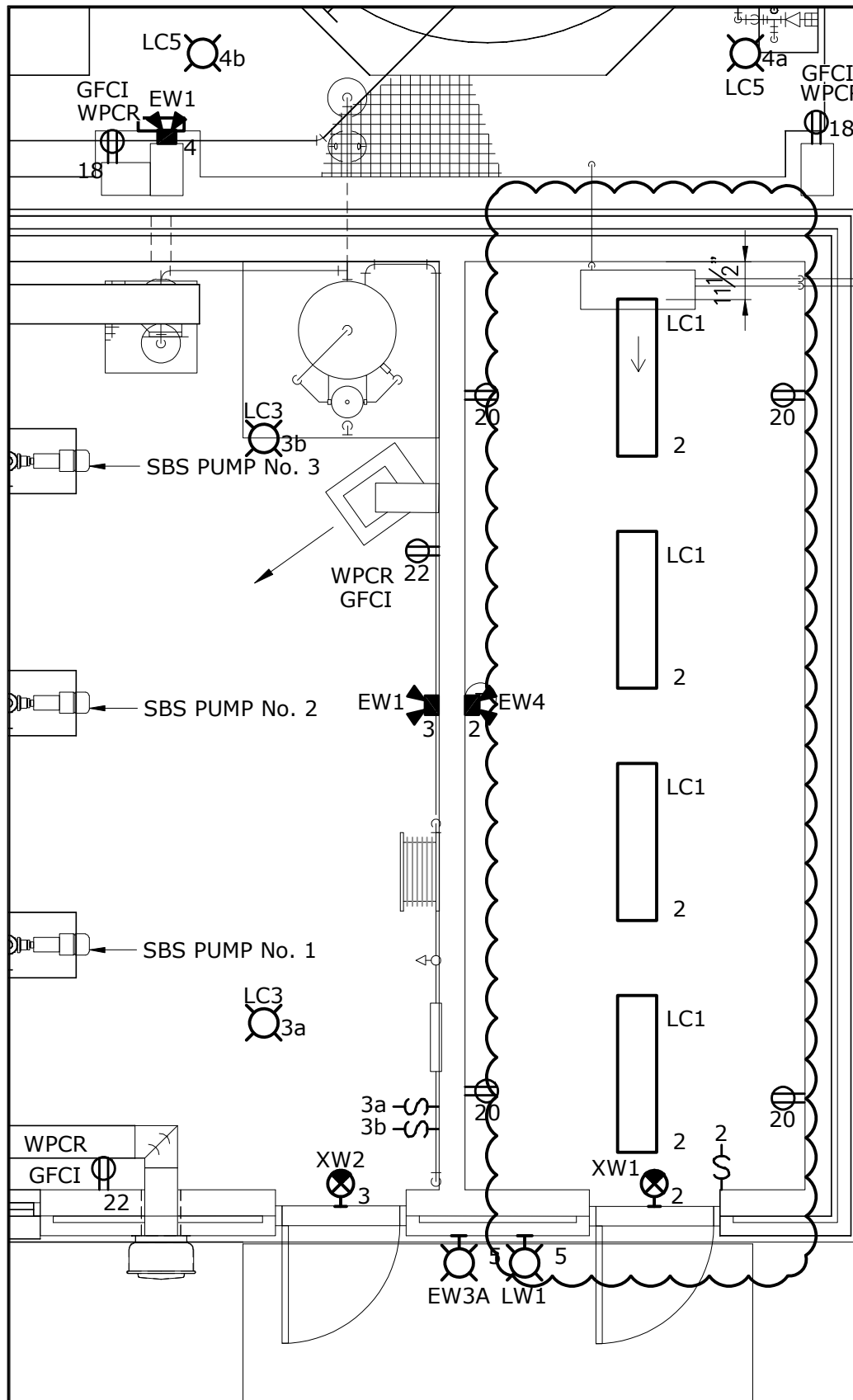


ADDENDUM NO. 5	DATE 08/3/16	CITY OF CHATTANOOGA, TN CONSENT DECREE PROGRAM	HAZEN JOB NUMBER 50037-003	REFER TO CONTRACT DRAWING NUMBER E517
ATTACHMENT NO. A5E517A	BY DWE	SECONDARY CLARIFIER UPGRADES MOCCASIN BEND WASTEWATER TREATMENT PLANT	CONTRACT NUMBER W-14-006-201	SHEET 1 OF 1



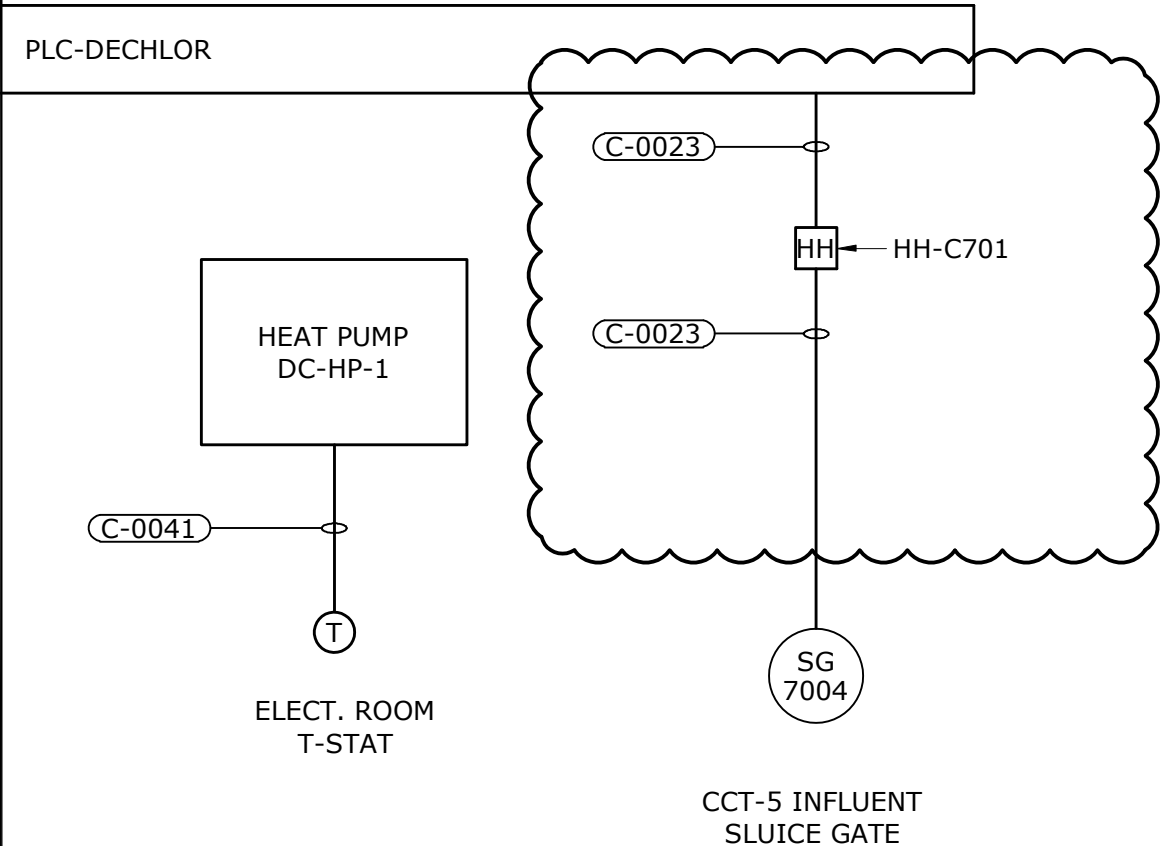


ADDENDUM NO. 5	DATE 08/3/16	CITY OF CHATTANOOGA, TN CONSENT DECREE PROGRAM	HAZEN JOB NUMBER 50037-003	REFER TO CONTRACT DRAWING NUMBER E518
ATTACHMENT NO. A5E518B	BY DWE	SECONDARY CLARIFIER UPGRADES MOCCASIN BEND WASTEWATER TREATMENT PLANT	CONTRACT NUMBER W-14-006-201	SHEET 2 OF 2

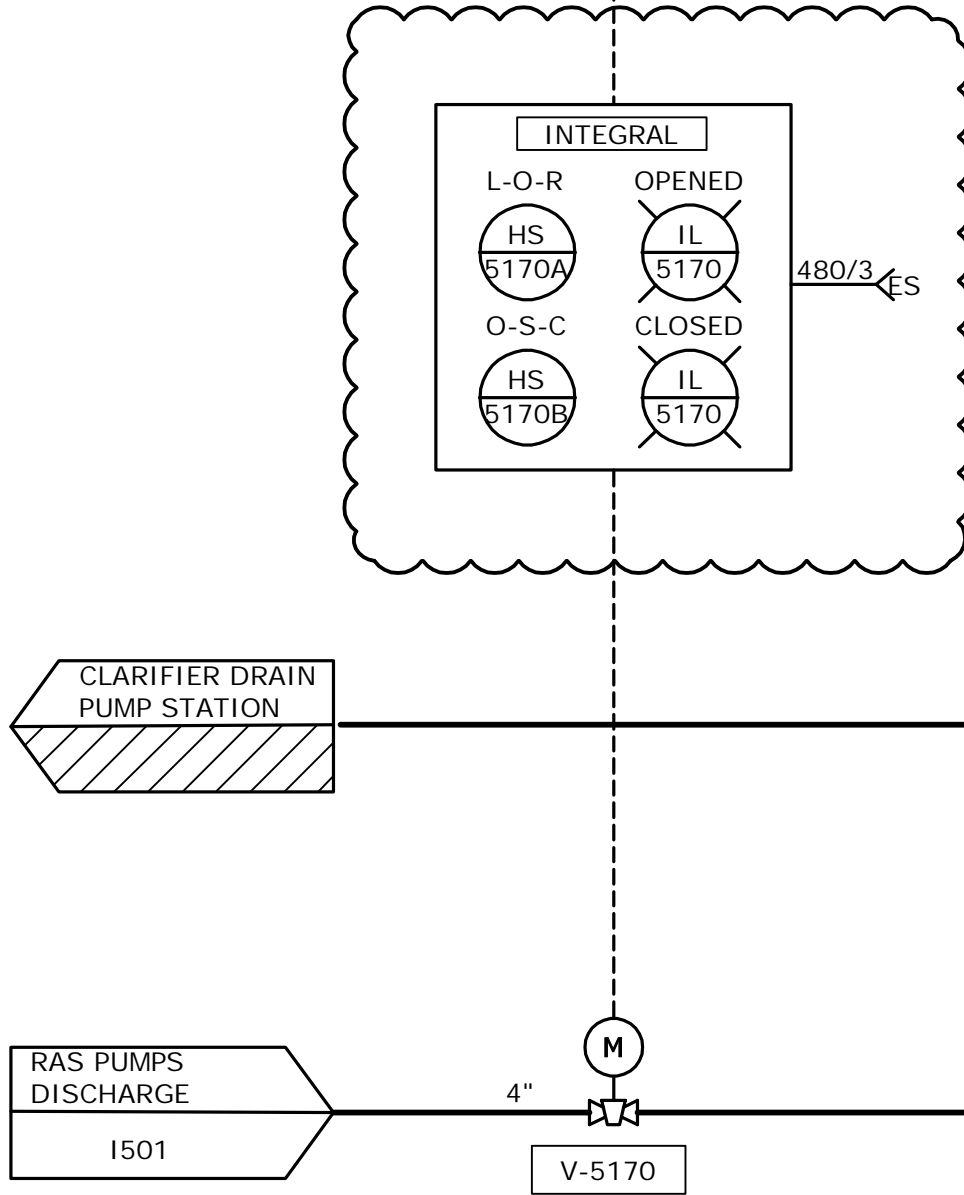


PLAN - LIGHTING
1/4" = 1'-0"

ADDENDUM NO. 5	DATE 08/3/16	CITY OF CHATTANOOGA, TN CONSENT DECREE PROGRAM		HAZEN JOB NUMBER 50037-003	REFER TO CONTRACT DRAWING NUMBER E771
ATTACHMENT NO. A5E771A	BY DWE	SECONDARY CLARIFIER UPGRADES MOCCASIN BEND WASTEWATER TREATMENT PLANT		CONTRACT NUMBER W-14-006-201	SHEET 1 OF 1



ADDENDUM NO. 5	DATE 08/3/16	CITY OF CHATTANOOGA, TN CONSENT DECREE PROGRAM	HAZEN JOB NUMBER 50037-003	REFER TO CONTRACT DRAWING NUMBER E775
ATTACHMENT NO. A5E775A	BY DWE	SECONDARY CLARIFIER UPGRADES MOCCASIN BEND WASTEWATER TREATMENT PLANT	CONTRACT NUMBER W-14-006-201	SHEET 1 OF 2



ADDENDUM NO. 5	DATE 08/11/16	CITY OF CHATTANOOGA, TN CONSENT DECREE PROGRAM	HAZEN JOB NUMBER 50037-003	REFER TO CONTRACT DRAWING NUMBER 1502
ATTACHMENT NO. A5I502A	BY JEE	SECONDARY CLARIFIER UPGRADES MOCCASIN BEND WASTEWATER TREATMENT PLANT	CONTRACT NUMBER W-14-006-201	SHEET 1 OF 1