

## ADDENDUM NO. 2

DATE: April 20, 2026

OWNER: Town of Tignall

PROJECT: Wastewater Treatment Plant Improvements

C & S PROJECT NO.: T7040.003

ENGINEER: Martin C. Boyd, P.E.  
CARTER & SLOOPE, INC.  
1031 Stonebridge Parkway  
Watkinsville, Georgia 30677  
Telephone: 706-769-4119  
Email: [mboyd@cartersloope.com](mailto:mboyd@cartersloope.com)

BID DATE: April 30, 2026

BID OPENING: 2:00 PM Local Time

TO ALL BIDDERS:

DOWNLOADING THIS ADDENDUM THROUGH QUESTCDN IS YOUR ACKNOWLEDGMENT OF RECEIPT. NO OTHER ACTION IS NECESSARY TO ACKNOWLEDGE RECEIPT. THIS ADDENDUM FORMS A PART OF THE BID DOCUMENTS WHICH ARE HEREBY MODIFIED IN THE FOLLOWING RESPECTS:

### I. CLARIFICATIONS

#### 1. Bid Opening Change

The new Bid Opening date will be on April 30, 2026 at 2:00 PM Local Time. The Bid Opening will still occur online through the QuestCDN website. All references to the Bid Opening date in the Specifications should be updated to this new date.

### II. Questions / Answers

1. **Question:** Will there be a scheduled pre-bid conference for the above-referenced project at your earliest convenience?

**Answer:** There will be no pre-bid conference.

2. **Question:** Can you also confirm if there are any Minority Goals/Requirements for this project?

**Answer:** There are no minority goals/requirements for this project since the project will be under \$10,000,000.

3. **Question:** Is this project subject to BABA, AIS, or any other requirement for domestically made projects in reference to the domestic preference called in spec section 00819-15?

**Answer:** BABA and AIS do not apply since this project will be under \$10,000,000.

4. **Question:** If domestic materials are required, what materials will fall under this requirement?  
**Answer:** Domestic materials are preferred but not required.
5. **Question:** Please confirm that the contractor is to negotiate terms and conditions with the pre-selected equipment suppliers on negotiated terms and not the ones provided in the quote to the owner.  
**Answer:** The Contractor shall use the Terms and Conditions provided in the Specifications. Note that Section 01030 is being modified by this Addendum (see below), which affects the Terms and Conditions.
6. **Question:** Is the ductile iron pipe cement mortar interior lining as called out in spec section 15062-3 correct for the gravity and force main sewer or should it be a lining with a ceramic epoxy like Proteco 401?  
**Answer:** Ductile Iron Pipe shall have a cement mortar lining and a bituminous seal coat on the inside per spec section 02500-5 -2.1.
7. **Question:** Spec section 15062-3 calls out the ductile iron pipe for air service to have an interior epoxy lining of Tnemec N140 Pota-Pox with EPDM gaskets but note 4 on plan sheet 13 calls out the ductile to be unlined with Viton gaskets. What will be required?  
**Answer:** All air lines shall be D.I.P. lined with Tnemec N140 Pota-Pox or Engineer approved equal with EPDM gaskets rated for temperatures up to 250 degrees F. See Specifications for additional information. Revised Sheet 13 forthcoming in next Addendum.
8. **Question:** Plan sheet 14 calls out a Waterman C-20 canal style gate or approved equal control gate for the aeration effluent structure but spec section 15124-3 calls out a Waterman SS-250 and a few other brand sluice style gates. What will be required?  
**Answer:** The Contractor shall furnish and install a Waterman C-20 or Engineer approved equal as shown on the Drawings.
9. **Question:** Please confirm that owner is responsible for employing a material testing firm for this project.  
**Answer:** Yes, it is the responsibility of the owner to employ a material testing firm. Contractor shall pay for testing services required by the specifications using the testing allowance, which was added in Addendum 1 and to the online Bid Form.
10. **Question:** Does this project have Davis-Bacon or AIS requirements  
**Answer:** No. See earlier response.
11. **Question:** If Davis-Bacon wage rates are applicable, can you please provide the wage rate sheet and construction type classification that applies to this project?  
**Answer:** Davis-Bacon wage rates are not applicable. See earlier response.

- 12. Question:** What factors will determine the award of this project? Is the award to be based on the lowest single prime amount on the bid form?
- Answer:** The Contract will be awarded in accordance with Section 00200, Articles 10 and 18. The Deductions are mandatory, but are not included in the Total Base Bid Amount.
- 13. Question:** Is a list of subcontractors and suppliers required to be submitted with the bid?
- Answer:** Yes, a list of sub-contractors and suppliers are to be submitted within five (5) days after bidding
- 14. Question:** In light of the unprecedented and unpredictable market conditions arising out of or relating to newly enacted or changed tariffs or other enactments and/or changes to laws, regulations, executive orders and other orders or decrees of government officers and authorities relating to ongoing and/or future trade in or with the United States, will the Owner modify the terms of the Contract to provide Contractor with reasonable equitable relief due to the unpredictable effect of such tariffs and market conditions on the cost or time for performance of the Work after the submission of bids or completed negotiations of price?
- Answer:** The Owner will provide the Contractor with reasonable equitable relief due to the effect of tariffs on the cost or time for performance of the Work after the submission of bids or completed negotiations of price. The Contractor must provide documentation of changes to price and time due to tariffs.
- 15. Question:** Are digital signatures for bid documents acceptable in lieu of wet ink signatures?
- Answer:** Digital signatures are acceptable.
- 16. Question:** Where is the existing potable water line that can be permanently connected to the chemical building?
- Answer:** The chemical building does not require a potable water line connection.
- 17. Question:** Can you please provide a geotechnical report for the project site? There are specifications regarding dewatering systems and rock removal, but no geotechnical report is attached.
- Answer:** A subsurface investigation of the project site has not been conducted. A geotechnical engineer will evaluate soil conditions during construction.
- 18. Question:** Please provide bypass pumping specifications.
- Answer:** If bypass pumping is required during construction, the Contractor shall supply the necessary pumps, conduits and other equipment to divert the flow of sewage around the sewer system sections in which work is to be performed. The diversion system shall be of sufficient capacity to handle existing flows plus additional flow that may occur during period of a rain storm or peak flows. The Contractor will be responsible for furnishing the necessary labor and supervision to set up and operate the pumping and flow diversion system. If pumping is required on a 24-hour basis, all engines shall be equipped in a manner to keep the pump noise at a minimum. The minimum bypass pumping rate should be 200 gpm.

19. **Question:** Will the existing basins remain aerated or will they be repurposed as EQ storage or settling basins?  
**Answer:** Existing basin "Pond A" will remain aerated. The blowers providing air to Pond A are to be relocated as shown. A new aeration system will be provided to Pond C as part of the Contractor's work
20. **Question:** Sheet 9, section B-B shows a "proposed concrete pad" on grade next the bar screen structure. What is the intended length of this slab? Does it span the length of the entire structure?  
**Answer:** See Sheet 9 "Top Plan" for pad dimensions.
21. **Question:** Sheet 17 says "See 26 for detail" related to the chemical piping pull box. However, there is not a detail for the pull box on sheet 26. Can a detail for the pull box be provided?  
**Answer:** Please see modified sheet 26 included in this Addendum for the chemical piping pull box detail.
22. **Question:** Can details or specifications be provided for the fiberglass grating in the chemical storage building, or will the fiberglass grating reflect the aluminum grating details on Sheet 26?  
**Answer:** The fiberglass grating manufacture can supply their standard detail for mounting in a concrete slab.
23. **Question:** Please confirm that the plug valve between SSMH A-1 and SSMH A-2 is to be 8" and not 12". The plug valve is shown as 8" on Sheet 8 but 12" on Sheet 7.  
**Answer:** The plug valve between SSMH A-1 & SSMH A-2 is to be an 8" valve. See revised Sheet 7 enclosed in this Addendum.
24. **Question:** Please confirm the intention with the pipe wall detail on Sheet 23 and what would differentiate the use of the left or right details. We are assuming the right detail can be used for pipe penetrations through new walls.  
**Answer:** The intent of the detail is to give the Contractor two different options for pipe penetrations. Whether or not a flush mount pipe penetration is used is up to the Contractor.
25. **Question:** Sheet 22 shows 5" wafer check valve w/ EPDM for Item No 17, but the air piping across the site is 4". What is the intention to connect the 4" air piping to the 5" blower inlet?  
**Answer:** A 5" x 4" flanged reducer is required. Revised sheet forthcoming in next Addendum.
26. **Question:** There is an 8" plug valve with a valve box shown outside the Existing Effluent Structure on Sheet 7, but this 8" plug valve is not shown Sheet 8 for the Proposed Aeration Basin Influent Structure in "Line A - Bypass Line". Is this 8" plug valve needed?  
**Answer:** 8" plug valve is not needed.

27. **Question:** Please confirm that gravity sewer lines will be 4" and not 8". The "Air Piping Schedule" on Sheet 13 lists gravity sewer lines as 8" but the drawing indicates 4".  
**Answer:** Yes, the gravity sewer line will be 4" and not 8".
28. **Question:** Please confirm if sales tax should be included in the base bid price for items intended for sales tax reimbursement as listed in Addendum #1.  
**Answer:** Yes, sales tax should be included in the base bid price. The Owner will request a refund from the Georgia Department of Revenue for sales taxes paid on equipment used to reduce water pollution.
29. **Question:** The drawings indicate Pre-Engineered Fiberglass Building dimensions of 8'-0" x 14'-0" x 9'-0" H, while the specifications indicate 8'-4" x 14'-6" x 9'-2" H. Please confirm the required dimensions and advise of any impact to the slab/foundation design.  
**Answer:** The required dimensions are 8'-0" x 14'-0" x 9'-0" H as indicated on the Drawings. Spec Section 13150 should be modified to reflect these dimensions.
30. **Question:** Are you going to make changes to the pond dredging?  
**Answer:** Yes, we intend to address this in Addendum 3 this week.
31. **Question:** I do not see a requirement to submit Specification Section 00410 – Basis of Bid online as our "Proposal Form" to be signed and submitted as a binding bid. Please advise at your earliest convenience.  
**Answer:** Section 00410 has been updated by this Addendum to include signatures.
32. **Question:** I see undercutting mentioned a few times under the structures to excavate unsuitable material and replace with #57 stone. How much undercutting/stone replacement should be assumed?  
**Answer:** The Contractor shall assume 12-inches of #57 stone under proposed structures. Any additional undercutting and stone will be paid for through the Supplemental Allowance.
33. **Question:** Spec section 11000 appears in the table of contents but not in the specs. Is this spec section required? If so, please provide.  
**Answer:** Spec Section 11000 is included in the specs.
34. **Question:** Can you confirm the Davis Bacon Wage rates required in this spec section are not required on this project? The bid advertisement seems to say it is not required because it is under \$10M (00100-1.10), but I don't see the \$10M minimum requirement in section 00819.  
**Answer:** Davis-Bacon Wage Rates are not required because this project is under \$10M. See Section 0819, Paragraph D.
35. **Question:** Spec Section 00819-L lists a domestic preference. Does this mean this project is subject to AIS/BABAA requirements?  
**Answer:** This project is not subject to AIS/BABA requirements. There is a preference for domestic procurements, but it is not a requirement.

36. **Question:** Can you clarify the bid form line items 1 & 2? Spec section 01025-3.1A says that the cost for furnishing all major materials and mechanical equipment should be included in this (line item 1) lump sum. However, it seems that the line item 2 has the Chemical metering pumps & Lemtec Biological Treatment Process also listed as lump sum items. Please advise.
- Answer:** The Bid Worksheet on QuestCDN will be updated to remove the Major Materials and Mechanical Equipment from the online bid form. The cost of major materials and mechanical equipment should be included in line item 1 as stated in Section 01025. The Bidder should submit the Major Materials and Mechanical Equipment Schedule in Section 00410A within 5 days of the Bid.
37. **Question:** The bid form also shows a testing \$20k allowance that I do not see in the specifications (01020 & 01025). Is this for all testing onsite? Or for concrete/soils testing only?
- Answer:** Section 01020 and 01025 were modified in Addendum 1 to include this information.
38. **Question:** Sheet 6 shows some clearing and grubbing at the very back of the plant, however I don't see any work back there. Just wanted to confirm if the only work required back there is clearing/grubbing?
- Answer:** Yes, the only work included on the Sheet 6 is clearing and grubbing.
39. **Question:** I see in the drawings attached to the addendum that the owner is supplying the bar screen rake. Is it correct to assume they will supply the barscreen itself considering these units usually come together?
- Answer:** No, the Contractor is to supply the barscreen only. The Owner will purchase a rake separately
40. **Question:** Could you please clarify the specification section or structural note that outlines the required compressive strength for fill grout in the following structures: the proposed influent (bar screen) structure, the existing aeration basin, and the proposed aeration structure?
- Answer:** Section 03601 has been added by this Addendum to include grout specifications. Grout shall be Type "A".
41. **Question:** Please confirm that the existing 10" equalization pipe between Pond A and Pond B is PVC.
- Answer:** The existing 10" equalization pipe between Pond A & Pond B is ductile iron pipe.
42. **Question:** Please confirm stone bedding will not be required for new pipelines.
- Answer:** Granular bedding is required on all gravity flow pipe. Type 4 bedding shall be used on all DIP gravity pipe and Type 5 bedding shall be used on all PVC gravity pipe. See spec section 02315 -11 for bedding requirements.

43. **Question:** Sheet 3 shows SSMH's C-1 thru C-3; however, on Sheet 7/8 the only manholes shown are A-1 thru A-4. Please confirm that the manholes should be provided as shown on sheet 7/8.  
**Answer:** Manholes shall be provided as shown on sheet 7&8. See revised sheet 3 included in this Addendum.
44. **Question:** Please confirm what diameter manholes A-1 thru A-4 should be.  
**Answer:** Manholes A-1 thru A-4 shall be 4'-0" in diameter. See Plan Sheets 23 & 24 for manhole diameters.
45. **Question:** Sheet 8 shows the influent line into the screen structure to be PVC, but Sheet 9 calls for this line to be DIP. Please confirm which is correct.  
**Answer:** The influent line into the screen structure shall be PVC. On Sheet 9 strike "12" D.I." and replace with 12" PVC.
46. **Question:** Can the plant effluent water be utilized for makeup water during the dewatering process?  
**Answer:** Yes, however, be aware that the Owner makes no warranty on the quality of the effluent in terms of total suspended solids that may be in the effluent. There can be no runoff from the dewatering site if effluent water is used.
47. **Question:** Is there a geotechnical report for this work? If not, can we assume for bidding purposes that there is no rock? Can we assume the excavated material is suitable for backfill?  
**Answer:** You may assume no rock and assume that the excavated material is suitable for backfill. If rock or unsuitable material is encountered during construction, we will address using the Supplemental Work Allowance.
48. **Question:** There is a note on SHT 5 "Existing pumps are to be removed and replaced as directed by engineer". Do these pumps need to be removed and replaced? If so, please provide a spec section/information on these pumps. Will there be any additional instrumentation? Or any additional electrical considerations for this replacement?  
**Answer:** Strike note "Existing pumps are to be removed and replaced as directed by the Engineer" from Sheet 5 of the plans. Existing pumps are to remain in place.
49. **Question:** Sheet 14 shows the diffuser piping to be 1/2", but spec section 11235 calls for it to be 2". Please advise.  
**Answer:** Spec Section 11235, Paragraph 2.3, is referring to the diffusers and air piping provided by the Manufacture which is to be constructed of 2" Sch. 80 PVC. The detail on Sheet 14 for chlorination and dechlorination calls out 1/2" Sch. 80 PVC.

50. **Question:** Sheet E.7 indicates that Blower Control Panel CP-100 shall be provided by Applied Industrial Controls or Dublin Automation, and that the Chemical Feed Control Panel shall be provided by Applied Industrial Controls. Note 2 further indicates that CP-100 and CP-300 may be combined into a single control panel. Please confirm the intended supplier(s) for each control panel, the required installation location if the panels are combined, and provide applicable specifications.
- Answer:** Both control panels (CP-100 and CP-300) may be provided by either Applied Industrial Controls or Dublin Automation, or an Engineer approved equal. Disregard Note 2. CP-100 and CP-300 are intended to be provided as separate panels and are not to be combined. Installation locations shall remain as shown on the contract drawings for each respective panel. Applicable specifications are as outlined in the project documents for control panels.
51. **Question:** Is it intended that Applied Industrial Controls or Dublin Automation will also be responsible for systems integration and SCADA for this project?
- Answer:** The SCADA panel and system shall be provided by Mission Communications. The applicable SCADA specifications have already been issued previously as part of the project documentation.
52. **Question:** With respect to electrical ductbanks, Sheet E.4 appears to indicate concrete-encased ductbanks, while Sheet E.5 appears to depict sand-filled ductbanks. Please clarify which installation type is required.
- Answer:** Electrical ductbanks installed under roadways shall be concrete-encased. Ductbanks in all other areas shall be sand filled.
53. **Question:** Will the TFR-C on E.3 be 3R since this is shown outside on E.6?
- Answer:** Transformer TFR-C shall be NERA 3R.
54. **Question:** Please confirm requirements for the "List of Project References" section in the QuestCDN bid submission.
- Answer:** Project References are to be submitted as part of spec Section 00470 which can be submitted within five (5) days of bid submission. The QuestCDN will be updated to reflect this.

### III. CONTRACT DOCUMENTS AND SPECIFICATIONS

**1. Section 00410 – Basis of Bd**

A. Please replace Section 00410 with the revised Section 00410 in this addendum.

**2. Section 01030 – Special Project Provisions**

A. Add the following paragraph 1.22 to this section:

“1.22 TERMS AND CONDITIONS

A. The terms and conditions for payment for all equipment and materials supplied under these Specifications shall be as listed below unless otherwise noted:

1. 10% of payment due upon receipt and approval of shop drawings
2. 80% of payment due upon successful delivery of equipment
3. 10% of payment due upon successful startup of equipment

B. Any variations from the terms listed above will be listed in individual sections of the specifications and will supersede the terms listed here.”

**3. Section 03601 – Grout (Non-Shrink)**

A. Add Section 03601 included in this addendum.

**4. Section 13150 – Pre-Engineered Fiberglass Shelters**

B. Refer to Paragraph 1.5.A.1. Change the dimensions to read: 8'-0" W x 14' - 0" D x 9' - 0" H.

### IV. CONTRACT DRAWINGS

**1. Revised Sheets**

A. Please remove and replace the following sheets with the attached revised sheets: 3,7, 26, E.5, E.6, E.7

END OF ADDENDUM NO. 2

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**SECTION 00410**  
**BASIS OF BID**  
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**SECTION 00410  
BASIS OF BID**

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.

The term “Bid” as used herein includes a Bid, offer, or proposal as applicable.

**ARTICLE 1—OWNER AND BIDDER**

1.01 This Bid is submitted to:

Town of Tignall  
124 S. Hulin Avenue  
Tignall, GA 30668

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—ATTACHMENTS TO THIS BID**

2.01 The following documents are submitted with and made a condition of this Bid:

- A. Required Bid security (Section 00460);
- B. Certification of Nonsegregated Facilities (Section 00480);
- C. Noncollusion Affidavit of Prime Bidder (Section 00481);
- D. Contractor Affidavit and Agreement (Section 00483);
- E. SAVE Affidavit (Section 00485);
- F. List of Project References;
- G. Certificate Regarding Lobbying

2.02 The following documents will be submitted within five (5) days after bidding and made a condition of this Bid:

- A. Major Materials and Mechanical Equipment Schedule (Section 00400A);
- B. Qualifications of Bidder (Section 00470);
- C. List of Proposed Subcontractors; (submit in Section 00470);
- D. List of Proposed Suppliers; (submit in Section 00470);
- E. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such authority within the time for acceptance of Bids; (submit in Section 00470);
- F. Utility Contractor License of Contractor performing the work or evidence of Bidder’s ability to obtain a Utility Contractor License within the time for acceptance of Bids; (submit in Section 00470);
- G. Sub-Contractor Affidavit for E-Verify (Section 00484).

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**ARTICLE 3—BASIS OF BID**

3.01 *Lump Sum Bids*

- A. Bidder is directed to the online Bid Schedule located on Quest CDN for submitting bid pricing. All Bidder representations and certifications shall apply to the Bid Schedule and it shall be considered part of the Bid Form. Submitting a paper copy of the Bid Schedule is not allowed and one is not furnished herein.

3.02 *Unit Price Bids*

- A. Bidder is directed to the online Bid Schedule located on Quest CDN for submitting bid pricing. All Bidder representations and certifications shall apply to the Bid Schedule and it shall be considered part of the Bid Form. Submitting a paper copy of the Bid Schedule is not allowed and one is not furnished herein.

**ARTICLE 4—TIME OF COMPLETION**

- 4.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

- 4.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

**ARTICLE 5—BIDDER’S ACKNOWLEDGEMENTS**

5.01 *Bid Acceptance Period*

- A. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

5.02 *Instructions to Bidders*

- A. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security.

5.03 *Receipt of Addenda*

- A. Bidder will acknowledge receipt of Addenda online through QuestCDN automatically by downloading Addenda.

**ARTICLE 6—BIDDER’S REPRESENTATIONS AND CERTIFICATIONS**

6.01 *Bidder’s Representations*

- A. In submitting this Bid, Bidder represents the following:
1. Bidder has examined and carefully studied the Bidding Documents, including Addenda.
  2. Bidder has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
  3. Bidder is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.

4. Bidder has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
5. Bidder has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.
6. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, if selected as Contractor; and (c) Bidder's (Contractor's) safety precautions and programs.
7. Based on the information and observations referred to in the preceding paragraph, Bidder agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
8. 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.
9. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
10. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
11. The submission of this Bid constitutes an incontrovertible representation by Bidder that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

#### 6.02 *Bidder's Certifications*

- A. The Bidder certifies the following:
  1. 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.
  2. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid.
  3. Bidder has not solicited or induced any individual or entity to refrain from bidding.
  4. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 8.02.A:

- a. 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.
- b. 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.
- c. 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.
- d. 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 7—BID SUBMITTAL**

7.01 This Bid is submitted by:

If Bidder is:

An Individual

Name (typed or printed): \_\_\_\_\_

By: \_\_\_\_\_

(Individual’s signature)

Doing business as: \_\_\_\_\_

A Partnership

Partnership Name: \_\_\_\_\_

By: \_\_\_\_\_

(Signature of general partner -- attach evidence of authority to sign)

Name (typed or printed): \_\_\_\_\_

A Corporation

Corporation Name: \_\_\_\_\_ (SEAL)

State of Incorporation: \_\_\_\_\_  
Type (General Business, Professional, Service, Limited Liability): \_\_\_\_\_

By: \_\_\_\_\_  
(Signature -- attach evidence of authority to sign)

Name (typed or printed): \_\_\_\_\_

Title: \_\_\_\_\_  
(CORPORATE SEAL)

Attest \_\_\_\_\_

Date of Qualification to do business in Georgia is \_\_\_/\_\_\_/\_\_\_.

Bidder's Business Address \_\_\_\_\_  
\_\_\_\_\_

Phone No. \_\_\_\_\_

E-mail \_\_\_\_\_

SUBMITTED on \_\_\_\_\_, 20\_\_\_\_.

State Contractor License No. of Contractor performing the work. \_\_\_\_\_

END OF SECTION

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**SECTION 03601**  
**GROUT (NON-SHRINK)**  
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**SECTION 03601  
GROUT (NON-SHRINK)**

PART 1. GENERAL

1.1 SCOPE

- A. Under this heading shall be included the furnishing and installation of all non-shrink grouts, wherever “grout” is noted on the Drawings unless noted otherwise.

PART 2. PRODUCTS

2.1 MATERIALS

- A. Non-Shrink/Non-Metallic Grout (Type “A”).

1. Grout shall be factory mixed containing natural aggregates formulated to be used at any consistency from extremely fluid to damp pack. The grout shall be similar in finished appearance to concrete and mortar. The grout shall be free of gas producing agents, oxidizing catalysts and inorganic accelerators.

2. Strength of the grout in-place shall meet or exceed the following:

4,000 psi	at	24 Hours
6,000 psi	at	72 Hours
7,500 psi	at	7 Days
9,500 psi	at	28 Days

Grout placed in a fluid consistency shall have an in-place 28-day comprehensive strength of at least 5,000 psi.

3. Type “A” grout shall be Sealtight 588 Grout by W.R. Meadows, Cartersville, GA; SonogROUT by Sonnebora – Contech, Minneapolis, Minnesota; Master Flow 713 Grout by Master Builders, Cleveland, Ohio; or an approved equal.

- B. Non-Shrink/Metallic Aggregate Grout Type “B”.

1. Grout shall be factory mixed, containing specially graded and processed ferrous metallic cementitious system formulated to be used at any consistency from extremely fluid to damp pack. The grout shall be free of gas producing agents, oxidizing agent and organic accelerators.

2. Strength of the grout in-place shall meet or exceed the following:

---

4,000 psi	at	24 Hours
6,000 psi	at	72 Hours
8,000 psi	at	7 Days
10,000 psi	at	28 Days

Grout placed in a fluid consistency shall have an in-place 28-day comprehensive strength of at least 7,000 psi.

3. Type "B" grout shall be Embeco 636 Grout by Master-Builders, Cleveland, Ohio: or an approved equal.

C. Water: Water shall be potable.

## 2.2 GROUTING SCHEDULE

- A. Grouting under this Contract shall be done in accordance with the applicable items in the following schedule, unless noted otherwise:

Grouting Applications	Grout Type
Anchor Bolts and Dowels in Cast or Drilled Holes	"A" or "B"
Bearing Plates or angles	"A" or "B"
Aluminum Handrails	"A"
Joining Precast Concrete Elements	"A"

- B. Damp pack (plastic) grout shall be used for vertical surfaces with holes having at least one surface dimension less than the hole depth and for holes left by removal of fasteners and form ties.

C. Flowable or fluid grout shall be used for all other applications.

## PART 3. EXECUTION

### 3.1 SURFACE PREPARATION

A. General:

1. Concrete surfaces to receive grout shall be rough and reasonably level. Laitance shall be removed to sound concrete. The surfaces, including bolt holes shall be saturated with water for 24 hours prior to grouting.
2. Where grout is to be used to repair damaged concrete surfaces, the damaged or honeycombed concrete shall be removed to sound concrete by chipping.

3. Metal surfaces to receive grout shall be cleaned of oil, grease and other deleterious substances by means of appropriate solvents, wire brushing or a combination of both.
- B. Formwork:
1. Forms shall be provided for grout placed at a flowable or fluid consistency.
  2. Forms shall be strong, tight and shall be braced so they will not leak or buckle under the weight of fluid grout.
  3. Forms shall be caulked with grout or a sand-cement mortar to prevent leakage. Expanded polystyrene or other means shall be used to caulk between foundation and portions of the element being grouted to seal off areas where grout is not required.

### 3.2 GROUT PREPARATION

- A. Grout shall be mixed in a paddle type mortar mixer or other suitable mechanical mixer. Hand mixing will not be permitted. The grout manufacturer's instructions shall be strictly adhered to and the grout shall be mixed a minimum of 3 minutes and placed immediately. Mixing water temperature shall not be less than 40° F not exceed 80° F.
- B. Grout shall be mixed to a consistency according to the method of placement (damp pack or fluid) without overuse of water to the extent to cause bleeding; however, whenever possible grout shall be placed in a damp pack (plastic) consistency to provide the highest strength grout. Damp pack (plastic) grout shall be used for vertical surfaces, with holes having at least one surface dimension less than the hole depth and for holes left by the removal of anchors, fasteners, and form ties. Damp pack (plastic) grout may be used for column base plates, bearing plates, machinery bases and precast concrete elements where either horizontal dimension of the element being grouted is less than 16-inches. Flowable or fluid grout shall be used for all other applications.

### 3.3 GROUT PLACEMENT

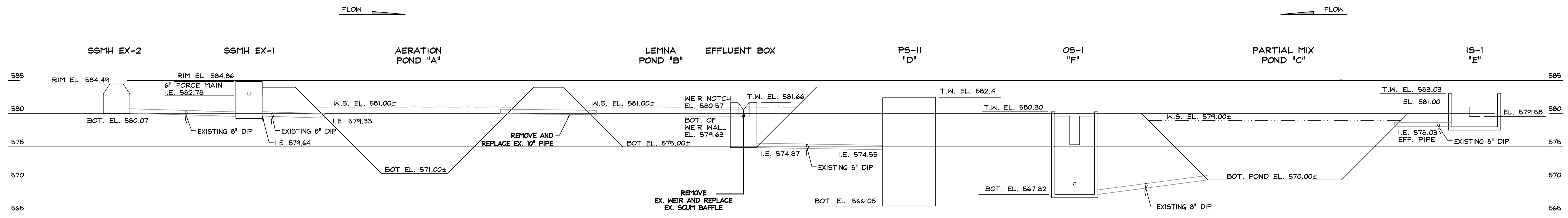
- A. Grout shall be placed at a temperature of 65° - 75° F. The contractor shall maintain this temperature range for 24 hours following installation, thereafter above 40° F. until the strength exceeds 4,000 psi.
- B. Grout shall be placed quickly and continuously and shall not be vibrated or overworked. Any nearby machinery or equipment causing vibration shall be shut down to avoid disturbing the bonding or initial set of freshly placed grout.

3.4 CURING

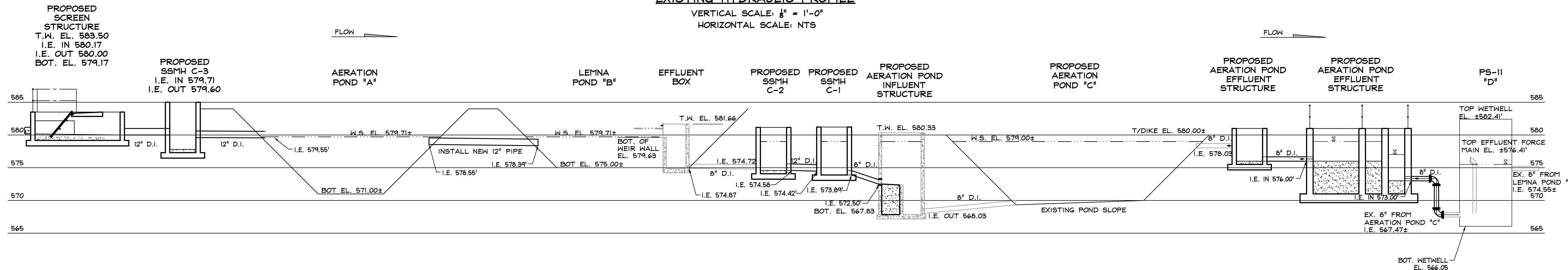
- A. Ponding or soaking wet cloth shall be applied within 10 minutes after grouting and shall be continued for 3 hours.
- B. Grout used for concrete surface repair and patchwork shall be applied to a small area and allowed to cure to determine color compatibility.

END OF SECTION

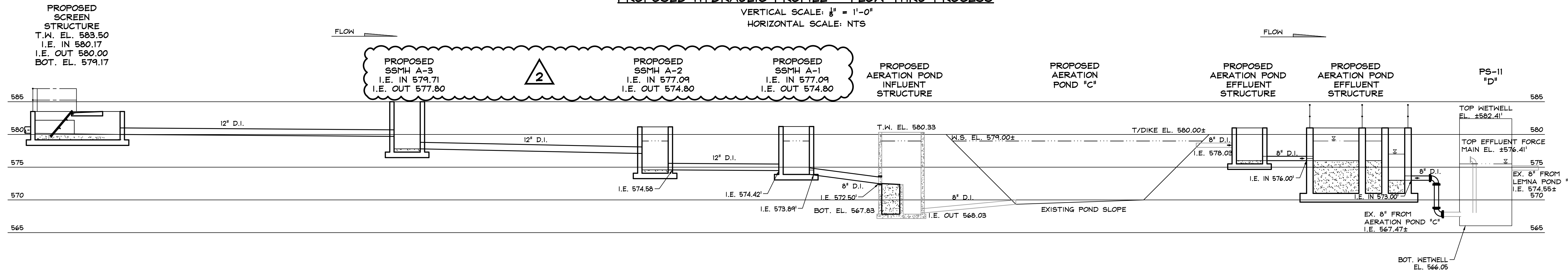
RELEASES	
03/16/26	RELEASE FOR BID
04/20/26	ADDENDUM #2



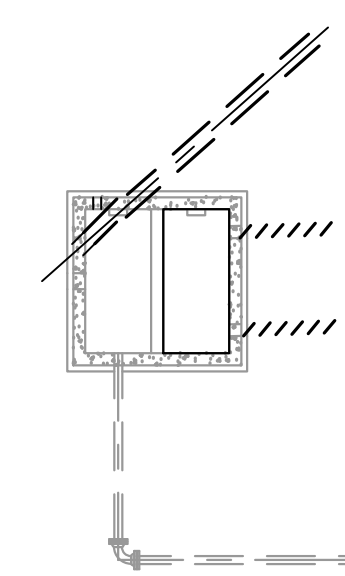
**EXISTING HYDRAULIC PROFILE**  
 VERTICAL SCALE: 1/8" = 1'-0"  
 HORIZONTAL SCALE: NTS



**PROPOSED HYDRAULIC PROFILE - FLOW THRU PROCESS**  
 VERTICAL SCALE: 1/8" = 1'-0"  
 HORIZONTAL SCALE: NTS



**PROPOSED HYDRAULIC PROFILE - LEMNA BYPASS**  
 VERTICAL SCALE: 1/8" = 1'-0"  
 HORIZONTAL SCALE: NTS



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 1031 STONEBRIDGE PARKWAY, WATKINSVILLE, GA 30677, 706.769.4119 TEL  
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PROJ. NO.: T7040.003	SHEET NO.:
DATE:	03/16/26
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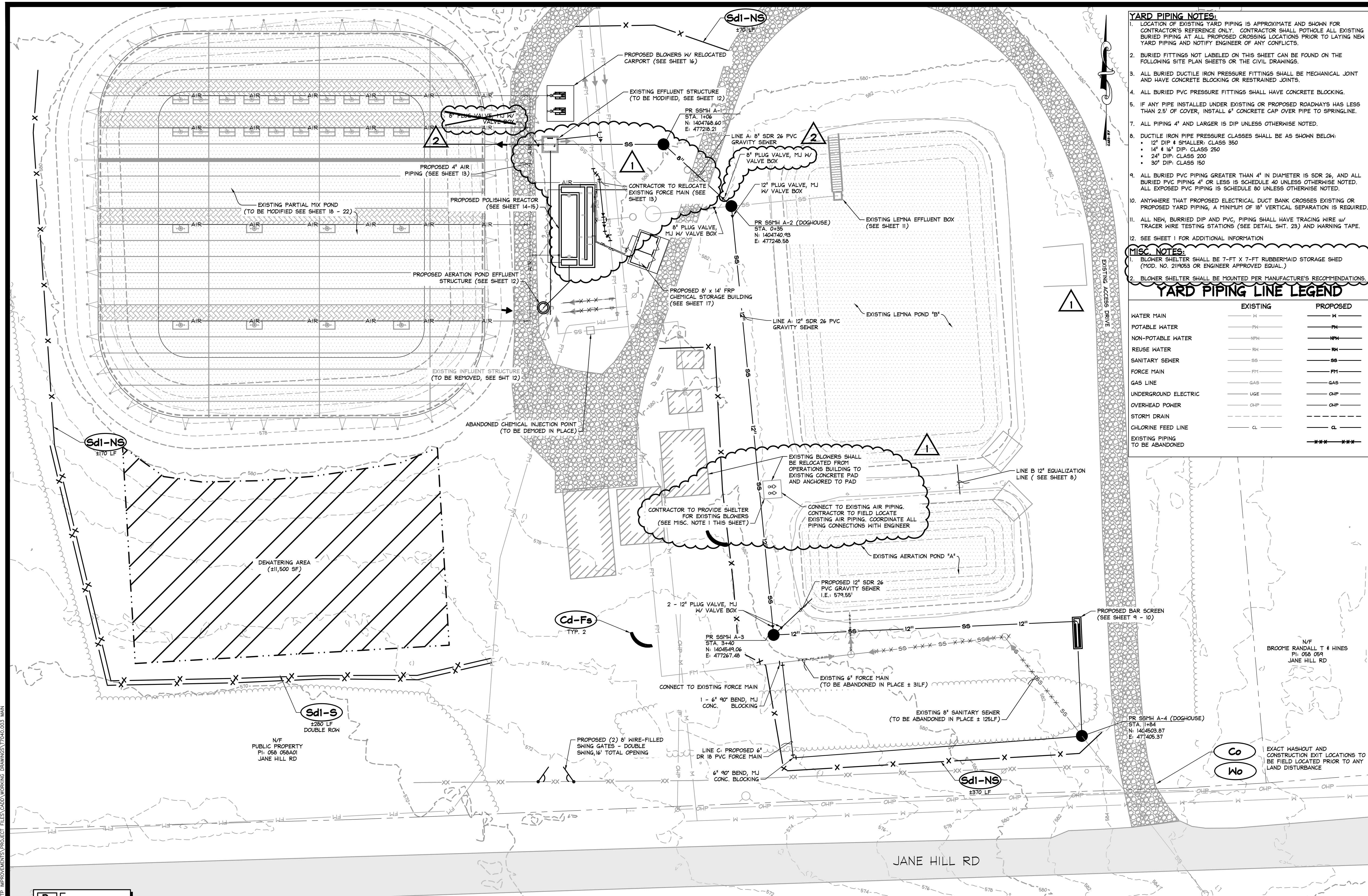
**HYDRAULIC PROFILES**



D:\A\DOBEKA\GCS\ACCD005\CARTERSLOOPE\T7040.003\WWTP IMPROVEMENTS\PROJECT FILES\CADD\WORKING DRAWINGS\POND STRUCTURES



Know what's below.  
Call before you dig.



**YARD PIPING NOTES:**

- LOCATION OF EXISTING YARD PIPING IS APPROXIMATE AND SHOWN FOR CONTRACTOR'S REFERENCE ONLY. CONTRACTOR SHALL POTHOLE ALL EXISTING BURIED PIPING AT ALL PROPOSED CROSSING LOCATIONS PRIOR TO LAYING NEW YARD PIPING AND NOTIFY ENGINEER OF ANY CONFLICTS.
- BURIED FITTINGS NOT LABELED ON THIS SHEET CAN BE FOUND ON THE FOLLOWING SITE PLAN SHEETS OR THE CIVIL DRAWINGS.
- ALL BURIED DUCTILE IRON PRESSURE FITTINGS SHALL BE MECHANICAL JOINT AND HAVE CONCRETE BLOCKING OR RESTRAINED JOINTS.
- ALL BURIED PVC PRESSURE FITTINGS SHALL HAVE CONCRETE BLOCKING.
- IF ANY PIPE INSTALLED UNDER EXISTING OR PROPOSED ROADWAYS HAS LESS THAN 2.5' OF COVER, INSTALL 6" CONCRETE CAP OVER PIPE TO SPRINGLINE.
- ALL PIPING 4" AND LARGER IS DIP UNLESS OTHERWISE NOTED.
- DUCTILE IRON PIPE PRESSURE CLASSES SHALL BE AS SHOWN BELOW:
  - 12" DIP & SMALLER: CLASS 350
  - 14" & 16" DIP: CLASS 250
  - 24" DIP: CLASS 200
  - 30" DIP: CLASS 150
- ALL BURIED PVC PIPING GREATER THAN 4" IN DIAMETER IS SDR 26, AND ALL BURIED PVC PIPING 4" OR LESS IS SCHEDULE 40 UNLESS OTHERWISE NOTED. ALL EXPOSED PVC PIPING IS SCHEDULE 80 UNLESS OTHERWISE NOTED.
- ANYWHERE THAT PROPOSED ELECTRICAL DUCT BANK CROSSES EXISTING OR PROPOSED YARD PIPING, A MINIMUM OF 18" VERTICAL SEPARATION IS REQUIRED.
- ALL NEW BURIED DIP AND PVC PIPING SHALL HAVE TRACING WIRE W/ TRACER WIRE TESTING STATIONS (SEE DETAIL SHT. 23) AND WARNING TAPE.
- SEE SHEET 1 FOR ADDITIONAL INFORMATION.

**MISC. NOTES:**

- BLOWER SHELTER SHALL BE 7-FT X 7-FT RUBBERMAID STORAGE SHED (MOD. NO. 211953 OR ENGINEER APPROVED EQUAL.)
- BLOWER SHELTER SHALL BE MOUNTED PER MANUFACTURER'S RECOMMENDATIONS.

**YARD PIPING LINE LEGEND**

	EXISTING	PROPOSED
WATER MAIN	W	W
POTABLE WATER	PH	PH
NON-POTABLE WATER	NPW	NPW
REUSE WATER	RW	RW
SANITARY SEWER	SS	SS
FORCE MAIN	FM	FM
GAS LINE	GAS	GAS
UNDERGROUND ELECTRIC	UGE	OHP
OVERHEAD POWER	OHP	OHP
STORM DRAIN	SD	SD
CHLORINE FEED LINE	CL	CL
EXISTING PIPING TO BE ABANDONED	---X---X---	

**RELEASES**

03/16/26	RELEASE FOR BID
03/30/26	ADDENDUM #1
04/20/26	ADDENDUM #2

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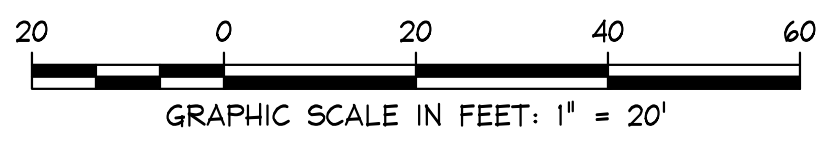
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DATE:	SHEET NO.: 7

**Du** TO BE PLACED ON ALL DISTURBED AREAS TO MATCH EXISTING CONDITIONS  
**Ds1**  
**Ds2**  
**Ds3**  
**Se** SEE NOTE 16, ECI

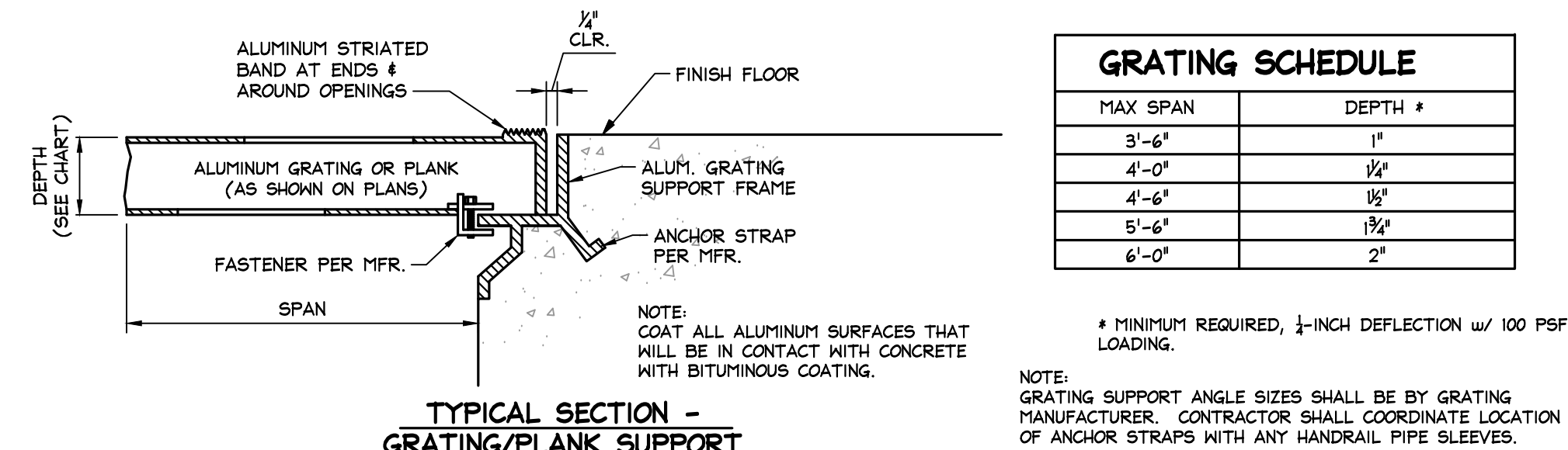
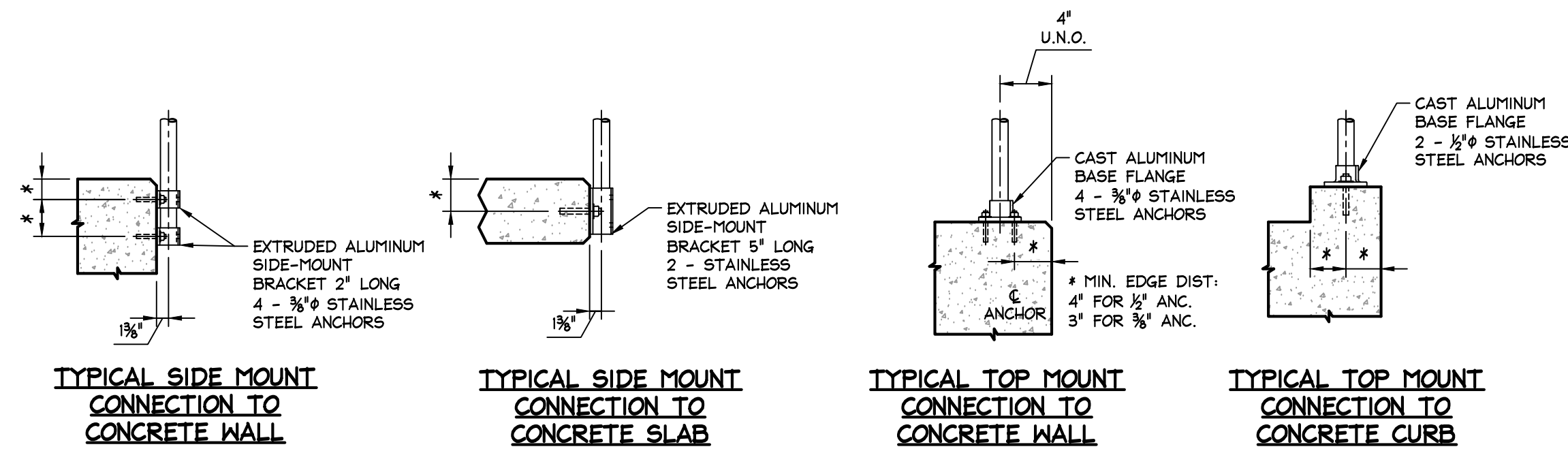


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**PROPOSED SITE PLAN - SOUTH**



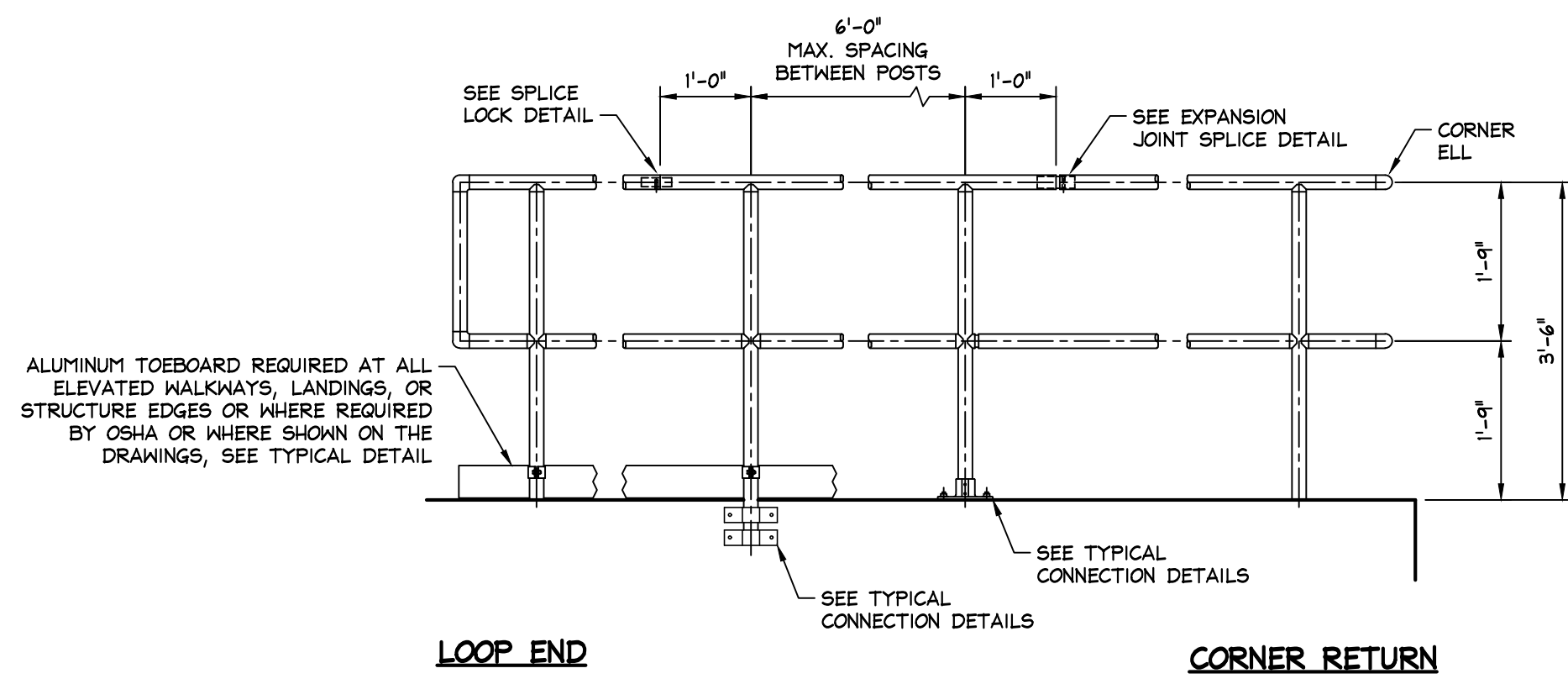
RELEASES	
03/16/26	RELEASE FOR BID
04/20/26	ADDENDUM #2



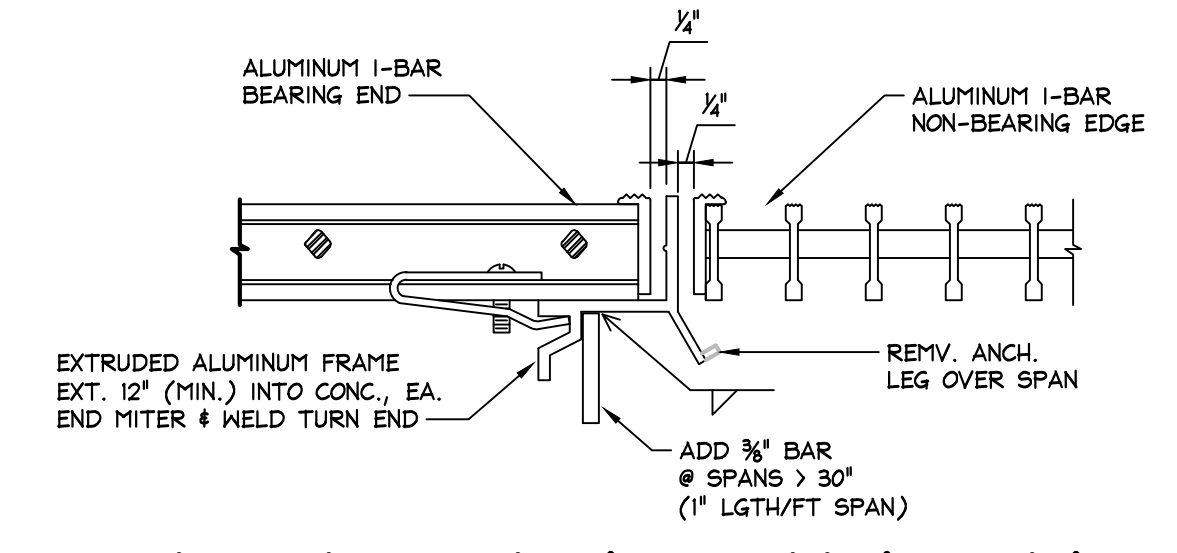
GRATING SCHEDULE	
MAX SPAN	DEPTH #
3'-6"	1"
4'-0"	1 1/2"
4'-6"	1 3/4"
5'-0"	1 3/4"
6'-0"	2"

\* MINIMUM REQUIRED, 1/4-INCH DEFLECTION w/ 100 PSF LOADING.  
 NOTE: GRATING SUPPORT ANGLE SIZES SHALL BE BY GRATING MANUFACTURER. CONTRACTOR SHALL COORDINATE LOCATION OF ANCHOR STRAPS WITH ANY HANDRAIL PIPE SLEEVES.

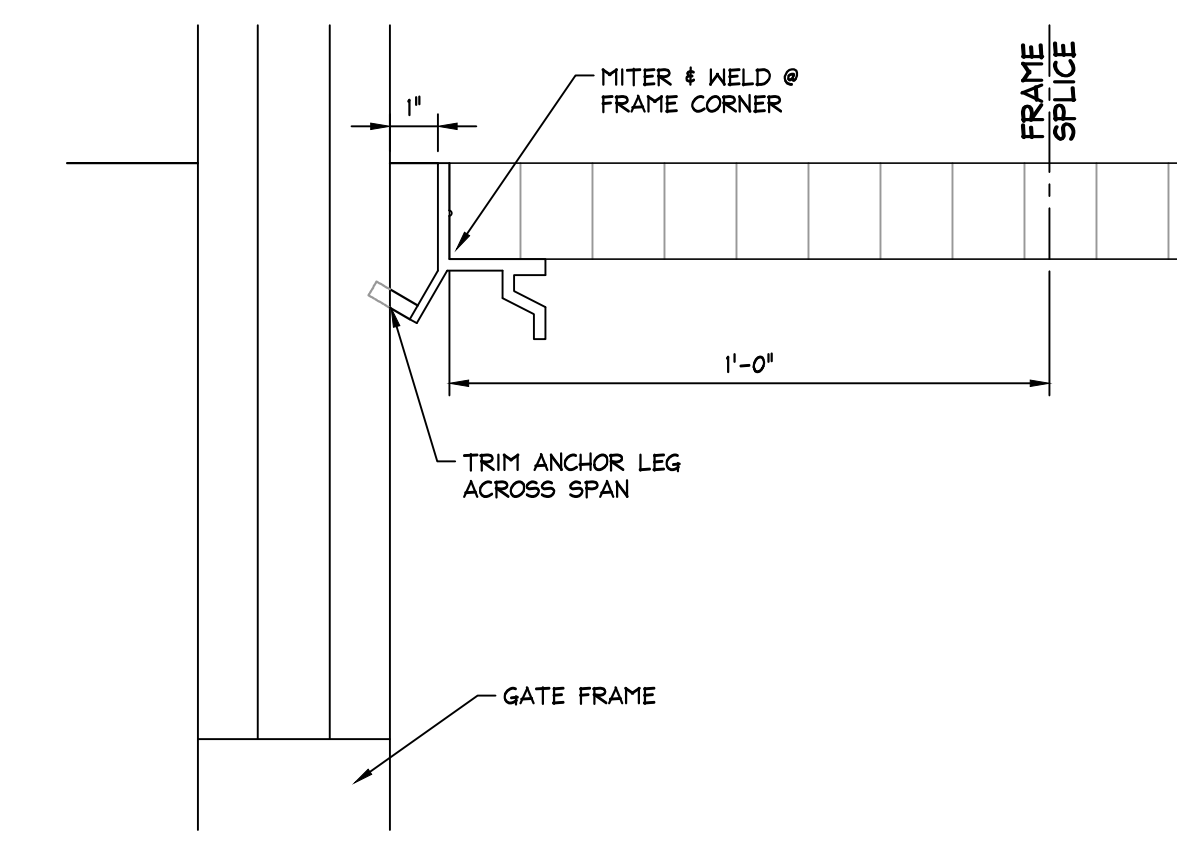
TYPICAL SECTION - GRATING/PLANK SUPPORT  
 ALUMINUM GRATING/PLANKING DETAILS  
 N.T.S.



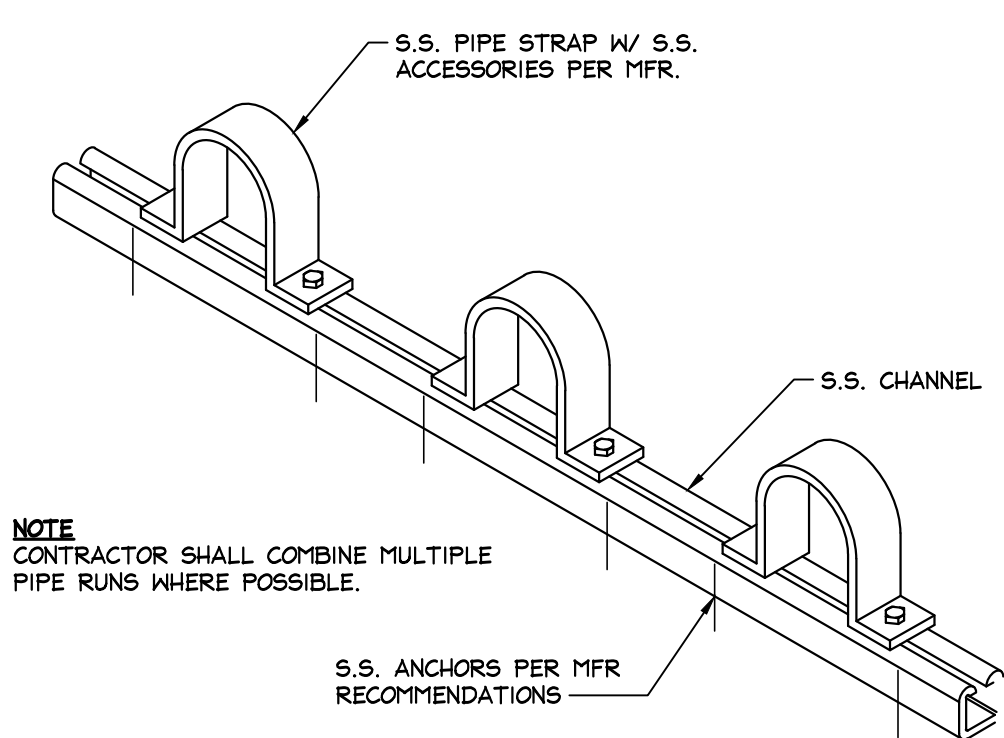
TYPICAL OSHA GUARDRAIL  
 GUARDRAILS SHALL BE TOP-MOUNTED OR SIDE-MOUNTED, AS SHOWN ON PLANS



TYPICAL SECTION - GRATING/PLANK SUPPORT OVER SPANS  
 N.T.S.



GRATING SUPPORT AT GATE  
 N.T.S.



- NOTE: CONTRACTOR SHALL COMBINE MULTIPLE PIPE RUNS WHERE POSSIBLE.
- SUPPORT SPACING FOR STEEL PIPE AND COPPER TUBING SHALL NOT EXCEED FIVE (5) FEET.
  - SUPPORT SPACING FOR DUCTILE IRON PIPE SHALL NOT EXCEED TEN (10) FEET WITH A MINIMUM OF ONE SUPPORT PER PIPE SECTION.
  - SUPPORT SPACING FOR PVC PIPE SHALL MEET THE FOLLOWING SCHEDULE.

PIPE DIAMETER	MAXIMUM SPACING SCH. 40	MAXIMUM SPACING SCH. 80
1/2"	3'6"	3'6"
3/4"	3'6"	4'0"
1"	4'0"	4'6"
1 1/4"	4'0"	4'6"
1 1/2"	4'6"	5'0"
1 3/4"	5'0"	5'6"
2"	5'0"	5'6"
2 1/2"	5'0"	6'0"
3"	6'0"	6'6"
4"	6'0"	7'0"
4 1/2"	6'6"	8'0"
5"	7'0"	8'0"
6"	7'6"	9'0"
8"	8'0"	9'6"
10"	8'6"	10'0"
12"	9'6"	10'6"

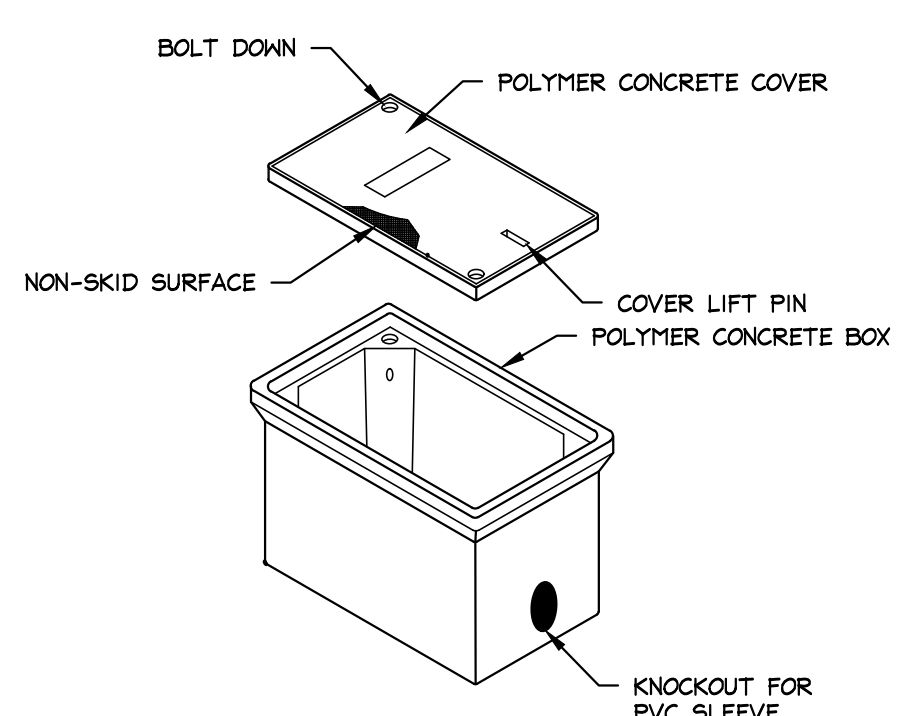
WALL CHANNEL PIPE SUPPORT LESS THAN 3"  
 N.T.S.

ANGLE SUPPORT SPACING	
PIPE SIZE	ANGLE TYPE & SPACING
4" THRU 10"	LIGHT WELDED @ 10' O.C.
12" THRU 14"	MEDIUM WELDED @ 10' O.C.
16" THRU 20"	HEAVY WELDED @ 10' O.C.
24"	MEDIUM WELDED @ 5' O.C.
30" THRU 36"	HEAVY WELDED @ 5' O.C.

U-BOLT SIZING CHART	
PIPE SIZE	ROD DIAMETER
1/2" THRU 1"	1/4"
1 1/4" THRU 2"	3/8"
2 1/2" THRU 5"	1/2"
6" THRU 8"	5/8"
10"	3/4"
12" THRU 16"	7/8"
18" THRU 36"	1"

ANGLE PIPE SUPPORTS  
 N.T.S.

- CHEMICAL PULL BOX NOTES:
- BOXES SHALL BE BELOW GROUND, STRAIGHT WALL, OPEN BOTTOM TYPE CONSTRUCTED OF POLYMER CONCRETE MATERIALS WITH INTEGRAL KNOCKOUTS AND FURNISHED IN THE SIZES AND LOCATIONS SHOWN ON THE DRAWINGS.
  - FURNISH FLUSH MOUNT, BOLT DOWN LID WITH SLIP RESISTANT SURFACE, PERMANENT MARKING, SS HARDWARE, AND SEALING GASKET. BOXES IN TRAFFIC AREAS SHALL BE FURNISHED WITH ANSI TIER 22 RATED LID AND BOXES IN NON-TRAFFIC AREAS SHALL BE FURNISHED WITH ANSI TIER 15 RATED LID.
  - BOXES SHALL BE MANUFACTURED BY OLDCASTLE INFRASTRUCTURE, JENSEN PRECAST, HUBBLE OR APPROVED EQUAL.



POLYMER CONCRETE CHEMICAL PULL BOX  
 N.T.S.

ADDENDUM No. 2  
 ADD DETAILS

STRUCTURAL NOTES & DETAILS

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DATE:	03/16/26
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RELEASES

04/20/26 ADDENDUM #2

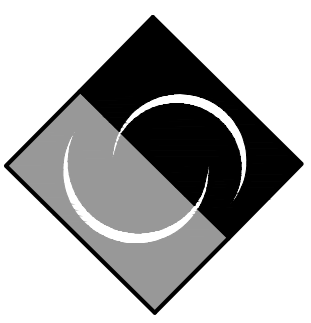
- NOTES**
1. INSTALL 20% SPARE CONTROL CONDUCTORS (MIN. 2 CONDUCTORS) IN ALL RACEWAYS BETWEEN STRUCTURES, MCCS, CPIS, SAME SIZE AND LABELED "SPARE". ALL INDIVIDUAL AND GROUPED CONDUITS SHALL BE INSTALLED ACCORDING TO THE DUCTBANK DETAILS. ALL SIGNAL CONDUITS SHALL MAINTAIN AT LEAST 1' CLEARANCE FROM POWER AND CONTROL CONDUITS AND DUCTS.
  2. EXIST. CONDUIT / DUCTBANK ROUTING UNKNOWN, ANY DEPICTION OF EXISTING SYSTEM ID FOR REFERENCE. CONTRACTOR TO TAKE CARE NOT TO DAMAGE EXISTING CABLE / CONDUIT DURING CONSTRUCTION. CONTRACTOR SHALL REPAIR ANY DAMAGE TO THE EXIST ELECTRICAL SYSTEM AT NO COST TO THE OWNER.
  3. THIS CONDUIT/DUCTBANK LAYOUT IS FOR GUIDANCE, ROUTE ALL RACEWAYS IN THE INDICATED CORRIDORS. ANY ADDITIONAL DUCTS OR CONDUITS SHALL BE INSTALLED FOR RACEWAYS FOR POWER, CONTROL AND SIGNAL CIRCUITS AS REQUIRED.
  4. RELOCATE THE EXISTING BLOWERS FROM THE BUILDING TO THE EXISTING PAD. PROVIDE NEW POWER WIRING FROM THE EXISTING STARTERS TO THE NEW BLOWER LOCATION.

**WWTP IMPROVEMENTS  
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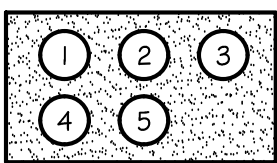
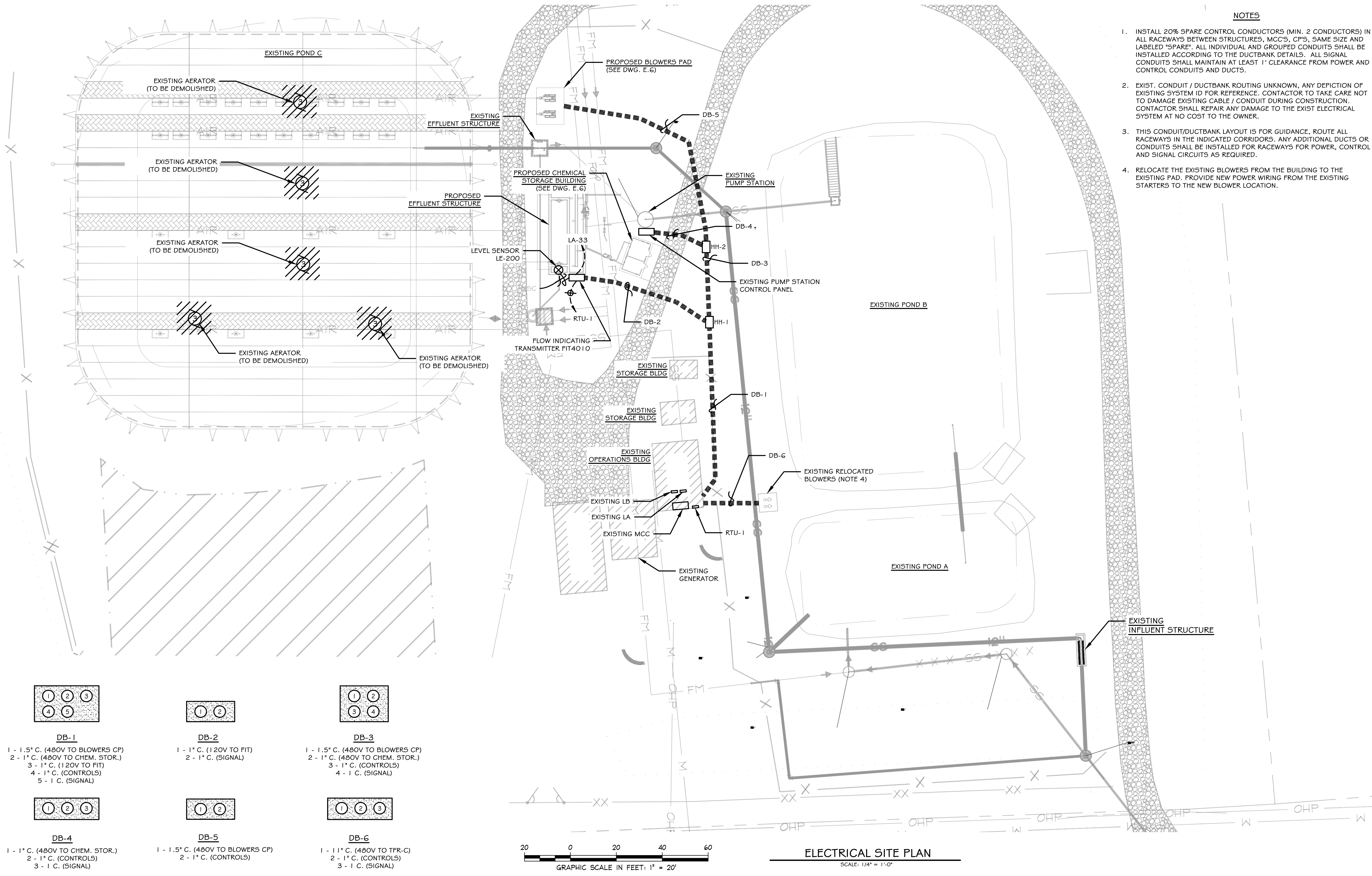
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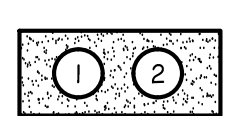
115 WOODLAND WAY, SUITE 120, CANTON, GA 30114 . 770.479.8782 TEL  
GA COA LICENSE# PE0001004 EXPIRES 6/30/2026



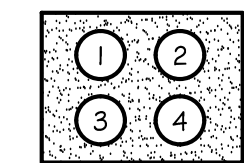
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SCALE: AS SHOWN	
PROJ. NO.: T7040.003	SHEET NO.:
DATE: 03/24/2026	E.5



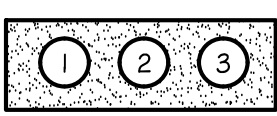
**DB-1**  
1 - 1.5" C. (480V TO BLOWERS CP)  
2 - 1" C. (480V TO CHEM. STOR.)  
3 - 1" C. (120V TO FIT)  
4 - 1" C. (CONTROLS)  
5 - 1 C. (SIGNAL)



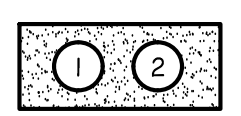
**DB-2**  
1 - 1" C. (120V TO FIT)  
2 - 1" C. (SIGNAL)



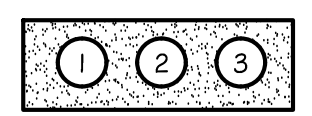
**DB-3**  
1 - 1.5" C. (480V TO BLOWERS CP)  
2 - 1" C. (480V TO CHEM. STOR.)  
3 - 1" C. (CONTROLS)  
4 - 1 C. (SIGNAL)



**DB-4**  
1 - 1" C. (480V TO CHEM. STOR.)  
2 - 1" C. (CONTROLS)  
3 - 1 C. (SIGNAL)



**DB-5**  
1 - 1.5" C. (480V TO BLOWERS CP)  
2 - 1" C. (CONTROLS)



**DB-6**  
1 - 1" C. (480V TO TFR-C)  
2 - 1" C. (CONTROLS)  
3 - 1 C. (SIGNAL)

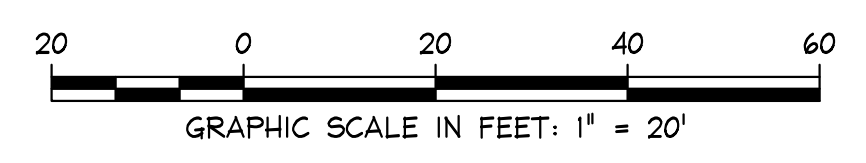
**NOTES:**

1. POWER CIRCUIT CONDUITS SHALL BE SCHEDULE 40 RIGID PVC.
2. ELECTRICAL DUCTBANKS INSTALLED UNDER ROADWAYS SHALL BE CONCRETE ENCASED. DUCTBANKS IN ALL OTHER AREAS SHALL BE SAND FILLED

**LEGEND**

DUCTBANK W/ SAND HATCH INDICATES SAND FILLED DUCTBANKS SEE CONDUIT ROUTING DETAIL SHEET E.3.

**ELECTRICAL DUCTBANK SCHEDULE**  
SCALE: N.T.S.



**ELECTRICAL SITE PLAN**  
SCALE: 1/4" = 1'-0"



**ELECTRICAL SITE PLAN**

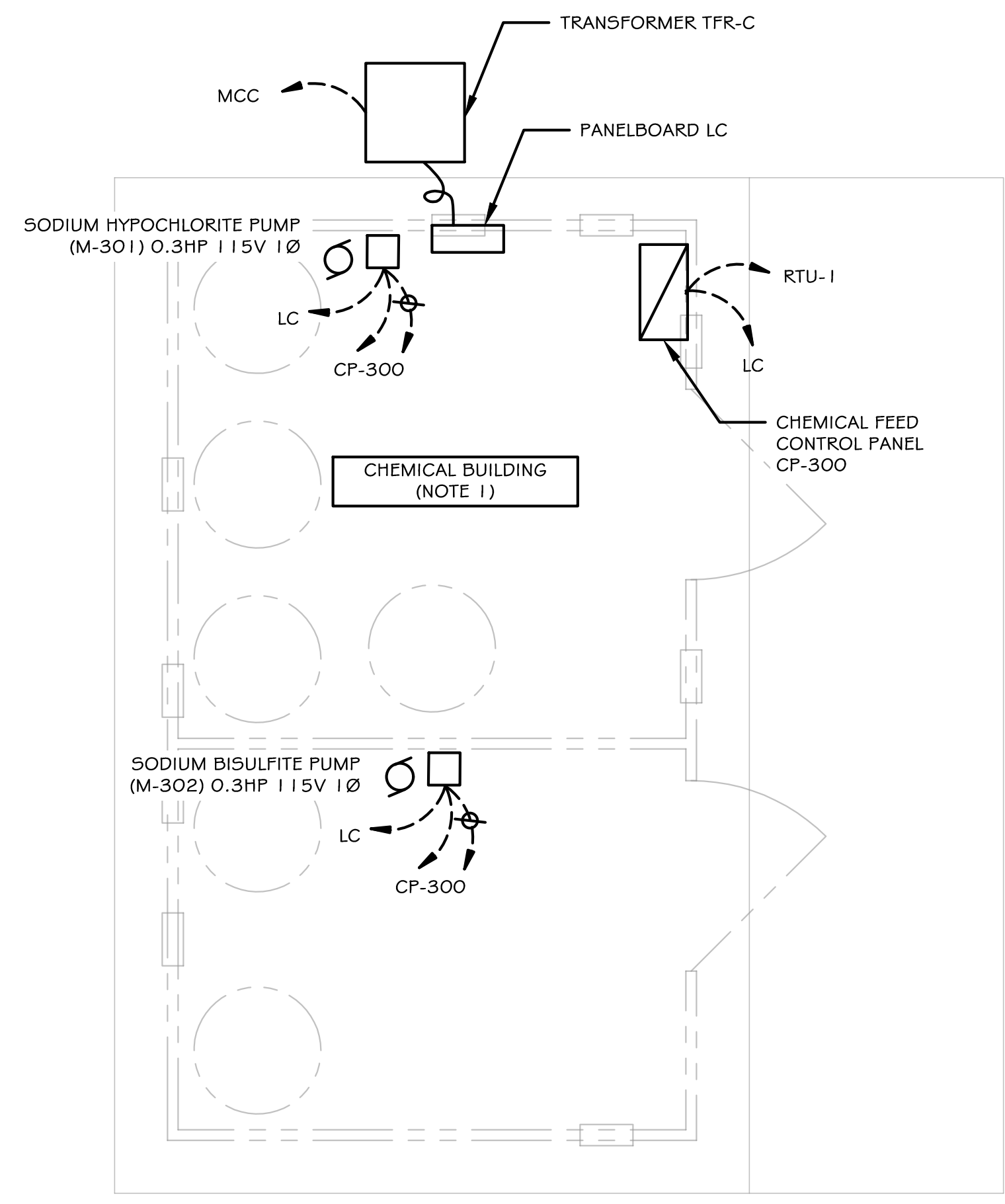
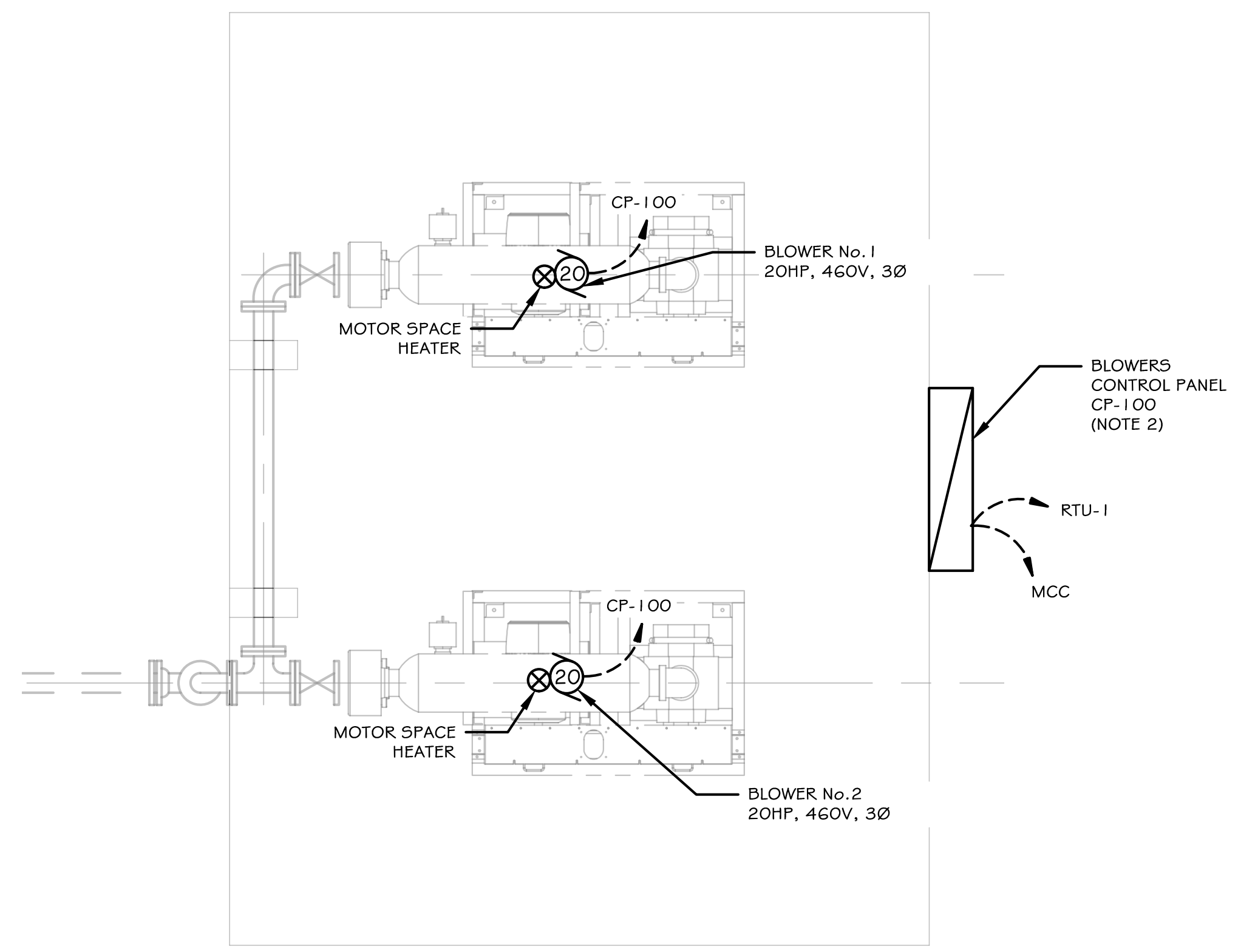
BFIELD ENGINEERING, LLC  
4180 Providence Road, Suite 325  
Manetta, GA 30062  
Phone: (678) 650-0732

G:\PROJECTS\2025\TIGNALL\GENERAL PROJECT FILES\TIGNALL WWTP - T7040.003\CADD\1-DWGSET\1-SHIFT\TIGNALL ELECTRICAL SITE PLAN

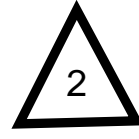
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04/20/26	ADDENDUM #2

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- NOTES**
1. CONTROL BUILDING TO COME PREWIRED WITH THE FOLLOWING EQUIPMENT:
    - 1.1. HVAC
    - 1.2. LIGHTING
    - 1.3. PANEL LA
    - 1.4. RECEPTACLES
  2. MOUNT ELECTRICAL BLOWER CONTROL PANEL CP-100 TO EQUIPMENT SUPPORT SEE DETAIL SHEET E.4.
  3. GENERAL ELECTRIC NOTES APPLY TO THE ELECTRICAL PLAN SEE SHEET E.2.
  4. THE ELECTRICAL CONTRACTOR WILL COORDINATE WITH OTHER TRADES TO ENSURE PROPER INSTALLATION AND AVOID CONFLICTS. ELECTRICAL CONTRACTOR WILL WORK CLOSELY WITH GENERAL CONTRACTOR AND VERIFY EXACT TYPES AND LOCATIONS OF EQUIPMENT AND PIPING TO BE INSTALLED WHICH MAY AFFECT THE PLACEMENT OF ELECTRICAL WORK.
  6. TRANSFORMER TFR-C SHALL BE RATED NEMA 3R FOR OUTDOOR INSTALLATION



**ENLARGED ELECTRICAL PLANS**

**BFIELD ENGINEERING, LLC**  
4180 Providence Road, Suite 325  
Mableton, GA 30062  
Phone: (678) 650-0732

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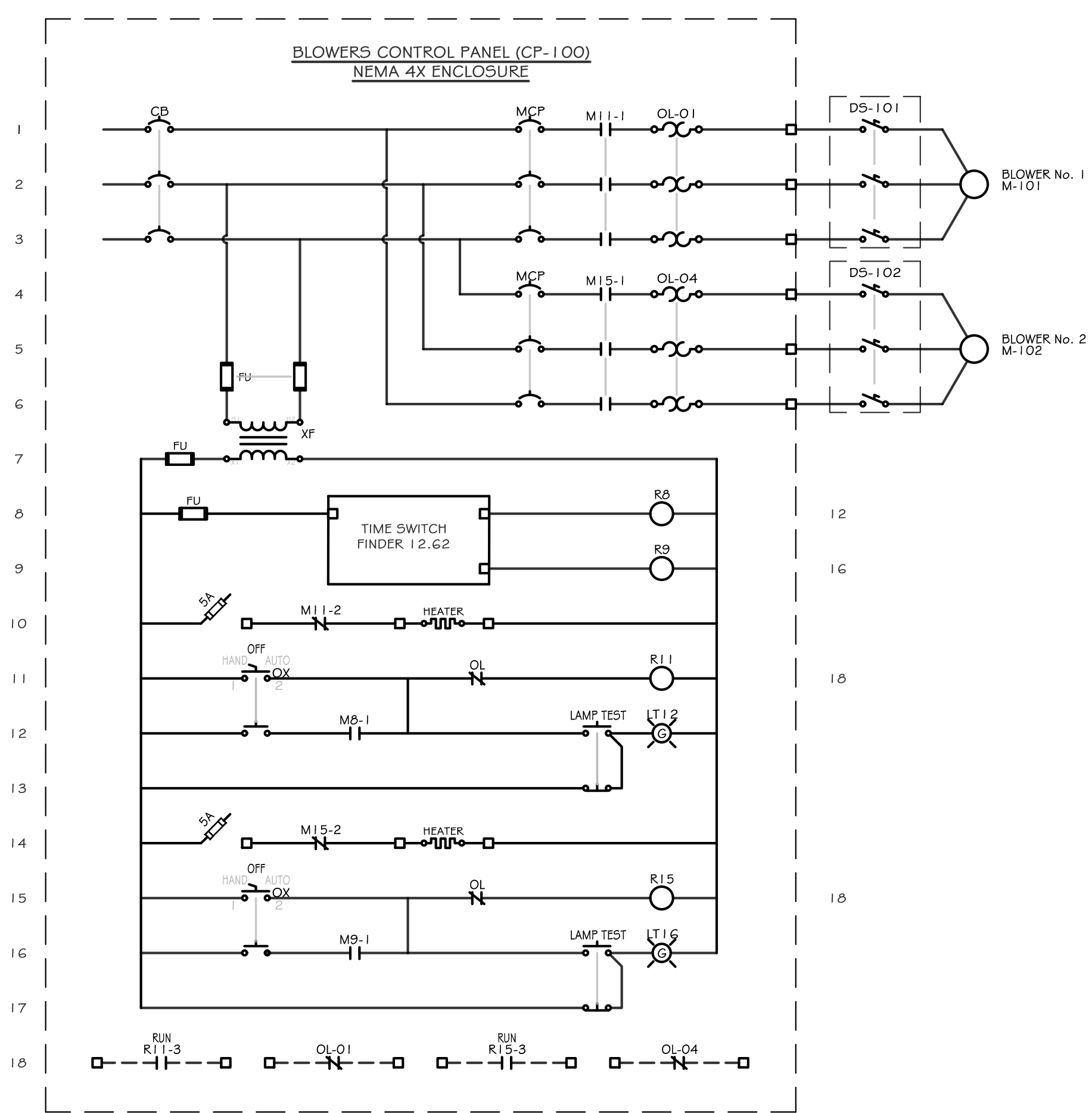
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DATE: 03/24/2026	E.6

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RELEASES	
04/20/26	ADDENDUM #2

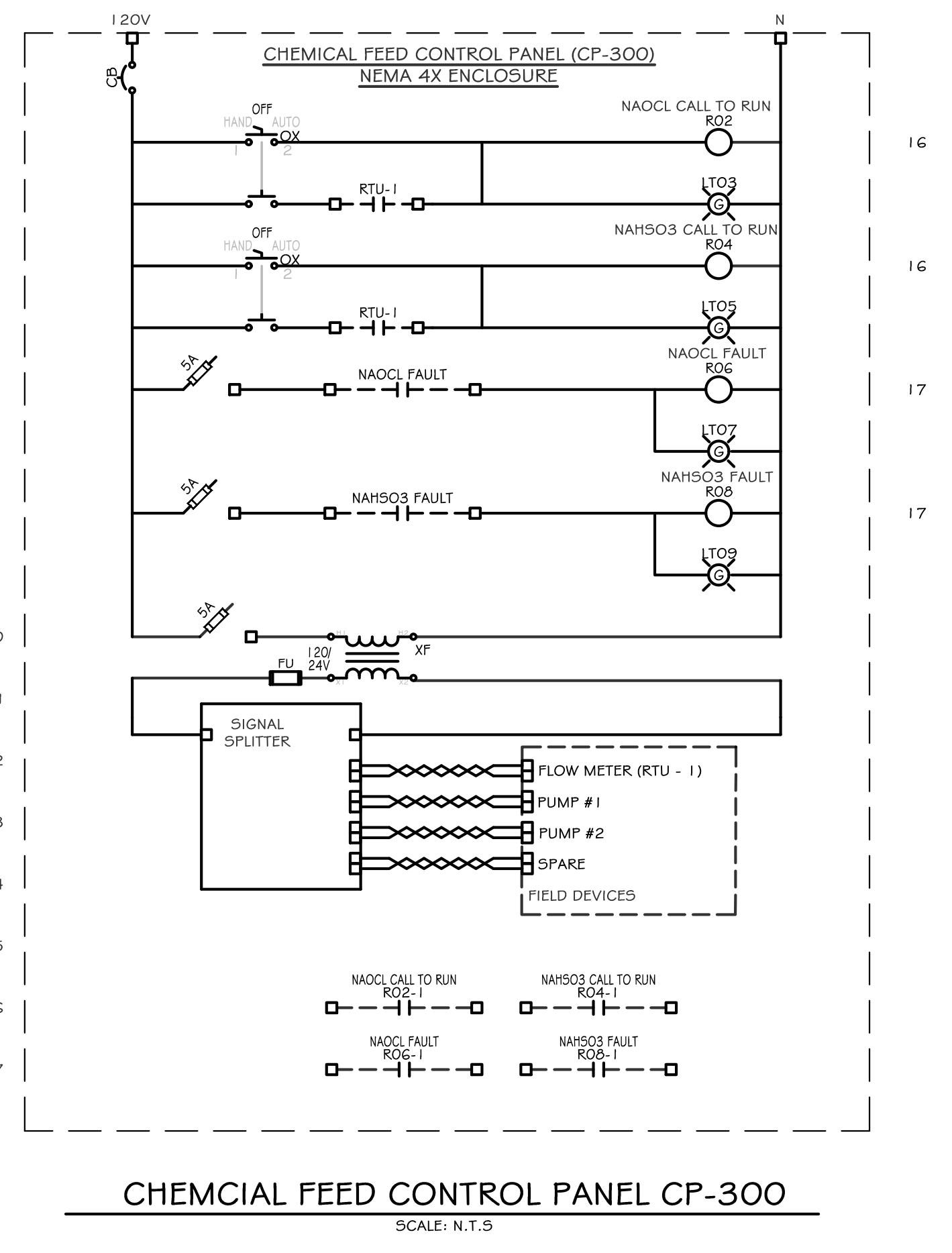
**WWTP IMPROVEMENTS  
FOR THE  
TOWN OF TIGNALL  
WILKES COUNTY, GA**

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**NOTE:**  
1) THE CONTRACTOR SHALL PROVIDE WIRING DIAGRAM DRAWINGS, A BILL OF MATERIALS, & A LAYOUT PLAN FOR THE CONTROL PANEL AND ALL ASSOCIATED COMPONENTS. THESE DOCUMENTS MUST BE SUBMITTED FOR THE ENGINEER'S REVIEW & APPROVAL PRIOR TO FABRICATION.  
2) CP-100 & CP-300 MAY BE COMBINED INTO A SINGLE CONTROL PANEL.

**BLOWERS CONTROL PANEL SCHEMATIC**  
SCALE: N.T.S.



**CHEMICAL FEED CONTROL PANEL CP-300**  
SCALE: N.T.S.

**BLOWER CONTROL PANEL CP-100**

- A. SCOPE OF WORK**
- CONTRACTOR SHALL PROVIDE ONE PANEL TO POWER AND CONTROL THE TWO (2) PROPOSED 20HP BLOWERS.
  - THE POWER SERVICE FOR EACH BLOWER WILL BE 460VOLTS, 3-PHASE, 60 HERTZ.
  - THE CONTROL PANEL LIST OF DEVICES IS DESCRIBED BELOW. THE EQUIPMENT LISTED BELOW IS A GUIDE AND DOES NOT RELIEVE THE CONTROLLER MANUFACTURER FROM SUPPLYING A SYSTEM THAT WILL FUNCTION AS REQUIRED.
- B. ENCLOSURE**
- THE ENCLOSURE SHALL BE A NEMA 4X WATERPROOF, CORROSION RESISTANT, 304 STAINLESS STEEL WITH INNER DEAD FRONT DOOR. THE ENCLOSURE SHALL ADEQUATELY HOUSE ALL OF THE COMPONENTS. THE DOOR GASKET SHALL BE RUBBER COMPOSITION WITH A RETAINER TO ASSURE A POSITIVE SEAL.
  - FOR NEMA 4X ENCLOSURES, A POLISHED ALUMINUM DEAD FRONT SHALL BE MOUNTED ON A CONTINUOUS AIRCRAFT TYPE HINGE, CONTAIN CUTOUPS FOR MOUNTED EQUIPMENT, AND PROVIDE PROTECTION OF PERSONNEL FROM LIVE INTERNAL WIRING. "HAND-OF-AUTO" CONTROL SWITCHES, INDICATOR PILOT LIGHTS, AND ELAPSED TIME METERS, SHALL BE MOUNTED ON THE EXTERNAL SURFACE OF THE DEAD FRONT. THE DEAD FRONT SHALL OPEN A MINIMUM OF 150 DEGREES TO ALLOW ACCESS TO EQUIPMENT FOR MAINTENANCE.
- C. BACK PLATE**
- THE BACK PLATE SHALL BE MANUFACTURED OF 12 GAUGE SHEET STEEL AND BE FINISHED WITH A PRIMER COAT AND TWO (2) COATS OF BAKED ON WHITE ENAMEL. ALL HARDWARE MOUNTED TO THE SUBPANEL SHALL BE ACCOMPLISHED WITH MACHINE THREAD TAPPED HOLES. SHEET METAL SCREWS ARE NOT ACCEPTABLE. ALL DEVICES SHALL BE PERMANENTLY IDENTIFIED.
- D. PILOT DEVICES**
- ALL PILOT DEVICES SHALL BE 30MM SIEMENS CLASS 52 OR EQUAL.
  - FOR NEMA 4X ENCLOSURES, ALL PILOT DEVICES SHALL BE MOUNTED ON THE INNER DEAD FRONT DOOR FOR UNLESS OTHERWISE NOTED.
  - THE CONTROL PANEL SHALL INCLUDE THE FOLLOWING FOR EACH BLOWER:
    - RUNNING LIGHT
    - HOA SELECTOR SWITCHES
    - ELAPSED TIME METER
- E. MAIN DISCONNECT, CIRCUIT BREAKERS, LIGHTNING PROTECTION**
- THE CONTROL PANEL SHALL HAVE A MAIN CIRCUIT BREAKER DISCONNECT.
  - EACH CONSTANT SPEED MOTOR STARTER SHALL HAVE CIRCUIT BREAKERS THAT ARE HEAVY DUTY THERMAL MAGNETIC OR MOTOR CIRCUIT PROTECTORS SIMILAR AND EQUAL TO SIEMENS. EACH BREAKER SHALL BE SIZED TO MEET THE PUMP MOTOR OPERATING CHARACTERISTICS AND SHALL HAVE A MINIMUM OF 22,000 AMPS INTERRUPTING CAPACITY AT 480 VAC.
  - CIRCUIT BREAKERS SHALL BE INDICATING TYPE PROVIDING "ON-OFF-TRIP" POSITIONS OF THE OPERATING HANDLE WHEN THE BREAKER IS TRIPPED AUTOMATICALLY, THE HANDLE SHALL ASSUME A MIDDLE POSITION INDICATING "TRIP".
- F. MOTOR STARTERS**
- MAGNETIC MOTOR STARTERS SHALL BE FURNISHED FOR EACH BLOWER MOTOR. STARTERS OF NEMA SIZE 1 AND ABOVE SHALL BE DESIGNED FOR ADDITION OF AT LEAST TWO AUXILIARY CONTACTS. STARTERS RATED "0", "00", OR FRACTIONAL SIZE ARE NOT

ACCEPTABLE. POWER CONTACTS SHALL BE DOUBLE-BREAK AND MADE OF CADMIUM OXIDE SILVER. ALL MOTOR STARTERS SHALL BE EQUIPPED TO PROVIDE UNDER-VOLTAGE RELEASE AND OVERLOAD PROTECTION ON ALL THREE PHASES. PROVIDE SOLID STATE OVERLOADS, BIMETALLIC TYPE THERMAL OVERLOADS ARE NOT ACCEPTABLE. STARTERS SHALL BE EQUAL TO SIEMENS CLASS 54.

**G. TRANSFORMER**

- THE 3KVA CONTROL TRANSFORMER SHALL BE LARGE ENOUGH TO PROVIDE 120 VAC FOR CONTROL CIRCUITS AND SEPARATE DUPLEX CONTROL POWER RECEPTACLE. THE TRANSFORMER SHALL UTILIZE CONTROL FUSES ON THE PRIMARY AND SECONDARY CIRCUITS. ONE LEG OF THE SECONDARY SHALL BE GROUNDED.

**H. LOCAL & REMOTE ALARMS**

- INDIVIDUAL CONTROL RELAYS SHALL BE USED FOR REMOTE ALARMS. RELAYS SHALL HAVE ISOLATED NO # 4C CONTACTS WIRED TO TERMINAL BLOCKS FOR FIELD INTERFACE.

**I. ELECTRONIC TIMERS**

- FINDER MODEL 12.62 DIGITAL TIME SWITCH, WEEKLY PROGRAMMING-CAN BE PROGRAMMED IN "CLASSIC" MODE VIA THE JOYSTICK, OR "SMART" MODE VIA SMARTPHONES WITH NFC COMMUNICATIONS.

**J. ANCILLARY EQUIPMENT**

- THE ANCILLARY EQUIPMENT LISTED BELOW SHALL BE INCLUDED WITH THE CONTROL PANEL.
  - PHASE MONITOR FOR MONITORING INCOMING POWER.
  - CONTROL PANEL ANTI-CONDENSATION HEATER.

**K. MISCELLANEOUS**

- PANEL MARKINGS
  - ALL COMPONENT PARTS IN THE CONTROL PANEL SHALL BE PERMANENTLY MARKED AND IDENTIFIED AS THEY ARE INDICATED ON THE DRAWING. MARKING SHALL BE ON THE BACK PLATE ADJACENT TO THE COMPONENT. ALL CONTROL CONDUCTORS AND TERMINALS SHALL BE IDENTIFIED WITH HEAT SHRINK TYPE, NON-ADHESIVE WIRE MARKERS.

**2. TESTING**

- ALL PANELS SHALL BE TESTED TO THE POWER REQUIREMENTS AS SHOWN ON THE PLANS TO ASSURE PROPER OPERATION OF ALL THE COMPONENTS. EACH CONTROL FUNCTION SHALL BE ACTIVATED TO CHECK FOR PROPER OPERATION AND INDICATION.
- FIELD COMMISSIONING AND STARTUP. THE PANEL SHALL BE TESTED IN THE FIELD BY AN AUTHORIZED STARTUP TECHNICIAN ASSURING ALL CONTROL DEVICES FUNCTION PROPERLY AND SEQUENCE OF OPERATION IS IN ACCORDANCE WITH SPECIFICATION REQUIREMENTS.

**3. WARRANTY**

- ALL EQUIPMENT SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF ACCEPTANCE. THE GUARANTEE SHALL BE EFFECTIVE AGAINST ALL DEFECTS IN WORKMANSHIP OR DEFECTIVE COMPONENTS.

**4. MANUFACTURER**

- THE CONTROL PANEL MANUFACTURER SHALL BE A UL508 LISTED SHOP FOR INDUSTRIAL CONTROL SYSTEMS SHALL PROVIDE EVIDENCE OF SUCH ON REQUEST FROM THE ENGINEER OR USING AUTHORITY. THE PANEL SHALL BE PROVIDED WITH A UL LABEL. THE PANEL SHOP SHALL HAVE BUILT UL508 CONTROL PANELS FOR NO LESS THAN 5 YEARS. PANEL SHALL BE PROVIDED BY APPLIED INDUSTRIAL CONTROLS (770) 614-7022, DUBLIN AUTOMATION (478) 353-1142 OR EQUAL.

**CHEMICAL FEED CONTROL PANEL SPECIFICATIONS**

- A. SCOPE OF WORK**
- CONTRACTOR SHALL PROVIDE ONE PANEL TO CONTROL THE METERING PUMPS AND OTHER DEVICES AS SHOWN.
  - THE POWER SERVICE FOR THE CONTROL PANEL WILL BE 120VOLTS, 1-PHASE, 60 HERTZ.
  - THE CONTROL PANEL LIST OF DEVICES IS DESCRIBED BELOW. THE EQUIPMENT LISTED BELOW IS A GUIDE AND DOES NOT RELIEVE THE CONTROLLER MANUFACTURER FROM SUPPLYING A SYSTEM THAT WILL FUNCTION AS REQUIRED.
  - THE CONTRACTOR SHALL PROVIDE WIRING DIAGRAM DRAWINGS, A BILL OF MATERIALS, & A LAYOUT PLAN FOR THE CONTROL PANEL AND ALL ASSOCIATED COMPONENTS. THESE DOCUMENTS MUST BE SUBMITTED FOR THE ENGINEER'S REVIEW & APPROVAL PRIOR TO FABRICATION.
  - THE PANEL TO BE SUPPLIED WITH RELAY LADDER LOGIC, ALTERNATORS & ANALOG SPLITTERS AS REQUIRED AS REQUIRED.
- B. ENCLOSURE**
- THE ENCLOSURE SHALL BE A NEMA 4X WATERPROOF, CORROSION RESISTANT, 304 STAINLESS STEEL WITH INNER DEAD FRONT DOOR. THE ENCLOSURE SHALL ADEQUATELY HOUSE ALL OF THE COMPONENTS. THE DOOR GASKET SHALL BE RUBBER COMPOSITION WITH A RETAINER TO ASSURE A POSITIVE SEAL.
- C. BACK PLATE**
- THE BACK PLATE SHALL BE MANUFACTURED OF 12 GAUGE SHEET STEEL AND BE FINISHED WITH A PRIMER COAT AND TWO (2) COATS OF BAKED ON WHITE ENAMEL. ALL HARDWARE MOUNTED TO THE SUBPANEL SHALL BE ACCOMPLISHED WITH MACHINE THREAD TAPPED HOLES. SHEET METAL SCREWS ARE NOT ACCEPTABLE. ALL DEVICES SHALL BE PERMANENTLY IDENTIFIED.
- D. PILOT DEVICES**
- ALL PILOT DEVICES SHALL BE 30MM SIEMENS CLASS 52 OR EQUAL.
  - THE CONTROL PANEL SHALL INCLUDE THE FOLLOWING FOR THE WELL PUMP:
    - ALARM LIGHTS
    - HOA SWITCH
- E. TRANSFORMER**
- PROVIDE CONTROL CIRCUIT TRANSFORMER AS NEEDED.
- F. LOCAL & REMOTE ALARMS**
- INDIVIDUAL CONTROL RELAYS SHALL BE USED FOR REMOTE ALARMS. RELAYS SHALL HAVE ISOLATED NO # 4C CONTACTS WIRED TO TERMINAL BLOCKS FOR FIELD INTERFACE.
- H. PUMP CONTROL DEVICES**
- THE METERING PUMP CALL TO RUN WILL BE PROVIDED BY RTU-1.
- I. ANCILLARY EQUIPMENT**
- THE ANCILLARY EQUIPMENT LISTED BELOW SHALL BE INCLUDED WITH THE CONTROL PANEL.
    - CONTROL PANEL ANTI-CONDENSATION HEATER.
    - BATTERY
    - ANALOG DISPLAYS W/ SPDT RELAYS
    - RED NEMA 4X ALARM LIGHT PROVIDED LOOSE FOR MOUNTING TO THE OUTSIDE OF THE BUILDING.

**J. MISCELLANEOUS**

- 1. PANEL MARKINGS**
- ALL COMPONENT PARTS IN THE CONTROL PANEL SHALL BE PERMANENTLY MARKED AND IDENTIFIED AS THEY ARE INDICATED ON THE DRAWING. MARKING SHALL BE ON THE BACK PLATE ADJACENT TO THE COMPONENT. ALL CONTROL CONDUCTORS AND TERMINALS SHALL BE IDENTIFIED WITH HEAT SHRINK TYPE, NON-ADHESIVE WIRE MARKERS.
- 2. TESTING**
- ALL PANELS SHALL BE TESTED TO THE POWER REQUIREMENTS AS SHOWN ON THE PLANS TO ASSURE PROPER OPERATION OF ALL THE COMPONENTS. EACH CONTROL FUNCTION SHALL BE ACTIVATED TO CHECK FOR PROPER OPERATION AND INDICATION.
  - FIELD COMMISSIONING AND STARTUP. THE PANEL SHALL BE TESTED IN THE FIELD BY AN AUTHORIZED STARTUP TECHNICIAN ASSURING ALL CONTROL DEVICES FUNCTION PROPERLY AND SEQUENCE OF OPERATION IS IN ACCORDANCE WITH SPECIFICATION REQUIREMENTS.

**K. WARRANTY**

- ALL EQUIPMENT SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF ACCEPTANCE. THE GUARANTEE SHALL BE EFFECTIVE AGAINST ALL DEFECTS IN WORKMANSHIP OR DEFECTIVE COMPONENTS. VFDs SHALL BE GUARANTEED FOR A PERIOD NO LESS THAN THREE (3) YEARS.

**L. MANUFACTURER**

- THE CONTROL PANEL MANUFACTURER SHALL BE A UL508 LISTED SHOP FOR INDUSTRIAL CONTROL SYSTEMS SHALL PROVIDE EVIDENCE OF SUCH ON REQUEST FROM THE ENGINEER OR USING AUTHORITY. THE PANEL SHALL BE PROVIDED WITH A UL LABEL. THE PANEL SHOP SHALL HAVE BUILT UL508 CONTROL PANELS FOR NO LESS THAN 5 YEARS. PANEL SHALL BE PROVIDED BY APPLIED INDUSTRIAL CONTROLS (770) 614-7022, OR APPROVED EQUAL.

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**Carter & Sloope**  
CONSULTING ENGINEERS

115 WOODLAND WAY, SUITE 120, CANTON, GA 30114 . 770.479.8782 TEL  
GA COA LICENSE# PE0001004 EXPIRES 6/30/2026



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DSGN: RV	DRWN: RV
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