



CONTRACT DOCUMENTS

VOLUME I

**PWC2324029 CROSS CREEK WATER RESOURCE FACILITY
AND ROCKFISH CREEK WATER RESOURCE FACILITY
SCREW PUMP IMPROVEMENTS**

ISSUED FOR BID

NOVEMBER 22, 2023



**Fayetteville Public Works Commission
Administrative Building
955 Old Wilmington Road
Fayetteville, NC 28301**

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**ADVERTISEMENT FOR BID
FAYETTEVILLE PUBLIC WORKS COMMISSION
CROSS CREEK WATER RESOURCE FACILITY AND ROCKFISH CREEK WATER
RESOURCE FACILITY SCREW PUMP IMPROVEMENTS**

**Cumberland County
North Carolina**

Pursuant to N.C.G.S 143-129, sealed bids are solicited and will be received at Fayetteville Public Works Commission, Administration Building, Conference Room 107, 955 Old Wilmington Road, Fayetteville, NC 28301, until **2:00 p.m., Thursday, January 18, 2023**, at which time they will be publicly opened and read.

The work includes furnishing, installing, and modifying facilities at the Cross Creek WRF including the Influent Pump Station, Primary Sludge Pump Station, PS No.3, electrical site work, and some site civil work. Influent Pump Station work includes replacement of screw pumps, ventilation fans and ductwork, a new gate for the screenings bypass channel. Primary Sludge Pump Station Work includes replacement of influent screw pump motor starters and demolition of a door and replacing with a masonry wall. Pump Station No. 3 work includes replacement of screw pumps and a new electrical building for the screw pump motor starters and a new switchgear. Electrical Site Work includes a new duct bank from the influent screw pump motor starters in the Primary Sludge Pump Station Facilities to the influent screw pumps. Rockfish Creek Influent Pump Station work includes replacement of four existing screw pumps and addition of a new screw pump. Additive alternate work will be a new electrical building near Influent Pump Station at Cross Creek WRF for influent pump motor starters and a new duct bank from the influent pump motor starters to the Influent Pump Station.

The foregoing description shall not be construed as a complete description of all work required. All work shall be done in accordance with PWC technical specifications and standard contract terms.

A **MANDATORY** pre-bid meeting will be held at **2:00 p.m., Thursday, December 7, 2023**, in the Conference Room 107, Fayetteville Public Works Commission, Administrative Building, 955 Old Wilmington Road, Fayetteville, NC 28301. Representatives of the Owner will be available to answer questions. Any formal bid submitted by a Bidder that fails to attend this meeting will be considered an unresponsive bid. A virtual option will be offered for potential bidders that prefer the web conference. To attend the web conference potential bidders must email Carla Wint, Procurement Advisor at procurement@faypwc.com, attention (pre-bid meeting PWC2324029) of their intent to attend, and to be added to the meeting ID: 218 416 602 861# and passcode: WWmBLC via Microsoft Teams.

Questions will be fielded at the pre-bid meeting and all prospective bidders are required to attend the meeting. Individual telephone inquiries are prohibited. PWC assumes no responsibility to fully inform absentees of clarifications not issued by addendum.

Bids must be enclosed in a sealed envelope addressed to Carla Wint, Procurement Advisor, Fayetteville Public Works Commission, 955 Old Wilmington Road, Fayetteville, North Carolina 28301. The outside of the envelope must be marked **SEALED BID: CROSS CREEK WATER RESOURCE FACILITY AND ROCKFISH CREEK WATER RESOURCE FACILITY SCREW PUMP IMPROVEMENTS** and shall indicate the name, address and state license number of the

bidder. Bids shall be submitted on the printed forms, or exact copies thereof, contained in the Contract Documents.

Each bid shall be accompanied by a bid bond of five percent (5%) of the bid executed by a surety company licensed under the laws of North Carolina to execute the Contract in accordance with the bid bond and upon failure to forthwith make payment, the surety shall pay the obligee an amount equal to the amount of said bond. Said deposit shall be retained by the Owner as liquidated damages in event of failure of the successful bidder to execute the Contract within ten (10) days after the Notice of Award or give satisfactory surety as required by law.

Performance and Payment Bonds are required in the amount of 100% of the Contract amount and shall be furnished by the Contractor.

All Contractors are notified that North Carolina Statutory provisions as to licensing of Contractors will be followed as applicable in receiving and evaluating bids and in reading and awarding the Contract (Chapter 87 of the North Carolina General Statutes).

The license classification shall be:

Part 1:	Public Utilities (Water and Sewer)	-	Unlimited
	Unclassified	-	Unlimited

Plans and Specifications including Contract Documents will be available online for viewing and downloading on or about **Wednesday, November 22, 2023** on the PWC Procurement website at <https://www.faypwc.com/purchasing>. In addition, the documents will be available from the Fayetteville State University Construction Resource Office (FSU CRO) at <https://www.uncfsu.edu/academics/colleges-schools-and-departments/broadwell-college-of-business-and-economics/outreach-centers/construction-resource-office>. In collaboration with the North Carolina Institute of Minority Economic Development, the FSU CRO offers services and support to help small, minority, veteran, and women-owned businesses identify and compete for construction-related projects.

At the FSU CRO, potential bidders may:

- Research, view and print project drawings to scale free of charge;
- Use available software to prepare their bid; and
- Receive certification and pre-qualification assistance.

Please email the FSU CRO to make an appointment: fsucro@uncfsu.edu

Plans and Specifications are also being furnished to ISQFT (www.isqft.com) for online posting. Purchase of the documents is not required to bid.

Fayetteville Public Works Commission reserves the right to reject any or all bids for any reason determined by PWC to be in its best interest, or to award the bid to the lowest responsible bidder or bidders, taking into consideration quality, performance, and the time specified in the bids for the performance of the contract.

The bidder to whom the contract may be awarded must comply fully with the requirements of North Carolina General Statutes Section 143-129, as amended.

No bids may be withdrawn after the scheduled Bid Opening for a period of ninety (90) calendar days.

FAYETTEVILLE PUBLIC WORKS COMMISSION

Candice S. Kirtz

Director of Supply Chain

**00100 - INSTRUCTIONS TO BIDDERS
FAYETTEVILLE PUBLIC WORKS COMMISSION
CROSS CREEK WATER RESOURCE FACILITY AND ROCKFISH CREEK WATER
RESOURCE FACILITY SCREW PUMP IMPROVEMENTS**

A. DEFINED TERMS

Terms used in these Instructions to Bidders are defined in the Definitions and Terminology sections of PWC General Conditions.

B. COPIES OF BIDDING DOCUMENTS

1. Complete sets of the Bidding Documents as stated in the Invitation to Bidders, may be obtained from the PWC Procurement Department.
2. Complete sets of Bidding Documents shall be used in preparing Bids. PWC assumes no responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

C. EXAMINATION OF CONTRACT DOCUMENTS, OTHER RELATED DATA, AND PROJECT SITE

1. Before submitting a Bid, each Bidder shall (a) examine the Contract Documents thoroughly, (b) visit the site and become familiar with the site and any local conditions that may in any manner affect the cost, progress, or performance of the Work, (c) be familiar with federal, state and local laws, ordinances, rules and regulations that may in any manner affect cost, progress or performance of the Work, and (d) study and carefully correlate Bidder's observations with the Contract Documents, and (e) give the PWC Procurement Advisor written notice of all conflicts, errors or discrepancies in the Contract Documents.
2. Bidders should consult the Specifications for the identification of those reports of investigations and tests of subsurface and latent physical conditions at the site or reports that otherwise may affect cost, progress, or performance of the Work which may have been utilized in the preparation of the Drawings and Specifications. PWC will make copies of such reports if available at the cost (non-refundable) of reproduction to any Bidder requesting them. These reports are not intended to constitute any explicit or implicit representation as to the nature of the subsurface and latent physical conditions, which may be encountered at the site or to constitute explicit or implicit representations as to any other matter, contained in any report. Such reports are not guaranteed as to accuracy or completeness and are not part of the Contract Documents. Before submitting a Bid, each Bidder will, at its own expense, make such investigations and tests as the Bidder may deem necessary to determine his Bid for the performance of the Work in accordance with the Contract Documents.
3. On request (minimum 48 hours advance notice), PWC will provide each Bidder access to the site to conduct such investigations and tests, as each Bidder deems necessary for submission of its Bid.
4. The lands upon which the Work is to be performed, right-of-way for access thereto, and other lands available for use by the Contractor in performing the Work are identified in the Contract Documents.

5. The submission of a Bid constitutes an incontrovertible representation by the Bidder that it has complied with every requirement of this Section and that the Contract Documents are sufficient in scope and detail to indicate and convey an understanding of all terms and conditions for the performance of the Work.

D. INTERPRETATIONS AND ADDENDA

1. All questions about the meaning or intent of the bid or Contract Documents shall be submitted in writing to Carla Wint, Procurement Advisor, by email to procurement@faypwc.com. In order to receive consideration, questions must be received by **Tuesday, January 9, 2023, 5:00 p.m.** Any interpretations of questions so raised, which in the opinion of the Project Engineer require interpretations, will be issued by Addenda via email or posted online by the Owner and/or Project Engineer. An Addendum extending the Bid Opening date may be issued up to five (5) business days before the Bid Opening date. An Addendum withdrawing the Invitation for Bid may be issued any time prior to the Bid Opening date. The Owner and Project Engineer will not be responsible for oral interpretations or clarifications, which anyone presumes to make on their behalf.

Bidders are expressly prohibited from contacting any PWC official or employee associated with this project, except as noted above. Violation of this prohibition is grounds for the immediate disqualification of the bidder.

2. PWC may issue such additional Addenda as may be necessary to clarify, correct, or change the Contract Documents. Such Addenda, if any, will be issued in the manner and within the time stated in Paragraph 1 of this Section.
3. Each Bidder shall be responsible for determining that all Addenda issued by PWC have been received before submitting a Bid for the Work.
4. Each Bidder shall acknowledge the receipt of each Addendum on the Bid Form.

E. QUALIFICATION OF CONTRACTORS

1. **Contractor Qualification Form** – The Bid package shall include the completed Contractor Qualification Form and all supporting documentation.
2. **Statutory Requirements** – The Bidder shall comply with all federal, state, and local statutes, regulations, and codes as they relate to the Project. Failure to comply with these requirements shall be considered a breach of Contract.
3. Contractor to provide utility references for similar projects completed by identified crews.

F. SUBSTITUTE MATERIAL AND EQUIPMENT

The Contract, if awarded, will be on the basis of material and equipment described in the Drawings or required in the Specifications without consideration of possible substitute or "or-equal" items. The procedure for submittal of substitute or "or-equal" items for consideration is set forth in the PWC General Conditions.

G. CONTRACTOR'S LICENSE

1. No General Contractor shall engage in contracting work in the State of North Carolina unless it has been licensed under in accordance with North Carolina law.

2. Bidders are prohibited from contracting for, or bidding upon, the construction, removal, repair or improvements to or upon real property owned, controlled or leased by Fayetteville Public Works Commission without a North Carolina Contractor's License.
3. Each bidder shall indicate its North Carolina Contractor's License number on the bid envelope and the Bid Form.
4. License Classification shall be:
 - Public Utilities Water and Sewer: Unlimited
 - Unclassified: Unlimited

H. SUBCONTRACTORS

1. Contractor shall subcontract no more than 49 percent (49%) of the value of the Contract.
2. Each Bidder shall submit to PWC with its bid the List of Subcontractors, Suppliers, other persons, and organizations proposed for those portions of the Work for which such identification is required. If PWC, after due investigation has reasonable objection to any proposed Subcontractor, Supplier, other person or organization, PWC may, before Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute without an increase in the Bid.
3. If the apparent Successful Bidder declines to make such a substitution, PWC may award the Contract to the next lowest responsive, responsible Bidder that proposes to use acceptable Subcontractors, Suppliers, and other persons, and organizations. The declining to make requested substitutions will not constitute grounds for sacrificing the bid security of any Bidder. If PWC does not make written objection to a Bidder's list of Subcontractors, Suppliers, other persons, or organizations prior to giving Notice of Award, the list will be considered acceptable, subject to revocation as provided in the PWC General Conditions.

I. MINORITY, WOMEN, DISADVANTAGED BUSINESS ENTERPRISE (MWDBE) PROGRAM / SMALL LOCAL SUPPLIER (SLS) PROGRAM

1. PWC is committed to promoting the utilization of Minority, Women, and Disadvantaged Businesses in PWC's geographical statistical area (GSA) by providing equal opportunity for participating in all aspects of PWC's contracting and procurement programs. The GSA consists of NCDOT division areas 3-8, and 10. PWC is also committed to promoting the utilization of small, local businesses in the Fayetteville Metropolitan Statistical Area (MSA) by increasing opportunities for those businesses to participate in PWC procurements. The MSA consists of Cumberland County, Hoke County, and Harnett County.
2. PWC requires Bidders to report efforts to utilize Minority, Women, and Disadvantaged Business Enterprises (MWDBEs) and Historically Underutilized Businesses (HUBs) for specific projects and requires all Bidders to report all such efforts for MWDBEs, HUBs, and Small Local Suppliers regardless of the requirements of a specific project. Bidders shall document any good-faith efforts and utilization in the MWDBE forms provided within the Contract Documents.
3. NCDOT Disadvantaged Business Enterprise (DBE) and NC Department of Administration (DOA) Historically Underutilized Business (HUB) firms with current certifications are acceptable for listing in the bidder's submittal of MWDBE participation and will be

considered to meet any necessary contract goal. Firms that are certified through NCDOT are listed in the "Vendor Directory" which can be accessed through the following: <https://www.ebs.nc.gov/VendorDirectory/default.html>. Firms that are certified through NC DOA are listed at the "Vendor Search" which can be accessed through the following link: <https://evp.nc.gov/vendors/vendorsearchadvanceform/?id=d98aa5d6-0d57-ee11-be6e-001dd804e775>.

4. Bidders shall submit, with their bid, the MWDBE documentation required in the Contract Documents. The Bidder is strongly recommended to attend the Pre-Bid Meeting, as important information will be reviewed.

J. SUBMISSION OF BIDS

1. All Bidders shall use the enclosed Bid Forms, or exact copies thereof, in submitting their bid prices. PWC will not accept oral Bids or Bids received by telephone, email, or telecopier (FAX machine) for this Bid.
2. All prices must be F.O.B. delivered to the point as indicated by this Bid. PWC will grant no allowance for boxing, crating, or delivery unless specifically provided for in this Bid.
3. The Bid Form must be completed in black ink. Black or blue pen ink is acceptable if handwritten. Discrepancies between amounts shown in words and amounts shown in figures will be resolved in favor of the amounts shown in words. Discrepancies in the multiplication of units of Work and the unit prices will be resolved in favor of the correct multiplication of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.
4. Bid submittals sent by mail should be registered mail. The sealed Bid, marked as indicated above, should be enclosed in an additional sealed envelope similarly marked and addressed to:

Fayetteville Public Works Commission
Attn: Carla Wint, Procurement Advisor
955 Old Wilmington Road
Fayetteville, North Carolina 28301

5. Mark the envelope in the lower left-hand corner with the project title, hour and due date of Bid, and the Bidder's North Carolina contractor registration number.
6. Bids sent by mail and arriving after the time for the opening of Bids shall not be considered valid Bids. In such instances, the Bidders shall have no claim against PWC.
7. All items contained in the Bid Checklist shall be completely filled out and submitted with the bid. Failure to submit any of the items requested with the Bid Form may be just cause for rejection of the Bid by PWC.
8. All erasures, insertions, additions, and other changes made by the Bidder to the Bid Form shall be signed or initialed by the Bidder. Bids containing any conditions, omissions, erasures, alterations, or items not called for in the Bid, may be rejected by PWC as being incomplete or nonresponsive.
9. The Bid Form must be signed in order to be considered. If the Bidder is a corporation, the

Bid must be submitted in the name of the corporation, not simply the corporation's trade name. In addition, the Bidder must indicate the corporate title of the individual signing the Bid.

10. The Bid Form, the Bid security, if any, and any other documents required, shall be enclosed in a sealed opaque envelope. Any notation or notations on the exterior of the envelope purporting to alter, amend, modify, or revise the bid contained within the envelope shall be of no effect and shall be disregarded.
11. All Bids received in the Procurement Department by the deadline indicated will be kept sealed until the time and date of the Bid Opening.
12. All late Bids shall be returned unopened to the sender.

K. BID BOND

1. Each Bid shall be accompanied by an acceptable Bid bond in the amount of five percent (5%) of the Bid amount, and made payable to Fayetteville Public Works Commission, North Carolina.
2. The Bid bond is a guarantee that if the contract is awarded by PWC to the Bidder, the Bidder shall enter into the contract with PWC for the work mentioned in this Bid or forfeit the Bid bond to PWC, not as a penalty, but as liquidated damages.
3. No forfeiture under a Bid bond shall exceed the lesser of (a) the difference between the Bid for which the Bid bond was written and the next low Bid of another Bidder, or (b) the face amount of the Bid bond.
4. All bonds shall be executed by a surety company selected by the Bidder, which is legally authorized to do business in the State of North Carolina (NCGS §44 A-26), and the bond shall be the same in both form as well as substance as AIA Document A310, Bid Bond.
5. The Bidder shall require the attorney-in-fact, who executed the required bond on behalf of the surety company, to affix thereto a certified and current copy of the power of attorney.
6. The bond premium shall be paid by the Bidder and the cost shall be included in the Bid price.
7. Any inspection of procurement transaction records shall be subject to reasonable restrictions to ensure the security and integrity of the records.

L. OPENING OF BIDS

1. Bids will be opened publicly and read aloud on the date and time set for the Bid Opening in the Notice to Bidders.
2. Any Bidder, upon request, shall be afforded the opportunity to inspect Bid records within a reasonable time after the opening of all Bids but prior to award, except in the event that PWC decides not to accept any of the Bids and to reopen the contract. Otherwise, bid records shall be open to public inspection only after the award of the Contract.
3. Any inspection of procurement transaction records shall be subject to reasonable

restrictions to ensure the security and integrity of the records.

M. MODIFICATION OF BIDS

1. A Bid may be modified or withdrawn by the Bidder at any time prior to the time and date set for the Bid Opening. The Bidder shall notify the PWC Procurement Department in writing of its intentions.
2. Modified and withdrawn Bids may be resubmitted to the PWC Procurement Department up to the time and date set for the Bid Opening.

N. WITHDRAWAL OF BID DUE TO ERROR

1. If the Bidder desires to withdraw its Bid, the Bidder must do so before the time fixed for the opening, without prejudice, by communicating its purpose in writing to PWC. After bids are open, bids may only be withdrawn in strict accordance with N.C.G.S. Section 143-129-1

O. BIDS TO REMAIN OPEN

1. All Bids shall remain open for ninety (90) calendar days after the day of the Bid Opening.

P. ESTIMATED QUANTITIES

1. The estimated quantities contained herein in certain items in the Bid are for the purpose of comparing bids, and while they are believed to be close approximations, they are not guaranteed, and settlement will be made on the basis of the work as actually executed at the unit prices in the Bid as accepted. PWC further reserves the right to delete any single line item or combination of items from the bid and cannot guarantee that all quantities listed in the Contract Documents will be utilized.

Q. AWARD OF CONTRACT

1. PWC reserves the right to reject any and all Bids, to waive any and all informalities, and to disregard all nonconforming, nonresponsive, or conditional Bids. PWC reserves the right to request additional information from any or all bidders for evaluation purposes. Failure or refusal to furnish additional information as requested may result in the rejection of the bid.
2. In case of a tie Bid, the tie shall be decided by lot.
3. It is the intent of PWC to recommend the award of this contract to the lowest responsive, responsible Bidder provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. In determining the lowest responsible Bidder, PWC may consider, among other criteria, the Bidder's past performance conduct on other contracts, and other information provided by the Bidder as noted below.
4. In determining the lowest responsive Bidder, PWC will evaluate the Bidder's proposed Bid price and the completeness of the submitted bid in accordance with the requirements of the Contract Documents.
5. PWC may consider the operating costs, maintenance considerations, performance date, and guarantees of materials and equipment.

6. PWC may conduct such investigations as deemed necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications and financial ability of the Bidders, as well as other considerations, to include but not limited to resources available to the Bidder to perform the work effectively, proposed Subcontractors and other persons and organizations to do the work in accordance with the Contract Documents to PWC's satisfaction within the prescribed time.
7. PWC reserves the right to reject the Bid of any Bidder who does not pass any such evaluation to PWC's satisfaction.
8. If the Contract is to be awarded, PWC will give the Successful Bidder a Notice of Award within ninety (90) days after the day of the Bid Opening.
9. The Bidder to whom the contract is awarded shall, within ten (10) days after prescribed documents are presented for signature, execute and deliver the Contract Documents and any other forms or bonds required by the Bid to PWC.
10. The Bidder is required to complete the attached forms that will allow PWC to verify that the Bidder is qualified to perform the Work described in these Contract Documents. All forms shall be completed and submitted with the Bid. Failure to submit all the required forms shall be considered grounds for PWC to reject the bid.

PWC will review all of the bids and qualification data to determine the lowest responsive, responsible Bidder. PWC reserves the right to not award the Contract to the lowest bidder if the information provided is not complete, does not meet the satisfaction of PWC, or has been falsified. PWC will not request any additional information in order to allow the Contractor to complete bid.

11. During the evaluation phase, bid submittals will be reviewed to ascertain which bids technically and otherwise address all the requirements of these Contract Documents. Bid submittals determined to be technically non-responsive or not sufficiently responsive may be disqualified.

The Bidder shall address each of the Evaluation Criteria as requested in the Technical Evaluation Criteria Form located within Section A Project Specifics Bid Submittal Documents. To be considered substantive, the information must respond to all requirements.

12. PWC may conduct such investigations/verifications as deemed necessary to establish the responsibility, qualification and financial ability of the Bidder. Should PWC find that the apparent low bidder is not the lowest responsive, responsible bidder by integrity of the information furnished, said apparent low bidder will be so notified and its bid bond shall be returned without prejudice. Failure or refusal to furnish any items of information requested by PWC shall be considered as non-responsive and therefore basis for rejection of the bid.

R. TAXES

1. The Successful Bidder shall pay all county, city, state and federal taxes required by laws in effect at the time Bids are received and resulting from the Work or traceable thereto,

under whatever name levied.

2. Said taxes shall not be in addition to the contract price between PWC and the Successful Bidder. The taxes shall be an obligation of the Successful Bidder and not of PWC. PWC shall be held harmless from same by the Successful Bidder.

S. PERFORMANCE AND OTHER BONDS

1. The PWC General Conditions set forth PWC's requirements as to Performance and other Bonds.

T. E-VERIFY REQUIREMENTS

1. Contractor hereby acknowledges that "E-Verify" is the federal E-Verify program operated by the US Department of Homeland Security and other federal agencies which is used to verify the work authorization of newly hired employees pursuant to federal law and in accordance with Article 2, Chapter 64 of the North Carolina General Statutes.
2. Contractor further acknowledges that all employers, as defined by Article 2, Chapter 64 of the North Carolina General Statutes, must use E-Verify and after hiring an employee to work in the United States, shall verify the work authorization of the employee through E-Verify in accordance with NCGS §64-26(a).
3. Contractor hereby pledges, attests and warrants through execution of this Agreement that Contractor complies with the requirements of Article 2, Chapter 64 of the North Carolina General Statutes and further pledges, attests and warrants that any subcontractors currently employed by or subsequently hired by Contractor shall comply with any and all E-Verify requirements. Failure to comply with the above requirements shall be considered a breach of this Agreement.

U. IRAN DIVESTMENT ACT

1. As mandated by N.C.G.S. 147-86.59(a), the Contractor hereby certifies that it is not listed on the Final Divestment List created by the North Carolina State Treasurer pursuant to N.C.G.S. 147-86.58. Contractor further certifies that in accordance with N.C.G.S. 146-86.58(b) that it shall not utilize any subcontractor found on the State Treasurer's Final Divestment List. Contractor certifies that the signatory to this Purchase Order authorized by the Contractor to make the foregoing statement.

*** END OF SECTION ***

**SECTION A – PROJECT SPECIFICS
BID SUBMITTAL DOCUMENTS**

**BID SCHEDULE – PERFORMANCE AND DELIVERY
FAYETTEVILLE PUBLIC WORKS COMMISSION
CROSS CREEK WATER RESOURCE FACILITY AND ROCKFISH CREEK WATER
RESOURCE FACILITY SCREW PUMP IMPROVEMENTS**

Hybrid Pre-Bid Meeting:	2:00 p.m., Thursday, December 7, 2023
(MANDATORY)	Via Microsoft Teams
	Fayetteville Public Works Commission Administrative Building Conference Rm 107 955 Old Wilmington Road Fayetteville, NC 28301
Deadline for Questions from Bidders ¹	5:00 p. m., Tuesday, January 9, 2023
Deadline for Addenda issued by PWC Procurement Department and Vance McGougan	5:00 p. m., Friday, January 12, 2023
Bid Opening	2:00 p. m., Thursday, January 18, 2023
	Fayetteville Public Works Commission Administrative Building Conference Room 107 955 Old Wilmington Road Fayetteville, NC 28301
Contract Time:	365 days
Liquidated Damages:	Insert amount \$1,000.00 per day for each day beyond the Final Completion Date
Bid Acceptance Period	Within ninety (90) Calendar Days unless otherwise noted

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1. Questions regarding this bid must be submitted in writing to the attention of Carla Wint, Procurement Advisor, (Bid No. & title) by email to procurement@faypwc.com.

Bidders are expressly prohibited from contacting any FPWC official or employee associated with this Invitation to Bid, except as noted above. Violation of this prohibition is grounds for the immediate disqualification of the bidder.

2. Any addenda to these Contract Documents will be issued by the Project Engineer no later than the date and time stated above.

BID SUBMITTAL CHECKLIST

- 1. Enter Contractor's License Number where called for in the Bid Form and on the outside of the sealed envelope containing the Bid.
- 2. Photocopy of Contractor's License.
- 3. Bid Bond
- 4. Bid Forms Section 00300.
- 5. Provide the responsible North Carolina Registered Agent for Insurance Claims. Include contact information.
- 6. Provide the proposed responsible Bonding Company name. Include contact information.
- 7. List of proposed Subcontractors and material suppliers exceeding 5% of the Contract Value.
- 8. Non-Collusive Affidavit.
- 9. Nondiscrimination Clause.
- 10. Affidavit of Organization and Authority and Sworn Statement.
- 11. Equal Employment Opportunity Acknowledgment.
- 12. Certification regarding Debarment, Proposed Debarment, and other Responsible Matters.
- 13. FTA Certification Regarding Lobbying.
- 14. MWDBE Program Packet and required Affidavits.
- 15. SLS and MWDBE Disclosure Form.
- 16. The Completed Contractor Qualification Form.

****FAILURE TO SUBMIT THE ABOVE FORMS WITH THE BID FORM MAY BE JUST CAUSE FOR REJECTION OF THE BID BY THE OWNER****

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00300 - BID FORM

TO: **Fayetteville Public Works Commission**
Attn: Carla Wint, Procurement Advisor
955 Old Wilmington Road
Fayetteville, North Carolina 28301

PROJECT: **CROSS CREEK WATER RESOURCE FACILITY AND ROCKFISH CREEK
WATER RESOURCE FACILITY SCREW PUMP IMPROVEMENTS**

FROM: BIDDER _____
ADDRESS _____

DATE OF BID _____, 20 _____

- A. The undersigned BIDDER proposes and agrees, if this Bid is accepted, to enter into a Contract with OWNER in the form included in the Contract Documents to perform and furnish all Work (as that term is defined in the Construction Agreement) specified or indicated in the Contract Documents for the Contract Price and within the Contract Time indicated in this Bid and in accordance with the Contract Documents.
- B. BIDDER accepts all of the terms and conditions of the Instructions to Bidders, including, without limitation, those dealing with the disposition of payment and performance bonds, and insurance certificates. This bid will remain open for ninety (90) calendar days after the day of Bid opening. BIDDER will sign the Contract and submit the Contract Security and other documents required by the Contract Documents within ten (10) days after the date of receipt by the BIDDER.
- C. In submitting this Bid, Bidder represents, as more fully set forth in the Contract, that:
 - 1. BIDDER has examined copies of all the Contract Documents and of the following addenda, receipt of all which is acknowledged on the bid summary page.
 - 2. BIDDER has examined the site and locality where the Work is to be performed, the legal requirements (federal, state, and local laws, ordinances, rules and regulations) and the conditions affecting cost, progress of performance of the work and has made such independent investigations as BIDDER deems necessary.
 - 3. BIDDER acknowledges that OWNER does not assume responsibility for the accuracy of dimensions or completeness of information and data shown or indicated in the Bidding Documents with respect to existing facilities.
 - 4. BIDDER has carefully studied all reports of explorations and tests of subsurface

conditions at or contiguous to the site of the Work (except underground facilities) and all drawings of physical conditions in or relating to existing surface or subsurface structures, pipelines, and utilities at or contiguous to the site are provided within these Contract Documents. Geotechnical Reports and other information regarding subsurface conditions are identified in the attached appendices and detailed in Article V of the PWC General Conditions. BIDDER acknowledges that the OWNER does not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Bidding Documents with respect to underground facilities at or contiguous to the site of Work. BIDDER had obtained and carefully studied (or assumes responsibility for have done so) all such additional or supplementary examinations investigations, explorations, tests, studies, and data that are necessary to identify and understand conditions (surface, subsurface, and underground facilities) at or contiguous to the site of Work or otherwise which may affect cost, progress, performance, or furnishing the Work or which relate to any aspect of means, methods, techniques, sequences, and procedures of construction to be employed by Bidder and safety precautions and programs incident thereto. BIDDER waives all rights to claim that any additional examinations, investigations, explorations, tests, studies, or data are necessary for the proper submission of the Bid for the performance and furnishing of the Work in accordance with the Contract Time, Contract Price, and other terms and conditions of the Contract Documents.

5. BIDDER hereby certifies that, if awarded the Contract for construction of the Project, it will take all possible actions to minimize costs to the OWNER which are related to any disruptions in any part of the Work resulting from unforeseeable conditions which may be encountered and work changes or additions which may be made.
6. BIDDER has correlated the information known to BIDDER, information and observations obtained from visits to the site, reports and drawings identified in the Contract Documents, and all additional examinations, investigations, exploration, tests, studies, and data with the Contract Documents.
7. BIDDER has given OWNER written notice of all conflicts, errors, ambiguities, or discrepancies that BIDDER has discovered in the Contract Documents and the written resolution thereof by OWNER is acceptable to BIDDER, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work for which this Bid is submitted.
8. By bidding in response to this invitation, the BIDDER represents that in the preparation and submission of this Bid, said BIDDER did not, either directly or indirectly, enter into any combination or arrangement with any person, firm or corporation or enter into any agreement, participate in any collusion, or otherwise take any action in the restraint of free, competitive bidding in violation of the Sherman Act (15 U.S.C. Section 1).

9. Bid form must be completed in blue or black ink or by typewriter. The Bid price of each item on the form must be stated in both words and numerals. In case of a conflict, words shall take precedence. Discrepancies in the multiplication of units of work and unit prices will be resolved in favor of the correct multiplication of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.
10. BIDDER understands that the award of contract will be made on the basis of the total Bid amount which will be determined as the sum of the unit price and lump sum Bid Items.
11. BIDDER understands that quantities are estimated and are not guaranteed; they are solely for comparing Bids and establishing the total Bid amount. The Price will be modified by Change Order, and final payment will be based on the quantities of work actually furnished and installed by the successful BIDDER.
12. BIDDER shall complete the Work for the prices indicated on the next page.

**SINGLE PRIME CONTRACT
FOR THE
CROSS CREEK WATER RESOURCE FACILITY AND ROCKFISH CREEK
WATER RESOURCE FACILITY SCREW PUMP IMPROVEMENTS**

		<i>Amount in Numbers</i>
A	Lump Sum Base Bid Price: <i>Excluding sales tax</i>	\$
B	IPS Concrete Repair - Unit Price Bid Item <i>(Total Amount from Unit Price Bid Item Summary Schedule):</i>	\$
Total Single Prime Base Bid Price (Sum of Items 1-2):		\$
Amount in Words: _____ _____		
Bidder Name:		
<i>NOTE: INCLUDE ALL PAGES LISTED IN SECTION 00300 WITH BID. ALL SIGNATURES REQUIRED BY 00300 MUST BE PROPERLY EXECUTED TO BE CONSIDERED A VALID BID.</i>		

UNIT PRICE BID ITEM SCHEDULE			
ITEM	DESCRIPTION	ESTIMATED QUANTITIES	TOTAL AMOUNT
1	TYPE III WATERPROOF INJECTION GROUT CRACK REPAIR (LF)	100 LF	\$
2	SURFACE SPALL REPAIR MATERIAL	225 CF	\$
3	FORMED SPALL REPAIR MATERIAL	75 CF	\$
TOTAL AMOUNT OF UNIT PRICE BID ITEMS (ITEM B IN BID FORM):			\$

ADDITIVE ALTERNATE BID ITEM NO. 1	
INFLUENT PUMP STATION ELECTRICAL BUILDING	
DESCRIPTION: Under Alternate Bid Item No. 1, provide cost for an Influent Pump Station Electrical Building and all associated work as described in the Contract Drawings and Specifications.	
TOTAL ALTERNATE BID ITEM NO. 1 PRICE (in numbers):	\$
Amount in Words: _____	

Basis of award shall be any combination of the TOTAL SINGLE PRIME BASE BID PRICE and ALTERNATE BID ITEM AMOUNTS, at the sole discretion of the Owner.

- BID SUMMARY-

TOTAL BASE BID \$ _____

TOTAL ALTERNATE BID \$ _____

The BIDDER has received, acknowledged, and used the following addenda in completing the Bid. (Initial and Date as appropriate).

Addendum No. 1	Date _____
Addendum No. 2	Date _____
Addendum No. 3	Date _____
Addendum No. 4	Date _____
Addendum No. 5	Date _____
Addendum No. 6	Date _____
Addendum No. 7	Date _____

The undersigned BIDDER _____ (Contractor Name) certifies that they are licensed as a Contractor under N.C.G.S § 87, and that their license number is _____ (License Number).

The undersigned BIDDER hereby agrees to accept an award of the Contract based on the Total Contract Amount as accepted by the OWNER and as indicated on the Notice of Award.

A. BIDDER agrees that Work shall be completed within the time frame indicated in the Agreement as follow:

1. All work described herein to be complete, including restoration and all punch list items from Notice to Proceed until March 30, 2025.
2. The BIDDER acknowledges that time is of the essence in this Contract and that the OWNER will suffer financial loss if the Work is not complete within the time specified in Paragraph D.1 above plus any extensions thereof allowed in accordance with these Contract Documents. BIDDER also recognizes the delays, expense and difficulties involved in proving in a legal proceeding the actual loss suffered by the OWNER if the Work is not complete on time. The Bidder agrees to diligently pursue all available work and complete all work in an expeditious manner.

B. The following documents are attached to and made part of this bid:

Required Bid Security in the form of either a cashier's check or certified check or Bid Bond in the amount of 5% of maximum Bid price.

C. Communications concerning this Bid shall be addressed to: (CONTRACTOR's Name, Address and Telephone Number)

D. The terms used in this Bid which are defined in Definitions and Terminology Section of the PWC General Conditions or as otherwise specifically defined in the Contract Documents have the meanings assigned to them therein, which are incorporated by reference as if fully set forth herein.

E. An individual contractor is required to furnish his social security number and sole proprietorship, partnership and corporation are required to furnish their employer identification numbers to Fayetteville Public Works Commission. Please indicate this information on this Bid Form as follows:

Social Security Number: _____

Federal Employer Identification Number: _____

SUBMITTED ON ____ day of _____ 2023

AN INDIVIDUAL

BY: _____ (SEAL)

(Individual's Name and Signature)

Doing Business as: _____

North Carolina Contractor Registration Number: _____

Business Address: _____

Phone Number: _____

Subscribed and sworn to before me this ____ day of _____ 2023

NOTARY PUBLIC

My Commission Expires: _____

A PARTNERSHIP

BY: _____ (SEAL)

(Firm Name)

(General Partner and Signature)

North Carolina Contractor Registration Number: _____

Business Address: _____

Phone Number: _____

Subscribed and sworn to before me this ____ day of _____ 2023

NOTARY PUBLIC

My Commission Expires: _____

A CORPORATION

BY: _____
(Corporation Name) (State of Incorporation)

BY: _____ (SEAL)
(Name and Title of Person Authorized to Sign and Signature)

ATTEST: _____
(Secretary or Assistant Secretary and Signature)

North Carolina Contractor Registration Number: _____

Business Address: _____

Phone Number: _____

Subscribed and sworn to before me this ____ day of _____ 2023

NOTARY PUBLIC
My Commission Expires: _____

A JOINT VENTURE

BY: _____
(Name and Signature)

Doing Business as: _____

North Carolina Contractor Registration Number: _____

Business Address: _____

Phone Number: _____

Subscribed and sworn to before me this ____ day of _____ 2023

NOTARY PUBLIC
My Commission Expires: _____

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

CONTRACTOR QUALIFICATION FORM

In order to assist the Owner in determining whether the Bidder is qualified to perform the Work, as set forth in the Contract Documents, the Bidder shall furnish the following information.

1. Attach a list of all projects of similar scope completed within the last fifteen (15) years. Include the following data: project name, owner, engineer and/or construction manager, completion date, percent of work performed by your own forces, original and final contract values.
2. List of references who are qualified to judge as to his financial responsibility and his experience in work of similar nature to that bid upon:
3. List of previous contracting experience, including dollar values of contracts for the past five (5) years:
4. List of facilities or equipment that is available for use:
5. Name, residence, and title of the individual who will give personal attention to the work:
6. Financial Statement:

ASSETS

CURRENT ASSETS:

Cash	\$ _____
Notes and Accounts Receivable	_____
Inventories	_____

PLANT ASSETS:

Real Estate	\$ _____
Machinery	_____
Good Will, Patents, etc.	_____ \$ _____

LIABILITIES:

Notes Payable	\$ _____
Accounts Payable	\$ _____
Accrued Wages	_____
Other Liabilities	_____ \$ _____

EXCESS OF
ASSETS OR
NET WORTH \$_____

Notes:

- A. The above is a suggested form for the Financial Statement, and the Bidder is not required to follow the form explicitly. The Financial Statement submitted must clearly show to the satisfaction of the Owner the Bidders current financial condition. The Owner reserves the privilege of requiring additional information as to financial responsibility of the Bidder prior to awarding Contract.
- B. Bidder shall attach additional pages, if necessary, in order to complete the required information.
- C. The Bidder shall submit detailed information required for above items 1 through 5 with his Bid package and at the discretion of the Bidder the information required under Item 6 can be furnished after Bids are received if required by the Owner and Engineer to evaluate the financial qualifications of a prospective Bidder.

CERTIFIED LIST OF MAJOR SUBCONTRACTORS

In compliance with the Instructions to Bidders and the Supplementary Conditions, the undersigned submits the following names of Subcontractors to be used in performing the Work.

The Bidder certifies that all Subcontractors listed are eligible to perform the Work and that all Subcontractors performing more than five percent of the work are listed. Changes to this list after the Bid opening shall only be as approved by the Owner upon request by the Bidder or as required by the Owner based upon review of Bidder's submittals:

Subdivision or Branch of Work (Describe, where applicable)	Name of Contractor	Value of Work as Approx % Total Lump Sum Bid
General Construction		
Electrical		
Controls and Information Systems		
HVAC		
Plumbing		

Bidder's Signature

CERTIFIED LIST OF EQUIPMENT/MATERIAL MANUFACTURERS

The Bidder, _____, as part of the procedure for the submission of Bids on this project known as the **CROSS CREEK WATER RESOURCE FACILITY AND ROCKFISH CREEK WATER RESOURCE FACILITY SCREW PUMP IMPROVEMENTS**, submits the following list of Equipment/Materials Manufacturers to be used in the performance of work to be done on said Project. The list of Manufacturers and all equipment/materials furnished shall be based on requirements of the Contract Documents. Changes to this list after the Bid opening shall only be as approved by the Owner upon request by the Contractor or as required by the Owner based upon review of Contractor's submittals:

Section Number	Description	Manufacturer/Supplier/Subcontractor
03 45 15	ARCHITECTURAL PRECAST CONCRETE UTILITY BUILDINGS	A) SMITH MIDLAND B) _____
26 24 13	LOW VOLTAGE SWITCHBOARDS	A) EATON B) SQUARE D C) ABB
26 24 16	PANELBOARDS	A) EATON B) SQUARE D C) ABB
26 24 19	LOW VOLTAGE MOTOR CONTROL CENTERS	A) EATON B) SQUARE D C) ABB
26 29 13.16	LOW VOLTAGE ENCLOSED MOTOR CONTROLLERS	A) EATON B) SQUARE D C) ABB D) ALLEN-BRADLEY
40 05 58	GATE OPERATORS AND ELECTRIC GATE ACTUATORS	A) ROTORK B) AUMA C) EIM
40 05 59.23	FABRICATED STAINLESS-STEEL SLIDE GATES	A) FONTAINE-AQUANOX B) GOLDEN HARVEST C) HYDRO GATE D) RODNEY HUNT E) RW GATE F) WATERMAN G) WHIPPS
43 24 41	SCREW PUMPS	A) LAKESIDE B) EPIC INTERNATIONAL C) SIEMENS ZIMPRO-PASSAVANT

It is understood and agreed that, if awarded a Contract, the Contractor will not make any additions, deletions or substitutions to this Certified list without the consent of the Owner.

BID BOND

This is a Bid Bond that is subject to the provisions of Article 3 of Chapter 44A of the North Carolina General statutes.

This Bond is executed on _____, 20 ____ .

The name of the PRINCIPAL is _____ (1)

_____ (2)

The name of the SURETY is _____

Fayetteville Public Works Commission, Fayetteville, North Carolina is the OWNER

The amount of the Bond is _____

_____ (Dollars) (\$ _____)

KNOW BY ALL MEN BY THESE PRESENTS, the Principal and Surety above named are hereby held and firmly bound unto the above named OWNER hereinafter called the OWNER in the penal sum of the amount stated above in lawful money of the United States, for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

The condition of the above obligation is such that whereas the Principal has submitted to the OWNER a certain Bid, attached hereto and hereby made a part hereof to enter into a Contract in writing, for the construction of:

CROSS CREEK WRF AND ROCKFISH CREEK WRF SCREW PUMP IMPROVEMENTS

NOW, THEREFORE

- (a) If said Bid shall be rejected, or in the alternate,
- (b) If said Bid shall be accepted and the Principal shall execute and deliver a Contract in the Form of Contract attached hereto (properly completed in accordance with said Bid) and shall furnish a bond for his faithful performance of said Contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said Bid, then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its Bond shall be in no way impaired or affected by any extension of the time within which the Owner may accept such Bid; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

ATTEST:

(Principal Secretary)
(SEAL)

Principal

BY: _____ (3)

(Address)

Witness as to Principal

Surety

(Address)

(Address)

ATTEST:

N.C. Resident Agent
(SEAL)

Witness as to Surety

(Address)

- (1) Correct name of Contractor
- (2) A Corporation, a Partnership or an Individual, as the case may be
- (3) If Contractor is a Partnership, all partners should execute Bond

**POWER OF ATTORNEY
(Attach)**

AFFIDAVIT OF ORGANIZATION AND AUTHORITY SWORN STATEMENT

CROSS CREEK WRF AND ROCKFISH CREEK WRF SCREW PUMP IMPROVEMENTS

STATE OF _____

COUNTY OF _____

_____ being the first duly sworn on oath deposes and says that the Bidder on the attached Bid Form is organized as indicated below and that all statements herein made are made on behalf of such Bidder and that this deponent is authorized to make them.

(Fill Out Applicable Paragraph)

1. CORPORATION

The bidder is a corporation organized and existing under the laws of the State of _____ and its President is _____, and its Secretary is _____, and does have a corporate seal. The _____ is authorized to sign construction Contract and Bids for the company by action of its Board of Directors taken _____, a certified copy of which is hereto attached. (Strike out last sentence if not applicable.)

2. PARTNERSHIP

The Bidder is a Partnership consisting of _____ and _____, partners doing business under the name of _____.

3. SOLE TRADER

The Bidder is an individual and if operating under a trade name, such trade name is as follows:

4. ADDRESS

The business address of the Bidder is as follows:

Its phone number is _____

Bidder

By: _____

EQUAL EMPLOYMENT OPPORTUNITY

During the performance of this Contract the Contractor agrees as follows:

- a. The Contractor will not discriminate against any employee or applicant because of race, color, religion, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to race, color, religion, sex, or national origin. Such action shall include but not be limited to the following: employment, upgrading, demotion, or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of the nondiscrimination clause.
- b. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.
- c. The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other Contract understanding, a notice, to be provided, advising the labor union or worker's representative of the Contractor's commitments under the Equal Employment Opportunity Section of this Contract, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- d. In the event of the Contractor's noncompliance with the nondiscrimination clauses of this Contract or with any of such rules, regulations, or orders, this Contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further OWNER Contracts.
- e. The Contractor will include the provisions of this section in every subcontract or purchase order unless exempted by rules, regulations, or orders of the OWNER so that such provisions will be binding upon each Subcontractor or vendor.

(Use the following form for signatures by a CORPORATION):

Corporate Name

ATTEST:

(Assistant) Secretary

(Vice) President

(CORPORATE SEAL)

(Use the following form for signatures by and INDIVIDUAL):

BY: _____ (Seal)

WITNESS:

(ACKNOWLEDGEMENT OF THE ABOVE SIGNATURE MUST BE NOTARIZED USING FORM ON FOLLOWING PAGE)

NONDISCRIMINATION CLAUSE

It is specifically agreed as part of the consideration of the signing of this Contract that the parties hereto, their agents, officials, employees or servants will not discriminate in any manner on the basis of age, handicap, race, color, creed, sexual orientation or national origin with reference to the subject matter of this Contract, no matter how remote.

This provision being incorporated for the benefit of Fayetteville Public Works Commission, Fayetteville, North Carolina and its residents may be enforced as set out in said ordinances, enforcement of this provision shall be by action for specific performance, injunctive relief, or other remedy as by law provided.

This provision shall be binding on the successors and assigns of the parties hereto with reference to the subject matter of this Contract.

(Use the following form for signatures by a CORPORATION):

Corporate Name

ATTEST:

(Assistant) Secretary

BY: _____
(Vice) President

(Printed Name)

BY: _____
(Printed Name)

(Corporate Seal)

(Use the following form for signatures by a PARTNERSHIP or INDIVIDUAL):

BY: _____(SEAL)

(Printed Name)

WITNESS:

(Printed Name)

NON-COLLUSIVE AFFIDAVIT

State of _____)
_____)

County of _____)

_____ being first duly sworn,
deposes and says that:

- (1) He is the _____
(Owner, Partner, Officer, Representative or Agent)
of _____ the BIDDER that has
submitted the attached BID;
- (2) He is fully informed respecting the preparation and contents of the attached BID and of all
pertinent circumstances respecting such BID;
- (3) Such BID is genuine and is not a collusive or sham BID;
- (4) Neither the said BIDDER nor any of its officers, partners, owners, agents, representatives,
employees or parties in interest, including this affiant, have in any way colluded, conspired,
connived or agreed, directly or indirectly, with any other BIDDER, firm, or person to submit
a collusive or sham BID in connection with the Contract for which the attached BID has
been submitted; or to refrain from bidding in connection with such Contract; or have in any
manner, directly or indirectly, sought by agreement or collusion, or communication, or
conference with any BIDDER, firm, or person to fix the price or prices in the attached BID
or of any other BIDDER, or to fix any overhead, profit, or cost elements of the BID price
or the BID price of any other BIDDER, or to secure through any collusion, conspiracy,
connivance, or unlawful agreement any advantage against (Recipient), or any person
interested in the proposed Contract;
- (5) The price or prices quoted in the attached BID are fair and proper and are not tainted by
any collusion, conspiracy, connivance, or unlawful agreement on the part of the BIDDER
or any other of its agents, representatives, owners, employees or parties in interest,
including this affidavit.

BY _____

ITS _____
(Title)

Subscribed and sworn to before me this _____ day of _____, 20 ____ .

Notary Public

My Commission Expires:

END OF AFFIDAVIT

F.T.A. CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

(To be submitted with each bid or offer exceeding \$100,000)

The undersigned _____ certifies, to the best of his or her knowledge and belief, that:

- (1) No federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with the awarding of any federal contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than federal appropriated funds have been paid or will be paid to any person for making lobbying contacts to an officer or employee of any agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with this federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form--LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions [as amended by "Government wide Guidance for New Restrictions on Lobbying," 61 Fed. Reg. 1413 (1/19/96). Note: Language in paragraph (2) herein has been modified in accordance with Section 10 of the Lobbying Disclosure Act of 1995 (P.L. 104-65, to be codified at 2 U.S.C. 1601, *et seq.* .)]
- (3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31, U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

[Note: Pursuant to 31 U.S.C. § 1352(c)(1)-(2)(A), any person who makes a prohibited expenditure or fails to file or amend a required certification or disclosure form shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such expenditure or failure.]

The Contractor, _____, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. A 3801, *et seq.*, *apply* to this certification and disclosure, if any.

_____ Signature of Contractor's Authorized Official

_____ Name and Title of Contractor's Authorized Official

_____ Date

**CERTIFICATION OF PRIMARY PARTICIPANT REGARDING DEBARMENT,
SUSPENSION AND OTHER RESPONSIBILITY MATTERS**

The Primary Participant, _____ (major third party contractor), certifies to the best of its knowledge and belief, that it and its principals:

1. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
2. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
3. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (2) of this certification; and
4. Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

(If the primary participant is unable to certify to any of the statements in this certification, the participant shall attach an explanation to this certification.)

THE PRIMARY PARTICIPANT _____ CERTIFIES OR AFFIRMS THE TRUTHFULNESS AND ACCURACY OF THE CONTENTS OF THE STATEMENTS SUBMITTED ON OR WITH THIS CERTIFICATION AND UNDERSTANDS THAT THE PROVISIONS OF 31 U.S.C. SECTIONS 3801 ET. SEQ. ARE APPLICABLE THERETO.

Signature

Title

Printed Name

Date

**FAYETTEVILLE PUBLIC WORKS COMMISSION'S
MWDBE COMPLIANCE PROVISIONS**

APPLICATION:

The requirements of Fayetteville Public Works Commission (PWC) Minority, Women, and Disadvantaged Business Enterprise (MWDBE) Program for participation specific contracts are hereby made part of the Contract Documents. Copies of the Program may be obtained from:

Fayetteville Public Works Commission
Economic Inclusion Programs
P.O. Box 1089
Fayetteville, North Carolina 28302
Phone (910) 223-4016 Fax (910) 483-1429
E-mail: EIProgram@faypwc.com

NCDOT DBE Directory: www.ebs.nc.gov/VendorDirectory

HUB Directory: <https://ncadmin.nc.gov/businesses/hub>

MWDBE Compliance Requirements:

1. The Bidder shall provide, with their Bid Form, at the time bids are due, the documents set forth below, properly executed. Returning executed copies indicates and establishes that the Bidder understands and agrees to any incorporated MWDBE contract provisions.
2. All Bidders must provide with their Bid Form, at the time bids are due, a properly completed and executed copy of **either:**
 - Affidavit A – Listing of Good-Faith Efforts **OR**
 - *Affidavit B – Intent to Self-Perform with Own Workforce.

*Affidavit B should **only** be used if the Contractor will perform **ALL Elements** of the Work on this project with their own forces **AND** will complete **ALL Elements** of this project **WITHOUT** the use of subcontractors, material suppliers, or providers of professional services.
3. Upon being identified as the apparent lowest responsive, responsible Bidder, a Bidder shall, within twenty-four (24) hours of PWC's notification provide a properly completed and executed copy of **either:**
 - Affidavit C – Percentage of MWDBE Participation **OR**
 - Affidavit D – Good-Faith Efforts.
4. All Bidders must provide with their Bid Form, at the time bids are due, a properly completed and executed copy of Affidavit E- Identification of MWDBE/Local Participation Form

All written statements, certifications, or intentions made by the Bidder shall become a part of the agreement between the Contractor and Fayetteville Public Works Commission for performance of this contract.

SUBCONTRACTOR PAYMENT REQUIREMENTS:

North Carolina General Statutes 143-134.1 (N.C.G.S.) states that the percentage of retainage on payments made by the prime contractor to the subcontractor shall not exceed the percentage of retainage on payments made by the Fayetteville Public Works Commission to the prime contractor. Failure to comply with this provision shall be considered a breach of the contract, and the contract may be terminated in accordance with the termination provisions of the contract.

The Contractor shall provide an itemized statement of payments to each MWDBE subcontractor before final payment is processed.

The Contractor shall provide an itemized statement of payments to each NON-MWDBE subcontractor before final payment is processed.

Contractor

Signature

Printed Name

Title

Date

Affidavit A: Listing of the Good Faith Efforts

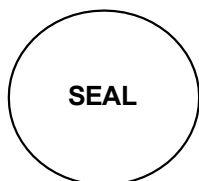
Affidavit of _____
(Name of Bidder)

I have made a good faith effort to comply under the following areas checked:

Total Available GFE Points: 155		Minimum Number GFE Points Required: 50
Points		
10	10	Contacting minority businesses that reasonably could have been expected to submit a quote and that were known to the contractor or available on State or local government-maintained lists at least 10 days before the bid or proposal date and notifying them of the nature and scope of the work to be performed.
10	10	Making the construction plans, specifications and requirements available for review by prospective minority businesses or providing these documents to them at least 10 days before the bid or proposals are due.
15	15	Breaking down or combining elements of work into economically feasible units to facilitate minority participation.
10	10	Working with minority trade, community, or contractor organizations identified by the Office for Historically Underutilized Businesses and included in the bid documents that provide assistance in recruitment of minority businesses.
10	10	Attending any pre-bid meetings scheduled by the public owner.
20	20	Providing assistance in getting required bonding or insurance or providing alternatives to bonding or insurance for subcontractors.
15	15	Negotiating in good faith with interested minority businesses and not rejecting them as unqualified without sound reasons based on their capabilities. Any rejection of a minority business based on lack of qualification should have the reasons documented in writing.
25	25	Providing assistance to an otherwise qualified minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letters of credit, including waiving credit that is ordinarily required. Assisting minority businesses in obtaining the same unit pricing with the bidder's suppliers in order to help minority businesses in establishing credit.
20	20	Negotiating joint venture and partnership arrangements with minority businesses in order to increase opportunities for minority business participation on a public construction or repair project when possible.
20	20	Providing quick pay agreements and policies to enable minority contractors and suppliers to meet cash-flow demands.
Total GFE Points (Claimed by Bidder):		Total GFE Points (Assessed by PWC):

In accordance with NCGS 143-128.2(d) the undersigned will enter into a formal agreement with the firms listed in the Identification of Small Disadvantaged Business Participation schedule conditional upon execution of a contract with the Owner. Failure to abide by any applicable statutory provision may constitute a breach of the contract. The undersigned hereby certifies that he or she has read the terms of the MWDBE business commitment and is authorized to bind the Bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____



State of North Carolina, County of _____

Subscribed and sworn to before me this _____ day of 20__

Notary Public _____

My commission expires _____

Affidavit B: Intent to Perform Contract with Own Workforce

Affidavit of _____
 (Name of Bidder)

I hereby certify that it is our intent to perform 100% of the work required for contract:

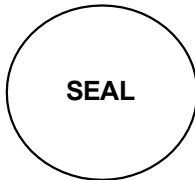
 (Name of Project)

In making this certification, the Bidder states that the Bidder does not customarily subcontract elements of this type project, and normally performs and has the capability to perform and will perform **all elements of the work** on this project with his/her own current workforces; and will complete all elements of this project **without** the use of subcontractors, material suppliers, or providers of professional services.

The Bidder agrees to provide any additional information or documentation requested by the Owner in support of the above statement.

The undersigned hereby certifies that he or she has read this certification and is authorized to bind the Bidder to the commitments herein contained.

Date: _____ Name of Authorized Officer: _____



State of North Carolina, County of _____

Subscribed and sworn to before me this _____ day of 20____

Notary Public _____

My commission expires _____

Affidavit C: Percentage of MWDBE Participation

Affidavit of _____
(Name of Bidder)

I hereby certify that on contract: _____
(Name of Project)

\$ _____
(Dollar Amount of Total Bid)

I will expend a minimum of _____% of the total dollar amount of the contract with Minority, Women, and Disadvantaged Business Enterprises (MWDBE). MWDBEs will be employed as subcontractors, vendors, or providers of professional services. Such work will be subcontracted to the following firms listed below.

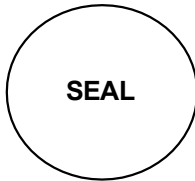
<u>Name, Address, & Phone No.</u>	<u>*MWDBE Category</u>	<u>NAICS</u>	<u>Dollar Value</u>	<u>% of Contract</u>

*MWDBE categories: Black-African Americans (B), Hispanic-Americans (H), Asian- Americans (A), Native-Americans (I), Women (F), Socially/Economically Disadvantaged (D)

Pursuant to NCGS 143-128.2(d), the undersigned will enter into a formal agreement with MWDBEs for work listed in this schedule conditional upon execution of a contract with the Owner. Failure to fulfill this commitment may constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the Bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____



State of North Carolina, County of _____

Subscribed and sworn to before me this _____ day of 20__

Notary Public _____

My commission expires _____

Affidavit D: Good Faith Efforts

If Owner determines using reasonable discretion that Affidavit C is insufficient, Bidder agrees to provide the following information regarding any good-faith efforts.

<u>Name, Address, & Phone No.</u>	<u>*MWDBE Category</u>	<u>NAICS</u>	<u>Dollar Value</u>

*MWDBE categories: Black-African Americans (B), Hispanic-Americans (H), Asian- Americans (A), Native-Americans (I), Women (F), Socially/Economically Disadvantaged (D)

Bidder may be requested to provide documentation of the Bidder's good-faith efforts. Examples of documentation may include the following:

- a. Copies of solicitations for quotes to MWDBEs. Each solicitation may include a specific description of the work to be subcontracted, location where bid documents can be reviewed, representative of the Prime Bidder to contact, and location, date and time when quotes must be received.
- b. Copies of quotes or responses received from each firm responding to the solicitation.
- c. A telephone log of follow-up calls to each firm sent a solicitation.
- d. For subcontracts where a MWDBE is not considered the lowest responsible sub-bidder, copies of quotes received from all firms submitting quotes for that particular subcontract.
- e. Documentation of any contacts or correspondence to MWDBE, community or contractor organizations in an attempt to meet the goal.
- f. Copy of pre-bid roster.
- g. Letter documenting efforts to provide assistance in obtaining required bonding or insurance for MWDBEs.
- h. Letter detailing reasons for rejection of a MWDBE due to lack of qualification.
- i. Letter documenting proposed assistance offered to MWDBEs in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letter of credit, including waiving credit that is ordinarily required.

Failure to provide the documentation as listed in these provisions may result in rejection of the bid and award to the next lowest responsible and responsive Bidder.

Date: _____ Name of Authorized Officer: _____



State of North Carolina, County of _____

Subscribed and sworn to before me this _____ day of 20__

Notary Public _____

My commission expires _____

Affidavit E: Identification of MWDBE/Local Participation

(Name of Bidder)

I hereby certify that on contract: _____

(Name of Project)

We will use the following Minority, Women, and Disadvantaged Business Enterprises (MWDBE), and Local (Cumberland, Hoke, Harnett County) as construction subcontractors, vendors, suppliers, or providers of professional services.

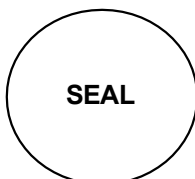
<u>Name, Address, & Phone No.</u>	<u>*MWDBE Category / **Local</u>	<u>NAICS</u>	<u>Dollar Value</u>

*MWDBE categories: Black-African Americans (B), Hispanic-Americans (H), Asian- Americans (A), Native-Americans (I), Women (F), Socially/Economically Disadvantaged (D)

**Local: Fayetteville Metropolitan Statistical Area (MSA) comprising of Cumberland County, Hoke County, and Harnett County. PWC is requesting this information for reporting purposes only, and use of local entities will not be considered for compliance with the requirements of the MWDBE Program.

The total value of MWDBE/local business contracting will be \$ _____

Date: _____ Name of Authorized Officer: _____



State of North Carolina, County of _____

Subscribed and sworn to before me this _____ day of 20 ____

Notary Public _____

My commission expires _____

**FAYETTEVILLE PUBLIC WORKS COMMISSION
MWDBE ADD / CHANGE FORM**

If a MWDBE subcontractor fails to complete work under the subcontract for any reason, the recipient must require the prime contractor to employ the good faith efforts set forth in the MWDBE Program if soliciting a replacement or additional subcontractor.

For MWDBE Change Request, please provide all information below:

Prime Contractor: _____

Subcontracted Work: _____

Previous Subcontractor: _____

Reason this for change request:

New Subcontractor: _____ MWDBE Category: _____

To Add MWDBE Subcontractor/Subcontracted work:

If this is a new trade being subcontracted or a subcontractor that was not documented in the original Project Bid Information submittal, then good faith efforts to solicit a MWDBE must be documented, as the original MWDBE instructions indicate. Please provide all good faith efforts below showing all the MWDBE firms contacted to perform this work along with any additional good faith efforts or evidence that there are not reasonably available firms in the work area. PWC's MWDBE Program requires that good faith efforts are to be carried out to the fullest extent practicable. If solicitations were not carried out due to being impracticable, please attach this explanation to this form.

Name, Address, & Contact Information	MBE or WBE and Certifying agency	How was this firm contacted (email, letter, or Phone) and what was the result of the solicitation? *

*Must submit copies of emails or letters. If phone calls were made this sheet can serve as documentation of calls

Date: _____ Name of Authorized Officer: _____



State of North Carolina, County of _____

Subscribed and sworn to before me this _____ day of 20__

Notary Public _____

My commission expires _____

SMALL LOCAL SUPPLIER / MWDBE SUBCONTRACTOR DISCLOSURE FORM

Contractor: _____
 Address & Phone: _____
 Project: _____
 Name: _____
 Pay Application # _____

Please complete the below form by providing the necessary information for the payments made to each subcontractor, vendor, or supplier for the work associated with the identified pay application. This form must be fully completed and attached to each pay application.

Firm Name, Address, and Contact Information	Payment Amount	Type of Work/Commodity (Include NAICS Code)

Signature

Printed Name

Title

Date

SECTION B - CONTRACT EXECUTION DOCUMENTS

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NOTICE OF AWARD

TO: _____

PROJECT DESCRIPTION: CROSS CREEK WRF AND ROCKFISH CREEK WRF SCREW PUMP IMPROVEMENTS

The OWNER has considered the BID submitted by you for the above described work in response to its Advertisement for Bids dated _____ and Instructions to Bidders.

You are hereby notified that your BID has been accepted for items in the amount of \$_____.

You are required by the Instructions to Bidders to execute the Agreement and furnish the required Performance Bond, Payment Bond, and Certificates of Insurance within ten (10) calendar days from the date of this NOTICE to you.

If you fail to execute said Agreement and to furnish said Bonds within ten (10) days from the date of this Notice, said Owner will be entitled to consider all your rights arising out of the OWNER's acceptance of your BID as abandoned and as a forfeiture of your Bid Bond. The Owner will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this NOTICE OF AWARD to the OWNER.

Dated this _____ day of _____, 2024.

**OWNER: FAYETTEVILLE PUBLIC WORKS COMMISSION
FAYETTEVILLE, NC**

**BY: Candice S. Kirtz
TITLE: Director of Supply Chain**

ACCEPTANCE OF AWARD

CROSS CREEK WRF AND ROCKFISH CREEK WRF SCREW PUMP IMPROVEMENTS

Receipt of the preceding NOTICE OF AWARD is hereby acknowledged this the _____
day of _____, 2024.

(CONTRACTOR)

By: _____

Title: _____

- END OF SECTION -

State of North Carolina
Cumberland County

CONSTRUCTION AGREEMENT

THIS CONSTRUCTION AGREEMENT (“Agreement” or “Contract”) is made by and between the Fayetteville Public Works Commission (“PWC”), a North Carolina public authority, and [REDACTED] (“Contractor”), a [REDACTED] registered to do business in North Carolina (each of each of PWC and Contractor is a “Party” and both are collectively the “Parties”) as of the date of execution last written below (the “Effective Date”). The Parties agree as follows:

1. The Construction Project. Contractor shall furnish and bear solely the entire cost of all labor and materials necessary for the construction and/or renovation of the Project (defined hereinbelow) as specified in the Contract Documents (defined hereinbelow) and complete all Work on the Project in a Workmanlike manner in strict accordance with the Contract Documents, schedule delivery of the new materials, furnish and bear solely the entire cost of all supervision, contract administration, equipment, tools, and other means necessary to complete the Project, perform every obligation imposed by the Contract Documents, and be solely responsible for the clean-up and disposal of all materials and debris relating to or arising from the construction and renovation, subject to any exceptions that are specifically set forth in the Contract Documents. Except as otherwise specifically provided in the Contract Documents, Contractor is solely responsible for all construction means, methods, techniques, sequences, procedures, safety precautions or programs, supervising, coordinating, and performing all the Work necessary to complete the Project; provided, however, PWC shall have the right, without incurring any liability to the Contractor, to suspend Contractor’s performance when a PWC employee, in his or her opinion, observes a safety violation involving a threat to life or imminent danger of bodily injury, and the suspension shall remain in effect until Contractor remedies the safety violation.

2. Terms. Capitalized terms used in this Agreement have the meaning specified below:

“Business Day” means each calendar day that is not a Saturday, Sunday, holiday observed by the federal government for its employees, or holiday observed by the State of North Carolina for its employees.

“Completion of the Project” means: (i) the Project is completed in accordance with this Agreement, except for punch list items; (ii) PWC has received any required temporary or final certificate of occupancy from the governmental agency with jurisdiction over the Project; and (iii) the registered architects or engineers (the “Designer(s)”) who designed portions or components of the Project have issued certificates of Completion of the Project as to those portions or components.

“Contract Documents” means the following documents that were either made available to Contractor by PWC during the bid solicitation process (including Drawings) or executed by the Parties or both, which are all incorporated by reference herein:

- a. This Agreement
- b. General Conditions

- c. Bid Submittal Documents
- d. Contractor's Submitted Bid
- e. Bid Bond
- f. [Form of Exceptions]
- g. Notice of Award
- h. Acceptance of Award
- i. Performance Bond
- j. Payment Bond
- k. Copy of General Contractor's License
- l. Power of Attorney
- m. Certificate of Insurance
- n. Section C – Administrative Provisions
- o. Section D - Technical Specifications
- p. [Additional Specifications]
- q. [Appendices]

The following documents may be delivered or issued on or after the Effective Date of the Agreement and may not be attached to this Agreement, but are considered Contract Documents when executed by the Parties:

- r. Notice to Proceed and Acceptance of Notice
- s. Work Change Directive(s)
- t. Change Order(s)
- u. Field Order(s)

There are no Contract Documents other than those identified in this Agreement. The Contract Documents may only be amended, modified, or supplemented as provided in this Agreement in a writing signed by the Parties.

"Fault" means a breach of contract by Contractor, negligent, reckless, or intentional act(s) or omission(s) constituting a tort under applicable statutes or common law by one or more Responsible Persons, or violation(s) of applicable statute(s) or regulation(s) by a Responsible Person.

"Project" means _____, as more specifically set forth in the Contract Documents.

"Responsible Person" means the Contractor and each of its employees, agents, representatives, subcontractors, or other persons and entities for which Contractor may be liable or responsible as a result of any statutory, tort, or contractual duty.

The terms used in this Agreement shall have the meaning as stated herein and in the General Conditions. In the event of a conflict between the terms of this Agreement and any other component(s) of the Contract Documents, the terms of this Agreement shall govern.

3. Contract Price. PWC shall pay Contractor for Completion of the Project in accordance with the Contract Documents the amount identified in the accepted Bid Form of Contractor, being in the total amount of \$ _____ (the "Price"). Contractor understands and acknowledges that the Price is derived from a specific

appropriation of funds provided for the Project. Contractor agrees and acknowledges the Price is equal to the aggregate cost of all Work to be done on the Project, including all labor, materials, equipment, apparatus, and supplies, set in accordance with the amount specified on the Bid Form submitted by Contractor and accepted by PWC.

4. Contract Times. The Parties shall perform their obligations under this Agreement in compliance with all scheduling deadlines set forth in the Contract Documents. The Contractor shall commence the Work to be performed under this Agreement on a date to be specified in accordance with the Notice to Proceed issued by PWC. Contractor shall achieve Completion of the Project no later than 360 consecutive calendar days from said date plus any modifications thereof allowed in accordance with the Contract Documents (the "Completion Date").

5. Payment. PWC shall pay Contractor in installment payments plus a final payment, as set forth in the Contract Documents. For each applicable installment payment, Contractor shall submit an application for payment in accordance with the Contract Documents. An application for payment will be processed by PWC as provided in the Contract Documents. Such installment payments shall reflect the actual Cost of the Work, not to exceed in total the Price, and the allocable portion of the total Price for said installment. PWC shall make payment to the Contractor, less any applicable retainage set forth in the Contract Documents; provided, however, that PWC may withhold all or a portion of a payment on account of (1) incomplete Work, (2) defective or nonconforming Work, (3) claims filed on a reasonable basis to believe that such claims will be filed imminently, (4) failure of the Contractor to make payments properly for labor, services, materials, equipment or subcontracts, (5) damages caused to PWC or another party by one or more Responsible Persons, or (6) failure to comply with the terms and conditions of this Agreement. In the final payment, PWC shall pay the balance of the Price, including all retained amounts, less any Liquidated Damages and other applicable damage and claim amounts, to Contractor within forty-five (45) days of Completion of the Project; provided, however, that PWC may withhold a reasonable sum from the final payment to ensure correction of any final items or condition on the Project.

6. Retainage. Subject to any restrictions applicable to any federal grant funds that may be utilized for the Project, PWC may, in its discretion, retain up to five percent (5%) of any periodic payment due Contractor; provided, however, when the Project is fifty percent (50%) complete, PWC, with written consent of the surety, shall not retain any further retainage from periodic payments due Contractor if Contractor continues to perform satisfactorily and any nonconforming Work identified in writing prior to that time by PWC or the Designer has been corrected by Contractor and accepted by PWC or the Designer, and provided further that full payment, less authorized deductions, shall also be made for those line item trades that have reached one hundred percent (100%) completion of their contract obligations by or before the Project is fifty percent (50%) complete if Contractor has performed satisfactorily in accordance with G.S. 143-134.1(b2), contingent upon PWC's receipt of an approval or certification from the Designer that the Work performed by the subcontractor is acceptable and in accordance with the Contract Documents. If PWC determines Contractor's performance is unsatisfactory, PWC may, in its discretion, reinstate retainage for each subsequent periodic application for payment as authorized in this Section up to the maximum amount of five percent (5%). The Project shall be deemed fifty percent (50%) complete when Contractor's gross project invoices, excluding the value of materials stored off-site, equal or exceed fifty percent (50%) of the Price, except the value of materials stored on-site shall not exceed twenty percent (20%) of Contractor's gross project invoices for the purpose of determining whether the Project is fifty percent (50%) complete. Within 60 days after the submission of a pay request and one of the following occurs, as specified in the Contract Documents, PWC, with written consent of the surety, shall release

to Contractor all retainage on payments held by PWC: (i) PWC receives a certificate of Substantial Completion from the Designer in charge of the Project; or (ii) PWC receives beneficial occupancy or use of the Project; provided, however, PWC may in its discretion retain sufficient funds to secure Completion of the Project or corrections on any Work. If PWC retains funds, the amount retained shall not exceed two and one-half times the estimated value of the Work to be completed or corrected. Any reduction in the amount of the retainage on payments shall be with the consent of Contractor's surety. The existence of any third-party claims against Contractor or any additive change orders to the Construction Documents shall not be a basis for delaying the release of any retainage on payments. Notwithstanding anything in this Section to the contrary, following fifty percent (50%) completion of the Project, PWC shall be authorized to withhold additional retainage from a subsequent periodic payment, not to exceed five percent (5%), in order to allow PWC to retain two and one-half percent (2.5%) total retainage through the Completion of the Project. In the event that PWC elects to withhold additional retainage on any periodic payment subsequent to release of retainage on a line-item of Work pursuant to G.S. 143-134.1(b2), Contractor may also withhold from the subcontractors remaining on the project sufficient retainage to offset the additional retainage held by PWC, notwithstanding the actual percentage of retainage withheld by PWC of the Project as a whole. Neither PWC's nor Contractor's release of retainage on payments as part of a payment in full on a line-item of Work pursuant to G.S. 143-134.1(b2) shall affect any applicable warranties on Work done by Contractor or subcontractor, and the warranties shall not begin to run any earlier than either PWC's receipt of a certificate of Substantial Completion from the Designer in charge of the Project or PWC receives beneficial occupancy.

7. Liquidated Damages. Time is of the essence with respect to performance of each of the Parties' obligations under this Agreement. Contractor recognizes and acknowledges that PWC will suffer financial and other losses if the Project is not completed by the Completion Date. The Parties recognize and agree that the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by PWC if the Project is not completed by the Completion Date. Accordingly, instead of requiring any such proof, Contractor and PWC agree that in the event Contractor fails to achieve Completion of the Project by the Completion Date, Contractor shall pay to PWC as liquidated damages to compensate PWC for damages related to the delayed Completion of the Project one thousand dollars (\$1000.00) per day ("Liquidated Damages") for each calendar day Contractor fails to achieve Completion of the Project by the Completion Date.

8. Contractor's Representations and Warranties. In order to induce PWC to enter into this Agreement, Contractor makes the following representations and warranties to PWC:

a. Contractor is duly licensed in the State of North Carolina to complete all Work necessary for the Project, is duly organized, validly existing and in good standing and has all requisite powers, rights, and authority to execute, enter into, and perform this Agreement in accordance with the terms and conditions of this Agreement, and this Agreement constitutes a legal, valid, and binding obligation of Contractor enforceable against it in accordance with its terms.

b. Contractor has read the Contract Documents, and acknowledges and understands all data, materials, specifications, and requirements identified in the Contract Documents.

c. Contractor has visited the site for the Project, conducted a thorough, visual examination of the site and adjacent areas, and become familiar

with and is satisfied as to the general, local, and site conditions that may affect cost, progress, and performance in completing the Project. Contractor is familiar with and is satisfied as to all laws and regulations that may affect cost, progress, and performance to complete the Project.

d. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the site and all drawings of physical conditions relating to existing surface or subsurface structures at the site that have been identified in the Contract Documents and any accompanying reports and drawings, and (2) reports and drawings relating to hazardous environmental conditions, if any, at or adjacent to the site that have been identified in the Contract Documents and any accompanying reports and drawings.

e. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract Documents, if any, 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 Contractor; and (3) Contractor's safety precautions and programs.

f. Based on the information and observations referred to in subsection e. of this Section, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Price commencing on the commencement date and in accordance with the other terms and conditions of the Contract.

g. Contractor is aware of the general nature of Work to be performed by PWC and others at the Site that relates to the Work as indicated in the Contract Documents.

h. Contractor has given PWC's Designer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by the Designer is acceptable to Contractor.

i. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

j. Contractor's entry into this Agreement constitutes an incontrovertible representation by Contractor that, without exception, all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

k. Contractor has no business or personal relationship with any PWC Commissioner, officer, director, manager, or supervisor and Contractor covenants to disclose immediately to PWC any such relationship that develops during the performance of Work on the Project.

9. Contractor's Payment Obligations. Contractor shall pay all of its obligations arising out of or in connection with the Project in a timely manner to all persons supplying materials in the prosecution of the Work and to all laborers and others employed thereon.

10. Performance and Payment Bonds. Contractor shall obtain and deliver to PWC a performance bond in the amount of one hundred percent (100%) of the Price, conditioned upon the faithful performance of the Project and all Work in accordance with the Contract Documents, which bond shall be solely for the protection of PWC. Contractor shall obtain and deliver to PWC a payment bond in the amount of one hundred percent (100%) of the Price, conditioned upon the prompt payment for all labor or materials for which the Contractor or one or more of its subcontractors is liable, which payment bond shall be solely for the protection of the persons furnishing materials or performing labor for which the Contractor is liable. The performance bond and the payment bond shall be executed by one or more surety companies legally authorized to do business in the State of North Carolina, shall become effective upon the awarding of the construction contract by PWC to Contractor, and shall at all times comply with the requirements set forth in Article 3 of North Carolina General Statutes Chapter 44A. In the event PWC deems the surety or sureties upon any bond necessary for this Agreement and the completion of the Project, or if for any reason, such bond ceases to be adequate to cover the performance and/or payment of the Work, Contractor shall, at its expense, within five (5) days after the receipt of notice from PWC, furnish an additional bond or bonds in such form and amount, and with such surety or sureties as shall be satisfactory to PWC. In such event no further payment to Contractor shall be deemed to be due under this Agreement until new or additional security for the performance and payment of the Project shall be furnished in manner and form satisfactory to PWC. Contractor understands and acknowledges that PWC, as a public authority, is not subject to the provisions of Articles 1 and 2 of Chapter 44A of the General Statutes, in accordance with G.S. 44A-34 and applicable law.

11. Contractor's Damage Repair Obligations. Contractor shall be responsible for all damages to the property of the City of Fayetteville and of PWC that may result from the normal procedure of a Responsible Person's actions in the prosecution of the Work or that may be caused by or result from the negligence of a Responsible Person during the progress of or connected with the prosecution of the Work, whether within the limits of the Work or elsewhere. Contractor shall promptly restore all such property so damaged to a condition as good as it was immediately prior to Contractor initiating the Work on the Project.

12. Defective Work. The Project shall be subject to observation and approval by PWC, Designer, and representatives of governmental agencies with jurisdiction over the Project. PWC and Designer shall be entitled to enter at all reasonable times the premises subject to construction or renovation to inspect the Work performed by or on behalf of Contractor, provided that such entry and inspection does not materially interfere with the progress of construction. Contractor shall correct promptly, at no cost to PWC, all Work reasonably rejected by PWC or by its representatives. Should Contractor fail to correct rejected Work, PWC may, acting in its sole discretion, correct such Work and the Contractor shall pay PWC's actual costs of correction and any other applicable amounts identified in the Contract Documents.

13. As-Built Drawings. Contractor shall maintain during the progress of the Project as-built drawings indicating the current status of the Project as actually performed. Upon Completion of the Project, Contractor shall prepare a final version of such as-built drawings and submit them to PWC for approval.

14. Assignment. This Agreement shall be binding upon and inure to the benefit of the Parties, their legal representatives, successors, and assigns. Contractor may not assign, transfer, convey, or encumber, whether voluntarily or by operation of law, this Agreement or any obligations, rights under, or interests in this Agreement to a third party without the prior written consent of PWC; and, specifically, but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

15. Indemnity. Contractor shall indemnify, defend, and hold harmless PWC and its Commissioners, officers, employees, agents, and representatives and the City of Fayetteville and its elected officials, managers, employees, agents, and representatives and Design Engineer (collectively "Indemnitees") from and against all claims, actions, liabilities, damages, losses, costs, and expenses (including, without limitation, injury to or death of any persons and damage to property, economic and consequential damages and attorneys' fees) asserted by one or more third parties against one or more of the Indemnitees if the Fault of one or more Responsible Persons is a proximate cause of the loss, damage, or expense indemnified. Contractor's obligation to indemnify, defend, and hold harmless the Indemnitees shall survive the termination of this Agreement.

16. Insurance. Contractor shall maintain during the Work and for at least three (3) years following Completion of the Project the insurance coverage set forth in the Contract Documents, which insurance shall be placed with insurance companies authorized to do business in the State of North Carolina and rated A minus VII or better by the current edition of Best's Key Rating Guide or otherwise approved in writing by PWC. Prior to initiating any Work, Contractor shall deliver certificates of insurance confirming each such coverage required by the Contract Documents, and Contractor shall direct its insurers to provide annually to PWC certificates confirming each such coverage during the coverage period. PWC shall be named as an additional insured in the comprehensive automobile and commercial liability insurance policies. Commercial general liability coverage shall be written on an "occurrence" basis. Contractor shall not reduce or allow the required insurance coverages to lapse without PWC's prior written approval. All policies for insurance must be endorsed to contain a provision giving PWC a thirty (30) calendar day prior written notice by certified mail of any cancellation of that policy or material reduction in coverage. Should a notice of cancellation be issued for non-payment of premiums or any part thereof, or should Contractor fail to provide and maintain certificates as set forth herein, PWC shall have the right, but shall not have the obligation, to pay such premium to the insurance company or to obtain such coverage and to deduct such payment from any sums that may be due or become due to Contractor, or to seek reimbursement for said payments from Contractor. Any such sums paid by PWC shall be due and payable immediately by Contractor upon notice from PWC. The insurance provisions of this Agreement shall not be construed as a limitation on Contractor's responsibilities and liabilities pursuant to the terms and conditions of this Agreement. Contractor's obligation to maintain insurance for three (3) years after Completion of the Project shall survive the termination of this Agreement.

17. Warranty. The Contractor hereby grants to PWC a warranty on all materials and Workmanship involved in the Project for a period of one (1) year from the Completion Date and a period of two (2) years from the Completion Date for any latent structural defects. PWC shall give written notice to Contractor of any claim under this Section within the time specified hereinabove. This warranty shall be in addition to, and not in derogation of, all other rights and

privileges which PWC may have under law, equity, or instrument, and shall survive the Completion Date and the final settlement and shall be binding on Contractor notwithstanding any provision in any other writing executed by PWC heretofore or contemporaneous with the execution of the Agreement or prior to the Completion Date.

18. Waiver. No failure on the part of any party to exercise, and no delay in exercising, any right, power, or privilege hereunder shall operate as a waiver thereof, nor shall any single or partial exercise of any right hereunder preclude any other or further cumulative and not exclusive of any remedies provided by law. This Agreement shall be binding upon and inure to the benefit of the parties, their legal representatives, successors, and assigns. This Agreement may not be assigned, transferred, conveyed, or encumbered, whether voluntarily or by operation of law, by either party without the prior written consent of the other party, which consent shall not be unreasonably withheld.

19. Law. THIS AGREEMENT SHALL BE GOVERNED BY AND INTERPRETED AND ENFORCED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NORTH CAROLINA WITHOUT GIVING EFFECT TO THE CHOICE OF LAW PROVISIONS THEREOF. The Contractor shall at all times comply with all applicable Federal, state, and local laws and building codes in the performance of its obligations under the Agreement.

20. Dispute Resolution. In the event of any dispute, controversy, or claim of any kind or nature arising under or in connection with this Agreement (a "Dispute") and involving any two or more of the following parties, PWC, Designer, Contractor or any subcontractor of Contractor, the party initiating the Dispute shall serve written notice of a Dispute on the party(ies) to the dispute, and those parties shall endeavor to settle the dispute first through direct, informal discussions between the parties' selected representatives. Any such representative(s) shall have binding authority to settle the Dispute. In the event the parties do not settle the Dispute within ten (10) days from the date of written notice of the Dispute, any party to the Dispute may, by written notice to the other party(ies), engage a mediator certified under the laws of the State of North Carolina to mediate the Dispute within thirty (30) days of such notice. The parties to the Dispute shall attend mediation in good faith. In the event mediation is unsuccessful, any party to the dispute may initiate arbitration proceedings. Any controversy or claim arising out of or relating to the Contract Documents, or the breach thereof, shall be settled by binding arbitration administered by the American Arbitration Association under its Construction Industry Arbitration Rules, and judgment on the award rendered by the arbitrator(s) may be entered in any court having jurisdiction thereof. All of the foregoing dispute resolution procedures shall be held in Cumberland County, North Carolina. The costs of the mediator and arbitrator in a dispute resolution process shall be divided equally among the parties to the process; provided, however, PWC shall bear at least one-third of the cost if PWC is a party to the dispute resolution and the remainder of the cost shall be divided equally among the other parties participating in the dispute resolution. PWC shall, in its contractual arrangements with Designer, and Contractor shall, in its contracts with subcontractors and they in their contracts with lower-tier subcontractors authorize and direct such parties to participate in the dispute resolution procedures set forth in this Section. Unless otherwise directed in writing by PWC, Contractor shall continue the Project and maintain compliance with the scheduling deadlines set forth in the Contract Documents during any dispute resolution proceedings. If Contractor continues to perform, PWC shall make payments due for the continued performance in accordance with this Agreement. The provisions of this Section shall not extend any applicable statutes of limitation or repose.

21. Execution; Modification; Entire Agreement; Severability. This Agreement may be

executed in counterparts with the same effect as if the signatures to each counterpart were upon a single instrument, and all such counterparts together shall be deemed an original of this Agreement. For purposes of this Agreement, a facsimile copy or scanned copy or photocopy of a party's signature shall be sufficient to bind such party. This Agreement shall be subject to execution by electronic means in accordance with Article 40 of Chapter 66 of the North Carolina General Statutes. No oral communication, promise, understanding, or agreement before, contemporaneous with, or after the execution of this Agreement shall affect or modify any of the terms and conditions and obligations of the Contract Documents. The Contract Documents shall be modified only by a subsequent writing signed by both Parties. The Contract Documents shall be conclusively considered to contain and express all the terms and conditions agreed upon by the Parties, notwithstanding any prior or contemporaneous written communication, promise, understanding or agreement. Should any provision of this Agreement or any of the Contract Documents at any time be in conflict with any law, statute, rule, regulation, order, or ruling and thus be unenforceable, or be unenforceable for any other reason, then the remaining provisions of this Agreement shall remain in full force and effect and the court or arbitrator shall give the offending provision the fullest meaning and effect permitted by law. The titles of the Sections throughout this Agreement are for convenience only and the words contained therein shall in no way be held to explain, modify, amplify or aid in the interpretation, construction, or meaning of the provisions of this instrument.

22. Notices. Any notice which either Party is required or desires to give the other hereunder shall be deemed sufficiently given if, in writing, it is delivered personally, or sent by certified U.S. mail, return-receipt requested, postage prepaid, to the addresses listed herein below, or such other address as either Party shall give to the other Party by written notice in accordance herewith. Any notice given herein by personal delivery shall be deemed delivered when received. Any properly addressed notice given herein by certified mail shall be deemed delivered on third Business Day after the same is deposited in an official United States Post Office, postage prepaid, or if sooner upon the date when the return receipt therefore is signed, or refusal to accept the mailing by the addressee is noted thereon by the postal authorities.

To PWC:
Fayetteville Public Works Commission
Attn: Timothy Bryant, CEO/General Manager
PO Box 1089
Fayetteville, NC 28302

To Contractor:

23. Termination. PWC may terminate this Agreement immediately if during the progress of the Work or during the warranty period, the Contractor:

- a. Persistently fails to prosecute the Work properly and in accordance with this contract, including but not limited to include failure to provide sufficient crews, equipment, or resources, or failure to adhere to the schedule;
- b. Demonstrates disregard for the policies, procedures, or requirements of PWC;

- c. Demonstrates complete disregard of the authority of PWC or its designated representatives; or
- d. Violates in any substantial way the provisions and requirements of this Agreement.

Such termination shall be effective upon written notice to Contractor and its surety. PWC may terminate the contract for its convenience by providing Contractor at least seven (7) calendar days prior written notice, in which event Contractor shall be paid for all Work completed, plus other expenses as mutually agreed upon between PWC and Contractor.

24. Compliance. Contractor hereby acknowledges that "E-Verify" is the federal E-Verify program operated by the US Department of Homeland Security and other federal agencies which is used to verify the Work authorization of newly hired employees pursuant to federal law and in accordance with Article 2, Chapter 64 of the North Carolina General Statutes. Contractor further acknowledges that all employers, as defined by Article 2, Chapter 64 of the North Carolina General Statutes, must use E-Verify and after hiring an employee to Work in the United States, shall verify the Work authorization of the employee through E-Verify in accordance with N.C.G.S. §64-26(a). Contractor hereby pledges, attests, and warrants through execution of this Agreement that Contractor complies with the requirements of Article 2, Chapter 64 of the North Carolina General Statutes and further pledges, attests, and warrants that all subcontractors currently employed by or subsequently hired by Contractor shall comply with all E-Verify requirements. Failure to comply with the above requirements shall be considered a breach of this Agreement. Contractor hereby further acknowledges that the execution and delivery of this Agreement constitutes Contractor's certification to PWC and to the North Carolina State Treasurer that, as of the date of the Effective Date of this Agreement, Contractor is not listed on (a) the Final Divestment List created and maintained by the North Carolina Department of State Treasurer pursuant to the Iran Divestment Act of 2015, Chapter 147, Article 6E of the General Statutes of North Carolina (the "Iran Divestment Act"); or (b) the list of companies that the North Carolina State Treasurer determines to be engaged in a boycott of Israel in accordance with Article 6G of Chapter 147 of the General Statutes of North Carolina. Contractor represents and warrants to Commission that Contractor, and all persons and entities owning (directly or indirectly) an ownership interest in it: (i) are not, and will not become, a person or entity with whom a party is restricted from doing business with under regulations of the Office of Foreign Asset Control ("OFAC") of the Department of the Treasury (including, but not limited to, those named on OFAC's Specially Designated and Blocked Persons list) or under any statute, executive order (including, but not limited to, the September 24, 2001, Executive Order 13224 Blocking Property and Prohibiting Transactions with Persons Who Commit, Threaten to Commit, or Support Terrorism), or other governmental action; and (ii) are not knowingly engaged in, and will not knowingly engage in, any dealings or transactions or be otherwise associated with such persons or entities described in clause (i) above. Contractor also shall at all times during the term of this Agreement comply with Executive Order 11246, including but not limited to the Equal Opportunity Clause requirements set forth in 41 C.F.R. § 60-1.4. Contractor shall abide by the requirements of 41 CFR 60-300.5(a) and 60-741.5(a) prohibiting discrimination against qualified individuals on the basis of protected veteran status or disability and requiring affirmative action by covered prime contractors and subcontractors to employ and advance in employment qualified protected veterans and individuals with disabilities.

IN WITNESS WHEREOF, the Parties have executed this Agreement by their duly authorized representatives.

Fayetteville Public Works Commission

CONTRACTOR

By: _____
Timothy Bryant, CEO/GM

By: _____

(Printed Name, Title)

Date: _____

Date: _____

This instrument has been preaudited in the manner required by the Local Government Budget and Fiscal Control Act (N.C. Gen. Stat. § 159-1 et seq.).

By: _____
Rhonda Haskins, Chief Financial Officer

Approved as to form:

Legal Dept.

SAMPLE

SECTION C - ADMINISTRATIVE PROVISIONS



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FAYETTEVILLE PUBLIC WORKS COMMISSION

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General Conditions

Article I. Definitions and Terminology

Section 1.01 Definitions

Capitalized terms used in the Bid Documents or Contract Documents, including the singular and plural forms, shall have the meaning indicated in the definitions below. In addition to terms specifically defined below, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

- (a) **Addenda**—Written or graphic instruments issued before the opening of Bids which clarify, correct, or change the Bid Documents or other Contract Documents.
- (b) **Agreement**—The written instrument, executed by PWC and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties, designates the specific documents that encompass the Contract Documents, and provides other material provisions that govern the relationship between the parties as it relates to the Project. The Agreement is also referred to, and titled as, the “Construction Agreement.”
- (c) **Application for Payment**—The form that Contractor shall use during the Work in requesting progress or final payments. Any Application for Payment shall be accompanied by such supporting documentation as is required by the Contract Documents.
- (d) **Bid**—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
- (e) **Bidder**—An individual or entity that submits a Bid to PWC for the Project.
- (f) **Bid Documents**—The Bidding Requirements, the proposed Contract Documents, and all Addenda.
- (g) **Bidding Requirements**—The Invitation to Bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bidder’s original Bid with any requisite attachments.
- (h) **Business Day**—each calendar day that is not a Saturday, Sunday, or holiday observed by PWC (New Year’s Day, Martin Luther King, Jr. Day, Good Friday, Memorial Day, Independence Day, Labor Day, Veteran’s Day, Thanksgiving Day (and the day after), and Christmas (2 days) for its employees.
- (i) **Change Order**—A document that is signed by Contractor and PWC, which authorizes an addition, deletion, or revision in the Work, an adjustment in the Contract Price or the Contract Times, a change in the scope of the Project, or other revision to the Agreement, issued on or after the Effective Date of the Agreement.
- (j) **Change Proposal**—A written request by Contractor, submitted in compliance with the procedural requirements set forth in the Contract Documents, seeking an adjustment in Contract Price or Contract Times, or both; contesting an initial decision by PWC concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Agreement.

- (k) Completion of the Project—Has the meaning as set forth in the Construction Agreement.
- (l) Constituent of Concern—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to (a) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. (“CERCLA”); (b) the Hazardous Materials Transportation Act, 49 U.S.C. §§5101 et seq.; (c) the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq. (“RCRA”); (d) the Toxic Substances Control Act, 15 U.S.C. §§2601 et seq.; (e) the Clean Water Act, 33 U.S.C. §§1251 et seq.; (f) the Clean Air Act, 42 U.S.C. §§7401 et seq.; or (g) any other federal, state, or local statute, law, rule, regulation, ordinance, resolution, code, order, or decree regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
- (m) Contract Price—The money that PWC has agreed to pay Contractor for Completion of the Project in accordance with the Contract Documents. May also be referred to as “Price” throughout the Contract Documents.
- (n) Contract Times—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; and (b) Completion of the Project.
- (o) Contractor—The individual or entity with which PWC has contracted for performance of the Work and Completion of the Project.
- (p) Day—a calendar day of 24 hours measured from midnight to the next midnight. Also referred to throughout the Contract Documents as “days” or “calendar days.”
- (q) Design Engineer—The Engineering firm identified on the Contract Drawings and their duly authorized employees and agents, such employees and agents acting within the scope of the particular duties entrusted to them in each case.
- (r) Drawings—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
- (s) Field Order—A written order issued by Project Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
- (t) Final Completion—The day the on which any specified Work is complete in accordance with the Contract Documents.
- (u) Hazardous Environmental Condition—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated in the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract Documents, does not establish a Hazardous Environmental Condition.
- (v) Laws and Regulations; Laws or Regulations—Any and all applicable laws, statutes, rules,

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regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction. Such terms, unless otherwise specified, shall refer to North Carolina laws and regulations.

- (w) Milestone—A principal event in the performance of the Work that the Agreement requires Contractor to achieve by an intermediate completion date or by a time prior to Completion of the Project.
- (x) Non-Compliance Notice—A written notice issued by PWC to Contractor indicating a violation of any term, provision, or requirement of the Contract Documents.
- (y) Notice of Award—The written notice by PWC to a Bidder providing of PWC's acceptance of the Bid upon timely compliance by the Bidder with any conditions precedent provided in the notice.
- (z) Notice to Proceed—A written notice by PWC to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.
- (aa) Progress Schedule—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.
- (bb) Project—has the meaning ascribed to it in the Agreement and is as more specifically set forth throughout the Contract Documents. "Project" includes the total undertaking to be accomplished for PWC by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.
- (cc) Project Engineer—the PWC employee assigned by PWC to coordinate, manage, monitor, and otherwise perform the administration necessary and consistent with PWC's responsibilities for the Completion of the Project. The Project Engineer has authority to coordinate and work with the Design Engineer regarding any engineering questions, concerns, revisions, alterations, deletions, or additions to the Work, and has authority to approve any changes in the scope of the Work. Project Engineer may assign a "Project Coordinator" who will also be an employee of PWC and have the duties and responsibilities set by the Project Engineer.
- (dd) PWC—Fayetteville Public Works Commission. PWC may also be referred to in the Contract Documents as "Owner."
- (ee) Samples—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
- (ff) Schedule of Submittals—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Project Engineer's review of the submittals and the performance of related construction activities.
- (gg) Schedule of Values—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

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- (hh) Shop Drawings—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Contract Drawings and are not Contract Documents.
- (ii) Site—Lands or areas indicated in the Contract Documents as being furnished by PWC upon which the Work is to be performed, including rights-of-way and easements, and such other lands furnished by PWC which are designated for the use of Contractor.
- (jj) Specifications—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
- (kk) Subcontractor—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
- (ll) Substantial Completion—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Project Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof.
- (mm) Successful Bidder—The Bidder whose Bid PWC accepts, and to which PWC provides a Notice of Award.
- (nn) Supplementary Conditions—Any part of the Agreement that amends or supplements these General Conditions.
- (oo) Supplier—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
- (pp) Technical Data—Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (a) subsurface conditions at the Site, or physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) or (b) Hazardous Environmental Conditions at the Site. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then the data contained in boring logs, recorded measurements of subsurface water levels, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical or environmental report prepared for the Project and made available to Contractor are hereby defined as Technical Data with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06.
- (qq) Underground Facilities—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including but not limited to those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, fiber optic transmissions, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

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- (rr) Unit Price Work—Work to be paid for on the basis of unit prices.
- (ss) Work—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, materials, equipment, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents and necessary to achieve Completion of the Project.
- (tt) Work Change Directive—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by PWC and recommended by the Project Engineer, ordering an addition, deletion, or revision in the Work.

Section 1.02 Terminology

The words and terms discussed in the following paragraphs are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

- (a) Intent of Certain Terms or Adjectives:
 - (i) The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Project Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Project Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Project Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions the Contract Documents.
- (b) Defective—when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - (i) does not conform to the Contract Documents; or
 - (ii) does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - (iii) has been damaged prior to Project Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by PWC at Substantial Completion in accordance with the Contract Documents).
- (c) Furnish, Install, Perform, Provide
 - (i) The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
 - (ii) The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment

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- complete and ready for intended use.
- (iii) The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
 - (iv) If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words “furnish,” “install,” “perform,” or “provide,” then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.

Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

Article II. Preliminary Matters

Section 2.01 Delivery of Bonds and Evidence of Insurance

- (a) Bonds: Contractor shall deliver to PWC such bonds as Contractor is required to furnish simultaneously with delivering the executed Agreement to PWC.
- (b) Contractor’s Insurance: Contractor shall deliver to PWC the certificates and other evidence of the insurance required by the Contract Documents simultaneously with delivering the executed Agreement to PWC.

Section 2.02 Copies of Documents

- (a) PWC will furnish to Contractor up to five (5) printed copies of the Contract Documents upon request by Contractor, and one (1) copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.
- (b) PWC will maintain and safeguard at least one original printed record version of the Agreement, including Drawings and Specifications signed and sealed by Design Engineer or other design professionals as applicable. PWC agrees to make such original printed record version of the Agreement reasonably available to Contractor for review during PWC’s normal business hours. PWC may delegate the responsibilities under this provision to Design Engineer.

Section 2.03 Before Starting any Work

- (a) Within ten (10) Days after the Contractor receives the Notice of Award from PWC (or as otherwise specifically required by the Contract Documents), Contractor shall submit to PWC for timely review:
 - (i) a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the identifiable aspects of the Work, including any Milestones specified in the Contract Documents;
 - (ii) a preliminary Schedule of Submittals; and
 - (iii) Any Shop Drawings, Samples, and other submittals required by the Contract Documents before the Preconstruction Conference.

Section 2.04 Preconstruction Conference; Designation of Authorized Representatives

- (a) Before any Work at the Site is started, a preconstruction conference attended by PWC, Project Engineer, Contractor, Design Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss general Project issues including, but not limited, the following:
 - (i) The schedules and submittals referred to in Section 2.03;
 - (ii) Contractor's designated authorized representative as described in Section 2.04(b);
 - (iii) Safety;
 - (iv) Procedures for handling Shop Drawings, Samples, and other submittals;
 - (v) Processing Applications for Payment, electronic or digital transmittals;
- (b) At the preconstruction conference Contractor shall designate, in writing, a specific individual to act as its authorized representative with respect to its services and responsibilities under the Contract Documents. Such individual shall have the authority to transmit and receive information, render decisions relative to the requirements of the Contract Documents, and otherwise act on behalf of the Contractor.

Section 2.05 Initial Acceptance of Schedules

- (a) At least twenty (20) Days before submission of the first Application for Payment a conference, attended by Contractor, PWC, and others as appropriate, will be held to review for acceptability to Project Engineer as provided below the schedules submitted in accordance with Paragraph 2.03(a). PWC shall have ten (10) Days to review the submission and provide feedback to Contractor. Contractor shall then have ten (10) days to make any corrections and adjustments as indicated by PWC and to complete and resubmit the schedules as necessary. No progress payment shall be made to Contractor until acceptable schedules are submitted to and approved by Project Engineer.
- (b) The Progress Schedule will be acceptable to Project Engineer if it provides an orderly progression of the Work to achieve Completion of the Project within the Contract Times. Such acceptance will not impose on Project Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
- (c) Contractor's Schedule of Submittals will be acceptable to Project Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

Section 2.06 Electronic Transmittals

- (a) Except as otherwise stated elsewhere in the Contract Documents, PWC and Contractor and their authorized agents may transmit, and shall accept, Project-related correspondence, text, data, documents, drawings, information, and graphics, including but not limited to Shop Drawings and other submittals, in electronic media or digital format, either directly, or through electronic mail at the address(es) designated by each Party.
- (b) When transmitting items in electronic media or digital format, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the items, or from those established in applicable transmittal protocols.

Article III. Contract Documents: Intent, Requirements, Reuse

Section 3.01 Intent

- (a) The Contract Documents are complementary; what is required by one is as binding as if required by all.
- (b) It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents.
- (c) Project Engineer, Design Engineer, or both, will issue clarifications and interpretations of the Contract Documents as provided herein.
- (d) To the extent necessary that Work, construction, or conditions not covered by these General Conditions is required for Contractor to achieve Completion of the Project, "Special Conditions" for such Work will be provided to Contractor and shall be part of the Contract Documents.
- (e) In case of any inconsistency, conflict, or ambiguity among the Contract Documents, the documents shall govern in the following order: (1) Change Orders; (2) Addenda; (3) the fully executed Agreement; (4) Special Conditions; (5) any Drawings and Technical Specifications; and (6) General Conditions.

Section 3.02 Reference Standards

- (a) Standards Specifications, Codes, Laws and Regulations
 - (i) Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard specification, manual, reference standard, code, or North Carolina laws and regulations in effect as of the Effective Date of the Agreement, except as may be otherwise specifically stated in the Contract Documents.
 - (ii) No provision of any such standard specification, manual, reference standard, or code, or any instruction of a Supplier shall be effective to change the duties or responsibilities of PWC or Contractor, or any of their subcontractors, consultants, agents, or employees, from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to PWC or any of its officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the part of the Contract Documents.

Section 3.03 Reporting and Resolving Discrepancies

- (a) Contractor's Verification of Figures and Measurements
 - (i) Before undertaking any portion of the Work, Contractor shall review all of the Contract Documents to and check and verify all figures and dimensions for the Project. Contractor shall promptly report in writing to Project Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is

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resolved, by a clarification or interpretation by Project Engineer, or by an amendment or supplement to the Contract Documents issued pursuant to these General Conditions.

- (ii) If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Project Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as defined hereinafter) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Project Engineer, or by an amendment or supplement to the Contract Documents issued pursuant to these General Conditions.

(b) Resolving Discrepancies:

- (i) Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for PWC shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:
 - 1) the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or
 - 2) the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

Section 3.04 Reuse of Documents

- (a) Contractor and its Subcontractors and Suppliers shall not have or acquire any title to or ownership rights in any of the:
 - (i) Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Design Engineer or its consultants, including electronic media editions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of PWC and Design Engineer and specific written verification or adaptation by Design Engineer, where applicable; or
 - (ii) Contract Documents and shall not reuse any such Contract Documents for any purpose without PWC's express written consent.
- (b) The prohibitions of this provision shall survive final payment or termination of the Agreement. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

Article IV. Commencement and Progress of the Work

Section 4.01 Commencement of Work

- (a) The Contract Times will commence to run on the day indicated in the Notice to Proceed issued by PWC to Contractor. A Notice to Proceed may be given at any time after the Effective Date of the Contract.

- (b) Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to such date. Contractor's failure to commence the Work within fifteen (15) Days of the date stated in the Notice to Proceed shall be deemed a material breach of the Agreement unless PWC otherwise determines in its sole discretion and agrees in writing to a delay of the Contract Times based on the applicable circumstances.

Section 4.02 Reference Points

- (a) Construction staking will be performed by Design Engineer, who will also prepare and furnish construction cut sheets, signed and sealed by a North Carolina professional land surveyor, to PWC and Contractor. Contractor shall not install any utilities without a sheet. All requests for staking shall be made not less than 96 hours in advance.
- (b) Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and staking, and shall make no changes or relocations without the prior written approval of Project Engineer. Contractor shall report to Project Engineer whenever any reference point staking is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or staking by professionally qualified personnel.

Section 4.03 Progress Schedule

- (a) Contractor shall adhere to the Progress Schedule established in accordance with Section 2.03 as it may be adjusted from time-to-time as provided below. Contractor shall submit to Project Engineer for acceptance any proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article IX.
- (b) Contractor shall carry on the Work and adhere to the Progress Schedule during any disputes or disagreements with PWC. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by these General Conditions or as PWC and Contractor may otherwise agree in writing.

Section 4.04 Delays in Contractor's Progress

- (a) If PWC, Project Engineer, anyone for whom PWC is responsible, or a Force Majeure Event delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Times and Contract Price. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- (b) Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.

- (c) Contractor must submit any Change Proposal, consistent with the procedure set forth in Article IX, seeking an adjustment in Contract Price or Contract Times under this provision within ten (10) calendar days of the commencement of the event that causes the delay, disruption, or interference with the Work and Contract Times.

Article V. Availability of Lands; Subsurface and Physical Conditions; Hazardous Environmental Conditions

Section 5.01 Availability of Lands

- (a) PWC will be responsible for obtaining any required easements and encroachments, and otherwise furnishing the Site, necessary to complete the Work, except as provided elsewhere in the Contract Documents.
- (b) Upon reasonable written request, PWC shall furnish to Contractor a current statement of record legal title and legal description of the lands upon which the Work is to be completed and PWC's interest therein.
- (c) Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment necessary to complete the Work. Any and all agreements between the Contractor and any individual property owner(s) shall not obligate PWC, PWC's employees, Project Engineer, or Design Engineer in any manner, and Contractor shall, before performing any work on any such property, obtain a signed and notarized release of liability of PWC and Design Engineer that is suitable to PWC as confirmed in writing.
- (d) Contractor and any of its Subcontractors shall exercise care and caution to avoid damage to any private property. Should any such damage to private property occur, it is Contractor's responsibility to notify the Project Engineer promptly in writing that such damage occurred, the extent of the damage, and Contractor's written plan to remedy the damage. If Contractor fails to timely correct damage to private property, PWC reserves the right to withhold progress payments until damage is corrected and/or to correct damage and back-charge Contractor for costs incurred. At the Completion of the Project, Contractor shall obtain a signed release from all owners of private property to which damage occurred that releases PWC and Design Engineer and acknowledges a settlement for the damage or that such damage was adequately remedied.

Section 5.02 Use of Site and Other Areas

- (a) Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site and other adjacent areas permitted by Laws and Regulations and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.

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- (b) Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris during the progress of the Work. Removal and disposal of such debris shall conform to applicable Laws and Regulations.
- (c) Prior to Completion of the Project, Contractor shall clean the Site and the Work and make it ready for utilization by PWC. At the completion of all of the Work, Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.
- (d) Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

Section 5.03 Differing Subsurface or Physical Conditions or Underground Facilities

- (a) If Contractor believes that any subsurface or physical condition or Underground Facilities that is uncovered or revealed at the Site either:
 - (i) is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely is materially inaccurate;
 - (ii) is of such a nature as to require a change in the Contract Documents;
 - (iii) differs materially from that shown or indicated in the Contract Documents; or
 - (iv) is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or Underground Facilities or performing any Work in connection therewith, notify PWC and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement approved by PWC permitting Contractor to do so.

- (b) After receipt of Contractor's written notice, Project Engineer will review the subsurface or physical condition or Underground Facilities in question; determine the necessity of PWC obtaining additional exploration or tests with respect to the condition; conclude whether the condition falls within any of the differing site condition categories in this Section 5.03; and obtain any pertinent cost or schedule information from Contractor.
- (c) Project Engineer will issue a written statement to Contractor regarding the subsurface or physical condition or Underground Facilities in question, which addresses the resumption of Work in connection with such condition and indicates whether any change in the Contract Documents will be made.
- (d) Possible Price and Times Adjustments:
 - (i) Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, or both, to the extent that the existence of a differing subsurface or physical condition or Underground Facilities, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

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- 1) such condition must fall within at least one of the categories in this Section 5.03; and,
 - 2) Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- (ii) Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition or Underground Facilities if:
- 1) Contractor knew of the existence of such condition at the time Contractor proffered its Bid to PWC or executed the applicable Agreement for the Project; or
 - 2) the existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's Bid; or
 - 3) Contractor failed to give the written notice as required.
- (iii) If PWC and Contractor agree regarding Contractor's entitlement to, and the amount or extent of, any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.
- (iv) Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, or both, no later than 30 calendar days after Project Engineer's written statement to Contractor regarding the subsurface or physical condition or Underground Facilities in question.

Section 5.04 Underground Utilities

- (a) Contractor shall ascertain the location and type of all underground utility lines or structures that may be located within the limits of the Site or any area where Work is to be performed.
- (i) The exact location of underground utilities or structures may vary from prior plans, permits, maps, or other documentation, and others may not be designated. The Contractor is fully responsible for verification of the exact location of all underground utility lines or structures within the limits of the Site or the area where the work is to be performed, whether known or unknown by PWC, and for providing necessary protection and/or repair if damage.
 - (ii) Should uncharted or incorrectly charted piping or other utilities be encountered during excavations, the Contractor shall immediately halt any Work, notify PWC, and await direction from PWC before proceeding with any Work. The Contractor shall fully cooperate with PWC and any other utility company in keeping respective services and facilities in operation.
- (b) PWC has used reasonable care to locate and depict existing underground installation on the construction drawings, but the accuracy cannot be guaranteed, and some items may not be shown which exist. Actual horizontal and vertical locations have not been verified. As part of the Work, the Contractor is required to dig up each utility which may conflict with construction in advance to verify locations. The utilities shall be "dug up" a minimum of fourteen (14) Days in advance of actual installation of new utilities to allow PWC an opportunity to adjust grades and alignments, to avoid a conflict, and to address

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any other issues.

- (c) The Contractor shall adhere to the provisions of the North Carolina Underground Utility Safety and Damage Prevention Act. The Contractor shall make a documented request to the North Carolina One Call Center, and/or individual utility owners, in order to locate any facilities within the Site limits or any area where Work is to be performed at least forty-eight (48) hours in advance of the day the Work is scheduled to begin. The Contractor shall include the cost of any coordination and cooperation for utilities in its Bid.
- (i) Location assistance requested from PWC by Contractor should include the actual horizontal location, type number, size, and depth of all lines. All costs associated with locating and marking existing utilities or the utilities representatives shall be the responsibility of the Contractor.
- (ii) The Owner, Project Engineer, Design Engineer, and/or Consultants shall not be liable to the Contractor for any claims, costs, losses, or damages incurred or sustained on or in connection with locating existing underground installations.
- (d) If the Contractor fails to schedule locates or perform advance physical locations in advance of the construction and a conflict arises, the Contractor will be required to make corrective measures as instructed by the Project Engineer at the Contractor's expense. The Contractor's failure to advance plan (minimum fourteen (14) days) by physically uncovering existing utilities in advance of construction shall not be cause for claim of lost time or for additional compensation. No additional payment will be made for re-mobilization required by the utility locator.
- (i) The Contractor shall inform all equipment operators, either those employed by him or those employed by his subcontractors, of information obtained from the utility owners prior to initiation of any aspect of any Work.
- (e) PWC and Design Engineer shall not be responsible for the accuracy or completeness of any information or data provided to the Contractor with respect to underground facilities.
- (f) The entire cost of all of the following will be included in the Contract Price, and Contractor shall bear full responsibilities for all such costs, including but not limited to:
 - (i) Reviewing and checking all such information and data;
 - (ii) Locating all underground facilities shown or indicated in the Contract Documents;
 - (iii) Coordination of the Work with the owners of such underground facilities, including PWC, during any portion of the Work; and
 - (iv) The safety and protection of all such underground facilities and repairing any damage thereto resulting from the Work.
- (g) Contractor shall be responsible for the discovery of existing underground installations, in advance of any excavating or trenching as required in the Contract Documents.

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- (h) If an underground facility is discovered at or contiguous to the Site that was not shown or indicated in the Contract Documents or of which Contractor was not aware prior to starting that portion of any Work, Contractor shall, immediately after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency), identify the owner of such underground facility and give written notice to PWC. Upon receipt of written notice, PWC will review the pertinent condition, determine the necessity of obtaining additional information, and advise Contractor in writing. During such time, Contractor shall be responsible for the safety and protection of such underground facility. If PWC concludes that a change in the Contract Documents is required, a Change Order will be issued.
- (i) The Contract Price and/or the Contract Time, may be adjusted if PWC determines, in its discretion, that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work subject to the following:
 - 1) Facility was not shown or indicated in the Contract Documents, and
 - 2) The Contractor did not know of or could not anticipate the facility.

Section 5.05 Hazardous Environmental Conditions at Site

- (a) Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work or Hazardous Environmental Condition was caused by Contractor.
- (b) Contractor shall be responsible for controlling, containing, and removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.
- (c) If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency); and (3) immediately notify Project Engineer (and promptly thereafter confirm such notice in writing). Project Engineer will evaluate such condition or take corrective action, if any. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then PWC may have the Hazardous Environmental Condition removed and remediated and impose a set-off against payments to Contractor to account for the reasonable associated costs.
- (d) Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after PWC has delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.

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- (e) If PWC and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, then within thirty (30) calendar days of PWC's written notice regarding the resumption of Work, Contractor may submit a Change Proposal or PWC may impose a set-off.
- (f) If after receipt of such written notice Contractor does not agree to resume such Work based on reasonable evidence it is unsafe or does not agree to resume such Work under such special conditions, then PWC may order the portion of the Work that is in the area affected by such condition to be deleted from the Work.

Article VI. Bonds and Insurance

Section 6.01 Performance and Payment Bonds

- (a) Contractor shall obtain and furnish to PWC a performance bond in the amount of one hundred percent (100%) of the Contract Price, conditioned upon the faithful performance of the Project and all Work in accordance with the Contract Documents, which bond shall be solely for the protection of PWC.
- (b) Contractor shall obtain and furnish to PWC a payment bond in the amount of one hundred percent (100%) of the Contract Price, conditioned upon the prompt payment for all labor or materials for which the Contractor or one or more of its subcontractors is liable, which payment bond shall be solely for the protection of the persons furnishing materials or performing labor for which the Contractor is liable.
- (c) The performance bond and the payment bond shall be executed by one or more surety companies legally authorized to do business in the State of North Carolina, shall become effective upon the awarding of the construction contract by PWC to Contractor, and shall at all times comply with the requirements set forth in Article 3 of North Carolina General Statutes Chapter 44A.
- (d) In the event PWC deems the surety or sureties upon any bond necessary for the Agreement and the completion of the Project, or if for any reason, such bond ceases to be adequate to cover the performance and/or payment of the Work, Contractor shall, at its expense, and within ten (10) days after the receipt of notice from PWC, furnish such additional bond(s) in such form and amount, and with such surety or sureties, as shall be satisfactory to PWC. In such event no further payment to Contractor shall be deemed to be due under this Agreement until new or additional security for the performance and payment of the Project shall be furnished in manner and form satisfactory to PWC.
- (e) By executing the Agreement, Contractor understands and acknowledges that PWC, as a public authority, and the City, as a municipal corporation, are not subject to the provisions of Articles 1 and 2 of Chapter 44A of the General Statutes, in accordance with G.S. 44A-34 and applicable law.

Section 6.02 Insurance

- (a) Contractor shall maintain during the life of the Agreement and during the completion of any Work the following insurance coverages, which insurance shall be placed with insurance companies authorized to do business in the State of North Carolina and rate A minus VII or

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better by the current edition of Best's Key Rating Guide or otherwise approved in writing by PWC:

- (i) Commercial general liability insurance with limits of \$1,000,000 per occurrence, \$2,000,000 aggregate other than products/completed operations; \$2,000,000 aggregate for products/completed. Commercial general liability coverage shall be written on an "occurrence" basis.
- (ii) Automobile liability insurance in an amount not less than \$1,000,000 combined single limit per accident for bodily injury and property damage from owned, non-owned, and hired automobiles.
- (iii) Workers' compensation insurance as required by the Laws and Regulations. In the event any employee(s), contractor(s), or subcontractor(s) engaged to perform any Work under the Agreement is not protected under the applicable workers' compensation laws, the Contractor shall provide adequate coverage for the protection of such employee(s), contractor(s), or subcontractor(s) not otherwise protected.
- (iv) In the event the Project concerns building construction or repair work, Contractor shall purchase and maintain "Builder's Risk" insurance. This insurance shall include the interests of the PWC, Contractor, and any Subcontractor(s) and shall be written on a one hundred percent (100%) completed value basis (full value as of the date that all construction is finished and includes the Contractor's Contract Price), and to remain in force until Completion of the Project.
- (v) Regardless of the nature of the work to be performed, coverage must also be provided for the theft or damage of building materials and supplies, which are not permanently attached or stored on Site for any period of time. This coverage shall be an "Installation Floater." If no building construction or repair is involved for the Project, the amount of the coverage shall equal the value of the materials stored on site.
- (b) Prior to initiating any Work on the Project, Contractor shall deliver certificates of insurance confirming each such coverage set forth above, and Contractor shall direct its insurers to provide annually to PWC certificates confirming each such coverage during the coverage period.
- (c) PWC shall be named as an additional insured in the comprehensive automobile and commercial liability insurance policies.
- (d) Contractor shall not reduce or allow the required insurance coverages to lapse without PWC's prior written approval. All policies for insurance must be endorsed to contain a provision giving PWC a thirty (30) calendar day prior written notice by certified mail of any cancellation of that policy or material reduction in coverage. Should a notice of cancellation be issued for non-payment of premiums or any part thereof, or should Contractor fail to provide and maintain certificates as set forth herein, PWC shall have the right, but shall not have the obligation, to pay such premium to the insurance company or to obtain such coverage and to deduct such payment from any sums that may be due or become due to Contractor, or to seek reimbursement for said payments from Contractor. Any such sums paid by PWC shall be due and payable immediately by Contractor upon notice from PWC.
- (e) The insurance coverage requirements shall not be construed as a limitation on

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Contractor's responsibilities and liabilities pursuant to the terms and conditions of this Agreement. Contractor's obligation to maintain insurance for three (3) years after Completion of the Project shall survive the termination of this Agreement.

- (f) If Contractor fails to obtain and maintain any required insurance, PWC may exclude Contractor from the Site, impose an appropriate set-off against payment, and exercise PWC's termination rights pursuant to the Contract Documents.
- (g) PWC does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests.

Article VII. Contractor's Responsibilities

Section 7.01 Supervision and Superintendence

- (a) Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction subject to the terms, provisions, and specifications set forth in the Contract Documents.
- (b) At all times during the progress of the Work, Contractor shall assign a competent superintendent, satisfactory to Project Engineer, to supervise the Work and to respond to Project Engineer concerning PWC's interests in the Work.
- (c) Contractor's superintendent shall have full authority to act on behalf of Contractor and all communications, instructions, directions, and notices given to the superintendent by the Project Engineer shall be binding to the Contractor.
- (d) Contractor's superintendent shall be responsible for coordination of the Work with other contractors or subcontractors. The superintendent shall not be replaced without written notice to PWC except under extraordinary circumstances.
- (e) Subcontractors
 - (i) Contractor shall submit the names and references all Subcontractors to the Project Engineer for approval before commencing any Work.
 - 1) In the event Contractor seeks to substitute any Subcontractor that was identified in Contractor's Bid, Contractor shall promptly provide PWC with: (1) the Subcontractor it seeks to substitute; (2) the identity of the Subcontractor to be substituted; and (3) the reason for the requested substitution.
 - 2) PWC will review the requested substitution within five (5) Business Days and provide written approval or denial of the substitution, with such approval not to be unreasonably withheld.
 - (ii) Contractor's superintendent shall be available to be present at the Site at any time that any Subcontractor(s) is performing any of the Work. Construction activity shall be

stopped if the Contractor's superintendent is not available to be at the Site.

Section 7.02 Labor; Working Hours

- (a) Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site. Contractor shall remove from the Project any person who appears incompetent, disorderly, or otherwise unsatisfactory. Contractor shall also remove any person who appears in PWC's sole discretion to be incompetent, disorderly, or otherwise unsatisfactory
- (b) Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed on Business Days. Contractor will not perform Work on non-Business Days. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with PWC's written consent, which will not be unreasonably withheld. In such circumstances, Contractor shall submit a written request to PWC at least two (2) Business Days prior to any Work that it requests to complete on a non-Business Day and PWC will, in its sole discretion, approve or deny such request. If such work outside of a Business Day is approved, PWC will set forth the specific parameters that Contractor must follow, including time of work, personnel, and any other issues.⁸

Section 7.03 Services, Materials, and Equipment

- (a) Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and Completion of the Project, whether or not such items are specifically called for in the Contract Documents.
- (b) All materials and equipment incorporated into the Work shall be of good quality and new, except as otherwise specified in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of PWC. If required by PWC or its designee, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
- (c) All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be specified in the Contract Documents.

Section 7.04 "Or Equals"

- (a) Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Project Engineer authorize the use of other items of material or equipment under the circumstances described below.

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- (i) If Project Engineer determines that an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Project Engineer shall deem it an “or equal” item and confirm such in writing to Contractor. A proposed item of material or equipment will be considered functionally equal to an item so named if:
 - 1) in the exercise of reasonable judgment Project Engineer determines that:
 - a) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
 - b) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
 - c) it has a proven record of performance and availability of responsive service; and
 - d) it is not objectionable to PWC.
 - 2) Contractor certifies that, if approved and incorporated into the Work:
 - a) there will be no increase in the Contract Price or Contract Times; and
 - b) it will conform substantially to the detailed requirements of the item specified in the Contract Documents.
- (b) Contractor shall provide all data in support of any proposed “or equal” item at Contractor’s expense.
- (c) Project Engineer will be allowed a reasonable time to evaluate each “or-equal” request. Project Engineer may require Contractor to furnish additional data about the proposed “or-equal” item. Project Engineer will be the sole judge of acceptability. Contractor shall not order, furnish, install, or utilize any “or-equal” it until Project Engineer has reviewed the request, determined that the proposed item is an “or-equal,” and provided written confirmation to Contractor.
- (d) Project Engineer’s denial of an “or-equal” request shall be final and binding and may not be reversed through an appeal under any provision of the Contract Documents.

Section 7.05 Concerning Subcontractors, Suppliers, and Others

- (a) Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to PWC.
- (b) Contractor shall not subcontract more than forty-nine percent (49%) of the final Contract Price.
- (c) Contractor shall retain specific Subcontractors, Suppliers, or other individuals or entities for the performance of designated parts of the Work if required by the Contract Documents.
- (d) After the submittal of Contractor’s Bid or final negotiation of the terms of the Agreement, PWC may not require Contractor to retain any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work.
- (e) Prior to entry into any binding subcontract or purchase order, Contractor shall submit to PWC the identity of the proposed Subcontractor or Supplier (unless PWC has already deemed such proposed Subcontractor or Supplier acceptable, during the bidding process

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or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to PWC unless PWC raises a substantive, reasonable objection within five (5) Business Days.

- (f) No acceptance by PWC of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of the right of PWC to the completion of the Work in accordance with the Contract Documents.
- (g) Contractor shall be fully responsible to PWC for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions.
- (h) Contractor shall be solely responsible for scheduling and coordinating the Subcontractors, Suppliers, and all other individuals or entities performing or furnishing any of the Work.
- (i) Contractor shall restrict all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work from communicating with PWC, except through Contractor or in case of an emergency, or as otherwise expressly allowed herein.
- (j) All Work performed for Contractor by a Subcontractor or Supplier shall be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of PWC.
- (k) PWC may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor on account of Work performed for Contractor by the particular Subcontractor or Supplier.
- (l) Nothing in the Contract Documents:
 - (i) shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between PWC or Design Engineer and any such Subcontractor, Supplier, or other individual or entity; nor
 - (ii) shall create any obligation on the part of PWC or Design Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

Section 7.06 Patent Fees and Royalties

- (a) Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device that is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of PWC, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by PWC in the Contract Documents.

Section 7.07 Permits

- (a) Unless otherwise specified in the Contract Documents, Contractor shall obtain and pay for all construction permits and licenses necessary to achieve Completion of the Project. Contractor shall timely seek assistance from PWC if necessary to obtain any permits or

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licenses; provided that, the Contract Time shall not be extended if PWC determines, in its discretion, that Contractor delayed or otherwise did not act expeditiously in requesting such assistance. PWC shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for Completion of the Project that are applicable at the time of the submission of Contractor's Bid.

Section 7.08 Taxes

- (a) Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the applicable Laws and Regulations for the Project and which are applicable during the performance of the Work.

Section 7.09 Laws and Regulations

- (a) Contractor shall give all notices required by, and shall comply with, all Laws and Regulations applicable to the Project. Except as otherwise expressly required, PWC shall not be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- (b) Contractor shall bear all resulting costs and losses for any of its actions or inactions that are contrary to Laws or Regulations.
- (c) PWC or Contractor may give notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under the Agreement) concerning any Laws or Regulations having an effect on the Contract Price or Contract Times, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If PWC and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 calendar days of such notice Contractor may submit a Change Proposal.

Section 7.10 Record Documents

- (a) Contractor shall maintain in good order one (1) printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. These record documents, together with all approved Samples, will be available to Project Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to PWC.

Section 7.11 Safety and Protection

- (a) Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
 - (i) all persons on the Site or who may be affected by the Work;
 - (ii) all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

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- (iii) other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- (b) Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss, and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify PWC, the owners of adjacent property or Underground Facilities, and other contractors and owners performing work at or adjacent to the Site, when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.
- (c) Contractor shall comply with the requirement of any of PWC's applicable health programs, which may be revised from time to time based on specific circumstances or applicable guidance from the Center for Disease Control or other applicable entity. Such health programs will be identified in the Special Conditions if applicable to the Project.
- (d) Contractor shall comply with the requirements of PWC's applicable safety programs. The Special Conditions identify any of PWC's safety programs that are applicable to the Project.
- (e) Contractor shall remedy, at its expense, all damage, injury, or loss to any property caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable.
- (f) Contractor's duties and responsibilities for safety and protection shall continue until such time as Completion of the Project is achieved.
- (g) Contractor's duties and responsibilities for safety and protection shall resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.
- (h) Contractor shall designate in writing to PWC a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

Section 7.12 Emergencies

- (a) In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to, and shall, act to prevent threatened damage, injury, or loss. Contractor shall give PWC prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused or are required as a result of any emergency. If PWC determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

Section 7.13 Shop Drawings, Samples, and Other Submittals

- (a) Contractor shall timely submit Shop Drawings and Samples required by the Contract

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Documents to Project Engineer for review and approval in accordance with applicable specifications.

- (b) Before submitting a Shop Drawing or Sample, Contractor shall have
 - (i) reviewed the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - (ii) verified all measurements, quantities, dimensions, performance and design criteria, installation requirements, materials, catalog numbers, and similar information;
 - (iii) verified the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - (iv) verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.
- (c) With each submittal, Contractor shall give Project Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be a written communication separate from the Shop Drawings or Sample submittal; and, in addition, in the case of Shop Drawings by a specific notation made on each Shop Drawing submitted to PWC for review and approval of each such variation.
- (d) Where a Shop Drawing or Sample is required by the Contract Documents, any related Work performed prior to Project Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.
- (e) Project Engineer will provide timely review of any required Shop Drawings and Samples. Such review, and subsequent determination of approval, will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
- (f) Project Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions or programs incident thereto.
- (g) Project Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, shall not change the Contract Times or Contract Price, unless such changes are included in a Change Order.
- (h) Project Engineer's receipt, review, acceptance or approval of a Shop Drawing, Sample, or other submittal shall not result in such item becoming a Contract Document.
- (i) Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples.
- (j) Resubmittal Procedures:
 - (i) Contractor shall make corrections required by Project Engineer and shall return the

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required number of corrected copies of Shop Drawings and submit new Samples as required for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by PWC or Project Engineer on previous submittals.

- (ii) Contractor shall furnish required submittals with sufficient information and accuracy to obtain required approval of an item with no more than three (3) submittals. If PWC has engaged a Design Engineer for the Project, Design Engineer will record Design Engineer's time for reviewing a fourth or subsequent submittal of a Shop Drawings, sample, or other item requiring approval, and Contractor shall be responsible for Design Engineer's charges to PWC for such time. PWC may impose a set-off against payments due to Contractor to secure reimbursement for such charges.
- (iii) If Contractor requests a change of a previously approved submittal item, Contractor shall be responsible for Design Engineer's charges to PWC for its review time, and PWC may impose a set-off against payments due to Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

Section 7.14 Contractor's General Warranty and Guarantee

- (a) In order to induce PWC to enter into an Agreement with Contractor for the Project, Contractor warrants and guarantees to PWC that:
 - (i) Contractor is duly licensed in the State of North Carolina to complete all Work necessary for the Project, is duly organized, validly existing and in good standing and has all requisite powers, rights, and authority to execute, enter into, and perform the Agreement in accordance with the terms and conditions of the Agreement, and the Agreement constitutes a legal, valid, and binding obligation of Contractor enforceable against it in accordance with its terms.
 - (ii) Contractor has read the Contract Documents, and acknowledges and understands all data, materials, specifications, and requirements identified in the Contract Documents.
 - (iii) Contractor has visited the site for the Project, conducted a thorough, visual examination of the site and adjacent areas, and become familiar with and is satisfied as to the general, local, and site conditions that may affect cost, progress, and performance in completing the Project.
 - (iv) Contractor is familiar with and is satisfied as to all laws and regulations that may affect cost, progress, and performance to complete the Project.
 - (v) Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the site and all drawings of physical conditions relating to existing surface or subsurface structures at the site that have been identified in the Detail Specifications and any accompanying reports and drawings, and (2) reports and drawings relating to any Hazardous Environmental Condition at or adjacent to the site that have been identified in the Contract Documents and any accompanying reports and drawings.
 - (vi) Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract Documents, if any, 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 Contractor; and (3) Contractor's safety precautions and programs.

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- (vii) Based on the information and observations referred to in subsection “(v)” of this Section, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price and in accordance with the other terms and conditions of the Contract Documents.
 - (viii) Contractor is aware of the general nature of work to be performed by PWC and others at the Site that relates to the Work as indicated in the Contract Documents.
 - (ix) Contractor has given PWC written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by PWC is acceptable to Contractor.
 - (x) The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
 - (xi) Contractor’s entry into this Agreement constitutes an incontrovertible representation by Contractor that, without exception, all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.
 - (xii) Contractor has no business or personal relationship with any PWC Commissioner, officer, director, manager, or supervisor and Contractor covenants to disclose immediately to PWC any such relationship that develops during the performance of Work on the Project.
- (b) Contractor’s obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor’s obligation to perform the Work in accordance with the Contract Documents:
- (i) observations by Project Engineer;
 - (ii) recommendation by Project Engineer or payment by PWC of any progress or final payment;
 - (iii) the issuance of a certificate of Substantial Completion by Project Engineer or any payment related thereto by PWC;
 - (iv) use or occupancy of the Work or any part thereof by PWC;
 - (v) any review and approval of a Shop Drawing or Sample submittal;
 - (vi) the issuance of a notice of acceptability by Project Engineer;
 - (vii) any inspection, test, or approval by others; or
 - (viii) any correction of defective Work by PWC.
- (c) If the Contract Documents requires the Contractor to accept the assignment of a contract entered into by PWC, then the specific warranties, guarantees, and correction obligations contained in the assigned contract shall govern with respect to Contractor’s performance obligations to PWC for the Work described in the assigned contract.

Section 7.15 Indemnification

- (a) Contractor shall indemnify, defend, and hold harmless PWC and its Commissioners, officers, employees, agents, and representatives and the City and its elected officials, managers, employees, agents, and representatives and Designer (collectively “Indemnitees”) from and against all claims, actions, liabilities, damages, losses, costs, and expenses (including, without limitation, injury to or death of any persons and damage to property, economic and consequential damages and attorneys’ fees) asserted by one or more third parties against one or more of the Indemnitees if the Fault of one or more Responsible Persons is a proximate cause of the loss, damage, or expense indemnified.
- (b) Contractor’s obligation to indemnify, defend, and hold harmless the Indemnitees shall survive the termination of the Agreement.

- (c) In any and all claims against the Indemnitees of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, Contractor's indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

Section 7.16 Claims Procedure

- (a) PWC shall notify the Contractor of all potential claims related to the Work within seven (7) calendar days of receiving notification or having knowledge of such potential claim. Should the Contractor receive a potential claim related to the Work, the Contractor shall notify PWC within seven (7) calendar days of receiving notification. The Contractor shall provide the claimant and PWC with a written response acknowledging receipt of the claim within seven (7) calendar days.
- (b) If the Contractor meets with the Claimant about the claim, a representative designated by PWC shall be present at all times. PWC shall maintain a record of any claim received, and the steps taken to resolve. PWC shall also concurrently investigate each case. The Contractor agrees to furnish PWC any information regarding the claim, the actions which led to the claim and/or the investigation of the claim. Contractor shall provide their proposed response to PWC within thirty (30) calendar days of receiving the claim. Upon receipt of the response PWC and the Contractor will discuss and reach a mutual agreement of the response necessary to send to the Claimant within fifteen (15) calendar days. Once the agreement is made the Contractor shall make a formal written resolution to the claimant.
- (c) Failure to act in good faith or respond to a claim in the timelines established by the Contract Documents will constitute a lack of response by the Contractor, therefore validating the claim. PWC will deduct the total amount of the claim from the monthly pay application. Failure to comply with the above requirements for resolving claims may, at the sole discretion of PWC, result in breach of contract.
- (d) The Contractor is aware of these claims procedures and understands that it is the PWC's practice to pursue reimbursement/subrogation for any and all claims related expenses, which are incurred as a result of the Contractor's performance under this Contract Documents and allowed within the applicable statute of limitations.

Section 7.17 Delegation of Professional Design Services

- (a) Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable Laws and Regulations.
- (b) If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of Contractor by the Contract Documents, PWC will specify all performance and design criteria that such services must satisfy.

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Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to PWC.

- (c) PWC shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, or approvals performed by such design professionals, provided PWC has specified to Contractor all performance and design criteria that such services must satisfy.
- (d) Pursuant to this Section, PWC's, or its designee's, review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. PWC specifically retains final approval of such submittals.
- (e) Contractor shall not be responsible for the adequacy of the performance or design criteria specified by PWC.

Article VIII. PWC's Responsibilities

- (a) In awarding the bid to Contractor and executing the applicable Agreement, PWC acknowledges the following responsibilities:
 - (i) Except as otherwise provided in these General Conditions, PWC shall issue all communications directly to Contractor or its designee.
 - (ii) PWC may at its discretion replace Design Engineer and Project Engineer. The replacement Design Engineer or Project Engineer's status under the Contract Documents shall be that of the former Design Engineer or Project Engineer.
 - (iii) PWC shall promptly furnish the data required of PWC under the Contract Documents.
 - (iv) PWC shall make payments to Contractor when they are due as provided in the Contract Documents.
 - (v) PWC shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. PWC will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
 - (vi) Upon request of Contractor, PWC shall furnish to Contractor reasonable evidence that financial arrangements have been made to satisfy PWC's obligations under the Contract Documents (including obligations under proposed changes in the Work).
 - (vii) While at the Site, PWC's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which PWC has been informed.
 - (viii) PWC shall furnish copies of any applicable PWC safety program(s) to Contractor, which Contractor shall review and implement.

Article IX. Amending the Contract Documents; Changes in the Work

Section 9.01 Amending and Supplementing Contract Documents

- (a) The Contract Documents may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
 - (i) Change Orders: If an amendment or supplement to the Contract Documents includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order. A Change Order also may be used to establish amendments and supplements of the Contract Documents that do not affect the Contract Price or Contract Times.
 - (ii) Work Change Directives: A Work Change Directive will not change the Contract Price or the Contract Times, but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 9.04 regarding change of Contract Price. Contractor must submit any Change Proposal seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 30 days after the completion of the Work set out in the Work Change Directive. PWC must submit any dispute or request seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 60 days after issuance of the Work Change Directive.
 - (iii) Field Orders: Project Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on PWC and on Contractor, which shall perform promptly the Work involved. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

Section 9.02 PWC-Authorized Changes in the Work

- (a) Without invalidating the Agreement and without notice to any surety, PWC may, at any time or from time to time, order additions, deletions, or revisions in the Work. Such changes shall be supported by Design Engineer's recommendation when applicable and to the extent the change involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters. Such changes may be accomplished by a Change Order or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work as revised. Nothing in this paragraph shall obligate Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

Section 9.03 Unauthorized Changes in the Work

- (a) Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented.

Section 9.04 Change of Contract Price

- (a) The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price shall comply with the provisions of these General Conditions.
- (b) An adjustment in the Contract Price will be determined as follows:
 - (i) where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved; or
 - (ii) where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit as agreed to in writing by the Parties); or
 - (iii) where the Work involved is not covered by unit prices contained in the Contract Documents and the Parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work plus a reasonable Contractor's fee for overhead and profit.
- (c) Contractor's Fee: When applicable, the Contractor's fee for overhead and profit shall be determined as follows:
 - (i) a mutually acceptable fixed fee; or
 - (ii) if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - 1) for unit prices, the Contractor's fee shall be fifteen percent (15%);
 - 2) for all other costs incurred, the Contractor's fee shall be five percent (5%);
 - 3) the amount of credit to be allowed by Contractor to PWC for any change that results in a net decrease in the Contract Price will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
 - 4) when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change.

Section 9.05 Change of Contract Times

- (a) The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times shall comply with the provisions of Paragraph 9.06.
- (b) An adjustment of the Contract Times shall be subject to the limitations set forth in these Contract Document as it concerns delays in Contractor's progress.

Section 9.06 Change Proposals

- (a) Contractor shall submit a Change Proposal to PWC to request an adjustment in the Contract Times and/or Contract Price. The Change Proposal shall specify any proposed change in Contract Times or Contract Price, or both, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents.
- (i) Procedures: Contractor shall submit each Change Proposal to PWC promptly (but in no event later than 30 days) after the start of the event giving rise thereto, or after such initial decision. The Contractor shall submit supporting data, including the proposed change in

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Contract Price or Contract Time (if any), to PWC within 15 calendar days after the submittal of the Change Proposal. The supporting data shall be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

- (ii) PWC Action: PWC will review each Change Proposal and, within 30 calendar days after receipt of the Contractor's supporting data, either deny the Change Proposal in whole, approve it in whole, or deny it in part and approve it in part. Such actions shall be in writing to Contractor. If PWC does not take action on the Change Proposal within 30 calendar days, then the Change Proposal is deemed denied, thereby commencing the time for appeal under these General Conditions.
- (iii) Binding Decision: PWC's decision will be final and binding unless Contractor appeals the decision.

Section 9.07 Execution of Change Orders

- (a) PWC and Contractor shall execute appropriate Change Orders covering:
 - (i) changes in the Contract Price or Contract Times that are agreed to by the parties, including any undisputed sum or amount of time for Work performed in accordance with a Work Change Directive;
 - (ii) changes in Contract Price resulting from a PWC set-off, unless Contractor has duly contested such set-off;
 - (iii) changes in the Work which are: (a) ordered by PWC, (b) required because of PWC's acceptance of defective Work or PWC's correction of defective Work, or (c) agreed to by the parties, subject to the need for Design Engineer's recommendation if the change in the Work involves the design (as set forth in the Contract Documents), or other engineering or technical matters; and
 - (iv) changes in the Contract Price or Contract Times, or other changes, which embody the substance of any final and binding results.
- (b) If PWC or Contractor refuses to execute a Change Order that is required to be executed under the terms of this Section, it shall be deemed to be of full force and effect as if fully executed.

Section 9.08 Notification to Surety

- (a) If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

Article X. Tests, Inspections, and Approvals; Correction, Removal, or Acceptance of Defective Work

Section 10.01 Access to Work

- (a) PWC, Design Engineer, their consultants and other representatives and personnel of PWC, independent testing laboratories, and authorities having jurisdiction will have access to the Site and the Work at reasonable times for their observation, inspection, and testing.

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Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply therewith as applicable.

Section 10.02 Tests, Inspections, and Approvals

- (a) Contractor shall give Project Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- (b) PWC shall retain and pay for the initial services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by PWC, except those costs incurred in connection with tests or inspections of covered Work shall be governed by the provisions of Paragraph 10.05.
- (c) If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish the required certificates of inspection or approval to PWC.
- (d) Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:
 - (i) by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to PWC;
 - (ii) to attain PWC's and Design Engineer's acceptance of materials or equipment to be incorporated in the Work;
 - (iii) by manufacturers of equipment furnished under the Contract Documents;
 - (iv) for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
 - (v) for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests shall be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to PWC, as confirmed in writing by Project Engineer to Contractor.

- (e) If the Contract Documents require the Work (or part thereof) to be approved by PWC or its designee, then Contractor shall assume full responsibility for arranging and obtaining such approvals.
- (f) If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Project Engineer, Contractor shall, if requested by Project Engineer, uncover such Work for observation. Such uncovering shall be at Contractor's expense unless Contractor had given PWC timely notice of Contractor's intention to cover the same and PWC had not acted with reasonable promptness in response to such notice.

Section 10.03 Defective Work

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- (a) It is Contractor's obligation to assure that the Work is not defective.
- (b) PWC or its designee has the authority to determine whether Work is defective, and to reject defective Work.
- (c) Prompt notice of all defective Work of which PWC has actual knowledge will be given to Contractor.
- (d) Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if PWC has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.
- (e) When correcting defective Work, Contractor shall take no action that would void or otherwise impair PWC's special warranty and guarantee, if any, on said Work.
- (f) In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against PWC by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if PWC and Contractor are unable to agree as to the measure of such claims, costs, losses, and damages resulting from defective Work, then PWC may impose a reasonable set-off against payments due.

Section 10.04 Acceptance of Defective Work

- (a) If, instead of requiring correction or removal and replacement of defective Work, PWC prefers to accept it, PWC may do so (subject, if such acceptance occurs prior to final payment, to Design Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles and will not endanger public safety).
- (b) Contractor shall pay all claims, costs, losses, and damages attributable to PWC's evaluation of and determination to accept such defective Work (such costs to be approved by PWC as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work shall be incorporated in a Change Order.
- (c) If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then PWC may impose a reasonable set-off against payments due. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to PWC.

Section 10.05 Uncovering Work

- (a) PWC has discretion to require, at its initial cost, additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.
- (b) If any Work is covered contrary to the written request of PWC, then Contractor shall, if requested by PWC or its designee, uncover such Work for observation, and then replace

the covering, all at Contractor's expense.

- (c) If PWC considers it necessary or advisable that covered Work be observed by PWC or inspected or tested by others, then Contractor, at PWC's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as PWC may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.
 - (i) If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility PWC shall be entitled to impose a reasonable set-off against payments due.
 - (ii) If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 calendar days of the determination that the Work is not defective.

Section 10.06 PWC May Stop the Work

- (a) If the Work is defective, or Contractor fails to supply sufficiently skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then PWC may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of PWC to stop the Work shall not give rise to any duty on the part of PWC to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

Section 10.07 PWC May Correct Defective Work

- (a) If Contractor fails within the time specified by PWC in a written notice from PWC to correct defective Work, or to remove and replace rejected Work as required by PWC, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, then PWC may, after seven (7) calendar days written notice to Contractor, correct or remedy any such deficiency.
- (b) In exercising the rights and remedies under this Section, PWC shall proceed expeditiously. In connection with such corrective or remedial action, PWC may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which PWC has paid Contractor but which are stored elsewhere. Contractor shall allow PWC and its officers, employees, representatives, agents and other contractors, and Design Engineer and its employees and agents access to the Site to enable PWC to exercise the rights and remedies under this Section.
- (c) All claims, costs, losses, and damages incurred or sustained by PWC in exercising the rights and remedies under this Section will be charged against Contractor as set-offs against payments due. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by

correction, removal, or replacement of Contractor's defective Work.

- (d) Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by PWC of PWC's rights and remedies under this Section.

Article XI. Claims

Section 11.01 Claims Process

- (a) The following disputes between PWC and Contractor shall be submitted to the Claims process set forth in this Article:
 - (i) Appeals by PWC or Contractor of Design Engineer's decisions regarding Change Proposals;
 - (ii) PWC or Contractor's demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents; and
 - (iii) Disputes that Design Engineer has been unable to address because they do not involve the design (as set forth in the Contract Documents), the acceptability of the Work, or other engineering or technical matters.

Section 11.02 Submittal of Claim

- (a) The party submitting a claim shall deliver it directly to the other party to the Agreement promptly (but in no event later than 30 calendar days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 calendar days of the decision under appeal. The responsibility to substantiate a claim shall rest with the party making the claim. In the case of a claim by Contractor seeking an increase in the Contract Times or Contract Price, or both, Contractor shall certify that the claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.

Section 11.03 Review and Resolution

- (a) The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim shall be stated in writing and submitted to the other party.

Section 11.04 Dispute Resolution

- (a) In the event of any dispute, controversy, or claim of any kind or nature arising under or in connection with this Agreement (a "Dispute") and involving any two or more of the following parties, PWC, Design Engineer, Contractor or any subcontractor of Contractor, the party initiating the Dispute shall serve written notice of a Dispute on the party(ies) to the dispute, and those parties shall endeavor to settle the dispute first through direct, informal discussions between the parties' selected representatives. Any such representative(s) shall have binding authority to settle the Dispute. In the event the parties do not settle the Dispute within ten (10) calendar days from the date of written notice of the Dispute, any

party to the Dispute may, by written notice to the other party(ies), engage a mediator certified under the laws of the State of North Carolina to mediate the Dispute within thirty (30) calendar days of such notice. The parties to the Dispute shall attend mediation in good faith. In the event mediation is unsuccessful, any party to the dispute may initiate arbitration proceedings. Any controversy or claim arising out of or relating to the Contract Documents, or the breach thereof, shall be settled by binding arbitration administered by the American Arbitration Association under its Construction Industry Arbitration Rules, and judgment on the award rendered by the arbitrator(s) may be entered in any court having jurisdiction thereof. All of the foregoing dispute resolution procedures shall be held in Cumberland County, North Carolina. The costs of the mediator and arbitrator in a dispute resolution process shall be divided equally among the parties to the process; provided, however, PWC shall bear at least one-third of the cost if PWC is a party to the dispute resolution and the remainder of the cost shall be divided equally among the other parties participating in the dispute resolution. PWC shall, in its contractual arrangements with Design Engineer, and Contractor shall, in its contracts with Subcontractors and they in their contracts with lower-tier subcontractors authorize and direct such parties to participate in the dispute resolution procedures set forth in this Section. Unless otherwise directed in writing by PWC, Contractor shall continue the Project and maintain compliance with the scheduling deadlines set forth in the Contract Documents during any dispute resolution proceedings. If Contractor continues to perform, PWC shall make payments due for the continued performance in accordance with this Agreement. The provisions of this Section shall not extend any applicable statutes of limitation or repose.

Article XII. Payments to Contractor; Set-Offs; Completion; Correction Period

Section 12.01 Progress Payments

- (a) The Schedule of Values will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to the Project Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed during the pay period. Progress payments for cost-based Work will be based on the Cost of the Work completed by the Contractor during the pay period.
- (b) Applications for Payments:
 - (i) Contractor shall submit to Project Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that PWC has received the materials and equipment free and clear, and evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect PWC's interest.
 - (ii) Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
 - (iii) The amount of retainage for progress payments will be as stipulated in the Contract

Documents.

(c) Review of Applications:

- (i) Project Engineer will, within ten (10) Business Days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to PWC, or return the Application to Contractor indicating in writing Project Engineer's reason(s) for refusing to recommend payment. In the latter case, the Contractor may make the necessary corrections and resubmit the Application.
- (ii) Project Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Project Engineer to PWC, based on Project Engineer's observations of the executed Work, and on Project Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Project Engineer's knowledge, information, and belief:
 - 1) the Work has progressed to the point indicated;
 - 2) the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work, and any other qualifications stated in the recommendation); and
 - 3) the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Project Engineer's responsibility to observe the Work.
- (iii) By recommending any such payment Project Engineer will not thereby be deemed to have represented that:
 - 1) inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Project Engineer in the Contract Documents; or
 - 2) there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by PWC or entitle PWC to withhold payment to Contractor.
- (iv) Neither Project Engineer's review of Contractor's Work for the purposes of recommending payments nor Project Engineer's recommendation of any payment, including final payment, will impose responsibility on Project Engineer:
 - 1) to supervise, direct, or control the Work, or
 - 2) for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - 3) for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - 4) to make any examination to ascertain how or for what purposes Contractor has used the money paid on account of the Contract Price.
- (v) Project Engineer may refuse to recommend the whole or any part of any payment if, in Project Engineer's opinion, it would be incorrect to make the representations to PWC outlined in this Section.

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- (d) Project Engineer will recommend reductions in payment (set-offs) necessary in Project Engineer's opinion to protect PWC from loss because:
 - (i) the Work is defective, requiring correction or replacement;
 - (ii) the Contract Price has been reduced by Change Orders;
 - (iii) PWC has been required to correct defective Work or has accepted defective Work in accordance with these General Conditions;
 - (iv) PWC has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or
 - (v) Project Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

- (e) Payment Becomes Due:
 - (i) Twenty (20) Business Days after presentation of the Application for Payment to PWC with Project Engineer's recommendation, the amount recommended (subject to any PWC set offs) will become due, and when due will be paid by PWC to Contractor.

- (f) Reductions in Payment by PWC:
 - (i) In addition to any reductions in payment (set-offs) recommended by Project Engineer, PWC is entitled to impose a set-off against payment based on any of the following:
 - 1) PWC has incurred costs, losses, or damages on account of Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;
 - 2) Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
 - 3) Contractor has failed to provide and maintain required bonds or insurance;
 - 4) PWC has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
 - 5) PWC has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
 - 6) the Work is defective, requiring correction or replacement;
 - 7) PWC has been required to correct defective Work or has accepted defective Work in accordance with the Contract Documents;
 - 8) the Contract Price has been reduced by Change Orders;
 - 9) an event that would constitute a default by Contractor and therefore justify a termination for cause has occurred;
 - 10) liquidated damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or Completion of the Project; or
 - 11) there are other items entitling PWC to a set off against the amount recommended.
 - (ii) If PWC imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Project Engineer, PWC will give Contractor immediate written notice stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. PWC shall promptly pay Contractor the amount so withheld, or any adjustment agreed to by PWC and Contractor if Contractor remedies the reasons for

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such action. The reduction imposed shall be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.

- (iii) Upon a subsequent determination that PWC's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due and subject to interest as provided in the Contract Documents.

Section 12.02 Substantial Completion

- (a) When Contractor considers the entire Work ready for its intended use Contractor shall notify PWC and Design Engineer in writing that the entire Work is substantially complete and request that PWC acknowledge in writing that Contractor has met Substantial Completion.
- (b) Promptly after Contractor's notification, PWC, Contractor, and Design Engineer shall make an inspection of the Work to determine the status of completion. If PWC does not consider the Work substantially complete, PWC will notify Contractor in writing giving the reasons therefor. PWC shall thereafter submit to Contractor an initial draft of punch list items to be completed or corrected before final payment.
- (c) If Design Engineer considers the Work substantially complete, Design Engineer will deliver to PWC a preliminary certificate of Substantial Completion which shall fix the date of Substantial Completion. Design Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. PWC shall have seven (7) Business Days after receipt of the preliminary certificate to make written objection to Design Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, PWC concludes that the Work is not substantially complete, PWC will, within fourteen (14) calendar days after submission of the preliminary certificate to PWC, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor.
- (d) At the time of receipt of the preliminary certificate of Substantial Completion, PWC and Contractor will confer regarding PWC's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by PWC. Unless PWC and Contractor agree otherwise in writing, PWC shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon PWC use or occupancy of the Work.
- (e) After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment and shall complete such items within the time specified by PWC. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- (f) PWC shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

Section 12.03 Partial Use or Occupancy

- (a) Prior to Substantial Completion of all the Work, PWC may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which PWC, Design Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by PWC for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:
 - (i) At any time PWC may request in writing that Contractor permit PWC to use or occupy any such part of the Work that PWC believes to be substantially complete.
 - (ii) At any time Contractor may notify PWC and Design Engineer in writing that Contractor considers any such part of the Work substantially complete and request Design Engineer to issue a certificate of Substantial Completion for that part of the Work.
 - (iii) Within a reasonable time after either such request, PWC, Contractor, and Design Engineer shall make an inspection of that part of the Work to determine its status of completion. If Design Engineer does not consider that part of the Work to be substantially complete, Design Engineer will notify PWC and Contractor in writing giving the reasons therefor.
 - (iv) No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements regarding builder's risk or other property insurance.

Section 12.04 Final Inspection

- (a) Upon written notice from Contractor that Completion of the Project has been achieved or an agreed portion thereof is complete, PWC will promptly make a final inspection with Project Engineer, Design Engineer, and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

Section 12.05 Final Payment

- (a) Application for Payment:
 - (i) After Contractor has, in the opinion of PWC, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents, and other documents, Contractor may make application for final payment.
 - (ii) The final Application for Payment shall be accompanied (except as previously delivered) by:
 - 1) all documentation called for in the Contract Documents;
 - 2) consent of the surety, if any, to final payment;
 - 3) satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to PWC free and clear or will so pass upon final payment;
 - 4) a list of all disputes that Contractor believes are unsettled; and
 - 5) complete and legally effective releases or waivers (satisfactory to PWC) required by the Contract Documents.

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- (iii) If Design Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Design Engineer will, within ten (10) Business Days after receipt of the final Application for Payment, indicate in writing Design Engineer's recommendation of final payment and present the Application for Payment to PWC for payment. Such recommendation shall account for any set-offs against payment that are necessary in Design Engineer's opinion to protect PWC from loss for the reasons stated above with respect to progress payments. At the same time Design Engineer will also give written notice to PWC and Contractor that the Work is acceptable and that Completion of the Project has been achieved. Otherwise, Design Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.
- (iv) Within thirty (30) calendar days after the presentation to PWC of the final Application for Payment and accompanying documentation, the amount recommended by Design Engineer (less any further sum PWC is entitled to set off against Design Engineer's recommendation, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions above with respect to progress payments) will become due and shall be paid by PWC to Contractor.

Section 12.06 Waiver of Claims

- (a) The making of final payment will not constitute a waiver by PWC of claims or rights against Contractor. PWC expressly reserves claims and rights arising from defective Work appearing after final inspection, from Contractor's failure to comply with the Contract Documents or the terms of any special guarantees specified therein, from Contractor's indemnification obligations, or from Contractor's continuing obligations under the Contract Documents.
- (b) The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against PWC other than those pending matters that have been duly submitted or appealed under the provisions of the Contract Documents.

Section 12.07 Correction Period

- (a) If within one (1) year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents, or by any specific provision of the Contract Documents), any Work is found to be defective, or if the repair of any damages to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas used by Contractor as permitted by Laws and Regulations, is found to be defective, then Contractor shall promptly, without cost to PWC and in accordance with PWC's written instructions:
 - (i) correct the defective repairs to the Site or such other adjacent areas;
 - (ii) correct such defective Work;
 - (iii) if the defective Work has been rejected by PWC, remove it from the Project and replace it with Work that is not defective, and
 - (iv) satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting therefrom.
- (b) If Contractor does not promptly comply with the terms of PWC's written instructions, or in an emergency where delay would cause serious risk of loss or damage, PWC may have

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the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others).

- (c) In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date only as provided in the Contract Documents.
- (d) Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Article XII, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.
- (e) Contractor's obligations under this Article XII are in addition to all other obligations and warranties. The provisions of this Article XII shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

Article XIII. Suspension of Work and Termination

Section 13.01 PWC May Suspend Work

- (a) At any time and without cause, PWC may suspend the Work or any portion thereof for a period of not more than 90 consecutive calendar days by written notice to Contractor and Design Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension. Any Change Proposal seeking such adjustments shall be submitted no later than thirty (30) calendar days after the date fixed for resumption of Work.

Section 13.02 PWC May Terminate for Cause

- (a) The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:
 - (i) Contractor's continued failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule);
 - (ii) Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
 - (iii) Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
 - (iv) Contractor's repeated disregard of the authority of PWC, Project Engineer, or Design Engineer.
- (b) If one or more of the events identified in Paragraph 13.02(a) occurs, then after giving Contractor (and any surety) ten (10) calendar days written notice that PWC is considering a declaration that Contractor is in default and termination of the Agreement, PWC may proceed to:
 - (i) declare Contractor to be in default, and give Contractor (and any surety) notice that the

General Conditions (Rev 7/2023)

- Contract is terminated; and
- (ii) enforce the rights available to PWC under any applicable performance bond.
 - (c) Subject to the terms and operation of any applicable performance bond, if PWC has terminated the Contract for cause, PWC may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which PWC has paid Contractor but which are stored elsewhere, and complete the Work as PWC may deem expedient.
 - (d) PWC may not proceed with termination of the Contract under Paragraph 13.02(b) if Contractor within seven (7) calendar days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure and such efforts are agreed to by PWC.
 - (e) If PWC proceeds as provided in Paragraph 13.02(b), Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals) sustained by PWC, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to PWC. Such claims, costs, losses, and damages incurred by PWC will be reviewed by PWC as to their reasonableness and, when so approved by PWC, incorporated in a Change Order.
 - (f) Where Contractor's services have been so terminated by PWC, the termination will not affect any rights or remedies of PWC against Contractor then existing or which may thereafter accrue, or any rights or remedies of PWC against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by PWC will not release Contractor from liability.
 - (g) The provisions of any applicable payment or performance bond shall govern over any inconsistent provisions of this Section.

Section 13.03 PWC May Terminate For Convenience

- (a) Upon seven (7) calendar days written notice to Contractor, PWC may, without cause and without prejudice to any other right or remedy of PWC, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - (i) completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - (ii) expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and
 - (iii) other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- (b) Contractor shall not be paid on account of loss of anticipated overhead, profits, or revenue, or other economic loss arising out of or resulting from such termination.

Section 13.04 Contractor May Stop Work or Terminate

- (a) If, through no act or fault of Contractor, (1) the Work is suspended for more than ninety (90) consecutive calendar days by PWC or under an order of court or other public authority or (2) PWC fails for sixty (60) calendar days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven (7) calendar days written notice to PWC, and provided PWC does not remedy such suspension or failure within that time, terminate the Contract and recover from PWC payment on the same terms as provided in this Article.
- (b) In lieu of terminating the Contract and without prejudice to any other right or remedy, if PWC has failed for thirty (30) calendar days to pay Contractor any sum finally determined to be due, Contractor may, seven (7) calendar days after written notice to PWC, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

Section 13.05 Morality

- (a) If, in the sole opinion of PWC, at any time Contractor or any of its owner(s) or employee(s) or agent(s) (each party, owner, employee, and agent is an "Actor") engages in any one or more actions that bring disrepute, contempt, scandal, or public ridicule to the Actor or subject the Actor to prosecution or offend the community or public morals or decency or denigrate individuals or groups in the community served by PWC or are scandalous or inconsistent with community standards or good citizenship or may adversely affect PWC's finances, public standing, image, or reputation or are embarrassing or offensive to PWC or may reflect unfavorably on PWC or are derogatory or offensive to one or more employee(s) or customer(s) of PWC, PWC may immediately upon written notice to Contractor terminate the Agreement, in addition to any other rights and remedies that PWC may have pursuant to the Contract Documents or at law or in equity.

Article XIV. Miscellaneous

Section 14.01 Additional General Terms and Conditions

- (a) Contractor shall be subject to any additional terms and conditions for this Project as set forth in the applicable Appendices as specific in the Agreement, which is incorporated by reference as if set forth word-for-word herein.

Section 14.02 Giving Notice

- (a) Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:
 - (i) delivered in person, by a commercial courier service or otherwise, to the individual or to a member of the firm or to an officer of the corporation for which it is intended;
 - (ii) delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the sender of the notice; or
 - (iii) sent to PWC or Contractor's designee(s) via email, with a confirmation of receipt.

Section 14.03 Computation of Times

- (a) When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

Section 14.04 Cumulative Remedies

- (a) The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

Section 14.05 Limitation of Damages

- (a) With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither PWC nor Design Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

Section 14.06 No Waiver

- (a) A party's non-enforcement of any provision shall not constitute a waiver of that provision, nor shall it affect the enforceability of that provision or any other provision of the Contract Documents.

Section 14.07 Survival of Obligations

- (a) All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Agreement or termination of the services of Contractor.

Section 14.08 Controlling Law

- (a) The Agreement shall be governed by the law of the State of North Carolina.

Section 14.09 Headings

- (a) Article and paragraph headings, numbers, and letters are inserted for convenience only and do not constitute parts of these General Conditions.

01000 - SUPPLEMENTARY CONDITIONS

DIVISION 1

These Supplementary Conditions amend or supplement the GENERAL CONDITIONS FOR THE FAYETTEVILLE PUBLIC WORKS COMMISSION (December 2022 Edition) and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect. Terms not defined herein shall have the meanings ascribed to them in the General Conditions.

Article I. Definitions and Terminology

Section 1.01 Definitions

These Supplemental Conditions are deemed to be included among the Contract Documents.

(m) Replace in its entirety with the following:

“(m) Contract Price—The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 15.03 in the case of Unit Price Work). Contract Price may also be referred to as “Price” throughout the Contract Documents.

(n) Replace in its entirety with the following:

“(n) Contract Times—The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any; (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer’s written recommendation of final payment.”

(q) Replace in its entirety with the following:

“(q) Engineer—The individual or entity named as such in the Agreement.”

(r) Replace in its entirety with the following:

“(r) Drawings—That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.”

(s) Delete the word “Project”.

(v) Replace in its entirety with the following:

“(v) Milestone—A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.”

- (w) After “PWC” insert “or Engineer”.
- (z) After “PWC” insert “or Engineer”.
- (bb) Add “Project Engineer” is sometimes referred to as “Project Manager”.
- (ee) After “Project Engineer’s” insert “Engineer’s”.
- (kk) In the first sentence delete “Project Engineer” and replace with “Engineer and Owner”.
- (ss) Replace in its entirety with the following:

“(ss) Work Change Directive—A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.”

A new definition is added which reads as follows:

Resident Project Representative—The authorized representative of Engineer who may be assigned to the Site or any part thereof.

Section 1.02 Terminology

- (a)(i) In three places delete “Project Engineer” and replace with “Engineer”.
- (a)(i) In the last sentence after “provisions” insert “of Article VIII of any other provisions of”.
- (b)(iii) Delete “Project Engineer’s” and replace with “Engineer’s”.

Section 1.01 Definitions

Article II. Preliminary Matters

Section 2.01 Delivery of Bonds and Evidence of Insurance

- (b) Replace in its entirety with the following:

“(b) Evidence of Insurance: When Contractor delivers the executed counterparts of the Agreement to the Owner, Contractor shall deliver to the Owner with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor is required to purchase and maintain in accordance with Article VI.”

Section 2.02 Copies of Documents

- (a) Replace in its entirety with the following:

“(a) PWC will furnish to Contractor one (1) electronic copy of the Contract Documents in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.

- (b) Delete this Paragraph in its entirety.

Section 2.03 Before Starting any Work

- (a)(iii) Replace in its entirety with the following:

“(iii) a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.”

Section 2.04 Preconstruction Conference; Designation of Authorized Representatives

- (a) In the first sentence, delete “Design Engineer” and replace with “Engineer”.

Section 2.05 Initial Acceptance of Schedules

- (a) In the first sentence, insert “and Engineer” following “Project Engineer”.
- (a) In the second sentence, insert “and Engineer” following “PWC”.
- (a) In the third sentence, insert “and Engineer” following “PWC”.
- (a) In the fourth sentence, insert “and Engineer” following “Project Engineer”.
- (b) In the first sentence, insert “and Engineer” following “Project Engineer”.

- (c) In the first sentence, insert “and Engineer” following “Project Engineer”.
- (c) After this Paragraph insert the following text as new Paragraph (d):

“(d) Contractor’s Schedule of Values will be acceptable to Project Engineer and Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.”

Section 2.06 Electronic Transmittals

- (a) Replace in its entirety with the following:

“(a) Unless otherwise stated in the Supplementary Conditions, the data furnished by Owner or Engineer to Contractor, or by Contractor to Owner or Engineer, that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user’s sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.”

Article III. Contract Documents: Intent, Requirements, Reuse

Section 3.01 Intent

- (c) Delete “Design Engineer” and replace with “Engineer”. (d) Replace in its entirety with the following:

“(d) Any labor, documentation, services, materials, or equipment that reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result shall be provided whether or not specifically called for, at no additional cost to PWC. It is the intent of the Specification and Contract Documents to obtain an operable Project. Equipment, components, systems, etc., therein shall be made operable by Contractor.”

- (e) Delete “ and (6) General Conditions” and replace with “(6) Supplementary Conditions; and (7) General Conditions.”

Section 3.03 Reporting and Resolving Discrepancies

- (a)(i) In the second sentence, in two places, add “and Engineer” following “Project Engineer”.
- (a)(ii) In two places add “and Engineer” following “Project Engineer”.

Section 3.04 Reuse of Documents

- (a)(i) In two places delete “Design Engineer” and replace with “Engineer”.
- (a)(ii) Delete “PWC’s” and replace with “PWC’s and Engineer’s”.

Article IV. Commencement and Progress of the Work

Section 4.02 Reference Points

- (a) Replace in its entirety with the following:

“(a) Contract Documents shall provide engineering surveys to establish reference points for construction which in Engineer’s judgment are necessary to enable Contractor to proceed with the Work.”
- (b) In the first sentence, delete “Project Engineer” and replace with “Engineer”.
- (b) In the second sentence, delete “Project Engineer” and replace with “Engineer”.

Section 4.03 Progress Schedule

- (a) In the second sentence, delete “Project Engineer” and replace with “Engineer”.

Section 4.04 Delays in Contractor’s Progress

- (a) Delete the text of this paragraph in its entirety and replace with the following:

“Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a claim is made therefor as provided in Paragraph 7.16. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work, fires, floods, epidemics, abnormal weather conditions, or acts of God.
- (c) After the text of this paragraph insert the following as new paragraphs:

“(d) Delays beyond the control of Contractor, as provided in paragraph 4.04(a), shall not entitle Contractor to obtain additional project overhead costs unless such delays extend the Project as described below:
 - (i) beyond the original Contract Times,
 - (ii) beyond the Contract Times for which the overhead costs have been previously approved, or
 - (iii) beyond Contract Times that are extended as a result of delays described in 12.03.C.

For the purpose of this paragraph, overhead costs shall be the supplemental costs defined in paragraph 15.01(a)(iv). Contractor's bid shall include all overhead costs as necessary to be on the Project for the original Contract Times.

(e) If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 4.04(e). Delays described in this Paragraph 4.04(e) due to abnormal weather conditions shall be determined as follows:

- (i) The weather conditions shown in the chart below can be reasonably anticipated and will not be considered abnormal.

Month	Number of days with 0.1 or more inches precipitation	Number of days on which the temperature is never above 32-degrees Fahrenheit
January	7	3
February	6	1
March	7	0
April	6	0
May	7	0
June	7	0
July	7	0
August	7	0
September	5	0
October	5	0
November	5	0
December	6	1

- (ii) For example, if Contractor submits a request to extend Contract Times on the sole basis of adverse weather conditions in January, and the factual records submitted show that the actual January in which Contractor worked had six (6) days on which the precipitation exceeded 0.1 inches, the extension of time will not be granted because the chart says that it is expected that there will be seven (7) days in January with at least that much rain. If the factual records show that the actual January in which Contractor worked had twelve (12) days on which the precipitation exceeded 0.1 inches, Contractor will not need to show that the precipitation was abnormal and could not have been reasonably anticipated but will still need to show the adverse effect on the scheduled construction. Unless

PWC agrees in writing otherwise, the weather conditions must be shown by use of data, submitted by Contractor, from either the National Weather Service (NWS) for Raleigh, N C or NWS readings from a location closer to the site than Raleigh, and not by use of weather readings on the Site or by Contractor. In order to request an extension of Contract Times for abnormal weather conditions the form must be submitted by the tenth (10th) day of the month after the month as to which the request is made. In order to make this request for Saturdays, Sundays, and PWC holidays, Contractor must have notified the Resident Project Representative by 3:30 PM, three (3) days in advance of the day of Contractor's intent to work on a specific Saturday, Sunday, or holiday. If the day on which the notice is to be given is a Saturday, Sunday, or PWC holiday, the notice shall be given by the first day before that Saturday, Sunday, or holiday that is not a Saturday, Sunday, or PWC holiday."

Article V. Availability of Lands; Subsurface and Physical Conditions; Hazardous Environmental Conditions

Section 5.03 Differing Subsurface of Physical Conditions or Underground Facilities

- (b) In the first sentence, delete "Project Engineer" and replace with "Engineer".
- (c) In the first sentence, delete "Project Engineer" and replace with "Engineer".

Section 5.04 Underground Utilities

- (a)(ii) In the first sentence, in two places, delete "PWC" and replace with "Project Engineer and Engineer".
- (c)(ii) Delete "Design Engineer" and replace with "Engineer".
- (e) Delete "Design Engineer" and replace with "Engineer".
- (h) In the first sentence, delete "PWC" and replace with "Project Engineer and Engineer".
- (h) In the second sentence, delete "PWC" and replace with "Project Engineer and Engineer".
- (h) Fourth sentence, delete in its entirety and replace with the following text:

"Engineer and Project Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility."
- (i) Replace in its entirety with the following:

“(i) If Engineer and Project Manager conclude that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a claim therefor as provided in Paragraph 11.01.”

Section 5.05 Hazardous Environmental Conditions at Site

(c) In the first sentence, insert “and Engineer” following “Project Engineer”.

(c) Second and third sentences, replace both entirely with the following:

PWC shall promptly consult with Engineer concerning the necessity for PWC to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, PWC shall take such actions as it deems reasonably necessary to permit PWC to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.05(d).

(e) Replace in its entirety with the following:

“(e) If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a claim therefor as provided in Paragraph 7.16.

Article VI. Bonds and Insurance

Section 6.02 Insurance

(c) After “PWC” insert the text “and Engineer”.

(g) After this Paragraph insert the following text as new Paragraphs:

“(h) An authorized representative of the insurance company(ies) shall provide a statement of correlation certifying that all of the required insurance coverages and amounts specified are provided by the submitted policies. The certification shall be signed by the authorized representatives of the insurance company(ies) and notarized. The authorized representative of the insurance company(ies) shall specifically indicate with the submittal which of the policies submitted fulfills

which specific coverage and amounts specified under Article 6.02 of the Supplementary Conditions. The certification statement and correlation shall be furnished and included with the insurance certificates.

(i) Subcontractors must, in all cases, provide Workers' Compensation and Employer's Liability Insurance and Motor Vehicle Liability Insurance.

(j) All policies and certificates of insurance of Contractor shall contain the following clauses:

1. Insurers shall have no right of recovery or subrogation against the Owner and its agents and agencies, or the Engineer, it being the intention of the parties that the insurance policies so effected shall protect both parties and be primary coverage for any and all losses covered by the above described insurance.
2. The clause "other insurance provisions" in a policy in which the Owner, its agents and agencies, and/or the Engineer is named as an insured, shall not apply to these parties.
3. The insurance companies issuing the policy or policies shall have no recourse against the Owner and its agents and agencies and the Engineer, for the payment of any premiums or for assessments under any form of policy.
4. Any and all deductibles in the above-described insurance policies shall be assumed by and be for the amount of, and at the sole risk of Contractor.

Article VII. Contractor's Responsibilities

Section 7.01 Supervision and Superintendence

(b) In two places, insert "and Engineer" following "Project Engineer".

(c) Delete "Project Engineer" and replace with "Engineer".

(d) In second sentence, delete "PWC" and replace with "Engineer".

(e)(i)2) Delete "PWC" and replace with "Engineer".

(e) After this Paragraph insert the following text as new Paragraphs:

"(f) Safety Representative: Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

(g) Hazard Communication Programs: Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.”

Section 7.04 "Or Equals"

(a) Second sentence, delete "Project Engineer" and replace with "Engineer".

(a)(i) First sentence, delete "Project Engineer" and replace with "Engineer".

(a)(i)1) Delete "Project Engineer" and replace with "Engineer".

(c) First sentence, delete "Project Engineer" and replace with "Engineer".

(c) Second sentence, delete "Project Engineer" and replace with "Engineer".

(d) Delete "Project Engineer" and replace with "Engineer".

(d) After this Paragraph insert the following text as new Paragraphs:

“(e) Substitute Items: If in Engineer’s sole discretion an item of material or equipment proposed by Contractor does not qualify as an “or-equal” item under Paragraph 7.04(a) through 7.04(d), it will be considered a proposed substitute item.

(i) Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.

(ii) Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application shall certify that the proposed substitute item will: 1) perform adequately the functions and achieve the results called for by the general design, 2) be similar in substance to that specified, and 3) be suited to the same use as that specified. Application will state: 1) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor’s achievement of Substantial Completion on time, 2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and 3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty. Application will identify: 1) all variations of the

proposed substitute item from that specified, and 2) available engineering, sales, maintenance, repair, and replacement services. Application shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.

(iii) Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 7.04(a) through 7.04(d).

(iv) Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by a Change Order in the case of a substitute and an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.

(v) Special Guarantee: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

(vi) Engineer's Cost Reimbursement: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraph 7.04(e). Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

(vii) Contractor's Expense: Contractor shall provide all data in support of any proposed substitute at Contractor's expense."

Section 7.05 Concerning Subcontractors, Suppliers, and Others

(i) Delete "PWC, except through Contractor" and replace with "PWC or Engineer, except through Contractor to Engineer".

(l)(i) Delete "Design Engineer" and replace with "Engineer".

(l)(ii) Delete "Design Engineer" and replace with "Engineer".

(l) After this Paragraph insert the following text as new Paragraphs:

"(m) The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among

Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

(n) All work performed for Contractor by a Subcontractor shall be pursuant to an appropriate agreement between Contractor and Subcontractor. The Subcontractor shall not commence work until Contractor has obtained all insurance as required by Article VI inclusive.”

Section 7.06 Patent Fees and Royalties

(a) After this Paragraph insert the following text as new Paragraph:

“(b) In addition to any other indemnity obligations under the Contract Documents, Contractor shall indemnify and hold harmless PWC and Engineer and anyone directly or indirectly employed by either of them from and against all claims, damages, losses and expenses, including attorney's fees, arising out of any infringement of patent rights or copyrights incident to the use in the performance of the Work or furnished by him in fulfillment of the requirements of this Contract. In the event of any claim or action by law on account of such patents or fees, it is agreed that the PWC may retain out of the monies which are or which may become due Contractor under this Contract, a sum of money sufficient to protect itself against loss, and to retain the same until said claims are paid or are satisfactorily adjusted.”

Section 7.07 Permits

(a) Last sentence, delete “Bid” and replace with “Bid, and Contractor shall pay all charges of utility owners for connections to the Work”.

Section 7.08 Taxes

(a) After this Paragraph insert the following text as new Paragraphs:

“(b) PROCEDURE FOR REPORTING NORTH CAROLINA SALES TAX EXPENDITURES: The following procedure in handling the North Carolina Sales Tax is applicable to this Project. Contractor shall comply fully with the requirements outlined hereinafter, in order that PWC may recover the amount of tax permitted under the law.

(c) BIDDER WILL NOT INCLUDE REFUNDABLE N.C. SALES TAX IN HIS LUMP SUM OR UNIT PRICES NAMED. Contractor will be reimbursed at the time each monthly estimate is paid for refundable N.C. Sales Tax paid during any preceding month. It shall be Contractor's responsibility to furnish the PWC documentary evidence showing the materials used and sales tax paid by Contractor and each of its Subcontractors with each payment request in a format approved by PWC.

(d) The documentary evidence shall consist of a certified statement, by Contractor and each of his Subcontractors individually, showing total purchases of materials from each separate vendor and total sales taxes charged to and paid by PWC. Certified statement must also show the invoice number, or numbers, covered and inclusive dates of such invoices. A certified statement is required even if no sales tax was paid for the applicable pay request period.

(e) Materials used from Contractor's or Subcontractor's warehouse stock shall be shown in a certified statement at warehouse stock prices to include the amount of County of Use Tax charged to and paid by PWC.

(f) Contractor shall also furnish to PWC invoices identifying the amount paid for the sales and use tax on services that are subject to such taxation under North Carolina law. Contractor shall not include any tax paid on supplies, tools, and equipment that Contractor or any Subcontractor uses to perform services.

(g) The documentary evidence to be furnished to PWC eligible for sales or use tax refunds covers sales and/or use taxes paid on building materials used by Contractors and Subcontractors in the performance of Contracts with churches, orphanages, hospitals not operated for profit and other charitable or religious institutions or organizations not operated for profit and, incorporated cities, towns, and counties in this State. The documentary evidence is to be submitted to the above-named institutions, organizations and governmental units to be included in claims for refunds to be prepared and submitted by them to obtain refunds provided by G.S. 105-164.14(2) and (3) of the 1961 Statute, and is to include the purchases of building materials, supplies, fixtures, and equipment which become a part of or annex to buildings or structures being erected, altered or repaired under Contracts with such institutions, organizations or governmental units.”

Section 7.09 Laws and Regulations

(c) After this Paragraph insert the following text as new Paragraph:

“(d) If Contractor observes that the Specifications or Drawings are at variance with any Laws or Regulations, he shall give PWC and Engineer prompt written notice thereof. If Contractor performs any Work knowing it to be contrary to such Laws or Regulations, and without such notice to PWC and Engineer, he shall bear all costs arising therefrom. Contractor shall, at all times, observe and comply with and shall cause all his agents and employees and all his Subcontractors to observe and comply with all such existing Laws or Regulations.”

Section 7.10 Record Documents

(a) Last sentence, delete “to PWC” and replace with “to Engineer and PWC”.

Section 7.11 Safety and Protection

(f) Replace in its entirety with the following:

“(f) Contractor’s duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to PWC and Contractor in accordance with Paragraph 12.04 that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).”

Section 7.12 Emergencies

(a) Second sentence, after “PWC” insert “and Engineer”.

(a) Third sentence, after “PWC” insert “and Engineer”.

Section 7.13 Shop Drawings, Samples, and Other Submittals

(a) Delete “Project Engineer” and replace with “Engineer”.

(c) Delete “Project Engineer” and replace with “Engineer”.

(c) Delete “to PWC” and replace with “to Engineer”.

(d) Delete “Project Engineer” and replace with “Engineer”.

(e) Delete “Project Engineer” and replace with “Engineer”.

(f) Delete “Project Engineer” and replace with “Engineer”.

(f) After “or procedures of construction” and insert the following text:

“(except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents)”

(g) Delete “Project Engineer” and replace with “Engineer”.

(h) Delete “Project Engineer” and replace with “Engineer”.

(j)(i) Delete “Project Engineer” and replace with “Engineer”.

(j)(i) Delete “PWC or Project”.

(j)(ii) Delete second sentence and replace with the following:

“After three (3) submittals of any item or if Contractor requests a change of a previously approved submittal item, Contractor shall be liable to PWC for

Engineer review time, and PWC may impose set-off against payment due to Contractor to secure reimbursement for Engineer's additional review time."

(j)(iii) Delete this Paragraph in its entirety.

Section 7.14 Contractor's General Warranty and Guarantee

(b)(i) after "Project Engineer" insert "or Engineer".

(b)(ii) Delete "Project Engineer" and replace with "Engineer".

(b)(iii) Delete "Project Engineer" and replace with "Engineer".

(b)(vi) Delete "Project Engineer" and replace with "Engineer".

Section 7.15 Indemnification

(a) Delete "Design Engineer" and replace with "Engineer".

(a) After "costs," insert "civil penalties, fines, losses, damages,".

Section 7.17 Delegation of Professional Design Services:

(b) After "PWC", insert "and Engineer".

(b) In the last sentence, delete "PWC" and replace with "Engineer".

(c) After "PWC" insert "and Engineer".

(d) Delete "PWC's, or its designee's," and replace with "PWC's, Engineer's and their designee's".

(e) Delete "PWC" and replace with "the Contract Documents".

Article VIII. PWC's Responsibilities

(a)(i) Delete "directly to Contractor or its designee" and replace with the following:
"to Contractor through Engineer".

(a) After this Paragraph and all of its subparts, insert the following text as new Paragraphs:

"(b) Engineer's Status During Construction

(iii) Owner's Representative: Engineer will be a representative of PWC during the construction period, and Engineer's instructions shall be carried into effect promptly and efficiently.

(ii) Visits to Site: Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

(iii) Project Representative:

1) Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Contract Documents.

2) The Resident Project Representative (RPR) will serve as the Engineer's liaison with Contractor, working principally through Contractor's resident superintendent to assist Contractor in understanding the intent of the Contract Documents.

3) RPR shall conduct on-site observations of the work in progress to confirm that the work is proceeding in accordance with the Contract Documents. RPR will verify that tests, equipment and systems start-ups and operation and maintenance instructions are conducted as required by the Contract Documents. He or she will have the authority to disapprove or reject defective work in accordance with Article X.

(iv) Authorized Variations in Work: Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a claim may be made therefor as provided in Paragraph 7.16.

(v) Rejecting Defective Work: Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 10.03, whether or not the Work is fabricated, installed, or completed.

(vi) Determinations for Unit Price Work: Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Contractor, subject to the provisions of Paragraph 7.16.

(vii) Decisions on Requirements of Contract Documents and Acceptability of Work:

1) All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the engineering requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question.

2) Engineer will, with reasonable promptness, render a recommendation on the issue referred. Notwithstanding such recommendation, Owner and Contractor may pursue a claim under Paragraph 7.16.

(viii) Limitations on Engineer's Authority.

Contractor acknowledges and agrees that:

1) Engineer will not be obligated to Contractor (a) to supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or (b) for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible to Contractor for Contractor's failure to perform the Work in accordance with the Contract Documents.

3) Engineer will not be responsible to Contractor for its acts or omissions or of those of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

4) the Resident Project Representative:

a) will not authorize Contractor to undertake any deviation from the Contract Documents or approve any substitute materials or equipment.

b) will not authorize Contractor to exceed limitations of Engineer's authority as set forth in the Contract Documents.

c) will not undertake any of the responsibilities of Contractor, Subcontractors or Contractor's superintendent, or expedite the Work.

d) will not advise Contractor on or issue directions relative to any aspect of the means, methods, techniques, sequences or procedures of construction unless such is specifically called for in the Contract.

e) will not advise Contractor on or issue directions as to safety precautions and programs in connection with the Work.

(ix) Compliance with Safety Program: While at the Site, Engineer's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Engineer has been informed."

Article IX. Amending the Contract Documents; Change in the Work

Section 9.01 Amending and Supplementing Contract Documents

(a)(iii) Delete "Project Engineer" and replace with "Engineer".

Section 9.04 Change of Contract Price: Delete the Paragraphs of this Section entirely and replace the following:

"(a) The Contract Price may only be changed by a Change Order. Any claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the claim in accordance with the provisions of Paragraph 7.16.

(b) The value of any Work covered by a Change Order or of any claim for an adjustment in the Contract Price will be determined as follows:

(i) where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 15.03); or

(ii) where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum; or

(iii) where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached, on the

basis of the Cost of the Work (determined as provided in Paragraph 15.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 9.04.(c)).

(c) Contractor's Fee: Contractor's fee for overhead and profit shall be determined as follows:

(i) a mutually acceptable fixed fee; or

(ii) if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

1) for costs incurred under Paragraphs 15.01.A.1 and 15.01.A.2, Contractor's fee shall be 15 percent;

2) for costs incurred under Paragraph 15.01.A.3, Contractor's fee shall be five percent;

3) where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 9.04.(c)(i)1) and 9.04.(c)(i)2) is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 15.01.A.1 and 15.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

4) no fee shall be payable on the basis of costs itemized under Paragraphs 15.01.A.4, 15.01.A.5, and 15.01.B;

5) the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and

6) when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 9.04(c), inclusive."

Section 9.06 Change Proposals

(a) Delete "PWC" and replace with "Project Engineer and Engineer".

(a)(i) First sentence, delete "PWC" and replace with "Project Engineer and Engineer".

(a)(i) Second sentence, delete "PWC" and replace with "Project Engineer and Engineer".

(a)(iii) Delete the text of this paragraph.

Section 9.07 Execution of Change Orders

(a)(iii) Delete “Design Engineer’s” and replace with “Engineer”.

(b) Delete the text of this paragraph in its entirety and replace with the following:

“Changes in the Contract Price or Contract Times which is required to be executed under the terms of this Section; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 13.04 or as Owner and Contractor may otherwise agree in writing.”

Article X. Tests, Inspections, and Approval; Correction, Removal or Acceptance of Defective Work

Section 10.01 Access to Work

(a) Following “Design Engineer,” insert “Engineer,”.

Section 10.02 Tests, Inspections, and Approvals

(a) Following “Project Engineer” insert “and Engineer”.

(f) First sentence, in two places, delete “Project Engineer” and replace with “Engineer”.

Section 10.03 Defective Work

(b) Delete “its designee” and replace with “and Engineer”.

(c) After “PWC” insert “or Engineer”.

(d) After “PWC” insert “or Engineer”.

Section 10.04 Acceptance of Defective Work

(a) Delete “Design Engineer’s” and replace with “Engineer’s”.

(b) Delete “by PWC” and replace with “by Project Engineer and Engineer”.

Section 10.05 Uncovering Work

- (c) Delete “If PWC” and replace with “If Project Engineer or Engineer”.
- (c) Delete “by PWC” and replace with “by Project Engineer or Engineer”.
- (c) Delete “as PWC” and replace with “as Project Engineer or Engineer”.

Article XI. Claims:

Section 11.01 Claims Process

- (a)(i) Delete “Design Engineer’s” and replace with “Engineer’s”.
- (a)(iii) Delete “Design Engineer” and replace with “Engineer”.

Section 11.04 Dispute Resolution

- (a) Delete “Design Engineer” and replace with “Project Engineer, Engineer,”.

Article XII. Payments to Contractor; Set-Offs; Completion; Correction Period

Section 12.01 Progress Payments

- (a) Following “Project Engineer” insert “and Engineer”.
- (a) After this Paragraph and all of its subparts, insert the following text as new Paragraphs under (a):

“(i) Contractor shall submit for Project Manager’s and Engineer’s approval, a complete breakdown of all Lump Sum Items in the Proposal. This breakdown, modified as directed by the Engineer, will be used as a basis for preparing estimates and establishing progress payments.

(ii) A Lump Sum Payment equal to 1-1/2% of the total Bid Price (to include all bonds, insurance, move-on expenses, etc.) will be allowed for ‘mobilization’ as a progress payment line item. The actual cost of bonds and insurance (up to the maximum payment of 1-1/2%) will be considered in the initial payment request provided that cost documentation suitable to Project Manager and Engineer is furnished by Contractor. Any outstanding balance of the mobilization line item will be payable when the Project work is 10% complete as indicated by the approved progress payments (less cost of mobilization and stored equipment).”

- (b)(i) Following “Project Engineer” insert “and Engineer”.
- (b)(iii) After this Paragraph and all of its subparts, insert the following text as new Paragraphs:

“(iv) At the sole option of the PWC, partial payment up to the estimated value, less retainage, may be allowed for any materials and equipment not incorporated in the Work, pursuant to the following conditions:

- 1) Major equipment items stored off site shall be stored in a bonded warehouse and properly maintained during storage.
- 2) Equipment or materials stored on the site shall be properly stored, protected and maintained.
- 3) For any partial payment Contractor shall submit, with his monthly progress payment from each material or equipment manufacturer, bills or invoices indicating actual material cost.
- 4) Contractor shall submit evidence that he has paid for materials or equipment stored and for which the Engineer has authorized partial payment and previous progress payments, prior to submission of the next monthly payment request.

(c)(i) Delete “Project Engineer” and replace with “Engineer”.

(c)(ii) In three places, delete “Project Engineer” and replace with “Engineer”.

(c)(ii)3) Delete “Project Engineer” and replace with “Engineer”.

(c)(iii) Delete “Project Engineer” and replace with “Engineer”.

(c)(iii)1) Delete “Project Engineer” and replace with “Engineer”.

(c)(iv) Delete “Project Engineer” and replace with “Engineer”.

(c)(iv) In three places, delete “Project Engineer” and replace with “Engineer”.

(c)(v) Delete “Project Engineer” and replace with “Engineer”.

(d) Delete “Project Engineer” and replace with “Engineer”.

(d)(v) Delete “Project Engineer” and replace with “Engineer”.

(e)(i) Delete “Project Engineer’s” and replace with “Engineer’s”.

(f)(i) Delete “Project Engineer” and replace with “Engineer”.

(f)(ii) Delete “Project Engineer” and replace with “Engineer”.

Section 12.02 Substantial Completion

(a) Delete “Design Engineer” and replace with “Engineer”.

- (b) Delete “Design Engineer” and replace with “Engineer”.
- (b) Second sentence, in two places, delete “PWC” and replace with “Engineer”.
- (b) Last sentence, delete “PWC” and replace with “Engineer”.
- (c) First sentence, in two places, delete “Design Engineer” and replace with “Engineer”.
- (c) Second sentence, delete “Design Engineer” and replace with “Engineer”.
- (c) Third sentence, delete “Design Engineer” and replace with “Engineer”.
- (c) Fourth sentence, delete “PWC concludes” and replace with “Engineer concludes”.
- (c) Fourth sentence, delete “PWC will” and replace with “Engineer will”.
- (e) Delete “by PWC” and replace with “by Engineer”.

Section 12.03 Partial Use of Occupancy: delete the text of this Section in its entirety and replace with the following:

“(a) Prior to Substantial Completion of the Project, PWC may request Contractor in writing to permit it to use a specified part of the Project which he believes he may use without significant interference with construction of the other parts of the Project. If Contractor agrees, it will certify to PWC and Engineer that said part of the Project is substantially complete and request the Engineer to issue a certificate of Substantial Completion for that part of the Project. Within a reasonable time thereafter, PWC, Contractor and Engineer shall make an inspection of that part of the Project to determine its status of completion. If Engineer and PWC do not consider that it is substantially complete, Engineer will notify Contractor in writing giving his reasons therefor. If Engineer and PWC consider that part of the Project to be substantially complete, Engineer will execute and deliver to PWC and Contractor a certificate to that effect, fixing the date of Substantial Completion as to that part of the Project, attaching thereto a tentative list of items to be completed or corrected before Substantial Completion of the entire Project and fixing the responsibility between PWC and Contractor for Maintenance, heat, and utilities as to that part of the Project. PWC shall have the right to exclude Contractor from any part of the Project which Engineer has so certified to be substantially complete, but PWC shall allow Contractor reasonable access to complete items on the tentative list.”

Section 12.04 Final Inspection

- (a) Delete “PWC will promptly make a final inspection with Project Manager, Design Engineer” and replace with “PWC and Engineer will make a final inspection within 14 days”.

Section 12.05 Final Payment

- (a)(i) Delete “of PWC” and replace with “of Engineer”.
- (a)(iii) In six places, delete “Design Engineer” and replace with “Engineer”.
- (a)(iv) In two places, delete “Design Engineer” and replace with “Engineer”.

A new Article XV is added which reads as follows:

“Article XV. Cost of the Work; Allowances; Unit Price Work

Section 15.01 Cost of the Work

- (a) Costs Included: The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 15.01(b), necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 15.01(b), or claims for extra cost shall be considered based on an escalation of labor costs throughout the period the Contract, and shall include only the following items:
 - (i) Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers’ compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.

- (ii) Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained. No claims for extra cost shall be considered based on an escalation of material costs throughout the period of the Contract.
- (iii) Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 15.01.
- (iv) Supplemental costs including the following:
 - 1) Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.
 - 2) Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work. These rates shall include all fuel, lubricants, insurance, etc. Equipment rental charges shall not exceed the prorated monthly rental rates listed in the current edition of the 'Compilation' of Rental Rates for Construction Equipment" as published by the Associated Equipment Distributors. Charges per hour shall be determined by dividing the monthly rates by 176.
 - 3) Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
 - 4) Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
 - 5) The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

(b) Costs Excluded: The term Cost of the Work shall not include any of the following items:

- (i) Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 15.01(a)(i) or specifically covered by Paragraph 15.01(a)(iv), all of which are to be considered administrative costs covered by Contractor's fee.
- (ii) Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
- (iii) Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
- (iv) Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
- (v) Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 15.01(a).
- (vi) Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
- (vii) Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 6.02), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.
- (viii) The cost of utilities, fuel, and sanitary facilities at the Site.

- (ix) Minor expenses such as land line or cellular telephone calls, internet service at the Site, express and courier services, and similar petty cash items in connection with the Work.
 - (x) The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
- (c) Contractor's Fee: When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 9.04(c).
- (d) Documentation: Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 15.01(a) and 15.01(b), Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to PWC and Engineer an itemized cost breakdown together with supporting data.

Section 15.02 Allowances

- (a) It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.
- (b) Cash Allowances: Contractor agrees that:
- (i) the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 - (ii) Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.
- (c) Contingency Allowance: Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- (d) Prior to final payment, an appropriate Change Order will be issued to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

Section 15.03 Unit Price Work

- (a) Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- (b) The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Article VIII, Limitations on Engineer's Authority and Responsibilities.
- (c) Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

END OF SECTION

DIVISION 1

PERFORMANCE BOND

Date of Execution: _____

Name of Principal: _____

(Contractor)

Name of Surety: _____

Name of Contracting

Body: Fayetteville Public Works Commission, Fayetteville, N.C.

Amount of Bond: _____

PROJECT: CROSS CREEK WRF AND ROCKFISH CREEK WRF SCREW PUMP IMPROVEMENTS

KNOW ALL MEN BY THESE PRESENTS, That We, the Principal and Surety above named, are held and firmly bound unto the above named Contracting Body, hereinafter called the Contracting Body, in the penal sum of the amount stated above the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these present.

THE CONDITION OF THIS OBLIGATION IS SUCH that whereas the Principal entered into a certain Contract with the Contracting Body, identified as shown above and hereto attached.

NOW, THEREFORE, if the Principal shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of said Contract during the original term of said Contract and any extensions there of that may be granted by the Contracting Body, with or without notice to the Surety, and during the life of any Guaranty required under the Contract, and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of any and all duly authorized modifications of said Contract that may hereafter be made, notice of which modifications to the Surety being hereby waived, then, this obligation to be void; otherwise to remain in full force and virtue.

IN WITNESS WHEREOF, the above bounded parties have executed this instrument under the several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed, and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Executed in _____ counterparts.

Witness:

(Proprietorship of Partnership)

By:

Title:

(Corporate Secretary or
Assistant Secretary, Only)

CONTRACTOR:

(Trade or Corporate Name)

By:

Title:

(Owner, Partner, Corporate President or
Vice-President, Only)
(CORPORATE SEAL)

Witness:

Countersigned:

(N.C. Licensed Resident Agent)

SURETY COMPANY:

(Surety Company Name)

By:

Title:

(Attorney in Fact)
(SURETY CORPORATE SEAL)

PAYMENT BOND

Date of Execution: _____

Name of Principal: _____
(Contractor)

Name of Surety: _____

Name of Contracting
Body: Fayetteville Public Works Commission, Fayetteville, N.C.

Amount of Bond: _____

PROJECT: CROSS CREEK WRF AND ROCKFISH CREEK WRF SCREW PUMP IMPROVEMENTS

KNOW ALL MEN BY THESE PRESENTS, that We, the PRINCIPAL and Surety above named, are held and firmly bound unto the above named Contracting Body, hereinafter called the Contracting Body, in the penal sum of the amount stated above the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that whereas the Principal entered into a certain Contract with the Contracting Body, identified as shown above and hereto attached.

NOW THEREFORE, if the Principal shall promptly make payment to all persons supplying labor and material in the prosecution of the work provided for in said contract, and any and all duly authorized modifications of said contract that may hereafter be made, notice of which modifications to the Surety being hereby waived, then, this obligation to be void; otherwise to remain in full force and virtue.

IN WITNESS WHEREOF, the above bounded parties have executed this instrument under the several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed, and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Executed in _____ counterparts.

Witness:

CONTRACTOR:

(Proprietorship of Partnership)

(Trade or Corporate Name)

By:

By:

Title:

Title:

(Corporate Secretary or
Assistant Secretary, Only)

(Owner, Partner, Corporate President or
Vice-President, Only)
(CORPORATE SEAL)

Witness:

SURETY COMPANY:

(Surety Company Name)

By:

Countersigned:

Title:

(N.C. Licensed Resident Agent)

(Attorney in Fact)
(SURETY CORPORATE SEAL)

**POWER OF ATTORNEY
(ATTACH)**

**CERTIFICATE(S) OF INSURANCE
(Attach)**

NOTICE TO PROCEED

TO: _____

Date: _____

PROJECT: CROSS CREEK WRF AND ROCKFISH CREEK WRF SCREW PUMP IMPROVEMENTS

You are hereby notified to commence work in accordance with the Contract dated _____, 2024, on or before _____, 2024, and you are to complete the WORK within the **contract period** thereafter. The date of final completion therefore is _____.

FAYETTEVILLE PUBLIC WORKS COMMISSION

BY: _____

Candice S. Kirtz

Director of Supply Chain

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED

is hereby acknowledged this the _____ day of _____, 2023.

(CONTRACTOR)

BY: _____

TITLE: _____

- END OF SECTION -

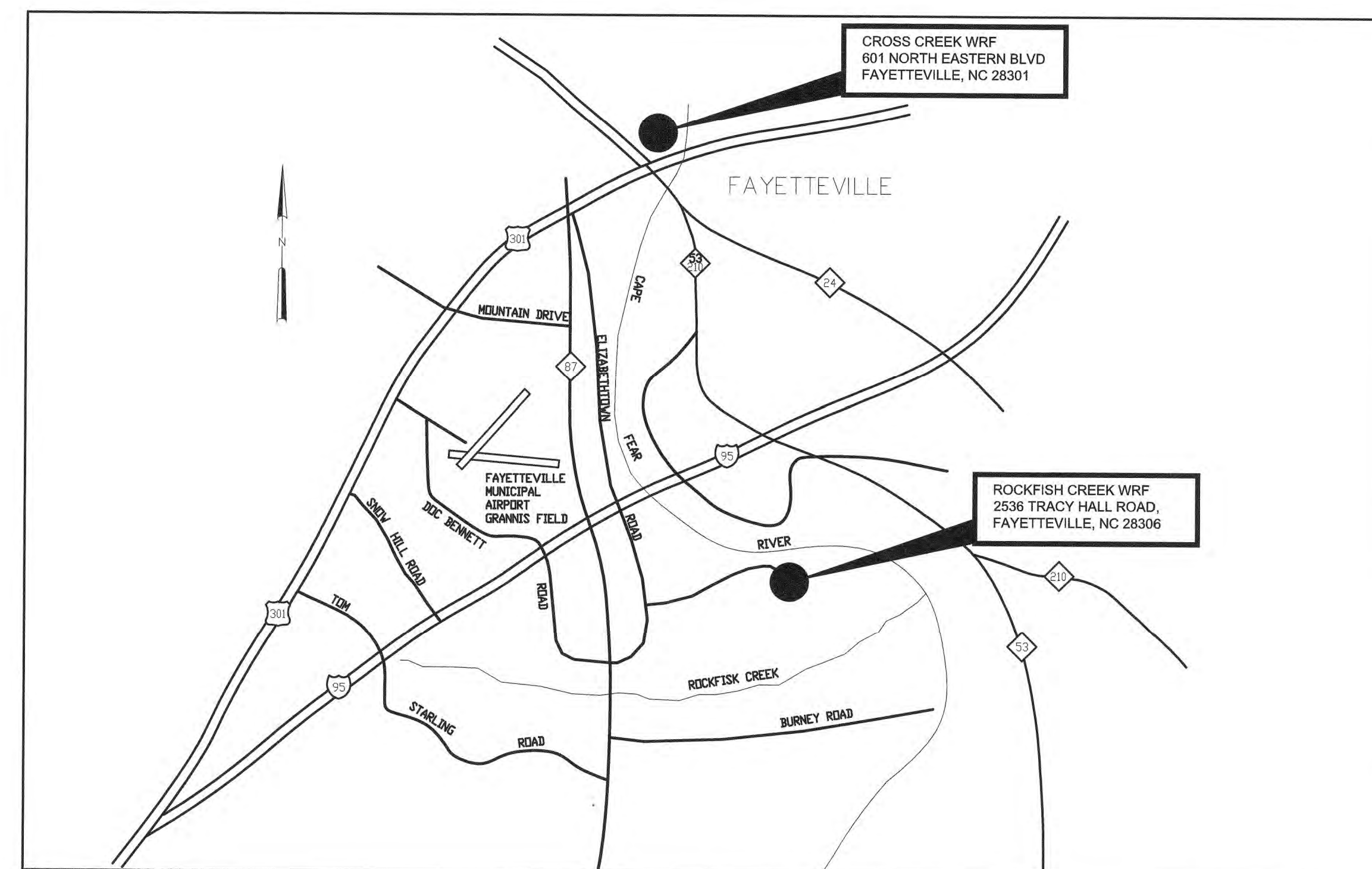
SECTION D - DRAWINGS

FAYETTEVILLE PUBLIC WORKS COMMISSION FAYETTEVILLE, NORTH CAROLINA



CROSS CREEK WRF AND ROCKFISH CREEK WRF SCREW PUMP IMPROVEMENTS

APRIL 2023



LOCATION MAP
NOT TO SCALE

Hazen

HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381



ISSUED FOR CONSTRUCTION

DRAWING NO DESCRIPTION

CROSS CREEK WRF

GENERAL

- COVER
- G1 INDEX SHEET
- G2 ABBREVIATIONS AND LEGEND
- G120A INFLUENT PUMP STATION ELECTRICAL BUILDING CODE SUMMARY- BID ALTERNATE
- G220 PUMP STATION NO.3 ELECTRICAL BUILDING CODE SUMMARY

CIVIL

SITE WORK

- C1 CIVIL NOTES AND LEGEND
- C2 GROUND STABILIZATION AND MATERIALS HANDLING
- C3 INSPECTION REPORTING AND RECORD KEEPING
- C10 OVERALL EXISTING CONDITIONS PLAN
- C11 EXISTING CONDITIONS AND DEMOLITION PLAN - AREA 1
- C12 EXISTING CONDITIONS AND DEMOLITION PLAN - AREA 2
- C13 OVERALL SITE PLAN
- C14 PARTIAL SITE PLAN - AREA 1
- C15 PARTIAL SITE PLAN - AREA 2

CIVIL STANDARD DETAILS

- CD1 SHEET 1
- CD2 SHEET 2

MECHANICAL

INFLUENT PUMP STATION - MODIFICATIONS

- M100 BOTTOM PLAN - DEMOLITION
- M101 TOP PLAN - DEMOLITION
- M102 SECTION - DEMOLITION
- M103 BOTTOM PLAN
- M104 TOP PLAN
- M105 SECTIONS AND DETAILS

PUMP STATION NO.3 - MODIFICATIONS

- M200 PLAN - DEMOLITION
- M201 SECTION - DEMOLITION
- M202 PLAN
- M203 SECTIONS AND DETAILS

BUILDING

INFLUENT PUMP STATION ELECTRICAL BUILDING - BID ALTERNATE

- B120A PLAN, ELEVATIONS, AND HVAC

PUMP STATION NO.3 ELECTRICAL BUILDING

- B220 PLAN, ELEVATIONS, AND HVAC

PRIMARY SLUDGE PUMP STATION

- B300 TOP PLAN - MODIFICATIONS

BUILDING STANDARD DETAILS

- BD1 BUILDING PENETRATION FIRESTOPPING

STRUCTURAL

- S1 GENERAL STRUCTURAL NOTES - SHEET 1

STRUCTURAL STANDARD DETAILS

- SD1 SHEET 1

DRAWING NO DESCRIPTION

ELECTRICAL

LEGEND AND SYMBOLS

- E1 LEGEND AND SYMBOLS
- E2 GENERAL NOTES AND ABBREVIATIONS

SITE WORK

- E10 OVERALL SITE PLAN
- E11 PARTIAL SITE PLAN - AREA 1
- E12 PARTIAL SITE PLAN - AREA 2
- E13 DUCTBANK SCHEDULES
- E14 DUCTBANK SCHEDULES
- E15 DUCTBANK SCHEDULES
- E51 EXISTING 27SWBD-1 SINGLE LINE DIAGRAMS AND ELEVATION
- E70 EXISTING 27SWBD-4 ENLARGED PLAN
- E71 EXISTING 27SWBD-4 SINGLE LINE DIAGRAM AND ELEVATION - DEMOLITION
- E11A PARTIAL SITE PLAN - AREA 1 - BID ALTERNATE
- E12A DUCTBANK SCHEDULES - BID ALTERNATE
- E13A DUCTBANK SCHEDULES - BID ALTERNATE
- E50A EXISTING 27SWBD-1 ENLARGED PLAN - BID ALTERNATE
- E51A EXISTING 27SWBD-1 SINGLE LINE DIAGRAM AND ELEVATION - DEMOLITION - BID ALTERNATE

INFLUENT PUMP STATION - MODIFICATIONS

- E100 TOP PLAN - DEMOLITION
- E101 AREA CLASSIFICATION TOP PLAN
- E102 AREA CLASSIFICATION SECTION
- E103 TOP PLAN - MODIFIED
- E103A TOP PLAN - MODIFIED - BID ALTERNATE

INFLUENT PUMP STATION ELECTRICAL BUILDING - BID ALTERNATE

- E120A GROUNDING, POWER, AND LIGHTING PLAN
- E121A SWBD-1 SINGLE LINE DIAGRAM AND ELEVATION
- E122A PANEL SCHEDULES, RISER DIAGRAMS, AND CONTROL ONE LINE DIAGRAMS
- E123A ELEMENTARY CONTROL SCHEMATICS
- E124A CONDUIT AND WIRE SCHEDULES
- E125A CONDUIT AND WIRE SCHEDULES

PUMP STATION NO.3 - MODIFICATIONS

- E200 TOP PLAN - DEMOLITION
- E201 TOP PLAN - MODIFIED

PUMP STATION NO.3 - ELECTRICAL BUILDING

- E220 GROUNDING, POWER AND LIGHTING PLAN
- E221 SWBD-4 SINGLE LINE DIAGRAM AND ELEVATION
- E222 PANEL SCHEDULES, RISER DIAGRAMS, AND CONTROL ONE LINE DIAGRAMS
- E223 ELEMENTARY CONTROL SCHEMATICS
- E224 CONDUIT AND WIRE SCHEDULES
- E225 CONDUIT AND WIRE SCHEDULES

PRIMARY SLUDGE PUMP STATION

- E300 TOP PLAN - DEMOLITION
- E301 TOP PLAN - MODIFIED
- E302 EXISTING 4MCC-1&2 SINGLE LINE DIAGRAMS AND ELEVATIONS - DEMOLITION
- E303 EXISTING 4MCC-1&2 SINGLE LINE DIAGRAMS AND ELEVATIONS - MODIFIED
- E304 CONTROL ONE LINE DIAGRAM AND RISER DIAGRAMS
- E305 ELEMENTARY CONTROL SCHEMATICS
- E306 CONDUIT AND WIRE SCHEDULES
- E300A TOP PLAN - DEMOLITION - BID ALTERNATE
- E301A TOP PLAN - MODIFIED - BID ALTERNATE
- E302A EXISTING 4MCC-1&2 SINGLE LINE DIAGRAMS AND ELEVATIONS - DEMOLITION - BID ALTERNATE
- E303A EXISTING 4MCC-1&2 SINGLE LINE DIAGRAMS AND ELEVATION - MODIFIED - BID ALTERNATE

ELECTRICAL STANDARD DETAILS

- ED1 SHEET 1
- ED2 SHEET 2
- ED3 SHEET 3

DRAWING NO DESCRIPTION

ROCKFISH CREEK WRF

CIVIL

SITE WORK

- C10 OVERALL SITE PLAN

MECHANICAL

INFLUENT PUMP STATION - MODIFICATIONS

- M100 BOTTOM PLAN - DEMOLITION AND SECTION
- M101 PLANS
- M102 TOP PLAN
- M103 SECTIONS AND DETAILS

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PLOT DATE: 4/14/2023 9:32 AM BY: JCAUDLE

PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	C. BECK
DRAWN BY:	B. CAUDLE
CHECKED BY:	M. MESSERE
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"

ISSUED FOR CONSTRUCTION



Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA
CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

GENERAL INDEX SHEET

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	G1

2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)
(Reproduce the following data on the building plans sheet 1 or 2)

Name of Project: Influent Pump Station Electrical Building - Bid Alternate
Address: 601 North Eastern Blvd, Fayetteville, NC Zip Code 28301
Owner/Authorized Agent: Fayetteville Public Works Commission; Vance McGougan
Phone # (910) 483-1382 E-Mail vance.mcougan@faypwc.com
Owned By: City
Code Enforcement Jurisdiction: City

CONTACT: Table with columns for DESIGNER FIRM, NAME, LICENSE #, TELEPHONE #, E-MAIL. Lists architectural, electrical, plumbing, mechanical, and structural professionals.

2018 NC BUILDING CODE: New Building
2018 NC EXISTING BUILDING CODE: N/A
CONSTRUCTED: (date) CURRENT OCCUPANCY(S) (Ch. 3):
RENOVATED: (date) PROPOSED OCCUPANCY(S) (Ch. 3):
OCCUPANCY CATEGORY (Table 1604.5): Current: N/A Proposed: III

BASIC BUILDING DATA
Construction Type: II-B
Sprinklers: No N/A
Standpipes: N/A
Primary Fire District: No Flood Hazard Area: No
Special Inspections Required: No

Gross Building Area Table with columns for FLOOR, EXISTING (SQ FT), NEW (SQ FT), SUB-TOTAL. Shows 0 SF existing and 800 SF new area.

ALLOWABLE AREA
Primary Occupancy Classification(s): Factory - F-2
Accessory Occupancy Classification(s):
Incidental Uses (Table 509):
Special Uses (Chapter 4 - List Code Sections): 414 Hazardous Materials, 415.10.3 Floors in Storage Rooms
Special Provisions: (Chapter 5 - List Code Sections): 506.3 Frontage Increase
Mixed Occupancy: Select one Separation: Select one Exception:

Table for ALLOWABLE AREA calculation with columns for STORY NO., DESCRIPTION AND USE, (A) BLDG AREA PER STORY (ACTUAL), (B) TABLE 506.2 AREA, (C) AREA FOR FRONTAGE INCREASE, (D) ALLOWABLE AREA PER STORY OR UNLIMITED.

1 Frontage area increases from Section 506.2 are computed thus:
a. Perimeter which fronts a public way or open space having 20 feet minimum width = (F)
b. Total Building Perimeter = (P)
c. Ratio (F/P) = 1 (F/P)
d. W = Minimum width of public way = (W)
2 Unlimited area applicable under conditions of Section 507.
3 Maximum Building Area = total number of stories in the building x D (maximum 3 stories) (506.2).
4 The maximum area of open parking garages must comply with Table 406.5.4. The maximum area of air traffic control towers must comply with Table 412.3.1.
5 Frontage increase is based on the unsprinklered area value in Table 506.2.

ALLOWABLE HEIGHT table with columns for BUILDING HEIGHT IN FEET (TABLE 504.3), ALLOWABLE, SHOWN ON PLANS, CODE REFERENCE. Shows 55 FT allowable and 13 FT shown on plans.

FIRE PROTECTION REQUIREMENTS table with columns for BUILDING ELEMENT, FIRE SEPARATION DISTANCE, RATING, DETAIL #, DESIGN #, SHEET # FOR RATED PENETRATION, SHEET # FOR RATED JOINTS. Lists various fire protection details like structural frame, exterior walls, etc.

* Indicate section number permitting reduction

PERCENTAGE OF WALL OPENING CALCULATIONS table with columns for FIRE SEPARATION DISTANCE, DEGREE OF OPENINGS PROTECTION, ALLOWABLE AREA (%), ACTUAL SHOWN ON PLANS (%). Shows calculations for north and south walls.

LIFE SAFETY SYSTEM REQUIREMENTS
Emergency Lighting: Yes
Exit Signs: Yes
Fire Alarm: No
Smoke Detection Systems: No
Carbon Monoxide Detection: No

LIFE SAFETY PLAN REQUIREMENTS
Life Safety Plan Sheet #: G120
List of requirements including fire-rated wall locations, exit access travel distances, maximum occupant load, etc.

ACCESSIBLE PARKING (SECTION 1106) table with columns for LOT OR PARKING AREA, TOTAL # OF PARKING SPACES, # OF ACCESSIBLE SPACES PROVIDED, etc.

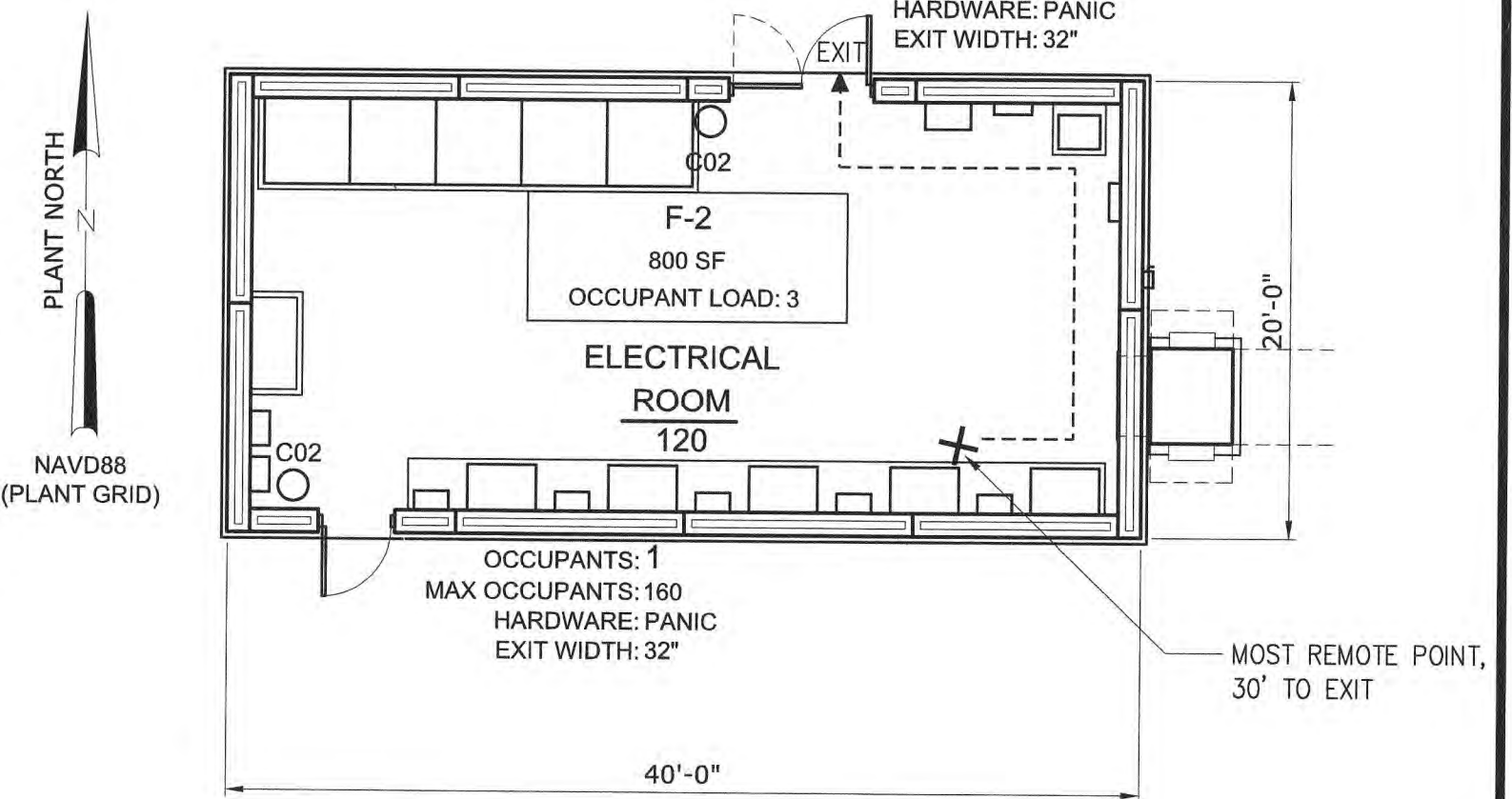
PLUMBING FIXTURE REQUIREMENTS (TABLE 2902.1) table with columns for USE, WATERCLOSETS, URINALS, LAVATORIES, SHOWER, DRINKING FOUNTAINS.

SPECIAL APPROVALS
Special approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, etc., describe below)
Exception Approval Request to Chief Building Inspector: Employee Toilet Facilities 2902.3.2 Exception for Factory Industrial Occupancies Requested.

2018 APPENDIX B BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
STRUCTURAL DESIGN (SEE STRUCTURAL SHEETS)
2018 APPENDIX B BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
MECHANICAL DESIGN (SEE MECHANICAL SHEETS)
2018 APPENDIX B BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
ELECTRICAL DESIGN (SEE ELECTRICAL SHEETS)

ENERGY REQUIREMENTS:
The following data shall be considered minimum and any special attribute required to meet the energy code shall also be provided.
Exempt Building: Yes Provide code or statutory reference: C101.2 Exception 2, Group F

NARRATIVE BUILDING DESCRIPTION
ELECTRICAL BUILDING
Precast concrete building to house electrical equipment serving Pump Station 3 at Municipal Water Reclamation Facility.
Accessibility is not required per 1103.2.9 Equipment Spaces.
Employee Toilet Facilities 2902.3.2 Exception for Factory Industrial Occupancies Requested:



LIFE SAFETY PLAN
1/8" = 1'-0"

Table with columns for PROJECT ENGINEER, DESIGNED BY, DRAWN BY, CHECKED BY, and a scale bar showing 0, 1/2, and 1 inch.

ISSUED FOR CONSTRUCTION
Professional seal for Mark J. Messere, Engineer, License # 18971.

Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA
CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

GENERAL
INFLUENT PUMP STATION ELECTRICAL BUILDING
CODE SUMMARY - BID ALTERNATE

Table with columns for DATE (APRIL 2023), HAZEN NO. (30402-064), CONTRACT NO. (1), DRAWING NUMBER (G120).

**2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)**
(Reproduce the following data on the building plans sheet 1 or 2)

Name of Project: **PS No. 3 Electrical Building**
Address: **601 North Eastern Blvd, Fayetteville, NC** Zip Code **28301**
Owner/Authorized Agent: **Fayetteville Public Works Commission; Vance McGougan**
Phone # **(910) 483-1382** E-Mail **vance.mcougan@faypwc.com**
Owned By: **City**
Code Enforcement Jurisdiction: **City**

CONTACT:				
DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #
Architectural	Hazen & Sawyer	Michael Santowasso	18560	(919)833-7152
Civil	Hazen & Sawyer	Michael Santowasso	18560	(919)833-7152
Electrical	Hazen & Sawyer	J. Brad Pickett	38699	(919)833-7152
Fire Alarm	Hazen & Sawyer	J. Brad Pickett	38699	(919)833-7152
Plumbing	Hazen & Sawyer	Mark J. Messere	18971	(919)833-7152
Mechanical	Hazen & Sawyer	Mark J. Messere	18971	(919)833-7152
Sprinkler-Standpipe	Hazen & Sawyer	Mark J. Messere	18971	(919)833-7152
Structural	Hazen & Sawyer	Christopher T. Phillips	17676	(919)833-7152
Retaining Walls >5' High	Hazen & Sawyer	Christopher T. Phillips	17676	(919)833-7152
Hvac	Hazen & Sawyer	Danny L. Reagan	25992	(919)833-7152

2018 NC BUILDING CODE: **New Building**
2018 NC EXISTING BUILDING CODE: **N/A** **N/A** **N/A**
CONSTRUCTED: (date) _____ CURRENT OCCUPANCY(S) (Ch. 3): _____
RENOVATED: (date) _____ PROPOSED OCCUPANCY(S) (Ch. 3): _____
OCCUPANCY CATEGORY (Table 1604.5): **Current: N/A** **Proposed: III**

BASIC BUILDING DATA
Construction Type: **II-B**
Sprinklers: **No** **N/A**
Standpipes: **N/A**
Primary Fire District: **No** **Flood Hazard Area: No**
Special Inspections Required: **No**

FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	SUB-TOTAL
1 st Floor	0 SF	800 SF	800 SF
TOTAL	0 SF	800 SF	800 SF

ALLOWABLE AREA
Primary Occupancy Classification(s): **Factory - F-2**
Accessory Occupancy Classification(s): _____
Incidental Uses (Table 509): _____
Special Uses (Chapter 4 - List Code Sections): **414 Hazardous Materials, 415.10.3 Floors in Storage Rooms**
Special Provisions: (Chapter 5 - List Code Sections): **506.3 Frontage Increase**
Mixed Occupancy: **Select one** Separation: **Select one** Exception: _____
Select one
 $\frac{\text{Actual Area of Occupancy A}}{\text{Allowable Area of Occupancy A}} + \frac{\text{Actual Area of Occupancy B}}{\text{Allowable Area of Occupancy B}} \leq 1$
+ = _____ ≤ 1.00

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 506.2 ⁴ AREA	(C) AREA FOR FRONTAGE INCREASE ^{1,5}	(D) ALLOWABLE AREA PER STORY OR UNLIMITED ^{2,3}
1	Electrical	800 SF	23,000 SF		23,000 SF

¹ Frontage area increases from Section 506.2 are computed thus:
a. Perimeter which fronts a public way or open space having 20 feet minimum width = (F)
b. Total Building Perimeter = (P)
c. Ratio (F/P) = 1 (F/P)
d. W = Minimum width of public way = (W)
² Unlimited area applicable under conditions of Section 507.
³ Maximum Building Area = total number of stories in the building x D (maximum 3 stories) (506.2).
⁴ The maximum area of open parking garages must comply with Table 406.5.4. The maximum area of air traffic control towers must comply with Table 412.3.1.
⁵ Frontage increase is based on the un-sprinklered area value in Table 506.2.

	ALLOWABLE	SHOWN ON PLANS	CODE REFERENCE
Building Height in Feet (Table 504.3)	55 FT	13 FT	
Building Height in Stories (Table 504.4)	3	1	

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING		DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	SHEET # FOR RATED PENETRATION	SHEET # FOR RATED JOINTS
		REQ'D	PROVIDED (W/ REDUCTION)				
Structural Frame, including columns, girders, trusses							
Bearing Walls							
Exterior							
North	>30	0					
East	>30	0					
West	>30	0					
South	>30	0					
Interior							
Nonbearing Walls and Partitions							
Exterior walls							
North							
East							
West							
South							
Interior walls and partitions							
Floor Construction		0					
Including supporting beams and joists							
Floor Ceiling Assembly							
Columns Supporting Floors							
Roof Construction, including supporting beams and joists		0					
Roof Ceiling Assembly							
Columns Supporting Roof							
Shaft Enclosures - Exit							
Shaft Enclosures - Other							
Corridor Separation							
Occupancy/Fire Barrier Separation							
Party/Fire Wall Separation							
Smoke Barrier Separation							
Smoke Partition							
Tenant/Dwelling Unit/ Sleeping Unit Separation							
Incidental Use Separation							

* Indicate section number permitting reduction

FIRE SEPARATION DISTANCE (FEET) FROM PROPERTY LINES	DEGREE OF OPENINGS PROTECTION (TABLE 705.8)	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLANS (%)
>30 Feet	Unprotected, Nonsprinklered	No Limit	North wall 11.25% Open
>30 Feet	Unprotected, Nonsprinklered	No Limit	South wall 4.38% Open

LIFE SAFETY SYSTEM REQUIREMENTS
Emergency Lighting: **Yes**
Exit Signs: **Yes**
Fire Alarm: **No**
Smoke Detection Systems: **No**
Carbon Monoxide Detection: **No**

LIFE SAFETY PLAN REQUIREMENTS
Life Safety Plan Sheet #: **G220**
 Fire and/or smoke rated wall locations (Chapter 7)
 Assumed and real property line locations (if not on the site plan)
 Exterior wall opening area with respect to distance to assumed property lines (705.8)
 Occupancy Use for each area as it relates to occupant load calculation (Table 1004.1.2)
 Occupant loads for each area
 Exit access travel distances (1017)
 Common path of travel distances (Tables 1006.2.1 & 1006.3.2(1))
 Dead end lengths (1020.4)
 Clear exit widths for each exit door
 Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.3)
 Actual occupant load for each exit door
 A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation
 Location of doors with panic hardware (1010.1.10)
 Location of doors with delayed egress locks and the amount of delay (1010.1.9.7)
 Location of doors with electromagnetic egress locks (1010.1.9.9)
 Location of doors equipped with hold-open devices
 Location of emergency escape windows (1030)
 The square footage of each fire area (202)
 The square footage of each smoke compartment for Occupancy Classification I-2 (407.5)
 Note any code exceptions or table notes that may have been utilized regarding the items above

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES		# OF ACCESSIBLE SPACES PROVIDED			TOTAL # ACCESSIBLE PROVIDED
	REQUIRED	PROVIDED	REGULAR WITH 5' ACCESS AISLE	VAN SPACES WITH 132" ACCESS AISLE	8' ACCESS AISLE	
NR						
TOTAL						

USE	WATERCLOSETS			URINALS	LAVATORIES			SHOWER S/TUBS	DRINKING FOUNTAINS	
	MALE	FEMALE	UNISEX		MALE	FEMALE	UNISEX		REGULAR	ACCESSIBLE
SPACE										
EXIST'G										
NEW										
REQ'D	NR	NR	NR							

SPECIAL APPROVALS
Special approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, etc., describe below)
Exception Approval Request to Chief Building Inspector: Employee Toilet Facilities 2902.3.2 Exception for Factory Industrial Occupancies Requested. Employee Toilet Facilities are available in the Administration Building on site, 1100 feet from the Electrical Building. Employees use golf carts and trucks to travel to process buildings at the Municipal Water Reclamation Facility, and access to toilet facilities from the electrical buildings will be the same as for other process buildings on site.

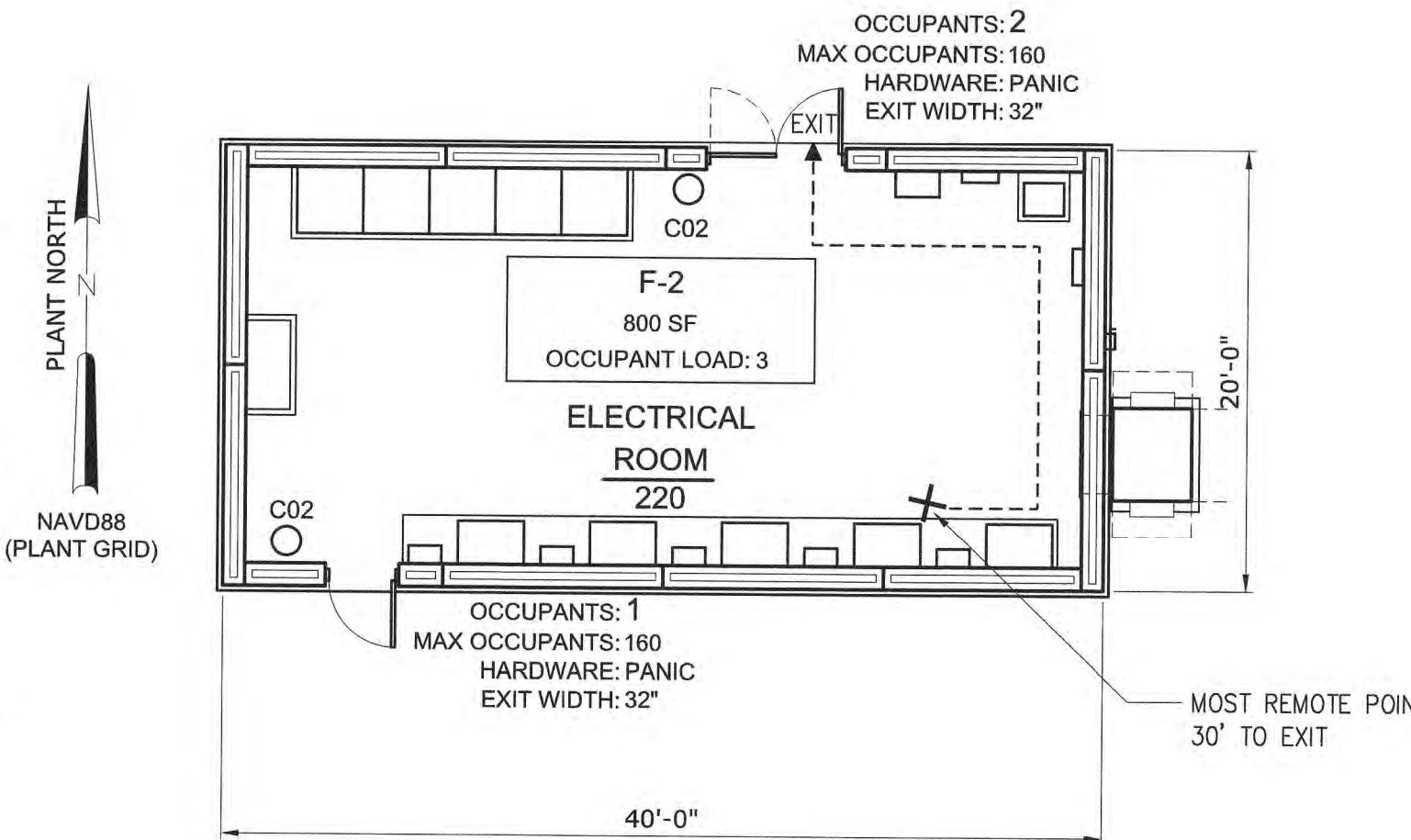
**2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
STRUCTURAL DESIGN
(SEE STRUCTURAL SHEETS)**

**2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
MECHANICAL DESIGN
(SEE MECHANICAL SHEETS)**

**2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
ELECTRICAL DESIGN
(SEE ELECTRICAL SHEETS)**

ENERGY REQUIREMENTS:
The following data shall be considered minimum and any special attribute required to meet the energy code shall also be provided. Each Designer shall furnish the required portions of the project information for the plan data sheet. If performance method, state the annual energy cost for the standard reference design vs annual energy cost for the proposed design.
Exempt Building: **Yes** Provide code or statutory reference: **C101.2 Exception 2, Group F**

NARRATIVE BUILDING DESCRIPTION
ELECTRICAL BUILDING
Precast concrete building to house electrical equipment serving Pump Station 3 at Municipal Water Reclamation Facility.
Accessibility is not required per 1103.2.9 Equipment Spaces.
Employee Toilet Facilities 2902.3.2 Exception for Factory Industrial Occupancies Requested:
• Employee Toilet Facilities are available in the Administration Building on site.
• Distance to PS 3 Electrical building exceeds 500 feet. Distance to Administration Building restrooms is 1100 Feet.
• Employees will use vehicles (golf cart or truck) to travel to the electrical buildings



LIFE SAFETY PLAN
1/8" = 1'-0"

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PLOT DATE: 4/17/2023 8:32 AM BY: JCAUDLE

NO.	DESCRIPTION	DATE	BY
1	CONSTRUCTION	4/2023	CWB
REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER: **M. MESSERE**
DESIGNED BY: **M. MCINTOSH**
DRAWN BY: **M. MCINTOSH**
CHECKED BY: **W. RUSSELL**

ISSUED FOR CONSTRUCTION

Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA
CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

GENERAL	
PUMP STATION NO.3 ELECTRICAL BUILDING CODE SUMMARY	
DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	
G220	

GENERAL:

- 1. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR SITE SAFETY ASSOCIATED WITH THE WORK UNDER THIS PROJECT AND FOR COMPLIANCE WITH ALL FEDERAL, STATE AND LOCAL HEALTH AND SAFETY LAWS, CODES, REGULATIONS, AND ORDINANCES INCLUDING, BUT NOT LIMITED TO, THOSE CURRENTLY MANDATED BY THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).
2. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE DESIGN, INSTALLATION, AND MAINTENANCE OF ALL EXCAVATION SUPPORT ON THE PROJECT. ALL EXCAVATION SUPPORT SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NORTH CAROLINA. ALL EXCAVATION SUPPORT DESIGN DOCUMENTS SHALL BE PRESENTED TO THE ENGINEER FOR REVIEW BEFORE IMPLEMENTATION. CONTRACTOR SHALL USE ADEQUATE SHORING METHODS TO ENSURE:
A. COMPLIANCE WITH OSHA REGULATIONS.
B. PROTECTION OF EXISTING PAVEMENT AND ROAD SHOULDERS, STRUCTURES AND UTILITIES.
C. CONSTRUCTION ACTIVITIES ARE CONFINED TO RIGHTS-OF-WAY OR EASEMENTS AS INDICATED
3. LIMITS OF DISTURBANCE (LOD) SHALL BE AS INDICATED ON THE CONTRACT DRAWINGS. ANY CHANGES TO THE LOD BY THE CONTRACTOR SHALL REQUIRE PRIOR APPROVAL FROM THE ENGINEER AND DEMLR LAND QUALITY SECTION.
4. CONTRACTOR SHALL REPAIR AT HIS OWN EXPENSE, ANY DAMAGE CAUSED BY CONSTRUCTION RELATED ACTIVITIES TO EXISTING UTILITY SERVICE LINES.
5. IN THE EVENT OF DAMAGE TO EXISTING UTILITIES, CONTRACTOR SHALL STOP WORK IMMEDIATELY, TAKE NECESSARY PRECAUTIONS TO PREVENT INJURY OR FURTHER DAMAGE, AND NOTIFY PROPER AUTHORITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING/REPAIRING ALL EXISTING STRUCTURES, CONDUITS, OR OTHER UTILITIES DAMAGED BY CONTRACTOR'S OPERATIONS AT NO COST TO OWNER.
6. REMOVAL AND REPLACEMENT OR REPAIR OF EXISTING UTILITY SERVICES SHALL BE COORDINATED WITH APPROPRIATE UTILITY COMPANY AT NO ADDITIONAL COST TO THE OWNER.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND REPLACEMENT TO ORIGINAL OR BETTER CONDITION OF ALL EXISTING PAVEMENTS, FENCES, AND MISCELLANEOUS ITEMS WHERE DAMAGED BY CONSTRUCTION ACTIVITIES OR REQUIRED TO COMPLETE THE CONSTRUCTION.
8. ALL HOLES, TRENCHES, AND OTHER HAZARDOUS AREAS SHALL BE ADEQUATELY PROTECTED BY BARRICADES, LIGHTS OR OTHER PROTECTIVE DEVICES.
9. REMOVAL OF EXCAVATED MATERIALS AND DAILY CLEANUP OPERATIONS SHALL BE PERFORMED IN COMPLIANCE WITH THE SPECIFICATIONS AND TO THE SATISFACTION OF THE OWNER/ENGINEER.
10. EXCESS/UNSUITABLE SPOIL TO BE REMOVED FROM SITE. PRIOR TO BEGINNING CONSTRUCTION, CONTRACTOR SHALL SUBMIT THE OFF-SITE SPOIL LOCATIONS TO BE USED AND PROVIDE DOCUMENTATION OF EROSION CONTROL MEASURES TO BE PROVIDED DURING DISPOSAL OPERATIONS. CONTRACTORS OFF-SITE SEDIMENT CONTROL MEASURES MUST BE APPROVED BY NC DEMLR PRIOR TO SPOIL DISPOSAL.
11. ALL EROSION AND SEDIMENTATION CONTROLS SHALL BE IMPLEMENTED BEFORE CONSTRUCTION COMMENCES AND SHALL NOT BE REMOVED UNTIL PERMANENT GROUND COVER STABILIZATION HAS BEEN ESTABLISHED.
12. THE CONTRACTOR SHALL RECORD AND SUPPLY TO THE ENGINEER THE FOLLOWING INFORMATION:
A. THE LOCATION OF ALL UTILITIES CROSSED AND THE NEW LOCATION AND DEPTH OF ALL RELOCATED AND/OR ADJUSTED UTILITIES.

EROSION CONTROL:

- 1. CONTRACTOR TO POST EROSION CONTROL PERMIT ON JOB SITE AS REQUIRED.
2. ALL EROSION CONTROL MEASURES SHALL BE IN PLACE BEFORE ANY LAND CLEARING OR DISTURBANCE ACTIVITIES MAY BEGIN.
3. PER NPDES REQUIREMENTS, A RAIN GAUGE, SELF-INSPECTIONS RECORDS, PERMIT, CERTIFICATE OF COVERAGE, AND S&E PLAN ARE REQUIRED TO BE MAINTAINED ON SITE AND ACCESSIBLE DURING INSPECTIONS. IT IS RECOMMENDED THESE ITEMS BE PLACED IN A PERMITS BOX AT THE BEGINNING OR ENTRANCE OF PROJECT. A RAIN GAUGE SHALL BE MAINTAINED IN GOOD WORKING ORDER ON THE SITE UNLESS ANOTHER RAIN-MONITORING DEVICE HAS BEEN APPROVED BY THE NC DIVISION OF WATER QUALITY. A WRITTEN RECORD OF THE DAILY RAINFALL AMOUNTS SHALL BE RETAINED AND ALL RECORDS SHALL BE MADE AVAILABLE TO THE DIVISION OF WATER QUALITY. REFER TO THE NC NPDES GENERAL PERMIT NCG010000, SECTION II.B.(3)(B), FOR ADDITIONAL INFORMATION.
4. THE CONTRACTOR SHALL CONDUCT SELF-INSPECTIONS OF THE EROSION AND SEDIMENTATION CONTROL MEASURES AND COMPLETE THE FOLLOWING COMBINED SELF-INSPECTION FOR FOUND ON THE DEMLR WEBSITE: https://deq.nc.gov/about/divisions/energy-mineral-land-resources/erosion-sediment-control/forms. TWELVE (12) MONTHS OF COMPLETE INSPECTION RECORDS SHALL BE KEPT ON-SITE AND AVAILABLE FOR INSPECTION AT ALL TIMES.
5. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY EROSION CONTROL MEASURES WHETHER OR NOT SHOWN ON THE PLANS TO PROTECT ADJACENT CREEKS, RIVERS, ROADWAYS, ETC. FROM SILTATION AND EROSION.
6. ALL EROSION CONTROL MEASURES SHALL BE INSPECTED WEEKLY AND WITHIN 24 HOURS OF ANY RAINFALL EVENT THAT PRODUCES 1 INCH OR MORE OF RAIN. REPAIR AND/OR REPLACE AS NECESSARY. SEE CIVIL STANDARD DETAILS DRAWINGS FOR SPECIFIC MAINTENANCE REQUIREMENTS FOR EACH EROSION AND SEDIMENT CONTROL MEASURE UTILIZED ON THIS PROJECT.
7. EROSION CONTROL MEASURES SHALL BE CLEANED OF ACCUMULATED SEDIMENT WHEN VOLUME OF MEASURE IS HALF FULL. SEDIMENT SHALL BE REMOVED FROM BEHIND SILT FENCING WHEN IT BECOMES APPROXIMATELY 0.5 FEET DEEP AT THE FENCE. THE SEDIMENT FENCE SHALL BE REPAIRED AS NECESSARY TO MAINTAIN THE BARRIER. REMOVED SEDIMENT SHALL BE DISPOSED OF IN SUCH A MANNER AS TO PREVENT FURTHER SEDIMENT TRANSPORT. IF NO SUITABLE ON-SITE LOCATIONS ARE AVAILABLE, ALL REMOVED SEDIMENT WILL BE LEGALLY DISPOSED OF OFF-SITE AT NO ADDITIONAL COST TO THE OWNER.
8. ALL EXCESS SOIL RESULTING FROM EARTHWORK OPERATIONS SHALL BE REMOVED FROM SITE BY CONTRACTOR. ALL TEMPORARY SOIL STOCKPILE AREAS USED FOR BACKFILL AND OTHER ACTIVITIES SHALL BE WITHIN THE LOD AS SHOWN ON THE DRAWINGS, AND LOCATED, AT A MINIMUM, 50 FEET FROM ANY SURFACE WATERS. STOCKPILE SIDE SLOPES SHALL BE NO STEEPER THAN 3:1 AND TOP OF STOCKPILE SHALL BE SLOPED AT A MINIMUM OF 5% TO PROMOTE POSITIVE DRAINAGE. ALL ONSITE TEMPORARY SOIL STOCKPILES SHALL BE SEEDED WITH TEMPORARY AND/OR PERMANENT SEEDING MEASURES FOR THE DURATION OF CONSTRUCTION ACTIVITIES. ALL CONTRACTOR STAGING AND LAYDOWN AREAS, SOIL OR WASTE STOCKPILE AREAS SHALL HAVE PERIMETER SILT FENCE. LOCATED NO CLOSER THAN 6 FEET FROM TOE OF SLOPE TO ALLOW FOR ACCESS AND MAINTENANCE. ANY SOILS TAKEN OFF SITE BECOMES THE CONTRACTORS RESPONSIBILITY AND SHALL COMPLY WITH ALL REQUIRED STATE AND LOCAL REGULATIONS AND PERMITS.
9. ALL EROSION CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL ENTIRE SITE IS PERMANENTLY STABILIZED WITH VEGETATION AS PER SEEDING SPECIFICATIONS AND SCHEDULE. ALL TEMPORARY EROSION CONTROL DEVICES ARE TO BE REMOVED AFTER PERMANENT STABILIZATION HAS BEEN ACHIEVED AND APPROVAL HAS BEEN GRANTED BY THE LAND QUALITY SECTION AND ENGINEER.
10. RESTORE ALL DISTURBED AREAS INCLUDING DITCHES/SWALES, STAGING/LAYDOWN/PARKING AREAS TO ORIGINAL GRADE AND ELEVATION AND ORIGINAL OR BETTER CONDITION, EXCEPT WHERE NOTED ON THE CONTRACT DRAWINGS.

CONSTRUCTION SEQUENCE:

- 1. CONTRACTOR SHALL SIGN AND IMPLEMENT THE REQUIREMENTS OF THE STATE APPROVED EROSION CONTROL PLAN AND THE NORTH CAROLINA NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL NOTIFY THE STATE LAND QUALITY SECTION AT (910) 433-3300 TO SCHEDULE A PRE-CONSTRUCTION MEETING. ADDITIONALLY, THE CONTRACTOR SHALL NOTIFY THE STATE LAND QUALITY SECTION, AT (910) 433-3300 AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES. EROSION AND SEDIMENT CONTROL (E&SC) PERMIT AND A CERTIFICATE OF COVERAGE (COC) MUST BE OBTAINED BEFORE AND LAND DISTURBING ACTIVITIES OCCUR.
2. EROSION AND SEDIMENT CONTROL (E&SC) PERMIT AND A CERTIFICATE OF COVERAGE (COC) MUST BE OBTAINED BEFORE ANY LAND DISTURBING ACTIVITIES OCCUR. THE COC CAN BE OBTAINED BY FILLING OUT THE ELECTRONIC NOTICE OF INTENT (e-NOI) FORM AT https://edocs.deq.nc.gov/Forms/NGG01-NOI.
3. INSTALL ALL PERIMETER TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES IN LOCATIONS AS SHOWN ON THE CONTRACT DRAWINGS. THIS INCLUDES, BUT IS NOT LIMITED TO, THE INSTALLATION OF SILT FENCE, TREE PROTECTION FENCE, AND, GRAVEL CONSTRUCTION ENTRANCE. NO CONSTRUCTION OR LAND DISTURBANCE ACTIVITIES MAY BEGIN UNTIL ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES HAVE BEEN INSTALLED. CLEAR ONLY THE AREA REQUIRED FOR INSTALLATION OF EROSION CONTROL MEASURES.
4. ONCE ALL TEMPORARY PERIMETER EROSION CONTROL MEASURES HAVE BEEN INSTALLED, THE SITE SHALL BE CLEARED AND GRUBBED, AS REQUIRED, WITHIN THE LIMITS OF DISTURBANCE (LOD) AS SHOWN ON THE CONTRACT DRAWINGS (C2). ANY ADJUSTMENTS TO THE LOD SHALL REQUIRE PRIOR APPROVAL FROM THE ENGINEER AND OWNER.
5. ALL DEBRIS FROM TREE CLEARING SHALL BE REMOVED FROM SITE. NO BURNING OF DEBRIS WILL BE ALLOWED. ALL EROSION CONTROL PRACTICES SHALL REMAIN IN PLACE WHEN CONSTRUCTION TRANSITIONS TO EACH PHASE.
6. ALL EXCESS SOIL RESULTING FROM ANY EARTHWORK OPERATIONS NECESSARY SHALL BE REMOVED FROM SITE BY CONTRACTOR. ANY SOILS TAKEN OFFSITE BECOMES THE CONTRACTOR'S RESPONSIBILITY, AND SHALL COMPLY WITH ALL REQUIRED STATE AND LOCAL REGULATIONS AND PERMITS.
7. TEMPORARY SEEDING MEASURES SHALL BE EMPLOYED AS SOON AS PRACTICABLE ON DISTURBED AREAS BUT IN ANY EVENT WITHIN FOURTEEN (14) DAYS. DISTURBED SLOPES STEEPER THAN 3:1 SHALL BE TEMPORARILY SEEDED WITHIN SEVEN (7) DAYS UNLESS SLOPE LENGTH IS TEN (10) FEET OR LESS AND NOT STEEPER THAN 2:1. DISTURBED SLOPES 3:1 OR FLATTER SHALL BE TEMPORARILY SEEDED WITHIN FOURTEEN (14) DAYS UNLESS SLOPE LENGTH IS GREATER THAN 50 FEET.
8. WHEN THE PROJECT IS COMPLETE, THE PERMITTEE SHALL CONTACT DEMLR TO CLOSE OUT THE E&SC PLAN. AFTER DEMLR INFORMS THE PERMITTEE OF THE PROJECT CLOSE OUT, VIA INSPECTION REPORT, THE PERMITTEE SHALL VISIT DEQ.NC.GOV/NGG01 TO SUBMIT AN ELECTRONIC NOTICE OF TERMINATION (E-NOT). A \$100 ANNUAL GENERAL PERMIT FEE WILL BE CHARGED UNTIL THE E-NOT HAS BEEN FILLED OUT.
9. THE DESIGN PROFESSIONAL (A NCPE, NCPLS, OR NCRLA - AS REQUIRED) SHALL SUBMIT ONE (1) SET OF AS-BUILT DRAWINGS TO THE PUBLIC WORKS DEPARTMENT - DEVELOPMENT REVIEW FOR REVIEW AND APPROVAL. AS-BUILT DRAWING APPROVAL IS REQUIRED PRIOR TO WATER METER INSTALLATION AND/OR SANITARY SEWER SERVICE CONNECTION AND PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY.

SEEDING SCHEDULE

Table with columns: SEED MIXTURE, PLANTING SEASON, LIME*, SEED, FERTILIZER*, STRAW MULCH*, TOPDRESSING (LB/AC)*, COMMENTS. Rows include P (Centipede Sod), TW (Overseed), TS (Overseed), TF (Overseed).

* LIME SHALL BE APPLIED AT A MINIMUM OF 2 TONS PER ACRE WITH 3 TONS PER ACRE IN CLAY SOILS. APPLICATION RATES AND/OR CHEMICAL ANALYSIS SHALL BE CONFIRMED OR ESTABLISHED BY SOIL TEST. TACK MULCH BY APPLYING AT 0.10 GAL/YD²

** FERTILIZER SHALL BE 10-10-10 ANALYSIS.

*** SEED MIXTURES TO BE USED ON THE PROJECT SHALL BE AS FOLLOWS:

- P - PERMANENT SEEDING CENTIPEDE SOD
TF - TEMPORARY FALL SEEDING (LB/AC) RYE (GRAIN)
TW - TEMPORARY WINTER SEEDING (LB/AC) GERMAN PEARL OR BROWN TOP MILLET
TS - TEMPORARY SUMMER SEEDING (LB/AC) RYE GRAIN

EXISTING CONDITIONS NOTES:

- 1. EXISTING CONDITIONS WITHIN LIMIT OF CURRENT SURVEY ARE BASED ON SURVEY TITLED: "TOPOGRAPHIC SURVEY OF A PORTION OF CROSS CREEK WATER RECLAMATION FACILITY" PREPARED BY JOYNER KEENEY, PLLC 230 DONALDSON STREET SUITE-500A FAYETTEVILLE, NORTH CAROLINA 28301 (NORTH CAROLINA FIRM NUMBER P-0551) AND DATED JANUARY 16, 2018.
2. THE RATIO OF PRECISION FOR THE SURVEY IS 1:10,000+/- AND THIS MAP MEETS THE REQUIREMENTS OF THE STANDARD OF PRACTICE FOR LAND SURVEYING IN NORTH CAROLINA (921 NCAC 56.1600).
3. NO SUBSURFACE INVESTIGATION WAS DONE AS PART OF THIS SURVEY. LOCATIONS OF ALL UNDERGROUND UTILITIES THAT MAY OR MAY NOT BE SHOWN HEREON ARE FROM VARIOUS OTHER SOURCES. DEVELOPERS OR CONTRACTORS SHOULD NOT ONLY MAKE SPECIFIC SUBSURFACE INVESTIGATIONS BUT SHOULD ALSO ALLOW FOR CONTINGENCIES WHICH MIGHT ARISE BY REASON OF ENCOUNTERING UNRECORDED LINES OR LINES BEING IN DIFFERENT LOCATIONS THAN INDICATED ON THIS SURVEY.
4. COORDINATE GRID IS BASED ON A PLANT GRID SYSTEM WITH BASELINE MARKED BY EXISTING CONCRETE MONUMENTS SHOWN ON THIS SHEET AND VERTICAL DATUM NAVD 88 PER SURVEY DONE BY MCKIM & CREED DATED 5/03/2007.
5. THIS SURVEY WAS CONDUCTED TO THE REQUIRED SPECIFICATIONS OF A 1-FOOT CONTOUR INTERVAL.
6. A PORTION OF THIS PROPERTY IS LOCATED IN FLOOD ZONE "AE" WITH A BASE FLOOD ELEVATION OF 83.3' AND FLOOD ZONE 0.2% ANNUAL CHANCE FLOOD HAZARD AS SHOWN ON FEMA- FIRM PANEL 0447, MAP NUMBER 37200447700K, EFFECTIVE DATE: JUNE 18, 2007.

NOTIFICATION OF LAND RESOURCES SEDIMENT AND EROSION CONTROL SELF-INSPECTION PROGRAM:

THE SEDIMENTATION POLLUTION CONTROL ACT WAS AMENDED IN 2006 TO REQUIRE THAT PERSONS RESPONSIBLE FOR LAND DISTURBING ACTIVITIES INSPECT A PROJECT AFTER EACH PHASE OF THE PROJECT TO MAKE SURE THAT THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN IS BEING FOLLOWED. RULES DETAILING THE DOCUMENTATION OF THESE INSPECTIONS TOOK EFFECT OCTOBER 1, 2010. THE SELF-INSPECTION PROGRAM IS SEPARATE FROM THE WEEKLY SELF MONITORING PROGRAM OF THE NPDES STORMWATER PERMIT FOR CONSTRUCTION ACTIVITIES. THE FOCUS OF THE SELF-INSPECTION REPORT IS THE INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROL MEASURES ACCORDING TO THE APPROVED PLAN. THE INSPECTIONS MUST BE CONDUCTED AFTER EACH PHASE OF THE PROJECT, AND CONTINUED UNTIL PERMANENT GROUND COVER IS ESTABLISHED IN ACCORDANCE WITH THE NCGS 113A 54.1 AND 15A NCAC 4B.0131. THE SELF-INSPECTION REPORT FORM IS AVAILABLE AS AN EXCEL SPREADSHEET FROM HTTP://WWW.DLR.STATE.NC.US/PAGES/SEDIMENTATION_NEW.HTML. IF YOU HAVE ANY QUESTIONS OR CANNOT ACCESS THE FORM, PLEASE CONTACT THIS OFFICE AT (910) 433-3300.

LEGEND

Legend table with columns: SYMBOLS, NEW, DEMO, EXISTING, and ABBREVIATIONS. Includes symbols for TEL PED, POWER POLE, SOIL BORING, FENCE, CONTOUR, SPOT ELEVATION, PROPERTY LINE, OVERHEAD ELECTRIC, WATER PIPING, ELECTRIC DUCTBANK, APPROXIMATE WOODLINE, YARD PIPING, MANHOLE, YARD INLET, FLARED END SECTION, STORM DRAIN LINE, STREAM, SWALE WITH LINING, STABILIZED OUTLET FOR SILT FENCE, YARD INLET PROTECTION, GRAVEL CONSTRUCTION ENTRANCE, SILT FENCE, TREE PROTECTION FENCE, LIMITS OF DISTURBANCE, and various abbreviations like ACF, EOP, LOC, OHE, FOC, LP, UGE, PP.

Project information table with columns: PROJECT ENGINEER (M. MESSERE), DESIGNED BY (R. HUNT), DRAWN BY (R. HUNT), CHECKED BY (M. SANTOWASSO), DATE (4/2023), and BY (CWB). Includes a scale bar (0, 1/2, 1 inch) and a note: 'IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE'.

Professional Engineer seal for Michael Santowasso, License No. 18560, State of North Carolina. Includes the text 'ISSUED FOR CONSTRUCTION' and a date stamp '4/17/2023'.

Hazen and Sawyer logo and address: 4011 WESTCHASE BOULEVARD, SUITE 500 RALEIGH, NORTH CAROLINA 27607 LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION CITY OF FAYETTEVILLE, NORTH CAROLINA CROSS CREEK WRF AND ROCKFISH CREEK WRF SCREW PUMP IMPROVEMENTS

CIVIL CIVIL NOTES AND LEGEND DATE: APRIL 2023 HAZEN NO.: 30402-064 CONTRACT NO.: 1 DRAWING NUMBER: C1

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT
 IMPLEMENTING THE DETAILS AND SPECIFICATIONS ON THIS PLAN SHEET WILL RESULT IN THE CONSTRUCTION ACTIVITY BEING CONSIDERED COMPLIANT WITH THE GROUND STABILIZATION AND MATERIALS HANDLING SECTIONS OF NCG01 CONSTRUCTION GENERAL PERMIT (SECTIONS E AND F, RESPECTIVELY). THE PERMITTEE SHALL COMPLY WITH THE EROSION AND SEDIMENT CONTROL PLAN APPROVED BY THE DELEGATED AUTHORITY HAVING JURISDICTION. ALL DETAILS AND SPECIFICATIONS SHOWN ON THIS SHEET MAY NOT APPLY DEPENDING ON SITE CONDITIONS AND THE DELEGATED AUTHORITY HAVING JURISDICTION.

SECTION E: GROUND STABILIZATION

REQUIRED GROUND STABILIZATION TIMEFRAMES		
SITE AREA DESCRIPTION	STABILIZE WITHIN THIS MANY CALENDAR DAYS AFTER CEASING LAND DISTURBANCE	TIME FRAME VARIATIONS
(A) PERIMETER DIKES, SWALES, DITCHES, AND PERIMETER SLOPES	7	NONE
(B) HIGH WATER QUALITY (HWQ) ZONES	7	NONE
(C) SLOPES STEEPER THAN 3:1	7	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED
(D) SLOPES 3:1 TO 4:1	14	-7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH AND WITH SLOPES STEEPER THAN 4:1 -7 DAYS FOR PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND HWQ ZONES -10 DAYS FOR FALLS LAKE WATERSHED
(E) AREAS WITH SLOPES FLATTER THAN 4:1	14	-7 DAYS FOR PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND HWQ ZONES -10 DAYS FOR FALLS LAKE WATERSHED UNLESS THERE IS ZERO SLOPE

NOTE: AFTER THE PERMANENT CESSATION OF CONSTRUCTION ACTIVITIES, ANY AREAS WITH TEMPORARY GROUND STABILIZATION SHALL BE CONVERTED TO PERMANENT GROUND STABILIZATION AS SOON AS PRACTICABLE BUT IN NO CASE LONGER THAN 90 CALENDAR DAYS AFTER THE LAST LAND DISTURBING ACTIVITY. TEMPORARY GROUND STABILIZATION SHALL BE MAINTAINED IN A MANNER TO RENDER THE SURFACE STABLE AGAINST ACCELERATED EROSION UNTIL PERMANENT GROUND STABILIZATION IS ACHIEVED.

GROUND STABILIZATION SPECIFICATION

STABILIZE THE GROUND SUFFICIENTLY SO THAT RAIN WILL NOT DISLodge THE SOIL. USE ONE OF THE TECHNIQUES IN THE TABLE BELOW:

TEMPORARY STABILIZATION	PERMANENT STABILIZATION
<ul style="list-style-type: none"> TEMPORARY GRASS SEED COVERED WITH STRAW OR OTHER MULCHES AND TACKIFIERS HYDROSEEDING ROLLED EROSION CONTROL PRODUCTS WITH OR WITHOUT TEMPORARY GRASS SEED APPROPRIATELY APPLIED STRAW OR OTHER MULCH PLASTIC SHEETING 	<ul style="list-style-type: none"> PERMANENT GRASS SEED COVERED WITH STRAW OR OTHER MULCHES AND TACKIFIERS GEOTEXTILE FABRICS SUCH AS PERMANENT SOIL REINFORCEMENT MATTING HYDROSEEDING SHRUBS OR OTHER PERMANENT PLANTINGS COVERED WITH MULCH UNIFORM AND EVENLY DISTRIBUTED GROUND COVER SUFFICIENT TO RESTRAIN EROSION STRUCTURAL METHODS SUCH AS CONCRETE, ASPHALT OR RETAINING WALLS ROLLED EROSION CONTROL PRODUCTS WITH GRASS SEED

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

- SELECT FLOCCULANTS THAT ARE APPROPRIATE FOR THE SOILS BEING EXPOSED DURING CONSTRUCTION, SELECTING FROM THE NC DWR LIST OF APPROVED PAMS/FLOCCULANTS.
- APPLY FLOCCULANTS AT OR BEFORE THE INLETS TO EROSION AND SEDIMENT CONTROL MEASURES.
- APPLY FLOCCULANTS AT THE CONCENTRATIONS SPECIFIED IN THE NC DWR LIST OF APPROVED PAMS/FLOCCULANTS AND IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
- PROVIDE PONDING AREA FOR CONTAINMENT OF TREATED STORMWATER BEFORE DISCHARGING OFFSITE.
- STORE FLOCCULANTS IN LEAK-PROOF CONTAINERS THAT ARE KEPT UNDER STORM-RESISTANT COVER OR SURROUNDED BY SECONDARY CONTAINMENT STRUCTURES.

EQUIPMENT AND VEHICLE MAINTENANCE

- MAINTAIN VEHICLES AND EQUIPMENT TO PREVENT DISCHARGE OF FLUIDS.
- PROVIDE DRIP PANS UNDER ANY STORED EQUIPMENT.
- IDENTIFY LEAKS AND REPAIR AS SOON AS FEASIBLE, OR REMOVE LEAKING EQUIPMENT FROM THE PROJECT.
- COLLECT ALL SPENT FLUIDS, STORE IN SEPARATE CONTAINERS AND PROPERLY DISPOSE AS HAZARDOUS WASTE (RECYCLE WHEN POSSIBLE).
- REMOVE LEAKING VEHICLES AND CONSTRUCTION EQUIPMENT FROM SERVICE UNTIL THE PROBLEM HAS BEEN CORRECTED.
- BRING USED FUELS, LUBRICANTS, COOLANTS, HYDRAULIC FLUIDS AND OTHER PETROLEUM PRODUCTS TO A RECYCLING OR DISPOSAL CENTER THAT HANDLES THESE MATERIALS.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

- NEVER BURY OR BURN WASTE. PLACE LITTER AND DEBRIS IN APPROVED WASTE CONTAINERS.
- PROVIDE A SUFFICIENT NUMBER AND SIZE OF WASTE CONTAINERS (E.G. DUMPSTER, TRASH RECEPTACLE) ON SITE TO CONTAIN CONSTRUCTION AND DOMESTIC WASTES.
- LOCATE WASTE CONTAINERS AT LEAST 50 FEET AWAY FROM STORM DRAIN INLETS AND SURFACE WATERS UNLESS NO OTHER ALTERNATIVES ARE REASONABLY AVAILABLE.
- LOCATE WASTE CONTAINERS ON AREAS THAT DO NOT RECEIVE SUBSTANTIAL AMOUNTS OF RUNOFF FROM UPLAND AREAS AND DOES NOT DRAIN DIRECTLY TO A STORM DRAIN, STREAM OR WETLAND.
- COVER WASTE CONTAINERS AT THE END OF EACH WORKDAY AND BEFORE STORM EVENTS OR PROVIDE SECONDARY CONTAINMENT. REPAIR OR REPLACE DAMAGED WASTE CONTAINERS.
- ANCHOR ALL LIGHTWEIGHT ITEMS IN WASTE CONTAINERS DURING TIMES OF HIGH WINDS.
- EMPTY WASTE CONTAINERS AS NEEDED TO PREVENT OVERFLOW. CLEAN UP IMMEDIATELY IF CONTAINERS OVERFLOW.
- DISPOSE WASTE OFF-SITE AT AN APPROVED DISPOSAL FACILITY.
- ON BUSINESS DAYS, CLEAN UP AND DISPOSE OF WASTE IN DESIGNATED WASTE CONTAINERS.

PAINT AND OTHER LIQUID WASTE

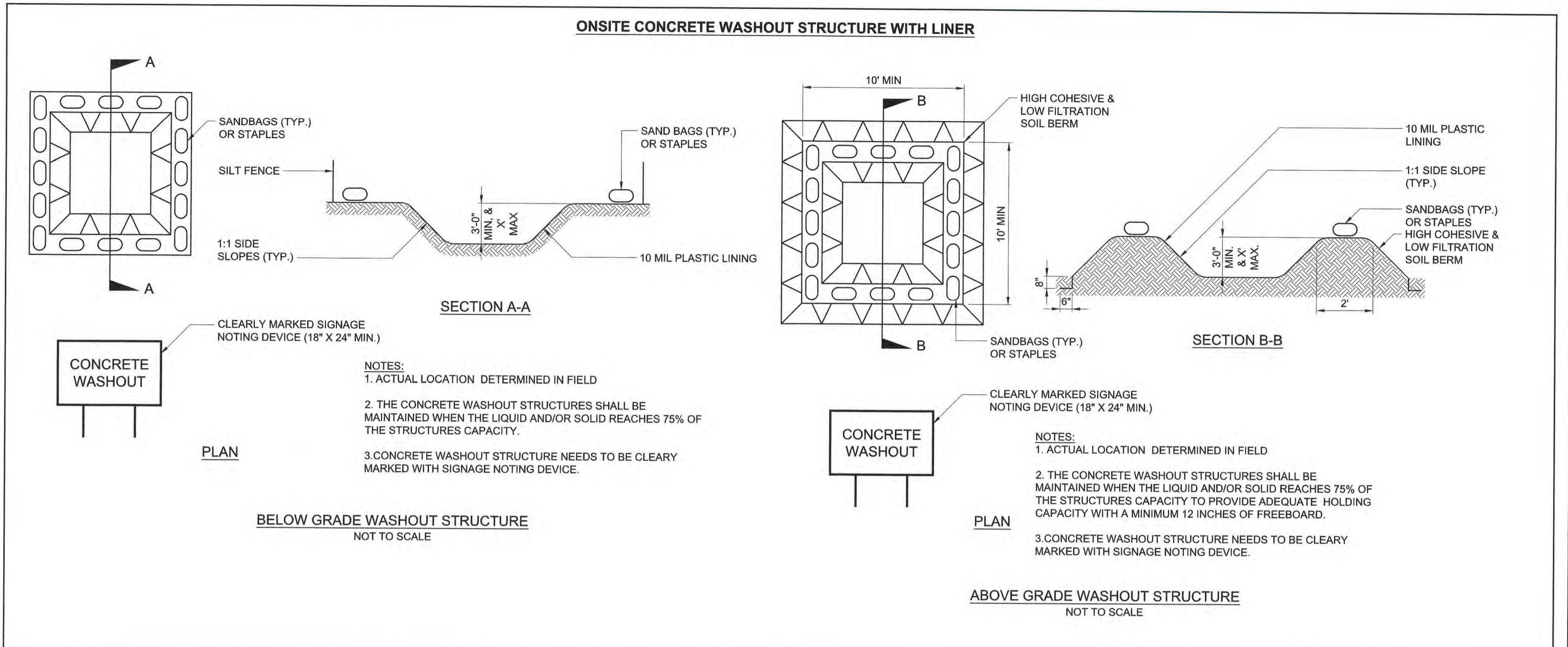
- DO NOT DUMP PAINT AND OTHER LIQUID WASTE INTO STORM DRAINS, STREAMS OR WETLANDS.
- LOCATE PAINT WASHOUTS AT LEAST 50 FEET AWAY FROM STORM DRAIN INLETS AND SURFACE WATERS UNLESS NO OTHER ALTERNATIVES ARE REASONABLY AVAILABLE.
- CONTAIN LIQUID WASTES IN A CONTROLLED AREA.
- CONTAINMENT MUST BE LABELED, SIZED AND PLACED APPROPRIATELY FOR THE NEEDS OF SITE.
- PREVENT THE DISCHARGE OF SOAPS, SOLVENTS, DETERGENTS AND OTHER LIQUID WASTES FROM CONSTRUCTION SITES.

PORTABLE TOILETS

- INSTALL PORTABLE TOILETS ON LEVEL GROUND, AT LEAST 50 FEET AWAY FROM STORM DRAINS, STREAMS OR WETLANDS UNLESS THERE IS NO ALTERNATIVE REASONABLY AVAILABLE. IF 50 FOOT OFFSET IS NOT ATTAINABLE, PROVIDE RELOCATION OF PORTABLE TOILET BEHIND SILT FENCE OR PLACE ON A GRAVEL PAD AND SURROUND WITH SAND BAGS.
- PROVIDE STAKING OR ANCHORING OF PORTABLE TOILETS DURING PERIODS OF HIGH WINDS OR IN HIGH FOOT TRAFFIC AREAS.
- MONITOR PORTABLE TOILETS FOR LEAKING AND PROPERLY DISPOSE OF ANY LEAKED MATERIAL. UTILIZE A LICENSED SANITARY WASTE HAULER TO REMOVE LEAKING PORTABLE TOILETS AND REPLACE WITH PROPERLY OPERATING UNIT.

EARTHEN STOCKPILE MANAGEMENT

- SHOW STOCKPILE LOCATIONS ON PLANS. LOCATE EARTHEN-MATERIAL STOCKPILE AREAS AT LEAST 50 FEET AWAY FROM STORM DRAIN INLETS, SEDIMENT BASINS, PERIMETER SEDIMENT CONTROLS AND SURFACE WATERS UNLESS IT CAN BE SHOWN NO OTHER ALTERNATIVES ARE REASONABLY AVAILABLE.
- PROTECT STOCKPILE WITH SILT FENCE INSTALLED ALONG TOE OF SLOPE WITH A MINIMUM OFFSET OF FIVE FEET FROM THE TOE OF STOCKPILE.
- PROVIDE STABLE STONE ACCESS POINT WHEN FEASIBLE.
- STABILIZE STOCKPILE WITHIN THE TIMEFRAMES PROVIDED ON THIS SHEET AND IN ACCORDANCE WITH THE APPROVED PLAN AND ANY ADDITIONAL REQUIREMENTS. SOIL STABILIZATION IS DEFINED AS VEGETATIVE, PHYSICAL OR CHEMICAL COVERAGE TECHNIQUES THAT WILL RESTRAIN ACCELERATED EROSION ON DISTURBED SOILS FOR TEMPORARY OR PERMANENT CONTROL NEEDS.



CONCRETE WASHOUTS

- DO NOT DISCHARGE CONCRETE OR CEMENT SLURRY FROM THE SITE.
- DISPOSE OF, OR RECYCLE SETTLED, HARDENED CONCRETE RESIDUE IN ACCORDANCE WITH LOCAL AND STATE SOLID WASTE REGULATIONS AND AT AN APPROVED FACILITY.
- MANAGE WASHOUT FROM MORTAR MIXERS IN ACCORDANCE WITH THE ABOVE ITEM AND IN ADDITION PLACE THE MIXER AND ASSOCIATED MATERIALS ON IMPERVIOUS BARRIER AND WITHIN LOT PERIMETER SILT FENCE.
- INSTALL TEMPORARY CONCRETE WASHOUTS PER LOCAL REQUIREMENTS, WHERE APPLICABLE. IF AN ALTERNATE METHOD OR PRODUCT IS TO BE USED, CONTACT YOUR APPROVAL AUTHORITY FOR REVIEW AND APPROVAL. IF LOCAL STANDARD DETAILS ARE NOT AVAILABLE, USE ONE OF THE TWO TYPES OF TEMPORARY CONCRETE WASHOUTS PROVIDED ON THIS DETAIL.
- DO NOT USE CONCRETE WASHOUTS FOR DEWATERING OR STORING DEFECTIVE CURB OR SIDEWALK SECTIONS. STORMWATER ACCUMULATED WITHIN THE WASHOUT MAY NOT BE PUMPED INTO OR DISCHARGED TO THE STORM DRAIN SYSTEM OR RECEIVING SURFACE WATERS. LIQUID WASTE MUST BE PUMPED OUT AND REMOVED FROM PROJECT.
- LOCATE WASHOUTS AT LEAST 50 FEET FROM STORM DRAIN INLETS AND SURFACE WATERS UNLESS IT CAN BE SHOWN THAT NO OTHER ALTERNATIVES ARE REASONABLY AVAILABLE. AT A MINIMUM, INSTALL PROTECTION OF STORM DRAIN INLET(S) CLOSEST TO THE WASHOUT WHICH COULD RECEIVE SPILLS OR OVERFLOW.
- LOCATE WASHOUTS IN AN EASILY ACCESSIBLE AREA, ON LEVEL GROUND AND INSTALL A STONE ENTRANCE PAD IN FRONT OF THE WASHOUT. ADDITIONAL CONTROLS MAY BE REQUIRED BY THE APPROVING AUTHORITY.
- INSTALL AT LEAST ONE SIGN DIRECTING CONCRETE TRUCKS TO THE WASHOUT WITHIN THE PROJECT LIMITS. POST SIGNAGE ON THE WASHOUT ITSELF TO IDENTIFY THIS LOCATION.
- REMOVE LEAVINGS FROM THE WASHOUT WHEN AT APPROXIMATELY 75% CAPACITY TO LIMIT OVERFLOW EVENTS. REPLACE THE TARP, SAND BAGS OR OTHER TEMPORARY STRUCTURAL COMPONENTS WHEN NO LONGER FUNCTIONAL. WHEN UTILIZING ALTERNATIVE OR PROPRIETARY PRODUCTS, FOLLOW MANUFACTURER'S INSTRUCTIONS.
- AT THE COMPLETION OF THE CONCRETE WORK, REMOVE REMAINING LEAVINGS AND DISPOSE OF IN AN APPROVED DISPOSAL FACILITY. FILL PIT, IF APPLICABLE, AND STABILIZE ANY DISTURBANCE CAUSED BY REMOVAL OF WASHOUT.

HERBICIDES, PESTICIDES AND RODENTICIDES

- STORE AND APPLY HERBICIDES, PESTICIDES AND RODENTICIDES IN ACCORDANCE WITH LABEL RESTRICTIONS.
- STORE HERBICIDES, PESTICIDES AND RODENTICIDES IN THEIR ORIGINAL CONTAINERS WITH THE LABEL, WHICH LISTS DIRECTIONS FOR USE, INGREDIENTS AND FIRST AID STEPS IN CASE OF ACCIDENTAL POISONING.
- DO NOT STORE HERBICIDES, PESTICIDES AND RODENTICIDES IN AREAS WHERE FLOODING IS POSSIBLE OR WHERE THEY MAY SPILL OR LEAK INTO WELLS, STORMWATER DRAINS, GROUND WATER OR SURFACE WATER. IF A SPILL OCCURS, CLEAN AREA IMMEDIATELY.
- DO NOT STOCKPILE THESE MATERIALS ONSITE.

HAZARDOUS AND TOXIC WASTE

- CREATE DESIGNATED HAZARDOUS WASTE COLLECTION AREAS ON-SITE.
- PLACE HAZARDOUS WASTE CONTAINERS UNDER COVER OR IN SECONDARY CONTAINMENT.
- DO NOT STORE HAZARDOUS CHEMICALS, DRUMS OR BAGGED MATERIALS DIRECTLY ON THE GROUND.

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PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	R. HUNT
DRAWN BY:	R. HUNT
CHECKED BY:	M. SANTOWASSO
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
1 CONSTRUCTION	4/2023 CWB
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4/17/2023

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HAZEN AND SAWYER
 4011 WESTCHASE BOULEVARD, SUITE 500
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PUBLIC WORKS COMMISSION
 CITY OF FAYETTEVILLE, NORTH CAROLINA

CROSS CREEK WRF AND ROCKFISH CREEK WRF
 SCREW PUMP IMPROVEMENTS

CIVIL
 GROUND STABILIZATION AND
 MATERIALS HANDLING

DATE: APRIL 2023
 HAZEN NO.: 30402-064
 CONTRACT NO.: 1
 DRAWING NUMBER: C2

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

SELF-INSPECTIONS ARE REQUIRED DURING NORMAL BUSINESS HOURS IN ACCORDANCE WITH THE TABLE BELOW. WHEN ADVERSE WEATHER OR SITE CONDITIONS WOULD CAUSE THE SAFETY OF THE INSPECTION PERSONNEL TO BE IN JEOPARDY, THE INSPECTION MAY BE DELAYED UNTIL THE NEXT BUSINESS DAY ON WHICH IT IS SAFE TO PERFORM THE INSPECTION. IN ADDITION, WHEN A STORM EVENT OF EQUAL TO OR GREATER THAN 1.0 INCH OCCURS OUTSIDE OF NORMAL BUSINESS HOURS, THE SELF-INSPECTION SHALL BE PERFORMED UPON THE COMMENCEMENT OF THE NEXT BUSINESS DAY. ANY TIME WHEN INSPECTIONS WERE DELAYED SHALL BE NOTED IN THE INSPECTION RECORD.

REQUIRED GROUND STABILIZATION TIMEFRAMES		
INSPECT	FREQUENCY (DURING NORMAL BUSINESS HOURS)	INSPECTION RECORDS MUST INCLUDE:
(1) RAIN GAUGE MAINTAINED IN GOOD WORKING ORDER	DAILY	DAILY RAINFALL AMOUNTS. IF NO DAILY RAIN GAUGE OBSERVATIONS ARE MADE DURING WEEKEND OR HOLIDAY PERIODS, AND NO INDIVIDUAL-DAY RAINFALL INFORMATION IS AVAILABLE, RECORD THE CUMULATIVE RAIN MEASUREMENT FOR THOSE UN-ATTENDED DAYS (AND THIS WILL DETERMINE IF A SITE INSPECTION IS NEEDED). DAYS ON WHICH NO RAINFALL OCCURRED SHALL BE RECORDED AS "ZERO." THE PERMITTEE MAY USE ANOTHER RAIN-MONITORING DEVICE APPROVED BY THE DIVISION.
(2) E&SC MEASURES	AT LEAST ONCE PER 7 CALENDAR DAYS AND WITHIN 24 HOURS OF A RAIN EVENT ≥ 1.0 INCH IN 24 HOURS	1. IDENTIFICATION OF THE MEASURES INSPECTED, 2. DATE AND TIME OF THE INSPECTION, 3. NAME OF THE PERSON PERFORMING THE INSPECTION, 4. INDICATION OF WHETHER THE MEASURES WERE OPERATING PROPERLY, 5. DESCRIPTION OF MAINTENANCE NEEDS FOR THE MEASURE, 6. DESCRIPTION, EVIDENCE, AND DATE OF CORRECTIVE ACTIONS TAKEN.
(3) STORMWATER DISCHARGE OUTFALLS (SDOS)	AT LEAST ONCE PER 7 CALENDAR DAYS AND WITHIN 24 HOURS OF A RAIN EVENT ≥ 1.0 INCH IN 24 HOURS	1. IDENTIFICATION OF THE MEASURES INSPECTED, 2. DATE AND TIME OF THE INSPECTION, 3. NAME OF THE PERSON PERFORMING THE INSPECTION, 4. EVIDENCE OF INDICATORS OF STORMWATER POLLUTION SUCH AS OIL SHEET, FLOATING OR SUSPENDED SOLIDS, OR DISCOLORATION, 5. INDICATION OF VISIBLE SEDIMENT LEAVING THE SITE, 6. DESCRIPTION, EVIDENCE, AND DATE OF CORRECTIVE ACTIONS TAKEN.
(4) PERIMETER OF SITE	AT LEAST ONCE PER 7 CALENDAR DAYS AND WITHIN 24 HOURS OF A RAIN EVENT ≥ 1.0 INCH IN 24 HOURS	1. IF VISIBLE SEDIMENTATION IS FOUND OUTSIDE SITE LIMITS, THEN A RECORD OF THE FOLLOWING SHALL BE MADE: 2. ACTIONS TAKEN TO CLEAN UP OR STABILIZE THE SEDIMENT THAT HAS LEFT THE SITE LIMITS, 3. DESCRIPTION, EVIDENCE, AND DATE OF CORRECTIVE ACTIONS TAKEN, AND 4. AN EXPLANATION AS TO THE ACTIONS TAKEN TO CONTROL FUTURE RELEASES.
(5) STREAMS OR WETLANDS ONSITE OR OFFSITE (WHERE ACCESSIBLE)	AT LEAST ONCE PER 7 CALENDAR DAYS AND WITHIN 24 HOURS OF A RAIN EVENT ≥ 1.0 INCH IN 24 HOURS	1. IF THE STREAM OR WETLAND HAS INCREASED VISIBLE SEDIMENTATION OR A STREAM HAS VISIBLE INCREASED TURBIDITY FROM THE CONSTRUCTION ACTIVITY, THEN A RECORD OF THE FOLLOWING SHALL BE MADE: 2. DESCRIPTION, EVIDENCE AND DATE OF CORRECTIVE ACTIONS TAKEN, AND 3. RECORDS OF THE REQUIRED REPORTS TO THE APPROPRIATE DIVISION REGIONAL OFFICE PER PART III, SECTION C, ITEM (2)(A) OF THIS PERMIT.
(6) GROUND STABILIZATION MEASURES	AFTER EACH PHASE OF GRADING	1. THE PHASE OF GRADING (INSTALLATION OF PERIMETER E&SC MEASURES, CLEARING AND GRUBBING, INSTALLATION OF STORM DRAINAGE FACILITIES, COMPLETION OF ALL LAND-DISTURBING ACTIVITY, CONSTRUCTION OR REDEVELOPMENT, PERMANENT GROUND COVER). 2. DOCUMENTATION THAT THE REQUIRED GROUND STABILIZATION MEASURES HAVE BEEN PROVIDED WITHIN THE REQUIRED TIMEFRAME OR AN ASSURANCE THAT THEY WILL BE PROVIDED AS SOON AS POSSIBLE.

NOTE: THE RAIN INSPECTION RESETS THE REQUIRED 7 DAY CALENDAR DAY INSPECTION REQUIREMENT

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC PLAN DOCUMENTATION

THE APPROVED E&SC PLAN AS WELL AS ANY APPROVED DEVIATION SHALL BE KEPT ON THE SITE. THE APPROVED E&SC PLAN MUST BE KEPT UP-TO-DATE THROUGHOUT THE COVERAGE UNDER THIS PERMIT. THE FOLLOWING ITEMS PERTAINING TO THE E&SC PLAN SHALL BE KEPT ON SITE AND AVAILABLE FOR INSPECTION AT ALL TIMES DURING NORMAL BUSINESS HOURS.

ITEM TO DOCUMENT	INSPECTION RECORDS MUST INCLUDE:
(A) EACH E&SC MEASURE HAS BEEN INSTALLED AND DOES NOT SIGNIFICANTLY DEVIATE FROM THE LOCATIONS, DIMENSIONS AND RELATIVE ELEVATIONS SHOWN ON THE APPROVED E&SC PLAN.	INITIAL AND DATE EACH E&SC MEASURE ON A COPY OF THE APPROVED E&SC PLAN OR COMPLETE, DATE AND SIGN AN INSPECTION REPORT THAT LISTS EACH E&SC MEASURE SHOWN ON THE APPROVED E&SC PLAN. THIS DOCUMENTATION IS REQUIRED UPON THE INITIAL INSTALLATION OF THE E&SC MEASURES OR IF THE E&SC MEASURES ARE MODIFIED AFTER INITIAL INSTALLATION.
(B) A PHASE OF GRADING HAS BEEN COMPLETED.	INITIAL AND DATE A COPY OF THE APPROVED E&SC PLAN OR COMPLETE, DATE AND SIGN AN INSPECTION REPORT TO INDICATE COMPLETION OF THE CONSTRUCTION PHASE.
(C) GROUND COVER IS LOCATED AND INSTALLED IN ACCORDANCE WITH THE APPROVED E&SC PLAN.	INITIAL AND DATE A COPY OF THE APPROVED E&SC PLAN OR COMPLETE, DATE AND SIGN AN INSPECTION REPORT TO INDICATE COMPLIANCE WITH APPROVED GROUND COVER SPECIFICATIONS.
(D) THE MAINTENANCE AND REPAIR REQUIREMENTS FOR ALL E&SC MEASURES HAVE BEEN PERFORMED.	COMPLETE, DATE AND SIGN AN INSPECTION REPORT.
(E) CORRECTIVE ACTIONS HAVE BEEN TAKEN TO E&SC MEASURES.	INITIAL AND DATE A COPY OF THE APPROVED E&SC PLAN OR COMPLETE, DATE AND SIGN AN INSPECTION REPORT TO INDICATE THE COMPLETION OF THE CORRECTIVE ACTION.

2. ADDITIONAL DOCUMENTATION TO BE KEPT ON SITE

IN ADDITION TO THE E&SC PLAN DOCUMENTS ABOVE, THE FOLLOWING ITEMS SHALL BE KEPT ON THE SITE AND AVAILABLE FOR INSPECTORS AT ALL TIMES DURING NORMAL BUSINESS HOURS, UNLESS THE DIVISION PROVIDES A SITE-SPECIFIC EXEMPTION BASED ON UNIQUE SITE CONDITIONS THAT MAKE THIS REQUIREMENT NOT PRACTICAL:

- (A) THIS GENERAL PERMIT AS WELL AS THE CERTIFICATE OF COVERAGE, AFTER IT IS RECEIVED.
- (B) RECORDS OF INSPECTIONS MADE DURING THE PREVIOUS TWELVE MONTHS. THE PERMITTEE SHALL RECORD THE REQUIRED OBSERVATIONS ON THE INSPECTION RECORD FORM PROVIDED BY THE DIVISION OR A SIMILAR INSPECTION FORM THAT INCLUDES ALL THE REQUIRED ELEMENTS. USE OF ELECTRONICALLY-AVAILABLE RECORDS IN LIEU OF THE REQUIRED PAPER COPIES WILL BE ALLOWED IF SHOWN TO PROVIDE EQUAL ACCESS AND UTILITY AS THE HARD-COPY RECORDS.

3. DOCUMENTATION TO BE RETAINED FOR THREE YEARS

ALL DATA USED TO COMPLETE THE E-NOI AND ALL INSPECTION RECORDS SHALL BE MAINTAINED FOR A PERIOD OF THREE YEARS AFTER PROJECT COMPLETION AND MADE AVAILABLE UPON REQUEST. [40 CFR 122.41]

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. OCCURRENCES THAT MUST BE REPORTED

PERMITTEES SHALL REPORT THE FOLLOWING OCCURRENCES:

- (A) VISIBLE SEDIMENT DEPOSITION IN A STREAM OR WETLAND
- (B) OIL SPILLS IF:
 - THEY ARE 25 GALLONS OR MORE,
 - THEY ARE LESS THAN 25 GALLONS BUT CANNOT BE CLEANED UP WITHIN 24 HOURS,
 - THEY CAUSE SHEET ON WATERS (REGARDLESS OF VOLUME), OR
 - THEY ARE WITHIN 100 FEET OF SURFACE WATERS (REGARDLESS OF VOLUME).
- (C) RELEASES OF HAZARDOUS SUBSTANCES IN EXCESS OF REPORTABLE QUANTITIES UNDER SECTION 311 OF THE CLEAN WATER ACT (REF: 40 CFR 110.3 AND 40 CFR 117.3) OR SECTION 102 OF CERCLA (REF: 40 CFR 302.4) OR G.S. 143-215.85.
- (D) ANTICIPATED BYPASSES AND UNANTICIPATED BYPASS
- (E) NONCOMPLIANCE WITH THE CONDITIONS OF THIS PERMIT THAT MAY ENDANGER HEALTH OR THE ENVIRONMENT.

2. REPORTING TIMEFRAMES AND OTHER REQUIREMENTS

AFTER A PERMITTEE BECOMES AWARE OF AN OCCURRENCE THAT MUST BE REPORTED, HE SHALL CONTACT THE APPROPRIATE DIVISION REGIONAL OFFICE WITHIN THE TIMEFRAMES AND IN ACCORDANCE WITH THE OTHER REQUIREMENTS LISTED BELOW. OCCURRENCES OUTSIDE NORMAL BUSINESS HOURS MAY ALSO BE REPORTED TO THE DEPARTMENT'S ENVIRONMENTAL EMERGENCY CENTER PERSONNEL AT (800) 858-0368.

OCCURRENCE	REPORTING TIMEFRAME (AFTER DISCOVERY) AND OTHER REQUIREMENTS
(A) VISIBLE SEDIMENT DEPOSITION IN A STREAM OR WETLAND	<ul style="list-style-type: none"> • WITHIN 24 HOURS, AN ORAL OR ELECTRONIC NOTIFICATION. • WITHIN 7 CALENDAR DAYS, A REPORT THAT CONTAINS A DESCRIPTION OF THE SEDIMENT AND ACTIONS TAKEN TO ADDRESS THE CAUSE OF THE DEPOSITION. DIVISION STAFF MAY WAIVE THE REQUIREMENT FOR A WRITTEN REPORT ON A CASE-BY-CASE BASIS. • IF THE STREAM IS NAMED ON THE NC 303(D) LIST AS IMPAIRED FOR SEDIMENT-RELATED CAUSES, THE PERMITTEE MAY BE REQUIRED TO PERFORM ADDITIONAL MONITORING, INSPECTIONS OR APPLY MORE STRINGENT PRACTICES IF STAFF DETERMINE THAT ADDITIONAL REQUIREMENTS ARE NEEDED TO ASSURE COMPLIANCE WITH THE FEDERAL OR STATE IMPAIRED-WATERS CONDITIONS.
(B) OIL SPILLS AND RELEASE OF HAZARDOUS SUBSTANCES PER ITEM 1(B)-(C) ABOVE	<ul style="list-style-type: none"> • WITHIN 24 HOURS, AN ORAL OR ELECTRONIC NOTIFICATION. THE NOTIFICATION SHALL INCLUDE INFORMATION ABOUT THE DATE, TIME, NATURE, VOLUME AND LOCATION OF THE SPILL OR RELEASE.
(C) ANTICIPATED BYPASSES [40 CFR 122.41(M)(3)]	<ul style="list-style-type: none"> • A REPORT AT LEAST TEN DAYS BEFORE THE DATE OF THE BYPASS, IF POSSIBLE. THE REPORT SHALL INCLUDE AN EVALUATION OF THE ANTICIPATED QUALITY AND EFFECT OF THE BYPASS.
(D) UNANTICIPATED BYPASSES [40 CFR 122.41(M)(3)]	<ul style="list-style-type: none"> • WITHIN 24 HOURS, AN ORAL OR ELECTRONIC NOTIFICATION. • WITHIN 7 CALENDAR DAYS, A REPORT THAT INCLUDES AN EVALUATION OF THE QUALITY AND EFFECT OF THE BYPASS.
(E) NONCOMPLIANCE WITH THE CONDITIONS OF THIS PERMIT THAT MAY ENDANGER HEALTH OR THE ENVIRONMENT [40 CFR 122.41(L)(7)]	<ul style="list-style-type: none"> • WITHIN 24 HOURS, AN ORAL OR ELECTRONIC NOTIFICATION. • WITHIN 7 CALENDAR DAYS, A REPORT THAT CONTAINS A DESCRIPTION OF THE NONCOMPLIANCE, AND ITS CAUSES; THE PERIOD OF NONCOMPLIANCE, INCLUDING EXACT DATES AND TIMES, AND IF THE NONCOMPLIANCE HAS NOT BEEN CORRECTED, THE ANTICIPATED TIME NONCOMPLIANCE IS EXPECTED TO CONTINUE; AND STEPS TAKEN OR PLANNED TO REDUCE, ELIMINATE, AND PREVENT REOCCURRENCE OF THE NONCOMPLIANCE. [40 CFR 122.41(L)(6)]. • DIVISION STAFF MAY WAIVE THE REQUIREMENT FOR A WRITTEN REPORT ON A CASE-BY-CASE BASIS.

PART II, SECTION G, ITEM (4)
DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

SEDIMENT BASINS AND TRAPS THAT RECEIVE RUNOFF FROM DRAINAGE AREAS OF ONE ACRE OR MORE SHALL USE OUTLET STRUCTURES THAT WITHDRAW WATER FROM THE SURFACE WHEN THESE DEVICES NEED TO BE DRAWN DOWN FOR MAINTENANCE OR CLOSE OUT UNLESS THIS IS INFEASIBLE. THE CIRCUMSTANCES IN WHICH IT IS NOT FEASIBLE TO WITHDRAW WATER FROM THE SURFACE SHALL BE RARE (FOR EXAMPLE, TIMES WITH EXTENDED COLD WEATHER). NON-SURFACE WITHDRAWALS FROM SEDIMENT BASINS SHALL BE ALLOWED ONLY WHEN ALL OF THE FOLLOWING CRITERIA HAVE BEEN MET:

- (A) THE E&SC PLAN AUTHORITY HAS BEEN PROVIDED WITH DOCUMENTATION OF THE NON-SURFACE WITHDRAWAL AND THE SPECIFIC TIME PERIODS OR CONDITIONS IN WHICH IT WILL OCCUR. THE NON-SURFACE WITHDRAWAL SHALL NOT COMMENCE UNTIL THE E&SC PLAN AUTHORITY HAS APPROVED THESE ITEMS.
- (B) THE NON-SURFACE WITHDRAWAL HAS BEEN REPORTED AS AN ANTICIPATED BYPASS IN ACCORDANCE WITH PART III, SECTION C, ITEM (2)(C) AND (D) OF THIS PERMIT.
- (C) DEWATERING DISCHARGES ARE TREATED WITH CONTROLS TO MINIMIZE DISCHARGES OF POLLUTANTS FROM STORMWATER THAT IS REMOVED FROM THE SEDIMENT BASIN. EXAMPLES OF APPROPRIATE CONTROLS INCLUDE PROPERLY SITED, DESIGNED AND MAINTAINED DEWATERING TANKS, WEIR TANKS, AND FILTRATION SYSTEMS.
- (D) VEGETATED, UPLAND AREAS OF THE SITES OR A PROPERLY DESIGNED STONE PAD IS USED TO THE EXTENT FEASIBLE AT THE OUTLET OF THE DEWATERING TREATMENT DEVICES DESCRIBED IN ITEM (C) ABOVE.
- (E) VELOCITY DISSIPATION DEVICES SUCH AS CHECK DAMS, SEDIMENT TRAPS, AND RIPRAP ARE PROVIDED AT THE DISCHARGE POINTS OF ALL DEWATERING DEVICES, AND
- (F) SEDIMENT REMOVED FROM THE DEWATERING TREATMENT DEVICES DESCRIBED IN ITEM (C) ABOVE IS DISPOSED OF IN A MANNER THAT DOES NOT CAUSE DEPOSITION OF SEDIMENT INTO WATERS OF THE UNITED STATES.

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REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	R. HUNT
DRAWN BY:	R. HUNT
CHECKED BY:	M. SANTOWASSO
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RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

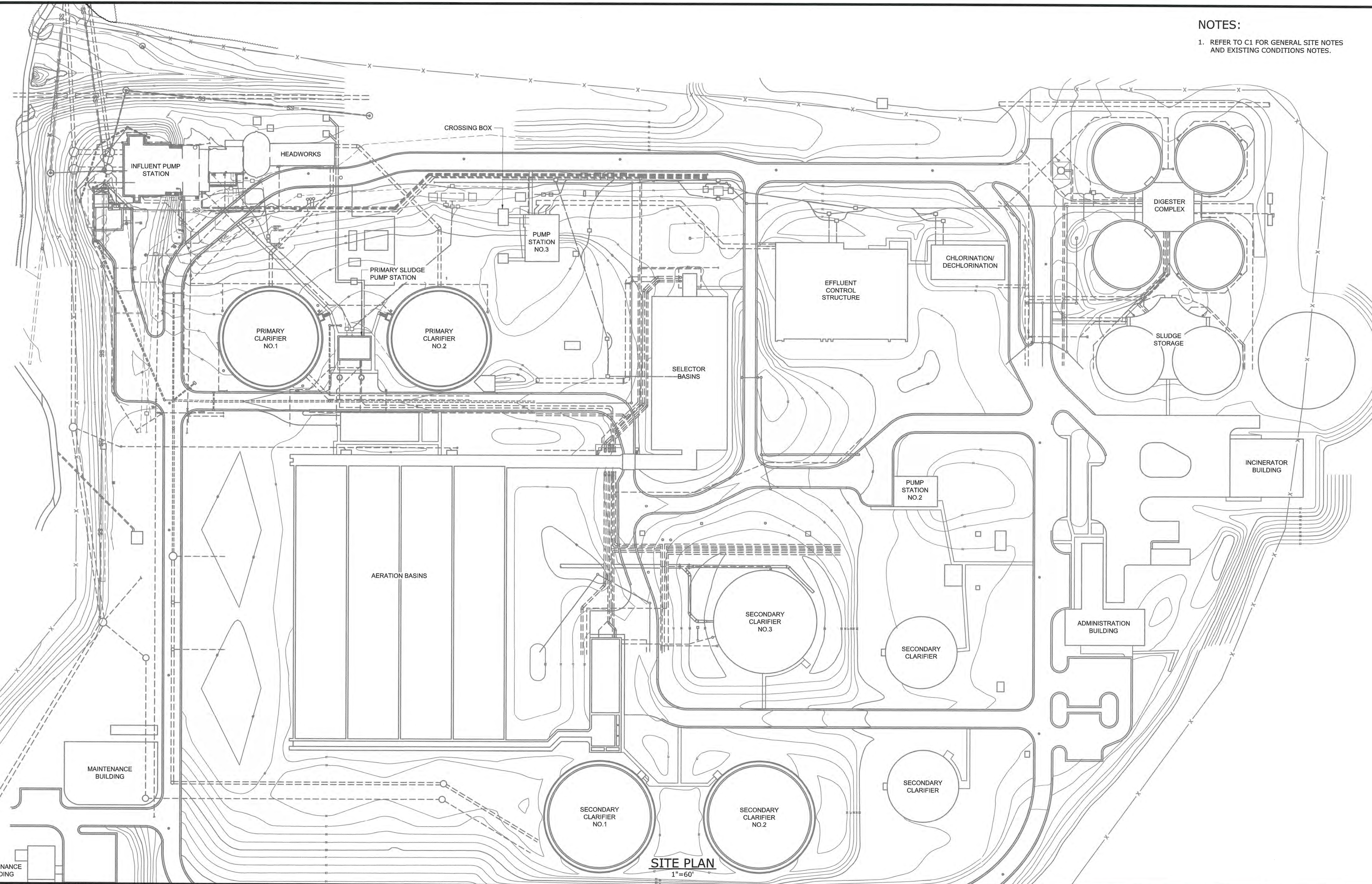
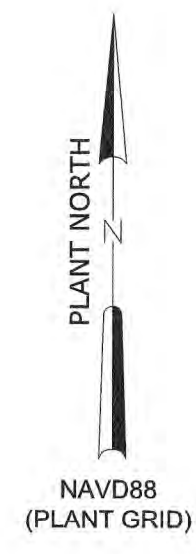
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CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

CIVIL
INSPECTION REPORTING AND
RECORD KEEPING

DATE: APRIL 2023
HAZEN NO.: 30402-064
CONTRACT NO.: 1
DRAWING NUMBER:
C3

NOTES:
 1. REFER TO C1 FOR GENERAL SITE NOTES AND EXISTING CONDITIONS NOTES.



SITE PLAN
 1"=60'

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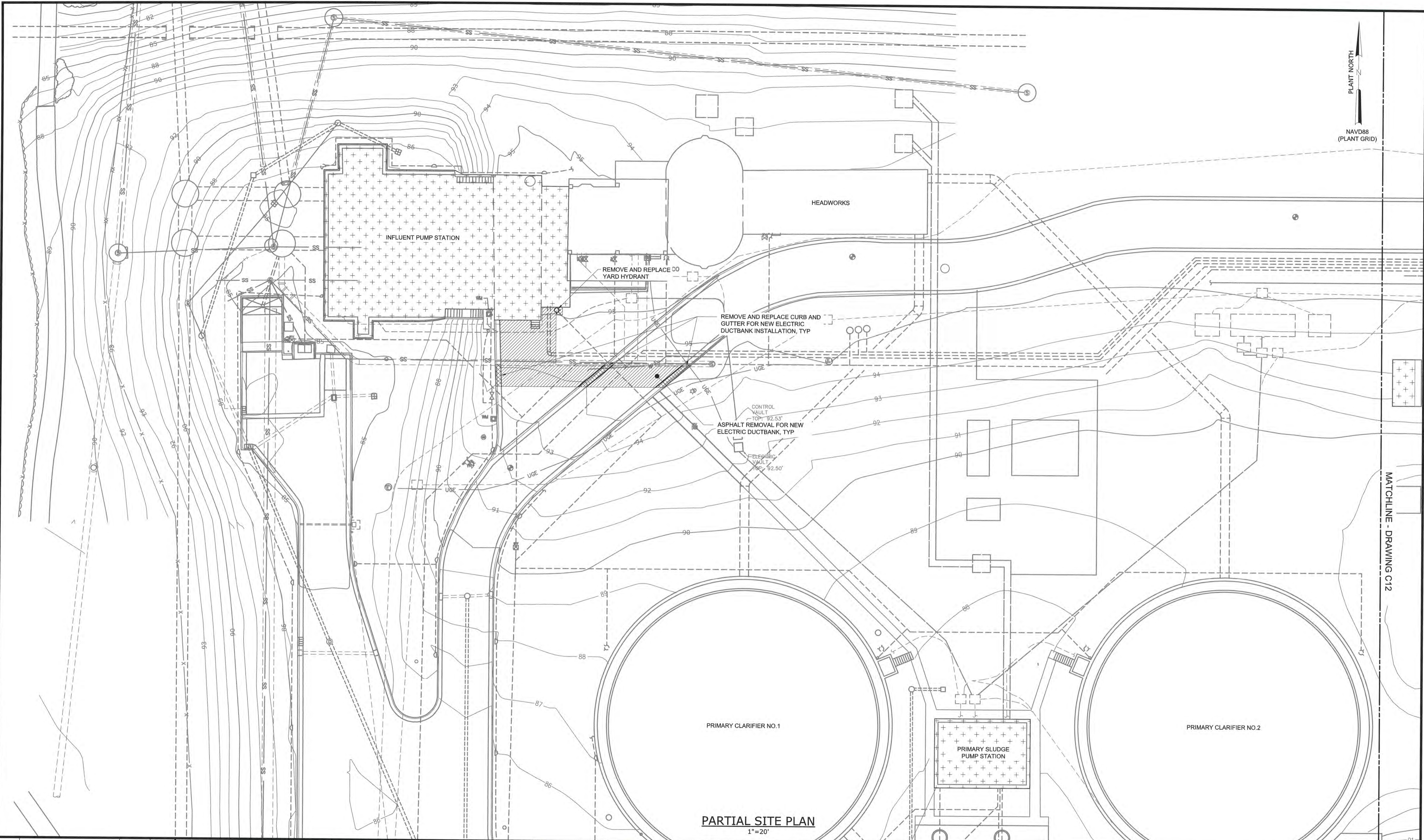
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CIVIL
OVERALL EXISTING CONDITIONS
PLAN

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	C10



PARTIAL SITE PLAN
1" = 20'

MATCHLINE - DRAWING C12

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1	CONSTRUCTION	4/2023	CWB
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DRAWN BY:	R. HUNT
CHECKED BY:	M. SANTOWASSO
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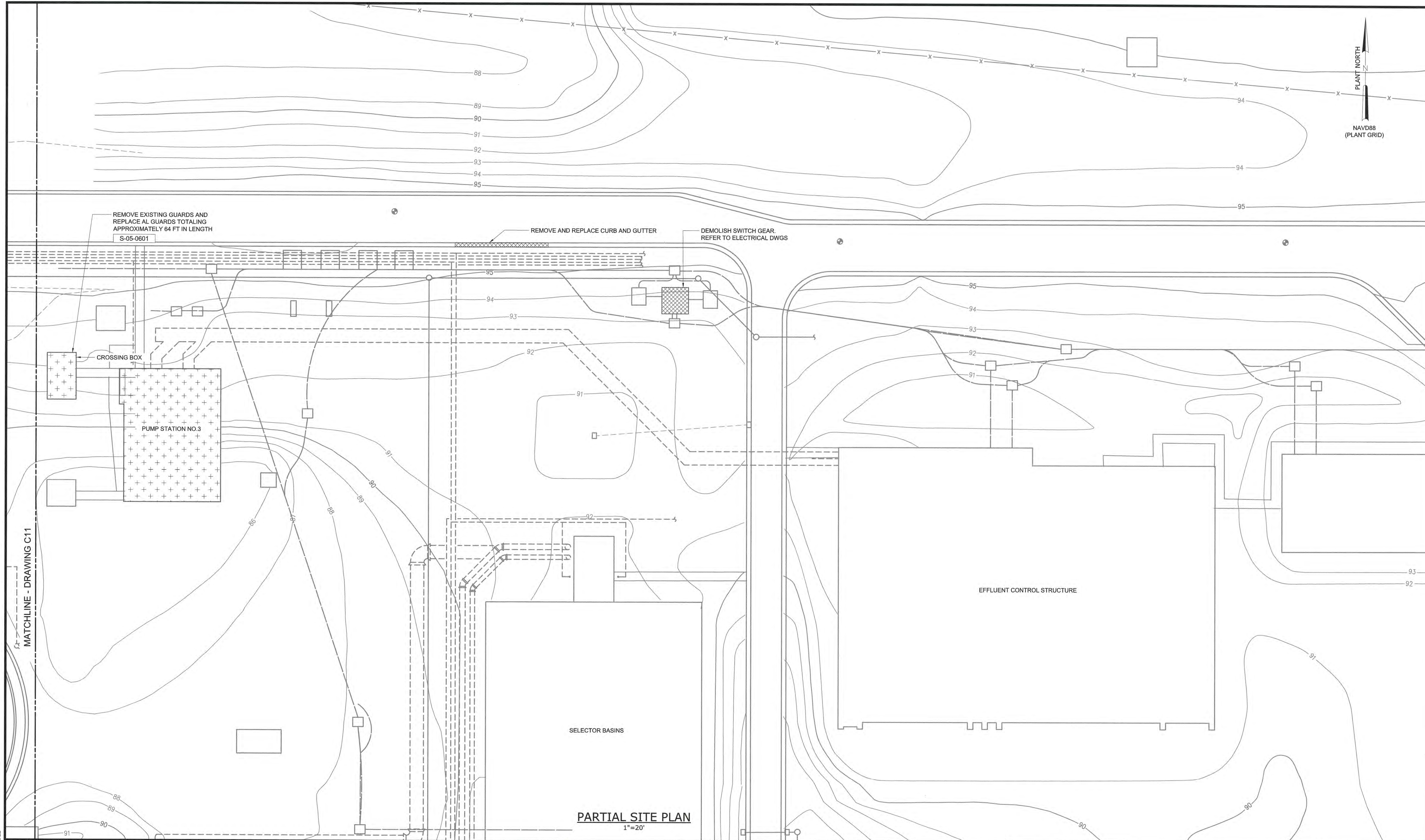
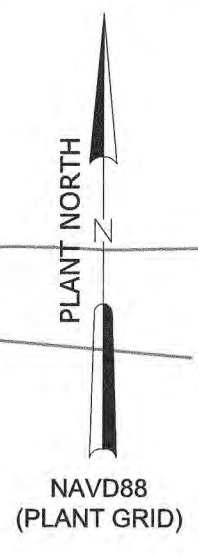
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**CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS**

CIVIL
**EXISTING CONDITIONS AND
DEMOLITION PLAN - AREA 1**

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	



MATCHLINE - DRAWING C11

PARTIAL SITE PLAN
1"=20'

1	CONSTRUCTION	4/2023	CWB
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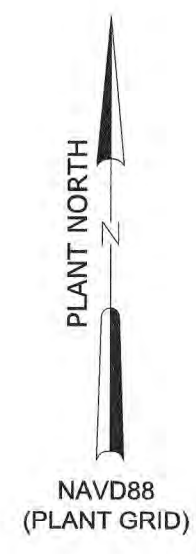
CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

CIVIL
EXISTING CONDITIONS AND
DEMOLITION PLAN - AREA 2

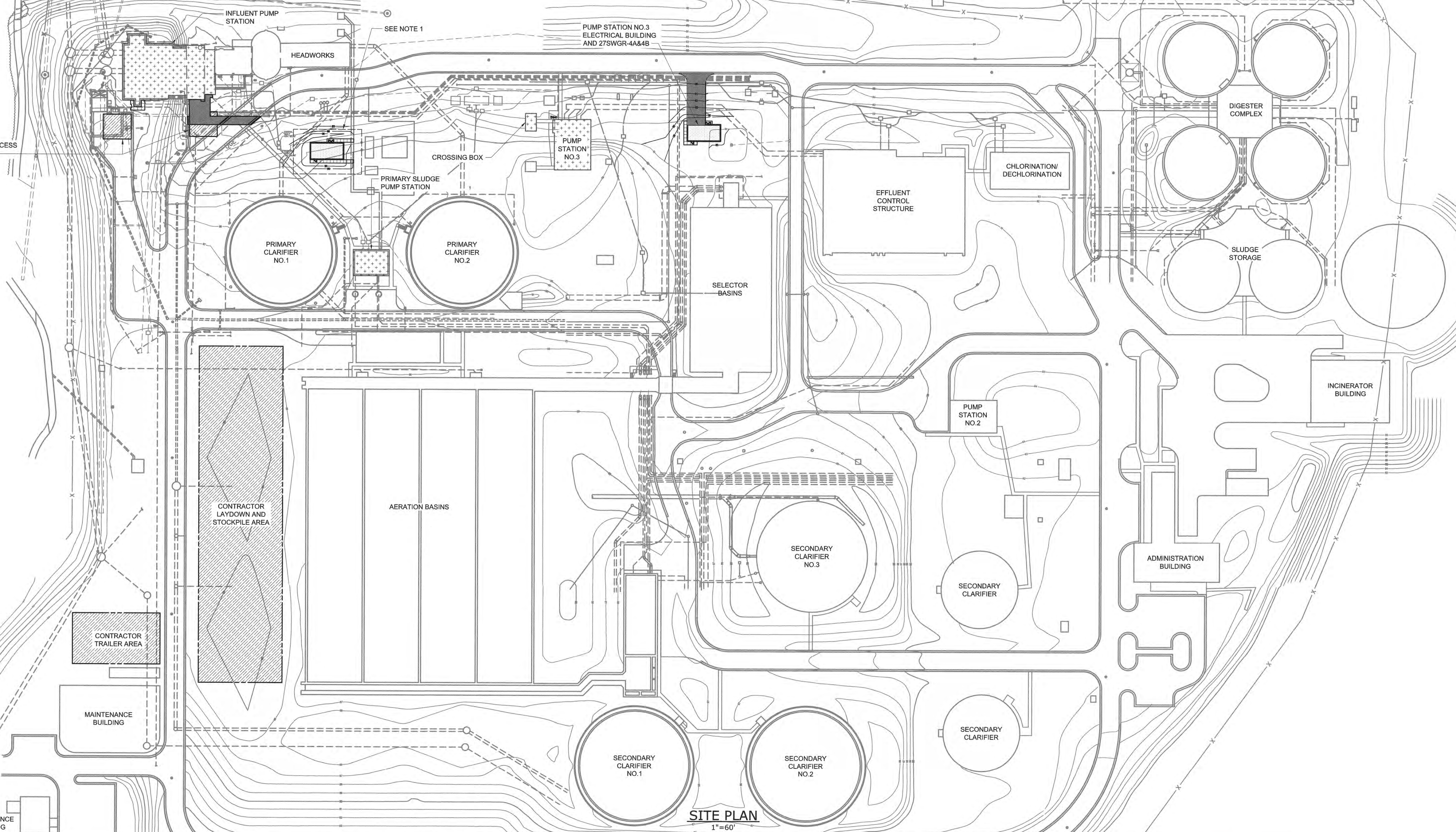
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- NOTES:**
1. WORK SHOWN SHALL BE PART OF BID ALTERNATE AS DETAILED IN SPECIFICATION SECTION 00300 - PROPOSAL.
 2. CONTRACTOR TO DETERMINE REQUIRED CRANE SIZE THEN COORDINATE LOCATION OF CRANE STAGING AREA WITH OWNER.



SUGGESTED CRANE ACCESS AREA, SEE NOTE 2

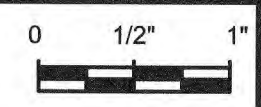


SITE PLAN
1"=60'

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REV	ISSUED FOR	DATE	BY

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE



ISSUED FOR CONSTRUCTION

4/17/23

Hazen

HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA

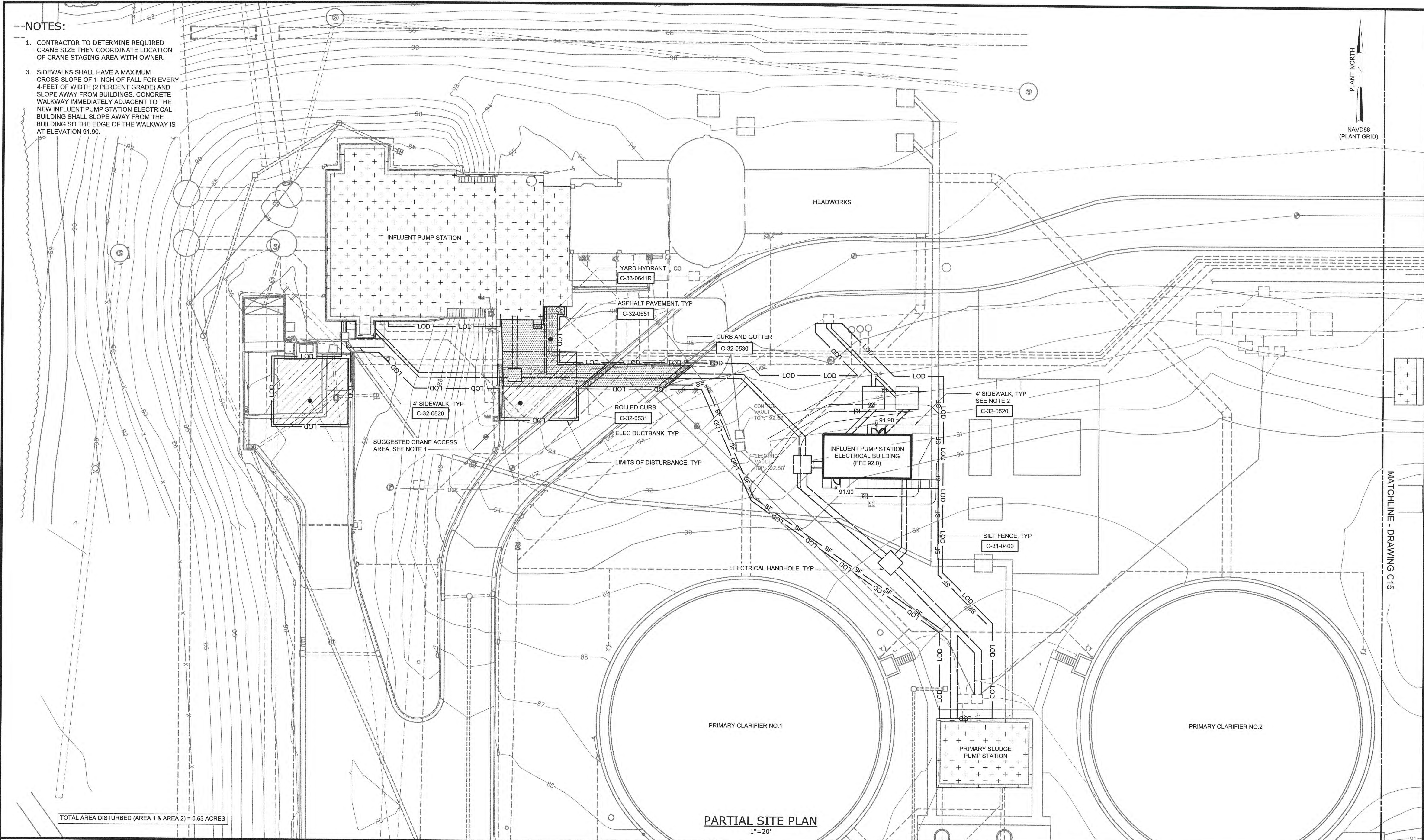
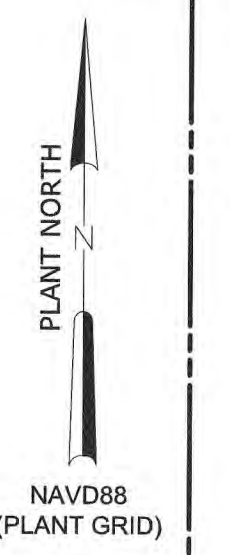
CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

CIVIL
OVERALL SITE PLAN

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	C13

NOTES:

1. CONTRACTOR TO DETERMINE REQUIRED CRANE SIZE THEN COORDINATE LOCATION OF CRANE STAGING AREA WITH OWNER.
3. SIDEWALKS SHALL HAVE A MAXIMUM CROSS-SLOPE OF 1-INCH OF FALL FOR EVERY 4-FEET OF WIDTH (2 PERCENT GRADE) AND SLOPE AWAY FROM BUILDINGS. CONCRETE WALKWAY IMMEDIATELY ADJACENT TO THE NEW INFLUENT PUMP STATION ELECTRICAL BUILDING SHALL SLOPE AWAY FROM THE BUILDING SO THE EDGE OF THE WALKWAY IS AT ELEVATION 91.90.



TOTAL AREA DISTURBED (AREA 1 & AREA 2) = 0.63 ACRES

PARTIAL SITE PLAN
1"=20'

MATCHLINE - DRAWING C15

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PLOT DATE: 4/14/2023 11:54 AM BY: RHUNT

PROJECT ENGINEER:	M. MESSERE		
DESIGNED BY:	R. HUNT		
DRAWN BY:	R. HUNT		
CHECKED BY:	M. SANTOWASSO		
1	CONSTRUCTION	4/2023	CWB
REV	ISSUED FOR	DATE	BY

ISSUED FOR CONSTRUCTION

4/17/2023

Hazen

HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA

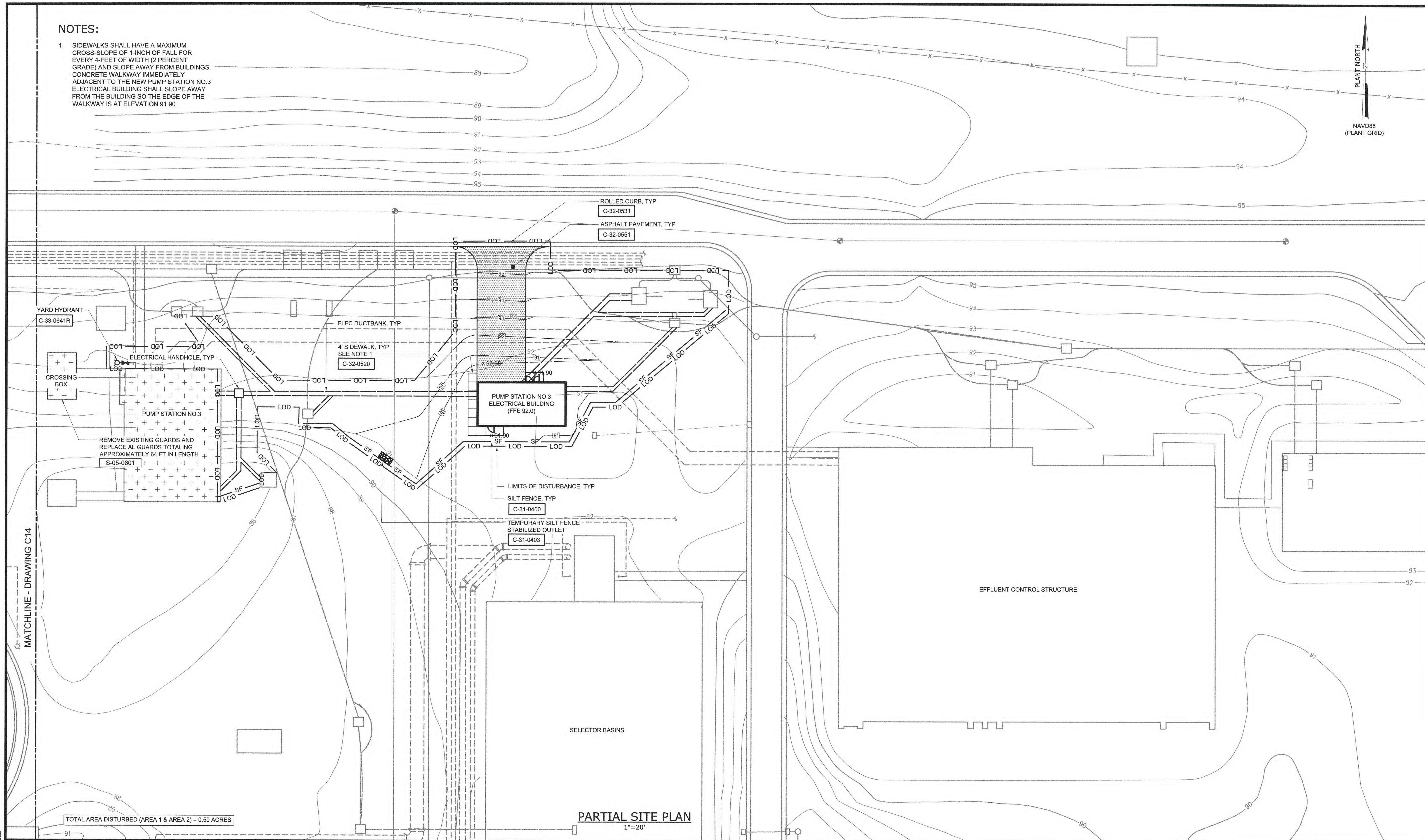
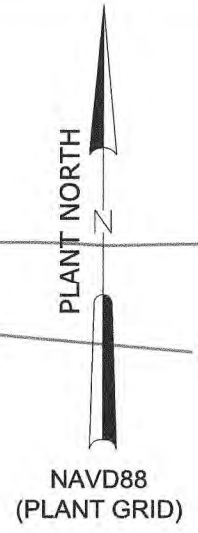
CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

CIVIL
PARTIAL SITE PLAN - AREA 1

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	C14

NOTES:

1. SIDEWALKS SHALL HAVE A MAXIMUM CROSS-SLOPE OF 1-INCH OF FALL FOR EVERY 4 FEET OF WIDTH (2 PERCENT GRADE) AND SLOPE AWAY FROM BUILDINGS. CONCRETE WALKWAY IMMEDIATELY ADJACENT TO THE NEW PUMP STATION NO.3 ELECTRICAL BUILDING SHALL SLOPE AWAY FROM THE BUILDING SO THE EDGE OF THE WALKWAY IS AT ELEVATION 91.90.



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REV	ISSUED FOR	DATE	BY
1	CONSTRUCTION	4/2023	CWB

PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	R. HUNT
DRAWN BY:	R. HUNT
CHECKED BY:	M. SANTOWASSO

ISSUED FOR CONSTRUCTION

4/17/2023

Hazen

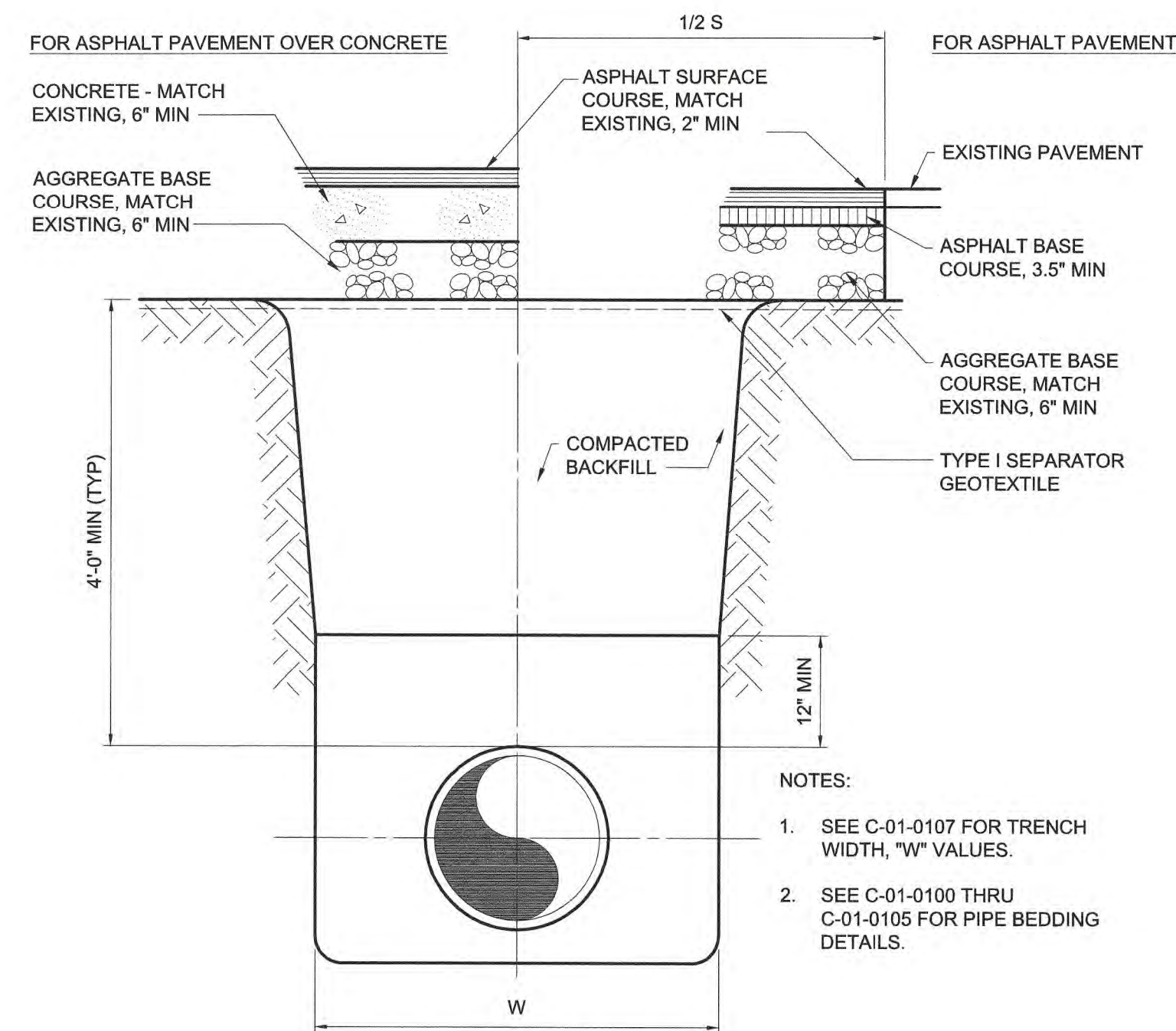
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA

CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

CIVIL
PARTIAL SITE PLAN - AREA 2

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	C15

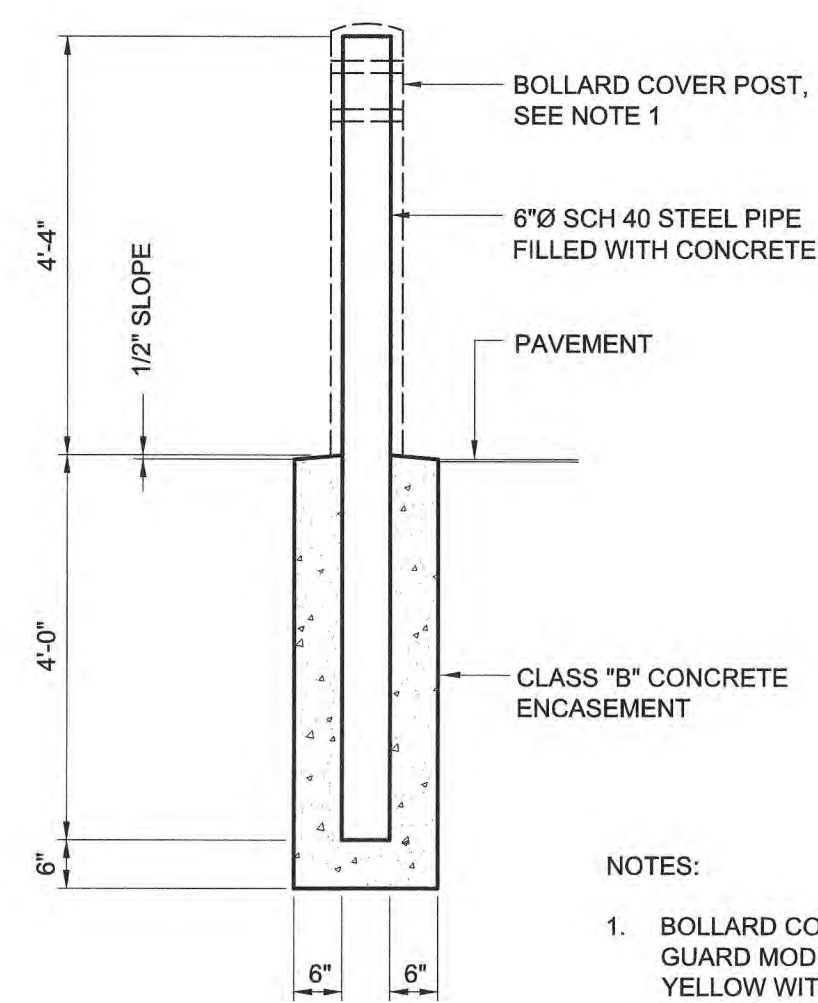


TYPICAL TRENCH
C-01-0106

TRENCH EXCAVATION LIMITS		
INTERNAL DIAMETER OF PIPE	WIDTH OF TRENCH	
	MAX	W=MIN
4'-6"	3'-9"	2'-0"
8'-10"	3'-9"	2'-2"
12"	3'-9"	O.D.+2'
14'-16"	4'-2"	O.D.+2'
18"	4'-4"	O.D.+2'
20'-21"	4'-8"	O.D.+2'
24"	4'-11"	O.D.+2'
27"	5'-9"	O.D.+2'
30"	6'-7"	O.D.+2'
36"	7'-4"	O.D.+2'
42"	8'-2"	O.D.+2'
48"	8'-9"	O.D.+2'
54"	9'-4"	O.D.+2'
60"	9'-10"	O.D.+2'
72"	11'-0"	O.D.+2'
78"	11'-8"	O.D.+2'
84"	12'-0"	O.D.+2'
90"	12'-6"	O.D.+2'
96"	13'-0"	O.D.+2'
108"	14'-0"	O.D.+2'
DEPTH OF CUT	S MAXIMUM PAVEMENT REPLACEMENT WIDTH	
0-6'	S=W+4'	
>6-8'	S=W+8'	
>8-10'	S=W+12'	
>10-12'	S=W+16'	
>12-14'	S=W+20'	
>14-16'	S=W+24'	
>16-18'	S=W+28'	
>18'	S=W+32'	

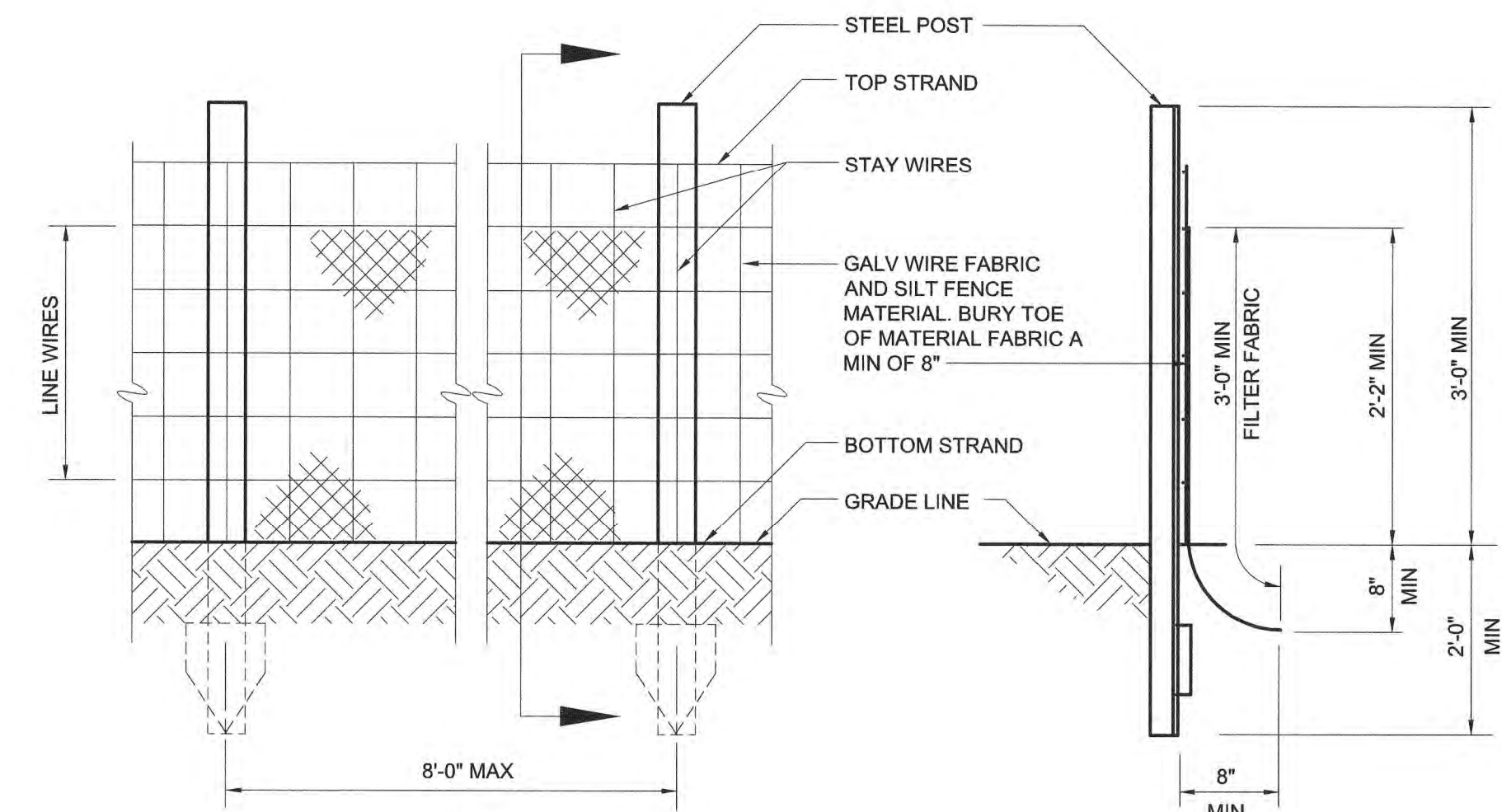
W = TRENCH WIDTH AT BOTTOM OF PIPE. TRENCH SIDE SLOPES SHALL BE IN ACCORDANCE WITH OSHA REQUIREMENTS.

C-01-0107



BOLLARD TYPE 1
C-32-0540

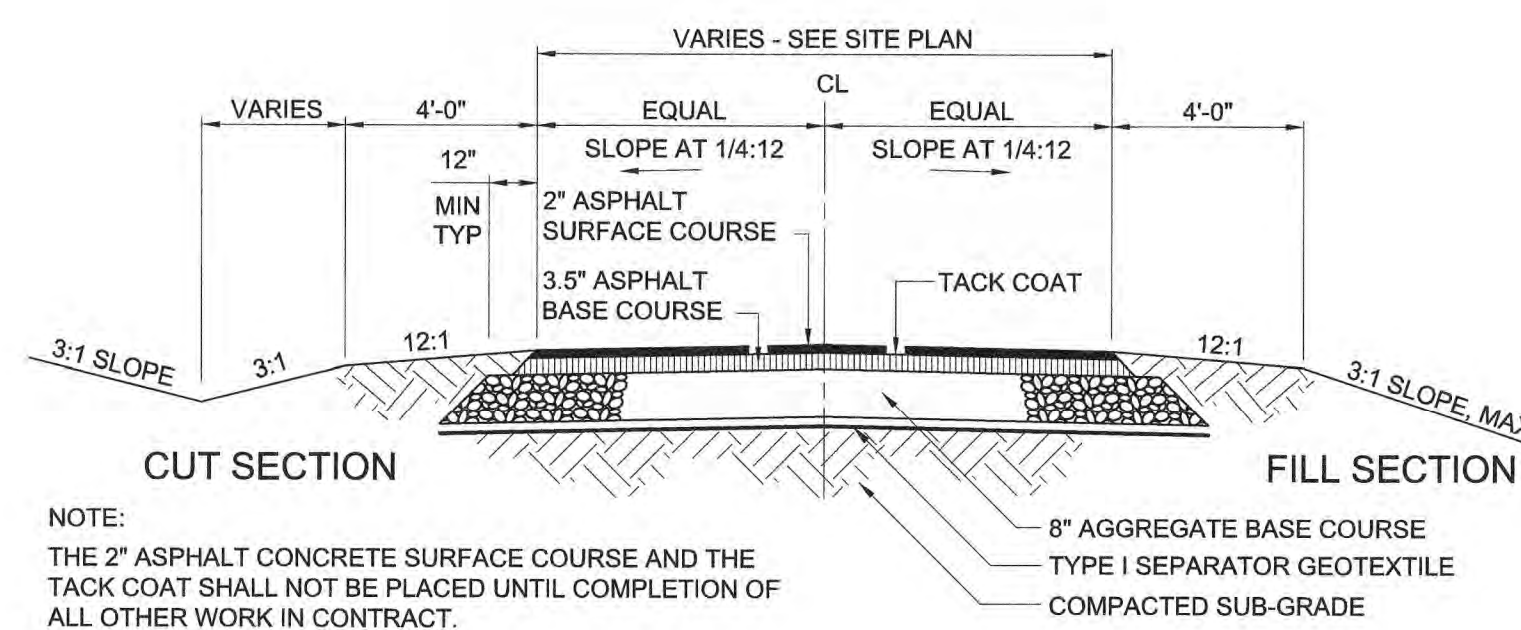
- NOTES:
- BOLLARD COVER SHALL BE POST GUARD MODEL CL1386F 7'0x52" HIGH, YELLOW WITH REFLECTIVE RED STRIPES, OR APPROVED EQUAL AND SECURED TO STEEL PIPE WITH COMPRESSIVE FOAM STRIPS.



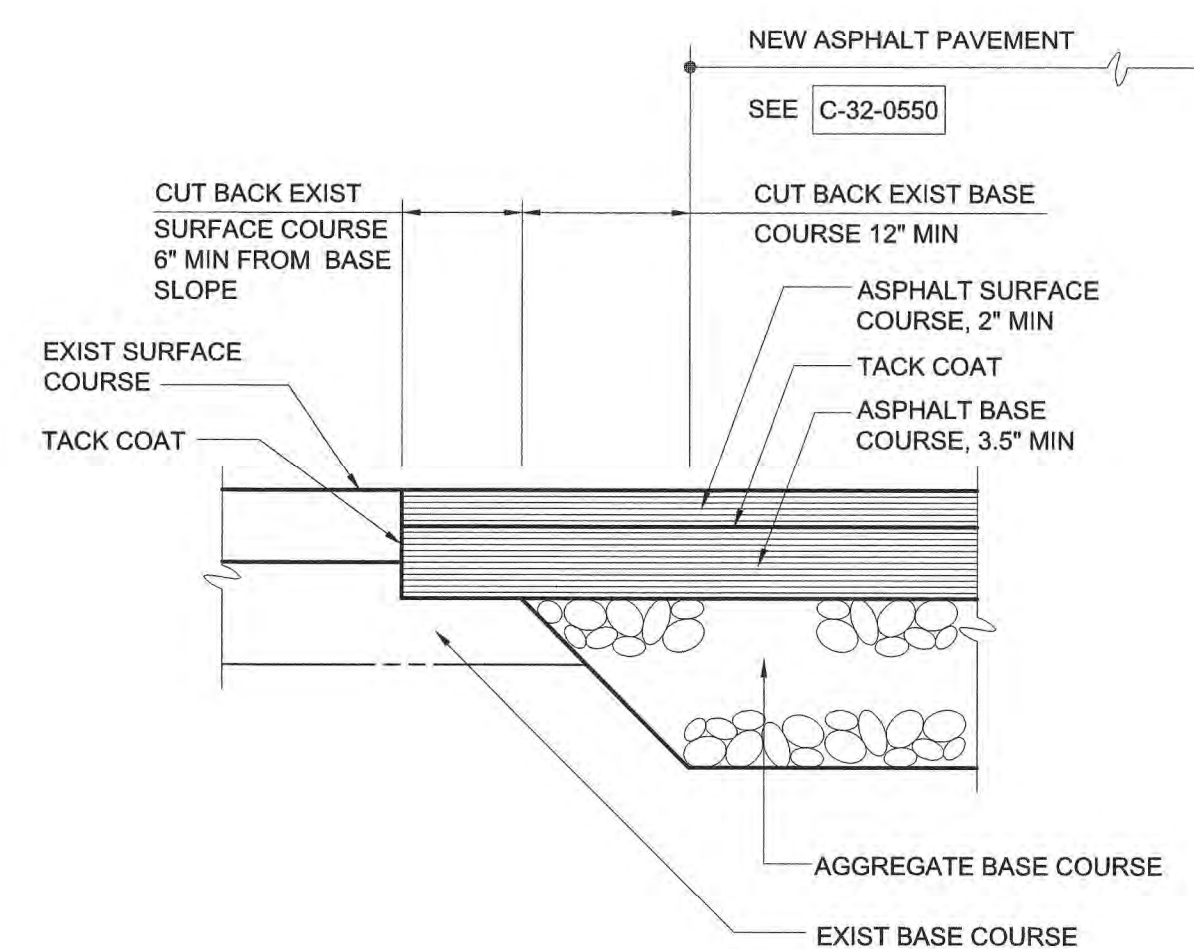
ELEVATION SILT FENCE
SECTION SILT FENCE

- NOTE:
- EXTRA STRENGTH SILT FENCE MATERIAL (AS APPROVED BY ENGINEER) WITH 6'-0" POST SPACING DOES NOT REQUIRE MESH SUPPORT FENCE.
 - SILT FENCE MATERIAL SHALL BE WIRED DIRECTLY TO POST.

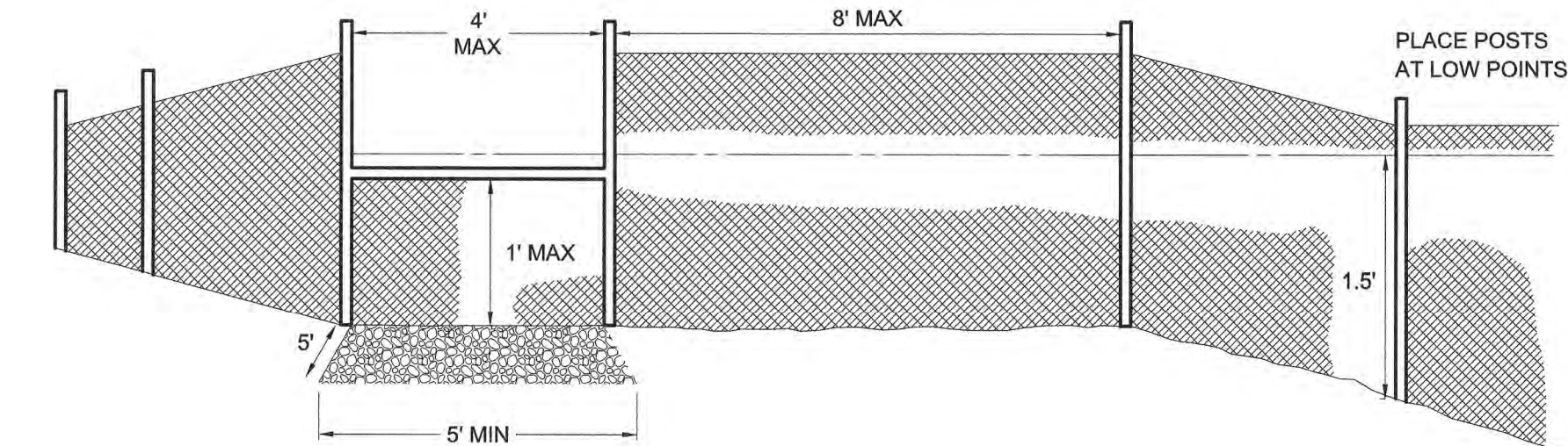
C-31-0400



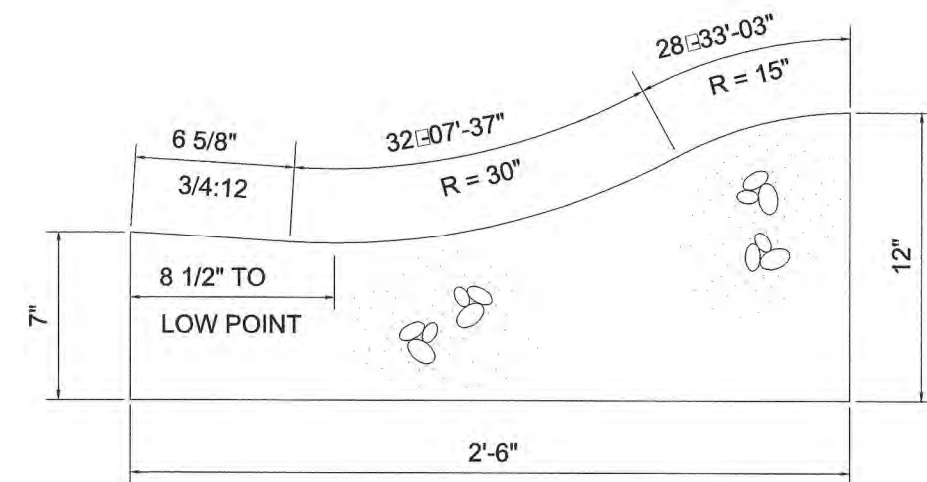
TYPICAL ROADWAY SECTION
C-32-0551



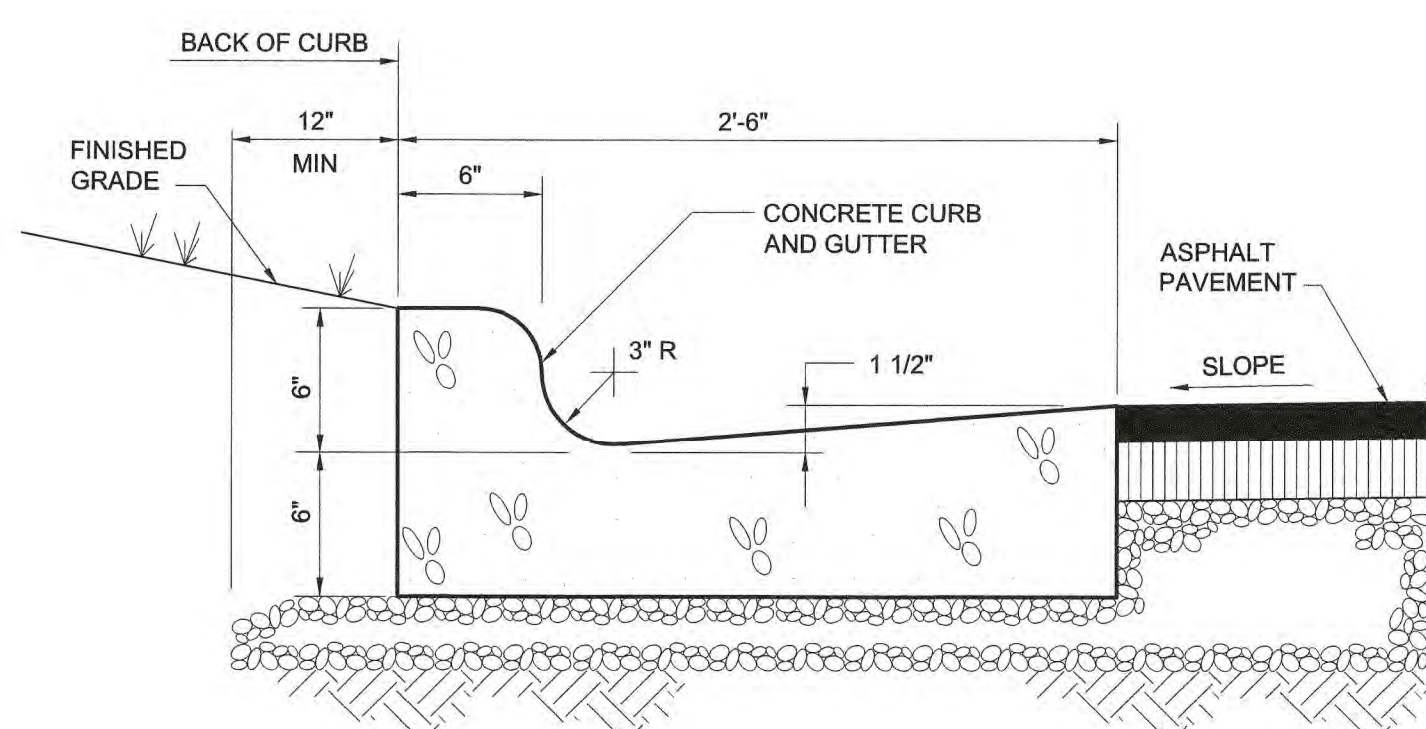
TYPICAL PAVEMENT JUNCTION
C-32-0556



STABILIZED OUTLET FOR SILT FENCE
C-31-0403



STANDARD 30" ROLLED CURB SECTION
C-32-0531



- NOTES:
- CONTRACTION JOINTS SHALL BE PLACED AT 10 FOOT INTERVALS, OR 15 FOOT INTERVALS WHEN A MACHINE IS USED TO PLACE THE CURB.
 - EXPANSION JOINTS SHALL BE PLACED AT 90 FOOT INTERVALS AND ADJACENT TO ALL RIGID OBJECTS.

CURB AND GUTTER
C-32-0530

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REV	ISSUED FOR	DATE	BY
1	CONSTRUCTION	4/2023	CWB

PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	HAZEN
DRAWN BY:	HAZEN
CHECKED BY:	M. SANTOWASSO
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"

ISSUED FOR CONSTRUCTION

4/17/2023

Hazen

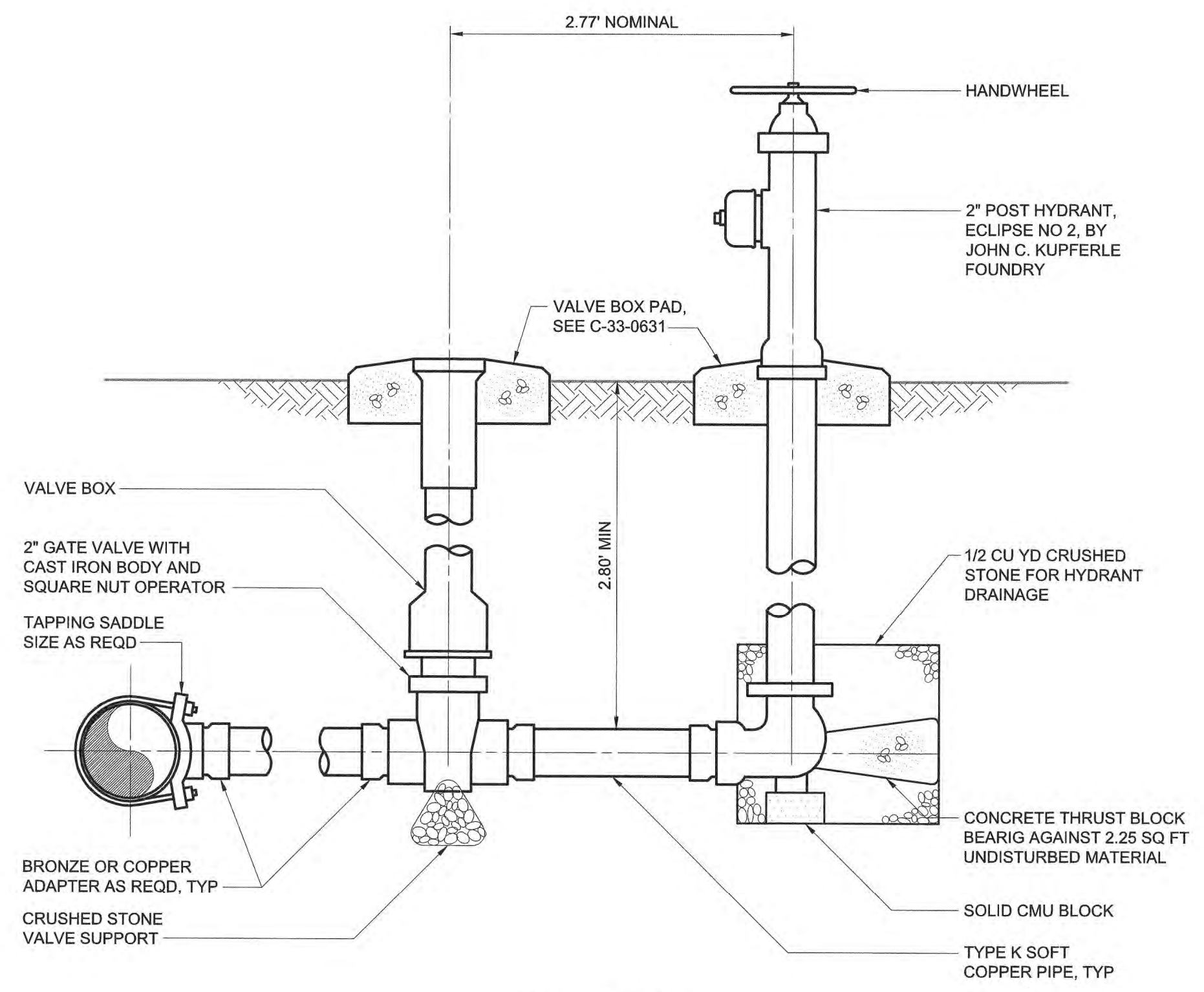
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA

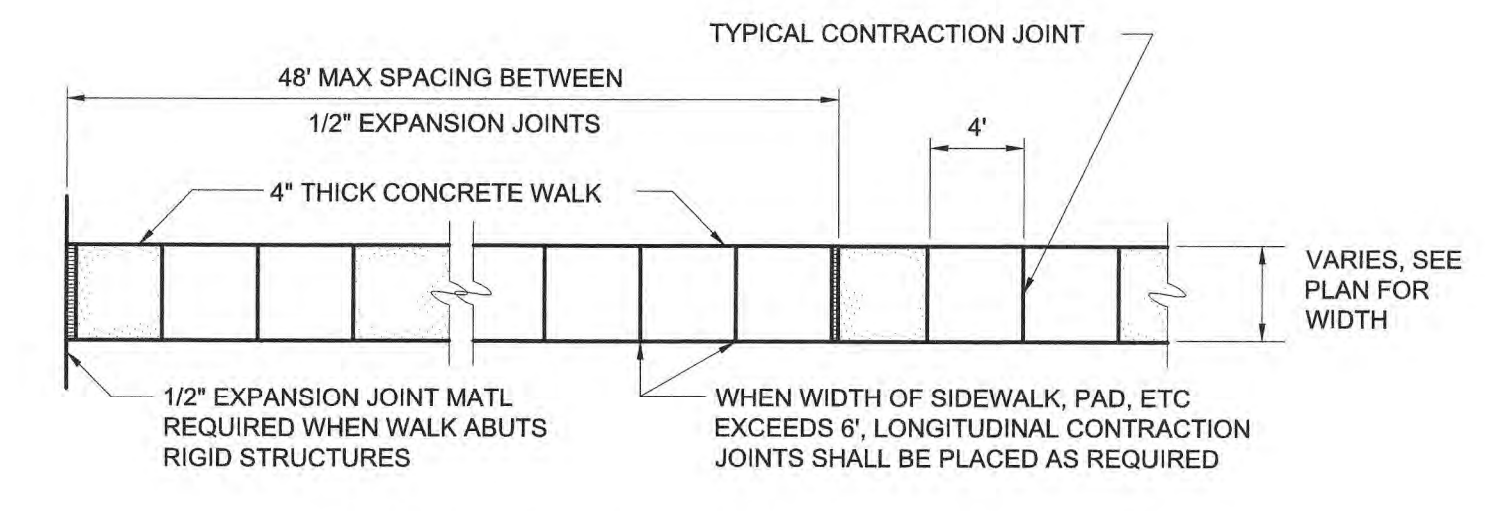
CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

CIVIL STANDARD DETAILS
SHEET 1

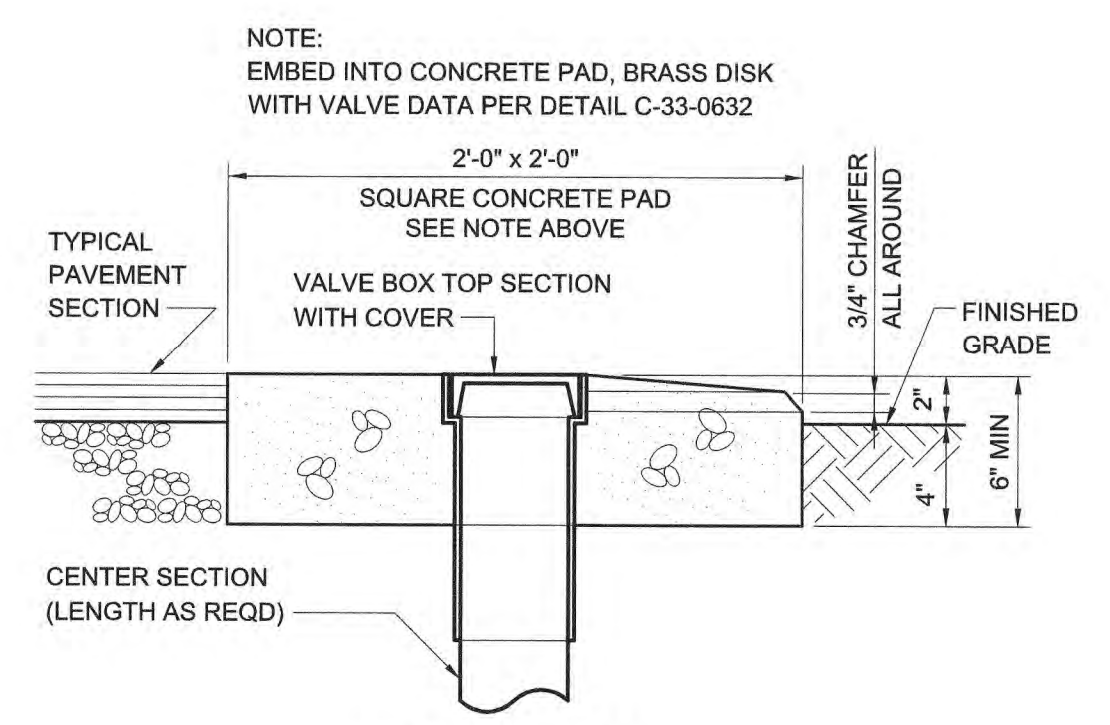
DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	CD1



YARD HYDRANT
C-33-0641R



TYPICAL CONCRETE WALKWAY
C-32-0520



VALVE BOX PAD
C-33-0631

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PLOT DATE: 4/14/2023 11:55 AM BY: RBUNT

REV	ISSUED FOR	DATE	BY
1	CONSTRUCTION	4/2023	CWB

PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	HAZEN
DRAWN BY:	HAZEN
CHECKED BY:	M. SANTOWASSO

ISSUED FOR CONSTRUCTION



Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

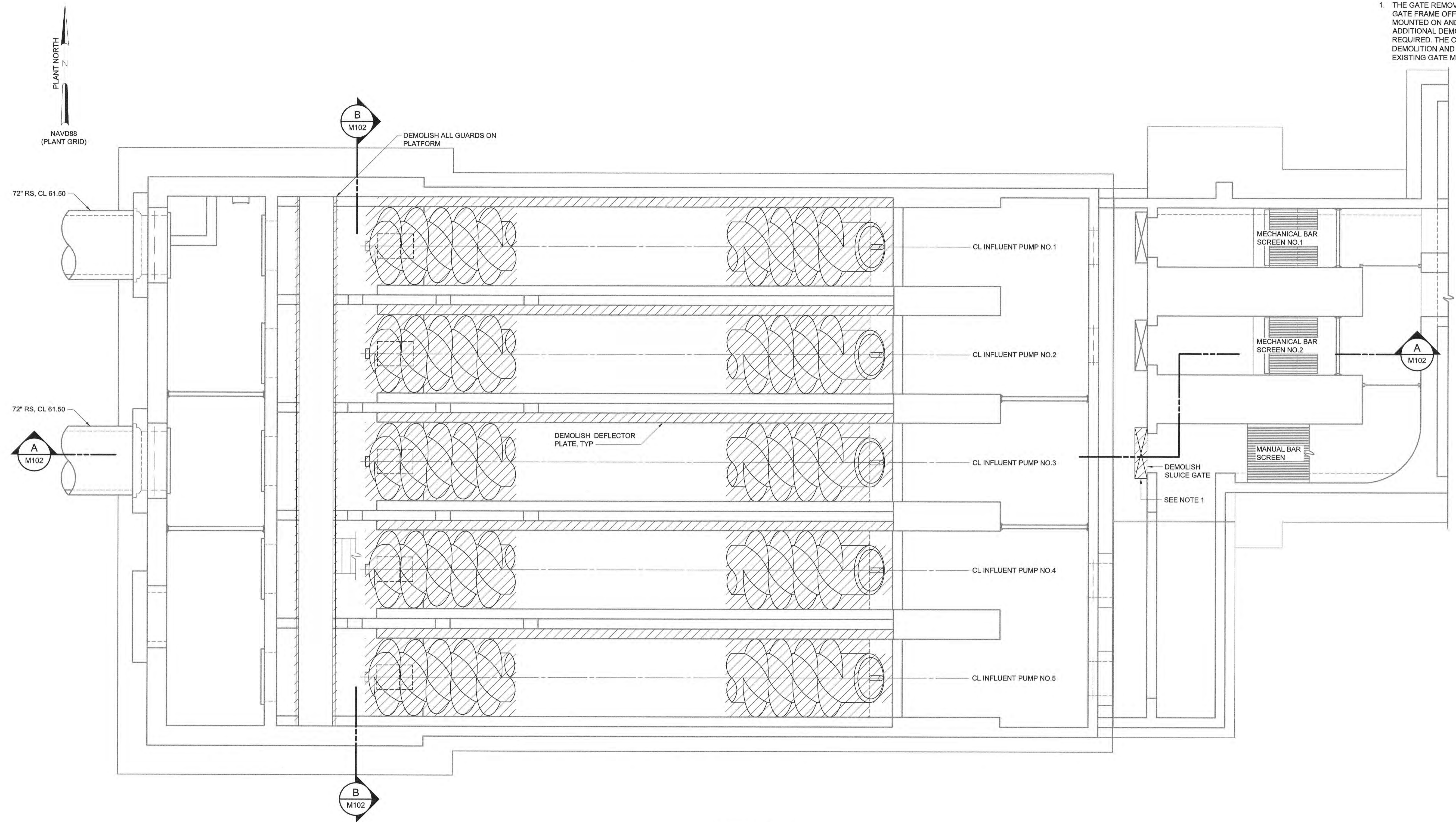
PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA
CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

CIVIL STANDARD DETAILS
SHEET 2

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	CD2

NOTES:

1. THE GATE REMOVAL SHALL CONSIST OF CUTTING THE TOP OF THE GATE FRAME OFF FLUSH WITH THE CONCRETE WALL THAT IT IS MOUNTED ON AND REMOVING THE GATE LEAF PERMANENTLY. NO ADDITIONAL DEMOLITION BELOW THE WATER SURFACE WILL BE REQUIRED. THE CHANNEL MUST REMAIN IN SERVICE DURING DEMOLITION AND THE NEW SLIDE GATE DOWNSTREAM OF THE EXISTING GATE MUST BE INSTALLED PRIOR TO ANY DEMOLITION.



BOTTOM PLAN
3/16" = 1'-0"

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PLOT DATE: 4/14/2023 9:33 AM BY: J.CAUDLE

PROJECT ENGINEER:	M. MESSERE				
DESIGNED BY:	C. BECK				
DRAWN BY:	B. CAUDLE				
CHECKED BY:	M. MESSERE				
1	CONSTRUCTION	4/2023	CWB	IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
REV	ISSUED FOR	DATE	BY		

ISSUED FOR CONSTRUCTION

Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

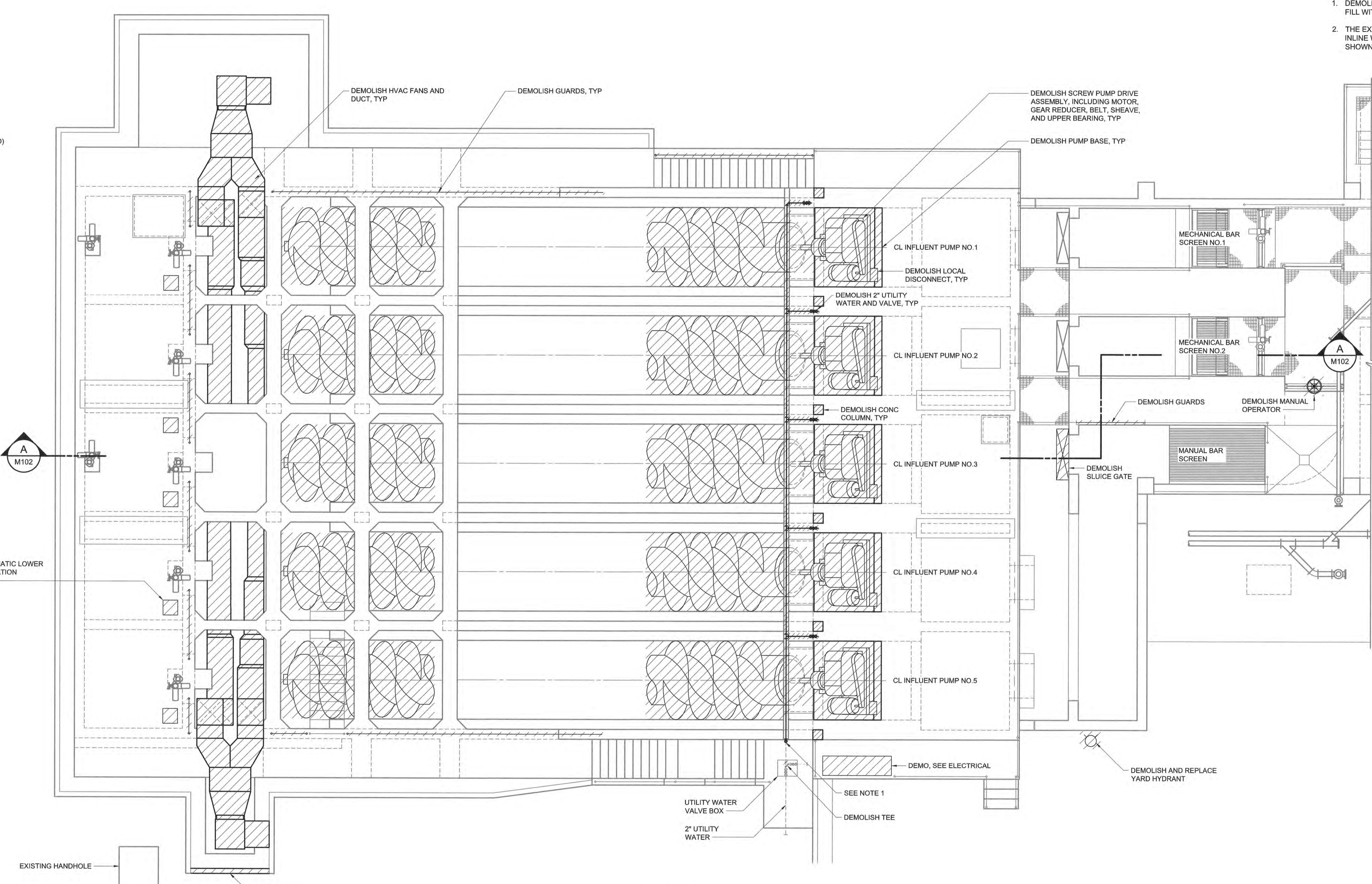
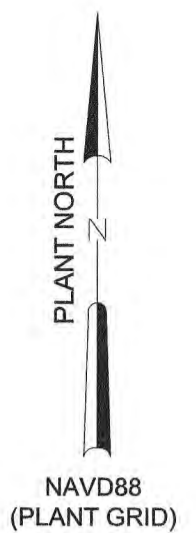
PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA
**CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS**

**INFLUENT PUMP STATION - MODIFICATIONS
MECHANICAL
BOTTOM PLAN - DEMOLITION**

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	M100

NOTES:

1. DEMOLISH PIPE FLUSH WITH THE SIDEWALK AND FILL WITH NON-SHRINK GROUT.
2. THE EXISTING MOTORS FOR PUMP NO. 1, 2, AND 3 IS INLINE WITH THE GEARBOX AND NOT BESIDE IT AS SHOWN.



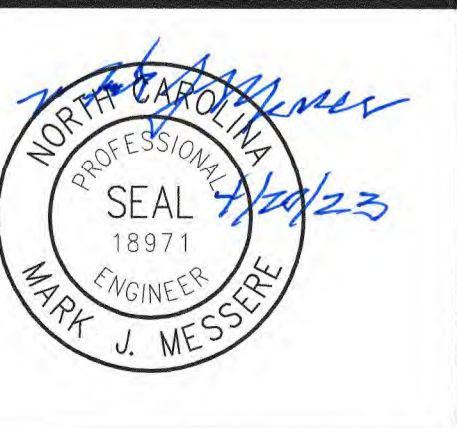
TOP PLAN
3/16" = 1'-0"

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 PLOT DATE: 4/20/2023 11:20 AM BY: JCAUDLE

REV	ISSUED FOR	DATE	CWB BY
1	CONSTRUCTION	4/2023	CWB

PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	C. BECK
DRAWN BY:	B. CAUDLE
CHECKED BY:	M. MESSERE

ISSUED FOR CONSTRUCTION



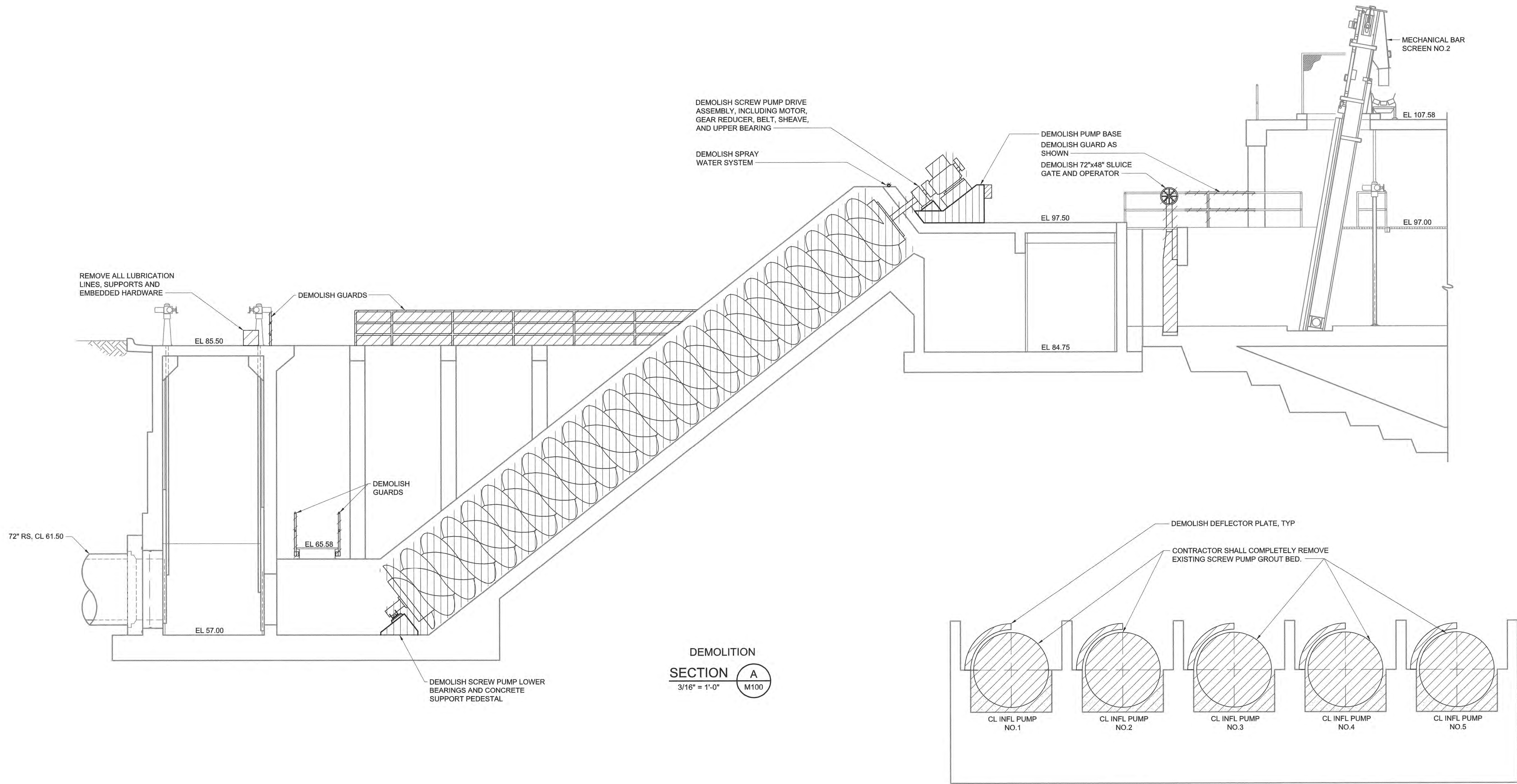
Hazen
 HAZEN AND SAWYER
 4011 WESTCHASE BOULEVARD, SUITE 500
 RALEIGH, NORTH CAROLINA 27607
 LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
 CITY OF FAYETTEVILLE, NORTH CAROLINA
 CROSS CREEK WRF AND ROCKFISH CREEK WRF
 SCREW PUMP IMPROVEMENTS

INFLUENT PUMP STATION - MODIFICATIONS
 MECHANICAL
 TOP PLAN - DEMOLITION

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	M101

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 PLOT DATE: 4/20/2023 11:20 AM BY: JCAUDLE



DEMOLITION
 SECTION A
 3/16" = 1'-0" M100

SECTION B
 3/16" = 1'-0" M100

REV	ISSUED FOR	DATE	BY
1	CONSTRUCTION	4/2023	CWB

PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	C. BECK
DRAWN BY:	B. CAUDLE
CHECKED BY:	M. MESSERE
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	

ISSUED FOR CONSTRUCTION

Hazen

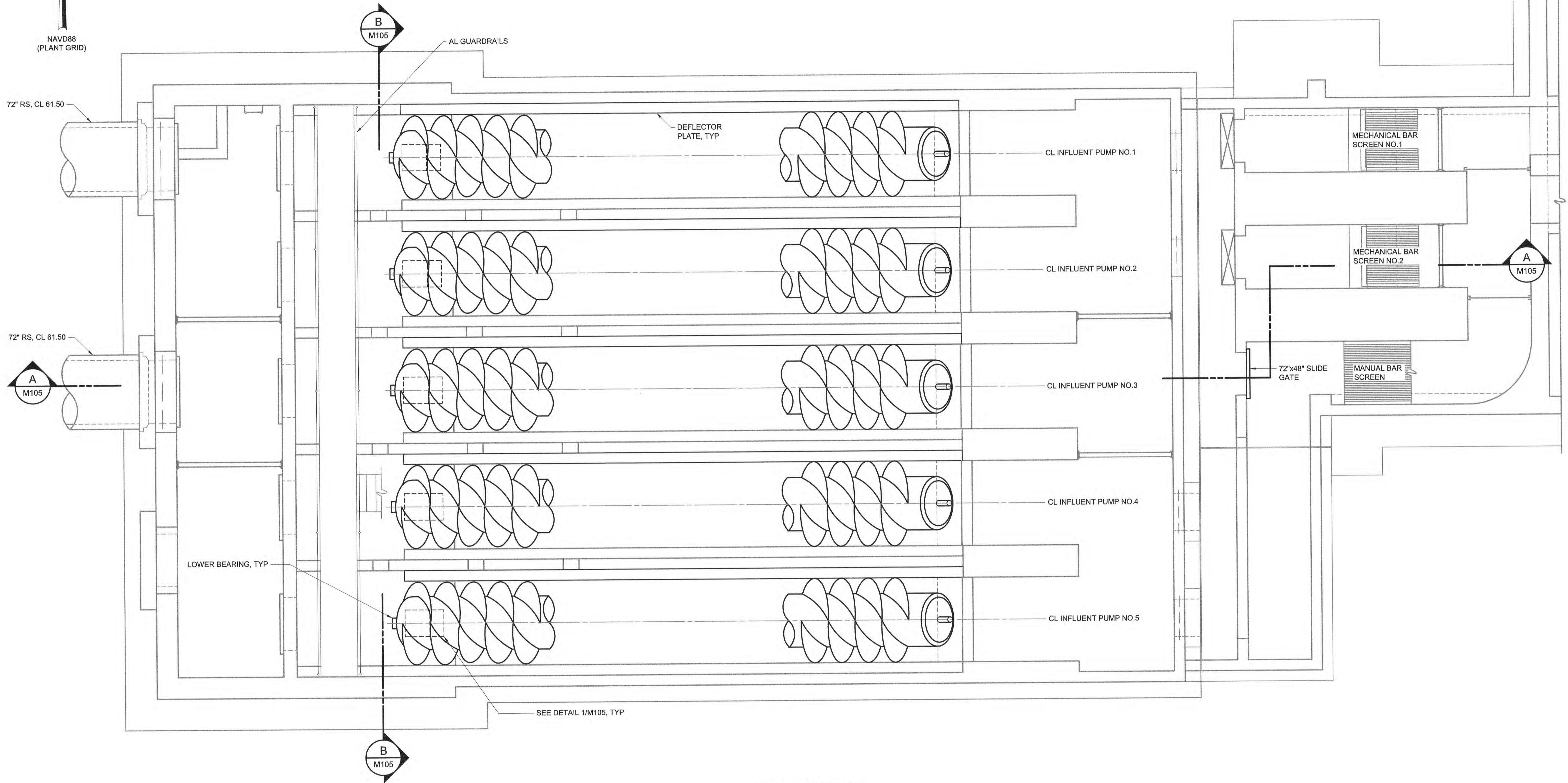
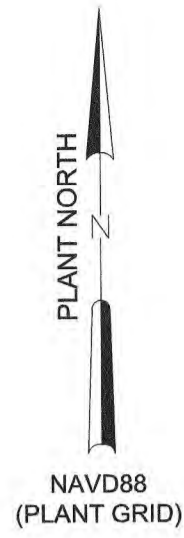
HAZEN AND SAWYER
 4011 WESTCHASE BOULEVARD, SUITE 500
 RALEIGH, NORTH CAROLINA 27607
 LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
 CITY OF FAYETTEVILLE, NORTH CAROLINA

CROSS CREEK WRF AND ROCKFISH CREEK WRF
 SCREW PUMP IMPROVEMENTS

INFLUENT PUMP STATION - MODIFICATIONS
 MECHANICAL
 SECTION - DEMOLITION

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	M102



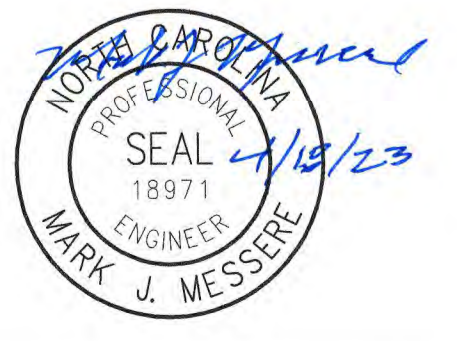
BOTTOM PLAN
3/16" = 1'-0"

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PLOT DATE: 4/14/2023 9:33 AM BY: JCAUDLE

REV	ISSUED FOR	DATE	BY
1	CONSTRUCTION	4/2023	CWB

PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	C. BECK
DRAWN BY:	B. CAUDLE
CHECKED BY:	M. MESSERE

ISSUED FOR CONSTRUCTION

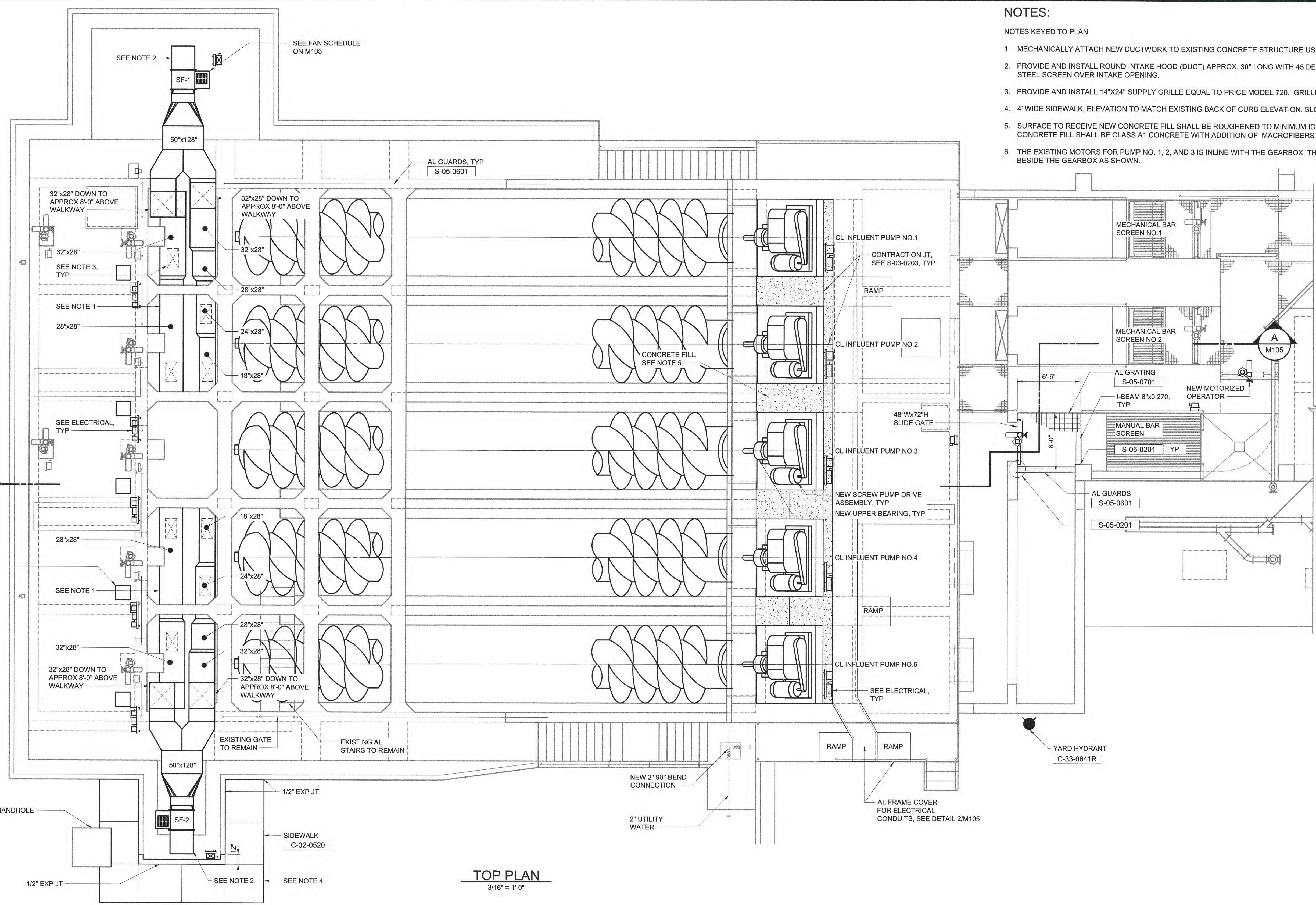


Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA
**CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS**

**INFLUENT PUMP STATION - MODIFICATIONS
MECHANICAL
BOTTOM PLAN**

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	M103



- NOTES:**
- NOTES KEYED TO PLAN
1. MECHANICALLY ATTACH NEW DUCTWORK TO EXISTING CONCRETE STRUCTURE USING EXISTING ATTACHMENT POINTS
 2. PROVIDE AND INSTALL ROUND INTAKE HOOD (DUCT) APPROX. 30" LONG WITH 45 DEG ANGLED INTAKE. PROVIDE 1/2"x1/2" STAINLESS STEEL SCREEN OVER INTAKE OPENING.
 3. PROVIDE AND INSTALL 14"x24" SUPPLY GRILLE EQUAL TO PRICE MODEL 720. GRILLE TO BE STAINLESS STEEL CONSTRUCTION.
 4. 4' WIDE SIDEWALK, ELEVATION TO MATCH EXISTING BACK OF CURB ELEVATION. SLOPE SLIGHTLY SOUTH. SEE DETAIL C-32-0520.
 5. SURFACE TO RECEIVE NEW CONCRETE FILL SHALL BE ROUGHENED TO MINIMUM ICRI CSP-5 PRIOR TO PLACEMENT OF FILL. CONCRETE FILL SHALL BE CLASS A1 CONCRETE WITH ADDITION OF MACROFIBERS AS PER SPECIFICATION SECTION 03 30 00.
 6. THE EXISTING MOTORS FOR PUMP NO. 1, 2, AND 3 IS IN LINE WITH THE GEARBOX. THE NEW MOTORS FOR ALL PUMPS SHALL BE BESIDE THE GEARBOX AS SHOWN.

TOP PLAN
3/16" = 1'-0"

File: 0130402-RAL30402-061CAD_BIMCONTRACT DRAWINGSMECHM104 Saved by JCAUDLE Save date: 4/20/2023 8:48 AM
 PLOT DATE: 4/20/2023 11:20 AM BY: JCAUDLE

PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	C. BECK
DRAWN BY:	B. CAUDLE
CHECKED BY:	M. MESSERE
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
1 CONSTRUCTION	4/2023 CWB
REV	ISSUED FOR DATE BY

ISSUED FOR CONSTRUCTION

Hazen

HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA

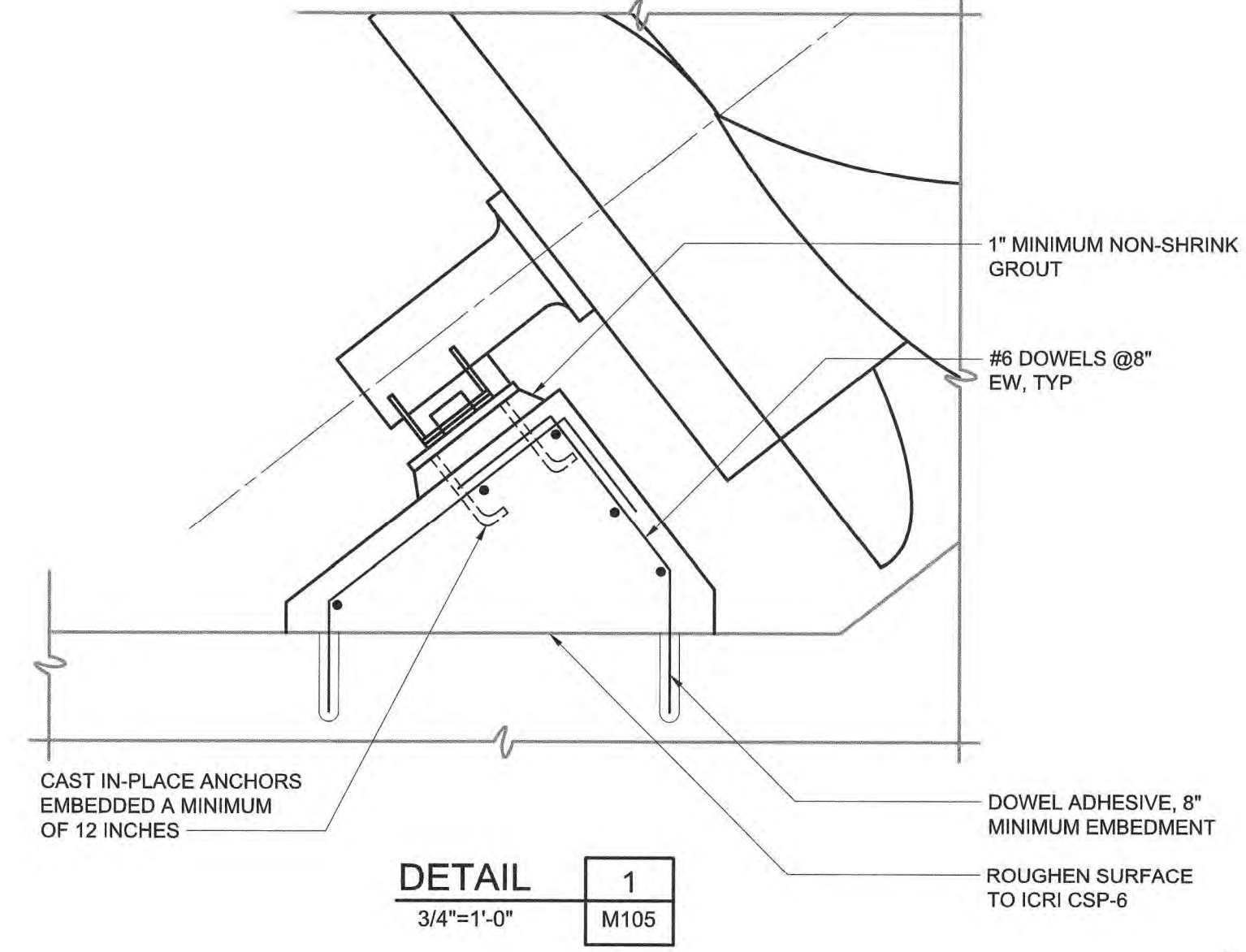
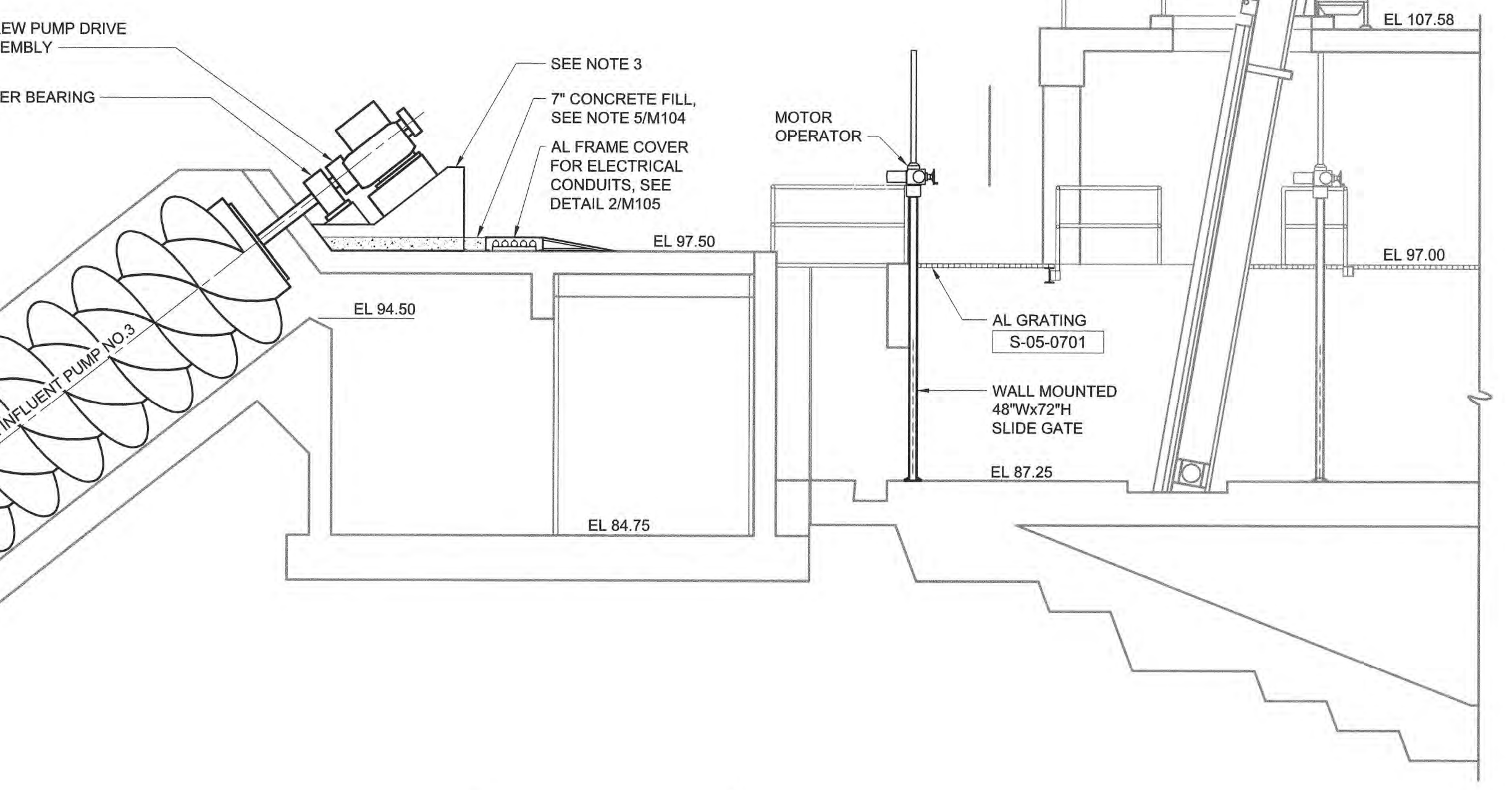
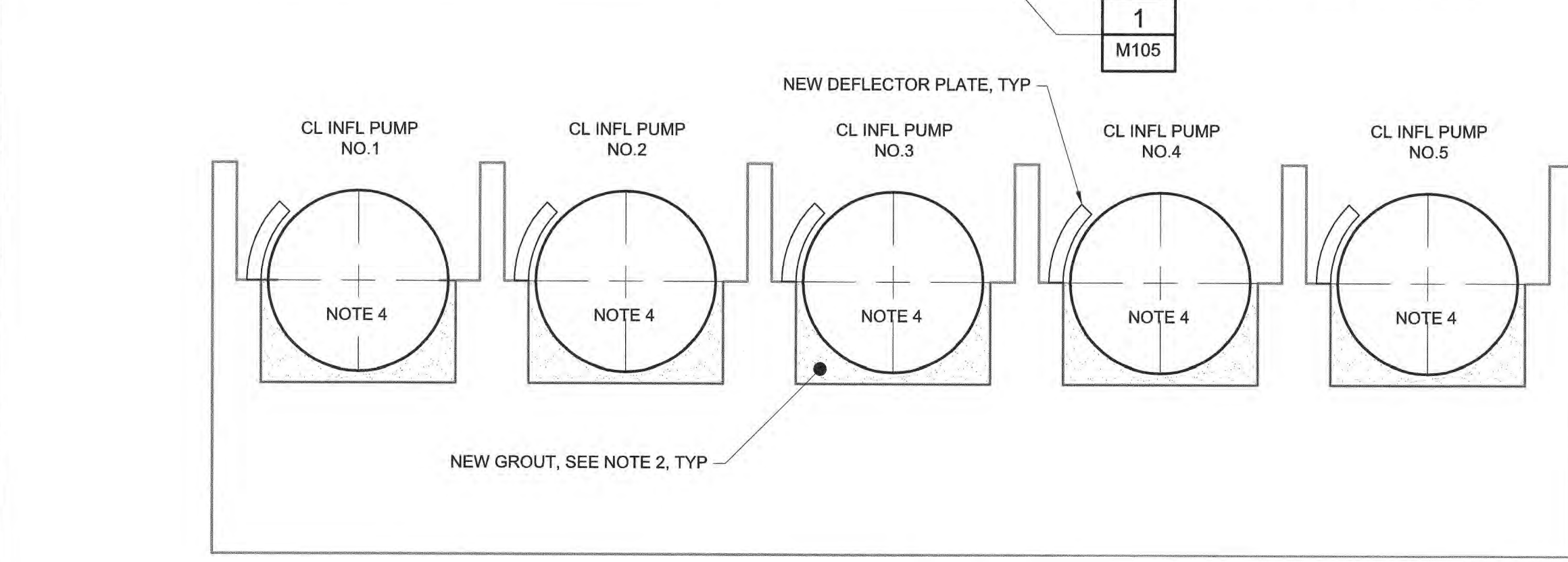
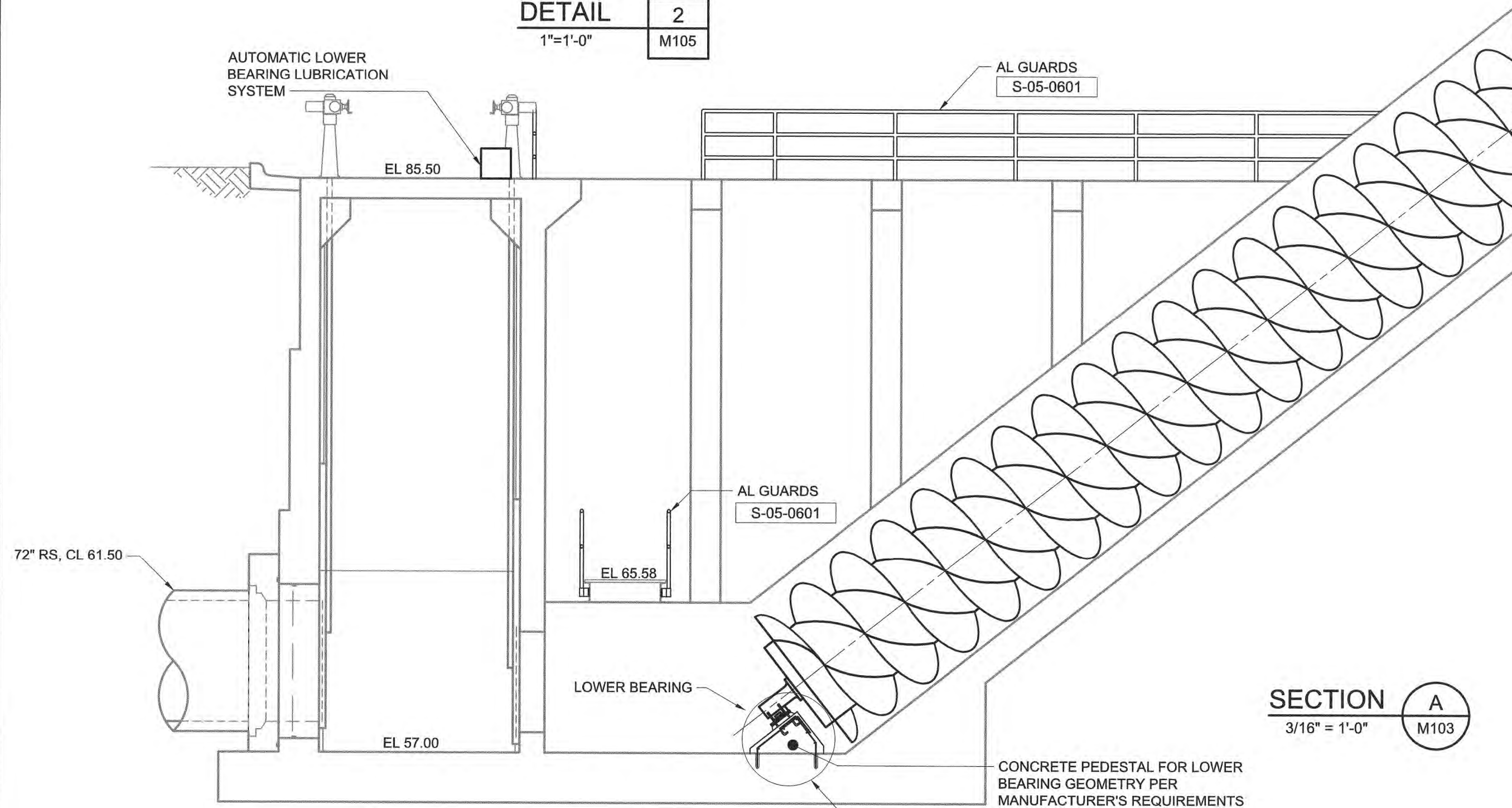
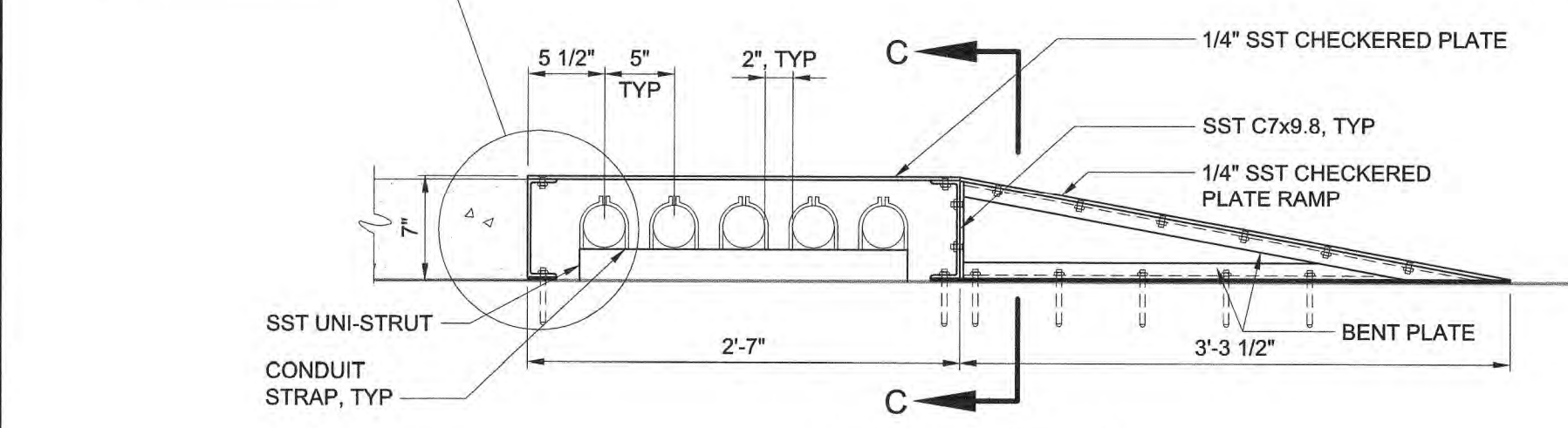
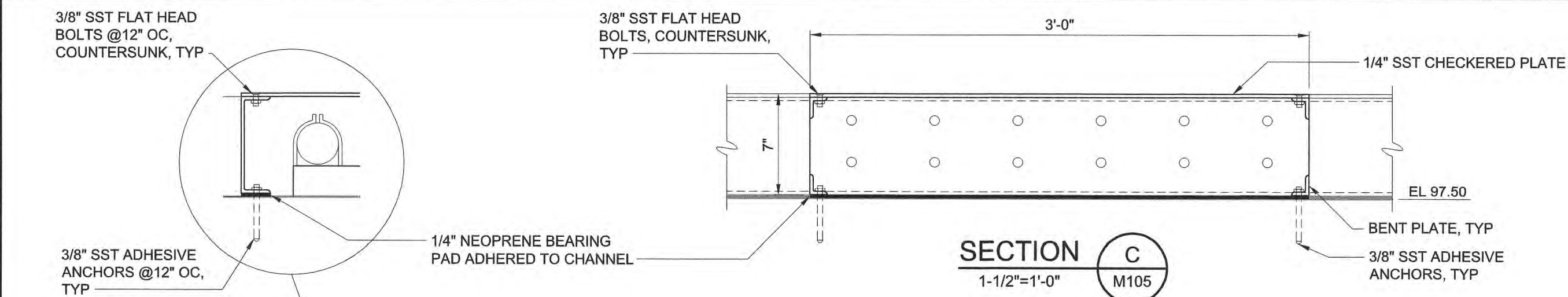
CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

INFLUENT PUMP STATION - MODIFICATIONS
MECHANICAL
TOP PLAN

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	M104

NOTES:

- CONTRACTOR SHALL SUPPLY AND INSTALL NEW GREASE AND 316 SST TUBING FROM GREASE PUMP TO LOWER BEARING AND FROM LOWER BEARING TO EXISTING GREASE RECEPTACLE. 316 SST TUBING SHALL BE 16 GAUGE AND MEET 3-A SANITARY REQUIREMENTS. END CONNECTIONS SHALL BE MADE BY UTILIZING QUICK CLAMP FITTINGS AND NPT THREADED ADAPTERS. ALL REQUIRED BENDS SHALL BE MADE USING A TUBE BENDING TOOL. ALL TUBING SHALL HAVE A ROCKWELL HARDNESS OF B90 AND SHALL MEET ASTM A289 AND A270. NEW BEARINGS SHALL BE INSTALLED PER SCREW PUMP MANUFACTURER'S REQUIREMENTS. THE DETAIL SHOWN IS FOR THE INSTALLATION OF THE STRAIGHT BEARING BASE. THE CONTRACTOR WILL BE RESPONSIBLE FOR COORDINATION WITH THE MANUFACTURER REGARDING INSTALLATION DETAILS IF THE ANGLED BEARING IS SUPPLIED.
- CONTRACTOR SHALL COORDINATE WITH PUMP MANUFACTURER AND INSTALL NEW GROUT BED AS SPECIFIED BY THE PUMP MANUFACTURER AND THE CONTRACT SPECIFICATIONS. NEW GROUT BED DEPTH VARIES BUT SHALL BE A MINIMUM OF 3-INCHES THICK. CONTRACTOR SHALL ROUGHEN SURFACE OF CONCRETE TO PROFILE MATCHING ICRI CSP-6 PRIOR TO PLACING NEW GROUT.
- NEW BASES SHALL BE CONSTRUCTED PER DIMENSIONS PROVIDED BY PUMP MANUFACTURER.
- ROTATION AND LOCATION OF THE DEFLECTORS FOR PUMPS NUMBERS 1 THRU 5 ARE DEPENDANT UPON THE MANUFACTURER OF THE PUMPS SUPPLIED. CONTRACTOR SHALL COORDINATE LOCATION OF NEW DEFLECTORS WITH THE PUMP MANUFACTURER.
- CONTRACTOR SHALL REMOVE OLD GROUT FROM UNDERNEATH EXISTING DEFLECTORS AND REPLACE WITH NEW NONSHRINK, NON-METALLIC GROUT, APPROX. 1" THICK, SEE SPECIFICATION 03 60 00.
- CONTRACTOR SHALL PRACTICE EXTREME CARE DURING CONSTRUCTION AND SHALL BE FULLY RESPONSIBLE FOR ANY DAMAGE TO EXISTING STRUCTURES RESULTING FROM WORK PERFORMED UNDER THIS CONTRACT.
- ALL LAYOUT DIMENSIONS SHOWN ARE FROM EXISTING CONTRACT DRAWINGS. ALL DIMENSIONS CRITICAL FOR REMOVAL, LAYOUT AND INSTALLATION/REINSTALLATION SHALL BE FIELD VERIFIED BY THE GENERAL CONTRACTOR.
- CONTRACTOR SHALL OPERATE EXISTING WETWELL HVAC SYSTEM IN ACCORDANCE WITH SECTION 01 11 00 - SUMMARY OF WORK, WETWELL SAFETY, OF THE CONTRACT SPECIFICATIONS.
- BEARING ANCHOR BOLT LOCATION PER SCREW PUMP MANUFACTURER. MINIMUM EDGE DISTANCE SHALL BE 5".
- DOWEL ADHESIVE SYSTEM SHALL BE "HILTI HIT HY-200 INJECTION ADHESIVE ANCHOR SYSTEM", OR EQUAL.
- BEARING PEDESTAL SHALL BE 3'-0" WIDE MINIMUM.
- THE CONTRACTOR SHALL REPAIR CONCRETE SPALLS IN EACH OF THE INFLUENT PUMP SUCTION WET WELLS. THE SPALL REPAIR SHALL BE MADE AS REQUIRED BY SPECIFICATION 03 01 30 - CONCRETE REPAIRS, AND ON A UNIT PRICE BASIS PER SPECIFICATION 00300 - PROPOSAL.



TAG	LOCATION	AREA SERVED	MANUFACTURER		AIRFLOW (CFM)	E.S.P. (\"WG)	FAN		MAX SPEED (RPM)	MOTOR			POWER			WEIGHT (LBS)	NOTES
			MAKE	MODEL			TYPE	DRIVE		BHP	HP	VFD	VOLT	PH	HZ		
SF-1	INFLUENT PUMP STATION	INFLUENT WELL	HARTZELL	A34-286FW-FGFC3	5120	1	AIRFOIL	BELT	1337	2.3	3	NO	460	3	60	295	1, 2
SF-2	INFLUENT PUMP STATION	INFLUENT WELL	HARTZELL	A34-286FW-FGFC3	5120	1	AIRFOIL	BELT	1337	2.3	3	NO	460	3	60	295	1, 2

- MECHANICALLY ATTACH FAN SUPPORT FRAME TO CONCRETE PAD AT MINIMUM 2 LOCATIONS EACH SUPPORT.
- PROVIDE AND INSTALL INTAKE DUCT (HOOD) WITH 45 DEG CUT INLET WITH 1/2\"/>

File: O:\30402-RAL\30402-06-RICAD_BIM\CONTRACT DRAWINGS\MECH\M105.dwg, Saved by: JCAUDLE, Save date: 4/20/2023 11:19 AM
 Plot Date: 4/20/2023 11:20 AM BY: JCAUDLE

PROJECT ENGINEER:	M. MESSERE		
DESIGNED BY:	C. BECK		
DRAWN BY:	B. CAUDLE		
CHECKED BY:	M. MESSERE		
IF THIS BAR DOES NOT MEASURE 1\"/>			
1 CONSTRUCTION	4/2023	CWB	BY
REV	ISSUED FOR	DATE	BY

ISSUED FOR CONSTRUCTION

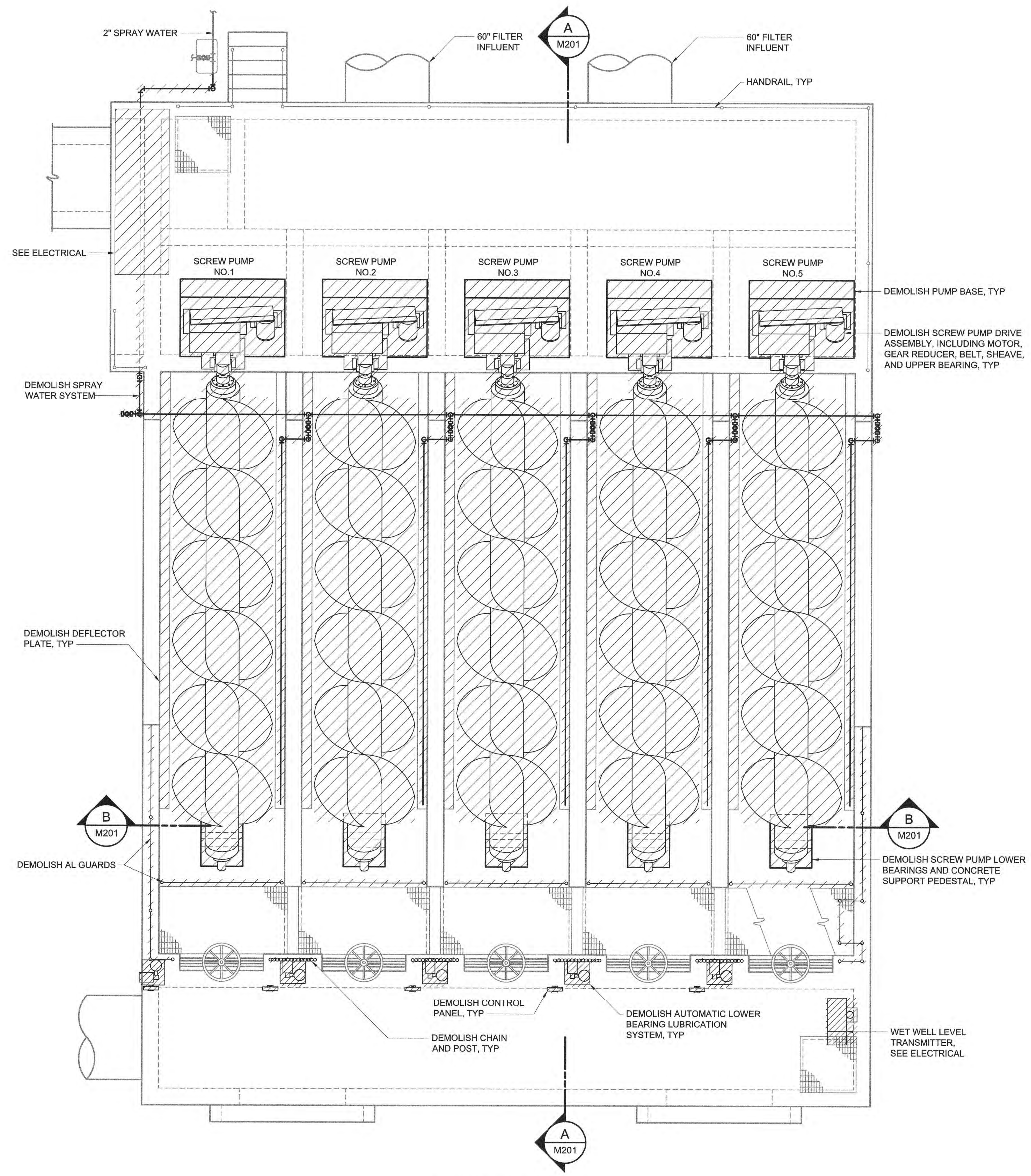
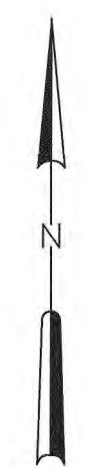
Hazen
 HAZEN AND SAWYER
 4011 WESTCHASE BOULEVARD, SUITE 500
 RALEIGH, NORTH CAROLINA 27607
 LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
 CITY OF FAYETTEVILLE, NORTH CAROLINA

CROSS CREEK WRF AND ROCKFISH CREEK WRF
 SCREW PUMP IMPROVEMENTS

INFLUENT PUMP STATION - MODIFICATIONS
 MECHANICAL
 SECTION AND DETAILS

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	M105



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

File: C:\30402-064\30402-064\CAD_BIM\CONTRACT DRAWINGS\MECH\M200.dwg saved by JCAUDLE Save date: 4/13/2023 8:56 AM
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1	CONSTRUCTION	4/2023	CWB
REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER: M. MESSERE
 DESIGNED BY: C. BECK
 DRAWN BY: B. CAUDLE
 CHECKED BY: M. MESSERE
 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE
 0 1/2" 1"

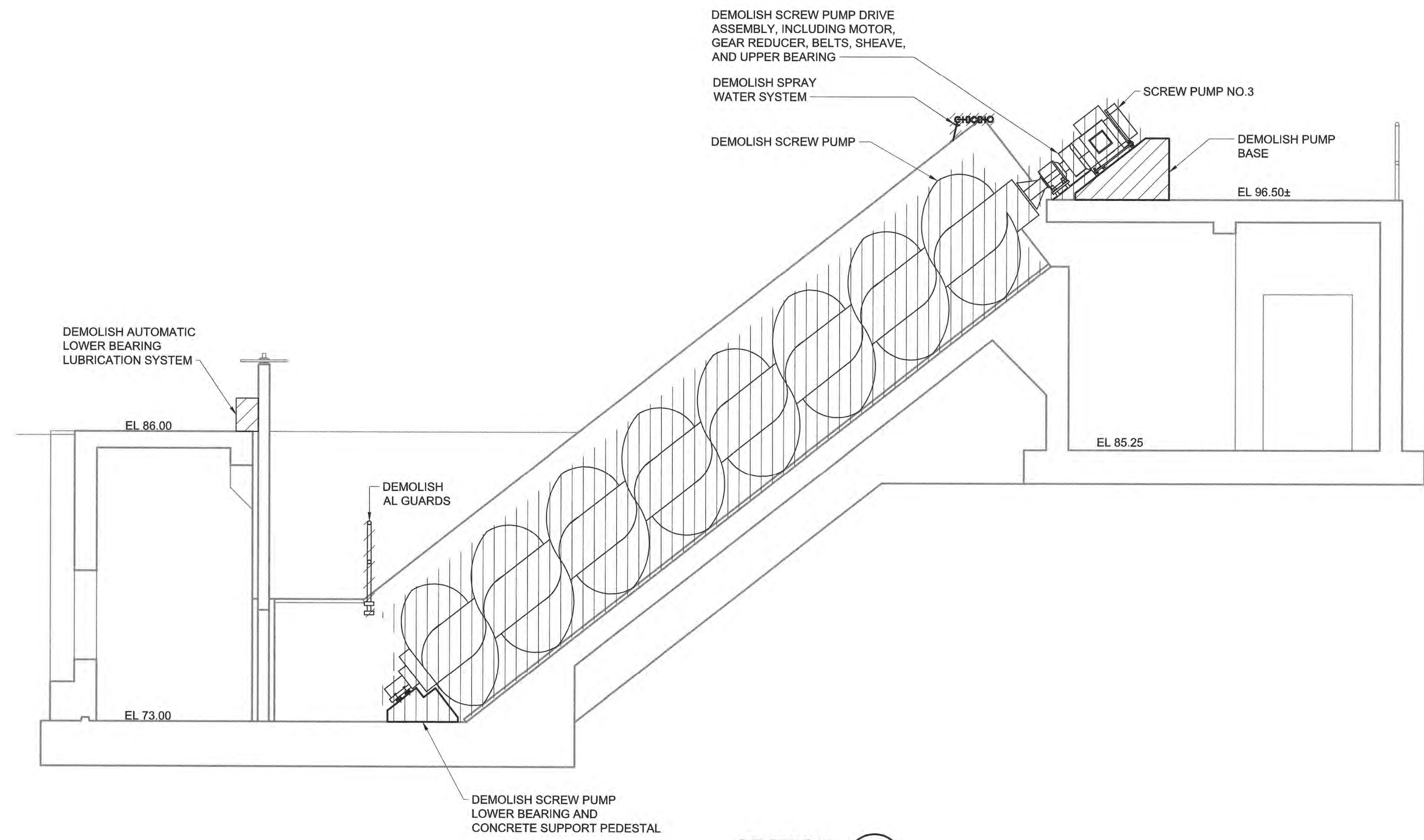
ISSUED FOR CONSTRUCTION

Hazen
 HAZEN AND SAWYER
 4011 WESTCHASE BOULEVARD, SUITE 500
 RALEIGH, NORTH CAROLINA 27607
 LICENSE NO. : C-0381

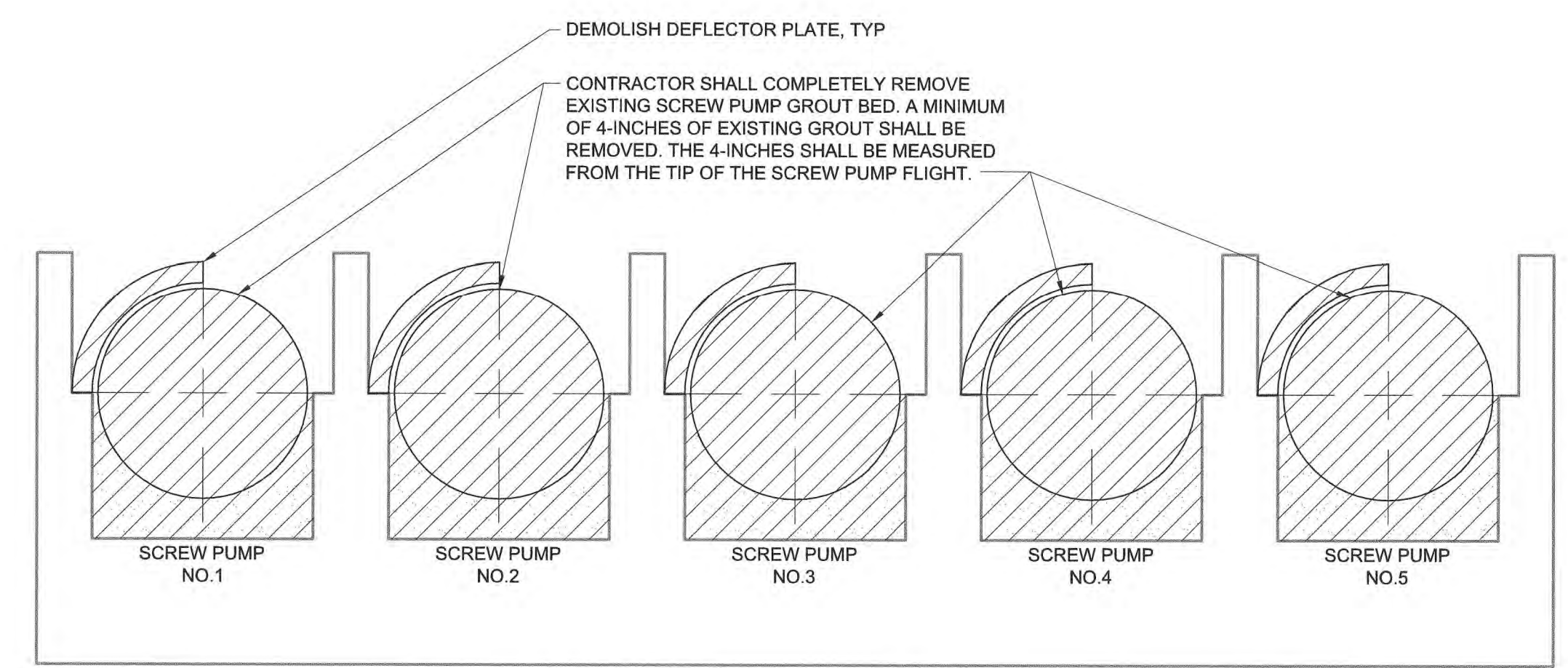
PUBLIC WORKS COMMISSION
 CITY OF FAYETTEVILLE, NORTH CAROLINA
 CROSS CREEK WRF AND ROCKFISH CREEK WRF
 SCREW PUMP IMPROVEMENTS

PUMP STATION NO.3 - MODIFICATIONS
 MECHANICAL
 PLAN - DEMOLITION

DATE: APRIL 2023
 HAZEN NO.: 30402-064
 CONTRACT NO.: 1
 DRAWING NUMBER:
 M200



SECTION A
1/4" = 1'-0" M200



SECTION B
1/4" = 1'-0" M200

File: 010402-RA1030402-064-CAD_BIM/CONTRACT DRAWINGS/MECH/M201 Saved by JCAUDLE Save date: 4/20/2023 9:05 AM PLOT DATE: 4/20/2023 11:20 AM BY: JCAUDLE

PROJECT ENGINEER:	M. MESSERE				
DESIGNED BY:	C. BECK				
DRAWN BY:	B. CAUDLE				
CHECKED BY:	M. MESSERE				
1	CONSTRUCTION	4/2023	CWB	IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
REV	ISSUED FOR	DATE	BY		

ISSUED FOR CONSTRUCTION

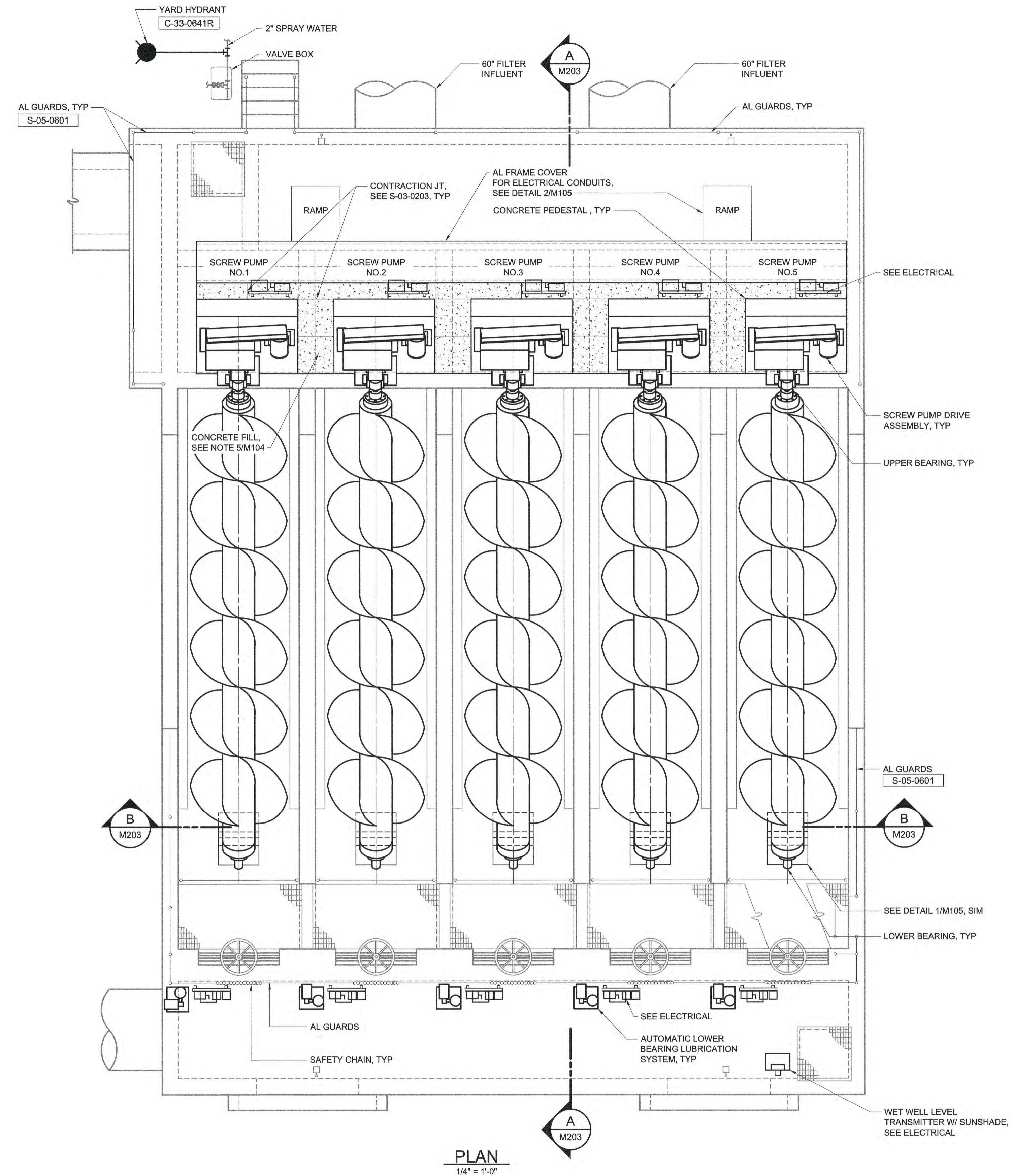
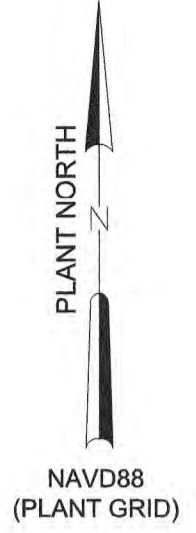
Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA

CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

PUMP STATION NO.3 - MODIFICATIONS
MECHANICAL
SECTION - DEMOLITION

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	M201



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 Plot Date: 4/14/2023 9:34 AM BY: JCAUDLE

PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	C. BECK
DRAWN BY:	B. CAUDLE
CHECKED BY:	M. MESSERE
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
1 CONSTRUCTION	4/2023 CWB
REV	ISSUED FOR

PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	C. BECK
DRAWN BY:	B. CAUDLE
CHECKED BY:	M. MESSERE
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
1 CONSTRUCTION	4/2023 CWB
REV	ISSUED FOR

ISSUED FOR CONSTRUCTION

Hazen

HAZEN AND SAWYER
 4011 WESTCHASE BOULEVARD, SUITE 500
 RALEIGH, NORTH CAROLINA 27607
 LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
 CITY OF FAYETTEVILLE, NORTH CAROLINA

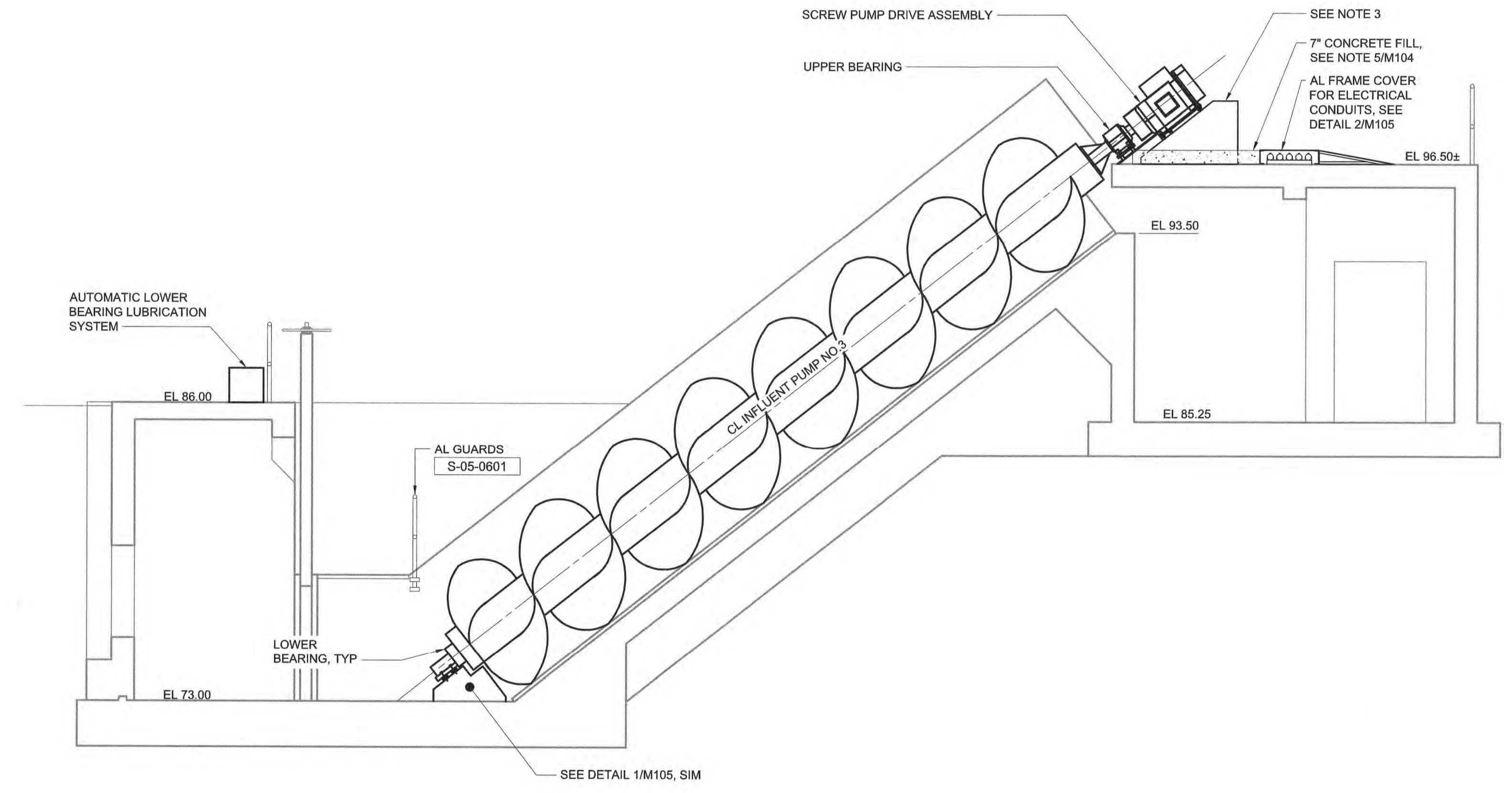
CROSS CREEK WRF AND ROCKFISH CREEK WRF
 SCREW PUMP IMPROVEMENTS

PUMP STATION NO.3 - MODIFICATIONS
 MECHANICAL
 PLAN

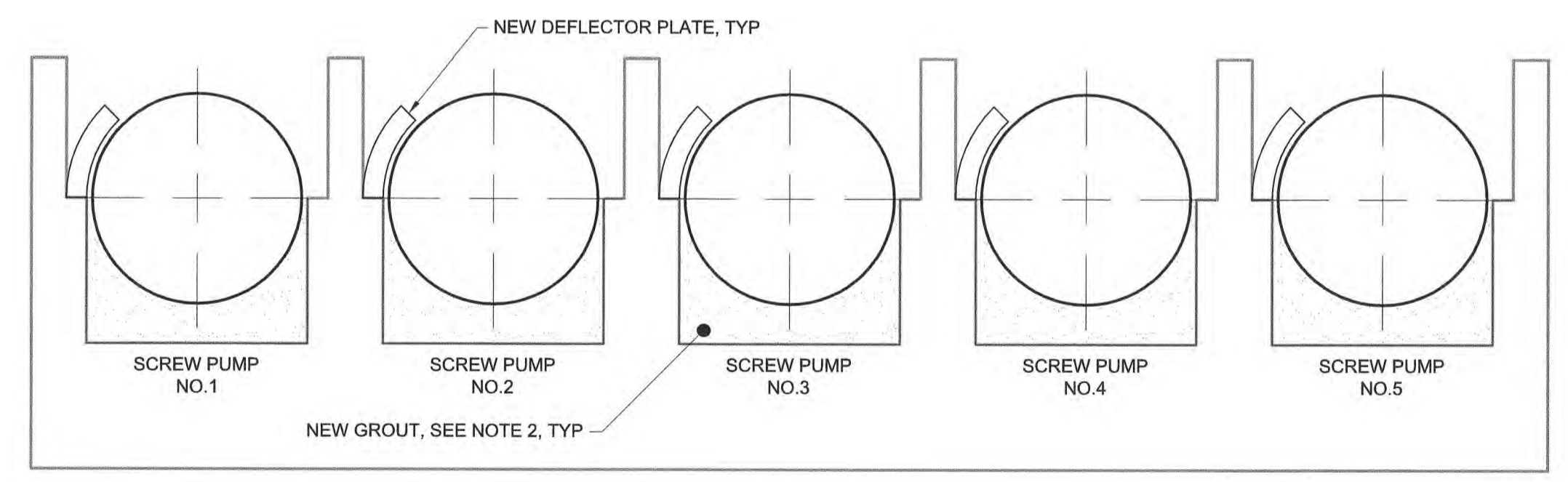
DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	M202

NOTES:

1. CONTRACTOR SHALL SUPPLY AND INSTALL NEW GREASE AND 316 SST TUBING FROM GREASE PUMP TO LOWER BEARING AND FROM LOWER BEARING TO GREASE RECEPTACLE. 316 SST TUBING SHALL BE 16 GAUGE AND MEET 3-A SANITARY REQUIREMENT. END CONNECTIONS SHALL BE MADE BY UTILIZING QUICK CLAMP FITTINGS AND NPT THREADED ADAPTERS. ALL REQUIRED BENDS SHALL BE MADE USING A TUBE BENDING TOOL. ALL TUBING SHALL HAVE A ROCKWELL HARDNESS OF 890 AND SHALL MEET ASTM A269 AND A270. NEW BEARING SHALL BE INSTALLED PER SCREW PUMP MANUFACTURERS REQUIREMENTS. THE DETAIL SHOWN IS FOR THE INSTALLATION OF THE STRAIGHT BEARING BASE. THE CONTRACTOR WILL BE RESPONSIBLE FOR COORDINATION WITH THE MANUFACTURER REGARDING INSTALLATION DETAILS IF THE ANGLED BEARING IS SUPPLIED.
2. CONTRACTOR SHALL COORDINATE WITH PUMP MANUFACTURER AND INSTALL NEW GROUT BED AS SPECIFIED BY THE PUMP MANUFACTURER AND THE CONTRACT SPECIFICATIONS. NEW GROUT BED DEPTH VARIES BUT SHALL BE A MINIMUM OF 3-INCHES THICK. CONTRACTOR SHALL ROUGHEN SURFACE OF CONCRETE TO PROFILE MATCHING ICRI CSP-6 PRIOR TO PLACING NEW GROUT.
3. NEW BASES SHALL BE CONSTRUCTED PER DIMENSIONS PROVIDED BY PUMP MANUFACTURER.
4. ROTATION AND LOCATION OF THE DEFLECTORS FOR PUMPS NUMBERS 1 THRU 5 ARE DEPENDANT UPON THE MANUFACTURER OF THE PUMPS SUPPLIED. CONTRACTOR SHALL COORDINATE LOCATION OF NEW DEFLECTORS WITH THE PUMP MANUFACTURER.
5. CONTRACTOR SHALL REMOVE OLD GROUT FROM UNDERNEATH EXISTING DEFLECTORS AND REPLACE WITH NEW NONSHRINK, NON-METALLIC GROUT, APPROX. 1" THICK, SEE SPECIFICATION 03 60 00.
6. CONTRACTOR SHALL PRACTICE EXTREME CARE DURING CONSTRUCTION AND SHALL BE FULLY RESPONSIBLE FOR ANY DAMAGE TO EXISTING STRUCTURES RESULTING FROM WORK PERFORMED UNDER THIS CONTRACT.
7. ALL LAYOUT DIMENSIONS SHOWN ARE FROM EXISTING CONTRACT DRAWINGS. ALL DIMENSIONS CRITICAL FOR REMOVAL, LAYOUT AND INSTALLATION/REINSTALLATION SHALL BE FIELD VERIFIED BY THE GENERAL CONTRACTOR.
8. CONTRACTOR SHALL OPERATE EXISTING WETWELL HVAC SYSTEM IN ACCORDANCE WITH SECTION 01 11 00 - SUMMARY OF WORK, WETWELL SAFETY, OF THE CONTRACT SPECIFICATIONS.
9. BEARING ANCHOR LOCATION PER SCREW PUMP MANUFACTURER. MINIMUM EDGE DISTANCE SHALL BE 5".
10. DOWEL ADHESIVE SYSTEM SHALL BE "HILTI HIT HY-200 INJECTION ADHESIVE ANCHOR SYSTEM", OR EQUAL.
11. BEARING PEDESTAL SHALL BE 3'-0" WIDE MINIMUM.



SECTION A
1/4" = 1'-0" M202



SECTION B
1/4" = 1'-0" M202

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PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	C. BECK
DRAWN BY:	B. CAUDLE
CHECKED BY:	M. MESSERE
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
1 CONSTRUCTION 4/2023 CWB	
REV ISSUED FOR DATE BY	

ISSUED FOR CONSTRUCTION

Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA

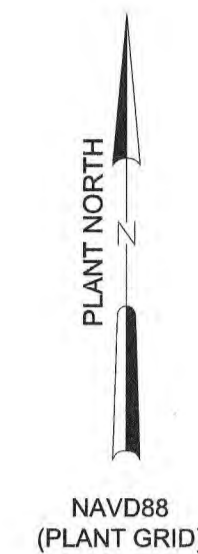
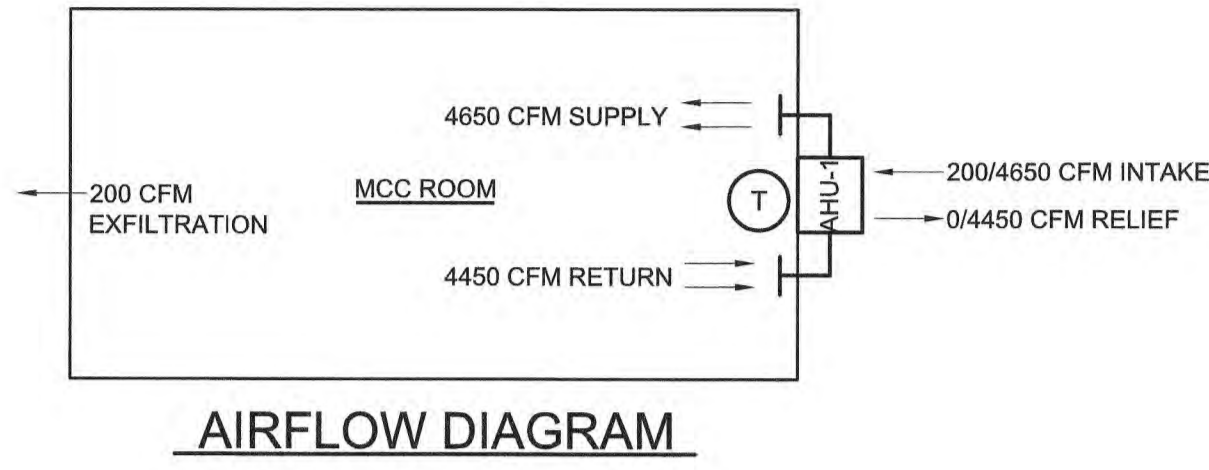
CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

PUMP STATION NO.3 - MODIFICATIONS
MECHANICAL
SECTIONS AND DETAILS

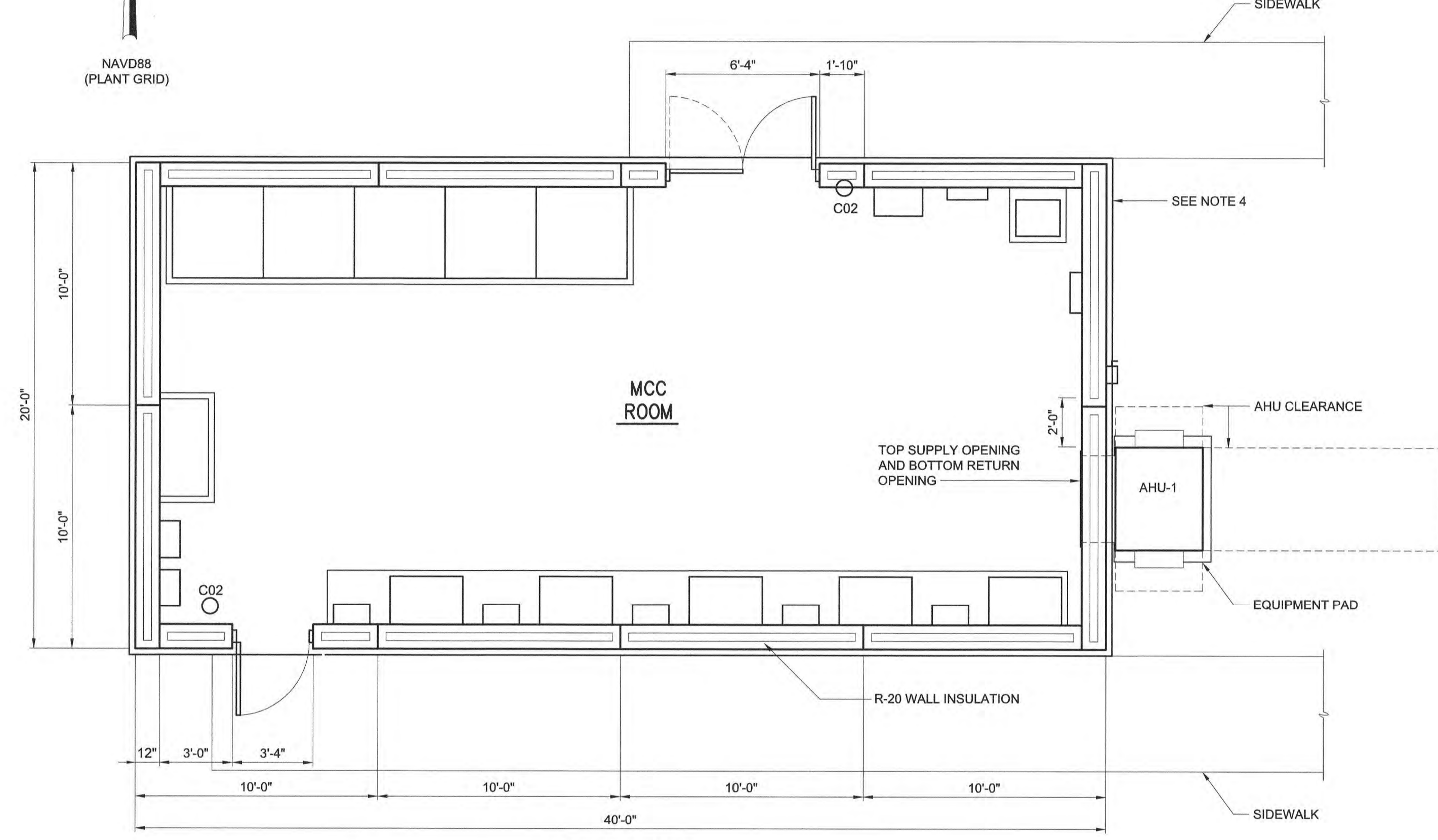
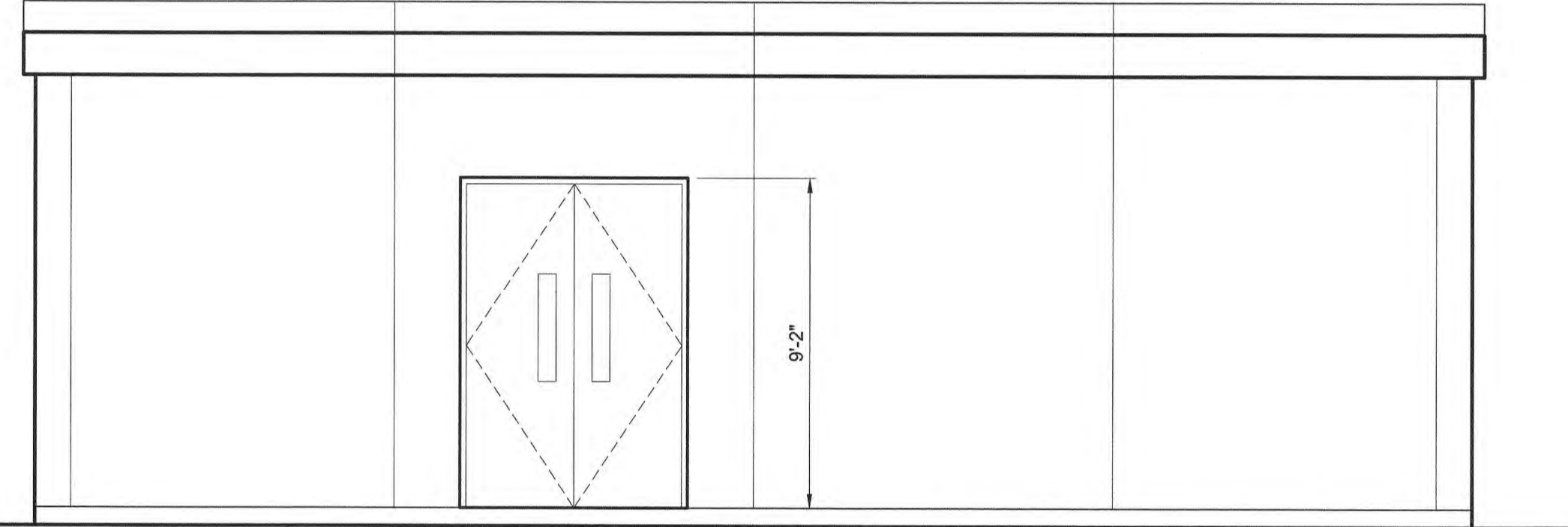
DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	M203

PACKAGED EXTERIOR WALL MOUNT AIR HANDLING UNITS																								
TAG	LOCATION	AREA SERVED	MANUFACTURER		TYPE	TOTAL COOLING CAPACITY (MBH)	SENSIBLE COOLING CAPACITY (MBH)	HEAT PUMP HEATING CAPACITY (MBH)	ELECTRIC HEATING CAPACITY (MBH)	AIR FLOW (CFM)	OA AIR FLOW (CFM)	E.S.P. ("WG)	COOLING COIL				EER	WEIGHT (LBS)	POWER					NOTES
			MAKE	MODEL									EAT (°F)		LAT (°F)				VOLT	PH	HZ	MCA	MOCP	
													DB	WB	DB	WB								
AHU-1	ELECTRICAL BUILDING	ELECTRICAL ROOM	BARD	W120APC08EPX3X	PACKAGED EXTERIOR WALL AHU	122.8	85.3	-	28.3000	4650	200	-	86.6000	60	67.7000	51.6000	10	1190	460	3	60	27	40	1-7

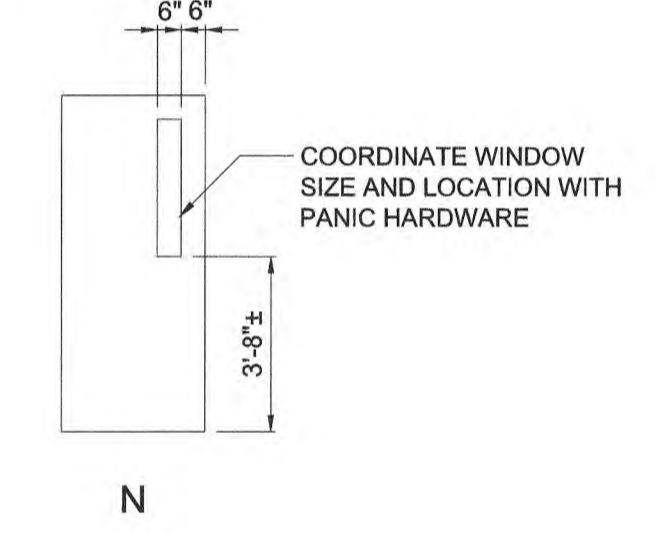
- NOTES:
- PROVIDE MANUFACTURER CONTROLLER IN ACCORDANCE WITH SPECIFICATION 23 81 24
 - PROVIDE WALL SLEEVE AND OUTDOOR LOUVER GRILLE ACCESSORIES
 - PROVIDE ENTHALPY CONTROLLED ECONOMIZER OPTION
 - REFER TO SPECIFICATION 23 81 24 FOR ADDITIONAL REQUIREMENTS
 - PROVIDE MANUFACTURER SUPPLIED PLATFORM TO SUPPORT UNIT FROM GROUND
 - HEAT PUMP CAPACITY @ 17F
 - SEQUENCE OF OPERATION AHU-1 SHALL CYCLE BETWEEN COOLING AND HEATING TO MAINTAIN THE MCC ROOM BETWEEN 85 DEG F AND 50 DEG F. THE UNIT SHALL OPERATE IN ECONOMIZER MODE WHEN THE SPACE IS CALLING FOR COOLING AND THE OUTDOOR AIR TEMPERATURE IS COLD ENOUGH.



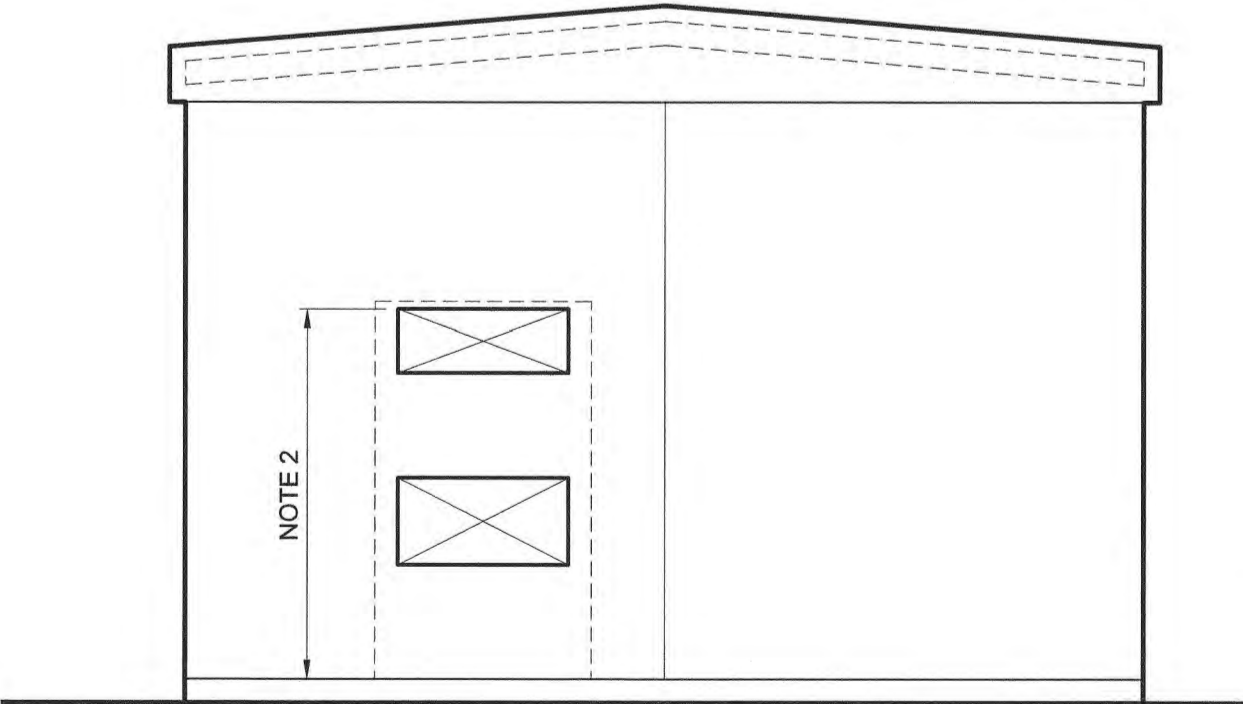
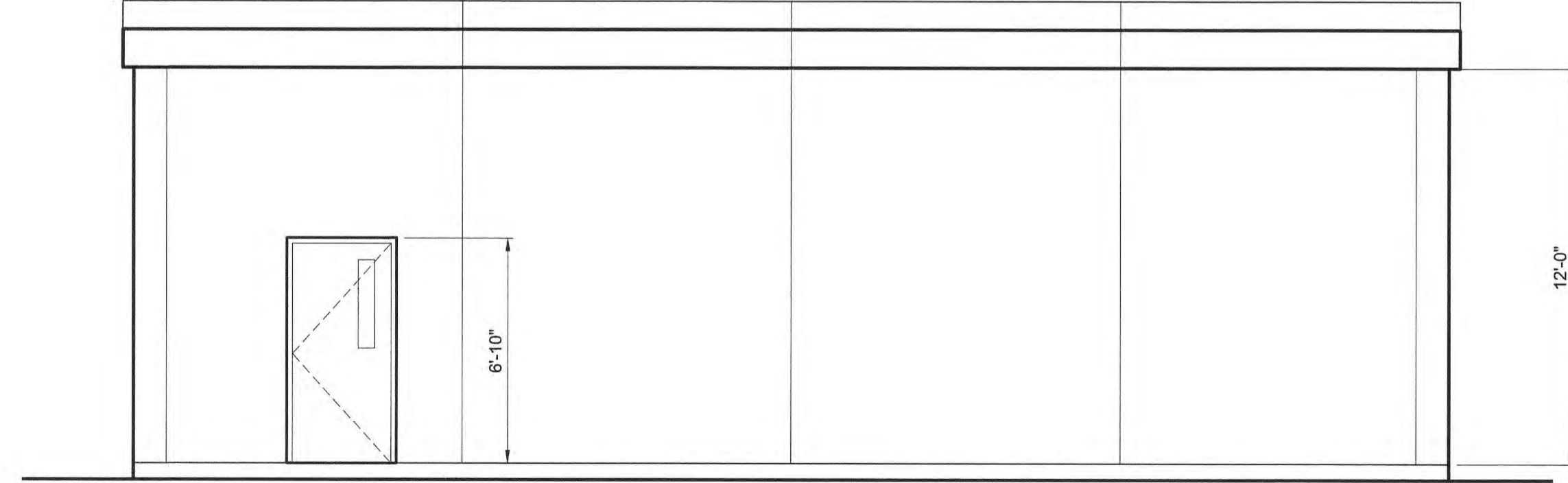
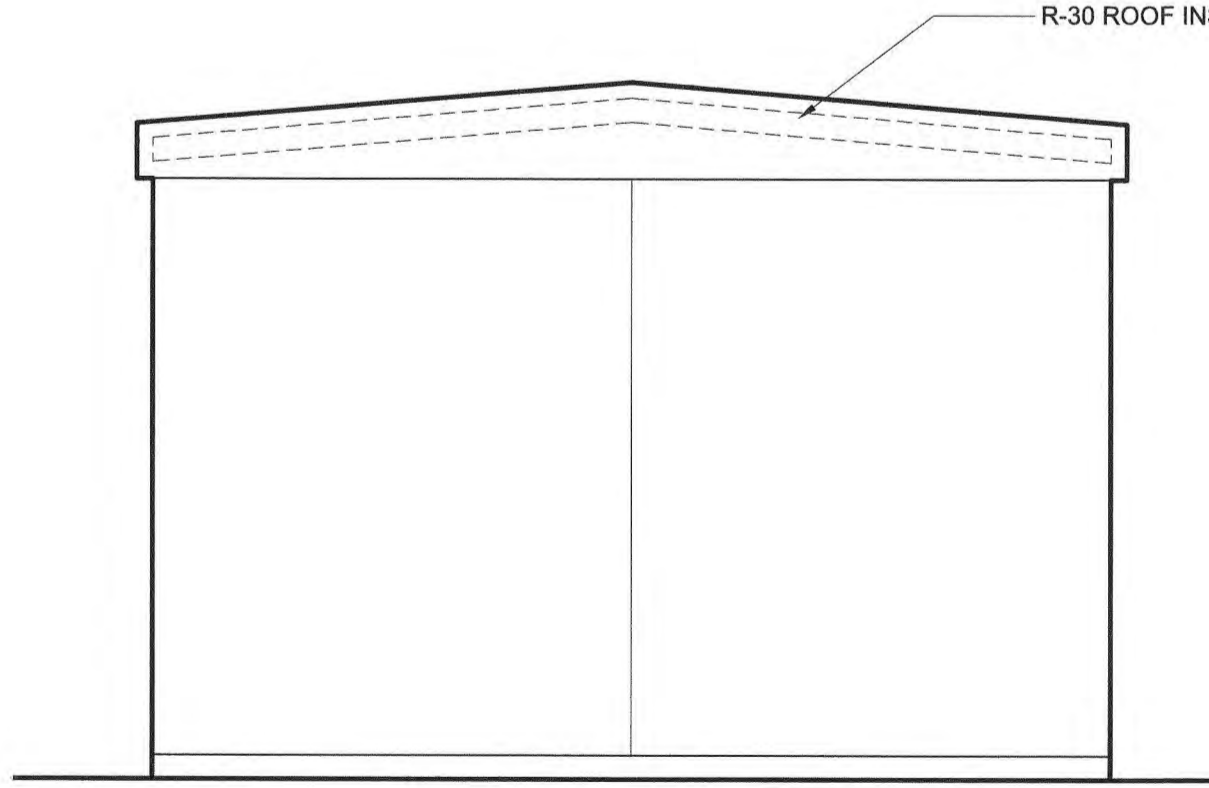
- PRECAST BUILDING NOTES:**
- PROVIDE AND INSTALL INSULATED PRECAST CONCRETE ELECTRICAL BUILDING. BASIS OF DESIGN IS EASI-SPAN SYSTEM BY SMITH MIDLAND CORPORATION, MIDLAND, VA. SEE SPECIFICATION 03 45 15.
 - COORDINATE OPENING SIZES AND LOCATIONS WITH ELECTRICAL AND HVAC EQUIPMENT.
 - SWITCHGEAR ELECTRICAL BUILDING SHALL BE CONSTRUCTED ON 6-INCH MINIMUM BED OF COMPACTED ABC WITH A CONTINUOUS VAPOR BARRIER OVER THE SUBBASE. CONCRETE BASE SLAB SHALL BE 10-INCHES THICK MINIMUM REINFORCED WITH #5@8", TB, EW. MINIMUM CONCRETE COVER SHALL BE 3" FOR BOTTOM MAT AND 2" FOR TOP MAT.
 - ANCHOR OF PREFABRICATED BUILDING TO CONCRETE BASE SLAB SHALL BE DESIGNED AND PROVIDED BY THE MANUFACTURER OF THE PREFABRICATED BUILDING.



- DOOR NOTES:**
- PROVIDE ALUMINUM "N" TYPE DOORS WITH INSULATED GLASS LITES.
 - SEE DETAILS 1,2,&3 SHEET BD1, FOR HEAD JAMB AND SILL.



- LEGEND:**
- C02 FIRE EXTINGUISHER- CARBON DIOXIDE



File: C:\30402-RA\30402-06A\CAD_BIM\CONTRACT DRAWINGS\MECH\B120A.rvt ELECTRICAL BUILDING. Saved by: MCMCINTOSH. Save date: 4/12/2023 5:58 PM. PLOT DATE: 4/14/2023 9:34 AM. BY: CAUDLE

PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	M. MCINTOSH
DRAWN BY:	M. MCINTOSH
CHECKED BY:	W. RUSSELL
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"

ISSUED FOR CONSTRUCTION

Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

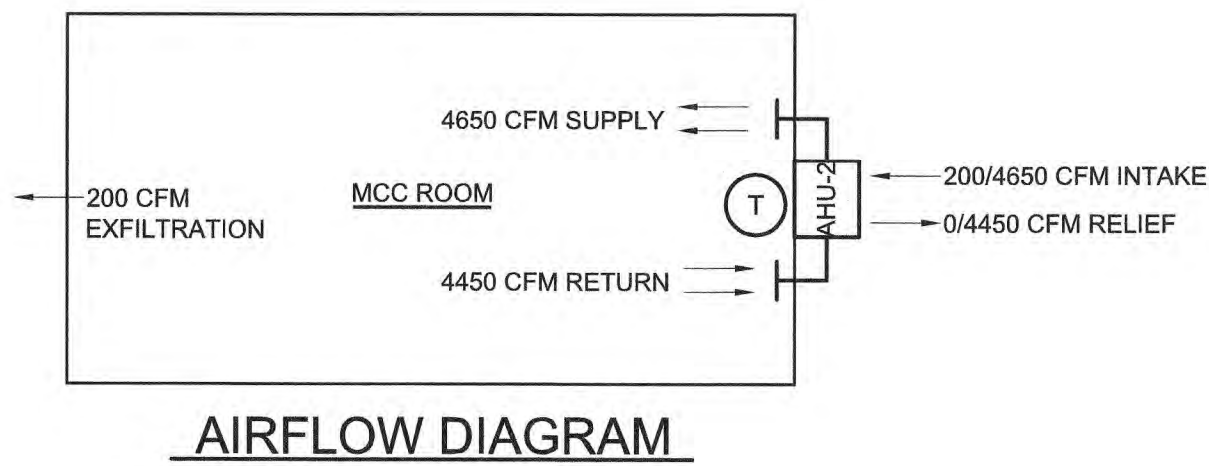
PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA
CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

INFLUENT PS ELECTRICAL BUILDING- BID ALTERNATE BUILDING
PLAN, ELEVATIONS, AND HVAC

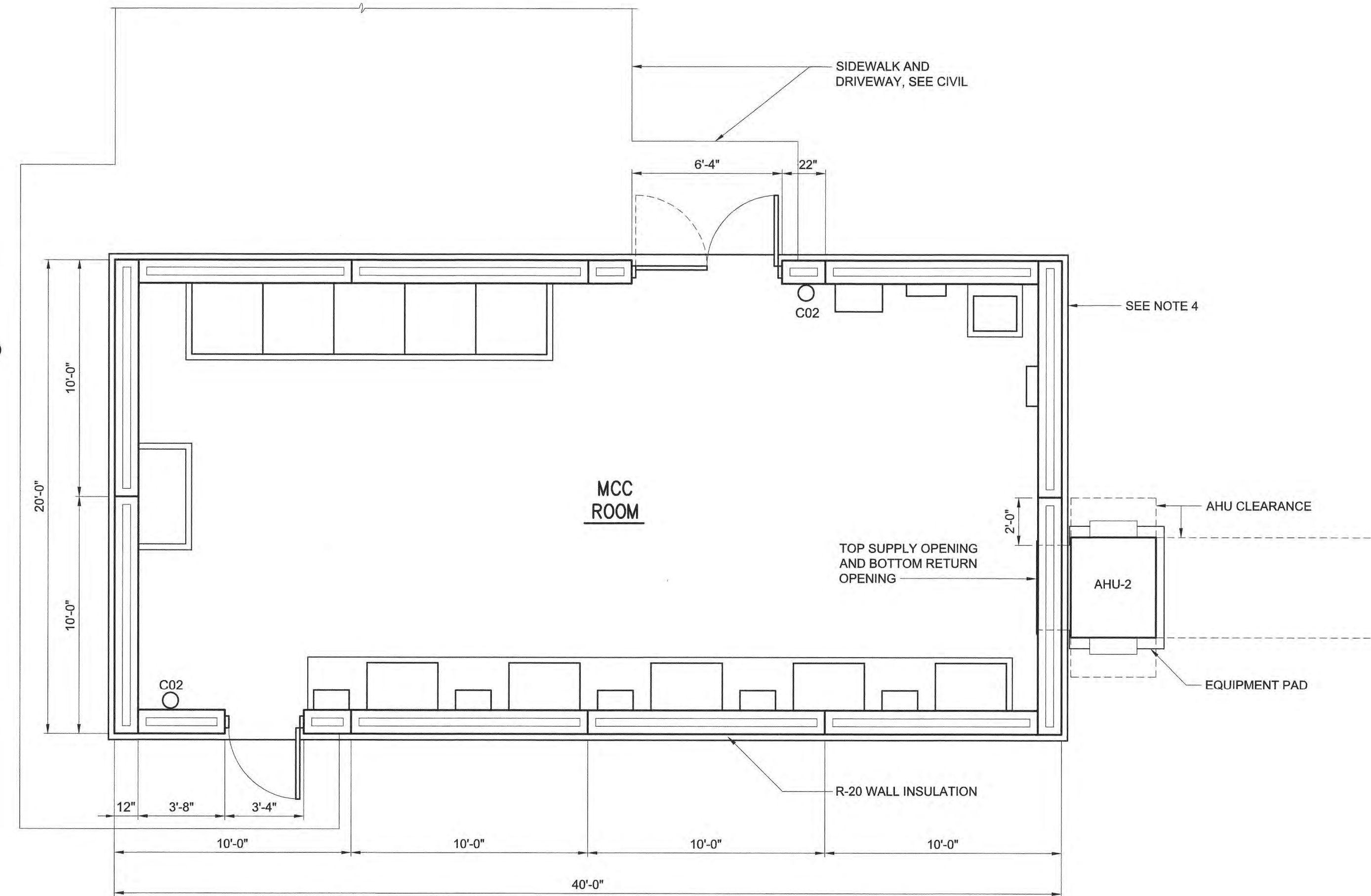
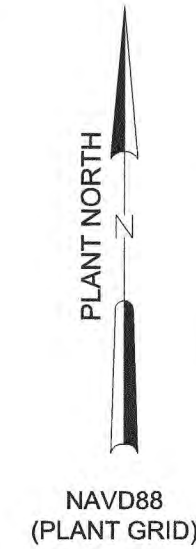
DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	B120A

PACKAGED EXTERIOR WALL MOUNT AIR HANDLING UNITS																								
TAG	LOCATION	AREA SERVED	MANUFACTURER		TYPE	TOTAL COOLING CAPACITY (MBH)	SENSIBLE COOLING CAPACITY (MBH)	HEAT PUMP HEATING CAPACITY (MBH)	ELECTRIC HEATING CAPACITY (MBH)	AIR FLOW (CFM)	OA AIR FLOW (CFM)	E.S.P. ("WG)	COOLING COIL				EER	WEIGHT (LBS)	POWER					NOTES
			MAKE	MODEL									EAT (°F)		LAT (°F)				VOLT	PH	HZ	MCA	MOCP	
													DB	WB	DB	WB								
AHU-2	ELECTRICAL BUILDING	ELECTRICAL ROOM	BARD	W120APC09EPXX 3X	PACKAGED EXTERIOR WALL AHU	122.8	85.3	-	28.3000	4650	200	-	86.6000	60	67.7000	51.6000	10	1190	460	3	60	27	40	1-7

- NOTES:
- PROVIDE MANUFACTURER CONTROLLER IN ACCORDANCE WITH SPECIFICATION 23 81 24
 - PROVIDE WALL SLEEVE AND OUTDOOR LOUVER GRILLE ACCESSORIES
 - PROVIDE ENTHALPY CONTROLLED ECONOMIZER OPTION
 - REFER TO SPECIFICATION 23 81 24 FOR ADDITIONAL REQUIREMENTS
 - PROVIDE MANUFACTURER SUPPLIED PLATFORM TO SUPPORT UNIT FROM GROUND
 - HEAT PUMP CAPACITY @ 17F
 - SEQUENCE OF OPERATION AHU-2 SHALL CYCLE BETWEEN COOLING AND HEATING TO MAINTAIN THE MCC ROOM BETWEEN 85 DEG F AND 60 DEG F. THE UNIT SHALL OPERATE IN ECONOMIZER MODE WHEN THE SPACE IS CALLING FOR COOLING AND THE OUTDOOR AIR TEMPERATURE IS COLD ENOUGH.



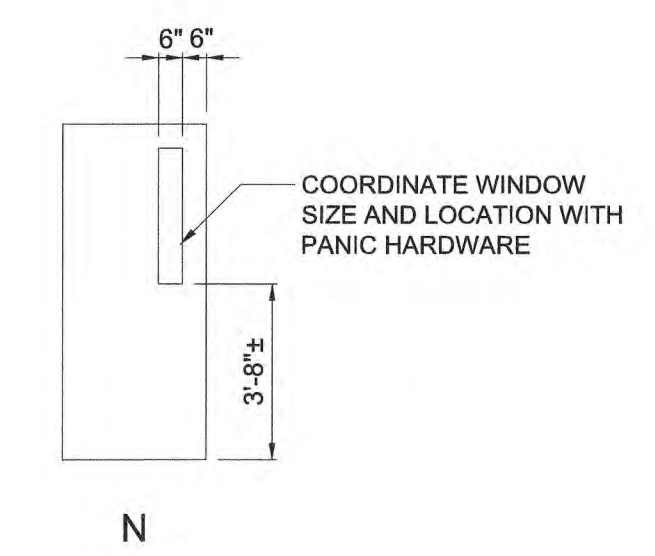
AIRFLOW DIAGRAM



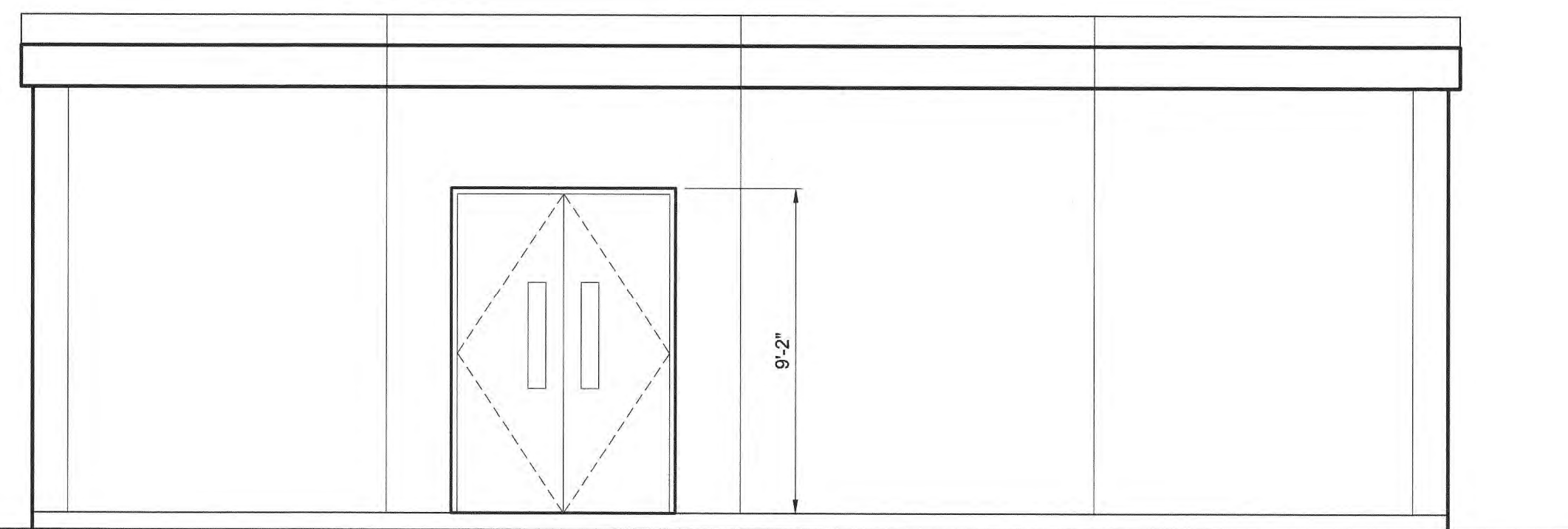
FLOOR PLAN
1/4" = 1'-0"

- PRECAST BUILDING NOTES:
- PROVIDE AND INSTALL INSULATED PRECAST CONCRETE ELECTRICAL BUILDING. BASIS OF DESIGN IS EASI-SPAN SYSTEM BY SMITH MIDLAND CORPORATION, MIDLAND, VA. SEE SPECIFICATION 03 45 15.
 - COORDINATE OPENING SIZES AND LOCATIONS WITH ELECTRICAL AND HVAC EQUIPMENT.
 - SWITCHGEAR ELECTRICAL BUILDING SHALL BE CONSTRUCTED ON 12-INCH MINIMUM BED OF COMPACTED ABC WITH A CONTINUOUS VAPOR BARRIER OVER THE SUBBASE. CONCRETE BASE SLAB SHALL BE 10-INCHES THICK MINIMUM REINFORCED WITH #5@8", TB, EW. MINIMUM CONCRETE COVER SHALL BE 3" FOR BOTTOM MAT AND 2" FOR TOP MAT.
 - ANCHOR OF PREFABRICATED BUILDING TO CONCRETE BASE SLAB SHALL BE DESIGNED AND PROVIDED BY THE MANUFACTURER OF THE PREFABRICATED BUILDING.

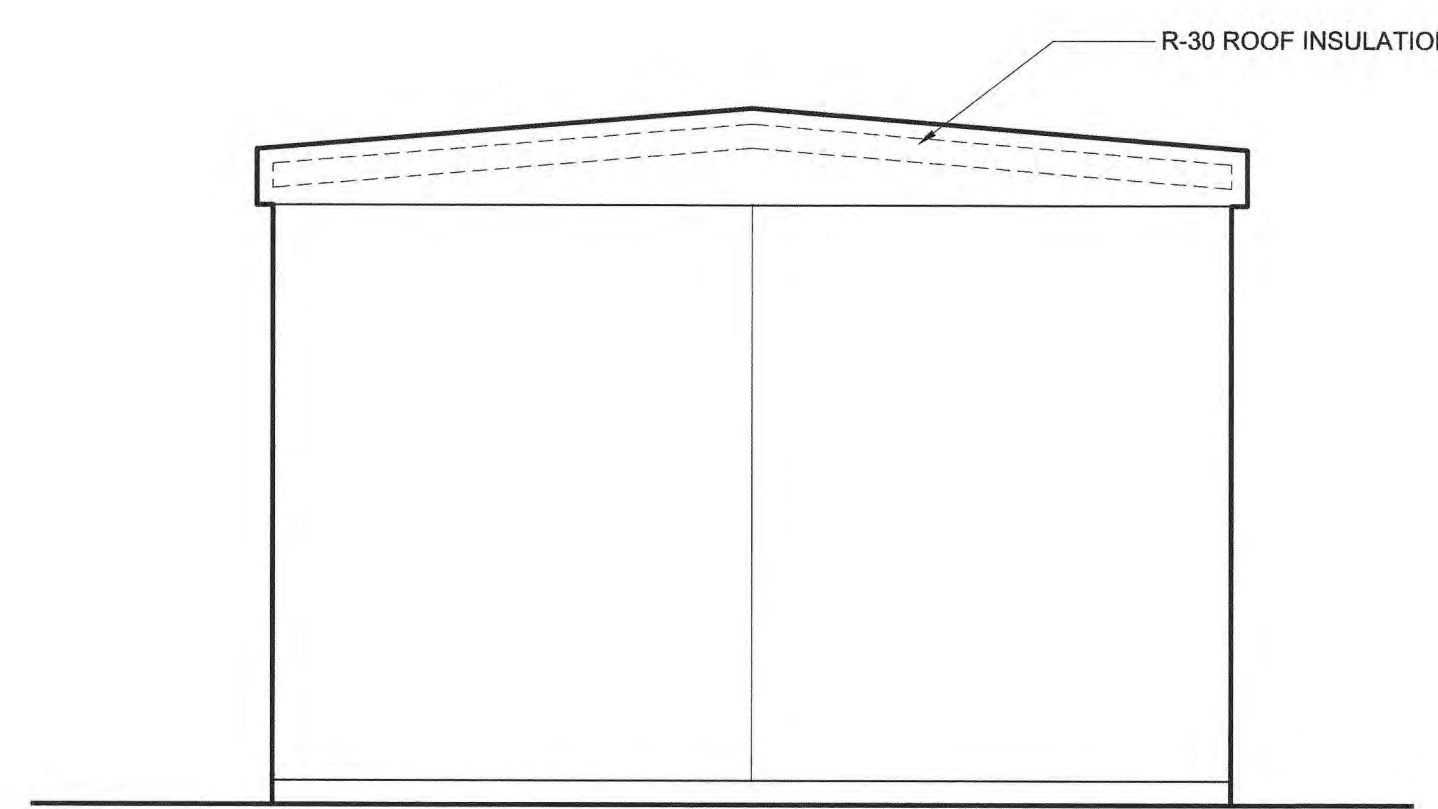
- DOOR NOTES:
- PROVIDE ALUMINUM "N" TYPE DOORS WITH INSULATED GLASS LITES.
 - SEE DETAILS 1,2,&3 SHEET BD1, FOR HEAD JAMB AND SILL.



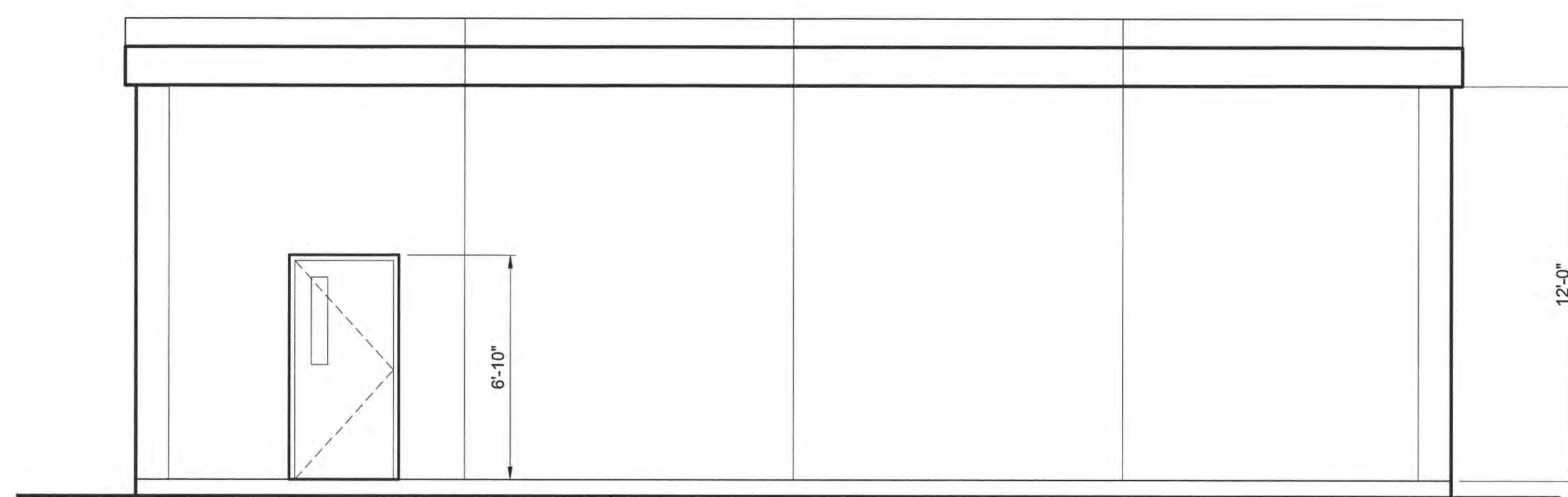
- LEGEND:
- C02 FIRE EXTINGUISHER- CARBON DIOXIDE



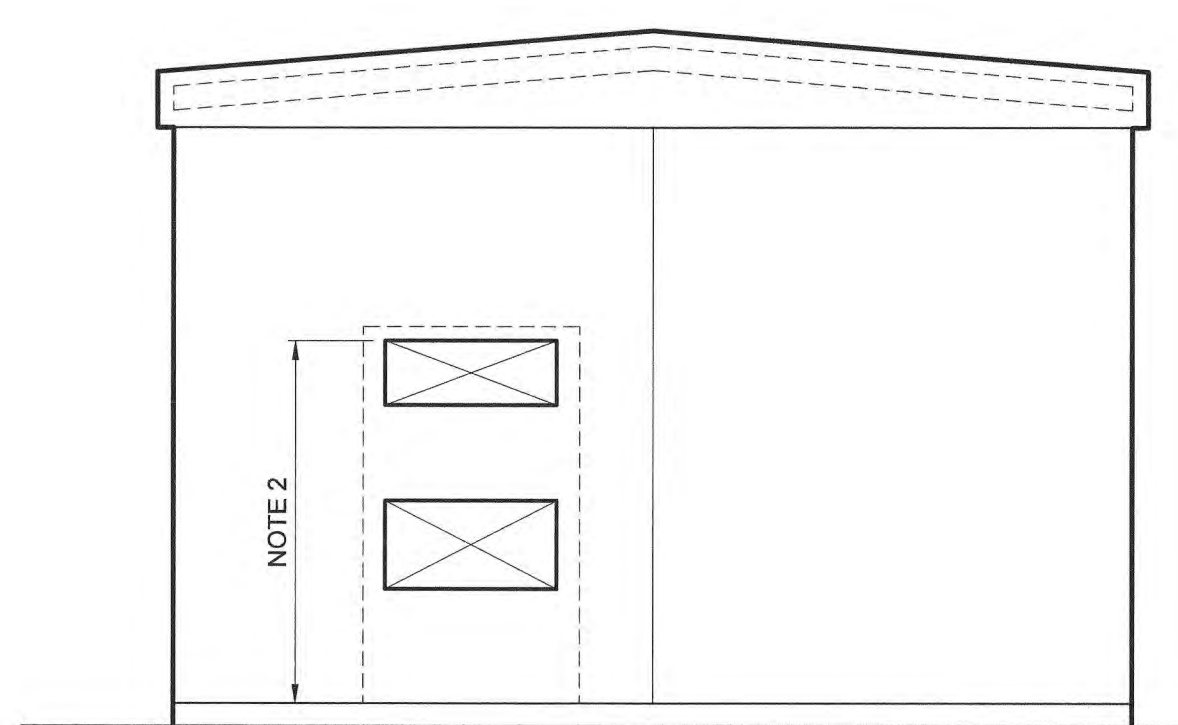
NORTH ELEVATION
1/4" = 1'-0"



WEST ELEVATION
1/4" = 1'-0"



SOUTH ELEVATION
1/4" = 1'-0"



EAST ELEVATION
1/4" = 1'-0"

File: C:\30402-PAL\30402-05A\CAD_BIM\CONTRACT DRAWINGS\MECH\B220 PUMP STATION NO.3 ELECTRICAL BUILDING Saved by: MMCHINTOSH Save date: 4/12/2023 6:07 PM PLOT DATE: 4/14/2023 9:35 AM BY: JCAUDIE

PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	M. MCINTOSH
DRAWN BY:	M. MCINTOSH
CHECKED BY:	W. RUSSELL
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
1 CONSTRUCTION	4/2023 CWB
REV ISSUED FOR	DATE BY

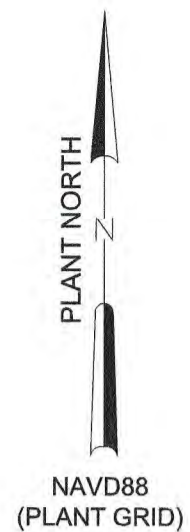
ISSUED FOR CONSTRUCTION

Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA
CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

PUMP STATION NO.3 ELECTRICAL BUILDING
BUILDING
PLAN, ELEVATIONS, AND HVAC

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	B220



- NOTES:**
1. DIMENSIONS SHOWN ARE TO NOMINAL FACE OF MASONRY, BASED ON EXISTING DRAWINGS. FIELD VERIFY ALL DIMENSIONS.
 2. REMOVE EXISTING DOOR AND FRAME IN EXISTING 7'-4" TALL OPENING IN ITS ENTIRETY.
 3. INFILL CMU IN DOOR OPENING.
 4. PAINT WALL, BOTH SIDES, FLOOR TO CEILING (10' TALL, APPROX.). COLOR TO MATCH EXISTING. SEE PLAN FOR DIMENSIONED PAINTING EXTENTS.

LEGEND:

----- GAS TIGHT WALL, PENETRATIONS, GAPS, AND TOP OF WALL JOINT AT CEILING TO COMPLY WITH REQUIREMENTS FOR 1 HR RATED WALL. STAIR CEILING SHALL ALSO BE GAS TIGHT. SEE STANDARD DETAILS SHEET BD1 FOR PENETRATION FIRE STOPPING DETAILS.

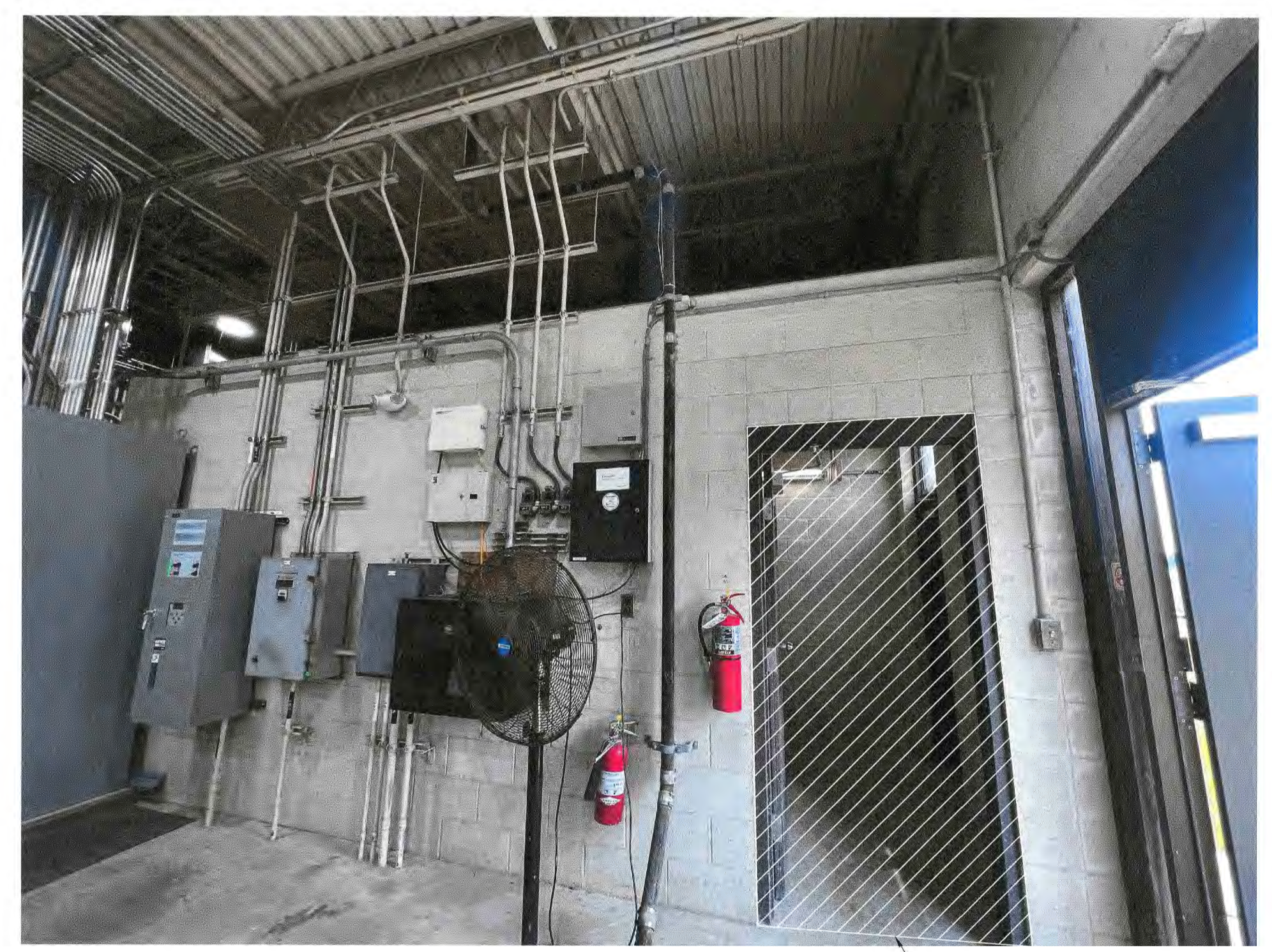
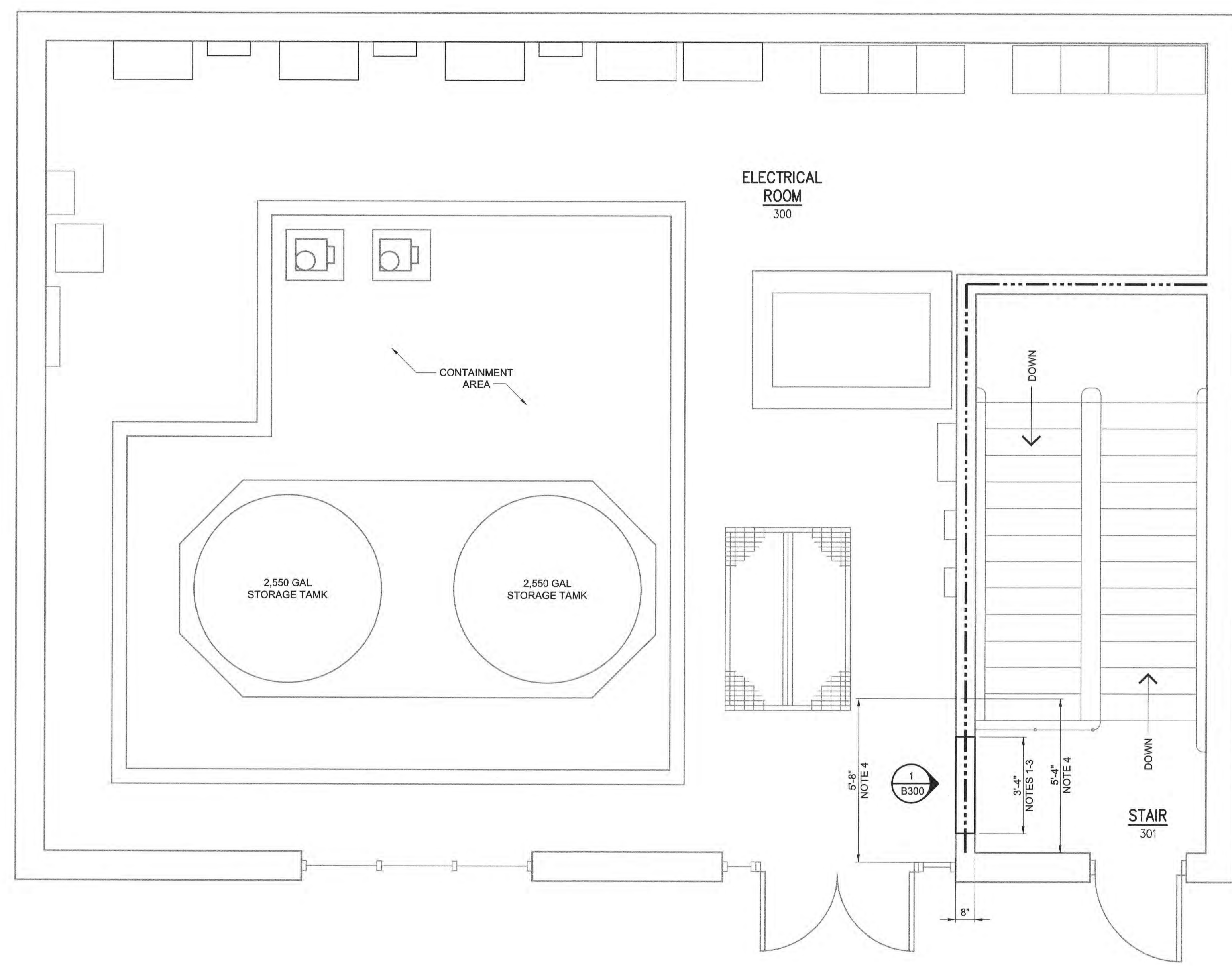


PHOTO 1 B300

SEE NOTES 1-3

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

File: O:\30402-RA\30402-064\CAD_BIM\CONTRACT DRAWINGS\MECH\B300.dwg Saved by: MICINTOSH Save date: 3/20/2023 2:57 PM PLOT DATE: 4/14/2023 9:35 AM BY: JCAUDLE

PROJECT ENGINEER:	M. MESSERE		
DESIGNED BY:	M. MCINTOSH		
DRAWN BY:	B. CAUDLE		
CHECKED BY:	W. RUSSELL		
1	CONSTRUCTION	4/2023	CWB
REV	ISSUED FOR	DATE	BY

ISSUED FOR CONSTRUCTION

Hazen

HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA

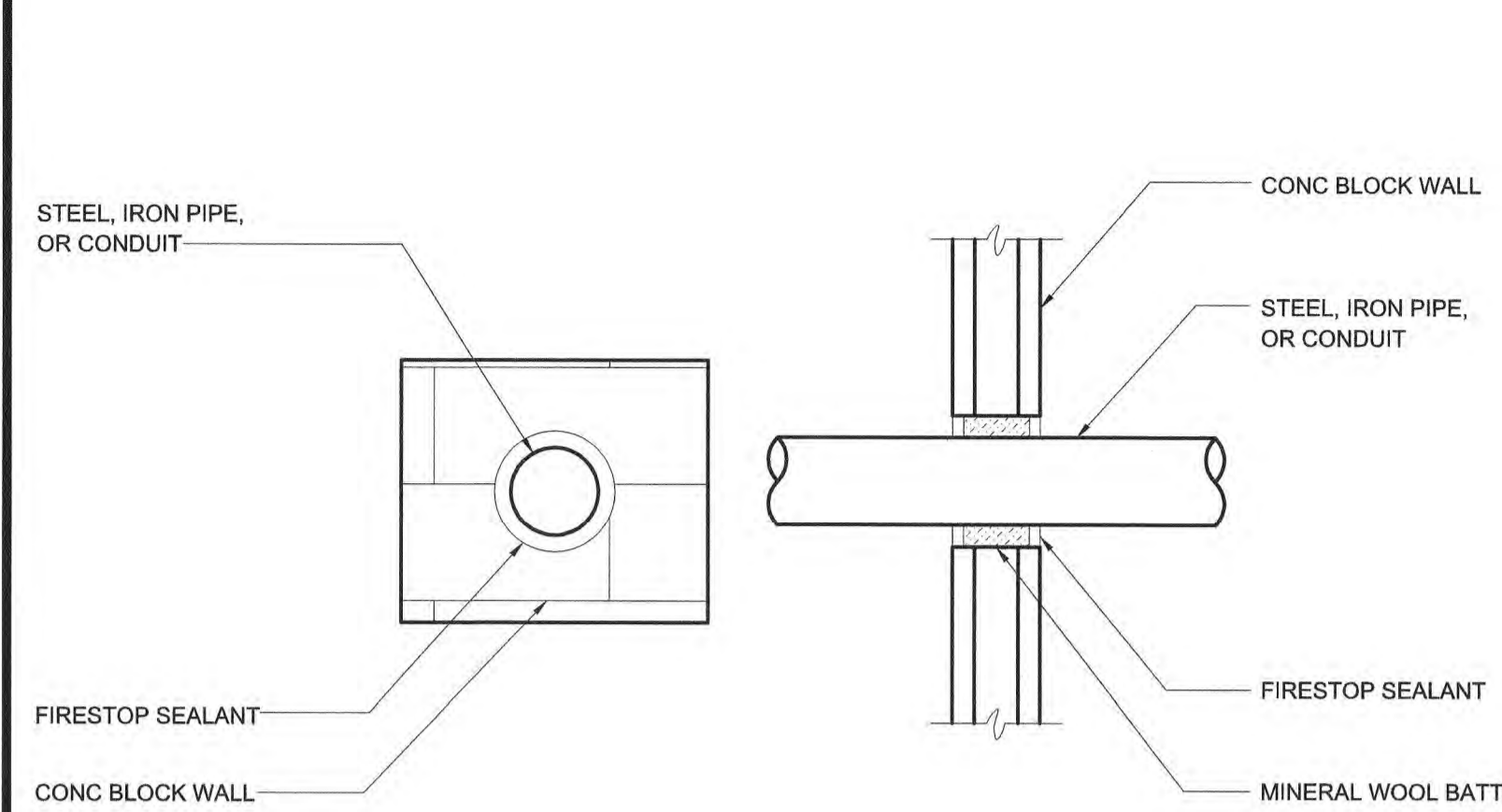
CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

PRIMARY SLUDGE PUMP STATION
BUILDING
TOP PLAN - MODIFICATIONS

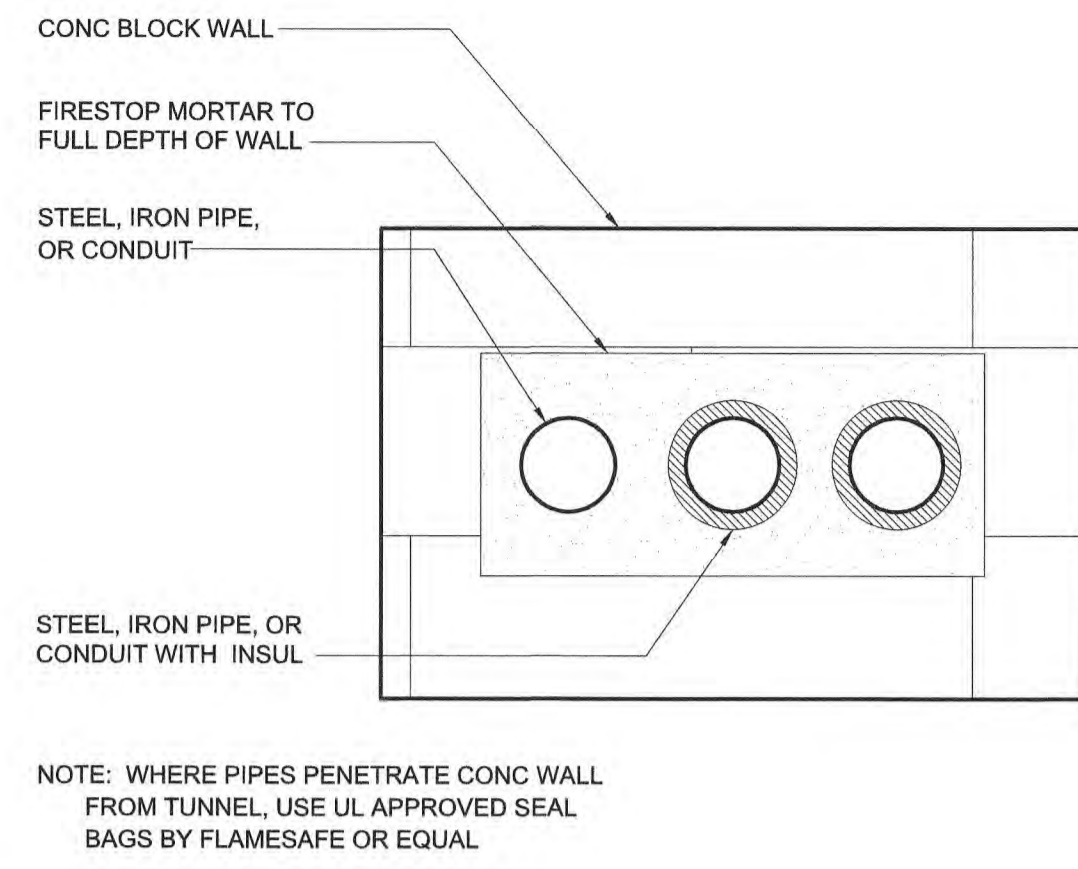
DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	B300

GENERAL NOTES:

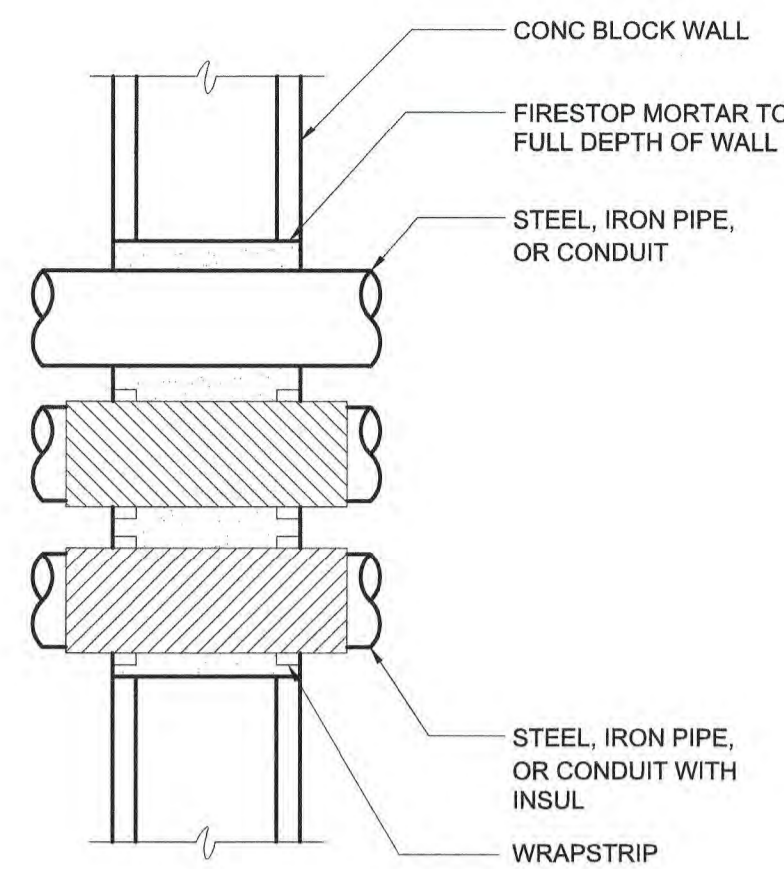
1. PENETRATIONS THROUGH GAS TIGHT WALLS SHALL USE PENETRATION DETAILS SHOWN ON THIS SHEET, OR EQUAL.
2. PENETRATIONS THROUGH ONE-HOUR RATED WALLS SHALL USE PENETRATION DETAILS SHOWN ON THIS SHEET OR EQUAL.



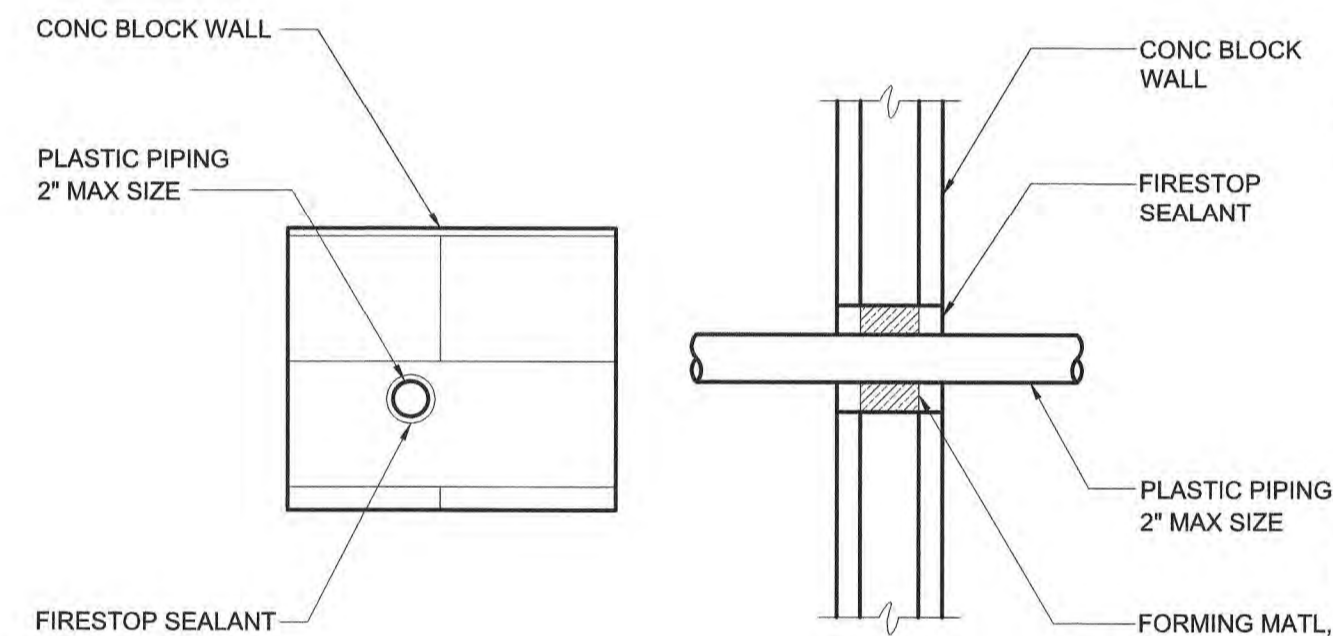
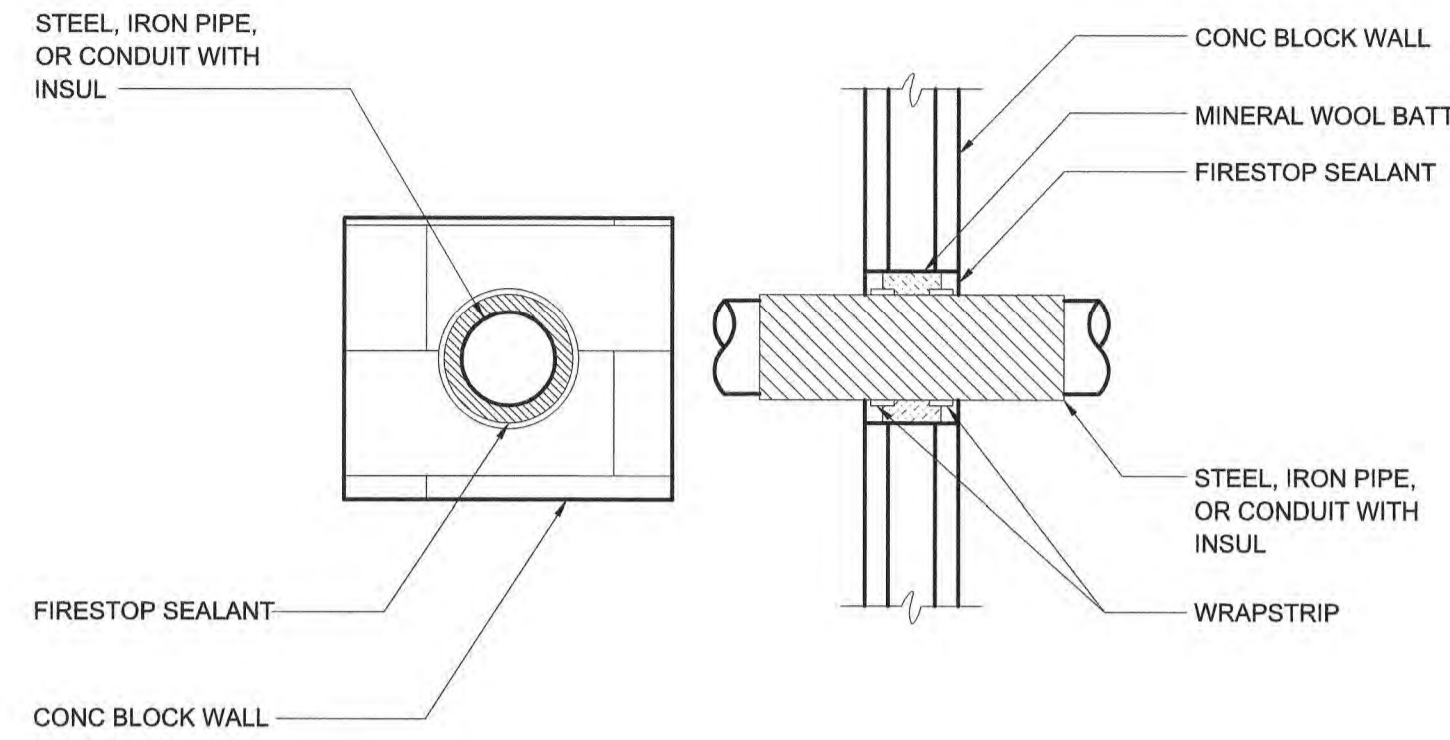
2-HR METALLIC PIPE THROUGH CMU WALL
UL DESIGN C-AJ-1079



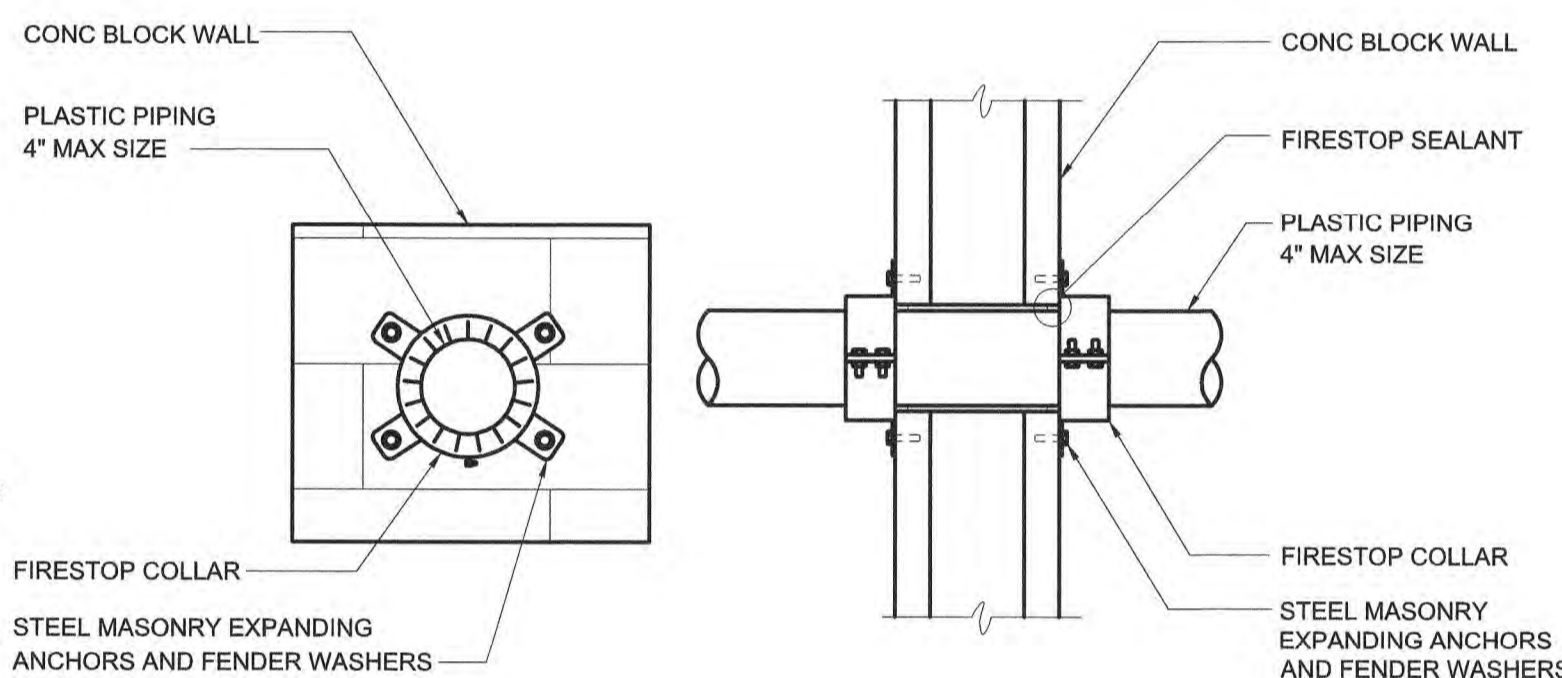
2-HR MULTIPLE PIPES THROUGH CMU OR CONC
WALL UL DESIGN C-AJ-8033



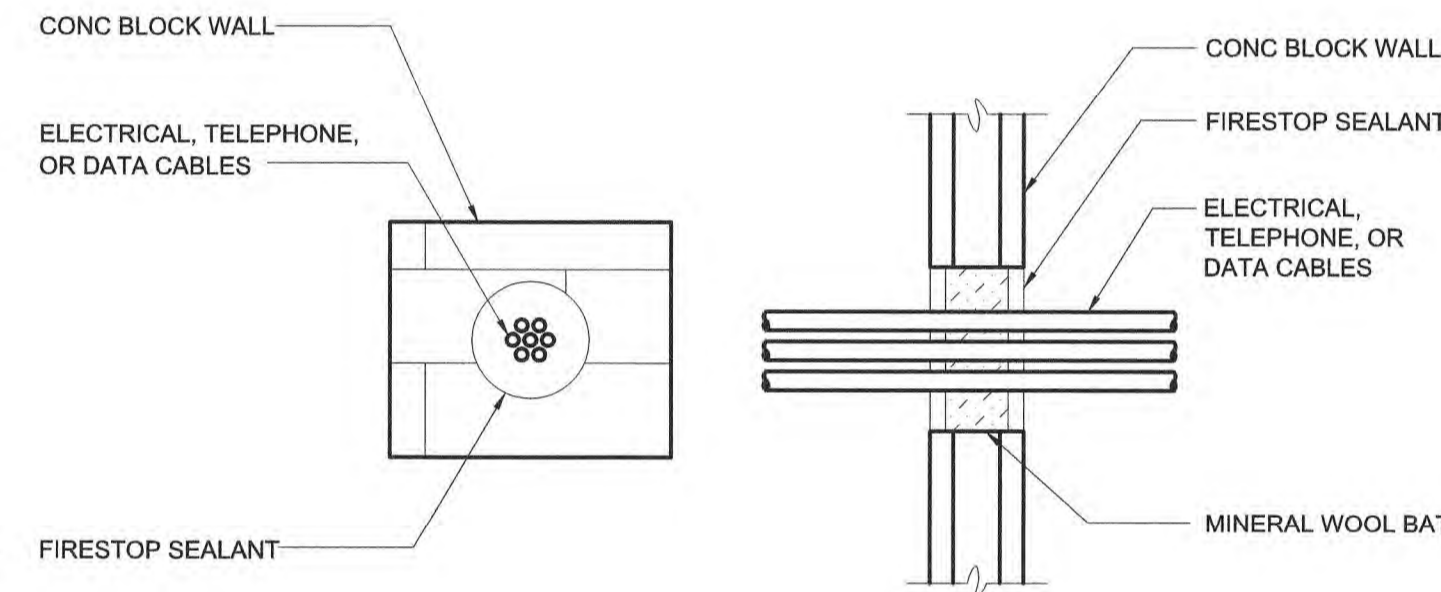
2-HR INSULATED METALLIC PIPE THROUGH CMU
WALL UL DESIGN C-AJ-5051 OR C-AJ-5042



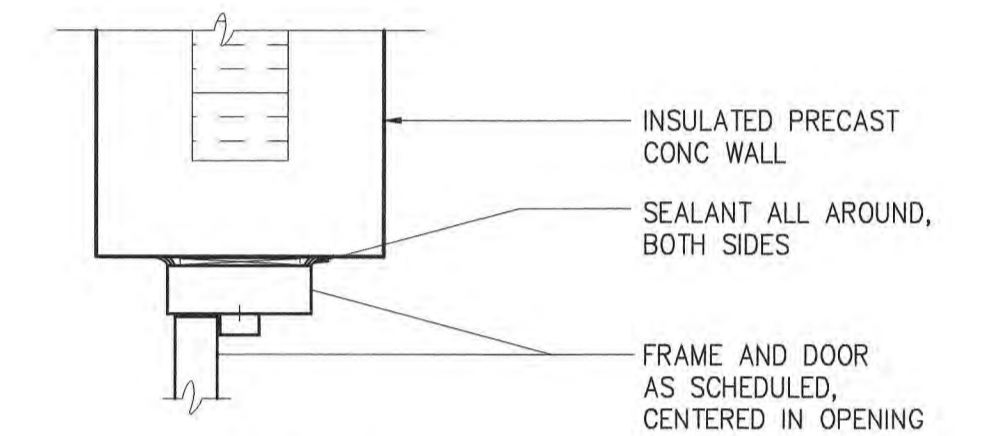
2-HR PLASTIC PIPE THROUGH CMU WALL
UL DESIGN C-AJ-2031



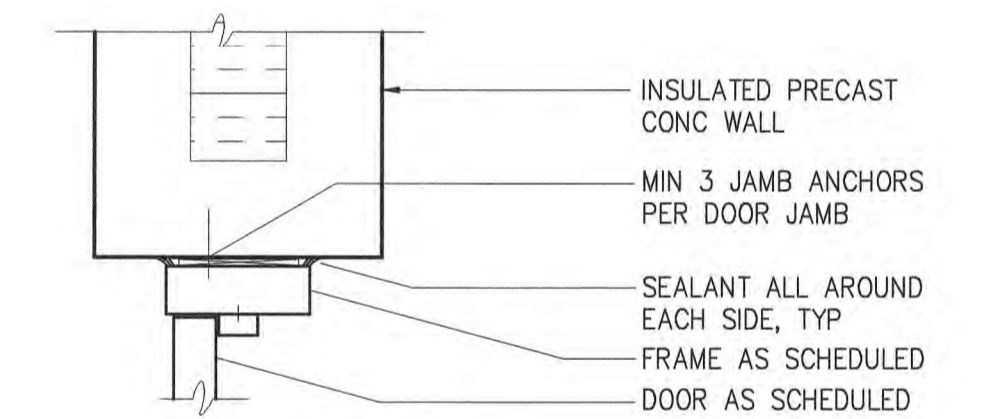
2-HR PLASTIC PIPE THROUGH CMU WALL
UL DESIGN C-AJ-2063



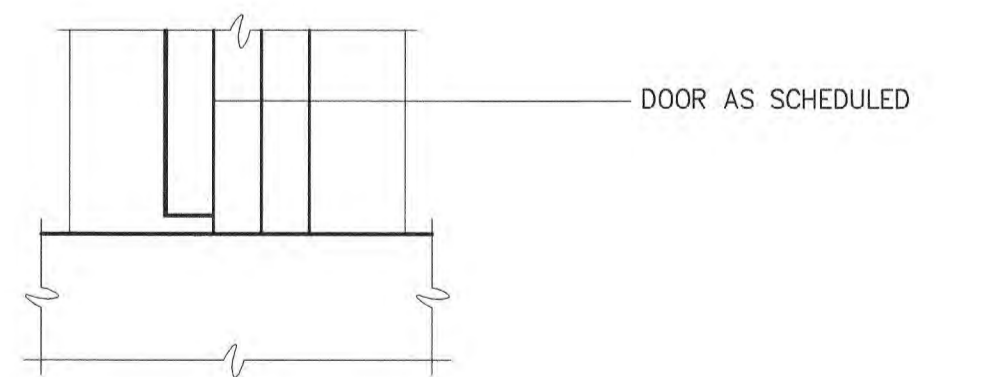
2-HR ELECTRICAL CABLE THROUGH CMU WALL
UL DESIGN C-AJ-3042



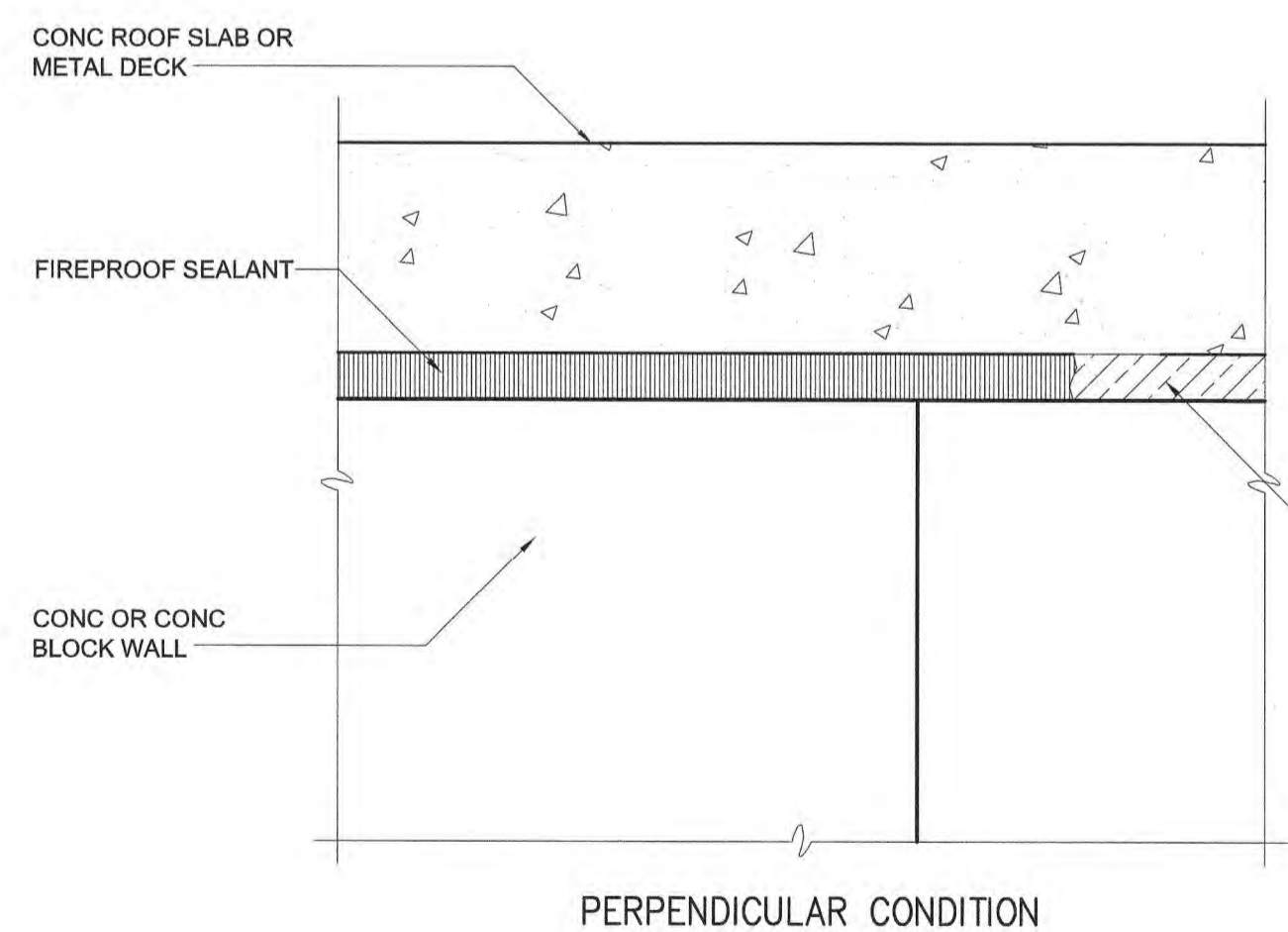
DOOR HEAD
PRECAST CONC
DETAIL 1
1 1/2\"/>



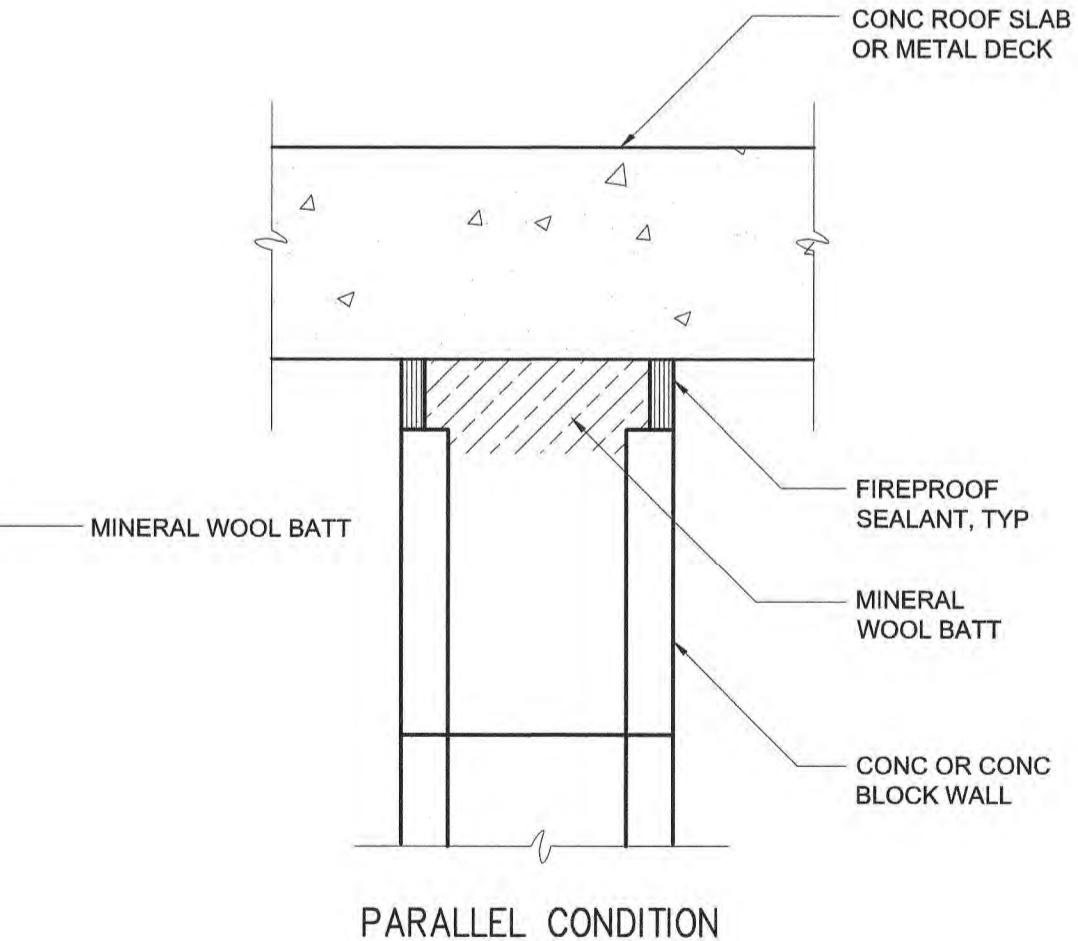
DOOR JAMB
PRECAST CONC
DETAIL 2
1 1/2\"/>



DOOR SILL
PRECAST CONC
DETAIL 3
1 1/2\"/>

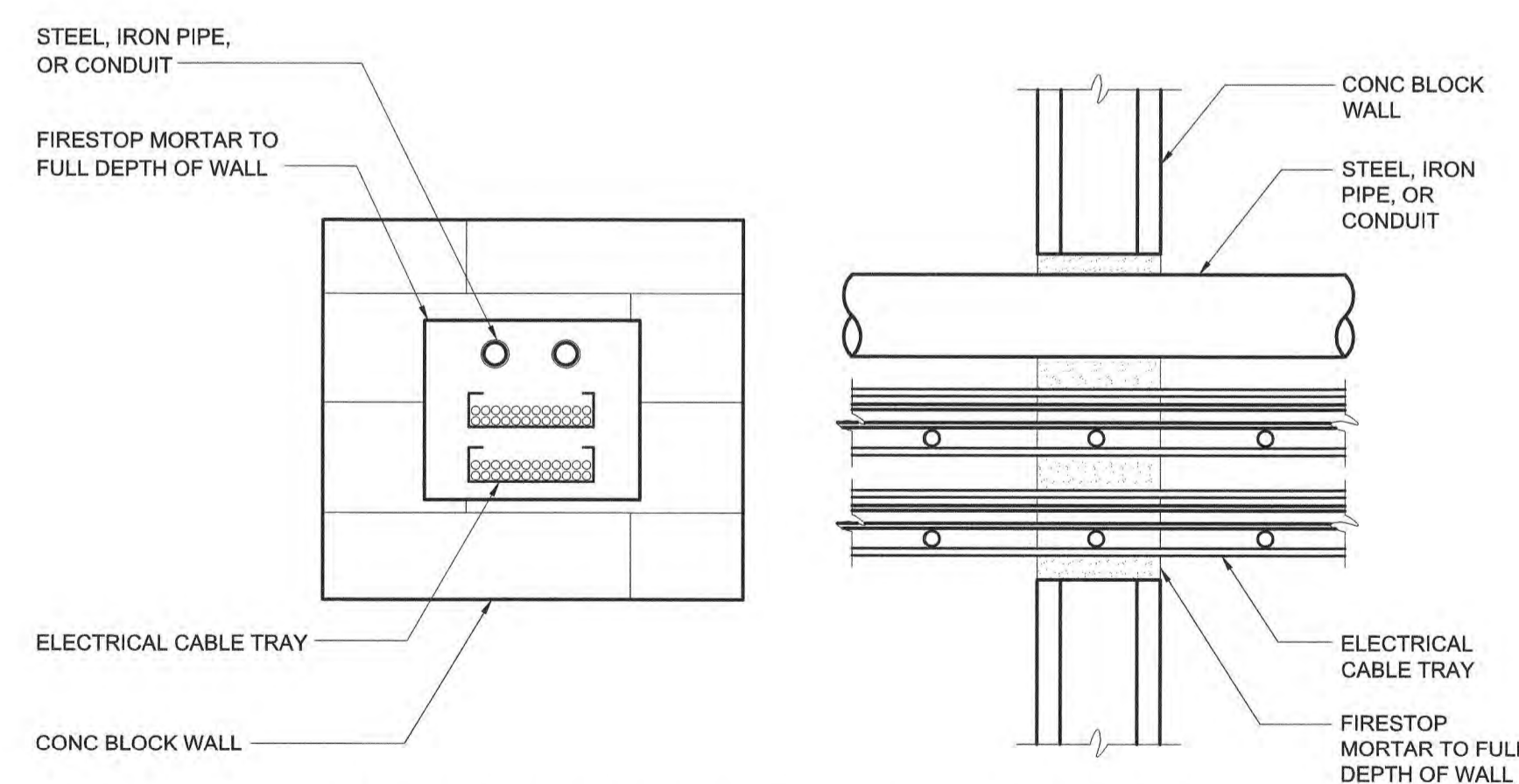


PERPENDICULAR CONDITION



PARALLEL CONDITION

2-HR TOP OF WALL
UL DESIGN HW-D-0027



2-HR MULTIPLE PIPE/CABLE TRAY THROUGH CMU WALL
UL DESIGN C-AJ-8016

File: C:\30402-FAL\30402-064\CAD_BIM\CONTRACT DRAWINGS\MECH\BD1 FIRESTOPPING.dwg Saved by: JCAUDLE Save date: 4/14/2023 8:10 AM PLOT DATE: 4/14/2023 9:35 AM BY: JCAUDLE

1	CONSTRUCTION	4/2023	CWB
REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	M. MCINTOSH
DRAWN BY:	M. MCINTOSH
CHECKED BY:	W. RUSSELL
IF THIS BAR DOES NOT MEASURE 1\"/>	

ISSUED FOR CONSTRUCTION

Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA
CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

STANDARD DETAILS
BUILDING
PENETRATION FIRESTOPPING & DOORS

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	BD1

GENERAL STRUCTURAL NOTES

- G-1 THESE NOTES ARE GENERAL AND SUPPLEMENT THE SPECIFICATIONS. THESE NOTES APPLY TO THE ENTIRE PROJECT UNLESS MODIFIED OR NOTED OTHERWISE IN THE CONTRACT DOCUMENTS.
G-2 STANDARD DETAILS SHALL BE USED WHEN REFERRED TO OR WHEN NO MORE RESTRICTIVE OR DIFFERENT DETAILS ARE SHOWN ON THE DRAWINGS.
G-3 DESIGN IS IN ACCORDANCE WITH AND CONSTRUCTION SHALL COMPLY WITH THE PROVISIONS OF THE NORTH CAROLINA BUILDING CODE. THE DESIGN LOADS AND OTHER DESIGN VALUES GIVEN IN NOTES G-4 THROUGH G-8 WERE USED FOR DESIGN OF STRUCTURES UNLESS NOTED OTHERWISE ON THE DRAWINGS.
G-4 LIVE LOADS:

Table with columns: LEVEL, ROOF, TOP / FIRST FLOOR, BOTTOM / GROUND FLOOR. Rows for Influent Pump Station and Pump Station No. 3.

-ALL STAIRWAYS, LANDINGS AND PLATFORMS ARE DESIGNED FOR A LIVE LOAD = 100 PSF UNLESS NOTED OTHERWISE.

- G-5 SNOW LOAD:
GROUND SNOW LOAD (Pg) = 10 PSF
FLAT-ROOF SNOW LOAD (Pf) = 13 PSF
SNOW EXPOSURE FACTOR (Ce) = 1.0
SNOW LOAD IMPORTANCE FACTOR (Is) = 1.25
THERMAL FACTOR (Ct) = 1.0

- G-6 WIND DESIGN CRITERIA:
BASIC DESIGN WIND SPEED (V) = 132 MPH
ALLOWABLE STRESS DESIGN WIND SPEED (Vasd) = 103 MPH
RISK CATEGORY = III
WIND IMPORTANCE FACTOR (Iw) = 1.0
WIND EXPOSURE = C

Table with columns: PARAMETER, PRESSURE COEFFICIENT Gcpi, WIND DESIGN PRESSURE, COMPONENTS AND CLADDING, LATERAL LOAD RESISTING SYSTEM. Rows for Influent Pump Station and Pump Station No. 3.

- G-7 SEISMIC LOAD:
RISK CATEGORY = III
SEISMIC IMPORTANCE FACTOR (Ie) = 1.25
SITE CLASS = C
MAPPED SPECTRAL RESPONSE ACCELERATIONS (Sa/S1) = 0.229/0.099
SPECTRAL RESPONSE ACCELERATIONS (Sms/Sm1) = 0.275/0.165
SPECTRAL RESPONSE COEFFICIENTS (SDS/SD1) = 0.183/0.112
SEISMIC DESIGN CATEGORY = B

Table with columns: PARAMETER, BASIC STRUCTURAL SYSTEM, DESIGN BASE SHEAR, SEISMIC RESPONSE COEFFICIENT Cs, RESPONSE MODIFICATION COEFFICIENT R, ANALYSIS PROCEDURE. Rows for Influent Pump Station and Pump Station No. 3.

- G-8 RAIN LOAD: RAIN INTENSITY (i) = 3.68 IN/HR
G-9 ALL DIMENSIONS INDICATED FOR EXISTING STRUCTURES SHALL BE VERIFIED BY FIELD MEASUREMENT. ALL DIMENSIONS THAT ARE CONTROLLED BY OR RELATED TO EQUIPMENT SHALL BE VERIFIED BY THE CONTRACTOR WITH THE MANUFACTURER SHOP DRAWINGS PRIOR TO CONSTRUCTION.
G-10 THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING INFORMATION IN THE FIELD AS REQUIRED FOR NEW WORK.
G-11 IF A CONFLICT IS FOUND BETWEEN DIFFERENT PORTIONS OF THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY. CONTINUED CONSTRUCTION OF THE AREA IN CONFLICT SHALL BE AT THE CONTRACTOR'S OWN RISK UNTIL THE CONFLICT IS RESOLVED.
G-12 EQUIPMENT ANCHOR SIZES, TYPES, EMBEDMENT AND PATTERNS SHALL BE DESIGNED BY THE MANUFACTURER OF THE EQUIPMENT. IF EQUIPMENT MANUFACTURER IS UNABLE TO PROVIDE DESIGN OF ANCHOR EMBEDMENT, DESIGN SHALL BE BY ENGINEER RETAINED BY CONTRACTOR BASED ON LOADS PROVIDED BY EQUIPMENT MANUFACTURER. CONTRACTOR SHALL SUBMIT SIZE, PLACEMENT, AND EMBEDMENT REQUIREMENTS. ALL ANCHOR PATTERNS SHALL BE TEMPLATED TO ENSURE ACCURACY OF PLACEMENT.
G-13 STRUCTURAL DRAWINGS SHALL BE USED IN COORDINATION WITH THE DRAWINGS OF ALL OTHER DISCIPLINES AND MANUFACTURER'S SHOP DRAWINGS.
G-14 STRUCTURES HAVE BEEN DESIGNED FOR OPERATIONAL LOADS ON THE COMPLETED STRUCTURE. DURING CONSTRUCTION, THE STRUCTURES SHALL BE PROTECTED BY BRACING AND TEMPORARY SUPPORTS WHEREVER EXCESSIVE CONSTRUCTION LOADS MAY OCCUR. OVERSTRESSING OF ANY STRUCTURAL ELEMENT IS PROHIBITED.
G-15 IF CONTRACTOR DESIRES TO TEMPORARILY PLACE OR MOVE LOADS ON OR ADJACENT TO EXISTING STRUCTURES OR UTILITIES DURING CONSTRUCTION PROCESS, CONTRACTOR IS EXCLUSIVELY RESPONSIBLE FOR MAINTAINING STRUCTURAL INTEGRITY AND AVOIDING OVERSTRESSING AND DAMAGING EXISTING STRUCTURES AND UTILITIES. CONTRACTOR SHALL SUBMIT STRUCTURAL CALCULATIONS AND DRAWINGS VERIFYING THAT PROPOSED CONSTRUCTION (INCLUDING APPLICATION OF TEMPORARY CONSTRUCTION LOADS) WILL NOT OVERSTRESS OR DAMAGE EXISTING STRUCTURES AND UTILITIES. DRAWINGS AND CALCULATIONS SHALL BE SEALED BY A PROFESSIONAL ENGINEER CURRENTLY REGISTERED IN THE STATE OF NORTH CAROLINA.

STRUCTURAL METALS

- M-1 DETAIL, FABRICATE, AND ERECT STRUCTURAL STEEL IN ACCORDANCE WITH ANSIAISC 360 SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, LATEST EDITION.
M-2 STEEL MATERIAL:
A) STRUCTURAL HSS: ASTM A500, GRADE C (46/50 KSI) OR A1085 GRADE A (50 KSI)
B) STRUCTURAL PIPE: ASTM A53, GRADE B (35 KSI)
C) PLATES, BARS AND ANGLES: ASTM A36 UNO (36 KSI)
D) STRUCTURAL W, C, & MC SHAPES: ASTM A992 (50 KSI)
E) STRUCTURAL M & S SHAPES: ASTM A36 (36 KSI)
F) STRUCTURAL HP: ASTM A572 GRADE 50 (50 KSI)
G) ANCHOR RODS: ASTM F1554 GRADE 55 (55 KSI)
M-3 PROVIDE MINIMUM 3/4" DIAMETER ASTM F3125 GRADE A325 TYPE 1 OR GRADE F1852 TYPE 1 HIGH STRENGTH BOLTS WITH SNUG TIGHTENED TYPE N CONNECTIONS FOR STRUCTURAL STEEL UNLESS NOTED OTHERWISE. HOLES FOR BOLTS SHALL BE STANDARD SIZE UNLESS NOTED OTHERWISE.
M-4 PROVIDE TYPICAL STEEL BEAM CONNECTIONS FOR A CAPACITY OF NOT LESS THAN ONE HALF OF THE TOTAL UNIFORM LOAD CAPACITY TABULATED IN THE AISC TABLES FOR ALLOWABLE LOADS OF BEAMS UNLESS NOTED OTHERWISE.
M-5 DO NOT PAINT STEEL SURFACES WHICH ARE TO BE WELDED OR ARE TO BE ENCASED IN CONCRETE.
M-6 ALL STAINLESS STEEL FABRICATIONS EXPOSED TO UNDERWATER SERVICE SHALL BE TYPE 316. ALL OTHER STAINLESS STEEL FABRICATIONS SHALL BE TYPE 304 UNLESS NOTED OTHERWISE.
M-7 ALUMINUM SHALL BE ALLOY 6061-T6 UNLESS NOTED OTHERWISE.
M-8 ALL BOLTS, ANCHORS, AND CONCRETE ANCHORS CONNECTING ALUMINUM SHALL BE STAINLESS STEEL TYPE 316 FOR UNDERWATER APPLICATIONS AND TYPE 304 FOR ALL OTHER APPLICATIONS.
M-9 ALUMINUM SHALL BE ISOLATED FROM CONTACT WITH CONCRETE AND DISSIMILAR METALS.
M-10 ALL GROOVE AND BUTT WELDS SHALL BE FULL PENETRATION.
M-11 FILLET WELD SIZES SHALL NOT BE LESS THAN THE MINIMUM SIZE REQUIRED BY AISC CODE FOR PLATE SIZES TO BE CONNECTED AND SHALL BE APPLIED TO THE ENTIRE JOINT CONTACT LENGTH, AND NOT LESS THAN 3/16".
M-12 ALL WELDS SHALL BE PERFORMED IN THE SHOP UNLESS NOTED BY A FIELD WELD SYMBOL OR APPROVED BY ENGINEER.
M-13 BOTTOM SURFACES OF BASE PLATES SHALL BE GROUTED TO ENSURE FULL BEARING CONTACT WITH CONCRETE SLAB.
M-14 WHENEVER ONE MEMBER IS FASTENED TO ANOTHER WITH FASTENINGS (BOLTS, WELDS, ETC.) SET AT A UNIFORM SPACING, A MINIMUM OF TWO FASTENINGS PER PIECE SHALL BE CONNECTED AND THE FIRST AND LAST FASTENINGS SHALL BE LOCATED NOT TO EXCEED 0.25 OF FASTENER SPACING FROM EACH END.
M-15 GRATING PANELS SHALL BE CONFINED TO PREVENT MOVEMENT PER STANDARD DETAIL S-05-0706. USE OF GRATING CLIP ATTACHMENT IS NOT ACCEPTABLE TO PREVENT GRATING MOVEMENT.

FOUNDATIONS

- F-1 CONCRETE (CAST-IN-PLACE) NOTES APPLY TO FOUNDATIONS.
F-2 ALLOWABLE SOIL BEARING PRESSURE = 3000 PSF
F-3 MINIMUM DEPTH FROM ADJACENT FINISHED GRADE TO BOTTOM OF FOUNDATION = 12 INCHES.
F-4 STRUCTURES ARE DESIGNED FOR THE 100-YEAR FLOOD ELEVATION OF 78.00.

PRECAST CONCRETE

- PC-1 PRECAST STRUCTURAL MEMBERS SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NORTH CAROLINA. OPENINGS TO ALLOW VENT PIPES, STRUCTURAL STEEL BRACING AND COLUMNS TO PASS THROUGH SHALL BE PROVIDED.
PC-2 PRECAST CONCRETE BUILDINGS SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NORTH CAROLINA. STRUCTURAL DRAWINGS SHALL INDICATE DESIGN IS IN COMPLIANCE WITH THE NORTH CAROLINA STATE BUILDING CODE.

CONCRETE (CAST-IN-PLACE)

- C-1 DESIGN OF CONCRETE ELEMENTS INCLUDING WALLS, FORMED SLABS, BEAMS, AND COLUMNS IS IN ACCORDANCE WITH ACI 318 (CODE REQUIREMENTS FOR STRUCTURAL CONCRETE) AND 350 (CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES).
C-2 CONCRETE STRENGTH CLASSES (28-DAY COMPRESSIVE STRENGTH):
A) CLASS A1 CONCRETE (4,500 PSI): NORMAL WEIGHT STRUCTURAL CONCRETE TO BE USED IN ALL STRUCTURES QUALIFYING AS ENVIRONMENTAL CONCRETE STRUCTURES THAT ARE DESIGNED IN ACCORDANCE WITH ACI 350.
B) CLASS A2 CONCRETE (4,000 PSI): NORMAL WEIGHT STRUCTURAL CONCRETE IN ALL STRUCTURES OTHER THAN STRUCTURES QUALIFYING AS ENVIRONMENTAL CONCRETE STRUCTURES AS DESCRIBED ABOVE, AND FOR ALL SIDEWALKS, CURB AND GUTTERS, AND PAVEMENT.
C) CLASS B CONCRETE (3,000 PSI): NORMAL WEIGHT STRUCTURAL CONCRETE USED FOR DUCT BANK ENCASUREMENTS, CATCH BASINS, FENCE AND GUARD POST EMBEDMENT, CONCRETE FILL, AND OTHER AREAS WHERE SPECIFICALLY NOTED ON CONTRACT DRAWINGS.
C-3 ALL BAR REINFORCING SHALL CONFORM TO ASTM A615, GRADE 60 UNLESS NOTED OTHERWISE.
C-4 CONCRETE COVER FOR REINFORCING (UNLESS NOTED OTHERWISE ON THE DRAWINGS):
A) CONCRETE DEPOSITED DIRECTLY AGAINST SOIL: 3"
B) CONCRETE EXPOSED TO WEATHER (#5 OR SMALLER): 1 1/2"
CONCRETE EXPOSED TO WEATHER (#6 OR LARGER): 2"
C) SLABS: 2"
AT SURFACES CONTACTING FLUID: 2"
D) BEAMS AND COLUMNS (TO MAIN REINFORCEMENT): 2"
BEAMS AND COLUMNS (TO COLUMN TIES OR STIRRUPS): 1 1/2"
E) WALLS 12" OR MORE: 2"
WALLS LESS THAN 12" (#5 OR SMALLER): 1 1/2"
WALLS LESS THAN 12" (#6 OR LARGER): 2"
F) FOR SURFACES EXPOSED TO FLUID IN BEAMS, COLUMNS AND WALLS: ADD 1/2" TO ABOVE VALUES

CONCRETE (CAST-IN-PLACE) CONTINUED

- C-5 SPLICES SHALL BE CLASS "B" CONFORMING TO THE PROVISIONS OF ACI 318 UNLESS NOTED OTHERWISE. SPLICE LENGTH FOR TWO DIFFERENT SIZED BARS TO BE LAP SPICED TOGETHER SHALL BE THE LENGTH OF THE LARGER BAR UNLESS NOTED OTHERWISE.
C-6 CONSTRUCTION JOINTS SHALL BE LOCATED AS SHOWN ON THE DRAWINGS.
C-7 ALL EXPOSED CORNERS SHALL HAVE A 3/4" CHAMFER.
C-8 EQUIPMENT SUPPORTS, ANCHORAGES, OPENINGS, RECESSES AND REVEALS NOT SHOWN ON THE STRUCTURAL DRAWINGS BUT REQUIRED BY OTHER CONTRACT DOCUMENTS, SHALL BE INSTALLED PRIOR TO PLACING CONCRETE.
C-9 REINFORCING BARS AND ACCESSORIES SHALL NOT BE IN CONTACT WITH ANY METAL PIPE, PIPE FLANGE, METAL CONDUIT, OR OTHER METAL PARTS EMBEDDED IN CONCRETE. A MINIMUM CLEARANCE OF 2" SHALL BE PROVIDED.
C-10 CONDUITS AND OTHER SIMILAR ITEMS EMBEDDED IN OR PENETRATING THROUGH CONCRETE SHALL BE SPACED ON CENTER NOT LESS THAN 3 TIMES THEIR OUTSIDE DIMENSION, BUT NOT LESS THAN 2 1/2" CLEAR. WHEN SUCH ITEMS ARE EMBEDDED IN WALLS OR SLABS, THEY SHALL NOT OCCUPY MORE THAN 1/3 OF THE MEMBER THICKNESS.
C-11 AT ALL TYPICAL CURBS, EQUIPMENT PADS, AND PIPE SUPPORT PIERS, REINFORCING DOWELS SHOWN MAY BE REPLACED WITH ADHESIVE DOWELS AS SPECIFIED. DOWELS LOCATED CLOSER THAN 3" FROM ANY EDGE OF CONCRETE SHALL NOT BE REPLACED WITH DRILLED DOWELS.
C-12 ADJUST THE LOCATION OF DOWELS OR ANCHORS PLACED INTO HARDENED CONCRETE AS NEEDED TO AVOID DRILLING THROUGH ANY REINFORCING BARS. IF THE LOCATION NEEDS TO BE MODIFIED, CONTACT THE ENGINEER. CONTRACTOR SHALL USE NON-DESTRUCTIVE MEANS TO FIELD LOCATE REINFORCEMENT PRIOR TO DRILLING HOLES FOR DOWELS OR ANCHORS.
C-13 CLEAR DISTANCE FROM ANCHOR RODS TO ANY CONCRETE EDGE SHALL BE 4" MINIMUM UNLESS NOTED OTHERWISE.

DEMOLITION

- D-1 FOR DEMOLITION REQUIREMENTS, REFER TO SPECIFICATION 01 73 00 - EXECUTION OF WORK AND 02 41 00 DEMOLITION.
D-2 CONCRETE DEMOLITION WITHIN STRUCTURES BEING MODIFIED SHALL BE SELECTIVE DEMOLITION BY CORE DRILLING OR SAWCUTTING AND CAREFUL REMOVAL OF CONCRETE SHALL BE REMOVED. NO OVER CUTTING OF AREAS TO BE DEMOLISHED SHALL BE PERMITTED. CONTRACTOR SHALL CORE DRILL CORNERS OF OPENING PRIOR TO SAWCUTTING. EXPLOSIVES AND VIBRATORY HAMMERS SHALL NOT BE USED FOR DEMOLITION WORK.
D-3 UNLESS ANCHORING DEVICES AND/OR REINFORCEMENT IS NOTED TO REMAIN FOLLOWING DEMOLITION, REMOVE AND/OR BURN BACK ANCHORS AND REINFORCEMENT STEEL 1/2" MIN BELOW SURFACE AND VOIDS CREATED SHALL BE FILLED WITH EPOXY RESIN BINDER.
D-4 EMBEDDED CONDUIT ENCOUNTERED DURING DEMOLITION WORK LIMITS SHALL BE PERMANENTLY REROUTED AS NECESSARY. CONTRACTOR SHALL SUBMIT PROPOSED MEANS OF REROUTING ANY INTERFERING CONDUIT.
D-5 WHERE DRAWINGS INDICATE A CONCRETE EQUIPMENT PAD TO BE DEMOLISHED, THE FLOOR SLAB SURFACE SHALL BE REPAIRED AS APPROVED BY ENGINEER. FOLLOWING SELECT DEMOLITION AND REMOVAL OF THE EQUIPMENT PAD REMOVAL THE REPAIR SHALL BE:
A. SAWCUT THE FLOOR AROUND THE EQUIPMENT PAD PERIMETER TO A DEPTH OF 1/4"
B. SCARIFY AND REMOVE SLAB CONCRETE WITHIN THE PERIMETER TO A NOMINAL 1/4" DEPTH CLEAN AND REMOVE ALL CONCRETE LAITANCE.
C. RESURFACE THE AREA BY APPLYING A POLYMER MODIFIED OR SILICA FUME ENHANCED CEMENTITIOUS REPAIR MORTAR, APPROVED BY THE ENGINEER, FOLLOWING THE MANUFACTURER'S SURFACE PREPARATION AND APPLICATION RECOMMENDATIONS. LEVEL AND FINISH THE SURFACE TO MATCH THE FLOOR SLAB SURROUNDING AREA.
D-6 PRIOR TO DEMOLITION OF SMALL OPENINGS (LESS THAN 6 INCHES IN SIZE) FOR PENETRATIONS, ETC., CONTRACTOR SHALL USE NON-DESTRUCTIVE MEANS TO FIELD LOCATE REINFORCEMENT. OPENINGS SHALL BE LOCATED TO AVOID CUTTING THROUGH EXISTING REINFORCEMENT, IF POSSIBLE. EXISTING REINFORCEMENT SHALL NOT BE CUT WITHOUT APPROVAL OF ENGINEER.
D-7 CONCRETE SURFACES LEFT EXPOSED FOLLOWING DEMOLITION SHALL BE SEALED WITH EPOXY RESIN COATING SUCH AS DURAKOTE 240 BY EUCLID CHEMICAL, OR APPROVED EQUAL.
D-8 DETAILED CONSTRUCTION AND DEMOLITION PLAN SHALL BE SUBMITTED TO THE ENGINEER AND APPROVED BY THE ENGINEER AND OWNER PRIOR TO BEGINNING CONSTRUCTION. ANY SHUTDOWNS SHALL BE SUBMITTED TO, COORDINATED WITH, AND APPROVED BY THE OWNER. ONCE APPROVED, CONTRACTOR SHALL PROVIDE A MINIMUM OF THREE (3) WEEKS NOTICE TO OWNER PRIOR TO SHUTDOWN.

NONSTRUCTURAL COMPONENT ANCHORAGE AND BRACING

- A-1 ANCHORAGE AND BRACING SHALL BE PROVIDED FOR NONSTRUCTURAL COMPONENTS IN ACCORDANCE WITH SPECIFICATION 01 73 23 - ANCHORAGE AND BRACING OF NONSTRUCTURAL COMPONENTS. "NONSTRUCTURAL COMPONENTS" INCLUDES ALL ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING ELEMENTS OR SYSTEMS (AND THEIR SUPPORTS OR ATTACHMENTS) WHICH ARE PERMANENTLY ATTACHED TO A SUPPORTING STRUCTURE. DESIGN OF ANCHORAGE AND BRACING SHALL BE PROVIDED BY CONTRACTOR'S ENGINEER UNLESS SPECIFICALLY DETAILED ON THE CONTRACT DRAWINGS.
A-2 ANCHORAGE AND BRACING OF ALL NONSTRUCTURAL COMPONENTS SHALL BE DESIGNED AND INSTALLED TO RESIST THE CONTROLLING LOAD COMBINATION OF GRAVITY LOADS, OPERATIONAL FORCES, WIND FORCES, SEISMIC FORCES, AND ANY OTHER APPLICABLE FORCES IN ACCORDANCE WITH THE GOVERNING BUILDING CODE. WIND AND SEISMIC FORCES SHALL BE AS PER ASCE 7. COMPONENTS SHALL BE BOLTED, WELDED, OR OTHERWISE POSITIVELY FASTENED WITHOUT CONSIDERATION OF FRICTIONAL RESISTANCE PROVIDED BY THE EFFECTS OF GRAVITY. A CONTINUOUS LOAD PATH OF SUFFICIENT STRENGTH AND STIFFNESS TO RESIST REQUIRED FORCES SHALL BE PROVIDED BETWEEN THE COMPONENT AND THE SUPPORTING STRUCTURE. ANCHORAGE AND BRACING SHALL BE DESIGNED TO RESIST LOADS IN BOTH ORTHOGONAL DIRECTIONS (TRANSVERSE AND LONGITUDINAL) AND SHALL BE DESIGNED AND SEALED BY THE CONTRACTOR'S ENGINEER CURRENTLY REGISTERED IN THE STATE OF NORTH CAROLINA.
A-3 COMPONENT REACTION FORCES AT THE POINT OF ATTACHMENT TO THE STRUCTURE SHALL BE SUBMITTED TO AND COORDINATED WITH THE ENGINEER FOR CONFIRMATION THAT SUPPORTING STRUCTURE IS ADEQUATE TO RESIST REQUIRED REACTION FORCES.
A-4 CONTRACTOR SHALL PROVIDE SPECIAL SEISMIC CERTIFICATION (SSC) FROM MANUFACTURER OF EQUIPMENT FOR ALL SYSTEMS REQUIRED BY SPECIFICATIONS. SPECIAL SEISMIC CERTIFICATION SHALL BE IN COMPLIANCE WITH ASCE 7.

EXISTING INFORMATION

- X-1 ALL EXISTING INFORMATION SHOWN ON THESE DRAWINGS INCLUDING LOCATION, DIMENSIONS, ELEVATIONS, AND CONFIGURATIONS IS DERIVED FROM THE 2003 ROCKFISH CREEK WRF EXPANSION PHASE 2 CONTRACT DRAWINGS AND IS NOT GUARANTEED TO BE COMPLETE OR CORRECT.
X-2 THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING INFORMATION IN THE FIELD AS REQUIRED FOR DEMOLITION AND MODIFICATIONS.

SPECIAL INSPECTIONS

- SI-1 SPECIAL INSPECTIONS SHALL BE IN ACCORDANCE WITH SPECIFICATIONS AND THE NORTH CAROLINA STATE BUILDING CODE.

DELEGATED STRUCTURAL DESIGN ITEMS

- DSD-1 THE FOLLOWING ITEMS SHALL BE SUBMITTED AS DELEGATED STRUCTURAL DESIGNS DURING CONSTRUCTION, IN ACCORDANCE WITH THE CONTRACT DRAWINGS AND SPECIFICATIONS.
A. ARCHITECTURAL PRECAST CONCRETE UTILITY BUILDINGS.
B. ANCHORAGE AND BRACING OF NONSTRUCTURAL COMPONENTS NOT SPECIFICALLY DESIGNED AND DETAILED ON THE CONTRACT DRAWINGS (INCLUDING, BUT NOT LIMITED TO, PIPE SUPPORTS AND EQUIPMENT)
DSD-2 DRAWINGS AND CALCULATIONS FOR EACH ITEM SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NORTH CAROLINA.

File: C:\30402\BALS\CAD\CAD_BIM\CONTRACT DRAWINGS\STRUS1 - SHEET 1.dwg 4/14/2023 8:35 AM By: JCAUDLE

Table with columns: REV, CONSTRUCTION, DATE, BY. Includes project information: PROJECT ENGINEER: M. MESSERE, DESIGNED BY: C. PHILLIPS, DRAWN BY: B. CAUDLE, CHECKED BY: C. PHILLIPS.

ISSUED FOR CONSTRUCTION



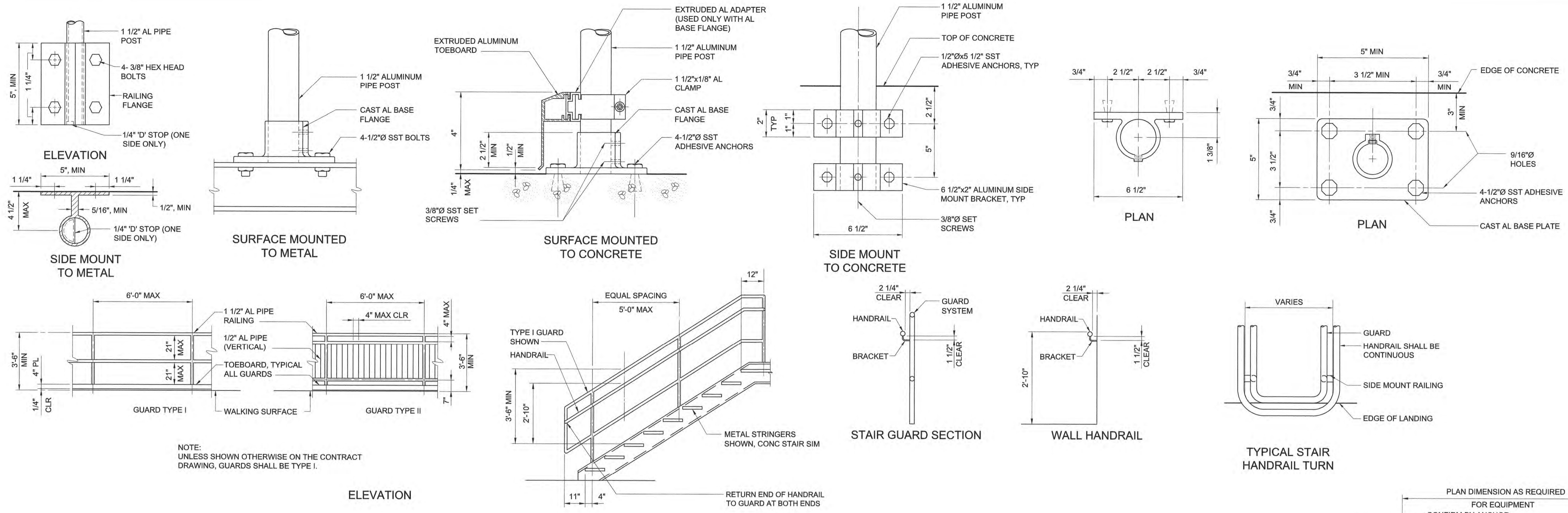
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA

CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

STRUCTURAL
GENERAL STRUCTURAL NOTES - SHEET 1

Table with columns: DATE, HAZEN NO., CONTRACT NO., DRAWING NUMBER. Values: DATE: APRIL 2023, HAZEN NO.: 30402-064, CONTRACT NO.: 1, DRAWING NUMBER: S1



NOTE: UNLESS SHOWN OTHERWISE ON THE CONTRACT DRAWING, GUARDS SHALL BE TYPE I.

ELEVATION

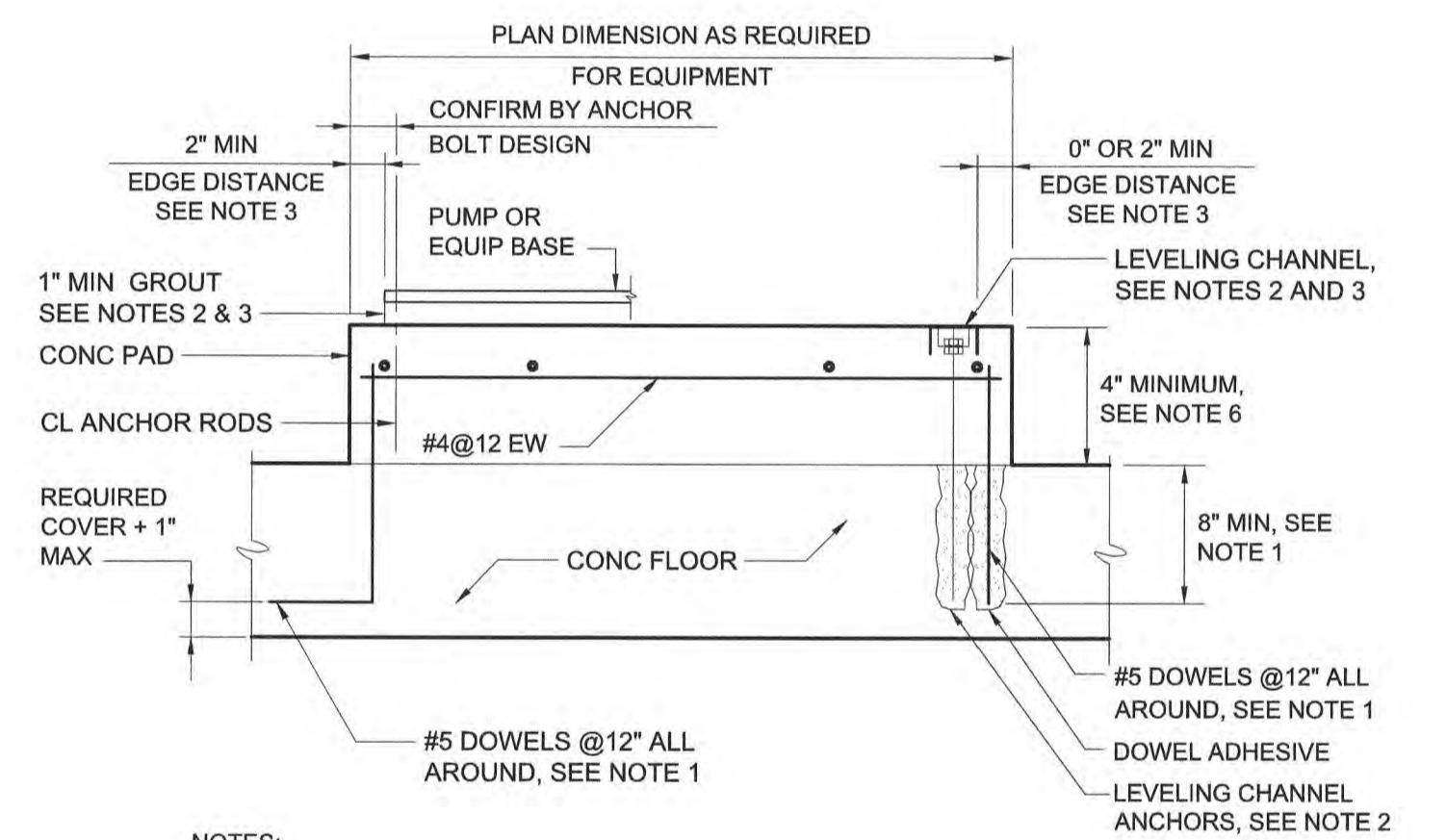
ALUMINUM GUARDS AND HANDRAILS
S-05-0601

SPAN, S	DEPTH (MIN)	CONCRETE ANCHOR (SIZE AND SPACING)
0'-0" < S ≤ 4'-0"	1 1/2"	1/2"Øx5 1/2" @ 18"
4'-0" < S ≤ 5'-0"	1 3/4"	5/8"Øx6" @ 18"
5'-0" < S ≤ 5'-6"	2"	
5'-6" < S ≤ 6'-0"	2 1/4"	
6'-0" < S ≤ 6'-6"	2 1/2"	

SCHEDULE BASED ON 150 PSF

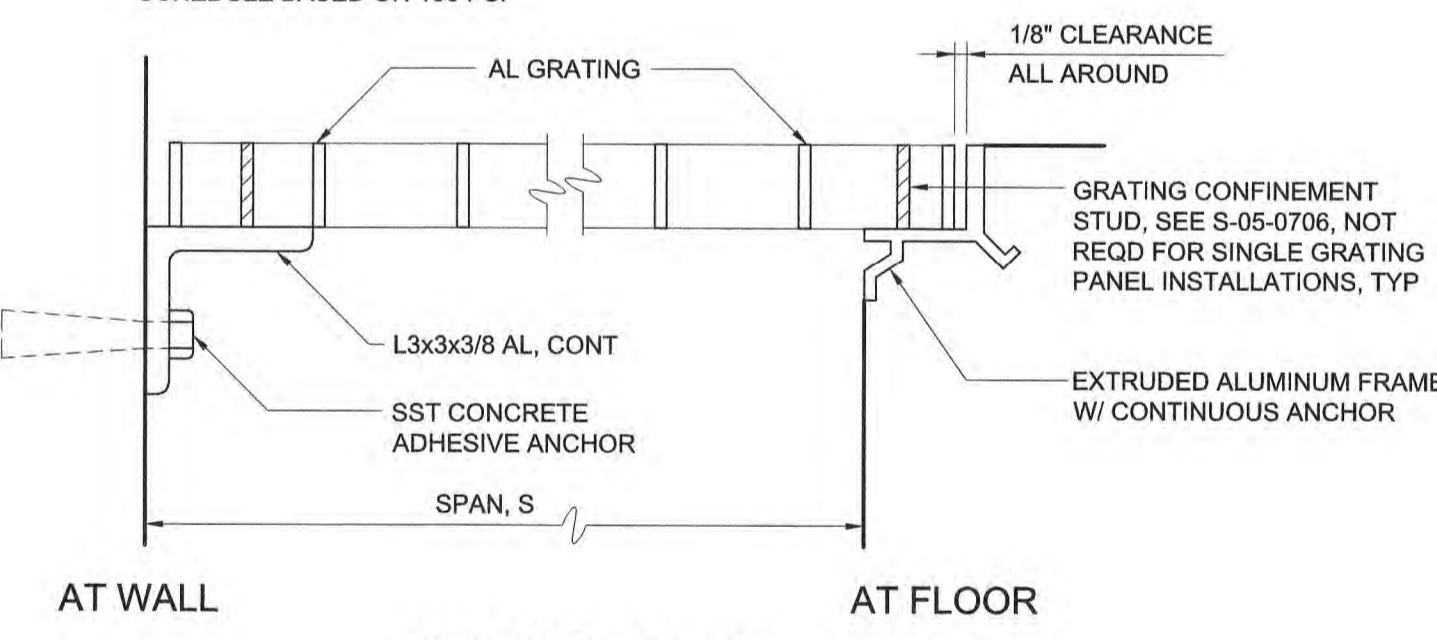
- NOTES
- VERTICAL JOINTS SHALL BE FORMED BY AN APPROVED JOINT INSERT. HORIZONTAL JOINTS SHALL BE FORMED BY AN APPROVED JOINT INSERT OR SAWCUTTING PERFORMED PER SPECIFICATION
 - DEPTH SHALL BE 1 1/2" IN REINF CONC DEPTH SHALL BE 1/3 OF CONCRETE THICKNESS IN UNREINFORCED CONCRETE PAVEMENT.

AL MEMBER DEPTH	AL DOUBLE ANGLES	(n) ROWS	SST ADHESIVE ANCHORS	EMBEDMENT
4", 5", 6"	2-L6x4x3/8x3" LONG	1	2-5/8"Ø SST ADHESIVE ANCHORS	5", MIN
8"	2-L4x3 1/2x3/8x0'-9"	2	4-5/8"Ø SST ADHESIVE ANCHORS	5", MIN
10", 12", 15"	2-L4x3 1/2x3/8x0'-9"	3	4-3/4"Ø SST ADHESIVE ANCHORS	6 1/2", MIN

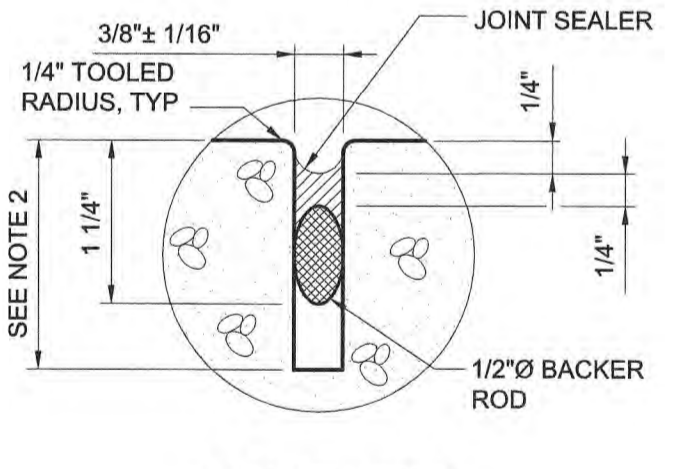


- NOTES:
- DOWELS MAY BE CAST IN WITH 90° HOOK OR ANCHORED WITH DOWEL ADHESIVE AT CONTRACTORS OPTION. WHERE FLOOR IS 8" THICK OR LESS, USE #4 DOWELS EMBEDDED TO WITHIN 2" OF BOTTOM OF FLOOR SLAB.
 - THE CONTRACTOR SHALL PROVIDE LEVELING CHANNELS AND LEVELING CHANNEL ANCHORS FOR SWITCHGEAR, SWITCHBOARDS, MOTOR CONTROL CENTERS, AND SIMILAR EQUIPMENT WHEN REQUIRED TO MEET EQUIPMENT MANUFACTURER'S LEVELING TOLERANCES. THE CONTRACTOR SHALL PROVIDE 1" MINIMUM GROUT FOR PUMPS AND SIMILAR EQUIPMENT WHEN REQUIRED TO MEET EQUIPMENT MANUFACTURER'S UNIFORM BEARING AND LEVELING REQUIREMENTS.
 - PRIOR TO PLACING CONCRETE PAD, LEVELING CHANNEL SIZE AND MEANS OF INSTALLATION, ANCHORAGE, GROUT, CONCRETE EDGE DISTANCE, AND CONCRETE BLOCKOUTS REQUIREMENTS SHALL BE COORDINATED WITH EQUIPMENT MANUFACTURER.
 - COAT DISSIMILAR MATERIALS PER THE CONTRACT DOCUMENTS.
 - STAGGER CHANNEL ANCHORS AND PAD DOWELS.
 - FOR PADS 24" OR GREATER IN DEPTH, PROVIDE #4@8" HORIZONTAL SKIN REINFORCING AROUND PERIMETER OF PAD.

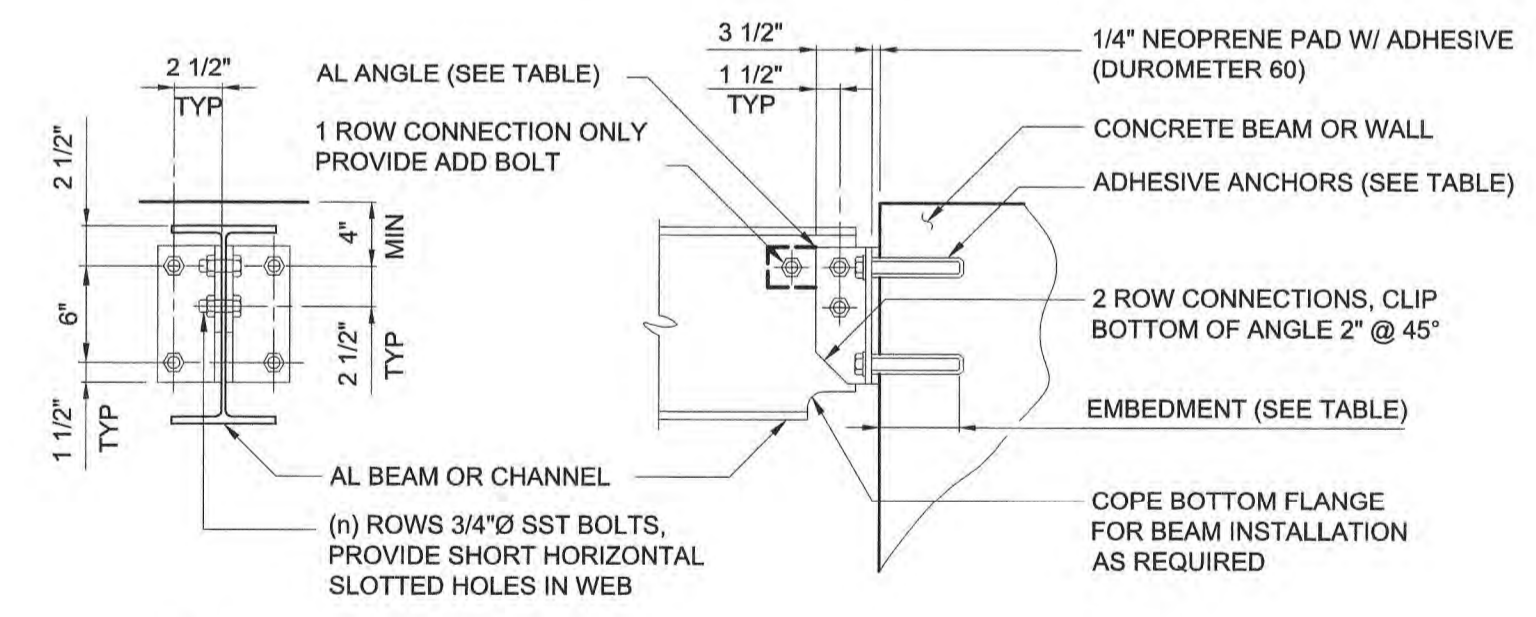
EQUIPMENT PAD
S-03-0504



ALUMINUM GRATING
S-05-0701



SEALED JOINT
S-03-0202



ALUMINUM BEAM TO CONCRETE CONNECTION
S-05-0201

NOTE: DURING INSTALLATION OF ADHESIVE ANCHORS BEAM TOP REINFORCEMENT SHALL NOT BE CUT. PRIOR TO FABRICATION FIELD LOCATE REINFORCEMENT AND LENGTHEN ANGLES AS REQUIRED LOWER ANCHORS TO CLEAR REINFORCEMENT.

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PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	C. PHILLIPS
DRAWN BY:	B. CAUDLE
CHECKED BY:	C. PHILLIPS
1 CONSTRUCTION	4/2023 CWB
REV ISSUED FOR	DATE BY

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE

0 1/2" 1"

ISSUED FOR CONSTRUCTION

Hazen

HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA

CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

STRUCTURAL STANDARD DETAILS
SHEET 1

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	SD1

LIGHTING:

- X DENOTES FIXTURE TYPE (TYP.)
SEE SPECIFICATION 26 50 00 FOR FIXTURE SCHEDULE
DENOTES CIRCUIT NUMBER (TYP.)
- RECTANGULAR FIXTURE
- LEFT: CEILING MOUNTED FIXTURE
RIGHT: WALL MOUNTED FIXTURE
- EMERGENCY WALL-MOUNTED FIXTURE:
LEFT: STANDARD
RIGHT: REMOTE-HEAD
- LEFT: CEILING MOUNTED EXIT SIGN
RIGHT: WALL MOUNTED EXIT SIGN
SHADED PORTION DENOTES SIGN FACE
- POLE-MOUNTED FIXTURE
- PHOTOCELL
- LEFT: CEILING MOUNTED OCCUPANCY SENSOR
RIGHT: WALL MOUNTED OCCUPANCY SENSOR
X DENOTES TYPE

RECEPTACLES:

- X DENOTES RECEPTACLE TYPE (TYP.):
GFCI DENOTES GROUND FAULT CIRCUIT INTERRUPT
UPS DENOTES UNINTERRUPTIBLE POWER SUPPLY
WPCR DENOTES WEATHERPROOF CORROSION RESISTANT
DENOTES CIRCUIT NUMBER (TYP.)
- RECEPTACLES:
LEFT: SIMPLEX
MIDDLE: DUPLEX
RIGHT: QUADRUPLX
- MULTI-OUTLET RECEPTACLE:
LEFT: SIMPLEX
RIGHT: DUPLEX
- OTHER RECEPTACLES:
LEFT: 240 VOLT
RIGHT: SPECIAL PURPOSE
- FLOOR-MOUNTED RECEPTACLES:
LEFT: SIMPLEX
MIDDLE: DUPLEX
RIGHT: QUADRUPLX

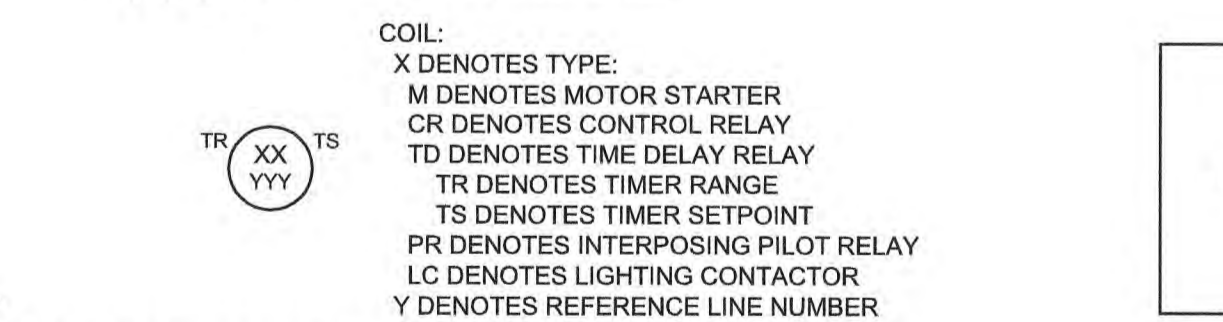
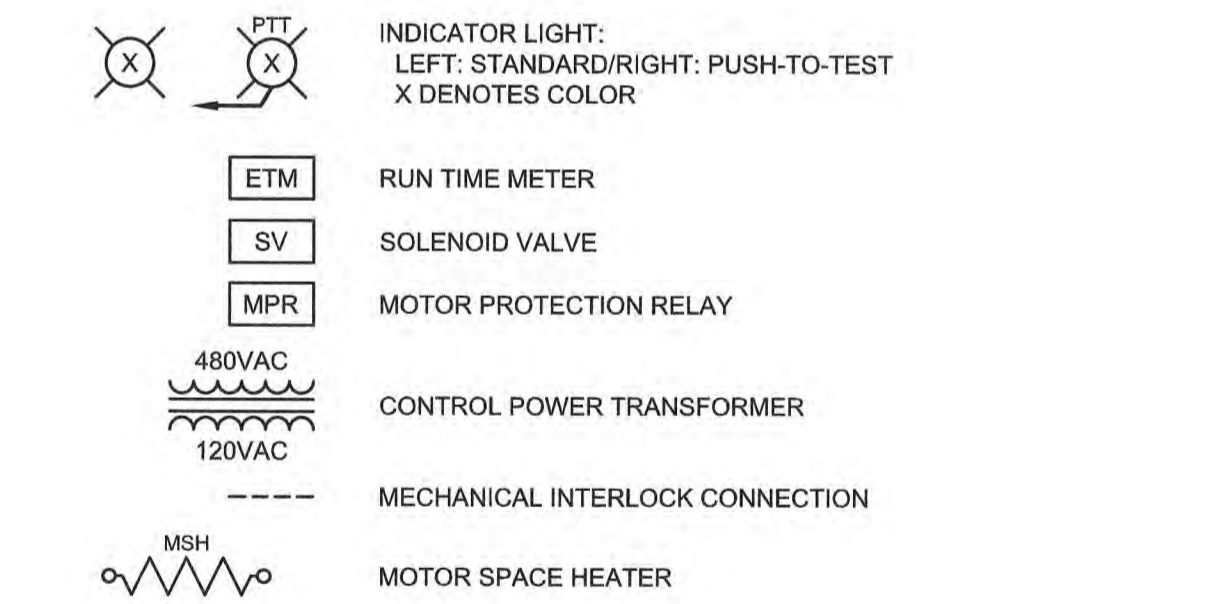
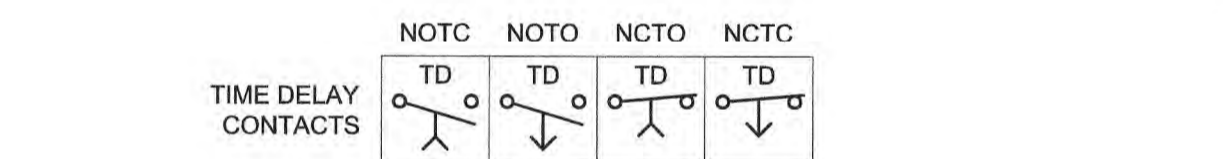
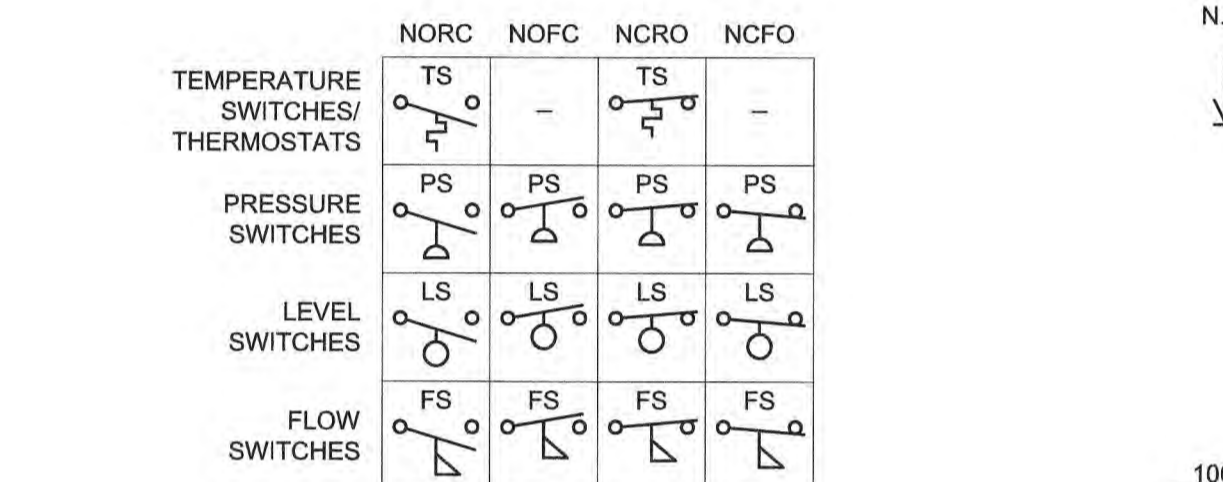
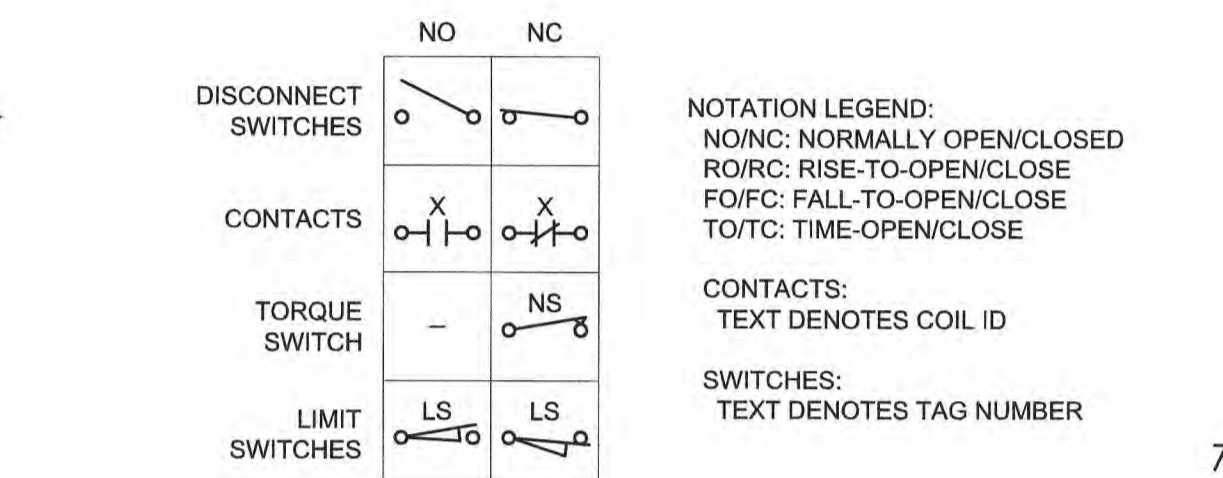
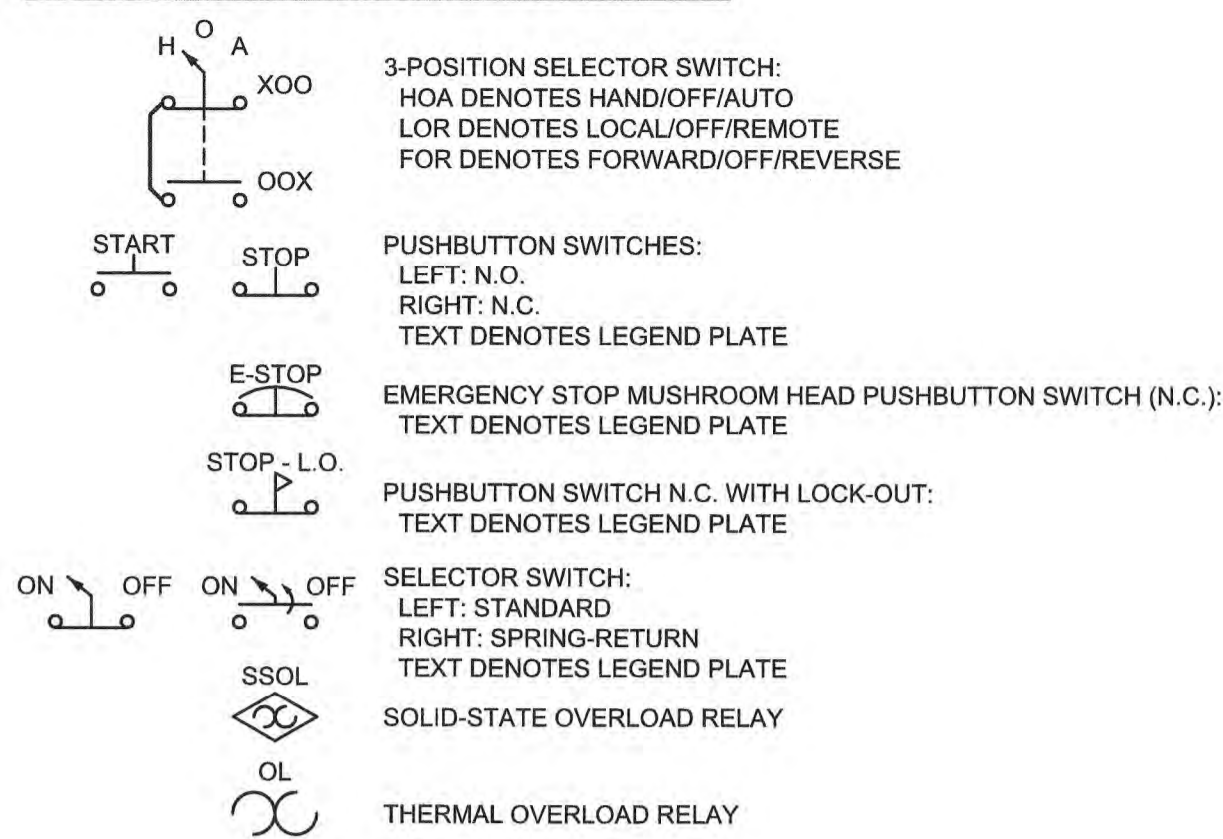
HVAC AND FIRE ALARM

- FIRE ALARM CONTROL PANEL
- FIRE ALARM ANNUNCIATOR PANEL
- FIRE ALARM PULL STATION
- FIRE ALARM INDICATOR:
X DENOTES ALERT TYPE (TYP.):
A DENOTES AUDIBLE
V DENOTES VISIBLE (# DENOTES STROBE INTENSITY)
- FIRE ALARM INDICATOR MOUNTED ABOVE A FIRE ALARM PULL STATION
- DUCT DETECTOR
- SMOKE DETECTOR:
X DENOTES TYPE:
Z DENOTES IONIZATION
P DENOTES PHOTOELECTRIC
T DENOTES THERMAL
- HEAT DETECTOR
- THERMOSTAT
- AMBIENT TEMPERATURE TRANSMITTER

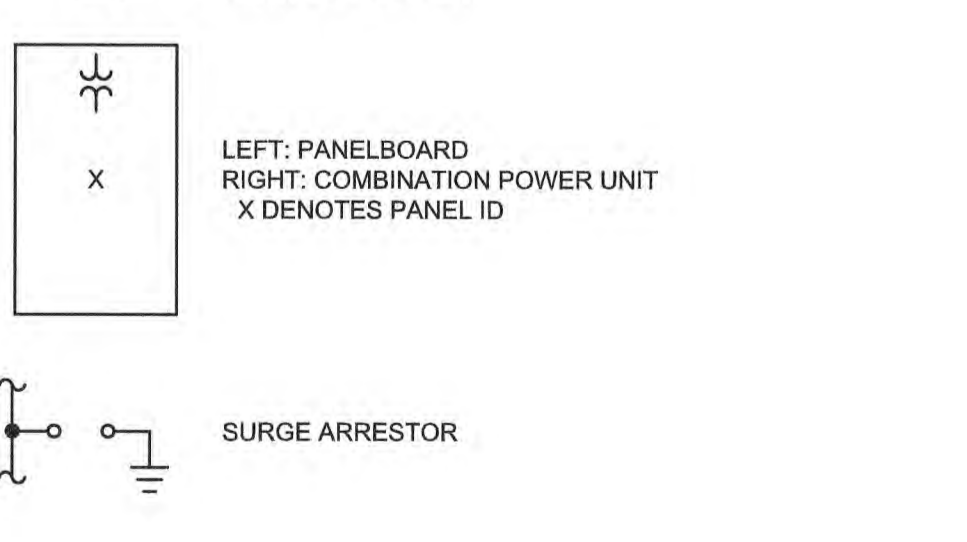
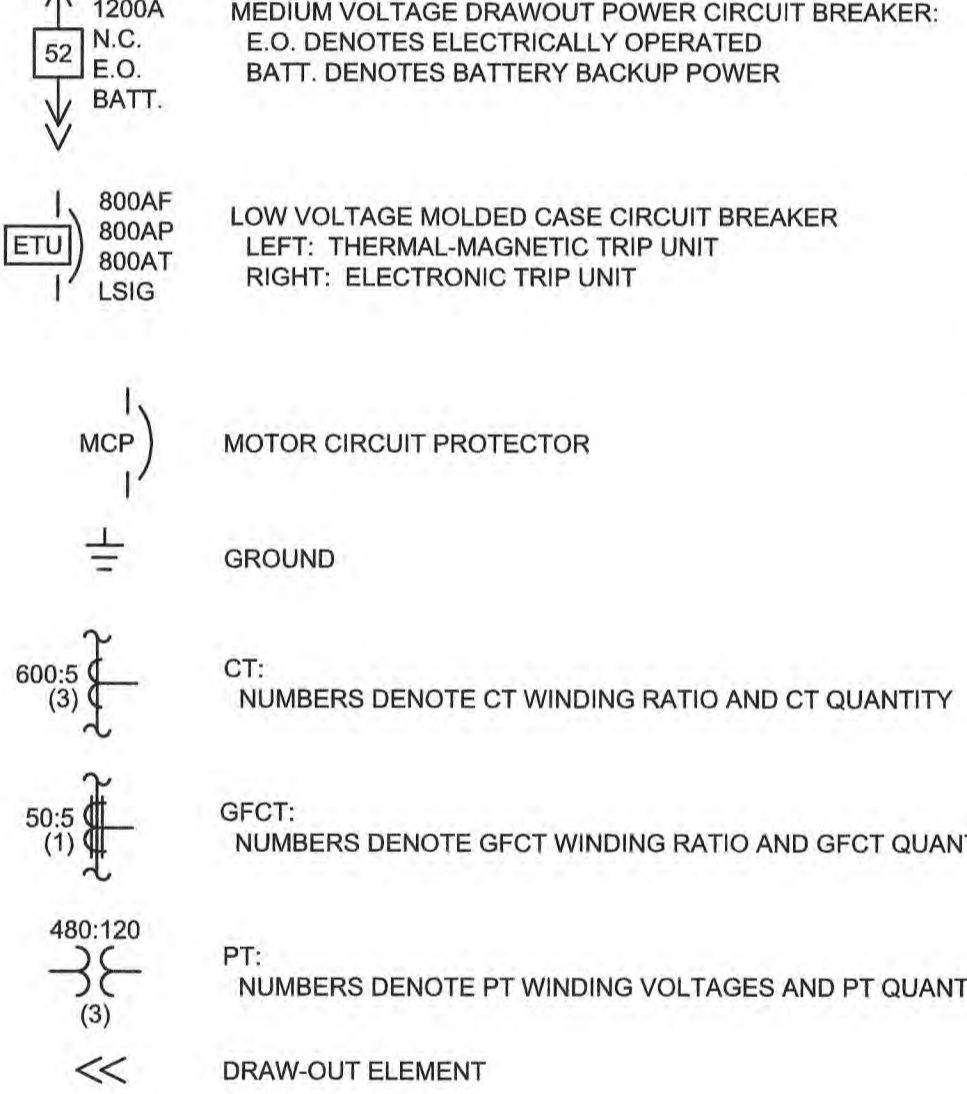
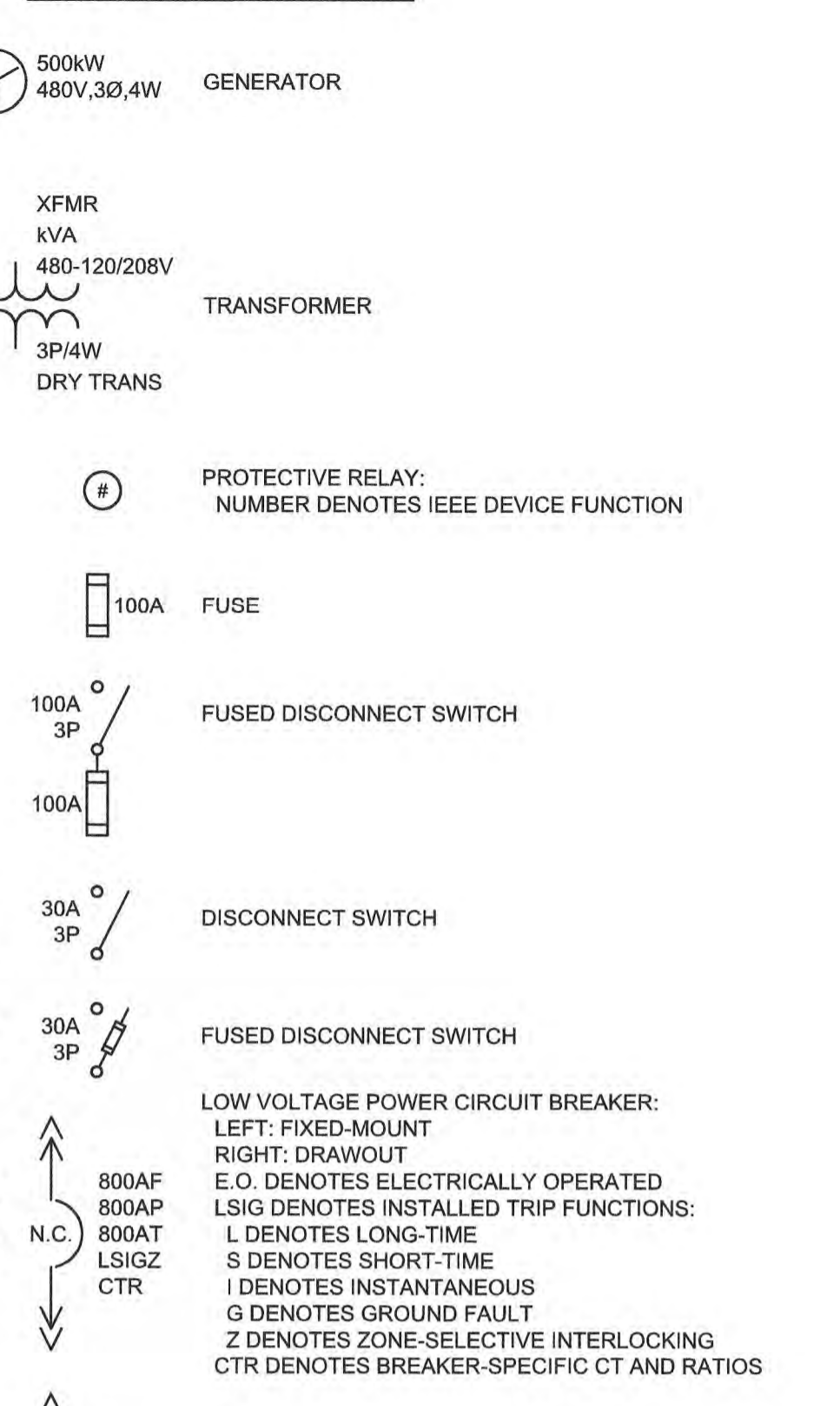
SWITCHES

- WALL SWITCH:
X DENOTES TYPE:
NO SUBSCRIPT DENOTES SINGLE-POLE SWITCH
3 DENOTES 3-WAY SWITCH
4 DENOTES 4-WAY SWITCH
M DENOTES MANUAL MOTOR STARTER
DENOTES CIRCUIT NUMBER
WPCR DENOTES WEATHERPROOF CORROSION RESISTANT
- COMBINATION MOTOR STARTER
- DISCONNECT SWITCH
- LOCAL CONTROL STATION

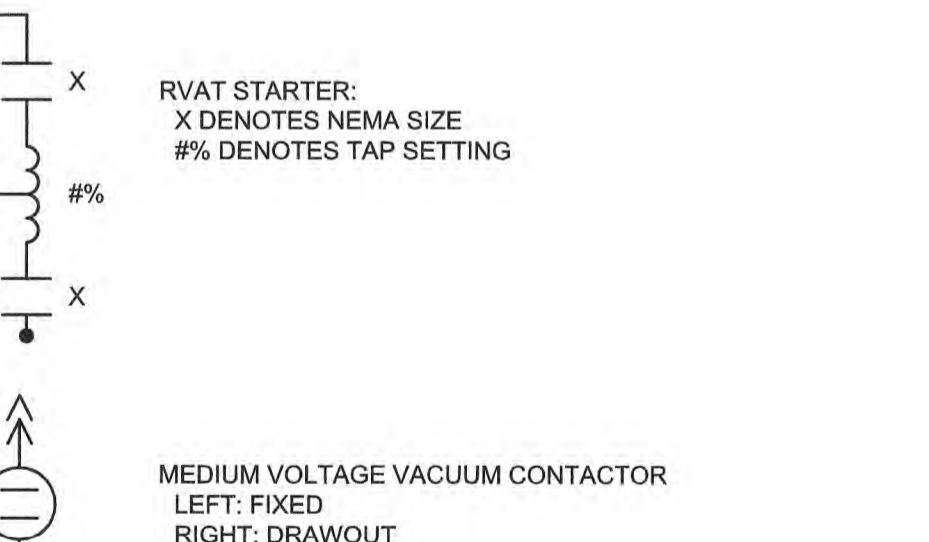
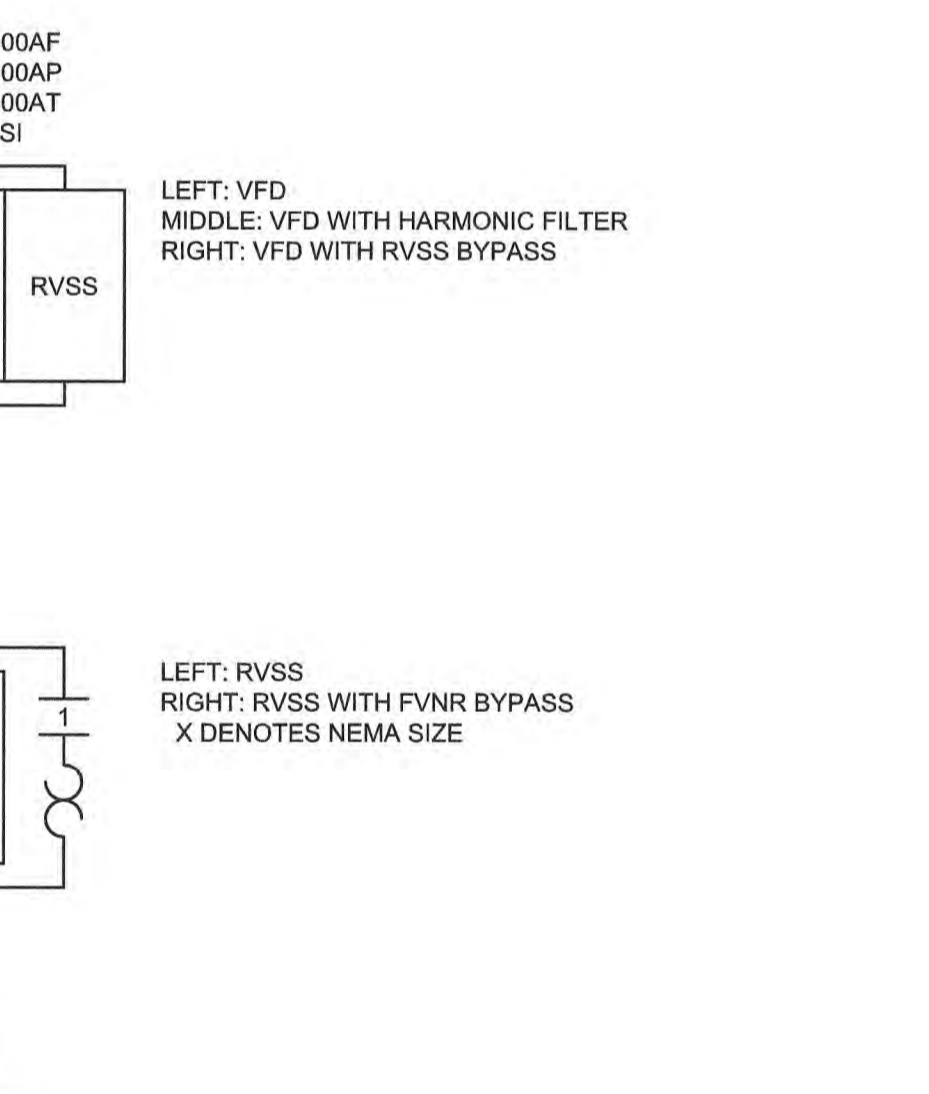
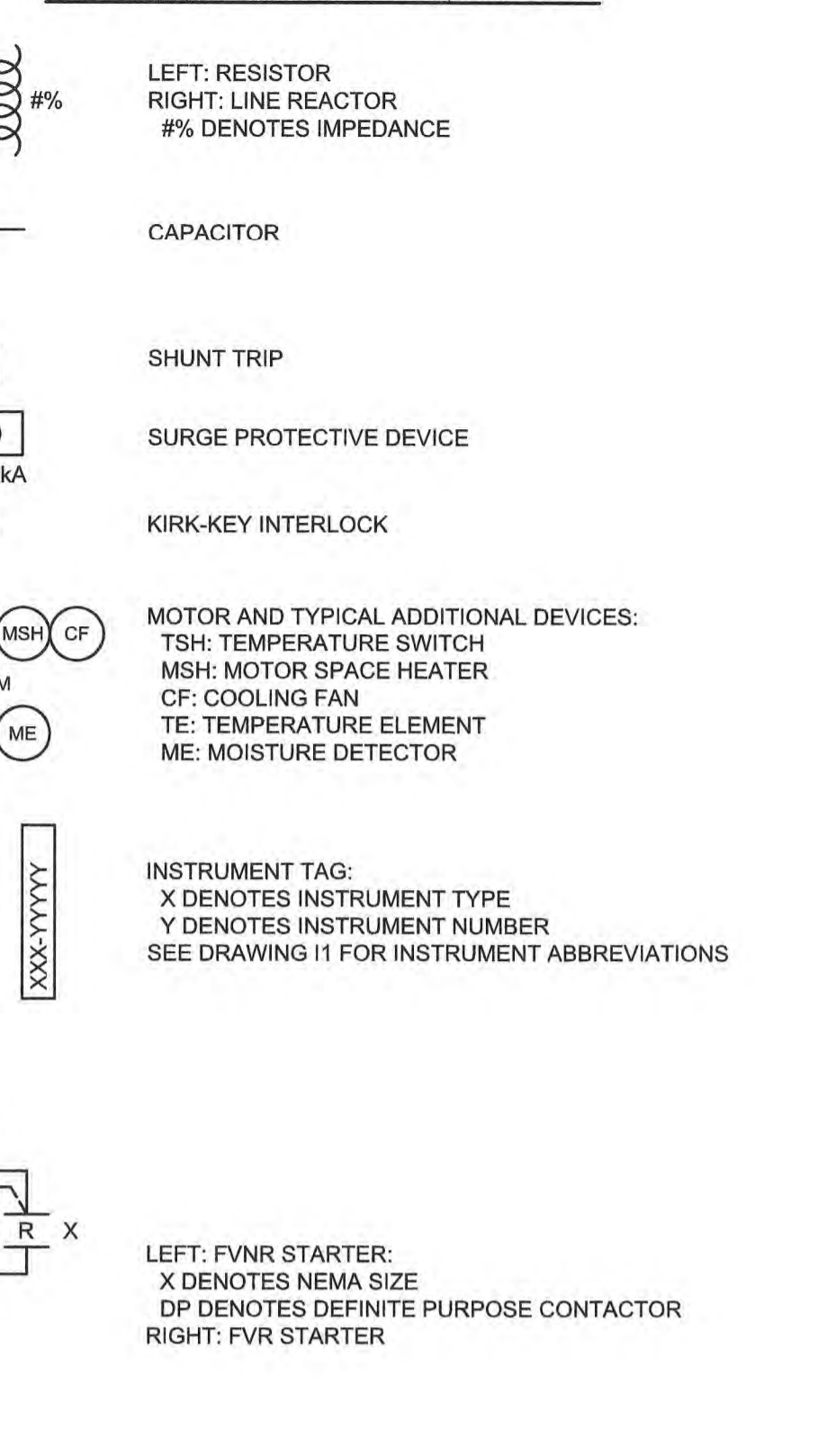
ELEMENTARY CONTROL SCHEMATICS



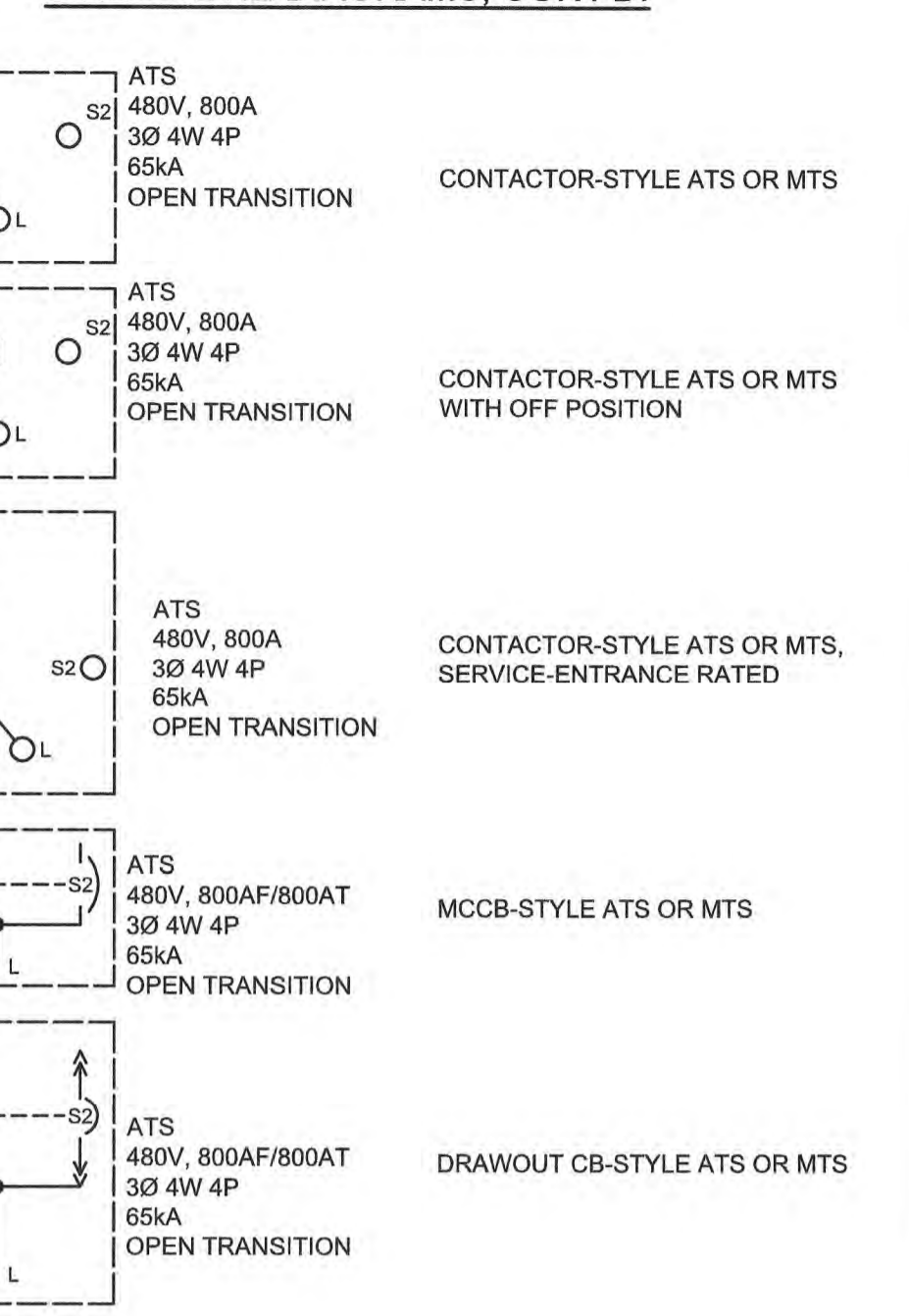
SINGLE-LINE DIAGRAMS



SINGLE-LINE DIAGRAMS, CONT'D.



SINGLE-LINE DIAGRAMS, CONT'D.



MISC PLAN VIEW SYMBOLS

- EQUIPMENT CONNECTION
- GROUND RODS:
LEFT: BURIED
RIGHT: IN TEST WELL
- DUCTBANK SECTION CUT IDENTIFIER:
DBXX DENOTES DUCTBANK ID
EXX DENOTES DRAWING NUMBER WHERE SECTION CUT IS LOCATED
- DUCTBANK TAG:
X DENOTES DUCTBANK ID
- CABLE TRAY TAG:
X DENOTES CABLE TRAY ID
Y DENOTES SCHEDULE REFERENCE
- INSTRUMENT TAG:
X DENOTES INSTRUMENT TYPE
DENOTES INSTRUMENT NUMBER
SEE DRAWING I1 FOR INSTRUMENT ABBREVIATIONS
- CONDUIT TAGS:
P DENOTES POWER
C DENOTES CONTROL
I DENOTES INSTRUMENTATION
XXXX DENOTES CONDUIT ID
XXX-XXX DENOTES CONDUIT ID

COMMUNICATIONS

- TELEPHONE OR NETWORK DROP
- FLOOR-MOUNTED TELEPHONE OR NETWORK DROP
- PAGER RECEPTACLE
- HORN/LIGHT DEVICE
- PA UNIT

WIRING

- FLEXIBLE CONDUIT
- CONDUIT EXPOSED
- CONDUIT CONCEALED
- CONCRETE ENCASED DUCTBANK
- CONCRETE ENCASED CONDUIT
- DIRECT BURIED CONDUIT
- LEFT: CONDUIT RISE (TURN UP)
RIGHT: CONDUIT DROP (TURN DOWN)

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PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	B. PICKETT
DRAWN BY:	T. RAHLAN
CHECKED BY:	D. ATKINSON
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"

ISSUED FOR CONSTRUCTION

JOSEPH B. PICKETT 4/13/23

Hazen

HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA

CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

ELECTRICAL
LEGEND AND SYMBOLS

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E1

ABBREVIATIONS

AE	ANALYSIS ELEMENT
AHU	AIR HANDLING UNIT
AIC	AMPERE INTERRUPTING CAPACITY
AIT	ANALYSIS INDICATING TRANSMITTER
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
AF	AMPERE FRAME
AT	AMPERE TRIP
ATS	AUTOMATIC TRANSFER SWITCH
BC	BYPASS CONTACTOR
BKR	BREAKER
(L/V)CP	(LOCAL/VENDOR) CONTROL PANEL
CPT	CONTROL POWER TRANSFORMER
CT	CURRENT TRANSFORMER
DB	DUCTBANK
DSW	DISCONNECT SWITCH
(*)HH	HAND HOLE*
(*)MH	MANHOLE*
EO	ELECTRICALLY OPERATED
ETM	ELAPSED TIME METER
ETU	ELECTRONIC TRIP UNIT
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FS	FLOW SWITCH
FSL	FLOW SWITCH LOW
FVNR	FULL VOLTAGE NON-REVERSING
FVR	FULL VOLTAGE REVERSING
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFCT	GROUND FAULT CURRENT TRANSFORMER
GNG	GO-NO GO
GND	GROUND
HOA	HAND-OFF-AUTO
HPU	HYDRAULIC POWER UNIT
IC	INPUT CONTACTOR
IEEE	INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
ISO	INTERNATIONAL ORGANIZATION FOR STANDARDIZATION
(*)JB	JUNCTION BOX*
LCS	LOCAL CONTROL STATION
LP	LIGHTING PANEL
LS	LEVEL SWITCH
LSL	LEVEL SWITCH LOW
LSLL	LEVEL SWITCH LOW-LOW
LSH	LEVEL SWITCH HIGH
LSHH	LEVEL SWITCH HIGH-HIGH
LT	LEVEL TRANSMITTER
MFR	MULTI-FUNCTION RELAY
MH	MANHOLE
MOD	MOTOR OPERATED DAMPER
MOG	MOTOR OPERATED GATE
MOL	MOTOR OPERATED LOUVER
MOV	MOTOR OPERATED VALVE
MPR	MOTOR PROTECTION RELAY
MSH	MOTOR SPACE HEATER
MTD	MOUNTED
MTS	MANUAL TRANSFER SWITCH
MWTS	MOTOR WINDING TEMPERATURE SWITCH
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSN
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OC	OUTPUT CONTACTOR
OL	OVERLOAD

ABBREVIATIONS, CONT.

(*)PB	PULLBOX*
PC	PHOTOCELL
PCC	POINT OF COMMON COUPLING
PE	PRESSURE ELEMENT
PIT	PRESSURE INDICATING TRANSMITTER
PLC	PROGRAMMABLE LOGIC CONTROLLER
PP	POWER PANEL
PST	PHASE SHIFTING TRANSFORMER
PT	POTENTIAL TRANSFORMER
PTT	PUSH TO TEST
RCS	REMOTE CONTROL STATION
RECP	RECEPTACLE
RIO	REMOTE I/O
RM	ROOM
RTD	RESISTANCE THERMAL DEVICE
RTU	REMOTE TELEMETRY UNIT
RVAT	REDUCED VOLTAGE AUTO TRANSFORMER
RVSS	REDUCED VOLTAGE SOLID STATE
SA	SUPPLY AIR
S.E.	SERVICE ENTRANCE
SP. C.	SPARE CONDUIT
SPD	SURGE PROTECTIVE DEVICE
SSOL	SOLID STATE OVERLOAD
SST	STAINLESS STEEL
TB	TEST BLOCK
TC	TIMED CLOSE
TO	TIMED OPEN
TSH	TWISTED SHIELDED
TX	TRANSFORMER
TYP	TYPICAL
UPS	UNINTERRUPTIBLE POWER SUPPLY
VFD	VARIABLE FREQUENCY DRIVE
WPCR	WEATHER PROOF CORROSION RESISTANT
WT	WALK THROUGH
XFMR	TRANSFORMER

*DESIGNATED ABBREVIATIONS CAN HAVE THE FOLLOWING PREFIXES:

E	ELECTRIC
P	POWER
C	CONTROL
I	INSTRUMENTATION
F	FIBER

NOTES:

- UNLESS SPECIFICALLY NOTED OTHERWISE, ALL UNDERGROUND CONCRETE ENCASED ELECTRICAL CONDUITS SHALL BE PER STANDARD DETAIL E-33-0101.
- BOND ALL NEW CONCRETE ENCASED GROUND CONDUCTORS TO EXISTING GROUND CONDUCTORS IN ALL MANHOLES, PULL BOXES, CABLE TRAYS, AND SIMILAR LOCATIONS WHERE APPLICABLE.
- UNLESS OTHERWISE SPECIFIED OR NOTED, ALL WALL MOUNTED ELECTRICAL PANELS, ENCLOSURES, AND SIMILAR EQUIPMENT SHALL BE MOUNTED 6'-6" (MAX) FROM THE TOP OF THE PANEL TO FINISHED FLOOR OR GRADE.
- UNLESS OTHERWISE NOTED, ALL LIGHTING SWITCHES, CONTROL SWITCHES, AND SIMILAR EQUIPMENT SHALL BE MOUNTED WITH THEIR CENTERLINE APPROXIMATELY 4'-0" ABOVE FINISHED FLOOR, SLAB, OR GRADE.
- A SEPARATE EQUIPMENT GROUNDING CONDUCTOR SHALL BE PROVIDED FOR EACH CIRCUIT (SEPARATE CONDUCTOR IN THE CONDUIT). THE CONDUCTOR SHALL BE TERMINATED AT THE PROPER DEVICE, TERMINAL, OR LUG AT THE POWER SOURCE (MCC GROUND BUS, PANELBOARD GROUND BUS, ETC.). GROUND CONDUCTOR SIZE SHALL BE PER THE LATEST EDITION OF THE NEC.
- ELECTRICAL SYSTEMS INSTALLED IN HAZARDOUS LOCATIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CHAPTER 5, ART. 500 OF THE LATEST EDITION OF THE NEC. CONTRACTOR SHALL SEAL ALL CONDUITS LEAVING HAZARDOUS AREAS. WALL AND FLOOR OPENINGS SHALL BE SEALED WITH FIREPROOF COMPOUND.
- ALL EQUIPMENT LOCATED IN HAZARDOUS AREAS SHALL BE SUITABLE FOR THE CLASS, DIVISION, AND GROUP RATING OF THE LOCATION.
- UNLESS SPECIFICALLY NOTED OTHERWISE, EXISTING PAVEMENT SHALL BE SAW CUT AND REMOVED TO ALLOW FOR THE INSTALLATION OF NEW ELECTRICAL DUCTBANKS. AFTER INSTALLATION, REPLACE PAVEMENT WITH NEW TO MATCH ORIGINAL CONDITIONS.
- LIGHTNING PROTECTION SYSTEMS SHALL BE PROVIDED FOR THE STRUCTURES INDICATED ON THE DRAWINGS AND IN ACCORDANCE WITH SECTION 26 41 00.
- ALL PROCESS INSTRUMENTS SHALL BE PROVIDED WITH A LOCAL DISCONNECT SWITCH AS SPECIFIED IN SPECIFICATION SECTION 26 27 26.
- REFERENCE SECTION 01 14 00 FOR CONSTRUCTION SEQUENCING REQUIREMENTS.
- CONDUIT HOMERUNS ARE NOT SHOWN ON THE DRAWINGS. CONTRACTOR SHALL REFER TO CONDUIT AND WIRE SCHEDULES, RISER DIAGRAMS, SINGLE LINE DIAGRAMS, AND OTHER DRAWINGS FOR CONDUIT AND WIRE REQUIREMENTS.
- ALL ELECTRICAL NON-STRUCTURAL COMPONENTS ARE SUBJECT TO SEISMIC DESIGN CATEGORY 'C'. COMPONENTS WITH AN IMPORTANCE FACTOR OF $I_p = 1.0$ ARE EXEMPT FROM SEISMIC ANCHORAGE AND BRACING. ESSENTIAL COMPONENTS SHALL HAVE AN IMPORTANCE FACTOR OF $I_p = 1.5$ AND SHALL BE DESIGNED, INSTALLED, ANCHORED, AND BRACED TO RESIST SEISMIC FORCES AS STIPULATED IN SECTION 01 73 23 - SEISMIC ANCHORAGE AND BRACING. ESSENTIAL COMPONENTS (WITH $I_p = 1.5$) SHALL BE FURNISHED WITH A MANUFACTURER'S CERTIFICATE OF SEISMIC QUALIFICATION.
- WHERE DUCTBANK SEGMENTS ARE SHOWN ENTERING A BUILDING/STRUCTURE IN PLAN VIEWS, THE CONTRACTOR SHALL FIELD VERIFY THE OPTIMAL ROUTING OF THE CONDUITS INTO THE BUILDING/STRUCTURE.
- UNLESS OTHERWISE INDICATED HEREIN, ALL ELECTRICAL ROOMS, INDOOR STAIRWELLS, OFFICES, CONTROL ROOMS, RESTROOMS, AND SIMILAR NON-PROCESS SPACES SHALL BE CONSIDERED INDOOR DRY NON-PROCESS AREAS.

File: C:\0402-RAH\30402-064CAD_BIM\CONTRACT DRAWINGS\ELECTR saved by: TRAHAN Save date: 4/6/2023 7:53 AM
PLOT DATE: 4/14/2023 5:07 PM BY: TRAHAN

PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	B. PICKETT
DRAWN BY:	T. RAHLAN
CHECKED BY:	D. ATKINSON
1	CONSTRUCTION 4/2023 CWB
REV	ISSUED FOR DATE BY

ISSUED FOR CONSTRUCTION

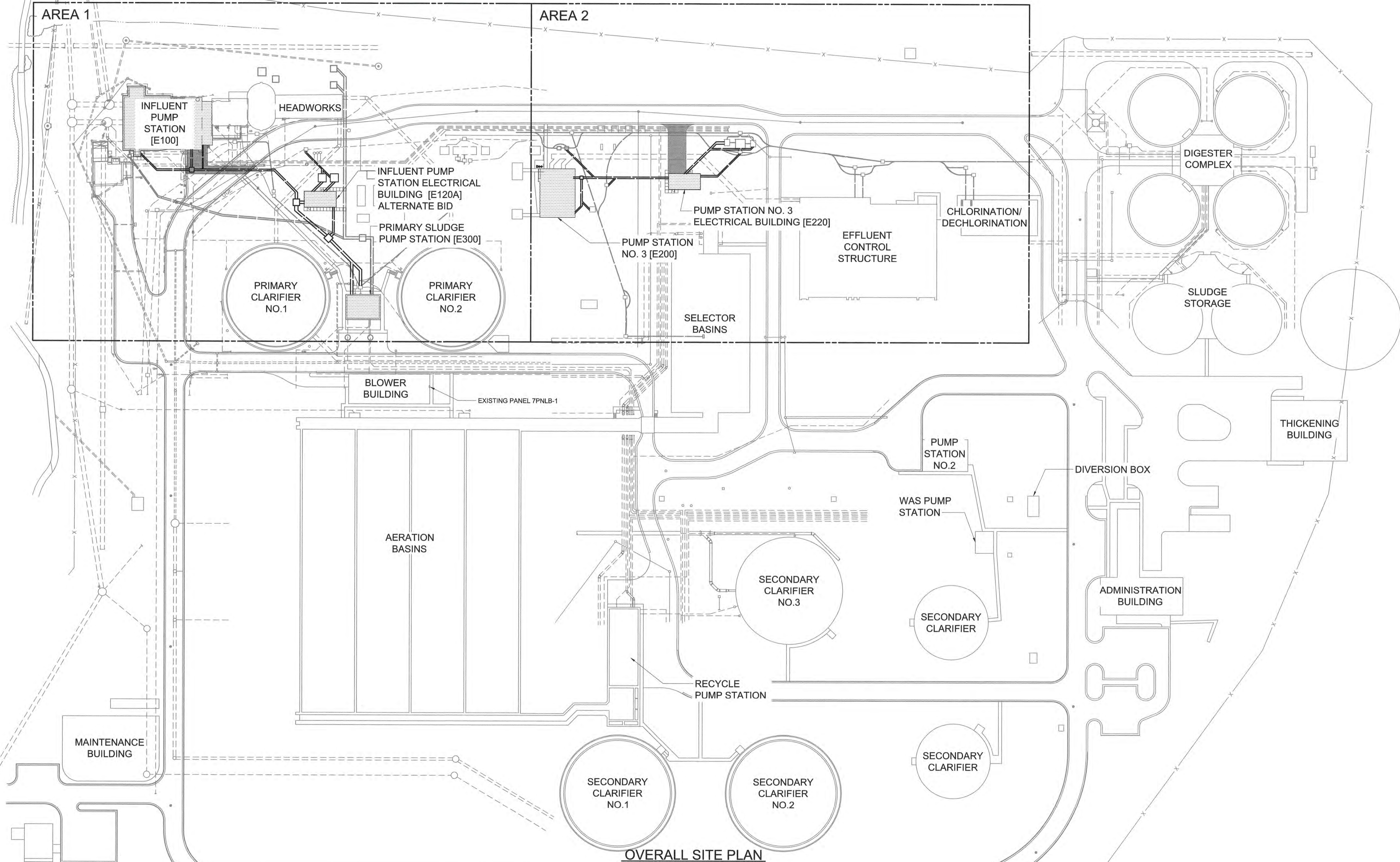
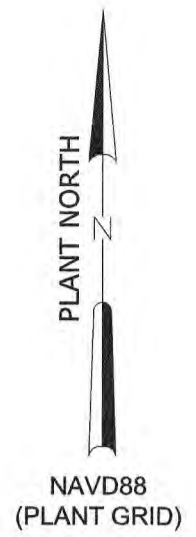
Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA

CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

ELECTRICAL
GENERAL NOTES AND ABBREVIATIONS

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E2



OVERALL SITE PLAN

1"=60'

File: O:\30402-RAL\30402-064\CAD_BIM\CONTRACT DRAWINGS\ELECTRICAL Saved by TRAHAN Save date: 4/13/2023 2:22 PM PLOT DATE: 4/14/2023 5:09 PM BY: TRAHAN

PROJECT ENGINEER:	M. MESSERE						
DESIGNED BY:	B. PICKETT						
DRAWN BY:	T. RAHLAN						
CHECKED BY:	D. ATKINSON						
1	CONSTRUCTION	4/2023	CWB	IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0	1/2"	1"
REV	ISSUED FOR	DATE	BY				

ISSUED FOR CONSTRUCTION



Hazen

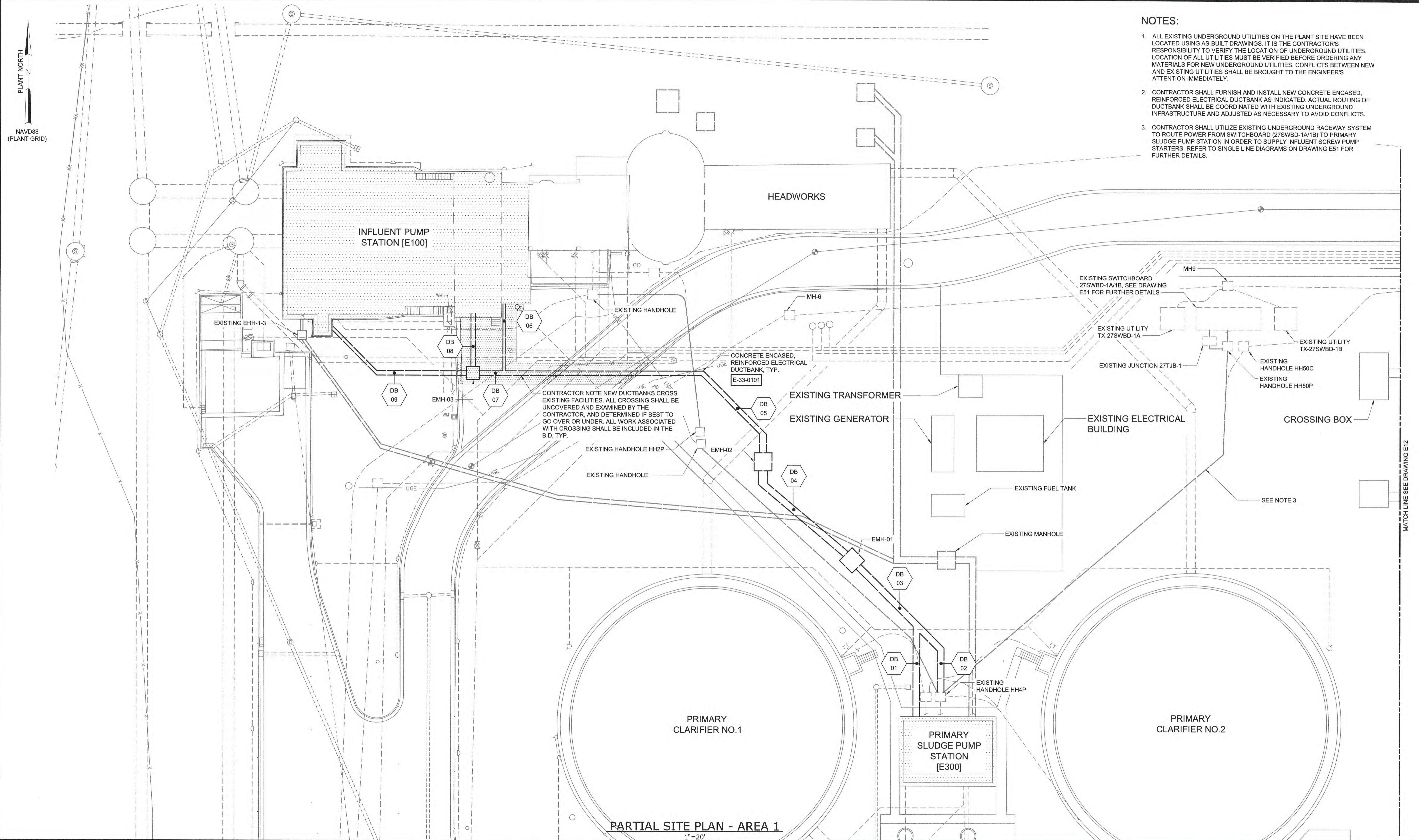
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA

CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

ELECTRICAL
OVERALL SITE PLAN

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E10



- NOTES:**
- ALL EXISTING UNDERGROUND UTILITIES ON THE PLANT SITE HAVE BEEN LOCATED USING AS-BUILT DRAWINGS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF UNDERGROUND UTILITIES. LOCATION OF ALL UTILITIES MUST BE VERIFIED BEFORE ORDERING ANY MATERIALS FOR NEW UNDERGROUND UTILITIES. CONFLICTS BETWEEN NEW AND EXISTING UTILITIES SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY.
 - CONTRACTOR SHALL FURNISH AND INSTALL NEW CONCRETE ENCASED, REINFORCED ELECTRICAL DUCTBANK AS INDICATED. ACTUAL ROUTING OF DUCTBANK SHALL BE COORDINATED WITH EXISTING UNDERGROUND INFRASTRUCTURE AND ADJUSTED AS NECESSARY TO AVOID CONFLICTS.
 - CONTRACTOR SHALL UTILIZE EXISTING UNDERGROUND RACEWAY SYSTEM TO ROUTE POWER FROM SWITCHBOARD (27SWBD-1A/1B) TO PRIMARY SLUDGE PUMP STATION IN ORDER TO SUPPLY INFLUENT SCREW PUMP STARTERS. REFER TO SINGLE LINE DIAGRAMS ON DRAWING E51 FOR FURTHER DETAILS.

PLANT NORTH
NAVD88
(PLANT GRID)

PARTIAL SITE PLAN - AREA 1
1"=20'

File: 030402-PAL30402-064CAD_BIMCONTRACT DRAWINGS/ELECTRICAL.dwg Date: 4/13/2023 2:21 PM
PLOT DATE: 4/14/2023 5:11 PM BY: TRAHAN

PROJECT ENGINEER:	M. MESSERE		
DESIGNED BY:	B. PICKETT		
DRAWN BY:	T. RAHLAN		
CHECKED BY:	D. ATKINSON		
1	CONSTRUCTION	4/2023	CWB
REV	ISSUED FOR	DATE	BY

ISSUED FOR CONSTRUCTION



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HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

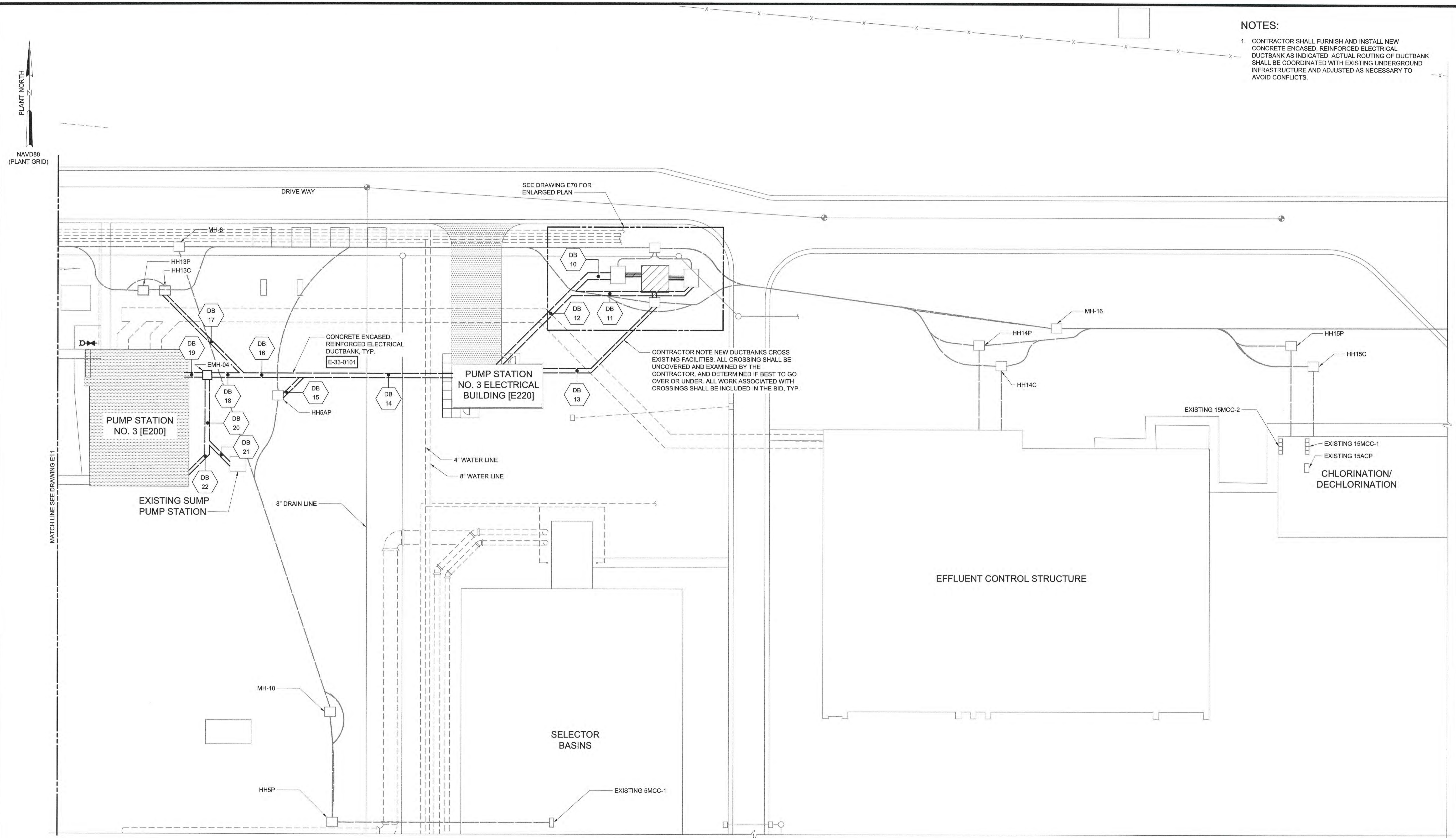
PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA
CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

ELECTRICAL
PARTIAL SITE PLAN - AREA 1

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E11

NOTES:

- CONTRACTOR SHALL FURNISH AND INSTALL NEW CONCRETE ENCASED, REINFORCED ELECTRICAL DUCTBANK AS INDICATED. ACTUAL ROUTING OF DUCTBANK SHALL BE COORDINATED WITH EXISTING UNDERGROUND INFRASTRUCTURE AND ADJUSTED AS NECESSARY TO AVOID CONFLICTS.



PARTIAL SITE PLAN - AREA 2
1"=20'

File: 0130402-RAL30402-064-CAD_BIMCONTRACT DRAWINGS/ELE/E12 Saved by TRAHAN Save date: 4/13/2023 1:28 PM
PLOT DATE: 4/14/2023 5:13 PM BY: TRAHAN

PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	B. PICKETT
DRAWN BY:	T. RAHLAN
CHECKED BY:	D. ATKINSON
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
1 CONSTRUCTION	4/2023 CWB
REV ISSUED FOR	DATE BY

ISSUED FOR CONSTRUCTION

Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA
**CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS**

**ELECTRICAL
PARTIAL SITE PLAN - AREA 2**

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E12

NOTES:

1. DUCTBANK DB-01 THRU DB-09 ARE NOT USED FOR BID ALTERNATE.

Table with columns: DUCTBANK NUMBER, CONDUIT, SIZE, FROM, TO. Contains detailed wiring and equipment schedules for ductbanks DB-01 through DB-06.

Table with columns: DUCTBANK NUMBER, CONDUIT, SIZE, FROM, TO. Contains detailed wiring and equipment schedules for ductbanks DB-04 through DB-06.

File: C:\30402-FAL\30402-064\CAD_BIM\CONTRACT DRAWINGS\ELECTRICAL Saved by TRAHAN Date: 4/8/2023 8:08 AM

Project information table including Project Engineer (M. MESSERE), Designer (B. PICKETT), and a revision table with columns for revision number, description, date, and by.

Professional seal for Joseph B. Pickett, North Carolina Professional Engineer, License No. 38699, dated 4/19/23.

Hazen and Sawyer logo and address: 4011 WESTCHASE BOULEVARD, SUITE 500, RALEIGH, NORTH CAROLINA 27607, LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION, CITY OF FAYETTEVILLE, NORTH CAROLINA. CROSS CREEK WRF AND ROCKFISH CREEK WRF SCREW PUMP IMPROVEMENTS

ELECTRICAL DUCTBANK SCHEDULES. DATE: APRIL 2023. HAZEN NO.: 30402-064. CONTRACT NO.: 1. DRAWING NUMBER: E13

NOTES:
1. DUCTBANK DB-01 THRU DB-09 ARE NOT USED FOR BID ALTERNATE.

Table with columns: DUCTBANK NUMBER, CONDUIT, SIZE, FROM, TO. Includes entries for DB-06, DB-07, DB-08, DB-09, and DB-10.

Table with columns: DUCTBANK NUMBER, CONDUIT, SIZE, FROM, TO. Includes entries for DB-11, DB-12, DB-13, and DB-14.

File: C:\30402\RAL\30402-66\CAD_BIM\CONTRACT DRAWINGS\ELE\E14 Saved by TRAHAN Save date: 4/13/2023 11:41 AM
PLOT DATE: 4/14/2023 5:14 PM BY: TRAHAN

Table with columns: PROJECT ENGINEER, DESIGNED BY, DRAWN BY, CHECKED BY, MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE.

ISSUED FOR CONSTRUCTION



Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA
CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

Table with columns: DATE, HAZEN NO., CONTRACT NO., DRAWING NUMBER. Includes 'ELECTRICAL DUCTBANK SCHEDULES' and drawing number 'E14'.

DUCTBANK NUMBER	CONDUIT	SIZE	FROM	TO
DB-15	P-220-058	4"	SWBD-4B	EXISTING HANDHOLE (HH5AP)
	P-220-059	4"	SWBD-4B	EXISTING HANDHOLE (HH5AP)
	P-220-060	4"	SWBD-4B	EXISTING HANDHOLE (HH5AP)
DB-16	P-220-030	2"	PUMP STATION NO. 3 PUMP NO. 1 STARTER (RVSS-M-13-4-1)	PPB-M-13-4-1
	P-220-034	2"	PUMP STATION NO. 3 PUMP NO. 2 STARTER (RVSS-M-13-4-2)	PPB-M-13-4-2
	P-220-038	2"	PUMP STATION NO. 3 PUMP NO. 3 STARTER (RVSS-M-13-4-3)	PPB-M-13-4-3
	P-220-042	1"	BEARING LUBRICATION PUMP NO. 1 STARTER (MTRS-BLP-1)	BEARING LUBRICATION PUMP NO. 1
	P-220-045	1"	BEARING LUBRICATION PUMP NO. 2 STARTER (MTRS-BLP-2)	BEARING LUBRICATION PUMP NO. 2
	P-220-048	1"	BEARING LUBRICATION PUMP NO. 3 STARTER (MTRS-BLP-3)	BEARING LUBRICATION PUMP NO. 3
	P-220-050	2"	SWBD-4A	EMH-04
	P-220-065	2"	PUMP STATION NO. 3 PUMP NO. 4 STARTER (RVSS-M-13-4-4)	PPB-M-13-4-4
	P-220-069	2"	PUMP STATION NO. 3 PUMP NO. 5 STARTER (RVSS-M-13-4-5)	PPB-M-13-4-5
	P-220-073	1"	BEARING LUBRICATION PUMP NO. 4 STARTER (MTRS-BLP-4)	BEARING LUBRICATION PUMP NO. 4
	P-220-076	1"	BEARING LUBRICATION PUMP NO. 5 STARTER (MTRS-BLP-5)	BEARING LUBRICATION PUMP NO. 5
	P-220-078	2"	SWBD-4B	EMH-04
	P-220-085	1"	PP-4	EMH-04
	P-220-086	1"	PP-4	EMH-04
	P-220-090	1"	LP-4	PUMP STATION NO. 3 LIGHTS
	P-220-092	1"	LP-4	EXISTING SUMP PUMP STATION
	P-220-094	1"	LP-4	LI-13-2
	P-220-096	1"	LP-4	PUMP STATION NO. 3 RECEPTACLES
	P-220-098	1"	LP-4	EMH-04
	P-220-099	1"	LP-4	EMH-04
	P-220-100	1"	LP-4	EMH-04
	C-220-000	1"	PUMP STATION NO. 3 PUMP NO. 1 STARTER (RVSS-M-13-4-1)	LCS-M-13-4-1
	C-220-004	1"	PUMP STATION NO. 3 PUMP NO. 2 STARTER (RVSS-M-13-4-2)	LCS-M-13-4-2
	C-220-008	1"	PUMP STATION NO. 3 PUMP NO. 3 STARTER (RVSS-M-13-4-3)	LCS-M-13-4-3
	C-220-012	1"	BEARING LUBRICATION PUMP NO. 1 STARTER (MTRS-BLP-1)	CPB-BLP-1
	C-220-016	1"	BEARING LUBRICATION PUMP NO. 2 STARTER (MTRS-BLP-2)	CPB-BLP-2
	C-220-020	1"	BEARING LUBRICATION PUMP NO. 3 STARTER (MTRS-BLP-3)	CPB-BLP-3
	C-220-024	1"	PUMP STATION NO. 3 PUMP NO. 4 STARTER (RVSS-M-13-4-4)	LCS-M-13-4-4
	C-220-028	1"	PUMP STATION NO. 3 PUMP NO. 5 STARTER (RVSS-M-13-4-5)	LCS-M-13-4-5
	C-220-032	1"	BEARING LUBRICATION PUMP NO. 4 STARTER (MTRS-BLP-4)	CPB-BLP-4
	C-220-036	1"	BEARING LUBRICATION PUMP NO. 5 STARTER (MTRS-BLP-5)	CPB-BLP-5
	C-220-042	2"	EXISTING HH13C	PLC-30
	C-220-043	2"	EXISTING HH13C	PLC-30
	C-220-070	1"	PLC-30	EXISTING LSHH-13-1
	C-220-072	1"	PLC-30	EXISTING SUMP PUMP STATION
	C-220-074	1"	PLC-30	EMH-04
	C-220-075	2"	PLC-30	EMH-04
	I-220-014	1"	PLC-30	LI-13-2
	I-220-017	2"	PLC-30	EMH-04
DB-17	C-220-042	2"	EXISTING HH13C	PLC-30
	C-220-043	2"	EXISTING HH13C	PLC-30
DB-18	P-220-030	2"	PUMP STATION NO. 3 PUMP NO. 1 STARTER (RVSS-M-13-4-1)	PPB-M-13-4-1
	P-220-034	2"	PUMP STATION NO. 3 PUMP NO. 2 STARTER (RVSS-M-13-4-2)	PPB-M-13-4-2
	P-220-038	2"	PUMP STATION NO. 3 PUMP NO. 3 STARTER (RVSS-M-13-4-3)	PPB-M-13-4-3
	P-220-042	1"	BEARING LUBRICATION PUMP NO. 1 STARTER (MTRS-BLP-1)	BEARING LUBRICATION PUMP NO. 1
	P-220-045	1"	BEARING LUBRICATION PUMP NO. 2 STARTER (MTRS-BLP-2)	BEARING LUBRICATION PUMP NO. 2
	P-220-048	1"	BEARING LUBRICATION PUMP NO. 3 STARTER (MTRS-BLP-3)	BEARING LUBRICATION PUMP NO. 3
	P-220-050	2"	SWBD-4A	EMH-04
	P-220-065	2"	PUMP STATION NO. 3 PUMP NO. 4 STARTER (RVSS-M-13-4-4)	PPB-M-13-4-4
	P-220-069	2"	PUMP STATION NO. 3 PUMP NO. 5 STARTER (RVSS-M-13-4-5)	PPB-M-13-4-5
	P-220-073	1"	BEARING LUBRICATION PUMP NO. 4 STARTER (MTRS-BLP-4)	BEARING LUBRICATION PUMP NO. 4
	P-220-076	1"	BEARING LUBRICATION PUMP NO. 5 STARTER (MTRS-BLP-5)	BEARING LUBRICATION PUMP NO. 5
	P-220-078	2"	SWBD-4B	EMH-04
	P-220-085	1"	PP-4	EMH-04
	P-220-086	1"	PP-4	EMH-04
	P-220-090	1"	LP-4	PUMP STATION NO. 3 LIGHTS
	P-220-092	1"	LP-4	EXISTING SUMP PUMP STATION
	P-220-094	1"	LP-4	LI-13-2
	P-220-096	1"	LP-4	PUMP STATION NO. 3 RECEPTACLES
	P-220-098	1"	LP-4	EMH-04
	P-220-099	1"	LP-4	EMH-04
	P-220-100	1"	LP-4	EMH-04

DUCTBANK NUMBER	CONDUIT	SIZE	FROM	TO
	C-220-000	1"	PUMP STATION NO. 3 PUMP NO. 1 STARTER (RVSS-M-13-4-1)	LCS-M-13-4-1
	C-220-004	1"	PUMP STATION NO. 3 PUMP NO. 2 STARTER (RVSS-M-13-4-2)	LCS-M-13-4-2
	C-220-008	1"	PUMP STATION NO. 3 PUMP NO. 3 STARTER (RVSS-M-13-4-3)	LCS-M-13-4-3
	C-220-012	1"	BEARING LUBRICATION PUMP NO. 1 STARTER (MTRS-BLP-1)	CPB-BLP-1
	C-220-016	1"	BEARING LUBRICATION PUMP NO. 2 STARTER (MTRS-BLP-2)	CPB-BLP-2
	C-220-020	1"	BEARING LUBRICATION PUMP NO. 3 STARTER (MTRS-BLP-3)	CPB-BLP-3
	C-220-024	1"	PUMP STATION NO. 3 PUMP NO. 4 STARTER (RVSS-M-13-4-4)	LCS-M-13-4-4
	C-220-028	1"	PUMP STATION NO. 3 PUMP NO. 5 STARTER (RVSS-M-13-4-5)	LCS-M-13-4-5
	C-220-032	1"	BEARING LUBRICATION PUMP NO. 4 STARTER (MTRS-BLP-4)	CPB-BLP-4
	C-220-036	1"	BEARING LUBRICATION PUMP NO. 5 STARTER (MTRS-BLP-5)	CPB-BLP-5
	C-220-070	1"	PLC-30	EXISTING LSHH-13-1
	C-220-072	1"	PLC-30	EXISTING SUMP PUMP STATION
	C-220-074	1"	PLC-30	EMH-04
	C-220-075	2"	PLC-30	EMH-04
	I-220-014	1"	PLC-30	LI-13-2
	I-220-017	2"	PLC-30	EMH-04
DB-19	P-220-030	2"	PUMP STATION NO. 3 PUMP NO. 1 STARTER (RVSS-M-13-4-1)	PPB-M-13-4-1
	P-220-034	2"	PUMP STATION NO. 3 PUMP NO. 2 STARTER (RVSS-M-13-4-2)	PPB-M-13-4-2
	P-220-038	2"	PUMP STATION NO. 3 PUMP NO. 3 STARTER (RVSS-M-13-4-3)	PPB-M-13-4-3
	P-220-065	2"	PUMP STATION NO. 3 PUMP NO. 4 STARTER (RVSS-M-13-4-4)	PPB-M-13-4-4
	P-220-069	2"	PUMP STATION NO. 3 PUMP NO. 5 STARTER (RVSS-M-13-4-5)	PPB-M-13-4-5
	P-220-090	1"	LP-4	PUMP STATION NO. 3 LIGHTS
	P-220-096	1"	LP-4	PUMP STATION NO. 3 RECEPTACLES
DB-20	P-220-042	1"	BEARING LUBRICATION PUMP NO. 1 STARTER (MTRS-BLP-1)	BEARING LUBRICATION PUMP NO. 1
	P-220-045	1"	BEARING LUBRICATION PUMP NO. 2 STARTER (MTRS-BLP-2)	BEARING LUBRICATION PUMP NO. 2
	P-220-048	1"	BEARING LUBRICATION PUMP NO. 3 STARTER (MTRS-BLP-3)	BEARING LUBRICATION PUMP NO. 3
	P-220-073	1"	BEARING LUBRICATION PUMP NO. 4 STARTER (MTRS-BLP-4)	BEARING LUBRICATION PUMP NO. 4
	P-220-076	1"	BEARING LUBRICATION PUMP NO. 5 STARTER (MTRS-BLP-5)	BEARING LUBRICATION PUMP NO. 5
	P-220-092	1"	LP-4	EXISTING SUMP PUMP STATION
	P-220-094	1"	LP-4	LI-13-2
	C-220-000	1"	PUMP STATION NO. 3 PUMP NO. 1 STARTER (RVSS-M-13-4-1)	LCS-M-13-4-1
	C-220-004	1"	PUMP STATION NO. 3 PUMP NO. 2 STARTER (RVSS-M-13-4-2)	LCS-M-13-4-2
	C-220-008	1"	PUMP STATION NO. 3 PUMP NO. 3 STARTER (RVSS-M-13-4-3)	LCS-M-13-4-3
	C-220-012	1"	BEARING LUBRICATION PUMP NO. 1 STARTER (MTRS-BLP-1)	CPB-BLP-1
	C-220-016	1"	BEARING LUBRICATION PUMP NO. 2 STARTER (MTRS-BLP-2)	CPB-BLP-2
	C-220-020	1"	BEARING LUBRICATION PUMP NO. 3 STARTER (MTRS-BLP-3)	CPB-BLP-3
	C-220-024	1"	PUMP STATION NO. 3 PUMP NO. 4 STARTER (RVSS-M-13-4-4)	LCS-M-13-4-4
	C-220-028	1"	PUMP STATION NO. 3 PUMP NO. 5 STARTER (RVSS-M-13-4-5)	LCS-M-13-4-5
	C-220-032	1"	BEARING LUBRICATION PUMP NO. 4 STARTER (MTRS-BLP-4)	CPB-BLP-4
	C-220-036	1"	BEARING LUBRICATION PUMP NO. 5 STARTER (MTRS-BLP-5)	CPB-BLP-5
	C-220-070	1"	PLC-30	EXISTING LSHH-13-1
	C-220-072	1"	PLC-30	EXISTING SUMP PUMP STATION
	I-220-014	1"	PLC-30	LI-13-2
DB-21	P-220-092	1"	LP-4	EXISTING SUMP PUMP STATION
	C-220-072	1"	PLC-30	EXISTING SUMP PUMP STATION
DB-22	P-220-042	1"	BEARING LUBRICATION PUMP NO. 1 STARTER (MTRS-BLP-1)	BEARING LUBRICATION PUMP NO. 1
	P-220-045	1"	BEARING LUBRICATION PUMP NO. 2 STARTER (MTRS-BLP-2)	BEARING LUBRICATION PUMP NO. 2
	P-220-048	1"	BEARING LUBRICATION PUMP NO. 3 STARTER (MTRS-BLP-3)	BEARING LUBRICATION PUMP NO. 3
	P-220-073	1"	BEARING LUBRICATION PUMP NO. 4 STARTER (MTRS-BLP-4)	BEARING LUBRICATION PUMP NO. 4
	P-220-076	1"	BEARING LUBRICATION PUMP NO. 5 STARTER (MTRS-BLP-5)	BEARING LUBRICATION PUMP NO. 5
	P-220-094	1"	LP-4	LI-13-2
	C-220-000	1"	PUMP STATION NO. 3 PUMP NO. 1 STARTER (RVSS-M-13-4-1)	LCS-M-13-4-1
	C-220-004	1"	PUMP STATION NO. 3 PUMP NO. 2 STARTER (RVSS-M-13-4-2)	LCS-M-13-4-2
	C-220-008	1"	PUMP STATION NO. 3 PUMP NO. 3 STARTER (RVSS-M-13-4-3)	LCS-M-13-4-3
	C-220-012	1"	BEARING LUBRICATION PUMP NO. 1 STARTER (MTRS-BLP-1)	CPB-BLP-1
	C-220-016	1"	BEARING LUBRICATION PUMP NO. 2 STARTER (MTRS-BLP-2)	CPB-BLP-2
	C-220-020	1"	BEARING LUBRICATION PUMP NO. 3 STARTER (MTRS-BLP-3)	CPB-BLP-3
	C-220-024	1"	PUMP STATION NO. 3 PUMP NO. 4 STARTER (RVSS-M-13-4-4)	LCS-M-13-4-4
	C-220-028	1"	PUMP STATION NO. 3 PUMP NO. 5 STARTER (RVSS-M-13-4-5)	LCS-M-13-4-5
	C-220-032	1"	BEARING LUBRICATION PUMP NO. 4 STARTER (MTRS-BLP-4)	CPB-BLP-4
	C-220-036	1"	BEARING LUBRICATION PUMP NO. 5 STARTER (MTRS-BLP-5)	CPB-BLP-5
	C-220-070	1"	PLC-30	EXISTING LSHH-13-1
	I-220-014	1"	PLC-30	LI-13-2

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 PLOT DATE: 4/14/2023 5:14 PM BY: TROJAN

PROJECT ENGINEER:	M. MESSERE		
DESIGNED BY:	B. PICKETT		
DRAWN BY:	T. RAHLAN		
CHECKED BY:	D. ATKINSON		
1	CONSTRUCTION	4/2023	CWB
REV	ISSUED FOR	DATE	BY

ISSUED FOR CONSTRUCTION



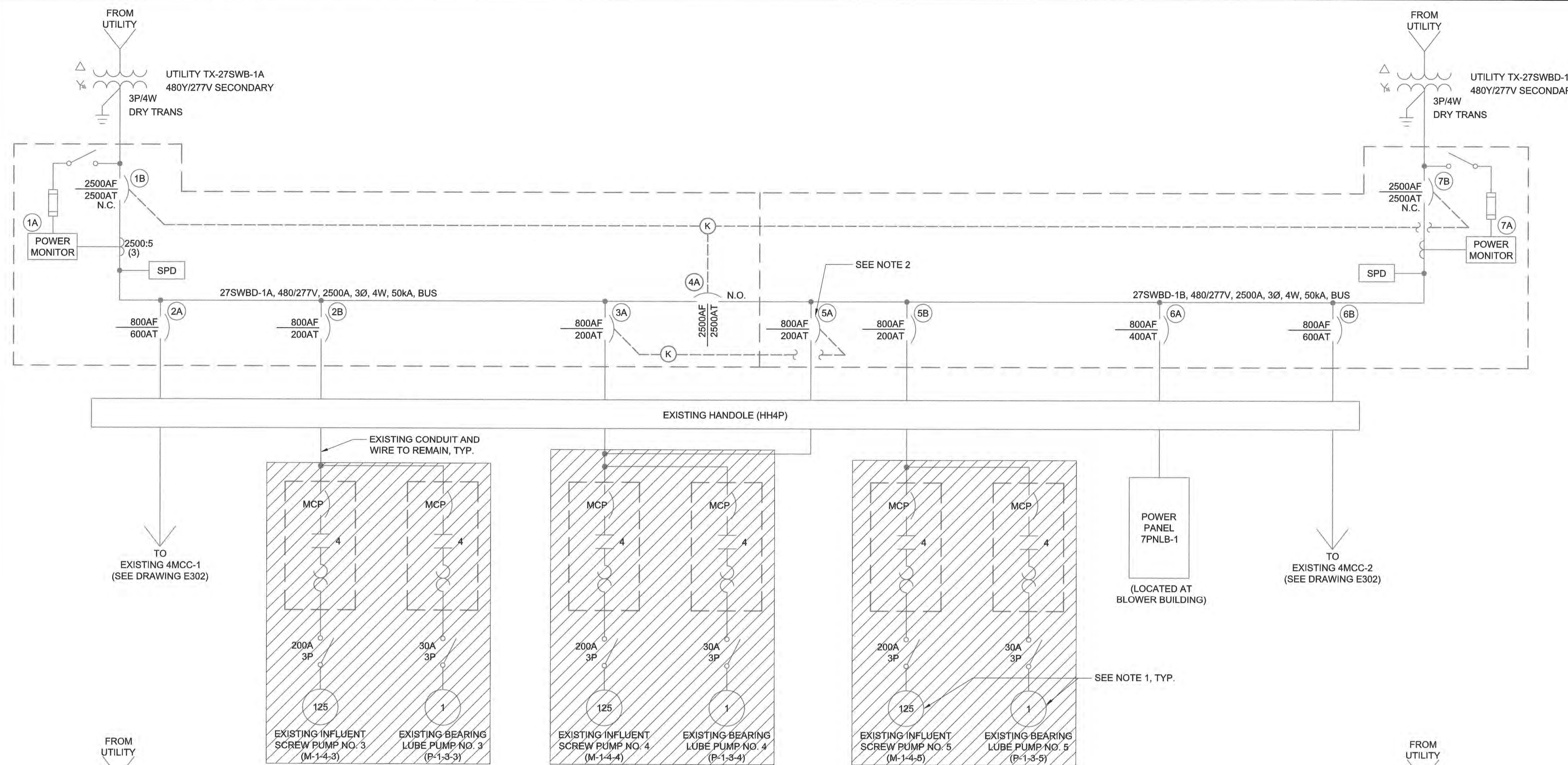
PUBLIC WORKS COMMISSION
 CITY OF FAYETTEVILLE, NORTH CAROLINA
 CROSS CREEK WRF AND ROCKFISH CREEK WRF
 SCREW PUMP IMPROVEMENTS

ELECTRICAL
 DUCTBANK SCHEDULES

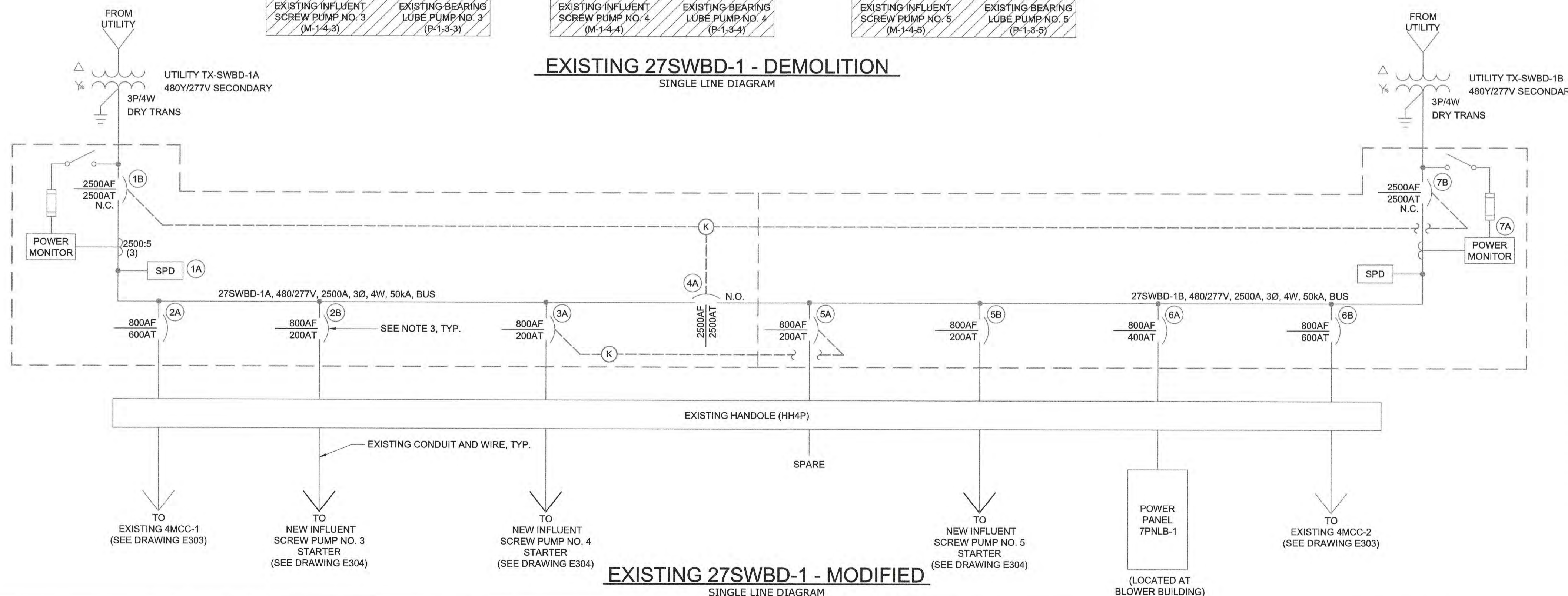
DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E15

NOTES:

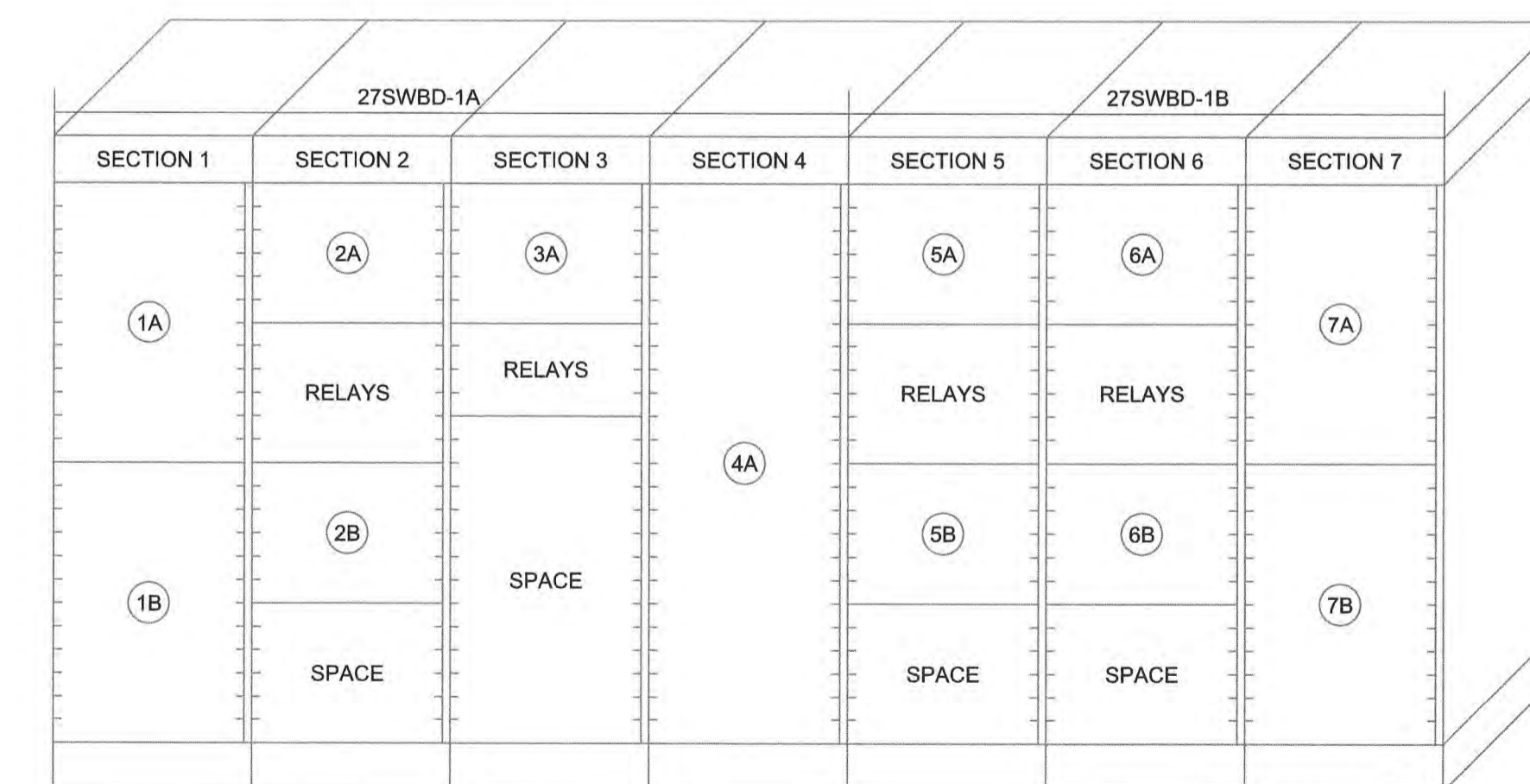
- CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING INFLUENT PUMP STARTERS, BEARING LUBRICATION PUMP STARTERS, AND ASSOCIATED CONDUIT AND WIRE COMPLETELY FROM STARTERS TO LOAD AS INDICATED. CONDUIT AND WIRE FROM SWITCHBOARD CIRCUIT BREAKER TO INFLUENT PUMP STARTERS TO REMAIN. PROPER CARE SHALL BE TAKEN BY THE CONTRACTOR TO ENSURE CONDUIT AND WIRE ARE NOT DAMAGED DURING DEMOLITION PHASE. ANY DAMAGE SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. COORDINATE DEMOLITION WITH THE ENGINEER, OWNER, AND SPECIFICATION SECTION 01 14 00 PRIOR TO STARTING WORK.
- CONTRACTOR SHALL DISCONNECT AND REMOVE CONDUCTORS ASSOCIATED WITH CIRCUIT BREAKER SUPPLY EXISTING INFLUENT SCREW PUMP NO. 4 AS INDICATED. CIRCUIT BREAKER TO REMAIN IN THE SWITCHBOARD AND RE-LABEL AS SPARE. CONDUIT SHALL BE ABANDONED PER STANDARD DETAILS.
- CONTRACTOR SHALL UTILIZE EXISTING CIRCUIT BREAKERS IN EXISTING SWITCHBOARD TO SUPPLY NEW INFLUENT SCREW PUMP STARTERS AS INDICATED. CONTRACTOR SHALL UTILIZE EXISTING CONDUIT AND WIRE FROM EXISTING CIRCUIT BREAKERS TO NEW INFLUENT SCREW PUMP STARTERS WHICH LOCATED IN PRIMARY SLUDGE PUMP STATION. SEE DRAWING E304 FOR FURTHER DETAILS.
- CERTAIN HANDHOLES ARE SHOWN ON SINGLE LINE DIAGRAMS TO SHOW TERMINATIONS OF CONDUITS AT THESE LOCATIONS. NOT ALL HANDHOLES ARE SHOWN FOR DRAWING CLARITY. REFER TO SITE PLANS, CONDUIT AND WIRE SCHEDULES FOR FURTHER DETAILS.



EXISTING 27SWBD-1 - DEMOLITION
SINGLE LINE DIAGRAM



EXISTING 27SWBD-1 - MODIFIED
SINGLE LINE DIAGRAM



EXISTING 27SWBD-1
ELEVATION (NTS)

File: C:\30402-RA\30402-06\64CAD_BIM\CONTRACT DRAWINGS\ELE\E51.dwg Saved by: TRAHAN Date: 3/14/2023 7:58 AM PLOT DATE: 4/16/2023 3:14 PM BY: TRAHAN

PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	B. PICKETT
DRAWN BY:	T. RAHLAN
CHECKED BY:	D. ATKINSON
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"

ISSUED FOR CONSTRUCTION



Hazen

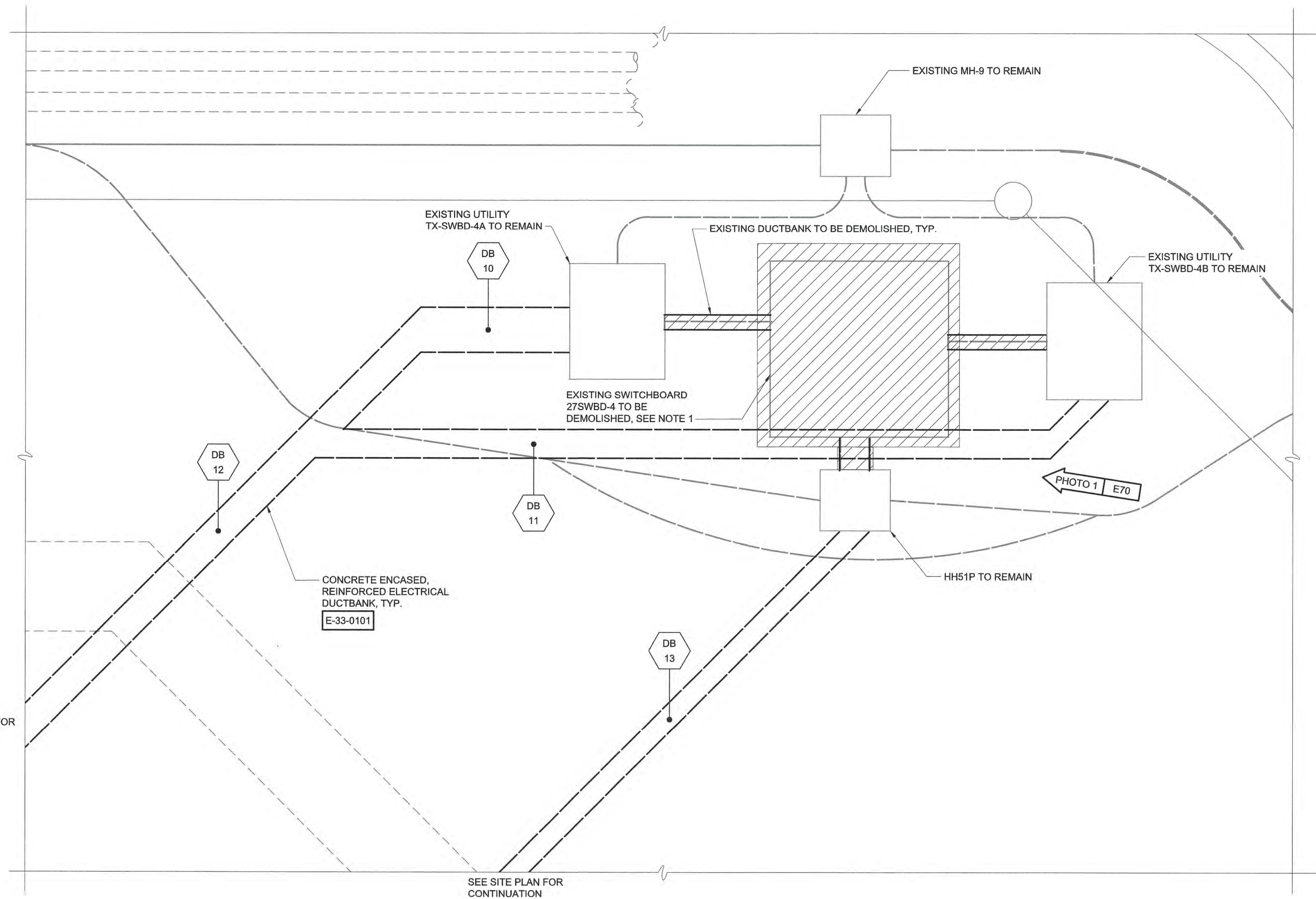
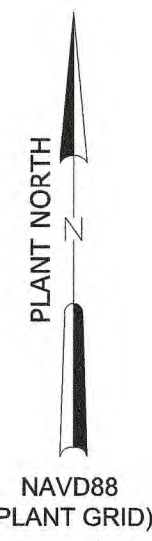
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA

CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

ELECTRICAL
EXISTING 27SWBD-1 SINGLE LINE
DIAGRAMS AND ELEVATION

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E51



EXISTING 27SWBD-4 ENLARGED PLAN
1" = 5'-0"

- NOTES:**
1. CONTRACTOR SHALL DEMOLISH EXISTING SWITCHBOARD (27SWBD-4) AND ASSOCIATED CONDUIT AND WIRE COMPLETELY FROM SOURCE TO LOAD. COORDINATE ALL DEMOLITION WITH THE ENGINEER, OWNER, AND SPECIFICATION SECTION 01 14 00 PRIOR TO STARTING WORK.
 2. CONTRACTOR SHALL FURNISH AND INSTALL CONCRETE ENCASED, REINFORCED ELECTRICAL DUCTBANK AS INDICATED. ACTUAL ROUTING OF DUCTBANK SHALL BE COORDINATED WITH EXISTING UNDERGROUND INFRASTRUCTURE AND ADJUSTED AS NECESSARY TO AVOID CONFLICTS.

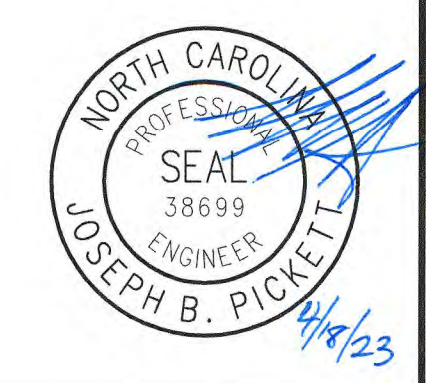


PHOTO NO. 1
NTS

File: C:\30402-RAI\30402-064\CAD_BIM\CONTRACT DRAWINGS\ELEC\E70 Saved by TRAHAN Save date: 4/13/2023 8:52 AM
PLOT DATE: 4/14/2023 5:16 PM BY: TRAHAN

PROJECT ENGINEER:	M. MESSERE		
DESIGNED BY:	B. PICKETT		
DRAWN BY:	T. RAHLAN		
CHECKED BY:	D. ATKINSON		
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"		
1	CONSTRUCTION	4/2023	CWB
REV	ISSUED FOR	DATE	BY

ISSUED FOR CONSTRUCTION



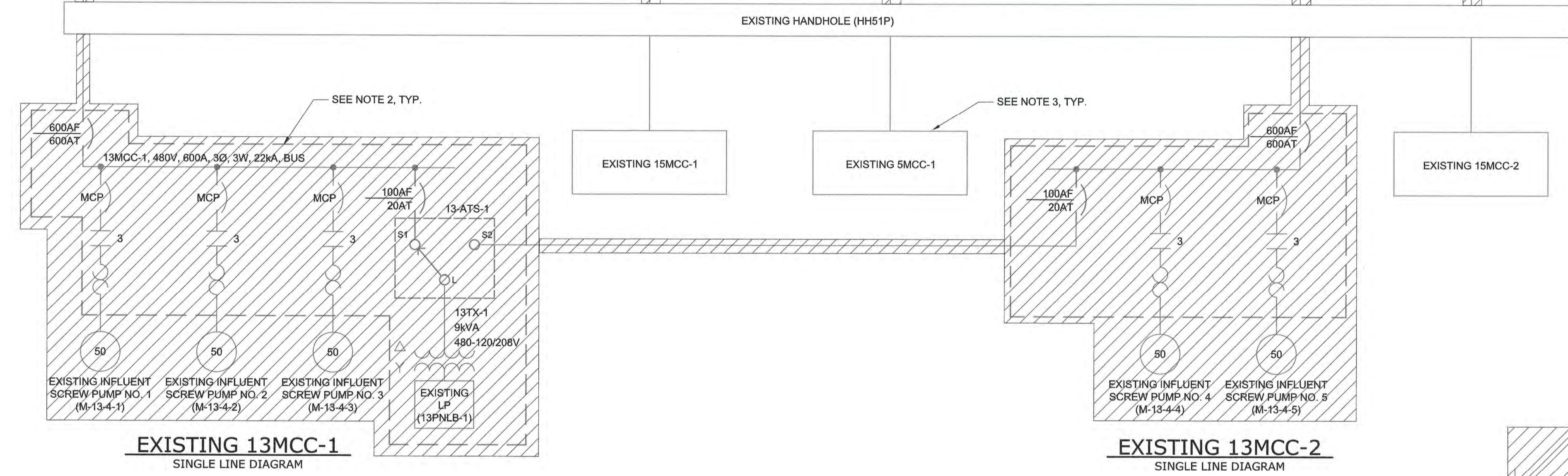
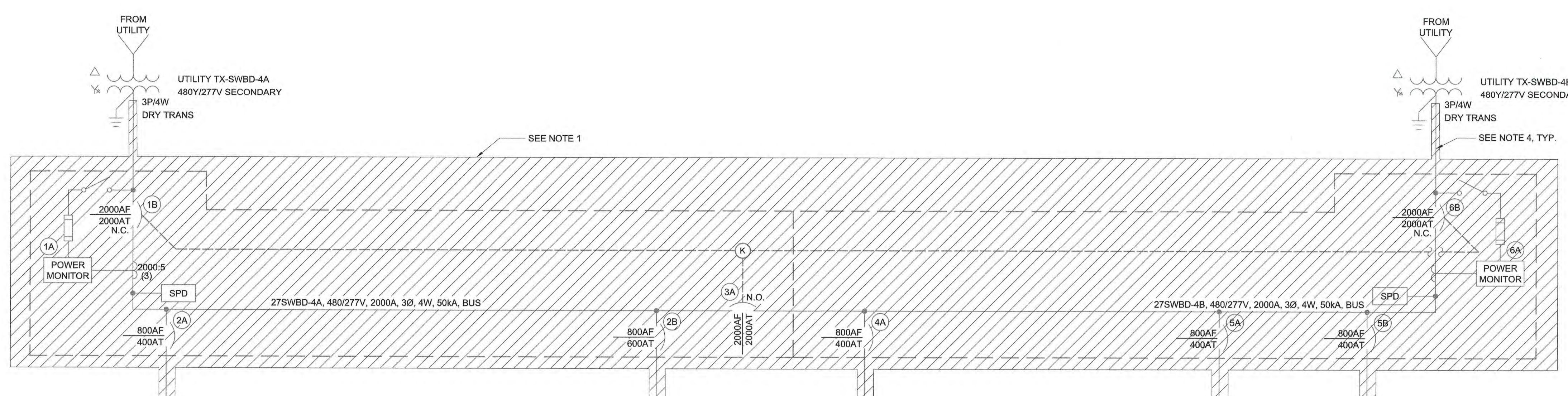
Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA
**CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS**

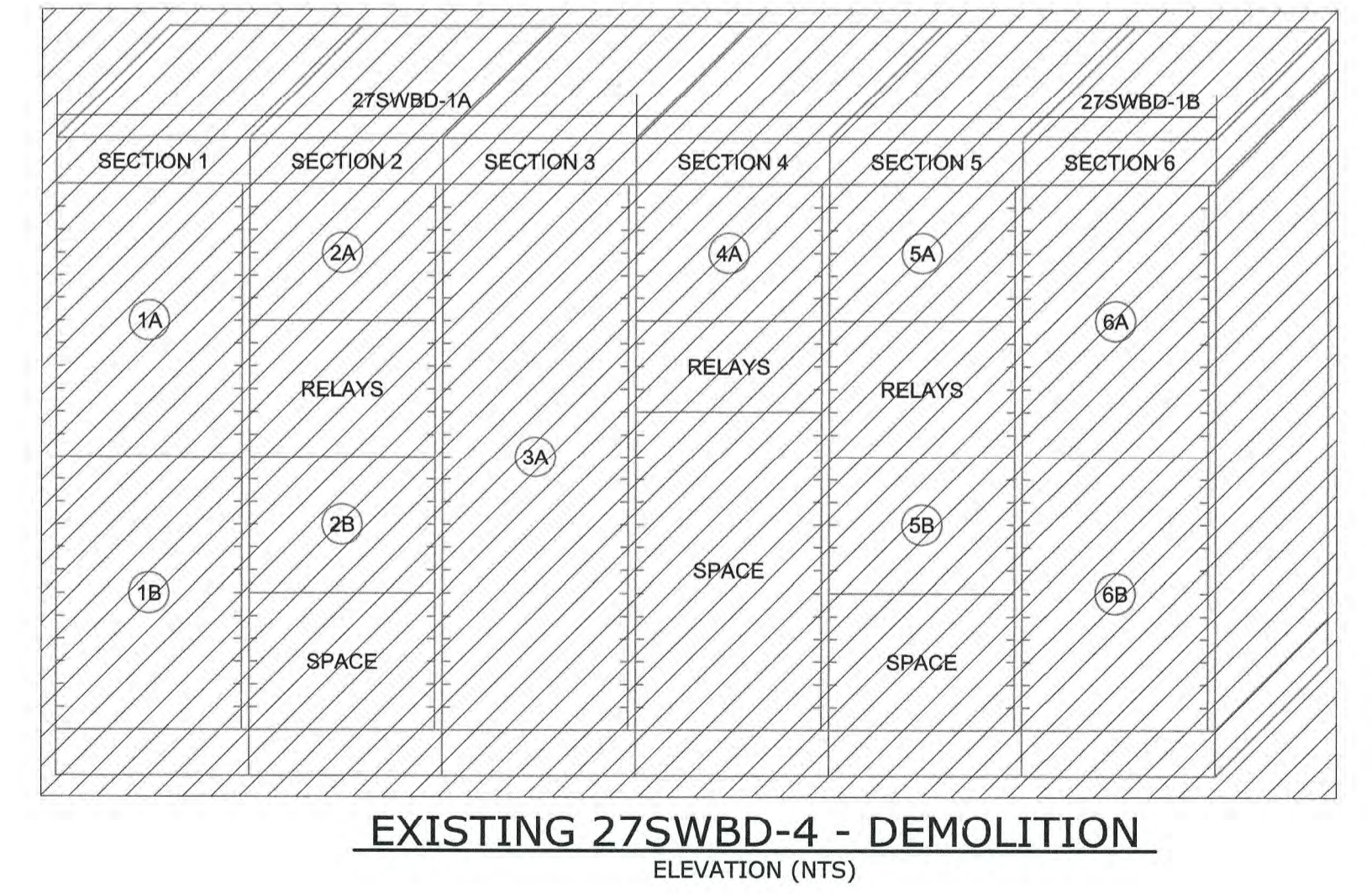
**ELECTRICAL
EXISTING 27SWBD-4 ENLARGED PLAN**

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E70

- NOTES:**
- CONTRACTOR SHALL DEMOLISH ENTIRE EXISTING SWITCHBOARD (27SWBD-4) AND ASSOCIATED CONDUIT AND WIRE AS INDICATED. COORDINATE DEMOLITION WITH THE ENGINEER, OWNER, AND SPECIFICATION SECTION 01 14 00 PRIOR TO STARTING WORK.
 - CONTRACTOR SHALL DEMOLISH ENTIRE EXISTING MOTOR CONTROL CENTER (13MCC-1, 13MCC-2) AND ASSOCIATED CONDUIT AND WIRE AS INDICATED. REFER TO PLAN DRAWING ON E200 FOR PHYSICAL LOCATION OF EXISTING MCC. COORDINATE DEMOLITION WITH THE ENGINEER, OWNER, AND SPECIFICATION SECTION 01 14 00 PRIOR TO STARTING WORK.
 - CONTRACTOR SHALL FURNISH AND INSTALL THE REQUIRED CONDUIT AND WIRE TO RESUPPLY EXISTING LOADS FROM NEW ELECTRICAL SOURCE. SEE DRAWING E221 FOR FURTHER DETAILS.
 - CONTRACTOR SHALL FURNISH AND INSTALL NEW CONDUIT AND WIRE FROM EXISTING TRANSFORMERS TO NEW SWITCHBOARD (SWBD-4) AS SHOWN ON DRAWING E221.



EXISTING 27SWBD-4 - DEMOLITION
SINGLE LINE DIAGRAM



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 PLOT DATE: 4/14/2023 5:16 PM BY: T. RAHLAN
 Saved by: T. RAHLAN Save date: 3/14/2023 7:59 AM

PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	B. PICKETT
DRAWN BY:	T. RAHLAN
CHECKED BY:	D. ATKINSON
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
1 CONSTRUCTION	4/2023 CWB
REV ISSUED FOR	DATE BY

ISSUED FOR CONSTRUCTION

Hazen

HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA

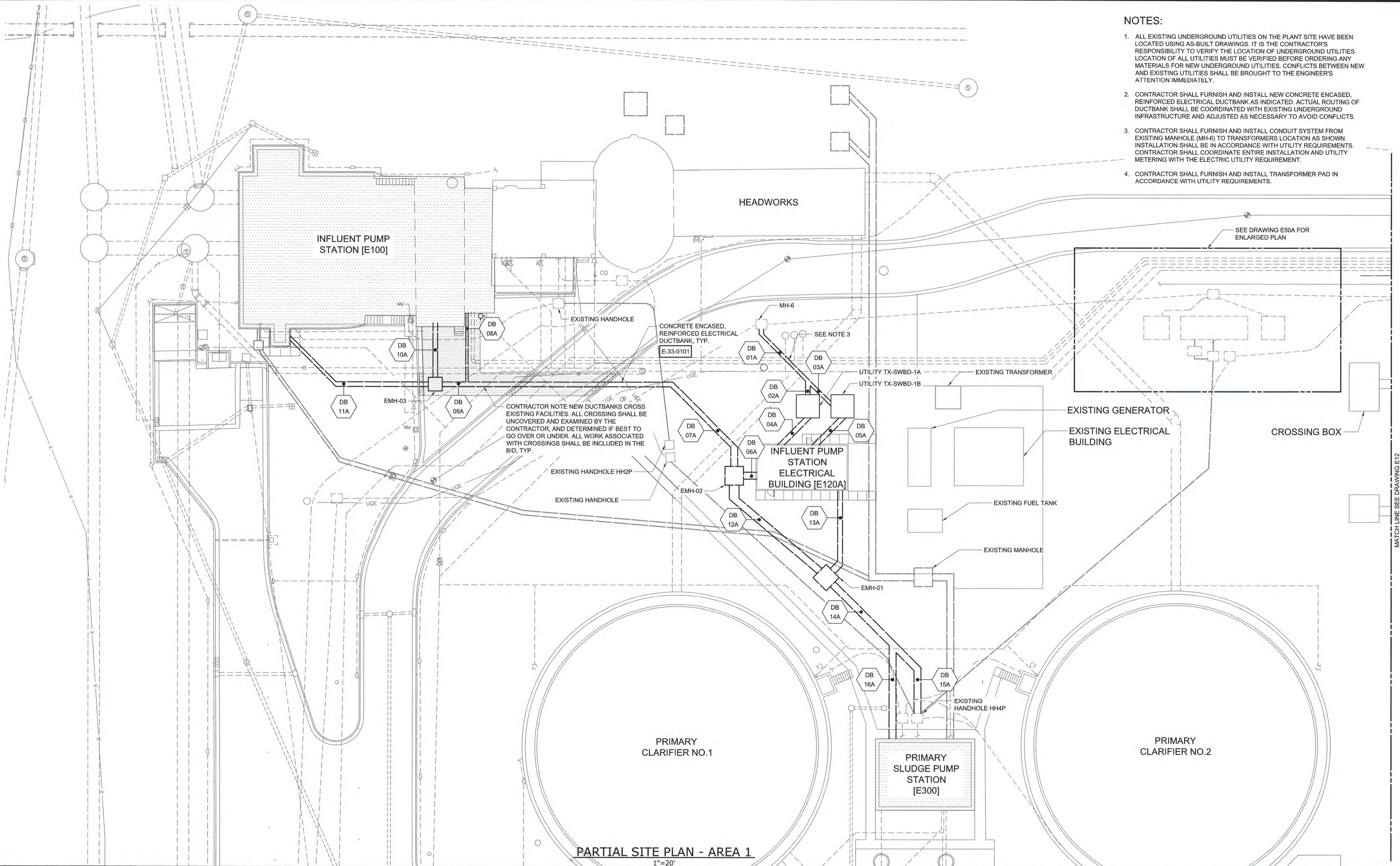
CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

ELECTRICAL
EXISTING 27SWBD-4 SINGLE LINE
DIAGRAM AND ELEVATION - DEMOLITION

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E71

PLANT NORTH
NAVD88
(PLANT GRID)

- NOTES:**
1. ALL EXISTING UNDERGROUND UTILITIES ON THE PLANT SITE HAVE BEEN LOCATED USING AS-BUILT DRAWINGS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF UNDERGROUND UTILITIES. LOCATION OF ALL UTILITIES MUST BE VERIFIED BEFORE ORDERING ANY MATERIALS FOR NEW UNDERGROUND UTILITIES. CONFLICTS BETWEEN NEW AND EXISTING UTILITIES SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY.
 2. CONTRACTOR SHALL FURNISH AND INSTALL NEW CONCRETE ENCASED, REINFORCED ELECTRICAL DUCTBANK AS INDICATED. ACTUAL ROUTING OF DUCTBANK SHALL BE COORDINATED WITH EXISTING UNDERGROUND INFRASTRUCTURE AND ADJUSTED AS NECESSARY TO AVOID CONFLICTS.
 3. CONTRACTOR SHALL FURNISH AND INSTALL CONDUIT SYSTEM FROM EXISTING MANHOLE (MH-6) TO TRANSFORMERS LOCATION AS SHOWN. INSTALLATION SHALL BE IN ACCORDANCE WITH UTILITY REQUIREMENTS. CONTRACTOR SHALL COORDINATE ENTIRE INSTALLATION AND UTILITY METERING WITH THE ELECTRIC UTILITY REQUIREMENT.
 4. CONTRACTOR SHALL FURNISH AND INSTALL TRANSFORMER PAD IN ACCORDANCE WITH UTILITY REQUIREMENTS.



PARTIAL SITE PLAN - AREA 1
1"=20'

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 PLOT DATE: 4/14/2023 5:16 PM, BY: T. RAHLAN

PROJECT ENGINEER:	M. MESSERE		
DESIGNED BY:	B. PICKETT		
DRAWN BY:	T. RAHLAN		
CHECKED BY:	D. ATKINSON		
1	CONSTRUCTION	4/2023	CWB
REV	ISSUED FOR	DATE	BY

ISSUED FOR CONSTRUCTION



Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA
**CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS**

**ELECTRICAL
PARTIAL SITE PLAN - AREA 1
BID ALTERNATE**

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E11A

File: D:\30402-064\30402-064\CAD_BIM\CONTRACT DRAWINGS\ELECTRICAL.dwg, Saved by: T. RAHLAN, Save date: 4/13/2023 11:46 AM
PLOT DATE: 4/14/2023 5:19 PM BY: T. RAHLAN

DUCTBANK NUMBER	CONDUIT	SIZE	FROM	TO	
DB-01A	P-120-001	5"	UTILITY SWITCH A	UTILITY TX-SWBD-1A	
	P-120-002	5"	UTILITY SWITCH A	UTILITY TX-SWBD-1A	
	P-120-004	5"	UTILITY SWITCH B	UTILITY TX-SWBD-1B	
	P-120-005	5"	UTILITY SWITCH B	UTILITY TX-SWBD-1B	
DB-02A	P-120-001	5"	UTILITY SWITCH A	UTILITY TX-SWBD-1A	
	P-120-002	5"	UTILITY SWITCH A	UTILITY TX-SWBD-1A	
DB-03A	P-120-004	5"	UTILITY SWITCH B	UTILITY TX-SWBD-1B	
	P-120-005	5"	UTILITY SWITCH B	UTILITY TX-SWBD-1B	
DB-04A	P-120-007	4"	UTILITY TX-SWBD-1A	SWBD-1A	
	P-120-008	4"	UTILITY TX-SWBD-1A	SWBD-1A	
	P-120-009	4"	UTILITY TX-SWBD-1A	SWBD-1A	
	P-120-010	4"	UTILITY TX-SWBD-1A	SWBD-1A	
	P-120-011	4"	UTILITY TX-SWBD-1A	SWBD-1A	
	P-120-012	4"	UTILITY TX-SWBD-1A	SWBD-1A	
	P-120-013	4"	UTILITY TX-SWBD-1A	SWBD-1A	
	P-120-014	4"	UTILITY TX-SWBD-1A	SWBD-1A	
	DB-05A	P-120-016	4"	UTILITY TX-SWBD-1B	SWBD-1B
		P-120-017	4"	UTILITY TX-SWBD-1B	SWBD-1B
		P-120-018	4"	UTILITY TX-SWBD-1B	SWBD-1B
P-120-019		4"	UTILITY TX-SWBD-1B	SWBD-1B	
P-120-020		4"	UTILITY TX-SWBD-1B	SWBD-1B	
P-120-021		4"	UTILITY TX-SWBD-1B	SWBD-1B	
P-120-022		4"	UTILITY TX-SWBD-1B	SWBD-1B	
P-120-023		4"	UTILITY TX-SWBD-1B	SWBD-1B	
DB-06A		P-120-037	3"	INFLUENT SCREW PUMP NO. 1 STARTER (RVSS-M-1-4-1)	PPB-M-1-4-1
		P-120-041	3"	INFLUENT SCREW PUMP NO. 2 STARTER (RVSS-M-1-4-2)	PPB-M-1-4-2
		P-120-045	3"	INFLUENT SCREW PUMP NO. 3 STARTER (RVSS-M-1-4-3)	PPB-M-1-4-3
	P-120-049	1"	BEARING LUBRICATION PUMP NO. 1 STARTER (MTRS-BLP-1)	BEARING LUBRICATION PUMP NO. 1	
	P-120-052	1"	BEARING LUBRICATION PUMP NO. 2 STARTER (MTRS-BLP-2)	BEARING LUBRICATION PUMP NO. 2	
	P-120-055	1"	BEARING LUBRICATION PUMP NO. 3 STARTER (MTRS-BLP-3)	BEARING LUBRICATION PUMP NO. 3	
	P-120-057	1"	SWBD-1A	SUPPLY FAN NO. 1 STARTER (MTRS-SF-1)	
	P-120-060	2"	SWBD-1A	EMH-03	
	P-120-061	4"	SWBD-1A	EMH-03	
	P-120-078	3"	INFLUENT SCREW PUMP NO. 4 STARTER (RVSS-M-1-4-4)	PPB-M-1-4-4	
	P-120-082	3"	INFLUENT SCREW PUMP NO. 5 STARTER (RVSS-M-1-4-5)	PPB-M-1-4-5	
	P-120-086	1"	BEARING LUBRICATION PUMP NO. 4 STARTER (MTRS-BLP-4)	BEARING LUBRICATION PUMP NO. 4	
	P-120-089	1"	BEARING LUBRICATION PUMP NO. 5 STARTER (MTRS-BLP-5)	BEARING LUBRICATION PUMP NO. 5	
	P-120-091	1"	SWBD-1B	SUPPLY FAN NO. 2 STARTER (MTRS-SF-2)	
	P-120-094	2"	SWBD-1B	EMH-03	
	P-120-095	4"	SWBD-1B	EMH-03	
	P-120-102	1"	PP-1	INFLUENT MOTORIZED GATE NO. 1	
	P-120-103	1"	PP-1	EFFLUENT MOTORIZED GATE NO. 2	
	P-120-104	2"	PP-1	EMH-03	
	P-120-105	1"	PP-1	EMH-03	
	P-120-106	1"	PP-1	EMH-03	
	P-120-110	1"	LP-1	EMH-03	
	P-120-111	1"	LP-1	EMH-03	
	P-120-112	1"	LP-1	EMH-03	
	P-120-113	1"	LP-1	EMH-03	
	P-120-115	1"	LP-1	LI-100	
	C-120-001	1"	INFLUENT SCREW PUMP NO. 1 STARTER (RVSS-M-1-4-1)	LCS-M-1-4-1	
	C-120-004	1"	INFLUENT SCREW PUMP NO. 2 STARTER (RVSS-M-1-4-2)	LCS-M-1-4-2	
	C-120-007	1"	INFLUENT SCREW PUMP NO. 3 STARTER (RVSS-M-1-4-3)	LCS-M-1-4-3	
	C-120-010	1"	BEARING LUBRICATION PUMP NO. 1 STARTER (MTRS-BLP-1)	CPB-BLP-1	
	C-120-014	1"	BEARING LUBRICATION PUMP NO. 2 STARTER (MTRS-BLP-2)	CPB-BLP-2	
C-120-018	1"	BEARING LUBRICATION PUMP NO. 3 STARTER (MTRS-BLP-3)	CPB-BLP-3		
C-120-022	1"	INFLUENT SCREW PUMP NO. 4 STARTER (RVSS-M-1-4-4)	LCS-M-1-4-4		
C-120-025	1"	INFLUENT SCREW PUMP NO. 5 STARTER (RVSS-M-1-4-5)	LCS-M-1-4-5		
C-120-028	1"	BEARING LUBRICATION PUMP NO. 4 STARTER (MTRS-BLP-4)	CPB-BLP-4		
C-120-032	1"	BEARING LUBRICATION PUMP NO. 5 STARTER (MTRS-BLP-5)	CPB-BLP-5		
C-120-040	2"	EXISTING PLC-4ACP	PLC-4ACP-RIO		
C-120-041	2"	EXISTING PLC-4ACP	PLC-4ACP-RIO		
C-120-068	1"	PLC-4ACP-RIO	INFLUENT MOTORIZED GATE NO. 1		
C-120-069	1"	PLC-4ACP-RIO	EFFLUENT MOTORIZED GATE NO. 2		
C-120-070	1"	PLC-4ACP-RIO	SUPPLY FAN NO. 1 STARTER (MTRS-SF-1)		
C-120-072	1"	PLC-4ACP-RIO	SUPPLY FAN NO. 2 STARTER (MTRS-SF-2)		
C-120-074	1"	PLC-4ACP-RIO	EMH-03		
C-120-075	2"	PLC-4ACP-RIO	EMH-03		
I-120-015	1"	PLC-4ACP-RIO	EMH-03		
I-120-016	2"	PLC-4ACP-RIO	EMH-03		
I-120-018	1"	PLC-4ACP-RIO	LI-100		
I-120-021	1"	PLC-4ACP-RIO	EMH-03		

DUCTBANK NUMBER	CONDUIT	SIZE	FROM	TO
DB-07A	P-120-037	3"	INFLUENT SCREW PUMP NO. 1 STARTER (RVSS-M-1-4-1)	PPB-M-1-4-1
	P-120-041	3"	INFLUENT SCREW PUMP NO. 2 STARTER (RVSS-M-1-4-2)	PPB-M-1-4-2
	P-120-045	3"	INFLUENT SCREW PUMP NO. 3 STARTER (RVSS-M-1-4-3)	PPB-M-1-4-3
	P-120-049	1"	BEARING LUBRICATION PUMP NO. 1 STARTER (MTRS-BLP-1)	BEARING LUBRICATION PUMP NO. 1
	P-120-052	1"	BEARING LUBRICATION PUMP NO. 2 STARTER (MTRS-BLP-2)	BEARING LUBRICATION PUMP NO. 2
	P-120-055	1"	BEARING LUBRICATION PUMP NO. 3 STARTER (MTRS-BLP-3)	BEARING LUBRICATION PUMP NO. 3
	P-120-057	1"	SWBD-1A	SUPPLY FAN NO. 1 STARTER (MTRS-SF-1)
	P-120-060	2"	SWBD-1A	EMH-03
	P-120-061	4"	SWBD-1A	EMH-03
	P-120-078	3"	INFLUENT SCREW PUMP NO. 4 STARTER (RVSS-M-1-4-4)	PPB-M-1-4-4
	P-120-082	3"	INFLUENT SCREW PUMP NO. 5 STARTER (RVSS-M-1-4-5)	PPB-M-1-4-5
	P-120-086	1"	BEARING LUBRICATION PUMP NO. 4 STARTER (MTRS-BLP-4)	BEARING LUBRICATION PUMP NO. 4
	P-120-089	1"	BEARING LUBRICATION PUMP NO. 5 STARTER (MTRS-BLP-5)	BEARING LUBRICATION PUMP NO. 5
	P-120-091	1"	SWBD-1B	SUPPLY FAN NO. 2 STARTER (MTRS-SF-2)
	P-120-094	2"	SWBD-1B	EMH-03
	P-120-095	4"	SWBD-1B	EMH-03
	P-120-102	1"	PP-1	INFLUENT MOTORIZED GATE NO. 1
	P-120-103	1"	PP-1	EFFLUENT MOTORIZED GATE NO. 2
	P-120-104	2"	PP-1	EMH-03
P-120-105	1"	PP-1	EMH-03	
P-120-106	1"	PP-1	EMH-03	
P-120-110	1"	LP-1	EMH-03	
P-120-111	1"	LP-1	EMH-03	
P-120-112	1"	LP-1	EMH-03	
P-120-113	1"	LP-1	EMH-03	
P-120-115	1"	LP-1	LI-100	
C-120-001	1"	INFLUENT SCREW PUMP NO. 1 STARTER (RVSS-M-1-4-1)	LCS-M-1-4-1	
C-120-004	1"	INFLUENT SCREW PUMP NO. 2 STARTER (RVSS-M-1-4-2)	LCS-M-1-4-2	
C-120-007	1"	INFLUENT SCREW PUMP NO. 3 STARTER (RVSS-M-1-4-3)	LCS-M-1-4-3	
C-120-010	1"	BEARING LUBRICATION PUMP NO. 1 STARTER (MTRS-BLP-1)	CPB-BLP-1	
C-120-014	1"	BEARING LUBRICATION PUMP NO. 2 STARTER (MTRS-BLP-2)	CPB-BLP-2	
C-120-018	1"	BEARING LUBRICATION PUMP NO. 3 STARTER (MTRS-BLP-3)	CPB-BLP-3	
C-120-022	1"	INFLUENT SCREW PUMP NO. 4 STARTER (RVSS-M-1-4-4)	LCS-M-1-4-4	
C-120-025	1"	INFLUENT SCREW PUMP NO. 5 STARTER (RVSS-M-1-4-5)	LCS-M-1-4-5	
C-120-028	1"	BEARING LUBRICATION PUMP NO. 4 STARTER (MTRS-BLP-4)	CPB-BLP-4	
C-120-032	1"	BEARING LUBRICATION PUMP NO. 5 STARTER (MTRS-BLP-5)	CPB-BLP-5	
C-120-068	1"	PLC-4ACP-RIO	INFLUENT MOTORIZED GATE NO. 1	
C-120-069	1"	PLC-4ACP-RIO	EFFLUENT MOTORIZED GATE NO. 2	
C-120-070	1"	PLC-4ACP-RIO	SUPPLY FAN NO. 1 STARTER (MTRS-SF-1)	
C-120-072	1"	PLC-4ACP-RIO	SUPPLY FAN NO. 2 STARTER (MTRS-SF-2)	
C-120-074	1"	PLC-4ACP-RIO	EMH-03	
C-120-075	2"	PLC-4ACP-RIO	EMH-03	
I-120-015	1"	PLC-4ACP-RIO	EMH-03	
I-120-016	2"	PLC-4ACP-RIO	EMH-03	
I-120-018	1"	PLC-4ACP-RIO	LI-100	
I-120-021	1"	PLC-4ACP-RIO	EMH-03	
DB-08A	P-120-102	1"	PP-1	INFLUENT MOTORIZED GATE NO. 1
	P-120-103	1"	PP-1	EFFLUENT MOTORIZED GATE NO. 2
C-120-068	1"	PLC-4ACP-RIO	INFLUENT MOTORIZED GATE NO. 1	
C-120-069	1"	PLC-4ACP-RIO	EFFLUENT MOTORIZED GATE NO. 2	

REV	CONSTRUCTION	DATE	CWB	BY
1	ISSUED FOR	4/2023		

PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	B. PICKETT
DRAWN BY:	T. RAHLAN
CHECKED BY:	D. ATKINSON

ISSUED FOR CONSTRUCTION



Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA

CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

ELECTRICAL
DUCTBANK SCHEDULES
BID ALTERNATE

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E12A

DUCTBANK NUMBER	CONDUIT	SIZE	FROM	TO
DB-09A	P-120-037	3"	INFLUENT SCREW PUMP NO. 1 STARTER (RVSS-M-1-4-1)	PPB-M-1-4-1
	P-120-041	3"	INFLUENT SCREW PUMP NO. 2 STARTER (RVSS-M-1-4-2)	PPB-M-1-4-2
	P-120-045	3"	INFLUENT SCREW PUMP NO. 3 STARTER (RVSS-M-1-4-3)	PPB-M-1-4-3
	P-120-049	1"	BEARING LUBRICATION PUMP NO. 1 STARTER (MTRS-BLP-1)	BEARING LUBRICATION PUMP NO. 1
	P-120-052	1"	BEARING LUBRICATION PUMP NO. 2 STARTER (MTRS-BLP-2)	BEARING LUBRICATION PUMP NO. 2
	P-120-055	1"	BEARING LUBRICATION PUMP NO. 3 STARTER (MTRS-BLP-3)	BEARING LUBRICATION PUMP NO. 3
	P-120-057	1"	SWBD-1A	SUPPLY FAN NO. 1 STARTER (MTRS-SF-1)
	P-120-060	2"	SWBD-1A	EMH-03
	P-120-061	4"	SWBD-1A	EMH-03
	P-120-078	3"	INFLUENT SCREW PUMP NO. 4 STARTER (RVSS-M-1-4-4)	PPB-M-1-4-4
	P-120-082	3"	INFLUENT SCREW PUMP NO. 5 STARTER (RVSS-M-1-4-5)	PPB-M-1-4-5
	P-120-086	1"	BEARING LUBRICATION PUMP NO. 4 STARTER (MTRS-BLP-4)	BEARING LUBRICATION PUMP NO. 4
	P-120-089	1"	BEARING LUBRICATION PUMP NO. 5 STARTER (MTRS-BLP-5)	BEARING LUBRICATION PUMP NO. 5
	P-120-091	1"	SWBD-1B	SUPPLY FAN NO. 2 STARTER (MTRS-SF-2)
	P-120-094	2"	SWBD-1B	EMH-03
	P-120-095	4"	SWBD-1B	EMH-03
	P-120-104	2"	PP-1	EMH-03
	P-120-105	1"	PP-1	EMH-03
	P-120-106	1"	PP-1	EMH-03
	P-120-110	1"	LP-1	EMH-03
	P-120-111	1"	LP-1	EMH-03
	P-120-112	1"	LP-1	EMH-03
	P-120-113	1"	LP-1	EMH-03
	P-120-115	1"	LP-1	LI-100
	C-120-001	1"	INFLUENT SCREW PUMP NO. 1 STARTER (RVSS-M-1-4-1)	LCS-M-1-4-1
	C-120-004	1"	INFLUENT SCREW PUMP NO. 2 STARTER (RVSS-M-1-4-2)	LCS-M-1-4-2
	C-120-007	1"	INFLUENT SCREW PUMP NO. 3 STARTER (RVSS-M-1-4-3)	LCS-M-1-4-3
	C-120-010	1"	BEARING LUBRICATION PUMP NO. 1 STARTER (MTRS-BLP-1)	CPB-BLP-1
	C-120-014	1"	BEARING LUBRICATION PUMP NO. 2 STARTER (MTRS-BLP-2)	CPB-BLP-2
	C-120-018	1"	BEARING LUBRICATION PUMP NO. 3 STARTER (MTRS-BLP-3)	CPB-BLP-3
	C-120-022	1"	INFLUENT SCREW PUMP NO. 4 STARTER (RVSS-M-1-4-4)	LCS-M-1-4-4
	C-120-025	1"	INFLUENT SCREW PUMP NO. 5 STARTER (RVSS-M-1-4-5)	LCS-M-1-4-5
	C-120-028	1"	BEARING LUBRICATION PUMP NO. 4 STARTER (MTRS-BLP-4)	CPB-BLP-4
	C-120-032	1"	BEARING LUBRICATION PUMP NO. 5 STARTER (MTRS-BLP-5)	CPB-BLP-5
	C-120-070	1"	PLC-4ACP-RIO	SUPPLY FAN NO. 1 STARTER (MTRS-SF-1)
	C-120-072	1"	PLC-4ACP-RIO	SUPPLY FAN NO. 2 STARTER (MTRS-SF-2)
	C-120-074	1"	PLC-4ACP-RIO	EMH-03
	C-120-075	2"	PLC-4ACP-RIO	EMH-03
	I-120-015	1"	PLC-4ACP-RIO	EMH-03
	I-120-016	2"	PLC-4ACP-RIO	EMH-03
	I-120-018	1"	PLC-4ACP-RIO	LI-100
	I-120-021	1"	PLC-4ACP-RIO	EMH-03
DB-10A	P-120-037	3"	INFLUENT SCREW PUMP NO. 1 STARTER (RVSS-M-1-4-1)	PPB-M-1-4-1
	P-120-041	3"	INFLUENT SCREW PUMP NO. 2 STARTER (RVSS-M-1-4-2)	PPB-M-1-4-2
	P-120-045	3"	INFLUENT SCREW PUMP NO. 3 STARTER (RVSS-M-1-4-3)	PPB-M-1-4-3
	P-120-078	3"	INFLUENT SCREW PUMP NO. 4 STARTER (RVSS-M-1-4-4)	PPB-M-1-4-4
	P-120-082	3"	INFLUENT SCREW PUMP NO. 5 STARTER (RVSS-M-1-4-5)	PPB-M-1-4-5
DB-11A	P-120-049	1"	BEARING LUBRICATION PUMP NO. 1 STARTER (MTRS-BLP-1)	BEARING LUBRICATION PUMP NO. 1
	P-120-052	1"	BEARING LUBRICATION PUMP NO. 2 STARTER (MTRS-BLP-2)	BEARING LUBRICATION PUMP NO. 2
	P-120-055	1"	BEARING LUBRICATION PUMP NO. 3 STARTER (MTRS-BLP-3)	BEARING LUBRICATION PUMP NO. 3
	P-120-057	1"	SWBD-1A	SUPPLY FAN NO. 1 STARTER (MTRS-SF-1)
	P-120-086	1"	BEARING LUBRICATION PUMP NO. 4 STARTER (MTRS-BLP-4)	BEARING LUBRICATION PUMP NO. 4
	P-120-089	1"	BEARING LUBRICATION PUMP NO. 5 STARTER (MTRS-BLP-5)	BEARING LUBRICATION PUMP NO. 5
	P-120-091	1"	SWBD-1B	SUPPLY FAN NO. 2 STARTER (MTRS-SF-2)
	P-120-115	1"	LP-1	LI-100
	C-120-001	1"	INFLUENT SCREW PUMP NO. 1 STARTER (RVSS-M-1-4-1)	LCS-M-1-4-1
	C-120-004	1"	INFLUENT SCREW PUMP NO. 2 STARTER (RVSS-M-1-4-2)	LCS-M-1-4-2
	C-120-007	1"	INFLUENT SCREW PUMP NO. 3 STARTER (RVSS-M-1-4-3)	LCS-M-1-4-3
	C-120-010	1"	BEARING LUBRICATION PUMP NO. 1 STARTER (MTRS-BLP-1)	CPB-BLP-1
	C-120-014	1"	BEARING LUBRICATION PUMP NO. 2 STARTER (MTRS-BLP-2)	CPB-BLP-2
	C-120-018	1"	BEARING LUBRICATION PUMP NO. 3 STARTER (MTRS-BLP-3)	CPB-BLP-3
	C-120-022	1"	INFLUENT SCREW PUMP NO. 4 STARTER (RVSS-M-1-4-4)	LCS-M-1-4-4
	C-120-025	1"	INFLUENT SCREW PUMP NO. 5 STARTER (RVSS-M-1-4-5)	LCS-M-1-4-5
	C-120-028	1"	BEARING LUBRICATION PUMP NO. 4 STARTER (MTRS-BLP-4)	CPB-BLP-4
	C-120-032	1"	BEARING LUBRICATION PUMP NO. 5 STARTER (MTRS-BLP-5)	CPB-BLP-5
	C-120-070	1"	PLC-4ACP-RIO	SUPPLY FAN NO. 1 STARTER (MTRS-SF-1)
	C-120-072	1"	PLC-4ACP-RIO	SUPPLY FAN NO. 2 STARTER (MTRS-SF-2)
	I-120-018	1"	PLC-4ACP-RIO	LI-100
DB-12A	C-120-040	2"	EXISTING PLC-4ACP	PLC-4ACP-RIO
	C-120-041	2"	EXISTING PLC-4ACP	PLC-4ACP-RIO

DUCTBANK NUMBER	CONDUIT	SIZE	FROM	TO
DB-13A	P-120-029	4"	SWBD-1A	EXISTING HH4P
	P-120-030	4"	SWBD-1A	EXISTING HH4P
	P-120-031	4"	SWBD-1A	EXISTING HH4P
	P-120-063	4"	SWBD-1B	EXISTING HH4P
	P-120-064	4"	SWBD-1B	EXISTING HH4P
	P-120-065	4"	SWBD-1B	EXISTING HH4P
	P-120-070	3"	SWBD-1B	EXISTING HH4P
	P-120-071	3"	SWBD-1B	EXISTING HH4P
	P-120-072	4"	SWBD-1B	EXISTING HH4P
DB-14A	P-120-029	4"	SWBD-1A	EXISTING HH4P
	P-120-030	4"	SWBD-1A	EXISTING HH4P
	P-120-031	4"	SWBD-1A	EXISTING HH4P
	P-120-063	4"	SWBD-1B	EXISTING HH4P
	P-120-064	4"	SWBD-1B	EXISTING HH4P
	P-120-065	4"	SWBD-1B	EXISTING HH4P
	P-120-070	3"	SWBD-1B	EXISTING HH4P
	P-120-071	3"	SWBD-1B	EXISTING HH4P
	P-120-072	4"	SWBD-1B	EXISTING HH4P
	C-120-040	2"	EXISTING PLC-4ACP	PLC-4ACP-RIO
	C-120-041	2"	EXISTING PLC-4ACP	PLC-4ACP-RIO
DB-15A	P-120-029	4"	SWBD-1A	EXISTING HH4P
	P-120-030	4"	SWBD-1A	EXISTING HH4P
	P-120-031	4"	SWBD-1A	EXISTING HH4P
	P-120-063	4"	SWBD-1B	EXISTING HH4P
	P-120-064	4"	SWBD-1B	EXISTING HH4P
	P-120-065	4"	SWBD-1B	EXISTING HH4P
	P-120-070	3"	SWBD-1B	EXISTING HH4P
	P-120-071	3"	SWBD-1B	EXISTING HH4P
	P-120-072	4"	SWBD-1B	EXISTING HH4P
DB-16A	C-120-040	2"	EXISTING PLC-4ACP	PLC-4ACP-RIO
	C-120-041	2"	EXISTING PLC-4ACP	PLC-4ACP-RIO

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1	CONSTRUCTION	4/2023	CWB
REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	B. PICKETT
DRAWN BY:	T. RAHLAN
CHECKED BY:	D. ATKINSON
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"

ISSUED FOR CONSTRUCTION

Hazen

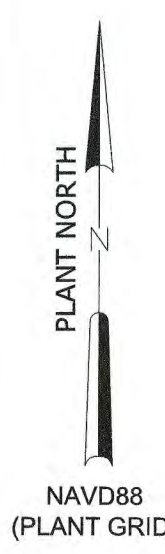
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA

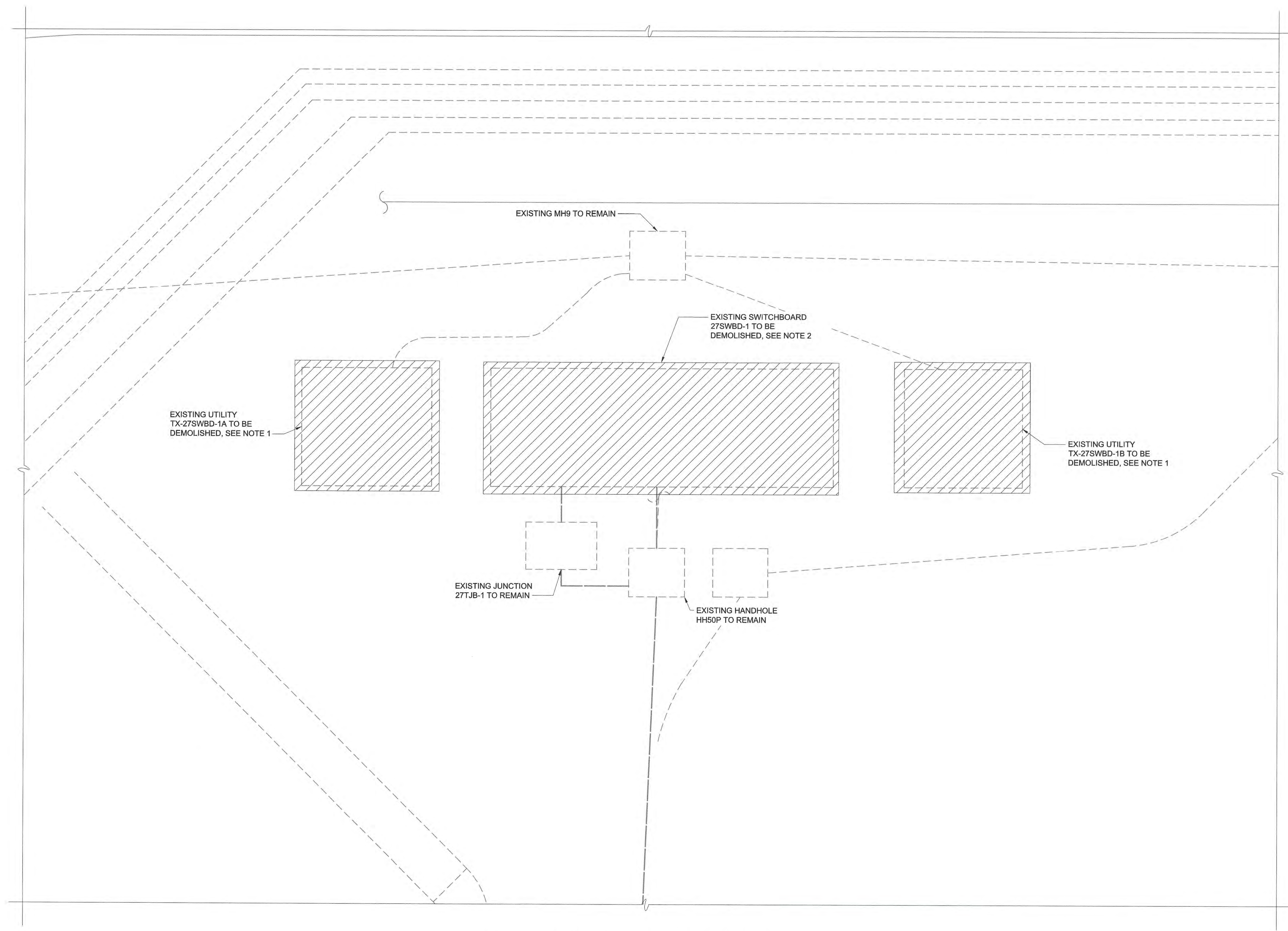
CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

ELECTRICAL
DUCTBANK SCHEDULES
BID ALTERNATE

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E13A



- NOTES:**
1. CONTRACTOR SHALL DEMOLISH EXISTING UTILITY TRANSFORMERS AS INDICATED. COORDINATE ALL WORK WITH THE ELECTRIC UTILITY, ENGINEER, AND OWNER PRIOR TO STARTING WORK.
 2. CONTRACTOR SHALL DEMOLISH EXISTING SWITCHBOARD (27SWBD-1) AND ASSOCIATED CONDUIT AND WIRE COMPLETELY FROM SOURCE TO LOAD. COORDINATE ALL DEMOLITION WITH THE ENGINEER, OWNER, AND SPECIFICATION SECTION 01 14 00 PRIOR TO STARTING WORK.



EXISTING 27SWBD-1 ENLARGED PLAN
1" = 5'-0"

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PLOT DATE: 4/14/2023 5:20 PM BY: TRAHAN

PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	B. PICKETT
DRAWN BY:	T. RAHLAN
CHECKED BY:	D. ATKINSON
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
1 CONSTRUCTION	4/2023 CWB
REV	ISSUED FOR

ISSUED FOR CONSTRUCTION



Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA

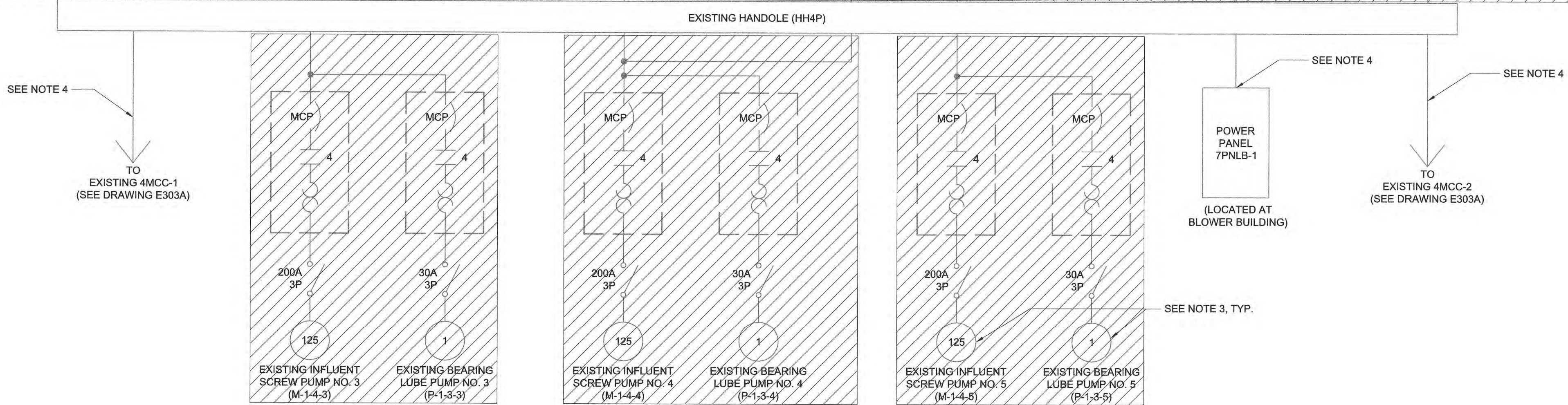
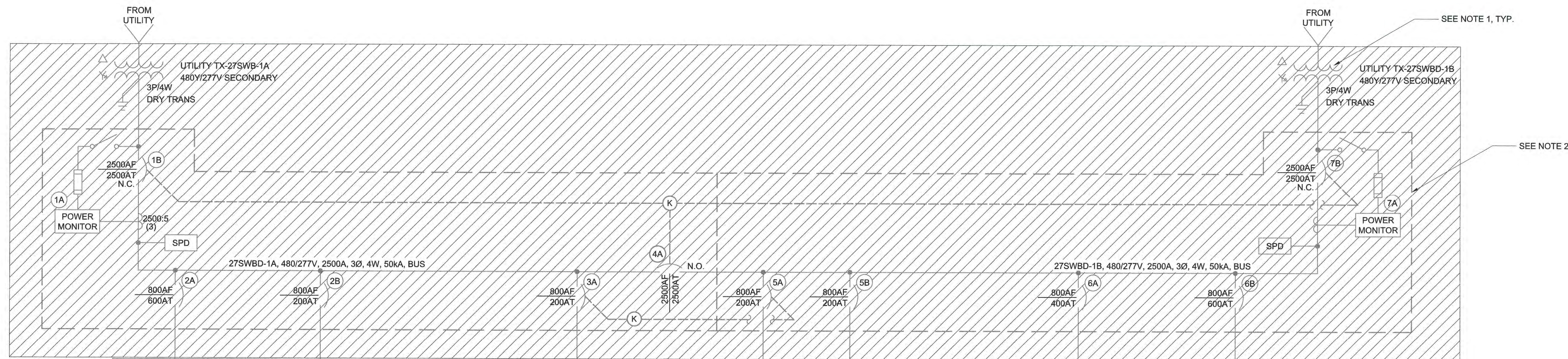
CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

ELECTRICAL
EXISTING 27SWBD-1 ENLARGED PLAN
BID ALTERNATE

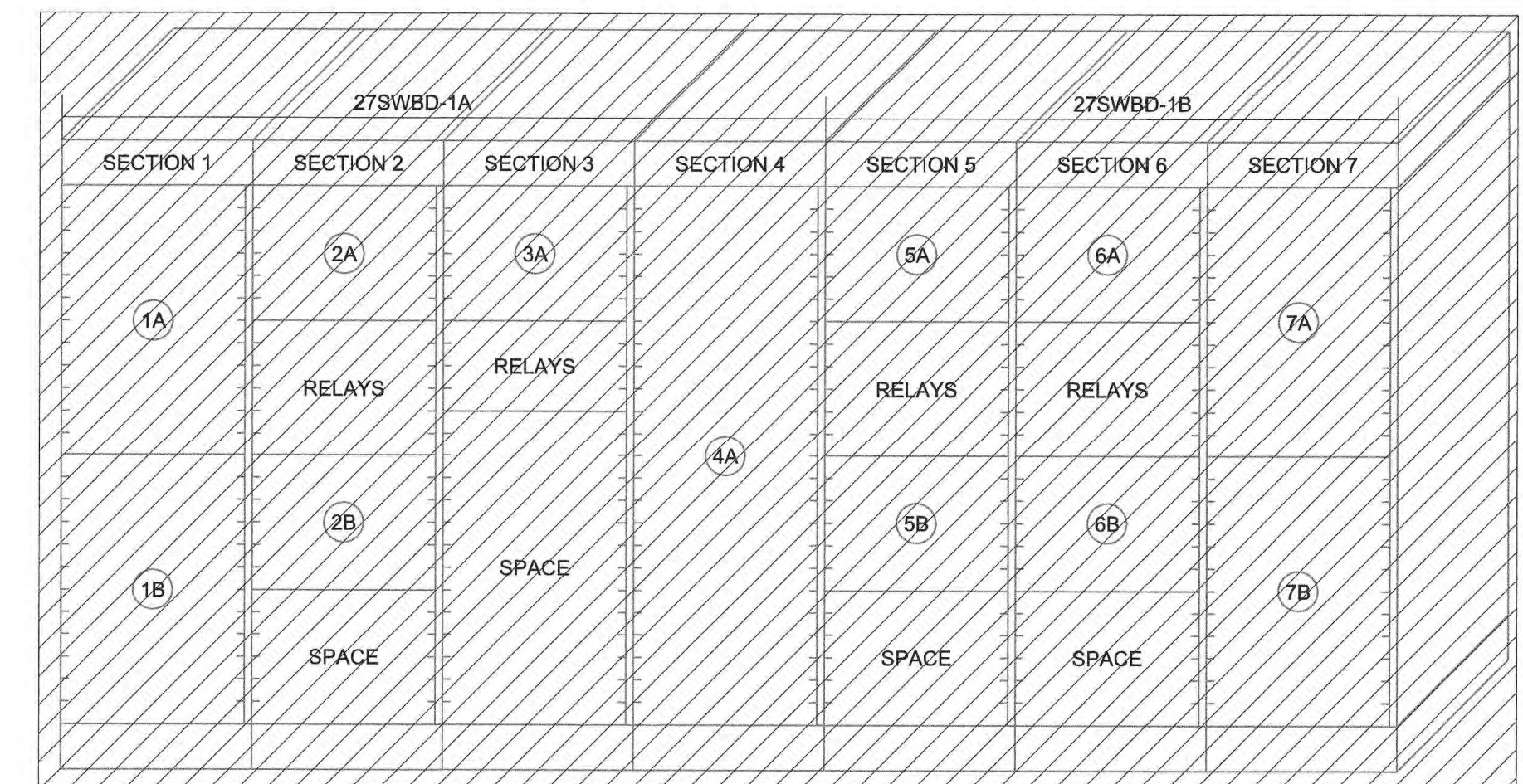
DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E50A

NOTES:

1. CONTRACTOR SHALL DEMOLISH EXISTING UTILITY TRANSFORMERS AND ASSOCIATED CONDUIT AND WIRE AS INDICATED. COORDINATE DEMOLITION WITH UTILITY, ENGINEER, AND SPECIFICATION SECTION 01 14 00 PRIOR TO PERFORMING ANY WORK.
2. CONTRACTOR SHALL DEMOLISH ENTIRE EXISTING SWITCHBOARD (27SWBD-1) AND ASSOCIATED CONDUIT AND WIRE COMPLETELY FROM SOURCE TO LOAD. COORDINATE DEMOLITION WITH THE ENGINEER, OWNER, AND SPECIFICATION SECTION 01 14 00 PRIOR TO STARTING WORK.
3. CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING INFLUENT PUMP STARTERS, BEARING LUBRICATION PUMP STARTERS, AND ASSOCIATED CONDUIT AND WIRE COMPLETELY FROM SOURCE TO LOAD AS INDICATED. COORDINATE DEMOLITION WITH THE ENGINEER, OWNER, AND SPECIFICATION SECTION 01 14 00 PRIOR TO STARTING WORK.
4. CONTRACTOR SHALL FURNISH AND INSTALL THE REQUIRED CONDUIT AND WIRE TO RESUPPLY EXISTING LOADS FROM NEW ELECTRICAL SOURCE. REFER TO DRAWING E121A FOR FURTHER DETAILS.



EXISTING 27SWBD-1 - DEMOLITION
SINGLE LINE DIAGRAM



EXISTING 27SWBD-1
ELEVATION (NTS)

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PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	B. PICKETT
DRAWN BY:	T. RAHLAN
CHECKED BY:	D. ATKINSON
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
1 CONSTRUCTION	4/2023 CWB
REV	ISSUED FOR

ISSUED FOR CONSTRUCTION



Hazen

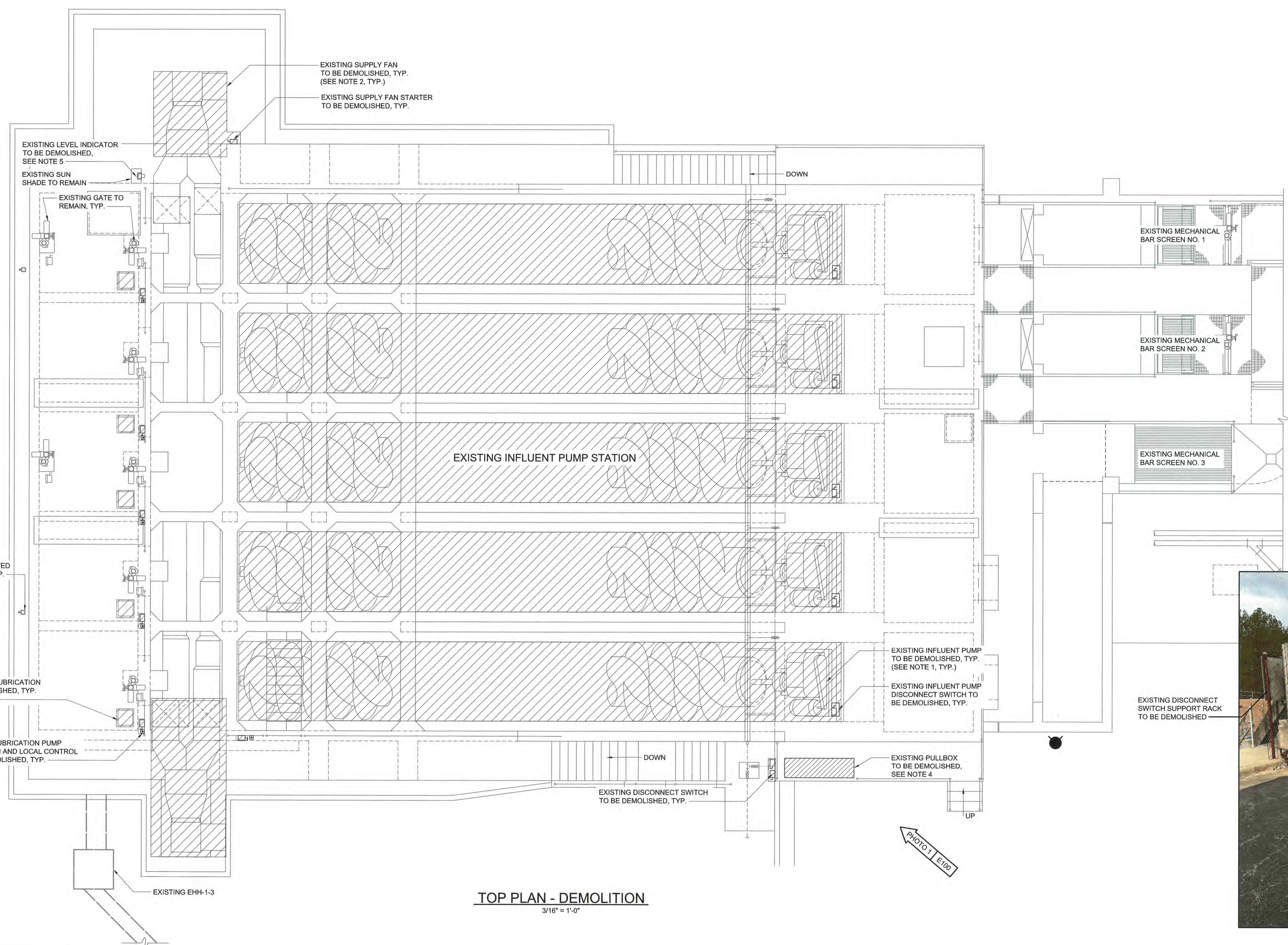
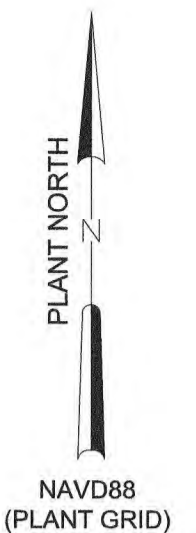
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4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA

CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

ELECTRICAL
EXISTING 27SWBD-1 SINGLE LINE
DIAGRAM AND ELEVATION - DEMOLITION
BID ALTERNATE

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E51A



- NOTES:**
- CONTRACTOR SHALL DEMOLISH EXISTING INFLUENT SCREW PUMPS AND ASSOCIATED DISCONNECT SWITCHES, CONDUIT AND WIRE COMPLETELY FROM SOURCE TO LOAD. ALL EXPOSED CONDUIT SHALL BE REMOVED AND CUT BELOW GRADE AND CAPPED. ALL EMBEDDED CONDUITS TO BE ABANDONED SHALL BE ABANDONED PER STANDARD E-26-0103. ALL DEMOLITION WORK SHALL BE COORDINATED WITH THE ENGINEER, OWNER, AND SPECIFICATION SECTION 01 14 00 PRIOR TO STARTING WORK.
 - CONTRACTOR SHALL DEMOLISH EXISTING SUPPLY FANS AND ASSOCIATED STARTERS AS SHOWN. ALL CONDUITS AND WIRE SHALL BE REMOVED COMPLETELY FROM SOURCE TO LOAD. ALL EXPOSED CONDUIT SHALL BE REMOVED AND CUT BELOW GRADE. ALL EMBEDDED CONDUITS SHALL BE ABANDONED PER STANDARD E-26-0103.
 - CONTRACTOR SHALL DEMOLISH EXISTING BEARING LUBRICATION PUMPS AND ASSOCIATED DISCONNECT SWITCHES AND LOCAL CONTROL STATIONS AS INDICATED. ALL WIRE SHALL BE REMOVED COMPLETELY FROM SOURCE TO LOAD. ALL EXPOSED CONDUIT SHALL BE REMOVED AND CUT BELOW GRADE. ALL EMBEDDED CONDUITS SHALL BE ABANDONED PER STANDARD E-26-0103. COORDINATE DEMOLITION WITH THE ENGINEER, OWNER, AND SPECIFICATION SECTION 01 14 00 PRIOR TO STARTING WORK.
 - EXISTING PULLBOX TO BE DEMOLISHED AS PART OF THIS PROJECT, NOTE CERTAIN LOADS ARE UTILIZING THIS PULLBOX AS PULLPOINT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY PRIOR TO DEMOLISH THE PULLBOX. FOR BIDDING PURPOSES, ASSUME ALL EXISTING EQUIPMENT TO REMAIN ON THIS PLAN SHALL BE RE-ROUTED OR RE-SUPPLIED. PROPER CARE SHALL BE TAKEN BY THE CONTRACTOR TO ENSURE OWNER EQUIPMENT SHALL NOT BE DAMAGED. ANY DAMAGE TO OWNER EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. COORDINATE DEMOLITION WITH THE ENGINEER, OWNER, AND SPECIFICATION SECTION 01 14 00.
 - CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING LEVEL INDICATOR AND ASSOCIATED CONDUIT AND WIRE COMPLETELY FROM SOURCE TO LOAD. ALL EXPOSED CONDUIT SHALL BE REMOVED AND CUT BELOW GRADE. ALL EMBEDDED CONDUITS SHALL BE ABANDONED PER STANDARD E-26-0103. RETURN EXISTING LEVEL INDICATOR TO THE OWNER.



PHOTO NO. 1
NTS

TOP PLAN - DEMOLITION
3/16" = 1'-0"

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PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	B. PICKETT
DRAWN BY:	T. RAHLAN
CHECKED BY:	D. ATKINSON
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
1 CONSTRUCTION	4/2023 CWB
REV ISSUED FOR	DATE BY

ISSUED FOR CONSTRUCTION

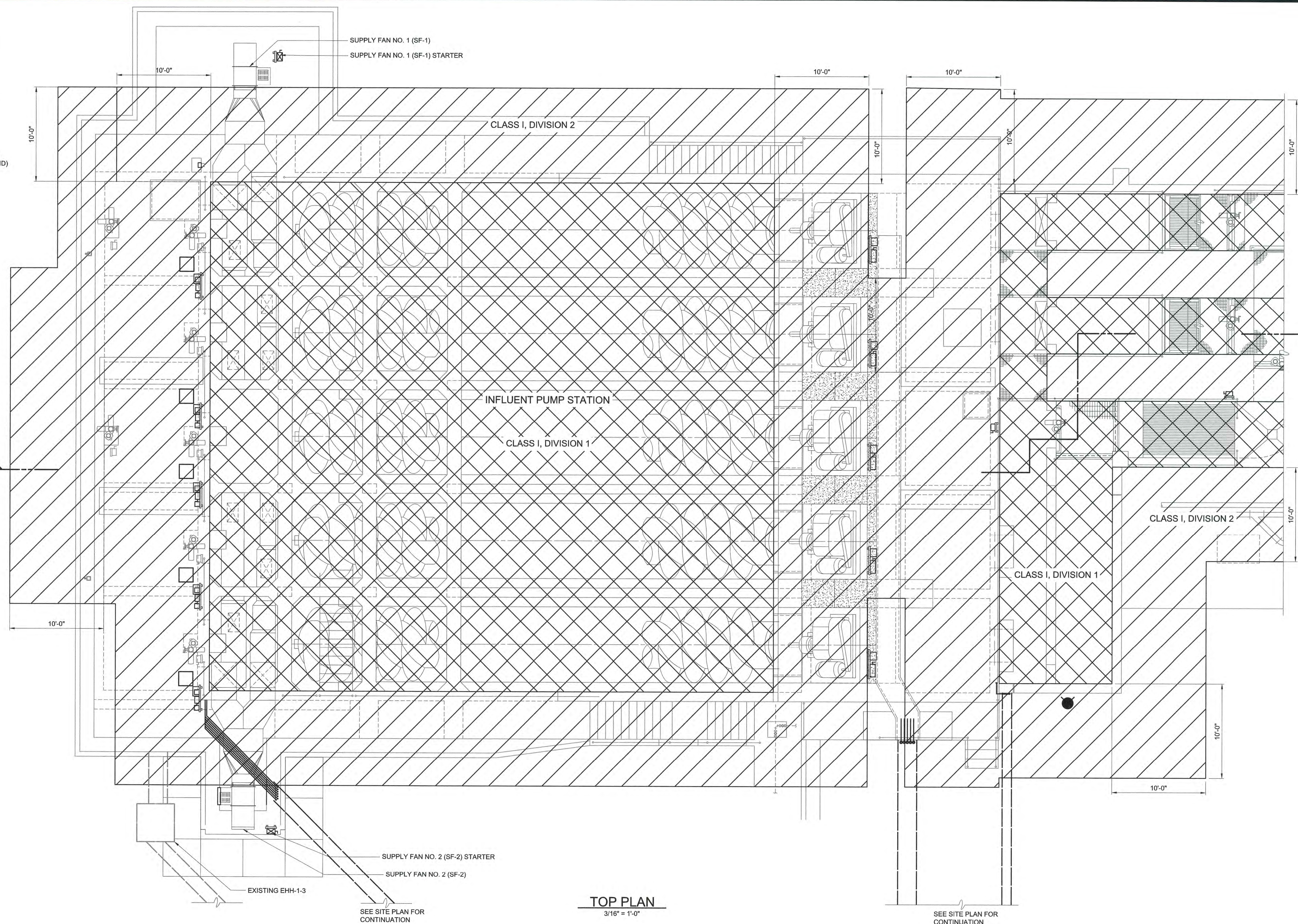
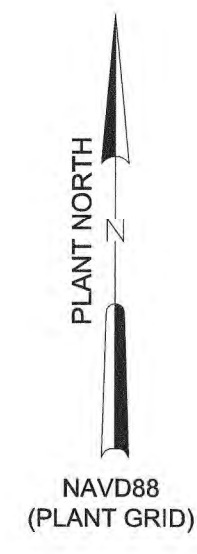


Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA
CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

INFLUENT PUMP STATION
ELECTRICAL
TOP PLAN - DEMOLITION

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E100



NOTES:

- ALL EQUIPMENT, ELECTRICAL MATERIALS, AND WIRING METHODS IN THE CLASSIFIED AREAS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE NEC.

LEGEND:

CLASS I, DIV. 1, GROUP D.

CLASS I, DIV. 2, GROUP D.

HAZARDOUS AREAS:

SPACE CLASSIFIED PER NFPA-820-2020 EDITION:

CLASS I, DIVISION 1 AREAS:

- INFLUENT PUMP STATION WET WELL (SCREW PUMPS)
 - TABLE 4.2.2, ROW 14a, TABLE 5.2.2, ROW 3, ENTIRE ROOM OR SPACE, ANNEX A FIGURE A.4.2(b).
- INFLUENT SCREEN DISTRIBUTION CHANNEL
 - TABLE 5.2.2, ROW 1a, ENTIRE ROOM OR SPACE, ANNEX A FIGURE A.4.2(b)
- GRIT COLLECTOR TANKS AND CHANNELS
 - TABLE 5.2.2, ROW 5a, ENTIRE ENCLOSED SPACE,
- ENVELOPE WITHIN 3'-0" RADIUS AROUND VENT PIPE OPENINGS INTO CLASS I, DIV1 SPACES.

CLASS I, DIVISION 2 AREAS:

- 10'-0" ENVELOPE AROUND EQUIPMENT AND OPEN CHANNELS.
 - TABLE 5.2.2, ROW 2C
- ENVELOPE 18" ABOVE THE TOP OF ANY OPENINGS AND EXTENDING 3'-0" BEYOND THE EDGE OF OPENINGS.
 - ANNEX A FIGURE A.4.2(b)
- ENVELOPE 2'-0" BEYOND THE 3'-0" RADIUS OF ANY CLASS I, DIV 1 VENT PIPE ENVELOPES.
 - ANNEX A FIGURE A.4.2(b)
- ENVELOPE WITHIN 3'-0" OF LEAKAGE SOURCES SUCH AS FANS, DAMPERS, FLANGES, PRESSURIZED UNWELDED DUCTWORK AND ODOR CONTROL VESSELS.
 - ANNEX A FIGURE A.4.2(b) AND A.4.2(f)

TOP PLAN
3/16" = 1'-0"

File: C:\0402-RAI\0402-064\CAD_BIM\CONTRACT DRAWINGS\E101.dwg Saved by: TRAHAN Save date: 4/13/2023 10:30 AM PLOT DATE: 4/14/2023 5:23 PM BY: TRAHAN

PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	B. PICKETT
DRAWN BY:	T. RAHLAN
CHECKED BY:	D. ATKINSON
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
1 CONSTRUCTION	4/2023 CWB
REV	ISSUED FOR DATE BY

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4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

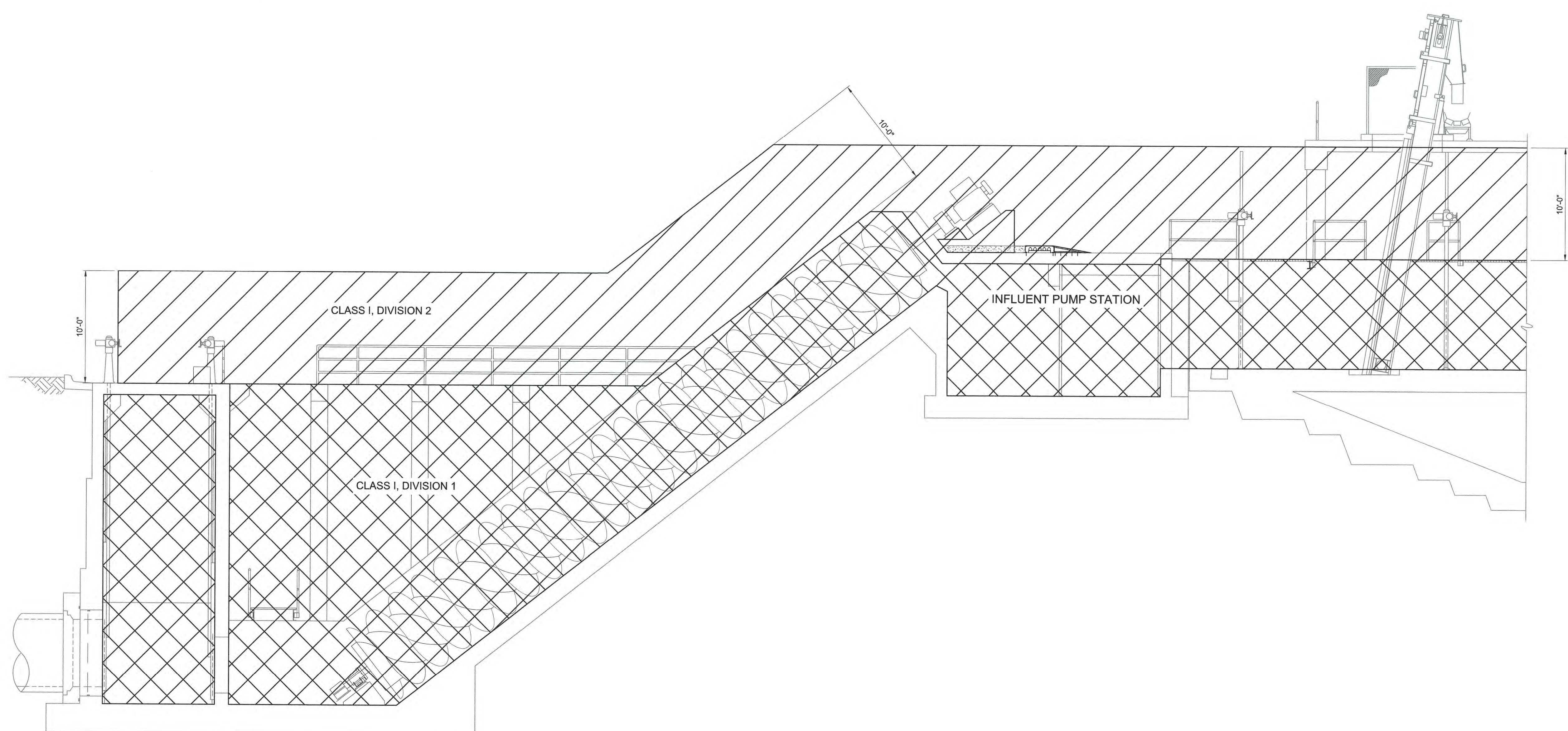
PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA
CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

INFLUENT PUMP STATION
ELECTRICAL
AREA CLASSIFICATION TOP PLAN


DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E101

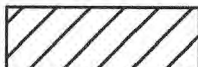
NOTES:

1. ALL EQUIPMENT, ELECTRICAL MATERIALS, AND WIRING METHODS IN THE CLASSIFIED AREAS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE NEC.



LEGEND:

 CLASS I, DIV. 1, GROUP D.

 CLASS I, DIV. 2, GROUP D.

- HAZARDOUS AREAS:**
- SPACE CLASSIFIED PER NFPA-820-2020 EDITION:
- CLASS I, DIVISION 1 AREAS:**
1. INFLUENT PUMP STATION WET WELL (SCREW PUMPS)
 - TABLE 4.2.2, ROW 14a, TABLE 5.2.2, ROW 3, ENTIRE ROOM OR SPACE, ANNEX A FIGURE A.4.2(b).
 2. INFLUENT SCREEN DISTRIBUTION CHANNEL
 - TABLE 5.2.2, ROW 1a, ENTIRE ROOM OR SPACE, ANNEX A FIGURE A.4.2(b)
 3. GRIT COLLECTOR TANKS AND CHANNELS
 - TABLE 5.2.2, ROW 5a, ENTIRE ENCLOSED SPACE,
 4. ENVELOPE WITHIN 3'-0" RADIUS AROUND VENT PIPE OPENINGS INTO CLASS I, DIV1 SPACES.
- CLASS I, DIVISION 2 AREAS:**
1. 10'-0" ENVELOPE AROUND EQUIPMENT AND OPEN CHANNELS.
 - TABLE 5.2.2, ROW 2C
 2. ENVELOPE 18" ABOVE THE TOP OF ANY OPENINGS AND EXTENDING 3'-0" BEYOND THE EDGE OF OPENINGS.
 - ANNEX A FIGURE A.4.2(b)
 3. ENVELOPE 2'-0" BEYOND THE 3'-0" RADIUS OF ANY CLASS I, DIV 1 VENT PIPE ENVELOPES.
 - ANNEX A FIGURE A.4.2(b)
 4. ENVELOPE WITHIN 3'-0" OF LEAKAGE SOURCES SUCH AS FANS, DAMPERS, FLANGES, PRESSURIZED UNWELDED DUCTWORK AND ODOR CONTROL VESSELS.
 - ANNEX A FIGURE A.4.2(b) AND A.4.2(f)

SECTION A
3/16" = 1'-0"
E101

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1	CONSTRUCTION	4/2023	CWB

PROJECT ENGINEER: M. MESSERE
 DESIGNED BY: B. PICKETT
 DRAWN BY: T. RAHLAN
 CHECKED BY: D. ATKINSON

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0 1/2" 1"

ISSUED FOR CONSTRUCTION



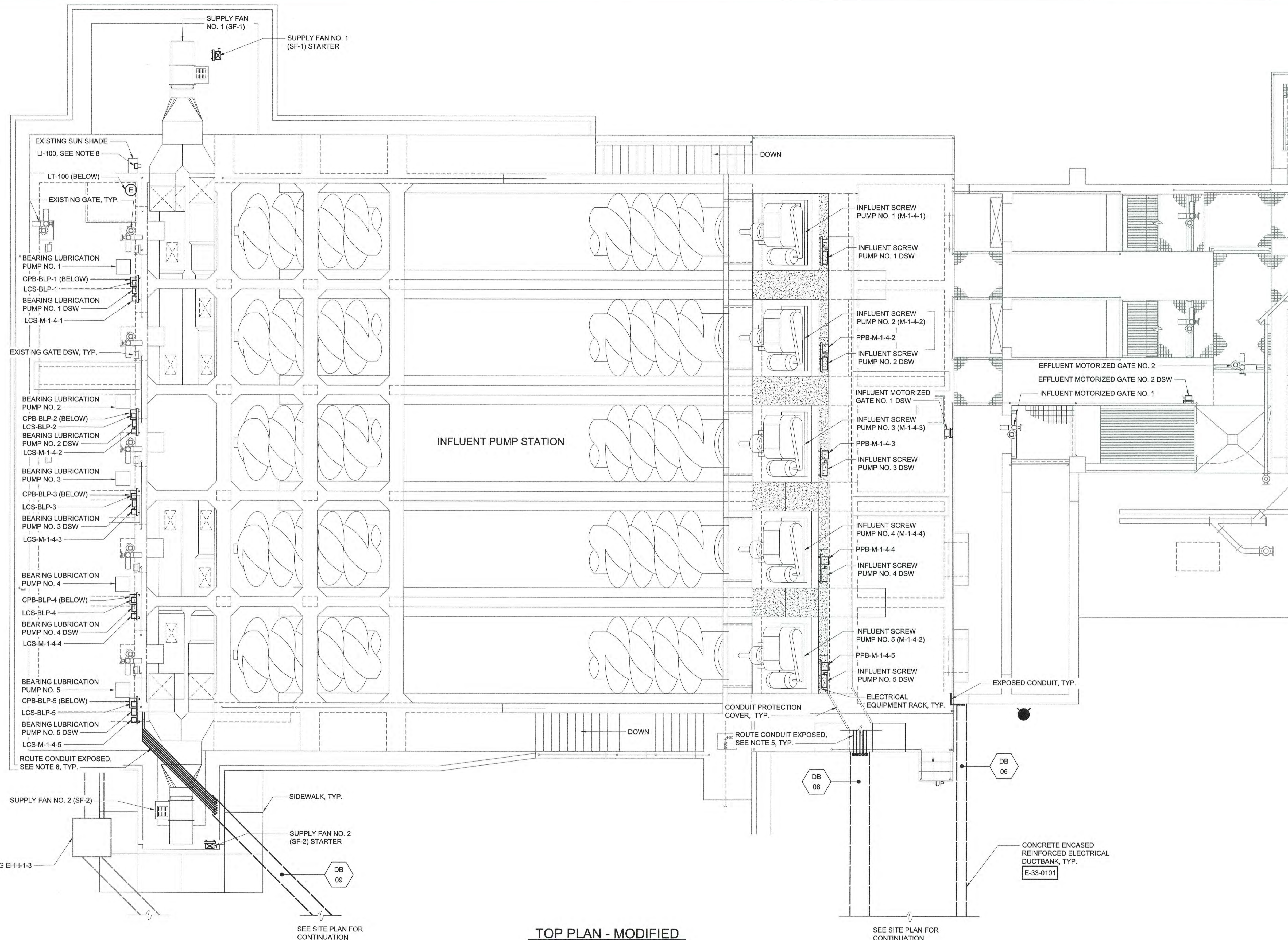
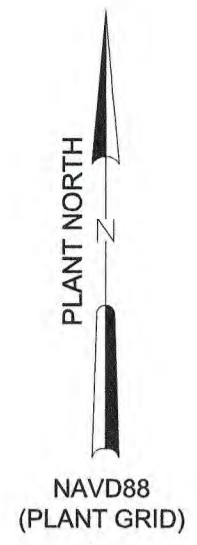
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PUBLIC WORKS COMMISSION
 CITY OF FAYETTEVILLE, NORTH CAROLINA

CROSS CREEK WRF AND ROCKFISH CREEK WRF
 SCREW PUMP IMPROVEMENTS

INFLUENT PUMP STATION
 ELECTRICAL
 AREA CLASSIFICATION SECTION

DATE: APRIL 2023
 HAZEN NO.: 30402-064
 CONTRACT NO.: 1
 DRAWING NUMBER: E102



- NOTES:**
1. ALL EQUIPMENT AND WIRING METHODS LOCATED WITHIN HAZARDOUS AREAS OF THIS STRUCTURE SHALL BE SUITABLE FOR THE CLASS AND DIVISION OF THE AREA IN WHICH THEY ARE LOCATED. REFERENCE THE HAZARDOUS AREAS CLASSIFICATION PLANS FOR THIS STRUCTURE.
 2. ALL EQUIPMENT SHOWN ON THIS PLAN IS LOCATED OUTDOORS. MATERIALS OF CONSTRUCTION SHALL BE COMMENSURATE WITH OUTDOOR LOCATIONS AS INDICATED WITHIN THE SPECIFICATION.
 3. CONTRACTOR SHALL FURNISH AND INSTALL NEW ELECTRICAL EQUIPMENT AS INDICATED. ALL NEW EQUIPMENT ON THIS PLAN IS SOURCED FROM EXISTING PRIMARY SLUDGE PUMP STATION. REFER TO E300 SERIES FOR FURTHER DETAILS.
 4. ALL ELECTRICAL EQUIPMENT LOCATIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL COORDINATE FINAL LOCATIONS OF ALL EQUIPMENT WITH PIPING, WALKWAY, GUARDRAILS, ETC TO ENSURE ELECTRICAL EQUIPMENT IS NOT OBSTRUCTING ACCESS.
 5. CONTRACTOR SHALL FURNISH AND INSTALL CONDUIT EXPOSED TO SUPPLY NEW INFLUENT SCREW PUMPS. CONDUIT SHALL BE ARRANGED TO ENTER/EXIT RACEWAY SYSTEM IN AN ORGANIZED MANNER WITH RESPECT TO THE LOCATION OF THE LOADS. CONTRACTOR SHALL PROVIDE CONDUIT PROTECTION COVER. REFER TO MECHANICAL DRAWINGS FOR FURTHER DETAILS.
 6. CONTRACTOR SHALL ROUTE CONDUIT EXPOSED UNDER SUPPLY FAN TO NEW EQUIPMENT AS INDICATED. CONDUITS SHALL BE RACK VERTICALLY ON UNISTRUT SUPPORT STRUCTURES ALONG OUTSIDES OF GUARDRAILS. CONDUIT SHALL BE ARRANGED TO ENTER/EXIT RACEWAY SYSTEM IN AN ORGANIZED MANNER WITH THE RESPECT TO THE LOCATION OF THE LOADS ON THE INFLUENT PUMP STATION.
 7. CONTRACTOR SHALL PROVIDE ENGINEER DETAILED CONDUIT ROUTING PLANS TO BE APPROVED PRIOR TO STARTING CONSTRUCTION. REFER TO SPECIFICATION SECTION 26 05 33.13.
 8. CONTRACTOR SHALL FURNISH AND INSTALL NEW CONDUIT AND WIRE UTILIZING EXISTING CIRCUIT BREAKER FROM PANEL 4PNLB-3 TO POWER NEW LEVEL INDICATOR AS INDICATED.

TOP PLAN - MODIFIED
3/16" = 1'-0"

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 PLOT DATE: 4/14/2023 5:25 PM BY: TRAHAN

PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	B. PICKETT
DRAWN BY:	T. RAHLAN
CHECKED BY:	D. ATKINSON
ISSUED FOR CONSTRUCTION	
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
REV	ISSUED FOR
	DATE
	BY

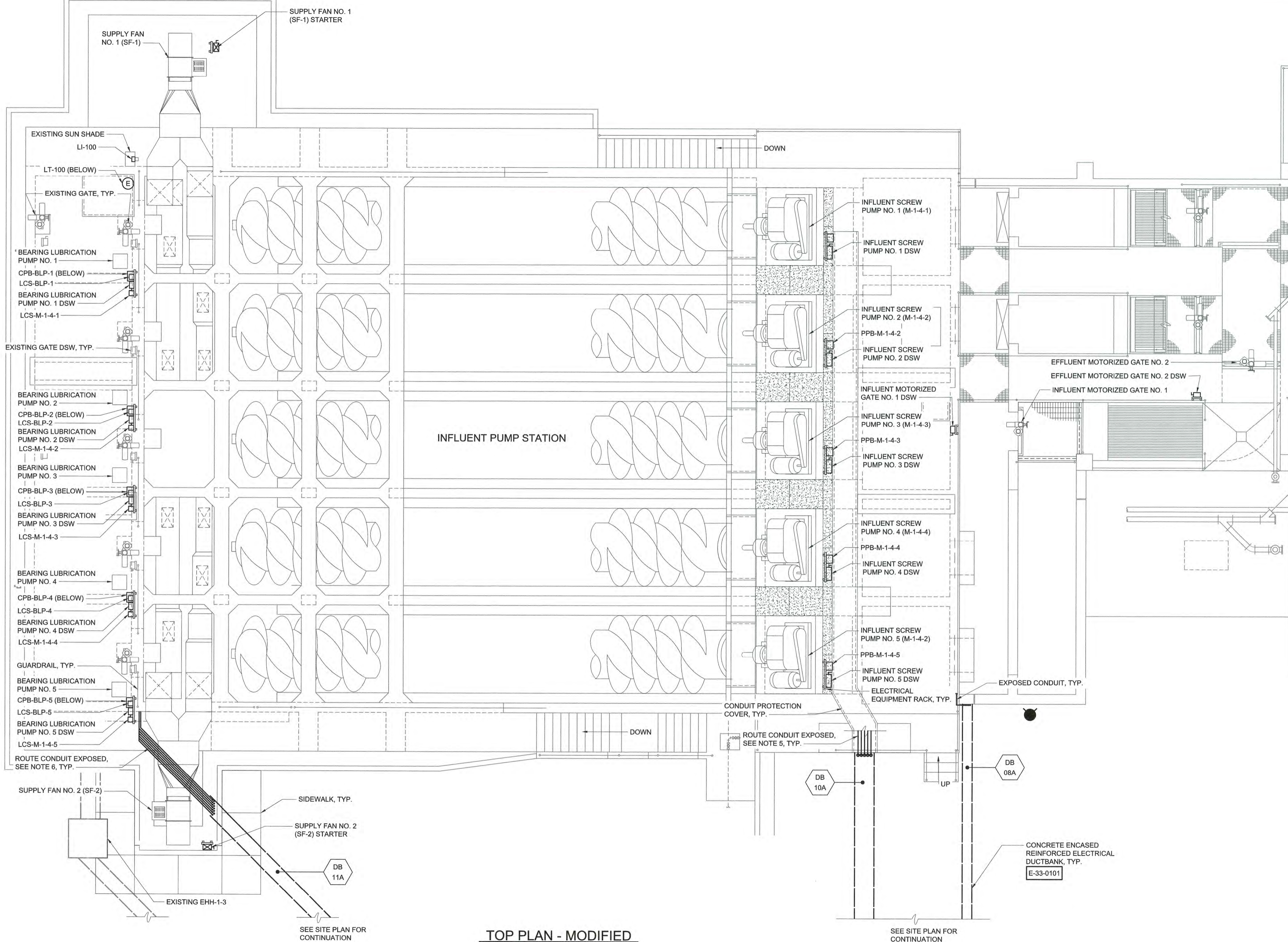


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CITY OF FAYETTEVILLE, NORTH CAROLINA
CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

INFLUENT PUMP STATION
ELECTRICAL
TOP PLAN - MODIFIED

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E103



- NOTES:**
1. ALL EQUIPMENT AND WIRING METHODS LOCATED WITHIN HAZARDOUS AREAS OF THIS STRUCTURE SHALL BE SUITABLE FOR THE CLASS AND DIVISION OF THE AREA IN WHICH THEY ARE LOCATED. REFERENCE THE HAZARDOUS AREAS CLASSIFICATION PLANS FOR THIS STRUCTURE.
 2. ALL EQUIPMENT SHOWN ON THIS PLAN IS LOCATED OUTDOORS. MATERIALS OF CONSTRUCTION SHALL BE COMMENSURATE WITH OUTDOOR LOCATIONS AS INDICATED WITHIN THE SPECIFICATION.
 3. CONTRACTOR SHALL FURNISH AND INSTALL NEW ELECTRICAL EQUIPMENT AS INDICATED. ALL NEW EQUIPMENT SHOWN ON THIS PLAN IS SOURCED FROM NEW INFLUENT PUMP STATION ELECTRICAL BUILDING. REFER TO E120A SERIES FOR FURTHER DETAILS.
 4. ALL ELECTRICAL EQUIPMENT LOCATIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL COORDINATE FINAL LOCATIONS OF ALL EQUIPMENT WITH PIPING, WALKWAY, GUARDRAILS, ETC TO ENSURE ELECTRICAL EQUIPMENT IS NOT OBSTRUCTING ACCESS.
 5. CONTRACTOR SHALL FURNISH AND INSTALL CONDUIT EXPOSED TO SUPPLY NEW INFLUENT SCREW PUMPS. CONDUIT SHALL BE ARRANGED TO ENTER/EXIT RACEWAY SYSTEM IN AN ORGANIZED MANNER WITH RESPECT TO THE LOCATION OF THE LOADS. CONTRACTOR SHALL PROVIDE CONDUIT PROTECTION COVER. REFER TO MECHANICAL DRAWINGS FOR FURTHER DETAILS.
 6. CONTRACTOR SHALL ROUTE CONDUIT EXPOSED UNDER SUPPLY FAN TO NEW EQUIPMENT AS INDICATED. CONDUITS SHALL BE RACK VERTICALLY ON UNISTRUT SUPPORT STRUCTURES ALONG OUTSIDES OF GUARDRAILS. CONDUIT SHALL BE ARRANGED TO ENTER/EXIT RACEWAY SYSTEM IN AN ORGANIZED MANNER WITH THE RESPECT TO THE LOCATION OF THE LOADS ON THE INFLUENT PUMP STATION.
 7. CONTRACTOR SHALL PROVIDE ENGINEER DETAILED CONDUIT ROUTING PLANS TO BE APPROVED PRIOR TO STARTING CONSTRUCTION. REFER TO SPECIFICATION SECTION 26 05 33.13.

TOP PLAN - MODIFIED
3/16" = 1'-0"

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PROJECT ENGINEER:	M. MESSERE		
DESIGNED BY:	B. PICKETT		
DRAWN BY:	T. RAHLAN		
CHECKED BY:	D. ATKINSON		
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"		
1	CONSTRUCTION	4/2023	CWB
REV	ISSUED FOR	DATE	BY

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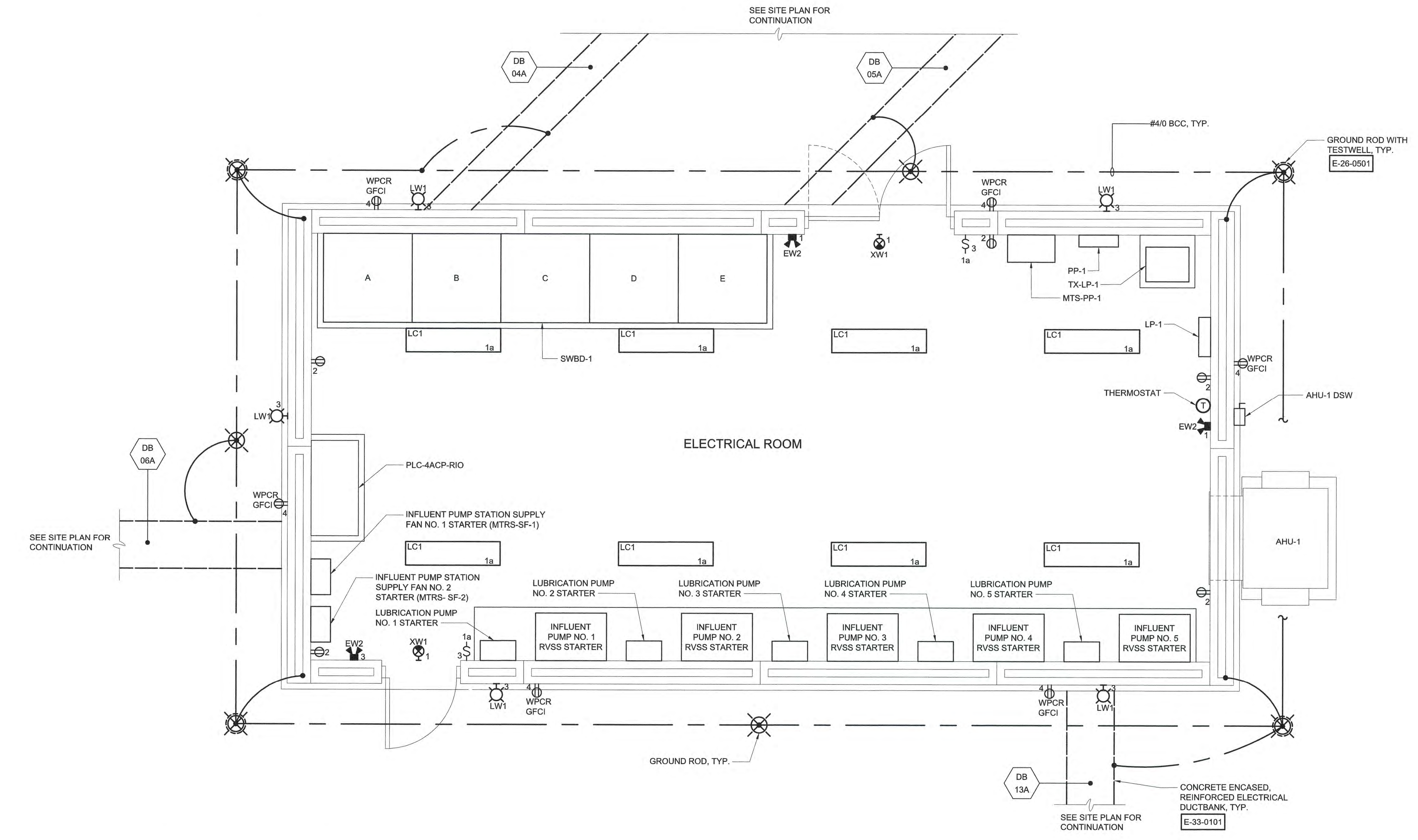
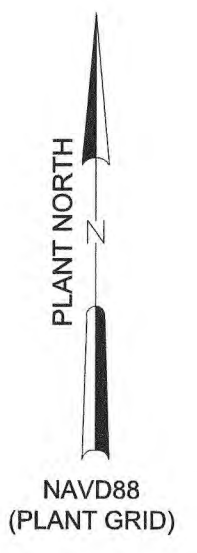


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PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA
CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

INFLUENT PUMP STATION
ELECTRICAL
TOP PLAN - MODIFIED
BID ALTERNATE

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E103A



GROUNDING, POWER, AND LIGHTING PLAN
3/8" = 1'-0"

- NOTES:**
- ELECTRICAL ROOM IS DESIGNATED AS AN INDOOR DRY NON-PROCESS AREA.
 - ALL MATERIALS OF CONSTRUCTION AND ENCLOSURE TYPES SHALL BE PROVIDED IN ACCORDANCE WITH THE DESIGNATION OF THE AREAS IN WHICH THEY ARE INSTALLED. REFERENCE THE AREA DESIGNATION TABLES IN THE APPROPRIATE DIVISION 26 SPECIFICATION SECTIONS.
 - REFER TO N.E.C. ARTICLE 250.52(A)(3) FOR BONDING OF GROUND RING TO STRUCTURAL FOUNDATION REBAR.
 - EACH DUCTBANK GROUND CONDUCTOR CROSSING THE GROUND LOOP SHALL BE EXOTHERMICALLY WELDED TO THE GROUND LOOP CONDUCTOR. CONNECTIONS TO GROUND RODS SHALL BE MECHANICAL TYPE.
 - ALL TRANSFORMERS AND SWITCHBOARD SHALL BE BONDED TO THE GROUND RING CONDUCTOR.
 - GROUND LOOP CONDUCTOR SHALL BE #4/0 BARE COPPER WIRE 30 INCHES MINIMUM BELOW FINISHED GRADED. ALL GROUND CONDUCTORS TO EQUIPMENT OR STRUCTURAL STEEL SHALL BE BARE COPPER WIRE.
 - IF VERTICALLY DRIVEN GROUND RODS ENCOUNTER ROCK BEFORE BEING DRIVEN TO 10'-0" DEPTH, CONTRACTOR SHALL BE PERMITTED TO DRIVE ROD AT ANGLE, OR LAY IN ACCORDANCE WITH LATEST N.E.C. ARTICLE 250.53(G).
 - CONTRACTOR SHALL FURNISH AND INSTALL LIGHTNING PROTECTION FOR THIS STRUCTURE AS DESCRIBED IN SPECIFICATION SECTION 26 41 00.
 - ROUTE LIGHTNING PROTECTION SYSTEM DOWN CONDUCTOR CONCEALED IN CONDUIT TO GROUND RODS ASSOCIATED WITH BUILDING ROUNDING SYSTEM.
 - COORDINATE GROUND SYSTEM INSTALLATION WITH INSTALLATION OF THE LIGHTNING PROTECTION SYSTEM.
 - MOUNT ALL TYPE LC1 FIXTURES AT CEILING HEIGHT.
 - MOUNT ALL TYPE LW1 FIXTURES AT 8'-0" AFF.
 - MOUNT ALL TYPE EW2 FIXTURES AT 8'-0" AFF.
 - MOUNT ALL TYPE XW1 FIXTURES WITH THE BOTTOM OF THE FIXTURE 12" ABOVE THE TOP OF THE RESPECTIVE DOOR FRAME.

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PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	B. PICKETT
DRAWN BY:	T. RAHLAN
CHECKED BY:	D. ATKINSON
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
CONSTRUCTION	4/2023 CWB
ISSUED FOR	DATE BY

ISSUED FOR CONSTRUCTION

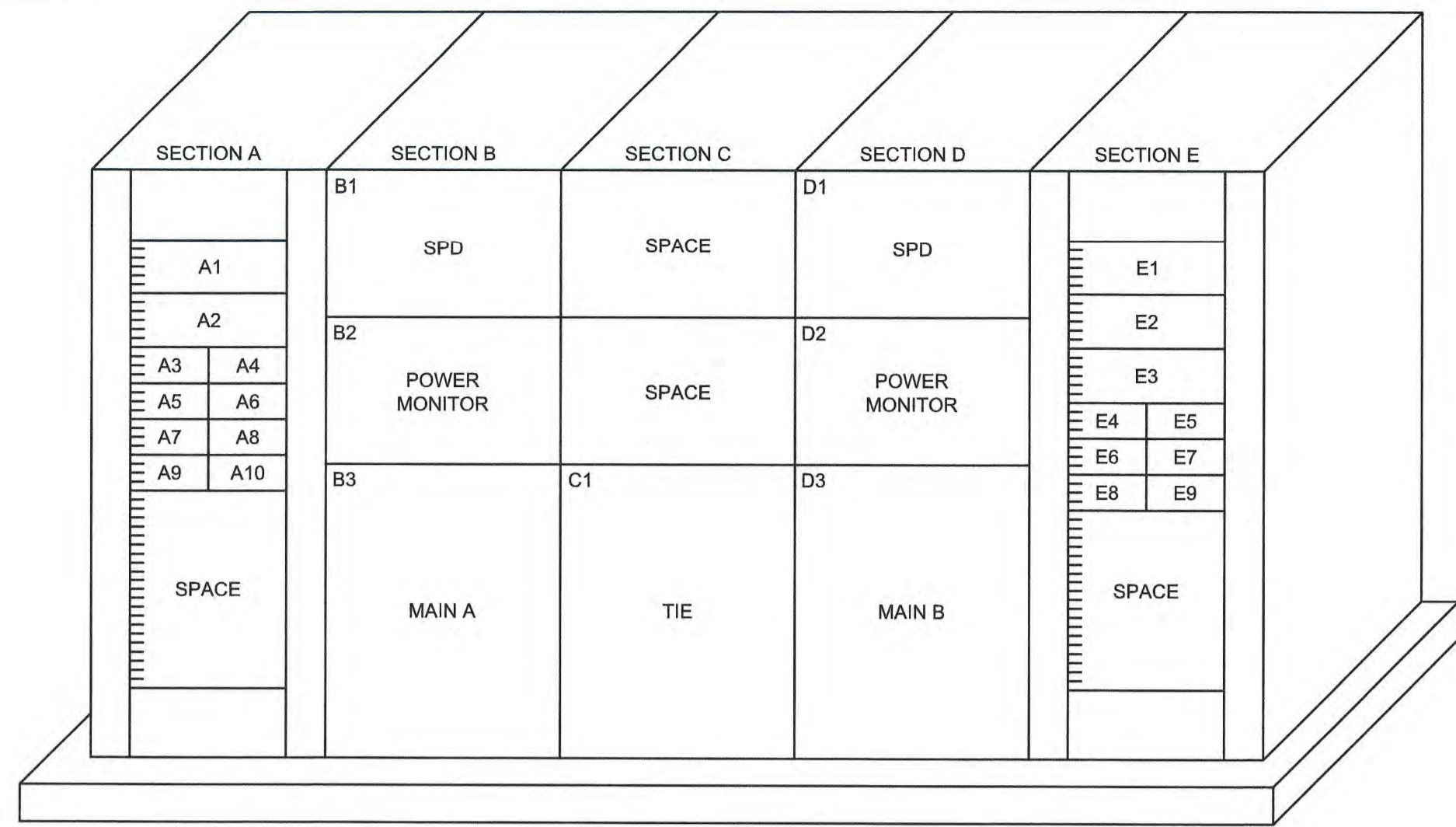


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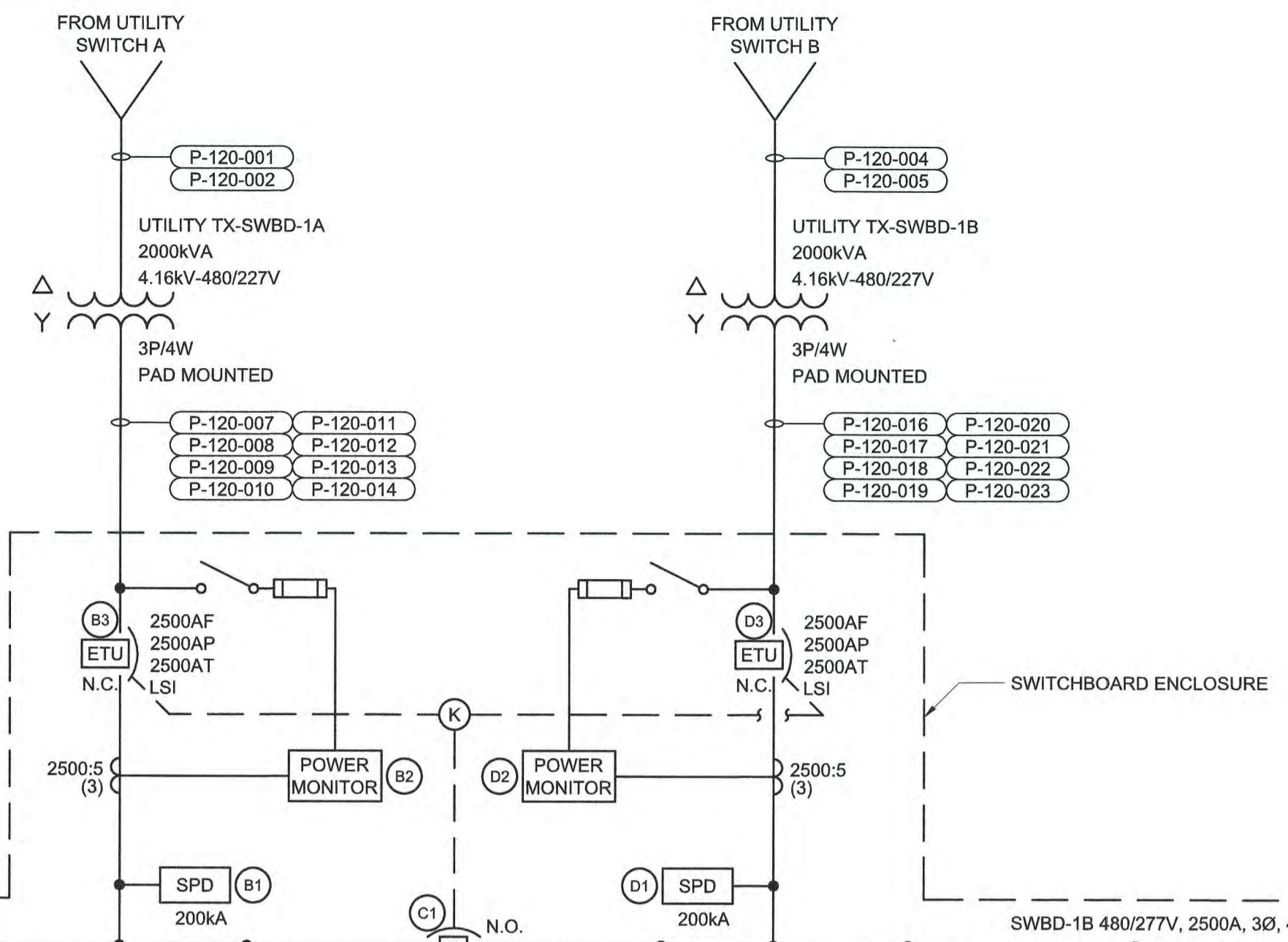
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CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

INFLUENT PUMP STATION ELECTRICAL
BUILDING ELECTRICAL
GROUNDING, POWER, AND LIGHTING PLAN
BID ALTERNATE

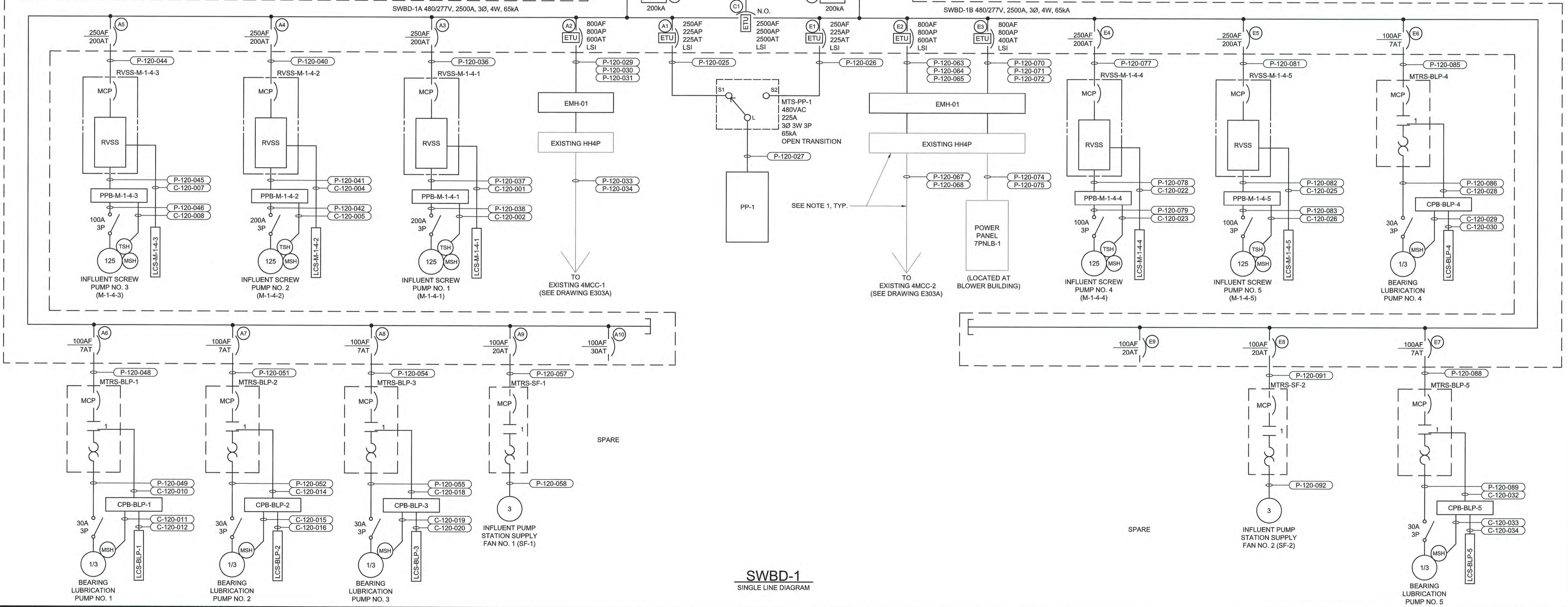
DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E120A



SWBD-1
ELEVATION (NTS)



- NOTES:**
- CONTRACTOR SHALL UTILIZE EXISTING HANDHOLES AND CONDUITS AS INDICATED. FURNISH AND INSTALL NEW CONDUITS AND CONDUITS AS NECESSARY TO RE-SUPPLY EXISTING LOADS FROM NEW SWITCHBOARD (SWBD-1).
 - CERTAIN MANHOLES AND HANDHOLES ARE SHOWN ON SINGLE LINE DIAGRAMS TO SHOW TERMINATIONS OF CONDUITS AT THESE LOCATIONS. NOT ALL MANHOLES AND HANDHOLES ARE SHOWN FOR DRAWING CLARITY. REFER TO SITE PLANS, CONDUIT AND WIRE SCHEDULES FOR FURTHER DETAILS.



SWBD-1
SINGLE LINE DIAGRAM

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PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	B. PICKETT
DRAWN BY:	T. RAHLAN
CHECKED BY:	D. ATKINSON
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CONSTRUCTION	4/2023
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CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

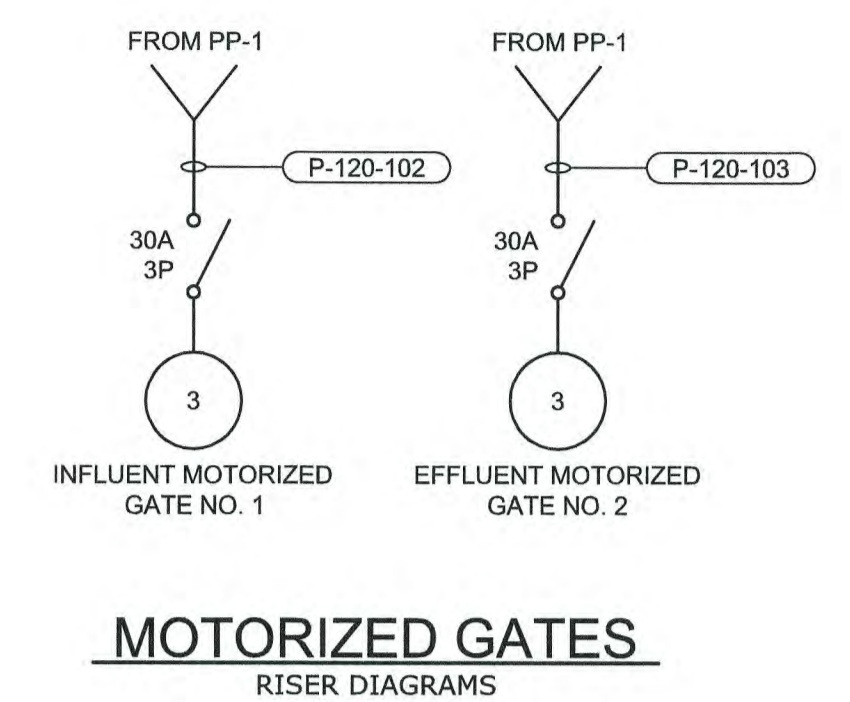
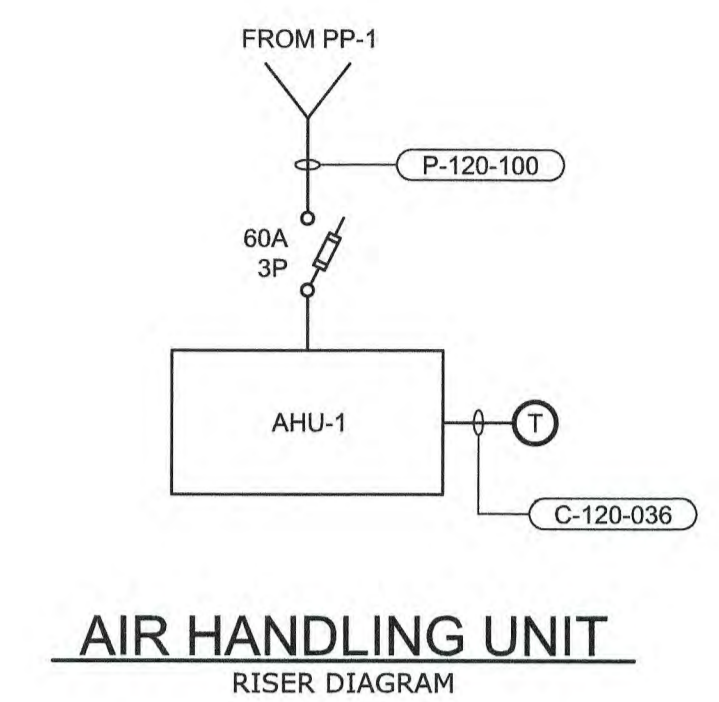
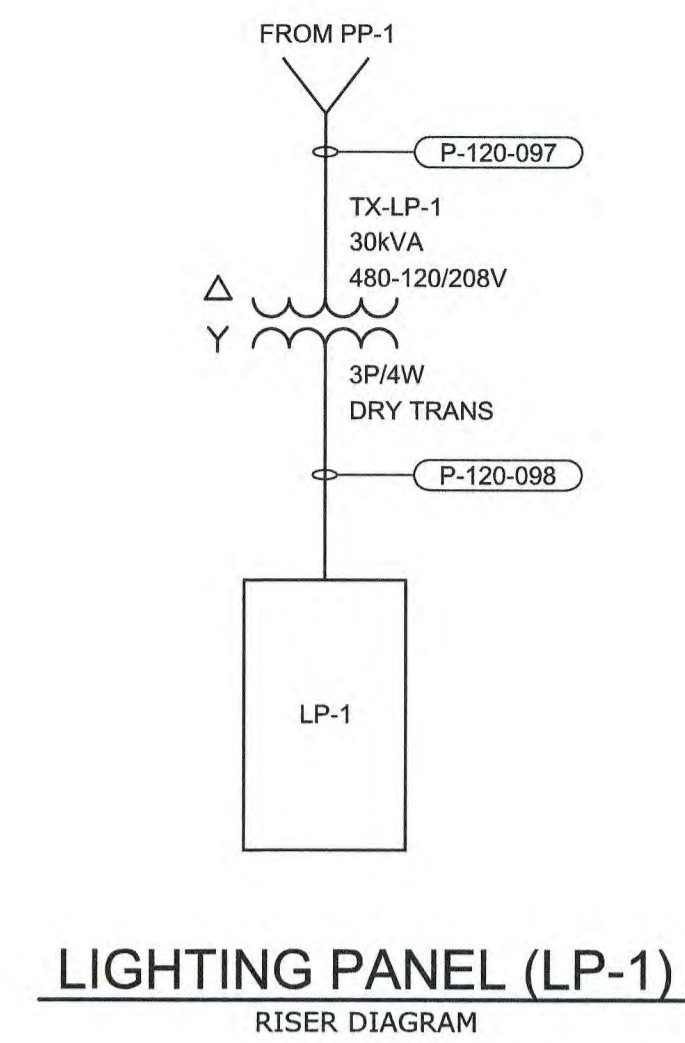
INFLUENT PUMP STATION ELECTRICAL
BUILDING ELECTRICAL
SWBD-1 SINGLE LINE DIAGRAM AND ELEVATION
BID ALTERNATE

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E121A

480/277 VOLTS 3 PHASE, 4 WIRE				PP-1 MAIN BREAKER 225A 3P				TYPE: NEMA 12 MOUNT: SURFACE									
MODS	DESCRIPTION	WIRE	TRIP	POLE	No.	VOLT-AMPERES			VOLT-AMPERES			No.	POLE	TRIP	WIRE	DESCRIPTION	MODS
						A	B	C	A	B	C						
-	AHU-1	SEE RISER	40	3	1	6,400			500			2	3	20	SEE RISER	EFFLUENT MOTORIZED GATE NO. 2	-
-	INFLUENT MOTORIZED GATE NO. 1	SEE RISER	20	3	7	500						4	3	20	SEE RISER		-
-	SPARE		20	3	9		500					6	3	20	SEE RISER		-
-	SPARE		20	3	11			500				8	3	20	SEE RISER		-
-	SPARE		20	3	13							10	3	20	SEE RISER		-
-	SPARE		20	3	15							12	3	20	SEE RISER		-
-	SPARE		20	3	17							14	3	20	SEE RISER		-
-	SPARE		20	3	19							16	3	20	SEE RISER		-
-	SPARE		20	3	21							18	3	20	SEE RISER		-
-	SPARE		20	3	23							20	3	20	SEE RISER		-
-	SPARE		20	3	25							22	3	20	SEE RISER		-
-	SPARE		20	3	27							24	3	20	SEE RISER		-
-	SPARE		20	3	29							26	3	20	SEE RISER		-
-	SPARE		20	3	31							28	3	20	SEE RISER		-
-	SPARE		20	3	33							30	3	20	SEE RISER		-
-	SPARE		20	3	35							32	3	20	SEE RISER		-
-	SPARE		20	3	37							34	3	20	SEE RISER		-
-	SPARE		20	3	39							36	3	20	SEE RISER		-
-	SPARE		20	3	41							38	3	20	SEE RISER		-
						TOTAL	6,900	6,900	6,900	10,500	10,500	10,500	TOTAL				
						PHASE TOTAL			TOTAL LOAD (VA)								
						17,400	17,400	17,400	52,200								
						TOTAL LOAD (A)			63								

MODIFICATION (MODS) LEGEND:
 EPD - GROUND FAULT CIRCUIT INTERRUPTER (30mA)
 GFCI - GROUND FAULT CIRCUIT INTERRUPTER (5mA)
 LOD - LOCK-ON DEVICE
 LFD - LOCK-OFF DEVICE

NOTES:
 65K AIC
 100KA SPD, INTEGRAL

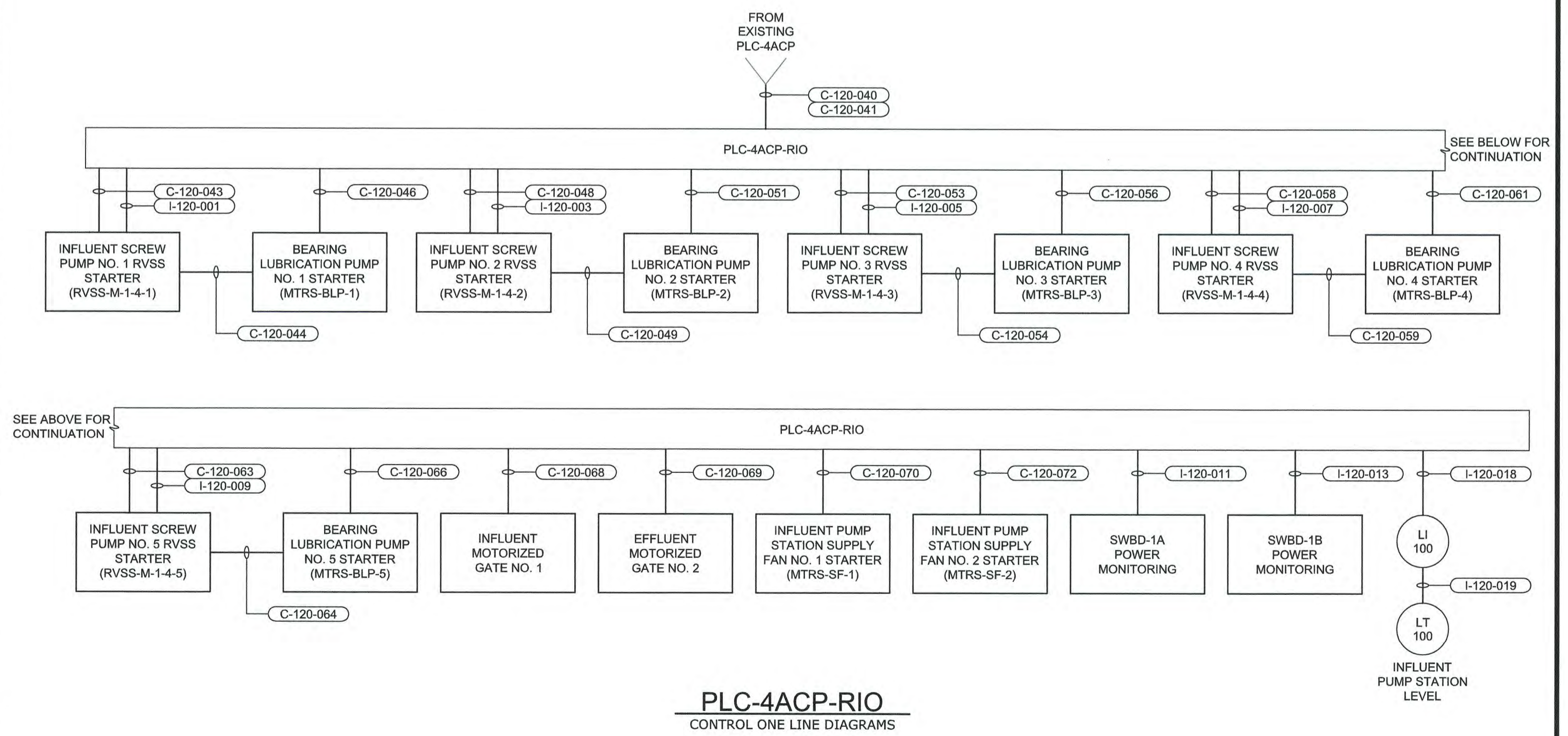


NOTES:
 1. FURNISH AND INSTALL 2#12, #12GND IN 3/4" CONDUIT, UNLESS OTHERWISE NOTED.

208/120 VOLTS 3 PHASE, 4 WIRE				LP-1 MAIN BREAKER 100A 3P				TYPE: NEMA 12 MOUNT: SURFACE										
MODS	DESCRIPTION	WIRE	TRIP	POLE	No.	VOLT-AMPERES			VOLT-AMPERES			No.	POLE	TRIP	WIRE	DESCRIPTION	MODS	
						A	B	C	A	B	C							
-	LIGHTS - ELECTRICAL ROOM	SEE NOTE 1	20	1	1	500			900			2	1	20	SEE NOTE 1	RECEPT. - ELECTRICAL ROOM	-	
-	LIGHTS - OUTDOOR	SEE NOTE 1	20	1	3		300			900			4	1	20	SEE NOTE 1	RECEPT. - OUTDOOR	-
-	LI-100	P-120-115	20	1	5							6	1	20		SPARE	-	
-	SPARE		20	1	7							8	1	20		SPARE	-	
-	SPARE		20	1	9							10	1	20		SPARE	-	
-	SPARE		20	1	11							12	1	20	P-120-108	PLC-4ACP-RIO	-	
-	SPARE		20	1	13							14	1	20		SPARE	-	
-	SPARE		20	1	15							16	1	20		SPARE	-	
-	SPARE		20	1	17							18	1	20		SPARE	-	
-	SPARE		20	1	19							20	1	20		SPARE	-	
-	SPARE		20	1	21							22	1	20		SPARE	-	
-	SPARE		20	1	23							24	1	20		SPARE	-	
-	SPARE		20	1	25							26	1	20		SPARE	-	
-	SPARE		20	1	27							28	1	20		SPARE	-	
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-	SPARE		20	1	31							32	1	20		SPARE	-	
-	SPARE		20	1	33							34	1	20		SPARE	-	
-	SPARE		20	1	35							36	1	20		SPARE	-	
-	SPARE		20	1	37							38	1	20		SPARE	-	
-	SPARE		20	1	39							40	1	20		SPARE	-	
-	SPARE		20	1	41							42	1	20		SPARE	-	
						TOTAL	500	300	100	900	900	1,000	TOTAL					
						PHASE TOTAL			TOTAL LOAD (VA)									
						1,400	1,200	1,100	3,700									
						TOTAL LOAD (A)			10									

MODIFICATION (MODS) LEGEND:
 EPD - GROUND FAULT CIRCUIT INTERRUPTER (30mA)
 GFCI - GROUND FAULT CIRCUIT INTERRUPTER (5mA)
 LOD - LOCK-ON DEVICE
 LFD - LOCK-OFF DEVICE

NOTES:
 22K AIC
 100KA SPD, INTEGRAL



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PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	B. PICKETT
DRAWN BY:	T. RAHLAN
CHECKED BY:	D. ATKINSON
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
CONSTRUCTION	4/2023 CWB
ISSUED FOR	BY

ISSUED FOR CONSTRUCTION

Hazen

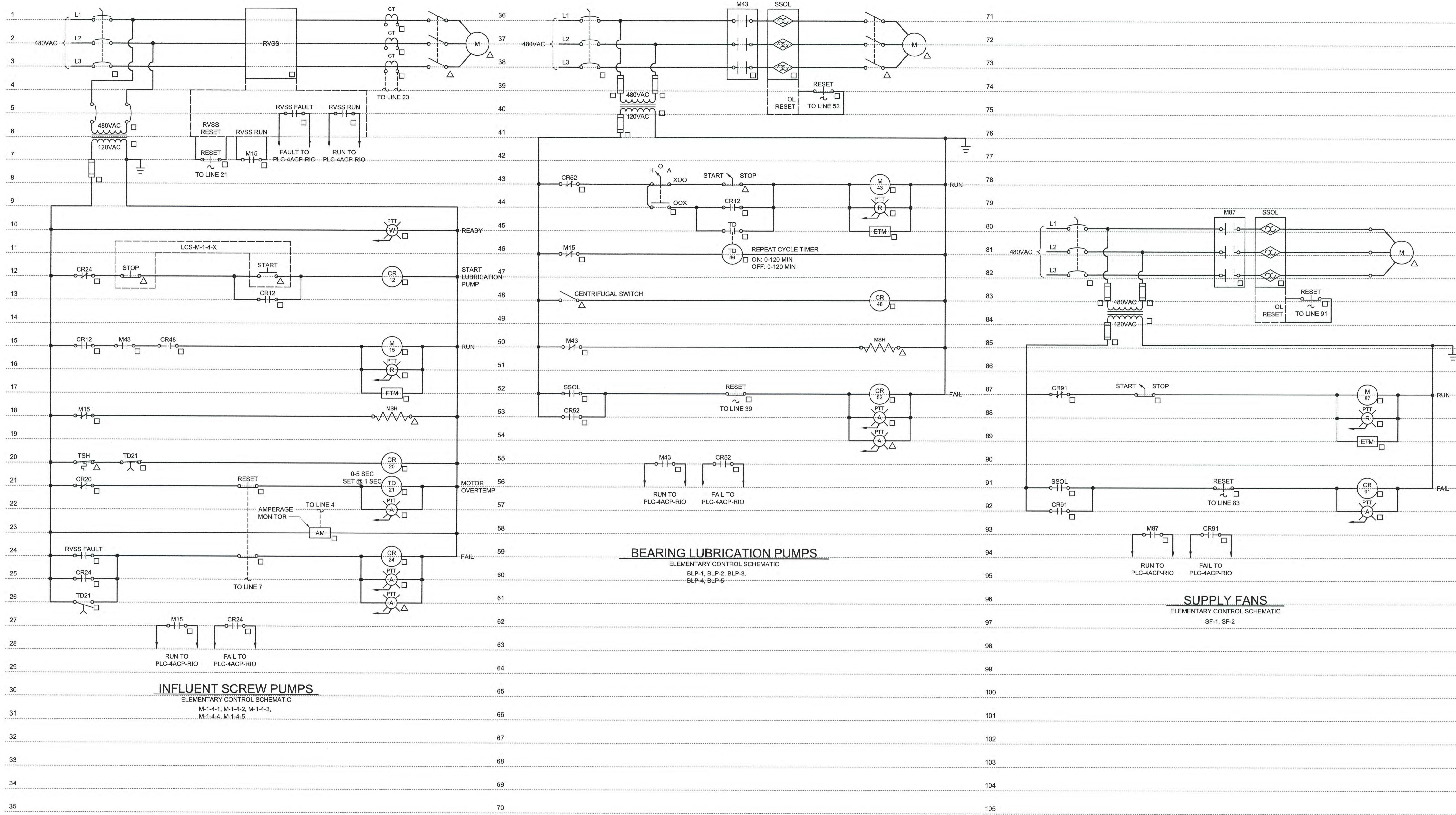
HAZEN AND SAWYER
 4011 WESTCHASE BOULEVARD, SUITE 500
 RALEIGH, NORTH CAROLINA 27607
 LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
 CITY OF FAYETTEVILLE, NORTH CAROLINA

CROSS CREEK WRF AND ROCKFISH CREEK WRF
 SCREW PUMP IMPROVEMENTS

INFLUENT PUMP STATION ELECTRICAL
 BUILDING ELECTRICAL
 PANEL SCHEDULES, RISER DIAGRAMS, AND
 CONTROL ONE LINE DIAGRAMS
 BID ALTERNATE

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E122A



INFLUENT SCREW PUMPS
ELEMENTARY CONTROL SCHEMATIC
M-1.4-1, M-1.4-2, M-1.4-3,
M-1.4.4, M-1.4.5

BEARING LUBRICATION PUMPS
ELEMENTARY CONTROL SCHEMATIC
BLP-1, BLP-2, BLP-3,
BLP-4, BLP-5

SUPPLY FANS
ELEMENTARY CONTROL SCHEMATIC
SF-1, SF-2

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PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	B. PICKETT
DRAWN BY:	T. RAHLAN
CHECKED BY:	D. ATKINSON
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"

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HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA
CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

INFLUENT PUMP STATION ELECTRICAL
BUILDING ELECTRICAL
ELEMENTARY CONTROL SCHEMATICS
BID ALTERNATE

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E123A

NOTES:

- CONTRACTOR NOTE ALL CONDUIT TAGS DENOTED WITH "1" PREFIX SHALL BE A METALLIC RACEWAY COMPLETE FROM SOURCE TO LOAD. REFER TO THE REQUIREMENTS OF SPECIFICATION SECTION 26 05 33.13 FOR FURTHER DETAILS.

CONDUIT NO.	SIZE	FROM	TO	CONDUCTORS	REMARKS
C-120-000				NOT USED	
C-120-001	1"	INFLUENT SCREW PUMP NO. 1 STARTER (RVSS-M-1-4-1)	LCS-M-1-4-1	6#14, #14GND	
C-120-002	3/4"	PPB-M-1-4-1	INFLUENT SCREW PUMP NO. 1 (M-1-4-1)	2#12, 4#14, #12GND	MSH, TSH
C-120-003				NOT USED	
C-120-004	1"	INFLUENT SCREW PUMP NO. 2 STARTER (RVSS-M-1-4-2)	LCS-M-1-4-2	6#14, #14GND	
C-120-005	3/4"	PPB-M-1-4-2	INFLUENT SCREW PUMP NO. 2 (M-1-4-2)	2#12, 4#14, #12GND	MSH, TSH
C-120-006				NOT USED	
C-120-007	1"	INFLUENT SCREW PUMP NO. 3 STARTER (RVSS-M-1-4-3)	LCS-M-1-4-3	6#14, #14GND	
C-120-008	3/4"	PPB-M-1-4-3	INFLUENT SCREW PUMP NO. 3 (M-1-4-3)	2#12, 4#14, #12GND	MSH, TSH
C-120-009				NOT USED	
C-120-010	1"	BEARING LUBRICATION PUMP NO. 1 STARTER (MTRS-BLP-1)	CPB-BLP-1	2#12, 4#14, #12GND	
C-120-011	3/4"	CPB-BLP-1	BEARING LUBRICATION PUMP NO. 1	2#12, #12GND	MSH
C-120-012	3/4"	CPP-BLP-1	LCS-BLP-1	4#14, #14GND	
C-120-013				NOT USED	
C-120-014	1"	BEARING LUBRICATION PUMP NO. 2 STARTER (MTRS-BLP-2)	CPB-BLP-2	2#12, 4#14, #12GND	
C-120-015	3/4"	CPB-BLP-2	BEARING LUBRICATION PUMP NO. 2	2#12, #12GND	MSH
C-120-016	3/4"	CPP-BLP-2	LCS-BLP-2	4#14, #14GND	
C-120-017				NOT USED	
C-120-018	1"	BEARING LUBRICATION PUMP NO. 3 STARTER (MTRS-BLP-3)	CPB-BLP-3	2#12, 4#14, #12GND	
C-120-019	3/4"	CPB-BLP-3	BEARING LUBRICATION PUMP NO. 3	2#12, #12GND	MSH
C-120-020	3/4"	CPP-BLP-3	LCS-BLP-3	4#14, #14GND	
C-120-021				NOT USED	
C-120-022	1"	INFLUENT SCREW PUMP NO. 4 STARTER (RVSS-M-1-4-4)	LCS-M-1-4-4	6#14, #14GND	
C-120-023	3/4"	CPB-M-1-4-4	INFLUENT SCREW PUMP NO. 4 (M-1-4-4)	2#12, 4#14, #12GND	MSH, TSH
C-120-024				NOT USED	
C-120-025	1"	INFLUENT SCREW PUMP NO. 5 STARTER (RVSS-M-1-4-5)	LCS-M-1-4-5	6#14, #14GND	
C-120-026	3/4"	CPB-M-1-4-5	INFLUENT SCREW PUMP NO. 5 (M-1-4-5)	2#12, 4#14, #12GND	MSH, TSH
C-120-027				NOT USED	
C-120-028	1"	BEARING LUBRICATION PUMP NO. 4 STARTER (MTRS-BLP-4)	CPB-BLP-4	2#12, 4#14, #12GND	
C-120-029	3/4"	CPB-BLP-4	BEARING LUBRICATION PUMP NO. 4	2#12, #12GND	MSH
C-120-030	3/4"	CPP-BLP-4	LCS-BLP-4	4#14, #14GND	
C-120-031				NOT USED	
C-120-032	1"	BEARING LUBRICATION PUMP NO. 5 STARTER (MTRS-BLP-5)	CPB-BLP-5	2#12, 4#14, #12GND	
C-120-033	3/4"	CPB-BLP-5	BEARING LUBRICATION PUMP NO. 5	2#12, #12GND	MSH
C-120-034	3/4"	CPP-BLP-5	LCS-BLP-5	4#14, #14GND	
C-120-035				NOT USED	
C-120-036	3/4"	AHU-1	THERMOSTAT	2#14, #14GND	
C-120-037				NOT USED	
C-120-038				NOT USED	
C-120-039				NOT USED	
C-120-040	2"	EXISTING PLC-4ACP	PLC-4ACP-RIO	(1) FIBER OPTIC CABLE	
C-120-041	2"	EXISTING PLC-4ACP	PLC-4ACP-RIO	EMPTY W/ PULLSTRING	SPARE
C-120-042				NOT USED	
C-120-043	1"	PLC-4ACP-RIO	INFLUENT SCREW PUMP NO. 1 STARTER (RVSS-M-1-4-1)	10#14, #14GND	
C-120-044	3/4"	INFLUENT SCREW PUMP NO. 1 STARTER (RVSS-M-1-4-1)	BEARING LUBRICATION PUMP NO. 1 STARTER (MTRS-BLP-1)	4#14, #14GND	
C-120-045				NOT USED	
C-120-046	1"	PLC-4ACP-RIO	BEARING LUBRICATION PUMP NO. 1 STARTER (MTRS-BLP-1)	4#14, #14GND	
C-120-047				NOT USED	
C-120-048	1"	PLC-4ACP-RIO	INFLUENT SCREW PUMP NO. 2 STARTER (RVSS-M-1-4-2)	10#14, #14GND	
C-120-049	3/4"	INFLUENT SCREW PUMP NO. 2 STARTER (RVSS-M-1-4-2)	BEARING LUBRICATION PUMP NO. 2 STARTER (MTRS-BLP-2)	4#14, #14GND	
C-120-050				NOT USED	
C-120-051	1"	PLC-4ACP-RIO	BEARING LUBRICATION PUMP NO. 2 STARTER (MTRS-BLP-2)	4#14, #14GND	
C-120-052				NOT USED	
C-120-053	1"	PLC-4ACP-RIO	INFLUENT SCREW PUMP NO. 3 STARTER (RVSS-M-1-4-3)	10#14, #14GND	
C-120-054	3/4"	INFLUENT SCREW PUMP NO. 3 STARTER (RVSS-M-1-4-3)	BEARING LUBRICATION PUMP NO. 3 STARTER (MTRS-BLP-3)	4#14, #14GND	
C-120-055				NOT USED	
C-120-056	1"	PLC-4ACP-RIO	BEARING LUBRICATION PUMP NO. 3 STARTER (MTRS-BLP-3)	4#14, #14GND	
C-120-057				NOT USED	
C-120-058	1"	PLC-4ACP-RIO	INFLUENT SCREW PUMP NO. 4 STARTER (RVSS-M-1-4-4)	10#14, #14GND	
C-120-059	3/4"	INFLUENT SCREW PUMP NO. 4 STARTER (RVSS-M-1-4-4)	BEARING LUBRICATION PUMP NO. 4 STARTER (MTRS-BLP-4)	4#14, #14GND	
C-120-060				NOT USED	
C-120-061	1"	PLC-4ACP-RIO	BEARING LUBRICATION PUMP NO. 4 STARTER (MTRS-BLP-4)	4#14, #14GND	
C-120-062				NOT USED	
C-120-063	1"	PLC-4ACP-RIO	INFLUENT SCREW PUMP NO. 5 STARTER (RVSS-M-1-4-5)	10#14, #14GND	
C-120-064	3/4"	INFLUENT SCREW PUMP NO. 5 STARTER (RVSS-M-1-4-5)	BEARING LUBRICATION PUMP NO. 5 STARTER (MTRS-BLP-5)	4#14, #14GND	
C-120-065				NOT USED	
C-120-066	1"	PLC-4ACP-RIO	BEARING LUBRICATION PUMP NO. 5 STARTER (MTRS-BLP-5)	4#14, #14GND	
C-120-067				NOT USED	
C-120-068	1"	PLC-4ACP-RIO	INFLUENT MOTORIZED GATE NO. 1	4#14, #14GND	
C-120-069	1"	PLC-4ACP-RIO	EFFLUENT MOTORIZED GATE NO. 2	4#14, #14GND	
C-120-070	1"	PLC-4ACP-RIO	SUPPLY FAN NO. 1 STARTER (MTRS-SF-1)	6#14, #14GND	
C-120-071				NOT USED	
C-120-072	1"	PLC-4ACP-RIO	SUPPLY FAN NO. 2 STARTER (MTRS-SF-2)	6#14, #14GND	
C-120-073				NOT USED	
C-120-074	1"	PLC-4ACP-RIO	EMH-03	EMPTY W/ PULLSTRING	SPARE
C-120-075	2"	PLC-4ACP-RIO	EMH-03	EMPTY W/ PULLSTRING	SPARE
C-120-076				NOT USED	
C-120-077				NOT USED	
C-120-078				NOT USED	
C-120-079				NOT USED	

CONDUIT NO.	SIZE	FROM	TO	CONDUCTORS	REMARKS
I-120-000				NOT USED	
I-120-001	2"	PLC-4ACP-RIO	INFLUENT SCREW PUMP NO. 1 STARTER (RVSS-M-1-4-1)	(1) CAT-6	
I-120-002				NOT USED	
I-120-003	2"	PLC-4ACP-RIO	INFLUENT SCREW PUMP NO. 2 STARTER (RVSS-M-1-4-2)	(1) CAT-6	
I-120-004				NOT USED	
I-120-005	2"	PLC-4ACP-RIO	INFLUENT SCREW PUMP NO. 3 STARTER (RVSS-M-1-4-3)	(1) CAT-6	
I-120-006				NOT USED	
I-120-007	2"	PLC-4ACP-RIO	INFLUENT SCREW PUMP NO. 4 STARTER (RVSS-M-1-4-4)	(1) CAT-6	
I-120-008				NOT USED	
I-120-009	2"	PLC-4ACP-RIO	INFLUENT SCREW PUMP NO. 5 STARTER (RVSS-M-1-4-5)	(1) CAT-6	
I-120-010				NOT USED	
I-120-011	2"	PLC-4ACP-RIO	SWBD-1A POWER MONITORING	(1) CAT-6	
I-120-012				NOT USED	
I-120-013	2"	PLC-4ACP-RIO	SWBD-1B POWER MONITORING	(1) CAT-6	
I-120-014				NOT USED	
I-120-015	1"	PLC-4ACP-RIO	EMH-03	EMPTY W/ PULLSTRING	SPARE
I-120-016	2"	PLC-4ACP-RIO	EMH-03	EMPTY W/ PULLSTRING	SPARE
I-120-017				NOT USED	
I-120-018	1"	PLC-4ACP-RIO	LI-100	2(2/C#16TSH), #14GND	VIA EMH-02, EMH-03
I-120-019	3/4"	LI-100	LT-100	CABLE BY MFR	
I-120-020				NOT USED	
I-120-021	1"	PLC-4ACP-RIO	EMH-03	EMPTY W/ PULLSTRING	SPARE
I-120-022				NOT USED	
I-120-023				NOT USED	
I-120-024				NOT USED	
I-120-025				NOT USED	
I-120-026				NOT USED	
I-120-027				NOT USED	
I-120-028				NOT USED	
I-120-029				NOT USED	
I-120-030				NOT USED	

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PROJECT ENGINEER:	M. MESSERE		
DESIGNED BY:	B. PICKETT		
DRAWN BY:	T. RAHLAN		
CHECKED BY:	D. ATKINSON		
1	CONSTRUCTION	4/2023	CWB
REV	ISSUED FOR	DATE	BY

ISSUED FOR CONSTRUCTION



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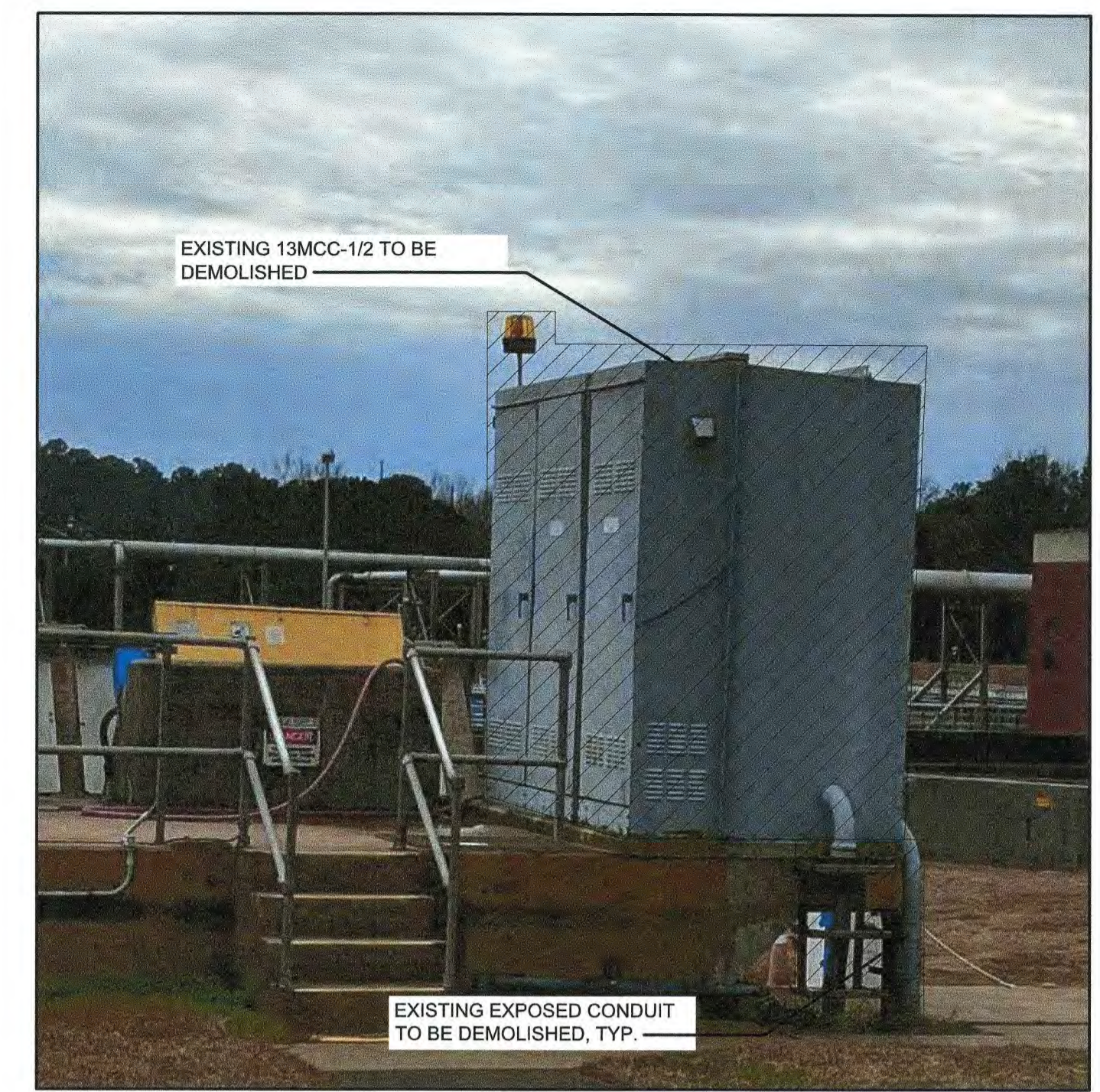
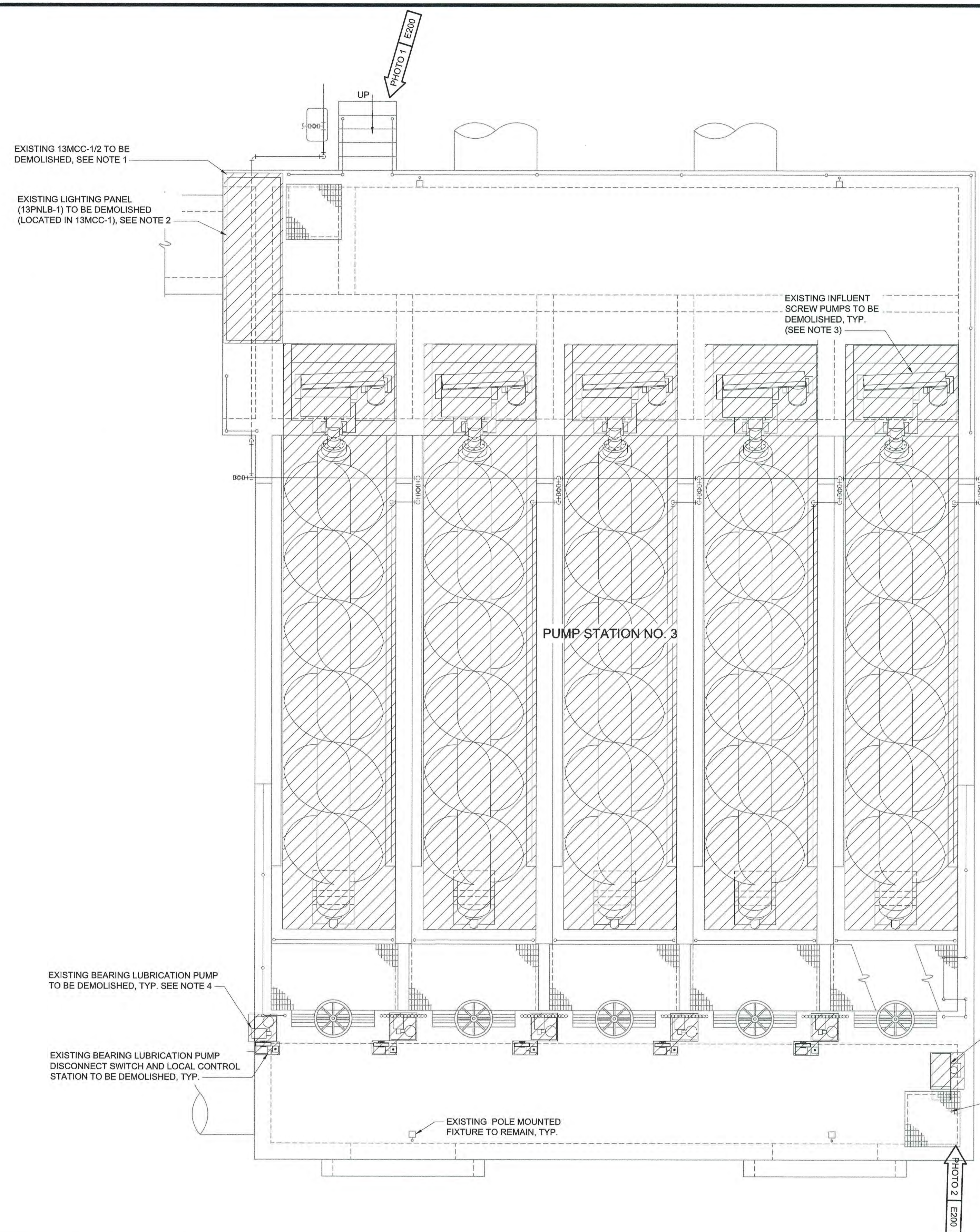
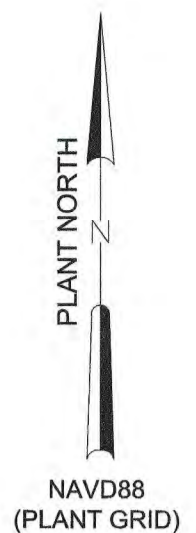
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA

CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

INFLUENT PUMP STATION ELECTRICAL
BUILDING
ELECTRICAL
CONDUIT AND WIRE SCHEDULES
BID ALTERNATE

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E125A



- NOTES:**
1. CONTRACTOR SHALL DEMOLISH ENTIRE EXISTING MOTOR CONTROL CENTER (13MCC-1/2) AND ASSOCIATED CONDUIT AND WIRE COMPLETELY FROM SOURCE TO LOAD. ALL EXPOSED CONDUIT SHALL BE REMOVED AND CUT FLUSH WITH GRADE. ALL EMBEDDED CONDUITS TO BE ABANDONED SHALL BE ABANDONED PER STANDARD E-26-0103. ALL DEMOLITION WORK SHALL BE COORDINATE WITH THE ENGINEER, OWNER, AND SPECIFICATION SECTION 01 14 00 PRIOR TO STARTING WORK.
 2. EXISTING LIGHTING PANEL 13PNLB-1 IS LOCATED WITHIN EXISTING 13MCC-1, WHICH IS TO BE DEMOLISHED AS PART OF THIS PROJECT. CONTRACTOR SHALL FIELD VERIFY LOADS WITHIN PANEL 13PNLB-1 TO RESUPPLY FROM NEW LIGHTING PANEL (LP-13) LOCATED IN ELECTRICAL BUILDING.
 3. CONTRACTOR SHALL DEMOLISH EXISTING INFLUENT SCREW PUMPS AND ASSOCIATED CONDUIT AND WIRE COMPLETELY FROM SOURCE TO LOAD. ALL EXPOSED CONDUIT SHALL BE REMOVED AND CUT FLUSH WITH GRADE. ALL EMBEDDED CONDUIT TO BE ABANDONED SHALL BE ABANDONED PER STANDARD E-26-0103. COORDINATE DEMOLITION WITH ENGINEER, OWNER, AND SPECIFICATION SECTION 01 14 00 PRIOR TO STARTING WORK.
 4. CONTRACTOR SHALL DEMOLISH EXISTING BEARING LUBRICATION PUMPS AND ASSOCIATED DISCONNECT SWITCHES, AND LOCAL CONTROL STATION AS INDICATED. ALL WIRE SHALL BE REMOVED COMPLETELY FROM SOURCE TO LOAD. ALL EXPOSED CONDUIT SHALL BE REMOVED AND CUT FLUSH WITH GRADE. ALL EMBEDDED CONDUITS SHALL BE ABANDONED PER STANDARD E-26-0103. COORDINATE DEMOLITION WITH THE ENGINEER, OWNER, AND SPECIFICATION SECTION 01 14 00 PRIOR TO STARTING WORK.

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REV	ISSUED FOR	DATE	BY
1	CONSTRUCTION	4/2023	CWB

PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	B. PICKETT
DRAWN BY:	T. RAHLAN
CHECKED BY:	D. ATKINSON

ISSUED FOR CONSTRUCTION

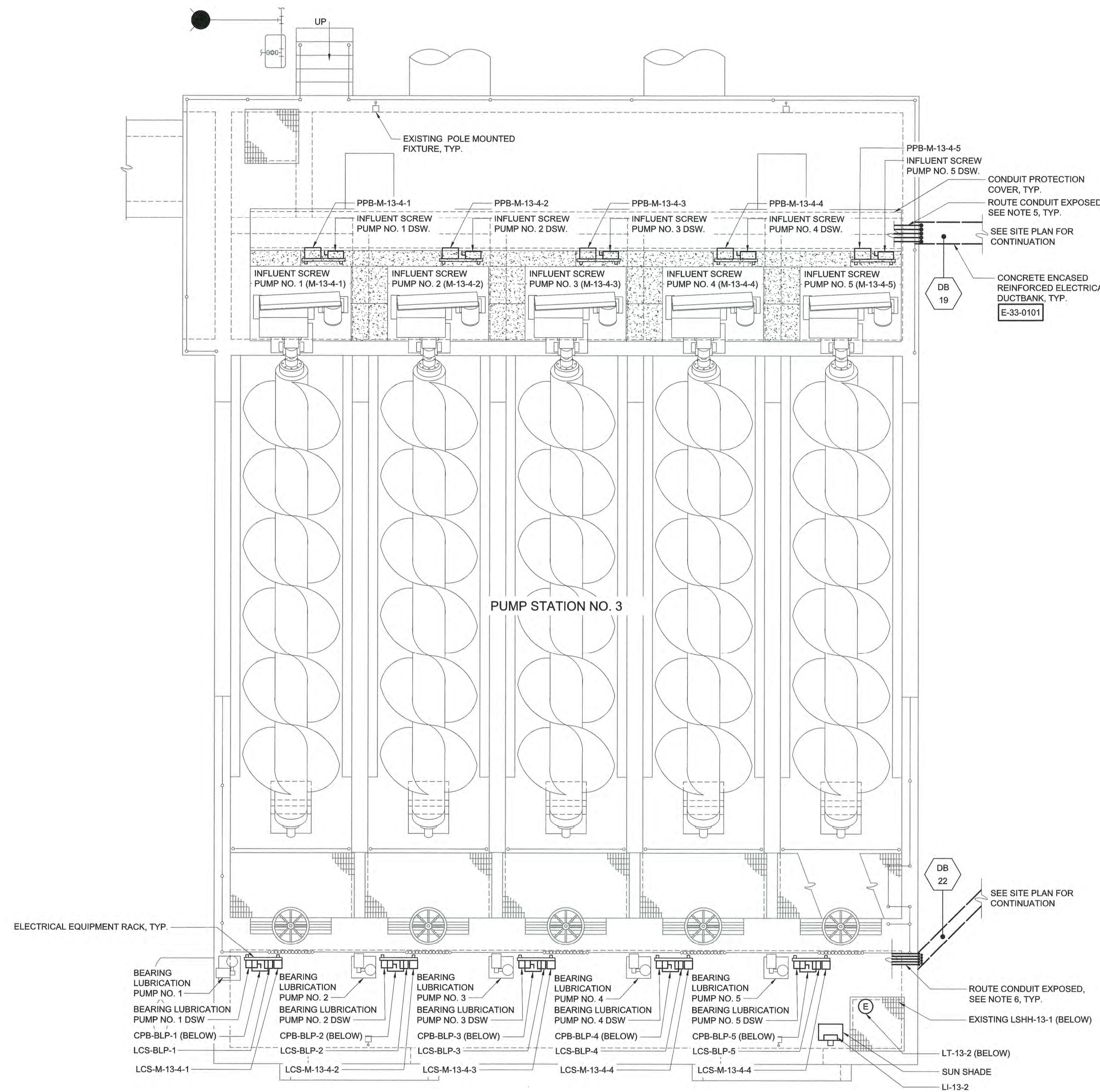
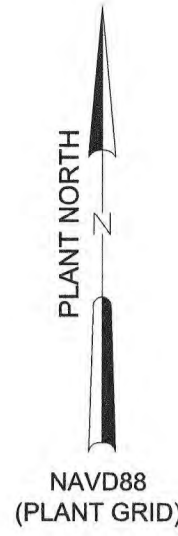


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 RALEIGH, NORTH CAROLINA 27607
 LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
 CITY OF FAYETTEVILLE, NORTH CAROLINA
 CROSS CREEK WRF AND ROCKFISH CREEK WRF
 SCREW PUMP IMPROVEMENTS

PUMP STATION NO.3 MODIFICATIONS
 ELECTRICAL
 TOP PLAN - DEMOLITION

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E200



NOTES:

1. ALL MATERIALS OF CONSTRUCTION AND ENCLOSURE TYPES SHALL BE PROVIDED IN ACCORDANCE WITH THE DESIGNATION OF THE AREAS IN WHICH THEY ARE INSTALLED. REFERENCE THE AREAS DESIGNATION TABLES IN THE APPROPRIATE DIVISION 26 SPECIFICATIONS SECTIONS.
2. ALL EQUIPMENT SHOWN ON THIS PLAN IS LOCATED OUTDOORS. MATERIALS OF CONSTRUCTION SHALL BE COMMENSURATE WITH OUTDOOR LOCATION AS INDICATED WITHIN THE SPECIFICATION.
3. ALL LOADS FOR THIS STRUCTURE ARE SOURCED FROM PUMP STATION NO. 3 ELECTRICAL BUILDING. REFER TO E220 SERIES FOR FURTHER DETAILS.
4. ALL ELECTRICAL EQUIPMENT LOCATIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL COORDINATE FINAL LOCATIONS OF ALL EQUIPMENT WITH PIPING, WALKWAY, GUARDRAILS, ETC TO ENSURE ELECTRICAL EQUIPMENT IS NOT OBSTRUCTING ACCESS.
5. CONTRACTOR SHALL FURNISH AND INSTALL CONDUIT EXPOSED TO SUPPLY NEW INFLUENT SCREW PUMPS. CONDUIT SHALL BE ARRANGED TO ENTER/EXIT RACEWAY SYSTEM IN AN ORGANIZED MANNER WITH RESPECT TO THE LOCATION OF THE LOADS. CONTRACTOR SHALL PROVIDE CONDUIT PROTECTION COVER. REFER TO MECHANICAL DRAWINGS FOR FURTHER DETAILS.
6. CONTRACTOR SHALL FURNISH AND INSTALL NEW CONDUIT EXPOSED TO SUPPLY NEW EQUIPMENT AS SHOWN. CONDUITS SHALL BE RACK VERTICALLY ON UNISTRUT SUPPORT STRUCTURES ALONG OUTSIDES OF GUARDRAILS. CONDUIT SHALL BE ARRANGED TO ENTER/EXIT RACEWAY SYSTEM IN AN ORGANIZED MANNER WITH THE RESPECT TO THE LOCATION OF THE LOADS ON THE PUMP STATION NO. 3.
7. CONTRACTOR SHALL PROVIDE ENGINEER DETAILED CONDUIT ROUTING PLANS TO BE APPROVED PRIOR TO STARTING CONSTRUCTION. REFER TO SPECIFICATION SECTION 26 05 33.13.

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 PLOT DATE: 4/14/2023 5:23 PM BY: TRAHLAN

PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	B. PICKETT
DRAWN BY:	T. RAHLAN
CHECKED BY:	D. ATKINSON
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
1 CONSTRUCTION	4/2023 CWB
REV ISSUED FOR	DATE BY

ISSUED FOR CONSTRUCTION

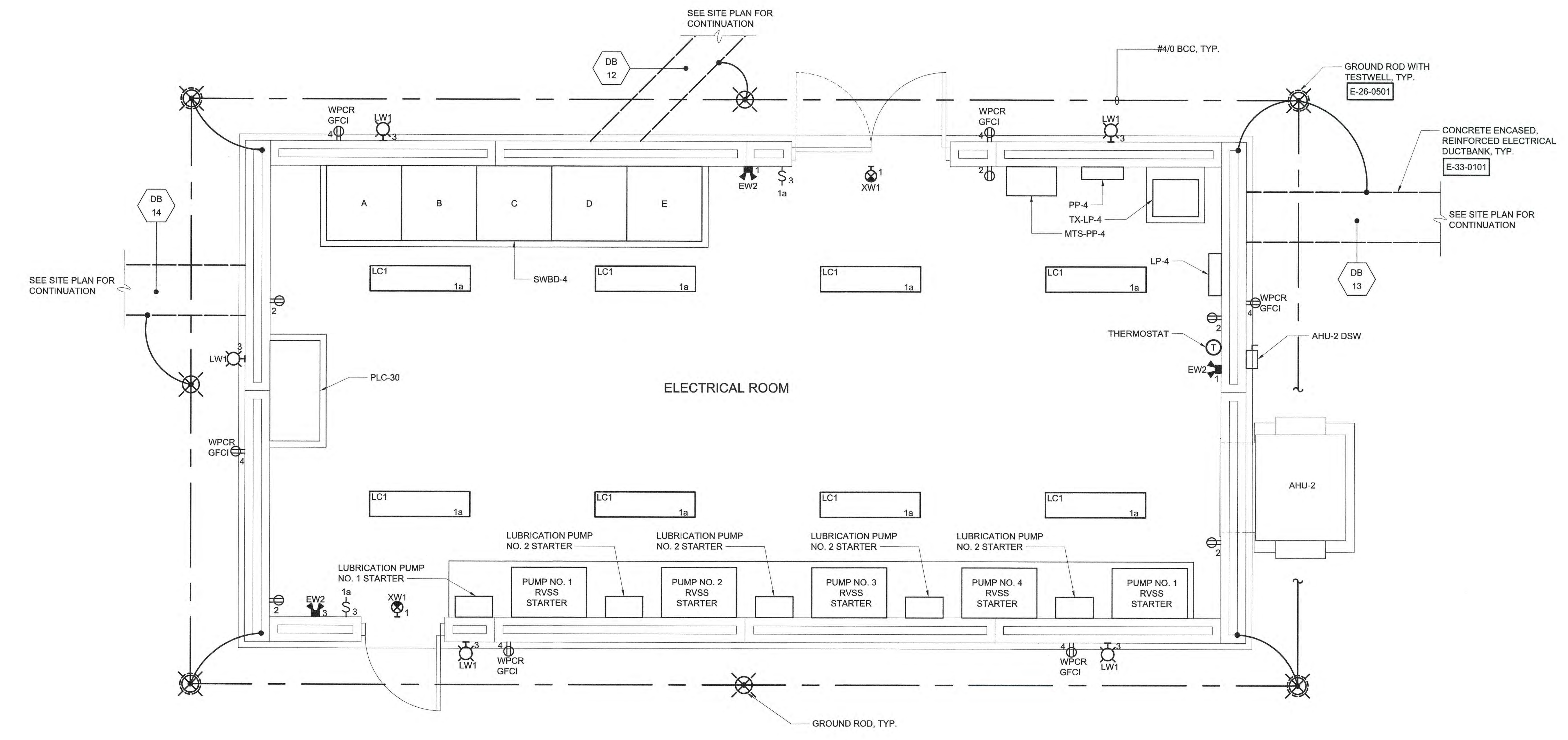
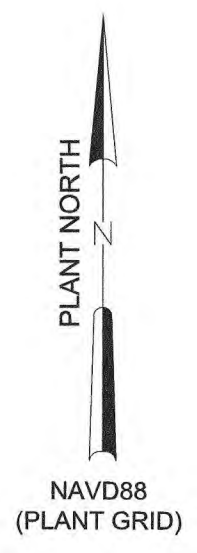


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 RALEIGH, NORTH CAROLINA 27607
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PUBLIC WORKS COMMISSION
 CITY OF FAYETTEVILLE, NORTH CAROLINA
 CROSS CREEK WRF AND ROCKFISH CREEK WRF
 SCREW PUMP IMPROVEMENTS

PUMP STATION NO.3 MODIFICATIONS
 ELECTRICAL
 TOP PLAN - MODIFIED

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E201



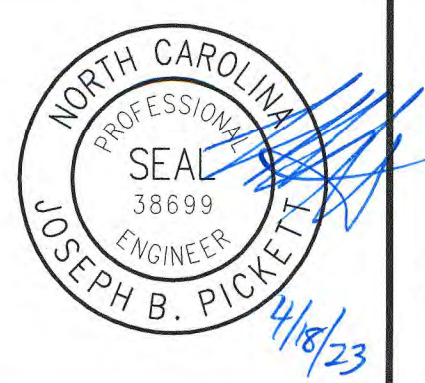
GROUNDING, POWER, AND LIGHTING PLAN
3/8" = 1'-0"

- NOTES:**
- ELECTRICAL ROOM IS DESIGNATED AS AN INDOOR DRY NON-PROCESS AREA.
 - ALL MATERIALS OF CONSTRUCTION AND ENCLOSURE TYPES SHALL BE PROVIDED IN ACCORDANCE WITH THE DESIGNATION OF THE AREAS IN WHICH THEY ARE INSTALLED. REFERENCE THE AREA DESIGNATION TABLES IN THE APPROPRIATE DIVISION 26 SPECIFICATION SECTIONS.
 - REFER TO N.E.C. ARTICLE 250.52(A)(3) FOR BONDING OF GROUND RING TO STRUCTURAL FOUNDATION REBAR.
 - EACH DUCTBANK GROUND CONDUCTOR CROSSING THE GROUND LOOP SHALL BE EXOTHERMICALLY WELDED TO THE GROUND LOOP CONDUCTOR. CONNECTIONS TO GROUND RODS SHALL BE MECHANICAL TYPE.
 - ALL TRANSFORMERS AND SWITCHBOARD SHALL BE BONDED TO THE GROUND RING CONDUCTOR.
 - GROUND LOOP CONDUCTOR SHALL BE #4/0 BARE COPPER WIRE 30 INCHES MINIMUM BELOW FINISHED GRADED. ALL GROUND CONDUCTORS TO EQUIPMENT OR STRUCTURAL STEEL SHALL BE BARE COPPER WIRE.
 - IF VERTICALLY DRIVEN GROUND RODS ENCOUNTER ROCK BEFORE BEING DRIVEN TO 10'-0" DEPTH, CONTRACTOR SHALL BE PERMITTED TO DRIVE ROD AT ANGLE, OR LAY IN ACCORDANCE WITH LATEST N.E.C. ARTICLE 250.53(G).
 - CONTRACTOR SHALL FURNISH AND INSTALL LIGHTNING PROTECTION FOR THIS STRUCTURE AS DESCRIBED IN SPECIFICATION SECTION 26 41 00.
 - ROUTE LIGHTNING PROTECTION SYSTEM DOWN CONDUCTOR CONCEALED IN CONDUIT TO GROUND RODS ASSOCIATED WITH BUILDING ROUNDING SYSTEM.
 - COORDINATE GROUND SYSTEM INSTALLATION WITH INSTALLATION OF THE LIGHTNING PROTECTION SYSTEM.
 - MOUNT ALL TYPE LC1 FIXTURES AT CEILING HEIGHT.
 - MOUNT ALL TYPE LW1 FIXTURES AT 8'-0" AFF.
 - MOUNT ALL TYPE EW2 FIXTURES AT 8'-0" AFF.
 - MOUNT ALL TYPE XW1 FIXTURES WITH THE BOTTOM OF THE FIXTURE 12" ABOVE THE TOP OF THE RESPECTIVE DOOR FRAME.

File: C:\30402-RA\30402-06\CAD_BIM\CONTRACT DRAWINGS\ELE\E220.dwg Saved by: TRAHAN Save Date: 3/21/2023 8:34 AM PLOT DATE: 4/14/2023 5:30 PM BY: TRAHAN

PROJECT ENGINEER:	M. MESSERE		
DESIGNED BY:	B. PICKETT		
DRAWN BY:	T. RAHLAN		
CHECKED BY:	D. ATKINSON		
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"		
1	CONSTRUCTION	4/2023	CWB
REV	ISSUED FOR	DATE	BY

ISSUED FOR CONSTRUCTION

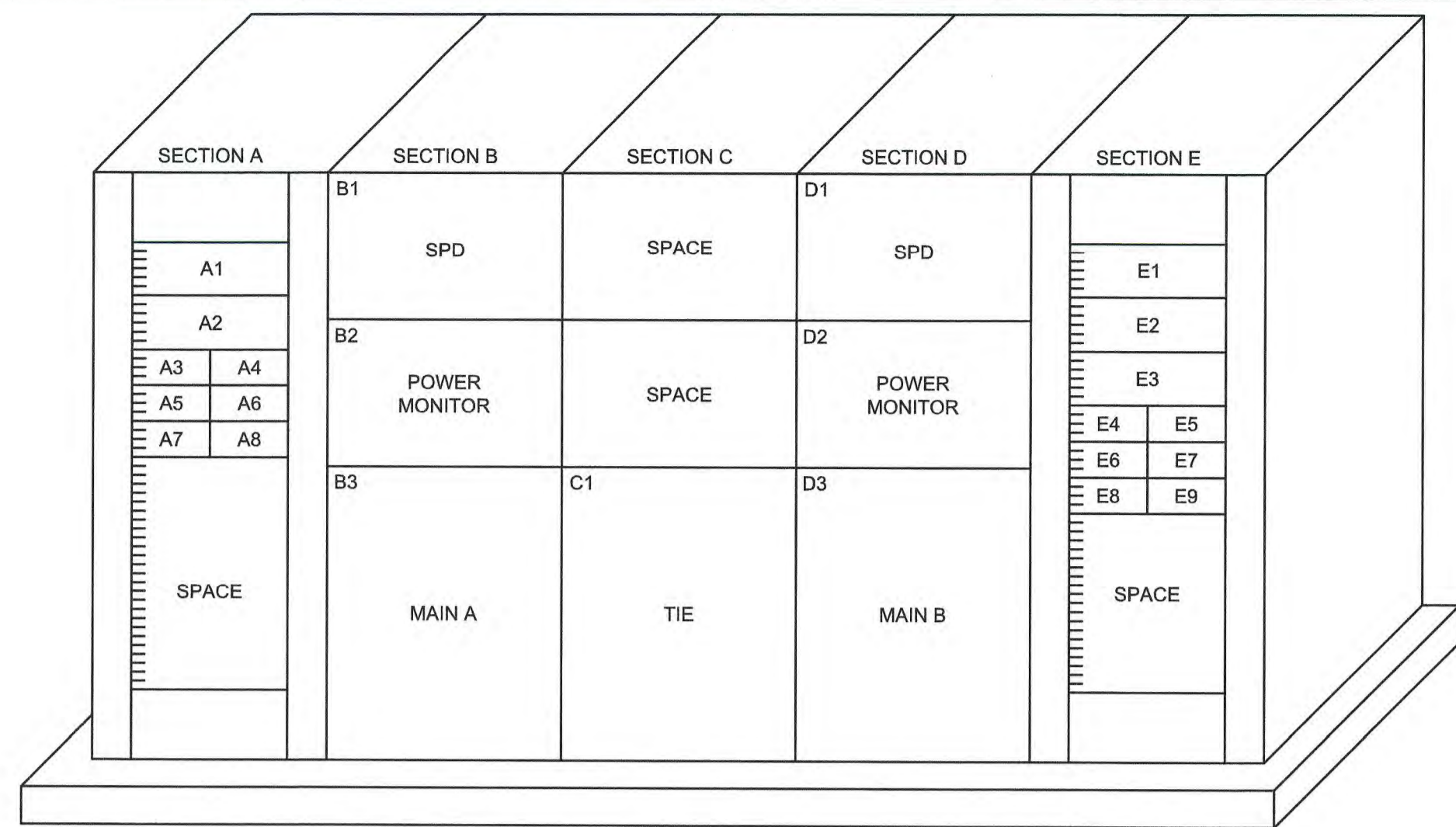


Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA
CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

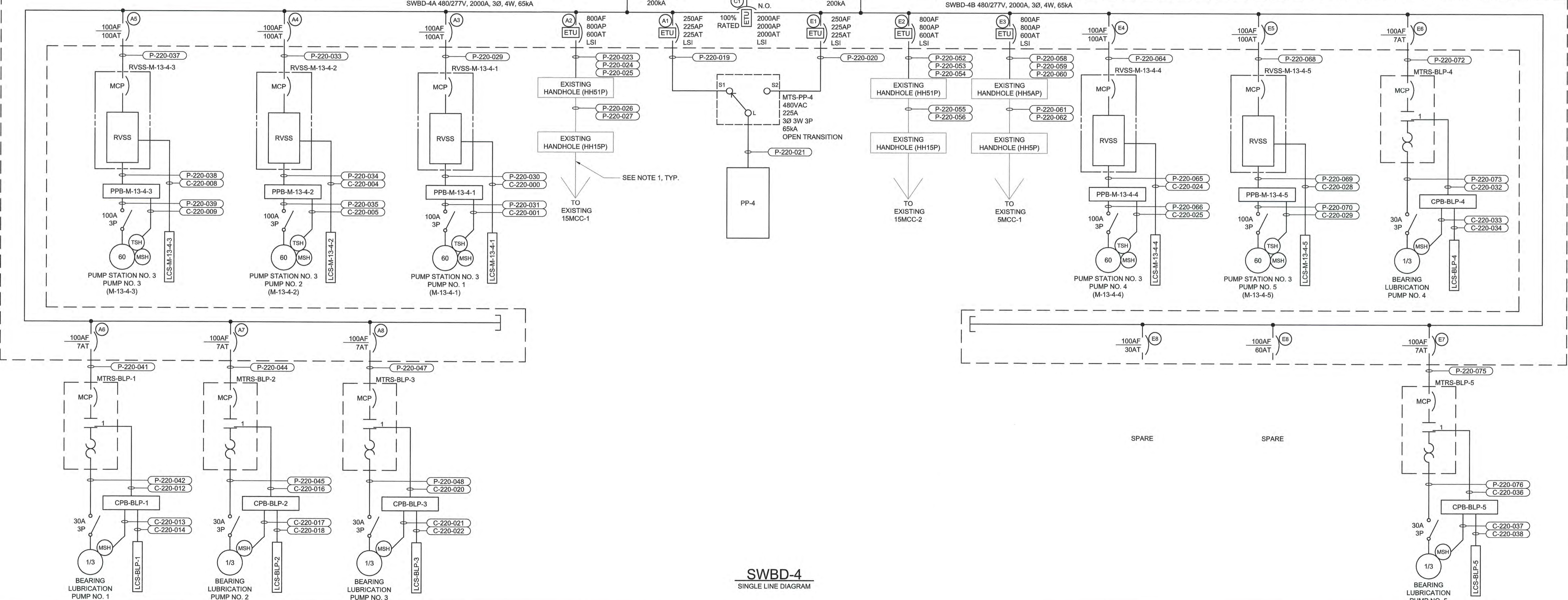
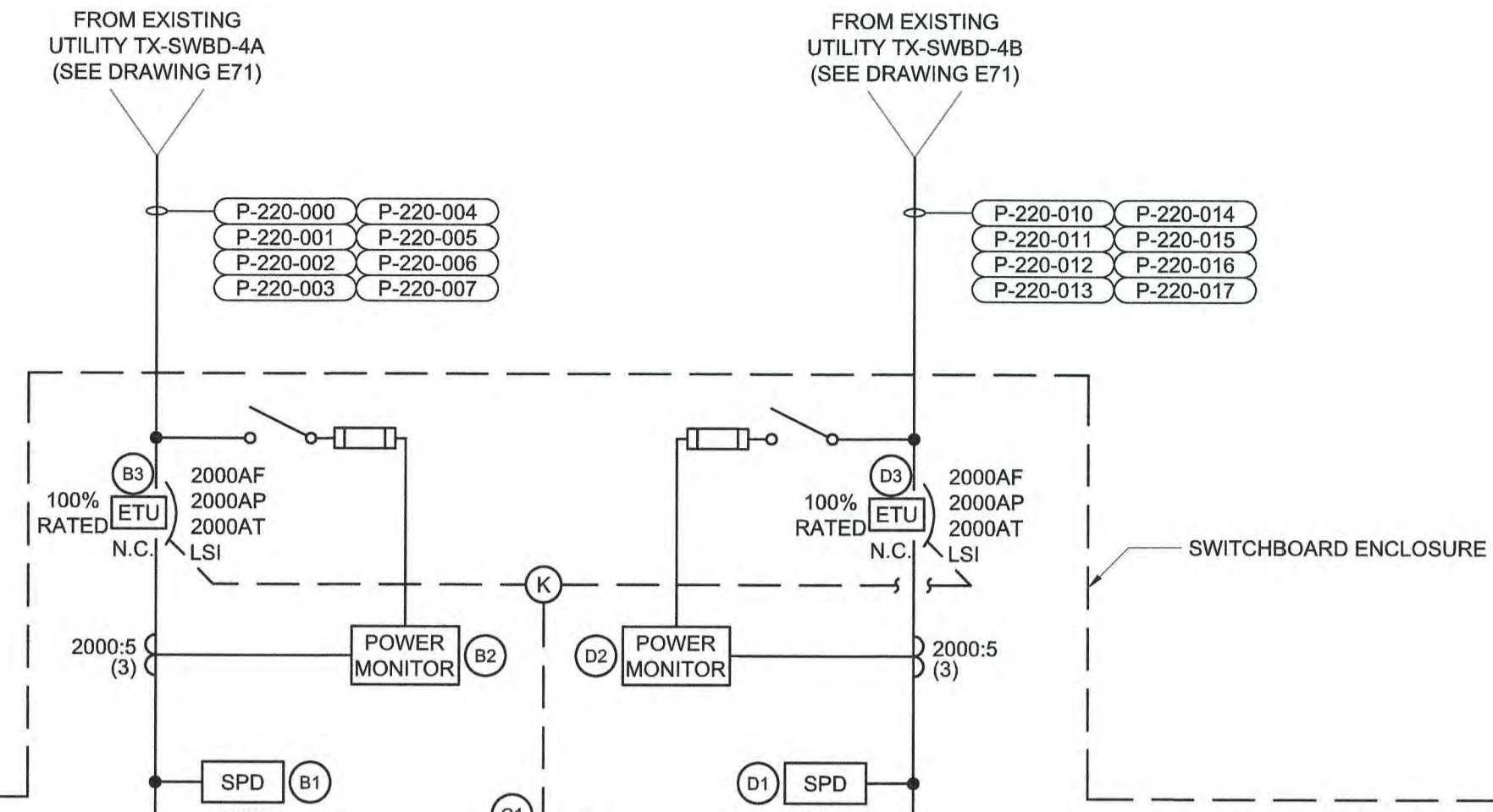
PUMP STATION NO. 3 ELECTRICAL BUILDING
ELECTRICAL
GROUNDING, POWER, AND LIGHTING PLAN

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E220



SWBD-4
ELEVATION (NTS)

- NOTES:**
- CONTRACTOR SHALL FURNISH AND INSTALL NEW CONDUCTORS UTILIZING EXISTING HANDHOLES AND RACEWAY TO RE-SUPPLYING EXISTING LOADS FROM NEW SWITCHBOARD (SWBD-4).
 - CERTAIN HANDHOLES ARE SHOWN ON SINGLE LINE DIAGRAMS TO SHOW TERMINATIONS OF CONDUITS AT THESE LOCATIONS. NOT ALL HANDHOLES ARE SHOWN FOR DRAWING CLARITY. REFER TO SITE PLANS, CONDUIT AND WIRE SCHEDULES FOR FURTHER DETAILS.



SWBD-4
SINGLE LINE DIAGRAM

File: O:\30402-FAL30402-064-CAD_BIM\CONTRACT DRAWINGS\REL\ED221.dwg, Saved by: TRAHAN, Save date: 4/13/2023 11:07 AM, PLOT DATE: 4/14/2023 5:30 PM, BY: TRAHAN

PROJECT ENGINEER:	M. MESSERE		
DESIGNED BY:	B. PICKETT		
DRAWN BY:	T. RAHLAN		
CHECKED BY:	D. ATKINSON		
1	CONSTRUCTION	4/2023	CWB
REV	ISSUED FOR	DATE	BY

ISSUED FOR CONSTRUCTION

Hazen

HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA

CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

PUMP STATION NO. 3 ELECTRICAL BUILDING
ELECTRICAL
SWBD-4 SINGLE LINE DIAGRAM AND
ELEVATION

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E221

480/277 VOLTS 3 PHASE, 4 WIRE				PP-4 MAIN BREAKER 225A 3P				TYPE: NEMA 12 MOUNT: SURFACE										
MODS	DESCRIPTION	WIRE	TRIP	POLE	No.	VOLT-AMPERES			VOLT-AMPERES			No.	POLE	TRIP	WIRE	DESCRIPTION	MODS	
						A	B	C	A	B	C							
-	AHU-2	SEE RISER	40	3	3	6,400	6,400		-	-	-	2	3	20		SPARE	-	
-	SPARE		20	3	9							4	3	20		SPARE	-	
-	SPARE		20	3	11			6,400				6	3	20		SPARE	-	
-	SPARE		20	3	13							8	3	20		SPARE	-	
-	SPARE		20	3	15							10	3	20		SPARE	-	
-	SPARE		20	3	17							12	3	20		SPARE	-	
-	SPARE		20	3	19							14	3	20		SPARE	-	
-	SPARE		20	3	21							16	3	20		SPARE	-	
-	SPARE		20	3	23							18	3	20		SPARE	-	
-	SPARE		20	3	25							20	3	20		SPARE	-	
-	SPARE		20	3	27							22	3	20		SPARE	-	
-	SPARE		20	3	29							24	3	20		SPARE	-	
-	SPARE		20	3	31							26	3	20		SPARE	-	
-	SPARE		20	3	33							28	3	20		SPARE	-	
-	SPARE		20	3	35							30	3	20		SPARE	-	
-	SPARE		20	3	37							32	3	20		SPARE	-	
-	SPARE		20	3	39							34	3	20		SPARE	-	
-	SPARE		20	3	41							36	3	20		SPARE	-	
						10,000						38	3	45	SEE RISER	TX-LP-4	-	
												40	3	45	SEE RISER	TX-LP-4	-	
												42	3	45	SEE RISER	TX-LP-4	-	
						10,000												

TOTAL	6,400	6,400	6,400		10,000	10,000	10,000	TOTAL
PHASE TOTAL					TOTAL LOAD (VA)			
16,400	16,400	16,400			49,200			
					TOTAL LOAD (A)			
					59			

MODIFICATION (MODS) LEGEND:

EPD - GROUND FAULT CIRCUIT INTERRUPTER (30mA)
GFCI - GROUND FAULT CIRCUIT INTERRUPTER (5mA)
LOD - LOCK-ON DEVICE
LFD - LOCK-OFF DEVICE

NOTES:

65K AIC
100KA SPD, INTEGRAL

208/120 VOLTS 3 PHASE, 4 WIRE				LP-4 MAIN BREAKER 100A 3P				TYPE: NEMA 12 MOUNT: SURFACE									
MODS	DESCRIPTION	WIRE	TRIP	POLE	No.	VOLT-AMPERES			VOLT-AMPERES			No.	POLE	TRIP	WIRE	DESCRIPTION	MODS
						A	B	C	A	B	C						
-	LIGHTS - ELECTRICAL ROOM	SEE NOTE 1	20	1	1	500			900			2	1	20	SEE NOTE 1	RECEPT. - ELECTRICAL ROOM	-
-	LIGHTS - OUTDOOR	SEE NOTE 1	20	1	3		300			900		4	1	20	SEE NOTE 1	RECEPT. - OUTDOOR	-
-	LIGHTS - PUMP STATION NO. 3	P-220-090	20	1	5			1,000			720	6	1	20	P-220-096	RECEPT. - PUMP STATION NO. 3	-
-	SPARE		20	1	7							8	1	20		SPARE	-
-	EXISTING SUMP PUMP	P-220-092	20	1	9		500			200		10	1	20	P-220-094	LI-13-2	-
-	SPARE		20	1	11							12	1	20		SPARE	-
-	PLC-30	P-220-088	20	1	13	1,000						14	1	20		SPARE	-
-	SPARE		20	1	15							16	1	20		SPARE	-
-	SPARE		20	1	17							18	1	20		SPARE	-
-	SPARE		20	1	19							20	1	20		SPARE	-
-	SPARE		20	1	21							22	1	20		SPARE	-
-	SPARE		20	1	23							24	1	20		SPARE	-
-	SPARE		20	1	25							26	1	20		SPARE	-
-	SPARE		20	1	27							28	1	20		SPARE	-
-	SPARE		20	1	29							30	1	20		SPARE	-
-	SPARE		20	1	31							32	1	20		SPARE	-
-	SPARE		20	1	33							34	1	20		SPARE	-
-	SPARE		20	1	35							36	1	20		SPARE	-
-	SPARE		20	1	37							38	1	20		SPARE	-
-	SPARE		20	1	39							40	1	20		SPARE	-
-	SPARE		20	1	41							42	1	20		SPARE	-

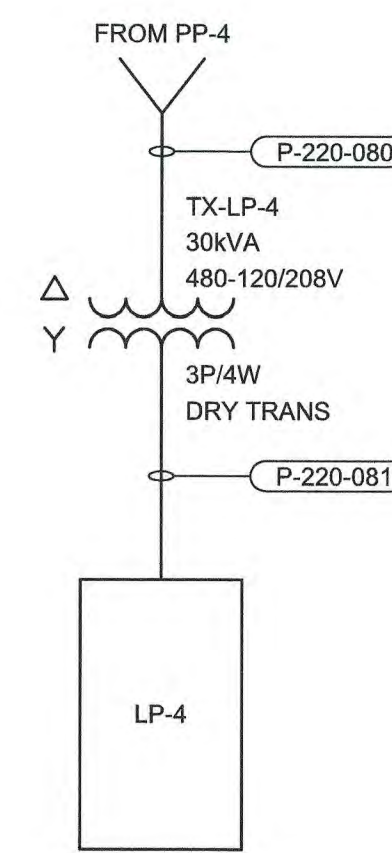
TOTAL	1,500	800	1,000		900	1,100	720	TOTAL
PHASE TOTAL					TOTAL LOAD (VA)			
2,400	1,900	1,720			6,020			
					TOTAL LOAD (A)			
					17			

MODIFICATION (MODS) LEGEND:

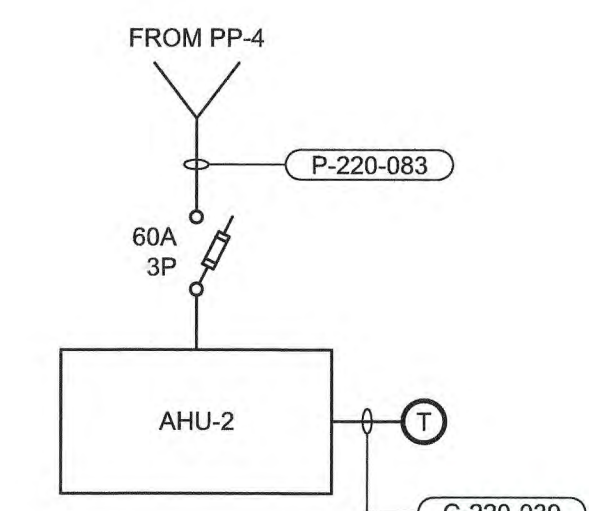
EPD - GROUND FAULT CIRCUIT INTERRUPTER (30mA)
GFCI - GROUND FAULT CIRCUIT INTERRUPTER (5mA)
LOD - LOCK-ON DEVICE
LFD - LOCK-OFF DEVICE

NOTES:

22K AIC
100KA SPD, INTEGRAL

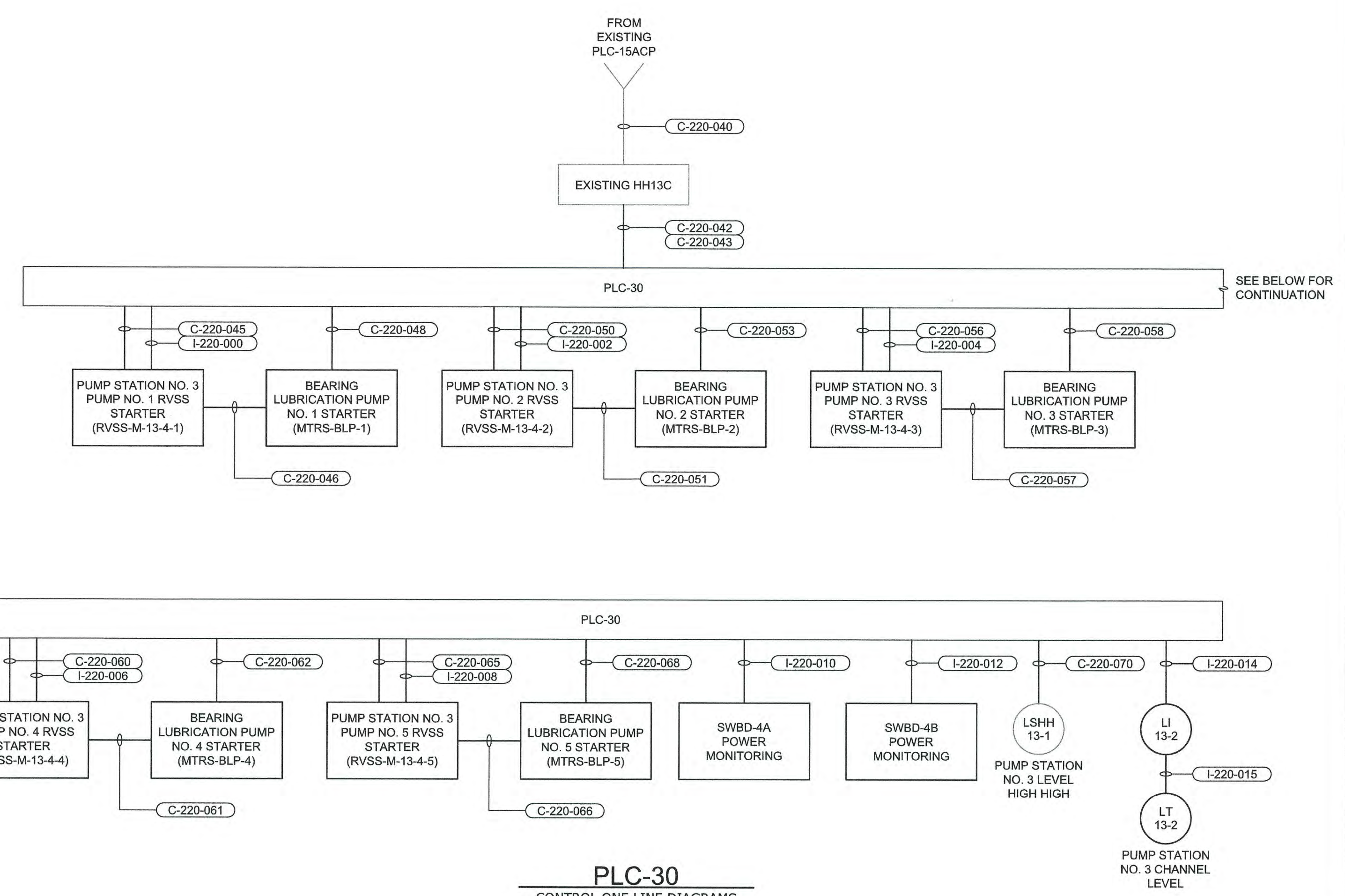


LIGHTING PANEL (LP-4)
RISER DIAGRAM



AIR HANDLING UNIT
RISER DIAGRAM

NOTES:
1. FURNISH AND INSTALL 2#12, #12GND IN 3/4" CONDUIT, UNLESS OTHERWISE NOTED.



PLC-30
CONTROL ONE LINE DIAGRAMS

File: C:\0402-3AL\0402-36\CAD_BIM\CONTRACT DRAWINGS\ELE\222 Saved by TRAHAN Save date: 3/20/2023 4:14 PM
PLOT DATE: 4/14/2023 5:31 PM BY: TRAHAN

PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	B. PICKETT
DRAWN BY:	T. RAHLAN
CHECKED BY:	D. ATKINSON
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
CONSTRUCTION	4/2023
ISSUED FOR	DATE

ISSUED FOR CONSTRUCTION

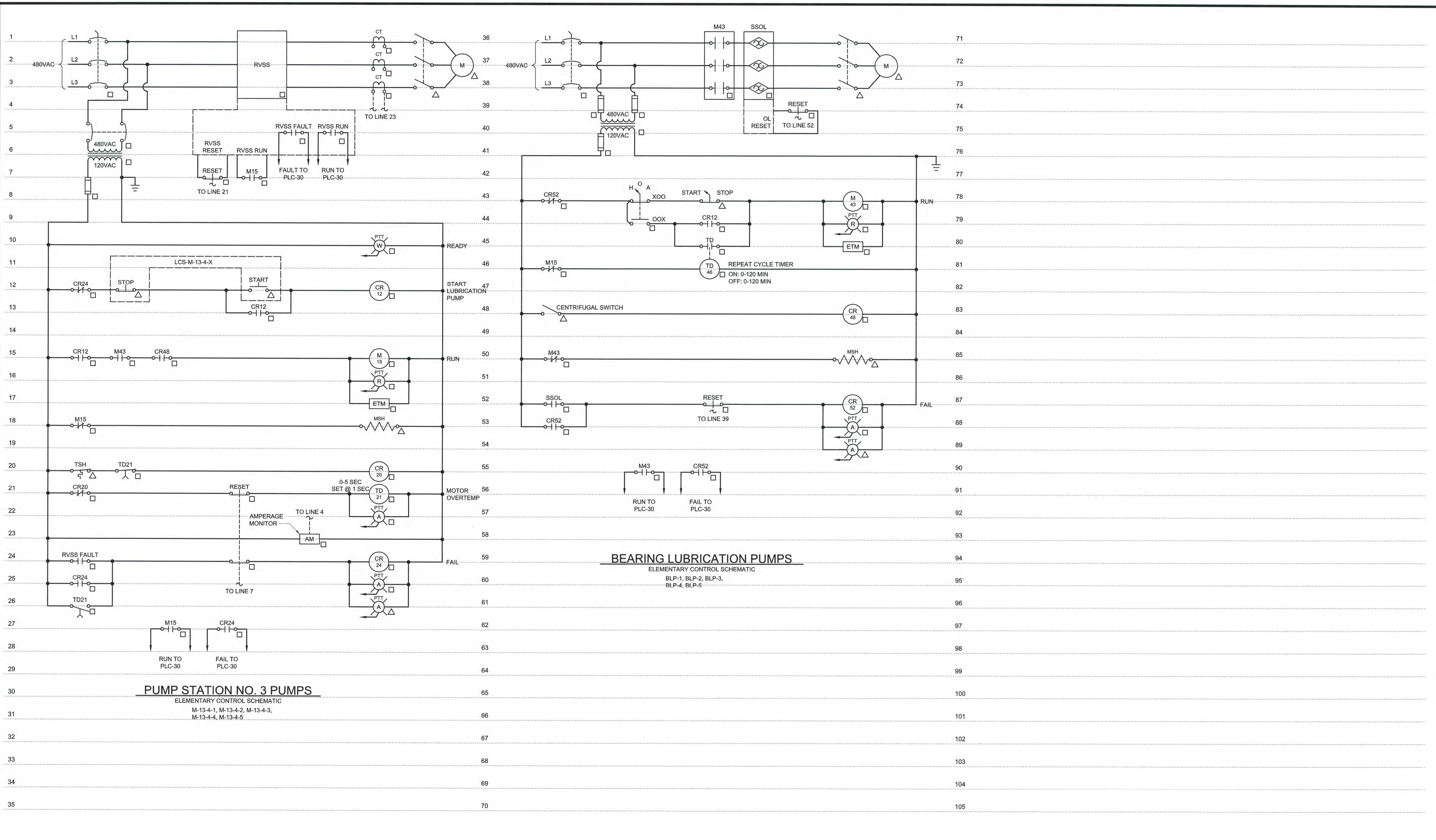


Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA
CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

PUMP STATION NO. 3 ELECTRICAL BUILDING
ELECTRICAL
PANEL SCHEDULES, RISER DIAGRAMS, AND
CONTROL ONE LINE DIAGRAMS

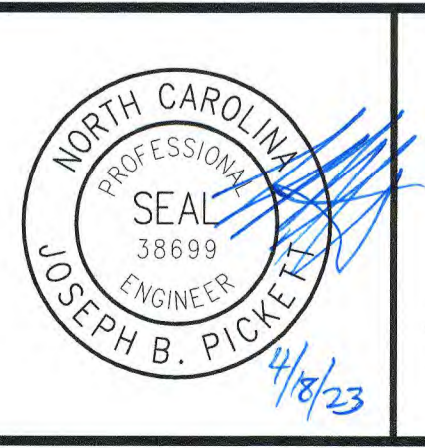
DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E222



File: 030402-RAJ30402-064CAD_BIMCONTRACT DRAWINGS/ELE223 Saved by TRAHAN Save date: 4/14/2023 1:59 PM
 PLOT DATE: 4/14/2023 5:31 PM BY: TRAHAN

PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	B. PICKETT
DRAWN BY:	T. RAHLAN
CHECKED BY:	D. ATKINSON
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
1 CONSTRUCTION	4/2023 CWB
REV ISSUED FOR	DATE BY

ISSUED FOR CONSTRUCTION



Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA
CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

PUMP STATION NO. 3 ELECTRICAL BUILDING
ELECTRICAL
ELEMENTARY CONTROL SCHEMATICS

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E223

NOTES:

1. CONDUIT SIZES IDENTIFIED AS "EX." INDICATED CONTRACTOR SHALL UTILIZE EXISTING CONDUIT.

CONDUIT NO.	SIZE	FROM	TO	CONDUCTORS	REMARKS
P-220-000	4"	EXISTING UTILITY TX-SWBD-4A	SWBD-4A	4#500KCMIL, #1/0GND	
P-220-001	4"	EXISTING UTILITY TX-SWBD-4A	SWBD-4A	4#500KCMIL, #1/0GND	
P-220-002	4"	EXISTING UTILITY TX-SWBD-4A	SWBD-4A	4#500KCMIL, #1/0GND	
P-220-003	4"	EXISTING UTILITY TX-SWBD-4A	SWBD-4A	4#500KCMIL, #1/0GND	
P-220-004	4"	EXISTING UTILITY TX-SWBD-4A	SWBD-4A	4#500KCMIL, #1/0GND	
P-220-005	4"	EXISTING UTILITY TX-SWBD-4A	SWBD-4A	4#500KCMIL, #1/0GND	
P-220-006	4"	EXISTING UTILITY TX-SWBD-4A	SWBD-4A	EMPTY W/ PULLSTRING	
P-220-007	4"	EXISTING UTILITY TX-SWBD-4A	SWBD-4A	EMPTY W/ PULLSTRING	
P-220-008				NOT USED	
P-220-009				NOT USED	
P-220-010	4"	EXISTING UTILITY TX-SWBD-4B	SWBD-4B	4#500KCMIL, #1/0GND	
P-220-011	4"	EXISTING UTILITY TX-SWBD-4B	SWBD-4B	4#500KCMIL, #1/0GND	
P-220-012	4"	EXISTING UTILITY TX-SWBD-4B	SWBD-4B	4#500KCMIL, #1/0GND	
P-220-013	4"	EXISTING UTILITY TX-SWBD-4B	SWBD-4B	4#500KCMIL, #1/0GND	
P-220-014	4"	EXISTING UTILITY TX-SWBD-4B	SWBD-4B	4#500KCMIL, #1/0GND	
P-220-015	4"	EXISTING UTILITY TX-SWBD-4B	SWBD-4B	4#500KCMIL, #1/0GND	
P-220-016	4"	EXISTING UTILITY TX-SWBD-4B	SWBD-4B	EMPTY W/ PULLSTRING	
P-220-017	4"	EXISTING UTILITY TX-SWBD-4B	SWBD-4B	EMPTY W/ PULLSTRING	
P-220-018				NOT USED	
P-220-019	3"	SWBD-4A	MTS-PP-4	3#250KCMIL, #4GND	
P-220-020	3"	SWBD-4B	MTS-PP-4	3#250KCMIL, #4GND	
P-220-021	3"	MTS-PP-4	PP-4	3#250KCMIL, #4GND	
P-220-022				NOT USED	
P-220-023	4"	SWBD-4A	EXISTING HANDHOLE (HH51P)	3#500KCMIL, #1GND	EXISTING 15MCC-1
P-220-024	4"	SWBD-4A	EXISTING HANDHOLE (HH51P)	3#500KCMIL, #1GND	EXISTING 15MCC-1
P-220-025	4"	SWBD-4A	EXISTING HANDHOLE (HH51P)	EMPTY W/ PULLSTRING	SPARE
P-220-026	EX.	EXISTING HANDHOLE (HH51P)	EXISTING 15MCC-1	3#500KCMIL, #1GND	VIA EXISTING HH15P
P-220-027	EX.	EXISTING HANDHOLE (HH51P)	EXISTING 15MCC-1	3#500KCMIL, #1GND	VIA EXISTING HH15P
P-220-028				NOT USED	
P-220-029	2"	SWBD-4A	PUMP STATION NO. 3 PUMP NO. 1 STARTER (RVSS-M-13-4-1)	3#2, #8GND	
P-220-030	2"	PUMP STATION NO. 3 PUMP NO. 1 STARTER (RVSS-M-13-4-1)	PPB-M-13-4-1	3#2, 2#12, 4#14, #8GND	
P-220-031	2"	PPB-M-13-4-1	PUMP STATION NO. 3 PUMP NO. 1 (M-13-4-1)	3#2, #8GND	VIA DSW
P-220-032				NOT USED	
P-220-033	2"	SWBD-4A	PUMP STATION NO. 3 PUMP NO. 2 STARTER (RVSS-M-13-4-2)	3#2, #8GND	
P-220-034	2"	PUMP STATION NO. 3 PUMP NO. 2 STARTER (RVSS-M-13-4-2)	PPB-M-13-4-2	3#2, 2#12, 4#14, #8GND	
P-220-035	2"	PPB-M-13-4-2	PUMP STATION NO. 3 PUMP NO. 2 (M-13-4-2)	3#2, #8GND	VIA DSW
P-220-036				NOT USED	
P-220-037	2"	SWBD-4A	PUMP STATION NO. 3 PUMP NO. 3 STARTER (RVSS-M-13-4-3)	3#2, #8GND	
P-220-038	2"	PUMP STATION NO. 3 PUMP NO. 3 STARTER (RVSS-M-13-4-3)	PPB-M-13-4-3	3#2, 2#12, 4#14, #8GND	
P-220-039	2"	PPB-M-13-4-3	PUMP STATION NO. 3 PUMP NO. 3 (M-13-4-3)	3#2, #8GND	VIA DSW
P-220-040				NOT USED	
P-220-041	3/4"	SWBD-4A	BEARING LUBRICATION PUMP NO. 1 STARTER (MTRS-BLP-1)	3#12, #12GND	
P-220-042	1"	BEARING LUBRICATION PUMP NO. 1 STARTER (MTRS-BLP-1)	BEARING LUBRICATION PUMP NO. 1	3#12, #12GND	VIA DSW
P-220-043				NOT USED	
P-220-044	3/4"	SWBD-4A	BEARING LUBRICATION PUMP NO. 2 STARTER (MTRS-BLP-2)	3#12, #12GND	
P-220-045	1"	BEARING LUBRICATION PUMP NO. 2 STARTER (MTRS-BLP-2)	BEARING LUBRICATION PUMP NO. 2	3#12, #12GND	VIA DSW
P-220-046				NOT USED	
P-220-047	3/4"	SWBD-4A	BEARING LUBRICATION PUMP NO. 3 STARTER (MTRS-BLP-3)	3#12, #12GND	
P-220-048	1"	BEARING LUBRICATION PUMP NO. 3 STARTER (MTRS-BLP-3)	BEARING LUBRICATION PUMP NO. 3	3#12, #12GND	VIA DSW
P-220-049				NOT USED	
P-220-050	2"	SWBD-4A	EMH-04	EMPTY W/ PULLSTRING	SPARE
P-220-051				NOT USED	
P-220-052	4"	SWBD-4B	EXISTING HANDHOLE (HH51P)	3#500KCMIL, #1GND	EXISTING 15MCC-2
P-220-053	4"	SWBD-4B	EXISTING HANDHOLE (HH51P)	3#500KCMIL, #1GND	EXISTING 15MCC-2
P-220-054	4"	SWBD-4B	EXISTING HANDHOLE (HH51P)	EMPTY W/ PULLSTRING	SPARE
P-220-055	EX.	EXISTING HANDHOLE (HH51P)	EXISTING 15MCC-2	3#500KCMIL, #1GND	VIA EXISTING HH15P
P-220-056	EX.	EXISTING HANDHOLE (HH51P)	EXISTING 15MCC-2	3#500KCMIL, #1GND	VIA EXISTING HH15P
P-220-057				NOT USED	
P-220-058	4"	SWBD-4B	EXISTING HANDHOLE (HH5AP)	3#500KCMIL, #1GND	EXISTING 5MCC-1
P-220-059	4"	SWBD-4B	EXISTING HANDHOLE (HH5AP)	3#500KCMIL, #1GND	EXISTING 5MCC-1
P-220-060	4"	SWBD-4B	EXISTING HANDHOLE (HH5AP)	EMPTY W/ PULLSTRING	SPARE
P-220-061	EX.	EXISTING HANDHOLE (HH5AP)	EXISTING 5MCC-1	3#500KCMIL, #1GND	VIA EXISTING HH5P
P-220-062	EX.	EXISTING HANDHOLE (HH5AP)	EXISTING 5MCC-1	3#500KCMIL, #1GND	VIA EXISTING HH5P
P-220-063				NOT USED	
P-220-064	2"	SWBD-4B	PUMP STATION NO. 3 PUMP NO. 4 STARTER (RVSS-M-13-4-4)	3#2, #8GND	
P-220-065	2"	PUMP STATION NO. 3 PUMP NO. 4 STARTER (RVSS-M-13-4-4)	PPB-M-13-4-4	3#2, 2#12, 4#14, #8GND	
P-220-066	2"	PPB-M-13-4-4	PUMP STATION NO. 3 PUMP NO. 4 (M-13-4-4)	3#2, #8GND	VIA DSW
P-220-067				NOT USED	
P-220-068	2"	SWBD-4B	PUMP STATION NO. 3 PUMP NO. 5 STARTER (RVSS-M-13-4-5)	3#2, #8GND	
P-220-069	2"	PUMP STATION NO. 3 PUMP NO. 5 STARTER (RVSS-M-13-4-5)	PPB-M-13-4-5	3#2, 2#12, 4#14, #8GND	
P-220-070	2"	PPB-M-13-4-5	PUMP STATION NO. 3 PUMP NO. 5 (M-13-4-5)	3#2, #8GND	VIA DSW
P-220-071				NOT USED	
P-220-072	3/4"	SWBD-4B	BEARING LUBRICATION PUMP NO. 4 STARTER (MTRS-BLP-4)	3#12, #12GND	
P-220-073	1"	BEARING LUBRICATION PUMP NO. 4 STARTER (MTRS-BLP-4)	BEARING LUBRICATION PUMP NO. 4	3#12, #12GND	VIA DSW
P-220-074				NOT USED	
P-220-075	3/4"	SWBD-4B	BEARING LUBRICATION PUMP NO. 5 STARTER (MTRS-BLP-5)	3#12, #12GND	
P-220-076	1"	BEARING LUBRICATION PUMP NO. 5 STARTER (MTRS-BLP-5)	BEARING LUBRICATION PUMP NO. 5	3#12, #12GND	VIA DSW
P-220-077				NOT USED	
P-220-078	2"	SWBD-4B	EMH-04	EMPTY W/ PULLSTRING	
P-220-079				NOT USED	

CONDUIT NO.	SIZE	FROM	TO	CONDUCTORS	REMARKS
P-220-080	1"	PP-4	TX-LP-4	3#8, #10GND	
P-220-081	2"	TX-LP-4	LP-4	4#1, #6GND	
P-220-082				NOT USED	
P-220-083	1"	PP-4	AHU-2	3#8, #10GND	VIA DSW
P-220-084				NOT USED	
P-220-085	1"	PP-4	EMH-04	EMPTY W/ PULLSTRING	
P-220-086	1"	PP-4	EMH-04	EMPTY W/ PULLSTRING	
P-220-087				NOT USED	
P-220-088	3/4"	LP-4	PLC-30	2#12, #12GND	
P-220-089				NOT USED	
P-220-090	1"	LP-4	PUMP STATION NO. 3 LIGHTS	2#10, #10GND	
P-220-091				NOT USED	
P-220-092	1"	LP-4	EXISTING SUMP PUMP STATION	2#10, #10GND	
P-220-093				NOT USED	
P-220-094	1"	LP-4	LI-13-2	2#10, #10GND	
P-220-095				NOT USED	
P-220-096	1"	LP-4	PUMP STATION NO. 3 RECEPTACLES	2#10, #10GND	
P-220-097				NOT USED	
P-220-098	1"	LP-4	EMH-04	EMPTY W/ PULLSTRING	
P-220-099	1"	LP-4	EMH-04	EMPTY W/ PULLSTRING	
P-220-100	1"	LP-4	EMH-04	EMPTY W/ PULLSTRING	
P-220-101				NOT USED	
P-220-102				NOT USED	
P-220-103				NOT USED	
P-220-104				NOT USED	
P-220-105				NOT USED	
P-220-106				NOT USED	
P-220-107				NOT USED	
P-220-108				NOT USED	
P-220-109				NOT USED	
P-220-110				NOT USED	

File: C:\0402-04\0402-04\0402-04\CONTRACT DRAWINGS\ELE\E224.dwg Saved by: T. RAHLAN Save date: 4/13/2023 11:15 AM PLOT DATE: 4/14/2023 5:01 PM BY: T. RAHLAN

PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	B. PICKETT
DRAWN BY:	T. RAHLAN
CHECKED BY:	D. ATKINSON
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
1 CONSTRUCTION 4/2023 CWB	
REV ISSUED FOR DATE BY	

ISSUED FOR CONSTRUCTION



Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA

CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

PUMP STATION NO. 3 ELECTRICAL BUILDING
ELECTRICAL
CONDUIT AND WIRE SCHEDULES

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E224

NOTES:

- CONTRACTOR NOTE ALL CONDUIT TAGS DENOTED WITH "I" PREFIX SHALL BE A METALLIC RACEWAY COMPLETE FROM SOURCE TO LOAD. REFER TO THE REQUIREMENTS OF SPECIFICATION SECTION 26 05 33.13 FOR FURTHER DETAILS.

CONDUIT NO.	SIZE	FROM	TO	CONDUCTORS	REMARKS
C-220-000	1"	PUMP STATION NO. 3 PUMP NO. 1 STARTER (RVSS-M-13-4-1)	LCS-M-13-4-1	8#14, #14GND	
C-220-001	3/4"	PPB-M-13-4-1	PUMP STATION NO. 3 PUMP NO. 1 (M-13-4-1)	2#12, 4#14, #12GND	MSH, TSH
C-220-002				NOT USED	
C-220-003				NOT USED	
C-220-004	1"	PUMP STATION NO. 3 PUMP NO. 2 STARTER (RVSS-M-13-4-2)	LCS-M-13-4-2	8#14, #14GND	
C-220-005	3/4"	PPB-M-13-4-2	PUMP STATION NO. 3 PUMP NO. 2 (M-13-4-2)	2#12, 4#14, #12GND	MSH, TSH
C-220-006				NOT USED	
C-220-007				NOT USED	
C-220-008	1"	PUMP STATION NO. 3 PUMP NO. 3 STARTER (RVSS-M-13-4-3)	LCS-M-13-4-3	8#14, #14GND	
C-220-009	3/4"	PPB-M-13-4-3	PUMP STATION NO. 3 PUMP NO. 3 (M-13-4-3)	2#12, 4#14, #12GND	MSH, TSH
C-220-010				NOT USED	
C-220-011				NOT USED	
C-220-012	1"	BEARING LUBRICATION PUMP NO. 1 STARTER (MTRS-BLP-1)	CPB-BLP-1	2#12, 8#14, #12GND	
C-220-013	3/4"	CPB-BLP-1	BEARING LUBRICATION PUMP NO. 1	2#12, #12GND	MSH
C-220-014	3/4"	CPB-BLP-1	LCS-BLP-1	8#14, #14GND	
C-220-015				NOT USED	
C-220-016	1"	BEARING LUBRICATION PUMP NO. 2 STARTER (MTRS-BLP-2)	CPB-BLP-2	2#12, 8#14, #12GND	
C-220-017	3/4"	CPB-BLP-2	BEARING LUBRICATION PUMP NO. 2	2#12, #12GND	MSH
C-220-018	3/4"	CPB-BLP-2	LCS-BLP-2	8#14, #14GND	
C-220-019				NOT USED	
C-220-020	1"	BEARING LUBRICATION PUMP NO. 3 STARTER (MTRS-BLP-3)	CPB-BLP-3	2#12, 8#14, #12GND	
C-220-021	3/4"	CPB-BLP-3	BEARING LUBRICATION PUMP NO. 3	2#12, #12GND	MSH
C-220-022	3/4"	CPB-BLP-3	LCS-BLP-3	8#14, #14GND	
C-220-023				NOT USED	
C-220-024	1"	PUMP STATION NO. 3 PUMP NO. 4 STARTER (RVSS-M-13-4-4)	LCS-M-13-4-4	8#14, #14GND	
C-220-025	3/4"	PPB-M-13-4-4	PUMP STATION NO. 3 PUMP NO. 4 (M-13-4-4)	2#12, 4#14, #12GND	MSH, TSH
C-220-026				NOT USED	
C-220-027				NOT USED	
C-220-028	1"	PUMP STATION NO. 3 PUMP NO. 5 STARTER (RVSS-M-13-4-5)	LCS-M-13-4-5	8#14, #14GND	
C-220-029	3/4"	PPB-M-13-4-5	PUMP STATION NO. 3 PUMP NO. 5 (M-13-4-5)	2#12, 4#14, #12GND	MSH, TSH
C-220-030				NOT USED	
C-220-031				NOT USED	
C-220-032	1"	BEARING LUBRICATION PUMP NO. 4 STARTER (MTRS-BLP-4)	CPB-BLP-4	2#12, 8#14, #12GND	
C-220-033	3/4"	CPB-BLP-4	BEARING LUBRICATION PUMP NO. 4	2#12, #12GND	MSH
C-220-034	3/4"	CPB-BLP-4	LCS-BLP-4	8#14, #14GND	
C-220-035				NOT USED	
C-220-036	1"	BEARING LUBRICATION PUMP NO. 5 STARTER (MTRS-BLP-5)	CPB-BLP-5	2#12, 8#14, #12GND	
C-220-037	3/4"	CPB-BLP-5	BEARING LUBRICATION PUMP NO. 5	2#12, #12GND	MSH
C-220-038	3/4"	CPB-BLP-5	LCS-BLP-5	8#14, #14GND	
C-220-039	3/4"	AHU-2	THERMOSTAT	2#14, #14GND	
C-220-040	EX.	EXISTING PLC-15ACP	EXISTING HH13C	(1) FIBER OPTIC CABLE	PLC-30
C-220-041				NOT USED	
C-220-042	2"	EXISTING HH13C	PLC-30	(1) FIBER OPTIC CABLE	
C-220-043	2"	EXISTING HH13C	PLC-30	EMPTY W/ PULLSTRING	SPARE
C-220-044				NOT USED	
C-220-045	1"	PLC-30	PUMP STATION PUMP NO. 1 STARTER (RVSS-M-13-4-1)	8#14, #14GND	
C-220-046	3/4"	PUMP STATION NO. 3 PUMP NO. 1 STARTER (RVSS-M-13-4-1)	BEARING LUBRICATION PUMP NO. 1 STARTER (MTRS-BLP-1)	6#14, #14GND	
C-220-047				NOT USED	
C-220-048	3/4"	PLC-30	BEARING LUBRICATION PUMP NO. 1 STARTER (MTRS-BLP-1)	8#14, #14GND	
C-220-049				NOT USED	
C-220-050	1"	PLC-30	PUMP STATION NO. 3 PUMP NO. 2 STARTER (RVSS-M-13-4-2)	8#14, #14GND	
C-220-051	3/4"	PUMP STATION NO. 3 PUMP NO. 2 STARTER (RVSS-M-13-4-2)	BEARING LUBRICATION PUMP NO. 2 STARTER (MTRS-BLP-2)	6#14, #14GND	
C-220-052				NOT USED	
C-220-053	3/4"	PLC-30	BEARING LUBRICATION PUMP NO. 2 STARTER (MTRS-BLP-2)	8#14, #14GND	
C-220-054				NOT USED	
C-220-055	1"	PLC-30	PUMP STATION NO. 3 PUMP NO. 3 STARTER (RVSS-M-13-4-3)	8#14, #14GND	
C-220-056	3/4"	PUMP STATION NO. 3 PUMP NO. 3 STARTER (RVSS-M-13-4-3)	BEARING LUBRICATION PUMP NO. 3 STARTER (MTRS-BLP-3)	6#14, #14GND	
C-220-057				NOT USED	
C-220-058	3/4"	PLC-30	BEARING LUBRICATION PUMP NO. 3 STARTER (MTRS-BLP-3)	8#14, #14GND	
C-220-059				NOT USED	
C-220-060	1"	PLC-30	PUMP STATION NO. 3 PUMP NO. 4 STARTER (RVSS-M-13-4-4)	8#14, #14GND	
C-220-061	3/4"	PUMP STATION NO. 3 PUMP NO. 4 STARTER (RVSS-M-13-4-4)	BEARING LUBRICATION PUMP NO. 4 STARTER (MTRS-BLP-4)	6#14, #14GND	
C-220-062				NOT USED	
C-220-063	3/4"	PLC-30	BEARING LUBRICATION PUMP NO. 4 STARTER (MTRS-BLP-4)	8#14, #14GND	
C-220-064				NOT USED	
C-220-065	1"	PLC-30	PUMP STATION NO. 3 PUMP NO. 5 STARTER (RVSS-M-13-4-5)	8#14, #14GND	
C-220-066	3/4"	PUMP STATION NO. 3 PUMP NO. 5 STARTER (RVSS-M-13-4-5)	BEARING LUBRICATION PUMP NO. 5 STARTER (MTRS-BLP-5)	6#14, #14GND	
C-220-067				NOT USED	
C-220-068	3/4"	PLC-30	BEARING LUBRICATION PUMP NO. 5 STARTER (MTRS-BLP-5)	8#14, #14GND	
C-220-069				NOT USED	
C-220-070	1"	PLC-30	EXISTING LSHH-13-1	4#14, #14GND	
C-220-071				NOT USED	
C-220-072	1"	PLC-30	EXISTING SUMP PUMP STATION	EMPTY W/ PULLSTRING	SPARE
C-220-073				NOT USED	
C-220-074	1"	PLC-30	EMH-04	EMPTY W/ PULLSTRING	SPARE
C-220-075	2"	PLC-30	EMH-04	EMPTY W/ PULLSTRING	SPARE
C-220-076				NOT USED	
C-220-077				NOT USED	
C-220-078				NOT USED	
C-220-079				NOT USED	

CONDUIT NO.	SIZE	FROM	TO	CONDUCTORS	REMARKS
I-220-000	1"	PLC-30	PUMP STATION NO. 3 PUMP NO. 1 STARTER (RVSS-M-13-4-1)	(1) CAT6	AMPERAGE MONITOR
I-220-001				NOT USED	
I-220-002	1"	PLC-30	PUMP STATION NO. 3 PUMP NO. 2 STARTER (RVSS-M-13-4-2)	(1) CAT6	AMPERAGE MONITOR
I-220-003				NOT USED	
I-220-004	1"	PLC-30	PUMP STATION NO. 3 PUMP NO. 3 STARTER (RVSS-M-13-4-3)	(1) CAT6	AMPERAGE MONITOR
I-220-005				NOT USED	
I-220-006	1"	PLC-30	PUMP STATION NO. 3 PUMP NO. 4 STARTER (RVSS-M-13-4-4)	(1) CAT6	AMPERAGE MONITOR
I-220-007				NOT USED	
I-220-008	1"	PLC-30	PUMP STATION NO. 3 PUMP NO. 5 STARTER (RVSS-M-13-4-5)	(1) CAT6	AMPERAGE MONITOR
I-220-009				NOT USED	
I-220-010	1"	PLC-30	SWBD-4A POWER MONITORING	(1) RS-485 CABLE	
I-220-011				NOT USED	
I-220-012	1"	PLC-30	SWBD-4B POWER MONITORING	(1) RS-485 CABLE	
I-220-013				NOT USED	
I-220-014	1"	PLC-30	LI-13-2	2(2)C#16TSH, #14GND	
I-220-015	3/4"	LI-13-2	LT-13-2	CABLE BY MFR	
I-220-016				NOT USED	
I-220-017	2"	PLC-30	EMH-04	EMPTY W/ PULLSTRING	SPARE
I-220-018				NOT USED	
I-220-019				NOT USED	
I-220-020				NOT USED	
I-220-021				NOT USED	
I-220-022				NOT USED	
I-220-023				NOT USED	
I-220-024				NOT USED	
I-220-025				NOT USED	
I-220-026				NOT USED	
I-220-027				NOT USED	
I-220-028				NOT USED	
I-220-029				NOT USED	
I-220-030				NOT USED	

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PLOT DATE: 4/14/2023 5:32 PM BY: TRAHAN

PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	B. PICKETT
DRAWN BY:	T. RAHLAN
CHECKED BY:	D. ATKINSON
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
1 CONSTRUCTION 4/2023 CWB	
REV ISSUED FOR DATE BY	

ISSUED FOR CONSTRUCTION



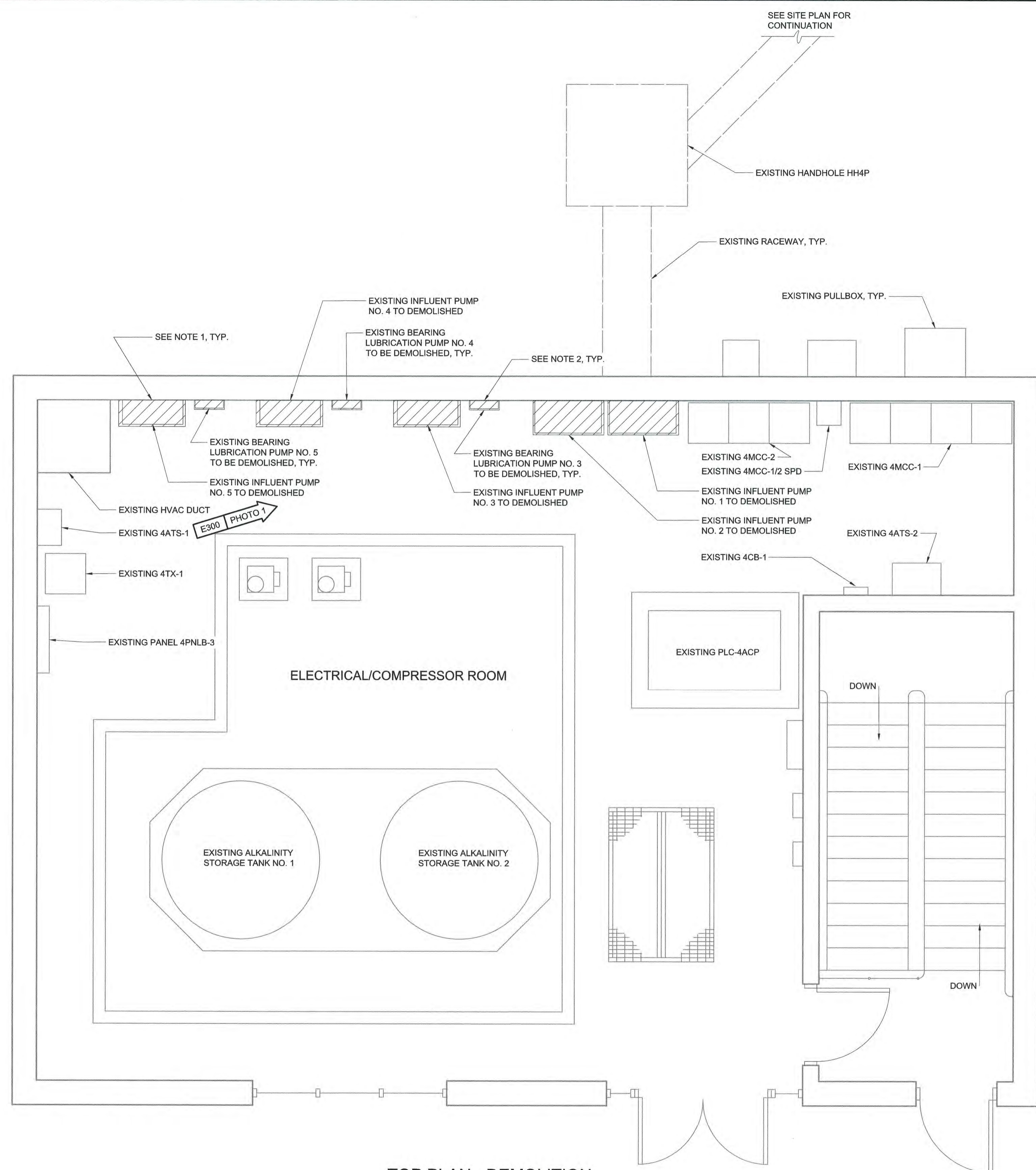
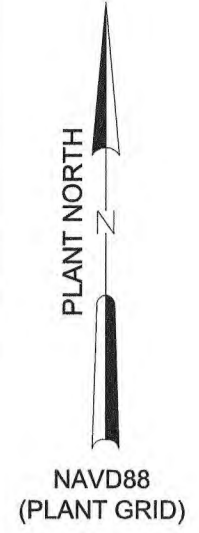
Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA

CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

PUMP STATION NO. 3 ELECTRICAL BUILDING
ELECTRICAL
CONDUIT AND WIRE SCHEDULES

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E225



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



PHOTO NO. 1
NTS

- NOTES:
- CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING INFLUENT PUMP STARTERS AS INDICATED. CONDUIT AND WIRE TO BE REMOVED COMPLETELY FROM STARTERS TO LOAD. ALL DEMOLITION WORK SHALL BE COORDINATED WITH THE ENGINEER, OWNER, AND SPECIFICATION SECTION 01 14 00 PRIOR TO STARTING WORK.
 - CONTRACTOR SHALL DEMOLISH EXISTING BEARING LUBRICATION PUMP STARTERS AND ASSOCIATED CONDUIT AND WIRE COMPLETELY FROM SOURCE TO LOAD. COORDINATE ALL DEMOLITION WITH THE ENGINEER, OWNER, AND SPECIFICATION SECTION 01 14 00 PRIOR TO STARTING WORK.

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PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	B. PICKETT
DRAWN BY:	T. RAHLAN
CHECKED BY:	D. ATKINSON
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
1 CONSTRUCTION	4/2023 CWB
REV ISSUED FOR	DATE BY

ISSUED FOR CONSTRUCTION

Hazen

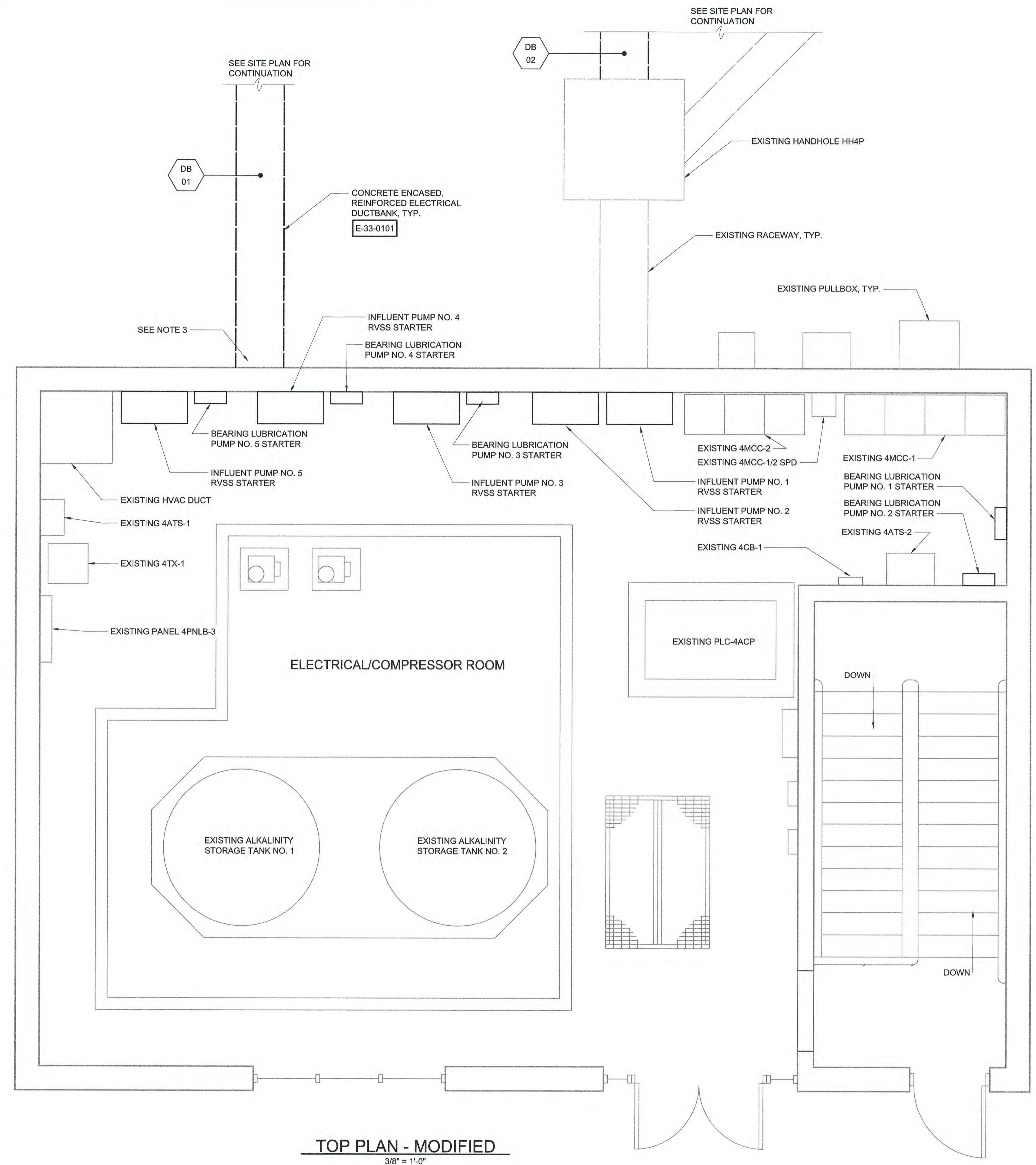
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA

CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

PRIMARY SLUDGE PUMP STATION
ELECTRICAL
TOP PLAN - DEMOLITION

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E300



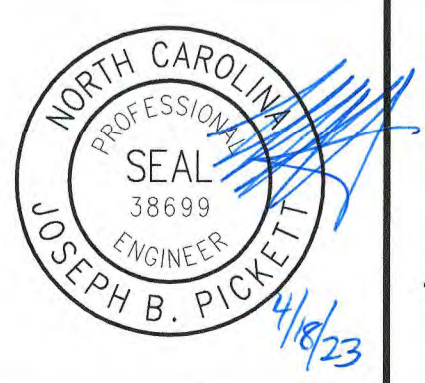
- NOTES:**
1. ALL MATERIALS OF CONSTRUCTION AND ENCLOSURE TYPES SHALL BE PROVIDED IN ACCORDANCE WITH THE DESIGNATION OF THE AREAS IN WHICH THEY ARE INSTALLED REFERENCE THE AREA DESIGNATION TABLES IN THE APPROPRIATE DIVISION 26 SPECIFICATION SECTIONS.
 2. ELECTRICAL/COMPRESSOR ROOM IS DESIGNATED AS AN INDOOR DRY NON-PROCESS AREA.
 3. CONTRACTOR SHALL FURNISH AND INSTALL NEW PULLBOXES AS REQUIRED FOR A COMPLETE RACEWAY SYSTEM. A MINIMUM OF TWO (2) BOXES SHALL BE PROVIDED TO KEEP POWER AND CONTROL RACEWAYS SEPARATED. PULLBOXES SHALL BE SIZED IN ACCORDANCE WITH THE LATEST EDITION OF THE N.E.C.
 4. ALL NEW CONDUIT TO BE ROUTED WITHIN ELECTRICAL/COMPRESSOR ROOM. CONTRACTOR SHALL COORDINATE ROUTING RACEWAY SYSTEM WITH EXISTING PIPING, EQUIPMENT, AND CONDUITS TO AVOID CONFLICTS. CONDUIT ROUTING SHALL BE APPROVED BY THE ENGINEER/OWNER PRIOR TO INSTALLATION.
 5. COORDINATE ELECTRICAL EQUIPMENT MOUNTING WITH MANUFACTURER. ALL FLOOR MOUNTED EQUIPMENT SHALL BE PROVIDED WITH A CONCRETE EQUIPMENT PAD. WALL MOUNTED EQUIPMENT SHALL BE MOUNTED VIA UNISTRUT SUPPORTS.

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

File: 0130402-RAI\30402-064\CAD_BIM\CONTRACT DRAWINGS\ELE\E301_Saved by TRAHAN Save date: 3/21/2023 8:35 AM
 PLOT DATE: 4/14/2023 5:33 PM BY: TRAHAN

PROJECT ENGINEER:	M. MESSERE		
DESIGNED BY:	B. PICKETT		
DRAWN BY:	T. RAHLAN		
CHECKED BY:	D. ATKINSON		
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"		
1	CONSTRUCTION	4/2023	CWB
REV	ISSUED FOR	DATE	BY

ISSUED FOR CONSTRUCTION



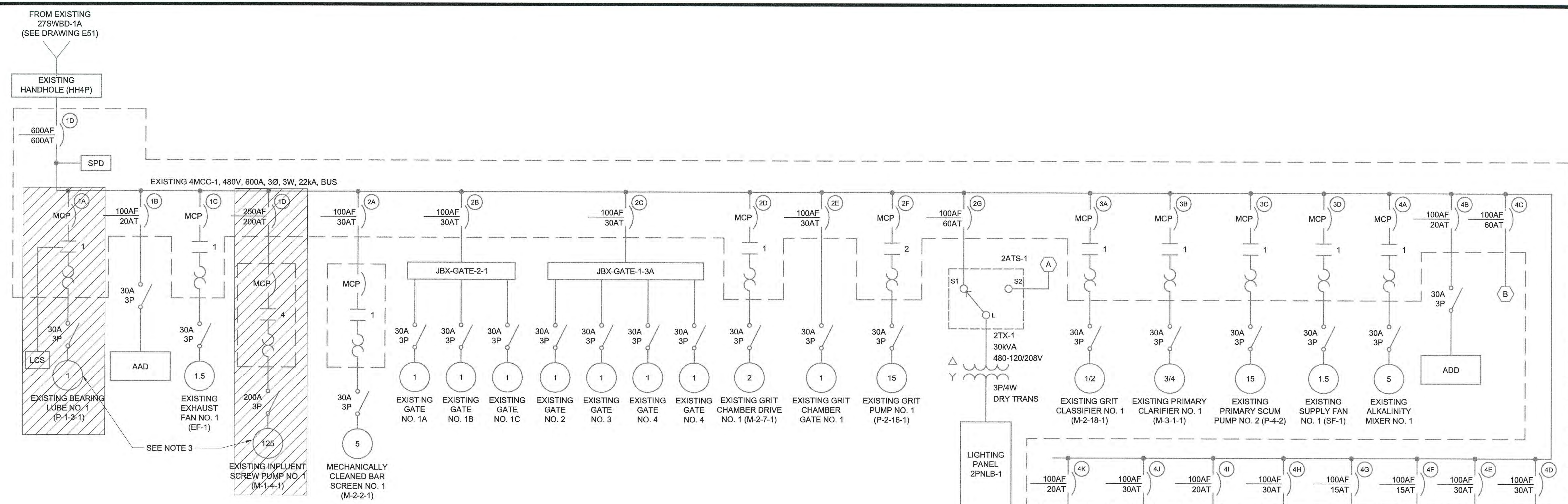
Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA
CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

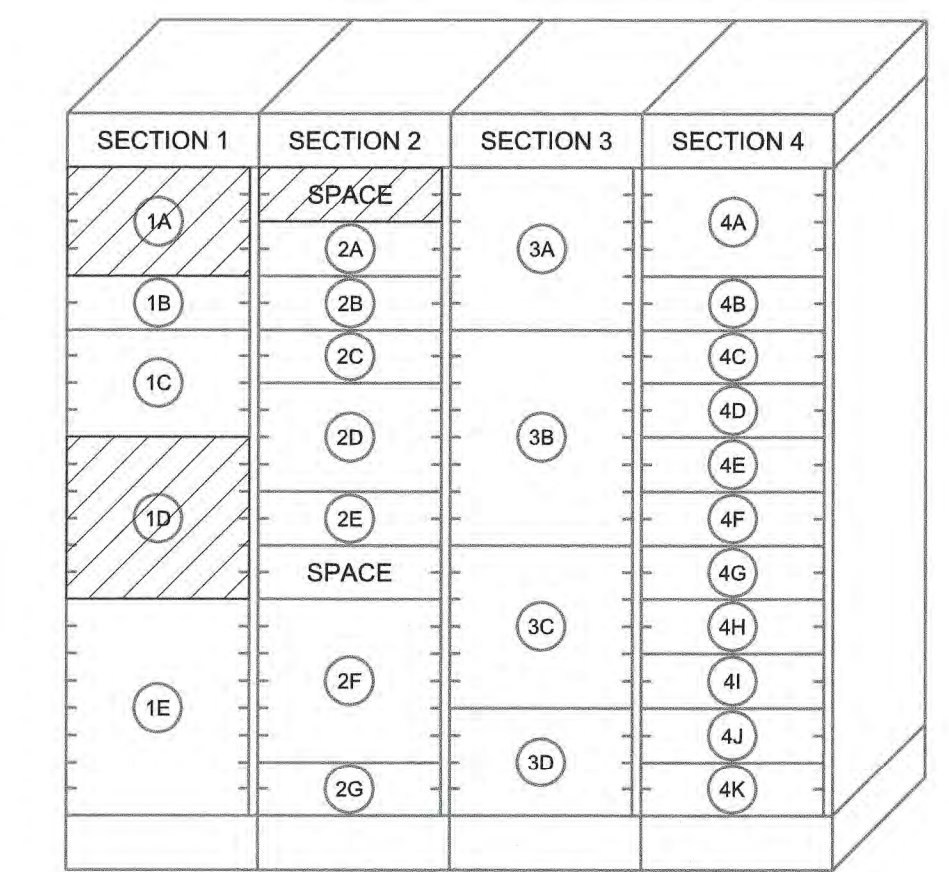
PRIMARY SLUDGE PUMP STATION
ELECTRICAL
TOP PLAN - MODIFIED

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E301

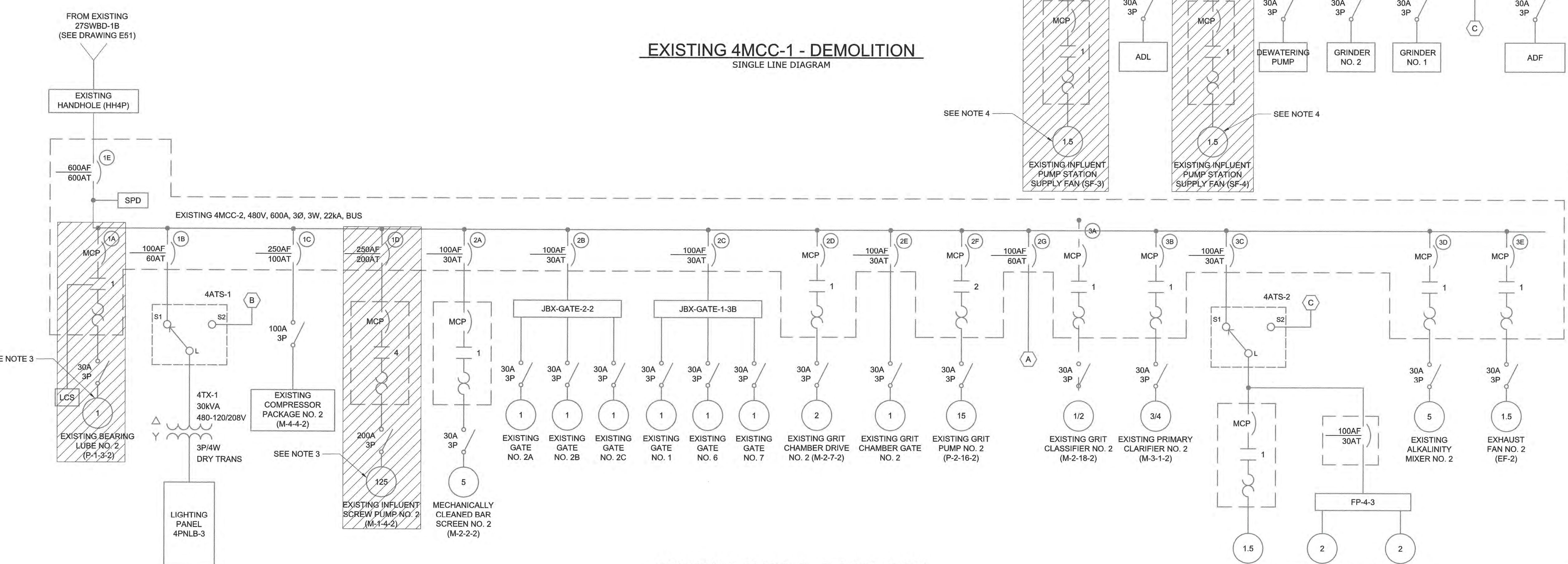
- NOTES:**
- EXISTING 4MCC-1 IS 8000 LINE MOTOR CONTROL CENTER MANUFACTURED BY GENERAL ELECTRIC. CAT. NO. 581X0432L01.
 - EXISTING 4MCC-2 IS 8000 LINE MOTOR CONTROL CENTER MANUFACTURED BY GENERAL ELECTRIC. CAT. NO. 581X0432L02.
 - CONTRACTOR SHALL DEMOLISH EXISTING STARTERS, CIRCUIT BREAKERS, DISCONNECT SWITCHES, AND LOCAL CONTROL STATIONS ASSOCIATED WITH INFLUENT SCREW PUMPS AND BEARING LUBRICATION PUMPS AS INDICATED. ALL CONDUCTORS SHALL BE REMOVED COMPLETELY FROM SOURCE TO LOAD. RETURN EXISTING STARTERS, CIRCUIT BREAKERS, AND DISCONNECT SWITCHES TO OWNER.
 - CONTRACTOR SHALL DEMOLISH EXISTING SUPPLY FAN STARTERS AND ASSOCIATED CONDUIT AND WIRE AS INDICATED. CIRCUIT BREAKER TO REMAIN AND SHALL BE UTILIZED TO SUPPLY NEW FAN STARTERS.



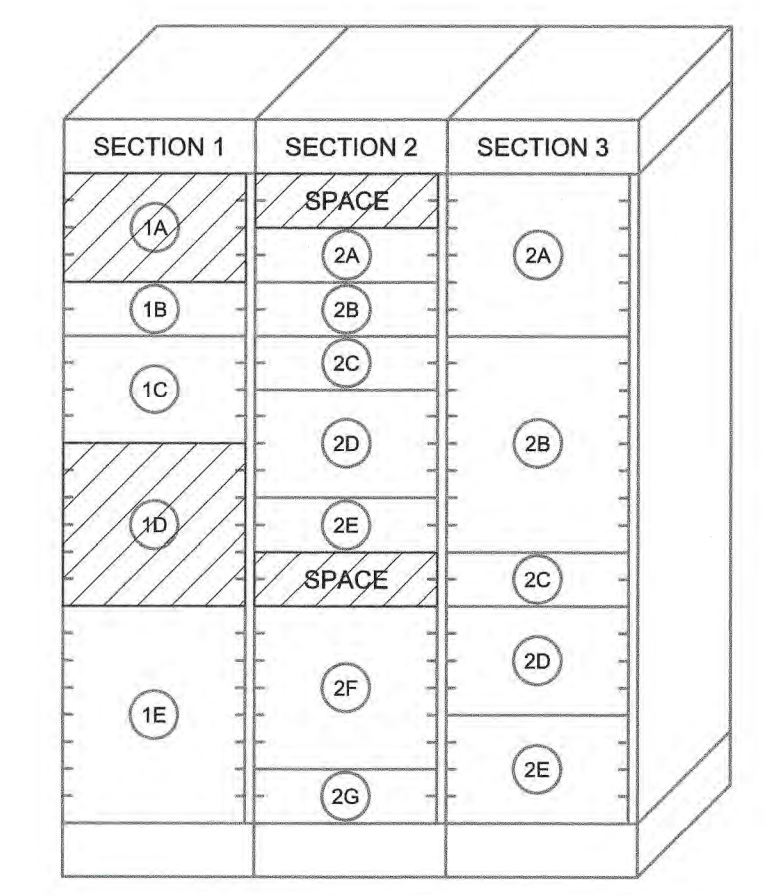
EXISTING 4MCC-1 - DEMOLITION
SINGLE LINE DIAGRAM



EXISTING 4MCC-1 - DEMOLITION
ELEVATION (NTS)



EXISTING 4MCC-2 - DEMOLITION
SINGLE LINE DIAGRAM



EXISTING 4MCC-2 - DEMOLITION
ELEVATION (NTS)

File: C:\30402-RAL\30402-06\CAD_BIM\CONTRACT DRAWINGS\ELE\E302.dwg, Saved by: TRAHAN, Save Date: 4/14/2023 11:15 AM, PLOT DATE: 4/14/2023 5:33 PM, BY: TRAHAN

PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	B. PICKETT
DRAWN BY:	T. RAHLAN
CHECKED BY:	D. ATKINSON
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
CONSTRUCTION	4/2023 CWB
ISSUED FOR	BY

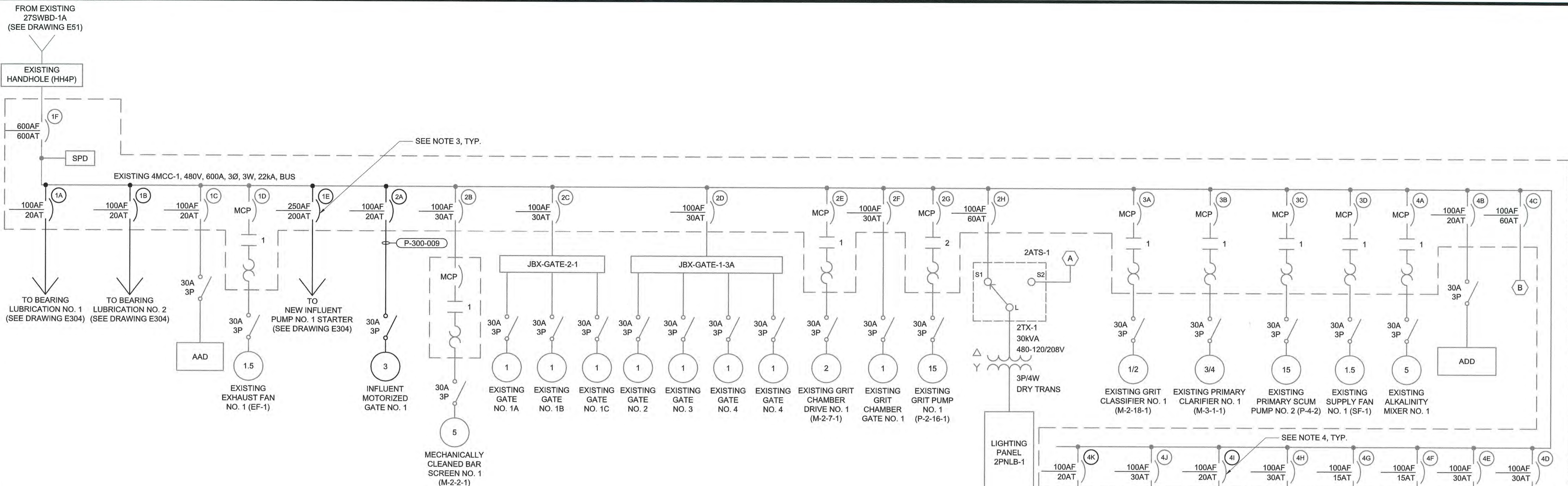
ISSUED FOR CONSTRUCTION

Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA
CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

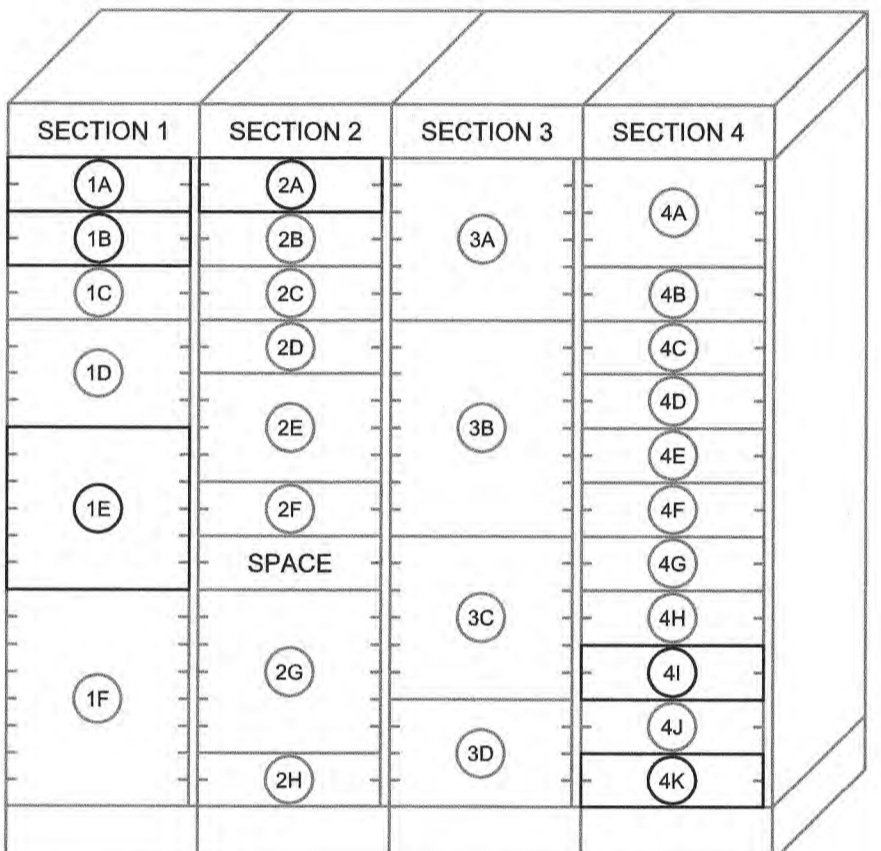
PRIMARY SLUDGE PUMP STATION
ELECTRICAL
EXISTING 4MCC-1&2 SINGLE LINE
DIAGRAMS AND ELEVATIONS-DEMOLITION

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E302

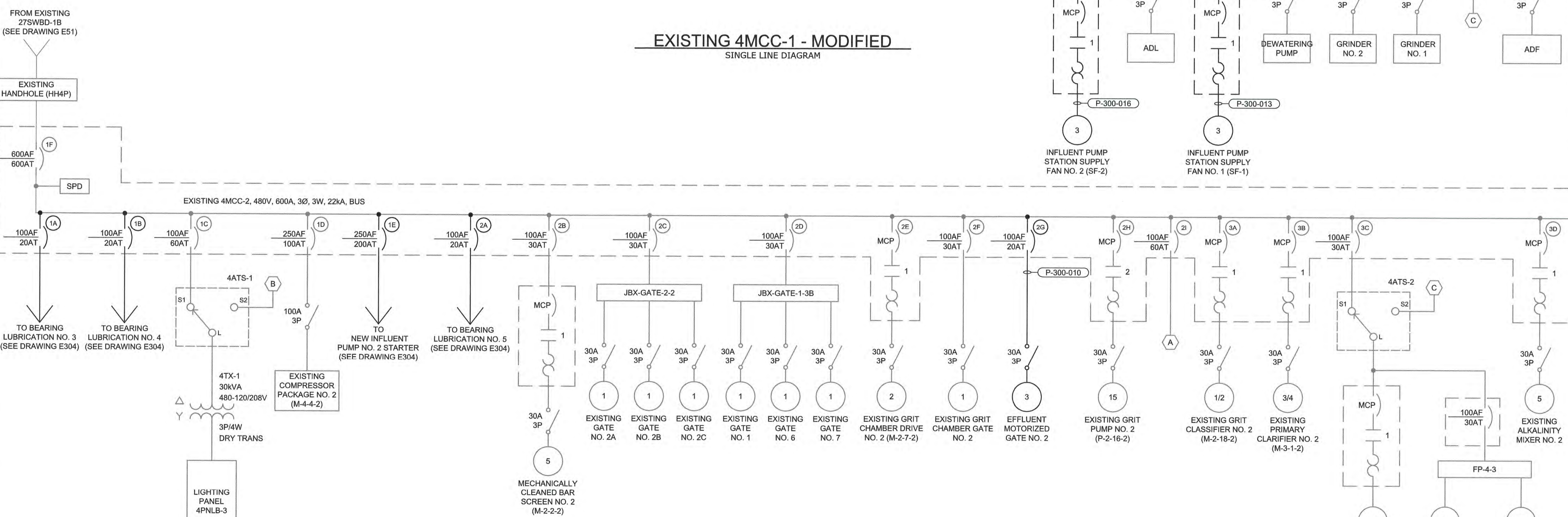


EXISTING 4MCC-1 - MODIFIED
SINGLE LINE DIAGRAM

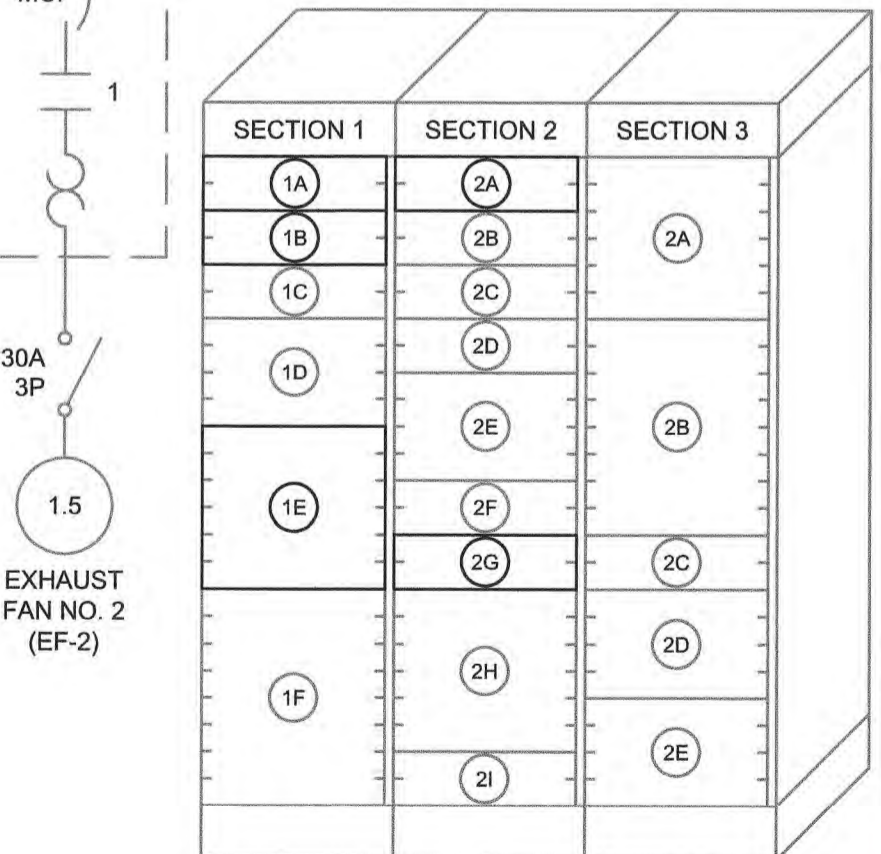
- NOTES:**
- EXISTING 4MCC-1 IS 8000 LINE MOTOR CONTROL CENTER MANUFACTURED BY GENERAL ELECTRIC. CAT. NO. 581X0432L01.
 - EXISTING 4MCC-2 IS 8000 LINE MOTOR CONTROL CENTER MANUFACTURED BY GENERAL ELECTRIC. CAT. NO. 581X0432L02.
 - CONTRACTOR SHALL FURNISH AND INSTALL NEW CIRCUIT BREAKERS IN EXISTING MOTOR CONTROL CENTERS (4MCC-1, 4MCC-2) TO SUPPLY INFLUENT SCREW PUMPS, BEARING LUBRICATIONS, AND NEW MOTORIZED GATES AS INDICATED. NEW CIRCUIT BREAKERS SHALL MATCH THE SHORT CIRCUIT RATING OF THE EXISTING MCC, MINIMUM. ANY EXCESS SPACE SHALL BE COVERED WITH A BLANK DOOR PROVIDED FROM THE MCC MANUFACTURER.
 - CONTRACTOR SHALL UTILIZE EXISTING CIRCUIT BREAKERS IN EXISTING 4MCC-1 TO SUPPLY NEW FANS AS INDICATED.



EXISTING 4MCC-1 - MODIFIED
ELEVATION (NTS)



EXISTING 4MCC-2 - MODIFIED
SINGLE LINE DIAGRAM



EXISTING 4MCC-2 - MODIFIED
ELEVATION (NTS)

File: 0130402-RAL30402-684CAD_BIM/CONTRACT DRAWINGS/EE/EE303 Saved by TRAHAN Save date: 4/6/2023 2:24 PM PLOT DATE: 4/14/2023 5:34 PM BY: TRAHAN

PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	B. PICKETT
DRAWN BY:	T. RAHLAN
CHECKED BY:	D. ATKINSON
ISSUED FOR CONSTRUCTION	0 1/2" 1"
CONSTRUCTION	4/2023 CWB
ISSUED FOR	DATE BY

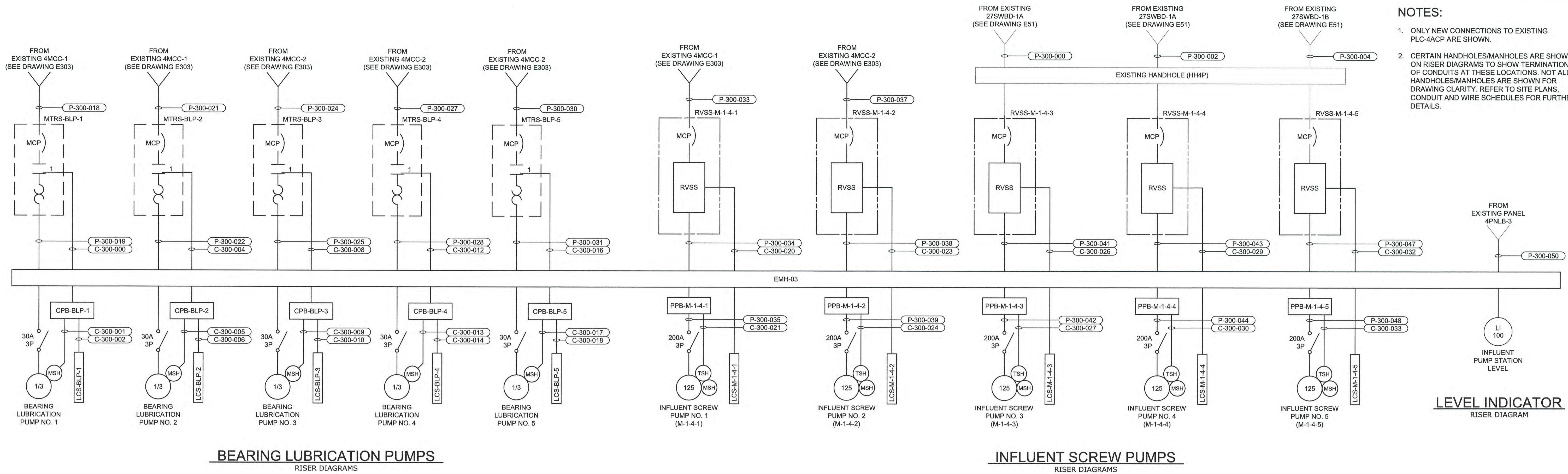
ISSUED FOR CONSTRUCTION

Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA
CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

PRIMARY SLUDGE PUMP STATION
ELECTRICAL
EXISTING 4MCC-1&2 SINGLE LINE
DIAGRAMS AND ELEVATIONS - MODIFIED

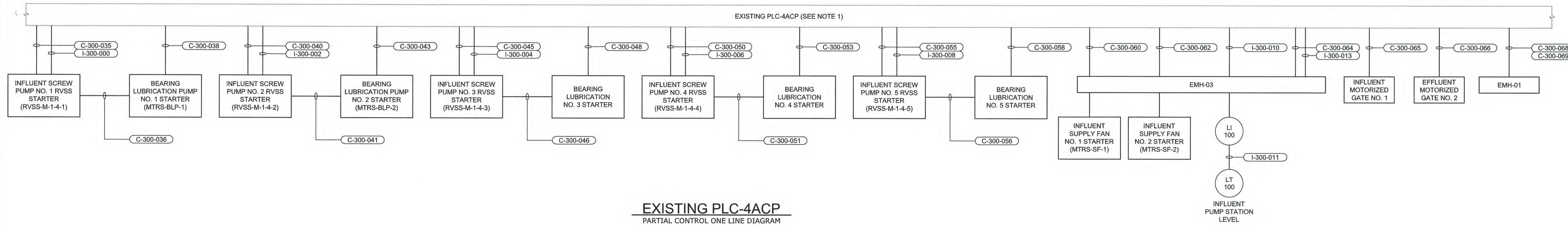
DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E303



- NOTES:**
- ONLY NEW CONNECTIONS TO EXISTING PLC-4ACP ARE SHOWN.
 - CERTAIN HANDHOLES/MANHOLES ARE SHOWN ON RISER DIAGRAMS TO SHOW TERMINATIONS OF CONDUITS AT THESE LOCATIONS. NOT ALL HANDHOLES/MANHOLES ARE SHOWN FOR DRAWING CLARITY. REFER TO SITE PLANS, CONDUIT AND WIRE SCHEDULES FOR FURTHER DETAILS.

BEARING LUBRICATION PUMPS
RISER DIAGRAMS

INFLUENT SCREW PUMPS
RISER DIAGRAMS



EXISTING PLC-4ACP
PARTIAL CONTROL ONE LINE DIAGRAM

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 PLOT DATE: 4/14/2023 5:35 PM BY: TRAHANLAN

PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	B. PICKETT
DRAWN BY:	T. RAHLAN
CHECKED BY:	D. ATKINSON
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
1 CONSTRUCTION	4/2023 CWB
REV ISSUED FOR	DATE BY

ISSUED FOR CONSTRUCTION

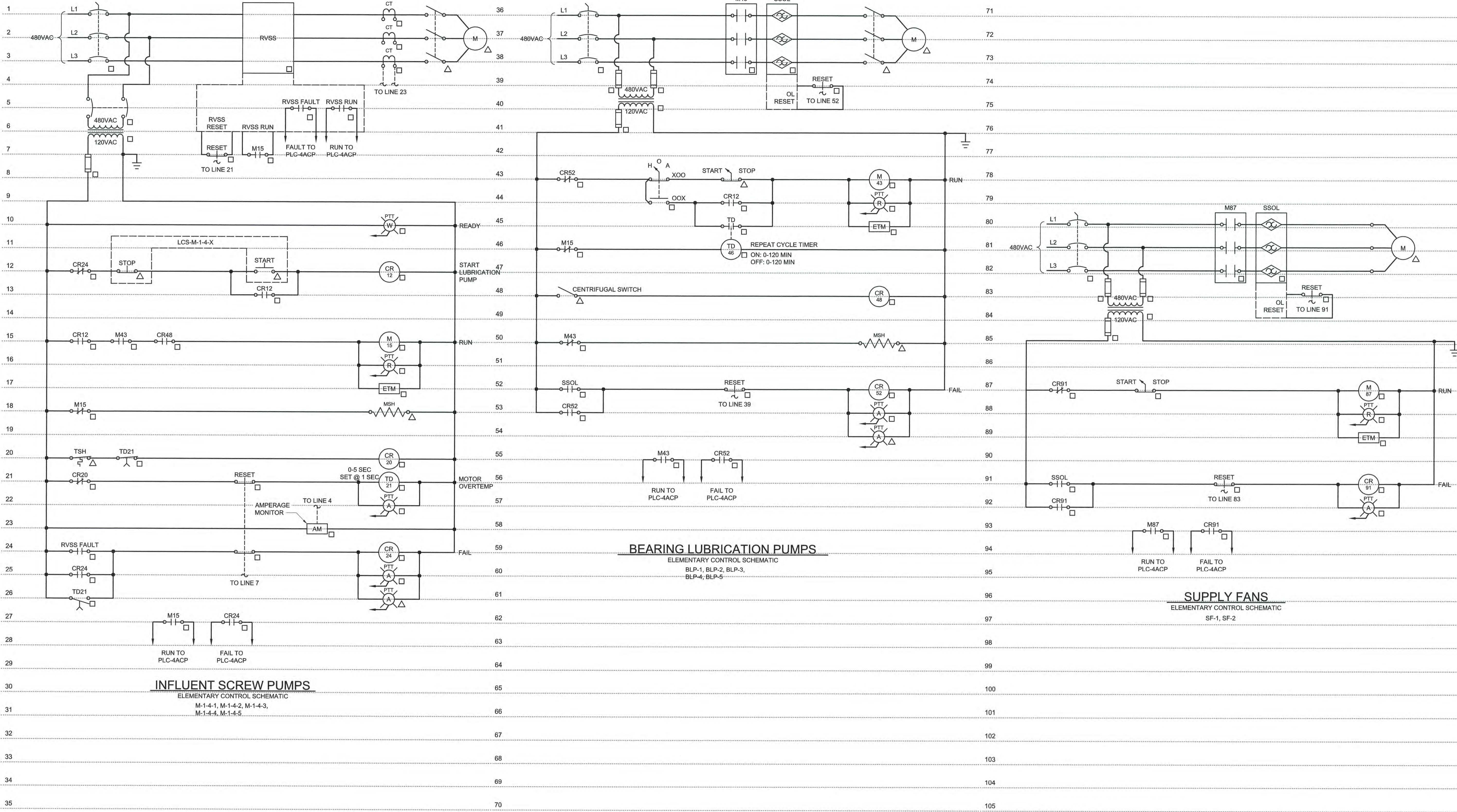
Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA

CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

PRIMARY SLUDGE PUMP STATION
ELECTRICAL
CONTROL ONE LINE DIAGRAM AND RISER
DIAGRAMS

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E304



INFLUENT SCREW PUMPS
ELEMENTARY CONTROL SCHEMATIC
M-1-4-1, M-1-4-2, M-1-4-3,
M-1-4-4, M-1-4-5

BEARING LUBRICATION PUMPS
ELEMENTARY CONTROL SCHEMATIC
BLP-1, BLP-2, BLP-3,
BLP-4, BLP-5

SUPPLY FANS
ELEMENTARY CONTROL SCHEMATIC
SF-1, SF-2

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PLOT DATE: 4/14/2023 5:35 PM BY: TRAHAN

PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	B. PICKETT
DRAWN BY:	T. RAHLAN
CHECKED BY:	D. ATKINSON
ISSUED FOR CONSTRUCTION	
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"

ISSUED FOR CONSTRUCTION

Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA

CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

PRIMARY SLUDGE PUMP STATION
ELECTRICAL
ELEMENTARY CONTROL SCHEMATICS

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E305

Table with columns: CONDUIT NO., SIZE, FROM, TO, CONDUCTORS, REMARKS. Rows include connections from EXISTING 27SWBD-1A to INFLUENT SCREW PUMP NO. 3 STARTER, and various EMH and PPB connections.

Table with columns: CONDUIT NO., SIZE, FROM, TO, CONDUCTORS, REMARKS. Rows include connections from BEARING LUBRICATION PUMP NO. 1 STARTER to CPB-BLP-1, and other similar connections.

NOTES:

- 1. CONTRACTOR NOTE ALL CONDUIT TAGS DENOTED WITH "I" PREFIX SHALL BE A METALLIC RACEWAY COMPLETE FROM SOURCE TO LOAD. REFER TO THE REQUIREMENTS OF SPECIFICATION SECTION 26 05 33.13 FOR FURTHER DETAILS.
2. CONDUIT SIZES IDENTIFIED AS "EX." INDICATED CONTRACTOR SHALL UTILIZE EXISTING CONDUIT.

Table with columns: CONDUIT NO., SIZE, FROM, TO, CONDUCTORS, REMARKS. Rows include connections from INFLUENT SCREW PUMP NO. 1 STARTER to various pump numbers and PLC-4ACP connections.

Table with columns: CONDUIT NO., SIZE, FROM, TO, CONDUCTORS, REMARKS. Rows include connections from EXISTING PLC-4ACP to INFLUENT SCREW PUMP NO. 1 STARTER, and other connections.

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Project information table including fields for PROJECT ENGINEER (M. MESSERE), DESIGNED BY (B. PICKETT), DRAWN BY (T. RAHLAN), CHECKED BY (D. ATKINSON), DATE (4/2023), and CONSTRUCTION/ISSUED FOR status.

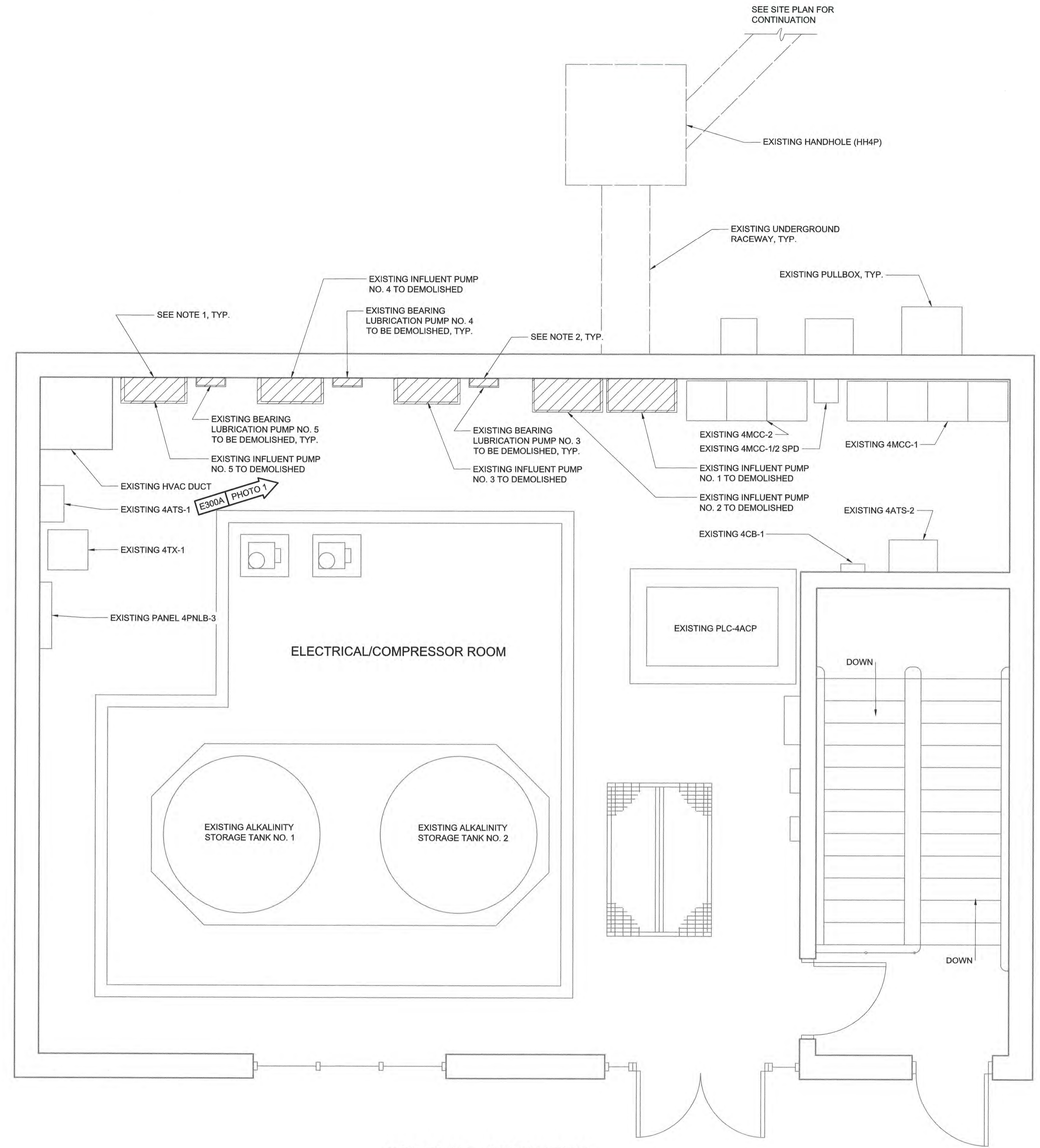
ISSUED FOR CONSTRUCTION



PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA
CROSS CREEK WRF AND ROCKFISH CREEK WRF SCREW PUMP IMPROVEMENTS

PRIMARY SLUDGE PUMP STATION ELECTRICAL CONDUIT AND WIRE SCHEDULES

Table with project details: DATE (APRIL 2023), HAZEN NO. (30402-064), CONTRACT NO. (1), DRAWING NUMBER (E306)



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

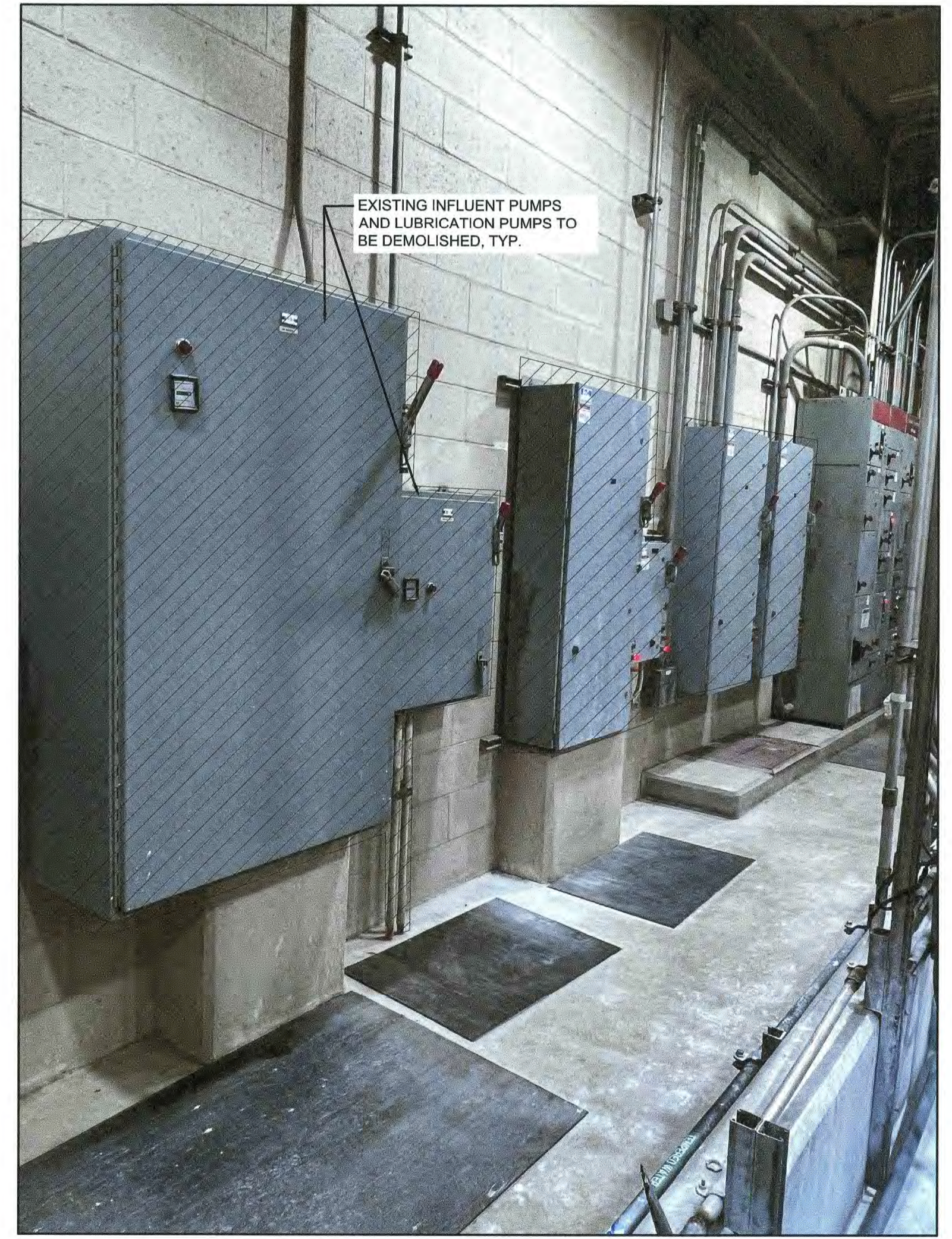


PHOTO NO. 1
NTS

- NOTES:
- CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING INFLUENT PUMP STARTERS AS INDICATED. CONDUIT AND WIRE TO BE REMOVED COMPLETELY FROM STARTERS TO LOAD. ALL DEMOLITION WORK SHALL BE COORDINATED WITH THE ENGINEER, OWNER, AND SPECIFICATION SECTION 01 14 00 PRIOR TO STARTING WORK.
 - CONTRACTOR SHALL DEMOLISH EXISTING BEARING LUBRICATION PUMP STARTERS AND ASSOCIATED CONDUIT AND WIRE COMPLETELY FROM SOURCE TO LOAD. COORDINATE ALL DEMOLITION WITH THE ENGINEER, OWNER, AND SPECIFICATION SECTION 01 14 00 PRIOR TO STARTING WORK.

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PROJECT ENGINEER:	M. MESSERE		
DESIGNED BY:	B. PICKETT		
DRAWN BY:	T. RAHLAN		
CHECKED BY:	D. ATKINSON		
1	CONSTRUCTION	4/2023	CWB
REV	ISSUED FOR	DATE	BY

ISSUED FOR CONSTRUCTION



Hazen

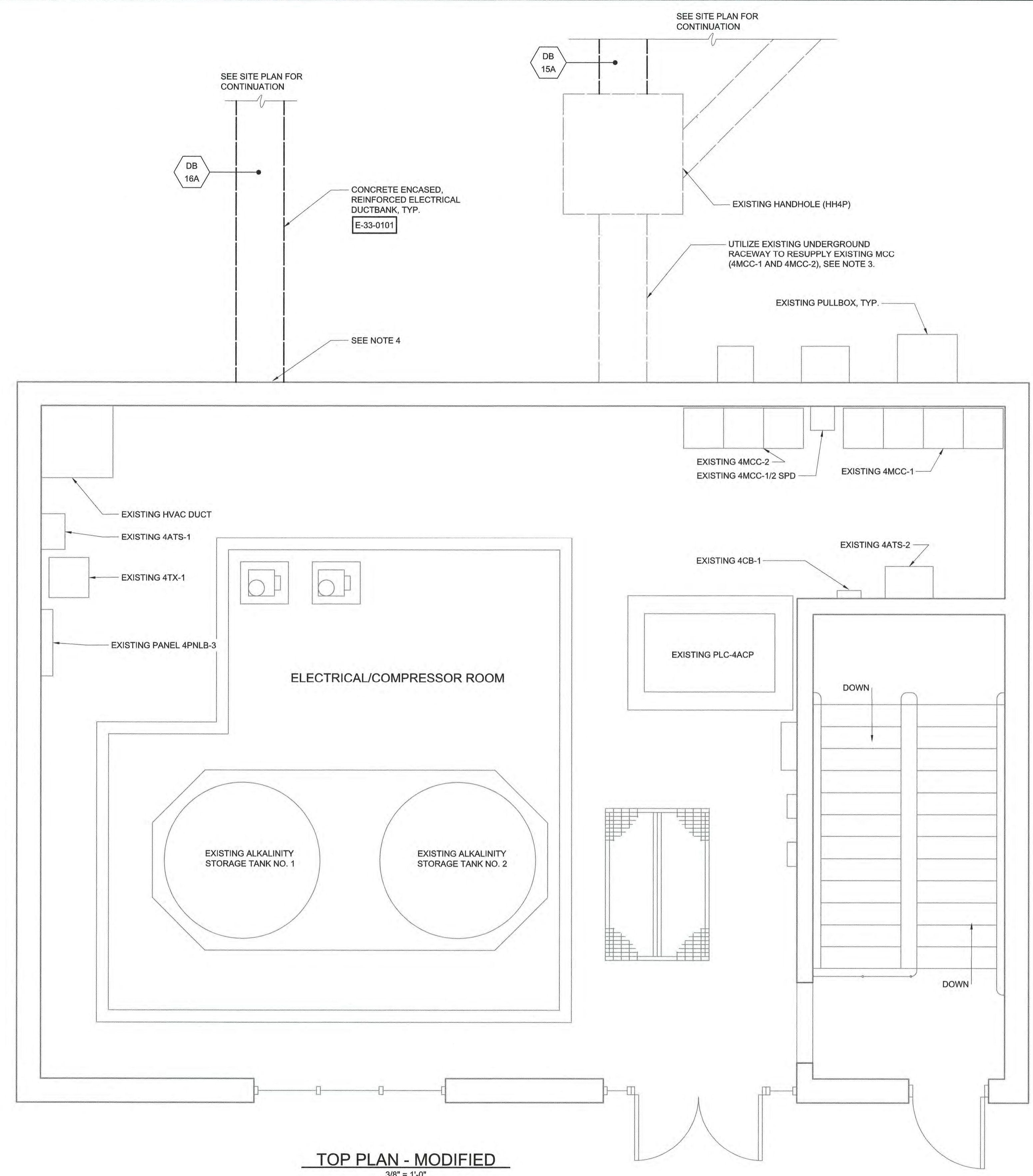
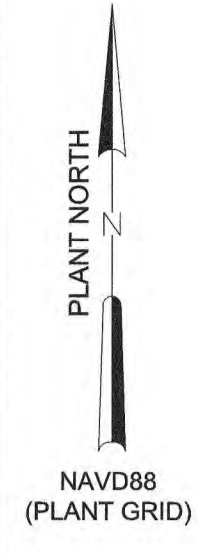
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA

CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

PRIMARY SLUDGE PUMP STATION
ELECTRICAL
TOP PLAN - DEMOLITION
BID ALTERNATE

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E300A



- NOTES:**
1. ALL MATERIALS OF CONSTRUCTION AND ENCLOSURE TYPES SHALL BE PROVIDED IN ACCORDANCE WITH THE DESIGNATION OF THE AREAS IN WHICH THEY ARE INSTALLED REFERENCE THE AREA DESIGNATION TABLES IN THE APPROPRIATE DIVISION 26 SPECIFICATION SECTIONS.
 2. ELECTRICAL/COMPRESSOR ROOM IS DESIGNATED AS AN INDOOR DRY NON-PROCESS AREA.
 3. CONTRACTOR SHALL ABANDON EXISTING UNDERGROUND RACEWAY FROM EXISTING SWITCHBOARD (27SWBD-1) TO MCC AND RESUPPLY EXISTING MCC (4MCC-1 AND 4MCC-2) FROM NEW SOURCE. COORDINATE EXACT ROUTING AND REUSE OF EXISTING CONDUIT INTO THE BUILDING WITH ENGINEER/OWNER DURING CONSTRUCTION.
 4. CONTRACTOR SHALL FURNISH AND INSTALL NEW PULLBOXES AS REQUIRED FOR A COMPLETE RACEWAY SYSTEM. PULLBOXES SHALL BE SIZED IN ACCORDANCE WITH THE LATEST EDITION OF THE N.E.C. ROUTE CONDUIT EXPOSED TO EXISTING PLC-4ACP. COORDINATE CONDUIT ROUTING WITH EXISTING PIPING, EQUIPMENT, AND CONDUITS TO AVOID CONFLICTS. CONDUIT ROUTING SHALL BE APPROVED BY THE ENGINEER/OWNER PRIOR TO INSTALLATION.

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

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PROJECT ENGINEER:	M. MESSERE		
DESIGNED BY:	B. PICKETT		
DRAWN BY:	T. RAHLAN		
CHECKED BY:	D. ATKINSON		
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE			
1	CONSTRUCTION	4/2023	CWB
REV	ISSUED FOR	DATE	BY

ISSUED FOR CONSTRUCTION

Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA

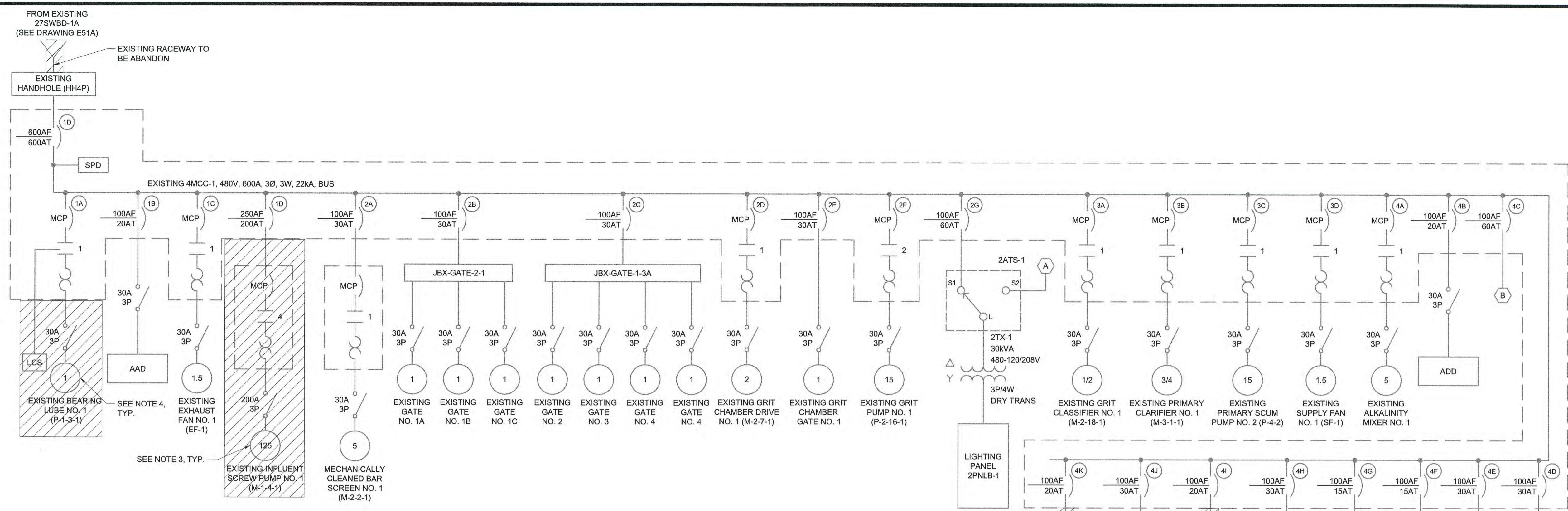
CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

PRIMARY SLUDGE PUMP STATION
ELECTRICAL
TOP PLAN - MODIFIED
BID ALTERNATE

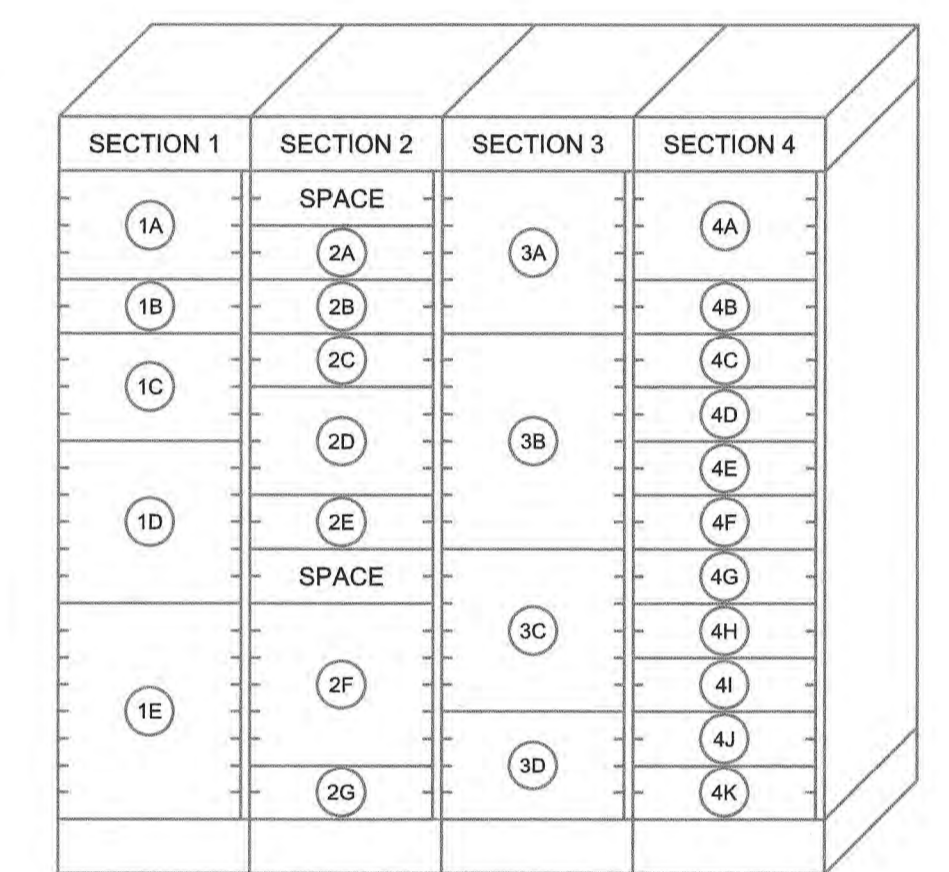
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HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E301A

NOTES:

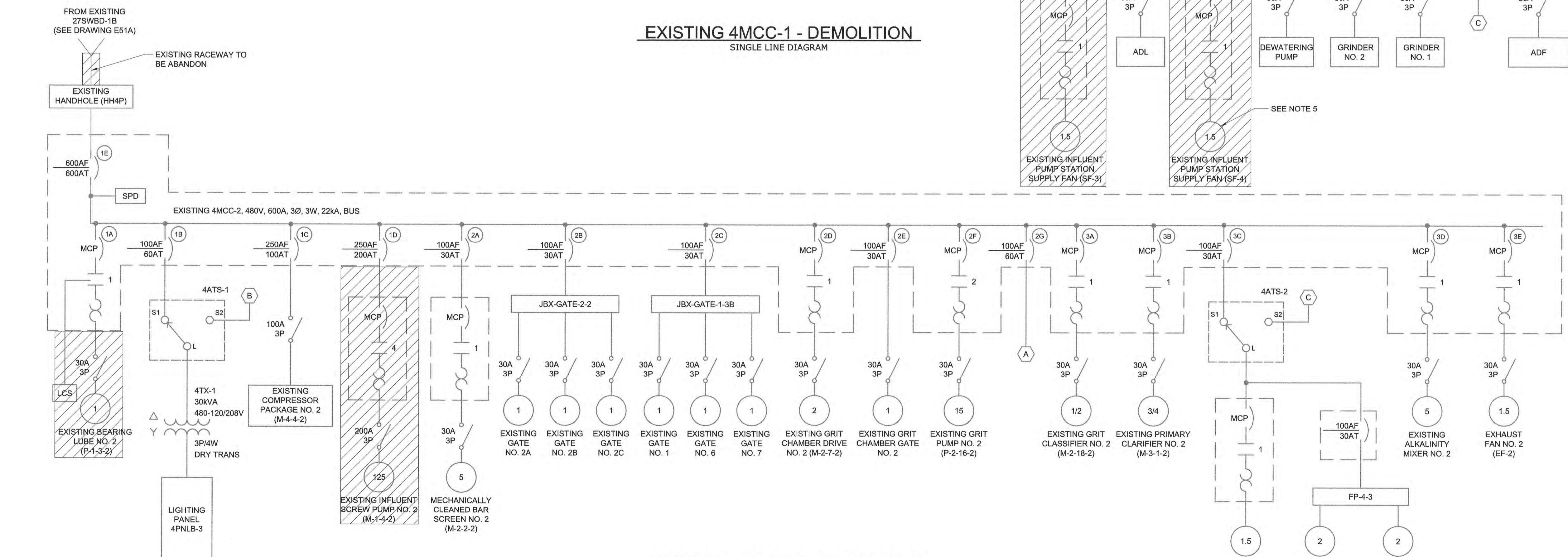
- EXISTING 4MCC-1 IS 8000 LINE MOTOR CONTROL CENTER MANUFACTURED BY GENERAL ELECTRIC. CAT. NO. 581X0432L01.
- EXISTING 4MCC-2 IS 8000 LINE MOTOR CONTROL CENTER MANUFACTURED BY GENERAL ELECTRIC. CAT. NO. 581X0432L02.
- CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING INFLUENT SCREW PUMP STARTERS AS INDICATED. CONDUIT AND WIRE SHALL BE REMOVED COMPLETELY FROM SOURCE TO LOAD. CIRCUIT BREAKERS TO REMAIN AND RE-LABEL AS SPARE. RETURN STARTERS TO THE OWNER. COORDINATE DEMOLITION WITH THE ENGINEER, OWNER, AND SPECIFICATION SECTION 01 14 00 PRIOR TO STARTING WORK.
- CONTRACTOR SHALL DISCONNECT AND REMOVE ALL CONDUIT AND WIRE ASSOCIATED WITH EXISTING BEARING LUBE PUMPS AS INDICATED. STARTERS TO REMAIN AND RE-LABEL AS SPARE.
- CONTRACTOR SHALL DEMOLISH EXISTING SUPPLY FAN STARTERS AND ASSOCIATED CONDUIT AND WIRE AS INDICATED. CIRCUIT BREAKER TO REMAIN AND RE-LABEL AS SPARE.



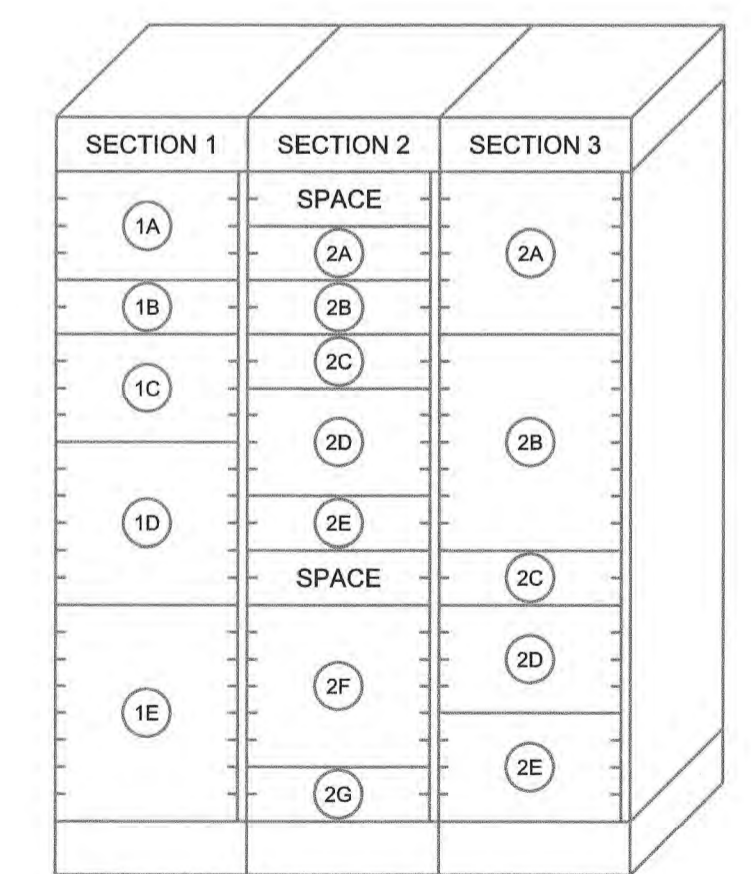
EXISTING 4MCC-1 - DEMOLITION
SINGLE LINE DIAGRAM



EXISTING 4MCC-1
ELEVATION (NTS)



EXISTING 4MCC-2 - DEMOLITION
SINGLE LINE DIAGRAM

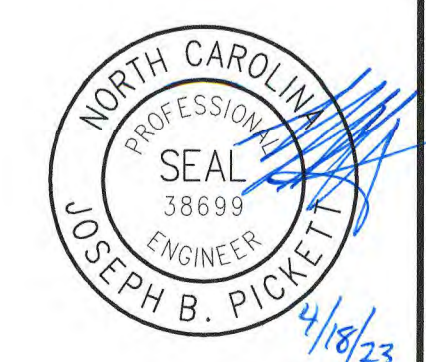


EXISTING 4MCC-2
ELEVATION (NTS)

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PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	B. PICKETT
DRAWN BY:	T. RAHLAN
CHECKED BY:	D. ATKINSON
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
CONSTRUCTION	4/2023 CWB
ISSUED FOR	DATE BY

ISSUED FOR CONSTRUCTION



Hazen
HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

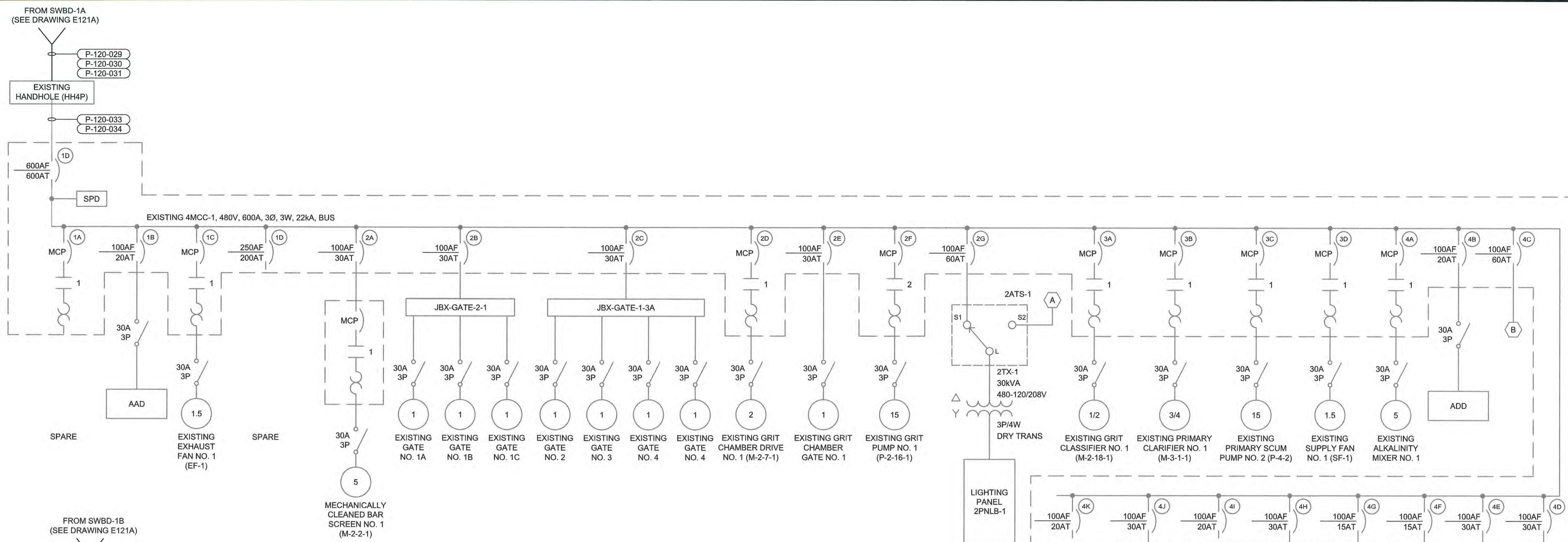
PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA
CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

PRIMARY SLUDGE PUMP STATION
ELECTRICAL
EXISTING 4MCC-1&2 SINGLE LINE
DIAGRAMS AND ELEVATIONS-DEMOLITION
BID ALTERNATE

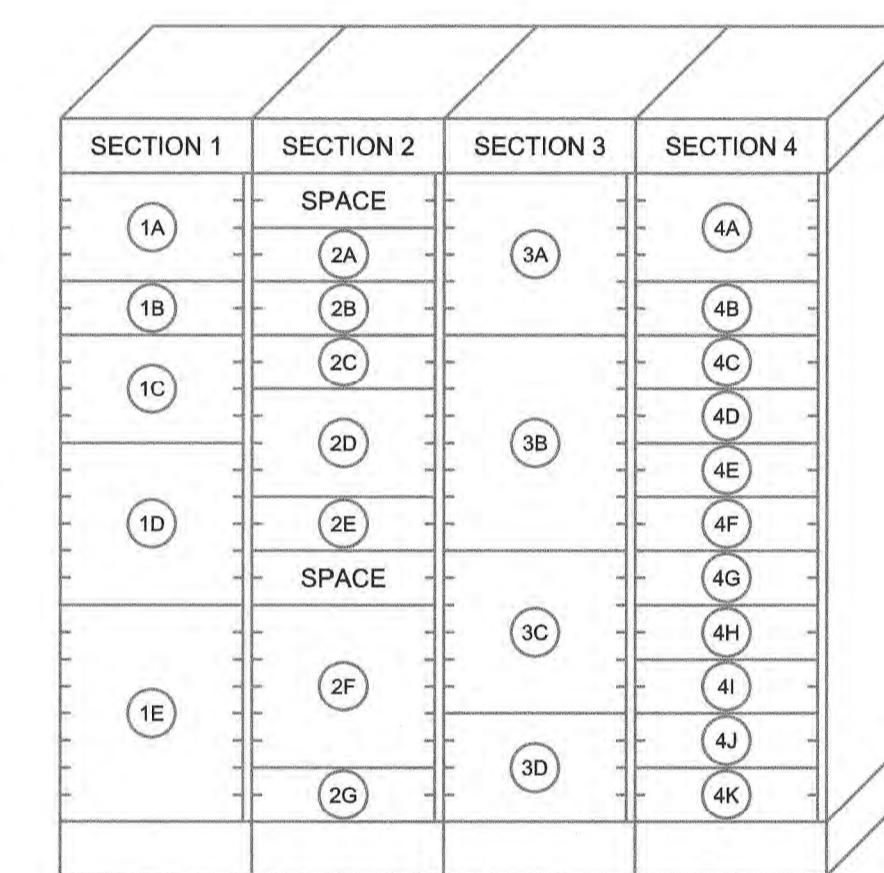
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CONTRACT NO.:	1
DRAWING NUMBER:	E302A

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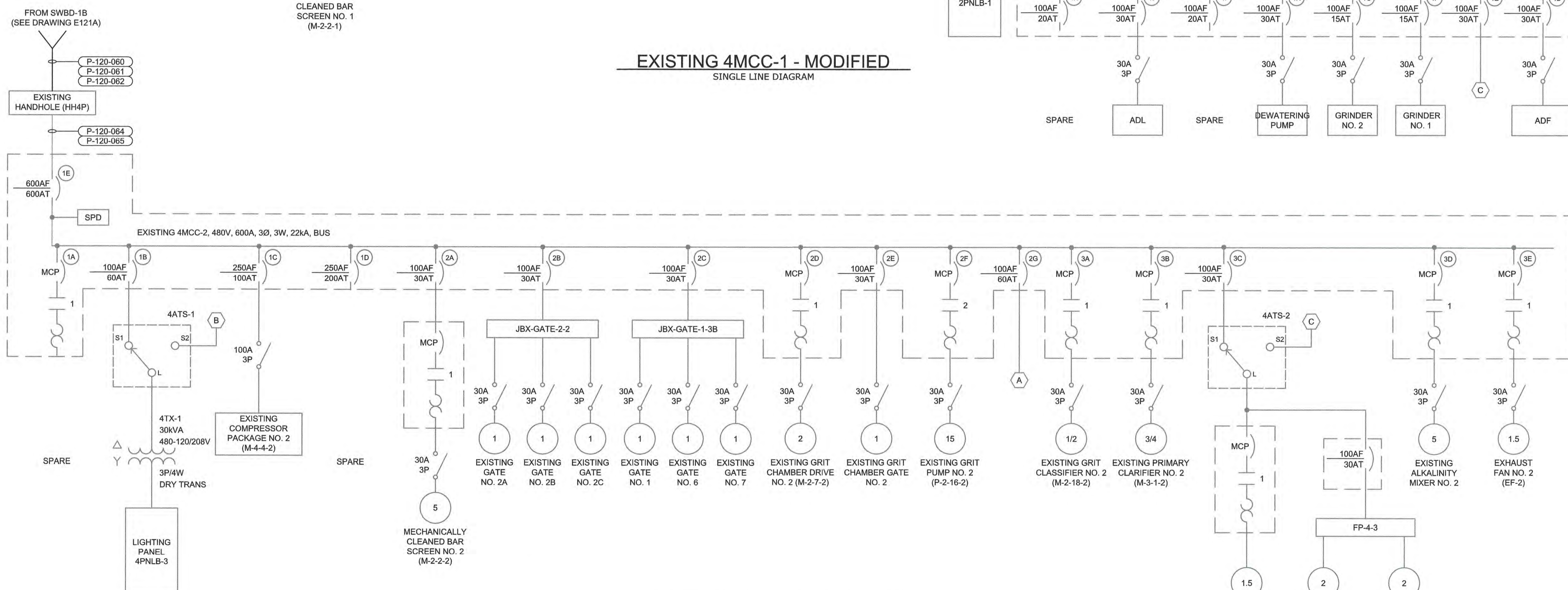
- EXISTING 4MCC-1 IS 8000 LINE MOTOR CONTROL CENTER MANUFACTURED BY GENERAL ELECTRIC. CAT. NO. 581X0432L01.
- EXISTING 4MCC-2 IS 8000 LINE MOTOR CONTROL CENTER MANUFACTURED BY GENERAL ELECTRIC. CAT. NO. 581X0432L02.



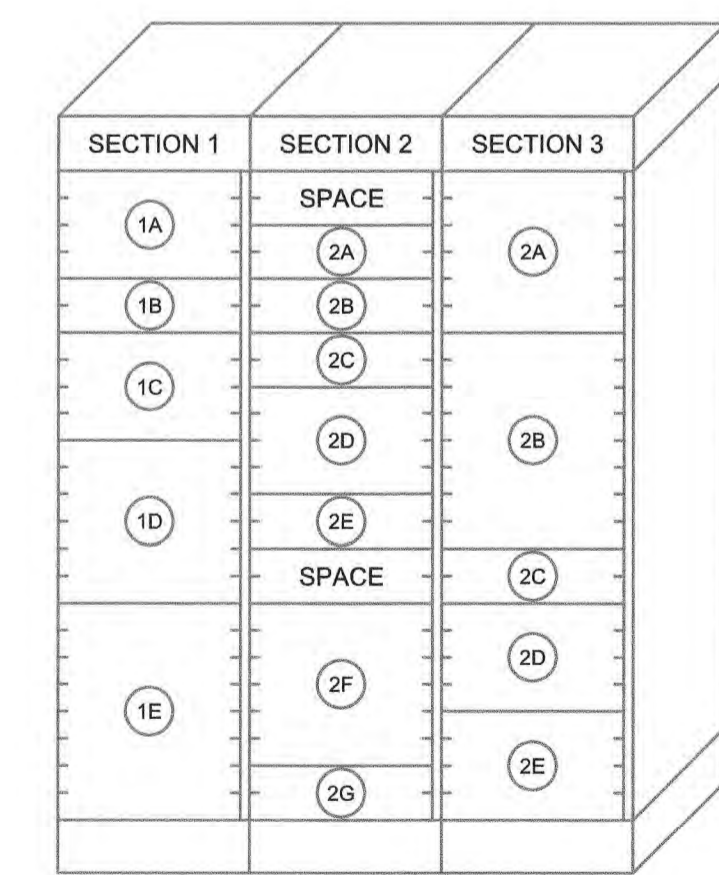
EXISTING 4MCC-1 - MODIFIED
SINGLE LINE DIAGRAM



EXISTING 4MCC-1
ELEVATION (NTS)



EXISTING 4MCC-2 - MODIFIED
SINGLE LINE DIAGRAM



EXISTING 4MCC-2
ELEVATION (NTS)

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 Plot Date: 4/14/2023 5:38 PM BY: TRAHAN

PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	B. PICKETT
DRAWN BY:	T. RAHLAN
CHECKED BY:	D. ATKINSON
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
CONSTRUCTION	4/2023 CWB
ISSUED FOR	BY

ISSUED FOR CONSTRUCTION

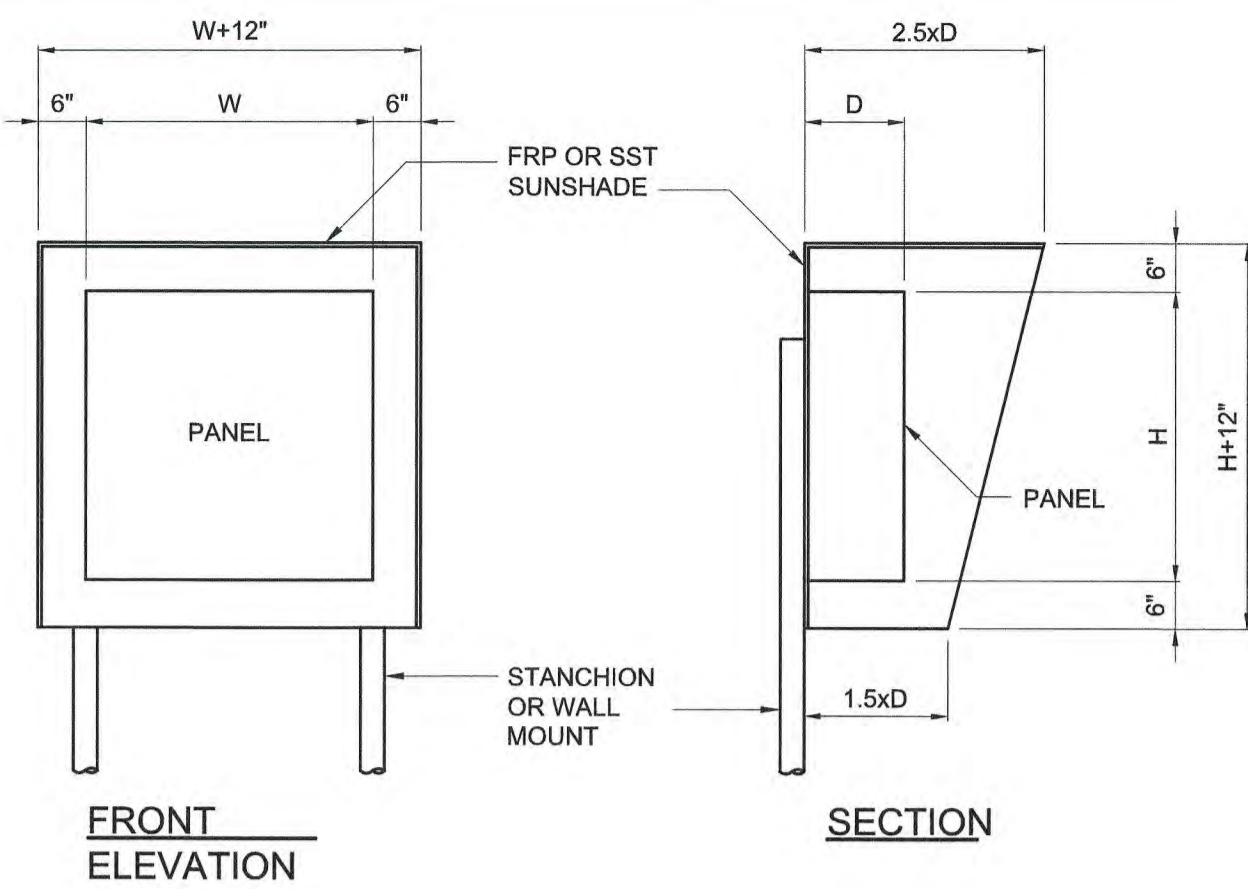


Hazen
 HAZEN AND SAWYER
 4011 WESTCHASE BOULEVARD, SUITE 500
 RALEIGH, NORTH CAROLINA 27607
 LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
 CITY OF FAYETTEVILLE, NORTH CAROLINA
 CROSS CREEK WRF AND ROCKFISH CREEK WRF
 SCREW PUMP IMPROVEMENTS

PRIMARY SLUDGE PUMP STATION
 ELECTRICAL
 EXISTING 4MCC-1&2 SINGLE LINE
 DIAGRAMS AND ELEVATIONS - MODIFIED
 BID ALTERNATE

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	E303A



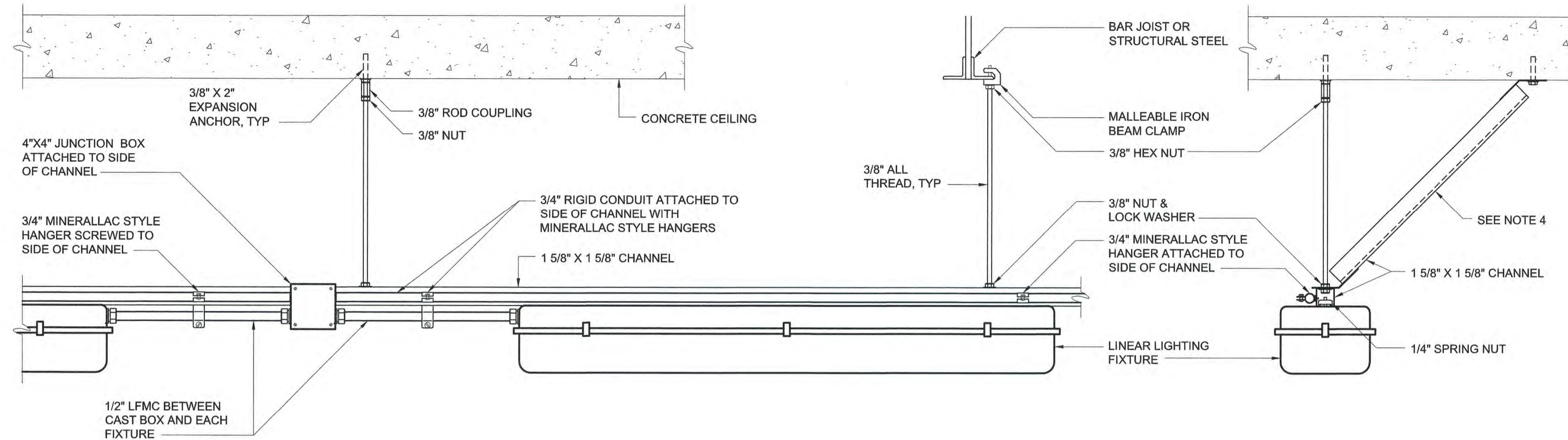
FRONT ELEVATION

SECTION

- NOTES:
- PANELS SHALL BE PROVIDED WITH SUNSHADES AS SPECIFIED OR AS SHOWN ON THE DRAWINGS.
 - SUNSHADES SHALL BE FRP, STYLE E AS MANUFACTURED BY O'BRIEN CORPORATION, OR EQUAL, OR FABRICATED FROM 10 GAUGE TYPE 304 STAINLESS STEEL. WHERE PRACTICAL, PANELS AND INSTRUMENTS SHALL BE MOUNTED IN A NORTH FACING DIRECTION.
 - CONTRACTOR SHALL VERIFY PANEL SIZE BEFORE CONSTRUCTION OF SUNSHADE AND MODIFY AS REQUIRED TO PROTECT PANELS FROM THE EFFECTS OF SOLAR HEAT GAIN.
 - SUNSHADES SHALL BE SUITABLE FOR WALL OR STAND MOUNTING.

SUNSHADE FOR OUTDOOR PANELS

I-40-1003

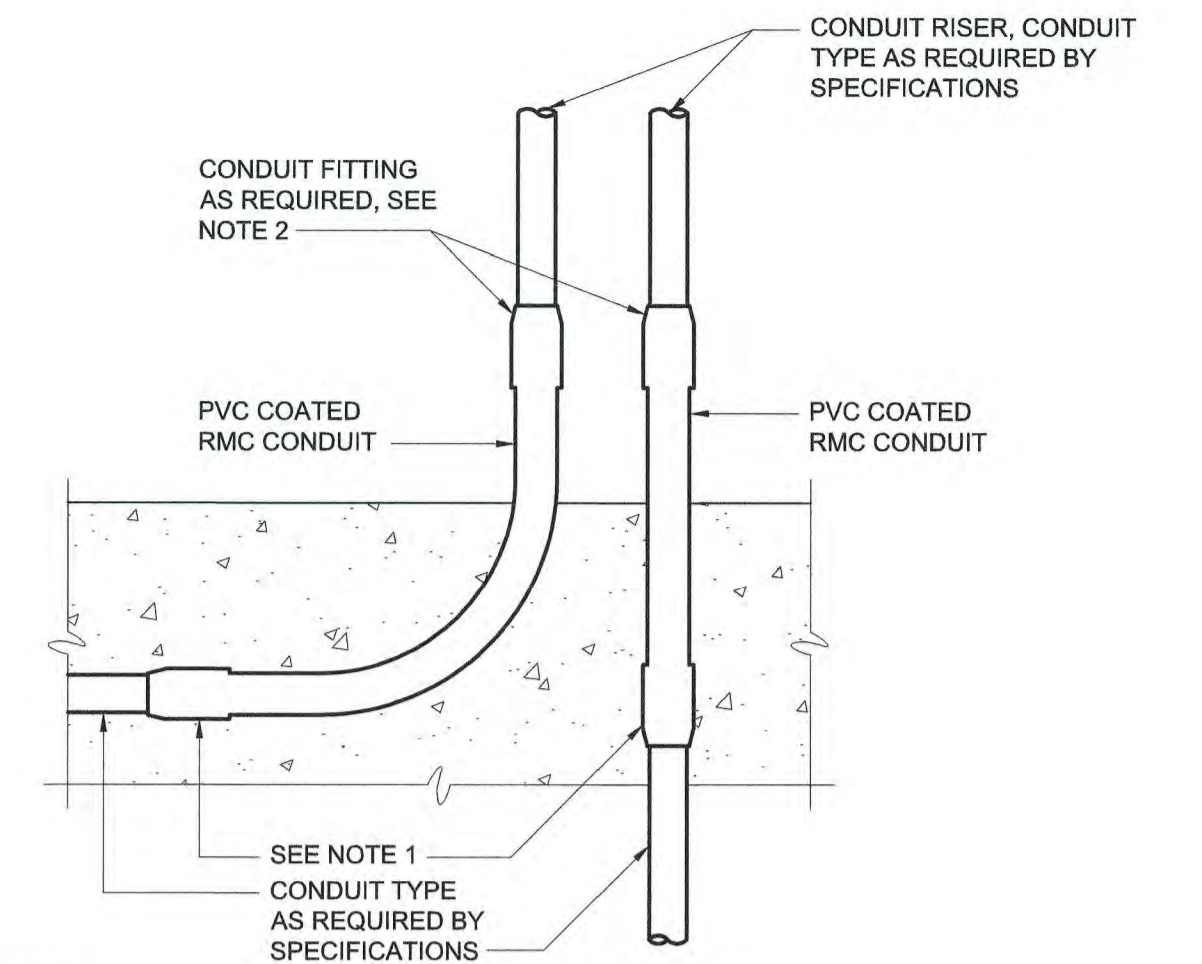


NOTES:

- ADDITIONAL SEISMIC SUPPORTS MAY BE REQUIRED, SEE CODE SUMMARY DRAWING AND DRAWING E1 FOR SEISMIC CLASSIFICATIONS.
- CONDUIT TYPE AND MATERIALS OF CONSTRUCTION FOR SUPPORTS AND HARDWARE SHALL BE AS REQUIRED FOR THE AREA IN WHICH THE FIXTURE IS INSTALLED AS SHOWN ON THE DRAWINGS AND IN ACCORDANCE WITH THE SPECIFICATIONS.
- REFER TO AREA DESIGNATION DRAWINGS AND SPECIFICATIONS FOR REQUIRED MATERIALS OF CONSTRUCTION.
- 45 DEGREE ANGLE BRACES SHALL BE INSTALLED TO PREVENT LATERAL MOVEMENT OF FIXTURE SUPPORTS. BRACES SHALL BE INSTALLED AT 8' INTERVALS ALONG ENTIRE LENGTH OF SUPPORT CHANNEL. TRANSVERSE MOVEMENT SHALL BE PREVENTED IN SIMILAR FASHION AT EACH END OF THE SUPPORT CHANNEL.

SUPPORT CHANNEL MOUNTED LINEAR FIXTURES

E-26-0606

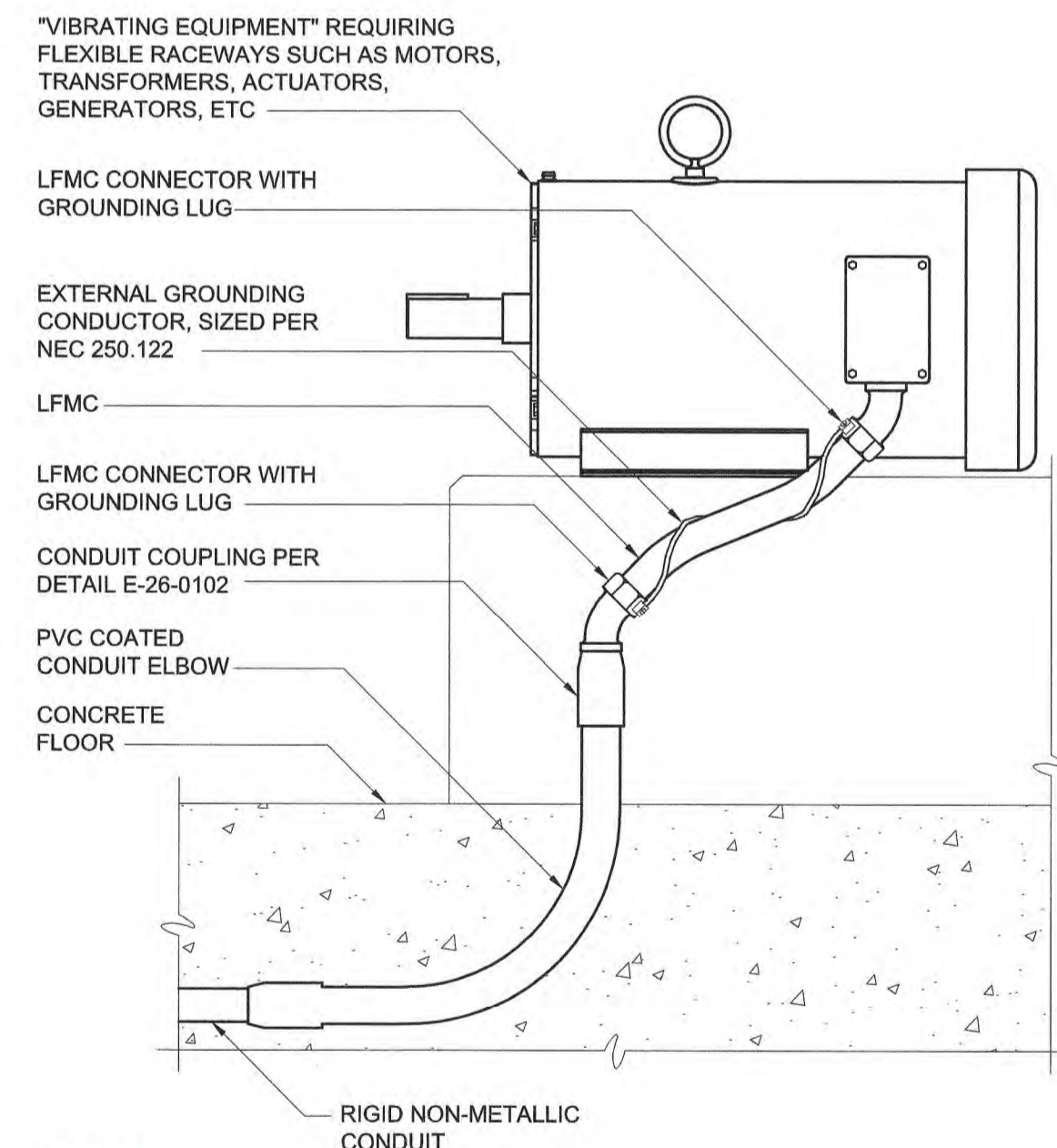


NOTES:

- FOR ENCASED PVC CONDUIT USE PVC TERMINAL ADAPTER. FOR ALL OTHER CONDUIT TYPES, USE PVC COATED RMC COUPLINGS.
- IF ANY THREADS OF THE PVC COATED RMC CONDUIT ARE EXPOSED AFTER INSTALLATION OF THE CONDUIT FITTING, THE CONDUIT FITTING SHALL BE PVC COATED TYPE WITH APPROPRIATE PVC SKIRTS. IF THE THREADS OF THE PVC COATED RMC CONDUIT ARE PROPERLY CUT SO THAT THEY ARE NOT EXPOSED AFTER INSTALLATION OF THE CONDUIT FITTING, THE CONDUIT MATERIAL SHALL BE AS REQUIRED BY THE SPECIFICATIONS, BASED ON THE MATERIAL OF THE CONDUIT RISER.

CONDUIT EXITING CONCRETE ENCASEMENT

E-26-0102

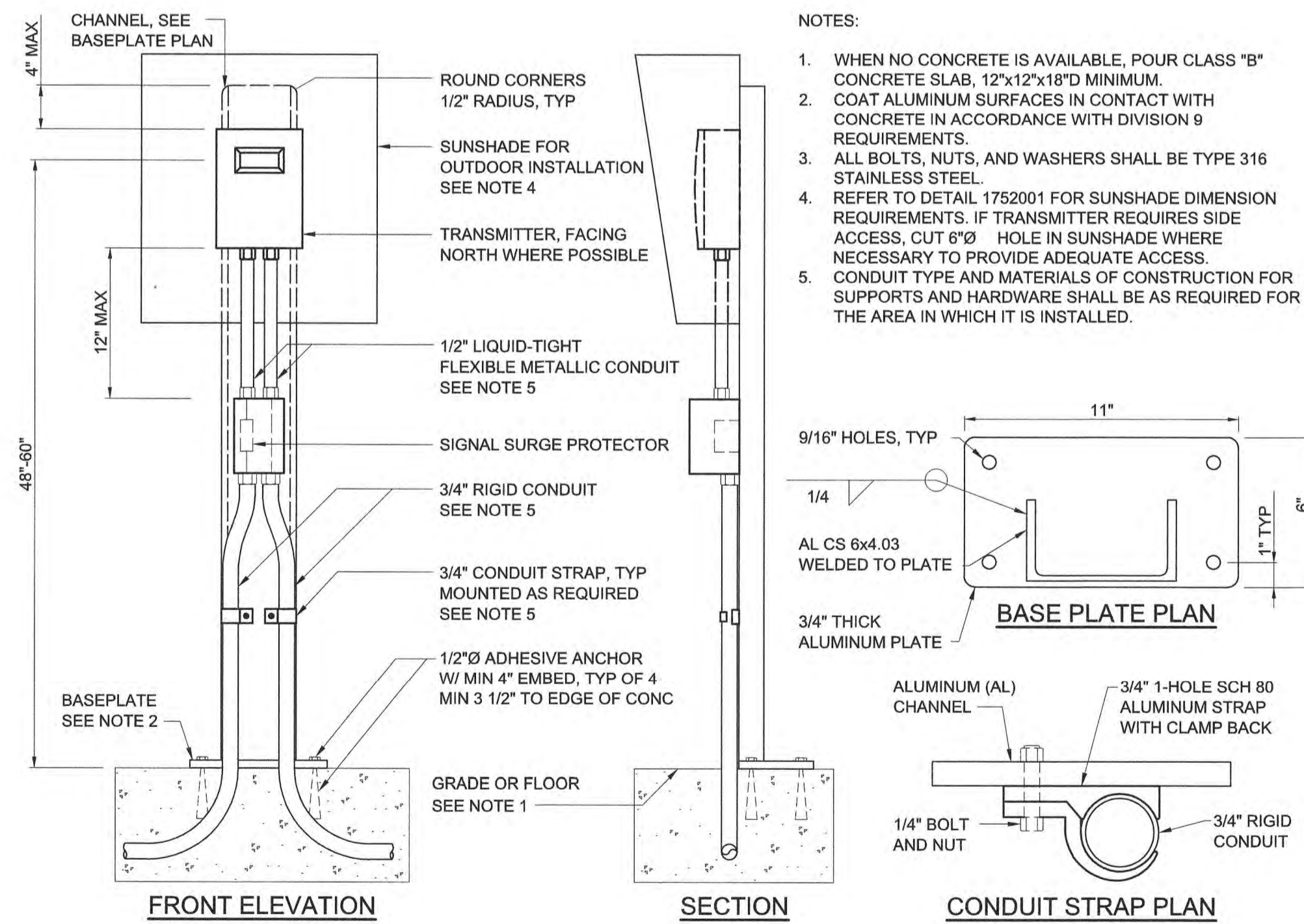


NOTES:

- WHERE NON-METALLIC CONDUIT TRANSITIONS TO RIGID METALLIC CONDUIT AND / OR LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT, (LFCM), TO FEED VIBRATING TYPE LOADS, THE CONTRACTOR SHALL FURNISH AND INSTALL AN EXTERNAL BARE COPPER GROUNDING CONDUCTOR AND APPROVED GROUNDING LFCM CONNECTORS TO ENSURE GROUND CONTINUITY TO THE RIGID METALLIC CONDUIT AS SHOWN. THE GROUNDING CONDUCTOR SHALL BE SIZED ACCORDING TO NEC 250.122 AND BE NEATLY WRAPPED AROUND LFCM AS SHOWN. LFCM INSTALLED IN THIS MANNER CANNOT BE USED FOR A CONTINUOUS GROUND PATH PER NEC 350.80.

LFCM CONDUIT GROUND STRAP

E-26-0104

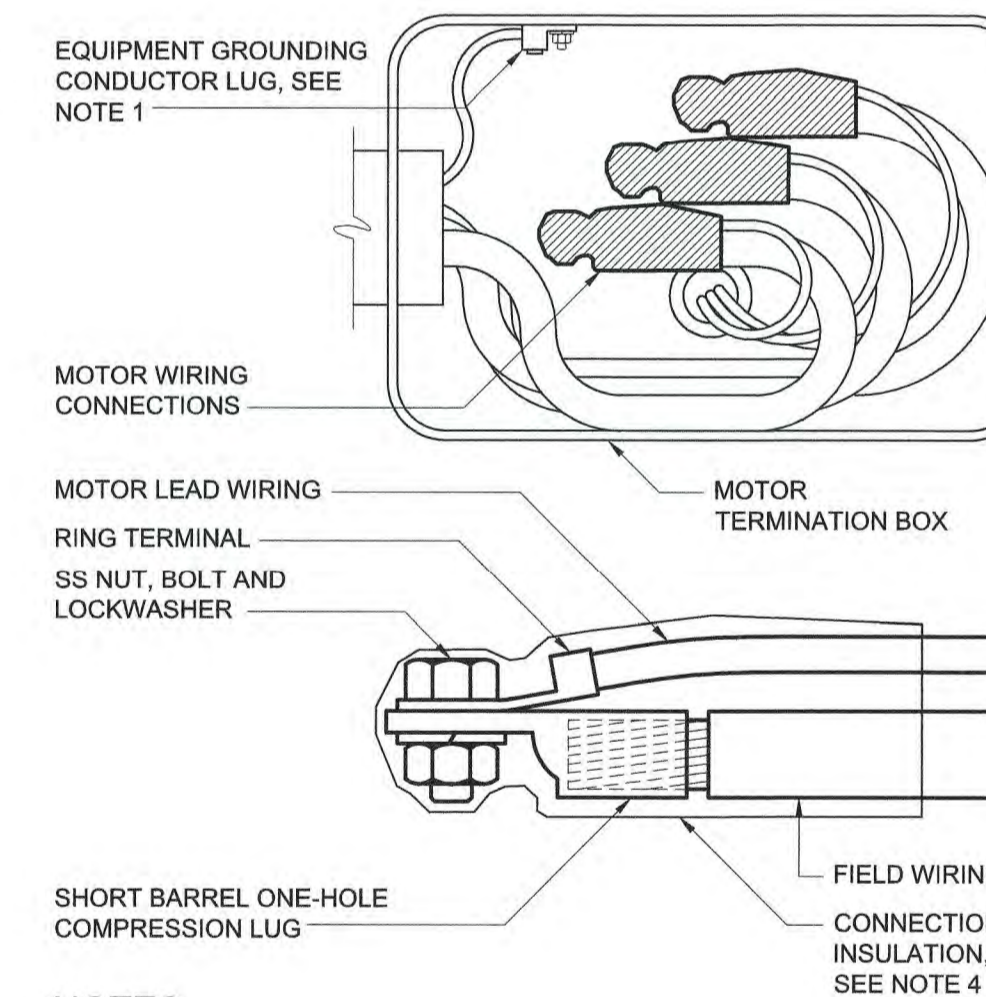


NOTES:

- WHEN NO CONCRETE IS AVAILABLE, POUR CLASS "B" CONCRETE SLAB, 12"x12"x18" MINIMUM.
- COAT ALUMINUM SURFACES IN CONTACT WITH CONCRETE IN ACCORDANCE WITH DIVISION 9 REQUIREMENTS.
- ALL BOLTS, NUTS, AND WASHERS SHALL BE TYPE 316 STAINLESS STEEL.
- REFER TO DETAIL 1752001 FOR SUNSHADE DIMENSION REQUIREMENTS. IF TRANSMITTER REQUIRES SIDE ACCESS, CUT 6" HOLE IN SUNSHADE WHERE NECESSARY TO PROVIDE ADEQUATE ACCESS.
- CONDUIT TYPE AND MATERIALS OF CONSTRUCTION FOR SUPPORTS AND HARDWARE SHALL BE AS REQUIRED FOR THE AREA IN WHICH IT IS INSTALLED.

2-WIRE TRANSMITTER MOUNTED IN CONCRETE SLAB

I-40-0902

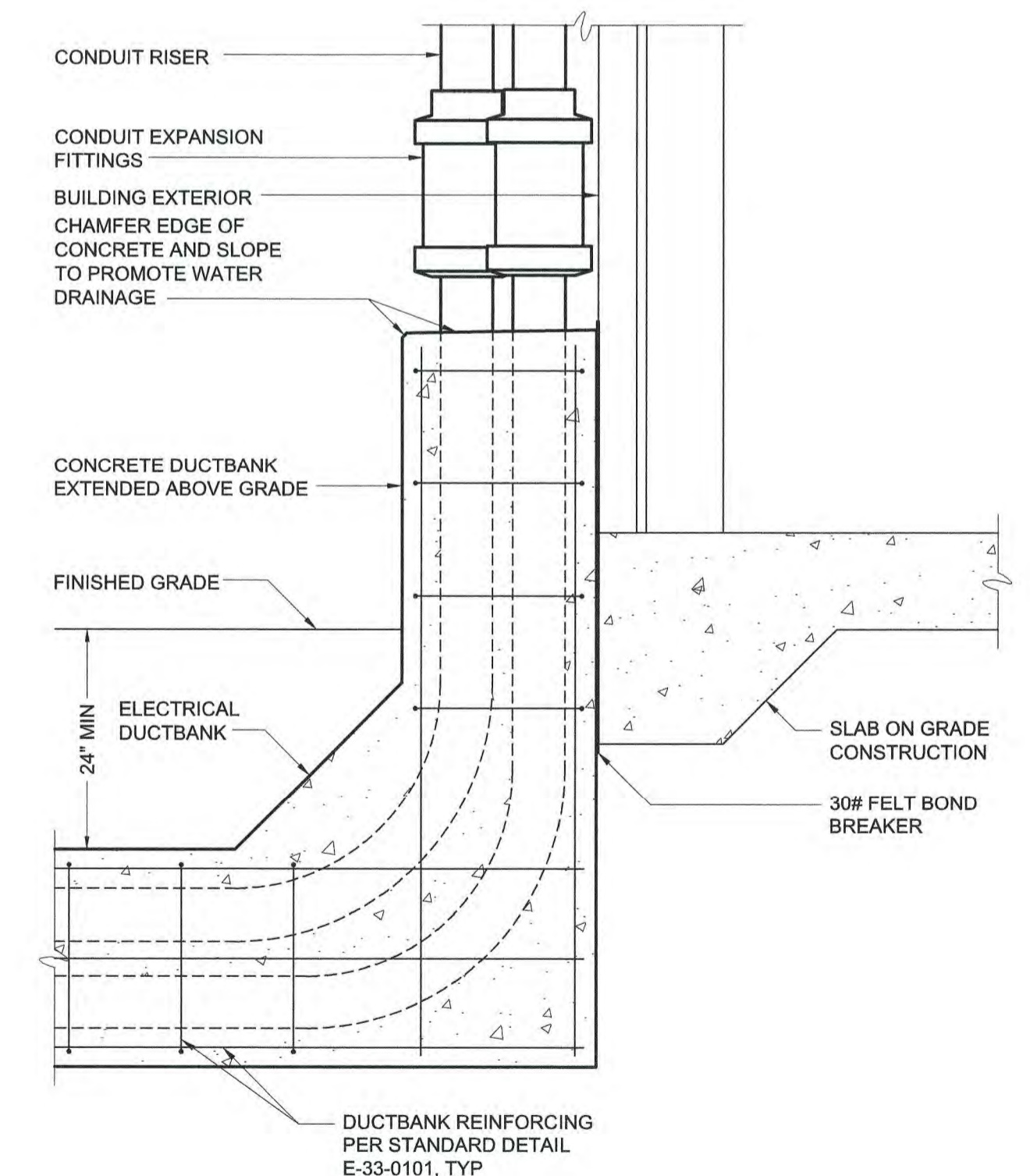


NOTES:

- EQUIPMENT GROUNDING CONDUCTOR LUG SHALL BE ATTACHED WITH NUT AND LOCKWASHER TO THE MOTOR GROUNDING STUD. WHERE PROVIDED, FACTORY INSTALLED EQUIPMENT GROUNDING CONDUCTOR LUGS ARE ACCEPTABLE IN LIEU OF THE FIELD INSTALLED EQUIPMENT GROUNDING CONDUCTOR LUG.
- RING TERMINALS ON MOTOR LEADS SHALL BE FACTORY INSTALLED BY THE MOTOR MANUFACTURER.
- INSTALL SHORT BARREL COMPRESSION CONNECTOR ON FIELD WIRING WITH MANUFACTURER'S RECOMMENDED COMPRESSION TOOL AND CRIMPING DIE. CONNECTORS SHALL HAVE SMOOTHLY ROUNDED EDGES.
- HEAT SHRINK OR COLD APPLIED CONNECTOR INSULATION LISTED FOR THE PURPOSE AND AS SPECIFIED.

LOW VOLTAGE MOTOR TERMINATION

E-26-0301



DUCTBANK ABUTMENT (FLOATING) TO STRUCTURE

E-33-0108

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PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	B. PICKETT
DRAWN BY:	T. RAHLAN
CHECKED BY:	D. ATKINSON
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
1 CONSTRUCTION 4/2023 CWB	
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Hazen

HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

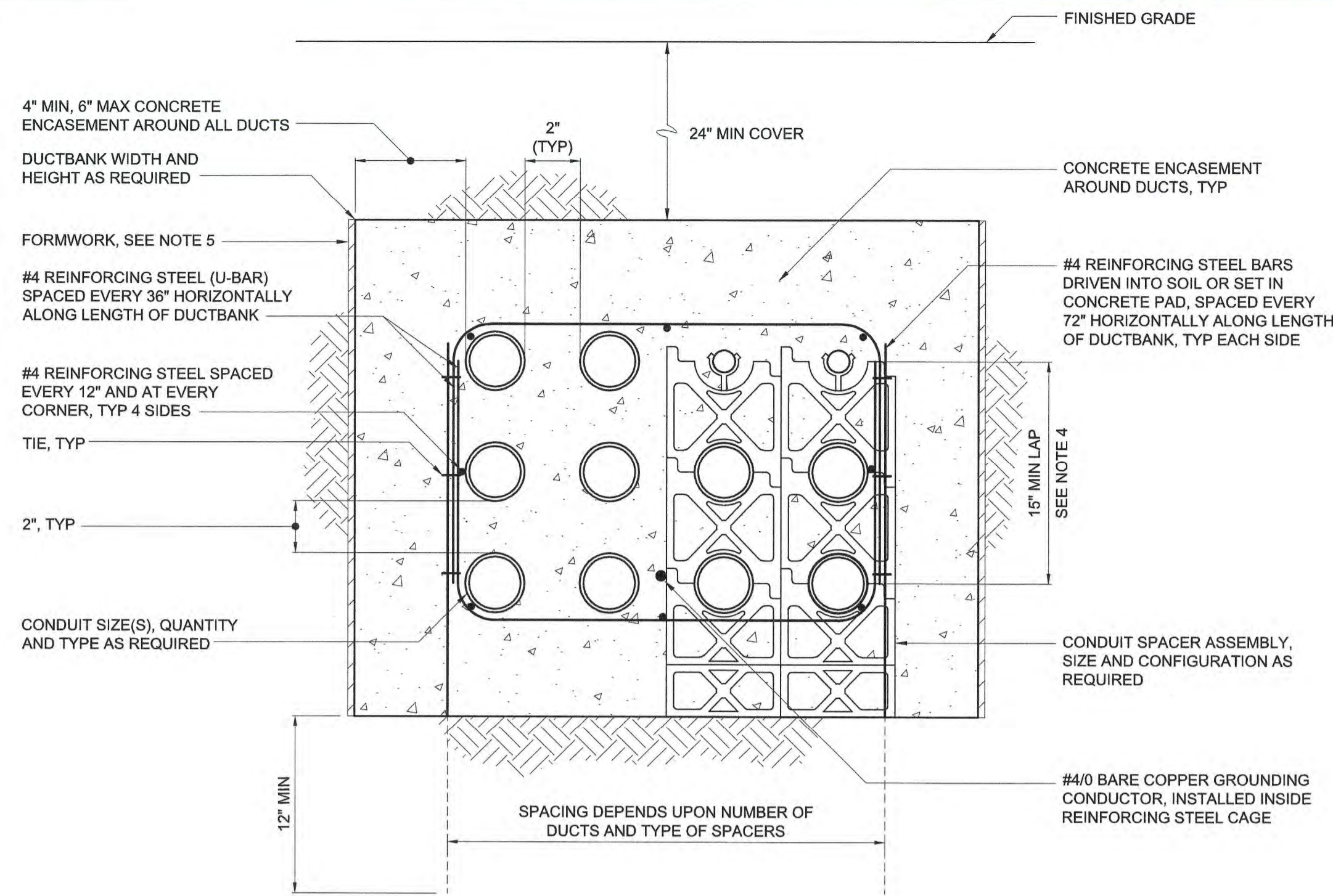
PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA

CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

ELECTRICAL
STANDARD DETAILS

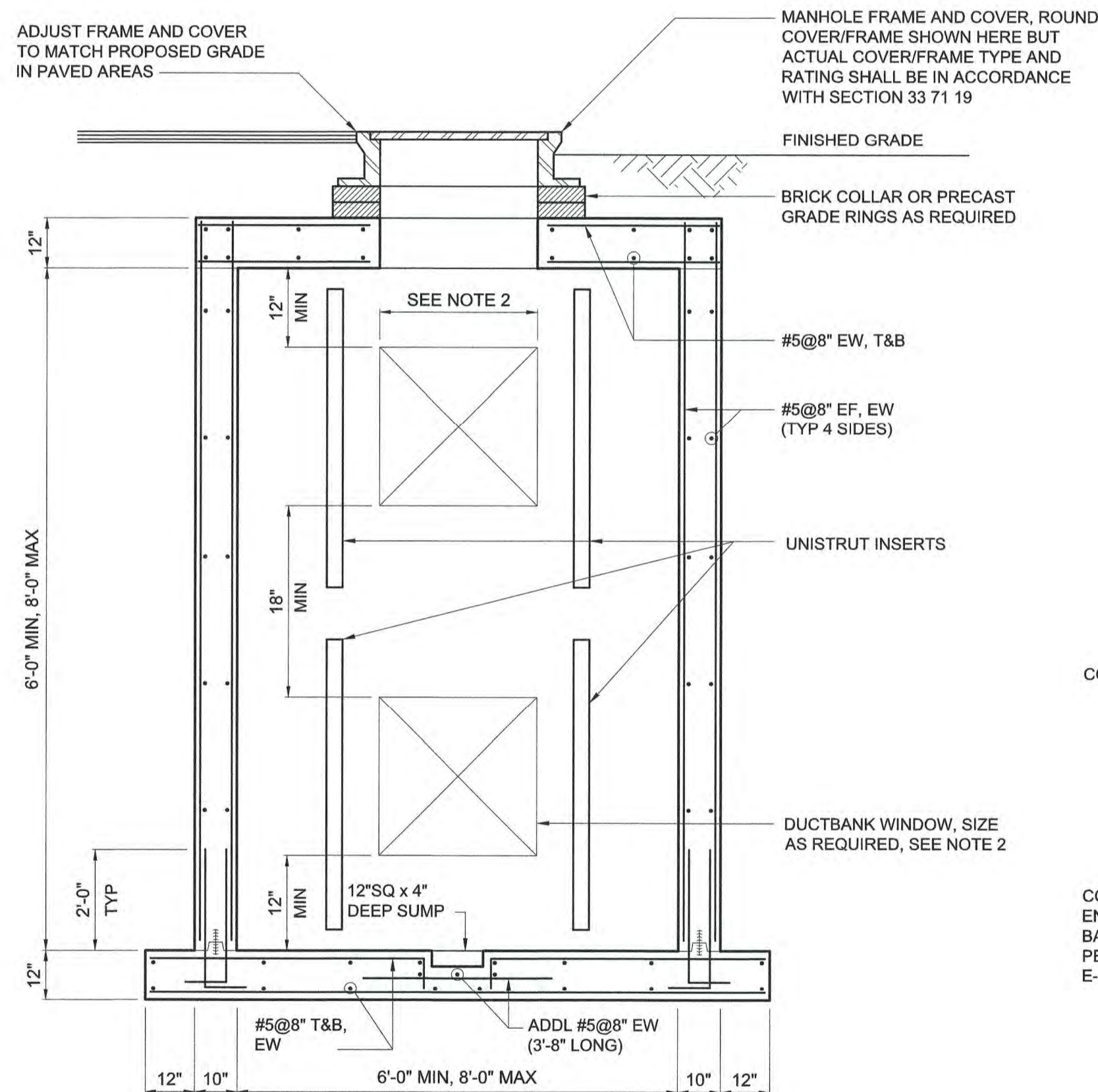
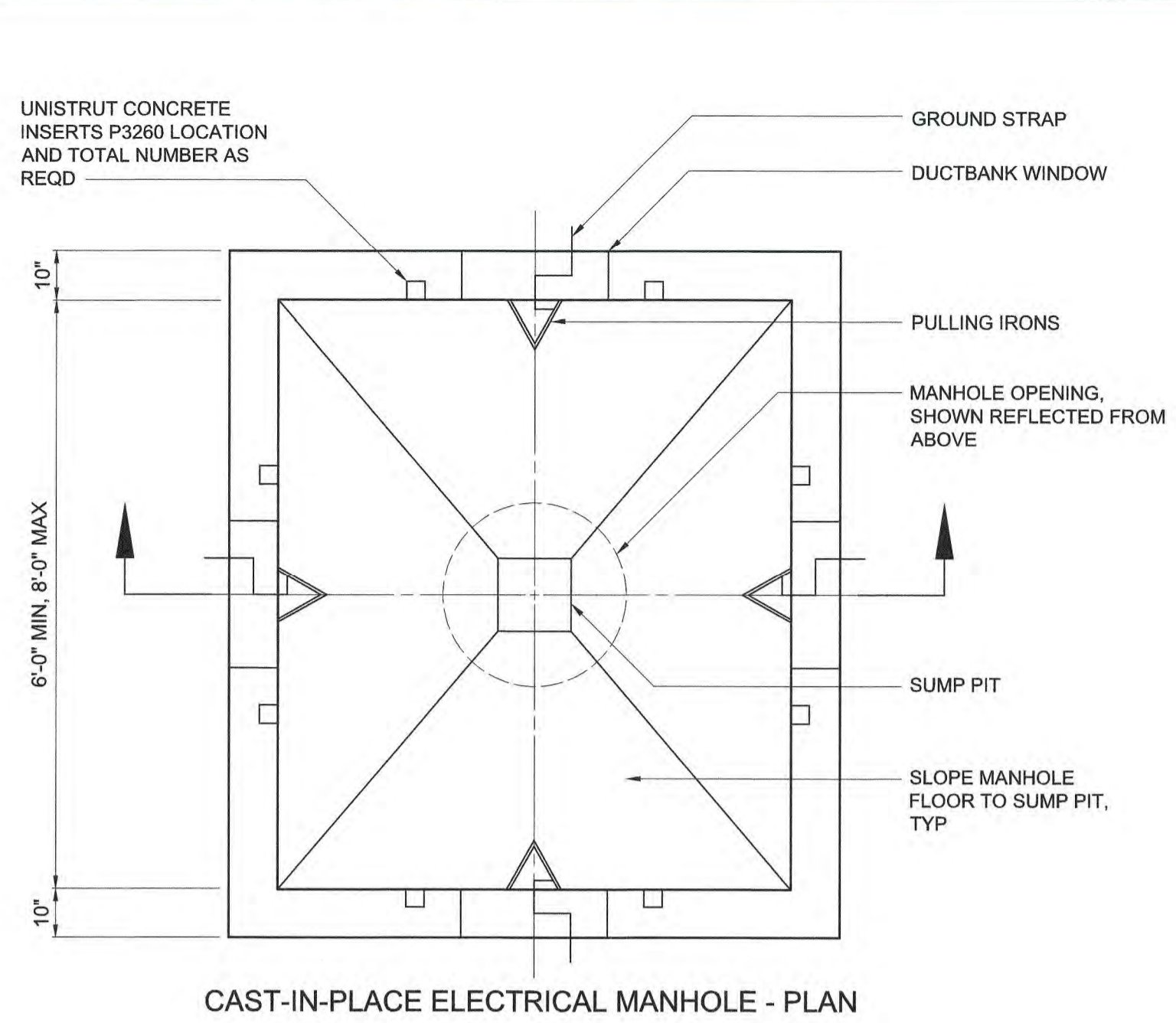
DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	

ED1

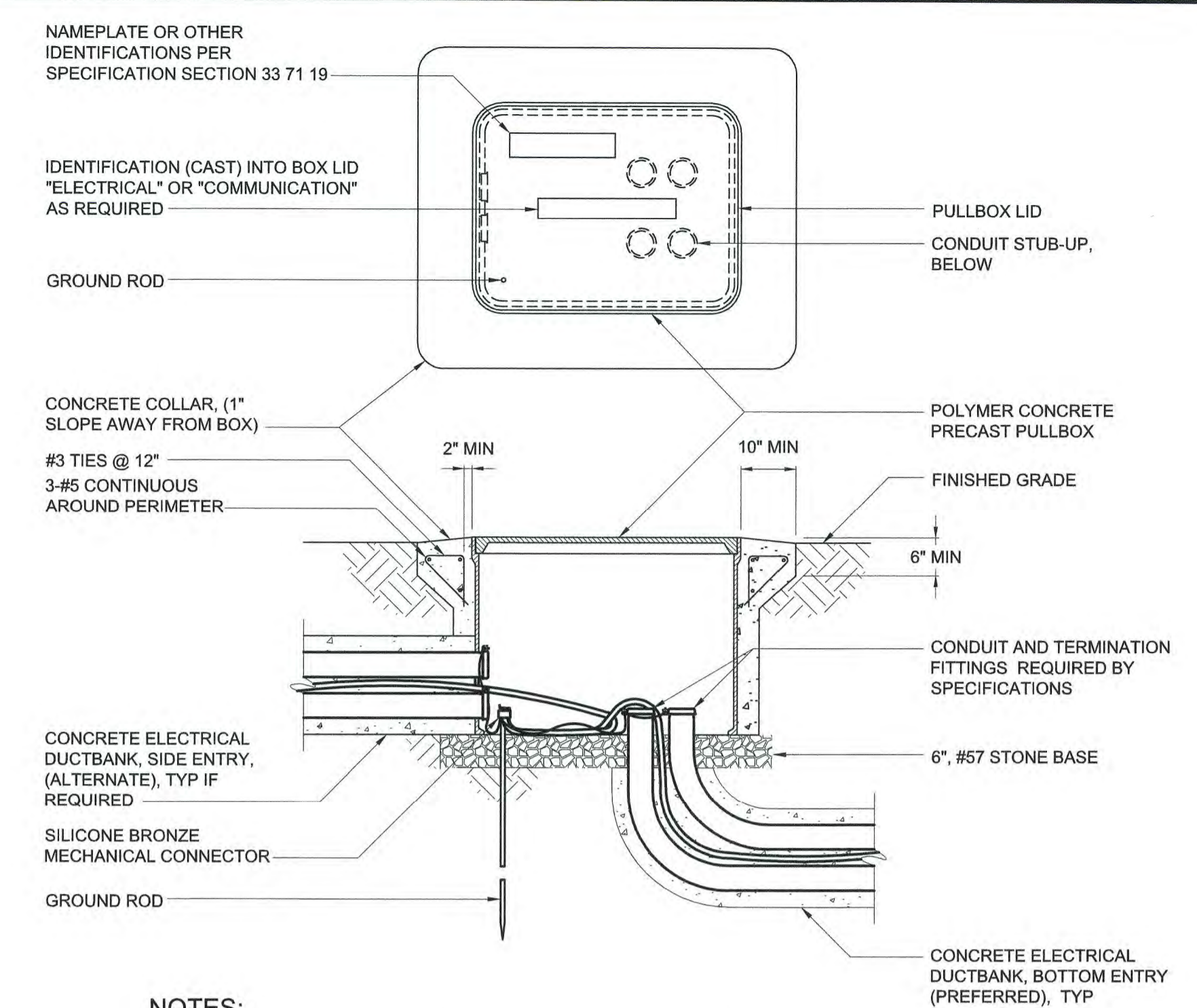


- NOTES:**
- CONCRETE SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH SPECIFICATION SECTION 03 30 00.
 - REINFORCING STEEL AND TIES SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH SPECIFICATION SECTION 03 21 00. OVERLAP FOR REINFORCING STEEL SPLICES ALONG THE DUCTBANK LENGTH SHALL BE 15", MINIMUM.
 - CONDUIT SPACERS ARE REQUIRED IN ACCORDANCE WITH SPECIFICATION SECTION 33 71 19. HORIZONTAL SPACING OF CONDUIT SPACER ASSEMBLIES ALONG LENGTH OF DUCTBANK SHALL BE AS SHOWN IN THE TABLE.
 - FOR DUCTBANKS LESS THAN 15" IN HEIGHT, THE LAP SHALL BE THE HEIGHT OF THE DUCTBANK.
 - IN POOR SOIL CONDITIONS, DUCTBANKS SHALL BE FORMED WITH FORMING MATERIALS TO MAINTAIN 4" MINIMUM ENCASEMENT. WHERE SOIL CONDITIONS PERMIT AND THE EXCAVATION IS MAINTAINED FOR A 4" MINIMUM TO 10" MAXIMUM ENCASEMENT, THE FORMWORK CAN BE OMITTED.

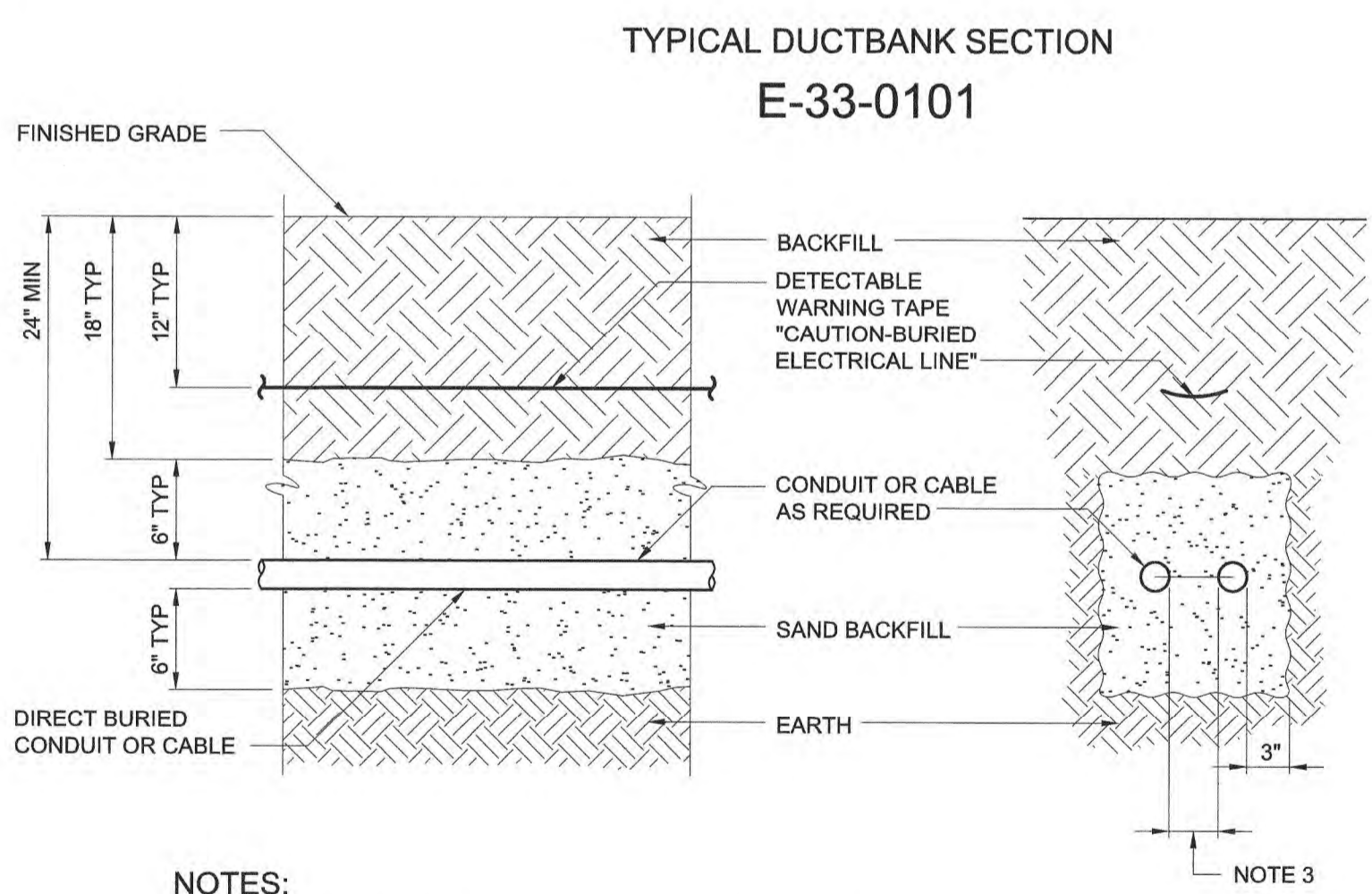
MAX SPACING BETWEEN CONDUIT SPACER ASSEMBLIES	
CONDUIT SIZE	SPACING
1"	3 FT
1 1/4-2"	5 FT
2 1/2-3"	6 FT
3 1/2-5"	7 FT
6"	8 FT



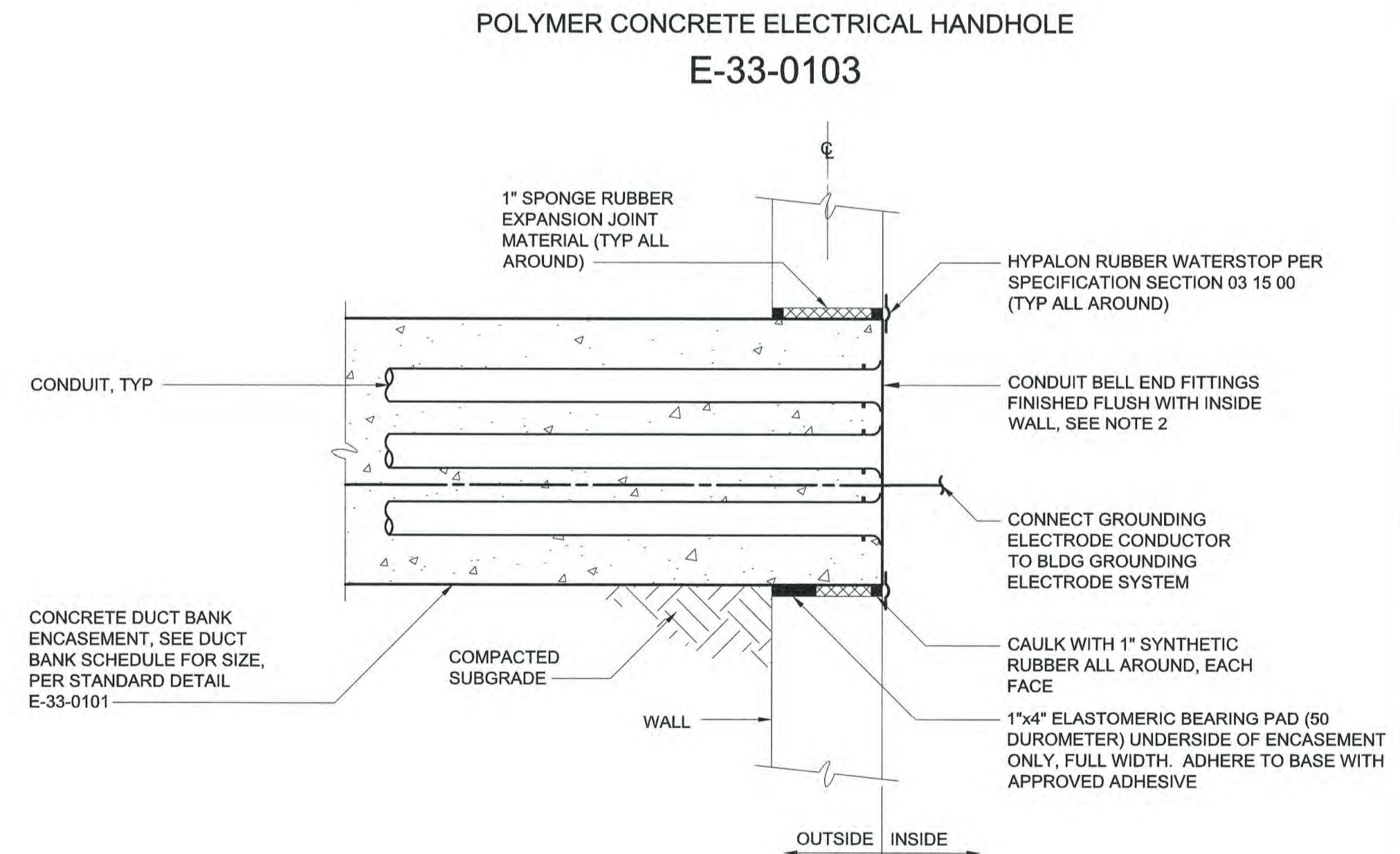
- NOTES:**
- DUCTBANK WINDOW WIDTH SHALL BE LIMITED TO ONE-THIRD (1/3) OF THE WALL WIDTH, I.E. 2'-0" FOR A 6'-0" WALL.
 - CAST-IN-PLACE OR PRE-CAST MANHOLES MAY BE USED AT THE CONTRACTOR'S OPTION. THIS DETAIL IS REPRESENTATIVE OF CAST-IN-PLACE MANHOLE CONSTRUCTION. IN EITHER CASE, MANHOLES SHALL BE FURNISHED AND/OR CONSTRUCTED IN ACCORDANCE WITH SECTION 33 71 19.



- NOTES:**
- FOR SIDE ENTRY, CONDUIT DUCTBANK SHALL ENTER PULLBOX AT LOWEST POINT.
 - GROUND CONDUCTORS WITHIN DUCTBANK SHALL BE BOLTED TOGETHER AND TO GROUND ROD.
 - CONDUIT BONDING BUSHINGS (IF REQUIRED) SHALL BE BONDED TO GROUND ROD.
 - FOR SIDE ENTRY, CONDUIT SHALL ENTER IN INDIVIDUAL CIRCULAR HOLES APPROPRIATELY SIZED FOR THE CONDUIT. LARGE SINGLE RECTANGULAR OPENINGS FOR MULTIPLE CONDUITS ARE NOT ACCEPTABLE.
 - DUCTBANK REINFORCING REBAR SHALL PENETRATE THE SIDEWALLS OF THE BOX NO LONGER THAN 1".



- NOTES:**
- CONDUIT SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH SPECIFICATION SECTION 26 05 33.13.
 - BACKFILL THAT CONTAINS LARGE ROCKS, PAVING MATERIALS, CINDERS, LARGE OR SHARPLY ANGULAR SUBSTANCES, OR CORROSIVE MATERIAL SHALL NOT BE USED.
 - MAINTAIN A MINIMUM OF 2" BETWEEN POWER, CONTROL, AND INSTRUMENTATION CONDUITS OR CONDUCTORS.



- NOTES:**
- BLOCK-OUT IN WALL SHALL BE SMOOTH AND PLUM BUILT TO ACCOMMODATE THE REQUIRED CONCRETE DUCT BANK ENCASEMENT PLUS 1" ALL AROUND.
 - INSTALL EXPANDING FOAM SEALANT IN CONDUIT AROUND CONDUCTORS PER MANUFACTURER'S RECOMMENDATIONS.

TYPICAL DIRECT BURIED CONDUIT & CABLE
E-33-0104

CAST-IN-PLACE ELECTRICAL MANHOLE - SECTION
E-33-0102

BELOW-GRADE DUCT BANK TERMINATION TO EXISTING MANHOLE
E-33-0106

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PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	B. PICKETT
DRAWN BY:	T. RAHLAN
CHECKED BY:	D. ATKINSON
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
1 CONSTRUCTION	4/2023 CWB
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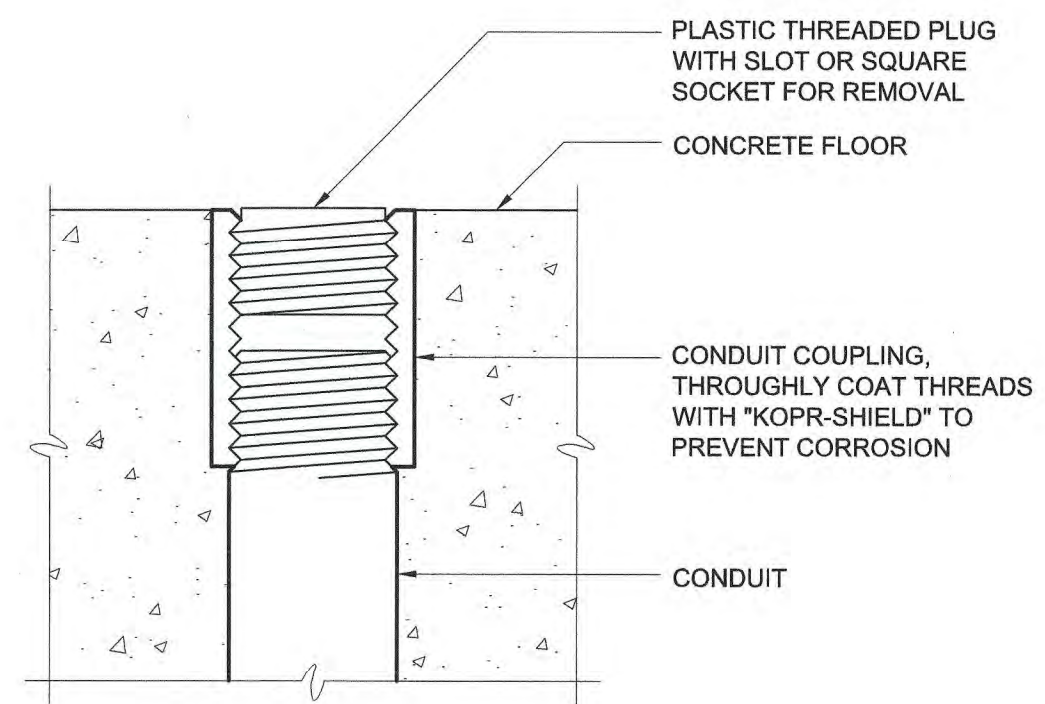
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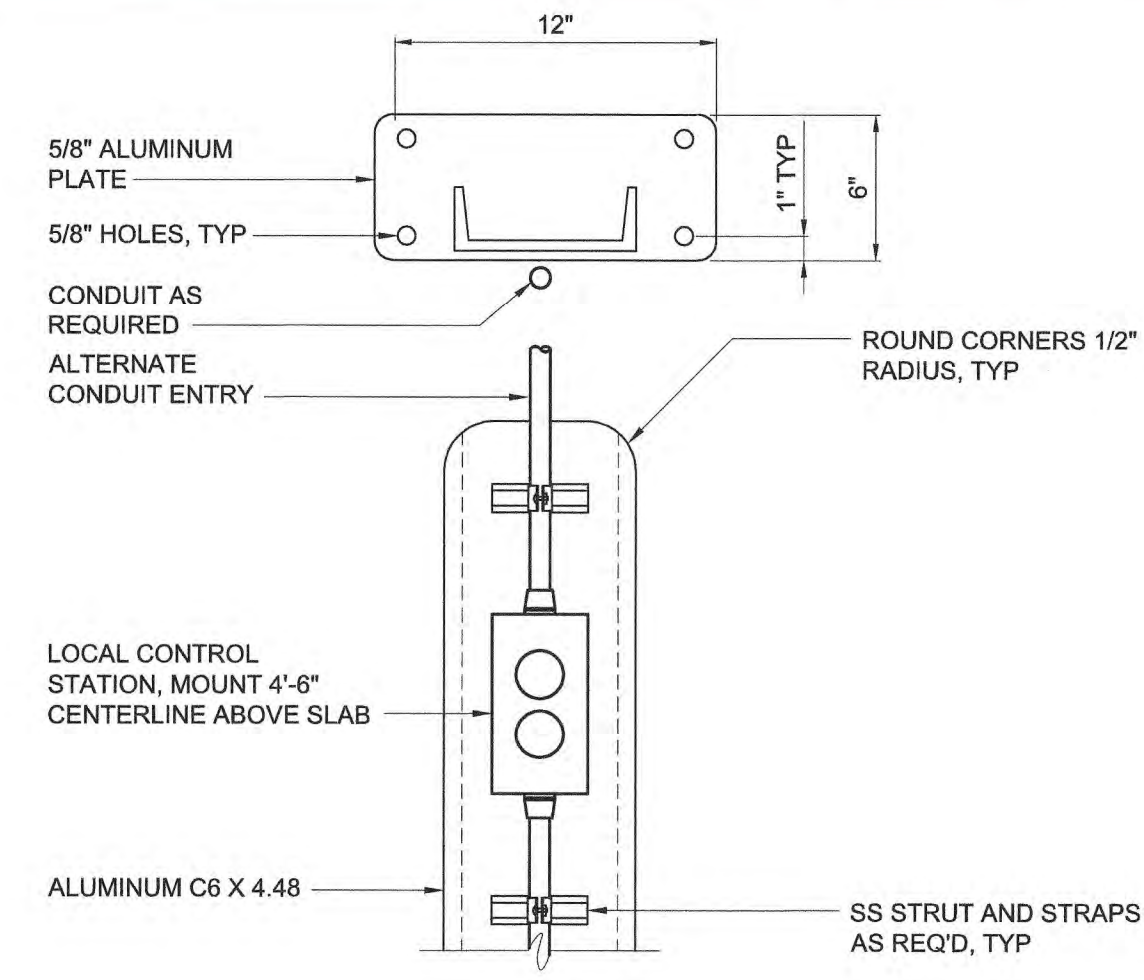
PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA
CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

ELECTRICAL STANDARD DETAILS

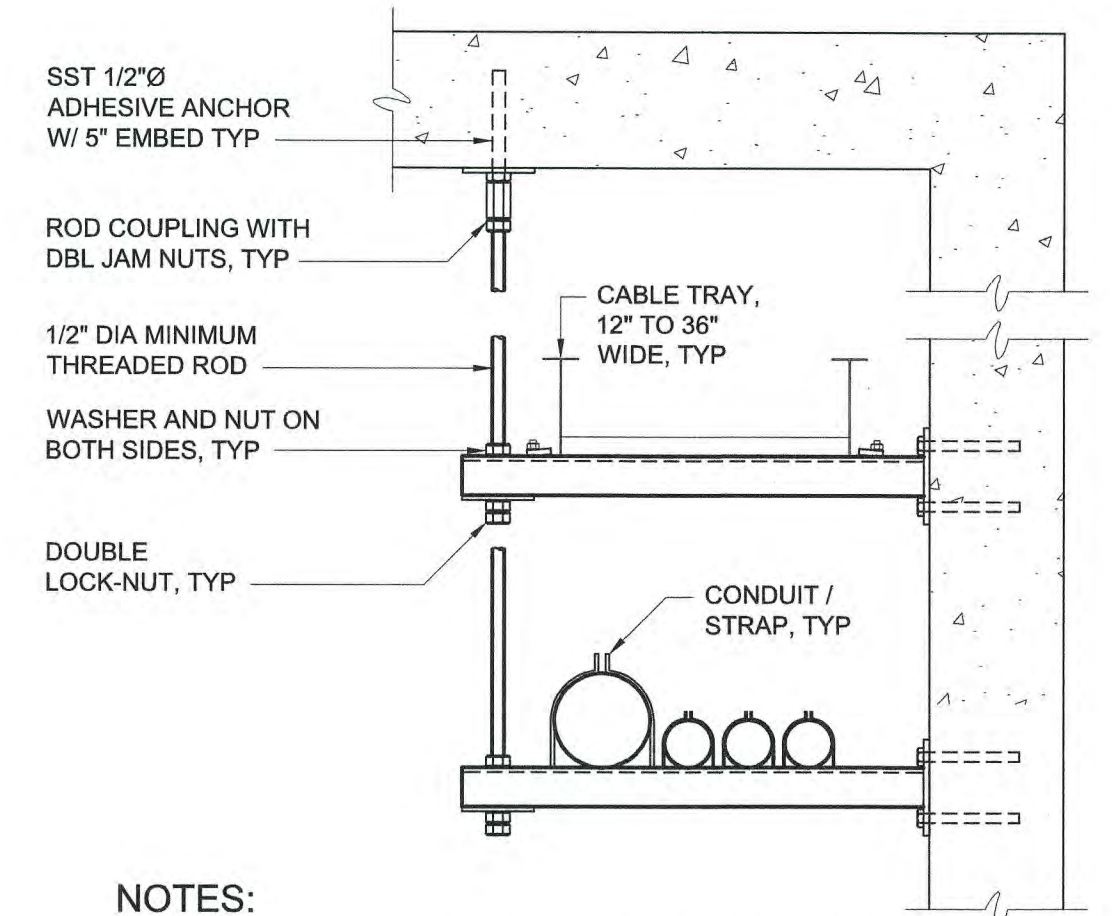
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CONTRACT NO.:	1
DRAWING NUMBER:	ED2



FLOOR STUB-UP FOR FUTURE CONDUIT
E-26-0101



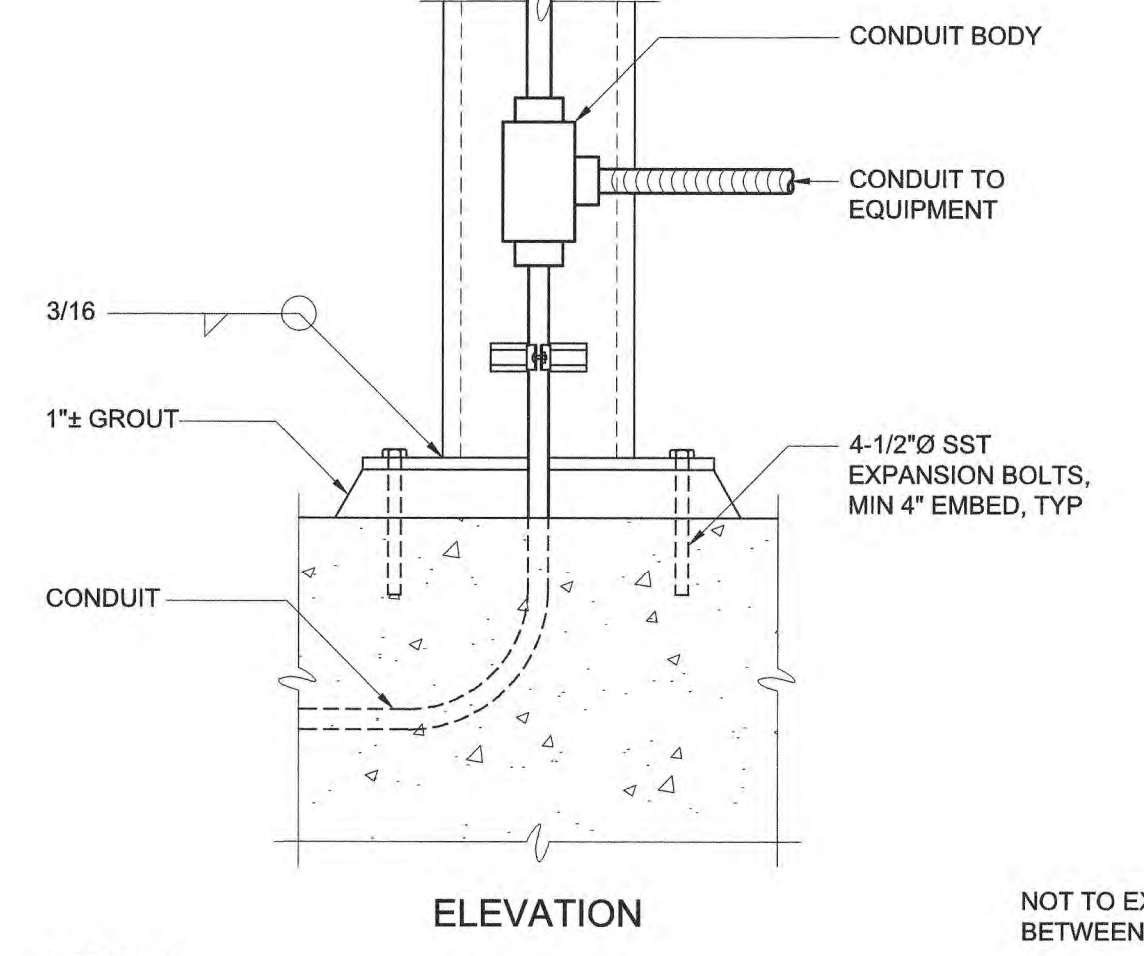
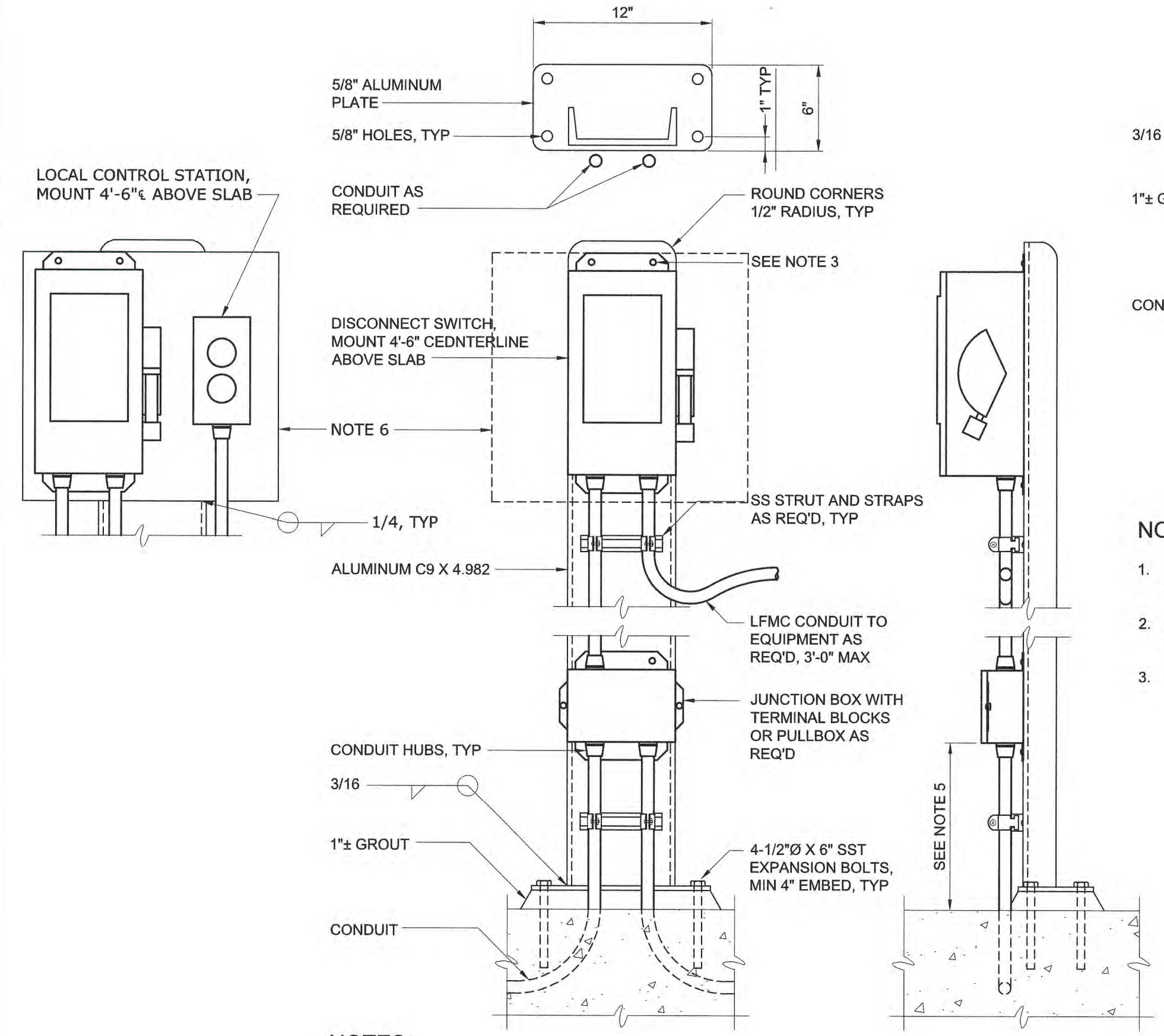
SEALING ABANDONED CONDUIT
AND ANCHOR BOLTS
E-26-0103



NOTES:

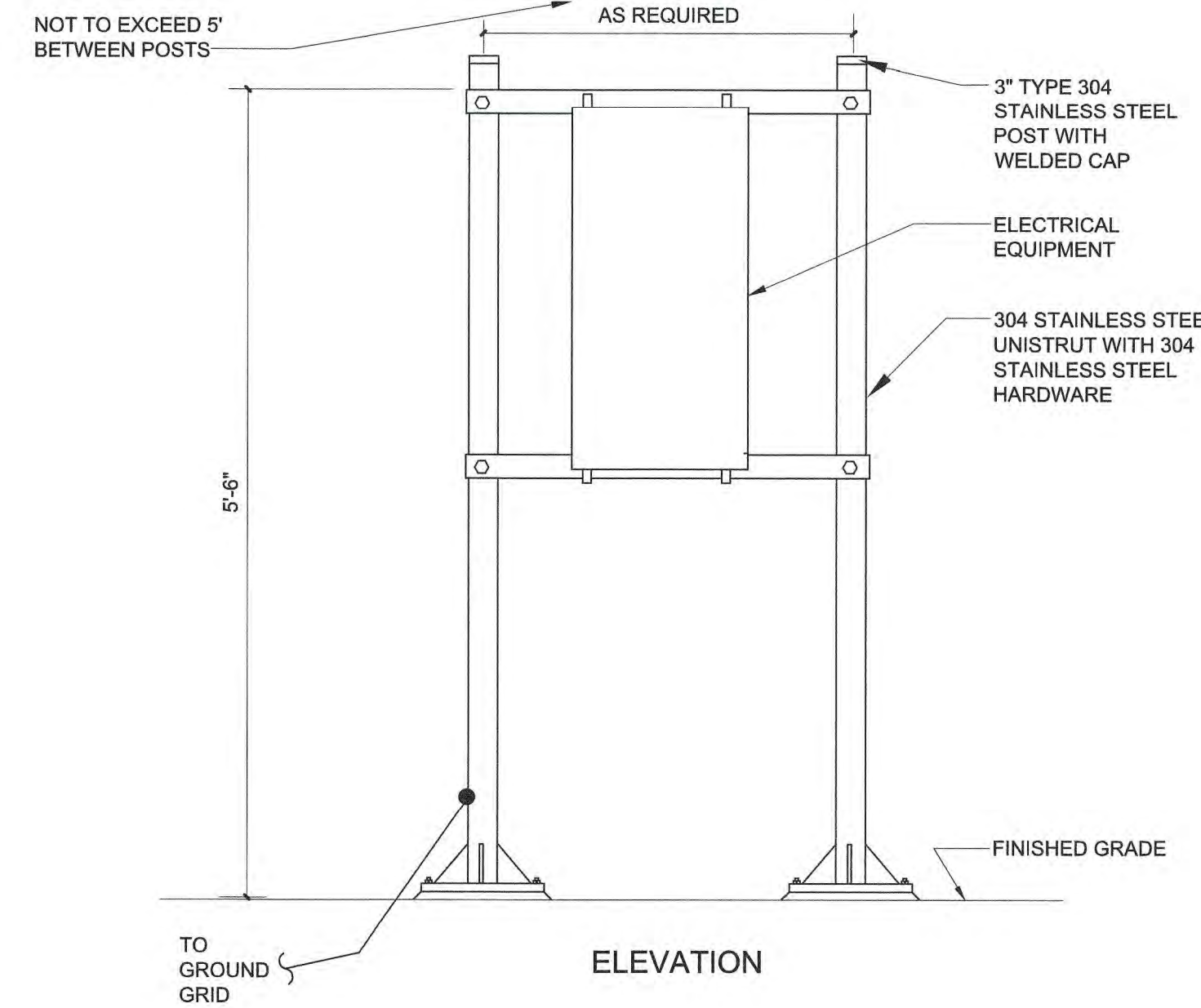
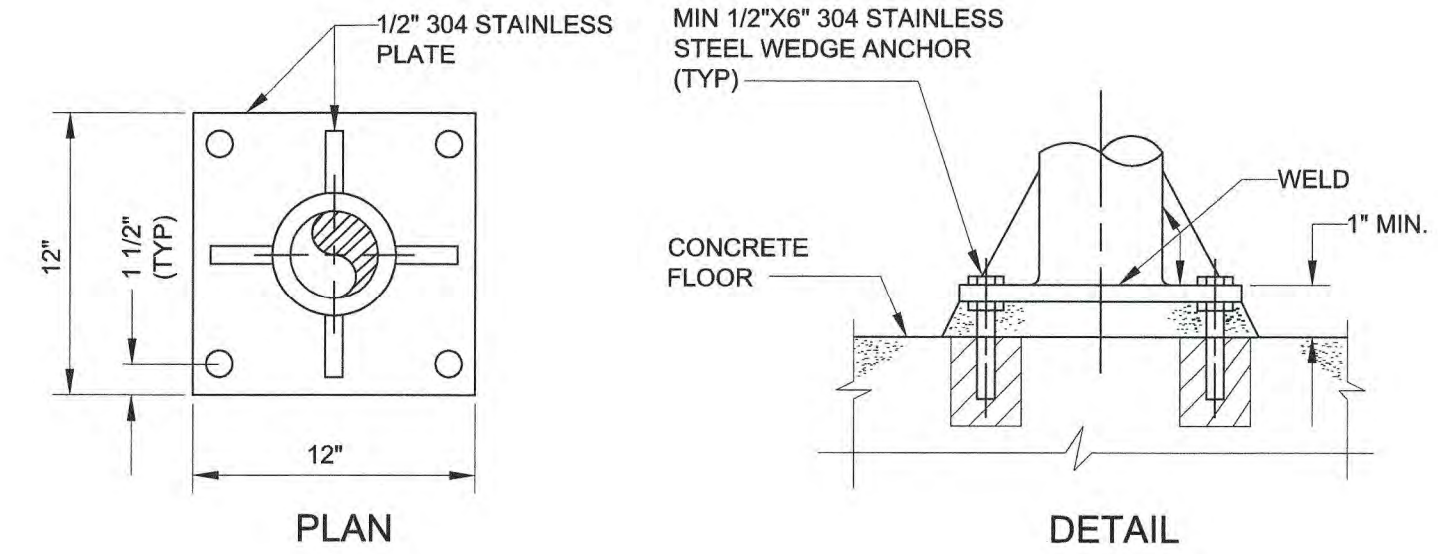
1. SPACE SUPPORTS AT 5'-0" MAXIMUM. HANGER SPACING SHALL BE BASED ON MAXIMUM LOAD.
2. ALL THREAD ROD SHALL BE USED ONLY FOR DUAL TRAY.
3. REFER TO AREA DESIGNATION DRAWINGS AND SPECIFICATIONS FOR REQUIRED MATERIALS OF CONSTRUCTION.
4. STRUT SHALL BE 12 GAUGE MINIMUM.

WALL MOUNTED RACEWAY SUPPORT RACK
E-26-0202



- NOTES:
1. COAT ALUMINUM SURFACES IN CONTACT WITH CONCRETE PER SPECIFICATIONS.
 2. CONSTRUCT 1'-2" DIAMETER X 2'-6" DEEP FOUNDATION WHERE MOUNTING SURFACE IS NOT AVAILABLE.
 3. USE SST WASHERS, NUTS AND BOLTS FOR MOUNTING DEVICES.

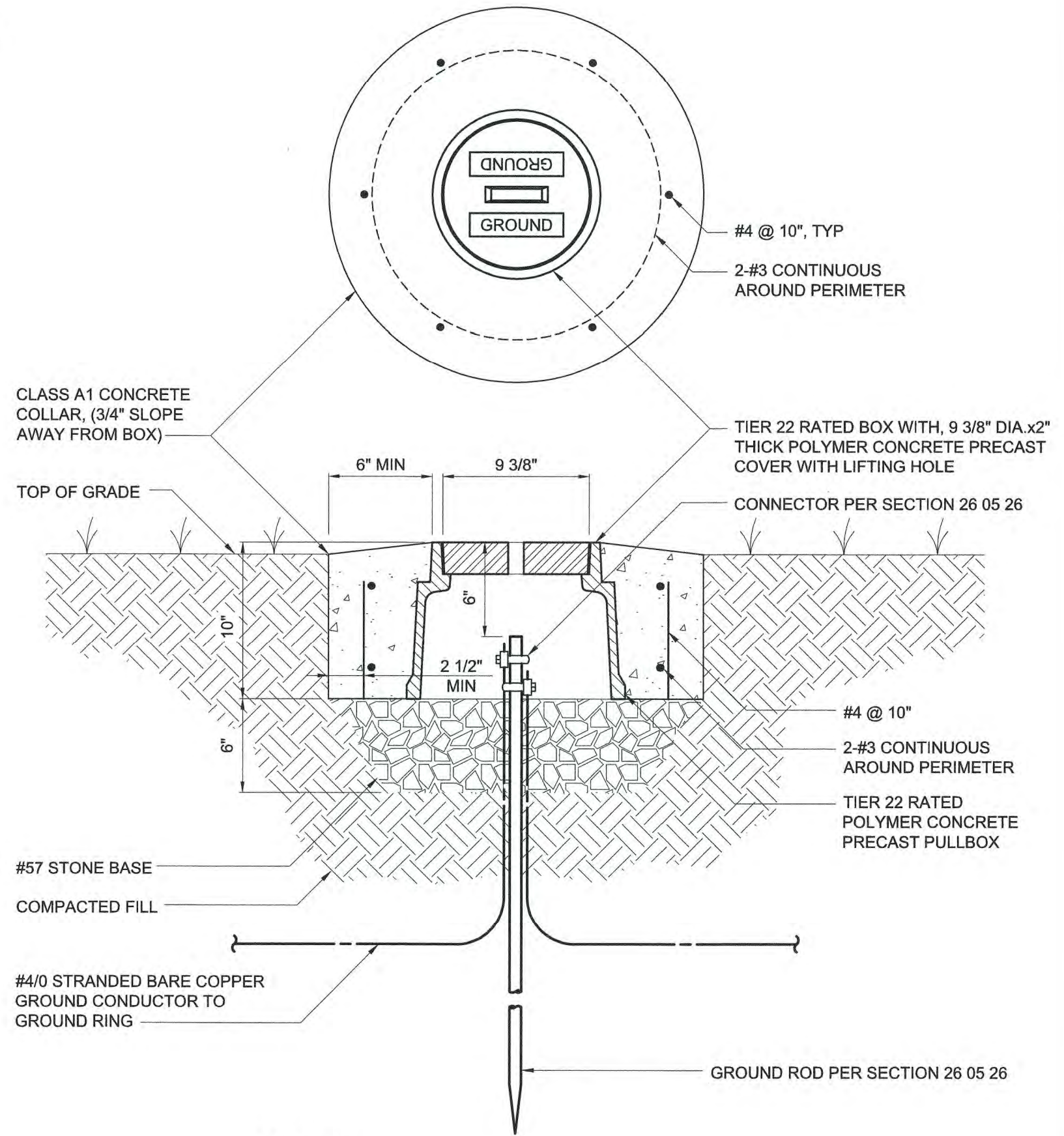
TYPICAL LOCAL CONTROL STATION
E-26-0401



NOTES:

1. ADJUST THE NUMBER OF SUPPORT POSTS TO ACCOMMODATE THE EQUIPMENT TO BE INSTALLED.

TYPICAL EQUIPMENT RACK ON GRADE
E-26-0404



NOTES:

1. PRECAST PULLBOX AND COVER SHALL BE OLDCASTLE PART NUMBER 09101187, OR APPROVED EQUAL.

GROUND ROD TEST WELL
E-26-0501

NOTES:

1. COAT ALUMINUM SURFACES IN CONTACT WITH CONCRETE PER SPECIFICATIONS.
2. CONSTRUCT 1'-2" DIAMETER X 2'-6" DEEP FOUNDATION WHERE MOUNTING SURFACE IS NOT AVAILABLE.
3. USE SST WASHERS, LOCKWASHERS, NUTS AND BOLTS FOR MOUNTING EQUIPMENT AND STRUT SUPPORTS TO CHANNEL. DRILL EQUIPMENT MOUNTING TABS AS NECESSARY TO COORDINATE WITH CHANNEL WIDTH.
4. REFERENCE STANDARD DETAIL E-26-0102 WHERE CONDUIT EMERGES FROM CONCRETE.
5. COORDINATE MOUNTING HEIGHT ABOVE CONCRETE WITH AREA CLASSIFICATION REQUIREMENTS.
6. WHERE A DISCONNECT IS PAIRED WITH A LOCAL CONTROL STATION, SUPPLY 1/4" ALUMINUM BACKPLANE CENTERED ON THE CHANNEL, MOUNT THE DISCONNECT AND LOCAL CONTROL STATION TO THE BACKPLANE PER NOTE 3.

30 AND 60 AMP DISCONNECT SWITCH
E-26-0403

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PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	B. PICKETT
DRAWN BY:	T. RAHLAN
CHECKED BY:	D. ATKINSON
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	0 1/2" 1"
1 CONSTRUCTION	4/2023 CWB
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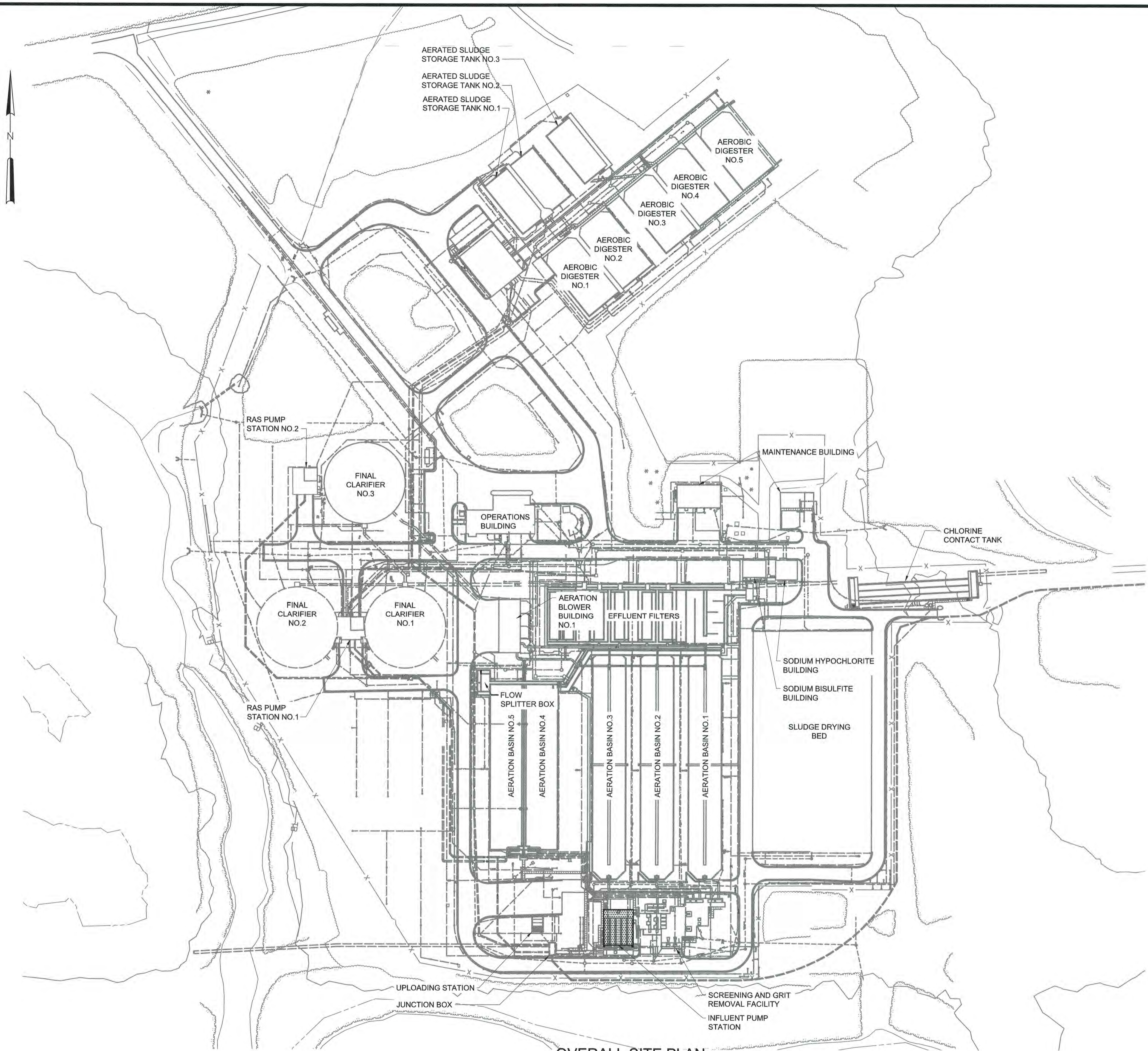


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HAZEN AND SAWYER
4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA
CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

ELECTRICAL
STANDARD DETAILS

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	ED3



OVERALL SITE PLAN
1"=100'

MODIFICATIONS

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PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	C. BECK
DRAWN BY:	B. CAUDLE
CHECKED BY:	M. MESSERE
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	

ISSUED FOR CONSTRUCTION

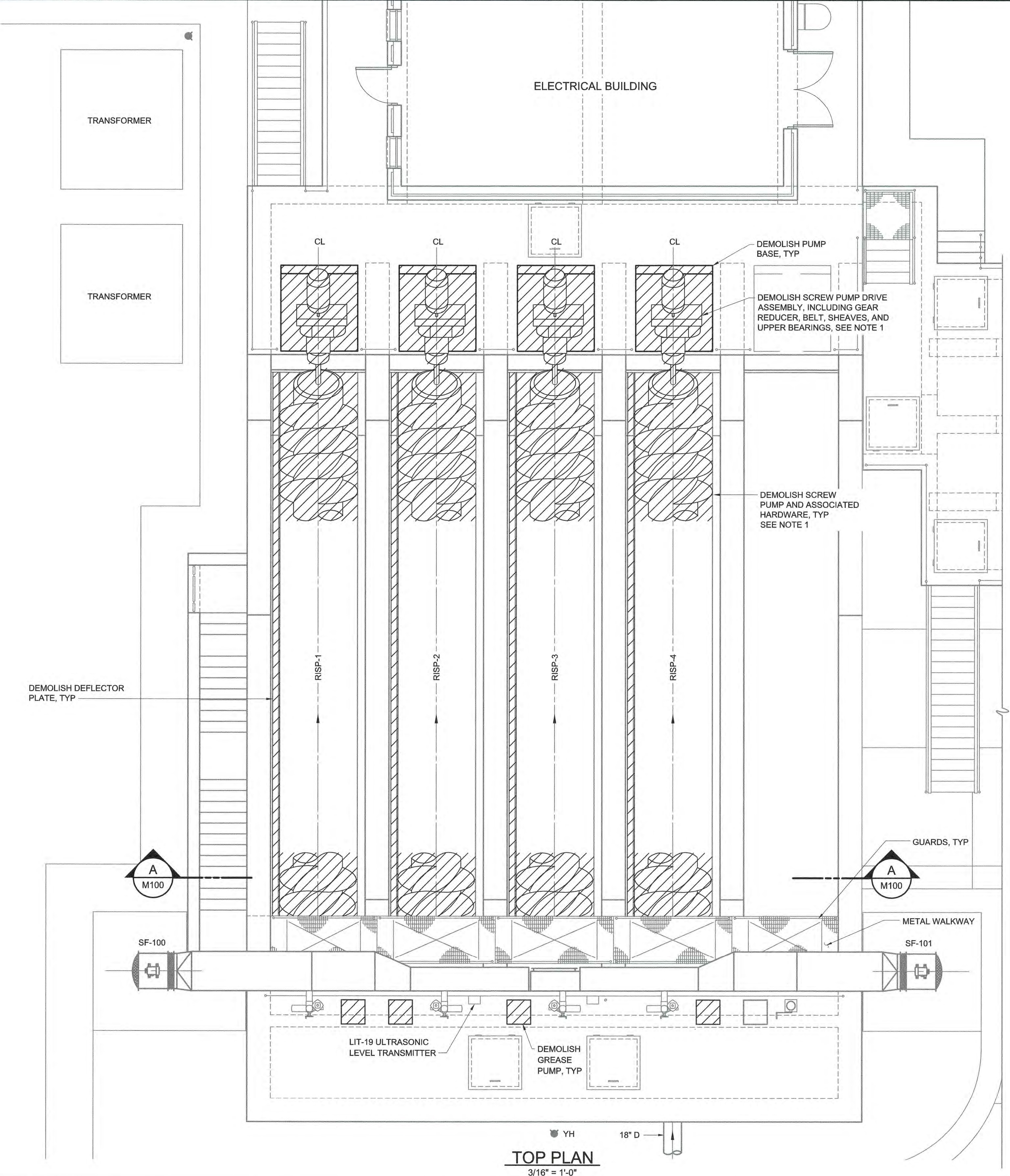
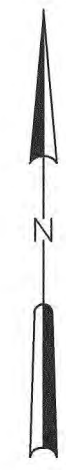
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PUBLIC WORKS COMMISSION
 CITY OF FAYETTEVILLE, NORTH CAROLINA

CROSS CREEK WRF AND ROCKFISH CREEK WRF
 SCREW PUMP IMPROVEMENTS

ROCKFISH CREEK
 CIVIL
 OVERALL SITE PLAN

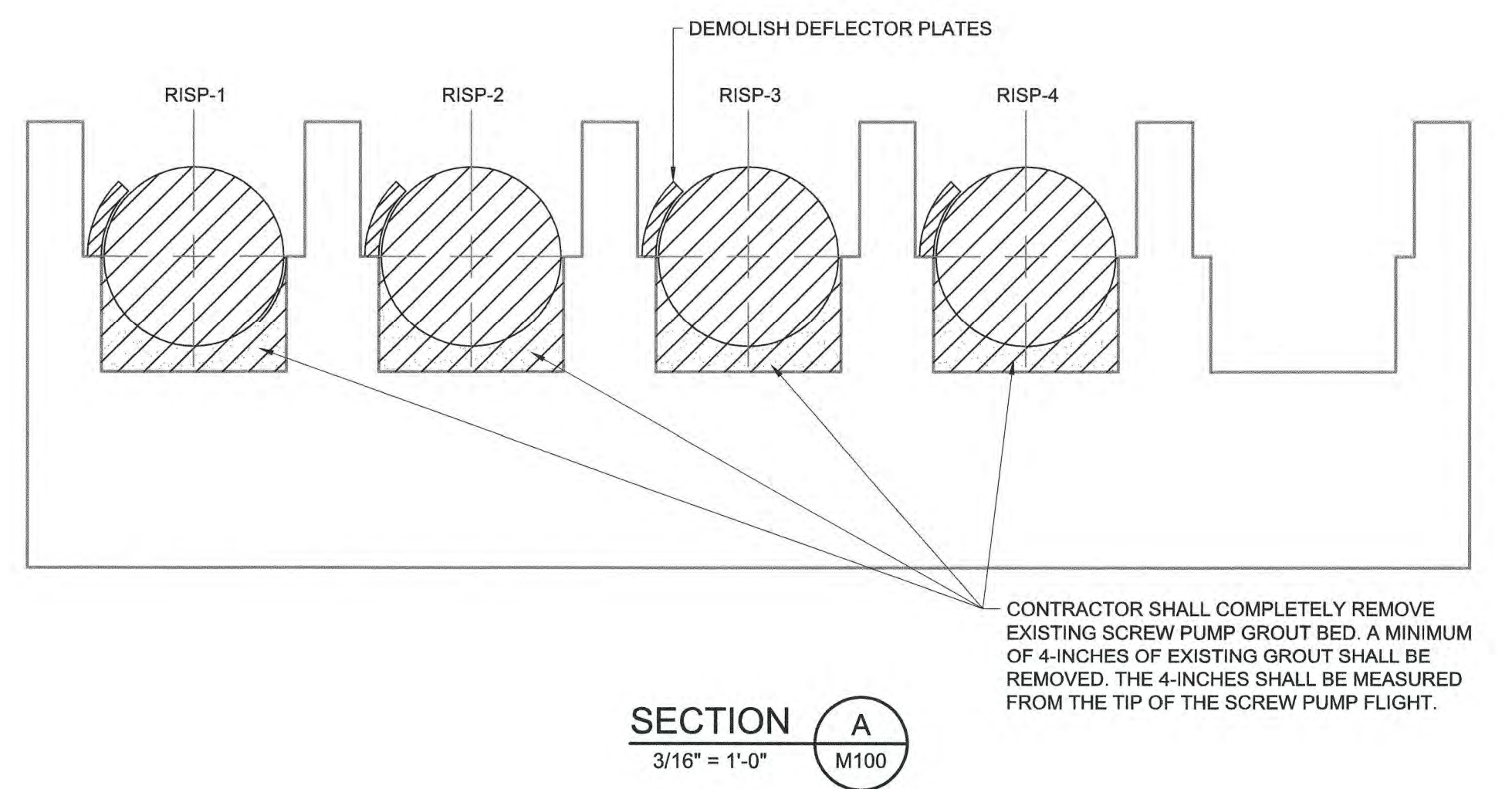
DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	C10



TOP PLAN
3/16" = 1'-0"

NOTES:

1. THE MOTOR AND BASE SHALL BE REUSED AND SHALL BE RELOCATED AS REQUIRED BY THE SCREW PUMP MANUFACTURERS LAYOUT DRAWING. THE ELECTRICAL FEED TO THE MOTOR SHALL BE PRESERVED AND PROTECTED. NO MODIFICATION OF THE EMBEDDED CONDUITS IN THE BASES WILL BE ALLOWED. THE PUMP MANUFACTURER SHALL SUPPLY ALL NEW BELTS AND SHEAVES INCLUDING THE MOTOR SHEAVE. THE PUMP MANUFACTURER SHALL DESIGN THE BELT AND SHEAVES SYSTEM TO STAY WITHIN THE OVERHUNG LOAD RATING OF THE EXISTING MOTOR.



CONTRACTOR SHALL COMPLETELY REMOVE EXISTING SCREW PUMP GROUT BED. A MINIMUM OF 4-INCHES OF EXISTING GROUT SHALL BE REMOVED. THE 4-INCHES SHALL BE MEASURED FROM THE TIP OF THE SCREW PUMP FLIGHT.

SECTION A
3/16" = 1'-0"

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DRAWN BY:	B. CAUDLE		
CHECKED BY:	M. MESSERE		
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1	CONSTRUCTION	4/2023	CWB
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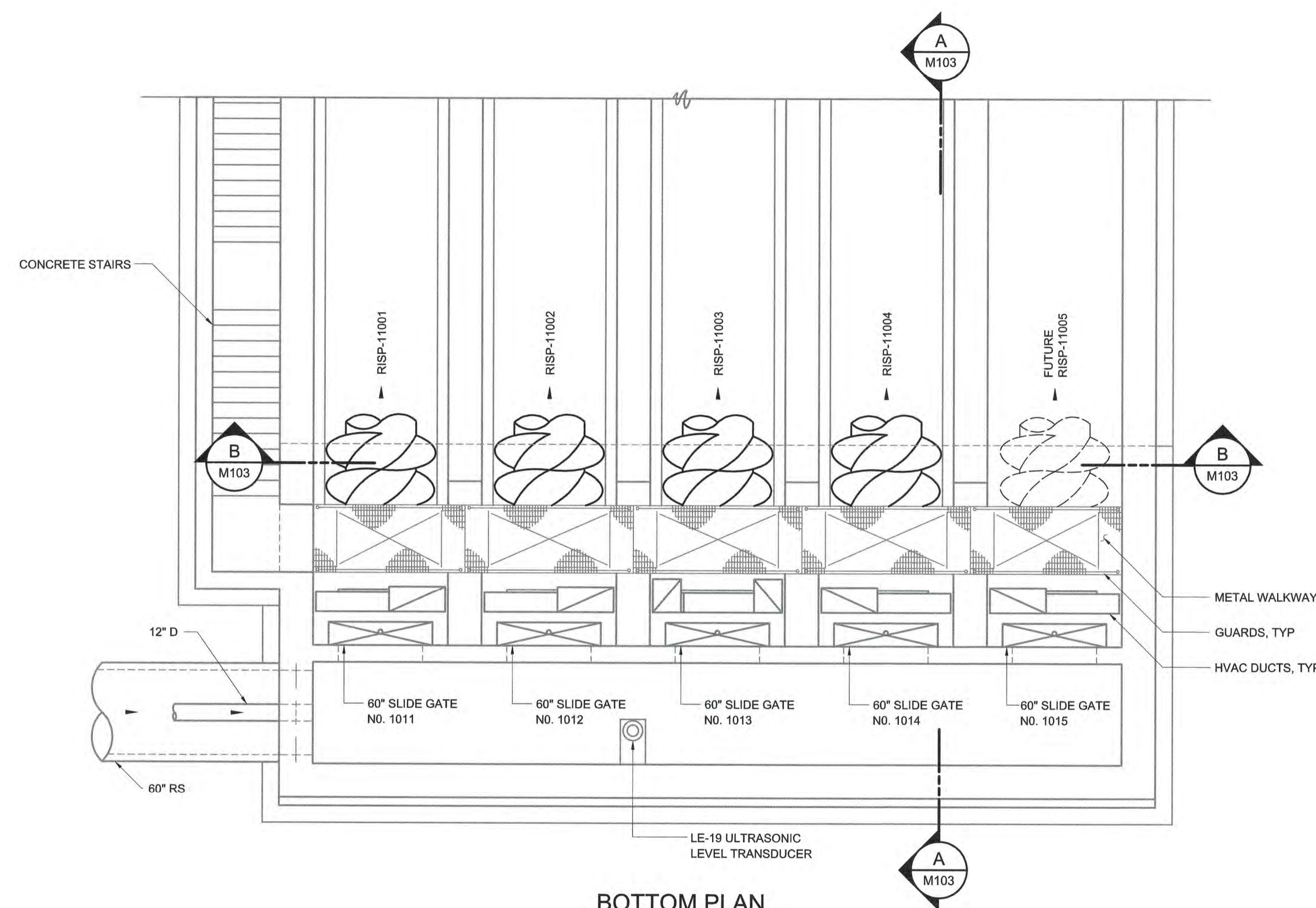
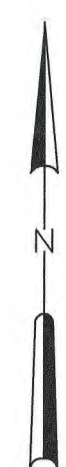
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LICENSE NO. : C-0381

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CITY OF FAYETTEVILLE, NORTH CAROLINA

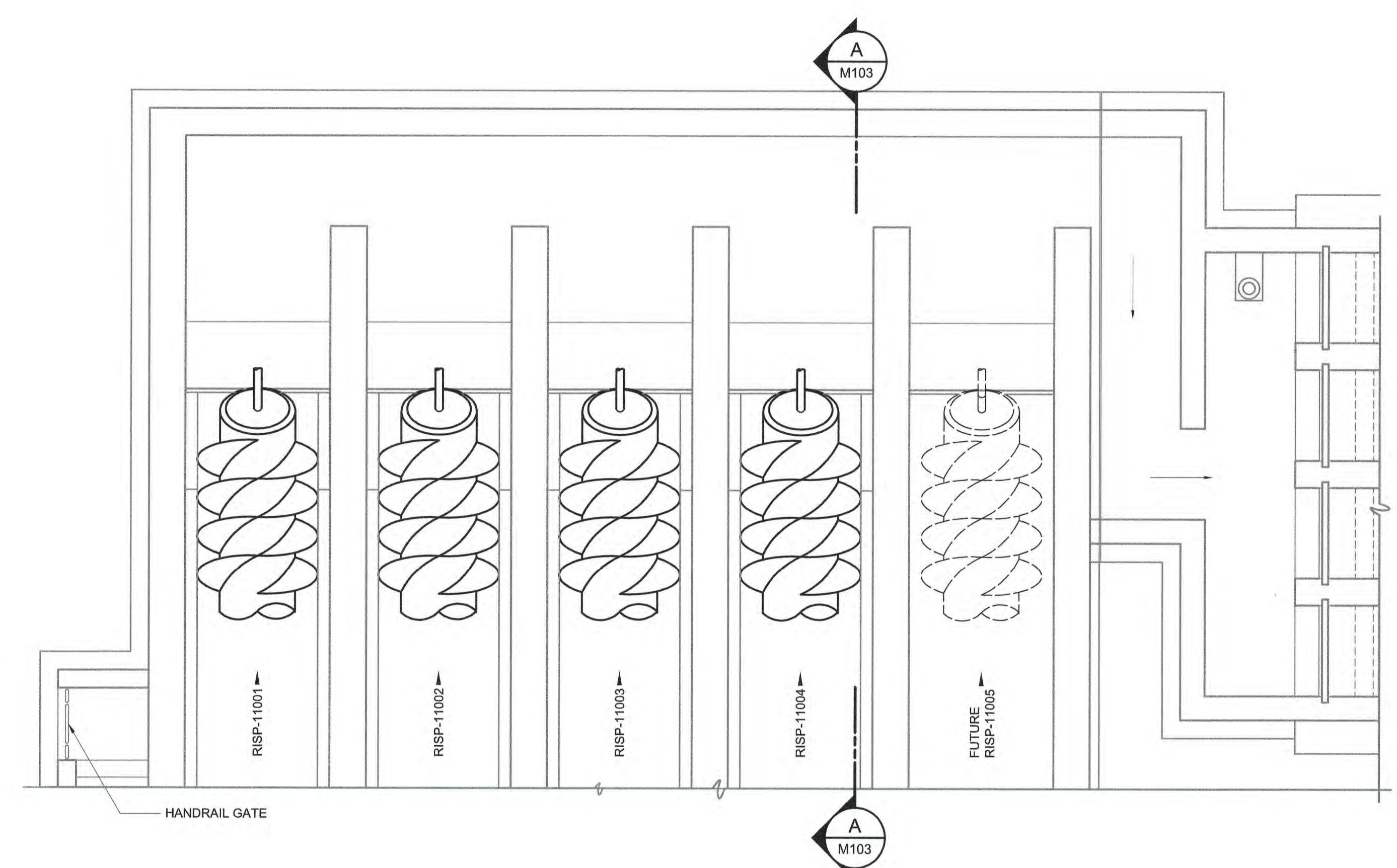
CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

ROCKFISH CREEK
INFLUENT PUMP STATION - MODIFICATIONS
MECHANICAL
DEMOLITION PLAN AND SECTION

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	M100



BOTTOM PLAN
3/16" = 1'-0"



INTERMEDIATE PLAN
3/16" = 1'-0"

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DRAWN BY:	B. CAUDLE		
CHECKED BY:	M. MESSERE		
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LICENSE NO. : C-0381

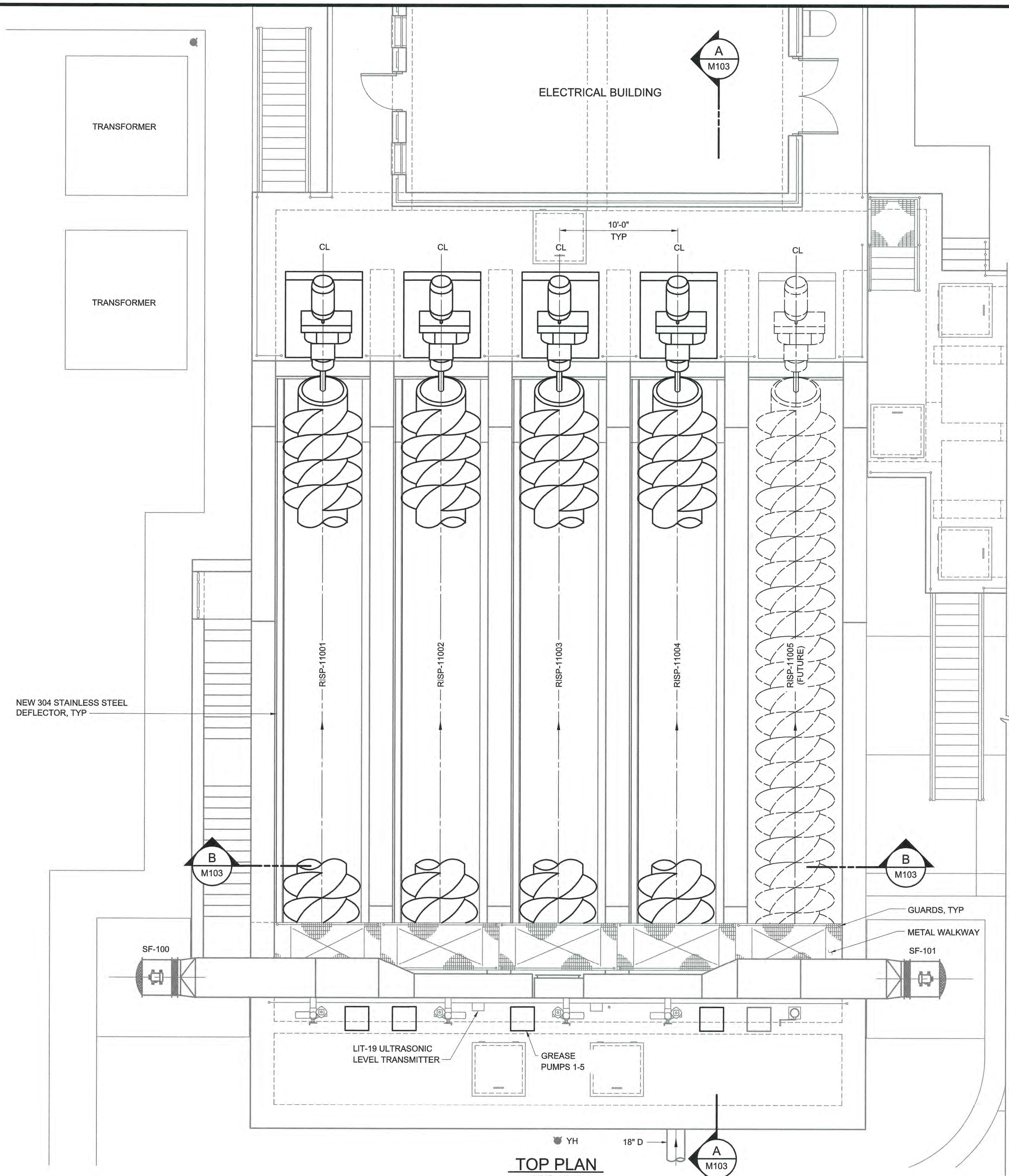
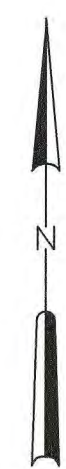
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CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

ROCKFISH CREEK
INFLUENT PUMP STATION - MODIFICATIONS
MECHANICAL
PLANS

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	M101

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TOP PLAN
 3/16" = 1'-0"

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PROJECT ENGINEER:	M. MESSERE
DESIGNED BY:	C. BECK
DRAWN BY:	B. CAUDLE
CHECKED BY:	M. MESSERE

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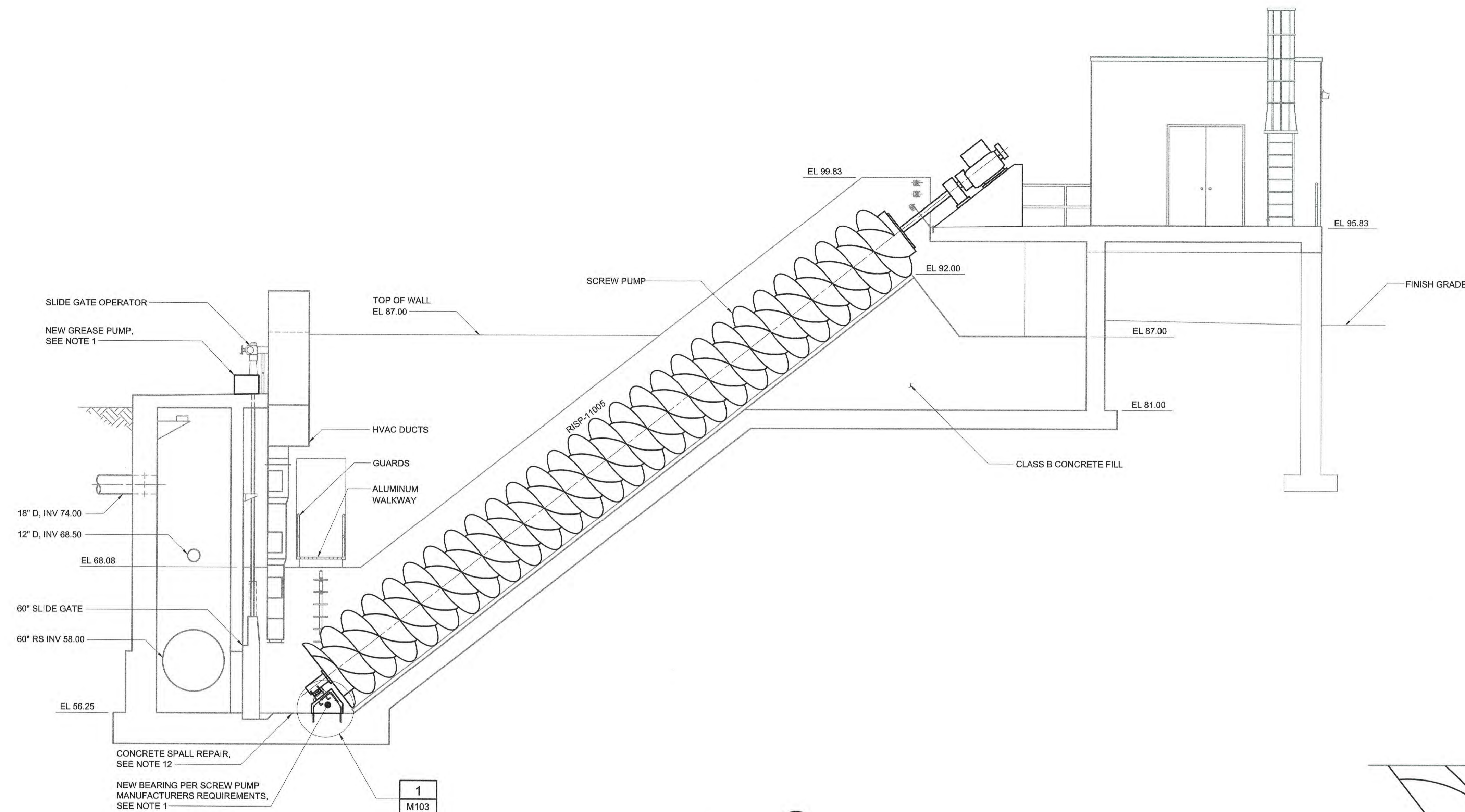
PUBLIC WORKS COMMISSION
 CITY OF FAYETTEVILLE, NORTH CAROLINA
 CROSS CREEK WRF AND ROCKFISH CREEK WRF
 SCREW PUMP IMPROVEMENTS

ROCKFISH CREEK
 INFLUENT PUMP STATION - MODIFICATIONS
 MECHANICAL
 TOP PLAN

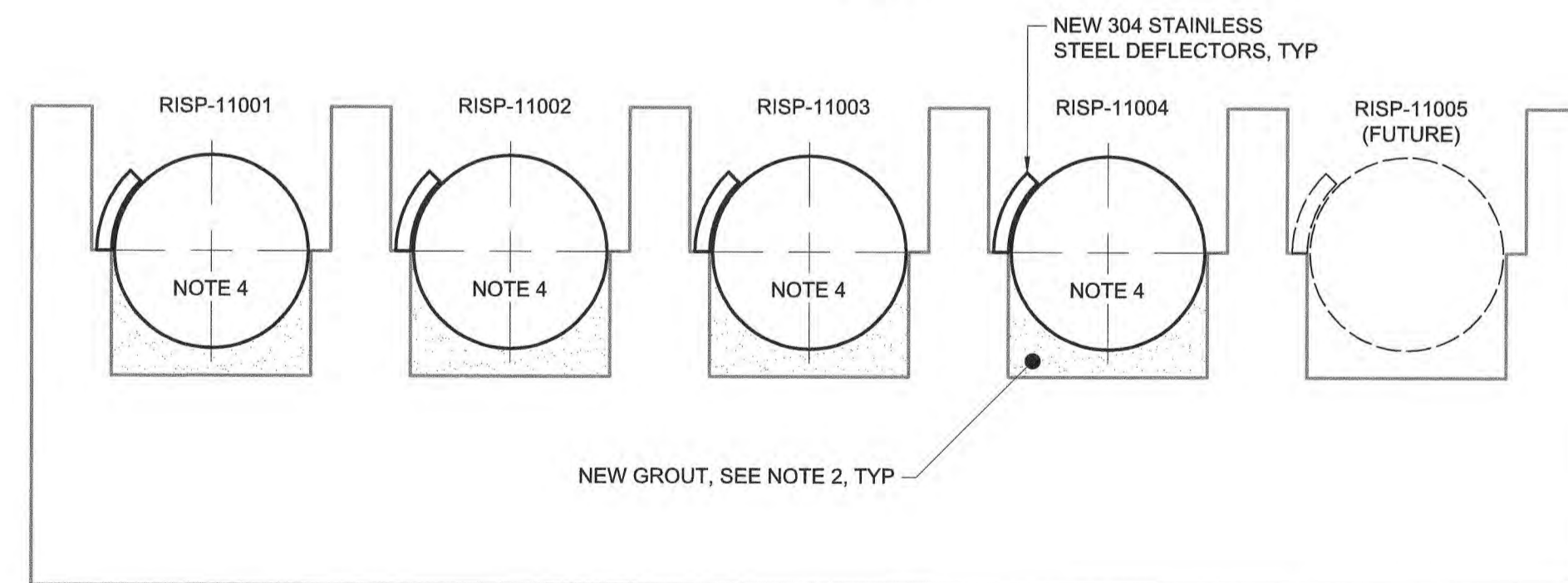
DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
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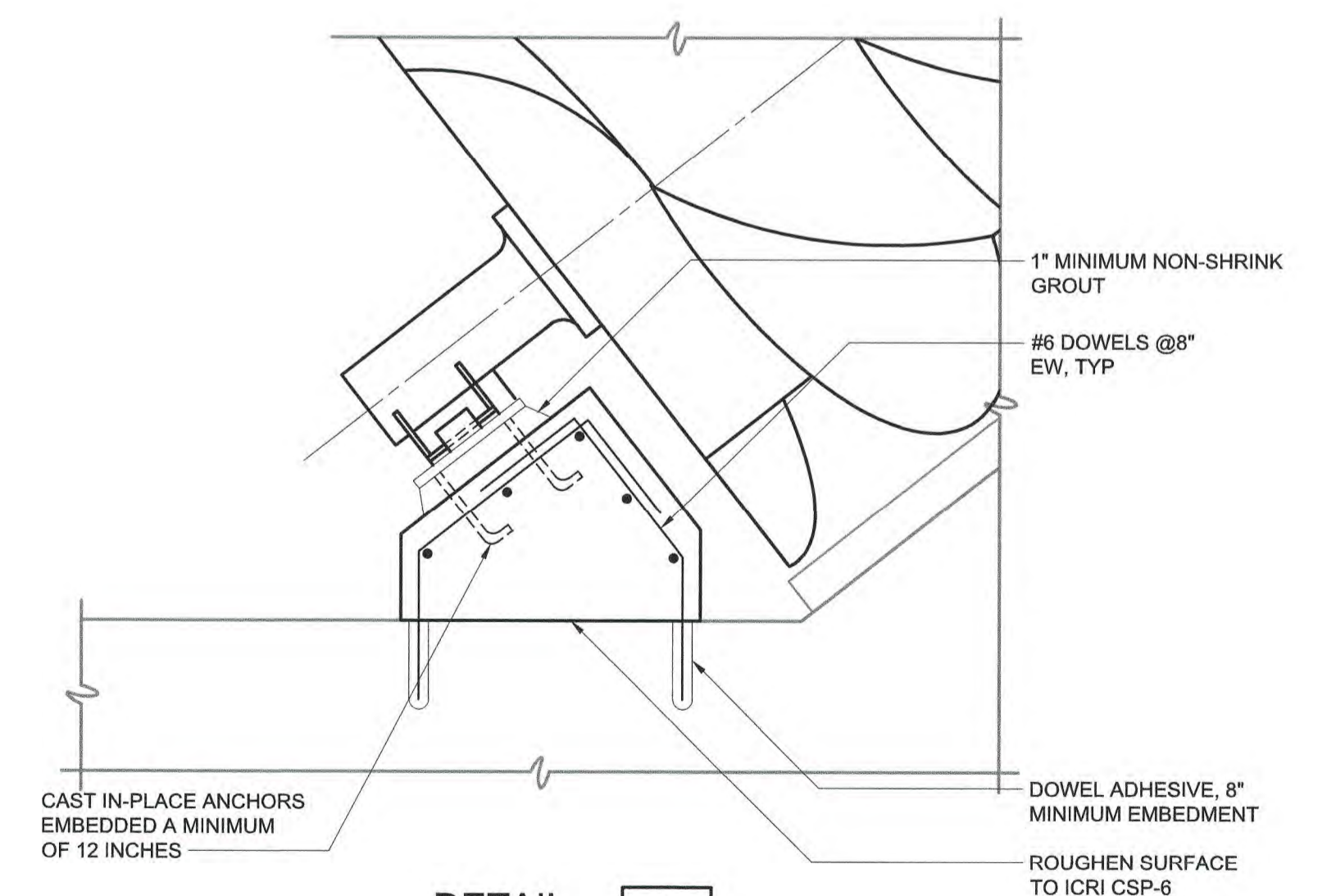
- CONTRACTOR SHALL SUPPLY AND INSTALL NEW GREASE AND 316 SST TUBING FROM GREASE PUMP TO LOWER BEARING AND FROM LOWER BEARING TO GREASE RECEPTACLE. 316 SST TUBING SHALL BE 16 GAUGE AND MEET 3-A SANITARY REQUIREMENT. END CONNECTIONS SHALL BE MADE BY UTILIZING QUICK CLAMP FITTINGS AND NPT THREADED ADAPTERS. ALL REQUIRED BENDS SHALL BE MADE USING A TUBE BENDING TOOL. ALL TUBING SHALL HAVE A ROCKWELL HARDNESS OF B90 AND SHALL MEET ASTM A289 AND A270. NEW BEARING SHALL BE INSTALLED PER SCREW PUMP MANUFACTURER'S REQUIREMENTS. THE DETAIL SHOWN IS FOR THE INSTALLATION OF THE STRAIGHT BEARING BASE. THE CONTRACTOR WILL BE RESPONSIBLE FOR COORDINATION WITH THE MANUFACTURER REGARDING INSTALLATION DETAILS IF THE ANGLED BEARING IS SUPPLIED. ANY COSTS DERIVED FROM CHANGING THE BEARING BASE TYPE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR SHALL COORDINATE WITH PUMP MANUFACTURER AND INSTALL NEW GROUT BED AS SPECIFIED BY THE PUMP MANUFACTURER AND THE CONTRACT SPECIFICATIONS. NEW GROUT BED DEPTH VARIES BUT SHALL BE A MINIMUM OF 3-INCHES.
- ROTATION AND LOCATION OF THE DEFLECTORS FOR PUMPS NUMBERS 1 THRU 4 ARE DEPENDANT UPON THE MANUFACTURER OF THE PUMPS SUPPLIED. CONTRACTOR SHALL COORDINATE LOCATION OF NEW DEFLECTORS WITH THE PUMP MANUFACTURER.
- CONTRACTOR SHALL REMOVE OLD GROUT FROM UNDERNEATH EXISTING DEFLECTORS AND REPLACE WITH NEW NONSHRINK, NON-METALLIC GROUT, APPROX. 1" THICK. SEE SPECIFICATION 03 60 00.
- CONTRACTOR SHALL PRACTICE EXTREME CARE DURING CONSTRUCTION AND SHALL BE FULLY RESPONSIBLE FOR ANY DAMAGE TO EXISTING STRUCTURES RESULTING FROM WORK PERFORMED UNDER THIS CONTRACT.
- ALL LAYOUT DIMENSIONS SHOWN ARE FROM EXISTING CONTRACT DRAWINGS. ALL DIMENSIONS CRITICAL FOR REMOVAL, LAYOUT AND INSTALLATION/REINSTALLATION SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
- CONTRACTOR SHALL OPERATE EXISTING WETWELL HVAC SYSTEM IN ACCORDANCE WITH SECTION 01010-1.14 WETWELL SAFETY, OF THE CONTRACT SPECIFICATIONS.
- BEARING ANCHOR LOCATION PER SCREW PUMP MANUFACTURER. MINIMUM EDGE DISTANCE SHALL BE 5".
- DOWEL ADHESIVE SYSTEM SHALL BE "HILTI HIT HT-200 INJECTION ADHESIVE ANCHOR SYSTEM", OR EQUAL.
- BEARING PEDESTAL SHALL BE 3'-0" WIDE MINIMUM.
- THE CONTRACTOR SHALL REPAIR CONCRETE SPALLS IN EACH OF THE INFLUENT PUMP SUCTION WET WELLS. THE SPALL REPAIR SHALL BE MADE AS REQUIRED BY SPECIFICATION 03 01 30 - CONCRETE REPAIRS, AND ON A UNIT PRICE BASIS PER SPECIFICATION 00300 - PROPOSAL.



SECTION A
3/16" = 1'-0" M101



SECTION B
3/16" = 1'-0" M101



DETAIL 1
3/4" = 1'-0" M103

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DESIGNED BY:	C. BECK		
DRAWN BY:	B. CAUDLE		
CHECKED BY:	M. MESSERE		
1	CONSTRUCTION	4/2023	CWB
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4011 WESTCHASE BOULEVARD, SUITE 500
RALEIGH, NORTH CAROLINA 27607
LICENSE NO. : C-0381

PUBLIC WORKS COMMISSION
CITY OF FAYETTEVILLE, NORTH CAROLINA
CROSS CREEK WRF AND ROCKFISH CREEK WRF
SCREW PUMP IMPROVEMENTS

ROCKFISH CREEK
INFLUENT PUMP STATION - MODIFICATIONS
MECHANICAL
SECTIONS AND DETAILS

DATE:	APRIL 2023
HAZEN NO.:	30402-064
CONTRACT NO.:	1
DRAWING NUMBER:	M103