

September 4, 2024

ADDENDUM NO. 1

**TO THE
CONTRACT DOCUMENTS FOR
FOREMAN BUNDY REVERSE OSMOSIS WTP UPGRADE
CONTRACT 2 – ELECTRICAL CONSTRUCTION
PROJECT NO.: SRP-D-134-0115
PASQUOTANK COUNTY, NORTH CAROLINA**

Bid Date: September 6, 2024 – 11:00 A.M.

**From: Green Engineering, P.L.L.C.
Consulting Engineers
Wilson, North Carolina**

NOTICE TO BIDDERS:

This Addendum is issued prior to the receipt of bids for the above project and **must be** acknowledged on Page 3 of 8 of the BID FORM where indicated.

The CONTRACT DOCUMENTS for this work are modified as follows:

CONTRACT DOCUMENTS

BID FORM:

Replace Bid Form in its entirety with Attachment 1. Changes include a revision to the scope and work of the Plant SCADA System Modifications; said prices to be included in the lump sum bid.

All Bidders are to submit their Bids on the Revised Bid Form.

DRAWINGS:

The following drawings are being reissued:

DRAWING SHEET E-1 – ELECTRICAL ROOM INSTALLATION FLOOR PLAN

General electrical note #2. Delete 800/3 breaker. Include as existing 700/3 breaker.

DRAWING SHEET E-2 – ELECTRICAL ROOM ONE LINE DIAGRAM & SCHEDULES

1/E-2 & 3/E-2 New switchboard FSB. Delete 100/3 circuit breaker for future chemical building. Provide new 200/3 circuit breaker for future chemical building.

Conduit & cable schedule. Conduit 10 – Delete $\frac{3}{4}$ ”; provide as 1”. Provide 1” to $\frac{3}{4}$ ” reducer to interface with existing spare conduit.

DRAWING SHEET E-3 – ELECTRICAL DETAILS

FSB Panel schedule. Delete 100/3 circuit breaker for future chemical building. Provide new 200/3 circuit breaker for future chemical building.

Reissued drawings are included in Attachment 2.

END OF ADDENDUM NO. 1

ADDENDUM NO. 1

ATTACHMENT 1 – REVISED BID FORM

BID FORM FOR CONSTRUCTION CONTRACT

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

ARTICLE 1—OWNER AND BIDDER

1.01 This Bid is submitted to:

**Pasquotank County
206 East Main Street
Elizabeth City, North Carolina 27909**

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

ARTICLE 2—ATTACHMENTS TO THIS BID

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

- A. Required Bid security;
- B. List of Proposed Subcontractors;
- C. List of Proposed Suppliers;
- D. NC Division of Water Infrastructure MBE/WBE (DBE) Compliance Supplement – Good Faith Efforts Form (2 pages);
- E. NC Division of Water Infrastructure MBE/WBE (DBE) Compliance Supplement – Table A
- F. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such authority within the time for acceptance of Bids;
- G. Contractor’s license number as evidence of Bidder’s State Contractor’s License.

ARTICLE 3—BASIS OF BID—LUMP SUM BID AND UNIT PRICES

3.01 *Lump Sum Bids*

- A. Bidder will complete the Work in accordance with the Contract Documents for the following lump sum (stipulated) price(s), together with any Unit Prices indicated in Paragraph 3.02:
 - 1. Lump Sum Price (Single Lump Sum)

| Lump Sum Bids | | |
|---------------------------|---|------------|
| Item No. | Description | Bid Amount |
| 1 | Electrical Construction – WTP Upgrade: The Bidder agrees to perform all work and to furnish all labor, tools, equipment, materials and supplies for the complete electrical construction of one (1) 1.0 MGD Reverse Osmosis treatment train including the installation of an Owner purchased variable frequency drive for the RO High Pressure Feed Pump; the furnishing and installation of all other electrical equipment; modifications to the plant's existing SCADA system, and all other items as shown on the project drawings or included in the contract specifications for the lump sum price of: | |
| Lump Sum Bid Price | | \$ |

2. Lump Sum Price (Base Bid and Alternates)

| | | |
|---------------------------------|----|-----|
| Lump Sum Bid Price for Base Bid | \$ | |
| Alternate A [Add] [Deduct] | \$ | N/A |
| Alternate B [Add] [Deduct] | \$ | N/A |

~~ARTICLE 4—BASIS OF BID—COST PLUS FEE~~

Deleted

~~ARTICLE 5—PRICE PLUS TIME BID~~

Deleted

ARTICLE 6—TIME OF COMPLETION

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

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7—BIDDER’S ACKNOWLEDGEMENTS: ACCEPTANCE PERIOD, INSTRUCTIONS, AND RECEIPT OF ADDENDA

7.01 *Bid Acceptance Period*

A. This Bid will remain subject to acceptance for 120 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

7.02 *Instructions to Bidders*

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

7.03 *Receipt of Addenda*

A. Bidder hereby acknowledges receipt of the following Addenda:

| Addendum Number | Addendum Date |
|-----------------|---------------|
| | |
| | |
| | |

ARTICLE 8—BIDDER’S REPRESENTATIONS AND CERTIFICATIONS

8.01 *Bidder’s Representations*

A. In submitting this Bid, Bidder represents the following:

1. Bidder has examined and carefully studied the Bidding Documents, including Addenda.
2. Bidder has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
3. Bidder is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
4. Bidder has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
5. Bidder has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.
6. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, if selected as Contractor; and (c) Bidder’s (Contractor’s) safety precautions and programs.
7. Based on the information and observations referred to in the preceding paragraph, Bidder agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
8. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
9. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and of

discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.

10. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
11. The submission of this Bid constitutes an incontrovertible representation by Bidder that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

8.02 *Bidder's Certifications*

A. The Bidder certifies the following:

1. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation.
2. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid.
3. Bidder has not solicited or induced any individual or entity to refrain from bidding.
4. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 8.02.A:
 - a. Corrupt practice means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process.
 - b. Fraudulent practice means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition.
 - c. Collusive practice means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels.
 - d. Coercive practice means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

**PASQUOTANK COUNTY
FOREMAN BUNDY REVERSE OSMOSIS WTP UPGRADE
LIST OF PROPOSED SUBCONTRACTORS & SUPPLIERS
*(To be submitted with Bid)***

PROPOSED SUBCONTRACTORS:

PROPOSED MAJOR SUPPLIERS:

PRICE QUOTATIONS WHICH SHALL BE INCLUDED IN THIS LUMP SUM BID

Plant SCADA System Modifications

The Contractor shall be required to furnish Plant SCADA System Modifications by Custom Controls Unlimited. For these modifications, no other system integrator will be considered. The Owner has received two price quotes in the amounts of \$ 28,248.00 and \$ 91,806.00 respectively per the Custom Controls Unlimited proposals. The Custom Controls Unlimited proposals are attached to the Bid Form and labeled Attachment No. 1.

BIDDER hereby submits this Bid as set forth above:

Bidder:

(typed or printed name of organization)

By:

(individual's signature)

Name:

(typed or printed)

Title:

(typed or printed)

Date:

(typed or printed)

If Bidder is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.

Attest:

(individual's signature)

Name:

(typed or printed)

Title:

(typed or printed)

Date:

(typed or printed)

Address for giving notices:

Bidder's Contact:

Name:

(typed or printed)

Title:

(typed or printed)

Phone:

Email:

Address:

Bidder's Contractor License No.: (if applicable) _____

BID FORM – ATTACHMENT 1

Date: 7/31/24

To: Tom Dienes
Green Engineering

Quote: CCU Q122023KM_R1 – Pasquotank RO Phase 1

Valid for: 120 days

After 120 days, subject to an increase of 5% per month.

Scope: Includes items related to:

A. Pasquotank RO Phase 1 Integration

Custom Controls Unlimited (CCU) is pleased to offer the following **SCOPE** based on the below equipment and services:

A. Pasquotank RO Phase 1 Integration

1. Hardware Provided by CCU, LLC:

- NA

2. Services Provided by CCU, LLC:

- Connect Train #3 to the SCADA Network
- Develop VTSCADA status and control Tags
- Develop VTSCADA graphics at the RO Plant
- Program RO Plant PLC to add Train #3 startup/shutdown sequence
- Alarm Setups

3. Services NOT Provided by CCU, LLC:

- Services/Programming related to adding the new train are included, any modifications to the existing system outside of the new train are NOT included

Notes and Exceptions:

- SCADA software upgrades or programming on existing SCADA not included unless explicitly listed above.
- CCU assumes existing equipment (electrical service, level instruments, flow meters, etc.) to be in good working order. Items found to be malfunctioning or damaged will need to be replaced at the expense of the client.
- Programming software not included.
- All plant operations will be done by plant operations staff throughout the installation and startup process. CCU staff are not licensed for plant operations.
- Please confirm the sales tax rate. If you are tax-exempt, please provide an exemption certificate.

Pricing and Payment Terms

Custom Controls Unlimited, LLC will provide the materials and services listed above for a cost of:

| | |
|---------------------|--------------------|
| Total before tax: | \$26,400.00 |
| Sales Tax (7.00%): | \$1,848.00 |
| Grand Total: | \$28,248.00 |

Acceptance of Quote:

We have read and understand all pages of this agreement and hereby acknowledge receipt of a copy hereof and realize the attached CUSTOM CONTROLS UNLIMITED, LLC Conditions of Sale are part of this agreement. You

are authorized to do the work as specified. *Circle and initial by the prices above to accept and authorize Notice to proceed.*

WITNESS OUR SIGNATURES, this the _____ day of _____, 20 _____.

OWNER

Company Name: _____

Signed by: _____

Print Name: _____ Title: _____

FOR CUSTOM CONTROLS UNLIMITED, LLC

Signed by: _____

Print Name: _____ Title: _____

CUSTOM CONTROLS UNLIMITED, LLC CONDITIONS OF SALE

1. Sales and Use Tax. If a valid exemption certificate is not provided, Owner shall pay sales taxes associated with the services contracted as applicable, and shall directly pay or reimburse CCU for any such taxes that CCU may be required to pay, including without limitation, sales and/or use taxes required under applicable law in connection with CCU's purchase or use of equipment, supplies, materials, and/or subcontracted services, necessary in performing the Services listed above.
2. Performance of Obligations. The manner in which CCU's obligations are to be performed and the specific hours during which the obligations are to be performed shall be determined solely by CCU. CCU shall not be required to devote full time, attention, or energy to the performance of CCU's obligations under this Agreement. However, CCU shall work as many hours as may be reasonably necessary for CCU to fulfill its obligations under this Agreement. CCU shall supply at CCU's expense any instrumentalities required by CCU for the performance of CCU's obligations hereunder.
3. Term. The term of this Agreement will commence on the date the last of the parties' executes this Agreement and continue until terminated in accordance with paragraph 10 of this Agreement. Notwithstanding any other provisions of this paragraph, this Agreement will terminate automatically in the event of a party's bankruptcy, insolvency, or assignment for the benefit of creditors.
4. Compensation. Any amount due from Owner hereunder which is not paid when due shall bear interest at a rate equal to 1.5% per month, 18% per annum, (but in no event more than the maximum rate permitted by law) from the date due until paid. Compensation paid pursuant to this Agreement shall not be subject to the customary withholding of income taxes and other employment taxes. CCU shall be solely responsible for reporting and paying any such taxes.
5. Indemnification and Release. Owner shall indemnify, defend, and hold CCU, and its parents, subsidiaries, affiliates, officers, employees, and licensors, harmless from any and all claims, demands, actions, damages, losses, liability, costs, and expenses, including actual attorney fees, brought by any third party, arising out of or by virtue of any breach or default in the performance of any obligation on Owner's part to be performed under the terms of this Agreement; any direct or indirect act of negligence of Owner; or Owner's failure to comply with any requirements of any governmental authorities.
6. Warranty. CCU warrants the products shall conform to the description contained in this agreement and be free from defects in material and workmanship for a period of one (1) year from the date the products are initially placed in operation, or 18 months from when the products are shipped, whichever occurs first, provided that the products are stored, maintained and operated so as to protect the products from harm or damage due to any cause but not limited to fire, water, inclement weather, lightning, extreme temperatures, and not subjected to misuse, neglect or accident. Upon prompt written notice of and determination that such defect is covered under the foregoing warranty, CCU's responsibility is limited to correction of the defect by, at CCU's option, repair or replacement of the defective part or parts. Unless stated elsewhere herein, CCU provides no warranty of product performance or process results. The foregoing warranties are exclusive and in lieu of all other warranties of any kind, including any implied warranty of merchantability or fitness for a particular purpose.
7. Software. Software created on this project by CCU is owned by CCU. If noted in the scope of work, CCU may authorize use of this software inside the Owner's organization only. Authorized use includes ability to modify the software, by the Owner at the Owner's risk. Under no circumstance is the Owner, agent or third party contractor of the Owner authorized to distribute or use software created by CCU at locations other than the Owner's facilities.
8. Limitation on Damages. CCU shall not be liable under any circumstances for any special, consequential, incidental, or exemplary damages arising out of or in any way connected with this Agreement or the services provided, including, but not limited to, damages for lost profits, anticipated sales, compensation, reimbursement, good will for expenditures, investments, leases, or any other commitments in connection with the business of Owner, or damages to third parties. CCU's liability is limited to the extent permitted by law in states that do not allow the exclusion or limitation of liability for consequential or incidental damages.
9. No Third-Party Beneficiary. It is the explicit intention of the parties hereto, that no person or entity, other than the parties, is or shall be entitled to bring any action to enforce any provision of this Agreement against either of the parties, and the covenants, undertakings, and agreements set forth in this Agreement shall be solely for the benefit of and shall be enforceable only by the parties hereto or their respective permitted successors or assigns hereunder.

10. Termination. This agreement may be terminated by CCU, in whole or in part, (a) whenever Owner defaults in its performance in any manner and fails to remedy same within seventy-two (72) hours after receipt of notice setting forth the default
11. Independent Contractor. The parties acknowledge that CCU is an independent contractor and is not an agent, partner, joint venturer, nor employee Owner. Nothing shall operate to change or alter that relationship except further agreement between the parties in writing and specifically addressing the issue. Neither party shall have authority to bind or otherwise obligate the other in any manner nor shall either party represent to anyone that it has a right to do so.
12. Force Majeure. Under no circumstances shall either party be held liable for any delay or failure in performance resulting directly or indirectly by acts of nature, forces, or causes beyond its reasonable control, including, without limitation: internet, computer equipment, telecommunication equipment, other equipment, or electrical power failures; riots; insurrections; civil disturbances; fires; floods; storms; explosions; acts of God; war; governmental actions; orders of domestic or foreign courts or tribunals; or loss of or fluctuations in heat, light, or air conditioning.
13. Binding Agreement. The provisions of this Agreement shall be binding upon and inure to the benefit of the heirs, personal representatives, successors, and assigns of the parties. Any provision hereof which imposes upon a party an obligation after termination or expiration of this Agreement shall survive termination or expiration hereof and be binding upon the party.
14. Choice of Law. The laws of the State of North Carolina shall govern the validity, performance, construction, and enforcement of this Agreement without regard to choice of law provisions. By agreeing to the terms of this Agreement, Owner consents to personal jurisdiction and venue in the Circuit Court for Wake County, North Carolina with respect to all controversies, disputes, and claims. No litigation concerning a dispute or arising out of this agreement may be commenced by Owner more than one year after completion of work by CCU.
15. Arbitration. If any controversy or claim arising out of this Agreement cannot be settled by the Parties hereto, the controversy or claim shall, at the sole option of CCU be settled by arbitration in accordance with the rules of the American Arbitration Association then in effect. Any such controversy or claim shall be arbitrated on an individual basis, and shall not be consolidated in any arbitration with any claim or controversy of any other party. The arbitration shall be conducted in Wake County, North Carolina, and judgment on the arbitration award may be entered into the Circuit Court for Wake County.
16. Amendment. This Agreement may only be altered or amended in an instrument, in writing, signed by all the parties hereto.
17. Waiver. No waiver of any provision of this Agreement shall be deemed, or shall constitute, a waiver of any other provision, whether or not similar, nor shall any waiver constitute a continuing waiver. No waiver shall be binding unless executed in writing by the party making the waiver.
18. Notices. All notices required or permitted under this Agreement shall be in writing and shall be deemed delivered when delivered in person or deposited in the United States mail, postage paid, addressed as follows:
19. Severability. The invalidity of any portion of this Agreement will and shall not be deemed to affect the validity of any other provision. In the event that any provision of this Agreement is held to be invalid, the parties agree that the remaining provisions shall be deemed to be in full force and effect as if they had been executed by both parties subsequent to the expungement of the invalid provision.
20. Entire Agreement. This Agreement constitutes the entire agreement between the parties pertaining to its subject matter and supersedes all prior contemporaneous agreements, representations, and understandings of the parties.
21. Counterparts and Facsimile Copies. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original. A facsimile copy or photocopy of this Agreement containing facsimile copies or photocopies of the signatures or initials of any Party shall be binding.

Date: 8/12/24

To: Tom Dienes
Green Engineering

Quote: CCU Q081224KM_R1 – Pasquotank RO Phase 1 Servers

Valid for: 120 days

After 120 days, subject to an increase of 5% per month.

Scope: Includes items related to:

A. Pasquotank RO Phase 1 Servers

Custom Controls Unlimited (CCU) is pleased to offer the following **SCOPE** based on the below equipment and services:

A. Pasquotank RO Phase 1 Servers

1. Hardware Provided by CCU, LLC:

- Quantity (2) SCADA Servers
- Monitors
- Keyboards
- UPS Backups
- 5000 Tag Dual Server Premium Software License
- Software Renewal
- Firewall Certificates
- SSL Certificate
- RO Train Ethernet Switches (2)

2. Services Provided by CCU, LLC:

- Server Setup / Configuration
- Network Configurations
- System Tank Data and Booster Pump Data Routing
- Booser Pump Alarms to RO Plant

3. Services NOT Provided by CCU, LLC:

- Services/Programming related to adding the new train are included, any modifications to the existing system outside of the new train are NOT included

Notes and Exceptions:

- SCADA software upgrades or programming on existing SCADA not included unless explicitly listed above.
- CCU assumes existing equipment (electrical service, level instruments, flow meters, etc.) to be in good working order. Items found to be malfunctioning or damaged will need to be replaced at the expense of the client.
- Programming software not included.
- All plant operations will be done by plant operations staff throughout the installation and startup process. CCU staff are not licensed for plant operations.
- Please confirm the sales tax rate. If you are tax-exempt, please provide an exemption certificate.

Pricing and Payment Terms

Custom Controls Unlimited, LLC will provide the materials and services listed above for a cost of:

Total before tax: \$85,800.00
Sales Tax (7.00%): \$6,006.00
Grand Total: \$91,806.00

Acceptance of Quote:

We have read and understand all pages of this agreement and hereby acknowledge receipt of a copy hereof and realize the attached CUSTOM CONTROLS UNLIMITED, LLC Conditions of Sale are part of this agreement. You are authorized to do the work as specified. *Circle and initial by the prices above to accept and authorize Notice to proceed.*

WITNESS OUR SIGNATURES, this the _____ day of _____, 20 ____.

OWNER
Company Name: _____

Signed by: _____

Print Name: _____ Title: _____

FOR CUSTOM CONTROLS UNLIMITED, LLC

Signed by: _____

Print Name: _____ Title: _____

CUSTOM CONTROLS UNLIMITED, LLC CONDITIONS OF SALE

1. Sales and Use Tax. If a valid exemption certificate is not provided, Owner shall pay sales taxes associated with the services contracted as applicable, and shall directly pay or reimburse CCU for any such taxes that CCU may be required to pay, including without limitation, sales and/or use taxes required under applicable law in connection with CCU's purchase or use of equipment, supplies, materials, and/or subcontracted services, necessary in performing the Services listed above.
2. Performance of Obligations. The manner in which CCU's obligations are to be performed and the specific hours during which the obligations are to be performed shall be determined solely by CCU. CCU shall not be required to devote full time, attention, or energy to the performance of CCU's obligations under this Agreement. However, CCU shall work as many hours as may be reasonably necessary for CCU to fulfill its obligations under this Agreement. CCU shall supply at CCU's expense any instrumentalities required by CCU for the performance of CCU's obligations hereunder.
3. Term. The term of this Agreement will commence on the date the last of the parties' executes this Agreement and continue until terminated in accordance with paragraph 10 of this Agreement. Notwithstanding any other provisions of this paragraph, this Agreement will terminate automatically in the event of a party's bankruptcy, insolvency, or assignment for the benefit of creditors.
4. Compensation. Any amount due from Owner hereunder which is not paid when due shall bear interest at a rate equal to 1.5% per month, 18% per annum, (but in no event more than the maximum rate permitted by law) from the date due until paid. Compensation paid pursuant to this Agreement shall not be subject to the customary withholding of income taxes and other employment taxes. CCU shall be solely responsible for reporting and paying any such taxes.
5. Indemnification and Release. Owner shall indemnify, defend, and hold CCU, and its parents, subsidiaries, affiliates, officers, employees, and licensors, harmless from any and all claims, demands, actions, damages, losses, liability, costs, and expenses, including actual attorney fees, brought by any third party, arising out of or by virtue of any breach or default in the performance of any obligation on Owner's part to be performed under the terms of this Agreement; any direct or indirect act of negligence of Owner; or Owner's failure to comply with any requirements of any governmental authorities.
6. Warranty. CCU warrants the products shall conform to the description contained in this agreement and be free from defects in material and workmanship for a period of one (1) year from the date the products are initially placed in operation, or 18 months from when the products are shipped, whichever occurs first, provided that the products are stored, maintained and operated so as to protect the products from harm or damage due to any cause but not limited to fire, water, inclement weather, lightning, extreme temperatures, and not subjected to misuse, neglect or accident. Upon prompt written notice of and determination that such defect is covered under the foregoing warranty, CCU's responsibility is limited to correction of the defect by, at CCU's option, repair or replacement of the defective part or parts. Unless stated elsewhere herein, CCU provides no warranty of product performance or process results. The foregoing warranties are exclusive and in lieu of all other warranties of any kind, including any implied warranty of merchantability or fitness for a particular purpose.
7. Software. Software created on this project by CCU is owned by CCU. If noted in the scope of work, CCU may authorize use of this software inside the Owner's organization only. Authorized use includes ability to modify the software, by the Owner at the Owner's risk. Under no circumstance is the Owner, agent or third party contractor of the Owner authorized to distribute or use software created by CCU at locations other than the Owner's facilities.
8. Limitation on Damages. CCU shall not be liable under any circumstances for any special, consequential, incidental, or exemplary damages arising out of or in any way connected with this Agreement or the services provided, including, but not limited to, damages for lost profits, anticipated sales, compensation, reimbursement, good will for expenditures, investments, leases, or any other commitments in connection with the business of Owner, or damages to third parties. CCU's liability is limited to the extent permitted by law in states that do not allow the exclusion or limitation of liability for consequential or incidental damages.
9. No Third-Party Beneficiary. It is the explicit intention of the parties hereto, that no person or entity, other than the parties, is or shall be entitled to bring any action to enforce any provision of this Agreement against either of the parties, and the covenants, undertakings, and agreements set forth in this Agreement shall be solely for the benefit of and shall be enforceable only by the parties hereto or their respective permitted successors or assigns hereunder.

10. Termination. This agreement may be terminated by CCU, in whole or in part, (a) whenever Owner defaults in its performance in any manner and fails to remedy same within seventy-two (72) hours after receipt of notice setting forth the default
11. Independent Contractor. The parties acknowledge that CCU is an independent contractor and is not an agent, partner, joint venturer, nor employee Owner. Nothing shall operate to change or alter that relationship except further agreement between the parties in writing and specifically addressing the issue. Neither party shall have authority to bind or otherwise obligate the other in any manner nor shall either party represent to anyone that it has a right to do so.
12. Force Majeure. Under no circumstances shall either party be held liable for any delay or failure in performance resulting directly or indirectly by acts of nature, forces, or causes beyond its reasonable control, including, without limitation: internet, computer equipment, telecommunication equipment, other equipment, or electrical power failures; riots; insurrections; civil disturbances; fires; floods; storms; explosions; acts of God; war; governmental actions; orders of domestic or foreign courts or tribunals; or loss of or fluctuations in heat, light, or air conditioning.
13. Binding Agreement. The provisions of this Agreement shall be binding upon and inure to the benefit of the heirs, personal representatives, successors, and assigns of the parties. Any provision hereof which imposes upon a party an obligation after termination or expiration of this Agreement shall survive termination or expiration hereof and be binding upon the party.
14. Choice of Law. The laws of the State of North Carolina shall govern the validity, performance, construction, and enforcement of this Agreement without regard to choice of law provisions. By agreeing to the terms of this Agreement, Owner consents to personal jurisdiction and venue in the Circuit Court for Wake County, North Carolina with respect to all controversies, disputes, and claims. No litigation concerning a dispute or arising out of this agreement may be commenced by Owner more than one year after completion of work by CCU.
15. Arbitration. If any controversy or claim arising out of this Agreement cannot be settled by the Parties hereto, the controversy or claim shall, at the sole option of CCU be settled by arbitration in accordance with the rules of the American Arbitration Association then in effect. Any such controversy or claim shall be arbitrated on an individual basis, and shall not be consolidated in any arbitration with any claim or controversy of any other party. The arbitration shall be conducted in Wake County, North Carolina, and judgment on the arbitration award may be entered into the Circuit Court for Wake County.
16. Amendment. This Agreement may only be altered or amended in an instrument, in writing, signed by all the parties hereto.
17. Waiver. No waiver of any provision of this Agreement shall be deemed, or shall constitute, a waiver of any other provision, whether or not similar, nor shall any waiver constitute a continuing waiver. No waiver shall be binding unless executed in writing by the party making the waiver.
18. Notices. All notices required or permitted under this Agreement shall be in writing and shall be deemed delivered when delivered in person or deposited in the United States mail, postage paid, addressed as follows:
19. Severability. The invalidity of any portion of this Agreement will and shall not be deemed to affect the validity of any other provision. In the event that any provision of this Agreement is held to be invalid, the parties agree that the remaining provisions shall be deemed to be in full force and effect as if they had been executed by both parties subsequent to the expungement of the invalid provision.
20. Entire Agreement. This Agreement constitutes the entire agreement between the parties pertaining to its subject matter and supersedes all prior contemporaneous agreements, representations, and understandings of the parties.
21. Counterparts and Facsimile Copies. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original. A facsimile copy or photocopy of this Agreement containing facsimile copies or photocopies of the signatures or initials of any Party shall be binding.

ADDENDUM NO. 1

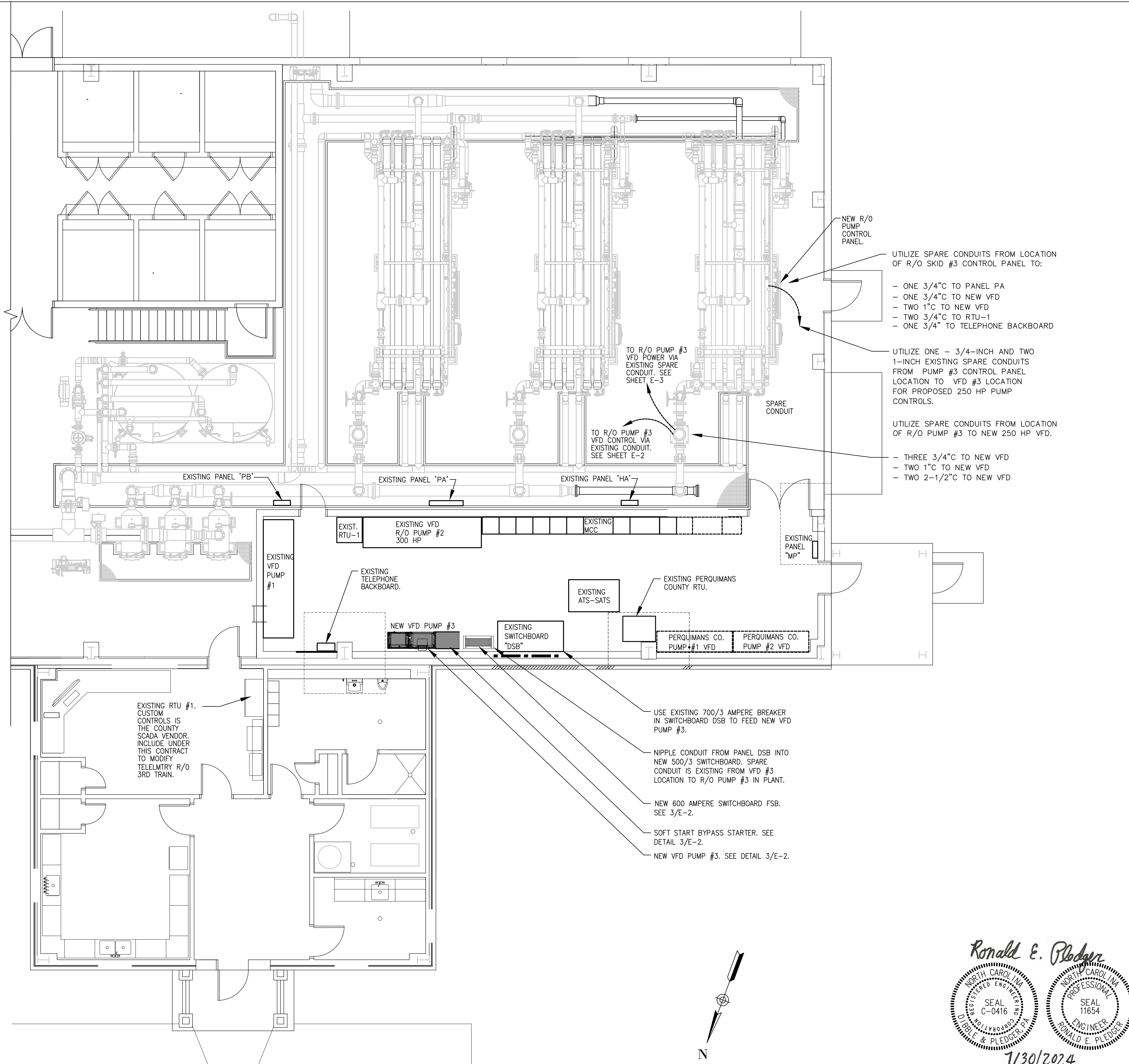
ATTACHMENT 2 – REISSUED DRAWINGS

ELECTRICAL SYMBOL SCHEDULE

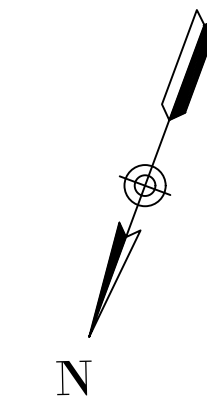
- NEW EQUIPMENT
- EXISTING EQUIPMENT TO REMAIN
- EQUIPMENT TO BE REMOVED
- EQUIPMENT TO BE RELOCATED
- NEW CONDUIT & WIRE
- NEW DIRECT BURIAL UNDERGROUND CONDUIT
- NEW WIRE & CONDUIT
- WORK AREA
- EXISTING WIRE AND CONDUIT
- REMOVE WIRING COMPLETELY. REMOVE CONDUIT AS INDICATED. REMOVE CONDUIT AS INDICATED.
- RECEPTACLE
- RECEPTACLE - WEATHERPROOF
- GROUND FAULT INTERRUPTING
- RAIN TIGHT WHILE IN USE COVER
- MOTOR IDENTIFICATION SYMBOL
- NON FUSED DISCONNECT IDENTIFICATION SYMBOL
- CONDUIT IDENTIFICATION
- CLASS 1 DIV. II SEAL OFF
- WP RAIN TIGHT WHILE IN USE COVER
- LSOS LINE SIDE OF LOCAL SWITCH
- EXISTING RECEPTACLE TO BE REMOVED
- AH CIRCUIT HOME RUN W/ ONE UNGROUND ONE NEUTRAL & ONE GROUNDING CONDUCTOR
- LIGHT
- MOTOR
- GROUND
- SAFETY SWITCH
- 20 CIRCUIT BREAKER AND AMPERAGE
- G.C. GENERAL CONTRACTOR
- E.C. ELECTRICAL CONTRACTOR
- HH/MH HANDHOLE/MANHOLE
- H-O-A SWITCH
- PZC POWER ZONE CENTER
- MCC MOTOR CONTROL CENTER
- PE PHOTOTELECTRIC CONTROL
- GC GENERAL CONTRACTOR
- EC ELECTRICAL CONTRACTOR
- LPT LOW POTENTIAL TRANSFORMER
- MCP MOTOR CIRCUIT PROTECTOR
- \$ SINGLE POLE LIGHTING SWITCH
- \$ THREE WAY LIGHTING SWITCH
- \$ EXISTING LIGHT SWITCH TO BE REMOVED
- (MS) ELECTRIC DOOR MONITORING SWITCH, NORMALLY "OPEN" WHEN DOOR IS CLOSED. SEE DETAIL 1/EW1/EW1.
- (OR) JUNCTION BOX SIZED PER N.E.C.
- GR COPPER CLAD STAINLESS STEEL GROUND ROD - 3/4" x 10'-0"
- DRY TYPE TRANSFORMER - SINGLE PHASE, 480-240/120 VOLTS.
- TVSS TRANSIENT VOLTAGE SUPPRESSION SYSTEM
- PMT POWER METERING/TRANSMITTER. FURNISHED WITH SCADA SYSTEM CONNECT AS DIRECTED BY SCADA INSTALLER.
- (CV) ELECTRICALLY ASSISTED CONTROL CHECK VALVE
- (FE) FLOW METER PRIMARY ELEMENT
- (FT) FLOW METER TRANSMITTER

GENERAL ELECTRICAL NOTES

1. ALL ELECTRICAL WORK SHALL CONFORM TO THE MOST CURRENT EDITION OF THE NATIONAL ELECTRICAL CODE, NATIONAL ELECTRIC SAFETY CODE, OSHA, AND ALL APPLICABLE LOCAL AND STATE CODES.
2. ELECTRICAL WORK AT THE TREATMENT PLANT SHALL BEGIN AT THE EXISTING SWITCHBOARD DSB. CIRCUIT BREAKER FOR R/O PUMP #3 IS AN EXISTING 700 AMP GE SPECTRA CIRCUIT BREAKER.
3. DIRECT BURIAL OR CONCRETE ENCASED CONDUIT SHALL BE SCHEDULE 40 PVC INSTALLED PER SPECIFICATIONS. TRANSITION TO SCH 80 PVC PRIOR TO TURNING UP ABOVE GRADE. ALL EXTERIOR CONDUIT ABOVE GRADE SHALL BE SCH 80 PVC UNLESS NOTED OTHERWISE. ALL EXTERIOR EXPOSED SCH 80 PVC CONDUIT SHALL HAVE EXPANSION COUPLINGS EVERY 15 FT. ALL INTERIOR CONDUIT SHALL BE SCHEDULE 80 PVC WITH EXPANSION COUPLINGS EVERY 5 FT. CONCRETE ENCASED CONDUIT SHALL BE SCHEDULE 40 PVC INSTALLED PER SPECIFICATIONS.
4. ALL GROUNDING SHALL BE IN ACCORDANCE WITH THE MOST CURRENT NATIONAL ELECTRIC CODE INCLUDING AN EQUIPMENT GROUNDING CONDUCTOR IN ALL CONDUIT RUNS. GROUND & BOND ALL METALLIC BOXES.
5. REFER TO CIVIL DRAWINGS FOR ACTUAL STRUCTURE SIZES, DIMENSIONS, AND LAYOUTS.
6. REFER TO CIVIL DRAWINGS FOR UNDERGROUND PIPING LAYOUT. AVOID CROSSINGS OR CONFLICTS AS MUCH AS POSSIBLE. WHERE UNAVOIDABLE, ROUTE DUCT BANK UNDER PIPING PROVIDING PROPER SEPARATION AND BACKFILL. REFER TO CIVIL SITE PLAN.
7. ALL EXTERIOR MOUNTING HARDWARE SHALL BE 304 STAINLESS STEEL OR CAST METAL CORROSION RESISTANT. ALL BRACKETS, CHANNELS, OR PIPE TO BE STAINLESS STEEL.
8. VOLTAGE AT SITE TO BE 277/480 VAC 3 PHASE 4 WIRE WYE.
9. REVISE AND COORDINATE SPACE REQUIREMENTS AS NECESSARY TO SUIT EQUIPMENT ACTUALLY USED. NEW EQUIPMENT TO BE MOUNTED MAXIMUM 6 FT. 6 INCHES AFF.
10. ENCLOSED CIRCUIT BREAKER INTERRUPTING RATINGS SHALL BE AS FOLLOWS:
 1. UP TO 70 AMPERES - 14,000 AIC - 480 VAC UP TO 100 AMPERES 208 VAC 10,000
 2. 70 TO 100 AMPERES - 18,000 AIC - 480 VAC 100-200 AMPERES 208 VAC 25,000 AIC
 3. 125 - 400 AMPERES - 25,000 AIC - 480 VAC
 4. 600 - 800 AMPERES - 30,000 AIC - 480 VAC
 5. 1,000 AMPERES - 85,000 AIC - 480 VAC
11. EXISTING R/O WATER PLANT SYSTEMS SHALL BE MAINTAINED WHILE NEW ELECTRICAL SYSTEM IS INSTALLED. MINIMIZE CUTOVER TIME TO NEW ELECTRICAL SYSTEM.
12. ALL MOTOR STARTERS & VFD'S SHALL HAVE TIME DELAY RELAYS FOR STAGGERED STARTING. INCLUDE SURGE SUPPRESSION ON ALL VFD'S & STARTERS. SEE SPECIFICATIONS.
13. VERIFY LUGS IN ALL SAFETY SWITCHES, STARTER AND DEVICES FOR PROPER COORDINATION WITH CONDUIT AND CABLE SCHEDULES. PROVIDE ADAPTER LUGS OR OVERSIZE LUGS IF NECESSARY. PROVIDE CONTROL CIRCUIT INTERLOCK & WIRING ON ALL SAFETY SWITCHES.
14. PROVIDE TERMINAL STRIP FOR ALL SPLICES THAT ARE MADE IN ALL JUNCTION BOXES. MANUFACTURER'S PUMP POWER & CONTROL CABLES SHALL BE CONTINUOUS, NO SPLICING.
15. ELECTRICAL CONTRACTOR TO PROVIDE OVERSIZED STAINLESS STEEL JUNCTION BOXES ON MOTORS TO ADAPT TO FIT CONDUCTORS SPECIFIED IF NECESSARY.
16. THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE LOCATION, EXACT CONFIGURATION AND REQUIREMENTS OF INSTRUMENTS AND EQUIPMENT BEING FURNISHED BY THE GENERAL CONTRACTOR AND THE OTHER CONTRACTORS PRIOR TO RUNNING ANY WIRING. VERIFY CONDUIT SIZE REQUIREMENT FOR CONNECTION TO INSTRUMENTS AND ADJUST INCOMING CONDUIT TO FIT REQUIREMENTS. LOCATION SHOWN FOR INSTRUMENTS, RTU'S AND CONTROL PANELS IS ONLY APPROXIMATE. THE OWNER HAS THE PREROGATIVE TO MOVE ANY OF THESE ITEMS 20 FEET IN ANY DIRECTION AT NO EXTRA CHARGE IF IT IS DONE PRIOR TO RUNNING CONDUIT.
17. FOR INDICATED DEMOLITION, REMOVE ALL WIRING COMPLETELY AS DETAILED. EXPOSED CONDUIT SHALL BE REMOVED. CONCEALED CONDUIT SHALL BE CAPPED AND ABANDONED. ALL HOLES SHALL BE GROUDED AND SEALED. LIGHTING & RECEPTACLE CONDUITS SHALL BE REUSED AS INDICATED.
18. ALL WIRE TO BE COPPER. ALL INSULATION TO BE THHN/THWN.
19. MAINTAIN SEPARATION AND ISOLATE NEUTRAL AND EQUIPMENT GROUNDING CONDUCTORS BEYOND SERVICE ENTRANCE. REMOVE CONNECTION BETWEEN NEUTRAL AND GROUNDING ELECTRODE AT FACILITIES SERVICE CENTER. BOND & GROUND NEW & EXISTING ELECTRICAL SERVICES TO THE SAME GROUND POTENTIAL.
20. VERIFY AND LABEL NEW AND EXISTING PANELBOARD CIRCUITS WITH SPECIFIC AREA DESIGNATION.
21. ALL LANDSCAPING DAMAGED DURING CONSTRUCTION MUST BE RESTORED BACK TO ORIGINAL CONDITION BY A LICENSED LANDSCAPE CONTRACTOR. GRASS MAY BE RESTORED WITH RESEEDING.
22. CONTRACTOR MUST FURNISH REST ROOM FACILITIES FOR ITS PERSONNEL.
23. MONITORING POINTS FOR R/O PUMP CONTROL PANELS SHALL BE AS SHOWN IN THE SPECIFICATIONS FOR THE CONTROLS & INSTRUMENTATION SYSTEM.
24. PROVIDE UNDERGROUND UTILITY "LOCATE" PROVIDE AS ULOCO OR OTHER THIRD PARTY LOCATING SERVICE FOR EXISTING UTILITIES.
25. EXISTING RTU #1. CUSTOM CONTROLS IS THE COUNTY SCADA VENDOR. INCLUDE UNDER THIS CONTRACT TO MODIFY TELEMETRY FOR R/O 3RD TRAIN. 1491 POLARIS PARKWAY SUITE 94 COLUMBUS, OH 43240 (614) 425-8694 INBOX@CCOHIO.COM



1 ELECTRICAL FLOOR PLAN
E-1 INSTALLATION 3/16"=1'-0"



Ronald E. Pledger
 NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER
 SEAL C-0416
 #1645 LD6328
 11/30/2024

DP ELECTRICAL DESIGN BY:
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 PHONE: (252) 946-3320 FAX: (252) 946-5160
 E-MAIL: rpledger@dibbleandpledger.com
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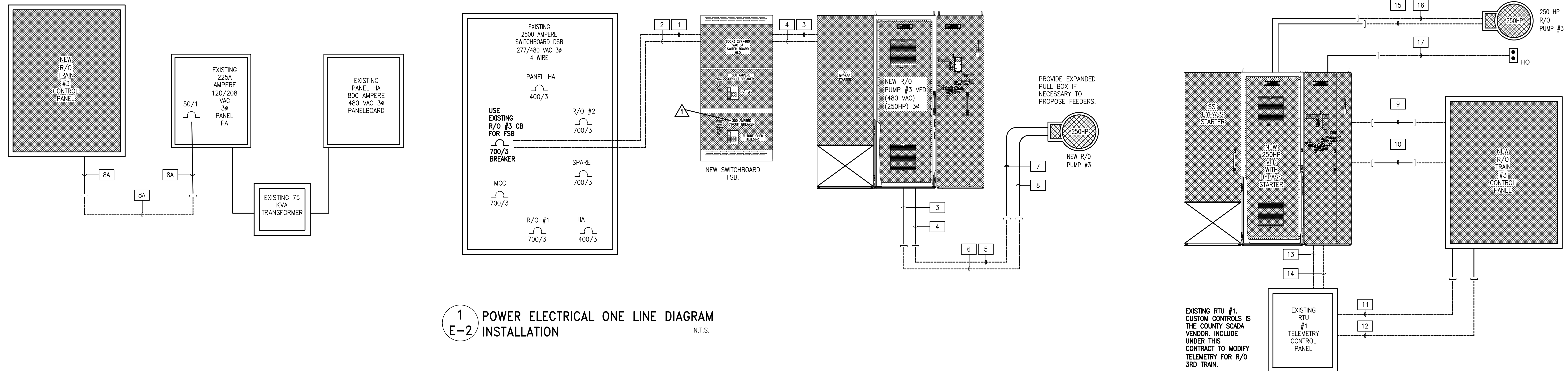
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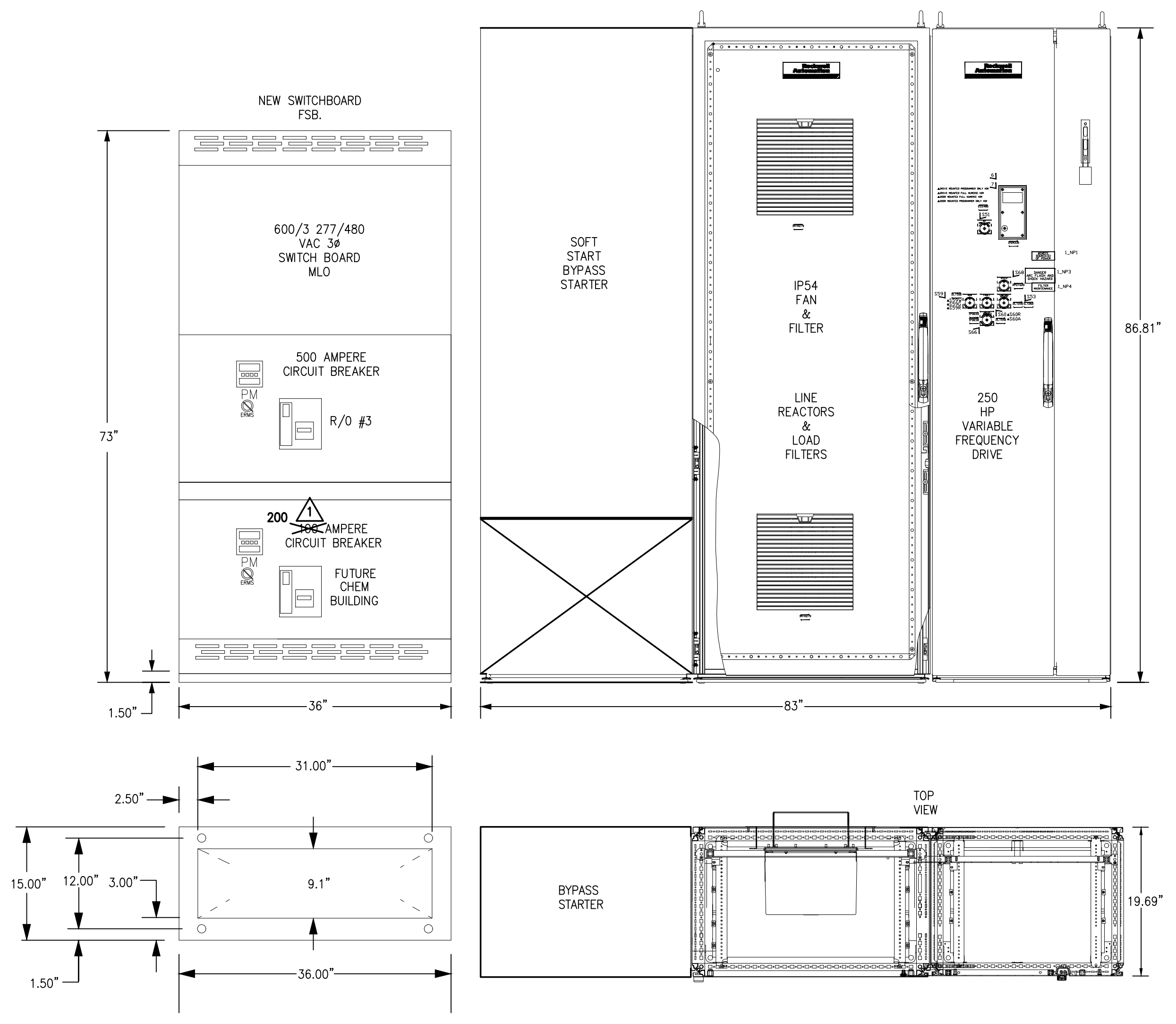
PASQUOTANK COUNTY
 FOREMAN BUNDY REVERSE OSMOSIS WTP UPGRADE
 PASQUOTANK COUNTY NORTH CAROLINA

ELECTRICAL ROOM INSTALLATION FLOOR PLAN

| REVISION | DATE | BY | DATE: NOVEMBER 2023 |
|------------|--------|-----|-----------------------------|
| REVISION01 | 8-7-24 | REP | GRAPHIC SCALE |
| | | | AS SHOWN |
| | | | CLIENT CODE: PASQU |
| | | | JOB NUMBER: 21-083 |
| | | | FIELD BOOK: XXX |
| | | | CAD FILE: LD6328PHASE1.dwg |
| | | | ASCIT FILE: |
| | | | LAST MODIFIED: Nov 13, 2023 |
| | | | MODIFIED BY: TDD |
| | | | SHEET NO. E-1 OF 3 |



1 POWER ELECTRICAL ONE LINE DIAGRAM
E-2 INSTALLATION N.T.S.



3 NEW 250HP VFD WITH BYPASS STARTER & SWITCHBOARD
E-2 ELEVATION SCALE=1"=1'-0"

CONDUIT & CABLE SCHEDULE
ALL CONDUCTORS TO BE COPPER

- 1 3 - 600 MCM CU THHN/THWN UNGROUNDED CONDUCTOR
1 - 1/0 AWG CU THHN/THWN GROUNDING CONDUCTOR
4" CONDUIT
IN PARALLEL WITH CONDUITS 2
- 2 3 - 600 MCM CU THHN/THWN UNGROUNDED CONDUCTOR
1 - 1/0 AWG CU THHN/THWN GROUNDING CONDUCTOR
4" CONDUIT
IN PARALLEL WITH CONDUITS 1
- 3 3 - 250 MCM CU THHN/THWN UNGROUNDED CONDUCTOR
1 - 1/0 AWG CU THHN/THWN GROUNDING CONDUCTOR
2-1/2" CONDUIT
IN PARALLEL WITH CONDUITS 4
- 4 3 - 250 MCM CU THHN/THWN UNGROUNDED CONDUCTOR
1 - 1/0 AWG CU THHN/THWN GROUNDING CONDUCTOR
2-1/2" CONDUIT
IN PARALLEL WITH CONDUITS 3
- 5 3 - 250 MCM CU THHN/THWN UNGROUNDED CONDUCTOR
1 - 1/0 AWG CU THHN/THWN GROUNDING CONDUCTOR
EXISTING 2-1/2" CONDUIT
IN PARALLEL WITH CONDUITS 4
- 6 3 - 250 MCM CU THHN/THWN UNGROUNDED CONDUCTOR
1 - 1/0 AWG CU THHN/THWN GROUNDING CONDUCTOR
EXISTING 2-1/2" CONDUIT
IN PARALLEL WITH CONDUITS 3
- 7 3 - 250 MCM CU THHN/THWN UNGROUNDED CONDUCTOR
1 - 1/0 AWG CU THHN/THWN GROUNDING CONDUCTOR
2-1/2" FLEXIBLE LIQUIDTIGHT CONDUIT
IN PARALLEL WITH CONDUITS 8
- 8 3 - 250 MCM CU THHN/THWN UNGROUNDED CONDUCTOR
1 - 1/0 AWG CU THHN/THWN GROUNDING CONDUCTOR
2-1/2" FLEXIBLE LIQUIDTIGHT CONDUIT
IN PARALLEL WITH CONDUITS 7
- BA 1 - #8 AWG CU THHN/THWN UNGROUNDED CONDUCTOR
1 - #8 AWG CU THHN/THWN NEUTRAL CONDUCTOR
1 - #10 AWG CU THHN/THWN GROUNDING CONDUCTOR
IN NEW & EXISTING 3/4" CONDUIT
- 9 1" C WITH TWISTED SHIELDED AS FOLLOWS:
1 PAIR 4-20ma AUTOSPEED SIGNAL FROM R/O CONTROL PANEL
1 PAIR 4-20ma AUTOSPEED INDICATION
1 PAIR 4-20ma SPARE
- 10 1" C WITH 23 #14 AS FOLLOWS:
2 #14 - MOTOR STARTER COMMAND
2 #14 - MOTOR RUNNING STATUS
3 #14 - MOTOR ON DRIVE - STATUS
3 #14 - MOTOR ON BYPASS - STATUS
3 #14 - VFD FAILURE - ALARM
3 #14 - SOFT STARTER FAILURE - ALARM
2 #14 - VFD IN AUTO
4 #14 - SPARE OR OTHER REQUIRED USES
1 #14 - GROUND

△ PROVIDE 1" TO 3/4" REDUCER TO EXISTING CONDUIT.

| DESIGNATION TYPED ON DIRECTORY | COND (") | GRND | WIRE SIZE | BRKR RAT'G | CKT NO. | S/N | CKT. NO. | BRKR RAT'G | WIRE SIZE | GRND | COND (") | DESIGNATION TYPED ON DIRECTORY |
|--------------------------------|----------|------|-----------|------------|---------|-----|----------|------------|-----------|------|----------|--------------------------------|
| EXISTING R.O. PUMP #1 | - | - | - | - | 1 | | 2 | - | - | - | - | EXISTING R.O. PUMP #2 |
| | | | | | 3 | | 4 | - | - | - | - | |
| | | | | | 5 | | 6 | - | - | - | - | |
| FSP / NEW R.O. PUMP #3 * | - | - | - | 700 | 7 | | 8 | - | - | - | - | EXISTING MCC |
| | | | | | 9 | | 10 | - | - | - | - | |
| | | | | | 11 | | 12 | - | - | - | - | |
| EXISTING PANEL "HA" | - | - | - | - | 13 | | 14 | - | - | - | - | EXISTING 100 HP PUMP #1 |
| | | | | | 15 | | 16 | - | - | - | - | |
| | | | | | 17 | | 18 | - | - | - | - | |
| EXISTING 100 HP PUMP #2 | - | - | - | - | 19 | | 20 | - | - | - | - | |
| | | | | | 21 | | 22 | - | - | - | - | |
| | | | | | 23 | | 24 | - | - | - | - | |
| | | | | | 25 | | 26 | - | - | - | - | |
| | | | | | 27 | | 28 | - | - | - | - | |
| | | | | | 29 | | 30 | - | - | - | - | |

2,500 AMPERE MAIN CIRCUIT BREAKER
277/480 VAC 3 PHASE 4 WIRE WYE 60HZ
FACTORY ASSEMBLED, BOLT-ON BREAKERS, 100%
TIN PLATED COPPER BUSSING, SEPARATE NEUTRAL
& GROUNDING BUSES, SURFACE MOUNTED
NEMA 1 ENCLOSURE

△ UTILIZE EXISTING SPARE CIRCUIT BREAKER.

PROVIDE ARC FAULT HAZARD WARNING SIGNAGE, PROVIDE PHENOLIC LABELS WITH NAME, VOLTAGE, & PHASE.

2 CONTROLS ELECTRICAL ONE LINE DIAGRAM
E-2 INSTALLATION N.T.S.

- CONTROL TERMINATIONS: R/O PANEL TO RTU#1**
- 11 ONE DHC (CAT 6) FOR MODBUS NETWORK PLUS ONE DHC (CAT 6) SPARE 3/4" C
 - 12 20 - #14 AWG CU THHN/THWN UNGROUNDED CONDUCTORS 3/4" CONDUIT
- CONTROL TERMINATIONS: VFD TO RTU#1**
- 13 ONE DHC (CAT 6) FOR MODBUS NETWORK PLUS ONE DHC SPARE 3/4" C
 - 14 ONE 3/4" C WITH 15 #14, AS FOLLOWS:
- 2 #14 - MOTOR WINDING OVER TEMPERATURE
- 2 #14 - MOTOR UPPER BEARING OVER TEMPERATURE
- 2 #14 - MOTOR LOWER BEARING OVER TEMPERATURE
- 2 #14 - EXCESSIVE MOTOR VIBRATION
- 2 #14 - POWER BEING SUPPLIED BY GENERATOR SET
- 4 #14 - SPARE OR OTHER USES
- 1 #14 GROUND
- CONTROL TERMINATIONS: R/O PUMP TO VFD**
- 15 ONE EXISTING & NEW 1" CONDUIT WITH:
8 - BELDEN #88770 FOR MOTOR WINDING AND BEARING TEMP. RTD'S
2 - BELDEN #88770 MOTOR VELOCITY/VIBRATION SENSOR.
 - 16 2 #14, 1 #14 G, 4 #14 SPARE, EXISTING & NEW 3/4" - 120V, 60 HZ POWER FOR MOTOR ENVIRONMENTAL HEATER.
 - 17 2 #14, 1 #14 G, 2 #14 SPARE - EXISTING & NEW 3/4" C FOR MAINTAINED CONTACT LOCKOUT "HO" STATION AT MOTOR.

Ronald E. Pledger
NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER
SEAL C-0416
11654
11/30/2024
#1645 LD6328

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SHEET NO. E-2 OF 3

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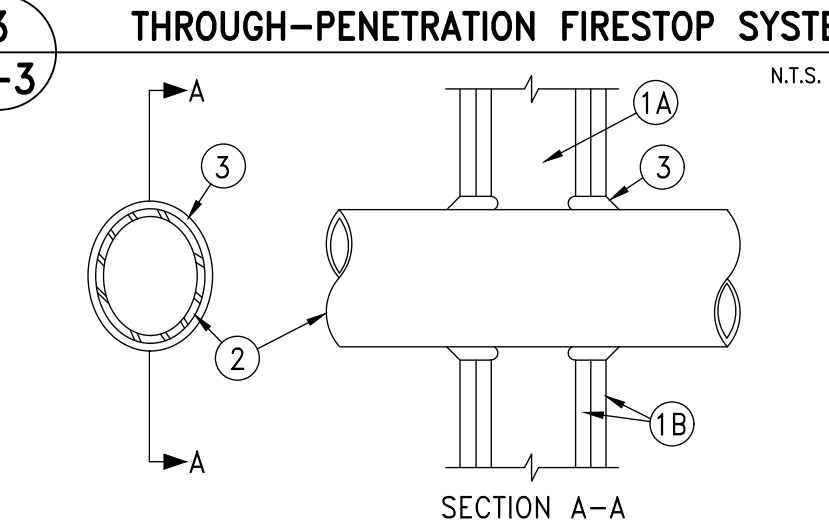
PASQUOTANK COUNTY
FOREMAN BUNDY REVERSE OSMOSIS WTP UPGRADE
PASQUOTANK COUNTY
NORTH CAROLINA

ELECTRICAL ROOM ONE LINE DIAGRAM + SCHEDULES

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**XHEZ.W-L-1001
THROUGH-PENETRATION FIRESTOP SYSTEMS
SYSTEM NO. W-L-1001**

JUNE 15, 2005
(FORMERLY SYSTEM NO. 147)
F RATINGS - 1, 2, 3, & 4 HR. (SEE ITEMS 2 & 3)
T RATINGS - 0, 1, 2, 3, & 4 HR. (SEE ITEM 3)
L RATING AT AMBIENT - LESS THAN 1 CFM/50 FT.
L RATING AT 400 F - LESS THAN 1 CFM/50 FT.



1. Wall Assembly - The 1, 2, 3 or 4 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed in the materials and in the individual U300 or U400 Series Wall or Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

- A. Studs - Wall framing may consist of either wood studs (max 2 hr fire rated assemblies) or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC with nom 2 by 4 in. (51 by 102 mm) lumber end plates and cross braces.
- B. Gypsum Board - Nom 1/2 or 5/8 in. (13 or 16 mm) thick, 4 ft. (122 cm) wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and steel orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 26 in. (660 mm).

2. Through-Penetration - One metallic pipe, conduit or tubing installed either concentrically or eccentrically within the firestop system. The annular space between pipe, conduit or tubing and periphery of opening shall be min of 0 in. (0 mm). (point contact) to max 2 in. (51 mm) Pipes, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:

- A. Steel Pipe - Nom 24 in. (610 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
- B. Iron Pipe - Nom 24 in. (610 mm) diam (or smaller) service weight (or heavier) cast iron wall pipe, nom 12 in (305 mm) diam (or smaller) or Class 50 (or heavier) ductile iron pressure pipe.
- C. Conduit - Nom 6 in. (152 mm) diam (or smaller) steel conduit or nom 4 in (102 mm) diam (or smaller) steel electrical metallic tubing.
- D. Copper Tubing - Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing.
- E. Copper Pipe - Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.
- F. Through Penetrating Product* - Flexible Metal Piping The following types of steel flexible metal gas piping may be used:

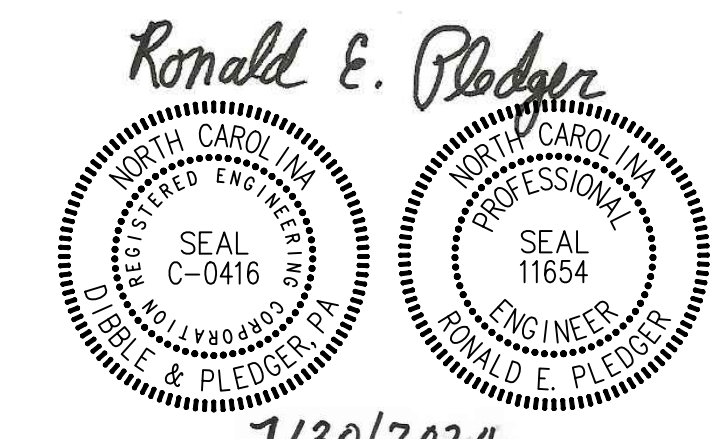
- 1. Nom 2 in. (51 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.
- 2. Nom 1 in. (25 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.
- 3. Nom 1 in. (25 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.

| MAX PIPE OR CONDUIT DIAM IN. (MM) | F RATING HR | T RATING HR |
|-----------------------------------|-------------|-------------|
| 1 (25) | 1 OR 2 | 0+, 1 OR 2 |
| 1 (25) | 3 OR 4 | 3 OR 4 |
| 4 (102) | 1 OR 2 | 0 |
| 6 (152) | 3 OR 4 | 0 |
| 12 (305) | 1 OR 2 | 0 |

*When copper pipe is used, T Rating is 0 hr.
SM COMPANY - CP 25WB+ or FB-3000 WT.

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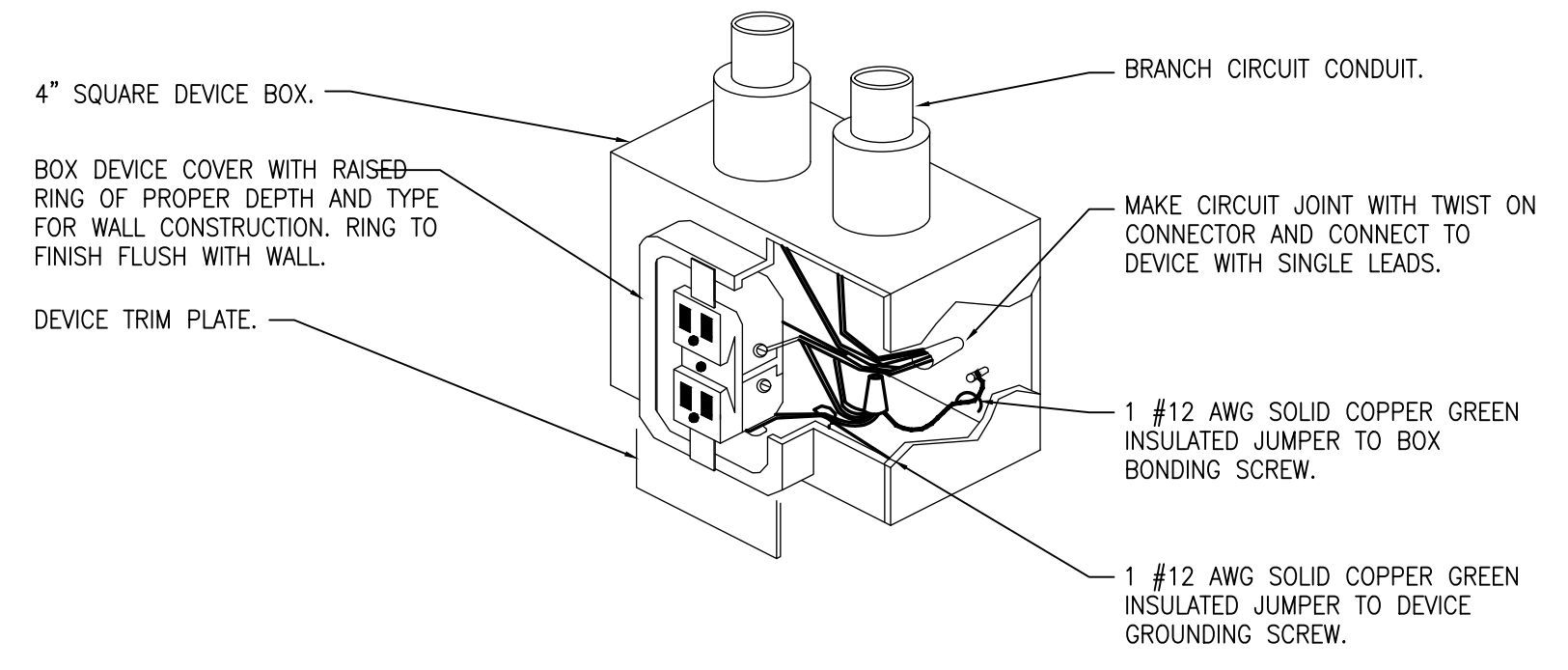
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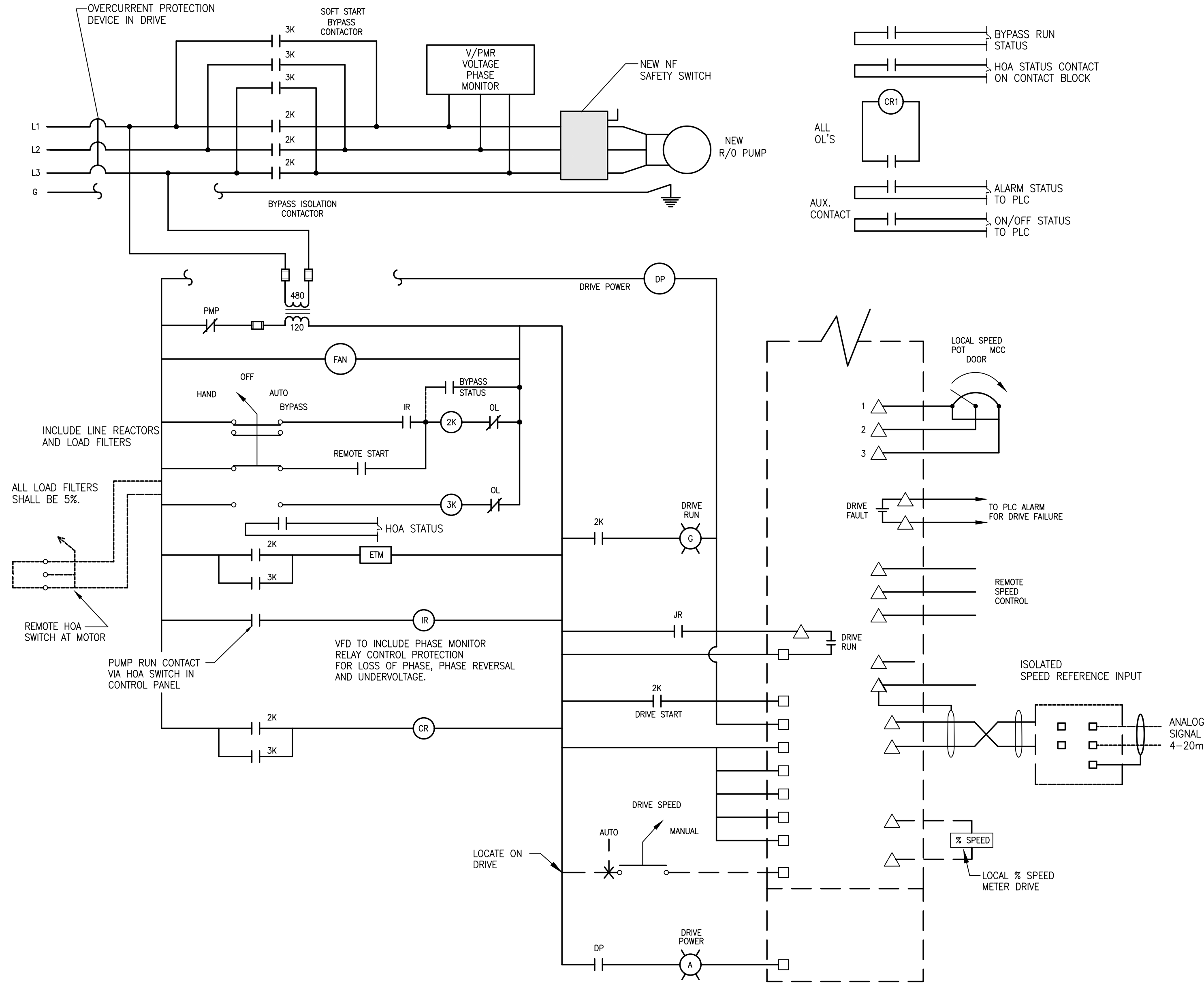
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CAD FILE: LD6328PHASE1.dwg
ASCII FILE:
LAST MODIFIED: Nov 13, 2023
MODIFIED BY: TDD

SHEET NO. **E-3** OF **3**

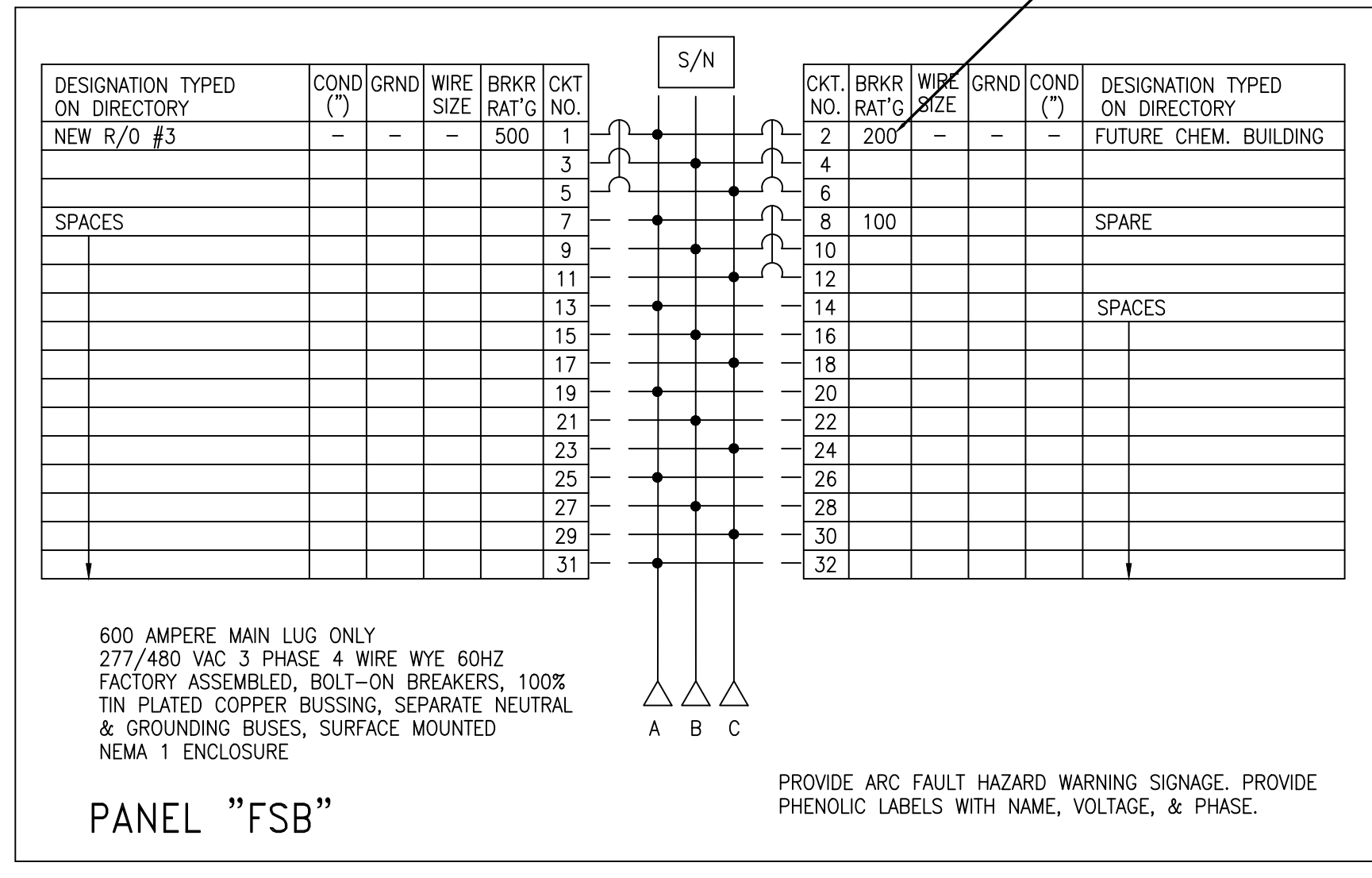
2 RECEPTACLE GROUNDING DETAIL
E-3 NTS



1 VARIABLE FREQUENCY DRIVE WIRING - SCHEMATIC (TYPICAL)
E-3 N.T.S.



SCHEMATIC DIAGRAM, PROVIDE SOFT START BYPASS STARTER ON NEW R/O PUMP #3 VFD (REFER TO SPECIFICATIONS FOR ALL CONTROLS. INCLUDE SURGE SUPPRESSION)



600 AMPERE MAIN LUG ONLY
277/480 VAC 3 PHASE 4 WIRE WYE 60HZ
FACTORY ASSEMBLED, BOLT-ON BREAKERS, 100%
TIN PLATED COPPER BUSSING, SEPARATE NEUTRAL
& GROUNDING BUSES, SURFACE MOUNTED
NEMA 1 ENCLOSURE

PROVIDE ARC FAULT HAZARD WARNING SIGNAGE. PROVIDE PHENOLIC LABELS WITH NAME, VOLTAGE, & PHASE.

C:\Users\labbaxa\Dropbox\LD6328\Drawings\LD6328 PHASE 1.dwg Last Plotted by: ASHLEY WINDHAM For: Green Engineering on Tuesday, August 27, 2024 @ 2:52:24 PM

GREEN ENGINEERING
WATER, WASTEWATER, SURVEYING, PLANNING, PROJECT MANAGEMENT
NORTH CAROLINA FIRM LICENSE: P-0115
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PASQUOTANK COUNTY
FOREMAN BUNDY REVERSE OSMOSIS WTP UPGRADE
PASQUOTANK COUNTY
NORTH CAROLINA

**ELECTRICAL
DETAILS**