

**January 8, 2018**  
**BOARD OF COUNTY COMMISSIONERS**  
**ORANGE COUNTY, FLORIDA**  
**Y18-725-TA / ADDENDUM # 2**  
**EASTERN REGIONAL WATER SUPPLY FACILITY IMPROVEMENTS PHASE IIIB**

**Bid Opening Date: January 25, 2018**

This addendum is hereby incorporated into the bid documents of the project referenced above. The following items are clarifications, corrections, additions, deletions and/or revisions to and shall take precedence over the original documents. Underlining indicates additions, deletions are indicated by ~~strikethrough~~.

**A. ADDITIONAL SITE VISIT:**

There is an additional site visit scheduled for 8:30 AM on Thursday, January 11, 2018 at the Eastern Regional Water Supply Facility, 9100 Curry Ford Road, Orlando, FL 32825. Contractors are to meet in the parking lot of the main building.

**B. QUESTIONS AND ANSWERS**

**1. Q: Drawing I-309 states the subplate for 63-LCP-1 is to be replaced and the doors modified or replaced. Please confirm the electrical panel doesn't need UL or any other electrical approval re-certification.**

**A:** Panel 63-LCP-1 is a new panel, so the note regarding the doors being modified/replaced does not apply. See revisions to Drawings E-310 and I-309 below, in part D of this addendum.

**2. Q: Note 2 on drawing I-306, states "provide complete new PLC panel, UPS, power supplies, etc to replace existing." Specifications page 13300-33 details equipment for furnishing only a new I/O rack (extender) and related I/O modules. Please advise.**

**A:** The Contractor shall provide a new PLC panel per Note 2 on drawing I-306. Refer to revised Drawings E-311 and specification modifications below in Part C and D of this addendum.

**3. Q: For Section 11214 - Will the County consider allowing National Pump Company to supply an alternate for both the High Service Pumps (qty 2) and the Transfer Pumps (qty 3)? National Pump has a number of VTPs (booster, well, transfer, etc) in Florida, in addition to their Southern Distribution Facility located in Central FL, and is capable of meeting all pertinent metallurgical and quality requirements for the project, including testing and analysis. Attached are the curves recommended for the design conditions for both pumps, the National Pump Company's ISO certification and a sample flyer for their NSF**

**certified pump. A more detailed reference list or pump design sheet for this job can be provided upon request.**

A: The Contractors shall bid the project as specified. Procedures for substitutions are covered in Part C of the bid documents.

4. **Q: For Section 11214 – For pumps of this size and HP, it is normal to require the job pumps & motors to be tested together at the factory, sometimes along with the job VFDs (especially when Vfds are to be supplied by the pump supplier). This will allow the vendor to assume a single point of responsibility for the performance of the equipment top-to-bottom. Is it the intent of the County to have the pump vendor supply the VFDs and/or to perform testing in this way (with or without the job VFDs)? Or is separate testing preferred?**

A: There are no requirements for the VFDs to be supplied by the pump supplier. Specification Section 16485 outlines the testing requirements for the VFDs.

5. **Q: Can we get a quantity or an allowance for the Note 1 on Drawing A102 regarding resealing the Existing High Service Pump Building?**

A: No allowances will be permitted. The Contractor is to provide a lump sum bid as set forth in the Invitation for Bids Official Bid Form, Part D. The quantity of square footage of existing High Service Pump Building exterior concrete masonry block to be re-sealed is approximately 11,000+/- square feet.

6. **Q: Page 6 of the Geotech Report has the following paragraph. Can we quantify this or come up with a unit price for Unsuitable Materials?**

**Evaluation of Existing Fill (High Service Pump Bldg Extension and Aeration Tower Vicinity)**

The character of the existing fill should be further explored to verify that unsuitable materials are not present within or covered by the fill. We recommend excavating test pits to further explore the nature of the existing fill. Test pits can be excavated before or during the initial phases of construction. The test pit excavations should be monitored by a representative of Ardaman & Associates. Unsuitable materials, if encountered, should be removed and replaced with suitable compacted fill during site construction.

A: There will be no unit price bid items included in this Invitation for Bids. The Contractor is to provide a lump sum bid as set forth in the Invitation for Bids Official Bid Form, Part D. Contractors shall include in their lump sum bid up to five feet of removal/disposal and replacement of unsuitable materials with suitable compacted fill for the two areas listed in the above paragraph of the Geotechnical Report (High Service Pump Bldg Extension and Aerators/AQC slab).

**C. Part H Specifications**

1. **ON APPENDIX C PERMITS: See attached FDEP Construction Permit Number 0080780-11001-WC to be added to Appendix C.**
2. **Section 11214 - 2.02 I., add the following:**
  6. Provide Resistance Thermal Detectors (RTDs) for High Service Pumps 50-P-7 and 50-P-8 per Section 16405.
3. **Section 13300 – 2.14 B., Delete and Replace with the following:**
  - B. 30-LCP-3 rack layouts consist of the following items:

<u>New 30-LCP-3 16-Slot Rack Layouts</u>		
<u>Rack 1</u>	<u>Slot 1</u>	<u>New Power Supply</u>
<u>Rack 1</u>	<u>Slot 2</u>	<u>New CPU</u>
<u>Rack 1</u>	<u>Slot 3</u>	<u>New 16-point relay output isolated module (140 series)</u>
<u>Rack 1</u>	<u>Slot 4</u>	<u>New 16-point discrete input non-isolated module (140 series)</u>
<u>Rack 1</u>	<u>Slot 5</u>	<u>New 8-point analog input module (140 series)</u>
<u>Rack 1</u>	<u>Slot 6</u>	<u>New 4-point analog output module (140 series)</u>
<u>Rack 1</u>	<u>Slot 7</u>	<u>New 8-point analog input module (140 series)</u>
<u>Rack 1</u>	<u>Slot 8</u>	<u>New 16-point discrete input non-isolated module (140 series)</u>
<u>Rack 1</u>	<u>Slot 9</u>	<u>New 4-point analog output module (140 series)</u>
<u>Rack 1</u>	<u>Slot 10</u>	<u>New NOE Module</u>
<u>Rack 1</u>	<u>Slot 11</u>	<u>New 16-point relay output isolated module (140 series)</u>
<u>Rack 1</u>	<u>Slot 12</u>	<u>New Empty Module</u>
<u>Rack 1</u>	<u>Slot 13</u>	<u>New Empty Module</u>
<u>Rack 1</u>	<u>Slot 14</u>	<u>New Empty Module</u>
<u>Rack 1</u>	<u>Slot 15</u>	<u>New Empty Module</u>
<u>Rack 1</u>	<u>Slot 16</u>	<u>New Empty Module</u>

**D. Drawings**

1. **Drawing Sheet E310, Note 1, modify as shown below:**
  1. ~~Locate new backplane within existing enclosure, see See Sheets I309 & I310 for additional requirements. Remove wires to/from 63-LCP-1 within existing conduits, pull in pull-strings in each existing conduit. Utilize existing conduits for new wires as shown. Mount 18" above finished floor.~~
2. **Drawing Sheet E311, Replace Drawing Sheet E311 Process 80**

**Building Power Plan with the attached Revised Drawing Sheet E311  
Process 80 Building Power Plan.**

- 3. Drawing Sheet E403, Replace Drawing Sheet E403 Wiring Diagrams with the attached Revised Drawing Sheet E403 Wiring Diagrams.**
  - 4. Drawing Sheet I309, Delete Note No. 1 in its entirety.**
- E.** All other terms, conditions, and specifications of the IFB remain unchanged.
- F.** The Bidder shall acknowledge receipt of this addendum by completing the applicable section in the solicitation or by completion of the acknowledgement information on the addendum. Either form of acknowledgement must be completed and returned not later than the date and time for receipt of the bid.

**Receipt acknowledged by:**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



# Florida Department of Environmental Protection

Central District  
3319 Maguire Boulevard, Suite 232  
Orlando, Florida 32803-3767

Rick Scott  
Governor

Carlos Lopez-Cantera  
Lt. Governor

Noah Valenstein  
Secretary

## In the matter of an Application for Permit by:

Charles "Tad" Parker, P.E., Chief Engineer  
Orange County Utilities  
9150 Curry Ford Road  
Orlando, FL 32825  
[Charles.Parker2@ocfl.net](mailto:Charles.Parker2@ocfl.net)

**DEP File No.** 0080780-1101-WC  
**County:** Orange

## NOTICE OF PERMIT ISSUANCE

Enclosed is Permit Number 0080780-1101-WC to construct the Eastern Regional Water Treatment Plant Improvements Phase 3B, issued pursuant to Section 403.861(9), Florida Statutes.

This permit is final and effective on the date filed with the clerk of the Department unless a petition is filed in accordance with the paragraphs below or unless a request for extension of time in which to file a petition is filed within the required timeframe and conforms to Rule 62-110.106(4), F.A.C. Upon timely filing of a petition or a request for an extension, this permit will not be effective until further Order of the Department.

A person whose substantial interests are affected by this permit may petition for an administrative proceeding (hearing) in accordance with sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) with the Agency Clerk for the Department of Environmental Protection, Office of General Counsel, Mail Station 35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000, within 14 days of receipt of this Notice. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under sections 120.569 and 120.57 of the Florida Statutes. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-106.205, F.A.C.

A petition must contain the following information:

- (a) The name and address of each agency affected and each agency's file or identification number, if known;
- (b) The name, address, and telephone number of the petitioner; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination;
- (c) A statement of how and when the petitioner received notice of the agency decision;
- (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;
- (e) A concise statement of the ultimate facts alleged, including the specific facts which petitioner contends warrant reversal or modification of the Department's action;

- (f) A statement of the specific rules or statutes the petitioner contends requires reversal or modification of the Department's action, including an explanation of how the alleged facts relate to the specific rules or statutes; and
- (g) A statement of the relief sought by petitioner, stating precisely the action that the petitioner wants the Department to take.

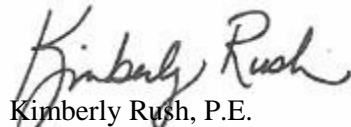
A petition that does not dispute the material facts on which the Department's action is based shall state that no such facts are in dispute and otherwise contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that, the Department's final action may be different from the position taken by it in this Notice. Persons whose substantial interests will be affected by any such final decision of the Department on the petition have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

When the Order (Permit) is final, any party to the Order has the right to seek judicial review of the Order pursuant to section 120.68 of the Florida Statutes, by filing a Notice of Appeal pursuant to Rule 9.110 of the Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, Mail Station 35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000; and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice of appeal must be filed within 30 days from the date when the final order is filed with the Clerk of the Department.

Executed in Orlando, Florida.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION



Kimberly Rush, P.E.  
Permitting and Waste Cleanup Program Administrator

Enclosures: Permit No. 0080780-1101-WC

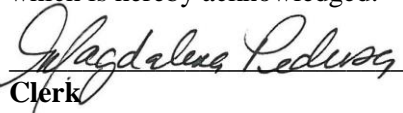
**CERTIFICATE OF SERVICE**

The undersigned duly designated deputy clerk hereby certifies that this permit and all copies were sent on the filing date below to the following listed persons:

Charles "Tad" Parker, P.E., Orange County Utilities [Charles.Parker2@ocfl.net]  
Jonathan C. Bundy, P.E., Tetra Tech [jon.bundy@tetrattech.com]  
FDEP: Sirena Davila, Jill Farris, Daissan A. Villareal

**FILING AND ACKNOWLEDGMENT**

FILED, on this date, pursuant to Section 120.52, F.S., with the designated Department Clerk, receipt of which is hereby acknowledged.

  
Clerk

December 28, 2017  
Date



# Florida Department of Environmental Protection

Central District  
3319 Maguire Boulevard, Suite 232  
Orlando, Florida 32803-3767

Rick Scott  
Governor

Carlos Lopez-Cantera  
Lt. Governor

Noah Valenstein  
Secretary

December 28, 2017

**PERMITTEE:**

Orange County Utilities  
9150 Curry Ford Road  
Orlando, FL 32825

**PWS ID NUMBER:** 3484132

**PERMIT NUMBER:** 0080780-1101-WC

**DATE OF ISSUE:** December 28, 2017

**EXPIRATION DATE:** December 27, 2022

**COUNTY:** Orange

**PROJECT:** Eastern Regional Water Treatment  
Plant (WTP) Improvements Phase 3B

This permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-550, 62-555 and 62-560. The above-named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawings, plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

**TO CONSTRUCT:** Water treatment plant improvements in the Eastern Regional WTP.

**PROPOSED CONSTRUCTION INCLUDES THE FOLLOWING COMPONENTS:**

1. Two new forced draft aeration (FDA) units and a two-stage air quality control(AQC) scrubber system.
  - a. Each of the two-force draft aeration unit has a capacity of 6.25 million gallons per day (MGD) or 4,430 gallons per minute (GPM). The new FDA treatment area will require a concrete pad approximately one-fourth the size of the existing system which is proposed to be located just north of the existing Process 20 Building.
  - b. One AQC system with a capacity of 12.5 MGD (8,680 GPM) to remove hydrogen sulfide from the force draft aerator exhaust at 99.6 percent efficiency. The AQC tower diameter is 11 feet and AQC tower height is 28 feet.
  
2. A new transfer pump station with three new transfer pumps with variable speed and a clearwell. The clearwell and transfer pump station will be constructed of cast-in-place reinforced concrete supported on mat slab foundation.
  - a. An additional three vertical turbine transfer pumps will be installed in the new clearwell. Each 150 horsepower (HP) pump has a capacity of 8,000 GPM at 60 feet total dynamic head (TDH). The transfer pumps will have variable speed.
  - b. The proposed 34.56 MGD (24,000 GPM) transfer pump station will be located to the north of the existing transfer pump station. A new common discharge header for both pump stations will replace the existing above grade discharge flow meter assembly.

- c. The proposed clearwell capacity is 81,463 gallons. The clearwell will be water tight and the interior of the clearwell will be coated with an NSF-61 approved coating suitable for use in potable water applications.
3. Replacement of the existing transfer pump station discharge venturi flow meter with a magnetic flow meter. The new common discharge header for both pump stations in Item 2b above will include a new above grade 48-inch magnetic flow meter which can typically provide measurement of flow velocity up to 30 feet per second (fps) on the high end and less than 0.5 fps at the low end.
4. A new high service pump building extension with two new high service pumps.
  - a. A new high service pump structure is proposed to be built as an extension to the existing high service pump building, located immediately east of the existing HSP station. This high service pump building extension will allow the existing facilities to continue to operate as is and will keep all the HSPs in the same general location. The high service pump building extension will be constructed of reinforced concrete masonry supported on cast-in-place concrete spread footings. The addition is approximately 1,840 square feet of space consisting of a single room, with no separate interior spaces. The new HSP discharge manifold will be connected to the existing 54-inch discharge manifold using a 54-inch by 36-inch wet tap. Additional wet taps and line stops will be used to construct a by-pass around the existing flow meter so that the HSP station will continue to operate while the existing flow meter is replaced. The new bypass line will also be equipped with valves downstream of the finished water flow meter that will allow the new line to be connected to the distribution system to provide a second point of connection to the distribution system
  - b. Additional two high service pumps. Each 600 HP HSP has a capacity of 10,000 GPM at 176 feet will provided. The high service pumps will have variable speed, are vertical turbine pumps in cans with above grade discharge, fabricated discharge heads, bronze impellers, mechanical seats, stainless steel open line shafts and weather protected motors with space heaters to match the existing pumps.
5. Replacement of the existing 36-inch finished water venturi flow meter with an above-grade 54-inch magnetic flow meter.
6. Expansion of the sodium hydroxide feed system to include two additional metering pumps to feed the proposed AQC system expansion. Each metering pump has a capacity of 14 gallons per hour (GPH).
7. Site work and miscellaneous yard and process piping. A summary of the proposed modifications to the yard and process piping, includes:
  - a. A new 36-inch raw water line connecting to the existing 48-inch raw water loop to supply aerated water to the new forced draft aerators.
  - b. A new 42-inch aerated water line connecting to the existing 48-inch aerated water line to the transfer pump clearwell.



- c. A new 48-inch aerated water line connecting the existing 48-inch aerated water line to the new transfer pump clearwell.
  - d. A new transfer pump station discharge manifold and flow meter.
  - e. A new finished water bypass around the existing finished water flow meter.  
Replacement of the existing flow meter and discharge pipe with a new flow meter and appropriately sized pipe.
  - f. New connections for the sodium hypochlorite and fluoride feeds and the sample piping on the proposed transfer pump discharge header.
8. Electrical and instrumentation modifications to feed the proposed transfer pumps and the proposed high service pumps. Also, the proposed modifications will require programming of the PLCs and SCADA control screens to add new equipment and remove unused and inactive equipment.

When the proposed Eastern Regional WTP improvements are cleared for service, the rated design capacity of the plant will remain 50 MGD as the current sodium hypochlorite system is limiting. The existing sodium hypochlorite generation system is adequate for the existing 50 MGD WTP flow based on the chlorine usage over the last 5 years. The sodium hypochlorite system will be modified/expanded in the future to meet the future WTP capacity of 62.5 MGD. Eastern Regional WTP is classified as Category V Class C (5.0 MGD and above). Accordingly, as per Rule 62-699, staffing of a Category V Class C WTP is by Class C or higher operator: 6 hours per day for 5 days per week and one visit on each weekend day. The lead/chief operator must be Class C or Higher.

Any change in staffing as per the Rule will be considered by the Department when a request is submitted by the permittee after clearance, substantiated by relevant mitigating conditions for DEP approval and in accordance with Rule 62-699 F.A.C.

**IN ACCORDANCE WITH:** This permit does not pertain to any wastewater, storm water or dredge and fill aspects of the project. This permit is issued based upon the dates and submissions during the application process as follows: Construction plans, specifications and details received on December 11, 2017 and additional documentations received on December 27, 2017.

**LOCATION:** The Easter Regional WTP is located off Curry Ford Road and Econlockhatchee Trail, just west of State Road 417.

Work must be conducted in accordance with the Proposed Construction, General and Specific Conditions, attached hereto.

The permittee shall be aware of and operate under the Permit Conditions below. These applicable conditions are binding upon the permittee and enforceable pursuant to Chapter 403, Florida Statutes. [F.A.C. Rule 62-555.533(1)]

## **A. GENERAL CONDITIONS**

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in Subsections 403.087(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other department permit that may be required for other aspects of the total project which are not addressed in this permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times (reasonable time may depend on the nature of the concern being investigated), access to the premises where the permitted activity is located or conducted to:

- a. Have access to and copy any records that must be kept under conditions of the permit;
  - b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
  - c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.
8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
  - a. A description of and cause of noncompliance; and
  - b. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.
9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.
10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules. A reasonable time for compliance with a new or amended surface water quality standard, other than those standards addressed in Rule 62-302.500, shall include a reasonable time to obtain or be denied a mixing zone for the new or amended standard.
11. This permit is transferable only upon Department approval in accordance with Rule 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
12. This permit or a copy thereof shall be kept at the work site of the permitted activity.
13. This permit also constitutes:
  - a. Determination of Best Available Control Technology (BACT)
  - b. Determination of Prevention of Significant Deterioration (PSD)

- c. Certification of compliance with State Water Quality Standards (Section 401, PL 92-500)
- d. Compliance with New Source Performance Standards

14. The permittee shall comply with the following:

- a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
- b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
- c. Records of monitoring information shall include:
  - i. the date, exact place, and time of sampling or measurements;
  - ii. the person responsible for performing the sampling or measurements;
  - iii. the dates analyses were performed;
  - iv. the person responsible for performing the analyses;
  - v. the analytical techniques or methods used;
  - vi. the results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

## **SPECIFIC CONDITIONS**

### **B. Construction Activities**

#### **1. Permit Modification**

All construction must be in accordance with this permit. Before commencing work on project changes for which a construction permit modification is required per 62-555.536(1), the permittee shall submit to the Department a written request for a permit modification. Each such request shall be accompanied by one copy of a revised construction permit application, the proper processing fee and one copy of either a revised preliminary design report or revised drawings, specifications and design data. [F.A.C. Rule 62-555.536].

## 2. **Professional Engineer Supervision**

Permitted construction or alteration of public water supply systems must be supervised during construction by a professional engineer registered in the State of Florida if the project was designed under the responsible charge of a professional engineer licensed in the State of Florida. The permittee must retain the service of a professional engineer registered in the State of Florida to observe that construction of the project is in accordance with the engineering plans and specifications as submitted in support of the application for this permit. [F.A.C. Rule 62-555.520(3)].

## 3. **Artifacts**

If prehistoric or historic artifacts, such as pottery or ceramics, stone tools or metal implements, dugout canoe remains, or any other physical remains that could be associated with Native American cultures, or early colonial or American settlement are encountered at any time within the project site area, the permitted project should cease all activities involving subsurface disturbance in the immediate vicinity of such discoveries. The permittee, or other designee, should contact the Florida Department of State, Division of Historical Resources, Compliance and Review Section at 850.245.6333 or 800.847.7278, as well as the appropriate permitting agency office. Project activities should not resume without verbal and/or written authorization from the Division of Historical Resources and the permitting agency. In the event that unmarked human remains are encountered during permitted activities, all work shall stop immediately and the proper authorities notified in accordance with Section 872.05, *Florida Statutes*.

## 4. **Delays and Extension of Permit**

If delays will cause project completion to extend beyond the expiration date of this permit, the permittee shall submit to the Department a request to extend the expiration date of this permit including the appropriate processing fee. This request shall specify the reasons for the delay and shall be submitted to the Department for approval prior to the expiration date of this permit. Note that no specific construction permit shall be extended so as to remain in effect longer than five years. [F.A.C. Rule 62-555.536(4)].

## 5. **Permit Transfer**

In accordance with General Condition #11 of this permit, this permit is transferable only upon Department approval. Persons proposing to transfer this permit must apply jointly for a transfer of the permit within 30 days after the sale or legal transfer of ownership of the permitted project that has not been cleared for service by the Department using form, 62-555.900(8), Application for Transfer of a PWS Construction Permit along with the appropriate fee. [F.A.C. Rule 62-555.536(5)]

## 6. **Obligation to Obtain Other Permits**

This permit satisfies Drinking Water permitting requirements only and does not authorize construction or operation of this facility prior to obtaining all other necessary permits from

other program areas within the Department, or required permits from other state, federal, or local agencies.

#### **7. Limits on Authorizing Connections**

This permit is for **CONSTRUCTION ONLY** of the components listed in the first page of this permit. This permit shall not infer that the clearance necessary for connection will be granted. Partial clearance may be granted, if required.

#### **8. Gasoline Contamination**

If gasoline contamination is found at the construction site, work shall be stopped and the proper authorities notified. With the approval of the Department, ductile iron pipe and fittings, and solvent resistant gaskets materials shall be used in the contaminated area. The ductile pipe shall be used in the contaminated area. The ductile iron pipe shall extend 100 feet beyond any solvent noted. Any contaminated soil that is excavated shall be placed on an impermeable mat, covered with waterproof covering, and held for disposal. If the site cannot be properly cleaned, then consultation with the Department is necessary prior to continuing with the project construction.

#### **9. Wetlands Jurisdiction**

This permit does not constitute approval of construction on jurisdictional wetland areas; therefore such approval must be obtained separately from the Water Management District or from DEP ERP Section, as applicable, Permittee shall provide a copy of the permit approval to the Department if water main installation involves activities on wetlands.

### **C. Construction Standards**

#### **1. National Sanitation Foundation (NSF)**

All products, including paints, which shall come into contact with potable water, either directly or indirectly, shall conform with National Sanitation Foundation (NSF) International, Water Chemicals Codex, Food Chemicals Codex, American Water Works Association (AWWA) Standards and the Food and Drug Administration, as provided in Rule 62-555.320(3), F.A.C.

#### **2. American Water Works Association (AWWA)**

Water supply facilities, including mains, pipe, fittings, valves, fire hydrants and other materials shall be installed in accordance with the latest applicable AWWA Standards and Department rules and regulations. The system shall be pressure and leak tested in accordance with AWWA Standard C600 C603, or C605, as applicable, and disinfected in accordance with AWWA Standard C651-653, as well as in accordance with Rule 62-555.340, F.A.C.

### 3. **Lead Free**

The installation or repairs of any public water system, or any plumbing in residential or nonresidential facilities providing water for human consumption, which is connected to a public water system shall be lead free in accordance with Rule 62-555.322, F.A.C.

### 4. **Asbestos**

If any existing asbestos cement (AC) pipes are replaced under this permit, the permittee shall do so in accordance with the applicable rules of Federal Asbestos Regulation and Florida DEP requirements. For specific requirements applicable to AC pipes, the permittee should contact the Central District Office prior to commencing any such activities at (407) 897-4100. Please be aware that a notification is required to be submitted to the Department at least 10 days prior to the start of a regulated project.

### 5. **Hazard and Reuse Setbacks**

Setback distances between potable water wells and sanitary hazards shall be in accordance with 62-555.312, F.A.C. Reclaimed water land application areas, if applicable, must not be located within the setback distance from potable water supply wells established in Chapter 62-610, F.A.C.

### 6. **Line Separation**

Permittee shall maintain vertical clearance and horizontal separation between water mains and sanitary sewers, storm sewers, etc. unless approved otherwise by the Department, as provided in Rule 62-555.314, F.A.C., and Section 8.6 of *Recommended Standards for Water Works*, a manual adopted by reference in Rule 62-555.330(3), F.A.C.

### 7. **Color Coding of Pipes**

The new or altered aboveground piping at the drinking water treatment plant shall be color coded and labeled as recommended in Section 2.14 of "Recommended Standards for Water Works, 1997 Edition". [F.A.C. Rule 62-555.320(10)]

### 8. **Cross Connections**

Permittee shall ensure that there shall be no cross-connection with any non-potable water source in accordance with Rule 62-555.360, F.A.C.

## **D. Operational Requirements**

### 1. **Staffing**

When the Eastern Regional WTP improvements are cleared for service, the rated design capacity of the plant will remain 50 MGD as the current sodium hypochlorite system is limiting. The existing sodium hypochlorite generation system is adequate for the existing 50 MGD WTP flow based on the chlorine usage over the last 5 years. The sodium hypochlorite system will be modified/expanded in the future to meet the future WTP capacity of 62.5 MGD. Eastern Regional WTP is classified as Category V Class C (5.0

MGD and above). Accordingly, as per Rule 62-699, staffing of a Category V Class C WTP is by Class C or higher operator: 6 hours per day for 5 days per week and one visit on each weekend day. The lead/chief operator must be Class C or higher. [F.A.C. Rule 62-699.310].

Any change in staffing as per the Rule will be considered by the Department when a request is submitted by the permittee after clearance, substantiated by relevant mitigating conditions for DEP approval and in accordance with Rule 62-699 F.A.C.

2. **Operation and Maintenance to comply with Water Quality Standards**  
The supplier of water shall operate and maintain the public water system so as to comply with applicable standards in F.A.C. Rule 62-550 and 62-555.350.
3. **Record Drawings**  
The permittee shall have complete record drawings produced for the project in accordance with Rule 62-555.530(4), F.A.C.
4. **State Watch Office**  
The permittee or suppliers of water shall telephone the State Watch Office (SWO), at 1-800- 320-0519 immediately (i.e., within two hours) after discovery of any actual or suspected sabotage or security breach, or any suspicious incident, involving a public water system in accordance with the F.A.C. Rule 62-555.350(10).

## **E. Monitoring Provisions**

1. **Compliance Monitoring by System Type**  
Permittee shall follow the guidelines of Chapters 62-550, 62-555, and 62-560, F.A.C., regarding public drinking water system standards, monitoring, reporting, permitting, construction, and operation.

This facility is a Community Water System as defined in F.A.C. Rule 62-550.200(12) and shall comply with the applicable chemical, radiological, lead and copper, and bacteriological monitoring requirements of F.A.C. Rule 62-550. Such requirements shall be initiated within the quarter that the water treatment facility is placed into service (i.e. calendar quarters such as January through March or April through June) and the results submitted to the Department.

2. **Chlorine Residual**  
The Water Treatment Plant shall maintain throughout the distribution system, a minimum continuous and effective free chlorine residual of 0.2 mg/L (or its equivalent). A minimum system pressure of 20 psi must be maintained throughout the system. Also, safety equipment shall be provided and located outside of chlorine room.



## F. Clearance Requirements

### 1. Clearance Letter

The permittee must instruct the engineer of record to request system clearance from the Department within sixty (60) days of completion of construction, testing and disinfecting the system. Bacteriological test results shall be considered unacceptable if the test was completed more than 60 days before the Department receives the results. [F.A.C. Rule 62-555.340(2)(c)]

Permitted construction or alteration of a public water system may not be placed into service until a letter of clearance has been issued by the Department. [F.A.C. Rule 62-555.345]

### 2. Requirements to Obtain Clearance

After submitting the permit clearance package, the permittee will contact [DEP\\_CD@dep.state.fl.us](mailto:DEP_CD@dep.state.fl.us) **to establish a date/time for an inspection of the components contained in this permit.**

Prior to placing this project into service, Permittee shall submit, at a minimum, all of the following to the Department for evaluation and approval for operation, as provided in Rules 62-555.340 and 62-555.345, F.A.C.:

- a. The engineer's *Certification of Construction Completion and Request for Clearance to Place Permitted PWS Components Into Operation* {DEP Form 62-555.900(9)};
- c. Certified record drawings, if there are any changes noted for the permitted project.
- d. Analytical results from two consecutive days of satisfactory bacteriological samples from locations found in paragraph 3 below.
- e. Copy of a satisfactory pressure test of the process piping performed in accordance with AWWA Standards. [F.A.C. Rule 62-555.320(21) (a)(1)].
- f. Photographs of the above ground installation.
- g. Provide evidence that the required operation and maintenance(O&M) manual for the water treatment plant is in place, which will be updated thereafter as necessary to reflect plant modifications. The manual shall contain operation and control procedures, and preventive maintenance and repair procedures, for all plant equipment and shall be made available for reference at the plant or at a convenient location near the plant. Bound and indexed equipment manufacturer manuals shall be considered sufficient to meet the requirements of this subsection. [F.A.C. 62-555.350 (13)].
- h. Submit the bacteriological sampling plan.

**No clearance will be issued unless the requested components to be cleared for service are viable and acceptable to the Department.**

### **3. Cleaning, Disinfecting, and Bacteriological Samples**

The new facilities shall be cleaned, disinfected, and bacteriologically cleared in accordance with Chapter 62-555, F.A.C. The bacteriological clearance data shall be submitted to the Department with the engineer's certification of construction completion. [Section 62-555.340 and 62-555.315(6)(b), F.A.C.]

**Bacteriological Sampling Locations:** Copies of results from satisfactory bacteriological samples shall be submitted with the clearance package. Samples shall be taken from locations listed below, in accordance with Rules 62-555.315 (6), 62-555.340 and 62-555.330, F.A.C. and American Water Works Association (AWWA) Standard C 651-92.

**The engineer-of-record shall submit a sampling plan showing the location of the bacteriological sampling points, considering the following locations:**

- a. The new 36-inch raw water line connecting to the existing 48-inch raw water loop to supply aerated water to the new forced draft aerators.
- b. The new 42-inch aerated water line connecting to the existing 48-inch aerated water line to the transfer pump clearwell.
- c. The new 48-inch aerated water line connecting the existing 48-inch aerated water line to the new transfer pump clearwell.
- d. The new transfer pump station discharge manifold and flow meter.
- e. The new finished water bypass around the existing finished water flow meter.
- f. The 48-inch HSP bypass line.
- g. The 54-inch HSP discharge pipe at its point of connection to the existing main

Each location shall be sampled on two separate days (at least 6 hours apart) with sample point locations and **chlorine residual readings clearly indicated** on the report and/or drawings.

**Bacteriological sample results will be considered unacceptable if the tests were completed more than 60 days before the Department received the results.**

Each location shall be sampled on two separate days (at least 6 hours apart) with sample point locations and chlorine residual readings **clearly indicated** on the report and/or drawings.

Per Rule 62-555.340, F.A.C., and AWWA Standard C653, which is referenced in Rule 62-555.340, F.A.C., all newly constructed chemical feed system components should be cleaned, rinsed with disinfectant, and bacteriologically evaluated unless the system is feeding a chemical upstream of surface water filtration and disinfection facilities or is feeding a disinfectant, in which case the system need only be cleaned.

Permittee:  
Orange County Utilities  
Charles "Tad" Parker, P.E., Chief Engineer  
Page 13

DEP File No.:  
0080780-1101-WC

**Please submit the entire clearance document package in electronic format to [DEP\\_CD@dep.state.fl.us](mailto:DEP_CD@dep.state.fl.us).** If the file is very large, you may post it to the Water Electronic Submittal folder on the Central District's ftp site at:

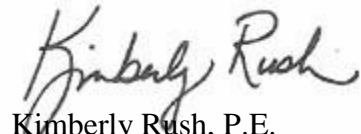
[ftp://ftp.dep.state.fl.us/pub/incoming/Central\\_District/Water%20Electronic%20Applications](ftp://ftp.dep.state.fl.us/pub/incoming/Central_District/Water%20Electronic%20Applications).

After posting the document, send an e-mail to [DEP\\_CD@dep.state.fl.us](mailto:DEP_CD@dep.state.fl.us) alerting us that it has been posted.

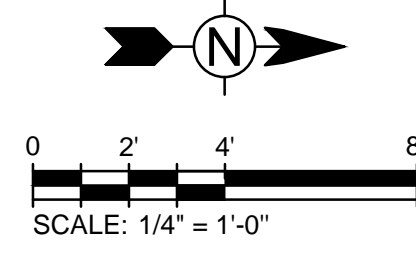
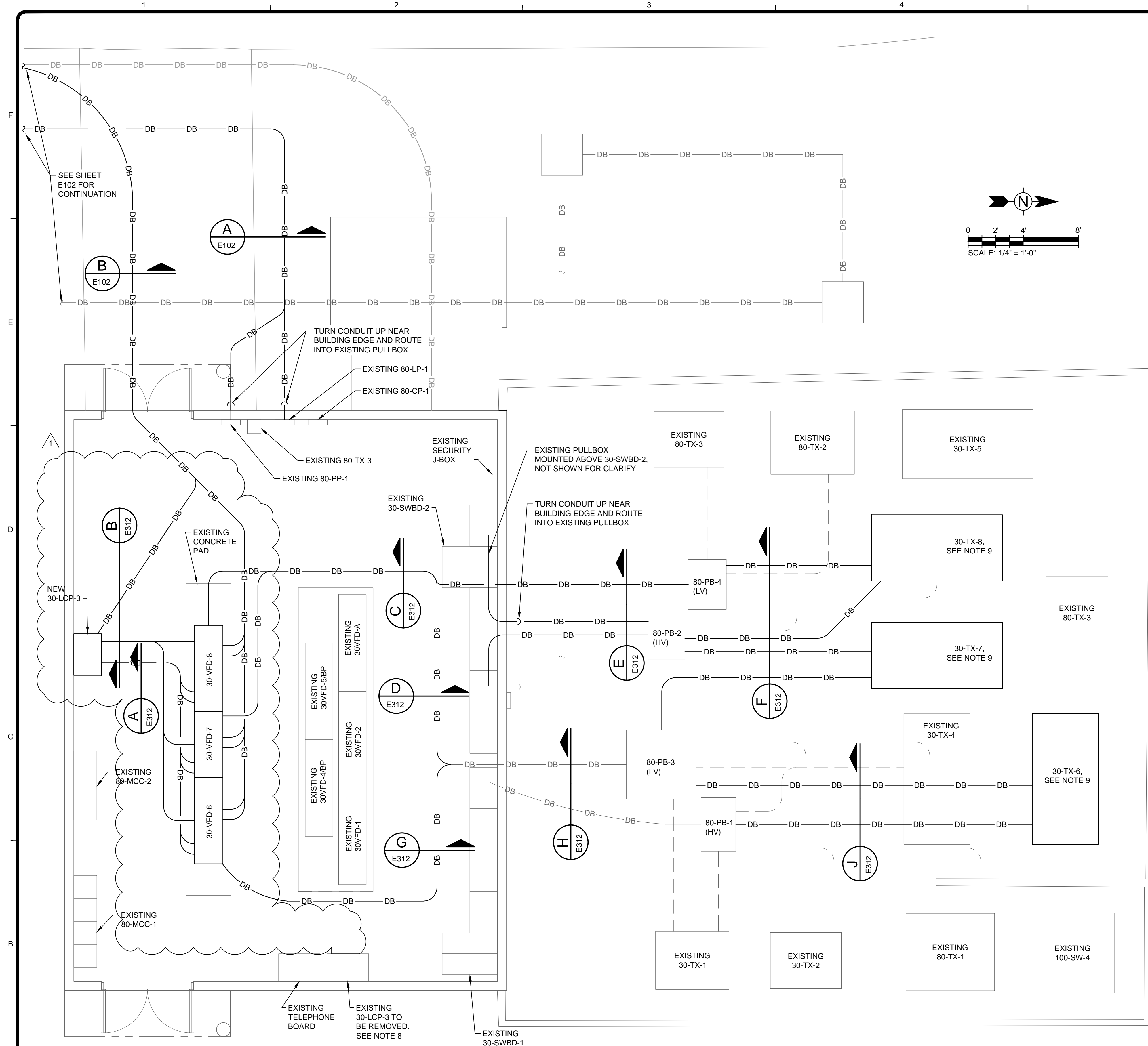
Any submitted drawings (should be sized 11" x 17") and the engineer of record's signed seal and dates on the required document must be legible for acceptance.

Forms: <http://www.dep.state.fl.us/water/drinkingwater/forms.htm>

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION



Kimberly Rush, P.E.  
Permitting and Waste Cleanup Program Administrator  
Central District Office



**80 MCC BLDG POWER PLAN**  
SCALE: 1/4"=1'-0"

- DUCTBANK SECTION A**  
SCALE: NTS (SEE NOTE 1)  
E312
- 1" C(12#14)
  - 1" C(12#14)
  - 1" C(12#14)
  - 1" C(2-2/C#18SH)
  - 1" C(2-2/C#18SH)
  - 1" C(2-2/C#18SH)
  - 1" C(CAT-5E)
  - CONDUIT SHOWN IS NEW
  - CONDUIT SHOWN IS NEW
  - CONDUIT SHOWN IS NEW

- DUCTBANK SECTION E**  
SCALE: NTS (SEE NOTES 3 & 4)  
E312
- 4" C(3#500kCML, 1#3/0)
  - 3" C(3#4(8KV), 1#6)
  - 3" C(3#4(8KV), 1#6)
  - (30-TX-8 TO 30-VFD-8 VIA 80-PB-4)
  - (30-SWBD-2 TO 30-TX-7 VIA 80-PB-2)
  - (30-SWBD-2 TO 30-TX-8 VIA 80-PB-2)

- DUCTBANK SECTION B**  
SCALE: NTS (SEE NOTE 2)  
E312
- 1" C(12#14)
  - 1" C(12#14)
  - 1" C(12#14)
  - 1" C(2-2/C#18SH)
  - 1" C(2-2/C#18SH)
  - 1" C(2-2/C#18SH)
  - 1" C(3-2/C#16SH)
  - 1" C(CAT-5E)
  - CONDUIT SHOWN IS NEW
  - CONDUIT SHOWN IS NEW
  - CONDUIT SHOWN IS NEW

- DUCTBANK SECTION F**  
SCALE: NTS (SEE NOTE 5)  
E312
- 4" C(3#500kCML, 1#3/0)
  - 4" C(3#500kCML, 1#3/0)
  - 3" C(3#4(8KV), 1#6)
  - 3" C(3#4(8KV), 1#6)
  - (30-TX-7 TO 30-VFD-7 VIA 80-PB-3)
  - (30-TX-8 TO 30-VFD-8 VIA 80-PB-4)
  - (30-SWBD-2 TO 30-TX-7 VIA 80-PB-2)
  - (30-SWBD-2 TO 30-TX-8 VIA 80-PB-2)

- DUCTBANK SECTION C**  
SCALE: NTS (SEE NOTE 3)  
E312
- 4" C(3#500kCML, 1#3/0)
  - 4" C(3#500kCML, 1#3/0)
  - (30-TX-7 TO 30-VFD-7 VIA 80-PB-3)
  - (30-TX-8 TO 30-VFD-8 VIA 80-PB-4)

- DUCTBANK SECTION G**  
SCALE: NTS (SEE NOTE 6)  
E312
- 4" C(3#500kCML, 1#3/0)
  - (30-TX-6 TO 30-VFD-6 VIA 80-PB-3)

- DUCTBANK SECTION D**  
SCALE: NTS (SEE NOTE 3)  
E312
- 4" C(3#500kCML, 1#3/0)
  - (30-TX-7 TO 30-VFD-7 VIA 80-PB-3)
  - (30-TX-8 TO 30-VFD-8 VIA 80-PB-4)

- DUCTBANK SECTION H**  
SCALE: NTS (SEE NOTES 3, 6, 7)  
E312
- 4" C(3#500kCML, 1#3/0)
  - 4" C(3#500kCML, 1#3/0)
  - 3" C(3#4(8KV), 1#6)
  - (30-TX-6 TO 30-VFD-6 VIA 80-PB-3)
  - (30-TX-7 TO 30-VFD-7 VIA 80-PB-3)
  - (30-SWBD-1 TO 30-TX-6 VIA 80-PB-1)

- DUCTBANK SECTION J**  
SCALE: NTS (SEE NOTE 5)  
E312
- 4" C(3#500kCML, 1#3/0)
  - 3" C(3#4(8KV), 1#6)
  - (30-TX-6 TO 30-VFD-6 VIA 80-PB-3)
  - (30-SWBD-1 TO 30-TX-6 VIA 80-PB-1)

- NOTES:**
- CONDUITS SHOWN WITHIN THIS SECTION ARE EXISTING, UNLESS NOTED OTHERWISE. ROUTE NEW WIRES WITHIN EXISTING CONDUITS AS SHOWN.
  - CONDUITS & WIRES SHOWN SHALL BE NEW, ROUTE NEW WIRES WITHIN EXISTING CONDUITS AS SHOWN & WIRES SHOWN SHALL BE NEW, EXCEPT THE SECTIONS OF CONDUITS FROM VFDs & 30-LCP-3 TO 30-PB-1 & 30-PB-2, WHICH ARE EXISTING. ROUTE NEW WIRES WITHIN EXISTING CONDUITS AS SHOWN.
  - CONDUIT(S) & WIRES SHOWN SHALL BE NEW, EXCEPT THE SECTIONS OF CONDUITS FROM 80-PB-3 TO 30-VFD-7 & 80-PB-4 TO 30-VFD-8 WHICH ARE EXISTING. ROUTE NEW WIRES WITHIN EXISTING CONDUITS AS SHOWN.
  - CONDUIT(S) & WIRES SHOWN SHALL BE NEW, EXCEPT THE SECTION OF CONDUIT FROM 30-SWBD-2 TO 30-PB-2 WHICH IS EXISTING. ROUTE NEW WIRES WITHIN EXISTING CONDUITS AS SHOWN.
  - DUCTBANK ONLY SHOWS NEW CONDUIT AND WIRE, EXISTING CONDUIT AND WIRE ARE NOT INCLUDED IN THIS SECTION.
  - CONDUIT(S) & WIRES SHOWN SHALL BE NEW, EXCEPT THE SECTION OF CONDUIT FROM 80-PB-3 TO 30-VFD-6 WHICH IS EXISTING. ROUTE NEW WIRES WITHIN EXISTING CONDUIT AS SHOWN.
  - CONDUITS & WIRES SHOWN SHALL BE NEW, EXCEPT THE SECTION OF CONDUIT FROM 30-SWBD-1 TO 80-PB-1 WHICH IS EXISTING. ROUTE NEW WIRES WITHIN EXISTING CONDUIT AS SHOWN.
  - BUILD AND INSTALL NEW PLC CONTROL PANEL. SEE SHEET 1306 FOR ADDITIONAL REQUIREMENTS. PROVIDE TWO GARRETTCOM SWITCH WITHIN 30-LCP-3.
  - SEE GROUND MAT DETAIL ON SHEET E601 FOR ADDITIONAL REQUIREMENTS.
  - REFER TO E001 GENERAL NOTE 18 AND DETAIL SHEET E-602. ALL DUCTBANKS.
  - CONTRACTOR SHALL CONFIRM ALL SPACE REQUIREMENTS FOR TRANSFORMERS AND VFD'S PRIOR TO SELECTING FINAL EQUIPMENT. VENDOR TO INSURE CODE COMPLIANT SPACE IS AVAILABLE FOR THE SELECTED EQUIPMENT.

BID SET

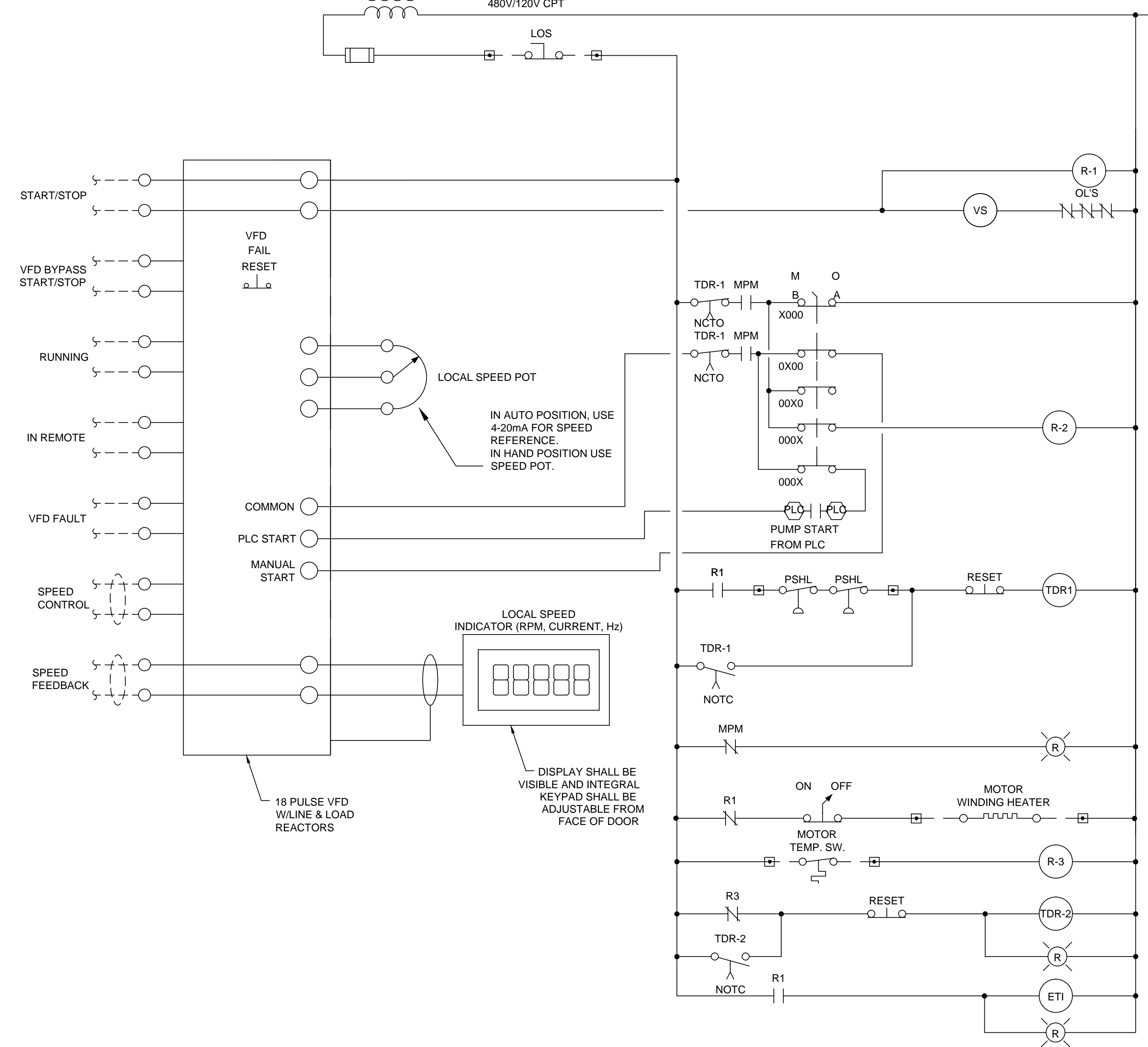
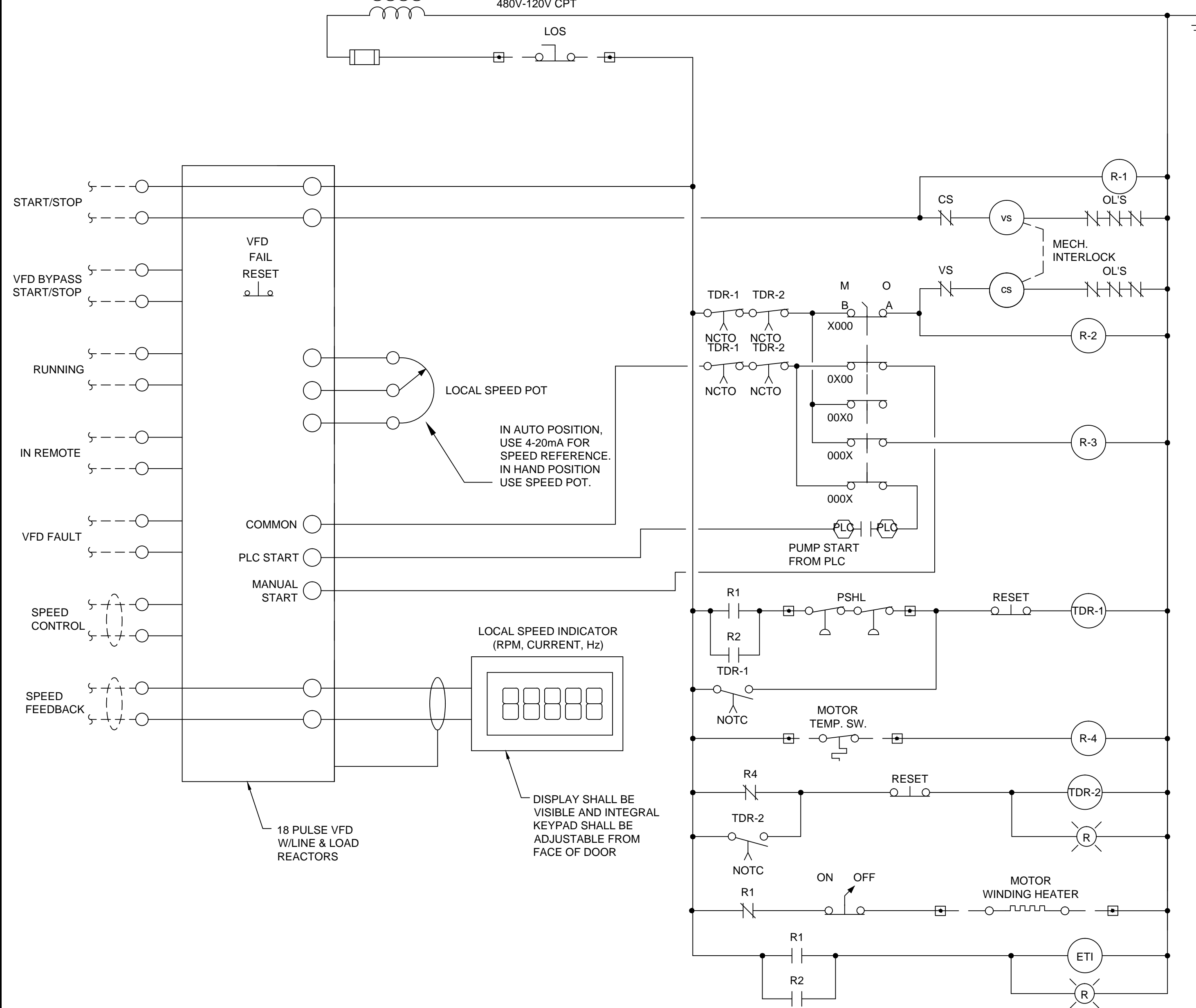
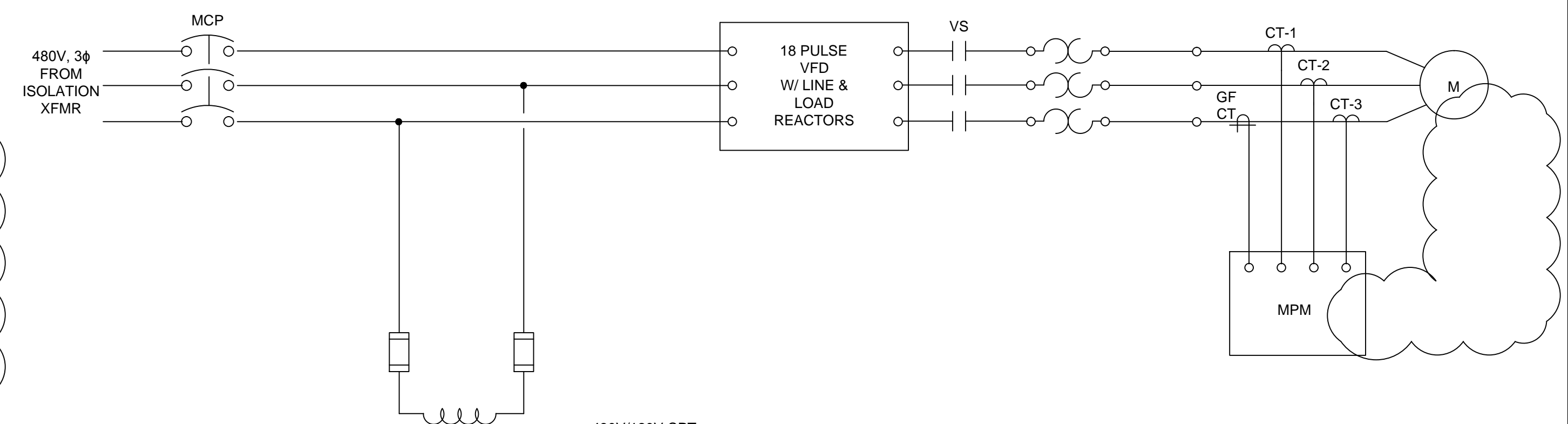
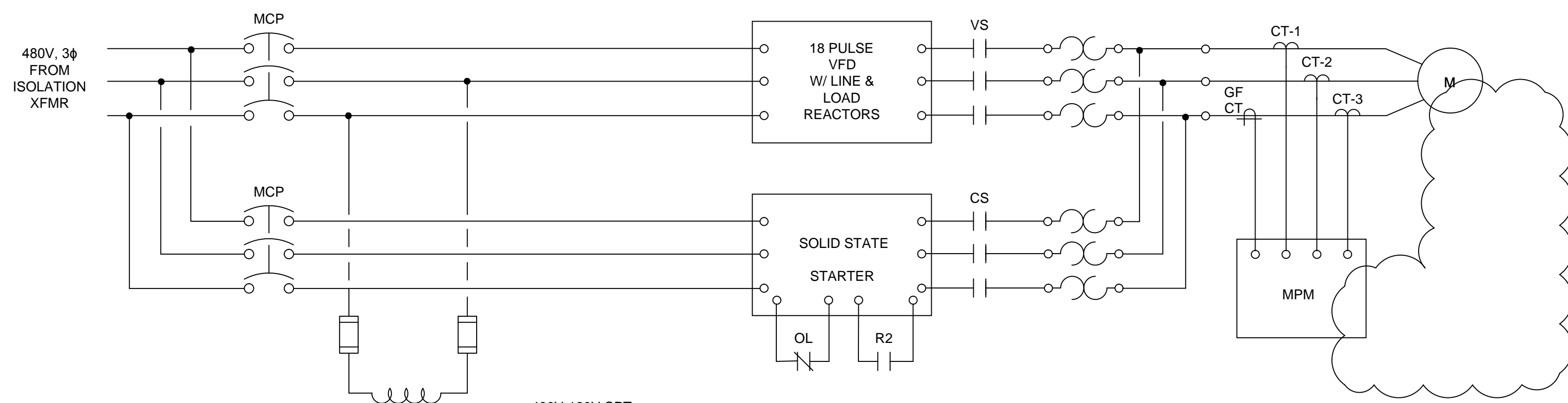
MARK	DATE	DESCRIPTION
1	12/20/17	ADDENDUM 2

ORANGE COUNTY UTILITIES  
EASTERN REGIONAL WATER SUPPLY FACILITY  
IMPROVEMENTS - PHASE 3B  
**PROCESS 80 BUILDING  
POWER PLAN**

Project No.: 200-10034-11005  
Designed By: FWY  
Drawn By: TAC  
Checked By: WAP

**E311**

12/20/2017 4:17:48 PM - P:\I\ER\10034\200-10034-11005\CAD\SHEETFILES\403 WIRING DIAGRAMS DWG - REINEFELD, AURORA



**TRANSFER PUMP CONTROL SCHEMATIC DIAGRAM**  
NO SCALE (TYP. FOR : 30-P-6 AND 30-P-8)

**TRANSFER PUMP CONTROL SCHEMATIC DIAGRAM**  
NO SCALE (TYP. FOR : 30-P-7)

BID SET

MARK	DATE	DESCRIPTION
1	12/20/17	ADDENDUM 2

ORANGE COUNTY UTILITIES  
EASTERN REGIONAL WATER SUPPLY FACILITY  
IMPROVEMENTS - PHASE 3B  
**WIRING DIAGRAMS**

Project No.:	200-10034-11005
Designed By:	FWY
Drawn By:	TAC
Checked By:	WAP

**E403**