#### WESTCHESTER JOINT WATER WORKS

# CONTRACT: A1364 – A: RYE LAKE WATER FILTRATION PLANT (CONSTRUCTION)

<u>ADDENDUM NO. 4</u> 05/13/2025



This Addendum shall be part of the Contract Documents as provided in the Instructions to Bidders of the referenced project. The following additions to and modifications of the Contract Documents shall be included in, and become a part of any Contract that may be executed for construction of this project. Bidders are instructed to take the following into account in rendering a Bid for the Work.

Please acknowledge receipt of this addendum within your bid, failure to do so may subject a bidder to disqualification.

#### **Modifications to Contract Documents:**

## **SPECIFICATION CHANGES:**

## **Item 4-1. Specification 00 01 10 – Table of Contents**

Add the following Specification Sections and Titles to the Table of Contents

- Section 00 61 13.13 Performance Bond
- Section 00 61 13.16 Payment Bond
- Section 00 61 19 Warranty Bond
- Section 40 42 13 Insulation
- Section 46 41 11 Emulsion Polymer Mixers

## Item 4-2. Specification 00 61 13.13 – Performance Bond

Add Specification Section 00 61 13.13 attached in Attachment A.

#### Item 4-3. Specification 00 61 13.16 – Payment Bond

Add Specification Section 00 61 13.16 attached in Attachment A.

## Item 4-4. Specification 00 61 19 – Warranty Bond

Add Specification Section 00 61 19 attached in Attachment A.

## **Item 4-5. Specification 01 75 00 – Checkout and Startup Procedures**

Article 1.01.B.3. Replace text with the following:

The Contractor is responsible for procuring the chemicals for and performing the disinfection and neutralization of structures, tanks, piping and equipment and others as required to complete the Work.

#### Item 4-6. Specification 01 78 23 – Operation and Maintenance Data

Article 3.01.A. Add the following to the Operation & Maintenance Manual Schedule:

Spec. Section	Specification Title	
46 41 11	Emulsion Polymer Mixers	

## Item 4-7. Specification 07 17 00 – Bentonite Waterproofing

Replace Specification Section 07 17 00 with the attached Specification Section 07 17 00 in Attachment A.

#### Item 4-8. Specification 26 06 11 – Cable and Conduit Schedule

Replace Specification Section 26 06 11 with the attached Specification Section 26 06 11 in Attachment A.

#### Item 4-9. Specification 26 28 16.16 – Enclosed Switches

Article 1.02.A. Replace text with the following:

Disconnect switches shall be designed, manufactured, and/or listed to the following standards as applicable:

- 1. UL 98 Enclosed and Dead-Front Switches
- 2. *UL* 891 Switchboards (For service rated disconnect switch)
- 3. *UL* 1203 Standard for Explosion-proof and Dust-ignition-proof Electrical Equipment for use in Hazardous (Classified) Locations.
- 4. NEMA 250 Enclosures for Electrical Equipment
- 5. NEMA KS 1 Heavy Duty Enclosed and Dead-Front Switches

## Article 2.02.B. Replace text with the following:

Disconnect switches for non-hazardous areas shall be UL 98 Listed. Disconnect switches for hazardous areas shall be UL 1203 Listed. Service Rated disconnect shall be UL 891 Listed. (1)

## Item 4-10. Specification 40 42 13 – Insulation

Add Specification 40 42 13 attached in Attachment A.

## Item 4-11. Specification 40 67 00 – Control System Equipment Panels and Racks

Replace Specification Section 40 67 00 with the attached Specification Section 40 67 00 in Attachment A.

#### Item 4-12. Specification 46 41 11 – Emulsion Polymer Mixers

Add Specification 46 41 11 attached in Attachment A.

### **DRAWING CHANGES:**

## **Item 4-13. Contract Drawings**

Delete the following drawing sheets in their entirety and replace with the attached drawings in Attachment B.

- C-201 PLANT ACCESS DRIVEWAY PLAN AND PROFILE
- C-231 SANITARY DRAIN PLAN AND PROFILE
- C-244 WATER MAIN EXTENSION PROFILE
- E-003 OVERALL SINGLE LINE DIAGRAM
- E-004 MCC-1 SINGLE LINE DIAGRAM
- E-006 MCC-2 SINGLE LINE DIAGRAM SHEET 2
- E-009 MCC-1 ELEVATION
- E-010 MCC-2 ELEVATION
- E-016 PANEL BOARD SCHEDULES SHEET 5
- E-100 SITE PLAN
- E-107 POWER PLAN EL. 407.00 AREA 3

## **Response to Questions:**

**Question 4-1.** Bidders are required to submit with their bids a schedule of owner's selected equipment/suppliers, as indicated in 00 40 00. Bidders are required to circle a specified equipment/supplier or write-in an alternate equipment/supplier with a deduct. If the bidder's choice is not indicated, the Lump Sum Bid will, by default, be based upon the first named (A) equipment/supplier in the Schedule.

Question: Is the bidder bound to commit to the circled equipment/supplier, or can the selection be changed after award?

If more than one (A) equipment/supplier is listed for the same equipment item, the selected equipment/supplier selection can change afterward as long as it is replaced with a different named (A) equipment/supplier. The selection must go through the full submittal approval process and be approved.

**Question 4-2.** Specification 01 35 29-Health and Safety requires the contractor to provide a full-time competent Health and Safety Officer (HSO) on the project. Please clarify if the HSO is to be a dedicated person, or if another member of the full-time project staff can also be the HSO if they meet the requirements.

The HSO is to be a full-time person, different from other members of the full-time project staff, to meet the requirement.

**Question 4-3.** Specification 40 05 23.23 section 1.01.H references specification 40 42 13-Insulation, which is not included in the bid documents.

Specification Section 40 42 13 – Insulation is included in Attachment A of this Addendum No. 4.

**Question 4-4.** Is the contractor required to top-off each chemical tank after the startup and commissioning phases are completed and the equipment is accepted?

The Owner will provide the process chemicals as identified in Specification Section 01 11 00, Article 1.05.C.1, and Specification Section 01 75 00 Article 1.01.B.1.

**Question 4-5.** Please provide a specification for the Polymer Totes, Mixers and Local Control Stations shown on drawing I-020.

Specification Section 46 41 11 has been added for the polymer tote mixers and local control stations. The polymer chem feed totes will be provided when the polymer is ordered and are standard 275-gal chemical totes.

**Question 4-6.** Please provide the SRF BABA contractor certification form, as indicated in the Instruction to Bidders 00 20 00 section 16.06.F.

The SRF BABA Contractor Certification Form has been included in Addendum No. 3, dated 5/6/2025.

**Question 4-7.** Refer to the Chemical Piping Schedule on page 7 of specification 40 06 20 and advise if there is missing information.

Response forthcoming in future addendum.

**Question 4-8.** As per Stainless Steel Pipe Spec Section 40 05 23.23 – 2.03.A.8: Mechanical Grooved Joint Connections, Similar to Victaulic Couplings, are acceptable for use. However, this spec section does not state which SS Process Water, Waste, etc. piping systems mechanical couplings may be utilized, only that is should not be utilized for DAF Recycle (DAFR) Lines. Please confirm mechanical grooved couplings are acceptable for use on the following exposed piping systems: BWS, FLW, FLTW, FTW & WWW.

Note: The Water Treatment Plant Piping Schedule within spec section 40 06 20 states "Type of Joint" for these systems in question shall be Welded or Flanged... please advise if Grooved Couplings will be added to this schedule as an acceptable joining method on Exposed Piping for the pipe designations described above?

If Grooved Mechanical Couplings are not an acceptable joining method for these systems, please confirm field welds shall be deemed acceptable.

Correct - Grooved couplings are acceptable on all stainless steel pipe systems except the DAFR.

**Question 4-9.** The Structural Section Views (i.e. S-200) call out 6" min crushed stone on compacted subgrade with the bentonite waterproofing on the crushed stone while the Typical Soil Tiedown Detail on S-300 calls out a 3" mud mat between the subgrade and the concrete base slab and no mention of the bentonite waterproofing. Additionally, the (3) approved bentonite manufacturers in the specification do not require a mud mat in their technical product data. Please advise if a 3" mud mat beneath the bentonite waterproofing membrane is a contract requirement.

The bentonite waterproofing should be installed as shown in the Contract Drawings.

The 3" mud mat is required for the installation of the soil anchors. Where the mud mat is identified in the drawings, the bentonite waterproofing should be installed directly on the mud mat after the anchor installation.

Question 4-10. Paragraph 1.01.A of Specification Section 07 17 00, Bentonite Waterproofing, describes the waterproofing system to be contaminant resistant however Paragraph 1.06.E of the same specification lists (2) types of bentonite systems (standard sodium bentonite and contaminant resistant, CR, sodium bentonite) and states that the type will be selected after bid and 30 days prior to the commencement of work once project site water is analyzed. In speaking with one of the approved manufacturers listed in the specification, the contaminant resistant type is more expensive than the standard type. Please specify the bentonite system type as it is unfair for the contractor to bear additional costs after bid if it is found that the contaminant resistant type is required.

Contaminant resistant bentonite geotextile waterproofing system is required. Please refer to revised Section 07 17 00 – Bentonite Waterproofing included in Attachment A.

**Question 4-11.** Contract Filtration Plant Structural Sections - Sheet 1 through 15 show 6" min crushed stone to be placed under all slabs on grade. See detail 20/S-304. However, Contract Specification 31 00 01 - Earthwork, Section 2.02.A.1. states that Select Fill I shall be used below footings and slab base course. In addition, Section 2.02.A.2. states that Select Fill II shall be used for slab base course and 3 feet laterally behind walls.

Question A: Please clarify if Crushed Stone, Select Fill I, or Select Fill II is to be used for slab base course.

Question B: Contract Drawing Structural Sections show crushed stone between Excavation Support and new concrete walls. Please clarify if Crushed Stone or Select Fill II is to be used begin the concrete walls.

For all mat foundation slabs, a crushed stone subbase should be placed as a working surface prior to placing waterproofing and slab construction. For slabs on grade and isolated footings, Select Fill I may be used. The exception to this approach is where soil anchors are installed as per previous response where a mud mat is required to allow anchors to be tensioned. Crushed stone is preferred for backfill between the concrete walls and the excavation support system. For bid purposes, crushed stone should be assumed for these applications.

**Question 4-12.** Referencing EJCDC - Standard General Conditions - Article 6, Item 6.01C - Performance, Payment and Other Bonds - Performance/Payment/Warranty Bonds were not included in the bidding document. Kindly provide these bonds for review by our bonding company.

These bond forms have been provided in Attachment A of this Addendum No. 4.

**Question 4-13.** Performance and Payment Bonds - if the Owner will not be providing their own bonds, with EJCDC/AIA bond forms be used?

These bond forms have been provided in Attachment A of this Addendum No. 4.

**Question 4-14.** Can a manufacturer be listed as an acceptable equal via an addendum prior to the bid date?

No additions to the specified and named (A) equipment/suppliers will be made via addendum. Alternative (B) equipment/suppliers may be proposed in accordance with Specification Section 00 40 00, Article 7, and shall be listed in the Owner Selected Equipment/Supplier Schedule with the total amount of deduct for the alternative equipment provided.

**Question 4-15.** After reviewing the specifications for this project, We are unsure if we are to provide Pressure Class 350 Ductile Iron Pipe or Class 52 Ductile Iron Pipe for the Buried Pipe applications. Can you please clarify what pipe we should quote for this project.

Buried piping shall be Class 53 as shown on the Contract Drawings and Specification Section 40 06 20. A revised Specification Section 40 06 20 will be released in a future addendum.

**Question 4-16.** What is the correct process for submitting bids as a Joint Venture if the Joint Venture has not yet been setup?

If submitting as a yet to be established Joint Venture, submit forms for all companies and make a note that the JV has not been set up yet.

**Question 4-17.** Please confirm that bids are to be submitted in person and there is no online portal.

All bids are to be submitted in person to 1625 Mamaroneck Avenue, Mamaroneck, NY 10528. There is no online portal for submitting bids.

**Question 4-18.** Attachment 1 in Specification Section 40 61 93 lists the panels and racks with notations for "furnished by" for each panel and rack. Truck Unloading panels LAS-5100, 5200, 5300, 5400 and 5500 are noted as being furnished by SI (Systems Integrator). These panels are not listed on the scope of services document provided by Woodard & Curran in Appendix H. Please confirm if all items noted as being furnished by SI on Table 40 61 93 will be provided by Woodard & Curran.

Please note that there is an error in the header of the referenced attachment. The attachment is part of Specification Section 40 67 00. The header will be updated.

As specified in Section 40 61 13 the instrumentation and control subcontractor (I&C) shall furnish and install local control panels, field panels and associated cabinets and panels. This is also indicated in Table 40.61.13.01 in the row for Item - "All Field instrumentation, analyzers, panels, devices and controls and associated software not explicitly included in SCADA work above and required for a complete operating system." In this specification section and table, Woodard & Curran is identified as the SCADA System Application Engineer (SSAE).

The Truck Unloading Operator Interfaces LAS-5100, 5200, 5300, 5400, and 5500 are considered field panels and shall be furnished by the instrumentation and control subcontractor (I&C SUBCONTRACTOR). All other items noted as being furnished by SI on Attachment 1 will be furnished by Woodard & Curran. An

updated Specification Section 40 67 00 is included in Attachment A of this Addendum No. 4 to include this revised attachment.

# **Attachments:**

Attachment A: Revised Specifications Attachment B: Revised Drawings

# Attachment A – Revised Specifications

### **SECTION 00 61 13.13 (1)**

#### **PERFORMANCE BOND**

Any singular reference to CONTRACTOR, Surety, OWNER or other party shall be considered plural where applicable. CONTRACTOR (Name and Address): SURETY (Name and Principal Place of Business): OWNER (Name and Address): Westchester Joint Water Works 1625 Mamaroneck Avenue Mamaroneck, NY 10543 CONSTRUCTION CONTRACT Date: Amount: Description (Name and Location): BOND Date (Not earlier than Construction Contract Date): Amount: Modifications to this Bond Form: CONTRACTOR AS PRINCIPAL SURETY Company: (Corp. Seal) Company: (Corp. Seal) Signature: Signature: Name and Title: Name and Title: CONTRACTOR AS PRINCIPAL **SURETY** (Corp. Seal) (Corp. Seal) Company: Company: Signature: Signature: Name and Title: Name and Title:

- 1. The Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.
- 2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except to participate in conferences as provided in Subparagraph 3.1.
- 3. If there is no Owner Default, the Surety's obligation under this Bond shall arise after:
  - 3.1. The Owner has notified the Contractor and the Surety at its address described in Paragraph 10 below, that the Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with the Contractor and the Surety to be held not later than fifteen days after receipt of such notice to discuss methods of performing the Construction Contract. If the Owner, the Contractor and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default; and
  - 3.2. The Owner has declared a Contractor Default and formally terminated the Contractor's right to complete the contract. Such Contractor Default shall not be declared earlier than twenty days after the Contractor and the Surety have received notice as provided in Subparagraph 3.1; and
  - 3.3. The Owner has agreed to pay the Balance of the Contract Price to the Surety in accordance with the terms of the Construction Contract or to a contractor selected to perform the Construction Contract in accordance with the terms of the contract with the Owner.
- 4. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
  - 4.1. Arrange for the Contractor, with consent of the Owner, to perform and complete the Construction Contract; or
  - 4.2. Undertake to perform and complete the Construction Contract itself, through its agents or through independent contractors; or
  - 4.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and the contract or selected with the Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the owner the amount of damages as described in paragraph 6 in excess of the Balance of the Contract Price incurred by the Owner resulting from the Contractor's default; or
  - 4.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances:
    - 1. After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, tender payment therefore to the Owner; or
    - 2. Deny liability in whole or in part and notify the Owner citing reasons therefore.
- 5. If the Surety does not proceed as provided in Paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond fifteen days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Subparagraph 4.4, and the Owner refuses the payment tendered or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.
- 6. After the Owner has terminated the Contractor's right to complete the Construction Contract, and if the Surety elects to act under Subparagraph 4.1, 4.2, or 4.3 above, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contract or under the Construction Contract, and the responsibilities of the owner to the Surety shall not be greater than those of the Owner under the Construction Contract. To the limit of the amount of this Bond, but subject to commitment by the Owner for the Balance of the Contract Price to mitigation of costs and damages on the Construction Contract, the Surety is obligated without duplication for:
  - 6.1. The responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

- 6.2. Additional legal, design professional and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 4; and
- 6.3. Liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.
- 7. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, or successors.
- 8. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.
- 9. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after Contractor Default or within two years after Contractor Default or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
- 10. Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the signature page.
- 11. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated within. The intent is that this bond shall be construed as a statutory bond and not as a common law bond.

#### 12. DEFINITIONS

- 12.1. Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made, including allowance to the Contractor of any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.
- 12.2. Construction Contract: The agreement between the Owner and the Contractor identified on the signature page, including all Contract Documents and changes thereto.
- 12.3. Contractor Default: Failure of the Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Construction Contract.
- 12.4. Owner Default: Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract or to perform and complete or comply with the other terms thereof.

#### **END OF SECTION**

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## **SECTION 00 61 13.16 <sup>(1)</sup>**

## **PAYMENT BOND**

Any singular reference to CONTRACTOR, Surety, OWNER or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):		SURETY (Name and Principal Place of Business):			):
OWNER (Name and Address):					
Westchester Joint Water Works 1625 Mamaroneck Ave. Mamaroneck, NY 10543					
CONSTRUCTION CONTRACT Date: Amount: Description (Name and Location):					
BOND Date (Not earlier than Construction Amount: Modifications to this Bond Form:	ı Contract Da	ite):			
CONTRACTOR AS PRINCIPAL Company:	(Corp. Seal)	)	SURETY Company:		(Corp. Seal)
Signature:Name and Title:		-	Signature: Name and Title:		
CONTRACTOR AS PRINCIPAL Company:	(Corp. Seal)	)	SURETY Company:		(Corp. Seal)
Signature:Name and Title:		-	Signature: Name and Title:		

- 1. The Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner to pay for labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference.
- 2. With respect to the Owner, this obligation shall be null and void if the Contractor:
  - 2.1. Defends, indemnifies and holds harmless the Owner from all claims, demands, liens or suits by any person or entity who furnished labor, materials or equipment for use in the performance of the Construction Contract, provided the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 12) of any claims, demands, liens or suits and tendered defense of such claims, demands, liens or suits to the Contractor and the Surety, and provided there is no Owner Default.
  - ens or suits to the Contractor and the Surety, and provided there is no Owner Default.
- 3. With respect to Claimants, this obligation shall be null and void if the Contractor promptly makes payment, directly or indirectly, for all sums due.
- 4. The Surety shall have no obligation to Claimants under this Bond until:
  - 4.1. Claimants who are employed by or have a direct contract with the Contractor have given notice to the Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to the Owner, starting that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.
  - 4.2. Claimants who do not have a direct contract with the Contractor:
    - 1. Have furnished written notice to the Contractor and sent a copy, or notice thereof, to the Owner, within 90 days after having last performed labor or last furnished materials or equipment included in the claim and the name of the party to whom the materials were furnished or supplied or from whom the labor was done or performed; and
    - 2. Have either received a rejection in whole or in part from the Contractor, or not received within 30 days of furnishing the above notice any communication from the Contractor by which the Contractor has indicated the claim will be paid directly or indirectly; and
    - ctor by which the Contractor has indicated the claim will be paid directly or indirectly; and
    - 3. Not having been paid within the above 30 days, have sent a written notice to the surety (at the address described in paragraph 12) and sent a copy, or notice thereof, to the Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to the Contractor.
- 5. If a notice required by Paragraph 4 is given by the Owner to the Contractor or to the Surety, that is sufficient compliance.
- 6. When the Claimant has satisfied the conditions of Paragraph 4, the Surety shall promptly and at the Surety's expense take the following actions:
  - 6.1. Send an answer to the Claimant, with a copy to the Owner, within 45 days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.
  - 6.2. Pay or arrange for payment of any undisputed amounts.
- 7. The Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

- 8. Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction Performance Bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and the Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
- 9. The Surety shall not be liable to the Owner, Claimants or other for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.
- 10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.
- 11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the work or part of the work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by Subparagraph 4.1 or Clause 4.2 (iii), or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
- by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
- 12. Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the signature page. Actual receipt of notice by Surety, the Owner or the Contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.
- 13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted here from and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is, that this Bond shall be construed as a statutory bond and not as a common law bond.
- 14. Upon request by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.

#### 15. DEFINITIONS

15.1. Claimant: An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Construction Contract, architectural and

engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.

rmance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.

15.2. Construction Contract: The agreement between the Owner and the Contractor identified on the signature page, including all Contract Documents and changes thereto.

15.3. Owner Default: Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract or to perform and complete or comply with the other terms thereof.

#### **END OF SECTION**

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## **SECTION 00 61 19 <sup>(1)</sup>**

## **WARRANTY BOND**

Contractor	Surety		
Name:	Name:		
Address (principal place of business):	Address (principal place of business):		
Owner	Construction Contract		
Name: Westchester Joint Water Works	Description (name and location):		
Address (principal place of business):	A1364 – A: Rye Lake Water Filtration Plant		
1625 Mamaroneck Avenue	(Construction), Harrison, NY		
Mamaroneck, NY 10543	Contract Price:		
	Effective Date of Contract:		
	Contraction Date of Culpatential		
	Contract's Date of Substantial Completion:		
Bond			
Bond Amount:	Bond Period: Commencing after Substantial		
Date of Bond:	<ul> <li>Completion of the Work under the Construction</li> </ul>		
	Contract, and continuing until three (3) years after such Substantial Completion.		
Modifications to this Bond form:			
□ None □ See Paragraph 9	horoby aubicat to the terms act forth horoin do		
Surety and Contractor, intending to be legally bound each cause this Warranty Bond to be duly executed			
Contractor as Principal	Surety		
(Full formal name of Contractor)	(Full formal name of Surety) (corporate seal)		
By: (Signature)	By: (Signature) (Attach Power of Attorney)		
Name:	Name:		
(Printed or typed)	(Printed or typed)		
Title:	Title:		
Attest:	Attest:		
(Signature)	(Signature)		
Name: (Printed or typed)	Name:(Printed or typed)		
Title:	Title:		
Notes: (1) Provide supplemental execution by any ac	ditional parties, such as joint venturers. (2) Any		
singular reference to Contractor, Surety, Owner, or o	trier party is considered piural where applicable.		

- 1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract's Correction Period Obligations. The Construction Contract is incorporated herein by reference.
- 2. If the Contractor performs the Correction Period Obligations, the Surety and the Contractor shall have no obligation under this Warranty Bond.
- 3. If Owner gives written notice to Contractor and Surety during the Bond Period of Contractor's obligation under the Correction Period Obligations, and Contractor does not fulfill such obligation, then Surety shall be responsible for fulfillment of such Correction Period Obligations. Surety shall either fulfill the Correction Period Obligations itself, through its agents or contractors, or, in the alternative, Surety may waive the right to fulfill the Correction Period Obligations itself, and reimburse the Owner for all resulting costs incurred by Owner in performing Contractor's Correction Period Obligations, including but not limited to correction, removal, replacement, and repair costs.
- 4. The Surety's liability is limited to the amount of this Warranty Bond. Renewal or continuation of the Warranty Bond will not modify such amount, unless expressly agreed to by Surety in writing.
- 5. The Surety shall have no liability under this Warranty Bond for obligations of the Contractor that are unrelated to the Construction Contract. No right of action will accrue on this Warranty Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.
- 6. Any proceeding, legal or equitable, under this Warranty Bond may be instituted in any court of competent jurisdiction in the location in which the Work or part of the Work is located and must be instituted within two years after the Surety refuses or fails to perform its obligations under this Warranty Bond.
- 7. Written notice to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown in this Warranty Bond.
- 8. Definitions
  - 8.1. Construction Contract—The agreement between the Owner and Contractor identified on the cover page of this Warranty Bond, including all Contract Documents and changes made to the agreement and the Contract Documents.
  - 8.2. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.
  - 8.3. Correction Period Obligations—The duties, responsibilities, commitments, and obligations of the Contractor with respect to correction or replacement of defective Work, as set forth in the Construction Contract's Correction Period clause, EJCDC® C-700, Standard General Conditions of the Construction Contract (2018), Paragraph 15.08, as duly modified.
  - 8.4. Substantial Completion—As defined in the Construction Contract.
  - 8.5. Work—As defined in the Construction Contract.
- 9. Modifications to this Bond are as follows: None

#### **END OF SECTION**

# SECTION 07 17 00 BENTONITE WATERPROOFING

#### PART 1 - GENERAL

#### 1.01 SUMMARY

- A. This Section describes a contaminant resistant bentonite geotextile waterproofing with an integrated polyethylene liner which shall prevent the passage of liquid water under hydrostatic pressure, contaminate resistant expansion joint(s) and vapor transmission. This Section describes the requirements to install without defects, damage or failure, sodium bentonite water-stops, sodium bentonite clay-based construction joints, parging sealant Division 3 work, and other system components, as indicated but not limited to, waterstops in Division 3 work, overlap of adjoining existing waterproofing system and accessories specified and required for bentonite geotextile waterproofing to perform in a permanently waterproof manner.<sup>(1)</sup>
  - 1. Waterproofing shall be a high strength geotextile interlocked encapsulating minimum one pound (0.45 kg) per square foot (0.1 sq m) of dry, granular geotextile composite sodium bentonite with an integrated polyethylene liner.
- B. Complete technical services as available from the specified manufacturer and provide on-site technical representation by manufacturer's Technical Representative during the time of delivery, storage, and installation of the Work of this Section and other Work which may affect the Work of this Section as specified herein. (1)
- C. The Contractor shall provide all labor, materials, equipment and incidentals as shown, specified, and required to furnish, install, and place into satisfactory service, all bentonite geotextile waterproofing Work. (1)
- D. The following index of this Section is presented for convenience:

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## 1.02 PAYMENT

A. There is no separate payment provision for this Section.

## 1.03 RELATED SECTIONS

- A. Section 03 30 00 Cast-in-Place Concrete
- B. Section 07 21 00 Thermal Insulation
- C. Section 07 26 13 Above-Grade Vapor Retarders
- D. Section 07 90 00 Joint Fillers, Sealants, and Caulking
- E. Section 07 95 00 Expansion Joint Systems<sup>(1)</sup>
- F. Division 31 Earthwork

#### 1.04 REFERENCES

A. NYSBC - New York State Building Code

- B. ASTM D903 Standard Test Method for Peel or Stripping Strength of Adhesive Bonds
- C. ASTM D1621 Standard Test Method for Compressive Properties of Rigid Cellular Plastics
- D. ASTM D1970 Specification for Self-Adhering Polymer Modified Bituminous Sheet
- E. ASTM D3786 Standard Test Method for Bursting Strength of Textile Fabrics Diaphragm Bursting Strength Tester Method
- F. ASTM D3787 Standard Test Method for Bursting Strength of Textiles Constant-Rate-of-Traverse (CRT), Ball Burst Test
- G. ASTM D4491 Standard Test Methods for Water Permeability of Geotextiles by Permittivity
- H. ASTM D4632 Standard Test Method for Grab Breaking Load and Elongation of Geotextiles
- I. ASTM D4716 Determining the (In-Place) Flow Rate per Unit Width and Hydraulic Transmissivity of a Geo-synthetic using a Constant Head, Test Method<sup>(1)</sup>
- J. ASTM D4833 Standard Test Method for Index Puncture Resistance of Geomembranes and Related Products
- K. ASTM D5084 Standard Test Method for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter
- L. ASTM D5261 Test Method for Measuring Mass per Unit Area of Geotextiles<sup>(1)</sup>
- M. ASTM D5385 Standard Test Method for Hydrostatic Pressure Resistance of Waterproofing Membranes
- N. ASTM D5887 Standard Test Method for Measurement of Index Flux Through Saturated Geosynthetic Clay Liner Specimens Using a Flexible Wall Permeameter
- O. ASTM D6141 Standard Guide for Screening Clay Portion and Index Flux of Geosynthetic Clay Liner (GCL) for Chemical Compatibility to Liquids<sup>(1)</sup>
- P. ASTM E96 Standard Test Methods for Water Vapor Transmission of Materials
- Q. ASTM D5261, E329 Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction
- R. ASTM E946 Water Absorption of Bentonite by the Porous Plate Method (1)

#### 1.05 DESCRIPTION

## A. Scheduling:

- 1. Proceed with the bentonite geotextile waterproofing and associated Work required for a completely finished below-grade waterproofing system only after projections and penetrations through the substrates have been installed, and when the substrate construction and framing of openings is complete.
- 2. Proceed with and complete the Work only when materials, equipment and tradesmen required for the installation of the insulation, crushed stone trench drain, geotextile filter fabric, pavers and backfilling operations are at the Site and are ready to follow with the Work in a manner which will not leave the bentonite **geotextile**<sup>(1)</sup> waterproofing vulnerable to damage or deterioration.
- 3. Proceed with the bentonite waterproofing and associated Work required for a completely finished below-grade waterproofing system only after projections, overlap of adjoining existing waterproofing system, expansion joint(s) (1) and penetrations through the substrates have been installed, and when the substrate construction and framing of openings is complete.
- 4. Do not advance the installation of bentonite **geotextile**<sup>(1)</sup> waterproofing materials beyond that which is necessary for proper sequencing of the Work and for which there is proper and secure protection from damaging weather and construction activities.
- 5. A water tightness test will be performed by others in accordance with Section 01 88 16 Watertightness Testing of Concrete Structures prior to the vertical application of the Bentonite Geotextile Waterproofing installation. Protection and waterproof sealing of the geotextile vertical overlap portion of the bentonite waterproofing is required while the water tightness test is performed. Do not proceed with the vertical application of the Bentonite Geotextile Waterproofing until the water tightness test is completed, and the substrate is suitable for commencement of the installation of the vertical conditions of the work.
- 6. Schedule the installation of backfilling operations and perimeter insulation, gravel and pavers and other adjoining and substrate Work to coordinate with the Work of this Section in order to provide a successful, waterproof installation of the bentonite **geotextile**<sup>(1)</sup> waterproofing Work.

### B. Substitutions:

1. Do not change products, system components, or manufacturers after Shop Drawing approval by Engineer.

2. Clearly identify, in a manner which is highlighted to Engineer, all proposed substitutions, modifications, variations, unspecified features and "or equal" products. Provide complete comparative data with specified products at time of Shop Drawing submission.

#### 1.06 QUALITY ASSURANCE

#### A. Installer Qualifications:

- 1. Engage a single installer skilled, trained and with successful experience in the application of each product who is a licensee of the manufacturer, or who can submit evidence in writing of being acceptable to the manufacturer and who agrees to employ only tradesmen with specific skill and successful experience in this type of Work. Submit names and qualifications to Engineer along with the following information on a minimum of three successful projects:
  - a. Names and telephone numbers of owners, architects or engineers responsible for projects.
  - b. Approximate contract cost of the bentonite **geotextile**<sup>(1)</sup> waterproofing.
  - c. Amount of area installed.
- 2. Submit proof of acceptability of installer by manufacturer to Engineer.

#### B. Performance Criteria:

- 1. Contractor's Review: Accompanying approval request, submit to engineer a written statement signed by Contractor, stating that the Contract Drawings and Sections have been reviewed with an agent of the bentonite **geotextile**<sup>(1)</sup> waterproofing material manufacturer and that he is in agreement that the selected systems are proper and compatible and that the details used for the Work are not in conflict with the manufacturer's details.
- 2. Manufacturers' details that reference a specific product by CETCO Colloid Environmental Technologies Company are provided as a reference at the end of this Section. The Contractor may submit another product manufacturer's details for Engineer's approval.<sup>(1)</sup>
- 3. Statement of Application: Upon completion of the Work, submit a notarized statement to Engineer signed by Contractor stating that the Work complies with the requirements of the manufacturer's printed instructions and were proper and adequate for the condition of installation and use.
- C. Testing Agency: Engage a testing laboratory regularly engaged in the testing of construction materials, and who complies with ASTM E329.

D. Pre-Installation Conference: A pre-installation conference shall be held prior to commencement of field installation to establish procedures to maintain required working conditions and to coordinate this Work with related and adjacent Work. Verify that final waterproofing details comply with waterproofing manufacturer's current installation requirements and recommendations.

## E. Water Sample Test:

- 1. The waterproofing contractor shall collect and submit water samples from the project site to both the manufacturer and an independent testing agency for analysis. The purpose of this test is to determine the appropriate bentonite geotextile system, including chemically resistant (CR) sodium bentonite and an integrated polymer liner (DS) bonded to the outer surface of the nonwoven geotextile.
- 2. Testing Requirements: The proposed manufacturer to conduct tests in accordance submission requirements below at no cost to the project. The independent testing agency shall perform a separate, unbiased test. The agency must not be affiliated with the bentonite waterproofing manufacturer.
- 3. Contractor Responsibilities: Collect a one-liter sample of actual site water in an uncontaminated, sealed plastic container. Ship the water sample to both: An independent testing agency (not associated with the manufacturer) and the bentonite waterproofing manufacturer's testing facility.
- 4. Testing Facility & Submission Details: The Basis of Design Manufacturer's Testing Facility: CETCO Technical Center, Attn: BMG Water Sample Technician, 2870 Forbs Ave, Hoffman Estates, IL 60192, (or an approved equivalent facility).
- 5. Along with the water sample, include the Project name, Project location (city and state), Return address for test results.
- 6. Timing: The contractor must submit the water samples at least 30 days prior to the commencement of the Work to allow sufficient time for testing and selection of the appropriate waterproofing system. (1)

#### F. Job Mock-Up:

1. Prior to the installation of bentonite geotextile waterproofing system, but after Engineer's approval of Shop Drawing submittals, erect a stepped-back job mockups using materials and application techniques specified for final Work. Provide special features and all components of the perimeter drain system including crushed stone and geotextile filter fabric, showing the correct configurations of the various parts and the workmanship quality which shall be achieved in the Work. Build mock-ups at the Site, in location approved by Engineer, of full thickness and height and approximately twelve (12) foot – zero (0) inches long indicating cast-in-

place and precast concrete assemblies. Indicate the proposed workmanship to be expected in the finished Work. Include methods of installation typical to the Work including wall penetration and system termination details using all system components and accessories specified and approved for the Work. Also include an area of honeycombing and fin removal for Engineer's approval. Obtain Engineer's acceptance of mock-up before start of Work. Retain and protect mock-up before start of Work. Retain and protect mock-up during construction as a standard of judging completed Work. Do not alter or destroy mock-up until given written permission by Engineer.

- 2. Build as many job mock-ups as necessary in order to achieve Engineer's acceptance of the Work.
- 3. Bentonite geotextile waterproofing Work which proceeds without an approved job mock-up shall be stopped, removed and re-installed, after job mock-up approval, at no additional expense to OWNER.

#### 1.07 SUBMITTALS

- A. The Contractor shall submit Shop Drawings for approval of the Engineer. Submittals shall include, but not be limited to:
  - 1. Samples: Submit for approval the following:
    - a. Each component of bentonite geotextile waterproofing system twelve (12) inch by twelve (12) inch for sheet, expansion joint assembly, bentonite geotextile materials, panel assembly or precast concrete and twelve (12) inch lengths of each strip material specified for the Work. (1)
    - b. Samples will be reviewed by Engineer for general appearance and as examples of the types of components to be installed on the job mock-ups. Compliance with other requirements is the responsibility of Contractor.
  - 2. Shop Drawings: Submit for approval the following:
    - a. Copies of Sections, installation instructions and general recommendations from the bentonite **geotextile**<sup>(1)</sup> waterproofing manufacturer, for each type of bentonite **geotextile**<sup>(1)</sup> waterproofing product required. Include manufacturer's data substantiating that the materials comply with the requirements.
    - b. Shop Drawings showing extent of each component of each system used in the Work and all details required for the Work referencing required system components provided as samples to Engineer. Provide Shop Drawings coordinated with cast-in-place concrete, pre-cast concrete and liquid-applied membrane waterproofing showing all construction, and other conditions encountered in the Work and manufacturer's approved and recommended

details appropriate to waterproof joints, expansion joint, grade terminations, corner details, through wall penetrations, and transitions as required for full bentonite geotextile waterproofing system waterproof performance whether or not specific indication is made on the Contract Drawings to the details of the specified manufacturer.

- 3. Test Reports: Submit for approval the following:
  - a. Copies of test reports verifying compliance with physical properties specified herein.
    - 1) Submission of test reports using Water Vapor Transmission Rate, Procedure B ASTM E96 and ASTM 5887 to be submitted for review for manufacturers to demonstrate compliance with NYS-ECC and water test requirements.<sup>(1)</sup>
    - 2) In addition, provide test results in compliance with ASTM D6141 provided for each type of material specified for work and proposed for the work of this section and a recommendation indicating the bentonite waterproofing system required for work of this project.<sup>(1)</sup>
  - b. Copies of testing agencies background and experience in preforming similar tests to those specified.
- 4. Certificates: Submit for approval copies of certificates stating that the bentonite waterproofing systems installer has been approved, or is a licensee of the bentonite waterproofing manufacturer.
- B. Contractor's Review: Accompanying approval request, submit to Engineer a written statement signed by Contractor, stating that the Contract Drawings and Sections for waterproofing of Work of Section 03 30 00 Cast-in-Place Concrete for below-grade concrete walls and foundations, **07 95 00 Expansion Joint Systems**<sup>(1)</sup>, Division 31 Earthwork, and Water Sample Test have been reviewed with an agent of the bentonite geotextile waterproofing manufacturer and that he is in agreement that the selected systems are proper, compatible and that the details shown are not in conflict with the bentonite **geotextile**<sup>(1)</sup> waterproofing manufacturer's details. Show by copy of transmittal form that a copy of the statement has been transmitted to the manufacturer.
- C. Statement of Application: Upon completion of the bentonite geotextile waterproofing Work, submit a notarized statement to Engineer signed by Contractor and bentonite geotextile<sup>(1)</sup> waterproofing installer stating that the Work complies with the requirements of these Sections and the installation methods were proper and adequate for the conditions of installation and use.

#### 1.08 DELIVERY, STORAGE, AND HANDLING

#### A. Delivery of Materials:

- 1. Deliver materials in bentonite **geotextile**<sup>(1)</sup> waterproofing manufacturer's original, unopened and undamaged containers, with information accurately representing container contents as approved by Engineer at time of Shop Drawing submission.
- 2. Include the following information on the label:
  - a. Name of material and supplier.
  - b. Installation, handling and protection requirements.
- 3. Deliver materials in sufficient quantities to allow uninterrupted continuity of the Work.

#### B. Storage of Materials:

- 1. Store materials in original, undamaged containers with manufacturer's labels and seals intact.
- 2. Store all materials in a dry, enclosed area, off the ground and away from all possible contact with water.
- Prevent damage to materials during storage primarily by minimizing the amount of time they are stored at the job-site before being incorporated into construction systems.

## C. Handling of Materials:

- 1. Handle materials carefully and in full consideration of the fact that materials shall not be placed in areas of free-standing water or where they may come in contact with water before waterproofing system can be properly protected as recommended by the manufacturer of the bentonite **geotextile**<sup>(1)</sup> waterproofing.
- 2. Do not open containers or expose materials to detrimental conditions or physical damage. Materials which are so exposed shall be removed from the Site and shall not be incorporated into the Work.
- 3. Handle materials in a manner which prevents inclusion of foreign materials.
- 4. Do not open packages or containers until all necessary preparatory Work is complete and installation will begin immediately. Do not allow materials to become wet or soiled or covered with ice or snow.

#### 1.09 SPARE PARTS, SPECIAL TOOLS, AND SUPPLIES

A. Not Used

#### 1.10 SPECIAL WARRANTY PROVISIONS / GUARANTEE PERIODS

- A. The Contractor shall obtain from the manufacturer and provide to OWNER the manufacturer's warranty documentation of eligibility for the project must be validated by Manufacturer, confirming acceptance of the installation and independent inspection reports are in accordance with the manufacturer's quality assurance program requirements. (1)
- B. Waterproofing Material and Labor Warranty: Upon installation completion and manufacturer acceptance of the work required by this section, the waterproofing materials manufacturer will provide to the DEP, a written five (5) year non-prorated warranty, covering both materials and labor: Issuance of Manufacturer's Waterproofing Warranty requires the following: (1) Waterproofing System products and drainage composite products shall have been provided by a single manufacturer; (2) Installation of waterproofing products and Expansion Joint by Manufacturer's Approved Applicator in full accordance with the manufacturer's quality assurance program requirements; (3) Installation inspected by an approved and trained Independent Inspection Firm participating with the waterproofing manufacturer's Certified Inspection Program; (4) In Division 3 work, Waterstops must be installed in all applicable concrete cold pour construction joints, including around applicable penetrations. Manufacturer's warranty shall be independent from any other warranties made by the Contractor under requirements of the Contract Documents and may run concurrent with the other warranties.(1)

#### PART 2 - PRODUCTS

#### 2.01 MANUFACTURERS

- A. Prefabricated bentonite geotextile **panels**<sup>(1)</sup> with integrated polyethylene liner and applicable accessories subject to the performance requirements specified herein:
  - 1. **Basis of Design: Voltex Membrane, Voltex CR Membrane**<sup>(1)</sup> bentonite geotextile waterproofing system as manufactured by:
    - a. CETCO Colloid Environmental Technologies Company, 2870 Forbs Avenue, Hoffman Estates, IL.
    - b. Or approved equal. (1)
  - 2. The following bentonite geotextile waterproofing system manufacturers must meet the requirements as specified:

- a. W.R. Meadows, Inc. 300 Industrial Drive P.O. Box 338 Hampshire, IL;
- b. Carlisle Coatings & Waterproofing (CCW) 900 Hensley Lane, Wylie, TX;
- c. Or approved equal. (1)

#### 2.02 MATERIALS / EQUIPMENT

- A. General: Provide a bentonite geotextile **panel**<sup>(1)</sup> system for vertical and horizontal below-grade areas, as shown on the Contract Drawings, deriving their properties from natural sodium bentonite, a hydrated aluminum silicate smectic clay naturally formed from volcanic ash and saltwater, which when confined under pressure forms an impervious water-resistant gel and which, if penetrated after installation, will self-heal and seal cracks caused by concrete shrinkage, movement and seismic action up to 1/16-inch in width.
- B. Below-Grade Sodium Bentonite Geotextile Waterproofing System **products are in**CETCO nomenclature provide products as specified or equal to the following: (1)
  - 1. Voltex Membrane: 1.2 x 4.4m (4' x 14.5') roll of interlocked geotextiles encapsulating a minimum 4.8 kg/sqm (1.0-lbs per square foot) of contaminant resistant granular sodium bentonite. Composite shall consist of one woven and one nonwoven polypropylene geotextile, interlocked using a needle-punching process that produces interlocks over the entire area of the product.
  - 2. Voltex CR Membrane: 1.2 x 4.5m (4' x 15') roll of interlocked geotextiles encapsulating a minimum 4.8 kg/sqm (1.0-lbs/sf) of contaminant resistant granular sodium bentonite. Composite shall consist of one woven and one nonwoven polypropylene geotextile, interlocked using a needle-punching process that produces interlocks over the entire area of the product.
  - 3. Prefabricated Voltex Membrane / Voltex CR Membrane Bentonite Geotextile: Provide a high flow capacity, high compressive strength prefabricated bentonite geotextile panel consisting of a formed polymeric core covered with a geotextile filter fabric and with a solid polymeric film on the side in contact with the vertical wall panels all complying with the following: (1)

PROPERTY	TEST METHOD	TYPICAL VALUE
Hydrostatic Pressure Resistance	ASTM D 5385 mod.	70 m (231 ft.)
Permeability	ASTM D 5084	1 x 10 <sup>-9</sup> cm/sec. (1)
Grab Tensile Strength	ASTM D 4632	422 N (95 lbs.)
Puncture Resistance	ASTM D 4833	445 N (100 lbs.) (1)
Low Temperature Flexibility	ASTM D 1970	Unaffected at -32°C (-25°F)
Elongation	ASTM D 4632	50%
Peel Adhesion to Concrete	ASTM D 903 mod.	2.6 kN/m (15 lbs. /in.)
Water Vapor Transmission Rate	ASTM E 96 (B)	0.03 grains/hr/ft <sup>2</sup>

- 4. Accessory Waterproofing Products: All accessory waterproofing materials shall be provided by the waterproofing manufacturer or shall have the manufacturer's written approval for substitution. The following products are in CETCO nomenclature, provide these products as specified or equal:
  - a. Bentoseal®: Trowel grade detailing mastic
  - b. Hydrobar Tubes: 50 mm (2") diameter x 60 cm 2' () long, water soluble tube container filled with active granular sodium bentonite.
  - c. Waterstoppage®: 22.7 kg (50 lbs.) bag of active granular sodium bentonite.
  - d. SeamTape®: 50 mm (2") wide butyl rubber sealant tape.
  - e. Termination Bar: Min. 3 mm (1/8") thick by 25 mm (1") wide stainless steel or aluminum termination bar with pre-punched holes punched 150 mm (6") on center for fastening.
  - f. Cementitious Wall Board: 12 mm (½") thick cementitious board for protection of waterproofing during the removal of metal soldier pile cap and top lagging boards.
  - g. CETSEAL single-component polyether general sealant and adhesive
  - h. TB-Boots pre-formed, single piece thermoplastic cover for tie-back heads and soil nails. Three sizes are available: TB-6SN, TB-8, and TB-10.
  - Envirosheet self-adhering flashing membrane used for grade and thru-wall detailing.
  - j. CXJ 200/400: CXJ is a thermoplastic expansion joint product consisting of a 50mm (2")/ 100mm (4") wide dual-cell center gland with two integrated flashing flanges on both sides of the center gland. (1)
- 5. Base And Sheet Drainage Composite, the following products are in CETCO nomenclature, provide these products as specified or equal to the following:
  - a. Aquadrain® drainage composite by CETCO shall be used where specified to promote positive drainage. Use base drain accessory connectors and outlets as required.
  - b. Aquadrain® 100BD Base Drain 25 mm (1") thick x 300 mm (12") high base drain composite designed to collect water from sheet composite drainage and then discharge the water to proper sump system or gravity to daylight.

- 1) Compressive Strength, 457 kPa (10,000psf); B. Water Flow rate, 1,197 l/m/m (97gpm/ft);
- 2) Thickness, 25 mm (1") (1)
- c. Fasteners: As recommended by the bentonite waterproofing manufacturer for temporary fastening of panels to cast-in-place concrete.

#### 2.03 FABRICATION / ASSEMBLING / FINISHES

A. Not Used

#### 2.04 SOURCE QUALITY CONTROL / SHOP TESTS

- A. Source Quality Control:
  - 1. Engage a single manufacturer who shall provide the services of a Technical Representative who shall assist Contractor and Engineer by providing technical opinions on the adequacy of materials and methods of installation based on Shop Drawings approved by Engineer.
  - 2. Provide such services during the time of delivery, storage, handling and installation of all bentonite **geotextile**<sup>(1)</sup> waterproofing components, up to and including placement of crushed stone trench drains and completion of backfilling operations.
  - 3. Provide a manufacturer who will provide complete technical services including preparation and review of Shop Drawings, installation methods and proposed detailing for the Work. Where the manufacturer requires additions or changes to the Contract Drawings and Contract Sections these shall be made at no additional expense to OWNER and only as acceptable to Engineer.
  - 4. Provide only the highest quality materials and methods of construction and installation as recommended by the manufacturer and as acceptable to Engineer.

#### **PART 3 - EXECUTION**

#### 3.01 EXAMINATION / PREPARATION

#### A. Inspection

The Contractor shall examine the surfaces to receive the bentonite **geotextile**<sup>(1)</sup> waterproofing, and the conditions under which the bentonite waterproofing Work is to be performed and notify Engineer in writing of any condition detrimental to the proper and timely completion of the Work and the performance of the bentonite waterproofing systems. Do not proceed with the bentonite **geotextile**<sup>(1)</sup> waterproofing Work until unsatisfactory conditions have been corrected in a manner acceptable to Engineer.

2. All cast-in-place concrete shall have cured a minimum of two (2) days prior to commencement of bentonite **geotextile**<sup>(1)</sup> waterproofing systems Work.

#### B. SUBSTRATE PREPARATION

- Provide exterior below-grade walls of cast-in-place and pre-cast concrete free from voids and sharp projections before placing any bentonite **geotextile**<sup>(1)</sup> waterproofing Work.
- 2. Remove surface irregularities on cast-in-place concrete and fill all holes, honeycombs, spalls and cracks using manufacturer's recommended joint seal parging. Repair areas of unacceptable consolidation.
- 3. Remove grease, oil and other contaminants from surfaces of cast-in-place and pre-cast concrete and clean all surfaces with vacuums cleaners. Remove all dust, loose stones and debris.
- 4. Parge all construction joints to a minimum depth of one-eighth (1/8) inch and three (3) inch minimum width using manufacturer's recommended joint seal parging.
- 5. Seal all through wall projections using joint seal parging.
- 6. Soil Substrates: Grade substrates should consist of well leveled soils without voids and debris and compacted to a minimum of eighty-five (85%) Modified Proctor density for uniform support and containment of waterproofing sheets. If substrate consists of large aggregate, place a high-strength geotextile layer over the aggregate and then provide several inches of compacted soil or sand for uniform support and containment of waterproofing sheets.
- 7. All expansion joints must be cleaned, primed, fitted with a proper compression seal product and caulked with polyurethane sealant or applicable expansion joint assembly product as work. (1)

#### 3.02 INSTALLATION

#### A. Pre-installation Conference:

1. Prior to the installation of each bentonite geotextile waterproofing system and associated Work, Contractor shall schedule and meet at the Site with the bentonite **geotextile**<sup>(1)</sup> waterproofing installer and the foreman of the installer who will actually Work on this job, the installer of each component of associated Work, the installers of substrate construction to receive the waterproofing Work, the installers of other Work in and around the bentonite waterproofing Work which must follow the waterproofing Work, including mechanical Work, if any, Engineer and other representatives directly concerned with performance of the Work including where applicable, test agencies, product manufacturer's, governing authorities and OWNER. Record the discussions of the conference and the decisions and

agreements (or disagreements) and furnish a copy of the record to each party attending. Review foreseeable methods and procedures related to the waterproofing Work, including but not necessarily limited to, the following:

- a. Review Project requirements, including Contract Drawings, Sections, approved Shop Drawings and other Contract Documents.
- b. Review required samples and submittals, both completed and yet to be completed.
- c. Review status of substrates.
- d. Review availability of materials, tradesman, equipment and facilities needed to make progress, avoid delays and protect the Work from damaging conditions until fully built into construction systems.
- e. Review required inspection, testing, certifying and accounting procedures.
- f. Review weather and forecasted weather conditions, and procedures for coping with unfavorable conditions.
- g. Review regulations concerning code compliance, environmental protection, health, safety, fire and similar considerations.
- h. Review procedures needed for protection of bentonite **geotextile**<sup>(1)</sup> waterproofing during the remainder of the construction period.
- 2. Reconvene the meeting at the earliest opportunity if additional information must be developed in order to conclude the subjects under consideration.
- 3. Record any revisions or changes agreed upon, reasons therefore, and parties agreeing or disagreeing with them.

## B. Environmental Conditions:

- 1. Proceed with bentonite **geotextile**<sup>(1)</sup> waterproofing Work only when temperature and moisture conditions comply with the bentonite **geotextile**<sup>(1)</sup> waterproofing manufacturer's written recommendations and when no rain or other damaging environmental condition is forecast for the time when the materials will be exposed to potential damage.
- 2. Protect Work from precipitation, frost and direct sun. Erect temporary shelters to protect Work in progress.
- 3. Proceed with bentonite **geotextile**<sup>(1)</sup> waterproofing only when weather conditions will permit unrestricted use of materials and quality control of the Work being installed, complying with the Section requirements and with the recommendations of the bentonite waterproofing manufacturer.

- 4. Record decisions, conditions and agreements to proceed with the Work when weather conditions might be unfavorable. State the reasons for proceeding, with the names of the persons involved along with the changes, if any, or revisions, requirements or terms of the Contract.
- 5. Continue to protect bentonite **geotextile**<sup>(1)</sup> waterproofing systems from contact with free water until completely built into construction systems and backfill material and pavers are in place.
- C. Installation at Backfilled Cast-In-Place Concrete Walls. The following products are in CETCO nomenclature, provide these products as specified or equal:
  - Bentonite geotextile waterproofing installation is required at all vertical castin-place concrete walls and horizontal base slabs extending below grade as shown on the Contract Drawings.
  - 2. Place Hydrobar Tubes along the wall/footing intersection with ends "butted" tightly together to form a continuous installation.
  - 3. Trowel 19 mm (3/4") thick, continuous Bentoseal fillet at all inside wall corner transitions. Trowel Bentoseal form-tie pockets/patches and any slightly irregular concrete surface honeycomb areas.
  - 4. Starting at the base of the wall, install Voltex sheet horizontally (dark gray geotextile side against the wall; white geotextile side facing installer) covering the Hydrobar Tubes and extending onto the footing a minimum of 150 mm (6"). For hydrostatic conditions, cover the entire footing and overlap waterproofing membrane from underslab work a minimum of 150 mm (6"). Attach Voltex using washer-headed mechanical fasteners maximum 600 mm (24") on center. Overlap all adjacent sheet edges a minimum 100 mm (4"). Stagger all vertical overlap seams a minimum of 300 mm (12").
  - 5. After the bottom horizontal course, Voltex sheets can be installed either vertically or horizontally oriented. Continue Voltex installation up wall to finished grade elevation detail, staggering all sheet roll ends of adjacent courses a minimum 300 mm (12"). Do not allow horizontal Voltex overlap joints to run at same elevation as the concrete pour lift joints. Overlap all adjacent Voltex sheet edges a minimum 100 mm (4") and secure with washer-head fastener maximum 600 mm (24") on center.
  - 6. Penetrations: For all pipe, rebar, structural and other penetrations install waterproofing system in accordance with manufacturer's detail for specific project condition(s).
  - 7. Terminate Voltex membrane 300 mm (12") below finished grade elevation secured with washer-head fasteners maximum 300 mm (12") on center to exterior surface of concrete wall. Per manufacturer's detail for specific

project condition(s), install ENVIROSHEET grade flashing to primed concrete substrate with bottom edge overlapping top edge of Voltex membrane minimum 100 mm (4"). Overlap all roll ends a minimum 100 mm (4") to form a continuous flashing. Height of flashing shall be per project details and specifications. Install a rigid termination bar along the top edge of ENVIROSHEET; fastened maximum 300 mm (12") on center. Complete grade termination detail with tooled bead of CETSEAL along the top edge, at all penetrations through the flashing, and all exposed overlap seams.

- 8. Inspect finished Voltex installation and repair any damaged material prior to backfill placement. Assure that Voltex is not displaced during backfill placement or soil compaction. Where the continuity of the bentonite geotextile layer is interrupted by piles, caissons and similar foundation conditions, provide a continuous bentonite seal following the contour of the pile, caisson or similar interrupting element to maintain the complete watertightness of the finished bentonite geotextile waterproofing system.
- 9. Cut panels to fit around penetrations. Keep panels horizontal while cutting. Tape all cut edges. Trowel a fillet of manufacturer's recommended joint seal around the penetration and a minimum of 2 inches up the penetration just prior to backfilling with crushed stone. (1)
- D. Prefabricated Drainage Composite Installation (Non-Hydrostatic Walls):
  - 1. Place drainage composite panels after panel installation and installation of penetrations, and transitions have been reviewed and accepted by manufacturer's Technical Representative and Engineer.
  - 2. At the base of the wall, place Aquadrain 100BD (100BD) base-drain horizontally oriented with the open core side up and the 50 mm (2") flap of fabric side tight against the wall over the previously installed Voltex waterproofing using wash-head mechanical fasteners or general construction adhesive. The 50 mm (2") fabric flap along the top edge of 100BD should be tightly secured against the wall. Use 100BD accessory fittings, as required, to form a continuous installation. Install 100BD discharge outlet fittings to connect to discharge pipes as required for the project.
  - 3. Install the bottom course of Aquadrain 15XP sheet drainage (plastic core side against the wall) with the 15XP bottom core edge in contact with open top core edge of 100BD. Secure sheet drain to wall with washer-head fasteners. Secure extra fabric flap of 15XP extending down the top front edge of 100BD to prevent the passage of soil into the core at the connection.
  - 4. Install subsequent courses of Aquadrain 15XP sheet drainage to within 300 mm (12") of finished grade or as shown on the project drawings. Tightly abut adjoining sheet drain core edges together and secure the extra fabric flaps

over the front of adjacent roll edges to prevent soil from entering the sheet drain. Secure sheet drain to wall with washer-head fasteners. Where drainage sheet panels are installed overlapped, bottom edge of higher course shall be installed to the outside of the lower course to shed water like a roof shingle.

- 5. Around penetrations and tie-back heads, cut sheet drainage composite to fit and wrap extra filter fabric around open core edge to prevent soil from entering core.
- 6. At the top of the sheet drain installation, wrap the filter fabric flap behind the exposed top core edge to prevent intrusion of soil into the core and secure sheet drain to wall with termination bar fastened 300 mm (12") on center. (1)
- 7. Install prefabricated drainage panels starting at the bottom of the wall attaching the first roll of drain horizontally with insulation anchors. Attach with filter fabric facing crushed stone and perimeter insulation and with flat side of core facing wall. Peel back about twelve (12) inches of fabric at the bottom of the wall and use this to wrap around and behind drain pipe in order to prevent stone intrusion.
- 8. At top of wall lap three (3) inches of drain fabric behind prefabricated drainage panels immediately at time of installation in order to prevent crushed stone intrusion.
- 9. After placing perimeter insulation and protection board immediately backfill with crushed stone and geotextile filter fabric. Place single row of heavy-duty protection paver's level and with all surfaces uniformly aligned above crushed stone trench, with edge of pavers abutting adjacent pavers on both sides and with long direction of grating pattern perpendicular to face of glazed brick masonry walls.
- 10. Tie into the adjacent waterproofing membrane according to the membrane installation guidelines. Ensure that the entire installation is completed on the same day. Apply any protection course or drainage board as specified, prior to placement of backfill.<sup>(1)</sup>

#### 3.03 FIELD TESTING / QUALITY CONTROL

A. Not Used

#### 3.04 STARTUP / DEMONSTRATION

A. Not Used

#### 3.05 ADJUSTING / PROTECTION / CLEANUP

A. Protection

- 1. All components of the Work shall be protected from detrimental weather until backfill is completed and pavers are installed and acceptable to Engineer.
- 2. Work which cannot for reasons acceptable to Engineer be covered with complete system before onset of weather detrimental to the Work shall be completely covered and protected in such a manner as to deflect water and weather from the installation without damaging adjacent Work.
- 3. Provide continuous protection of materials against damage, wetting and moisture absorption primarily by storing materials under cover and above ground and away from other construction traffic.
- 4. Protect materials against damage by construction activities.
- 5. Protect all bentonite **geotextile**<sup>(1)</sup> waterproofing materials and system components from all contact with water, non-associated construction traffic and other contractors, until after installation of pavers is complete.
- 6. Do not install bentonite **geotextile**<sup>(1)</sup> waterproofing membrane in standing water or when precipitation is forecasted and adequate protection of the Work is not, or cannot, be made available.
- 7. Do not allow construction traffic which is not associated with the installation of the bentonite **geotextile**<sup>(1)</sup> waterproofing and related materials in the area of Work. Protect the area from access by other installers and Contractors until the Work of this Section has been incorporated into finished construction systems.

#### B. Adjustment

- 1. System components which are dislodged, damaged, expanded, broken, penetrated or crushed by subsequent installation operations or damaged by detrimental weather shall be immediately replaced with undamaged material in compliance with the Sections and properly protected as specified.
- 2. Only the original installer shall repair or replace deteriorated or defective Work.

#### 3.06 MANUFACTURERS STANDARD DETAILS

A. The following are manufacturers details that are referenced to a specific product details by CETCO Colloid Environmental Technologies Company. The Contractor may submit another product manufacturer's details for Engineer's approval:

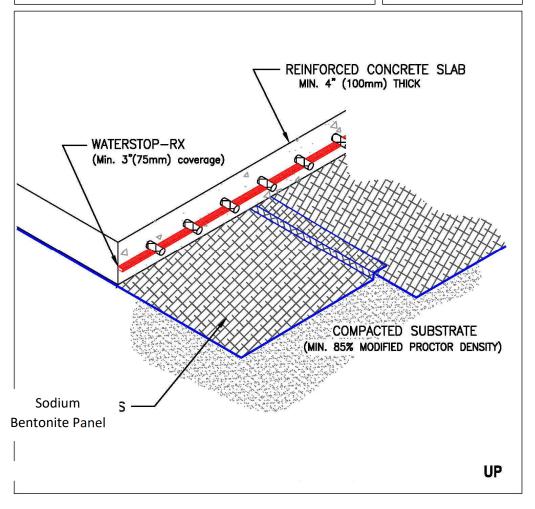
### **DS WATERPROOFING**

### **FOUNDATION DETAIL**

Structural Slab On Compacted Substrate

### **DETAIL**

**DS-100** 

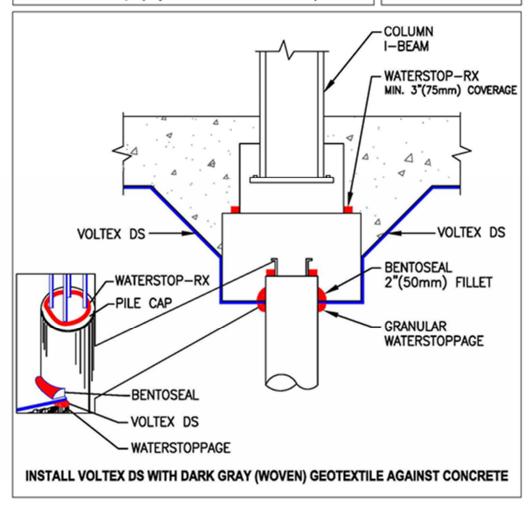


### **FOUNDATION DETAIL**

Pile Cap (Hydrostatic Condition)

### **DETAIL**

**DS-108** 



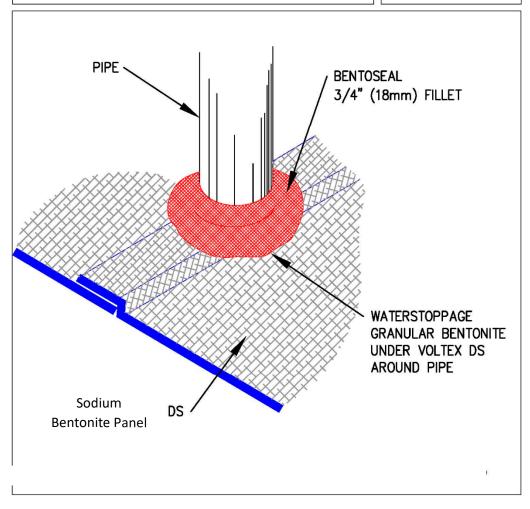
### **DS WATERPROOFING**

### **FOUNDATION DETAIL**

**Typical Penetration** 

### **DETAIL**

**DS-112** 

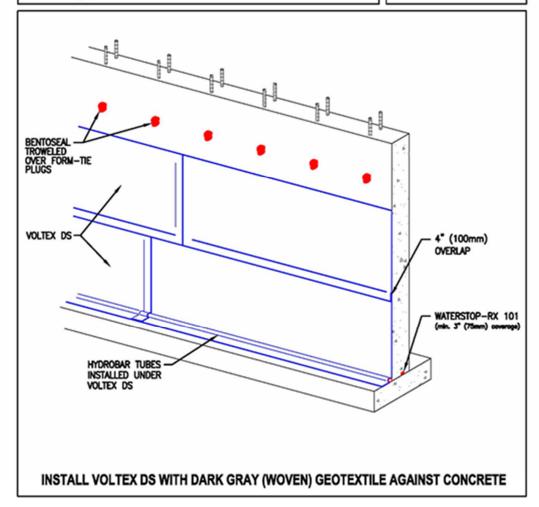


### **FOUNDATION WALL**

Typical Concrete Wall Installation

### **DETAIL**

**DS-200** 

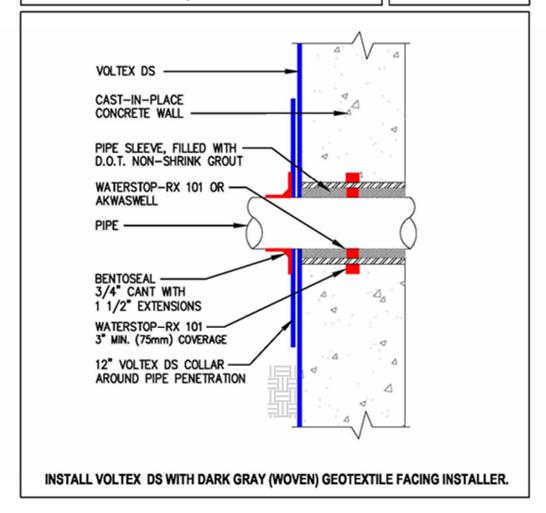


### **FOUNDATION WALL**

Sleeved Pipe Penetration

#### **DETAIL**

**DS-215** 

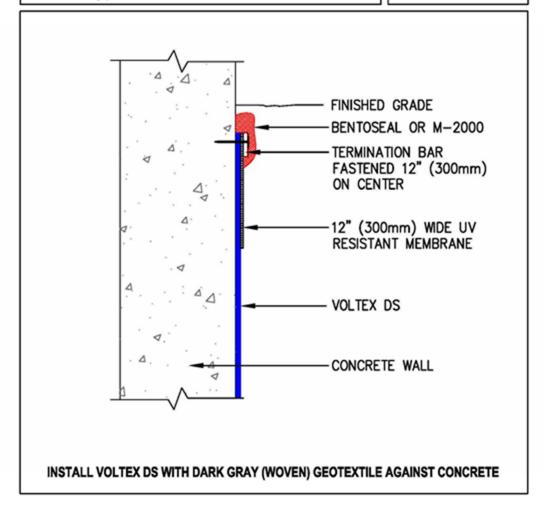


### **FOUNDATION WALL**

Typical Termination At Grade

### **DETAIL**

**DS-208** 



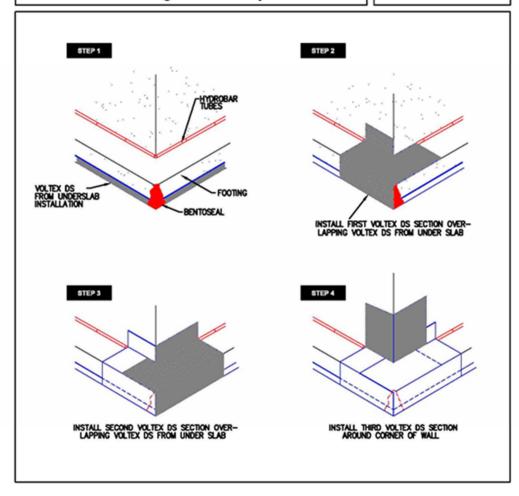
# VOLTEX DS WATERPROOFING FOUNDATION WALL

Outside Footing Corner - Hydrostatic

### **DETAIL**

**DS-202** 

NO SCALE - 01/05



#### **END OF SECTION**

## SECTION 26 06 11 CABLE AND CONDUIT SCHEDULE

#### PART 1 – GENERAL

#### 1.01 THE REQUIREMENT

- A. The cable and conduit schedule lists conduit number, size, cable quantity and size, from/to destinations, circuit purpose and remarks.
- B. The Contractor shall provide all labor, materials, equipment, and incidentals as shown, specified, and required to furnish and install wires, cables and conduit complete and operational.
- C. All wiring, cable and conduit shall be furnished and installed under this Contract, unless specifically noted otherwise.
- D. The conduit numbering system consists of two parts separated by hyphen. First part is the equipment identification number. The second part is the individual conduit identification number. The individual conduit identification number may be presented in a 2- or 3-digit format (for example, 01 and 001) and represents the same conduit.
- E. The definition of the term conduit shall include all types of raceway provided under this Contract.
- F. In all cases where the word "install" or "installed" refers to conduit, it shall mean install all conduit, raceways, fittings, supports, boxes and appurtenances. In addition, it shall include all grounding and bonding. Drag lines are to be pulled upon completion of each raceway.
- G. Where install or installed refers to cable it shall include pulling the cable and testing the cable for insulation resistance, continuity and absence from grounds, as well as terminating all conductors and testing for proper connection.
- H. In general, the conduit and cable schedules do not indicate lighting and receptacle circuits, as well as some of the other cable and conduit to be provided under this Contract. The Contractor is advised to refer to the Specifications and Drawings for the additional conduit and cable requirements
- I. The conduit and cable schedule is attached.

#### 1.02 CODES AND STANDARDS

A. Not Used.

#### 1.03 SUBMITTALS

A. Not Used.

#### 1.04 SHOP DRAWINGS

A. Not Used.

#### 1.05 **DEFINITIONS**

A. Not Used.

#### **PART 2 - PRODUCTS**

#### 2.01 GENERAL

A. Not Used.

#### **PART 3 – EXECUTION**

#### 3.01 GENERAL

A. Not Used.

RLWFP C&C SCHEDULE							
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS	
SE-XFMR-01	5"	Property Line Pole	SE-XFMR-01	3#1, #1 GND	13.8KV	Duct Bank	
SE-XFMR-02	5"	Property Line Pole	SE-XFMR-01	3#1, #1 GND	13.8KV	Duct Bank	
SE-DSW-01	5-5"	SE-XFMR-01	Service Disconnect Switch	5- 4#750, #750 GND	480V Power	Duct Bank	
SE-DSW-02	5"	SE-XFMR-02	Service Disconnect Switch	Pulling Line	480V Power	Duct Bank	
SE-SWBD-01	5-5"	Service Disconnect Switch	SWBD-01	5- 4#750, #750 GND	480V Power	Duct Bank	
SE-SWBD-02	5"	Service Disconnect Switch	SWBD-01	Pulling Line	480V Power	Duct Bank	
P-EGS-01	3-5"	Generator 1	EGS-01	3- 4#750, #750 GND	480V Power	Duct Bank	
P-EGS-02	5"	Generator 1	EGS-01	Pulling Line	480V Power	Duct Bank	
C-EGS-01	5"	Generator 1	EGS-01	40#14, 2#6	Control	Duct Bank	
C-EGS-02	5"	Generator 1	EGS-01	(2) Belden 8762, (1) Belden 9842	Control	Duct Bank	
P-EGS-03	3-5"	Generator 2	EGS-01	3- 4#750, #750 GND	480V Power	Duct Bank	
P-EGS-04	5"	Generator 2	EGS-01	Pulling Line	480V Power	Duct Bank	
C-EGS-03	5"	Generator 2	EGS-01	40#14, 2#6	Control	Duct Bank	

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		RLV	VFP C&C SCHEDULE			
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS
C-EGS-04	5"	Generator 2	EGS-01	(2) Belden 8762, (1) Belden 9842	Control	Duct Bank
P-EGS-05	2-5"	Load Bank	EGS-01	2- 4#750, #750 GND	480V Power	Duct Bank
P-EGS-06	5"	Load Bank	EGS-01	Pulling Line	480V Power	Duct Bank
C-EGS-05	5"	Load Bank	EGS-01	2#14	Control	Duct Bank
P-ATS-MCC-1A-01-A	4"	SWBD-01	ATS-MCC-1A	4#600, #600GND	480V Power	
P-ATS-MCC-1A-01-B	4"	SWBD-01	ATS-MCC-1A	4#600, #600GND	480V Power	
P-ATS-MCC-1A-02-A	4"	EGS-01	ATS-MCC-1A	4#600, #600GND	480V Power	
P-ATS-MCC-1A-02-B	4"	EGS-01	ATS-MCC-1A	4#600, #600GND	480V Power	
C-ATS-MCC-01A-01	1"	EGS-01	ATS-MCC-1A	6#14	Control	
C-ATS-MCC-01A-02	3/4"	EGS-01	ATS-MCC-1A	Cat 5 Cable	Control	
P-MCC-1A-01-A	4"	ATS-MCC-1A	MCC-1A	4-#600, #600GND	480V Power	
P-MCC-1A-01-B	4"	ATS-MCC-1A	MCC-1A	4-#600, #600GND	480V Power	
P-ATS-MCC-1B-01-A	4"	SWBD-01	ATS-MCC-1B	4-#600, #600GND	480V Power	
P-ATS-MCC-1B-01-B	4"	SWBD-01	ATS-MCC-1B	4-#600, #600GND	480V Power	
P-ATS-MCC-1B-02-A	4"	EGS-01	ATS-MCC-1B	4-#600, #600GND	480V Power	

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	RLWFP C&C SCHEDULE								
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS			
P-ATS-MCC-1B-02-B	4"	EGS-01	ATS-MCC-1B	4-#600, #600GND	480V Power				
C-ATS-MCC-01B-01	1"	EGS-01	ATS-MCC-1B	(6) #14	Control				
C-ATS-MCC-01B-02	3/4"	EGS-01	ATS-MCC-1B	Cat 5 Cable	Control				
P-MCC-1B-01-A	4"	ATS-MCC-1B	MCC-1B	4-#600, #600GND	480V Power				
P-MCC-1B-01-B	4"	ATS-MCC-1B	MCC-1B	4-#600, #600GND	480V Power				
P-ATS-MCC-2A-01	-	SWBD-01	ATS-MCC-2A	4-4-#750, #750GND	480V Power	Cable Tray			
P-ATS-MCC-2A-02	-	EGS-01	ATS-MCC-2A	4-4-#750, #750GND	480V Power	Cable Tray			
C-ATS-MCC-2A-01	1"	EGS-01	ATS-MCC-2A	(6) #14	Control				
C-ATS-MCC-2A-02	3/4"	EGS-01	ATS-MCC-2A	Cat 5 Cable	Control				
P-MCC-2A-01	-	ATS-MCC-2A	MCC-2A	4-4-#750, #750GND	480V Power	Cable Tray			
P-ATS-MCC-2B-01	-	SWBD-01	ATS-MCC-2B	4-4-#750, #750GND	480V Power	Cable Tray			
P-ATS-MCC-2B-02	-	EGS-01	ATS-MCC-2B	4-4-#750, #750GND	480V Power	Cable Tray			
C-ATS-MCC-2B-01	1"	EGS-01	ATS-MCC-2B	(6) #14	Control				
C-ATS-MCC-2B-02	3/4"	EGS-01	ATS-MCC-2B	Cat 5 Cable	Control				
P-MCC-2B-01	-	ATS-MCC-2B	MCC-2B	4-4-#750, #750GND	480V Power	Cable Tray			
P-BL-7110-01	3"	MCC-1A	DSW-BL-7110	3#350, #350 GND	480V Power	SECTION 8			

	RLWFP C&C SCHEDULE							
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS		
P-BL-7110-02	3"	DSW-BL-7110	BL-7110	3#350, #350 GND	480V Power			
C-BL-7110-01	1"	MCC-2A	BL-7110	8/C#14	Control			
P-7210-01	2"	MCC-2A	VFD-7210	3 #2/0, #2/0 GND	480 V Power	SECTION 18		
C-7210-01	1"	MCC-2A	VFD-7210	20/C#14	Control	SECTION 18		
I-7210-01	1"	MCC-2A	VFD-7210	(3) TSP#16	Instrumentation	SECTION 18		
P-7230-01	2"	MCC-2A	VFD-7230	3 #2/0, #2/0 GND	480 V Power	SECTION 14		
C-7230-01	1"	MCC-2A	VFD-7230	20/C#14	Control	SECTION 14		
I-7230-01	1"	MCC-2A	VFD-7230	(3) TSP#16	Instrumentation	SECTION 14		
P-7250-01	2"	MCC-2B	VFD-7250	3 #2/0, #2/0 GND	480 V Power	SECTION 34		
C-7250-01	1"	MCC-2B	VFD-7250	20/C#14	Control	SECTION 34		
I-7250-01	1"	MCC-2B	VFD-7250	(3) TSP#16	Instrumentation	SECTION 34		
P-7410-01	2"	MCC-2A	VFD-7410	3 #3/0, #3/0 GND	480 V Power	SECTION 7		
C-7410-01	1"	MCC-2A	VFD-7410	20/C#14	Control	SECTION 7		
I-7410-01	1"	MCC-2A	VFD-7410	(3) TSP#16	Instrumentation	SECTION 7		
P-7430-01	2"	MCC-2A	VFD-7430	3 #3/0, #3/0 GND	480 V Power	SECTION 4		
C-7430-01	1"	MCC-2A	VFD-7430	20/C#14	Control	SECTION 4		

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	RLWFP C&C SCHEDULE								
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS			
I-7430-01	1"	MCC-2A	VFD-7430	(3) TSP#16	Instrumentation	SECTION 4			
P-4210-01	3"	MCC-2A	VFD-4210	3 #4/0, #4/0 GND	480 V Power	SECTION 6			
P-4210-02	3"	VFD-4210	DSW-4210	3#4/0, #4/0 GND	480 V Power	-			
P-4210-03	3"	DSW-4210	P-4210	3#4/0, #4/0 GND	480 V Power	_			
C-4210-01	1"	MCC-2A	VFD-4210	20/C#14	Control	SECTION 6			
C-4210-02	1"	VFD-4210	P-4210	6/C#14	Control	-			
I-4210-01	1"	MCC-2A	VFD-4210	(3) TSP#16	Instrumentation	SECTION 6			
I-4210-02	1"	VFD-4210	P-4210	(3) TSP#16	Instrumentation	-			
P-4230-01	3"	MCC-2A	VFD-4230	3 #4/0, #4/0 GND	480 V Power	SECTION 1			
P-4230-02	3"	VFD-4230	DSW-4230	3#4/0, #4/0 GND	480 V Power	-			
P-4230-03	3"	DSW-4230	P-4230	3#4/0, #4/0 GND	480 V Power	-			
C-4230-01	1"	MCC-2A	VFD-4230	20/C#14	Control	SECTION 1			
C-4230-02	1"	VFD-4230	P-4230	6/C#14	Control	-			
I-4230-01	1"	MCC-2A	VFD-4230	(3) TSP#16	Instrumentation	SECTION 1			
I-4230-02	1"	VFD-4230	P-4230	(3) TSP#16	Instrumentation	-			

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	RLWFP C&C SCHEDULE							
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS		
P-4320-01	3"	MCC-2A	VFD-4320	3 #4/0, #4/0 GND	480 V Power	SECTION 13		
P-4320-02	3"	VFD-4320	DSW-4320	3#4/0, #4/0 GND	480 V Power	-		
P-4320-03	3"	DSW-4320	P-4320	3#4/0, #4/0 GND	480 V Power	-		
C-4320-01	1"	MCC-2A	VFD-4320	20/C#14	Control	SECTION 13		
C-4320-02	1"	VFD-4320	P-4320	6/C#14	Control	-		
I-4320-01	1"	MCC-2A	VFD-4320	(3) TSP#16	Instrumentation	SECTION 13		
I-4320-02	1"	VFD-4320	P-4320	(3) TSP#16	Instrumentation	-		
P-BC-106-01	1.5"	MCC-2A	DSW-BC-106	3 #2, #6 GND	480 V Power	SECTION 26		
P-BC-106-02	1.5"	DSW-BC-106	BC-106	3 #2, #6 GND	480 V Power	SECTION 26		
P-MH-C03-01	1.5"	MCC-2B	DSW-MH-C03	3 #2, #6 GND	480 V Power	SECTION 26		
P-MH-C03-02	1.5"	DSW-MH-C03	MH-C03	3 #2, #6 GND	480 V Power	SECTION 26		
P-BC-109-01	1.5"	MCC-2B	DSW-BC-109	3 #2, #6 GND	480 V Power	SECTION 26		
P-BC-109-02	1.5"	DSW-BC-109	BC-109	3 #2, #6 GND	480 V Power	SECTION 26		
P-7220-01	2"	MCC-2B	VFD-7220	3 #2/0, #2/0 GND	480 V Power	SECTION 26		

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RLWFP C&C SCHEDULE							
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS	
C-7220-01	1"	MCC-2B	VFD-7220	20/C#14	Control	SECTION 26	
I-7220-01	1"	MCC-2B	VFD-7220	(3) TSP#16	Instrumentation	SECTION 26	
P-7240-01	2"	MCC-2B	VFD-7240	3 #2/0, #2/0 GND	480 V Power	SECTION 11	
C-7240-01	1"	MCC-2B	VFD-7240	20/C#14	Control	SECTION 11	
I-7240-01	1"	MCC-2B	VFD-7240	(3) TSP#16	Instrumentation	SECTION 11	
P-7420-01	2"	MCC-2B	VFD-7420	3 #3/0, #3/0 GND	480 V Power	SECTION 37	
C-7420-01	1"	MCC-2B	VFD-7420	20/C#14	Control	SECTION 37	
I-7420-01	1"	MCC-2B	VFD-7420	(3) TSP#16	Instrumentation	SECTION 37	
P-4220-01	3"	MCC-2B	VFD-4220	3 #4/0, #4/0 GND	480 V Power	SECTION 39	
P-4220-02	3"	VFD-4220	DSW-4220	3#4/0, #4/0 GND	480 V Power	-	
P-4220-03	3"	DSW-4220	P-4220	3#4/0, #4/0 GND	480 V Power	-	
C-4220-01	1"	MCC-2B	VFD-4220	20/C#14	Control	SECTION 39	
C-4220-02	1"	VFD-4220	P-4220	6/C#14	Control	-	
I-4220-01	1"	MCC-2B	VFD-4220	(3) TSP#16	Instrumentation	SECTION 39	
I-4220-02	1"	VFD-4220	P-4220	(3) TSP#16	Instrumentation	-	
P-4310-01	3"	MCC-2B	VFD-4310	3 #4/0, #4/0 GND	480 V Power	SECTION 27	

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		RL	WFP C&C SCHEDULE			
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS
P-4310-02	3"	VFD-4310	DSW-4310	3#4/0, #4/0 GND	480 V Power	-
P-4310-03	3"	DSW-4310	P-4310	3#4/0, #4/0 GND	480 V Power	-
C-4310-01 C-4310-02	1"	MCC-2B VFD-4310	VFD-4310 P-4310	20/C#14 6/C#14	Control Control	SECTION 27
I-4310-01	1"	MCC-2B	VFD-4310	(3) TSP#16	Instrumentation	SECTION 27
I-4310-02	1"	VFD-4310	P-4310	(3) TSP#16	Instrumentation	-
P-4330-01	3"	MCC-2B	VFD-4330	3 #4/0, #4/0 GND	480 V Power	SECTION 33
P-4330-02	3"	VFD-4330	DSW-4330	3#4/0, #4/0 GND	480 V Power	-
P-4330-03	3"	DSW-4330	P-4330	3#4/0, #4/0 GND	480 V Power	-
C-4330-01	1"	MCC-2B	VFD-4330	20/C#14	Control	SECTION 33
C-4330-02	1"	VFD-4330	P-4330	6/C#14	Control	-
I-4330-01	1"	MCC-2B	VFD-4330	(3) TSP#16	Instrumentation	SECTION 33
I-4330-02	1"	VFD-4330	P-4330	(3) TSP#16	Instrumentation	-
P-7210-02	2"	VFD-7210	DSW-7210	3#2/0, #2/0 GND	480 V Power	-
P-7220-02	2"	VFD-7220	DSW-7220	3#2/0, #2/0 GND	480 V Power	-
P-7230-02	2"	VFD-7230	DSW-7230	3#2/0, #2/0 GND	480 V Power	-

	RLWFP C&C SCHEDULE								
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS			
P-7240-02	2"	VFD-7240	DSW-7240	3#2/0, #2/0 GND	480 V Power	-			
P-7250-02	2"	VFD-7250	DSW-7250	3#2/0, #2/0 GND	480 V Power	-			
P-7410-02	2"	VFD-7410	DSW-7410	3#3/0, #3/0 GND	480 V Power	-			
P-7420-02	2"	VFD-7420	DSW-7420	3#3/0, #3/0 GND	480 V Power	-			
P-7430-02	2"	VFD-7430	DSW-7430	3#3/0, #3/0 GND	480 V Power	-			
P-7210-03	2"	DSW-7210	P-7210	3#2/0, #2/0 GND	480 V Power	-			
P-7220-03	2"	DSW-7220	P-7220	3#2/0, #2/0 GND	480 V Power	-			
P-7230-03	2"	DSW-7230	P-7230	3#2/0, #2/0 GND	480 V Power	-			
P-7240-03	2"	DSW-7240	P-7240	3#2/0, #2/0 GND	480 V Power	-			
P-7250-03	2"	DSW-7250	P-7250	3#2/0, #2/0 GND	480 V Power	-			
P-7410-03	2"	DSW-7410	P-7410	3#3/0, #3/0 GND	480 V Power	-			
P-7420-03	2"	DSW-7420	P-7420	3#3/0, #3/0 GND	480 V Power	-			
P-7430-03	2"	DSW-7430	P-7430	3#3/0, #3/0 GND	480 V Power	-			
C-7210-02	1"	VFD-7210	PULL BOX - PG- CONTROL 1	6/C#14	Control	-			

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	RLWFP C&C SCHEDULE								
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS			
C-7230-02	1"	VFD-7220	PULL BOX - PG- CONTROL 1	6/C#14	Control	-			
C-7250-02	1"	VFD-7230	PULL BOX - PG- CONTROL 1	6/C#14	Control	-			
C-7410-02	1"	VFD-7240	PULL BOX - PG- CONTROL 1	6/C#14	Control	-			
C-7430-02	1"	VFD-7250	PULL BOX - PG- CONTROL 1	6/C#14	Control	-			
C-7220-02	1"	VFD-7410	PULL BOX - PG- CONTROL 1	6/C#14	Control	-			
C-7240-02	1"	VFD-7420	PULL BOX - PG- CONTROL 1	6/C#14	Control	-			
C-7420-02	1"	VFD-7430	PULL BOX - PG- CONTROL 1	6/C#14	Control	-			
C-PG-01	2"	PULL BOX - PG- CONTROL 1	PULL BOX - PG- CONTROL 2	8 - 6/C#14	Control	-			
C-7210-03	1"	PULL BOX - PG- CONTROL 2	P-7210	6/C#14	Control	-			
C-7230-03	1"	PULL BOX - PG- CONTROL 2	P-7230	6/C#14	Control	-			
C-7250-03	1"	PULL BOX - PG- CONTROL 2	P-7250	6/C#14	Control				
C-7410-03	1"	PULL BOX - PG- CONTROL 2	P-7410	6/C#14	Control	-			

RLWFP C&C SCHEDULE								
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS		
C-7430-03	1"	PULL BOX - PG- CONTROL 2	P-7430	6/C#14	Control	-		
C-7220-03	1"	PULL BOX - PG- CONTROL 2	P-7220	6/C#14	Control	-		
C-7240-03	1"	PULL BOX - PG- CONTROL 2	P-7240	6/C#14	Control	-		
C-7420-03	1"	PULL BOX - PG- CONTROL 2	P-7420	6/C#14	Control	-		
I-7210-02	1"	VFD-7210	PULL BOX - PG- INST. 1	(3) TSP#16	Instrumentation	-		
I-7230-02	1"	VFD-7220	PULL BOX - PG- INST. 1	(3) TSP#16	Instrumentation	-		
I-7250-02	1"	VFD-7230	PULL BOX - PG- INST. 1	(3) TSP#16	Instrumentation	-		
I-7410-02	1"	VFD-7240	PULL BOX - PG- INST. 1	(3) TSP#16	Instrumentation	-		
I-7430-02	1"	VFD-7250	PULL BOX - PG- INST. 1	(3) TSP#16	Instrumentation	-		
I-7220-02	1"	VFD-7410	PULL BOX - PG- INST. 1	(3) TSP#16	Instrumentation	-		
1-7240-02	1"	VFD-7420	PULL BOX - PG- INST. 1	(3) TSP#16	Instrumentation	-		
I-7420-02	1"	VFD-7430	PULL BOX - PG- INST. 1	(3) TSP#16	Instrumentation	-		

RLWFP C&C SCHEDULE							
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS	
I-PG-01	2"	PULL BOX - PG- INST. 1	PULL BOX - PG- INST. 2	(24) TSP#16	Instrumentation	-	
I-7210-03	1"	PULL BOX - PG- INST. 2	P-7210	(3) TSP#16	Instrumentation	<u>-</u>	
I-7230-03	1"	PULL BOX - PG- INST. 2	P-7230	(3) TSP#16	Instrumentation	-	
I-7250-03	1"	PULL BOX - PG- INST. 2	P-7250	(3) TSP#16	Instrumentation	-	
I-7410-03	1"	PULL BOX - PG- INST. 2	P-7410	(3) TSP#16	Instrumentation	-	
I-7430-03	1"	PULL BOX - PG- INST. 2	P-7430	(3) TSP#16	Instrumentation	-	
I-7220-03	1"	PULL BOX - PG- INST. 2	P-7220	(3) TSP#16	Instrumentation	-	
I-7240-03	1"	PULL BOX - PG- INST. 2	P-7240	(3) TSP#16	Instrumentation	-	
I-7420-03	1"	PULL BOX - PG- INST. 2	P-7420	(3) TSP#16	Instrumentation	-	
P-RIO-21	3/4"	IP-1-MCC-1	RIO-21	2#12, #12 GND	120 V Power	-	
P-FIT-1711	3/4"	IP-1-MCC-1	FIT-1711	2#12, #12 GND	120 V Power	-	
P-AIT-1811	3/4"	IP-1-MCC-1	AIT-1811	2#12, #12 GND	120 V Power	-	

		RLV	VFP C&C SCHEDULE			
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS
P-AIT-1812	3/4"	IP-1-MCC-1	AIT-1812	2#12, #12 GND	120 V Power	-
P-AIT-1813	3/4"	IP-1-MCC-1	AIT-1813	2#12, #12 GND	120 V Power	-
P-AIT-1821	3/4"	IP-1-MCC-1	AIT-1821	2#12, #12 GND	120 V Power	-
P-AIT-1822	3/4"	IP-1-MCC-1	AIT-1822	2#12, #12 GND	120 V Power	-
P-AIT-1823	3/4"	IP-1-MCC-1	AIT-1823	2#12, #12 GND	120 V Power	-
P-LIT-1901	3/4"	IP-1-MCC-1	LIT-1901	2#12, #12 GND	120 V Power	-
P-LIT-1902	3/4"	IP-1-MCC-1	LIT-1902	2#12, #12 GND	120 V Power	-
P-AIT-1911	3/4"	IP-1-MCC-1	AIT-1911	2#12, #12 GND	120 V Power	-
P-AIT-1912	3/4"	IP-1-MCC-1	AIT-1912	2#12, #12 GND	120 V Power	-
P-LIT-2111	3/4"	IP-1-MCC-1	LIT-2111	2#12, #12 GND	120 V Power	-
P-LIT-2211	3/4"	IP-1-MCC-1	LIT-2211	2#12, #12 GND	120 V Power	-
P-LIT-2311	3/4"	IP-1-MCC-1	LIT-2311	2#12, #12 GND	120 V Power	-
P-LIT-2411	3/4"	IP-1-MCC-1	LIT-2411	2#12, #12 GND	120 V Power	-
P-LIT-2511	3/4"	IP-1-MCC-1	LIT-2511	2#12, #12 GND	120 V Power	-

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RLWFP C&C SCHEDULE							
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS	
P-LIT-2611	3/4"	IP-1-MCC-1	LIT-2611	2#12, #12 GND	120 V Power	-	
P-LIT-2711	3/4"	IP-1-MCC-1	LIT-2711	2#12, #12 GND	120 V Power	-	
P-LIT-2712	3/4"	IP-1-MCC-2	RIO-MCC-1	2#12, #12 GND	120 V Power	-	
P-IP-2-MCC-1	1"	IP-1-MCC-1	IP-2-MCC-1	3#6, #6 GND	208 V Power	-	
P-IP-3-MCC-1	1"	IP-1-MCC-1	IP-3-MCC-1	3#6, #6 GND	208 V Power	-	
P-PTC-01	3/4"	IP-1-MCC-1	PAGING/TELEPHONE CABINET	3#12, #12 GND	120 V Power	-	
P-S-1810	3/4"	IP-1-MCC-1	S-1810	3#12, #12 GND	120 V Power	-	
P-RIO-MCC-2	3/4"	IP-1-MCC-2	RIO-MCC-2	3#12, #12 GND	120 V Power	-	
P-IP-3-MCC-2	3/4"	IP-1-MCC-2	IP-3-MCC-2	3#12, #12 GND	208 V Power	-	
P-IP-5-MCC-2	3/4"	IP-1-MCC-2	IP-5-MCC-2	3#12, #12 GND	208 V Power	-	
P-IP-7-MCC-2	3/4"	IP-1-MCC-2	IP-7-MCC-2	3#12, #12 GND	208 V Power	-	
P-RLWTP PLC PANEL	3/4"	IP-2-MCC-1	RLWTP PLC PANEL	2#12, #12 GND	120 V Power	-	
P-FILTER-PLC 1	3/4"	IP-2-MCC-1	FILTER-PLC 1	2#12, #12 GND	120 V Power	-	

	RLWFP C&C SCHEDULE								
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS			
P-CENT-PLC-1	3/4"	IP-2-MCC-1	CENT-PLC-1	2#12, #12 GND	120 V Power	-			
P-CENT-PLC-2	3/4"	IP-2-MCC-1	CENT-PLC-2	2#12, #12 GND	120 V Power	-			
P-LIT-6111	3/4"	IP-2-MCC-1	LIT-6111	2#12, #12 GND	120 V Power	-			
P-LIT-6211	3/4"	IP-2-MCC-1	LIT-6211	2#12, #12 GND	120 V Power	<u>-</u>			
P-LIT-6251	3/4"	IP-2-MCC-1	LIT-6251	2#12, #12 GND	120 V Power	-			
P-FIT-6330	3/4"	IP-2-MCC-1	FIT-6330	2#12, #12 GND	120 V Power	-			
P-YSK-6410	3/4"	IP-2-MCC-1	YSK-6410	2#12, #12 GND	120 V Power	-			
P-LIT-6412	3/4"	IP-2-MCC-1	LIT-6412	2#12, #12 GND	120 V Power	-			
P-LIT-6413	3/4"	IP-2-MCC-1	LIT-6413	2#12, #12 GND	120 V Power	-			
P-LIT-6414	3/4"	IP-2-MCC-1	LIT-6414	2#12, #12 GND	120 V Power	-			
P-YSK-6420	3/4"	IP-2-MCC-1	YSK-6420	2#12, #12 GND	120 V Power	-			
P-YSK-6430	3/4"	IP-2-MCC-1	YSK-6430	2#12, #12 GND	120 V Power	-			
P-LIT-6431	3/4"	IP-2-MCC-1	LIT-6431	2#12, #12 GND	120 V Power	-			
P-YSK-6440	3/4"	IP-2-MCC-1	YSK-6440	2#12, #12 GND	120 V Power	-			

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		RLV	WFP C&C SCHEDULE			
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS
P-LIT-6441	3/4"	IP-2-MCC-1	LIT-6441	2#12, #12 GND	120 V Power	-
P-LAS-5100-01	3/4"	IP-2-MCC-1	LAS-5100	2#12, #12 GND	120 V Power	-
P-LAS-5200-01	3/4"	IP-2-MCC-1	LAS-5200	2#12, #12 GND	120 V Power	-
P-LAS-5300-01	3/4"	IP-2-MCC-1	LAS-5300	2#12, #12 GND	120 V Power	-
P-LAS-5400-01	3/4"	IP-2-MCC-1	LAS-5400	2#12, #12 GND	120 V Power	-
P-LAS-5500-01	3/4"	IP-2-MCC-1	LAS-5500	2#12, #12 GND	120 V Power	-
P-WIT-6312	3/4"	IP-2-MCC-1	WIT-6312	2#12, #12 GND	120 V Power	-
P-WIT-6332	3/4"	IP-2-MCC-1	WIT-6332	2#12, #12 GND	120 V Power	(1)
P-WIT-6342	3/4"	IP-2-MCC-1	WIT-6342	2#12, #12 GND	120 V Power	-
P-IP-4-MCC-2	3/4"	IP-2-MCC-2	IP-4-MCC-2	2#12, #12 GND	120 V Power	-
P-IP-6-MCC-2	3/4"	IP-2-MCC-2	IP-6-MCC-2	2#12, #12 GND	120 V Power	-
P-IP-8-MCC-2	3/4"	IP-2-MCC-2	IP-8-MCC-2	2#12, #12 GND	120 V Power	-
P-AIT-3113	3/4"	IP-3-MCC-1	AIT-3113	2#12, #12 GND	120 V Power	-
P-AIT-3114	3/4"	IP-3-MCC-1	AIT-3114	2#12, #12 GND	120 V Power	-

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RLWFP C&C SCHEDULE							
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS	
P-FIT-3116	3/4"	IP-3-MCC-1	FIT-3116	2#12, #12 GND	120 V Power	-	
P-FIT-3118	3/4"	IP-3-MCC-1	FIT-3118	2#12, #12 GND	120 V Power	-	
P-AIT-3213	3/4"	IP-3-MCC-1	AIT-3213	2#12, #12 GND	120 V Power	-	
P-AIT-3214	3/4"	IP-3-MCC-1	AIT-3214	2#12, #12 GND	120 V Power	-	
P-FIT-3216	3/4"	IP-3-MCC-1	FIT-3216	2#12, #12 GND	120 V Power	-	
P-FIT-3218	3/4"	IP-3-MCC-1	FIT-3218	2#12, #12 GND	120 V Power	-	
P-RIO-70	3/4"	IP-3-MCC-1	RIO-70	2#12, #12 GND	120 V Power	-	
P-LSH-5300	3/4"	IP-3-MCC-1	LSH-5300	2#12, #12 GND	120 V Power	-	
P-LIT-5311	3/4"	IP-3-MCC-1	LIT-5311	2#12, #12 GND	120 V Power	-	
P-LSHH-5312	3/4"	IP-3-MCC-1	LSHH-5312	2#12, #12 GND	120 V Power	-	
P-LIT-5321	3/4"	IP-3-MCC-1	LIT-5321	2#12, #12 GND	120 V Power	-	
P-LSHH-5322	3/4"	IP-3-MCC-1	LSHH-5322	2#12, #12 GND	120 V Power	-	
P-LIT-5351	3/4"	IP-3-MCC-1	LIT-5351	2#12, #12 GND	120 V Power	-	
P-RIO-31	3/4"	IP-3-MCC-2	RIO-31	2#12, #12 GND	120 V Power	-	

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		RLV	VFP C&C SCHEDULE			
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS
P-RIO-32	3/4"	IP-3-MCC-2	RIO-32	2#12, #12 GND	120 V Power	-
P-LIT-3111	3/4"	IP-3-MCC-2	LIT-3111	2#12, #12 GND	120 V Power	-
P-AIT-3112	3/4"	IP-3-MCC-2	AIT-3112	2#12, #12 GND	120 V Power	-
P-LIT-3211	3/4"	IP-3-MCC-2	LIT-3211	2#12, #12 GND	120 V Power	-
P-AIT-3212	3/4"	IP-3-MCC-2	AIT-3212	2#12, #12 GND	120 V Power	-
P-LIT-3311	3/4"	IP-3-MCC-2	LIT-3311	2#12, #12 GND	120 V Power	-
P-AIT-3312	3/4"	IP-3-MCC-2	AIT-3312	2#12, #12 GND	120 V Power	-
P-LIT-3411	3/4"	IP-3-MCC-2	LIT-3411	2#12, #12 GND	120 V Power	-
P-AIT-3412	3/4"	IP-3-MCC-2	AIT-3412	2#12, #12 GND	120 V Power	-
P-SP-01	3/4"	IP-3-MCC-2	SECURITY PANEL	2#12, #12 GND	120 V Power	-
P-RLWTP-PLC-PANEL- 01	3/4"	IP-3-MCC-2	RLWTP PLC PANEL	2#12, #12 GND	120 V Power	-
P-RIO-22	3/4"	IP-4-MCC-2	RIO-22	2#12, #12 GND	120 V Power	-
P-LIT-3511	3/4"	IP-4-MCC-2	LIT-3511	2#12, #12 GND	120 V Power	-
P-AIT-3512	3/4"	IP-4-MCC-2	AIT-3512	2#12, #12 GND	120 V Power	-

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	RLWFP C&C SCHEDULE							
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS		
P-LIT-3611	3/4"	IP-4-MCC-2	LIT-3611	2#12, #12 GND	120 V Power	-		
P-AIT-3612	3/4"	IP-4-MCC-2	AIT-3612	2#12, #12 GND	120 V Power	-		
P-LIT-3711	3/4"	IP-4-MCC-2	LIT-3711	2#12, #12 GND	120 V Power	-		
P-AIT-3712	3/4"	IP-4-MCC-2	AIT-3712	2#12, #12 GND	120 V Power	-		
P-RIO-33	3/4"	IP-5-MCC-2	RIO-33	2#12, #12 GND	120 V Power	-		
P-RIO-34	3/4"	IP-5-MCC-2	RIO-34	2#12, #12 GND	120 V Power	-		
P-AIT-3313	3/4"	IP-5-MCC-2	AIT-3313	2#12, #12 GND	120 V Power	-		
P-AIT-3314	3/4"	IP-5-MCC-2	AIT-3314	2#12, #12 GND	120 V Power	-		
P-FIT-3316	3/4"	IP-5-MCC-2	FIT-3316	2#12, #12 GND	120 V Power	-		
P-FIT-3318	3/4"	IP-5-MCC-2	FIT-3318	2#12, #12 GND	120 V Power	-		
P-AIT-3413	3/4"	IP-5-MCC-2	AIT-3413	2#12, #12 GND	120 V Power	-		
P-AIT-3414	3/4"	IP-5-MCC-2	AIT-3414	2#12, #12 GND	120 V Power	-		
P-FIT-3416	3/4"	IP-5-MCC-2	FIT-3416	2#12, #12 GND	120 V Power	<u>-</u>		
P-FIT-3418	3/4"	IP-5-MCC-2	FIT-3418	2#12, #12 GND	120 V Power	-		

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	RLWFP C&C SCHEDULE							
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS		
P-AIT-3513	3/4"	IP-5-MCC-2	AIT-3513	2#12, #12 GND	120 V Power	-		
P-AIT-3514	3/4"	IP-5-MCC-2	AIT-3514	2#12, #12 GND	120 V Power	-		
P-FIT-3516	3/4"	IP-5-MCC-2	FIT-3516	2#12, #12 GND	120 V Power	-		
P-FIT-3518	3/4"	IP-5-MCC-2	FIT-3518	2#12, #12 GND	120 V Power	-		
P-RIO-70	3/4"	IP-5-MCC-2	RIO-70	2#12, #12 GND	120 V Power			
P-AIT-3613	3/4"	IP-6-MCC-2	AIT-3613	2#12, #12 GND	120 V Power	-		
P-AIT-3614	3/4"	IP-6-MCC-2	AIT-3614	2#12, #12 GND	120 V Power	-		
P-FIT-3616	3/4"	IP-6-MCC-2	FIT-3616	2#12, #12 GND	120 V Power	<u>-</u>		
P-FIT-3618	3/4"	IP-6-MCC-2	FIT-3618	2#12, #12 GND	120 V Power	-		
P-AIT-3713	3/4"	IP-6-MCC-2	AIT-3713	2#12, #12 GND	120 V Power	-		
P-AIT-3714	3/4"	IP-6-MCC-2	AIT-3714	2#12, #12 GND	120 V Power	-		
P-FIT-3716	3/4"	IP-6-MCC-2	FIT-3716	2#12, #12 GND	120 V Power	-		
P-FIT-3718	3/4"	IP-6-MCC-2	FIT-3718	2#12, #12 GND	120 V Power	-		
P-LIT-7511	3/4"	IP-6-MCC-2	LIT-7511	2#12, #12 GND	120 V Power	-		

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	RLWFP C&C SCHEDULE							
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS		
P-LIT-7551	3/4"	IP-6-MCC-2	LIT-7551	2#12, #12 GND	120 V Power	-		
P-FIT-7591	3/4"	IP-6-MCC-2	FIT-7591	2#12, #12 GND	120 V Power	-		
P-LIT-7350	3/4"	IP-7-MCC-2	LIT-7350	2#12, #12 GND	120 V Power	-		
P-LIT-7360	3/4"	IP-7-MCC-2	LIT-7360	2#12, #12 GND	120 V Power	-		
P-FIT-7370	3/4"	IP-7-MCC-2	FIT-7370	2#12, #12 GND	120 V Power	-		
P-AIT-4111	3/4"	IP-7-MCC-2	AIT-4111	2#12, #12 GND	120 V Power	-		
P-AIT-4112	3/4"	IP-7-MCC-2	AIT-4112	2#12, #12 GND	120 V Power	-		
P-AIT-4113	3/4"	IP-7-MCC-2	AIT-4113	2#12, #12 GND	120 V Power	-		
P-LIT-4201	3/4"	IP-7-MCC-2	LIT-4201	2#12, #12 GND	120 V Power	-		
P-LIT-4301	3/4"	IP-7-MCC-2	LIT-4301	2#12, #12 GND	120 V Power	-		
P-LIT-7401	3/4"	IP-7-MCC-2	LIT-7401	2#12, #12 GND	120 V Power	<u>-</u>		
P-FIT-7403	3/4"	IP-7-MCC-2	FIT-7403	2#12, #12 GND	120 V Power	<u>-</u>		
P-AIT-4711	3/4"	IP-7-MCC-2	AIT-4711	2#12, #12 GND	120 V Power	<u>-</u>		
P-AIT-4712	3/4"	IP-7-MCC-2	AIT-4712	2#12, #12 GND	120 V Power	-		

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	RLWFP C&C SCHEDULE								
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS			
P-FIT-4713	3/4"	IP-7-MCC-2	FIT-4713	2#12, #12 GND	120 V Power	-			
P-AIT-4791	3/4"	IP-7-MCC-2	AIT-4791	2#12, #12 GND	120 V Power	-			
P-AIT-4792	3/4"	IP-7-MCC-2	AIT-4792	2#12, #12 GND	120 V Power	-			
P-AIT-4793	3/4"	IP-7-MCC-2	AIT-4793	2#12, #12 GND	120 V Power	-			
P-AIT-4794	3/4"	IP-7-MCC-2	AIT-4794	2#12, #12 GND	120 V Power	-			
P-PLC-UV-001	3/4"	IP-7-MCC-2	PLC-UV-001	2#12, #12 GND	120 V Power	-			
P-PLC-UV-002	3/4"	IP-7-MCC-2	PLC-UV-002	2#12, #12 GND	120 V Power	-			
P-PLC-UV-003	3/4"	IP-7-MCC-2	PLC-UV-003	2#12, #12 GND	120 V Power	-			
P-FIT-4412	3/4"	IP-7-MCC-2	FIT-4412	2#12, #12 GND	120 V Power	-			
P-FIT-4512	3/4"	IP-7-MCC-2	FIT-4512	2#12, #12 GND	120 V Power	-			
P-FIT-4612	3/4"	IP-7-MCC-2	FIT-4612	2#12, #12 GND	120 V Power	-			
P-S-4110	3/4"	IP-7-MCC-2	S-4110	2#12, #12 GND	120 V Power	-			
P-S-4120	3/4"	IP-7-MCC-2	S-4120	2#12, #12 GND	120 V Power	-			
P-S-4720	3/4"	IP-7-MCC-2	S-4720	2#12, #12 GND	120 V Power	-			

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	RLWFP C&C SCHEDULE							
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS		
P-RIO-60	3/4"	IP-7-MCC-2	RIO-60	2#12, #12 GND	120 V Power	-		
P-RIO-40	3/4"	IP-8-MCC-2	RIO-40	2#12, #12 GND	120 V Power	<u>-</u>		
P-RIO-50	3/4"	IP-8-MCC-2	RIO-50	2#12, #12 GND	120 V Power	-		
P-LSH-5100	3/4"	IP-8-MCC-2	LSH-5100	2#12, #12 GND	120 V Power	-		
P-LSHH-5112	3/4"	IP-8-MCC-2	LSHH-5112	2#12, #12 GND	120 V Power	-		
P-LSHH-5122	3/4"	IP-8-MCC-2	LSHH-5122	2#12, #12 GND	120 V Power	-		
P-LSH-5200	3/4"	IP-8-MCC-2	LSH-5200	2#12, #12 GND	120 V Power	-		
P-LIT-5211	3/4"	IP-8-MCC-2	LIT-5211	2#12, #12 GND	120 V Power	-		
P-LSHH-5212	3/4"	IP-8-MCC-2	LSHH-5212	2#12, #12 GND	120 V Power	-		
P-LIT-5221	3/4"	IP-8-MCC-2	LIT-5221	2#12, #12 GND	120 V Power	-		
P-LSHH-5222	3/4"	IP-8-MCC-2	LSHH-5222	2#12, #12 GND	120 V Power	-		
P-LIT-5251	3/4"	IP-8-MCC-2	LIT-5251	2#12, #12 GND	120 V Power	-		
P-LSH-5400	3/4"	IP-8-MCC-2	LSH-5400	2#12, #12 GND	120 V Power	-		
P-LIT-5411	3/4"	IP-8-MCC-2	LIT-5411	2#12, #12 GND	120 V Power	-		

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	RLWFP C&C SCHEDULE							
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS		
P-LSHH-5412	3/4"	IP-8-MCC-2	LSHH-5412	2#12, #12 GND	120 V Power	-		
P-LIT-5451	3/4"	IP-8-MCC-2	LIT-5451	2#12, #12 GND	120 V Power	-		
P-LIT-5511	3/4"	IP-8-MCC-2	LIT-5511	2#12, #12 GND	120 V Power	-		
P-LSH-5511	3/4"	IP-8-MCC-2	LSH-5511	2#12, #12 GND	120 V Power	-		
P-LSHH-5512	3/4"	IP-8-MCC-2	LSHH-5512	2#12, #12 GND	120 V Power	-		
P-WIT-5551	3/4"	IP-8-MCC-2	WIT-5551	2#12, #12 GND	120 V Power	-		
P-LCP-6330	3/4"	IP-8-MCC-2	LCP-6330	2#12, #12 GND	120 V Power	-		
P-LCP-6340	3/4"	IP-8-MCC-2	LCP-6340	2#12, #12 GND	120 V Power	-		
MOV-1710	3/4"	LP-1-MCC-1	MOV-1710	2#12, #12 GND	120 V Power	-		
P-P-1810	3/4"	LP-1-MCC-1	P-1810	2#12, #12 GND	120 V Power	-		
P-P-1820	3/4"	LP-1-MCC-1	P-1820	2#12, #12 GND	120 V Power	-		
P-P-1830	3/4"	LP-1-MCC-1	P-1830	2#12, #12 GND	120 V Power	-		
P-P-1840	3/4"	LP-1-MCC-1	P-1840	2#12, #12 GND	120 V Power	-		
P-P-1910	3/4"	LP-1-MCC-1	P-1910	2#12, #12 GND	120 V Power	-		

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RLWFP C&C SCHEDULE						
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS
P-P-1850	3/4"	LP-1-MCC-1	P-1850	2#12, #12 GND	120 V Power	-
P-P-1860	3/4"	LP-1-MCC-1	P-1860	2#12, #12 GND	120 V Power	-
P-EUH-01	3/4"	LP-1-MCC-1	EUH-01	3#12, #12 GND	208 V Power	
P-EUH-02	3/4"	LP-1-MCC-1	EUH-02	3#12, #12 GND	208 V Power	
P-MOV-3330	3/4"	LP-1-MCC-2	MOV-3330	2#12, #12 GND	120 V Power	<u>-</u>
P-MOV-3430	3/4"	LP-1-MCC-2	MOV-3430	2#12, #12 GND	120 V Power	-
P-MOV-3530	3/4"	LP-1-MCC-2	MOV-3530	2#12, #12 GND	120 V Power	-
P-MOV-3630	3/4"	LP-1-MCC-2	MOV-3630	2#12, #12 GND	120 V Power	-
P-MOV-3730	3/4"	LP-1-MCC-2	MOV-3730	2#12, #12 GND	120 V Power	-
P-MOV-3340	3/4"	LP-1-MCC-2	MOV-3340	2#12, #12 GND	120 V Power	-
P-MOV-3440	3/4"	LP-1-MCC-2	MOV-3440	2#12, #12 GND	120 V Power	-
P-MOV-3540	3/4"	LP-1-MCC-2	MOV-3540	2#12, #12 GND	120 V Power	-
P-MOV-3640	3/4"	LP-1-MCC-2	MOV-3640	2#12, #12 GND	120 V Power	-
P-MOV-3740	3/4"	LP-1-MCC-2	MOV-3740	2#12, #12 GND	120 V Power	-

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	RLWFP C&C SCHEDULE								
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS			
P-MOV-7120	3/4"	LP-1-MCC-2	MOV-7120	2#12, #12 GND	120 V Power	-			
P-DSW-ACCU-01-01	3/4"	LP-1-MCC-2	DSW-ACCU-01	2#10, #10 GND	208 V Power	-			
P-DSW-ACCU-02-01	3/4"	LP-1-MCC-2	DSW-ACCU-02	2#10, #10 GND	208 V Power	-			
P-DSW-ACCU-01-02	3/4"	DSW-ACCU-01	ACCU-01	2#10, #10 GND	208 V Power	-			
P-DSW-ACCU-02-02	3/4"	DSW-ACCU-02	ACCU-02	2#10, #10 GND	208 V Power	-			
P-MOV-5291	3/4"	LP-1-MCC-2	MOV-5291	2#12, #12 GND	120 V Power	-			
P-MOV-5292	3/4"	LP-1-MCC-2	MOV-5292	2#12, #12 GND	120 V Power	-			
P-MOV-5293	3/4"	LP-1-MCC-2	MOV-5293	2#12, #12 GND	120 V Power	-			
P-MOV-5294	3/4"	LP-1-MCC-2	MOV-5294	2#12, #12 GND	120 V Power	-			
P-MOV-5295	3/4"	LP-1-MCC-2	MOV-5295	2#12, #12 GND	120 V Power	-			
P-MOV-5296	3/4"	LP-1-MCC-2	MOV-5296	2#12, #12 GND	120 V Power	-			
P-MOV-5297	3/4"	LP-1-MCC-2	MOV-5297	2#12, #12 GND	120 V Power	-			
P-EUH-03	3/4"	LP-1-MCC-2	EUH-03	3#12, #12 GND	208 V Power				
P-EUH-04	3/4"	LP-1-MCC-2	EUH-04	3#12, #12 GND	208 V Power				

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RLWFP C&C SCHEDULE							
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS	
P-P-6330	3/4"	LP-2-MCC-1	P-6330	2#12, #12 GND	120 V Power	-	
P-P-6340	3/4"	LP-2-MCC-1	P-6340	2#12, #12 GND	120 V Power	-	
P-EF-05	3/4"	LP-2-MCC-1	EF-05	2#12, #12 GND	120 V Power	-	
P-M-6330	3/4"	LP-2-MCC-1	M-6330	2#12, #12 GND	120 V Power	-	
P-M-6340	3/4"	LP-2-MCC-1	M-6340	2#12, #12 GND	120 V Power	-	
P-UH-01	3/4"	LP-2-MCC-1	UH-01	2#12, #12 GND	120 V Power	-	
P-FACP-01	3/4"	LP-2-MCC-1	FACP-01	2#12, #12 GND	120 V Power	-	
P-MOV-3490	3/4"	LP-2-MCC-2	MOV-3490	2#12, #12 GND	120 V Power	-	
P-MOV-3590	3/4"	LP-2-MCC-2	MOV-3590	2#12, #12 GND	120 V Power	-	
P-MOV-3690	3/4"	LP-2-MCC-2	MOV-3690	2#12, #12 GND	120 V Power	-	
P-MOV-3790	3/4"	LP-2-MCC-2	MOV-3790	2#12, #12 GND	120 V Power	-	
P-EF-01	3/4"	LP-2-MCC-2	EF-01	3#12, #12 GND	208 V Power	-	
P-EF-02	3/4"	LP-2-MCC-2	EF-02	3#12, #12 GND	208 V Power	-	
P-VCP-5160	3/4"	LP-2-MCC-2	VCP-5160	2#12, #12 GND	120 V Power	-	

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	RLWFP C&C SCHEDULE								
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS			
P-VCP-5560	3/4"	LP-2-MCC-2	VCP-5560	2#12, #12 GND	120 V Power	-			
P-VCP-5570	3/4"	LP-2-MCC-2	VCP-5570	2#12, #12 GND	120 V Power	-			
P-P-5580	3/4"	LP-2-MCC-2	P-5580	2#12, #12 GND	120 V Power	-			
P-P-5590	3/4"	LP-2-MCC-2	P-5590	2#12, #12 GND	120 V Power	-			
P-VCP-5260	3/4"	LP-2-MCC-2	VCP-5260	2#12, #12 GND	120 V Power	-			
P-VCP-5270	3/4"	LP-2-MCC-2	VCP-5270	2#12, #12 GND	120 V Power	-			
P-VCP-5280	3/4"	LP-2-MCC-2	VCP-5280	2#12, #12 GND	120 V Power	-			
P-P-5290	3/4"	LP-2-MCC-2	P-5290	2#12, #12 GND	120 V Power	-			
P-VCP-5360	3/4"	LP-2-MCC-2	VCP-5360	2#12, #12 GND	120 V Power	-			
P-VCP-5370	3/4"	LP-2-MCC-2	VCP-5370	2#12, #12 GND	120 V Power	-			
P-VCP-5380	3/4"	LP-2-MCC-2	VCP-5380	2#12, #12 GND	120 V Power	-			
P-P-5390	3/4"	LP-2-MCC-2	P-5390	2#12, #12 GND	120 V Power	-			
P-P-5400	3/4"	LP-2-MCC-2	P-5400	2#12, #12 GND	120 V Power	-			
P-P-5410	3/4"	LP-2-MCC-2	P-5410	2#12, #12 GND	120 V Power	-			

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	RLWFP C&C SCHEDULE							
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS		
P-VCP-5460	3/4"	LP-2-MCC-2	VCP-5460	2#12, #12 GND	120 V Power	-		
P-VCP-5470	3/4"	LP-2-MCC-2	VCP-5470	2#12, #12 GND	120 V Power	-		
P-P-5480	3/4"	LP-2-MCC-2	P-5580	2#12, #12 GND	120 V Power	-		
P-P-5490	3/4"	LP-2-MCC-2	P-5590	2#12, #12 GND	120 V Power	<u>-</u>		
P-VCP-5170	3/4"	LP-2-MCC-2	VCP-5170	2#12, #12 GND	120 V Power	-		
P-VCP-5290	3/4"	LP-2-MCC-2	VCP-5290	2#12, #12 GND	120 V Power	-		
P-VCP-5390	3/4"	LP-2-MCC-2	VCP-5390	2#12, #12 GND	120 V Power	<u>-</u>		
P-EF-06	3/4"	LP-3-MCC-1	EF-06	2#12, #12 GND	120 V Power	-		
P-EF-08	3/4"	LP-3-MCC-1	EF-08	2#12, #12 GND	120 V Power	-		
P-DWH-01	3/4"	LP-3-MCC-1	DWH-01	3#12, #12 GND	208 V Power	-		
P-MOV-3100	3/4"	LP-3-MCC-1	MOV-3100	2#12, #12 GND	120 V Power	-		
P-MOV-3110	3/4"	LP-3-MCC-1	MOV-3110	2#12, #12 GND	120 V Power	-		
P-MOV-3120	3/4"	LP-3-MCC-1	MOV-3120	2#12, #12 GND	120 V Power	-		
P-MOV-3130	3/4"	LP-3-MCC-1	MOV-3130	2#12, #12 GND	120 V Power	-		

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		RLV	VFP C&C SCHEDULE			
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS
P-MOV-3210	3/4"	LP-3-MCC-1	MOV-3210	2#12, #12 GND	120 V Power	-
P-MOV-3220	3/4"	LP-3-MCC-1	MOV-3220	2#12, #12 GND	120 V Power	-
P-MOV-3130	3/4"	LP-3-MCC-1	MOV-3130	2#12, #12 GND	120 V Power	-
P-MOV-3230	3/4"	LP-3-MCC-1	MOV-3230	2#12, #12 GND	120 V Power	-
P-MOV-3140	3/4"	LP-3-MCC-1	MOV-3140	2#12, #12 GND	120 V Power	-
P-MOV-3240	3/4"	LP-3-MCC-1	MOV-3240	2#12, #12 GND	120 V Power	-
P-GMU-01	3/4"	LP-3-MCC-1	GMU-01	2#12, #12 GND	120 V Power	-
P-ET-01	3/4"	LP-3-MCC-1	ET-01	2#12, #12 GND	120 V Power	-
P-HWB-01	3/4"	LP-3-MCC-1	HWB-01	2#12, #12 GND	120 V Power	-
P-HWB-02	3/4"	LP-3-MCC-1	HWB-02	2#12, #12 GND	120 V Power	-
P-MOV-3310	3/4"	LP-3-MCC-2	MOV-3310	2#12, #12 GND	120 V Power	-
P-MOV-3320	3/4"	LP-3-MCC-2	MOV-3320	2#12, #12 GND	120 V Power	-
P-MOV-3410	3/4"	LP-3-MCC-2	MOV-3410	2#12, #12 GND	120 V Power	-
P-MOV-3420	3/4"	LP-3-MCC-2	MOV-3420	2#12, #12 GND	120 V Power	-

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	RLWFP C&C SCHEDULE								
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS			
P-MOV-3510	3/4"	LP-3-MCC-2	MOV-3510	2#12, #12 GND	120 V Power	-			
P-MOV-3520	3/4"	LP-3-MCC-2	MOV-3520	2#12, #12 GND	120 V Power	-			
P-MOV-3610	3/4"	LP-3-MCC-2	MOV-3610	2#12, #12 GND	120 V Power	-			
P-MOV-3620	3/4"	LP-3-MCC-2	MOV-3620	2#12, #12 GND	120 V Power	-			
P-MOV-3710	3/4"	LP-3-MCC-2	MOV-3710	2#12, #12 GND	120 V Power	-			
P-MOV-3720	3/4"	LP-3-MCC-2	MOV-3720	2#12, #12 GND	120 V Power	-			
P-FLOC_TANK_LIGHT	3/4"	LP-3-MCC-2	FLOC TANK LIGHT	2#12, #12 GND	120 V Power	SUBMERCIBLE RATED			
P-MOV-3190	3/4"	LP-4-MCC-2	MOV-3190	2#12, #12 GND	120 V Power	-			
P-MOV-3290	3/4"	LP-4-MCC-2	MOV-3290	2#12, #12 GND	120 V Power	-			
P-MOV-3390	3/4"	LP-4-MCC-2	MOV-3390	2#12, #12 GND	120 V Power	-			
P-EF-03	3/4"	LP-4-MCC-2	EF-03	3#12, #12 GND	208 V Power	-			
P-EF-04	3/4"	LP-4-MCC-2	EF-04	3#12, #12 GND	208 V Power	-			
P-MOV-7351	3/4"	LP-4-MCC-2	MOV-7351	2#12, #12 GND	120 V Power	-			
P-MOV-7361	3/4"	LP-4-MCC-2	MOV-7361	2#12, #12 GND	120 V Power	-			

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	RLWFP C&C SCHEDULE								
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS			
P-SP-01	3/4"	LP-5-MCC-2	SP-01	3#12, #12 GND	208 V Power	-			
P-SP-02	3/4"	LP-5-MCC-2	SP-02	3#12, #12 GND	208 V Power	-			
P-SP-03	3/4"	LP-5-MCC-2	SP-03	3#12, #12 GND	120 V Power	-			
P-RCP-01-01	3/4"	LP-5-MCC-2	RCP-01	2#12, #12 GND	120 V Power	-			
P-AHU-01-01	3/4"	PP-1-MCC-1	DSW-AHU-01	3#12, #12 GND	480 V Power	-			
P-AHU-01-02	3/4"	DSW-AHU-01	AHU-01	3#12, #12 GND	480 V Power	-			
P-AHU-07-01	3/4"	PP-1-MCC-1	DSW-AHU-07	3#12, #12 GND	480 V Power	-			
P-AHU-07-02	3/4"	DSW-AHU-07	AHU-07	3#12, #12 GND	480 V Power	-			
P-LP-1-MCC-1-01	1"	PP-1-MCC-1	XFMR-LP-1-MCC-1	3#4, #4 GND	480 V Power	-			
P-LP-3-MCC-1-01	1"	PP-1-MCC-1	XFMR-LP-3-MCC-1	3#4, #4 GND	480 V Power	-			
P-IP-1-MCC-1-01	3/4"	PP-1-MCC-1	XFMR-IP-1-MCC-1	3#10, #10 GND	480 V Power	-			
P-FOP-1-01	3/4"	PP-1-MCC-1	FOP-1	3#12, #12 GND	480 V Power	-			
P-FOP-2-01	3/4"	PP-1-MCC-1	FOP-2	3#12, #12 GND	480 V Power	-			
P-MOV-7590-01	3/4"	PP-1-MCC-1	MOV-7590	3#12, #12 GND	480 V Power	-			

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		RLV	WFP C&C SCHEDULE			
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS
P-AHU-02-01	3/4"	PP-1-MCC-2	DSW-AHU-02	3#12, #12 GND	480 V Power	-
P-AHU-02-02	3/4"	DSW-AHU-02	AHU-02	3#12, #12 GND	480 V Power	-
P-AHU-03-01	3/4"	PP-1-MCC-2	DSW-AHU-03	3#10, #10 GND	480 V Power	-
P-AHU-03-02	3/4"	DSW-AHU-03	AHU-03	3#10, #10 GND	480 V Power	-
P-AHU-04-01	3/4"	PP-1-MCC-2	DSW-AHU-04	3#8, #8 GND	480 V Power	-
P-AHU-04-02	3/4"	DSW-AHU-04	AHU-04	3#8, #8 GND	480 V Power	-
P-AHU-05-01	3/4"	PP-1-MCC-2	DSW-AHU-05	3#12, #12 GND	480 V Power	-
P-AHU-05-02	3/4"	DSW-AHU-05	AHU-05	3#12, #12 GND	480 V Power	-
P-MOV-3770-01	3/4"	PP-1-MCC-2	MOV-3770	3#12, #12 GND	480 V Power	-
P-LP-1-MCC-2-01	3/4"	PP-1-MCC-2	XFMR-LP-1-MCC-2	3#8, #8 GND	480 V Power	-
P-LP-3-MCC-2-01	3/4"	PP-1-MCC-2	XFMR-LP-3-MCC-2	3#8, #8 GND	480 V Power	-
P-LP-5-MCC-2-01	3/4"	PP-1-MCC-2	XFMR-LP-5-MCC-2	3#8, #8 GND	480 V Power	-
P-AHU-08-01	3/4"	PP-1-MCC-2	DSW-AHU-08	3#12, #12 GND	480 V Power	-
P-AHU-08-02	3/4"	DSW-AHU-08	AHU-08	3#12, #12 GND	480 V Power	-

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	RLWFP C&C SCHEDULE								
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS			
P-AHU-09-01	1"	PP-1-MCC-2	DSW-AHU-09	3#6, #6 GND	480 V Power	-			
P-AHU-09-02	1"	DSW-AHU-09	AHU-09	3#6, #6 GND	480 V Power	-			
P-LP-2-MCC-1-01	1"	PP-2-MCC-1	XFMR-LP-2-MCC-1	3#4, #4 GND	480 V Power	-			
P-LCP-6010-01	3/4"	PP-2-MCC-1	LCP-6010	3#8, #8 GND	480 V Power	-			
P-SLG-6450-01	3/4"	PP-2-MCC-1	SLG-6450	3#12, #12 GND	480 V Power	-			
P-SLG-6460-01	3/4"	PP-2-MCC-1	SLG-6460	3#12, #12 GND	480 V Power	-			
P-SLG-6470-01	3/4"	PP-2-MCC-1	SLG-6470	3#12, #12 GND	480 V Power	-			
P-LCP-7700-01	3/4"	PP-2-MCC-1	LCP-7700	3#12, #12 GND	480 V Power	-			
P-RUD-109-1-01	3/4"	PP-2-MCC-1	RUD-109-1	3#12, #12 GND	480 V Power	-			
P-RUD-109-2-01	3/4"	PP-2-MCC-1	RUD-109-2	3#12, #12 GND	480 V Power	-			
P-SLG-4250-01	3/4"	PP-2-MCC-1	SLG-4250	3#12, #12 GND	480 V Power	<u>-</u>			
P-ACCU-03-01	3/4"	LP-1-MCC-2	DSW-ACCU-03	2#10, #10 GND	208 V Power	-			
P-ACCU-03-02	3/4"	DSW-ACCU-03	ACCU-03	2#10, #10 GND	208 V Power	-			
P-ACCU-04-01	3/4"	LP-1-MCC-2	DSW-ACCU-04	3#10, #10 GND	208 V Power	-			

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	RLWFP C&C SCHEDULE								
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS			
P-ACCU-04-02	3/4"	DSW-ACCU-04	ACCU-04	3#10, #10 GND	208 V Power	-			
P-ACCU-05-01	3/4"	PP-2-MCC-2	DSW-ACCU-05	3#10, #10 GND	480 V Power	-			
P-ACCU-05-02	3/4"	DSW-ACCU-05	ACCU-05	3#10, #10 GND	480 V Power	-			
P-ACCU-06-01	3/4"	LP-1-MCC-2	DSW-ACCU-06	3#10, #10 GND	208 V Power	-			
P-ACCU-06-02	3/4"	DSW-ACCU-06	ACCU-06	3#10, #10 GND	208 V Power	-			
P-ACCU-07-01	3/4"	PP-2-MCC-2	DSW-ACCU-07	3#10, #10 GND	480 V Power	-			
P-ACCU-07-02	3/4"	DSW-ACCU-07	ACCU-07	3#10, #10 GND	480 V Power	-			
P-MOV-3680-01	3/4"	PP-2-MCC-2	MOV-3680	3#12, #12 GND	480 V Power	-			
P-LP-2-MCC-2-01	3/4"	PP-2-MCC-2	XFMR-LP-2-MCC-2	3#8, #8 GND	480 V Power	<u>-</u>			
P-MOV-3780-01	3/4"	PP-2-MCC-2	MOV-3780	3#12, #12 GND	480 V Power	-			
P-MOV-3370-01	3/4"	PP-2-MCC-2	MOV-3370	3#12, #12 GND	480 V Power	<u>-</u>			
P-MOV-3470-01	3/4"	PP-2-MCC-2	MOV-3470	3#12, #12 GND	480 V Power	-			
P-MOV-3570-01	3/4"	PP-2-MCC-2	MOV-3570	3#12, #12 GND	480 V Power	-			
P-MOV-3670-01	3/4"	PP-2-MCC-2	MOV-3670	3#12, #12 GND	480 V Power	-			

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	RLWFP C&C SCHEDULE							
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS		
P-AHU-06-01	3/4"	PP-2-MCC-2	DSW-AHU-06	3#12, #12 GND	480 V Power	-		
P-AHU-06-02	3/4"	DSW-AHU-06	AHU-06	3#12, #12 GND	480 V Power	<u>-</u>		
P-MOV-3160-01	3/4"	PP-3-MCC-1	MOV-3160	3#12, #12 GND	480 V Power	-		
P-MOV-3260-01	3/4"	PP-3-MCC-1	MOV-3260	3#12, #12 GND	480 V Power	-		
P-MOV-3360-01	3/4"	PP-3-MCC-1	MOV-3360	3#12, #12 GND	480 V Power	-		
P-MOV-3150-01	3/4"	PP-3-MCC-1	MOV-3150	3#12, #12 GND	480 V Power	-		
P-MOV-3250-01	3/4"	PP-3-MCC-1	MOV-3250	3#12, #12 GND	480 V Power	-		
P-MOV-3350-01	3/4"	PP-3-MCC-1	MOV-3350	3#12, #12 GND	480 V Power	-		
P-MOV-3180-01	3/4"	PP-3-MCC-1	MOV-3180	3#12, #12 GND	480 V Power	-		
P-MOV-3280-01	3/4"	PP-3-MCC-1	MOV-3280	3#12, #12 GND	480 V Power	-		
P-MOV-3380-01	3/4"	PP-3-MCC-1	MOV-3380	3#12, #12 GND	480 V Power	-		
P-MOV-3170-01	3/4"	PP-3-MCC-1	MOV-3170	3#12, #12 GND	480 V Power	-		
P-MOV-3270-01	3/4"	PP-3-MCC-1	MOV-3270	3#12, #12 GND	480 V Power	-		
P-COMP-7310-01	1"	PP-3-MCC-2	COMP-7310	3#6, #6 GND	480 V Power	-		

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	RLWFP C&C SCHEDULE								
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS			
P-COMP-7320-01	1"	PP-3-MCC-2	COMP-7320	3#6, #6 GND	480 V Power	-			
P-TWH-01-01	3/4"	PP-3-MCC-2	TWH-01	3#12, #12 GND	480 V Power	-			
P-RUD-106-2-01	3/4"	PP-3-MCC-2	RUD-106-2	3#12, #12 GND	480 V Power	-			
P-LP-4-MCC-2-01	3/4"	PP-3-MCC-2	XFMR-LP-4-MCC-2	3#8, #8 GND	480 V Power	-			
P-LCP-7610-01	3/4"	PP-3-MCC-2	LCP-7610	3#12, #12 GND	480 V Power	-			
P-MOV-1901-01	3/4"	PP-4-MCC-1	MOV-1901	3#12, #12 GND	480 V Power	-			
P-MOV-1902-01	3/4"	PP-4-MCC-1	MOV-1902	3#12, #12 GND	480 V Power	-			
P-MOV-3460-01	3/4"	PP-4-MCC-2	MOV-3460	3#12, #12 GND	480 V Power	-			
P-MOV-3560-01	3/4"	PP-4-MCC-2	MOV-3560	3#12, #12 GND	480 V Power	-			
P-MOV-3760-01	3/4"	PP-4-MCC-2	MOV-3760	3#12, #12 GND	480 V Power	-			
P-MOV-3860-01	3/4"	PP-4-MCC-2	MOV-3860	3#12, #12 GND	480 V Power	-			
P-MOV-3450-01	3/4"	PP-4-MCC-2	MOV-3450	3#12, #12 GND	480 V Power	-			
P-MOV-3550-01	3/4"	PP-4-MCC-2	MOV-3550	3#12, #12 GND	480 V Power	-			
P-MOV-3650-01	3/4"	PP-4-MCC-2	MOV-3650	3#12, #12 GND	480 V Power	-			

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		RLV	VFP C&C SCHEDULE			
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS
P-MOV-3750-01	3/4"	PP-4-MCC-2	MOV-3750	3#12, #12 GND	480 V Power	-
P-MOV-7450-01	3/4"	PP-4-MCC-2	MOV-7450	3#12, #12 GND	480 V Power	-
P-MOV-3480-01	3/4"	PP-4-MCC-2	MOV-3480	3#12, #12 GND	480 V Power	-
P-MOV-3580-01	3/4"	PP-4-MCC-2	MOV-3580	3#12, #12 GND	480 V Power	-
P-MOV-2110-01	3/4"	PP-5-MCC-2	MOV-2110	3#12, #12 GND	480 V Power	-
P-MOV-2210-01	3/4"	PP-5-MCC-2	MOV-2210	3#12, #12 GND	480 V Power	-
P-MOV-2310-01	3/4"	PP-5-MCC-2	MOV-2310	3#12, #12 GND	480 V Power	-
P-MOV-2410-01	3/4"	PP-5-MCC-2	MOV-2410	3#12, #12 GND	480 V Power	-
P-MOV-2510-01	3/4"	PP-5-MCC-2	MOV-2510	3#12, #12 GND	480 V Power	-
P-MOV-2610-01	3/4"	PP-5-MCC-2	MOV-2610	3#12, #12 GND	480 V Power	-
P-MOV-2710-01	3/4"	PP-5-MCC-2	MOV-2710	3#12, #12 GND	480 V Power	-
P-MOV-4240-01	3/4"	PP-6-MCC-2	MOV-4240	3#12, #12 GND	480 V Power	-
P-MOV-4340-01	3/4"	PP-6-MCC-2	MOV-4340	3#12, #12 GND	480 V Power	-
P-MOV-7440-01	3/4"	PP-6-MCC-2	MOV-7440	3#12, #12 GND	480 V Power	-

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	RLWFP C&C SCHEDULE									
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS				
P-RUD-129-2-01	3/4"	PP-6-MCC-2	RUD-129-2	3#12, #12 GND	480 V Power	-				
P-MOV-7352-01	3/4"	PP-UPS-MCC-2	MOV-7352	3#12, #12 GND	480 V Power	-				
P-MOV-7362-01	3/4"	PP-UPS-MCC-2	MOV-7362	3#12, #12 GND	480 V Power	-				
P-IP-2-MCC-2-01	3/4"	PP-UPS-MCC-2	XFMR-IP-2-MCC-2	3#10, #10 GND	480 V Power	-				
P-IP-1-MCC-2-01	3/4"	PP-UPS-MCC-2	XFMR-IP-1-MCC-2	3#10, #10 GND	480 V Power	-				
P-LP-1-MCC-1-02	2"	XFMR-LP1-MCC-1	LP-1-MCC-1	3#2/0, #2/0 GND	208 V Power	-				
P-LP-3-MCC-1-02	2"	XFMR-LP3-MCC-1	LP-3-MCC-1	3#2/0, #2/0 GND	208 V Power	-				
P-LP-1-MCC-2-02	2"	XFMR-LP-1-MCC- 2	LP-1-MCC-2	3#2, #2 GND	208 V Power	-				
P-LP-3-MCC-2-02	1"	XFMR-LP-3-MCC- 2	LP-3-MCC-2	3#6, #6 GND	208 V Power	-				
P-LP-5-MCC-2-02	2"	XFMR-LP-5-MCC- 2	LP-5-MCC-2	3#2, #2 GND	208 V Power	-				
P-LP-2-MCC-1-02	2"	XFMR-LP-2-MCC- 1	LP-2-MCC-1	3#2/0, #2/0 GND	208 V Power	-				
P-LP-2-MCC-2-02	2"	XFMR-LP-2-MCC- 2	LP-2-MCC-2	3#2, #2 GND	208 V Power	-				
P-LP-4-MCC-2-02	2"	XFMR-LP-4-MCC- 2	LP-4-MCC-2	3#2, #2 GND	208 V Power	-				
P-IP-1-MCC-1-02	1"	XFMR-IP-1-MCC-1	UPS-IP-1-MCC-1	3#6, #6 GND	208 V Power	-				

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	RLWFP C&C SCHEDULE								
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS			
P-IP-1-MCC-1-03	1"	UPS-IP-1-MCC-1	IP-1-MCC-1	3#6, #6 GND	208 V Power	-			
P-IP-2-MCC-2-02	1"	XFMR-IP-2-MCC-2	IP-2-MCC-2	3#6, #6 GND	208 V Power	-			
P-IP-1-MCC-2-02	2"	XFMR-IP-1-MCC-2	IP-1-MCC-2	3#3, #3 GND	208 V Power	-			
P-PP-1-MCC-1-01	3"	MCC-1	ATS-PP-1-MCC-1	3#250 KCMIL, #250 KCMIL GND	480 V Power	SECTION 3			
P-PP-1-MCC-1-02	3"	MCC-1	ATS-PP-1-MCC-1	3#250 KCMIL, #250 KCMIL GND	480 V Power	SECTION 11			
P-PP-1-MCC-1-03	3"	ATS-PP-1-MCC-1	PP-1-MCC-1	3#250 KCMIL, #250 KCMIL GND	480 V Power	-			
P-PP-2-MCC-1-01	2"	MCC-1A	PP-2-MCC-1	3#1/0, #1/0 GND	480 V Power	-			
P-PP-3-MCC-1-01	1"	MCC-1	PP-3-MCC-1	3#6, #6 GND	480 V Power	SECTION 12			
P-PP-1-MCC-2-01	3"	MCC-2	ATS-PP-1-MCC-2	3#250 KCMIL, #250 KCMIL GND	480 V Power	SECTION 4			
P-PP-1-MCC-2-02	3"	MCC-2	ATS-PP-1-MCC-2	3#250 KCMIL,	480 V Power	SECTION 40			

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RLWFP C&C SCHEDULE								
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS		
				#250 KCMIL GND				
P-PP-1-MCC-2-03	3"	ATS-PP-1-MCC-2	PP-1-MCC-2	3#250 KCMIL, #250 KCMIL GND	480 V Power	_		
P-PP-2-MCC-2-01	3"	MCC-2	ATS-PP-2-MCC-2	3#250 KCMIL, #250 KCMIL GND	480 V Power	SECTION 6		
P-PP-2-MCC-2-02	3"	MCC-2	ATS-PP-2-MCC-2	3#250 KCMIL, #250 KCMIL GND	480 V Power	SECTION 39		
P-PP-2-MCC-2-03	3"	ATS-PP-2-MCC-2	PP-2-MCC-2	3#250 KCMIL, #250 KCMIL GND	480 V Power	-		
P-PP-3-MCC-2-01	2"	MCC-2	PP-3-MCC-2	3#1/0, #1/0 GND	480 V Power	SECTION 1		
P-PP-4-MCC-2-01	1"	MCC-2	PP-4-MCC-2	3#6, #6 GND	480 V Power	-		
P-PP-5-MCC-2-01	1"	MCC-2	PP-5-MCC-2	3#6, #6 GND	480 V Power	-		
P-PP-6-MCC-2-01	1"	MCC-2	PP-6-MCC-2	3#6, #6 GND	480 V Power	-		
P-PP-UPS-MCC-2-01	1"	MCC-2	UPS-MCC-2	3#6, #6 GND	480 V Power	SECTION 21		

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		RLV	VFP C&C SCHEDULE					
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS		
P-PP-UPS-MCC-2-02	1"	UPS-MCC-2	PP-UPS-MCC-2	3#6, #6 GND	480 V Power	-		
P-IP-2-MCC-1-01	1"	IP-1-MCC-1	IP-2-MCC-1	3#6, #6 GND	120 V Power	-		
P-IP-3-MCC-1-01	1"	IP-1-MCC-1	IP-3-MCC-1	3#6, #6 GND	120 V Power	-		
P-IP-3-MCC-2-01	3/4"	IP-1-MCC-2	IP-3-MCC-2	3#8, #8 GND	120 V Power	-		
P-IP-5-MCC-2-01	3/4"	IP-1-MCC-2	IP-5-MCC-2	3#8, #8 GND	120 V Power	-		
P-IP-7-MCC-2-01	3/4"	IP-1-MCC-2	IP-7-MCC-2	3#8, #8 GND	120 V Power	-		
P-IP-4-MCC-2-01	3/4"	IP-2-MCC-2	IP-4-MCC-2	3#8, #8 GND	120 V Power	-		
P-IP-6-MCC-2-01	3/4"	IP-2-MCC-2	IP-6-MCC-2	3#8, #8 GND	120 V Power	-		
P-IP-8-MCC-2-01	3/4"	IP-2-MCC-2	IP-8-MCC-2	3#8, #8 GND	120 V Power	-		
P-ELEV-01	3/4"	MCC-1A	DSW-ELEV	3#12, #12 GND	480 V Power	SECTION 3		
P-ELEV-02	3/4"	DSW-ELEV	ELEVATOR CONTROLLER	3#12, #12 GND	480 V Power	SECTION 3		
P-HWP-01-01	3/4"	MCC-2A	DSW-HWP-01	3#12, #12 GND	480 V Power	SECTION 4		
P-HWP-01-02	3/4"	DSW-HWP-01	HWP-01	3#12, #12 GND	480 V Power	SECTION 4		

	RLWFP C&C SCHEDULE								
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS			
P-SF-1-01	3/4"	MCC-2A	DSW-SF-1	3#12, #12 GND	480 V Power	SECTION 7			
P-SF-1-02	3/4"	DSW-SF-1	SF-1	3#12, #12 GND	480 V Power	SECTION 7			
P-HWP-02-01	3/4"	MCC-2B	DSW-HWP-02	3#12, #12 GND	480 V Power	SECTION 11			
P-HWP-02-02	3/4"	DSW-HWP-02	HWP-02	3#12, #12 GND	480 V Power	SECTION 11			
P-6220-01	3/4"	MCC-1A	PPB-PG-03	3#10, #10 GND	480 V Power	SECTION 1			
C-6220-01	3/4"	MCC-1A	CPB-PG-03	6/C#14	Control	SECTION 1			
P-6230-01	3/4"	MCC-1A	PPB-PG-03	3#10, #10 GND	480 V Power	SECTION 2			
C-6230-01	3/4"	MCC-1A	CPB-PG-03	6/C#14	Control	SECTION 2			
C-6230-02	3/4"	MCC-1A	CENT-6310	6/C#14	Control	SECTION 2			
I-6230-03	1"	MCC-1A	CENT-6310	TSP #16	Instrumentation	SECTION 2			
P-6120-01	3/4"	MCC-1A	PPB-PG-03	3#12, #12 GND	480 V Power	SECTION 3			
C-6120-01	3/4"	MCC-1A	CPB-PG-03	6/C#14	Control	SECTION 3			
I-6120-01	1"	MCC-1A	IPB-PG-03	TSP #16	Instrumentation	SECTION 3			
P-UV-4410-01	2"	MCC-1A	CCP-4410	3#3, #3 GND	480 V Power	SECTION 4			
P-UV-4510-01	2"	MCC-1A	CCP-4510	3#3, #3 GND	480 V Power	SECTION 5			

	RLWFP C&C SCHEDULE							
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS		
P-6270-01	3/4"	MCC-1B	PPB-PG-03	3#10, #10 GND	480 V Power	SECTION 9		
C-6270-01	3/4"	MCC-1B	CPB-PG-03	6/C#14	Control	SECTION 9		
C-6270-02	3/4"	MCC-1B	CENT-6320	6/C#14	Control	SECTION 9		
I-6270-03	1"	MCC-1B	CENT-6320	TSP #16	Instrumentation	SECTION 9		
P-6220-01	3/4"	MCC-1B	PPB-PG-03	3#10, #10 GND	480 V Power	SECTION 9		
C-6220-01	3/4"	MCC-1B	CPB-PG-03	6/C#14	Control	SECTION 9		
P-6130-01	3/4"	MCC-1B	PPB-PG-03	3#12, #12 GND	480 V Power	SECTION 10		
C-6130-01	3/4"	MCC-1B	CPB-PG-03	6/C#14	Control	SECTION 10		
I-6130-01	1"	MCC-1B	IPB-PG-03	TSP #16	Instrumentation	SECTION 10		
P-UV-4610-01	2"	MCC-1B	CCP-4510	3#3, #3 GND	480 V Power	SECTION 10		
P-PG-03-01	2"	PPB-PG-03	PPB-PG-04	12#10, 4#12 GND 6#12, 2#12 GND	480 V Power	-		
C-PG-03-01	2"	CPB-PG-03	CPB-PG-04	6-6/C #14	Control	-		
I-PG-03-01	2"	IPB-PG-03	IPB-PG-04	6-TSP#16	Instrumentation	-		
P-6220-02	3/4"	PPB-PG-04	DSW-6220	3#10, #10 GND	480 V Power	-		
P-6220-03	3/4"	DSW-6220	P-6220	3#10, #10 GND	480 V Power	-		
C-6220-02	3/4"	CPB-PG-04	P-6220	6/C#14	Control	_		

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	RLWFP C&C SCHEDULE								
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS			
P-6230-02	3/4"	PPB-PG-04	DSW-6230	3#10, #10 GND	480 V Power	-			
P-6230-03	3/4"	DSW-6230	P-6230	3#10, #10 GND	480 V Power	-			
C-6230-02	3/4"	CPB-PG-04	P-6230	6/C#14	Control	-			
P-6120-02	3/4"	PPB-PG-04	DSW-6120	3#12, #12 GND	480 V Power	-			
P-6120-03	3/4"	DSW-6120	P-6120	3#12, #12 GND	480 V Power	-			
C-6120-02	3/4"	CPB-PG-04	P-6120	6/C#14	Control	-			
I-6120-02	1"	IPB-PG-04	P-6120	(3) TSP#16	Instrumentation	-			
P-6270-02	3/4"	PPB-PG-04	DSW-6270	3#10, #10 GND	480 V Power	-			
P-6270-03	3/4"	DSW-6270	P-6270	3#10, #10 GND	480 V Power	-			
C-6270-02	3/4"	CPB-PG-04	P-6270	6/C#14	Control	-			
P-6220-02	3/4"	PPB-PG-04	DSW-6220	3#10, #10 GND	480 V Power	-			
P-6220-03	3/4"	DSW-6220	P-6220	3#10, #10 GND	480 V Power	-			
C-6220-02	3/4"	CPB-PG-04	P-6220	6/C#14	Control	-			
P-6130-02	3/4"	PPB-PG-04	DSW-6130	3#12, #12 GND	480 V Power	-			
P-6130-03	3/4"	DSW-6130	P-6130	3#12, #12 GND	480 V Power	-			
C-6130-02	3/4"	CPB-PG-04	P-6130	6/C#14	Control	-			

		RLV	/FP C&C SCHEDULE			
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS
I-6130-02	1"	IPB-PG-04	P-6130	(3) TSP#16	Instrumentation	-
P-CENT-6310-01	2"	MCC-1A	PPB-DEWATERING- 01	3#2/0, #2/0 GND	480 V Power	SECTION 2
P-CONV-6430-01	3/4"	MCC-1A	PPB-DEWATERING- 01	3#12, #12 GND	480 V Power	SECTION 5
P-CENT-6315-01	3/4"	MCC-1A	PPB-DEWATERING- 01	3#8, #8 GND	480 V Power	SECTION 5
P-CONV-6420-01	3/4"	MCC-1A	PPB-DEWATERING- 02	3#12, #12 GND	480 V Power	SECTION 3
P-CONV-6440-01	3/4"	MCC-1B	PPB-DEWATERING- 01	3#12, #12 GND	480 V Power	SECTION 11
P-CENT-6320-01	2"	MCC-1B	PPB-DEWATERING- 01	3#2/0, 2/0 GND	480 V Power	SECTION 12
P-CENT-6325-01	3/4"	MCC-1B	PPB-DEWATERING- 01	3#8, #8 GND	480 V Power	SECTION 12
P-DEWATERING-01	4"	PPB- DEWATERING-01	PPB-DEWATERING- 02	3#2/0, 2/0 GND, 3#8, #8 GND, 3#12 #12 GND	480 V Power	_
. 22	·	PPB-	PPB-DEWATERING-	3#2/0, 2/0 GND, 3#8, #8 GND, 6#12 2#12		
P-DEWATERING-02	4"	DEWATERING-01	03	GND	480 V Power	-

		RLV	VFP C&C SCHEDULE			
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS
P-DEWATERING-03	2"	PPB- DEWATERING-02	LCP-6310	3#2/0, 2/0 GND, 3#8, #8 GND	480 V Power	-
P-CONV-6430-02	3/4"	PPB- DEWATERING-02	DSW-CONV-6430	3#12, #12 GND	480 V Power	-
P-CONV-6430-03	3/4"	DSW-CONV-6430	CONV-6430	3#12, #12 GND	480 V Power	-
P-DEWATERING-04	2"	PPB- DEWATERING-03	LCP-6320	3#2/0, 2/0 GND, 3#8, #8 GND	480 V Power	_
P-CONV-6420-02	3/4"	PPB- DEWATERING-03	DSW-CONV-6420	3#12, #12 GND	480 V Power	-
P-CONV-6420-03	3/4"	DSW-CONV-6420	CONV-6420	3#12, #12 GND	480 V Power	-
P-CONV-6440-02	3/4"	PPB- DEWATERING-03	DSW-CONV-6440	3#12, #12 GND	480 V Power	-
P-CONV-6440-03	3/4"	DSW-CONV-6440	CONV-6440	3#12, #12 GND	480 V Power	-
P-CENT-01	2"	LCP-6310	CENT-6310 & CENT- 6315	3#2/0, 2/0 GND, 3#8, #8 GND	480 V Power	-
P-CENT-02	2"	LCP-6320	CENT-6320 & CENT- 6325	3#2/0, 2/0 GND, 3#8, #8 GND	480 V Power	-
P-IWH-01-01	2"	MCC-1A	DSW-IWH-01	3#3, #3 GND	480 V Power	SECTION 1

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	RLWFP C&C SCHEDULE								
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS			
P-IWH-01-02	2"	DSW-IWH-01	IWH-01	3#3, #3 GND	480 V Power	SECTION 1			
P-DHU-01-01	2"	MCC-1A	DSW-DHU-01	3#2/0, 2/0 GND	480 V Power	SECTION 1			
P-DHU-01-02	2"	DSW-DHU-01	DHU-01	3#2/0, 2/0 GND	480 V Power	SECTION 1			
P-2120-01	3/4"	MCC-2A	PPB-FLOCC-01	3#12, #12 GND	480 V Power	SECTION 1			
C-2120-01	3/4"	MCC-2A	CPB-FLOCC-01	6/C#14	Control	SECTION 1			
I-2120-01	1"	MCC-2A	IPB-FLOCC-01	(3) TSP#16	Instrumentation	SECTION 1			
P-2220-01	3/4"	MCC-2A	PPB-FLOCC-01	3#12, #12 GND	480 V Power	SECTION 2			
C-2220-01	3/4"	MCC-2A	CPB-FLOCC-01	6/C#14	Control	SECTION 2			
I-2220-01	1"	MCC-2A	IPB-FLOCC-01	(3) TSP#16	Instrumentation	SECTION 2			
P-2320-01	3/4"	MCC-2A	PPB-FLOCC-01	3#12, #12 GND	480 V Power	SECTION 2			
C-2320-01	3/4"	MCC-2A	CPB-FLOCC-01	6/C#14	Control	SECTION 2			
I-2320-01	1"	MCC-2A	IPB-FLOCC-01	(3) TSP#16	Instrumentation	SECTION 2			
P-2420-01	3/4"	MCC-2A	PPB-FLOCC-01	3#12, #12 GND	480 V Power	SECTION 3			
C-2420-01	3/4"	MCC-2A	CPB-FLOCC-01	6/C#14	Control	SECTION 3			
I-2420-01	1"	MCC-2A	IPB-FLOCC-01	(3) TSP#16	Instrumentation	SECTION 3			

	RLWFP C&C SCHEDULE								
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS			
P-2520-01	3/4"	MCC-2A	PPB-FLOCC-01	3#12, #12 GND	480 V Power	SECTION 4			
C-2520-01	3/4"	MCC-2A	CPB-FLOCC-01	6/C#14	Control	SECTION 4			
I-2520-01	1"	MCC-2A	IPB-FLOCC-01	(3) TSP#16	Instrumentation	SECTION 4			
P-2620-01	3/4"	MCC-2A	PPB-FLOCC-01	3#12, #12 GND	480 V Power	SECTION 5			
C-2620-01	3/4"	MCC-2A	CPB-FLOCC-01	6/C#14	Control	SECTION 5			
I-2620-01	1"	MCC-2A	IPB-FLOCC-01	(3) TSP#16	Instrumentation	SECTION 5			
P-2720-01	3/4"	MCC-2A	PPB-FLOCC-01	3#12, #12 GND	480 V Power	SECTION 11			
C-2720-01	3/4"	MCC-2A	CPB-FLOCC-01	6/C#14	Control	SECTION 11			
I-2720-01	1"	MCC-2A	IPB-FLOCC-01	(3) TSP#16	Instrumentation	SECTION 11			
P-2130-01	3/4"	MCC-2B	PPB-FLOCC-01	3#12, #12 GND	480 V Power	SECTION 24			
C-2130-01	3/4"	MCC-2B	CPB-FLOCC-01	6/C#14	Control	SECTION 24			
I-2130-01	1"	MCC-2B	IPB-FLOCC-01	(3) TSP#16	Instrumentation	SECTION 24			
P-2230-01	3/4"	MCC-2B	PPB-FLOCC-01	3#12, #12 GND	480 V Power	SECTION 25			
C-2230-01	3/4"	MCC-2B	CPB-FLOCC-01	6/C#14	Control	SECTION 25			
I-2230-01	1"	MCC-2B	IPB-FLOCC-01	(3) TSP#16	Instrumentation	SECTION 25			

	RLWFP C&C SCHEDULE								
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS			
P-2330-01	3/4"	MCC-2B	PPB-FLOCC-01	3#12, #12 GND	480 V Power	SECTION 26			
C-2330-01 I-2330-01	3/4"	MCC-2B MCC-2B	CPB-FLOCC-01	6/C#14 (3) TSP#16	Control Instrumentation	SECTION 26 SECTION 26			
P-2430-01	3/4"	MCC-2B	PPB-FLOCC-01	3#12, #12 GND	480 V Power	SECTION 27			
C-2430-01	3/4"	MCC-2B	CPB-FLOCC-01	6/C#14	Control	SECTION 27			
I-2430-01 P-2530-01	3/4"	MCC-2B MCC-2B	IPB-FLOCC-01 PPB-FLOCC-01	(3) TSP#16 3#12, #12 GND	Instrumentation 480 V Power	SECTION 27 SECTION 36			
C-2530-01	3/4"	MCC-2B	CPB-FLOCC-01	6/C#14	Control	SECTION 36			
I-2530-01 P-2630-01	3/4"	MCC-2B MCC-2B	IPB-FLOCC-01 PPB-FLOCC-01	(3) TSP#16 3#12, #12 GND	Instrumentation 480 V Power	SECTION 36 SECTION 39			
C-2630-01	3/4"	MCC-2B	CPB-FLOCC-01	6/C#14	Control	SECTION 39			
I-2630-01 P-2730-01	3/4"	MCC-2B MCC-2B	IPB-FLOCC-01 PPB-FLOCC-01	(3) TSP#16 3#12, #12 GND	Instrumentation 480 V Power	SECTION 39 SECTION 41			
C-2730-01	3/4"	MCC-2B	CPB-FLOCC-01	6/C#14	Control	SECTION 41			
I-2730-01 C-FLOCC-01	1" 2"	MCC-2B CPB-FLOCC-01	IPB-FLOCC-01 CPB-FLOCC-02	(3) TSP#16 7-6/C#14	Instrumentation Control	SECTION 41 -			

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	RLWFP C&C SCHEDULE								
CONDUIT NUMBER	CONDUIT SIZE	FROM	ТО	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS			
C-FLOCC-02	2"	CPB-FLOCC-01	CPB-FLOCC-03	7-6/C#14	Control	•			
P-FLOCC-01	2"	PPB-FLOCC-01	PPB-FLOCC-02	21#12, 7#12 GND	480 V Power	-			
P-FLOCC-02	2"	PPB-FLOCC-01	PPB-FLOCC-03	21#12, 7#12 GND	480 V Power	-			
I-FLOCC-01	2"	IPB-FLOCC-01	IPB-FLOCC-02	(21) TSP #16	Instrumentation	-			
I-FLOCC-02	2"	IPB-FLOCC-01	IPB-FLOCC-03	(21) TSP #16	Instrumentation	•			
P-2120-02	3/4"	PPB-FLOCC-02	DSW-A-2120	3#12, #12 GND	480 V Power	•			
P-2120-03	3/4"	DSW-A-2120	A-2120	3#12, #12 GND	480 V Power	-			
C-2120-02	1"	CPB-FLOCC-02	A-2120	6/C#14	Control	-			
I-2120-02	1"	IPB-FLOCC-02	A-2120	(3) TSP#16	Instrumentation	-			
P-2130-02	3/4"	PPB-FLOCC-02	DSW-A-2130	3#12, #12 GND	480 V Power	-			
P-2130-03	3/4"	DSW-A-2130	A-2130	3#12, #12 GND	480 V Power	-			
C-2130-02	1"	CPB-FLOCC-02	A-2130	6/C#14	Control	-			
I-2130-02	1"	IPB-FLOCC-02	A-2130	(3) TSP#16	Instrumentation	-			
P-2220-02	3/4"	PPB-FLOCC-02	DSW-A-2220	3#12, #12 GND	480 V Power	-			
P-2220-03	3/4"	DSW-A-2220	A-2220	3#12, #12 GND	480 V Power	-			

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RLWFP C&C SCHEDULE								
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS		
C-2220-02	1"	CPB-FLOCC-02	A-2220	6/C#14	Control	-		
I-2220-02	1"	IPB-FLOCC-02	A-2220	(3) TSP#16	Instrumentation	-		
P-2230-02	3/4"	PPB-FLOCC-03	DSW-A-2230	3#12, #12 GND	480 V Power	-		
P-2230-03	3/4"	DSW-A-2230	A-2230	3#12, #12 GND	480 V Power	-		
C-2230-02	1"	CPB-FLOCC-03	A-2230	6/C#14	Control	-		
I-2230-02	1"	IPB-FLOCC-03	A-2230	(3) TSP#16	Instrumentation	-		
P-2320-02	3/4"	PPB-FLOCC-02	DSW-A-2320	3#12, #12 GND	480 V Power	-		
P-2320-03	3/4"	DSW-A-2320	A-2320	3#12, #12 GND	480 V Power	-		
C-2320-02	1"	CPB-FLOCC-02	A-2320	6/C#14	Control	-		
I-2320-02	1"	IPB-FLOCC-02	A-2320	(3) TSP#16	Instrumentation	-		
P-2330-02	3/4"	PPB-FLOCC-02	DSW-A-2330	3#12, #12 GND	480 V Power	-		
P-2330-03	3/4"	DSW-A-2330	A-2330	3#12, #12 GND	480 V Power	-		
C-2330-02	1"	CPB-FLOCC-02	A-2330	6/C#14	Control	-		
I-2330-02	1"	IPB-FLOCC-02	A-2330	(3) TSP#16	Instrumentation	-		
P-2420-02	3/4"	PPB-FLOCC-02	DSW-A-2420	3#12, #12 GND	480 V Power	-		
P-2420-03	3/4"	DSW-A-2420	A-2420	3#12, #12 GND	480 V Power	<u>-</u> _		
C-2420-02	1"	CPB-FLOCC-02	A-2420	6/C#14	Control	-		

		RLW	/FP C&C SCHEDULE			
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS
I-2420-02	1"	IPB-FLOCC-02	A-2420	(3) TSP#16	Instrumentation	-
P-2430-02	3/4"	PPB-FLOCC-03	DSW-A-2430	3#12, #12 GND	480 V Power	-
P-2430-03	3/4"	DSW-A-2430	A-2430	3#12, #12 GND	480 V Power	-
C-2430-02	1"	CPB-FLOCC-03	A-2430	6/C#14	Control	-
I-2430-02	1"	IPB-FLOCC-03	A-2430	(3) TSP#16	Instrumentation	-
P-2520-02	3/4"	PPB-FLOCC-03	DSW-A-2520	3#12, #12 GND	480 V Power	-
P-2520-03	3/4"	DSW-A-2520	A-2520	3#12, #12 GND	480 V Power	-
C-2520-02	1"	CPB-FLOCC-03	A-2520	6/C#14	Control	-
I-2520-02	1"	IPB-FLOCC-03	A-2520	(3) TSP#16	Instrumentation	-
P-2530-02	3/4"	PPB-FLOCC-03	DSW-A-2530	3#12, #12 GND	480 V Power	-
P-2530-03	3/4"	DSW-A-2530	A-2530	3#12, #12 GND	480 V Power	-
C-2530-02	1"	CPB-FLOCC-03	A-2530	6/C#14	Control	-
I-2530-02	1"	IPB-FLOCC-03	A-2530	(3) TSP#16	Instrumentation	-
P-2620-02	3/4"	PPB-FLOCC-03	DSW-A-2620	3#12, #12 GND	480 V Power	-
P-2620-03	3/4"	DSW-A-2620	A-2620	3#12, #12 GND	480 V Power	<u>-</u>
C-2620-02	1"	CPB-FLOCC-03	A-2620	6/C#14	Control	-
I-2620-02	1"	IPB-FLOCC-03	A-2620	(3) TSP#16	Instrumentation	-

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	RLWFP C&C SCHEDULE							
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS		
P-2630-02	3/4"	PPB-FLOCC-03	DSW-A-2630	3#12, #12 GND	480 V Power	-		
P-2630-03 C-2630-02	3/4"	DSW-A-2630 CPB-FLOCC-03	A-2630 A-2630	3#12, #12 GND 6/C#14	480 V Power Control	<u>-</u>		
I-2630-02	1"	IPB-FLOCC-03	A-2630 A-2630	(3) TSP#16	Instrumentation	<u>-</u>		
P-2720-02	3/4"	PPB-FLOCC-03	DSW-A-2720	3#12, #12 GND	480 V Power	<del>-</del>		
P-2720-03	3/4"	DSW-A-2720	A-2720	3#12, #12 GND	480 V Power	-		
C-2720-02	1"	CPB-FLOCC-03	A-2720	6/C#14	Control	-		
I-2720-03	1"	IPB-FLOCC-03	A-2720	(3) TSP#16	Instrumentation	-		
P-2730-02	3/4"	PPB-FLOCC-03	DSW-A-2730	3#12, #12 GND	480 V Power	-		
P-2730-03	3/4"	DSW-A-2730	A-2730	3#12, #12 GND	480 V Power	-		
C-2730-02	1"	CPB-FLOCC-03	A-2730	6/C#14	Control	-		
I-2730-02	1"	IPB-FLOCC-03	A-2730	(3) TSP#16	Instrumentation	-		
P-3191-01	3/4"	MCC-2A	DSW-SKMR-3191	3#12, #12 GND	480 V Power	SECTION 9		
P-3191-02	3/4"	DSW-SKMR-3191	SKMR-3191	3#12, #12 GND	480 V Power	SECTION 9		
C-3191-01	3/4"	MCC-2A	SKMR-3191	6/C#14	Control	SECTION 9		
I-3191-01	1"	MCC-2A	SKMR-3191	(3) TSP#16	Instrumentation	SECTION 9		

		RLW	/FP C&C SCHEDULE			
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS
P-3391-01	3/4"	MCC-2A	DSW-SKMR-3391	3#12, #12 GND	480 V Power	SECTION 9
P-3391-02 C-3391-01	3/4" 3/4"	DSW-SKMR-3391 MCC-2A	SKMR-3391 SKMR-3391	3#12, #12 GND 6/C#14	480 V Power Control	SECTION 9 SECTION 9
I-3391-01	1"	MCC-2A	SKMR-3391	(3) TSP#16	Instrumentation	SECTION 9
P-3591-01	3/4"	MCC-2A	DSW-SKMR-3591	3#12, #12 GND	480 V Power	SECTION 15
P-3591-02	3/4"	DSW-SKMR-3591	SKMR-3591	3#12, #12 GND	480 V Power	SECTION 15
C-3591-01	3/4"	MCC-2A	SKMR-3591	6/C#14	Control	SECTION 15
I-3591-01	1"	MCC-2A	SKMR-3591	(3) TSP#16	Instrumentation	SECTION 15
P-3791-01	3/4"	MCC-2A	DSW-SKMR-3791	3#12, #12 GND	480 V Power	SECTION 19
P-3791-02	3/4"	DSW-SKMR-3791	SKMR-3791	3#12, #12 GND	480 V Power	SECTION 19
C-3791-01	3/4"	MCC-2A	SKMR-3791	6/C#14	Control	SECTION 19
I-3791-01	1"	MCC-2A	SKMR-3791	(3) TSP#16	Instrumentation	SECTION 19
P-3291-01	3/4"	MCC-2B	DSW-SKMR-3291	3#12, #12 GND	480 V Power	SECTION 30
P-3291-02	3/4"	DSW-SKMR-3291	SKMR-3291	3#12, #12 GND	480 V Power	SECTION 30
C-3291-01	3/4"	MCC-2B	SKMR-3291	6/C#14	Control	SECTION 30
I-3291-01	1"	MCC-2B	SKMR-3291	(3) TSP#16	Instrumentation	SECTION 30

	RLWFP C&C SCHEDULE									
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS				
P-3491-01	3/4"	MCC-2B	DSW-SKMR-3491	3#12, #12 GND	480 V Power	SECTION 32				
P-3491-02 C-3491-01	3/4"	DSW-SKMR-3491 MCC-2B	SKMR-3491 SKMR-3491	3#12, #12 GND 6/C#14	480 V Power Control	SECTION 32 SECTION 32				
I-3491-01	1"	MCC-2B	SKMR-3491	(3) TSP#16	Instrumentation	SECTION 32				
P-3691-01	3/4"	MCC-2B	DSW-SKMR-3691	3#12, #12 GND	480 V Power	SECTION 32				
P-3691-02	3/4"	DSW-SKMR-3691	SKMR-3691	3#12, #12 GND	480 V Power	SECTION 32				
C-3691-01	3/4"	MCC-2B	SKMR-3691	6/C#14	Control	SECTION 32				
I-3691-01	1"	MCC-2B	SKMR-3691	(3) TSP#16	Instrumentation	SECTION 32				
P-5230-01	3/4"	MCC-2A	PPB-HYPO-01	3#12, #12 GND	480 V Power	SECTION 16				
C-5230-01	3/4"	MCC-2A	CPB-HYPO-01	4/C#14	Control	SECTION 16				
P-5330-01	3/4"	MCC-2A	PPB-HYDROXIDE-01	3#12, #12 GND	480 V Power	SECTION 16				
C-5330-01	3/4"	MCC-2A	CPB-HYDROXIDE-01	4/C#14	Control	SECTION 16				
P-5430-01	3/4"	MCC-2A	PPB-COAGULANT- CORROSION-01	3#12, #12 GND	480 V Power	SECTION 17				
C-5430-01	3/4"	MCC-2A	CPB-COAGULANT- CORROSION-01	4/C#14	Control	SECTION 17				
P-5530-01	3/4"	MCC-2A	PPB-HFS-01	3#12, #12 GND	480 V Power	SECTION 18				

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RLWFP C&C SCHEDULE								
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS		
C-5530-01	3/4"	MCC-2A	CPB-HFS-01	4/C#14	Control	SECTION 18		
P-5130-01	3/4"	MCC-2A	PPB-COAGULANT- CORROSION-01	3#12, #12 GND	480 V Power	SECTION 19		
C-5130-01	3/4"	MCC-2A	CPB-COAGULANT- CORROSION-01	4/C#14	Control	SECTION 19		
P-5140-01	3/4"	MCC-2B	PPB-COAGULANT- CORROSION-01	3#12, #12 GND	480 V Power	SECTION 28		
C-5140-01	3/4"	MCC-2B	CPB-COAGULANT- CORROSION-01	4/C#14	Control	SECTION 28		
P-5240-01	3/4"	MCC-2B	PPB-HYPO-01	3#12, #12 GND	480 V Power	SECTION 37		
C-5240-01	3/4"	MCC-2B	CPB-HYPO-01	4/C#14	Control	SECTION 37		
P-5340-01	3/4"	MCC-2B	PPB-HYDROXIDE-01	3#12, #12 GND	480 V Power	SECTION 37		
C-5340-01	3/4"	MCC-2B	CPB-HYDROXIDE-01	4/C#14	Control	SECTION 37		
P-5440-01	3/4"	MCC-2B	PPB-COAGULANT- CORROSION-01	3#12, #12 GND	480 V Power	SECTION 38		
C-5440-01	3/4"	MCC-2B	CPB-COAGULANT- CORROSION-01	4/C#14	Control	SECTION 38		
P-5540-01	3/4"	MCC-2B	PPB-HFS-01	3#12, #12 GND	480 V Power	SECTION 38		
C-5540-01	3/4"	MCC-2B	CPB-HFS-01	4/C#14	Control	SECTION 38		

		RLV	VFP C&C SCHEDULE			
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS
P-COAG	1"	PPB- COAGULANT- CORROSION-01	PPB-COAGULANT- CORROSION-02	12#12, 4#12 GND	480 V Power	-
C-COAG	1"	CPB- COAGULANT- CORROSION-01	CPB-COAGULANT- CORROSION-02	4-4/C#14	Control	<u>-</u>
P-HYPO	1"	PPB-HYPO-01	PPB-HYPO-02	6#12, 2#12 GND	480 V Power	-
C-HYPO	3/4"	CPB-HYPO-01	CPB-HYPO-02	2-4/C#14	Control	-
P-HYDROXIDE	1"	PPB- HYDROXIDE-01	PPB-HYDROXIDE-02	6#12, 2#12 GND	480 V Power	-
C-HYDROXIDE	3/4"	CPB- HYDROXIDE-01	CPB-HYDROXIDE-02	2-4/C#14	Control	-
P-HFS	1"	PPB-HFS-01	PPB-HFS-02	6#12, 2#12 GND	480 V Power	-
C-HFS	3/4"	CPB-HFS-01	CPB-HFS-02	2-4/C#14	Control	-
P-5130-02	3/4"	PPB- COAGULANT- CORROSION-02	LCS-5130	3#12, #12 GND	480 V Power	
P-5140-02	3/4"	PPB- COAGULANT- CORROSION-02	LCS-5140	3#12, #12 GND	480 V Power	-
P-5430-02	3/4"	PPB- COAGULANT- CORROSION-02	LCS-5430	3#12, #12 GND	480 V Power	-

		RLWI	FP C&C SCHEDULE			
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS
P-5440-02	3/4"	PPB- COAGULANT- CORROSION-02	LCS-5440	3#12, #12 GND	480 V Power	_
C-5130-02	3/4"	CPB- COAGULANT- CORROSION-02	LCS-5130	4/C#14	Control	-
C-5140-02	3/4"	CPB- COAGULANT- CORROSION-02	LCS-5140	4/C#14	Control	-
C-5430-02	3/4"	CPB- COAGULANT- CORROSION-02	LCS-5430	4/C#14	Control	-
C-5440-02	3/4"	CPB- COAGULANT- CORROSION-02	LCS-5440	4/C#14	Control	-
P-5230-02	3/4"	PPB-HYPO-02	LCS-5230	3#12, #12 GND	480 V Power	-
P-5240-02	3/4"	PPB-HYPO-02	LCS-5240	3#12, #12 GND	480 V Power	_
C-5230-02	3/4"	CPB-HYPO-02	LCS-5230	4/C#14	Control	-
C-5240-02	3/4"	CPB-HYPO-02	LCS-5240	4/C#14	Control	-
P-5330-02	3/4"	PPB- HYDROXIDE-02	LCS-5330	3#12, #12 GND	480 V Power	-
P-5340-02	3/4"	PPB- HYDROXIDE-02	LCS-5340	3#12, #12 GND	480 V Power	-
C-5330-02	3/4"	CPB- HYDROXIDE-02	LCS-5330	4/C#14	Control	

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		RLWF	P C&C SCHEDULE			
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS
C-5340-02	3/4"	CPB- HYDROXIDE-02	LCS-5340	4/C#14	Control	-
P-5530-02	3/4"	PPB-HFS-02	LCS-5530	3#12, #12 GND	480 V Power	-
P-5540-02	3/4"	PPB-HFS-02	LCS-5540	3#12, #12 GND	480 V Power	-
C-5530-02	3/4"	CPB-HFS-02	LCS-5530	4/C#14	Control	-
C-5540-02	3/4"	CPB-HFS-02	LCS-5540	4/C#14	Control	-
P-5130-03	3/4"	LCS-5130	P-5130	3#12, #12 GND	480 V Power	-
P-5140-03	3/4"	LCS-5140	P-5140	3#12, #12 GND	480 V Power	-
P-5430-03	3/4"	LCS-5430	P-5430	3#12, #12 GND	480 V Power	-
P-5440-03	3/4"	LCS-5440	P-5440	3#12, #12 GND	480 V Power	-
P-5230-03	3/4"	LCS-5230	P-5230	3#12, #12 GND	480 V Power	-
P-5240-03	3/4"	LCS-5240	P-5240	3#12, #12 GND	480 V Power	-
P-5330-03	3/4"	LCS-5330	P-5330	3#12, #12 GND	480 V Power	-
P-5340-03	3/4"	LCS-5340	P-5340	3#12, #12 GND	480 V Power	-
P-5530-03	3/4"	LCS-5530	P-5530	3#12, #12 GND	480 V Power	-

		RL	WFP C&C SCHEDULE			
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS
P-5540-03	3/4"	LCS-5540	P-5540	3#12, #12 GND	480 V Power	-
P-7530-01	1"	MCC-2A	PPB-480-WWWT-01	3#6, #6 GND	480 V Power	SECTION 12 Via Ductbank and Handholes <sup>(1)</sup>
C-7530-01	3/4"	MCC-2A	CPB-WWWT-01	4/C#14	Control	SECTION 12 Via Ductbank and Handholes <sup>(1)</sup>
P-7510-01	2"	MCC-2A	PPB-480-WWWT-01	3#3, #3 GND	480 V Power	SECTION 14 Via Ductbank and Handholes <sup>(1)</sup>
C-7510-01	3/4"	MCC-2A	CPB-WWWT-01	4/C#14	Control	SECTION 14  Via Ductbank and  Handholes <sup>(1)</sup>
P-7560-01	2"	MCC-2A	PPB-480-WWWT-02	3#3, #3 GND	480 V Power	SECTION 15 Via Ductbank and Handholes <sup>(1)</sup>
C-7560-01	3/4"	MCC-2A	CPB-WWWT-02	4/C#14	Control	SECTION 15 Via Ductbank and Handholes <sup>(1)</sup>
P-7580-01	1"	MCC-2B	PPB-480-WWWT-02	3#6, #6 GND	480 V Power	SECTION 34 Via Ductbank and Handholes <sup>(1)</sup>
C-7580-01	3/4"	MCC-2B	CPB-WWWT-02	4/C#14	Control	SECTION 34 Via Ductbank and Handholes <sup>(1)</sup>
P-7520-01	2"	MCC-2B	PPB-480-WWWT-01	3#3, #3 GND	480 V Power	SECTION 35

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		RLW	VFP C&C SCHEDULE			
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS
						Via Ductbank and Handholes <sup>(1)</sup>
C-7520-01	3/4"	MCC-2B	CPB-WWWT-01	4/C#14	Control	SECTION 35 Via Ductbank and Handholes <sup>(1)</sup>
P-7570-01	2"	MCC-2B	PPB-480-WWWT-02	3#3, #3 GND	480 V Power	SECTION 36 Via Ductbank and Handholes <sup>(1)</sup>
C-7570-01	3/4"	MCC-2B	CPB-WWWT-02	4/C#14	Control	SECTION 36 Via Ductbank and Handholes <sup>(1)</sup>
C-LSH7552-01	3/4"	RIO-MCC2	CPB-WWWT-01	2#14	Control	- Via Ductbank and Handholes <sup>(1)</sup>
C-LSH7512-01	3/4"	RIO-MCC2	CPB-WWWT-02	2#14	Control	- Via Ductbank and Handholes <sup>(1)</sup>
P-480-WWWT-01	2"	PPB-480-WWWT- 01	PPB-480-WWWT-03	6#3, 2#3 GND & 3#6, #6 GND	480 V Power	-
C-WWWT-01	1"	CPB-WWWT-01	CPB-WWWT-03	3-4/C#14, 2#14	Control	-
P-480-WWWT-02	2"	PPB-480-WWWT- 02	PPB-480-WWWT-04	6#3, 2#3 GND & 3#6, #6 GND	480 V Power	-
C-WWWT-02	1"	CPB-WWWT-02	CPB-WWWT-04	3-4/C#14, 2#14	Control	-
C-RIO-MCC-2-01	4"	CSI-MCC-2-A	RIO-MCC-2	322#14	Control	-

		RLV	VFP C&C SCHEDULE			
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS
C-RIO-MCC-2-02	4"	CSI-MCC-2-B	RIO-MCC-2	322#14	Control	-
I-RIO-MCC-2-01	4"	CSI-MCC-2-A	RIO-MCC-2	60#16 TSP	Instrumentation	-
I-RIO-MCC-2-02	4"	CSI-MCC-2-B	RIO-MCC-2	60#16 TSP	Instrumentation	-
C-RIO-MCC-1-01	2"	CSI-MCC-1-A	RIO-MCC-1	36#14	Control	-
C-RIO-MCC-1-02	2"	CSI-MCC-1-B	RIO-MCC-1	36#14	Control	_
I-RIO-MCC-1-01	1"	CSI-MCC-2-A	RIO-MCC-1	5#16 TSP	Instrumentation	-
I-RIO-MCC-1-02	1"	CSI-MCC-2-B	RIO-MCC-1	5#16 TSP	Instrumentation	-
I-LIT7511-01	3/4"	RIO-40	IPB-WWWT-01	2#16 TSP	Instrumentation	Via Ductbank and Handholes <sup>(1)</sup>
I-LIT7551-01	3/4"	RIO-40	IPB-WWWT-02	2#16 TSP	Instrumentation	Via Ductbank and Handholes <sup>(1)</sup>
I-LIT7511-02	1"	IPB-WWWT-01	IPB-WWWT-03	2#16 TSP	Instrumentation	-
I-LIT7551-02	1"	IPB-WWWT-02	IPB-WWWT-04	2#16 TSP	Instrumentation	-
I-LIT7511-03	1"	IPB-WWWT-03	LIT-7511	2#16 TSP	Instrumentation	-
I-LIT7551-03	1"	IPB-WWWT-04	LIT-7551	2#16 TSP	Instrumentation	-
P-CRN-01	3/4"	LP-2-MCC-2	PPB-120-WWWT-01	2#12, #12 GND	120 V Power	Via Ductbank and Handholes <sup>(1)</sup>
P-CRN-02	3/4"	LP-2-MCC-2	PPB-120-WWWT-02	2#12, #12 GND	120 V Power	Via Ductbank and Handholes <sup>(1)</sup>

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		RLW	/FP C&C SCHEDULE			
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS
P-LIT7511-01	3/4"	IP-8-MCC-2	PPB-120-WWWT-01	2#12, #12 GND	120 V Power	Via Ductbank and Handholes <sup>(1)</sup>
P-LIT7551-01	3/4"	IP-8-MCC-2	PPB-120-WWWT-02	2#12, #12 GND	120 V Power	Via Ductbank and Handholes <sup>(1)</sup>
P-120-WWWT-02	1"	PPB-120-WWWT- 02	PPB-120-WWWT-03	4#12, 2#12 GND	120 V Power	-
P-120-WWWT-01	1"	PPB-120-WWWT- 01	PPB-120-WWWT-04	4#12, 2#12 GND	120 V Power	-
P-LIT-7511-02	3/4"	PPB-120-WWWT- 03	LIT-7511	2#12, #12 GND	120 V Power	-
P-LIT-7552-02	3/4"	PPB-120-WWWT- 04	LIT-7551	2#12, #12 GND	120 V Power	-
P-LIT-CRN-03	3/4"	PPB-120-WWWT- 03	DAVIT CRANE 1	2#12, #12 GND	120 V Power	-
P-LIT-CRN-04	3/4"	PPB-120-WWWT- 04	DAVIT CRANE 2	2#12, #12 GND	120 V Power	-
P-480-WWWT-03	2"	PPB-480-WWWT- 03	PPB-480-WWWT-05	6#3, 2#3 GND & 3#6, #6 GND	480 V Power	-
P-480-WWWT-04	2"	PPB-480-WWWT- 04	PPB-480-WWWT-06	6#3, 2#3 GND & 3#6, #6 GND	480 V Power	-
C-WWWT-03	1"	CPB-WWWT-03	CPB-WWWT-05	3-4/C#14, 2#14	Control	-
C-WWWT-04	1"	CPB-WWWT-04	CPB-WWWT-06	3-4/C#14, 2#14	Control	-
C-LSH7512-02	3/4"	CPB-WWWT-05	LSH-7512	2#14	Control	-

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		RLW	/FP C&C SCHEDULE			
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS
C-7510-02	3/4"	CPB-WWWT-05	P-7510	4/C#14	Control	-
C-7520-02	3/4"	CPB-WWWT-05	P-7520	4/C#14	Control	-
C-7530-02	3/4"	CPB-WWWT-05	MX-7530	4/C#14	Control	-
P-7510-02	2"	PPB-480-WWWT- 05	DSW-P-7510	3#3, #3 GND 3#3, #3	480 V Power	-
P-7510-03	2"	DSW-P-7510	P-7510	GND	480 V Power	-
P-7520-02	2"	PPB-480-WWWT- 05	DSW-P-7520	3#3, #3 GND	480 V Power	-
P-7520-03	2"	DSW-P-7520	P-7520	3#3, #3 GND	480 V Power	-
P-7530-02	1"	PPB-480-WWWT- 05	DSW-MX-7530	3#6, #6 GND	480 V Power	-
P-7530-03	1"	DSW-MX-7530	MX-7530	3#6, #6 GND	480 V Power	-
C-LSH7552-02	3/4"	CPB-WWWT-06	LSH-7552	2#14	Control	-
C-7560-02	3/4"	CPB-WWWT-06	P-7560	4/C#14	Control	-
C-7570-02	3/4"	CPB-WWWT-06	P-7570	4/C#14	Control	-
C-7580-02	3/4"	CPB-WWWT-06	MX-7580	4/C#14	Control	-
P-7560-02	2"	PPB-480-WWWT- 06	DSW-P-7560	3#3, #3 GND	480 V Power	-
P-7560-03	2"	DSW-P-7560	P-7560	3#3, #3 GND	480 V Power	-
P-7570-02	2"	PPB-480-WWWT- 06	DSW-P-7570	3#3, #3 GND	480 V Power	-

		RLW	/FP C&C SCHEDULE			
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS
P-7570-03	2"	DSW-P-7570	P-7570	3#3, #3 GND	480 V Power	-
P-7580-02	1"	PPB-480-WWWT- 06	DSW-MX-7580	3#6, #6 GND	480 V Power	-
P-7580-03	1"	DSW-MX-7580	MX-7580	3#6, #6 GND	480 V Power	-
MOD-P-6230	3/4"	CENT-PLC-001	PLC-RLWFD	Cat 6 Cable		-
MOD-CENT-6310	3/4"	CENT-PLC-001	PLC-RLWFD	Cat 6 Cable		-
MOD-POLYMER-6330	3/4"	CENT-PLC-001	PLC-RLWFD	Cat 6 Cable		-
MOD-CONV-6410	3/4"	CENT-PLC-001	PLC-RLWFD	Cat 6 Cable		-
MOD-P-6270	3/4"	CENT-PLC-002	PLC-RLWFD	Cat 6 Cable		-
MOD-CENT-6320	3/4"	CENT-PLC-002	PLC-RLWFD	Cat 6 Cable		-
I-LIT-6211	3/4"	PLC-RLWFP	LIT-6211	2#16 TSP		-
I-LIT-6251	3/4"	PLC-RLWFP	LIT-6251	2#16 TSP		-
I-WIT-6332	3/4"	PLC-RLWFP	WIT-6332	2#16 TSP		-
I-WIT-6342	3/4"	PLC-RLWFP	WIT-6342	2#16 TSP		-
C-P-6120	1"	PLC-RLWFP	P-6120	4#14		-
C-P-6130	1"	PLC-RLWFP	P-6130	4#14		-
C-P-6220	1"	PLC-RLWFP	P-6220	4#14		-
C-P-6230	1"	PLC-RLWFP	P-6230	4#14		-
C-P-6260	1"	PLC-RLWFP	P-6260	4#14		-
C-P-6270	1"	PLC-RLWFP	P-6270	4#14		-
C-HVAC	1"	PLC-RLWFP	HVAC SYSTEM	6#14		-
C-FIT-6311	3/4"	PLC-RLFTP	FIT-6311	2#16 TSP		-

	RLWFP C&C SCHEDULE								
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS			
C-FIT-6312	3/4"	PLC-RLFTP	FIT-6312	2#16 TSP		-			
C-UV-4410	3/4"	PLC-UV-001	PLC-RLWFP	Cat 6 Cable		-			
C-UV-4510	3/4"	PLC-UV-002	PLC-RLWFP	Cat 6 Cable		-			
C-UV-4610	3/4"	PLC-UV-003	PLC-RLWFP	Cat 6 Cable		-			
I-FIT-1711	3/4"	RIO-21	FIT-1711	2#16 TSP		-			
I-AIT-1811	3/4"	RIO-21	AIT-1811	2#16 TSP		-			
I-AIT-1812	1"	RIO-21	AIT-1812	4#16 TSP		-			
I-AIT-1813	3/4"	RIO-21	AIT-1813	2#16 TSP		-			
I-AIT-1821	3/4"	RIO-21	AIT-1821	2#16 TSP		-			
I-AIT-1822	1"	RIO-21	AIT-1822	4#16 TSP		-			
I-AIT-1823	3/4"	RIO-21	AIT-1823	2#16 TSP		-			
I-LIT-1901	1"	RIO-21	LIT-1901	4#16 TSP		-			
I-RLPS	3/4"	RIO-21	RYE LAKE PUMP STATION	2#16 TSP		-			
I-LIT-1902	3/4"	RIO-21	LIT-1902	2#16 TSP		-			
I-AIT-1911	1"	RIO-21	AIT-1911	4#16 TSP		-			
I-AIT-1912	3/4"	RIO-21	AIT-1912	2#16 TSP		-			
C-MOV-1901	1"	RIO-21	MOV-1901	16#14					
I-MOV-1901	1"	RIO-21	MOV-1901	4#16 TSP					
C-MOV-1902	1"	RIO-21	MOV-1902	16#14					
I-MOV-1902	1"	RIO-21	MOV-1902	4#16 TSP					
C-MOV-2110	1"	RIO-21	MOV-2110	16#14		-			
C-MOV-2210	1"	RIO-21	MOV-2210	16#14		-			

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	RLWFP C&C SCHEDULE								
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS			
C-MOV-2310	1"	RIO-21	MOV-2310	16#14		-			
C-MOV-7590	1"	RIO-21	MOV-7590	16#14		-			
I-MOV-7590	1"	RIO-21	MOV-7590	4#16 TSP		-			
I-FIT-7591	3/4"	RIO-21	FIT-7591	2#16 TSP		-			
C-MOV-2410	1"	RIO-22	MOV-2410	16#14		-			
C-MOV-2510	1"	RIO-22	MOV-2510	16#14		-			
C-MOV-2610	1"	RIO-22	MOV-2610	16#14		-			
C-MOV-2710	1"	RIO-22	MOV-2710	16#14		-			
C-MOV-3100	1"	RIO-31	MOV-3100	16#14		-			
C-MOV-3110	1"	RIO-31	MOV-3110	16#14		-			
I-LIT-3111	3/4"	RIO-31	LIT-3111	2#16 TSP		-			
I-LIT-3119	3/4"	RIO-31	LIT-3119	2#16 TSP		-			
C-MOV-3120	1"	RIO-31	MOV-3120	16#14		-			
C-MOV-3130	1"	RIO-31	MOV-3130	16#14		-			
C-MOV-3140	1"	RIO-31	MOV-3140	16#14		-			
C-MOV-3200	1"	RIO-31	MOV-3200	16#14		-			
C-MOV-3210	1"	RIO-31	MOV-3210	16#14		-			
I-LIT-3211	3/4"	RIO-31	LIT-3211	2#16 TSP		-			
I-LIT-3219	3/4"	RIO-31	LIT-3219	2#16 TSP		-			
C-MOV-3220	1"	RIO-31	MOV-3220	16#14		-			
C-MOV-3230	1"	RIO-31	MOV-3230	16#14		-			
C-MOV-3240	1"	RIO-31	MOV-3240	16#14		-			
C-MOV-3300	1"	RIO-31	MOV-3300	16#14		-			
C-MOV-3310	1"	RIO-31	MOV-3310	16#14		-			

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	RLWFP C&C SCHEDULE								
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS			
I-LIT-3311	1"	RIO-31	LIT-3311	2#16 TSP		-			
I-LIT-3319	3/4"	RIO-31	LIT-3319	2#16 TSP		-			
C-MOV-3320	3/4"	RIO-31	MOV-3320	16#14		-			
C-MOV-3330	1"	RIO-31	MOV-3330	16#14		-			
C-MOV-3340	1"	RIO-31	MOV-3340	16#14		-			
C-MOV-3400	1"	RIO-31	MOV-3400	16#14		-			
C-MOV-3410	1"	RIO-31	MOV-3410	16#14		-			
I-LIT-3411	1"	RIO-31	LIT-3411	2#16 TSP		-			
I-LIT-3419	1"	RIO-31	LIT-3419	2#16 TSP		-			
C-MOV-3420	3/4"	RIO-31	MOV-3420	16#14		-			
C-MOV-3430	3/4"	RIO-31	MOV-3430	16#14		-			
C-MOV-3440	1"	RIO-31	MOV-3440	16#14		-			
C-MOV-3500	1"	RIO-32	MOV-3500	16#14		-			
C-MOV-3510	1"	RIO-32	MOV-3510	16#14		-			
I-LIT-3511	1"	RIO-32	LIT-3511	2#16 TSP		-			
I-LIT-3519	1"	RIO-32	LIT-3519	2#16 TSP		-			
C-MOV-3520	1"	RIO-32	MOV-3520	16#14		-			
C-MOV-3530	3/4"	RIO-32	MOV-3530	16#14		-			
C-MOV-3540	3/4"	RIO-32	MOV-3540	16#14		-			
C-MOV-3600	1"	RIO-32	MOV-3600	16#14		-			
C-MOV-3610	1"	RIO-32	MOV-3610	16#14		-			
I-LIT-3611	1"	RIO-32	LIT-3611	2#16 TSP		-			
I-LIT-3619	1"	RIO-32	LIT-3619	2#16 TSP		-			
C-MOV-3620	1"	RIO-32	MOV-3620	16#14		-			

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	RLWFP C&C SCHEDULE								
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS			
C-MOV-3630	1"	RIO-32	MOV-3630	16#14		-			
C-MOV-3640	3/4"	RIO-32	MOV-3640	16#14		-			
C-MOV-3700	3/4"	RIO-32	MOV-3700	16#14		-			
C-MOV-3710	1"	RIO-32	MOV-3710	16#14		-			
I-LIT-3711	1"	RIO-32	LIT-3711	2#16 TSP		-			
I-LIT-3719	1"	RIO-32	LIT-3719	2#16 TSP		-			
C-MOV-3720	1"	RIO-32	MOV-3720	16#14		-			
C-MOV-3730	1"	RIO-32	MOV-3730	16#14		-			
C-MOV-3740	1"	RIO-32	MOV-3740	16#14		-			
I-PIT-3117	3/4"	RIO-33	PIT-3117	2#16 TSP		-			
I-FIT-3118	3/4"	RIO-33	FIT-3118	2#16 TSP		-			
C-MOV-3150	1"	RIO-33	MOV-3150	16#14		-			
C-MOV-3160	1"	RIO-33	MOV-3160	16#14		-			
I-MOV-3160	1"	RIO-33	MOV-3160	4#16 TSP		-			
C-MOV-3170	1"	RIO-33	MOV-3170	16#14		-			
I-MOV-3170	1"	RIO-33	MOV-3170	4#16 TSP		-			
C-MOV-3180	1"	RIO-33	MOV-3180	16#14		-			
I-MOV-3180	1"	RIO-33	MOV-3180	4#16 TSP		-			
C-MOV-3190	1"	RIO-33	MOV-3190	16#14		-			
I-PIT-3217	3/4"	RIO-33	PIT-3217	2#16 TSP		-			
I-FIT-3218	3/4"	RIO-33	FIT-3218	2#16 TSP		-			
C-MOV-3250	1"	RIO-33	MOV-3250	16#14		-			
C-MOV-3260	1"	RIO-33	MOV-3260	16#14		-			
I-MOV-3260	1"	RIO-33	MOV-3260	4#16 TSP		-			

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	RLWFP C&C SCHEDULE								
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS			
C-MOV-3270	1"	RIO-33	MOV-3270	16#14		-			
I-MOV-3270	1"	RIO-33	MOV-3270	4#16 TSP		-			
C-MOV-3280	1"	RIO-33	MOV-3280	16#14		-			
I-MOV-3280	1"	RIO-33	MOV-3280	4#16 TSP		-			
C-MOV-3290	1"	RIO-33	MOV-3290	16#14		-			
I-PIT-3317	3/4"	RIO-33	PIT-3317	2#16 TSP		-			
I-FIT-3318	3/4"	RIO-33	FIT-3318	2#16 TSP		-			
C-MOV-3350	1"	RIO-33	MOV-3350	16#14		-			
C-MOV-3360	1"	RIO-33	MOV-3360	16#14		-			
I-MOV-3360	1"	RIO-33	MOV-3360	4#16 TSP		-			
C-MOV-3370	1"	RIO-33	MOV-3370	16#14		-			
I-MOV-3370	1"	RIO-33	MOV-3370	4#16 TSP		-			
C-MOV-3380	1"	RIO-33	MOV-3380	16#14		-			
I-MOV-3380	1"	RIO-33	MOV-3380	4#16 TSP		-			
C-MOV-3390	1"	RIO-33	MOV-3390	16#14		-			
I-PIT-3417	3/4"	RIO-33	PIT-3417	2#16 TSP		-			
I-FIT-3418	3/4"	RIO-33	FIT-3418	2#16 TSP		-			
C-MOV-3450	1"	RIO-33	MOV-3450	16#14		-			
C-MOV-3460	1"	RIO-33	MOV-3460	16#14		-			
I-MOV-3460	1"	RIO-33	MOV-3460	4#16 TSP		-			
C-MOV-3470	1"	RIO-33	MOV-3470	16#14		-			
I-MOV-3470	1"	RIO-33	MOV-3470	4#16 TSP		-			
C-MOV-3480	1"	RIO-33	MOV-3480	16#14		-			
I-MOV-3480	1"	RIO-33	MOV-3480	4#16 TSP		-			

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	RLWFP C&C SCHEDULE								
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS			
C-MOV-3490	1"	RIO-33	MOV-3490	16#14		-			
I-PIT-3517	3/4"	RIO-34	PIT-3517	2#16 TSP		-			
I-FIT-3518	3/4"	RIO-34	FIT-3518	2#16 TSP		-			
C-MOV-3550	1"	RIO-34	MOV-3550	16#14		-			
C-MOV-3560	1"	RIO-34	MOV-3560	16#14		-			
I-MOV-3560	1"	RIO-34	MOV-3560	4#16 TSP		-			
C-MOV-3570	1"	RIO-34	MOV-3570	16#14		-			
I-MOV-3570	1"	RIO-34	MOV-3570	4#16 TSP		-			
C-MOV-3580	1"	RIO-34	MOV-3580	16#14		-			
I-MOV-3580	1"	RIO-34	MOV-3580	4#16 TSP		-			
C-MOV-3590	1"	RIO-34	MOV-3590	16#14		-			
I-PIT-3617	3/4"	RIO-34	PIT-3617	2#16 TSP		-			
I-FIT-3618	3/4"	RIO-34	FIT-3618	2#16 TSP		-			
C-MOV-3650	1"	RIO-34	MOV-3650	16#14		-			
C-MOV-3660	1"	RIO-34	MOV-3660	16#14		-			
I-MOV-3660	1"	RIO-34	MOV-3660	4#16 TSP		-			
C-MOV-3670	1"	RIO-34	MOV-3670	16#14					
I-MOV-3670	1"	RIO-34	MOV-3670	4#16 TSP					
C-MOV-3680	1"	RIO-34	MOV-3680	16#14		-			
I-MOV-3680	1"	RIO-34	MOV-3680	4#16 TSP		-			
C-MOV-3690	1"	RIO-34	MOV-3690	16#14		-			
I-PIT-3717	3/4"	RIO-34	PIT-3717	2#16 TSP		-			
I-FIT-3718	3/4"	RIO-34	FIT-3718	2#16 TSP		-			
C-MOV-3750	1"	RIO-34	MOV-3750	16#14		-			

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	RLWFP C&C SCHEDULE								
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS			
C-MOV-3760	1"	RIO-34	MOV-3760	16#14		-			
I-MOV-3760	1"	RIO-34	MOV-3760	4#16 TSP		-			
C-MOV-3770	1"	RIO-34	MOV-3770	16#14		-			
I-MOV-3770	1"	RIO-34	MOV-3770	4#16 TSP		-			
C-MOV-3780	1"	RIO-34	MOV-3780	16#14		-			
I-MOV-3780	1"	RIO-34	MOV-3780	4#16 TSP		-			
C-MOV-3790	1"	RIO-34	MOV-3790	16#14		-			
I-AIT-4111	3/4"	RIO-34	AIT-4111	2#16 TSP		-			
I-AIT-4113	3/4"	RIO-34	AIT-4113	2#16 TSP		-			
C-MOV-4240	1"	RIO-34	MOV-4240	16#14		-			
C-MOV-4340	1"	RIO-34	MOV-4340	16#14		-			
I-FIT-7403	3/4"	RIO-34	FIT-7403	2#16 TSP		-			
I-T7400	3/4"	RIO-34	T7400	2#16 TSP		-			
C-SLG-4250	1"	RIO-34	SLG-4250	16#14		-			
C-MOV-7440	1"	RIO-34	MOV-7440	16#14		-			
C-MOV-7450	1"	RIO-34	MOV-7450	16#14		-			
I-MOV-7450	1"	RIO-34	MOV-7450	4#16 TSP					
C-LSH-5100	1"	RIO-40	LSH-5100	2#14					
C-FSH-5120	1"	RIO-40	FSH-5120	2#14		-			
C-FSH-5103	1"	RIO-40	FSH-5103	2#14		-			
I-LIT-5110	3/4"	RIO-40	LIT-5110	2#16 TSP		-			
C-LSH-5112	1"	RIO-40	LSH-5112	2#14		-			
I-LIT-5120	3/4"	RIO-40	LIT-5120	2#16 TSP		-			
C-LSH-5122	1"	RIO-40	LSH-5122	2#14		-			

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		RLV	VFP C&C SCHEDULE			
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS
I-LIT-5150	3/4"	RIO-40	LIT-5150	2#16 TSP		-
C-LSH-5151	1"	RIO-40	LSH-5151	2#14		-
C-P-5160	1"	RIO-40	P-5160	10#14		-
I-P-5160	1"	RIO-40	P-5160	4#16 TSP		-
C-P-5170	1"	RIO-40	P-5170	10#14		-
I-P-5170	1"	RIO-40	P-5170	4#16 TSP		-
C-LSH-5200	1"	RIO-40	LSH-5200	2#14		-
C-FSH-5202	1"	RIO-40	FSH-5202	2#14		-
C-FSH-5203	1"	RIO-40	FSH-5203	2#14		-
I-AIT-5204	3/4"	RIO-40	AIT-5204	2#16 TSP		-
I-LIT-5211	3/4"	RIO-40	LIT-5211	2#16 TSP		-
C-LSH-5212	1"	RIO-40	LSH-5212	2#14		-
I-LIT-5221	3/4"	RIO-40	LIT-5221	2#16 TSP		-
C-LSH-5222	1"	RIO-40	LSH-5222	2#14		-
I-LIT-5251	3/4"	RIO-40	LIT-5251	2#16 TSP		-
C-LSH-5251	1"	RIO-40	LSH-5251	2#14		-
C-P-5260	1"	RIO-40	P-5260	10#14		-
I-P-5260	1"	RIO-40	P-5260	4#16 TSP		-
C-P-5270	1"	RIO-40	P-5270	10#14		-
I-P-5270	1"	RIO-40	P-5270	4#16 TSP		-
C-P-5280	1"	RIO-40	P-5280	10#14		-
I-P-5280	1"	RIO-40	P-5280	4#16 TSP		-
C-P-5360	1"	RIO-40	P-5360	10#14		-
I-P-5360	1"	RIO-40	P-5360	4#16 TSP		-

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		RLV	WFP C&C SCHEDULE			
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS
C-P-5370	1"	RIO-40	P-5370	10#14		-
I-P-5370	1"	RIO-40	P-5370	4#16 TSP		-
C-P-5380	1"	RIO-40	P-5380	10#14		-
I-P-5380	1"	RIO-40	P-5380	4#16 TSP		-
C-P-5390	1"	RIO-40	P-5390	10#14		
I-P-5390	1"	RIO-40	P-5390	4#16 TSP		
C-LSH-5400	1"	RIO-40	LSH-5400	2#14		-
C-FSH-5402	1"	RIO-40	FSH-5402	2#14		-
I-LIT-5411	3/4"	RIO-40	LIT-5411	2#16 TSP		-
C-LSH-5412	1"	RIO-40	LSH-5412	2#14		-
I-LIT-5451	3/4"	RIO-40	LIT-5451	2#16 TSP		-
C-LSH-5451	1"	RIO-40	LSH-5451	2#14		-
C-P-5460	1"	RIO-40	P-5460	10#14		-
I-P-5460	1"	RIO-40	P-5460	4#16 TSP		-
C-P-5470	1"	RIO-40	P-5470	10#14		-
I-P-5470	1"	RIO-40	P-5470	4#16 TSP		-
C-LSH-5500	1"	RIO-40	LSH-5500	2#14		-
C-FSH-5502	1"	RIO-40	FSH-5502	2#14		-
C-FSH-5503	1"	RIO-40	FSH-5503	2#14		-
I-LIT-5511	3/4"	RIO-40	LIT-5511	2#16 TSP		-
C-LSH-5512	1"	RIO-40	LSH-5512	2#14		-
I-WIT-5551	3/4"	RIO-40	WIT-5551	2#16 TSP		-
C-WSH-5551	1"	RIO-40	WSH-5551	2#14		-
C-P-5560	1"	RIO-40	P-5560	10#14		-

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		RLV	WFP C&C SCHEDULE			
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS
I-P-5560	1"	RIO-40	P-5560	4#16 TSP		-
C-P-5570	1"	RIO-40	P-5570	10#14		-
I-P-5570	1"	RIO-40	P-5570	4#16 TSP		-
I-LIT-7401	3/4"	RIO-40	LIT-7401	2#16 TSP		-
I-LSH-7402	1"	RIO-40	LSH-7402	2#14		-
I-LIT-7511	3/4"	RIO-40	LIT-7511	2#16 TSP		-
I-LIT-7551	3/4"	RIO-40	LIT-7551	2#16 TSP		-
C-MOV-5292	1"	RIO-40	MOV-5292	16#14		
C-MOV-5293	1"	RIO-40	MOV-5293	16#14		
C-MOV-5294	1"	RIO-40	MOV-5294	16#14		
C-MOV-5295	1"	RIO-40	MOV-5295	16#14		
C-MOV-5296	1"	RIO-40	MOV-5296	16#14		
C-MOV-5297	1"	RIO-40	MOV-5297	16#14		
C-MOV-5391	1"	RIO-40	MOV-5391	16#14		
I-AIT-3113	3/4"	RIO-60	AIT-3113	2#16 TSP		-
I-AIT-3114	3/4"	RIO-60	AIT-3114	2#16 TSP		-
I-AIT-3213	3/4"	RIO-60	AIT-3213	2#16 TSP		-
I-AIT-3214	3/4"	RIO-60	AIT-3214	2#16 TSP		-
I-AIT-3312	3/4"	RIO-60	AIT-3312	2#16 TSP		-
I-AIT-3313	3/4"	RIO-60	AIT-3313	2#16 TSP		-
I-AIT-3314	3/4"	RIO-60	AIT-3314	2#16 TSP		-
I-AIT-3413	3/4"	RIO-60	AIT-3413	2#16 TSP		-
I-AIT-3414	3/4"	RIO-60	AIT-3414	2#16 TSP		-
I-AIT-3513	3/4"	RIO-60	AIT-3513	2#16 TSP		-

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		RLV	WFP C&C SCHEDULE			
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS
I-AIT-3514	3/4"	RIO-60	AIT-3514	2#16 TSP		-
I-AIT-3612	3/4"	RIO-60	AIT-3612	2#16 TSP		-
I-AIT-3613	3/4"	RIO-60	AIT-3613	2#16 TSP		-
I-AIT-3614	3/4"	RIO-60	AIT-3614	2#16 TSP		-
I-AIT-3713	3/4"	RIO-60	AIT-3713	2#16 TSP		-
I-AIT-3714	3/4"	RIO-60	AIT-3714	2#16 TSP		-
I-AIT-4712	3/4"	RIO-60	AIT-4712	2#16 TSP		-
I-AIT-4792	3/4"	RIO-60	AIT-4792	2#16 TSP		-
I-AIT-4793	3/4"	RIO-60	AIT-4793	2#16 TSP		-
I-AIT-4794	3/4"	RIO-60	AIT-4794	2#16 TSP		-
I-AIT-4795	3/4"	RIO-60	AIT-4795	2#16 TSP		-
C-FSH-6401	1"	RIO-60	FSH-6401	2#14		-
I-T4800	3/4"	RIO-60	T-4800	2#16 TSP		
I-LIT-4201	3/4"	RIO-70	LIT-4201	2#16 TSP		-
C-LSH-4202	1"	RIO-70	LSH-4202	2#14		-
I-LIT-4301	3/4"	RIO-70	LIT-4301	2#16 TSP		-
C-LSH-4301	1"	RIO-70	LSH-4301	2#14		-
C-LAS-5100	1"	RIO-70	LAS-5100	6#14		-
I-LAS-5100	1"	RIO-70	LAS-5100	4#16 TSP		-
C-LAS-5200	1"	RIO-70	LAS-5200	6#14		-
I-LAS-5200	1"	RIO-70	LAS-5200	4#16 TSP		-
C-LSH-5300	1"	RIO-70	LSH-5300	2#14		-
C-LAS-5300	1"	RIO-70	LAS-5300	6#14		-
I-LAS-5300	1"	RIO-70	LAS-5300	4#16 TSP		-

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	RLWFP C&C SCHEDULE					
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS
C-FSH-5302	1"	RIO-70	FSH-5302	2#14		-
C-FSH-5303	1"	RIO-70	FSH-5303	2#14		-
I-LIT-5311	3/4"	RIO-70	LIT-5311	2#16 TSP		-
C-LSH-5212	1"	RIO-70	LSH-5212	2#14		-
I-LIT-5321	3/4"	RIO-70	LIT-5321	2#16 TSP		-
C-LSH-5322	1"	RIO-70	LSH-5322	2#14		-
I-LIT-5351	3/4"	RIO-70	LIT-5351	2#16 TSP		-
C-LSH-5351	1"	RIO-70	LSH-5351	2#14		-
C-LAS-5400	1"	RIO-70	LAS-5400	4#14		-
I-LAS-5400	3/4"	RIO-70	LAS-5400	2#16 TSP		-
C-LAS-5500	1"	RIO-70	LAS-5500	4#14		-
I-LAS-5500	3/4"	RIO-70	LAS-5500	2#16 TSP		-
C-FSH-5901	1"	RIO-70	FSH-5901	2#14		-
C-FSH-5902	1"	RIO-70	FSH-5902	2#14		-
I-LIT-6111	3/4"	RIO-70	LIT-6111	2#16 TSP		-
C-COMP-7310	1"	RIO-70	COMP-7310	10#14		-
C-COMP-7320	1"	RIO-70	COMP-7320	10#14		-
I-PIT-7330	3/4"	RIO-70	PIT-7330	2#16 TSP		-
C-PAL-7330	1"	RIO-70	PAL-7330	2#14		-
C-DPSL-7331	1"	RIO-70	DPSL-7331	2#14		-
C-DPSL-7334	1"	RIO-70	DPSL-7334	2#14		-
I-PIT-7340	3/4"	RIO-70	PIT-7340	2#16 TSP		-
C-PSL-7340	1"	RIO-70	PSL-7340	2#14		-
I-LIT-7350	3/4"	RIO-70	LIT-7350	2#16 TSP		-

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		RLV	VFP C&C SCHEDULE			
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS
I-PIT-7350	3/4"	RIO-70	PIT-7350	2#16 TSP		-
C-MOV-7351	1"	RIO-70	MOV-7351	16#14		-
I-MOV-7351	1"	RIO-70	MOV-7351	4#16 TSP		-
C-MOV-7352	1"	RIO-70	MOV-7352	16#14		-
I-MOV-7352	1"	RIO-70	MOV-7352	4#16 TSP		-
I-LIT-7360	3/4"	RIO-70	LIT-7360	2#16 TSP		-
I-PIT-7360	3/4"	RIO-70	PIT-7360	2#16 TSP		-
C-MOV-7361	1"	RIO-70	MOV-7361	16#14		-
I-MOV-7361	1"	RIO-70	MOV-7361	4#16 TSP		-
I-T-7360	3/4"	RIO-70	T-7360	2#16 TSP		-
C-MOV-7362	1"	RIO-70	MOV-7362	16#14		-
I-MOV-7362	1"	RIO-70	MOV-7362	4#16 TSP		-
I-FIT-7370	3/4"	RIO-70	FIT-7370	2#16 TSP		-
C-LSHH-7701	1"	RIO-70	LSHH-7701	2#14		-
C-LSLL-7701	1"	RIO-70	LSLL-7701	2#14		-
I-FIT-7702	3/4"	RIO-70	FIT-7702	2#16 TSP		-
C-EGS-01	1"	RIO-MCC1	EGS-01	10#14		-
C-SCDA-01	3/4"	ETHERNET SWITCH	PRIMARY SCADA SERVER	Cat 6 Cable		-
C-SCDA-02	3/4"	ETHERNET SWITCH	BACKUP SCADA SERVER	Cat 6 Cable		-
C-SCDA-03	3/4"	ETHERNET SWITCH	HISTORICAL DATA SERVER	Cat 6 Cable		-

		RLV	VFP C&C SCHEDULE			
CONDUIT NUMBER	CONDUIT SIZE	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS
C-RLWTPPLC-01	3/4"	ETHERNET SWITCH	RLWTP PLC PANEL	Cat 6 Cable		-
C-ENGWKST-01	3/4"	ETHERNET SWITCH	DEVELOPMENT ENGINEERING WKST	Cat 6 Cable		-
C-CLTWKST-01	3/4"	ETHERNET SWITCH	FULL CONT CLIENT WKST 1	Cat 6 Cable		-
C-CLTWKST-02	3/4"	ETHERNET SWITCH	FULL CONT CLIENT WKST 2	Cat 6 Cable		-
C-CLTWKST-03	3/4"	ETHERNET SWITCH	FULL CONT CLIENT WKST 3	Cat 6 Cable		-
C-PRTR-01	3/4"	ETHERNET SWITCH	PRINTER	Cat 6 Cable		-
C-PRTR-02	3/4"	ETHERNET SWITCH	ALARM PRINTER	Cat 6 Cable		-
C-PLC-UV-001-01	3/4"	ETHERNET SWITCH	PLC-UV-001	Cat 6 Cable		-
C-PLC-UV-002-01	3/4"	ETHERNET SWITCH	PLC-UV-002	Cat 6 Cable		-
C-PLC-UV-003-01	3/4"	ETHERNET SWITCH	PLC-UV-003	Cat 6 Cable		-
C-RIO-21-01	3/4"	SCADA SERVER RACK	RIO-21	12 Strand Multi-Mode Fiber Optic Cable		-
C-RIO-22-01	3/4"	SCADA SERVER RACK	RIO-22	12 Strand Multi-Mode		-

		RLV	VFP C&C SCHEDULE			
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS
				Fiber Optic Cable		
C-RIO-31-01	3/4"	SCADA SERVER RACK	RIO-31	12 Strand Multi-Mode Fiber Optic Cable		_
C-RIO-32-01	3/4"	SCADA SERVER RACK	RIO-32	12 Strand Multi-Mode Fiber Optic Cable		_
C-RIO-33-01	3/4"	SCADA SERVER RACK	RIO-33	12 Strand Multi-Mode Fiber Optic Cable		_
C-RIO-34-01	3/4"	SCADA SERVER RACK	RIO-34	12 Strand Multi-Mode Fiber Optic Cable		-
C-RIO-40-01	3/4"	SCADA SERVER RACK	RIO-40	12 Strand Multi-Mode Fiber Optic Cable		-
C-RIO-60-01	3/4"	SCADA SERVER RACK	RIO-60	12 Strand Multi-Mode Fiber Optic Cable		-

		RLW	/FP C&C SCHEDULE			
CONDUIT NUMBER	CONDUIT	FROM	то	QUANTITY & SIZE OF CABLE	PURPOSE	REMARKS
C-RIO-70-01	3/4"	SCADA SERVER RACK	RIO-70	12 Strand Multi-Mode Fiber Optic Cable		-
C-RIO-MCC1-01	3/4"	SCADA SERVER RACK	RIO-MCC1	12 Strand Multi-Mode Fiber Optic Cable		-
C-RIO-MCC2-01	3/4"	SCADA SERVER RACK	RIO-MCC2	12 Strand Multi-Mode Fiber Optic Cable		-
C-CENT-PLC-001-01	3/4"	SCADA SERVER RACK	CENT-PLC-001	12 Strand Multi-Mode Fiber Optic Cable		-
C-CENT-PLC-002-01	3/4"	SCADA SERVER RACK	CENT-PLC-002	12 Strand Multi-Mode Fiber Optic Cable		-

# **END OF SECTION**

# SECTION 40 42 13 (1) INSULATION

#### PART 1 - GENERAL

#### 1.01 THE REQUIREMENT

- A. The Contractor shall furnish and install insulation as shown on the Drawings or otherwise specified. Insulation shall not be installed until piping has been field tested and approved by the Owner. The Contractor shall protect the insulation from moisture at all times.
- B. Reference Section 40 05 00 Basic Mechanical Requirements.

#### PART 2 - PRODUCTS

#### 2.01 INSULATED PROCESS/CHEMICAL PIPING

- A. Fiberglass insulation shall be Owens Corning Fiberglass Corp., Fiberglass 25ASJ/SSC; Certain Teed Products Corporation, Certain Teed snap-on ASJ/SSL; or equal. Insulation shall be heavy density sectional pipe insulation with vapor barrier and self-sealing lap. Minimum density insulation density shall be 6 pounds per cubic foot. Contractor shall use manufacturer's recommended adhesives and tape for jointing material. Fittings shall be molded fiberglass. Minimum insulation thickness shall be 1-1/2 inches for 4" diameter pipe and larger, and 1 inch for smaller pipe.
- B. Weatherproof insulation jacket for process piping shall be Certain Teed Products Corporation; Childers Products Company, Lock On and Slip On; or equal. Jacket shall be smooth embossed aluminum metal jacket with minimum thickness 0.016 inches thick for interior installations and at least 0.031 inches thick for exterior installations. Fastening shall use preformed "2"-lock seam with 2 inch butt strap with sealant. Bonds shall be 1/2 inch aluminum with wing seals. Fittings shall be prefabricated 0.016/0.031 inches thickness aluminum.
  - 1. Contractor shall install weather proofing for outdoor piping. The field applied jacket with moisture barrier shall be slipped around pipe into preformed 2-lock position. Butt next jacket section adjacent to previous section leaving 3/8 inch gap. Place preformed 2 inch butt strap with sealant over the seam and secure with 1/2 inch aluminum band and wing seal. Contractor shall install preformed fittings identical in composition to pipe jacketing at all fittings.
- C. Insulation fitting covers and jacket for chemical piping shall be Zeston 2000 PVC by Manville, or equal. Fitting covers shall fit snugly over fittings, including all elbows and

valves, etc. Jacketing shall be high-impact UV-resistant covering for insulated piping and shall match fitting covers. Fitting covers and jackets shall be white and suitable for painting. PVC jacketing shall be 30 mil thick and shall be factory curled to fit snugly. Fitting covers and jacketing shall be secured with tacks.

D. The Contractor shall ensure that surfaces of pipes, valves, heat tracing, and fittings are clean and dry prior to installation of insulation. Insulation shall be installed so as to make surfaces smooth, even, and substantially flush with the adjacent insulation. The Contractor shall follow the manufacturer's application instructions for the materials used.

# 2.02 INSULATED AIR PIPING

- A. Fiberglass insulation shall be provided for exposed exterior blower discharge piping as shown on the Drawings and as specified herein. Insulation shall be a roll of semi-rigid fiberglass board insulation. The fibrous insulation is adhered to the ASJ jacket with the end grain of the insulation perpendicular to the jacket surface. Each section of insulation may be secured on the longitudinal seam by using staples and mastic or vapor barrier ASJ pressure sensitive tape. Adjacent sections shall be butted together and sealed with vapor barrier ASJ tape. The insulation shall be 2-1/2 inches thick with a fiberglass density of at least 3 pounds per cubic foot.
- B. Insulation for fittings and flanges shall be mitered segments of nominal 6 pounds per cubic foot density fiberglass pipe covering. Cover with a coat of insulating cement then embed a 20 x 20 weave white glass reinforcing cloth between two 1/16 inch coats of Benjamin Foster 30-36. The glass cloth and second coat shall overlap adjacent covering by two inches. Insulation shall be fiberglass pipe wrap as manufactured by Owens-Corning, Johns Mansfield, or equal.
- C. The insulation shall be covered with a smooth, weatherproof, embossed aluminum jacket with integral Kraft-polyethylene vapor barrier separating the insulation from the metal. The factory applied aluminum jackets shall be at least .016 inches thick for interior installation and at least .031 inches thick for exterior installation. They shall be at least 36" long as measured along the pipe.
- D. Circumferentially, the width of the sheets shall be 1/2" to 2" greater than the circumference of the pipe insulation, with a Pittsburgh locktype on the longitudinal edge.
- E. The metal jackets shall be held in place by .020" thick, 3/4 inch wide, metal bands on 9" centers.
- F. Special care shall be taken to make all exterior insulation jackets completely waterproof by the use of an appropriate silicone base sealant at all joints, etc.

# PART 3 – EXECUTION (NOT USED)

# **END OF SECTION**

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#### **SECTION 40 67 00**

#### **CONTROL SYSTEM EQUIPMENT PANELS AND RACKS**

#### **PART 1 – GENERAL**

#### 1.01 THE REQUIREMENT

- A. The Contractor shall furnish, test, install and place, in satisfactory operation the control enclosures, with all spare parts, accessories, and appurtenances as specified herein and as shown on the Drawings.
- B. Control enclosures shall be assembled, wired, and tested in the instrumentation subcontractor's own facilities, unless specified otherwise. All components and all necessary accessories such as power supplies, conditioning equipment, mounting hardware, signal input and output terminal blocks, and plug strips that may be required to complete the system shall be provided.
- C. Either manufacturer's standard or custom enclosures may be furnished subject to the requirements of the Contract Documents and favorable review by the Owner.
- D. Due consideration shall be given to installation requirements for enclosures in new and existing structures. The Contractor shall examine plans and field inspect new and existing structures as required to determine installation requirements and shall coordinate the installation of all enclosures with the Owner and all affected contractors. The Contractor shall be responsible for all costs associated with installation of enclosures, including repair of damage to structures (incidental, accidental or unavoidable).
- E. The terms enclosure, cabinet, and panel shall be considered the same product and are used interchangeably.

#### 1.02 SUBMITTALS

A. Submittals shall be per Section 40 61 15 – Process Control System Submittals.

# 1.03 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 40 61 13 Process Control System General Provisions
- B. Section 40 62 00 Computer System Hardware and Ancillaries
- C. Section 40 78 00 Panel Mounted Instruments
- D. Section 40 78 56 Isolators, Intrinsically-Safe Barriers, and Surge Suppressors
- E. Section 40 70 00 Instrumentation for Process Systems WESTCHESTER JOINT WATER WORKS 40 67 00 1 RYE LAKE WFP

- F. Section 40 61 90 Schedules and Control Descriptions, General
- G. Refer to Division 26 for additional requirements for conductors, circuit breakers, disconnect switches, etc.

#### 1.04 PANEL LOCATION AND TYPE

- A. For locations inside buildings in areas other than climate controlled (i.e., heated and air conditioned) electrical or control rooms, panel shall be Type 304 stainless steel NEMA 4X construction, or where indicated for hazardous area classification, NEMA 7.
- B. For locations in storage/feed areas for chlorine or other applicable corrosive chemicals, panel shall be of non-metallic construction, rated NEMA 4X, and be fully compatible with the associated chemical.
- C. For locations within climate controlled (i.e., heated and air-conditioned) electrical or control rooms, panel shall be a painted steel fully enclosed NEMA 12 units with gasketed doors.
- D. For outdoor locations, panel shall be Type 304 stainless steel NEMA 4X construction unless located in chlorine environments. Chlorine environment shall be nonmetallic NEMA 4X construction.

# 1.05 TOOLS, SUPPLIES AND SPARE PARTS

A. Tools, supplies and spare parts shall be provided as specified in Section 40 61 22 – Tools, Supplies and Spare Parts, General.

#### **PART 2 - PRODUCTS**

# 2.01 CABINETS AND PANELS - GENERAL

- A. Cabinets and panels shall be formed or welded construction, reinforced with Unistrut, Powerstrut, or equal to facilitate mounting of internal components or equipment. Sufficient access plates and doors shall be provided to facilitate maintenance and testing of the cabinet's equipment. Doors shall be removable. Cabinets and panels with any dimension 36 inches or greater shall be provided with removable lifting lugs designed to facilitate safe moving and lifting of the panel during installation. All doors shall be fitted with common-keyed locks.
- B. Cabinets and panels shall be minimum 14 USS gauge. Cabinets and panels with any dimension greater than 36 inches shall be 12 USS gauge.
- C. Cabinets and panels shall have doors on the front and shall be designed for front access. NEMA 12 cabinets shall be fitted with three-point door latches. Doors for NEMA 4X cabinets shall be all stainless steel with three-point latches. Door hardware on NEMA

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RYE LAKE WFP

- 4X cabinets located in chemical storage/feed areas shall be non-corrosive in that environment.
- D. Panels and cabinets located outside secured rooms shall be fitted with padlockable latch kits.
- E. All cabinets and panels shall be provided with drawing pockets for as-built panel drawings. One copy of the appropriate panel as-built drawings shall be furnished and left in the pocket of each panel.
- F. Panels with any dimension greater than 36 inches that contain a programmable controller (PLC) shall be provided with a folding laptop programmer shelf on the inside of the door. When deployed, the laptop shelf shall not be greater than 48 inches above finished floor. Laptop shelf shall be fitted to door with factory applied weld-studs. Weld discoloration and enclosure penetrations will not be accepted.
- G. Unless otherwise noted, panel-mounted control devices (OIUs, hand switches, etc.) requiring operator access shall be mounted between 48 and 60 inches above the floor or work platform.
- H. Cabinets and panels shall be prefabricated cabinets and panels by Hoffman or Saginaw Control and Engineering (SCE). The Contractor may optionally provide cabinets that are custom-fabricated by the instrumentation subcontractor or by a reputable panel fabrication shop acceptable to the Engineer.

#### 2.02 FIELD PANELS

- A. Field panels for outdoor service shall be suitable for wall or pipe mounting. Panels shall have the following features:
  - 1. Hinged and foamed-in-place continuous gasketed door(s). Door material shall match enclosure and shall have piano hinge(s) and three-point latches.
  - 2. Field panels located outside fence-secured areas shall be fitted with staple and hasp. Provide padlock and coordinate keying with Owner.
  - Thermal insulation and thermostatically controlled space heaters where required to prevent condensation or maintain environmental conditions for installed components.
  - 4. External sun shields or shades constructed of the same materials as the associated enclosure, unless otherwise specified. Sun shield or shade shall be fitted to enclosure supports and not to enclosure. Sun shield or shade shall have a slightly sloped top to shed water and shall extend past the front of the enclosure by at least 6 inches and extend down the side and back of enclosure.

- B. All external sample/process piping, including valves and appurtenances, shall be insulated with weather-proof insulation and heat-taped to prevent freezing. Heat taping shall be thermostatically controlled and self-regulating, and shall adjust its heat output to the temperature of the lines. Heat tape shall be powered from an equipment-safety GFCI circuit from within panel, unless otherwise shown or specified.
- C. Field panels shall be adequately sized to house instruments, power supplies, surge protection, and appurtenant equipment required for operation. Sufficient space shall be provided for servicing instruments without removal of equipment from the enclosure.
- D. Field panels shall be as manufactured by Hoffman, Saginaw Control & Engineering (SCE), or equal.

# 2.03 CABINET AIR CONDITIONING UNITS

- A. Where indicated or required due to ambient conditions and panel component ratings, panel-mounted closed loop air conditioning units and thermostatically controlled space heaters shall be provided.
- B. Air conditioning units shall both cool and dehumidify the cabinet's internal air. Each air conditioner shall be sized to handle current and future (with specified spare capacity filled) heat loadings from all equipment mounted inside the cabinet.
- C. Air conditioners shall be provided with thermostats which operate the centrifugal evaporator blowers continuously to prevent stratification of air within the cabinet. Compressors shall operate as needed to maintain the temperature set at the thermostat. Compressors shall be provided with space heaters to maintain the compressor at a minimum temperature during cold ambient temperatures.
- D. Ambient air shall be completely separated from the air inside the cabinet. All air conditioner components exposed to the atmosphere outside the cabinets shall be coated to prevent corrosion.
- E. Power supply shall be 115VAC, 60 Hz. Units shall be provided with EMI/RFI noise suppressors.
- F. Air conditioner enclosures shall be constructed of stainless steel or cold rolled steel which is phosphatized and finished in baked enamel.
- G. Cabinet air conditioners shall be ProAir CR Series as manufactured by McLean Midwest of Brooklyn Park, MN, or equal.

#### 2.04 TERMINAL BLOCKS

A. Terminal blocks shall be assembled on non-current carrying galvanized steel DIN mounting rails securely bolted to the cabinet subpanel. Terminals shall be of the screw

- down pressure plate type as manufactured by Phoenix Contact, Weidmuller, Wieland, Square D, or equal.
- B. Power terminal blocks for both 120 VAC and 24 VDC power shall be two-tier with a minimum rating of 600 volts, 30 amps.
- C. Signal terminal blocks shall be two-tier with a minimum rating of 600 volts, 20 amps.

# 2.05 NAMEPLATES

- A. Items of equipment installed in control panels shall be identified with nameplates. Each nameplate shall be located so that it is readable from the normal observation position and is clearly associated with the device or devices it identifies. Nameplates shall be positioned so that removal of the device for maintenance and repair shall not disturb the nameplate. Nameplates shall include, as necessary, the equipment identification number, description, calibrated range, and set point(s). Abbreviations of the description shall be subject to the Engineer's approval.
- B. Nameplates shall be made of 1/16-inch thick machine engraved laminated phenolic plastic having white numbers and letters not less than 3/16-inch high on a black background. Nameplates attached to instruments may be black laser etched 1/8-inch high text on stainless steel with sharp edges made smooth. Stamped text shall not be acceptable.
- C. Nameplates shall be attached to metal equipment by NEMA rated stainless steel screws and to other surfaces by an epoxy-based adhesive that is resistant to oil and moisture. In cases where the label cannot be attached by the above methods, it shall be drilled and attached to the associated device by means of a braided stainless steel wire affixed with a permanent crimp.

# **PART 3 - EXECUTION**

# 3.01 FABRICATION

- A. The cabinet itself and all interior and exterior equipment shall be identified with nameplates. The equipment shall be mounted such that service can occur without removal of other equipment. Face mounted equipment shall be flush or semi-flush mounted with flat black escutcheons. All equipment shall be accessible such that adjustments can be made while the equipment is in service and operating. All enclosures shall fit within the allocated space as shown on the Drawings.
- B. Enclosures shall provide mounting for power supplies, control equipment, input/output subsystems, panel-mounted equipment and appurtenances. Ample space shall be provided between equipment to facilitate servicing and cooling.

- C. Enclosures shall be sized to adequately dissipate heat generated by equipment mounted inside the panel. If required, one or more of the following shall be provided to facilitate cooling:
  - 1. For NEMA 12 cabinets only, louvered openings near the bottom and top or thermostatically controlled, low-noise cooling fans to circulate outside air into the enclosure, exhausting through louvers near the top of the cabinet. Air velocities through the enclosure shall be minimized to assure quiet operation.
  - 2. Thermostatically controlled, low noise internal air blowers to circulate air within the enclosure, maintaining a uniform internal temperature. Initial setpoint shall be 75 degrees F.
  - 3. All intake openings in cabinets and panels shall be fitted with dust filters.
- D. Enclosures shall be constructed so that no screws or bolt heads are visible when viewed from the front. Punch cutouts for instruments and other devices shall be cut, punched, or drilled and smoothly finished with rounded edges.
- E. The temperature inside each enclosure containing digital hardware (e.g., PLC, computer, Ethernet switch) shall be continuously monitored and shall generate an alarm to the nearest PLC if the temperature rises to an adjustable, preset high temperature. This thermostat shall be independent and separate from the thermostat used to control the temperature in the enclosure described above. Enclosure "high interior temperature" alarm shall be displayed on the SCADA system HMI.
- F. Intrusion alarm switches shall be provided on all enclosures containing digital hardware and shall generate an alarm to the nearest PLC when any enclosure door is opened. If panel contains a service light, alarm switch shall also be wired to turn light on when door is opened.
- G. Terminals shall be marked with a permanent, continuous marking strip. One side of each terminal shall be reserved exclusively for field incoming conductors. Common connections and jumpers required for internal wiring shall not be made on the field side of the terminal. Subject to the approval of the Engineer, a vendor's pre-engineered and prefabricated wiring termination system will be acceptable.
- H. Wiring within cabinets, panels, and consoles shall be installed neatly and shall comply with accepted standard instrumentation and electrical practices. Power, control and signal wiring shall comply with Division 26 of the Specifications, except that the minimum wire size for discrete signal wiring may be 16 AWG, and for analog wiring may be 18 AWG. For each pair of parallel terminal blocks, the field wiring shall be between the blocks.
- I. Separate terminal strips shall be provided for each type of power and signal used within each cabinet. Where applicable, terminal strips for different voltages of discrete signal

- wiring shall also be separated. Terminal strips shall be labeled as to voltage and function.
- J. All wiring shall be bundled and run open or enclosed in vented plastic wireway as required. Wireways shall be oversized by a minimum of 10%; overfilled wireways shall not be acceptable. All conductors run open shall be bundled and bound at regular intervals, not exceeding 12 inches, with nylon cable ties. Care shall be taken to separate electronic signal, discrete signal, and power wiring when operating at differing voltages.
- K. Spare field wiring shall be bundled, tied, and labeled as specified above, and shall be neatly coiled in the bottom of the cabinet.
- L. All installed spare I/O hardware shall be wired along with live I/O wiring to the field wiring terminal blocks within the cabinet. Where space for spare I/O modules has been provided with the PLC backplane or DIN-rail mounting system, corresponding space for wiring, surge protection, and terminations shall be furnished within the cabinet.
- M. A copper ground bus shall be installed in each cabinet and shall be connected to the building power ground.
- N. Interior panel wiring shall be tagged at all terminations with machine-printed self-laminating labels. Labeling system shall be Brady BMP61 Printer with BMP61 PC Link™ labels, or equivalent system by Seton or Panduit. The wire numbering system and identification tags shall be as specified in Section 26 05 19 Low-Voltage Conductors and Cables. Field wiring terminating in panels shall be labeled in accordance with the requirements of Section 26 05 19 Low-Voltage Conductors and Cables. Where applicable, the wire number shall be the ID number listed in the input/output schedules.
- O. Wires shall be color coded as follows:
  - 1. Equipment Ground GREEN
  - 2. 120 VAC Power BLACK
  - 120 VAC Power Neutral WHITE
  - 4. 120 VAC Control (Internally Powered) RED
  - 5. 120 VAC Control (Externally Powered) YELLOW
  - 24 VAC Control ORANGE
  - 7. DC Power (+) BLUE
  - 8. DC Power (-) WHITE/BLUE
  - 9. DC Control BLUE

- 10. Analog Signal BLACK/WHITE or BLACK/RED
- P. Enclosures shall be provided with a main circuit breaker and appropriately sized fuses on each individual branch circuit distributed from the panel. Main breaker and branch breaker sizes shall be coordinated such that an overload in a circuit will trip only its immediate breaker and not the upstream breaker.
- Q. Enclosures with any dimension larger than 36 inches shall be provided with 120-volt duplex receptacles for service equipment and LED service lights. Power to these devices shall be independent from the PLC power supply and its associated uninterruptible power system.
- R. Where applicable, enclosures shall be furnished with red laminated plastic warning signs in each section. The sign shall be inscribed "WARNING This Device Is Connected to Multiple Sources of Power." Letters in the word "WARNING" shall be 0.75 inch high, white.
- S. The interconnection between equipment and panel shall be by means of flexible cables provided to permit withdrawal of the equipment from the cabinet without disconnecting the plugs.

#### 3.02 PAINTING/FINISHING

- A. All steel enclosures shall be free from dirt, grease, and burrs and shall be treated with a phosphatizing metal conditioner before painting. All surfaces shall be filled, sanded, and finish coated per manufacturer's standard color and process.
- B. Panels fabricated from stainless steel shall not be painted.
- C. Panels fabricated from non-metallic materials (e.g., FRP) shall be gel-coated and shall not be otherwise painted.

# 3.03 INSTALLATION

A. Refer to Section 40 61 13 – Process Control System General Provisions for additional requirements.

#### 3.04 ATTACHMENTS

A. See 40 67 00 - Attachment 1(1)

# **END OF SECTION**

# Attachment 1 40 67 00 Panels and Racks (1)

PnPID	Dwg Number	Tag	Service Description	Power Req'd	Furnished By	Panel/ Inst.Detail
114101	1-002	RIO-021	REMOTE I/O, , REMOTE I/O CABINET	120VAC	SI	RIO-21
114110	I-002	RIO-022	REMOTE I/O, , REMOTE I/O CABINET	120VAC	SI	RIO-22
114112	I-002	RIO-031	REMOTE I/O, , REMOTE I/O CABINET	120VAC	SI	RIO-31
114114	I-002	RIO-032	REMOTE I/O, , REMOTE I/O CABINET	120VAC	SI	RIO-32
114116	I-002	RIO-033	REMOTE I/O, , REMOTE I/O CABINET	120VAC	SI	RIO-33
114118	I-002	RIO-034	REMOTE I/O, , REMOTE I/O CABINET	120VAC	SI	RIO-34
114120	I-002	RIO-040	REMOTE I/O, , REMOTE I/O CABINET	120VAC	SI	RIO-40
114122	I-002	RIO-050	REMOTE I/O, , REMOTE I/O CABINET	120VAC	SI	RIO-50
114131	I-002	RIO-060	REMOTE I/O, , REMOTE I/O CABINET	120VAC	SI	RIO-60
114133	I-002	RIO-070	REMOTE I/O, , REMOTE I/O CABINET	120VAC	SI	RIO-70
114135	I-002	RIO-090	REMOTE I/O, , REMOTE I/O CABINET	120VAC	SI	RIO-MCC2
114137	I-002	RIO-091	REMOTE I/O, , REMOTE I/O CABINET	120VAC	SI	PLC-RLWTP
114139	I-002	RIO-095	REMOTE I/O, , REMOTE I/O CABINET	120VAC	SI	RIO-MCC1
101009	I-004	LCS-1810	Field Panel, P-1810, SAMPLE PUMP CONTROL	120VAC	ELECTRICAL	LCS-1810
101012	I-004	LCS-1820	Field Panel, P-1820, SAMPLE PUMP CONTROL	120VAC	ELECTRICAL	LCS-1820
101014	I-004	LCS-1830	Field Panel, P-1830, SAMPLE PUMP CONTROL	120VAC	ELECTRICAL	LCS-1830
101016	I-004	LCS-1840	Field Panel, P-1840, SAMPLE PUMP CONTROL	120VAC	ELECTRICAL	LCS-1840
101018	I-004	LCS-1850	Field Panel, P-1850, DILUTION WATER PUMP CONTROL	120VAC	ELECTRICAL	LCS-1850
101992	I-004	LCS-1860	Field Panel, P-1860, DILUTION WATER PUMP 2 CONTROL	120VAC	ELECTRICAL	LCS-1860
101028	I-004	S-1860	Field Panel, S-1860, ANLYSIS SUMP	120VAC	MECHANICAL	NONE
101020	I-004	LCS-1910	Field Panel, P-1910, SAMPLE PUMP CONTROL	120VAC	ELECTRICAL	LCS-1910
101022	I-004	LCS-1920	Field Panel, P-1920, SAMPLE PUMP CONTROL	120VAC	ELECTRICAL	LCS-1920
111548	I-005	LCP-3010	Field Panel, CRAND-3010, CRANE	480VAC	MECHANICAL	NONE
111544	I-005	S-4110	Field Panel, S-4110, ANLYSIS SUMP	120VAC	MECHANICAL	NONE
111564	I-009	S-4120	Field Panel, S-4120, ANALYSIS SUMP	120VAC	MECHANICAL	LCS-4120
100978	I-012	CCP-6310	RESIDUALS CENTRIFUGE 1, CENT-6310, CENTRIFUGE CONTROL PANEL		VENDOR	CCP-6310
100981	I-012	CPP-6310	RESIDUALS CENTRIFUGE 1, CENT-6310, CENTRIFUGE POWER PANEL	480VAC	VENDOR	CCP-6310
100985	I-012	CCP-6320	RESIDUALS CENTRIFUGE 2, CENT-6320, CENTRIFUGE CONTROL PANEL		VENDOR	CCP-6320
100987	I-012	CPP-6320	RESIDUALS CENTRIFUGE 2, CENT-6320, CENTRIFUGE POWER PANEL	480VAC	VENDOR	CCP-6320
100975	I-013	LCP-6400	Field Panel, CONV-6440, CONVEYOR CONTROL PANEL	480VAC	EQUIP VENDOR	LCP-6400
100953	I-014	LAS-5100	TRUCK UNLOADING, TRUCK UNLOADING, OPERATOR INTERFACE	120VAC	I&C SUBCONTRACTOR (1)	LCS-5100/I-40-0901
100949	I-014	LCS-5130	Field Panel, P-5130, MOTOR CONTROL	FROM MCC	EQUIP VENDOR	LCS-5130
100951	I-014	LCS-5140	Field Panel, P-5140, MOTOR CONTROL	FROM MCC	EQUIP VENDOR	LCS-5140
100955	I-014	VCP-5160	Field Panel, P-5160, MOTOR CONTROL	120VAC	EQUIP VENDOR	VCP-5160

WESTCHESTER JOINT WATER WORKS RYE LAKE WATER FILTRATION PLANT

# Attachment 1 40 67 00 Panels and Racks (1)

100957	I-014	VCP-5170	Field Panel, P-5170, MOTOR CONTROL	120VAC	EQUIP VENDOR	VCP-5170
100934	I-015	LAS-5200	TRUCK UNLOADING, TRUCK UNLOADING, OPERATOR INTERFACE	120VAC	I&C SUBCONTRACTOR (1)	LAS-5200/I-40-0901
100930	I-015	LCS-5230	Field Panel, P-5230, MOTOR CONTROL	FROM MCC	EQUIP VENDOR	LCS-5230
100932	I-015	LCS-5240	Field Panel, P-5240, MOTOR CONTROL	FROM MCC	EQUIP VENDOR	LCS-5240
100936	I-015	VCP-5260	Field Panel, P-5260, MOTOR CONTROL	120VAC	EQUIP VENDOR	VCP-5260
100938	I-015	VCP-5270	Field Panel, P-5270, MOTOR CONTROL	120VAC	EQUIP VENDOR	VCP-5270
100940	I-015	VCP-5280	Field Panel, P-5280, MOTOR CONTROL	120VAC	EQUIP VENDOR	VCP-5280
103425	I-015	VCP-5290	Field Panel, P-5290, MOTOR CONTROL	120VAC	EQUIP VENDOR	VCP-5290
100917	I-016	LAS-5300	TRUCK UNLOADING, TRUCK UNLOADING, OPERATOR INTERFACE	120VAC	I&C SUBCONTRACTOR (1)	LAS-5400/I-40-0901
100913	I-016	LCS-5330	SODIUM HYPOCHLORITE TRANSFER PUMP 1, P-5330, MOTOR CONTROL	FROM MCC	EQUIP VENDOR	LCS-5330
100915	I-016	LCS-5340	SODIUM HYPOCHLORITE TRANSFER PUMP 2, P-5340, MOTOR CONTROL	FROM MCC	EQUIP VENDOR	LCS-5340
100919	I-016	VCP-5360	SODIUM HYDROXIDE FEED PUMP 1, P-5360, MOTOR CONTROL	120VAC	EQUIP VENDOR	VCP-5360
100921	I-016	VCP-5370	SODIUM HYDROXIDE FEED PUMP 2, P-5370, MOTOR CONTROL	120VAC	EQUIP VENDOR	VCP-5370
100927	I-016	VCP-5380	SODIUM HYDROXIDE FEED PUMP 3, P-5380, MOTOR CONTROL	120VAC	EQUIP VENDOR	VCP-5380
104301	I-016	VCP-5390	SODIUM HYDROXIDE FEED PUMP 4, P-5390, MOTOR CONTROL	120VAC	EQUIP VENDOR	VCP-5390
100902	I-017	LAS-5400	TRUCK UNLOADING, TRUCK UNLOADING, OPERATOR INTERFACE	120VAC	I&C SUBCONTRACTOR (1)	LAS-5400/I-40-0901
100897	I-017	LCS-5430	Field Panel, P-5430, MOTOR CONTROL	FROM MCC	EQUIP VENDOR	LCS-5430
100899	I-017	LCS-5440	Field Panel, P-5440, MOTOR CONTROL	FROM MCC	EQUIP VENDOR	LCS-5440
100904	I-017	VCP-5460	Field Panel, P-5460, MOTOR CONTROL	120VAC	EQUIP VENDOR	VCP-5460
100906	I-017	VCP-5470	Field Panel, P-5470, MOTOR CONTROL	120VAC	EQUIP VENDOR	VCP-5470
100888	I-018	LAS-5500	TRUCK UNLOADING, TRUCK UNLOADING, OPERATOR INTERFACE	120VAC	I&C SUBCONTRACTOR (1)	LAS-5500/I-40-0901
100882	I-018	LCS-5530	HYDROFLUOROSILICIC ACID TRANSFER PUMP 1, P-5530, MOTOR CONTROL	FROM MCC	EQUIP VENDOR	LCS-5530
100885	I-018	LCS-5540	HYDROFLUOROSILICIC ACID TRANSFER PUMP 1, P-5540, MOTOR CONTROL	FROM MCC	EQUIP VENDOR	LCS-5540
100891	I-018	VCP-5560	HYDROFLUOROSILICIC ACID FEED PUMP 1, P-5560, MOTOR CONTROL	120VAC	EQUIP VENDOR	VCP-5560
100894	I-018	VCP-5570	HYDROFLUOROSILICIC ACID FEED PUMP 2, P-5570, MOTOR CONTROL	120VAC	EQUIP VENDOR	VCP-5570
100966	I-019	CCP-4410	UV-4410 - MODULE 1, UV-4410, UV CONTROL PANEL	480VAC	EQUIP VENDOR	CCP-4410
100969	I-019	CCP-4510	UV-4510 - MODULE 2, UV-4510, UV CONTROL PANEL	480VAC	EQUIP VENDOR	CCP-4510
100971	I-019	CCP-4610	UV-4610 - MODULE 3, UV-4610, UV CONTROL PANEL	480VAC	EQUIP VENDOR	CCP-4610
111573	I-020	LCP-6330	Field Panel, M-6330, POLYMER CONTROL PANEL	120VAC	EQUIP VENDOR	LCS-6330
103051	I-020	LCS-6330	Field Panel, M-6330, MOTOR CONTROL	120VAC	EQUIP VENDOR	LCS-6330
111575	I-020	LCP-6340	Field Panel, M-6340, POLYMER CONTROL PANEL	120VAC	EQUIP VENDOR	LCS-6340
103054	I-020	LCS-6340	Field Panel, M-6340, MOTOR CONTROL	120VAC	EQUIP VENDOR	LCS-6340

WESTCHESTER JOINT WATER WORKS RYE LAKE WATER FILTRATION PLANT

# SECTION 46 41 11 (1) EMULSION POLYMER MIXERS

#### **PART 1 – GENERAL**

# 1.01 THE REQUIREMENT

- A. The CONTRACTOR shall furnish all materials and shall properly install, adjust, and place in satisfactory operation two (2) integrated tote mixers as shown on the Contract Drawings and specified herein.
- B. Equipment shall be provided in accordance with the requirements of Section 46 00 00 Equipment General Provisions.
- C. The mixer assembly shall consist of motor, gear reducer, dynamic coupling, drive shaft coupling, mixer shaft, impeller, and all accessories and appurtenances as specified herein and as indicated on the Contract Drawings.
- D. The Manufacturer and CONTRACTOR shall thoroughly review the conditions of service and mounting arrangements for the proposed integrated tote mixers, including baseplate/anchorage and support, and shall select mixing equipment suitable for the proposed application. The Manufacturer shall be responsible for ensuring the mixer is adequate for the chemical viscosity and specific gravity of the polymer solution.

# 1.02 CONDITIONS OF SERVICE AND PERFORMANCE REQUIREMENTS

A. Integrated Tote Mixer Schedule:

<b>EMULSION POLYMER INTEGRA</b>	TED TOTE MIXERS
Criterion	Value
Total Number of Mixers	2
Dynamix Model No.	ITM-7505J-7
Mounting Arrangement	6" Plastic Tote Mount
Tote Dimensions	
Length	3'-11-1/4"
Width	3'-3-3/8"
Height	3'-9-11/16"
Volume, gal	275
Maximum Drive Segment Length, in.	17.8
Minimum Shaft Diameter, in.	0.75
Maximum Shaft Length, in.	31
Number of Impellers	1
Minimum Impeller Diameter, in.	14
Maximum Impeller Speed, RPM	175

#### 1.03 SUBMITTALS

- A. The following items shall be submitted in accordance with, or in addition to the submittal requirements specified in Section 01 33 00 Submittal Procedures, Section 01 78 23 Operation and Maintenance Data, Section 01 79 00 Instruction of Owner's Personnel and Section 46 00 00 Equipment General Provisions:
  - 1. Shop Drawings. Provide the following:
  - 2. Manufacturer's literature, illustrations, catalog cuts, specifications, and Engineering data.
  - 3. Drawings showing fabrication methods, assembly, accessories, installation details and wiring diagrams.
  - 4. Parts lists and Bills of Materials for all equipment.
  - 5. Spare parts list.
  - 6. Calculations showing mixer pumping rate.
  - 7. Manufacturer's instructions for delivery, unloading, storage, handling and installation of all equipment.
  - 8. Warranties for the Work performed under this Contract and, in particular, the wear and performance guarantees.
  - 9. Qualifications of the proposed technicians for the installation, testing and start-up and commissioning.

#### 10. O&M Manuals

- a. Submit complete Installation, Operation and Maintenance Manuals including test reports, maintenance data and schedules, description of operation and spare parts information.
- b. The manuals shall be prepared specifically for this installation and shall include all required cuts, drawings, equipment lists, descriptions that are required to instruct operating and maintenance personnel unfamiliar with such equipment.

#### B. Training Lesson Plans

1. Training Lesson Plans Shall conform to the Requirements in Division 1 Section 01 79 00.

#### 1.04 WARRANTY AND GUARANTEE

A. Warranty and Guarantee shall be as specified in Section 46 00 00 – Equipment General Provisions with the exception that the warranty period shall be for two (2) years.

#### **PART 2 - PRODUCTS**

#### 2.01 ACCEPTABLE MANUFACTURERS

- A. The integrated tote mixers shall be Dynamix Model ITM-7505J-7, or equal. The same manufacturer shall furnish all mixers.
- B. To ensure system responsibility and design integration, the gear reducer, impeller, and impeller shaft shall be designed, manufactured and tested by the mixer supplier. Second party manufactured gear drives are not allowed.

# 2.02 INTEGRATED TOTE MIXER

#### A. Drive

- 1. The integrated tote mixer drive shall consist of a 0.5-hp gear motor and gear reducer to reduce the impeller speed to 175 rpm.
- 2. The drive shall be detachable from the mixer shaft and impeller through the use of a dynamic drive coupling.

# B. Mount

- 1. The integrated tote mixers shall be provided with a mount compatible for mounting on a 6-inch plastic tote opening.
- 2. The mount shall be of a style that provides a sealed enclosure, preventing foreign particles and debris from entering the tote during mixing.

#### C. Shaft

1. Mixer shaft shall be 0.75-inch diameter, 31 inches long, and constructed of Type 316 stainless steel.

#### D. Impeller

- 1. Mixer impellers shall be 14-inch diameter, and constructed of Type 316 stainless steel.
- 2. Mixer impeller style shall be Dynaflow as manufactured by Dynamix, or equal.
- 3. Mixer impeller shall be collapsible to accommodate insertion and removal through a 6-inch plastic tote opening.

# E. Mixer Support Frame

- 1. Provide mixer support frame constructed of Type 316 stainless steel. Provide lifting handles.
- 2. Provide moveable brackets to adjust the width of the mixer support frame for the I.B.C. being used.
- 3. Provide a Type 316 stainless steel wall mounting bracket with drip pan to support the mixer and collect polymer drips while the mixer is not in use.

# 2.03 ELECTRICAL AND CONTROL REQUIREMENTS

A. Integrated Tote Mixers Electrical Requirements:

<b>EMULSION POLYMER</b>	INTEGRATED TOTE MIXERS
Criterion	Value
Rating	110V, 1 ph, 60 Hz
Horsepower	0.5
Speed, rpm	1750
Enclosure	TEFC
Insulation	Class F
Service Factor	1.15

- 1. The motor shall be in accordance with Section 26 05 60 Low Voltage Electric Motors.
- 2. Provide mixer controls integral to the motor and include an ON/OFF switch and 0-60 minute timer.

#### **PART 3 - EXECUTION**

# 3.01 INSTALLATION

A. The Contractor shall furnish and install one (1) mixer in each polymer tote in accordance with the manufacturer's instructions and in accordance with Section 46 00 00 – Equipment General Provisions.

# 3.02 MANUFACTURER'S FIELD SERVICES

A. The services of a qualified manufacturer's technical representative shall be provided in accordance with Section 01 75 00 – Checkout and Startup Procedures and Section 46 00 00 – Equipment General Provisions and shall include at a minimum the following site visits:

Service	Number of Trips	Number of Days/Trip
Installation and Testing	1	1
Startup	1	1
Training	1	1
Services after Startup	1	1

# 3.03 SHOP TESTING

- A. Shop testing shall be performed in accordance with Section 46 00 00 Equipment General Provision.
- B. Each mixer shall be tested at the manufacturers facility to check for excessive noise, vibration, heat build-up and proper operation.

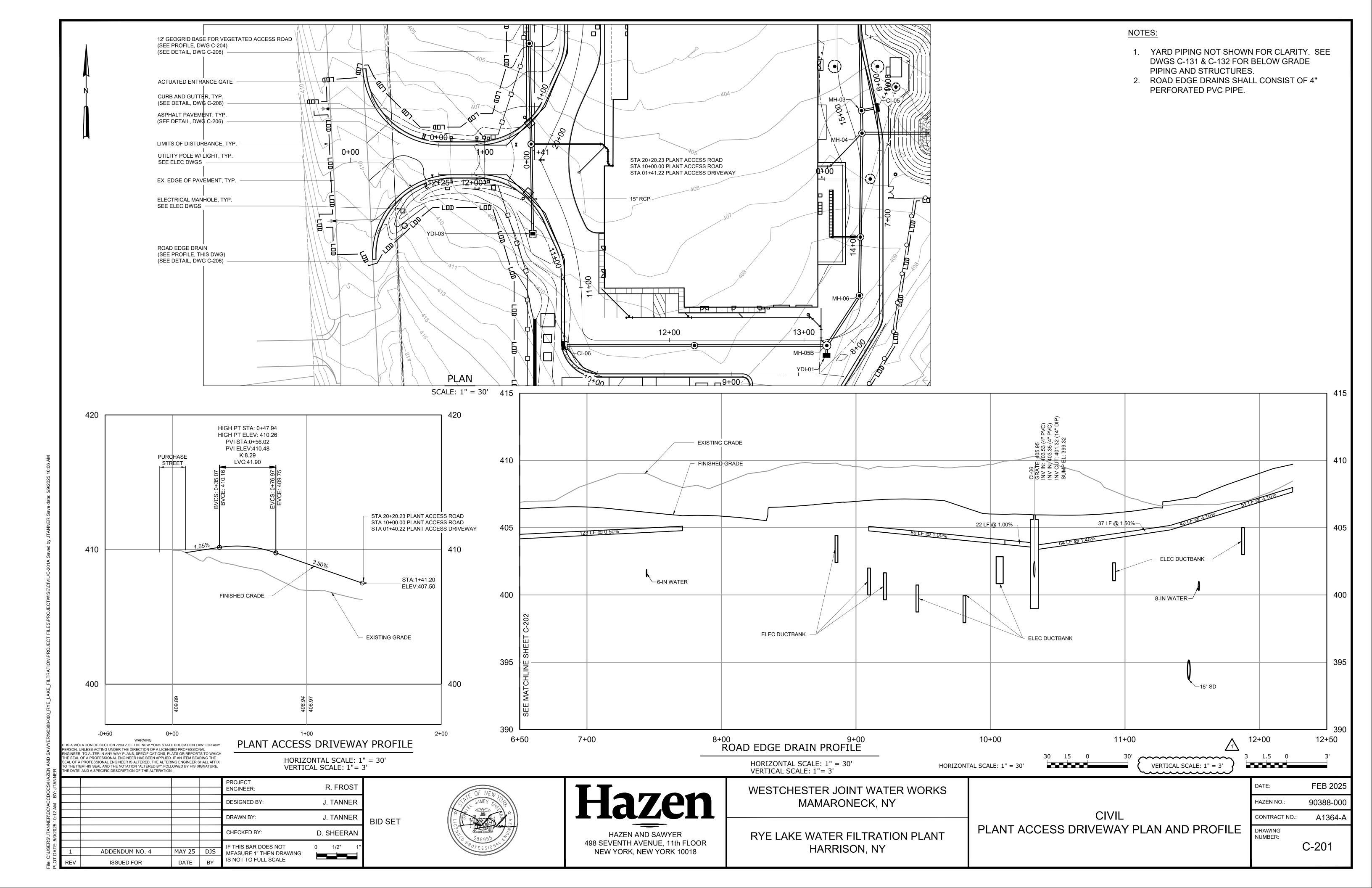
# 3.04 FIELD TESTING

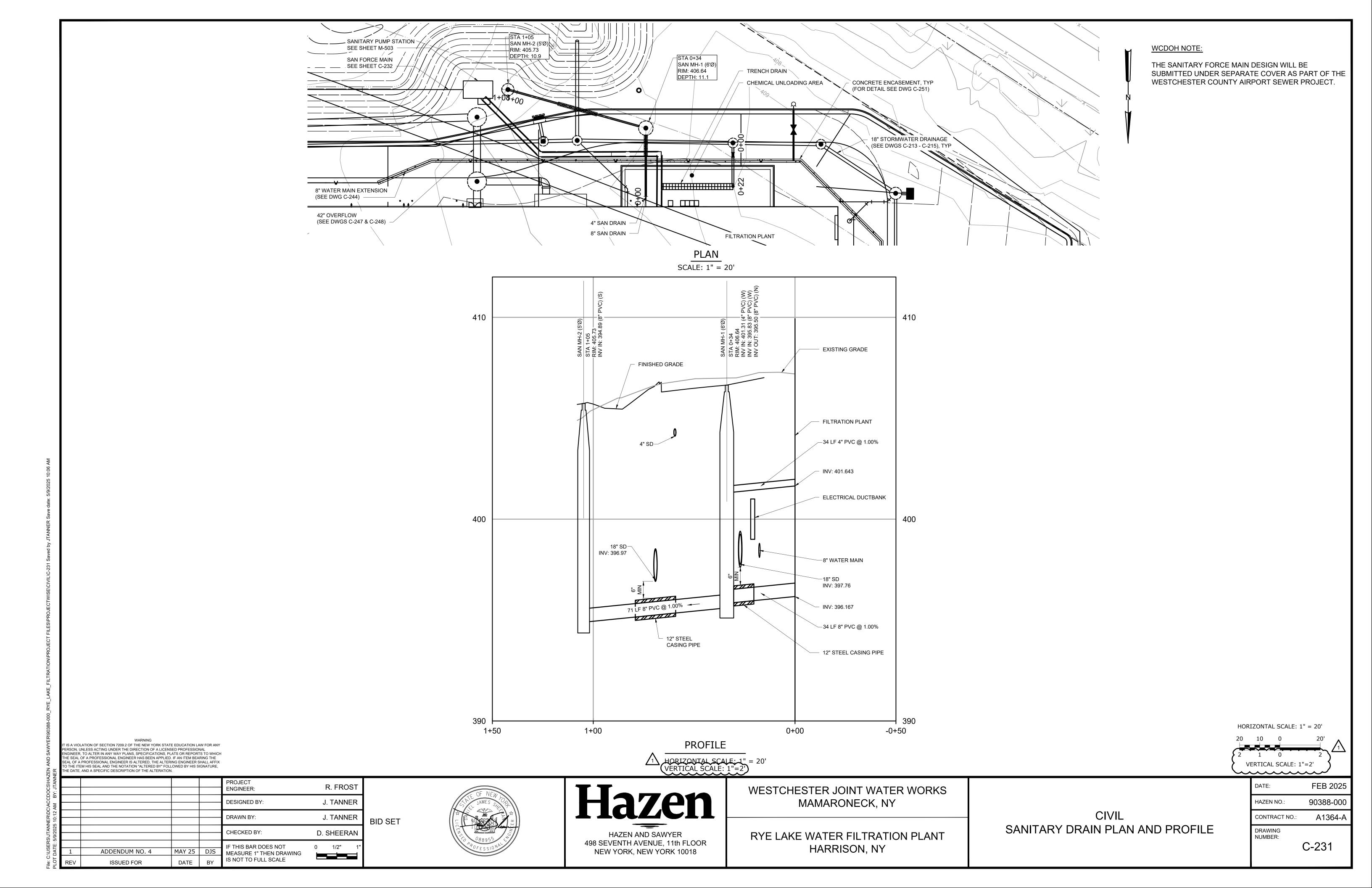
- A. Field testing shall be in accordance with the requirements of Section 01 75 00 Checkout and Startup Procedures and Section 46 00 00 Equipment General Provision.
- B. The entire installation shall operate with a vibration of less than 3 mils measured on any plane.
- C. The Contractor shall make modifications that may be required to provide vibration within specified tolerances in accordance with the manufacturer's and/or Engineer's recommendations without additional cost to the Owner.

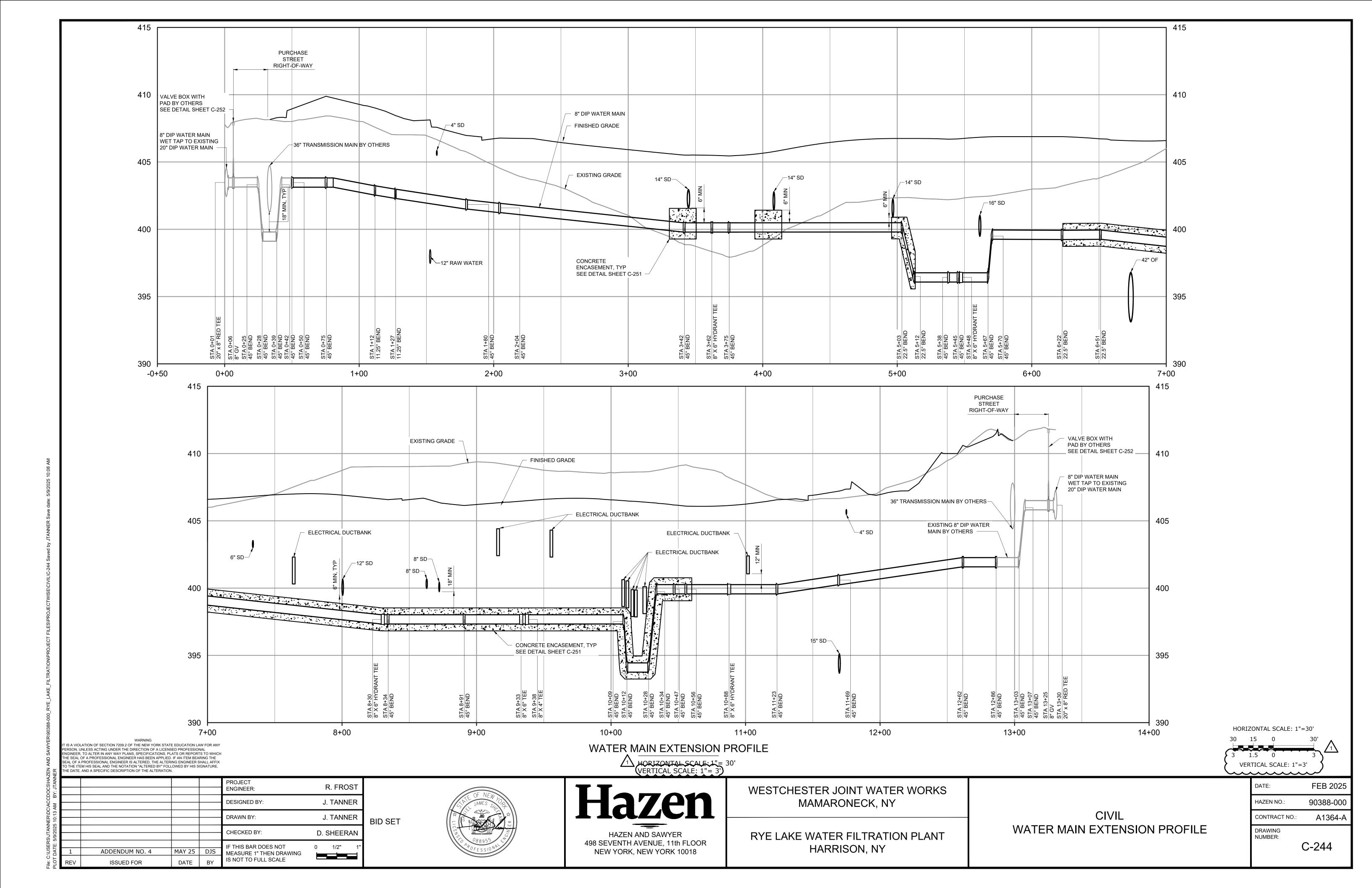
#### **END OF SECTION**

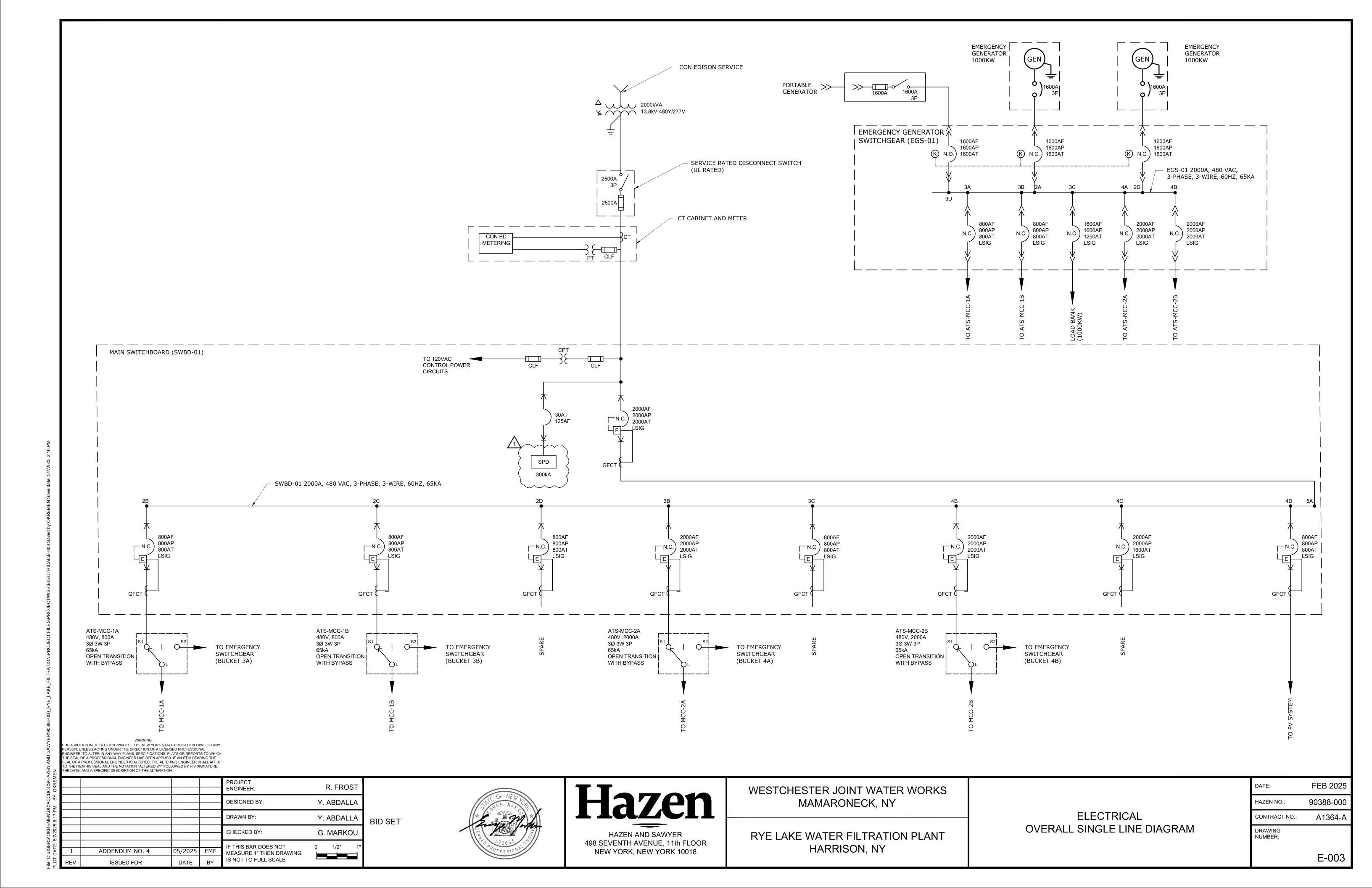
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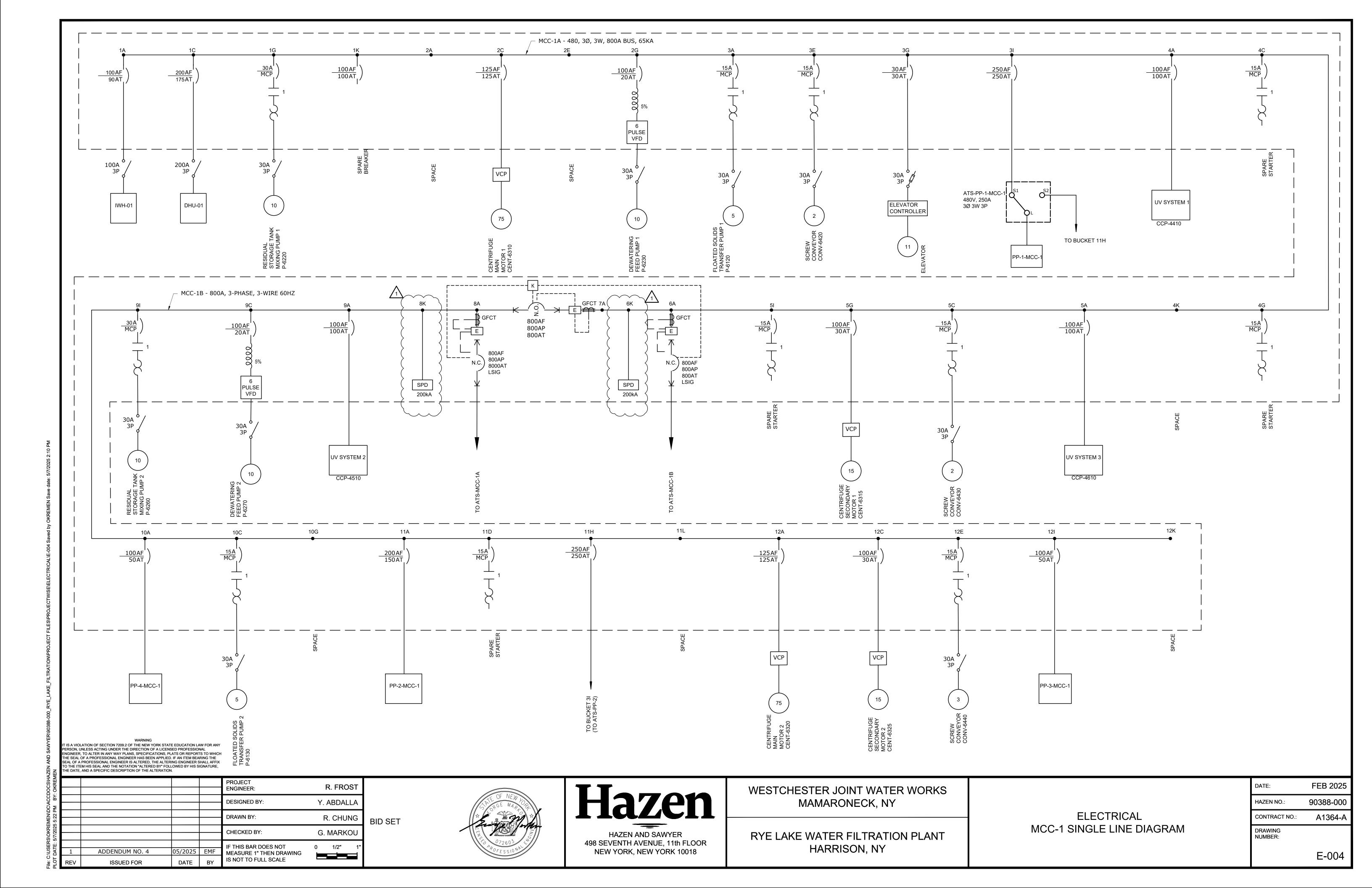
# Attachment B – Revised Drawings

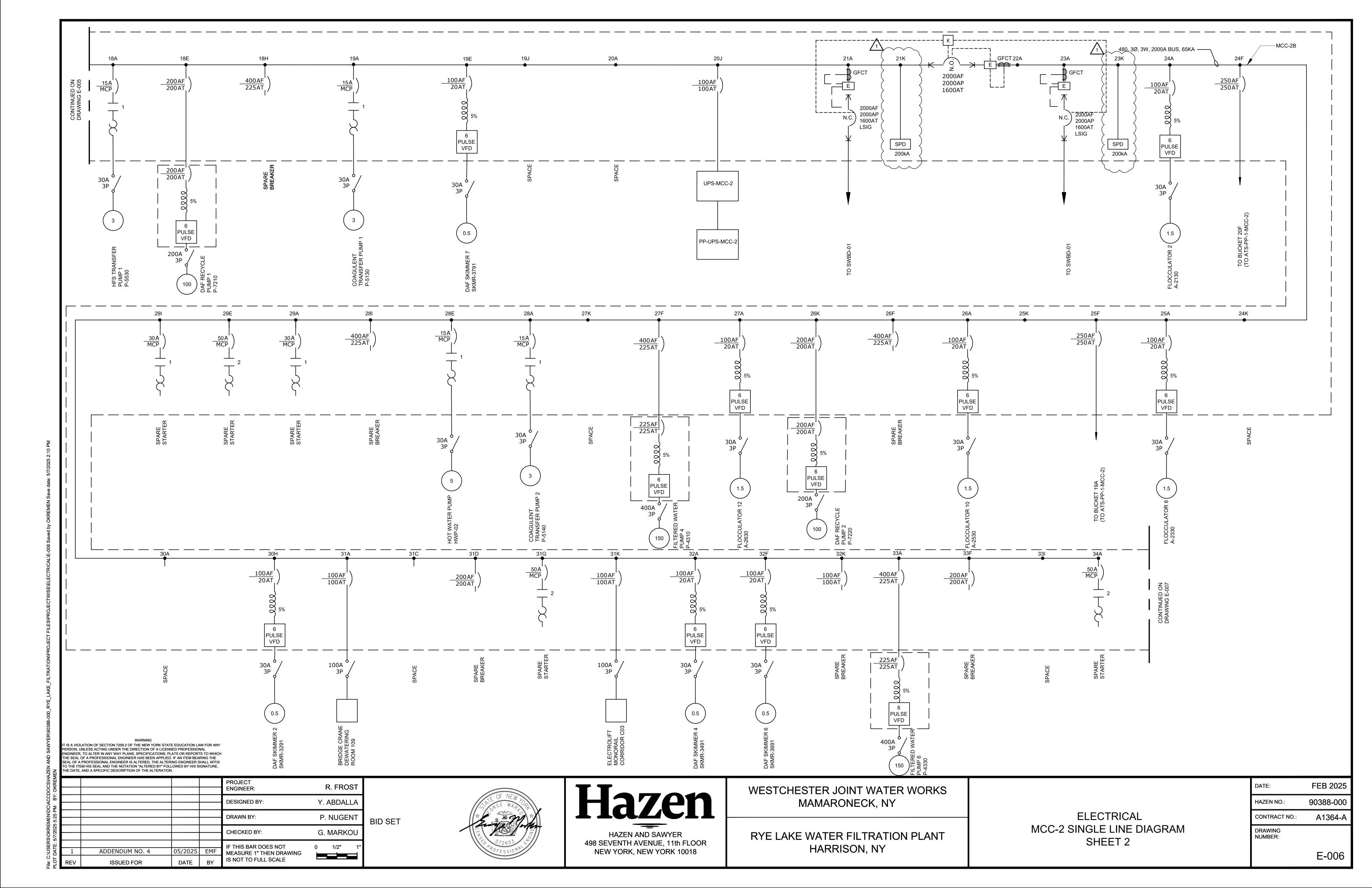


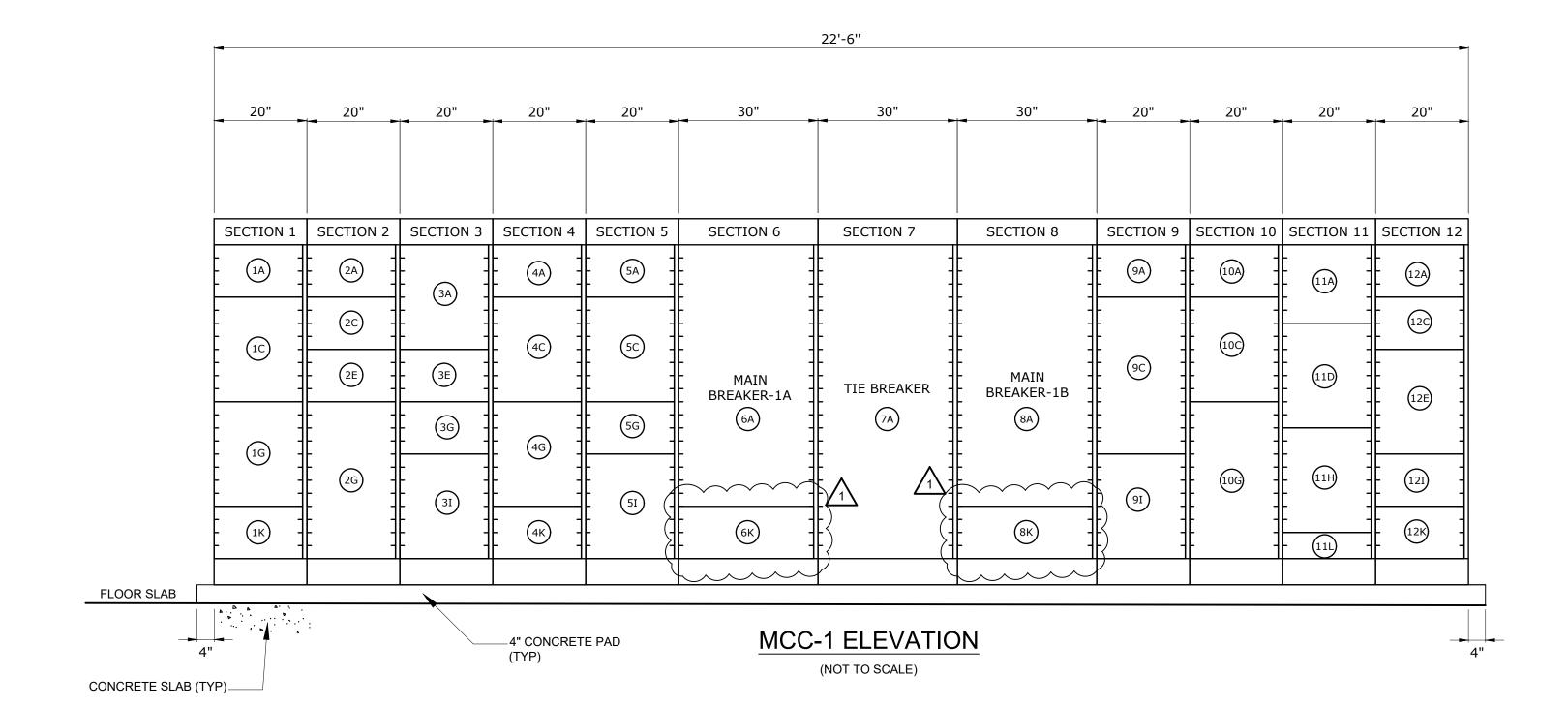


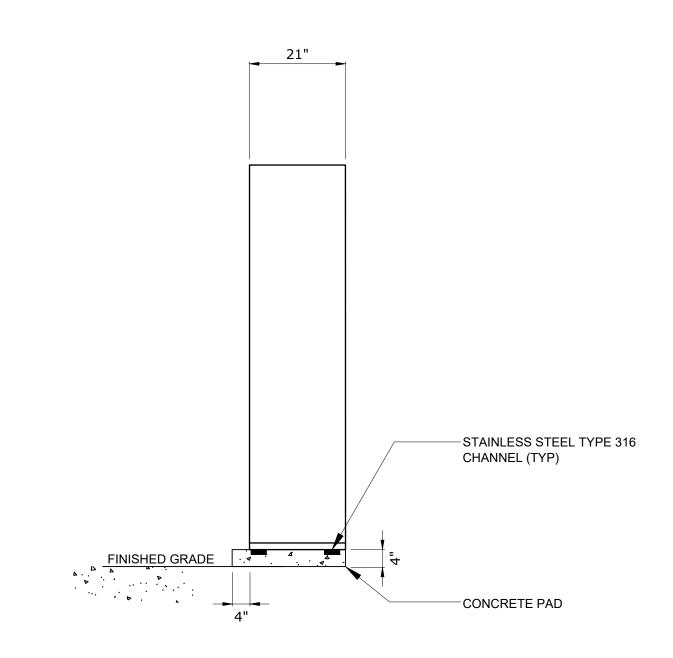












MOTOR CONTROL CENTER DETAIL
(SIDE VIEW)

(NOT TO SCALE)

WARNING
IT IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK STATE EDUCATION LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER IN ANY WAY PLANS, SPECIFICATIONS, PLATS OR REPORTS TO WHICH THE SEAL OF A PROFESSIONAL ENGINEER HAS BEEN APPLIED. IF AN ITEM BEARING THE SEAL OF A PROFESSIONAL ENGINEER IS ALTERED, THE ALTERING ENGINEER SHALL AFFIX TO THE ITEM HIS SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS SIGNATURE, THE DATE, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

∮ <u>□</u> ∣							
OKREME					PROJECT ENGINEER:	R. FROST	
PM BY:					DESIGNED BY:	Y. ABDALLA	
5:26					DRAWN BY:	P. NUGENT	BID SET
5/7/2025					CHECKED BY:	G. MARKOU	
DATE:	1	ADDENDUM NO. 4	05/2025	EMF	IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING	0 1/2" 1"	
<b>⊢</b>	REV	ISSUED FOR	DATE	BY	IS NOT TO FULL SCALE		

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HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT HARRISON, NY

ELECTRICAL MCC-1 ELEVATION

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	
	E-009



WARNING
IT IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK STATE EDUCATION LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER IN ANY WAY PLANS, SPECIFICATIONS, PLATS OR REPORTS TO WHICH THE SEAL OF A PROFESSIONAL ENGINEER HAS BEEN APPLIED. IF A TIEM BEARING THE SEAL OF A PROFESSIONAL ENGINEER IS ALTERED, THE ALTERING ENGINEER SHALL AFFIX TO THE ITEM HIS SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS SIGNATURE, THE DATE, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

: OKREM					PROJECT ENGINEER:	R. FROST	
PM BY:					DESIGNED BY:	Y. ABDALLA	
5:27					DRAWN BY:	P. NUGENT	BID SET
5/7/2025					CHECKED BY:	G. MARKOU	
ΞË	1	ADDENDUM NO. 4	05/2025	EMF	IF THIS BAR DOES NOT	0 1/2" 1"	
PLOT DA	REV	ISSUED FOR	DATE	BY	MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE		

OF NEW POR GE MARROP

HAZEN AND SAWYER
498 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT HARRISON, NY

ELECTRICAL MCC-2 ELEVATION

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	
	E-010

208/120 VOLTS						IP-1-	MCC-1					TYPE:	NEMA 1
3 PHASE, 4 WIRE						MAIN E	REAKER				М	OUNT:	SURFACE
						100	)A 3P				LOCA	ATION:	ELECTRICAL ROOM 119
DESCRIPTION	TDID	POLE	CKT	KILO-	VOLT-AMF	PERES	KILO-	VOLT-AMF	PERES	СКТ	DOL E	TDID	DESCRIPTION
DESCRIPTION	IRIP	POLE	No.	Α	В	С	Α	В	С	No.	POLE	IRIP	DESCRIPTION
RIO-21	20	1	1	2.4			5.0			2	1		
FIT-1711	20	1	3		0.06			5.0		4	1	50	IP2-MCC-1
AIT-1811	20	1	5			0.06			5.0	6	1		
AIT-1812	20	1	7	0.06			5.0			8	1		
AIT-1813	20	1	9		0.06			5.0		10	1	50	IP3-MCC-1
AIT-1821	20	1	11			0.06			5.0	12	1		
AIT-1822	20	1	13	0.06			0.5			14	1	20	PAGING/TELEPHONE CABINET
AIT-1823	20	1	15		0.06			-		16	1	20	SPARE
LIT-1901	20	1	17			0.06			-	18	1	20	SPARE
LIT-1902	20	1	19	0.06			-			20	1	20	SPARE
AIT-1911	20	1	21		0.06			-		22	1	20	SPARE
AIT-1912	20	1	23			0.06			-	24	1	20	SPARE
LIT-2111	20	1	25	0.06			-			26	1	20	SPARE
LIT-2211	20	1	27		0.06			-		28	1	20	SPARE
LIT-2311	20	1	29			0.06			-	30	1	20	SPARE
LIT-2411	20	1	31	0.06			-			32	1	20	SPARE
LIT-2511	20	1	33		0.06			-		34	1	20	SPARE
LIT-2611	20	1	35			0.06			-	36	1	20	SPARE
LIT-2711	20	1	37	0.06			-			38	1	20	SPARE
RIO-MCC-1	20	1	39		2.4			-		40	1	20	SPARE
SPARE	20	1	41			-			-	42	1	20	SPARE
	Ÿ												
			TOTAL	3	0	0	11	10	10	TOTAL			NOTES:
				P	HASE TOT	AL	TOT	AL LOAD (	KVA)		-		22kAIC
				13	10	10		34					100kA SPD
							ТО	TAL LOAD	(A)				
								94					

208/120 VOLTS						IP-2-N	MCC-1					TYPE:	NEMA 4X	
3 PHASE, 4 WIRE						MAIN BI	REAKER			MOUNT: SURFACE				
						50 <i>A</i>	A 3P				LOC	ATION:	ION: CORRIDOR (C01)	
DESCRIPTION	TRIP	POLE	CKT	KILO-	VOLT-AMF	PERES	KILO-	-VOLT-AMF	PERES	СКТ	POLF	TRIP	DESCRIPTION	
BEGGINI HOIV		I OLL	No.	Α	В	С	Α	В	С	No.	I OLL	HIXII	BEGORII HON	
SCADA ROOM - Receptacles	20	1	1	1.0			0.06			2	1	20	LIT-6414	
RLWTP PLC PANEL	20	1	3		2.40			0.06		4	1	20	YSK-6420	
FILTER-PLC 1	20	1	5			2.40			0.06	6	1	20	YSK-6430	
SPARE	20	1	7				0.06			8	1	20	LIT-6431	
CLIENTS WORK STATION 3	20	1	9		1.80			0.06		10	1	20	YSK-6440	
(WIT-6332	20	1	11	· · · · ·		0.06			0.06	12	1	20	LIT-6441	
CENT-PLC-1	20		13	2.40			0.1			14	1	20	LAS-5100	
CENT-PLC-2	20	1	15		2.40			0.1		16	1	20	LAS-5200	
LIT-6111	20	1	17			0.06			0.1	18	1	20	LAS-5300	
LIT-6211	20	1	19	0.1			0.1			20	1	20	LAS-5400	
LIT-6251	20	1	21		0.1			0.1		22	1	20	LAS-5500	
FIT-6330	20	1	23			0.06			-	24	1	20	SPARE	
YSK-6410	20	1	25	0.1			-			26	1	20	SPARE	
LIT-6412	20	1	27		0.1			-		28	1	20	SPARE	
LIT-6413	20	1	29			0.06			-	30	1	20	SPARE	
WIT-6312	20	1	31	0.06			-			32	1	20	SPARE	
WIT-6342	20	1	33		0.06			-		34	1	20	SPARE	
SECURITY PANEL	20	1	35			0.10			-	36	1	20	SPARE	
SPARE	20	1	37	-			-			38	1	20	SPARE	
SPARE	20	1	39		-			-		40	1	20	SPARE	
SPARE	20	1	41			-			-	42	1	20	SPARE	
										•				
			TOTAL	4	7	3	0	0	0	TOTAL			NOTES:	
		·		Р	HASE TOT	AL	TOT	AL LOAD (	KVA)		_		22kAIC	
				4	7	3		14					100kA SPD	
			•				TC	TAL LOAD	(A)					
								39						

**BID SET** 

208/120 VOLTS						IP-3-	-MC	C-1					TYPE:	E: NEMA 4X		
3 PHASE, 4 WIRE						MAIN B	BRE/	AKER				М	OUNT:	SURFACE		
						50	)A 3F	<b>o</b>				PIPE GALLERY (PLATFORM AREA)				
DECODIDATION	TDID	DOLE	СКТ	KILO-	VOLT-AMF	PERES		KILO-	CKT	חסור	TDID	DESCRIPTION				
DESCRIPTION	TRIP	POLE	No.	Α	В	С		Α	В	С	No.	POLE	IRIP	DESCRIPTION		
AIT-3113	20	1	1	0.06				0.06			2	1	20	LSH-5300		
AIT-3114	20	1	3		0.06				0.06		4	1	20	LIT-5311		
FIT-3116	20	1	5			0.06				0.06	6	1	20	LSHH-5312		
FIT-3118	20	1	7	0.06				0.06			8	1	20	LIT-5321		
AIT-3213	20	1	9		0.06				0.06		10	1	20	LSHH-5322		
AIT-3214	20	1	11			0.06				0.06	12	1	20	LIT-5351		
FIT-3216	20	1	13	0.06				-			14	1	20	SPARE		
FIT-3218	20	1	15		0.06				-		16	1	20	SPARE		
RIO-70	20	1	17			2.50				-	18	1	20	SPARE		
SPARE	20	1	19	-				-			20	1	20	SPARE		
SPARE	20	1	21		-				-		22	1	20	SPARE		
SPARE	20	1	23			-				-	24	1	20	SPARE		
			TOTAL	0	0	3		0	0	0	TOTAL			NOTES:		
		·		Pl	HASE TOTA	AL		TOT	AL LOAD (F	(VA)		=		22kAIC		
				0	0	3						100 kA SPD				
			•					TOTAL LOAD (A)								
									9							

208/120 VOLTS						ID_1_I	MCC-2					TVDE:	NEMA 1		
3 PHASE, 4 WIRE							REAKER						SURFACE		
orrinos, rvince							A 3P					ELECTRICAL ROOM 203			
			OKT	KII O	VOLT-AMF	-	1	KILO-VOLT-AMPERES				ATTON.	LEEGTRICAL ROOM 203		
DESCRIPTION	TRIP	POLE	CKT No.	A	В	C	A	B B	C	CKT No.	POLE	TRIP	DESCRIPTION		
RIO-MCC-2	20	1	1	1.0			-			2					
			3	2.0				-		4	3	20	SPARE		
P-3-MCC-2	50	3	5		2.0				-	6					
			7			2.0	-			8					
			9	2.0				-		10	3	50	SPARE		
IP-4-MCC-2	50	3	11		2.0				-	12					
			13			2.0	0.4			14	1	20	MOV-3330		
			15	2.0				0.4		16	1	20	MOV-3430		
IP-6-MCC-2	50	3	17		2.0				0.4	18	1	20	MOV-3530		
			19	-		2.0	0.4			20	1	20	MOV-3630		
SPARE	20	1	21		-			0.4		22	1	20	MOV-3730		
SPARE	20	1	23			-			0.4	24	1	20	MOV-3340		
SPARE	20	1	25	-			0.4			26	1	20	MOV-3440		
SPARE	20	1	27		-			0.4		28	1	20	MOV-3540		
SPARE	20	1	29			-			0.4	30	1	20	MOV-3640		
						· · · · · ·							•		
			TOTAL	7	6	6	1	1	1	TOTAL			NOTES:		
PHASE TOTAL							TOT	AL LOAD (	KVA)		_		22kAIC		
			Î	8	7	7		23					100kA SPD		
			•				TOTAL LOAD (A)								

208/120 VOLTS						IP-2-I	ACC-2					TYPE:	NEMA 1		
3 PHASE, 4 WIRE						MAIN B	REAKER			MOUNT: SURFACE					
			100A 3P							LOCATION: ELECTRICAL ROOM 203					
DESCRIPTION	TRIP	POLE	CKT	KILO-	KILO-VOLT-AMPERES		KILO-	KILO-VOLT-AMPERES		СКТ	POLE	TRIP	DESCRIPTION		
DESCRIPTION	IIXII	I OLL	No.	Α	В	С	Α	В	С	No.	No.	HXII	DESCRIPTION		
SPARE	20	1	1	-			-			2					
			3		-			-		4	3	50	SPARE		
SPARE	50	3	5			-			-	6					
			7	-			-			8					
			9		2.0			-		10	3	50	SPARE		
-5-MCC-2	50	3	11			2.0			-	12					
			13	2.0			0.4			14	1	20	MOV-3740		
			15		2.0			0.4		16	1	20	MOV-7120		
P-7-MCC-2	50	3	17			2.0			0.4	18	1	20	MOV-5297		
			19	2.0			0.4			20	1	20	MOV-5291		
SPARE	20	1	21		-			0.4		22	1	20	MOV-5292		
SPARE	20	1	23			-			0.4	24	1	20	MOV-5293		
SPARE	20	1	25	-			0.4			26	1	20	MOV-5294		
SPARE	20	1	27		-			0.4		28	1	20	MOV-5295		
SPARE	20	1	29			-			0.4	30	1	20	MOV-5296		
											_				
			TOTAL	4	4	4	1	1	1	TOTAL			NOTES:		
				PI	HASE TOT	AL	ТОТ	AL LOAD (	KVA)		-		22kAIC		
				5	5	5		16					100 kA SPD		
							TC	TAL LOAD	(A)						
								43		1					

WARNING
IT IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK STATE EDUCATION LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER IN ANY WAY PLANS, SPECIFICATIONS, PLATS OR REPORTS TO WHICH THE SEAL OF A PROFESSIONAL ENGINEER HAS BEEN APPLIED. IF AN ITEM BEARING THE SEAL OF A PROFESSIONAL ENGINEER IS ALTERED, THE ALTERING ENGINEER SHALL AFFIX TO THE ITEM HIS SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS SIGNATURE, THE DATE, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

OOCS!					PROJECT ENGINEER:		R. FRO	ST	
C/ACCI					DESIGNED BY:	Y. ABDALLA			
9: C:\USERS\OKREMEN\DC\ACCDOCS\ OT DATE: 5/8/2025 8:52 PM BY: OKRE					DRAWN BY:	Р	. NUGE	NT	
					CHECKED BY:	G. MARKOU			
Ë,			IF THIS BAR DOES NOT		IF THIS BAR DOES NOT	n	1/2"	1"	
:\USI	1	ADDENDUM NO. 4	05/2025	EMF	MEASURE 1" THEN DRAWING		1/2	—i I	
0 ic	DE\/	ISSUED FOR	DATE	RV	IS NOT TO FULL SCALE				





WESTCHESTER JOINT WATER WORKS MAMARONECK, NY

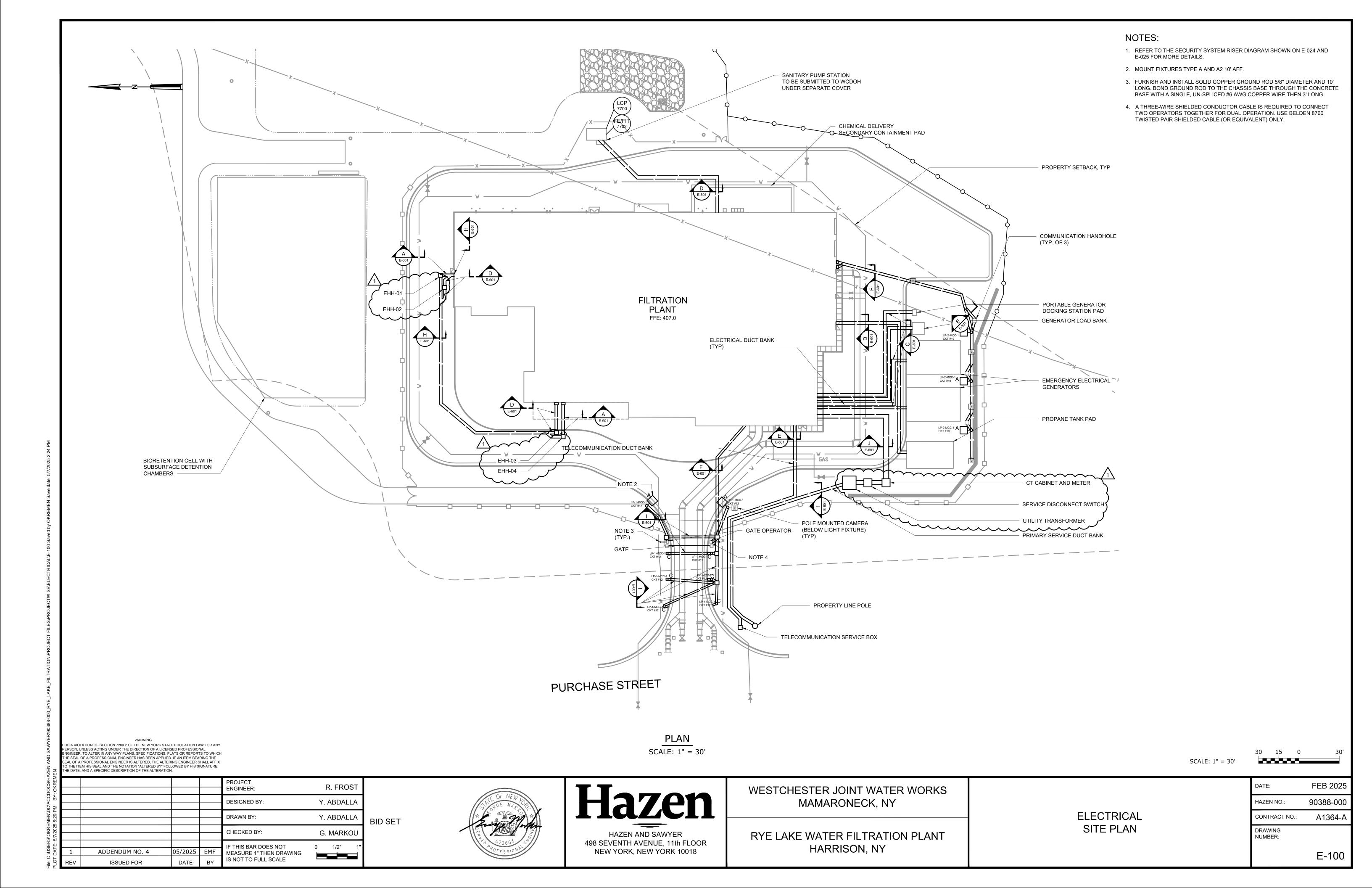
RYE LAKE WATER FILTRATION PLANT HARRISON, NY ELECTRICAL PANEL BOARD SCHEDULES - SHEET 5

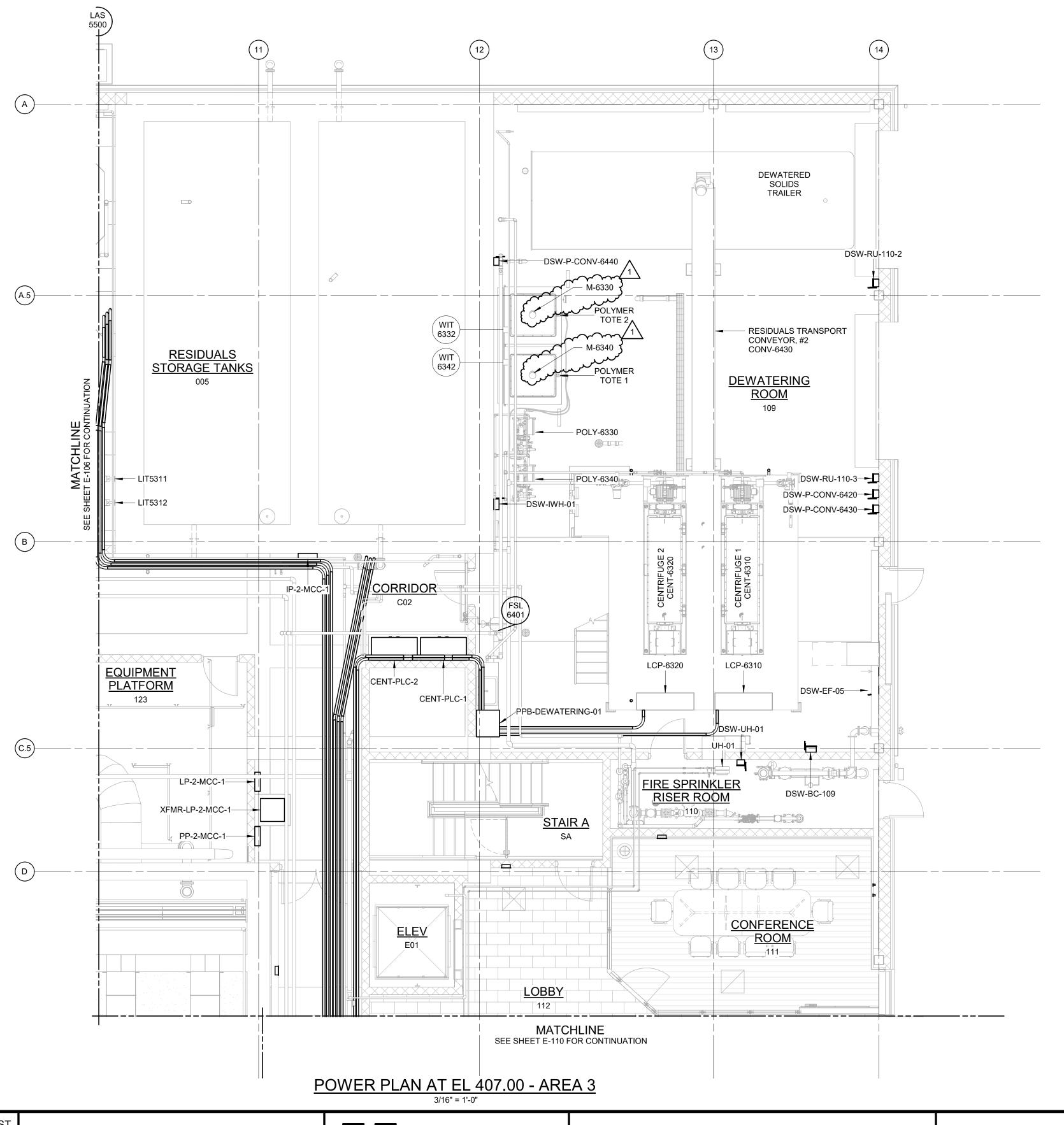
DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	
	E-016

FIIE: C:USEKS!ORKEMENIDCACCDOCS!HAZEN AND SAWYER!90388-000\_RYE\_LAKE\_FILI RATION!FROJECT F PLOT DATE: 5/8/2025 8:52 PM BY: OKREMEN

HAZEN AND SAWYER
P8 SEVENTH AVENUE, 11th FLOOR
NEW YORK, NEW YORK 10018

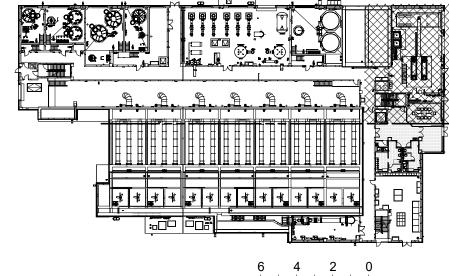
RYE LAKE WATE
HARF





NOTES:

- CONDUITS UNDER 2" ARE NOT SHOWN ON THIS DRAWING.
- 2. REFER TO THE CONDUIT AND CABLE SCHEDULE FOR ALL CONDUITS AND CONDUIT
- 3. CONDUITS SHALL BE SUPPORTED FROM THE CEILING OR WALLS OF THE ROOMS/AREAS THEY ARE LOCATED IN. SUPPORT SYSTEM SHALL BE DESIGNED BY THE CONTRACTOR AS PER SPECIFICATION SECTION 26 05 29.



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05/2025

DATE BY

ADDENDUM NO. 4

ISSUED FOR

**BID SET** 

Hazen HAZEN AND SAWYER

498 SEVENTH AVENUE, 11th FLOOR

NEW YORK, NEW YORK 10018

WESTCHESTER JOINT WATER WORKS MAMARONECK, NY

RYE LAKE WATER FILTRATION PLANT HARRISON, NY

FILTRATION PLANT ELECTRICAL POWER PLAN - EL 407.00 - AREA 3

DATE:	FEB 2025
HAZEN NO.:	90388-000
CONTRACT NO.:	A1364-A
DRAWING NUMBER:	
	E-107