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JULY 9, 2025

CONTRACT NO. 1800

WET WEATHER PUMP STATION

ADDENDUM NO. 3

All bidders bidding **Contract No. 1800** shall read and take note of this **Addendum No. 3**. The Procurement Documents for **Contract No. 1800 WET WEATHER PUMP STATION** are hereby revised and/or clarified as stated below.

Acknowledgement of Contract No. 1800 Addendum No. 3

The Acknowledgement attached to **Addendum No. 3** is to be signed and returned immediately via email at contract.clerks@alcosan.org and acknowledged with Bidder's Proposal.

Kimberly Kennedy, P.E.

Director – Engineering and Construction

ACKNOWLEDGEMENT OF
CONTRACT NO. 1800 G, E, H, P – WET WEATHER PUMP STATION

ADDENDUM NUMBER 3

FIRM NAME: _____

SIGNATURE: _____

TITLE: _____

DATE: _____

July 9, 2025

CONTRACT NO. 1800

WET WEATHER PUMP STATION

ADDENDUM NO. 3

ADDENDUM No. 3

ALLEGHENY COUNTY SANITARY

AUTHORITY

PITTSBURGH, PENNSYLVANIA

CONTRACT NO. 1800

WET WEATHER PUMP STATION PROJECT

July 9, 2025

BID OPENING

DATE

WEDNESDAY,

AUGUST 19,

2025

11:00 A.M.

This Addendum No. 3 consists of 18 pages and the following attachments:

Attachment A – Addendum No. 3 Drawings – 22” x 34” (3 pages)

Attachment B – Addendum No. 3 Reference Information Section 5I – (25 pages)

Attachment C – Addendum No. 3 MBE/WBE Registered Vendors (1 page)

ATTENTION BIDDERS

The following additions to and modifications of the Contract Documents will be included in and become part of the Contract for the Allegheny County Sanitary Authority (ALCOSAN) – Wet Weather Pump Station Improvements Project. Bidders are instructed to take the following into account in rendering any Bid for this work

The Bidder is responsible for verifying that he/she has received and reviewed all of the pages of the Contract Documents as well as all of the pages and attachments of all addenda. The Bidder shall verify all pages with the table of contents in the Contract Documents and the first page of all Addenda. Receipt of this Addendum No. 3 must be noted on the Bid Form. These items modify the portions of the documents specifically noted; all other provisions of the Contract Documents shall remain in effect

1. CHANGES TO THE SPECIFICATIONS

- 1.1 In Volume 1 of 5, **REVISE** Article 1 BIDDERS QUALIFICATION STATEMENT, Page 1-25G, last paragraph to read as follows:

“List name, location and description of project, owner, architect or engineer, contract price, date of completion and percent of work performed with your own forces for major projects of the same general nature as this project which the Bidder or Joint Venture partner(s) has completed in the past fifteen (15) years. Provide name, address and telephone number of a reference for each project listed.”

- 1.2 In Volume 1 of 5, Article 2.13 QUESTIONS REGARDING CONTRACT DOCUMENTS/ERRORS, **REVISE** the second paragraph, first sentence to read as follows:

“To receive consideration, any question, inquiry or request for interpretation or clarification shall be submitted to the Owner in writing, by 4:00 PM local time, Thursday, July 31, 2025.”

- 1.3 In Volume 1 of 5, Article 2.05 EXAMINATION OF CONTRACT DOCUMENTS AND SITE, **REVISE** the third sentence of the third paragraph to read as follows:

"Each Contract 1800G Bidder is required to visit the core shed at least once within nine (9) calendar weeks from advertisement for Bids, but limited to six (6) total workdays (48 work hours) of dedicated access to the rock core storage facility throughout the bid period."

- 1.4 In Volume 1 of 5, Article 2.15 BIDDERS TO INVESTIGATE, Paragraph A. **REVISE** the next to last sentence to read as follows,

"Access will be provided between May 28, 2025 and July 30, 2025 between the hours of 8:00 am and 4:00 pm."

- 1.5 In Volume 2 of 5, Specification Section 01 11 00 Summary of Work, Paragraph 1.02.C.25 **REVISE** as follows:

“ 25. Provide all Distributed Antenna Systems, cameras, radio antenna wiring, poles and mounts and all appurtenances equipment required for video cameras and radio where applicable to effect a complete and functional system.”

- 1.6 In Volume 2 of 5, Specification Section 01 61 45 “Area Exposure Designations”, **ADD** the following row to Part 4 Area Exposure Table:

Area	Delineation	Exposure Type	Notes
Discharge Chamber	Entire Chamber	Submerged/Process Corrosive	

- 1.7 In Volume 3 of 5, Specification Section 31 09 13 Geotechnical Instrumentation and Monitoring, Paragraph 3.01.A **REVISE** the text as follows:

“A. Install instrumentation in accordance with each respective manufacturer's recommendations at the locations shown on the Contract Drawings, prior to start of any work, shaft or open excavation construction and as approved and directed by the Owner. Potholing for utility location and utility relocation is permitted prior to instrumentation installation but is subject to limitations on depth being above the groundwater table and extend of limits as approved by the Owner. Install instruments in accordance with the instrument installation schedule as required in this Section and install such that baseline readings are made as specified herein.”

- 1.8 In Volume 3 of 5, Specification Section 31 71 21 Rock Excavation, Paragraph 1.03.A.1, **DELETE** the word “bolts” in Para 1.03.A.1 and **REPLACE** with “dowels”.

2. CHANGES TO THE DRAWINGS

- 2.1 On Sheet 000-CDM-01, **UPDATE** keynotes. **REPLACE** Sheet 000-CDM-01 with Sheet 000-CDM-01 Rev. 01, refer to Attachment A.
- 2.2 On Sheet 000-CDM-03, **UPDATE** keynotes. **REPLACE** Sheet 000-CDM-03 with Sheet 000-CDM-03 Rev. 01, refer to Attachment A.
- 2.3 On Sheet 000-C-04, **UPDATE** information on existing trailers. **REPLACE** Sheet 000-C-04 with Sheet 000-C-04 Rev. 01, refer to Attachment A.

3. CHANGES TO VOLUME 1 of 1 REFERENCE INFORMATION

- 3.1 **REPLACE** the Table of Contents with the revised Table of Contents contained in Attachment B.
- 3.2 At the end of Section 5 Reference Drawings, **ADD** new Section 5I ALCOSAN WWPS EXISTING SWITCHGEAR LOCATION SUMMARY, refer to Attachment B.

4. QUESTIONS AND ANSWERS

- Q1:** Drawing Sheet 118 of 405, Note 7A restricts the maximum spacing between bracing levels to 12 feet vertically. Please consider removing this constraint and allow the Contractor's designer to determine the safe allowable spacing between bracing levels.
A1: Contract requirements to remain.
- Q2:** Drawing Sheet 118 of 405, Note 7D restricts the maximum cantilever height to 7 feet. Please consider removing this constraint and allow the Contractor's designer to determine the safe allowable cantilever distance.
A2: Contract requirements to remain.
- Q3:** Specification section 2.27.C indicates that the Authority maintains a list of minority or women's business to be incorporated into solicitations for the project. Can the Authority share this list with the Contractors?
A3: Please see attached list of vendors who have registered with ALCOSAN under construction and industrial supplies categories. These firms have not been prequalified, nor have their certifications been verified. Refer to Attachment C of Addendum No. 3.
- Q4:** The Bidder's Qualification Statement specifications require the Contractor to submit Schedule A through D. Are there specific Owner developed forms that are to be used?
A4: There are no specific Owner-developed forms
- Q5:** Are there page limits for Schedules A through D for the Bidder's Qualification Statement?
A5: Limit to 20 pages maximum, attempting to be as concise as possible should the maximum be needed.
- Q6:** Drawing Sheet 7 of 405 shows an Owner's barge adjacent to a river wall

West of the Wet Weather Pump Station Work area. Will the Wet Weather Pump Station Contractor be permitted to stage any barges along the river wall between Coordinates N 10735.162, E 5503.887 and N 11173.344, E 5505.541?

A6: Response will be provided in future addendum.

Q7: Drawing Sheet 7 of 405 shows the LOD down the center of the river wall cells and also prohibits vehicular access West of the LOD line. Laydown area is at a premium for this contract. Would Alcosan consider moving the LOD to the face of the river wall and provide water access and barge storage to the Wet Weather Pump Station Contractor? This would reduce the construction traffic on the site.

A7: Response will be provided in future addendum.

Q8: Specification section 01 30 00, Paragraph 1.05.D.6 says, "Each contractor is allowed a maximum of two (2) Contractors' vehicles to be parked or driven onto the plant site and must be registered with the main gate guardhouse to receive a vehicle identification tag." A project of this scope and magnitude will require more than two foreman vehicles to be on site at a time. If we are required to shuttle small equipment and materials through the gates, one pickup truck at a time, bid prices will increase. Please reconsider this restriction.

A8: Each Prime Contractor is allowed two vehicles to be parked on the plant site outside the Limits of the Contractor Staging Area. These two spots per Prime, are the parking spaces west of the designated owner spots shown by Keynote 6 on drawing 000-G-06. Additional vehicles will be allowed onsite but must be parked within the Limits of the Contractor Staging Area and shall be shared among Prime Contractors. Use of the Contractor Staging Area must be coordinated with the CM and other Primes.

Q9: What certifying body is acceptable when considering MBE/WBE participation?

A9: PAUCP, WBENC, EMSDC, DOTs, and Certifications from other states.

Q10: Specification section 01 50 13 tells us to move the existing CM trailer. Where is this trailer currently located?

A10: Refer to Item 2.3 in Addendum 3.

Q11: Page 1-6G in Article 1 of the specifications only provides the ability for one surety to be listed. How are we to address multiple sureties?

A11: Provide additional copies of Page 1-6G as required for the additional sureties.

Q12: Page 1-8G in Article 1 of the specifications only provides the ability for

two Joint Venture Partners to be listed. How are we to address more than two Joint Venture Partners?

A12: Provide additional copies of Page 1-8G as required for the additional partners.

Q13: Page 1-25G of Article 1 of the specifications limits the reference projects to those which have been completed within the past 12 years. We are requesting that be extended to 15 years.

A13: Refer to Item 1.1 in Addendum No. 3.

Q14: Pursuant to the discussions at the Pre-Bid Meeting regarding the "Bidder's Qualification Statement", we are requesting Schedule D - Method Statement be eliminated as a bidding requirement. Producing the workplans as described in Schedule D prior to bid will be counterproductive. ALCOSAN will expect the project to be built in accordance with the work plans submitted at the time of bid while the construction team, which will incorporate personnel that were not on the estimating team, will want to develop their own plans to better manage the project as they see fit. Because the "Bidder's Qualification Statement" is not graded and will only be used to indicate the low bidders qualifications, we feel the information provided in Schedules A, B & C will sufficiently indicate to ALCOSAN if the low bidder has the qualifications to perform the work. Please eliminate Schedule D as a requirement for bid.

A14: Response will be provided in future addendum.

Q15: Contract drawing 000-CDM-03 shows the Fuel Containment Area Demolition Plan. What is the type and length of pile under the fuel containment foundation?

A15: Pile type and length is provided in Volume 1 of 1 Reference Information, Section 5B. Drawing 000-CDM-03 has been revised to clarify the requirements. Refer to Item 2.2 in Addendum No. 3.

Q16: Sheet 000-CDM-01, keynote 13 of the Site Demolition Plan calls for three Test Pits along the river wall. What is the estimated depth of the test pits. As a reference the depth of the Test Pits referred to in the Contract Documents Volume 5 of 5 was 10 feet.

A16: Drawing 000-CDM-01 has been revised to clarify the requirements. Refer to Item 2.1 in Addendum No. 3.

Q17: Please provide a copy of the sign in sheet for the Mandatory Pre-Bid Meeting held June 11, 2025.

A17: Provided in Addendum No. 2.

Q18: Paragraph 2.13 in Article 2: Information for Bidders says "To receive

consideration, any question, inquiry or request for interpretation or clarification shall be submitted to the Owner in writing, at least Thirty (30) calendar days prior to the advertised date for receipt of Bids." Thirty (30) calendar days prior to bid receipt date is July 20, 2025. At the Pre-Bid meeting, it was said the last day for bid questions is July 9, 2025. Please confirm the last day for bid questions is July 20, 2025.

A18: Refer to Item 1.2 in Addendum No. 3.

Q19: Please confirm that it will be acceptable, as it has been on previous bids, to utilize an Excel spreadsheet to track our WBE/MBE efforts, as long as it captures all of the required information of the tracking form issued with the bid documents.

A19: Yes, this will be acceptable.

Q20: Since the base mat foundation is 16-feet thick and is approximately 6,500 CY, and a vertical construction joint will be impractical, is it acceptable to have a two-part placement with a horizontal cold joint? If so, will any additional reinforcing be required, and can you provide that information?

A20: No horizontal joints are permitted in the base slab. See standard details for locations where vertical joints in the base slab are permitted.

Q21: The concrete specifications call out construction joints at 30' for walls above elevation 707'. Are construction joints permitted in walls below elevation 707'? If so, at what length?

A21: Joints are permitted in the walls below elevations 707 and are shown in the Contract Drawings. Contractor may request additional construction joints in the walls below elevations 707 which are subject to Engineer review and approval.

Q22: The concrete specifications call for slab joints at 40' or 900 SF. Is this only for slabs on grade, or does this include structural mats and structural elevated slabs?

A22: The specified joint criteria is for all structural slabs, including slabs on grade, structural mats, and structural elevated slabs. Requirements and restrictions for the locations of construction joints in the pump station shaft base slab and pump station shaft elevated slabs are shown on the Contract Drawings. Contractor may request additional locations for construction joints in the shaft slabs which are subject to Engineer review and approval

Q23: I wanted to know if my company can be considered for the DDC portion of the project as an equal to Johnson Controls. I previously worked for JCI and know that our open protocol Niagara System is fully integratable

to the Metasys System. I am very familiar with Scada integration projects as well and would like the opportunity to bid on this as an equivalent.

- A23:** Refer to Article 2 Information for Bidders, Part 2.07 Supplementary Information Package for procedures on proposed or equals.
- Q24:** Reference Article 2, paragraph 2.17.C: Is the “waste disposal plan” required with our bid or afterwards?
- A24:** This is a contract submittal that would be provided after bid, not with the bid.
- Q25:** Reference Article 2, paragraph 2.26, first paragraph: “list of available facilities including equipment and personnel,” required with our bid or afterwards?
- A25:** Submit Bidder's Qualification Statement as described in Article 1. The Bidder's Qualification Statement is required to be submitted with the bid.
- Q26:** Reference Article 2, paragraph 2.33: Is it acceptable to limit our list of subcontractors (greater than 5%) to only those that we have made pre-bid commitments to as part of our proposed team?
- A26:** Yes, this is acceptable. As additional subcontractors under this category are committed to the team after bid, Contractor shall notify the Owner.
- Q27:** Section 01 11 00-1.02(C)(20) in the Summary of Work references the provision of control panels, stating “Equipment shall be consistent with the functional control descriptions listed in the Specifications.” There are no details provided for Control Panels in the E Drawings, please provide the following:
- List of Control Panels to be provided by the 1800-E Contract
- A27:** A list will not be provided. Each Prime Contractor shall review the Functional Descriptions and specification sections for responsibility of furnishing and installing control panels.
- Q28:** Is the 1800-E Contractor responsible for the complete design, provision, installation and testing of the DAS System as detailed on Drawing 430-ER-08 and Specification Section 40 66 10?
- A28:** Refer to Item 1.5 of Addendum 3.
- Q29:** 1.02 B. 3 states that all excavation, test pits, SOE control of groundwater will be provided by the 1800-G Contract. Is the 1800G Contract responsible for determining the actual physical location of the 1800-E manholes, handholes and duct-banks?
- A29:** Contract 1800E is responsible for determining the actual physical

location of the 1800E manholes, handholes and ductbanks. Refer to Section 01 11 00 Part 1.02.C.7. Contract 1800E shall coordinate with Contract 1800G to accommodate other site utilities.

Q30: Will the 1800-E Contractor be required to have a Professional Land Surveyor to coordinate the designed plan location coordinates of the 1800-E in-ground electrical installation (manholes, handholes and duct-banks) as part of the coordination effort with the 1800-G Contract?

A30: Yes. Refer to Section 01 11 20 Parts 3.03.I.1, 3, 4 and 10 and Section 01 78 39 Part 1.03.B.1.

Q31: Section 26 05 33 Raceways 1.01 Scope A States Raceways shall be provided for grounding systems. Will all grounding conductors as detailed on the Power Plans 430-ET-01 through 430-ET 12 be required to be installed in conduit inside of the 430 Building, including the roof plans?

A31: All grounding shall be in conduits per 26 05 33 1.01 A. Contractor may request deviations for specific areas.

Q32: Can details be provided for the Shore Power Breaker detailed on Drawing 430-ET-09 relative to current rating and voltage?

A32: The Shore Power Transformer is 75kVA, 480/120-208V, 3 phase. Shore Power Breaker is 200A, 208 V, 3 phase. See drawings 430-ET-09 Key Note 4 and Drawing 430-ES-01 Panel Schedule (PPB0002-430).

Q33: Section 26 56 19 details the requirements for exterior site lighting inclusive of 2.02 Exterior Light Poles, 2.03 Site Junction Boxes, 2.04 Photocells. No Site Lighting Plans have been included in the Electrical Plans or Luminaire Schedule. Panel Schedules 1 through 3 do not detail any branch circuit provisions for any exterior Site Lighting power circuits. Is the 1800-E Contractor responsible for providing Pole Mounted Site Lighting, in-ground raceways, power conductors and in-ground junction boxes?

A33: All Exterior Lighting is shown on drawings 430-ELP-06 to 430-ELP-10, 430-ELP-13 and 430-ELP-14 and are mounted on the building. Fixtures are listed on Luminaire Schedule 000-E-04.

Q34: To relocate duct banks it is necessary to pull new MV cable and control cables. New duct bank locations are shown on the drawings. Routing is shown on the cable schedule. However the drawings do not show where specific pieces of equipment are inside each of the existing buildings, making it hard to determine lengths of cables through existing conduits. Are there drawings available to show these locations?

A34: Refer to Attachment B in Addendum No. 3, Reference Information Section 5I for the general vicinity of existing switchgear. Refer to

Article 2.05 Examination of the Contract Documents and Site.

Contractors may schedule site visits to assess the termination locations by contacting the Construction Manager as described in the Legal Notice.

Q35: Paragraph 1.03 A of the Maintenance of Plant Operations Specification states: "During construction, it is expected that additional relocations of work in addition to the detailed tie-ins listed below will be necessary. This is considered incidental and included in the Contract Price." Due to the unforeseen and unquantifiable nature of this work please consider additional relocations be paid on a Time and Material Basis.

A35: No. Refer to Part 1.01 Summary. Additional relocations may be impacted by the Contractor's means and methods for performing the work and maintenance of plant operations. This is for any known utility, structure, or surface improvement that is not specifically called out to be removed or replaced in the contract documents that may need to be modified to facility the contractors work, should be included in the bid price. If an unknown utility is discovered and required to be relocated, it will be paid for through the change order process.

Q36: Please clarify if Site Electrical Demolition (including the 5kv substation and structures) are to be included in the General Construction Contract or the Electrical Contract. Reference Plan Sheet 000-EDM-01. Reference is also made to the following conflicting paragraphs in Specification 01 11 00 - Summary of Work: 1.02.B.9, 1.02.B.2, and 1.02.B.3.

A36: We believe the Question is actually referring to 1.02.C.2 and 1.02C.3 rather than 1.02.B.2 and 1.02B.3.

Contract 1800G is responsible for existing substation demolition per 01 11 00 Summary of Work, 1.02.B.7.

Contract 1800G is responsible for existing ductbank demolition per 01 11 00 Summary of Work, 1.02.B.9, after Contract 1800E has performed utility relocation and removed cabling per 01 11 00 Summary of Work 1.0.B.9 and 1.09.C.2.

Contract 1800E has electrical demolition work associated with relocation, modification and new site utilities. An example would be modification to existing electrical manholes.

Q37: Division 09 90 00 and 09 96 00 provides instructions on surface preparation, coating, and testing for both conventional and high performance coatings for various substrate materials. However, it is not clear what items of work require a coating. Specifically related to

concrete, will any concrete (cast in place or precast) require any type of coating? If so, please provide a list of which portions of the structure require a coating along with its required coating system.

- A37:** See coating requirements in 09 90 00 Section 3.03 Coating Systems Schedule and the Interior and Exterior finish schedules on Drawing 430-AS-01.
- Q38:** Division 09 90 00 and 09 96 00 provides minimal direction on pieces and parts that are to be coated and if they are to be shop or field coated. Will ALCOSAN provide a list of equipment or materials that they are considering immersed vs. not immersed?
- A38:** See coating requirements in 09 90 00 Section 3.03 Coating Systems Schedule for all equipment, conduit, pipes, ducting, and miscellaneous metals. Specification 09 90 00 Section 1.03 A.54 defines Immersion as anything "below the waterline or submerged in a liquid". Specification 01 61 45 Section 1.03 B.5 and Part 4, Areas Exposure Table summarizes the submerged locations. See Contract Documents for all equipment and materials located in immersed/submerged areas.
- Q39:** Currently, the only direction for protective coatings in the project scope specific to field application is for "immersed equipment" and (should time allow) for the final coat of "non immersed equipment", with the exception of pumps and valves (see spec 09 96 00 - 26). Is it acceptable for this material to be fully painted in the shop and touched up, as necessary, in the field? This would provide a superior quality product and reduce an already clogged worksite.
- A39:** Shop coating of equipment and field touch up is acceptable.
- Q40:** Specification Section 01 22 00 - Measurement and Payment identifies 430 Wet Weather Pump Station (all work in 430 not including 431 and 432) as an item for the creation of the Work Breakdown Structure for the Schedule of Values and the CPM Schedule. In order to ensure that there are no scope gaps or overlaps please clarify what work would be included in this item that would not be included in Items 431 Superstructure (above grade), 432 Pump Station Shaft (below grade), or 000 Sitework.
- A40:** The WBS is a schedule reporting tool, not a bid form that delineates scope or scope gaps.

The 3-digit high level WBS shall be further expanded to include lower tiers in working with the Construction Manager (CM) as described in 01 32 16 Construction Progress Schedule. Refer to Part 1.04 Work Breakdown Structure and 1.14 Schedule Requirements.

Activities may need to shifted from one WBS to another at the discretion

of the CM. WBS 432 is generally intended to include all the SOE, deep foundations and structural shaft related work while WBS 431 is generally intended to include all above grade superstructure components. WBS 430 would generally include all the work internal to the WWPS both above and below grade including the process mechanical, instrumentation, architectural, electrical, HVAC, plumbing, fire protection, etc.

Q41: Specification Section 31 09 13 - Geotechnical Instrumentation and Monitoring Paragraph 3.01A states "Install instrumentation in accordance with each respective manufacturer's recommendations at the locations shown on the Contract Drawings, prior to start of any work, shaft or open excavation construction and as approved and directed by the Owner. Please clarify "prior to any work, shaft or open excavation construction". eg. prior to utility pothole excavation, utility relocation excavation, shaft SOE excavation.

A41: Refer to Item 1.7 of Addendum No. 3.

Q42: Specification Section 03 15 00 Concrete Joints and Accessories paragraph 3.03.A.2 states that horizontal joints are not permitted in footings, beams, or slabs. Consider permitting horizontal joints in the Bottom Floor Base Slab that is 16 ft thick.

A42: No horizontal joints are permitted in the base slab. See standard details for locations where vertical joints in the base slab are permitted.

Q43: Article 1 - Bid Form, Paragraph 7 Subcontractors states: " Bidders agrees to submit within FIVE (5) days of Owner's request, a listing of subcontracting firms or businesses that will be awarded subcontracts for portions of Work as described in the Instruction to Bidders".
Article 2 - Information for Bidders, Paragraph 2.33 - List of Major Subcontractors / Suppliers states: "The Bidder shall submit for approval a list of all subcontractors employed on the Work, whose work to be performed is anticipated to be in excess of One Hundred Thousand Dollars (\$100,000.00), or Five percent (5%) of the Lump Sum Price, whichever is greater, with a list of Work they are to perform. Bidders are advised that they must submit a complete list of subcontractors. Failure to provide this information at the time specified will, at the Owner's election, make the Bid nonresponsive....

Question - The above two requirements appear in conflict. One requires submission of the list of proposed subcontractors after the bid and the other appears to imply submitting this list prior to bid or with the bid. Please clarify when the list of proposed subcontractors must be submitted.

A43: The list of proposed subcontractors is not required to be submitted with the bid. As stated in Article 1, Bidder shall submit within 5 days of

Owner's request. As stated in Article 2, if the Bidder does not submit within 5 days of Owner's request, the Owner may deem the bid nonresponsive.

Q44: Article 2.13 - Please consider revising the last day for questions to be submitted from 30 calendar before the receipt of bids to 15 calendar days.

A44: Refer to Item 1.2 in Addendum No. 3.

Q45: Article 2.15 - Please consider extending the last date to visit the core shed from July 2, 2025 until August 1, 2025.

A45: Refer to Item 1.3 in Addendum 3.

Q46: Article 3.77 SC- To meet the required completion dates the Contractor will likely need to work extended shifts and / or multiple shifts.

Question 1) Can the Contractor work up to 2 EA 12-hour shifts a day Monday through Saturday?

Question 2) Can the Contractor work on Owner observed Holidays?

A46: Refer to Section 01 11 20 Job Conditions Part 3.01 for working outside these time frames. Please also review Article 2, Attachment A Project Labor Agreement regarding work on Owner observed Holidays.

Q47: Specification snipped (01 11 00 1.09 B.) below says we are to consult Alcosan for access to the underground utility record drawings. Can you tell me how we go about reviewing these drawings?

A47: Contract Documents were prepared using available Owner model of buried utilities and available drawings. Please follow-up with a more specific request if there are utilities or areas of particular need.

Q48: During the pre-bid meeting it was stated that the last day for questions is July 9, 2025. Please consider extending the question deadline to within two weeks of the bid date.

A48: Refer to Item 1.2 in Addendum No. 3.

Q49: Article XIII of the Letter of Assent states, "Parking facilities or arrangements for employees working on the Project will be established by ALCOSAN by the time work on the Project commences." Are bidders to assume that ALCOSAN will provide onsite parking for all staff and craft workers for these contracts?

A49: The limited parking on Alcosan property is defined in Section 01 30 00. Street parking can be found on public streets outside the plant. Bidders should review Specification 01 50 00 Attachment A Contractor Personnel and Delivery Control Procedure with regards to controlling

personnel and on-site traffic. In addition, refer to Addendum No.3, Question 8.

- Q50:** Are there requirements for vertical construction joints (i.e. maximum circumferential wall lengths) for the circular wet well and outer shaft walls?
- A50:** Vertical construction joints are required in the walls below elevation 707 where shown in the Contract Drawings. Contractor may request additional vertical construction joints in the walls, subject to the limitations indicated on the Contract Documents and to Engineer review and approval.
- Q51:** Are there requirements for horizontal construction joints for the High Tension Overlay Concrete placed on the bottom floor, duty pump floor, and motor floor?
- A51:** Horizontal joints are permitted in the HTC in the wetwell over the base slab. At all other levels, only vertical construction joints are permitted. All construction joints are subject to Engineer review and approval.
- Q52:** Reference cranes CRN003-430, CRN004-430, CRN005-430 on pages 430-M-06, 430-M-18, 430-M-16, 430-M-07, and 430-M-15. In addition, reference the corresponding specifications for these cranes in division 41 section 41 22 00 paragraph 2.03. The hoist vertical lift for these three cranes is specified as 200ft, 200ft, and 210ft, respectively. Cranes CRN003-430 and CRN004-430 are not directly over the shaft, but CRN005-430 is over the shaft. Please clarify the hoist length for these cranes.
- A52:** CRN003-430 and CRN004-430 will be used to lower equipment through hatch H-02 (refer to Drawing S-53) to lower levels. The vertical lift requirements listed in the specifications are correct.
- Q53:** Referring to Vol. 1, Art. 3, Sec. 3.7, please clarify that the Owner's Construction Manager is responsible for the overall coordination of all contractors on the project. On a multi-prime project, overall coordination must be centralized with the Owner/CM, who holds all the contracts. This change establishes a clear, single point of authority, which is critical to preventing conflicts, gaps, and inefficiencies between the various prime contractors.
- The Contractor's role is to coordinate its specific work within the CM's master schedule and overall direction.
- A53:** Per Vol. 1, Article 3, Section 3.7, " It shall be the Contractor's responsibility to coordinate all Work furnished under this Contract with the Construction Manager and with the Other Contractors to make sure that all Work performance guarantees are achieved and that the Work is

properly constructed, assembled, installed, and configured for reliable and continuous operation.". Please also reference Volume 2, Specification 01 31 15 Summary of Multiple Primes, Paragraph 1.04 Project Coordinator which states " Project Coordinator shall be responsible for coordination between the Prime Contractors." Paragraph 1 further defines the Project Coordinator as the General Construction Contractor.

Please review Volume 2 Section 01 32 16 Construction Progress Schedule (CPS) for all information regarding preparation, submission and coordination of the CM Master Project Schedule by each Prime Contractor.

Q54: Please consider extending the contractual question deadline from July 20,2025 to August 3,2025 to allow the Contractors time to evaluate the responses to the bid questions and formulate any necessary follow up questions.

A54: Refer to Item 1.2 in Addendum No. 3.

Q55: Due to the complexity of the project, limited work area, and high degree of prime contractor coordination there is concern that the specified Contract Time is not sufficient for a project of this magnitude. Please provide an Owner/Engineer schedule confirming that the work can be completed within the specified contract time.

A55: Contract Documents stand as written.

Q56: Reference specification section 10 28 00 Toilet, Bath, and Laundry Accessories : Laundry rooms and-or washrooms are not shown on drawings 430-A-04, 430-A-05, 430-A-06, 430-A-07, 430-A-08, & 430-A-09. Please confirm a laundry room or washroom is not required for this project

A56: There is no laundry room. The accessories listed under Section 2.02 Public-Use Washroom Accessories shall be provided for the restroom shown in the drawings.

Q57: S489_SPC_VOL3_20250514 Section 31 71 1 Rock Excavation mentions Rock bolts throughout the document. Rock Bolts are not found within the drawings. Are rock bolts referred to as rock dowels in the drawings? If not, where are these rock bolts required?

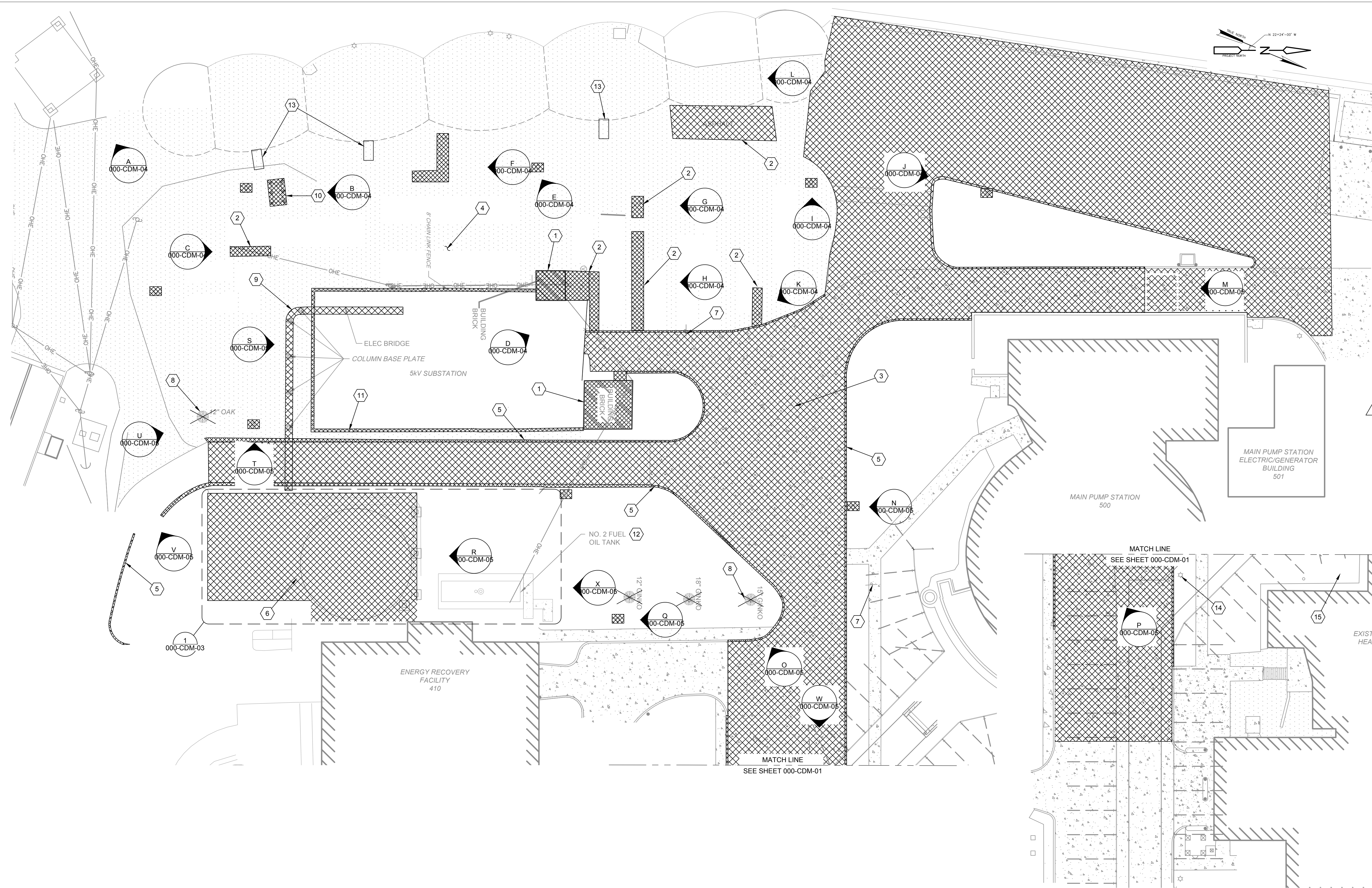
A57: Refer to Item 1.8 in Addendum 3

END OF ADDENDUM No. 3

ATTACHMENT – A

Addendum No. 3 Drawings

Path: C:\BCPWD\0328368 FILENAME: 000-CDM-01.DWG PLOT DATE: 6/26/2025 8:27 AM CAD USER: DEANNA SIGLER

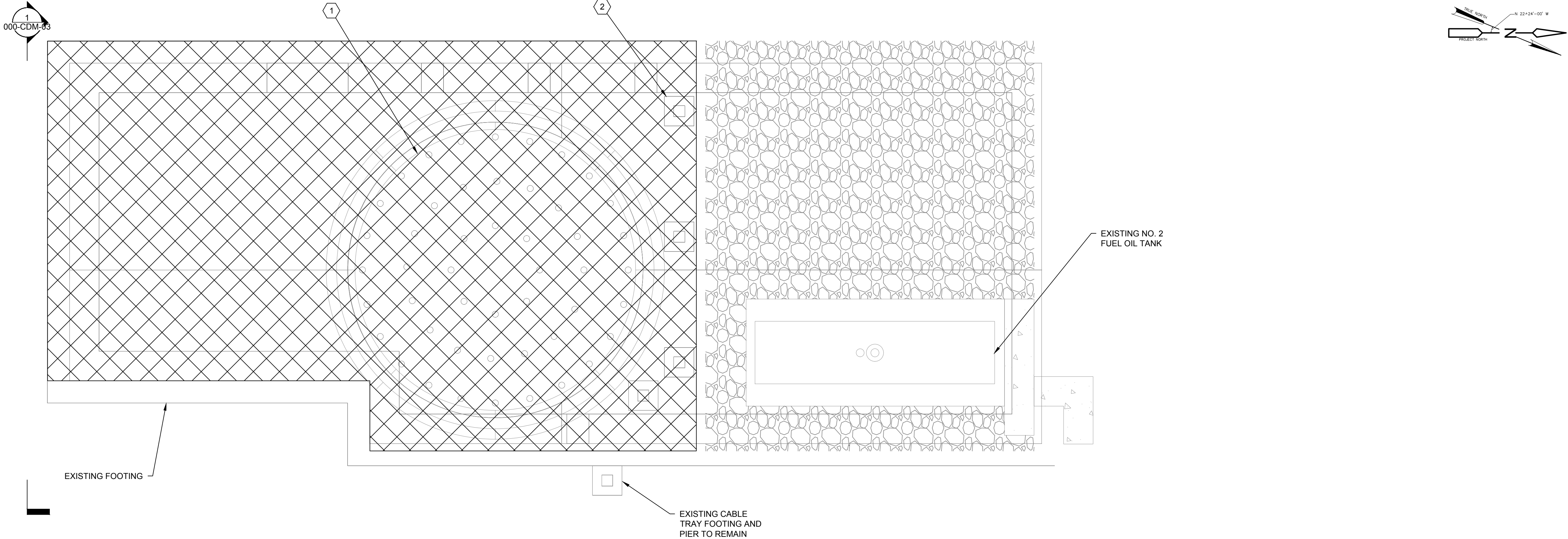


- GENERAL NOTES:**
 - UTILITIES SHOWN ARE BASED ON INFORMATION PROVIDED BY OTHERS AND IS NOT GUARANTEED TO INCLUDE ALL SUCH FEATURES OR EXACT LOCATIONS. CONTRACTOR SHALL FIELD VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION.
 - SAWCUT PAVEMENT FULL DEPTH WHERE PAVEMENT IS TO BE REMOVED AND WHERE IT ABUTS PAVEMENT TO REMAIN.
 - REFER TO ELECTRICAL SHEETS FOR DEMOLITION AND REROUTING OF OVERHEAD AND UNDERGROUND ELECTRICAL SYSTEMS.
- KEYNOTES:**
 - DEMOLISH BUILDING INCLUDING CONCRETE SLAB.
 - DEMOLISH CONCRETE PADS AND WALKWAYS.
 - CONCRETE PAVEMENT TO BE SAWCUT, DEMOLISHED, AND REMOVED TO EXTENT SHOWN.
 - EXISTING GRAVEL AREA TO BE REMOVED WHERE APPLICABLE.
 - CONCRETE CURB BORDERING ALL PAVEMENT TO BE SAWCUT, DEMOLISHED, AND REMOVED TO EXTENT SHOWN.
 - DEMOLISH FOOTINGS, TANK FOUNDATION, AND 6" SLAB. DEMOLITION INCLUDES REMOVAL OF EXISTING CABLE TRAY, FOOTINGS, PIER, AND STRUCTURE. SEE SHEET 000-CDM-03 FOR DETAILS.
 - REMOVE, STORE AND REINSTALL SIGN TO LOCATION SHOWN ON SHEET 000-C-12.
 - DEMOLISH TREE.
 - DEMOLISH OVERHEAD CABLE TRAY AND CONCRETE SUPPORTS.
 - DEMOLISH BOLLARDS, CONCRETE PAD, AND HYDRANT. SEE SHEET 000-CDM-02 FOR WATERLINE DEMOLITION.
 - DEMOLISH CHAIN LINK FENCE.
 - OWNER ACCESS TO NO. 2 FUEL OIL TANK SHALL REMAIN FULLY ACCESSIBLE.
 - PERFORM A MINIMUM OF THREE TEST PITS (5'Wx10'Lx10'D) ALONG THE EASTERN BOUNDARY OF THE EXISTING BURIED RIVER WALL TO CONFIRM PRESENCE OF ANY EXISTING OBSTRUCTIONS THAT MAY INTERFERE WITH NEW UTILITIES AND TEMPORARY SOE INSTALLATIONS. REFER TO VOLUME 1 OF 1 REFERENCE INFORMATION FOR AVAILABLE RECORD DRAWINGS ASSOCIATED WITH THE PRIOR RIVER WALL CONSTRUCTION AND THE RIVER WALL INSPECTION REPORT (DATED DEC. 12, 2023).
 - PROTECT AND SUPPORT LIGHT POLE AT ALL TIMES DURING CONSTRUCTION.
 - APPROXIMATE LOCATION OF 96" PCCP CAP AND 120"x96" PCCP REDUCER (NOT SHOWN) FROM PRIOR CONTRACT. DISPOSE OF PCCP CAP AND REDUCER.

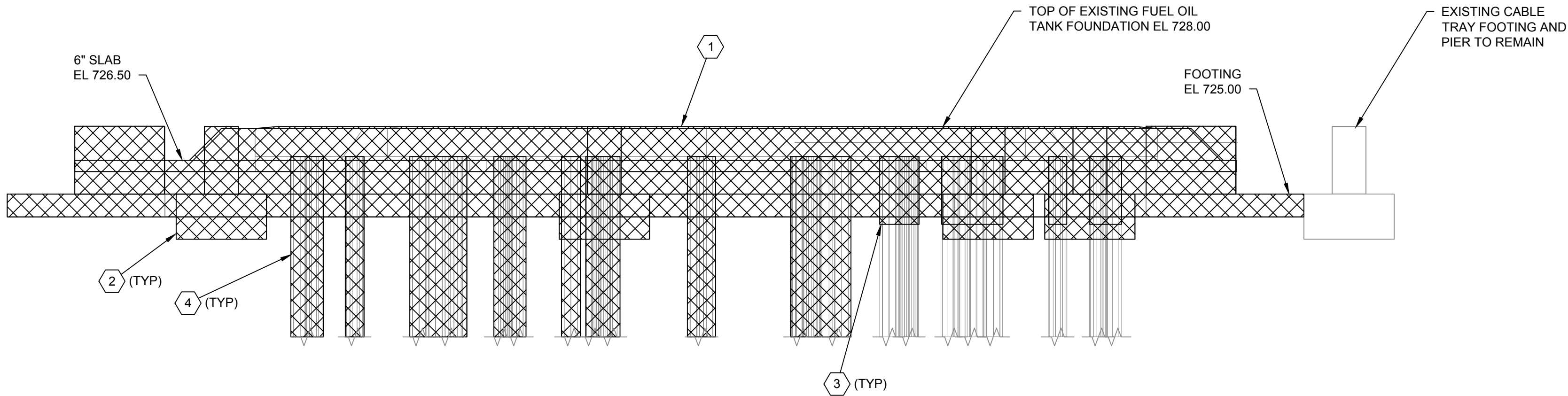
- LEGEND:**
 - TO BE REMOVED
 - TREE REMOVAL

Designed by: D.SIGLER	REVISION			APPV		Signer Name: DeAnna Sigler Signing Reason: I approved this document. Signing Time: 2025-06-30 16:51:43(EDT)			ARLETTA SCOTT WILLIAMS EXECUTIVE DIRECTOR, ALCOSAN 3300 PREBLE AVE. PITTSBURGH, PA 15233 (412) 766 - 4810 www.alcosan.org	ALLEGHENY COUNTY SANITARY AUTHORITY WASTEWATER TREATMENT PLANT WET WEATHER PUMP STATION 000-CDM-01 SITE DEMOLITION PLAN	Contract: 1800
Drawn by: D.SIGLER	REV No.	DATE	DESCRIPTION								CAD File Name: 000-CDM-01.dwg
Checked by: S.LOCKHART	0	5/16/25	ISSUED FOR BID								Date: 5/16/2025
	1	6/26/25	ADD. 3 TEST PIT DIMENSIONS								Sheet: 12 of 405

Path: C:\BOPWD\0328368 FILENAME: 000-CDM-03.DWG PLOT DATE: 6/26/2025 8:24 AM CAD USER: DEANNA SIGLER



1 FUEL CONTAINMENT - ENLARGED PLAN
000-CDM-03 SCALE: 1/8" = 1'-0"



1 SECTION
000-CDM-03 SCALE: 1/4" = 1'-0"

0 2' 4' 8'
SCALE: 1/4"=1'-0"

0 4' 8' 16'
SCALE: 1/8"=1'-0"

GENERAL NOTES:

- UTILITIES SHOWN ARE BASED ON INFORMATION PROVIDED BY OTHERS AND IS NOT GUARANTEED TO INCLUDE ALL SUCH FEATURES OR EXACT LOCATIONS. CONTRACTOR SHALL FIELD VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION.
- OWNER ACCESS TO FUEL OIL STORAGE SHALL REMAIN FULLY ACCESSIBLE.

KEYNOTES:

- DEMOLISH TANK FOUNDATION, FOOTINGS AND 6" SLAB.
- DEMOLISH EXISTING CABLE TRAY (NOT SHOWN), FOOTINGS, PIER AND STRUCTURE.
- CUTOFF EXISTING PILES IN PLACE A MIN 3' BELOW GRADE, WHERE PILES DO NOT INTERFERE WITH UTILITIES.
- PILES LOCATED BELOW PROPOSED UTILITIES SHALL BE REMOVED OR CUTOFF 3' BELOW THE PROPOSED UTILITIES INVERTS. PROVIDE BACKFILL MATERIAL PER SECTION 31 21 00 PART 2.01.F WITHIN THE VOIDS LEFT BY REMOVAL/DEMOLITION OF THE PILES.

1

Designed by:	REVISION			
	REV No.	DATE	DESCRIPTION	APPV
D.SIGLER	0	5/16/25	ISSUED FOR BID	DS
Drawn by:	1	6/26/25	ADD. 3 PILE BACKFILL REQUIREMENTS	DS
D.SIGLER				
Checked by:				
S.LOCKHART				



Signer Name: DeAnna Sigler
Signing Reason: I approved this document.
Signing Time: 2025-06-30 16:31:43(EDT)



ARLETTA SCOTT WILLIAMS
EXECUTIVE DIRECTOR, ALCOSAN

3300 PREBLE AVE.
PITTSBURGH, PA 15233
(412) 766 - 4810

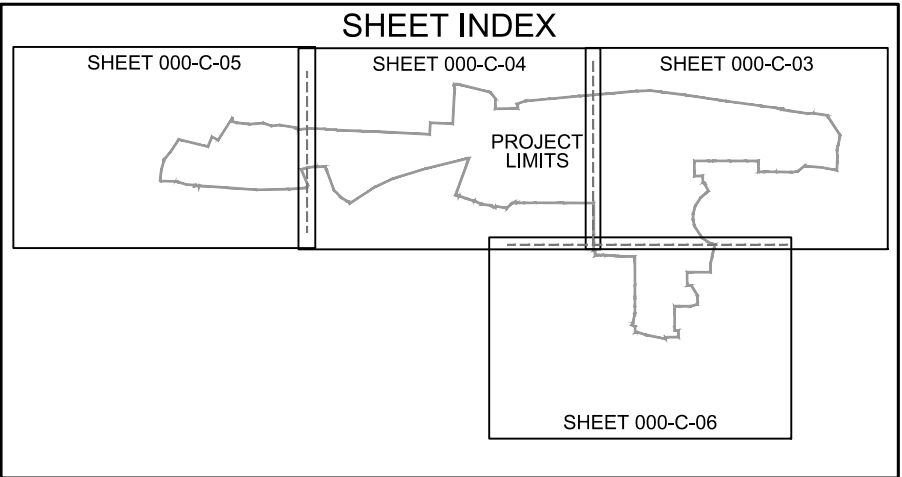
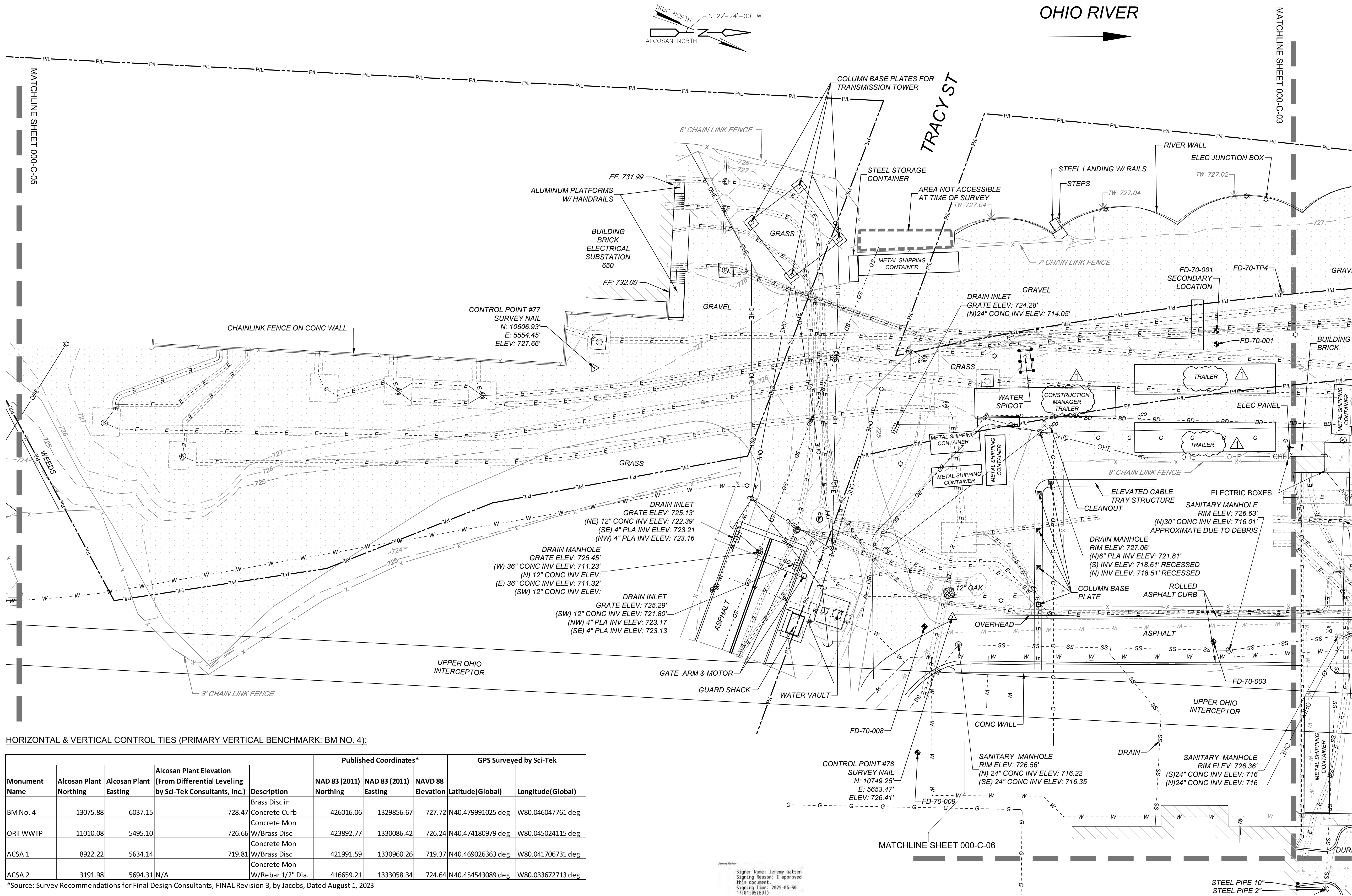
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ALLEGHENY COUNTY SANITARY AUTHORITY
WASTEWATER TREATMENT PLANT
WET WEATHER PUMP STATION

000-CDM-03 FUEL CONTAINMENT AREA DEMOLITION PLAN

Contract:	1800
CAD File Name:	000-CDM-03.dwg
Date:	5/16/2025
Sheet:	14 of 405

Path: S:\CUSTOMERS\2023-1148 B&C\ALCOSAN\WWPS SURVEY BASE PLANT DATUM DRAFT 2025-6-27.DWG PLOT DATE: 6/27/2025 3:34 PM CAD USER: JONATHAN BLACK



- LEGEND:**
- Gravel Areas
 - Brick Areas
 - Concrete Areas
 - Drain Inlet
 - Electric Manhole
 - Drain Manhole
 - Water Manhole
 - Sanitary Sewer Manhole
 - Manhole Unknown Type
 - Geotechnical Test Pit (AS-STAKED)
 - Geotechnical Bore (AS-DRILLED)
 - Bollard
 - Fire Hydrant
 - Utility Pole
 - Light Pole
 - Sign
 - Water Valve
 - Tree with Trunk Diameter
 - Tree Line
 - Fence
 - OHE Overhead Electric/Telephone Line
 - E Underground Electric Line & Duct Bank
 - W Underground Water Line
 - W Underground Effluent Water Line
 - SD Underground Drain Line
 - SS Underground Sanitary Sewer Line
 - BD Scrubber Blowdown Line
 - CS Underground Combined Sewer Line
 - CL Chlorine Line
 - G Underground Gas Line
 - 100 Major Topographic Contour Line with Elevation
 - 102 Minor Topographic Contour Line with Elevation
 - 109.3 Topographic Spot Elevation
 - Guidrail
 - P/L Property Line Provided by Alcosan (Not Surveyed)
 - Areas Under Construction at Time of Survey

- ABBREVIATIONS:**
- BOT BOTTOM
 - CMP CORRUGATED METAL PIPE
 - CONC CONCRETE
 - DIA DIAMETER
 - EHW EFFLUENT FLUSHING WATER
 - ELEC ELECTRIC
 - ELEV ELEVATION
 - INV INVERT
 - MH MANHOLE
 - PLA PLASTIC
 - POB POINT OF BEGINNING
 - RCP REINFORCED CONCRETE PIPE
 - TEMP TEMPORARY
 - TCP TERRA COTTA PIPE
 - UNK UNKNOWN
 - WL WATER LEVEL

HORIZONTAL & VERTICAL CONTROL TIES (PRIMARY VERTICAL BENCHMARK: BM NO. 4):

Monument Name	Alcosan Plant			Description	Published Coordinates*			GPS Surveyed by Sci-Tek	
	North	East	Elevation		NAD 83 (2011) North	NAD 83 (2011) East	NAVD 88 Elevation	Latitude(Global)	Longitude(Global)
BM No. 4	13075.88	6037.15	728.47	Brass Disc in Concrete Curb	426016.06	1329856.67	727.72	N40.479991025 deg	W80.046047761 deg
ORT WWTP	11010.08	5495.10	726.66	W/Brass Disc Concrete Mon	423892.77	1330086.42	726.24	N40.474180979 deg	W80.045024115 deg
ACSA 1	8922.22	5634.14	719.81	W/Brass Disc Concrete Mon	421991.59	1330960.26	719.37	N40.469026363 deg	W80.041706731 deg
ACSA 2	3191.98	5694.31	N/A	Concrete Mon W/Rebar 1/2" Dia.	416659.21	1333058.34	724.64	N40.454543089 deg	W80.033672713 deg

*Source: Survey Recommendations for Final Design Consultants, FINAL Revision 3, by Jacobs, Dated August 1, 2023

Surveyed by:	REVISION			
	REV No.	DATE	DESCRIPTION	APPV
F. Hall	0	5/16/25	ISSUED FOR BID	JRG
Drawn by:	1	6/26/25	ADD. 3 – REVISED TRAILER LABELING	JRG
J. Black				
Checked by:				
J. Gatten				



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ALLEGHENY COUNTY SANITARY AUTHORITY
WASTEWATER TREATMENT PLANT
WET WEATHER PUMP STATION

000-C-04
EXISTING CONDITIONS SURVEY 2

Contract: 1800
CAD File Name: 000-C-04.dwg
Date: 5/16/2025
Sheet: of 374

ATTACHMENT – B

Addendum No. 3 Reference Information Section 5I

TABLE OF CONTENTS

Section	Title	Page No.
1	Not Used	
2	Not Used	
3	City of Pittsburgh Department of Mobility and Infrastructure Right-of-Way Procedures Manual	
4	River Wall Inspection Report	
5	Reference Drawings	
5A	Contract 37 River Wall 1953	
5B	Contract 554 Fuel Storage Tanks 1977	
5C	Contract 1202 Site Electrical	
5D	Contract 1227 Fuel Containment 2000	
5E	Contract 1739 Electrical Manholes Survey Conforms Set	
5F	Contract 1787 Misc Tank Demo	
5G	Contract Main Pump Station 1953	
5H	River Wall North and Ash Pits	
<u>5I</u>	<u>Alcosan WWPS Switchgear Location Summary</u>	

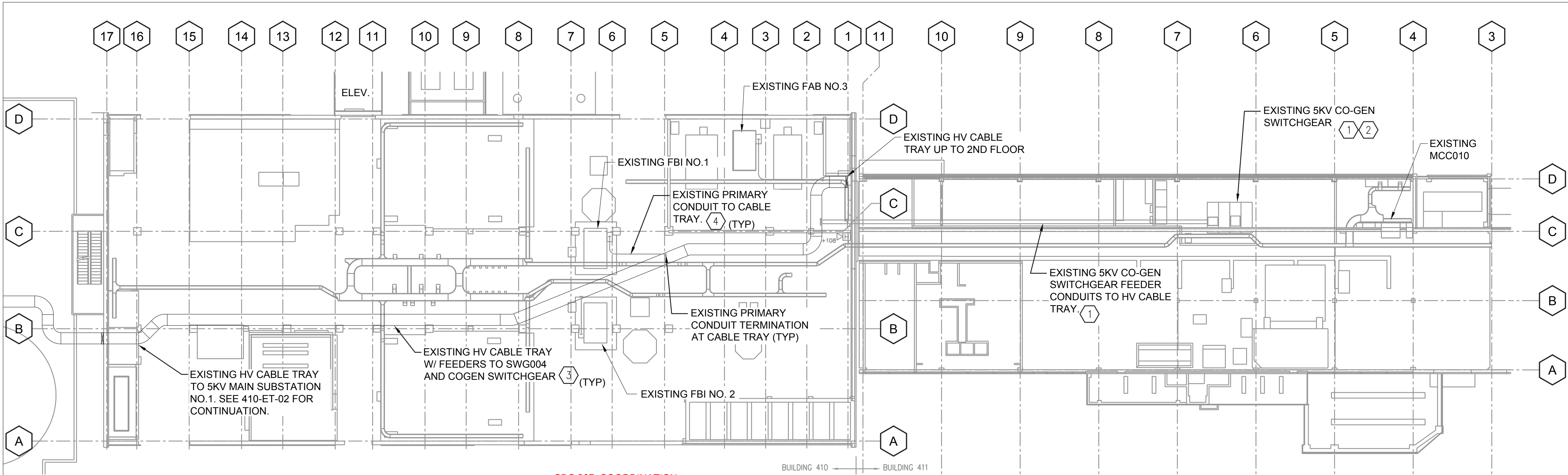
ADD. NO. 3

Section 5I: Alcosan WWPS Switchgear Location Summary

ALCOSAN WWPS EXISTING SWITCHGEAR LOCATION SUMMARY

#	DESCRIPTION	BUILDING NAME AND NUMBER	WWPS DRAWING	CONTRACT NUMBER	RECORD DRAWINGS	COMMENT
1	SWG003A-410	ENERGY RECOVERY FACILITY BUILDING 410	000-ESP-01	1739	410-ET-01, 410-ET-02, 410-ET-03, 410-ET-04	
				1739	600-ETD-01	
2	SWG003B-410	ENERGY RECOVERY FACILITY BUILDING 410	000-ESP-01	1739	410-ET-01, 410-ET-02, 410-ET-03, 410-ET-04	
				1739	600-ETD-01	
3	HV-PB01-000	MAIN PUMP STATION BUILDING 500	000-ESP-01	1739	500-ET-01	13.8KV BENCH
4	USS004A-501	MAIN PUMP STATION ELECTRICAL/GENERATOR BUILDING 501	000-ESP-01	1739	501-ET-01	
5	USS004B-501	MAIN PUMP STATION ELECTRICAL/GENERATOR BUILDING 501	000-ESP-01	1739	501-ET-01	
6	SWGXXX-650	MAIN OUTDOOR SUBSTATION	000-ESP-01	1500	650-S-01 THRU 650-S-05	FOR ALL MAIN SWITCHGEAR
				1739	650-ET-01 THRU 650-ET-04	
7	SWG003A-810	COMPRESSOR BUILDING 810	000-ESP-02	1739	810-ADM-01, 810-A-01, 810-ET-01 THRU 810-ET-03	
8	SWG003B-810	COMPRESSOR BUILDING 810	000-ESP-02	1739	810-ADM-01, 810-A-01, 810-ET-01 THRU 810-ET-03	
	USS013A-923	SECONDARY SUBSTATION BUILDING 923	000-ESP-03	1723	EDM-10	
				1500	000-ESP-16	SHOWN AT GRADE LEVEL
9				1070D		
	USS013B-923	SECONDARY SUBSTATION BUILDING 923	000-ESP-03	1723	EDM-10	
8				1500	000-ESP-16	SHOWN AT GRADE LEVEL
				1070D		

This table lists available record drawings that can assist with routing cable through various buildings as required by the Contract Documents. The drawings provided may not consist of all the information the Contractor needs to field route cables in the buildings. These drawings may not necessarily show all existing conditions. The Contractor is responsible for walking through each building to determine the cable routing and final quantities.



1ST FLOOR PLAN - ERF BLDG 410/ GEN BLDG 411

SCALE: 1/16"=1'-0"

FLOOR ELEV. 727.5'

1

SDS 367: COORDINATION
DRAWINGS (OTHER
BUILDINGS/AREAS)

SDS-037: MEDIUM-VOLTAGE CABLES
(QUALIFICATION DATA)

SDS 061: CABLE TRAYS FOR ELECTRICAL
SYSTEMS (PRODUCT DATA)

SDS-038: MEDIUM-VOLTAGE CABLES (MATERIAL
CERTIFICATES)

SDS 429: HOUSEKEEPING PAD CONCRETE
MIX DESIGN - BUILDING 900 & 410

SDS 390: MOTOR STARTERS - MEDIUM
VOLTAGE FULL-VOLTAGE (BLDG 410 - SWG004)

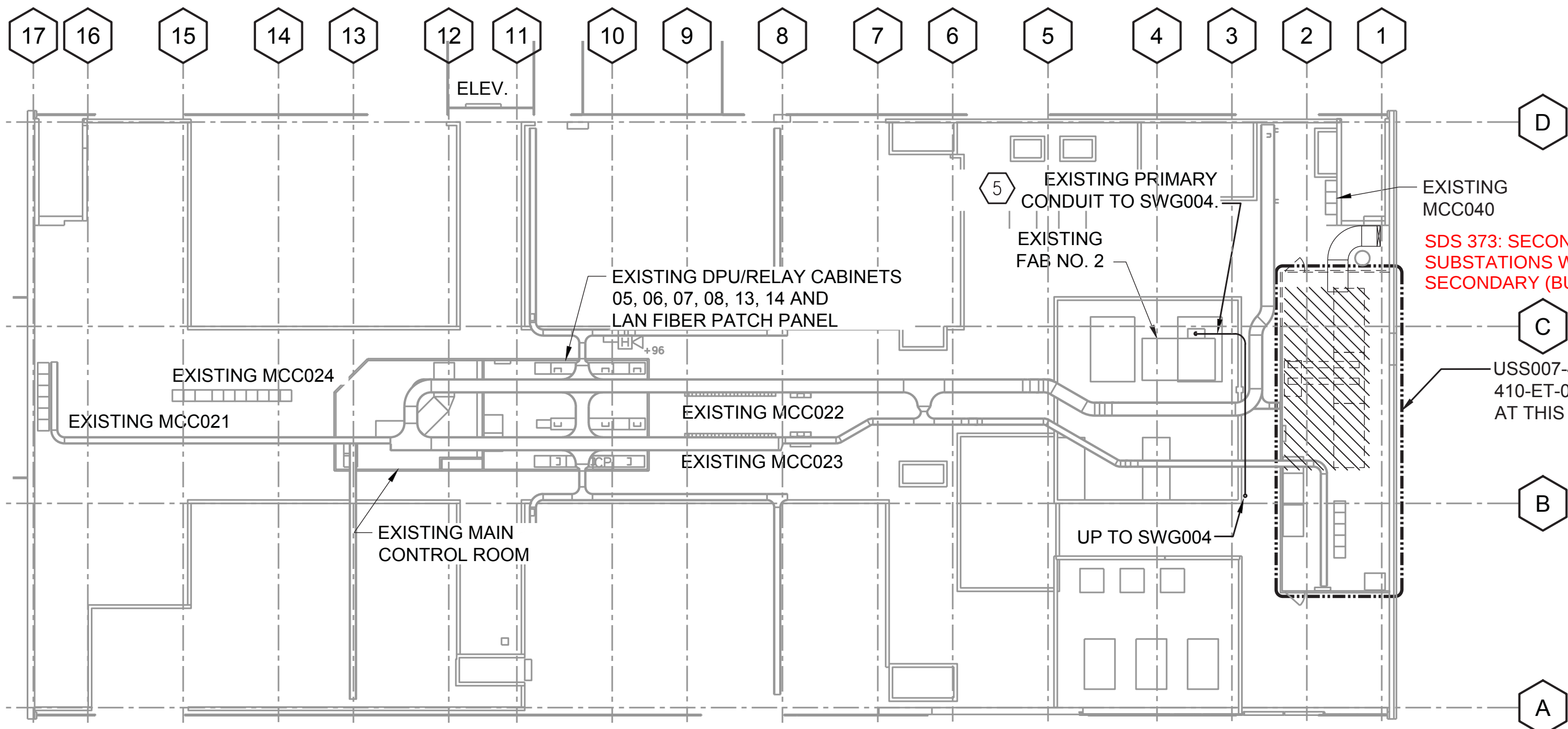
GENERAL NOTES:

1. REFER TO GENERAL NOTES ON DWG 000-E-02 FOR ADDITIONAL INFORMATION.
2. EXISTING 480V MCC'S, 4.16KV FBI FANS, AND 4.16KV FAB FANS TO REMAIN AND BE RE-FED FROM NEW SWITCHGEAR UNITS.

KEYED NOTES:

- 1 PARTIALLY REMOVE EXISTING 5KV FEEDER (FR005/FR006) FROM MAIN SWITCH POSITION BACK TO MAIN 5KV SUBSTATION BREAKER NO. 28, BUS C. RECONFIGURE AND REROUTE FEEDER CABLES FOR SERVICE TO NEW SWG004 ON 3RD FLOOR OF ERF BLDG. 410. CONDUITS MAY BE SALVAGED AND MODIFIED AS NECESSARY TO ACCOMMODATE RECONNECTION TO NEW SWG004.
- 2 MODIFY EXISTING CT CIRCUIT FOR BUS DIFFERENTIAL AND TRANSFER TRIP. CIRCUIT TO EXISTING 5KV MAIN SUBSTATION TO BE REMOVED AND REPLACED WITH CIRCUITS TO NEW SWG004. REFER TO ONE-LINE DIAGRAM FOR DETAILS.
- 3 REMOVE EXISTING 5KV FEEDER CABLES FROM 5KV SUBSTATION TO SWG004 AND CO-GEN SWITCHGEAR. CABLE TRAY TO REMAIN AND BE REUSED FOR ROUTING OF NEW SWG004 FEEDER CABLES.
- 4 EXISTING MOTOR PRIMARY CONDUIT TO HV-1 CABLE TRAY TO REMAIN AND BE REUSED FOR NEW FEEDER. SEE ONE-LINE DIAGRAMS.
- 5 EXISTING MOTOR PRIMARY CONDUIT TO SWG004 TO BE REMOVED. PROVIDE CONDUIT TO NEW SWG004 FOR NEW MOTOR FEEDER. SEE ONE-LINE DIAGRAMS.
- 6 WIDTH OF ACCESS PATHWAYS TO WORK AREAS IS LIMITED AND MAY REQUIRE THE REMOVAL OF THE BLDG EXTERIOR WALL PANEL SYSTEM AND LIGHT DUTY FRAMING FOR EQUIPMENT INSTALLATION. ACCOUNT FOR SUCH REMOVALS AND INSTALLATION BY CRANE THRU THE EXTERIOR WALL IF NECESSARY.

SDS 391: MOTOR STARTERS - MEDIUM VOLTAGE
FULL-VOLTAGE (BLDG 410 - SWG004 - FINAL AS-BUILT
DRAWINGS)



2ND FLOOR PLAN - BLDG 410

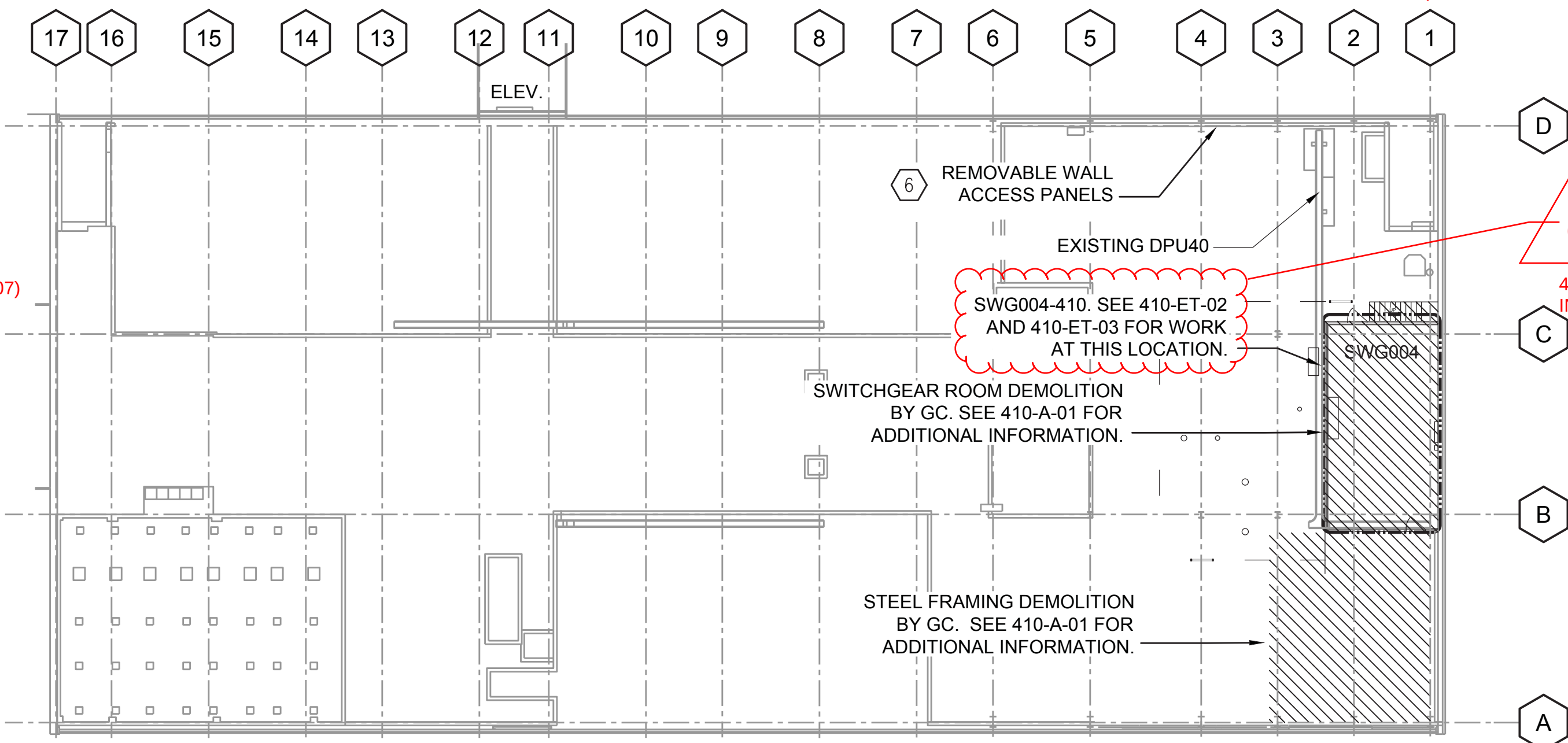
SCALE: 1/16"=1'-0"

FLOOR ELEV. 752.5'

2

SDS 374: SECONDARY UNIT SUBSTATIONS WITH
SWITCHGEAR SECONDARY (BUILDING 410 - USS007 -
FACTORY TEST REPORTS)

SDS 376: SECONDARY UNIT SUBSTATIONS WITH
SWITCHGEAR SECONDARY (BLDG 410 - USS007 -
OPERATION AND MAINTENANCE DATA)



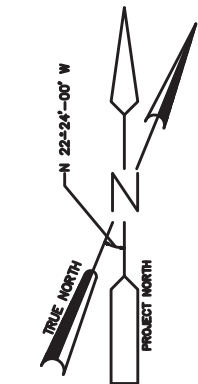
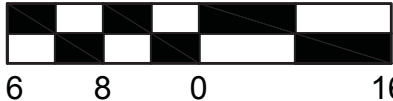
3RD FLOOR PLAN - BLDG 410

SCALE: 1/16"=1'-0"

FLOOR ELEV. 772.5'

3

Drawing Scale 1/16" = 1'



Designed by:	REVISION				APPV
E. SULLIVAN	REV No.	DATE	DESCRIPTION		EJS
Drawn by:	A	07/26/21	CONFORMED SET		
RY / JJC					
Checked by:					
ES					



THIS DRAWING
IS NOT
CONSIDERED A
SEALED
DOCUMENT



ARLETTA SCOTT WILLIAMS
EXECUTIVE DIRECTOR, ALCOSAN

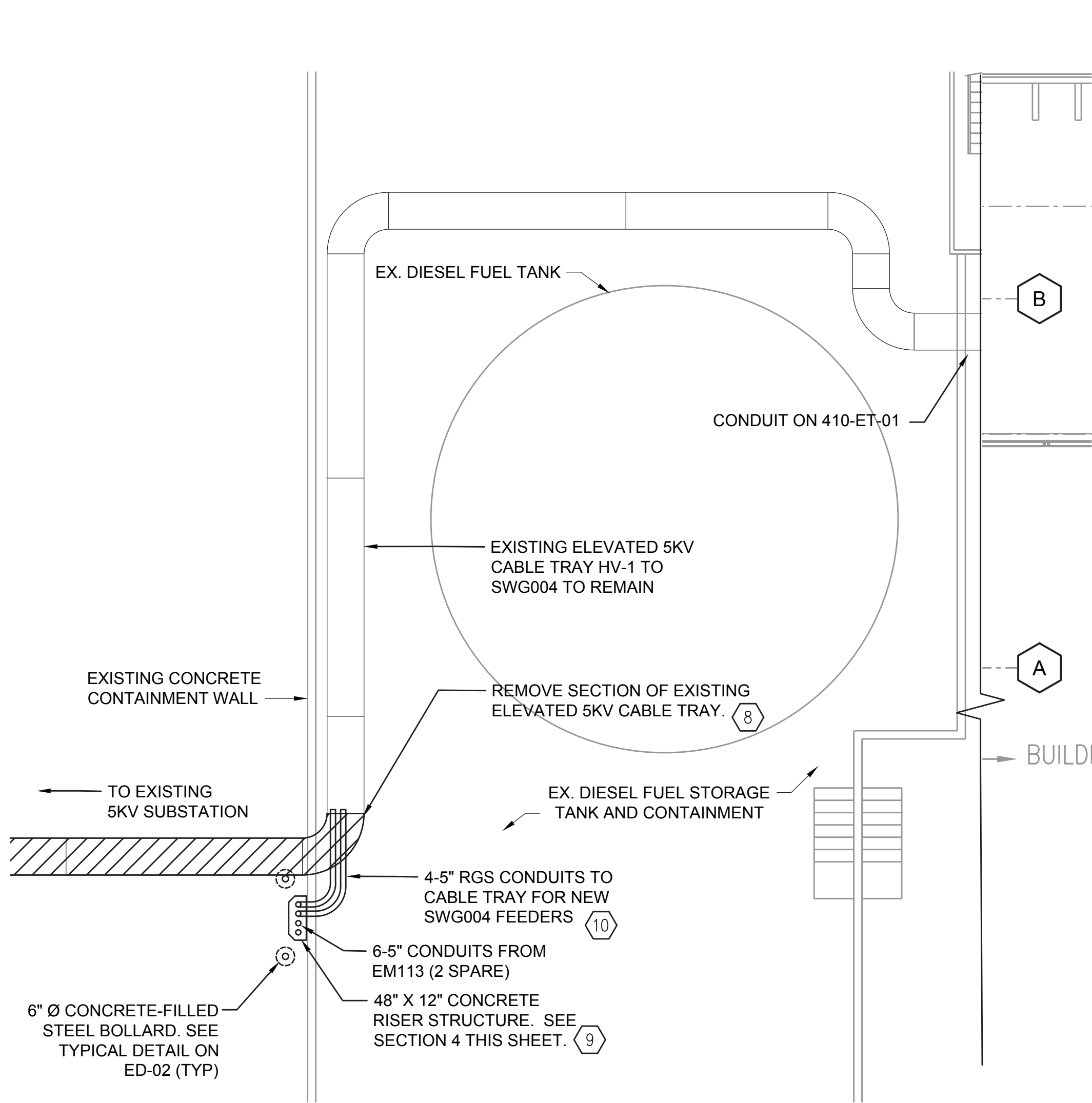
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ALLEGHENY COUNTY SANITARY AUTHORITY
WASTEWATER TREATMENT PLANT
ELECTRICAL DISTRIBUTION SYSTEM UPGRADE

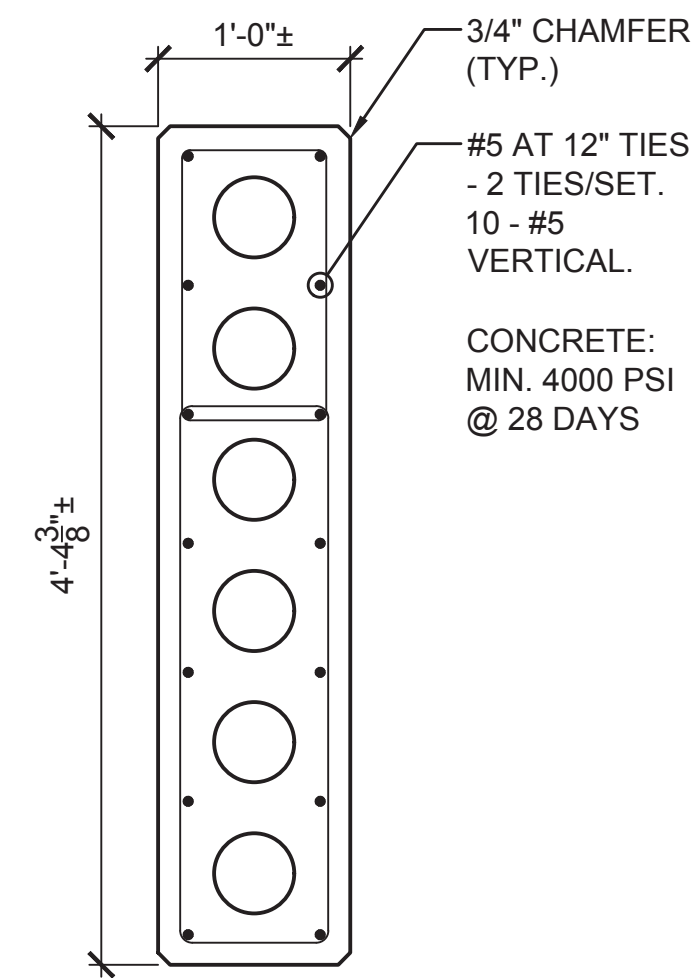
410-ET-01
ERF BLDG 410 AND GEN BLDG 411
LOCATION PLANS

Contract:	1739
CAD File Name:	410ET01
Date:	05 / 25 / 2021
Sheet:	57 OF 108



EXTERIOR ELEVATED CABLE TRAY PLAN - ERF BLDG 410

SCALE: 1/8"=1'-0"



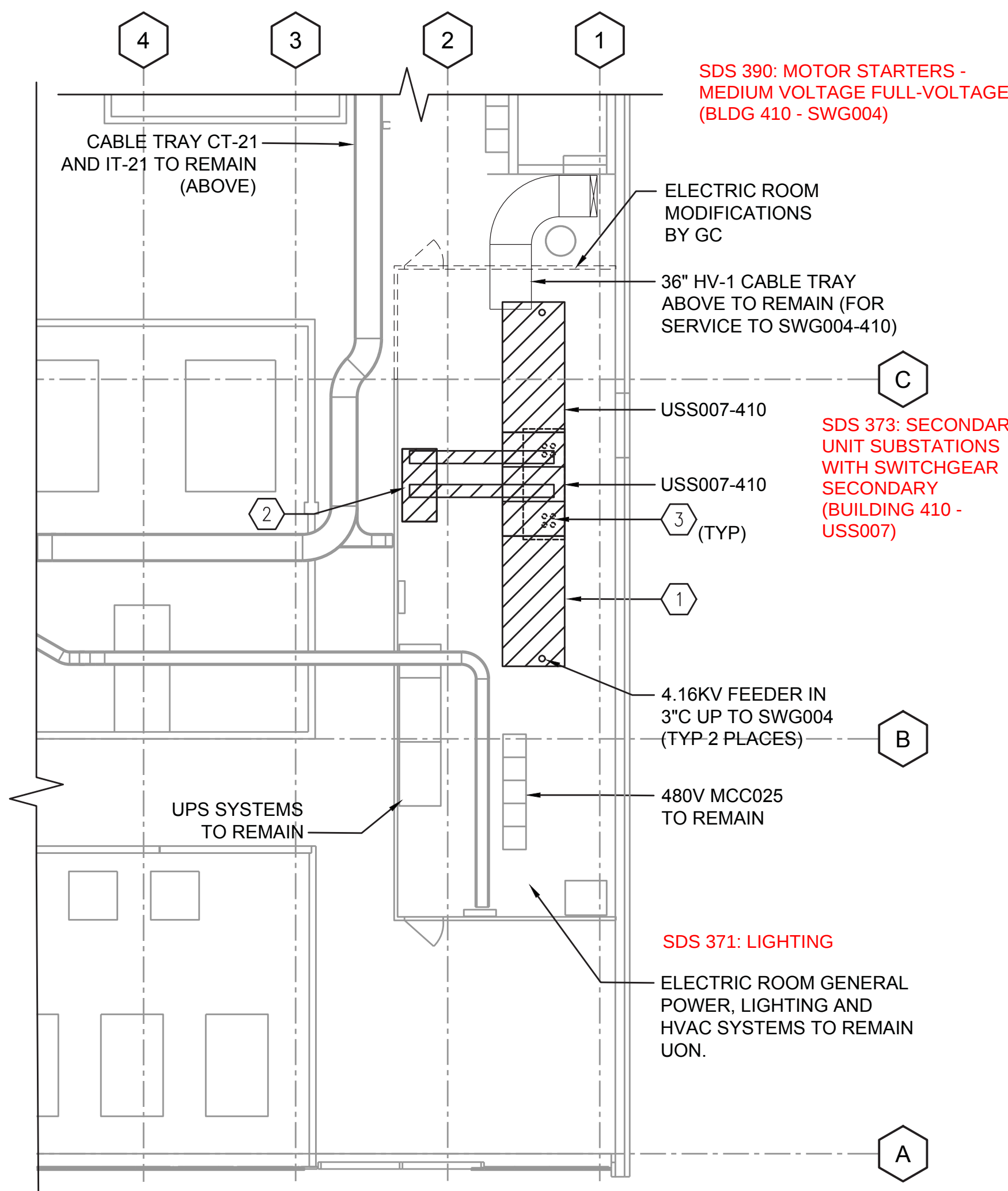
CONCRETE RISER STRUCTURE

SCALE: 1"=1'-0"

PLAN KEYED NOTES:

- 1 REMOVE EXISTING DOUBLE-ENDED UNIT SUBSTATION USS007-410 AND 4.16KV INCOMING FEEDER CABLES. 480V FEEDER CABLES SHALL BE MAINTAINED AND EXTENDED TO NEW USS007. CUT ANY CONDUITS NOT SCHEDULED FOR REUSE FLUSH WITH SLAB AND SEAL. MAINTAIN GROUNDING AND EXTEND TO NEW SUBSTATION ON 3RD FLOOR.
- 2 REMOVE EXISTING USS007-410 TIE BREAKER SECTION AND ASSOCIATED BUS DUCT.
- 3 EXISTING CONDUIT STUBS THRU FLOOR TO 480V MAIN PULLBOX PBH-P100410 (APPROX. 36"WX72"LX12"D) AT CEILING BELOW. REMOVE CONDUIT STUBS AND MAINTAIN PBH FOR SPLICING AND EXTENDING EXISTING 480V FEEDERS TO NEW USS012 ON 3RD FLOOR. SEAL ALL UNUSED OPENINGS IN PBH.
- 4 REMOVE EXISTING SWITCHGEAR SWG004-410 AND 4.16KV INCOMING AND MOTOR LOAD CABLES. MOTOR CONTROL CABLES SHALL BE MAINTAINED AND EXTENDED TO NEW SWG004. CUT ANY CONDUITS NOT SCHEDULED FOR REUSE FLUSH WITH SLAB AND SEAL. MAINTAIN GROUNDING AND EXTEND TO NEW SWITCHGEAR LOCATION ON 3RD FLOOR.

SDS 045: CONTROL-VOLTAGE ELECTRICAL POWER CABLES (PRODUCT DATA)

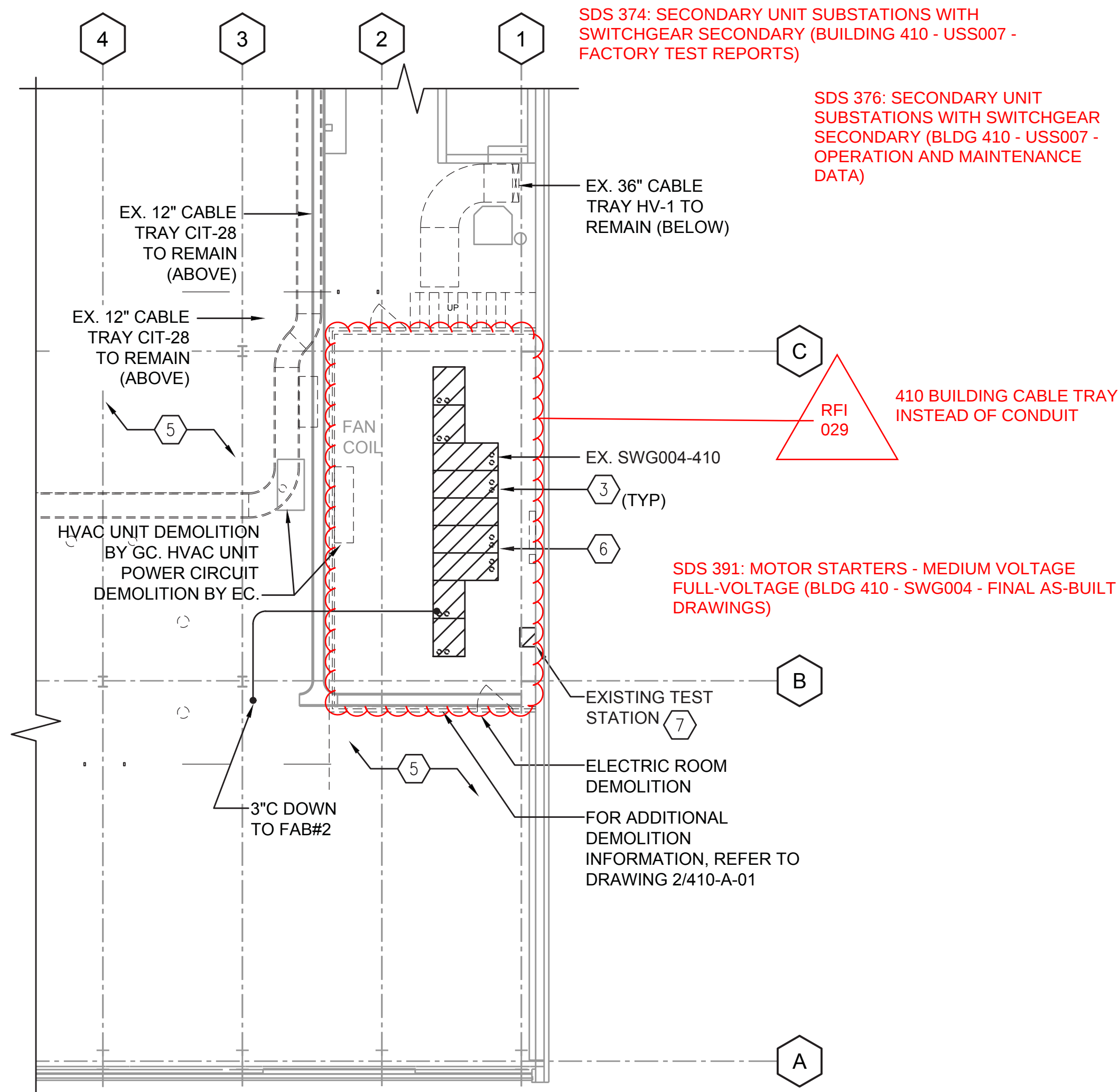


2ND FLOOR DEMOLITION ENLARGED PLAN - ERF BLDG 410

SCALE: 1/8"=1'-0"

- 5 ALL ELECTRICAL SYSTEMS WITHIN THE LIMITS OF THE NEW ELECTRIC ROOM FOR SWG004 AND USS007 SHALL BE REMOVED AND/OR RELOCATED TO AVOID CONFLICTS WITH NEW CONSTRUCTION. SYSTEMS ATTACHED TO COLUMNS MAY REMAIN. FIELD VERIFY ALL SYSTEMS AND CONDITIONS. REFER TO NEW WORK PLAN FOR NEW ELECTRIC ROOM LAYOUT.
- 6 REMOVE EXISTING PRIMARY CONDUITS FROM SWG TO CABLE TRAY HV-1 AT CEILING BELOW. REMOVE CONDUIT FROM SWG TO FAB#2 ON 2ND FLOOR. CUT CONDUITS FLUSH WITH FLOOR SLAB AND SEAL. TYPICAL FOR ALL IN SWG.
- 7 REMOVE SWG TEST SET. MAINTAIN TRANSFORMER AND DISCONNECT FOR NEW SWG TEST SET.
- 8 DISCONNECT AND DEMOLISH SECTION OF ELEVATED HIGH VOLTAGE CABLE TRAY AND ASSOCIATED SUPPORT STRUCTURES BACK TO EXISTING 5KV MAIN SUBSTATION NO. 1. CABLE TRAY AND CABLING SHALL BE MAINTAINED UNTIL CONVERSION OF BLDG 410 TO NEW SUBSTATION. SEE 600-ETD-01 FOR CONTINUATION.

SDS 440: SECONDARY UNIT SUBSTATIONS WITH SWITCHGEAR SECONDARY (BLDG 900 - USS012 - OPERATION AND MAINTENANCE DATA) - REV 2



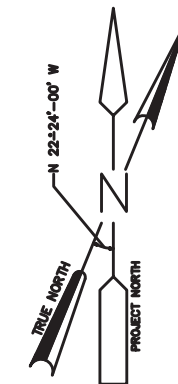
3RD FLOOR DEMOLITION ENLARGED PLAN - ERF BLDG 410

SCALE: 1/8"=1'-0"

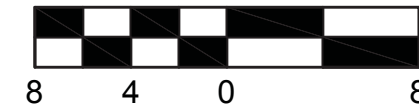
GENERAL NOTES:

1. REFER TO GENERAL NOTES ON DWG E-02 FOR ADDITIONAL INFORMATION.
2. DEMOLITION OF SWG004 AND USS007 SHALL NOT BEGIN UNTIL NEW SWG004 AND USS007 ARE FULLY INSTALLED AND COMMISSIONED. ALL CUTOVERS FROM EXISTING TO NEW EQUIPMENT SHALL BE ACCOMPLISHED ONE BUS SECTION AT A TIME TO ALLOW FOR THE CONTINUOUS OPERATION OF PLANT OPERATIONS.

SDS 184: GROUNDING AND BONDING FOR COMMUNICATION SYSTEMS (PRODUCT DATA)



Drawing Scale 1/8" = 1'



Designed by:	REVISION			
E. SULLIVAN	REV No.	DATE	DESCRIPTION	APPV
Drawn by:	A	07/26/21	CONFORMED SET	EJS
RY / JJC				
Checked by:				
ES				



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ARLETTA SCOTT WILLIAMS
EXECUTIVE DIRECTOR, ALCOSAN

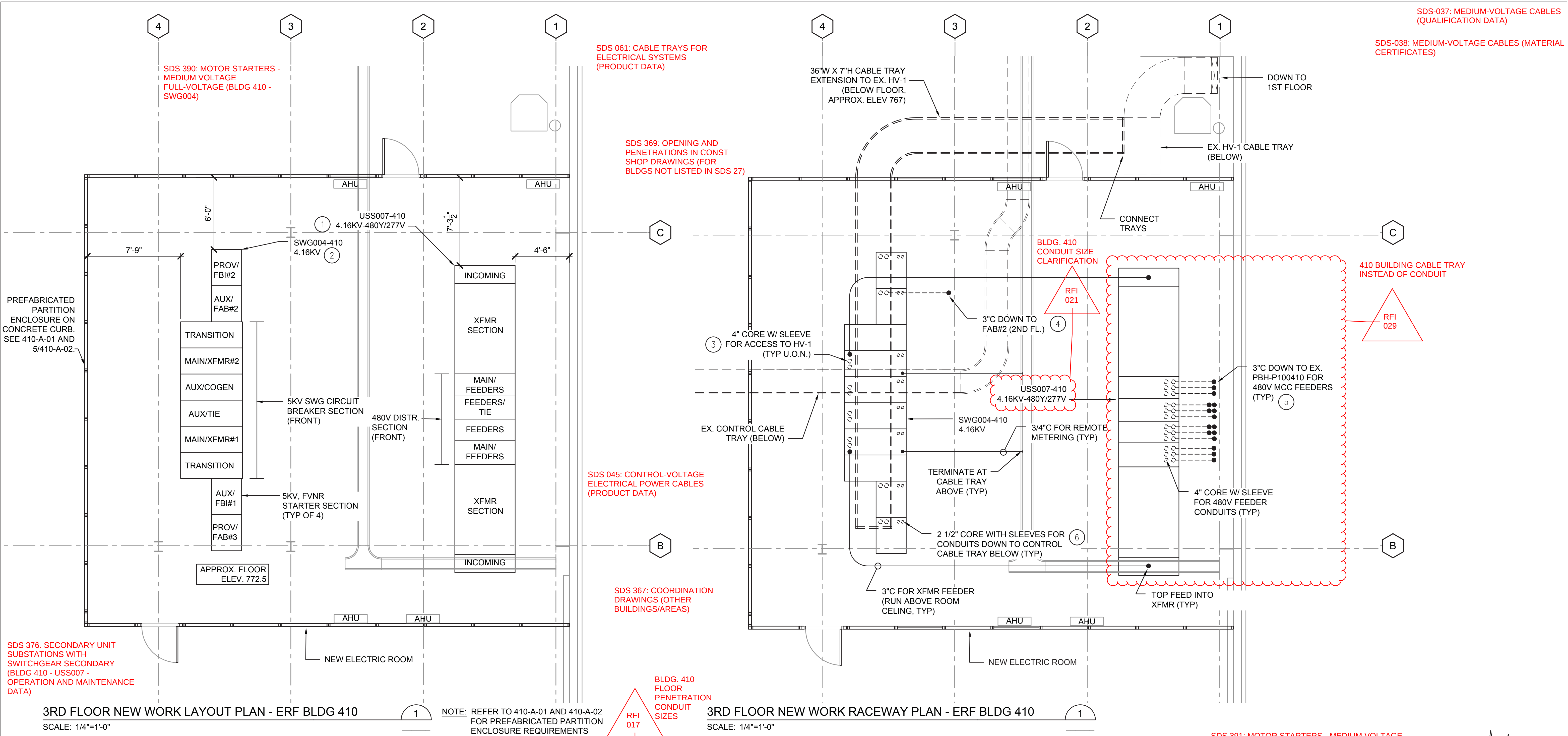
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ALLEGHENY COUNTY SANITARY AUTHORITY
WASTEWATER TREATMENT PLANT
ELECTRICAL DISTRIBUTION SYSTEM UPGRADE

410-ET-02
ERF BLDG 410 AND GEN BLDG 411
DEMOLITION PLANS

Contract:	1739
CAD File Name:	410ET02
Date:	05 / 25 / 2021
Sheet:	58 OF 108



- GENERAL NOTES:
- REFER TO GENERAL NOTES ON DWG E-02 FOR ADDITIONAL INFORMATION.
- SDS 374: SECONDARY UNIT SUBSTATIONS WITH SWITCHGEAR SECONDARY (BUILDING 410 - USS007 - FACTORY TEST REPORTS)
- SDS 373: SECONDARY UNIT SUBSTATIONS WITH SWITCHGEAR SECONDARY (BUILDING 410 - USS007)
- NEW WORK PLAN KEYED NOTES:
- PROVIDE DOUBLE-ENDED UNIT SUBSTATION CONSISTING OF: 1500/2000KVA OA/FA, 4.16KV-480Y/277V, DRY-TYPE TRANSFORMERS; AND 3000A, 277/480V, 3Ø, 4W SWITCHGEAR. PROVIDE 4.16KV INCOMING FEEDERS FROM SWG004-410. REFER TO ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.
 - PROVIDE DOUBLE-ENDED SWITCHGEAR CONSISTING OF: 5KV MAIN AND TIE CIRCUIT BREAKERS; AND 5KV FVNR MOTOR CONTROLLERS. PROVIDE 4.16KV INCOMING FEEDERS FROM NEW 5KV MAIN SUBSTATION AND LOAD FEEDERS TO USS007-410 AND MOTORS. REFER TO ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.
 - CORE DRILL CONCRETE FLOOR FOR PRIMARY FEEDER ACCESS TO CABLE TRAY HV-1 BELOW. PROVIDE SLEEVES AND SEALS. COORDINATE EXACT LOCATION OF PENETRATIONS WITH NEW SWITCHGEAR. TYPICAL FOR ALL SHOWN.
 - PROVIDE FEEDER CONDUIT DOWN TO FAB#2 ON 2ND FLOOR. SEE 410-ET-01 FOR FAB#2 LOCATION.
 - PROVIDE CONDUITS FROM 480V FEEDER BREAKER SECTIONS DOWN TO EX. PBH-100410 AT 1ST FLOOR CEILING LEVEL. ROUTE CONDUITS TIGHT TO WALL IN 2ND FLOOR ELECTRICAL ROOM. CORE 2ND FLOOR DECK AND PROVIDE SLEEVES AND SEALS TO ACCESS TO 1ST FLOOR. TYPICAL FOR ALL SHOWN.
 - PROVIDE 1 1/2" CONDUITS DOWN TO CONTROL CABLE TRAY BELOW TO ACCOMMODATE EXISTING REMOTE CONTROL AND MONITORING CABLES. REROUTE CABLES FROM EXISTING SWG004 TO NEW SWG004 AND TERMINATE. EXTEND WHERE NECESSARY.
- SDS 391: MOTOR STARTERS - MEDIUM VOLTAGE FULL-VOLTAGE (BLDG 410 - SWG004 - FINAL AS-BUILT DRAWINGS)

SDS-037: MEDIUM-VOLTAGE CABLES
(QUALIFICATION DATA)

SDS-038: MEDIUM-VOLTAGE CABLES (MATERIAL
CERTIFICATES)

GENERAL NOTES:

- REFER TO GENERAL NOTES ON DWG 000-E-02 FOR ADDITIONAL INFORMATION.
- COORDINATE EXACT LOCATIONS OF LIGHTING WITH ARCHITECTURAL PLAN, AND NEW AND EXISTING EQUIPMENT.
- MOTOR STARTERS FOR HVAC EQUIPMENT SHALL BE FURNISHED THE GC AND INSTALLED AND WIRED BY THE EC.

KEYED NOTES:

- PROVIDE 20A,2P CIRCUIT BREAKER IN AVAILABLE SPACE IN EXISTING PANEL LOCATED IN MCC025. CIRCUIT SHALL BE 2-#12 + #12 GND IN 3/4" C
- PROVIDE 40A, 3P CIRCUIT BREAKER IN SPARE BUCKET IN EXISTING MCC025. CIRCUIT SHALL BE 3-#10 + #10 GND IN 3/4" C
- PROVIDE 20A,1P CIRCUIT BREAKER IN AVAILABLE SPACE IN EXISTING PANEL LOCATED IN MCC025. CIRCUIT SHALL BE 2-#12 + #12 GND IN 3/4" C.

LIGHT FIXTURE SCHEDULE:

TYPE "A": 1'X4' LED INDUSTRIAL RECESSED TROFFER FIXTURE WITH ACRYLIC LENS. LITHONIA GTL 4 40L EZ1 LP840 OR EQUIVALENT BY HUBBELL OR PHILLIPS.

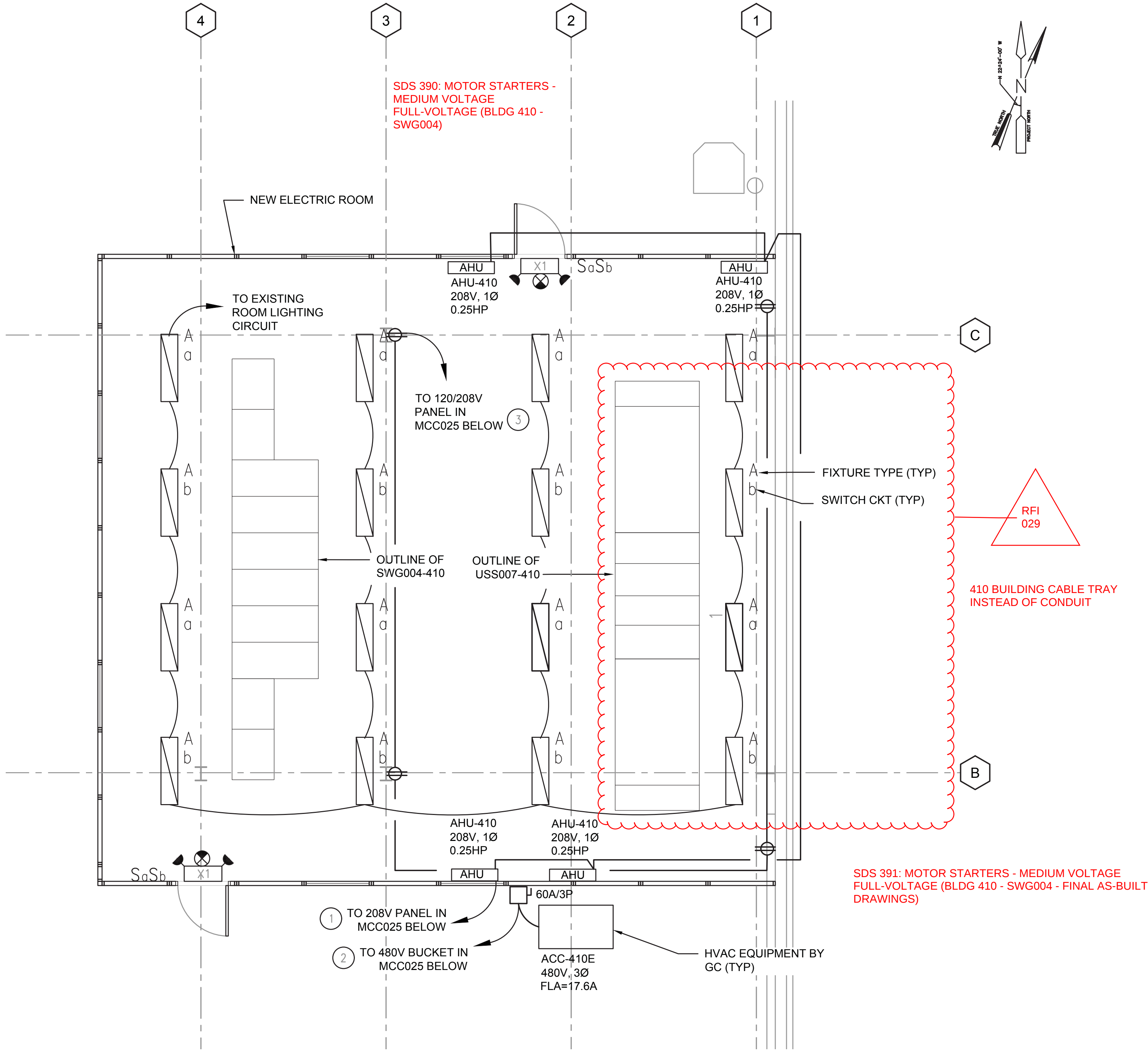
TYPE "X1": COMBINATION EMERGENCY BATTERY UNIT AND EXIT SIGN WITH DUAL ILLUMINATION HEADS. ISOLITE LP2H NC 6V22W R 1 WH MTEB 2 L65 SD. EQUIVALENT BY HUBBELL OR PHILLIPS. CONNECT TO UNSWITCHED ROOM LIGHTING CIRCUIT.

SDS 373: SECONDARY UNIT SUBSTATIONS WITH SWITCHGEAR SECONDARY (BUILDING 410 - USS007)

SDS 371: LIGHTING

SDS 374: SECONDARY UNIT SUBSTATIONS WITH SWITCHGEAR SECONDARY (BUILDING 410 - USS007 - FACTORY TEST REPORTS)

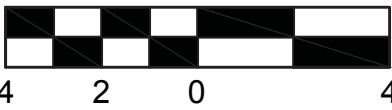
SDS 376: SECONDARY UNIT SUBSTATIONS WITH SWITCHGEAR SECONDARY (BLDG 410 - USS007 - OPERATION AND MAINTENANCE DATA)



3RD FLOOR LIGHTING AND POWER PLAN - ERF BLDG 410
SCALE: 1/4"=1'-0"

SDS 371: LIGHTING

Drawing Scale 1/4" = 1'



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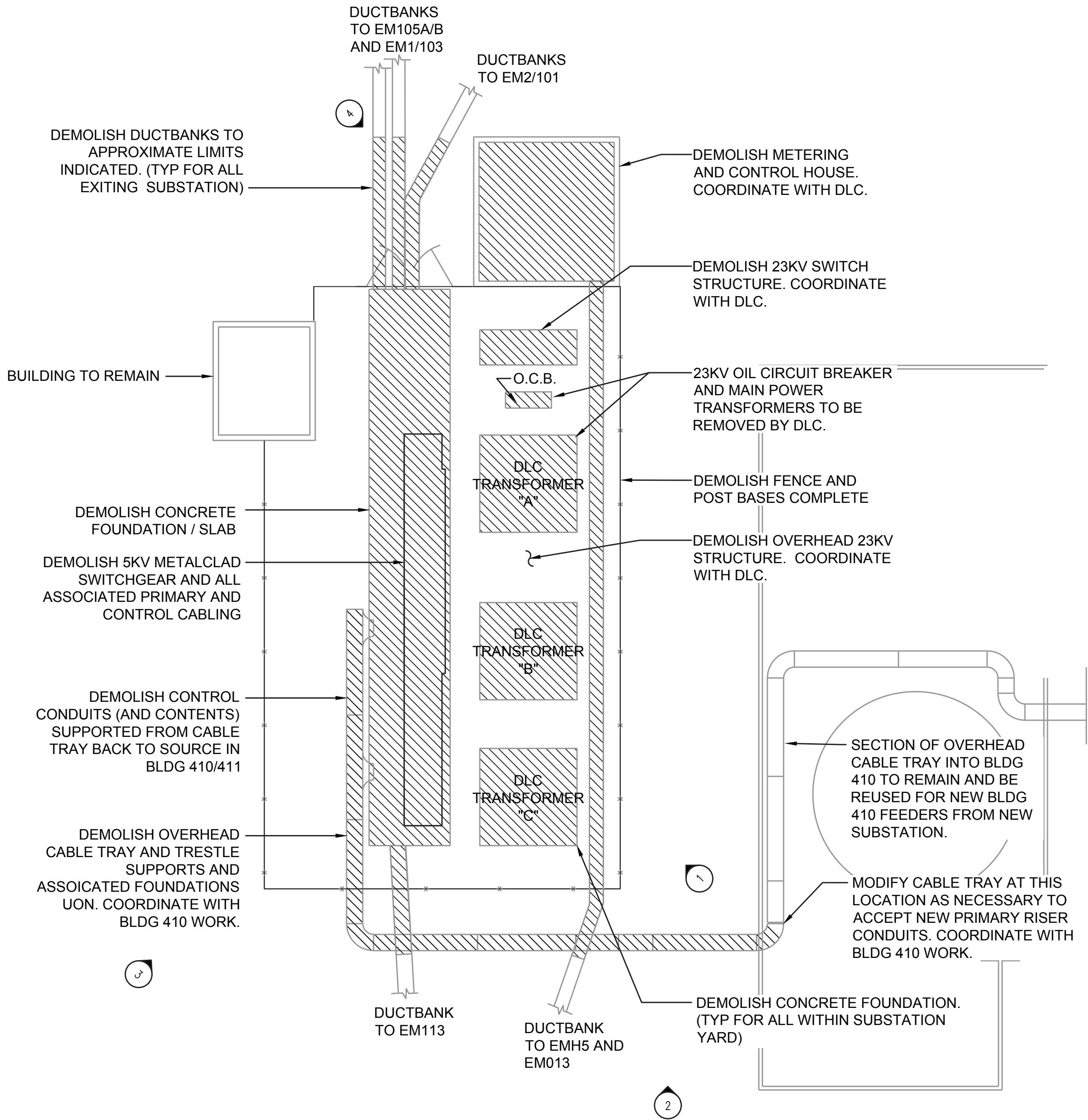
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ALLEGHENY COUNTY SANITARY AUTHORITY
WASTEWATER TREATMENT PLANT
ELECTRICAL DISTRIBUTION SYSTEM UPGRADE

410-ET-04
ERF BLDG 410
3RD FLOOR LIGHTING AND POWER PLAN

Contract:	1739
CAD File Name:	410ET04
Date:	05 / 25 / 2021
Sheet:	60 OF 108

FI 005:
BLDG 600 - EXISTING SUBSTATION NO. 1 DEMOLITION



DEMOLITION PLAN - EXISTING 5KV SUBSTATION BLDG 600

SCALE: 1/16"=1'-0"

1 INDICATES PHOTO NUMBER AND ORIENTATION OF PHOTO



EAST VIEW - EXISTING 5KV SUBSTATION
PHOTO 1



OVERHEAD CABLE TRAY
PHOTO 2



WEST VIEW - EXISTING 5KV SUBSTATION
PHOTO 3



DLC CONTROL HOUSE
PHOTO 4

GENERAL NOTES:

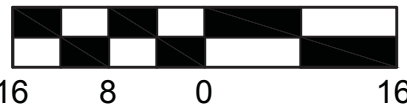
1. REFER TO GENERAL NOTES ON DWG E-02 FOR ADDITIONAL INFORMATION.
2. REFER TO ONE-LINE DIAGRAM 000-ESL-001 FOR ADDITIONAL CABLE AND ELECTRICAL EQUIPMENT DEMOLITION DETAILS.
3. REFER TO 500-ET-01 FOR DEMOLITION OF SUBSTATION BENCHBOARD AND RELOCATION OF EXISTING BATTERY SYSTEM. REMOVE ALL CONTROL AND STATION SERVICE CABLING BACK TO BLDG 500.
4. THE EXISTING SUBSTATION SHALL BE DEMOLISHED IN ITS ENTIRETY. SELECT 23KV EQUIPMENT SHALL BE REMOVED BY DUQUESNE LIGHT COMPANY (DLC) AS IDENTIFIED HEREON. ALL OTHER EQUIPMENT AND FACILITIES SHALL BE DEMOLISHED BY THIS CONTRACTOR. THE OWNER SHALL BE RESPONSIBLE FOR ANY AND ALL DLC RELATED COSTS.
5. ALL 4.16KV AND 23KV SUBSTATION EQUIPMENT AND FACILITIES NOT SLATED FOR REMOVAL BY DLC SHALL BE REMOVED BY THIS CONTRACTOR.
6. ALL DUCT BANKS AND UNDERGROUND CONDUITS SHALL BE REMOVED TO A MINIMUM OF 5' BEYOND THE FENCE LINE UNLESS OTHERWISE NOTED.
7. ALL FOUNDATIONS SHALL BE REMOVED TO A MINIMUM DEPTH OF 36" BELOW FINISHED GRADE.
8. BACKFILL AND COMPACT ALL EXCAVATED AREAS WITH OFFSITE SATISFACTORY SOILS. TOP SURFACES WITH 6" AASHTO #57 STONE.

DUQUESNE LIGHT COMPANY RESPONSIBILITIES:

DUQUESNE LIGHT COMPANY SHALL BE RESPONSIBLE FOR THE REMOVAL OF THE FOLLOWING EQUIPMENT (WITHOUT COST TO THE CONTRACTOR):

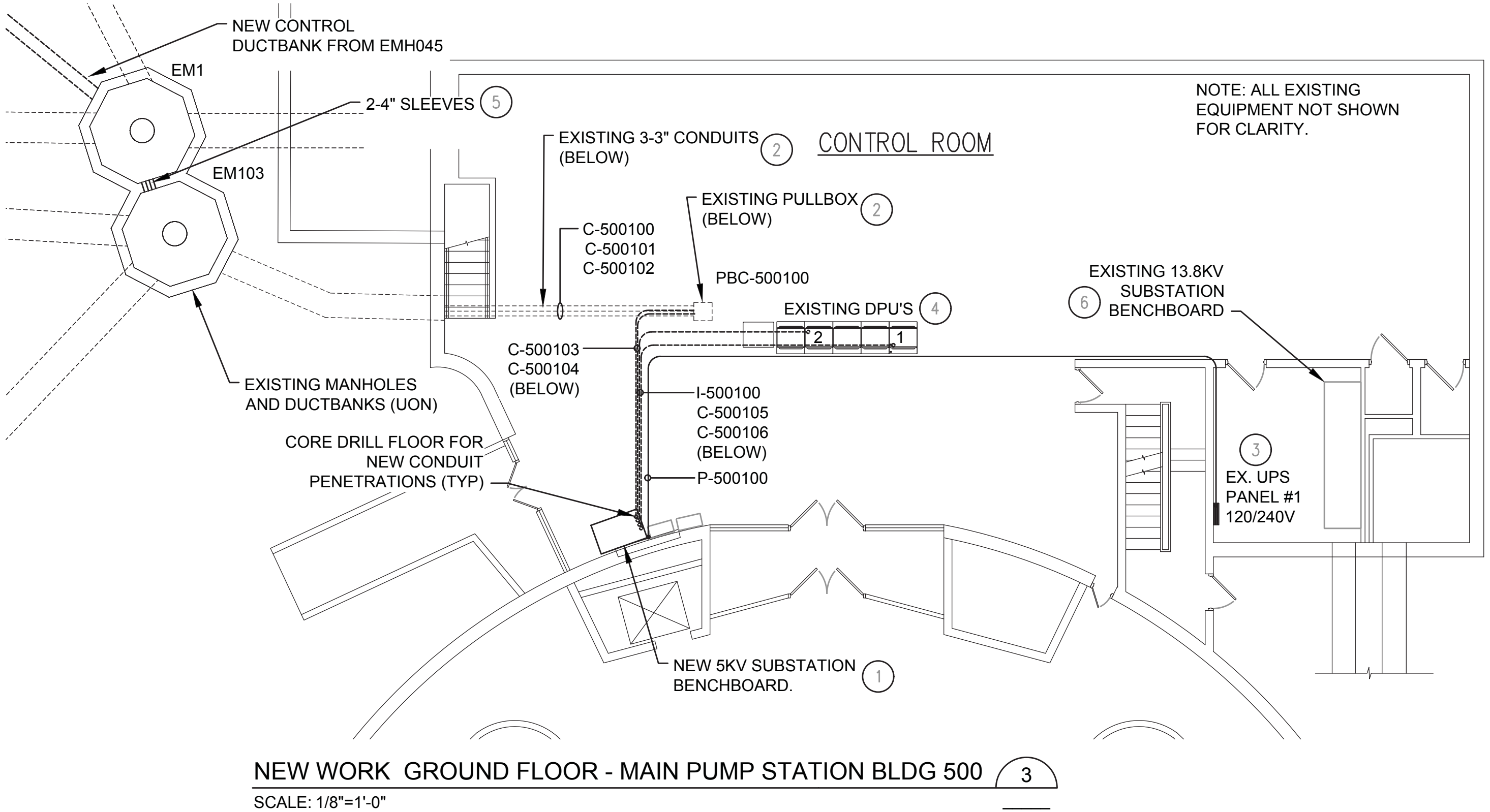
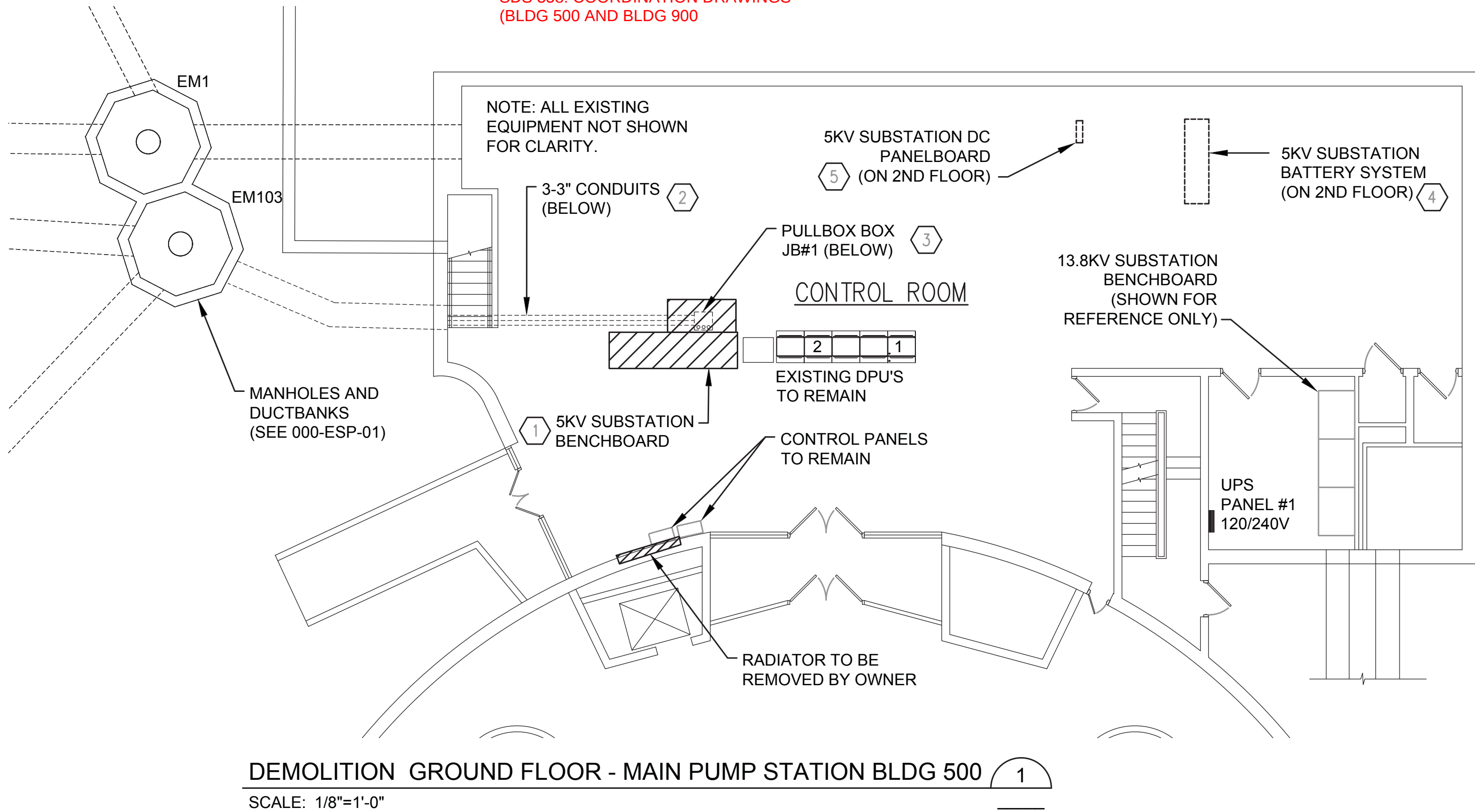
- ALL INCOMING 23KV UNDERGROUND FEEDERS
- THREE (3) 23KV-4KV MAIN POWER TRANSFORMERS
- ONE (1) 23KV OIL CIRCUIT BREAKER
- SIX (6) 23KV DISCONNECTS
- SIX (6) 23KV POTENTIAL TRANSFORMERS
- NINE (9) 4KV METERING POTENTIAL TRANSFORMERS
- NINE (9) METERING CURRENT TRANSFORMERS
- THREE (3) 4KV STATION SERVICE TRANSFORMERS AND FUSES/DISCONNECTS
- 23KV STATION POST INSULATORS AND CONDUCTORS
- 23KV INCOMING CABLES
- CONTROL HOUSE INTERIOR EQUIPMENT:
 - 48VDC BATTERY/RACK/CHARGER
 - PROTECTION/CONTROLS/COMMUNICATIONS CABINETS, AND THE EQUIPMENT INSTALLED IN THEREIN

Drawing Scale 1/16" = 1'

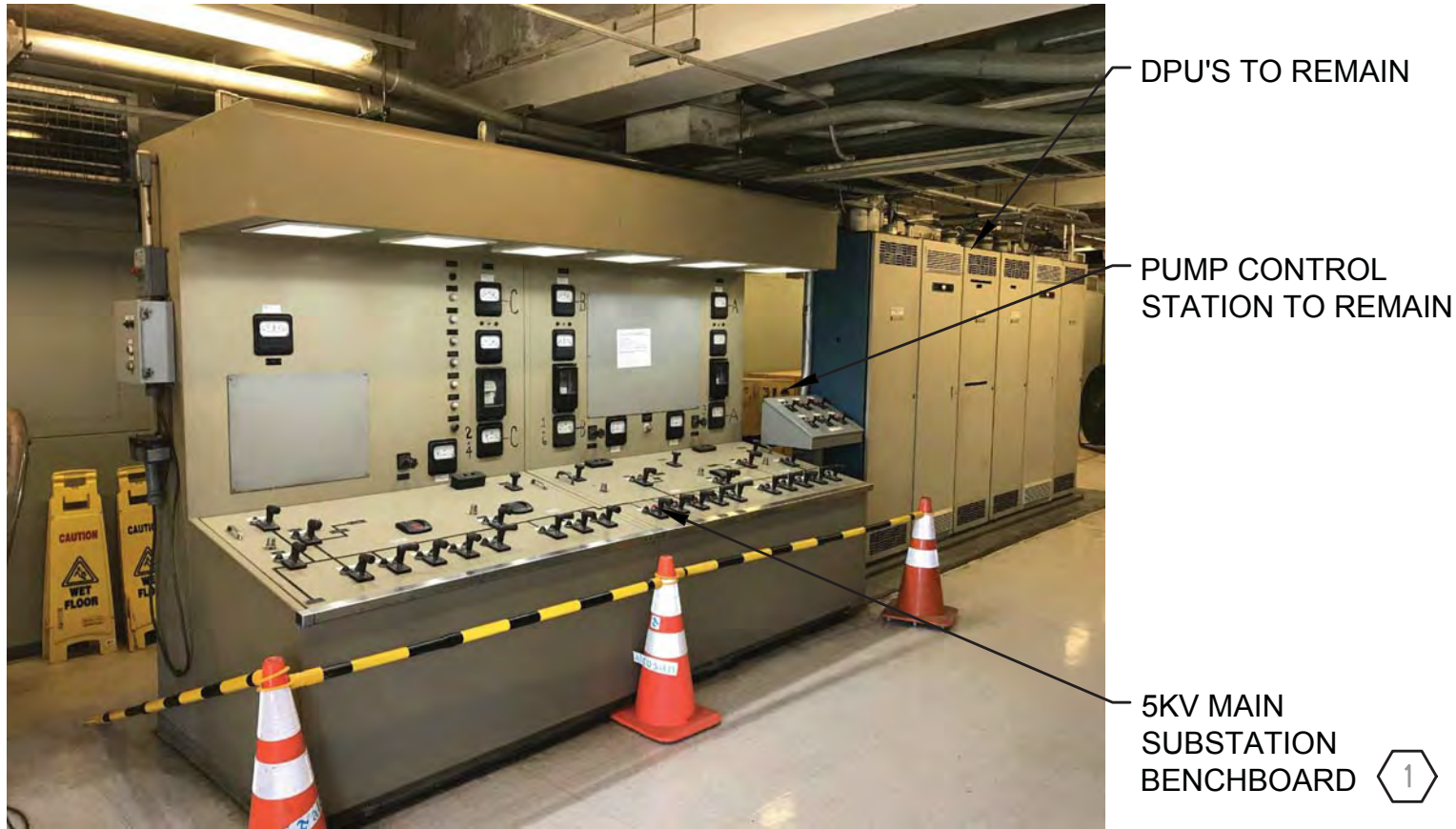


Designed by: E. SULLIVAN	REVISION			APPV EJS		THIS DRAWING IS NOT CONSIDERED A SEALED DOCUMENT	 ARLETTA SCOTT WILLIAMS EXECUTIVE DIRECTOR, ALCOSAN 3300 PREBLE AVE. PITTSBURGH, PA 15233 (412) 766 - 4810 www.alcosan.org	ALLEGHENY COUNTY SANITARY AUTHORITY WASTEWATER TREATMENT PLANT ELECTRICAL DISTRIBUTION SYSTEM UPGRADE 600-ETD-01 EXISTING 5KV SUBSTATION - BLDG 600 DEMOLITION PLANS	Contract: 1739
Drawn by: JJC	REV No. A	DATE 07/26/21	DESCRIPTION CONFORMED SET						CAD File Name: 600ETD01
Checked by: ES									Date: 05 / 25 / 2021
									Sheet: 68 OF 108

SDS 358: COORDINATION DRAWINGS
(BLDG 500 AND BLDG 900)



SDS 027: OPENINGS AND PENETRATIONS



EXISTING 5KV BENCHBOARD - MAIN PUMP STATION BLDG 500

SCALE: NONE



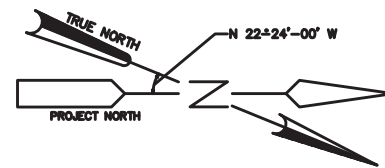
EXISTING BATTERY SYSTEM - MAIN PUMP STATION BLDG 500

SCALE: NONE

CONDUIT ROUTING SCHEDULE					
CONDUIT		ROUTING		CONDUIT FILL	FILL DESCRIPTION
NO.	SIZE	FROM	TO		
C-500100	3" (EX.)	EM103	PBC-500100	C-008010 TO 18 - 500	SEE CABLE SCHEDULE ON 650-ES-01
C-500101	3" (EX.)	EM103	PBC-500100	C-008019 TO 22 - 500	SEE CABLE SCHEDULE ON 650-ES-01
C-500102	3" (EX.)	EM103	PBC-500100	SPARE	
C-500103	3"	PBC-500100	5KV BENCHBOARD	C-008010 TO 18 - 500	SEE CABLE SCHEDULE ON 650-ES-01
C-500104	3"	PBC-500100	5KV BENCHBOARD	C-008019 TO 22 - 500	SEE CABLE SCHEDULE ON 650-ES-01
C-500105	2"	5KV BENCHBOARD	DPU-1	(2) 9/C #14	DISCRETE STATUS AND CONTROL
C-500106	2"	5KV BENCHBOARD	DPU-1	(5) 4/C #14	DISCRETE STATUS AND CONTROL
I-500100	1"	5KV BENCHBOARD	DPU-2	(5) 2/C #16 STP	4-20MA ANALOG METERING
P-500100	3/4	UPS PANEL #1	5KV BENCHBOARD	2-#12+12G	120VAC BENCHBOARD POWER

NOTES:
1. REFER TO 500-EZ-01 AND 02 FOR BENCHBOARD WIRING DETAILS.
2. GROUND ALL UNUSED (SPARE) CONTROL CABLE CONDUCTORS.

SDS 045: CONTROL-VOLTAGE ELECTRICAL POWER CABLES (PRODUCT DATA)



Drawing Scale 1/8" = 1'

8 4 0 8

GENERAL NOTES:

1. REFER TO GENERAL NOTES ON DWG E-02 FOR ADDITIONAL INFORMATION.

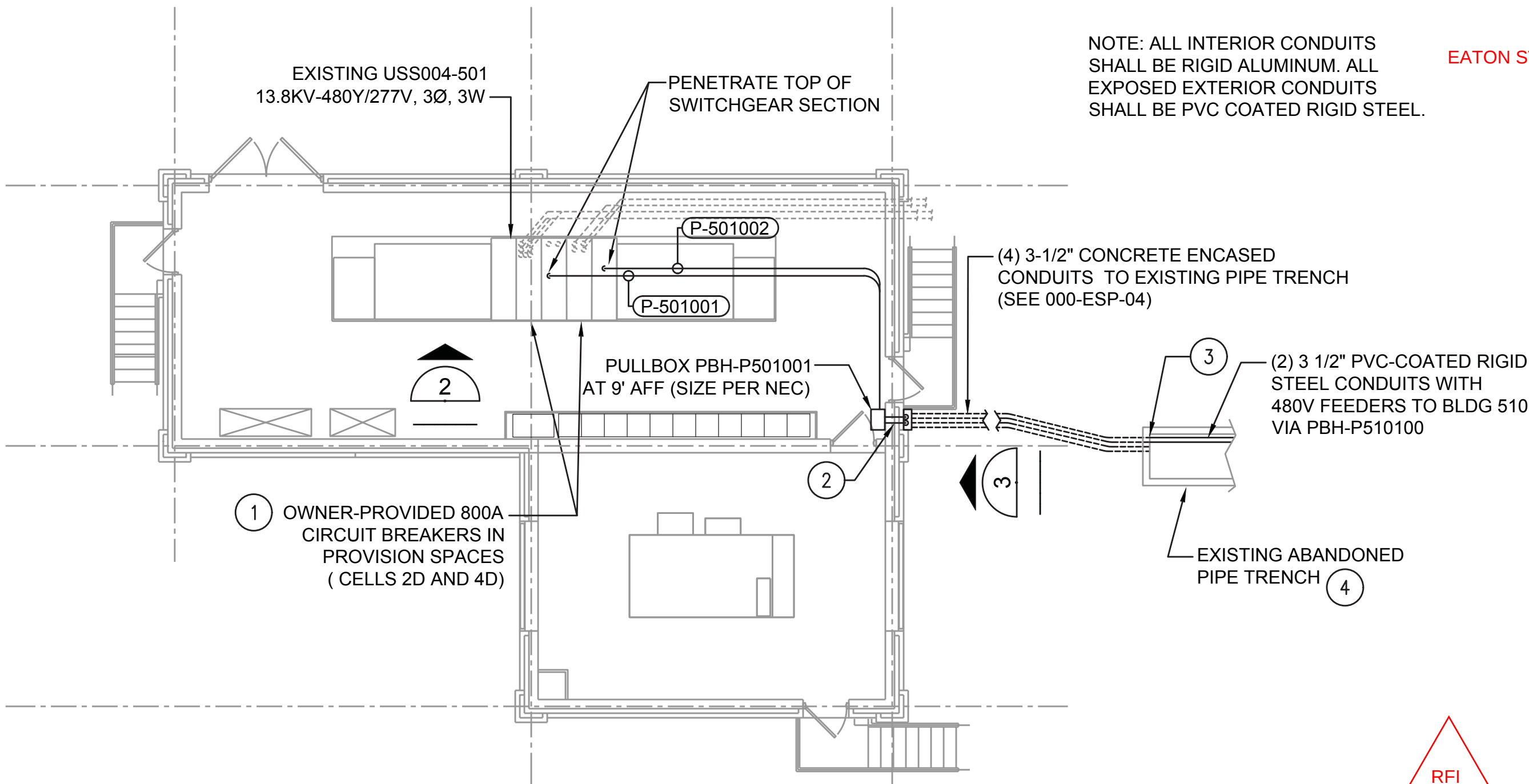
DEMOLITION PLAN NOTES:

1. REMOVE EXISTING 5KV SUBSTATION (600) BENCHBOARD AND REAR ACCESS ENCLOSURE COMPLETE. REMOVE ALL CABLING INCLUDING: CONTROL/METERING CABLES BACK TO 5KV SUBSTATION; DCS CABLING BACK TO DPU'S 1 AND 2; AND 120VAC CIRCUIT BACK TO UPS PANEL #1. COORDINATE ALL REMOVALS WITH THE DEMOLITION OF THE EXISTING 5KV SUBSTATION.
2. EXISTING 3-3" CONDUITS FROM EM103 TO JB#1 WITH BENCHBOARD CONTROL CABLES FROM 5KV SUBSTATION. REMOVE ALL CONTROL CABLES AND MAINTAIN CONDUITS FOR NEW 5KV SUBSTATION BENCHBOARD.
3. MAINTAIN EXISTING PULLBOX JB#1. REMOVE ALL CONDUIT STUBS UP TO BENCHBOARD AND SEAL PENETRATIONS.
4. DISCONNECT, REMOVE AND RELOCATE EXISTING 120VDC, 200AH BATTERY (CONSISTING OF 60, 2V, 200AH CELLS), RACK AND CHARGER TO BLDG 651 FOR USE WITH NEW 5KV SWG008. REMOVE CHARGER AC POWER CIRCUIT AND CONDUIT BACK TO SOURCE PANEL. REFER TO 650 SERIES DRAWINGS FOR ADDITIONAL RELOCATION INFORMATION. COORDINATE WITH EXISTING 5KV SUBSTATION DEMOLITION.
5. REMOVE DC DISCONNECT, FEEDER AND CONDUIT TO DC PANELBOARD IN ADJACENT ROOM. REMOVE ALL DC CIRCUITS TO 5KV SUBSTATION. ABANDON PANELBOARD AND CONDUITS IN PLACE. REFER TO 600-ETD-01 FOR ADDITIONAL INFORMATION.

NEW WORK PLAN NOTES:

1. PROVIDE BENCHBOARD AND ASSOCIATED CABLING AND CONDUITS FOR NEW 5KV SUBSTATION. INSTALLATION SHALL BE COORDINATED WITH THE INSTALLATION OF THE NEW 5KV SUBSTATION. REFER TO BENCHBOARD DETAILS ON 500-ED-01 FOR ADDITIONAL INFORMATION.
2. UTILIZE EXISTING CONDUITS AND PULLBOX BOX FOR NEW BENCHBOARD CONTROL/ METERING CABLES TO NEW 5KV SUBSTATION. RE-LABEL CONDUITS AND PULLBOX AS INDICATED.
3. UTILIZE EXISTING SPARE 20A, 1P BREAKER IN PANEL FOR 120VAC POWER TO NEW 5KV BENCHBOARD.
4. PROVIDE DCS INSTRUMENTATION AND CONTROL INTERFACE FOR NEW 5KV BENCHBOARD. COORDINATE ALL TERMINATIONS IN DPU'S WITH OWNER.
5. CORE DRILL MANHOLE WALLS AND PROVIDE 2-4" CONDUIT SLEEVES FOR PASS-THRU OF BENCHBOARD CONTROL CABLES.
6. REPLACE NAMEPLATES FOR SPARE BREAKERS A4T AND B4T. NAMEPLATE DESCRIPTION TO BE "XFM007-650" AND XFM008-650". TYPE TO MATCH EXISTING.

Designed by: E. SULLIVAN	REV No. A	DATE 07/26/21	REVISION DESCRIPTION CONFORMED SET	APPV EJS	Quad3 Architecture Engineering Environmental Services The Bathhouse 3455 Butler Street Pittsburgh, PA 15201 phone 412 781 1344 fax 412 781 1389 web www.quad3.com	THIS DRAWING IS NOT CONSIDERED A SEALED DOCUMENT	alcosan allegheeny county sanitary authority ARLETTA SCOTT WILLIAMS EXECUTIVE DIRECTOR, ALCOSAN 3300 PREBLE AVE. PITTSBURGH, PA 15233 (412) 766 - 4810 www.alcosan.org	ALLEGHENY COUNTY SANITARY AUTHORITY WASTEWATER TREATMENT PLANT ELECTRICAL DISTRIBUTION SYSTEM UPGRADE 500-ET-01 MAIN PUMP STATION BLDG 500 FLOOR PLANS	Contract: 1739
Drawn by: RY / JJC				CAD File Name: 500ET01					
Checked by: ES				Date: 05 / 25 / 2021					
				Sheet: 61 OF 108					



NEW WORK FLOOR PLAN - ELECTRIC / GENERATOR BLDG 501

SCALE: 1/8"=1'-0"

SDS 027: OPENINGS AND PENETRATIONS

EXISTING EQUIPMENT DATA SCHEDULE:

EQUIPMENT ID: USS004-501 480V SWITCHGEAR
RATING: 2000A MAIN BUS; 2000A SECTION BUS; 65KAIC; 480V, 3Ø, 3W
MANUF: CUTLER-HAMMER
SHOP ORDER: 98Y0072
FEEDER CIRCUIT BREAKER: MAGNUS DS, MDS608, 800A, 3 POLE; 65KAIC;
DIGITRIP 520M

LEGEND:

(X #####) RACEWAY TAG. SEE SCHEDULE THIS DWG.

GENERAL NOTES:

- REFER TO GENERAL NOTES ON DWG E-02 FOR ADDITIONAL INFORMATION.
- REFER TO BLDG 510 DRAWINGS FOR COORDINATION REQUIREMENTS WITH THE EAST HEADWORKS CONTRACT 1729 PROJECT.
- ALL EQUIPMENT AND CABLES SHOWN IN DARK LINE TYPE ON THE NEW WORK PLANS SHALL BE PROVIDED UON. LIGHT LINE TYPE INDICATES EXISTING.

NEW WORK PLAN NOTES:

- PROVIDE DUAL 400A, 480V FEEDERS TO MCC003-510 LOCATED IN BLDG 510. UTILIZE OWNER-PROVIDED 800A FRAME CIRCUIT BREAKERS IN SPACES F-2D AND F-4D FOR NEW FEEDERS. REFER TO ONE-LINE DIAGRAMS ON DWG 510-ESL-01 FOR ADDITIONAL INFORMATION. SEE EXISTING EQUIPMENT DATA SCHEDULE FOR SWITCHGEAR INFORMATION. PROVIDE SETTINGS, TESTING AND FEEDER CONNECTIONS.
- ENTER BUILDING A MINIMUM OF 9' AFF. CORE DRILL ALL PENETRATIONS. EXACT LOCATION OF PENETRATIONS SHALL BE FIELD COORDINATED WITH BUILDING STRUCTURE, WALL REINFORCING AND EXISTING BUILDING SYSTEMS. CORE DRILL FROM THE EXTERIOR TO AVOID DAMAGE TO BLOCK GLAZING. TYPICAL FOR ALL PENETRATIONS. PROVIDE ADDITIONAL PULLBOXES AND/OR CONDUIT FITTINGS AS NECESSARY FOR CABLE PULLING.
- CORE DRILL TRENCH WALL FOR NEW CONDUITS. TERMINATE (2) SPARE CONDUITS INSIDE TRENCH WALL AND CAP. CONTINUE (2) ACTIVE CONDUITS WITH 480V FEEDERS TO BLDG 510. SEE DWG 000-ESP-03 FOR CONTINUATION AND DWG 510-ET-01 FOR WORK AT BLDG 510.
- UTILIZE ABANDONED PIPE TRENCH FOR CONDUIT PATH TO BLDG 510. REHABILITATE THE TRENCH AS FOLLOWS: DEMO ALL EXISTING PIPING AND BRACKETS; CLEAN ALL DEBRIS; LEVEL UNEVEN COVERS; AND REPLACE DAMAGED COVERS (ALLOCATE UP TO 10 COVERS)

SDS 075: IDENTIFICATION FOR ELECTRICAL SYSTEMS
(PRODUCT DATA)

(X #####)

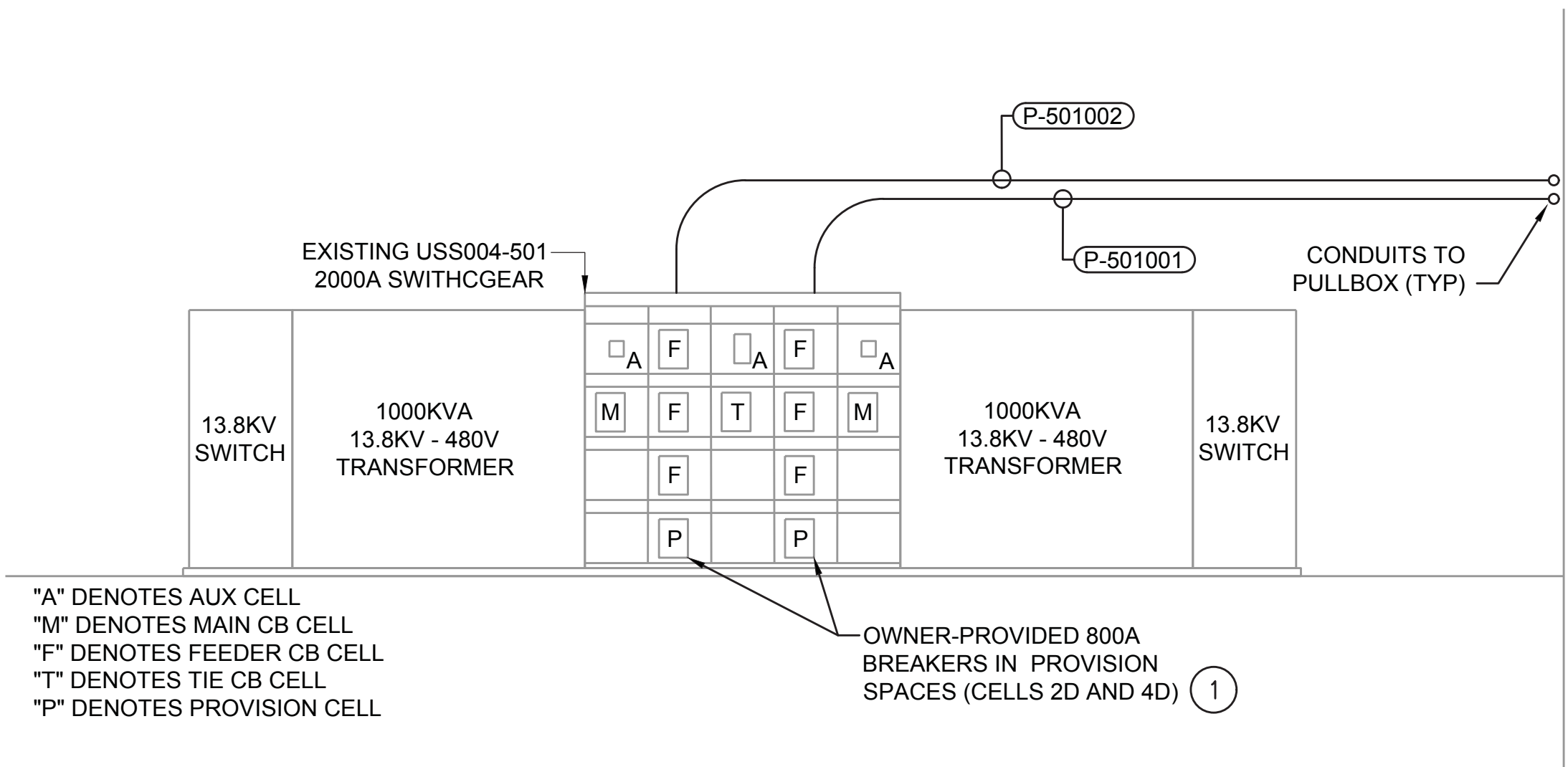
CONDUIT ROUTING SCHEDULE

CONDUIT NO.	SIZE	ROUTING		CONDUIT FILL	FILL DESCRIPTION
		FROM	TO		
P-501001	3 1/2"	USS004-501 UNIT 2	PBH-P501001	P-MCC003A-510	
P-501002	3 1/2"	USS004-501 UNIT 4	PBH-P501001	P-MCC003B-510	

SEE DWG 000-ES-02 FOR CONTINUATION TO BLDG 510.
SEE DWG 510-ESL-01 FOR APPLICABLE CABLE SCHEDULE.

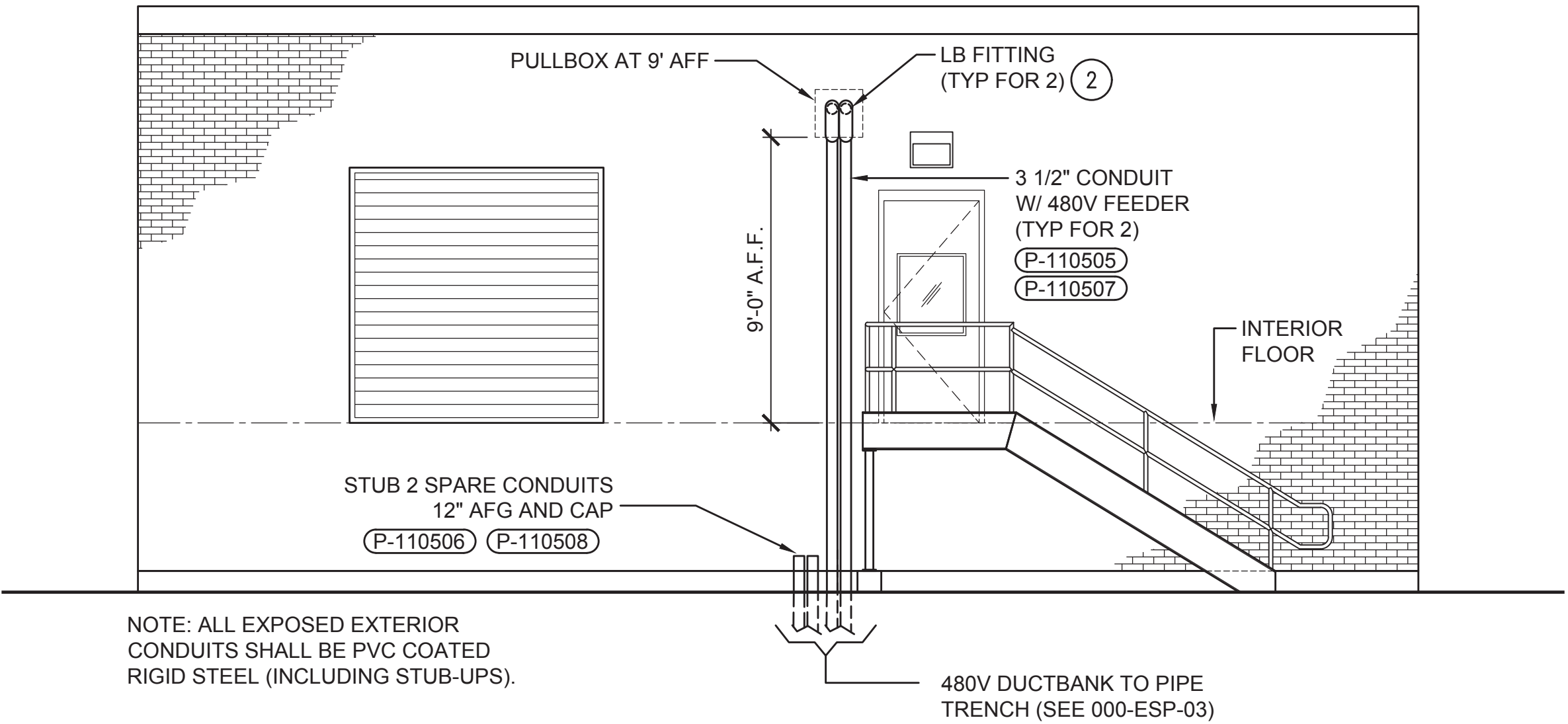
BLDG. 501 CONDUIT RISER SIZE

SDS 005: JOB CONDITIONS
(COORDINATION DRAWINGS)



EXISTING USS004-501 ELEVATION

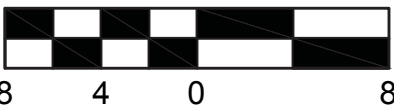
SCALE: NTS



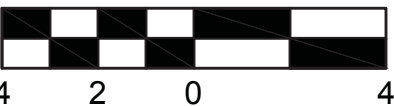
NEW WORK EAST ELEVATION - ELECTRIC / GENERATOR BLDG 501

SCALE: 1/4"=1'-0"

Drawing Scale 1/8" = 1'



Drawing Scale 1/4" = 1'



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E. SULLIVAN	A	07/26/21	CONFORMED SET		EJS
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WASTEWATER TREATMENT PLANT
ELECTRICAL DISTRIBUTION SYSTEM UPGRADE

501-ET-01
ELECTRIC/GEN BLDG 501
PLAN AND ONE-LINE DIAGRAM

Contract:	1739
CAD File Name:	510ET01
Date:	05 / 25 / 2021
Sheet:	65 OF 108

SDS-249: CAST-IN-PLACE
CONCRETE (PRODUCT DATA)

SDS-250: CAST-IN-PLACE
CONCRETE (DESIGN MIXTURES)

SDS-251: CAST-IN-PLACE CONCRETE
(STEEL REINFORCING SHOP DRAWINGS)

SDS 412: MISC. METALS -
LADDER FOR CABLE VAULT
AT 650 BLDG.

SDS 269: STRUCTURAL STEEL
FRAMING (SHOP DRAWINGS)

SDS 435: STRUCTURAL
STEEL FRAMING -
REVISED FIELD
MEASUREMENTS (SHOP
DRAWINGS)

SDS 026: MANUFACTURER
ACCEPTANCE OF CONDITIONS
(TRAINING MATERIALS)

ADDITIVE / ADMIXTURE NOTE:
CONCRETE FOR VAULT WALLS, VAULT BASE SLAB AND VAULT
CAP TO CONTAIN A CRYSTALLINE WATERPROOFING ADDITIVE
(SEE SPECIFICATION SECTION 033000, CAST-IN-PLACE
CONCRETE). ALL OTHER CONCRETE ELEMENTS TO RECEIVE A
SET-ACCELERATING CORROSION-INHIBITING ADMIXTURE (SEE
SPECIFICATION SECTION 033000, CAST-IN-PLACE CONCRETE).

SDS 418: REVISED CONCRETE MIX DESIGN -
ADMIXTURE - SIKAMENT SPMN (PRODUCT DATA)

SDS 421: CONCRETE MIX DESIGN
(ALTERNATE 4000AE - #8 AGGREGATE)

SDS 341: CHAIN LINK FENCES
AND GATES

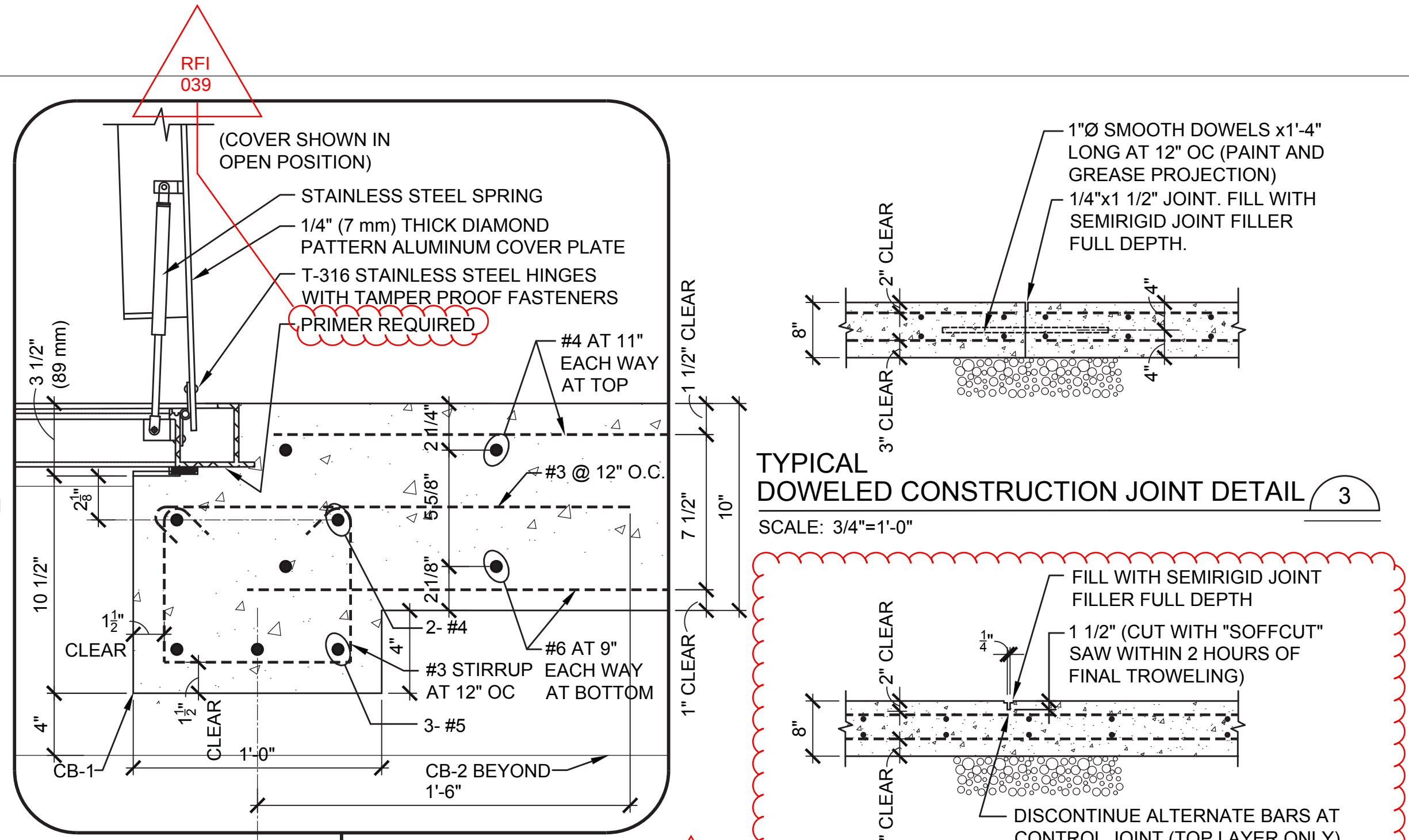
ACCESS DOOR / FENCE NOTE:
TO ELIMINATE THE POTENTIAL FOR INTERFERENCE,
DO NOT POSITION POSTS FOR FENCING NEAR
ACCESS DOOR FRAME. MAINTAIN AS A MINIMUM
1'-0" CLEARANCE FROM FENCE POST TO FRAME.

SDS 388: MEDIUM-VOLTAGE,
METAL-CLAD SWITCHGEAR
(OUTDOOR) (BLDG 650 -
SWG008 - OPERATION AND
MAINTENANCE DATA)

SDS 386: MEDIUM-VOLTAGE;
METAL-CLAD SWITCHGEAR
(OUTDOOR) (BLDG 650 -
SWG008)

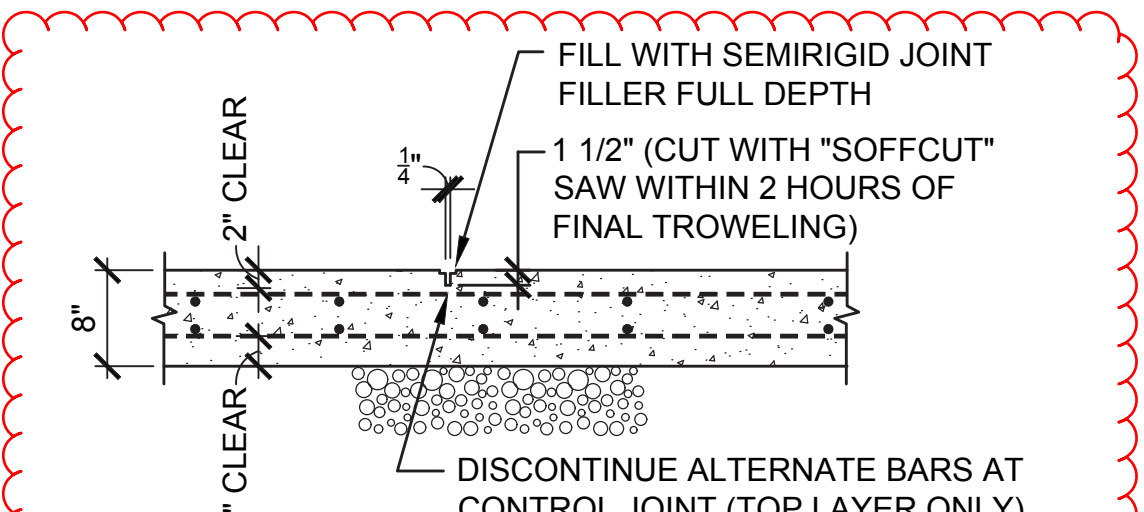
SDS-408: ACCESS HATCHES
FOR 650 BLDG. CABLE VAULT

3'-0" x 3'-0" HALLIDAY SERIES
H1W ACCESS DOOR
(BASIS OF DESIGN)
(OR EQUAL)
MINIMUM LOAD RATING
= 500 PSF
PRODUCT DATA/FEATURES:
• EXTRUDED ALUMINUM
CHANNEL FRAME
• SINGLE LEAF CONSTRUCTION
• AUTO-LOCK T-316 STAINLESS
STEEL HOLD OPEN ARM WITH
RELEASE HANDLE
• T-316 STAINLESS STEEL HINGES
AND ATTACHING HARDWARE
• T-316 STAINLESS STEEL SLAM
LOCK WITH REMOVABLE KEY
• STAINLESS STEEL COMPRESSION
SPRING ASSIST
• RECESSED LIFTING HANDLE
• LIFETIME GUARANTEE



TYPICAL
DOWELED CONSTRUCTION JOINT DETAIL

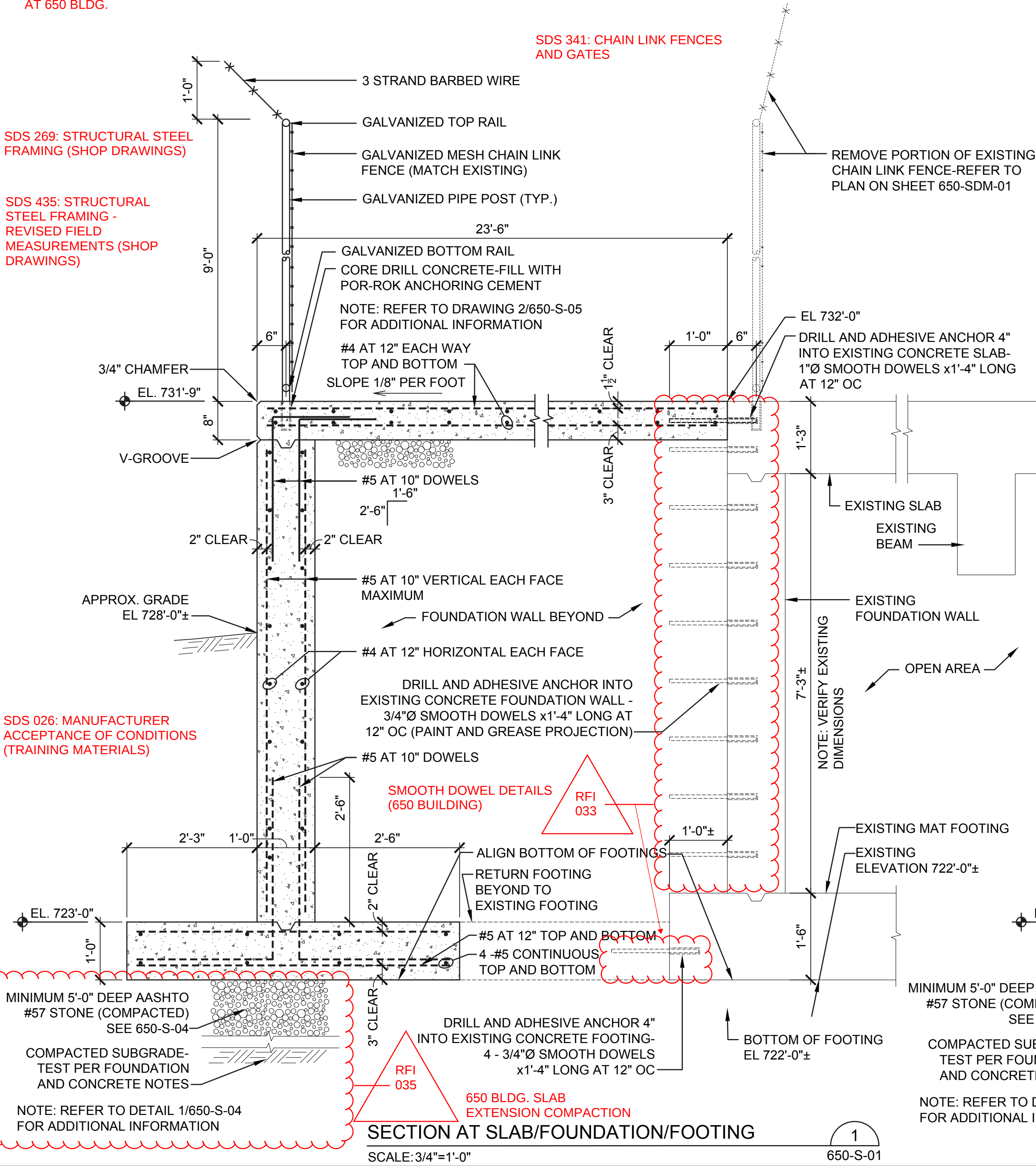
SCALE: 3/4"=1'-0"



TYPICAL
SAWED CONTROL JOINT DETAIL

SCALE: 3/4"=1'-0"

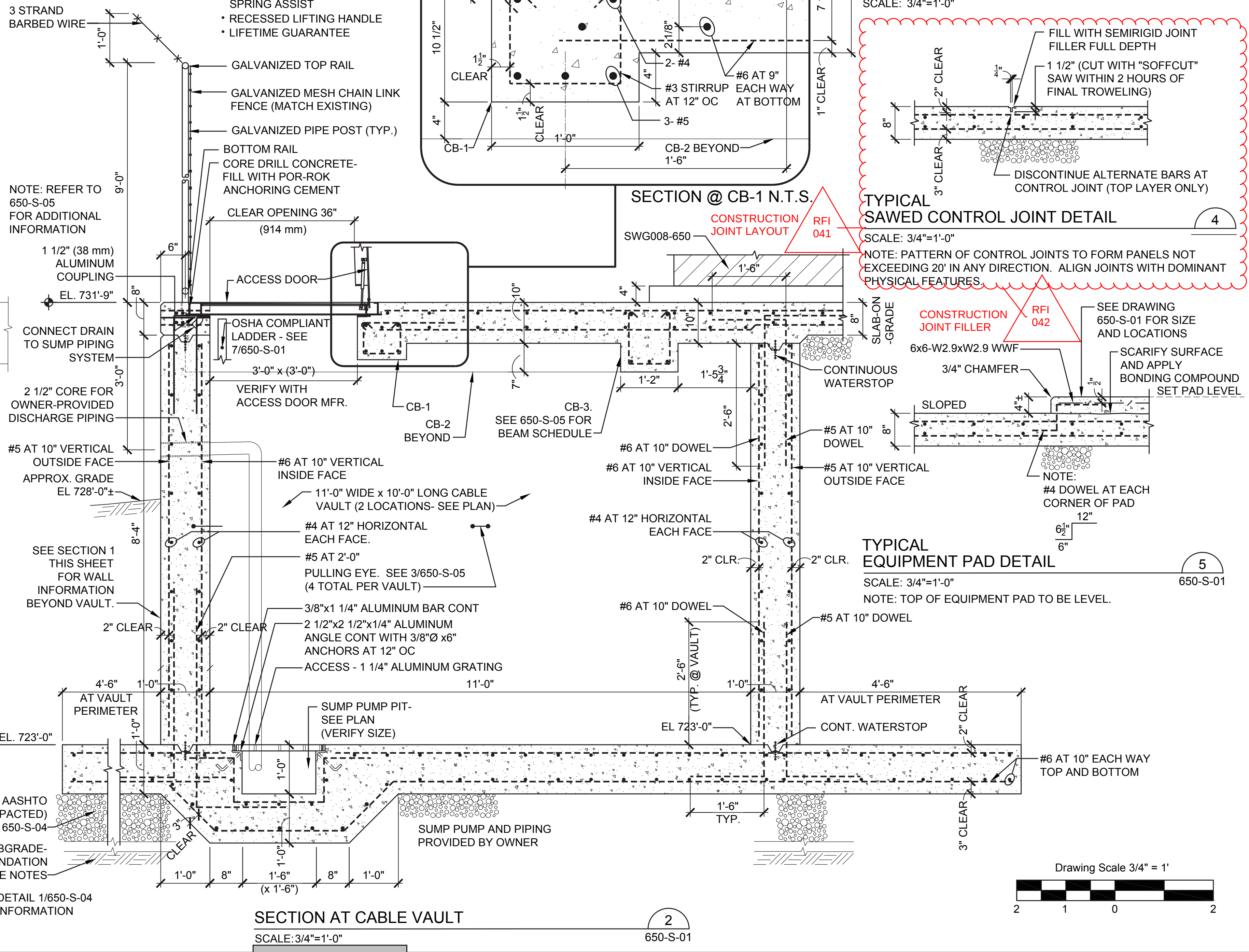
NOTE: PATTERN OF CONTROL JOINTS TO FORM PANELS NOT
EXCEEDING 20' IN ANY DIRECTION. ALIGN JOINTS WITH DOMINANT
PHYSICAL FEATURES.



SECTION AT SLAB/FOUNDATION/FOOTING

SCALE: 3/4"=1'-0"

650-S-01



SECTION AT CABLE VAULT

SCALE: 3/4"=1'-0"

650-S-01

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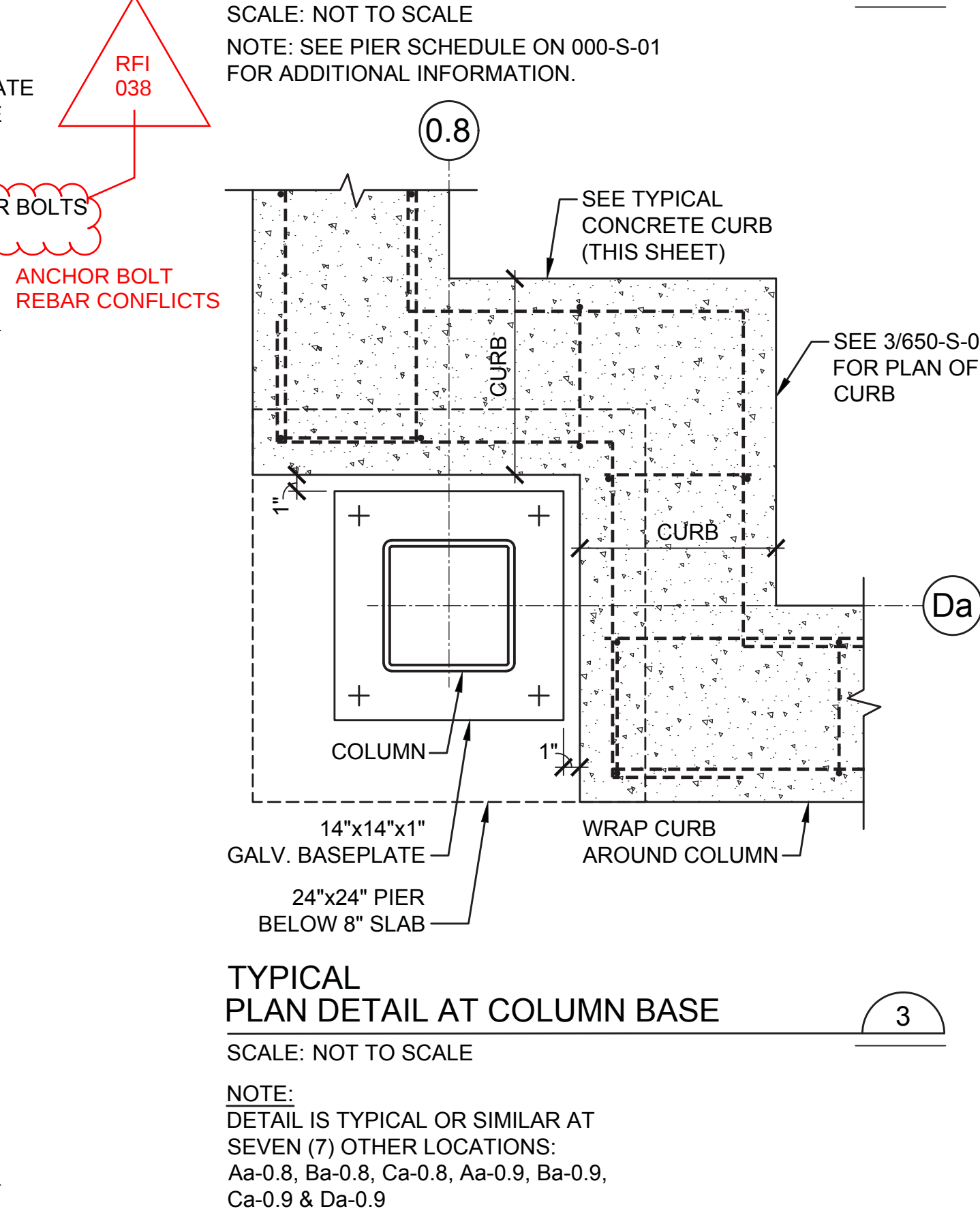
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ALLEGHENY COUNTY SANITARY AUTHORITY
WASTEWATER TREATMENT PLANT
ELECTRICAL DISTRIBUTION SYSTEM UPGRADE

650-S-02
13.8KV - 4.16KV SUBSTATION
SECTIONS AND DETAILS

Contract: 1739
CAD File Name: 650S02
Date: 05 / 25 / 2021
Sheet: 23 OF 108

SDS 026: MANUFACTURER ACCEPTANCE OF CONDITIONS
(TRAINING MATERIALS)



Drawing Scale $\frac{3}{4}'' = 1'$

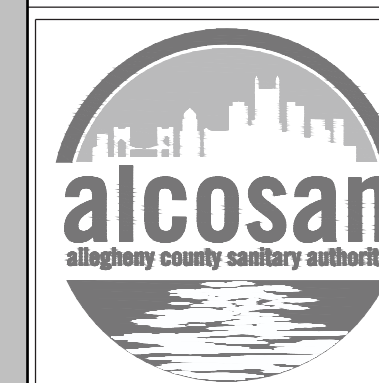


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WASTEWATER TREATMENT PLANT
ELECTRICAL DISTRIBUTION SYSTEM UPGRADE

650-S-03
13.8KV - 4.16KV SUBSTATION
SECTION

Contract:	1739
CAD File Name:	650S03
Date:	05 / 25 / 2021
Sheet:	24 OF 108

SDS 269: STRUCTURAL STEEL FRAMING (SHOP DRAWINGS)

SDS 435: STRUCTURAL STEEL FRAMING - REVISED FIELD MEASUREMENTS (SHOP DRAWINGS)

650 BLDG. SLAB EXTENSION COMPACTION

RFI 035

RFI 023

650 BLDG. STRUCTURAL DETAILS

EXTERIOR OF SUBSTATION

INTERIOR OF SUBSTATION

WALL AND FOOTING

EL. 722'-6" SEE PLANS AND SECTIONS

BACKFILL- SEE NOTE 4 ON PAD PREP DETAIL THIS SHEET

BACKFILL TO FINAL FOOTING BEARING LEVEL WITH SUITABLE INERT (NON-EXPANSIVE) CRUSHED LIMESTONE MEETING SIZE AND GRADING FOR AASHTO NO. 57. SEE NOTE 3 BELOW.

EXISTING SITE MATERIAL

PROOF-ROLL (SEE NOTE 1 BELOW) COMPACTED SUBGRADE

TYPICAL FOOTING UNDERCUT DETAIL

SCALE: 3/4"=1'-0"

1
650-S-04

NOTE:
DETAIL IS TYPICAL FOR WALL FOOTINGS AND SPREAD FOOTINGS.

NOTES:

1. PROOF-ROLL EXPOSED UNDERCUT WITH A SUITABLE VIBRATORY ROLLER COMPACTOR EXERTING A MINIMUM COMPACTIVE CENTRIFUGAL FORCE OF 3500 POUNDS PERFORMED IN THE PRESENCE OF A TESTING AND INSPECTION AGENCY.
2. LOOSE OR SOFT SURFACES REVEALED VIA PROOF-ROLLING WILL BE UNDERCUT TO COMPETENT MATERIAL AS DETERMINED BY THE TESTING AND INSPECTION AGENCY.
3. ALL STRUCTURAL BACKFILL SHALL BE PLACED IN MAXIMUM 8" LOOSE LIFTS AND COMPACTED TO AT LEAST 70% RELATIVE DENSITY PER ASTM TEST DESIGNATIONS D4253-16 AND D4254-16.
4. REFER TO SPECIFICATION SECTION 31 21 00 "EARTHWORK, EXCAVATION, TRENCHING AND BACKFILLING" REGARDING EXISTING SITE SOILS.

SEE SECTION 1/650-S-02 AND DETAILS 3, 4, & 5 ON 650-S-02 FOR ADDITIONAL INFORMATION

8" THICK SUBSTATION PAD (SLOPED)

8" AASHTO NO. 57 STONE

BACKFILL (SEE SPECIFICATIONS) AND NOTE 4 BELOW

PROOF-ROLL (SEE NOTE 2 BELOW)

EXISTING GRADE EL. 728'-0"±

EXISTING GRADE (SEE NOTE 1 BELOW)

PROOF-ROLL (SEE NOTE 1 BELOW)

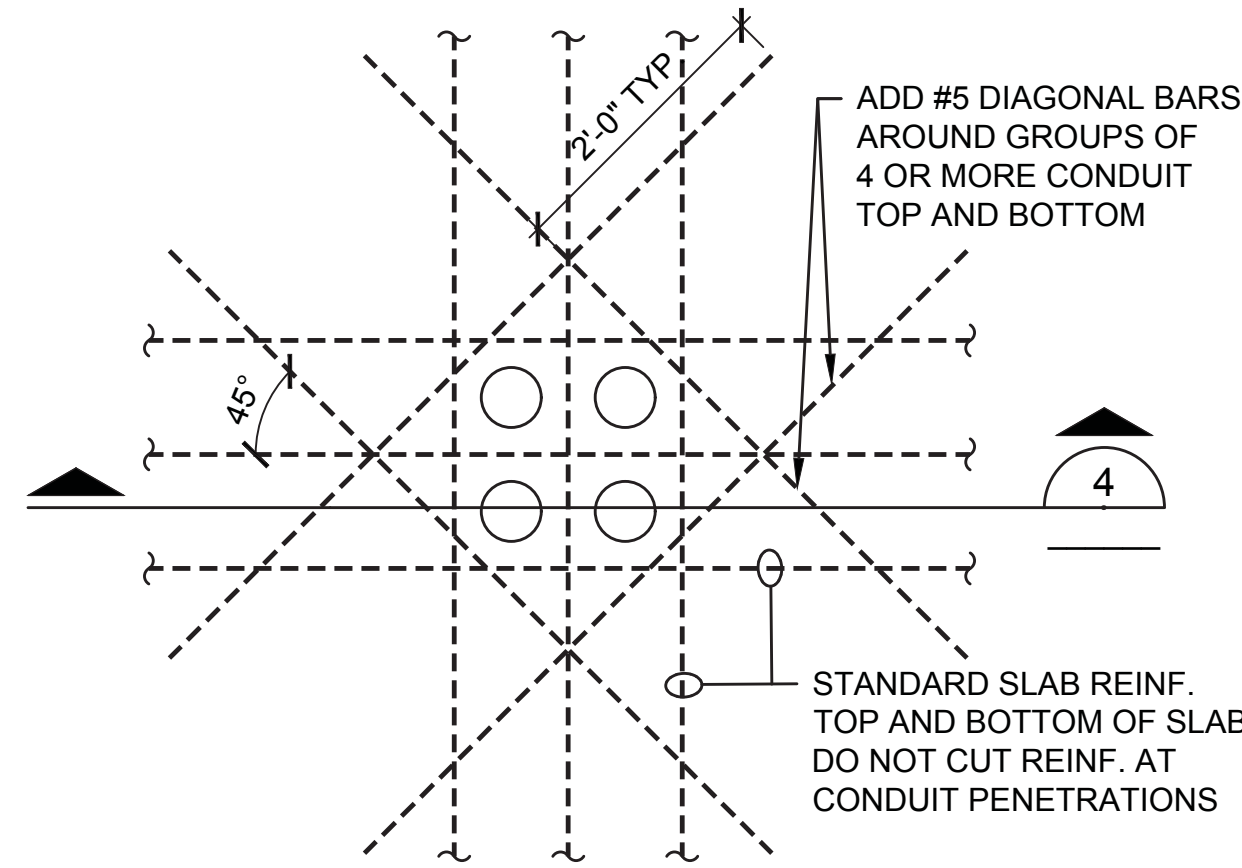
TYPICAL 8" SUBSTATION PAD PREP DETAIL

SCALE: 3/4"=1'-0"

2
650-S-04

NOTES:

1. REMOVE ALL TOPSOIL, PAVEMENTS, ORGANICS, RUBBLE, DEBRIS, TRASH, ROCK FRAGMENTS LARGER THAN 3" AND OTHER DELETERIOUS MATERIALS AS REQUIRED.
2. PROOF-ROLL WITH A SUITABLE TEN-TON (STATIC WEIGHT) STEEL-WHEELED VIBRATORY ROLLER COMPACTOR (RAYGO 400A, CATERPILLAR CS563D OR EQUAL) COMPACTOR VIBRATORS SHOULD BE DISENGAGED WHEN WITHIN 10 FEET OF THE EXISTING SUBSTATION BUILDING.
3. LOOSE OR SOFT SURFACES REVEALED BY PROOF-ROLLING WILL BE UNDERCUT TO COMPETENT MATERIAL AS DETERMINED BY THE TESTING AND INSPECTION AGENCY.
4. BACKFILL SHALL CONSIST OF SATISFACTORY SOILS (SEE SPECIFICATIONS) AND THE FOLLOWING:
 1. CONSIST OF LOW-PLASTICITY SOIL WITH A LIQUID LIMIT LESS THAN 45.
 2. PLASTICITY INDEX OF LESS THAN 25.
 3. COMPACT COHESIVE BACKFILL TO 98% OF MAXIMUM MODIFIED PROCTOR DRY DENSITY PER ASTM D1557-12e1, AND AT WATER CONTENTS WITHIN 3% OF OPTIMUM WATER CONTENT ESTABLISHED THAT TEST.
 4. COMPACT GRANULAR BACKFILL TO MINIMUM 70% RELATIVE DENSITY PER ASTM TEST DESIGNATIONS D4253-16 AND D4254-16.
 5. MAXIMUM LOOSE LIFTS SHOULD NOT EXCEED 8 INCHES.

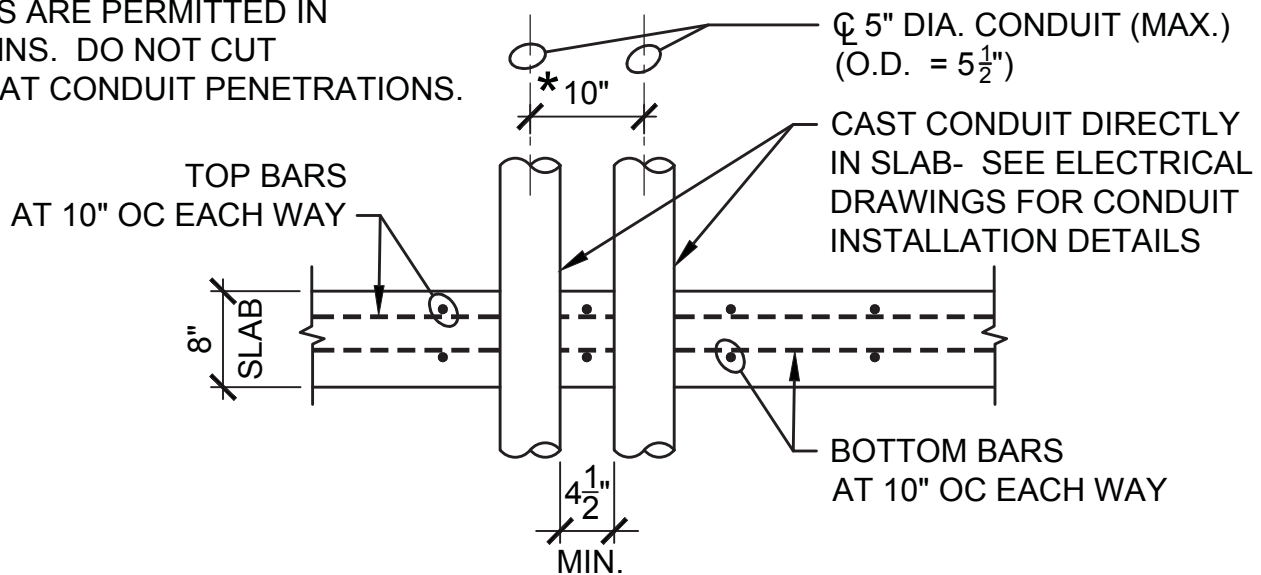


TYPICAL CONDUIT PENETRATIONS

SCALE: 3/4"=1'-0"

3

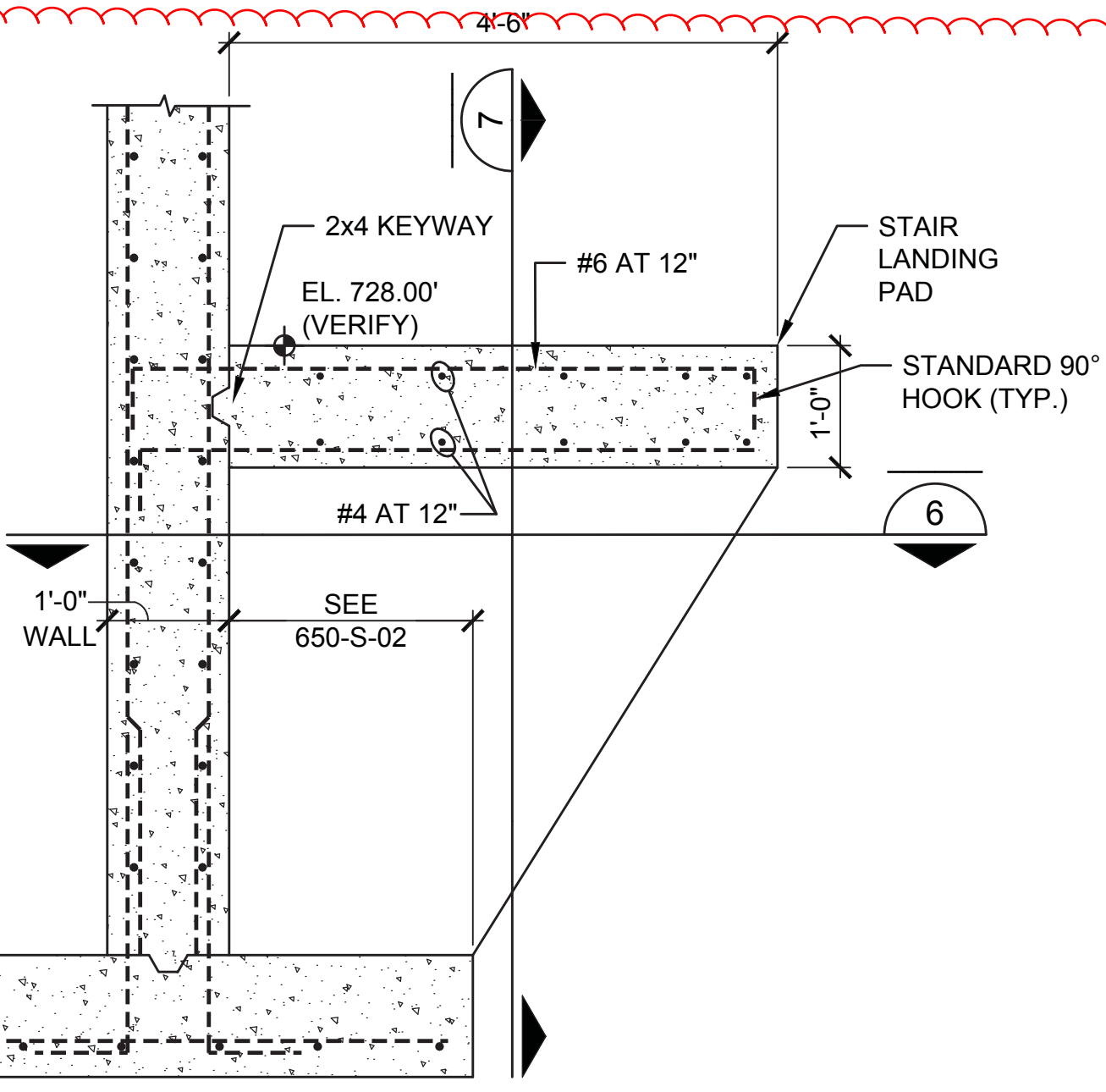
* SPACING OF CONDUIT THRU SLAB TO BE 10" OC OR MULTIPLES OF 10" OC. LOCATE BETWEEN SLAB REINFORCEMENT. NO PENETRATIONS ARE PERMITTED IN BEAMS OR COLUMNS. DO NOT CUT REINFORCEMENT AT CONDUIT PENETRATIONS.



SECTION AT CONDUIT PENETRATIONS

SCALE: 3/4"=1'-0"

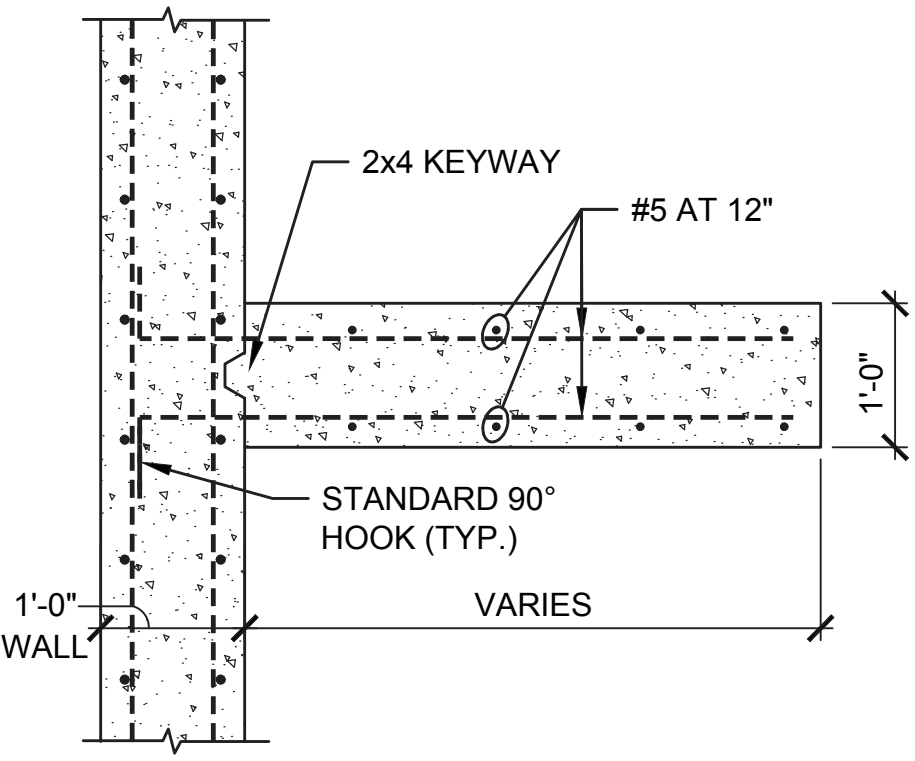
4



SECTION AT STAIR LANDING PAD

SCALE: 3/4"=1'-0"

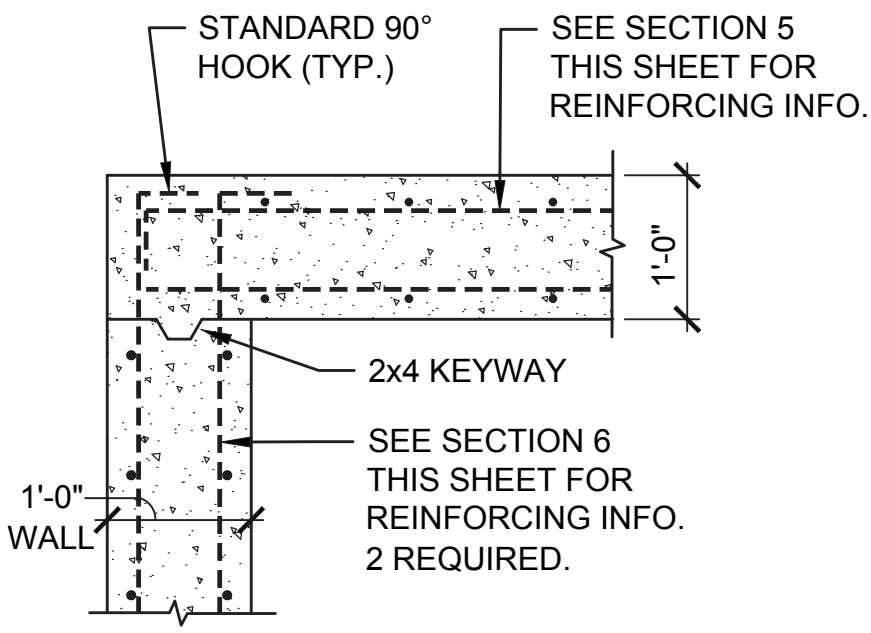
5
650-S-01



SECTION AT STAIR LANDING PAD

SCALE: 3/4"=1'-0"

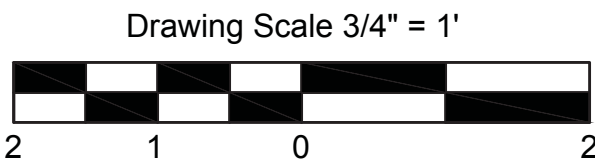
6



SECTION AT STAIR LANDING PAD

SCALE: 3/4"=1'-0"

7



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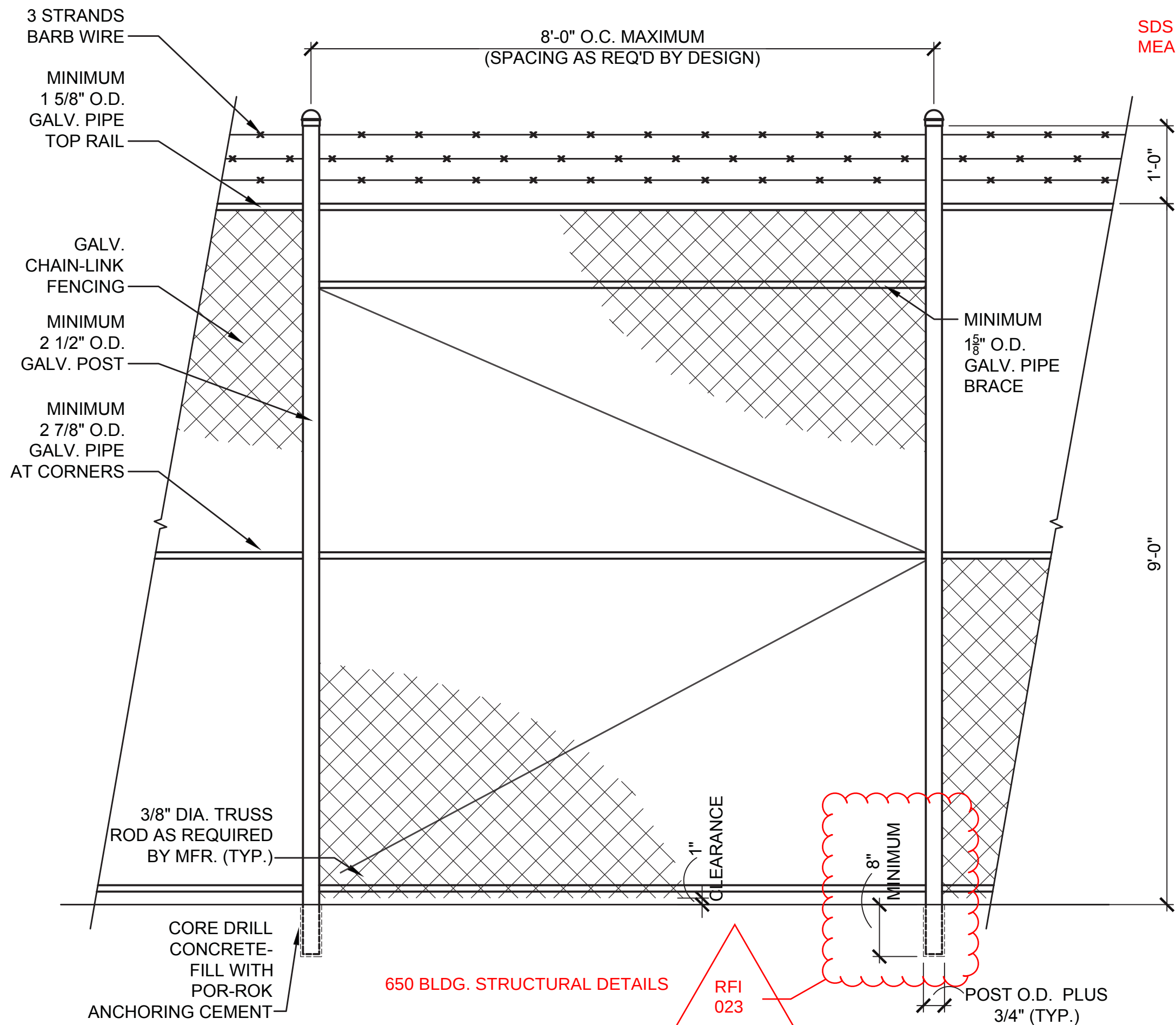
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WASTEWATER TREATMENT PLANT
ELECTRICAL DISTRIBUTION SYSTEM UPGRADE

650-S-04
13.8KV - 4.16KV SUBSTATION
SECTIONS AND DETAILS

Contract:	1739
CAD File Name:	650S04
Date:	05 / 25 / 2021
Sheet:	25 OF 108

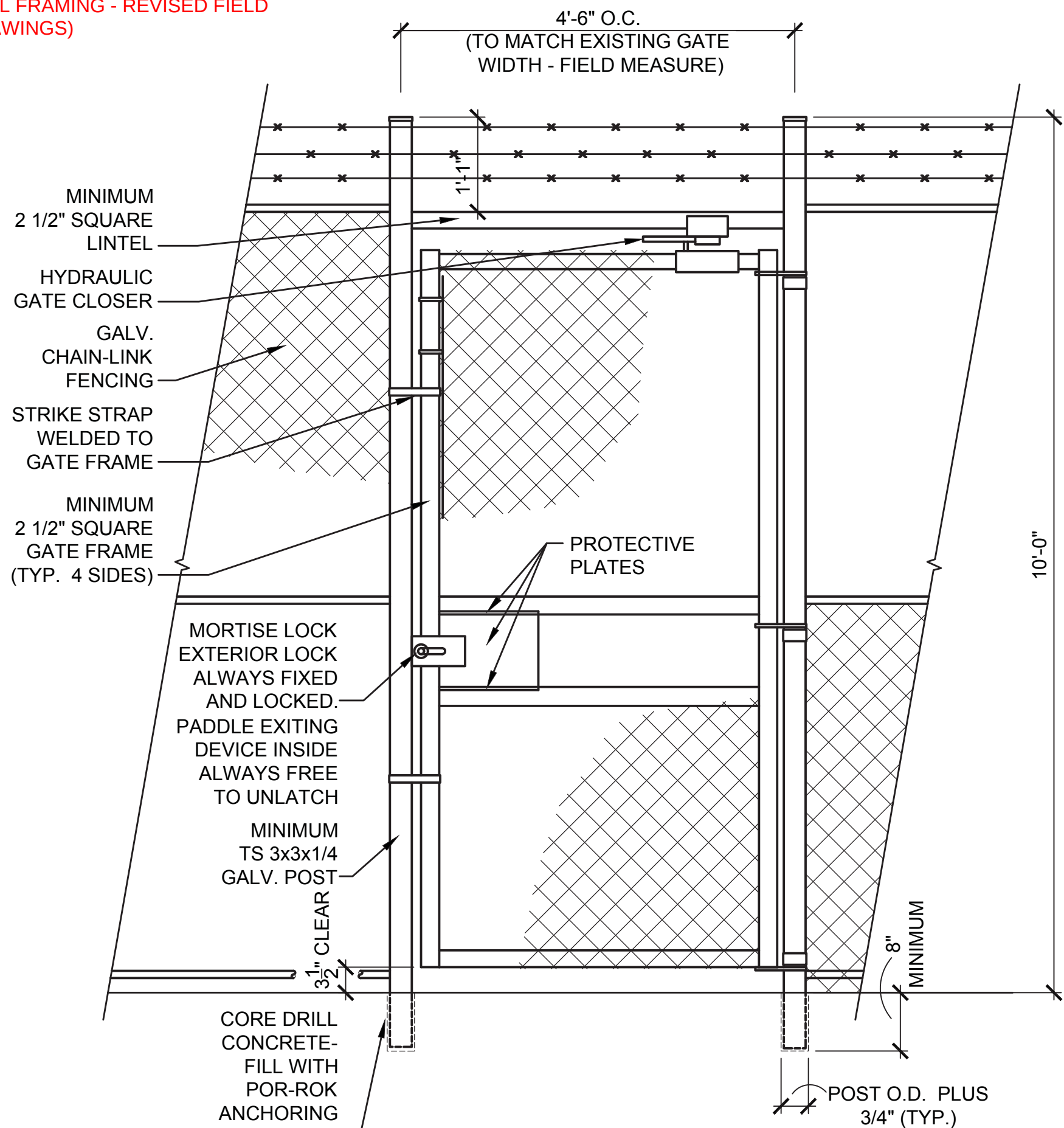


TYPICAL FENCE ELEVATION

SCALE: 3/4"=1'-0"

1
650-S-05

SDS 341: CHAIN LINK FENCES AND GATES



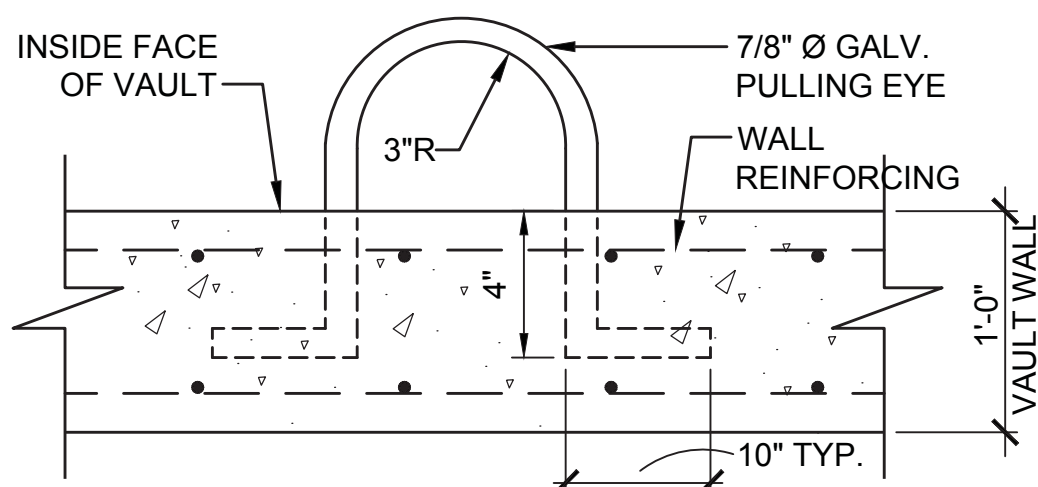
SINGLE SWINGING GATE ELEVATION

SCALE: 3/4"=1'-0"

2
650-S-05

GENERAL FENCE NOTES:

- COORDINATE FENCE INDICATED IN ELEVATIONS WITH SPECIFICATION SECTION 323113 "CHAIN LINK FENCES AND GATES."
- REFER TO ELECTRICAL DRAWINGS FOR GROUNDING REQUIREMENTS.
- ELEVATIONS ARE SCHEMATIC. MATCH EXISTING FENCE SYSTEM TO GREATEST DEGREE POSSIBLE.
- CORE DRILL HOLES FOR POSTS NOT LESS THAN 8" DEEP AND 3/4" LARGER THAN OUTSIDE DIAMETER OF POST.
- MATCH BARB WIRE ASSEMBLY TO THAT OF EXISTING ASSEMBLY REGARDING TYPE AND ORIENTATION.



TYPICAL PULLING EYE DETAIL

SCALE: NOT TO SCALE

3
650-S-02

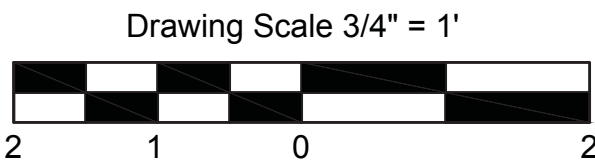
NOTES:

- PULLING EYES TO BE PROVIDED AND INSTALLED BY GENERAL CONTRACTOR IN EACH VAULT.
- COORDINATE EXACT LOCATIONS PRIOR TO CONSTRUCTION.
- FOUR (4) PER EACH VAULT (EIGHT (8) TOTAL). TWO (2) ON WALL OPPOSITE EACH DUCT BANK ENTRANCE AND ONE (1) CENTERED ON EACH SIDE WALL PER VAULT.

CONCRETE BEAM SCHEDULE						
MARK	WIDTH	DEPTH	TOP BARS	BOTTOM BARS	STIRRUPS	COMMENTS
CB-1	12"	10 1/2"	2 - #4	3 - #5	#3 @ 12"	COORDINATE WITH 7/650-S-01 & 2/650-S-02
CB-2	12"	14 1/2"	2 - #4	3 - #6	#3 @ 5"	1 @ 1 1/2" FROM FACE OF SUPPORT THEN #3 @ 5" REMAINDER (TYP) STIRRUPS.
CB-3	14"	16"	2 - #4	3 - #9	#3 @ 6"	1 @ 1 1/2" FROM FACE OF SUPPORT THEN #3 @ 6" REMAINDER (TYP) STIRRUPS.

CONCRETE: F'C = 4000 PSI @ 28 DAYS
REINFORCING: ASTM A-615, GRADE 60

NOTE:
BOTTOM OF CB-2 MATCHES
BOTTOM OF CB-3 IN ELEVATION.
SEE 2/650-S-02.



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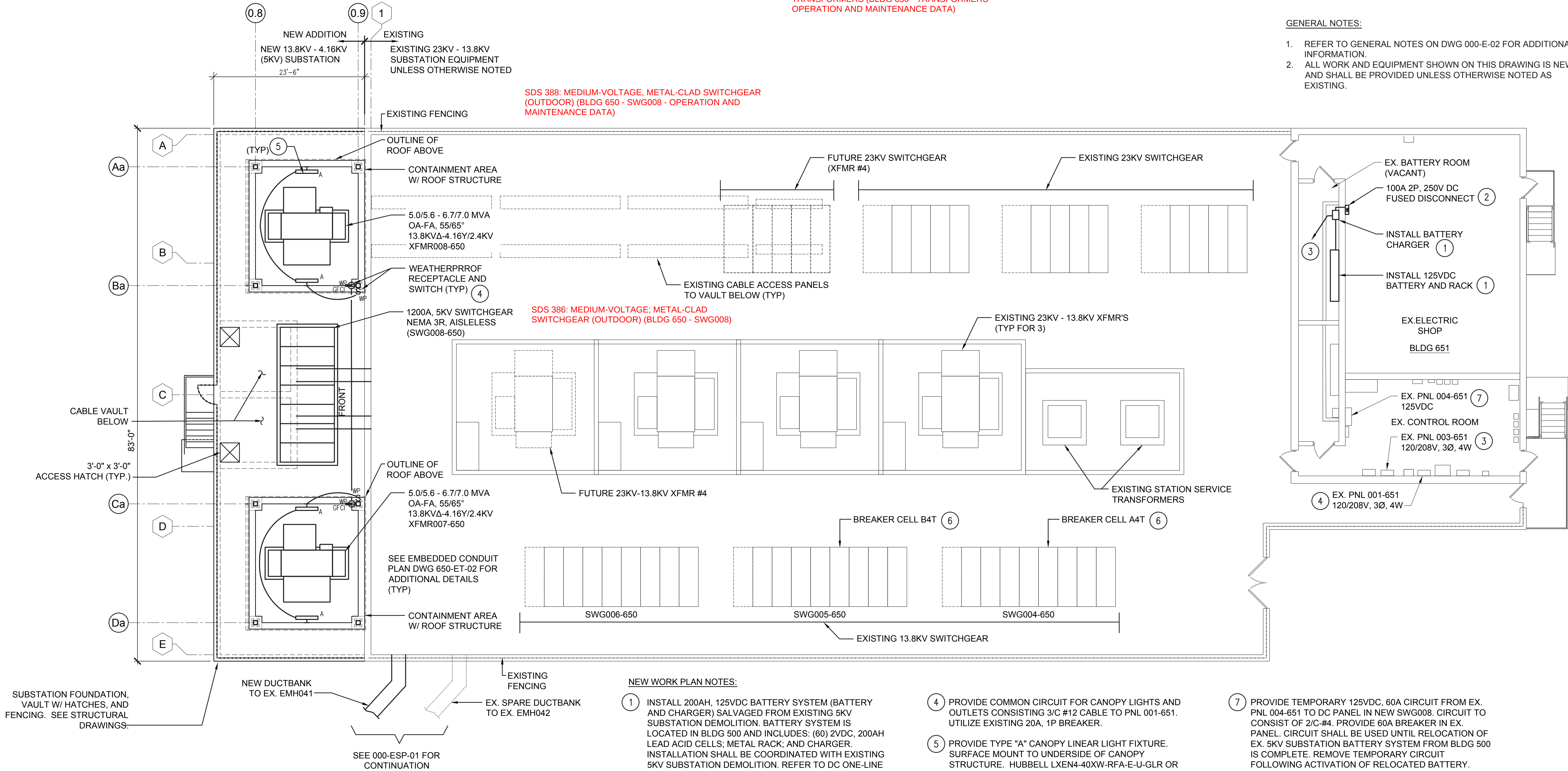
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ALLEGHENY COUNTY SANITARY AUTHORITY WASTEWATER TREATMENT PLANT ELECTRICAL DISTRIBUTION SYSTEM UPGRADE		Contract: 1739
650-S-05 13.8KV - 4.16KV SUBSTATION FENCE ELEVATIONS, SCHEDULE, & DETAILS		CAD File Name: 650S05
		Date: 05 / 25 / 2021
		Sheet: 26 OF 108

SDS 385: LIQUID-FILLED, MEDIUM-VOLTAGE TRANSFORMERS (BLDG 650 - TRANSFORMERS - OPERATION AND MAINTENANCE DATA)

GENERAL NOTES:

- REFER TO GENERAL NOTES ON DWG 000-E-02 FOR ADDITIONAL INFORMATION.
- ALL WORK AND EQUIPMENT SHOWN ON THIS DRAWING IS NEW AND SHALL BE PROVIDED UNLESS OTHERWISE NOTED AS EXISTING.

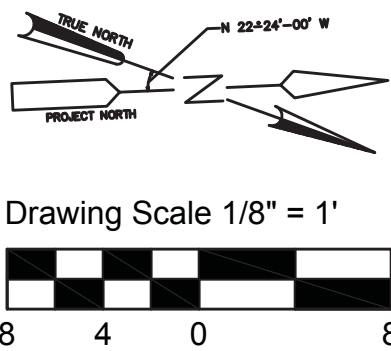


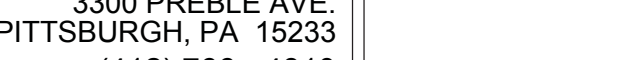
NEW WORK PLAN - 13.8KV SUBSTATION BLDG 650
SCALE: 1/8"=1'-0"

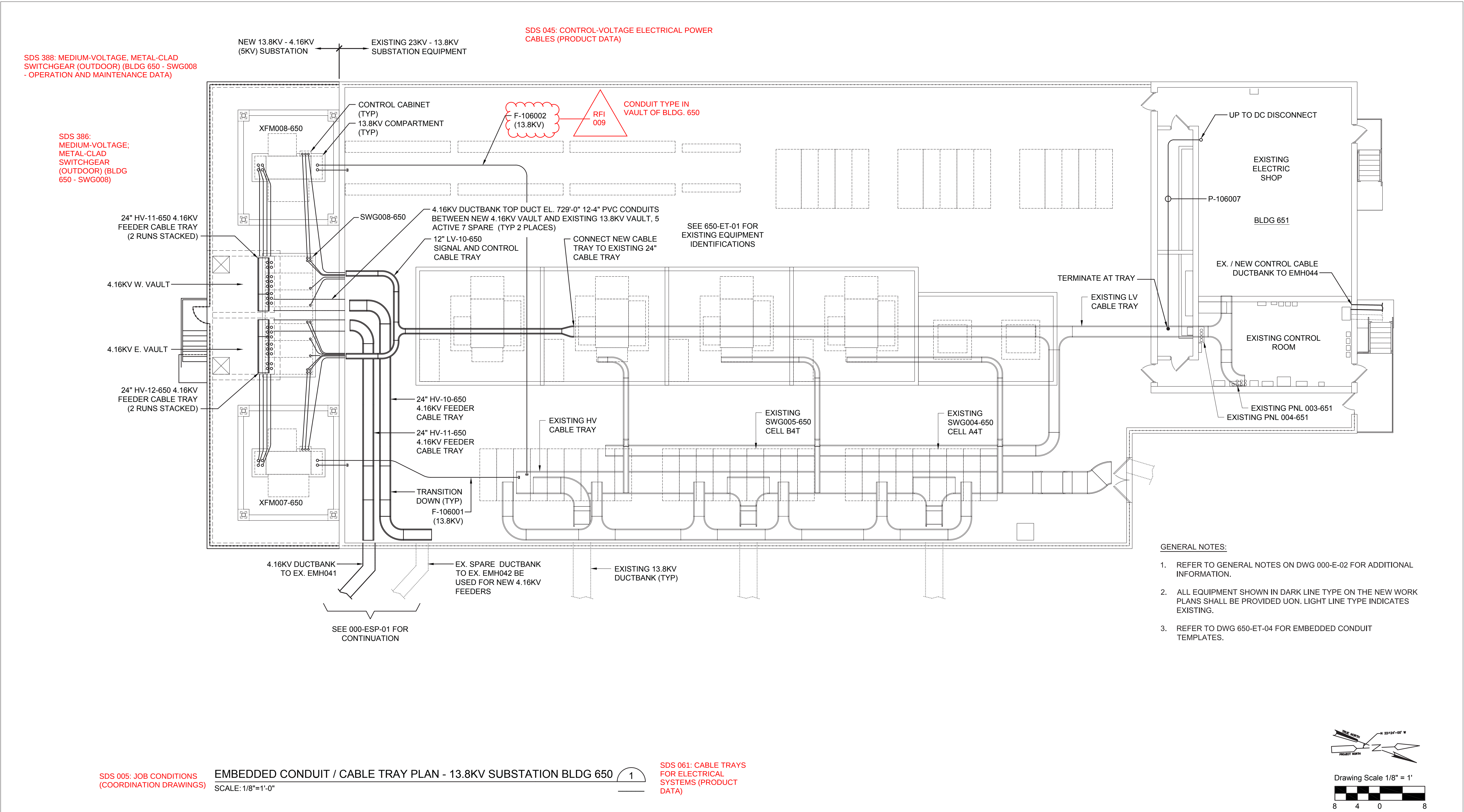
NEW WORK PLAN NOTES:

- INSTALL 200AH, 125VDC BATTERY SYSTEM (BATTERY AND CHARGER) SALVAGED FROM EXISTING 5KV SUBSTATION DEMOLITION. BATTERY SYSTEM IS LOCATED IN BLDG 500 AND INCLUDES: (60) 2VDC, 200AH LEAD ACID CELLS; METAL RACK; AND CHARGER. INSTALLATION SHALL BE COORDINATED WITH EXISTING 5KV SUBSTATION DEMOLITION. REFER TO DC ONE-LINE DIAGRAM ON 650-ESL-03 FOR ADDITIONAL INFORMATION.
- PROVIDE 100A 2P, 250VDC DISCONNECT WITH 100A FUSES FOR SWG008 MAIN DC FEEDER.
- PROVIDE 208VAC, 1Ø CIRCUIT FOR BATTERY CHARGER FROM EX. PNL 003-651 CONSISTING OF 2-#6+10G IN 3/4" CONDUIT. PROVIDE 50A, 2P BREAKER IN EX. PANEL.
- PROVIDE COMMON CIRCUIT FOR CANOPY LIGHTS AND OUTLETS CONSISTING 3/C #12 CABLE TO PNL 001-651. UTILIZE EXISTING 20A, 1P BREAKER.
- PROVIDE TYPE "A" CANOPY LINEAR LIGHT FIXTURE. SURFACE MOUNT TO UNDERSIDE OF CANOPY STRUCTURE. HUBBELL LXEN4-40XW-RFA-E-U-GLR OR EQUIVALENT.
- MODIFY EXISTING CIRCUIT BREAKER RELAYING AND ASSOCIATED CONTROL CIRCUITS TO ACCOMMODATE NEW TRANSFORMER FEEDERS. REFER TO ONE-LINES AND BREAKER SCHEMATICS FOR DETAILED INFORMATION.

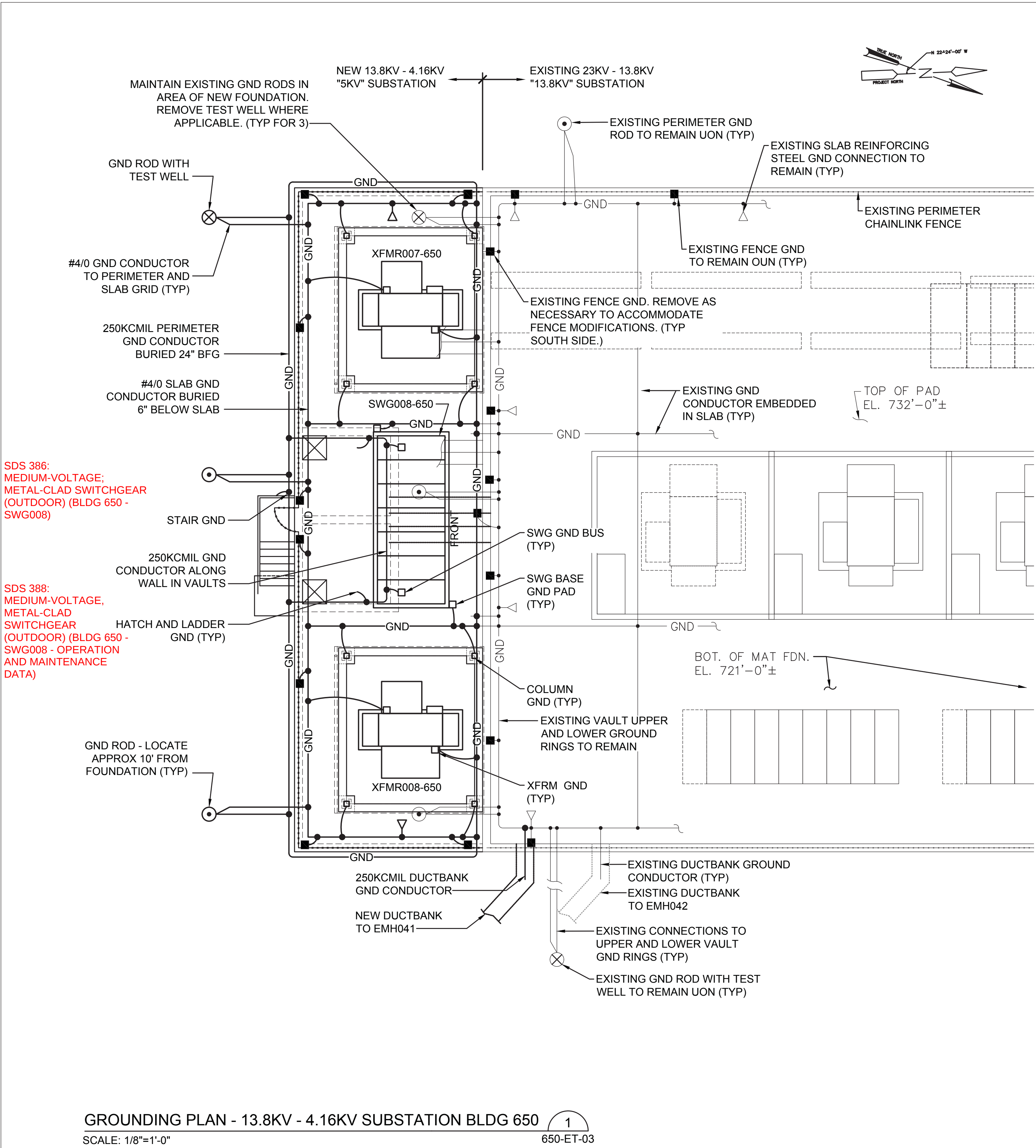
- PROVIDE TEMPORARY 125VDC, 60A CIRCUIT FROM EX. PNL 004-651 TO DC PANEL IN NEW SWG008. CIRCUIT TO CONSIST OF 2/C-#4. PROVIDE 60A BREAKER IN EX. PANEL. CIRCUIT SHALL BE USED UNTIL RELOCATION OF EX. 5KV SUBSTATION BATTERY SYSTEM FROM BLDG 500 IS COMPLETE. REMOVE TEMPORARY CIRCUIT FOLLOWING ACTIVATION OF RELOCATED BATTERY.



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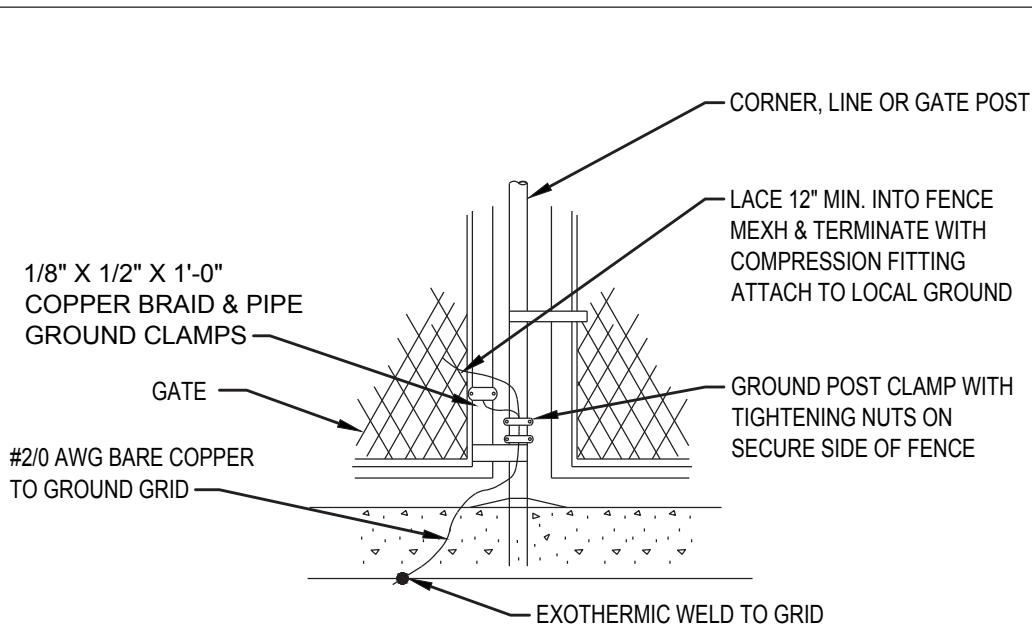
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GROUNDING PLAN - 13.8KV - 4.16KV SUBSTATION BLDG 650

SCALE: 1/8"=1'-0"

650-ET-03



TYPICAL FENCE GROUNDING DETAIL

SCALE: NONE

SDS-041: LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (PRODUCT DATA)

SDS 184: GROUNDING AND BONDING FOR COMMUNICATION SYSTEMS (PRODUCT DATA)

SDS 385: LIQUID-FILLED, MEDIUM-VOLTAGE TRANSFORMERS (BLDG 650 - TRANSFORMERS - OPERATION AND MAINTENANCE DATA)

SDS 196: COMMUNICATIONS COPPER BACKBONE CABLING (SOURCE QUALITY-CONTROL REPORTS)

SDS 194: COMMUNICATIONS COPPER BACKBONE CABLING (TWISTED PAIR CABLE TESTING PLAN)

GENERAL NOTES:

- REFER TO GENERAL NOTES ON DWG 000-E-02 FOR ADDITIONAL INFORMATION.
- ALL EQUIPMENT SHOWN IN DARK LINE TYPE ON THE NEW WORK PLANS SHALL BE PROVIDED UON. LIGHT LINE TYPE INDICATES EXISTING.

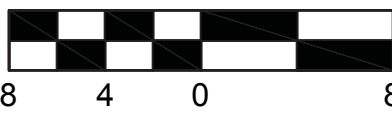
GROUNDING GENERAL NOTES:

- THE EXISTING 13.8KV SUBSTATION GROUND GRID SHALL BE EXTENDED TO NEW 5KV SUBSTATION. GROUND GRID COMPONENTS IN THE AREA OF THE NEW 5KV SUBSTATION CONSTRUCTION SHALL MODIFIED TO ACCOMMODATE CONSTRUCTION. VERIFY ALL REMOVALS WITH THE CM.
- ALL GROUND CONDUCTORS SHALL BE BARE STRANDED COPPER WITH SIZES AS INDICATED.
- ALL CONNECTIONS SHALL BE EXOTHERMIC WELDS UNLESS OTHERWISE NOTED.
- COORDINATE THE INSTALLATION OF ALL GROUND CONDUCTORS WITH THE GC.
- CONNECTIONS TO CANOPY STRUCTURAL STEEL SHALL BE MADE USING EXOTHERMIC WELDS. REPAIR ALL GALVANIZED FINISHES USING ZINC RICH PAINT.
- ALL TRANSFORMER AND SWITCHGEAR EQUIPMENT GROUNDING POINTS SHALL BE BONDED TO GROUND GRID USING #250KCMIL CONDUCTOR.
- TRANSFORMER NEUTRAL TERMINALS SHALL BE BONDED TO GROUND GRID USING 2-250KCMIL CONDUCTORS.
- ALL METALLIC EQUIPMENT IN VAULT (CABLE TRAY, ETC.) SHALL BE BONDED TO VAULT GROUND RING USING #2/0 CONDUCTOR.

GROUNDING LEGEND:

- 3/4" X 10' LONG COPPER CLAD STEEL SECTIONAL GROUND ROD WITH EXOTHERMIC WELD TO GROUND CONDUCTOR
- 3/4" X 10' LONG COPPER CLAD STEEL SECTIONAL GROUND ROD WITH EXOTHERMIC WELD FOR GROUND CONDUCTOR AND INSPECTION TEST WELL
- GROUND CONDUCTOR EXOTHERMIC WELD JUNCTION
- EQUIPMENT GROUND CONNECTION WITH NEMA 2-HOLE PAD
- FENCE GROUND CONNECTION
- REINFORCING STEEL GROUND CONNECTION WITH COMPRESSION CONNECTOR

Drawing Scale 1/8" = 1'



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E. SULLIVAN	REV No. A	DATE 07/26/21	DESCRIPTION CONFORMED SET	APPV EJS				CAD File Name: 650ET03	
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650-ET-03
13.8KV - 4.16KV SUBSTATION
GROUNDING PLAN AND DETAILS

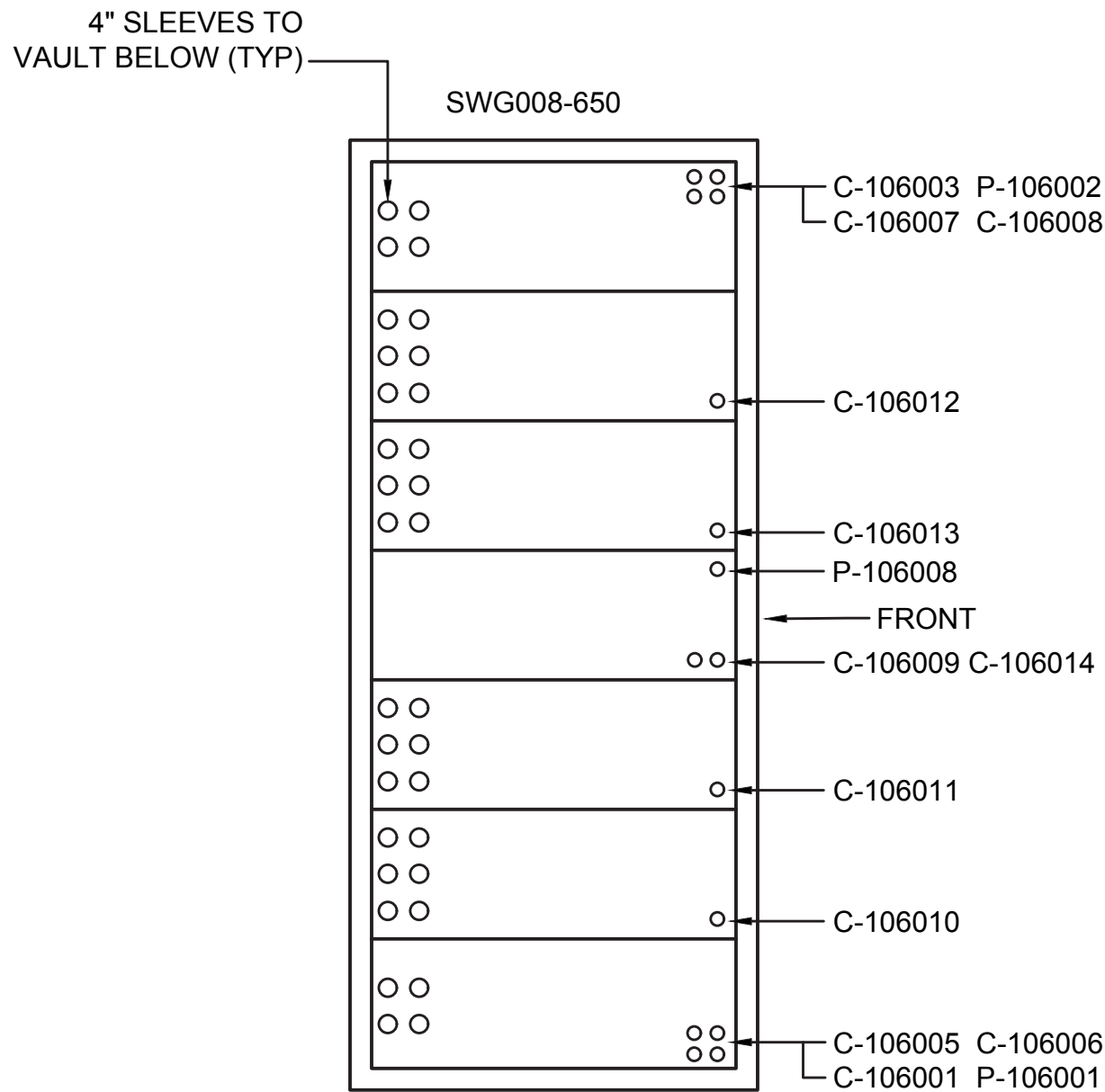
SDS 026: MANUFACTURER ACCEPTANCE OF CONDITIONS
(TRAINING MATERIALS)

SDS 385: LIQUID-FILLED, MEDIUM-VOLTAGE
TRANSFORMERS (BLDG 650 - TRANSFORMERS -
OPERATION AND MAINTNANCE DATA)

SDS-383: LIQUID-FILLED, MEDIUM-VOLTAGE
TRANSFORMERS (BLDG. 650 - TRANSFORMERS)

GENERAL NOTES:

1. REFER TO GENERAL NOTES ON DWG 000-E-02 FOR ADDITIONAL INFORMATION.
2. REFER TO DWG 650-ET-02 FOR EMBEDDED CONDUIT PLAN.
3. CONDUIT TEMPLATES ARE DIAGRAMMATIC IN NATURE. FIELD VERIFY ALL LAYOUTS WITH NEW AND EXISTING EQUIPMENT AND ADJUST AS NECESSARY.

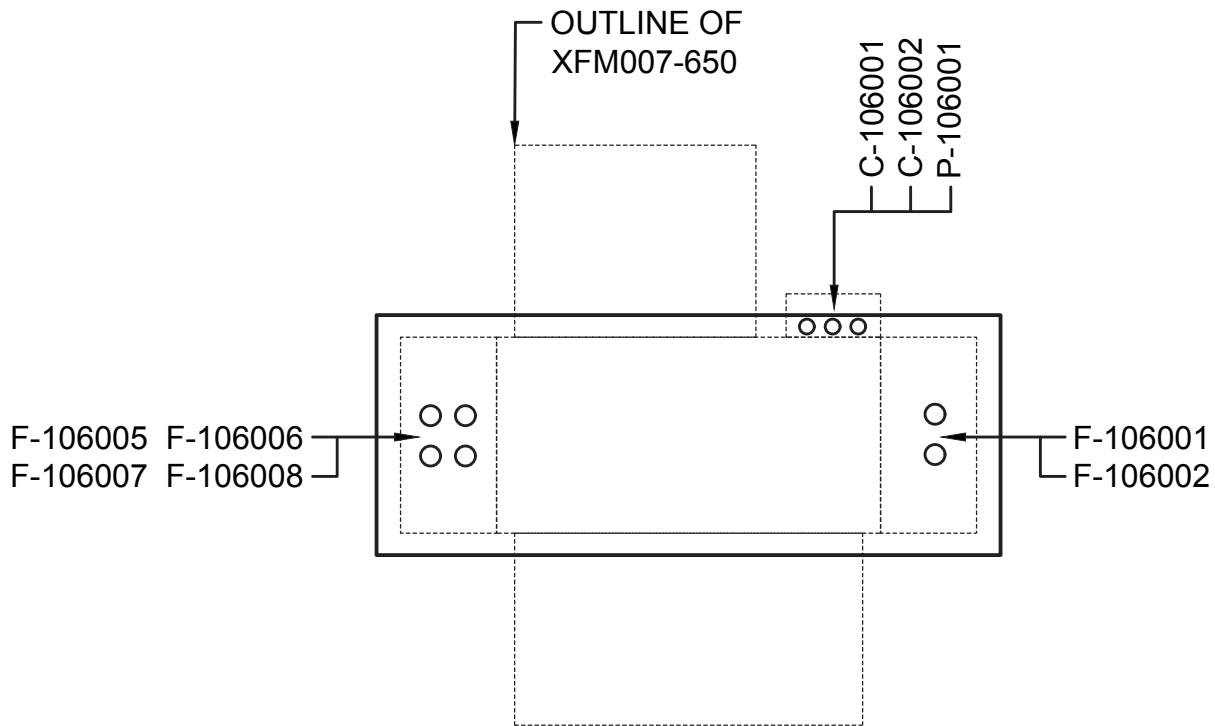


4.16KV SWITCHGEAR SWG008-650 TEMPLATE

SCALE: NONE

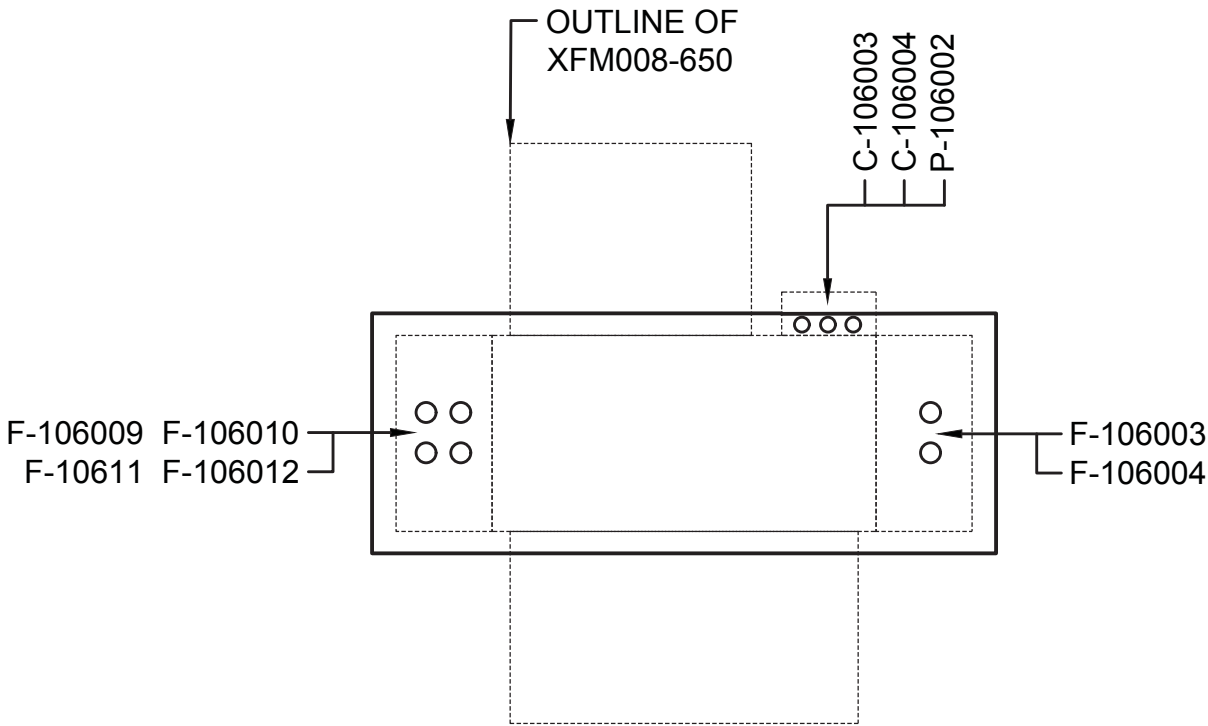
TRANSFORMER XFM007-650 TEMPLATE

SCALE: NONE



TRANSFORMER XFM008-650 TEMPLATE

SCALE: NONE



SDS 386:
MEDIUM-VOLTAGE;
METAL-CLAD SWITCHGEAR
(OUTDOOR) (BLDG 650 -
SWG008)

SDS 388: MEDIUM-VOLTAGE, METAL-CLAD SWITCHGEAR
(OUTDOOR) (BLDG 650 - SWG008 - OPERATION AND
MAINTNANCE DATA)

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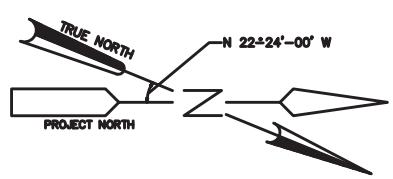
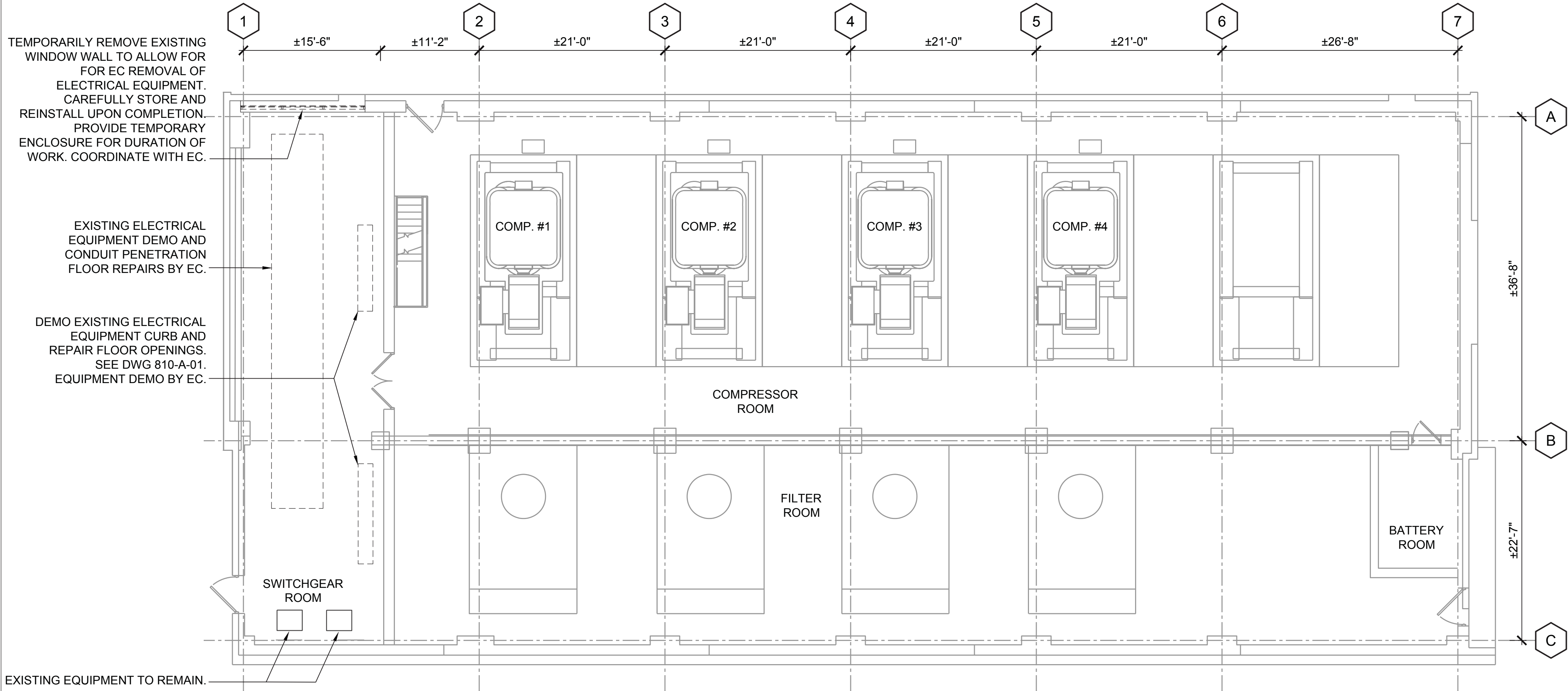
alleggheny county sanitary authority

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3300 PREBLE AVE.
PITTSBURGH, PA 15233
(412) 766 - 4810

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ALLEGHENY COUNTY SANITARY AUTHORITY WASTEWATER TREATMENT PLANT ELECTRICAL DISTRIBUTION SYSTEM UPGRADE		Contract: 1739
650-ET-04 13.8KV - 4.16KV SUBSTATION EMBEDDED CONDUIT TEMPLATES		CAD File Name: 650ET04
		Date: 05 / 25 / 2021
		Sheet: 77 OF 108



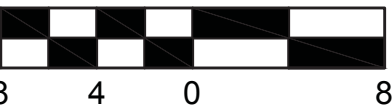
GENERAL DEMOLITION NOTES:

1. VERIFY ALL DIMENSIONS, ELEVATIONS AND EXISTING CONDITIONS AT THE SITE.
2. VERIFY ALL DEMOLITION WORK AND COORDINATE EXTENT OF DEMOLITION WORK WITH ALL WORK INDICATED HEREON AND/OR IN SPECIFICATIONS.
3. ALL DEMOLISHED ITEMS, NOT IDENTIFIED FOR SALVAGE OR REINSTALLATION SHALL BE REMOVED AND LEGALLY DISPOSED OF WITHOUT EXCEPTION, WHETHER INDICATED OR NOT.
4. REMOVE PORTIONS OF EXISTING CONSTRUCTION AS REQUIRED FOR INSTALLATION OF ALL COMPONENTS. NOT ALL DEMOLITION ITEMS ARE IDENTIFIED HEREON.
5. VERIFY LOCATIONS OF ALL SWITCHES, RECEPTACLES AND SIMILAR DEVICES ATTACHED TO WALL, AS NOT ALL ARE SHOWN HEREON, REMOVE, DISCONNECT AND REINSTALL AS REQUIRED.
6. COORDINATE DUMPSTER LOCATION WITH OWNER.
7. UNLESS NOTED OTHERWISE, ALL ITEMS SHOWN OR OMITTED SHALL BE REMOVED WHERE INTEGRAL WITH WALLS TO BE DEMOLISHED.
8. REMOVE CURBS UNDER EXISTING EQUIPMENT TO BE REPLACED AND INFILL FLOOR OPENINGS. COORDINATE WORK WITH EC AND DRAWINGS 810-ET-01 AND 02.

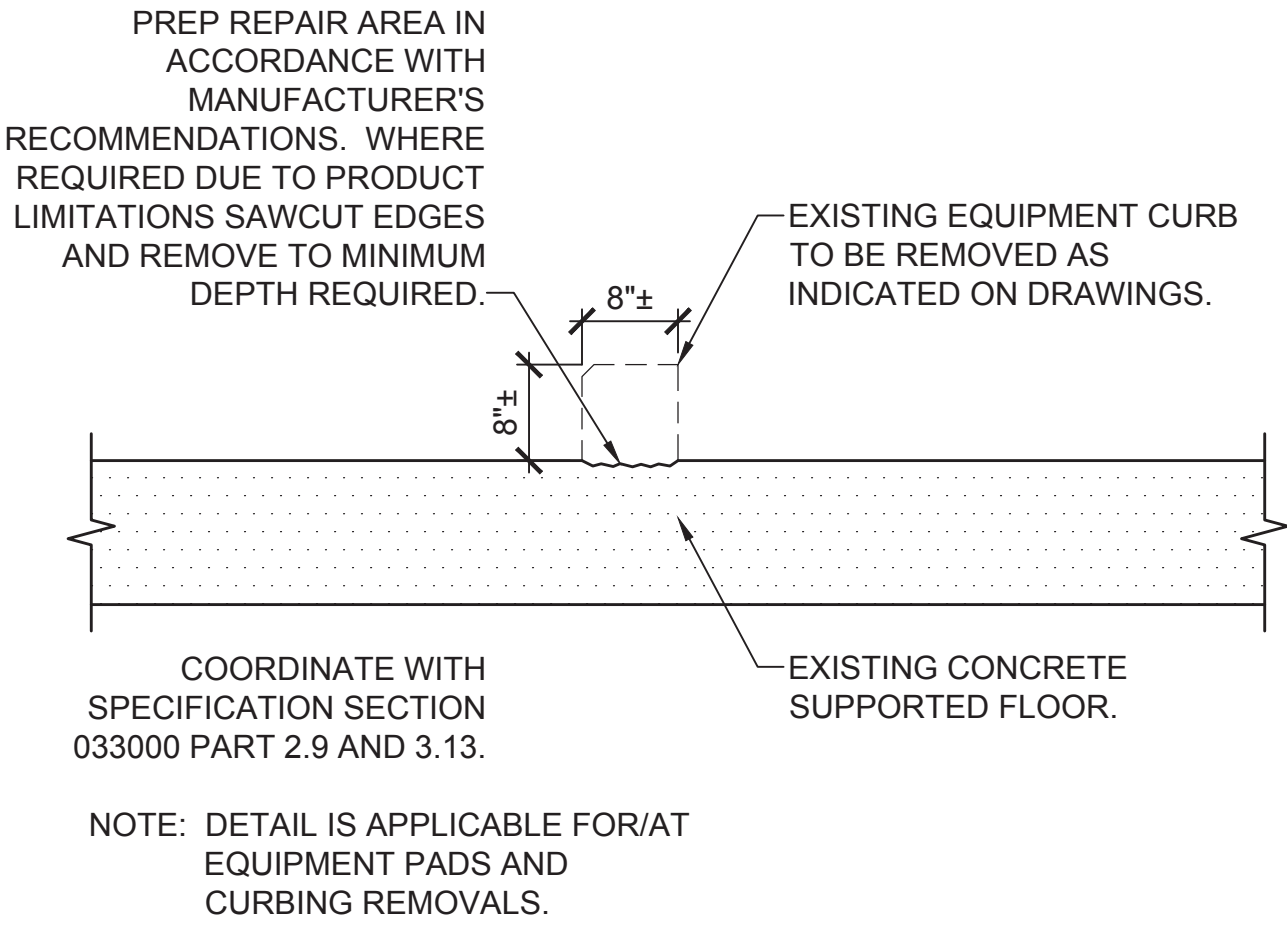
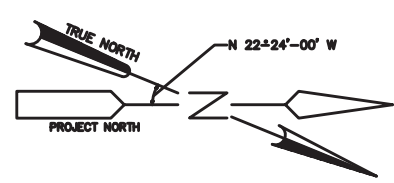
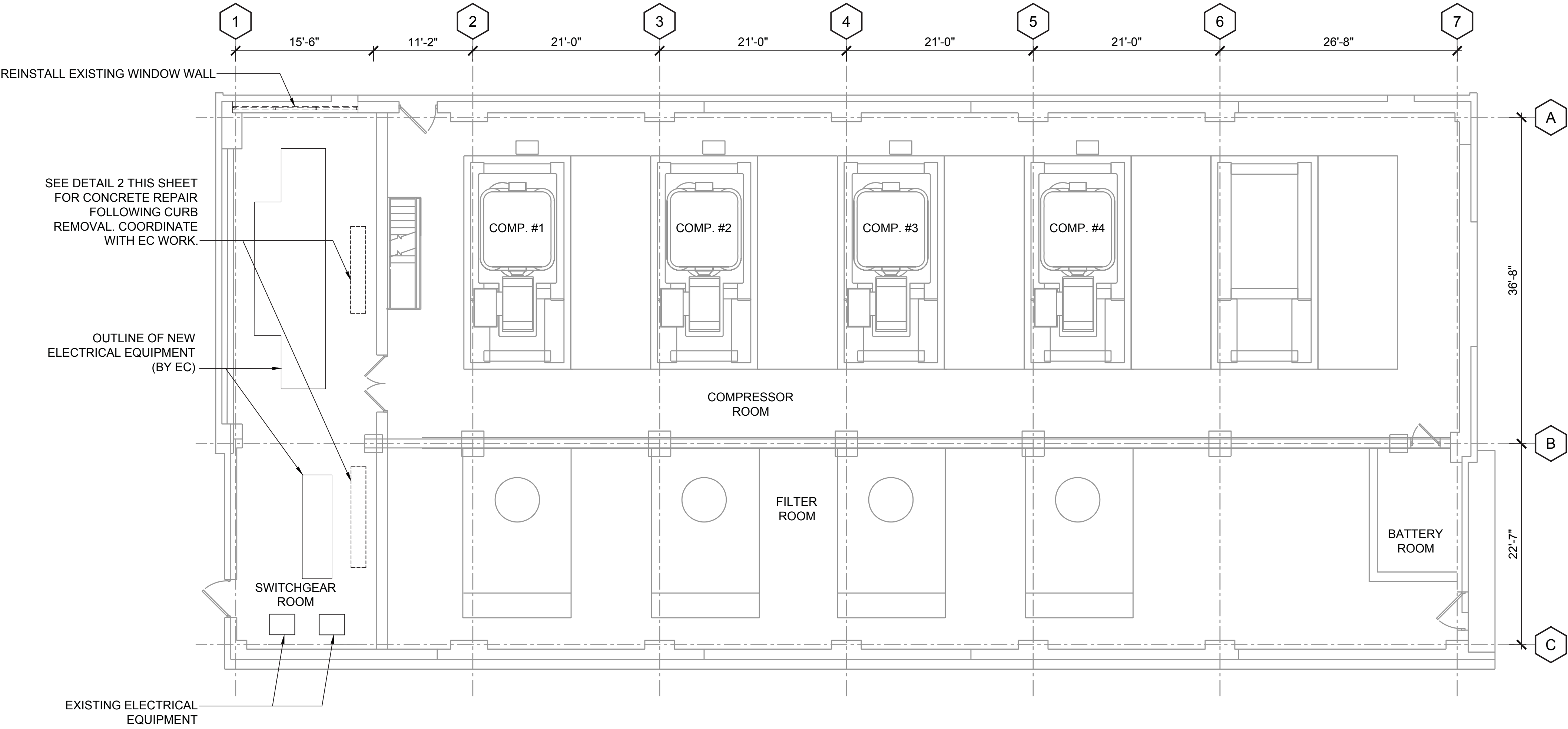
DEMOLITION FLOOR PLAN - COMPRESSOR BLDG 810 1

SCALE: 1/8"=1'-0"

Drawing Scale 1/8" = 1'



Designed by:	REVISION				 Architecture Engineering Environmental Services The Bellhouse 3405 Butler Street Pittsburgh, PA 15201 phone 412 781 1344 fax 412 781 1389 web www.quad3.com	THIS DRAWING IS NOT CONSIDERED A SEALED DOCUMENT	 ARLETTA SCOTT WILLIAMS EXECUTIVE DIRECTOR, ALCOSAN 3300 PREBLE AVE. PITTSBURGH, PA 15233 (412) 766 - 4810 www.alcosan.org	ALLEGHENY COUNTY SANITARY AUTHORITY WASTEWATER TREATMENT PLANT ELECTRICAL DISTRIBUTION SYSTEM UPGRADE	Contract:	1739
E. SULLIVAN	REV No.	DATE	DESCRIPTION	APPV					CAD File Name:	810ADM01
Drawn by:	A	07/26/21	CONFORMED SET	EJS					Date:	05 / 25 / 2021
JJC									Sheet:	17 OF 108
Checked by:										
ES										

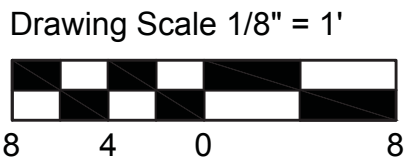


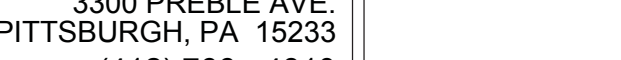
NEW WORK FLOOR PLAN - COMPRESSOR BLDG 810

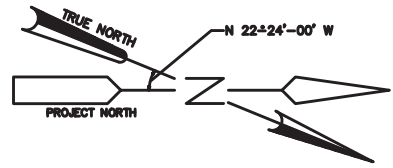
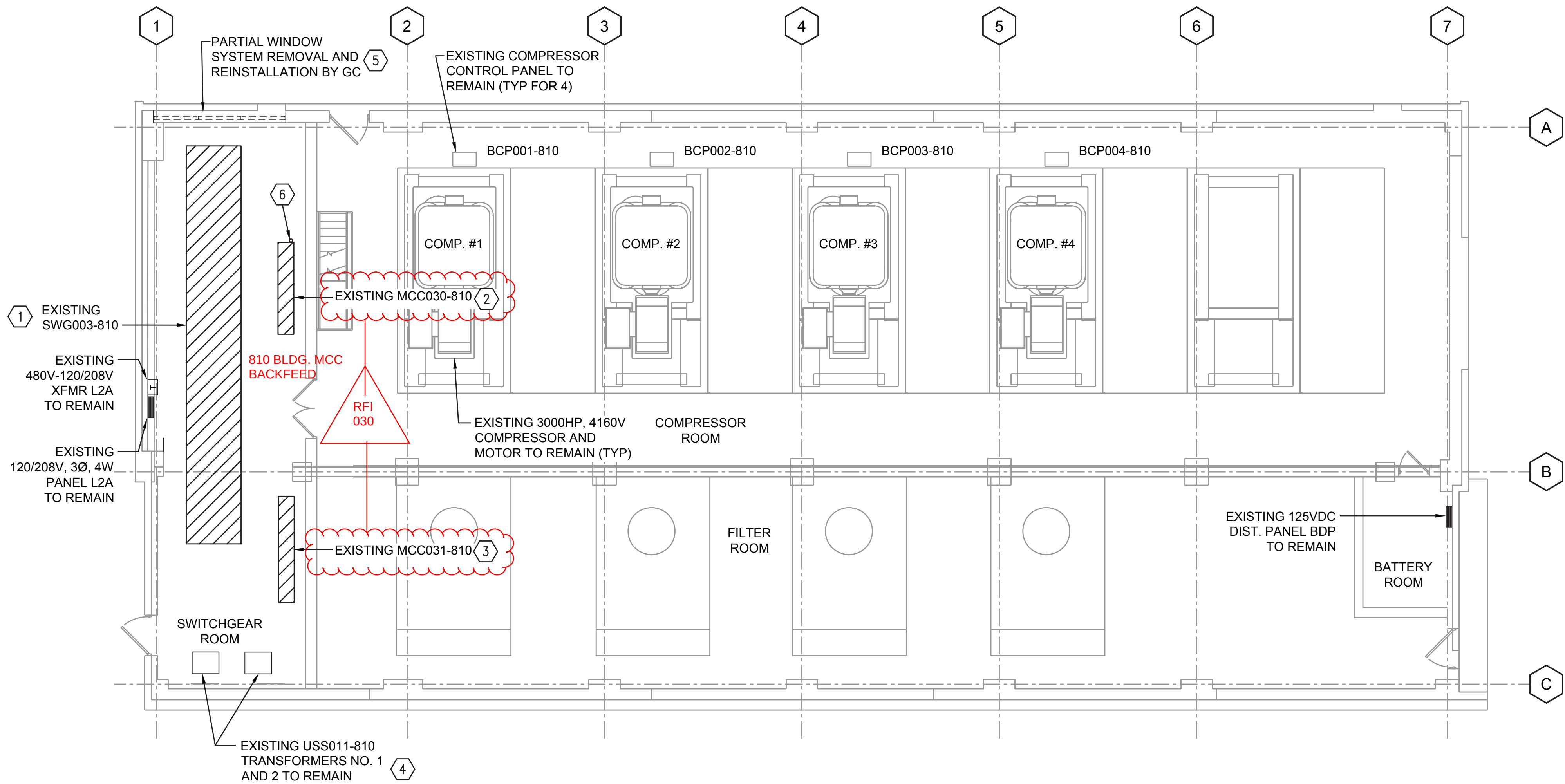
SCALE: 1/8"=1'-0"

CONCRETE REPAIR DETAIL

SCALE: 3/4"=1'-0"



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E. SULLIVAN	REV No.	DATE	DESCRIPTION	APPV					1739
Drawn by:		07/26/21	CONFORMED SET	EJS					CAD File Name:
JJC									810A01.dwg
Checked by:									Date:
ES					05 / 25 / 2021	Sheet:	18 OF 108		
810-A-01 COMPRESSOR BLDG 810 NEW WORK PLAN									



GENERAL NOTES:

- REFER TO GENERAL NOTES ON DWG 000-E-02 FOR ADDITIONAL INFORMATION.
- REFER TO GENERAL NOTES DWG ON 000-ESL-01 FOR SPECIFIC INFORMATION REGARDING THE DEMOLITION OF SWG003 AND MCC030 AND 031.

SDS 045: CONTROL-VOLTAGE ELECTRICAL POWER CABLES (PRODUCT DATA)

DEMOLITION PLAN NOTES:

- REMOVE EXISTING DOUBLE-ENDED SWG003-810, 4.16KV INCOMING FEEDER CABLES, 4.16KV LOAD CABLES, AND LOW-VOLTAGE CONTROL CABLES. CUT ANY CONDUITS NOT SCHEDULED FOR REUSE FLUSH WITH FLOOR AND SEAL. INFILL ALL UNUSED FLOOR PENETRATIONS.
- REMOVE 480V MCC030-810 WITH CURBING AND INCOMING FEEDER CABLES. LOAD CABLES SHALL BE SALVAGED, RECONFIGURED, AND EXTENDED AS NECESSARY TO ACCOMMODATE NEW MCC030 LOCATION. CURB DEMO AND FLOOR INFILL BY GC.
- REMOVE 480V MCC031-810 WITH CURBING AND INCOMING FEEDER CABLES. LOAD CABLES SHALL BE SALVAGED, RECONFIGURED, AND EXTENDED AS NECESSARY TO ACCOMMODATE NEW MCC031 LOCATION. CURB DEMO AND FLOOR INFILL BY GC.
- EXISTING 500KVA, 4.16KVA - 480Y/277V USS011 DRY-TYPE TRANSFORMERS TO REMAIN FOR USE WITH NEW MCC030 AND MCC031. REMOVE PRIMARY AND SECONDARY FEEDERS.
- WINDOW SYSTEM TO BE TEMPORARILY REMOVED BY GC TO ALLOW REMOVAL/INSTALLATION OF THE BUS NO. 2 SECTION OF SWG003 (NEAREST WINDOW) WHILE MAINTAINING OPERATION OF THE BUS NO. 1 SECTION. COORDINATE WORK WITH ALL TRADES. REFER 810-A FOR LIMITS OF TEMPORARY REMOVALS.
- RELOCATE/REROUTE EXISTING 1 1/4" AL CONDUIT WITH VIDEO SURVEILLANCE CAMERA CABLES (3 - 2 STRAND FIBER AND 3 - 2/C #18) TO ALLOW FOR DEMO OF EXISTING MCC030. CAMERA LOCATED ON EXTERIOR OF BLDG. FIELD VERIFY FINAL ROUTING. PULL BACK CABLES TO NEAREST PULLBOX AND REROUTE THRU NEW CONDUIT AND RECONNECT. CABLES ORIGINATE IN BLDG 802 DPU ROOM.

SDS 395: MOTOR STARTERS - MEDIUM VOLTAGE REDUCED VOLTAGE SOLID STATE (BLDG 810 - SWG003)

DEMOLITION GROUND FLOOR - COMPRESSOR BLDG 810
SCALE: 1/8"=1'-0"



SWG003-810 EXISTING CONDITIONS
SCALE: NONE



RELOCATE CAMERA FIBER CONDUIT

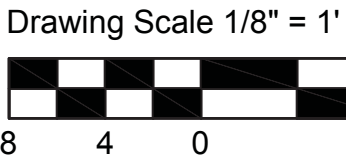
REMOVE MCC030. CONCRETE CURB DEMO AND FLOOR INFILL BY GC.

MCC030-810 EXISTING CONDITIONS
SCALE: NONE



REMOVE MCC031. CONCRETE CURB DEMO AND FLOOR INFILL BY GC.

MCC031-810 EXISTING CONDITIONS
SCALE: NONE



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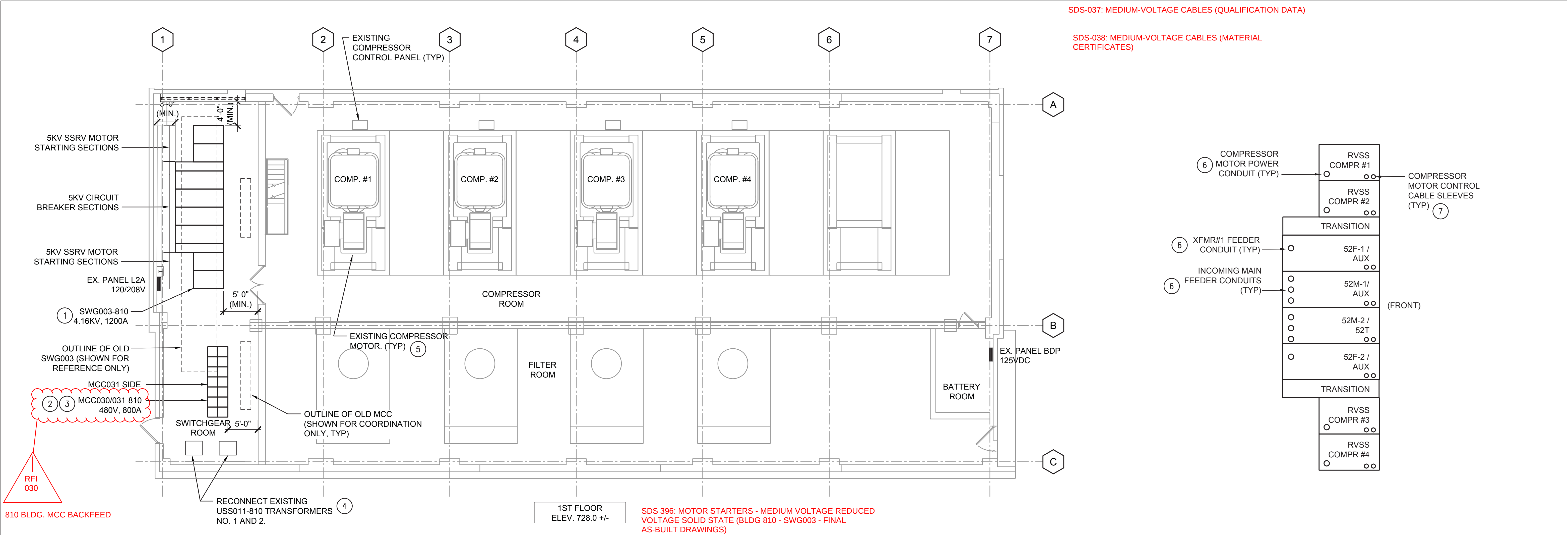
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ALLEGHENY COUNTY SANITARY AUTHORITY
WASTEWATER TREATMENT PLANT
ELECTRICAL DISTRIBUTION SYSTEM UPGRADE

810-ET-01
COMPRESSOR BLDG 810
GROUND FLOOR DEMOLITION PLAN

Contract:	1739
CAD File Name:	810ET01
Date:	05 / 25 / 2021
Sheet:	94 OF 108



NEW WORK LAYOUT PLAN - COMPRESSOR BLDG 810 1

SCALE: 1/8"=1'-0"

SWG003-810 LAYOUT PLAN 2

SCALE: NONE

SDS 395: MOTOR STARTERS - MEDIUM VOLTAGE REDUCED VOLTAGE SOLID STATE (BLDG 810 - SWG003)

NEW WORK PLAN KEYED NOTES:

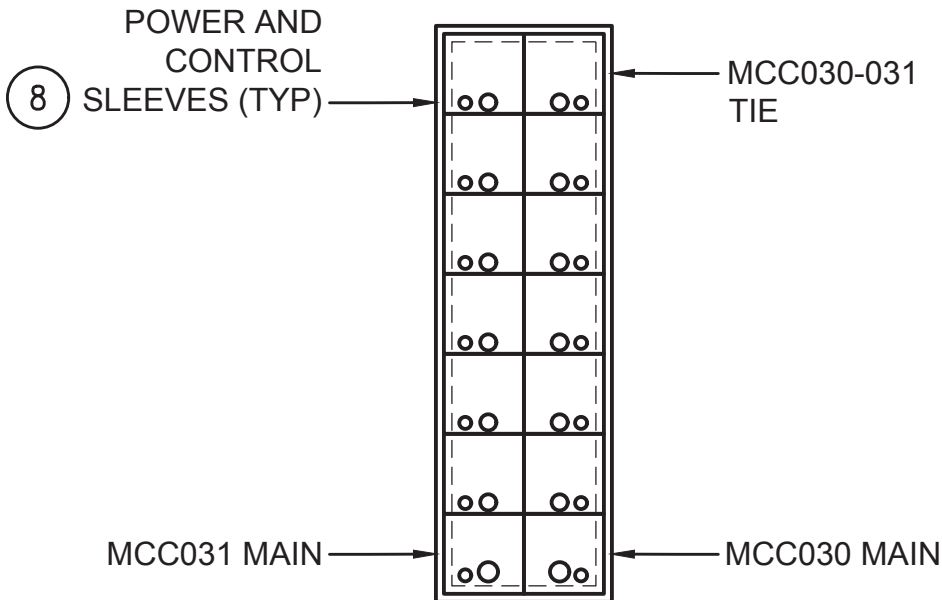
- 1 PROVIDE DOUBLE-ENDED SWITCHGEAR SWG003-810 CONSISTING OF: 1200A, 5KV CIRCUIT BREAKERS MAIN, TIE AND FEEDER CIRCUIT BREAKERS; AND 5KV SOLID-STATE, REDUCED-VOLTAGE CIRCUIT BREAKER STARTERS. REFER TO ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.
- 2 PROVIDE 800A, 480V, 3Ø, 3W MOTOR CONTROL CENTER MCC030-810. REFER TO ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.
- 3 PROVIDE 800A, 480V, 3Ø, 3W MOTOR CONTROL CENTER MCC031-810. REFER TO ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.
- 4 PROVIDE FEEDER CABLES AND RECONNECT EXISTING UNIT SUBSTATION USS011-810 TRANSFORMERS NO. 1 AND 2 TO NEW SWG #3. REFER TO ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.
- 5 PROVIDE POWER CABLES AND RECONNECT EXISTING COMPRESSOR MOTORS TO NEW SWG003. REFER TO ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.

NEW WORK PLAN KEYED NOTES (CONTINUED):

- 6 CORE DRILL FLOOR TO ACCOMMODATE EXTENSION OF EXISTING / NEW RECONFIGURED 4.16KV FEEDER CONDUITS TO NEW SWG003. REFER TO ONE-LINE DIAGRAM ON DWG 810-ESL-02 FOR DETAILS. PROVIDE SLEEVES AT ALL FLOOR PENETRATIONS. COORDINATE EXACT LOCATIONS WITH NEW SWITCHGEAR UNIT.
- 7 CORE DRILL FLOOR TO ACCOMMODATE EXTENSION OF EXISTING / NEW CONTROL AND INSTRUMENTATION CABLES TO NEW SWG003. PROVIDE A MINIMUM OF 2-2" SLEEVES PER SWITCHGEAR SECTION. REFER TO SWG003 ELEMENTARY DIAGRAMS FOR DETAILS. COORDINATE EXACT LOCATIONS WITH NEW SWITCHGEAR UNIT.
- 8 PROVIDE 4" CONCRETE HOUSEKEEPING CURB FOR NEW MCC'S. CORE DRILL FLOOR TO ACCOMMODATE EXTENSION OF EXISTING / NEW POWER AND CONTROL CABLES TO NEW MCC030 AND 031. PROVIDE SUFFICIENT QUANTITY OF SLEEVES TO ACCOMMODATE ALL POWER AND CONTROL CABLES PLUS 10% SPARE CAPACITY. COORDINATE WITH EXISTING SYSTEMS AND NEW MCC UNIT.

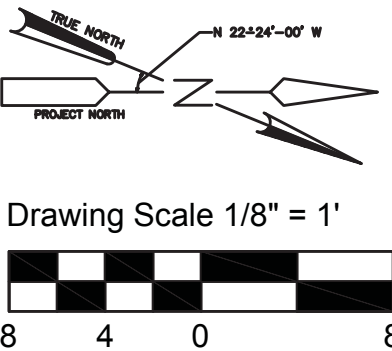
GENERAL NOTES:

1. REFER TO GENERAL NOTES ON DWG 000-E-02 FOR ADDITIONAL INFORMATION.
2. COORDINATE ALL NEW FLOOR PENETRATIONS WITH EXISTING FLOOR BEAMS AND REINFORCING AND OTHER BUILDING SYSTEMS. ADJUST AS NECESSARY TO ACCOMMODATE POTENTIAL INTERFERENCES.



MCC030 & 031 LAYOUT PLAN 3

SCALE: NONE



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Drawn by: RY / JJC					810-ET-02 COMPRESSOR BLDG 810 NEW WORK PLAN	CAD File Name: 810ET02
Checked by: ES						Date: 05 / 25 / 2021 Sheet: 95 OF 108

SDS 367: COORDINATION DRAWINGS
(OTHER BUILDINGS/AREAS)

SDS-037: MEDIUM-VOLTAGE CABLES (QUALIFICATION DATA)

SDS-038: MEDIUM-VOLTAGE CABLES (MATERIAL
CERTIFICATES)

GENERAL NOTES:

1. REFER TO GENERAL NOTES ON DWG 000-E-02 FOR ADDITIONAL INFORMATION.
2. ALL RACEWAY MODIFICATIONS SHALL BE COORDINATED WITH SWITCHGEAR REMOVALS. ROUGH-IN ALL WORK IN ADVANCE OF SCHEDULED BUS SECTION SHUTDOWNS TO MINIMIZE DOWN-TIME.

DEMOLITION KEYED NOTES:

- 1 REUSE EXISTING CONDUITS FROM EM109 FOR NEW 5KV INCOMING FEEDERS. FEEDER INSTALLATION WILL REQUIRE COORDINATION WITH EXISTING FEEDER REMOVALS TO FREE-UP CONDUIT SPACE.
- 2 REMOVE EXISTING INCOMING FEEDER CONDUITS AND PROVIDE (3) 4" CONDUITS FROM EXISTING PULLBOX TO NEW SWG003 MAIN BREAKER COMPARTMENT. TYPICAL FOR 2.
- 3 REMOVE EXISTING TRANSFORMER FEEDER CONDUITS AND PROVIDE (1) 3" CONDUIT FROM NEW SWG003 XFMR BREAKER COMPARTMENT TO EXISTING SUB#11 TRANSFORMER. TYPICAL FOR 2.
- 4 REMOVE EXISTING MCC FEEDER CONDUITS AND PROVIDE (2) 3 1/2" CONDUITS FROM EXISTING SUB#11 TRANSFORMER TO NEW MCC. TYPICAL FOR 2.
- 5 MODIFY AND REROUTE EXISTING MOTOR FEEDER CONDUIT TO NEW SWG003 MOTOR STARTER COMPARTMENT. TYPICAL FOR 4.

NEW WORK KEYED NOTES:

- 1 PROVIDE 24" X 4"D X 10'L +/- FOR CABLE ACCESS TO NEW MCC030 & 031. MOUNT TRAY AT APPROX. ELEVATION OF EXISTING POWER TRAY. VERIFY IN FIELD.

SDS 395: MOTOR STARTERS - MEDIUM VOLTAGE REDUCED
VOLTAGE SOLID STATE (BLDG 810 - SWG003)

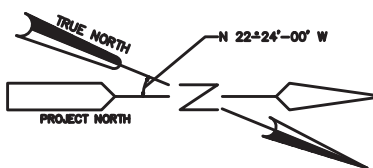
SDS 396: MOTOR STARTERS - MEDIUM VOLTAGE REDUCED
VOLTAGE SOLID STATE (BLDG 810 - SWG003 - FINAL
AS-BUILT DRAWINGS)

SDS 061: CABLE TRAYS FOR ELECTRICAL
SYSTEMS (PRODUCT DATA)

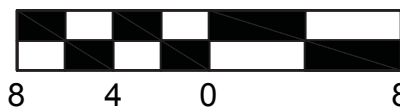
BASEMENT RACEWAY PLAN - COMPRESSOR BLDG 810

SCALE: 1/8"=1'-0"

SDS 404: MOTOR-CONTROL CENTERS (BLDG 810 - MCC 30
AND MCC 31 - OPERATION AND MAINTENANCE DATA)



Drawing Scale 1/8" = 1'



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ALLEGHENY COUNTY SANITARY AUTHORITY
WASTEWATER TREATMENT PLANT
ELECTRICAL DISTRIBUTION SYSTEM UPGRADE

810-ET-03
COMPRESSOR BLDG 810
BASEMENT EXISTING RACEWAY PLAN

Contract:	1739
CAD File Name:	810ET03
Date:	05 / 25 / 2021
Sheet:	96 OF 108

ATTACHMENT – C

Addendum No. 3 MBE/WBE Registered Vendors

12 Bravo, Inc	glenn@12BravoCC.com	412-977-5743	Glenn	Geary	SDVOSB
2bn contracting	theresa@2b-n.com	724-272-0435	Theresa	Ortiz-Palsa	WBE
4Tech Solutions LLC	Lindsay@4tech4me.com	770-241-0670	Lindsay	Martin	MBE, WBE
6 Degrees Consulting Inc.	blawson@6degreesconsulting.net	412-310-7607	Robert	Lawson	MBE
84 Lumber	shaun.mcnamara@84lumber.com	724 454 8995	Shaun	McNamara	WBE
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Advanced Integration Group, Inc.	dchappel@aigcontrols.com	412-722-0065	Donna	Chappel	WBE
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Gomez International Inc.	tom@gomezinternational.com	480-823-5202	Tom	Crmjac	mwbe
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MOCA Systems, Inc.	jon.pilon@mocasystems.com	865-606-2506	Jon	Pilon	WBE
Monaloh Basin Engineers	smerrickle@mbe-eng.com	412-788-2433	Sharon	Merrickle	WBE
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Peer Consultants, PC	MosbyJ@peerpc.com	202.478.2060 Ext. 1032	Janet	Mosby	MWBE
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PROLINE SOLUTIONS MANAGEMENT LLC	prolinesolutionsmgmt@gmail.com	412-927-0212	Curtis	Drane	MBE
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ProTech Group	correy.woods@protechgroupllc.com	713-446-7794	Correy	Woods	MBE
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RMP Safety Services, Inc. dba American Safety Group	savendano@asgcorps.com	909-843-0859	Sylvia	Avendano	SDVOSB
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Sigelock Systems LLC	billing@sigelock.com	516-887-3510	Gregory	Chambers	MWBE
Siyafu Global Llc	SiyafuGlobal7@gmail.com	412 597-4373	Nyna	Stokes	MWBE
Steppo Supply & Construction, Inc.	steppoconstr@aol.com	312-296-8175	Linda	Olaszewski	WBE
Strategic Analytics LLC	opportunity@strategicanalyticsllc.com	281-309-2992	Becca	Barry	WBE
Suffolk Sales & Service Corporation	quearryj@suffolksales.com	717-571-3563	Jessica	Quearry	WBE
Technical Analysis & Services International, Inc. (TASI)	sec@tasi-inc.com	724-288-7467	Susan	Chang	MWBE
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