SEPTEMBER 12, 2025

CONTRACT NO. 1800

WET WEATHER PUMP STATION

ADDENDUM NO. 11

All bidders bidding **Contract No. 1800** shall read and take note of this **Addendum No. 11.** 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. 11

The Acknowledgement attached to **Addendum No. 11** is to be signed and returned immediately via email at contract.clerks@alcosan.org and acknowledged with Bidder's Proposal.

~~**Kimberly Kennedy, P.E.**~~ Jefferson Argyros, P.E. (on behalf of Kimberly Kennedy
~~Director – Engineering and Construction~~ Manager of Capital Projects – Treatment

ACKNOWLEDGEMENT OF

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

ADDENDUM NUMBER 11

FIRM NAME: _____

SIGNATURE: _____

TITLE: _____

DATE: _____

September 12, 2025

CONTRACT NO. 1800

WET WEATHER PUMP STATION

ADDENDUM NO. 11

ADDENDUM NO. 11

ALLEGHENY COUNTY SANITARY

AUTHORITY

PITTSBURGH, PENNSYLVANIA

CONTRACT NO. 1800

WET WEATHER PUMP STATION PROJECT

September 12, 2025

ATTENTION

BID OPENING DATE

THURSDAY, OCT 2, 2025

11:00 A.M.

DEADLINE FOR QUESTIONS WAS THURSDAY, SEPTEMBER 4, 2025

This Addendum No. 11 consists of 21 pages and the following attachments:

Attachment A - Addendum No. 11 Drawings – 22" x 34" (23 pages)
Attachment B – Addendum No. 11 Specifications (30 pages)
Attachment C – Addendum No. 11 Contract 1800G Bid Form (36 pages)

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 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. 11 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 PRIOR ADDENDUM

1.1 In Addendum No. 5 as it relates to Question 38,

In Volume 1 of 5, Article 3.59 on Page 3-60, **CHANGE** the two sentences to the following:

"This warranty shall be for a period of eighteen (18) months from the date of the delivery to the Job Site, or twelve (12) months from **Substantial Completion** ~~the date the Work is placed into service and Final Acceptance by the Owner~~, whichever is later to occur or such longer period of time as may be prescribed by law or by the terms of the Contract Documents (the "Warranty Period"). In special circumstances where a portion of the Work is accepted by the Owner, pursuant to a signed writing, before **Substantial Completion** ~~Final Acceptance~~ of all the Work, the Warranty Period for that portion of the Work only may start to run from an earlier date if so provided in the Specifications or by Written Amendment."

2. CHANGES TO VOLUME 1 OF 5

2.1 In Volume 1 of 5, Article 1 Bidding Documents Contract 1800G, **REPLACE** the Contract 1800G BIDDING DOCUMENTS in its entirety. Refer to Attachment C.

3. CHANGES TO SPECIFICATIONS

3.1 In Volume 2 of 5, Specification Section 01 22 00 Measurement and Payment, **REPLACE**, this Section in its entirety. Refer to Attachment B.

3.2 In Volume 2 of 5, Specification Section 07 10 50 Shaft Membrane Waterproofing System, **REPLACE** this Section in its entirety. Refer to Attachment B.

3.3 In Volume 2 of 5, Specification Section 07 42 13 Insulated Metal Wall Panels, paragraph 2.03.A.4, **DELETE** "3 inch (76 mm). Provide 4 inch panels when used in conjunction with Fire Resistant Wall Panels" and **REPLACE** with "2 inch (50.8 mm)".

3.4 In Volume 2 or 5, Specification Section 08 71 00 Door Hardware, paragraph 2.02.F.16, **DELETE** "DC2000DA" and **REPLACE** with "DC6000".

3.5 In Volume 3 of 5, Specification Section 26 05 13 Medium-Voltage Cables, paragraph 3.02.B.1.a, after the last sentence **ADD** the following:

"Cables shall be firewrapped or installed in FRE wireways."

3.6 In Volume 3 of 5, Specification Section 31 23 20 Pre-Excavation Drilling and grouting, paragraph 3.02.C.2 **REVISE** the first sentence to the following:

"2. When within 20 feet, horizontally and vertically until the UOIT invert elevation, advance the drill equipment by 1-foot increments."

3.7 In Volume 3 of 5, Specification Section 31 23 20 Pre-Excavation Drilling and grouting, paragraph 3.02.C.3 **REVISE** the first sentence to the following:

"3. When within 20 feet, horizontally and vertically until the UOIT invert elevation, stop drilling and perform a downhole deviation survey to confirm the hole deviation will not interfere with the existing UOIT."

4. CHANGES TO THE DRAWINGS

4.1 **REPLACE** Sheet 430-A-06 with Sheet 430-A-06 Rev.01, refer to Attachment A.

4.2 **REPLACE** Sheet 430-A-15 with Sheet 430-A-15 Rev.01, refer to Attachment A.

4.3 **REPLACE** Sheet 430-A-16 with Sheet 430-A-16 Rev.01, refer to Attachment A.

4.4 **REPLACE** Sheet 430-A-17 with Sheet 430-A-17 Rev.01, refer to Attachment A.

4.5 **REPLACE** Sheet 430-A-18 with Sheet 430-A-18 Rev.01, refer to Attachment A.

4.6 **REPLACE** Sheet 430-A-23 with Sheet 430-A-23 Rev.01, refer to Attachment A.

4.7 **REPLACE** Sheet 430-A-24 with Sheet 430-A-24 Rev.01, refer to Attachment A.

4.8 **REPLACE** Sheet 430-A-25 with Sheet 430-A-25 Rev.01, refer to Attachment A.

4.9 **REPLACE** Sheet 430-A-26 with Sheet 430-A-26 Rev.01, refer to Attachment A.

4.10 **REPLACE** Sheet 430-A-28 with Sheet 430-A-28 Rev.03, refer to Attachment A.

4.11 **REPLACE** Sheet 430-A-33 with Sheet 430-A-33 Rev.02, refer to Attachment A.

4.12 **REPLACE** Sheet 430-AD-01 with Sheet 430-AD-01 Rev.02, refer to Attachment A.

4.13 **REPLACE** Sheet 430-AD-04 with Sheet 430-AD-04 Rev.02, refer to Attachment A.

4.14 **REPLACE** Sheet 430-AD-06 with Sheet 430-AD-06 Rev.02, refer to Attachment A.

4.15 **REPLACE** Sheet 430-AD-07 with Sheet 430-AD-07 Rev.01, refer to Attachment A.

4.16 **REPLACE** Sheet 430-AS-01 with Sheet 430-AS-01 Rev.02, refer to Attachment A.

4.17 **REPLACE** Sheet 000-S-06 with Sheet 000-S-06 Rev.01, refer to Attachment A.

4.18 **REPLACE** Sheet 430-ES-03 with Sheet 430-ES-03 Rev.01, refer to Attachment A.

4.19 **REPLACE** Sheet 430-ES-07 with Sheet 430-ES-07 Rev.01, refer to Attachment A.

4.20 **REPLACE** Sheet 430-ES-11 with Sheet 430-ES-11 Rev.01, refer to Attachment A.

4.21 **REPLACE** Sheet 430-ES-12 with Sheet 430-ES-12 Rev.01, refer to Attachment A.

4.22 **REPLACE** Sheet 430-ET-08 with Sheet 430-ET-08 Rev.01, refer to Attachment A.

4.23 **REPLACE** Sheet 430-ET-10 with Sheet 430-ET-10 Rev.01, refer to Attachment A.

5. QUESTIONS AND ANSWERS

Q1: Addendum #8, question 13 was asked in reference to the use of rebar couplers/form savers. Due to cost considerations Contractors need to know prior to bid if rebar couplers/form savers will be approved for use in the shaft. Will rebar couplers/form savers be approved for use on this project?

A1: As indicated in previous response Addendum No. 8 Question #13, blanket approval of use of form savers/couplers at all locations is not possible. Form savers/couplers proposed will be evaluated and approved by the Engineer at locations where they do not impact the structural design.

Q2: Addendum #8, question 15 was asked in reference to the welding of rebar. Due to cost considerations Contractors need to know prior to bid if we will be allowed to weld rebar on the project. Will rebar welding be allowed on this project?

A2: Field welding of reinforcing is typically not permitted. However, the Engineer will evaluate requests and reasons why the Contractor would require welding of reinforcing during construction on a case by case basis.

Q3: Reference Addendum 8 Q&A # 11 regarding testing: The response clarifies that specification 01 45 33 was incorrect and that contractor is responsible to pay for concrete, masonry, and soil testing. Please confirm that this is the limit of testing the contractor is to pay for and that the owner will pay for all other testing. With the understanding that the contractor will coordinate with the owner for those tests.

A3: There is nothing in the Addendum No. 8 response that states 01 45 33 was incorrect. Specification 01 45 33 1.04 defines terms related to Special Inspections, while 01 45 00 outlines general requirements for independent testing by the contractor. Section 01 45 00 1.06.B requires the contractor to provide Testing and Inspection Services specified in the Technical Specifications. For example, section 03 30 00 stipulates additional testing requirements beyond those for Special Inspections, which are themselves supplementary to other quality requirements.

Q4: The remarks column for the 15KV cable circuits states “replaced existing, to be field verified”. Does this mean the circuit is to be replaced from the substation to the indicated building in this contract?

A4: Refer to response to Question #15 in Addendum No. 9.

Q5: Is our project manager, site superintendent, quality control representative and safety/protection representative required to be on site for the complete project duration if no work is being performed under our electrical contract ?

A5: Per the specification requirement stating that the Project Manager and Site Superintendent must be on site at all times when work in the individual contract area is proceeding, the presence of these key personnel is only required during periods when active work is being performed under your electrical contract.

If no work is occurring in your scope of work, then these personnel are not required to be on site during that time. However, once work resumes, their presence is mandatory to ensure compliance with the specification and to maintain oversight, safety, and quality standards.

Q6: Section 01 52 00 1.02Q General Constraints and specific constraints #4 states a maximum of 3 days to replace a 13.8kv circuit. Does this include the installation of the new cables ? It is impossible to install, terminate and test a complete circuit in 3 days.
What is required if the circuit cannot be replaced in 3 days? The specific allowance #13(which is #14) listed under this specific constraint is for general contractors. Will this work be handled as a change order for the electrical contractor ?

A6: The intent of Section 01 52 00 1.02.Q General Constraints and Specific Constraint #4 give (3) days to complete the replacement of a 13.8kV circuit. Based on existing conditions, the existing cabling would remain in service and the new cabling pulled into adjacent spare conduits from a convenient point just below the Main Substation to a convenient point inside the building or in the last manhole just outside the building. The new cable would then be tested. During the (3) days, all loads would be transferred to the other switchgear buses and buses where the cable will be terminated will be taken out of service. The new cable would then be pulled into the associated switchgear at each end, terminated, and retested before energizing. The existing cabling would be demolished back to a convenient point at each end and the circuit would be energized and reloaded. The new circuit would remain in service as described in Specific Constraint #4 (01 52 00 Part 1.02.) before the other existing circuit could be replaced.

If the Contractor believes they cannot accomplish the work within the 3-day period, then per the third sentence of 1.02 the Contractor would provide temporary power at no cost to the Owner.

The last sentence of Part 1.02.Q. identifies that after the Field Verification has been completed, the Contractor can submit an RFI for circuits that, due to the existing configuration, available spare conduits and proposed new configuration prevent the installation as shown and specified. Those instances would be reviewed in accordance with Article 3.32. Instances where it's a matter of the Contractor believing it would take more than 3 days as shown and specified would not be considered a potential change order.

Q7: 01 50 00 1.11 B.2.b states EC shall provide portable lights for ALL open excavation. Summary of work 01 31 15 1.06 c.1.b states that EACH contractor is responsible for all special lighting for its own activities.
What temporary light is the EC responsible for? Who is responsible for general 120V temporary outlets?

A7: 01 50 00 1.11.2.b Temporary Site Lighting is not "special lighting necessary exclusively for its own activities" as described in 01 31 15. 1.06.C.1.b.

Review the complete set of Contract Documents for other instances where temporary lighting may be required of Contract 1800E. For instance, refer to 01 11 00, 1.02.C.31 and C.32 which are examples but not comprehensive of all temporary electrical work.

Q8: Summary of work 01 11 00-1 1.02 c.26 states EC owns heat trace. Please indicate where the heat trace is shown on the documents.

A8: Refer to Sheet 430-M-24 Keynote 6. Refer to Items 4.18, 4.19, 4.21, and 4.22 of Addendum No. 11.

Q9: Are the 15KV feeders required to be firetaped in manholes, cable trays and switchgear ?

A9: All cabling running through manholes, cable trays, or any other raceway where multiple circuits are exposed to each other shall be protected from damage from another circuit failure. This will include exposed cabling going into the switchgear enclosure. Cable shall be fire wrapped or installed in FRE wireway (manholes).

Q10: Please indicate a cable spec for the 600V TC rated multi-conductor cable.

A10: 600V Cable Tray Rated Cable is defined in Section 26 05 19-3.16, MXLPE/S/PVC.

Q11: Summary of work 01 11 00 1.02 C.19 states to install vfd's furnished under 1800G. Please confirm the 6 wet weather pump VFD's will be furnished by 1800G.

A11: The Wet Weather Pump VFD's shall be furnished by 1800G and installed by 1800E.

Q12: The documents ask to combine cellular traffic and emergency responders on the same system. This may not be allowed due to Fire Marshall restrictions and codes. Should we price 2 separate systems ? The DAS emergency responder vertical cabling is required to be 2-hour fire rated cable or within a 2-hour rated closet. Please advise if there will be any 2-hour rated pathways in the structure that we could include our conduit in.

A12: Specification 40 66 10 defines the DAS required services and approval requirements for designing and deploying the DAS system and obtaining approval from the PSN AHJ and WSP. As with the Fire Alarm System all conduit and wiring will carry a (2) hour fire rating. The DAS System Control Panel(s) are located in the Electrical Room which also carries a (2) hour fire rating.

Q13: Reference specification section 31 23 20 Part 1.04.A (various sub-Parts) : States that the Contractor will submit various criteria which are already

defined in the specification and Drawings, such as expected pressures, proposed grouting refusal criteria, proposed split spacing criteria, and grouting pattern. Grout pressures, refusal criteria, and split spacing criteria have been specified. Please confirm that the Contractor is not responsible for determining these criteria.

A13: Confirmed that these Contract requirements are the minimum criteria for pre-excavation and cutoff grouting.

Q14: Reference specification section 31 23 20 : Does the Owner currently have an anticipated grout stage length for pre-excavation grouting as described in this specification ? If so, can this stage length be provided ?

A14: Contractor to provide grout stage length per the Contract Specification 31 23 20, Article 2.05.D.2.

Q15: Reference specification section 31 23 20 Part 1.04.A.11 : States that the Contractor must submit the proposed field testing to confirm that the grouting extent and performance complies with the minimum design criteria. The Drawings and specifications define the field-testing program as ten verification holes which will be water tested as described in the specifications. Additionally, the grouting program has been designed. Please confirm that the Contractor is only responsible for submitting means and methods of the specified verification packer testing and not for determining-designing the field-testing program or for interpretation of the data to determine if the Engineer's design intent has been met.

A15: Confirmed that these Contract requirements are the minimum criteria for pre-excavation and cutoff grouting.

Q16: Reference specification section 31 23 20 Part 1.04.A.14 : States that standpipes for grouting will be retrieved once rock grouting is complete. Is retrieval of standpipes required ? Can sacrificial standpipes (i.e., left in place) be utilized if they do not conflict with other work and are abandoned upon the completion of grouting ?

A16: Standpipes can be left in place, subject to grouting them solid and cutting them off 5' below grade.

Q17: Reference specification section 31 23 20 Part 1.04.B.2.c : States that certifications will be provided for all materials showing compliance with potable water standards in accordance with ASTM C1602. It is assumed that this statement applies to mixing water and not all grout materials. Please confirm.

A17: Yes, ASTM 1602 applies to mixing water. Other materials shall conform to their relevant material specifications.

Q18: Reference specification section 31 23 20 Part 1.07.B : States that the maximum hole deviation shall be one percent of the total hole depth. This deviation criteria is significantly more stringent than is typically required for pre-excavation grout holes. Assuring conformance with this tolerance will result in significant additional drilling costs. It is assumed that strict tolerance controls would only be necessary when within the designated 20 feet, horizontal and vertical, vicinity of the UOIT. If this is the case, will the Owner consider only requiring the drilling deviation tolerance within this zone ?

A18: Contractor shall bid what is specified and shown in the Contract Documents. Alternatives will be reviewed after award.

Q19: Reference specification section 31 23 20 Part 1.08 : Provides a split spacing criteria defined as 10 gallons of injected grout per foot of stage, or as directed. It is our understanding that this criterion will be applied to grout take on Primary 3 holes to determine if secondary or higher order holes are required. Please confirm or clarify.

A19: Correct, this criterion is applied to grout take on Primary 3 holes to determine if secondary or higher order holes are required.

Q20: Reference specification section 31 23 20 Part 2.02.B.1 : Is related to drilling for the installation of standpipes and states that the use of air or water is precluded. Several allowable drilling methods are mentioned. For most of the allowed methods, either air or water is generally required to remove drill cuttings from the hole. Please clarify if a flushing medium will be allowed or if a method which does not require a flushing medium must be used for the drilling of soil and rock socket.

A20: Flushing medium is allowed. Refer to Item 1.10 of Addendum No. 4

Q21: Reference specification section 31 23 20 Part 2.02.C : Requires the use of water powered down hole hammers for drilling in rock. Will other rotary percussive drilling methods utilizing water flush be allowed ?

A21: Yes. Refer to Item 1.11 of Addendum No. 4.

Q22: Reference specification section 31 23 20 Part 2.03.B : Requires that grout pipe have a minimum inside diameter of 1.75 inches. Typical grout pipe ID for high mobility grouts are 0.75 to 1.00 inch. This smaller diameter helps to prevent settlement of solids within grout pipe at low injection rates. Please advise if smaller inside diameters for grout pipe may be utilized.

A22: Contractor shall bid what is specified and shown in the Contract Documents. Alternatives will be reviewed after award.

Q23: Reference specification section 31 23 20 Part 2.05 : Discusses instrumented packers. If the Contractors real time monitoring system calculates and displays effective pressure during grouting, can this function be utilized in lieu of instrumented packers ?

A23: Contractor shall bid what is specified and shown in the Contract Documents. Alternatives will be reviewed after award.

Q24: Reference specification section 31 23 20 Part 3.02.C : Discusses drilling when within 20 feet, horizontally and vertically, of the UOIT. We interpret C.1 and C.2 to mean that when within the 20 feet horizontal and vertical tolerance, each time drilling is advanced a foot, drilling must stop and the down hole deviation must be checked every foot. Is this the correct interpretation of these sections of the specification? If it is not, please clarify these sections.

A24: Refer to Item 3.6 and 3.7 of Addendum No. 11.

Q25: Reference specification section 31 23 20 Part 3.05.D : Requires that the Contractor remediate unacceptable injection holes at no additional cost and states that unacceptable injection holes will be determined by the Owner. Contractor requests that it be clarified that remediation at no additional cost will only be applicable if the remediation is necessary due to the negligence of the Contractor.

A25: This will be determined on a case-by-case basis, taken into account the actual performance of the injection hole and assessment of the specification requirements and application of the approved methodology.

Q26: Reference specification section 31 23 20 Part 3.05.E : States that after each batch is mixed and pumped to the agitator tanks the grout supply line will be cleared via approved method. We understand this to be referring to grout transfer line from the grout mixing tank to the grout agitator tank. Please confirm.

A26: Confirmed that this is referring to grout transfer line from the grout mixing tank to the grout agitator tanks.

Q27: Reference specification section 31 23 20 Part 3.05.N : States that grout which has not been injected within two hours after mixing will be wasted, unless otherwise approved by the Owner. The section goes on to state that the Contractor will not be paid for wasted grout. The Contractor does not control the rate at which the ground will accept grout. Please consider changing this section to state that the Contractor will be paid for wasted grout unless grout is wasted due to Contractor's negligence.

A27: Payments will be for material used, reasonable wastage for quantities above required amounts will be agreed to with the CM prior to start of work and paid for.

Q28: Reference specification section 31 23 20 Part 3.05.Q.3: States that the Contractor will stop grouting if flow conditions change within the UOIT. Will the Owner be able to advise the Contractor of when flow changes will occur within the UOIT so that the Contractor can plan their work in a manner that UIOT flow changes will not interfere with the work? If not, how will the Contractor be compensated for delays associated with unforeseen work stoppages and possible rework or schedule delays due to stoppages?

A28: Contractor to work with Owner on schedule and UOIT conditions. The causes for communication will be reviewed should an event occur. The Contractor shall remain responsible for appropriate execution of its means and methods.

Q29: Reference specification section 31 23 20 Part 3.08.B.3 : Table 2 states that initial gel time will be determined via a method "Described herein". We cannot locate the methodology for determining gel time within the specification. Please provide the required methodology or provide details as to where the methodology can be found within the specification.

A29: Gel time and methodology per manufacturer's recommendations.

Q30: Reference specification section 31 23 20 Part 3.08.B.1 : References the calibration of pH meters. The pH of the grout is not a specified characteristic of the grout mix which must be tested, therefore, please clarify if pH meters are required and if they are required, what pH measurements will be required.

A30: pH for admixtures per Part 2.08.A.5.

Q31: Per Specification 31 23 20, Section 1.07.A.1.b - if the split spacing criteria is exceeded after the secondary holes are grouted, will higher order (tertiary+) holes be accepted in lieu of probe drilling and grouting.

A31: Contractor shall bid what is specified and shown in the Contract Documents. Alternatives will be reviewed after award.

Q32: Per Specification 31 23 20 Section 3.02.C.1, the requirements from Section 31 09 13 govern for drilling qualifications, borehole logs, and equipment used. Please confirm that this refers to the requirements outlined in Specification 31 09 13 Section 1.05.3 and Section 1.05.4. Additionally, would the Owner accept a licensed geologist (with 2+ years of experience) logging the rock cores in lieu of PennDOT certification.

A32: Yes this refers to the requirements in Specification Section 31 09 13 in Article 1.05.A.3 and 1.05.A.4.

Contractor shall bid what is shown and specified in the Contract Documents.

Q33: Addendum #8, question 10 was asked in reference to the use of wood-faced form systems. The question was answered to preclude the use of all wood forms for the curved surfaces in the shaft. Should this answer be interpreted to exclude the use of form systems that only use plywood as a form face on a steel frame OR should the answer be interpreted to exclude the use of form panels completely constructed of wood?

A33: Neither "form systems that only use plywood as a form face on a steel frame" nor "form panels completely constructed of wood" are allowed on curved cast-in-place concrete surfaces.

Q34: Detail 3/430-AD-04, 3/430-A-28 and 1/430-A-33, indicate the panel module width to be 2'-6". This however conflicts with the Specifications 2.03.1 which specifies the panel module to be 3'-0". Please clarify that the 2'-6" width in the Drawings is correct.

A34: The 3' Panel module noted in the specifications is the correct module. Refer to Items 4.10, 4.11. 4.12 and 4.13 of Addendum No. 11.

Q35: Drawing 430-AD-01 and numerous others shows the panel module thickness as 2". This however conflicts with the Specifications 2.03.4 which specifies the panel thickness to be 3" or to provide 4" when used in conjunction with Fire Resistant Wall Panels. Please clarify that the IMP panels, erected to masonry and/or concrete walls, are not intended to provide fire resistance and that the 2" panel thickness in the Drawings is correct.

A35: The 2" panel thickness noted in the drawings is the correct thickness. The insulated metal panels erected to masonry/concrete walls are not intended to provide fire resistance. Refer to Item 4.13 of Addendum No. 11.

Q36: In the Exterior Material Finish and Color Schedule on Drawing 430-AS-01 the finish for the Insulated Metal Panels is scheduled as Slate Gray by Centria or Approved Equal. This however conflicts with the Specifications 2.03.A.2.a.2 which specifies Color as selected from Manufacturer Standard Colors and also 2.06.B.1.b which specifies Color Selection from Manufacturer's Custom Color Selection. Please clarify which is correct.

A36: Color selection from the manufacturers custom color selection. Refer to Item 4.16 of Addendum No. 11.

Q37: Drawings 430-A-06 and 430-A-07 Notes 1 and 2 call out aluminum and metal for the handrail material respectively, when indicating same handrail on plan. While aluminum is a metal generally when the two annotations are used in the same drawing metal refers to steel. Please confirm material and intended finish for ST A-K & 1-3.

A37: The intended material is aluminum and the finish is per spec section 05 52 10. Refer to Item 4.1 of Addendum No. 11.

Q38: Drawings 430-A-22 and 430-A-30 indicate the stair railings are to be 3 line pipe w/offset grab on open side and single line wall mount. Please confirm that this is the requirement.

A38: Yes, this is the intended railing/guard configuration. Guard spacing is required to limit the passage of a 21" sphere.

Q39: Cast stone parapet angle are shown on Details 5 and 6, Drawing 430-AD-06. Is it intentional that these angles are of different size on both details? Also are these pieces continuous along this condition or if not please provide length and frequency. Please also provide material, finish and attachment detail.

A39: Yes, they are intended to be different angles for different wall type thicknesses, but the high and low points on the slope are intended to be at the same level. These shapes are intended to be continuous along the tops of the walls. Material and finish is to match the precast concrete façade panels. Refer to Items 4.1 through 4.16 of Addendum No. 11.

Q40: Specification 09 30 13 details the requirement for ceramic tile, but no ceramic tile is noted in the drawings. Please specify any locations of ceramic tile. Please confirm that the specification is not applicable.

A40: There is no ceramic tile in the project.

Q41: Specification 09 90 00 – 2.01.A.2 provides details for anti-graffiti coating (AG-1) but no AG-1 is noted in the drawings. Please specify any locations of AG-1.

A41: There are no locations for anti-graffiti coatings in the project.

Q42: Will the installed keying system listed in Specification 08 71 00 – 2.02.E.13 be keyed into an existing system, or is a new, separate keying system being installed? If keying into an existing system, please specify a keyway.

A42: The keying is to be coordinated with the owner during a pre installation meeting per 08 71 00 Part 1.03.B.1.

Q43: Specification 08 71 00 – 2.02.F.16 lists the DC2000 line of products by Corbin Russwin has been discontinued. Please update the basis of design product to a currently manufactured series or confirm if the DC6000 series by Corbin Russwin is acceptable.

A43: The DC6000 is acceptable. Refer to Item 3.4 of Addendum No. 11.

Q44: Reference Addendum 8 Q&A 26 : The request is to seal each compartment. Please note with the typical application of loose laid membrane, the compartmentalization on the dry side of the PVC is created by the water barrier and sealing to the substrate does not take place. Sealing to the substrate along the perimeter of each compartment would require

epoxy tape terminations or mechanical clamps. This is not typical and is only requested in the rarest of circumstances where concerns exist for the migration of groundwater and contaminants behind the PVC. The typical shaft installation of loose laid membrane should only require sealing-termination at the top of the shaft, around adit-tunnel openings, or at a discontinuity for shear keys or other structural elements. The requirement to seal each compartment to the substrate will drastically impact the cost and time necessary for the PVC installation. Please confirm if the intents is for each compartment to be sealed to the substrate along the layout provided in 430-S-36 or whether we should follow the typical shaft installation procedure.

A44: The compartments isolate local leakage of the concrete liner and membrane and the grout ports provide a mechanism to remediate the leakage. Compartment grout ports do not extend through the membrane and as such are not intended to grout the substrate as suggested in the question.

Q45: Reference Addendum 8 Q&A 27 : The means and methods of the termination at the tunnel are dictated by the order in which the structure is completed. If the tunnel is completed prior to the shaft lining, the waterproofing can be terminated to the TBM segments. If the PVC membrane is to be in place prior to the tunnel completion, the waterproofing will need to be terminated outside of the tunnel zone. Please confirm what is being requested for termination of the waterproofing at the tunnel junction chamber opening. The contractor may be able to dictate the means and methods, but the order of construction impacts the methods as well as liability for the termination. Please provide appropriate details for each scenario for Alternates 1 & 2.

A45: The waterproofing membrane does not extend into the Tunnel Junction Chamber (TJC) or the tunnel beyond as such its installation is not impacted by either Alternate. Waterproofing membrane detail at the shaft/TJC interface is as indicated on the Contact Documents.

Q46: Reference specification section 07 10 50 paragraph 2.01.B.1 : SikaPlan WP 1130 is not Buy America compliant. CETCO is the only domestic membrane manufacturer and has physical characteristics that make it difficult to install, posing a QC risk for tight radiuses. Due to the products lack of flexibility and the lack of alternatives, please confirm the PVC membrane will be considered exempt from the Buy America requirements and that all materials proposed in 2.01.B.1 are acceptable. If Sika can be an acceptable non-American-made product, will other non-American-made products be eligible for consideration as an equal, if they meet the specification ?

A46: Refer to Item 3.2 of Addendum No. 11. Contractor shall conform to GCC Article 3.79 and is responsible for establishing and managing which

engineered products may be granted a waiver or exception to regulatory requirements.

Q47: The GBR notes pockets of Methane encountered in the rock. During drilling and excavation of the rock, are methane concentrations expected to create unsafe conditions that require additional procedures to mitigate? If methane concentrations exceed safe conditions requiring additional time and mitigation measures (such as down time for off-gasing) how is the contractor compensated for this downtime?

A47: Shaft is classified as potentially gassy. Contractor to comply with OSHA requirements for safe working conditions for this condition. In the event of this occurrence, refer to Article 3.34 Delays and Extension of Time.

Q48: Specification 31 09 13, paragraph 2.03.B.5 states "provide in-place inclinometers with one monitoring point per foot." Please clarify, as the minimum spacing is typically two feet between sensor locations.

A48: In-Place Inclinometers have a tighter spacing than the standard 2 feet, per the manufacturers listed in Section 31 09 13 Part 2.03.B.2.

Q49: In order to calculate a bid, how many crack monitors should be assumed for the project?

A49: Contractor to determine the quantity of crack monitors in the field, based on the Engineer-designed SOE systems shown on the Contract Documents, the Contractor-designed SOE systems, and the findings of the pre-construction surveys.

Q50: In order to calculate a bid, what is the minimum crack width that requires monitoring?

A50: Contractor to determine the minimum crack width requiring monitoring.

Q51: 1. Slurry wall panel - Joints dimension and tolerances Drawing 430-SOE-05 – includes:

a) Detail B “Closing Panel Typical Detail” showing the joint overlap of 8” on the outer face and 1’-3” in the inside phase of the panel.
b): Note 6 indicating “PRIMARY AND SECONDARY SLURRY WALL PANELS ARE SHOWN FOR REFERENCE. GUIDE WALL CONFIGURATION AND SLURRY WALL PANEL LAYOUT ARE TO BE DEFINED BY CONTRACTOR BASED ON EQUIPMENT SELECTION AND IN ACCORDANCE WITH CONTRACT DOCUMENTS”
c): Note 7 indicating “REFER TO SPECIFICATIONS FOR SLURRY WALL INSTALLATION TOLERANCES. CONTRACTOR SHALL INSTALL THE SLURRY WALL SYSTEM WITHIN REQUIRED

INSTALLATION TOLERANCES SO THAT THE CLEAR DIMENSIONS AND MINIMUM OVERLAP THICKNESS SHOWN ON THE DRAWINGS ARE MET."

Then Section 31 56 00 SLURRY WALLS, under 1.07 Tolerances / C. Slurry Walls 6. indicates: "Closing panel overcut into primary panel: Dimension shown on Shop Drawings with a tolerance of plus 6 inches; minus 0 inches. Please confirm that:

1. The reference to "Shop Drawings" Dimensions, sited under the tolerances, refers to the panel layout proposed by the Contactor per the note 6, and not to the panel layout shown in the same contract drawings.
2. The minimum overlap between primary and closing panels to be guaranteed, after verticality tolerances are accounted for.

A51: 1. Confirmed.

2. Yes, the minimum overlap is the performance requirement to be achieved at the end of construction, accounting for all tolerances.

Q52: Spec Section 28 46 00 2.01 (A)(4) states an "Approved Equal" for a fire alarm manufacturer. Is Siemens an approved manufacturer for the fire alarm system?

A52: Refer to Article 2 Information for Bidders, Part 2.07 Supplementary Information Package for procedures on proposed or equals.

Q53: Please reconsider the answer to Q20 in Addendum 3 regarding disallowing horizontal joints in the base slab.
Placing the 16' slab in one continuous placement, or in 4 equal shaft quadrants, creates several issues.
The placement is over 6,000 CY which will take 2 to 3 days to complete working 24 hours per day. Some of the concrete suppliers are unable to commit to providing a continuous supply of concrete over that period of time thereby limiting competition.
Secondly this is a mass concrete placement with 6,000 psi concrete which will generate significant heat of hydration and core temperatures before it is even completed. Water will need to be pumped through the cooling tubes while the concrete is still being placed to keep the temperatures in an acceptable range. This adds an element of risk to the Contractor if a tube leaks prior to the initial set of concrete. There will be in excess of three miles of cooling tubes in that placement. The chance of a leak is not insignificant. In addition, a single sixteen foot lift of mass concrete is unusual. On local Lock and Dam construction projects for the Pittsburgh Cops of Engineers they only permit a maximum of 6' lifts for their mass concrete and a 5 day cooling period before the next lift can be placed to

prevent their core temperatures from exceeding 160 degrees.
Lastly, no matter if Contractors add vertical construction joints or not, three top mats of #11 bars (approx. 1.2 million lbs) have to be completed before starting the placement. The mats are 16' off of the invert which creates both a trapping hazard for employees inside the rebar cage and fall hazards which could be reduced dramatically if three horizontal lifts of 5'-4" were allowed. Please reconsider previous question responses and add two horizontal joints in the invert slab to reduce the lift heights to 5'-4".

A53: Horizontal joints are prohibited in the base slab. Vertical joints are not - restrictions for locations of vertical joints are provided on the Contract Documents. There is no limitation to place the slab as a full circle or in quadrants as suggested in the comment.

Q54: Reference is made to the response to Question 7 in Addendum 9 regarding water tightness testing. We disagree that referencing the 1500 gpm infiltration in the shaft construction specification is inaccurate. The water is going to be there behind the liner if the GBR is accurate. This is a significant amount of water to deal with after the grouting program that a PVC liner has to prevent from entering the completed shaft. To require a watertightness requirement of "No Measurable Loss" in a shaft of this size with 1500 GPM of water infiltration behind the liner is unrealistic to obtain. Please consider allowing a more reasonable watertightness requirement.

A54: Refer to section 01 45 25 Part 3.03 for requirements for the shaft final liner and tunnel junction chamber external watertightness testing requirements. Contract requirements stand as written.

Q55: Will the following previously asked question be answered prior to the bid date ? : Reference specification section 07 10 50 paragraph 2.01.B.1 : SikaPlan WP 1130 is not Buy America compliant. CETCO is the only domestic membrane manufacturer and has physical characteristics that make it difficult to install, posing a QC risk for tight radiuses. Due to the products' lack of flexibility and the lack of alternatives, please confirm the PVC membrane will be considered exempt from the Buy America requirements and that all materials proposed in 2.01.B.1 are acceptable. If Sika can be an acceptable non-American-made product, will other non-American-made products be eligible for consideration as an equal, if they meet the specification?

A55: Refer to Question #46 of this addendum.

Q56: The bidders qualifications statement requires a letter identifying the bidders EMR. What is the maximum allowable EMR for a bidder not to be disqualified from performing work on this project.

A56: EMR is required as reference information and will not be used to disqualify bidders.

Q57: Through the numerous industry day meetings that were held for the ALCOSAN Wet Weather Program, Contractors were ensured a three month period between the Wet Weather Pump Station and Ohio River Tunnel bids. Currently the WWPS project is due October 2, 2025 and the ORT project is due November 24, 2025. Please extend the bid date for the ORT to preserve the promised three month period between bid due dates.

A57: This is a question for the ORT project.

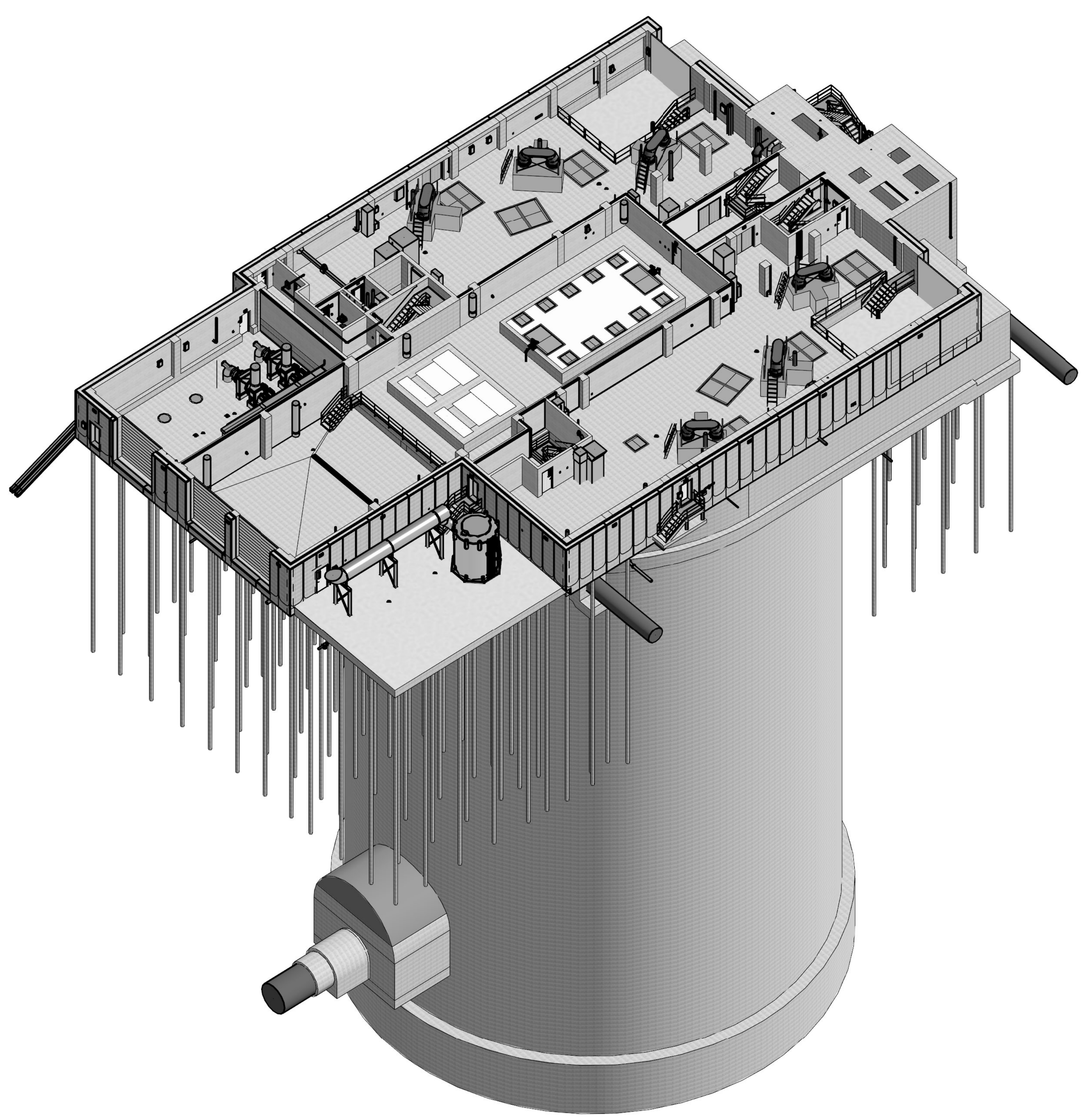
Q58: On previous ALCOSAN projects, Contractors receive 100% participation credit for materials supplied by a qualified Minority or Women's Business. Please confirm.

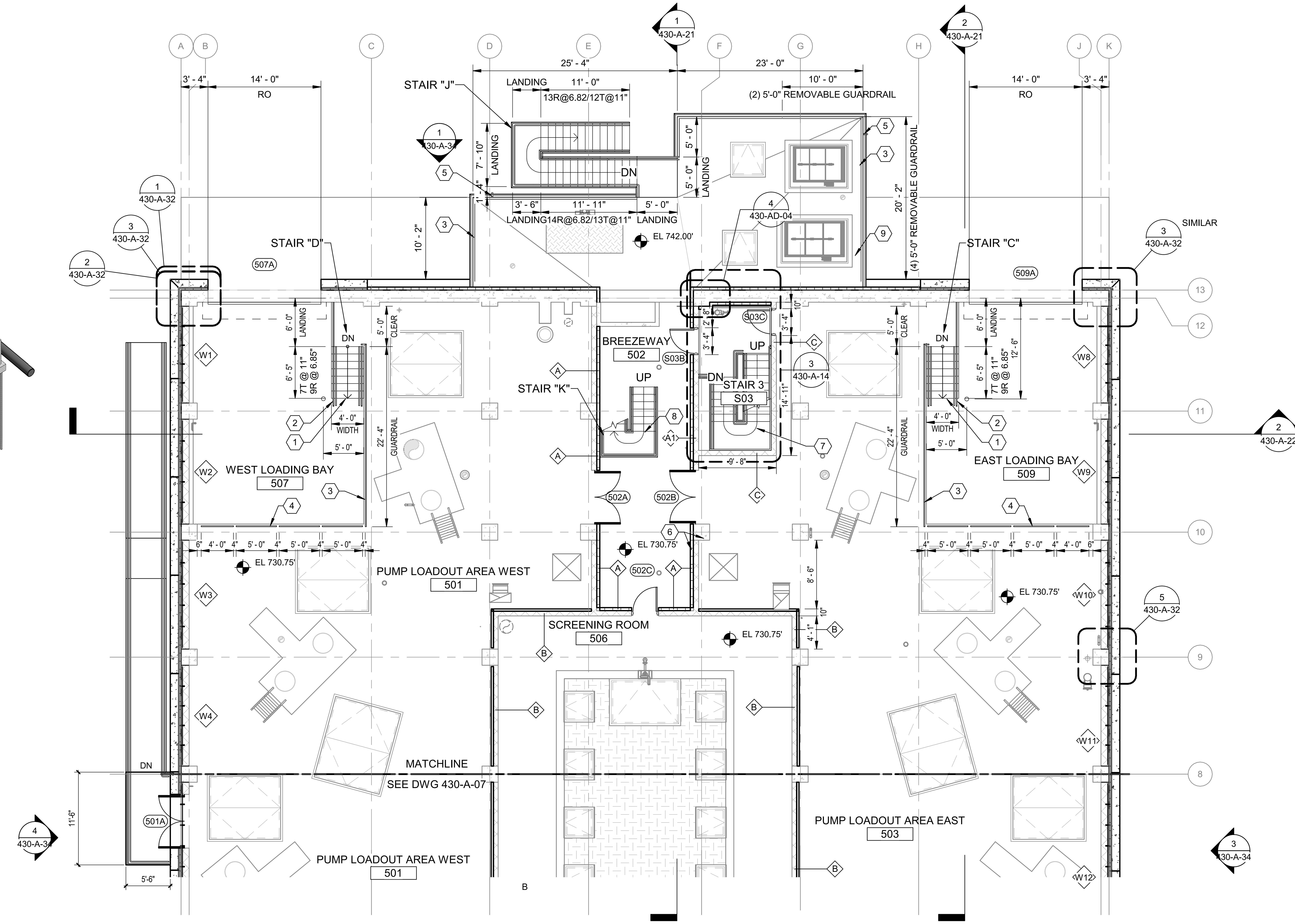
A58: Confirmed.

END OF ADDENDUM No. 11

ATTACHMENT – A

Addendum No. 11 Drawings





ENTRY LEVEL FLOOR PLAN - NORTH

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

GENERAL NOTES

1. REFERENCE 430-AD-09 FOR TYPICAL RESTROOM FIXTURE MOUNTING HEIGHTS.

KEYNOTES:

1. CAST IN PLACE CONCRETE STAIR WITH ALUMINUM GUARDRAILS AND HANDRAILS. REFERENCE STRUCTURAL DRAWINGS FOR STAIR DESIGN.
2. 42" HIGH ALUMINUM GUARDRAIL WITH 34" HIGH ALUMINUM HANDRAIL ABOVE TOP OF FINISHED TREAD NOSING. EXTEND 34" HIGH HANDRAIL 11" MIN PAST TOP AND BOTTOM STAIR TREAD NOSING.
3. 42" HIGH ALUMINUM GUARDRAIL SYSTEM WITH TOEBOARD
4. 42" HIGH REMOVABLE ALUMINUM GUARDRAIL ABOVE TOP OF FINISHED TREAD NOSING.
5. ALUMINUM GUTTER AND DOWNSPOUT, REFERENCE DETAILS 3 & 4/430-AD-10
6. CONCRETE BLOCK TO ALIGN WITH FACE OF CONCRETE COLUMN. REFERENCE STRUCTURAL DETAILS, TYPICAL
7. CONCRETE PAN STAIR, GUARDRAIL AND HANDRAIL SYSTEM. DELEGATED DESIGN BY CONTRACTOR
8. ALUMINUM STAIR, GUARDRAIL, AND HANDRAIL SYSTEM. DELEGATED DESIGN BY CONTRACTOR
9. LIQUID ROOF MEMBRANE, FULL EXTENT OF EXTERIOR CONCRETE CAP. APPROX 1000 SF. PROVIDE SIKALISTIC BY SIKA OR APPROVED EQUAL. INSTALL IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS

Christine Mondor

Signer Name: Christine Mondor
Signing Reason: I approved this document.
Signing Time: 2025-09-09 09:15:59(EDT)

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Plot Date: 9/4/2025 2:00:28 PM

Designed by: M.CONTI
Drawn by: S.GRAMKOW
Checked by: D.WALDROP

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WASTEWATER TREATMENT PLANT
WET WEATHER PUMP STATION

430-A-06
ENTRY LEVEL FLOOR PLAN NORTH

Contract: 1800
CAD File Name:
Date: 5/16/2025
Sheet: 57 of 405

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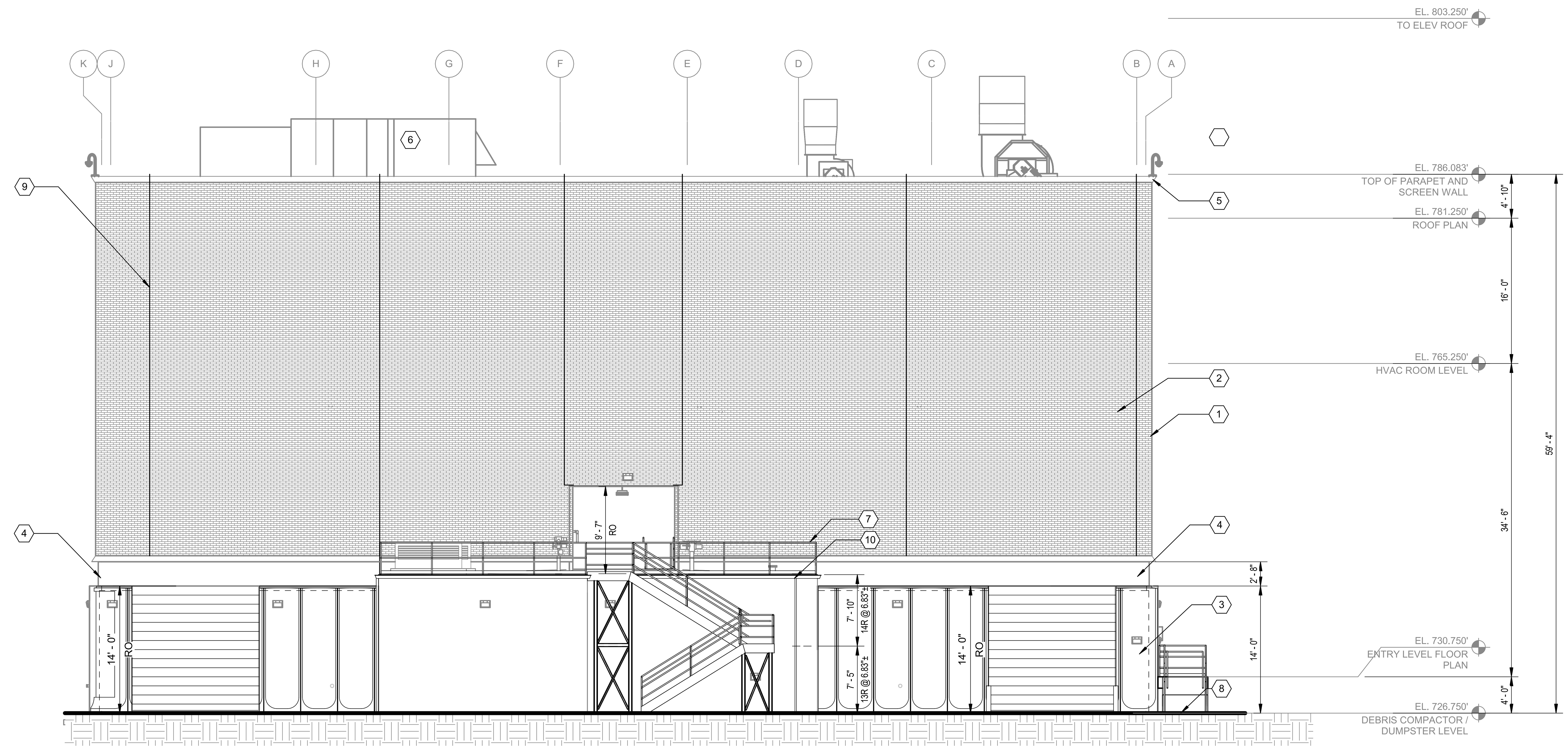
GENERAL NOTES:

1. REFERENCE SHEETS 430-A-40 TO 430-A-48 FOR SPECIAL SHAPE LAYOUT FOR BRICK VENEER DESIGN

KEYNOTES:

1	PRECAST CONCRETE CORNER PANEL INLAID WITH BRICK, TYPICAL
2	BRICK VENEER, TYPICAL
3	PRECAST CONCRETE PANELS WITH A CONCAVE FACE, TYPICAL
4	INSULATED METAL PANEL SYSTEM, TYPICAL
5	ARCHITECTURAL PRECAST CONCRETE COPING, TYPICAL
6	HVAC EQUIPMENT, REFERENCE BUILDING MECHANICAL DRAWINGS
7	42" HIGH ALUMINUM GUARDRAIL SYSTEM WITH TOEBOARD
8	APPROXIMATE GRADE, TYPICAL
9	BRICK EXPANSION JOINT, TYPICAL. REFERENCE DETAIL 6 ON 430-AD-10
10	ALUMINUM GUTTER AND DOWNSPOUT, REFERENCE DETAILS 3 & 4/430-AD-10



1 NORTH ELEVATION
430-A-06

Christine Mondor

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Signing Reason: I approved this document.
Signing Time: 2025-09-09 09:15:59(EDT)

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

Path: BIM 360://170064 - ALCOSAN Wet Weather PS/170064-A-430V21.rvt

Plot Date: 9/4/2025 1:51:46 PM

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ALLEGHENY COUNTY SANITARY AUTHORITY
WASTEWATER TREATMENT PLANT
WET WEATHER PUMP STATION

430-A-15
ELEVATIONS 1

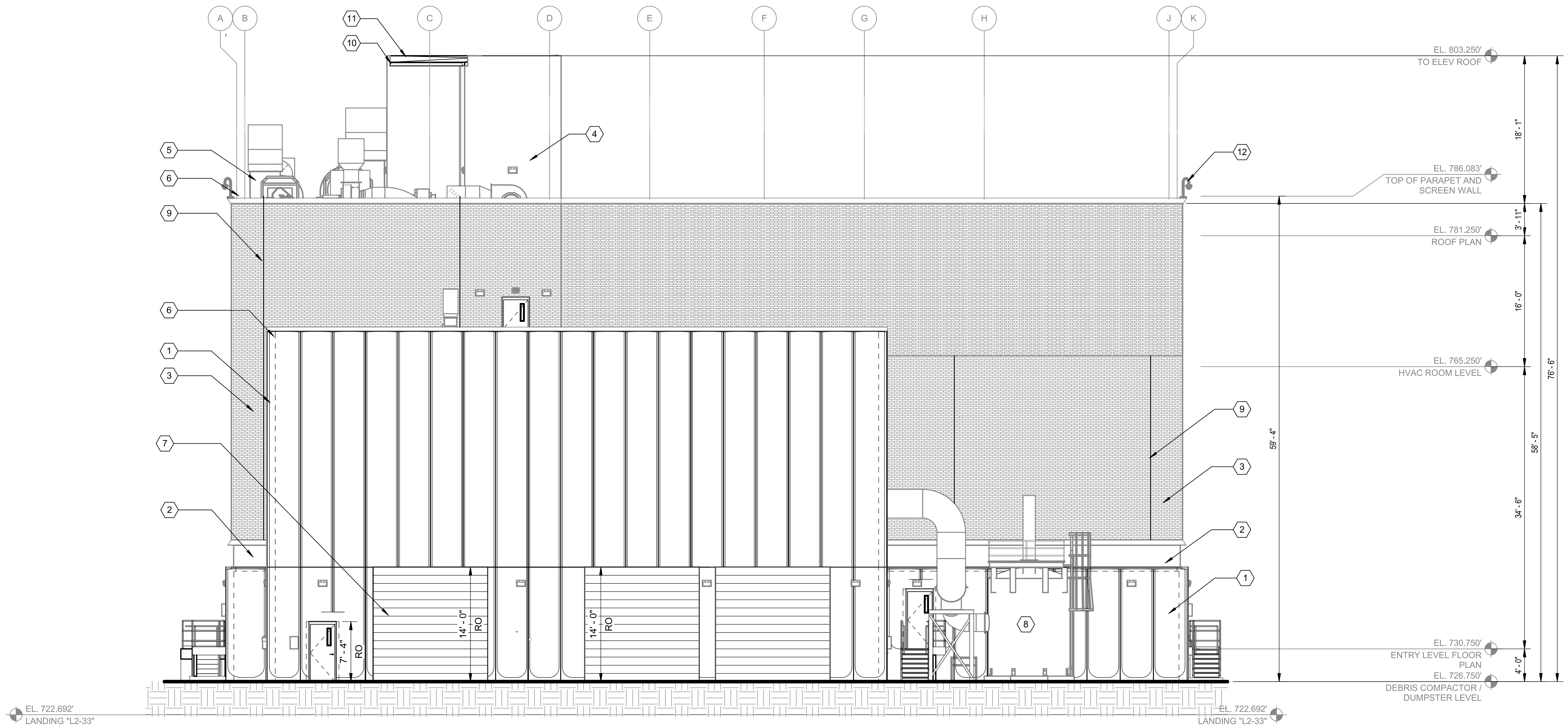
Contract: 1800
CAD File Name:
Date: 5/16/2025
Sheet: 66 of 405

GENERAL NOTES:

1. REFERENCE SHEETS 430-A-40 TO 430-A-48 FOR SPECIAL SHAPE LAYOUT FOR BRICK VENEER DESIGN.
2. FOR ALL DUCT/PIPE PENETRATIONS PROVIDE BACKER ROD AND SEALANT AT THE INTERIOR AND EXTERIOR OF THE OPENING. FILL INTERSTITIAL SPACE WITH MINERAL WOOL INSULATION.

KEYNOTES:

1	PRECAST CONCRETE PANELS WITH A CONCAVE FACE, TYPICAL
2	INSULATED METAL PANEL SYSTEM, TYPICAL
3	BRICK VENEER, TYPICAL
4	INSULATED METAL PANEL SYSTEM ENCLOSING CONCRETE STAIR AND ELEVATOR TOWER
5	HVAC EQUIPMENT, REFERENCE BUILDING MECHANICAL DRAWINGS
6	ARCHITECTURAL PRECAST CONCRETE COPING, TYPICAL (1)
7	OVERHEAD COILING DOOR, TYPICAL
8	PROCESS TANK, REFERENCE PROCESS DRAWINGS
9	BRICK EXPANSION JOINT, TYPICAL. REFERENCE DETAIL 6 ON 430-AD-10
10	ALUMINUM GUTTER AND DOWNSPOUT, REFERENCE DETAILS 3 & 4/430-AD-10
11	BITUMINOUS BUILT UP ROOFING SYSTEM, TYPICAL
12	CAMERAS TO BE COPING MOUNTED, TYPICAL



1 430-A-07 SOUTH ELEVATION

Christine Mondor

Signer Name: Christine Mondor
Signing Reason: I approved this document.
Signing Time: 2025-09-09 09:15:59(EDT)

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

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WASTEWATER TREATMENT PLANT
WET WEATHER PUMP STATION

430-A-16
ELEVATIONS 2

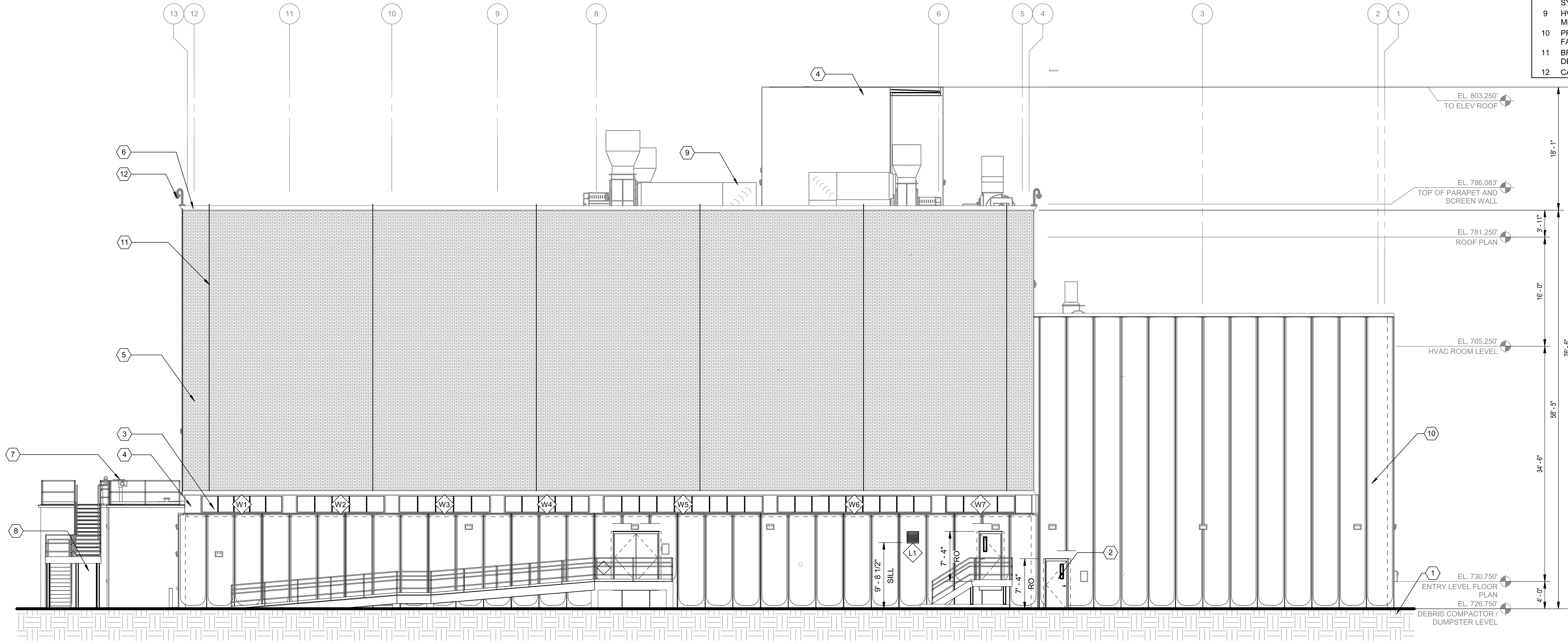
Contract: 1800
CAD File Name:
Date: 5/16/2025
Sheet: 67 of 405

GENERAL NOTES:

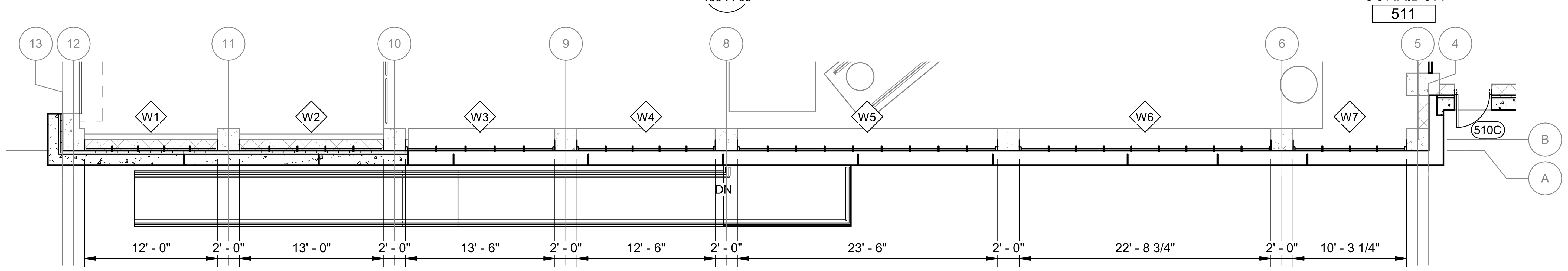
1. REFERENCE SHEETS 430-A-40 TO 430-A-48 FOR SPECIAL SHAPE LAYOUT FOR BRICK VENEER DESIGN
2. FOR ALL DUCT/PIPE PENETRATIONS PROVIDE BACKER ROD AND SEALANT AT THE INTERIOR AND EXTERIOR OF THE OPENING. FILL INTERSTITIAL SPACE WITH MINERAL WOOL INSULATION.

KEYNOTES:

1	APPROXIMATE GRADE, TYPICAL
2	HOLLOW METAL DOOR AND FRAME, TYPICAL
3	ALUMINUM WINDOW, TYPICAL
4	INSULATED METAL PANEL SYSTEM ENCLOSING CONCRETE STAIR AND ELEVATOR TOWER
5	BRICK VENEER, TYPICAL
6	ARCHITECTURAL PRECAST CONCRETE COPING, TYPICAL
7	42" HIGH ALUMINUM GUARDRAIL SYSTEM WITH TOEBOARD
8	ALUMINUM STAIR, HANDRAIL, AND GUARDRAIL SYSTEM, TYPICAL
9	HVAC EQUIPMENT, REFERENCE BUILDING MECHANICAL DRAWINGS
10	PRECAST CONCRETE PANELS WITH A CONCAVE FACE, TYPICAL
11	BRICK EXPANSION JOINT, TYPICAL. REFERENCE DETAIL 6 ON 430-AD-10
12	CAMERAS TO BE COPING MOUNTED, TYPICAL



1 WEST ELEVATION
430-A-06



2 PARTIAL ENTRY LEVEL FLOOR WALL PLAN - WEST
430-A-15 SCALE: 1/8" = 1'-0"

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

Designed by:	M.CONTI
Drawn by:	S.GRAMKOW
Checked by:	D.WALDROP

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WASTEWATER TREATMENT PLANT
WET WEATHER PUMP STATION

430-A-17
ELEVATIONS 3

Contract:	1800
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Date:	5/16/2025
Sheet:	68 of 405

Path: BIM 360://170064 - ALCOSAN Wet Weather PS/170064-A-430V21.rvt

Plot Date: 9/4/2025 1:52:10 PM

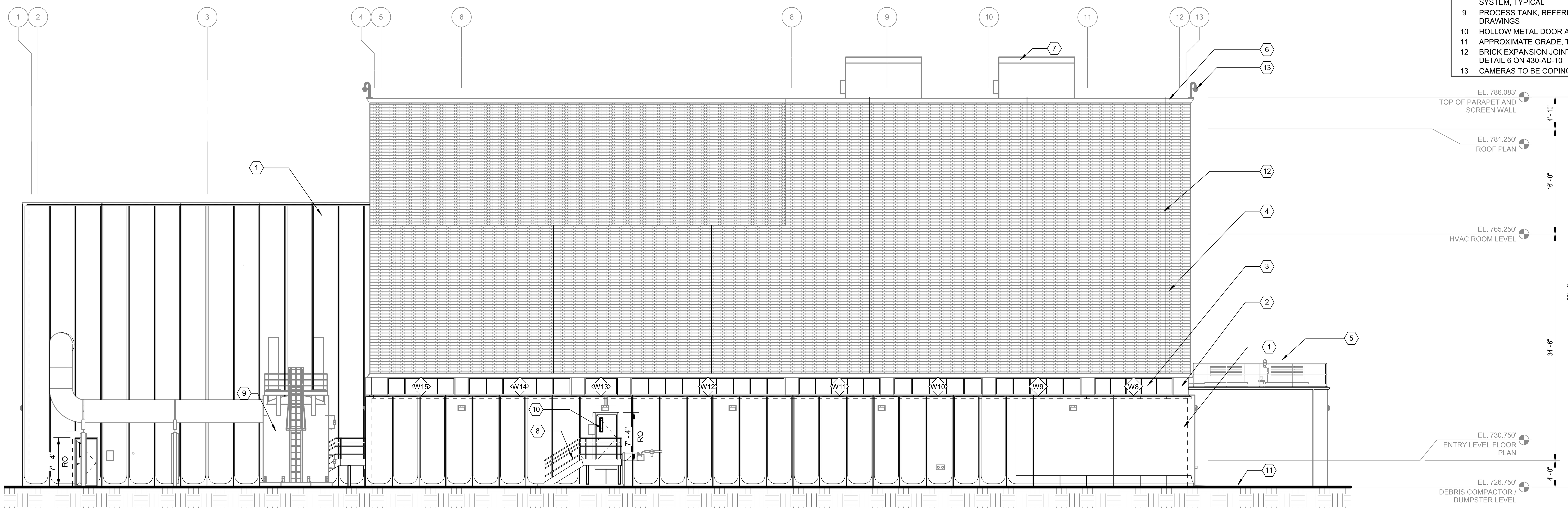
GENERAL NOTES:

1. REFERENCE SHEETS 430-A-40 TO 430-A-48 FOR SPECIAL SHAPE LAYOUT FOR BRICK VENEER DESIGN.
2. FOR ALL DUCT/PIPE PENETRATIONS PROVIDE BACKER ROD AND SEALANT AT THE INTERIOR AND EXTERIOR OF THE OPENING. FILL INTERSTITIAL SPACE WITH MINERAL WOOL INSULATION.

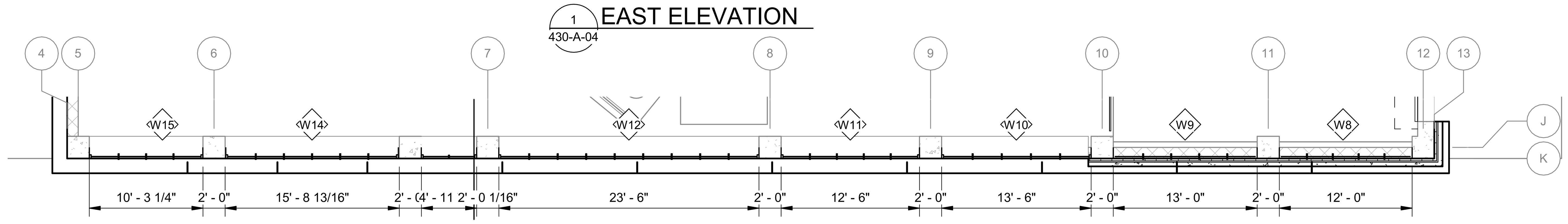
KEYNOTES:

1	PRECAST CONCRETE PANELS WITH A CONCAVE FACE, TYPICAL
2	INSULATED METAL PANEL SYSTEM, TYPICAL
3	ALUMINUM WINDOW, TYPICAL
4	BRICK VENEER, TYPICAL
5	42" HIGH ALUMINUM GUARDRAIL SYSTEM WITH TOEBOARD
6	ARCHITECTURAL PRECAST CONCRETE COPING, TYPICAL
7	HVAC EQUIPMENT, REFERENCE BUILDING MECHANICAL DRAWINGS
8	ALUMINUM STAIR, HANDRAIL, AND GUARDRAIL SYSTEM, TYPICAL
9	PROCESS TANK, REFERENCE PROCESS DRAWINGS
10	HOLLOW METAL DOOR AND FRAME, TYPICAL
11	APPROXIMATE GRADE, TYPICAL
12	BRICK EXPANSION JOINT, TYPICAL. REFERENCE DETAIL 6 ON 430-AD-10
13	CAMERAS TO BE COPING MOUNTED, TYPICAL

1



EAST ELEVATION
430-A-04



2
PARTIAL ENTRY LEVEL FLOOR WALL PLAN - EAST
430-A-15 SCALE: 1/8" = 1'-0"

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

Path: BIM 360://170064 - ALCOSAN Wet Weather PS/170064-A-430V21.rvt

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M.CONTI	
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REGISTERED ARCHITECT PENNSYLVANIA CHRISTINE MONDOR No. RA403537
26 Aug 2025

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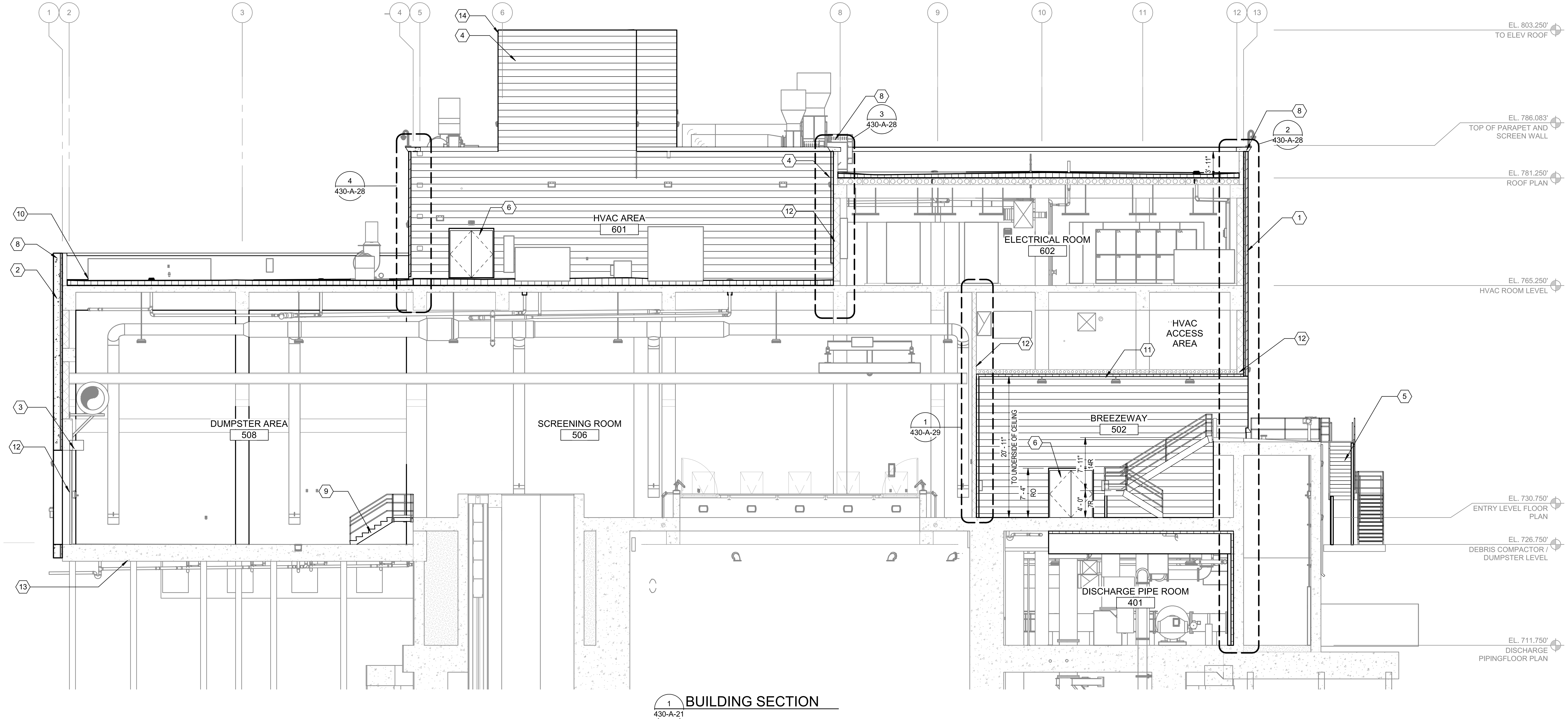
WASTEWATER TREATMENT PLANT
WET WEATHER PUMP STATION

430-A-18
ELEVATIONS 4

Contract: 1800
CAD File Name:
Date: 5/16/2025
Sheet: 69 of 405

KEYNOTES:

1	BRICK VENEER, TYPICAL
2	PRECAST CONCRETE PANELS WITH A CONCAVE FACE, TYPICAL
3	OVERHEAD COILING DOOR, TYPICAL
4	INSULATED METAL PANEL SYSTEM, TYPICAL
5	ALUMINUM STAIR, HANDRAIL, AND GUARDRAIL SYSTEM, TYPICAL
6	HOLLOW METAL DOOR AND FRAME, TYPICAL
7	HVAC EQUIPMENT, REFERENCE BUILDING MECHANICAL DRAWINGS
8	ARCHITECTURAL PRECAST CONCRETE COPING, TYPICAL
9	CAST IN PLACE CONCRETE STAIR WITH ALUMINUM GUARDRAILS AND HANDRAILS. REFERENCE STRUCTURAL DRAWINGS FOR STAIR DESIGN.
10	BITUMINOUS BUILT UP ROOFING SYSTEM, TYPICAL
11	INSULATED METAL PANEL AND JOIST SUPPORT SYSTEM, TYPICAL
12	CONCRETE BLOCK INFILL WALL, TYPICAL
13	UNDERSLAB VAPOR RETARDER
14	BUILT-UP ROOF GRAVEL STOP, REFERENCE DETAIL 6/430-AD-05



1 BUILDING SECTION
430-A-21

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

Designed by: M.CONTI	REV No.	DATE	DESCRIPTION	APPV
Drawn by: S.GRAMKOW	0	5/16/25	ISSUE FOR BID	CKM
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Signing Reason: I approved this document.
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REGISTERED ARCHITECT
PENNSYLVANIA
CHRISTINE MONDOR No. RA403153

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ALLEGHENY COUNTY SANITARY AUTHORITY
WASTEWATER TREATMENT PLANT
WET WEATHER PUMP STATION

430-A-23
ENLARGED BUILDING SECTION 1

Contract: 1800
CAD File Name:
Date: 5/16/2025
Sheet: 74 of 405

Path: BIM 360://170064 - ALCOSAN Wet Weather PS/170064-A-430V21.rvt
Plot Date: 9/4/2025 1:52:32 PM

KEYNOTES:

1	BRICK VENEER, TYPICAL
2	PRECAST CONCRETE PANELS WITH A CONCAVE FACE, TYPICAL
3	APPROXIMATE GRADE, TYPICAL
4	INSULATED METAL PANEL SYSTEM, TYPICAL
5	ALUMINUM STAIR, HANDRAIL, AND GUARDRAIL SYSTEM, TYPICAL
6	HOLLOW METAL DOOR AND FRAME, TYPICAL
7	PROCESS TANK, REFERENCE PROCESS DRAWINGS
8	HVAC EQUIPMENT, REFERENCE BUILDING MECHANICAL DRAWINGS
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10	42" HIGH ALUMINUM GUARDRAIL SYSTEM WITH TOEBOARD
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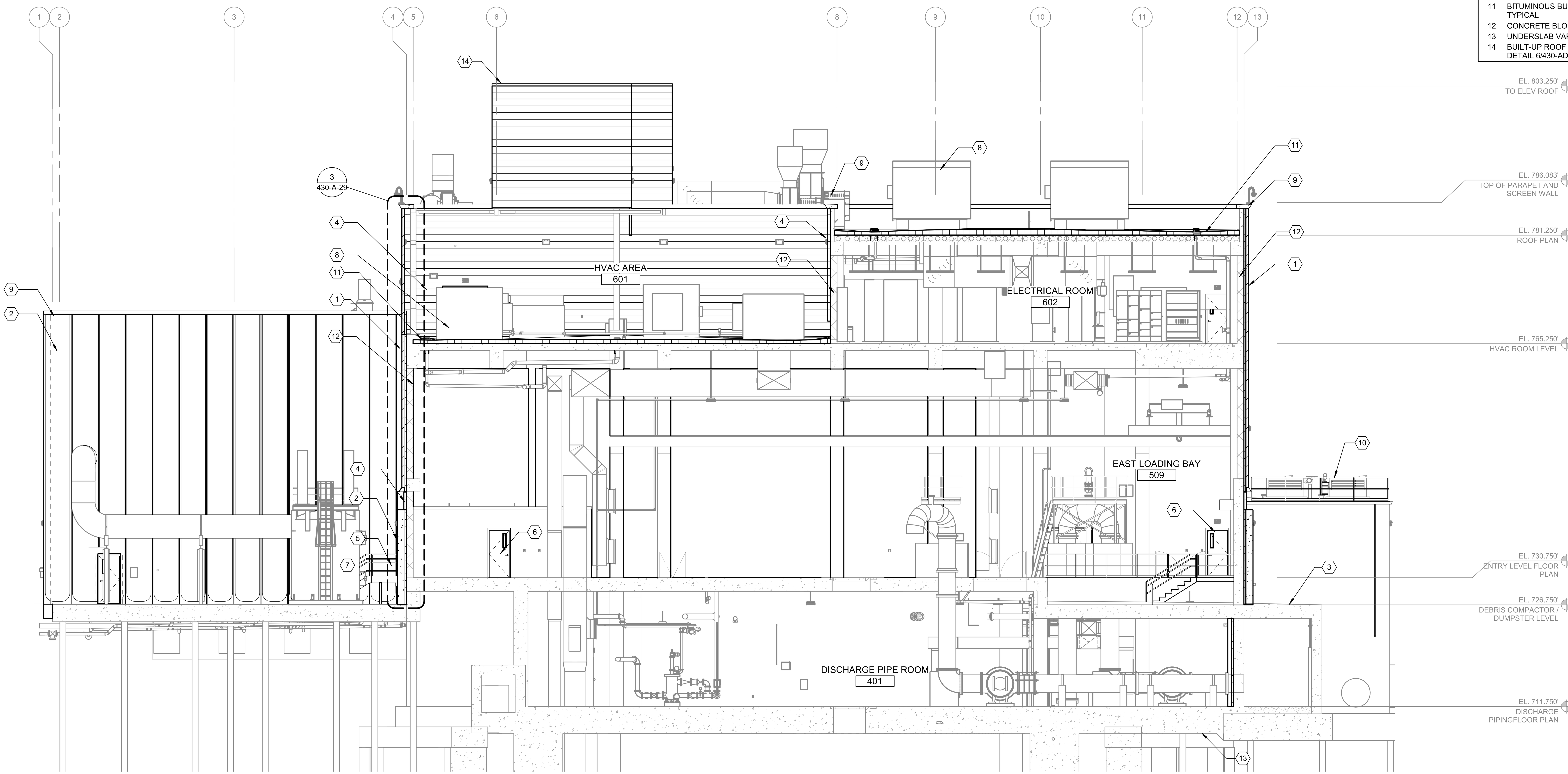
12	CONCRETE BLOCK INFILL WALL, TYPICAL
13	UNDERSLAB VAPOR RETARDER
14	BUILT-UP ROOF GRAVEL STOP, REFERENCE DETAIL 6/430-AD-05



1
430-A-21
BUILDING SECTION

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

Designed by:	M.CONTI
Drawn by:	S.GRAMKOW
Checked by:	D.WALDROP

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REV No.	DATE	DESCRIPTION	APPV
0	5/16/25	ISSUE FOR BID	CKM
1	08/28/25	ADD. 11 - COPING REVISION	CKM

Brown AND Caldwell

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Signer Name: Christine Mondor
Signing Reason: I approved this document.
Signing Time: 2025-09-09 09:15:59(EDT)

REGISTERED ARCHITECT
PENNSYLVANIA
CHRISTINE MONDOR No. RA403537

alcosan
allegheny 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
WET WEATHER PUMP STATION

430-A-24
ENLARGED BUILDING SECTION 2

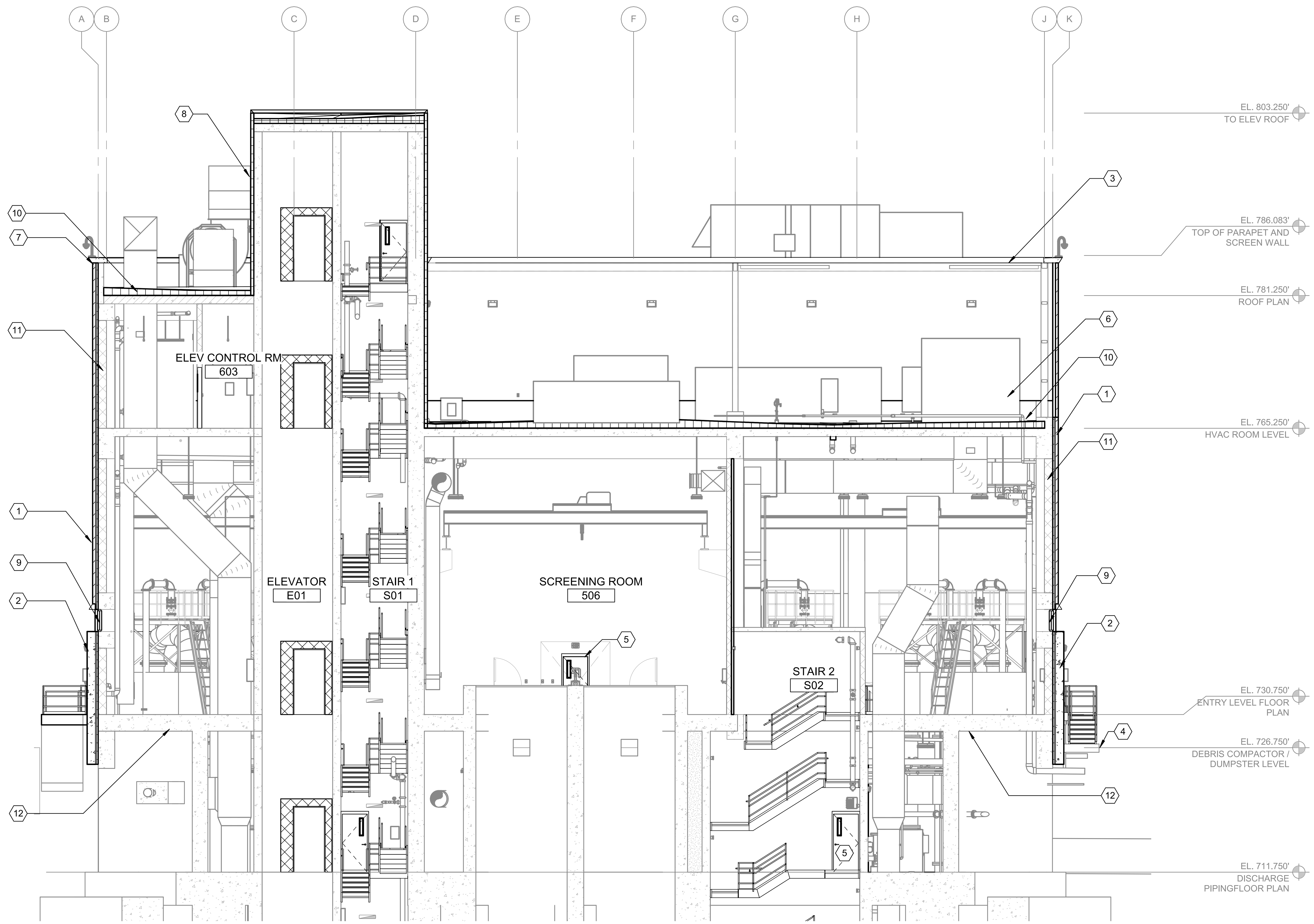
Contract: 1800
CAD File Name:
Date: 5/16/2025
Sheet: 75 of 405

Path: BIM 360://170064 - ALCOSAN Wet Weather PS/170064-A-430V21.rvt

Plot Date: 9/4/2025 1:52:43 PM

KEYNOTES:

1	BRICK VENEER, TYPICAL
2	PRECAST CONCRETE PANELS WITH A CONCAVE FACE, TYPICAL
3	INSULATED METAL PANEL SYSTEM, TYPICAL
4	APPROXIMATE GRADE, TYPICAL
5	HOLLOW METAL DOOR AND FRAME, TYPICAL
6	HVAC EQUIPMENT, REFERENCE BUILDING MECHANICAL DRAWINGS
7	ARCHITECTURAL PRECAST CONCRETE COPING, TYPICAL
8	INSULATED METAL PANEL SYSTEM ENCLOSING CONCRETE STAIR AND ELEVATOR TOWER
9	ALUMINUM WINDOW, TYPICAL
10	BITUMINOUS BUILT UP ROOFING SYSTEM, TYPICAL
11	CONCRETE BLOCK INFILL WALL, TYPICAL
12	UNDERSLAB VAPOR RETARDER



1 BUILDING SECTION
430-A-22

Signer Name: Christine Mondor
Signing Reason: I approved this document.
Signing Time: 2025-09-09 09:15:59(EDT)

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

Path: BIM 360://170064 - ALCOSAN Wet Weather PS/170064-A-430V21.rvt

Plot Date: 9/4/2025 1:52:52 PM

Designed by:	M.CONTI
Drawn by:	S.GRAMKOW
Checked by:	D.WALDROP

REVISION

REV No.	DATE	DESCRIPTION	APPV
0	5/16/25	ISSUE FOR BID	CKM
1	08/28/25	ADD. 11 - COPING REVISION	CKM

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REGISTERED ARCHITECT PENNSYLVANIA CHRISTINE MONDOR No. RA 401537

alcosan allegheny county sanitary authority

ARLETTA SCOTT WILLIAMS
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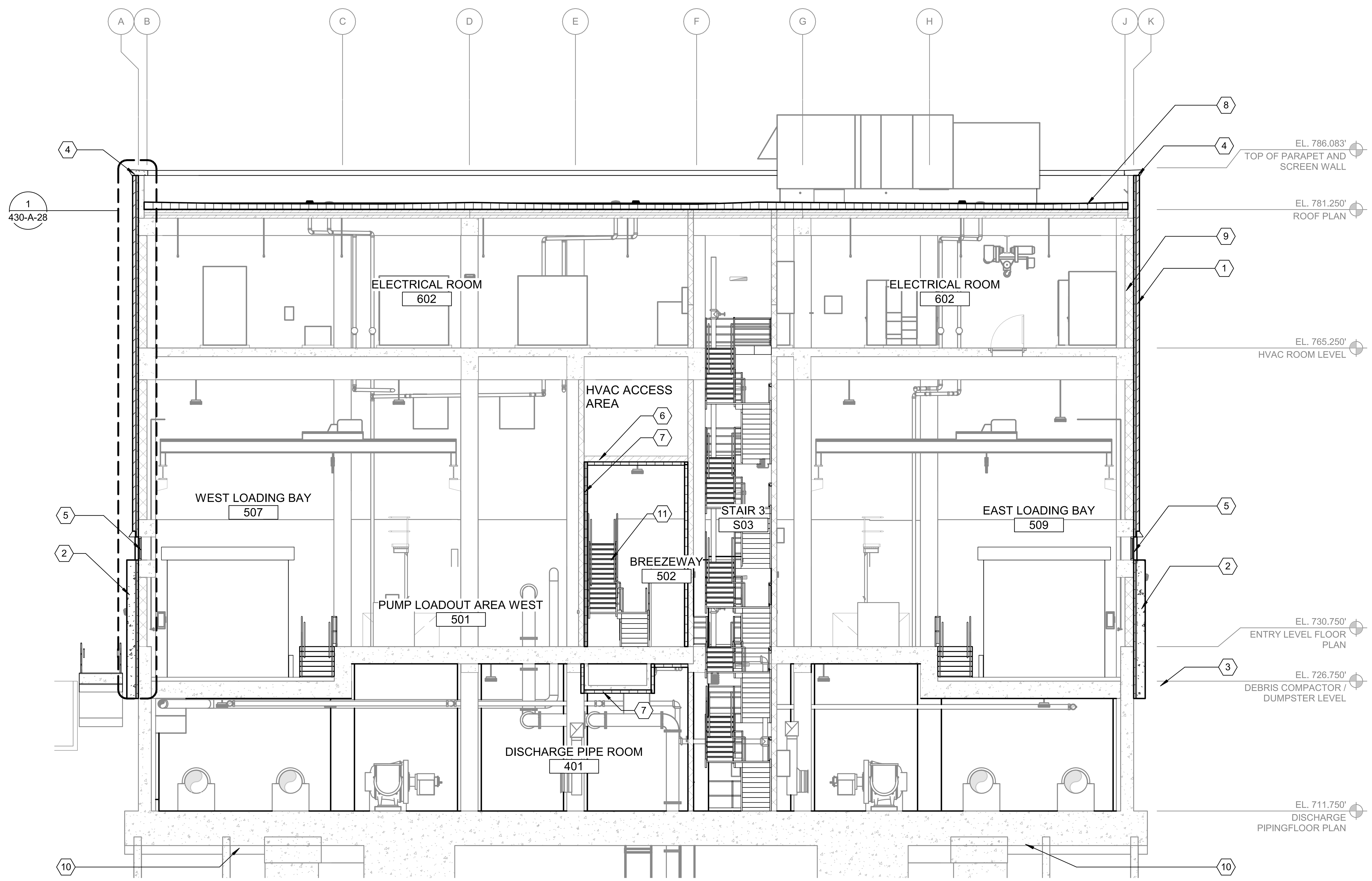
ALLEGHENY COUNTY SANITARY AUTHORITY
WASTEWATER TREATMENT PLANT
WET WEATHER PUMP STATION

430-A-25
ENLARGED BUILDING SECTION 3

Contract:	1800
CAD File Name:	
Date:	5/16/2025
Sheet:	76 of 405

KEYNOTES:

1	BRICK VENEER, TYPICAL
2	PRECAST CONCRETE PANELS WITH A CONCAVE FACE, TYPICAL
3	APPROXIMATE GRADE, TYPICAL
4	ARCHITECTURAL PRECAST CONCRETE COPING, TYPICAL
5	ALUMINUM WINDOW, TYPICAL
6	INSULATED METAL PANEL AND JOIST SUPPORT SYSTEM, TYPICAL
7	INSULATED METAL PANEL SYSTEM, TYPICAL
8	BITUMINOUS BUILT UP ROOFING SYSTEM, TYPICAL
9	CONCRETE BLOCK INFILL WALL, TYPICAL
10	UNDERSLAB VAPOR RETARDER
11	CONCRETE PAN STAIR, GUARDRAIL AND HANDRAIL SYSTEM. DELEGATED DESIGN BY CONTRACTOR



1
430-A-22
BUILDING SECTION

Christine Mondor

Signer Name: Christine Mondor
Signing Reason: I approved this document.
Signing Time: 2025-09-09 09:15:59(EDT)

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

Path: BIM 360://170064 - ALCOSAN Wet Weather PS/170064-A-430V21.rvt

Plot Date: 9/4/2025 1:53:00 PM

Designed by: M.CONTI
Drawn by: S.GRAMKOW
Checked by: D.WALDROP

REVISION			
REV No.	DATE	DESCRIPTION	APPV
0	5/16/25	ISSUE FOR BID	CKM
1	08/28/25	ADD. 11 - COPING REVISION	CKM

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REGISTERED ARCHITECT PENNSYLVANIA CHRISTINE MONDOR No. RA401537

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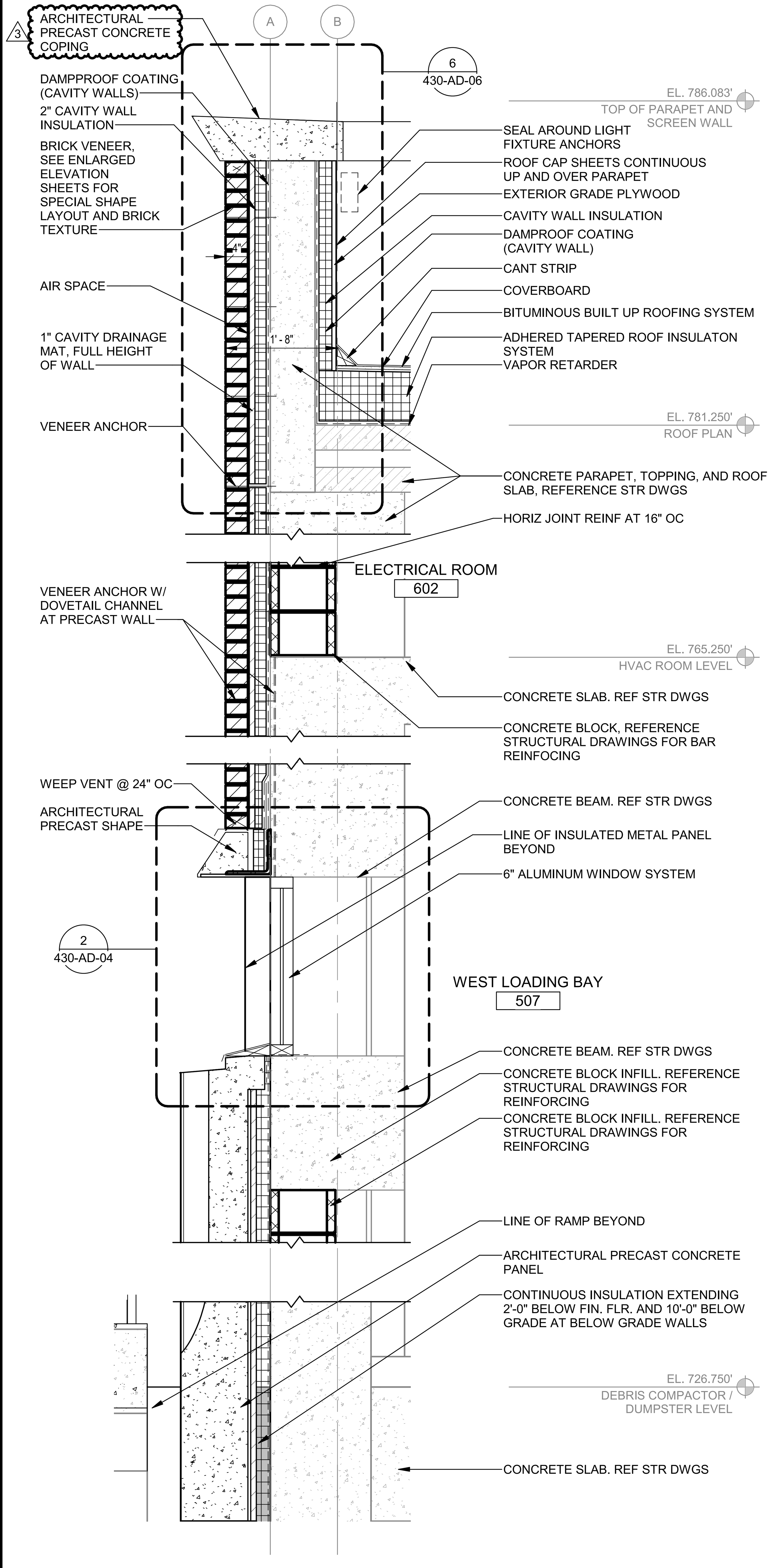
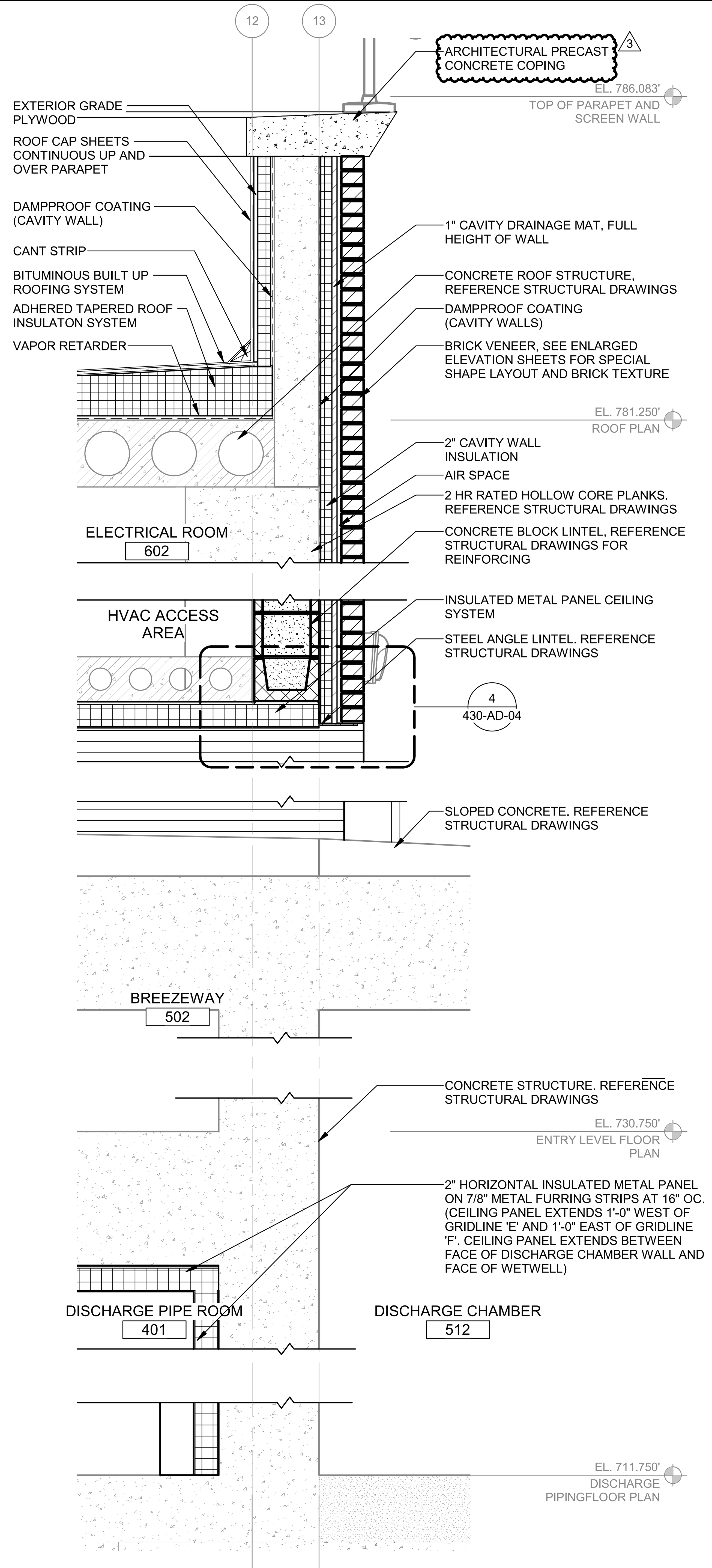
ALLEGHENY COUNTY SANITARY AUTHORITY
WASTEWATER TREATMENT PLANT
WET WEATHER PUMP STATION

430-A-26
ENLARGED BUILDING SECTION 4

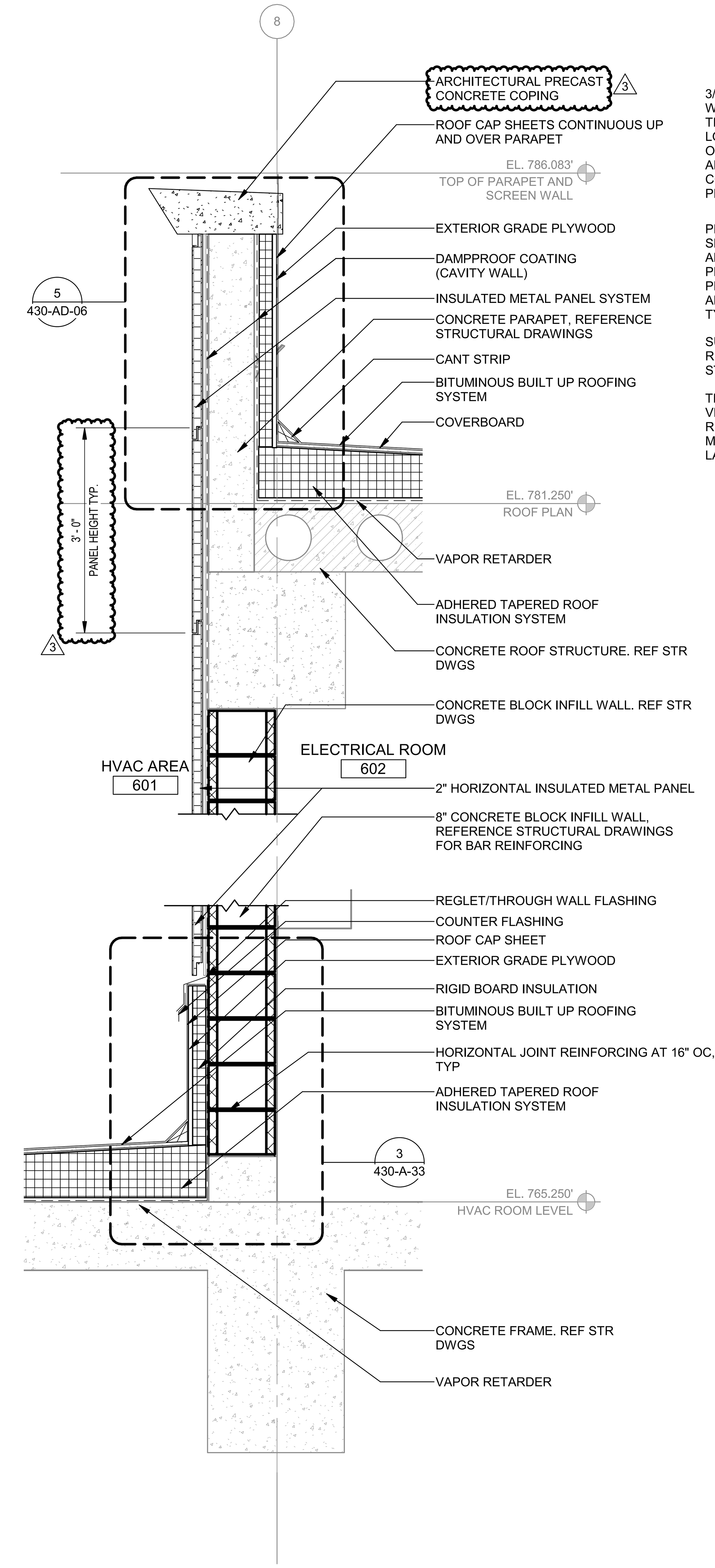
Contract: 1800
CAD File Name:
Date: 5/16/2025
Sheet: 77 of 405



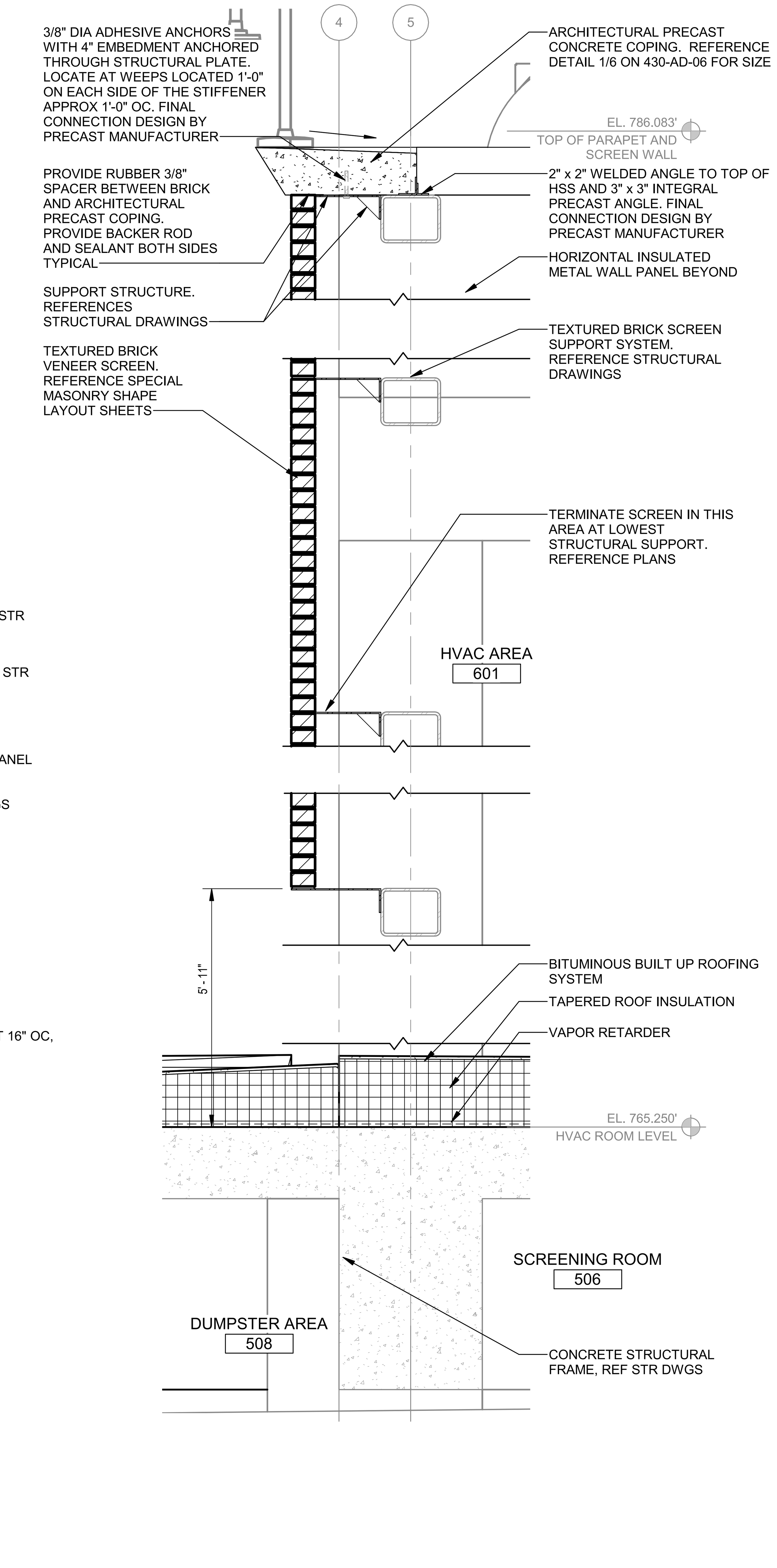
1
430-A-26
WALL SECTION



2
430-A-23
WALL SECTION



3
430-A-23
WALL SECTION



4
430-A-23
WALL SECTION

0 1' 2' 3'
SCALE : 3/4" = 1'-0"

Path: BIM 360://170064 - ALCOSAN Wet Weather PS/170064-A-430V21.rvt

Plot Date: 9/4/2025 1:53:06 PM

Designed by:	M.CONTI
Drawn by:	S.GRAMKOW
Checked by:	D.WALDROP

REVISION

REV No.	DATE	DESCRIPTION	APPV
0	5/16/25	ISSUE FOR BID	CKM
1	07/31/25	ADD. 6 - REVISED DETAILS, NOTES, & FINISH SCHEDULE	CKM
2	08/15/25	ADD. 9 - REVISED DAMPPROOFING AND VAPOR BARRIERS	CKM
3	08/28/25	ADD. 11 - PANEL MODULE SIZE & COPING REVISION	CKM

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Signer Name: Christine Mondor
Signing Reason: I approved this document.
Signing Time: 2025-09-09 09:15:59(EDT)

REGISTERED ARCHITECT PENNSYLVANIA CHRISTINE MONDOR No. RA403537

alcosan allegheny county sanitary authority

ARLETTA SCOTT WILLIAMS
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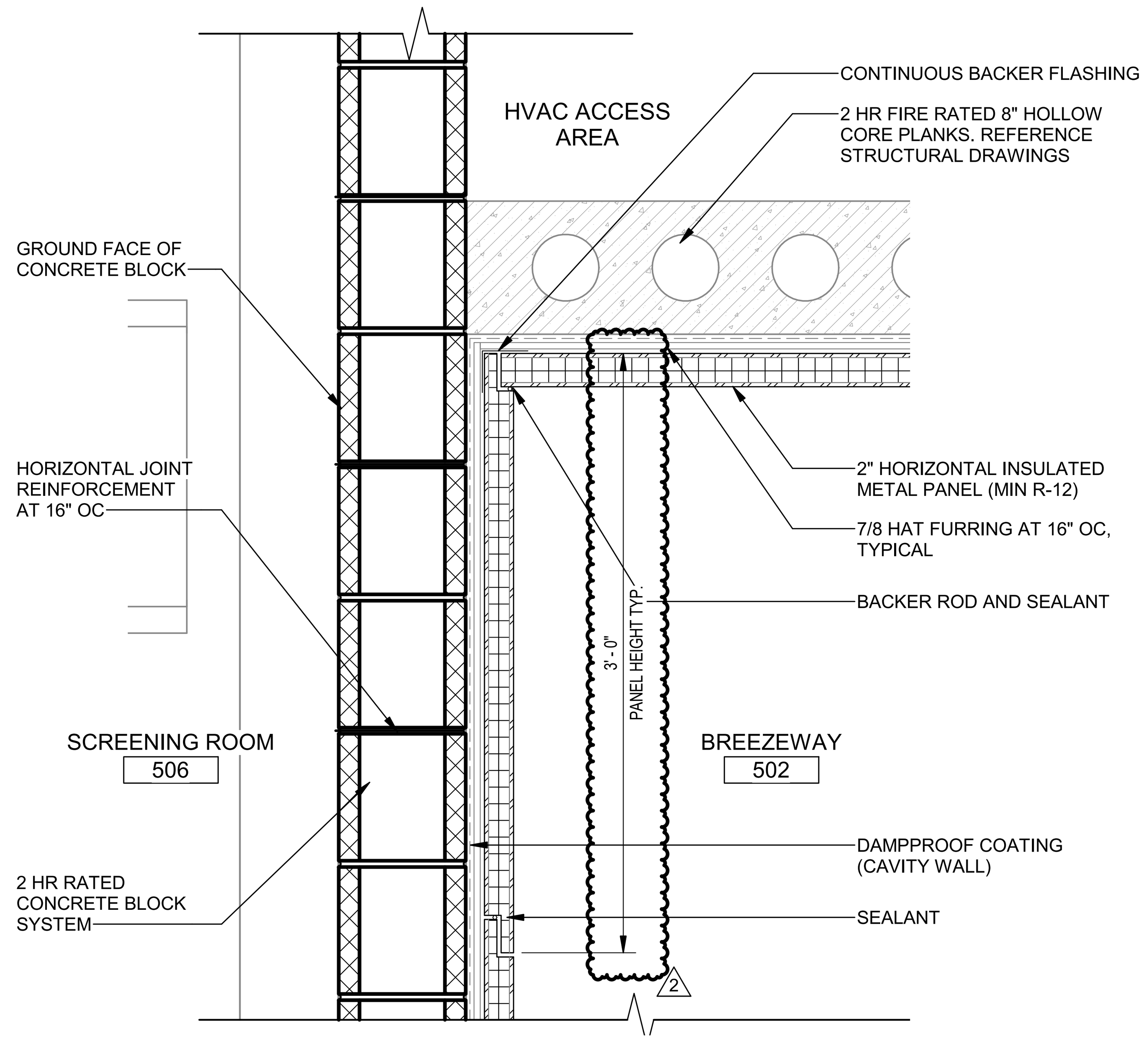
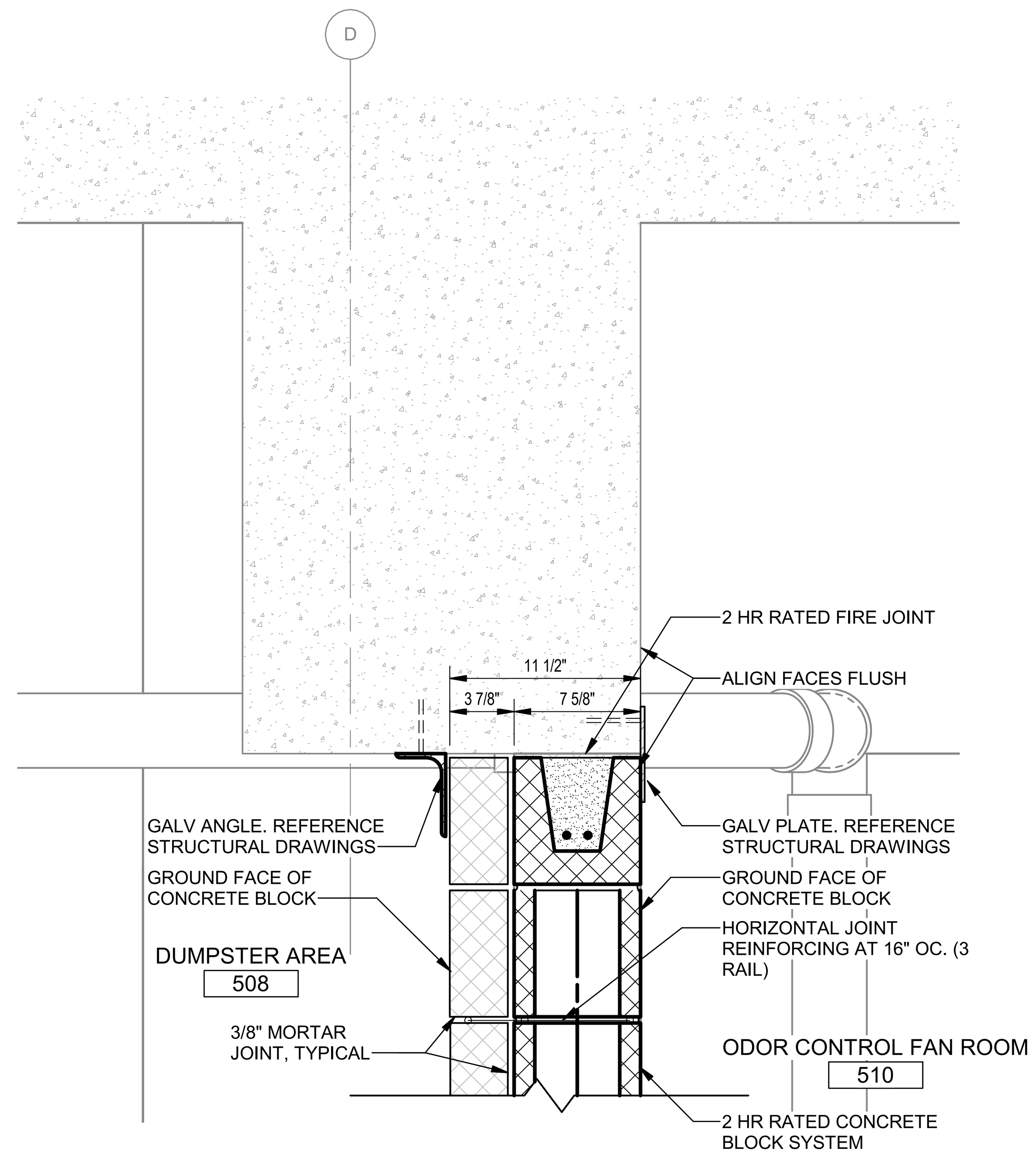
ALLEGHENY COUNTY SANITARY AUTHORITY
WASTEWATER TREATMENT PLANT
WET WEATHER PUMP STATION

430-A-28
WALL SECTIONS 1

Contract:	1800
CAD File Name:	
Date:	5/16/2025
Sheet:	79 of 405

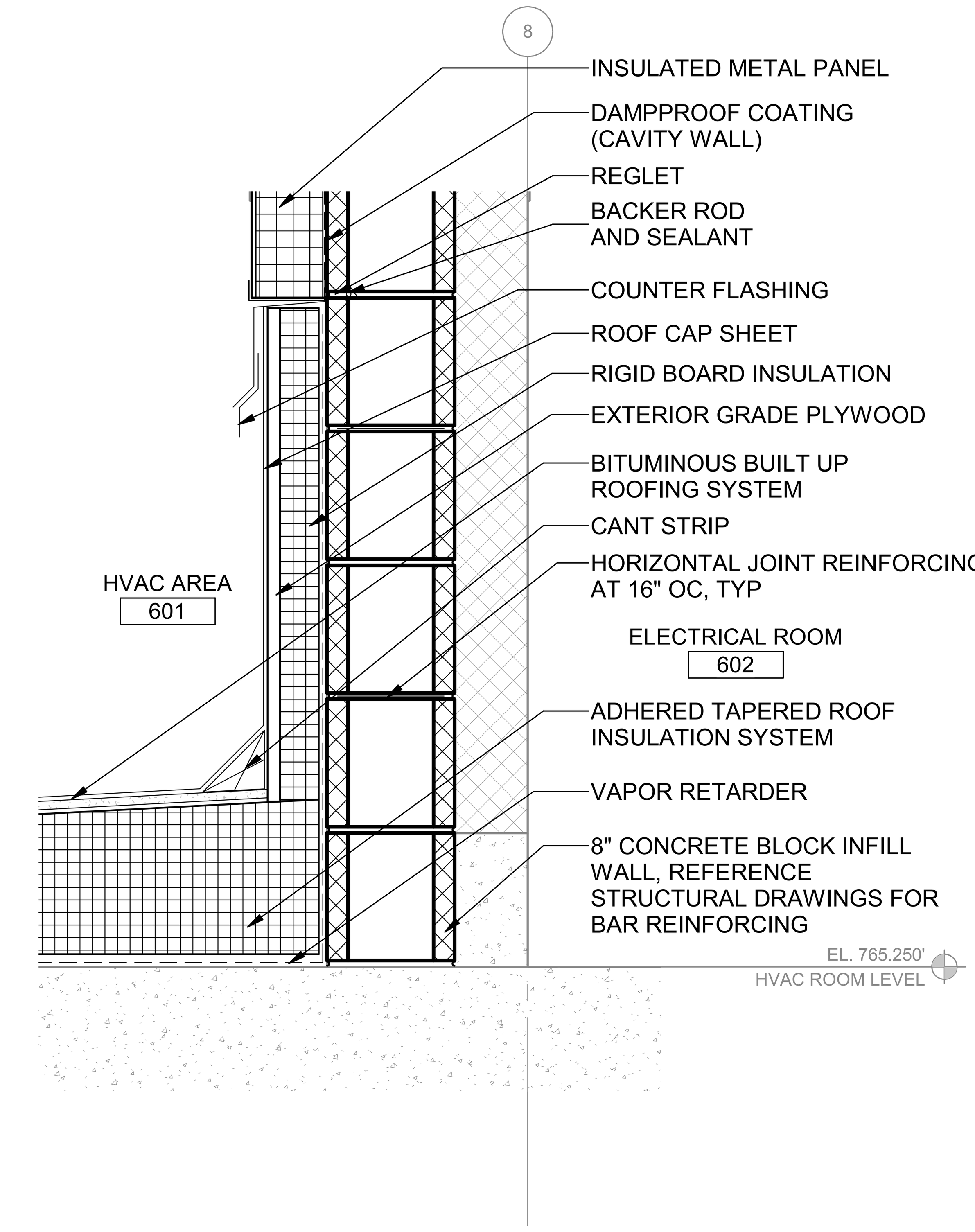


1 BUILDING SECTION - A - DETAIL
430-A-29



NOTE: REFERENCE STRUCTURAL DETAILS FOR FURTHER INFORMATION

2 TOP OF WALL DETAIL
430-A-27



3 HVAC BASE OF WALL DETAIL
430-A-28

Christine Mondor

Signer Name: Christine Mondor
Signing Reason: I approved this document.
Signing Time: 2025-09-09 09:15:59(EDT)

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

Path: BIM 360://170064 - ALCOSAN Wet Weather PS/170064-A-430V21.rvt

Plot Date: 9/4/2025 2:09:07 PM

Designed by: S.GRAMKOW
Drawn by: S.GRAMKOW
Checked by: D.WALDROP

REVISION			
REV No.	DATE	DESCRIPTION	APPV
0	5/16/25	ISSUE FOR BID	CKM
1	08/15/25	ADD. 9 - REVISED DAMPPROOFING AND VAPOR BARRIERS	CKM
2	08/28/25	ADD. 11 - PANEL MODULE SIZE REVISION	CKM

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REGISTERED ARCHITECT PENNSYLVANIA CHRISTINE MONDOR No. RA403537

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ALLEGHENY COUNTY SANITARY AUTHORITY
WASTEWATER TREATMENT PLANT
WET WEATHER PUMP STATION

430-A-33
ENLARGED SECTION DETAILS

Contract: 1800
CAD File Name:
Date: 5/16/2025
Sheet: 84 of 405

DOOR SCHEDULE

NUMBER	DOOR W	DOOR HT	DOOR TYPE	DOOR MAT'L	FRAME W	FRAME HT	FRAME THK	FRAME MAT'L	FRAME TYPE	GLAZING	FINISH	DOOR SECURITY	HARDWARE SET	DETAIL HEAD	DETAIL JAMB	DETAIL SILL	FIRE RATING	REMARKS
BOTTOM FLOOR PLAN																		
S01A	3'-0"	7' - 0"	NG	HM	3' - 4"	7' - 4"	H - 4" / J - 2"	HM	6" DR	TG/FPG	PT	NONE	2	5/430-AD-03	5/430-AD-03	5/430-AD-03	90 MIN	
S02A	3'-0"	7' - 0"	NG	HM	3' - 4"	7' - 4"	H - 4" / J - 2"	HM	6" DR	TG/FPG	PT	NONE	2	5/430-AD-03	5/430-AD-03	5/430-AD-03	90 MIN	
DUTY PUMP FLOOR																		
S01B	3'-0"	7' - 0"	NG	HM	3' - 4"	7' - 4"	H - 4" / J - 2"	HM	6" DR	TG/FPG	PT	NONE	2	5/430-AD-03	5/430-AD-03	5/430-AD-03	90 MIN	
S02B	3'-0"	7' - 0"	NG	HM	3' - 4"	7' - 4"	H - 4" / J - 2"	HM	6" DR	TG/FPG	PT	NONE	2	5/430-AD-03	5/430-AD-03	5/430-AD-03	90 MIN	
MOTOR FLOOR																		
510H	3'-0"	7' - 0"	F	HM	3' - 4"	7' - 4"	H - 4" / J - 2"	HM	3" SR	NONE	PT	NONE	12	1/430-AD-02	1/430-AD-02	1/430-AD-02	90 MIN	REFERENCE DETAIL 6A/6B ON 430-A-19
S01C	3'-0"	7' - 0"	NG	HM	3' - 4"	7' - 4"	H - 4" / J - 2"	HM	6" DR	TG/FPG	PT	NONE	2	5/430-AD-03	5/430-AD-03	5/430-AD-03	90 MIN	
S02C	3'-0"	7' - 0"	NG	HM	3' - 4"	7' - 4"	H - 4" / J - 2"	HM	6" DR	TG/IG	PT	NONE	2	5/430-AD-03	5/430-AD-03	5/430-AD-03	90 MIN	
INTERMEDIATE CRANE SUPPORT FRAMING																		
510E	3'-0"	7' - 0"	F	HM	3' - 4"	7' - 4"	H - 4" / J - 2"	HM	3" SR	NONE	PT	NONE	12	1/430-AD-02	1/430-AD-02	1/430-AD-02	90 MIN	REFERENCE DETAIL 6A/6B ON 430-A-19
510G	3'-0"	7' - 0"	F	HM	3' - 4"	7' - 4"	H - 4" / J - 2"	HM	3" SR	NONE	PT	NONE	12	1/430-AD-02	1/430-AD-02	1/430-AD-02	90 MIN	REFERENCE DETAIL 6A/6B ON 430-A-19
LANDING "L23"																		
510F	3'-0"	7' - 0"	F	HM	3' - 4"	7' - 4"	H - 4" / J - 2"	HM	3" SR	NONE	PT	NONE	12	1/430-AD-02	1/430-AD-02	1/430-AD-02	90 MIN	REFERENCE DETAIL 6A/6B ON 430-A-19
DISCHARGE PIPINGFLOOR PLAN																		
S01D	3'-0"	7' - 0"	NG	HM	3' - 4"	7' - 4"	H - 4" / J - 2"	HM	6" DR	TG/FPG	PT	NONE	2	5/430-AD-03	5/430-AD-03	5/430-AD-03	90 MIN	
S02D	3'-0"	7' - 0"	NG	HM	3' - 4"	7' - 4"	H - 4" / J - 2"	HM	6" DR	TG/FPG	PT	NONE	2	5/430-AD-03	5/430-AD-03	5/430-AD-03	90 MIN	
S03A	3'-0"	7' - 0"	NG	HM	3' - 4"	7' - 4"	H - 4" / J - 2"	HM	6" DR	TG/FPG	PT	NONE	2	4/430-AD-03	4/430-AD-03	4/430-AD-03	90 MIN	
DEBRIS COMPACTOR / DUMPSTER LEVEL																		
507A	14'-0"	14' - 0"	OH	AL	14' - 0"	14' - 0"	MFG	AL	MFG	NONE	AN	CT	13	4/430-AD-02	5/430-AD-02	6/430-AD-02	NONE	MOTOR OPERATED
508B	14'-0"	14' - 0"	OH	AL	14' - 0"	14' - 0"	MFG	AL	MFG	NONE	AN	CT	13	5/430-AD-02	5/430-AD-02	5/430-AD-02	NONE	MOTOR OPERATED - NEMA 7
508C	14'-0"	14' - 0"	OH	AL	14' - 0"	14' - 0"	MFG	AL	MFG	NONE	AN	CT	13	5/430-AD-02	5/430-AD-02	5/430-AD-02	NONE	MOTOR OPERATED - NEMA 7
509A	14'-0"	14' - 0"	OH	AL	14' - 0"	14' - 0"	MFG	AL	MFG	NONE	AN	CT	13	4/430-AD-02	5/430-AD-02	6/430-AD-02	NONE	MOTOR OPERATED
510A	14'-0"	14' - 0"	OH	AL	14' - 0"	14' - 0"	MFG	AL	MFG	NONE	AN	CT	13	5/430-AD-02	5/430-AD-02	5/430-AD-02	NONE	MOTOR OPERATED - NEMA 7
510B	3'-0"	7' - 0"	NG	HM	3' - 4"	7' - 4"	H - 4" / J - 2"	HM	6" DR	TG/IG	PT	NONE	3	3/430-AD-03	3/430-AD-03	7/430-AD-02	NONE	
510C	3'-0"	7' - 0"	NG	HM	3' - 4"	7' - 4"	H - 4" / J - 2"	HM	6" DR	TG/IG	PT	NONE	3	3/430-AD-03	3/430-AD-03	7/430-AD-02	NONE	
ENTRY LEVEL FLOOR PLAN																		
501A	(2) 3'-2"	7' - 0"	DNG	HM	6' - 8"	7' - 4"	H - 4" / J - 2"	HM	6" DED	TG/IG	PT	NONE	6	2/430-AD-03	2/430-AD-03	2/430-AD-03	NONE	
502A	(2) 3'-2"	7' - 0"	DNG	HM	6' - 8"	7' - 4"	H - 4" / J - 2"	HM	6" DR	TG/IG/FPG	PT	NONE	7	1/430-AD-03	1/430-AD-03	1/430-AD-03	90 MIN	LEFT LEAF INACTIVE, CLOSEST TO STAIR
502B	(2) 3'-2"	7' - 0"	DNG	HM	6' - 8"	7' - 4"	H - 4" / J - 2"	HM	6" DR	TG/IG/FPG	PT	NONE	7	1/430-AD-03	1/430-AD-03	1/430-AD-03	90 MIN	RIGHT LEAF INACTIVE, CLOSEST TO STAIR
502C	3'-0"	7' - 0"	NG	HM	3' - 4"	7' - 4"	H - 4" / J - 2"	HM	6" DR	TG/IG/FPG	PT	NONE	4	1/430-AD-03	1/430-AD-03	1/430-AD-03	90 MIN	
503A	3'-0"	7' - 0"	NG	HM	3' - 4"	7' - 4"	H - 4" / J - 2"	HM	6" DR	TG/IG	PT	NONE	3	2/430-AD-03	2/430-AD-03	2/430-AD-03	NONE	
504A	3'-0"	7' - 0"	F	HM	3' - 4"	7' - 4"	H - 4" / J - 2"	HM	6" DR	NONE	PT	NONE	8	4/430-AD-03	4/430-AD-03	4/430-AD-03	NONE	OVERLAP CONCRETE BLOCK JOINT WITH FRAME
505A	3'-0"	7' - 0"	F	HM	3' - 4"	7' - 4"	H - 4" / J - 2"	HM	6" DR	NONE	PT	NONE	9	4/430-AD-03	4/430-AD-03	4/430-AD-03	NONE	OVERLAP CONCRETE BLOCK JOINT WITH FRAME
508A	3'-0"	7' - 0"	NG	HM	3' - 4"	7' - 4"	H - 4" / J - 2"	HM	6" DR	TG/IG	PT	NONE	3	3/430-AD-03	3/430-AD-03	3/430-AD-03	90 MIN	COORD LOCATION OF DOOR IN PRECAST/CMU WITH SLAB SLOPE
S01E	3'-0"	7' - 0"	NG	HM	3' - 4"	7' - 4"	H - 4" / J - 2"	HM	6" DR	TG/FPG	PT	NONE	2	4/430-AD-03	4/430-AD-03	4/430-AD-03	90 MIN	
S01F	3'-0"	7' - 0"	NG	HM	3' - 4"	7' - 4"	H - 4" / J - 2"	HM	6" DR	TG/IG/FPG	PT	NONE	4	2/430-AD-03	2/430-AD-03	2/430-AD-03	90 MIN	
S02E	3'-0"	7' - 0"	NG	HM	3' - 4"	7' - 4"	H - 4" / J - 2"	HM	6" DR	TG/FPG	PT	NONE	2	4/430-AD-03	4/430-AD-03	4/430-AD-03	90 MIN	
S02F	3'-0"	7' - 0"	NG	HM	3' - 4"	7' - 4"	H - 4" / J - 2"	HM	6" DR	TG/IG/FPG	PT	NONE	4	2/430-AD-03	2/430-AD-03	6/430-AD-03	90 MIN	
S03B	3'-0"	7' - 0"	NG	HM	3' - 4"	7' - 4"	H - 4" / J - 2"	HM	6" DR	TG/IG/FPG	PT	NONE	4	1/430-AD-03	1/430-AD-03	1/430-AD-03	90 MIN	
S03C	3'-0"	7' - 0"	NG	HM	3' - 4"	7' - 4"	H - 4" / J - 2"	HM	6" DR	TG/FPG	PT	NONE	2	4/430-AD-03	4/430-AD-03	4/430-AD-03	90 MIN	
HVAC ROOM LEVEL																		
601A	(2) 3'-2"	7' - 0"	DNG	HM	6' - 8"	7' - 4"	H - 4" / J - 2"	HM	6" DR	TG/IG	PT	NONE	11	1/430-AD-03	1/430-AD-03	11/430-AD-02	NONE	SIMILAR SILL CONDITION
602A	(2) 3'-2"	7' - 0"	DNG	HM	6' - 8"	7' - 4"	H - 4" / J - 2"	HM	6" DR	TG/FPG	PT	NONE	5	4/430-AD-03	4/430-AD-03	4/430-AD-03	90 MIN	
603A	3'-0"	7' - 0"	F	HM	3' - 4"	7' - 4"	H - 4" / J - 2"	HM	6" DR	NONE	PT	NONE	1	4/430-AD-03	4/430-AD-03	4/430-AD-03	90 MIN	
604A	3'-0"	7' - 0"	NG	HM	3' - 4"	7' - 4"	H - 4" / J - 2"	HM	6" DR	TG/IG	PT	NONE	10	11/430-AD-02	11/430-AD-02	11/430-AD-02	NONE	
S01G	3'-0"	7' - 0"	NG	HM	3' - 4"	7' - 4"	H - 4" / J - 2"	HM	6" DR	TG/FPG	PT	NONE	2	4/430-AD-03	4/430-AD-03	4/430-AD-03	90 MIN	
S03D	3'-0"	7' - 0"	NG	HM	3' - 4"	7' - 4"	H - 4" / J - 2"	HM	6" DR	TG/FPG	PT	NONE	1	4/430-AD-03	4/430-AD-03	4/430-AD-03	90 MIN	
ROOF PLAN																		
S01H	3'-0"	7' - 0"	NG	HM	3' - 4"	7' - 4"	2"	HM	6" DR	TG/IG/FPG	PT	NONE	10	1/430-AD-03	1/430-AD-03	11/430-AD-02	90 MIN	SIMILAR DETAIL, REPLACE CMU WITH CONCRETE
S02O	3'-0"	7' - 0"	NG	HM	4' - 4"	7' - 4"	2"	HM	6" DR	TG/IG/FPG	PT	NONE	10	1/430-AD-03	1/430-AD-03	11/430-AD-02	90 MIN	SIMILAR DETAIL, REPLACE CMU WITH CONCRETE

GENERAL DOOR NOTES:
1. PROVIDE ALL EXTERIOR AND INTERIOR WINDOWS WITH CLEAR, TEMPERED, INSULATION FLOAT GLASS UNITS 1" THICK (EXTERIOR WINDOWS TINTED), UNLESS OTHERWISE NOTED.
2. ALL DOORS TO BE INSULATED AS PER ENERGY CODE REQUIREMENTS.
3. COORDINATE FINAL COLOR SELECTION WITH OWNER

ROOM FINISH SCHEDULE

ROOM NUMBER	ROOM NAME	FLOOR MATERIAL	FLOOR COLOR	BASE FINISH	NORTH MATERIAL	NORTH FINISH	EAST MATERIAL	EAST FINISH	SOUTH MATERIAL	SOUTH FINISH	WEST MATERIAL	WEST FINISH	CEILING MATERIAL	CEILING HEIGHT	REMARKS
Not Placed															
514	CONTROL ROOM														
BOTTOM FLOOR PLAN															
101	BOTTOM FLOOR	CONC-S	C	CONC-W	CONC-W	PT/ NOTE 1	CONC-W	PT / NOTE 1	CONC-W	PT / NOTE 1	CONC-W	PT / NOTE 1	CONC	10' - 4"	
E01	ELEVATOR	CONC-S	C	CONC-W	CONC-W	N	CONC-W	N	CONC-W	N	CONC-W	N	CONC	243' - 0"	
S01	STAIR 1	CONC-S	C	CONC-W	CONC-W	PT/ NOTE 2	CONC-W	PT / NOTE 2	CONC-W	PT / NOTE 2	CONC-W	PT / NOTE 2	CONC	244' - 0"	
S02	STAIR 2	CONC-S	C	CONC-W	CONC-W	PT/ NOTE 2	CONC-W	PT / NOTE 2	CONC-W	PT / NOTE 2	CONC-W	PT / NOTE 2	CONC	195' - 0"	
DUTY PUMP FLOOR															
201	DUTY PUMP FLOOR	CONC-S	N	CMU	CONC-W	PT/ NOTE 1	CONC-W	PT / NOTE 1	CONC-W	PT / NOTE 1	CONC-W	PT / NOTE 1	CONC	30' - 3"	
MOTOR FLOOR															
301	MOTOR FLOOR	CONC-S	C	CONC-W	CONC-W	PT/ NOTE 1	CONC-W	PT / NOTE 1	CONC-W	PT / NOTE 1	CONC-W	PT / NOTE 1	CONC	114' - 5"	
DISCHARGE PIPINGFLOOR PLAN															
401	DISCHARGE PIPE ROOM	CONC-S	N	IMP	IMP	FF	CONC-W	N	CONC-W	N	CONC-W	N	IMP	17' - 0"	IMP CEILING FINISH INDICATES PARTIAL CEILING COVERAGE - REFERENCE WALL SECTION 2 ON SHEET 430-A-28
S03	STAIR 3	CONC-S	N	CMU	CONC-W	PT/ NOTE 2	CMU	PT / NOTE 2	CMU	PT / NOTE 2	CMU	N	CONC	68' - 6"	
ENTRY LEVEL FLOOR PLAN															
501	PUMP LOADOUT AREA WEST	CONC-H	C	CMU-G	CMU-G	FF	CMU-G	FF	CMU-G	FF	CMU-G	FF	CONC	33' - 6"	
502	BREEZEWAY	CONC-H	C	IMP	NONE	N/A	IMP	FF	IMP	FF	IMP	FF	IMP	33' - 6"	
503	PUMP LOADOUT AREA EAST	CONC-H	C	CMU-G	CMU-G	FF	CMU-G	FF	CMU-G	FF	CMU-G	FF	CONC	33' - 6"	
504	JANITORS CLOSET	CONC-H	C	CMU-G	CONC-W	N	CONC-W	N	CMU-G	FF	CMU-G	FF	CONC	12' - 0"	
505	RESTROOM	CONC-H	C	CMU-G	CMU-G	FF	CMU-G	FF	CMU-G	FF	CMU-G	FF	CONC	12' - 0"	
506	SCREENING ROOM	CONC-H	C	CMU-G	CMU-G	N	CMU-G	N	CMU-G	N	CMU-G	N	CONC	33' - 6"	
507	WEST LOADING BAY	CONC-H	C	CONC-W	CONC-W	N	CONC-W	N	CONC-W	N	CONC-W	N	CONC	37' - 6"	
508	DUMPSTER AREA	CONC-H	C	CMU-G	CMU-G	FF	CMU-G	FF	CMU-G	FF	CMU-G	FF	CONC	36' - 6"	
509	EAST LOADING BAY	CONC-H	C	CONC-W	CONC-W	N	CONC-W	N	CONC-W	N	CONC-W	N	CONC	37' - 6"	
510	ODOR CONTROL FAN ROOM	CONC-H	C	CMU-G	CMU-G	N	CMU-G	N	CMU-G	N	CMU-G	N	CONC	36' - 6"	
511	CORRIDOR	CONC-S	C	CMU-G	CMU-G	N	CMU-G	N	CMU-G	N	CMU-G	N	CONC	12' - 0"	
HVAC ROOM LEVEL															
601	HVAC AREA	R	C	IMP	IMP	FF	SW	FF	SW	FF	IMP	FF	NONE		
602	ELECTRICAL ROOM	CONC-H	C	CMU-G	CMU-G	FF	CMU-G	FF	CMU-G	FF	CMU-G	FF	CONC	15' - 0"	
603	ELEV CONTROL RM	CONC-H	C	CMU	CMU	N	CONC-W	N	CMU	N	CMU	N	CONC	15' - 0"	
ROOF PLAN															
605	VESTIBULE	CONC-S	C	CONC-W	CONC-W	N	CONC-W	N	CONC-W	N	CONC-W	N	CONC		
Grand total: 24															

ROOM FINISH NOTES:
1. AT ALL BELOW GRADE FLOORS (TOTAL OF 4). PROVIDE INTERIOR FACE OF EXTERIOR CONCRET WALLS WITH A PAINTED FINISH FROM FINISHED FLOOR TO 10'-0" ABOVE.
2. PAINT N/S/E/W INTERIOR STAIR CONCRETE/CONCRETE BLOCK WALLS AT EACH FLOOR WITH FROM TOP OF LANDING TO 10'-0" ABOVE.

MATERIAL LEGEND

ACT	2' X 2' ACOUSTICAL CEILING TILES
B	BRICK
CMU	CONCRETE MASONRY UNITS
CMU-G	GROUND CONCRETE MASONRY UNITS
CONC	CONCRETE
CONC-C	CONCRETE CURB
CONC-H	CONCRETE WITH HARDENER
CONC-S	CONCRETE WITH SEALER
CONC-W	CONCRETE WALL
IMP	INSULATED METAL WALL PANEL
P-C	PRECAST CONCRETE PANEL
PT	PAINT

MATERIAL LEGEND

R	ROOF
SW	SCREEN BRICK WALL
VB	VINYL BASE

FINISH KEY

E	EXISTING - NO WORK
P1	PAINTED - SEMI GLOSS
P2	PAINTED - FLAT
N	NO ADDITONAL FINISH
FF	FACTORY FINISH
C	CLEAR

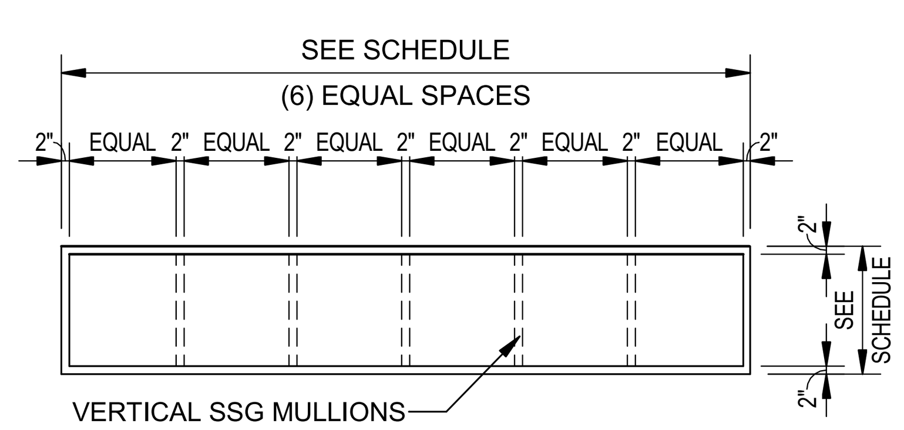
WINDOW SCHEDULE

MARK	TYPE	WIDTH	HEIGHT	GLAZING TYPE	FRAME	VERTICAL MULLION	HEAD DETAIL	JAMB DETAIL	SILL DETAIL	SILL HEIGHT	COMMENTS
W1	C	12' - 0"	2' - 8"	TEMPERED GLASS	ALUMINUM	ALUMINUM	2/430-AD-04	2/430-AD-04	2/430-AD-04	+10'-0"	
W2	C	13' - 0"	2' - 8"	TEMPERED GLASS	ALUMINUM	ALUMINUM	2/430-AD-04	2/430-AD-04	2/430-AD-04	+10'-0"	
W3	C	13' - 6"	2' - 8"	TEMPERED GLASS	ALUMINUM	ALUMINUM	2/430-AD-04	2/430-AD-04	2/430-AD-04	+10'-0"	
W4	C	12' - 6"	2' - 8"	TEMPERED GLASS	ALUMINUM	ALUMINUM	2/430-AD-04	2/430-AD-04	2/430-AD-04	+10'-0"	
W5	E	23' - 6"	2' - 8"	TEMPERED GLASS	ALUMINUM	ALUMINUM	2/430-AD-04	2/430-AD-04	2/430-AD-04	+10'-0"	
W6	E	22' - 9"	2' - 8"	TEMPERED GLASS	ALUMINUM	ALUMINUM	2/430-AD-04	2/430-AD-04	2/430-AD-04	+10'-0"	
W7	B	10' - 3"	2' - 8"	TEMPERED GLASS	ALUMINUM	ALUMINUM	2/430-AD-04	2/430-AD-04	2/430-AD-04	+10'-0"	
W8	C	12' - 0"	2' - 8"	TEMPERED GLASS	ALUMINUM	ALUMINUM	2/430-AD-04	2/430-AD-04	2/430-AD-04	+10'-0"	
W9	C	13' - 0"	2' - 8"	TEMPERED GLASS	ALUMINUM	ALUMINUM	2/430-AD-04	2/430-AD-04	2/430-AD-04	+10'-0"	
W10	C	13' - 6"	2' - 8"	TEMPERED GLASS	ALUMINUM	ALUMINUM	2/430-AD-04	2/430-AD-04	2/430-AD-04	+10'-0"	
W11	C	12' - 6"	2' - 8"	TEMPERED GLASS	ALUMINUM	ALUMINUM	2/430-AD-04	2/430-AD-04	2/430-AD-04	+10'-0"	
W12	E	23' - 6"	2' - 8"	TEMPERED GLASS	ALUMINUM	ALUMINUM	2/430-AD-04	2/430-AD-04	2/430-AD-04	+10'-0"	
W13	A	5' - 0"	2' - 8"	TEMPERED GLASS	ALUMINUM	ALUMINUM	2/430-AD-04	2/430-AD-04	2/430-AD-04	+10'-0"	
W14	D	15' - 7"	2' - 8"	TEMPERED GLASS	ALUMINUM	ALUMINUM	2/430-AD-04	2/430-AD-04	2/430-AD-04	+10'-0"	
W15	B	10' - 3"	2' - 8"	TEMPERED GLASS	ALUMINUM	ALUMINUM	2/430-AD-04	2/430-AD-04	2/430-AD-04	+10'-0"	

GENERAL WINDOW NOTES:
1. PROVIDE ALL EXTERIOR AND INTERIOR WINDOWS WITH CLEAR, TEMPERED, INSULATION FLOAT GLASS UNITS 1" THICK (EXTERIOR WINDOWS TINTED), UNLESS OTHERWISE NOTED.
2. ALL WINDOWS TO BE INSULATED AS PER ENERGY CODE REQUIREMENTS.
3. PROVIDE METAL SILL PAN WITH END DAMS AT EACH EXTERIOR WINDOW/STOREFRONT ASSEMBLY, WITH CONTINOUS BACKER ROD AND SEALANT

DOOR LEGEND

VP	VISION PANEL	HL	HALF-LIGHT	MFR	MANUFACTURER
FG	FIRE GLASS	HM	HOLLOW METAL DOOR AND FRAME	TG	TEMPERED GLASS
AL	ALUMINUM	IG	INSULATED GLASS	CR	CARD READER
SR	SINGLE RABBIT FRAME	DR	DOUBLE RABBIT FRAME	DED	DOUBLE EGRESS DOOR FRAME



WINDOW TYPE D

LOUVER SCHEDULE

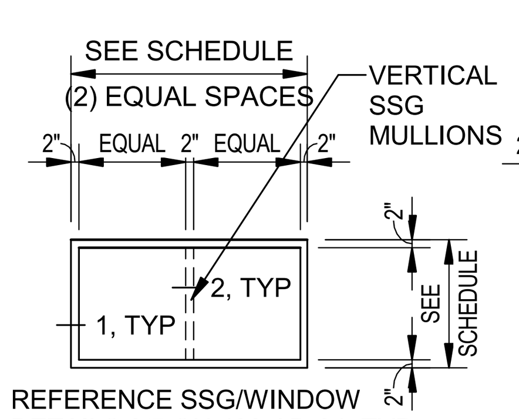
LOUVER	LOUVER TYPE	HEIGHT	WIDTH	HEAD	JAMB	SILL	COMMENTS
L1	A	1' - 6"	1' - 6"	1/430-AD-04	1/430-AD-04	1/430-AD-04	

GENERAL LOUVER NOTES:
1. ALL LOUVERS SHALL BE 6" DRAINABLE LOUVERS
2. PROVIDE ALL LOUVERS WITH SS REMOVABLE INSECT SCREEN
3. ALL LOUVER SUPPORTS AND ANCHORAGE SHALL BE DESIGNED BY THE CONTRACTOR AND/OR MANUFACTURER

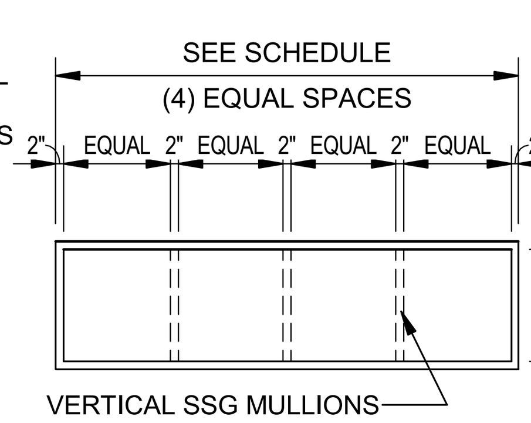
EXTERIOR MATERIAL FINISH AND COLOR SCHEDULE

MATERIAL	COLOR
BRICK	EMERALD GREEN BY GLEN-GERY OR APPROVED EQUAL
OVERHEAD COILING DOOR	CHARCOAL BY CORNELL DOORS INC OR APPROVED EQUAL
INSULATED METAL PANEL	SLATE GRAY BY CENTRIA OR APPROVED EQUAL (COLOR SELECTION FROM THE MANUFACTURER'S CUSTOM COLOR SELECTION)
METAL COPING	TO MATCH OVERHEAD COILING DOOR/INSULATE METAL PANELS
DOOR & FRAME	TO MATCH OVERHEAD COILING DOOR/INSULATE METAL PANELS
LOUVER & FRAME	TO MATCH OVERHEAD COILING DOOR/INSULATE METAL PANELS
WINDOW FRAMES	TO MATCH OVERHEAD COILING DOOR/INSULATE METAL PANELS
GUTTER/DOWNSPOUT	TO MATCH OVERHEAD COILING DOOR/INSULATE METAL PANELS
GUTTER	TO MATCH OVERHEAD COILING DOOR/INSULATE METAL PANELS
CONCRETE BOLLARDS	SAFETY YELLOW
PRECAST CONCRETE	INTEGRAL COLOR 'FOG' (1410 LIGHT SAND BLASTED) BY HIGH CONCRETE OR APPROVED EQUAL

2



WINDOW TYPE A



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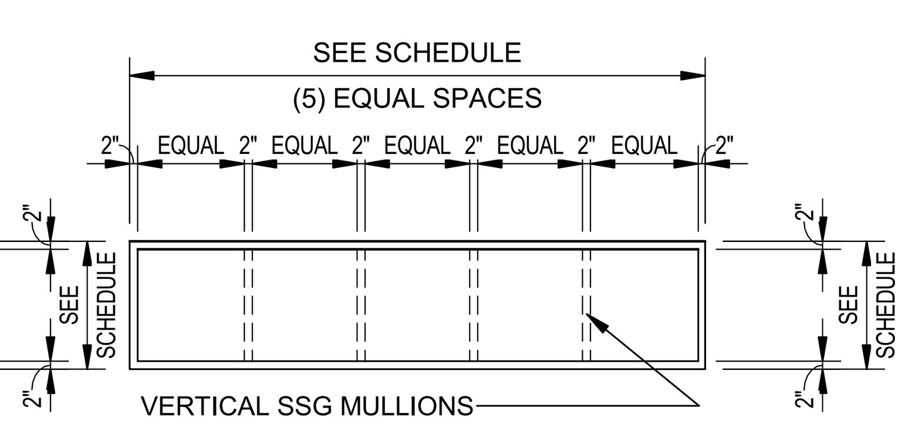
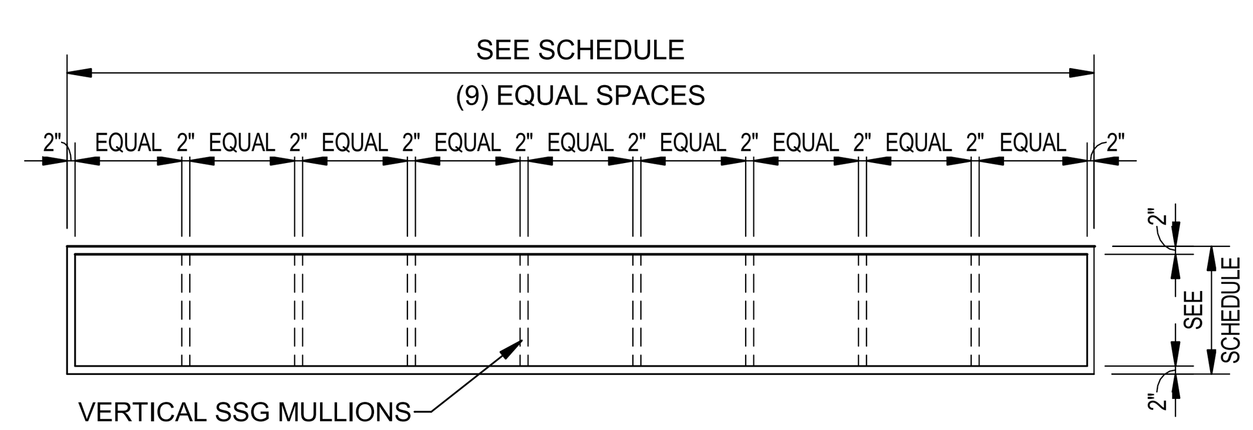
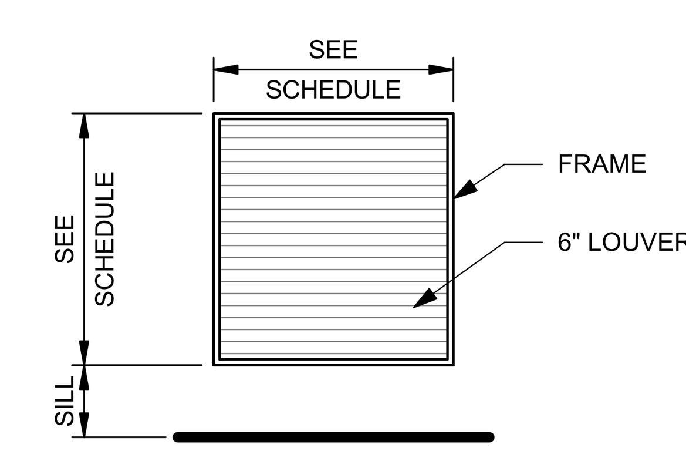


WINDOW TYPE C



WINDOW TYPE E



LOUVER TYPE A

Designed by: M.CONTI	REV No.	DATE	DESCRIPTION	APPV
Drawn by: S.GRAMKOW	0	5/16/25	ISSUE FOR BID	CKM
Checked by: D.WALDROP	1	07/31/25	ADD. 6 - REVISED DETAILS, NOTES, & FINISH SCHEDULE	CKM
	2	08/28/25	ADD. 11 - PANEL FINISH REVISION	CKM

REVISION

Brown AND Caldwell

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Signer Name: Christine Mondor
Signing Reason: I approved this document.
Signing Time: 2025-09-09 09:15:59(EDT)

REGISTERED ARCHITECT PENNSYLVANIA CHRISTINE MONDOR No. RA403 157 — 20 AUG 2025

alcosan allegheny county sanitary authority

ARLETTA SCOTT WILLIAMS
EXECUTIVE DIRECTOR, ALCOSAN

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PITTSBURGH, PA 15233
(412) 766 - 4810

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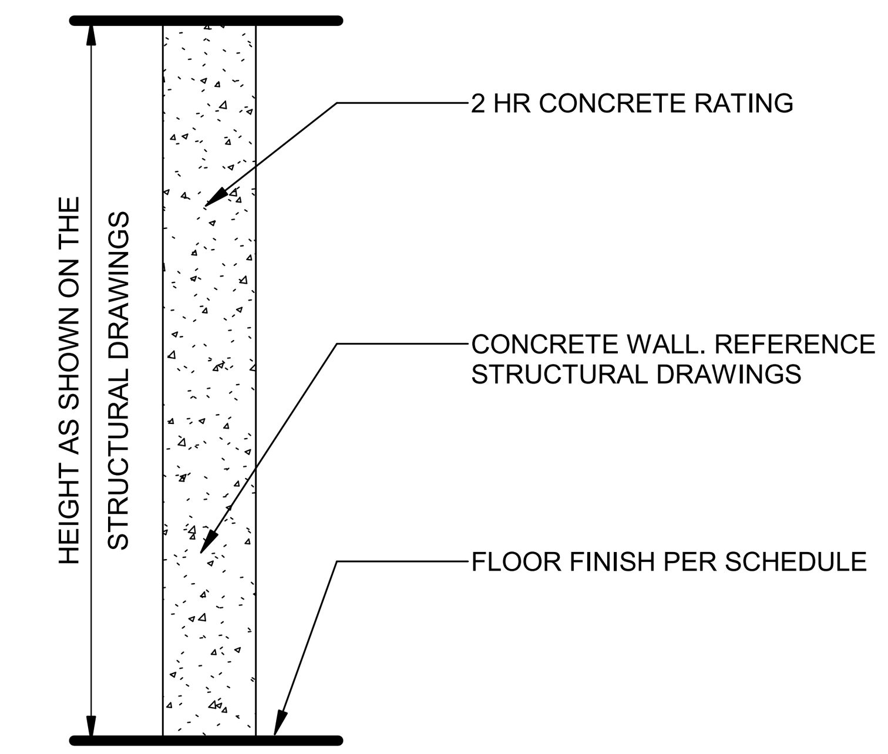
ALLEGHENY COUNTY SANITARY AUTHORITY
WASTEWATER TREATMENT PLANT
WET WEATHER PUMP STATION

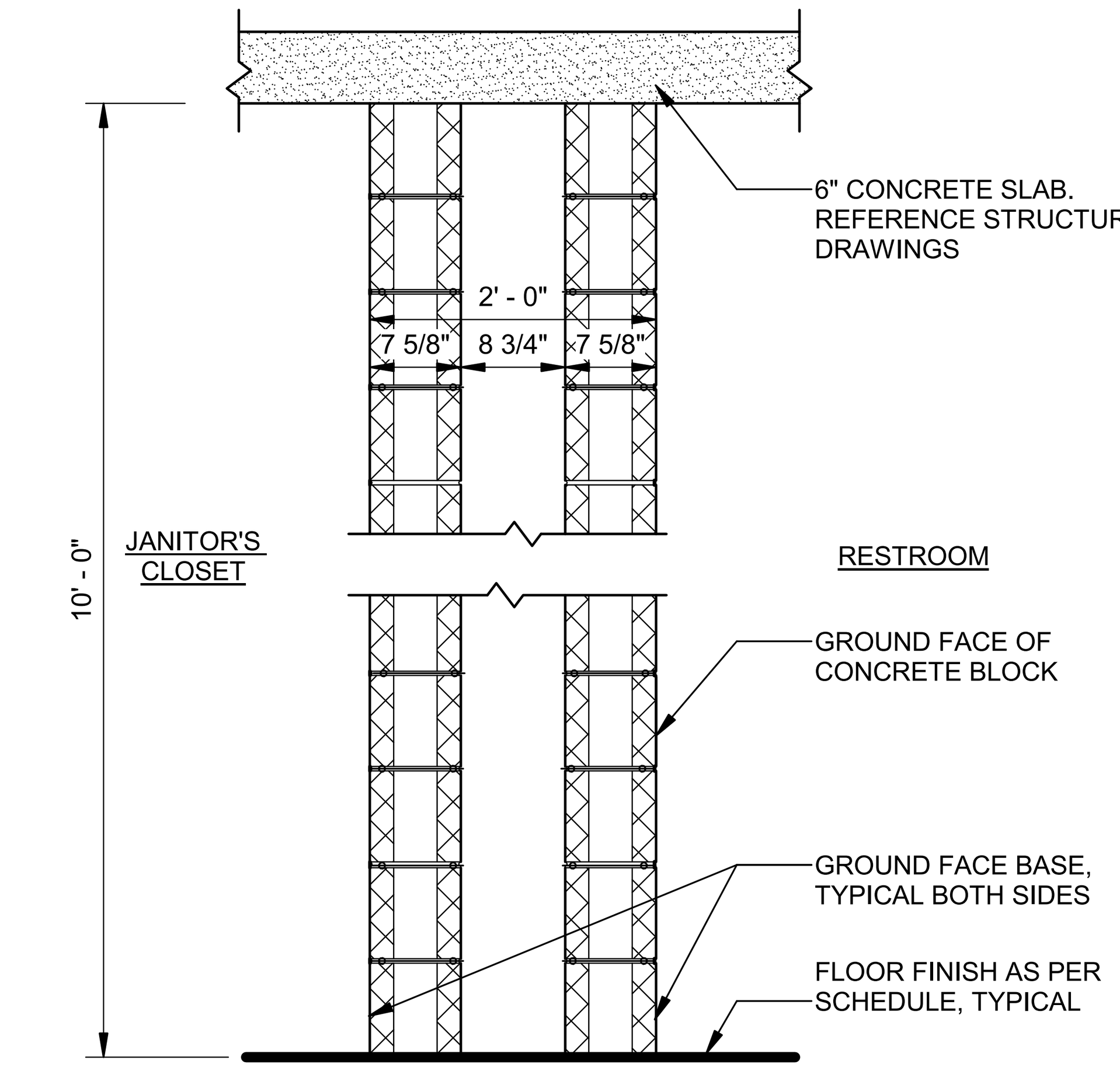
430-AS-01
ROOM FINISH, DOOR, AND WINDOW SCHEDULE

Contract: 1800
CAD File Name:
Date: 5/16/2025
Sheet: 100 of 405

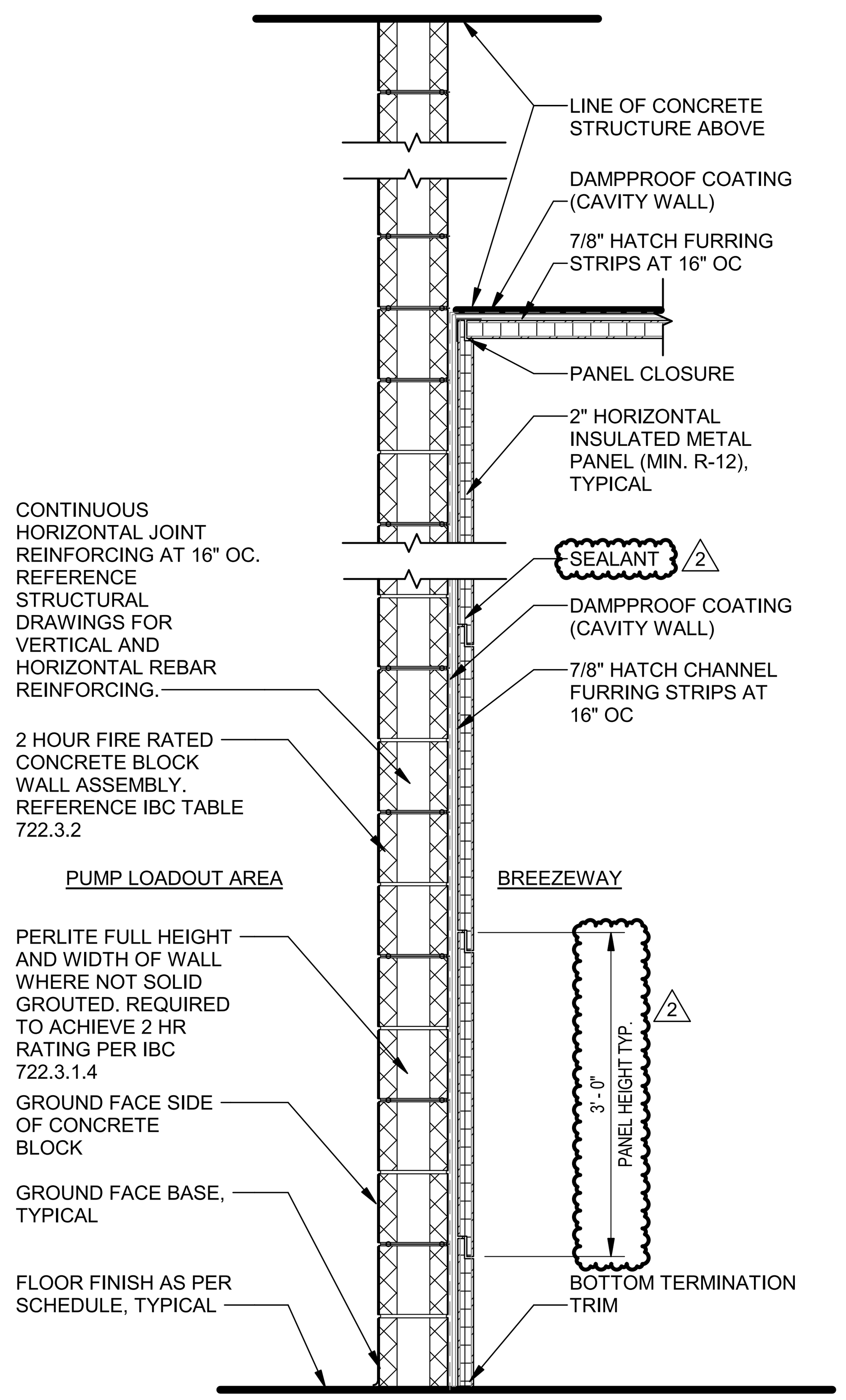
Path: BIM 360://170064 - ALCOSAN Wet Weather PS/170064-A-430V21.rvt
Plot Date: 9/4/2025 1:53:49 PM



4 WALL TYPE E
NTS

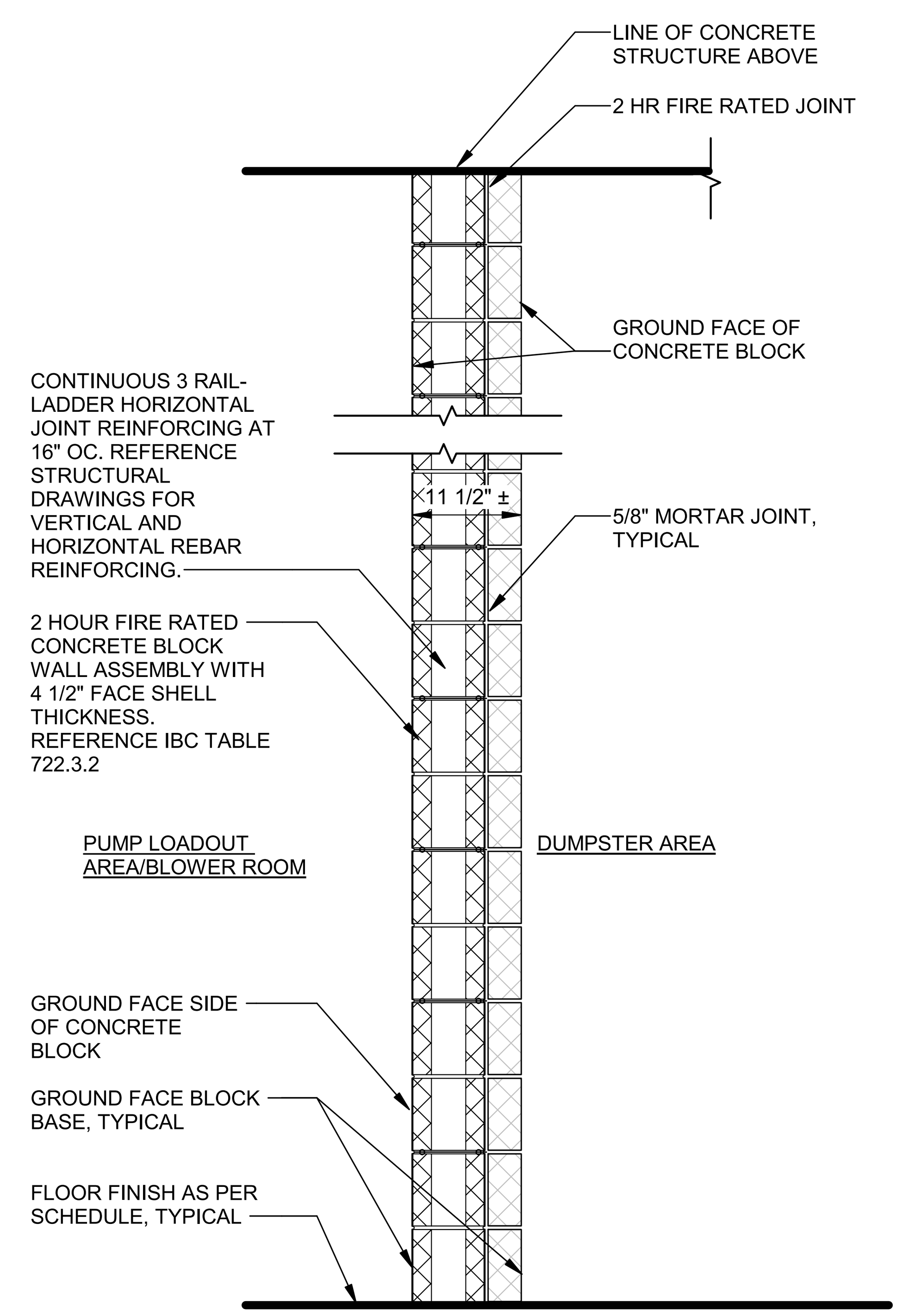


5 WALL TYPE F
NTS



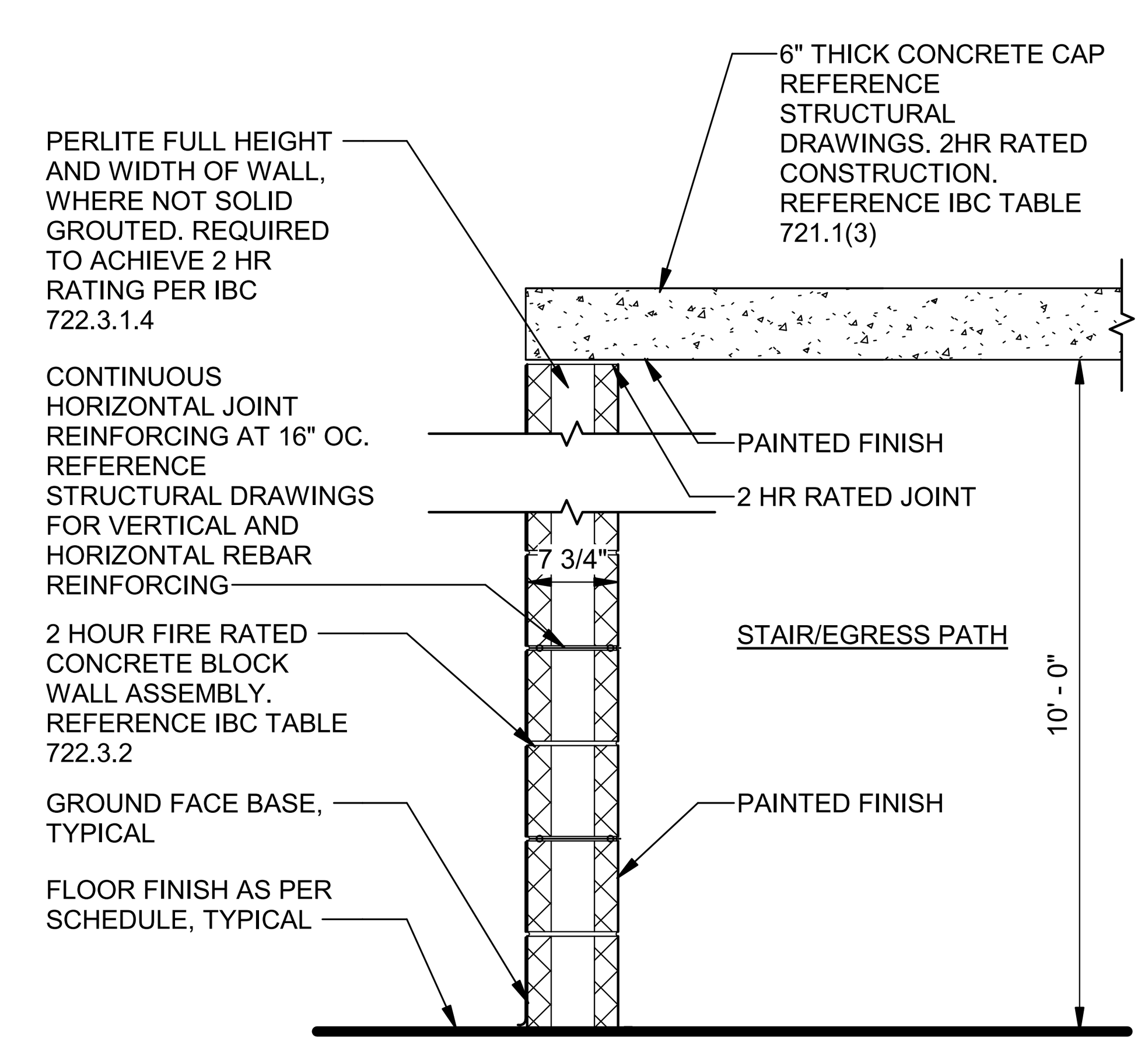
WHERE A1 IS DENOTED, THE CONCRETE BLOCK IS NOT GLAZED.

1 WALL TYPE A, A1
NTS



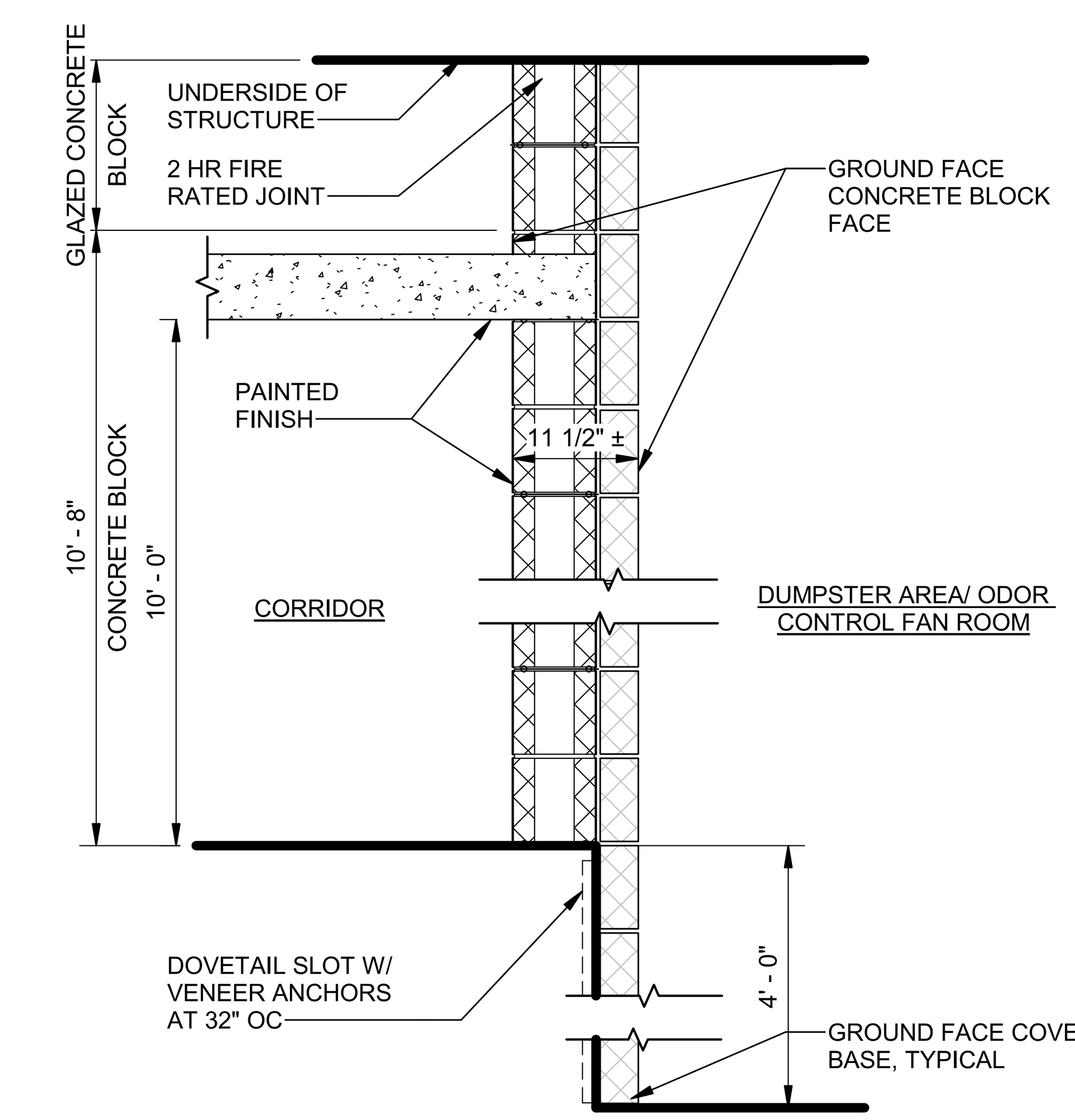
B1 DENOTES A 10'-0" HIGH WALL TO UNDERSIDE OF 6" CONCRETE SLAB.SIMILAR TO WALL TYPE C

2 WALL TYPE B, B1
NTS



C1 DENOTES WALL SYSTEM EXTEND TO THE UNDERSIDE OF THE STRUCTURE OF NEXT FLOOR ABOVE, SIMILAR TO WALL TYPE B
C2 DENOTES TYPE C WALL WITH 6" CONCRETE CAP EXTENDING PASS FACE OF GROUNDFACE CONCRETE BLOCK

3 WALL TYPE C, C1, C2
NTS



D1 DENOTES GROUND FACE VENEER EXTENDS DOWN TO FINISHED FLOOR

6 WALL TYPE D, D1
NTS

Path: BIM 360://170064 - ALCOSAN Wet Weather PS/170064-A-430V21.rvt

Plot Date: 9/4/2025 1:53:19 PM

Designed by:	B.GOMEZ
Drawn by:	D.DIDASA
Checked by:	D.WALDROP

REVISION

REV No.	DATE	DESCRIPTION	APPV
0	5/16/25	ISSUE FOR BID	CKM
1	08/15/25	ADD. 9 - REVISED DAMPPROOFING AND VAPOR BARRIERS	CKM
2	08/28/25	ADD. 11 - PANEL MODULE SIZE REVISION	CKM

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Signer Name: Christine Mondor
Signing Reason: I approved this document.
Signing Time: 2025-09-09 09:15:59(EDT)

REGISTERED ARCHITECT PENNSYLVANIA CHRISTINE MONDOR No. RA403537

alcosan allegheny county sanitary authority

ARLETTA SCOTT WILLIAMS
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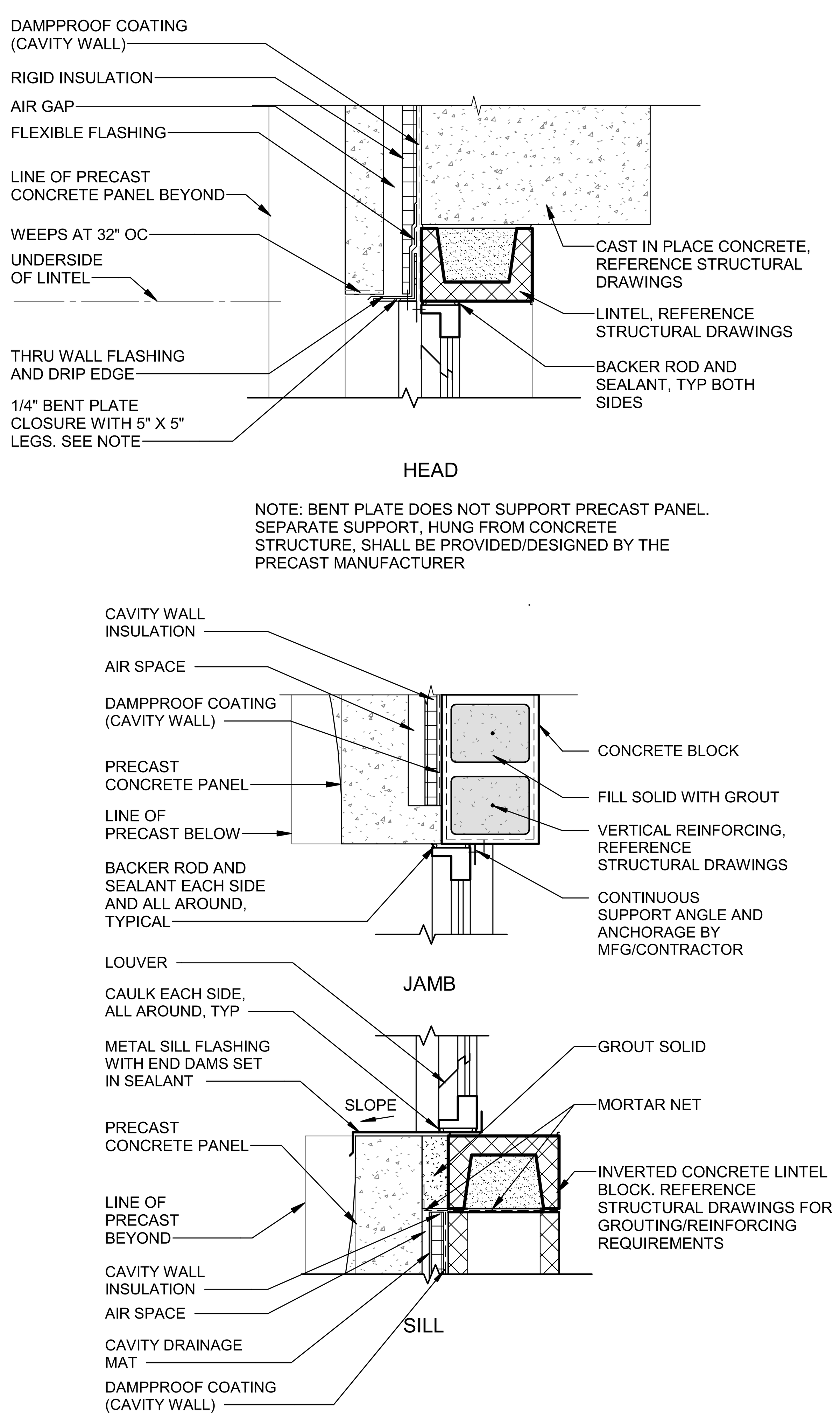
ALLEGHENY COUNTY SANITARY AUTHORITY
WASTEWATER TREATMENT PLANT
WET WEATHER PUMP STATION

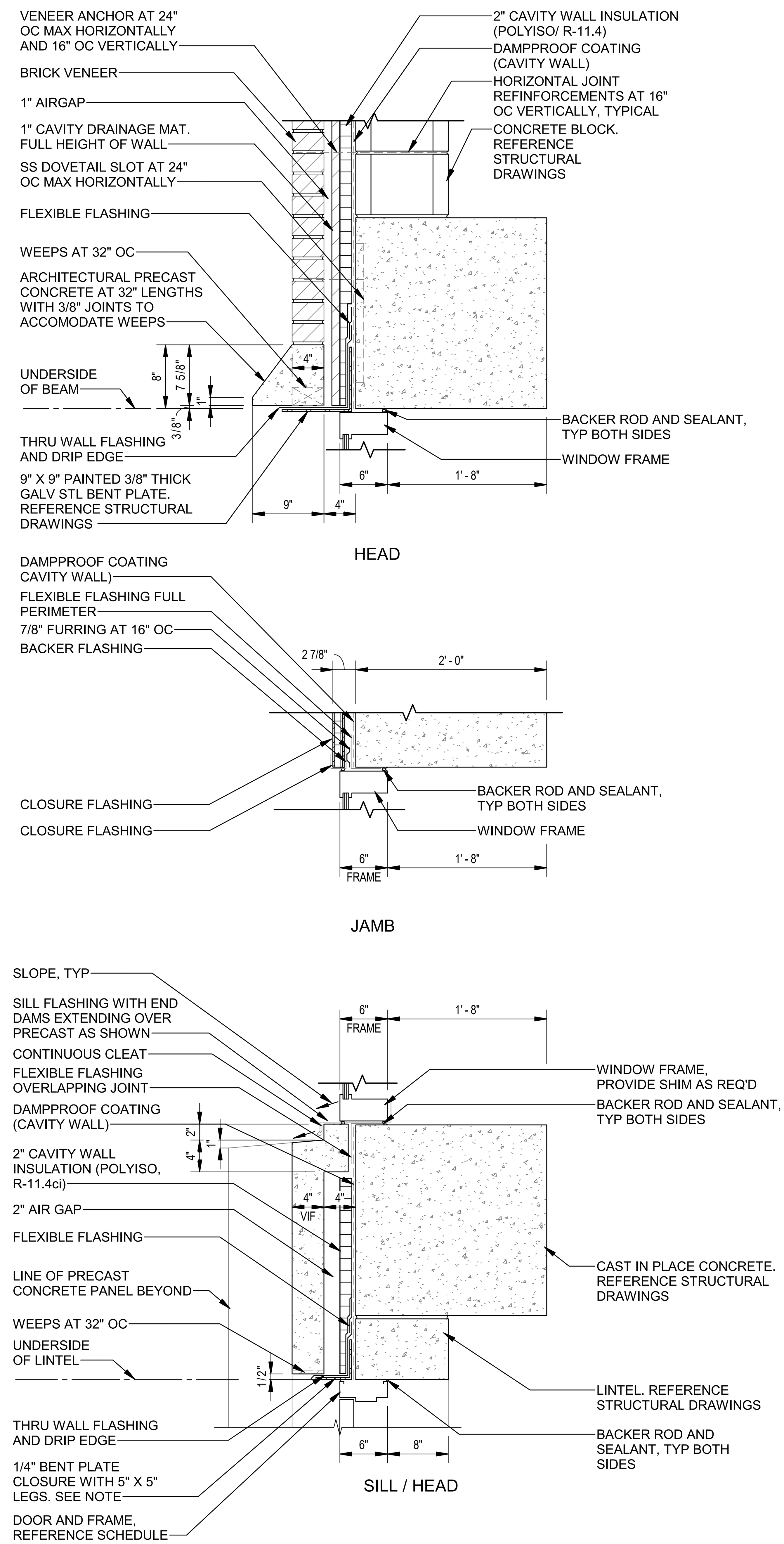
430-AD-01
WALL AND PARTITION TYPES

Contract:	1800
CAD File Name:	
Date:	5/16/2025
Sheet:	101 of 405



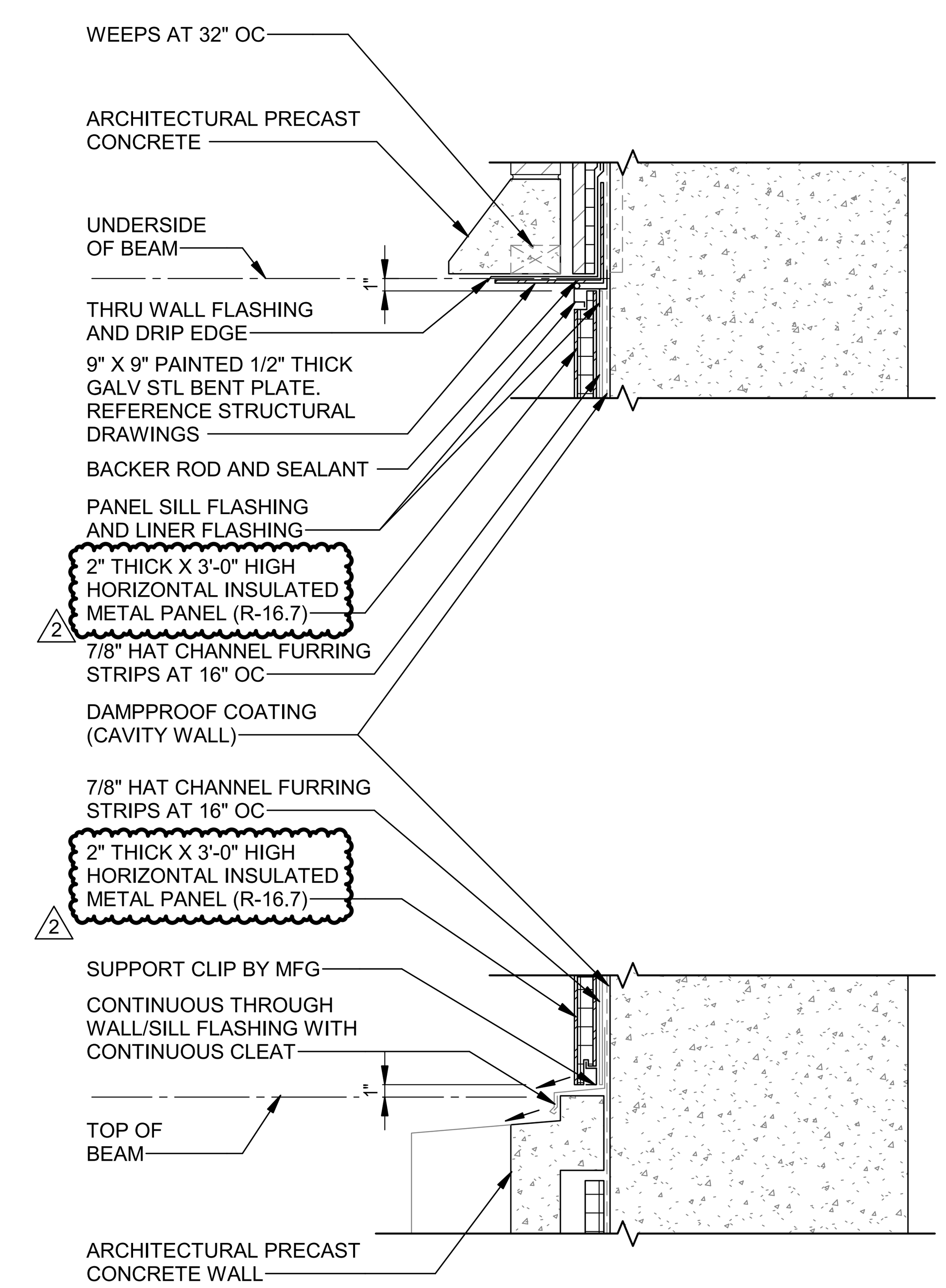
NOTE: BENT PLATE DOES NOT SUPPORT PRECAST PANEL. SEPARATE SUPPORT, HUNG FROM CONCRETE STRUCTURE, SHALL BE PROVIDED/DESIGNED BY THE PRECAST MANUFACTURER

1 PRECAST CONCRETE PANEL LOUVER HEAD
NTS

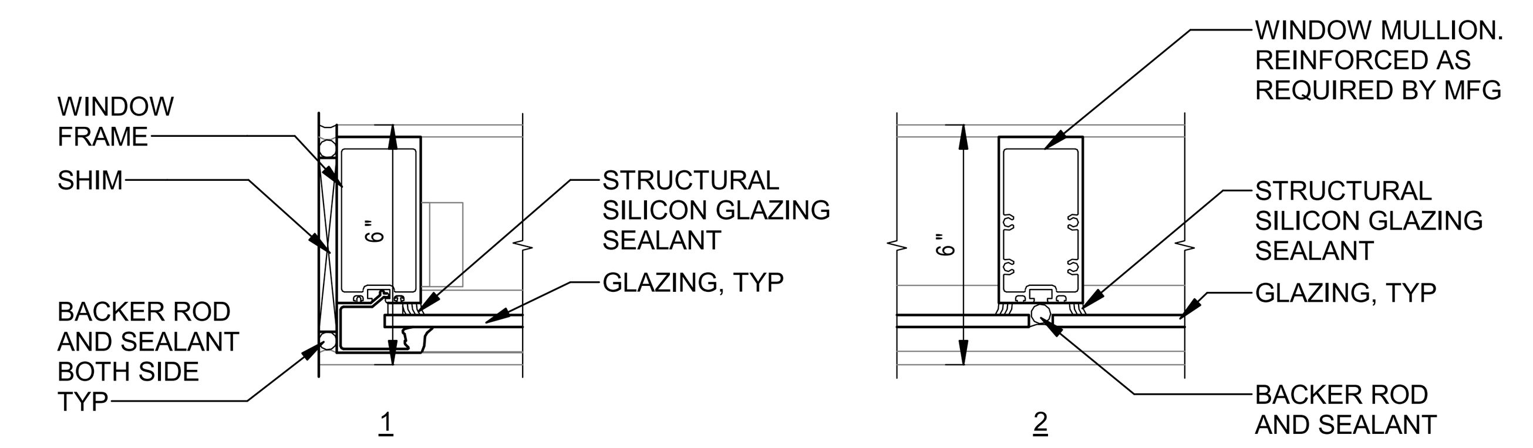


NOTE: BENT PLATE DOES NOT SUPPORT PRECAST PANEL. SEPARATE SUPPORT, HUNG FROM CONCRETE STRUCTURE, SHALL BE PROVIDED/DESIGNED BY THE PRECAST MANUFACTURER

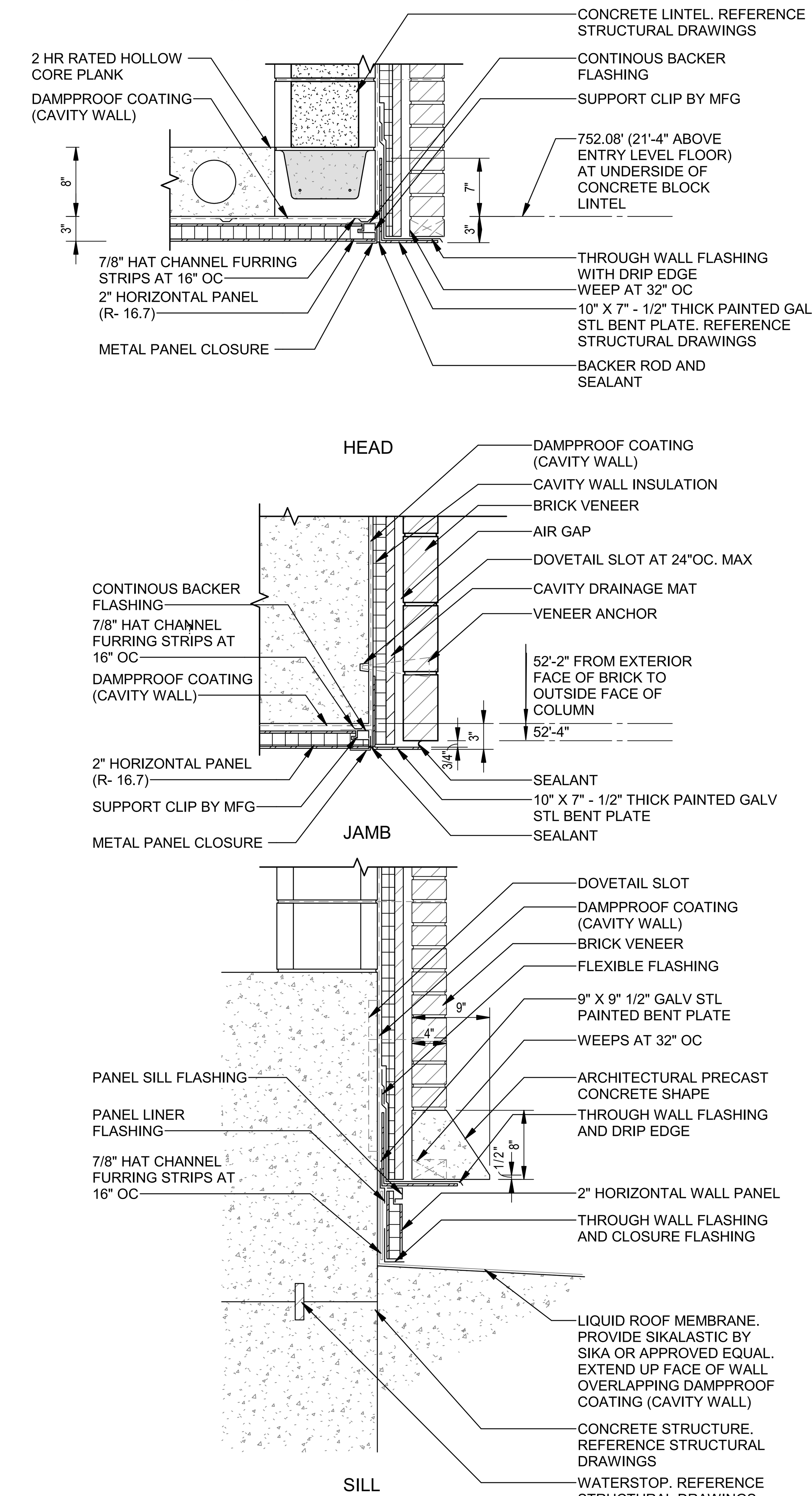
2 WINDOW DETAILS
NTS



3 HORIZONTAL METAL PANEL
NTS



5 SSG TYP MULLION/JAMB
NTS



4 BREEZEWAY OPENING
NTS

Designed by: B.GOMEZ	REV No.	DATE	DESCRIPTION	APPV
	0	5/16/25	ISSUE FOR BID	CKM
Drawn by: D.DIDASA	1	08/15/25	ADD. 9 - REVISED DAMPPROOFING AND VAPOR BARRIERS	CKM
	2	08/28/25	ADD. 11 - PANEL MODULE SIZE REVISION	CKM
Checked by: D.WALDROP				

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Signer Name: Christine Mondor
Signing Reason: I approved this document.
Signing Time: 2025-09-09 09:15:59(EDT)

REGISTERED ARCHITECT PENNSYLVANIA CHRISTINE MONDOR No. RA403537

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ALLEGHENY COUNTY SANITARY AUTHORITY
WASTEWATER TREATMENT PLANT
WET WEATHER PUMP STATION

430-AD-04
WINDOW AND LOUVER DETAILS

Contract: 1800
CAD File Name:
Date: 5/16/2025
Sheet: 104 of 405

Plot Date: 9/4/2025 2:12:20 PM
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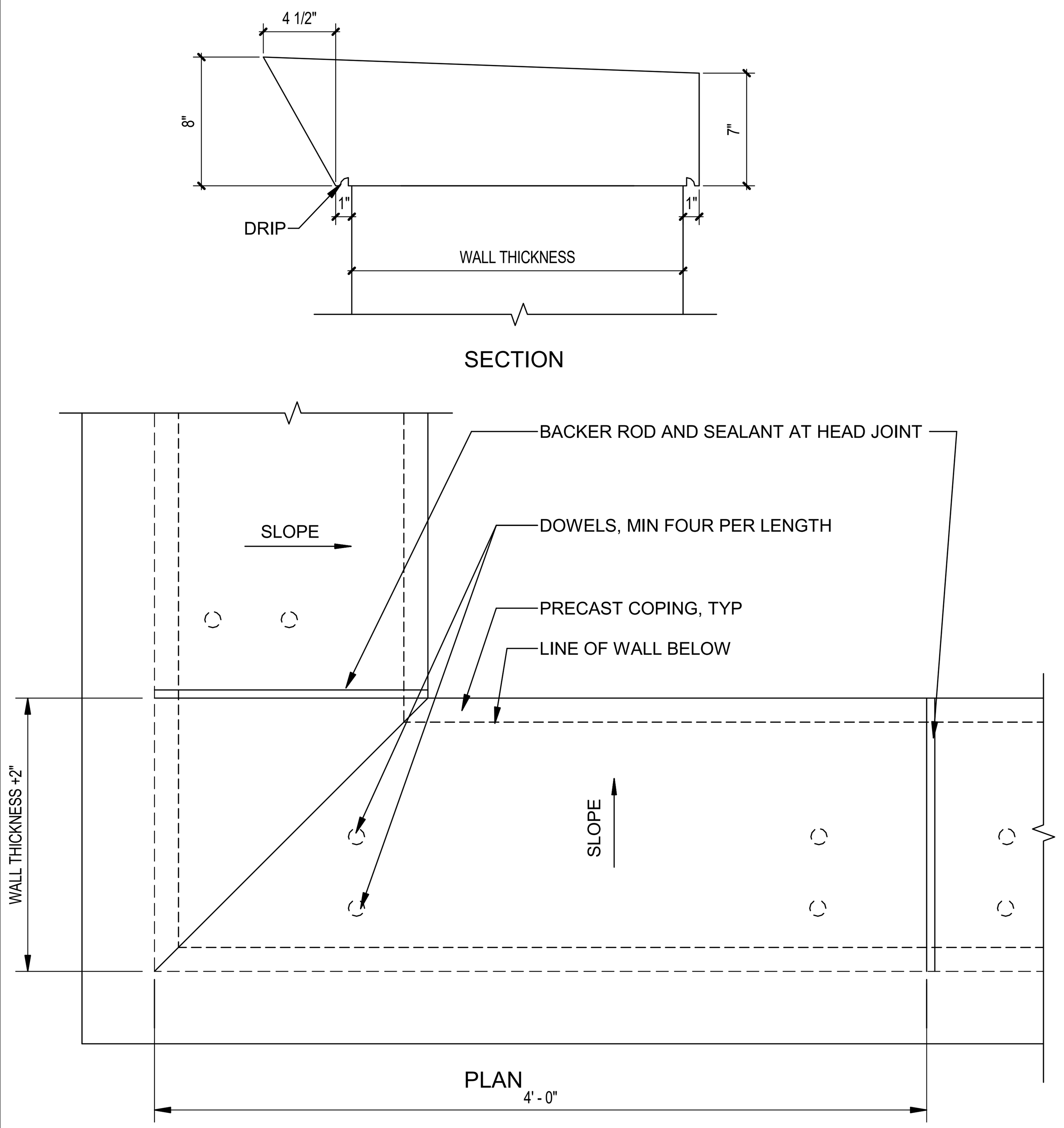
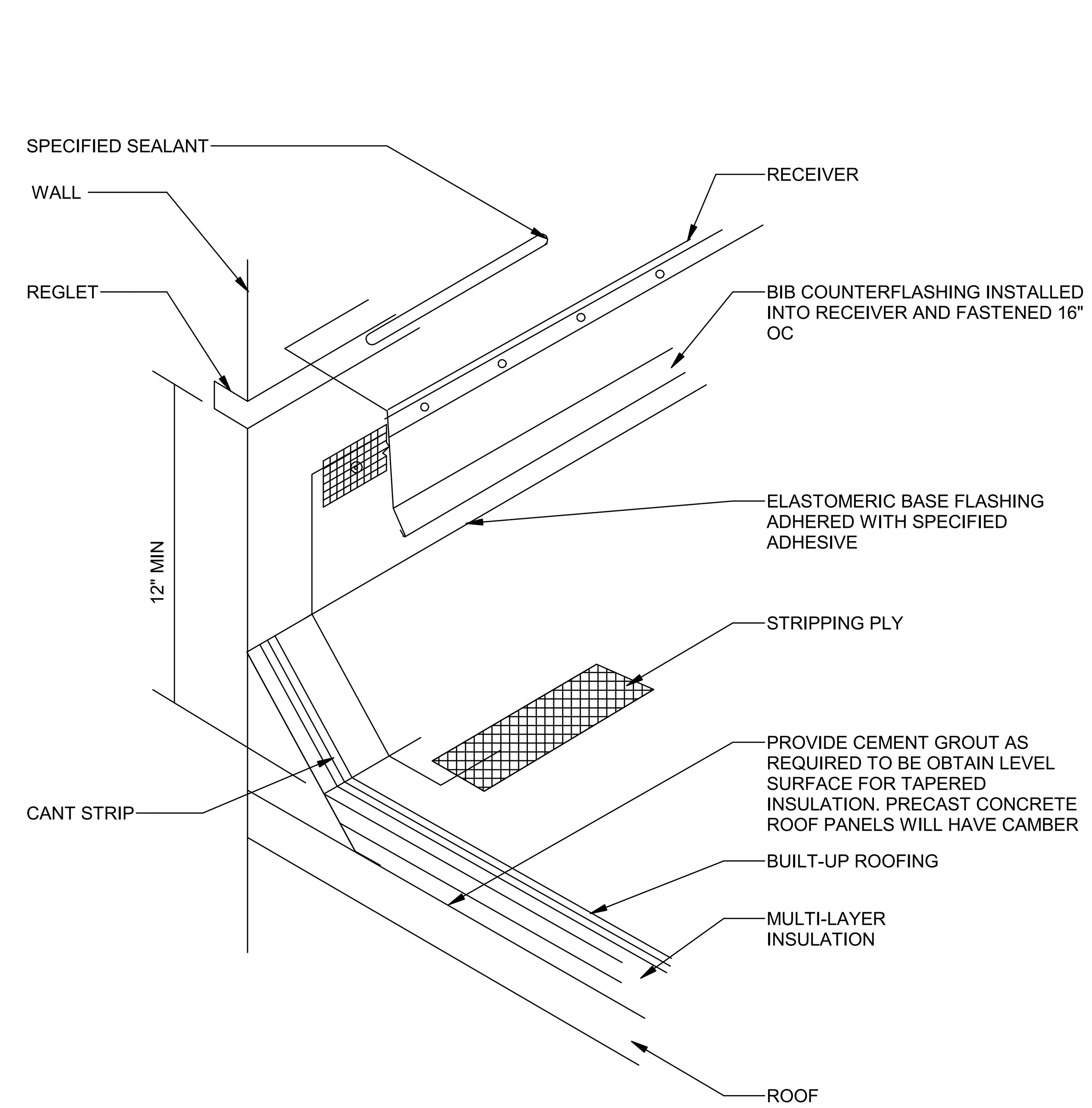
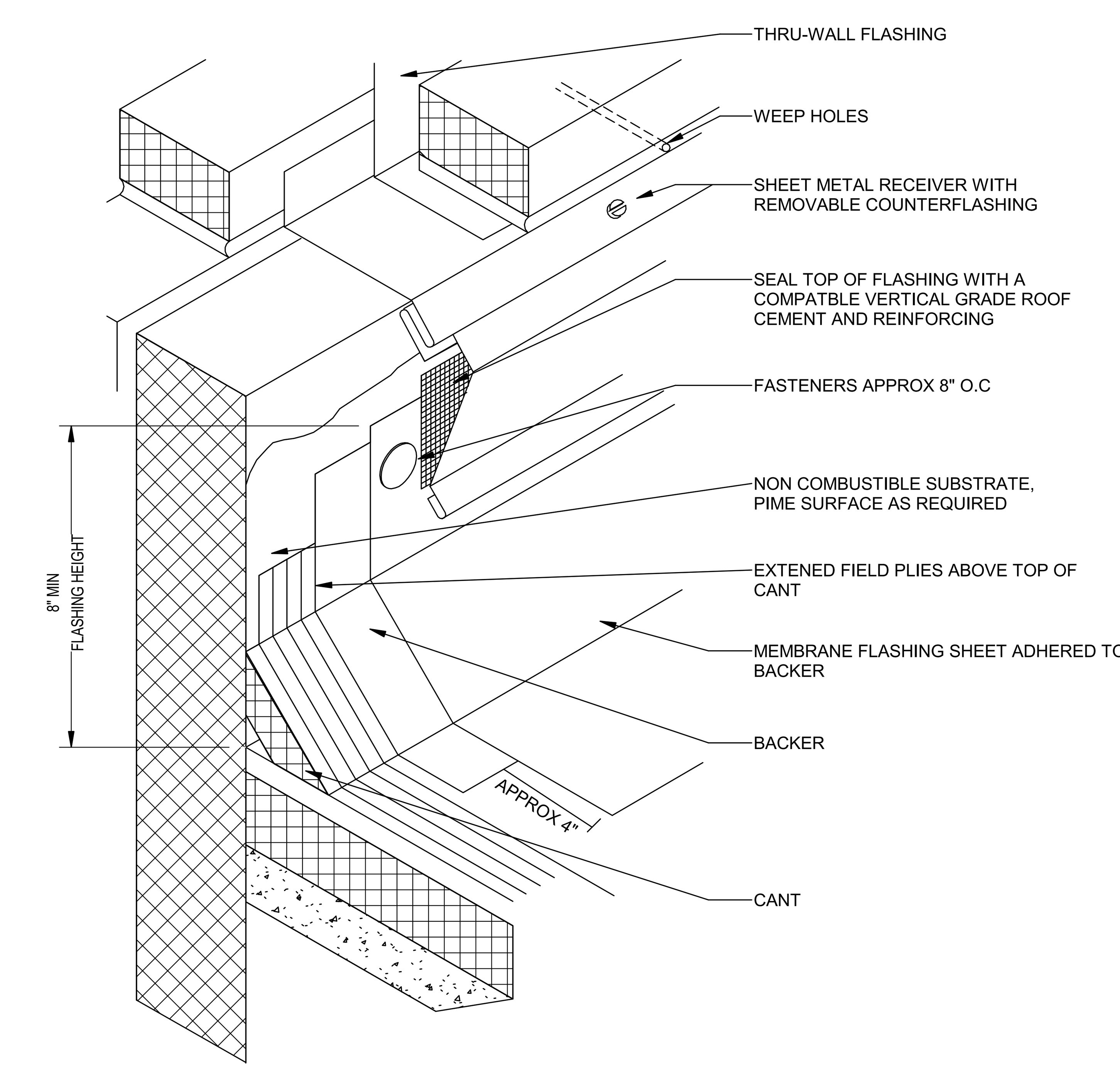


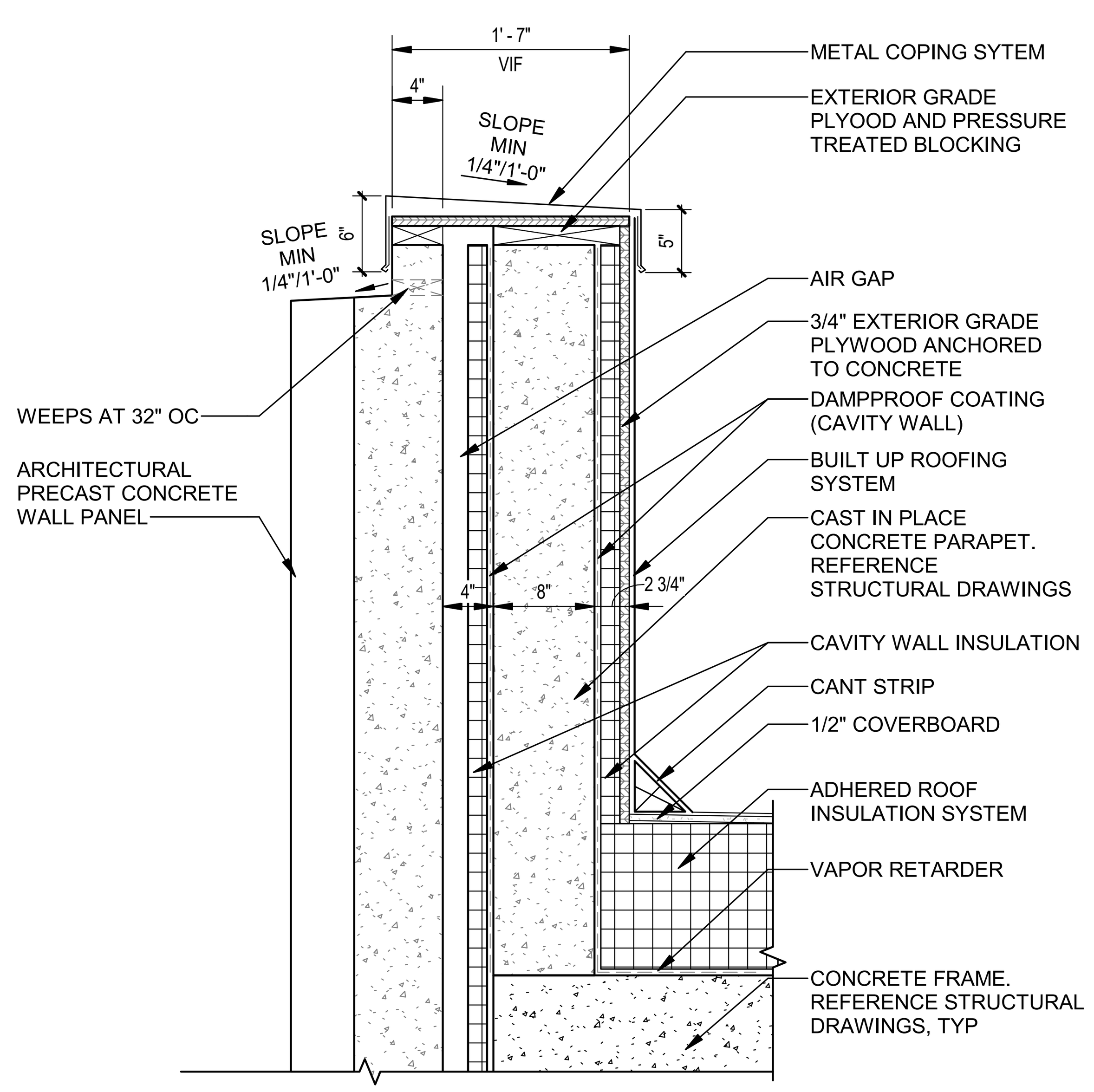
1 CAST STONE COPING
NTS



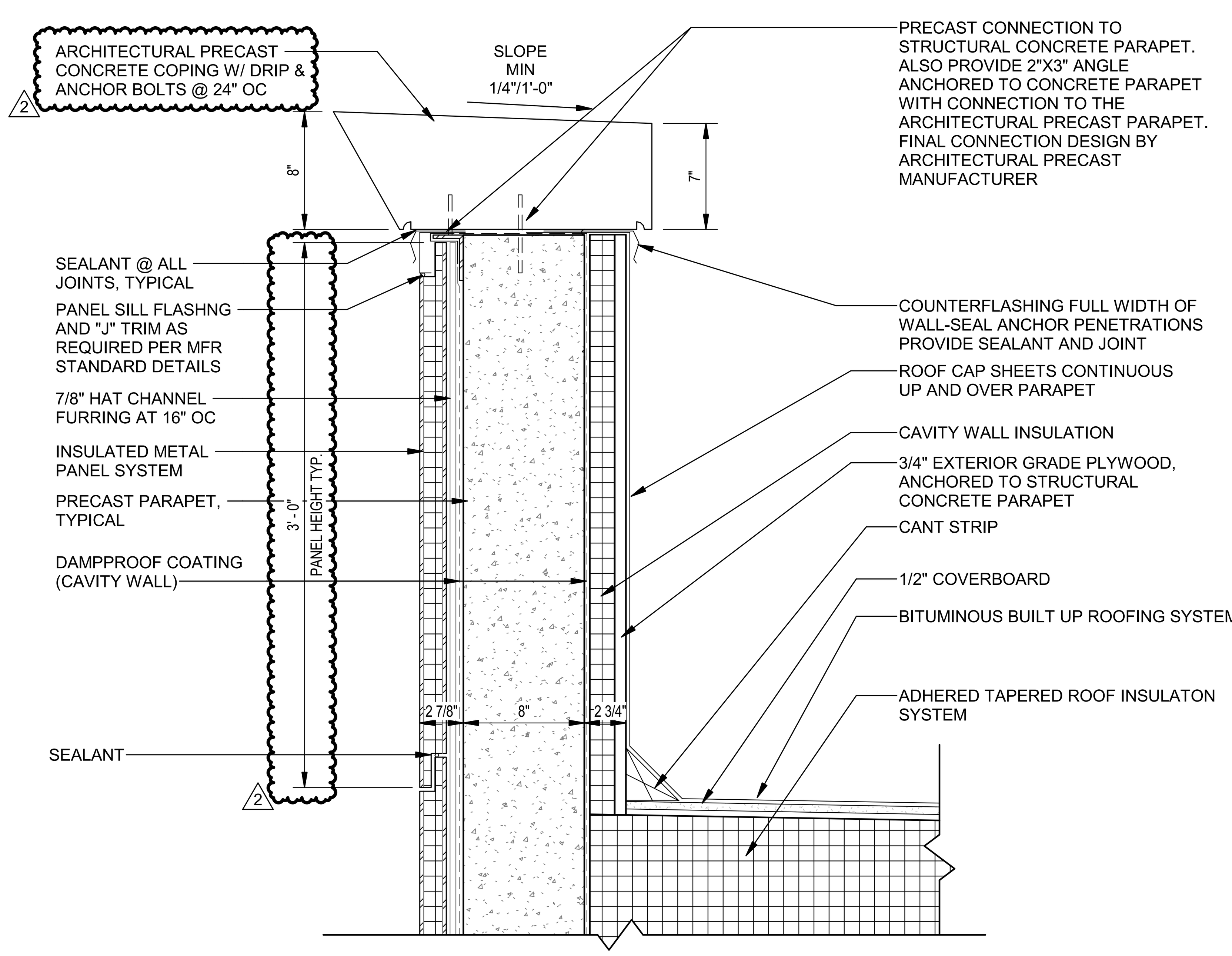
2 BUILT UP ROOF BASE FLASHING
NTS



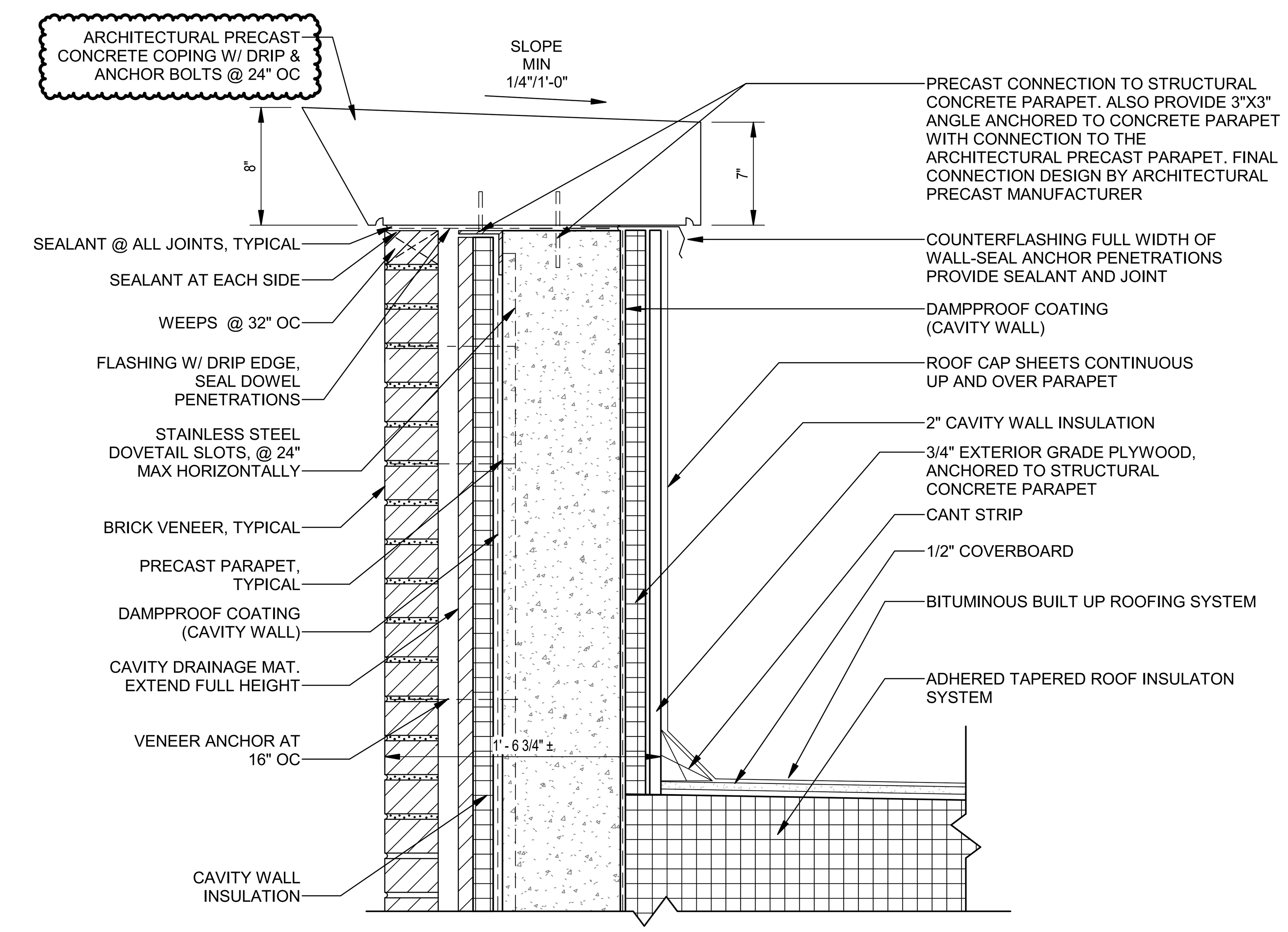
3 BUILT UP ROOF BASE FLASHING AT MASONRY WALL
NTS



4 PARAPET DETAIL
NTS



5 BUILT-UP ROOF PARAPET WITH CAST STONE COPING
NTS



6 BUILT-UP ROOF PARAPET WITH CAST STONE COPING
NTS

Path: BIM 360://170064 - ALCOSAN Wet Weather PS/170064-A-430V21.rvt

Plot Date: 9/4/2025 1:53:31 PM

Designed by: B.GOMEZ
Drawn by: D.DIDASA
Checked by: D.WALDROP

REVISION

REV No.	DATE	DESCRIPTION	APPV
0	5/16/25	ISSUE FOR BID	CKM
1	08/15/25	ADD. 9 - REVISED DAMPPROOFING AND VAPOR BARRIERS	CKM
2	08/28/25	ADD. 11 - PANEL MODULE SIZE & COPING REVISION	CKM

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Signer Name: Christine Mondor
Signing Reason: I approved this document.
Signing Time: 2025-09-09

REGISTERED ARCHITECT PENNSYLVANIA CHRISTINE MONDOR No. RA403537

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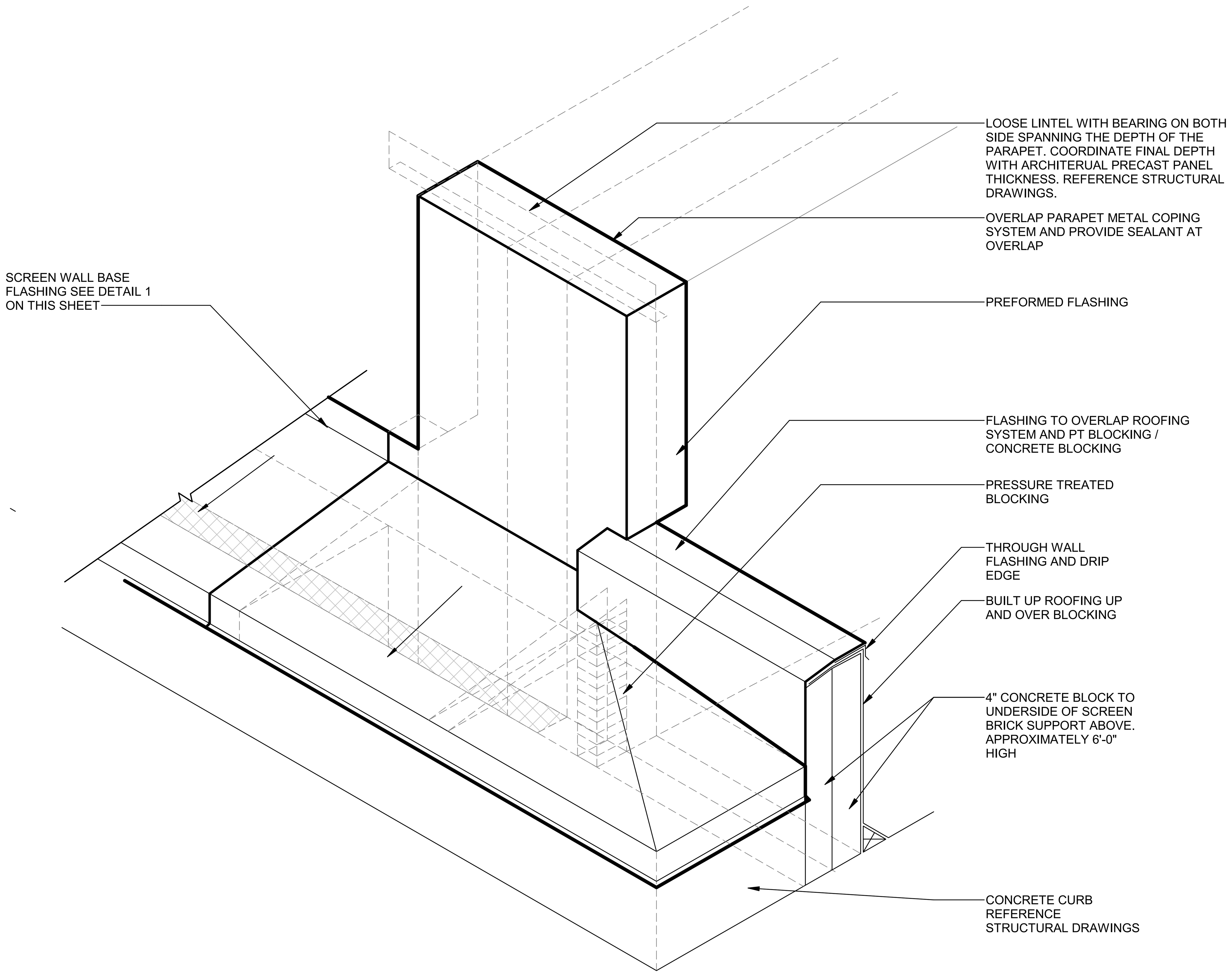
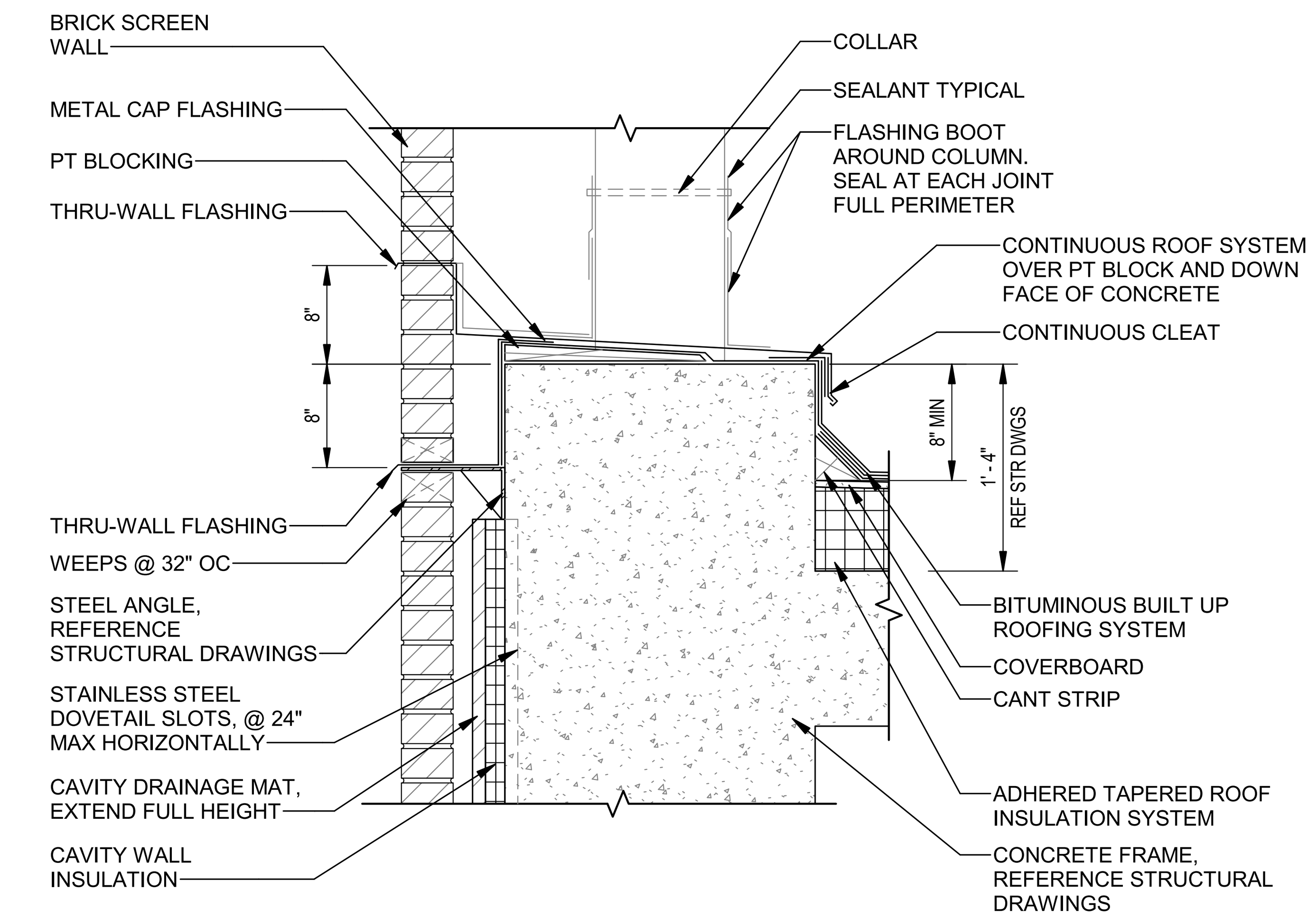
ALLEGHENY COUNTY SANITARY AUTHORITY
WASTEWATER TREATMENT PLANT
WET WEATHER PUMP STATION

430-AD-06
ROOF DETAILS 2

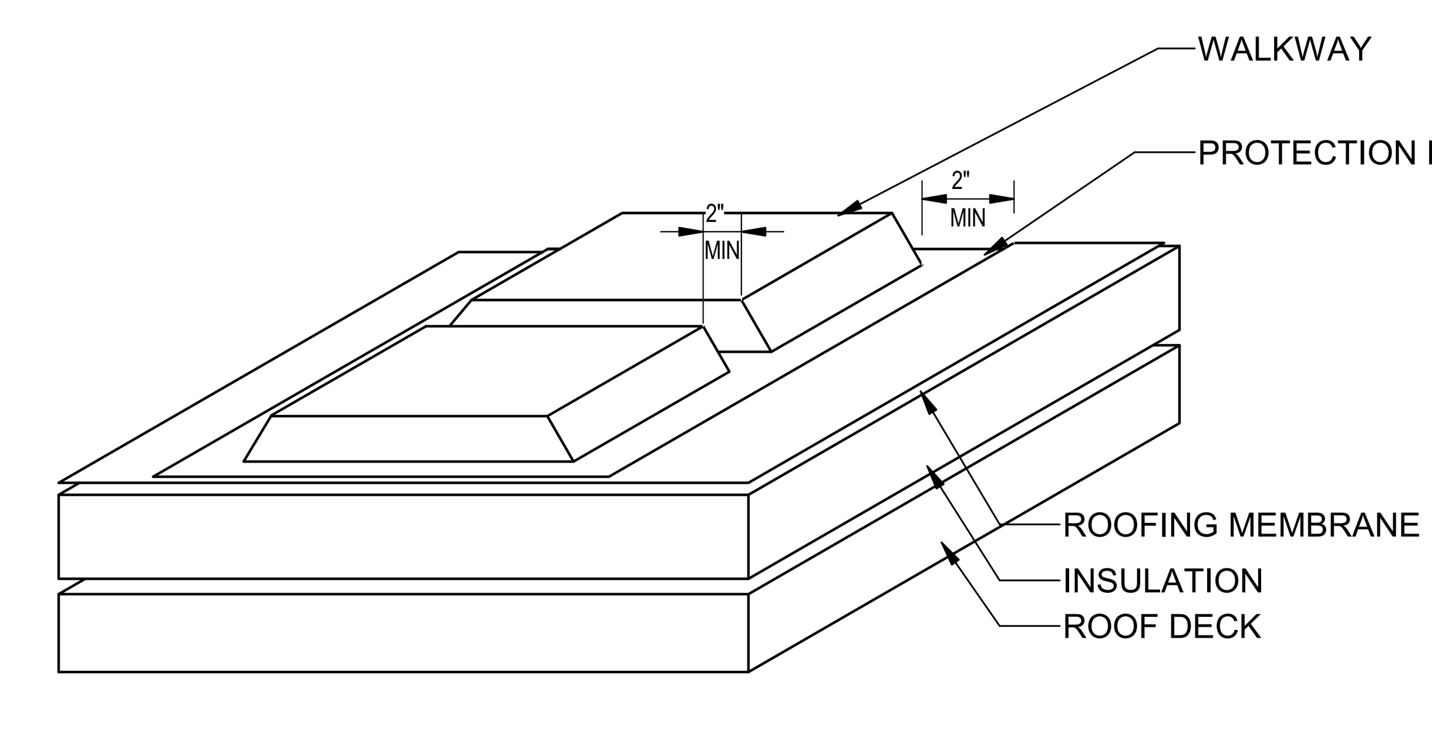
Contract: 1800
CAD File Name:
Date: 5/16/2025
Sheet: 106 of 405



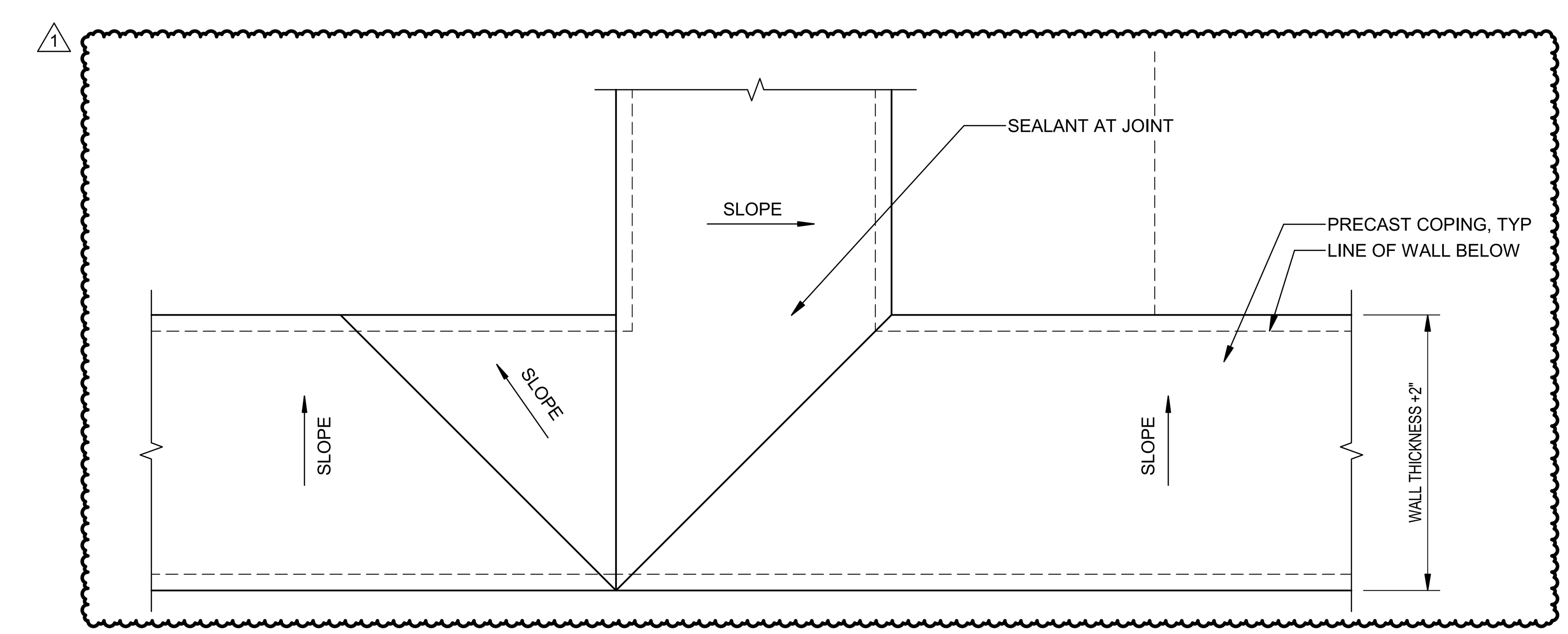
2 DUMPSTER BAY PARAPET FLASHING INTERSECTION WITH SCREEN
NTS



1 SCREEN WALL BASE DETAIL
NTS



3 ROOF WALKWAY PAD
NTS



4 PRECAST COPING PLAN AT SCREEN WALL INTERSECTION
NTS

Christine Mondor
Signer Name: Christine Mondor
Signing Reason: I approved this document.
Signing Time: 2025-09-09 09:15:59(EDT)

Path: BIM 360://170064 - ALCOSAN Wet Weather PS/170064-A-430V21.rvt

Plot Date: 9/4/2025 1:53:36 PM

Designed by: B.GOMEZ
Drawn by: B.GOMEZ
Checked by: D.WALDROP

REVISION

REV No.	DATE	DESCRIPTION	APPV
0	5/16/25	ISSUE FOR BID	CKM
1	08/28/25	ADD. 11 - COPING REVISION	CKM

Brown AND Caldwell

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ARLETTA SCOTT WILLIAMS
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ALLEGHENY COUNTY SANITARY AUTHORITY
WASTEWATER TREATMENT PLANT
WET WEATHER PUMP STATION

430-AD-07
ROOF DETAILS 3

Contract: 1800
CAD File Name:
Date: 5/16/2025
Sheet: 107 of 405

TABLE 1

REQUIRED SPECIAL INSPECTIONS - STRUCTURAL SYSTEMS

SYSTEM OR MATERIAL	REQUIRED INSPECTION	FREQUENCY OF INSPECTION		REMARKS
		CONTINUOUS	PERIODIC	
DEEP FOUNDATIONS	VERIFY MATERIALS, LENGTH, AND TESTING.	X		
	INSPECT DRILLING OPERATIONS AND MAINTAIN COMPLETE AND ACCURATE RECORDS FOR EACH ELEMENT.	X		
	VERIFY PLACEMENT LOCATIONS AND PLUMBNESS, CONFIRM ELEMENT DIAMETERS, BELL DIAMETERS (IF APPLICABLE), LENGTHS, EMBEDMENT INTO BEDROCK (IF APPLICABLE), AND ADEQUATE END-BEARING STRATA CAPACITY. RECORD CONCRETE OR GROUT VOLUMES.	X		
SOILS	VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL		X	
	VERIFY SOIL MATERIALS BELOW FOOTINGS ARE ADEQUATE TO ACHIEVE DESIGN BEARING CAPACITY		X	
	PRIOR TO PLACEMENT OF CONTROLLED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY		X	
	PERFORM CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS		X	SEE TABLE 3
	VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF CONTROLLED FILL	X		SEE TABLE 3
	PROOF ROLLING OF SOILS DISTURBED BY GROUND IMPROVEMENTS		X	
	PERMANENT SHEET PILING INSTALLATION, INCLUDING VERIFYING TIP AND CUTOFF ELEVATIONS	X		
	SHORING SYSTEM WELDING	X		
	SLURRY WALL - VERIFY PLACEMENT LOCATION AND PLUMBNESS, CONFIRM THICKNESS, CONTACT BETWEEN ADJACENT PANELS, AND TIP ELEVATION. SEE CONCRETE SECTION FOR CONCRETING AND REINFORCING STEEL INSPECTION REQUIREMENTS	X		
CONCRETE	INSPECT FORMWORK FOR LOCATION AND DIMENSIONS OF MEMBER BEING FORMED		X	
	VERIFY MATERIAL FOR REINFORCEMENT		X	SUBMIT CERTIFIED MILL TEST REPORTS
	REINFORCING STEEL PLACEMENT		X	
	INSPECT ANCHORS TO BE CAST IN CONCRETE		X	PRIOR TO AND DURING CONCRETE PLACEMENT
	INSPECT POST-INSTALLED CONCRETE ANCHORS: - HORIZONTAL AND UPWARDLY INCLINED ADHESIVE ANCHORS - OTHER ANCHORS UNLESS ICC REPORT REQUIRED CONTINUOUS INSPECTION	X	X	INSPECTION TO CONFORM TO IBC AND TO ANCHOR MANUFACTURER'S RECOMMENDATIONS AND ICC REPORTS
	VERIFY USE OF REQUIRED CONCRETE MIX DESIGN(S)		X	
	AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND TEMPERATURE OF CONCRETE	X		CONTINUOUS DURING PREPARATION OF SAMPLES
	CONCRETE PLACEMENT	X		
	INSPECTION FOR MAINTENANCE OF CURING PROCEDURES AND TEMPERATURE		X	VERIFY APPROPRIATE CURING METHOD HAS BEEN IMPLEMENTED AFTER EACH POUR
	VERIFY IN-SITU CONCRETE STRENGTH PRIOR TO REMOVAL OF SHORES AND FORMS FROM STRUCTURAL SLABS AND BEAMS		X	
	CEMENTITIOUS GROUTING OF BASE PLATES AND EPOXY GROUTING FOR EQUIPMENT MOUNTING	X		
	INSPECT ERECTION OF PRECAST CONCRETE MEMBERS		X	
MASONRY	VERIFY PROPORTIONS OF SITE -PREPARED MORTAR AND GROUT		X	AT START OF MASONRY CONSTRUCTION
	VERIFY SPECIFIED TYPE, GRADE AND SIZE OF REINFORCEMENT		X	SUBMIT CERTIFIED MILL TEST REPORTS
	VERIFY MATERIALS FOR MASONRY UNITS, MORTAR, GROUT, ANCHORS, TIES AND ACCESSORIES		X	SUBMIT MANUFACTURER'S CERTIFIED COMPLIANCE REPORTS
	VERIFY TYPE, SIZE, LOCATION AND INSTALLATION OF EMBEDDED CONNECTORS AND ANCHORS		X	
	VERIFY SIZE AND LOCATION OF STRUCTURAL ELEMENTS		X	
	VERIFY TYPE, SIZE AND LOCATION OF ANCHORAGE OF MASONRY TO OTHER CONSTRUCTION		X	

TABLE 1 (CONTINUED)

REQUIRED SPECIAL INSPECTIONS - STRUCTURAL SYSTEMS

SYSTEM OR MATERIAL	REQUIRED INSPECTION	FREQUENCY OF INSPECTION		REMARKS
		CONTINUOUS	PERIODIC	
	VERIFY PROTECTION PROVISIONS FOR COLD AND HOT WEATHER MASONRY CONSTRUCTION		X	
	PLACEMENT OF MASONRY UNITS AND CONSTRUCTION OF MORTAR JOINTS		X	
	REINFORCING STEEL PLACEMENT		X	
	VERIFY GROUT SPACE IS CLEAN		X	
	VERIFY PROPORTIONS OF GROUT; USE OF REQUIRED GROUT MIX DESIGN		X	
	OBSERVE GROUT PLACEMENT	X		
	OBSERVE PREPARATION OF ANY GROUT OR MORTAR SPECIMENS AND/OR PRISMS	X		CONTINUOUS DURING PREPARATION OF SAMPLES
STRUCTURAL STEEL AND ALUMINUM	FABRICATION OF STRUCTURAL ELEMENTS			FABRICATOR SHALL BE APPROVED IN ACCORDANCE WITH IBC, CHAPTER 17 TO PERFORM WORK WITHOUT SPECIAL INSPECTION
	VERIFY MATERIAL OF ANCHOR BOLTS AND THREADED RODS		X	SUBMIT MANUFACTURER'S CERTIFIED TEST REPORTS
	VERIFY MATERIAL OF HIGH-STRENGTH BOLTS, NUTS AND WASHERS		X	SUBMIT MANUFACTURER'S CERTIFIED TEST REPORTS
	VERIFY MATERIAL FOR STRUCTURAL STEEL AND ALUMINUM SHAPES, PLATES, BARS, ETC.		X	SUBMIT CERTIFIED MILL TEST REPORTS
	VERIFY MATERIALS FOR WELD FILLER MATERIALS		X	
	VERIFY WELDER QUALIFICATIONS		X	SUBMIT WELDERS CERTIFICATES
	VERIFY USE OF PROPER WELDING PROCEDURES		X	
	INSPECT COMPLETE AND PARTIAL-PENETRATION GROOVE WELDS, MULTI-PASS FILLET WELDS, AND SINGLE-PASS FILLET WELDS GREATER THAN 5/16"	X		
	INSPECT SINGLE-PASS FILLET WELDS LESS THAN OR EQUAL TO 5/16"		X	VISUALLY INSPECT ALL WELDS
	INSPECT HIGH-STRENGTH BEARING-TYPE BOLTED CONNECTIONS		X	
	INSPECT HIGH-STRENGTH SLIP CRITICAL-TYPE BOLTED CONNECTIONS	X		
	VERIFY TYPE, DEPTH AND GAGE OF DECKING AND GRATING		X	
	INSPECT INSTALLATION (ATTACHMENT) OF DECKING AND GRATING		X	
	INSPECT WELDING OF HEADED STUDS IN COMPOSITE STRUCTURAL SLABS		X	
	INSPECT FRAME AND TRUSSES TO VERIFY THAT BRACING, STIFFENERS, MEMBER LOCATIONS AND JOINT DETAILS COMPLY WITH APPROVED CONSTRUCTION DRAWINGS		X	

QUALITY ASSURANCE NOTES

1. THE QUALITY OF THE WORKMANSHIP AND THE QUALITY OF THE MATERIALS OF CONSTRUCTION ARE GOVERNED BY THE INTERNATIONAL BUILDING CODE.
2. NEW STRUCTURES AND MODIFICATIONS TO EXISTING STRUCTURES TO BE CONSTRUCTED AS A PART OF THIS PROJECT ARE CLASSIFIED AS OCCUPANT CATEGORY III, WASTE WATER TREATMENT FACILITY AND CLASSIFIED AS SEISMIC DESIGN CATEGORY B.
3. TO ASSURE QUALITY OF CONSTRUCTION, STRUCTURAL TESTS, SPECIAL INSPECTION AND STRUCTURAL OBSERVATION WILL BE PERFORMED IN ACCORDANCE WITH IBC, CHAPTER 17.
4. WHERE FREQUENCY OF INSPECTION IS SPECIFIED TO BE CONTINUOUS, THE SPECIAL INSPECTOR IS EXPECTED TO BE PRESENT IN THE AREA WHERE THE WORK IS BEING PERFORMED AND PROVIDING FULL-TIME OBSERVATION OF THE WORK REQUIRING SPECIAL INSPECTION.
5. WHERE FREQUENCY OF INSPECTION IS SPECIFIED TO BE PERIODIC, THE SPECIAL INSPECTOR IS EXPECTED TO BE PRESENT IN THE AREA WHERE THE WORK HAS BEEN OR IS BEING PERFORMED AND AT THE COMPLETION OF THE WORK (PRIOR TO THE NEXT CONSTRUCTION TASK).
6. SPECIAL INSPECTIONS ARE IN addition TO INSPECTIONS BY BUILDING OFFICIALS. CONSTRUCTION IS SUBJECT TO INSPECTION BY THE BUILDING OFFICIAL. COORDINATE WITH BUILDING DEPARTMENT TO DETERMINE REQUIRED INSPECTIONS.
7. CONTRACTOR SHALL PROVIDE ACCESS SUITABLE TO THE SPECIAL INSPECTOR TO THE WORK FOR REQUIRED INSPECTIONS. DESIGN-BUILDER SHALL PROVIDE NOTIFICATION IN ADVANCE OF REQUIRED INSPECTIONS, TESTING AND STRUCTURAL OBSERVATIONS.

Designed by: A.KEARNS
Drawn by: T.WIBLE
Checked by: J.MINADEO

REVISION

REV No.	DATE	DESCRIPTION	APPV
0	5/16/25	ISSUED FOR BID	JM
1	8/29/25	ADD. 11 - ADD PRECAST SPECIAL INSPECTION	JM

Brown AND Caldwell

Signer Name: Justin Minadeo
Signing Reason: I approved this document.
Signing Time: 2025-09-08 14:00:34(EDT)

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — JUSTIN C MINADEO — ENGINEER PE082048

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ALLEGHENY COUNTY SANITARY AUTHORITY
WASTEWATER TREATMENT PLANT
WET WEATHER PUMP STATION

000-S-06
SPECIAL INSPECTION NOTES 1

Contract: 1800
CAD File Name:
Date: 5/16/2025
Sheet: 136 of 405

Plot Date: 8/26/2025 10:40:48 AM Path: BIM 360://170064 - ALCOSAN Wet Weather PS/170064-S-430V21.rvt

LPB001B-430

LOCATION: ELECTRICAL ROOM
MOUNTING: SURFACE
***NOTES:** FEED THRU LUGS FROM LPBB001A

VOLTAGE: 208/120V, 3Ø, 4W
BUS: 350A
MAINS: 350MCB
SCCR: 22 KA

CKT	TRIP /POLE	LOAD DESCRIPTION	LOAD KVA	PHASE A	PHASE B	PHASE C	LOAD KVA	LOAD DESCRIPTION	TRIP /POLE	CKT
1	15/1	OVERHEAD COILING DOOR OPERATOR #1 (430-D-508A)	0.75	1.75			1.00	CARBON SCRUBBER DRAIN HEAT TRACE #1 (HTC001-430)	20/1	2
3	15/1	TAP DRAIN HEAT TRACE	0.25		0.25		0.00	CARBON SCRUBBER DRAIN HEAT TRACE #2 (HTC002-430) FUTURE	20/1	4
5	15/1	OVERHEAD COILING DOOR OPERATOR #3 (430-D-509C)	0.75			0.75	0.00	CARBON SCRUBBER DRAIN HEAT TRACE #3 (HTC003-430) FUTURE	20/1	6
7	15/1	BAR RACK 1 CONTROL PANEL (BSR001-430-CP) FUTURE	0.00	0.75			0.75	OVERHEAD COILING DOOR OPERATOR #2 (430-D-510B)	15/1	8
9	15/1	BAR RACK 3 CONTROL PANEL (BSR003-430-CP) FUTURE	0.00		0.00		0.00	SPARE	15/1	10
11	15/1	BAR RACK BELT CONVEYOR CONTROL PANEL (CST001-430-CP) FUTURE	0.00			0.75	0.75	OVERHEAD COILING DOOR OPERATOR #5 (430-D-511A)	15/1	12
13	15/1	INFLUENT SAMPLE PUMP CONTROL PANEL (SAP001-430) FUTURE	0.00	0.00			0.00	BAR RACK 2 CONTROL PANEL (BSR002-430-CP) FUTURE	15/1	14
15	15/1	OVERHEAD COILING DOOR OPERATOR #4 (430-D-509D)	0.00		0.00		0.00	BAR RACK 4 CONTROL PANEL (BSR004-430-CP) FUTURE	15/1	16
17	20/1	SPARE	0.00			0.00	0.00	BAR RACK BRIDGE CRANE CONTROL PANEL (CRN00X-430-CP) FUTURE	15/1	18
19	15/1	SPARE	0.00	0.00			0.00	PLANT DRAIN SAMPLE PUMP CONTROL PANEL (SAP002-430) FUTURE	15/1	20
21	15/1	SPARE	0.00	1.00			1.00	HVAC CONTROL PANEL	15/1	22
23	15/1	EXHAUST FAN #5 (EFF005-430)	0.00		0.00		0.00	SPARE	15/1	24
25	15/1	FREIGHT ELEVATOR SUMP PUMP CONTROL PANEL (SPP001-430CP)	0.50			1.50	1.00	LOBBY PANEL	15/1	26
27		SPACE	0.00	1.25			1.25	ELEVATOR CONTROL ROOM HVAC UNIT OUTDOOR (ACU004-430)	20/2	28
29	20/1	SPARE	0.00			1.25	1.25			30
31	15/1	WET WEATHER PUMP SPACE HEATER #3 (PWW003-430HTR)	0.54	1.54			1.00	ELEVATOR CAB POWER (ELV001-430	15/1	32
33	15/1	WET WEATHER PUMP SPACE HEATER #4 (PWW004-430HTR)	0.54		15.54		15.00	POINT OF USE WATER HEATER #2 (THW003-430)	150/2	34
35			0.00			15.00	15.00			36
37	15/1	WET WEATHER PUMP SPACE HEATER #1 (PWW001-430HTR)	0.54	1.08			0.54	WET WEATHER PUMP SPACE HEATER #2 (PWW002-430HTR)	15/1	38
39	15/1	SPARE	0.00		0.00		0.00	SPARE	15/1	40
41	15/1	WET WEATHER PUMP SPACE HEATER #5 (PWW005-430HTR)	0.54			1.08	0.54	WET WEATHER PUMP SPACE HEATER #6 (PWW006-430HTR)	15/1	42
43	150/2	POINT OF USE WATER HEATER #1 (THW002-430)	15.00	15.00			0.00	SPARE	15/1	44
45			15.00		15.25		0.25	DISCHARGE FLOOR NORTH TRAP PRIMER (TP-1)	15/1	46
47	30/2	ELECTRIC WATER HEATER #1 (THW001-430)	1.88			2.13	0.25	DISCHARGE FLOOR SOUTH TRAP PRIMER (TP-1)	15/1	48
49			1.88	2.13			0.25	ENTRY LEVEL NORTH TRAP PRIMER (TP-1)	15/1	50
51	30/2	SPARE	0.00		0.25		0.25	ENTRY LEVEL SOUTH TRAP PRIMER (TP-1)	15/1	52
53			0.00			0.25	0.25	JANITORS CLOSET TRAP PRIMER (TP-1)	15/1	54
		TOTAL KVA	24.50	31.29	22.71					
		TOTAL AMPS	88.45	112.96	81.99					

MAXIMUM LOAD (AMPS) = 217.6 A

LPUPS001-430

LOCATION: ELECTRICAL ROOM
MOUNTING: SURFACE
***NOTES:** PROVIDE INTEGRAL SPD

VOLTAGE: 208/120V, 3Ø, 4W
BUS: 100A
MAINS: 100A MCB
SCCR: 10 KA

CKT	TRIP /POLE	LOAD DESCRIPTION	LOAD KVA	PHASE A	PHASE B	PHASE C	LOAD KVA	LOAD DESCRIPTION	TRIP /POLE	CKT
1	15/1	WET WEATHER PUMP #1 VFD CONTROLS	1.00	2.00			1.00	WET WEATHER PUMP #3 VFD CONTROLS	15/1	2
3	15/1	WET WEATHER PUMP #5 VFD CONTROLS	1.00		2.00		1.00	EMERGENCY FLOOD PUMP #1 VFD CONTROLS	15/1	4
5	15/1	SCREENING ROOM GAS DETECTION PANEL #1 (BSR001-430)	1.00			2.00	1.00	SCREENING ROOM GAS DETECTION PANEL #2 (BSR002-430)	15/1	6
7	15/1	SCREENING ROOM GAS DETECTION PANEL #3 (BSR003-430)	1.00	2.00			1.00	DPU ENCLOSURE	15/1	8
9	15/1	WWPS PUMP #1 FLOW METER (MFM001-430)	0.40		0.80		0.40	WWPS PUMP #3 FLOW METER (MFM003-430)	15/1	10
11	15/1	WWPS PUMP #5 FLOW METER (MFM005-430)	0.40			1.40	1.00	IT/NETWORK ENCLOSURE	15/1	12
13	15/1	DAS MAIN ANTENNA	1.00	1.50			0.50	ENTRY LEVEL VFP PANELS 1	15/1	14
15	15/1	DISCHARGE PUMPING FLOOR VFP PANELS	0.50		1.00		0.50	ENTRY LEVEL VFP PANELS 2	15/1	16
17	15/1	EAST STAIRWELL DAS	1.44			2.88	1.44	FLOOR DAS CIRCUIT 1	15/1	18
19	15/1	WEST STAIRWELL DAS	1.44	1.44			0.00	SPARE	15/1	20
21	15/1	NORTH STAIRWELL DAS	1.44		2.88		1.44	FLOOR DAS CIRCUIT 2	15/1	22
23	15/1	SPARE	0.00			0.00	0.00	SPARE	15/1	24
25	15/1	SPARE	0.00	0.00			0.00	SPARE	15/1	26
27	15/1	SPARE	0.00		0.00		0.00	SPACE		28
29	15/1	SPARE	0.00			0.00	0.00	SPACE		30
31		SPACE	0.00	0.00			0.00	SPACE		32
33		SPACE	0.00		0.00		0.00	SPACE		34
35		SPACE	0.00			0.00	0.00	SPACE		36
37		SPACE	0.00	0.00			0.00	SPACE		38
39		SPACE	0.00		0.00		0.00	SPACE		40
41		SPACE	0.00			0.00	0.00	SPACE		42
		TOTAL KVA	6.94	6.68	6.28					
		TOTAL AMPS	25.05	24.12	22.67					

MAXIMUM LOAD (AMPS) = 55.2 A

LPUPS002-430

LOCATION: ELECTRICAL ROOM
MOUNTING: SURFACE
***NOTES:** PROVIDE INTEGRAL SPD

VOLTAGE: 208/120V, 3Ø, 4W
BUS: 100A
MAINS: 100A MCB
SCCR: 10 KA

CKT	TRIP /POLE	LOAD DESCRIPTION	LOAD KVA	PHASE A	PHASE B	PHASE C	LOAD KVA	LOAD DESCRIPTION	TRIP /POLE	CKT
1	15/1	WET WEATHER PUMP #2 VFD CONTROLS	1.00	2.00			1.00	WET WEATHER PUMP #4 VFD CONTROLS	15/1	2
3	15/1	WET WEATHER PUMP #6 VFD CONTROLS	1.00		2.00		1.00	EMERGENCY FLOOD PUMP #2 VFD CONTROLS	15/1	4
5	15/1	FAN ROOM GAS DETECTION PANEL #1 (OC001-430)	1.00			2.00	1.00	FAN ROOM GAS DETECTION PANEL #2 (OC002-430)	15/1	6
7	15/1	FAN ROOM GAS DETECTION PANEL #3 (OC003-430)	1.00	2.00			1.00	DPU ENCLOSURE	15/1	8
9	15/1	FIRE ALARM PANEL (FAP001-430)	1.00		1.40		0.40	WWPS PUMP #2 FLOW METER (MFM002-430)	15/1	10
11	15/1	WWPS PUMP #4 FLOW METER (MFM002-430)	0.40			0.80	0.40	WWPS PUMP #6 FLOW METER (MFM006-430)	15/1	12
13	15/1	BOTTOM FLOOR VFP PANELS	0.50	0.50			0.00	SPARE	20/1	14
15	15/1	HIGH DUTY PUMP FLOOR VFP PANELS	0.50		0.50		0.00	SPARE	20/1	16
17	15/1	MOTOR FLOOR VFP PANELS	0.50			0.50	0.00	SPARE	20/1	18
19	15/1	SPARE	0.00	0.00			0.00	SPACE		20
21	15/1	SPARE	0.00		0.00		0.00	SPACE		22
23	15/1	SPARE	0.00			0.00	0.00	SPACE		24
25	15/1	SPARE	0.00	0.00			0.00	SPACE		26
27	15/1	SPARE	0.00		0.00		0.00	SPACE		28
29		SPACE	0.00			0.00	0.00	SPACE		30
31		SPACE	0.00	0.00			0.00	SPACE		32
33		SPACE	0.00		0.00		0.00	SPACE		34
35		SPACE	0.00			0.00	0.00	SPACE		36
37		SPACE	0.00	0.00			0.00	SPACE		38
39		SPACE	0.00		0.00		0.00	SPACE		40
41		SPACE	0.00			0.00	0.00	SPACE		42
		TOTAL KVA	4.50	3.90	3.30					
		TOTAL AMPS	16.25	14.08	11.91					

MAXIMUM LOAD (AMPS) = 32.4 A

GENERAL NOTES:

1. FOR ALL BRANCH CIRCUITS RATED 120V, 20A THAT RUN OVER 80'0", PROVIDE 2#10, #10G TO COMPENSATE FOR VOLTAGE DROP.

Path: C:\USERS\PSTRAKER\ONEDRIVE - BROWN AND CALDWELL\DOCUMENTS\0004_MY_PROJECTS\170064_ALCOSAN_WET_WEATHER_PS\ADDENDUM 11 FILENAME: 430-ES-03.DWG PLOT DATE: 9/5/2025 9:41 AM CAD USER: PAMELA STRAKER

Designed by: P.STRAKER
Drawn by: P.STRAKER
Checked by: R.FRYE

REVISION			
REV No.	DATE	DESCRIPTION	APPV
0	5/16/25	ISSUED FOR BID	RF
1	9/5/25	ADD. 11 - RESPONSE TO ITEM #452	RF

Brown AND Caldwell

Signer Name: Ralph Frye
Signing Reason: I approved this document.
Signing Time: 2025-09-09 08:57:18(EDT)

RALPH A. FRYE III — REGISTERED PROFESSIONAL ENGINEER — COMMONWEALTH OF PENNSYLVANIA

ARLETTA SCOTT WILLIAMS
EXECUTIVE DIRECTOR, ALCOSAN

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(412) 766 - 4810
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ALLEGHENY COUNTY SANITARY AUTHORITY
WASTEWATER TREATMENT PLANT
WET WEATHER PUMP STATION

430-ES-03
PANEL SCHEDULES 3

Contract: 1800
CAD File Name: 430-ES-03.dwg
Date: 5/16/2025
Sheet: 379 of 405

Path: C:\USERS\PSTRAKER\ONEDRIVE - BROWN AND CALDWELL\DOCUMENTS\0004_MY_PROJECTS\170064_ALCOSAN_WET_WEATHER_PS\ADDENDUM 11 FILENAME: 430-ES-07.DWG PLOT DATE: 9/5/2025 9:41 AM CAD USER: PAMELA STRAKER

GENERAL NOTES:

1. COLUMN (C#) AND (RECORD DWG #) REFERS TO THE ALCOSAN CONTRACT NUMBERS AND RECORD DRAWINGS PROVIDED IN THE PROJECT APPENDICES.
2. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF ALL MISSING INFORMATION ON THE CONDUIT AND CABLE SCHEDULES, INCLUDING BUT NOT LIMITED TO CONDUIT TAG NUMBERS, SIZES, COUNTS, AND SPARES IN ACCORDANCE WITH SECTION 01 52 00.

CONDUIT SCHEDULE

C#	RECORD DWG #	REV NO.	CONDUIT NUMBER	FROM	TO	COND SIZE	CONDUIT FILL	CONDUCTORS, QTY/SIZE, PER CONDUIT	REMARKS
	NEW		P-430895D	PWW002-430SCV-DS	PWW002-430SCV	3/4"	P-PWW002-430SCV-1	3-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430895E	PWW004-430SCV-DS	PWW004-430SCV	3/4"	P-PWW004-430SCV-1	3-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430895F	PWW006-430SCV-DS	PWW006-430SCV	3/4"	P-PWW006-430SCV-1	3-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430895G	PWW002-430RCV-DS	PWW002-430RCV	3/4"	P-PWW002-430RCV-1	3-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430895H	PWW004-430RCV-DS	PWW004-430RCV	3/4"	P-PWW004-430RCV-1	3-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430895I	PWW006-430RCV-DS	PWW006-430RCV	3/4"	P-PWW006-430RCV-1	3-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430896	UPS001-430	LPUPS001-430	1-1/2"	P-LPUPS001-430-1	3-1/C 600V #1 & 1#8 GND	NEW, EXPOSED
	NEW		P-430897	UPS002-430	LPUPS002-430	1-1/2"	P-LPUPS002-430-1	3-1/C 600V #1 & 1#8 GND	NEW, EXPOSED
	NEW		P-430898	PPB003-430	ELV001-430	1"	P-PPB003-430-1	3-1/C 600V #4 & 1#8 GND	NEW, EXPOSED
	NEW		P-430899	PPB003-430	CRN006-430-DS	3/4"	P-PPB003-430-2	3-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430900	PPB003-430	CRN007-430-DS	3/4"	P-PPB003-430-3	3-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430901	PPB003-430	SEF001-430VCP	3/4"	P-PPB003-430-4	3-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430902	PPB003-430	XFM003-430	1-1/2"	P-PPB003-430-5	3-1/C 600V #1/0 & 1#6 GND	NEW, EXPOSED
	NEW		P-430903	PPB003-430	GWO001-430-DS	3/4"	P-PPB003-430-6	3-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430904	PPB003-430	CRN008-430	3/4"	P-PPB003-430-7	3-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430905	PPB003-430	PLV001-430-DS	3/4"	P-PPB003-430-8	3-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430907	PPB003-430	EUH001-430	3/4"	P-PPB003-430-10	3-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430908	PPB003-430	GTV004-430-DS	3/4"	P-PPB003-430-11	3-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430909	PPB003-430	PBP001&2-430CP	1-1/2"	P-PPB003-430-12	3-1/C 600V #1 & 1#6 GND	NEW, EXPOSED
	NEW		P-430910	PPB003-430	SWG009-430 STATION BATTERY	1"	P-PPB003-430-13	3-1/C 600V #4 & 1#10 GND	NEW, EXPOSED
	NEW		P-430910A	PPB003-430	EUH003-430	3/4"	P-PPB003-430-14	3-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430910B	PPB003-430	EUH007-430	3/4"	P-PPB003-430-15	3-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430910C	PPB003-430	EUH011-430	3/4"	P-PPB003-430-16	3-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430910D	PPB003-430	DUMPSTER AREA W RECPT	1"	P-PPB003-430-17	3-1/C 600V #3 & 1#8 GND	NEW, EXPOSED
	NEW		P-430910E	PPB003-430	HVAC AREA W RECPT	1"	P-PPB003-430-18	3-1/C 600V #3 & 1#8 GND	NEW, EXPOSED
	NEW		P-430910F	PPB003-430	XFM004-430	1-1/2"	P-PPB003-430-19	3-1/C 600V #2/0 & 1#6 GND	NEW, EXPOSED
	NEW		P-430911	CRN006-430-DS	CRN006-430	3/4"	P-CRN006-430-1	3-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430912	CRN007-430-DS	CRN007-430	3/4"	P-CRN007-430-1	3-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW								
	NEW		P-430913	PBP001&2-430CP	PBP001-430-DS	1"	P-PBP001&2-430CP-1	3-1/C 600V #4 & 1#8 GND	NEW, EXPOSED
	NEW		P-430914	PBP001-430-DS	PBP001-430	1-1/2"	P-PBP001&2-430CP-2	VND CABLE	NEW, EXPOSED
	NEW		P-430915	PBP001&2-430CP	PBP002-430-DS	1"	P-PBP001&2-430CP-3	3-1/C 600V #4 & 1#8 GND	NEW, EXPOSED
	NEW		P-430916	PBP002-430-DS	PBP002-430	1-1/2"	P-PBP001&2-430CP-4	VND CABLE	NEW, EXPOSED
	NEW		P-430917	SEF001-430VCP	SEF001-430BFV	1"	P-SEF001-430-1	VND CABLE	NEW, EXPOSED
	NEW		P-430918	GWO001-430-DS	GWO001-430	3/4"	P-GWO001-430-1	3-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430919	PLV001-430-DS	PLV001-430	3/4"	P-PLV001-430-1	3-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430919A	GTV004-430-DS	GTV004-430	3/4"	P-GTV004-430-1	3-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430922	LPB001A-430	LC001-430	3/4"	P-LPB001A-430-5	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430924	LPB001A-430	LINV001-430	3/4"	P-LPB001A-430-7	2-1/C 600V #10 & 1#10 GND	NEW, EXPOSED
	NEW		P-430940	LPB001B-430	430-D-508A-DS	3/4"	P-LPB001B-430-3	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430941	LPB001B-430	HTC001-430	3/4"	P-LPB001B-430-4	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430942	LPB001B-430	430-D-509C-DS	3/4"	P-LPB001B-430-5	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430943	LPB001B-430	430-D-510B-DS	3/4"	P-LPB001B-430-6	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430944	LPB001B-430	430-D-509D-DS	3/4"	P-LPB001B-430-7	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430945	LPB001B-430	430-D-511A-DS	3/4"	P-LPB001B-430-8	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430946	LPB001B-430	THW001-430-DS	3/4"	P-LPB001B-430-9	2-1/C 600V #10 & 1#10 GND	NEW, EXPOSED
	NEW		P-430947	LPB001B-430	THW002-430-DS	1-1/2"	P-LPB001B-430-10	2-1/C 600V #1/0 & 1#6 GND	NEW, EXPOSED
	NEW		P-430948	LPB001B-430	THW003-430-DS	1-1/2"	P-LPB001B-430-11	2-1/C 600V #1/0 & 1#6 GND	NEW, EXPOSED
	NEW		P-430949	LPB001B-430	PWW001-430MO	3/4"	P-LPB001B-430-12	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430950	LPB001B-430	PWW002-430MO	3/4"	P-LPB001B-430-13	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430951	LPB001B-430	PWW003-430MO	3/4"	P-LPB001B-430-14	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430952	LPB001B-430	PWW004-430MO	3/4"	P-LPB001B-430-15	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430953	LPB001B-430	PWW005-430MO	3/4"	P-LPB001B-430-16	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430954	LPB001B-430	PWW006-430MO	3/4"	P-LPB001B-430-17	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430955	LPB001B-430	ELV001-430	3/4"	P-LPB001B-430-18	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430956	LPB001B-430	SPP001-430CP	3/4"	P-LPB001B-430-19	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430957	LPB001B-430	LOBBY PANEL	3/4"	P-LPB001B-430-20	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430957A	LPB001B-430	DISCH. FLOOR N TRAP PRIMER (TP-1)	3/4"	P-LPB001B-430-21	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430957B	LPB001B-430	DISCH. FLOOR S TRAP PRIMER (TP-1)	3/4"	P-LPB001B-430-22	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430957C	LPB001B-430	ENTRY LEVEL N TRAP PRIMER (TP-1)	3/4"	P-LPB001B-430-23	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430957D	LPB001B-430	ENTRY LEVEL S TRAP PRIMER (TP-1)	3/4"	P-LPB001B-430-24	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430957E	LPB001B-430	JAN. CLOSET TRAP PRIMER (TP-1)	3/4"	P-LPB001B-430-25	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430957F	LPB001B-430	ACU004-430	3/4"	P-LPB001B-430-26	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430957G	LPB001B-430	EFF005-430	3/4"	P-LPB001B-430-27	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430957H	LPB001B-430	HVAC CONTROL PANEL	3/4"	P-LPB001B-430-28	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
1	NEW		P-430957I	LPB001B-430	TAP DRAIN HEAT TRACE	3/4"	P-LPB001B-430-29	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430958	430-D-508A-DS	430-D-508A	3/4"	P-430-D-508A	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430959	430-D-509C-DS	430-D-509C	3/4"	P-430-D-509C	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430960	430-D-510B-DS	430-D-510B	3/4"	P-430-D-510B	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430961	430-D-509D-DS	430-D-509D	3/4"	P-430-D-509D	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430962	430-D-511A-DS	430-D-511A	3/4"	P-430-D-511A	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED

CONDUIT SCHEDULE

C#	RECORD DWG #	REV NO.	CONDUIT NUMBER	FROM	TO	COND SIZE	CONDUIT FILL	CONDUCTORS, QTY/SIZE, PER CONDUIT	REMARKS
	NEW		P-430963	SPP001-430CP	SPP001-430-DS	3/4"	P-SPP001-430-1	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430964	SPP001-430DS	SPP001-430	3/4"	P-SPP001-430-2	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430965	LPUPS001-430	WWP #1 VFD CONTROLS	3/4"	P-LPUPS001-430-2	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430966	LPUPS001-430	WWP #3 VFD CONTROLS	3/4"	P-LPUPS001-430-3	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430967	LPUPS001-430	WWP #5 VFD CONTROLS	3/4"	P-LPUPS001-430-4	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430968	LPUPS001-430	EMERGENCY FP #1 VFD CONTROLS	3/4"	P-LPUPS001-430-5	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430969	LPUPS001-430	BRS001-430	3/4"	P-LPUPS001-430-6	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430970	LPUPS001-430	BRS002-430	3/4"	P-LPUPS001-430-7	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430971	LPUPS001-430	BRS003-430	3/4"	P-LPUPS001-430-8	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430972	LPUPS001-430	DPU ENCLOSURE	3/4"	P-LPUPS001-430-9	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430973	LPUPS001-430	MFM001-430	3/4"	P-LPUPS001-430-10	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430974	LPUPS001-430	MFM003-430	3/4"	P-LPUPS001-430-11	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430975	LPUPS001-430	MFM005-430	3/4"	P-LPUPS001-430-12	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430976	LPUPS001-430	IT/NETWORK ENCLOSURE	3/4"	P-LPUPS001-430-13	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430977	LPUPS001-430	DAS ENCLOSURE	3/4"	P-LPUPS001-430-14	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430978	LPUPS001-430	DISCHARGE PUMPING FLOOR VFP JB	3/4"	P-LPUPS001-430-15	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430979	LPUPS001-430	ENTRY LEVEL VFP JB	3/4"	P-LPUPS001-430-16	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430980A	LPUPS001-430	ENTRY LEVEL VFP JB	3/4"	P-LPUPS001-430-17	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430980B	LPUPS001-430	EAST STAIRWELL DAS	3/4"	P-LPUPS001-430-18	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430980C	LPUPS001-430	WEST STAIRWELL DAS	3/4"	P-LPUPS001-430-19	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430980D	LPUPS001-430	NORTH STAIRWELL DAS	3/4"	P-LPUPS001-430-20	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430980E	LPUPS001-430	FLOOR DAS CIRCUIT 1	3/4"	P-LPUPS001-430-21	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430980F	LPUPS001-430	FLOOR DAS CIRCUIT 2	3/4"	P-LPUPS001-430-22	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430978A	DISCHARGE PUMPING FLOOR VFP JB	VFP016-430	3/4"	P-DPFVFP-1	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430978B	DISCHARGE PUMPING FLOOR VFP JB	VFP017-430	3/4"	P-DPFVFP-2	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430978C	DISCHARGE PUMPING FLOOR VFP JB	VFP018-430	3/4"	P-DPFVFP-3	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430978D	DISCHARGE PUMPING FLOOR VFP JB	VFP019-430	3/4"	P-DPFVFP-4	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430978E	DISCHARGE PUMPING FLOOR VFP JB	VFP020-430	3/4"	P-DPFVFP-5	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430978F	DISCHARGE PUMPING FLOOR VFP JB	VFP021-430	3/4"	P-DPFVFP-6	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430979A	ENTRY LEVEL VFP JB	VFP022-430	3/4"	P-ELVFPVFP-1	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430979B	ENTRY LEVEL VFP JB	VFP023-430	3/4"	P-ELVFPVFP-2	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430979C	ENTRY LEVEL VFP JB	VFP024-430	3/4"	P-ELVFPVFP-3	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430979D	ENTRY LEVEL VFP JB	VFP025-430	3/4"	P-ELVFPVFP-4	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430979E	ENTRY LEVEL VFP JB	VFP026-430	3/4"	P-ELVFPVFP-5	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430979F	ENTRY LEVEL VFP JB	VFP027-430	3/4"	P-ELVFPVFP-6	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430979G	ENTRY LEVEL VFP JB	VFP028-430	3/4"	P-ELVFPVFP-7	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430979H	ENTRY LEVEL VFP JB	VFP029-430	3/4"	P-ELVFPVFP-8	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430979I	ENTRY LEVEL VFP JB	VFP030-430	3/4"	P-ELVFPVFP-9	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430979J	ENTRY LEVEL VFP JB	VFP031-430	3/4"	P-ELVFPVFP-10	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430979K	ENTRY LEVEL VFP JB	VFP032-430	3/4"	P-ELVFPVFP-11	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430980	LPUPS002-430	WWP #2 VFD CONTROLS	3/4"	P-LPUPS002-430-2	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430981	LPUPS002-430	WWP #4 VFD CONTROLS	3/4"	P-LPUPS002-430-3	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430982	LPUPS002-430	WWP #6 VFD CONTROLS	3/4"	P-LPUPS002-430-4	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430983	LPUPS002-430	EMERGENCY FP #2 VFD CONTROLS	3/4"	P-LPUPS002-430-5	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430984	LPUPS002-430	OC001-430	3/4"	P-LPUPS002-430-6	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430985	LPUPS002-430	OC002-430	3/4"	P-LPUPS002-430-7	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430986	LPUPS002-430	OC003-430	3/4"	P-LPUPS002-430-8	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430987	LPUPS002-430	DPU ENCLOSURE	3/4"	P-LPUPS002-430-9	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430988	LPUPS002-430	MFM002-430	3/4"	P-LPUPS002-430-10	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430989	LPUPS002-430	MFM004-430	3/4"	P-LPUPS002-430-11	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430990	LPUPS002-430	MFM006-430	3/4"	P-LPUPS002-430-12	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430991	LPUPS002-430	FAP001-430	3/4"	P-LPUPS002-430-13	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430992	LPUPS002-430	BOTTOM FLOOR VFP JB	3/4"	P-LPUPS002-430-14	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430993	LPUPS002-430	HIGH DUTY PUMP FLOOR VFP JB	3/4"	P-LPUPS002-430-15	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430994	LPUPS002-430	MOTOR FLOOR VFP JB	3/4"	P-LPUPS002-430-16	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430992A	BOTTOM FLOOR VFP JB	VFP001-430	3/4"	P-BFVFP-1	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430992B	BOTTOM FLOOR VFP JB	VFP002-430	3/4"	P-BFVFP-2	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430992C	BOTTOM FLOOR VFP JB	VFP003-430	3/4"	P-BFVFP-3	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430992D	BOTTOM FLOOR VFP JB	VFP004-430	3/4"	P-BFVFP-4	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430992E	BOTTOM FLOOR VFP JB	VFP005-430	3/4"	P-BFVFP-5	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430993A	HIGH DUTY PUMP FLOOR VFP JB	VFP006-430	3/4"	P-HDPVFP-1	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430993B	HIGH DUTY PUMP FLOOR VFP JB	VFP007-430	3/4"	P-HDPVFP-2	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430993C	HIGH DUTY PUMP FLOOR VFP JB	VFP008-430	3/4"	P-HDPVFP-3	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430993D	HIGH DUTY PUMP FLOOR VFP JB	VFP009-430	3/4"	P-HDPVFP-4	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430993E	HIGH DUTY PUMP FLOOR VFP JB	VFP010-430	3/4"	P-HDPVFP-5	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430994A	MOTOR FLOOR VFP JB	VFP011-430	3/4"	P-MFVFP-1	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430994B	MOTOR FLOOR VFP JB	VFP012-430	3/4"	P-MFVFP-2	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430994C	MOTOR FLOOR VFP JB	VFP013-430	3/4"	P-MFVFP-3	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430994D	MOTOR FLOOR VFP JB	VFP014-430	3/4"	P-MFVFP-4	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED
	NEW		P-430994E	MOTOR FLOOR VFP JB	VFP015-430	3/4"	P-MFVFP-5	2-1/C 600V #12 & 1#12 GND	NEW, EXPOSED

Designed by:	REVISION			
P.STRAKER	REV No.	DATE	DESCRIPTION	APPV
Drawn by:	0	5/16/25	ISSUED FOR BID	RF
P.STRAKER	1	9/5/25	ADD. 11 - RESPONSE TO ITEM #452	RF
Checked by:				
R.FRYE				

Brown AND Caldwell

Signer Name: Ralph Frye
Signing Reason: I approved this document.
Signing Time: 2025-09-09 08:57:18(EDT)

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL RALPH E. FRYE III ENGINEER PE035645

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

430-ES-07
CONDUIT SCHEDULE 4

Contract:	1800
CAD File Name:	430-ES-07.dwg
Date:	5/16/2025
Sheet:	383 of 405

CABLE ROUTING SCHEDULE

REV NO.	CABLE NUMBER	FROM	TO	CABLE TYPE	CABLE DESCRIPTION	VIA RACEWAY OR CABLE TRAY	REMARKS
	F-SWG003A-410-1	SWG008-650 (A1)	SWG003A-410	EPR	3-1/C 15KV 500KCMIL & 1# 1/0 GND	SWG008-650 (A1), FXXXXX, 13.8KV SUB VAULT, F-101264, EMH-042-000, F-101434, EMH-043-000, F-101439, EMH-113-000, F-430030, BLDG 410	TO BE FIELD VERIFIED, REPLACE EXISTING CONDUCTORS
	F-SWG003A-410-2	SWG008-650 (A1)	SWG003A-410	EPR	3-1/C 15KV 500KCMIL & 1# 1/0 GND	SWG008-650 (A1), FXXXXX, 13.8KV SUB VAULT, F-101246, EMH-042-000, F-101435, EMH-043-000, F-101440, EMH-113-000, F-430033, BLDG 410	TO BE FIELD VERIFIED, REPLACE EXISTING CONDUCTORS
							TO BE FIELD VERIFIED, REPLACE EXISTING CONDUCTORS
	F-SWG003B-410-1	SWG008-650 (A2)	SWG003B-410	EPR	3-1/C 15KV 500KCMIL & 1# 1/0 GND	SWG008-650 (B1), FXXXXX, 13.8KV SUB VAULT, F-101265, EMH-042-000, F-101435, EMH-043-000, F-101440, EMH-113-000, F-430033, BLDG 410	TO BE FIELD VERIFIED, REPLACE EXISTING CONDUCTORS
	F-SWG003B-410-2	SWG008-650 (A2)	SWG003B-410	EPR	3-1/C 15KV 500KCMIL & 1# 1/0 GND	SWG008-650 (B1), FXXXXX, 13.8KV SUB VAULT, F-101247, EMH-042-000, F-101436, EMH-043-000, F-101441, EMH-113-000, F-430034, BLDG 410	TO BE FIELD VERIFIED, REPLACE EXISTING CONDUCTORS
							TO BE FIELD VERIFIED, REPLACE EXISTING CONDUCTORS
	F-USS002-501(4A)	USS002-501(4A)	USS004A-501	EPR	3-1/C 15KV 500KCMIL & 1# 1/0 GND	SWG006-650, F-101242, EMH-001-000, F-101006, EMH-002-000, F-101012, EMH-003-000, F-101022, EMH027-000, F-430070, EMH-223-000, F-430112, EMH-224-000, F-430212, EMH-225-000, F-430250, EMH-031-000, F-101043, EMH-032-000, F-0601101, BDLG-501	TO BE FIELD VERIFIED, REPLACE EXISTING CONDUCTORS
	F-USS001-501(4B)	USS001-501(4B)	USS004B-501	EPR	3-1/C 15KV 500KCMIL & 1# 1/0 GND	SWG006-650, F-101222, EMH-002-000, F-101014, EMH-003-000, F-101024, EMH027-000, F-430071, EMH-223-000, F-430114, EMH-224-000, F-430214, EMH-225-000, F-430252, EMH-031-000, F-101041, EMH-032-000, F-060103, BDLG-501	TO BE FIELD VERIFIED, REPLACE EXISTING CONDUCTORS
	F-USS002-923(13A)	USS002-923(13A)	USS013A-923	EPR	3-1/C 15KV 500KCMIL & 1# 1/0 GND	SWG004-650, F-101197, EMH-003-000, F-101023, EMH027-000, F-430072, EMH-223-000, F-430121, EMH-224-000, F-430221, EMH-225-000, F-430258, EMH-031-000, F-101049, EMH-033-000, F-101055, EMH-034-000, F-101062, EMH-108A/B, F-101065, EMH-035-000, F-101075, EMH-036-000, F-101081, EMH-037-000, F-101083, FMH01-000, F-070029, FMH02-000, F-XXXXXX, FMH04-000, F-XXXXXX, BDLG-923	TO BE FIELD VERIFIED, REPLACE EXISTING CONDUCTORS
	F-USS001-923(13B)	USS001-923(13B)	USS013B-923	EPR	3-1/C 15KV 500KCMIL & 1# 1/0 GND	SWG006-650, F-101237, EMH-001-000, F-101002, EMH-002-000, F-101015, EMH-003-000, F-101027, EMH027-000, F-430073, EMH-223-000, F-430123, EMH-224-000, F-430223, EMH-225-000, F-430260, EMH-031-000, F-101050, EMH-033-000, F-101056, EMH-034-000, F-101061, EMH-108A/B, F-101067, EMH-035-000, F-101076, EMH-036-000, F-101082, EMH-037-000, F-101084, FMH01-000, F-070032, FMH02-000, F-XXXXXX, FMH04-000, F-XXXXXX, FMH03-000, F-XXXXXX, BLDG XXX, F-XXXXXX, FMH05-000, F-XXXXXX, FMH06-000, BDLG-923	TO BE FIELD VERIFIED, REPLACE EXISTING CONDUCTORS
							TO BE FIELD VERIFIED, REPLACE EXISTING CONDUCTORS
	F-MSP001-500	SWG004-650	HV-PB01-000	EPR	3-1/C 15KV 500KCMIL & 1# 1/0 GND	SWG005-650 (B7T), F-101221, HV-04-650, F-101187, EMH-004-000, F-430000, EMH-223-000, F-430100, EMH-224-000, F-430200, EMH-225-000, F-430270, EMH-050-000, F-101509, HV-PB01-000 (BDLG-500)	TO BE FIELD VERIFIED, REPLACE EXISTING CONDUCTORS
	F-MSP002-500	SWG004-650	HV-PB01-000	EPR	3-1/C 15KV 500KCMIL & 1# 1/0 GND	SWG006-650 (C7T), F-101250, HV-04-650, F-101186, EMH-004-000, F-430003, EMH-223-000, F-430102, EMH-224-000, F-430203, EMH-225-000, F-430273, EMH-050-000, F-101510, HV-PB01-000 (BDLG-500)	TO BE FIELD VERIFIED, REPLACE EXISTING CONDUCTORS
	F-MSP003-500	SWG004-650	HV-PB01-000	EPR	3-1/C 15KV 500KCMIL & 1# 1/0 GND	SWG004-650 (A7T), F-101191, HV-04-650, F-101185, EMH-004-000, F-430006, EMH-223-000, F-430104, EMH-224-000, F-430206, EMH-225-000, F-430276, EMH-050-000, F-101511, HV-PB01-000 (BDLG-500)	TO BE FIELD VERIFIED, REPLACE EXISTING CONDUCTORS
							TO BE FIELD VERIFIED, REPLACE EXISTING CONDUCTORS
	F-SWG003A-810-1	SWG003A-650 (XX)	SWG003A-810	EPR	3-1/C 15KV 500KCMIL & 1# 1/0 GND	SWG008-650 (A2), F-XXXXXX, 13.8KV SUB VAULT, F-106001, EMH-041-000, F-10411, EMH-018-000, F-430400, EMH-219-000, F-430450, EMH-220-000, F-430500, EMH-221-000, F-430550, EMH-106A/B-000, F-106027, EMH-107B-000, F-106033, BLDG 709 RISER, F-106041, EMH-109-000, F-108001, BLDG 810	TO BE FIELD VERIFIED, REPLACE EXISTING CONDUCTORS
	F-SWG003A-810-2	SWG003A-650 (XX)	SWG003A-810	EPR	3-1/C 15KV 500KCMIL & 1# 1/0 GND	SWG008-650 (A2), F-XXXXXX, 13.8KV SUB VAULT, F-106002, EMH-041-000, F-10410, EMH-018-000, F-430402, EMH-219-000, F-430452, EMH-220-000, F-430502, EMH-221-000, F-430552, EMH-106A/B-000, F-106028, EMH-107B-000, F-106034, BLDG 709 RISER, F-106042, EMH-109-000, F-108002, BLDG 810	TO BE FIELD VERIFIED, REPLACE EXISTING CONDUCTORS
	F-SWG003A-810-3	SWG003A-650 (XX)	SWG003A-810	EPR	3-1/C 15KV 500KCMIL & 1# 1/0 GND	SWG008-650 (A2), F-XXXXXX, 13.8KV SUB VAULT, F-106005, EMH-041-000, F-10415, EMH-018-000, F-430405, EMH-219-000, F-430455, EMH-220-000, F-430505, EMH-221-000, F-430555, EMH-106A/B-000, F-106029, EMH-107B-000, F-106035, BLDG 709 RISER, F-106043, EMH-109-000, F-108003, BLDG 810	TO BE FIELD VERIFIED, REPLACE EXISTING CONDUCTORS
							TO BE FIELD VERIFIED, REPLACE EXISTING CONDUCTORS
	F-SWG003B-810-1	SWG003B-650 (XX)	SWG003B-810	EPR	3-1/C 15KV 500KCMIL & 1# 1/0 GND	SWG008-650 (B2), F-XXXXXX, 13.8KV SUB VAULT, F-106006, EMH-041-000, F-10414, EMH-018-000, F-430407, EMH-219-000, F-430457, EMH-220-000, F-430507, EMH-221-000, F-430557, EMH-106A/B-000, F-106030, EMH-107B-000, F-106037, BLDG 709 RISER, F-106045, EMH-109-000, F-108005, BLDG 810	TO BE FIELD VERIFIED, REPLACE EXISTING CONDUCTORS
	F-SWG003B-810-2	SWG003B-650 (XX)	SWG003B-810	EPR	3-1/C 15KV 500KCMIL & 1# 1/0 GND	SWG008-650 (B2), F-XXXXXX, 13.8KV SUB VAULT, F-106009, EMH-041-000, F-10419, EMH-018-000, F-430409, EMH-219-000, F-430459, EMH-220-000, F-430509, EMH-221-000, F-430559, EMH-106A/B-000, F-106031, EMH-107B.000, F-106038, BLDG 709 RISER, F-106046, EMH-109-000, F-108006, BLDG 810	TO BE FIELD VERIFIED, REPLACE EXISTING CONDUCTORS
	F-SWG003B-810-3	SWG003B-650 (XX)	SWG003B-810	EPR	3-1/C 15KV 500KCMIL & 1# 1/0 GND	SWG008-650 (B2), F-XXXXXX, 13.8KV SUB VAULT, F-106010, EMH-041-000, F-10418, EMH-018-000, F-430411, EMH-219-000, F-430461, EMH-220-000, F-430511, EMH-221-000, F-430561, EMH-106A/B-000, F-106032, EMH-107B-000, F-106039, BLDG 709 RISER, F-106047, EMH-109-000, F-108007, BLDG 810	TO BE FIELD VERIFIED, REPLACE EXISTING CONDUCTORS
	F-SWG009A-430-1	SWG004-650 (A7B)	F-SWG009A-430 (1B)	EPR	3-1/C 15KV 500KCMIL & 1# 1/0 GND	SWG004-650 (A27), F-101188, EMH-003-000, F-101471, EMH-027-000, F-430050, EMH-226-000, F-430060, BLDG 430	NEW
	F-SWG009A-430-2	SWG004-650 (A7B)	F-SWG009A-430 (1B)	EPR	3-1/C 15KV 500KCMIL & 1# 1/0 GND	SWG004-650 (A27), F-101190, EMH-003-000, F-101472, EMH-027-000, F-430051, EMH-226-000, F-430061, BLDG 430	NEW
	F-SWG009A-430-3	SWG004-650 (A7B)	F-SWG009A-430 (1B)	EPR	3-1/C 15KV 500KCMIL & 1# 1/0 GND	SWG004-650 (A27), F-101191, EMH-003-000, F-101473, EMH-027-000, F-430052, EMH-226-000, F-430062, BLDG 430	NEW
	F-SWG009B-430-1	SWG010-650 (B1)	F-SWG009B-430 (10B)	EPR	3-1/C 15KV 500KCMIL & 1# 1/0 GND	SWG010-650 (B1), F-101193, EMH-003-000, F-101475, EMH-027-000, F-430054, EMH-226-000, F-430064, BLDG 430	NEW
	F-SWG009B-430-2	SWG010-650 (B1)	F-SWG009B-430 (10B)	EPR	3-1/C 15KV 500KCMIL & 1# 1/0 GND	SWG010-650 (B1), F-101194, EMH-003-000, F-101476, EMH-027-000, F-430055, EMH-226-000, F-430065, BLDG 430	NEW
	F-SWG009B-430-3	SWG010-650 (B1)	F-SWG009B-430 (10B)	EPR	3-1/C 15KV 500KCMIL & 1# 1/0 GND	SWG010-650 (B1), F-101195, EMH-003-000, F-101477, EMH-027-000, F-430056, EMH-226-000, F-430066, BLDG 430	NEW
	F-SWG009A-430 (2A)	SWG009A-430 (2A)	PWW001-430VF	EPR	3-1/C 15KV #2 & 1#8 GND	F-430600	
	F-SWG009A-430 (2B)	SWG009A-430 (2B)	PWW003-430VF	EPR	3-1/C 15KV #2 & 1#8 GND	F-430601	
	F-SWG009A-430 (3A)	SWG009A-430 (3A)	PWW005-430VF	EPR	3-1/C 15KV #2 & 1#8 GND	F-430602	
	F-SWG009A-430 (3B)	SWG009A-430 (3B)	XFM001A-430	EPR	3-1/C 15KV #1/0 & 1#6 GND	F-430603	
	F-SWG009A-430 (5B)-1	SWG009A-430 (5B)	SWG001B-430 (6A)	EPR	3-1/C 15KV 500KCMIL & 1# 1/0 GND	F-430650	
	F-SWG009A-430 (5B)-2	SWG009A-430 (5B)	SWG001B-430 (6A)	EPR	3-1/C 15KV 500KCMIL & 1# 1/0 GND	F-430651	
	F-SWG009A-430 (5B)-3	SWG009A-430 (5B)	SWG001B-430 (6A)	EPR	3-1/C 15KV 500KCMIL & 1# 1/0 GND	F-430652	
	F-SWG009B-430 (9A)	SWG009B-430 (9A)	PWW002-430VF	EPR	3-1/C 15KV #2 & 1#8 GND	F-430660	
	F-SWG009B-430 (9B)	SWG009B-430 (9B)	PWW004-430VF	EPR	3-1/C 15KV #2 & 1#8 GND	F-430661	
	F-SWG009B-430 (8A)	SWG009B-430 (8A)	PWW006-430VF	EPR	3-1/C 15KV #2 & 1#8 GND	F-430662	
	F-SWG009B-430 (8B)	SWG009B-430 (8B)	XFM001B-430	EPR	3-1/C 15KV #1/0 & 1#6 GND	F-430663	
	F-PWW001-430VF	PWW001-430VF	PWW001-430MO	EPR	3-1/C 5KV #3/0 & 1#6 GND	F-430670	
	F-PWW002-430VF	PWW002-430VF	PWW002-430MO	EPR	3-1/C 5KV #3/0 & 1#6 GND	F-430671	
	F-PWW003-430VF	PWW003-430VF	PWW003-430MO	EPR	3-1/C 5KV #3/0 & 1#6 GND	F-430672	
	F-PWW004-430VF	PWW004-430VF	PWW004-430MO	EPR	3-1/C 5KV #3/0 & 1#6 GND	F-430673	
	F-PWW005-430VF	PWW005-430VF	PWW005-430MO	EPR	3-1/C 5KV #3/0 & 1#6 GND	F-430674	
	F-PWW006-430VF	PWW006-430VF	PWW006-430MO	EPR	3-1/C 5KV #3/0 & 1#6 GND	F-430675	
	P-USS017A-430-1	USS017A-430 (2B)	PED001-430VF	600V CU	3-1/C 600V 300KCMIL & 1#2/0 GND	P-430680	
	P-USS017A-430-2	USS017A-430 (2B)	PED001-430VF	600V CU	3-1/C 600V 300KCMIL & 1#2/0 GND	P-430681	
	P-USS017A-430-3	USS017A-430 (2D)	PPB001-430	600V CU	3-1/C 600V 350KCMIL & 1#2 GND	P-430682	
	P-USS017A-430-4	USS017A-430 (2D)	PPB001-430	600V CU	3-1/C 600V 350KCMIL & 1#2 GND	P-430683	
	P-USS017A-430-5	USS017A-430 (2D)	PPB001-430	600V CU	3-1/C 600V 350KCMIL & 1#2 GND	P-430684	
	P-USS017A-430-6	USS017A-430 (2E)	MCC011A-430	600V CU	3-1/C 600V 350KCMIL & 1#2 GND	P-430685	
	P-USS017A-430-7	USS017A-430 (2E)	MCC011A-430	600V CU	3-1/C 600V 350KCMIL & 1#2 GND	P-430686	
	P-USS017A-430-8	USS017A-430 (2C)	ACU001-430	600V CU	3-1/C 600V 250KCMIL & 1#4 GND	P-430687	
	P-USS017A-430-9	USS017A-430 (2F)	ATS001-430	600V CU	3-1/C 600V 350KCMIL & 1#2 GND	P-430688	
	P-USS017A-430-10	USS017A-430 (2F)	ATS001-430	600V CU	3-1/C 600V 350KCMIL & 1#2 GND	P-430689	
	P-USS017A-430-11	USS017A-430 (2F)	ATS001-430	600V CU	3-1/C 600V 350KCMIL & 1#2 GND	P-430690	
	P-USS017AB-430-1	USS017A-430 (3B)	USS017B-430 (4B)	600V CU	3-1/C 600V 500KCMIL & 1-500KCMIL GND	P-430700	
	P-USS017AB-430-2	USS017A-430 (3B)	USS017B-430 (4B)	600V CU	3-1/C 600V 500KCMIL & 1-500KCMIL GND	P-430701	
	P-USS017AB-430-3	USS017A-430 (3B)	USS017B-430 (4B)	600V CU	3-1/C 600V 500KCMIL & 1-500KCMIL GND	P-430702	
	P-USS017AB-430-4	USS017A-430 (3B)	USS017B-430 (4B)	600V CU	3-1/C 600V 500KCMIL & 1-500KCMIL GND	P-430703	
	P-USS017AB-430-5	USS017A-430 (3B)	USS017B-430 (4B)	600V CU	3-1/C 600V 500KCMIL & 1-500KCMIL GND	P-430704	
	P-USS017AB-430-6	USS017A-430 (3B)	USS017B-430 (4B)	600V CU	3-1/C 600V 500KCMIL & 1-500KCMIL GND	P-430705	
	P-USS017AB-430-7	USS017A-430 (3B)	USS017B-430 (4B)	600V CU	3-1/C 600V 500KCMIL & 1-500KCMIL GND	P-430706	
	P-USS017AB-430-8	USS017A-430 (3B)	USS017B-430 (4B)	600V CU	3-1/C 600V 500KCMIL & 1-500KCMIL GND	P-430707	
	P-USS017AB-430-9	USS017A-430 (3B)	USS017B-430 (4B)	600V CU	3-1/C 600V 500KCMIL & 1-500KCMIL GND	P-430708	
	P-USS017AB-430-10	USS017A-430 (3B)	USS017B-430 (4B)	600V CU	3-1/C 600V 500KCMIL & 1-500KCMIL GND	P-430709	
	P-USS017AB-430-11	USS017A-430 (3B)	USS017B-430 (4B)	600V CU	3-1/C 600V 500KCMIL & 1-500KCMIL GND	P-430710	
	P-USS017B-430-1	USS017B-430 (5G)	PED002-430VF	600V CU	3-1/C 600V 300KCMIL & 1#2/0 GND	P-430720	
	P-USS017B-430-2	USS017B-430 (5G)	PED002-430VF	600V CU	3-1/C 600V 300KCMIL & 1#2/0 GND	P-430721	
	P-USS017B-430-3	USS017B-430 (5B)	PPB002-430	600V CU	3-1/C 600V 350KCMIL & 1#2 GND	P-430730	
	P-USS017B-430-4	USS017B-430 (5B)	PPB002-430	600V CU	3-1/C 600V 350KCMIL & 1#2 GND	P-430731	
	P-USS017B-430-5	USS017B-430 (5B)	PPB002-430	600V CU	3-1/C 600V 350KCMIL & 1#2 GND	P-430732	
	P-USS017B-430-6	USS017B-430 (5D)	MCC011B-430	600V CU	3-1/C 600V 350KCMIL & 1#2 GND	P-430733	
	P-USS017B-430-7	USS017B-430 (5D)	MCC011B-430	600V CU	3-1/C 600V 350KCMIL & 1#2 GND	P-430734	
	P-USS017B-430-8	USS017B-430 (5F)	ACU002-430	600V CU	3-1/C 600V 250KCMIL & 1#4 GND	P-430735	
	P-USS017B-430-9	USS017B-430 (5A)	ATS001-430	600V CU	3-1/C 600V 350KCMIL & 1#2 GND	P-430736	
	P-USS017B-430-10	USS017B-430 (5A)	ATS001-430	600V CU	3-1/C 600V 350KCMIL & 1#2 GND	P-430737	
	P-USS017B-430-11	USS017B-430 (5A)	ATS001-430	600V CU	3-1/C 600V 350KCMIL & 1#2 GND	P-430738	

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GENERAL NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF ALL MISSING INFORMATION ON THE CONDUIT AND CABLE SCHEDULES, INCLUDING BUT NOT LIMITED TO CONDUIT TAG NUMBERS, SIZES, COUNTS, AND SPARES IN ACCORDANCE WITH SECTION 01 52 00.

CABLE ROUTING SCHEDULE

REV NO.	CABLE NUMBER	FROM	TO	CABLE TYPE	CABLE DESCRIPTION	VIA RACEWAY OR CABLE TRAY	REMARKS
	P-USS017B-430-1	USS017B-430 (5G)	PED002-430VF	600V CU	3-1/C 600V 300KCMIL & 1#2/0 GND	P-430720	
	P-USS017B-430-2	USS017B-430 (5G)	PED002-430VF	600V CU	3-1/C 600V 300KCMIL & 1#2/0 GND	P-430721	
	P-USS017B-430-3	USS017B-430 (5B)	PPB002-430	600V CU	3-1/C 600V 350KCMIL & 1#2 GND	P-430730	
	P-USS017B-430-4	USS017B-430 (5B)	PPB002-430	600V CU	3-1/C 600V 350KCMIL & 1#2 GND	P-430731	
	P-USS017B-430-5	USS017B-430 (5B)	PPB002-430	600V CU	3-1/C 600V 350KCMIL & 1#2 GND	P-430732	
	P-USS017B-430-6	USS017B-430 (5D)	MCC011B-430	600V CU	3-1/C 600V 350KCMIL & 1#2 GND	P-430733	
	P-USS017B-430-7	USS017B-430 (5D)	MCC011B-430	600V CU	3-1/C 600V 350KCMIL & 1#2 GND	P-430734	
	P-USS017B-430-8	USS017B-430 (5F)	ACU002-430	600V CU	3-1/C 600V 250KCMIL & 1#4 GND	P-430735	
	P-USS017B-430-9	USS017B-430 (5A)	ATS001-430	600V CU	3-1/C 600V 350KCMIL & 1#2 GND	P-430736	
	P-USS017B-430-10	USS017B-430 (5A)	ATS001-430	600V CU	3-1/C 600V 350KCMIL & 1#2 GND	P-430737	
	P-USS017B-430-11	USS017B-430 (5A)	ATS001-430	600V CU	3-1/C 600V 350KCMIL & 1#2 GND	P-430738	
	P-USS017B-430-12	USS017B-430 (5E)	ACU005-430	600V CU	3-1/C 600V 250KCMIL & 1#4 GND	P-430739	
	P-PED001-430VP-1	PED001-430VF	PED001-430 POWER TERM. BOX	600V CU	3-1/C 600V 300KCMIL & 1#2/0 GND	P-430750	
	P-PED001-430VP-2	PED001-430VF	PED001-430 POWER TERM. BOX	600V CU	3-1/C 600V 300KCMIL & 1#2/0 GND	P-430751	
	P-PED001-430VP-3	PED001-430 POWER TERM. BOX	PED001-430MO	600V CU	VND CABLE	P-430752	MOTOR LEAD CABLE COMBINES POWER AND CONTROL WIRES TO PED001-430MO
	P-PED002-430VP-1	PED002-430VF	PED002-430 POWER TERM. BOX	600V CU	3-1/C 600V 300KCMIL & 1#2/0 GND	P-430760	
	P-PED002-430VP-2	PED002-430VF	PED002-430 POWER TERM. BOX	600V CU	3-1/C 600V 300KCMIL & 1#2/0 GND	P-430761	
	P-PED002-430VP-3	PED002-430 POWER TERM. BOX	PED002-430MO	600V CU	VND CABLE	P-430762	MOTOR LEAD CABLE COMBINES POWER AND CONTROL WIRES TO PED002-430MO
	P-ATS001-430-1	ATS001-430	PPB003-430	600V CU	3-1/C 600V 350KCMIL & 1#2 GND	P-430770	
	P-ATS001-430-2	ATS001-430	PPB003-430	600V CU	3-1/C 600V 350KCMIL & 1#2 GND	P-430771	
	P-ATS001-430-3	ATS001-430	PPB003-430	600V CU	3-1/C 600V 350KCMIL & 1#2 GND	P-430772	
	P-LPB001A-430-1	XFM003-430	LPB001A-430	600V CU	4-1/C 600V 250KCMIL & 1#4 GND	P-430790	
	P-LPB001B-430-1	XFM004-430	LPB001B-430	600V CU	4-1/C 600V 500KCMIL & 1#2 GND	P-430792	
	P-MCC001A-430-1	MCC011A-430 (2C)	EFF001-430	600V CU	3-1/C 600V #2 & 1#6 GND	P-430811	
	P-MCC001A-430-2	MCC011A-430 (3A)	EFF003-430	600V CU	3-1/C 600V #6 & 1#8 GND	P-430812	
	P-MCC001A-430-3	MCC011A-430 (1D)	FAS001-430	600V CU	3-1/C 600V #12 & 1#12 GND	P-430813	
	P-MCC001A-430-4	MCC011A-430 (3C)	FAS003-430	600V CU	3-1/C 600V #12 & 1#12 GND	P-430814	
	P-MCC001A-430-5	MCC011A-430 (4D)	FOC001-430	600V CU	3-1/C 600V #8 & 1#10 GND	P-430815	
	P-MCC001B-430-1	MCC011B-430 (2A)	EFF002-430	600V CU	3-1/C 600V #8 & 1#10 GND	P-430831	
	P-MCC001B-430-2	MCC011B-430 (2B)	EFF004-430	600V CU	3-1/C 600V #8 & 1#10 GND	P-430832	
	P-MCC001B-430-3	MCC011B-430 (3B)	FAS002-430	600V CU	3-1/C 600V #12 & 1#12 GND	P-430833	
	P-MCC001B-430-4	MCC011B-430 (2C)	FOC002-430	600V CU	3-1/C 600V #8 & 1#10 GND	P-430834	
	P-MCC001B-430-5	MCC011B-430 (3A)	EFF006-430	600V CU	3-1/C 600V #12 & 1#12 GND	P-430835	
	P-FOC001-430-1	FOC001-430-DS	FOC001-430	600V CU	3-1/C 600V #8 & 1#10 GND	P-430836	
	P-FOC002-430-1	FOC002-430-DS	FOC002-430	600V CU	3-1/C 600V #8 & 1#10 GND	P-430837	
	P-PPB001-430-1	PPB001-430	MUW001-430	600V CU	3-1/C 600V #6 & 1#10 GND	P-430840	
	P-PPB001-430-2	PPB001-430	MUW003-430	600V CU	3-1/C 600V #1 & 1#8 GND	P-430841	
	P-PPB001-430-3	PPB001-430	MUW005-430	600V CU	3-1/C 600V #12 & 1#12 GND	P-430842	
	P-PPB001-430-4	PPB001-430	CRN001-430-DS	600V CU	3-1/C 600V #8 & 1#10 GND	P-430843	
	P-PPB001-430-5	PPB001-430	CRN003-430-DS	600V CU	3-1/C 600V #4 & 1#8 GND	P-430844	
	P-PPB001-430-6	PPB001-430	CRN005-430-DS	600V CU	3-1/C 600V #2 & 1#6 GND	P-430845	
	P-PPB001-430-7	PPB001-430	PWW001-430IV-DS	600V CU	3-1/C 600V #12 & 1#12 GND	P-430846	
	P-PPB001-430-8	PPB001-430	PWW003-430IV-DS	600V CU	3-1/C 600V #12 & 1#12 GND	P-430847	
	P-PPB001-430-9	PPB001-430	PWW005-430IV-DS	600V CU	3-1/C 600V #12 & 1#12 GND	P-430848	
	P-PPB001-430-10	PPB001-430	PWW001-430SCV-DS	600V CU	3-1/C 600V #12 & 1#12 GND	P-430849	
	P-PPB001-430-11	PPB001-430	PWW003-430SCV-DS	600V CU	3-1/C 600V #12 & 1#12 GND	P-430850	
	P-PPB001-430-12	PPB001-430	PWW005-430SCV-DS	600V CU	3-1/C 600V #12 & 1#12 GND	P-430851	
	P-PPB001-430-13	PPB001-431	PWW001-430RCV-DS	600V CU	3-1/C 600V #12 & 1#12 GND	P-430852	
	P-PPB001-430-14	PPB001-430	PWW003-430RCV-DS	600V CU	3-1/C 600V #12 & 1#12 GND	P-430853	
	P-PPB001-430-15	PPB001-430	PWW005-430RCV-DS	600V CU	3-1/C 600V #12 & 1#12 GND	P-430854	
	P-PPB001-430-16	PPB001-430	EUH005-430	600V CU	3-1/C 600V #12 & 1#12 GND	P-430855	
	P-PPB001-430-17	PPB001-430	EUH009-430	600V CU	3-1/C 600V #12 & 1#12 GND	P-430856	
	P-PPB001-430-18	PPB001-430	MOTOR FLOOR W RECPT	600V CU	3-1/C 600V #3 & 1#8 GND	P-430857	
	P-PPB001-430-19	PPB001-430	SCREENING ROOM W RECPT	600V CU	3-1/C 600V #3 & 1#8 GND	P-430858	
	P-PPB001-430-20	PPB001-430	PUMP LOADOUT WEST W RECPT	600V CU	3-1/C 600V #3 & 1#8 GND	P-430859	
	P-PPB001-430-21	PPB001-430	DISCH PIPE FLOOR SOUTH W RECPT	600V CU	3-1/C 600V #3 & 1#8 GND	P-430860	
	P-PPB001-430-22	PPB001-430	UPS001-430	600V CU	3-1/C 600V #4 & 1#10 GND	P-430861	
	P-CRN001-430-1	CRN001-430-DS	CRN001-430	600V CU	3-1/C 600V #8 & 1#10 GND	P-430866	
	P-CRN003-430-1	CRN003-430-DS	CRN003-430	600V CU	3-1/C 600V #4 & 1#8 GND	P-430867	
	P-CRN005-430-1	CRN005-430-DS	CRN005-430	600V CU	3-1/C 600V #2 & 1#6 GND	P-430868	
	P-PWW001-430-1	PWW001-430IV-DS	PWW001-430IV	600V CU	3-1/C 600V #12 & 1#12 GND	P-430869A	
	P-PWW003-430-1	PWW003-430IV-DS	PWW003-430IV	600V CU	3-1/C 600V #12 & 1#12 GND	P-430869B	
	P-PWW005-430-1	PWW005-430IV-DS	PWW005-430IV	600V CU	3-1/C 600V #12 & 1#12 GND	P-430869C	
	P-PWW001-430SCV-1	PWW001-430SCV-DS	PWW001-430SCV	600V CU	3-1/C 600V #12 & 1#12 GND	P-430869D	
	P-PWW003-430SCV-1	PWW003-430SCV-DS	PWW003-430SCV	600V CU	3-1/C 600V #12 & 1#12 GND	P-430869E	
	P-PWW005-430SCV-1	PWW005-430SCV-DS	PWW005-430SCV	600V CU	3-1/C 600V #12 & 1#12 GND	P-430869F	
	P-PWW001-430RCV-1	PWW001-430RCV-DS	PWW001-430RCV	600V CU	3-1/C 600V #12 & 1#12 GND	P-430869G	
	P-PWW003-430RCV-1	PWW003-430RCV-DS	PWW003-430RCV	600V CU	3-1/C 600V #12 & 1#12 GND	P-430869H	
	P-PWW005-430RCV-1	PWW005-430RCV-DS	PWW005-430RCV	600V CU	3-1/C 600V #12 & 1#12 GND	P-430869I	
	P-PPB002-430-1	PPB002-430	MUW002-430	600V CU	3-1/C 600V #1/0 & 1#6 GND	P-430875	
	P-PPB002-430-2	PPB002-430	MUW004-430	600V CU	3-1/C 600V #4 & 1#8 GND	P-430876	
	P-PPB002-430-3	PPB002-430	CRN002-430-DS	600V CU	3-1/C 600V #8 & 1#10 GND	P-430877	
	P-PPB002-430-4	PPB002-430	CRN004-430-DS	600V CU	3-1/C 600V #4 & 1#8 GND	P-430878	
	P-PPB002-430-5	PPB002-430	PWW002-430IV-DS	600V CU	3-1/C 600V #12 & 1#12 GND	P-430879	
	P-PPB002-430-6	PPB002-430	PWW004-430IV-DS	600V CU	3-1/C 600V #12 & 1#12 GND	P-430880	
	P-PPB002-430-7	PPB002-430	PWW006-430IV-DS	600V CU	3-1/C 600V #12 & 1#12 GND	P-430881	
	P-PPB002-430-8	PPB002-430	PWW002-430SCV-DS	600V CU	3-1/C 600V #12 & 1#12 GND	P-430882	
	P-PPB002-430-9	PPB002-430	PWW004-430SCV-DS	600V CU	3-1/C 600V #12 & 1#12 GND	P-430883	
	P-PPB002-430-10	PPB002-430	PWW006-430SCV-DS	600V CU	3-1/C 600V #12 & 1#12 GND	P-430884	
	P-PPB002-430-11	PPB002-430	PWW002-430RCV-DS	600V CU	3-1/C 600V #12 & 1#12 GND	P-430885	
	P-PPB002-430-12	PPB002-430	PWW004-430RCV-DS	600V CU	3-1/C 600V #12 & 1#12 GND	P-430886	
	P-PPB002-430-13	PPB002-430	PWW006-430RCV-DS	600V CU	3-1/C 600V #12 & 1#12 GND	P-430887	

Designed by: P.STRAKER
Drawn by: P.STRAKER
Checked by: R.FRYE

REVISION			
REV No.	DATE	DESCRIPTION	APPV
0	5/16/25	ISSUED FOR BID	RF
1	9/5/25	ADD 11: UPDATE TO CABLE SCHEDULES NOTES	RF

Brown AND Caldwell

Signer Name: Ralph Frye
Signing Reason: I approved this document.
Signing Time: 2025-09-09 08:57:18(EDT)

RALPH A. FRYE III

ARLETTA SCOTT WILLIAMS
EXECUTIVE DIRECTOR, ALCOSAN

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PITTSBURGH, PA 15233
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ALLEGHENY COUNTY SANITARY AUTHORITY
WASTEWATER TREATMENT PLANT
WET WEATHER PUMP STATION

430-ES-11
CABLE SCHEDULE 1

Contract: 1800
CAD File Name: 430-ES-11.dwg
Date: 5/16/2025
Sheet: 388 of 405

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GENERAL NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF ALL MISSING INFORMATION ON THE CONDUIT AND CABLE SCHEDULES, INCLUDING BUT NOT LIMITED TO CONDUIT TAG NUMBERS, SIZES, COUNTS, AND SPARES IN ACCORDANCE WITH SECTION 01 52 00.

CABLE ROUTING SCHEDULE

REV NO.	CABLE NUMBER	FROM	TO	CABLE TYPE	CABLE DESCRIPTION	VIA RACEWAY OR CABLE TRAY	REMARKS
	P-PPB002-430-14	PPB002-430	EUH002-430	600V CU	3-1/C 600V #12 & 1#12 GND	P-430888	
	P-PPB002-430-15	PPB002-430	EUH004-430	600V CU	3-1/C 600V #12 & 1#12 GND	P-430889	
	P-PPB002-430-16	PPB002-430	EUH006-430	600V CU	3-1/C 600V #12 & 1#12 GND	P-430890	
	P-PPB002-430-17	PPB002-430	EUH008-430	600V CU	3-1/C 600V #12 & 1#12 GND	P-430891	
	P-PPB002-430-18	PPB002-430	EUH010-430	600V CU	3-1/C 600V #12 & 1#12 GND	P-430892	
	P-PPB002-430-19	PPB002-430	DUTY PUMP FLOOR W RECPT	600V CU	3-1/C 600V #3 & 1#8 GND	P-430888	
	P-PPB002-430-20	PPB002-430	DISCH PIPE FLOOR NORTH W RECPT	600V CU	3-1/C 600V #3 & 1#8 GND	P-430889	
	P-PPB002-430-21	PPB002-430	PUMP LOADOUT EAST W RECPT	600V CU	3-1/C 600V #3 & 1#8 GND	P-430890	
	P-PPB002-430-22	PPB002-430	UPS002-430	600V CU	3-1/C 600V #4 & 1#10 GND	P-430891	
	P-PPB002-430-23	PPB002-430	XFM005-430	600V CU	3-1/C 600V #1/0 & 1#6 GND	P-430892	
	P-XFM005-430-1	XFM005-430	SHORE POWER REEL	600V CU	4-1/C 600V 250KCMIL & 1#4 GND	P-430893, SECTION (20)	
	P-CRN002-430-1	CRN002-430-DS	CRN002-430	600V CU	3-1/C 600V #8 & 1#10 GND	P-430894	
	P-CRN004-430-1	CRN004-430-DS	CRN004-430	600V CU	3-1/C 600V #4 & 1#8 GND	P-430895	
	P-PWW002-430IV-1	PWW002-430IV-DS	PWW002-430IV	600V CU	3-1/C 600V #12 & 1#12 GND	P-430895A	
	P-PWW004-430IV-1	PWW004-430IV-DS	PWW004-430IV	600V CU	3-1/C 600V #12 & 1#12 GND	P-430895B	
	P-PWW006-430IV-1	PWW006-430IV-DS	PWW006-430IV	600V CU	3-1/C 600V #12 & 1#12 GND	P-430895C	
	P-PWW002-430SCV-1	PWW002-430SCV-DS	PWW002-430SCV	600V CU	3-1/C 600V #12 & 1#12 GND	P-430895D	
	P-PWW004-430SCV-1	PWW004-430SCV-DS	PWW004-430SCV	600V CU	3-1/C 600V #12 & 1#12 GND	P-430895E	
	P-PWW006-430SCV-1	PWW006-430SCV-DS	PWW006-430SCV	600V CU	3-1/C 600V #12 & 1#12 GND	P-430895F	
	P-PWW002-430RCV-1	PWW002-430RCV-DS	PWW002-430RCV	600V CU	3-1/C 600V #12 & 1#12 GND	P-430895G	
	P-PWW004-430RCV-1	PWW004-430RCV-DS	PWW004-430RCV	600V CU	3-1/C 600V #12 & 1#12 GND	P-430895H	
	P-PWW006-430RCV-1	PWW006-430RCV-DS	PWW006-430RCV	600V CU	3-1/C 600V #12 & 1#12 GND	P-430895I	
	P-LPUPS001-430-1	UPS001-430	LPUPS001-430	600V CU	3-1/C 600V #1 & 1#8 GND	P-430896	
	P-LPUPS002-430-1	UPS002-430	LPUPS002-430	600V CU	3-1/C 600V #1 & 1#8 GND	P-430897	
	P-PPB003-430-1	PPB003-430	ELV001-430	600V CU	3-1/C 600V #4 & 1#8 GND	P-430898	
	P-PPB003-430-2	PPB003-430	CRN006-430-DS	600V CU	3-1/C 600V #12 & 1#12 GND	P-430899	
	P-PPB003-430-3	PPB003-430	CRN007-430-DS	600V CU	3-1/C 600V #12 & 1#12 GND	P-430900	
	P-PPB003-430-4	PPB003-430	SEF001-430VCP	600V CU	3-1/C 600V #12 & 1#12 GND	P-430901	
	P-PPB003-430-5	PPB003-430	XFM003-430	600V CU	3-1/C 600V #1/0 & 1#6 GND	P-430902	
	P-PPB003-430-6	PPB003-430	GWO001-430-DS	600V CU	3-1/C 600V #12 & 1#12 GND	P-430903	
	P-PPB003-430-7	PPB003-430	CRN008-430	600V CU	3-1/C 600V #12 & 1#12 GND	P-430904	
	P-PPB003-430-8	PPB003-430	PLV001-430-DS	600V CU	3-1/C 600V #12 & 1#12 GND	P-430905	
	P-PPB003-430-10	PPB003-430	EUH001-430	600V CU	3-1/C 600V #12 & 1#12 GND	P-430907	
	P-PPB003-430-11	PPB003-430	GTV004-430-DS	600V CU	3-1/C 600V #12 & 1#12 GND	P-430908	
	P-PPB003-430-12	PPB003-430	PBP001&2-430CP	600V CU	3-1/C 600V #1 & 1#6 GND	P-430909	
	P-PPB003-430-13	PPB003-430	SWG009-430 STATION BATTERY	600V CU	3-1/C 600V #4 & 1#10 GND	P-430910	
	P-PPB003-430-14	PPB003-430	EUH003-430	600V CU	3-1/C 600V #12 & 1#12 GND	P-430910A	
	P-PPB003-430-15	PPB003-430	EUH007-430	600V CU	3-1/C 600V #12 & 1#12 GND	P-430910B	
	P-PPB003-430-16	PPB003-430	EUH011-430	600V CU	3-1/C 600V #12 & 1#12 GND	P-430910C	
	P-PPB003-430-17	PPB003-430	DUMPSTER AREA W RECPT	600V CU	3-1/C 600V #3 & 1#8 GND	P-430910D	
	P-PPB003-430-18	PPB003-430	HVAC AREA W RECPT	600V CU	3-1/C 600V #3 & 1#8 GND	P-430910E	
	P-PPB003-430-19	PPB003-430	XFM004-430	600V CU	3-1/C 600V #2/0 & 1#6 GND	P-430910F	
	P-CRN006-430-1	CRN006-430-DS	CRN006-430	600V CU	3-1/C 600V #12 & 1#12 GND	P-430911	
	P-CRN007-430-1	CRN007-430-DS	CRN007-430	600V CU	3-1/C 600V #12 & 1#12 GND	P-430912	
	P-PBP001&2-430CP-1	PBP001&2-430CP	PBP001-430-DS	600V CU	3-1/C 600V #4 & 1#8 GND	P-430913	
	P-PBP001&2-430CP-2	PBP001-430-DS	PBP001-430MO	600V CU	VND CABLE	P-430914	MOTOR LEAD CABLE COMBINES POWER AND CONTROL WIRES TO PBP001-430MO
	P-PBP001&2-430CP-3	PBP001&2-430CP	PBP002-430-DS	600V CU	3-1/C 600V #4 & 1#8 GND	P-430915	
	P-PBP001&2-430CP-4	PBP002-430-DS	PBP002-430MO	600V CU	VND CABLE	P-430916	MOTOR LEAD CABLE COMBINES POWER AND CONTROL WIRES TO PBP002-430MO
	P-SEF001-430-1	SEF001-430VCP	SEF001-430BFV	600V CU	VND CABLE	P-430917	
	P-GWO001-430-1	GWO001-430-DS	GWO001-430	600V CU	3-1/C 600V #12 & 1#12 GND	P-430918	
	P-PLV001-430-1	PLV001-430-DS	PLV001-430	600V CU	3-1/C 600V #12 & 1#12 GND	P-430919	
	P-GTV004-430-1	GTV004-430-DS	GTV004-430	600V CU	3-1/C 600V #12 & 1#12 GND	P-430919A	
	P-LPB001A-430-5	LPB001A-430	LC001-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430922	
	P-LPB001A-430-7	LPB001A-430	LINV001-430	600V CU	2-1/C 600V #10 & 1#10 GND	P-430924	
	P-LPB001B-430-3	LPB001B-430	430-D-508A-DS	600V CU	2-1/C 600V #12 & 1#12 GND	P-430940	
	P-LPB001B-430-4	LPB001B-430	HTC001-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430941	
	P-LPB001B-430-5	LPB001B-430	430-D-509C-DS	600V CU	2-1/C 600V #12 & 1#12 GND	P-430942	
	P-LPB001B-430-6	LPB001B-430	430-D-510B-DS	600V CU	2-1/C 600V #12 & 1#12 GND	P-430943	
	P-LPB001B-430-7	LPB001B-430	430-D-509D-DS	600V CU	2-1/C 600V #12 & 1#12 GND	P-430944	
	P-LPB001B-430-8	LPB001B-430	430-D-511A-DS	600V CU	2-1/C 600V #12 & 1#12 GND	P-430945	
	P-LPB001B-430-9	LPB001B-430	THW001-430-DS	600V CU	2-1/C 600V #10 & 1#10 GND	P-430946	
	P-LPB001B-430-10	LPB001B-430	THW002-430-DS	600V CU	2-1/C 600V #1/0 & 1#6 GND	P-430947	
	P-LPB001B-430-11	LPB001B-430	THW003-430-DS	600V CU	2-1/C 600V #1/0 & 1#6 GND	P-430948	
	P-LPB001B-430-12	LPB001B-430	PWW001-430MO	600V CU	2-1/C 600V #12 & 1#12 GND	P-430949	
	P-LPB001B-430-13	LPB001B-430	PWW002-430MO	600V CU	2-1/C 600V #12 & 1#12 GND	P-430950	
	P-LPB001B-430-14	LPB001B-430	PWW003-430MO	600V CU	2-1/C 600V #12 & 1#12 GND	P-430951	
	P-LPB001B-430-15	LPB001B-430	PWW004-430MO	600V CU	2-1/C 600V #12 & 1#12 GND	P-430952	
	P-LPB001B-430-16	LPB001B-430	PWW005-430MO	600V CU	2-1/C 600V #12 & 1#12 GND	P-430953	
	P-LPB001B-430-17	LPB001B-430	PWW006-430MO	600V CU	2-1/C 600V #12 & 1#12 GND	P-430954	
	P-LPB001B-430-18	LPB001B-430	ELV001-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430955	
	P-LPB001B-430-19	LPB001B-430	SPP001-430CP	600V CU	2-1/C 600V #12 & 1#12 GND	P-430956	
	P-LPB001B-430-20	LPB001B-430	LOBBY PANEL	600V CU	2-1/C 600V #12 & 1#12 GND	P-430957	
	P-LPB001B-430-21	LPB001B-430	DISCH. FLOOR N TRAP PRIMER (TP-1)	600V CU	2-1/C 600V #12 & 1#12 GND	P-430957A	
	P-LPB001B-430-22	LPB001B-430	DISCH. FLOOR S TRAP PRIMER (TP-1)	600V CU	2-1/C 600V #12 & 1#12 GND	P-430957B	
	P-LPB001B-430-23	LPB001B-430	ENTRY LEVEL N TRAP PRIMER (TP-1)	600V CU	2-1/C 600V #12 & 1#12 GND	P-430957C	
	P-LPB001B-430-24	LPB001B-430	ENTRY LEVEL S TRAP PRIMER (TP-1)	600V CU	2-1/C 600V #12 & 1#12 GND	P-430957D	
	P-LPB001B-430-25	LPB001B-430	JAN. CLOSET TRAP PRIMER (TP-1)	600V CU	2-1/C 600V #12 & 1#12 GND	P-430957E	
	P-LPB001B-430-26	LPB001B-430	ACU004-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430957F	
	P-LPB001B-430-27	LPB001B-430	EFF005-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430957G	
1	~~P-LPB001B-430-28~~	~~LPB001B-430~~	~~HVAC CONTROL PANEL~~	~~600V CU~~	~~2-1/C 600V #12 & 1#12 GND~~	~~P-430957H~~	
1	P-LPB001B-430-29	LPB001B-430	TAP DRAIN HEAT TRACE	600V CU	2-1/C 600V #12 & 1#12 GND	P-430957I	
	P-430-D-508A	430-D-508A-DS	430-D-508A	600V CU	2-1/C 600V #12 & 1#12 GND	P-430958	
	P-430-D-509C	430-D-509C-DS	430-D-509C	600V CU	2-1/C 600V #12 & 1#12 GND	P-430959	
	P-430-D-510B	430-D-510B-DS	430-D-510B	600V CU	2-1/C 600V #12 & 1#12 GND	P-430960	
	P-430-D-509D	430-D-509D-DS	430-D-509D	600V CU	2-1/C 600V #12 & 1#12 GND	P-430961	
	P-430-D-511A	430-D-511A-DS	430-D-511A	600V CU	2-1/C 600V #12 & 1#12 GND	P-430962	
	P-THW001-430-1	THW001-430-DS	THW001-430	600V CU	2-1/C 600V #10 & 1#10 GND	P-430962A	
	P-THW002-430-1	THW002-430-DS	THW002-430	600V CU	2-1/C 600V #1/0 & 1#6 GND	P-430962B	
	P-THW003-430-1	THW003-430-DS	THW003-430	600V CU	2-1/C 600V #1/0 & 1#6 GND	P-430962C	

CABLE ROUTING SCHEDULE

REV NO.	CABLE NUMBER	FROM	TO	CABLE TYPE	CABLE DESCRIPTION	VIA RACEWAY OR CABLE TRAY	REMARKS
	P-SPP001-430-1	SPP001-430CP	SPP001-430DS	600V CU	2-1/C 600V #12 & 1#12 GND	P-430963	
	P-SPP001-430-2	SPP001-430DS	SPP001-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430964	
	P-LPUPS001-430-2	LPUPS001-430	WWP #1 VFD CONTROLS	600V CU	2-1/C 600V #12 & 1#12 GND	P-430965	
	P-LPUPS001-430-3	LPUPS001-430	WWP #3 VFD CONTROLS	600V CU	2-1/C 600V #12 & 1#12 GND	P-430966	
	P-LPUPS001-430-4	LPUPS001-430	WWP #5 VFD CONTROLS	600V CU	2-1/C 600V #12 & 1#12 GND	P-430967	
	P-LPUPS001-430-5	LPUPS001-430	EMERGENCY FP #1 VFD CONTROLS	600V CU	2-1/C 600V #12 & 1#12 GND	P-430968	
	P-LPUPS001-430-6	LPUPS001-430	BRS001-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430969	
	P-LPUPS001-430-7	LPUPS001-430	BRS002-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430970	
	P-LPUPS001-430-8	LPUPS001-430	BRS003-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430971	
	P-LPUPS001-430-9	LPUPS001-430	DPU ENCLOSURE	600V CU	2-1/C 600V #12 & 1#12 GND	P-430972	
	P-LPUPS001-430-10	LPUPS001-430	MFM001-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430973	
	P-LPUPS001-430-11	LPUPS001-430	MFM003-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430974	
	P-LPUPS001-430-12	LPUPS001-430	MFM005-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430975	
	P-LPUPS001-430-13	LPUPS001-430	IT/NETWORK ENCLOSURE	600V CU	2-1/C 600V #12 & 1#12 GND	P-430976	
	P-LPUPS001-430-14	LPUPS001-430	DAS ENCLOSURE	600V CU	2-1/C 600V #12 & 1#12 GND	P-430977	
	P-LPUPS001-430-15	LPUPS001-430	DISCHARGE PUMPING FLOOR VFP JB	600V CU	2-1/C 600V #12 & 1#12 GND	P-430978	
	P-LPUPS001-430-16	LPUPS001-430	ENTRY LEVEL VFP JB	600V CU	2-1/C 600V #12 & 1#12 GND	P-430979	
	P-LPUPS001-430-17	LPUPS001-430	ENTRY LEVEL VFP JB	600V CU	2-1/C 600V #12 & 1#12 GND	P-430980A	
	P-LPUPS001-430-18	LPUPS001-430	EAST STAIRWELL DAS	600V CU	2-1/C 600V #12 & 1#12 GND	P-430980B	
	P-LPUPS001-430-19	LPUPS001-430	WEST STAIRWELL DAS	600V CU	2-1/C 600V #12 & 1#12 GND	P-430980C	
	P-LPUPS001-430-20	LPUPS001-430	NORTH STAIRWELL DAS	600V CU	2-1/C 600V #12 & 1#12 GND	P-430980D	
	P-LPUPS001-430-21	LPUPS001-430	FLOOR DAS CIRCUIT 1	600V CU	2-1/C 600V #12 & 1#12 GND	P-430980E	
	P-LPUPS001-430-22	LPUPS001-430	FLOOR DAS CIRCUIT 2	600V CU	2-1/C 600V #12 & 1#12 GND	P-430980F	
	P-DPFVFP-1	DISCHARGE PUMPING FLOOR VFP JB	VFP016-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430978A	
	P-DPFVFP-2	DISCHARGE PUMPING FLOOR VFP JB	VFP017-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430978B	
	P-DPFVFP-3	DISCHARGE PUMPING FLOOR VFP JB	VFP018-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430978C	
	P-DPFVFP-4	DISCHARGE PUMPING FLOOR VFP JB	VFP019-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430978D	
	P-DPFVFP-5	DISCHARGE PUMPING FLOOR VFP JB	VFP020-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430978E	
	P-DPFVFP-6	DISCHARGE PUMPING FLOOR VFP JB	VFP021-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430978F	
	P-ELVFPVFP-1	ENTRY LEVEL VFP JB	VFP022-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430979A	
	P-ELVFPVFP-2	ENTRY LEVEL VFP JB	VFP023-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430979B	
	P-ELVFPVFP-3	ENTRY LEVEL VFP JB	VFP024-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430979C	
	P-ELVFPVFP-4	ENTRY LEVEL VFP JB	VFP025-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430979D	
	P-ELVFPVFP-5	ENTRY LEVEL VFP JB	VFP026-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430979E	
	P-ELVFPVFP-6	ENTRY LEVEL VFP JB	VFP027-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430979F	
	P-ELVFPVFP-7	ENTRY LEVEL VFP JB	VFP028-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430979G	
	P-ELVFPVFP-8	ENTRY LEVEL VFP JB	VFP029-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430979H	
	P-ELVFPVFP-9	ENTRY LEVEL VFP JB	VFP030-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430979I	
	P-ELVFPVFP-10	ENTRY LEVEL VFP JB	VFP031-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430979J	
	P-ELVFPVFP-11	ENTRY LEVEL VFP JB	VFP032-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430979K	
	P-LPUPS002-430-2	LPUPS002-430	WWP #2 VFD CONTROLS	600V CU	2-1/C 600V #12 & 1#12 GND	P-430980	
	P-LPUPS002-430-3	LPUPS002-430	WWP #4 VFD CONTROLS	600V CU	2-1/C 600V #12 & 1#12 GND	P-430981	
	P-LPUPS002-430-4	LPUPS002-430	WWP #6 VFD CONTROLS	600V CU	2-1/C 600V #12 & 1#12 GND	P-430982	
	P-LPUPS002-430-5	LPUPS002-430	EMERGENCY FP #2 VFD CONTROLS	600V CU	2-1/C 600V #12 & 1#12 GND	P-430983	
	P-LPUPS002-430-6	LPUPS002-430	OC001-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430984	
	P-LPUPS002-430-7	LPUPS002-430	OC002-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430985	
	P-LPUPS002-430-8	LPUPS002-430	OC003-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430986	
	P-LPUPS002-430-9	LPUPS002-430	DPU ENCLOSURE	600V CU	2-1/C 600V #12 & 1#12 GND	P-430987	
	P-LPUPS002-430-10	LPUPS002-430	MFM002-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430988	
	P-LPUPS002-430-11	LPUPS002-430	MFM004-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430989	
	P-LPUPS002-430-12	LPUPS002-430	MFM006-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430990	
	P-LPUPS002-430-13	LPUPS002-430	FAP001-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430991	
	P-LPUPS002-430-14	LPUPS002-430	BOTTOM FLOOR VFP JB	600V CU	2-1/C 600V #12 & 1#12 GND	P-430992	
	P-LPUPS002-430-15	LPUPS002-430	HIGH DUTY PUMP FLOOR VFP JB	600V CU	2-1/C 600V #12 & 1#12 GND	P-430993	
	P-LPUPS002-430-16	LPUPS002-430	MOTOR FLOOR VFP JB	600V CU	2-1/C 600V #12 & 1#12 GND	P-430994	
	P-BFVFP-1	BOTTOM FLOOR VFP JB	VFP001-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430992A	
	P-BFVFP-2	BOTTOM FLOOR VFP JB	VFP002-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430992B	
	P-BFVFP-3	BOTTOM FLOOR VFP JB	VFP003-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430992C	
	P-BFVFP-4	BOTTOM FLOOR VFP JB	VFP004-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430992D	
	P-BFVFP-5	BOTTOM FLOOR VFP JB	VFP005-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430992E	
	P-HDPVFP-1	HIGH DUTY PUMP FLOOR VFP JB	VFP006-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430993A	
	P-HDPVFP-2	HIGH DUTY PUMP FLOOR VFP JB	VFP007-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430993B	
	P-HDPVFP-3	HIGH DUTY PUMP FLOOR VFP JB	VFP008-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430993C	
	P-HDPVFP-4	HIGH DUTY PUMP FLOOR VFP JB	VFP009-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430993D	
	P-HDPVFP-5	HIGH DUTY PUMP FLOOR VFP JB	VFP010-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430993E	
	P-MFVFP-1	MOTOR FLOOR VFP JB	VFP011-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430994A	
	P-MFVFP-2	MOTOR FLOOR VFP JB	VFP012-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430994B	
	P-MFVFP-3	MOTOR FLOOR VFP JB	VFP013-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430994C	
	P-MFVFP-4	MOTOR FLOOR VFP JB	VFP014-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430994D	
	P-MFVFP-5	MOTOR FLOOR VFP JB	VFP015-430	600V CU	2-1/C 600V #12 & 1#12 GND	P-430994E	

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Designed by: P.STRAKER
Drawn by: P.STRAKER
Checked by: R.FRYE

REV No.	DATE	DESCRIPTION	APPV
0	5/16/25	ISSUED FOR BID	RF
1	9/5/25	ADD. 11 - RESPONSE TO ITEM #452	RF

Brown AND Caldwell

Signer Name: Ralph Frye
Signing Reason: I approved this document.
Signing Time: 2025-09-09 08:57:18(EDT)

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL RALPH A. FRYE III ENGINEER PE053642E

alcosan allegheny county sanitary authority
ARLETTA SCOTT WILLIAMS
EXECUTIVE DIRECTOR, ALCOSAN
3300 PREBLE AVE.
PITTSBURGH, PA 15233
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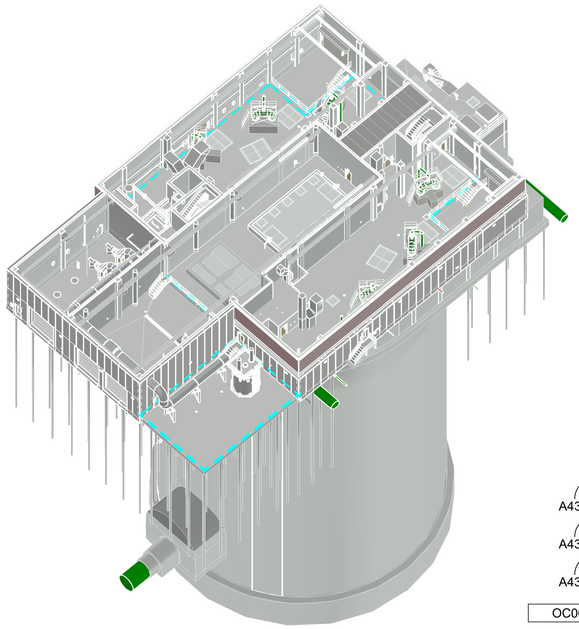
ALLEGHENY COUNTY SANITARY AUTHORITY
WASTEWATER TREATMENT PLANT
WET WEATHER PUMP STATION

430-ES-12
CABLE SCHEDULE 2

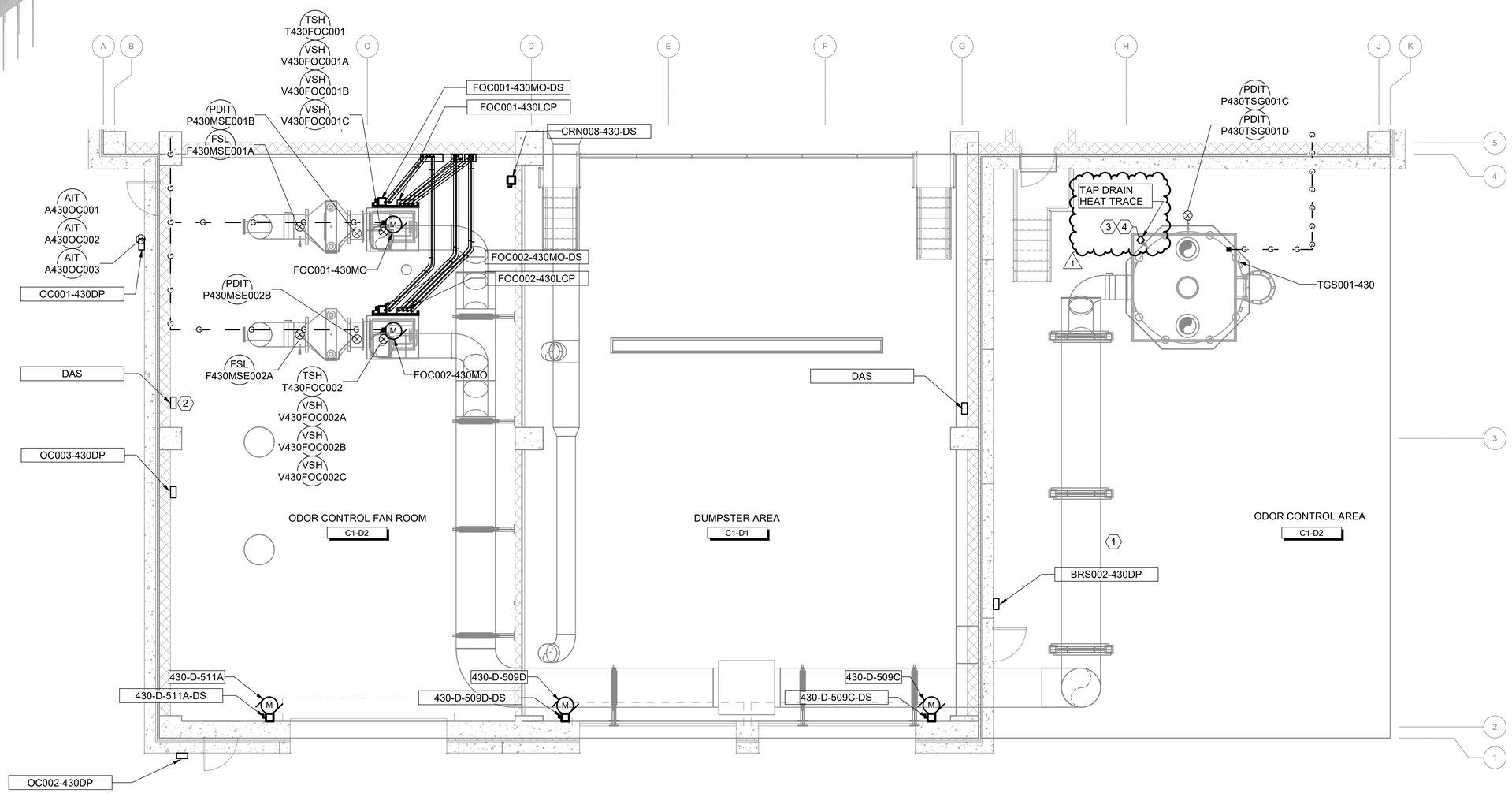
Contract: 1800
CAD File Name: 430-ES-12.dwg
Date: 5/16/2025



KEYNOTES:

1. CLASS I DIVISION II RATING WITHIN (5) FEET OF THE PROCESS PIPING.
2. COORDINATE WITH ALCOSAN AND OTHER DISCIPLINES REGARDING FINAL LOCATIONS FOR ANTENNAS.
3. FOR TAP DRAIN HEAT TRACE LOCATION SEE DRAWING 430-M-24 KEYNOTE 6.
4. TAP DRAIN HEAT TRACE SHALL BE POWERED BY LPB001B-430.

N



ENLARGED ODOR CONTROL POWER PLAN

SCALE : 3/16" = 1'-0"

Path: BIM 360://170084 - ALCOSAN Wet Weather PS//170084-E-430V21.rvt

Plot Date: 9/5/2025 9:56:19 AM

Designed by: P.STRAKER	REVISION			
	REV No.	DATE	DESCRIPTION	APPV
Drawn by: P.STRAKER	0	5/16/25	ISSUED FOR BID	RF
	1	9/5/25	ADD. 11 REVISION TO ELEV CP LOCATION AND TAG	RF
Checked by: R.FRYE				

Brown AND Caldwell

Signer Name: Ralph Frye
Signing Reason: I approved this document.
Signing Time: 2025-09-09 08:57:18(EDT)

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL RALPH E. FRYE III ENGINEER 035364

ARLETTA SCOTT WILLIAMS
EXECUTIVE DIRECTOR, ALCOSAN

3300 PREBLE AVE.
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(412) 766 - 4810

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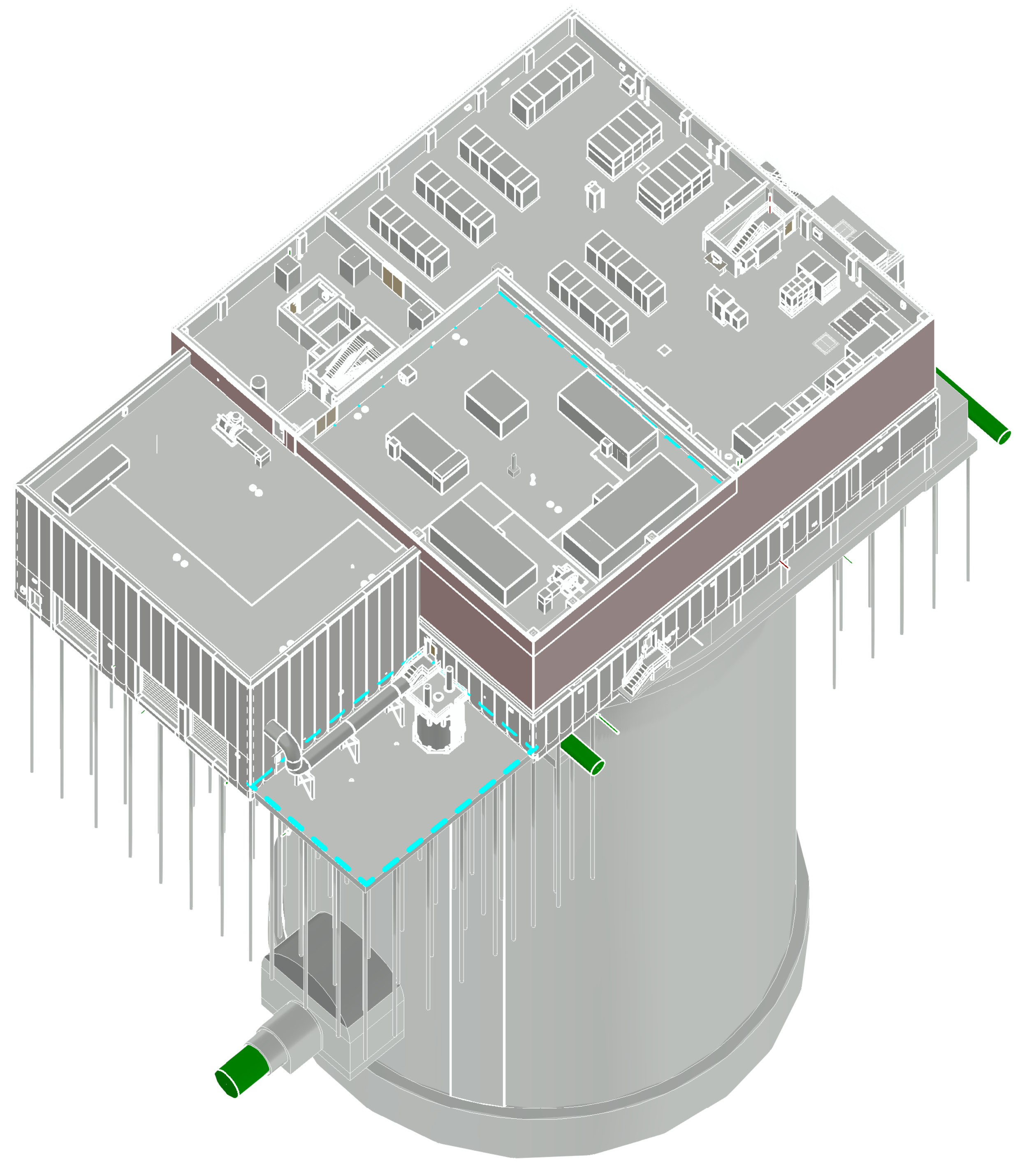
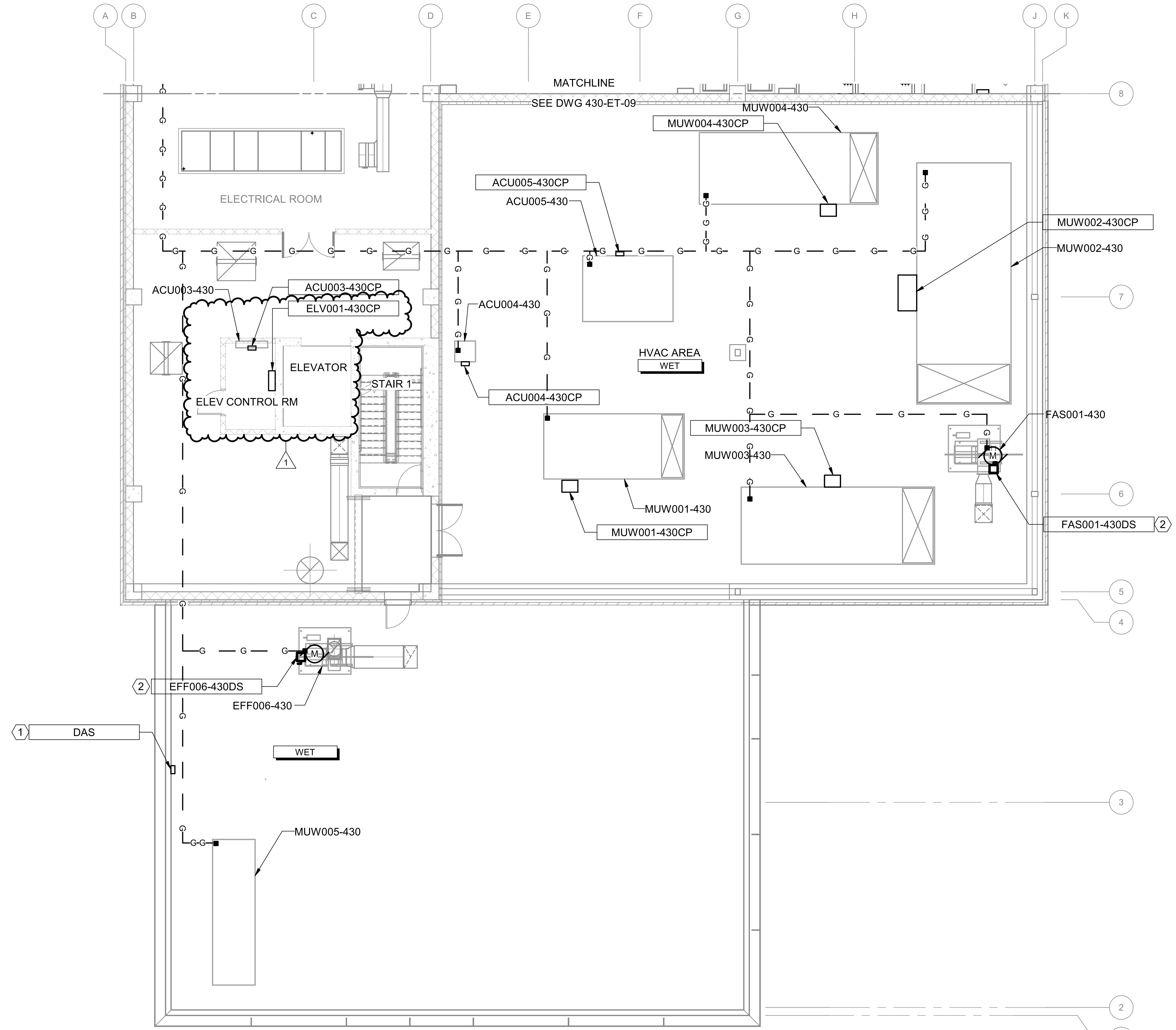
ALLEGHENY COUNTY SANITARY AUTHORITY
WASTEWATER TREATMENT PLANT
WET WEATHER PUMP STATION

430-ET-08
ENLARGED ODOR CONTROL POWER PLAN

Contract: 1800
CAD File Name:
Date: 5/16/2025
Sheet: 364 of 413





N

KEYNOTES:

1. COORDINATE WITH ALCOSAN AND OTHER DISCIPLINES REGARDING FINAL LOCATIONS FOR ANTENNAS.
2. DISCONNECT SWITCH SHALL BE SUPPLIED BY VENDOR AND PACKAGED WITH FAN. FOR DETAILS SEE SPECIFICATION SECTION 23 34 23.

ELECTRICAL ROOM POWER PLAN SOUTH

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

Path: BIM 360://170064 - ALCOSAN Wet Weather PS/170064-E-430V21.rvt

Plot Date: 9/5/2025 9:59:22 AM

Designed by: P.STRAKER
Drawn by: P.STRAKER
Checked by: R.FRYE

REVISION

REV No.	DATE	DESCRIPTION	APPV
0	5/16/25	ISSUED FOR BID	RF
1	9/5/25	ADD. 11 REVISION TO ELEV CP LOCATION AND TAG	RF

Brown AND Caldwell

Signer Name: Ralph Frye
Signing Reason: I approved this document.
Signing Time: 2025-09-09 08:57:18(EDT)

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
RALPH ALFRYE III

alcosan
allegheny county sanitary authority

ARLETTA SCOTT WILLIAMS
EXECUTIVE DIRECTOR, ALCOSAN

3300 PREBLE AVE.
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www.alcosan.org

ALLEGHENY COUNTY SANITARY AUTHORITY
WASTEWATER TREATMENT PLANT
WET WEATHER PUMP STATION

430-ET-10
ELECTRICAL ROOM POWER PLAN SOUTH

Contract: 1800
CAD File Name:
Date: 5/16/2025
Sheet: 366 of 413

ATTACHMENT – B

Addendum No. 11 Specifications

SECTION 01 22 00
MEASUREMENT AND PAYMENT (LUMP SUM AND UNIT PRICES)

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Defines how work items are measured and paid for on Lump Sum and Unit Price Contracts. These items include unit price, lump sum price, and allowance payment items.
   2. Receive payment for work after it is installed. Payment for material on hand can only be paid for if allowed by the Agreement, the General and/or Special Conditions.
   3. Partial payment may be requested for items partially installed when agreed to by the Owner.

1.2 UNIT PRICE ITEMS

A. Quantity and measurement estimates stated in the Bid Form are estimates for bidding purposes only. Actual payments shall be based on actual quantities installed, in-place, as measured and/or verified by the Construction Manager.

B. Unless otherwise stated in the Contract Documents, the bid unit prices shall be in effect throughout the contract duration. When the variance between the estimated quantities and the actual installed quantities is more than 25%, the Contractor or the Owner may negotiate a change to the Unit Price. That change will be made in accordance with the Change Order process as defined in the Contract Documents.

C. Except as defined above, make no claim, nor receive any compensation, for anticipated profits, loss of profit, damages, or any extra payment due to any difference between the amounts of work actually completed, or materials or equipment furnished, and the estimated quantities.

D. If the added quantities will result in payments that exceed the Contract Quantity, a Change Order will need to be executed before payment is made for the added quantities.

E. Assist Construction Manager by providing necessary equipment, workers, and survey personnel as required to measure quantities.

F. Unless stated in the Contract Documents, measured quantities shall be rounded to the nearest whole integer.

G. Measurement:
   1. Measurement for progress payment shall be made by, or approved by, the Construction Manager based on the actual quantities installed. The actual quantities installed can be adjusted for corrections to previous calculations, incomplete elements or components if agreed to in advance and in writing by the Construction Manager.
   2. Unless otherwise provided for in the Contract Documents, unit price items are all inclusive of all related work, direct and indirect costs, to provide a complete and functional item.
   3. The final measurement shall be based on actual installed quantities, jointly measured, and agreed to by the Contractor and the Construction Manager. Quantities can be adjusted (increased or decreased) based on a final calculation of quantities by the Construction Manager.

H. Payment:
   1. Progress payments shall be in accordance with the Contract Documents based on actual quantities installed and paid at the bid unit price.
   2. The final payment shall be based on actual quantities, fully installed, tested and placed into service, paid at the bid unit price.

1.3 LUMP SUM ITEMS

A. Payment for Lump Sum work completed under this Contract will be made at the lump sum bid. The Lump Sum shall include the furnishing of all labor, tools, equipment and materials and the performance of all work required to complete the Contract as indicated and specified in accordance with all requirements of the Contract Documents and to the satisfaction of the Construction Manager. Should there be discrepancies among Contract Documents, it shall be assumed that the more costly and higher quality work performed, as solely judged by the Construction Manager, was the basis of the bid; no additional payment shall be required from the Owner.

B. Before the first Application for Payment, the Contractor shall submit to the Construction Manager a Schedule of Values allocated to the various portions of the Work, as set forth in this section and supported by such data to substantiate its accuracy as the Owner may require. This Schedule of Values, when approved by the Owner shall be used as the basis for the Contractor's Applications for Payment and only for this purpose.

C. No progress payments will be made by the Owner until the Progress Schedule, including the Schedule of Values, has been submitted to and approved by the Owner.

D. Assist Construction Manager by providing necessary equipment, workers, and survey personnel as required to measure quantities.

E. The Contractor agrees that it will make no claim for damages, anticipated profits, or otherwise on account of any difference between the amounts of work actually performed and materials actually furnished and the estimated quantities.

1.4 ALLOWANCES

A. Allowances if indicated in the Bid Schedule are defined in the Contract Documents. No work may be performed under an allowance item without prior written approval of the Owner.

B. Allowance is for exclusive use of Owner for changes as a result of changed conditions, design refinements, and unanticipated design issues. Not for use by Contractor as Contractor's construction contingency.

C. Owner approval of adjustment is required prior to authorization by the Construction Manager of progress payments from Contingency Allowance. Adjustments will include either:
   1. Contractor's measured time and materials amount
   2. Contractor's related costs, and reasonable overhead and profit as stipulated in Contract Documents and Article 3 of the General Contract Conditions when Work is performed on the cost of the work basis.

D. Authorization for payment shall be supported by all required labor and material backup per Article 3 of the General Conditions.

E. Any unused balance of the allowances shall revert to the Owner upon completion of the project. Prior to final payment, the original amount provided for allowances shall be

adjusted to actual costs by deductive/final adjusting Change Order, adjusting the Contract Price, accordingly.

F. Contractor shall make no claim, nor receive any compensation, for anticipated profits, loss of profit, damages, or any extra payment due to any unexpended portion of the allowances.

G. The measurable and allowable costs for work performed under an allowance item(s) shall be limited to the actual costs associated with that allowance item unless otherwise stated in the specific measurement and payment provisions under allowance items.

H. Time impacts associated with Specific Allowances shall be provided in the form of a zero dollar time extension for only those activities on the critical path based on actual time of impact.

1.5 SCHEDULE OF VALUES

A. The Schedule of Values is a statement furnished by the Contractor to the Construction Manager. It shall be submitted within seven calendar days prior to the Preconstruction Conference and shall reflect the portions of the Contract Price allocated to various portions of the Work.

B. Once accepted by the Construction Manager, the Schedule of Values shall be the basis for reviewing Payment Applications by the Contractor in accordance with the Schedule of Payments in the Contract Provisions.

C. This Schedule will contain all of the major components making up the work, shall be coordinated with the Schedule of Payments, and shall contain, as a minimum, the following information:
   1. Organization of Work Items by Specification; Section; Reference.
   2. For all major Work Items/Components
      a. Listing of Labor Value
      b. Listing of Material/Equipment/Deliverable Value
      c. Reflect all activities shown on the Project Schedule.
   3. Show all Subtotals and Totals as directed by the Construction Manager to support the Payment Application Form.

D. The Contractor shall include a line item in the Schedule of Values for the submission of approved Operation & Maintenance Manuals in the amount of 0.025% of the Contract Value or $2,500, whichever is greater.

E. The Contractor shall include a line item in the Schedule of Values for the submission of approved as-built drawings with an associated value of 0.05% of the Contract Value or $5,000, whichever is greater.

F. The Contractor shall utilize the following work breakdown structure (WBS) for the creation of the Schedule of Values and CPM Schedule:
   1. Mobilization/Demobilization
   2. O&M Manuals
   3. As-Built Drawings
   4. General Conditions
   5. 000 Site Work
   6. 410 Energy Recovery Facility
   7. 430 Wet Weather Pump Station (all work in 430 not including 431 and 432)
   8. 431 Super Structure (above grade)

9. 432 Pump Station Shaft (below grade)
10. 500 Main Pump Station
11. 509 East Headworks Influent Conduit
12. 650 13.2kV Substation

1.6 APPLICATION FOR PAYMENT

A. General:
   1. Progress payments applications will be made monthly on the date established at the preconstruction meeting.

B. Pay Applications shall be submitted in eBuilder®. Pencil copy shall be submitted to the CM for review prior to submission of progress Pay Application. Pencil copy shall be submitted on form provided by the CM.

C. Payment for all work shown or specified in the Contract Documents is included in the Contract Price. No measurement or payment will be made for individual items.

   1. General:
      a. The lump sum bid price for this work will consist of work identified in the Contract Documents associated with construction of the Wet Weather Pump Station.
      b. Major items of work are provided in Section 01 11 00, Summary of Work, Paragraph 1.02.B.
      c. Measurement and payment for this item will be a physical percent complete as agreed upon by the Construction Manager and the Contractor per the Contractor's Schedule of Values.

   2. Electrical:
      a. The lump sum bid price for this work will consist of work identified in the Contract Documents associated with construction of the Wet Weather Pump Station.
      b. Major items of work are provided in Section 01 11 00, Summary of Work, Paragraph 1.02.C
      c. Measurement and payment for this item will be a physical percent complete as agreed upon by the Construction Manager and the Contractor per the Contractor's Schedule of Values.

   3. HVAC:
      a. The lump sum bid price for this work will consist of work identified in the Contract Documents associated with construction of the Wet Weather Pump Station.
      b. Major items of work are provided in Section 01 11 00, Summary of Work, Paragraph 1.02.D.
      c. Measurement and payment for this item will be a physical percent complete as agreed upon by the Construction Manager and the Contractor per the Contractor's Schedule of Values.

   4. Plumbing:
      a. The lump sum bid price for this work will consist of work identified in the Contract Documents associated with construction of the Wet Weather Pump Station.
      b. Major items of work are provided in Section 01 11 00, Summary of Work, Paragraph 1.02.E
      c. Measurement and payment for this item will be a physical percent complete as agreed upon by the Construction Manager and the Contractor per the Contractor's Schedule of Values.

1.7 NON-PAYMENT FOR REJECTED OR UNUSED PRODUCTS

A. Payment will not be made for following:
   1. Loading, hauling, and disposing of rejected material.
   2. Quantities of material wasted or disposed of in manner not called for under Contract Documents.
   3. Rejected loads of material, including material rejected after it has been placed by reason of failure of Contractor to conform to provisions of Contract Documents.
   4. Material not unloaded from transporting vehicle.
   5. Defective work not accepted by Owner.
   6. Material remaining on hand after completion of work.

1.8 PARTIAL PAYMENT FOR STORED MATERIALS AND EQUIPMENT

A. Partial Payment:
   1. No partial payments will be made for materials and equipment delivered or stored unless Shop Drawings or preliminary operation and maintenance manuals are acceptable to Construction Manager.

B. Final Payment:
   1. Final payment shall not be made for material and equipment incorporated in work unless all deliverables required in Sections 01 33 04, Operation and Maintenance Manuals; 01 75 00, Facility Startup, through 01 78 39, Contract Closeout and Execution Documents; and Article 3 of the General Contract Conditions are submitted and approved.

C. Temporary Systems
   1. No payment will be made for stored materials and equipment that are not part of the permanent Work.

1.9 PARTIAL PAYMENT FOR UNDELIVERED, PROJECT-SPECIFIC MANUFACTURED OR FABRICATED EQUIPMENT

A. Notwithstanding the above provisions, partial payments for undelivered (not yet delivered to site or not stored in the vicinity of site) products specifically manufactured for this Project, excluding off the shelf or catalog items, may be made for products listed below when all following conditions exist:
   1. Partial payment request is supported by written acknowledgment from Supplier(s) that invoice requirements have been met.
   2. Equipment is adequately insured, maintained, stored at a location acceptable to the Owner, protected by appropriate security measures, and verification of same is provided to the Owner.
   3. Each equipment item is clearly marked and segregated from other items to permit inventory and accountability.
   4. Authorization has been provided for access to storage site for Construction Manager and Owner. All costs related to inspections shall be at the Contractor’s expense.
   5. Equipment meets applicable specifications of these Contract Documents.

B. Payment of 15% of manufacturer's quoted price for undelivered, Project specific manufactured equipment will be made following shop drawing approval. Thereafter, monthly payments will be made based on progress of fabrication as determined by Construction Manager, but in no case will total of payments prior to delivery exceed 75% of manufacturer's quoted price. This amount shall be identified in the Schedule of Values.

C. Failure of Contractor to continue compliance with above requirements shall give cause for Owner to withhold payments made for such equipment from future partial payments.

D. Failure of Contractor to supply Operation and Maintenance Manuals will cause the Owner to withhold payment in the amount of 0.025% or $2,500, whichever is greater. Failure of Contractor to supply as-built drawings will cause the Owner to withhold payment in the amount of 0.05% or $5,000, whichever is greater.

PART 2 - PRODUCTS - (NOT USED)

PART 3 - EXECUTION

3.1 PAY ITEMS

A. Pay Item 1 – WWPS Construction Lump Sum Work
   1. The lump sum bid price for this work includes work identified in the Contract Documents and as summarized in Section 01 11 00, Summary of Work.
   2. Work associated with unit price and allowance items as identified in this Section will not be paid under this pay item.
   3. Measurement and payment for this item will be a physical percent complete as agreed by the Construction Manager and Contractor per the Contractor's Schedule of Values.
   4. Payment for this pay item will be made at the lump sum bid price, which will include all labor, materials, equipment, tools, testing, fees, and incidentals needed to complete the work specified, except as otherwise itemized in the Schedule of Values.
   5. All mechanical, civil, architectural, and structural improvements performed as part of this project is considered part of this lump sum bid price.
   6. All temporary support of excavation (SOE) systems and rock initial support are considered part of this lump sum bid price.
   7. Temporary Water Control
      a. All regulatory testing and treatment of all fluid discharged from temporary water control systems as described in Section 31 23 19, to control construction water and groundwater to meet applicable regulatory requirements is considered part of this lump sum bid price.
      b. Furnishing, delivery, installation, maintenance, operation, monitoring and removal of all temporary water control systems to control groundwater and construction water is considered part of this lump sum bid price.
      c. Coordination with Construction Manager who may observe the regulatory testing performed by Contractor.
   8. Regulatory Testing – subsurface work
      a. All sampling, testing and analysis of all excavated materials for compliance with applicable regulatory requirements including but not limited to soil, rock and other encountered material during subsurface work, pile drilling, temporary SOE work, grout hole drilling, probe hole drilling, spoils, handling, hauling and disposal.
      b. Coordination with Construction Manager who may observe the regulatory testing performed by Contractor.
   9. Excavation, handling, stockpiling, hauling and disposal – Soil and Other Encountered Material
      a. Beyond the circumference of the outer diameter of the shaft slurry wall and below grade, all excavation, handling, stockpiling, hauling and disposal of soil, rock, spoils and other encountered material during subsurface work is considered part of this lump sum bid price.

i. All material shall be assumed to be Residual Waste as described in Section 31 23 00.

b. Within the circumference of the outer diameter of the guidewalls, shaft slurry wall and below grade, all excavation, handling, stockpiling, hauling and disposal of soil and other encountered material during subsurface work, is considered part of this lump sum bid price.
   i. All material above approximate elevation 693 shall be assumed to be Residual Waste as described in Section 31 23 00.
   ii. All material below approximate elevation 693 to the top of rock interface shown in the GBR shall be assumed to be Clean Fill as described in Section 31 23 00.

c. If regulatory compliance testing confirms Residual Waste material in excess of the above assumptions, refer to Pay Item 22 – Additional Residual Waste Soil Disposal for payment.

10. Excavation, handling, stockpiling, hauling and disposal – Rock and Other Encountered Material
    a. Within the circumference of the outer diameter of the slurry wall and below including the shaft and the tunnel junction chamber, all excavation, handling, stockpiling hauling and disposal of rock and other encountered material below the soil interface is considered part of this lump sum bid price. Disposal of rock that is not identified as Acid Producing Rock per item b. below is considered part of this lump sum bid price.
    b. If regulatory compliance testing in accordance with PennDOT Publication 293, Chapter 10 confirms Acid Producing Rock l refer to Pay Item 23 –Acid Producing Rock Disposal for payment.

B. Pay Item 2 – Drilled Micropiles
   1. This pay item will be measured in VLF.
   2. Measurement is from the micropile tip elevation (bottom of the bonded zone) to the final cutoff elevation (top of the casing).
   3. Payment for this pay item will be made at a unit price, which bid price and payment will include all costs for furnishing all labor, materials, equipment, and accessories required for complete micropile installation as indicated in the Contract Documents.
   4. Payment for the required proof load tests shall be incorporated into the micropile unit price VLF.
   5. Payment for installed micropile length to be made in accordance with unit prices in the Bid Proposal.
      a. No payment will be made for individual micropiles but will be made on the total lineal footage of piling installed.
      b. No price adjustment will be made for grout volume, unless greater than twice the theoretical total volume of the holes for all accepted production piles. Adjustment shall only be made on the labor and materials associated with the grout.
   6. Payment will be made for micropiles that do not achieve the required tip elevation and are discontinued due to encountering an obstruction and for any additional piles required at locations of discontinued piles.
   7. No payment will be made for the following:
      a. Grout volume less than twice the total of theoretical volume of all accepted production piles.
      b. Damaged, failed, or rejected piles or for the installation of piles and additional foundation construction resulting from the damaged or rejected piles
      c. Additional pile and concrete construction required when a proof load test pile fails

at a location where the test pile is required for support of the structure.
   d. Piles installed beyond specified tolerance limits and piles and concrete foundation construction required due to piles installed beyond the tolerance limits.
   e. Pile lengths extending beyond cut-off elevation.
   f. Piles installed as sacrificial reaction piles for the purposes of testing described in Pay Item 4, unless production piles are used in lieu of sacrificial reaction piles.

C. Pay Item 3 – Static Compression and Tension Verification Pile Load Tests
   1. This pay item will be measured per EA.
   2. Payment for this pay item will be made at a unit price, which bid price and payment will include all costs for furnishing all labor, materials, and accessories required for pile load testing at piles as indicated in the Contract Documents.
   3. Payment will include costs associated with verification load testing and integrity testing and reporting as specified in Section 31 63 33, Drilled Micropiles.
   4. Production piles may be used as reaction piles for Verification Pile Load Tests. If used, as reaction piles, payment for production piles will be made separately under Pay Item 3.
   5. No payment will be made for the following:
      a. Pile load test where either the testing system, test pile, or reaction (anchor) pile fails before test is complete.
      b. Additional pile and concrete construction required when a test pile fails at a location where the test pile is required for support of the structure.

D. Pay Item 4 – Pre-excavation Grout Hole Drilling in Soil
   1. This pay item will be measured per LF.
   2. Payment for this pay item will be made at a unit price, which bid price and payment will include all costs for furnishing all labor, materials, and equipment required to complete drilling of pre-excavation grout holes in soil, including mobilization, casing, and soil drilling.

E. Pay Item 5 – Pre-excavation Grout Hole Drilling in Rock
   1. This pay item will be measured per LF.
   2. Payment for this pay item will be made at a unit price, which bid price and payment will include all costs for furnishing all labor, materials, and equipment required to complete drilling of pre-excavation grout holes in rock, including mobilization and rock drilling.

F. Pay Item 6 – Probe Hole Drilling in Rock
   1. This pay item will be measured per LF.
   2. Payment for this pay item will be made at a unit price, which bid price and payment will include all costs for furnishing all labor, materials, and equipment required to complete drilling of probe grout holes, including mobilization and rock drilling.

G. Pay Item 7 – Shaft Pre-Excavation Grouting Exclusive of Grout Materials
   1. This pay item will include full compensation for labor and equipment for shaft pre-excavation grouting as specified and shown on the Contract Drawings, including:
      a. Labor performing the grouting and support services for grouting.
      b. Provision of all grouting equipment, connections, piping, and consumables other than those specifically excluded in this Part.
      a. Any indirect costs associated with any extension of Contract Time due to the performance of grouting.
      c. All other work required to provide the Shaft Pre-Excavation Grouting Exclusion of Grout Materials in accordance with the Contract Documents and drilling of pre-

excavation grouting per additional Pay Items.

ADD NO. 6

2. Grout material is excluded from this pay item and paid under SPECIFIC ALLOWANCE #13, "Grout Materials Used for Pre-Excavation Grouting and Cut-off Grouting."
3. Disposal of grout waste is incidental to this Bid Item.
4. This pay item will be measured per crew hour as provided below:
   a. The hourly measurement will be for crew hours only performing grouting operations under this task. The hourly measurement will be for actual hours grouting, which is determined by water pressure testing performed in accordance with the specifications. A crew hour encompasses all resources combined for one hour of grouting performed at a single grout hole.
   b. If grouting is performed concurrently at multiple grout holes, measurement of crew hour will be by each grout crew carrying out grouting activities as provided under this pay item.
   c. Attempts to grout where no grout takes, or limited grout takes will still be considered time grouting if executed in good faith and with concurrence of the Owner.
   d. Contractor should anticipate items such as mobilization of specialty Subcontractor(s), water pressure testing of grout holes, batching and filling of grout lines, moving from hole to hole, set-up and break-down, quality control testing, preparation of grouting records and submittals, Contractor and Subcontractor field oversight, and other items for inclusion into the hourly rate bid.
5. No payment will be made for stoppages that result from equipment failure or breakdown, time spent troubleshooting and repairing failed or faulty equipment, replacing or cleaning seized grout lines, stoppages and downtime due to inaccessible or unavailable grout holes, standby time due to material or equipment delivery delays, and other non-productive time spent in support of grouting activity.

H. Pay Item 8 – Cut-off Grouting Exclusive of Grout Materials
1. This pay item will include full compensation for labor equipment for shaft pre-excavation grouting as specified and shown on the Contract Drawings, including:
   a. Labor performing the grouting and support services for grouting.
   b. Provision of all grouting equipment, connections, piping, and consumables other than those specifically excluded in this Part.
   c. Any indirect costs associated with any extension of Contract Time due to the performance of grouting.
   d. All other work required to provide the Cut-off Grouting Exclusion of Grout Materials in accordance with the Contract Documents and drilling of the probe hole drilling per additional Pay Items.

ADD NO. 6

2. Grout material is excluded from this pay item and paid under SPECIFIC ALLOWANCE #13, "Grout Materials Used for Pre-Excavation Grouting and Cut-off Grouting."
3. Disposal of grout waste is incidental to this Bid Item.
4. This pay item will be measured per crew hour as provided below:
   a. The hourly measurement will be for crew hours only performing grouting operations under this task. The hourly measurement will be for actual hours grouting, which is determined by water pressure testing performed in accordance with the specifications. A crew hour encompasses all resources combined for one hour of grouting performed at a single grout hole.
   b. If grouting is performed concurrently at multiple grout holes, measurement of crew hour will be by each grout crew carrying out grouting activities as provided under this pay item.
   c. Attempts to grout where no grout takes, or limited grout takes will still be

considered time grouting if executed in good faith and with concurrent of the Owner.

d. `Contractor should anticipate items such as mobilization of specialty Subcontractor(s), water pressure testing of grout holes, batching and filling of grout lines, moving from hole to hole, set-up and break-down, quality control testing, preparation of grouting records and submittals, Contractor and Subcontractor field oversight, and other items for inclusion into the hourly rate bid.

5. No payment will be made for stoppages that result from equipment failure or breakdown, time spent troubleshooting and repairing failed or faulty equipment, replacing or cleaning seized grout lines, stoppages and crew downtime due to inaccessible or unavailable grout holes, standby time due to material or equipment delivery delays, and other non-productive time spent in support of grouting activity.

I. Pay Item 9 – Initial Support Spot Rock Dowels
   1. This pay item will be measured per LF.
   2. Payment for this pay item will be made at a unit price, which bid price and payment will include all costs for furnishing all labor, materials, and equipment required for installation of spot rock dowels.

J. Pay Item 10 – Alternative 1 Connection to ORT Contract Dewatering Tunnel
   1. This pay item will be measured in LS.
   2. The lump sum bid price for this work will consist of work identified in the Contract Documents associated with construction of Alternative 1 of the interface with the ORT Contract.
   3. Major items of work include initial support, shotcrete, removal of CLSM, temporary bulkhead installed by ORT Contract 1797, construction of the permanent concrete of the DWT, and constructing the final permanent connection of the DWT installed in the ORT Concrete.
   4. Selection of Alternative 1 or 2 will be coordinated by the Construction Manager and Contractor and will depend on construction schedule and progress of both the WWPS Contract 1800 and ORT Contract 1797. A decision will be made by the Owner 90 days prior to Work associated with the Alternatives defined in the Contract Drawings. Contractor shall include the longer duration Alternative within the Baseline Schedule.
   5. Contractor will only be paid for one alternative.

K. Pay Item 11 – Alternative 2 Connection to ORT Contract Dewatering Tunnel
   1. This pay item will be measured in LS.
   2. The lump sum bid price for this work will consist of work identified in the Contract Documents associated with construction of Alternative 2 of the interface with the ORT Contract.
   3. Major items of work include initial support, construction of permanent DWT to limits shown, design and installation of temporary bulkhead, and installation of CLSM required to facilitate the permanent connection of the future ORT Contract to the WWPS contract.
   4. Selection of Alternative 1 or 2 will be coordinated by the Construction Manager and Contractor and will depend on construction schedule and progress of both the WWPS Contract 1800 and ORT Contract 1797. A decision will be made by the Owner 90 days prior to Work associated with the Alternatives defined in the Contract Drawings. Contractor shall include the longer duration Alternative within the Baseline Schedule.
   5. Contractor will only be paid for one alternative.

L. Pay Item 12 – Specific Allowance #1 – Dispute Review Board (DRB)

1. The amount stipulated for this Allowance item shall be used to reimburse the Contractor for the Owner's portion of the cost incurred in accordance with the terms and conditions of the Contract and the Dispute Review Board (DRB) Agreement.
2. The Contractor shall be responsible for the initial payment of all DRB related costs and submit the proper documentation within 30 days of invoice date to receive reimbursement for 50% of the costs from the Owner under work order authorizations from this Allowance. The remaining 50% shall be unreimbursed and therefore paid by the Contractor. No markup shall be added for services provided under this item and any unused portion shall be deducted at the end of the Contract.
3. If the DRB requests specialty items, services, or personnel, both the Contractor and Owner shall be made aware of these requests prior to expenditures and agree to split the cost of such items.

M. Pay Item 13 – Specific Allowance #2 – Stoppage to Slurry Wall Trench Excavations
1. A stoppage is defined as an obstruction within the slurry wall panel excavation that reduces the excavation rate to less than 6 vertical inches over a 4-hour period and requires the employment of special tools and/or excavation techniques and procedures, including drilling, excavating, or coring, to remove, break up or push aside the obstruction.
2. Payment for this pay item will be measured per crew hour as provided below:,
   a. The hourly measurement will be for crew hours only performing operations for drilling, excavating, coring through, breaking up, pushing aside, or otherwise removing the obstruction found during installation of the slurry wall. A crew hour encompasses all resources combined for one hour.
3. Payment to include reimbursement for indirect costs due to Contract Time extensions and/or critical path delays incurred as a result of drilling through obstructions, as determined by the Owner.
4. No payment will be made under this item for the following:
   b. Near-surface stoppages encountered during guide wall installation.
   c. Stoppages less than 10 ft below the existing ground surface.
   d. Bedrock excavation.

ADD NO. 6

   e. Obstructions which take less than 4 hours to drill, excavate, core through, break up, push aside, or otherwise remove, measured from the moment an obstruction is confirmed as specified.
   f. Concrete from the nearby Primary Panel that is being excavated for a Secondary Panel.
   g. Obstructions encountered in mass excavations of the shaft.

N. Pay Item 14 – Specific Allowance #3 – Drilling Through Obstructions for Micropile Installation
1. Obstructions for Micropile Installation are defined in the Contract Documents as natural or manmade objects that are encountered within the site overburden (Fill and Alluvium) soils which stop drilling progress of a micropile for more than 2 hours despite the Contractor's reasonable and diligent effort to overcome it, as determined by the Owner.
2. This pay item will be measured per crew hour as provided below:
   a. The hourly measurement will be for actual hours expended to remove or otherwise advance micropiles through obstructions as defined above, which takes more than 2 hours to clear during drilling. For each micropile, clearing of obstructions by the Contractor that does not significantly impact drilling progress, and takes less than 2 hours to break apart, clear, and/or remove, is incidental to the Work and will not

be paid separately. Payment to include reimbursement for indirect costs due to Contract Time extensions and/or critical path delays incurred as a result of drilling through obstructions, as determined by the Owner.

3. Payment will be made for obstruction removal time at each micropile in excess of 2 hours.

O. Pay Item 15 – Specific Allowance #4 – Disposal of Other Contaminated Waste
   1. Allowance for potential force account work identified in Section 31 23 00, Management, Handling, and Disposal of Excavated Soil and Other Excavated Material, Paragraphs 1.03.I, 1.05.C.1.c, 3.05B.3, 3.06D, and 3.07A.
   2. Payment for this pay item will be made as an allowance, per Article 1.4 above which total bid price is set and provided in the Contract Documents. Payment will include all costs for furnishing all labor, materials, and equipment required for proper sampling, testing, handling, removal, and disposal of other contaminated waste, that is discovered due to work outside the Lump Sum, Unit Price and Allowance Work Items. Other contaminated waste is defined in Section 31 23 00, Management, Handling, and Disposal of Excavated Soil and Other Excavated Material.
   3. Payment will be made for time and materials required to handle, segregate, remove, and properly dispose of other contaminated wastes due to additional work approved by the Owner in writing.
   4. No payment will be made for the following:
      a. Any handling, removal, or disposal of other contaminated waste due to work that has not been approved in writing by Owner, prior to work commencement.

P. Pay Item 16 – Specific Allowance #5 – Non-Compliant Groundwater Disposal
   1. Allowance for potential force account work, as identified in Section 31 21 00, Earthwork, Excavation, Trenching and Backfilling, Paragraph 1.07D; and 31 23 00, Management, Handling, and Disposal of Excavated Soil and Other Excavated Material, Paragraph 1.05.C.

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   2. Payment for this pay item will be made as an allowance, per Article 1.4 above, which total bid price is set and provided in the Contract Documents. Payment will include all costs for furnishing all labor, materials, and equipment required for proper sampling, testing, handling, removal, and disposal of non-compliant groundwater encountered during excavation activities.
   3. Payment will be made for time and materials required to handle, remove, and properly dispose of non-compliant groundwater.
   4. No payment will be made for the following:
      a. Any handling, removal, or disposal of compliant groundwater, or non-compliant groundwater due to work not included in the Lump Sum Bid items or that has not been approved in writing by Owner, prior to work commencement.

Q. Pay Item 17 – Specific Allowance #6 – Handling and Disposal of Lead-Based Coatings and Asbestos-Containing Materials (ACM) (Greater Than 1 Percent Asbestos)
   1. Payment for this pay item will be made as an allowance, per Article 1.4 above, which total bid price is set and provided in the Contract Documents. Payment will include all costs for furnishing all labor, materials, and equipment required for proper testing, handling, removal, and disposal of hazardous materials encountered during project work. Hazardous materials are required to be removed if work requires the demolition, disturbance, relocation, or modification of equipment or structures.
   2. Hazardous materials include:
      a. Lead-based paint on structures and/or equipment.

b. ACM (defined as containing greater than 1 percent asbestos) including, but not limited to, electrical wiring/materials, pipe materials, masonry materials, and insulation materials.

3. Contractor shall submit for identification testing of any material suspected or with the potential to be hazardous as directed by Owner.
4. Payment will be made by tracking of for time and materials required to test, handle, remove, and properly dispose of hazardous materials.
5. No payment will be made for the following:
   a. Any handling, removal, or disposal of hazardous materials due to work not included in the Lump Sum Bid items or that has not been approved in writing by Owner, prior to work commencement.

R. Pay Item 18 – Excavation of "Hard Slag" Removal

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1. This pay item will be measured per CY.
2. Payment for this pay item will be made as an allowance, per Article 1.4 above, which total bid price is set and provided in the Contract Documents. Payment for this pay item will be made at a unit price, which bid price and payment will include all costs for furnishing all labor, materials, and equipment required for excavation, handling, removal and disposal of hard slag found outside the limits of the WWPS slurry wall, including hard slag encountered during installation of piping, structures, or temporary earth retaining structures that cannot be removed utilizing conventional excavation equipment and methods.
3. Payment for excavation and removal of hard slag within pre-trenching excavations for the WWPS slurry walls, encountered within 10 feet of the ground surface shall be paid under this pay item.
4. Slag (sometimes called "blue slag" due to its color and hardness) was commonly used on the ALCOSAN plant site for roadway and structural foundation material at a typical thickness of 12-inches to 18-inches.
5. Excavation of slag shall be considered to be part of the Lump Sum Pay Item 1 WWPS Construction Lump Sum Work if it can be removed with the use of excavation equipment including but not limited to backhoes, bulldozers, or scrapers.
6. Should removal require the use of jackhammers, or pavement breakers, the Contractor shall be reimbursed by the Contract Unit Price per cubic yard under this Pay Item.
7. Excavated material shall be considered Residual Waste.
8. Payment will be made for excavations completed with written authorization by the Owner.
9. No payment will be made for the following:
   a. Work by the Contractor without prior written authorization from the Owner.
   b. Removal of hard slag material utilizing conventional excavation equipment described above.
   c. Removal of hard slag material encountered within the mass excavation for the WWPS.

S. Pay Item 19 – Specific Allowance #8 – Excavation and Demolition Of Unforeseen Concrete, Masonry and Other Manmade Obstructions

1. Payment for this pay item will be made as an allowance, per Article 1.4 above, which total bid price is set and provided in the Contract Documents. Payment will include all costs for furnishing all labor, materials, and equipment required for excavation, demolition, handling, and disposal of manmade obstructions found outside the limits

ADD NO. 6

of the WWPS slurry wall, including manmade obstructions encountered during installation of piping, structures, or temporary earth retaining structures.

2. Payment for excavation and removal of unforeseen concrete, masonry and other manmade obstructions within pre-trenching excavations for the WWPS slurry walls, encountered within 10 feet of the ground surface shall be paid under this pay item.
3. Excavations may uncover unforeseen quantities of concrete, masonry and other manmade structures below grade. Removal of the unforeseen concrete and masonry structures will be considered to be part of the Lump Sum Pay Item 1 WWPS Construction Lump Sum Work if they can be removed with the use of excavating equipment including but not limited to backhoes, bulldozers, or scrapers.
4. Should removal require demolition of the concrete and masonry structures by the use of jackhammers, or pavement breakers, then the Contractor shall be reimbursed by the Contract Unit Price per Cubic Yard under this Pay Item.
5. Concrete, masonry and other manmade obstructions shall be considered Residual Waste.
6. Payment will be made for excavations completed with written authorization by the Owner.
7. No payment will be made for the following:
    a. Work by the Contractor without prior written authorization from the Owner.
    b. Excavation and demolition of buried concrete, masonry and other manmade structures specifically identified in the Contract Documents.
    c. Excavation and demolition of buried concrete, masonry and other manmade structures encountered within the mass excavation for the WWPS.
    d. Obstructions defined in other Pay Items.

T. Pay Item 20 – Specific Allowance #9 – Contingent Unclassified Excavation
1. Payment for this pay item will be made as an allowance, per Article 1.4 above, which total bid price is set and provided in the Contract Documents. Payment will include all costs for furnishing all labor, materials, and equipment required for excavation, handling, and disposal of excavated material outside the scope of work included in the Contract Documents as requested by the Owner.
2. Excavated material shall be considered Residual Waste.
3. Payment will be made for excavations completed with written authorization by the Owner.
4. No payment will be made for the following:
    a. Work by the Contractor without prior written authorization from the Owner.
    b. Excavations made by the Contractor without prior written authorization from the Owner.

U. Pay Item 21 – Specific Allowance #10 – Contingent Placement of Backfill Material
1. Payment for this pay item will be made as an allowance, per Article 1.4 above, which total bid price is set and provided in the Contract Documents. Payment will include all costs for furnishing all labor, materials, and equipment required for placement and compaction of permanent backfill material in place completed as part of Pay Item 19 and Pay Item 20.

V. Pay Item 22 – Specific Allowance #11 – Additional Residual Waste Soil Disposal
1. Allowance for potential force account work identified in Section 31 23 00, Management, Handling, and Disposal of Excavated Soil and Other Excavated Material, Paragraphs 1.05C.1.b, 3.05B.3, 3.06C, and 3.07A.
2. Payment for this pay item will be made as an allowance, per Article 1.4 above which

total bid price is set and provided in the Contract Documents. Payment will include all costs for furnishing all labor, materials, and equipment required for proper disposal of Residual Waste Soil, that is discovered due to work outside the Lump Sum Work Items. Residual Waste is defined in Section 31 23 00, Management, Handling, and Disposal of Excavated Soil and Other Excavated Material.

3. Payment will be made due to additional work approved by the Owner in writing.
4. No payment will be made for the following:
   a. Any handling, removal, or disposal of Residual Waste due to work that has not been approved in writing by Owner, prior to work commencement.
   b. Handling, removal, or disposal of Residual Waste to the extents provided in Paragraph 3.1B.9 herein.
5. This pay item will be measured per ton, based upon submitted truck weigh tickets.

W. Pay Item 23 – Specific Allowance #12 – Acid Producing Rock Disposal

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1. Allowance for potential force account work identified in Section 31 23 00, Management, Handling, and Disposal of Excavated Soil and Other Excavated Material, Paragraphs 1.05.C.1.b, 3.05B.3, 3.06C, and 3.07A.
2. Payment for this pay item will be made as an allowance, per Article 1.4 above which total bid price is set and provided in the Contract Documents. Payment will include all costs for furnishing all labor, materials, and equipment required for proper disposal of Acid Producing Rock as a Residual Waste that may be encountered within the limits identified in the GBR.
3. Residual Waste is defined in Section 31 23 00, Management, Handling, and Disposal of Excavated Soil and Other Excavated Material.
4. Payment will be made due to additional work approved by the Owner in writing.
5. No payment will be made for the following:
   a. Any handling, removal, or disposal of Residual Waste due to work that has not been approved in writing by Owner, prior to work commencement.
6. This pay item will be measured per ton based on submitted truck weigh tickets.

X. Pay Item 24 – Specific Allowance #13 – Grout Materials Used for Pre-Excavation Grouting and Cut-off Grouting

1. Allowance for compensation to the Contractor for grout material used in the pre-excavation grouting of shafts and cut-off grouting.
2. Different grout materials will need to be used at different times and for different applications. It is expected that the Contractor will work closely with the Owner to determine the effectiveness of the grout material used and change it if not effectively cutting off groundwater. This will require trial and error or mixes and types of grouts. This BID ITEM is for the material cost for the grout type used only.

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3. Measurement for this item will be as agreed between the Contractor and Owner during construction and in consideration of various grout types. Payment for this BID ITEM will be on an 'at cost' open-book invoiced basis including mark up and profit allowed by the Contract.

Y. Pay Item 25 – Specific Allowance #14 – Unforeseen Utility Removal and Relocation

1. Payment for this pay item will be made as an allowance, per Article 1.4 above, which total bid price is set and provided in the Contract Documents. Payment will include all costs for furnishing all labor, materials, and equipment required for unforeseen utility removal and relocation that is required to complete the Work.
2. Utilities may include but not be limited to various active and inactive process piping systems, potable water, nonpotable water, stormwater, drains, electrical, fiberoptic, gas systems.

3. Excavated material shall be considered Residual Waste.
4. No payment will be made for the following:
    a. Work conducted by the Contractor without prior written authorization from the Owner.

Z. Pay Item 26 – Specific Allowance #15 – Temporary Security Trailer

1. Payment for this pay item will be made as an allowance, per Article 1.4 above, which total bid price is set and provided in the Contract Documents. Payment will include all costs for furnishing all labor, materials, and equipment required for providing temporary security trailer and utilities to the trailer.

Add. No. 11

3.2 ELECTRICAL CONSTRUCTION CONTRACT

A. Lump Sum:
1. This pay item will not be measured for payment.
2. Payment for this pay item will be made at the lump sum bid price, which price and payment will include all labor, materials, equipment, tools, testing, fees, and incidentals needed to complete the work specified, except as otherwise itemized in the Schedule of Values.
3. All electrical improvements performed as part of this project is considered part of this lump sum bid price.

3.3 HVAC CONSTRUCTION CONTRACT

A. Lump Sum:
1. This pay item will not be measured for payment.
2. Payment for this pay item will be made at the lump sum bid price, which price and payment will include all labor, materials, equipment, tools, testing, fees, and incidentals needed to complete the work specified, except as otherwise itemized in the Schedule of Values.
3. All HVAC improvements performed as part of this project is considered part of this lump sum bid price.

3.4 PLUMBING CONSTRUCTION CONTRACT

A. Lump Sum:
1. This pay item will not be measured for payment.
2. Payment for this pay item will be made at the lump sum bid price, which price and payment will include all labor, materials, equipment, tools, testing, fees, and incidentals needed to complete the work specified, except as otherwise itemized in the Schedule of Values.

3.5 All plumbing improvements performed as part of this project is considered part of this lump sum bid price.

3.6 INITIAL APPLICATION FOR PAYMENT

A. Administrative actions and submittals that must precede the first Application for Payment include the following:
1. Contractor's Mobilization Schedule (first 90 days).
2. Baseline Construction Schedules information.
3. Contractor's Schedule of Values.
4. Contractor's Submittal Schedule.
5. List of Subcontractors (if required).
6. List of Principal Suppliers and Fabricators (if required).

7. List of Contractor's staff assignments (if required).
8. Copies of Building Permits (if applicable).
9. Copies of licenses and authorizations from governing authorities for performance of the work (if applicable).
10. Certificates of Insurance.
11. Required Bonds.
12. Safety Program reviewed by the ALCOSAN and Construction Manager and recorded as reviewed without comments.
13. WBE/MBE submittal accepted.
14. Preconstruction photograph and video session completed and three copies provided to the Construction Manager.

3.7 MONTHLY APPLICATION FOR PAYMENT

A. Administrative actions and submittals that must precede each monthly Application for Payment include the following:
1. Contractor's Project Schedule with brief summary narrative (updated).
2. Contractor's submittal schedule (updated).
3. Certified payrolls.
4. Certificates of Insurance (updated).
5. Required backup/approved shop drawings for materials stored on site.
6. Maintenance of on-site as-built drawings.
7. Resolution of all Site Safety Notices.
8. Disposition of all Non-Conformance Notices by the Construction Manager.
9. WBE/MBE compliance update.
10. Weekly safety meeting minutes.

3.8 INITIAL APPLICATION FOR PAYMENT

A. Administrative actions and submittals that must precede the first Application for Payment include the following:
1. Contractor's Mobilization Schedule (first 90 days).
2. Baseline Construction Schedules information.
3. Contractor's Schedule of Values.
4. Contractor's Submittal Schedule.
5. List of Subcontractors (if required).
6. List of Principal Suppliers and Fabricators (if required).
7. List of Contractor's staff assignments (if required).
8. Copies of Building Permits (if applicable).
9. Copies of licenses and authorizations from governing authorities for performance of the work (if applicable).
10. Certificates of Insurance.
11. Required Bonds.
12. Safety Program reviewed by the ALCOSAN and Construction Manager and recorded as reviewed without comments.
13. WBE/MBE submittal accepted.
14. Preconstruction photograph and video session completed and three copies provided to the Construction Manager.

3.9 MONTHLY APPLICATION FOR PAYMENT

A. Administrative actions and submittals that must precede each monthly Application for Payment include the following:

11. Contractor's Project Schedule with brief summary narrative (updated).
12. Contractor's submittal schedule (updated).
13. Certified payrolls.
14. Certificates of Insurance (updated).
15. Required backup/approved shop drawings for materials stored on site.
16. Maintenance of on-site as-built drawings.
17. Resolution of all Site Safety Notices.
18. Disposition of all Non-Conformance Notices by the Construction Manager.
19. WBE/MBE compliance update.
20. Weekly safety meeting minutes.

3.10 FINAL APPLICATION FOR PAYMENT

A. Administrative actions and submittals that must precede the Final Application for Payment are outlined in Article 3, General Contract Conditions.

END OF SECTION

SECTION 07 10 50
SHAFT MEMBRANE WATERPROOFING SYSTEM

PART 1 GENERAL

1.01 SCOPE OF WORK

A. This section includes requirements for the shaft waterproofing system.

B. Furnishing and install a Poly Vinyl Chloride (PVC) membrane waterproofing system including all components and appurtenances required to provide a complete, watertight waterproofing system, including management, diversion, or control of groundwater.

1.02 RELATED SECTIONS

A. This section contains specific references to the following related sections. Additional related sections may apply that are not specifically listed below.
   1. Section 03 15 00 Concrete Joints and Accessories.
   2. Section 03 30 00 Cast-In-Place Concrete.

B. This section contains references to the following documents. They are a part of this section as specified and modified. Where a referenced document contains references to other standards, those documents are included as references under this section as if referenced directly. In the event of conflict between the requirements of this section and those of the listed documents, the requirements of this section shall prevail.

Reference	Title	
ASTM	~~ASTM D149, Standard Test Method for Dielectric Breakdown Voltage and Dielectric Strength of Solid Electrical Insulating Materials at Commercial Power Frequencies.~~	ADD. NO. 8
	ASTM D374, Test Method for Thickness of Solid Electrical Insulation.	
	ASTM D543, Standard Practices for Evaluating the Resistance of Plastics to Chemical Reagents.	ADD. NO. 8
	~~ASTM D568, Test Method for Rate of Burning and/or Extent and Time of Burning of Flexible Plastics in a Vertical Position.~~	
	ASTM D638, Standard Test Method for Tensile Properties of Plastics.	
	ASTM D1593, Standard Specification for Nonrigid Vinyl Chloride Plastic Film and Sheeting.	
	ASTM D1777, Standard Test Method for Thickness of Textile Materials.	
	ASTM D1785, Standard Specification for Poly Vinyl Chloride (PVC) Plastic Pipe, Schedules 40, 80, and 120.	
	ASTM D3776, Standard Test Methods for Mass per Unit Area (Weight) of Fabric.	
	ASTM D3786, Standard Test Method for Bursting Strength of Textile Fabrics: Diaphragm Bursting Strength Tester Method.	

Reference	Title
	ASTM D4533, Standard Test Method of Trapezoid Tearing Strength of Geotextiles.
	ASTM D4632, Standard Test Method for Grab Breaking Load and Elongation of Geotextiles.
	ASTM D4716, Standard Test Method for Determining the (In-plane) Flow Rate per Unit Width and Hydraulic Transmissivity of a Geosynthetic Using a Constant Head.
	ASTM D5602, Standard Test Method for Static Puncture Resistance of Roofing Membrane Specimens
	ASTM D5635, Standard Test Method for Dynamic Puncture Resistance of Roofing Membrane Specimens
European Standard	EN 1847, Flexible Sheets for Waterproofing – Plastic and Rubber Sheets for Roof Waterproofing – Methods for Exposure to Liquid Chemicals, Including Water
	EN 14415, Geosynthetic Barriers – Test Method for Determining the Resistance to Leaching

ADD. NO. 8

1.03 DEFINITIONS

A. Terminology used in this Section conforms to the following definitions:
   1. Attachment Disk: PVC Discs used for anchorage of the system to the geotextile and substrate.
   2. Double Weld: Machine welded seams achieved by use of automatic hot double-wedge welding equipment.
   3. Single Weld: Hand weld seam consisting of tack welding and sealing the seam with liquid synthetic membrane.
   4. Geotextile: Material that provides a groundwater channel and protection of the membrane from sharp projections of the surface to which the membrane is applied.
   5. Membrane: Membrane comprised of specially plasticized PVC.
   6. Re-injectable hose: Grouting hoses made of synthetics equipped with a valve system, which precludes grout return flow from outside into the grouting hose and allows for multiple grouting passes.
   7. Remedial Grouting Pipes: Pipes installed near the intersection of water barriers used for re-grouting to control the watertightness of a section if leakage occurs.
   8. Sectioning: Strategically placed water barriers to create watertight sections of the waterproofing system. Water barrier intersections close off a section.
   9. Water Barrier: Base seal waterstop profile welded to the membrane to seal off individualized membrane compartments.
   10. Waterproofing System: Layered system consisting of geotextile, PVC membrane, protection layer (where required), water barriers and grouting pipes used to improve the watertightness of the structure.
   11. Protective Concrete: Concrete mud slab placed over invert membrane as means of protection to avoid damage.

12. Patent Strip: Channel shaped stainless-steel bar with pre-punched holes for attachment to achieve a tight fit at waterproofing terminations.
13. Hydrophilic Waterstop: Expansive swelling gasket strip applied in conjunction with patent strips at waterproofing terminations.
14. Protection Board: Pressure treated plywood used to protect membrane along vertical surfaces and at grade membrane terminations.

1.04 SUBMITTALS

A. Action Submittals:
   1. Procedures: Section 01 33 00.
   2. A copy of this specification section with each paragraph check-marked to indicate specification compliance or marked to indicate requested deviations from specification requirements. ADD. NO. 8
   3. Check-marks (✓) shall denote full compliance with a paragraph as a whole. Deviations shall be underlined and denoted by a number in the margin to the right of the identified paragraph. The remaining portions of the paragraph not underlined will signify compliance on the part of the Contractor with the specifications. Include a detailed, written justification for each deviation. Failure to include a copy of the marked-up specification sections, along with justification(s) for any requested deviations to the specification requirements, with the submittal shall be sufficient cause for rejection of the entire submittal with no further consideration. ADD. NO. 8
   4. Shop Drawings: Include plans, sections and details showing as a minimum:
      a. Sequencing of waterproofing installation relative to construction sequence.
      b. Typical sheet layout for the shaft, base slab, tunnel junction chamber and discharge piping floor slab. Including splice locations and types of welds.
      c. Developed plan layout of water barriers along vertical shaft walls.
      d. Waterproofing terminations at surfaces.
      e. Waterproofing termination at interfaces.
      f. Waterproofing at all penetrations.
      g. Waterproofing at corners.
      h. Remedial grout pipe assembly.
      i. Protection of remedial grout pipes during construction activities.
      j. Attachment assembly.
      k. Waterproofing/membrane details at slurry wall
      l. Layout of temporary construction drainage in shaft base in connection with temporary sumps and procedures during construction.
   5. As-built Drawings and Installation Records:
      a. Remedial grouting pipes.
      b. Water barriers: location and elevation of water barriers and size of panel section.
      c. Re-injectable grouting hoses:
         1) Location and elevation of junction boxes and service ports.
         2) Labelling system.
         3) Location and elevation of re-injectable grout hose.

d. Any areas of repair.
e. Documentation of membrane damage and repair areas.

6. Qualifications including a resume listing applicable project experience installing waterproofing membrane on projects of similar complexity, position held, duration and project description for:
   a. Waterproofing installer.
   b. Waterproofing supervisor.
   c. Remedial grout supervisor.
7. Product data for all products used in the Work, including, catalogue cuts, MSDS sheets, certification of compliance, manufacturer's recommendation for storage, handling, installation and protection, testing, welding, detection of damage and repair.
8. Submit the following material samples:
   a. PVC Waterproofing Membrane – One square foot.
   b. Double Weld Seam – One-foot length.
   c. Geotextile – One square foot.
   d. Water Barrier – one-foot length welded to membrane.
   e. Membrane attachment disc – two (2) disks welded to membrane.
   f. Waterstop/Flashing – one-foot length.
   g. Remedial Grout Pipe Assembly – one foot in length (including flange) with threaded end, welded to membrane and protection cap to prevent clogging.
   h. Re-injectable grout hose assembly – two foot in length with protection cap to prevent clogging.
   i. Remedial grout – two four-ounce jars.
   j. Patent Termination Strip – one foot in length with fasteners.
   k. Hydrophilic waterstop – one foot in length.
   l. Protection board – one square foot.
9. Submit a Method Statement for installation, equipment used and materials that include plastic caps, solid tape or heat shrink wrap over exposed cut ends or flat bottomed plastic circular spaces to isolate steel and ensure watertight integrity and protection of waterproofing membrane.
10. Waterproofing protection plan and details describing the intended procedures to prevent damage during construction operations such as, installation of formwork, reinforcement and embedded items and placement of concrete.

B. Informational Submittals
   1. Procedures: Section 01 33 00.
   2. Waterproofing installer certification and qualifications.
   3. Reports/Records/Forms: Surface acceptance form completed and signed prior to start of welding.
   4. Waterproofing and Remedial Grouting Pipes Protection Plan, narrative and details describing the procedures to prevent damage during construction operations such as installation of form work, reinforcement and placement of concrete.

1.05 QUALITY ASSURANCE

A. Qualifications
   1. Manufacturer: Fifteen minimum years of experience in production of waterproofing systems for application in shafts/tunnel structures.
   2. Successful installation of the waterproofing system on at least three projects as the type proposed for this project.
   3. Personnel Qualifications
      a. Installer: Five years minimum experience on projects of similar size and complexity. Trained by the waterproofing system manufacturer prior to beginning installation.
      b. A manufacturer's representative to be present at least during the first ten working days of installation and later as often as required.
      c. Installation and testing to be performed under the direct supervision of an individual having at least five years' experience on projects of similar size and complexity.

B. Field Samples and Testing
   1. Double weld samples, three-foot long, from each welding machine and welder, prior to start of daily shift.
   2. Single weld samples, three-foot long, from each welding machine and welder, prior to start of each shift.
   3. Waterstop Butt weld samples- One butt welded sample consisting of two 12" waterstops from each welder prior to start of any daily shift where waterstop welding will take place.

C. Pre-Installation Conferences.

1.06 DELIVERY, STORAGE AND HANDLING

A. Procedures: Section 01 65 50.

1.07 WARRANTY

A. Provide Manufacturer's Standard Warranties in accordance with 01 78 36. Manufacturer shall warrant against defects in materials and workmanship from the date of substantial completion.

1.08 PROJECT CONDITIONS

A. The surface of the support of excavation system will require some restoration to prepare it for proper installation of the membrane waterproofing system.

PART 2 PRODUCTS

2.01 MATERIALS

A. Geotextile:

1. A 100 percent non-woven polypropylene consisting of long chain polymetric filaments, or fiber formed into a stable network of uniform thickness and surface texture.
2. non-woven polypropylene having uniform thickness and surface texture with the following properties ant test methods:

Physical Properties	Values	ASTM Test Method
Thickness	285 mils	DI777
Unit Weight	22 oz/sy	D3776
Grab Tensile Strength	285 lbs.	D4632
Elongation	85 %	D4632
Trapezoidal Tear Strength	135 lbs.	D4533
Burst Strength	400 lb./sq.-in	D3786
Chemical Resistance	pH 2 -13	-

B. Membrane: Flexible, homogeneous, unreinforced PVC of uniform thickness, surface texture and dual color to assist in detecting damage with the following properties and test methods:

Physical Properties	Values	ASTM Test Method
Thickness	0.100 in (2.5 mm)	D374
Ultimate Tensile Strength	1600 psi	D638
Ultimate Elongation	230%	D638
Low Temperature Impact	Pass at -20° F	D1593
Chemical Resistance	pH value 2 - 13	*See Footnote
~~Flammability~~	~~Self-extinguishing~~	~~D568~~
Puncture Resistance		
Static	Pass, 50 lbf	ASTM D5602
Dynamic	Pass, 5 J	ASTM D5635
~~Mechanical Puncture Resistance~~	~~65 in~~	~~DIN 16726 5.12~~
~~Dielectric Strength~~	~~544 V/mil~~	~~D149~~

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Footnote: Chemical resistance may be demonstrated using any combination of the following procedures: ASTM D543, EN 1847, and/or EN 14415.

1. PVC membrane to be as follows:
   a. SikaPlan WP 1130 ~~or WP 110025 – HL2~~ by SIKA Corporation
   b. T100-NR by CETCO
   ~~c. DonProof PT by Don Construction Products Inc~~
   d. Approved equal

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ADD. NO. 8

2.02 ACCESSORIES

A. Attachment Discs: Discs are to be manufactured of PVC and a minimum three (3") inch diameter, with (1) steel washer ~~embedded in the disc~~. The disc is to be attached with 1-1/4" steel nails to the geodrains/ geotextile. Adjust nail length, for disc fixation as required. The discs shall be compatible with the membrane and installed in accordance with the manufacturer's recommendations.

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B. Water Barrier: PVC strip weldable to membrane with embedment ribs and the following dimensions:
   1. 16-inch minimum width with 6 ribs of l-inch minimum height.
   2. Water barrier intersections must be prefabricated by manufacturer.
   3. Thickness shall be comparable to the thickness of the PVC membrane.

C. Remedial Grout Pipes: Remedial Grout Pipes: ~~1 ½ inch nominal size~~ PVC pipe, schedule 40, ASTM D1785, length as determined by the Contractor with threaded end and plug or ~~1 ½ inch nominal size,~~ flexible high-pressure PVC braided reinforced clear tube with end pieces threaded ends and plug. Diameter shall be in accordance with manufacturer's requirements.

ADD. NO. 4

D. Remedial Grout: Water soluble, hydrophilic, acrylate-ester resin grout or approved equal and compatible with remedial grout tube.

E. Reinjectable Grout Hose: System shall include tough flexible and chemically inert tubes with a minimum internal hole diameter of 3/8-inch, connecting tubes, junction boxes, grout, pumps and all other items required for their installation and use. The system shall be suitable for resinous or cementitious grout and be capable of re-injection to seal joints.

F. Junction Box: Heavy duty plastic box with removable cover compatible with the reinjectable grout hose system and sized to accommodate injection and

G. Protection Board: 3/8-inch-thick pressure treated plywood sheets.

H. All accessories shall be coordinated with the approved manufacturer of the PVC membrane.

PART 3 EXECUTION

3.01 DELIVERY, STORAGE AND HANDLING

A. Store and handle materials and products in strict accordance with manufacturer's instructions, recommendations, and material safety data sheets.

B. Handle all materials to prevent damage. Place material, when off-loaded, on a smooth surface free of rocks, debris or other protrusions which may damage the waterproofing materials.

C. Keep membrane under cover to protect from potential ultraviolet radiation.

D. Provide storage space to protected materials from theft, vandalism and passage of vehicles. Mark applicable primers, cements, coatings and sealants with date of manufacture and show a date of shelf life. Do not use products beyond shelf-life dates. Do not dilute primes, roofing cements, adhesive coatings, or sealants. Keep containers closed except when removing materials from them.

E. Store all flammable materials in a cool, dry area away from sparks and open flames. Follow precautions outlined on container or supplied by material manufacturer or supplier.

F. Promptly remove from the site any materials that are damaged or rejected.

3.02 SURFACE PREPARATION

A. Prepare surfaces to receive membrane in accordance with manufacturer’s recommendations and as follows:
   1. Clean all surfaces free of oils, grease, and gasoline.
   2. Repair all joints, offsets, voids, cracks, and spalled areas which are greater than one half inch in width or depth with quick setting grout shotcrete, mortar, or approved equal.
   3. Remove all loose concrete and debris.

B. Surface inspection and acceptance:
   1. Inspect all surfaces to receive waterproofing in the presence of the Waterproofing Installer, Engineer, the Owner
   2. Correct deficiencies identified during inspection and re-inspect after corrective action has been taken.
   3. Complete Surface Acceptance Forms to release an area for waterproofing installation, and obtain signatures of the waterproofing supervisor, waterproofing installer, Engineer, and Owner.
   4. Install 2" by 2" chamfers at all exposed concrete comers.
   5. Provide overall smoothness of support of excavation and shotcrete surface as required by the waterproofing manufacturer.

C. Groundwater Management
   1. Provide means of diverting, controlling, or managing groundwater inflows on surfaces to receive waterproofing system.
   2. Means or methods of diverting, controlling, or managing groundwater inflows shall not result in additional loading on the initial support or interfere with or infringe upon the Permanent Work.

3.03 INSTALLATION

A. Install waterproofing only after the Surface Acceptance form has been signed as specified above.

B. All surfaces to receive the waterproofing systems are installed are to be clean, free from loose aggregate, sharp projections, or any edges, projecting tying wire, release agents and other substances which are likely to damage or affect the waterproofing system.

C. Remove temporary supports and hangers installed for construction purposes. Cover any protrusions of more than 1/2 inch with quick setting grout or mortar such that no sharp edges remain. Ensure the allowable roughness of the support of excavation meets the manufacturer's minimum requirements to achieve proper installation and operation of the waterproof membrane.

D. Survey the profile of the support of excavation system and shotcrete to confirm it is to the correct profile and meets the smoothness requirements of the membrane prior to fixing either a separation layer of geotextile or waterproofing membrane.

E. Install penetrations and using proprietary products by the membrane manufacturer. . Seal penetrations and membrane anchorage as recommended by the membrane manufacturer.

F. Install the waterproofing membrane closely against the geotextile drainage and protective layer.

G. Attach the membrane sheets at all the nailing discs around the nails by spot heat welding. Alternative methods of fixing the waterproofing membrane may be used subject to approval by the Engineer and the Owner. Do not penetrate the membrane with nails, welding tools or any other object not in accordance with the approved fixing details.

H. Carry out welding of the membrane sheet edges by experienced personnel and with equipment to form a flat double weld seam.

I. Provide welds 1/4-inch minimum wide spaced between at l-inch maximum. Repairs and T -joints may have solid welds up to 1-1/4- inch wide as recommended by the manufacturer.

J. Seal the membrane at the ends of each waterproofed compartment ~~section~~ against the surface to prevent ingress of concrete or grout between the membrane and the surface. ADD. NO. 8

~~K. Install method of fixing the membrane to a base slab to preclude the ingress of grout during concreting and any back grouting operations. Install fixing methods in accordance with the manufacturer.~~ ADD. NO. 8

L. Install the waterproofing membrane when the ambient air temperature is higher than 40 °F or in accordance with the manufacturer's recommendations.

M. Supply and maintain fire-fighting equipment in the shaft for the whole period that membrane material is exposed.

3.04 FIELD QUALITY CONTROL

A. During installation of the waterproofing system, the following inspect the following for conformance:
   1. Use of specified materials.
   2. Proper storage and handling of material.
   3. Ambient temperature.
   4. Seam directions and layouts.
   5. Attachments.
   6. Proper membrane overlaps at seams for welding.
   7. Weld application.
   8. Location of water barriers.
   9. Location of remedial grout pipes.
   10. Correct face of geotextile facing inwards.

3.05 REPAIR AND RESTORATION

A. Protection and Placement inspection.
   1. Check the integrity of the waterproofing system during and after the installation of reinforcing steel, formwork and during concrete pours.
   2. Check for watertightness and leaks within the membrane.
   3. Protect membrane from damage during post-installation work.

B. Test all completed double seam welds by the application of air pressure to the space between the two seams. Apply the test pressure, at one end of the seams and measure at the other end to test the integrity of the whole joint. Perform test in the presence of the Engineer and the Owner. Provide at least 12 hours' notice to the Engineer and the Owner prior to performing seam testing.

C. Perform all testing in accordance with the requirements of the waterproofing manufacturer.

D. Repair or replace any areas failing to achieve the watertightness requirements in accordance with the manufacturer's recommendations. Record areas which have been repaired and submit repair details to the Engineer.

E. Leak Remediation

1. Maintain observation of CIP concrete liner and remedial grout pipes and reinjectable grout hoses ~~tubes~~ for water infiltration. If water infiltration occurs, implement the following measures: ADD. NO. 4

   a. In the section indicating a leak, grout through remedial grout ~~tubes~~ pipes and/or reinjectable grout hoses to seal and provide a second layer of waterproofing. ADD. NO. 4

   b. Clean pipes and/or hoses after grouting and repeat operation if leak persists. ADD. NO. 4

   c. Ensure grout injection pressure does not exceed capacity.

   d. Do not penetrate or puncture membrane except for permanent purposes using proven approved water-tightness techniques.

2. Inject grout through the re-injectable grout hoses or remedial grout tubes only after the Cast-in-Place (CIP) concrete has attained its 28-day compressive strength. Fill any voids between the barrier and concrete and achieve a proper tie-in of water barriers into the CIP concrete. ADD. NO. 4

3. Injection of grout of reinjectable grout hoses and/or remedial grout pipes is not mandatory. Reinjectable grout hoses and/or remedial grout pipes are to be used, as required, to achieve the performance criteria for watertightness specified in Section 01 45 25. ADD. NO. 4

3.06 PROTECTION

A. Where reinforced concrete and/or embedded steelwork is to be placed against the waterproofing membrane provide a signaling layer on the exposed waterproofing membrane surface, to give a visual indication of any mechanical damage. Install signaling layer in accordance with the recommendations of the waterproofing membrane manufacturer.

B. Provide protection to steel reinforcement when it is installed adjacent to the waterproofing membrane. Provide details of l the protection method in the method statement and can include plastic caps, solid tape or heat shrink wrap over exposed reinforcing steel cut ends and plastic flywheel or flat bottomed plastic circular spaces to ensure suitable separation of the steel from the membrane. No burning or welding of steel reinforcing will be permitted without approval of the Engineer.

C. Pipe water percolating outside the membrane to avoid the formation of water-filled blisters. Provide "lay-flat" type or small diameter polypropylene pipe for disposal of water. Provide pipes that are suitable for removal and membrane patching prior to CIP concrete placement. Where this is not possible, provide a proprietary system, in accordance with the recommendations of the waterproofing manufacturer, which allows the formation of a hole in the membrane and the sealing of a drainpipe.

D. Spot weld strips of membrane at least 20 inches wide to the waterproofing at the formwork stop ends to protect the installed membrane from being damaged.

E. Upon completion of waterproofing installation, all exposed waterproofing elements, and terminations to be protected from damage using protection boards or similar barriers.

END OF SECTION

ATTACHMENT – C

Addendum No. 11 Contract 1800G Bid Form

BIDDING DOCUMENTS

ARTICLE 1

CONTRACT NO. 1800 G

WET WEATHER PUMP STATION

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BIDDING DOCUMENTS

ARTICLE 1

CONTRACT NO. 1800 G: WET WEATHER PUMP STATION

Page

NOTE TO BIDDER: Use typewriter or BLACK ink for completing this Bid Form.

BID FORM

To: Allegheny County Sanitary Authority

Address: 3300 Preble Avenue, Pittsburgh, PA 15233

Project Identification: WET WEATHER PUMP STATION

Contract No.: 1800 G

1. BIDDER'S DECLARATION AND UNDERSTANDING.

1.1 This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm, or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization, or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any person, firm, or corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over Owner.

1.2 In submitting this Bid, Bidder certifies Bidder is qualified to do business in the Commonwealth of Pennsylvania as required by laws, rules, and regulations or, if allowed by statute, covenants to obtain such qualification prior to contract award.

2. CONTRACT EXECUTION AND BONDS.

8.1 The undersigned Bidder agrees, if this Bid is accepted, to enter into an Agreement with Owner on the form included in the Bidding Documents to perform and furnish Work as specified or indicated in the Bidding Documents for the Contract Price derived from the Bid and within the Contract Times indicated in the Agreement and in accordance with the other terms and conditions of the Bidding Documents.

8.2 Bidder accepts the terms and conditions of the Bidding Documents.

3. INSURANCE.

3.1 Bidder further agrees that the Bid amount(s) stated herein includes specific consideration for the specified insurance coverages.

4. CONTRACT TIMES.

4.1 Bidder agrees to accept Contract Times set forth in Article 4, Contract Agreement.

5. LIQUIDATED DAMAGES.

5.1 Bidder accepts the provisions in Article 4, Contract Agreement as to liquidated damages.

6. ADDENDA.

6.1 Bidder hereby acknowledges that it has received Addenda Numbers: _____ _____, _____, _____, _____, _____,(Bidder shall insert number of each Addendum received) and agrees that Addenda issued are hereby made part of the Bidding Documents, and Bidder further agrees that this Bid includes impacts resulting from said Addenda.

7. SUBCONTRACTORS.

7.1 Bidder 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 Instructions to Bidders.

8. BASE BID.

8.1 Bidder further proposes to accept as full payment for the Unit Price Work proposed herein the amounts computed under the provisions of the Bidding Documents and based on the following unit price amounts, it being expressly understood that the unit prices are independent of the exact quantities involved. Bidder agrees that the unit prices represent a true measure of the labor, materials, and services required to furnish and install the item, including all allowances for overhead and profit for each type and unit of Work called for in these Bidding Documents.

Item	Description	Quantity	Unit	Unit Price	Extended Total Amount
01	WWPS CONSTRUCTION LUMP SUM WORK	1	LS		$
02	DRILLED MICROPILES	9003	VLF		$
03	STATIC COMPRESSION AND TENSION VERIFICATION PILE LOAD TESTS	2	EA		$
04	PRE-EXCAVATION GROUT HOLD DRILLING IN SOIL	3,255	LF		$
05	PRE-EXCAVATION GROUT HOLE DRILLING IN ROCK	10,590	LF		$
06	PROBE HOLE DRILLING IN ROCK	2,700	LF		$
07	SHAFT PRE-EXCAVATION GROUTING EXCLUSIVE OF GROUT MATERIALS	600	CREW HOURS		$
08	CUT-OFF GROUTING EXCLUSIVE OF GROUT MATERIALS	100	CREW HOURS		$
09	INITIAL SUPPORT SPOT ROCK DOWELS	2050	LF		$
10	ALTERNATIVE 1 CONNECTION TO ORT CONTRACT DEWATERING TUNNEL	1	LS		$
11	ALTERNATIVE 2 CONNECTION TO ORT CONTRACT DEWATERING TUNNEL	1	LS		$
12	SPECIFIC ALLOWANCE #1 – DISPUTE REVIEW BOARD (DRB)	250,000	USD	N/A	$
13	SPECIFIC ALLOWANCE #2 – STOPPAGE TO SLURRY WALL TRENCH EXCAVATIONS	250,000	USD	N/A	$
14	SPECIFIC ALLOWANCE #3 – DRILLING THROUGH OBSTRUCTIONS FOR MICROPILE INSTALLATION	50,000	USD	N/A	$
15	SPECIFIC ALLOWANCE #4 – DISPOSAL OF OTHER CONTAMINATED WASTE	500,000	USD	N/A	$
16	SPECIFIC ALLOWANCE #5 – NON-COMPLIANT GROUNDWATER DISPOSAL	100,000	USD	N/A	$
17	SPECIFIC ALLOWANCE #6 – HANDLING AND DISPOSAL OF LEAD-BASED COATINGS AND ASBESTOS-CONTAINING MATERIALS (ACM) (GREATER THAN 1 PERCENT ASBESTOS)	25,000	USD	N/A	$
18	SPECIFIC ALLOWANCE #7 – EXCAVATION OF “HARD SLAG” REMOVAL	1,000	CY		$

Item	Description	Quantity	Unit	Unit Price	Extended Total Amount
19	SPECIFIC ALLOWANCE #8 – EXCAVATION AND DEMOLITION OF UNFORESEEN CONCRETE, MASONRY, AND OTHER MANMADE OBSTRUCTIONS	200	CY		$
20	SPECIFIC ALLOWANCE #9 – CONTINGENT UNCLASSIFIED EXCAVATION	2,000	CY		$
21	SPECIFIC ALLOWANCE #10 – CONTINGENT PLACEMENT OF BACKFILL MATERIAL	2,400	CY		$
22	SPECIFIC ALLOWANCE #11 – ADDITIONAL RESIDUAL WASTE SOIL DISPOSAL	14,400	TONS		$
23	SPECIFIC ALLOWANCE #12 – ACID PRODUCING ROCK DISPOSAL	43,400	TONS		$
24	SPECIFIC ALLOWANCE #13 – GROUT MATERIALS USED FOR PRE-EXCAVATION GROUTING AND CUT-OFF GROUTING	250,000	USD	N/A	$
25	SPECIFIC ALLOWANCE #14 – UNFORESEEN UTILITY REMOVAL AND RELOCATION	100,000	USD	N/A	$
26	SPECIFIC ALLOWANCE #15 – TEMPORARY OWNER'S SECURITY TRAILER	150,000	USD	N/A	$
Add. No. 11					
	TOTAL OF EXTENDED ITEM AMOUNTS FOR UNIT PRICE WORK LISTED ABOVE (Sum of Extended Total Amount for 01 thru 26)				$

8.2 Base Bid Summary:

TOTAL BASE BID:

_____ Dollars
(Words)

and _____Cents. $_____
(Words) (Figures)

9. SURETY.

9.1 If Bidder is awarded a construction contract from this Bid, the surety who provides the Performance and Payment Bond(s) shall be:

_____ whose address is

_____

Street City State Zip

9.2 The Bidder further certifies that the surety listed as providing the Performance Bond and the Payment Bond is listed on the Treasury Department's most current list (Circular 570 as amended) and is authorized to transact business in the Commonwealth of Pennsylvania.

10. BIDDER.

An Individual _____

By _____
(Individual's name and signature)

A Partnership

By _____
(Partnership name)

_____
(Name and signature of general partner)

_____
(Title)

A Corporation

By _____
(Corporation name)

_____
(State of incorporation)

By _____
(Name and signature of person authorized to sign)

_____
(Title)

(Corporate Seal)

A Joint Venture

By _____
(Business name)

_____
(Name and signature of person authorized to sign)

By _____
(Business name)

_____
(Name and signature of person authorized to sign)

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

= =

CONTRACTOR CONTACT INFORMATION

Name, Address, and Phone Number for receipt of official communications and for additional information on this Bid:

_____
(NAME OF CONTACT PERSON)

_____
(ADDRESS)

_____
(CITY, STATE, ZIP) (PHONE)

SUBMITTED ON _____, 20__

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we _____ _____, as Principal, and _____, a corporation duly organized under the laws of the State of _____, as Surety, are held and firmly bound unto the Allegheny County Sanitary Authority, herein called the "Authority", its attorneys, successors or assigns in the sum of _____ Dollars ($_____) lawful money of the United States of America, for payment of which sum well and truly to be made, we bind ourselves, our heirs, legal representatives, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted the accompanying Bid for **CONTRACT NO. 1800 G – WET WEATHER PUMP STATION**

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that (1) if the Principal shall not withdraw said Bid within the period specified in the Information for Bidders, and shall within the period therein specified therefore [or, if no time is specified, within TEN (10) calendar days (not including Sundays or Legal Holidays) after the prescribed forms are presented to it for execution] enter into a written Contract with the Authority in accordance with the Bid as required, for the faithful performance of such Contract and for the payment of labor and materials and execute and deliver to the Authority all bonds and other instruments required to be executed and delivered by the Principal in accordance with the Contract Documents, or (2) in the event of the unauthorized withdrawal of said Bid, or the failure to enter into such Contract and give such bonds within the time specified and execute and deliver to the Authority all bonds and other instruments required to be executed and delivered by the Principal in accordance with the Contract Documents, if the Principal shall pay the Authority the difference between the amount specified in said Bid and the amount for which the Authority may procure the required work or supplies or both, if the latter amount be in excess of former together with all other loss, damage or expense suffered by the Authority thereby, then, in either such case, the above obligation shall become void and of no effect; otherwise it shall remain in full force and effect.

Said Surety, for value received, hereby stipulates and agrees that the obligation of said Surety under this Bond shall in no way be impaired or affected by an extension of the time within which said Bid may be accepted and said Surety does hereby waive notice of any such extension.

Said Surety agrees that its liability hereunder shall be absolute regardless of any liability of the Principal hereunder whether by reason of any irregular or unauthorized execution of or failure to execute this Bond or otherwise.

This Bond is entered into, under and pursuant to the laws of the Commonwealth of Pennsylvania and shall in all respects be construed in accordance with the laws of said Commonwealth.

IN WITNESS WHEREOF, the above parties have executed this instrument under their several seals this _____ day of _____, 20__ the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

SURETY COMPLETE THIS PAGE

_____
(Corporate Surety)

_____
(Street Address)

_____
(City, State and Zip Code)

ATTEST: By: _____*
(Signature)

_____ _____
(Title)

Date: _____, 20__

(AFFIX CORPORATE SEAL)

* The Surety should attach to the Bid Bond a currently certified Power of Attorney which should be dated, sealed and executed by a live (not facsimile) signature showing that the person signing the Bid Bond for the Surety has the current authority to do so.

CORPORATION COMPLETE THIS PAGE

_____is a corporation organized and existing under the laws of _____ with principal place of business at _____

(Street Address) (City, State and Zip Code)

and, if a non-Pennsylvania corporation [has] / [has not] been granted a certificate of authority to do business in Pennsylvania, as required by the Pennsylvania Business Corporation Law of 1988, approved December 21, 1988, P.L. 1444, as amended, 15 Pa. C.S.A. §§ 4101 et seq.

ATTEST:

_____
(Name of Corporation)

_____
(Signature of Certifying Officer)

_____
(Signature of Authorized Officer)

Date: _____, 20__

_____
(Typed name of Authorized Officer)

(AFFIX CORPORATE SEAL)

(The corporation shall make certain that the secretary or assistant secretary certifies the official character and authority of the person or persons executing this Bid Bond for the Principal according to the form attached hereto. In lieu of such certificate, attach to the Bid Bond copies of the records of the corporation that show the official character and authority of the officer signing. The records shall be duly certified to be true copies by the secretary or assistant secretary under corporate seal.)

CORPORATION COMPLETE THIS PAGE
CERTIFICATE AS TO CORPORATE OFFICER

I, _____, certify that I am [secretary]/[assistant secretary] of the corporation executing the within Bid Bond; that _____ ___who signed the said Bid Bond; on behalf of the corporation was then _____ of said corporation; that I know his signature and his signature thereto is genuine; and that said Bid Bond was duly signed, sealed and attested for and in behalf of said corporation by authority of its governing body.

Dated: _____, 20__ _____
Signature of secretary (or assistant secretary)

(AFFIX CORPORATE SEAL)

PARTNERSHIP COMPLETE THIS PAGE

_____ is a partnership trading under a fictitious or assumed name and [has] / [has not] registered under the Fictitious Names Act of Pennsylvania, namely, the Act of December 16, 1982, P.L. 1309, as amended, 54 Pa. C.S.A. §§ 301 et seq.

_____
(Fictitious or assumed name)

WITNESS:

_____*(SEAL)
(Partner trading as above)

_____ _____*(SEAL)
(Partner trading as above)

Date: _____, 20__ _____
(Street Address)

_____
(City, State and Zip Code)

* If the executing party is a partnership, the document must be signed in the name of the partnership by at least two general partners, and the names and addresses of all the partners must be listed on the attached Certificate. Principal must also attach Certificate of registration under the provisions of the Fictitious Names Act.

PARTNERSHIP COMPLETE THIS PAGE
CERTIFICATE AS TO PARTNERSHIP

I, a partner of _____, the partnership named as Contractor in the within Bid Bond, certify that the following are the names and addresses of all the partners of said partnership:

_____ (Name)	_____ (Name)
_____ (Address)	_____ (Address)
_____ (City, State and Zip Code)	_____ (City, State and Zip Code)
_____ (Name)	_____ (Name)
_____ (Address)	_____ (Address)
_____ (City, State and Zip Code)	_____ (City, State and Zip Code)

Date: _____, 20__

_____
(Signature of Certifying Partner)

INDIVIDUAL COMPLETE THIS PAGE
(WHEN THE PRINCIPAL IS AN INDIVIDUAL DOING BUSINESS UNDER A FIRM NAME)

_____ is an individual trading under a fictitious or assumed name and [has] / [has not] registered under the Fictitious Names Act of Pennsylvania, namely, the Act of December 16, 1982, P.L. 1309, as amended, 54 Pa. C.S.A §§ 301 et seq.

_____
(Fictitious or assumed name)

WITNESS:

By: _____(SEAL)
(Individual doing business as above)

_____
(Street Address)

Date: _____, 20__ _____
(City, State and Zip Code)

(WHEN THE PARTY IS AN INDIVIDUAL DOING BUSINESS IN HIS/HER INDIVIDUAL NAME)

_____
(Individual Name)

WITNESS:

By: _____(SEAL)
(Individual)

_____ _____
(Street Address)

Date: _____, 20__ _____
(City, State and Zip Code)

CERTIFICATE OF MINORITY AND WOMEN'S BUSINESS ENTERPRISE PARTICIPATION

CONTRACT 1800 G: WET WEATHER PUMP STATION

The undersigned Bidder certifies that they have read and understand the Information for Bidders Section entitled "Minority and Women's Business Enterprise and Labor Surplus Area Policy," and further understand and agree to the minority participation goal applicable to this Contract, and shall strive to expend from TEN to TWENTY-FIVE PERCENT (10-25%) of the total cost of the Contract for minority and women's business enterprise participation.

The Bidder further certifies that they understand that they are required to submit, within 5 days of Owner's request, a specific proposal indicating the manner in which it will attempt to comply with this requirement. This proposal shall include the four pages following 1-17G in Article 1 (Bidding Documents)

Failure of the Bidder to attempt to comply with these conditions or failure to submit with the Bid the proposal described above, or failure to sign and submit this Certificate with the Bid may disqualify the Bid as being nonresponsive.

Add. No. 5
Add. No. 9

Name of Bidder _____

Signed _____

Title _____

Date _____

ALLEGHENY COUNTY SANITARY AUTHORITY

Failure to complete this form and submit it with bid will be sufficient cause for rejection of bid.

Note: Each sheet must be returned.

SOLICITATION AND COMMITMENT STATEMENT
MINORITY (MBE) AND FEMALE (WBE) OWNED BUSINESS ENTERPRISES

CONTRACT NO.	NAME OF BIDDER	ADDRESS	PHONE
1800 G			

List below all MBE/WBE's that were solicited - whether or not a commitment was obtained - - Copy this form as necessary

☐ MBE ☐ WBE	TYPE OF SUBCONTRACT WORK OR MATERIALS	DATE SOLICITED BY PHONE	BY MAIL	COMMITMENT MADE YES (IF YES, GIVE DATE)	NO	GIVE REASON(S) IF NO COMMITMENT MADE
COMPANY NAME						
ADDRESS		QUOTE RECEIVED YES	NO	AMOUNT COMMITTED DOLLAR AMOUNT $		
CONTACT PERSON PHONE				PERCENT OF TOTAL BID %		
☐ MBE ☐ WBE	TYPE OF SUBCONTRACT WORK OR MATERIALS	DATE SOLICITED BY PHONE	BY MAIL	COMMITMENT MADE YES (IF YES, GIVE DATE)	NO	GIVE REASON(S) IF NO COMMITMENT MADE
COMPANY NAME						
ADDRESS		QUOTE RECEIVED YES	NO	AMOUNT COMMITTED DOLLAR AMOUNT $		
CONTACT PERSON PHONE				PERCENT OF TOTAL BID %		
☐ MBE ☐ WBE	TYPE OF SUBCONTRACT WORK OR MATERIALS	DATE SOLICITED BY PHONE	BY MAIL	COMMITMENT MADE YES (IF YES, GIVE DATE)	NO	GIVE REASON(S) IF NO COMMITMENT MADE
COMPANY NAME						
ADDRESS		QUOTE RECEIVED YES	NO	AMOUNT COMMITTED DOLLAR AMOUNT $		
CONTACT PERSON PHONE				PERCENT OF TOTAL BID %		

Prepared by: _____ Title: _____ Phone: _____

NOTE: It is recommended that Certification and letters of intent for each MBE/WBE commitment accompany this Solicitation and Commitment Statement.

MBE/WBE SOLICITATION AND COMMITMENT STATEMENT

BIDDER'S FIRM: _____

ADDRESS: _____

TELEPHONE: _____

CONTACT PERSON: _____

PROPOSAL AND BID FOR: _____

LIST BELOW ALL CONTRACTS WITH THE ALLEGHENY COUNTY SANITARY AUTHORITY DURING THE PAST THREE YEARS AND THE MBE AND WBE PARTICIPATION OBTAINED					
CONTRACT TITLE	**CONTRACT DATE**	**AMOUNT**	**% PARTICIPATION**		**COMMENTS**
			MBE	**WBE**	

Prepared by: _____ Title: _____

MBE/WBE SOLICITATION AND COMMITMENT STATEMENT

Additional Information

The bidder presents the following as additional and supplemental information to its MBE/WBE Solicitation and Commitment Statement

Prepared by: _____ Title: _____ Phone: _____

Websites that provide certified MBE/WBE companies:

www.paucp.com

Suzanne Thomas
ALCOSAN DBE Coordinator

(412) 732-8020

NON-COLLUSION AFFIDAVIT

State of _____:

S.S.

County of _____:

I state that I am _____ of
(Title)

_____ and that I am
(Name of Firm)

authorized to make this Affidavit on behalf of my firm and its owners, directors and officers. I am the person responsible for the price(s) and the amount of this Bid.

I further state that:

(1) The price(s) and amount of this Bid have been arrived at independently and without consultation, communication or agreement with any other contractor, bidder or potential bidder.

(2) Neither the price(s) nor the amount of this Bid, and neither the approximate price(s) nor approximate amount of this Bid, have been disclosed to any other firm or person who is a bidder or potential bidder, and they will not be disclosed before the bid opening.

(3) No attempt has been made or will be made to induce any firm or person to refrain from bidding on this contract, or to submit a bid higher than this Bid, or to submit any intentionally high or noncompetitive bid or other form of complementary bid.

(4) The Bid is made in good faith and not pursuant to any agreement or discussion with, or inducement from, any firm or person to submit a complementary or other noncompetitive bid.

(5) The above-named firm, its affiliates, subsidiaries, officers, directors and employees are not currently under investigation by any governmental agency and have not in the last four years been convicted or found liable for any act prohibited by State or Federal law in any jurisdiction, involving conspiracy or collusion with respect to bidding on any public contract, except as follows (Either provide an explanation or check box provided if there are no exceptions):

❑ No Exceptions

Explanation: _____

_____

I state that the above-named firm understands and acknowledges that the above representations are material and important, and will be relied on by:

THE ALLEGHENY COUNTY SANITARY AUTHORITY

in awarding the Contract(s) for which this Bid is submitted. I understand and my firm understands that any misstatement in this Affidavit is and shall be treated as fraudulent concealment from:

THE ALLEGHENY COUNTY SANITARY AUTHORITY

of the true facts relating to the submission of bids for this contract.

_____
(Name and Company Position)

SWORN TO AND SUBSCRIBED BEFORE ME

THIS _____DAY OF _____, 20__

_____
(Notary Public) (My Commission Expires)

CERTIFICATE OF COMPLIANCE WITH THE PENNSYLVANIA STEEL PRODUCTS PROCUREMENT ACT

This Certificate is supplied by _____ ("Contractor") to the Allegheny County Sanitary Authority ("ALCOSAN") this _____ Day of _____, 20__.

W I T N E S S E T H:

WHEREAS, Contractor wishes to contract with ALCOSAN relative to CONTRACT NO 1800 G: WET WEATHER PUMP STATION (the "Contract"); and

WHEREAS, The Pennsylvania Steel Products Procurement Act, 72 P.S. § 1881 et. seq. ("Steel Procurement Act") requires that if a product contains foreign and United States steel, such product shall be determined to be a United States steel product only if at least SEVENTY-FIVE PERCENT (75%) of the cost of the articles, materials, and supplies have been mined, produced or manufactured, as the case may be, in the United States; and

WHEREAS, Contractor has represented to ALCOSAN that any and all products Contractor will supply to ALCOSAN pursuant to the Contract will be United States steel products as defined in Steel Procurement Act and Contractor does and will in all fashion and manner comply with the Steel Procurement Act and the Contract in performance of the Contract.

NOW, THEREFORE, INTENDING TO BE LEGALLY BOUND HEREBY, Contractor does represent and promise to ALCOSAN as follows:

1. The above recitals are binding between the parties and are legally enforceable as if set forth in their entirety herein.

2. Contractor will, pursuant to the Contract, meet the definition of United States steel products as set forth in the Steel Procurement Act and will in all manner and fashion otherwise comply with the Steel Procurement Act and the Contract.

3. Contractor acknowledges that its representations and promises are a material consideration to ALCOSAN with regard to considering Contractor for and possibly awarding the Contract to Contractor.

4. Contractor does hereby promise to indemnify and save harmless the Authority, its officers, agents, servants, and employees from and against any and all suits, actions, legal proceedings, claims, demands, damages, costs, expenses and attorney's fees resulting from the breach of any representation, covenant or promise contained in this Certificate.

Intending to be legally bound hereby Contractor does hereby supply this Certificate the _____ day of _____, 20__.

ATTEST: (_____)

_____ By: _____

Title: _____

Date: _____

BIDDER'S QUALIFICATION STATEMENT

In order to determine the qualifications of any Bidder and its ability to undertake the work in this Contract, the Owner may undertake investigations as it deems necessary. All Bidders shall promptly furnish to the Owner all such information for this purpose as specified herein or which may be requested by the Owner subsequent to the receipt and opening of Bids. The Owner reserves the right to reject any Bid if the information submitted by, or the investigation of, the Bidder fails to satisfy the Owner that the Bidder is responsible to complete the Work in the Contract Documents.

1. Completion of this form is required to be submitted with the Bid. Bidders shall submit supplemental information as an attachment to this Statement.
2. Within three (3) days after opening the bids, the two (2) apparent lowest bidders shall comply with the Escrow Bid Document requirements of Section 01 35 20 of the Contract Documents.
3. At the Owner's discretion the following may be requested prior to award to assist with the Owner's determination of the lowest responsible, and responsive bid.

    A. Provide an audited financial statement for the previous two years and an interim statement for the current year. If the Bidder is a joint venture or partnership, provide statements for each company that comprises the joint venture or partnership and a copy of the executed joint venture or partnership agreement. The statements will be held in confidentiality to the extent permitted by law.
    B. Provide a letter from the Bidder's insurance broker identifying the Bidder's Experience Modification Rating (EMR). If the Bidder is a joint venture or partnership, provide statements indicating the EMR for each company that comprises the joint venture or partnership.

The Bidder guarantees the accuracy of all statements and answers below. Please print in ink or type and attach additional sheets as required. If the requested information is not fully submitted or does not meet the qualification requirements, the Owner reserves the right to consider the bid unresponsive.

Agent:
The undersigned certifies under oath the truth and correctness of all statements and of all answers to questions made hereinafter:

SUBMITTED BY: _____
Name of Organization (Print or Type Name of Bidder)
Name of Individual (Agent):
_____
Title: _____
Business Address: _____
_____
Telephone No.: _____

(Note: Attach additional sheets as required.)

General Business Information
Type of Business_____
If Corporation:

A. Date and State of Incorporation _____
B. List of Executive Officers

Name	Title
_____	_____
_____	_____
_____	_____
_____	_____

If Partnership:

A. Date and State of Incorporation _____
B. Names of Current General Partners
_____
_____
C. Type of Partnership _____

If Joint Venture:

A. Date and State of Organization _____
B. Names, Address and Form of Organization of Joint Venture Partners
_____
_____
C. List Majority Joint Venture Partner and Managing Partner:
_____

_____

If Sole Proprietorship:

A. Date and State of Organization _____
B. Names and Addresses of Owners

Name	Address
_____	_____
_____	_____
_____	_____
_____	_____

If Limited Liability Company or Other:

A. Date and State of Formation _____
B. List of Executive Officers

Name	Title
_____	_____
_____	_____
_____	_____
_____	_____

How many years has your organization been in business as a contractor? For joint venture, provide response for each partner, including each partner's participation in other joint ventures.

_____

If your organizational structure has changed within the past five years, provide data as listed above in for your previous organization(s). Attach additional sheet if necessary.

If the answer to any of the following questions is "yes", furnish details of all such occurrences including name of owner, architect or engineer, and surety, and name and date of project. For joint venture, provide response for each partner, including each partner's participation in other joint ventures.

Within the last ten years, has any construction contract to which your organization and/or proposed partners been terminated for cause by the owner? No□ Yes□

Have you ever terminated work on a project prior to its completion for any reason? No□ Yes□

Has any surety which issued a performance bond on your behalf ever completed the work in its own name or financed such completion on your behalf? No□ Yes□

Has any surety expended any monies in connection with a contract for which they furnished a bond on your behalf? No□ Yes□

In the last ten years, has your organization, including predecessor organizations and JV partner(s), failed to achieve substantial completion of a project in accordance with the timeframe established by the Contract and been subject to penalties. No□ Yes□

In the last ten years, has your organization, including predecessor organizations and JV partner(s), been subject to legal action by, or taken legal action against a party to a contract to which your organization, including predecessor organizations and JV partner(s), was a signatory? This includes legal action(s), arbitration(s), and litigation(s) settled outside of court.
No□ Yes□

In the last ten years, has your organization, including predecessor organizations and JV partner(s), been subject to legal action, or taken legal action against an Owner, employee, former employee, subcontractor or other entity? This includes legal action(s), arbitration(s), and litigation(s) settled out of court. No□ Yes□

Bidder's Qualifications Statement as stated in Schedule A through Schedule C is required to be submitted with the Bid by all bidders. Bidders shall submit supplemental information as an attachment to this Statement.

Add No. 5

At Owner's discretion, Bidder's Execution Statement as stated in Schedule D is required to be submitted by the two apparent low bidders within five (5) workdays of Owner's request. Bidders shall submit supplemental information as an attachment to this Statement.

Projects in Progress: (Provide as Schedule A, to be prepared and attached by the Bidder) List name, location and description of project, owner, architect or engineer, contract price, percent complete and scheduled completion of the comparable construction projects your organization has in progress on this date. Provide name, address, email and telephone number of a reference for each project listed.

Reference Projects: (Provide as Schedule B, to be prepared and attached by the Bidder) The Bidder must demonstrate construction experience in performing the type of work comparable to that in this Contract by submitting experience documentation. Design experience will not be considered acceptable. Construction management for construction work not self-performed will not be considered acceptable. Construction work not self-performed (e.g. performed by a subcontractor or by previous JV partner) will not be considered acceptable, as confirmed by the project references provided.

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 with 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.

Add No. 3

If the Bidder is a joint venture or partnership, the qualifications in Schedule B may be met by combining the experience of the individual members.

The projects included in Schedule B shall satisfy all of the following minimum requirements in order for the Bidder to be considered for Award of Contract:

1. A minimum of ten (10) years of experience in underground pump station and construction as demonstrated through a comprehensive list of projects completed by the Bidder inclusive of those listed in items 2 and 3 below.
2. A minimum of three (3) projects within the last ten (10) years involving shaft construction to a depth of at least 100 feet per shaft and diameter of at least 25 feet. Shaft construction as defined in this Article shall include the following elements: installation of support of excavation systems, excavation and removal of soil and rock, installation of rock support, pre-excavation or cutoff grouting, and construction of shaft final concrete lining. At least one of the shafts shall have been excavated in rock by controlled blasting for at least 75 feet, and at least two of the shafts shall have used slurry/diaphragm wall or secant pile support of excavation in soil for at least 75 feet. If a subcontractor is proposed to meet the minimum requirements for shaft construction, indicate the firm. Qualifying subcontractor experience shall only be acceptable if the same subcontractor is responsible for shaft construction on the proposed Work for the WWPS.

Add No. 4

Add No. 4

3. A minimum of three (3) projects within the last ten (10) years involving construction of a wetwell/drywell pump station with a pumping capacity greater than 25 mgd and power requirements involving medium voltage pump motors greater than 1,000 horsepower.

Personnel: (Provide as Schedule C, to be prepared and attached by the Bidder) The Bidder must demonstrate construction experience of personnel in performing the type of work comparable to that in this Contract by submitting experience documentation. Design experience will not be considered acceptable. Construction management for construction work not self-performed will not be considered acceptable.

List name and construction experience satisfying the requirements below for each of the principal individuals of your organization directly involved in construction operations and that will be utilized on this project. Also provide name, address, email and telephone number of a client reference for each staff listed:

1) Contractor's Project Manager

a) Ten (10) years of supervisory experience, of which at least seven (7) cumulative years and three (3) consecutive years is in a project management position.
b) Participation in the capacity of a supervisory position on at least one (1) pump station project and one (1) deep infrastructure project of similar sizes and complexity as this project.

2) General Superintendent

a) Ten (10) years of supervisory experience, of which at least ten (10) cumulative years and three (3) consecutive years were in a superintendent position.
b) Participation in the capacity of a superintendent on at least one (1) pump station project and one (1) deep infrastructure project of similar sizes and complexity as this project.
c) One General Superintendent will be required to oversee and manage the work.
d) Demonstrated supervisory experience in underground construction on projects of similar size and complexity as this project.

3) Shaft Superintendent/s

a) Ten (10) years of supervisory shaft construction experience with at least one (1) supervisory role within the last five (5) years.
b) Participation in the capacity of a superintendent on at least one shaft construction project utilizing support of excavation in soil and controlled blasting in rock, <u>installation of rock support, and construction of shaft final concrete lining.</u>
c) Demonstrated supervisory experience in underground construction on projects of similar size and complexity as this project.

Add No. 4

4) Safety Manager

a) Hold a safety and health certification/designation such as but not limited to Certified Safety Professional (CSP), Certified Industrial Hygienist (CIH), Associate Safety Professional (ASP), with at least 5 years of relevant shaft with underground construction safety and health experience; or
b) Have a bachelor's degree in safety management or an equivalent engineering degree with at least 7 years of relevant construction safety and health experience.
c) A resume of the qualifications of the Safety Manager which shall include a description of the Safety Manager's experience, education, and special safety and first aid courses completed, and safety conferences attended, and shall indicate that the individual possesses safety experience in heavy construction and underground construction, including experience as a Safety Manager on a project classified as potentially gassy and on projects with projects requiring 24/7 work schedule.

Method Statement: Bidder's Execution Statement (Provide as Schedule D, to be prepared by the Bidder). Written replies to the following questions and statements are to be provided. Responses shall be detailed and specific; therefore general responses such as "will be done in accordance with the specifications" or similar will not be considered acceptable. These responses shall be separate and distinct from the Escrow Bid Documents which are to be submitted after the bid as specified in Section 01 35 20:

Add No. 5

a) Gas in Excavations. Explain how the presence of methane, hydrogen sulfide, and other gases will be monitored and strategies for avoiding the accumulation of gas concentrations in underground excavations.

b) Shaft Construction. Describe the manner in which the WWPS shaft and adjacent excavations will performed including the proposed SOE systems to be used.
   i) Provide key layout parameters (size, spacing, depth) for support of excavation (SOE) and groundwater control systems elements/components in soil. Include discussion of SOE support system installation equipment to be used.
      (1) Include the means by which groundwater pressures that exist in the soils will be monitored and controlled in advance of excavation.
      (2) Include description of proposed methods to achieve verticality tolerances and potential remedial measures to be implemented to achieve these tolerances, as required.
   ii) Provide construction details and describe methods proposed for shaft excavation in rock including cut-off, pre-excavation grouting, ground support and groundwater inflow mitigation. Include discussion of sequencing and proposed excavation lifts.
   iii) Provide details of proposed blasting activities including:
      (1) Controlled blasting techniques including noise and vibration monitoring and control of overbreak.
      (2) Blasting materials (i.e., cartridged, bagged, bulk), packaging, delivery method, and loading (charging) methods or systems.
      (3) Methods of transportation, storage, security, and use of explosives for a typical working day.
   iv) For each stage of shaft construction, provide a description of proposed staging area requirements including layout of construction trailers and equipment, muck handling and stockpiling locations, temporary access roads and areas of restricted travel/access,

c) Tunnel Junction Chamber Excavation. Include the following
   i) Method of excavation;
   ii) Description and details of the type of equipment;
   iii) Tunnel pre-support and support methods;
   iv) Proposed details of proposed blasting activities including:
      (1) Controlled blasting techniques including noise and vibration monitoring and

control of overbreak

(2) Blasting materials (i.e., cartridged, bagged, bulk), packaging, delivery method, and loading (charging) methods or systems.

(3) Methods of transportation, storage, security, and use of explosives for a typical working day with blasting operations and a typical working day without blasting operations including on-site storage of explosives during overnight periods, non-working weekends, and holidays.

v) Methods of final lining and bulkhead construction for each bulkhead plan alternatives.

d) Groundwater Flow Control

e) Protection of Structures. Describe the methods and procedures to be used to protect existing structures and utilities at the WWPS site, including:

i) Description and details of geotechnical instrumentation to be used.

ii) Methods and support systems used to minimize construction-induced ground movements and vibrations.

f) Disposal of Excavated Materials. Describe the methods and procedures to be used to provide the required testing, handling, temporary stockpiling, transportation and disposal of excavated materials including anticipated disposal facilities for the applicable Clean Fill, Residual Waste and Other materials at each site.

g) Utilities.

i) Describe your power consumption and usage plans;

ii) Describe your approach to protecting the various utilities at each site.

h) Pump Station Construction.

- Provide construction details, methods and sequence for final lining construction including description of internal structural elements (e.g., collar, final lining, floor slabs, etc.).

CERTIFICATION OF SAFETY PROCEDURES COMPLIANCE

I, _____, as _____ of
(Typed Name) (Title or Office)
_____, a _____,
(Name of Corporation/Partnership) (Type of Entity)

hereby certify that I have read and understand the Safety Procedure as enumerated in the Contract Provisions Section entitled "Compliance with Health, Safety and Environmental Laws" of Contract Number 1800 G and that all Work will be conducted in accordance with OSHA standards and other applicable safety precautions.

Date: _____, 20__ By:_____