ADDENDUM NO. 2

To the Plans and Specifications for the

COWLITZ COUNTY HEADQUARTERS LANDFILL
2025 GAS COLLECTION AND CONTROL SYSTEM EXPANSION PROJECT

Project No. 8467

For the Department of Public Works, Cowlitz County, Washington

Bid Opening Date: **September 16, 2025, at 1:30 p.m.** (revised by Addendum 2)

THIS ADDENDUM IS HEREBY MADE A PART OF THE CONTRACT DOCUMENTS TO THE SAME EXTENT AS THOUGH IT WAS ORIGINALLY INCLUDED THEREIN.

QUESTIONS FROM PROSPECTIVE BIDDERS AND ANSWERS

The following are questions asked by prospective bidders and answers to those questions:

1. **What is the contract term?**

   Per Section 1-08.5 of the WSDOT Standard Specifications, Contract time shall begin on the first working day following the 21st calendar day after the date the Contracting Agency executes the Contract. If the Contractor starts Work on the project at an earlier date, then Contract time shall begin on the first working day when on-site Work begins.
   Per the Special Provisions for Section 1-08.5, This project shall be physically completed within 30 working days.
   It is anticipated that the contract will be awarded 1-2 weeks after bid opening, and the contract will be executed 3 weeks after that. This timeline is approximate and is subject to change.
2. **Do all the proposal forms must be completed in ink (filled out by hand)? Or can we fill out and sign with electronic signatures?**

   All proposal forms must be filled out and signed in ink. See WSDOT Standard Specifications Sections 1-02.6 Preparation of Proposal, 1-02.9 Delivery of Proposal, and 1-02.13 Irregular Proposals, as well as the Special Provisions for those sections.
3. **On the Proposal Form on page 5, is the Industrial Insurance Coverage Account No. the same as a Washington Labor & Industry Workers' Compensation Account No.?**

   Yes.
4. **On the Proposal Form, should we input our UBI No. in the State Excise Tax Registration No. space in addition to the UBI No. space?**

   Yes.

5. **We are unclear about the Washington Registration No. needed on the County's Proposal Form document.**

   The Washington Registration No. is the Contractor's License Number.

6. **Can the project contractor work on Saturdays?**

   The Contractor may request to work Saturdays. Per the Special Provisions for Section 1-08.0(3), the Contracting Agency may deduct from amounts due or to become due to the Contractor for the costs in excess of the straight-time costs for employees of the Contracting Agency required to work overtime hours.

7. **Is Trench bedding and clean backfilling soil available on site for the contractor?**

   Section 1.5 of the bid item special provisions states OWNER will provide a source for borrow soil.

8. **Is construction water available on site for the contractor?**

   Section 1.5 of the bid item special provisions states OWNER will provide a source of water for soil conditioning.

9. **Do all road crossings shown in the design require rocks on top for the finish layer, as shown on Sheet M2.07?**

   Bedding and backfill for all road crossings shall be crushed surfacing base course per WSDOT Standard Specifications Section 9-03.9(3). Asphalt for the road crossing for the 2" air line shall be patched per Cowlitz County Standard Plan CC-1303 (available download at https://www.co.cowlitz.wa.us/DocumentCenter/View/634/CC-1303-Pavement-Patching?bidId=).

10. **In the design, it shows sand bedding in trenching for Cell 1, and it does not show anything for the other cells. Please confirm - Detail D and F on sheet M2.04**

    Sand Bedding occurs in trenching of the closed section of cell 1 to prevent direct contact of header and lateral piping with the top liner system.

11. **Should the estimated quantity for pipe support needed on site be mounded in soil or cast in concrete?**

    There is one pipe support attached to the concrete channel. The rest are mounded in soil.

12. **Are all well drilling locations accessible for the drill rig? Per today's site visit, it appears that a pad (30x30) is needed with a possible road to all locations to have safe transportation during winter weather. This will be an added cost to footage for well drilling, or a separate line item will need to be added to the bid. This will also determine the unit price with other possible bidders, and this may differentiate the cost of the project.**

    All wells are on a slope between 4:1 and 3:1 (H:V), except for those near the top. The Contractor is responsible for constructing leveling pads and roads as necessary for their equipment to operate. The Contractor is responsible for determining the extents and construction of all leveling pads and roads required for their operations. The Contract has been revised to include a lump sum bid item to cover this work.

13. **For below-grade valves, are vaults required? This does not show up in the design. If yes, can you confirm the quantity and specifications on the vaults?**

The only vaulted valve is on the 3" liquid conveyance line near the tie-in to the 8" LCS cleanout. See detail D/M2.05. All other below grade valves will have valve extension handles.

14. **Is there any specific brand that the County is looking for regarding the air compressor installation? What are the exact specifications for the compressor?**

    Ingersol Rand was the compressor used in the master plan for sizing purposes, but there are no hard requirements for brand if it meets specification requirements. Specifications for the Electric Air Compressor: 7.5 hp, 2 Stage, Vertical, 80 gal, 14.3 cfm, 175 psi, 480V AC.

15. **Based on the site visit today, it looks like the current electrical connections are 480V single-phase. Can modifications be made if anything else is installed other than 480V single-phase? Normal is 480 three-phase.**

    The plans have been revised to provide both 480V 3 phase and 120V 1 phase power.

16. **Is there a contingency plan for winter weather events?**

    In the event of extreme weather, the Contractor shall close up all tarp that has been opened up for construction.

17. **Is the Electrical Contractor supplying the exhaust fan and doing the install?**

    The Contractor shall provide and install all electrical items.

18. **What type of control do you prefer for the exhaust fan?**

    The Plans have been revised to specify temperature actuated exhaust fan.

19. **Typically, with an exhaust out, you have an intake (louver). Is this needed?**

    The existing shed has vents. Exhaust will require louvers as shown on revised Plans.

20. **It doesn't appear that lighting is included in the drawings. We would assume an 8' LED strip fixture and a switch would suffice. Is MB Electric supplying this?**

    The Plans have been revised to include 8" LED strip fixtures.

21. **Can the contractor dispose of drilling and other spoils there at no cost?**

    Section 1.5 of the bid item special provisions states OWNER will provide a disposal area for any waste or deleterious materials that are excavated and removed by the CONTRACTOR during the project.

22. **Is a SWPPP plan needed, or is that by others?**

    The work for this project is covered by the current SWPPP for operation of the landfill.

23. **Is the County handling all permits for the GCCS installation, and any building or electrical permits for the air compressor?**

    The Contractor shall obtain an electrical permit from the Washington State Department of Labor and Industries.

24. **Who is responsible for the removal of the existing plastic cover on the site for construction?**

    The Contractor is responsible for cutting, folding back, and replacing tarp as needed. The Contractor shall not open more than one acre of tarp within the project area at any time.

25. **Who is responsible for the installation after project completion?**

County will own and operate all installations. The Contract includes Warranty provisions that are the Contractor's responsibility.

26. **Are materials (soil and rocks) for the drill pad and access road available on site?**

    The Contractor is responsible for determining the extents and construction of all leveling pads and roads required for their operations. Aggregate needed for leveling pads and roads will need to be imported.

27. **Does the contractor need to remove all pads and access road after construction?**

    The Contractor is responsible for the restoration of the site to its original state. This includes replacing all tarp, sandbags and rope, and sealing the joints.

PROPOSAL

Quantities have been revised, and additional bid items have been added. The Proposal Form is replaced with the attached revised Proposal Form.

PLANS

There have been extensive plan revisions. The attached Plans replace the Plans included in the original bid documents.

SPECIAL PROVISIONS

BID ITEM 3: 12-INCH HDPE SDR 11 HEADER
BID ITEM 4: 6-INCH HDPE SDR 11 LATERAL
BID ITEM 5: VERTICAL LFG EXTRACTION WELL (8-INCH PVC SCH 80)
BID ITEM 6: 2-INCH FLOW WING STYLE WELLHEAD
BID ITEM 7: QED AP 42+ ULTRA VERTICAL WELL PUMP
BID ITEM 8: 8-INCH QED MODEL GWC82 WELL CAP
BID ITEM 9: LIQUID DISCHARGE SUMP TIE-IN
BID ITEM 10: 12-INCH HEADER ISOLATION VALVE (GEAR OPERATED, BELOW-GRADE) INSTALLATION
BID ITEM 11: 6-INCH HEADER ISOLATION VALVE (GEAR OPERATED, BELOW-GRADE) INSTALLATION
BID ITEM 12: 6-INCH LATERAL TIE-IN TO 12-INCH HEADER
BID ITEM 13: 12-INCH HEADER TIE-IN TO 18-INCH HEADER
BID ITEM 14: 6-INCH LFG STUB UP
BID ITEM 15: 3-INCH HDPE SDR 11 CONDENSATE FORCEMAIN
BID ITEM 16: LIQUID CONVEYNACE CLEANOUT INSTALLATION
BID ITEM 17: 3-INCH LIQUID CONVEYANCE LINE ISOLATION VALVE INSTALLATION
BID ITEM 18: 2-INCH HDPE SDR 9 AIR SUPPLY LINE
BID ITEM 19: 2-INCH AIR LINE ISOLATION AND BLOWOFF VALVE INSTALLATION
BID ITEM 20: 12-INCH HEADER ROAD CROSSING

BID ITEM 21: 2-INCH AIR LINE ROAD CROSSING
BID ITEM 22: 3-INCH FORCEMAIN ROAD CROSSING (ADDED BY ADDENDUM 2)
BID ITEM 23: 12-INCH FLANGED TERMINATION
BID ITEM 24: WELLHEAD CENTRALIZER (WC-020)
BID ITEM 25: NON-CALCAREOUS STONE BACKFILL
BID ITEM 26: 1-INCH ELECTRICAL CONDUIT
BID ITEM 27: AIR CONVEYANCE COMPRESSOR, ELECTRIC RECIPROCATING AIR COMPRESSOR
BID ITEM 28: AIR COMPRESSOR ELECTRICAL COMPONENTS
BID ITEM 29: LEVELING PADS, ACCESS ROADS, TARP REMOVAL AND SITE RESTORATION (ADDED BY ADDENDUM 2)

1.4B.4(5) Site Work
Replace item g with the following:

g. E.C. shall be responsible for procuring, receiving, unloading, rigging, handling and final installation (including bolting to pads, per equipment manufacturer's recommendations) of new air compressor. The shed has been Owner-purchased and delivered to the site.

1.4B.4(6) Scope of Work - Specific Provisions
Replace Section 1.4B.4(6) with the following:

1.4B.4(6) Scope of Work - Specific Provisions

a. The electrical Scope of Work includes additions by this E.C. to an existing Electrical Distribution System.

b. Provision of a complete 600V aboveground and underground electrical distribution, as required by the contract documents. Provide all appurtenances for a complete operational and working system. E.C. shall provide new underground and above ground raceway system (conduits, hand holes and pull boxes); 600V branch feeders terminated in two-hole compression mechanical lugs (mechanical lugs by this E.C.); 600V, 300V, DC controls and communications wiring with final connections and terminations. E. C. shall coordinate details with Owner and Construction Manager's / Builders.

c. Low Voltage Work; shall be provided by the E.C.; refer to the electrical drawings.
   1) Provide new 3-pole 600V 20 amp circuit breaker – Eaton #FD3020 in existing panel EDP-1.
   2) Provide new 3-pole 600V 20 amp non-fused NEMA 3R disconnect switch adjacent to 7.5 HP air compressor.
   3) Provide new 480V electrical service (conduits and conductors) from the EDP-1 panelboard to new air compressor.
   4) All of the electrical installation shall conform to rules and regulations from NFPA and the local power utility company.

5) Provide components for grounding protection system and all appurtenances as required by the contract documents. All connections shall be exothermal welds. Bond new air compressor frame to existing ground with #6 bare soft drawn copper.
   a) Provide grounding connections from existing ground grid to new air compressor frame with #6 AWG bare soft drawn copper.

1.6 CONTRACTOR'S SCOPE OF WORK
Replace Section 1.6 with the following:

1.6 CONTRACTOR'S SCOPE OF WORK

The CONTRACTOR shall furnish all labor, materials, and equipment for the construction of the work as shown and indicated on the construction drawings and technical specification. The scope of work covered by this Contract includes, but is not necessarily limited to, the following (items correspond to Bid Proposal):

1. **Miscellaneous Construction.** See Special Provisions for Bid Item 1 Miscellaneous Construction.

2. **Mobilization.** See Special Provisions for Bid Item 2 Mobilization.

3. **12-inch HDPE SDR 11 Header (See Item 3 of Bid Proposal):** Measurement for this item shall be on an installed linear foot basis of 12-inch diameter HDPE SDR 11 header piping, as measured during the conformance survey conducted by Owner's CQA Consultant. The majority of the installation of this item is in a common trench with new air and forcemain piping. Installation of 12-inch header piping must ensure a minimum of 3% drop, downgrade, in order to facilitate the movement of condensate. Payment for this item will be at the contract unit price per linear foot. Payment includes excavation, trenching, clean soil backfill, and soil compaction; and fittings, joining materials, and accessories required for the installation of piping, including connections to proposed/existing piping, pressure testing, and incidentals. Payment shall constitute full compensation for all material, labor, equipment and work incidental thereto, necessary to complete this item in accordance with the Construction Plans and Specifications.

4. **6-inch HDPE SDR 11 Lateral (See Item 4 of Bid Proposal):** Measurement for this item shall be on an installed linear foot basis of 6-inch diameter HDPE SDR 11 lateral piping, as measured during the conformance survey conducted by Owner's CQA Consultant. Installation of this item is to be placed in a common trench with new air and forcemain piping. Installation of 12-inch header piping must ensure a minimum of 3% drop, downgrade, in order to facilitate the movement of condensate. Payment for this item will be at the contract unit price per linear foot. Payment includes excavation, trenching, clean soil backfill, and soil compaction; and pipe, fittings, joining materials, tees and

accessories required for the installation of piping, including connections to proposed piping and proposed/existing wells, pressure testing, and incidentals. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Construction Plans and Specifications.

5. **Vertical LFG Extraction Wells (8-inch PVC SCH 80) (See Item 5 of Bid Proposal):** Drilling and installation of vertical LFG extraction wells shall be measured on an installed vertical foot basis measured from existing ground surface to the bottom of the wellbore as measured in the field and approved by Owner's CQA Consultant. Lengths of the solid PVC SCH 80 are to be set at 30 feet, in order to maintain the calculated radius on influence (ROI) within each well. Use of bentonite, non-calcareous stone, and clean soil backfill will be used within the borehole in order to prevent solid LFG vertical well piping from bending and potentially breaking.

   Lengths of perforated PVC SCH 80 are to be dependent on surface, liner and existing Weyerhauser waste elevations. Lengths are set to maximize collection while also maintaining compliance and minimizing the potential for bad gas collection. Pipe is to be perforated with 3/8" X 6" slots, slots are to be spaced 90 degrees apart horizontally and 6" apart vertically.

   Payment for this item will be at the contract unit price per vertical foot installed. Payment includes all drilling, transport of all materials, well aggregate, clean soil and bentonite backfill, well plugs, perforated and solid piping, pipe connections, wellbore reinforcement grate, health and safety requirements, and temporary caps. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Construction Plans and Specifications.

   The labor and equipment costs for drilling past obstructions in excess of one (1) hour as approved by Owner's CQA Consultant shall be paid under the bid item Miscellaneous Construction. If the Engineer determines that a well should be relocated after drilling has begun, the labor and equipment costs associated with drilling and backfilling the abandoned well location will be paid under the bid item Miscellaneous Construction.

6. **2-inch Flow Wing Style Wellhead (See Item 6 of Bid Proposal):** Measurement for this item shall be on a per each unit basis. The wellhead comes from ISCO premade and ready to install. The Flow Wing Style Wellhead is to be used with two monitoring ports attached with acetal quick-disconnect ports. Other components of the wellhead will include a temperature port on the top side of the wellhead, a 2" fernco cap at the top of the meter run, a 2" SCH 80 PVC union, and a 2" SCH 80 PVC gate valve. Payment for this item will be at the contract unit price per each installed 2-inch Flow Wing Wellhead. Payment includes supply and installation of materials and connections to laterals, well caps, and other necessary connections or incidentals. Payment shall constitute full compensation for all

material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Construction Plans and Specifications.

7. **QED AP4+ Ultra Vertical Well Pump (See Item 7 of Bid Proposal):** Measurement for this item shall be on a per each unit basis. The QED AP4+ Ultra Well Pump includes three (3) lines. A steel cable, forcemain line and an air in and out line. Payment for this item will be at the contract unit price per each installed QED AP4+ Ultra pump. Payment includes supply and installation of materials and connections to laterals, well caps, and other necessary connections or incidentals. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Construction Plans and Specifications.

8. **8-inch QED Model GWC82 Well Cap (See Item 8 of Bid Proposal):** Measurement for this item shall be on a per each unit basis. The QED Model Well Cap is a fernco fitting well cap, designed to accommodate a pump and hold a wellhead. Payment for this item will be at the contract unit price per installed 8-inch Well Cap (QED Model GWC82 or similar). Payment includes supply and installation of well cap and accessories to make connections to extraction well and wellhead. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Construction Plans and Specifications.

9. **Liquid Discharge Sump Tie-In (See Item 9 of Bid Proposal):** Measurement for this item shall on a per installed unit basis, with only one liquid discharge tie in to the existing Cell 1 sump. This item consist of a 3-inch discharge line extrusion welded into the side of the sump, with four gusset welds into a 90 degree elbow to discharge liquids into the bottom of the sump. Payment includes supply and installation of materials and connections to laterals, well caps, and other necessary connections or incidentals. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Construction Plans and Specifications.

10. **12-inch Header Isolation Valve (Gear Operated, Below-Grade) Installation (See Item 10 of Bid Proposal):** Measurement for this item shall be on a per unit basis. Payment for this item will be at the contract unit price per each installed 12-inch diameter header isolation valve. This item includes an HDPE beveled flange adapter with ring, however valve spacers may be used in place of beveled adapter. The valve is a butterfly valve lug body, stainless steel disc, with gear operator and extension handle to above grade. Payment includes excavation, clean soil backfill, transport of excavated materials, and soil compaction; and supply and installation of valve, fittings, spacers, stem extension, and joining materials required for connection of valve to proposed piping with flanges and installation of a monitoring port on each side of the valve. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Construction Plans and Specifications.

11. **6-inch Header Isolation Valve (Gear Operated, Below-Grade) Installation (See Item 11 of Bid Proposal):** Measurement for this item shall be on a per each unit basis. Payment for this item will be at the contract unit price per each installed 6-inch diameter header isolation valve. This item includes an HDPE beveled flange adapter with ring, however valve spacers may be used in place of beveled adapter. The valve is a butterfly valve lug body, stainless steel disc, with gear operator and extension handle to above grade. Payment includes excavation, clean soil backfill, transport of excavated materials, and soil compaction; and supply and installation of valve, fittings, spacers, stem extension, and joining materials required for connection of valve to proposed piping with flanges and installation of a monitoring port on each side of the valve. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Construction Plans and Specifications.

12. **6-Inch Lateral Tie-In to 12-Inch Header (See Bid Item 12 of Bid Proposal):** Measurement for this item shall be on a per each unit basis. This item contains a simple 12" X 6" HDPE Tee connection. All wells included in this expansion use a 6" lateral with a connection into a new or existing 12" header. The tee is to be butt fusion welded to the 12" header as well as to the 6" lateral connection. Payment for this item will be at the contract unit price per each installed header tie-in. Payment includes excavation, clean soil backfill, transport of excavated materials, and soil compaction; and supply and installation of HDPE spacers, extensions, and joining materials required for connection of proposed piping. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Construction Plans and Specifications.

13. **12-Inch Header Tie-In to 18-Inch Header (See Bid Item 13 of Bid Proposal):** Measurement for this item shall be on a per each unit basis. There is only one of these items within the expansion, this item will use an 18" X 12" butt fusion welded tee. The 12" header running down Cell 1 shall remain above the geotextile filter of the final cover in Cell 1. The pipe shall rest on 6" of sand bedding or existing dirt in order to minimize any potential damage to the geotextile. With piping support the header will cross the concrete channel and 90-degree elbow into the existing 18" LFG header. Payment for this item will be at the contract unit price per each installed header tie-in. Payment includes excavation, clean soil backfill, transport of excavated materials, and soil compaction; and supply and installation of HDPE spacers, extensions, and joining materials required for connection of proposed piping. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Construction Plans and Specifications.

14. **6-Inch LFG Stub-Up (See Bid Item 14 of Bid Proposal):** Measurement for this item shall be on a per each unit basis. This item includes a 6" X 4" flange reducer into a 4" X 2" concentric reducer. This ties into a 2" QED Solarguard Hose with a powerlock kanaflex clamp. Payment for this item will be at the contract unit price per each installed stub-up. Payment includes supply and installation of materials and connections to laterals, well

caps, and other necessary connections or incidentals. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Construction Plans and Specifications.

15. **3-inch HDPE SDR 11 Condensate Forcemain (See Item 15 of Bid Proposal):** Measurement for this item shall be on an installed linear foot basis of 3-inch diameter HDPE SDR 11 condensate forcemain piping installed, as measured during the conformance survey conducted by Owner's CQA Consultant. The majority of the installation will be in a common trench with LFG and compressed air piping. Condensate forcemain piping that is ran along existing 12" and 18" will not share a common trench and ran within its own trench. Forcemain piping will be ran to every well in the expansion for the potential to have a pump installed within the well. Payment for this item will be at the contract unit price per linear foot. Payment includes fittings, joining materials, and accessories required for the installation of piping, including connections to sump and isolation valves, pressure testing, and incidentals. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Construction Plans and Specifications.

16. **Liquid Conveyance Cleanout Installation (See Bid Item 16 of Bid Proposal):** Measurement for this item shall be on a per each unit basis. This item includes camlock fittings above grade with threaded male adapters for vacuum truck access as needed. Camlock fitting are threaded with an HDPE to SS transition fitting. Camlock extensions are tied into the 3-inch conveyance line at a 45-degree angle to ensure the ability to flood out and clean the conveyance cleanout. Payment for this item will be at the contract unit price per each installed 3-inch diameter HDPE SDR 11 liquid conveyance cleanout. Payment includes excavation, clean soil backfill, transport of excavated materials, and soil compaction; and supply and installation of wyes, valves, fittings, spacers, extensions, and joining materials required for connection of cleanout to proposed liquid conveyance piping. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Construction Plans and Specifications.

17. **3-Inch Liquid Conveyance Line Isolation Valve Installation (See Bid Item 17 of Bid Proposal):** Measurement for this item shall be on a per each unit basis. This item consists of a 3-Inch HDPE ball valve, full bore and butt fusion welded to additional 3" HDPE piping, elbowed down into the running liquid conveyance line. Payment for this item will be at the contract unit price per each installed 3-inch diameter HDPE SDR 11 liquid conveyance line isolation valve. Payment includes excavation, clean soil backfill, transport of excavated materials, and soil compaction; and supply and installation of valves, fittings, spacers, extensions, and joining materials required for connection of isolation valves to proposed liquid conveyance piping. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Construction Plans and Specifications.

18. **2-inch HDPE SDR 9 Air Supply Line (See Item 18 of Bid Proposal):** Measurement for this item shall be on an installed linear foot basis of 2-inch diameter HDPE SDR 9 air supply line installed, as measured during the conformance survey conducted by Owner's CQA Consultant. The majority of the installation will be in a common trench with LFG and liquid conveyance piping. Air supply piping that is ran along existing 12" and 18" will not share a common trench and ran within its own trench. Air supply piping will be ran to every well in the expansion for the potential to have a pump installed within the well. Payment for this item will be at the contract unit price per linear foot. Payment includes pipe, fittings, joining materials, and accessories required for the installation of the piping, including connections to proposed/existing piping, pressure testing, and incidentals. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Construction Plans and Specifications.

19. **2-Inch Air Line Isolation and Blowoff Valve Installation (See Item 19 of Bid Proposal):** Measurement for this item shall be on a per each unit basis. Payment for this item will be at the contract unit price per each installed 2-inch diameter stainless steel air-line isolation valve and associated 1-inch blowoff valves. This item consists of a 2-inch flanged connection to assist in removal of the ball valve for maintenance. The blowoff valve is a 1-inch female by female threaded stainless steel ball valve with lever handle. The 1-inch blowoff valves are used to blow off liquids that accumulate in the air line. Payment includes excavation, clean soil backfill, transport of excavated materials, and soil compaction; and supply and installation of valves, fittings, spacers, extensions, and joining materials required for connection of blowoff and isolation valves to proposed air conveyance piping. These valves are to be installed inside Owner or Engineer approved vaults in areas of high operations traffic. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Construction Plans and Specifications.

20. **12-inch Header Road Crossing (See Item 20 of Bid Proposal):** Measurement for this item shall be on an installed linear foot basis of 12-inch header pipe, as measured during the conformance survey conducted by Owner's CQA Consultant, as well as the cost of double walled corrugated polyethylene (CPE) (6" larger in diameter than the sum of pipe diameters running through the CPE). Payment for this item will be at the contract unit price per linear foot. Payment includes excavation; road base, clean soil, and aggregate backfilling; compaction; placement of piping; repair of the road to its original condition after construction; and other incidentals. Payment shall constitute full compensation for all material, labor, equipment and Work incidental thereto, necessary to complete this item in accordance with the Construction Plans.

21. **2-inch Air Line Road Crossing (See Item 21 of Bid Proposal):** Measurement for this item shall be on an installed linear foot basis of 2-inch Air Line, as measured during the conformance survey conducted by Owner's CQA Consultant, as well as the cost of double walled 8" diameter corrugated polyethylene (CPE). The air-line shall remain above the

existing geotextile filter within the final cover of Cell 1, crossing over-top of the concrete channel and into the CPE. Payment for this item will be at the contract unit price per linear foot. Payment includes excavation; road base, clean soil, and aggregate backfilling; compaction; placement of piping; repair of the road to its original condition after construction; and other incidentals. Payment shall constitute full compensation for all material, labor, equipment and Work incidental thereto, necessary to complete this item in accordance with the Construction Plans.

22. **3-inch Forcemain Road Crossing (See Item 22 of Bid Proposal – Added by Addendum 2):** Measurement for this item shall be on an installed linear foot basis of 3-inch Forcemain, as measured during the conformance survey conducted by Owner's CQA Consultant, as well as the cost of double walled 8" diameter corrugated polyethylene (CPE). Payment for this item will be at the contract unit price per linear foot. Payment includes excavation; road base, clean soil, and aggregate backfilling; compaction; placement of piping; repair of the road to its original condition after construction; and other incidentals. Payment shall constitute full compensation for all material, labor, equipment and Work incidental thereto, necessary to complete this item in accordance with the Construction Plans.

23. **12-Inch Flanged Termination (See Item 23 of Bid Proposal):** Measurement for this item shall be on a per each unit basis. This item consists of a blind flange at the ending segment of the 12-inch LFG header. If the termination occurs inside the waste a HDPE cap may be used to terminate if needed. Backfill should be no closer than 6" away from the blind flange in order to keep the flange accessible. Payment for this item will be at the contract unit price per each installed flanged termination. Payment includes supply and installation of materials and connections to laterals, well caps, and other necessary connections or incidentals. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Construction Plans and Specifications.

24. **Wellhead Centralizer (WC-020) (See Item 24 in Bid Proposal):** Measurement for this item shall be on a per each unit basis. This item is to be a stainless-steel wellhead centralizer, with the intention to be the ISCO WC-020 model, but an approved alternative may be used as well. The centralizer is to be installed just below the QED Well Cap within the well casing. Payment for this item will be at the contract unit price per each installed centralizer. Payment includes supply and installation of materials and connections to laterals, well caps, and other necessary connections or incidentals. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Construction Plans and Specifications.

25. **1-3 – Inch Washed; Fractured Non-Calcareous Stone Backfill (See Item 25 in Bid Proposal):** Measurement for this item shall be on a per cubic yard of stone. This item is to be any non-calcaerous stone, "river rock" is the most commonly used material to satisfy this. Fractured rock is preferred as it compacts and becomes more stable than

unfractured rock. Payments for this item will be at the contract unit price per cubic yard installed. Payment includes supply and installation of materials and connections to laterals, well caps, and other necessary connections or incidentals. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Construction Plans and Specifications.

26. **1-Inch Conduit (See Item 26 in Bid Proposal):** Measurement for this item shall be on a per linear foot basis. Payment for this item will be at the contract unit price per each installed 1-inch diameter conduit. Payment includes excavation, clean soil backfill, transport of excavated materials, and soil compaction; and supply and installation of valve, fittings, spacers, stem extension, and joining materials required for connection of valve to proposed piping with flanges and installation of a monitoring port on each side of the valve. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Construction Plans and Specifications.

27. **Air Conveyance Compressor, Electric Reciprocating Air Compressor (See bid Item 27 of Bid Proposal):** Measurement for this item shall be on a per each unit basis. The design intention of the air compressor was to be an Ingersoll Rand 2-Stage Reciprocating Air Compressor, a similar and approved alternative will also be accepted. The air compressor is to sit in the middle of the shed in order to allow for full 360-degree access to the compressor for maintenance and cleaning operations. The compressor will be anchored into wood flooring. Payment for this item shall be at the contract unit price per item installed. Payment includes supply and installation of materials and connections to power conduit, other necessary connections or incidentals. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Construction Plans and Specifications.

28. **Air Compressor Electrical Components (See Bid Item 28 of Bid Proposal):** No unit of measure shall apply to the lump sum item Air Compressor Electrical Components. Payment for this item at the lump sum contract price includes electrical wiring from existing electrical panels as well as integration into the grounding plan. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Construction Plans and Specifications.

29. **Leveling Pads, Access Roads, Tarp Removal and Site Restoration (See Bid Item 29 of Bid Proposal – Added by Addendum 2):** No unit of measure shall apply to the lump sum item Leveling Pads, Access Roads, Tarp Removal and Site Restoration. The Contractor is responsible for constructing leveling pads and roads as necessary for their equipment to operate. The Contractor is responsible for determining the extents and construction of all leveling pads and roads required for their operations. The Contractor is responsible for cutting, folding back, and replacing tarp as needed. The Contractor shall not open more

than one acre of tarp within the project area at any time. The Contractor is responsible for the restoration of the site to its original state. This includes replacing all tarp, sandbags and rope, and sealing the joints. Payment shall constitute full compensation for all material, labor, equipment, and work incidental thereto, necessary to complete this item in accordance with the Construction Plans and Specifications.

ATTACHMENTS TO THIS ADDENDUM

- The attached Proposal Form replaces the Proposal Form in the Contract Documents.
- The attached Plans replace the Plans included in the original bid documents.

Acknowledgment of this addendum is required under ADDENDA on Page 8 of the Contract Documents.

ISSUED THIS 4TH DAY OF SEPTEMBER, 2025.

Susan Eugenis

SUSAN EUGENIS, P.E.
County Engineer
Cowlitz County Public Works
1600 13th Avenue South
Kelso, WA 98626

PROPOSAL FORM

TO: Board of County Commissioners
County Administration Building
207 Fourth Avenue North, 3rd Floor
Kelso, WA 98626

FOR: **COWLITZ COUNTY HEADQUARTERS LANDFILL 2025 GCCS EXPANSION PROJECT**
Name of Project

FROM:

Bidder's Business Name	Mailing Address
Email Address	City, State and Zip
Name of Bidder's Representative for Bid	Telephone
Washington Registration No.	Tax I.D. No.
Employment Security Department No.	State Excise Tax Registration No.
Industrial Insurance Coverage Account No.	UBI No.

INSTRUCTIONS TO BIDDERS

1. Contract Documents. See Section 1-04.2 of the Special Provisions for a list of the "contract documents" that make up the contract. Be sure that you have a copy of the **2025** Standard Specifications for Road, Bridge, and Municipal Construction, by the Washington State Department of Transportation and the American Public Works Association, Washington State Chapter. Such specifications are sometimes referred to as the "Standard Specifications."

2. Submission of Bid. Fill out this Proposal Form completely, in accordance with Section 1-02.6 of the Standard Specifications. Enclose your Proposal Form and bid deposit in an opaque sealed envelope addressed to:

Cowlitz County Department of Public Works
Attn: County Engineer
1600 13th Avenue South
Kelso, WA 98626

Mark the outside of the envelope with the name of the bidder, the name of the project, and the date and time of the bid opening. It is your responsibility to make sure that your bid is physically received by the Clerk of the Board by the time set for the bid opening. Bids not so received will not be considered. Bids may not be submitted by facsimile machine.

The County's determination of when a bid was received shall be final and non-appealable.

3. Bidder Responsibility Standards. It is the intent of the Owner to award a contract to the lowest, responsible and responsive bidder for all described Work. Before award, the bidder must meet all criteria and satisfy all requirements of the following bidder-responsibility standards to be considered a responsible and a responsive bidder. The bidder may be required by the Owner to submit documentation demonstrating compliance with these standards to be qualified to be awarded a contract. The bidder must:

a. Have a current certificate of registration as a contractor in compliance with chapter 18.27 RCW, which must have been in effect at the time of bid submittal;

b. Have a current Washington Unified Business Identifier (UBI) number;

c. If applicable:

   i. Have Industrial Insurance (workers' compensation) coverage for the bidder's employees working in Washington, as required in Title 51 RCW;

   ii. Have a Washington Employment Security Department number, as required in Title 50 RCW;

   iii. Have a Washington Department of Revenue state excise tax registration number, as required in Title 82 RCW;

d. Not be disqualified from bidding on any public works contract under RCW 39.06.010 or 39.12.065(3).

4. Execution of Contract. The successful bidder must use the performance bond form and other forms provided by Cowlitz County to be considered both a responsible and responsive bidder.

5. Sales Tax Code. In computing and reporting sales taxes payable to the Washington State Department of Revenue on this project, the following code number shall be used: **0800**.

PROPOSAL

The undersigned bidder proposes to perform the project named above in strict compliance with the contract documents, for the following amounts:

Item No.	Approximate Quantity	ITEM	UNIT PRICE $	AMOUNT $
1	Force Account	Miscellaneous Construction	$100,000.00	$100,000.00
2	Lump Sum	Mobilization		
3	1,270 L.F.	12-inch HDPE SDR 11 Header		
4	3,752 L.F.	6-inch HDPE SDR 11 Lateral		
5	2,210 L.F.	Vertical LFG Extraction Well (8-inch PVC SCH 80)		
6	20 Each	2-inch Flow Wing Style Wellhead		
7	13 Each	QED AP4+ Ultra Vertical Well Pump		
8	20 Each	8-inch QED Model GWC82 Well Cap		
9	1 Each	Liquid Discharge Sump Tie-In		
10	2 Each	12-inch Header Isolation Valve (Gear Operated, Below-Grade) Installation		
11	10 Each	6-inch Header Isolation Valve (Gear Operated, Below-Grade) Installation		
12	10 Each	6-Inch Lateral Tie-In to 12-Inch Header		
13	1 Each	12-Inch Header Tie-In to 18-Inch Header		
14	20 Each	6-Inch LFG Stub-Up		
15	6,031 L.F.	3-inch HDPE SDR 11 Condensate Forcemain		

Item No.	Approximate Quantity	ITEM	UNIT PRICE $	AMOUNT $
16	4 Each	Liquid Conveyance Cleanout Installation		
17	2 Each	3-Inch Liquid Conveyance Line Isolation Valve Installation		
18	7,273 L.F.	2-inch HDPE SDR 9 Air Supply Line		
19	5 Each	2-Inch Air Line Isolation and Blowoff Valve Installation		
20	50 L.F.	12-inch Header Road Crossing		
21	67 L.F.	2-inch Air Line Road Crossing		
22	50 L.F.	3-inch Forcemain Road Crossing		
23	1 Each	12-Inch Flanged Termination		
24	20 Each	Wellhead Centralizer (WC-020)		
25	415 C.Y.	Non-Calcareous Stone Backfill		
26	187 L.F.	1-Inch Electrical Conduit		
27	1 Each	Air Conveyance Compressor, Electric Reciprocating Air Compressor		
28	Lump Sum	Air Compressor Electrical Components		
29	Lump Sum	Leveling Pads, Access Roads, Tarp Removal and Site Restoration		

SUBTOTAL .....$_____

WASHINGTON SALES TAX (7.7%) .....$_____

TOTAL COST TO COWLITZ COUNTY.....$_____

Addenda. The bidder acknowledges receipt of the following addenda: _____, _____, _____, _____, and _____. (Insert numbers of any addenda received.)

Non-Collusion. Each bidder must submit a declaration of non-collusion completely executed with their bid. Reasonable grounds for believing that any bidder(s) have engaged, either directly or indirectly, into any agreement, participated in any collusion, or otherwise taken any action, in restraint of free competitive bidding in connection with this bid will cause rejection of all proposals which said bidder(s) has shown interest, and none of the participants to such direct or indirect actions will be considered.

The person(s) signing this bid on behalf of the bidder declare(s) under penalty of perjury under the laws of the United States and the State of Washington that this bidder has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action, in restraint of free competitive bidding in connection with this bid.

_____	_____
Date	Signature of Person Authorized to Bind Bidder
_____	_____
Bidder's Business Name	Title of Person Signing Bid

Signed in _____, Washington

2025 GCCS EXPANSION

HEADQUARTERS LANDFILL

CASTLE ROCK, WASHINGTON

PROJECT INFORMATION

PROJECT LOCATION

3434 SOUTH SILVER LAKE ROAD
CASTLE ROCK, WASHINGTON

LANDFILL OWNER

COWLITZ COUNTY DEPARTMENT OF PUBLIC WORKS
1600 13TH AVE S
KELSO, WA 98626
(360) 577-3030

PROJECT DESCRIPTION

LANDFILL GAS COLLECTION AND CONTROL SYSTEM (GCCS) DESIGN PLAN. DESIGN PLAN INCLUDES INSTALLATION OF VERTICAL WELLS, HEADER PIPING AND LATERAL PIPING.

GCCS ENGINEER

ESI
15820 BARCLAY DRIVE
SISTERS, OR 97759
(541) 549-8766

DRAWING INDEX

REV	DATE	DESCRIPTION	DRN BY	DSN BY	CHK BY
0	9/3/25	ISSUED FOR ADDENDUM 2	PD	QM	BB

BENJAMIN BENSON STATE OF WASHINGTON 46558 REGISTERED PROFESSIONAL ENGINEER

COWLITZ COUNTY WASHINGTON

DEPARTMENT OF PUBLIC WORKS

1600 13TH AVENUE SOUTH
KELSO, WASHINGTON 98626

ESI

15820 BARCLAY DRIVE SISTERS, OR 97759
PHONE: (541) 549-8766
WWW.ESISOLUTIONS.COM

COVER PAGE

PROPOSED 2025 GCCS EXPANSION
HEADQUARTERS LANDFILL
CASTLE ROCK, WA

G0.00

077.517

GENERAL MECHANICAL NOTES

GENERAL:

1. ENTIRE INSTALLATION, INCLUDING MATERIALS, EQUIPMENT AND WORKMANSHIP, SHALL CONFORM WITH THE MOST RECENTLY ADOPTED SPECIFICATION OF CODE AND WITH ALL APPLICABLE LAWS, CODES, AND REGULATIONS AND REGULATORY BODIES HAVING JURISDICTION OVER THIS WORK.
2. THE CONTRACTOR SHALL ASSUME THAT THERE WILL BE MINOR MODIFICATIONS MADE DURING CONSTRUCTION.
3. WORK REQUIRING A SHUTDOWN OF GCCS, FLARE, OR ENERGY FACILITY SHALL BE AT SUCH TIME AND IN SUCH MANNER AS DIRECTED BY THE OWNER. PROVIDE A MINIMUM ONE (1) WEEK PRIOR WRITTEN NOTICE.
4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY FIELD CONDITIONS AT THE SITE AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO COMMENCING WITH THE WORK.
5. DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN A RECORD SET OF INSTALLATION PRINTS. THE CONTRACTOR SHALL NEATLY AND CLEARLY RECORD ON THESE PRINTS ALL DEVIATIONS FROM THE CONTRACT DRAWINGS IN SIZES, LOCATIONS AND DETAILS. AT THE COMPLETION OF THE WORK, THE CONTRACTOR SHALL RETURN THE MARKED PRINTS WITH ALL INFORMATION OBTAINED DURING THE CONSTRUCTION PROCESS TO THE ENGINEER.
6. ENERGYNEERING SOLUTIONS, LLC. INCORPORATES COMMERCIALLY MANUFACTURED ITEM(S) OR COMPONENT(S) IN THE PREPARATION OF THIS PLAN, AND RELIES UPON THE MANUFACTURER'S STATED OR IDENTIFIED SPECIFICATIONS AND PROPERTIES IN THE PREPARATION OF THIS PLAN. ENERGYNEERING SOLUTIONS, INC. HAS NOT UNDERTAKEN ANY INDEPENDENT EXAMINATION, TESTING OR ANALYSIS TO VERIFY THE MANUFACTURERS' SPECIFICATIONS OR PROPERTIES FOR ANY ITEM OR COMPONENT.
7. THE CONTRACTOR SHALL VERIFY AND COORDINATE THE DIMENSIONS AMONG DRAWINGS PRIOR TO PROCEEDING WITH ANY WORK OR FABRICATION.
8. THE CONTRACTOR IS RESPONSIBLE FOR ALL DEMOLITION AND CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCING, AND SAFETY REQUIRED FOR THIS PROJECT.
9. ALL PRODUCTS AND MATERIALS USED BY THE CONTRACTOR SHALL BE APPLIED, PLACED, ERECTED OR INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
10. THESE DOCUMENTS CONTAIN NOTES THAT MAY APPLY GENERALLY TO ALL MECHANICAL ELEMENTS, SPECIFICALLY TO ONE SHEET, OR SPECIFICALLY TO ONE OR MORE MECHANICAL ELEMENTS. THE NOTES ARE NOT MERE GUIDELINES, THEY ARE PART AND PARCEL OF THE DESIGN. ANY WORK THAT IS PERFORMED THAT IS NOT IN COMPLIANCE WITH THE NOTES IS NOT IN COMPLIANCE WITH THE DESIGN AND IS SUBJECT TO REJECTION. ANY ALTERATION, MODIFICATION, DELETION, OR ADDITION TO THE NOTES BY WRITING, ACT OR FAILURE TO ACT, SHALL BE CARRIED OUT ONLY WITH THE PRIOR EXPRESS WRITTEN CONSENT AND APPROVAL OF THE DESIGN ENGINEER.
11. UNLESS OTHERWISE SPECIFIED, DETAIL SHEETS ARE NOT TO SCALE.

MECHANICAL PIPING:

1. ALL FLANGES TO BE ANSI 150# UNLESS OTHERWISE NOTED.
2. ALL STEEL PIPING AND COMPONENTS TO BE GALVANIZED OR PAINTED FOR CORROSION PROTECTION. STEEL CASING FOR LANDFILL GAS WELLS ARE EXCLUDED FROM BEING COATED.
3. REFLECTIVE TAPE TO BE INSTALLED ON ALL STUB-UPS.
4. ALL OFF-LINER PIPING, AND WHERE APPLICABLE, SHALL UTILIZE 100% EXPANDED PTFE GASKETS (GORE® OR APPROVED EQUAL).

PIPE SUPPORTS:

1. PIPE SUPPORTS TO BE INSTALLED TO MAINTAIN SLOPE, SUPPORT, AND ACCESSIBILITY. MECHANICAL CONTRACTOR TO INSTALL ADDITIONAL PIPE SUPPORTS AS NECESSARY.
2. MAXIMUM SUPPORT SPACING TO COMPLY WITH ALL APPLICABLE CODES (E.G. INTERNATIONAL MECHANICAL CODE, TABLE 305.4).

MECHANICAL COMPONENTS:

1. UNIONS TO BE INSTALLED AS NECESSARY.

AS-BUILT, SURVEY, AND PROVIDED INFORMATION:

1. EXISTING WELL LOCATIONS COMPILED BASED ON FIELD OBSERVATION AND HISTORICAL SITE DRAWINGS.
2. EXISTING TOPOGRAPHY BASED ON AERIAL SURVEY BY COWLITZ COUNTY ON JANUARY 7, 2025.
3. EXISTING OPERATIONS LAYER ELEVATIONS FOR CELLS 1-9 ARE BASED ON AN AS-BUILT TOPO PROVIDED BY COWLITZ COUNTY AND RECEIVED BY ESI ON MARCH 3, 2025.

REV	DATE	DESCRIPTION	DRN BY	DSN BY	CHK BY
0	9/3/25	ISSUED FOR ADDENDUM 2	PD	QM	BB

BENJAMIN BENSON STATE OF WASHINGTON 46558 REGISTERED PROFESSIONAL ENGINEER

COWLITZ COUNTY WASHINGTON

DEPARTMENT OF PUBLIC WORKS

1600 13TH AVENUE SOUTH
KELSO, WASHINGTON 98626

ESI
15820 BARCLAY DRIVE SISTERS, OR 97759
PHONE: (541) 549-8766
WWW.ESISOLUTIONS.COM

GENERAL NOTES

PROPOSED 2025 GCCS EXPANSION
HEADQUARTERS LANDFILL
CASTLE ROCK, WA

G0.01

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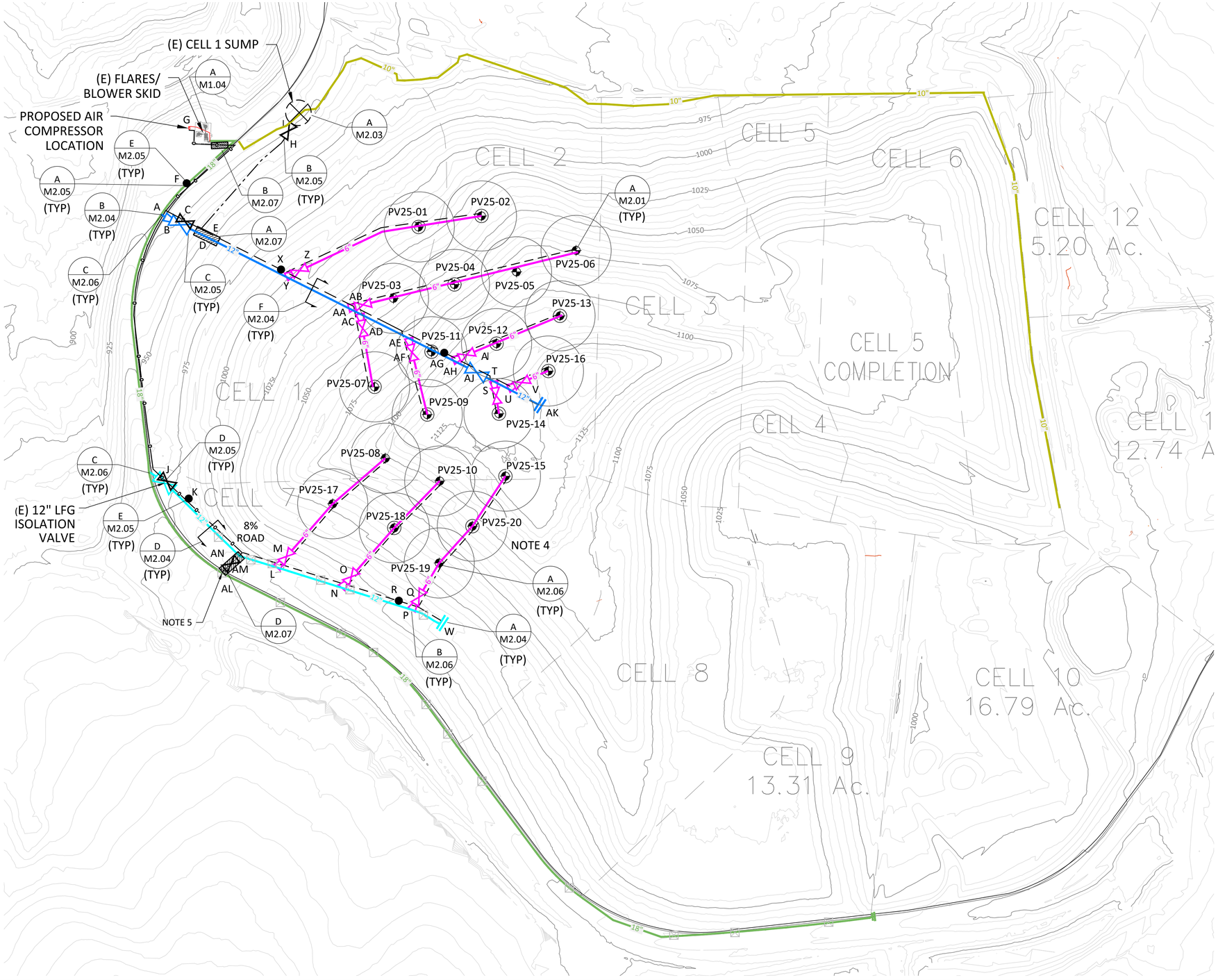

LEGEND

PROPOSED

- FILL
- 12" LFG PIPING
- 6" LFG PIPING
- AIR & FORCE MAIN PIPING
- FORCE MAIN PIPING
- AIR PIPING
- VERTICAL LFG WELL
- VERTICAL LFG WELL WITH PUMP
- LFG/AIR & LIQUID CONVEYANCE ISOLATION VALVE
- LIQUID CONVEYANCE CLEANOUT/AIR BLOWOFF
- REDUCER
- SLOPE
- ROAD CROSSING
- 1" ELECTRICAL CONDUIT

EXISTING

- 10" LFG HEADER
- 18" LFG HEADER
- 12" LFG HEADER (ON 8% ROAD)
- HORIZONTAL MANIFOLD/WELLHEAD
- SUMP

N
W E
S

0 75 150 300
GRAPHIC SCALE IN FEET

NOTES:

1. TOPOGRAPHY SHOWN REPRESENTS PROJECTED GRADES PROVIDED BY COWLITZ COUNTY ON JANUARY 7, 2025.
2. VACUUM, LIQUID, AND AIR LINES SHOULD BE INSTALLED ON THE DOWN HILL SIDE OF ALL WELLS
3. FIELD GRADE TO MAINTAIN 3% MINIMUM DROP FOR DRAINAGE BACK INTO WASTE
4. WELLS CONNECT TO HEADER/LATERAL PIPING WITH 6" RISER
5. TIE IN 3" FORCE MAIN LINE INTO (E) 8" LCS NEAR CLEANOUT

REV	DATE	DESCRIPTION	DRN BY	DSN BY	CHK BY
0	9/3/25	ISSUED FOR ADDENDUM 2	PD	QM	BB

BENJAMIN BENSON STATE OF WASHINGTON 46558 REGISTERED PROFESSIONAL ENGINEER

COWLITZ COUNTY WASHINGTON

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1600 13TH AVENUE SOUTH
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2025 GCCS EXPANSION LAYOUT

PROPOSED 2025 GCCS EXPANSION HEADQUARTERS LANDFILL
CASTLE ROCK, WA

M1.01A

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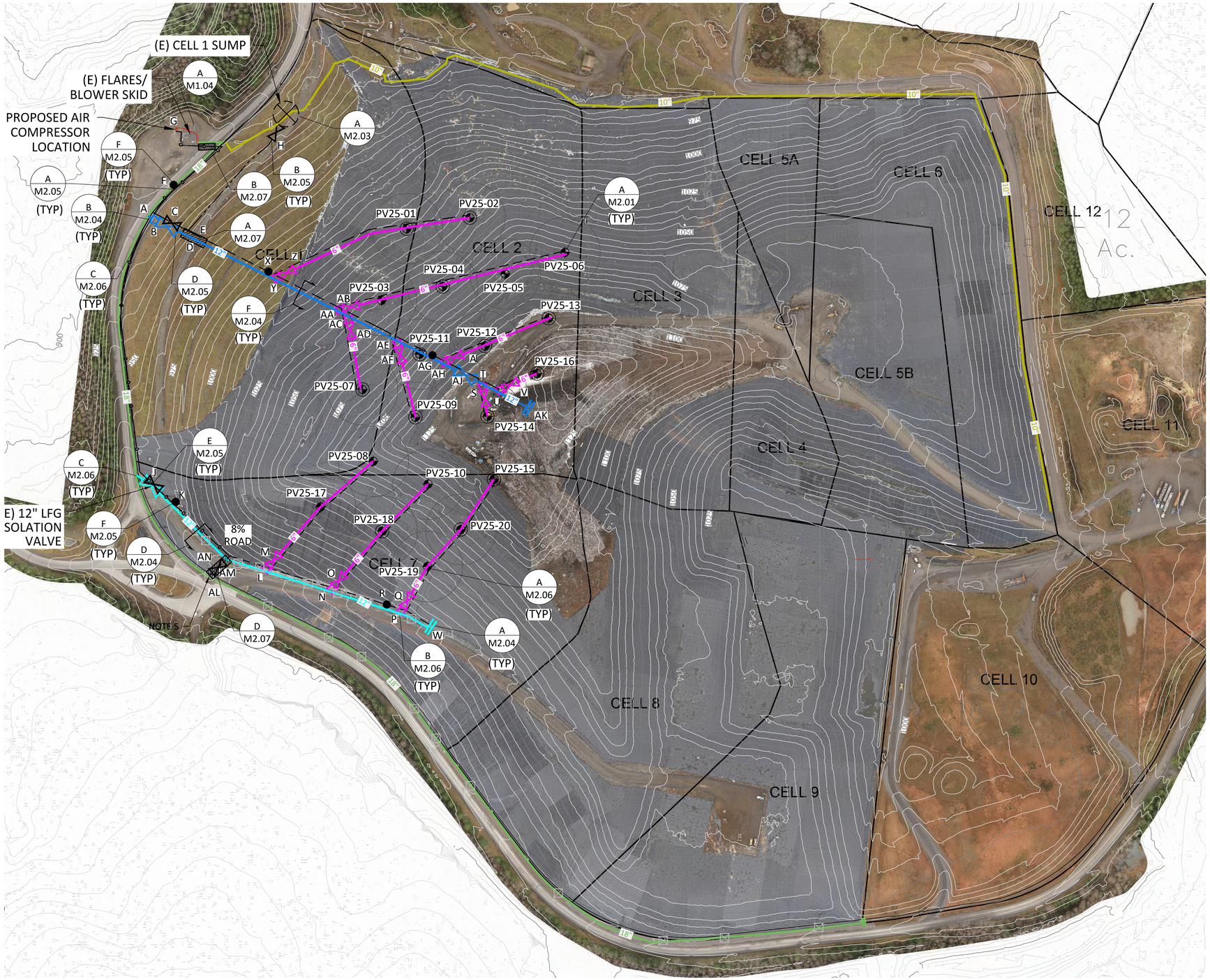

LEGEND

PROPOSED

- FILL
- 12" LFG PIPING
- 6" LFG PIPING
- AIR & FORCE MAIN PIPING
- FORCE MAIN PIPING
- AIR PIPING
- VERTICAL LFG WELL
- VERTICAL LFG WELL WITH PUMP
- LFG/AIR & LIQUID CONVEYANCE ISOLATION VALVE
- LIQUID CONVEYANCE CLEANOUT/AIR BLOWOFF
- REDUCER
- SLOPE
- ROAD CROSSING
- 1" ELECTRICAL CONDUIT

EXISTING

- 10" LFG HEADER
- 18" LFG HEADER
- 12" LFG HEADER (ON 8% ROAD)
- HORIZONTAL MANIFOLD/WELLHEAD
- SUMP

N W E S

0 75 150 300
GRAPHIC SCALE IN FEET

NOTES:

1. TOPOGRAPHY SHOWN REPRESENTS PROJECTED GRADES PROVIDED BY COWLITZ COUNTY ON JANUARY 7, 2025.
2. VACUUM, LIQUID, AND AIR LINES SHOULD BE INSTALLED ON THE DOWN HILL SIDE OF ALL WELLS
3. FIELD GRADE TO MAINTAIN 3% MINIMUM DROP FOR DRAINAGE BACK INTO WASTE

REV	DATE	DESCRIPTION	DRN BY	DSN BY	CHK BY
0	9/3/25	ISSUED FOR ADDENDUM 2	PD	QM	BB

BENJAMIN BENSON STATE OF WASHINGTON 46558 REGISTERED PROFESSIONAL ENGINEER

COWLITZ COUNTY WASHINGTON

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2025 GCCS EXPANSION ORTHO LAYOUT

PROPOSED 2025 GCCS EXPANSION HEADQUARTERS LANDFILL
CASTLE ROCK, WA

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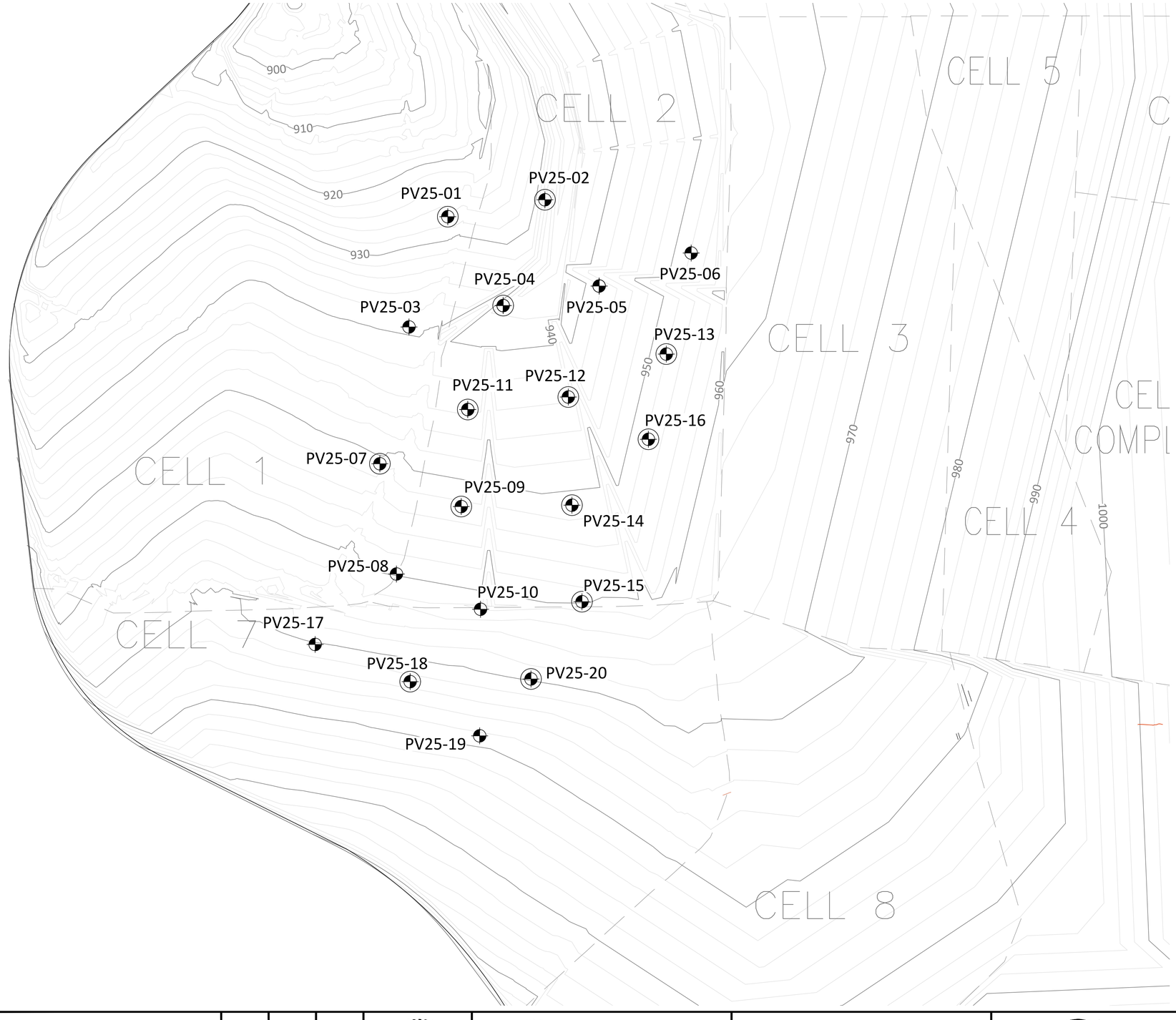

LEGEND

PROPOSED

- VERTICAL LFG WELL
- VERTICAL LFG WELL WITH PUMP

EXISTING

- LINER
- CELL BOUNDARY

N W E S

0 50 100 200

GRAPHIC SCALE IN FEET

NOTES:

1. LINER TOPOGRAPHY SHOWN REPRESENTS PROJECTED GRADES PROVIDED BY COWLITZ COUNTY ON MARCH 3, 2025.
2. LINER ELEVATIONS ARE APPROXIMATELY 2 FEET LOWER THAN TOP OF OPERATIONS LAYER.

REV	DATE	DESCRIPTION	DRN BY	DSN BY	CHK BY
0	9/3/25	ISSUED FOR ADDENDUM 2	PD	QM	BB

BENJAMIN BENSON STATE OF WASHINGTON 46558 REGISTERED PROFESSIONAL ENGINEER

COWLITZ COUNTY WASHINGTON

DEPARTMENT OF PUBLIC WORKS

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EXPANSION LAYOUT-
LINER ELEVATIONS

PROPOSED 2025 GCCS EXPANSION
HEADQUARTERS LANDFILL
CASTLE ROCK, WA

M1.02

077.517

VERTICAL WELL SCHEDULE												
WELL I.D.	NORTHING (FT)	EASTING (FT)	ELEVATION (FT)				BOREHOLE DEPTH (FT)	PIPE LENGTH (FT)			THICKNESS OF GRAVEL PACK	CASING MATERIAL
			GROUND	LINER	BOTTOM OF BOREHOLE	WEYERHAEUSER FILL		PERFORATED	SOLID WALL	ABOVE GRADE RISER		
PV25-01	341141.1926	1065185.5218	1012	924	944	1012	68	38	30	3	41	8" SCH 80 PVC
PV25-02	341172.4174	1065362.8185	1034	939	959	1034	75	45	30	3	48	
PV25-03	340937.7054	1065111.9764	1040	931	951	1040	89	59	30	3	62	
PV25-04	340977.1821	1065285.7649	1055	936	956	1053	99	69	30	3	72	
PV25-05	341013.1918	1065462.8540	1075	947	967	1054	108	78	30	3	81	
PV25-06	341074.1521	1065632.6742	1047	956	976	1046	71	41	30	3	44	
PV25-07	340685.3259	1065058.2271	1072	943	963	1035	109	79	30	3	82	
PV25-08	340481.9113	1065088.8196	1112	951	971	992	141	111	30	3	114	
PV25-09*	340606.4217	1065208.3715	1114	946	994	1022	120	90	30	3	93	
PV25-10	340416.8962	1065243.9712	1123	953	973	974	150	120	30	3	123	
PV25-11*	340785.3941	1065220.4171	1087	939	967	1060	120	90	30	3	93	
PV25-12*	340808.4699	1065405.8890	1107	947	987	1060	120	90	30	3	93	
PV25-13	340887.7008	1065586.7410	1098	958	978	1062	120	90	30	3	93	
PV25-14*	340608.9209	1065412.6901	1120	950	1000	1022	120	90	30	3	93	
PV25-15	340430.8078	1065431.1283	1123	955	975	976	148	118	30	3	121	
PV25-16*	340730.4940	1065553.7523	1124	958	1004	1050	120	90	30	3	93	
PV25-17	340351.9380	1064938.8555	1076	960	980	964	96	66	30	3	69	
PV25-18	340283.3404	1065114.1413	1083	962	982	964	101	71	30	3	74	
PV25-19	340183.2984	1065242.4074	1084	967	987	967	97	67	30	3	70	
PV25-20	340288.7248	1065337.1078	1115	960	980	960	135	105	30	3	108	

* SEE NOTE 6

A M1.01 M1.03 VERTICAL WELL SCHEDULE
(NOTES 1-3)

POINTS OF INTEREST			
I.D.	NORTHING (FT)	EASTING (FT)	DESCRIPTION
A	341176.3526	1064450.7939	12" LFG HEADER TIE INTO (E) 18" LFG HEADER
B	341146.5589	1064506.1622	12" LFG HEADER ISOLATION VALVE
C	341145.7076	1064542.7916	AIR ISOLATION VALVE
D	341111.6597	1064583.6799	12" LFG HEADER ROAD CROSSING
E	341111.6597	1064583.6799	AIR & LIQUID CONVEYANCE ROAD CROSSING
F	341265.5757	1064521.3548	AIR & LIQUID CONVEYANCE CLEANOUT/BLOWOFF
G	341422.7847	1064525.7854	PROPOSED AIR COMPRESSOR LOCATION
H	341413.5447	1064812.4004	LIQUID CONVEYANCE ISOLATION VALVE
I	341430.1264	1064824.5694	3" LIQUID CONVEYANCE TIE INTO (E) 60" SUMP
J	340416.3337	1064468.5777	AIR ISOLATION VALVE
K	340365.4829	1064529.4089	AIR & LIQUID CONVEYANCE CLEANOUT/BLOWOFF
L	340170.9218	1064780.4701	6" LFG LATERAL TIE INTO " LFG HEADER
M	340200.7688	1064804.8022	6" LFG LATERAL ISOLATION VALVE
N	340113.4373	1064965.1721	6" LFG LATERAL TIE INTO " LFG HEADER
O	340146.6017	1064991.7146	6" LFG LATERAL ISOLATION VALVE
P	340049.2934	1065164.0345	6" LFG LATERAL TIE INTO " LFG HEADER
Q	340085.3129	1065184.3504	6" LFG LATERAL ISOLATION VALVE
R	340676.1441	1065127.9873	AIR & LIQUID CONVEYANCE CLEANOUT/BLOWOFF
S	340662.6213	1065405.7745	6" LFG LATERAL ISOLATION VALVE
T	340701.9060	1065395.9462	6" LFG LATERAL TIE INTO 12" LFG HEADER
U	340681.6091	1065440.5014	6" LFG LATERAL TIE INTO 12" LFG HEADER
V	340696.6681	1065476.5407	6" LFG LATERAL ISOLATION VALVE
W	340009.8464	1065242.5784	(E) 12" LFG HEADER FLANGED TERMINATION
X	341017.8399	1064973.4502	AIR & LIQUID CONVEYANCE CLEANOUT/BLOWOFF
Y	341001.4794	1064807.2040	6" LFG LATERAL TIE INTO 12" LFG HEADER
Z	341017.8399	1064843.8788	6" LFG LATERAL ISOLATION VALVE
AA	340911.1683	1064985.3360	6" LFG LATERAL TIE INTO 12" LFG HEADER
AB	340920.3305	1065025.9402	6" LFG LATERAL ISOLATION VALVE
AC	340894.8078	1065018.0814	6" LFG LATERAL TIE INTO 12" LFG HEADER
AD	340854.2339	1065024.6297	6" LFG LATERAL ISOLATION VALVE
AE	340819.5491	1065155.6093	6" LFG LATERAL TIE INTO 12" LFG HEADER
AF	340784.8654	1065164.7785	6" LFG LATERAL ISOLATION VALVE
AG	340783.4824	1065256.5373	AIR & LIQUID CONVEYANCE CLEANOUT/BLOWOFF
AH	340761.8867	1065281.4241	6" LFG LATERAL TIE INTO 12" LFG HEADER
AI	340778.9018	1065319.4074	6" LFG LATERAL ISOLATION VALVE
AJ	340727.2020	1065350.8443	12" LFG HEADER ISOLATION VALVE
AK	340634.5814	1065525.5778	12" LFG HEADER FLANGED TERMINATION
AL	340156.7776	1064623.6597	3" LIQUID CONVEYANCE TIE-IN TO (E) 8" LCS CLEANOUT
AM	340181.6854	1064646.8102	3" LIQUID ISOLATION STEM VALVE
AN	340181.6854	1064646.8102	3" LIQUID ISOLATION ROAD CROSSING

B M1.01 M1.03 POINTS OF INTEREST
(NOTES 1-5)

NOTES:

1. LOCATIONS AND LENGTHS ARE APPROXIMATE AND INTENDED FOR BUDGETARY PURPOSES. ACTUAL LENGTHS WILL NEED FIELD VERIFIED AT TIME OF INSTALLATION. LENGTHS ARE BASED ON THE LATEST FILL PLANNING AND TOPOGRAPHIC SURVEY INFORMATION AVAILABLE, WHICH ARE DESCRIBED ON SHEET G0.01.
2. ALL LFG PIPING TO BE SDR 11 HDPE PIPE UNLESS OTHERWISE SPECIFIED.
3. INSTALL ALL PIPING AND TERMINATE ALL PIPING AT LOCATIONS NOT TO INTERFERE WITH FUTURE FILLING OPERATIONS.
4. UNLESS OTHERWISE SPECIFIED, ALL LOCATIONS WITH LFG PIPING TIE-INS, TERMINATIONS, AND STUB-UPS CORRESPOND TO LOCATIONS OF AIR AND LIQUID CONVEYANCE PIPING TIE-INS, TERMINATIONS, AND STUB-UPS, RESPECTIVELY.
5. POINTS AM THROUGH AR ARE APPROXIMATE LOCATIONS, VERIFY COORDINATES BEFORE TIE-IN.
6. WELL DEPTH HAS BEEN ADJUSTED FROM STANDARD 20' ABOVE LINER TO REDUCE WEYERHAEUSER FILL PENETRATION.

REV	DATE	DESCRIPTION	DRN BY	DSN BY	CHK BY
0	9/3/25	ISSUED FOR ADDENDUM 2	PD	QM	BB

BENJAMIN BENSON STATE OF WASHINGTON 46558 REGISTERED PROFESSIONAL ENGINEER

COWLITZ COUNTY WASHINGTON
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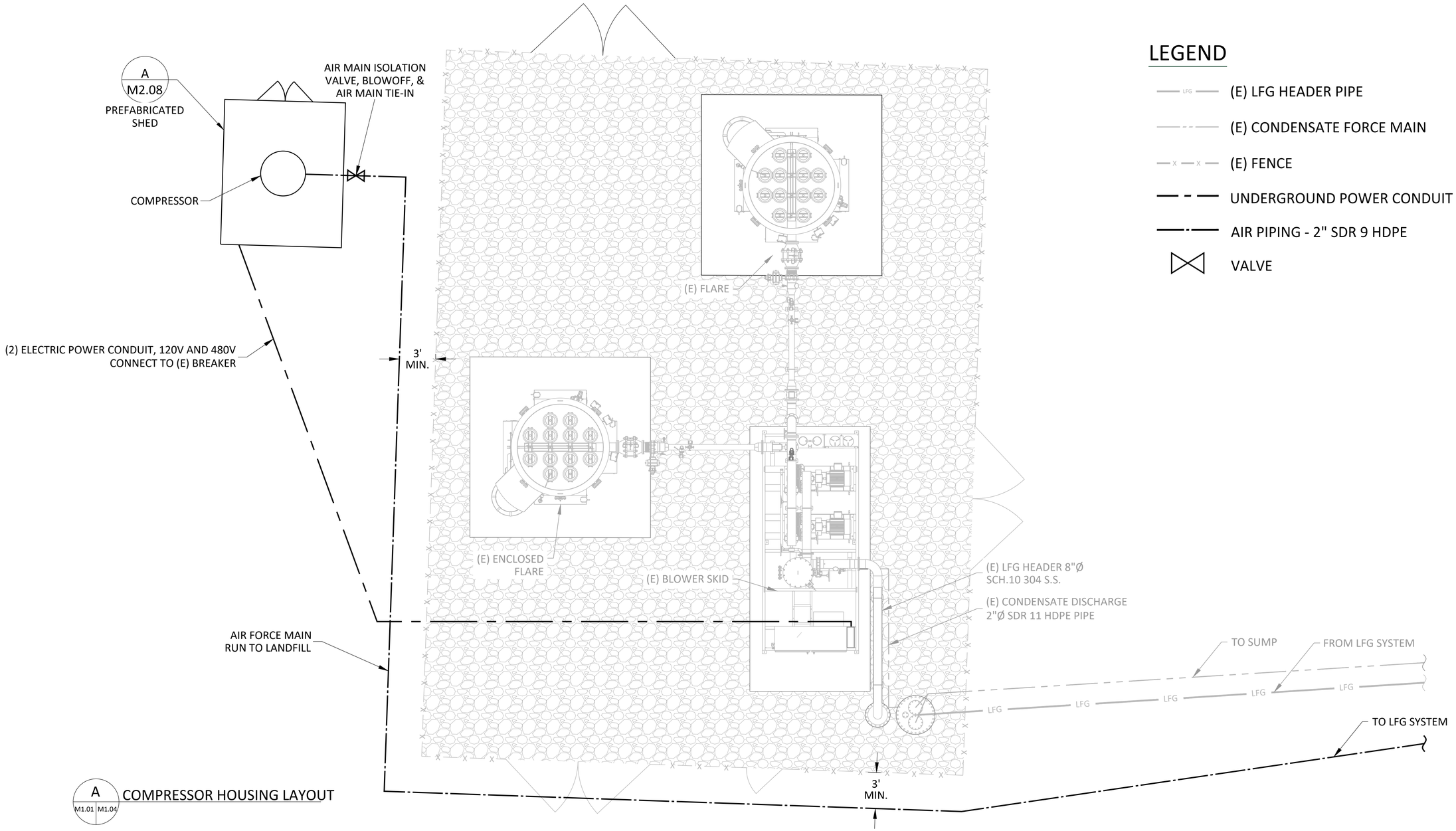
WELL SCHEDULE & POINTS OF INTEREST

PROPOSED 2025 GCCS EXPANSION
HEADQUARTERS LANDFILL
CASTLE ROCK, WA

M1.03

077.517



A
M1.01 M1.04
COMPRESSOR HOUSING LAYOUT

LEGEND

- (E) LFG HEADER PIPE
- (E) CONDENSATE FORCE MAIN
- (E) FENCE
- UNDERGROUND POWER CONDUIT
- AIR PIPING - 2" SDR 9 HDPE
- VALVE

REV	DATE	DESCRIPTION	DRN BY	DSN BY	CHK BY
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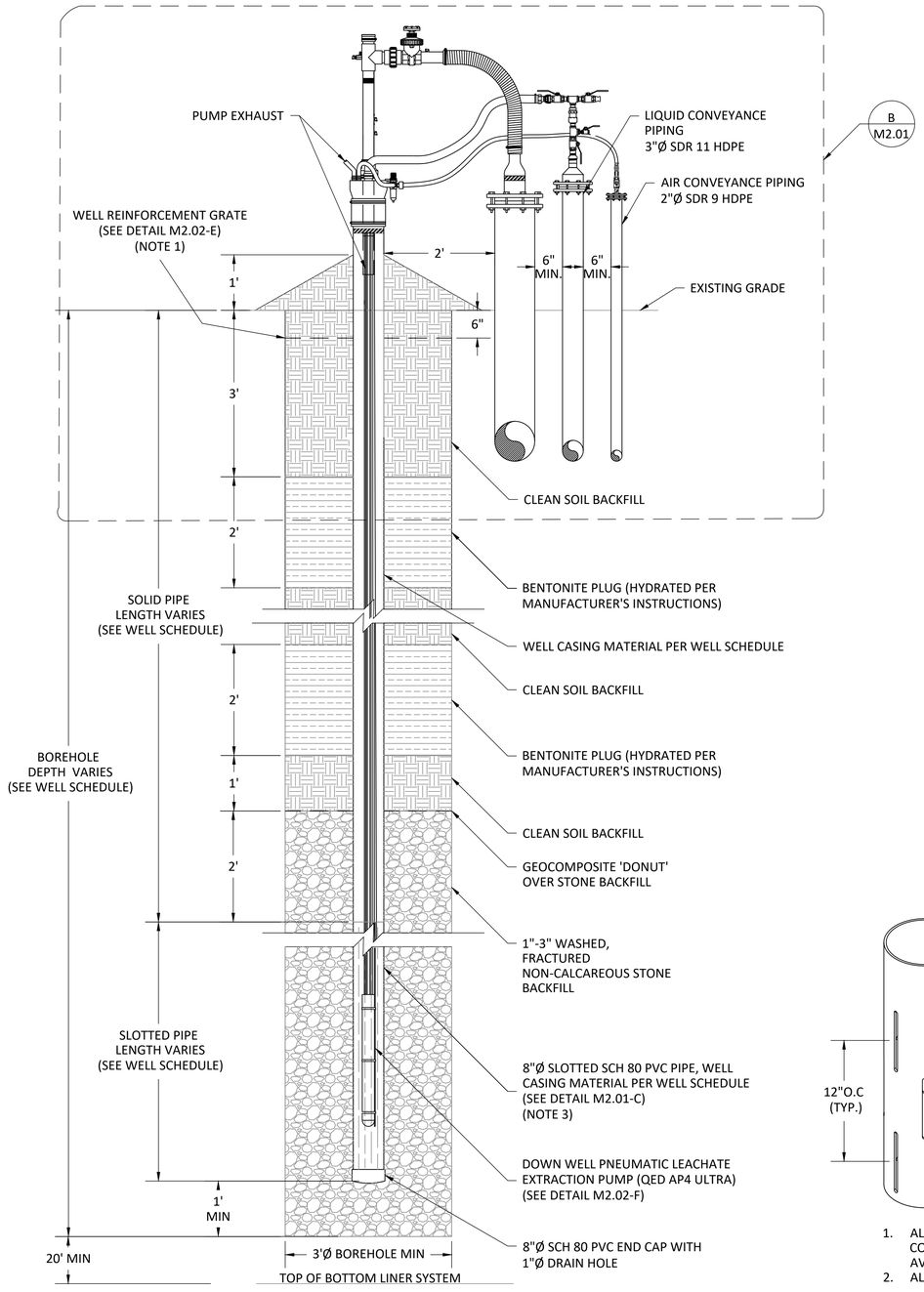
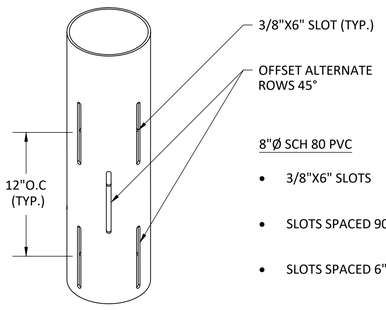
COMPRESSOR HOUSING LAYOUT

PROPOSED 2025 GCCS EXPANSION
HEADQUARTERS LANDFILL
CASTLE ROCK, WA

DRAWING NO.
M1.04
PROJECT NO.
077.517

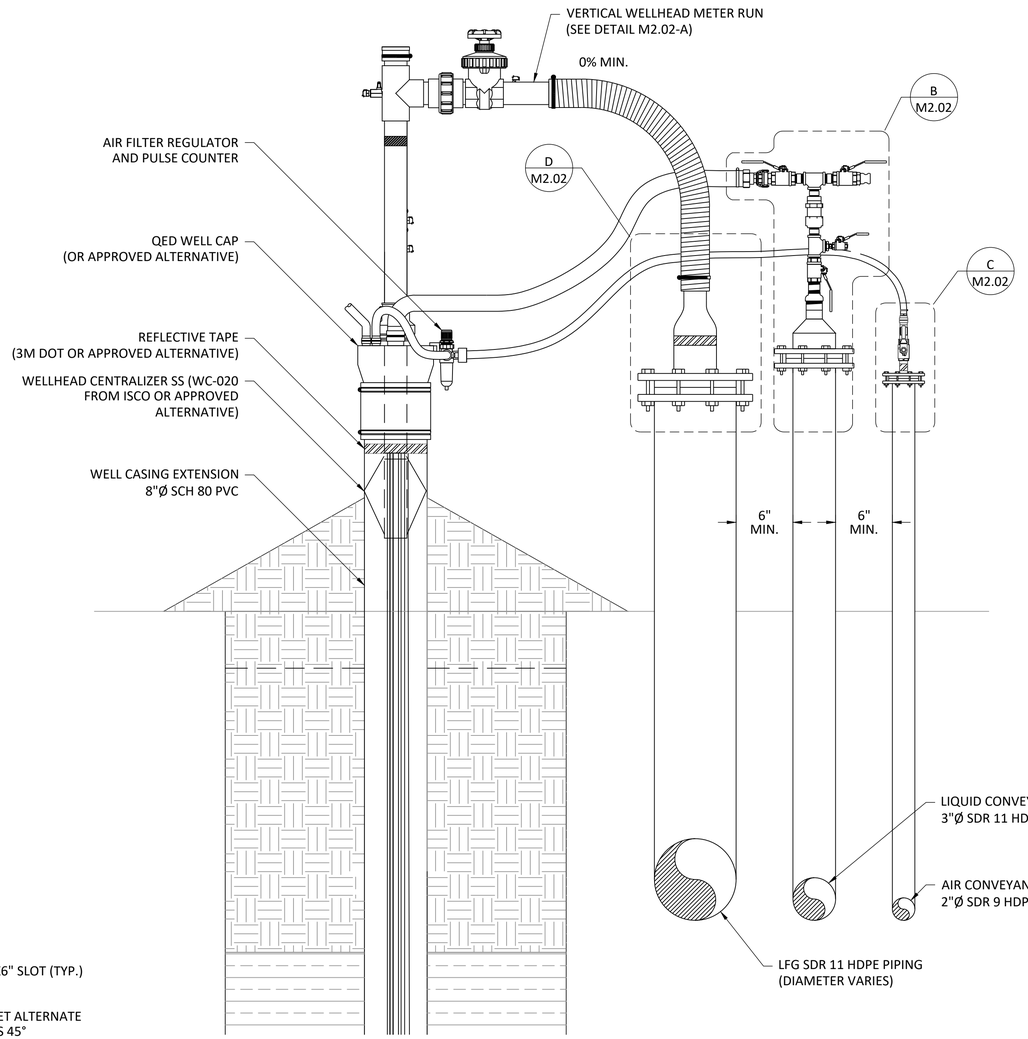


A M1.01 M2.01 LFG VERTICAL EXTRACTION WELL



1. ALTERNATE SLOT DETAILS MAY BE SUBMITTED IF THE CONTRACTOR HAS PREFERRED FABRICATION OR AVAILABILITY.
2. ALTERNATES TO BE APPROVED BY THE DESIGN ENGINEER.

C M2.01 M2.01 PERFORATED WELL CASING DETAIL I



B M2.01 M2.01 STANDARD LFG VERTICAL WELLHEAD DETAIL (NOTE 2)

NOTES:

1. WELL BORE REINFORCEMENT GRATES ARE REQUIRED FOR ALL WELLS AND BOREHOLE ABANDONMENTS IN ORDER TO PROVIDE A SAFEGUARD FROM COLLAPSE OF BACKFILL MATERIAL.
2. AIR AND LIQUID CONVEYANCE STUB-UPS TO BE LOCATED AT EVERY VERTICAL LFG COLLECTION WELL AND WHERE APPLICABLE.
3. CONTRACTOR TO DETERMINE JOINING METHOD FOR WELL CASING. ACCEPTABLE OPTIONS INCLUDE COUPLINGS, FLANGES, OR WELDED SEAMS. JOINING METHOD SELECTED SHALL BE SUBMITTED TO THE OWNER AND THE ENGINEER TWO WEEKS PRIOR TO CONSTRUCTION OF CASING FOR APPROVAL.
4. IN PLACE OF TEE, USE A WYE FITTING TO TIE INTO LIQUID CONVEYANCE PIPING.

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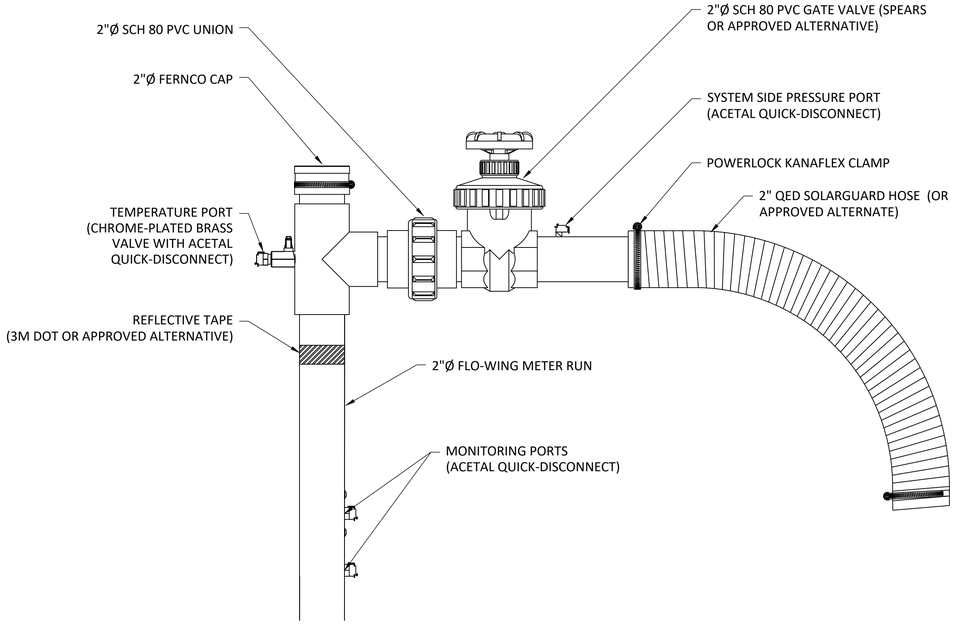
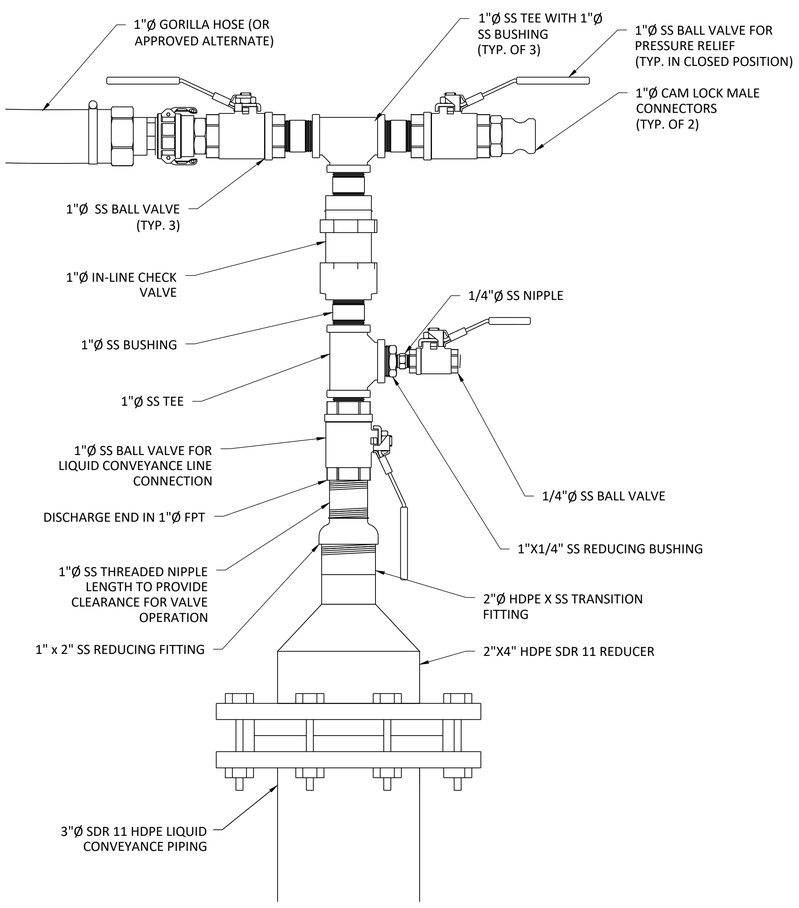
VERTICAL WELL DETAILS I

PROPOSED 2025 GCCS EXPANSION HEADQUARTERS LANDFILL
CASTLE ROCK, WA

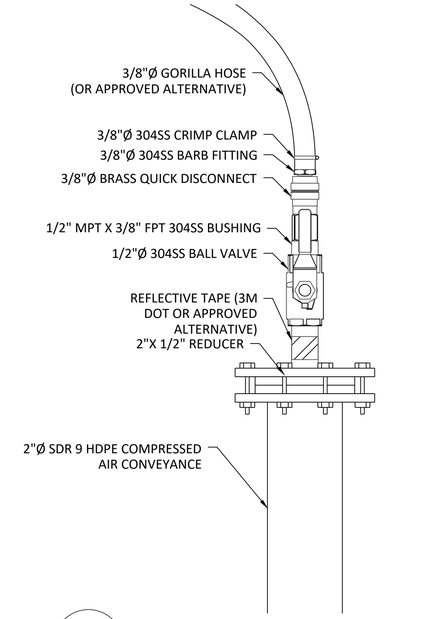
DRAWING NO.
M2.01
PROJECT NO.
077.517



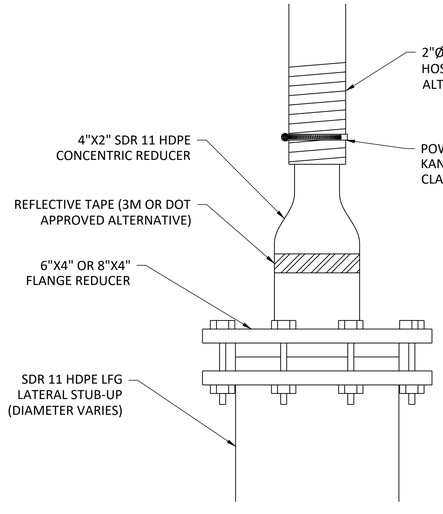
A M2.01 M2.02 VERTICAL WELLHEAD METER RUN



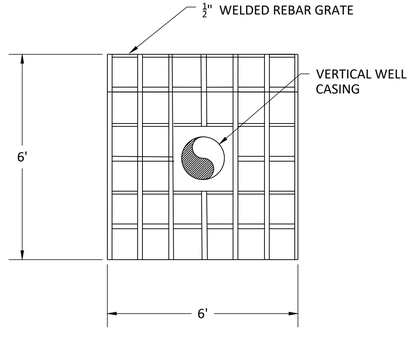
B M2.01 M2.02 STANDARD LIQUID CONVEYANCE STUB-UP DETAIL AT WELL



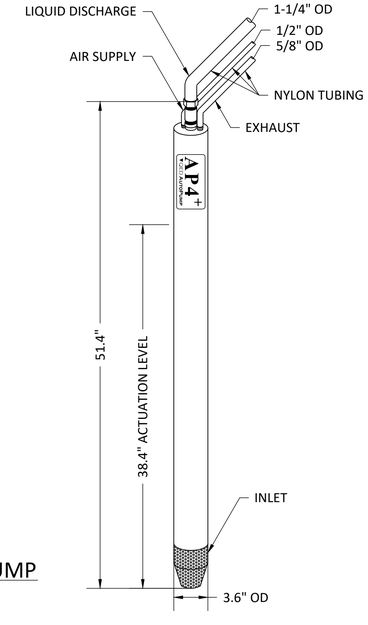
C M2.01 M2.02 STANDARD AIR CONVEYANCE STUB-UP DETAIL AT WELL



D M2.01 M2.02 STANDARD LFG LATERAL STUB-UP DETAIL



E M2.01 M2.02 WELL REINFORCEMENT GRATE DETAIL (TOP VIEW)



F M2.01 M2.02 QED AUTO PUMP

REV	DATE	DESCRIPTION	DRN BY	DSN BY	CHK BY
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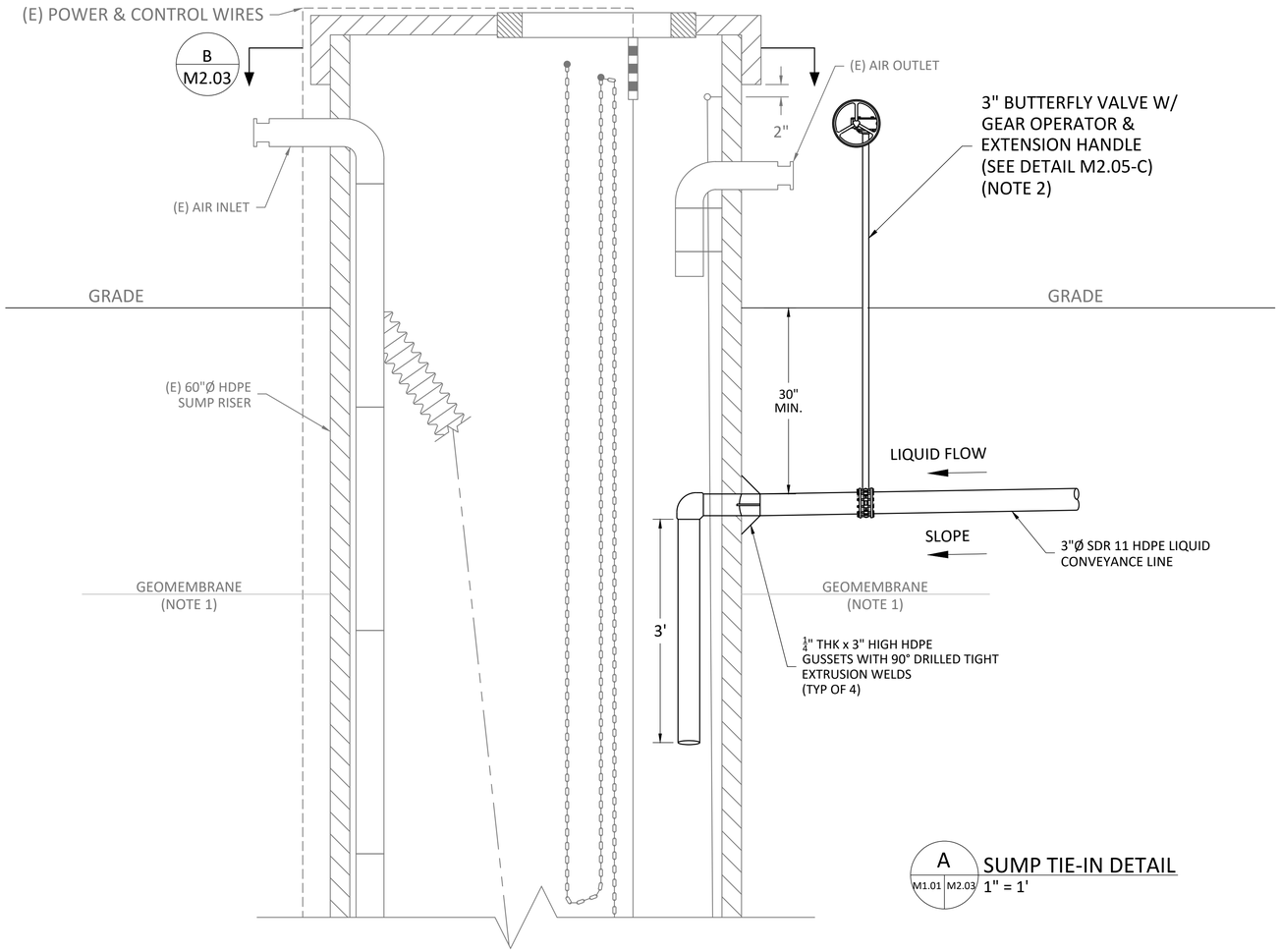
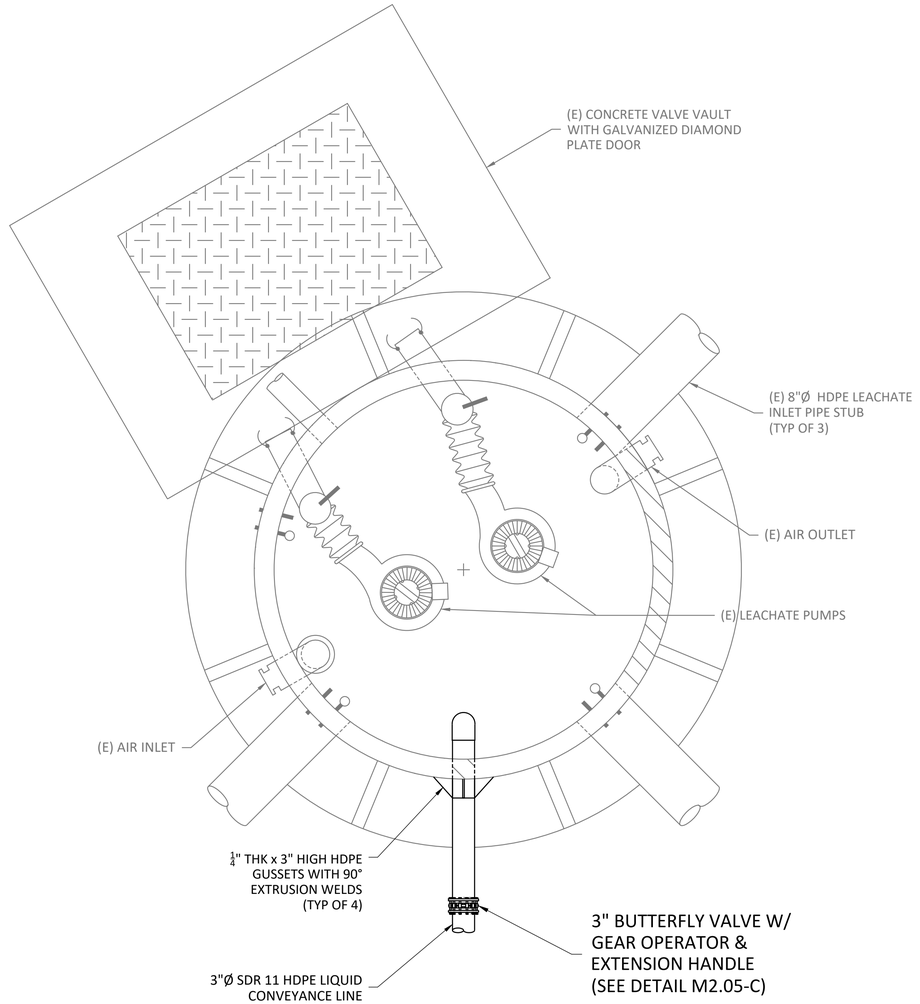
VERTICAL WELL DETAILS II

PROPOSED 2025 GCCS EXPANSION HEADQUARTERS LANDFILL
CASTLE ROCK, WA

DRAWING NO.
M2.02
PROJECT NO.
077.517



A SUMP TIE-IN DETAIL
M1.01 | M2.03 1" = 1'



B SUMP TIE-IN DETAIL - TOP VIEW
M2.03 | M2.03 1" = 1'

NOTES:

1. EXCAVATION NOT TO INTERFERE WITH THE LANDFILL GEOMEMBRANE.
2. THOROUGHLY COAT ENTIRE SURFACE OF BOLTS, WASHERS, NUTS AND BACKUP RINGS WITH POLYCOAT RUBBERIZED PRIMER, OR APPROVED ALTERNATIVE, AFTER TIGHTENING BOLTS. THOROUGHLY WRAP BURIED VALVES IN PLASTIC WRAP PRIOR TO BACKFILLING.

REV	DATE	DESCRIPTION	DRN BY	DSN BY	CHK BY
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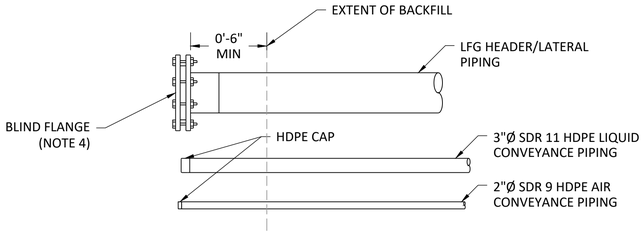
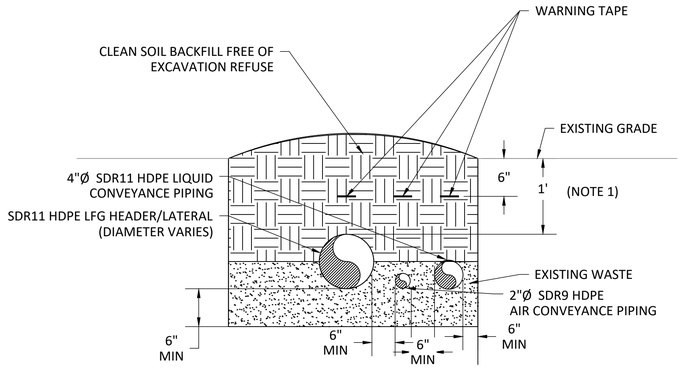
SUMP DETAILS

PROPOSED 2025 GCCS EXPANSION
HEADQUARTERS LANDFILL
CASTLE ROCK, WA

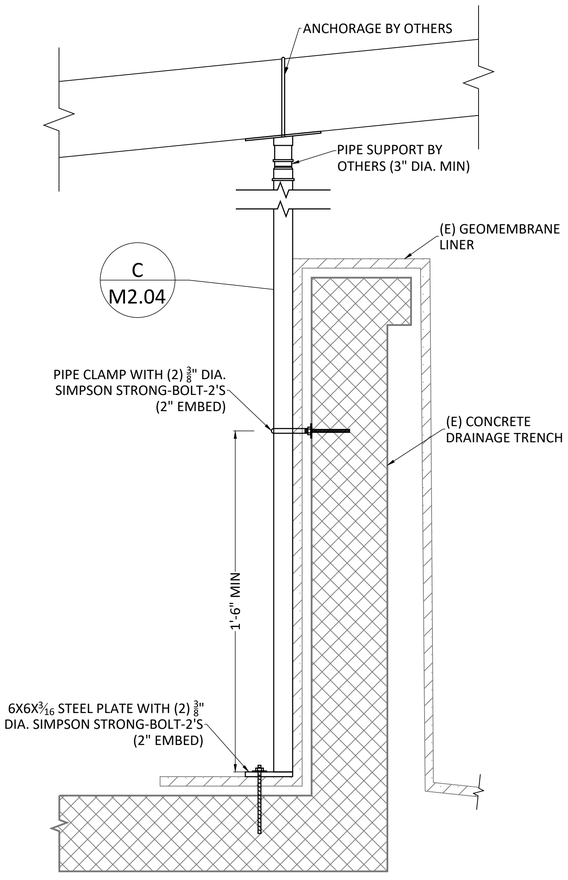
DRAWING NO.
M2.03
PROJECT NO.
077.517



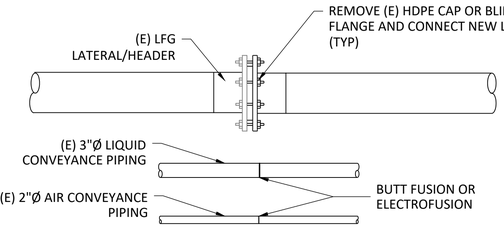
A M1.01 M2.04 LFG LATERAL, AIR & LIQUID PIPE TERMINATION DETAIL



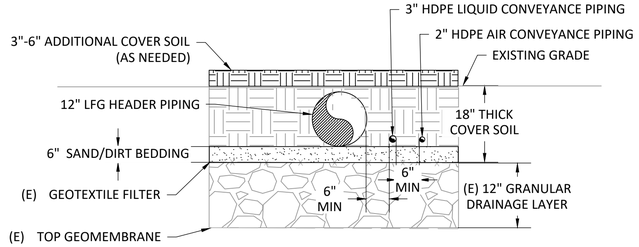
D M1.01 M2.04 LFG TRENCH DETAIL



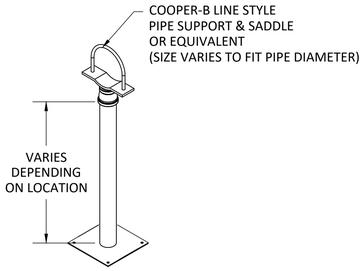
E M2.06 M2.04 TRENCH PIPE SUPPORT DETAIL



B M1.01 M2.04 CONNECTION TO LFG LATERAL, HEADER, AIR & LIQUID PIPING FLANGE



F M1.01 M2.04 CELL 1 LFG TRENCH DETAIL



C M2.04 M2.04 PIPE SUPPORT (AS NEEDED)

NOTES:

1. EXCAVATION NOT TO INTERFERE WITH THE LANDFILL LINER.
2. PROVIDE PIPE SUPPORTS AT A MAXIMUM SPACING OF 8' TO PREVENT SAG IN LFG PIPING AND MAINTAIN A MINIMUM OF 1% SLOPE. ALTERNATIVE METHODS OF PIPE SUPPORT MAY BE USED WITH OWNER OR ENGINEER APPROVAL
3. INSTALL SOIL MOUNDS WHERE NEEDED TO HOLD LFG PIPING IN PLACE.
4. IF TERMINATING INSIDE THE WASTE, PIPE MAY BE TERMINATED WITH AN HDPE CAP (INSTEAD OF BLIND FLANGE)

REV	DATE	DESCRIPTION	DRN BY	DSN BY	CHK BY
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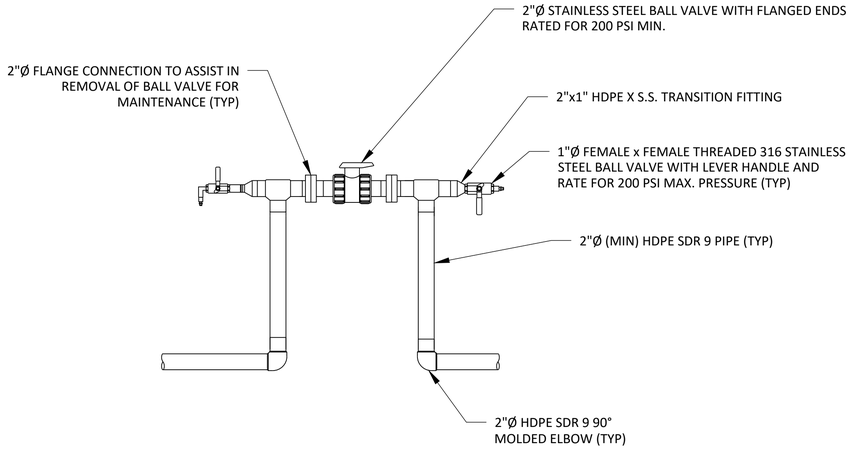
LFG CONNECTION, PIPE TERMINATION, & TRENCH DETAILS

PROPOSED 2025 GCCS EXPANSION HEADQUARTERS LANDFILL
CASTLE ROCK, WA

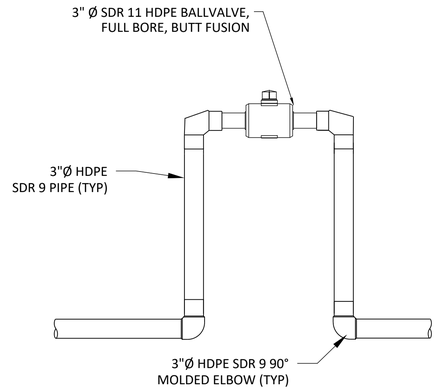
DRAWING NO.
M2.04
PROJECT NO.
077.517



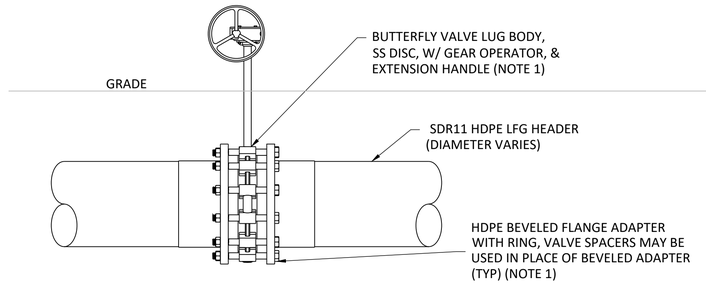
A M1.01 M2.05 AIR LINE ISOLATION AND BLOWOFF VALVES DETAIL

NOTES:

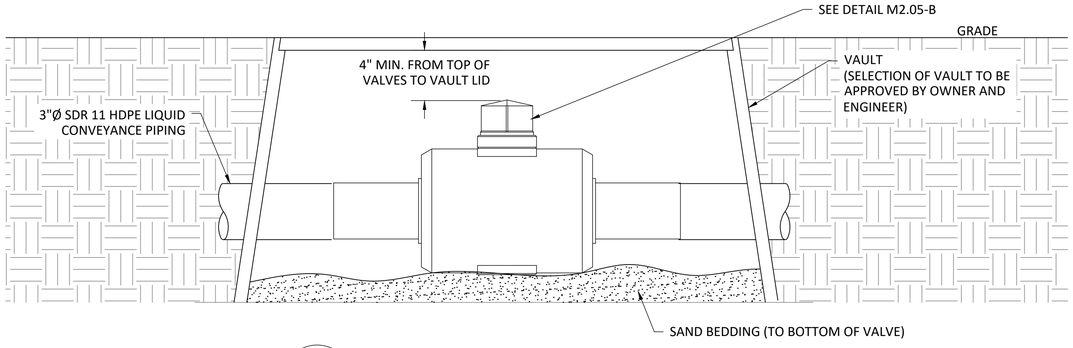
1. ALL AIR SUPPLY PIPING SHALL BE 2" HDPE SDR 9 (MIN).
2. 1" VALVES ARE USED TO BLOW OFF LIQUIDS THAT ACCUMULATE IN THE AIR LINE AND FOR PRESSURIZING PIPE SEGMENTS FOR TROUBLESHOOTING PURPOSES.
3. PVC FITTINGS AND VALVES MAY NOT BE USED IN COMPRESSED AIR APPLICATIONS UNDER ANY CIRCUMSTANCES.



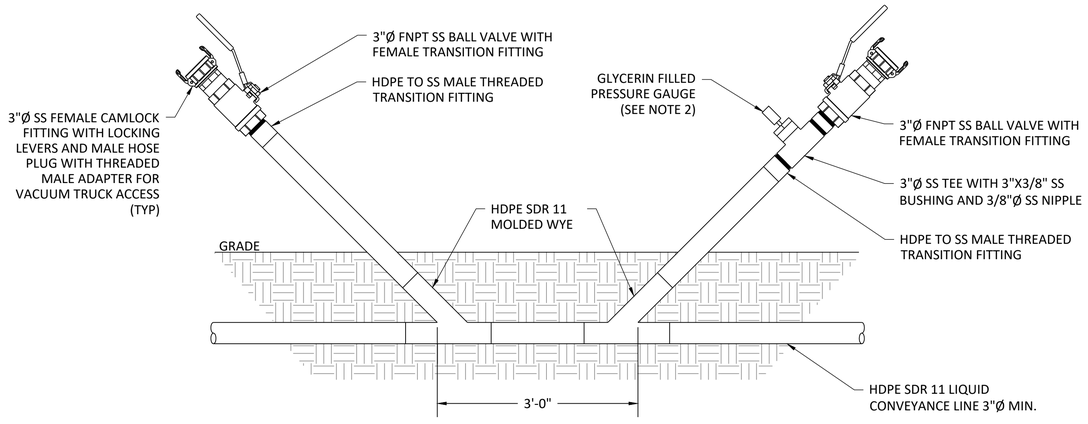
B M1.01 M2.05 LIQUID CONVEYANCE LINE ISOLATION VALVE DETAIL



C M1.01 M2.05 BELOWGRADE LFG ISOLATION VALVE DETAIL



D M1.01 M2.05 LIQUID CONVEYANCE ISOLATION VALVE VAULT DETAIL



E M1.01 M2.05 LIQUID CONVEYANCE CLEANOUT

NOTES:

1. THOROUGHLY COAT ENTIRE SURFACE OF BOLTS, WASHERS, NUTS AND BACKUP RINGS WITH POLYCOAT RUBBERIZED PRIMER, OR APPROVED ALTERNATIVE, AFTER TIGHTENING BOLTS. THOROUGHLY WRAP BURIED VALVES IN PLASTIC WRAP PRIOR TO BACKFILLING.
2. 3/8" SS BALL VALVE AND GLYCERIN FILLED PRESSURE GAUGE (0-200 PSI RANGE).

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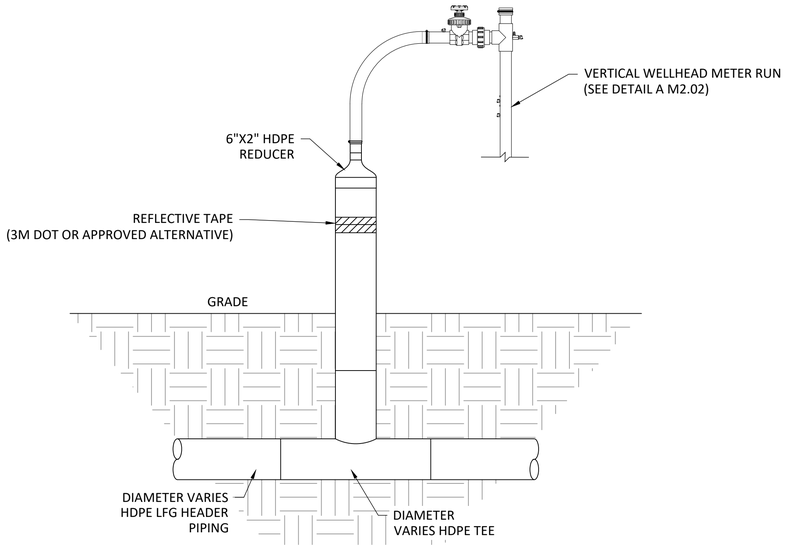
MISCELLANEOUS DETAILS

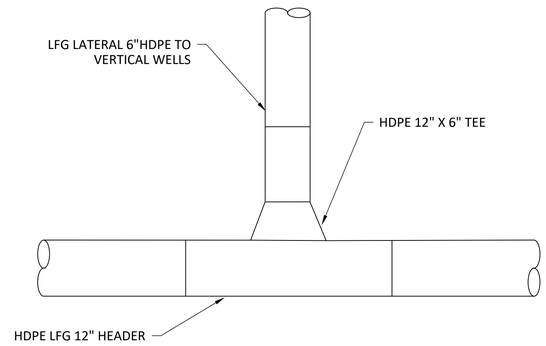
PROPOSED 2025 GCCS EXPANSION HEADQUARTERS LANDFILL
CASTLE ROCK, WA

DRAWING NO.
M2.05
PROJECT NO.
077.517



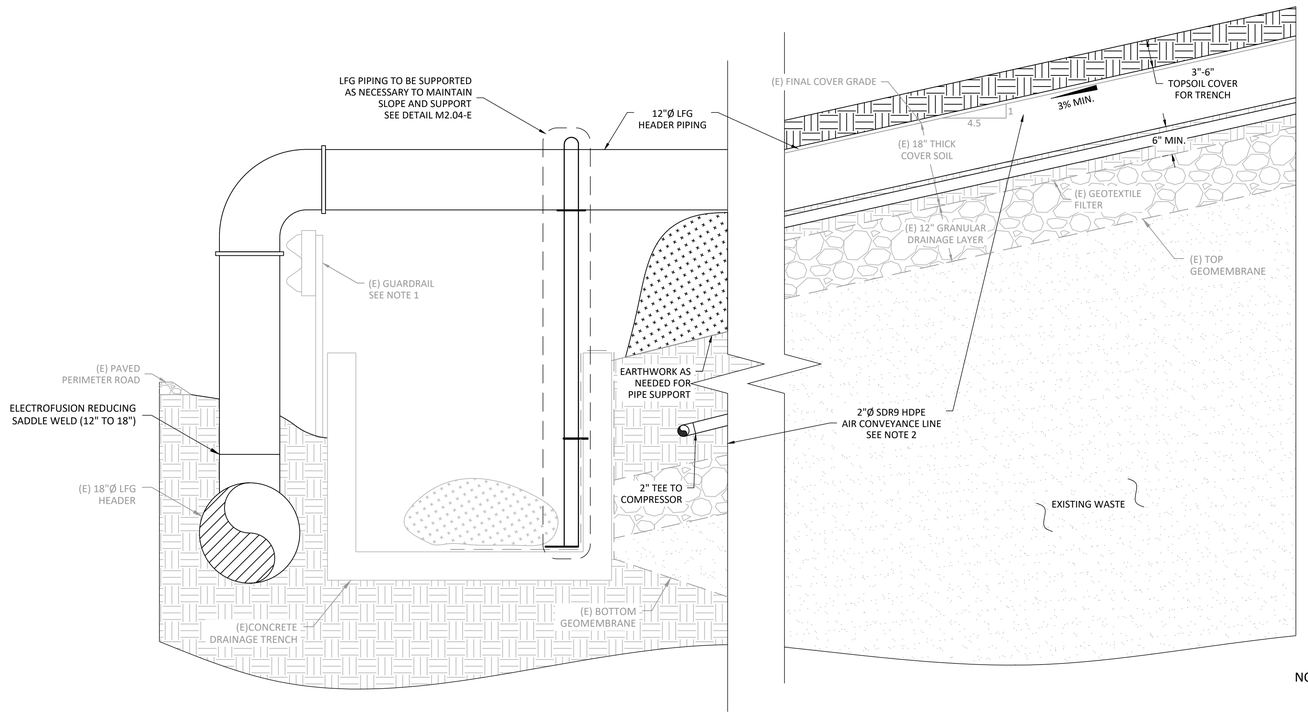
A
M1.01 | M2.06

WELLHEAD LATERAL AND HEADER TIE-IN DETAIL



B
M1.01 | M2.06

6" LATERAL TIE-IN TO 12" LFG HEADER



C
M1.01 | M2.06

12" HEADER TIE-IN TO (E) 18" LFG HEADER

NOTES:

1. SUPPORT 12" HEADER CROSSING OVER CONCRETE TRENCH AS NEEDED TO MAINTAIN 3% DROP TO ELBOW INTO (E) 18" HEADER
2. AIR CONVEYANCE LINE IS SHOWN BELOW HEADER FOR CLARITY, BUT SHOULD BE TRENCHED SIDE BY SIDE (SEE DETAIL M2.04-F)

REV	DATE	DESCRIPTION	DRN BY	DSN BY	CHK BY
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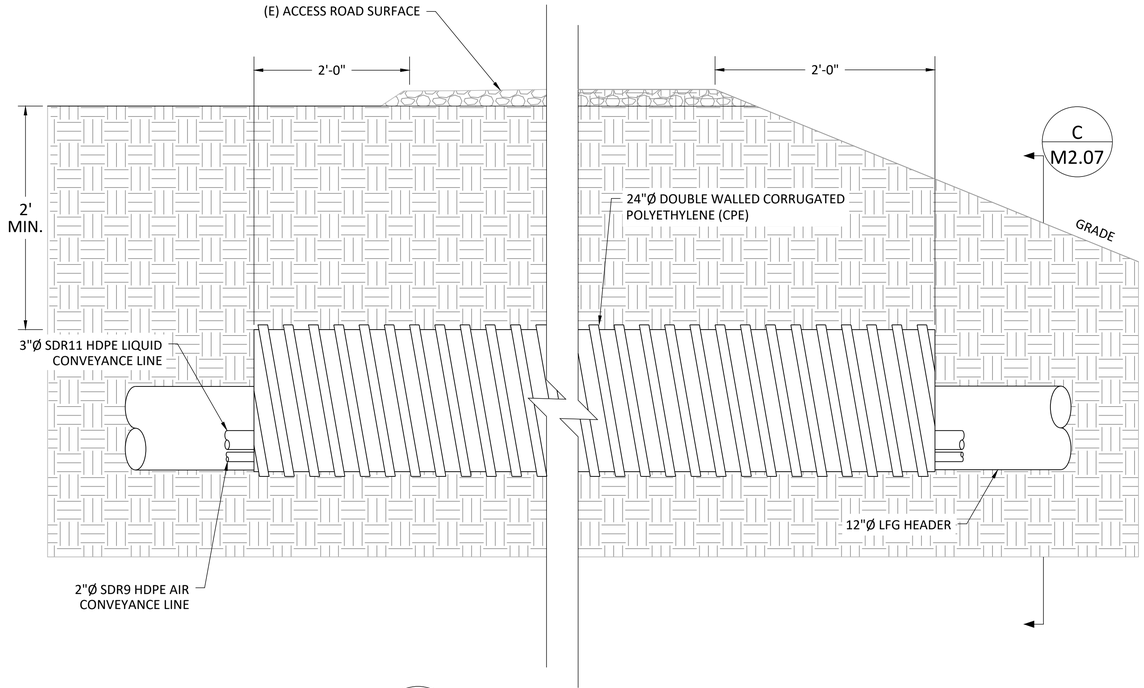
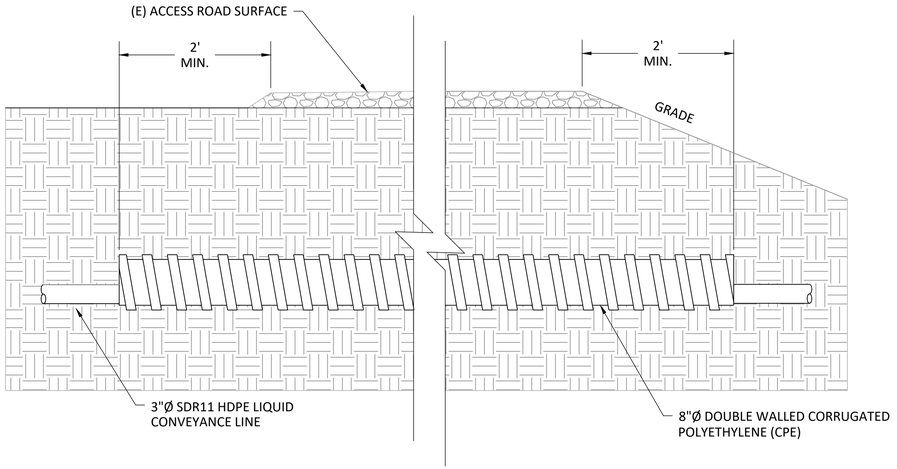
TIE-IN DETAILS

PROPOSED 2025 GCCS EXPANSION
HEADQUARTERS LANDFILL
CASTLE ROCK, WA

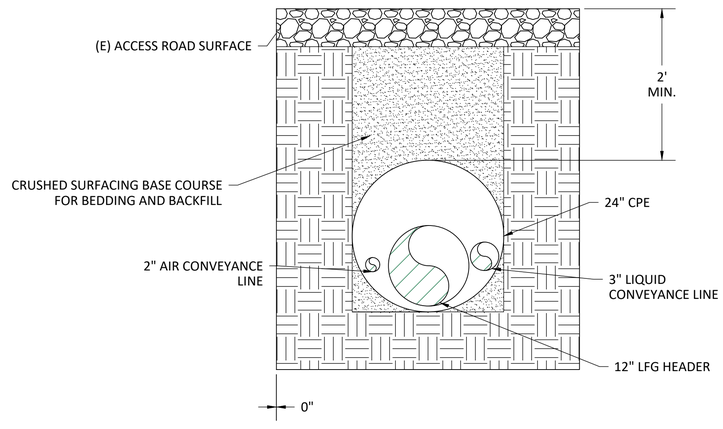
DRAWING NO.
M2.06
PROJECT NO.
077.517



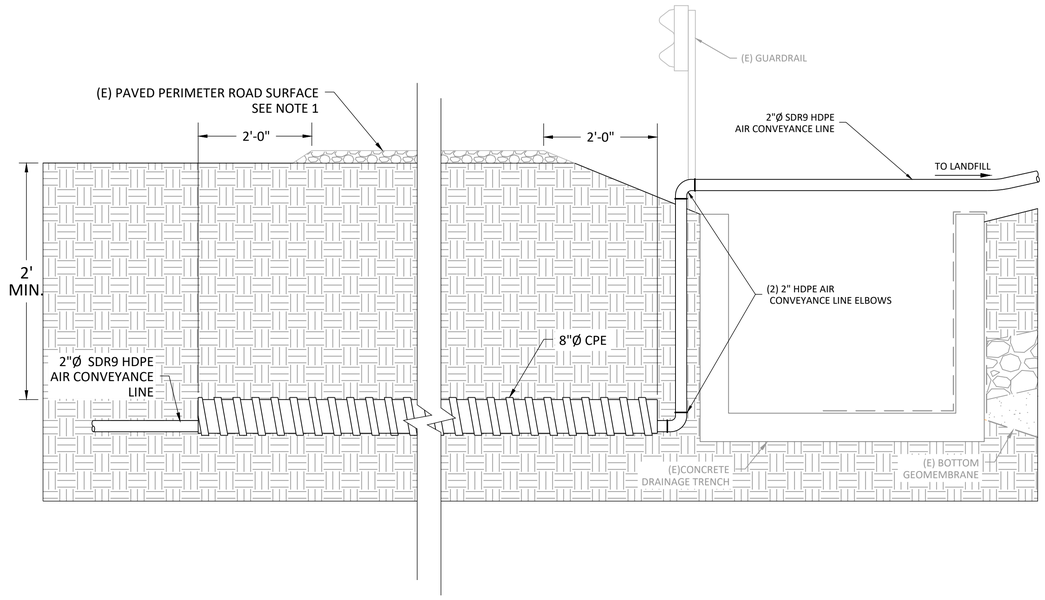
A M1.01 M2.07 ROAD CROSSING - 12" HEADER



D M1.01 M2.07 ROAD CROSSING - 3" LIQUID LINE



C M2.07 M2.07 ROAD CROSSING - 12" HEADER CROSS SECTION



B M1.01 M2.07 ROAD CROSSING - 2" AIR LINE

NOTES:

1. PATCH PAVEMENT WITH 4" THICK HMA CLASS 3/8" PG58H-22 PER COWLITZ COUNTY STANDARD PLAN CC-1303.

REV	DATE	DESCRIPTION	DRN BY	DSN BY	CHK BY
0	9/3/25	ISSUED FOR ADDENDUM 2	PD	QM	BB

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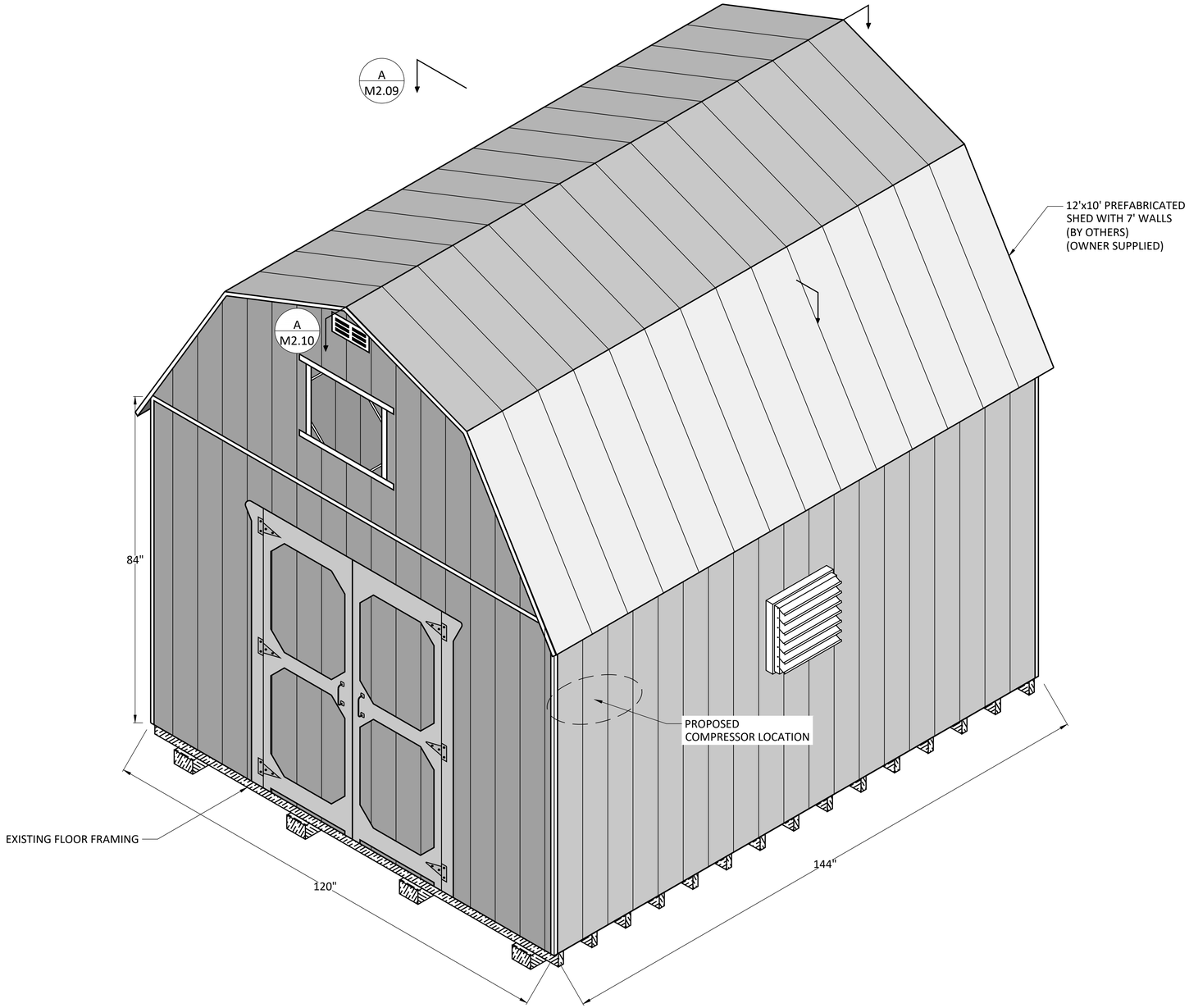
ROAD CROSSING DETAILS

PROPOSED 2025 GCCS EXPANSION
HEADQUARTERS LANDFILL
CASTLE ROCK, WA

DRAWING NO.
M2.07

PROJECT NO.
077.517



A M1.04 M2.08 AIR COMPRESSOR HOUSING OVERVIEW

NOTES:

1. ALTERNATE COMPRESSOR HOUSING TO BE APPROVED BY OWNER AND ENGINEER

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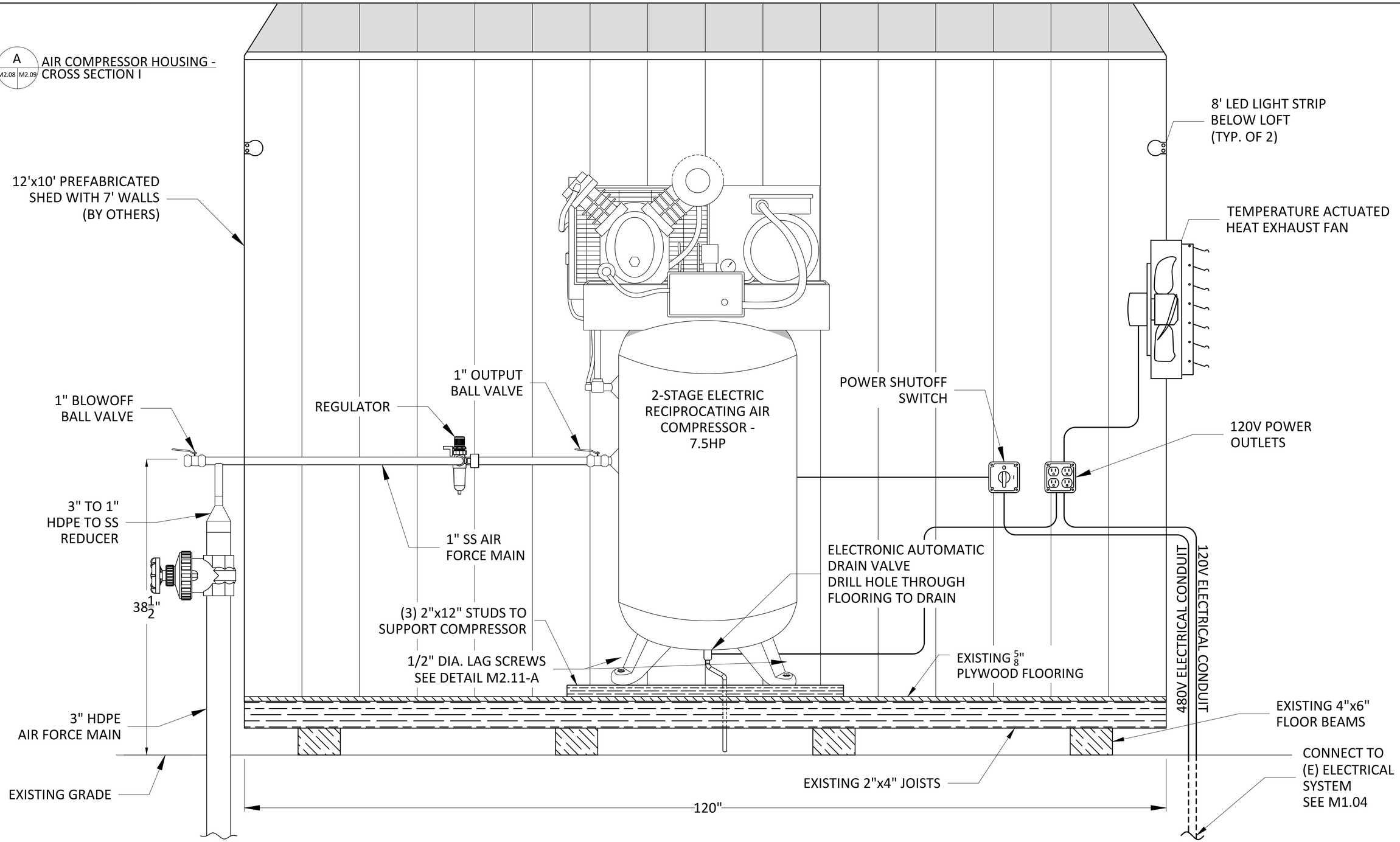
AIR COMPRESSOR HOUSING

PROPOSED 2025 GCCS EXPANSION
HEADQUARTERS LANDFILL
CASTLE ROCK, WA

DRAWING NO.
M2.08
PROJECT NO.
077.517

A
M2.08 | M2.09
AIR COMPRESSOR HOUSING - CROSS SECTION I



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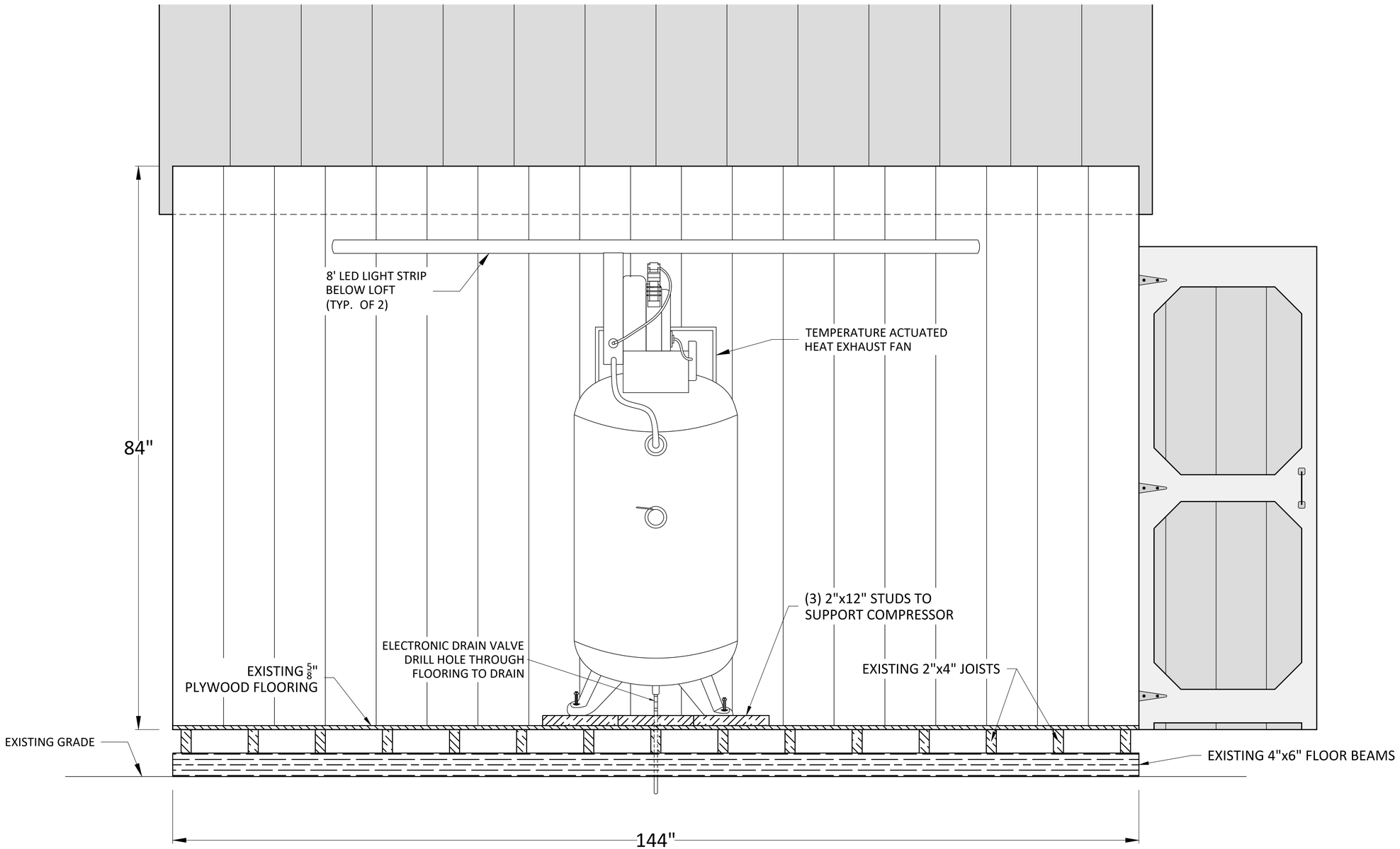
COMPRESSOR HOUSING - CROSS SECTION I

PROPOSED 2025 GCCS EXPANSION HEADQUARTERS LANDFILL
CASTLE ROCK, WA

DRAWING NO.
M2.09
PROJECT NO.
077.517



A M2.08 M2.10 COMPRESSOR HOUSING - CROSS SECTION II

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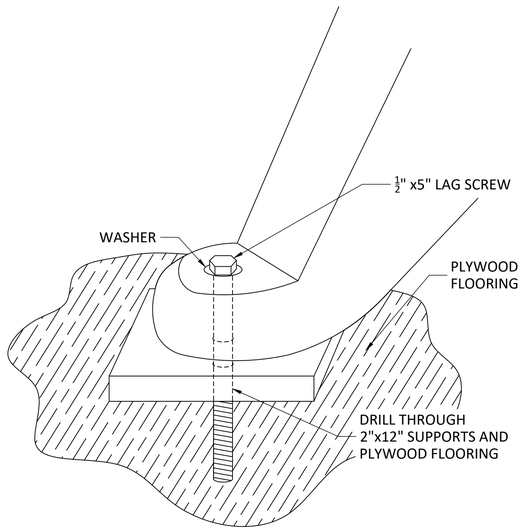
COMPRESSOR HOUSING -
CROSS SECTION II

PROPOSED 2025 GCCS EXPANSION
HEADQUARTERS LANDFILL
CASTLE ROCK, WA

DRAWING NO.
M2.10
PROJECT NO.
077.517



A
M2.09 | M2.11
COMPRESSOR ANCHOR BOLT DETAIL (NTS)

REV	DATE	DESCRIPTION	DRN BY	DSN BY	CHK BY
0	9/3/25	ISSUED FOR ADDENDUM 2	PD	QM	BB

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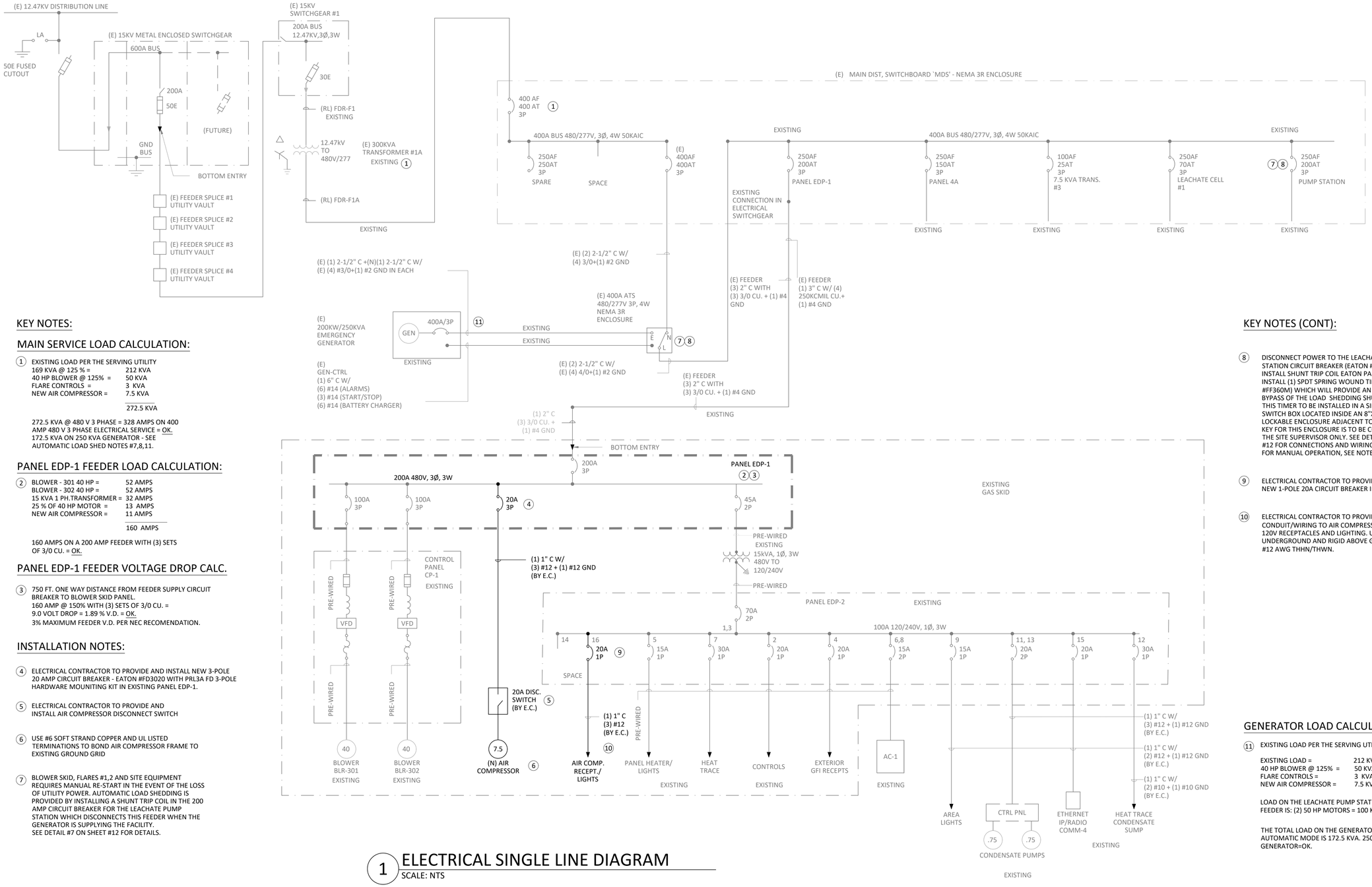
MISCELLANEOUS COMPRESSOR DETAILS

PROPOSED 2025 GCCS EXPANSION HEADQUARTERS LANDFILL
CASTLE ROCK, WA

DRAWING NO.
M2.11
PROJECT NO.
077.517



KEY NOTES:

MAIN SERVICE LOAD CALCULATION:

1 EXISTING LOAD PER THE SERVING UTILITY

169 KVA @ 125 % =	212 KVA
40 HP BLOWER @ 125% =	50 KVA
FLARE CONTROLS =	3 KVA
NEW AIR COMPRESSOR =	7.5 KVA
	272.5 KVA

272.5 KVA @ 480 V 3 PHASE = 328 AMPS ON 400 AMP 480 V 3 PHASE ELECTRICAL SERVICE = OK.
172.5 KVA ON 250 KVA GENERATOR - SEE AUTOMATIC LOAD SHED NOTES #7,8,11.

PANEL EDP-1 FEEDER LOAD CALCULATION:

2

BLOWER - 301 40 HP =	52 AMPS
BLOWER - 302 40 HP =	52 AMPS
15 KVA 1 PH.TRANSFORMER =	32 AMPS
25 % OF 40 HP MOTOR =	13 AMPS
NEW AIR COMPRESSOR =	11 AMPS
	160 AMPS

160 AMPS ON A 200 AMP FEEDER WITH (3) SETS OF 3/0 CU. = OK.

PANEL EDP-1 FEEDER VOLTAGE DROP CALC.

3 750 FT. ONE WAY DISTANCE FROM FEEDER SUPPLY CIRCUIT BREAKER TO BLOWER SKID PANEL.
160 AMP @ 150% WITH (3) SETS OF 3/0 CU. =
9.0 VOLT DROP = 1.89 % V.D. = OK.
3% MAXIMUM FEEDER V.D. PER NEC RECOMENDATION.

INSTALLATION NOTES:

4 ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL NEW 3-POLE 20 AMP CIRCUIT BREAKER - EATON #FD3020 WITH PRL3A FD 3-POLE HARDWARE MOUNITING KIT IN EXISTING PANEL EDP-1.

5 ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL AIR COMPRESSOR DISCONNECT SWITCH

6 USE #6 SOFT STRAND COPPER AND UL LISTED TERMINATIONS TO BOND AIR COMPRESSOR FRAME TO EXISTING GROUND GRID

7 BLOWER SKID, FLARES #1,2 AND SITE EQUIPMENT REQUIRES MANUAL RE-START IN THE EVENT OF THE LOSS OF UTILITY POWER. AUTOMATIC LOAD SHEDDING IS PROVIDED BY INSTALLING A SHUNT TRIP COIL IN THE 200 AMP CIRCUIT BREAKER FOR THE LEACHATE PUMP STATION WHICH DISCONNECTS THIS FEEDER WHEN THE GENERATOR IS SUPPLYING THE FACILITY.
SEE DETAIL #7 ON SHEET #12 FOR DETAILS.

KEY NOTES (CONT):

8 DISCONNECT POWER TO THE LEACHATE PUMP STATION CIRCUIT BREAKER (EATON #HJD325DF) AND INSTALL SHUNT TRIP COIL EATON PART # SNT2P04K. INSTALL (1) SPDT SPRING WOUND TIMER (INTERMATIC #FF360M) WHICH WILL PROVIDE AN EMERGENCY BYPASS OF THE LOAD SHEDDING SHUNT TRIP CIRCUIT. THIS TIMER TO BE INSTALLED IN A SINGLE GANG SWITCH BOX LOCATED INSIDE AN 8"X8"X6" NEMA 3R LOCKABLE ENCLOSURE ADJACENT TO THE A.T.S. THE KEY FOR THIS ENCLOSURE IS TO BE CONTROLLED BY THE SITE SUPERVISOR ONLY. SEE DETAIL #7 ON SHEET #12 FOR CONNECTIONS AND WIRING.
FOR MANUAL OPERATION, SEE NOTE #9 BELOW.

9 ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL NEW 1-POLE 20A CIRCUIT BREAKER IN PANEL EDP-2

10 ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL CONDUIT/WIRING TO AIR COMPRESSOR HOUSING FOR 120V RECEPTACLES AND LIGHTING. USE 1" SCH 40 PVC UNDERGROUND AND RIGID ABOVE GRADE. WIRE TO BE #12 AWG THHN/THWN.

GENERATOR LOAD CALCULATION:

11 EXISTING LOAD PER THE SERVING UTILITY = 169 KVA @ 125 % = 212 KVA

EXISTING LOAD =	212 KVA
40 HP BLOWER @ 125% =	50 KVA
FLARE CONTROLS =	3 KVA
NEW AIR COMPRESSOR =	7.5 KVA
LOAD ON THE LEACHATE PUMP STATION FEEDER IS: (2) 50 HP MOTORS = 100 KVA	(-100 KVA)
THE TOTAL LOAD ON THE GENERATOR IN AUTOMATIC MODE IS 172.5 KVA. 250 KVA GENERATOR=OK.	172.5 KVA

1 ELECTRICAL SINGLE LINE DIAGRAM

SCALE: NTS

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0	09/03/25	ISSUED FOR ADDENDUM 2	CJM	CJM	CJM

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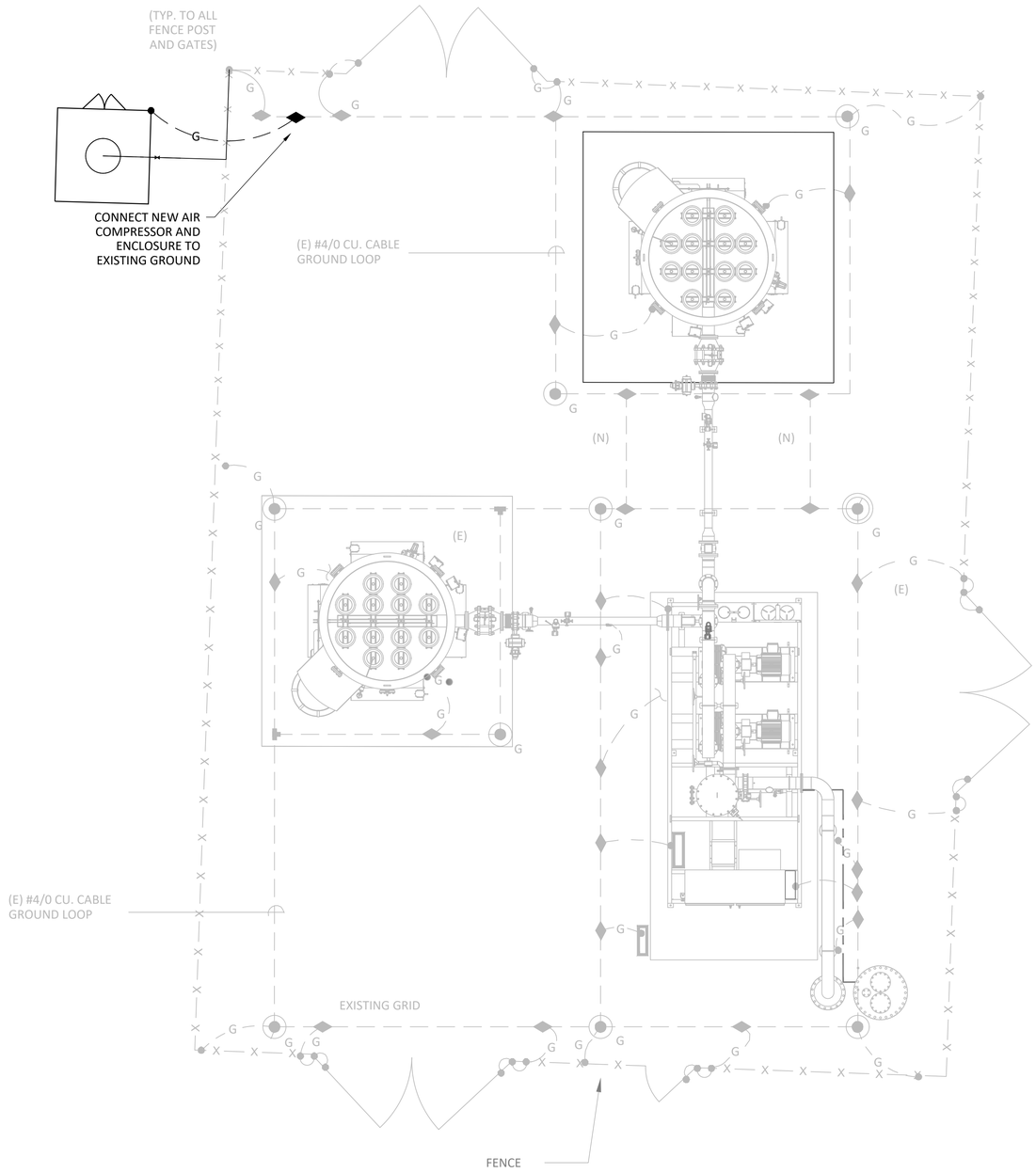
SITE ONE-LINE

PROPOSED 2025 GCSS EXPANSION HEADQUARTERS LANDFILL
CASTLE ROCK, WA

DRAWING NO.
E1.01
PROJECT NO.
077.516



2 ELECTRICAL GROUNDING PLAN
SCALE: NTS

SHEET NOTES:

1. E.C. SHALL PROVIDE ALLOWANCE IN HIS BID FOR 10% ADDITIONAL GROUNDING CONNECTIONS. ENGINEER WILL INDICATE IN FIELD WHERE THESE SHALL BE REQUIRED.
2. DRAWING DOES NOT INCORPORATE ALL BONDING CONNECTIONS. THIS IN A GUIDE ONLY. E.C. SHALL BOND ALL EQUIPMENT FOR SAFE TOUCH POTENTIALS.

GROUNDING LEGEND:

- (E) 4/0 SOFT DRAWN STRANDED CU. GROUND LOOP.
- (N) 3/4" x 10` COPPER CLAD GROUND ROD WITH GROUND ROD COUPLER AND EXOTHERMIC WELD CONNECTIONS. SEE DETAIL #1, E5.01
- (E) 3/4" x 10` COPPER CLAD GROUND RODS WITH GROUND ROD COUPLER AND EXOTHERMIC WELD CONNECTIONS IN TEST WELL.
- (N) #6, SOFT DRAWN STRANDED COPPER CONDUCTOR FOR THE CONNECTION OF EQUIPMENT.
- (N) EXOTHERMIC WELD

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GROUNDING PLAN

PROPOSED 2025 GCSS EXPANSION HEADQUARTERS LANDFILL
CASTLE ROCK, WA

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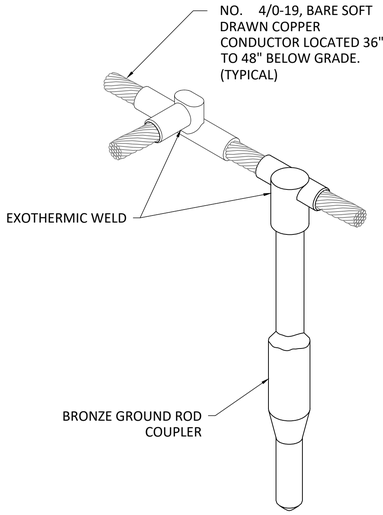
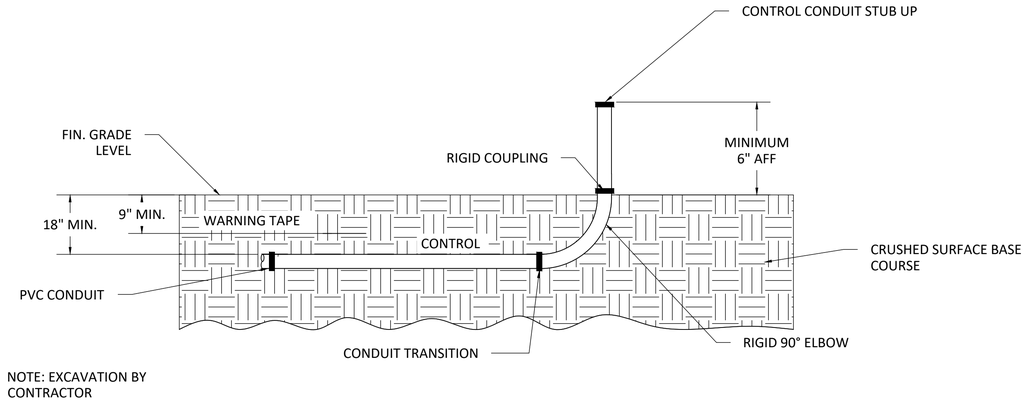
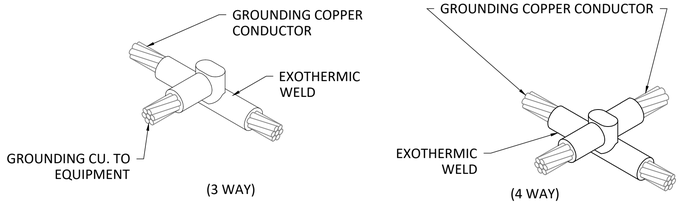


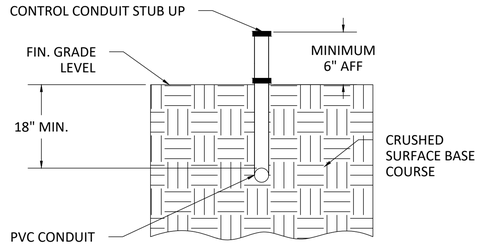
1 GROUND ROD DETAIL
SCALE: NTS



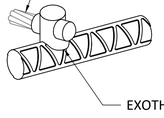
2 TYPICAL GROUND FILL AND CONDUIT STUB UP DETAIL (OUTDOORS)
SCALE: NTS



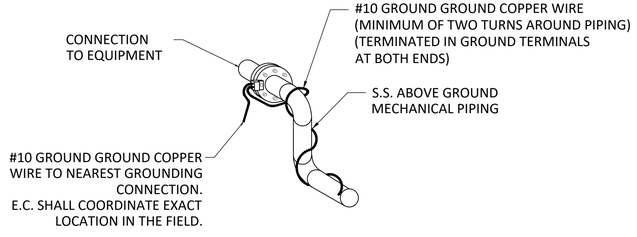
3 EXOTHERMIC WELD CONNECTION DETAIL
SCALE: NTS



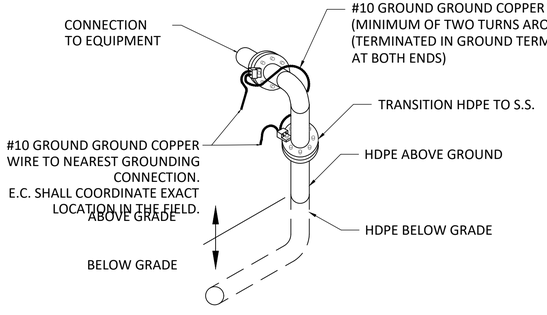
4 TYPICAL TRENCH DETAIL
SCALE: NTS



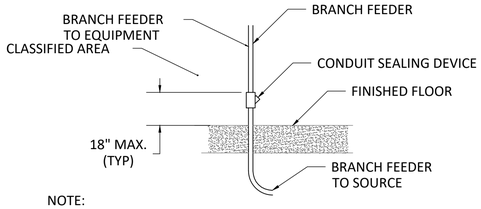
5 TYPICAL GROUND WIRE TO REBAR CONNECTION
SCALE: NTS



6 EXPOSED MECHANICAL PIPING (STEEL) ELECTRICAL GROUNDING DETAIL
SCALE: NTS

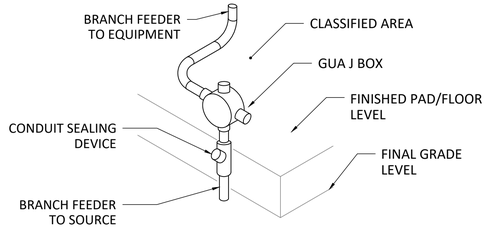


7 EXPOSED MECHANICAL PIPING (HDPE-STEEL) ELECTRICAL GROUNDING DETAIL
SCALE: NTS

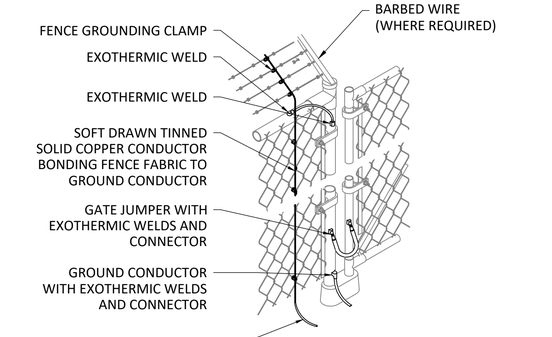


NOTE:
E.C. SHALL PROVIDE SEAL-OFFS ON ALL POWER AND COMMUNICATIONS CONDUITS.

8 CONDUIT SEAL FOR FOR CLASS I AREAS DETAIL
SCALE: NTS



9 CONDUIT STUB-UP WITH SEAL FOR CLASS I AREAS DETAIL
SCALE: NTS



NOTE:
USE #4/0 AWG FOR CONNECTION TO MAIN #4/0 GROUND GRID AND #6 AWG FOR ALL OTHER BONDING AT FENCE AND POSTS.

10 FENCE/SWING GATE GROUND DETAIL
SCALE: NTS

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ELECTRICAL DETAILS

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CASTLE ROCK, WA

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