June 8, 2026 **2025-CRW-1019**

To: All Bidders of Record

Re: **Addendum No. One (1)**
Snow Removal Equipment (SRE) Building
3-54-0003-087-2025 (Design)
3-54-0003-XXX-2026 (Construction)
West Virginia International Yeager Airport (CRW)

Dear Bidders:

This Addendum is hereby made part of the Contract Documents for the above referenced Project. All other requirements of the original documents shall remain in effect in their respective order.

Bid Due Date: Thursday June 18th, 2026 at 2:00 PM EST **(REVISED)**

FRONT END SPECIFICATIONS

1.01 **REPLACE** Division 2 (Scope of Work) with the new Scope of Work provided in this Addendum.

1.02 **REPLACE** all of Division 3 with the new Division 3 provided in this Addendum.

TECHNICAL SPECIFICATIONS

1.03 **REVISE** Specification 011000

1.03.1 Add the following text: 4 Architectural Base-bid work includes metal panel walls; standing seam metal roof with manufacturer's standard snow guards, and interior insulation with vapor barrier. Exterior enclosure includes motorized overhead doors, translucent clerestory panels, hollow metal doors and frames, painting and sealed concrete floors. The Architectural scope includes three alternates; Alternate No. 1 replaces the exterior wall and roof panels with insulated metal panels. Alternate No. 2 is a net deduct to have a single exterior color for the metal panel. Alternate No. 3 is a net deduct to omit the Fiberglass-Sandwich-Panel (Translucent) Clerestory Panels. Refer to Section 012300-Alternates.

1.04 **ADD** Specification 012300 Alternatives included in this addendum

1.05 **REPLACE** Specification Section 083323 with the new 083323 provided in this addendum.

1.05.1 **REVISE** 2.02 A: DELETE 2.02.A.2.a reference to Vision Lites

1.06 **REPLACE** Specification Section 133419 with the new 133419 provided in this addendum,

1.06.1 **REVISE** 1.02 A: Added reference to Section 012300 - Alternates

1.06.2 **REVISE** 2.08 for Wall and Roof Panels (Base Bid)

1.07 **REPLACE** Specification X-2 with the New X-2 provided in this addendum.

1.08 **REVISE** Specification WV-636

1.08.1 Delete the Subsection Electrical under Section 1.5 Utility Coordination

1.09 **REPLACE** Specification WV-642 with the New WV-642 provided in this Addendum.

CONSTRUCTION DRAWINGS

1.10 **REVISE** Drawing No. GI002

1.10.1 **REVISE** the Schedule of Quantities

1.11 **REPLACE** Drawing No. A101 with new A101 attached to this Addendum No. One (1).

1.11.1 **DELETE** Note reference #1

1.12 **REPLACE** Drawing No. A102 with new A102 attached to this Addendum No. One (1).

1.12.1 **DELETE** Note reference #1

1.13 **REPLACE** Drawing No. A104 with new A104 attached to this Addendum No. One (1).

1.13.1 **DELETE** Note reference #1

1.14 **REPLACE** Drawing No. A201 with new A201 attached to this Addendum No. One (1).

1.14.1 **DELETE** Note reference #1

1.15 **REPLACE** Drawing No. A302 with new A302 attached to this Addendum No. One (1).

1.16 **REPLACE** Drawing No. A303 with new A303 attached to this Addendum No. One (1).

1.16.1 **REVISE** Details to show base bid with Metal Panel & Interior Insulation

1.17 **REPLACE** Drawing No. A501 with new A501 attached to this Addendum No. One (1).

1.17.1 **REVISE** Details to show base bid with Metal Panel & Interior Insulation

1.18 **REVISE** Drawing No. GC200

1.18.1 **REVISE** Major work Items/Suggested Sequence of Construction “Install Drainage Pipes, Floor Drains, Cleanouts and Headwall” to read “Install Drainage Pipes, Inlets and Headwall”

1.18.2 **ADD** Construction Hours. Site is available 24 hours/day

1.19 REVISE Drawing No. A101, A102, A104 and A201

1.19.1 DELETE Note Reference #1

1.20 **REVISE** Drawing No. CD100

1.20.1 **DELETE** Electrical (Overhead) label

1.20.2 **ADD** Electrical Ductbanks label

1.21 **REVISE** Drawing No. GC100

1.21.1 **REVISE** proposed ductbank layout and waterline layout as shown on CU100.

1.22 **REPLACE** Drawing No. CU100 with new CU100 attached to this Addendum No. One (1).

1.23 **REPLACE** Drawing No. S001 with new S001 attached to this Addendum No. One (1).

1.24 **REPLACE** Drawing No. S202 with new S202 attached to this Addendum No. One (1).

1.25 **REPLACE** Drawing No. E200 with new E100 attached to this Addendum No. One (1).

BIDDERS QUESTIONS

Q1. Regarding water trucks for dust control, note 11 on GC100 states two water trucks shall be kept on site at all times. Are two trucks required if one truck is 5,000 gallons? Are two trucks required once excavation operation is complete?

A1. **Two trucks are not required as long as the contractor can maintain dust control.**

Q2. Is there a Kanawha County Development Authority permit fee for this project? If so who is responsible for paying for this permit? If this is on the contractor how much is the permit?

A2. **Contractor shall be responsible for obtaining and paying for the Kanawha County Development Authority permit. The current fee is unknown and shall be confirmed by the Contractor prior to bid; no separate payment will be made.**

Q3. Is this project exempt from West Virginia sales taxes?

A3. **No.**

Q4. Could existing site electrical plans be provided, as existing electrical is on site but not shown on sheet CD100.

A4. **The available existing electrical information is included on CD100. In general, the existing electrical consists of ductbanks along the edge of Eagle Mountain Road.**

Q5. Regarding the existing waterline shown on CD100, which shall be relocated by WVAW. Due to critical path and project duration, could this be done prior to start of project?

A5. **Yes. The contractor is responsible for coordinating this work with WVAM. Coordination may start once the selected contractor has received NTP. It may be completed during the contractor's mobilization period. However, the mobilization period is not intended to absorb the WVAM work. It is anticipated that WVAM will be available within a few weeks upon receipt of payment.**

Any delays from the utility company are outside of the Contractor's control and will not be held against the contractor.

Q6. Regarding flagger (2 each) shown on GC201, could you clarify if this required at all times or only required when deliveries will be stopping traffic and gas tie in?

A6. **Yes, the Flaggers are only necessary during work within 25' of the edge of Eagle Mountain Road. See Note 1 on Sheet GC201.**

Q7. Would the engineer consider adding a pay item for inlet removal, as CD100 shows an inlet for removal, and there is only a pay item for pipe removal as LF.

A7. **Contractor shall consider the removal and backfill of the existing inlet as incidental to Item 207001-1 (Unclassified Excavation).**

Q8. Regarding separation fabric, is it required at subgrade in asphalt pavement sections? Currently only required in proposed gravel parking.

A8. **The separation/engineering fabric is only necessary under the proposed gravel parking area.**

Q9. Would the engineer consider adding a pay item for ECS maintenance (1 LS)?

A9. **No. All maintenance shall be incidental to the Erosion and Sediment Control Devices. Specification WV-642 (Temporary Pollution Control) Section 3.2 states that "Maintenance of all controls shall be considered incidental to the cost of the specific control device".**

Q10. Would the engineer consider adding a pay item for seeding (AC)?

A10. **No. Specification WV-652 (Seeding and Mulching) Section 4.1 states that seeding and mulching shall be considered incidental to 651001-1 (Furnish and Placing Topsoil)**

Q11. Would the engineer consider adding a pay item for concrete cleanout? (1 EA)?

A11. **Confirmed. Concrete Washout shall be pay Item 642001-7 and shall be per each. Specification WV-642 and the Bid forms have been updated.**

Q12. Regarding site water, could you please clarify pay item 670004-1, is this to be 18" or 6", as drawing number GI002 states 18" DIP for the bid item.

A12. **6" is correct. The Bid forms have been updated.**

Q13. Regarding the site water, will there be a valve between the new tee and building? If yes, who is responsible for the valve and what size? Or will this be handle in Pay Item X-2-1?

A13. **Yes, American Waterline is responsible for the water reducing valve and its installation. CU100 has been updated with some additional clarification.**

Q14. Regarding natural gas, how much is the fee to establish new service and tapping fee? Where shall this amount be paid for?

A14. **The fee is paid under Specification WV-636 (Temporary Construction Items). The fee to establish the new service will need to be coordinated directly with Mountaineer Gas. The Airport will need to be involved as the owner of the service.**

Q15. Natural gas tie in is located in the middle of Eagle Mountain Road. Where shall the road repair be paid for?

A15. **Mountaineer Gas will be responsible for the roadway repair associated with the gas line installation.**

Q16. Regarding handhole (3x3x3), would the owner want to reuse a handhole from a previous project that is brand new, and already delivered to SRE proposed location?

A16. **The contractor shall confirm with the Airport if this structure is available. If it is available then it may be utilized in the SRE project.**

Q17. Would the engineer add a pay item for mobilization for the site items?

A17. **The pay item for mobilization has already been included. It is Bid Item Number 57 in the Bid Forms. As a reminder, this item is capped at 5% of Subtotal B.**

Q18. Would the engineer add a pay item for quality control?

A18. **Quality control shall be considered incidental to the item for which it is required.**

Q19. Would the engineer extend the bid day to June 16th, 2026?

A19. **The Bid date has been revised to June 18th, 2026.**

Q20. Spec 011000 narrative "insulated standing seam metal roof with snow guards" while spec 133419 (metal building systems) does not mention standing seam or snow guards, and the drawings do not detail snow guards either, please clarify.

A20. **Roof system shall be as required by Section 133419 and the drawings. Snow guards shall be manufacturer's standard system compatible with the roof panel**

Q21. Stand by optional diesel 25kW generator and associate transfer switch shown on E200 single line diagram, is this is base bid scope, future installation, or alternate?

A21. **The diesel generator has been added as a part of Add Alternate No.2, which has been added with this addendum.**

Q22. Regarding optional diesel generator, is the conduit, wiring, and concrete pad included in the base bid?

A22. **No. The conduit, wiring and concrete pad will be included in the Add Alt. The diesel generator has been added as a part of Add Alternate No.2, which has been added with this addendum.**

Q23. Regarding plumbing, is a hot water heater required?

A23. **No Hot water heater required. There is no hot water planned within the facility currently for this project.**

Q24. Note 23 & 24 on P000, state pressure reducing valve may be needed as well as booster may be needed, could you please provide which one shall be provided?

A24. **The most recent water pressure information we identified for that area indicated that the water pressure at the supply main were tying into was ~33 PSI. For bidding purposes, the Contractor shall assume that neither a domestic water booster pump nor a pressure reducing valve is required for the building water service. The most recent pressure information available for the existing water main in the project area indicates an approximate static pressure of 33 psi at the supply main, which is within the acceptable range for the proposed use.**

If the available water pressure is below 30 PSI, a booster pump will be required. If the incoming water pressure is above 60 PSI, a reducing valve shall be required. If the incoming water pressure is between 30 and 60 PSI no booster pump or reducing valve shall be required.

Q25. Per architecture plans, roof drains shall drain onto surface and not tie into storm system. Drawing CP300, detail shows downspout tying into proposed drainage pipe where there is sidewalk. If detail 2 on CP300 shall be followed, is this for only downspouts at sidewalks of all downspouts to be tied into storm system?

A25. **Yes, Detail 2 on sheet CP300 is only for downspouts to tie in to the storm drain system at the sidewalks**

Q26. Could you please confirm the scale on CU100?

A26. **The scale has been fixed from 1" = 20' to 1" = 30' to match the viewport on sheet CU100.**

Q27. Will access to existing maintenance building be required during the duration of the project?

A27. **Note has been deleted from GC200.**

Q28. Are there any working hour restrictions?

A28. **There are no working hour restrictions, the site is available 24 hours. Construction work hours are added on sheet GC200.**

Q29. The current CCTV system is Avigilon, what size server is currently supporting this system and what version is currently running? (Unity 8 or ACC7)

A29. **ACC7 - We have 2 servers - RAM is 15.63GB and Total disk space shows 97092.53 GB.**

Q30. Yeager Airport had a bid out a few months ago to change there current system and stated they were wanting Avigilon ACM (Access Control), shall the contractor provide Avigilon ACM as a part of this bid package?

A30. **The system needs to be compatible with the Airport's existing system.**

Q31. The facility is Avigilon Cameras but, the specification calls out Axis Cameras and model numbers. Which system do we need to provide?

A31. **The system needs to be compatible with the Airport's existing system.**

Q32. We anticipate that there could be a significant savings by eliminating insulated metal wall panels and using standard metal wall panels with fiberglass insulation. Would it be possible to add this option as an alternate in the pricing?

A32. **Revisions to the Base Bid and new Add/Deduct Alternates have been included with this addendum.**

Q33. Could you please provide the following specification, 07 42 13 Insulated wall panel

A33. **Revised 133419 to delete paragraph and added wall insulation requirement.**

Q34. Could you please provide the following specification 07 41 16 Insulated core metal roof panels.

A34. **Revised 133419 to delete paragraph and added roof insulation requirement.**

Q35. Bidding documents state other projects may occur simultaneously, and additional traffic will be used on haul roads. How will it be determined who is responsible for condition of haul roads that is used by all parties?

A35. **All projects will utilize a portion of Eagle Mountain Road. Haul road condition shall be documented at the onset and agreed upon with the RPR. Any damage will be negotiated by the RPR.**

Q36. "Contractor shall furnish flagmen as necessary to control construction traffic unless otherwise directed.." – If routes are dedicated haul roads, are flagmen necessary?

A36. **The Maintenance of Traffic Plan is applicable to all work within 25' of Eagle Mountain Road for the safety of the workers.**

Q37. "Access to the maintenance building will be restricted during construction" Will GC be required to maintain access to this building for the duration of the project?

A37. **This note has been deleted.**

Q38. Targeted Notice to Proceed date? CE103 shows October 2026

A38. **The Notice to Proceed date will depend on the receipt of an FAA grant. It is anticipated that the grant notification will be in early Fall of 2026.**

Q39. A103 Does not show a ceiling

A301 – Section 2 shows interior ceiling height at 15'

Please clarify.

A39. **The Ceiling elevation reference is for the ceiling in Room - 102 'Parts'. Refer to Wall Section 3/A302.**

Q40. Pump truck taller than 50'

A40. **Noted, this should not be issue. Engineer will coordinate with FAA.**

Q41. VG100 - NOTE #5: "The card reader and gate operator provided by the contractor will need to be compatible with the airport's existing system."

Who does the airport use for this service now? What system is in place?

A41. **The airport service is in flux. Any proposed system will need to needs to be compatible with the Airport's existing system.**

Q42. Item X-1: SECURITY REQUIREMENTS DURING CONSTRUCTION

2.1 – c: "Security training with the airport for all personnel on security protocols, emergency procedures, and reporting suspicious behavior."

A42. **Security training with the airport is not applicable to this project and has been deleted.**

Q43. Specification 083323: 2.02, A, 2:

Specifies vison lites, the elevations don't appear to show any vision lites. Are they required? If so, how many?

A43. **Vision Lites are not required. Specification will be updated with conformed documents.**

Q44. Specification 083323: 2.04, B:

Appears to specify NEMA 4 motor operators/controls. Typically doors in this type of application mounted inside are NEMA 1. Is NEMA 1 acceptable?

A44. **It is acceptable as long as it meet the requirements in the plans and specifications.**

Q45. Bid Documents contain (6) pages of unit pricing. Is this required to submit with bid?

A45. **Confirmed. Please utilize the updated Bid Forms provided with this Addendum (Attachment 2).**

Q46. 4.1 – Subsurface Conclusions:

"Rock excavation may be necessary for utility installation".

Will there be a rock clause in place for this project, or are we to allow for rock excavation in the base bid?

A46. **The contractor shall review provided boring logs. There will be no added compensation for rock excavation.**

Q47. 4.2 – Foundation Recommendation

"If the footing trench becomes wet and soft, the soft material should be excavated and replaced with WVDOH Class 1 stone and compacted"

Are mud mats acceptable foundation mats in place of stone?

A47. **Lean concrete mud mats are an acceptable alternative.**

Q48. S001 – Backfill Against Walls – 31.5 – B

"No backfill material shall be placed against foundation walls until the wall has attained 75% of its design strength and the upper bracing floors are in place for at least 7 days, or adequate bracing is installed. The contractor's engineer, registered in the project's jurisdiction, shall design the bracing and provide signed and sealed submittals for review"

Recommending mud mats to cover the "Grey Sandy Shale: highly weathered to completed weathered, dry, very soft" material found in Terradon boring logs. If you leave these footing excavations open for 1-2 weeks to form, pour, and wait for 75% strength, and it rains in that time frame, it would be extremely difficult to get the moisture out of the sandy shale. The geotechnical report indicated the boring was done during a drought period and wet weather springs could occur during heavy precipitation.

A48. **This note has been revised. However, the foundation wall will still need to reach 75% strength, confirmed via a cylinder break, before being backfilled. The excavation for the footing under the foundation wall can be backfilled after 24 hours.**

Q49. S001 – Below Grade Wall Drainage – 31.8 – A

"The below-grade areas for the structure should be provided with a permanent drainage system and below-grade wall waterproofing, see architectural drawings."

Architectural drawings do not seem to show any waterproofing, please clarify.

A49. This note has been revised. Below grade waterproofing is not required.

Q50. "New 3X3X3 H20 handhole with provisional stubs to the north and east. See Detail 2 on CU500."

There does not seem to be a drawing title CU500.

A50. The note has been updated to reference Sheet CU200.

Q51. Are precast duct bank acceptable?

A51. Yes provided it meets all requirements outlined in the specifications.

Q52. Should excavations near roadway be with hydroexcavation or similar method to avoid FAA line? What is the protocol if FAA line is damaged during excavation? Who is responsible for cost of lost time and repair cost of FAA line?

A52. The contractor shall take great care to avoid any damage to the FAA line. The method of excavation is the contractor's means and methods and a pre-excavation meeting shall be required where the FAA can be invited by the RPR.

If the FAA line is damaged then it will be the contractor's responsibility to pay for the repair costs and coordinate directly with the FAA.

Q53. "Waterline demolition will be completed by WV American Water"

What is the extent of this demolition? Is existing waterline removed back to point shown at beginning of new waterline on CU100. Can this work be done during regular dayshift hours?

A53. Contractor shall confirm with WV American Water. For bidding purposes, assume West Virginia American Water's work can be performed during regular daytime working hours. If West Virginia American Water requires night work, off-hour work, or additional work restrictions that are not identified in the Contract Documents, those requirements will be reviewed by the Owner and Engineer in accordance with the Contract Documents.

Q54. Are high-bay switches to be located at man doors?

A54. Yes. High bay switches to be located at each man door.

Q55. A501 – Detail #6:

Indicates insulation between z-girts, in addition to Insulated Metal Panel sheets. Is this additional insulation accurate?

A55. Refer to revised Drawings A303 and A501, added specification section 012300 – Alternates, and revised specification section133419 Metal Building Systems.

Q56. S100 - Will it be acceptable to pour the slab-on-grade in one (1) single pour, or will multiple pours be required?

A56. We have no objection to pouring it in a single pour.

Q57. A102 – On Plan sheet A102, General Note #1 references a slab plan on sheet A-003 but I don't believe a sheet A-003 was included in the bid documents. Can that sheet be provided?

A57. **Drawings will be amended to delete reference to A-003.**

Q58. Will Kanawha County require a permit for this project? If so, please indicate the cost associated with the permit.

A58. **Contractor shall be responsible for obtaining and paying for the Kanawha County Development Authority permit. The current fee is unknown and shall be confirmed by the Contractor prior to bid; no separate payment will be made.**

Q59. S001 – Foundation Placement & Protection – 31.6 – D

"Bearing elevations indicated on the drawings are estimated from soil bearing data indicated in the geotechnical report"

Are we to bid based on not having to add material to form base for footings, with the understanding that the soil in place will meet compaction requirements?

A59. **For bidding purposes, foundations will need to be excavated to the shale bedrock layer (approximately 2' of over excavation) and then backfilled with flowable fill concrete (500 psi). This shall be incidental to the cost of the foundations.**

Q60. Can civil demo material be placed on CRW property for future fill use?

A60. **Contractor shall coordinate directly with the Airport. For Bidding purposes, assume that all demoed material shall be taken off site and legally disposed of.**

Q61. Is the 60 days of mobilization time separate from the 240 Project duration, or is the 60 days of mobilization included in the 240 days?

I would request that the 60 day mobilization period is a separate timeframe than the construction period, if not the case already.

A61. **Confirmed. The 60-day mobilization period shall be separate from the 240 days for the project construction (on site). Construction duration is important as the Airport has owner representation only through 240 CCD and covering the owner's rep cost is part of LD consideration.**

Q62. There are two drawings labeled GC200. Sheet no 6 and sheet no 27.

A62. **Sheet No. 27 has been revised to be CG200.**

Q63. Geotechnical Survey 4.3 – Foundation Recommendations:

"The foundations should be placed neat against the excavation sides."

Please confirm this means no formwork is needed for any foundation pours. If that is the case, how are anchor bolts to be hung for columns? S202 – Detail 2 shows grade beam reinforcement to overlap 8' into spread footings, this will not be possible without formwork.

A63. **For bidding purposes please assume formwork.**

Q64. Related Documents – 1 – c

"FAA will need to approve any changes in elevation, and it may take up to 90 days to process such requests." Considering the pump truck and crane will likely approach or exceed 50', I think it would be a good idea to go ahead and make those requests.

A64. The contractor shall coordinate with the Engineer to submit revised elevations to the FAA (OEAAA website).

Q65. Top of footings F8.0, F11.0, and F13.0 are to be (- 1'-6"), Top of foundation wall WF2.0 is to meet turndown slab at (- 1'-0") per S202 – Detail 1. This means that the top 6" of WF2.0 foundation wall will continue onto top of footings F8.0, F11.0, and F13.0. Is the foundation wall WF2.0 to be doweled into adjacent spread footings at this point?

A65. That is correct. Alternatively, the SOG turned down edge can be extended down to the top of spread footings in lieu of pouring a 6" tall wall on top of the footings.

Q66. There is no allowance for adjustment of elevation in columns, yet spec section 133419 says to set column base plates with non-shrink grout to achieve full plate bearing. Please clarify, as this adjustment will affect building elevation

A66. Detail 2/S202 has been revised to specify a grout pad under the column baseplates.

Q67. Cornerstone Building Brands manufacturers material for both Ceco and Star buildings. Ceco is listed but Star is not. Can Star be an approved manufacturer?

https://www.cornerstonebuildingbrands.com/

A67. Yes, this is acceptable provided all applicable requirements are met.

Q68. Is it possible to reformat the drawings so that all are showing the same orientation in relation to North? Civil drawings are opposite Architectural and Structural. General drawings are 90 degree out from both.

A68. No.

Q69. Is Mountaineer Gas or the Plumbing contractor responsible for the tap into the existing line? Does Mountaineer Gas set the meter?

A69. Mountaineer Gas will tap into the existing line and set the meter. The contractor will connect to the portion of pipe that they install and bring it to the building. This will be from the edge of the roadway to the building. Coordination with Mountaineer Gas is required.

MISCELLANEOUS

M1. The Pre-Bid Meeting Minutes (attendees list included) and Pre-Bid Power Point are included with this Addendum.

M2. Notice to Proceed (NTP) is anticipated to be Fall 2026. However, this is pending receipt of the FAA grant and local board approval.

M3. Please acknowledge receipt of this Addendum at the appropriate space on the Proposal Form. This Addendum shall also become part of the Project Manual for this Contract.

M4. All other provisions of these Specifications and Contract Documents shall remain unchanged and in full effect.

All Bidders
June 8, 2026

LIST OF ATTACHMENTS

1. Pre-Bid Meeting Minutes/Attendance Sheet/Power Point/Meeting Agenda (9 pages)
2. Front End Specifications – Division 2 (Scope of Work) & Division 3 (Entirety) (20 pages)
3. Technical Specifications (X-2, WV-636, WV-642, 012300, 083323 and 133419) (19 pages)
4. Drawings (A101, A102, A104, A201, CU100, S001, S202 & E200) (8 pages)

– END OF ADDENDUM NO. ONE (1) –

If you should have any questions regarding this matter, please do not hesitate to contact our office.

Sincerely,

Rebecca McDonald, PE
Project Engineer

RM

Cc: West Virginia International Yeager Airport (CRW)

P:\Airport\CRW\Projects\2025-1019 SRE\Non-CAD\9_Bidding\Addendums\Addendum No. 1\2026_06_05 Addendum No. 1 - CRW SRE Building.docx

All Bidders
June 8, 2026

ATTACHMENT NO. 1

WEST VIRGINIA INTERNATIONAL YEAGER AIRPORT
SNOW REMOVAL EQUIPMENT (SRE) BUILDING

PRE-BID MEETING MINUTES

May 26, 2026 at 2:00 PM

1. Introductions

- **Bids due:** Monday, June 15, 2026, no later than 2:00 P.M in West Virginia Yeager International Airport, Terminal Building, Executive Conference Room, 100 Airport Road, Suite 175, Charleston, WV 25311. Bids will be opened and read aloud right after.
  a. Bids will be opened at 2pm. The agenda had 10am listed for the bid time, but the correct time is 2pm.

2. Contract Information

- **Contact duration:**
  a. Base Bid: 240 Consecutive Calendar Days
- **Wage Rates:**
  a. As the project is federally funded, Davis-Bacon prevailing wage rates apply. Division 1 of the project manual.
- **Award:**
  a. Award of contract will be based the lowest responsive and responsible bid that is in the best interest of the airport based on available funding. Priority of award is anticipated to be Base Bid.

  b. The Deduct Alternate No.1 will be deducted from the project if the base bid comes in above budget and availability of funding.

- **Bonding & Insurance Requirements:**

  a. Bid Bond shall be 5% of the contractor's base bid amount.
  b. Payment/Performance Bonds will be required of the successful low bidder in the full amount of the contract.
  c. The successful bidder shall maintain and provide proof of insurance coverage for the duration of the contract that protects the Owner from any and all liabilities. The successful bidder shall provide evidence of insurance for Workers' Compensation & Employer's Liability, West Virginia Deliberate Intent Coverage (West Virginia Code Section 23-4-2, et. seq.), General Liability, automobile liability, and Umbrella / Excess coverage.

- **Liquidated Damages for Exceeding Contract Time**

    a. $500 per calendar day (or part thereof) beyond project completion.

3. Scope of Work

The Base Bid encompasses the civil, environmental, structural, architectural, and MEP design and construction of a new Pre-Engineered Metal Building (PEMB) Snow Removal Equipment (SRE) facility.

The major work components include:

- Removal of existing pavement and general site clearing
- Erosion and sediment control devices
- Installation of a new Pre-Engineered Metal Building
    a. The building is 23,560 square feet
- Installation of concrete foundations and footings
- Installation of Building Systems and MEP
    a. Mechanical
    b. Electrical
    c. Plumbing
    d. Sanitary
    e. Fire Alarm and Protection
- Installation of a paved roadway (asphalt) and parking spots (ravel)
- Installation of new utilities
    a. Water
    b. Sanitary
    c. Electrical
    d. Telecommunication and
    e. Storm drain
- New fencing and gate
- New Security Cameras and Card Readers
- Installation of bollards, sidewalk and pavement marking

WEST VIRGINIA INTERNATIONAL YEAGER AIRPORT
SNOW REMOVAL EQUIPMENT (SRE) BUILDING

PRE-BID MEETING MINUTES

May 26, 2026 at 2:00 PM

There was an emphasis on coordination with the utility companies for the connections to existing utilities. Contact information is shown on the Composite Utility Plan.

4. Overall Construction Phasing & Schedule

- Total Project Duration of 240 Consecutive Calendar Days
  a. 60 Consecutive Calendar Days for Mobilization
- Project site is generally isolated and located outside of the Airport's secure fence
- The RPR will coordinate with Marshall University Flight OPS to ensure that overflow parking is relocated.
- Contractor shall not expose foundation excavation to weather for more than 7 days.

Maintenance of Traffic

- For work within 25' of Eagle Mountain Road the contractor is required to utilize cones/channeling devices, signs and flaggers

6. Deduct Alternative

The project includes Deduct Alternate 1 to delete the translucent clerestory panels and replace them with standard insulated metal panels (IMPs).

7. Instructions to Bidders

- Bid proposals shall be labeled as follows and hand carried, during normal business hours, or sent by mail to:
  CWVRAA
  100 Airport Rd
  Suite 175
  Charleston, WV 25311
  Subject: Snow Removal Equipment (SRE) Building

- One (1) separate copy of the Form of Proposal (Division 3) will be furnished as loose pdf with final addendum for the use of the Bidder. One (1) original and one (1) copy shall be submitted with the bid. Bid proposals shall contain forms and certifications included with Division 3. The original proposal submitted must be

properly signed. No proposal will be considered which is submitted otherwise than upon the Form of Proposal or an exact copy thereof. One electronic copy (pdf) of the bid proposal shall also be submitted.

- One (1) duly executed copy of the Bid Bond (Division 4) must be submitted with the bid unless a proper guarantee check is submitted.

8. Addendum

- Addenda will be emailed to all who are registered plan holders. All Addenda sent to Bidders will become a part of the Contract Documents.
- Bidder acknowledges receipt of the Bulletins or Addendum(s) in Division 3 page 19, make sure this is completed. Bidder shall list the number and issuing dates of the Bulletins or Addendum(s) received.

9. Questions

- What is the anticipated start date for this FAA-funded project?

  Mike W. answered that the funding is secured, and contract award is anticipated in August, within 60 days of late July. The timeline remains flexible pending final bid submissions, FAA paperwork turnaround, and local board approval.

Meeting Attendance Record

Airport: West Virginia International Yeager Airport (CRW)
Project: Snow Removal Equipment (SRE) Building
Subject: Pre-Bid Meeting

Project No. 2025-1019
Meeting Date: May 26, 2026
Meeting Time: 2:00 PM

Name	Representing	Office/Mobile Phone	Email	Present
Christian Wells	BPI, Inc.	(304) 760-8909	cwells@bpi-gc.com	✓ ☐ Virtual Attendance
Tom Simms	BBL Carlton, LLC	304-345-1300	tsimms@bblcarlton.com	☐ Virtual Attendance
Eric Campbell	WV Paving	304-206-5011	eric.campbell@wvpaving.com	☐ Virtual Attendance
Tanner Baxter	March-Westin Company	304-942-7096	Tanner@MarchWestin.com	☐ Virtual Attendance
IAN HADDOX	HATZEL & BUEHLER	304-563-4557	i.haddox@hatzelandbuehler.com	☐ Virtual Attendance
Jeremy Smith	UCCI	304-857-1051	JSmith@ucciwv.com	☐ Virtual Attendance
Lane Ashley	Swope Construction	304 325 8146	bid@swopeco.com	☐ Virtual Attendance
BRIAN CHRISTIAN	HATZEL & BUEHLER	304 207-4558	b.christian@hatzelandbuehler.com	☐ Virtual Attendance

Meeting Attendance Record

Airport: West Virginia International Yeager Airport (CRW)
Project: Snow Removal Equipment (SRE) Building
Subject: Pre-Bid Meeting

Project No. 2025-1019
Meeting Date: May 26, 2026
Meeting Time: 2:00 PM

Name	Representing	Office/Mobile Phone	Email	Present
Rob Whittington	ADCI	(681)317-3160	rwhittington@adci-corp.com	☐ Virtual Attendance
Andrew Hunter	CRW	304 348 8033	andrew@flycrw.com	☐ Virtual Attendance
Ryan Sparks	Progressive Electric	(971)230-8921	RSparks@weirew.com	☐ Virtual Attendance
Bill McMichen	Electronic Specialty	304-993-5250	bmcmichen@electronicspecialty.com	☐ Virtual Attendance
Vadym Karaman	Persinger and Associates	304-531-27-17	will@persingerandassociates.com	☐ Virtual Attendance
JAMES Mankin	Gonday Enterprises LLC	304-437-1874	Gonday138@gmail.com	☐ Virtual Attendance
				☐ Virtual Attendance
				☐ Virtual Attendance

Meeting Attendance Record

Airport: West Virginia International Yeager Airport (CRW)
Project: Snow Removal Equipment (SRE) Building
Subject: Pre-Bid Meeting

Project No. 2025-1019
Meeting Date: May 26, 2026
Meeting Time: 2:00 PM

Name	Representing	Office/Mobile Phone	Email	Present
Sravya Velupula	ADCI	571-635-3762	svelupula@adci-corp.com	X Virtual Attendance
Amanda Pizza	ADCI	717-309-3577	apizza@adci-corp.com	X Virtual Attendance
Rebecca McDonald	ADCI	410-300-4233	rmcdonald@adci-corp.com	X Virtual Attendance
Keith Fritz	ADCI	410-300-4233	kfritz@adci-corp.com	X Virtual Attendance
Daniel Kebede	ABSTRACT		daniel.kebede@abstract.group	X Virtual Attendance
Richard Hawksworth	TLC	425-210-8418	richard.hawksworth@tlc-eng.com	X Virtual Attendance
Jody Moore	MCS Construction Company	304-925-3190	estimating@mcsconstructionwv.com	X Virtual Attendance
Jonathan Grose	Danhill Construction	304.632.1600	Jonathan.grose@danhillconstruction.com	X Virtual Attendance

Meeting Attendance Record

Airport: West Virginia International Yeager Airport (CRW)
Project: Snow Removal Equipment (SRE) Building
Subject: Pre-Bid Meeting

Project No. 2025-1019
Meeting Date: May 26, 2026
Meeting Time: 2:00 PM

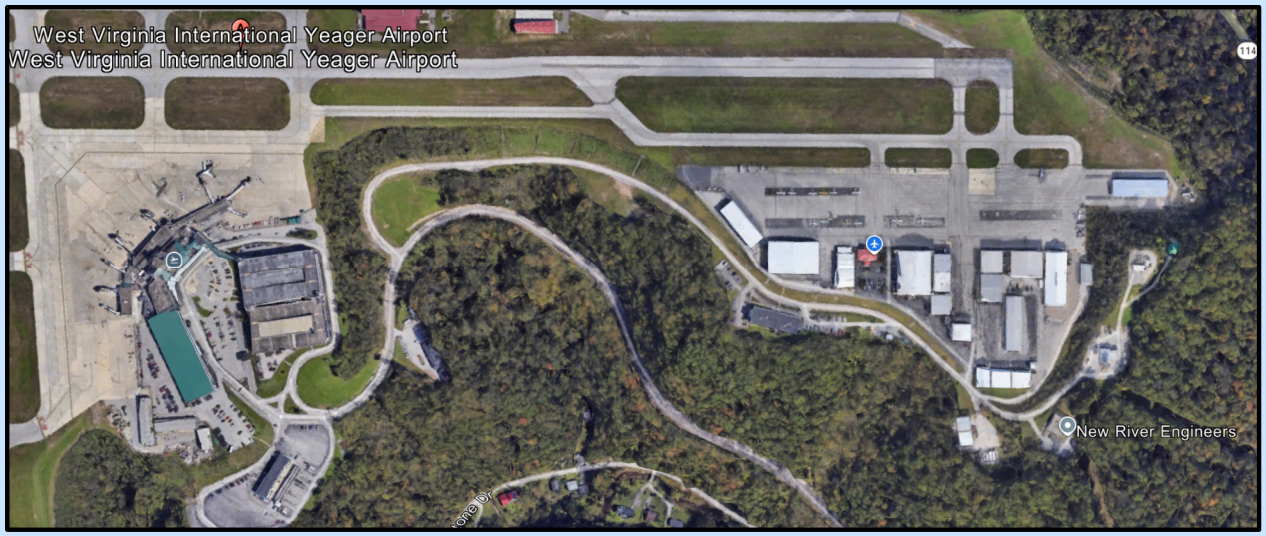
Name	Representing	Office/Mobile Phone	Email	Present
Dan Hill	Danhill Construction	304-663-5761	Dan.Hill@danhillconstruction.com	X Virtual Attendance
Keri Dunn	GRAE		kdunn@graecon.com	X Virtual Attendance
Matt Glaspey	TERRADON		matt.glaspey@terradon.com	X Virtual Attendance
Najuane Phillpotts	ABSTRACT		najuane.phillpotts@abstract.group	X Virtual Attendance
Nikolaus Marcella	Unitas Engineering	267-230-9732	NMarcella@unitasengineering.com	X Virtual Attendance
Bryan Fetty	United Construction Company		BFetty@ucciwv.com	X Virtual Attendance
Rob Lowther	United Construction Company		RLowther@ucciwv.com	X Virtual Attendance
Sebastian Montaigne	Fuog/Interbuild, Inc.	571-690-1591	sebastian@fuoginterbuildinc.com	X Virtual Attendance

Meeting Attendance Record

Airport: West Virginia International Yeager Airport (CRW)
Project: Snow Removal Equipment (SRE) Building
Subject: Pre-Bid Meeting

Project No. 2025-1019
Meeting Date: May 26, 2026
Meeting Time: 2:00 PM

Name	Representing	Office/Mobile Phone	Email	Present
Michael Snyder	Landcore Builders	304-437-9384	msnyder@landcorebuilders.com	X Virtual Attendance



West Virginia International Yeager Airport (CRW)

Snow Removal Equipment (SRE) Building
Prebid Meeting

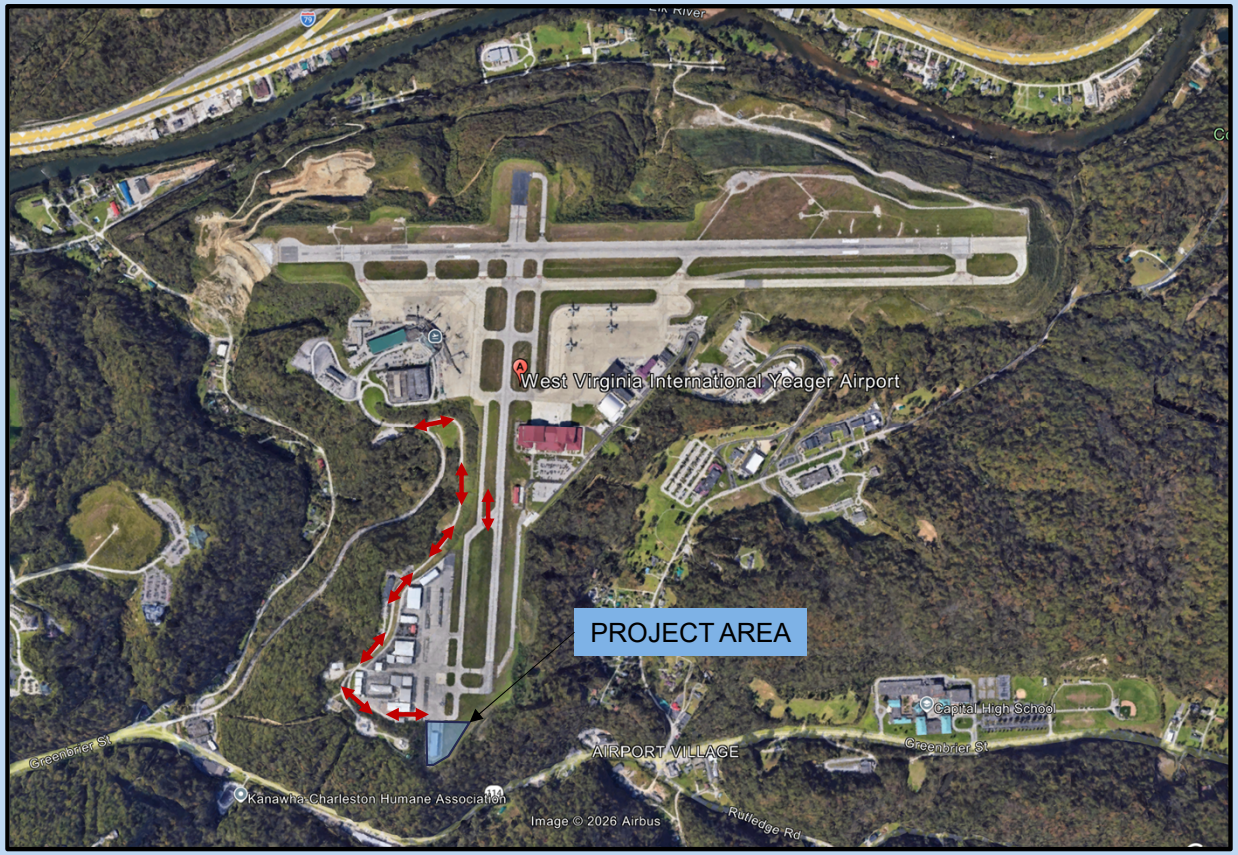
May 26, 2026 | 2:00 PM

Agenda

- Contract Requirements
- Project Overview & General Project Layout
- Scope of Work
- Building Overview
- Site Overview
- Utilities Overview
- Overall Construction Phasing/Schedule
- Maintenance of Traffic
- Add Alternative
- Questions

Contract Requirements

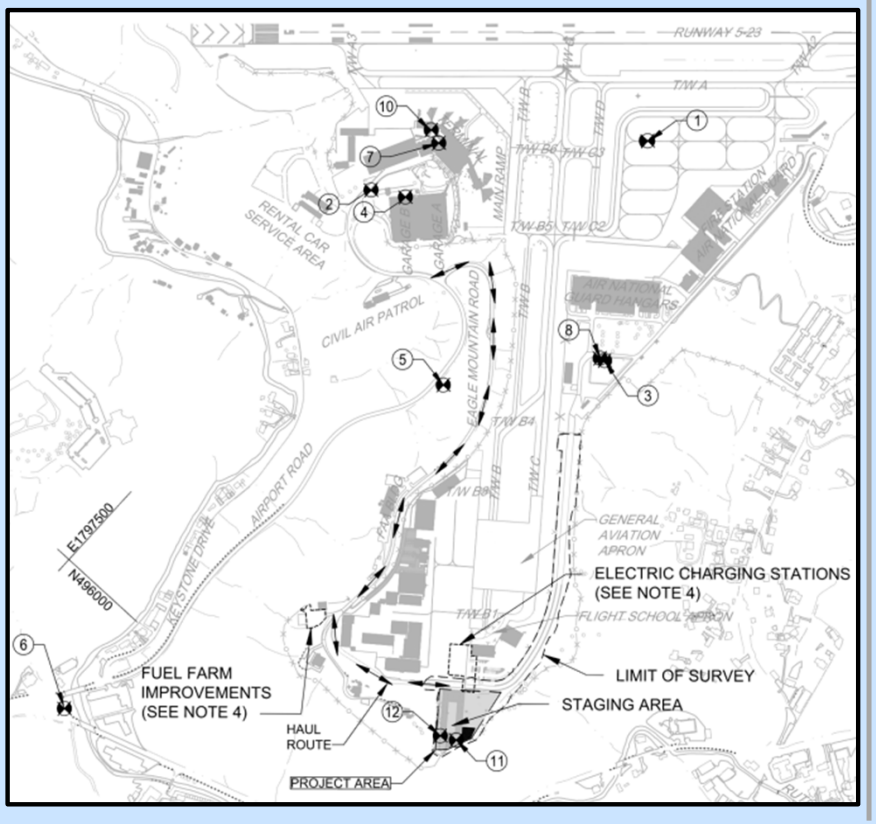
- Davis Bacon
- Bid Bond
  - 5%
- Liquidated Damages
  - $500/day
- DBE Requirement
  - 0.0%



General Project Layout

Scope of Work

- Pre-Engineered Metal Building (PEMB) with Concrete Foundations (23,560 sf)
- Site Work
- Site and Building Utilities

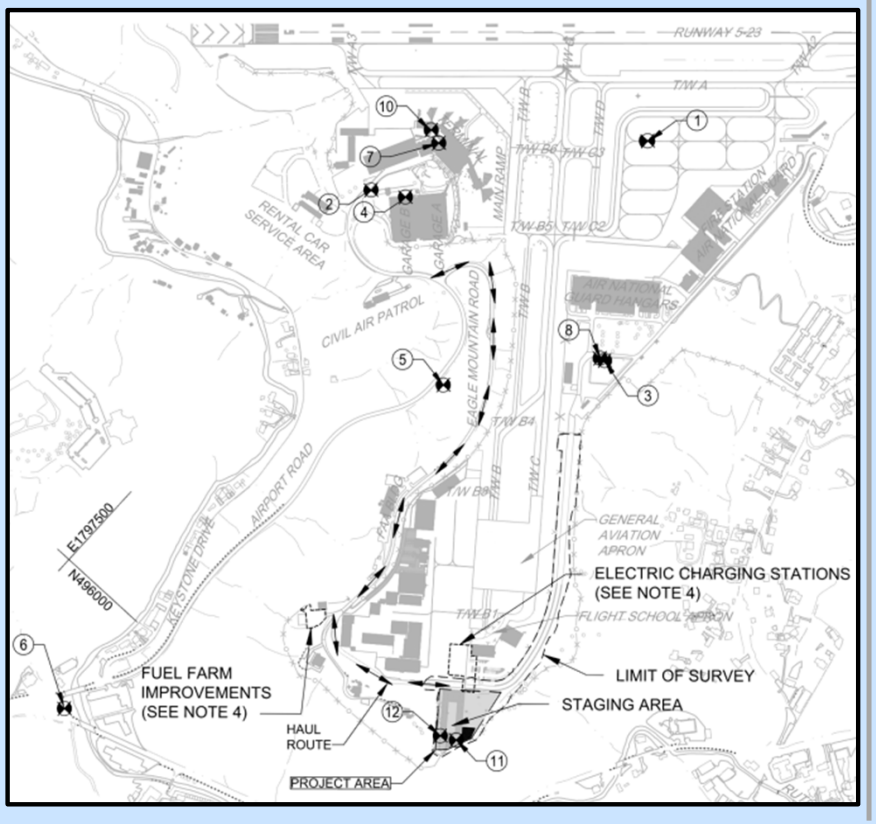


Building Overview

- MAJOR WORK ITEMS:
  - **Structure and Foundation:**
    - Pre-Engineered Metal Building
    - Concrete Foundations and Footings
  - **Building Layout:**
    - Drive aisle, Wash bay, and Maintenance bay
    - Materials storage and Vehicle storage hall
  - **Building Systems and MEP:**
    - Mechanical – Heating and Ventilation Systems (trench drains, exhaust system)
    - Electrical – Power and Interior lighting
    - Plumbing – Water and Natural Gas Supply
    - Sanitary Drainage – Interior floor drains
    - Fire Alarm and Protection – Sprinkler and Gas detection Systems

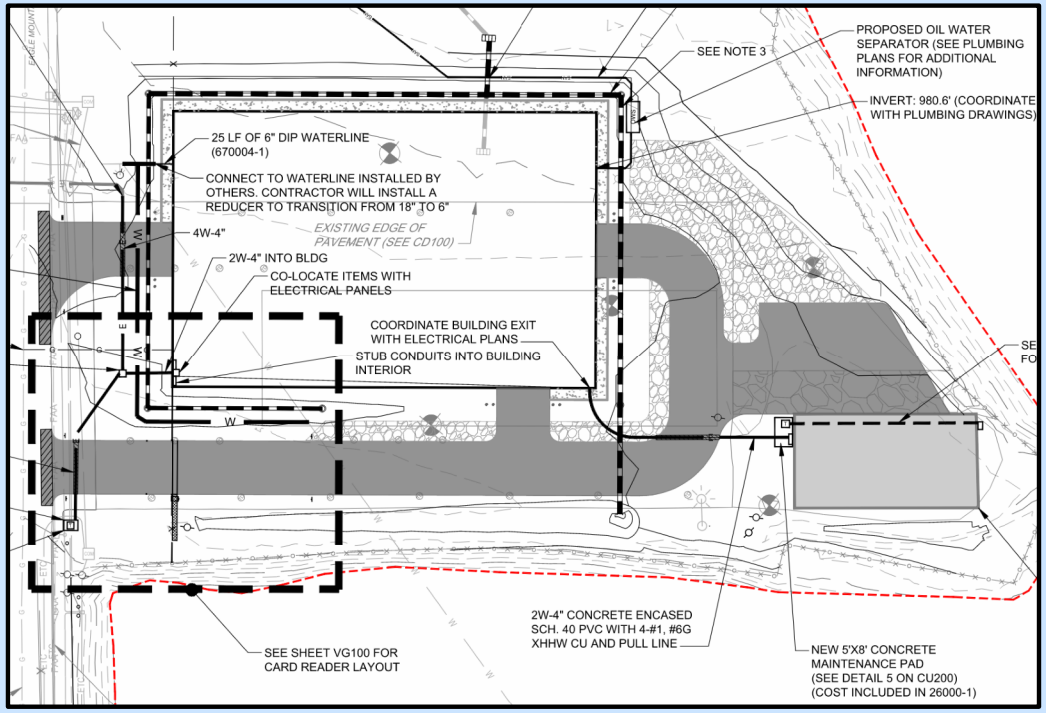
Civil Overview

- MAJOR WORK ITEMS:
  - **Site Prep:** E&S controls, Clearing, and Topsoil stripping.
  - **Earthwork:** Site excavation and Utility trenching.
  - **Utilities:** Drainage, Water, Sanitary, and Storm lines.
  - **Paving:** Asphalt access road, Concrete curb, and Gravel
  - **SRE Building:** Foundation, Interiors, MEP, and Fire Alarm and Protection systems.
  - **Security & Finishes:** Fence, Pedestrian gates, Slide gate, Signage, Seeding, and Marking.



Site Utilities

- ELECTRICAL
  - Install new PVC duct banks (concrete encased under pavement), handholes, and utility transformer
  - AEP to provide
  - Connection point to SRE Building and Electric Charing Station project
- GAS
  - Install new Natural Gas pipe
  - Connection point from SRE Building to edge of Eagle Mountain Road
- SANITARY
  - Install new Oil/Water Separator
  - Collects water from building interior floor drains
  - Connection point to existing sanitary manhole
- WATER
  - Allowance for installation
  - Demolish and install a new waterline outside the SRE Building
  - Connection point to existing waterline



Overall Construction Phasing/Schedule

Construction Duration:

- Mobilization – 60 Consecutive Calendar Days
- Total Project Duration – 240 Consecutive Calendar Days

Landside Impacts:

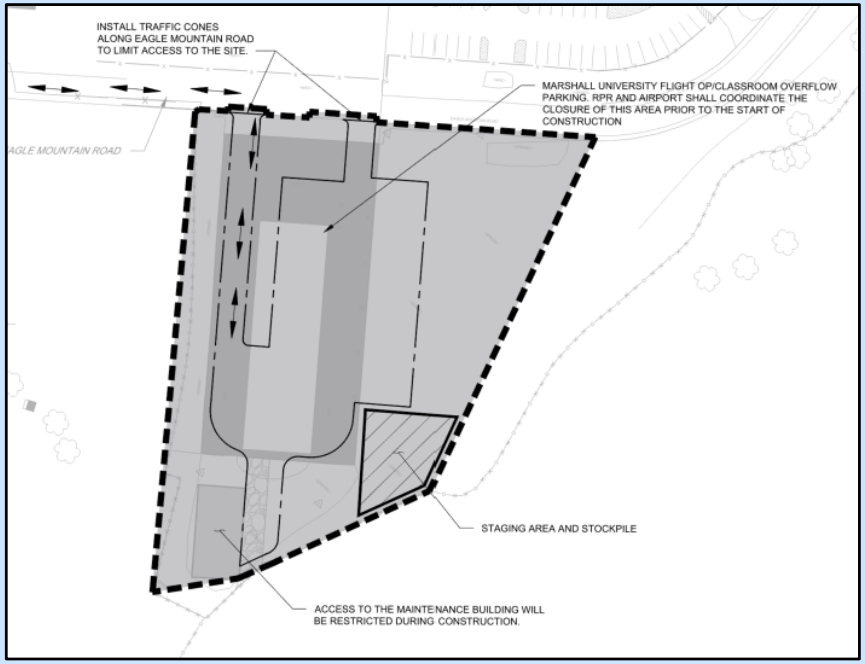
- Construction traffic on public access roads.

Airside Impacts:

- None.

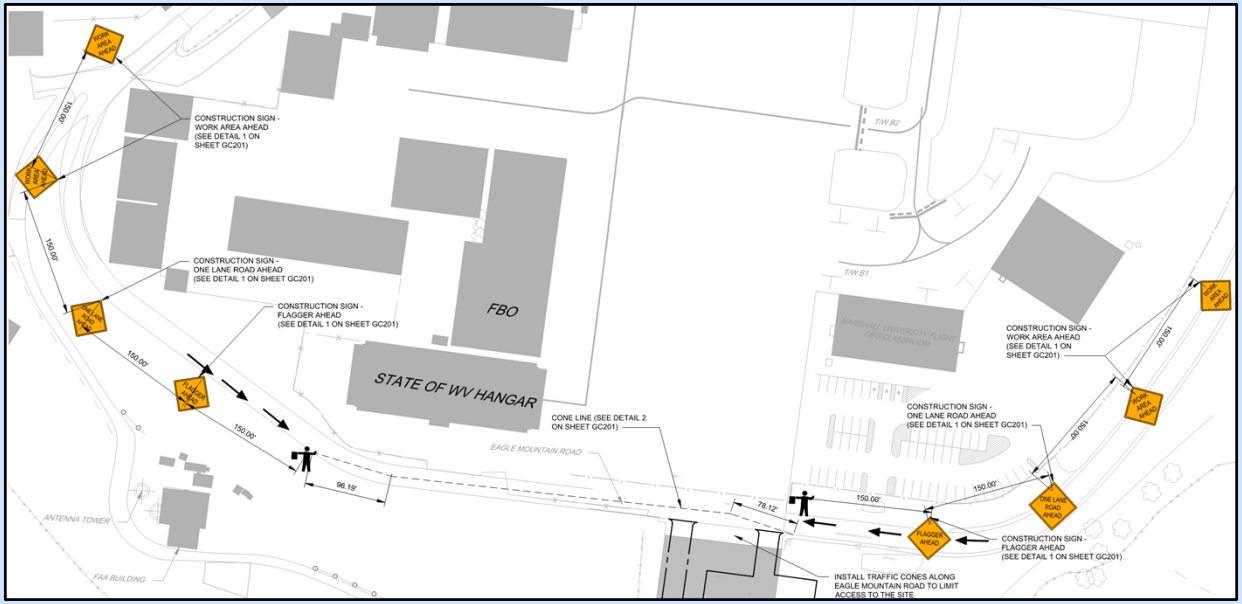
Special Requirements:

- Coordinate with CRW Maintenance to ensure no existing stockpiled airport materials remain on-site.
- The RPR will coordinate with Marshall University Flight Operations to ensure the relocation of overflow parking.



Maintenance of Traffic

- Utilized when working within 25’ of Eagle Mountain Road



Deduct-Alternates

- Deduct Alt 1
  - Deduct Translucent Clerestory panels and provide Standard Insulated Metal Panels

Schedule

- Questions Due: Wednesday June 3, 2026
- Bid Due Date: Monday June 15, 2026

Questions – Shall be Submitted electronically to RMcDonald@adci-corp.com

WEST VIRGINIA INTERNATIONAL YEAGER AIRPORT
SNOW REMOVAL EQUIPMENT (SRE) BUILDING

PRE-BID MEETING AGENDA

May 26, 2026 at 2:00 PM

1. Introductions

- **Bids due:** Monday, June 15, 2026, no later than 2:00 P.M in West Virginia Yeager International Airport, Terminal Building, Executive Conference Room, 100 Airport Road, Suite 175, Charleston, WV 25311. Bids will be opened and read aloud right after.

- **Plan Deposit:** No deposit required. Electronic bid documents available through download. Send request via email to RMcDonald@adci-corp.com.

- **Questions due:** 5:00 P.M. (EDT/EST), Wednesday, June 3, 2026. Submit all questions to RMcDonald@adci-corp.com utilizing Bid Question Form in Division 2 Page 16.

2. Scope of Work

The Base Bid includes The Base Bid encompasses the civil, environmental, structural, architectural, and MEP design and construction of a new Pre-Engineered Metal Building (PEMB) Snow Removal Equipment (SRE) facility.

The project includes Deduct Alternate 1 to delete the translucent clerestory panels and replace them with standard insulated metal panels (IMPs).

The major work components include:

- Removal of existing pavement and general site clearing
- Erosion and sediment control devices
- Installation of a new Pre-Engineered Metal Building including concrete footings
- Installation of a paved roadway (asphalt)
- Installation of new utilities
    a. Water
    b. Sanitary
    c. Electrical
    d. Telecommunication and

e. Storm drain
- New fencing and gate
- New Security Cameras and Card Readers
- Installation of bollards, sidewalk and pavement marking

3. Security Requirements

- Traffic cones along Eagle Mountain Road
- Flagger and Construction Signs

4. Construction Schedule & Phasing

- Work Area
  a. Mobilization of 60 Consecutive Calendar Days
  b. Total Project Duration of 240 Consecutive Calendar Days
  c. Coordinate with CRW Maintenance to ensure all existing stockpiled airport materials have been removed from the site.
  d. The RPR will coordinate with Marshall University Flight OPS to ensure that overflow parking is relocated.
  e. Contractor shall not expose foundation excavation to weather for more than 7 days.

5. Contract Requirements:

- **Contact duration:**
  a. Base Bid: 240 Consecutive Calendar Days
- **Wage Rates:**
  a. As the project is federally funded, Davis-Bacon prevailing wage rates apply. Division 1 of the project manual.
- **Award:**
  a. Award of contract will be based the lowest responsive and responsible bid that is in the best interest of the airport based on available funding. Priority of award is anticipated to be Base Bid.

b. The Deduct Alternate No.1 will be deducted from the project if the base bid comes in above budget and availability of funding.

- **Bonding & Insurance Requirements:**

  a. Bid Bond shall be 5% of the contractor's base bid amount.
  b. Payment/Performance Bonds will be required of the successful low bidder in the full amount of the contract.
  c. The successful bidder shall maintain and provide proof of insurance coverage for the duration of the contract that protects the Owner from any and all liabilities. The successful bidder shall provide evidence of insurance for Workers' Compensation & Employer's Liability, West Virginia Deliberate Intent Coverage (West Virginia Code Section 23-4-2, et. seq.), General Liability, automobile liability, and Umbrella / Excess coverage.

- **Liquidated Damages for Exceeding Contract Time**

  a. $500 per calendar day (or part thereof) beyond project completion.

6. Instructions to Bidders

- Bid proposals shall be labeled as follows and hand carried, during normal business hours, or sent by mail to:
  CWVRAA
  100 Airport Rd
  Suite 175
  Charleston, WV 25311
  Subject: Snow Removal Equipment (SRE) Building

- One (1) separate copy of the Form of Proposal (Division 3) will be furnished as loose pdf with final addendum for the use of the Bidder. One (1) original and one (1) copy shall be submitted with the bid. Bid proposals shall contain forms and certifications included with Division 3. The original proposal submitted must be properly signed. No proposal will be considered which is submitted otherwise than

upon the Form of Proposal or an exact copy thereof. One electronic copy (pdf) of the bid proposal shall also be submitted.

- One (1) duly executed copy of the Bid Bond (Division 4) must be submitted with the bid unless a proper guarantee check is submitted.

7. Addendum

- Addenda will be emailed to all who are registered plan holders. All Addenda sent to Bidders will become a part of the Contract Documents.
- Bidder acknowledges receipt of the Bulletins or Addendum(s) in Division 3 page 19, make sure this is completed. Bidder shall list the number and issuing dates of the Bulletins or Addendum(s) received.

8. Division 5 – Agreement

9. Division 6 Contract Bonds

- The "Contract Bond" form shall be used for all contracts. There shall be no deviation from this form.
- The Contract bond shall consist of two (2) parts. Part "A" shall be in sum equal to one hundred (100) percent of the amount of the contract awarded for faithful performance. Part "B" shall be in sum equal to one hundred (100) percent of the Amount of the contract awarded for payment of labor and material.
- The bond shall be executed by a company licensed to do business in the State in which the project is located.

10. Division 7G General Provisions

11. Division 7S Special Provisions

12. Division 8 Regulations

13. Division 9 Supplementary Conditions

14. Division 10 – Technical Specifications

All Bidders
June 8, 2026

ATTACHMENT NO. 2

SCOPE OF WORK

The proposed work will include the construction of a new 23,560 square foot Snow Removal Equipment (SRE) building. The building will be a Pre-Engineered Metal Building (PEMB), which the contractor will be responsible for acquiring, installing and coordination with other disciplines. Construction items include miscellaneous site demolition, site preparation, foundation and floor slab construction and various utility installations.

All work shall be completed in accordance with the Contract Plans and Specifications and any subsequent revisions required by the Authority. The work is being bid as a base bid with an alternate, as described below.

1. Base Bid: Removal of existing pavement/general site clearing, installation of erosion and sediment control devices, installation of a new Pre-Engineered Metal Building (PEMB), installation of utilities to support the building, installation of a paved roadway, installation of new utilities (water, sanitary, electrical, telecommunications and storm drain), installation of a new fence and gate and installation of various site elements. Coordination with utility companies for tie ins, services fees and other construction items performed by the utility company.

   For the architecture the base bid shall include all work indicated in the contract documents, featuring a pre-engineered metal building (PEMB) exterior wall assembly comprised of:

   a. Exterior panels: multi-color standard single-skin metal wall panels (as indicated on architectural elevations).
   b. Insulation system: Interior cavity insulation with a continuous fabric liner system.
   c. Daylighting: Fiberglass-Sandwich-Panel (Translucent) daylighting clerestory wall panels as detailed.

2. Add Alternative No.1: Insulated Metal Panel (IMP) Substitution
   a. Description: Net ADDITION to the Base Bid to substitute the single-skin metal panels and interior cavity liner insulation system with an Insulated Metal Panel (IMP) system.
   b. Scope of Work Includes:
      i. Provide and install continuous Insulated Metal Panels (IMPs) of the thickness and R-value required.
      ii. Include all modified structural attachments, specialized flashings, sealants, and integrated trims required for a complete, weather-tight IMP installation.
      iii. Multi-color IMP (as indicated on architectural elevations).
      iv. Fiberglass-Sandwich-Panel (Translucent) clerestory panels are to remain per Base Bid.
3. Add Alternative No. 2: Relocate existing generator to the Maintenance Building. Work will include the installation of a concrete pad, placement of the existing generator and completion of all required electrical connections.
4. Deduct Alternate No.1: Omit Fiberglass-Sandwich-Panel (Translucent) Clerestory Panels.
   a. Description: Net DEDUCTION from the Base Bid to completely eliminate the translucent clerestory wall panels.
   b. Scope of Work Includes: Infills the clerestory wall framing locations with the standard single-skin metal panels and interior insulation system defined in the Base Bid.

c. Scope of Work Omits (Deducts from Base): Completely omit the procurement and installation of the translucent clerestory panels, including specialized framing, flashings, and transitions required for the clerestory system.
d. We anticipate this to be a negative value in the bid form as this will be a savings to the project. For example, if the deduct alternate would result in a $10 savings to the project then the bid forms would say -$10.

5. Deduct Alternative No. 2: Single-Color Wall Panel Economy.
    a. Description: Net DEDUCTION from the Base Bid to utilize a single standard manufacturer's color for all exterior metal wall panels.
    b. Scope of Work Includes: All structural and insulation components of the Base Bid remain unchanged.
    c. Scope of Work Omits (Deducts from Base): Omit the multi-color panel layout, premium color choices, and associated field-transition trims. All exterior single-skin metal panels shall be a single, standard manufacturer color selected by the Owner.

Award:
Award of contract will be based the lowest responsive and responsible bid that is in the best interest of the airport based on available funding. Add Alternates and Deduct Alternates will be selected based on the available funding.

Contract Duration:
240 Consecutive Calendar Days

Damages:
Refer to General Provisions, Section 80 for Liquidated Damages

This summation is for informational purposes only and is not part of the Contract Documents. It is the responsibility of the Contractor to verify and supplement the information contained herein by a thorough examination of the Contract Documents.

DIVISION 3 – PROPOSAL

PROPOSAL OF: _____

(CONTRACTOR)

FOR Snow Removal Equipment (SRE) Building

TO CWVRAA

This proposal is submitted in accordance with your advertisement inviting Bids to be received for the Snow Removal Equipment (SRE) Building project; by the CWVRAA until June 15, 2026 2:00pm at West Virginia International Yeager Airport. Proposals will be publicly opened at immediately thereafter at the Executive Conference Room, located at 100 Airport Road, Suite 175, Charleston, WV 25311.

Having carefully examined the Site, the Contract Documents, comprising the Invitation to Bid, Minimum Wage Rates, Instructions to Bidders, Proposal, Bid Bond, Agreement, Contract Bond, General Provisions, Regulations, Supplementary Conditions, Plans, Detailed Specifications and all Documents bound therewith, together with all Addendum(s) or Bulletins thereto, all as prepared by ADCI, Inc. and being familiar with the various conditions affecting the work as set forth in Section 20 of the General Provisions, the undersigned herein agrees to furnish all material, perform all labor and do all things necessary to erect and complete in a workmanlike manner the work called for in Snow Removal Equipment (SRE) Building project; in accordance with said Contract Documents to the satisfaction and acceptance of OWNER and ENGINEER at the unit prices provided on the Proposal Unit Price Form for the sum of:

TOTAL BASE BID (Total from Proposal Tabulation Sheets)

_____

(Written)

($_____)

(figures)

DEDUCT ALTERNATE NO. 1 (Total from Proposal Tabulation Sheets)

_____

(Written)

($_____)

(figures)

DEDUCT ALTERNATE NO. 2 (Total from Proposal Tabulation Sheets)

_____

(Written)

($_____)

(figures)

ADD ALTERNATE NO. 1 (Total from Proposal Tabulation Sheets)

_____

(Written)

($_____)

(figures)

ADD ALTERNATE NO. 2 (Total from Proposal Tabulation Sheets)

_____

(Written)

($_____)

(figures)

This Proposal is made with the definite understanding that it will not be withdrawn for a period of 120 days after the date set for the opening of bids.
The undersigned hereby certifies that this Proposal is genuine and not a sham, collusive or fraudulent or made in the interest of or in behalf of any person, firm or corporation not herein named; and that the undersigned has not, directly or indirectly, solicited any bidder to submit a sham bid, or any prospective bidder not to bid and that the undersigned has not, in any manner, sought by collusion to secure for himself any advantage over any other bidder.

This Proposal is submitted with the understanding that the contract shall be completed within a maximum of 240 calendar days for base bid and all deduct alternates after the date which **CONTRACTOR** is to start to work as provided in the Contract Documents and that the time of completion of the work shall be considered as of the essence of this contract.

It is understood that **OWNER** reserves the right to reject any or all Proposals, or any part thereof or items therein, and to waive any defects or irregularities in Proposals. It is further understood that competency and responsibility of bidders and their workplan will receive consideration before the award of the contract.

TO BE FILLED IN IF BULLETINS OR ADDENDUM (S) ARE ISSUED

Bidder acknowledges receipt of the Bulletins or Addendum(s) hereinafter enumerated which have been issued during the period of bidding and agrees that said bulletins shall become part of the construction contract. Bidder shall list below the number and issuing dates of the Bulletins or Addendum(s) received:

Bulletins or Addendum(s)	**Issuing Date**
_____	_____
_____	_____
_____	_____

Accompanying this Proposal is a _____

in the amount _____ ($_____) made payable to **OWNER** which it is agreed will be forfeited as liquidated damages if the undersigned fails to execute the Agreement and furnish a Contract bond and evidence of insurance, as specified, after notification of the Award of the Contract is delivered via email or post to him/her at the official address of the undersigned given below. Said bid security shall be equal to at least 5% (percent) of the total Base Bid.

The undersigned Bidder also acknowledges that the quantities of work shown herein are approximate only and are given as a basis for comparison of bids and the award of the Contract. **OWNER** reserves and shall have the right to make such changes from time to time in the plans and the work as may be considered necessary to complete the proposed construction. It is further understood that the quantities of items may be increased or decreased to any amount without re-negotiation of unit prices.

The undersigned also agrees to do any extra work, not covered by the above schedule of prices, which may be ordered by OWNER, and to accept as full compensation therefore such prices as may be agreed upon in writing by OWNER and CONTRACTOR. It is further understood that Bidder shall comply with the applicable requirements of Part 152 of the Federal Aviation Regulations as set forth in the Regulations Division of the Project Manual.

The undersigned further agrees that he/she possesses the necessary skill required to determine the adequacy of OWNER'S drawings and specifications for the purpose of arriving at the contract price, that he/she has exercised this skill, and that he/she finds them fit and sufficient for the purpose intended and free from ambiguities.

By submitting a bid/proposal under this solicitation, the offeror certifies that he/she has reviewed the Regulations included in Division 8 of this Project Manual and that he/she and all proposed subcontractors meet the requirements of those Provisions.

---------- (If an Individual) ----------

WITNESS **BY**

_____ _____

Individual

(SEAL)

Trading and doing business as

_____

Address _____

Email: _____

(If an Individual)

*_____is an (individual, partnership) trading under a fictitious name and (has, has not) registered under the Fictitious Name laws of the state in which the project is located.

---------- (If a Partnership) ----------

_____ is a co-partnership trading and doing business under this firm name

with _____ as partners.

WITNESS	**PARTNER**
_____	_____(SEAL)
_____	_____(SEAL)
_____	_____(SEAL)
_____	_____(SEAL)

Business Address _____

(If a partnership)

---------- **(If a Corporation)** ----------

By _____

ATTEST Name of Corporation

_____ _____

Secretary President

CORPORATE SEAL) _____

Signature

Business Address _____

(If a Corporation)

Incorporated under the laws of the State / Commonwealth of _____ and (has, has not) been granted certificate of Authority to do business in the jurisdiction in which the project is located as required by law.

BASE BID						
BID ITEM NO.	**PAY ITEM NO.**	**DESCRIPTION**	**UNIT**	**APPROX. QUANTITY**	**UNIT PRICE WRITTEN**	**TOTAL PRICE**
1	133419-1	PRE-ENGINEERED METAL BUILDING	LS	1	$	$
2	033000-1	FOUNDATIONS	LS	1	$	$
3	081113-1	INTERIOR CONSTRUCTION (PARTITIONS, CEILINGS, FINISHES, ETC)	LS	1	$	$
4	210000-1	FIRE PROTECTION SYSTEM	LS	1	$	$
5	220000-1	PLUMBING	LS	1	$	$
6	230000-1	MECHANICAL	LS	1	$	$
7	260000-1	ELECTRICAL	LS	1	$	$
8	280000-1	FIRE ALARM	LS	1	$	$
9	101423-1	EQUIPMENT AND SPECIALTY SYSTEMS	LS	1	$	$
10	207001-1	UNCLASSIFIED EXCAVATION	CY	1,180	$	$
11	211001-1	UNCLASSIFIED BORROW EXCAVATION	CY	2,900	$	$
12	639001-1	CONSTRUCTION LAYOUT	LS	1	$	$
13	P-101-5.1	PAVEMENT REMOVAL (ASPHALT AND CONCRETE)	SY	4,870	$	$
14	P-101-5.2	PIPE REMOVAL	LF	55	$	$
15	P-101-5.3	TIE DOWN REMOVAL	EA	22	$	$

BASE BID						
BID ITEM NO.	**PAY ITEM NO.**	**DESCRIPTION**	**UNIT**	**APPROX. QUANTITY**	**UNIT PRICE WRITTEN**	**TOTAL PRICE**
16	342100-1	BOLLARDS	EA	12	$	$
17	307001-1	6” CRUSHED AGGREGATE BASE COURSE CLASS 3	SY	2,150	$	$
18	311001-1	6” NO. 2 CRUSHED AGGREGATE BASE	SY	710	$	$
19	401001-1	SUPER PAVE ASPHALT BASE COURSE 19MM, TABLE 401.4.2B	TON	790	$	$
20	401002-1	SUPER PAVE ASPHALT WEARING COURSE 12.5MM, TABLE 401.4.2B	TON	340	$	$
21	408001-1	ASPHALT TACK COAT	GAL	640	$	$
22	604052-1	18” HIGH DENSITY POLYETHYLENE (HDPE) PIPE	LF	230	$	$
23	604052-2	24” HIGH DENSITY POLYETHYLENE (HDPE) PIPE	LF	420	$	$
24	604071-1	24” HEADWALL	EA	1	$	$
25	605001-1	INLET DRAINAGE STRUCTURE	EA	5	$	$
26	605001-2	BAFFLE WALL INLET	EA	1	$	$
27	608001-1	8’ RIGHT-OF-WAY FENCE, CHAIN LINK	LF	335	$	$
28	608004-1	PEDESTRIAN GATE	EA	2	$	$
29	608005-1	VEHICULAR GATE, MOTORIZED SLIDE GATE, GATE OPERATOR AND ACCESSORIES	EA	1	$	$
30	609001-1	CONCRETE SIDEWALK	SY	220	$	$

BASE BID						
BID ITEM NO.	**PAY ITEM NO.**	**DESCRIPTION**	**UNIT**	**APPROX. QUANTITY**	**UNIT PRICE WRITTEN**	**TOTAL PRICE**
31	610001-1	PLAIN CONCRETE CURBING	LF	420	$	$
32	642000-1	EROSION EEL/EROSION EEL DITCH CHECK	LF	60	$	$
33	642000-2	STABILIZED CONSTRUCTION ENTRANCE	SF	1200	$	$
34	642000-3	TEMPORARY INLET PROTECTION	EA	3	$	$
35	642000-4	BELTED SILT FENCE OR SUPER SILT FENCE	LF	475	$	$
36	642000-5	SLOPE MATTING	SF	10,250	$	$
37	642000-6	STONE RING	EA	1	$	$
38	642000-7	CONCRETE WASHOUT	EA	1	$	$
39	651001-1	FURNISHING AND PLACING TOPSOIL (INCLUDING SEEDING)	CY	400	$	$
40	657019-1	STOP SIGN INCLUDING POST AND SHEET METAL	EA	6	$	$
41	663005-1	PAVEMENT MARKING	SF	410	$	$
42	670004-1	6” DUCTILE IRON PIPE, TYPE II, CLASS 350 WATERLINE	LF	25	$	$
43	670007-1	PLASTIC PIPE FOR NATURAL GAS	LF	55	$	$
44	675008-1	6” CAST IRON SEWERLINE WITH HUB&SPIGOT CONNECTIONS	LF	320	$	$
45	L-108-5.1	1-1/C NO. 6 AWG BARE COPPER COUNTERPOISE WIRE IN TRENCH, INCLUDING 3/4" X 10' GROUND RODS	LF	280	$	$

BASE BID						
BID ITEM NO.	**PAY ITEM NO.**	**DESCRIPTION**	**UNIT**	**APPROX. QUANTITY**	**UNIT PRICE WRITTEN**	**TOTAL PRICE**
46	L-110-5.1	2 WAY-4" CONCRETE ENCASED PVC DUCTBANK IN PAVED AREAS	LF	40	$	$
47	L-110-5.2	2 WAY-4" PVC DUCTBANK IN UNPAVED AREAS	LF	100	$	$
48	L-110-5.3	4 WAY-4" CONCRETE ENCASED PVC DUCTBANK IN PAVED AREAS	LF	30	$	$
49	L-110-5.4	4 WAY-4" PVC DUCTBANK IN UNPAVED AREAS	LF	150	$	$
50	L-115-5.1	3X3X3 HANDHOLE	EA	1	$	$
51	260519-5.1	3-1/C NO. 1/0 AWG, 600V, XHHW COPPER CABLE AND 1/C NO.6 AWG, 600V XHHW GROUND IN CONDUIT	LF	350	$	$
52	260519-5.2	2 SETS 4-1/C 3/0 AWG, 600V, XHHW COPPER CABLE AND 1/C NO.2 AWG, 600V XHHW GROUND IN CONDUIT	LF	110	$	$
53	281300-1	CARD READER AND ACCESSORIES	EA	2	$	$
54	X-2-1	UTILITY MANAGEMENT AND CONSTRUCTION ALLOWANCE (WATER)	ALLOW	1	$200,000.00	$
55	X-2-2	UTILITY MANAGEMENT AND CONSTRUCTION ALLOWANCE (ELECTRICAL)	ALLOW	1	$60,000.00	$
SUBTOTAL A (Total of Bid Item No. 1 through 55)		$				
56	636001-1	TEMPORARY CONSTRUCTION ITEMS (SHALL NOT EXCEED 5% OF SUBTOTAL A)	LS	1	$	$

BASE BID						
BID ITEM NO.	**PAY ITEM NO.**	**DESCRIPTION**	**UNIT**	**APPROX. QUANTITY**	**UNIT PRICE WRITTEN**	**TOTAL PRICE**
SUBTOTAL B (Total of Subtotal A through 56)		$				
57	204001-1	MOBILIZATION/DEMOBILIZATION (SHALL NOT EXCEED 5% OF SUBTOTAL B)	LS	1	$	$
SUBTOTAL C (Total of Subtotal A through 57)		$				
58	X-1-5.1	SECURITY REQUIREMENTS DURING CONSTRUCTION (SHALL NOT EXCEED 3% OF SUBTOTAL C)	LS	1	$	$
BASE BID TOTAL (Subtotal C through 58)		_____Dollars				$

DEDUCT ALTERNATE NO. 1						
BID ITEM NO.	**PAY ITEM NO.**	**DESCRIPTION**	**UNIT**	**APPROX. QUANTITY**	**UNIT PRICE WRITTEN**	**TOTAL PRICE**
1A	133419-2	DEDUCT TRANSLUCENT CLERESTORY PANELS AND PROVIDE STANDARD INSULATED METAL PANELS	LS	1		
SUBTOTAL A (Total of Item No. 1A)		$				
2A	636001-1	TEMPORARY CONSTRUCTION ITEMS (SHALL NOT EXCEED 5% OF SUBTOTAL A)	LS	1	$	$
SUBTOTAL B (Total of Subtotal A through 2A)		$				
3A	204001-1	MOBILIZATION/DEMOBILIZATION (SHALL NOT EXCEED 5% OF SUBTOTAL B)	LS	1	$	$
SUBTOTAL C (Total of Subtotal B through 3A)		$				
4A	X-1-5.1	SECURITY REQUIREMENTS DURING CONSTRUCTION (SHALL NOT EXCEED 3% OF SUBTOTAL C)	LS	1	$	$
DEDUCT ALTERNATE NO. 1 TOTAL (Subtotal C through 4A)		_____Dollars				$

DEDUCT ALTERNATE NO. 2						
BID ITEM NO.	**PAY ITEM NO.**	**DESCRIPTION**	**UNIT**	**APPROX. QUANTITY**	**UNIT PRICE WRITTEN**	**TOTAL PRICE**
1B	133419-2	OMIT THE MULTI-COLOR PANEL LAYOUT, PREMIUM COLOR CHOICES AND ASSOCIATED FIELD TRANSITION TRIMS.	LS	1		
SUBTOTAL A (Total of Item No. 1B)		$				
2B	636001-1	TEMPORARY CONSTRUCTION ITEMS (SHALL NOT EXCEED 5% OF SUBTOTAL A)	LS	1	$	$
SUBTOTAL B (Total of Subtotal A through 2B)		$				
3B	204001-1	MOBILIZATION/DEMOBILIZATION (SHALL NOT EXCEED 5% OF SUBTOTAL B)	LS	1	$	$
SUBTOTAL C (Total of Subtotal B through B)		$				
4B	X-1-5.1	SECURITY REQUIREMENTS DURING CONSTRUCTION (SHALL NOT EXCEED 3% OF SUBTOTAL C)	LS	1	$	$
DEDUCT ALTERNATE NO. 1 TOTAL (Subtotal C through 4B)		_____Dollars				$

ADD ALTERNATE NO. 1						
BID ITEM NO.	**PAY ITEM NO.**	**DESCRIPTION**	**UNIT**	**APPROX. QUANTITY**	**UNIT PRICE WRITTEN**	**TOTAL PRICE**
1C	133419-2	SUBSTITUDE THE SINGLE-SKIN METAL PANELS AND INTERIOR CAVITY LINEAR INSULATION SYSTEM WITH AN INSULATED METAL PANELS (IMPs) SYSTEM	LS	1		
SUBTOTAL A (Total of Item No. 1C)		$				
2C	636001-1	TEMPORARY CONSTRUCTION ITEMS (SHALL NOT EXCEED 5% OF SUBTOTAL A)	LS	1	$	$
SUBTOTAL B (Total of Subtotal A through 2C)		$				
3C	204001-1	MOBILIZATION/DEMOBILIZATION (SHALL NOT EXCEED 5% OF SUBTOTAL B)	LS	1	$	$
SUBTOTAL C (Total of Subtotal B through 3C)		$				
4C	X-1-5.1	SECURITY REQUIREMENTS DURING CONSTRUCTION (SHALL NOT EXCEED 3% OF SUBTOTAL C)	LS	1	$	$
DEDUCT ALTERNATE NO. 1 TOTAL (Subtotal C through 4C)		_____Dollars				$

ADD ALTERNATE NO. 2						
BID ITEM NO.	**PAY ITEM NO.**	**DESCRIPTION**	**UNIT**	**APPROX. QUANTITY**	**UNIT PRICE WRITTEN**	**TOTAL PRICE**
1D		RELOCATE EXISTING GENERATOR TO THE MAINTENANCE BUILDING, INSTALL A CONCRETE PAD AND COMPLETE ALL ELECTRICAL CONNECTIONS	LS	1		
SUBTOTAL A (Total of Item No. 1D)		$				
2D	636001-1	TEMPORARY CONSTRUCTION ITEMS (SHALL NOT EXCEED 5% OF SUBTOTAL A)	LS	1	$	$
SUBTOTAL B (Total of Subtotal A through 2D)		$				
3D	204001-1	MOBILIZATION/DEMOBILIZATION (SHALL NOT EXCEED 5% OF SUBTOTAL B)	LS	1	$	$
SUBTOTAL C (Total of Subtotal B through 3D)		$				
4D	X-1-5.1	SECURITY REQUIREMENTS DURING CONSTRUCTION (SHALL NOT EXCEED 3% OF SUBTOTAL C)	LS	1	$	$
DEDUCT ALTERNATE NO. 1 TOTAL (Subtotal C through 4D)		_____Dollars				$

PROPOSAL FORM SUMMARY – SNOW REMOVAL EQUIPMENT (SRE) BUILDING

GRAND TOTAL OF ALL BASE BID ITEMS

_____

(Written in Numerals)

_____

(Written in Words)

DEDUCT ALTERNATE 1 BID ITEMS

_____

(Written in Numerals)

_____

(Written in Words)

DEDUCT ALTERNATE 2 BID ITEMS

_____

(Written in Numerals)

_____

(Written in Words)

ADD ALTERNATE 1 BID ITEMS

_____

(Written in Numerals)

_____

(Written in Words)

ADD ALTERNATE 2 BID ITEMS

_____

(Written in Numerals)

_____

(Written in Words)

CONTRACTOR:

_____

By: _____

(Signature of Authorized Representative)

All Bidders
June 8, 2026

ATTACHMENT NO. 3

Item X-2 MISCELLANEOUS WORK ITEMS

DESCRIPTION

1.1 This section shall consist of items required by the Contract Documents for Miscellaneous Work Items.

REQUIREMENTS

2.1 BUILDING PERMITS

a. Building permits will be the responsibility of the contractor. The contractor shall coordinate with the airport for their assistance in obtaining the building permits.

2.2 UTILITY ALLOWANCE

a. WATER

i. Coordination with West Virginia America Water (WVAW)

ii. WVAW will be responsible for relocating the pipe from the existing hydrant to the connection tie in point. They will provide a Tee connection for the building tie in. The cost of the WVAW work will be the contractor's responsibility.

iii. WVAW will inspect the waterline installed by the contractor from the connection point to the building. The contractor shall schedule the inspection.

iv. The contractor will be responsible for the tapping application, tapping fees inspection fees and fees to establish service.

b. ELECTRICAL

i. Coordination with Appalachian Power (AEP).

1. AEP will begin construction a minimum of 60 days following receipt of payment for inspections, equipment and construction.

ii. The contractor shall pay all fees to establish new electrical service, inspections and construction of AEP items.

iii. The contractor will install all ductbanks, the concrete pad for the transformer and long sweep 90 degree belows by the primary enclosure

1. AEP will provide the requirements for the concrete pad

2. Ductbank installation will include trenching and backfilling.

iv. AEP will install the transformer, meter, cable and other items as discussed and shown on the plans.

1. AEP will pull cables including between the SRE & Maintenance Building.

Utility contact information is shown on the plans.

METHOD OF MEASUREMENT

No direct measurement will be made for utility allowance as this payment will be made as an allowance.

No direct measurement will be made for the building permit and related items.

BASIS OF PAYMENT

No direct measurement will be made for utility allowance as this payment will be made as an allowance.

No direct measurement will be made for the building permit and related items.

Payment will be made under:

Item X-2-1 Utility Management and Construction Allowance (Water)– per allowance

Item X-2-2 Utility Management and Construction Allowance (Electrical)– per allowance

Item WV-636 TEMPORARY CONSTRUCTION ITEMS

DESCRIPTION/MATERIALS

1.1 Description and Materials shall meet the requirements of The Standards Specifications Roads and Bridges of the West Virginia Department of Transportation Division of Highways (2023 Edition).

1.2 These project specifications reference and incorporate the applicable State Highway Specifications. Unless specifically modified herein or shown otherwise in the Contract Documents, all materials, workmanship, construction methods, tolerances, submittals, certifications, testing, inspection, quality control, quality assurance, measurement, and payment requirements shall comply with the referenced State Highway Specifications. The Contractor is responsible for complying with the full requirements of the referenced specifications, whether or not repeated herein. Where the Contract Documents are more stringent, the more stringent requirement shall govern. Method of measurement and basis of payment as outlined herein shall govern in the event of a discrepancy.

1.3 **Construction Cones.** Construction Cones shall meet the requirements shown on the plans.

1.4 **Maintenance of Traffic**. The maintenance of traffic will include construction signs, cones and flaggers. All signs and cones shall meet MUTCD requirements.

1.5 Utility Coordination

Sanitary

a. Contractor shall coordination with the Charleston Sanitary Board (CSB). Utility contact information is shown on the plans.

b. There are no work and no fees anticipated.

c. CSB will inspect the Oil/Water Separator prior to backfilling. Contractor shall schedule the inspection.

Gas

d. Contractor will be responsible for coordination with Mountaineer Gas. Utility contact information is shown on the plans.

e. Mountaineer Gas will install the gas line from the edge of the roadway to the tie in point and complete the tie in work. This work shall be at no cost to the contractor.

f. Contractor is responsible for bringing the gas line from the building to the edge of the roadway.

g. Contractor shall pay all fees to establish new service

h. Mountaineer Gas will inspect the portion of gas line installed by the contractor. The contractor shall schedule the

Utility contact information is shown on the plans.

CONSTRUCTION METHODS

1.6 Construction Methods shall meet the requirements of The Standards Specifications Roads and Bridges of the West Virginia Department of Transportation Division of Highways (2023 Edition).

METHOD OF MEASUREMENT

4.1 No separate measurements will be made for Temporary Construction Items. Temporary construction items will be paid for on a lump sum basis.

BASIS OF PAYMENT

5.1 "Temporary Construction Items" will be made per lump sum bid price. This payment shall be full compensation for all costs associated with the temporary construction items identified in this Specification and shall include all labor, materials, training, and equipment required to complete the specified work.

5.2 The first payment on the lump sum item will be thirty percent (30%) of the bid price for that item and shall be included in the first progress estimate following the initiation of construction work. The remaining seventy percent (70%) of the lump sum item price will be included as installments in subsequent progress estimates as the project progresses. The total lump sum cost for Temporary Construction Items shall not exceed 5% of the subtotal indicated in the project bid forms. Any costs in excess of 5% shall be spread out evenly over unit priced items.

5.3 Payment will be made under:

Item 636001-1	Temporary Construction Items – per lump sum

END OF ITEM WV-636

Item WV-642 TEMPORARY POLLUTION CONTROL

DESCRIPTION/MATERIALS

1.1 Description and Materials shall meet the requirements of The Standards Specifications Roads and Bridges of the West Virginia Department of Transportation Division of Highways (2023 Edition).

1.2 These project specifications reference and incorporate the applicable State Highway Specifications. Unless specifically modified herein or shown otherwise in the Contract Documents, all materials, workmanship, construction methods, tolerances, submittals, certifications, testing, inspection, quality control, quality assurance, measurement, and payment requirements shall comply with the referenced State Highway Specifications. The Contractor is responsible for complying with the full requirements of the referenced specifications, whether or not repeated herein. Where the Contract Documents are more stringent, the more stringent requirement shall govern. Method of measurement and basis of payment as outlined herein shall govern in the event of a discrepancy.

1.3 All materials shall meet the requirements of Section 642.2.

CONSTRUCTION METHODS

2.1 Construction Methods shall meet the requirements of The Standards Specifications Roads and Bridges of the West Virginia Department of Transportation Division of Highways (2023 Edition).

2.2 Construction Methods shall conform to Section 642.3 through 642.6.

METHOD OF MEASUREMENT

3.1 Temporary erosion and pollution control work required will be performed as scheduled or as directed by the RPR. Completed and accepted work will be measured as follows:

A. Erosion Eel/Erosion eel ditch check and Belted Silt Fence/Super Silt Fence will be measured per linear foot, including necessary replacement as directed by the RPR.

B. Stabilized Construction Entrance, Temporary Inlet Protection, Stone Ring and Concrete Washout will be measured per each including necessary replacement as directed by the RPR.

C. Slope matting will be measured per square foot including necessary replacement as directed by the RPR.

3.2 Maintenance of all controls shall be considered incidental to the cost of the specific control device.

BASIS OF PAYMENT

4.1 Payment for erosion eel/erosion eel ditch check will be made at the contract unit price per linear foot. This payment shall be full compensation for furnishing all materials and for all preparations and placing of materials and shall include all labor, materials, maintenance, equipment and incidentals required to complete the work specified.

4.2 Payment for Stabilized Construction Entrance will be made at the contract unit price per each. This payment shall be full compensation for furnishing all materials and for all preparations and placing of materials and shall include all labor, materials, maintenance, equipment and incidentals required to complete the work specified.

4.3 Payment for Temporary Inlet Protection will be made at the contract unit price per each. This payment shall be full compensation for furnishing all materials and for all preparations and placing of materials and shall include all labor, materials, maintenance, equipment and incidentals required to complete the work specified.

4.4 Payment for Belted Silt Fence or Super Silt Fence will be made at the contract unit price per linear foot. This payment shall be full compensation for furnishing all materials and for all preparations and placing of materials and shall include all labor, materials, maintenance, equipment and incidentals required to complete the work specified.

4.5 Payment for Slope Matting will be made at the contract unit price per square foot. This payment shall be full compensation for furnishing all materials and for all preparations and placing of materials and shall include all labor, materials, maintenance, equipment and incidentals required to complete the work specified.

4.6 Payment for Stone Ring will be made at the contract unit price per each. This payment shall be full compensation for furnishing all materials and for all preparations and placing of materials and shall include all labor, materials, maintenance, equipment and incidentals required to complete the work specified.

4.7 Payment for Concrete Washout will be made at the contract unit price per each. This payment shall be full compensation for furnishing all materials and for all preparations and placing of materials and shall include all labor, materials, maintenance, equipment and incidentals required to complete the work specified.

4.8 Payment will be made under:

Item 642001-1	18 inch Silt Sock – per linear foot
Item 642001-2	Stabilized Construction Entrance – per each
Item 642001-3	Temporary Inlet Protection – per each
Item 642001-4	Belted Silt Fence or Super Silt Fence – per linear foot
Item 642001-5	Slope Matting – per square foot
Item 642001-6	Stone Ring – per each
Item 642001-7	Concrete Washout – per each

END OF ITEM WV-642

SECTION 012300
ALTERNATES

PART 1 GENERAL

1.01 RELATED DOCUMENTS

A. The Contract Documents, including but not limited to, the Drawings and Individual Specification Sections, apply to this Section.

1.02 SUMMARY

A. Section includes administrative and procedural requirements for alternates.

1.03 DEFINITIONS

A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Documents that may be added to or deducted from the base bid amount if the Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.

1. Alternates described in this Section are part of the Work only if enumerated in the Contract.
2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.04 PROCEDURES

A. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project. 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.

B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.

C. Execute accepted alternates under the same conditions as other Work of the Contract.

D. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 SCHEDULE OF ALTERNATES

A. **BASE BID**: The base bid shall include all work indicated in the contract documents, featuring a pre-engineered metal building (PEMB) exterior wall assembly comprised of:
1. Exterior panels: multi-color standard single-skin metal wall panels (as indicated on architectural elevations).
2. Insulation system: Interior cavity insulation with a continuous fabric liner system.
3. Daylighting: Fiberglass-Sandwich-Panel (Translucent) daylighting clerestory wall panels as detailed.

B. **ALTERNATE NO. 1**: Insulated Metal Panel (IMP) Substitution (ADD ALTERNATE NO. 1)
1. Description: Net ADDITION to the Base Bid to substitute the single-skin metal panels and interior cavity liner insulation system with an Insulated Metal Panel (IMP) system.
2. Scope of Work Includes:

a. Provide and install continuous Insulated Metal Panels (IMPs) of the thickness and R-value required.
b. Include all modified structural attachments, specialized flashings, sealants, and integrated trims required for a complete, weather-tight IMP installation.
c. Multi-color IMP (as indicated on architectural elevations).
d. Fiberglass-Sandwich-Panel (Translucent) clerestory panels are to remain per Base Bid.

C. **ALTERNATE NO. 2**: Single-Color Wall Panel Economy (DEDUCT ALTERNATE NO. 2)
1. Description: Net DEDUCTION from the Base Bid to utilize a single standard manufacturer's color for all exterior metal wall panels.
2. Scope of Work Includes: All structural and insulation components of the Base Bid remain unchanged.
3. Scope of Work Omits (Deducts from Base): Omit the multi-color panel layout, premium color choices, and associated field-transition trims. All exterior single-skin metal panels shall be a single, standard manufacturer color selected by the Owner.

D. **ALTERNATE NO. 3**: Omit Fiberglass-Sandwich-Panel (Translucent) Clerestory Panels (DEDUCT ALTERNATE NO. 1)
1. Description: Net DEDUCTION from the Base Bid to completely eliminate the translucent clerestory wall panels.
2. Scope of Work Includes: Infills the clerestory wall framing locations with the standard single-skin metal panels and interior insulation system defined in the Base Bid.
3. Scope of Work Omits (Deducts from Base): Completely omit the procurement and installation of the translucent clerestory panels, including specialized framing, flashings, and transitions required for the clerestory system.

END OF SECTION 012300

SECTION 083323
OVERHEAD COILING DOORS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Exterior coiling doors.

B. Electric operators and control stations.

C. Wiring from electric circuit disconnect to operators and control stations.

1.02 REFERENCE STANDARDS

A. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2025a.

B. ITS (DIR) - Directory of Listed Products; Current Edition.

C. NEMA EN 10250 - Enclosures for Electrical Equipment (1000 Volts Maximum); 2024.

D. NEMA ICS 2 - Industrial Control and Systems Controllers, Contactors and Overload Relays Rated 600 Volts; 2008 (Reaffirmed 2020).

E. NEMA MG 00001 - Motors and Generators; 2024.

F. UL (DIR) - Online Certifications Directory; Current Edition.

G. UL 325 - Standard for Door, Drapery, Gate, Louver, and Window Operators and Systems; Current Edition, Including All Revisions.

1.03 QUALITY ASSURANCE

A. Products Requiring Electrical Connection: Listed and classified by ITS (DIR), UL (DIR), or testing firm acceptable to authorities having jurisdiction as suitable for purpose specified and indicated.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Overhead Coiling Metal Doors:
   1. Pre-engineered metal building manufacturer's standard.

2.02 COILING DOORS

A. Exterior Coiling Doors: Steel slat curtain.
   1. Capable of withstanding positive and negative wind loads of 20 psf without undue deflection or damage to components.
   2. Sandwich Slats: Manufacturer's standard, with core of foamed-in-place polyurethane insulation; minimum R-value of 4.88.
   3. Finish: Factory painted, color as selected.
   4. Electric operation.

2.03 MATERIALS

A. Metal Curtain Construction: Interlocking slats.
   1. Slat Ends: Alternate slats fitted with end locks to act as wearing surface in guides and to prevent lateral movement.
   2. Curtain Bottom for Slat Curtains: Fitted with angles to provide reinforcement and positive contact in closed position.
   3. Weatherstripping for Exterior Doors: Moisture and rot proof, resilient type, located at jamb edges, bottom of curtain, and where curtain enters hood enclosure of exterior doors.
   4. Steel Slats: Minimum thickness, ; ASTM A653/A653M galvanized steel sheet.

B. Guide Construction: Continuous, of profile to retain door in place with snap-on trim, mounting brackets of same metal.

C. Lock Hardware:
   1. For motor operated units, additional lock or latching mechanisms are not required.
   2. Latching Mechanism: Inside mounted, adjustable keeper, spring activated latch bar feature to keep in locked or retracted position.
   3. Latch Handle: Manufacturer's standard.

2.04 ELECTRIC OPERATION

A. Operator, Controls, Actuators, and Safeties: Comply with UL 325; provide products listed by ITS (DIR), UL (DIR), or testing agency acceptable to authorities having jurisdiction.
   1. Provide interlock switches on motor operated units.

B. Electric Operators:
   1. Mounting: Side mounted.
   2. Motor Enclosure:
      a. Exterior Coiling Doors: NEMA MG 00001, Type 4; open drip proof.
   3. Motor Rating: motor HP per approved shop drawings; continuous duty.
   4. Motor Voltage: per approved shop drawings volts, three phase, 60 Hz.
   5. Motor Controller: NEMA ICS 2, full voltage, reversing magnetic motor starter.
   6. Controller Enclosure: NEMA EN 10250, Type 4.
   7. Opening Speed: 12 inches per second.
   8. Brake: Manufacturer's standard type, activated by motor controller.
   9. Manual override in case of power failure.
   10. See Section 260583 for electrical connections.

C. Control Station: Provide standard three button, 'Open-Close-Stop' momentary-contact control device for each operator complying with UL 325.
   1. 24 volt circuit.
   2. Surface mounted, at interior door jamb.
   3. Entrapment Protection Devices: Provide sensing devices and safety mechanisms complying with UL 325.
      a. Primary Device: Provide electric sensing edge, wireless sensing, NEMA 1 photo eye sensors, or NEMA 4X photo eye sensors as required with momentary-contact control device.

D. Safety Edge: Located at bottom of coiling door, full width, electro-mechanical sensitized type, wired to stop and reverse door direction upon striking object, hollow neoprene covered.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that adjacent construction is suitable for door installation.

B. Verify that electrical services have been installed and are accessible.

C. Verify that door opening is plumb, header is level, and dimensions are correct.

D. Notify Architect of any unacceptable conditions or varying dimensions.

E. Commencement of installation indicates acceptance of substrate and door opening conditions.

3.02 INSTALLATION

A. Install units in accordance with manufacturer's instructions.

B. Use anchorage devices to securely fasten assembly to wall construction and building framing without distortion or stress.

C. Securely and rigidly brace components suspended from structure. Secure guides to structural members only.

D. Fit and align assembly including hardware; level and plumb, to provide smooth operation.

E. Coordinate installation of electrical service with Section 260583.

F. Complete wiring from disconnect to unit components.

3.03 TOLERANCES

A. Maintain dimensional tolerances and alignment with adjacent work.

B. Maximum Variation From Plumb: 1/16 inch.

C. Maximum Variation From Level: 1/16 inch.

D. Longitudinal or Diagonal Warp: Plus or minus 1/8 inch per 10 feet straight edge.

3.04 ADJUSTING

A. Adjust operating assemblies for smooth and noiseless operation.

3.05 CLEANING

A. Clean installed components.

B. Remove labels and visible markings.

END OF SECTION 083323

SECTION 133419
METAL BUILDING SYSTEMS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Pre-engineered Manufacturer Building; shop-fabricated structural steel building frame.

B. Insulated Metal wall and roof panels including soffits, gutters and downspouts, and roof mounted equipment curbs.

C. Exterior doors, overhead doors, and Fiberglass reinforced plastic (FRP) sandwich panel system.

1.02 RELATED REQUIREMENTS

A. Section 012300 - Alternates: PEMB Exterior Add Alternates and Deduct Alternates

B. Section 055000 - Metal Fabrications.

C. Section 079200 - Joint Sealants: Sealing joints between accessory components and wall system.

D. Section 081113 - Hollow Metal Doors and Frames.

E. Section . 084523-TRANSLUCENT FIBERGLASS PANEL UNIT WALL SYSTEM

1.03 REFERENCE STANDARDS

A. AISC 360 - Specification for Structural Steel Buildings; 2022, with Errata (2025).

B. ASTM A36/A36M - Standard Specification for Carbon Structural Steel; 2019.

C. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2024.

D. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2023.

E. ASTM A307 - Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength; 2021.

F. ASTM A500/A500M - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes; 2023.

G. ASTM A501/A501M - Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing; 2021.

H. ASTM A529/A529M - Standard Specification for High-Strength Carbon-Manganese Steel of Structural Quality; 2019.

I. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2025a.

J. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing; 2024.

K. ASTM C1107/C1107M - Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink); 2020.

L. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2025.

M. ASTM E96/E96M - Standard Test Methods for Gravimetric Determination of Water Vapor Transmission Rate of Materials; 2024a.

N. ASTM F1554 - Standard Specification for Anchor Bolts, Steel, 36, 55, and 105-ksi Yield Strength; 2020.

O. ASTM F3125/F3125M - Standard Specification for High Strength Structural Bolts and Assemblies, Steel and Alloy Steel, Heat Treated, Inch Dimensions 120 ksi, 144 ksi, and 150 ksi Minimum Tensile Strength, and Metric Dimensions 830 MPa and 1040 MPa Minimum Tensile Strength; 2025.

P. AWS A2.4 - Standard Symbols for Welding, Brazing, and Nondestructive Examination; 2020.

Q. AWS B2.1/B2.1M - Specification for Welding Procedure and Performance Qualification; 2021, with Errata (2023).

R. AWS D1.1/D1.1M - Structural Welding Code - Steel; 2025.

S. IAS AC472 - Accreditation Criteria for Inspection Programs for Manufacturers of Metal Building Systems; 2024.

T. MBMA (MBSM) - Metal Building Systems Manual; 2024.

U. SSPC-Paint 20 - Zinc-Rich Coating (Type I - Inorganic, and Type II - Organic); 2019.

1.04 SUBMITTALS

A. See Section 013000 - Administrative Requirements for submittal procedures.

B. Product Data: Provide data on profiles, component dimensions, fasteners.

C. Shop Drawings: Indicate assembly dimensions, locations of structural members, connections; wall and roof system dimensions, panel layout, general construction details, anchors and methods of anchorage, and installation; framing anchor bolt settings, sizes, locations from datum, and foundation loads; indicate welded connections with AWS A2.4 welding symbols; indicate net weld lengths; provide professional seal and signature.

D. Samples: Submit two samples of precoated metal panels for each color selected, 24 by 24 inch in size illustrating color and texture of finish.

E. Manufacturer's Instructions: Indicate preparation requirements, anchor bolt placement, and other necessary elements for coordination.

F. Erection Drawings: Indicate members by label, assembly sequence, and temporary erection bracing.

G. Manufacturer's Qualification Statement: Provide documentation showing metal building manufacturer is accredited under IAS AC472.

1. Include statement that manufacturer designs and fabricates metal building system as integrated components and assemblies, including but not limited to primary structural members, secondary members, joints, roof, and wall cladding components specifically designed to support and transfer loads and properly assembled components form a complete or partial building shell.

H. Welders' Qualification Statement: Welders' certificates in accordance with AWS B2.1/B2.1M and dated no more than 12 months before start of scheduled welding work.

I. Project Record Documents: Record actual locations of concealed components and utilities.

1.05 QUALITY ASSURANCE

A. Designer Qualifications: Design structural components, develop shop drawings, and perform shop and site work under direct supervision of a Professional Structural Engineer experienced in design of this type of work.

1. Design Engineer Qualifications: Licensed in the State in which the Project is located.
2. Comply with applicable code for submission of design calculations as required for acquiring permits.
3. Cooperate with regulatory agency or authorities having jurisdiction (AHJ), and provide data as requested.

B. Perform work in accordance with AISC 360, MBMA (MBSM), and _____.

C. Manufacturer Qualifications: Company specializing in the manufacture of products similar to those required for this project.

1. Not less than three years of documented experience.
2. Accredited by IAS in accordance with IAS AC472.

D. Erector Qualifications: Company specializing in performing the work of this section with minimum three years years documented experience.

E. Welder Qualifications: Welding processes and welding operators qualified in accordance with AWS D1.1/D1.1M and no more than 12 months before start of scheduled welding work.

1.06 WARRANTY

A. See Section 017800 - Closeout Submittals for additional warranty requirements.

B. Correct defective Work within a five year period after Date of Substantial Completion.

C. Provide five year manufacturer warranty for all components.

1. Include coverage for exterior pre-finished surfaces to cover pre-finished color coat against chipping, cracking or crazing, blistering, peeling, chalking, or fading. Include coverage for weather tightness of building enclosure elements after installation.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Metal Buildings Systems:

1. Butler Manufacturing Company: www.butlermfg.com/#sle.
2. Ceco Building Systems: www.cecobuildings.com/#sle.
3. Nucor Building Systems: www.nucorbuildingsystems.com/#sle.
4. Substitutions: See Section 016000 - Product Requirements.

2.02 ASSEMBLIES

A. Continuous beam frame.

B. Bay Spacing: 24 ft.

C. Primary Framing: Rigid frame of rafter beams and columns, braced end frames, and wind bracing.

D. Secondary Framing: Purlins, Girts, Eave struts, Sill supports, and Clips, and other items detailed.

E. Wall System: Preformed metal panels of vertical profile, with sub-girt framing/anchorage assembly, insulation, and liner sheets, and accessory components.

F. Roof System: Preformed metal panels oriented parallel to slope, with sub-girt framing/anchorage assembly, insulation, and liner panels, and accessory components.

G. Roof Slope: 1 inches in 12 inches.

2.03 PERFORMANCE REQUIREMENTS

A. Installed Thermal Resistance of Wall System: R-value of 30.

B. Installed Thermal Resistance of Roof System: R-value of 30.

C. Design structural members to withstand dead load, applicable snow load, and design loads due to pressure and suction of wind calculated in accordance with applicable code.

D. Exterior wall and roof system shall withstand imposed loads with maximum allowable deflection of 1/180 of span.

E. Provide drainage to exterior for water entering or condensation occurring within wall or roof system.

F. Permit movement of components without buckling, failure of joint seals, undue stress on fasteners or other detrimental effects, when subject to temperature range of 100 degrees F.

G. Size and fabricate wall and roof systems free of distortion or defects detrimental to appearance or performance.

2.04 MATERIALS - FRAMING

A. Structural Steel Members: ASTM A36/A36M.

B. Structural Tubing: ASTM A500/A500M Grade B cold-formed.

C. Plate or Bar Stock: ASTM A529/A529M, Grade 50.

D. Anchor Bolts: ASTM A307, Grade A, with no preference for protective coatings.

E. Welding Materials: Perform in accordance with AWS D1.1/D1.1M.

F. Primer: SSPC-Paint 20 zinc rich.

G. Grout: ASTM C1107/C1107M; Non-shrink; premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents.
   1. Minimum Compressive Strength at 48 Hours: 2,000 pounds per square inch.
   2. Minimum Compressive Strength at 28 Days: 7,000 pounds per square inch.

2.05 MATERIALS - WALLS AND ROOF

A. Steel Sheet: Hot-dipped galvanized steel sheet, ASTM A653/A653M, Designation SS (structural steel), Grade 33 (230), with G90/Z275 coating.

B. Insulation: ASTM C665 Type III, Class A; ____ inches thick.

C. Metal Building Type, Factory Applied, Vapor-Barrier Insulation Facings: Water vapor permeance no greater than 0.10 perm when tested in accordance with ASTM E96/E96M; flame spread index of 25 or less, and smoke developed index of 40 or less when tested in accordance with ASTM E84.

D. Joint Seal Gaskets: Manufacturer's standard type.

E. Fasteners: Manufacturer's standard type, galvanized to comply with requirements of ASTM A153/A153M, finish to match adjacent surfaces when exterior exposed.

F. Sealant: Manufacturer's standard type.

G. Trim, Closure Pieces, Caps, Flashings, Gutters, Downspouts, Rain Water Diverter, Fascias, Infills, and snow guards (of standard materials): Same material, thickness and finish as exterior sheets; brake formed to required profiles.

2.06 COMPONENTS

A. Doors and Frames: Manufacturer's standard.

B. Overhead Doors and Frames: Manufacturer's standard.

C. Windows: See 084523 Fiberglass reinforced plastic (FRP) sandwich assembly.

2.07 FABRICATION - FRAMING

A. Fabricate members in accordance with AISC 360 for plate, bar, tube, or rolled structural shapes.

B. Anchor Bolts: Formed with bent shank, assembled with template for casting into concrete.

C. Provide wall opening framing for doors, windows, and other accessory components.

2.08 FABRICATION - WALL AND ROOF PANELS (BASE BID)

A. Wall Panels: Provide roll-formed, single-skin structural metal wall panels engineered for exterior exposure. All wall panel configurations shall conform to ASTM E283 and ASTM E331.
   1. Profile: Standard PBR panel profile with 1-1/4 inch high major ribs spaced at 12 inches on center.
   2. Material: Galvalume conforming to ASTM A792 precision roll-formed from 26-gauge structural steel sheet.
   3. Finish: Factory-applied, Polyvinylidene Fluoride (PVDF/Kynar 500) coating system.
   4. Color: Multi-color configuration as indicated on architectural elevations. Colors to be selected by Owner from manufacturer’s full standard range.
   5. Fasteners: Manufacturer-approved, color-matched hex-head self-drilling screws with assembled EPDM sealing washers.

B. Roof Panels: Provide roll-formed, single-skin standing seam metal roof panels designed for mechanical field seaming over a liner insulation system. All roof panels shall conform to ASTM E108, ASTM E1646, ASTM E1680, UL 580 Class 90, and have FM 4471 Class 1 approval.
   1. Profile: Standing seam roof profile (vertical or trapezoidal leg) with a minimum rib height of 2 inches, spaced 12 inches on center. Panels must utilize concealed floating clips to allow for thermal expansion and contraction.

2. Material: Galvalume conforming to ASTM A792 precision roll-formed from 24-gauge structural steel sheet.
3. Finish: Standard bare Galvalume with AZ55 coating designation and a clear, factory-applied acrylic coating to resist finger-marking and storage stains.
4. Seams: Factory-applied hot-melt mastic sealant inside the panel laps, mechanically seamed in the field using manufacturer's approved seaming equipment.

C. Wall and Roof Insulation System (Banded Liner System): Provide a complete, filled-cavity, high-performance metal building insulation and vapor retarder system.
1. Insulation Blankets: Formaldehyde-free, unfaced glass-fiber blankets conforming to ASTM C991 Type I and NAIMA 202 standards.
a. Roof Insulation: Minimum R-30 total thermal resistance.
b. Wall Insulation: Minimum R-25 total thermal resistance.
2. Liner Fabric (Vapor Retarder): High-strength, woven or bi-directionally reinforced polypropylene fabric liner.
a. Finish: High-glare white interior face.
b. Fire Performance: Class A rated per ASTM E84, with a Flame Spread Index of 25 or less, and Smoke Developed Index of 50 or less.
c. Permeance: Maximum 0.02 perms per ASTM E96 to prevent interior moisture migration.
3. Support Banding: Heavy-duty, structural-grade galvanized steel banding, pre-painted white to match the liner fabric, mechanically fastened to the bottom of purlins and interior of girts to support the insulation system.
4. Thermal Spacer Blocks: High-density extruded polystyrene (XPS) or polyisocyanurate thermal spacer blocks, minimum 1-inch thick, installed between the exterior metal panels and the structural steel purlins/girts to minimize thermal bridging.

2.09 FABRICATION - INSULATED METAL WALL AND ROOF PANELS (ALTERNATE NO. 1)

A. Wall Panels (Siding): Provide factory-assembled, foamed-in-place insulated metal panels (IMPs) engineered for composite structural action and continuous exterior thermal performance.
1. Profile:
a. Exterior Face: Micro-rib, striated, or shallow-wave profile to minimize oil-canning.
b. Interior Face: Lightly planked or mesa profile.
2. Material and Thickness:
a. Exterior Skin: AZ-50 24-gauge structural steel sheet, conforming to ASTM A792.
b. Interior Skin: G-90 galvanized 26-gauge structural steel sheet, conforming to ASTM A653.
c. Core Thickness: Minimum 2.5 inches.
3. Thermal Performance: Composite panel assembly must provide a minimum thermal resistance of R-18 (U-factor of 0.055 or lower) when tested in accordance with ASTM C1363 at a 75°F mean temperature. System must meet or exceed ASHRAE 90.1-2013 prescriptive requirements for Climate Zone 4A continuous insulation.
4. Insulation Core: Foamed-in-place, zero-ozone-depleting polyisocyanurate (PIR) or polyurethane foam completely filling the interstitial space between skins.
5. Panel Joints: Double tongue-and-groove side joints with a concealed fastening standout clip system. Side joints must feature factory-applied non-skinning butyl sealant inside the joint pocket to establish a continuous air and vapor barrier.
6. Finish and Color: a. Exterior Finish: Factory-applied, baked-on PVDF (Kynar 500) premium coating system.
a. Multi-color configuration as indicated on architectural elevations. Colors to be selected by Owner from manufacturer’s standard range.
b. Interior Finish: Manufacturer's standard wash coat.
c. Color: Prefinished standard high-reflectivity White.
7. Fire Performance & Code Compliance:

a. Flame/Smoke: Potential heat and flame spread index of 25 or less, and smoke developed index of 450 or less, when tested in accordance with ASTM E84.
b. Structural/Fire: Panel system must comply with IBC Chapter 26 requirements for foam plastic insulation, including passing FM 4880 or UL 1040 room fire tests.

B. Roof Panels (Insulated Core): Provide factory-assembled, foamed-in-place insulated standing seam metal roof panels engineered for composite structural action, continuous thermal performance, and mechanical field seaming.
1. Profile: Standing seam or trapezoidal profile with a minimum major rib height of 2 inches, spaced 24 inches to 42 inches on center. Panels must utilize an interlocking side joint designed for a concealed clip attachment and mechanical seaming.
2. Material and Thickness:
a. Exterior Skin: AZ-50 24-gauge structural steel sheet conforming to ASTM A792.
b. Interior Skin: G-90 galvanized 26-gauge structural steel sheet conforming to ASTM A653.
c. Core Thickness: Minimum 4 inches.
3. Thermal Performance: Composite panel assembly must provide a minimum thermal resistance of R-30 (U-factor of 0.033 or lower) when tested in accordance with ASTM C1363. System must meet or exceed ASHRAE 90.1-2013 prescriptive roof requirements for Climate Zone 4A.
4. Insulation Core: Foamed-in-place, zero-ozone-depleting polyisocyanurate (PIR) or polyurethane foam completely filling the interstitial space between skins.
5. Seams and Joint Sealant: Side joints must feature factory-applied non-skinning butyl sealant inside the joint pockets to establish an unbroken air, water, and vapor seal. Outer standing seam must be mechanically seamed in the field using the manufacturer’s approved seaming equipment.
6. Finish and Color:
a. Exterior Finish: Standard bare Galvalume (AZ55 coating) with a clear, factory-applied acrylic coating, OR standard premium PVDF finish to match wall panels where visible from grade.
b. Interior Finish: Manufacturer's standard wash coat or Silicone Modified Polyester (SMP). Color: Prefinished standard high-reflectivity White.
7. Fire and Wind Performance:
a. Fire Assessment: Class A rated per ASTM E84, with a Flame Spread Index of 25 or less.
b. Uplift Resistance: Panel system must be FM Approved (Class 4471) or UL Listed for wind uplift resistance, satisfying a minimum UL 580 Class 90 rating.

2.10 FABRICATION - WALL AND ROOF PANELS ADDITIONAL COMPONENTS

A. Girts/Purlins: Rolled formed structural shape to receive wall and roof panels.

B. Internal and External Corners: Same material thickness and finish as adjacent material, profile brake formed to required angles. Back brace mitered internal corners with ____ inch thick sheet.

C. Expansion Joints: Same material and finish as adjacent material, manufacturer's standard brake formed type, of profile to suit system.

D. Flashings, Closure Pieces, Fascia, Infills, and Caps: Same material and finish as adjacent material, profile to suit system.

E. Fasteners: To maintain load requirements and weather tight installation, same finish as cladding, non-corrosive type.

2.11 FABRICATION - GUTTERS AND DOWNSPOUTS

A. Fabricate of same material and finish as roofing metal.

B. Form gutters and downspouts of profile and size required to collect and remove water. Fabricate with connection pieces.

C. Form sections in maximum possible lengths. Hem exposed edges. Allow for expansion at joints.

D. Fabricate support straps of same material and finish as roofing metal, color as selected.

2.12 FINISHES

A. Framing Members: Clean, prepare, and shop prime. Do not prime surfaces to be field welded.

B. Exterior Surfaces of Wall Components and Accessories: Precoated enamel on steel of _____ finish, _____ color as selected from manufacturer's standard range.

C. Interior Surfaces of Wall Components and Accessories: Precoated enamel on steel of modified silicone finish, _____ color as selected from manufacturer's standard range.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that foundation, floor slab, mechanical and electrical utilities, and placed anchors are in correct position

3.02 ERECTION - FRAMING

A. Erect framing in accordance with AISC 360.

B. Provide for erection and wind loads. Provide temporary bracing to maintain structure plumb and in alignment until completion of erection and installation of permanent bracing. Locate braced bays as indicated.

C. Set column base plates with non-shrink grout to achieve full plate bearing.

D. Do not field cut or alter structural members without approval.

E. After erection, prime welds, abrasions, and surfaces not shop primed.

3.03 ERECTION - WALL AND ROOF PANELS

A. Install in accordance with all manufacturer's instructions.

B. Exercise care when cutting prefinished material to ensure cuttings do not remain on finish surface.

C. Fasten cladding system to structural supports, aligned level and plumb.

D. Locate end laps over supports. End laps minimum 2 inches. Place side laps over bearing.

E. Provide expansion joints where indicated, or as required by engineering design.

F. Use concealed fasteners.

G. Install sealant and gaskets, providing weather tight installation.

3.04 ERECTION - GUTTERS AND DOWNSPOUTS

A. Rigidly support and secure components. Join lengths with formed seams sealed watertight. Flash and seal gutters to downspouts.

B. Slope gutters minimum 1/8" inch/ft.

3.05 INSTALLATION - ACCESSORY COMPONENTS IN WALL SYSTEM

A. Install door frames, doors, overhead doors, and FRP system in accordance with manufacturer's instructions.

3.06 TOLERANCES

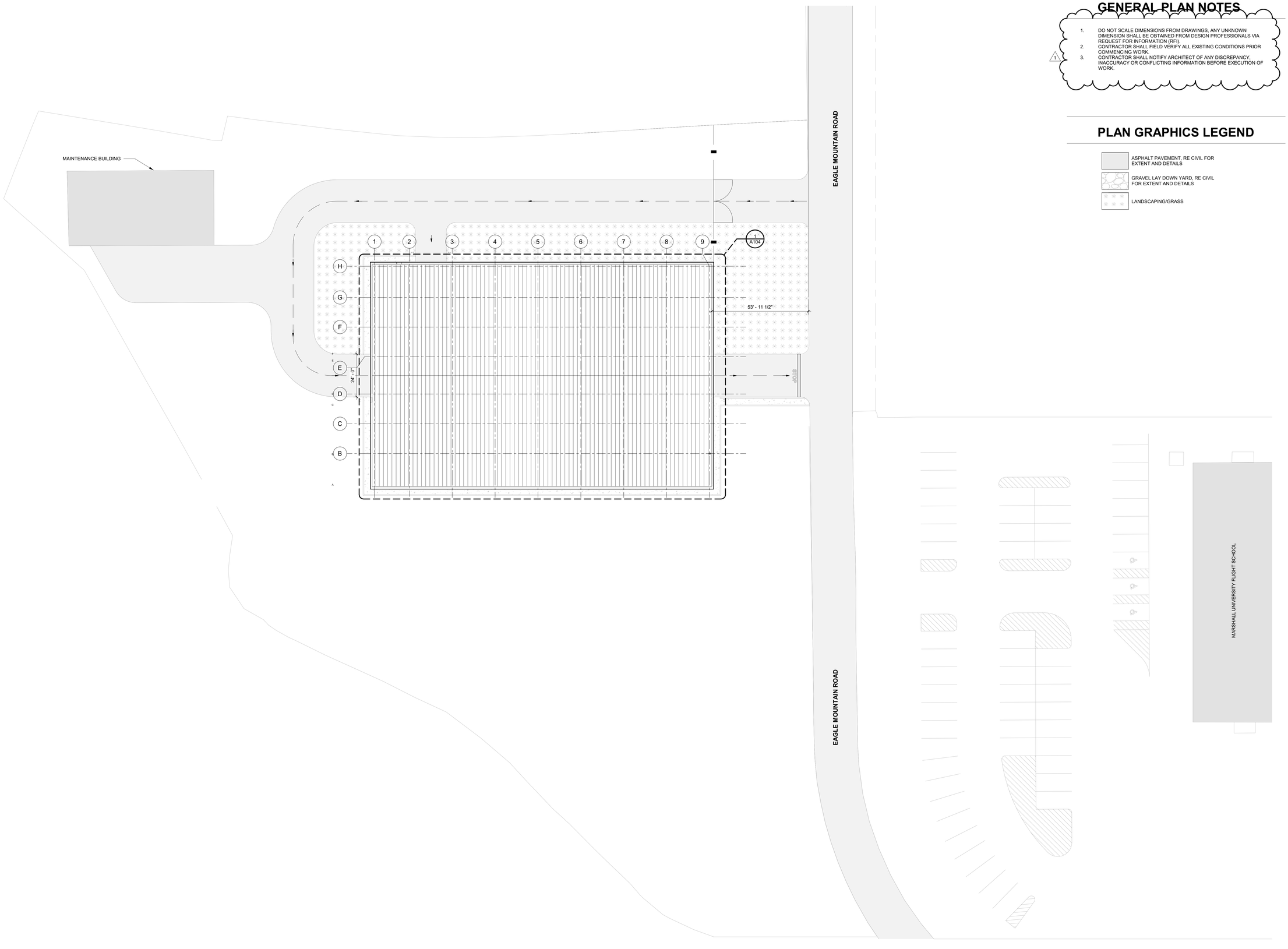
A. Framing Members: 1/4 inch from level; 1/8 inch from plumb.

B. Siding and Roofing: 1/8 inch from true position.

END OF SECTION 133419

All Bidders
June 8, 2026

ATTACHMENT NO. 4



1 ARCHITECTURAL SITE PLAN
1" = 20'-0"

NORTH

GENERAL PLAN NOTES

1. DO NOT SCALE DIMENSIONS FROM DRAWINGS, ANY UNKNOWN DIMENSION SHALL BE OBTAINED FROM DESIGN PROFESSIONALS VIA REQUEST FOR INFORMATION (RFI).
2. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR COMMENCING WORK.
3. CONTRACTOR SHALL NOTIFY ARCHITECT OF ANY DISCREPANCY, INACCURACY OR CONFLICTING INFORMATION BEFORE EXECUTION OF WORK.

1

PLAN GRAPHICS LEGEND

- ASPHALT PAVEMENT, RE CIVIL FOR EXTENT AND DETAILS
- GRAVEL LAY DOWN YARD, RE CIVIL FOR EXTENT AND DETAILS
- LANDSCAPING/GRASS

CRW

ADCI
6011 University Blvd. Suite 490
Ellicott City, MD 21043

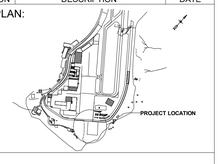
abstract
9689 GERWIG LN. STE A
COLUMBIA, MD 21046

SEAL:

STATE OF WEST VIRGINIA
DANIEL KEBEDE
No. 5815
REGISTERED
ARCHITECT
05/08/2026

REVISION	DESCRIPTION	DATE
1	Addendum 1	06/05/2026

KEY PLAN:



WEST VIRGINIA INTERNATIONAL YEAGER AIRPORT SNOW REMOVAL EQUIPMENT (SRE) BUILDING

PROJECT NO.

SUBMITTAL DATE: MAY 2026

DESIGNED:	CP	CHECKED:	JZ
DRAWN:	NP/JL	APPROVED:	DK

SHEET TITLE:

ARCHITECTURAL SITE PLAN

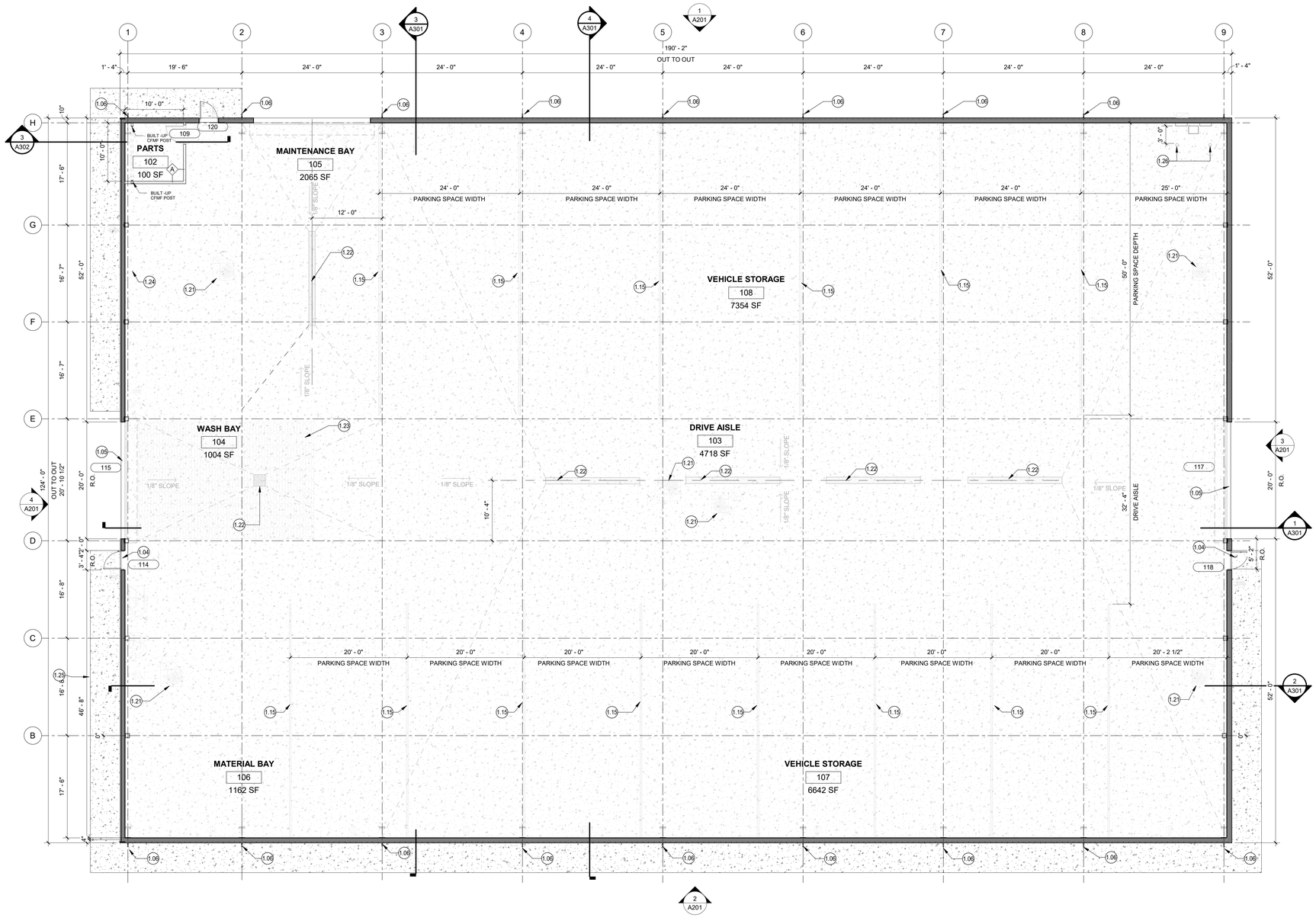
DRAWING NO.

A101

SHEET NO. of

6/3/2026 10:46:37 AM

Autodesk Docs://25-006 - CRW SRE/CRW_SRE_ARCH_v26.rvt



1 GROUND FLOOR PLAN
1/8" = 1'-0"

NORTH

GENERAL PLAN NOTES

1. DO NOT SCALE DIMENSIONS FROM DRAWINGS, ANY UNKNOWN DIMENSION SHALL BE OBTAINED FROM DESIGN PROFESSIONALS VIA REQUEST FOR INFORMATION (RFI).
2. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR COMMENCING WORK.
3. CONTRACTOR SHALL NOTIFY ARCHITECT OF ANY DISCREPANCY, INACCURACY OR CONFLICTING INFORMATION BEFORE EXECUTION OF WORK.
4. FLOOR ELEVATIONS AND SLWO DEFINED BY CIVIL/STRUCTURAL.
5. ALL WALL TYPES ARE EW01, U.N.O. ALL INTERIOR WALLS ARE DIMENSIONED TO FACE OF FINISH, ALL EXTERIOR WALLS ARE DIMENSIONED TO FACE OF STUD.
6. REFERENCE ARCHITECTURAL SITE PLAN ON SHEET A-101 FOR SITE CONDITIONS & DETAIL REFERENCES
7. LIGHT FIXTURES ARE DIMENSIONED TO CENTERLINE OF FIXTURE, OR PROVIDE THE "CL" (CENTERLINE) SYMBOL, AND / OR LINE TYPE ON THE DIMENSION STRING AT EACH FIXTURE.

PLAN GRAPHICS LEGEND

CONCRETE FINISHING (SEALED)

KEYNOTE LEGEND

1.04	EXTERIOR SWING DOOR/FRAME, TYP.
1.05	OVERHEAD DOOR/FRAME, ASSOCIATED HARDWARE, AND DOOR MOTORS TO BE LOCATED IN THE SAME LOCATION, TYP.
1.06	DOWNSPOUT
1.15	PARKING LANE MARKER, TYP.
1.21	DOWNFLOW HEATER, REFER TO MECHANICAL
1.22	TRENCH DRAIN
1.23	RADIANT FLOOR HEATER, REFER TO MECHANICAL
1.24	CABINET UNIT HEATER, REFER TO MECHANICAL
1.25	BELOW GRADE OIL INTERCEPTOR
1.26	6" DIA. CONCRETE-FILLED STEEL PIPE BOLLARD, EMBEDDED IN CONCRETE FOOTING, PAINTED SAFETY YELLOW

CRW

ADCI
6011 University Blvd. Suite 490
Ellicott City, MD 21043

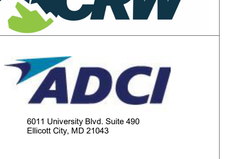
abstract
9689 GERWIG LN, STE A
COLUMBIA, MD 21046

SEAL:

STATE OF WEST VIRGINIA
DANIEL KEBEDE
No. 5815
REGISTERED
05/05/2026
ARCHITECT

REVISION	DESCRIPTION	DATE
1	Addendum 1	05/05/2026

KEY PLAN:



WEST VIRGINIA
INTERNATIONAL YEAGER
AIRPORT
SNOW REMOVAL
EQUIPMENT (SRE)
BUILDING

PROJECT NO.

SUBMITTAL DATE: MAY 2026

DESIGNED: CP | CHECKED: JZ

DRAWN: NP/JL | APPROVED: DK

SHEET TITLE:

FLOOR PLAN

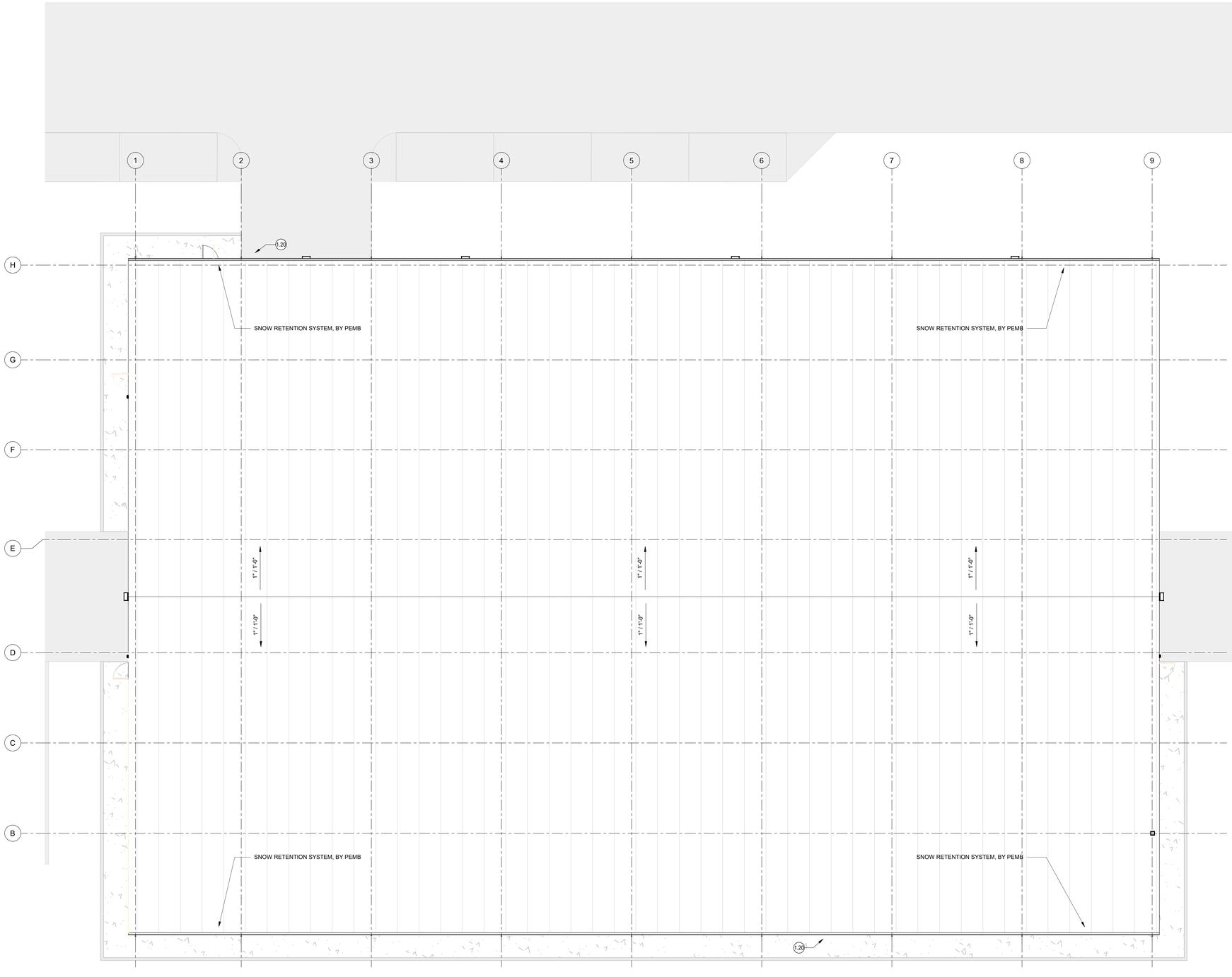
DRAWING NO.

A102

SHEET NO. of

5/5/2026 10:45:08 AM

Autodesk Docs://25-006 - CRW SRE/CRW_SRE_ARCH_v26.rvt



1 ROOF PLAN
1/8" = 1'-0"

NORTH

ROOF PLAN NOTES

1. DO NOT SCALE DIMENSIONS FROM DRAWINGS, ANY UNKNOWN DIMENSION SHALL BE OBTAINED FROM DESIGN PROFESSIONALS VIA REQUEST FOR INFORMATION (RFI).
2. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR COMMENCING WORK.
3. CONTRACTOR SHALL NOTIFY ARCHITECT OF ANY DISCREPANCY, INACCURACY OR CONFLICTING INFORMATION BEFORE EXECUTION OF WORK.
4. FLOOR ELEVATIONS AND SLWO DEFINED BY CIVIL/STRUCTURAL.
5. ALL WALL TYPES ARE EW01, U.N.O. ALL INTERIOR WALLS ARE DIMENSIONED TO FACE OF FINISH, ALL EXTERIOR WALLS ARE DIMENSIONED TO FACE OF STUD.
6. REFERENCE ARCHITECTURAL SITE PLAN ON SHEET A-101 FOR SITE CONDITIONS & DETAIL REFERENCES
7. LIGHT FIXTURES ARE DIMESIONED TO CENTERLINE OF FIXTURE, OR PROVIDE THE "CL" (CENTERLINE) SYMBOL, AND / OR LINE TYPE ON THE DIMENSION STRING AT EACH FIXTURE.

ROOF GRAPHICS LEGEND

KEYNOTE LEGEND

1.20	GUTTER

CRW

ADCI
6011 University Blvd. Suite 490
Ellicott City, MD 21043

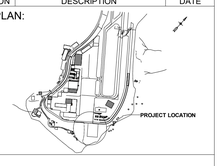
abstract
9689 GERWIG LN. STE A
COLUMBIA, MD 21046

SEAL:

STATE OF WEST VIRGINIA
DANIEL KEBEDE
No. 5815
REGISTERED
ARCHITECT
05/08/2026

REVISION	DESCRIPTION	DATE
1	Addendum 1	06/05/2026

KEY PLAN:



WEST VIRGINIA
INTERNATIONAL YEAGER
AIRPORT
SNOW REMOVAL
EQUIPMENT (SRE)
BUILDING

PROJECT NO.

SUBMITTAL DATE: MAY 2026

DESIGNED:	CP	CHECKED:	JZ
DRAWN:	NP/JL	APPROVED:	DK

SHEET TITLE:

ROOF PLAN

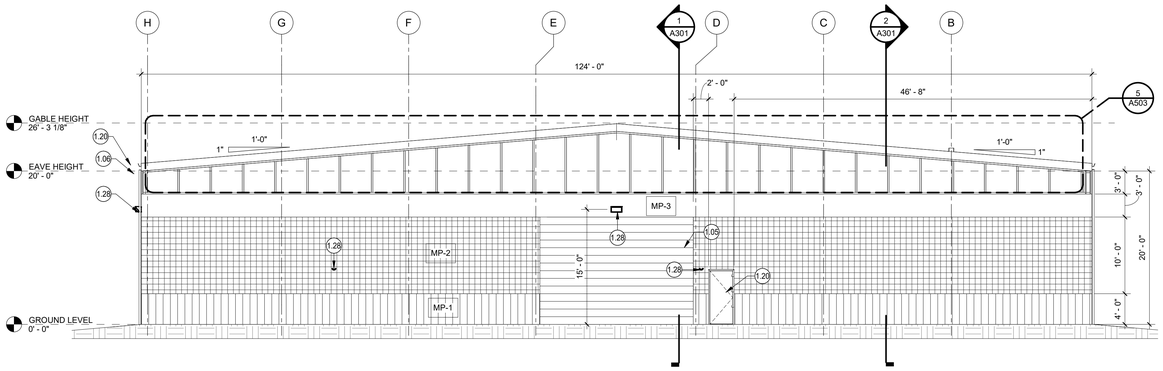
DRAWING NO.

A104

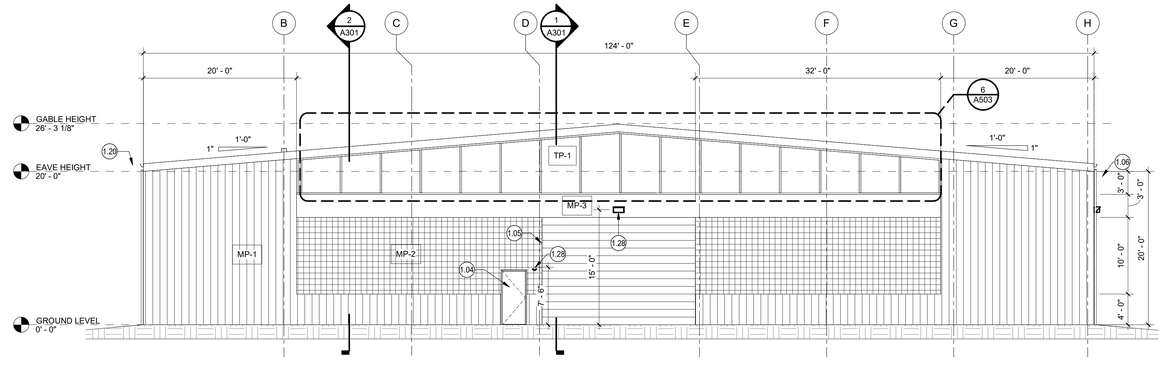
SHEET NO. of

6/3/2026 10:48:29 AM

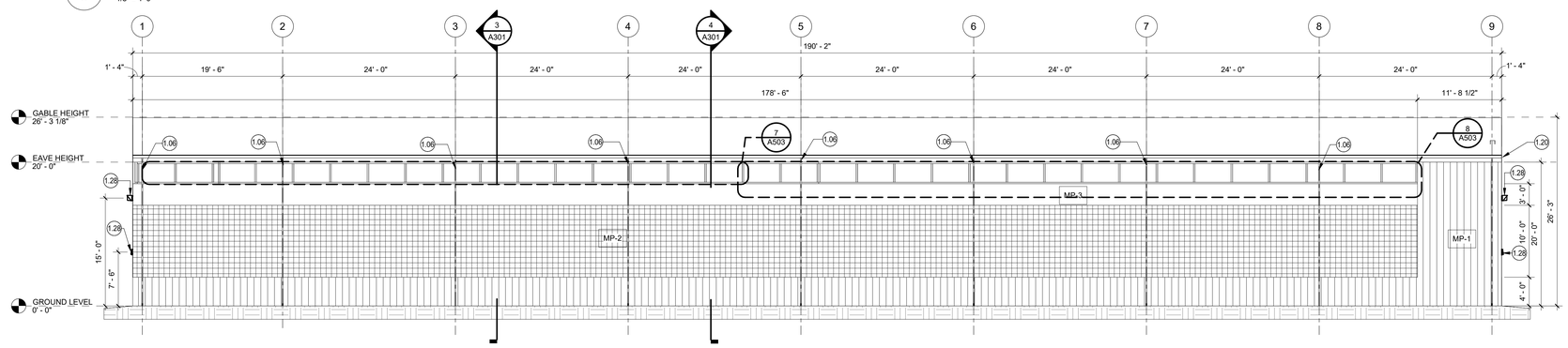
Autodesk Docs://25-006 - CRW SRE/CRW_SRE_ARCH_v26.rvt



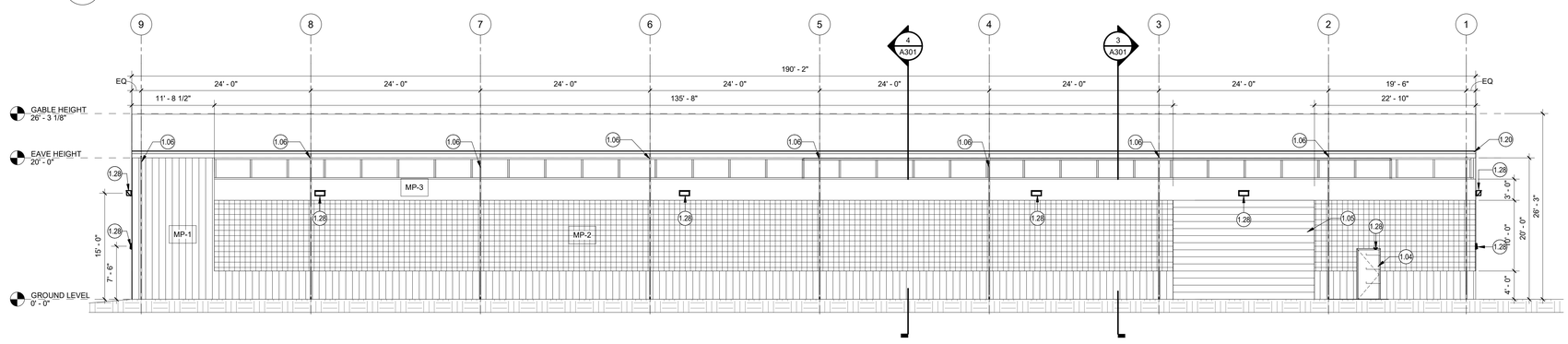
4 WEST ELEVATION
1/8" = 1'-0"



3 EAST ELEVATION
1/8" = 1'-0"



2 SOUTH ELEVATION
1/8" = 1'-0"



1 NORTH ELEVATION
1/8" = 1'-0"

GENERAL ELEVATION NOTES

1. DO NOT SCALE DIMENSIONS FROM DRAWINGS, ANY UNKNOWN DIMENSION SHALL BE OBTAINED FROM DESIGN PROFESSIONALS VIA REQUEST FOR INFORMATION (RFI).
2. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR COMMENCING WORK.
3. CONTRACTOR SHALL NOTIFY ARCHITECT OF ANY DISCREPANCY, INACCURACY OR CONFLICTING INFORMATION BEFORE EXECUTION OF WORK.
4. FLOOR ELEVATIONS AND SLWO DEFINED BY CIVIL/STRUCTURAL.
5. ALL WALL TYPES ARE EW01, U.N.O. ALL INTERIOR WALLS ARE DIMENSIONED TO FACE OF FINISH, ALL EXTERIOR WALLS ARE DIMENSIONED TO FACE OF STUD.

ELEVATION GRAPHICS LEGEND

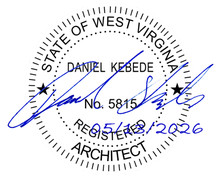
MP-1 METAL PANEL : MIDNIGHT BLACK PVDF
MP-2 METAL PANEL : WARM WHITE PVDF
MP-3 METAL PANEL : REGAL WHITE PVDF
TP-1 TRANSLUCENT PANEL : KALWALL

KEYNOTE LEGEND

1.04	EXTERIOR SWING DOOR/FRAME, TYP.
1.05	OVERHEAD DOOR/FRAME, ASSOCIATED HARDWARE, AND DOOR MOTORS TO BE LOCATED IN THE SAME LOCATION, TYP.
1.06	DOWNSPOUT
1.20	GUTTER
1.28	EXTERIOR SURFACE MOUNTED LIGHT FIXTURE, RE: ELECTRICAL

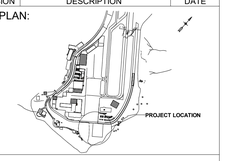
CRW
ADCI
6011 University Blvd. Suite 490
Ellicott City, MD 21043
abstract
9689 GERWIG LN, STE A
COLUMBIA, MD 21046

SEAL:



REVISION	DESCRIPTION	DATE
1	Addendum 1	06/05/2026

KEY PLAN:



WEST VIRGINIA
INTERNATIONAL YEAGER
AIRPORT
SNOW REMOVAL
EQUIPMENT (SRE)
BUILDING

PROJECT NO.

SUBMITTAL DATE: MAY 2026

DESIGNED: CP | CHECKED: JZ

DRAWN: NP/JL | APPROVED: DK

SHEET TITLE:

EXTERIOR ELEVATIONS

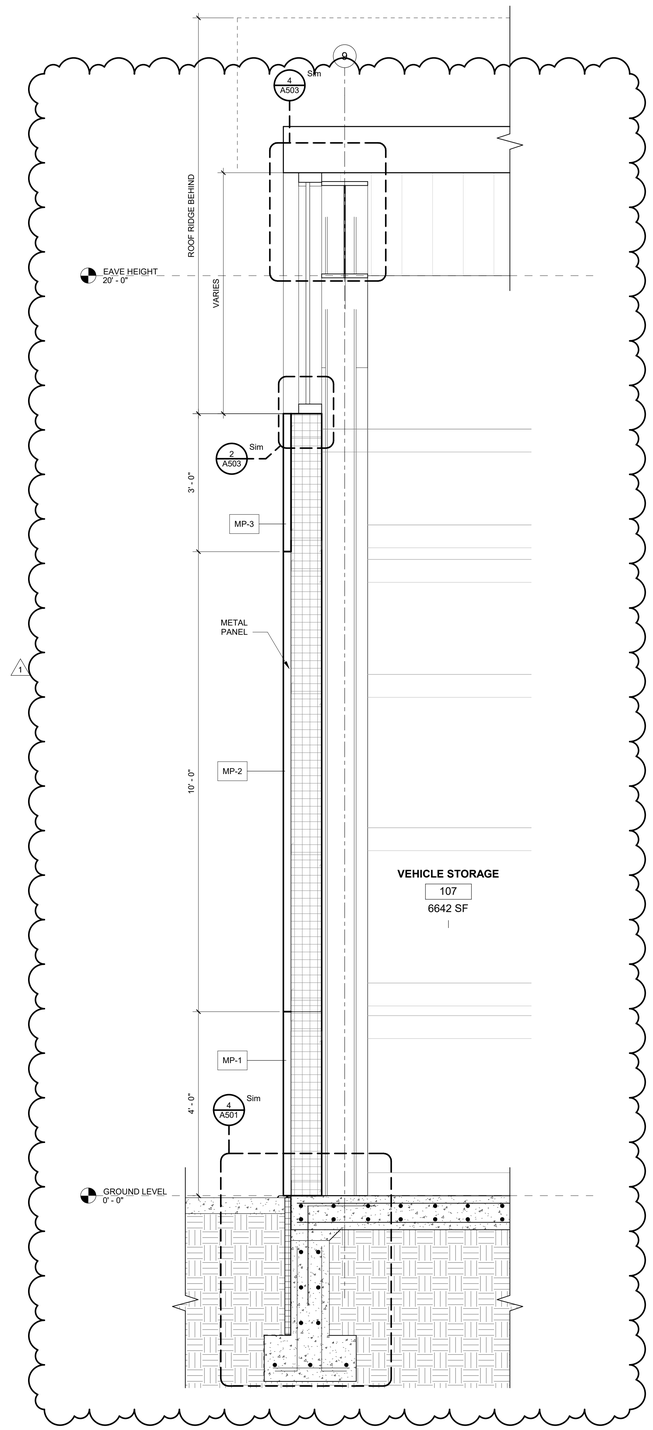
DRAWING NO.

A201

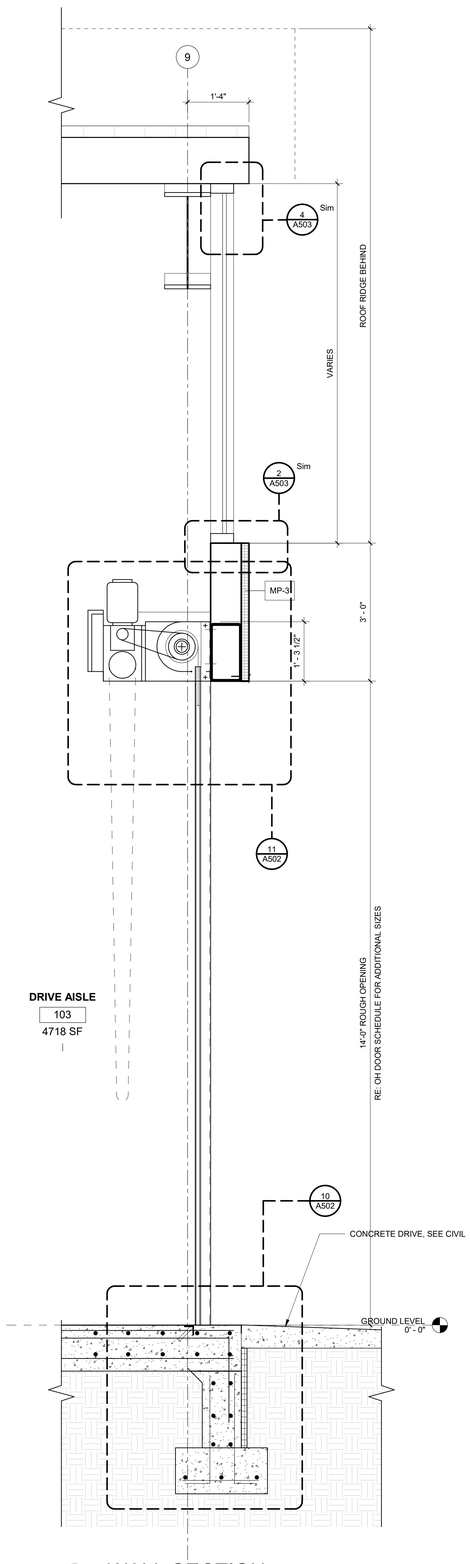
SHEET NO. of

6/3/2026 10:48:31 AM

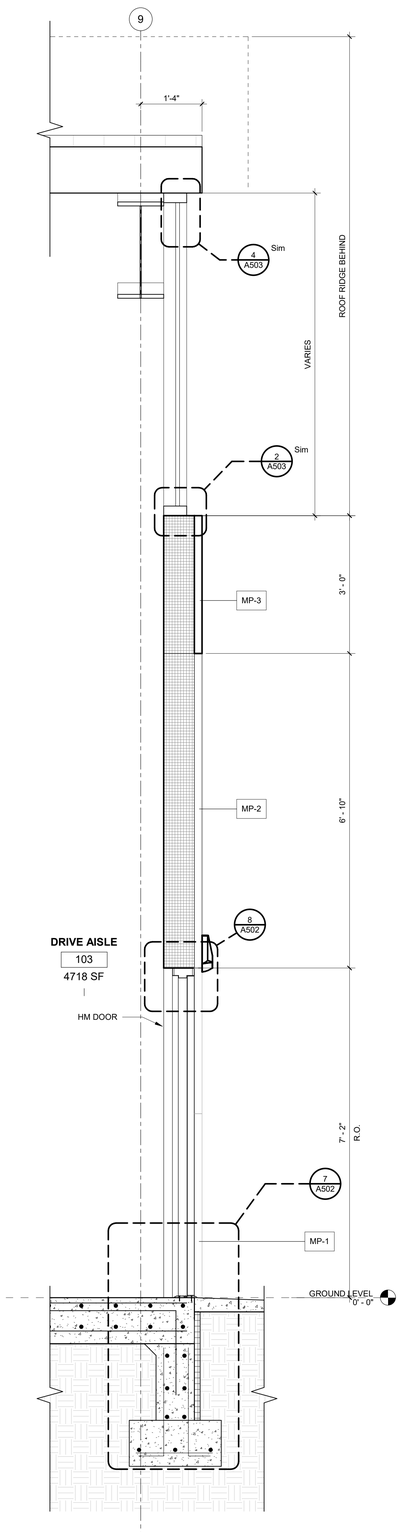
Autodesk Docs://25-006 - CRW SRE/CRW_SRE_ARCH_v26.rvt



3 WALL SECTION
3/4" = 1'-0"



2 WALL SECTION
3/4" = 1'-0"



1 WALL SECTION
3/4" = 1'-0"

CRW

ADCI
6011 University Blvd. Suite 490
Ellicott City, MD 21043

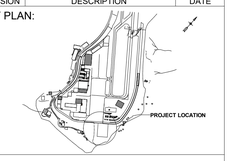
abstract
9689 GERWIG LN, STE A
COLUMBIA, MD 21046

SEAL:

STATE OF WEST VIRGINIA
DANIEL KEBEDE
No. 5815
REGISTERED
ARCHITECT
05/11/2026

REVISION	DESCRIPTION	DATE
1	Addendum 1	06/05/2026

KEY PLAN:



WEST VIRGINIA INTERNATIONAL YEAGER AIRPORT SNOW REMOVAL EQUIPMENT (SRE) BUILDING

PROJECT NO.

SUBMITTAL DATE: MAY 2026

DESIGNED:	CP	CHECKED:	JZ
DRAWN:	NP/JL	APPROVED:	DK

SHEET TITLE:

WALL SECTIONS

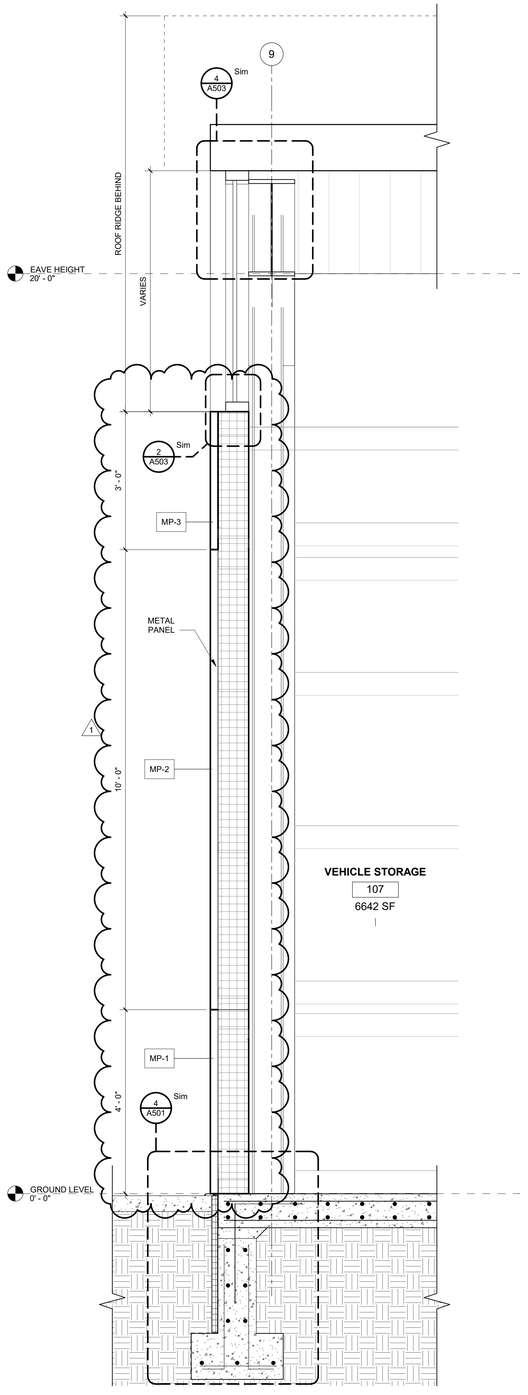
DRAWING NO.

A303

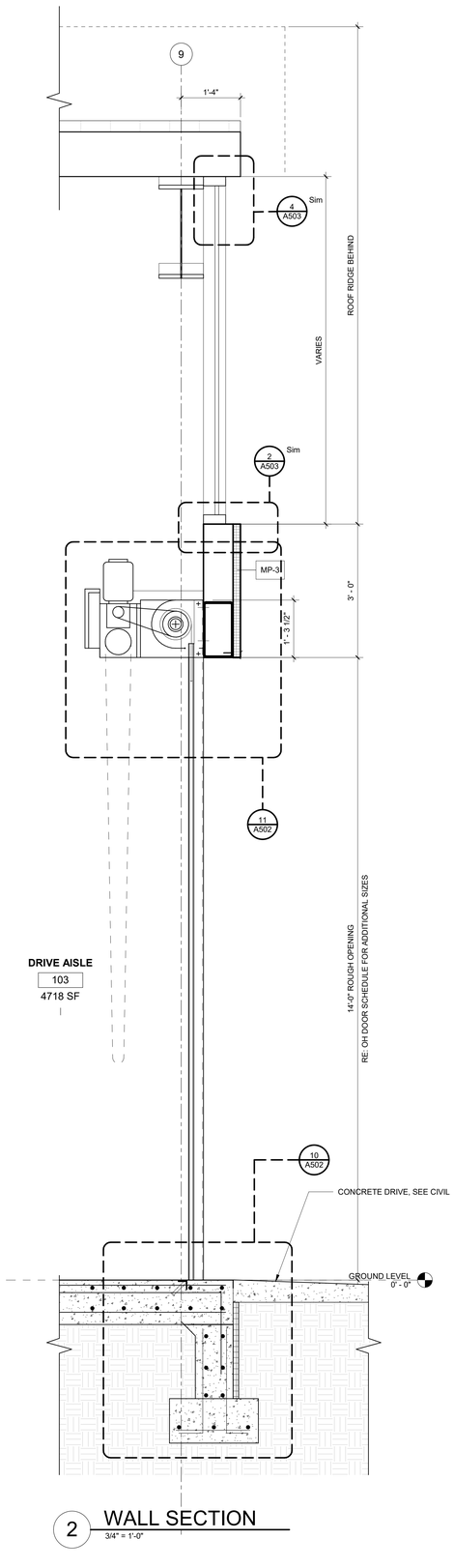
SHEET NO. of

6/3/2026 10:45:32 AM

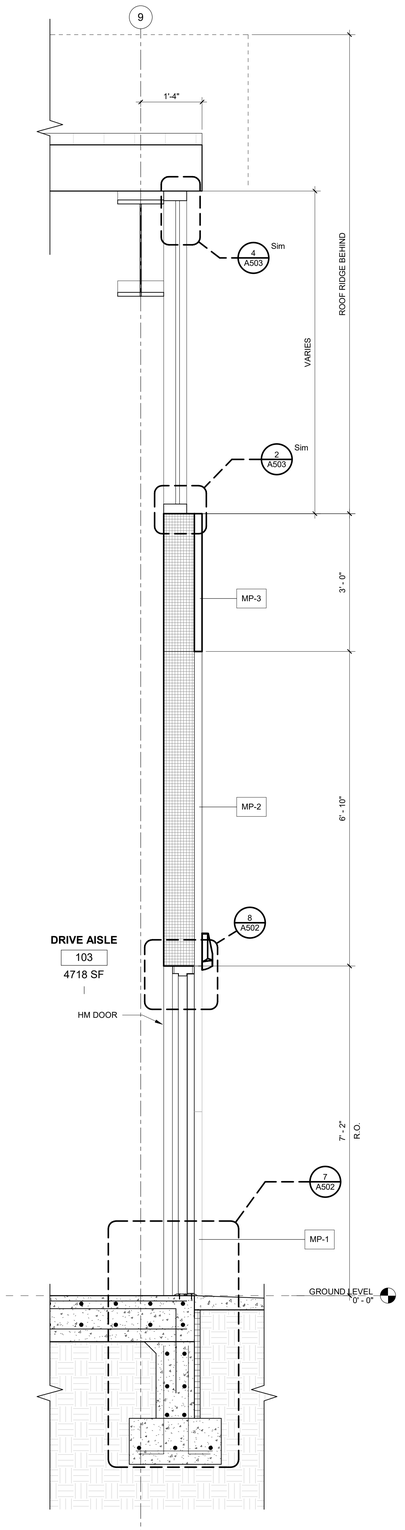
Autodesk Docs://25-006 - CRW SRE/CRW_SRE_ARCH_v26.rvt



3 WALL SECTION
3/4" = 1'-0"



2 WALL SECTION
3/4" = 1'-0"



1 WALL SECTION
3/4" = 1'-0"

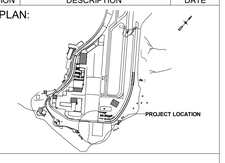
CRW
ADCI
6011 University Blvd. Suite 490
Ellicott City, MD 21043
abstract
9689 GERWIG LN, STE A
COLUMBIA, MD 21046

SEAL:

STATE OF WEST VIRGINIA
DANIEL KEBEDE
No. 5815
REGISTERED
ARCHITECT
05/6/2026

REVISION	DESCRIPTION	DATE
1	Addendum 1	06/05/2026

KEY PLAN:



WEST VIRGINIA INTERNATIONAL YEAGER AIRPORT SNOW REMOVAL EQUIPMENT (SRE) BUILDING

PROJECT NO.

SUBMITTAL DATE: MAY 2026

DESIGNED:	CP	CHECKED:	JZ
DRAWN:	NP/JL	APPROVED:	DK

SHEET TITLE:

WALL SECTIONS

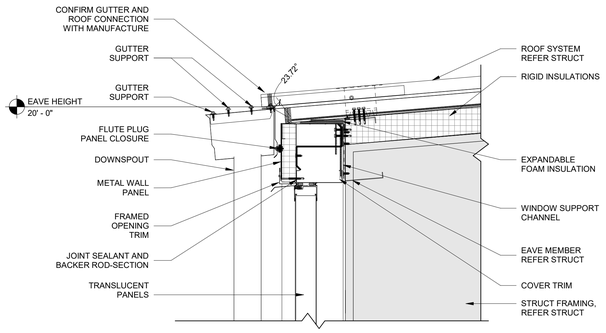
DRAWING NO.

A303

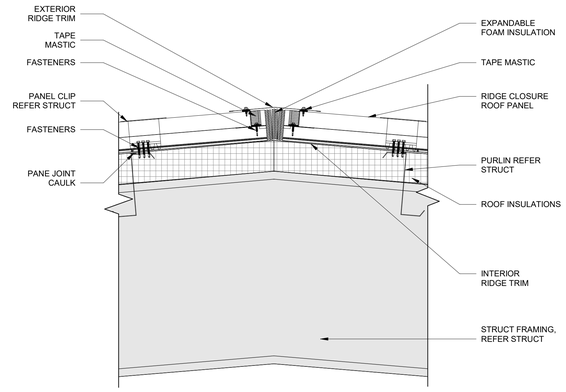
SHEET NO. of

6/5/2026 11:07:33 AM

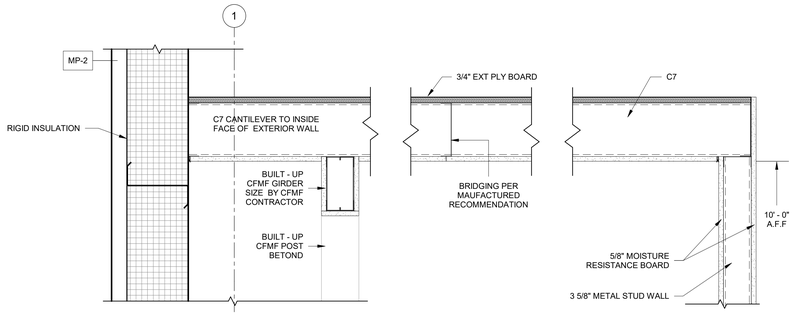
Autodesk Docs://25-006 - CRW SRE/CRW_SRE_ARCH_v26.rvt



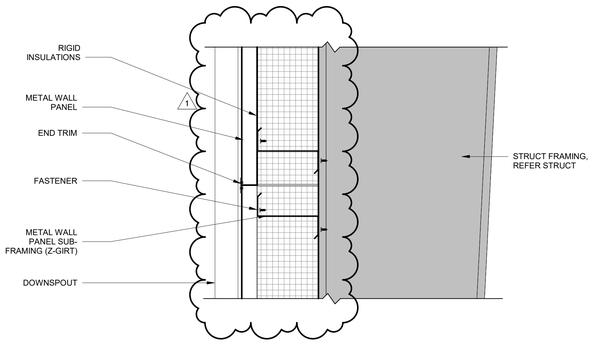
9 SECTION DETAIL
1 1/2" = 1'-0"



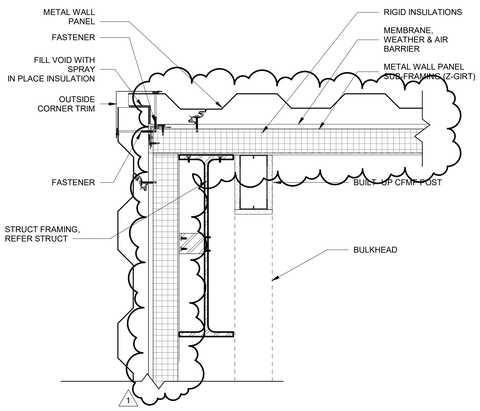
8 SECTION DETAIL
1 1/2" = 1'-0"



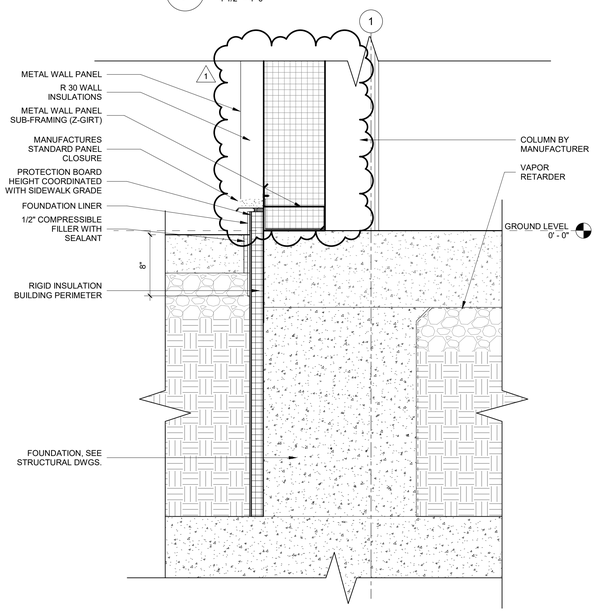
7 SECTION CEILING
1 1/2" = 1'-0"



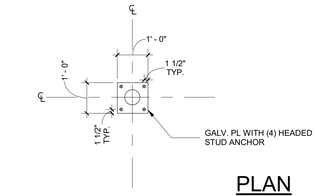
6 SECTION DETAIL
1 1/2" = 1'-0"



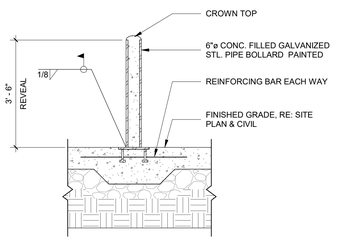
5 PLAN DETAIL
1 1/2" = 1'-0"



4 TYPICAL WIND COLUMN AT FOUNDATION
1 1/2" = 1'-0"



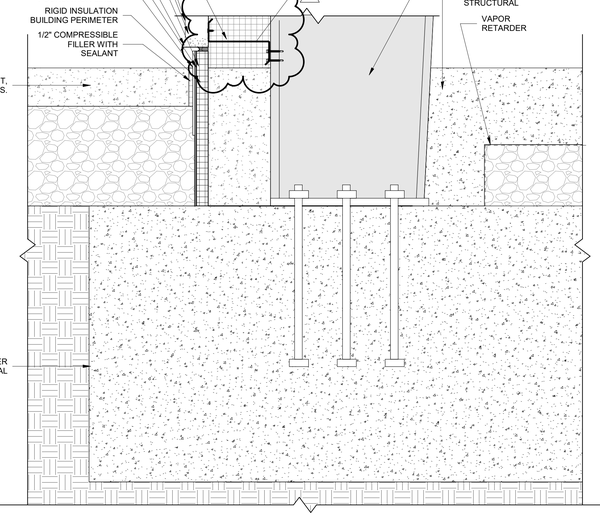
PLAN



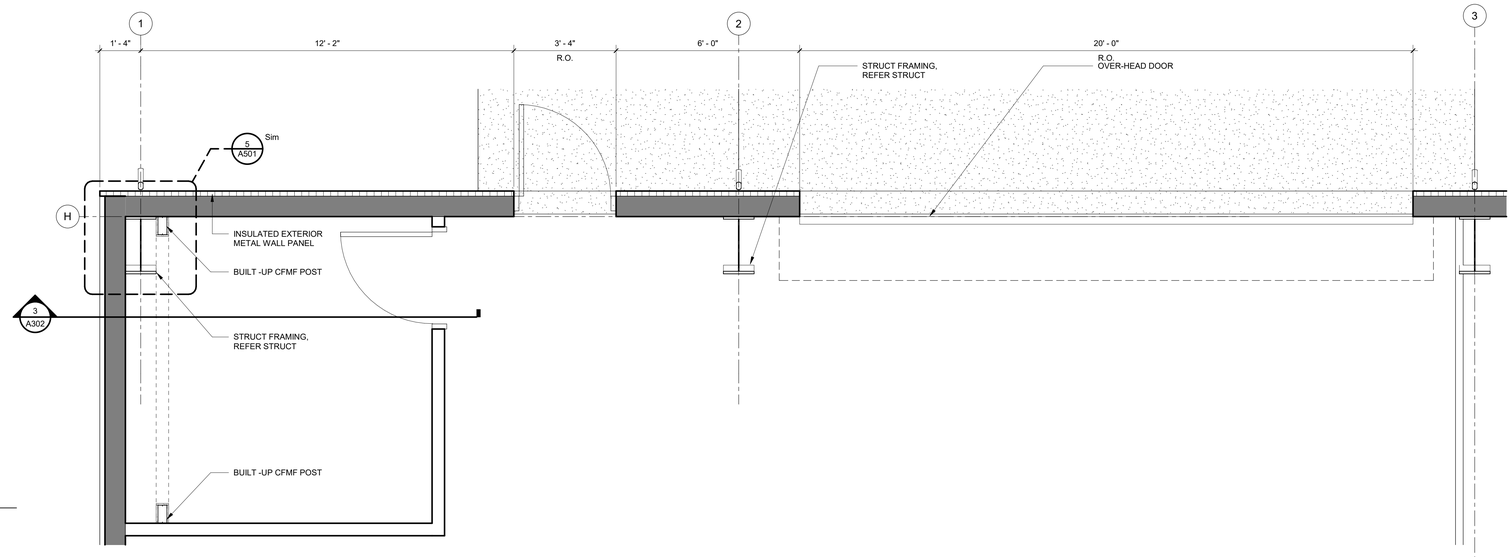
NOTE: PRIME AND PAINT BOLLARD AND BASE PLATE PER SPECIFICATIONS.

SECTION

3 BOLLARD DETAL INTERIOR
1/2" = 1'-0"



2 TYPICAL METAL BUILDING EXTERIOR FOOTING
1 1/2" = 1'-0"



1 FLOOR DETAILS
1/2" = 1'-0"

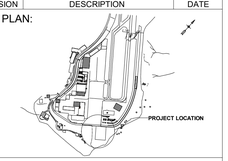
CRW
ADCI
6011 University Blvd. Suite 490
Ellicott City, MD 21043
abstract
9689 GERWIG LN, STE A
COLUMBIA, MD 21046

SEAL:

STATE OF WEST VIRGINIA
DANIEL KEBEDE
No. 5815
REGISTERED
05/05/2026
ARCHITECT

REVISION	DESCRIPTION	DATE
1	Addendum 1	06/05/2026

KEY PLAN:



WEST VIRGINIA INTERNATIONAL YEAGER AIRPORT SNOW REMOVAL EQUIPMENT (SRE) BUILDING

PROJECT NO.

SUBMITTAL DATE: MAY 2026

DESIGNED: CP | CHECKED: JZ

DRAWN: NP/JL | APPROVED: DK

SHEET TITLE:

DETAILS

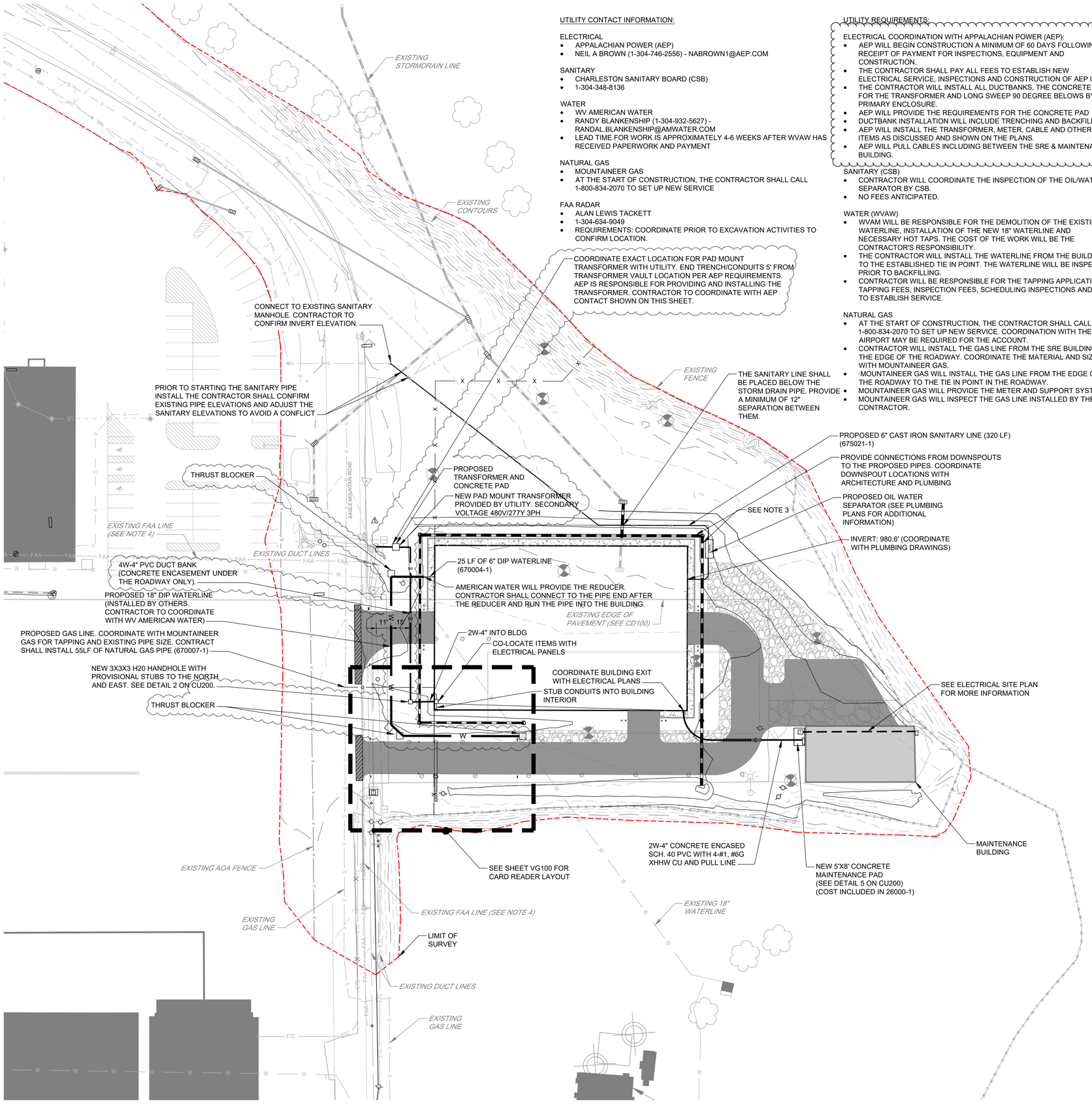
DRAWING NO.

A501

SHEET NO. of

6/5/2026 10:46:33 AM

Autodesk Docs://25-006 - CRW SRE/CRW_SRE_ARCH_v26.rvt



UTILITY CONTACT INFORMATION:

ELECTRICAL
- APPALACHIAN POWER (AEP)
- NEIL A BROWN (1-304-746-2556) - NABROWN1@AEP.COM

SANITARY
- CHARLESTON SANITARY BOARD (CSB)
- 1-304-348-8136

WATER
- WV AMERICAN WATER
- RANDY BLANKENSHIP (1-304-932-5627) - RANDAL.BLANKENSHIP@AMWATER.COM
- LEAD TIME FOR WORK IS APPROXIMATELY 4-6 WEEKS AFTER WVAW HAS RECEIVED PAPERWORK AND PAYMENT

NATURAL GAS
- MOUNTAINEER GAS
- AT THE START OF CONSTRUCTION, THE CONTRACTOR SHALL CALL 1-800-834-2070 TO SET UP NEW SERVICE

FAA RADAR
- ALAN LEWIS TACKETT
- 1-304-634-9049
- REQUIREMENTS: COORDINATE PRIOR TO EXCAVATION ACTIVITIES TO CONFIRM LOCATION.

UTILITY REQUIREMENTS:

ELECTRICAL COORDINATION WITH APPALACHIAN POWER (AEP):
- AEP WILL BEGIN CONSTRUCTION A MINIMUM OF 60 DAYS FOLLOWING RECEIPT OF PAYMENT FOR INSPECTIONS, EQUIPMENT AND CONSTRUCTION.
- THE CONTRACTOR SHALL PAY ALL FEES TO ESTABLISH NEW ELECTRICAL SERVICE, INSPECTIONS AND CONSTRUCTION OF AEP ITEMS.
- THE CONTRACTOR WILL INSTALL ALL DUCTBANKS, THE CONCRETE PAD FOR THE TRANSFORMER AND LONG SWEEP 90 DEGREE BELOWS BY THE PRIMARY ENCLOSURE.
- AEP WILL PROVIDE THE REQUIREMENTS FOR THE CONCRETE PAD
- DUCTBANK INSTALLATION WILL INCLUDE TRENCHING AND BACKFILLING.
- AEP WILL INSTALL THE TRANSFORMER, METER, CABLE AND OTHER ITEMS AS DISCUSSED AND SHOWN ON THE PLANS.
- AEP WILL PULL CABLES INCLUDING BETWEEN THE SRE & MAINTENANCE BUILDING.

SANITARY (CSB)
- CONTRACTOR WILL COORDINATE THE INSPECTION OF THE OIL/WATER SEPARATOR BY CSB.
- NO FEES ANTICIPATED.

WATER (WVAW)
- WVAM WILL BE RESPONSIBLE FOR THE DEMOLITION OF THE EXISTING 18" WATERLINE, INSTALLATION OF THE NEW 18" WATERLINE AND NECESSARY HOT TAPS. THE COST OF THE WORK WILL BE THE CONTRACTOR'S RESPONSIBILITY.
- THE CONTRACTOR WILL INSTALL THE WATERLINE FROM THE BUILDING TO THE ESTABLISHED TIE IN POINT. THE WATERLINE WILL BE INSPECTED PRIOR TO BACKFILLING.
- CONTRACTOR WILL BE RESPONSIBLE FOR THE TAPPING APPLICATION, TAPPING FEES, INSPECTION FEES, SCHEDULING INSPECTIONS AND FEES TO ESTABLISH SERVICE.

NATURAL GAS
- AT THE START OF CONSTRUCTION, THE CONTRACTOR SHALL CALL 1-800-834-2070 TO SET UP NEW SERVICE. COORDINATION WITH THE AIRPORT MAY BE REQUIRED FOR THE ACCOUNT.
- CONTRACTOR WILL INSTALL THE GAS LINE FROM THE SRE BUILDING TO THE EDGE OF THE ROADWAY. COORDINATE THE MATERIAL AND SIZE WITH MOUNTAINEER GAS.
- ·MOUNTAINEER GAS WILL INSTALL THE GAS LINE FROM THE EDGE OF THE ROADWAY TO THE TIE IN POINT IN THE ROADWAY.
- MOUNTAINEER GAS WILL PROVIDE THE METER AND SUPPORT SYSTEM
- MOUNTAINEER GAS WILL INSPECT THE GAS LINE INSTALLED BY THE CONTRACTOR.

LEGEND:

- PROPOSED BUILDING LOCATION
- PROPOSED FULL-STRENGTH ASPHALT
- PROPOSED SIDEWALK
- LIMIT OF SURVEY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING FENCE LINE
- EXISTING AOA FENCE LINE
- EXISTING STORMWATER INLET
- EXISTING STORMWATER PIPE
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING UNDERGROUND ELECTRICAL LINE
- EXISTING COMMUNICATIONS LINE
- EXISTING LIGHTING STRUCTURES
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED WATER LINE
- PROPOSED SANITARY LINE
- PROPOSED STORMWATER PIPE
- PROPOSED ELECTRICAL PVC DUCT LINE
- PROPOSED ELECTRICAL PVC CONCRETE ENCASED DUCT LINE
- PROPOSED ELECTRICAL PANEL BOARD
- PROPOSED ELECTRICAL TRANSFORMER

NOTES:

1. SEE CONSTRUCTION SAFETY AND PHASING PLAN GI003 SHEET FOR UTILITY COMPANY CONTACTS.
2. SEE SHEET CG100 FOR INFORMATION ON THE PROPOSED STORMWATER PIPE.
3. CONTRATOR SHALL FIELD VERIFY ALL PIPE CROSSINGS PRIOR TO INSTALLATION AND REPORT DISCREPANCIES TO THE RPR.
4. THE CONTRACTOR SHALL TAKE CARE WHEN EXCAVATING NEAR THE EXISTING FAA LINE. THIS LINE CANNOT BE DISTURBED. HAND EXCAVATION OR OTHER PRECISE EXCAVATION METHOD IS RECOMMENDED.
5. THE BENDS IN THE WATERLINE SHALL BE EITHER MECHANICAL JOINT CONNECTIONS OR THRUST BLOCKERS. CONFIRM WITH WV WATER. CONTACT INFORMATION IS SHOWN ON THIS SHEET.
6. THE BENDS IN THE SANITARY LINE SHALL BE HUB AND SPIGOT. CONTACT INFORMATION FOR CHARLESTON SANITARY BOARD IS SHOWN ON THIS SHEET.

CRW WEST VIRGINIA INTERNATIONAL YEAGER AIRPORT

ADCI
FAA BLDG 2ND FLOOR
301 EAGLE MOUNTAIN ROAD, RM 227
CHARLESTON, WV 25311

SEAL:

KEITH M. FRITZ REGISTERED 22779 PROFESSIONAL ENGINEER 5-14-26

REVISION	DESCRIPTION	DATE
1	ADDENDUM #1	6/5/26
	AS-ADVERTISED	5/18/26

PROJECT LOCATION

WEST VIRGINIA INTERNATIONAL YEAGER AIRPORT SNOW REMOVAL EQUIPMENT (SRE) BUILDING

PROJECT NO.	2025-1019		
SUBMITTAL DATE:	MAY 2026		
DESIGNED:	SV	CHECKED:	RM
DRAWN:	ST	APPROVED:	KF

SHEET TITLE:

COMPOSITE UTILITY PLAN

DRAWING NO.

CU100

SHEET NO. 28 of 62

PART 1 - GENERAL REQUIREMENTS AND DESIGN CRITERIA

1.1 SPECIFICATIONS
- A. THE WORK OF THESE DRAWINGS ADDRESSES STRUCTURAL INFORMATION ONLY. THE STRUCTURAL DOCUMENTS INCLUDE THESE S-SERIES DRAWINGS AND GENERAL NOTES. THERE ARE NO TECHNICAL SPECIFICATIONS IN ADDITION TO THESE GENERAL NOTES.

1.2 ELEVATIONS & DIMENSIONS
- A. ALL ELEVATIONS AND DIMENSIONS SHOWN FOR NEW CONSTRUCTION ARE BASED ON THE ARCHITECTURAL DRAWINGS. COORDINATE ALL ELEVATIONS AND DIMENSIONS BEFORE PROCEEDING WITH CONSTRUCTION.

1.3 GOVERNING BUILDING CODES
- A. THE FOLLOWING BUILDING CODES AND STANDARDS, INCLUDING ALL SPECIFICATIONS REFERENCED WITHIN, SHALL APPLY TO THE DESIGN, CONSTRUCTION, QUALITY CONTROL AND SAFETY OF ALL WORK PERFORMED ON THE PROJECT.
  1. 2018 WEST VIRGINIA STATE BUILDING CODE
  2. "INTERNATIONAL BUILDING CODE - 2018", INTERNATIONAL CODE COUNCIL
  3. "MINIMUM DESIGN LOADS AND ASSOCIATED CRITERIA FOR BUILDINGS AND OTHER STRUCTURES", (ASCE/SEI 7-16, 2016), AMERICAN SOCIETY OF CIVIL ENGINEERS.
- B. ADDITIONAL CODES FOR MATERIALS SHALL BE FOUND IN THE APPROPRIATE SECTIONS THAT FOLLOW. SEE THOSE SECTIONS FOR THE APPLICABLE CODES.

1.4 DESIGN LOADS
- A. RISK CATEGORY: II
- B. FLOOR LIVE LOADS:
  1. TYPICAL FLOOR AREAS 200 PSF
- C. ROOF LIVE LOADS:
  1. MINIMUM LIVE LOAD: 20 PSF
- D. ROOF SNOW LOAD DATA: (PLUS DRIFTING AND SLIDING WHERE APPLICABLE)
  - a. Pg = 20 PSF
  - b. Ps = 20 PSF
  - c. Ce = 1.0
  - d. Is = 1.0
  - e. Ct = 1.0
- E. DEAD LOADS: ALL PERMANENT STATIONARY CONSTRUCTION. SEE PART 13 ON S001 FOR PEMB COLLATERAL LOAD.
- F. WIND DESIGN DATA:
  1. BASIC WIND SPEED (3-SECOND GUST), V = 110 MPH, Vasd = 86 MPH
  2. EXPOSURE CATEGORY: C
  3. INTERNAL PRESSURE COEFFICIENT: GC(PI) = +/- 0.18
  4. COMPONENTS AND CLADDING:
     - a. PRESSURE VALUES LISTED BELOW ARE FOR At = 10 FT2:

(i)	MAXIMUM PRESSURE ON VERTICAL FACE:	END ZONE:	-36 PSF
		INTERIOR ZONE:	-30 PSF
(ii)	MAXIMUM PRESSURE ON ROOF:	CORNER ZONE:	-66 PSF
		INTERIOR ZONE:	-62 PSF

- G. EARTHQUAKE DESIGN DATA: NOTE-PARAMETERS SHOWN FOR THE DESIGN OF THE PRE-ENGINEERED METAL BUILDING BY OTHERS
  1. SEISMIC IMPORTANCE FACTOR, Ie = 1.0
  2. MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETERS:
     - a. S(S) = 0.154
     - b. S(1) = 0.064
  3. SITE CLASS: C
  4. DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETERS:
     - a. S(DS) = 0.133
     - b. S(D1) = 0.064
  5. SEISMIC DESIGN CATEGORY = A
- H. EARTH PRESSURE PARAMETERS:
  1. LATERAL EQUIVALENT FLUID PRESSURE:

a.	PASSIVE SOIL PRESSURE:	240 PSF/FOOT OF DEPTH
b.	SOIL FRICTION FACTOR:	0.3
c.	FRICTION ANGLE:	32°
d.	Kp:	3.25
e.	Ka:	0.31

- I. ROOF RAIN LOAD DATA:
  1. RAIN INTENSITY, i(15) = 5.40 in/hr
  2. RAIN INTENSITY, i(60) = 2.60 in/hr
- J. COLUMN REACTIONS: PRELIMINARY BUILDING REACTIONS HAVE NOT BEEN PROVIDED BY BUILDING MANUFACTURER. FINAL REACTIONS FOR ALL COLUMNS SHALL BE PROVIDED FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
  1. THE FOLLOWING PRELIMINARY REACTIONS WERE USED FOR PRELIMINARY FOOTING AND HAIRPIN DESIGN (KIPS):

A-1:	AXIAL: D=12, Lr=8, S=18, W=-27, E=-3	SHEAR: D=7, Lr=4, S=10, W=11, E=2
A-2:	AXIAL: D=36, Lr=22, S=53, W=-82, E=-7	SHEAR: D=19, Lr=12, S=30, W=31, E=2
A-3:	AXIAL: D=36, Lr=22, S=53, W=-82, E=-7	SHEAR: D=19, Lr=12, S=30, W=31, E=2
A-4:	AXIAL: D=36, Lr=22, S=53, W=-82, E=-7	SHEAR: D=19, Lr=12, S=30, W=31, E=2
A-5:	AXIAL: D=36, Lr=22, S=53, W=-82, E=-7	SHEAR: D=19, Lr=12, S=30, W=31, E=2
A-6:	AXIAL: D=36, Lr=22, S=53, W=-82, E=-7	SHEAR: D=19, Lr=12, S=30, W=31, E=2
A-7:	AXIAL: D=36, Lr=22, S=53, W=-82, E=-7	SHEAR: D=19, Lr=12, S=30, W=31, E=2
A-8:	AXIAL: D=36, Lr=22, S=53, W=-82, E=-7	SHEAR: D=19, Lr=12, S=30, W=31, E=2
A-9:	AXIAL: D=18, Lr=11, S=27, W=-41, E=-4	SHEAR: D=10, Lr=6, S=15, W=16, E=2
I-1:	AXIAL: D=12, Lr=8, S=18, W=-27, E=-3	SHEAR: D=7, Lr=4, S=10, W=11, E=2
I-2:	AXIAL: D=36, Lr=22, S=53, W=-82, E=-7	SHEAR: D=19, Lr=12, S=30, W=31, E=2
I-3:	AXIAL: D=36, Lr=22, S=53, W=-82, E=-7	SHEAR: D=19, Lr=12, S=30, W=31, E=2
I-4:	AXIAL: D=36, Lr=22, S=53, W=-82, E=-7	SHEAR: D=19, Lr=12, S=30, W=31, E=2
I-5:	AXIAL: D=36, Lr=22, S=53, W=-82, E=-7	SHEAR: D=19, Lr=12, S=30, W=31, E=2
I-6:	AXIAL: D=36, Lr=22, S=53, W=-82, E=-7	SHEAR: D=19, Lr=12, S=30, W=31, E=2
I-7:	AXIAL: D=36, Lr=22, S=53, W=-82, E=-7	SHEAR: D=19, Lr=12, S=30, W=31, E=2
I-8:	AXIAL: D=36, Lr=22, S=53, W=-82, E=-7	SHEAR: D=19, Lr=12, S=30, W=31, E=2
I-9:	AXIAL: D=18, Lr=11, S=27, W=-41, E=-4	SHEAR: D=7, Lr=6, S=30, W=31, E=2

1.5 GENERAL
- A. INSPECTIONS AND CLOSEOUT: OWNER OR CONTRACTOR ARRANGED 3RD PARTY INSPECTIONS/ SPECIAL INSPECTIONS SHALL CONFORM TO LOCAL JURISDICTION REQUIREMENTS AND INSPECTION REQUIREMENTS SHOWN ON THESE DOCUMENTS. FINAL CERTIFICATION FROM THE ENGINEER OF RECORD, IF REQUIRED BY THE AUTHORITY HAVING JURISDICTION OR OWNER, WILL BE PROVIDED ONCE TEC RECEIVES A THIRD PARTY INSPECTION REPORT CONFIRMING THE STRUCTURE WAS INSTALLED PER THE CONTRACT DOCUMENTS. TEC DOES NOT PROVIDE THIRD PARTY INSPECTIONS, AND OUR SITE OBSERVATIONS ARE FOR GENERAL CONFORMANCE, NOT INSPECTION.
- B. IN CASE OF CONFLICT BETWEEN THE GENERAL NOTES AND DETAILS THE MOST RIGID SHALL GOVERN.
- C. ALL DETAILS, SECTIONS, AND NOTES SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS ELSEWHERE UNLESS OTHERWISE NOTED.
- D. WORK NOT INCLUDED ON THE DRAWINGS BUT IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING LOCATIONS ELSEWHERE ON THE DRAWINGS SHALL BE REPEATED.
- E. DO NOT SCALE DRAWINGS.
- F. NO PART OF THE BUILDING SHALL BE USED AS A STAGING AREAS RESULTING IN A LOAD (UNDER THE LIMITED LOADED AREA) THAT EXCEEDS THE DESIGN LOADS.
- G. THESE DRAWINGS REPRESENT THE COMPLETED PROJECT WHICH HAS BEEN DESIGNED FOR THE WEIGHTS OF MATERIALS, FOR THE SUPERIMPOSED LOADS INDICATED IN THE DESIGN LOAD CRITERIA ABOVE, AND FOR LOADS INDICATED ON THE DRAWINGS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ALLOWABLE CONSTRUCTION LOADS AND TO PROVIDE PROPER DESIGN AND CONSTRUCTION OF FALSE WORK, STAGING, BRACING, SHEETING AND SHORING, ETC.
- H. DEVELOPING AND IMPLEMENTING JOB SITE SAFETY AND CONSTRUCTION PROCEDURES ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- I. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING AND NEW UTILITIES AND SHALL ASSUME FULL RESPONSIBILITY FOR ANY DAMAGE DURING CONSTRUCTION.
- J. NO CHANGE IN SIZE, DIMENSION, OR POSITION OF STRUCTURAL ELEMENTS SHALL BE MADE, NOR SHALL ANY OPENINGS OR SLEEVES BE PERMITTED THROUGH ANY STRUCTURAL ELEMENT, WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD, UNLESS DETAILED AND SPECIFICALLY NOTED AND APPROVED ON THE SHOP DRAWINGS. PROVIDE SEPARATE SHOP DRAWINGS INDICATED ALL PENETRATIONS THROUGH STRUCTURAL ELEMENTS FOR APPROVAL, PRIOR TO THE SUBMISSION OF THE SHOP DRAWINGS FOR THE AFFECTED STRUCTURAL ELEMENTS.
- K. ALL COSTS OF INVESTIGATION AND REDESIGN, DUE TO THE CONTRACTOR MIS-LOCATION OF STRUCTURAL ELEMENTS OR OTHER LACK OF CONFORMANCE WITH THE PROJECT DOCUMENTS, SHALL BE AT THE CONTRACTOR'S EXPENSE.
- L. CONTRACTOR SHALL REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING, ELECTRICAL, DRAWINGS FOR SIZE AND LOCATION OF OPENINGS, SLEEVES, CHASES, CONCRETE HOUSEKEEPING PADS, INSERTS, DEPRESSIONS, REVEALS, DRIPS, FINISHES, DOORS AND OTHER SUCH PROJECT REQUIREMENTS NOT SHOWN ON THE STRUCTURAL DRAWINGS. ANY SUCH ITEMS SHOWN ON STRUCTURAL DRAWINGS ARE INDICATED FOR INFORMATION ONLY. APPEARANCE OF SAME ON STRUCTURAL DRAWINGS IS NOT MEANT TO CONVEY ACTUAL LOCATION OR EXTENT OF WORK.
- M. SEE ARCHITECTURAL DRAWINGS FOR DETAILED INFORMATION REGARDING FINISHES, WATERPROOFING, FIREPROOFING, ETC.
- N. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF NON-LOAD BEARING MASONRY AND DRYWALL PARTITIONS AND PROVIDE SLIP CONNECTIONS THAT ALLOW VERTICAL MOVEMENT AT THE HEADS OF ALL SUCH PARTITIONS. UNLESS SHOWN ON THE DRAWINGS, THE CONNECTIONS SHALL BE DESIGNED TO LATERALLY BRACE THE TOPS OF THE WALLS FOR THE CODE REQUIRED LATERAL LOAD. PROVIDE COMPRESSIBLE FIRE-SAFING AT THE TOP OF RATED WALLS AS SPECIFIED BY THE ARCHITECTURAL DRAWINGS.
- O. PROVIDE ANY ADDITIONAL COMPONENTS NEEDED TO ACCOMMODATE THE INSTALLATION OF EQUIPMENT OF ANY NATURE. COORDINATE SUCH WORK WITH THE EQUIPMENT SUPPLIER. INCORPORATE SUCH REFINEMENTS ON THE SHOP DRAWINGS, AND OBTAIN THE EQUIPMENT SUPPLIER'S APPROVAL (CLEARLY DISPLAYED ON THE DRAWINGS) PRIOR TO SUBMITTING THE SHOP DRAWINGS TO THE ARCHITECT AND ENGINEER FOR APPROVAL.

1.6 SHOP DRAWINGS
- A. SHOP DRAWINGS FOR ALL STRUCTURAL ELEMENTS SHOWN ON THE CONTRACT DOCUMENTS ARE REQUIRED TO BE SUBMITTED BY THE CONTRACTOR AND REVIEWED BY THE STRUCTURAL ENGINEER. IF A CONTRACTOR OR OWNER FAILS TO SUBMIT THE SHOP DRAWINGS, TARANTINO ENGINEERING CONSULTANTS (TEC) WILL NOT BE RESPONSIBLE FOR THE STRUCTURAL CERTIFICATION AND DESIGN OF THE PROJECT.
- B. UNAUTHORIZED REPRODUCTION OF ANY PORTION OF THE STRUCTURAL CONTRACT DRAWINGS FOR RE-SUBMITTAL AS SHOP DRAWINGS IS PROHIBITED. SHOP DRAWINGS PRODUCED IN SUCH A MANNER WILL BE REJECTED AND RETURNED.
- C. SHOP DRAWINGS FOR HANGER LAYOUT ABOVE MECHANICAL ROOMS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW.
- D. SHOP DRAWINGS SUBMITTED FOR STRUCTURAL REVIEW SHALL CONSIST OF ELECTRONIC DRAWINGS. ONLY ONE MARKED UP SET OF ELECTRONIC DRAWINGS WITH THE STRUCTURAL ENGINEER'S COMMENTS WILL BE RETURNED TO THE CONTRACTOR.
- E. AT THE TIME OF SHOP DRAWINGS SUBMISSION, THE CONTRACTOR SHALL INFORM THE ENGINEER IN WRITING OF ANY DEVIATIONS OR OMISSIONS FROM THE CONTRACT DRAWINGS.
- F. ALLOW 10 BUSINESS DAYS FOR STRUCTURAL REVIEW OF SHOP DRAWINGS. THIS TIME SHOULD BE ALLOTTED IN THE CONTRACTOR'S SCHEDULE.
- G. SHOP DRAWINGS SHALL BEAR THE CONTRACTOR'S STAMP OF APPROVAL WHICH SHALL CONSTITUTE CERTIFICATION THAT THEY HAVE VERIFIED ALL FIELD MEASUREMENTS, CONSTRUCTION CRITERIA, MATERIALS AND SIMILAR DATA AND HAVE CHECKED EACH DRAWING FOR COMPLETENESS, COORDINATION AND COMPLIANCE WITH THE CONTRACT DOCUMENTS.
- H. DELEGATED DESIGN: THE CONTRACTOR SHALL SUBMIT FOR REVIEW, SIGNED AND SEALED DRAWINGS AND CALCULATIONS PREPARED BY A SPECIALTY STRUCTURAL ENGINEER REGISTERED IN THE PROJECT'S JURISDICTION FOR THE FOLLOWING ASSEMBLIES. THIS REVIEW SHALL BE FOR GENERAL CONFORMANCE WITH THE PROJECT'S PARAMETERS AS INDICATED ON THE DRAWINGS, SPECIFICATIONS AND GENERAL NOTES. THE DESIGN OF THESE ASSEMBLIES IS THE RESPONSIBILITY OF THE CONTRACTOR'S ENGINEER WHO HAS SIGNED AND SEALED THESE DRAWINGS AND CALCULATIONS. THESE SUBMISSIONS SHALL BE MADE AVAILABLE IN CONJUNCTION WITH OR PRIOR TO THE SHOP DRAWING FOR THE PRIMARY BUILDING STRUCTURE THAT SUPPORT THESE ASSEMBLIES.
  1. CFMF AND CURTAIN WALL SYSTEMS AND RELATED CONNECTIONS:
     - a. DESIGNS SHALL TAKE INTO ACCOUNT ALL VERTICAL AND LATERAL LOADS REQUIRED BY APPLICABLE BUILDING CODES. BACK-UP SYSTEMS AND CURTAIN WALLS SHALL BE DESIGNED FOR A MAXIMUM LATERAL DEFLECTION OF L/600 OF THE SPAN IN INCHES OR 3/8" WHICHEVER IS LESS FOR THE APPLICABLE DESIGN WIND LOAD. THE SUBMITTED DRAWINGS AND CALCULATIONS SHALL CLEARLY SHOW THE LOAD PATH AND THE REACTIONS AS APPLIED TO THE MAIN BUILDING STRUCTURE.
  2. RAILINGS AND GUARDRAILS:
     - a. DESIGNS SHALL TAKE INTO ACCOUNT ALL VERTICAL AND LATERAL LOADS REQUIRED BY APPLICABLE BUILDING CODES, INCLUDING LIVE LOAD OF 50 PLF AND 200# CONCENTRATED LOAD. WHERE RAILINGS WILL BE EMBEDDED IN THE TOP OF A CONCRETE WALL, A STEEL SLEEVE MUST BE USED.
  3. PRE-ENGINEERED METAL BUILDING:
     - a. DESIGNS SHALL TAKE INTO ACCOUNT ALL VERTICAL AND LATERAL LOADS REQUIRED BY APPLICABLE BUILDING CODES INCLUDING ALL MOMENT AND AXIAL EFFECTS. STEEL SHOP DRAWINGS SHOWING THE CONNECTIONS SHALL BE DESIGNED, SIGNED AND SEALED BY AN ENGINEER LICENSED IN THE JURISDICTION.
  4. METAL STAIRS AND LADDERS:
     - a. DESIGNS SHALL TAKE INTO ACCOUNT ALL VERTICAL AND LATERAL LOADS REQUIRED BY APPLICABLE BUILDING CODES. WHERE HEADERS OR OTHER TYPES OF STRUCTURAL MEMBERS HAVE BEEN DESIGNATED BY THE STRUCTURAL ENGINEER OF RECORD TO SUPPORT STAIRS OR LADDERS, THE CONNECTIONS FROM THE STAIRS OR LADDER SHALL BE DESIGNED SO THAT NO ECCENTRIC OR TORSIONAL FORCES ARE INDUCED INTO THESE MEMBERS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING EMBEDS AND HARDWARE AS REQUIRED BY THE STAIR DESIGN.
- I. CONTRACTOR SHALL FURNISH DIMENSIONED SHOP DRAWINGS LOCATING FLOOR AND ROOF EDGES FOR REVIEW BY THE ARCHITECT AND STRUCTURAL ENGINEER.
- J. CONTRACTOR SHALL FURNISH DIMENSIONED SHOP DRAWINGS SHOWING LOCATIONS OF ALL SLEEVES AND OPENINGS REQUIRED BY ALL TRADES FOR REVIEW BY THE MEP, ARCHITECT AND STRUCTURAL ENGINEER.

PART 3 - CONCRETE

3.1 STANDARD SPECIFICATIONS AND REFERENCE STANDARDS:
- A. "ACI MANUAL OF CONCRETE PRACTICE - PARTS 1 THROUGH 5", AMERICAN CONCRETE INSTITUTE."MANUAL OF STANDARD PRACTICE", CONCRETE REINFORCING STEEL INSTITUTE.
- B. FOLLOW THE LATEST RECOMMENDATIONS AND SPECIFICATIONS OF THE AMERICAN CONCRETE INSTITUTE:
  1. ACI 301 SPECIFICATION OF STRUCTURAL CONCRETE
  2. ACI 302 GUIDE TO CONCRETE FLOOR AND SLAB CONSTRUCTION
  3. ACI 304 GUIDE FOR MEASURING, MIXING, TRANSPORTING AND PLACING CONCRETE
  4. ACI 305 GUIDE TO HOT WEATHER CONCRETING
  5. ACI 306 GUIDE TO COLD WEATHER CONCRETING
  6. ACI 315 GUIDE TO DETAILING REINFORCING STEEL
  7. ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
  8. ACI 347 GUIDE TO FORMWORK FOR CONCRETE
  9. ACI 117 STANDARD SPECIFICATION FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS

3.2 CONCRETE MIX PROPERTIES:

A. ELEMENT (NORMAL WEIGHT UNO)	28-DAY STRENGTH	W/CM MAX(b)	AIR CONTENT(a)	EXPOSURE CATEGORIES
1. FOOTINGS & SLAB ON GRADE:	5,000 PSI	0.40	6%	F3, S0, W0, C2

- a. AIR CONTENT OF TROWEL FINISHED FLOORS SHALL NOT EXCEED 3%
- b. PUMP MIXES: MAXIMUM WATER/CEMENTITIOUS MATERIAL (W/CM) RATIO MUST BE MAINTAINED. IF ADDITIONAL WORKABILITY IS REQUIRED FOR PUMPED PLACEMENT, THE HIGH OR MID-RANGE WATER REDUCERS SHALL BE USED IN LIEU OF ADDITIONAL WATER.
- c. ELEVATED DECKS THAT ARE EXPOSED TO FREEZING TEMPERATURES, I.E. PLAZA DECKS, THAT DO NOT RECEIVE A TROWEL FINISH SHALL HAVE AN AIR CONTENT OF 6%
- d. MAXIMUM SLUMP WITHOUT ADMIXTURES = 4"
- e. AIR CONTENT INDICATED AS TARGET, +- 1 1/2%

- B. PORTLAND CEMENT: ASTM C150, TYPE I OR III.
- C. CEMENT SUBSTITUTES: ASTM C595, TYPE LS (LIMIT TO 50% MAX OF CEMENTITIOUS CONTENT BY WEIGHT)
- D. AGGREGATES / DENSITY: MAXIMUM COARSE AGGREGATE SIZE = 3/4" TYPICAL; ASTM C33 / 145 PCF - NORMAL WEIGHT
- E. AIR-ENTRAINMENT: ASTM C260 (ALL CONCRETE EXPOSED TO WEATHER AND WITHIN 4'-0" OF FINISHED GRADE).
- F. SHOP DRAWINGS: CONCRETE MIX DESIGNS SHALL BE MADE BY AN APPROVED LABORATORY FOR ALL CONCRETE AND SHALL BE SUBMITTED TO THE ARCHITECT AND ENGINEER FOR APPROVAL BEFORE USE. THE MIX MUST CLEARLY NOTE WHERE THE CONCRETE IS INTENDED TO BE USED.
- G. CALCIUM CHLORIDE SHALL NOT BE PERMITTED IN CONCRETE IN ANY MANNER.

3.3 BASE PLATE GROUT: 6,000 PSI 28-DAY COMPRESSIVE STRENGTH, NON-METALLIC, NON-SHRINK.

3.4 STEEL REINFORCEMENT:
1. DEFORMED REINFORCING BARS: ASTM A615 GRADE 60
2. WELDABLE DEFORMED REINF. BARS: ASTM A706 OR APPROVED EQUAL.
3. WELDED WIRE REINFORCEMENT (WWR): ASTM A1064 (FLAT SHEETS ONLY)

3.5 CONCRETE COVER:
- A. MILD REINFORCED CONCRETE
  1. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3 IN.
  2. CONCRETE EXPOSED TO EARTH OR WEATHER:
     - #6 BAR OR LARGER 2 IN.
     - #5 BAR OR SMALLER 1½ IN.
  3. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
     SLABS, WALLS AND JOISTS:
     - #14 BAR OR LARGER 1½ IN.
     - #11 BAR OR SMALLER ¾ IN.

3.6 GENERAL REQUIREMENTS:
- A. PROVIDE (2) #4 X 4'-0" AT SLAB MID DEPTH AT ALL RE-ENTRANT CORNERS OF FLOOR SLAB (BOTH ELEVATED AND SLAB ON GRADE).
- B. CONCRETE SHALL NOT BE DROPPED THROUGH REINFORCING STEEL SO AS TO CAUSE SEGREGATION OF AGGREGATES. HOPPERS, VERTICAL CHUTES, OR TRUNKS SHALL BE USED IN SUFFICIENT NUMBERS SO THAT THE FREE UNCONFINED FALL OF CONCRETE SHALL NOT EXCEED SIX FEET AND TO ENSURE CONCRETE IS KEPT LEVEL AT ALL TIMES.
- C. EXISTING SURFACE TREATMENT: PRIOR TO PLACING FRESH CONCRETE AGAINST CONCRETE IN PLACE, THE CONTACT SURFACES SHALL BE CLEANED. ALL LAITANCE SHALL BE REMOVED, AND A CHEMICAL BONDING COMPOUND APPLIED. WHERE NOTED, ROUGHEN EXISTING CONCRETE SURFACES COMMON WITH NEW CONCRETE TO AMPLITUDE OF 1/4 INCH.
- D. FORMWORK, SHORING AND RESHORING: SHALL BE DESIGNED AND SUBMITTED BY THE CONTRACTOR'S ENGINEER REGISTERED IN THE PROJECT'S JURISDICTION WITH ALL SUBMISSIONS BEARING THE ENGINEER'S SEAL AND SIGNATURE.
- E. ALL KEYS SHALL BE 3" DEEP UNLESS NOTED OTHERWISE.
- F. INSERTS AND SLEEVES: CONTRACTOR SHALL FURNISH DIMENSIONED SHOP DRAWINGS AT ALL LEVELS SHOWING LOCATIONS OF ALL CAST-IN-PLACE SLEEVES, INSERTS AND OPENINGS REQUIRED BY ALL TRADES FOR REVIEW BY THE MEP, ARCHITECT AND STRUCTURAL ENGINEER, IN THAT ORDER. NO SLEEVE SHALL BE PLACED THROUGH ANY CONCRETE ELEMENT UNLESS SHOWN ON THE APPROVED SHOP DRAWINGS OR SPECIFICALLY AUTHORIZED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD.
- G. CORES AND DRILLED FASTENERS:
  1. DRILLED OR POWDER DRIVEN FASTENERS WILL BE PERMITTED WHEN PROVEN TO THE SATISFACTION OF THE STRUCTURAL ENGINEER THAT THE FASTENERS WILL NOT SPALL THE CONCRETE OR DAMAGE EXISTING REINFORCEMENT.
  2. CORE DRILLING OF FOUNDATIONS SHALL NOT BE PERMITTED UNLESS AUTHORIZED IN WRITING BY THE STRUCTURAL ENGINEER.
  3. WHEN INSTALLING EXPANSION OR ADHESIVE ANCHORS, THE CONTRACTOR SHALL TAKE MEASURES TO AVOID DRILLING OR CUTTING OF ANY EXISTING REINFORCING AND DESTRUCTION OF CONCRETE. ALL BOLTS AND ANCHORS SHALL BE INSTALLED PER THE MANUFACTURER'S SPECIFICATIONS.
- H. FLOOR SLABS SHALL BE FINISHED TO A MINIMUM FLATNESS F-NUMBER FF=20 AND A MINIMUM LEVELNESS F-NUMBER F1=17 IN ANY DIRECTION. ALL CONCRETE SHALL BE CURED WITH LIQUID SEALING COMPOUND CONFORMING TO ASTM C-309, TYPE 1 AND FEDERAL SPECIFICATION TT-C-00800 OR OTHER APPROVED METHOD WHICH IS COMPATIBLE WITH FLOORING ADHESIVES AND OTHER TREATMENTS. (ALL CONCRETE LEFT EXPOSED AT THE COMPLETION OF THE PROJECT SHALL BE TREATED WITH A CLEAR, PENETRATING ACRYLIC BASED POLYMER CAPABLE OF PREVENTING INFILTRATION OF WATER BORNE CHLORIDES SUCH AS CONSPEC #1 BY CONSPEC MARKETING AND MANUFACTURING COMPANY OR APPROVED EQUAL.)
- I. ALL INTERIOR CONCRETE SHALL RECEIVE A STEEL TOWELED FINISH. EXTERIOR SLABS ON GRADE TO RECEIVE A BROOM FINISH, UNLESS NOTED OTHERWISE. SUBMIT FINISHED SCHEDULE TO ARCHITECT FOR APPROVAL.
- J. CHAMFER ALL EXPOSED CONCRETE CORNERS,3/4 IN. X 3/4 IN. MINIMUM, UNLESS NOTED OTHERWISE ON THE ARCHITECTURAL DRAWINGS.
- K. WATERSTOPS: AS SPECIFIED ON THE ARCHITECTURAL DRAWINGS, PROVIDE CONTINUOUS WATERSTOPS AT ALL HORIZONTAL AND VERTICAL CONSTRUCTION JOINTS IN ALL BELOW GRADE FOUNDATION WALLS, ELEVATOR PITS AND OTHER PIT WALLS.
- L. CONCRETE QUANTITIES: THE CONCRETE SLABS SHALL BE FINISHED, WITHIN TOLERANCE AND FLOOR FLATNESS REQUIREMENTS, TO THE ELEVATIONS INDICATED ON THE DRAWINGS. CONTRACTOR SHALL PROVIDE AT THEIR COST, ADDITIONAL CONCRETE AS REQUIRED DUE TO FORMWORK DEFLECTION TO ACHIEVE THIS FINISHED TOP OF SLAB ELEVATION. REFER TO PART 5B FOR CONCRETE PLACEMENT AT SLABS ON DECK.
- M. LOADS GREATER THAN THE DESIGN LIVE LOADS SHALL NOT BE PLACED ON THE STRUCTURE. A CONCRETE STRUCTURE MAY NOT SUPPORT ITS DESIGN LIVE LOAD UNTIL IT HAS REACHED ITS SPECIFIED STRENGTH. CONTRACTOR SHALL SUPPORT ADJACENT STRUCTURES, UTILITIES, AND EXCAVATIONS AS REQUIRED FOR COMPLETION OF WORK.
- N. IT IS NOT PERMISSIBLE TO DELAY THE APPLICATION OF CURING COMPOUND UNTIL THE MORNING AFTER THE CONCRETE IS CAST.
- O. CONCRETE CAST ON SLOPED SURFACES SHALL BEGIN AT THE LOWEST ELEVATION AND CONTINUE MONOLITHICALLY TOWARD THE HIGHER ELEVATION UNTIL THE INTENDED POUR IS COMPLETED.
- P. CONDUITS IN CONCRETE SLABS SHALL BE SPACED SUCH THAT THE CENTER TO CENTER DISTANCE BETWEEN CONDUITS IS A MINIMUM OF THREE TIMES THE OUTSIDE DIAMETER OF THE LARGEST CONDUIT.
- Q. CONDUITS IN CONCRETE SLAB HAVING OUTSIDE DIAMETER LARGER THAN ONE THIRD OF THE SLAB THICKNESS SHALL NOT BE PERMITTED. CONDUITS THAT CROSS EACH OTHER WITHIN THE SLAB SHALL NOT CONSUME MORE THAN ONE THIRD OF THE SLAB THICKNESS AT THE POINT OF INTERSECTION. FOR ELEVATED SLABS WHICH ARE ON A DECK, THICKNESS SHALL BE DEFINED AS THE CLEAR DIMENSION ABOVE THE RIBS.
- R. ALUMINUM CONDUITS WILL NOT BE PERMITTED IN CONCRETE ELEMENTS.
- S. ALL WELDING OF REINFORCING SHALL BE COMPLETED WITH E90XX ELECTRODES IN ACCORDANCE WITH AWS SPECIFICATION D1.4 (LATEST EDITION).

3.7 SPLICING AND PLACEMENT OF REINFORCEMENT:
- A. NO SPLICES OF REINFORCEMENT SHALL BE PERMITTED EXCEPT AS DETAILED OR AUTHORIZED BY THE STRUCTURAL ENGINEER. MAKE BARS CONTINUOUS AROUND CORNERS. WHEN PERMITTED, SPLICES SHALL BE MADE BY CONTACT TENSION LAP SPLICE, UNLESS NOTED OTHERWISE.
- B. SPLICE WELDED WIRE REINFORCEMENT TWO FULL MESH LENGTHS AND WIRE TOGETHER.
- C. SPLICE BARS AS SHOWN ON DRAWINGS BUT NOT LESS THAN 50 BAR DIAMETERS FOR SLABS AND BEAM BOTTOM BARS, AND NOT LESS THAN 65 BAR DIAMETERS FOR WALLS AND BEAM TOP STEEL.
- D. NO WELDING OF REINFORCING SHALL BE PERMITTED UNLESS SPECIFICALLY CALLED FOR OR APPROVED BY THE STRUCTURAL ENGINEER.
- E. WELDED WIRE REINFORCING SHALL HAVE ENDS LAPPED ONE FULL PANEL AND SPLICE LACED WITH WIRE.
- F. ANY MECHANICAL SPLICES USED, MUST BE "TENSION-COMPRESSION" TYPE AND SHALL COMPLY WITH ACI 318 UNLESS OTHERWISE APPROVED BY THE STRUCTURAL ENGINEER. SHOP DRAWINGS SUBMITTED FOR THE ENGINEER'S APPROVAL MUST INDICATE THE USE AND THE TYPE OF ANY MECHANICAL SPLICES USED.
- G. PROVIDE #4 CHAIR BARS, HIGH CHAIRS, TIES, CLIPS, SLAB BOLSTERS AND OTHER ACCESSORIES WHERE NOT SPECIFIED ON THE DRAWINGS IN ACCORDANCE WITH MANUAL OF STANDARD PRACTICE OR DETAILING REINFORCING CONCRETE STRUCTURES ACI 315 OR CRSI MANUAL OF STANDARD PRACTICE. USE PLASTIC TIPS ON ALL CHAIRS PLACED ON THE SIDES OF CONCRETE FORMWORK.
- H. PROVIDE PLASTIC TIPPED BOLSTERS AND CHAIRS AT ALL LOCATIONS WHERE THE CONCRETE SURFACE IS IN CONTACT WITH THE BOLSTERS OR CHAIRS IS EXPOSED.

3.8 REINFORCEMENT SHOP DRAWINGS:
- A. SUBMIT FOR APPROVAL, COMPLETE BENDING AND PLACING DETAILS OF ALL REINFORCEMENT INCLUDING WELDED WIRE REINFORCEMENT, INDICATING POSITION OF SPLICES. INCLUDE ACCESSORY DRAWINGS. ALL REINFORCING SHALL BE DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH ACI 315 AND ACI 318.
- B. UNAUTHORIZED REPRODUCTION OF ANY PORTION OF THE STRUCTURAL CONTRACT DRAWINGS FOR RE-SUBMITTAL AS SHOP DRAWINGS IS PROHIBITED. SHOP DRAWINGS PRODUCED IN SUCH A MANNER WILL BE REJECTED AND RETURNED.

3.9 HOUSEKEEPING PADS AND CURBS:
- A. PADS AND CURBS MAY BE SHOWN ON PLAN IN CERTAIN INSTANCES FOR REFERENCE ONLY. SEE ARCHITECTURAL AND MECHANICAL DRAWINGS AND SPECIFICATIONS FOR LOCATIONS AND COORDINATE WITH EQUIPMENT MANUFACTURER'S REQUIREMENTS. USE SAME CONCRETE AS BASE SLAB, UNLESS DETAILED OTHERWISE.
- B. PROVIDE 4" CONCRETE PADS REINFORCED WITH #3 REBAR AT 12" E.W. AT MID DEPTH AT ALL EQUIPMENT SUPPORTED ON SLABS ON GRADE OR ON FRAMED FLOORS UNLESS NOTED OTHERWISE. USE LIGHTWEIGHT CONCRETE FOR ALL PADS ON FRAMED FLOORS. PAD SHALL EXTEND 6" MINIMUM ON ALL SIDES OF THE EQUIPMENT.

3.10 CONSTRUCTION JOINTS:
- A. SUBMIT SHOP DRAWINGS INDICATING JOINT LAYOUT FOR ARCHITECT/ENGINEER APPROVAL.
- B. CONSTRUCTION JOINTS FOR MILD-REINFORCED CONCRETE SHALL BE LOCATED WITHIN THE MIDDLE THIRD OF THE SPAN. PROPOSED CONSTRUCTION JOINT LOCATIONS SHALL BE SHOWN ON THE REINFORCING STEEL SHOP DRAWINGS. ANY STOP IN CONCRETE WORK MUST BE MADE WITH VERTICAL BULKHEADS AND HORIZONTAL KEYS, UNLESS INDICATED OTHERWISE. FOUNDATIONS SHALL NOT HAVE JOINTS IN A HORIZONTAL PLANE UNLESS DETAILED OTHERWISE.
- C. WHERE CONSTRUCTION JOINTS ARE PROVIDED THE REINFORCEMENT SHALL PASS CONTINUOUSLY THROUGH THE JOINT AND ADEQUATE SHEAR TRANSFER REINFORCEMENT SHALL BE PROVIDED.

3.11 CONCRETE SLAB ON GRADE CONSTRUCTION:
- A. THE CONCRETE SLABS ON GRADE FOR THIS PROJECT HAVE BEEN DESIGNED UTILIZING A MODULUS OF SUBGRADE REACTION "K" EQUAL TO 500 PCI.
- B. PLEASE NOTE THAT THE CONCRETE SLABS ON GRADE THROUGHOUT THIS PROJECT ARE NOT DESIGNED TO SUPPORT THE CRANES USED DURING THE ERECTION OF THE STRUCTURAL STEEL. IF THE CONTRACTOR ELECTS TO PLACE THE CRANE ON THE CONCRETE SLAB ON GRADE, IT IS THE CONTRACTOR'S RESPONSIBILITY TO TAKE ALL NECESSARY PRECAUTIONS, INCLUDING THE TEMPORARY INSTALLATION OF WOOD CRIBBING ON THE SLAB, IN ORDER TO PREVENT CRACKS FROM FORMING IN THE SLAB ON GRADE. ALL CRACKS WHICH FORM IN THE CONCRETE SLABS ON GRADE DUE TO THE CRANE BEING PLACED ON THE SLAB WILL BE REPLACED OR REPAIRED TO THE APPROVAL OF THE STRUCTURAL ENGINEER AND OWNER AT THE CONTRACTOR'S EXPENSE.

PART 13 - PRE-ENGINEERED METAL BUILDING (PEMB)

13.1 THE PRE-ENGINEERED BUILDING MANUFACTURER SHALL DESIGN AND FABRICATE THE BUILDING STRUCTURE AND ENCLOSURE FOR THE LOADING INDICATED, ON THE PLANS, PART 1 NOTES, AND BELOW, IN COMPLIANCE WITH THE APPLICABLE CODES AND STANDARDS REFERENCED IN THESE NOTES, AND FOR THE GEOMETRIC CRITERIA SHOWN ON THE ARCHITECTURAL AND/OR STRUCTURAL DRAWINGS. CALCULATIONS AND SHOP DRAWINGS SHALL BE SUBMITTED BEARING THE SEAL AND SIGNATURE OF THE MANUFACTURER'S ENGINEER REGISTERED IN THE PROJECT'S JURISDICTION.
- A. MAXIMUM HORIZONTAL DRIFT (10-YEAR MRI)= H/240 (WHERE H=MEAN HEIGHT OF STRUCTURE)
- B. MINIMUM COLLATERAL DEAD LOAD= 8 PSF (ROOF)

13.2 COLUMN BASE REACTIONS SHALL NOT EXCEED THE CAPACITIES INDICATED IN THE APPROVED PEMB DRAWINGS. ALL COLUMNS SHALL BE DESIGNED AS HAVING "PINNED" BASES AND SHALL NOT INTRODUCE MOMENTS INTO THE FOUNDATIONS. TEC RESERVES THE RIGHT TO UPDATE FOUNDATION SIZES BASED ON THE FINAL REACTIONS AS LISTED ON PEMB SHOP AND ERECTION DRAWINGS.

13.3 ANCHOR ROD DIAMETERS SHALL BE DESIGNED BY THE PRE-ENGINEERED METAL BUILDING SUPPLIER. ANCHOR RODS SHALL CONFORM TO ASTM F1554, GRADE 55. REFER TO FOUNDATION DETAILS FOR REQUIRED EMBEDMENT AND MATERIAL.

PART 31 - FOUNDATIONS / EARTHWORK / GEOTECHNICAL REPORT

31.1 REFERENCE GEOTECHNICAL REPORT:
- A. FOUNDATION DESIGN IS IN ACCORDANCE WITH THE RECOMMENDATIONS PROVIDED IN THE GEOTECHNICAL REPORT PREPARED BY TERRADON CORPORATION, DATED OCTOBER 1, 2024, AUTHOR'S REPORT NUMBER 2401-3170-002. THE GEOTECHNICAL ENGINEERING REPORT HAS BEEN INCLUDED AS PART OF THE CONTRACT DOCUMENTS. THE RECOMMENDATIONS INCLUDED IN THE GEOTECHNICAL ENGINEERING REPORT SHALL BE CONSIDERED REQUIREMENTS OF THE PROJECT.
- B. SEE THE GEOTECHNICAL REPORT REQUIREMENTS FOR EXCAVATION, SUITABILITY AND REPLACEMENT OF THE BEARING MATERIAL, AND PREPARATION OF THE SUBGRADE FOR THE FOUNDATIONS AND THE SLAB ON GRADE, INCLUDING COMPACTION PROCEDURES.
- C. IF UNSUITABLE BEARING MATERIAL IS DISCOVERED THE GEOTECHNICAL ENGINEER SHALL BE ALERTED.

31.2 FOUNDATION DESIGN PARAMETERS
- A. ALL FOUNDATIONS SHALL BEAR A MINIMUM OF 36 INCHES BELOW ADJACENT EXTERIOR GRADE. THE CONTRACTOR SHALL COORDINATE THESE REQUIREMENTS WITH ALL UNDERGROUND UTILITIES, TUNNELS, ETC. AND NOTIFY THE ARCHITECT AND STRUCTURAL ENGINEER IN ADVANCE OF ANY CONSTRUCTION TO ALLOW FOR ADJUSTMENTS.
- B. SHALLOW FOUNDATIONS:
  1. BUILDING SPREAD AND STRIP FOOTINGS SHALL BEAR ON UNDISTURBED NATURAL SOILS OR PROPERLY PLACED AND COMPACTED ENGINEERED FILL WITH AN ALLOWABLE BEARING PRESSURE OF 4000 PSF.

31.3 EXCAVATION:
- A. THE SLOPE BETWEEN THE LOWER EDGES OF ADJACENT FOUNDATIONS SHALL NOT EXCEED 30 DEGREES REFERENCED FROM THE HORIZONTAL, UNLESS NOTED OR DETAILED OTHERWISE ON THE PLAN. MAINTAIN A 1V:2/3H SLOPE FROM BOTTOM EDGE OF ANY EXCAVATION, OR AS REQUIRED BY GEOTECHNICAL RECOMMENDATIONS OR OSHA REQUIREMENTS.
- B. THE CONTRACTOR SHALL VERIFY ALL EXISTING FIELD CONDITIONS THAT MAY AFFECT THE INSTALLATION OF THE FOUNDATION SYSTEM AS SHOWN PRIOR TO STARTING WORK. CONTRACTOR SHALL COORDINATE THE EXTENT OF THE EXCAVATION, SHORING AND BRACING WITH THE CIVIL ENGINEERS'S DRAWING AND REFER TO THOSE DRAWINGS AND SPECIFICATIONS FOR RELATED INFORMATION NOT COVERED IN THE STRUCTURAL DRAWINGS.
- C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING UTILITIES, ABOVE AND BELOW GRADE STRUCTURES, ETC., WHETHER INDICATED OR NOT, THAT MAY BE AFFECTED BY THE CONSTRUCTION PROCESS.
- D. UTILITIES LINES SHALL NOT BE PLACED THROUGH OR BELOW FOUNDATIONS WITHOUT THE STRUCTURAL ENGINEER'S APPROVAL UNLESS DETAILED OTHERWISE IN THE PLANS.
- E. ALL SHORING, TEMPORARY BRACED EXCAVATION (INCLUDING STAGED UNDERPINNING PITS), SHEETING AND DEWATERING SHALL BE THE TOTAL RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR'S ENGINEER, REGISTERED IN THE PROJECT'S JURISDICTION, SHALL DESIGN THE SHEETING AND SHORING, AND BRACED EXCAVATION AND PROVIDE SIGNED AND SEALED SUBMITTALS FOR REVIEW.

31.4 BACKFILL UNDER SLAB ON GRADE:
- A. BACKFILL WHERE REQUIRED BELOW SLABS WITH APPROVED GRANULAR SOIL PLACED IN ACCORDANCE WITH GEOTECHNICAL RECOMMENDATIONS. IN ABSENCE OF GEOTECHNICAL DIRECTION, BACK FILL SHALL BE PLACED IN 8 IN. LAYERS AND COMPACTED TO 95% DENSITY AT OPTIMUM MOISTURE CONTENT AS DEFINED BY ASTM D-1557, METHOD D.
- B. FOLLOWING REQUIRED STRIPPING OPERATIONS, ANY PROOFROLLING SHALL BE AS DIRECTED BY AN EXPERIENCED, QUALIFIED GEOTECHNICAL ENGINEER. THE PURPOSE OF PROOFROLLING WILL BE TO LOCATE ANY ISOLATED AREAS OF SOFT OR LOOSE SOILS REQUIRING IMPROVEMENT OR REPLACEMENT. SOFT AREAS SHALL BE UNDERCUT AND REPLACED WITH PROPERLY COMPACTED MATERIALS.

31.5 BACKFILL AGAINST WALLS:
- A. DO NOT BACKFILL AGAINST RETAINING WALLS UNTIL WALL CONCRETE IS AT FULL DESIGN STRENGTH. BACKFILL WITH APPROVED MATERIAL PLACED IN ACCORDANCE WITH GEOTECHNICAL RECOMMENDATIONS. IN ABSENCE OF GEOTECHNICAL DIRECTION, BACK FILL SHALL BE PLACED IN 8 IN. LAYERS AND COMPACTED TO 95% DENSITY AT OPTIMUM MOISTURE CONTENT AND FREE OF DEBRIS AS DEFINED BY ASTM D-1557, METHOD D.
- B. NO BACKFILL MATERIAL SHALL BE PLACED AGAINST FOUNDATION WALLS UNTIL THE WALL HAS ATTAINED 75% OF ITS DESIGN STRENGTH.
- C. WHERE THE FINAL GRADE ELEVATIONS ARE APPROXIMATELY EQUAL ON BOTH SIDES OF A WALL, BACKFILL IN LIFTS TO MAINTAIN LEVEL ELEVATIONS WITHIN 12 INCHES ON BOTH SIDES AT ANY TIME. 1

31.6 FOUNDATION PLACEMENT & PROTECTION:
- A. DO NOT PLACE FOUNDATION CONCRETE IN WATER OR ON FROZEN GROUND. PROTECT IN-PLACE FOUNDATIONS AND SLABS FROM FROST PENETRATION UNTIL THE PROJECT IS COMPLETE. DO NOT USE SALT OR CHLORIDE COMPOUNDS TO DE-ICE THE SITE.
- B. NEW FOOTING BEARING ELEVATION IS TO MATCH ADJACENT EXISTING FOOTING BEARING ELEVATION WHERE APPLICABLE UNLESS NOTED OR DETAILED OTHERWISE ON PLAN.
- C. CONCRETE FOR FOUNDATIONS SHALL BE POURED ON THE SAME DAY SUBGRADE APPROVAL IS GIVEN BY THE GEOTECHNICAL ENGINEER.
- D. BEARING ELEVATIONS INDICATED ON THE DRAWINGS ARE ESTIMATED FROM SOIL BEARING DATA INDICATED IN THE GEOTECHNICAL REPORT. PRIOR TO PLACING FOUNDATIONS, AN EXPERIENCED, QUALIFIED GEOTECHNICAL ENGINEER SHALL FIELD VERIFY ALLOWABLE BEARING PRESSURES AND DETERMINE FINAL BEARING ELEVATIONS.

31.7 STRUCTURAL FILL:
- A. REFER TO GEOTECHNICAL REPORT RECOMMENDATIONS FOR COMPACTED STRUCTURAL FILL. RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL REPORT ARE PART OF THIS WORK. INSPECTION OF THE PLACEMENT OF COMPACTED STRUCTURAL FILL SHALL BE BY AN EXPERIENCED, QUALIFIED GEOTECHNICAL ENGINEER.

31.8 BELOW GRADE DRAINAGE:
- A. THE BELOW-GRADE AREAS FOR THE STRUCTURE SHOULD BE PROVIDED WITH A PERIMETER DRAINAGE SYSTEM.

1

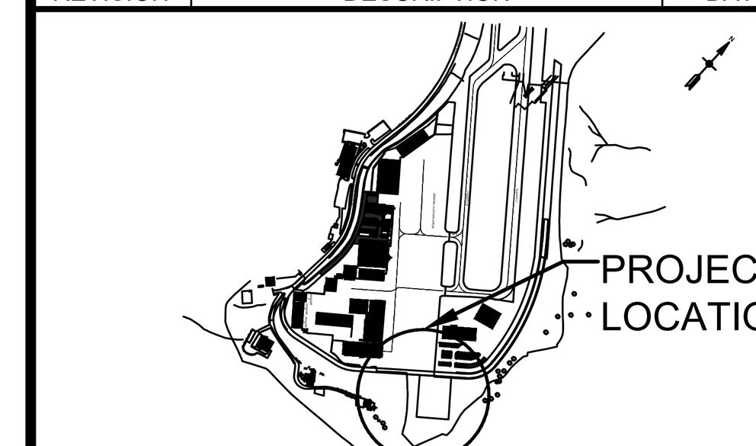
CRW WEST VIRGINIA INTERNATIONAL YEAGER AIRPORT

ADCI
FAA BLDG 2ND FLOOR
301 EAGLE MOUNTAIN ROAD, RM 227
CHARLESTON, WV 25311

25-181
TEC
Tarantino Engineering Consultants, PC
8115 Maple Lawn Blvd, Suite 350
Fulton, MD 20759
410-921-7678
www.tarantinoec.com

SEAL:
RYAN JAMES ENGLISH REGISTERED 26328 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER

REVISION	DESCRIPTION	DATE
1	ADDENDUM NO. 1	6/05/26
	AS-ADVERTISED	5/18/26



WEST VIRGINIA INTERNATIONAL YEAGER AIRPORT SNOW REMOVAL EQUIPMENT (SRE) BUILDING

PROJECT NO.	25-181		
SUBMITTAL DATE:	MAY 2026		
DESIGNED:	RHH	CHECKED:	BTS
DRAWN:	MJM	APPROVED:	RE

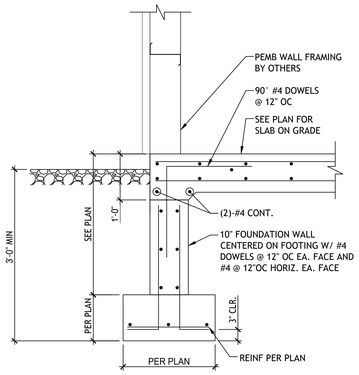
SHEET TITLE:

GENERAL NOTES

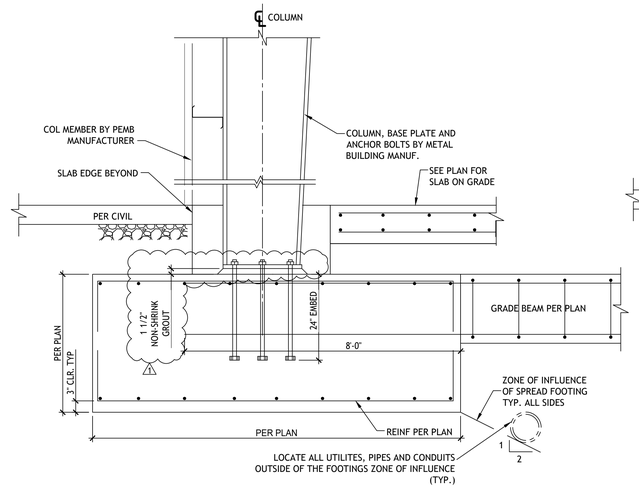
DRAWING NO.

S001

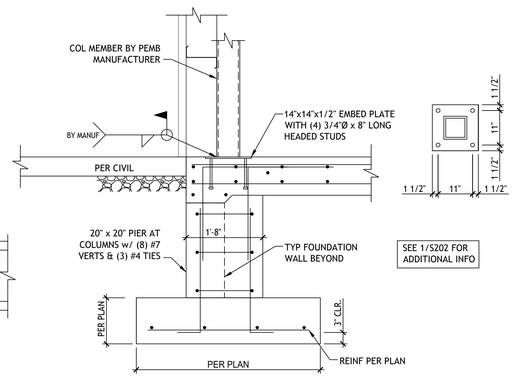
SHEET NO. 43 of 63



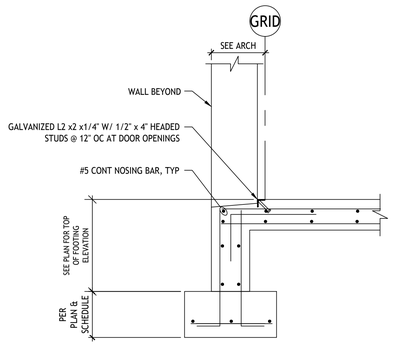
1 FOUNDATION DETAIL AT EXTERIOR WALL
3/4" = 1'-0"



2 TYPICAL METAL BUILDING EXTERIOR FOOTING
3/4" = 1'-0"



3 TYPICAL WIND COLUMN AT FOUNDATION
3/4" = 1'-0"



4 EXTERIOR FOUNDATION AT OVERHEAD DOOR
SCALE : 3/4" = 1'-0"

WEST VIRGINIA INTERNATIONAL YEAGER AIRPORT

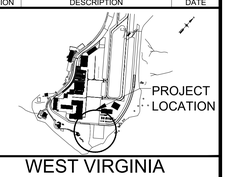
ADCI
FAA BLDG 2ND FLOOR
301 EAGLE MOUNTAIN ROAD, RM 227
CHARLESTON, WV 25311

25-181
TEC
Tarantino Engineering Consultants, PC
8115 Maple Lawn Blvd, Suite 350
Fulton, MD 20759
410-921-7678
www.tarantinoec.com

SEAL:

RYAN JAMES ENGLISH
REGISTERED
26328
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER

REVISION	DESCRIPTION	DATE
1	ADDENDUM NO. 1	6/05/26
	AS-ADVERTISED	5/18/26



WEST VIRGINIA INTERNATIONAL YEAGER AIRPORT SNOW REMOVAL EQUIPMENT (SRE) BUILDING

PROJECT NO. 25-181

SUBMITTAL DATE: MAY 2026

DESIGNED: RHH | CHECKED: BTS

DRAWN: MJM | APPROVED: RE

SHEET TITLE:

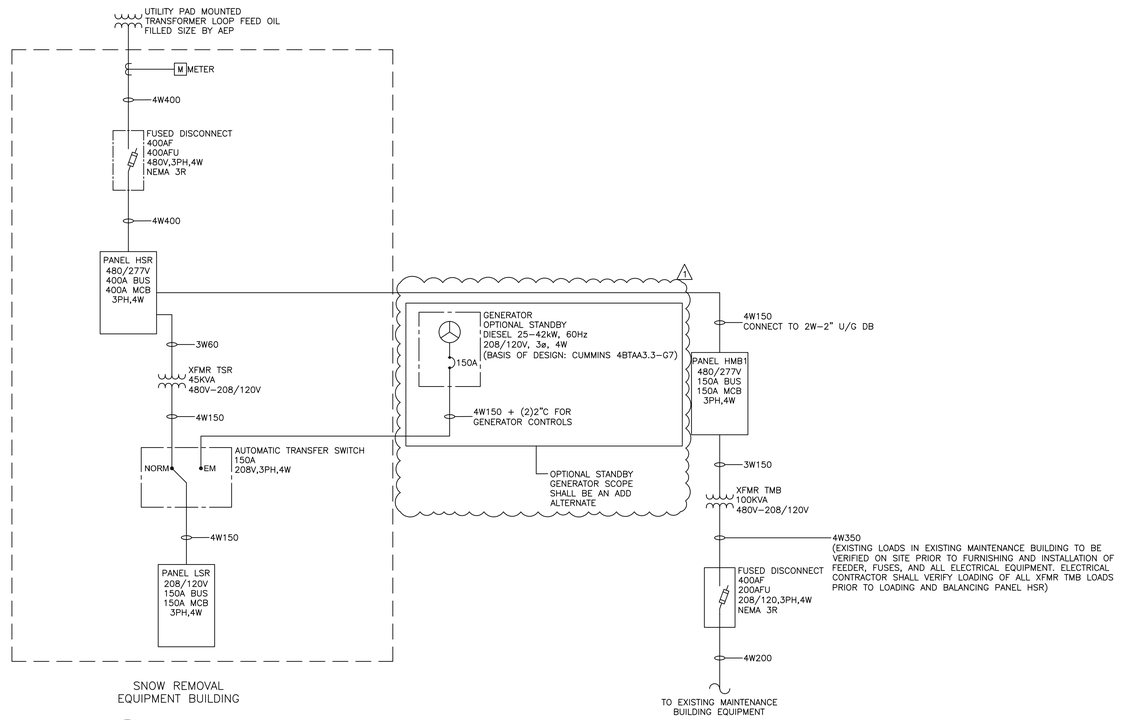
FOUNDATION DETAILS

DRAWING NO.

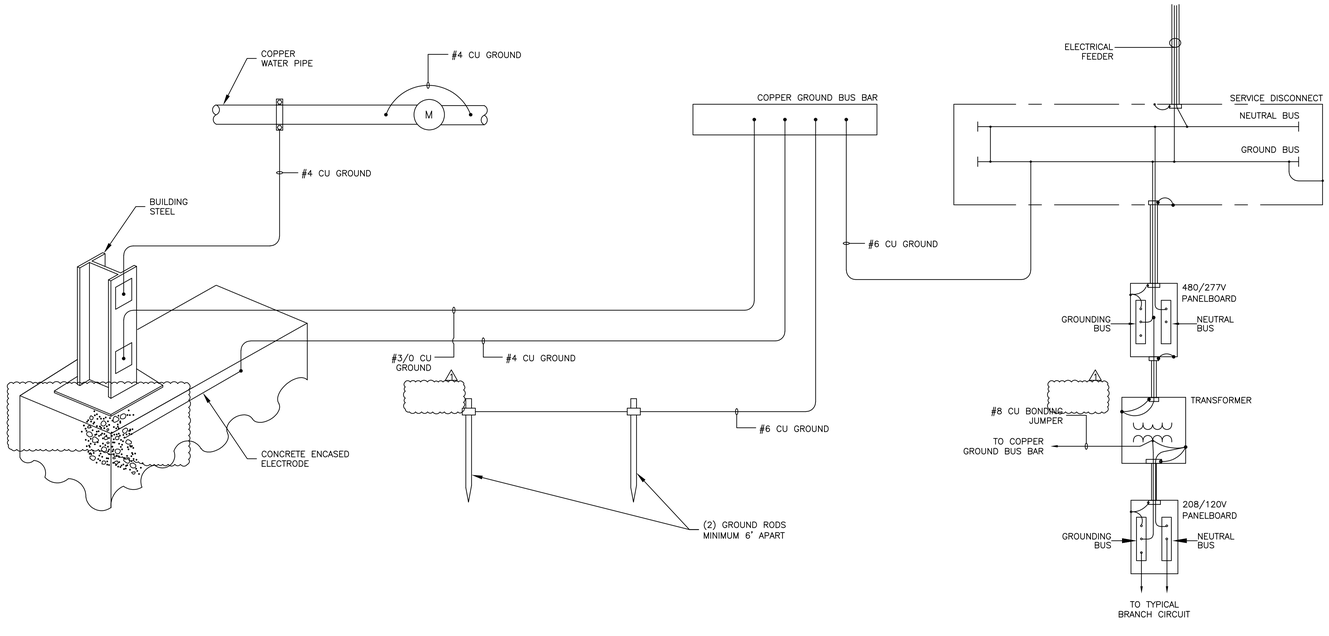
S202

SHEET NO. 47 of 63

Q:\PROJECTS\25-181AL_CRW-SRE PEMB-ADCI\CAD\SHEETS\25-181-S20X.DWG PLOT: 6/4/2026 12:20:40 PM BY RICHARD HAWKSWORTH SAVED: 5/13/2026 2:04:01 PM BY RICHARD HAWKSWORTH



1 / E200 ELECTRICAL SINGLE LINE DIAGRAM
SCALE: NONE



2 / E200 GROUNDING ELECTRODE CONDUCTOR AND BONDING DIAGRAM
SCALE: NONE

GENERAL NOTES:

1. ALL UTILITY EQUIPMENT SHALL BE INSTALLED PER UTILITY COMPANY GUIDELINES.
2. COORDINATE EXACT LOCATION OF UTILITY EQUIPMENT AND REQUIREMENTS WITH UTILITY COMPANY.
3. E.C. SHALL VERIFY AIC RATING OF EQUIPMENT WITH MAXIMUM SHORT CIRCUIT CURRENT AVAILABLE AT UTILITY TRANSFORMER.
4. SEE DRAWING E001 FOR FEEDER ID SCHEDULES.
5. THE GROUND FAULT PROTECTION SYSTEM SHALL BE PERFORMANCE TESTED WHEN INSTALLED ON SITE. THE TESTING SHALL BE CONDUCTED BY A QUALIFIED PERSONNEL USING A TEST PROCESS OF PRIMARY CURRENT INJECTION. A WRITTEN RECORD OF THE TEST SHALL BE PROVIDED WITH THE EQUIPMENT AND SHALL BE AVAILABLE TO THE AHJ.
6. PANEL DIRECTORIES SHALL HAVE SUFFICIENT DETAIL TO ALLOW EACH CIRCUIT TO BE DISTINGUISHED FROM ALL OTHERS AND THE PANEL LABEL(S) SHALL INCLUDE THE SOURCE OF FEED PER NEC 408.4.
7. ARC–FLASH HAZARD WARNING MARKINGS SHALL BE PROVIDED ON ELECTRICAL EQUIPMENT LIKELY TO REQUIRE EXAMINATION, ADJUSTMENT, SERVICING, OR MAINTENANCE WHILE ENERGIZED TO WARN QUALIFIED PERSONNEL OF POTENTIAL ELECTRIC ARC FLASH HAZARDS IN ACCORDANCE WITH NEC 110.16.
8. COORDINATE EXACT SUB–METERING PRODUCT AND REQUIREMENTS WITH OWNER PRIOR TO FURNISHING AND INSTALLATION.

ELECTRICAL LOAD CALCULATION

LOAD DESCRIPTION	LOAD (VA)	QUANTITY	TOTAL CONNECTED LOAD (VA)	DEMAND (%)	TOTAL DEMAND LOAD (VA)
GENERAL LIGHTING AND RECEPTACLES					
LIGHTING	N/A	N/A	7000	125%	8750.00
NEC TABLE 220.44 - RECEPTACLES	180	35	6300.0	FIRST 10KVA @ 100% REMAINDER @ 50%	6300.0
MECHANICAL					
RADIANT FLOOR HEATING	3025.0	10	30250.0	125%	37812.5
EF-1	3990.5	1	3990.5	125%	4988.2
EF-2	696.0	1	696.0	125%	870.0
EBB-1	400.0	1	400.0	125%	500.0
GAS-FIRE HEATERS	1150.0	6	6900.0	125%	8625.0
MISCHELLANEOUS					
GARAGE DOOR (5HP)	6304.5	3	18913.4	100%	18913.4
XFMR TMB	100000.0	1	100000.0	100%	100000.0
TOTAL LOAD					
				TOTAL DEMAND LOAD (VA)	186759.10
				TOTAL DEMAND LOAD (A @ 480V)	224.64

PANEL HSR

FED FROM: PAD MOUNTED TRANSFORMER | **MAIN BUS:** 400A | **MOUNTING:** SURFACE
LOCATION: SNOW REMOVAL EQUIPMENT BUILDING | **BKR RATING:** 400A | **AIC RATING:** 65kA
VOLTAGE: 480/277V - 3PH | **POLES:** 42

CKT #	LOAD TYPE	LOAD DESCRIPTION	LOAD (VA)	BREAKER TYPE	BREAKER TRIP	BREAKER POLE	MIN WIRE SIZE	LOAD PER PHASE (VA) A	B	C	MIN WIRE SIZE	BREAKER TYPE	BREAKER TRIP	BREAKER POLE	LOAD (VA)	LOAD DESCRIPTION	LOAD TYPE	CKT #
1	M/P	EP-1	1275		20	3	3W20	12045			3W60		60	3	10770	PANEL LSR	P	2
3	M/P		1275						12039						10764		P	4
5	M/P		1275							12436					11161		P	6
7	--	SPARE			20	3	3W20	33333			4W150		150	3	33333	PANEL HMB1	P	8
9	--								33333						33333		P	10
11	--									33333					33333		P	12
13	M/P	RF-1	15125		100	2	2W100	15125			2W20		20	2		SPARE	--	14
15	M/P		15125						15125								--	16
17	L	LIGHTING	2816		20	1	2W20			4337	2W20		20	1	1521	OUTDOOR LIGHTING	L	18
19	--	SPARE			20	1		0					20	1		SPARE	--	20
21	--	SPARE			20	1			0				20	1		SPARE	--	22
23	L	LIGHTING	2904		20	1	2W20			2904			20	1		SPARE	--	24
25	--	SPARE			20	1		0					20	1		SPARE	--	26
27	--	SPARE			20	1			0				20	1		SPARE	--	28
29	--	SPARE			20	1				0						SPACE	--	30
31	--	SPACE						0								SPACE	--	32
33	--	SPACE							0							SPACE	--	34
35	--	SPACE								0						SPACE	--	36
37	--	SPACE						0								SPACE	--	38
39	--	SPACE							0							SPACE	--	40
41	--	SPACE								0						SPACE	--	42

BREAKER LEGEND:
BLANK STANDARD
A ARC FAULT
D EXISTING TO BE DEMOLISHED
E EXISTING TO REMAIN
G GROUND FAULT
HT HANDLE TIE
LH LOCKING HASP
ST SHUNT TRIP

A	B	C	
60503.5	60497.5	53010.8	CONNECTED LOAD PER PHASE (VA)
174011.7			TOTAL CONNECTED LOAD (VA)
209.6			TOTAL CONNECTED AMPERES (A)
60503.5	60497.5	53010.8	DEMAND LOAD PER PHASE (VA)
174011.7			TOTAL DEMAND LOAD (VA)
209.6			TOTAL DEMAND AMPERES (A)

LOAD TYPES:
D DWELLING UNIT
K KITCHEN (COMMERCIAL)
L LIGHTING
M/P MECH/PLUMBING EQUIPMENT
NC NONCOINCIDENTAL
P POWER
R RECEPTACLE

PANEL LSR

FED FROM: PANEL HSR | **MAIN BUS:** 150A | **MOUNTING:** SURFACE
LOCATION: SNOW REMOVAL EQUIPMENT BUILDING | **BKR RATING:** 150A | **AIC RATING:** 22kA
VOLTAGE: 208/120V - 3PH | **POLES:** 42

CKT #	LOAD TYPE	LOAD DESCRIPTION	LOAD (VA)	BREAKER TYPE	BREAKER TRIP	BREAKER POLE	MIN WIRE SIZE	LOAD PER PHASE (VA) A	B	C	MIN WIRE SIZE	BREAKER TYPE	BREAKER TRIP	BREAKER POLE	LOAD (VA)	LOAD DESCRIPTION	LOAD TYPE	CKT #
1	M/P	EP-2	696		20	1	2W20	946			2W20		20	1	250	MOTOR OPERATED DAMPER	M/P	2
3	M/P	EBB-1	400		20	1	2W20		400				20	1		SPARE	--	4
5	M/P	GFH-1	1150		20	1	2W20			2300	2W20		20	1	1150	GFH-2	M/P	6
7	M/P	GFH-3	1150		20	1	2W20	2300			2W20		20	1	1150	GFH-4	M/P	8
9	M/P	GFH-5	1150		20	1	2W20		2300		2W20		20	1	1150	GFH-6	M/P	10
11	R	REC - PARTS STORAGE	577		20	1	2W20			937	2W20		20	1	360	REC - VEH STORAGE 108	R	12
13	--	SPARE			20	1		0					20	1		SPARE	--	14
15	R	REC - VEH STORAGE 107	360		20	1	2W20		720		2W20		20	1	360	REC - VEH STORAGE 107	R	16
17	R	REC - VEH STORAGE 107	540		20	1	2W20			900	2W20		20	1	360	REC - VEH STORAGE 107	R	18
19	R	REC - VEH STORAGE 109	360		20	1	2W20	720			2W20		20	1	360	REC - MAINTENANCE BAY	R	20
21	R	REC - MATERIAL BAY	540		20	1	2W20		540				20	1		SPARE	--	22
23	--	SPARE			20	1				0			20	1		SPARE	--	24
25	P	GAS DETECTION PANEL	500		20	1	2W20	500					20	1		SPARE	--	26
27	P	FACP	500	LH	20	1	2W20		500				20	1		SPARE	--	28
29	R	REC - VEH STORAGE 108	360		20	1	2W20			720	2W20		20	1	360	REC - VEH STORAGE 108	R	30
31	P		2101					2101					20	1		SPARE	--	32
33	P	GARAGE DOOR	2101		25	3	3W25		2101				20	1		SPARE	--	34
35	P		2101							2101			20	1		SPARE	--	36
37	P		2101					4203							2101		P	38
39	P	GARAGE DOOR	2101		25	3	3W25		4203		3W25		25	3	2101	GARAGE DOOR	P	40
41	P		2101							4203					2101		P	42

BREAKER LEGEND:
BLANK STANDARD
A ARC FAULT
D EXISTING TO BE DEMOLISHED
E EXISTING TO REMAIN
G GROUND FAULT
HT HANDLE TIE
LH LOCKING HASP
ST SHUNT TRIP

A	B	C	
10770.5	10764.5	11161.5	CONNECTED LOAD PER PHASE (VA)
	32696.4		TOTAL CONNECTED LOAD (VA)
	90.8		TOTAL CONNECTED AMPERES (A)
10770.5	10764.5	11161.5	DEMAND LOAD PER PHASE (VA)
	32696.4		TOTAL DEMAND LOAD (VA)
	90.8		TOTAL DEMAND AMPERES (A)

LOAD TYPES:
D DWELLING UNIT
K KITCHEN (COMMERCIAL)
L LIGHTING
M/P MECH/PLUMBING EQUIPMENT
NC NONCOINCIDENTAL
P POWER
R RECEPTACLE

PANEL HMB1

FED FROM: PANEL HSR | **MAIN BUS:** 150A | **MOUNTING:** SURFACE
LOCATION: MAINTENANCE BUILDING | **BKR RATING:** 150A | **AIC RATING:** 22kA
VOLTAGE: 480/277V - 3PH | **POLES:** 24

CKT #	LOAD TYPE	LOAD DESCRIPTION	LOAD (VA)	BREAKER TYPE	BREAKER TRIP	BREAKER POLE	MIN WIRE SIZE	LOAD PER PHASE (VA) A	B	C	MIN WIRE SIZE	BREAKER TYPE	BREAKER TRIP	BREAKER POLE	LOAD (VA)	LOAD DESCRIPTION	LOAD TYPE	CKT #
1	P	XFMR TMB	33333		150	3	3W150	33333					20	1		SPARE	--	2
3	P		33333						33333				20	1		SPARE	--	4
5	P		33333							33333			20	1		SPARE	--	6
7	--	SPARE			20	1		0					20	1		SPARE	--	8
9	--	SPARE			20	1			0				20	1		SPARE	--	10
11	--	SPARE			20	1				0			20	1		SPARE	--	12
13	--	SPARE			20	1		0					20	1		SPARE	--	14
15	--	SPARE			20	1			0				20	1		SPARE	--	16
17	--	SPARE			20	1				0			20	1		SPARE	--	18
19	--	SPARE			20	1		0					20	1		SPARE	--	20
21	--	SPARE			20	1			0				20	1		SPARE	--	22
23	--	SPARE			20	1				0			20	1		SPARE	--	24

BREAKER LEGEND:
BLANK STANDARD
A ARC FAULT
D EXISTING TO BE DEMOLISHED
E EXISTING TO REMAIN
G GROUND FAULT
HT HANDLE TIE
LH LOCKING HASP
ST SHUNT TRIP

A	B	C	
33333.0	33333.0	33333.0	CONNECTED LOAD PER PHASE (VA)
	99999.0		TOTAL CONNECTED LOAD (VA)
	120.4		TOTAL CONNECTED AMPERES (A)
33333.0	33333.0	33333.0	DEMAND LOAD PER PHASE (VA)
	99999.0		TOTAL DEMAND LOAD (VA)
	120.4		TOTAL DEMAND AMPERES (A)

LOAD TYPES:
D DWELLING UNIT
K KITCHEN (COMMERCIAL)
L LIGHTING
M/P MECH/PLUMBING EQUIPMENT
NC NONCOINCIDENTAL
P POWER
R RECEPTACLE

CRW WEST VIRGINIA INTERNATIONAL YEAGER AIRPORT

ADCI
FAA BLDG 2ND FLOOR
301 EAGLE MOUNTAIN ROAD, RM 227
CHARLESTON, WV 25311

UNITAS ENGINEERING
UNITAS ENGINEERING
220 CECIL B MOORE AVE.
PHILADELPHIA PA 19122
T: (609) 703-9095
UNITASENGINEERING.COM

SEAL:

REVISION	DESCRIPTION	DATE
1	ADDENDUM #1	6/5/26
	AS-ADVERTISED	5/18/26

WEST VIRGINIA INTERNATIONAL YEAGER AIRPORT SNOW REMOVAL EQUIPMENT (SRE) BUILDING

PROJECT NO. 2025-1019

SUBMITTAL DATE: MAY 2026

DESIGNED: GC | CHECKED: AR

DRAWN: GC | APPROVED: AR

SHEET TITLE:

ELECTRICAL DIAGRAMS

DRAWING NO.

E200

SHEET NO. 57 of 63