

DMVA Project #: 42080032
New CSMS Calibration Laboratory
Area 10, Fort Indiantown Gap
Anville, PA 17003

ADDENDUM #001
Responses to Contractor Bid Based RFIs

Contracting/Bid Submission

Q - Please confirm the time the bid is due.

A – 2:00pm

Q- Please confirm the deadline for RFI submittals.

A – All RFIs must be submitted by 5:00pm, 2 June.

Q - May you provide an estimated value on this project?

A – We do not provide estimated values [or] a range of values.

Q - May you provide a plan holders list?

A – Attached in www.emarketplace.state.pa.us

Q - Can you confirm the site address?

A – Popular Street and Utility Road, Fort Indiantown Gap, Anville, PA 17003

Q - Please issue a link to where the bid is to be submitted. The solicitation number is not found on the PA Supplier Portal.

A – All bids are to be submitted electronically via the www.pasupplierportal.state.pa.us. Search for the bid number (starts with 61) and not the project number (starts with 41 or 42)

Q – Are there any Liquidated Damages?

A – No

Q - At the pre-bid it was mentioned that the bid is to be submitted online. The documents do not have directions for this and the Instructions to Bidders, page 1, section 5. But that only seems to indicate that we must deliver it as no other method will be accepted. Please clarify and provide directions on how we are to submit the bids.

A - All bids are to be submitted electronically via the www.pasupplierportal.state.pa.us. Search for the bid number (starts with 61) and not the project number (starts with 41 or 42)

Q - Please provide clarification on the Reciprocal Limitations Form. Which materials are to be included in this form?

A - All bidders must complete the following chart by listing the name of the manufacturer and the state (or foreign country) of manufacture for each item. If the item is domestically produced, the bidder must indicate the state in the United States where the item will be manufactured.

General Contractor (Point 1)

G – See attached Specifications 010100_Summary of Work and 011200_Coordination and Control. These specifications were corrected due to errors contained within the original bid design documents.

Q – Is it correct that the General Contractor is responsible for temporary electric, lights and heat? If so, can this be changed to have the Electrical (.4) and HVAC (.2) contractors responsible for temporary utilities?

A – YES, this is correct. NO, this will not be changed. The General Contractor will be responsible for all temporary utilities.

Q - Please issue drawing S.4.1 Structural Details shown on G.1.0 Cover Sheet.

A – See attached drawing S.4.1

Q - Specification 081113 indicates steel frames for wood doors. However, there is no wood door specification and wood doors do not appear on the door and frame schedule. Please confirm wood doors are not on this project.

A – There are no wood doors on this project.

Q - Specification 099123 interior painting refers to Division 9 Exterior Painting. Please issues specifications for exterior painting or confirm there is no exterior painting.

A – There is no Exterior Painting.

Q - Please issue a specification for the overhead door type 5.

A – See attached specification 083323_OH Coiling Doors.

Q - Table of contents in the specification indicates 096816, however it is not in the specifications. Please issue the specification section for 096816 Sheet Carpet.

A – See attached specification 096816_Sheet Carpet. In addition, there is no carpet tile. Carpet Tile was outlined within the finish schedule and this was a mistake. All carpet is to be sheet carpet.

Q - Please issue a specification for the steel lintel shown on 1/A3.3.

A – Refer to the Lintel Schedule located on Sheet S.4.1_Structural Details.

Q - Please confirm if YKK is an approved manufacturer for the aluminum storefront.

A – All project specifications list “Or Approved Equal” under the approved manufactures. All manufacturers that meets and/or exceeds the requirements outlined with the Project Design Documents, will be considered.

Q - Section 096519-Resilient Tile Flooring does not include a product for the ANTI-Static VCT that is called out on the floor schedule, please provide.

A – Refer to attached specification: 096536_Static Control Resilient Flooring

Q - Please provide additional details for Wall Type #6 (Service Counter)

A – See attached sheet A.3.2 Room Finish Schedule

- Q - Please issue more information (installation manual) for the government furnished antenna mast and gable antenna to be installed by general contractor.
- A – We do not have installation manuals for the install of the antennas. Government will provide all strapping and brackets necessary for the install. Contractor will only provide fasteners and labor. The antennas are to be installed in the same manner as they are currently installed.
- Q - A.3.1 indicates Columbia Partitions as the toilet partition manufacturer. However, Columbia partitions are not listed in the specs. Please confirm if they are acceptable.
- A – Columbia is an acceptable manufacturer.
- Q - Door schedule on A3.3 indicates 6x30glass for doors 109 and 116, type 2. However, door elevations do not show glass for door type 2. Please confirm if doors 109 and 116 are type 3 with glass, or type 2.
- A – The active leaf of doors 109 and 116 are to receive 6”x30” lights.
- Q - Please provide a section through the roll up door.
- A – See attached drawing A.3.3 Door & Window Schedules & Details
- Q - Please provide manufacturers for the carpet tile.
- A – There is no carpet tile. This was a mistake. See attached specification 096816_Sheet Carpet.
- Q - Please confirm if there are any owner supplied items that would need to be scheduled around.
- A – The only Government Provided equipment for this project is the two (2) antennas and a scale calibration bar. All three items will be provided to the contractor at their request and no scheduling issues are expected.
- Q - Please provide a detail for the bollards to include footer, diameter and finish.
- A – See attached sheet S.4.1 Structural Details.
- Q - Will a detail of the exterior railing be provided?
- A – No. The railing is a prefabricated railing and should be fabricated by the manufacturer to meet all current Federal and State code requirements.
- Q - Detail drawing C2.1 has a detail showing top and bottom tension wire. The steel post schedule box on the same page calls for top, brace and bottom rail. The written specs call for top rail and bottom tension wire. Which should we bid?
- A - Bid should include a top and bottom tension wire along the fence run. The gate should have top, bottom and brace rails
- Q - 074113-2.2A.4 lists 2 and 3 coat pain finishes. Please confirm that 3 coat paint finishes are not required.
- A - 3 coat finishes are not required. Only manufacturers that offer a 3-coat finish as a standard, are required to meet the requirements outlined within the specification.
- Q - 061000-1.4, B in the Rough Carpentry spec mentions LEED Submittals. Please confirm that this is not a LEED project.
- A - This project is NOT a LEED project.

Q - 061753-2.3, D in the Shop-Fabricated Wood Trusses spec calls for all trusses to be treated "Unless otherwise indicated" I did not see any drawings call or the trusses to be treated. Will the Trusses be required to be treated?

A – Unless deemed by the manufacturer, trusses are not required to be treated.

Q - Section 312319 - Dewatering is included in the project manual, but is not listed on the Table of Contents, please confirm that this section is not required. This section requires well points, which this job does not have excavations that should not need this type of Dewatering.

A – Dewatering is NOT required.

Q - Sheet C2.0 Shows the Sanitary Sewer crossing Poplar Street, there is no Paving detail or specification provided. How should we patch the trench crossing?

A – Sheet C.2.1 Detail 3 is a Typical Utility Trench Detail. The contractor shall match existing material removed.

Q - The foundations at Lobby 100 appear to require paving demo to install, will this area also need paving patch?

A – Excavation for foundation at lobby 100: When backing the excavation, match existing material that was removed.

Q - Drawing S3.1 Shows foundation drains. Please provide a drawing that shows Where these are to drain to. The Civil Drawings do not show any Storm Water Management systems near buy to tie into. Where will these connect?

A – Foundation drains will NOT be required on this project.

Q - Section 334100-Storm Utility Drainage was included in the Project Documents. I did not see any Storm Utility work shown on the Civil Drawings. Where is the Storm Utility Drainage work shown?

A – There is no Storm Utility Drainage on this project. Splash blocks are to be provided at all downspout locations.

Q - Please clarify what the finished site should be. Are we to replace the stone or provide new topsoil and seeding? Will this only be required inside the LOD as outlined on C2.0?

A – Stone shall be replaced and graded to match new site. This will only apply to the LOD.

Q - Sheet A3.2 shows the wall types (1-6) neither of the label the walls with the types. Please provide a floor plan with the walls tagged with the type.

A – See wall reference on sheet A.1.1.

Q - Window cross sections call for a painted lintel. Please confirm they are galvanized and then painted.

A – All lintels are to be painted galvanized steel.

Q - Please confirm the railing is powder coated aluminum.

A – Railings are to be power coated aluminum.

Q - Please confirm if there is a lintel for the 8' OH door.

A – There is a lintel at the OH Door location.

Q - Please confirm if the FRP is only per the elevations or if it is on all walls in the bathroom.

A – FRP is to be installed throughout the toilet rooms to a height of 48 inches a.f.f.

Q – Will temporary construction fencing be required?

A – No

Q – Is gypsum board required to be installed on the bottom of the truss chords for fire rating?

A – No

Q - Are the diagonally hatched walls shown on A1.1 the insulated walls that note 5 on sheet A3.2 are referring to under the Wall Notes?

A – Refer to sheet G.1.2 for Material Legend.

Q - Sheet A3.3 on the door schedule shows door 003 as an 8' x 8' door. Floor plan A1.1 shows it as a 3' x 7' single door. What door on the door schedule is the door shown on the floor plan as 003?

A – See attached sheet A.1.1 for corrected door labels.

Q - The door schedule on sheet A3.3 seems to be in correct. Floor plan A1.1 show door 113 but the schedule on A3.3 does not list this door. Also, Door 004, and 005 are listed on the Door Schedule, but not shown on the floor plan.

A – See attached sheet A.1.1 for corrected door labels.

Q - Sheet C2.0 Shows a ADA ramp. There are not details for this ramp, the Structural drawings do not show a foundation for it either. Please provide details on the ramp, and what footings/foundations are required.

A – See attached sheets S.1.1 and S.3.1 for details pertaining to the Concrete Ramp and Stoop.

Q - Are the two small gables at the stoops going to be EIFS?

A – Yes.

Q - Is the EIFS system going to be with waterproofing and adhered or mechanically fastened on plywood and Tyvek? And what is the foam thickness.

A – Refer to Specification 072413 and Sheet S.4.1 for information pertaining to all EIFS related installations.

Q - Drawing A3.2 on the finish schedule calls for some of the floors to be painted. What product is to be used?

A – See attached specification 099600 Epoxy Coatings.

Q - Detail 1/S3.1 Calls for a Moisture/Vapor Barrier. What is this product to be?

A – See attached specification 072726 Elastomeric Air Barrier.

Q - Room 110 on the Finish Schedule show "X" under Ceiling Mat. The RCP Does not show a finish. Is this to be open to the bottom of the truss?

A - Ceiling Finish should be 2. RCP shows the finish as Gypsum Board.

Q - Room 111 on the Finish Schedule Shows "1" under Ceiling Mat. which is ACT and the RCP does not show a finish at all. Which is correct?

A - Room 111 (Electrical Room) is to have an open ceiling. Room 112 (Telecom Room) is to have acoustical ceiling tile.

Q – What is the ceiling finish for Room 113?

A – Room 113 (Mechanical Room) is to have an open ceiling.

Q - What size lintel will be required at the OH door opening, the lintel schedule that is provided on S4.1 does not have a size listed for an opening of 8'.

A – See revised lintel schedule on attached sheet S.4.1.

Q - Please confirm that all the door pads and stoops are to have a frost wall foundation per 7/S4.1. The Foundation Plan on S1.1 shows 2' footings with 8" concrete walls. Please clarify.

A – The main entrance and loading dock are to have 8" concrete frost walls and 24" footers. Concrete stoops located at the exterior of the Mechanical Room and Calibration Lab can be turn-down slabs per detail 7-S.4.1.

Q – Is the Roof Framing Plan and Associated Framing Details on Sheet S.3.1 for the reverse gables at the Loading Dock and Main Entrance correct?

A – Yes.

Q - Per the Door Schedule on A3.3 door 002 is the only Steel framed door that is shown to be the DOD Type B. The remaining steel framed doors are standard. Please confirm this is correct. This contradicts the Special note on that page and the spec section.

A – All the exterior doors and windows are to be DoD Type B.

Q - Residential Casework-123530, 1.5, C Calls for KCMA Certified Cabinet Seals. Can this certification be waived?

A – No

Q - The Kimberly Clark bathroom accessories in the spec are discontinued per the manufacturer. Will comparable products be acceptable?

A - Yes

Q - Please confirm the rigid insulation goes to the ceiling as per 2/S.3.1, not up to the underside of the roof sheeting as shown on S.3.1

A – See detail 15/S.4.1

HVAC Contractor (Point 2)

Q - May the refrigerant piping be run above the ceilings and exit the building at the condensing units and may the condensate piping be run above the ceilings and exit the building directly where they will spill on grade in lieu of what is shown on H.1.0 to avoid multiple and long line set covers on the outside of the building?

A - Modifications to the plans and specs can be discussed during construction.

Q - If the ductwork ends are covered during construction will duct cleaning by mechanical methods be required?

A - If ductwork is properly protected to the satisfaction of the department, additional cleaning may not be required.

Q - Specifications call for 5' of flex duct maximum. The plans show flex runs of approximately 12'. May the flex be run as shown on the plans or must hard round duct be run in addition to the flex duct for runs exceeding the 5'?

A - Flex duct is acceptable as shown on the plans.

Q - The only reference to refrigerant piping is in the equipment specifications that states it is to be line sets. Please confirm the refrigerant piping is to be soft copper refrigerant line sets.

A - Refrigerant piping and linesets shall be provided by equipment manufacturer or as approved by equipment manufacturer.

Q - How does the refrigerant and condensate piping get insulated?

A - Refrigerant and condensate insulation shall be per specification 220700.

Q - The specifications call for each prime contractor to provide a superintendent on the work site whenever work is being performed by any impacting trade. This would basically require a superintendent onsite at all times. Is this required, or may the contractors provide a superintendent only when they or their sub-contractors are on the jobsite?

A - Correct. It is only when the contractor or subs are on-site.

Q - Some ductwork must be run above the bottom chord of the trusses. Is the intent to run the remainder of the ductwork above or below the bottom chord of the roof trusses?

A - The intent is to run all ductwork above the ceiling and below the trusses.

Q - The exhaust fan specifications call for ceiling radiation dampers. Please confirm this is not required for this project.

A - The ceiling radiation damper is not required.

Q - The gravity intake hood to the ERV-1 unit has a backdraft damper. Please confirm this should be a motorized control damper.

A - The damper is a gravity damper; not motorized.

Q - Referencing H.1.0, will the HVAC prime be responsible for their own Condenser Unit concrete pad?

A - Yes

Q - Specification 084113 1.2.B refers to Division 8 Section "Glazing" for glazing requirements. Please issue this specification.

A - There is no Glazing Specification for this project.

Q - Room 110 has exposed CMU on two interior walls and no paint is called out in the finish schedule. Should we figure colored CMU at this area?

A - See Wall Type #3 on A.3.2

Plumbing Contractor (Point 3)

- Q - Please Confirm that the Plumbing Prime (Point 3) Contractor will be responsible for all utility work including 5' past the building and connecting to the existing utilities outside of the building.
- A – The plumbing prime (point 3) contractor is responsible for water and sewer to the manhole and water main shown utility work beyond 5' of the building. The extent of work on the civil plans.
- Q - Who is responsible for the Trenching, and installing of the Gas Service to the building? Is this by the utility company?
- A – The gas service up to and including the meter is by UGI.
- Q - Please confirm all gas piping is by the Plumbing Contractor.
- A - All gas piping is by the .3 contractor as shown on P.1.0 and P.1.1.
- Q – Will the PC provide the gas regulators for the HVAC equipment?
- A - The .3 contractor shall provide regulators as required for all equipment.
- Q – Please confirm 010100-2.1-b-2 is by the PC.
- A - Correct. 010100-2.1-b-2 is by the .3 contractor. This specification will be reissued.

Electrical Contractor (Point 4)

- Q - Sheet C2.1 detail 4/C.2.1 Note: mentions that the EC is responsible for the Conduit, Innerduct, and Pull Rope, and All other work is by the General Contractor. But the Summary of work says that the EC has all their own excavation.
- A - The E.C. shall be responsible for all trenching, bedding, conduit, spacers, backfill, tamping, seeding, and patching related to their work.
- Q - Where is the location of the 100 amp disconnect for the mobile trailer?
- A - The disconnect for the mobile trailer shall be mounted approx. 5' feet south of Door# 004.
- Q – What rating is the surge arrestors?
- A - The surge arrestors shall be rated at 10KV.
- Q - Who is responsible to demo the pole, overhead lines, and streetlight listed on print E0.1 note 9?
- A – Electrical Contractor (Point 4)

SECTION 010100 – SUMMARY OF WORK

PART 1 – GENERAL

1.1 STIPULATIONS

- a. The General Conditions, drawings and all other attached documents form a part of this Section and all other Sections by reference thereto and have the same force and effect as if printed herewith in full. The Contractor shall be strictly accountable for the cognizance of carrying out the provisions thereof. Contractor shall note that reference to “Project Design Documents” refers to any and all documentation included within the Project Bid and/or Award Package. This includes, but is not limited to drawings, specifications, Government forms, contractual literature, etc.

1.2 SCOPE OF WORK, GENERAL

- a. The work under this Contract shall generally consist of, but not necessarily be limited to, providing all labor, material, devices, tools and equipment required for the construction of a new 6000 SF, Calibration Laboratory for the CSMS at the Fort Indiantown Gap Pennsylvania National Guard Training Center, located in Annville, Lebanon County, PA and shall be in total accordance with the specifications and drawings and subject to the terms and conditions of all other Contract Documents.

1.3 PERFORMANCE PERIOD

- a. *Three Hundred and twenty-five* (325) calendar days from Government granted Notice to Proceed.

1.4 WAGE SCALES

- a. Wage Scales ARE REQUIRED to be paid on this Project.

1.5 QUESTIONS DURING BID PROCESS

- a. Direct all questions pertaining to the project as shown and described in the contract documents to both persons listed below.

Mr. Jason R. Nye, Architectural Designer II
DMVA, Bureau of Military Construction & Engineering
Bldg. 0-10, Fort Indiantown Gap
Annville, PA 17003
Email: jnye@state.pa.us
Ph.: 717.861.9748 Fax: 717.861.8683

Department of Military and Veterans Affairs State Contracting Office
Building 0-47, Fort Indiantown Gap
Annville, PA 17003

Ph.: 717.[xxx.xxxx]

Fax: 717.[xxx.xxxx]

- b. Should the contractor submit an RFI via email, the subject line shall appear as follows:
 - 1. **DMVA Project#: 42080032_New Calibration Lab**
 - 2. Additional information can be included thereafter.

1.6 SUBMITTALS

- a. See individual Sections and “SCHEDULE OF MATERIAL SUBMITTALS (AF FORM 66)” included within the project Design Documents
- b. Submittals shall be forwarded to Department of Military & Veteran’s Affairs; Division of Engineering and Architecture, Building 0-10, Fort Indiantown Gap, Annville, Pa 17003
- c. Each submittal shall include the following:
 - 1. Project number
 - 2. Contract number
 - 3. Related specification section
 - 4. Contractor’s approval stamp
 - 5. Contractors initials and date
 - 6. Area for DMVA-BMCE review stamp
- d. All submittals must be approved by the discipline responsible, DMVA-BMCE **Design Professional** prior to incorporation into the project.

1.7 REQUIRED WARRANTIES

- a. Contractor shall provide all required warranties as outlined within the Project Design Specifications and on all included Government AF Form 66’s.

PART 2 – OUTLINE OF REQUIRED WORK

- 2.1 The work of this project consists of but is not necessarily limited to the following. Detailed requirements of the work are described on the pertinent specification sections and/or shown on the drawings.
 - a. (GENERAL – POINT 1)
 - 1. Prepare and submit all necessary pre-construction documentation as outlined within the project Design Documents.
 - 2. Excavate/prepare site per Project Design Documents.
 - 3. Construct/Install all foundation aspects per Project Design Documents.
 - 4. Construct exterior masonry walls as per Project Design Documents.
 - 5. Install pre-manufactured roof trusses as depicted within the Project Design Documents.
 - 6. Install all additional exterior building and site features per the Project Design Documents.
 - 7. Install all interior facility features, to include but not limited to, stud walls, doors, flooring, ceilings, etc. as depicted within the Project Design Documents.

8. Complete Punch Lists and Final Cleaning.
 9. Provide all required closeout documentation and training per the Project Design Documents prior to deeming/granting the project complete.
- b. (HVAC – POINT 2)
1. Prepare and submit all necessary pre-construction documentation as outlined within the project Design Documents.
 2. Construct/Install all HVAC ductwork, duct accessories & Insulation per Project Design Documents.
 3. Install Air Handlers, Energy Recovery Ventilators, Split Systems & Condenser Units as per Project Design Documents.
 4. Install Duct Accessories, Diffusers and Registers as per Project Design Documents.
 5. Install all Exhaust fans related ductwork, and louver per the Project Design Documents.
 6. Install all Wall Heaters as per the Project Design Documents.
 7. Provide certified Testing, balancing and Adjustment to HVAC System and Reports.
 8. Provide all required closeout documentation and training per the Project Design Documents prior to deeming/granting the project complete.
- c. (PLUMBING – POINT 3)
1. Excavations & Installation of Sanitary Waste Piping and Domestic Water Piping
 2. Indoor Sanitary Waste and Vent Line Installation
 3. Plumbing Fixtures Installation and Rough-Ins
 4. Indoor Domestic Water Line installation and related Insulation
 5. Installation of Tankless water heater and Venting
 6. Excavation & Installation of Domestic Water Service
 7. Final Cleaning, Punch List Items, Close-Out Documents.
- d. (ELECTRICAL – POINT 4)
1. Prepare and submit all necessary pre-construction documentation as outlined within the Project Design Documents.
 2. Excavate/prepare site for ground counterpoise and loop as per Project Design Documents.
 3. Provide all electrical service equipment per Project Design Documents.
 4. Provide all trenching, conduits, foundations, and equipment as per Project Design Documents.
 5. Provide all 15KV class work, transformer, foundation, and line work as per Project Design Documents.
 6. Provide all electrical distribution panels and equipment as per the Project Design Documents.
 7. Provide all lighting, controls, sensors, and devices as per the Project Design Documents.
 8. Install all branch circuits, outlets, devices, fixtures, and sensors as per Project Design Documents.
 9. Provide all communications equipment, cable, splices, terminations, testing, conduit, and the like as per Project Design Documents.
 10. Complete Punch Lists and Final Cleaning.

11. Provide all required closeout documentation and training per the Project Design Documents prior to deeming/granting the project complete.

END OF SECTION 010100

SECTION 011200 – COORDINATION AND CONTROL

PART 1 - GENERAL

1.1 STIPULATIONS

- A. The General Conditions, drawings and all other attached documents form a part of this Section and all other Sections by reference thereto and have the same force and effect as if printed herewith in full. The Contractor shall be strictly accountable for the cognizance of carrying out the provisions thereof.

1.2 SUMMARY

- A. Section includes a summary of each contract, including responsibilities for coordination and temporary facilities and controls that govern the performance of the work to complete this project.
- B. Specific requirements for work of each contract are also indicated in individual Specification Sections and on Drawings.

1.3 PRIME CONTRACTS FOR CONSTRUCTION

- A. Point 1 – General (Lead)
- B. Point 2 – HVAC
- C. Point 3 – Plumbing
- D. Point 4 – Electrical

1.4 WORK HOURS

- A. Regular work hours will be Monday through Friday, 7:00 am to 4:30 pm.
- B. Holidays: No work will be allowed on holidays observed by the State and Federal Government.
- C. Weekends: No work will be allowed on weekends.
- D. Exceptions: If deemed necessary, exceptions to the above can be made. Prime Contractors must submit, in writing, justification for such an exception and approval from the Department must be obtained prior to commencement of any work.
 - 1. Fort Indiantown Gap: Any and all work that takes place outside of the working hours as listed herein, shall be coordinated with the DMVA-FTIG Construction Manager. Contractor(s) performing work on approved dates shall submit, in writing, a list of all employees that will be on site for the days approved. This list of employees will be submitted to the Fort Indiantown Gap Police Dept. by the DMVA-FTIG Construction Manager.

1.5 COORDINATION

- A. The General Contractor shall be responsible for coordination between all contracts.
 - 1. Construction operations shall be coordinated to ensure efficient and orderly installation of each part of the work.
 - 2. Coordinate installation of different components with other Contractors to ensure accessibility for required construction operations.
 - 3. Make necessary provisions to accommodate items scheduled for later installation.

PART 2 - TEMPORARY FACILITIES AND EQUIPMENT

2.1 GENERAL

- A. It shall be the responsibility of each Contractor to provide, maintain, and remove all facilities and equipment necessary for construction operations for individual Contracts. All restoration required due to contract operations, shall be the responsibility of each individual Contractor for his location/area of operation, at no expense to the Department. Where there is conflict with responsibility, the General Contractor shall be responsible for restoration, at no cost to the Department.
 - 1. These items include, but are not limited to:
 - a. Costs and use charges associated with the facility.
 - b. Plug-in cords, power cords, and extension cords, power tools.
 - c. Task lighting and special lighting necessary for construction operations.
 - d. Storage and fabrication structures/areas.
 - e. Temporary enclosures for construction activities.
 - f. Hoisting equipment for construction activities.
 - g. Waste disposal facilities, including collection and legal disposal of its own waste materials.
 - h. Daily cleaning of work area.
 - i. Secure lockup of tools, materials, and equipment.
 - j. Construction aids, services, and facilities necessary for individual construction activities.

2.2 FIELD OFFICES

A. CONTRACTOR TRAILERS/OFFICES

- 1. The Prime Contractor(s) shall provide and maintain, at their cost, a suitable office on the premises. Trailer/offices shall be located based on either the staging area depicted on the Project Design Documents and/or the location determined during the Pre-Construction Coordination Meeting. The Contractor shall provide and maintain all necessary services and utilities for their respective offices and/or trailers, to include, but not limited to; electrical services, sanitary and water services, heating and cooling, telephone/fax and internet services.

B. SANITARY FACILITIES

1. Portable Toilets (Porta Johns) – Point 1 General Contractor (Lead), at their costs, shall be responsible for providing and maintaining any and all temporary toilet facilities. Toilets are to be utilized by all persons (Contractors, Sub-Contractors, etc.) associated with the project.
 - a. Cleaning, Pumping and Maintenance of the portable toilets shall be the responsibility of the Point 1 General Contractor.

PART 3 - TEMPORARY SERVICES/UTILITIES DURING CONSTRUCTION

3.1 CONTRACTOR RESPONSIBILITIES

- A. The General Contractor shall be responsible for all temporary heating, cooling, ventilation, power, lighting and water/sewer. This shall include, unless otherwise indicated, utility-use charges, temporary meters, and temporary connections, necessary during construction operations.
- B. The designated Contractor shall install, operate, protect and maintain the respective temporary services as specified herein during the duration of the entire project.
- C. Temporary connections to new and/or existing permanent service lines shall be made at locations as directed by the Department, and when the temporary service lines are no longer required, they shall be removed by the Contractor. Any part or parts of the permanent service lines, grounds and building, disturbed and damaged by the installation and/or removal of the temporary service lines, shall be restored to their original condition by the Contractor responsible for the temporary installation.
- D. If the Contractor fails to carry out its responsibility in supplying temporary services as set forth in this contract it is responsible for such failure and the Department may take such action as it deems proper for the protection and conduct of the work and shall deduct the cost involved from the amount due the Contractor. Only those temporary utilities required for construction need to be extended to the work area(s).

3.2 INTERRUPTION OF SERVICES

- A. Each Prime Contractor shall have all needed equipment and material to complete planned work at the site prior to shutting down any system.
- B. No additional compensation or time will be given to the Contractor if work must be performed on State or National Holidays or on weekends or on overtime. See Paragraph 1.4 on 'Working Hours'.

3.3 WELDING

- A. Any Contractor using electrical power for welding on the site shall use self-contained engine generating units.

3.4 FIRE EXTINGUISHERS

- A. Each Contractor shall provide UL listed, NFPA approved fire extinguishers (ten (10) lb. minimum) at the construction site during operations, suitable for all types of fires in accordance with OSHA.

END OF SECTION 011200

SECTION 072726 - FLUID-APPLIED MEMBRANE AIR BARRIERS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Fluid-applied membrane air barrier, vapor retarding.
 - 2. Fluid-applied membrane air barrier, vapor permeable.
- B. Related Sections include the following:
 - 1. Division 04 Section "Unit Masonry" for embedded flashings.
 - 2. Division 06 Section "Sheathing" for wall sheathings, wall sheathing joint-and-penetration treatments, building paper, and building wraps.
 - 3. Division 07 Section "Thermal Insulation" for foam-plastic board insulation.
 - 4. Division 07 Section "Joint Sealants" for joint-sealant materials and installation.

1.3 DEFINITIONS

- A. ABAA: Air Barrier Association of America.
- B. Air Barrier Assembly: The collection of air barrier materials and auxiliary materials applied to an opaque wall, including joints and junctions to abutting construction, to control air movement through the wall.

1.4 PERFORMANCE REQUIREMENTS

- A. General: Air barrier shall be capable of performing as a continuous vapor-retarding air barrier and as a liquid-water drainage plane flashed to discharge to the exterior incidental condensation or water penetration. Air barrier assemblies shall be capable of accommodating substrate movement and of sealing substrate expansion and control joints, construction material changes, and transitions at perimeter conditions without deterioration and air leakage exceeding specified limits.
- B. Air Barrier Assembly Air Leakage: Not to exceed 0.03 cfm x sq. ft. of surface area at 1.57 lbf/sq. ft.; ASTM E 283.

1.5 SUBMITTALS

- A. Product Data: Include manufacturer's written instructions for evaluating, preparing, and treating substrate; technical data; and tested physical and performance properties of air barrier.

- B. Shop Drawings: Show locations and extent of air barrier. Include details for substrate joints and cracks, counterflashing strip, penetrations, inside and outside corners, terminations, and tie-ins with adjoining construction.
 - 1. Include details of interfaces with other materials that form part of air barrier.
- C. Product Certificates: For air barriers, certifying compatibility of air barrier and accessory materials with Project materials that connect to or that come in contact with the barrier; signed by product manufacturer.
- D. Qualification Data: For Applicator.
- E. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for air barriers.

1.6 QUALITY ASSURANCE

- A. Applicator Qualifications: A firm experienced in applying air barrier materials similar in material, design, and extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance and that is an ABAA-licensed contractor, employs certified and registered installers, and complies with ABAA's Quality Assurance Program.
- B. Pre-installation Conference: Conduct conference at Project site.
 - 1. Include installers of other construction connecting to air barrier, including roofing, waterproofing, architectural precast concrete, masonry, sealants, windows, glazed curtain walls, and door frames.
 - 2. Review air barrier requirements including surface preparation, substrate condition and pretreatment, minimum substrate curing period, forecasted weather conditions, special details and sheet flashings, mockups, installation procedures, sequence of installation, testing and inspecting procedures, and protection and repairs.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Store liquid materials in their original undamaged packages in a clean, dry, protected location and within temperature range required by air barrier manufacturer.
- B. Remove and replace liquid materials that cannot be applied within their stated shelf life.
- C. Store rolls according to manufacturer's written instructions.
- D. Protect stored materials from direct sunlight.

1.8 PROJECT CONDITIONS

- A. Environmental Limitations: Apply air barrier within the range of ambient and substrate temperatures recommended by air barrier manufacturer. Protect substrates from environmental conditions that affect performance of air barrier. Do not apply air barrier to a damp or wet substrate or during snow, rain, fog, or mist.

PART 2 - PRODUCTS

2.1 FLUID-APPLIED MEMBRANE AIR BARRIER

- A. Fluid-Applied, Vapor-Retarding Membrane Air Barrier: Elastomeric, modified bituminous or synthetic polymer membrane.
1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
 2. Products: Subject to compliance with requirements, provide one of the following:
 - a. Elastomeric Modified Bituminous Membrane:
 - 1) Carlisle Coatings & Waterproofing; Barriseal.
 - 2) Henry Company; Air-Bloc 06.
 - 3) Tremco Incorporated; ExoAir.
 - 4) "Or Approved Equal"
 - b. Synthetic Polymer Membrane:
 - 1) Grace, W. R. & Co.; Perm-A-Barrier Liquid.
 - 2) Henry Company; Air-Bloc
 - 3) Rubber Polymer Corporation; Rub-R-Wall Airtight.
 - 4) "Or Approved Equal"
 3. Physical and Performance Properties:
 - a. Membrane Air Permeance: Not to exceed 0.004 cfm x sq. ft. of surface area at 1.57-lbf/sq. ft. pressure difference; ASTM E 2178.
 - b. Membrane Vapor Permeance: Not to exceed 0.1 per; ASTM E 96.

2.2 AUXILIARY MATERIALS

- A. General: Auxiliary materials recommended by air barrier manufacturer for intended use and compatible with air barrier membrane. Liquid-type auxiliary materials shall comply with VOC limits of authorities having jurisdiction.
- B. Primer: Liquid waterborne primer recommended for substrate by manufacturer of air barrier material.
- C. Counterflashing Strip: Modified bituminous, 40-mil- thick, self-adhering sheet consisting of 32 mils of rubberized asphalt laminated to an 8-mil- thick, crosslaminated polyethylene film with release liner backing.
- D. Butyl Strip: Vapor-retarding, 30- to 40-mil-thick, self-adhering; polyethylene-film-reinforced top surface laminated to layer of butyl adhesive with release liner backing.
- E. Modified Bituminous Strip: Vapor-retarding, 40-mil- thick, smooth-surfaced, self-adhering; consisting of 36 mils of rubberized asphalt laminated to a 4-mil- thick polyethylene film with release liner backing.
- F. Joint Reinforcing Strip: Air barrier manufacturer's glass-fiber-mesh tape.
- G. Substrate Patching Membrane: Manufacturer's standard trowel-grade substrate filler.

- H. Adhesive and Tape: Air barrier manufacturer's standard adhesive and pressure-sensitive adhesive tape.
- I. Stainless-Steel Sheet: ASTM A 240/A 240M, Type 304, 0.0250 inch thick, and Series 300 stainless-steel fasteners.
- J. Sprayed Polyurethane Foam Sealant: 1- or 2-component, foamed-in-place, polyurethane foam sealant, 1.5 to 2.0 lb/cu. ft density; flame spread index of 25 or less according to ASTM E 162; with primer and non-corrosive substrate cleaner recommended by foam sealant manufacturer.
- K. Modified Bituminous Transition Strip: Vapor-retarding, 40-mil- thick, smooth-surfaced, self-adhering; consisting of 36 mils of rubberized asphalt laminated to a 4-mil- thick polyethylene film with release liner backing.
- L. Adhesive-Coated Transition Strip: Vapor-permeable, 17-mil- thick, self-adhering strip consisting of an adhesive coating over a permeable laminate with a permeance of 37 perms.
- M. Elastomeric Flashing Sheet: ASTM D 2000, 2BC415 to 3BC620, minimum 50- to 65-mil- thick, cured sheet neoprene with manufacturer's recommended contact adhesives and lap sealant with stainless-steel termination bars and fasteners.
- N. Preformed Silicone-Sealant Extrusion: Manufacturer's standard system consisting of cured low-modulus silicone extrusion, sized to fit opening widths, with a single-component, neutral-curing, Class 100/50 (low-modulus) silicone sealant for bonding extrusions to substrates.
- O. Joint Sealant: ASTM C 920, single-component, neutral-curing silicone; Class 100/50 (low-modulus), Grade NS, Use NT related to exposure, and, as applicable to joint substrates indicated, Use O. Comply with Division 07 Section "Joint Sealants."

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements and other conditions affecting performance.
 1. Verify that substrates are sound and free of oil, grease, dirt, excess mortar, or other contaminants.
 2. Verify that concrete has cured and aged for minimum time period recommended by air barrier manufacturer.
 3. Verify that concrete is visibly dry and free of moisture. Test for capillary moisture by plastic sheet method according to ASTM D 4263.
 4. Verify that masonry joints are flush and completely filled with mortar.
 5. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 SURFACE PREPARATION

- A. Clean, prepare, treat, and seal substrate according to manufacturer's written instructions. Provide clean, dust-free, and dry substrate for air barrier application.
- B. Mask off adjoining surfaces not covered by air barrier to prevent spillage and overspray affecting other construction.

- C. Remove grease, oil, bitumen, form-release agents, paints, curing compounds, and other penetrating contaminants or film-forming coatings from concrete.
- D. Remove fins, ridges, mortar, and other projections and fill honeycomb, aggregate pockets, holes, and other voids in concrete with substrate patching membrane.
- E. Remove excess mortar from masonry ties, shelf angles, and other obstructions.
- F. At changes in substrate plane, apply sealant or termination mastic beads at sharp corners and edges to form a smooth transition from one plane to another.
- G. Cover gaps in substrate plane and form a smooth transition from one substrate plane to another with stainless-steel sheet mechanically fastened to structural framing to provide continuous support for air barrier.

3.3 JOINT TREATMENT

- A. Concrete and Masonry: Prepare, treat, rout, and fill joints and cracks in substrate according to ASTM C 1193 and air barrier manufacturer's written instructions. Remove dust and dirt from joints and cracks complying with ASTM D 4258 before coating surfaces.
 - 1. Prime substrate and apply a single thickness of preparation coat strip extending a minimum of 3 inches along each side of joints and cracks. Apply a double thickness of air barrier membrane and embed a joint reinforcing strip in preparation coat.
- B. Gypsum Sheathing: Fill joints greater than 1/4 inch with sealant according to ASTM C 1193 and with air barrier manufacturer's written instructions. Apply first layer of fluid air barrier membrane at joints. Tape joints with joint reinforcing strip after first layer is dry. Apply a second layer of fluid air barrier membrane over joint reinforcing strip.

3.4 TRANSITION STRIP INSTALLATION

- A. Install strips, transition strips, and auxiliary materials according to air barrier manufacturer's written instructions to form a seal with adjacent construction and maintain a continuous air barrier.
 - 1. Coordinate the installation of air barrier with installation of roofing membrane and base flashing to ensure continuity of air barrier with roofing membrane.
- B. Apply primer to substrates at required rate and allow to dry. Limit priming to areas that will be covered by air barrier sheet in same day. Reprime areas exposed for more than 24 hours.
 - 1. Prime glass-fiber-surfaced gypsum sheathing with number of prime coats needed to achieve required bond, with adequate drying time between coats.
- C. Connect and seal exterior wall air barrier membrane continuously to roofing membrane air barrier, concrete below-grade structures, floor-to-floor construction, exterior glazing and window systems, glazed curtain-wall systems, storefront systems, exterior louvers, exterior door framing, and other construction used in exterior wall openings, using accessory materials.
- D. At end of each working day, seal top edge of strips and transition strips to substrate with termination mastic.

- E. Apply joint sealants forming part of air barrier assembly within manufacturer's recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.
- F. Wall Openings: Prime concealed perimeter frame surfaces of windows, curtain walls, storefronts, and doors. Apply modified bituminous transition strip or elastomeric flashing sheet so that a minimum of 3 inches of coverage is achieved over both substrates. Maintain 3 inches of full contact over firm bearing to perimeter frames with not less than 1 inch of full contact.
 - 1. Modified Bituminous Transition Strip: Roll firmly to enhance adhesion.
 - 2. Elastomeric Flashing Sheet: Apply adhesive to wall, frame, and flashing sheet. Install flashing sheet and termination bars, fastened at 6 inches o.c. Apply lap sealant over exposed edges and on cavity side of flashing sheet.
 - 3. Preformed Silicone-Sealant Extrusion: Set in full bed of silicone sealant applied to walls, frame, and membrane.
- G. Fill gaps in perimeter frame surfaces of windows, curtain walls, storefronts, and doors, and miscellaneous penetrations of air barrier membrane with foam sealant.
- H. Seal strips and transition strips around masonry reinforcing or ties and penetrations with termination mastic.
- I. Seal top of through-wall flashings to air barrier with an additional 6-inch- wide, counterflashing strip.
- J. Seal exposed edges of strips at seams, cuts, penetrations, and terminations not concealed by metal counterflashings or ending in reglets with termination mastic.
- K. Repair punctures, voids, and deficient lapped seams in strips and transition strips. Slit and flatten fishmouths and blisters. Patch with transition strips extending 6 inches beyond repaired areas in strip direction.

3.5 AIR BARRIER MEMBRANE INSTALLATION

- A. Apply air barrier membrane to form a seal with strips and transition strips and to achieve a continuous air barrier according to air barrier manufacturer's written instructions.
- B. Apply air barrier membrane within manufacturer's recommended application temperature ranges.
- C. Apply primer to substrates at required rate and allow to dry. Limit priming to areas that will be covered by air barrier sheet in same day. Reprime areas exposed for more than 24 hours.
 - 1. Prime glass-fiber-surfaced gypsum sheathing with number of prime coats needed to achieve required bond, with adequate drying time between coats.
- D. Apply a continuous unbroken air barrier to substrates according to the following minimum thickness. Apply membrane in full contact around protrusions such as masonry ties.
 - 1. Vapor-Retarding Membrane Air Barrier: 40-mil dry film thickness.
- E. Apply strip and transition strip a minimum of 1 inch onto cured air membrane or strip and transition strip over cured air membrane overlapping 3 inches onto each surface according to air barrier manufacturer's written instructions.
- F. Do not cover air barrier until it has been tested and inspected by Owner's testing agency.

- G. Correct deficiencies in or remove air barrier that does not comply with requirements; repair substrates and reapply air barrier components.

3.6 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections and prepare test reports.
- B. Inspections: Air barrier materials and installation are subject to inspection for compliance with requirements. Inspections may include the following:
 - 1. Continuity of air barrier system has been achieved throughout the building envelope with no gaps or holes.
 - 2. Continuous structural support of air barrier system has been provided.
 - 3. Masonry and concrete surfaces are smooth, clean and free of cavities, protrusions, and mortar droppings.
 - 4. Site conditions for application temperature and dryness of substrates have been maintained.
 - 5. Maximum exposure time of materials to UV deterioration has not been exceeded.
 - 6. Surfaces have been primed, if applicable.
 - 7. Laps in strips and transition strips have complied with minimum requirements and have been shingled in the correct direction (or mastic has been applied on exposed edges), with no fishmouths.
 - 8. Termination mastic has been applied on cut edges.
 - 9. Strips and transition strips have been firmly adhered to substrate.
 - 10. Compatible materials have been used.
 - 11. Transitions at changes in direction and structural support at gaps have been provided.
 - 12. Connections between assemblies (membrane and sealants) have complied with requirements for cleanliness, preparation and priming of surfaces, structural support, integrity, and continuity of seal.
 - 13. All penetrations have been sealed.
- C. Tests: Testing to be performed will be determined by Contractor/Manufacturer's testing agency from among the following tests:
 - 1. Qualitative Testing: Air barrier assemblies will be tested for evidence of air leakage according to ASTM E 1186, smoke pencil with pressurization or depressurization, ASTM E 1186, chamber pressurization or depressurization with smoke tracers or ASTM E 1186, chamber depressurization using detection liquids.
 - 2. Quantitative Air Leakage Testing: Testing not to exceed the test pressure differential, positive and negative, indicated in "Performance Requirements" Article for air barrier assembly air leakage according to ASTM E 283.
- D. Remove and replace deficient air barrier components and retest as specified above.

3.7 CLEANING AND PROTECTION

- A. Protect air barrier system from damage during application and remainder of construction period, according to manufacturer's written instructions.
 - 1. Protect air barrier from exposure to UV light and harmful weather exposure as required by manufacturer. Remove and replace air barrier exposed for more than 30 days.
 - 2. Protect air barrier from contact with creosote, uncured coal-tar products, TPO, EPDM, flexible PVC membranes, and sealants not approved by air barrier manufacturer.

- B. Clean spills, stains, and soiling from construction that would be exposed in the completed work using cleaning agents and procedures recommended by manufacturer of affected construction.
- C. Remove masking materials after installation.

END OF SECTION 072726

SECTION 083323 - OVERHEAD COILING DOORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Service doors

1.3 ACTION SUBMITTALS

- A. Product Data: For each type and size of overhead coiling door and accessory.
 - 1. Include construction details, material descriptions, dimensions of individual components, profiles for slats, and finishes.
 - 2. Include rated capacities, operating characteristics, electrical characteristics, and furnished accessories.
 - 3. Include description of automatic closing device and testing and resetting instructions.
- B. Shop Drawings: For each installation and for special components not dimensioned or detailed in manufacturer's product data.
 - 1. Include plans, elevations, sections, and mounting details.
 - 2. Include details of equipment assemblies, and indicate dimensions, required clearances, method of field assembly, components, and location and size of each field connection.
 - 3. Include points of attachment and their corresponding static and dynamic loads imposed on structure.
 - 4. For exterior components, include details of provisions for assembly expansion and contraction and for excluding and draining moisture to the exterior.
 - 5. Show locations of controls, locking devices, and other accessories.
 - 6. Include diagrams for power, signal, and control wiring.
- C. Samples for Initial Selection: Manufacturer's finish charts showing full range of colors and textures available for units with factory-applied finishes.
 - 1. Include similar Samples of accessories involving color selection.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.

- B. Oversize Construction Certification: For door assemblies required to be fire-rated and that exceed size limitations of labeled assemblies.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For overhead coiling doors to include in maintenance manuals.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer for both installation and maintenance of units required for this Project.
 - 1. Maintenance Proximity: Not more than two hours normal travel time from Installer's place of business to Project site.

PART 2 - PRODUCTS

2.1 MANUFACTURERS, GENERAL

- A. Source Limitations: Obtain overhead coiling doors from single source from single manufacturer.
 - 1. Obtain operators and controls from overhead coiling door manufacturer.

2.2 PERFORMANCE REQUIREMENTS

- A. Structural Performance, Exterior Doors: Capable of withstanding the design wind loads.
 - 1. Design Wind Load: Uniform pressure (velocity pressure) of 20 lbf/sq. ft., acting inward and outward.
 - 2. Testing: According to ASTM E 330
 - 3. Deflection Limits: Design overhead coiling doors to withstand design wind load without evidencing permanent deformation or disengagement of door components.
 - 4. Operability under Wind Load: Design overhead coiling doors to remain operable under uniform pressure (velocity pressure) of 20 lbf/sq. ft. wind load, acting inward and outward.

2.3 DOOR ASSEMBLY <Insert drawing designation>

- A. Insulated Service Door: Overhead coiling door formed with curtain of interlocking metal slats.
 - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

2. Basis-of-Design Product: Subject to compliance with requirements, provide [product indicated on Drawings] <Insert manufacturer's name; product name or designation> or comparable product by one of the following:
 - a. ACME Rolling Doors.
 - b. Overhead Door Corporation.
 - c. Raynor.
 - d. Or Approved Equal

- B. Air Infiltration: Maximum rate of 0.08 cfm/sq. ft. at 15 and 25 mph when tested according to ASTM E 283 or DASMA 105.

- C. STC Rating: 26.

- D. Door Curtain Material: Galvanized steel or [Stainless steel] [Aluminum].

- E. Door Curtain Slats: Flat profile slats of 1-7/8-inch min./3-1/4-inch max. center-to-center height.
 1. Insulated-Slat Interior Facing: Metal.
 2. Gasket Seal. Manufacturer's standard continuous gaskets between slats.

- F. Bottom Bar: Two angles, each not less than 1-1/2 by 1-1/2 by 1/8 inch thick; fabricated from hot-dip galvanized steel and finished to match door.

- G. Curtain Jamb Guides: Galvanized steel with exposed finish matching curtain slats.

- H. Hood: Match curtain material and finish.
 1. Shape: Square.
 2. Mounting: Face of wall.

- I. Locking Devices: Equip door with locking device assembly and chain lock keeper.
 1. Locking Device Assembly: Cremona type, both jamb sides locking bars, operable from inside with thumb turn.

- J. Manual Door Operator: Chain-hoist operator.
 1. Provide operator with manufacturer's standard removable operating arm.

- K. Curtain Accessories: Equip door with weatherseals, pull-down strap.

- L. Door Finish:
 1. Baked-Enamel or Powder-Coated Finish: Color as selected by Government Design Professional from manufacturer's full range.
 2. Interior Curtain-Slat Facing: Match finish of exterior curtain-slat face.

2.4 MATERIALS, GENERAL

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

2.5 DOOR CURTAIN MATERIALS AND CONSTRUCTION

- A. Door Curtains: Fabricate overhead coiling-door curtain of interlocking metal slats, designed to withstand wind loading indicated, in a continuous length for width of door without splices. Unless otherwise indicated, provide slats of thickness and mechanical properties recommended by door manufacturer for performance, size, and type of door indicated, and as follows:
 - 1. Steel Door Curtain Slats: Zinc-coated (galvanized), cold-rolled structural steel sheet; complying with ASTM A 653/A 653M, with G90 zinc coating; nominal sheet thickness (coated) of 0.028 inch; and as required.
 - 2. Insulation: Fill slats for insulated doors with manufacturer's standard thermal insulation complying with maximum flame-spread and smoke-developed indexes of 75 and 450, respectively, according to ASTM E 84 or UL 723. Enclose insulation completely within slat faces.
 - 3. Metal Interior Curtain-Slat Facing: Match metal of exterior curtain-slat face, with minimum steel thickness of 0.010 inch.
- B. Curtain Jamb Guides: Manufacturer's standard angles or channels and angles of same material and finish as curtain slats unless otherwise indicated, with sufficient depth and strength to retain curtain, to allow curtain to operate smoothly, and to withstand loading. Slot bolt holes for guide adjustment. Provide removable stops on guides to prevent overtravel of curtain, and a continuous bar for holding windlocks.

2.6 HOODS

- A. General: Form sheet metal hood to entirely enclose coiled curtain and operating mechanism at opening head. Contour to fit end brackets to which hood is attached. Roll and reinforce top and bottom edges for stiffness. Form closed ends for surface-mounted hoods and fascia for any portion of between-jamb mounting that projects beyond wall face. Equip hood with intermediate support brackets as required to prevent sagging.
 - 1. Galvanized Steel: Nominal 0.028-inch thick, hot-dip galvanized steel sheet with G90 zinc coating, complying with ASTM A 653/A 653M.
 - 2. Stainless Steel: 0.025-inch thick stainless-steel sheet, Type 304, complying with ASTM A 666.
 - 3. Aluminum: 0.040-inch thick aluminum sheet complying with ASTM B 209

2.7 LOCKING DEVICES

- A. Slide Bolt: Fabricate with side-locking bolts to engage through slots in tracks for locking by padlock, located on both left and right jamb sides, operable from coil side.

- B. Locking Device Assembly: Fabricate with cylinder lock, spring-loaded dead bolt, operating handle, cam plate, and adjustable locking bars to engage through slots in tracks.
 - 1. Lock Cylinders: Cylinders standard with manufacturer and keyed to building keying system.
 - 2. Keys: Three for each cylinder.
- C. Chain Lock Keeper: Suitable for padlock.
- D. Safety Interlock Switch: Equip power-operated doors with safety interlock switch to disengage power supply when door is locked.

2.8 CURTAIN ACCESSORIES

- A. Weatherseals for Exterior Doors: Equip each exterior door with weather-stripping gaskets fitted to entire exterior perimeter of door for a weather-resistant installation unless otherwise indicated.
 - 1. At door head, use 1/8-inch thick, replaceable, continuous-sheet baffle secured to inside of hood or field- installed on the header.
 - 2. At door jambs, use replaceable, adjustable, continuous, flexible, 1/8-inch thick seals of flexible vinyl, rubber, or neoprene.
- B. Push/Pull Handles: Equip each push-up-operated or emergency-operated door with lifting handles on each side of door, finished to match door.
- C. Pull-Down Strap: Provide pull-down straps for doors more than 84 inches high.

2.9 COUNTERBALANCING MECHANISM

- A. General: Counterbalance doors by means of manufacturer's standard mechanism with an adjustable-tension, steel helical torsion spring mounted around a steel shaft and contained in a spring barrel connected to top of curtain with barrel rings. Use grease-sealed bearings or self-lubricating graphite bearings for rotating members.
- B. Counterbalance Barrel: Fabricate spring barrel of manufacturer's standard hot-formed, structural-quality, seamless or welded carbon-steel pipe, of sufficient diameter and wall thickness to support rolled-up curtain without distortion of slats and to limit barrel deflection to not more than 0.03 in./ft. of span under full load.
- C. Counterbalance Spring: One or more oil-tempered, heat-treated steel helical torsion springs. Size springs to counterbalance weight of curtain, with uniform adjustment accessible from outside barrel. Secure ends of springs to barrel and shaft with cast-steel barrel plugs.
- D. Torsion Rod for Counterbalance Shaft: Fabricate of manufacturer's standard cold-rolled steel, sized to hold fixed spring ends and carry torsional load.
- E. Brackets: Manufacturer's standard mounting brackets of either cast iron or cold-rolled steel plate.

2.10 MANUAL DOOR OPERATORS

- A. General: Equip door with manual door operator by door manufacturer.
- B. Push-up Door Operation: Lift handles and pull rope for raising and lowering doors, with counterbalance mechanism designed so that required lift or pull for door operation does not exceed 25 lbf.
- C. Chain-Hoist Operator: Consisting of endless steel hand chain, chain-pocket wheel and guard, and gear-reduction unit with a maximum 25-lbf force for door operation. Provide alloy-steel hand chain with chain holder secured to operator guide.

2.11 GENERAL FINISH REQUIREMENTS

- A. Comply with NAAMM/NOMMA's "Metal Finishes Manual for Architectural and Metal Products (AMP 500-06)" for recommendations for applying and designating finishes.
- B. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

2.12 ALUMINUM FINISHES

- A. Mill Finish: Manufacturer's standard.
- B. Clear Anodic Finish: AAMA 611, AA-M12C22A31, Class II, 0.010 mm or thicker.
- C. Color Anodic Finish: AAMA 611, AA-M12C22A42/A44, Class I, 0.018 mm or thicker.
- D. Baked-Enamel or Powder-Coat Finish: AAMA 2603. Comply with coating manufacturer's written instructions for cleaning, conversion coating, application, and baking.

2.13 STEEL AND GALVANIZED-STEEL FINISHES

- A. Factory Prime Finish: Manufacturer's standard primer, compatible with field-applied finish. Comply with coating manufacturer's written instructions for cleaning, pretreatment, application, and minimum dry film thickness.
- B. Baked-Enamel or Powder-Coat Finish: Manufacturer's standard baked-on finish consisting of prime coat and thermosetting topcoat. Comply with coating manufacturer's written instructions for cleaning, pretreatment, application, and minimum dry film thickness.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates areas and conditions, with Installer present, for compliance with requirements for substrate construction and other conditions affecting performance of the Work.
- B. Examine locations of electrical connections.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install overhead coiling doors and operating equipment complete with necessary hardware, anchors, inserts, hangers, and equipment supports; according to manufacturer's written instructions and as specified.
- B. Install overhead coiling doors, hoods, controls, and operators at the mounting locations indicated for each door.
- C. Accessibility: Install overhead coiling doors, switches, and controls along accessible routes in compliance with regulatory requirements for accessibility.

3.3 STARTUP SERVICE

- A. Engage a factory-authorized service representative to perform startup service.
 - 1. Perform installation and startup checks according to manufacturer's written instructions.
 - 2. Test and adjust controls and safety devices. Replace damaged and malfunctioning controls and equipment.
 - 3. Test door closing when activated by detector or alarm-connected fire-release system. Reset door-closing mechanism after successful test.

3.4 ADJUSTING

- A. Adjust hardware and moving parts to function smoothly so that doors operate easily, free of warp, twist, or distortion.
 - 1. Adjust exterior doors and components to be weather-resistant.
- B. Lubricate bearings and sliding parts as recommended by manufacturer.
- C. Adjust seals to provide tight fit around entire perimeter.

3.5 MAINTENANCE SERVICE

- A. Initial Maintenance Service: Beginning at Substantial Completion, maintenance service shall include 12 months' full maintenance by skilled employees of coiling-door Installer. Include quarterly preventive maintenance, repair or replacement of worn or defective components, lubrication, cleaning, and adjusting as required for door operation. Parts and supplies shall be manufacturer's authorized replacement parts and supplies.
1. Perform maintenance, including emergency callback service, during normal working hours.
 2. Include 24-hour-per-day, seven-day-per-week, emergency callback service.

END OF SECTION 083323

SECTION 096536 - STATIC-CONTROL RESILIENT FLOORING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:

- 1. Static-dissipative, **vinyl composition floor tile**.

- B. Related Requirements:

- 1. Section 096513 "Resilient Base and Accessories" for resilient base, reducer strips, and other accessories installed with static-control resilient flooring.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Samples for Initial Selection: For each type of static-control resilient flooring.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.
- B. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for static-control resilient flooring.
- C. Field quality-control reports.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For each type of static-control resilient flooring to include in maintenance manuals.

1.6 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Floor Tile: Furnish one box for every **50** boxes or fraction thereof, of each type, color, and pattern of floor tile installed.

1.7 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified installer who employs workers for this Project who are competent in techniques required by manufacturer for static-control resilient flooring **and seaming method**.

1. Engage an installer who employs workers for this Project who are trained or certified by manufacturer for installation techniques required.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Store static-control resilient flooring and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer but not less than **50 deg F** or more than **90 deg F**.

1. Floor Tile: Store on flat surfaces.

1.9 PROJECT CONDITIONS

- A. Maintain ambient temperatures within range recommended by manufacturer, but not less than **70 deg F** or more than **85 deg F**, in spaces to receive static-control resilient flooring during the following time periods:

1. 48 hours before installation.
2. During installation.
3. 48 hours after installation.

- B. Until Substantial Completion, maintain ambient temperatures within range recommended by manufacturer, but not less than **55 deg F** or more than **95 deg F**.

- C. Close spaces to traffic during static-control resilient flooring installation.

- D. Close spaces to traffic for 48 hours after static-control resilient flooring installation.

- E. Install static-control resilient flooring after other finishing operations, including painting, have been completed.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Static-Dissipative Properties: Provide static-control resilient flooring with static-control properties indicated as determined by testing identical products per test method indicated by an independent testing and inspecting agency.

1. Electrical Resistance: Test per **ASTM F 150 with 100-V applied voltage**.
 - a. Average greater than 1 megohm and less than or equal to 1000 megohms when test specimens are tested surface to ground.
 - b. Average greater than 1 megohm and less than or equal to 1000 megohms when installed floor coverings are tested surface to ground.
 2. Static Generation: Less than **300 V** when tested per AATCC-134 at 20 percent relative humidity with conductive footwear.
 3. Static Decay: 5000 to zero V in less than **0.25** seconds when tested per FED-STD-101C/4046.1.
- B. Conductive Properties: Provide static-control resilient flooring with static-control properties indicated as determined by testing identical products per test method indicated by an independent testing and inspecting agency.
1. Electrical Resistance: Test per **ASTM F 150 with 500-V applied voltage**.
 - a. Average greater than 25,000 ohms and less than 1 megohm when test specimens and installed floor coverings are tested surface to surface (point to point).
 - b. Average greater than 25,000 ohms with no single measurement less than 10,000 ohms when installed floor coverings are tested surface to ground.
 2. Static Generation: Less than **100 V** when tested per AATCC-134 at 20 percent relative humidity with conductive footwear.
 3. Static Decay: 5000 to zero V in less than **0.03** seconds when tested per FED-STD-101C/4046.1.
- C. FloorScore Compliance: Static-control resilient flooring shall comply with requirements of FloorScore certification.

2.2 STATIC-DISSIPATIVE RESILIENT FLOOR COVERINGS

- A. Static-Dissipative, Vinyl Composition Floor Tile: ASTM F 1066 (vinyl composition floor tile, nonasbestos formulated), Class 2 (through-pattern tile).
1. **Products:** Subject to compliance with requirements, **available products that may be incorporated into the Work include, but are not limited to, the following:**
 - a. [Armstrong World Industries, Inc](#); Static Dissipative SDT.
 - b. Or Approved Equal
 2. Thickness: Not less than **0.125 inch**.
 3. Size: **12 by 12 inches**.
 4. Colors and Patterns: **As selected by Government Design Professional from full range of industry colors**].

2.3 INSTALLATION MATERIALS

- A. Trowelable Leveling and Patching Compounds: Latex-modified portland cement or blended hydraulic-cement-based formulation provided or approved by manufacturer for applications indicated.
- B. Static-Control Adhesive: Provided or approved by manufacturer; type that maintains electrical continuity of floor-covering system to ground connection.
 - 1. Adhesives shall comply with the following limits for VOC content:
 - a. VCT and Asphalt Tile Adhesives: Not more than 50 g/L.
 - b. Rubber Floor Adhesives: Not more than 60 g/L.
 - 2. Adhesives shall comply with the testing and product requirements of the California Department of Public Health's (formerly, the California Department of Health Services') "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
- C. Grounding Strips: Provided or approved by manufacturer; type and size that maintains electrical continuity of floor-covering system to ground connection.
- D. Maintenance Floor Tiles: Special floor tiles inscribed "Conductive floor. Do not wax."
- E. Floor Polish: Provide protective, static-control liquid floor polish products as recommended by floor-covering manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
- B. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion or static-control characteristics of floor coverings.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Prepare substrates according to manufacturer's written instructions to ensure adhesion of static-control resilient flooring and electrical continuity of floor-covering systems.
- B. Concrete Substrates: Prepare according to ASTM F 710.
 - 1. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.

2. Remove substrate coatings and other substances that are incompatible with floor-covering adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by manufacturer. Do not use solvents.
 3. Alkalinity and Adhesion Testing: Perform tests recommended by manufacturer. Proceed with installation only after substrates pass testing.
 4. Moisture Testing: Perform tests recommended by manufacturer. Proceed with installation only after substrates pass testing.
- C. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound and remove bumps and ridges to produce a uniform and smooth substrate.
- D. Do not install static-control resilient flooring until it is same temperature as space where it is to be installed.
1. Move static-control resilient flooring and installation materials into spaces where they will be installed at least 48 hours in advance of installation.
- E. Sweep and vacuum substrates to be covered by static-control resilient flooring immediately before installation.

3.3 INSTALLATION, GENERAL

- A. Install static-control resilient flooring according to manufacturer's written instructions.
- B. Embed grounding strips in static-control adhesive. Extend grounding strips beyond perimeter of static-control resilient floor-covering surfaces to ground connections.
- C. Scribe, cut, and fit static-control resilient flooring to butt neatly and tightly to vertical surfaces and permanent fixtures including built-in furniture, cabinets, pipes, outlets, and door frames.
- D. Extend static-control resilient flooring into toe spaces, door reveals, closets, and similar openings. Extend static-control resilient flooring to center of door openings.
- E. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on static-control resilient flooring as marked on substrates. Use chalk or other nonpermanent, nonstaining marking device.
- F. Install static-control resilient flooring on covers for telephone and electrical ducts, and similar items in installation areas. Maintain overall continuity of color and pattern with pieces of static-control resilient flooring installed on covers. Tightly adhere static-control resilient flooring edges to substrates that abut covers and to cover perimeters.
- G. Adhere static-control resilient flooring to substrates using a full spread of static-control adhesive applied to substrate to produce a completed installation without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, and other surface imperfections.

3.4 FLOOR-TILE INSTALLATION

- A. Comply with manufacturer's written instructions for installing floor tile.

- B. Lay out floor tiles from center marks established with principal walls, discounting minor offsets, so floor tiles at opposite edges of room are of equal width. Adjust as necessary to avoid using cut widths that equal less than one-half floor tile at perimeter.
 - 1. Lay floor tiles **square with room axis**.
- C. Match floor tiles for color and pattern by selecting floor tiles from cartons in same sequence as manufactured and packaged if so numbered. Discard broken, cracked, chipped, or deformed floor tiles.
 - 1. Lay static-dissipative, vinyl composition floor tiles **with grain direction alternating in adjacent floor tiles (basket-weave pattern)**.
- D. In each space where conductive, solid vinyl floor tile is installed, install maintenance floor tile identifying conductive floor tile in locations approved by Architect.

3.5 FIELD QUALITY CONTROL

- A. Testing: **Engage** a qualified testing agency to test electrical resistance of static-control resilient flooring for compliance with requirements.
 - 1. Arrange for testing after static-control adhesives have fully cured and static-control resilient flooring has stabilized to ambient conditions and after ground connections are completed.
 - 2. Arrange for testing of static-control resilient flooring **before and after** performing floor polish procedures.
- B. Static-control resilient flooring will be considered defective if it does not pass tests and inspections.
- C. Prepare test and inspection reports.

3.6 CLEANING AND PROTECTION

- A. Comply with manufacturer's written instructions for cleaning and protection of static-control resilient flooring.
- B. Perform the following operations immediately after completing static-control resilient flooring:
 - 1. Remove static-control adhesive and other blemishes from exposed surfaces.
 - 2. Sweep and vacuum surfaces thoroughly.
 - 3. Damp-mop surfaces to remove marks and soil.
- C. Protect static-control resilient flooring from marks, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.
 - 1. Do not wax static-control resilient flooring.
 - 2. If recommended in writing by manufacturer, apply protective static-control floor polish formulated to maintain or enhance floor covering's electrical properties; ensure static-

control resilient flooring surfaces are free from soil, static-control adhesive, and surface blemishes.

- a. Verify that both floor polish and its application method are approved by manufacturer and that floor polish will not leave an insulating film that reduces static-control resilient flooring's effectiveness for static control.

D. Cover static-control resilient flooring until Substantial Completion.

END OF SECTION 096536

SECTION 096816 – SHEET CARPET

PART 1 - GENERAL

1.1 STIPULATIONS

- A. The specifications sections “General Conditions of the Construction Contract”, “Special Conditions”, and “Division 1 – General Requirements” form a part of this Section by this reference thereto, and shall have the same force and effect as if printed herewith in full.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Woven carpet.
 - 2. Carpet cushion.
- B. Related Sections include the following:
 - 1. Division 9 Section "Resilient Floor Tile" for resilient wall base and accessories installed with carpet.

1.3 SUBMITTALS

- A. Product Data: For the following, including installation recommendations for each type of substrate:
 - 1. Carpet: For each type indicated. Include manufacturer's written data on physical characteristics, durability, and fade resistance.
 - 2. Carpet Cushion: For each type indicated. Include manufacturer's written data on physical characteristics and durability.
- B. Shop Drawings: Show the following:
 - 1. Carpet type, color, and dye lot.
 - 2. Seam locations, types, and methods.
 - 3. Type of installation.
 - 4. Pattern type, repeat size, location, direction, and starting point.
 - 5. Type, color, and location of edge, transition, and other accessory strips.
 - 6. Transition details to other flooring materials.
 - 7. Type of carpet cushion.
- C. Samples: For each of the following products and for each color and texture required. Label each Sample with manufacturer's name, material description, color, pattern, and designation indicated on Drawings and in schedules.
 - 1. Carpet: 6-inch square Sample.

- D. Maintenance Data: For carpet to include in maintenance manuals. Include the following:
 - 1. Methods for maintaining carpet, including cleaning and stain-removal products and procedures and manufacturer's recommended maintenance schedule.
 - 2. Precautions for cleaning materials and methods that could be detrimental to carpet and carpet cushion.
- E. Warranties: Special warranties specified in this Section.

1.4 QUALITY ASSURANCE

- A. Fire-Test-Response Characteristics: Provide products with the critical radiant flux classification indicated in Part 2, as determined by testing identical products per ASTM E 648 by an independent testing and inspecting agency acceptable to authorities having jurisdiction.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Comply with CRI 104, Section 5, "Storage and Handling."

1.6 PROJECT CONDITIONS

- A. Comply with CRI 104, Section 7.2, "Site Conditions; Temperature and Humidity" and Section 7.12, "Ventilation."
- B. Environmental Limitations: Do not install carpet and carpet cushion until wet work in spaces is complete and dry, and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.
- C. Where demountable partitions or other items are indicated for installation on top of carpet, install carpet before installing these items.

1.7 WARRANTY

- A. Special Warranty for Carpet: Manufacturer's standard form in which manufacturer agrees to repair or replace components of carpet installation that fail in materials or workmanship within specified warranty period.
 - 1. Warranty does not include deterioration or failure of carpet due to unusual traffic, failure of substrate, vandalism, or abuse.
 - 2. Failures include, but are not limited to, more than 10 percent loss of face fiber, edge raveling, snags, runs, and delamination.
 - 3. Warranty Period: 10 years from date of Substantial Completion.
- B. Special Warranty for Carpet Cushion: Manufacturer's standard form in which manufacturer agrees to repair or replace components of carpet cushion installation that fail in materials or workmanship within specified warranty period.
 - 1. Warranty includes consequent removal and replacement of carpet and accessories.

2. Warranty does not include deterioration or failure of carpet cushion due to unusual traffic, failure of substrate, vandalism, or abuse.
3. Failure includes, but is not limited to, permanent indentation or compression.
4. Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 WOVEN CARPET

- A. Face Construction: Woven Interlock.
- B. Pile Characteristic: Level-loop pile.
- C. Pile Weight: 32oz/sq. yd..
- D. Backing: Manufacturers standard.
- E. Applied Soil-Resistance Treatment: Manufacturer's standard material.
- F. Performance Characteristics: As follows:
 1. Appearance Retention Rating: Heavy traffic, 3.0 minimum per ASTM D 7330.
 2. Critical Radiant Flux Classification: Not less than 0.45 W/sq. cm.
 3. Dry Breaking Strength: Not less than 100 lbf per ASTM D 2646.
 4. Resistance to Insects: Comply with AATCC 24.
 5. Colorfastness to Crocking: Not less than 4, wet and dry, per AATCC 165.
 6. Colorfastness to Light: Not less than 4 after 40 AFU (AATCC fading units) per AATCC 16, Option E.
 7. Electrostatic Propensity: Less than 3.5 kV per AATCC 134.
 8. VOC Limits: Provide carpet that complies with the following limits for VOC content when tested according to ASTM D 5116:
 - a. Total VOCs: 0.5 mg/sq. m x h.
 - b. 4-PC (4-Phenylcyclohexene): 0.05 mg/sq. m x h.
 - c. Formaldehyde: 0.05 mg/sq. m x h.
 - d. Styrene: 0.4 mg/sq. m x h.

2.2 CARPET CUSHION

- A. Traffic Classification: CCC Class II, heavy traffic.
- B. Polyurethane-Foam Cushion: Bonded.
 1. Thickness: 7/16"
 2. Density: 8lbs. minimum

2.3 INSTALLATION ACCESSORIES

- A. Trowelable Leveling and Patching Compounds: Latex-modified, hydraulic-cement-based formulation provided or recommended by carpet manufacturer.
- B. Tackless Carpet Stripping: Water-resistant plywood, in strips as required to match cushion thickness and that comply with CRI 104, Section 12.2.
- C. Seam Adhesive: Hot-melt adhesive tape or similar product recommended by carpet manufacturer for sealing and taping seams and butting cut edges at backing to form secure seams and to prevent pile loss at seams.
- D. Metal Edge Strips: Extruded aluminum with mill finish of width shown, of height required to protect exposed edge of carpet, and of maximum lengths to minimize running joints.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for maximum moisture content, alkalinity range, installation tolerances, and other conditions affecting carpet performance. Examine carpet for type, color, pattern, and potential defects.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. General: Comply with CRI 104, Section 7.3, "Site Conditions; Floor Preparation," and with carpet manufacturer's written installation instructions for preparing substrates.
- B. Use trowelable leveling and patching compounds, according to manufacturer's written instructions, to fill cracks, holes, depressions, and protrusions in substrates. Fill or level cracks, holes and depressions 1/8 inch wide or wider, and protrusions more than 1/32 inch, unless more stringent requirements are required by manufacturer's written instructions.
- C. Broom and vacuum clean substrates to be covered immediately before installing carpet.

3.3 INSTALLATION

- A. Comply with CRI 104 and carpet and carpet cushion manufacturers' written installation instructions for the following:
 - 1. Stretch-in Installation: Comply with CRI 104, Section 12, "Stretch-in Installation."
- B. Comply with carpet manufacturer's written recommendations and Shop Drawings for seam locations and direction of carpet; maintain uniformity of carpet direction and lay of pile. At doorways, center seams under the door in closed position.
- C. Do not bridge building expansion joints with carpet.

- D. Cut and fit carpet to butt tightly to vertical surfaces, permanent fixtures, and built-in furniture including cabinets, pipes, outlets, edgings, thresholds, and nosings. Bind or seal cut edges as recommended by carpet manufacturer.
- E. Extend carpet into toe spaces, door reveals, closets, open-bottomed obstructions, removable flanges, alcoves, and similar openings.
- F. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on finish flooring as marked on subfloor. Use nonpermanent, nonstaining marking device.
- G. Install pattern parallel to walls and borders to comply with CRI 104, Section 15, "Patterned Carpet Installations" and with carpet manufacturer's written recommendations.
- H. Comply with carpet cushion manufacturer's written recommendations.

3.4 CLEANING AND PROTECTING

- A. Perform the following operations immediately after installing carpet:
 - 1. Remove excess adhesive, seam sealer, and other surface blemishes using cleaner recommended by carpet manufacturer.
 - 2. Remove yarns that protrude from carpet surface.
 - 3. Vacuum carpet using commercial machine with face-beater element.
- B. Protect installed carpet to comply with CRI 104, Section 16, "Protection of Indoor Installations."
- C. Protect carpet against damage from construction operations and placement of equipment and fixtures during the remainder of construction period. Use protection methods indicated or recommended in writing by carpet manufacturer and carpet cushion manufacturer.

END OF SECTION 096816

SECTION 099600 – EPOXY FLOOR COATINGS

GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes surface preparation and application of high-performance coating systems on the following substrates:
 - 1. Interior Substrates:
 - a. Concrete Floor Slabs

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples for Initial Selection: For each type of finish-coat product indicated.
- C. Product List: For each product indicated. Cross-reference products to coating system and locations of application areas. Use same designations indicated on Drawings and in schedules.

1.4 QUALITY ASSURANCE

- A. Qualifications:
 - 1. The Manufacturer shall have a minimum of 10 years experience in the production, sales, and technical support of methyl methacrylate (MMA) industrial flooring and related materials.
 - 2. The Applicator shall have been approved by the flooring system manufacturer in all phases of surface preparation and application of the product specified.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F.
 - 1. Maintain containers in clean condition, free of foreign materials and residue.
 - 2. Remove rags and waste from storage areas daily.

1.6 PROJECT CONDITIONS

- A. Application may proceed when space conditions, material and substrate temperatures are between 35 F and 90 F providing the substrate temperature is above the dew point. Outside of this range, the Manufacturer shall be consulted.
- B. Do not apply coatings in snow, rain, fog, or mist; when relative humidity exceeds 85 percent; at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.
- C. The relative humidity in the specific location of the application shall be less than 85 % and the surface temperature shall be at least 5 F above the dew point.
- D. The Applicator shall ensure that adequate ventilation is available for the work area. This shall include the use of manufacturer's approved fans, smooth bore tubing and closure of the work area.
- E. The Applicator shall be supplied with adequate lighting equal to the final lighting level during the preparation and installation of the system.
- F. The Applicator shall be provided with adequate disposal facilities for non-hazardous waste generated during installation of the system.

PRODUCTS

1.7 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. Dur-A-Flex, Inc.
 - 2. Epoxy Systems, Inc.
 - 3. Sherwin-Williams Company; General Polymers.
 - 4. Or Approved Equal

1.8 MATERIALS

- A. VOC Content of Resinous Flooring: Provide resinous flooring systems, for use inside the weatherproofing system, that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
 - 1. Epoxy Flooring: 100 g/L.

1.9 EPOXY FLOORING [Floor Finish #4 – Sheet A.3.2]

- A. Epoxy Flooring: Waterproof, slip-resistant floor surfacing designed to produce a seamless floor.
- B. System Characteristics:
 - 1. Color and Pattern: As selected by Government Design Professional from manufacturer's full range
 - 2. Wearing Surface: Textured for slip resistance

- C. Coats:
 - 1. Primer: As required and recommended by the manufacturer for specific application area and substrate.
 - 2. Base Coat: Minimum of one (1) coat, but as required for specific application area based on manufacturer's recommendation.
 - 3. Top Coat (Sealing or finish coats): Minimum of one (1) coat, but as required by manufacturer.

EXECUTION

1.10 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of work.
 - 1. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
 - a. Concrete: 12 percent.
 - 2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
 - 3. Begin coating application only after unsatisfactory conditions have been corrected and surfaces are dry.
 - 4. Coating application indicates acceptance of surfaces and conditions.

1.11 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates indicated.
- B. Remove plates, machined surfaces, and similar items already in place that are not to be coated. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and coating.
- C. Concrete surfaces shall be free of oil, grease, curing compounds, loose particles, moss, algae growth, lantace, friable matter, dirt, and incompatible paints.
 - 1. Clean surfaces with pressurized water. Use pressure range of 1500 to 4000 psi at 6 to 12 inches.
- D. The substrate shall be sound and all spalls repaired prior to placement of the prime coat. Spalls and cracks shall be repaired with compatible rapid cure concrete patch materials per Manufacturer's recommendations.
- E. There shall be no visible moisture present on the surface at the time of application of the system. Compressed oil-free air and/or a light passing of a propane torch may be used to dry the substrate.
- F. Bond Test:

1. Random tests for adequate bond strength shall be conducted on the substrate while the surface preparation is ongoing and prior to application of the primer, in accordance with the Manufacturer's recommendations, at minimum frequency of three tests per 5,000 sf. Smaller areas shall receive a minimum of three tests.
2. Based on the test results, additional substrate preparation may be required before proceeding with the installation of the system.

1.12 APPLICATION

- A. Apply high-performance coatings according to manufacturer's written instructions.
 1. Use applicators and techniques suited for coating and substrate indicated.
- B. Immediately prior to the application of any component of the system, the surface shall be dry and any remaining dust or loose particles shall be removed using a vacuum or clean, dry, oil-free compressed air.
- C. The handling, mixing and addition of components shall be performed in a safe manner to achieve the desired results in accordance with the Manufacturer's recommendations.
- D. The system shall follow the contour of the substrate unless pitching or other leveling work has been specified by the Government Design Professional.
- E. Male and Female Shower Areas: System shall provide proper slope to all new and existing floor drains as depicted on the project design drawings.
- F. A neat finish with well-defined boundaries and straight edges shall be provided by the Applicator.

1.13 FIELD QUALITY CONTROL

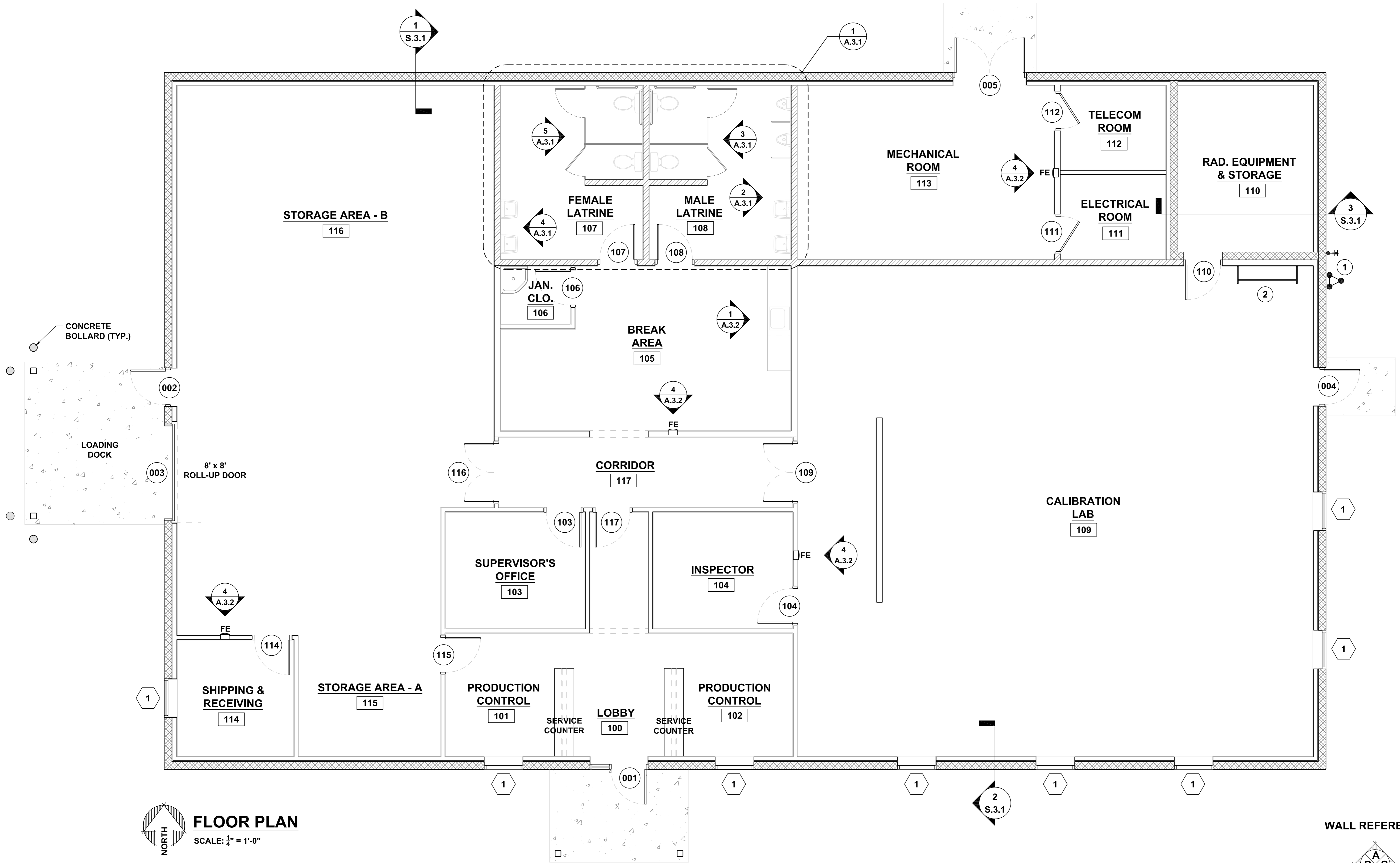
- A. Government reserves the right to invoke the following procedure at any time and as often as Owner deems necessary during the period when coatings are being applied:
 1. Government may direct the Contractor, at no additional cost to engage the services of a qualified testing agency to sample coating material being used. Samples of material delivered to Project site will be taken, identified, sealed, and certified in presence of Contractor.
 2. Testing agency will perform tests for compliance with specified requirements.
 3. Government may direct Contractor to stop applying coatings if test results show materials being used do not comply with specified requirements. Contractor shall remove non-complying coating materials from Project site, pay for testing, and recoat surfaces coated with rejected materials. Contractor will be required to remove rejected materials from previously coated surfaces if, on recoating with complying materials, the two coatings are incompatible.
- B. Tests, Inspection
 1. The following tests shall be conducted by the Applicator:
 - a. Temperature
 1. Air, substrate temperatures and, if applicable, dew point.
 - b. Bond Tests
 1. Bond Test of the primer to the substrate shall be checked as per Clause 3.2 C.
 - c. Coverage Rates
 2. Rates for all layers shall be monitored by checking quantity of material used against the area covered.
- C.

1.14 CLEANING AND PROTECTION

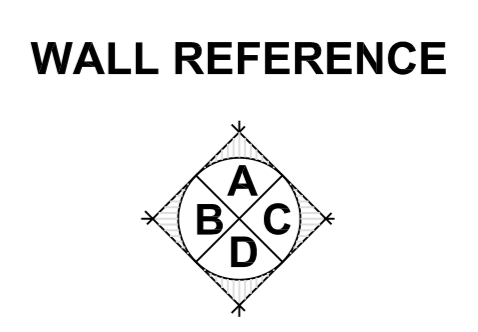
- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
- B. After completing coating application, clean spattered surfaces. Remove spattered coatings by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from coating operation. Correct damage by cleaning, repairing, replacing, and recoating, as approved by Government Design Professional, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced coated surfaces.

END OF SECTION 099600

- ① GOVERNMENT FURNISHED ANTENNA MAST AND GABLE ANTENNA TO BE INSTALLED BY GENERAL CONTRACTOR. PROVIDE ALL REQUIRED MOUNTING BRACKETS AND STRAPS TO SECURE EQUIPMENT FIRMLY TO BUILDING.
- ② GOVERNMENT FURNISHED SCALE (WEIGHT) CALIBRATION BAR. GENERAL CONTRACTOR TO INSTALL PER GOVERNMENT REPRESENTATIVE INSTRUCTIONS. CONTRACTOR SHALL PROVIDE ALL NECESSARY BLOCKING, ANCHOR BOLTS, ETC.



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



PENNSYLVANIA DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
 BUREAU OF DESIGN AND PROJECT MANAGEMENT
 DIV. OF ENGINEERING & ARCHITECTURE
 BUILDING C-10, FORT INDIANTOWN GAP
 ANNVILLE, PENNSYLVANIA 17003

LOCATION:
 AREA 10
 FORT INDIANTOWN GAP
 ANNVILLE, PA 17003

PROJECT:
 NEW CSMS - EAST
 CALIBRATION LAB

REVISIONS	NO.	DATE	DESCRIPTION
	1	5/27/20	DOOR LABELS

DESIGNED BY	DATE	NO.	SCALE	AS NOTED
J. NYE	6 APR. 2020	1		
DRAWN BY	PROJECT NO.			
J. NYE	42080032			
REVIEWED BY	SCALE			
R. FISBURN	AS NOTED			

DRAWING:
 FLOOR PLAN

DRAWING NO.
A.1.1

ALL DIMENSIONS AND EXISTING CONDITIONS SHALL BE CHECKED AND VERIFIED BY THE GENERAL CONTRACTOR. ALL DIMENSIONS SHALL BE SCALED TO OBTAIN DIMENSIONS AND DISTANCES.

ROOM FINISH SCHEDULE											
RM. NO.	ROOM NAME	SQUARE FOOTAGE	FLOOR	WALLS				CEILING		REMARKS	RM. NO.
				WALL 'A'	WALL 'B'	WALL 'C'	WALL 'D'	MATERIAL	HGT.		
100	LOBBY	95	1	-	6	6	1	1	8'-0"	100	
101	PRODUCT. CONTROL	106	1	5	5	6	1	1	8'-0"	101	
102	PRODUCT. CONTROL	106	1	5	5	6	1	1	8'-0"	102	
103	SUPERVISOR OFC.	120	3	5	5	5	5	1	8'-0"	103	
104	INSPECTOR OFC.	120	3	5	5	5	5	1	8'-0"	104	
105	BREAK AREA	322	1	4	4	4	4	1	8'-0"	105	
106	JANITOR CLOSET	30	1	4	5	5	5	1	8'-0"	106	
107	FEMALE LATRINE	182	1	1	4	4	4	1	8'-0"	107	
108	MALE LATRINE	182	1	1	4	4	4	1	8'-0"	108	
109	CALIBRATION LAB	1871	2	4	4/5	1	1	1	8'-0"	109	
110	RAD. EQUIP. & STOR.	166	2	1	3	1	3	X	10'-0"	110	
111	ELECTRICAL ROOM	65	4	5	4	3	4	-	-	111	
112	TELECOM ROOM	65	4	1	4	3	5	1	8'-0"	112	
113	MECHANICAL ROOM	329	4	1	4	4	4	-	-	113	
114	SHIP/RECV'G OFC.	100	1	5	1	5	1	1	8'-0"	114	
115	STORAGE - A	128	4	-	5	5	1	1	10'-0"	115	
116	STORAGE - B	1237	4	1	1	4	-	1	10'-0"	116	
117	CORRIDOR	152	1	5	5	5	5	1	8'-0"	117	

CEILING FINISHES:

- ACOUSTIC CEILING SYSTEM - 24"x24" GRID WITH 24"x24" LAY-IN, LIGHT TEXTURED ACOUSTIC TILES.
- 5/8" GYP., FINISHED, PRIMED AND PAINTED
- 5/8" GYP. BOARD w/ MOISTURE PROTECTION

NOTE 1: REFER TO PROJECT SPECIFICATIONS FOR CEILING GRID INFORMATION. GRID, TILE AND PAINTED GYP. COLORS TO BE SELECTED BY GOVERNMENT PERSONNEL.

NOTE 2: REFER TO DRAWING A.1.3 FOR CEILING GRID LAYOUT.

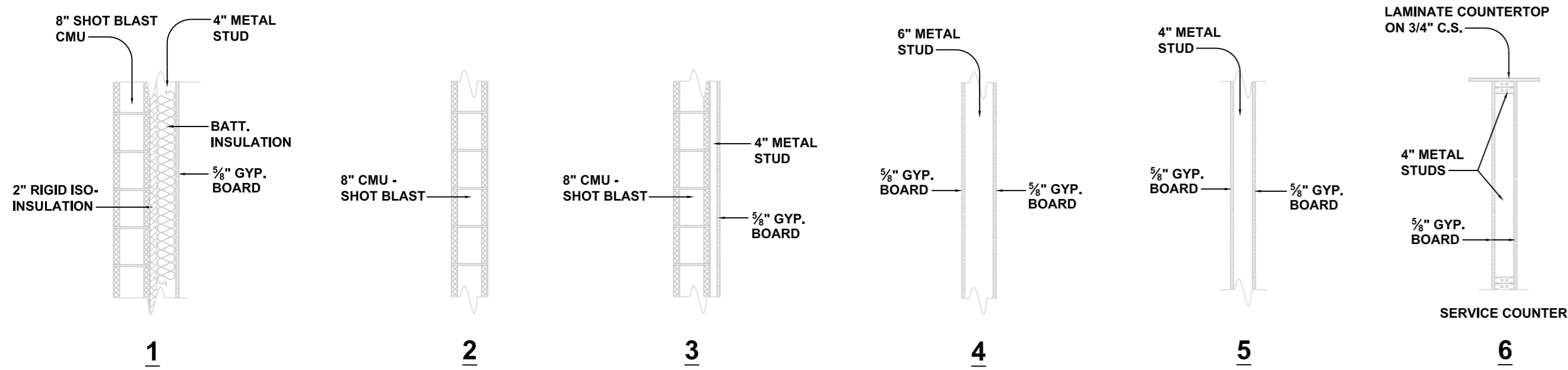
NOTE 3: CONTRACTOR TO PROVIDE ALL NECESSARY FRAMING MEMBERS (16" O.C.), SUPPORT BRACKETS AND FASTENERS FOR GYP. BOARD CEILING SYSTEMS.

FLOOR FINISHES:

- 12"x12" VINYL COMPOSITE TILE. (COLOR AND STYLE TO BE SELECTED BY GOVERNMENT PROFESSIONAL).
- 12"x12" ANTI-STATIC VINYL COMPOSITE FLOOR (COLOR AND STYLE TO BE SELECTED BY GOVERNMENT PROFESSIONAL)
- CARPET TILE - 24" x 24" (COLOR AND STYLE TO BE SELECTED BY GOVERNMENT DESIGN PROFESSIONAL)
- CONCRETE - PAINTED.

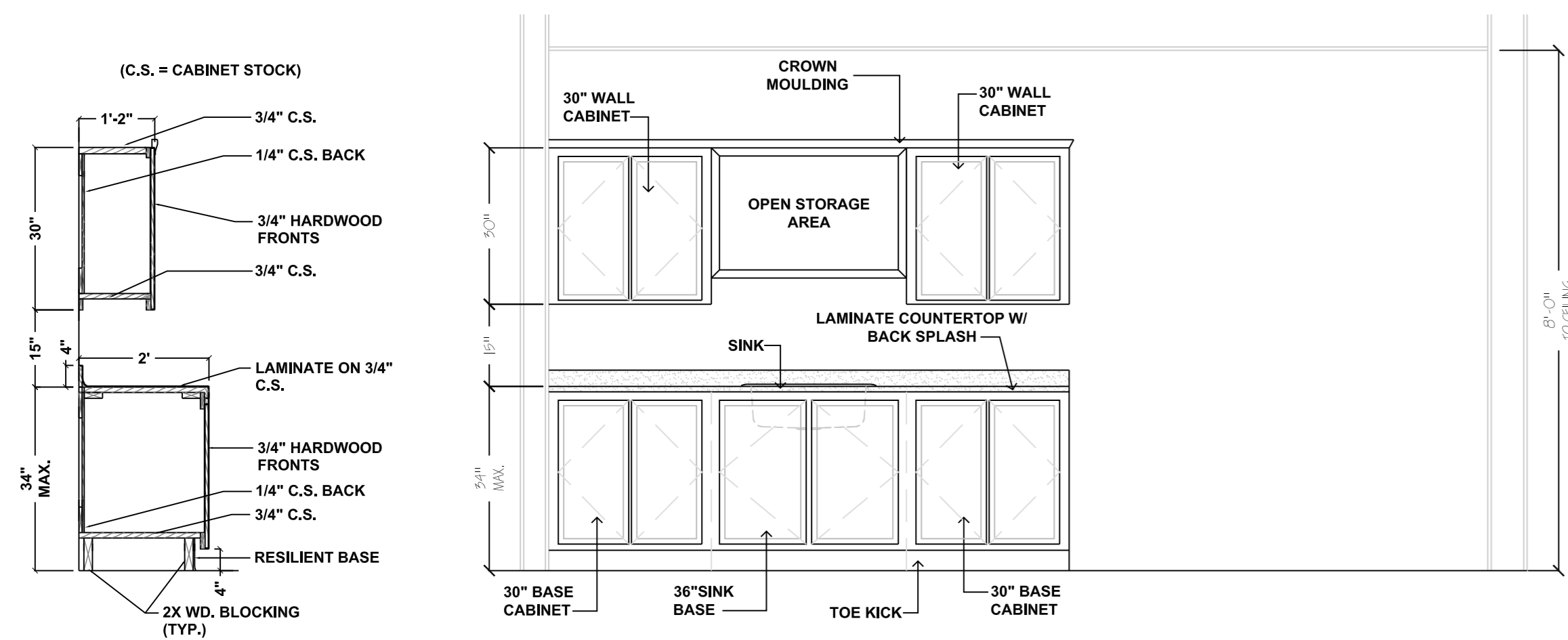
NOTE: ALL FLOORS TO RECEIVE VINYL WALL BASE UNLESS NOTED OTHERWISE. REFER TO SPECIFICATIONS FOR INFORMATION ON WALL BASE.

WALL TYPES



WALL NOTES:

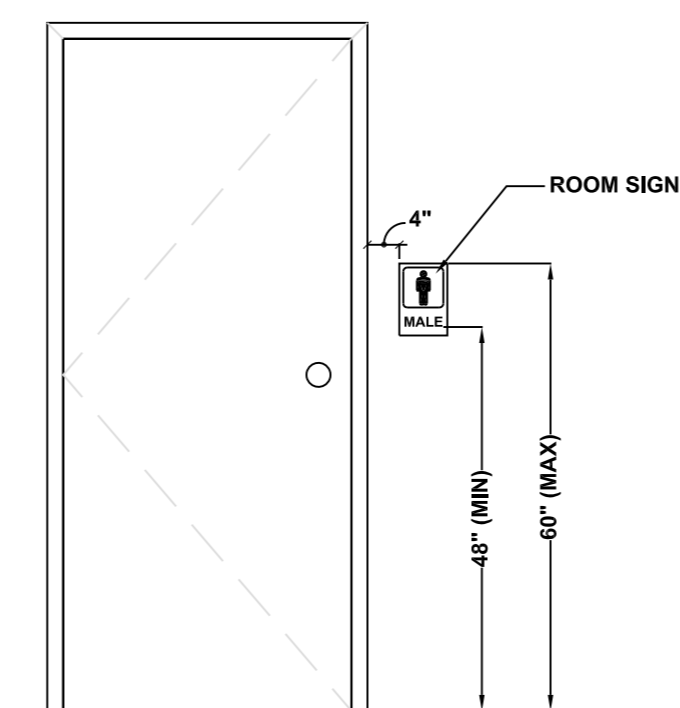
- GYP. BOARD INSTALLED IN TOILETS ROOMS AND JANITOR CLOSET SHALL BE MOISTURE/MILDEW RESISTANT GREEN BOARD.
- TOILET ROOMS TO RECEIVE FRP (FIBERGLASS REINFORCED PANELS). PANELS ARE TO BE INSTALLED TO A MAXIMUM HEIGHT OF 48" AFF. SEE SHEET A.3.1 FOR FUTHER DETAILS.
- ALL STUD WALLS ARE TO BE RAN FULL HEIGHT TO UNDERSIDE OF TRUSSES, UNLESS OTHERWISE NOTED.
- GYP. BOARD SHALL BE INSTALLED TO A MINIMUM OF 6 INCHES ABOVE FINISHED CEILING HEIGHT, UNLESS OTHERWISE NOTED.
- INSULATE WALLS AS INDICATED ON PLAN A.1.1 UTILIZING 4" OR 6" BATT. INSULATION.



NOTE:
1. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS PRIOR TO ORDERING CABINERY. DIMENSIONS TO BE ADJUSTED AS NEEDED TO ACCOMMODATE FIELD CONDITIONS.

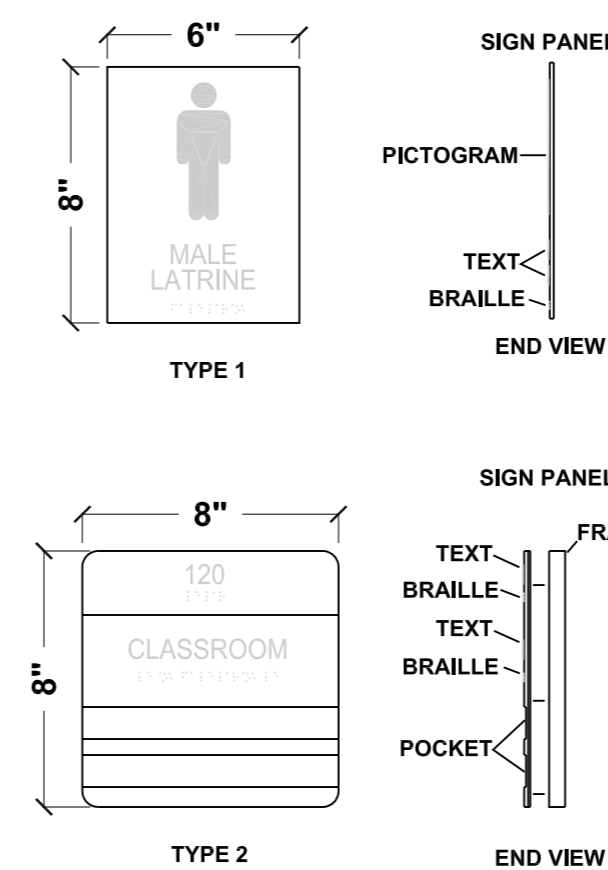
BREAK ROOM ELEVATION
SCALE: 1/2" = 1'-0"

1
A 13.2



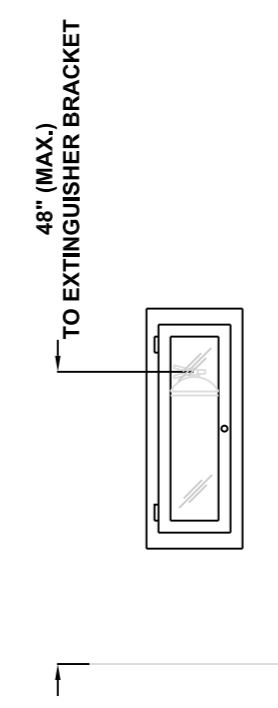
DOOR SIGNAGE
SCALE: N.T.S

2
A 13.2



SIGNAGE DETAILS
SCALE: N.T.S

3
A 13.2



EXTINGUISHER CABINET
SCALE: N.T.S

4
A 13.2

PENNSYLVANIA DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
BUREAU OF DESIGN AND PROJECT MANAGEMENT
DIV. OF ENGINEERING & ARCHITECTURE
BUILDING C-10, FORT INDIANTOWN GAP
ANNVILLE, PENNSYLVANIA 17003

LOCATION:
AREA 10
FORT INDIANTOWN GAP
ANNVILLE, PA 17003

PROJECT:
NEW CSMS - EAST
CALIBRATION LAB

NO.	DATE	DESCRIPTION
1	5/27/20	ROOM FINISH SCHEDULE

DESIGNED BY	DATE	PROJECT NO.	SCALE
J. NYE	6 APR. 2020	42080032	AS NOTED

DRAWING:
ROOM FINISH SCHEDULES AND INTERIOR DETAILS

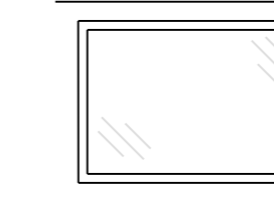
DRAWING NO.
A.3.2

ALL DIMENSIONS AND EXISTING CONDITIONS SHALL BE CHECKED AND VERIFIED BY THE CONTRACTOR. DIMENSIONS AND DISTANCES SHALL BE SCALED TO OBTAIN DIMENSIONS AND DISTANCES.

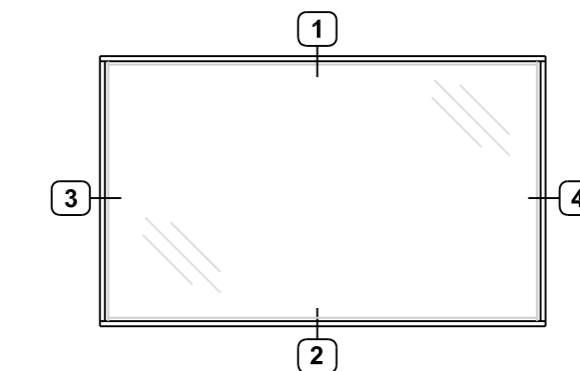
DOOR AND FRAME SCHEDULE																
DOOR NO.	DOOR					FRAME			HARDWARE		REMARKS	DOOR NO.				
	SIZE	MAT'L	TYPE	FIRE RATING	GLASS SIZE	GLASS DoD TYPE	LOUVER W	LOUVER H	MAT'L	FRAME DETL.			SET NO.	KEY SIDE	KEYING	
001	3'-0"	7'-0"	1 3/4"	ALUM	1	NA	FULL	B		ALUM	A	1	EXT/INT	BFE-M	DOORS TO BE INSULATED	001
002	3'-0"	7'-0"	1 3/4"	STEEL	3	NA	6x30			STEEL	B	2	EXT	BFE-M	DOORS TO BE INSULATED	002
003	8'-0"	8'-0"	-	ALUM	5	NA				STEEL	F	4	EXT	BFE-M		003
004	3'-0"	7'-0"	1 3/4"	STEEL	4	NA				STEEL	B	2	EXT	BFE-M	DOORS TO BE INSULATED	004
005	5'-0"	7'-0"	1 3/4"	STEEL	2	NA				STEEL	C	3	EXT	BFE-M	DOORS TO BE INSULATED/RIGHT DOOR (ACTIVE)/LEFT DOOR (INACTIVE)	005
103	3'-0"	7'-0"	1 3/4"	STEEL	3	NA	6x30			STEEL	D	5	CDR. 117	BFE-M		103
104	3'-0"	7'-0"	1 3/4"	STEEL	3	NA	6x30			STEEL	D	5	LAB 109	BFE-M		104
106	3'-0"	7'-0"	1 3/4"	STEEL	4	NA				STEEL	D	6		BFE-M		106
107	3'-0"	7'-0"	1 3/4"	STEEL	4	NA				STEEL	D	7		BFE-M		107
108	3'-0"	7'-0"	1 3/4"	STEEL	4	NA				STEEL	D	7		BFE-M		108
109	5'-0"	7'-0"	1 3/4"	STEEL	2	NA	6x30			STEEL	E	2	CDR. 117	BFE-M	RIGHT DOOR (ACTIVE) LEFT DOOR (INACTIVE)	109
110	3'-0"	7'-0"	1 3/4"	STEEL	4	NA				STEEL	D	5	LAB 109	BFE-M		110
111	3'-0"	7'-0"	1 3/4"	STEEL	4	NA				STEEL	D	6		BFE-M		111
112	3'-0"	7'-0"	1 3/4"	STEEL	4	NA				STEEL	D	6		BFE-M		112
114	3'-0"	7'-0"	1 3/4"	STEEL	3	NA	6x30			STEEL	D	5	STOR. 116	BFE-M		114
115	3'-0"	7'-0"	1 3/4"	STEEL	3	NA	6x30			STEEL	D	5	P.C. 101	BFE-M		115
116	5'-0"	7'-0"	1 3/4"	STEEL	2	NA	6x30			STEEL	E	2	STOR. 116	BFE-M	RIGHT DOOR (ACTIVE) LEFT DOOR (INACTIVE)	116
117	3'-0"	7'-0"	1 3/4"	STEEL	3	NA	6x30			STEEL	D	2	LBY. 100	BFE-M		117

WINDOW SCHEDULE								
NO.	TYPE	SIZE	INSTALL HEIGHT	FRAME MATERIAL	SECURITY GLAZING	DoD ATFP TYPE	REMARKS	
1	1	36" x 24"	64" AFF	ALUMINUM	YES	B	REFER TO SPECS. FOR FURTHER INFO.	

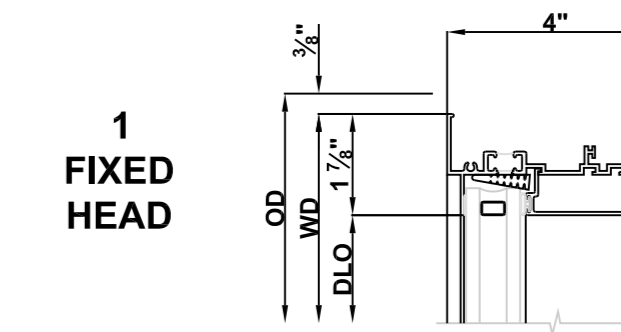
WINDOW TYPES



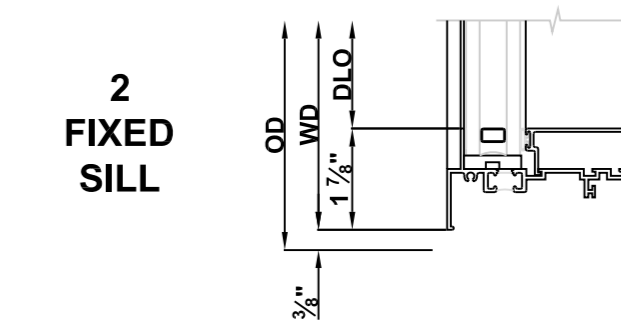
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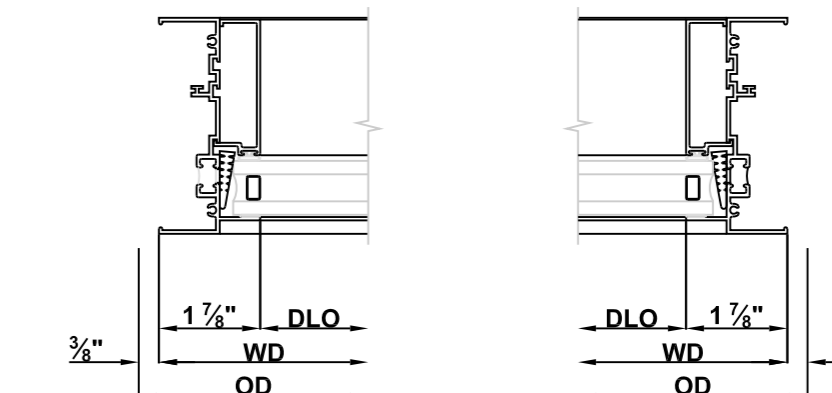
FIXED WINDOW



1
FIXED HEAD



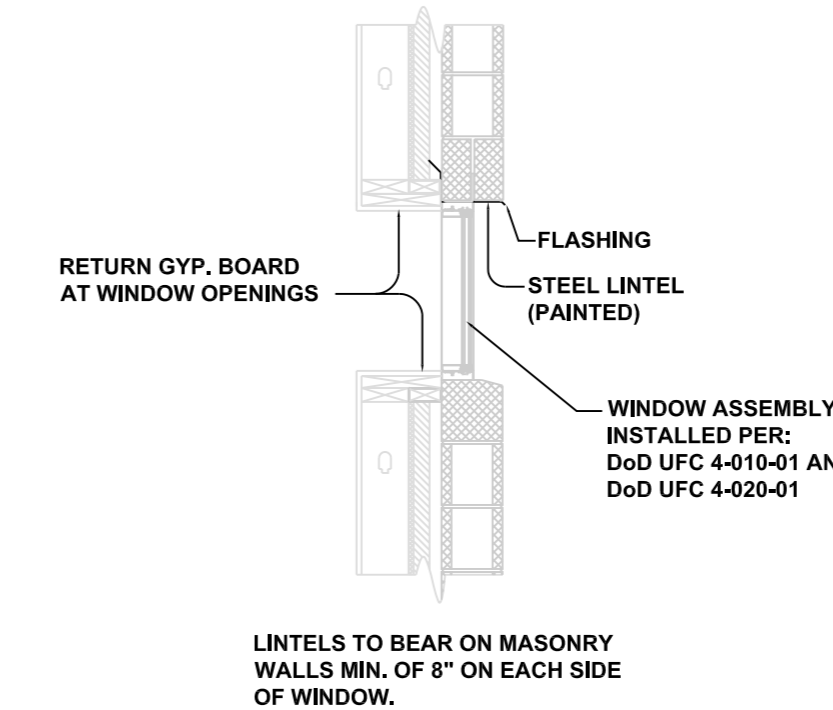
2
FIXED SILL



3
FIXED JAMB

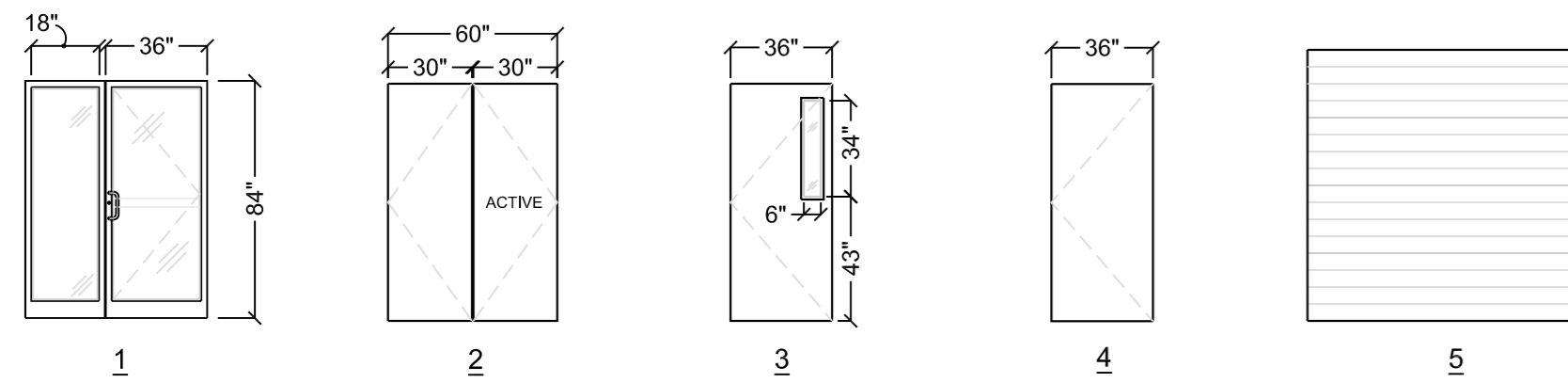
4
FIXED JAMB

WINDOW DETAILS - TYP
SCALE: N.T.S. A | 3.3

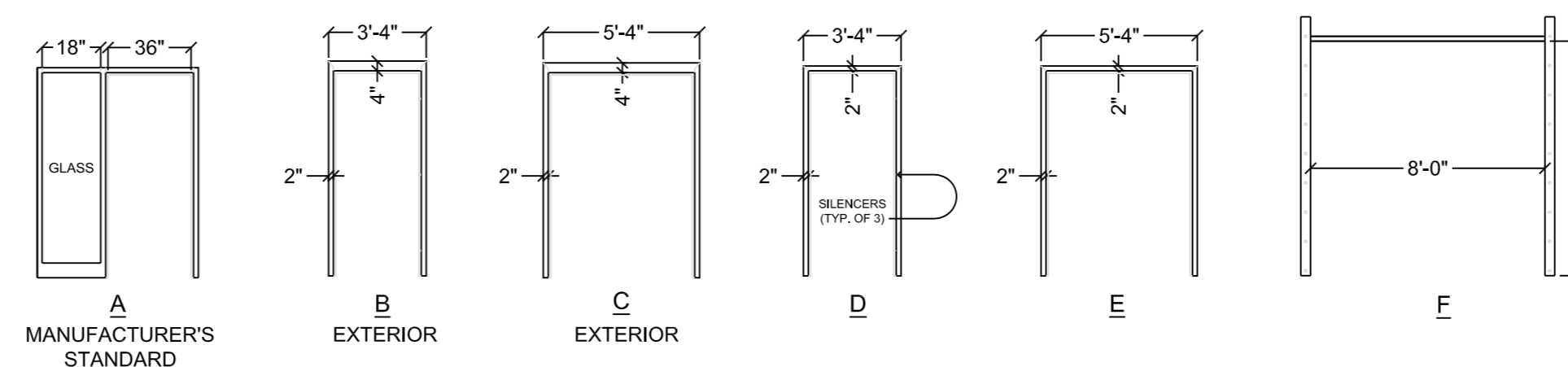


WINDOW INSTALL - TYP
SCALE: 1/2" = 1'-0" A | 3.3

DOOR TYPES

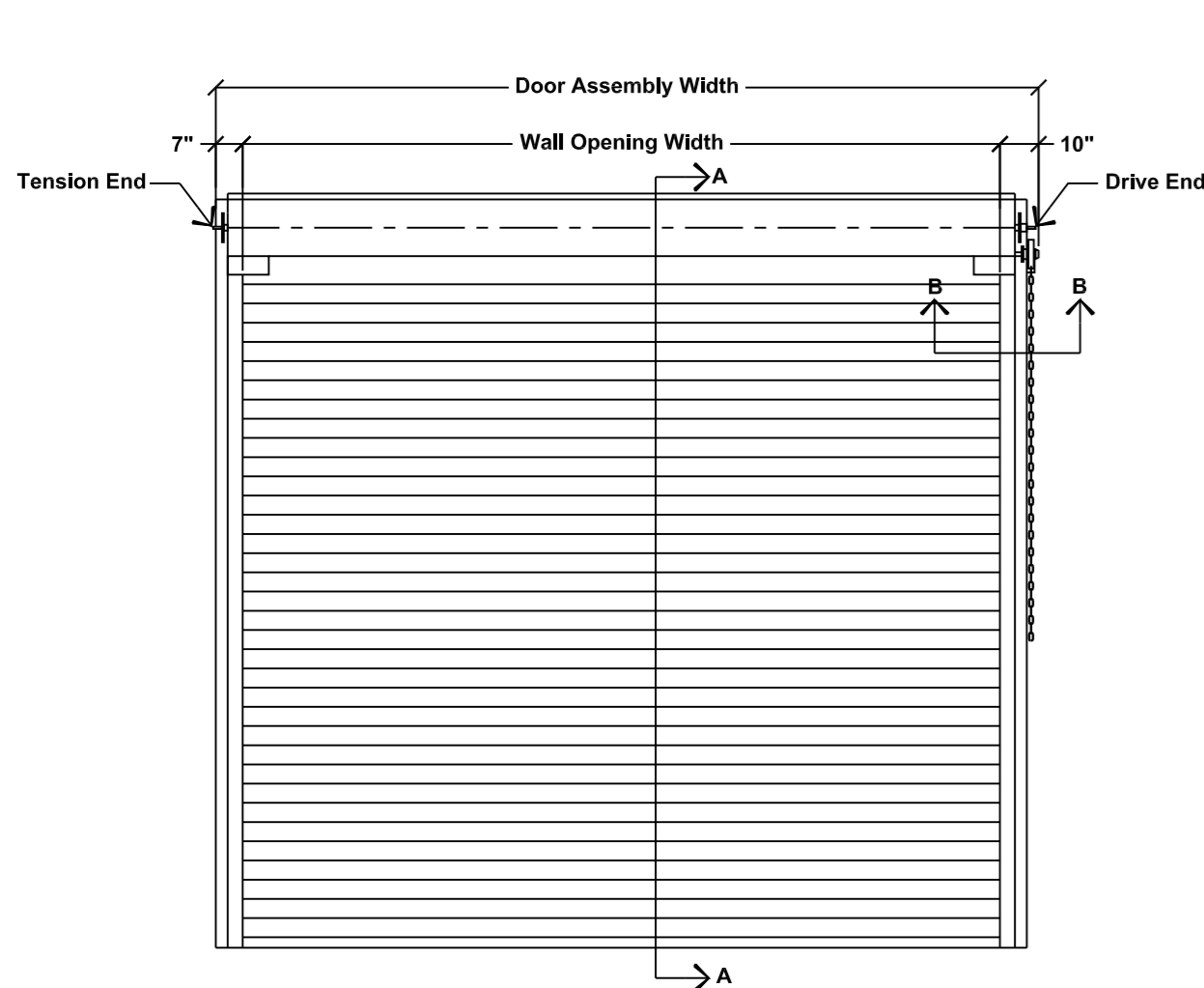


FRAME TYPES

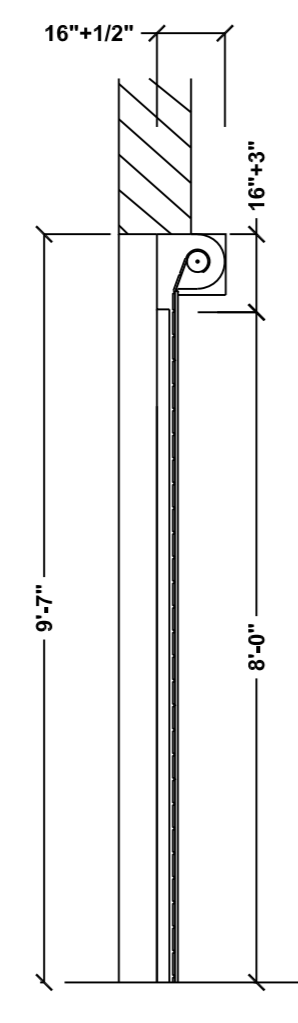


DOOR HARDWARE SCHEDULE

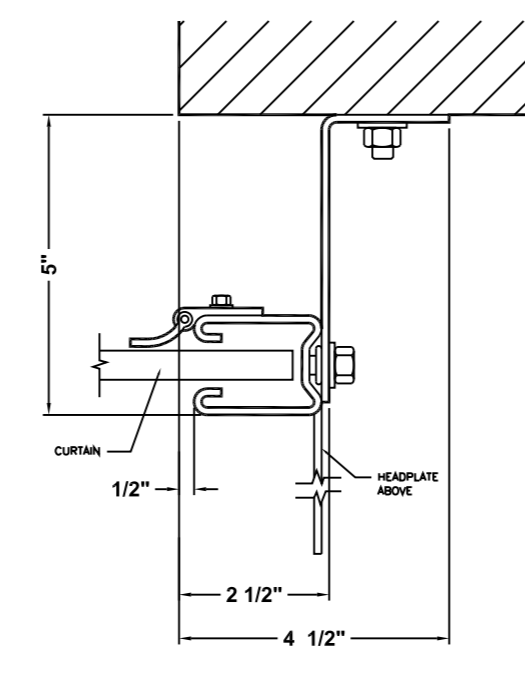
- SET 1**
HINGES: PER MANUFACTURER'S STANDARD
OPENING DEVICE: PULL HANDLES
LOCKING DEVICE: MORTISE LOCK, DEADBOLT W/ INTERIOR/EXTERIOR KEYING
EXIT: TOUCH BAR
CLOSER: TOP SURFACE MOUNTED ON DOOR W/ 120° PARALLEL ARM
- SET 2**
HINGES: HEAVY DUTY, 5 KNUCKLE, FULL MORTISE
OPENING DEVICE: LEVER W/ KEYED CORE
LOCKING DEVICE: MORTISE LOCK, DEADBOLT W/ ONE SIDED LOCK ONLY
EXIT: TOUCH BAR
CLOSER: TOP SURFACE MOUNTED ON DOOR W/ 120° PARALLEL ARM
- SET 3**
HINGES: HEAVY DUTY, 5 KNUCKLE, FULL MORTISE
OPENING DEVICE: KNOB W/ KEYED CORE
LOCKING DEVICE: CYLINDRICAL LOCK W/ EXTERIOR LOCK ONLY
EXIT: KNOB
CLOSER: TOP SURFACE MOUNTED ON DOOR W/ 120° PARALLEL ARM
- SET 4**
ROLL-UP DOOR HARDWARE:
TRACK, OPERATION DEVICE, HARDWARE, TO INCLUDE LOCKING DEVICE TO BE PROVIDED BY DOOR MANUFACTURER AND PER MANUFACTURER'S STANDARD BASED ON DOOR SIZE AND INSTALLATION PARAMETERS.
- SET 5**
HINGES: 5 KNUCKLE, FULL MORTISE
OPENING DEVICE: LEVER W/ KEYED CORE
LOCKING DEVICE: CYLINDRICAL LOCK W/ INSIDE PUSH BUTTON ACTIVATION
EXIT: LEVER
CLOSER: NONE
- SET 6**
HINGES: 5 KNUCKLE, FULL MORTISE
OPENING DEVICE: LEVER
LOCKING DEVICE: NONE
EXIT: LEVER
CLOSER: NONE
- SET 7**
HINGES: 5 KNUCKLE, FULL MORTISE
OPENING DEVICE: PUSH PLATE
LOCKING DEVICE: NONE
EXIT: PULL HANDLE
CLOSER: TOP SURFACE MOUNTED ON DOOR W/ 120° PARALLEL ARM



ELEVATION



SECTION - A



ROLLER GUIDES - MASONRY

OVERHEAD COILING SERVICE DOOR DETAILS
SCALE: N.T.S.

3
A | 3.3

PENNSYLVANIA DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
BUREAU OF DESIGN AND PROJECT MANAGEMENT
DIV. OF ENGINEERING & ARCHITECTURE
BUILDING C-10, FORT INDIANTOWN GAP
ANNVILLE, PENNSYLVANIA 17003

LOCATION:
AREA 10
FORT INDIANTOWN GAP
ANNVILLE, PA 17003

PROJECT:
NEW CSMS - EAST
CALIBRATION LAB

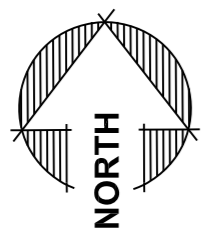
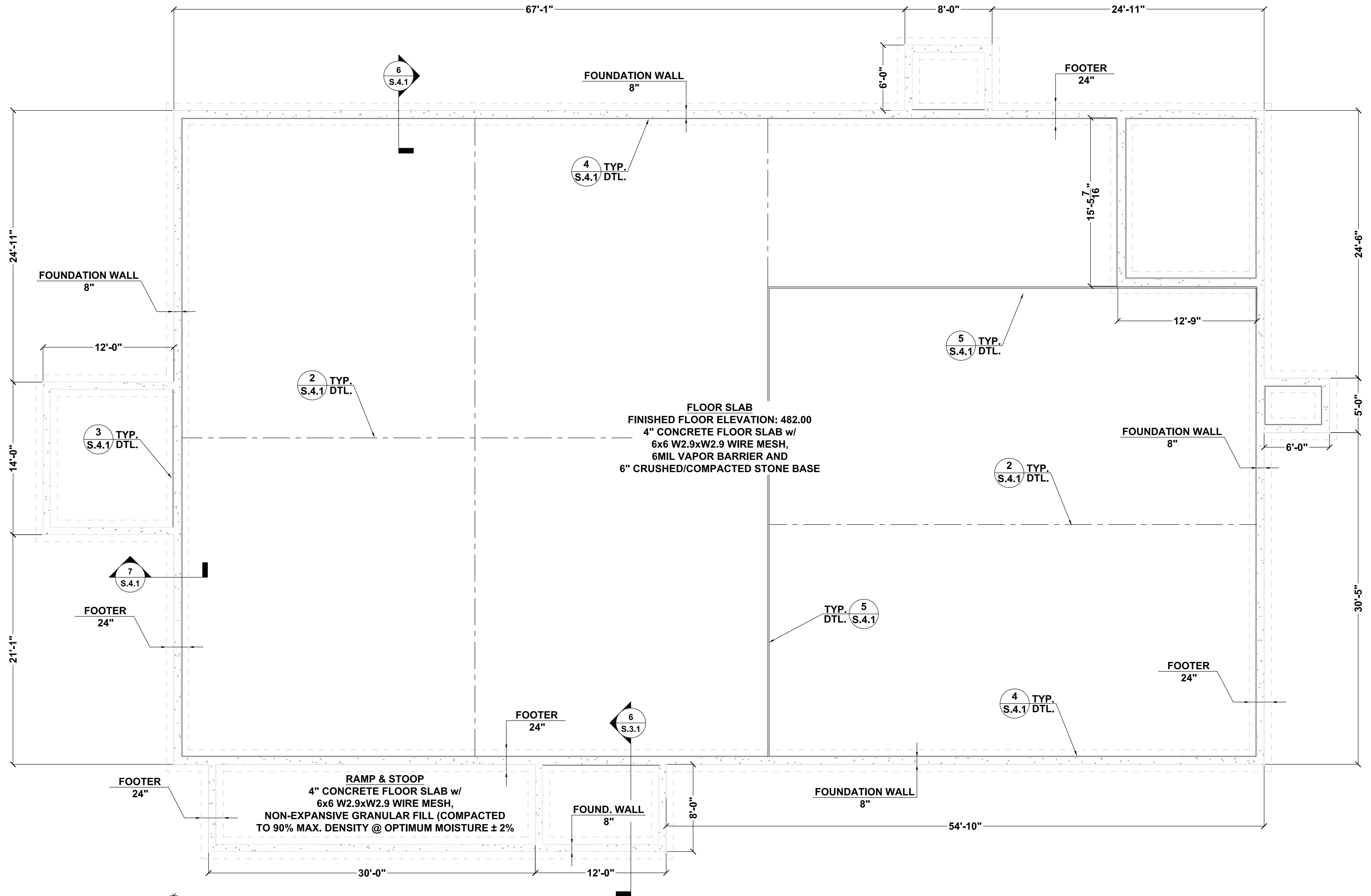
NO.	DATE	DESCRIPTION
1	5/27/20	O.H. DOOR DETAILS

DESIGNED BY	DATE	PROJECT NO.	SCALE	AS NOTED
J. NYE	6 APR. 2020	42080032		
DRAWN BY				
J. NYE				
REVIEWED BY				
R. FISHER				

DRAWING:
DOOR AND WINDOW
SCHEDULES AND DETAILS

DRAWING NO.
A.3.3

SPECIAL NOTE:
ALL EXTERIOR DOOR AND WINDOW FRAMING, GLAZING AND INSTALLATION METHODS MUST MEET AND/OR EXCEED ALL REQUIREMENTS AS OUTLINED WITHIN THE DEPARTMENT OF DEFENSE: UNIFIED FACILITIES CODE, UFC-04-010 AND UFC-04-020-01. CONTRACTOR ALONG WITH THE DOOR/WINDOW MANUFACTURER SHALL BE RESPONSIBLE FOR INSURING THAT ALL INSTALLED DOORS AND WINDOWS COMPLY WITH THE REFERENCED STANDARD TO THE FULLEST EXTENT.



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

PENNSYLVANIA DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
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ANNVILLE, PENNSYLVANIA 17003

LOCATION:
AREA 10
FORT INDIANTOWN GAP
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PROJECT:
NEW CSMS - EAST
CALIBRATION LAB

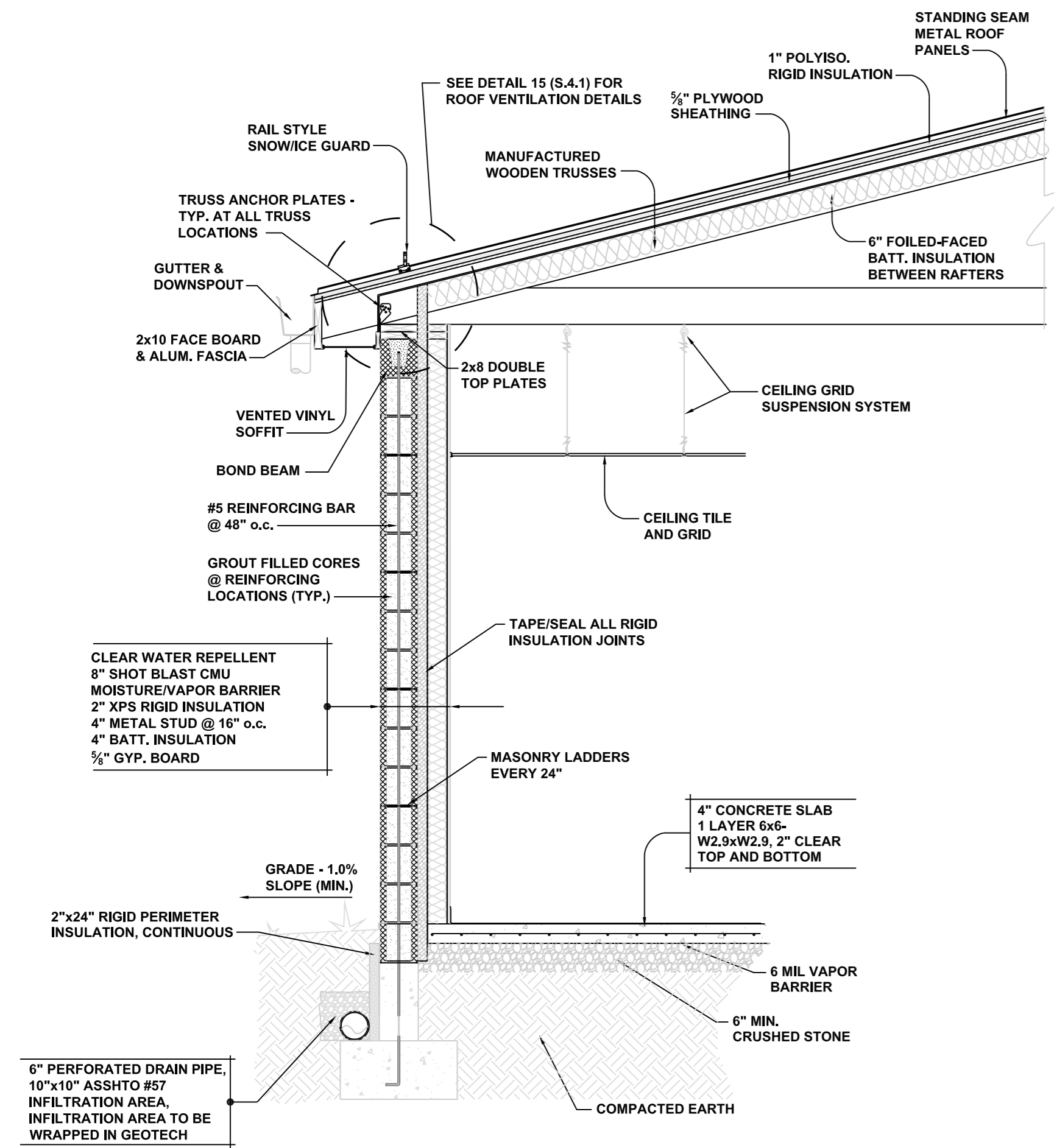
NO.	DATE	DESCRIPTION
1	5/27/20	RAMP & STOOP INFO.

DESIGNED BY	J. NYE	DATE	6 APR. 2020
DRAWN BY	J. NYE	PROJECT NO.	42080032
REVIEWED BY	R. FISBURN	SCALE	AS NOTED

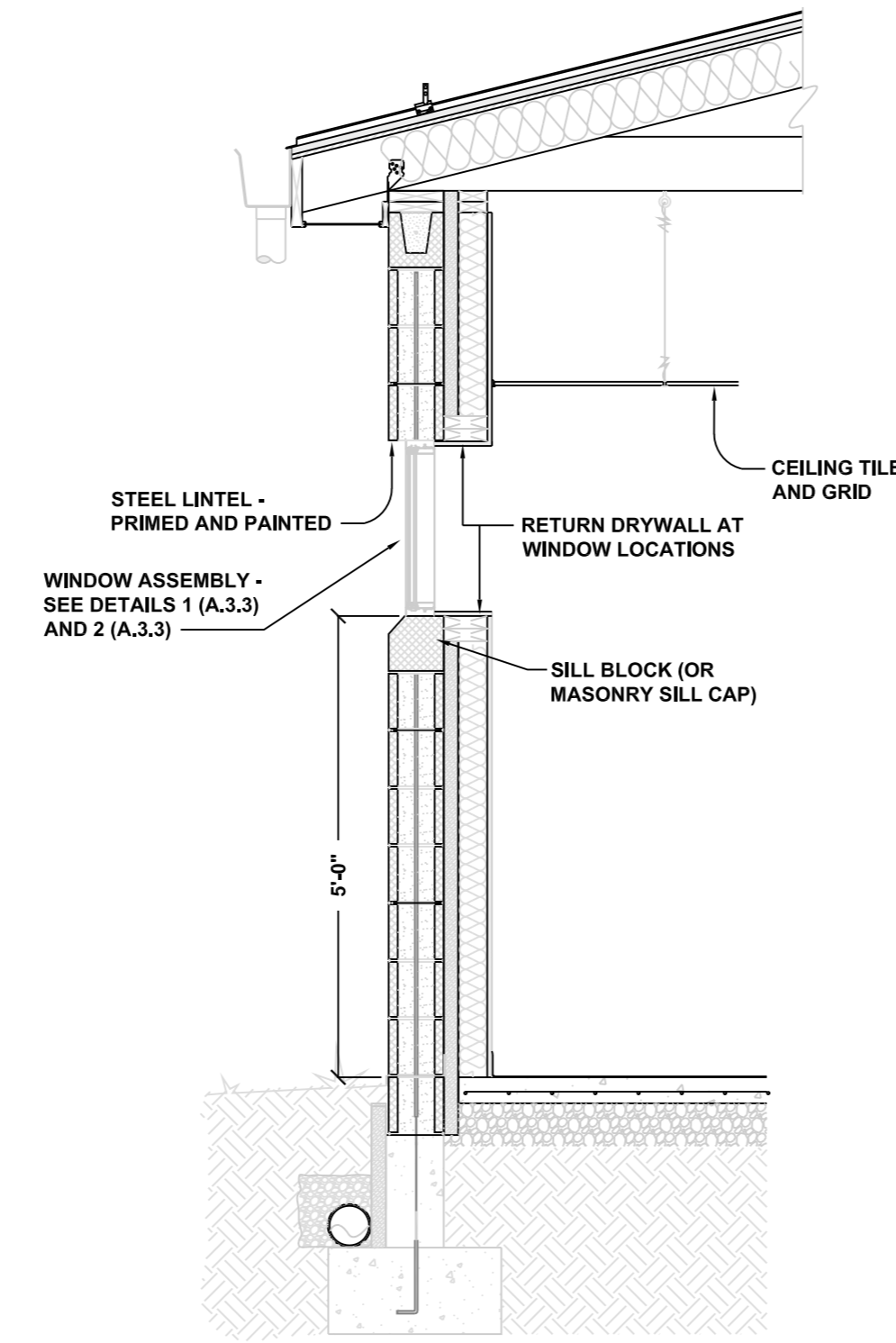
DRAWING:
FOUNDATION PLAN
AND DIMENSIONS

DRAWING NO.
S.1.1

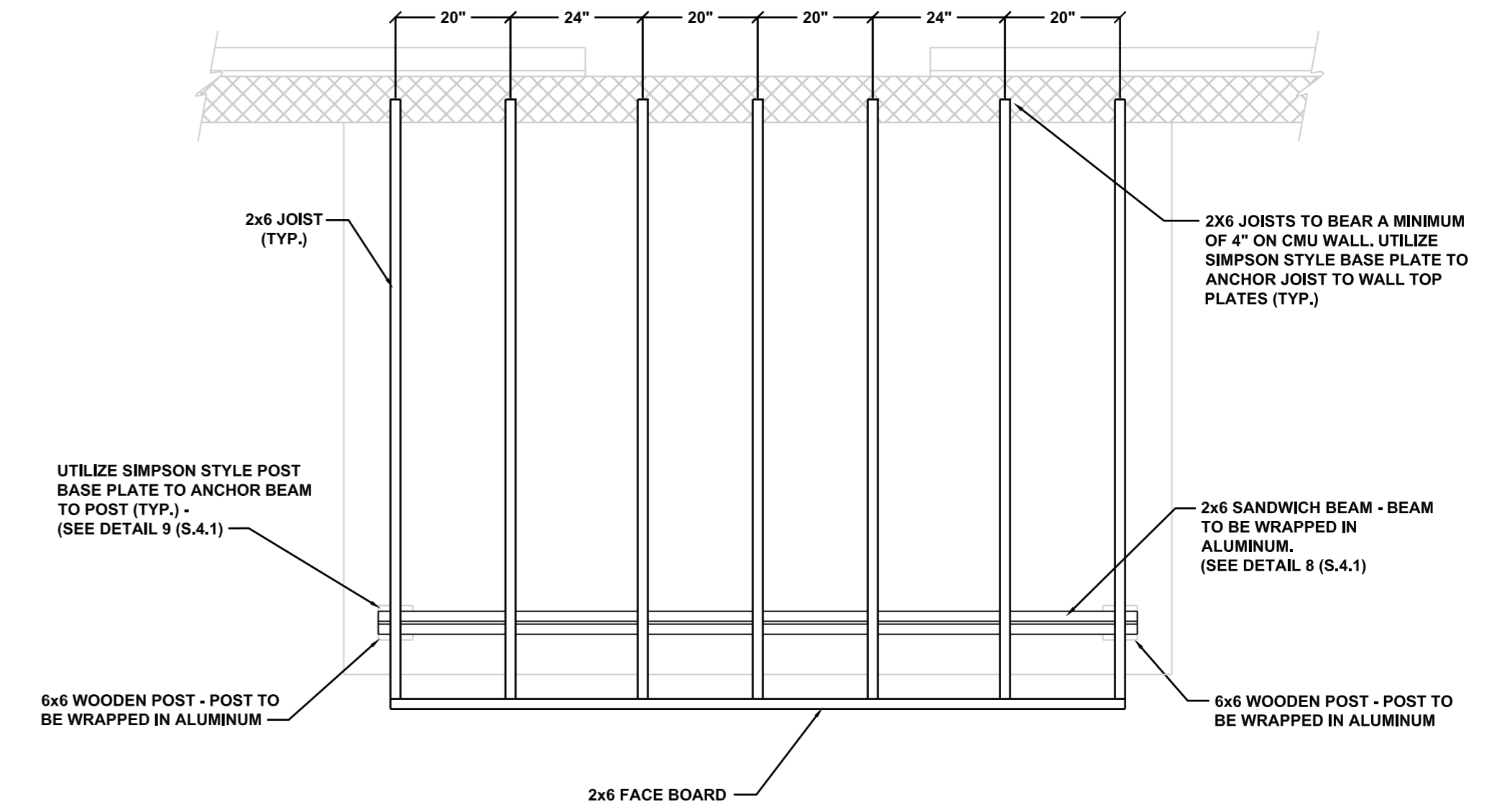
ALL DIMENSIONS AND EXISTING CONDITIONS SHALL BE CHECKED AND VERIFIED BY THE CLIENT. DIMENSIONS AND DISTANCES SHALL BE SCALED TO OBTAIN DIMENSIONS AND DISTANCES.



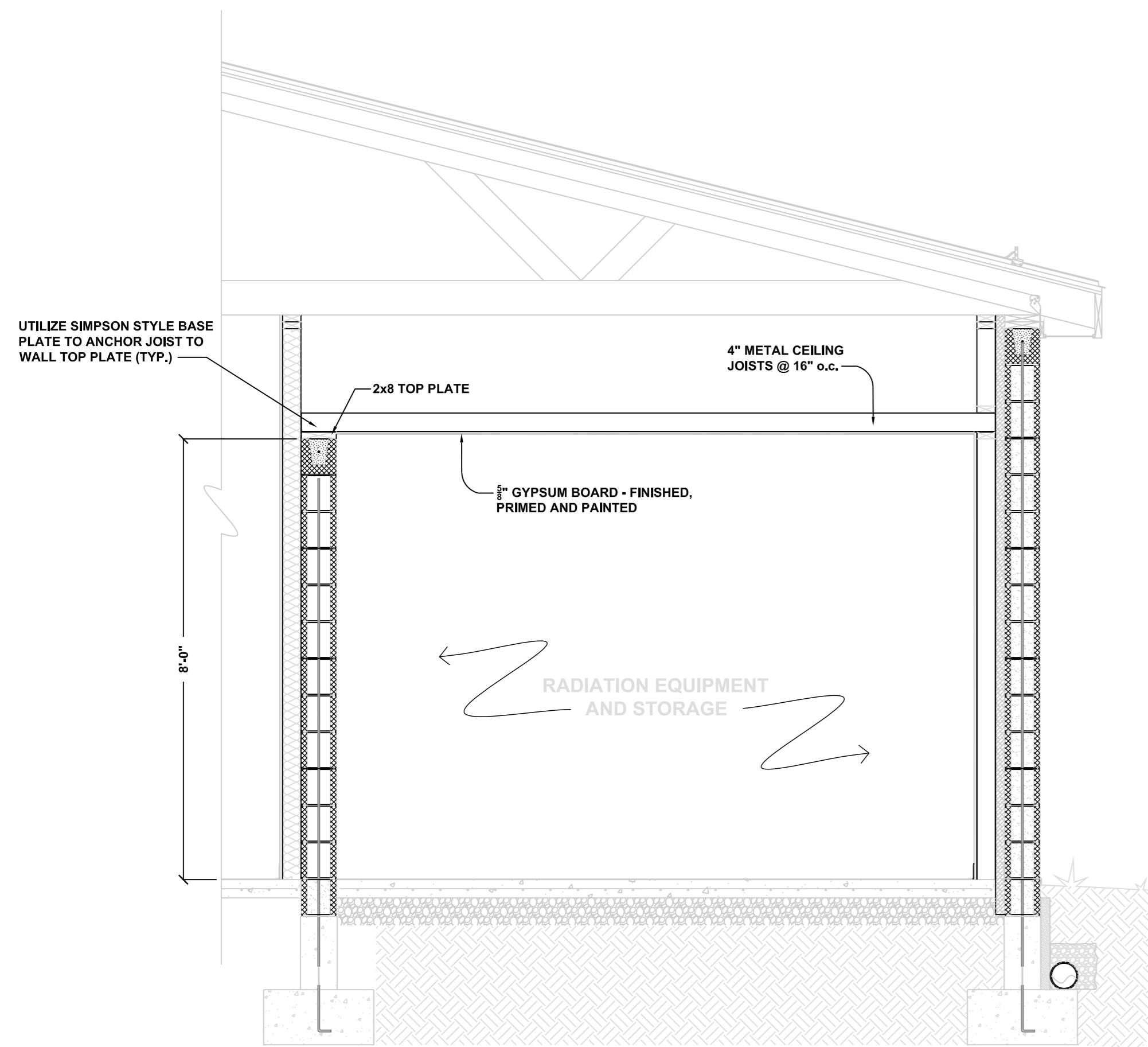
SECTION - TYP. EXTERIOR WALL
SCALE: 1/2" = 1'-0"
S 1 3.1



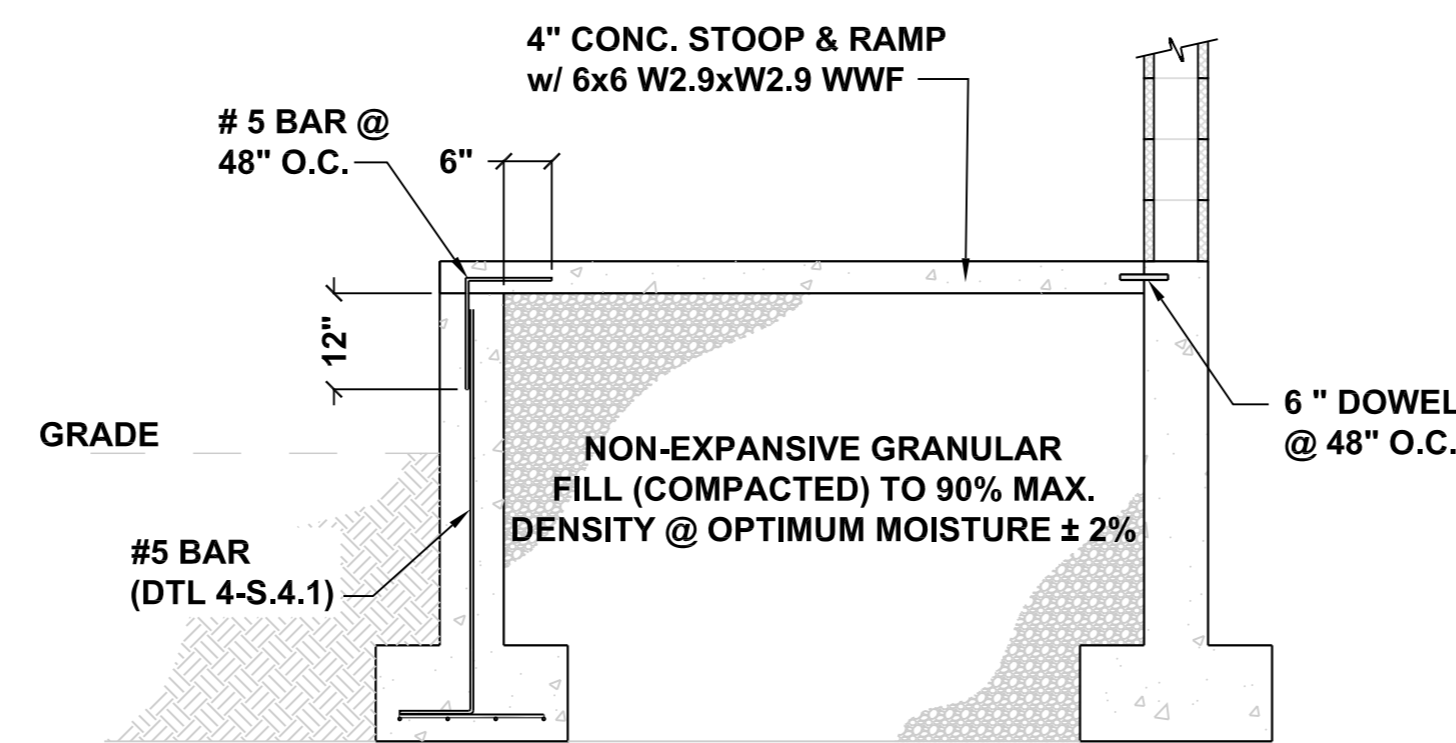
SECTION - EXTERIOR WINDOWS (TYP.)
SCALE: 1/2" = 1'-0"
S 2 3.1



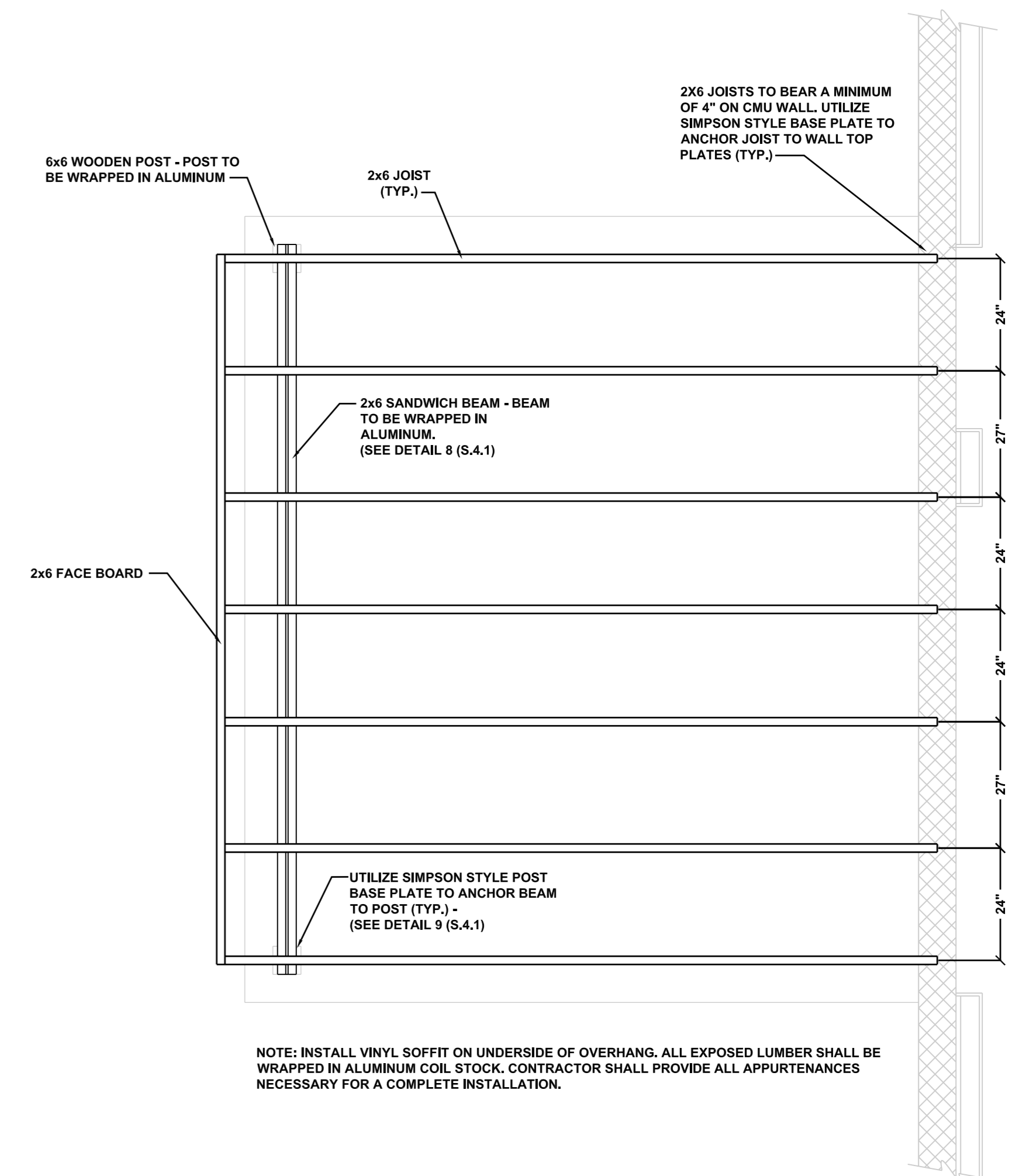
DETAIL - MAIN ENTRANCE ROOF FRAMING
SCALE: 1/2" = 1'-0"
S 4 3.1



SECTION - RAD. EQUIPMENT ROOM
SCALE: 1/2" = 1'-0"
S 3 3.1



SECTION - ENTRANCE RAMP & STOOP
SCALE: 1/2" = 1'-0"
S 6 3.1



DETAIL - LOADING DOCK ROOF FRAMING
SCALE: 1/2" = 1'-0"
S 5 3.1

PENNSYLVANIA DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
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LOCATION:
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ANNVILLE, PA 17003

PROJECT:
NEW CSMS - EAST
CALIBRATION LAB

DESIGNED BY	DATE	NO.	DESCRIPTION
J. NYE	6 APR. 2020	1	RAMP & STOOP SECTION

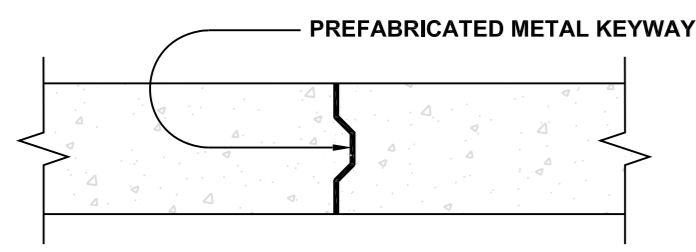
REVISIONS	DATE	NO.	DESCRIPTION
	5/27/20	1	

DESIGNED BY	DATE	PROJECT NO.	SCALE
J. NYE	6 APR. 2020	42080032	AS NOTED

DRAWN BY	REVIEWED BY
J. NYE	R. FISHBURN

DRAWING:
WALL SECTIONS
AND DETAILS
DRAWING NO.
S.3.1

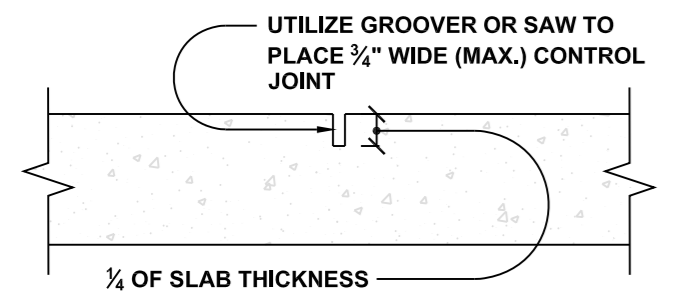
ALL DIMENSIONS AND EXISTING CONDITIONS SHALL BE CHECKED AND VERIFIED BY THE CONTRACTOR. ALL DIMENSIONS AND DISTANCES SHALL BE SCALED TO OBTAIN DIMENSIONS AND DISTANCES.



CONSTRUCTION KEYWAY

SCALE: 1" = 1'-0"

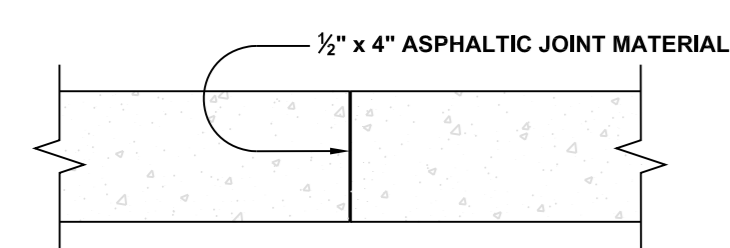
1
S | 4.1



CONTROL JOINT

SCALE: 1" = 1'-0"

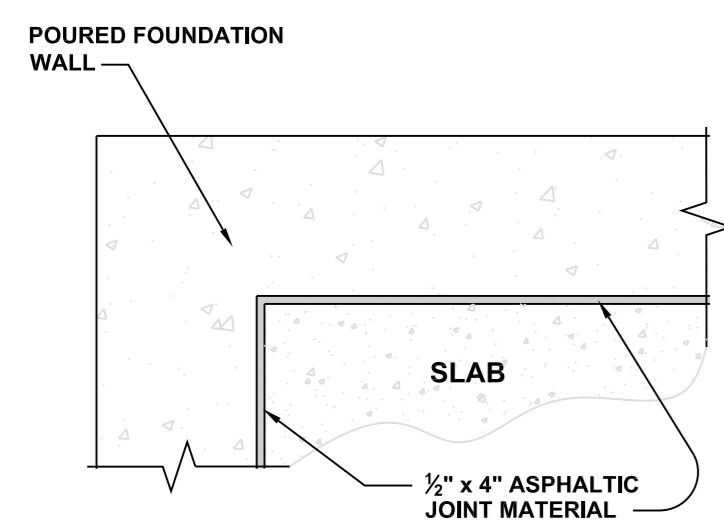
2
S | 4.1



EXT. EXPANSION JOINT

SCALE: 1" = 1'-0"

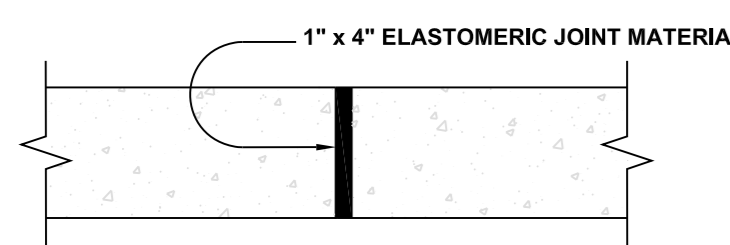
3
S | 4.1



INT. EXPANSION JOINT

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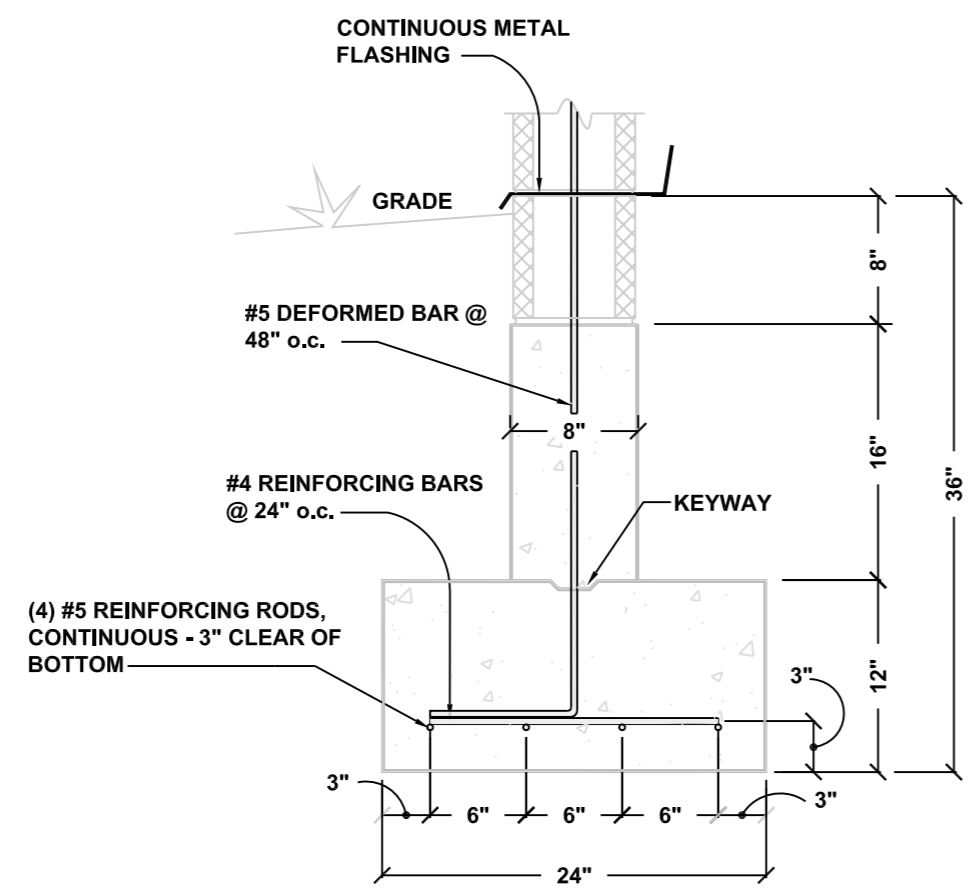
4
S | 4.1



SLAB ISOLATION JOINT

SCALE: 1" = 1'-0"

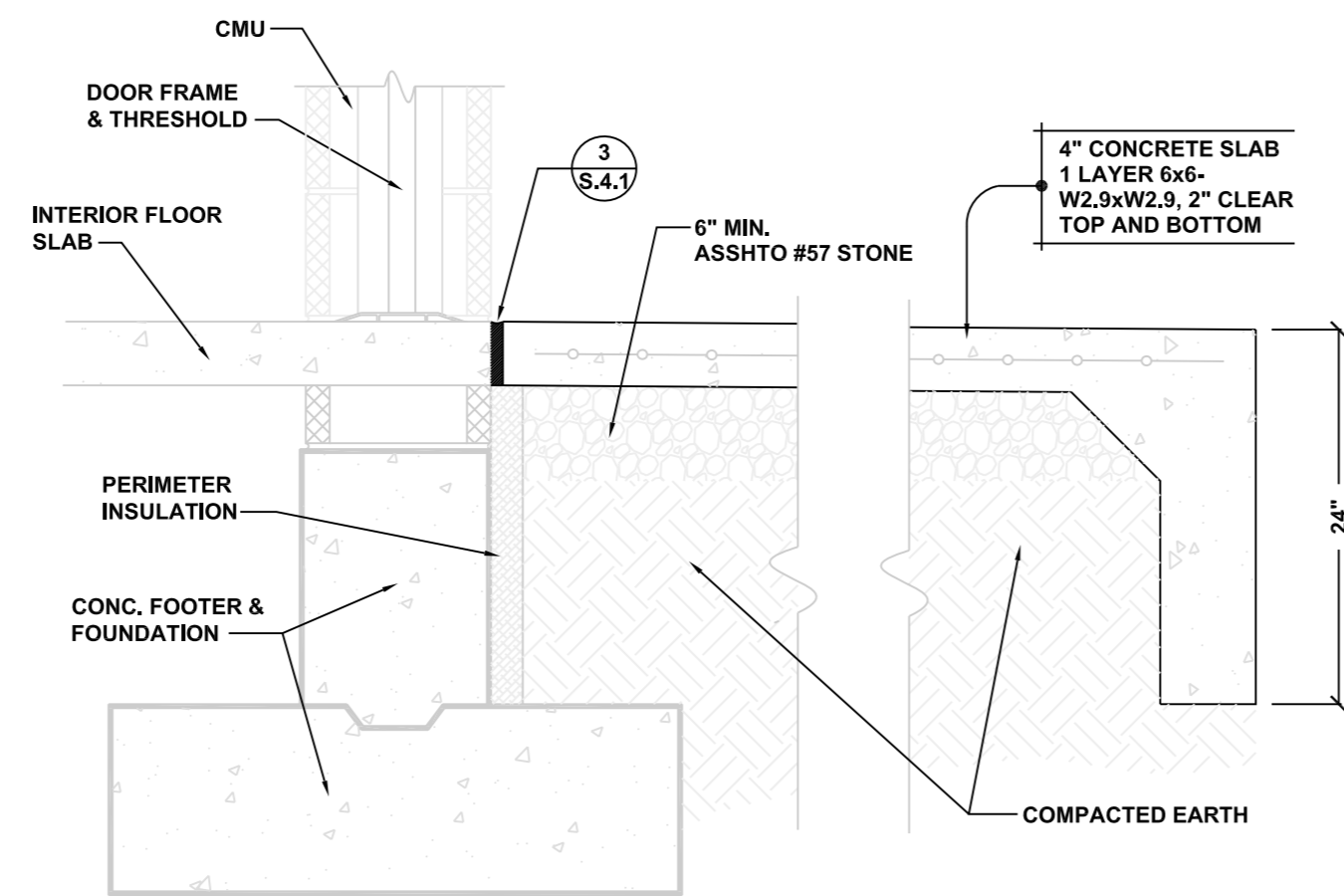
5
S | 4.1



SECTION - 8" FOUNDATION

SCALE: 1" = 1'-0"

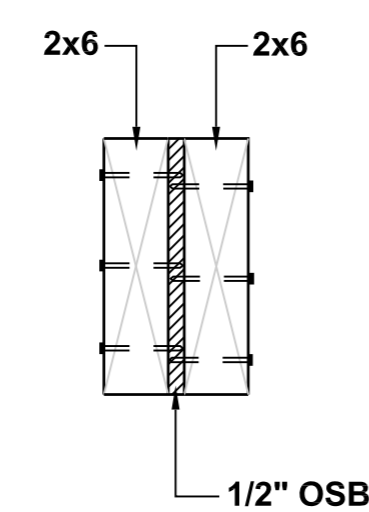
6
S | 4.1



SECTION - CONCRETE STOOP

SCALE: 1" = 1'-0"

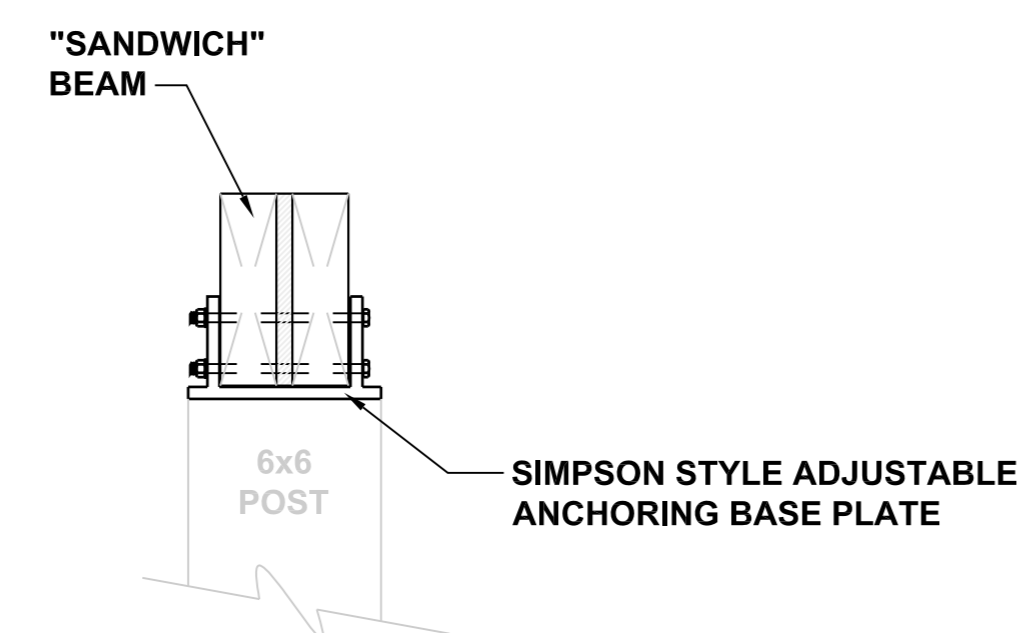
7
S | 4.1



DETAIL - SANDWICH BEAM

SCALE: N.T.S

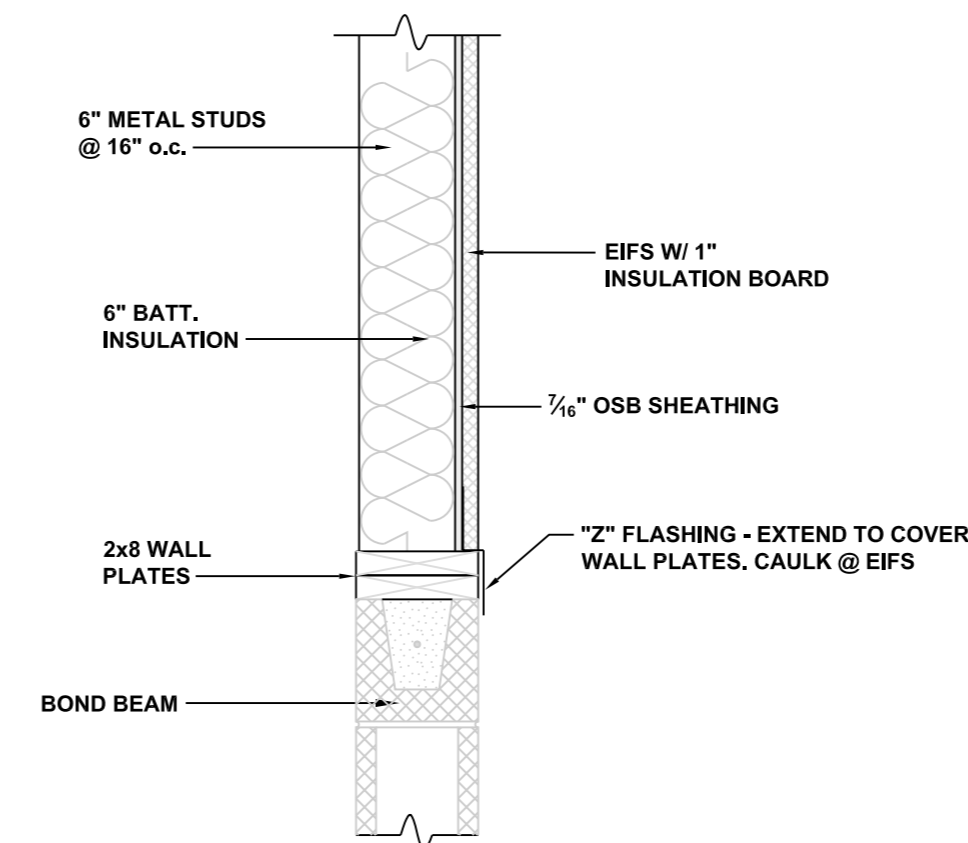
8
S | 4.1



DETAIL - BEAM ANCHOR PLATE (TYP.)

SCALE: N.T.S

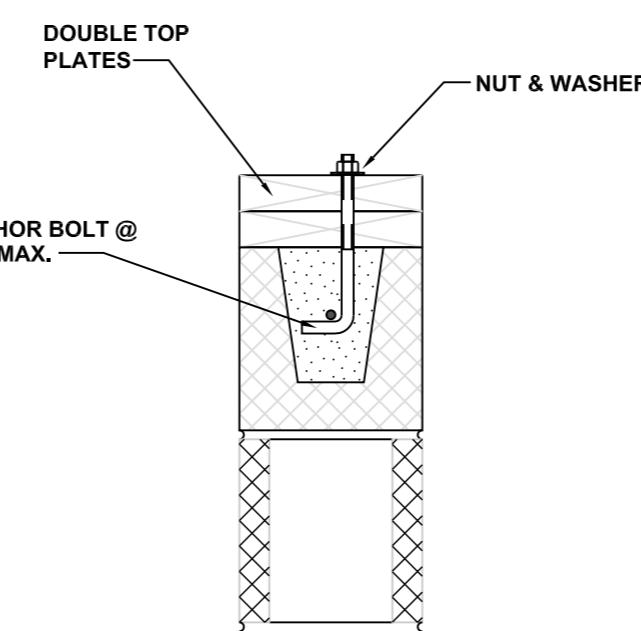
9
S | 4.1



SECTION @ ROOF GABLES

SCALE: 1" = 1'-0"

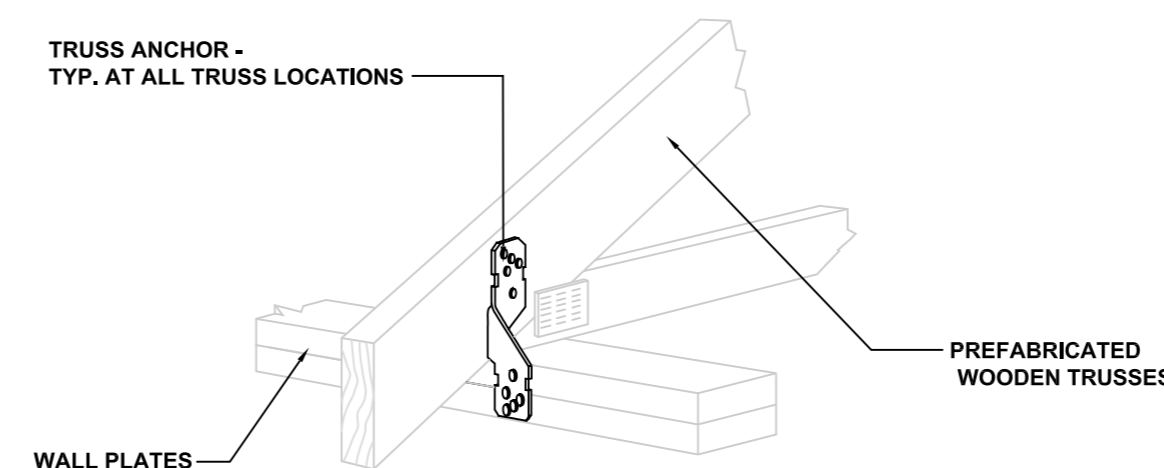
10
S | 4.1



DETAIL - WALL PLATE ANCHORING

SCALE: N.T.S

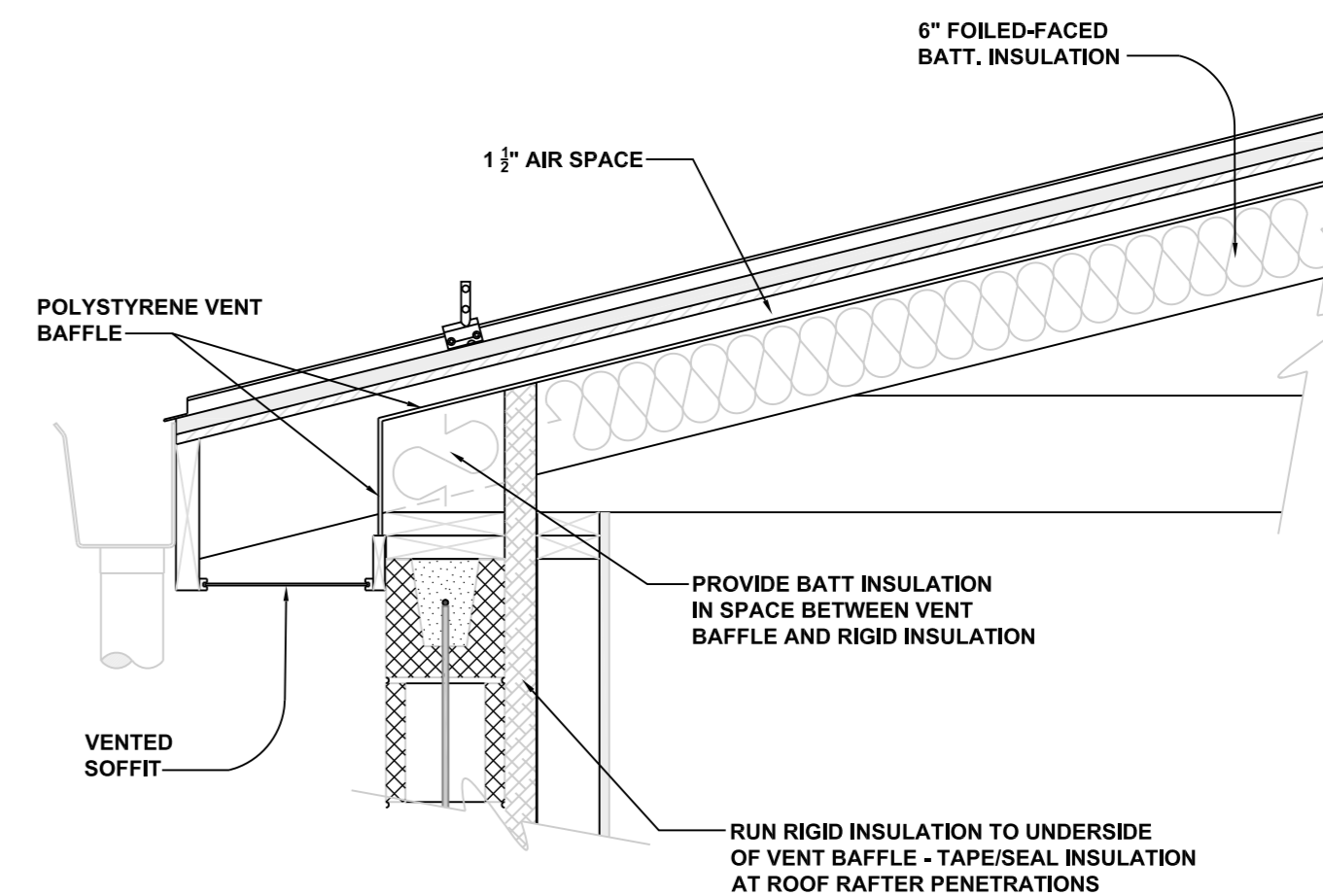
11
S | 4.1



DETAIL - TRUSS ANCHOR

SCALE: N.T.S

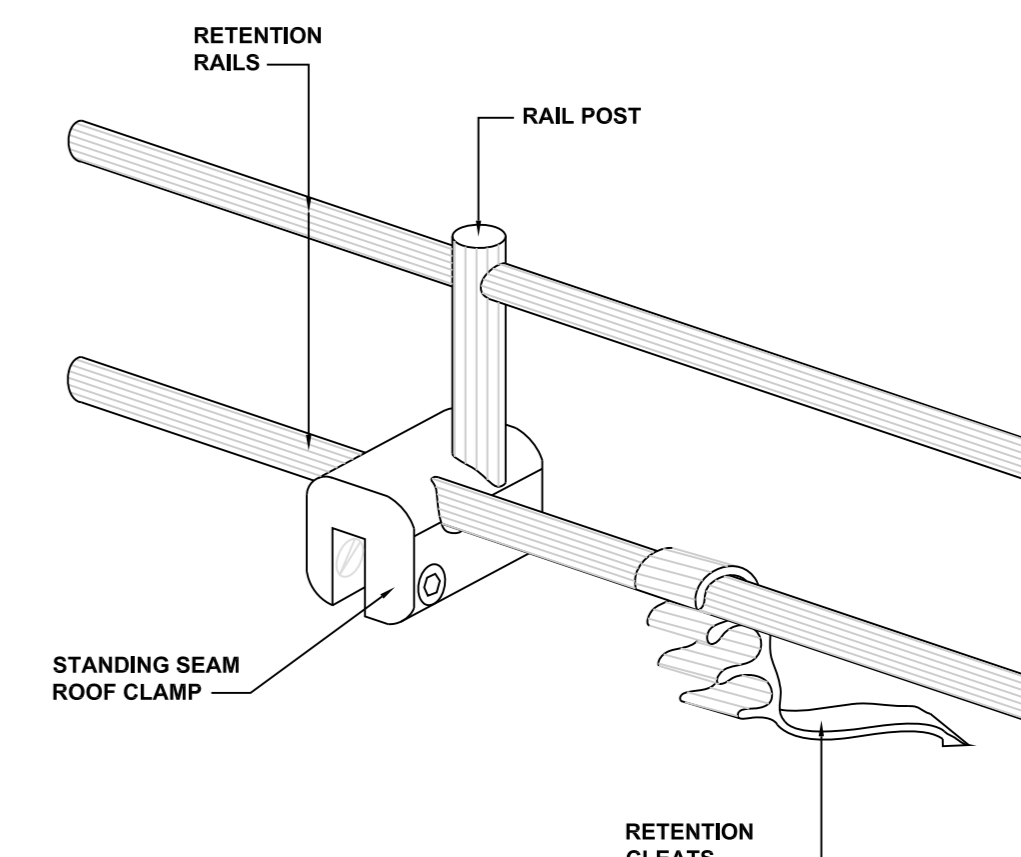
12
S | 4.1



DETAIL - SOFFIT/ROOF VENTILATION

SCALE: N.T.S

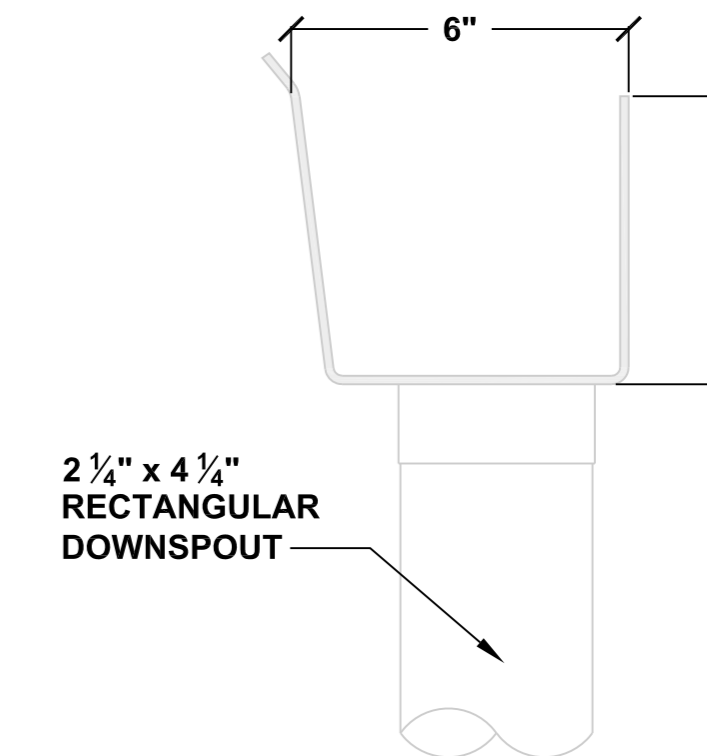
15
S | 4.1



DETAIL - SNOW/ICE GUARD

SCALE: N.T.S

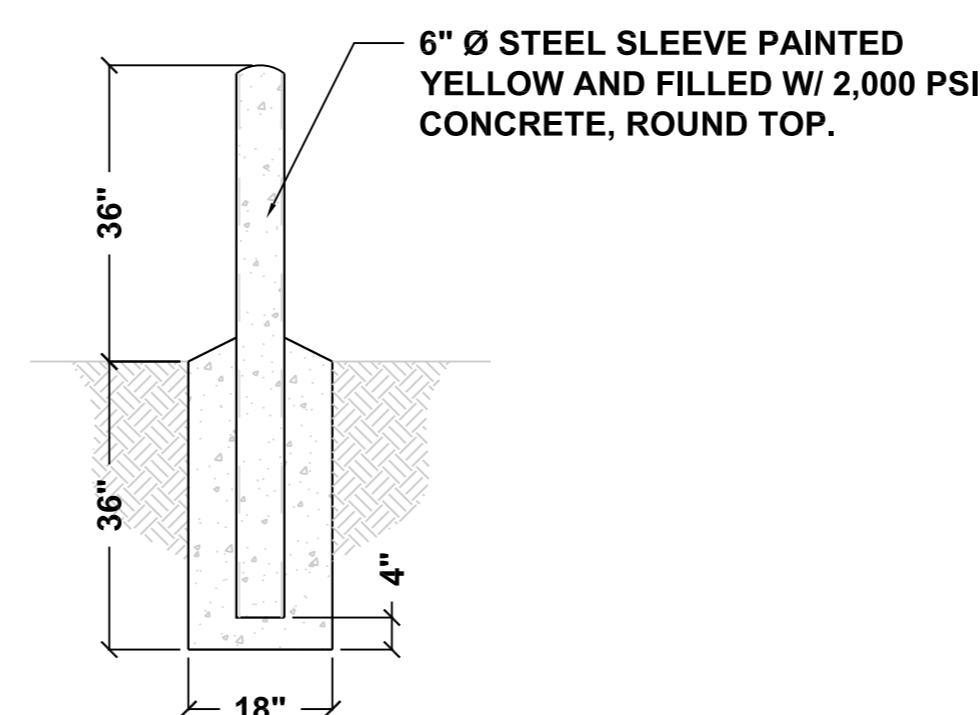
13
S | 4.1



DETAIL - GUTTER/DOWNSPOUT

SCALE: N.T.S

14
S | 4.1



DETAIL - STEEL/CONCRETE BOLLARD

SCALE: N.T.S

16
S | 4.1

LINTEL SCHEDULE				
LOCATION	MAX. SPAN	TYPE	SIZE	REMARKS
8" BLOCK	9'-4"	STEEL ANGLE	(2) $\angle\angle$ 3 x 3 x $\frac{3}{8}$	BEAR 8" EACH END
8" BLOCK	6'-4"	STEEL ANGLE	(2) $\angle\angle$ 3 $\frac{1}{2}$ x 3 $\frac{1}{2}$ x $\frac{3}{8}$	BEAR 8" EACH END
8" BLOCK	4'-4"	STEEL ANGLE	(2) $\angle\angle$ 3 $\frac{1}{2}$ x 3 $\frac{1}{2}$ x $\frac{3}{8}$	BEAR 8" EACH END
8" BLOCK	4'-0"	STEEL ANGLE	(2) $\angle\angle$ 3 $\frac{1}{2}$ x 3 $\frac{1}{2}$ x $\frac{3}{8}$	BEAR 8" EACH END

PENNSYLVANIA DEPARTMENT OF MILITARY AND VETERANS AFFAIRS
BUREAU OF DESIGN AND PROJECT MANAGEMENT
DIV. OF ENGINEERING & ARCHITECTURE
BUILDING C-10, FORT INDIANTOWN GAP
ANNVILLE, PENNSYLVANIA 17003

LOCATION:
AREA 10
FORT INDIANTOWN GAP
ANNVILLE, PA 17003

PROJECT:
NEW CSMS - EAST
CALIBRATION LAB

DESIGNED BY	DATE	NO.	DESCRIPTION
J. NYE <td>6 APR. 2020 <td>1 <td>5/27/20 DETAILS & LINTEL SCHEDULE</td> </td></td>	6 APR. 2020 <td>1 <td>5/27/20 DETAILS & LINTEL SCHEDULE</td> </td>	1 <td>5/27/20 DETAILS & LINTEL SCHEDULE</td>	5/27/20 DETAILS & LINTEL SCHEDULE

REVISIONS	DATE	NO.	DESCRIPTION
	5/27/20	1	DETAILS & LINTEL SCHEDULE

DESIGNED BY	DATE	PROJECT NO.	SCALE	AS NOTED
J. NYE <td>6 APR. 2020 <td>42080032 <td></td> <td>AS NOTED</td> </td></td>	6 APR. 2020 <td>42080032 <td></td> <td>AS NOTED</td> </td>	42080032 <td></td> <td>AS NOTED</td>		AS NOTED

REVIEWED BY	SCALE	AS NOTED
R. FISHER		AS NOTED

ALL DIMENSIONS AND EXISTING CONDITIONS SHALL BE CHECKED AND VERIFIED BY THE CLIENT. ALL DIMENSIONS AND DISTANCES SHALL BE TO CENTER UNLESS OTHERWISE NOTED.

DRAWING:
STRUCTURAL DETAILS

DRAWING NO.
S.4.1