

Mauldin High School Stadium Expansion & Carolina High School Restroom Building

Greenville County School District

CMAR Information Packet

09.23.2024



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Introduction.....

Project Summary

The stadium expansions and renovations at Mauldin and Carolina High Schools represent upgrades to provide students, staff, and community with an enhanced overall user experience.

At Mauldin High School, the project includes expanded stadium seating on both the home and away sides of the bleachers to address both present and future needs comprehensively. The existing building that houses concessions, toilet rooms, and the press box will undergo renovations to expand the concessions area into an adjacent storage area. It will also feature an additional serving window for improved efficiency in operations. The project will also include a new building to accommodate the increased stadium capacity, designed around minimum State standards supporting the home and visitor's side toilet requirements. Also included in the new building are custodial and stadium storage spaces.

Similarly, Carolina High School's initiative involves the construction of a new convenience restroom building near the practice facility and the addition of an accessible ramp to the stadium from the parking lot, ensuring enhanced accessibility and comfort for all attendees.

These enhancements at both schools aim to meet operational requirements and elevate the spaces to foster inclusivity and support for teams and spectators. They are designed to enhance the experience of gathering, cheering, and connecting in these vital community spaces.

Project Team

Greenville County School District

Jaime Benton, Director of Construction Services

DLR Group & GMC

Mike Lukus, Civil

Jason Lembke, Architectural

Julie McLaurin, Architectural

Blair Steinmetz, Architectural

Gokhan Inan, Structural

Shawn Cochran, Mechanical & Plumbing

Elijah Ventura, Mechanical & Plumbing

Ben Bush, Electrical

Overall Project Schedule

Design

- August – October

Approvals

- November

Procurement of Stadium Bleachers

- Ordered Mid-November

Stadium Construction Activities

- Summer 2025

Other Construction Activities

- To Be Coordinated

*Refer to attached project schedule

Process.....

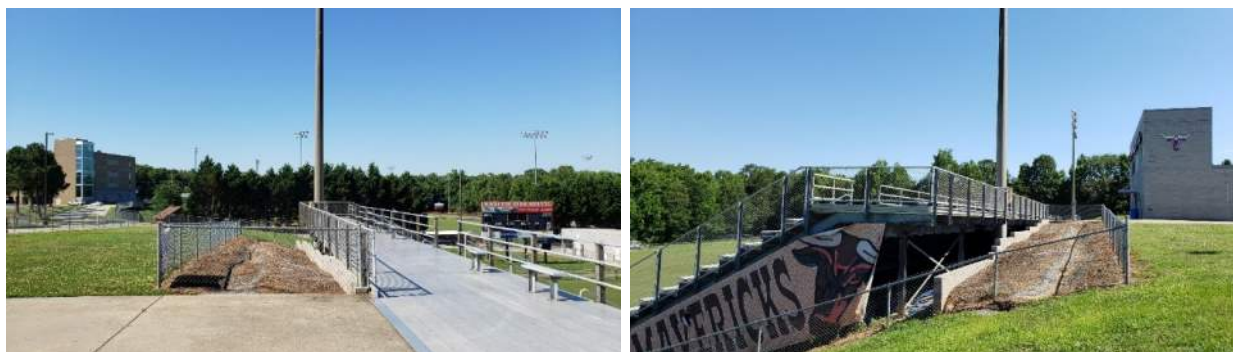
The initial site visit and meeting with the principal and members of the Mauldin High School Athletic Department on July 26, 2023, provided a comprehensive understanding of the project's scope and needs. During this meeting, we reviewed the requirements for expanding stadium seating, adding new toilet facilities, and renovating the concessions building. Subsequent site visits and assessments of existing conditions were conducted to gather detailed information on the current infrastructure and layout.

Mauldin High School:

Images Below | Shown is the site of the future toilet building.



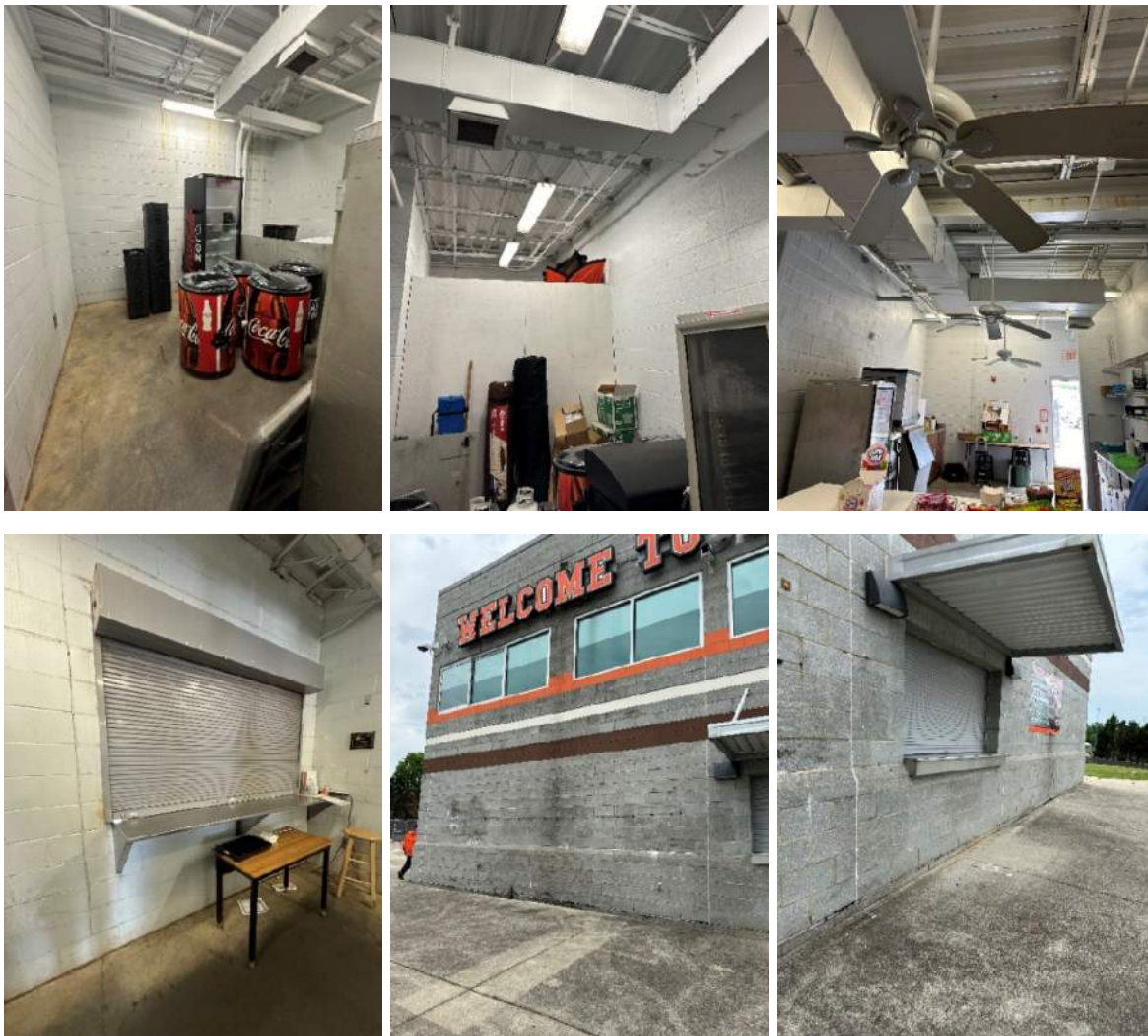
Images Below | Shown are the current bleachers on both the home and away sides. Both sides will be expanded to accommodate more spectators. The home side bleachers will require retaining wall expansions and enhancements to support the additional seating on either side. Additionally, improvements will be made to address erosion issues under the existing stadium seating, ensuring long-term stability and safety. These upgrades will significantly increase capacity and improve the overall spectator experience.



Mauldin High School (Cont.):



Images Below | Shown is the current concession building, where the serving area will be expanded into an adjacent room featuring an additional concessions window, roll-up coiling shutter, countertop, and awning to match the existing.

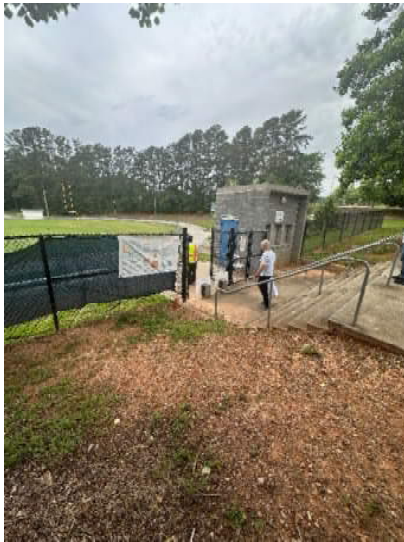


Carolina High School:

Image Below | Shown is the site of the future toilet building.



Image Below | Shown is the stadium entrance, where a new accessible ramp will be added to provide access from the parking lot to the athletic stadium.



Narratives.....

Civil

MHS BLEACHER EXPANSION & BATHROOM ADDITION

ESTIMATED SITEWORK

The following outlines the estimated sitework to be completed for the bleacher and building addition and associated infrastructure improvements at the Mauldin High School sports facility. Based on the information provided, we believe the sitework scope will include the following:

Erosion Control / Demolition:

- 380 LF of silt fence
- Inlet protection (1)
- Concrete pavement demo at bathroom (240 SF)

Site Related Items:

- Bleacher Addition:

- 150 LF of concrete sidewalk and ramp
- 6990 SF of bleacher and associated ramp area
- 180 LF of retaining walls
- 100 LF of fence relocation

- Bathroom:

- 1140 SF of concrete building pad

Stormdrain and Earthwork:

- Minimal on-site earthwork for retaining walls

Utilities:

- Bathroom:

- Electric service to building
- +/- 25 LF of water line to building
- Sanitary sewer service to building
- Relocation of existing sanitary sewer (90 LF)
- Sanitary sewer cleanouts (4)

Please note that this scope is limited to all sitework up to the proposed addition. All building and structure related items (including foundation, etc) are not included. Please let us know if you have any questions or need additional information.

CHS RAMP & BATHROOM ADDITION

ESTIMATED SITEWORK

The following outlines the estimated sitework to be completed for the ramp and building addition and associated infrastructure improvements at the Carolina High School sports facility. Based on the information provided, we believe the sitework scope will include the following:

Erosion Control / Demolition:

- 200 LF of silt fence

Site Related Items:

- ADA Ramp:
 - 160 LF of concrete ramp
 - 320 LF of handrail (including landings)
 - 80 LF of retaining wall
- Bathroom:
 - 1200 SF of concrete building pad
 - 135 LF of sidewalk around building

Stormdrain and Earthwork:

- ADA Ramp:
 - Minimal on-site earthwork for retaining wall
 - Relocation of existing stormdrain
 - Addition of stormdrain structure

Utilities:

- ADA Ramp:
- Relocation of existing underground electric
- Bathroom:
- Electric service to building
- +/- 36 LF of water line to building
- +/- 230 LF of sanitary sewer line to building
- Associated cleanouts

Please note that this scope is limited to all sitework up to the proposed addition. All building and structure related items (including foundation, etc) are not included. Please let us know if you have any questions or need additional information.

Architectural

The stadium expansions and renovations at Mauldin and Carolina High Schools will represent significant upgrades designed to provide students, staff, and the community with an enhanced overall user experience.

At Mauldin High School, the project includes expanding stadium bleachers, adding new toilet facilities, and renovating the concessions building. The scope of this part of the project consists of:

Bleacher Expansion:

The bleacher expansion project at Mauldin High School's stadium will significantly increase seating capacity. Visitor seating will expand by approximately 736 seats, with 368 seats added on each side, resulting in 1,746 total seats. Home seating will similarly increase by approximately 736 seats, with 368 seats added on each side, bringing the total to about 3,870 seats. These enhancements will accommodate larger crowds and improve spectator comfort during events. Additionally, the company will handle the design of accessible ramps, the relocation of the student section and cheer platform, and the installation of new skirting along the field. The bleachers have a long lead time for fabrication, making them a critical path item; therefore, the architect retained Southern Bleacher Company to develop the bleacher design and provide shop drawings for competitive bidding as soon as the CMAR is on board.

New Toilet Building:

The new toilet building at Mauldin High School will comply with current codes and standards, including OSF 404.3.6.3 and SC statute 59-23-245, allowing for a reduced number of fixtures in high school stadiums. To accommodate increased capacity, the facility will include approximately 11 new water closets and 5 lavatories for the stadium's home and visitor sides. Constructed with CMU (Concrete Masonry Unit) walls both inside and outside, the building will offer durability and aesthetic appeal. The roof will feature a single slope design with a steel structure, finished with a standing seam metal roof, and equipped with downspouts and gutters for effective water management, ensuring longevity and weather resistance. All toilet partitions and accessories will match the requirements set by Greenville County Schools.

Renovations to the Existing Concessions/Toilet and Press Box Building:

Renovating the existing concessions building at Mauldin High School will enhance operational efficiency and visitor experience. The serving area will be expanded into an adjacent room featuring an additional serving window to expedite service. The space will be reconfigured with a new CMU wall to create separate areas for concessions and remaining storage. Furthermore, the concessions area will be equipped with perimeter convenience outlets, ensuring convenient access to electrical power for appliances and equipment, thereby optimizing the functionality and service capabilities of the facility.

Carolina High School's initiative involves the construction of a new convenience toilet building near the practice fields and the addition of an accessible ramp from the parking lot, ensuring enhanced accessibility and comfort for all attendees. The scope of this part of the project consists of:

New Toilet Building:

The new toilet building at Carolina High School will adhere to current codes and standards. To accommodate the practice fields directly, the facility will feature approximately 6 new water closets and 4 lavatories. It will be Constructed with CMU (Concrete Masonry Unit) walls inside and outside the building, offering durability and aesthetic appeal. The roof will feature a single slope design with a steel structure, finished with a standing seam metal roof, and equipped with downspouts and gutters for effective water management, ensuring longevity and weather resistance. All toilet partitions and accessories will match the requirements set by Greenville County Schools.

New Accessible Ramp:

The addition of an accessible ramp at Carolina High School connects the parking lot with the lower level of the athletic stadium to provide a convenient and accessible path for all attendees. These ramps will be strategically placed around the existing ticket booth, facilitating easy access and inclusivity for individuals with mobility challenges. Designed to meet accessibility standards, the ramps provide a seamless and welcoming experience for spectators of varying abilities.

Structural

PROJECT OVERVIEW:

The Mauldin HS & Carolina HS projects each consist of a new restroom building near the school stadium sites located in Mauldin, South Carolina and Greenville, South Carolina respectively. Both new constructions are proposed as a single-story structure with masonry load bearing walls, and steel bar joists and metal deck at the roof.

DESIGN CRITERIA:

Codes & Standards:

The Structural design of the project shall be based on the following codes and standards:

- 2021 South Carolina Building Code
- 2021 International Building Code
- American Society of Civil Engineers – Minimum Design Loads for Buildings and Other Structures (ASCE 7-16)
- American Concrete Institute - Building Code Requirements for Structural Concrete (ACI 318-19)
- The Masonry Society - Building Code Requirements and Specification for Masonry Structures (TMS 402-16/TMS 602-16)
- American Institute of Steel Construction – Steel Construction Manual (AISC 360-16)
- American Welding Society AWS D1.4 - Structural Welding Code – Steel Reinforcing Bars

General Design Criteria:

The structural design of the project shall be based on the following design criteria:

- Roof Dead Loads: Dead loads for design shall be the actual weights of materials of construction.
- Roof Live Loads
 - o ASCE 7-16, Chapter 4
 - o 20 psf minimum
 - o Roof top unit weights
 - o No live load reductions
- Snow Loads
 - o ASCE 7-16, Chapter 7
 - o Ground Snow Load, $p_g = 10$ psf
 - o Risk Category II (ASCE 7-16, Table 1.5-1)
 - o Exposure Factor, $C_e = 1.0$ Terrain Category C, Partially Exposed (ASCE 7-16, Table 7.3-1)
 - o Importance Factor: $I_s = 1.0$ (ASCE 7-16, Table 1.5-2)
 - o Thermal Factor, $C_t = 1.0$ (ASCE 7-16, Table 7.3-2)
 - o Minimum Uniform Roof Snow Load: $p_m = 15$ psf including rain-on-snow surcharge

- Wind Loads
 - o ASCE 7-16, Chapters 26 – 30
 - o Directional Procedure (ASCE 7-16, Chapter 27)
 - o Risk Category II (ASCE 7-16, Table 1.5-1)
 - o 108 mph Basic Wind Speed (3-sec gust) (ASCE 7-16, Figure 26.5-1B)
 - o Exposure Category C (ASCE 7-16, Section 26.7.3)
 - o Enclosure Classification: Enclosed

- Rain Loads
 - o 60 min: 3.48 in/h

- Seismic Loads
 - o IBC 2021, Section 1613 and ASCE 7-16, Chapters 11 and 12
 - o Site Class: D (Assumed)
 - o $S_s = 0.322$ (IBC 2018, Figure 1613.2.1(1))
 - o $S_1 = 0.097$ (IBC 2018, Figure 1613.2.1(2))
 - o $F_a = 1.56$ (IBC 2018, Table 1613.2.3(1))
 - o $F_v = 2.4$ (IBC 2018, Table 1613.2.3(2))
 - o $SMS = 0.497$ (IBC 2018, Eq. 16-36)
 - o $SM_1 = 0.233$ (IBC 2018, Eq. 16-37)
 - o $SDS = 0.331$ (IBC 2018, Eq. 16-38)
 - o $SD_1 = 0.155$ (IBC 2018, Eq. 16-39)
 - o Seismic Design Category: C
 - o $R = 2$ for ordinary reinforced masonry shear walls (ASCE 7-16, Table 12.2.1)
 - o $\Omega_g = 2\frac{1}{2}$ for ordinary reinforced masonry shear walls (ASCE 7-16, Table 12.2.1)
 - o $C_d = 1.75$ for ordinary reinforced masonry shear walls (ASCE 7-16, Table 12.2.1)
 - o Importance Factor: $I_e = 1.0$ (ASCE 7-16, Table 1.5-2)

Materials:

- o Structural Steel:
 - Channels and angles shall conform to ASTM A36
 - Angles and structural plates shall conform to ASTM A36
 - High strength bolts shall conform to ASTM A325, Type 1
 - Threaded rods shall conform to ASTM A36

- o Cast-In-Place Concrete:
 - Reinforcing Steel: All reinforcing steel shall conform to ASTM A615, Grade 60 unless noted otherwise on the drawings
 - All concrete is normal weight concrete
 - Weldable Reinforcing steel shall conform to ASTM A706
 - Shallow foundations $f'_c = 4000$ psi, exposure category F2, C1
 - Interior slab on grade $f'_c = 4000$ psi, exposure category F1, C1

- o Structural Masonry:
 - o Reinforcing Steel: All reinforcing steel shall conform to ASTM A615, Grade 60 unless noted otherwise on the drawings
 - o $F'm = 2,000$ psi minimum
 - o Masonry units shall conform to ASTM C90. Masonry units for construction below grade shall be normal weight units. Other masonry units may be normal weight or lightweight units.

Structural Systems Description:

- Roof System: The typical roof framing will be 1½" x 20 gage wide rib (Type B) painted metal roof deck supported by open-web steel joists spanning between CMU walls.
- Lateral System: Resistance to wind and seismic lateral loads will be provided by ordinary reinforced masonry shear walls, based upon assumed site class "D" and seismic category C.
- Foundation System: Foundations will consist of continuous shallow footings along the perimeter to bear on suitable soil materials prepared as recommended by the project geotechnical engineer. All footings and foundations will be cast-in-place concrete and reinforced with ASTM A615 Grade 60 reinforcing steel. Slabs-on-grade will be minimum 4 inches thick and will be reinforced with welded wire reinforcement.
- Slabs on grade will be placed over a 15-mil vapor retarder placed on a subgrade prepared as recommended by the project geotechnical engineer's report. Excavation and re-compaction of the subgrade soils, and placement of surface moisture barrier, will be performed as recommended by the project geotechnical engineer's report.

Structural Specifications:

- 033000 Cast-In-Place Concrete
- 042000 Unit Masonry
- 051200 Structural Steel Framing
- 052100 Steel Joist Framing
- 053100 Steel Decking

Mechanical & Plumbing

Codes and Standards

All work, materials, and installations shall conform to appropriate codes, regulations, and enforcing agencies as listed below:

- Americans with Disabilities Act, Accessibility Guidelines (ADAAG)
- American Refrigeration Institute (ARI)
- American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE)
- American Society of Mechanical Engineers (ASME)
- Local and State Mechanical Code
- National Fire Protection Association (NFPA)
- Occupational Safety and Health Act (OSHA)
- Regulations of Local Utility Companies
- Sheet Metal and Air Conditioning Contractors National Association (SMACNA)

Design will conform to the following building codes:

- 2021 South Carolina Building Code (2021 IBC amended)
- 2021 South Carolina Mechanical Code (2021 IMC amended)
- 2021 South Carolina Plumbing Code (2021 IPC amended)
- 2021 South Carolina Fuel Gas Code (2021 IFGC amended)
- 2009 International Energy Conservation Code

Plumbing Systems

(All plumbing systems, fixtures and equipment shall comply with the requirements set by Greenville County Schools)

- Domestic Water System
 - o A new domestic water service will be brought to the building and will be sized based on the available water pressure at the site, the total required flow required by the fixtures shown on the architectural plans, and to deliver a minimum pressure of 30 psi to the most remote water closet.
 - o The main water service is estimated to be 3".
 - o The domestic water service to the building will be protected by a reduced pressure backflow preventer located inside the building at the service entrance.
 - o Hot and cold water will be extended to all fixtures shown on the architectural plans.
 - o Domestic water piping will be Type L copper piping with lead-free solder joints or mechanical joints similar to Viega pro-press.
 - o The domestic water systems valves shall be bronze construction gate or ball valves. Valves will be installed to isolate individual fixtures and groups of plumbing fixtures.
 - o Insulation: Cold and hot water will be insulated. The insulation thickness will be specified to be consistent with the energy code requirements.
 - o Pipeline Supports: Domestic water pipeline supports will be specified to be consistent with the requirements of the applicable plumbing code.

- Identification: Pipelines will have identification tags and flow arrows. Pipeline identification tags will be adhesive markers that are commercially available.
- Water supplies to lavatories, sinks, and drinking fountains will have angle stops with loose key handles.
- Provisions for draining the building's water system will be provided.
- Domestic Hot Water
 - Domestic hot water will be centrally generated by a tank type water heater located in the custodial closet and distributed to the fixtures shown on the architectural plans.
 - A hot water recirculation pump and piping will be provided to ensure timely delivery of hot water to all fixtures.
 - Point of use mixing valves complying with ASSE 1070 will be provided to temper the water at each lavatory.
- Plumbing Fixtures
 - All plumbing fixtures will be selected in accordance with the use of the facility and will meet all ADAAG, state, and local regulations.
 - Water closets will be of the water conserving type with consumption not to exceed 1.28 gallons per flush. Water closets will be floor mounted per GCS standards, constructed from vitreous China, and have an elongated bowl, siphon jet action, and open-front seat. Flush valves will be of the manually operated type.
 - Lavatories will be wall mounted, vitreous China with center-set faucets, open drain type waste outlet, flexible supplies with angle stops, and adjustable 1¼-inch cast brass P-trap. Faucets will be of the manually operated type with ADA handles and water flows limited to 0.5 gallons per minute. Each lavatory will be provided with an ASSE 1070 tempering valve.
 - Urinals will be of the water conserving type with consumption not to exceed 0.125 gallons per flush. Urinals will be vitreous China, wall-hung blow out type with flush valve, wall hanger and backing plate. Flush valves will be of the manually operated type.
 - Drinking fountains will be dual level refrigerated, wall-mounted units with a bottle filler, constructed from stainless steel, and conform to ADAAG standards
 - Sinks will be 18-gauge, type 304 stainless steel and will be outfitted with faucet, supplies with stops, and cast brass P-trap. Faucet will be manual type with ADAAG-compliant handles. Faucets will be equipped with a 1.0 gpm flow restrictor for water conservation.
 - Service sinks will be floor mounted, pre-molded stone type with sink edge guards, wall-mounted faucet with hose end, brace, and vacuum breaker. Water flow will be limited to 2.5 gallons per minute.
- Sanitary Waste and Vent System
 - A 4" sanitary waste line will be brought to the building.
 - Sanitary waste and vent piping above and below grade will be either cast iron with mechanical couplings or PVC with solvent cemented joints.
 - Cleanouts will be installed at maximum 100-foot intervals, at changes in direction of more than 45 degrees, at the bottom of vertical risers, and where the sewer exits the building.

- Pipeline Supports: Sanitary waste and vent pipeline supports will be specified to be consistent with the requirements of the plumbing code.
- Identification: Pipelines will have identification labels and flow arrows.
- Floor drains will be installed in each restroom, mechanical rooms, and in the janitor's closets. All floor drains will have trap seal protection.
- Roof Drain/Storm Water System
 - Roof drainage will be via gutters and downspouts as detailed on the architectural plans.

Heating, Ventilating and Air Conditioning (HVAC)

(All HVAC equipment shall comply with the requirements set by Greenville County Schools)

- Design Ambient Conditions:
 - Winter - ASHRAE 99.6%: 22.9° F db
- The following summarizes the design temperature set-point conditions within this facility:

Description	Summer (° F)	Winter (° F)
Custodial (Water Service Entrance)	N/A	45
Other Spaces	N/A	N/A

- Exhaust / Make Up Air:
 - General exhaust will be provided by an inline exhaust fan and ducted to one exhaust grille in each restroom and custodial closet.
 - Make up air to the restrooms will be via louvers mounted in the doors.
- Heat:
 - Heat will be provided in the custodial closet (water service entrance) to maintain the space above freezing. The room will be insulated per the requirements of the energy code.
 - There will be no conditioning of other spaces within the building.
- Air Distribution and Ductwork:
 - Overhead air distribution will be through conventional sheet metal ductwork to ceiling diffusers. Noise level will be limited to 35 NC.
 - Exhaust ductwork will be galvanized sheet metal and will have all joints sealed with fire retardant duct sealer. Ductwork will be constructed to 2" static pressure design standard.
- HVAC Test and Balance:
 - Air Balance: Balancing will be accomplished by a firm with a minimum of three years of experience on similar projects.

Specification Sections

The following list summarizes the specification sections that are anticipated to be prepared for this project:

- SECTION 220500 COMMON WORK RESULTS FOR PLUMBING
- SECTION 220517 SLEEVES AND SLEEVE SEALS FOR PLUMBING PIPING
- SECTION 220518 ESCUTCHEONS FOR PLUMBING PIPING
- SECTION 220519 METERS AND GAGES FOR PLUMBING PIPING
- SECTION 220523 GENERAL-DUTY VALVES FOR PLUMBING PIPING
- SECTION 220529 HANGERS AND SUPPORTS FOR PLUMBING PIPING AND EQUIPMENT
- SECTION 220553 IDENTIFICATION FOR PLUMBING PIPING AND EQUIPMENT
- SECTION 220700 PLUMBING INSULATION
- SECTION 221116 DOMESTIC WATER PIPING
- SECTION 221119 DOMESTIC WATER PIPING SPECIALTIES
- SECTION 221123 DOMESTIC WATER PUMPS
- SECTION 221316 SANITARY WASTE AND VENT PIPING
- SECTION 221319 SANITARY WASTE PIPING SPECIALTIES
- SECTION 223300 ELECTRIC, DOMESTIC WATER HEATER
- SECTION 224000 PLUMBING FIXTURES
- SECTION 224700 DRINKING FOUNTAINS AND WATER COOLERS
- SECTION 230500 COMMON WORK RESULTS FOR HVAC
- SECTION 230593 TESTING, ADJUSTING, AND BALANCING FOR HVAC SYSTEMS
- SECTION 233113 METAL DUCTS
- SECTION 233300 AIR DUCT ACCESSORIES
- SECTION 233423 HVAC POWER VENTILATORS
- SECTION 233713 DIFFUSERS, REGISTERS, AND GRILLES
- SECTION 238239 UNIT HEATERS

Electrical

Codes and Standards

All work, materials, and installations shall conform to appropriate codes, regulations, and enforcing agencies as listed below:

- Americans with Disabilities Act, Accessibility Guidelines (ADAAG)
- American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE)
- National Fire Protection Association (NFPA)
- Occupational Safety and Health Act (OSHA)
- Regulations of Local Utility Companies

Design will conform to the following building codes:

- 2021 South Carolina Building Code (2021 IBC amended)
- 2020 South Carolina Electrical Code (2020 NEC amended)
- 2009 International Energy Conservation Code

Power Systems

(All power equipment shall comply with the requirements set by Greenville County Schools)

- A new 208Y/120V, 100A bus panelboard will be provided for each of the new restrooms. Panels shall be NEMA 1 and located within storage or janitor's closets. Panels will be tied into the existing power infrastructure.
- Additional power distribution is currently not anticipated for the concessions building.
- GFCI receptacles will be provided within restrooms, janitor's closets, food service areas, and other areas required per NEC.
- Emergency power for egress lighting will be by battery backed emergency fixtures.
- GFCI receptacles with in-use, weatherproof covers shall be provided on the exterior of the rest room buildings.
- Space heaters will be 208V or 120V power where provided.
- Lighting will be 120V.

Lighting Systems

(All lighting equipment and fixtures shall comply with the requirements set by Greenville County Schools)

- All lighting fixtures shall be LED type. Basis of design will be Lithonia.
- Existing fixtures within the concessions building will be replaced with LED fixtures. Removed fixtures and lamps will be turned over to the owner.

- Light fixtures in wet areas shall be vapor resistant and have cleanable, shatter-resistant lenses.
- Exterior lighting will be provided to meet all zoning, local, and state codes. Photometrics will be run to check lighting levels with the new fixtures.
- Lighting fixtures will be installed at all exterior doors on the outside of the building.
- Lighting will be designed around recommending levels per IESNA 10th Edition Handbook.
 - o Public Restrooms: 20 FC average.
 - o Mechanical/Electrical Rooms: 25 FC average.
 - o Storage: 20 FC average.
 - o Stair: 15 FC average.
 - o Building Entrance/Exit: 5 FC average.
- Lighting controls will meet local and state energy codes.
- Basis of design for lighting controls will be Acuity nLight.
- Devices:
 - o Occupancy Sensors: Dual technology (passive infrared and microphonix); settings for occupancy (automatic on) or vacancy (manual on) mode. Located in:
 - Public restrooms.
 - Back of house spaces (janitor's closets, storage rooms, MEP spaces).
 - Concessions
 - o Photocells with timeclock for exterior fixtures.

MAULDIN HS STADIUM EXPANSION & CAROLINA HS RESTROOM BUILDING

MAULDIN HIGH SCHOOL - 701 E BUTLER RD, MAULDIN, SC 29662
CAROLINA HIGH SCHOOL - 2725 ANDERSON RD, GREENVILLE, SC 29611

DESIGN DEVELOPMENT DOCUMENTS 08.30.2024

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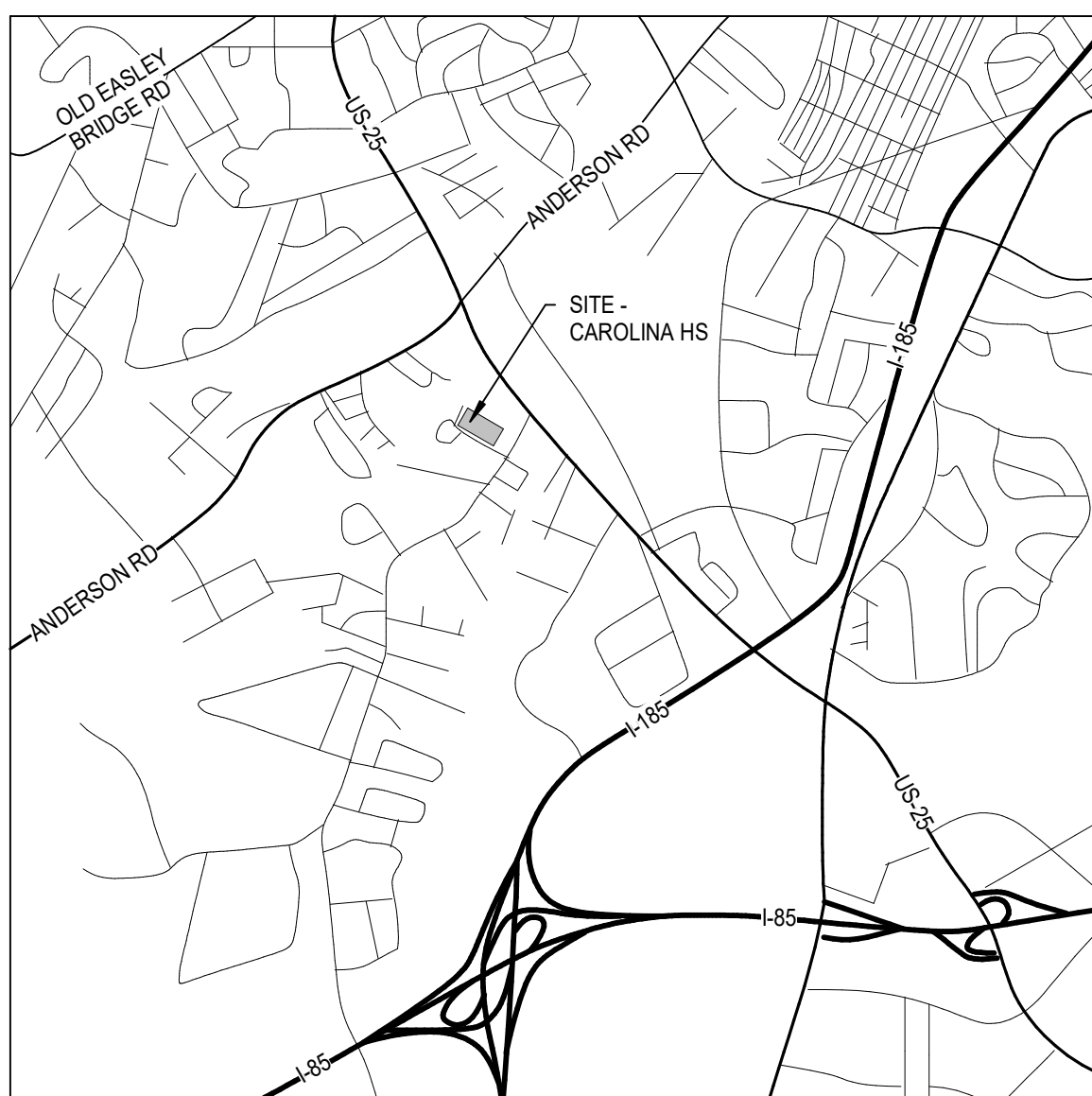
Map - Mauldin Location Map
SCALE: 1/2" = 1'-0"



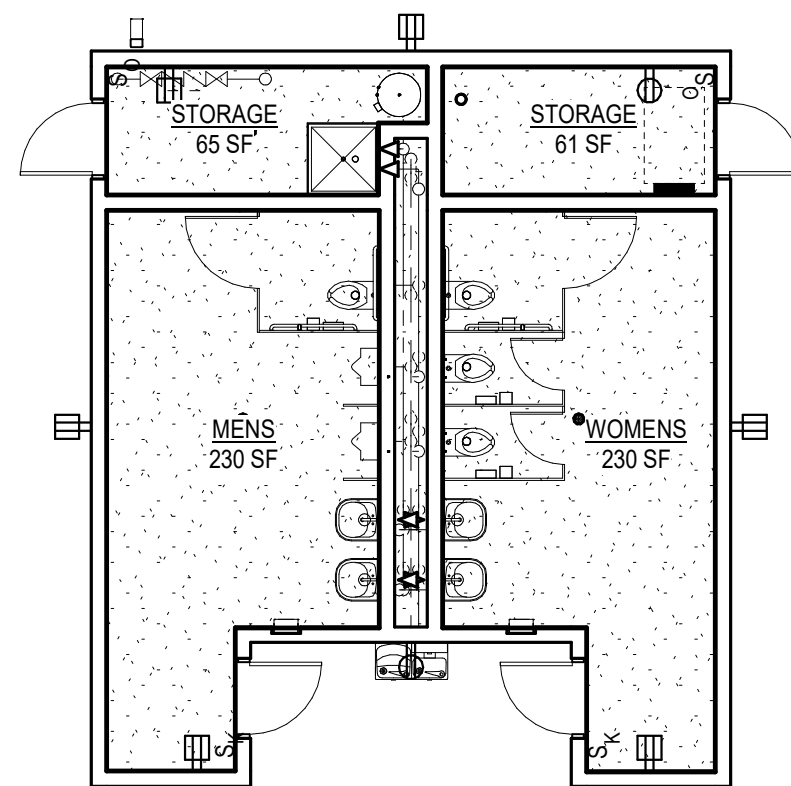
Map - Mauldin Vicinity Map
SCALE: 1/2" = 1'-0"



Map - Carolina Location Map
SCALE: 1/2" = 1'-0"



Map - Carolina Vicinity Map
SCALE: 1/2" = 1'-0"



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

Form F3 –Building Code Analysis				
Date: 08/30/2024				
SUBMITTAL: ☐ Schematic		☒ Design Development		☐ Construction Document
SC CODE EDITION: 2021	ICC CODE EDITION: 2021	ICC A117.1 EDITION: 2017	OSF GUIDE EDITION: 2023	
OTHER CODES/STANDARDS & EDITIONS:				

PROJECT DESCRIPTION:
Carolina High School's project involves the construction of a new convenience restroom building near the practice facility and the addition of an accessible ramp to the stadium from the parking lot, ensuring enhanced accessibility and comfort for all attendees.

BASIC BUILDING CODE INFORMATION						
Dedicated Areas of Building	Building Code	Area 1	Area 2	Area 3	Area 4	Area 5
		☒ SCBC ☐ SCBC	☐ SBC ☐ SBCB	☐ SBSC ☐ SCSB	☐ SBSC ☐ SCSB	☐ SBC ☐ SCSB
CONSTRUCTION CLASSIFICATION TYPE	Section 602	I B				
OCCUPANCY GROUP (indicate all)	Section 502	A5				
MOST RESTRICTIVE OCCUPANCY GROUP	Table 504.3, Section 508.2	A5				
Does building require Incident Use Area Separation?	Table 509	☐ YES ☒ NO	☐ YES ☐ NO	☐ YES ☐ NO	☐ YES ☐ NO	☐ YES ☐ NO
Does building have Accessory Occupancy (es)?	Section 508.2	☐ YES ☒ NO				
What is the aggregate square footage of the accessory occupancy (ies)?	Section 508.2	_ _ SF	_ _ SF	_ _ SF	_ _ SF	_ _ SF
What percent of the story's the aggregate of the accessory occupancy (ies)?	Section 508.2	_ %	%	%	%	%
Hazard Occupancy	Section 506	☐ YES ☒ NO	☐ YES ☐ NO	☐ YES ☐ NO	☐ YES ☐ NO	☐ YES ☐ NO
		☒ Nonseparated Separated	☐ Nonseparated Separated	☐ Nonseparated Separated	☐ Nonseparated Separated	☐ Nonseparated Separated

EXISTING BUILDING CODE INFORMATION [SECBIC]				
DESIGNATED AREAS OF BUILDING	Area 1	Area 2	Area 3	
Method of Compliance (Check only one Option, and all items must apply under that Option.)	☐ Option 1: Prescriptive Compliance Method (Ch. 3, 5, 5) ☐ Alternate ☐ Addition ☐ Change of Occupancy ☐ Historic Building	☐ Option 1: Prescriptive Compliance Method (Ch. 3, 5) ☐ Alteration ☐ Addition ☐ Change of Occupancy ☐ Historic Building	☐ Option 1: Prescriptive Compliance Method (Ch. 3, 5) ☐ Alteration ☐ Addition ☐ Change of Occupancy ☐ Historic Building	
NEW CONSTRUCTION	☐ Option 2: Work Area Compliance Method (Ch. 3, 8-13) ☐ Alteration Level 1 ☐ Alteration Level 2 ☐ Alteration Level 3 ☐ Change of Occupancy ☐ Addition ☐ Historic Building	☐ Option 2: Work Area Compliance Method (Ch. 3, 8-13) ☐ Alteration Level 1 ☐ Alteration Level 2 ☐ Alteration Level 3 ☐ Change of Occupancy ☐ Addition ☐ Historic Building	☐ Option 2: Work Area Compliance Method (Ch. 3, 8-13) ☐ Alteration Level 1 ☐ Alteration Level 2 ☐ Alteration Level 3 ☐ Change of Occupancy ☐ Addition ☐ Historic Building	
	Aggregate area of building: SF Work area: SF	SF	SF	Aggregate area of building: SF Work area: SF
	☐ Option 3: Performance Compliance Method (Ch. 3, 13)	☐ Option 3: Performance Compliance Method (Ch. 3, 13)	☐ Option 3: Performance Compliance Method (Ch. 3, 13)	
Original Building Code and Edition Applicable at the time of Construction				
Existing Sprinkler System?	☐ YES ☐ NO		☐ YES ☐ NO	
Existing Fire Alarm System?	☐ Manual ☐ Auto		☐ Manual ☐ Auto	
Seismic Evaluation Required?	☐ YES ☐ NO		☐ YES ☐ NO	
Change of Occupancy	NEW CONSTRUCTION	☐ YES ☐ NO (Existing Occupancy Class) / New Occupancy Classification(s)	☐ YES ☐ NO (Existing Occupancy Class) / New Occupancy Classification(s)	
	Historic Building	☐ YES ☐ NO ☐ Preservation ☐ Rehabilitation ☐ Restoration ☐ Reconstruction	☐ YES ☐ NO ☐ Preservation ☐ Rehabilitation ☐ Restoration ☐ Reconstruction	

SUMMARY - BUILDING DESIGN OCCUPANCY					
DESIGNATED AREAS OF BUILDING:	Area 1	Area 2	Area 3	Area 4	Area 5
1ST FLOOR	-	-	-	-	-
2ND FLOOR	-	-	-	-	-
3RD FLOOR	-	-	-	-	-
4TH FLOOR	-	-	-	-	-
TOTAL:	0	0	0	0	0

ALLOWABLE BUILDING AREA						
DESIGNATED AREA OF BUILDING	Area 1	Area 2	Area 3	Area 4	Area 5	
A. Tabular allowable area factor (Table S-1, Table S-2, or applicable) in accordance with IRC, Section 506.2	A = LA / SF	A = SF	A = SF	A = SF	A = SF	
Algebraic less increase (Equation S-1 through S-5, as applicable)	YES ■ NO	YES ■ NO	YES ■ NO	YES ■ NO	YES ■ NO	
IRC Section 506.2.2, Equation S-4 where: W = 1.5 ft or 1.5 ft + 1.5 ft x W, not to be W = 1/8th of public way or open space L = Length of portion of the exterior perimeter with W = W = (20 ft or 20 ft) of public way or open space associated with that portion of the exterior perimeter wall	L = L = L = L =	L = L = L = L =	L = L = L = L =	L = L = L = L =	L = L = L = L =	
F. Building perimeter that fronts on a public way or open space having a width of 20 feet or more	F = F = F = F =	F = F = F = F =	F = F = F = F =	F = F = F = F =	F = F = F = F =	
IRC Section 506.2.3, Equation S-4 where: I = (1/9) - (0.25) W/2 I = Perimeter of building F = Building perimeter that fronts on a public way or open space having a width of 20 feet or more P = Perimeter of entire building length W = Width of public way or open space in accordance with Equation S-4	I = I = I = I =	I = I = I = I =	I = I = I = I =	I = I = I = I =	I = I = I = I =	
Allowable building area per story in square feet as calculated by Equation S-1 through S-5 (Indicate equation used)	N = N = N = N =	N = N = N = N =	N = N = N = N =	N = N = N = N =	N = N = N = N =	
(1) IRC Section 506.2.1, Equation S-1 A = A x (N + 1)	A = A = A = A =	A = A = A = A =	A = A = A = A =	A = A = A = A =	A = A = A = A =	
(2) IRC Section 506.2.2, Equation S-2 A = A x (N + 1) x 1.5	A = A = A = A =	A = A = A = A =	A = A = A = A =	A = A = A = A =	A = A = A = A =	
(3) IRC Section 506.2.4, Equation S-3 A = A x (N + 1) x 1.5	A = A = A = A =	A = A = A = A =	A = A = A = A =	A = A = A = A =	A = A = A = A =	
N. Tabular allowable area factor in accordance with Table 506.2 for a non-symmetrical building (regardless of whether the building is partitioned)	A = SF	A = SF	A = SF	A = SF	A = SF	
S. Actual number of building stories above-grade area, not to exceed 10 (11 for buildings equipped throughout with automatic sprinkler system installed in accordance with Section 903.3.1.2, use the actual number of building stories above-grade, not to exceed 10 (4))	A = SF	A = SF	A = SF	A = SF	A = SF	
MAXIMUM AREA PER STORY	LA / SF	SF	SF	SF	SF	
AREA AG DESIGNED PER STORY (Repeat for each story)	AG / SF	SF	SF	SF	SF	

BUILDING HEIGHT							
DESIGNATED AREAS OF BUILDING	Building Code	Area 1		Area 2		Area 3	
HEIGHT	-	DESIGNED	ALLOWED	DESIGNED	ALLOWED	DESIGNED	ALLOWED
In Feet	Table D04.3	11'-0"	10'-0"				
In Stories	Table D04.4	UL	UL				

GENERAL FIRE PROTECTION REQUIREMENTS						
Designated Areas of Building	Building Code	Area 1	Area 2	Area 3	Area 4	Area 5
SEPARATIONS						
Fire Wall Required	Section 706	DYES ■ NO	DYES CNO	DYES CNO	DYES CNO	DYES CNO
Fire Barrier Required	Section 707	DYES ■ NO	DYES CNO	DYES CNO	DYES CNO	DYES CNO
Fire Partition Required	Section 708	DYES ■ NO	DYES CNO	DYES CNO	DYES CNO	DYES CNO
Smoke Barriers Required	Section 709	DYES ■ NO	DYES CNO	DYES CNO	DYES CNO	DYES CNO
Smoke Partitions Required	Section 710	DYES ■ NO	DYES CNO	DYES CNO	DYES CNO	DYES CNO
Firestopping	Section 713.2	DYES ■ NO	DYES CNO	DYES CNO	DYES CNO	DYES CNO
Chimney	Section 713.3 & 713.4	DYES ■ NO	DYES CNO	DYES CNO	DYES CNO	DYES CNO
Unlisted Use Area One-hour fire barrier Smoke system plus smoke resistance	Section 903.4	DYES ■ NO DYES ■ NO	DYES CNO DYES CNO	DYES CNO DYES CNO	DYES CNO DYES CNO	DYES CNO DYES CNO
ALARM & DETECTION						
Fire Alarm and Notification System: Fire Alarm Manual Notification Emergency voice/alarm comm.	SCFC Section 907	DYES ■ NO DYES ■ NO DYES ■ NO	DYES CNO DYES CNO DYES CNO	DYES CNO DYES CNO DYES CNO	DYES CNO DYES CNO DYES CNO	DYES CNO DYES CNO DYES CNO
Emergency Alarm System Required	SCFC Section 908	DYES ■ NO	DYES CNO	DYES CNO	DYES CNO	DYES CNO
ALARM & DETECTION						
Automatic Smoke Detector Power Source Required	SCFC Section 903	DYES ■ NO DYES ■ NO	DYES CNO DYES CNO	DYES CNO DYES CNO	DYES CNO DYES CNO	DYES CNO DYES CNO
Automatic Automatic Fire Extinguisher: Kitchen Hoods Other	SCFC Section 904	DYES ■ NO DYES ■ NO	DYES CNO DYES CNO	DYES CNO DYES CNO	DYES CNO DYES CNO	DYES CNO DYES CNO
Standpipes Required	SCFC Section 905	DYES ■ NO	DYES CNO	DYES CNO	DYES CNO	DYES CNO
Portable extinguisher required: General Building Kitchen Other	SCFC Section 906	DYES ■ NO DYES ■ NO DYES ■ NO	DYES CNO DYES CNO DYES CNO	DYES CNO DYES CNO DYES CNO	DYES CNO DYES CNO DYES CNO	DYES CNO DYES CNO DYES CNO

OTHER FIRE AND LIFE SAFETY FEATURES						
DESIGNATED AREAS OF BUILDING	Building Code	Area 1	Area 2	Area 3	Area 4	Area 5
Smoke Control System	Section 909	Q1 YES ■	Q1 YES □ NO	Q1 YES □ NO	Q1 YES □ NO	Q1 YES □ NO
Smoke & Heat Horizontal Release	SCFC 913	Q1 YES ■ NO	Q1 YES □ NO	Q1 YES □ NO	Q1 YES □ NO	Q1 YES □ NO
Fire Department Connections	Section 912	Q1 YES ■ NO	Q1 YES □ NO	Q1 YES □ NO	Q1 YES □ NO	Q1 YES □ NO
Carbon Monoxide Detection	Section 915	Q1 YES ■ NO	Q1 YES □ NO	Q1 YES □ NO	Q1 YES □ NO	Q1 YES □ NO
Gas Detection Systems	Section 916	Q1 YES ■ NO	Q1 YES □ NO	Q1 YES □ NO	Q1 YES □ NO	Q1 YES □ NO
Emergency Response Radio Coverage	Section 918	Q1 YES ■ NO	Q1 YES □ NO	Q1 YES □ NO	Q1 YES □ NO	Q1 YES □ NO
Fire Apparatus Access and Water Line	SCFC 903 & 907	Q1 YES ■ NO	Q1 YES □ NO	Q1 YES □ NO	Q1 YES □ NO	Q1 YES □ NO
Emergency Communication Required	Section 1065.6	Q1 YES ■ NO	Q1 YES □ NO	Q1 YES □ NO	Q1 YES □ NO	Q1 YES □ NO
Area of Refuge (e.g. Separation, Two-Way Communication, and Instruction)	Sections 1008.6, 1009.0, 1009.10 & 1009.11	Q1 YES ■ NO	Q1 YES □ NO	Q1 YES □ NO	Q1 YES □ NO	Q1 YES □ NO
Entire Area for Assisted Rescue (e.g. Separation, Openness, and Instruction)	Sections 1009.7, 1009.0, 1009.10 & 1009.11	Q1 YES ■ NO	Q1 YES □ NO	Q1 YES □ NO	Q1 YES □ NO	Q1 YES □ NO
Self Dispersal Area	Section 1028.5	Q1 YES ■ NO	Q1 YES □ NO	Q1 YES □ NO	Q1 YES □ NO	Q1 YES □ NO

DESIGNATED AREAS OF BUILDING		Building Code	Area 1	Area 2	Area 3	Area 4	Area 5
Primary Structural Frame	As Required, Hqs	Table 601	NA	-	-	-	-
	As Designed, Hqs		NA	-	-	-	-
	Testing Agency & Design No.(J.L., FM, etc.)		NA	-	-	-	-
	Wall/Partition Key Code		NA	-	-	-	-
Bearing Walls, Exterior	As Required, Hqs	Table 601	NA	-	-	-	-
	As Designed, Hqs		NA	-	-	-	-
	Testing Agency & Design No.(J.L., FM, etc.)		NA	-	-	-	-
	Wall/Partition Key Code		NA	-	-	-	-
Bearing Walls, Interior	As Required, Hqs	Table 601	NA	-	-	-	-
	As Designed, Hqs		NA	-	-	-	-
	Testing Agency & Design No.(J.L., FM, etc.)		NA	-	-	-	-
	Wall/Partition Key Code		NA	-	-	-	-
Nonbearing Walls and Partitions, Interior	As Required, Hqs	Table 601	NA	-	-	-	-
	As Designed, Hqs		NA	-	-	-	-
	Testing Agency & Design No.(J.L., FM, etc.)		NA	-	-	-	-
	Wall/Partition Key Code		NA	-	-	-	-
Nonbearing Walls and Partitions, Exterior	As Required, Hqs	Table 602	NA	-	-	-	-
	As Designed, Hqs		NA	-	-	-	-
	Testing Agency & Design No.(J.L., FM, etc.)		NA	-	-	-	-
	Wall/Partition Key Code		NA	-	-	-	-
Floor Construction and associated secondary members	As Required, Hqs	Table 601	NA	-	-	-	-
	As Designed, Hqs		NA	-	-	-	-
	Testing Agency & Design No.(J.L., FM, etc.)		NA	-	-	-	-
	Wall/Partition Key Code		NA	-	-	-	-
Roof Construction and associated secondary members	As Required, Hqs	Table 601	NA	-	-	-	-
	As Designed, Hqs		NA	-	-	-	-
	Testing Agency & Design No.(J.L., FM, etc.)		NA	-	-	-	-
	Wall/Partition Key Code		NA	-	-	-	-
Fire Walls	As Required, Hqs	Section 706	NA	-	-	-	-
	As Designed, Hqs		NA	-	-	-	-
	Testing Agency & Design No.(J.L., FM, etc.)		NA	-	-	-	-
	Wall/Partition Key Code		NA	-	-	-	-
Fire Barriers	As Required, Hqs	Section 707	NA	-	-	-	-
	As Designed, Hqs		NA	-	-	-	-
	Testing Agency & Design No.(J.L., FM, etc.)		NA	-	-	-	-
	Wall/Partition Key Code		NA	-	-	-	-
Fire Partitions	As Required, Hqs	Section 708	NA	-	-	-	-
	As Designed, Hqs		NA	-	-	-	-
	Testing Agency & Design No.(J.L., FM, etc.)		NA	-	-	-	-
	Wall/Partition Key Code		NA	-	-	-	-
Smoke Barriers	As Required, Hqs	Section 709	NA	-	-	-	-
	As Designed, Hqs		NA	-	-	-	-
	Testing Agency & Design No.(J.L., FM, etc.)		NA	-	-	-	-
	Wall/Partition Key Code		NA	-	-	-	-
Smoke Partitions	As Required, Hqs	Section 710	NA	-	-	-	-
	As Designed, Hqs		NA	-	-	-	-
	Testing Agency & Design No.(J.L., FM, etc.)		NA	-	-	-	-
	Wall/Partition Key Code		NA	-	-	-	-
Horizontal Assemblies	As Required, Hqs	Section 711	NA	-	-	-	-
	As Designed, Hqs		NA	-	-	-	-
	Testing Agency & Design No.(J.L., FM, etc.)		NA	-	-	-	-
	Wall/Partition Key Code		NA	-	-	-	-
Shaft Enclosures	As Required, Hqs	Sections 712 & 713	NA	-	-	-	-
	As Designed, Hqs		NA	-	-	-	-
	Testing Agency & Design No.(J.L., FM, etc.)		NA	-	-	-	-
	Wall/Partition Key Code		NA	-	-	-	-
Lifting & Protective Lifting by Category (the shutters, doors, etc.)	As Required, Hqs	Section 716	NA	-	-	-	-
	As Designed, Hqs		NA	-	-	-	-
	Testing Agency & Design No.(J.L., FM, etc.)		NA	-	-	-	-
	Wall/Partition Key Code		NA	-	-	-	-
	As Required, Hqs		NA	-	-	-	-
	As Designed, Hqs		NA	-	-	-	-
Testing Agency & Design No.(J.L., FM, etc.)	NA	-	-	-	-		
Wall/Partition Key Code	NA	-	-	-	-		

FLOOD HAZARD INFORMATION and FLOOD LOADS	
FLOOD HAZARD AREA	
Base Flood Elevation (NOVD or FIRM)	MSL
Design Flood Elevation: SCOB 1612.3 and ASCE 24	MSL
NON HIGH-VELOCITY WAVE ACTION	
Elevation of Lowest Proposed Floor (Must meet Section 2.4.2.11)	MSL
Dry flood proofing: ASCE 24	☐ NO ☐ YES
HIGH-VELOCITY WAVE ACTION	
Elevation of bottom of lowest structural member of lowest floor	MSL
Pressure-resistant (ASCE 24)	☐ NO ☐ YES
Breakaway wall per (ASCE 24)	☐ NO ☐ YES

FIRE SERVICE INFORMATION		
Service Line Size		Inches
Fire Department Connection	Location	-
Backflow		-
		-
		-
Fire Hydrant Flow Test	Flow	- GPM
	Residual	- PSI
	Static	- PSI

STRUCTURAL DESIGN INFORMATION, AREA							
		Stationing Code	Area 1	Area 2	Area 3	Area 4	Area 5
OCCUPANCY CATEGORY		Table 1604.5			-	-	-
LIVE LOAD FOR OCCUPANCY TYPE	Floor Live Load, F1	Figure 1603.2 Weighted Area	PSF	PSF	PSF	PSF	PSF
	Roof Live Load, R1		PSF		PSF	PSF	PSF
	Ground Snow Load, Sg		PSF		PSF	PSF	PSF
MISCELLANEOUS LOADS BY SPECIAL USE AREA (STRUCTURAL, MECHANICAL, DATA CENTER, ETC.)		ASCE 7	PSF	PSF	PSF	PSF	PSF

SOILS & SITE		STRUCTURAL DESIGN INFORMATION, BUILDING	
SOILS INVESTIGATION REQUIRED (RISC 102.2)	☐ no ☐ yes	Analytical Procedures (ASCE 7 or ASCE 1600.6) Basic design (Wind Speed, 100 MPH) Exposure Category Wind Importance Factor (ASCE 7 Table 1-5.2) Internal Pressure Coefficient (ASCE 7) External Pressure Coefficient (ASCE 7)	
SOILS CLASSIFICATION		WIND LOADS SEISMIC LOADS/COMPATIBILITY (REFER TO SOI FOR STRUCTURAL INFORMATION)	
Select the Class (RISC Section 113.1.2)			
Classes Soil of Materials (USCS Symbols (RISC 103.1.1))			
Allowable Flexible Bearing Pressure	psf		
MINIMUM DESIGN SOIL BEARING LOAD (USCS Table 1602.2)	psf		
COMPRESSION			
Suggestive (ASTM D698, ASTM D1587) or (ASD/STO only for piling & sheet piles)	%		
Base (ASTM D698, ASTM D1587) or (ASD/STO only for piling & sheet piles)	%		
Soil (ASTM D698, ASTM D1587) or (ASD/STO only for piling & sheet piles)	%		
MINIMUM DESIGN (USCS 1613.1.1)	psf		
FOOTINGS			
Undisturbed footings	☐ no ☐ yes		
Compacted Fill Material (RISC Section 1604.6)	☐ no ☐ yes		
ELEVATIONS			
Elevation of Water Table	MSL		
Elevation of lowest flood	MSL		
Elevation of lowest floor or basement	MSL		

[illegible]

PLUMBING INFORMATION		
WATER SYSTEM		
Service Line Size	3 Inches	
Distribution Design Criteria (SCPD Table 604.3)	61.25 Fixture Units	
Maximum Flow Rate (SCPD Table 604.4)	54.6 GPM	
Backflow	Location	Storage Cistern
	Type	Double Check Valve
Test Pressure	75 psi	
SANITARY SEWER SYSTEM		
Service Line Size	4 Inches	
Drainage Design Criteria (SCPD Tables 705.1 and 705.2)	38.0 Fixture Units	
Maximum Flow Rate	GPD	
Slope (SCPD Table 704.1)	1/8 Inches/Ft	

SUMMARY OF FIXTURES (SCPC Section 403 & Table 403.1)		
Water Closets	Male-Required	
	Male-Vol-Provided	
	Male-Unsat-Provided	
	Female-Required	
Lodgings	Female-Provided	
	Male-Required	
	Male-Provided	
	Female-Required	
	Female-Provided	
Showers	Male-Provided	
	Female-Provided	
Drinking Fountains	Required	
	Provided	
Family or Assisted-Use Toilet	Required	
	Provided	
Service Sink	Required	
	Provided	
Others (all)	Required	
	Provided	

MECHANICAL INFORMATION		
GENERAL INFORMATION		
Building Location	2752 Anderson Rd, Greenville, SC 29611	
Climate Zone	Zone 3	
Outdoor Design Temperature	Summer	N/A
	Winter	N/A
Indoor Design Temperature	Summer	N/A
	Winter	N/A
OUTSIDE AIR		
Occupied Minimum Outside Air	N/A	
CO2 Demand Minimum	☐ 600 ☐ 350 ppm	
Supervisory Control System	☒ 60 ☐ 35 ppm	
MECHANICAL SYSTEMS, SERVICE SYSTEMS & EQUIPMENT		
Briefly describe mechanical system: Single exhaust for serving both restaurants and cocktail lounge. No air conditioning provided in restaurants, and heater provided in cocktail lounge to keep pipes from freezing in winter.		

ELECTRICAL INFORMATION					
SERVICE TRANSFORMER	☐ By Utility				
	☐ By District	Approved _____ Responsible To (Name) _____			
ELECTRIC SERVICE INFORMATION					
Service Voltage/Phase	20kV - Medium-HV 480V - Commercial	41 Amps			
Service Entrance Conductor Size	Existing to Remain	Qty per Phase			
Total Connected Load		kVA			
Estimated Maximum Demand		kVA			
Average Full Current in Symmetrical Amperes		9K			
Interconnecting Capacity of Service Disconnect Device		2K			
Grounding electrode system components NEC-250		Existing			
EMERGENCY SERVICE INFORMATION					
Emergency Generator	☒ Yes	kVA			
	Fuel	Voltage/Phase			
Exit/Emergency Lights Backup Power	☒ Integral Battery		☐ Generator		
Fire Alarm System	☐ Manual	Addressable			
	☐ Automatic	Initiated A			
		Class B			
LIGHTING PROTECTION PROVIDED					
		☒ Yes			

LEGEND - CODE FLOOR PLANS

ROOM NUMBER

AREA (SF)

OCCUPANT LOAD

EXIT TAG

- CUMULATIVE OCCUPANT LOAD
- EGRESS CAPACITY

REQUIRED OCCUPANT LOAD

REQUIRED WIDTH FOR OCCUPANT LOAD (INCHES)

CAPACITY OF EGRESS COMPONENT (WIDTH IN INCHES)

CAPACITY OF EGRESS COMPONENT (OCCUPANTS)

LOAD FACTOR (INCHES/OCCUPANT)

- WHEN CAPACITY FACTOR TRIANGLE IS FILLED - THIS IS TOTAL OCCUPANT LOAD FROM THIS STORY

DOOR TAG

- PANIC DEVICE
- DOOR FIRE RATING

EXIT SIGN

OCCUPANT LOAD TAG (NET)

- THIS LOAD DOES NOT EXTEND BEYOND THIS SPACE
- SEE PATTERN FOR APPLIED LOAD FACTOR

MAX TRAVEL = Length

MAX CP = Length

MAX DIAG DIM = X"-X"
1/8 DIAG = X"-X"

MIN SEPARATION DISTANCE

EXIT ACCESS TRAVEL DISTANCE

COMMON PATH OF EGRESS TRAVEL DISTANCE

MAX OVERALL DIAGONAL DIM OF AREA SERVED

MIN EXIT SEPARATION

GENERAL CONSTRUCTION CONDITIONS:

1. THE TERM OF OWNER AS USED IN THESE SPECIFICATIONS AND NOTES SHALL INCLUDE THE OWNER OF THE PROPERTY, THE COMPANY OR PARTY THAT HIRED THE CONTRACTOR, THE COMPANY OR PARTY THAT SIGNED THE CONTRACT FOR THIS WORK AND THE AGENTS OF EACH. THE OWNER'S REPRESENTATIVE SHALL BE THE INDIVIDUAL OR PARTY ASSIGNED BY THE OWNER TO BE THE OWNER'S REPRESENTATIVE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY PERMITS, CONNECTION PERMITS, FEES, INSPECTIONS AND RECORD KEEPING REQUIRED BY ALL MUNICIPAL, UTILITY, HEALTH, ENVIRONMENTAL, STATE OR FEDERAL AGENCIES THAT MAY HAVE JURISDICTION. FURTHERMORE, THE CONTRACTOR SHALL BE RESPONSIBLE TO MEET OR EXCEED ALL REQUIREMENTS OF THE AGENCIES OR AGENCIES HAVING JURISDICTION OVER HIS WORK. ALL CONFLICTS IN REQUIREMENTS OF DIFFERENT AGENCIES, AUTHORITIES AND/OR THE DESIGN SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE BEFORE PROCEEDING.
3. THE CONTRACTOR SHALL BE RESPONSIBLE TO LOCATE AND MAINTAIN THE PROPERTY AND PROJECT LIMITS THROUGHOUT THE PROJECT. ALL CONFLICTS BETWEEN THE DESIGN AND THE PROJECT/PROPERTY LIMITS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE BEFORE PROCEEDING. UNLESS DESCRIBED IN THE CONTRACT DOCUMENTS OR SHOWN ON THE DRAWINGS THE OWNER HAS NOT SECURED ANY RIGHT OF WAYS, EASEMENTS OR AGREEMENTS WITH OTHER PROPERTY OWNERS OR PROPERTY USERS. THEREFORE, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SECURE AND MAINTAIN ANY TEMPORARY RIGHT OF WAYS, EASEMENTS, PERMITS OR AGREEMENTS HE MAY NEED TO PERFORM HIS WORK. ALL SUCH AGREEMENTS SHALL HOLD THE OWNER, ENGINEER AND HIS AGENTS HARMLESS AND THE RESPONSIBILITY OF THE CONTRACTOR TO BEAR ALL COSTS. THE CONTRACTOR SHALL COPY THE OWNER OR RELEASES OF ALL AGREEMENTS PRIOR TO FINAL PAYMENT BY THE OWNER TO THE CONTRACTOR.
4. UNLESS OTHERWISE NOTED ON THE DRAWINGS OR IN THE CONTRACT DOCUMENTS THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION SURVEY, LAYOUT AND RECORD DRAWINGS FOR THIS CONTRACT. ANY CONFLICTS IN SURVEY/LAYOUT AND THE DESIGN OR AGENCIES REQUIREMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE PRIOR TO PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL PROTECT AND SAFEGUARD ALL EXISTING SURVEY MONUMENTS, CONTROL AND TIE-DOWNS. THE CONTRACTOR SHALL PAY ALL COSTS TO REPAIR OR REPLACED DAMAGED SURVEY MONUMENTS, CONTROL AND TIE-DOWNS.
5. NO CHANGES TO THE DESIGN OR MATERIALS SPECIFIED MAY BE MADE WITHOUT WRITTEN AUTHORIZATION BY THE ENGINEER OR IN THE CASE OF UTILITIES OR ROAD WORK TO BE DEDICATED, THE AUTHORITY RECEIVING DEDICATION. AT THE END OF THE CONTRACT, THE CONTRACTOR SHALL PROVIDE TO THE OWNER A RECORD SET OF DRAWING REFLECTING ALL CHANGES MADE TO THE DESIGN.
6. EROSION CONTROL IS NECESSARY WHEN EVER SEDIMENT, DUST, EROSION, OR CONTAMINATED RUN-OFF MAY OCCUR. THE CONTRACTOR SHALL BE RESPONSIBLE TO PLACE AND MAINTAIN WHAT EVER EROSION CONTROL OR RUN-OFF PROTECTION IS REQUIRED TO PROTECT HIS WORK, THE WORK OF OTHERS, THE PROJECT, ADJACENT PROPERTIES AND THE HEALTH AND WELL BEING OF THE WORKING PUBLIC AND SURROUNDING NATURAL RESOURCES. THEY SHALL BE FAMILIAR WITH ALL FEDERAL, STATE AND LOCAL REQUIREMENTS REGARDING EROSION AND RUN-OFF CONTROL.
7. THE CONTRACTOR SHALL BE FAMILIAR WITH THE PROJECT SITE AND ALL ADJACENT PEDESTRIAN, TRAFFIC AND BUSINESS USES. THE CONTRACTOR SHALL TAKE WHAT EVER PRECAUTIONS AND STEPS NECESSARY TO MAINTAIN SAFETY AND OPERATION OF THEIR USES IN ACCORDANCE WITH FEDERAL, STATE, COUNTY AND LOCAL REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COSTS AND DAMAGES CAUSED FROM HIS FAILURE TO TAKE PROPER AND ADEQUATE PRECAUTIONS. THE CONTRACTOR SHALL BE FAMILIAR WITH ALL FEDERAL, STATE AND LOCAL REQUIREMENTS REGARDING THESE USES.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COSTS AND DELAYS ASSOCIATED WITH WEATHER, GROUNDWATER, AND OTHER OCCURRENCES THAT COULD BE EXPECTED OR ARE COMMON WITH THIS TYPE WORK. THE CONTRACTOR SHALL REVIEW ALL PERTINENT DOCUMENTS INCLUDING SOILS REPORTS, SOILS BORINGS AND OTHER SOIL OR SITE DATA.
9. THE CONTRACTOR SHALL BE RESPONSIBLE TO SAVE AND PROTECT HIS WORK THROUGHOUT THE CONTRACT. ANY DAMAGES REQUIRING REPAIRS OR REPLACEMENT SHALL BE CORRECTED BY THE CONTRACTOR AT HIS EXPENSE.
10. WHEN WORK IS DONE WITHIN A ROAD, UTILITY OR PRIVATE EASEMENT, RIGHT OF WAY OR OTHER PROPERTY AGREEMENT THE CONTRACTOR SHALL DO ALL WORK WITHIN THAT AREA PER THE AUTHORITY HAVING JURISDICTION.
11. ALL UTILITIES ARE SHOWN PER SURFACE SURVEYS AND/OR RECORD MAPS AND MAY VARY FROM ACTUAL IN FIELD LOCATIONS. THE CONTRACTOR IS RESPONSIBLE FOR ALL UTILITY STAKE OUTS AND LOCATING UTILITIES PRIOR TO COMMENCING WORK. ANY DAMAGE TO UTILITIES DUE TO IMPROPER STAKE OUT, LACK OF STAKE OUT OR THE FAILURE TO VERIFY DIFFERENCES BETWEEN DRAWINGS AND ACTUAL FIELD CONDITIONS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR, REPLACE OR PAY DAMAGES AT NO EXPENSE TO THE CONTRACT.

EROSION CONTROL:

1. PRIOR TO CONSTRUCTION EQUIPMENT ENTERING OR EXITING THE SITE, A CONSTRUCTION ENTRANCE SHALL BE BUILT UNLESS EXISTING CONDITIONS PREVENT ANY TRACKING OF DIRT, MUD, OR DEBRIS OFF THE SITE. THE CONTRACTOR WILL BE RESPONSIBLE TO KEEP ALL ROADS, PARKING LOTS, SIDEWALKS AND ADJACENT PROPERTIES FREE OF DIRT, MUD OR OTHER DEBRIS. THIS WILL INCLUDE BUILDING THE CONSTRUCTION ENTRANCE, SWEEPING, SCRAPING AND WASHING THE PAVEMENT SURFACES WHENEVER NEEDED. THE CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AS SHOWN ON THE PLANS. IF A DETAIL IS NOT PROVIDED, CONSTRUCT THE ENTRANCE WITH CLEAN 2 TO 3 INCH STONE, 6 INCHES THICK, OVER STABILIZING FABRIC TO THE DIMENSIONS OF 12 FEET WIDE AND 50 LONG. THE ENTRANCE SHOULD BE LOCATED SO THAT ALL VEHICLES LEAVING THE SITE WILL UTILIZE IT.
2. ALL EROSION CONTROL DEVICES SHALL BE PLACED AS SHOWN ON THE DRAWINGS AND IN ACCORDANCE WITH FEDERAL, STATE, LOCAL, AND MANUFACTURES RECOMMENDATIONS. THE CONTRACTOR SHALL PLACE AND MAINTAIN ALL EROSION CONTROL DEVICES AS NEEDED THROUGHOUT THE PROJECT.
3. SILT FENCE SHALL HAVE HARD WOOD STAKES 2X2 INCH AND 4 FEET LONG WOVEN INTO THE FABRIC. THE BASE OF THE SILT FENCE SHALL BE EXCAVATED SO AS TO PROVIDE AN AREA TO BURY THE BOTTOM OF THE FABRIC AT LEAST 6 INCHES INTO THE GROUND. THE STAKES SHALL BE DRIVEN TO A DEPTH THAT WILL PLACE THE BOTTOM FABRIC AT THE BOTTOM OF THE TRENCH. THEN BACKFILL THE BOTTOM FABRIC ON THE UPSTREAM SIDE WITH THE MATERIAL THAT WAS EXCAVATED.
4. SILT FENCE SHALL BE PLACED WHERE EVER SURFACE DRAINAGE CAN LEAVE THE SITE.
5. STONE FILTERS SHALL BE PLACED IN ALL DRAINAGE WAYS BUT NOT IN STREAMS, CREEKS OR RIVERS. STONE FILTERS SHALL CONSIST OF A UNIFORM MIX OF 1/4 TO 3/4 INCH CLEAN STONE WRAPPED IN FILTER FABRIC AND COVERED WITH 4 INCH STONE.
6. SEDIMENT BASINS AND TRAPS SHALL BE PLACED AND MAINTAINED AS NEEDED. THEY SHALL BE SIZED TO PROVIDE ADEQUATE STORAGE TO ALLOW SEDIMENT TO PRECIPITATE OUT PRIOR DISCHARGING DOWN STREAM.
7. TEMPORARY SEEDING SHALL CONSIST OF LIME @ 1/2 TON PER ACRE, FERTILIZER 5-10-10 @ 600 POUNDS PER ACRE, RYEGRASS (ANNUAL OR PERENNIAL) @ 40 POUNDS PER ACRE AND STRAW MULCH @ 2 TON PER ACRE. LIME MESH SHALL BE PLACED OVER MULCH AND STAKED WHENEVER WINDS OR SLOPE WILL CAUSE THE MULCH AND SEED TO BECOME DEPLETED OR ERODED. AREAS SHALL BE TEMPORARILY SEEDED WHEN THEY ARE SUBJECT TO EROSION AND WILL LIE DORMANT FOR A MONTH OR MORE.

CLEARING AND GRUBBING:

1. THE CONTRACTOR SHALL REVIEW PLANS AND IDENTIFY AND SAFELY MARK ALL PLANTS AND TREES TO BE SAVED. THE CONTRACTOR SHALL PROTECT ALL PLANTS AND TREES TO BE SAVED THROUGHOUT THE CONTRACT. THIS SHALL INCLUDE PROHIBITING ANY WORK WITHIN THE DRIP LINE OF THE TREE EXCEPT UNDER THE SUPERVISION OF A LICENSED LANDSCAPE ARCHITECT.
2. ALL AREAS TO BE CLEARED AND GRUBBED SHALL BE SURVEYED IN THE FIELD TO ESTABLISH THE APPROPRIATE LIMITS OF WORK.
3. THE CONTRACTOR SHALL TAKE WHAT EVER MEASURES NECESSARY TO LOCATE AND PROTECT EXISTING UTILITIES, STRUCTURES, AND OTHER FACILITIES TO REMAIN.
4. ALL TREES, SHRUBS, STUMPS, ROOTS AND OTHER DEBRIS SHALL BE REMOVED FROM SITE AND DISPOSED OF IN A LEGAL MANNER.
5. NO BURNING WILL BE ALLOWED ON SITE.

DEMOLITION:

1. THE CONTRACTOR SHALL INSPECT ALL STRUCTURES, FACILITIES AND AREAS SLATED FOR DEMOLITION TO GAIN A FULL UNDERSTANDING OF THE WORK REQUIRED. THE CONTRACTOR SHALL TAKE WHAT EVER MEASURES NECESSARY TO PROTECT THE SAFETY OF THE PUBLIC, HIS EMPLOYEES AND AGENTS DURING THE INSPECTIONS AND SUBSEQUENT WORK. THE OWNER, CLIENT AND ENGINEER ARE NOT RESPONSIBLE FOR THE CONDITION OF THE BUILDINGS, FACILITIES OR OTHER AREAS SLATED FOR DEMOLITION.
2. ALL MATERIALS NOT SLATED FOR REUSE MUST BE DISPOSED OF OFF SITE IN A LEGAL MANNER. THE CONTRACTOR MAY SALVAGE ALL MATERIALS NOT DESIGNATED BY THE OWNER TO BE SAVED. THE CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE AND STORE SAFELY ALL MATERIALS SLATED TO BE SAVED OR REUSED. THE CONTRACTOR SHALL DOCUMENT EXISTING CONDITIONS USING PHOTOGRAPHS PRIOR TO START OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS TO REPAIR OR REPLACE MATERIALS DAMAGED DUE TO HIS WORK OR FAILURE TO PROTECT THROUGHOUT THE DURATION OF HIS CONTRACT.
3. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH ALL APPROPRIATE UTILITY OWNERS, OPERATORS AND USERS PRIOR TO DISCONNECTION AND DEMOLITION. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE AUTHORITY HAVING JURISDICTION. ALL PLUGS, STOPS AND CAPS SHALL BE PER AGENCIES REQUIREMENTS AND IF NONE EXIST THEN A 3000 PSI CONCRETE PLUG WITH A THICKNESS EQUAL TO THE DIAMETER OF THE PIPE SHALL BE USED.
4. THE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY AND STOP ALL WORK IN AREAS WHERE HAZARDOUS MATERIALS ARE DISCOVERED. WHEN REQUIRED, THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE ENVIRONMENTAL AND HEALTH AGENCIES.
5. NO BURNING, EXPLOSIVES OR OTHER POTENTIALLY DANGEROUS METHODS OF DEMOTION WILL BE ALLOWED UNLESS WRITTEN PERMISSION IS GRANTED BY THE OWNER AND ALL APPROPRIATE PERMITS ARE GRANTED.
6. THE CONTRACTOR WILL PROVIDE WHAT EVER SAFETY EQUIPMENT AND DEVICES ARE NECESSARY TO PROTECT THE ADJACENT PROPERTIES, STRUCTURES AND OTHER AREAS SLATED TO REMAIN. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL COSTS TO REPAIR OR REPLACE ANY DAMAGE CAUSED BY HIS WORK. THIS WILL ALSO INCLUDE EROSION CONTROL, DUST CONTROL AND SETTLEMENT.
7. ALL AREAS SHALL BE BROUGHT BACK TO THEIR ORIGINAL GRADE OR THAT OF THE SURROUNDING AREA, WHICH EVER IS CLOSER TO THE FINAL GRADES OF THE PROJECT FOR THAT AREA. ALL AREAS REQUIRING FILL SHALL BE COMPACTED TO THE REQUIREMENTS OF THE AREA BUT IN NO CASE LESS THAN 90% OF MODIFIED PROCTOR (ASTM D 1557).

SITE CONCRETE:

1. THE DIMENSIONS SHALL BE THOSE SHOWN ON THE DRAWINGS. THE CONCRETE MIX SHALL BE 4000 PSI AT 28 DAYS MADE WITH TYPE I OR TYPE II CEMENT, PER ASTM C 150, AND AGGREGATES MEETING STATE DEPARTMENT OF TRANSPORTATION REQUIREMENTS. SLUMP FOR SLIP FORMING SHALL BE 1 INCH +/- 1/2 INCH AND FOR FORMED CONCRETE THE SLUMP SHALL BE 3 INCH +/- 1 INCH. AIR ENTRAINMENT MIXTURE SHALL MEET THE REQUIREMENTS OF ASTM C 260 4% +/- 1.1% FOR SLIP FORM WORK AND 6% +/- 1.1% FOR FORMED AND PLACED CONCRETE. WATER REDUCING AGENT SHALL CONFORM TO ASTM C 494, TYPE A. CURING COMPOUNDS SHALL CONFORM TO ASTM C309, TYPE I, CLASS A MOISTURE LOSS OF NOT MORE THAN .055 GR/ SQ CM WHEN APPLIED AT 200 SQ FT PER GALLON.
2. SIDEWALKS, GUTTERS AND CURBS SHALL BE PLACED ON COMPACTED SUBBASE, CONSISTENT WITH THE PAVEMENT SUBBASE, AS SHOWN ON THE DRAWINGS. WHEN SUBBASE DETAILS ARE MISSING AND NO AGENCY HAS JURISDICTION USE THE FOLLOWING: SIDEWALKS AND GUTTERS SHALL BE PLACED ON A MINIMUM OF 6 INCHES OF COMPACTED SUBBASE AND CURBS SHALL BE PLACED ON A MINIMUM OF 4 INCHES OF COMPACTED SUBBASE.
3. ALL FORMING, PLACEMENT, MATERIALS AND CURING SHALL CONFORM TO THE LATEST ADDITION OF ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" AND ALL SIMILAR STATE DEPARTMENT OF TRANSPORTATION REQUIREMENTS.
4. REINFORCING SHALL BE IN ACCORDANCE WITH THAT SPECIFIED ON THE DRAWINGS AND THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI) "MANUAL OF STANDARD PRACTICES". REINFORCING STEEL SHALL BE ASTM A 615, GRADE 60, DEFORMED, WELDED WIRE FABRIC SHALL BE ASTM A 185, WELDED WIRE STEEL FABRIC.
5. SIDEWALKS AND GUTTERS SHALL HAVE A BROOM FINISH PERPENDICULAR TO FLOW WITH A PICTURE FRAME EDGE JOINT ALL THE WAY AROUND. CURBS SHALL HAVE A SMOOTH FINISH OR LIGHT RUB FINISH, BUT CONSISTENT THROUGHOUT THE PROJECT.
6. EXPANSION JOINTS SHALL BE PLACED EVERY 50 FEET AND AT ADJOINING STRUCTURES SUCH AS WALLS, MANHOLES AND VAULTS. EXPANSION JOINT MATERIAL SHALL BE PREMOIDED, 1/2 INCH CAP IN ACCORDANCE WITH ASTM D1751. AFTER CONCRETE HAS SET, THE CAP SHOULD BE REMOVED AND VOID FILLED WITH WATERPROOF JOINT FILLER. CURB AND GUTTER SHALL BE CUT OR TOOK JOINTED TO 10 THE DEPTH EVERY 10 FEET. SIDEWALKS SHOULD HAVE TOOLED OR CUT JOINTS TO 1/3 THE DEPTH IN SQUARES OR AS CLOSE TO SQUARE AS POSSIBLE NOT EXCEEDING 5 FT X5 FT.

EARTHWORK:

1. PRIOR STARTING ANY CUTS OF FILLS THE CONTRACTOR SHALL STRIP AND STOCKPILE ALL TOPSOIL. STRIPPING OF TOPSOIL CAN ONLY COMMENCE AFTER THE CLEAR AND GRUB OPERATIONS ARE COMPLETE IN THAT AREA. TOPSOIL SHALL BE STOCKPILED IN AREAS DESIGNATED ON THE PLANS OR APPROVED BY THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL REVIEW THE SOILS REPORTS, SOIL FIELD LOGS AND WHEN NECESSARY HIS OWN FIELD VERIFICATION SO AS TO BE FAMILIAR WITH THE DEPTH OF TOPSOIL. THE CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS TO PREVENT OVER AND UNDER REMOVAL.
2. UNLESS OTHERWISE NOTED, THE GRADES SHOWN ON THE PLANS ARE FINISHED GRADES. THEREFORE, PAVEMENT, FLOORS, SUBBASE AND OTHER IMPROVEMENTS MUST BE SUBTRACTED TO CALCULATE SUBGRADE ELEVATIONS.
3. THE CONTRACTOR SHALL MAINTAIN A SURVEY GRID OF NOT LESS THAN 100' X 100' OR OTHER MEANS ACCEPTABLE TO THE OWNER'S REPRESENTATIVE THAT WILL INDICATE LOCATION AND AMOUNT OF CUT OR FILLS REMAINING. AT SUBGRADE THIS GRID SHALL BE 50' X 50' WITH LOCATION AND FINAL GRADE MARKED CLEARLY OR SURVEY SHALL BE COMPLETED DEMONSTRATING THAT THE SUBGRADE IS +/- 0.1 FEET OF REQUIRED SUBGRADE.
4. UNLESS OTHERWISE NOTED ON THE DRAWINGS OR IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL RETAIN AND PAY ALL COST FOR SOIL COMPACTION TESTING TO BE PERFORMED BY AN INDEPENDENT TESTING LABORATORY. FOR EACH LIFT PLACED, COMPACTION TESTING SHALL BE DONE EVERY 2000 SQ. FT. IN TRENCHES, COMPACTION TESTING SHALL BE DONE EVERY OTHER LIFT WITH AT LEAST 1 TEST EVERY 100 LF.
5. COMPACTION REQUIREMENTS SHALL BE THOSE OUTLINED IN THE SOILS REPORT. IF THE SOILS REPORT IS NOT CLEAR OR DOES NOT GIVE REQUIREMENTS THE FOLLOWING WILL BE USED. UNDER AND TO 20 FEET OUTSIDE THE BUILDING ENVELOPE THE SOILS SHALL BE COMPACTED TO A MINIMUM OF 95% MAXIMUM DRY DENSITY PER ASTM D1557 (MODIFIED PROCTOR). UNDER PROPOSED OR FUTURE PAVEMENT AREAS, INCLUDING 10 FEET OUTSIDE SUCH AREAS, THE SOIL SHALL BE COMPACTED TO A MINIMUM OF 95% MAXIMUM DRY DENSITY PER ASTM D 1557 (MODIFIED PROCTOR). ALL LANDSCAPE AND LAWN AREAS SHALL BE COMPACTED TO 90% MAXIMUM DRY DENSITY PER ASTM D 1557 (MODIFIED PROCTOR). THE TESTING LAB SHALL TEST SOILS IN ACCORDANCE WITH ASTM D2922 (NUCLEAR METHOD) WITH PROCTORS FOR EACH SOIL TYPE.
6. UNLESS OTHERWISE NOTED IN THE SOILS REPORT OR ON THE DRAWINGS, THE ON SITE MATERIAL SHALL BE USED TO MAKE FILLS. ALL MATERIAL TO BE USED FOR FILL SHALL BE FREE OF ORGANICS, FROZEN MATERIAL, CONTAMINATED MATERIAL, DEBRIS AND ANY ROCKS LARGER THAN 4 INCHES. FOR FILL PLACEMENT WITHIN 1 FOOT OF SUBGRADE, NO ROCK SHALL BE GREATER THAN 2 INCHES IN DIAMETER. THE CONTRACTOR SHALL BEAR ALL COST ASSOCIATED WITH DRYING, SEGREGATING OR REQUIRED METHODS TO TREAT SOILS TO MEET COMPACTION AND OTHER REQUIREMENTS.
7. FILLS SHALL BE PLACED IN LIFTS NOT TO EXCEED 1 FOOT IN MASS FILLS AND 8 INCHES IN TRENCH OR RESTRICTED AREAS.
8. IF IMPORTED MATERIAL IS REQUIRED, THE SOURCE AND A RANDOM COMPOSITE SAMPLE SHALL BE REVIEWED BY THE TESTING LABORATORY PRIOR TO BEING BROUGHT TO SITE. THE TESTING LABORATORY SHALL TEST FOR PERCENT PASSING THE 200 SIEVE THAT DOES NOT EXCEED THE EXISTING ON SITE MATERIAL OR IN NO CASE GREATER THAN 35%. THEY SHALL ALSO VERIFY CONSISTENCY WITH EXISTING ON SITE MATERIALS AND ALL OTHER REQUIREMENTS. WAIVERS TO THESE REQUIREMENTS CAN ONLY BE GIVEN JOINTLY BY GREENVILLE COUNTY AND THE GEOTECHNICAL ENGINEER THAT PREPARED THE SOILS REPORT.
9. THE TESTING LAB MAY RESTRICT SOME ON SITE MATERIALS FROM BEING USED AS FILL IN BUILDING OR PAVEMENT AREAS WHEN IT IS THEIR OPINION THAT THE MATERIAL WILL NOT MEET REQUIREMENTS STATED HERE. IF SUCH CONDITIONS DO EXIST AND OTHER MATERIAL IS NOT AVAILABLE ON SITE, THE OWNER'S REPRESENTATIVE MUST AUTHORIZE IN WRITING THE USE OF IMPORT MATERIAL. UNLESS THERE WILL BE NO ADDITION COST TO THE CONTRACT.
10. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EARTHWORK OPERATIONS FROM WEATHER AND GROUND WATER INCLUDING KEEPING POSITIVE DRAINAGE, DIVERT DRAINAGE, DEWATERING AND SEALING DISTURBED AREAS WITH A STEEL DRUM ROLLER PRIOR TO INCLEMENT WEATHER.
11. PRIOR PLACEMENT OF FILLS, IN AREAS WHERE THE FINAL FILL DEPTH WILL BE LESS THAN 4 FEET, THE AREA SHALL BE PROOF ROLLED WITH A 10 TON ROLLER OR A LOADED 10 WHEEL DUMP TRUCK. SOFT AREAS SHALL BE SCARIFIED, DRIED AND RE-COMPACTED PRIOR TO FILL BEING PLACED. RETEST BY PROOF ROLL AS NECESSARY.
12. ALL FINAL SUBGRADE UNDER PROPOSED PAVEMENT, BUILDING OR OTHER STRUCTURE SHALL BE PROOF ROLLED AS DESCRIBED ABOVE FOR THE IDENTIFYING OF SOFT AREAS. AREAS FOUND TO BE UNACCEPTABLE SHALL BE SCARIFIED, DRIED AND RE-COMPACTED. RETEST BY PROOF ROLL AS NECESSARY.
13. TRENCH EXCAVATION REQUIRING SHEETING, SHORING OR OTHER STABILIZING DEVICES SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER AND MEET ALL O.S.H.A. REQUIREMENTS. ALL EXCAVATIONS SHALL MAINTAIN SAFE SIDE SLOPES IN ACCORDANCE WITH LOCAL, STATE AND O. S. H. A. REQUIREMENTS. NO STOCKING OF MATERIAL CLOSE TO AN OPEN CUT OR STEEP SLOPE WILL BE PERMITTED IN AN EFFORT TO PREVENT CAVE-INS.
14. TRENCH EXCAVATIONS SHALL BE MADE UNIFORM AND STRAIGHT TO THE FOLLOWING WIDTHS: FOR PIPES 36 INCHES OR LESS THE TRENCH WIDTH SHALL BE THE DIAMETER PLUS 2 FEET; FOR PIPES 36 INCHES OR GREATER THE WIDTH SHALL BE THE DIAMETER PLUS 3 FEET; ADDITIONAL WIDTH WILL ONLY BE ALLOWED WHEN COMPACTION EQUIPMENT LIMITATIONS REQUIRE AND ONLY AFTER APPROVAL OF THE ENGINEER OF RECORD. NO MORE TRENCH SHALL BE OPEN IN ONE DAY THAN CAN BE PROPERLY BACKFILLED IN THAT SAME DAY TO MINIMIZE WEATHER AND SAFETY CONCERNS. WHEN BACKFILLING AROUND PIPES, PROVIDE UNIFORM SUPPORT AT INVERT AND PROPER COMPACTION UNDER, ALONG AND OVER THE PIPE. CARE SHALL BE GIVEN WHILE BACKFILLING AROUND PIPES TO PREVENT DAMAGE TO THE PIPES INCLUDING: PLACING BACKFILL BEDDING BY HAND, USING HAND OPERATED PLATE TAMPS OR JUMPING JACKS, AND OTHER LOAD RESTRICTIVE TECHNIQUES UNTIL FILLS ARE A MINIMUM OF 2 FEET OR MANUFACTURES RECOMMEND DEPTH, WHICH EVER IS GREATER ABOVE THE TOP OF THE PIPE. COMPACTION SHALL BE PROVIDED AND NOT RELIEVED IN THESE AREAS AND WILL REMAIN AS STATED ON THE DRAWINGS OR ABOVE. IF CLEAN STONE IS USED AS A BEDDING OR ENCASEMENT FILTER FABRIC SHALL BE PLACED BETWEEN THE NATURAL SOILS AND BACKFILL AND THE STONE TO PREVENT MIGRATION OF FINES.
15. IF ROCK IS ENCOUNTERED THAT WAS NOT INDICATED ON THE PLANS OR SOILS REPORT, THE AREA FOR REMOVAL SHOULD BE MEASURED AND REVIEWED WITH THE OWNER'S REPRESENTATIVE PRIOR TO ROCK REMOVAL. ROCK WILL BE DEFINED AS THE NATURAL EARTH MATERIALS THAT CAN NOT BE REMOVED WITH CONVENTIONAL EARTH WORKING EQUIPMENT.
16. WHERE ROCK IS ENCOUNTERED, CONSTRUCT THE ENTRANCE WITH CLEAN 2 TO 3 INCH STONE, 6 INCHES THICK, OVER STABILIZING FABRIC TO THE DIMENSIONS OF 12 FEET WIDE AND 50 LONG. THE ENTRANCE SHOULD BE LOCATED SO THAT ALL VEHICLES LEAVING THE SITE WILL UTILIZE IT.
17. NO EXPLOSIVES WILL BE ALLOWED UNTIL ALL PERMITS ARE GRANTED AND THE OWNER HAS SIGNED OFF. PRE AND POST BLAST REPORTS MUST BE KEPT AND RECORDED. ALL STRUCTURES WITHIN THE AREA OF THE BLAST MUST RECEIVE A PRE-BLAST SURVEY. ALL MANUFACTURES RECOMMEND DEPTH, WHICH EVER IS GREATER ABOVE THE TOP OF THE PIPE. COMPACTION SHALL BE PROVIDED AND NOT RELIEVED IN THESE AREAS AND WILL REMAIN AS STATED ON THE DRAWINGS OR ABOVE. IF CLEAN STONE IS USED AS A BEDDING OR ENCASEMENT FILTER FABRIC SHALL BE PLACED BETWEEN THE NATURAL SOILS AND BACKFILL AND THE STONE TO PREVENT MIGRATION OF FINES.
18. UNLESS OTHERWISE NOTED ON THE DRAWINGS, THE CONTRACTOR SHALL REMOVE ALL EXCESS TOPSOIL, CUT MATERIAL OR WASTE MATERIAL FROM SITE AND DISPOSE OF IN A LEGAL MANNER.

SEEDING AND LANDSCAPING:

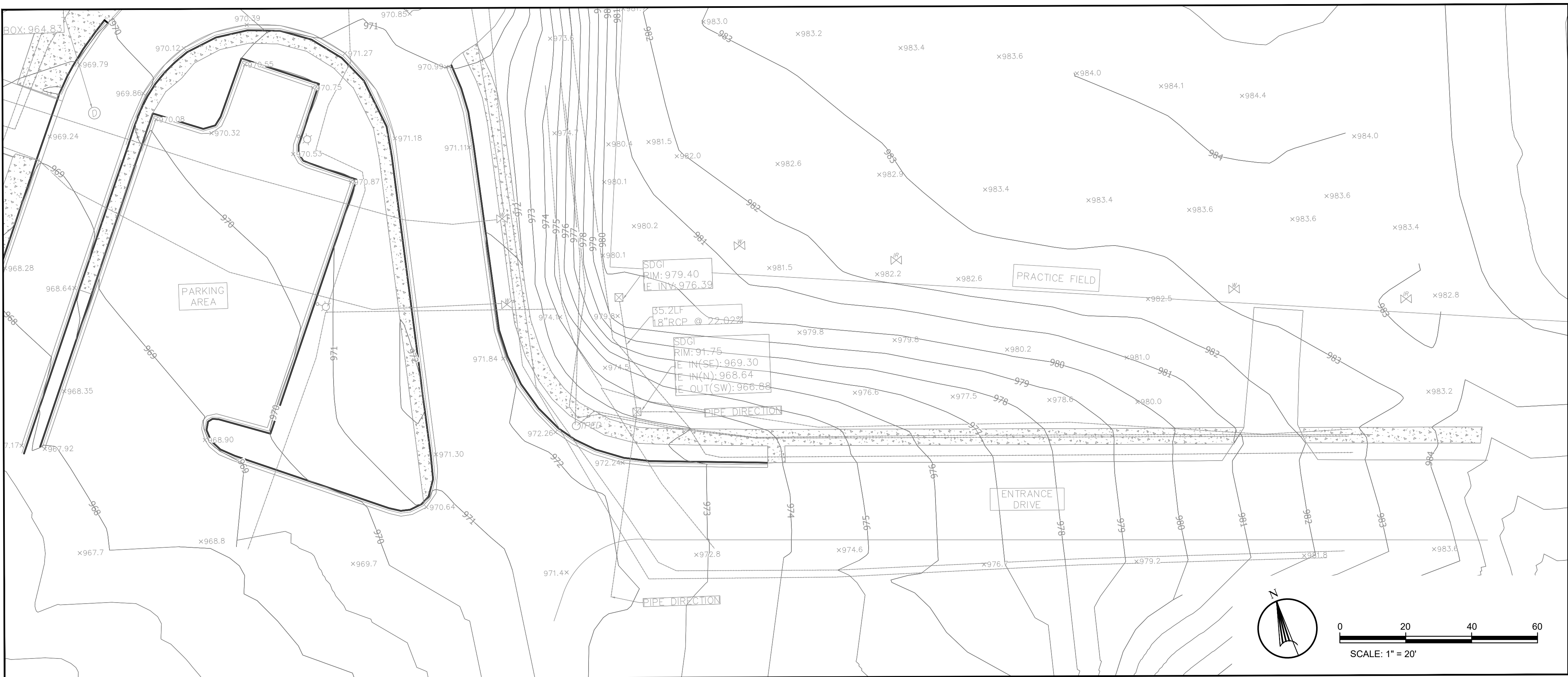
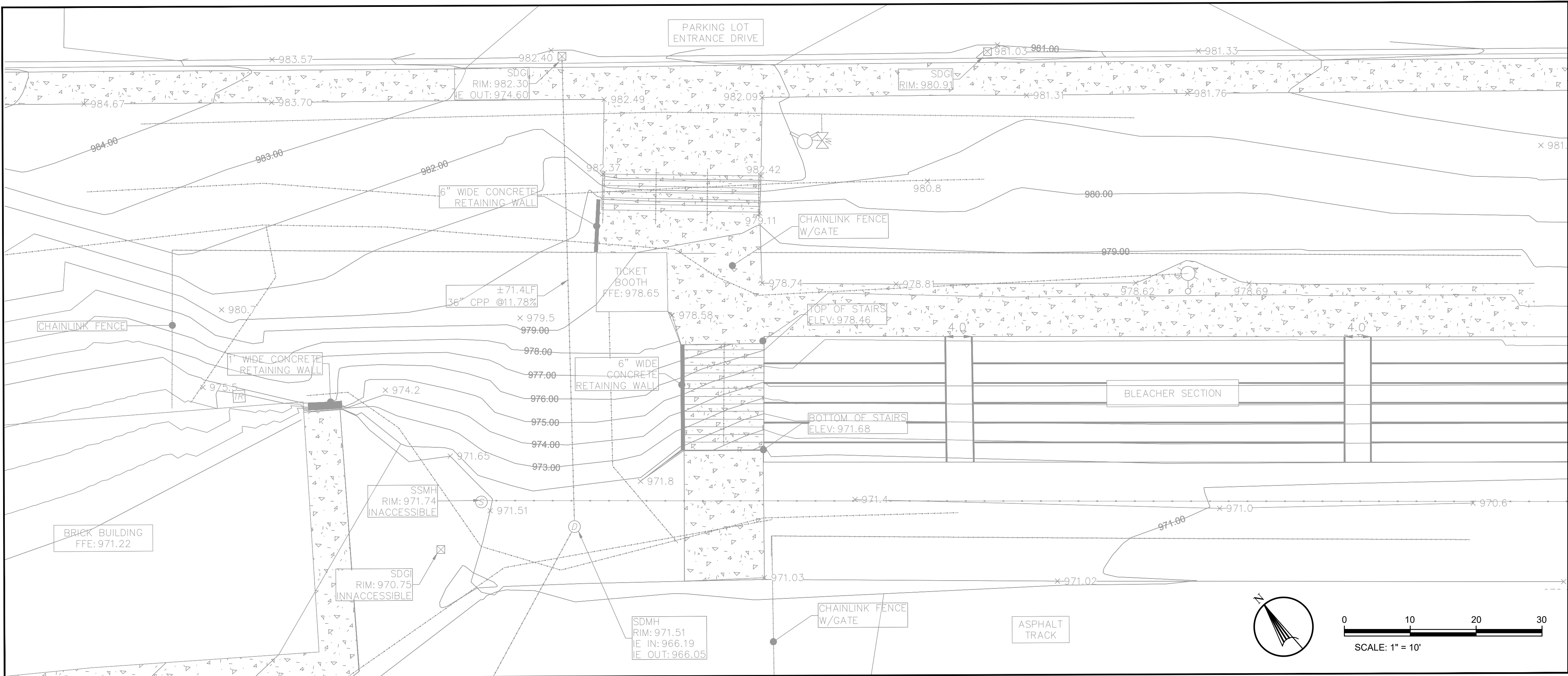
1. TOPSOIL SHALL BE REMOVED FROM STOCKPILES AND SPREAD IN THE AREAS SHOWN ON THE PLANS. THE DEPTH OF TOPSOIL SHALL BE AS SHOWN ON THE PLANS. IF THE DEPTH OF TOPSOIL IS NOT GIVEN THE FOLLOWING SHALL BE USED: "A MINIMUM OF 4 INCHES IN LAWN AREAS" AND "A MINIMUM OF 12 INCHES IN LANDSCAPE PLANTING AREAS".
2. AFTER THE TOPSOIL IS IN PLACE IT SHALL BE FINE GRADED REMOVING ALL ROOTS, STICKS, STONES AND DEBRIS GREATER THAN 2 INCHES IN ANY DIMENSION. THE TOPSOIL SHALL BE FINE GRADED TO THE LINES AND GRADES SHOWN ON THE PLANS.
3. THE TOPSOIL SOIL SHALL HAVE A PH OF 5.5 TO 7.6 AND AN ORGANIC CONTENT OF 3 TO 20%. THE GRADATION OF THE TOPSOIL SHALL BE 100% PASSING 2 INCH SIEVE, 85 TO 100% PASSING THE 1 INCH SIEVE, 65 TO 100% PASSING THE 1/2 INCH SIEVE AND 20 TO 80% PASSING THE NO. 200 SIEVE.
4. LIME OF TYPE RECOMMENDED FOR SOIL CONDITIONING SHALL BE USED TO TREAT ACIDIC SOILS.
5. LAWN FERTILIZER SHALL BE 55% NITROGEN, 10% PHOSPHORUS AND 10% POTASH WHERE 50% OF THE NITROGEN IS DERIVED FROM UREAFORM SOURCE.
6. LAWN SEED (WHEN NOT GIVEN ON THE PLANS) SHALL BE: "50% BY WEIGHT, 85% PURITY, 85% GERMINATION OF PENNFINE PERENNIAL RYE", "30% BY WEIGHT, 97% PURITY, 85% GERMINATION OF PENNLAWN RED FESCUE"; "20% BY WEIGHT, 85% PURITY, 80% GERMINATION OF COMMON KENTUCKY BLUEGRASS".
7. WHEN PLACING BY HYDROSEEDING APPLICATION FERTILIZER SHALL BE PLACED AT 80 POUNDS PER ACRE, HYDROMULCH AT 1,200 POUNDS PER ACRE, WATER AT 500 GALLONS PER ACRE AND SEED AT A MINIMUM OF 220 POUNDS PER ACRE. ALL OVER SPRAY AREAS SHALL BE PROPERLY CLEANED AND RESTORED AT NO EXPENSE TO THE CONTRACT.
8. IF PLACING BY MECHANICAL MEANS, FERTILIZER SHALL BE PLACED AT 25 POUNDS PER 1,000 SQUARE FEET, SEED AT 5 POUNDS PER 1,000 SQUARE FEET, AND STRAW MULCH AT 2 TONS PER ACRE. PLACE FERTILIZER AND SEED, THEN LIGHTLY RAKE AND THE ROLL WITH 200 POUND ROLLER. MULCH THE AREA AND THEN WATER. STRAW MAY NEED TO BE SECURED TO PREVENT IT BLOWING AWAY.
9. WATER LAWN AREAS AS NEEDED TO PROMOTE GROWTH. THE CONTRACTOR WILL BE RESPONSIBLE TO WATER, RESEED OR WORK WHEN NECESSARY TO INSURE THE GROWTH OF THE LAWN UNTIL A COMPLETE AND UNIFORM STAND OF GRASS HAS GROWN AND BEEN CUT AT LEAST TWICE.
10. UNLESS OTHERWISE NOTED ON THE DRAWINGS, ALL AREAS NOT RECEIVING STRUCTURES, PAVEMENT, RIP RAP, LANDSCAPING OR OTHER IMPROVEMENTS OR FUTURE IMPROVEMENTS SHALL BE CONSIDERED LAWN AREAS AND RECEIVE TOPSOIL AND SEEDING PER DRAWINGS AND ABOVE STATED REQUIREMENTS.
11. PLANTINGS SHALL BE SUPPLIED IN ACCORDANCE WITH THE PLANS AND ANSI 260.1 "AMERICAN STANDARD FOR NURSERY STOCK" IN GOOD HEALTH, VIGOROUS, AND FREE OF INSECTS, LARVAE, EGGS, DEFECTS AND DISEASE.
12. PLANTING BEDS SHALL BE PREPARED BY LOOSENING THE TOP 1 FOOT OF TOPSOIL. PLANTS SHALL BE LOCATED PER THE PLANS. THE HOLES SHALL BE EXCAVATED (PER THE DETAILS ON THE DRAWINGS) WITH THE CENTER SLIGHTLY HIGHER TO PROMOTE DRAINAGE. USE A TOPSOIL BACKFILL MIX OF 4 PARTS TOPSOIL, 1 PART PEAT MOSS, 1/2 PART WELL ROTTED MANURE, AND 10 POUNDS 5-10-5 PLANTING FERTILIZER AND PROPERLY MIXED PER CUBIC YARD. BERM AROUND PLANTS TO FORM A BOWL SHAPE.
13. WEED BARRIER MADE FROM FIBERGLASS AND ULTRA-VIOLET LIGHT RESISTANT SHALL BE PLACED UNDER ALL PLANTING BEDS PRIOR MULCHING.
14. ALL TREES AND SHRUBS SHALL BE STAKED AS DETAILED ON THE DRAWINGS. TREE WRAPPING WILL BE PROVIDED AT THE BASE OF ALL TREES AS DETAILED.
15. MULCH SHALL BE 50% SHREDDED BARK AND 50% WOOD CHIPS, 1/4 TO 2 INCH IN SIZE, UNIFORMLY MIXED AND FREE OF ELM WOOD. MULCH SHALL BE PLACED UNIFORMLY OVER THE PLANTING BED ALLOWING NO WEED BARRIER TO BE SEEN.
16. ALL LANDSCAPING SHALL BE GUARANTEED FOR ONE YEAR AFTER FINAL ACCEPTANCE. ANY PLANTINGS IN NEED OF REPLACEMENT WILL BE GUARANTEED FROM THE TIME OF REPLACEMENT IF AFTER FINAL ACCEPTANCE.

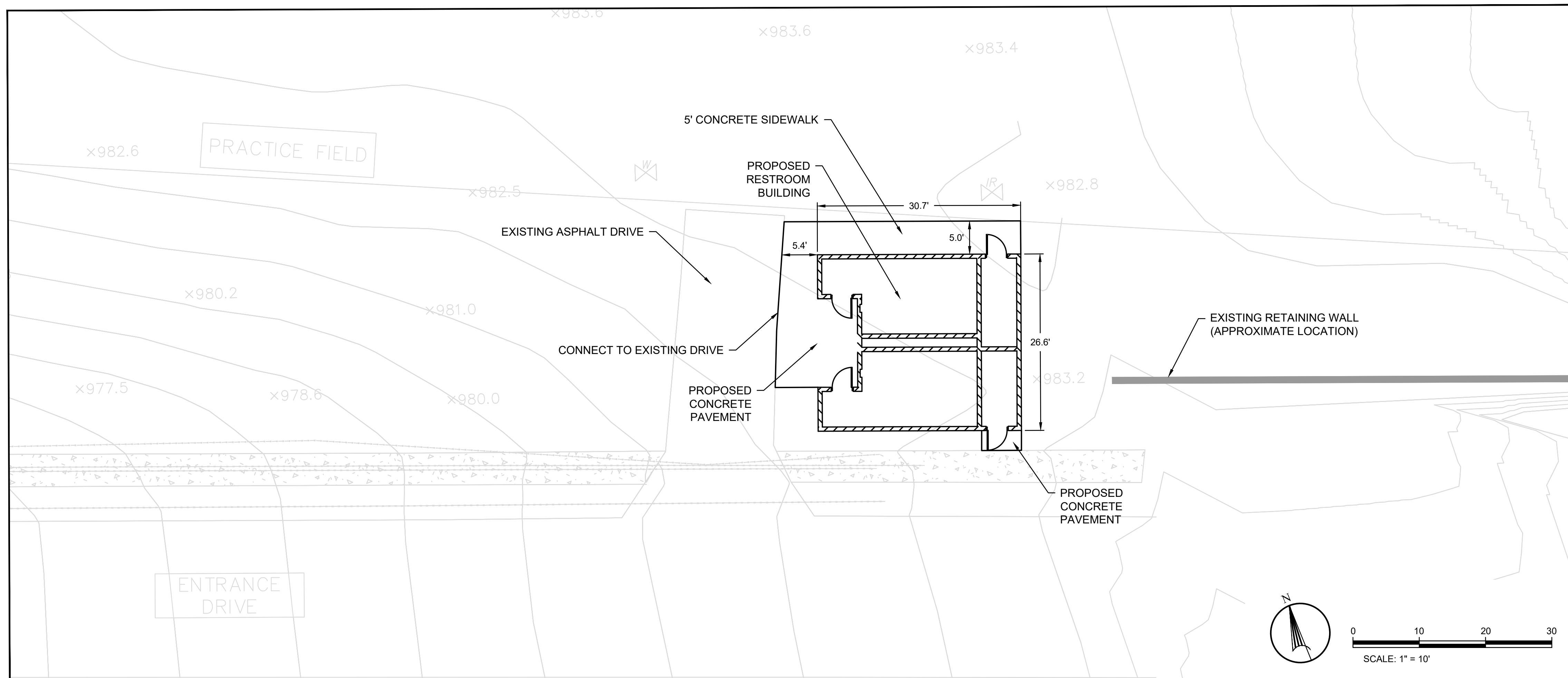
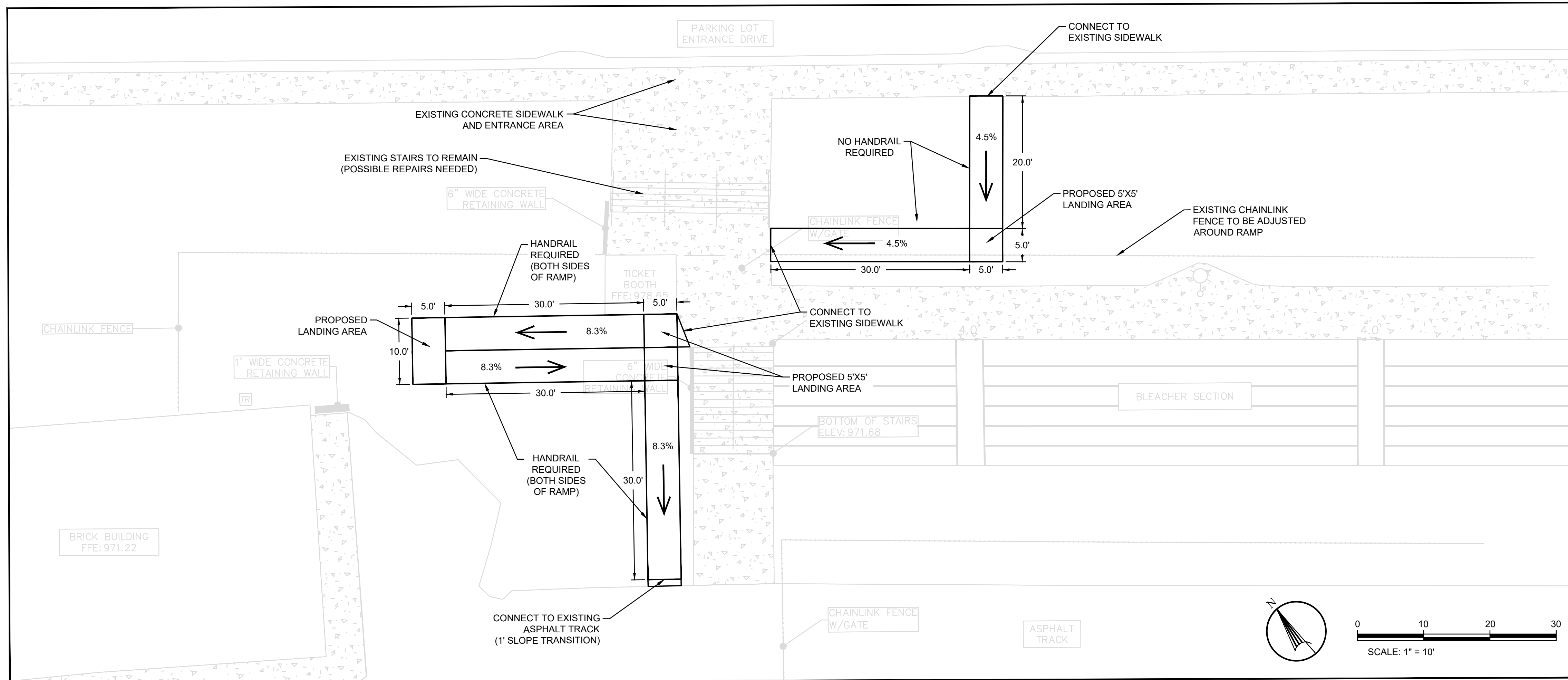
TRAFFIC SIGNAGE AND STRIPING:

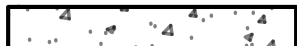
1. PAVEMENT MARKINGS SHALL BE THE TYPE, COLOR, SIZE AND LOCATIONS SHOWN ON THE PLANS. IF THE INFORMATION ON THE PLANS IS NOT COMPLETE AND AUTHORITY HAVING JURISDICTION DOES NOT HAVE REQUIREMENTS REGARDING THE MARKINGS THE FOLLOWING. PAINT SHALL BE SUPPLIED IN ACCORDANCE WITH AASHTO: M 248 LATEST ADDITION. COLORS SHALL BE AS FOLLOWS (WHITE - PARKING STALLS, HANDICAP PARKING AND CHARACTERS, PARKING ISLANDS, TRAFFIC CONTROL LETTERING AND CHARACTERS AND FIRE LANES) (WHITE - STOP BARS, PEDESTRIAN CROSSINGS AND STOP LETTERING).
2. THE PAVEMENT SHALL BE CLEAN AND FREE OF DIRT, DUST, MOISTURE, OILS AND OTHER FOREIGN MATERIALS. ANY OLD PAVEMENT MARKINGS SHALL BE REMOVED UNLESS PAINTS ARE COMPATIBLE AND OVERLAY IDENTICALLY. THE SURFACE OF THE PAVEMENT PRIOR APPLICATION SHALL BE 45 DEGREES F AND RISING UNLESS MANUFACTURES RECOMMENDATIONS ARE FOLLOWS.
3. THE SIGNAGE SHALL BE THE TYPE AND LOCATED PER THE DRAWINGS. THE SIGNAGE SHALL BE PROVIDED IN ACCORDANCE WITH THE LOCAL, HIGHWAY, COUNTY HIGHWAY AND STATE DEPARTMENT OF TRANSPORTATION. IF LOCAL, COUNTY OR STATE CODES DO NOT EXIST USE AASHTO: M268.
4. POSTS, BRACKETS AND FRAMES SHALL BE STEEL PER ASTM A-36, A-242, A-441, A-572, A-588, GRADE 50 AND HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A123. ALL CUTTING, DRILLING OR OTHER POLE MODIFICATIONS SHALL BE PAINTED WITH GALVANIZING PAINT. ALL BOLTS, NUTS AND WASHERS SHALL BE STAINLESS STEEL.
5. POST HOLES SHALL BE A MINIMUM OF FOUR FEET DEEP AND 12 INCHES IN DIAMETER UNLESS POOR SOILS OR FROST CONDITIONS REQUIRE GREATER DEPTH. SIGN POSTS SHALL BE KEPT PLUMB, 6 INCHES OFF BOTTOM AND CENTERED AS 3000 PSI CONCRETE IS PLACED AROUND THE POST. THE OVERALL SIGN AND POST SYSTEM SHOULD BE ABLE TO WITHSTAND 33 POUNDS PER SQUARE FOOT.
6. CONTRACTORS CAN PLACE SIGNS ON POSTS AFTER CONCRETE HAS CURED FOR SEVEN DAYS OR 1/2 STRENGTH IS ACHIEVED.
7. ALL HANDICAP STRIPING AND SIGNAGE SHALL MEET THE AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. FIRE LANE STRIPING AND SIGNAGE SHALL MEET THE REQUIREMENTS OF THE LOCAL BUILDING INSPECTOR AND FIRE DEPARTMENT.

STORM WATER SYSTEM:

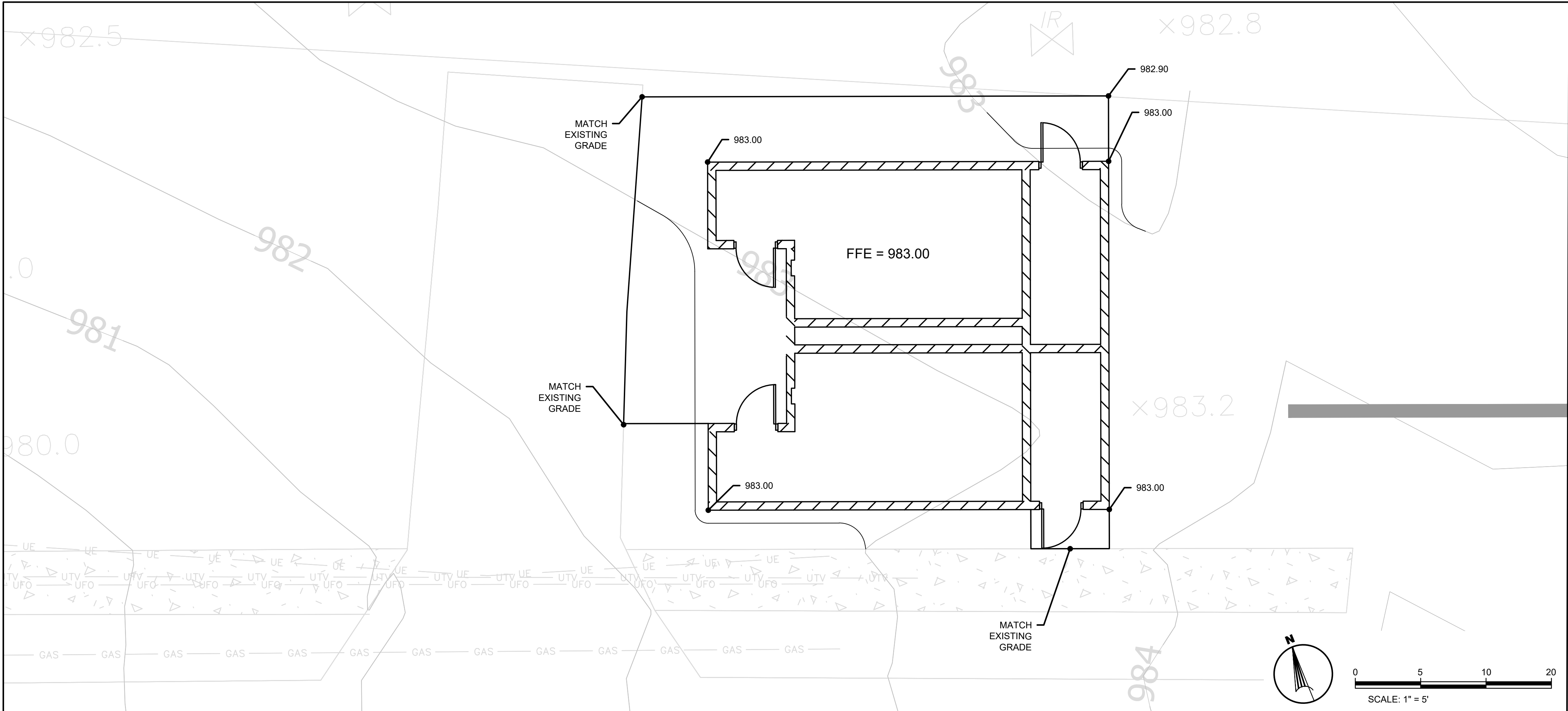
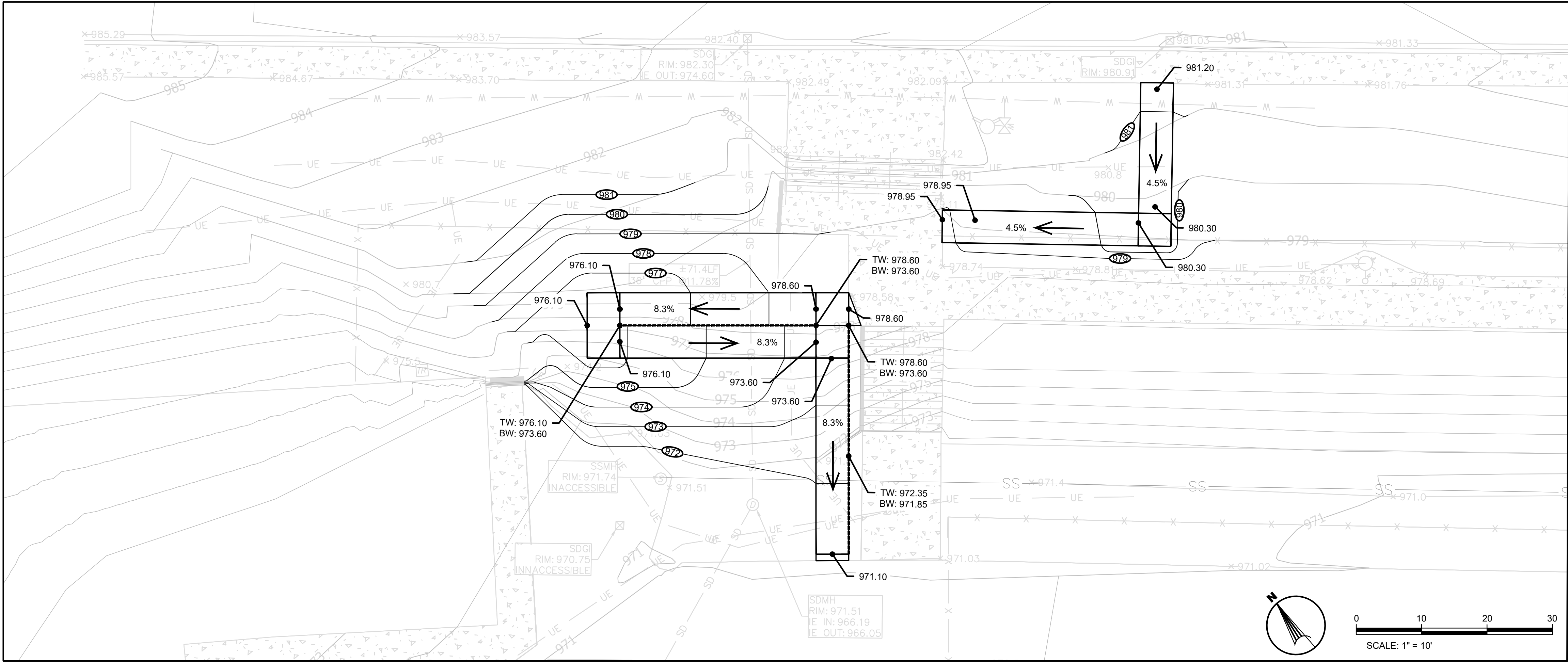
1. THE STORM WATER SYSTEM SHALL BE SUPPLIED AND PLACED IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REQUIREMENTS. THE LOCAL STORM WATER AUTHORITY FOR THIS PROJECT IS GREENVILLE COUNTY AND THE EROSION CONTROL AND RUN-OFF AUTHORITY IS SCDCHEC.
2. STORM DESIGN INCLUDING MANY VARIABLES SUCH AS PIPE ROUGHNESS COEFFICIENT, THAT CAN AFFECT THE ACTUAL FINAL RUN-OFF. IF NO ALTERNATIVE MATERIALS ARE LISTED ON THE UTILITY DRAWINGS NO SUBSTITUTIONS MAY BE MADE BY THE CONTRACTOR UNLESS FIRST REVIEWED AND ACCEPTED BY THE ENGINEER.
3. ALL STORM MATERIAL SIZES, TYPES AND SPECIFICS ARE LISTED ON THE DRAWINGS. IF THE PLANS DO NOT LIST ALL INFORMATION OR ARE UNCLEAR USE THE FOLLOWING.
4. WHENEVER CLEAN STONE IS USED FOR BEDDING, BACKFILL, OR ENCASEMENT FILTER FABRIC SHALL BE PLACED BETWEEN THE NATURAL AND BACKFILL SOILS TO PREVENT MIGRATION OF FINES INTO THE VOIDS, AS NECESSARY. ANTI-SEEP COLLARS SHALL ALSO BE INCORPORATED AT THE PROJECT LIMIT AND ALONG THE PIPE TO PREVENT WATER FLOW WITHIN THE STONE BEDDING OR ENCASEMENT. ANTI-SEEP COLLARS MAY NOT BE REQUIRED WHEN USING PERFORATED PIPE. ANTI-SEEP COLLARS SHALL BE INCORPORATED AT POND AND BASIN OUTLETS TO PREVENT WATER MIGRATION ALONG PIPE BEDDING OR ENCASEMENT MATERIAL.
5. STORM PIPE 12 INCHES AND UP SHALL BE REINFORCED CONCRETE PIPE (RCP) WITH SMOOTH INTERIOR. IN ACCORDANCE WITH AASHTO M252 & M254 AND ASTM F406 & F687, WITH A MANNNING FRICTION NUMBER (N) OF 0.012 OR LESS. UNLESS SOILS ARE CONSISTENTLY SAND OR SAND AND GRAVEL WITH NOT MORE THAN 15% OR LESS THAN 5% PASSING THE 200 SIEVE AND 100% PASSING THE 2 INCH SIEVE THE PIPE WILL BE ENCASED IN A UNIFORM GRAVEL WITH NOT MORE THAN 15% OR LESS THAN 5% PASSING THE 200 SIEVE AND 100% PASSING THE 2 INCH SIEVE FROM SIX INCHES BELOW TO SIX INCHES ABOVE THE OUTSIDE OF PIPE. INSTALL IN ACCORDANCE WITH ASTM F449 AND THE MANUFACTURES RECOMMENDATIONS.
6. STORM PIPE BELOW 12 INCHES SHALL BE POLYVINYL CHLORIDE (PVC) PER ASTM D 3034, SDR 35 WITH GASKETS PER ASTM D 3212, ELASTOMERIC SEAL. THE PIPE SHALL BE BED 6 INCHES BELOW AND UP HALF ITS DIAMETER WITH A UNIFORM MIX OF GRAVEL OR CRUSH STONE 100% PASSING THE 1.5" SIEVE AND 10% TO 3% PASSING THE 200 SIEVE. THE MIX SHALL BE SUPPLEMENTED AS NEEDED TO REMOVE VOIDS. INCORPORATE FILTER FABRIC AROUND BEDDING OR CRADLE STONE IF GROUND WATER, SILTS, OR SANDS ARE ENCOUNTERED.
7. END SECTIONS SHALL BE THE SAME MATERIAL AS THE PRECEDING PIPE AND APPROPRIATE COLLAR.
8. MANHOLES SHALL BE PROVIDED PER ASTM C 478 WITH STEEL CORE POLYETHYLENE STEPS. THE MANHOLE SHALL BE SIZED TO A MINIMUM OF 2 FOOT GREATER THAN THE LARGEST DIAMETER PIPE ENTERING OR EXISTING. INCREASE SIZE OF MANHOLE IF IN THE SAME HORIZONTAL PLANE THERE IS TWO AREAS WHERE THE AREA BETWEEN TWO PIPES IS GREATER THAN 1/2 THE AREA HALVE OR THE CIRCUMFERENCE IS SUPPORTED BY LESS THAN 1/2 OF THE DIAMETER OF THE MANHOLE. INVERTS SHALL BE SMOOTH CAST IN PLACE CONCRETE. UNLESS OTHERWISE INDICATED, 4 INCH WEEPS COVER WITH FILTER FABRIC AND 2 INCH STONE SHALL BE PROVIDED AT THE CROWN OF PIPES AND AT SUBGRADE ELEVATION. GASKETS BETWEEN RISERS SHALL BE RUBBER PER ASTM C 443. ADJUSTMENT RINGS SHALL BE PRECAST CONCRETE 1000 PSI AND 5 TO 8% AIR ENTRAINMENT.
9. INLETS SHALL MEET THE SAME REQUIREMENTS AS THOSE LISTED FOR MANHOLES.
10. GRATES SHALL BE RETICULINE AND GALVANIZED PER ASTM A123. MINIMUM GRATE OPENING SIZE WILL BE 24 INCHES X 24 INCHES AND DESIGN FOR A MINIMUM OF H-20 LOADING.
11. MANHOLE FRAMES AND COVERS SHALL BE PER ASTM A 48, CLASS 308, FULLY COATED WITH THE LETTERING "STORM" CAST INTO IT. THE MINIMUM SIZE WILL BE A 24 INCH INSIDE OPENING AND DESIGN FOR A MINIMUM OF H-20 LOADING.
12. CLEANOUTS SHALL BE MADE OF THE SAME PIPE MATERIAL AS THE CARRIER PIPE. A CAST IRON FRAME AND COVER SHALL BE PROVIDED FOR ACCESS AT GRADE AND DESIGNED FOR H-20 LOADING. THE CLEANOUT SHALL BE ENCASED IN STONE OF THE SAME TYPE AS THE PIPE BEDDING FOR THE FULL DEPTH OF THE CLEANOUT.
13. RIP RAP SHALL BE PLACED AT THE END OF ALL OUTFALL STRUCTURES. UNLESS OTHERWISE NOTED, THE RIP RAP SHALL BE A CLEAN DURABLE STONE WITH AVERAGE WEIGHTS OF 100 POUNDS. THE RIP RAP SHALL BE PLACED ON 1 FOOT OF GRAVEL SUBBASE OR STABILIZING FABRIC.
14. DRY WELLS SHALL MEET THE SAME REQUIREMENTS AS THOSE LISTED FOR MANHOLES WITH THE ADDITION OF OPENINGS OF APPROXIMATELY 15% OF THE RINGS INTERIOR SURFACE. THE OPENINGS SHALL BE 1 X 3 INCH SLOTS OR 1 INCH DIAMETER ON THE INSIDE SURFACE. DRY WELLS SHALL BE BACKFILLED WITH A MINIMUM OF 1 FOOT OF CLEAN STONE SIZED BETWEEN 3 AND 4 INCHES. OUTSIDE THE STONE THE ENTIRE STRUCTURE SHALL BE WRAPPED IN FILTER FABRIC TO PREVENT OUTSIDE SOILS FROM ENTERING THE STONE AND DRY WELL.
15. UNLESS OTHERWISE NOTED, TRENCH DRAINS SHALL BE MADE WITH 4 INCH PERFORATED CORRUGATED POLYETHYLENE PIPE ENCASED IN CLEAN STONE SIZED BETWEEN 2 INCH AND 1/2 INCH AND THEN WRAPPED IN FILTER FABRIC. OUTSIDE DIMENSIONS OF THE TRENCH DRAIN WILL NOT BE LESS THAN 1 FOOT.
16. ALL JOINTS BETWEEN PIPES AND PRECAST STRUCTURES SHALL BE MORTARED TIGHT.
17. ALL PIPE SHALL BE PLACED IN ACCORDANCE WITH THE MANUFACTURES RECOMMENDATION AND TO THE LINES AND GRADES SHOWN ON THE DRAWINGS. CARE SHALL BE GIVEN DURING BACKFILL OPERATIONS NOT TO MOVE OR DAMAGE PIPE OR APPURTENANCES WHILE ACHIEVING THE APPROPRIATE COMPACTION REQUIREMENTS.
18. ALL SYSTEMS SHALL BE VISUALLY INSPECTED FOR ALIGNMENT AND WORKMANSHIP. ALL DEBRIS, DIRT OR OTHER FOREIGN OBJECTS SHALL BE REMOVED AND THE SYSTEM FLUSHED CLEAN.
19. ANY PIPES FOUND WITH DIAMETER DEFLECTIONS GREATER THAN 5% OF THE SPECIFIED PIPE DIAMETER WILL BE REPAIRED OR REPLACED. ANY ALIGNMENT DIFFERENTIALS GREATER THAN 5% OF THE DIAMETER OF THE PIPE WILL BE CORRECTED OR REPLACED.
20. ANY CLEANING, REPAIRS OR REPLACEMENT REQUIRED, DUE TO FAILURE OF TESTING OR POOR WORKMANSHIP, SHALL BE DONE BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE CONTRACT.





LEGEND		
EXISTING	PROPOSED	DESCRIPTION
		PROPERTY LINE
		SETBACK LINE
		18" CONCRETE CURB & GUTTER
		EXISTING FENCE
		CONCRETE PAVEMENT

- ## NOTES
1. ALL WORK AND MATERIALS SHALL COMPLY WITH ALL CITY/COUNTY REGULATIONS AND CODES AND O.S.H.A. STANDARDS.
 2. CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF VESTIBULES, SLOPE PAVING, SIDEWALKS, EXIT PORCHES, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
 3. ALL DISTURBED AREAS ARE TO RECEIVE FOUR INCHES OF TOPSOIL, SEED, MULCH AND WATER UNTIL A HEALTHY STAND OF GRASS IS ESTABLISHED.
 4. ALL ISLANDS WITH CURB & GUTTER SHALL BE LANDSCAPED. THOSE ISLANDS ARE TO HAVE 18" CURB & GUTTER.
 5. ALL CURBED RADII ARE TO BE 4' UNLESS OTHERWISE NOTED.
 6. ALL DIMENSIONS AND RADII ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
 7. EXISTING STRUCTURES WITHIN CONSTRUCTION LIMITS ARE TO BE ABANDONED, REMOVED OR RELOCATED AS NECESSARY. ALL COST SHALL BE INCLUDED IN BASE BID.
 8. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELOCATIONS, INCLUDING BUT NOT LIMITED TO, ALL UTILITIES, STORM DRAINAGE, SIGNS, TRAFFIC SIGNALS & POLES, ETC. AS REQUIRED. ALL WORK SHALL BE IN ACCORDANCE WITH GOVERNING AUTHORITIES' SPECIFICATIONS AND SHALL BE APPROVED BY SUCH. ALL COST SHALL BE INCLUDED IN BASE BID.
 9. REFER TO ARCHITECTURAL PLANS FOR SITE LIGHTING ELECTRICAL PLAN.
 10. ALL BOUNDARY AND TOPOGRAPHICAL INFORMATION SHOWN WAS TAKEN FROM A SURVEY BY EAS PROFESSIONALS, INC. DATED 12/11/2023.
 11. BASED ON MAPS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) AVAILABLE ONLINE AT WWW.MSCF.FEMA.GOV, AND BY GRAPHIC PLOTTING ONLY, THIS PROPERTY, LOCATED IN GREENVILLE COUNTY, SOUTH CAROLINA, IS IN ZONE "X" ON FLOOD INSURANCE RATE MAP (FIRM) NO.: 45045C04166Z, WHICH BEARS AN EFFECTIVE DATE OF 08/18/2014 AND IS NOT IN A SPECIAL FLOOD HAZARD AREA.



LEGEND		
EXISTING	PROPOSED	DESCRIPTION
---	---	RIGHT OF WAY LINE
---	---	CONTOUR LINE
x 850.00	850.00	SPOT ELEVATION
SDI		STORM DRAIN INLET
SD	SD	STORM DRAIN PIPE
	---	RETAINING WALL

- ### GRADING NOTES
- CONTRACTOR IS RESPONSIBLE FOR DEMOLITION OF EXISTING STRUCTURES INCLUDING REMOVAL OF ANY EXISTING UTILITIES SERVING THE STRUCTURE. UTILITIES ARE TO BE REMOVED TO THE RIGHT-OF-WAY.
 - THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF ALL EXISTING UTILITIES (ABOVE OR BELOW GROUND) AS SHOWN ON THESE PLANS ARE APPROXIMATE AND WERE LOCATED BASED ON EITHER VISUAL OBSERVATIONS AT THE SITE, EXISTING SURVEYS AND/OR FROM UTILITY OWNERS. GMC DOES NOT GUARANTEE THAT EXISTING UTILITY LOCATIONS SHOWN ARE EXACT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXACT LOCATIONS OF EXISTING UTILITIES (ABOVE OR BELOW GROUND) BEFORE BEGINNING ANY CONSTRUCTION. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANIES AND THE UTILITIES PROTECTION CENTER AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY OWNER AND/OR ENGINEER OF ANY UTILITY CONFLICTS WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
 - ALL CUT OR FILL SLOPES SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED.
 - EXISTING DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIRED AS NEEDED, AND EXISTING PIPES TO BE CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.
 - EXISTING GRADE CONTOUR SHOWN AT 1 FOOT INTERVALS.
 - PROPOSED GRADE CONTOUR SHOWN AT 1 FOOT INTERVALS.
 - IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.
 - ALL STORM PIPE ENTERING STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATERTIGHT.
 - ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT, AND SHALL HAVE TRAFFIC BEARING RINGS & COVERS. MANHOLES IN UNPAVED AREAS SHALL BE 6" ABOVE FINISH GRADE.
 - THE CONTRACTOR SHALL ADHERE TO ALL TERMS & CONDITIONS AS OUTLINED IN THE GENERAL N.P.D.E.S. PERMIT FOR STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES.
 - CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.
 - CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS.
 - ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATION SHALL RECEIVE 4 INCHES OF TOPSOIL. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES AS INDICATED ON THE EROSION CONTROL PLANS. CONTRACTOR SHALL GRASS DISTURBED AREAS UNTIL A HEALTHY STAND OF GRASS IS OBTAINED. AT A MINIMUM, 80% COVERAGE AND 80% DENSITY SHALL BE ACHIEVED PRIOR TO PROJECT CLOSEOUT.
 - CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO SAME.
 - ALL STORM STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED MORTAR INVERT FROM INVERT-IN TO INVERT-OUT.
 - CONTRACTOR SHALL VERIFY BENCHMARKS PRIOR TO SETTING FINISHED GRADES.
 - ALL A.D.A. SPACES SHALL BE GRADED TO HAVE A MAXIMUM SLOPE OF 2.00% IN ANY DIRECTION.
 - CONTRACTOR SHALL COORDINATE ALL EXCAVATION WITH GEOTECHNICAL TESTING COMPANY. ALL COMPACTION SHALL BE PER THE GEOTECHNICAL REPORT.
 - ANY IMPORT OR EXPORT OF SOIL AND/OR MATERIALS SHALL BE TO/FROM A PERMITTED BORROW/SPOIL SITE. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING DOCUMENTATION TO GEOTECHNICAL TESTING COMPANY FOR ANY AND ALL IMPORT/EXPORT SITES USED FOR CONSTRUCTION.
 - THE CONTRACTOR SHALL NOTIFY THE ENGINEER ANY AREAS THAT MAY TRAP STORMWATER RUNOFF AND/OR NOT DRAIN PROPERLY.

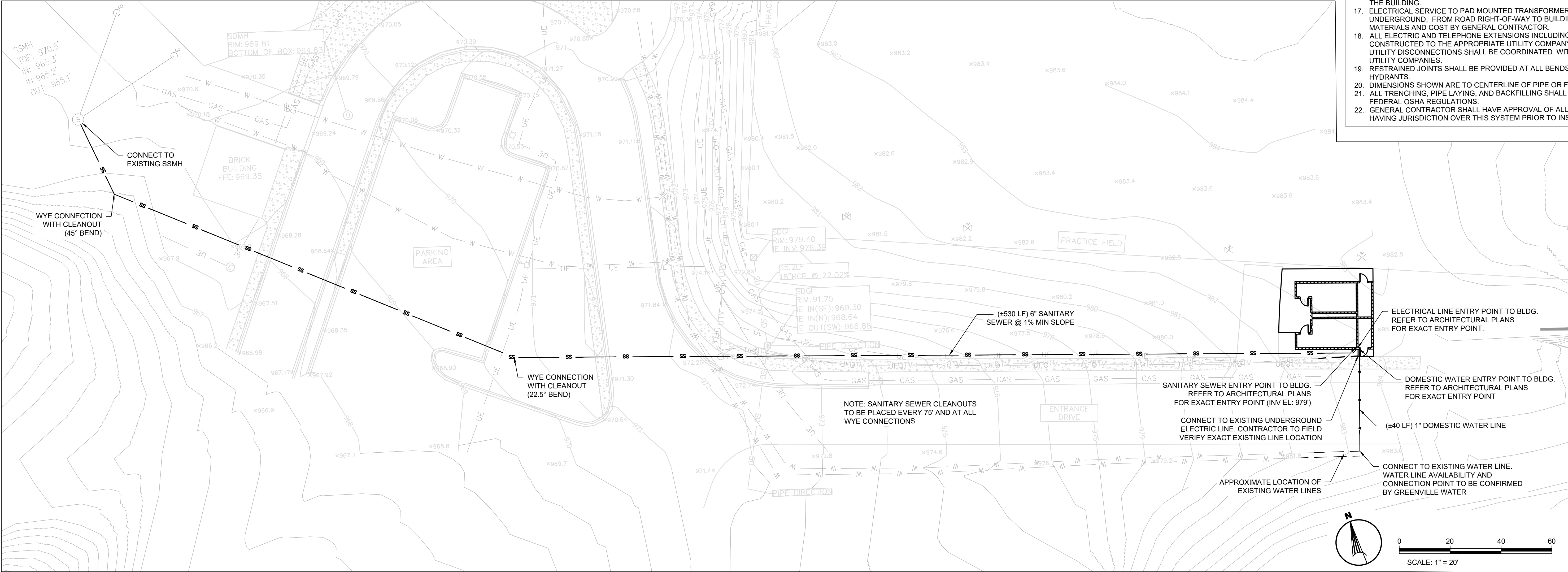
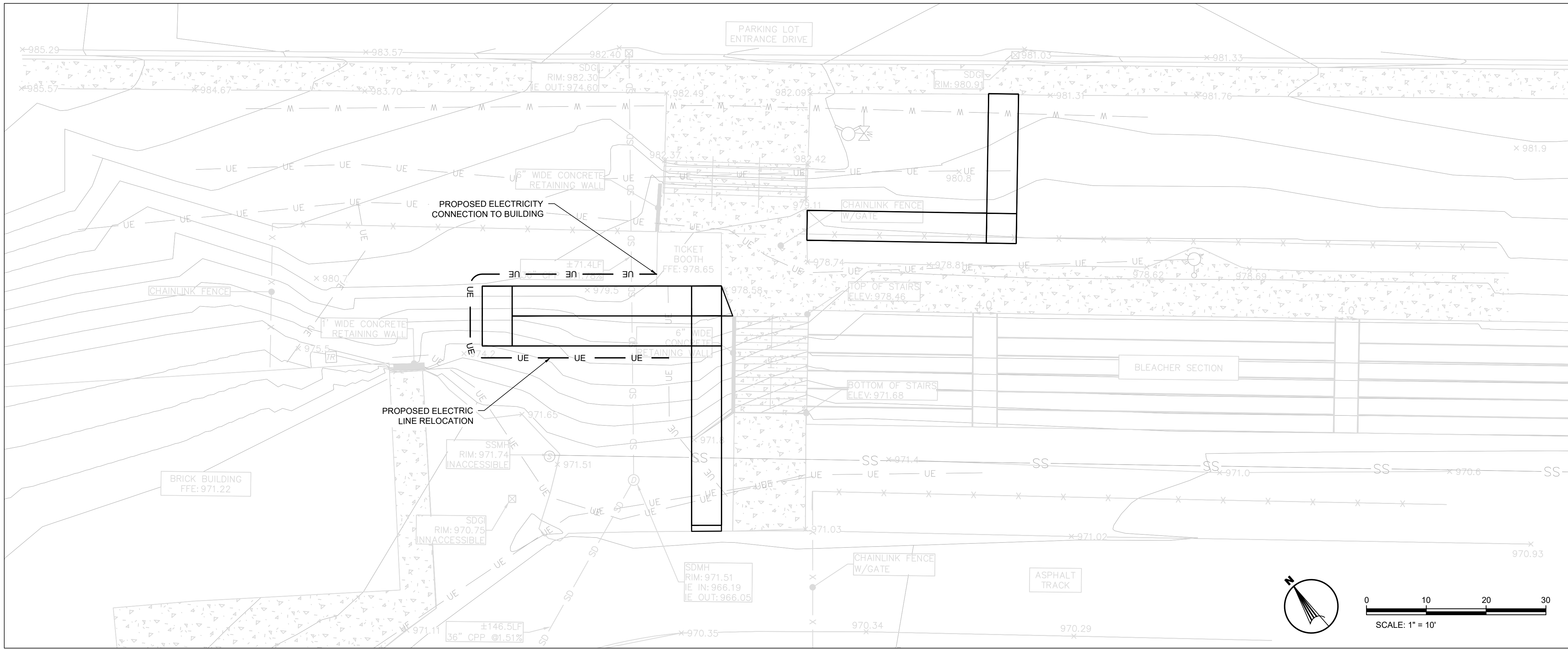
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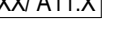
LEGEND

EXISTING	PROPOSED	DESCRIPTION
W	W	WATER LINE
⊕	⊕	FIRE HYDRANT
⊕	⊕	WATER VALVE
—UU/UE/UT—	—UE/T—	UNDERGROUND ELEC/TELE
⊕	⊕	POWER POLE
SS	SS	SANITARY SEWER LINE
UG	G	UNDERGROUND GAS LINE
⊕	⊕	SANITARY SEWER MANHOLE
CO	CO	CLEAN OUT

UTILITY NOTES

1. ALL SANITARY SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE SOUTH CAROLINA AND GREENVILLE COUNTY.
2. WATER LINES SHALL BE INSTALLED WITH A MINIMUM OF 36" OF COVER UNLESS OTHERWISE NOTED. ALL WATER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF GREENVILLE COUNTY AND GREENVILLE WATER.
3. VALVES SHALL BE RESILIENT SEAT GATE VALVES, DIRECT BURY WITH A VALVE BOX (AWWA C509).
4. ALL SERVICE LINES LESS THAN 3" IN DIAMETER SHALL BE PVC.
5. SANITARY SEWER LINES (INCLUDING LATERALS) SHALL BE POLYVINYL CHLORIDE (PVC) SDR 26 PER ASTM D-3034.
6. SEWER CLEANOUTS SHALL BE IN ACCORDANCE WITH GREENVILLE COUNTY DETAILS AND SPECIFICATIONS.
7. THE CONTRACTOR SHALL REFER TO THE MEP PLANS FOR EXACT UTILITY EXIT POINTS, EXIT PORCHES, ETC.
8. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS AND FIELD LOCATIONS WHEN POSSIBLE, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF TRENCHING. IF CLEARANCES ARE LESS THAN SPECIFIED ON THE PLAN OR 12", WHICHEVER IS LESS, CONTACT THE DESIGN ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
9. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND/OR FINAL CONNECTION OF SERVICES.
10. A MINIMUM OF 10 FEET HORIZONTAL SEPARATION MUST BE MAINTAINED BETWEEN WATER AND SEWER LINES. THE VERTICAL SEPARATION IS TO BE A MINIMUM OF 18".
11. REFER TO THE PHOTOMETRIC AND ARCHITECTURAL PLANS FOR SITE LIGHTING ELECTRICAL DESIGN AND LAYOUT.
12. ALL SITEWORK SHALL MEET OR EXCEED GREENVILLE COUNTY STANDARDS, AND THE SITEWORK SPECIFICATIONS.
13. CONTRACTOR TO PROVIDE ALL TRENCHING, BACKFILLING, & INSTALL ALL ELECTRICAL CONDUITS TO UTILITY COMPANY SPECIFICATIONS.
14. LOCATION OF SITE UTILITIES SHALL BE VERIFIED BY GENERAL CONTRACTOR & THE PROPER UTILITY COMPANY PROVIDING SERVICE.
15. GENERAL CONTRACTOR SHALL PROVIDE 2' x 2' x 6" THICK CONCRETE APRON AT ALL CLEANOUTS OUTSIDE OF BUILDING.
16. GENERAL CONTRACTOR WILL BE RESPONSIBLE FOR ALL TAP AND TIE ON FEES REQUIRED, AS WELL AS COST OF UNDERGROUND SERVICE CONNECTIONS TO THE BUILDING.
17. ELECTRICAL SERVICE TO PAD MOUNTED TRANSFORMER SHALL BE RUN UNDERGROUND, FROM ROAD RIGHT-OF-WAY TO BUILDING. ASSOCIATED MATERIALS AND COST BY GENERAL CONTRACTOR.
18. ALL ELECTRIC AND TELEPHONE EXTENSIONS INCLUDING SERVICE LINE SHALL BE CONSTRUCTED TO THE APPROPRIATE UTILITY COMPANY SPECIFICATIONS. ALL UTILITY DISCONNECTIONS SHALL BE COORDINATED WITH THE DESIGNATED UTILITY COMPANIES.
19. RESTRAINED JOINTS SHALL BE PROVIDED AT ALL BENDS, TEES, AND FIRE HYDRANTS.
20. DIMENSIONS SHOWN ARE TO CENTERLINE OF PIPE OR FITTING.
21. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.
22. GENERAL CONTRACTOR SHALL HAVE APPROVAL OF ALL GOVERNING AGENCIES HAVING JURISDICTION OVER THIS SYSTEM PRIOR TO INSTALLATION.

ARCHITECTURAL SYMBOLS

	CASEWORK ELEVATION
	DOOR NUMBER
	INTERIOR WINDOW NUMBER
	EXTERIOR WINDOW / CURTAIN WALL NUMBER
	WALL TYPE
	CEILING TYPE
	CEILING HEIGHT

ALL INTERIOR CMU WALLS SHALL BE 8 INCHES NOMINAL THICKNESS. UNLESS NOTED OTHERWISE.

THRESHOLD SHALL BE 1/2" ABOVE FINISH FLOOR TYPE SHALL BE AS SHOWN ON FLOOR PLANS (XX.XX.XX). THIS SEE SHEET A0.1 FOR TYPES. ALL MASONRY WALLS AND INTERIOR STUD WALLS SHALL EXTEND TO TOP OF CEILING OR ROOF DECK UNLESS NOTED OTHERWISE. PER PARTITION TYPE.

PROVISIONS SHALL BE MADE AT FULL HEIGHT NON-STRUCTURAL WALLS TO ALLOW FOR REMOVAL OF THE BUILDING STRUCTURE WITHOUT TRANSFER OF COMPRESSIVE LOADS TO WALL. FILL IRREGULARITIES BETWEEN TOP OF WALL AND CEILING WITH CONCRETE OR OTHER APPROVED STOPPING MATERIALS AS REQUIRED TO MEET FIRE RATING OF STOPPING WALLS. SEE DETAILS ON SHEET XX.X.

CEILING JOINT DRAUGHTS FOR BRICKS OR MONOLAB BEARING MASONRY WALLS.

FURNISH AND INSTALL FIRE-TREATED WOOD BLOCKING OR ANOTHER ACCEPTED METHOD TO PROVIDE PROTECTION FOR THE PROPER ANCHORAGE OF ALL WALL ATTACHED ITEMS. I.E. TIE ACCESSORIES, CASEWORK, MILLWORK, WALL PANELS, ETC. EXCEPTS, MINIMUM 2" BENEATH DOOR STOPS, AUDIO VISUAL BRACKETS, AND OTHER WALL ATTACHED ITEMS.

CONTROL JOINTS (CJ) AND CONTROL JOINTS ABOVE (CAJ) SHALL BE LOCATED AS SHOWN ON THE FLOOR PLAN AND INDICATED BY THE FOLLOWING SYMBOLS. CRACKS AND RISERS OCCUR IN SINGLE WYTHE MASONRY WALLS, AND WHERE MASONRY WALLS BEARING ON THE CONCRETE FLOOR ARE LOCATED AT CORNERS OR CHANGES IN CONCRETE FOOTINGS OR AS INDICATED ON DRAWINGS.

A. GENERAL NOTES APPLY TO ALL SHEETS

B. DIMENSIONS ARE ACTUAL AND ARE TO FACE OF STUDS, FACE OF CONCRETE WALLS, FACE OF CMU, FACE OF FRAMING, FACE OF CURBS, FACE OF CURBS, UNLESS NOTED OTHERWISE.

C. INCLUDE ALL OWNER-FURNISHED AND INSTALLED ITEMS AND OWNER-FURNISHED AND CONTRACTOR INSTALLED ITEMS IN THE CONSTRUCTION SCHEDULE, AND SHALL COORDINATE WITH THE OWNER TO PREPARE THESE SCHEDULES.

D. COORDINATE ALL MECHANICAL CHASE SIZES WITH THE MECHANICAL CONTRACTOR.

E. CONSTRUCTION DOCUMENTS ARE COMPLEMENTARY. SEE DRAWING FOR QUANTITIES AND LOCATION OF ITEMS. SEE SPECIFICATIONS FOR MATERIALS AND METHODS.

F. WORK: ALL ASPECTS OF THE WORK AND ITEMS NOT SPECIFICALLY MENTIONED, BUT NECESSARY TO MAKE A COMPLETE WORKING INSTALLATION, SHALL BE INCLUDED AND INDICATED IN THE CONSTRUCTION SCHEDULE.

G. REFERENCES TO OTHER SHEETS OR TO OTHER DRAWINGS.

H. GENERAL SHEET NOTES ONLY APPLY TO PARTICULAR DRAWING OR SERIES OF DRAWINGS.

I. NO ASBESTOS OR PCB CONTAINING MATERIALS SHALL BE USED ON THIS PROJECT.

J. SEE DRAWING FOR DISCREPANCY.

K. SEE DRAWING FOR DISCREPANCY.

L. DIMENSIONS ARE ACTUAL AND ARE TO FACE OF STUDS, FACE OF CONCRETE WALLS, FACE OF CMU, FACE OF FRAMING, FACE OF CURBS, UNLESS NOTED OTHERWISE.

M. DIMENSIONS ARE ACTUAL AND ARE TO FACE OF STUDS, FACE OF CONCRETE WALLS, FACE OF CMU, FACE OF FRAMING, FACE OF CURBS, UNLESS NOTED OTHERWISE.

N. DIMENSIONS ARE ACTUAL AND ARE TO FACE OF STUDS, FACE OF CONCRETE WALLS, FACE OF CMU, FACE OF FRAMING, FACE OF CURBS, UNLESS NOTED OTHERWISE.

O. DIMENSIONS ARE ACTUAL AND ARE TO FACE OF STUDS, FACE OF CONCRETE WALLS, FACE OF CMU, FACE OF FRAMING, FACE OF CURBS, UNLESS NOTED OTHERWISE.

P. DIMENSIONS ARE ACTUAL AND ARE TO FACE OF STUDS, FACE OF CONCRETE WALLS, FACE OF CMU, FACE OF FRAMING, FACE OF CURBS, UNLESS NOTED OTHERWISE.

Q. DIMENSIONS ARE ACTUAL AND ARE TO FACE OF STUDS, FACE OF CONCRETE WALLS, FACE OF CMU, FACE OF FRAMING, FACE OF CURBS, UNLESS NOTED OTHERWISE.

R. DIMENSIONS ARE ACTUAL AND ARE TO FACE OF STUDS, FACE OF CONCRETE WALLS, FACE OF CMU, FACE OF FRAMING, FACE OF CURBS, UNLESS NOTED OTHERWISE.

S. DIMENSIONS ARE ACTUAL AND ARE TO FACE OF STUDS, FACE OF CONCRETE WALLS, FACE OF CMU, FACE OF FRAMING, FACE OF CURBS, UNLESS NOTED OTHERWISE.

T. DIMENSIONS ARE ACTUAL AND ARE TO FACE OF STUDS, FACE OF CONCRETE WALLS, FACE OF CMU, FACE OF FRAMING, FACE OF CURBS, UNLESS NOTED OTHERWISE.

U. DIMENSIONS ARE ACTUAL AND ARE TO FACE OF STUDS, FACE OF CONCRETE WALLS, FACE OF CMU, FACE OF FRAMING, FACE OF CURBS, UNLESS NOTED OTHERWISE.

V. DIMENSIONS ARE ACTUAL AND ARE TO FACE OF STUDS, FACE OF CONCRETE WALLS, FACE OF CMU, FACE OF FRAMING, FACE OF CURBS, UNLESS NOTED OTHERWISE.

W. DIMENSIONS ARE ACTUAL AND ARE TO FACE OF STUDS, FACE OF CONCRETE WALLS, FACE OF CMU, FACE OF FRAMING, FACE OF CURBS, UNLESS NOTED OTHERWISE.

X. DIMENSIONS ARE ACTUAL AND ARE TO FACE OF STUDS, FACE OF CONCRETE WALLS, FACE OF CMU, FACE OF FRAMING, FACE OF CURBS, UNLESS NOTED OTHERWISE.

Y. DIMENSIONS ARE ACTUAL AND ARE TO FACE OF STUDS, FACE OF CONCRETE WALLS, FACE OF CMU, FACE OF FRAMING, FACE OF CURBS, UNLESS NOTED OTHERWISE.

Z. DIMENSIONS ARE ACTUAL AND ARE TO FACE OF STUDS, FACE OF CONCRETE WALLS, FACE OF CMU, FACE OF FRAMING, FACE OF CURBS, UNLESS NOTED OTHERWISE.

MATERIAL DESCRIPTION	
S	= STEEL (METAL STUDS)
W	= WOOD STUDS
H	= SHAFT WALLS
M	= MASONRY
C	= CONCRETE
RATING / HEIGHT	
A	= FULL HEIGHT / UNDERSIDE OF
B	= 6" ABOVE CEILING (NOT RATED)
C	= UNDERSIDE OF CEILING (NOT RATED)
D	= PARTIAL HEIGHT (NOT RATED)
X	= VARIABLE HEIGHT (NOT RATED)
S	= SMOKE PARTITION (NOT RATED)
0	= 0 HOUR RATED (CORRIDOR)
5	= 0.5 HOUR RATED
1	= 1 HOUR RATED
2	= 2 HOUR RATED
3	= 3 HOUR RATED
4	= 4 HOUR RATED

2 = FURRING STRIPS / CHANNELS
3 = 1" x 1" METAL
4 = 2 1/2" METAL / 1 1/2" WOOD
5 = 3/8" METAL
6 = 4" METAL / 3 1/2" WOOD / 3/8" CMU
7 = 4" METAL / 1 1/2" WOOD / 1/8" CMU / 8" CONC
8 = 8" METAL / 1 1/4" WOOD / 7/8" CMU / 8" CONC
9 = 10" CONC
10 = 12" CONC
11 = 11/8" CMU / 12" CONC
12 = NON-STANDARD FRAMING. SEE DETAILS
13 = DOUBLE STUD FRAMING
14 = STAGGERED STUD FRAMING

GYPSPUM WALLBOARD INDICATOR
(NOT INCLUDING SLASH LINER)

0 = NO GWB
1 = ONE LAYER, TAG SIDE
2 = ONE LAYER, EACH SIDE
3 = ONE LAYER TAG SIDE, ONE LAYER OTHER
4 = TWO TAGS, EACH SIDE
5 = TWO LAYERS TAG SIDE, NO GWB OTHER
6 = THREE LAYERS, EACH SIDE



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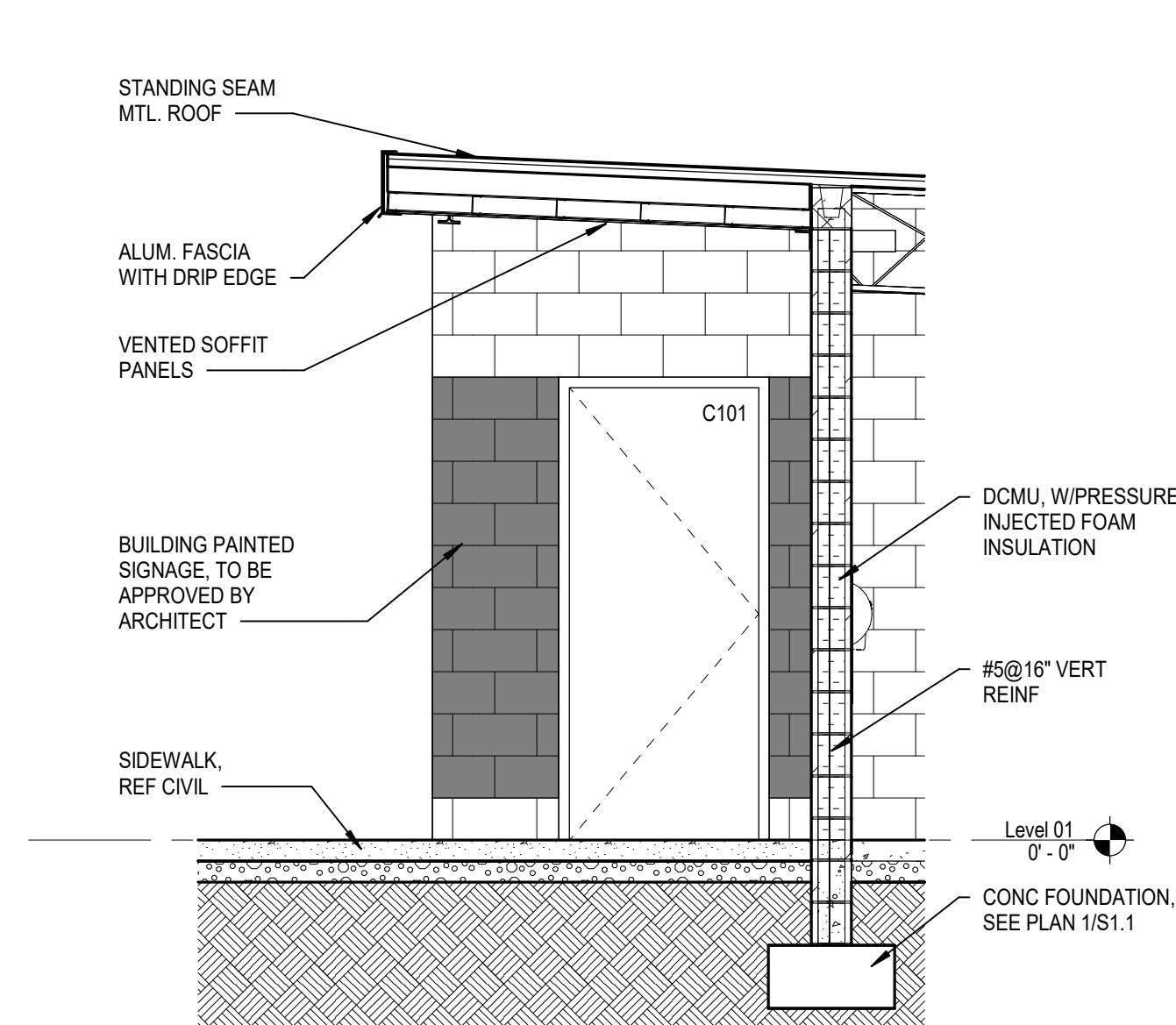
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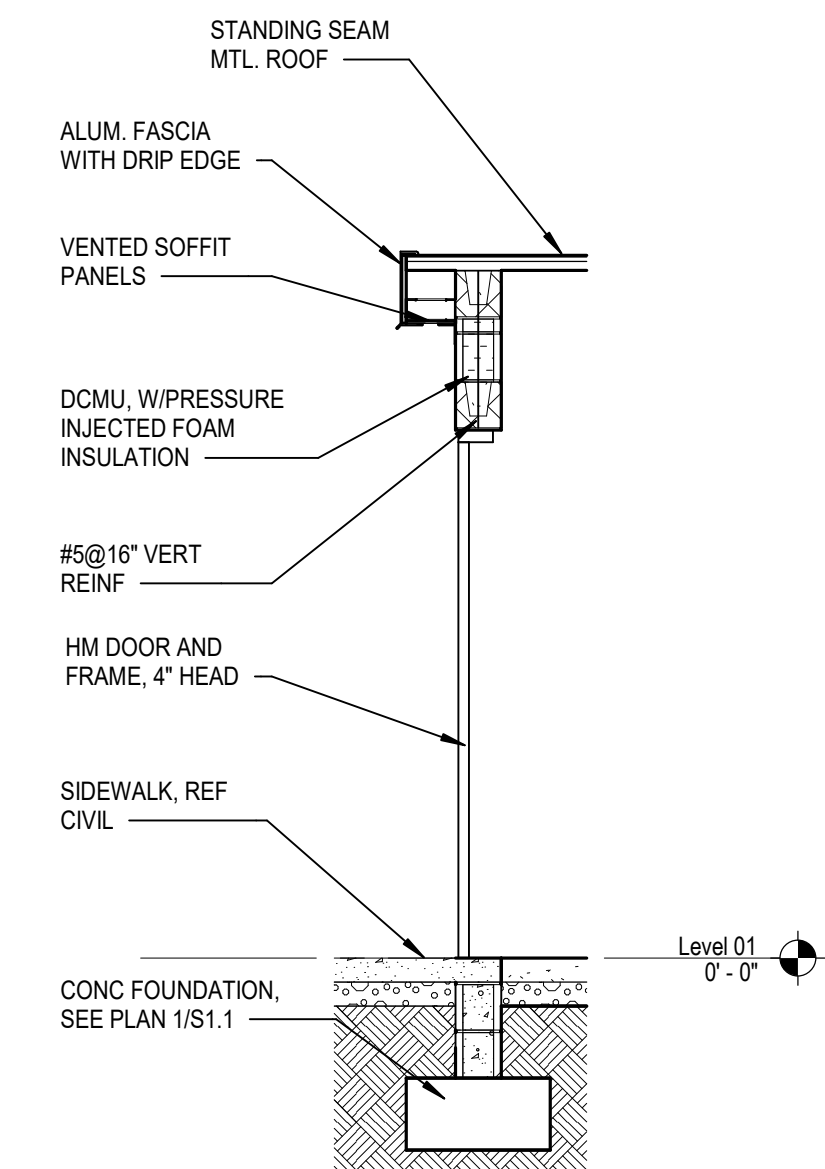
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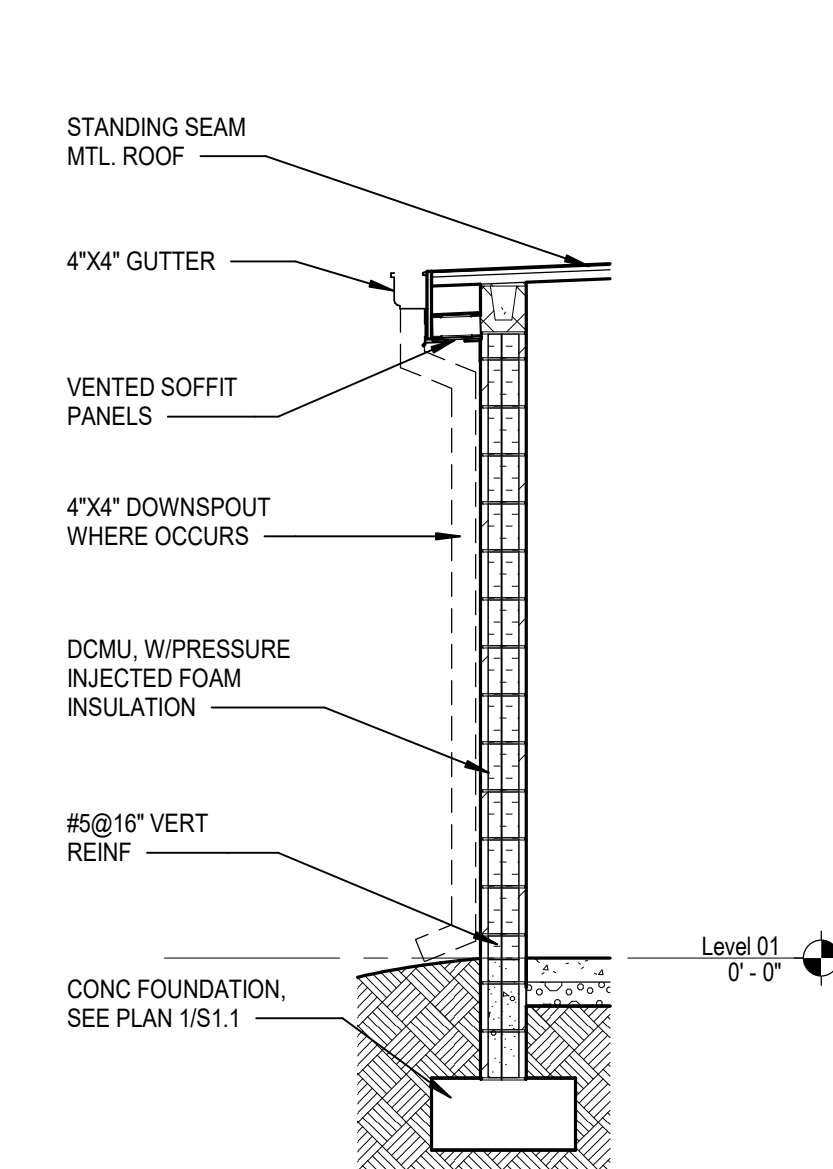
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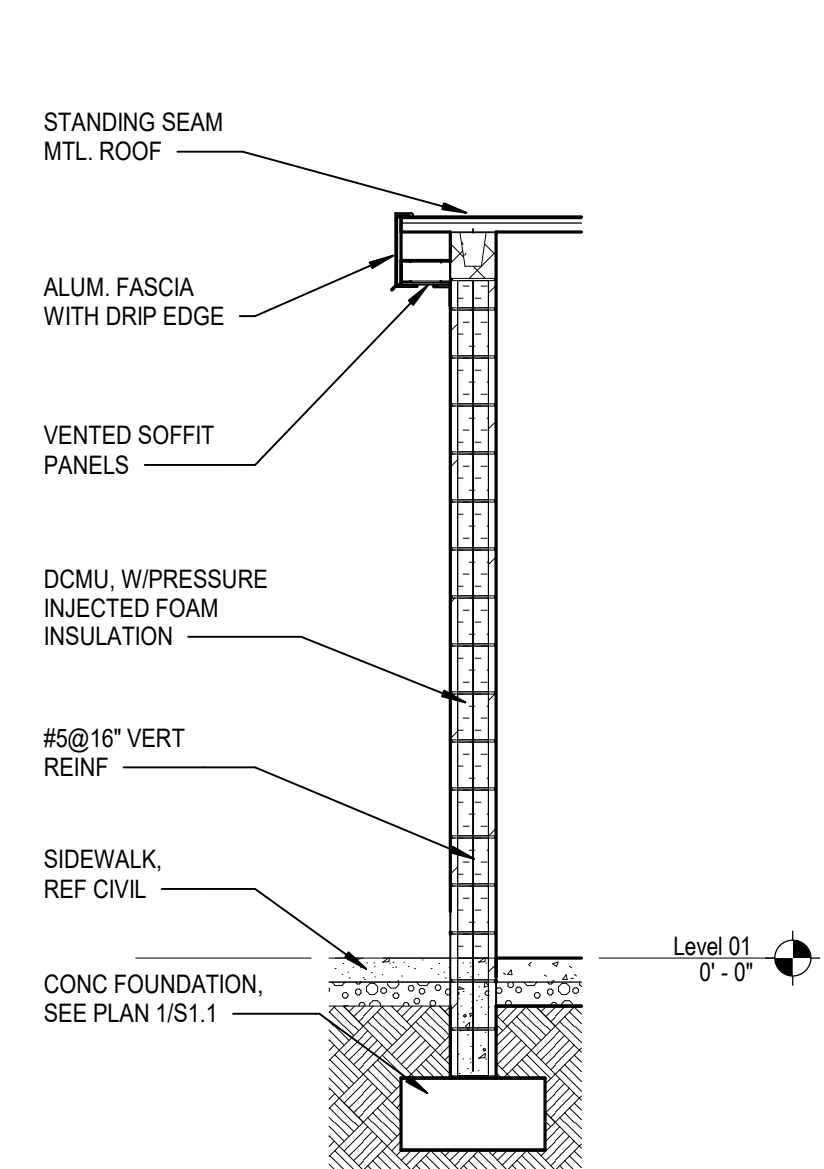
3A WALL SECTION
A2.1 SCALE: 3/8" = 1'-0"



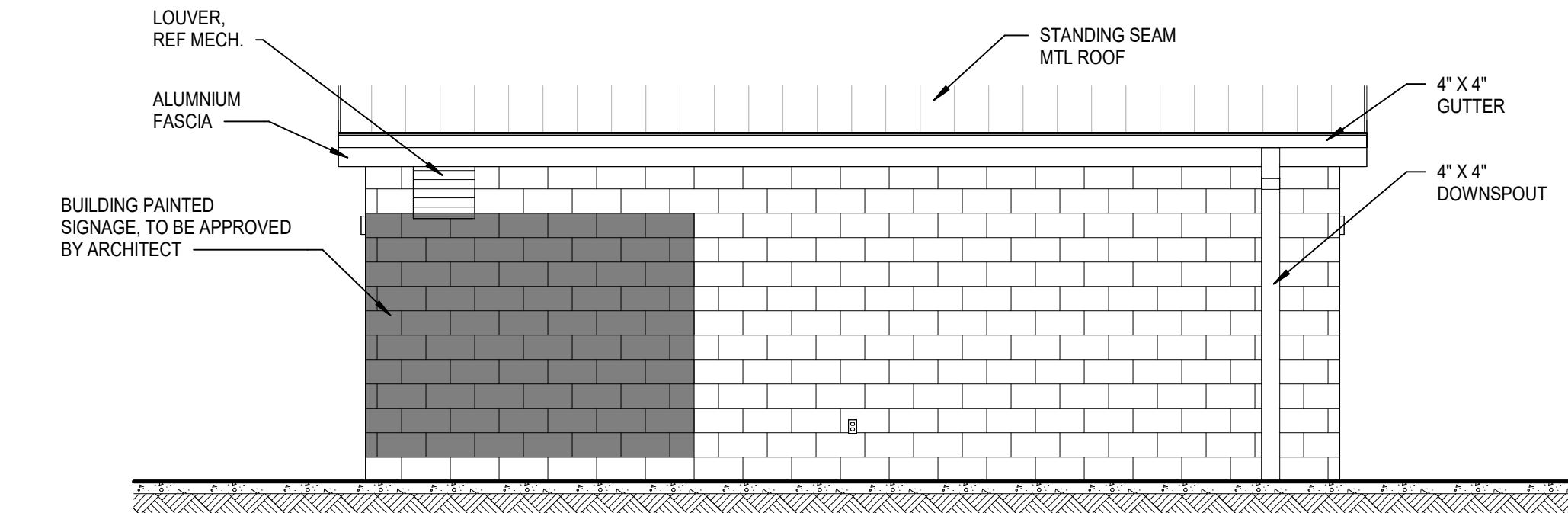
3B WALL SECTION
A2.1 SCALE: 3/8" = 1'-0"



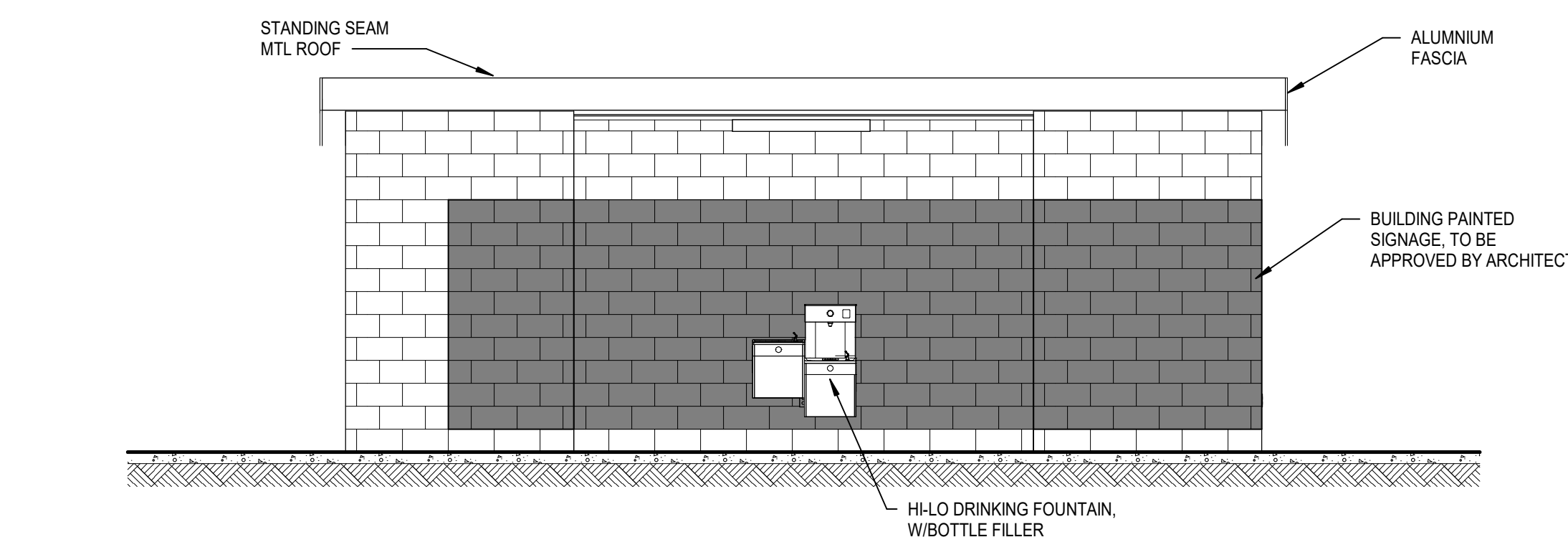
3C WALL SECTION
A2.1 SCALE: 3/8" = 1'-0"



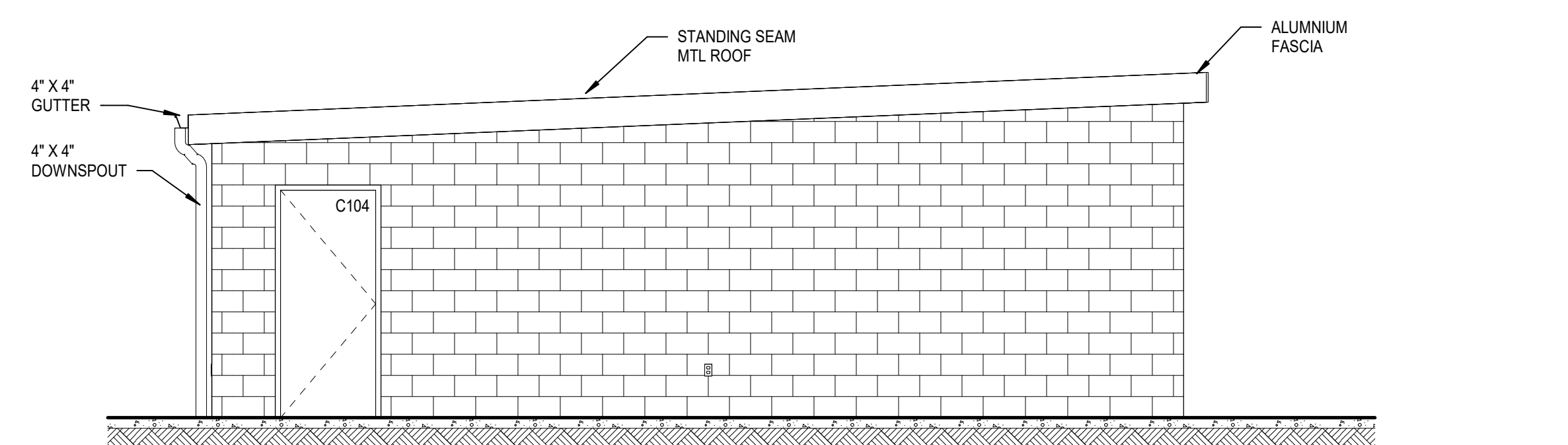
3D WALL SECTION
A2.1 SCALE: 3/8" = 1'-0"



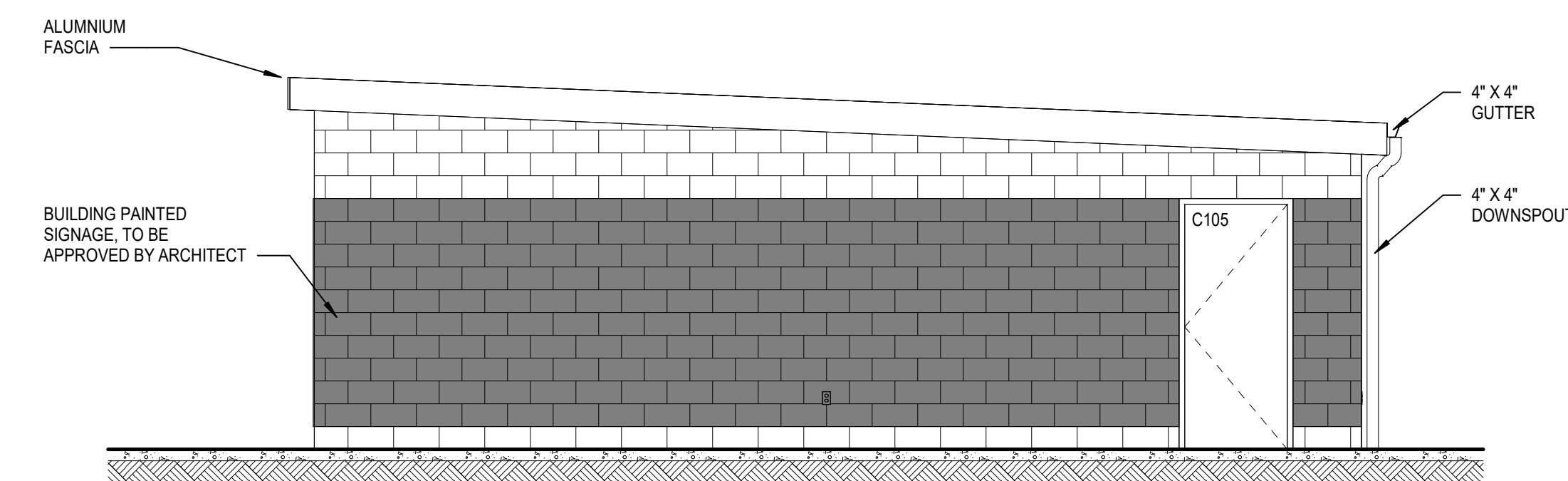
7 EXT. ELEVATION
A2.1 SCALE: 1/4" = 1'-0"



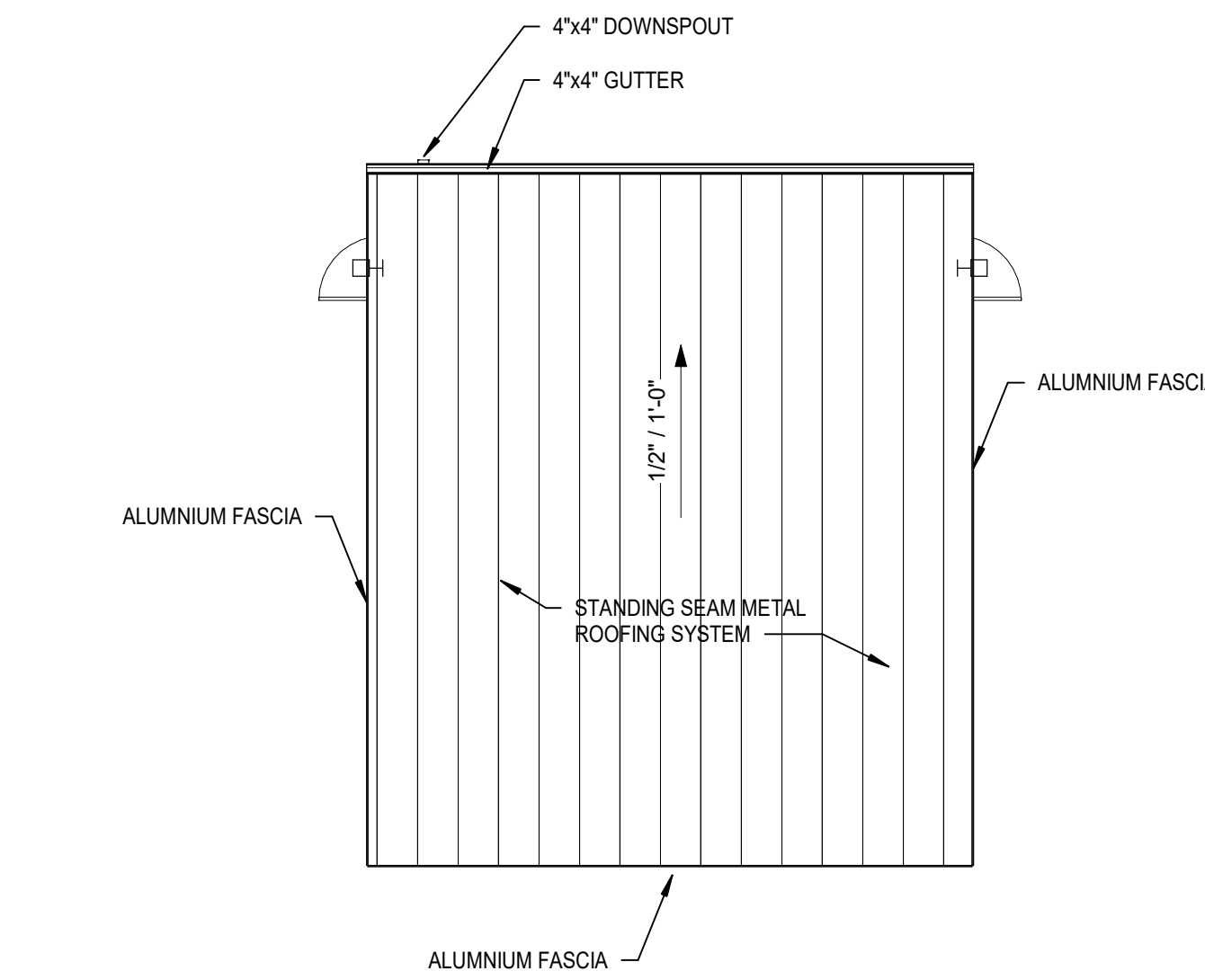
5A EXT. ELEVATION
A2.1 SCALE: 1/4" = 1'-0"



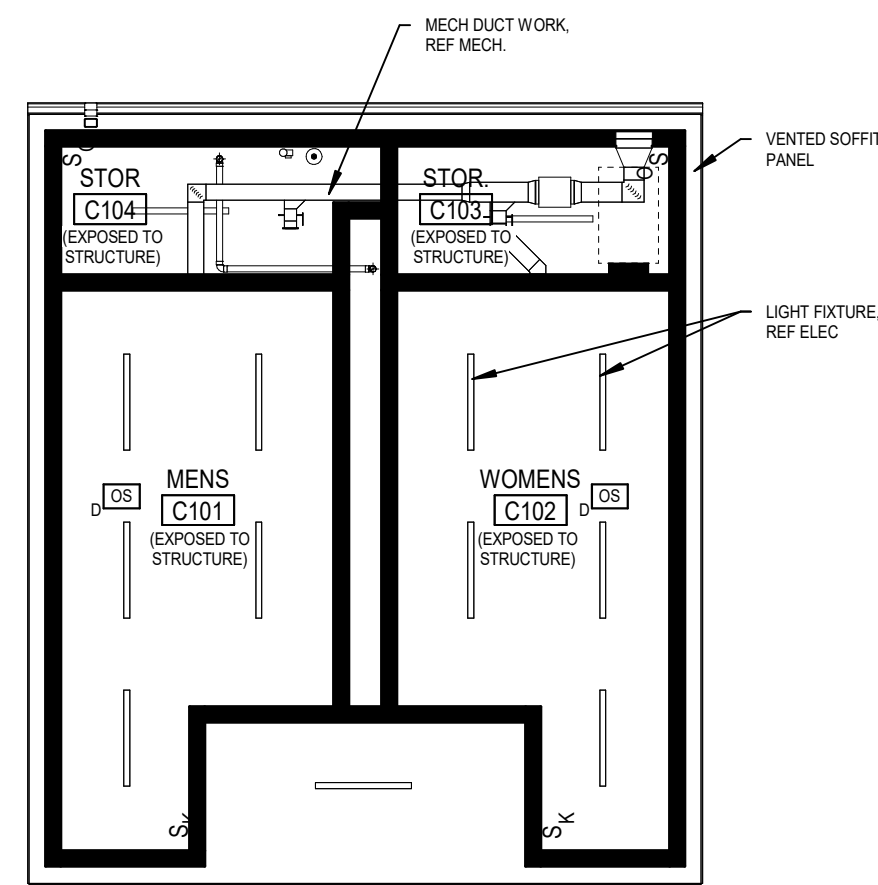
4C EXT. ELEVATION
A2.1 SCALE: 1/4" = 1'-0"



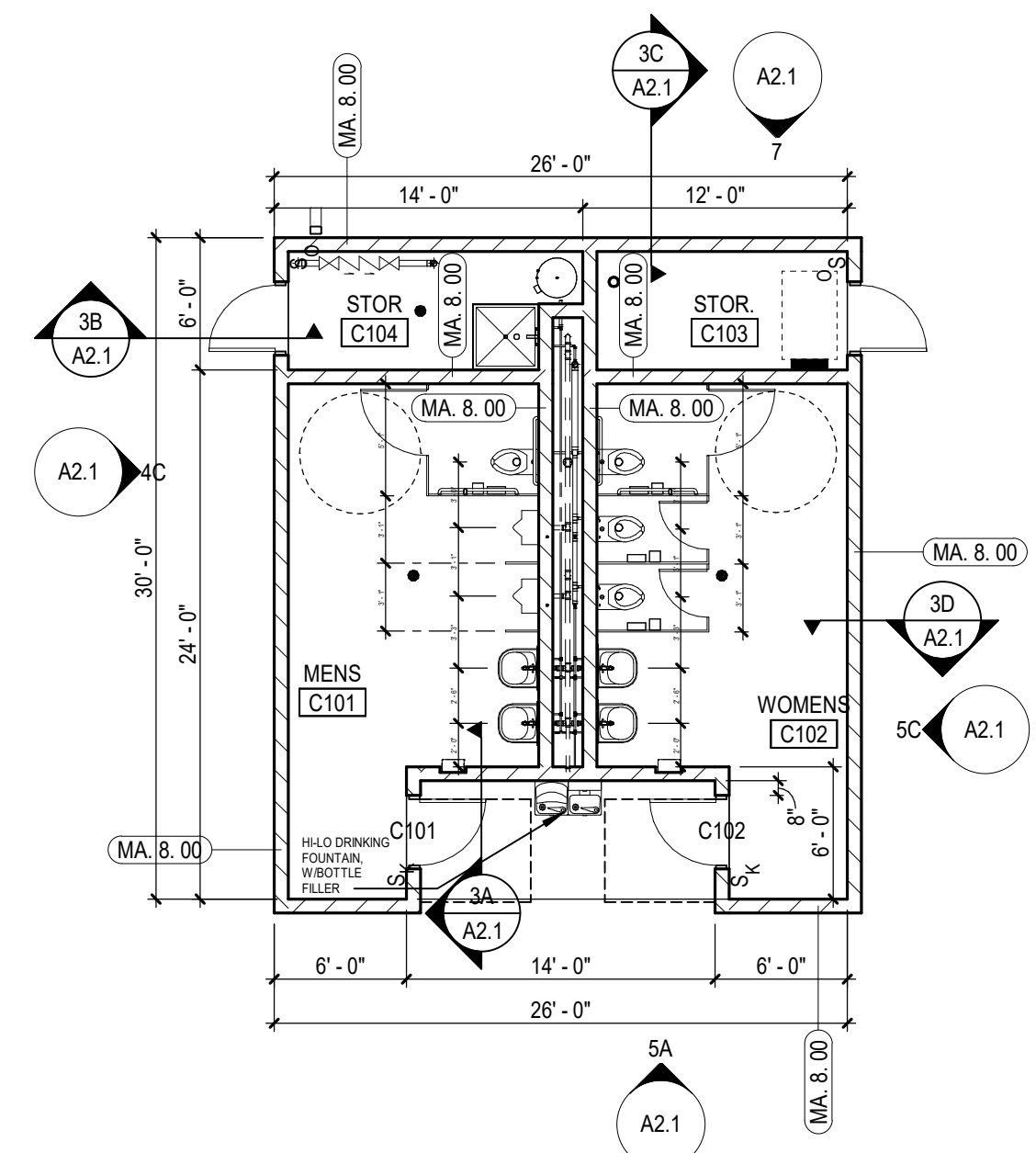
5C EXT. ELEVATION
A2.1 SCALE: 1/4" = 1'-0"



3E ROOF PLAN
A2.1 SCALE: 1/8" = 1'-0"



4E CEILING PLAN
A2.1 SCALE: 1/8" = 1'-0"



5E FLOOR PLAN
A2.1 SCALE: 1/8" = 1'-0"

GENERAL ARCHITECTURAL NOTES

- ALL INTERIOR CMU WALLS SHALL BE 8 INCHES NOMINAL THICKNESS, UNLESS NOTED OTHERWISE. PARTITION TYPES SHALL BE DESIGNATED ON FLOOR PLANS (XX.X.XX). THIS: SEE SHEET A4.1 FOR TYPES. ALL MASONRY WALLS AND INTERIOR STUD WALLS SHALL EXTEND TO UNDERSIDE OF FLOOR OR ROOF DECK ABOVE UNLESS NOTED OTHERWISE. PER PARTITION TYPE.
- PROVISIONS SHALL BE MADE AT ALL FULL HEIGHT NON-BEARING WALLS FOR 1-INCH VERTICAL MOVEMENT OF THE BUILDING STRUCTURE WITHOUT TRANSFER OF COMPRESSIVE LOADS TO WALL. FILL IRREGULARITIES BETWEEN TOP OF WALL AND DECK ABOVE WITH MINERAL WOOL INSULATION OR FIRE STOPPING MATERIALS AS REQUIRED TO MEET FIRE RATING OF RESPECTIVE WALLS. SEE DETAILS ON SHEET XX.X.
- SEE STRUCTURAL DRAWINGS FOR BRACING OF NON-LOAD BEARING MASONRY WALLS.
- FURNISH AND INSTALL FIRE-TREATED WOOD BLOCKING OR METAL BACKING PLATE IN METAL STUD PARTITIONS FOR THE PROPER ANCHORAGE OF ALL WALL ATTACHED ITEMS, I.E. TOILET ACCESSORIES, CASEWORK, MILLWORK, WALL-MOUNTED FIXTURES, MARKER BOARDS, TACK BOARDS, DOOR STOPS, AUDIO VISUAL BRACKETS, AND OTHER WALL ATTACHED ITEMS.
- MASONRY CONTROL JOINTS (CJ) AND CONTROL JOINTS ABOVE (CA) SHALL BE LOCATED AS SHOWN ON THE FLOOR PLAN AND BUILDING ELEVATIONS, AND WHERE LARGE PLUMBING VENTS OR RISERS OCCUR IN SINGLE WYTHE MASONRY WALLS, AND WHERE MASONRY WALLS BEARING ON THE CONCRETE FLOOR SLAB ABUT MASONRY WALLS BEARING ON CONCRETE FOOTINGS OR AS INDICATED ON DRAWINGS.

ROOF PLAN GENERAL NOTES

- ROOF PLAN GENERAL NOTES APPLY TO ALL ROOF PLAN SHEETS.
- ROOF SLOPES ARE CREATED BY SLOPING THE ROOF STRUCTURE UNLESS NOTED OTHERWISE. SEE STRUCTURAL DRAWINGS FOR ELEVATIONS OF THE HIGH AND LOW POINTS TO DETERMINE PROPER TAPER IN INSULATION.
- SEE STRUCTURAL DRAWINGS FOR FRAMING AROUND ROOF PENETRATIONS.
- COORDINATE THE SIZE AND LOCATION OF ROOF PENETRATIONS FOR MECHANICAL AND ELECTRICAL EQUIPMENT. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR PENETRATIONS NOT SHOWN ON THIS DRAWING.

REFLECTED CEILING PLAN GENERAL NOTES

- IN AREAS WITH EXPOSED STRUCTURE CEILINGS, COORDINATE EXACT LOCATIONS OF MECHANICAL GRILLES, DIFFUSERS, DUCTWORK AND ELECTRICAL FIXTURES WITH EACH REPRESENTATIVE SUBCONTRACTOR.
- ALL WALLS EXTEND TO UNDERSIDE OF DECK EXCEPT THOSE SHOWN SHADED IN WHICH GYPSUM BOARD OR MASONRY EXTENDS MIN 4 INCHES ABOVE FINISHED CEILING. ALL METAL STUDS EXTEND TO UNDERSIDE OF FLOOR OR ROOF DECK.

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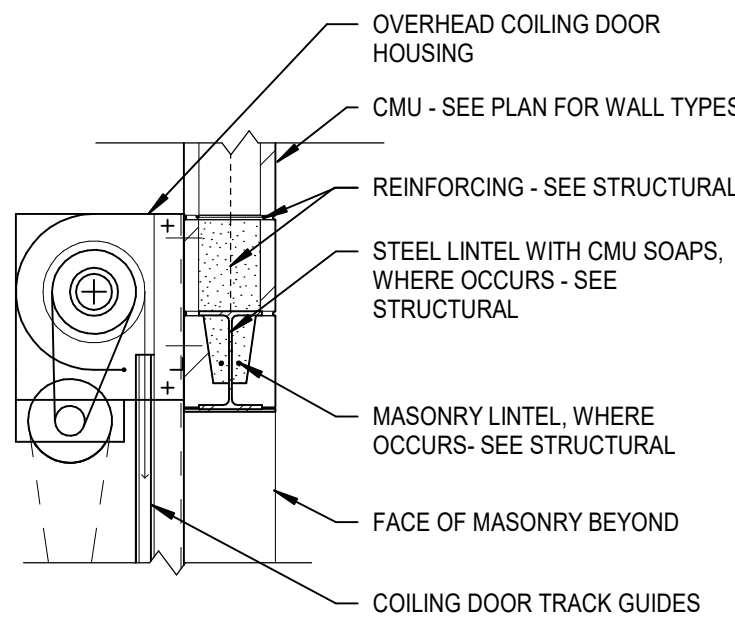
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DOOR AND FRAME SCHEDULE															
NUMBER	NO. OF PANELS	PANEL				FRAME				FIRE RATING	HARDWARE SET	DETAILS			
		WIDTH	HEIGHT	THICKNESS	MATERIAL	GLASS	TYPE	MATERIAL	TYPE			HEAD	JAMB LEFT	JAMB RIGHT	SILL
A101	1	3'-0"	7'-0"	2"	HM	-	F	HM	1	-	-	5A/A3.1	5B/A3.1	5B/A3.1	5C/A3.1
A102	1	3'-0"	7'-0"	2"	HM	-	F	HM	1	-	-	5A/A3.1	5B/A3.1	5B/A3.1	5C/A3.1
A103	1	3'-0"	7'-0"	2"	HM	-	F	HM	1	-	-	5A/A3.1	5B/A3.1	5B/A3.1	5C/A3.1
A104	1	3'-0"	7'-0"	2"	HM	-	F	HM	1	-	-	5A/A3.1	5B/A3.1	5B/A3.1	5C/A3.1
B105	1	7'-4"	4'-8"	2"	STL	-	C	STL	1	-	-	4A/A3.1	4B/A3.1	4B/A3.1	4C/A3.1
C101	1	3'-0"	7'-2"	2"	HM	-	F	HM	1	-	-	5A/A3.1	5B/A3.1	5B/A3.1	5C/A3.1
C102	1	3'-0"	7'-2"	2"	HM	-	F	HM	1	-	-	5A/A3.1	5B/A3.1	5B/A3.1	5C/A3.1
C104	1	3'-0"	7'-2"	2"	HM	-	F	HM	1	-	-	5A/A3.1	5B/A3.1	5B/A3.1	5C/A3.1
C105	1	3'-0"	7'-2"	2"	HM	-	F	HM	1	-	-	5A/A3.1	5B/A3.1	5B/A3.1	5C/A3.1

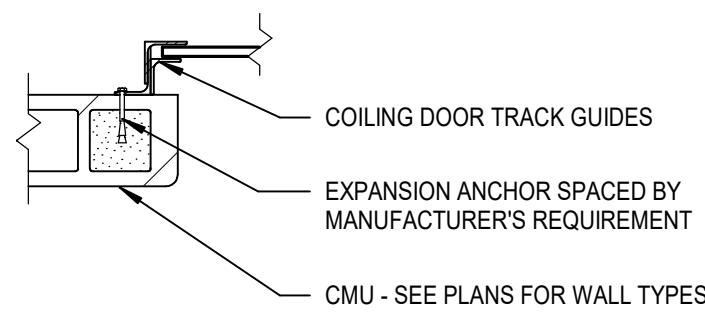


DOOR PANEL TYPES

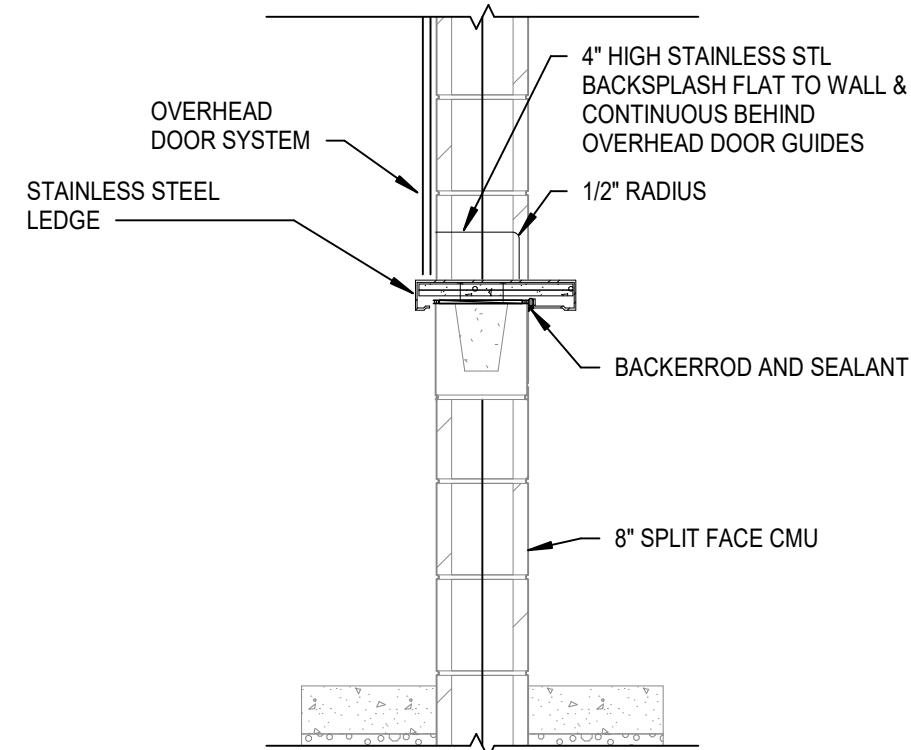
INTERIOR FRAME TYPES



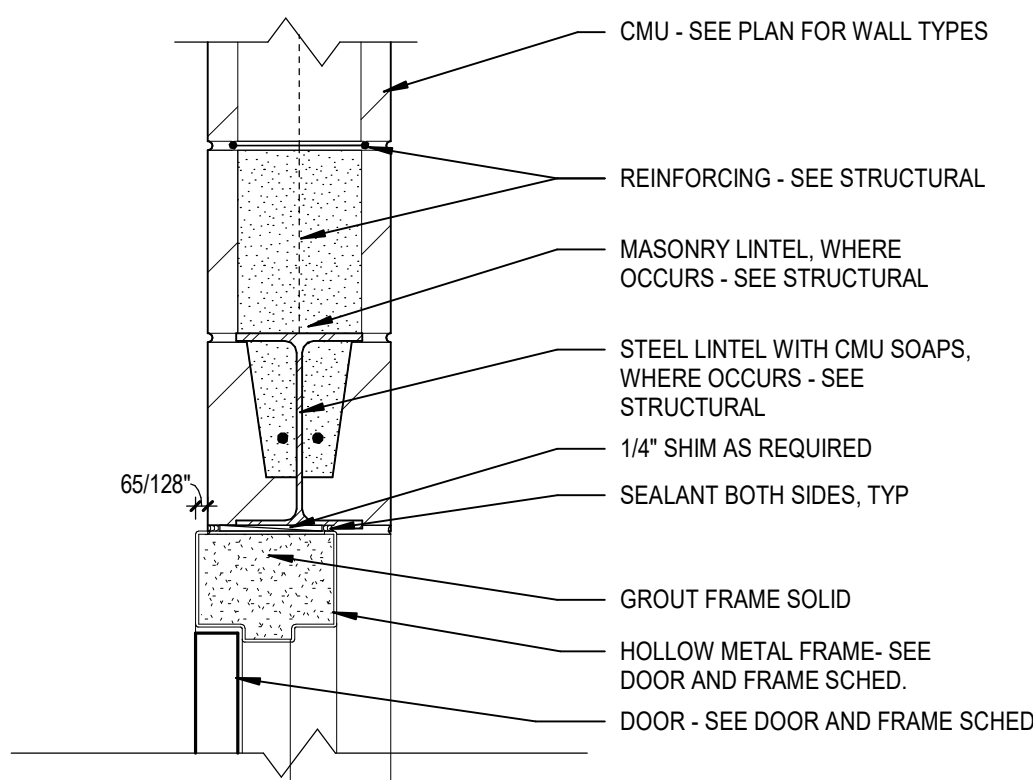
4A HEAD @ COILING DOOR
SCALE: 3/4" = 1'-0"



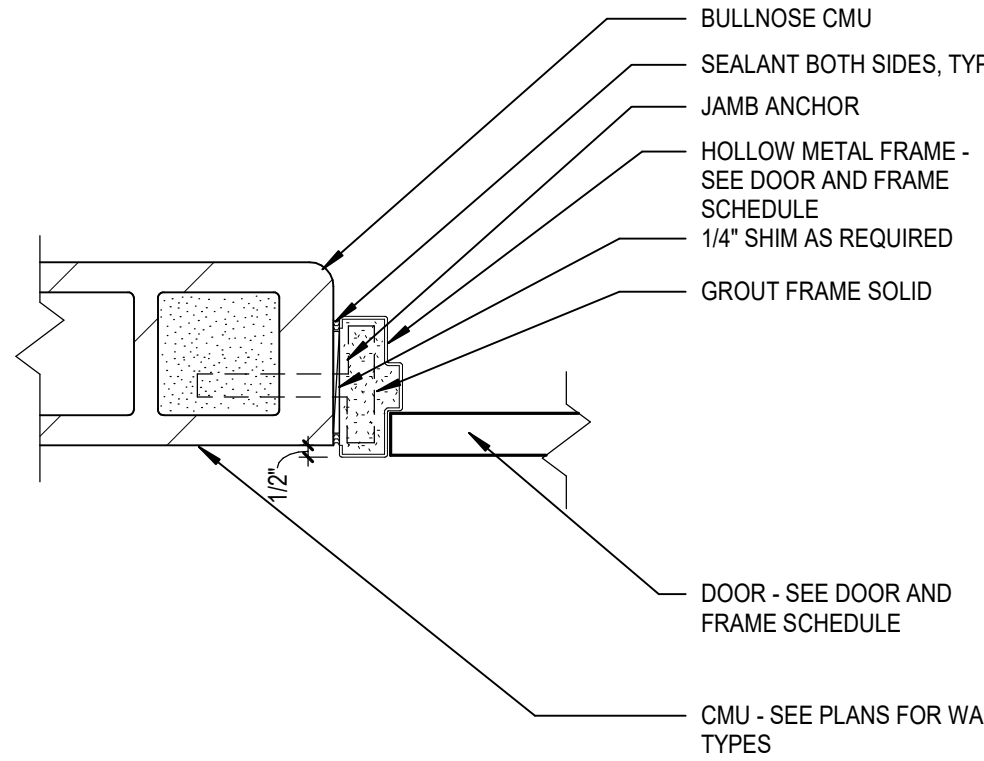
4B JAMB @ COILING DOOR
SCALE: 3/4" = 1'-0"



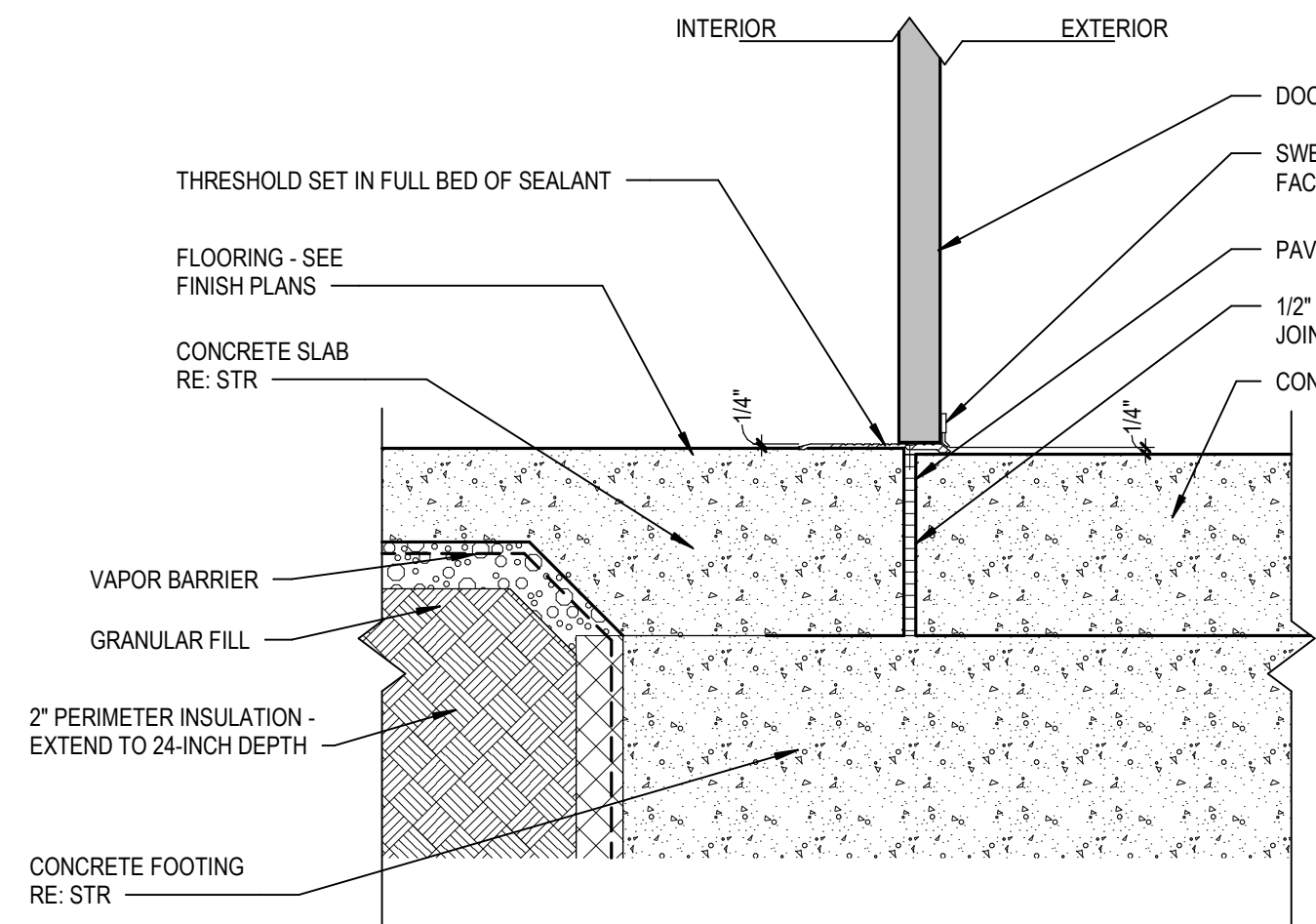
4C DR SL COILING
SCALE: 3/4" = 1'-0"



5A HEAD DTL-HM DOOR @ INT CMU WALL
SCALE: 1 1/2" = 1'-0"



5B JAMB DTL-HM DOOR @ INT CMU WALL
SCALE: 1 1/2" = 1'-0"



5C Ext Door - Threshold
SCALE: 1 1/2" = 1'-0"

ROOM FINISH SCHEDULE

NUMBER	ROOM NAME	FLOOR FINISH	BASE FINISH	MATERIAL	WALL				COMMENTS
					NORTH	EAST	SOUTH	WEST	
A101	MENS								
A102	WOMENS								
A103	JAN.								
A104	STORAGE								
A102	WOMENS								
A101	MENS								
A104	STORAGE								
A108	WOMENS								
A109	MENS								
B108	WOMENS								
B106	CONCESSIONS								
B104	MENS								
B105	CONCESSIONS								
B102	STORAGE								
B101	JANITOR								
A116	CUSTODIAL								
A103	CUSTODIAL								
A118	WOMENS								
A119	MENS								
C102	WOMENS								
C101	MENS								
C103	CHASE								
C104	STOR								
C103	STOR								
B107	STO								
B103	STAIR								

ROOM FINISH SCHEDULE
GENERAL NOTES

- A. SEE SPECIFICATION FOR PAINTING OF ITEMS NOT NOTED IN THE ROOM FINISH SCHEDULE OR FINISH PLANS.
B. EXPOSED CONCRETE FLOORS NOT SHOWN TO RECEIVE A FINISH SHALL RECEIVE LIQUID FLOOR TREATMENT OR CURING AND SEALING COMPOUND UNLESS NOTED OTHERWISE. SEE SPEC SECTION 03300.

ROOM FINISH SCHEDULE
SPECIFIC NOTES

FLOOR NOTES:

- F1. DEPRESS CONCRETE SLAB 3/8 INCH FOR EPOXY TERRAZZO FLOORING. VERIFY DEPTH WITH MANUFACTURER.
F2. DEPRESS CONCRETE SLAB 3/8 INCH FOR RECESS FLOOR MAT AND FRAME. VERIFY RECESS DEPTH WITH MANUFACTURER.

WALL NOTES:

- W1. PAINT THE JANITOR'S CLOSET WALLS BUT NOT INSIDE THE CHASE AREA.
W2. PAINT EXPOSED STEEL COLUMNS P-7.

CEILING NOTES:

- C1. PAINT EXPOSED STEEL DECK P-7.
C2. PAINT EXPOSED STRUCTURE P-7.

MISCELLANEOUS ITEMS:

- M1. ----
M2. ----

GENERAL NOTES FOR
ACCESSIBILITY

- A. ACCESSIBLE URINAL SHALL PROVIDE CLEAR FLOOR SPACE PER ADA SAD 2010 - 606.3.
B. ACCESSIBLE WATER CLOSETS SHALL PROVIDE CLEAR SPACE PER ADA SAD 2010 - 604.3.1.
C. ACCESSIBLE LAVATORIES AND SINKS SHALL PROVIDE CLEAR SPACE PER ADA SAD 2010 - 606.2.
D. ACCESSIBLE TOILET ROOMS SHALL PROVIDE A TURNING SPACE OF 60 INCHES IN DIAMETER PER ADA SAD 2010 - 304.3.1.
E. ACCESSIBLE WATER FOUNTAINS SHALL PROVIDE CLEAR FLOOR SPACE PER ADA SAD 2010 - 602.2.
F. ACCESSIBLE TOILET PARTITIONS SHALL COMPLY WITH ADA SAD 2010 - 604.8.1.
G. EXPOSED PIPES AND SURFACES UNDER LAVATORIES AND SINKS SHALL BE INSULATED PER ADA SAD 2010 - 606.5.

TOILET ACCESSORIES
ABBREVIATIONS

ABBREV	DESCRIPTION
ACC	ADA ACCESSIBLE
BCS	BABY CHANGING STATION
EWC	ELECTRIC WATER COOLER
GB-1	GRAB BAR (BACK WALL)
GB-2	GRAB BAR (SIDE WALL)
GB-3	GRAB BAR (VERTICAL)
GB-4	GRAB BAR (AMBULATORY STALL)
GB-5	GRAB BAR (SHOWER)
HD	HAND DRYER
LAV	LAVATORY
MBH	MOP/ROOM HOLDER
MR	MIRROR
MRS	MIRROR WITH SHELF
PTD	PAPER TOWEL DISPENSER
PTD/R	COMBINATION TOWEL DISPENSER/RECEPTACLE
RH	ROBE HOOK
SCD	SEAT COVER DISPENSER
SCR	SHOWER CURTAIN ROD
SD	SOAP DISPENSER
SND	SANITARY NAPKIN DISPOSAL
SNV	SANITARY NAPKIN VENDOR
SSS	STAINLESS STEEL SHELF
TTO	TOILET TISSUE DISPENSER
US	UTILITY SHELF
WC	WATER CLOSET
WR	WASTE RECEPTACLE

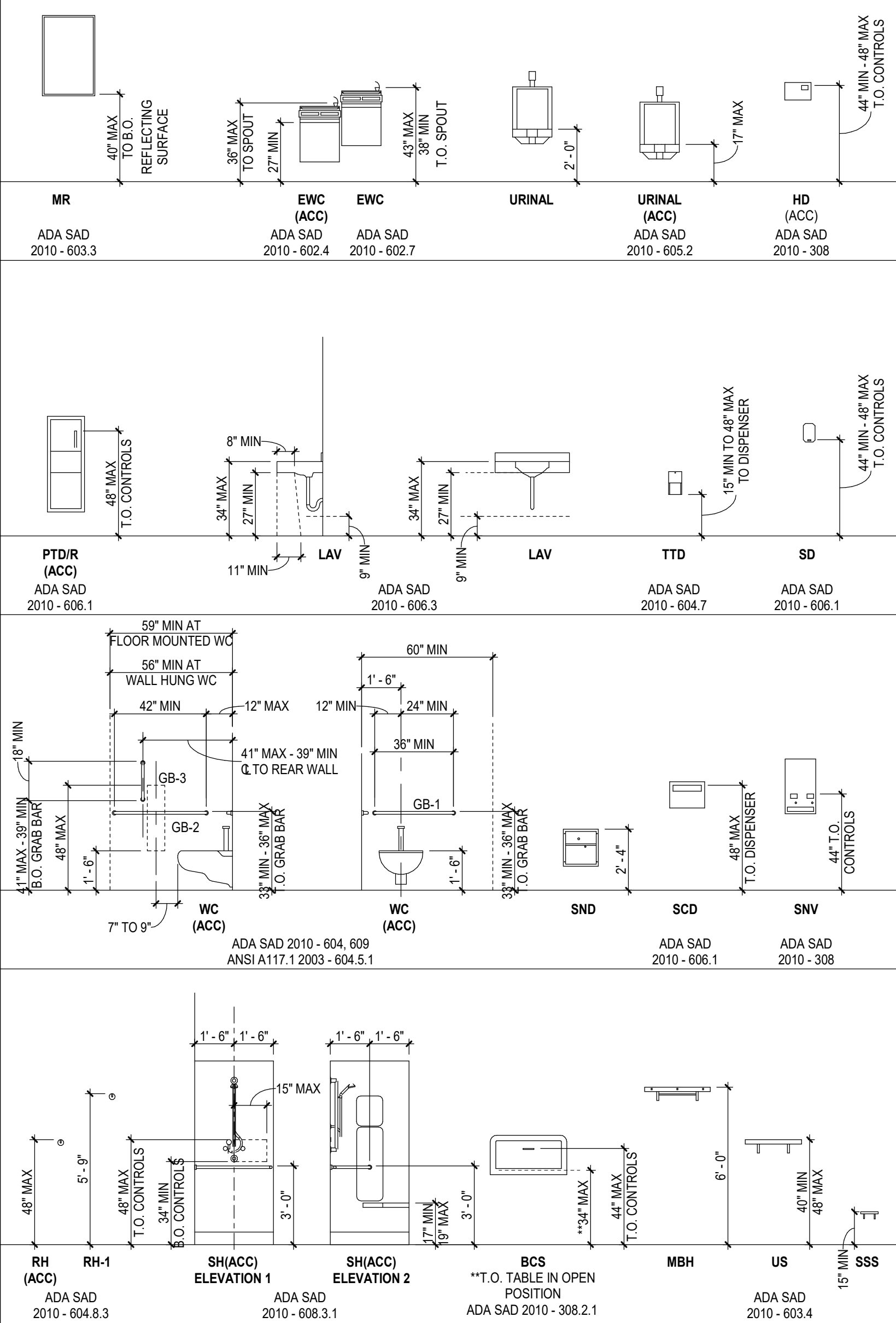
DOOR AND FRAME SCHEDULE
GENERAL NOTES

- A. ALL EXTERIOR HOLLOW METAL FRAMES SHALL BE FILLED WITH INSULATION.
B. ALL INTERIOR HOLLOW METAL FRAMES SET IN MASONRY AND CONCRETE WALLS SHALL BE GROUTED SOLID.
C. ALL HOLLOW METAL FRAMES SET IN METAL STUD WALLS SHALL BE FILLED WITH MINERAL WOOL BLANKET INSULATION.
D. ALL EXTERIOR FRAMES SHALL BE INSTALLED WITH 1/4" SHIM AND SEALANT AROUND PERIMETER OF FRAME.
E. MASONRY LINTELS AND STEEL LINTELS ARE SHOWN ON STRUCTURAL DRAWINGS.
F. GLASS TYPES FOR DOORS ARE INDICATED IN THE DOOR GLAZING COLUMN OF THE DOOR AND FRAME SCHEDULE.
G. FOR COILING DOORS, GRILLES AND SECTIONAL DOORS, WIDTH AND HEIGHT DIMENSIONS SHOWN IN DOOR AND FRAME SCHEDULE REPRESENT FINISHED OPENING SIZE. CONTRACTOR TO COORDINATE EXACT SIZE OF DOOR WITH MANUFACTURER.
H. FRAME MANUFACTURER SHALL COORDINATE LOCATIONS OF ALL CONCEALED CONDUIT AND J-BOXES REQUIRED FOR SECURITY SYSTEM HARDWARE PRIOR TO MANUFACTURING OF HOLLOW METAL FRAMES AND COORDINATE WITH SECURITY HARDWARE AND DEVICES.
I. PROVIDE HEAD RECEIVERS AT ALUMINUM STOREFRONTS AND CURTAIN WALLS AS REQUIRED FOR STRUCTURAL DEFLECTION ALLOWANCE.
J. SEE SPECIFICATIONS HARDWARE SECTION FOR HARDWARE SETS NOTED IN DOOR AND FRAME SCHEDULE.

DOOR PANEL TYPE DESCRIPTIONS

- F FLUSH PANEL
L LOUVERED (BOTTOM)

ADULT MOUNTING HEIGHTS



1	GENERAL STRUCTURAL NOTES	GEOTECHNICAL & FOUNDATIONS	CONCRETE CONSTRUCTION	STRUCTURAL STEEL	STEEL JOISTS	MASONRY
2	GENERAL	1. FOUNDATION DESIGN IS BASED ON GEOTECHNICAL INVESTIGATION PERFORMED BY TERRACON, PROJECT NO. PRG20318, DATED DECEMBER 20, 2023. BASED ON THE GEOTECHNICAL REPORT, THE FOLLOWING HAS BEEN ASSUMED: MINIMUM FOUNDATION EMBEDMENT BELOW GRADE 1'-0" (EXTERIOR FOOTINGS) 1'-6" (INTERIOR FOOTINGS) ALLOWABLE NET SOIL BEARING PRESSURE 2,500 PSF EQUIVALENT ACTIVE (UNRESTRAINED) FLUID PRESSURE 85 PCF (FINE GRAINED BACKFILL) EQUIVALENT PASSIVE (RESTRAINED) FLUID PRESSURE 95 PCF (FINE GRAINED BACKFILL) EQUIVALENT ACTIVE FLUID PRESSURE 80 PCF (FINE GRAINED BACKFILL) EQUIVALENT PASSIVE FLUID PRESSURE 90 PCF (FINE GRAINED BACKFILL) COEFFICIENT OF FRICTION 0.25	2. THESE NOTES APPLY TO CONCRETE USED IN BUILDING CONSTRUCTION ONLY. SEE CIVIL/SITE WORK DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. 3. CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF ACI 301 AND ACI 318. 3. REFER TO DRAWINGS OF OTHER DISCIPLINES AND VENDOR DRAWINGS FOR EMBEDDED ITEMS AND RECESSES NOT SHOWN ON STRUCTURAL DRAWINGS. 4. SLEEVES OR OPENINGS, EXCEPT AS DETAILED ON THE STRUCTURAL DRAWINGS, SHALL NOT BE PLACED IN WALLS, JOISTS, BEAMS, GIRDERS, OR IN SLABS ADJACENT TO A COLUMN WITHIN A DISTANCE EQUAL TO THE SLAB THICKNESS UNLESS APPROVED BY THE ENGINEER. PLUMBING, MECHANICAL, & ELECTRICAL CONTRACTORS SHALL SUBMIT SIZES AND LOCATIONS OF ALL PENETRATIONS IN STRUCTURAL SLABS FOR THE ENGINEER'S APPROVAL BEFORE THE SLAB IS PLACED. ALL PIPE PENETRATIONS THROUGH SLABS SHALL BE SLEEVED AND REINFORCING SHALL NOT BE CUT. CURING OF CONCRETE AFTER PLACEMENT IS NOT PERMITTED UNLESS APPROVED BY THE ENGINEER. 5. PROVIDE CONSTRUCTION JOINTS IN ACCORDANCE WITH ACI 318. SUBMIT DRAWINGS SHOWING PLACEMENT SEQUENCE FOR ENGINEERING REVIEW. 6. ALL CONCRETE SHALL BE MECHANICALLY CONSOLIDATED IN ACCORDANCE WITH ACI 309. 7. PROVIDE A FORMED CONSTRUCTION KEYWAY BETWEEN ALL HORIZ AND VERT PLACEMENT EDGES EXCEPT CONCRETE TOPPING SLABS. PROVIDE WATERSTOPS FOR ALL CONSTRUCTION JOINTS BELOW WATER TABLE AND WHERE INTERIOR SLAB ON GRADE IS BELOW EXTERIOR GRADE. 8. INTENTIONALLY ROUGHEN ALL CONCRETE SURFACES TO A MINIMUM 1/4" AMPLITUDE AGAINST WHICH CONCRETE IS TO BE PLACED UNO. 9. ALL EDGES OF PERMANENTLY EXPOSED CONCRETE SURFACES SHALL BE CHAMFERED 3/4", UNO. 10. RIGID INSULATION USED TO FORM BUILT-UP SLABS SHALL BE CLOSED-CELL EXPANDED POLYSTYRENE CONFORMING TO ASTM D6817 WITH MINIMUM COMPRESSIVE RESISTANCE @ 1% DEFORMATION OF 2.2 PSI. CONCRETE REINFORCEMENT 1. REINFORCING STEEL SHALL BE ASTM A615, GRADE 60, UNO. 2. REINFORCING STEEL TO BE WELDED SHALL BE ASTM A706, GRADE 60. NO WELDING OF REINFORCEMENT SHALL BE PERMITTED UNLESS SPECIFICALLY CALLED FOR OR REVIEWED AND APPROVED BY THE ENGINEER. 3. DEFORMED BAR ANCHORS (DBA) SHALL BE PROVIDED IN ACCORDANCE WITH NELSON STUD WELDING, INC. ICC ESR 2897. ANCHORS SHALL BE SHOP WELDED TO STEEL USING A STUJ WELDING GUN. 4. CONCRETE COVER REQUIREMENTS FOR CAST-IN-PLACE, NON-PRESTRESSED REINFORCEMENT UNLESS OTHERWISE NOTED ON DETAILS SHALL BE AS FOLLOWS: CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3" FORMED CONCRETE EXPOSED TO EARTH OR WEATHER: #6 BARS AND LARGER: 2" #6 BARS AND SMALLER: 1 1/2" CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH EARTH: SLABS, WALLS, AND JOISTS: 1 1/2" #14 AND #16 BARS: 1 1/2" #1 BARS AND SMALLER: 1" BEAMS, COLUMNS: 1 1/2" PRIMARY REINFORCEMENT: 1 1/2" TIES, STIRRUPS, SPIRALS: 1 1/2"	1. FABRICATOR QUALIFICATIONS: FABRICATOR SHALL BE AISC CERTIFIED OR AN APPROVED FABRICATOR IN ACCORDANCE WITH THE BUILDING CODE AND APPROVED BY THE A.H.J. IN LIEU OF THE PREVIOUS. FABRICATOR SHALL INCLUDE IN THEIR BID THE SERVICES OF A SPECIAL INSPECTOR TO PROVIDE IN-PLANT INSPECTING SERVICES FOR WORK COMPLETED ON THE FABRICATOR'S PREMISES TO MEET BUILDING CODE REQUIREMENTS. AT THE COMPLETION OF WORK, FABRICATOR SHALL SUBMIT A "CERTIFICATE OF COMPLIANCE" TO THE ARCHITECT AND A.H.J. STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH CONSTRUCTION DOCUMENTS. 2. STRUCTURAL STEEL SHAPES AND CONNECTING COMPONENTS SHALL CONFORM TO THE FOLLOWING MATERIAL SPECIFICATIONS: FOLLOWING MATERIAL SPECIFICATIONS: WIDE FLANGE SHAPES ASTM A992, Fy = 50 KSI HOLLOW STRUCTURAL SECTIONS (HSS) RECTANGULAR & SQUARE ROUND ASTM A500, GRADE C, Fy = 50 KSI STEEL PIPE ASTM A500, GRADE C, Fy = 46 KSI ASTM A53, GRADE B, Fy = 35 KSI ASTM A53, Fy = 30 KSI ASTM F1525, GRADE A325N ASTM F1554, GRADE 55 WELDABLE (S1) MACHINE BOLTS ASTM A307 THREADS RODS ASTM A36 WELDED ELECTRODES E70XX DEFORMED BAR ANCHORS (DBA) ASTM A496, Fy = 70 KSI WELDED HEADED STUDS (WHS) ASTM A108, Fu = 65 KSI WELDED HEADED STUDS (WTS) 3. CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE BUILDING SYSTEM AT ALL TIMES DURING THE ERECTION PROCESS. ELEMENTS HAVE BEEN DESIGNED FOR THE FINAL COMPLETED CONDITION AND HAVE NOT BEEN INVESTIGATED FOR TEMPORARY LOADING DURING CONSTRUCTION. INVESTIGATION OF THE STRUCTURAL ELEMENTS FOR ADEQUACY DURING THE STEEL ERECTION AND CONSTRUCTION PROCESS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR TO PROVIDE TEMPORARY SUPPORTS AS REQUIRED TO MAINTAIN STABILITY. 4. COLUMNS AND BEAMS WITH BOLT, CAP OR END PLATES SHALL HAVE SQUARE CUT OR MILLED ENDS. 5. NON-METALLIC, NON-SHRINK, CHLORIDE FREE GROUT UNDER ALL COLUMN BASE PLATES AND BEAM BEARING PLATES SHALL CONSIST OF A PRE-MIXED PRODUCT COMPLYING WITH ALL REQUIREMENTS OF ASTM C1107. THE 28-DAY COMPRESSIVE STRENGTH OF THE GROUT SHALL BE TWICE THE FOUNDATION REQUIRED CONCRETE COMPRESSIVE STRENGTH, 5,000 PSI MINIMUM. 6. UNO, ALL STRUCTURAL STEEL PERMANENTLY EXPOSED TO THE WEATHER, INCLUDING ALL BRICK SHELF ANGLES AND EXTERIOR LINTELS, SHALL BE HOT DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123. ALL DAMAGED GALVANIZING SHALL BE REPAIRED IN ACCORDANCE WITH ASTM A780. STAINLESS AND WEATHERING STEELS, WHERE SPECIFIED, ARE EXEMPT FROM THIS REQUIREMENT. 7. COAT STEEL BELOW GRADE WITH COLD-APPLIED ASPHALT EMULSION PER ASTM D1187. 8. WHERE CONNECTIONS ARE NOTED TO BE SLIP CRITICAL, (EXAMPLE: A325-SC), BOLTS SHALL BE TIGHTENED TO THE MINIMUM PRETENSION FOR FULLY TIGHTENED BOLTS BY ONE OF THE AISC APPROVED METHODS. SLIP CRITICAL BOLTS SHALL HAVE CLASS "A" FAYING SURFACES. 9. ALL BOLTS (HIGH STRENGTH, ANCHOR BOLTS, EXPANSION BOLTS, ADHESIVE ANCHORS, ETC.) SHALL BE INSTALLED WITH STEEL NUTS AND WASHERS. NUTS AND WASHERS FOR HIGH STRENGTH BOLTS SHALL CONFORM TO ASTM A503 AND TO ASTM A436, RESPECTIVELY. 10. WELDING PROCEDURES, ELECTRODES, AND WELDER QUALIFICATIONS SHALL CONFORM TO THE AMERICAN WELDING SOCIETY CODE D1.1, AISC STANDARDS, AND LOCAL CODE REQUIREMENTS. 11. ALL WELDS SHOWN ON THE DRAWINGS SHALL BE SHOP WELDS, UNO, WHERE SHOWN, FIELD WELDING SHALL BE USED. CONTRACTOR MAY SUBSTITUTE FIELD WELDS FOR SHOP WELDS AT THEIR DISCRETION. SHOP DRAWINGS SHALL CLEARLY NOTE ALL WELDING USING AWS A2.4 SYMBOLS. 12. WHERE CONTINUOUS ANGLES OR BENT PLATES ARE INDICATED, PROVIDE A CONTINUOUS BUT WELD OR FULL PENETRATION WELD AT THE SPICE POINTS, UNO. THE STEEL FABRICATOR MAY SUBMIT AN ALTERNATE BOLTED CONNECTION DETAIL FOR APPROVAL. 13. COORDINATE WITH ALL OTHER TRADES WHICH MEET STEEL INTERACTIONS. THIS INCLUDES BUT IS NOT LIMITED TO COORDINATING WITH MASONRY, PRECAST CONCRETE, CAST-IN-PLACE CONCRETE, JOIST, AND METAL DECK SUPPLIERS. STEEL DECK 1. ALL STEEL DECK SHALL BE MANUFACTURED, DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS, AND ROOF DECKS BY THE STEEL DECK INSTITUTE (SDI). 2. STEEL DECK & ACCESSORIES SHALL BE FABRICATED FROM STEEL PER ASTM A1008 OR A663. 3. DECK SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: a. WIDE RIB ROOF DECK (TYPE B): i. MINIMUM YIELD STRENGTH: Fy = 50 KSI ii. DEPTH/GAGE: 1 1/2" / 20 c. MOMENT OF INERTIA (Iy): 0.197 in ⁴ / FT MIN d. SECTION MODULUS (Sx): 0.224 in ³ / FT MIN 4. ROOF DECK SHALL BE ATTACHED TO SUPPORTING STRUCTURAL MEMBERS BY 5/8" PULLE WELDS IN A 36S PATTERN AND 2 #10 TEK SCREW SIDE LAPS PER SPAN. SHEAR STRENGTH OF DECK DIAPHRAGM SHALL BE DESIGNED FOR A MINIMUM OF 91 PLF (LRFD) LOAD. 5. MINIMUM DECK BEARING SHALL BE 2" AT EXTERIOR SUPPORTS & 3" FOR INTERIOR SUPPORTS, UNO. 6. ALL DECK SHALL BE CONTINUOUS OVER 3 SPANS. WHERE LESS THAN 3 SPANS ARE AVAILABLE, THE DECK SUPPLIER SHALL INCREASE THE DECK GAGE OR PROVIDE TEMPORARY SHORING AS NOTED ON THE PLAN SHALL BE TREATED AS AN ANCHOR ROD AND SHALL CONFORM TO THE TOLERANCES SPECIFIED IN SECTION 7.5 OF AISC 303-16 CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES". 7. NO DIRECT ATTACHMENT TO UNDERSIDE OF METAL ROOF DECK IS ALLOWED UNLESS INDICATED ON THE STRUCTURAL DRAWINGS. ALL SUSPENDED LOADS, INCLUDING BUT NOT LIMITED TO, CEILING, LIGHT FIXTURES, DUCTWORK, PIPING, AND OTHER UTILITIES TO BE SUPPORTED FROM THE PRIMARY STRUCTURAL MEMBERS OR SECONDARY SUPPORTS BETWEEN STRUCTURAL FRAMING. COORDINATE HANGER AND/OR WIRE SUPPORTS WITH ASSOCIATED SPECIFICATIONS AND TRADES. 8. THE STEEL DECK SUPPLIER SHALL PROVIDE CLOSURE PLATES, AND ALL MISCELLANEOUS COLD-FORMED STEEL NECESSARY TO COMPLETE THE WORK.	1. THESE NOTES ARE APPLICABLE TO THE DESIGN OF STEEL JOISTS (K-SERIES, LH-SERIES, DLH-SERIES, SH-SERIES) AND JOIST BRACING. 2. STEEL JOIST FABRICATOR SHALL BE AN APPROVED FABRICATOR IN ACCORDANCE WITH THE BUILDING CODE, REGISTERED AND APPROVED BY THE A.H.J. AT THE COMPLETION OF FABRICATION, THE APPROVED FABRICATOR SHALL SUBMIT A "CERTIFICATE OF COMPLIANCE" TO THE A/E AND A/HJ STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH CONSTRUCTION DOCUMENTS. 3. FABRICATE AND ERECT JOISTS IN ACCORDANCE WITH THE BUILDING CODE, OPEN WEB STEEL JOISTS AND THE STANDARD SPECIFICATIONS FOR STEEL JOIST K-SERIES, LH-SERIES, DLH-SERIES, SH-SERIES, PUBLISHED BY THE STEEL JOIST INSTITUTE. TEMPORARY BRACING AND BRACING DESIGN REQUIRED FOR ERECTION ARE THE RESPONSIBILITY OF THE CONTRACTOR. 4. ALL STEEL JOISTS SHALL BE DESIGNED FOR THE SPAN, LOADING, AND SPACING INDICATED ON THE DRAWINGS. WHERE LOADS ARE NOT INDICATED, DESIGN JOIST FOR UNIFORM LOADING SHOWN IN STEEL JOIST INSTITUTE (SJI) LOAD TABLES BASED ON THE JOIST SPAN IN ADDITION TO LOADING INDICATED IN THESE NOTES OR ON PLANS. 5. SIZE, TYPE, AND SPACING OF JOIST BRIDGING SHALL BE IN ACCORDANCE WITH SJI, USE "X" BRIDGING AT DISCONTINUOUS ENDS OF BRIDGING, LOAD BRIDGING TO AVOID MECHANICAL OPENINGS. 6. DESIGN JOISTS AND BRIDGINS TO RESIST AN ASD NET UPLIFT OF 15 PSF IN THE FIELD OF THE ROOF, 25 PSF WITHIN 10' OF BUILDING EDGES, AND 35 PSF WITHIN 10' OF EXPOSED CORNERS. 7. UNO, JOIST SEAT DEPTH SHALL BE 2 1/2" AT K-SERIES JOIST, 3" H AND DLH10-11 SERIES JOISTS, 7" AT DLH18-25 AND JOIST GIRDERS, AND 10" AT JOIST GIRDERS WITH A SELF WEIGHT GREATER THAN OR EQUAL TO 150 PLF. JOIST SUPPLIER SHALL COORDINATE TOP OF STEEL BEAM ELEVATIONS WITH STEEL SUPPLIER PRIOR TO FABRICATION. PROVIDE SLOPED AND/OR SLOPED AND SKEWED BEARING SEATS AS REQUIRED FOR ROOF SLOPE. 8. FABRICATOR SHALL SUBMIT CALCULATIONS AND SHOP DRAWINGS SEALED BY AN ENGINEER REGISTERED IN THE STATE IN WHICH THE PROJECT IS LOCATED FOR ALL SPECIAL JOISTS AND JOIST GIRDERS. CALCULATIONS SHALL INCLUDE DEFLECTION AND CAMBER REQUIREMENTS AND CLEARLY SHOW ALL DESIGN LOADS. 9. LIVE LOAD DEFLECTIONS SHALL BE LIMITED TO SPAN/40 AT SIMPLE SPAN ROOF MEMBERS AND SPAN/80 AT SIMPLE SPAN FLOOR MEMBERS. ALL JOISTS AND JOIST GIRDERS SHALL BE CAMBERED PER SJI STANDARDS. 10. JOIST CANTILEVERS SHALL BE DESIGNED FOR ALL APPLICABLE LOADS. LIMIT TOTAL DEFLECTION TO 1/80 OF THE 2 TIMES THE CANTILEVER LENGTH. 11. ALL JOISTS AND JOIST GIRDERS SHALL BE DESIGNED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE APPLICABLE FIRE RESISTANCE RATINGS PER ARCHITECTURAL DETAIL. 12. REFER TO SNOW DRIFT DIAGRAM FOR SNOW DRIFT LOADS FOR SP JOISTS. LOADS SHALL BE COMBINED WITH OTHER ROOF LOADS INDICATED IN ACCORDANCE WITH THE BUILDING CODE. SNOW DRIFT LOADS SHALL BE DISTRIBUTED OVER THE TRIBUTARY WIDTH SUPPORTED BY THE JOIST. 13. DO NOT ALTER DETAILS SHOWN ON PLANS UNLESS REQUESTED AND APPROVED IN WRITING PRIOR TO SHOP DRAWING SUBMITTAL. 14. DESIGN ALL JOIST CHORDS FOR BENDING BETWEEN PANEL POINTS WITH A TOP CHORD BEND CHECK LOAD OF 400 LBS AND A BOTTOM CHORD BEND CHECK LOAD OF 200 LBS. WHERE CONCENTRATED LOADS EXCEED THESE LOADS, CONTRACTOR SHALL PROVIDE FIELD REINFORCEMENT PER JOISTAL JOIST REINFORCEMENT DETAIL. 15. WHERE JOISTS ARE INDICATED WITH A DEPTH AND SERIES ONLY ALONG WITH "SP" (SHOWN THUS "20K-SP") MANUFACTURER SHALL DESIGN JOIST BOLTS FOR THE LOADS NOTED ON THE PLANS AND GENERAL NOTES PLUS AN ADDITIONAL 500 LB CONCENTRATED DEAD LOAD TO OCCUR ANYWHERE ALONG SPAN, TOP OR BOTTOM CHORD. 16. WHERE A COMPLETE JOIST DESIGNATION IS INDICATED ALONG WITH AN "SP" (SHOWN THUS "20K-SP") THE JOIST IS DESIGNED WITH THE LOADS INDICATED ON THE PLANS AND GENERAL NOTES WITH A MINIMUM EQUIVALENT UNIFORM LOAD CAPACITY EQUAL TO OR GREATER THAN THAT OF THE SIZE INDICATED. 17. COORDINATE ARCH MECHANICAL, EQUIPMENT WEIGHT AND LOCATION WITH MECHANICAL CONTRACTOR. COORDINATE JOIST WEBS WHERE MECHANICAL DUCTS SHOWN ON MECHANICAL DRAWINGS ARE DESIGNED TO PENETRATE THROUGH JOIST WEBS. 18. JOISTS SHALL BE DESIGNED FOR A 500 LBS CONCENTRATED SERVICE WIND LOAD AT ALL STEEL ANGLE BRACES. REFERENCE THE ROOF SECTIONS FOR ANGLE BRACE SPACING REQUIREMENTS. POST-INSTALLED ANCHORS 1. UNO, THE FOLLOWING APPLIES TO ALL POST-INSTALLED ANCHORAGE INTO HARDENED CONCRETE OR MASONRY WHICH INCLUDES SUCHS AS EXPANSION, WEDGE, SLEEVE, ADHESIVE, EPOXY, SHOT-PI, SCREW AND UNDERCUT. 2. POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED. 3. CONTRACTOR SHALL OBTAIN APPROVAL FROM ENGINEER OF RECORD PRIOR TO USING POST-INSTALLED ANCHORS FOR MISSING, DAMAGED OR MISPLACED CAST-IN-PLACE ANCHORS. 4. CARE SHALL BE GIVEN TO AVOID DAMAGES WITH EXISTING REBAR OR EMBEDDED CONDUIT WHEN DRILLING HOLE. HOLES SHALL BE DRILLED AND CLEANED PER THE MANUFACTURER'S INSTRUCTIONS. 5. MAINTAIN A MINIMUM OF 2 INCHES FROM EXISTING REINFORCEMENT, CONDUIT, POST-TENSIONING (WHERE OCCURS), ETC. USE NON-DESTRUCTIVE TESTING TO LOCATE PRIOR TO DRILLING, CORING OR SHOOTING PINS INTO THE EXISTING CONCRETE OR MASONRY. FOR INSTALLATION DEEPER THAN 3 INCHES USE GROUND PENETRATING RADAR OR X-RAY METHODS. 6. ALL ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE BUILDING CODE REQUIREMENTS, MANUFACTURER'S RECOMMENDATIONS AND ALL APPLICABLE CODES, INCLUDING BUT NOT LIMITED TO, ALL ANCHOR SPACINGS, EMBEDMENTS AND EDGE DISTANCES. 7. SUBSTITUTION REQUESTS FOR ALTERNATE PRODUCTS MUST BE APPROVED IN WRITING BY THE ENGINEER PRIOR TO USE. CONTRACTOR SHALL PROVIDE CALCULATIONS DEMONSTRATING THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE PERFORMANCE VALUES OF THE SPECIFIED PRODUCT. SUBSTITUTION REQUESTS MUST BE SUBMITTED WITH THE SHOP DRAWING SUBMITTAL. ONCE REVIEWED, CONTRACTOR SHALL FORWARD TO THE A/HJ FOR APPROVAL. FABRICATION AND INSTALLATION OF THE DELEGATED DESIGN SUBMITTAL ITEMS SHALL NOT OCCUR UNTIL APPROVAL OF THE A/HJ IS RECEIVED. 8. EMBEDMENT REFERS TO THE FINAL INSTALLED EFFECTIVE DEPTH "H". ALL ANCHORS SHALL HAVE EMBEDMENT NOTED OR EMBEDMENT AS RECOMMENDED BY MANUFACTURER WHERE NO EMBEDMENT IS SHOWN. REQUIRED ANCHOR HOLE DEPTH FOR INSTALLATION MAY BE DEEPER. 9. IF THE FULL ANCHOR EMBEDMENT DEPTH, SPACING OR EDGE DISTANCE CANNOT BE ACHIEVED, NOTIFY THE ENGINEER. 10. STEEL ANCHORING ELEMENTS SHALL BE THE SIZE AND GRADE SHOWN ON THE DRAWINGS AND MUST BE CLEAN, DRY AND FREE OF ANY OIL CONTAMINANTS. DO NOT INCREASE OR DECREASE SIZE OF ANCHOR WITHOUT APPROVAL OF ENGINEER. 11. ALL PERSONNEL INSTALLING POST-INSTALLED ANCHORS SHALL BE TRAINED BY THE MANUFACTURER OR PROVIDE TRAINING DOCUMENTATION FROM THE MANUFACTURER SHALL BE AVAILABLE UPON REQUEST. 12. INSTALLATION OF ADHESIVE ANCHORS IN HORIZONTAL TO VERTICALLY OVERHEAD ORIENTATION SHALL BE DONE BY A CERTIFIED ADHESIVE ANCHOR INSTALLER (AAI) AS CERTIFIED THROUGH ACI AND IN ACCORDANCE WITH ACI 318. PROOF OF CURRENT CERTIFICATION SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF INSTALLATION. 13. EXPANSION BOLTS IN CONCRETE MASONRY SHALL BE ONE OF THE FOLLOWING: a. HLTI HWB BOLT 1 T2Z MASONRY ANCHORS (ICC ESR-4581) b. DEWALT - POWER STUD-SD1 (ICC ESR-2968) c. SIMPSON STRONG-TIE WEDGE-ALL (ICC ESR-1396) d. SIMPSON STRONG-TIE STRONG-BOLT 2 WEDGE ANCHOR (AWMO UES ESR-240) 14. SCREW ANCHORS IN CONCRETE MASONRY SHALL BE ONE OF THE FOLLOWING: a. HLTI HWB BOLT 1 T2Z MASONRY ANCHORS (ICC ESR-4581) b. DEWALT - SCREW BOLT - SCREW ANCHOR (ICC ESR-4042) c. SIMPSON STRONG-TIE TITEN HD SCREW ANCHORS (ICC ESR-1056) 15. ADHESIVE ANCHORS IN MASONRY SHALL BE ONE OF THE FOLLOWING: a. HLTI HIT-HY 270 FAST CURE ADHESIVE ANCHORING SYSTEM (ICC ESR-4144 FOR MULTI WYTHE BRICK, ICC ESR-4145 FOR CMU) b. HLTI HIT-HY 220 V3 ADHESIVE ANCHORING SYSTEM (ICC ESR-4878) c. DEWALT AC100-GOLD FAST CURE ADHESIVE ANCHORING SYSTEM (ICC ESR-3200) d. SIMPSON STRONG-TIE SET-XP ADHESIVE ANCHORING SYSTEM (AFMO UES ESR-265) 16. EXPANSION BOLTS IN CONCRETE SHALL BE ONE OF THE FOLLOWING: a. HLTI HWB BOLT 1 T2Z CONCRETE ANCHORS (ICC ESR-4266) b. DEWALT POWER-STUD-SD1 (ICC ESR-2918), POWER STUD -SD2 (ICC ESR-2922) c. SIMPSON STRONG-TIE STRONG-BOLT 2 WEDGE ANCHORS (ICC ESR-3037) 17. SCREW ANCHORS IN CONCRETE SHALL BE ONE OF THE FOLLOWING: a. HLTI HUS-EZ SCREW ANCHORS (ICC ESR-3027) b. DEWALT SCREW BOLT - SCREW ANCHORS (ICC ESR-3889) c. SIMPSON STRONG-TIE TITEN HD SCREW ANCHORS (ICC ESR-2713) 18. ADHESIVE ANCHORS IN CONCRETE SHALL BE ONE OF THE FOLLOWING: a. HLTI HIT-HY 220 V3 ADHESIVE ANCHORING SYSTEM WITH SAFESSET (ESR-4688) (FAST CURE APPLICATIONS) b. HLTI RE-100 V3 ADHESIVE ANCHORING SYSTEM (ICC ESR-3828) (STANDARD CURE APPLICATIONS) c. DEWALT AC208 ADHESIVE ANCHORING SYSTEM (ICC ESR-4027) (FAST CURE APPLICATIONS) d. DEWALT PURE 220+ ADHESIVE ANCHORING SYSTEM (ICC ESR-5144) (STANDARD CURE APPLICATIONS) e. SIMPSON STRONG-TIE SET-XP ADHESIVE ANCHORING SYSTEM (ESR-4057) f. SIMPSON STRONG-TIE AT-XP ADHESIVE ANCHORING SYSTEM (AFMO UES ESR-263) g. SIMPSON STRONG-TIE SET-XP ADHESIVE ANCHORING SYSTEM (ESR-2608) (STANDARD CURE APPLICATIONS) 19. ANCHORS ARE NOT TO BE INSTALLED UNTIL CONCRETE OR GROUT HAS REACHED ITS DESIGN STRENGTH. ADHESIVE ANCHORS SHALL BE INSTALLED IN CONCRETE WITH A MIN. AGE OF 21 DAYS. 20. MASONRY CELLS SHALL BE FULLY GROUTED AND CURED FOR INSTALLATION OF POST-INSTALLED ANCHORS. 21. USE INSTALLATION PROCEDURES FOR CRACKED CONCRETE CONDITIONS. DO NOT CORE DRILL FOR ANCHOR HOLES WITHOUT ENGINEER APPROVAL. 22. PROVIDE GALVANIZED CARBON STEEL ANCHORS AT DRY INTERIOR LOCATIONS AND STAINLESS-STEEL TYPE 304 OR 316 AT EXTERIOR / DAMP INTERIOR LOCATIONS. ANCHORS SHALL BE CLEAN AND FREE OF DEROGATING SUBSTANCES. 23. PATCH ABANDONED HOLES AND SPLAYS USING NON-SHRINK GROUT AND REPAIR FINISHES AS REQUIRED. ANCHORS PENETRATING THROUGH WATERPROOFING OR VAPOR MEMBRANES SHALL BE SEALED OR FLASHED.	
3	LATERAL LOAD RESISTANCE SYSTEM	1. FOUNDATION DESIGN IS BASED ON GEOTECHNICAL INVESTIGATION PERFORMED BY TERRACON, PROJECT NO. PRG20318, DATED DECEMBER 20, 2023. BASED ON THE GEOTECHNICAL REPORT, THE FOLLOWING HAS BEEN ASSUMED: MINIMUM FOUNDATION EMBEDMENT BELOW GRADE 1'-0" (EXTERIOR FOOTINGS) 1'-6" (INTERIOR FOOTINGS) ALLOWABLE NET SOIL BEARING PRESSURE 2,500 PSF EQUIVALENT ACTIVE (UNRESTRAINED) FLUID PRESSURE 85 PCF (FINE GRAINED BACKFILL) EQUIVALENT PASSIVE (RESTRAINED) FLUID PRESSURE 95 PCF (FINE GRAINED BACKFILL) EQUIVALENT ACTIVE FLUID PRESSURE 80 PCF (FINE GRAINED BACKFILL) EQUIVALENT PASSIVE FLUID PRESSURE 90 PCF (FINE GRAINED BACKFILL) COEFFICIENT OF FRICTION 0.25	2. THESE NOTES APPLY TO CONCRETE USED IN BUILDING CONSTRUCTION ONLY. SEE CIVIL/SITE WORK DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. 3. CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF ACI 301 AND ACI 318. 3. REFER TO DRAWINGS OF OTHER DISCIPLINES AND VENDOR DRAWINGS FOR EMBEDDED ITEMS AND RECESSES NOT SHOWN ON STRUCTURAL DRAWINGS. 4. SLEEVES OR OPENINGS, EXCEPT AS DETAILED ON THE STRUCTURAL DRAWINGS, SHALL NOT BE PLACED IN WALLS, JOISTS, BEAMS, GIRDERS, OR IN SLABS ADJACENT TO A COLUMN WITHIN A DISTANCE EQUAL TO THE SLAB THICKNESS UNLESS APPROVED BY THE ENGINEER. PLUMBING, MECHANICAL, & ELECTRICAL CONTRACTORS SHALL SUBMIT SIZES AND LOCATIONS OF ALL PENETRATIONS IN STRUCTURAL SLABS FOR THE ENGINEER'S APPROVAL BEFORE THE SLAB IS PLACED. ALL PIPE PENETRATIONS THROUGH SLABS SHALL BE SLEEVED AND REINFORCING SHALL NOT BE CUT. CURING OF CONCRETE AFTER PLACEMENT IS NOT PERMITTED UNLESS APPROVED BY THE ENGINEER. 5. PROVIDE CONSTRUCTION JOINTS IN ACCORDANCE WITH ACI 318. SUBMIT DRAWINGS SHOWING PLACEMENT SEQUENCE FOR ENGINEERING REVIEW. 6. ALL CONCRETE SHALL BE MECHANICALLY CONSOLIDATED IN ACCORDANCE WITH ACI 309. 7. PROVIDE A FORMED CONSTRUCTION KEYWAY BETWEEN ALL HORIZ AND VERT PLACEMENT EDGES EXCEPT CONCRETE TOPPING SLABS. PROVIDE WATERSTOPS FOR ALL CONSTRUCTION JOINTS BELOW WATER TABLE AND WHERE INTERIOR SLAB ON GRADE IS BELOW EXTERIOR GRADE. 8. INTENTIONALLY ROUGHEN ALL CONCRETE SURFACES TO A MINIMUM 1/4" AMPLITUDE AGAINST WHICH CONCRETE IS TO BE PLACED UNO. 9. ALL EDGES OF PERMANENTLY EXPOSED CONCRETE SURFACES SHALL BE CHAMFERED 3/4", UNO. 10. RIGID INSULATION USED TO FORM BUILT-UP SLABS SHALL BE CLOSED-CELL EXPANDED POLYSTYRENE CONFORMING TO ASTM D6817 WITH MINIMUM COMPRESSIVE RESISTANCE @ 1% DEFORMATION OF 2.2 PSI. CONCRETE REINFORCEMENT 1. REINFORCING STEEL SHALL BE ASTM A615, GRADE 60, UNO. 2. REINFORCING STEEL TO BE WELDED SHALL BE ASTM A706, GRADE 60. NO WELDING OF REINFORCEMENT SHALL BE PERMITTED UNLESS SPECIFICALLY CALLED FOR OR REVIEWED AND APPROVED BY THE ENGINEER. 3. DEFORMED BAR ANCHORS (DBA) SHALL BE PROVIDED IN ACCORDANCE WITH NELSON STUD WELDING, INC. ICC ESR 2897. ANCHORS SHALL BE SHOP WELDED TO STEEL USING A STUJ WELDING GUN. 4. CONCRETE COVER REQUIREMENTS FOR CAST-IN-PLACE, NON-PRESTRESSED REINFORCEMENT UNLESS OTHERWISE NOTED ON DETAILS SHALL BE AS FOLLOWS: CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3" FORMED CONCRETE EXPOSED TO EARTH OR WEATHER: #6 BARS AND LARGER: 2" #6 BARS AND SMALLER: 1 1/2" CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH EARTH: SLABS, WALLS, AND JOISTS: 1 1/2" #14 AND #16 BARS: 1 1/2" #1 BARS AND SMALLER: 1" BEAMS, COLUMNS: 1 1/2" PRIMARY REINFORCEMENT: 1 1/2" TIES, STIRRUPS, SPIRALS: 1 1/2"	1. FABRICATOR QUALIFICATIONS: FABRICATOR SHALL BE AISC CERTIFIED OR AN APPROVED FABRICATOR IN ACCORDANCE WITH THE BUILDING CODE AND APPROVED BY THE A.H.J. IN LIEU OF THE PREVIOUS. FABRICATOR SHALL INCLUDE IN THEIR BID THE SERVICES OF A SPECIAL INSPECTOR TO PROVIDE IN-PLANT INSPECTING SERVICES FOR WORK COMPLETED ON THE FABRICATOR'S PREMISES TO MEET BUILDING CODE REQUIREMENTS. AT THE COMPLETION OF WORK, FABRICATOR SHALL SUBMIT A "CERTIFICATE OF COMPLIANCE" TO THE ARCHITECT AND A.H.J. STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH CONSTRUCTION DOCUMENTS. 2. STRUCTURAL STEEL SHAPES AND CONNECTING COMPONENTS SHALL CONFORM TO THE FOLLOWING MATERIAL SPECIFICATIONS: FOLLOWING MATERIAL SPECIFICATIONS: WIDE FLANGE SHAPES ASTM A992, Fy = 50 KSI HOLLOW STRUCTURAL SECTIONS (HSS) RECTANGULAR & SQUARE ROUND ASTM A500, GRADE C, Fy = 50 KSI STEEL PIPE ASTM A500, GRADE C, Fy = 46 KSI ASTM A53, GRADE B, Fy = 35 KSI ASTM A53, Fy = 30 KSI ASTM F1525, GRADE A325N ASTM F1554, GRADE 55 WELDABLE (S1) MACHINE BOLTS ASTM A307 THREADS RODS ASTM A36 WELDED ELECTRODES E70XX DEFORMED BAR ANCHORS (DBA) ASTM A496, Fy = 70 KSI WELDED HEADED STUDS (WHS) ASTM A108, Fu = 65 KSI WELDED HEADED STUDS (WTS) 3. CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE BUILDING SYSTEM AT ALL TIMES DURING THE ERECTION PROCESS. ELEMENTS HAVE BEEN DESIGNED FOR THE FINAL COMPLETED CONDITION AND HAVE NOT BEEN INVESTIGATED FOR TEMPORARY LOADING DURING CONSTRUCTION. INVESTIGATION OF THE STRUCTURAL ELEMENTS FOR ADEQUACY DURING THE STEEL ERECTION AND CONSTRUCTION PROCESS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR TO PROVIDE TEMPORARY SUPPORTS AS REQUIRED TO MAINTAIN STABILITY. 4. COLUMNS AND BEAMS WITH BOLT, CAP OR END PLATES SHALL HAVE SQUARE CUT OR MILLED ENDS. 5. NON-METALLIC, NON-SHRINK, CHLORIDE FREE GROUT UNDER ALL COLUMN BASE PLATES AND BEAM BEARING PLATES SHALL CONSIST OF A PRE-MIXED PRODUCT COMPLYING WITH ALL REQUIREMENTS OF ASTM C1107. THE 28-DAY COMPRESSIVE STRENGTH OF THE GROUT SHALL BE TWICE THE FOUNDATION REQUIRED CONCRETE COMPRESSIVE STRENGTH, 5,000 PSI MINIMUM. 6. UNO, ALL STRUCTURAL STEEL PERMANENTLY EXPOSED TO THE WEATHER, INCLUDING ALL BRICK SHELF ANGLES AND EXTERIOR LINTELS, SHALL BE HOT DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123. ALL DAMAGED GALVANIZING SHALL BE REPAIRED IN ACCORDANCE WITH ASTM A780. STAINLESS AND WEATHERING STEELS, WHERE SPECIFIED, ARE EXEMPT FROM THIS REQUIREMENT. 7. COAT STEEL BELOW GRADE WITH COLD-APPLIED ASPHALT EMULSION PER ASTM D1187. 8. WHERE CONNECTIONS ARE NOTED TO BE SLIP CRITICAL, (EXAMPLE: A325-SC), BOLTS SHALL BE TIGHTENED TO THE MINIMUM PRETENSION FOR FULLY TIGHTENED BOLTS BY ONE OF THE AISC APPROVED METHODS. SLIP CRITICAL BOLTS SHALL HAVE CLASS "A" FAYING SURFACES. 9. ALL BOLTS (HIGH STRENGTH, ANCHOR BOLTS, EXPANSION BOLTS, ADHESIVE ANCHORS, ETC.) SHALL BE INSTALLED WITH STEEL NUTS AND WASHERS. NUTS AND WASHERS FOR HIGH STRENGTH BOLTS SHALL CONFORM TO ASTM A503 AND TO ASTM A436, RESPECTIVELY. 10. WELDING PROCEDURES, ELECTRODES, AND WELDER QUALIFICATIONS SHALL CONFORM TO THE AMERICAN WELDING SOCIETY CODE D1.1, AISC STANDARDS, AND LOCAL CODE REQUIREMENTS. 11. ALL WELDS SHOWN ON THE DRAWINGS SHALL BE SHOP WELDS, UNO, WHERE SHOWN, FIELD WELDING SHALL BE USED. CONTRACTOR MAY SUBSTITUTE FIELD WELDS FOR SHOP WELDS AT THEIR DISCRETION. SHOP DRAWINGS SHALL CLEARLY NOTE ALL WELDING USING AWS A2.4 SYMBOLS. 12. WHERE CONTINUOUS ANGLES OR BENT PLATES ARE INDICATED, PROVIDE A CONTINUOUS BUT WELD OR FULL PENETRATION WELD AT THE SPICE POINTS, UNO. THE STEEL FABRICATOR MAY SUBMIT AN ALTERNATE BOLTED CONNECTION DETAIL FOR APPROVAL. 13. COORDINATE WITH ALL OTHER TRADES WHICH MEET STEEL INTERACTIONS. THIS INCLUDES BUT IS NOT LIMITED TO COORDINATING WITH MASONRY, PRECAST CONCRETE, CAST-IN-PLACE CONCRETE, JOIST, AND METAL DECK SUPPLIERS. STEEL DECK 1. ALL STEEL DECK SHALL BE MANUFACTURED, DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS, AND ROOF DECKS BY THE STEEL DECK INSTITUTE (SDI). 2. STEEL DECK & ACCESSORIES SHALL BE FABRICATED FROM STEEL PER ASTM A1008 OR A663. 3. DECK SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: a. WIDE RIB ROOF DECK (TYPE B): i. MINIMUM YIELD STRENGTH: Fy = 50 KSI ii. DEPTH/GAGE: 1 1/2" / 20 c. MOMENT OF INERTIA (Iy): 0.197 in ⁴ / FT MIN d. SECTION MODULUS (Sx): 0.224 in ³ / FT MIN 4. ROOF DECK SHALL BE ATTACHED TO SUPPORTING STRUCTURAL MEMBERS BY 5/8" PULLE WELDS IN A 36S PATTERN AND 2 #10 TEK SCREW SIDE LAPS PER SPAN. SHEAR STRENGTH OF DECK DIAPHRAGM SHALL BE DESIGNED FOR A MINIMUM OF 91 PLF (LRFD) LOAD. 5. MINIMUM DECK BEARING SHALL BE 2" AT EXTERIOR SUPPORTS & 3" FOR INTERIOR SUPPORTS, UNO. 6. ALL DECK SHALL BE CONTINUOUS OVER 3 SPANS. WHERE LESS THAN 3 SPANS ARE AVAILABLE, THE DECK SUPPLIER SHALL INCREASE THE DECK GAGE OR PROVIDE TEMPORARY SHORING AS NOTED ON THE PLAN SHALL BE TREATED AS AN ANCHOR ROD AND SHALL CONFORM TO THE TOLERANCES SPECIFIED IN SECTION 7.5 OF AISC 303-16 CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES". 7. NO DIRECT ATTACHMENT TO UNDERSIDE OF METAL ROOF DECK IS ALLOWED UNLESS INDICATED ON THE STRUCTURAL DRAWINGS. ALL SUSPENDED LOADS, INCLUDING BUT NOT LIMITED TO, CEILING, LIGHT FIXTURES, DUCTWORK, PIPING, AND OTHER UTILITIES TO BE SUPPORTED FROM THE PRIMARY STRUCTURAL MEMBERS OR SECONDARY SUPPORTS BETWEEN STRUCTURAL FRAMING. COORDINATE HANGER AND/OR WIRE SUPPORTS WITH ASSOCIATED SPECIFICATIONS AND TRADES. 8. THE STEEL DECK SUPPLIER SHALL PROVIDE CLOSURE PLATES, AND ALL MISCELLANEOUS COLD-FORMED STEEL NECESSARY TO COMPLETE THE WORK.	1. THESE NOTES ARE APPLICABLE TO THE DESIGN OF STEEL JOISTS (K-SERIES, LH-SERIES, DLH-SERIES, SH-SERIES) AND JOIST BRACING. 2. STEEL JOIST FABRICATOR SHALL BE AN APPROVED FABRICATOR IN ACCORDANCE WITH THE BUILDING CODE, REGISTERED AND APPROVED BY THE A.H.J. AT THE COMPLETION OF FABRICATION, THE APPROVED FABRICATOR SHALL SUBMIT A "CERTIFICATE OF COMPLIANCE" TO THE A/E AND A/HJ STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH CONSTRUCTION DOCUMENTS. 3. FABRICATE AND ERECT JOISTS IN ACCORDANCE WITH THE BUILDING CODE, OPEN WEB STEEL JOISTS AND THE STANDARD SPECIFICATIONS FOR STEEL JOIST K-SERIES, LH-SERIES, DLH-SERIES, SH-SERIES, PUBLISHED BY THE STEEL JOIST INSTITUTE. TEMPORARY BRACING AND BRACING DESIGN REQUIRED FOR ERECTION ARE THE RESPONSIBILITY OF THE CONTRACTOR. 4. ALL STEEL JOISTS SHALL BE DESIGNED FOR THE SPAN, LOADING, AND SPACING INDICATED ON THE DRAWINGS. WHERE LOADS ARE NOT INDICATED, DESIGN JOIST FOR UNIFORM LOADING SHOWN IN STEEL JOIST INSTITUTE (SJI) LOAD TABLES BASED ON THE JOIST SPAN IN ADDITION TO LOADING INDICATED IN THESE NOTES OR ON PLANS. 5. SIZE, TYPE, AND SPACING OF JOIST BRIDGING SHALL BE IN ACCORDANCE WITH SJI, USE "X" BRIDGING AT DISCONTINUOUS ENDS OF BRIDGING, LOAD BRIDGING TO AVOID MECHANICAL OPENINGS. 6. DESIGN JOISTS AND BRIDGINS TO RESIST AN ASD NET UPLIFT OF 15 PSF IN THE FIELD OF THE ROOF, 25 PSF WITHIN 10' OF BUILDING EDGES, AND 35 PSF WITHIN 10' OF EXPOSED CORNERS. 7. UNO, JOIST SEAT DEPTH SHALL BE 2 1/2" AT K-SERIES JOIST, 3" H AND DLH10-11 SERIES JOISTS, 7" AT DLH18-25 AND JOIST GIRDERS, AND 10" AT JOIST GIRDERS WITH A SELF WEIGHT GREATER THAN OR EQUAL TO 150 PLF. JOIST SUPPLIER SHALL COORDINATE TOP OF STEEL BEAM ELEVATIONS WITH STEEL SUPPLIER PRIOR TO FABRICATION. PROVIDE SLOPED AND/OR SLOPED AND SKEWED BEARING SEATS AS REQUIRED FOR ROOF SLOPE. 8. FABRICATOR SHALL SUBMIT CALCULATIONS AND SHOP DRAWINGS SEALED BY AN ENGINEER REGISTERED IN THE STATE IN WHICH THE PROJECT IS LOCATED FOR ALL SPECIAL JOISTS AND JOIST GIRDERS. CALCULATIONS SHALL INCLUDE DEFLECTION AND CAMBER REQUIREMENTS AND CLEARLY SHOW ALL DESIGN LOADS. 9. LIVE LOAD DEFLECTIONS SHALL BE LIMITED TO SPAN/40 AT SIMPLE SPAN ROOF MEMBERS AND SPAN/80 AT SIMPLE SPAN FLOOR MEMBERS. ALL JOISTS AND JOIST GIRDERS SHALL BE CAMBERED PER SJI STANDARDS. 10. JOIST CANTILEVERS SHALL BE DESIGNED FOR ALL APPLICABLE LOADS. LIMIT TOTAL DEFLECTION TO 1/80 OF THE 2 TIMES THE CANTILEVER LENGTH. 11. ALL JOISTS AND JOIST GIRDERS SHALL BE DESIGNED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE APPLICABLE FIRE RESISTANCE RATINGS PER ARCHITECTURAL DETAIL. 12. REFER TO SNOW DRIFT DIAGRAM FOR SNOW DRIFT LOADS FOR SP JOISTS. LOADS SHALL BE COMBINED WITH OTHER ROOF LOADS INDICATED IN ACCORDANCE WITH THE BUILDING CODE. SNOW DRIFT LOADS SHALL BE DISTRIBUTED OVER THE TRIBUTARY WIDTH SUPPORTED BY THE JOIST. 13. DO NOT ALTER DETAILS SHOWN ON PLANS UNLESS REQUESTED AND APPROVED IN WRITING PRIOR TO SHOP DRAWING SUBMITTAL. 14. DESIGN ALL JOIST CHORDS FOR BENDING BETWEEN PANEL POINTS WITH A TOP CHORD BEND CHECK LOAD OF 400 LBS AND A BOTTOM CHORD BEND CHECK LOAD OF 200 LBS. WHERE CONCENTRATED LOADS EXCEED THESE LOADS, CONTRACTOR SHALL PROVIDE FIELD REINFORCEMENT PER JOISTAL JOIST REINFORCEMENT DETAIL. 15. WHERE JOISTS ARE INDICATED WITH A DEPTH AND SERIES ONLY ALONG WITH "SP" (SHOWN THUS "20K-SP") MANUFACTURER SHALL DESIGN JOIST BOLTS FOR THE LOADS NOTED ON THE PLANS AND GENERAL NOTES PLUS AN ADDITIONAL 500 LB CONCENTRATED DEAD LOAD TO OCCUR ANYWHERE ALONG SPAN, TOP OR BOTTOM CHORD. 16. WHERE A COMPLETE JOIST DESIGNATION IS INDICATED ALONG WITH AN "SP" (SHOWN THUS "20K-SP") THE JOIST IS DESIGNED WITH THE LOADS INDICATED ON THE PLANS AND GENERAL NOTES WITH A MINIMUM EQUIVALENT UNIFORM LOAD CAPACITY EQUAL TO OR GREATER THAN THAT OF THE SIZE INDICATED. 17. COORDINATE ARCH MECHANICAL, EQUIPMENT WEIGHT AND LOCATION WITH MECHANICAL CONTRACTOR. COORDINATE JOIST WEBS WHERE MECHANICAL DUCTS SHOWN ON MECHANICAL DRAWINGS ARE DESIGNED TO PENETRATE THROUGH JOIST WEBS. 18. JOISTS SHALL BE DESIGNED FOR A 500 LBS CONCENTRATED SERVICE WIND LOAD AT ALL STEEL ANGLE BRACES. REFERENCE THE ROOF SECTIONS FOR ANGLE BRACE SPACING REQUIREMENTS. POST-INSTALLED ANCHORS 1. UNO, THE FOLLOWING APPLIES TO ALL POST-INSTALLED ANCHORAGE INTO HARDENED CONCRETE OR MASONRY WHICH INCLUDES SUCHS AS EXPANSION, WEDGE, SLEEVE, ADHESIVE, EPOXY, SHOT-PI, SCREW AND UNDERCUT. 2. POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED. 3. CONTRACTOR SHALL OBTAIN APPROVAL FROM ENGINEER OF RECORD PRIOR TO USING POST-INSTALLED ANCHORS FOR MISSING, DAMAGED OR MISPLACED CAST-IN-PLACE ANCHORS. 4. CARE SHALL BE GIVEN TO AVOID DAMAGES WITH EXISTING REBAR OR EMBEDDED CONDUIT WHEN DRILLING HOLE. HOLES SHALL BE DRILLED AND CLEANED PER THE MANUFACTURER'S INSTRUCTIONS. 5. MAINTAIN A MINIMUM OF 2 INCHES FROM EXISTING REINFORCEMENT, CONDUIT, POST-TENSIONING (WHERE OCCURS), ETC. USE NON-DESTRUCTIVE TESTING TO LOCATE PRIOR TO DRILLING, CORING OR SHOOTING PINS INTO THE EXISTING CONCRETE OR MASONRY. FOR INSTALLATION DEEPER THAN 3 INCHES USE GROUND PENETRATING RADAR OR X-RAY METHODS. 6. ALL ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE BUILDING CODE REQUIREMENTS, MANUFACTURER'S RECOMMENDATIONS AND ALL APPLICABLE CODES, INCLUDING BUT NOT LIMITED TO, ALL ANCHOR SPACINGS, EMBEDMENTS AND EDGE DISTANCES. 7. SUBSTITUTION REQUESTS FOR ALTERNATE PRODUCTS MUST BE APPROVED IN WRITING BY THE ENGINEER PRIOR TO USE. CONTRACTOR SHALL PROVIDE CALCULATIONS DEMONSTRATING THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE PERFORMANCE VALUES OF THE SPECIFIED PRODUCT. SUBSTITUTION REQUESTS MUST BE SUBMITTED WITH THE SHOP DRAWING SUBMITTAL. ONCE REVIEWED, CONTRACTOR SHALL FORWARD TO THE A/HJ FOR APPROVAL. FABRICATION AND INSTALLATION OF THE DELEGATED DESIGN SUBMITTAL ITEMS SHALL NOT OCCUR UNTIL APPROVAL OF THE A/HJ IS RECEIVED. 8. EMBEDMENT REFERS TO THE FINAL INSTALLED EFFECTIVE DEPTH "H". ALL ANCHORS SHALL HAVE EMBEDMENT NOTED OR EMBEDMENT AS RECOMMENDED BY MANUFACTURER WHERE NO EMBEDMENT IS SHOWN. REQUIRED ANCHOR HOLE DEPTH FOR INSTALLATION MAY BE DEEPER. 9. IF THE FULL ANCHOR EMBEDMENT DEPTH, SPACING OR EDGE DISTANCE CANNOT BE ACHIEVED, NOTIFY THE ENGINEER. 10. STEEL ANCHORING ELEMENTS SHALL BE THE SIZE AND GRADE SHOWN ON THE DRAWINGS AND MUST BE CLEAN, DRY AND FREE OF ANY OIL CONTAMINANTS. DO NOT INCREASE OR DECREASE SIZE OF ANCHOR WITHOUT APPROVAL OF ENGINEER. 11. ALL PERSONNEL INSTALLING POST-INSTALLED ANCHORS SHALL BE TRAINED BY THE MANUFACTURER OR PROVIDE TRAINING DOCUMENTATION FROM THE MANUFACTURER SHALL BE AVAILABLE UPON REQUEST. 12. INSTALLATION OF ADHESIVE ANCHORS IN HORIZONTAL TO VERTICALLY OVERHEAD ORIENTATION SHALL BE DONE BY A CERTIFIED ADHESIVE ANCHOR INSTALLER (AAI) AS CERTIFIED THROUGH ACI AND IN ACCORDANCE WITH ACI 318. PROOF OF CURRENT CERTIFICATION SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF INSTALLATION. 13. EXPANSION BOLTS IN CONCRETE MASONRY SHALL BE ONE OF THE FOLLOWING: a. HLTI HWB BOLT 1 T2Z MASONRY ANCHORS (ICC ESR-4	

STATEMENT OF SPECIAL INSPECTIONS

- IN ACCORDANCE WITH IBC, SECTION 1704, THE OWNER'S REPRESENTATIVE SHALL EMPLOY ONE OR MORE QUALIFIED SPECIAL INSPECTORS AND/OR TESTING AGENCIES TO PERFORM STRUCTURAL TESTS AND SPECIAL INSPECTIONS ON THE TYPES OF WORK LISTED IN THE STATEMENT OF SPECIAL INSPECTIONS.
- THE DESIGNATED ENGINEER OF RECORD FOR SPECIAL INSPECTIONS SHALL BE RESPONSIBLE FOR DEFINING THE ACTIVITIES OF THE INSPECTORS, FOR CERTIFYING THE QUALIFICATIONS OF THE INSPECTORS WITH THE A/E, AND TO ATTEND THE PRE-CONSTRUCTION MEETING TO DEFINE THEIR SCOPE OF SERVICES AND THE TESTING OR TEST PROCEDURES THAT ARE REQUIRED AS OUTLINED IN THE BUILDING CODE.
- THE INSPECTOR SHALL OBSERVE THE WORK ASSIGNED TO VERIFY CONFORMANCE WITH THE APPROVED CONTRACT DOCUMENTS.
- THE INSPECTOR SHALL FURNISH DAILY INSPECTION REPORTS ON THE WORK TO THE OWNER'S REPRESENTATIVE, A/E AND ENGINEER. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, AND, IF UNCORRECTED, TO THE ENGINEER AND THE A/E.
- THE DESIGNATED ENGINEER OF RECORD FOR SPECIAL INSPECTIONS SHALL COMPLETE, SIGN AND SEAL A FINAL REPORT CERTIFYING THAT TO THE BEST OF THEIR KNOWLEDGE, THE WORK IS IN CONFORMANCE WITH THE APPROVED CONTRACT DOCUMENTS.
- SPECIAL INSPECTION IS TO BE PROVIDED IN ADDITION TO THE INSPECTIONS CONDUCTED BY THE A/E AND SHALL NOT BE CONSTRUED TO RELIEVE THE OWNER OR AUTHORIZED AGENT FROM REQUESTING THE INSPECTIONS REQUIRED BY IBC SECTION 110.
- CONTRACTOR RESPONSIBILITY: EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF A MAIN WIND- OR SEISMIC FORCE-RESISTING COMPONENT LISTED IN THE STATEMENT OF SPECIAL INSPECTIONS SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE A/E AND THE OWNER'S REPRESENTATIVE ACKNOWLEDGING AWARENESS OF REQUIRED SPECIAL INSPECTIONS PRIOR TO COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT.
- CONCRETE: PER IBC SECTION 1705.3 AND TABLE 1705.3 WITH EXCEPTIONS. THE FOLLOWING ITEMS REQUIRE SPECIAL INSPECTION: ALL CONCRETE, EXCEPT SLAB-ON-GRADE, SIDE WALKS, AND PAVEMENT.
- STRUCTURAL MASONRY: MASONRY CONSTRUCTION SHALL BE INSPECTED AND VERIFIED IN ACCORDANCE WITH TMS 402/602-16:
 - ENGINEERED MASONRY IN RISK CATEGORY I, II, OR III STRUCTURES: THE MINIMUM SPECIAL INSPECTION PROGRAM FOR MASONRY SHALL COMPLY WITH LEVEL 2 QUALITY ASSURANCE, TABLE 4.
- STEEL CONSTRUCTION: SPECIAL INSPECTIONS FOR STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF AISC 360-16. PROVIDE INSPECTION PER IBC SECTION 1704.2.3 FOR STRUCTURAL LOADING-BEARING MEMBERS AND ASSEMBLIES FABRICATED ON THE PREMISES OF A FABRICATOR'S SHOP. THESE INSPECTIONS SHALL BE AT CONTRACTOR'S EXPENSE IF THE FABRICATOR IS NOT AN APPROVED FABRICATOR PER SECTION 1704.2.5.1.
- WELDING: WELDING INSPECTION SHALL BE IN COMPLIANCE WITH AWS D1.1. THE BASIS FOR WELDING INSPECTOR QUALIFICATIONS SHALL BE AWS D1.1. PROVIDE SPECIAL INSPECTION IN ACCORDANCE WITH AISC 360-16 TABLE N5.4-1 THROUGH TABLE N5.4-3.
- STEEL DETAILING: AN INSPECTION OF THE STEEL FRAME SHALL BE PERFORMED TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN ON THE APPROVED CONSTRUCTION DOCUMENTS, SUCH AS BRACING, STIFFENING, MEMBER LOCATIONS AND PROPER APPLICATION OF JOINT DETAILS AT EACH CONNECTION.
- HIGH STRENGTH BOLTING: INSTALLATION OF HIGH STRENGTH BOLTS SHALL BE PERIODICALLY INSPECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. HIGH STRENGTH BOLTING: PROVIDE SPECIAL INSPECTION IN ACCORDANCE WITH AISC 360-16 TABLE N5.6-1 THROUGH TABLE N5.6-3.
- STEEL OPEN WEB STEEL JOIST AND JOIST GIRDERS: INSPECTION SHALL BE PER TABLE 1705.2.3.
- GRADING, EXCAVATION AND FILLING: PER SECTION 1705.6 AND TABLE 1705.6.
- SPRAY-APPLIED FIREPROOFING: PER SECTION 1705.14.
- MASTIC AND INTUMESCENT FIRE RESISTING COATINGS: PER SECTION 1705.15.
- EXTERIOR INSULATION AND FINISH SYSTEM (EIFS): PER SECTION 1705.16.
- FIRE-RESISTANT PENETRATIONS AND JOINTS: PER SECTION 1705.17.
- SMOKE CONTROL: PER SECTION 1705.18.
- EXPANSION BOLT, SCREW ANCHOR AND ADHESIVE ANCHORS: INSTALLATION TO VERIFY INSTALLATION IN ACCORDANCE WITH ICC-ES REPORTS NOTED PREVIOUSLY OR APPROVED EQUAL.

IBC — TABLE 1705.2.3			
REQUIRED SPECIAL INSPECTIONS OF OPEN-WEB STEEL JOISTS AND JOIST GIRDERS			
TYPE	CONTINUOUS	PERIODIC	REFERENCED STANDARD (a)
1. Installation of open-web steel joists and joist girders.			
a. End connections – welding or bolted.	—	X	SJI specifications listed in Section 2207.1.
b. Bridging – horizontal or diagonal.	—	—	—
1. Standard bridging.	—	X	SJI specifications listed in Section 2207.1.
2. Bridging that differs from the SJI specifications listed in Section 2207.1.	—	X	—
For SJI: 1 inch = 25.4 mm.			
a. Where applicable, see also Section 1705.13. Special inspections for seismic resistance.			

IBC — TABLE 1705.3				
REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION				
TYPE	CONTINUOUS	PERIODIC	REFERENCED STANDARD (a)	ISC REFERENCE
1. Inspect reinforcement, including prestressing tendons, and verify placement.	—	X	ACI 318: Ch. 20, 25.2, 25.3, 26.6.1-26.6.3	—
2. Reinforcing bar welding:				
a. Verify weldability of reinforcing bars other than ASTM A706.	—	X	AWS D14	—
b. Inspect single-pass fillet welds, maximum 5/16", and	—	X	ACI 318: 26.6.4	—
c. Inspect all other welds.	X	—	—	—
3. Inspect anchors cast in concrete.	—	X	ACI 318: 17.8.2	—
4. Inspect anchors post-installed in hardened concrete members. (b)				
a. Adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension loads.	X	—	ACI 318: 17.8.2.4	—
b. Mechanical anchors and adhesive anchors not defined in 4-a.	—	X	ACI 318: 17.8.2	—
5. Verify use of required design mix.	—	X	ACI 318: Ch. 19, 26.4.3, 26.4.4	1904.1, 1904.2
6. Prior to concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	X	—	ASTM C31, ASTM C172, ACI 318: 26.5, 26.12	—
7. Inspect concrete and shotcrete placement for proper application techniques.	X	—	ACI 318: 26.5	—
8. Verify maintenance of specified curing temperature and techniques.	—	X	ACI 318: 26.5.3-26.5.5	—
9. Inspect prestressed concrete for:				
a. Application of prestressing forces, and	X	—	ACI 318: —	—
b. Grouting of bonded prestressing tendons.	X	—	26.10	—
10. Inspect erection of precast concrete members.	—	X	ACI 318: 26.9	—
11. For precast concrete diaphragm connections or reinforcement at joints classified as moderate or high deformability elements (MDE or HDE) in structures assigned to Seismic Design Category C, D, E or F, inspect such connections and reinforcement in the field for:				
a. Installation of the embedded part	X	—	ACI 318: 26.13.1.3, ACI 550.5	—
b. Completion of the continuity of reinforcement across joints.	X	—	—	—
c. Completion of connections in the field.	X	—	—	—
12. Inspect installation tolerances of precast concrete diaphragm connections for compliance with ACI 550.5.	—	X	ACI 318: 26.13.1.3	—
13. Verify in-situ concrete strength, prior to stressing of tendons in post-tensioned concrete and prior to removal of shores and forms from beams and structural slabs.	—	X	ACI 318: 26.11.2	—
14. Inspect formwork for shape, location and dimensions of the concrete member being formed.	—	X	ACI 318: 26.11.1.2(b)	—
a. Where applicable, see also Section 1705.13. Special inspections for seismic resistance.				
b. Specific requirements for special inspection shall be included in the research report for the anchor issued by an approved source in accordance with 17.8.2 in ACI 318, or other qualification procedures. Where specific requirements are not provided, special inspection requirements shall be specified by the registered design professional and shall be approved by the building official prior to the commencement of the work.				

IBC — TABLE 1705.6		
REQUIRED SPECIAL INSPECTIONS AND TESTS OF SOILS		
TYPE	CONTINUOUS	PERIODIC
1. Verify materials below shallow foundations are adequate to achieve the design bearing capacity.	—	X
2. Verify excavations are extended to proper depth and have reached proper material.	—	X
3. Perform classification and testing of compacted fill materials.	—	X
4. During fill placement, verify use of proper materials and procedures in accordance with the provisions of the approved geotechnical report. Verify densities and fill thicknesses during placement and compaction of compacted fill.	X	—
5. Prior to placement of compacted fill, inspect subgrade and verify that site has been prepared properly.	—	X

TMS 402 / 602 — TABLE 3				
MINIMUM VERIFICATION REQUIREMENTS				
MINIMUM VERIFICATION	REQUIRED FOR QUALITY ASSURANCE (a)			REFERENCE FOR CRITERIA
	LEVEL 1	LEVEL 2	LEVEL 3	
Prior to construction, verification of compliance of submittals.	R	R	R	Art. 1.5
Prior to construction, verification of f'm and FAAC, except where specifically exempted by the Code.	NR	R	R	Art. 1.4B
During construction, verification of Slump flow and Visual Stability Index (VSI) when self-consolidating grout is delivered to the project site.	NR	R	R	Art. 1.5 & 1.6.3
During construction, verification of f'm and FAAC for every 5,000 square feet (465 square meters).	NR	NR	R	Art. 1.4B
During construction, verification of applications of materials as delivered to the project site for premixed or preblended mortar, prestressing grout, and grout other than self-consolidating grout.	NR	NR	R	Art. 1.4B
a. R = Required, NR = Not Required				

TMS 402 / 602 — TABLE 4					
MINIMUM SPECIAL INSPECTION					
INSPECTION TASK	FREQUENCY (a)			REFERENCE FOR CRITERIA	
	LEVEL 1	LEVEL 2	LEVEL 3	TMS 402	TMS 602
1. As masonry construction begins, verify that the following are in compliance:					
a. Proportions of site-prepared mortar	NR	P	P	Art. 2.1, 2.6A, & 2.6C	
b. Grade and size of prestressing tendons and anchorages	NR	P	P	Art. 2.4B & 2.4H	
c. Grate, type, and size of reinforcement, connectors, anchor bolts, and prestressing tendons and anchorages	NR	P	P	Art. 3.4 & 3.6A	
d. Prestressing technique	NR	P	P	Art. 3.6B	
e. Properties of thin-bed mortar for AAC masonry	NR	C (b) / P (c)	C	Art. 2.1C.1	
f. Sample panel construction	NR	P	C	Art. 1.6D	
2. Prior to grouting, verify that the following are in compliance:					
a. Grout Space	NR	P	C	Art. 3.2D & 3.2F	
b. Placement of prestressing tendons and anchorages	NR	P	P	Sec. 10.8 & 10.9	Art. 2.4 & 3.6
c. Placement of reinforcement, connectors, and anchor bolts	NR	P	C	Art. 3.2E & 3.4	
d. Proportions of site-prepared grout and prestressing grout for bonded tendons	NR	P	P	Art. 2.6B & 2.4G.1.b	
3. Verify compliance of the following during construction:					
a. Materials and procedures with the approved submittals	NR	P	P	Art. 1.5	
b. Placement of masonry units and mortar joint construction	NR	P	P	Art. 3.3B	
c. Size and location of structural members	NR	P	P	Art. 3.3F	
d. Type, size, and location of anchors, including other details of anchorage of masonry to structural members, frames, or other construction	NR	P	C	Sec. 1.2.1(e), 6.2.1 & 6.3.1	
e. Welding of reinforcement	NR	C	C	Sec. 6.1.6.1.2	
f. Preparation, construction, and protection of masonry during cold weather (temperature below 40°F) or hot weather (temperature above 90°F)	NR	P	P	Art. 1.8C & 1.8D	
g. Application and measurement of prestressing force	NR	C	C	Art. 3.8B	
h. Placement of grout and prestressing grout for bonded tendons in compliance	NR	C	C	Art. 3.5 & 3.6C	
i. Placement of AAC masonry units and construction of thin-bed mortar joints	NR	C (b) / P (c)	C	Art. 3.3B.9 & 3.3F.1.b	
4. Observe preparation of grout specimens, mortar specimens, and / or prisms	NR	P	C	Art. 1.4B.2.a.3, 1.4B.2.b.3, 1.4B.2.c.3, 1.4B.3 & 1.4B.4	
a. Frequency refer to the frequency of inspection, which may be continuous during the task listed or periodically during the listed task, as defined in the table.					
NR = Not Required, P = Periodic, C = Continuous					
b. Required for the first 5,000 square feet (465 square meters) of AAC masonry.					
c. Required after the first 5,000 square feet (465 square meters) of AAC masonry.					

AISC 360 — TABLE N5.4-1		
INSPECTION TASKS PRIOR TO WELDING		
INSPECTION TASKS PRIOR TO WELDING	QC	QA
Welder qualification records and continuity records	P	O
Welding procedure specifications (WPS) available	P	P
Manufacturer certifications for welding consumables available	P	P
Material identification (type / grade)	O	O
Welder identification system [a]	O	O

Fit-up of groove welds (including joint geometry)		
• Joint preparations		
• Dimensions (alignment, root opening, root face, bevel)		
• Cleanliness (condition of steel surfaces)	O	O
• Tacking (tack weld quality and location)		
• Backing type and fit (if applicable)		
Fit-up of CJP groove welds of HSS T-, Y- and K-joints without backing (including joint geometry)		
• Joint preparations		
• Dimensions (alignment, root opening, root face, bevel)		
• Cleanliness (condition of steel surfaces)	P	O
• Tacking (tack weld quality and location)		
Configuration and finish of access holes	O	O
Fit-up of fillet welds		
• Dimensions (alignment, gaps at root)	O	O
• Cleanliness (condition of steel surfaces)		
• Tacking (tack weld quality and location)		
Check welding equipment	O	—

(a) The fabricator or erector, as applicable, shall maintain a system by which a welder who has welded a joint or member can be identified. Stamps, if used, shall be the low-stress type.		
O - Observe these items on a random basis. Operations need not be delayed pending these inspections.		
P - Perform these tasks for each welded joint or member.		

AISC 360 — TABLE N5.4-2		
INSPECTION TASKS DURING WELDING		
INSPECTION TASKS DURING WELDING	QC	QA
Control and handling of welding consumables		
• Packaging	O	O
• Exposure Control		
No welding over cracked tack welds	O	O
Environmental conditions		
• Wind speed within limits	O	O
• Precipitation and temperature		
WPS Followed		
• Settings on welding equipment		
• Travel Speed		
• Selected welding materials	O	O
• Shielding gas type / flow rate		
• Preheat applied		
• Interpass temperature maintained (min. / max.)		
• Proper position (F, V, H, OH)		
Welding techniques		
• Interpass and final cleaning		
• Each pass within profile limitations	O	O
• Each pass meets quality requirements		
Placement and installation of steel headed stud anchors	P	P
O - Observe these items on a random basis. Operations need not be delayed pending these inspections.		
P - Perform these tasks for each welded joint or member.		

AISC 360 — TABLE N5.4-3		
INSPECTION TASKS AFTER WELDING		
INSPECTION TASKS AFTER WELDING	QC	QA
Welds cleaned	O	O
Size, length and location of welds	P	P
Welds meet visual acceptance criteria		
• Crack prohibition		
• Weld / base-metal fusion		
• Crater cross section	P	P
• Weld profiles		
• Weld size		
• Undercut		
• Porosity		
Arc strikes	P	P
k-area [a]	P	P
Weld access holes in rolled heavy shapes and build-up heavy shapes [b]	P	P
Backing removed and weld tabs removed (if required)	P	P
Repair activities	P	P
Document acceptance or rejection of welded joint or member	P	P
No prohibited welds have been added without the approval of the EOR	O	O
[a] When welding of doubler plates, continuity plates or stiffeners has been performed in the k-area, visually inspect the web k-area for cracks within 3 inches (75 mm) of the weld.		
[b] After rolled heavy shapes (see Section A3.1c) and built-up heavy shapes (see Section A3.1d) are welded, visually inspect the weld access hole for cracks.		
O - Observe these items on a random basis. Operations need not be delayed pending these inspections.		
P - Perform these tasks for each welded joint or member.		

AISC 360 — TABLE N5.6-1		
INSPECTION TASKS PRIOR TO BOLTING		
INSPECTION TASKS PRIOR TO BOLTING	QC	QA
Manufacturer's certifications available for fastener materials	O	P
Fasteners marked in accordance with ASTM requirements	O	O
Proper fasteners selected for the joint detail (grade, type, bolt length if threads are to be excluded from shear plane)	O	O
Proper bolting procedure selected for joint detail	O	O
Connecting elements, including the appropriate faying surface condition and hole preparation, if specified, meet applicable requirements	O	O
Pre-installation verification testing by installation personnel observed and documented for fastener assemblies and methods used	P	O
Proper storage provided for bolts, nuts, washers, and other fastener components	O	O
O - Observe these items on a random basis. Operations need not be delayed pending these inspections.		
P - Perform these tasks for each bolted connection.		

AISC 360 — TABLE N5.6-2		
INSPECTION TASKS DURING BOLTING		
INSPECTION TASKS DURING BOLTING	QC	QA
Fastener assemblies placed in all holes and washers and nuts are positioned as required	O	O
Joint brought to the snug-tight condition prior to the pretensioning operation	O	O
Fastener component not turned by the wrench prevented from rotating	O	O
Fasteners are pretensioned in accordance with the RCSC Specification, progressing systematically from the most right point toward the free edges	O	O
O - Observe these items on a random basis. Operations need not be delayed pending these inspections.		
P - Perform these tasks for each bolted connection.		

AISC 360 — TABLE N5.6-3		
INSPECTION TASKS AFTER BOLTING		
INSPECTION TASKS AFTER BOLTING	QC	QA
Document acceptance or rejection of bolted connections	P	P
O - Observe these items on a random basis. Operations need not be delayed pending these inspections.		
P - Perform these tasks for each bolted connection.		

ANSI / SDI QA/QC — TABLE 1.1		
INSPECTION OR EXECUTION TASKS PRIOR TO DECK PLACEMENT		
INSPECTION TASKS PRIOR TO DECK PLACEMENT	QC	QA
TASK	QC	QA
A. Verify compliance of materials (deck and all deck accessories) with construction documents, including profiles, material properties, and base metal thickness	P	P
B. Document acceptance or rejection of deck and deck accessories	P	P
O - Observe these items on an intermittent basis. Operations need not be delayed pending these inspections.		
P - Perform these tasks prior to final acceptance for each item or element.		

ANSI / SDI QA/QC — TABLE 1.2		
INSPECTION OR EXECUTION TASKS AFTER DECK PLACEMENT		
INSPECTION OR EXECUTION TASKS AFTER DECK PLACEMENT	QC	QA
TASK	QC	QA
A. Verify compliance of deck and all deck accessories installation with construction documents	P	P
B. Verify deck materials are represented by the mill certifications that comply with the construction documents	N/A	P
C. Document acceptance or rejection of installation of deck and deck accessories	P	P
O - Observe these items on an intermittent basis. Operations need not be delayed pending these inspections.		
P - Perform these tasks prior to final acceptance for each item or element.		

ANSI / SDI QA/QC — TABLE 1.3		
INSPECTION OR EXECUTION TASKS PRIOR TO WELDING		
INSPECTION OR EXECUTION TASKS PRIOR TO WELDING	QC	QA
TASK	QC	QA
A. Welding procedure specifications (WPS) available	O	O
B. Manufacturer certifications for welding consumables available	O	O
C. Material identification (type / grade)	O	O
D. Check welding equipment	O	O
O - Observe these items on an intermittent basis. Operations need not be delayed pending these inspections.		
P - Perform these tasks prior to final acceptance for each item or element.		

ANSI / SDI QA/QC — TABLE 1.4		
INSPECTION OR EXECUTION TASKS DURING WELDING		
INSPECTION OR EXECUTION TASKS DURING WELDING	QC	QA
TASK	QC	QA
A. Use of qualified welders.	O	O
B. Control and handling of welding consumables	O	O
C. Environmental conditions (wind speed, moisture, temperature)	O	O
D. WPS followed	O	O
O - Observe these items on an intermittent basis. Operations need not be delayed pending these inspections.		
P - Perform these tasks prior to final acceptance for each item or element.		

ANSI / SDI QA/QC — TABLE 1.5		
INSPECTION OR EXECUTION TASKS AFTER WELDING		
INSPECTION OR EXECUTION TASKS AFTER WELDING	QC	QA
TASK	QC	QA
A. Verify size and location of welds, including support, sidelap, and perimeter welds	P	P
B. Welds meet visual acceptance criteria	P	P
C. Verify repair activities	P	P
D. Document acceptance or rejection of welds	P	P
O - Observe these items on an intermittent basis. Operations need not be delayed pending these inspections.		
P - Perform these tasks prior to final acceptance for each item or element.		

ANSI / SDI QA/QC— TABLE 1.6			
INSPECTION OR EXECUTION TASKS PRIOR TO MECHANICAL FASTENING			
	TASK	QC	QA
A.	Manufacturer installation instructions available for mechanical fasteners	○	○
B.	Proper tools available for fastener installation	○	○
C.	Proper storage for mechanical fasteners	○	○
O - Observe these items on an intermittent basis. Operations need not be delayed pending these inspections.			
P - Perform these tasks prior to final acceptance for each item or element.			

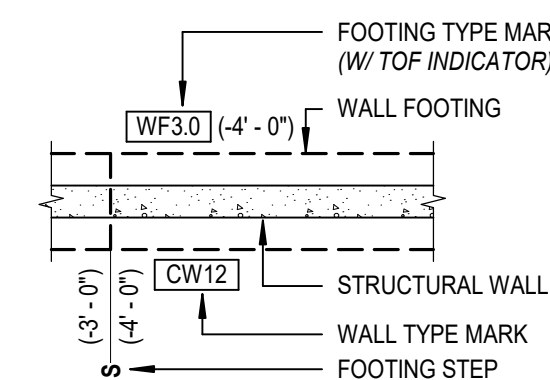
FOUNDATION PLAN GENERAL NOTES

- A. TOP OF SOG ELEVATION = 0' - 0" UNO. COORDINATE TOP OF SLAB WITH FLOOR FINISHES. SEE ARCHITECTURAL DRAWINGS.
- B. EXTERIOR TOP OF FOOTING (TOF) ELEVATION = -1' - 8" UNO.
- C. INTERIOR TOP OF FOOTING (TOF) ELEVATION = -1' - 8" UNO.
- D. SEE GEOTECHNICAL REPORT FOR SITE AND SUBGRADE PREPARATIONS.
- E. PROVIDE STOOPS/FROST SLABS AT ALL EXTERIOR DOORS. COORDINATE WITH CIVIL AND ARCHITECTURAL DRAWINGS.

ROOF FRAMING PLAN GENERAL NOTES

- A. SEE PLAN FOR TOP OF STEEL (TOS) ELEVATIONS/JOIST BEARING ELEVATIONS (JBE).
- B. TOP OF STEEL/JOIST ELEVATION (TOS) EQUAL TO BOTTOM OF DECK ELEVATION UNO.
- C. JOIST SEAT DEPTH TO BE DETERMINED BASED ON ROOF DECK SLOPE. TOP OF STEEL ELEVATIONS TO BE DETERMINED BASED ON JOIST SEAT DEPTHS.
- D. BEAMS/JOISTS SHALL BE SPACED EVENLY BETWEEN NEAREST COLUMN LINES AND/OR LOCATED STRUCTURAL MEMBERS (WALLS/UMS) UNO.
- E. STEEL ANGLES OR BENT PLs ARE REQUIRED AT ALL DECK PERIMETERS, EVEN WHEN NOT INDICATED. REFERENCE TYPEICAL DETAILS.
- F. STEEL MEMBERS AND CONNECTIONS EXPOSED TO THE WEATHER ARE TO BE GALVANIZED.

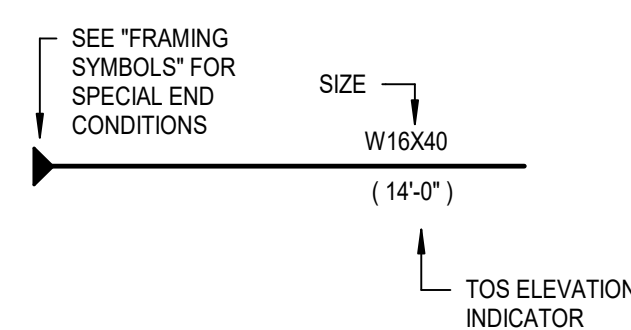
FOUNDATION SYMBOLS



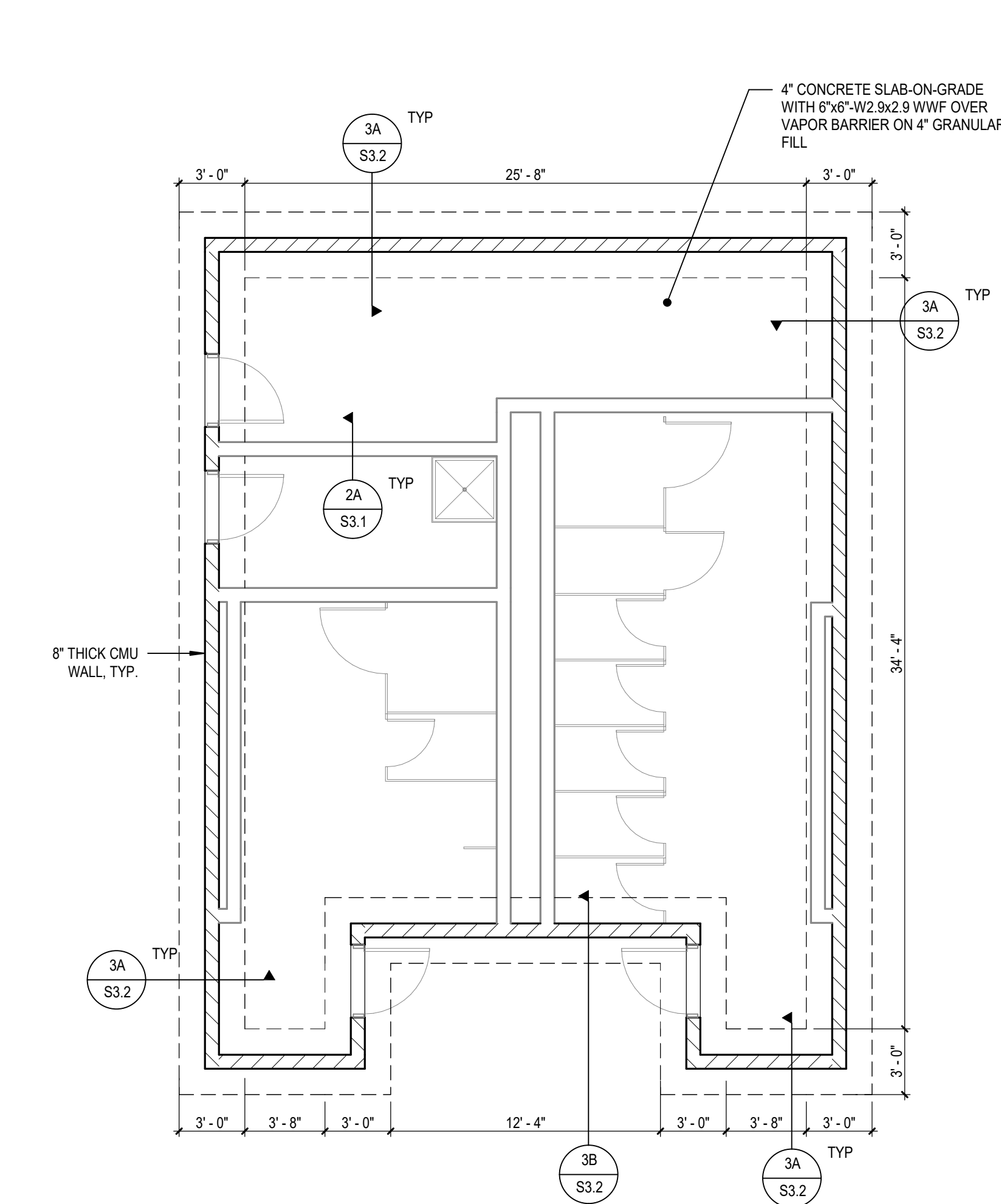
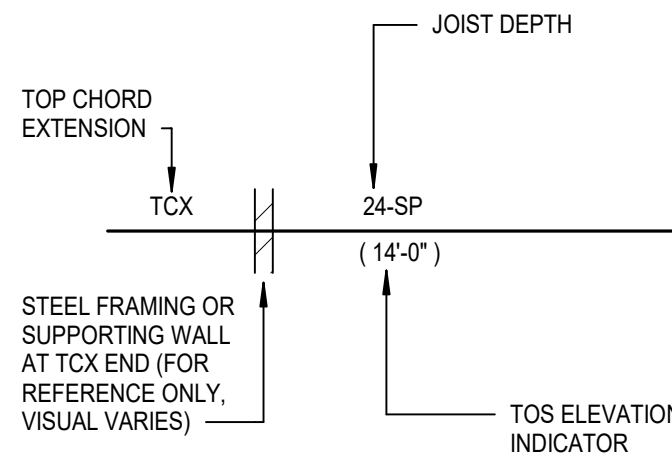
FRAMING SYMBOLS

- | | |
|---|---|
|  | MASONRY WALL TYPE MARK |
|  | MASONRY WALL LINTEL
(MLX INDICATES MASONRY LINTEL
PLX INDICATES PRECAST LINTEL
(W/ BOTTOM OF LINTEL ELEVATION INDICATOR) |
|  | MASONRY WALL CONTROL JOINT |
|  | STEEL BEAM TO STEEL BEAM MOMENT CONN |

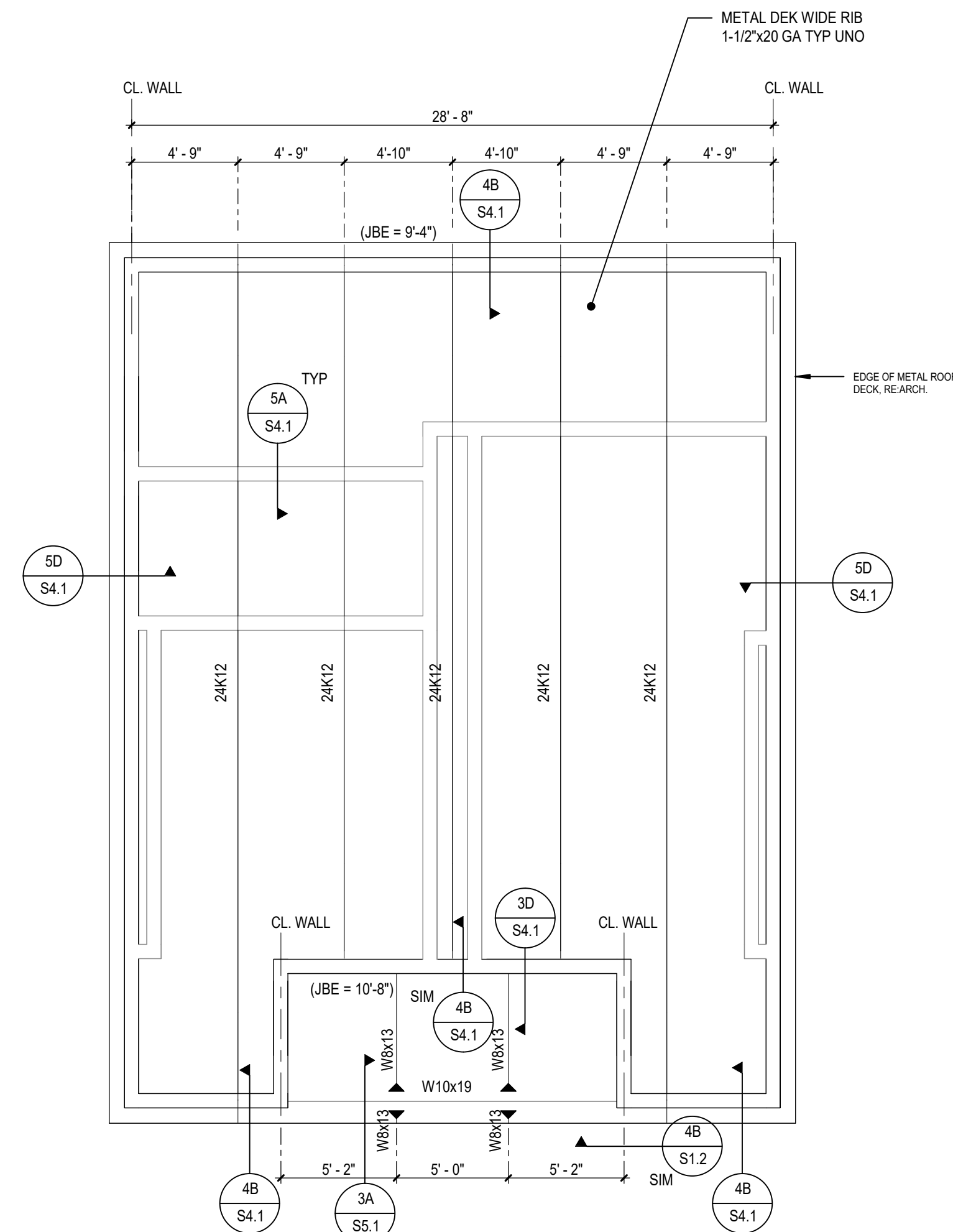
BEAM SYMBOLS



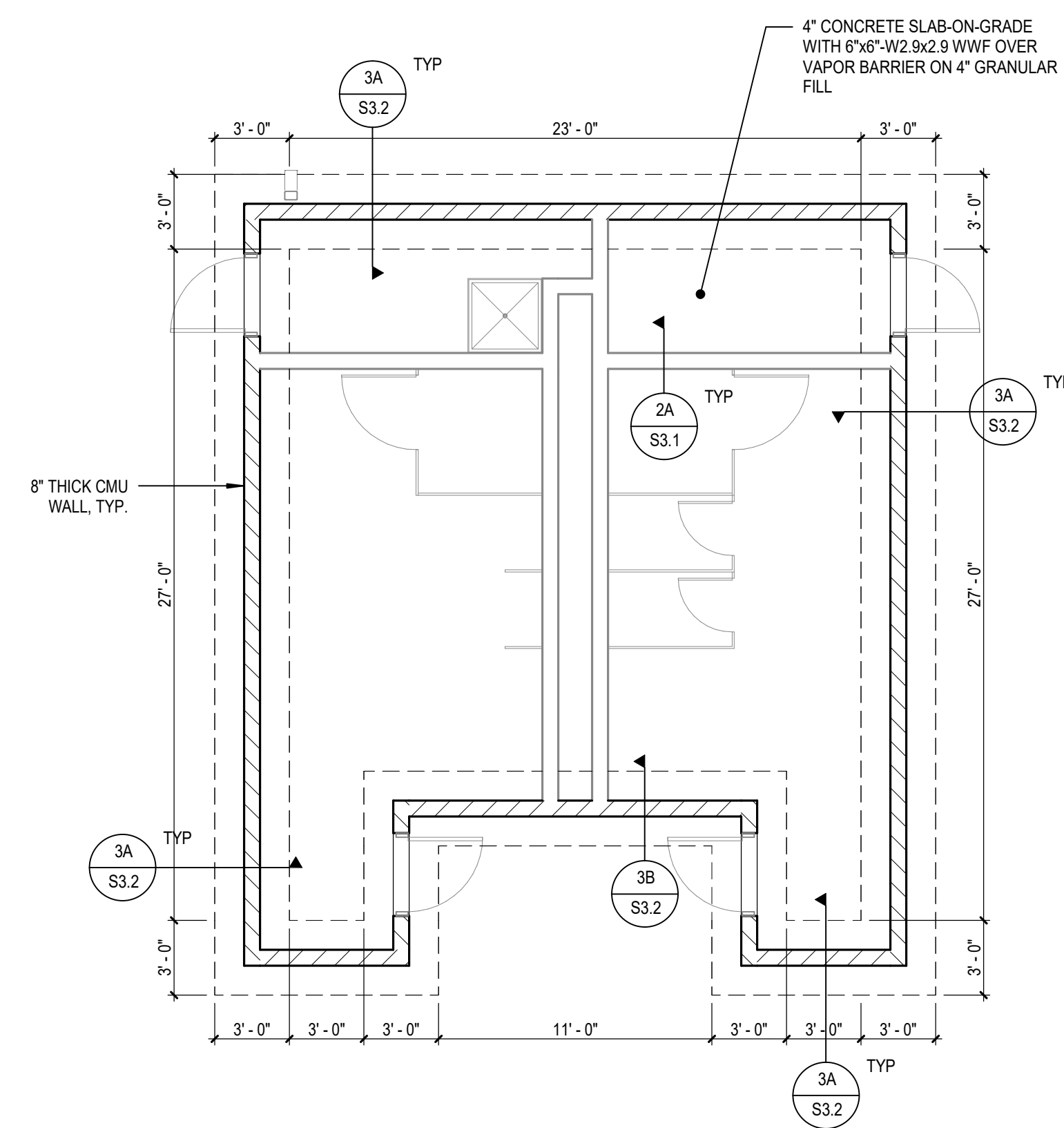
STEEL JOIST SYMBOLS



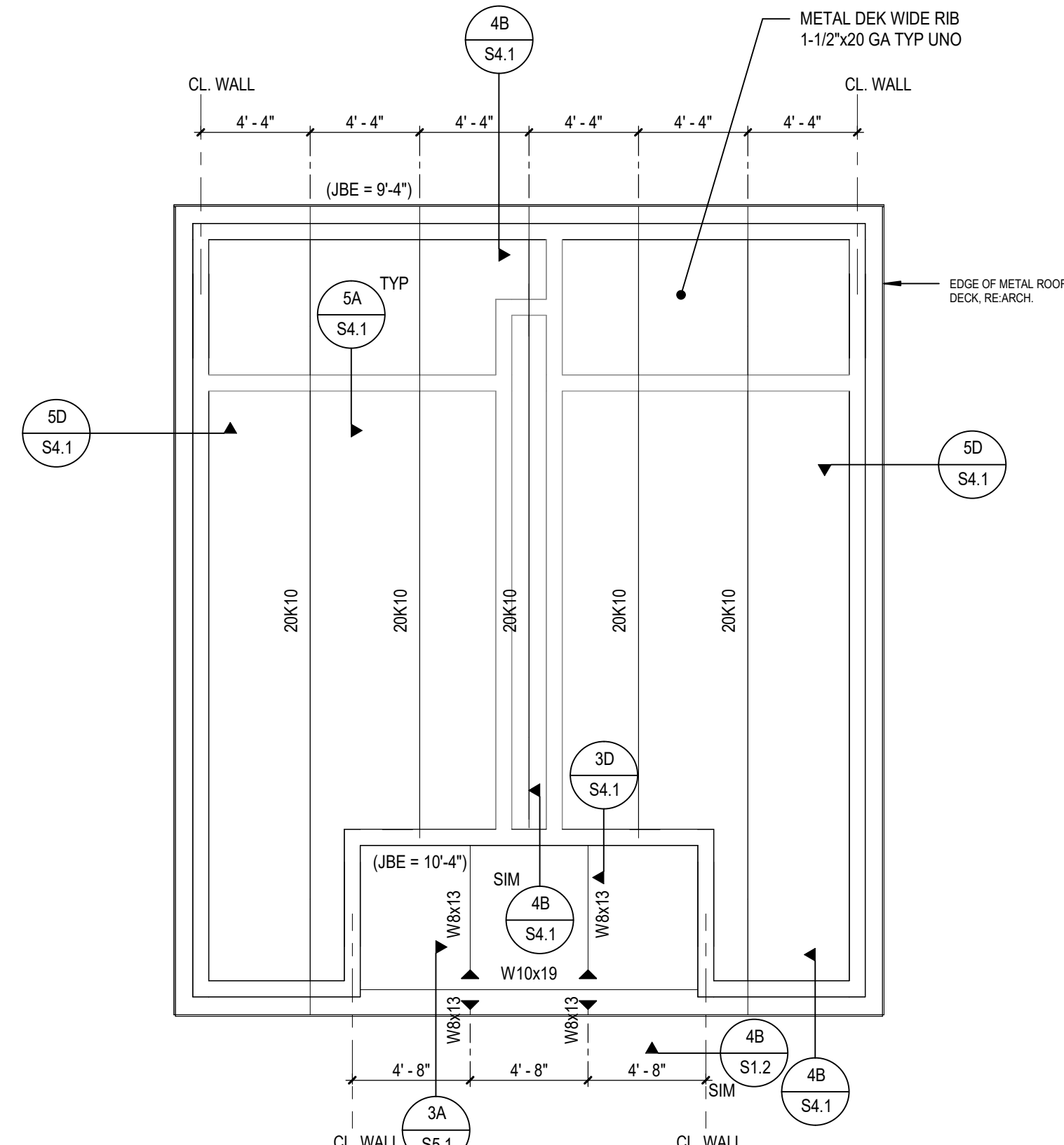
1 MAULIN HS FOUNDATION PLAN
S1.1 SCALE: 3/16" = 1'-0"



2 MAULIN HS STRUCTURAL ROOF PLAN
S1.1 SCALE: 3/16" = 1'-0"



3 CAROLINA HS FOUNDATION PLAN
S1.1 SCALE: 3/16" = 1'-0"



4 CAROLINA HS STR ROOF PLAN
S1.1 SCALE: 3/16" = 1'-0"

Autodesk Docs/17-24-103-00 Mauldin HS Stadium Seating, Restroom Bldg/17-24-103-00 Mauldin HS Stadium Seating, Restroom
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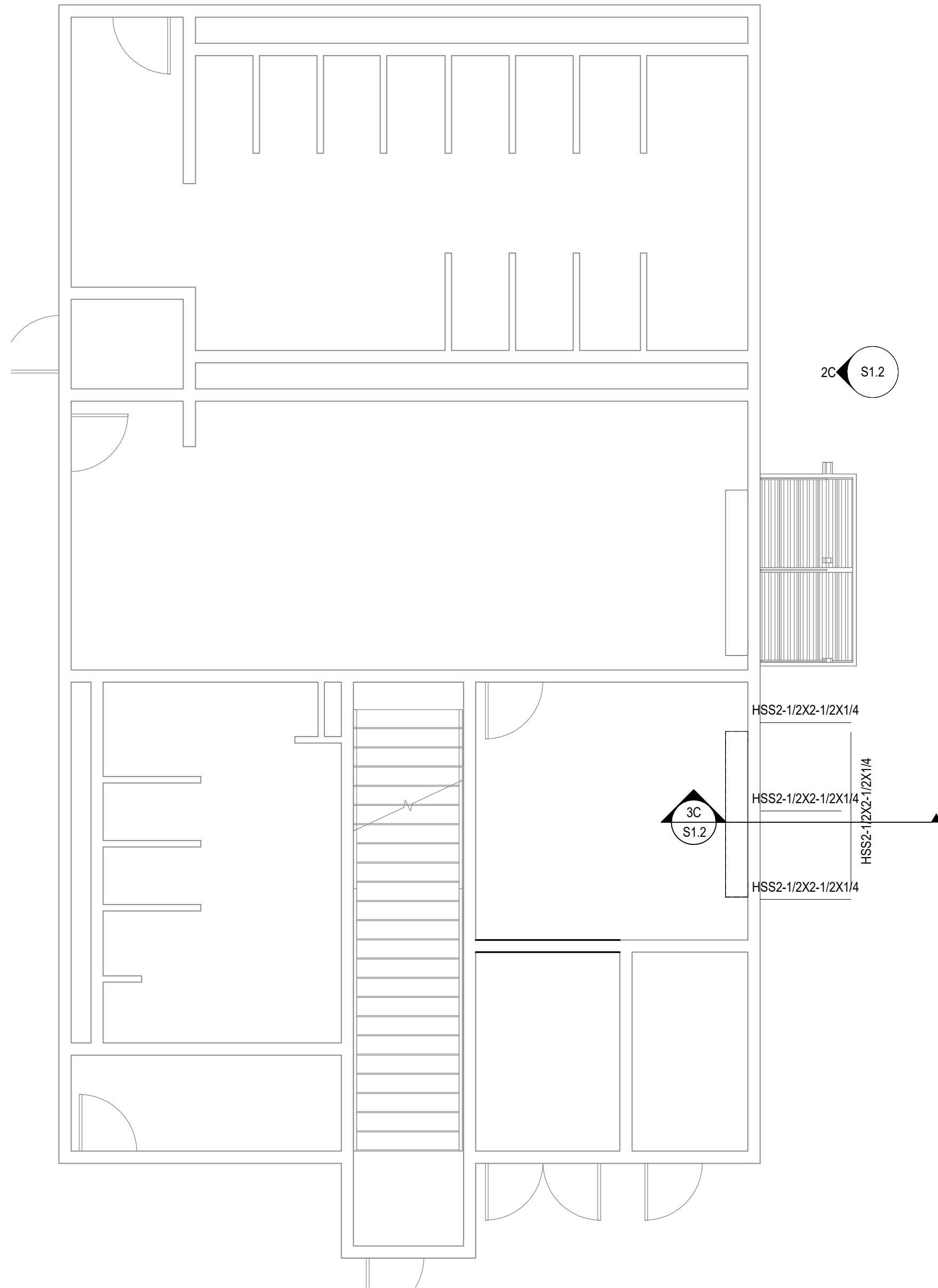
1

2

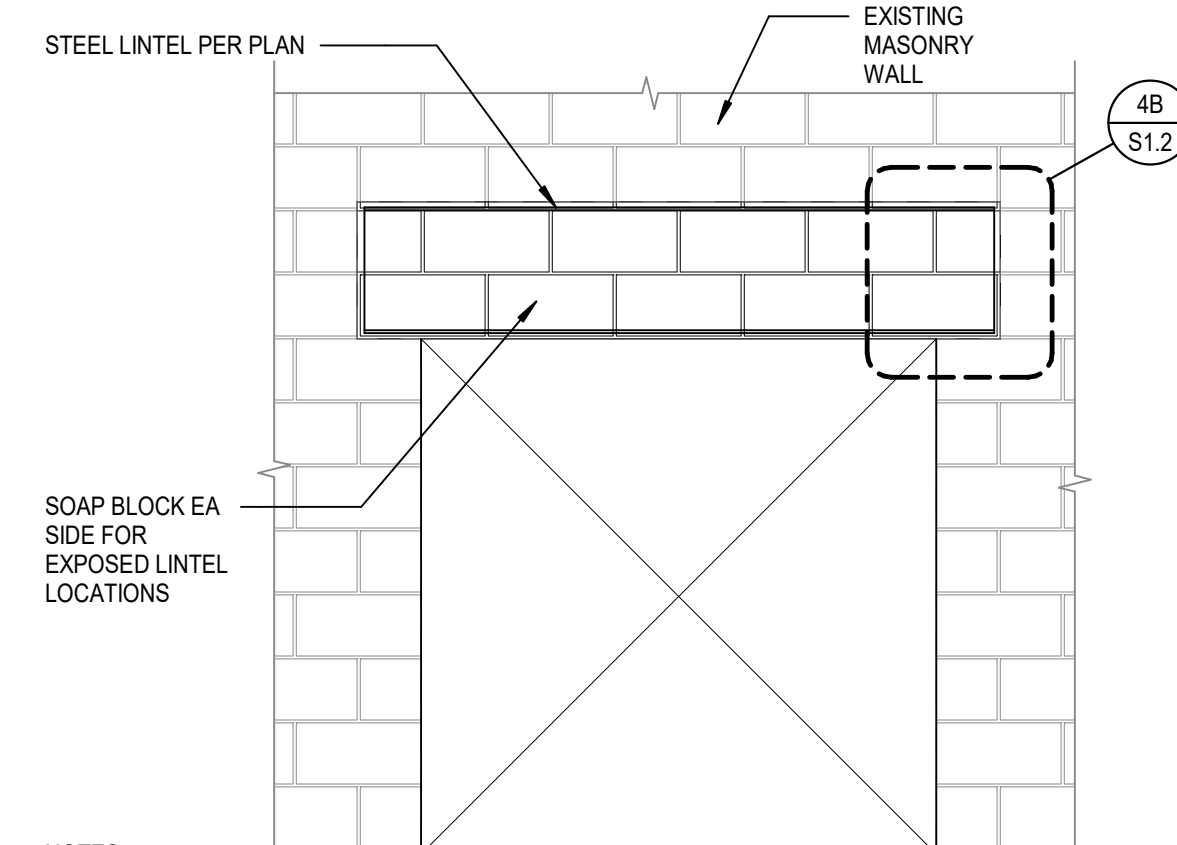
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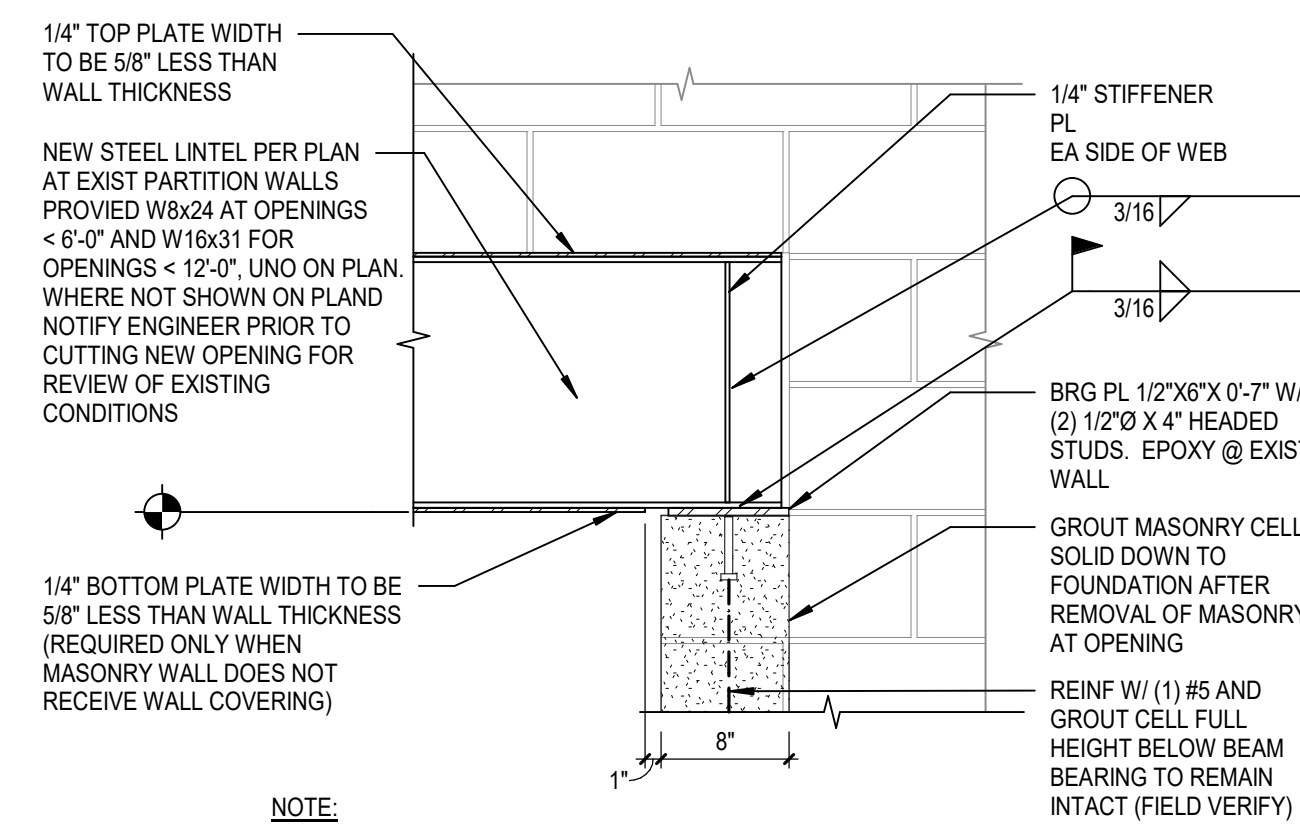
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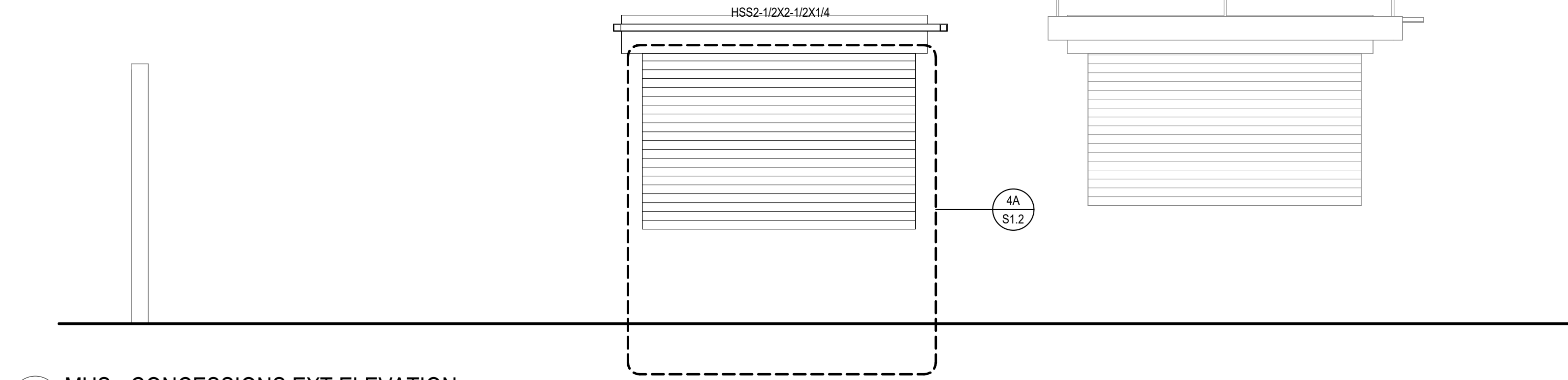
3A MAULIN HS CONCESSION RENOVATION PLAN
S1.2 / SCALE: 3/16" = 1'-0"



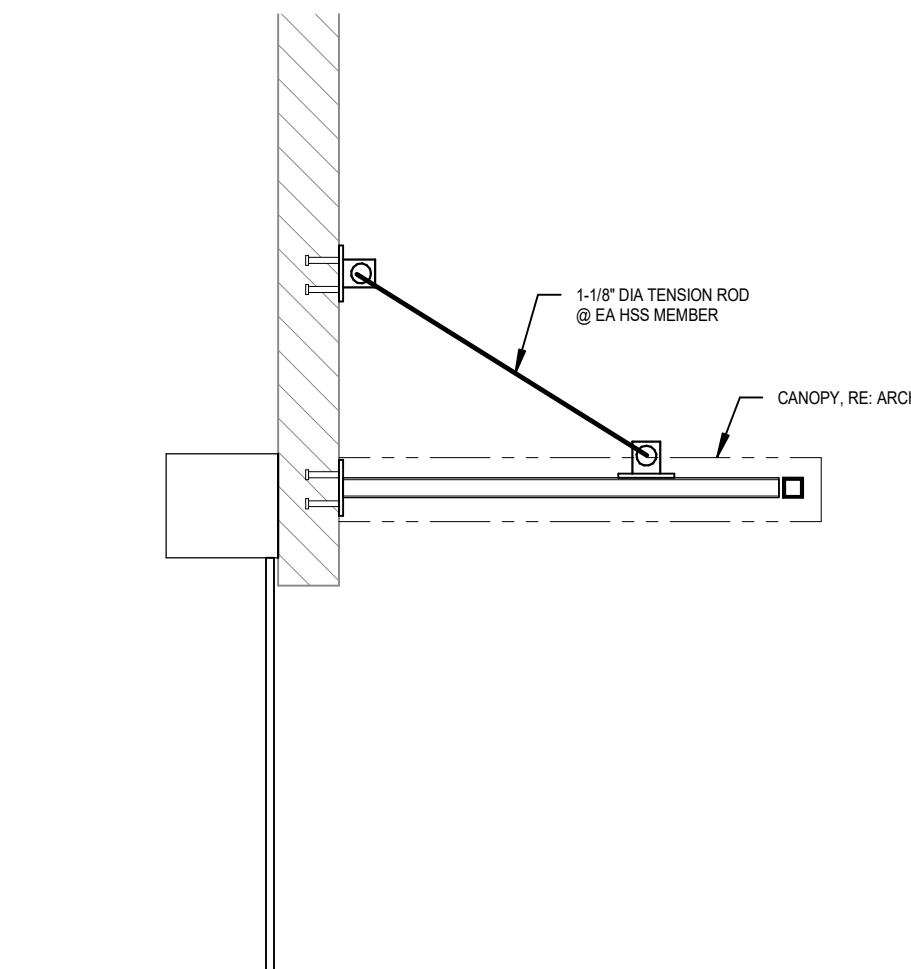
4A TYP CMU WALL OPENING DETAIL W/ STEEL LINTEL
S1.2 / NO SCALE



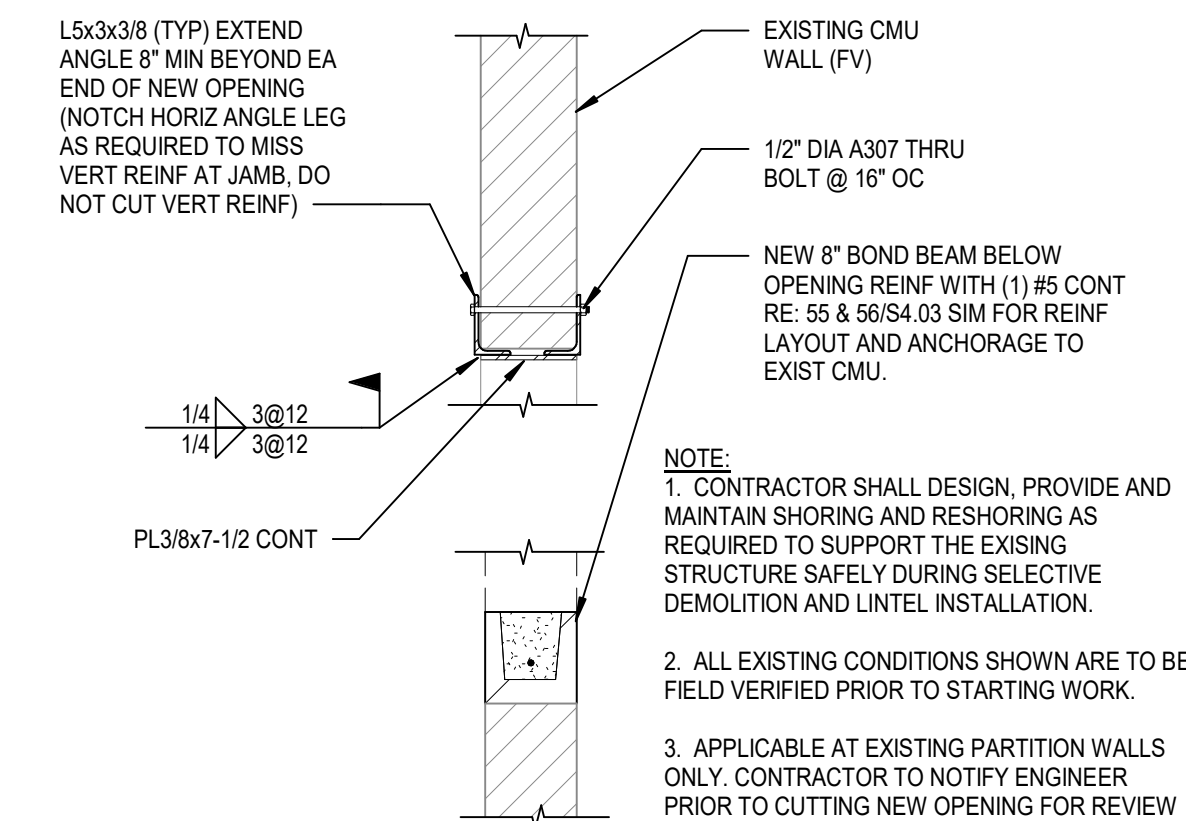
4B TYP STEEL LINTEL BRG DETAIL
S1.2 / NO SCALE



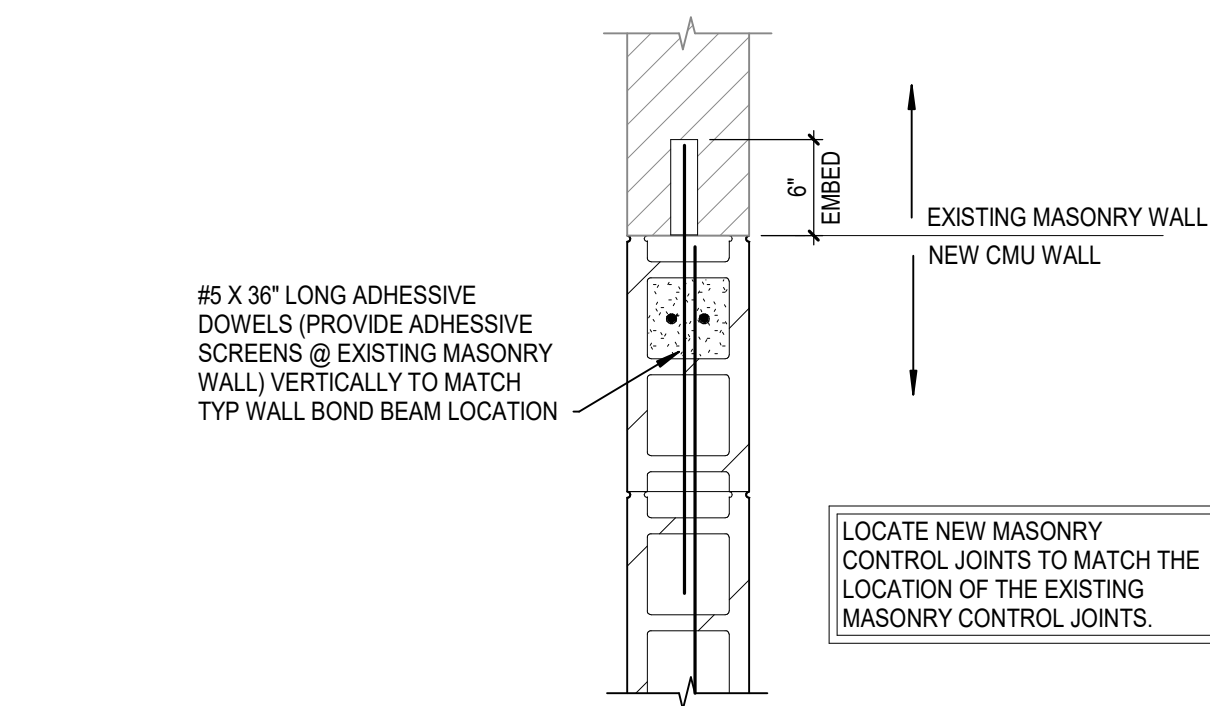
3C SECTION
S1.2 / SCALE: 1/2" = 1'-0"



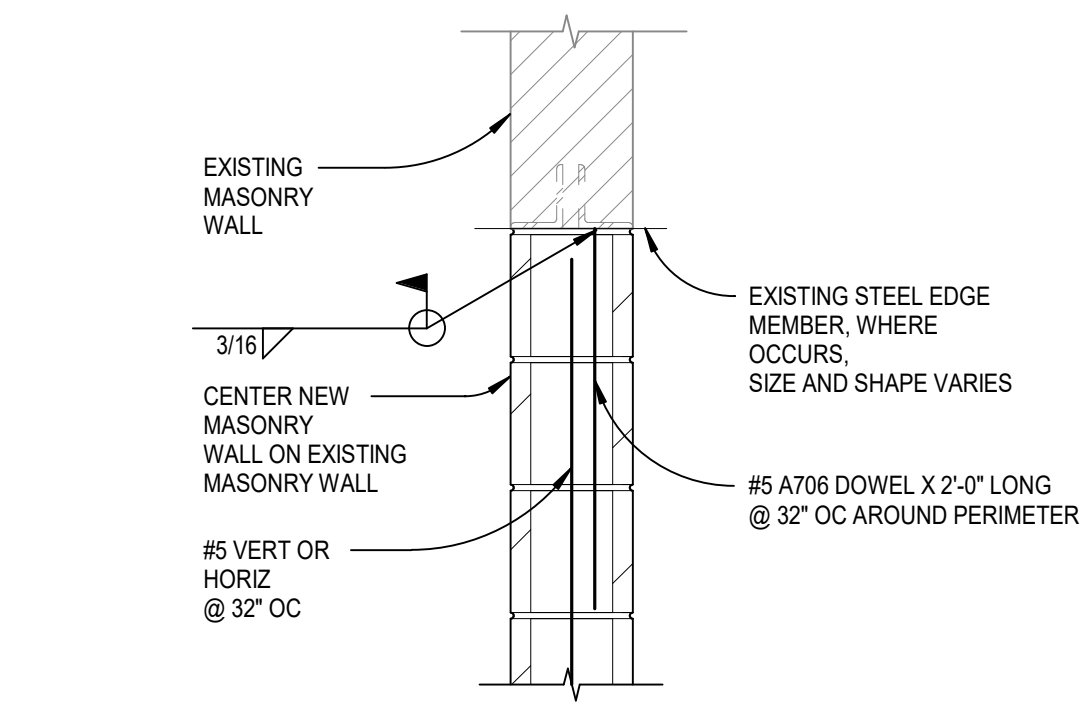
3C SECTION
S1.2 / SCALE: 1/2" = 1'-0"



4C TYP CMU WALL OPENING DETAIL
S1.2 / NO SCALE



4D SECTION
S1.2 / NO SCALE



4E SECTION
S1.2 / NO SCALE

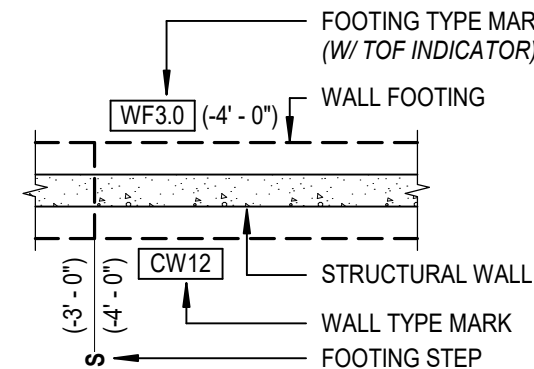
FOUNDATION PLAN GENERAL NOTES

- TOP OF SOG ELEVATION = 0'-0" UNO. COORDINATE TOP OF SLAB WITH FLOOR FINISHES. SEE ARCHITECTURAL DRAWINGS.
- EXTERIOR TOP OF FOOTING (TOF) ELEVATION = -1'-8" UNO.
- INTERIOR TOP OF FOOTING (TOF) ELEVATION = -1'-8" UNO.
- SEE GEOTECHNICAL REPORT FOR SITE AND SUBGRADE PREPARATIONS.
- PROVIDE STOOPS/FROST SLABS AT ALL EXTERIOR DOORS. COORDINATE WITH CIVIL AND ARCHITECTURAL DRAWINGS.

ROOF FRAMING PLAN GENERAL NOTES

- SEE PLAN FOR TOP OF STEEL (TOS) ELEVATIONS/JOIST BEARING ELEVATIONS (JBE).
- TOP OF STEEL/JOIST ELEVATION (TOS) EQUAL TO BOTTOM OF DECK ELEVATION UNO.
- JOIST SEAT DEPTH TO BE DETERMINED BASED ON ROOF DECK SLOPE. TOP OF STEEL ELEVATIONS TO BE DETERMINED BASED ON JOIST SEAT DEPTHS.
- BEAMS/JOISTS SHALL BE SPACED EVENLY BETWEEN NEAREST COLUMN LINES AND/OR LOCATED STRUCTURAL MEMBERS (WALLS, BEAMS) UNO.
- STEEL ANGLES OR BENT PLS ARE REQUIRED AT ALL DECK PERIMETERS, EVEN WHEN NOT INDICATED. REFERENCE TYPICAL DETAILS.
- STEEL MEMBERS AND CONNECTIONS EXPOSED TO THE WEATHER ARE TO BE GALVANIZED.

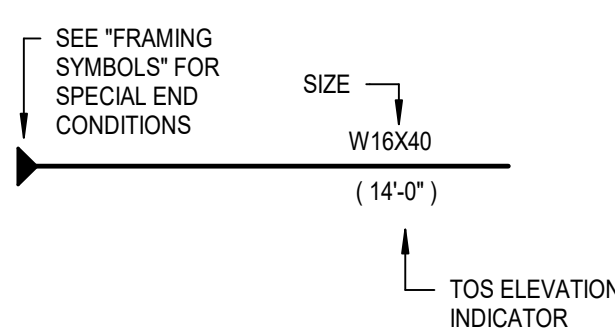
FOUNDATION SYMBOLS



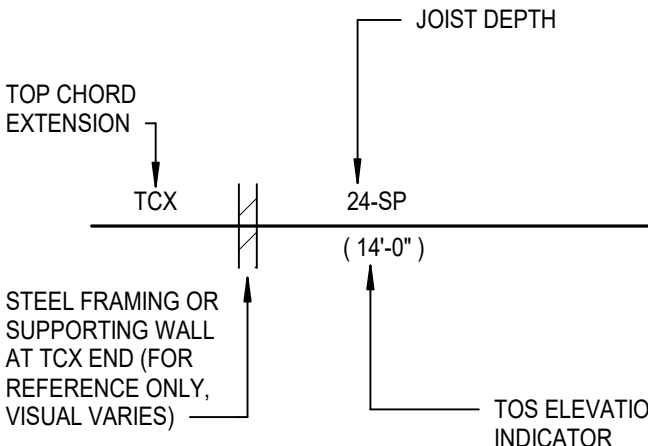
FRAMING SYMBOLS

- MW# MASONRY WALL TYPE MARK
ML# MASONRY WALL LINTEL
MLX# MASONRY WALL LINTEL (MLX INDICATES MASONRY LINTEL, PLX INDICATES PRECAST LINTEL)
CJ MASONRY WALL CONTROL JOINT
SB STEEL BEAM TO STEEL BEAM MOMENT CONN

BEAM SYMBOLS

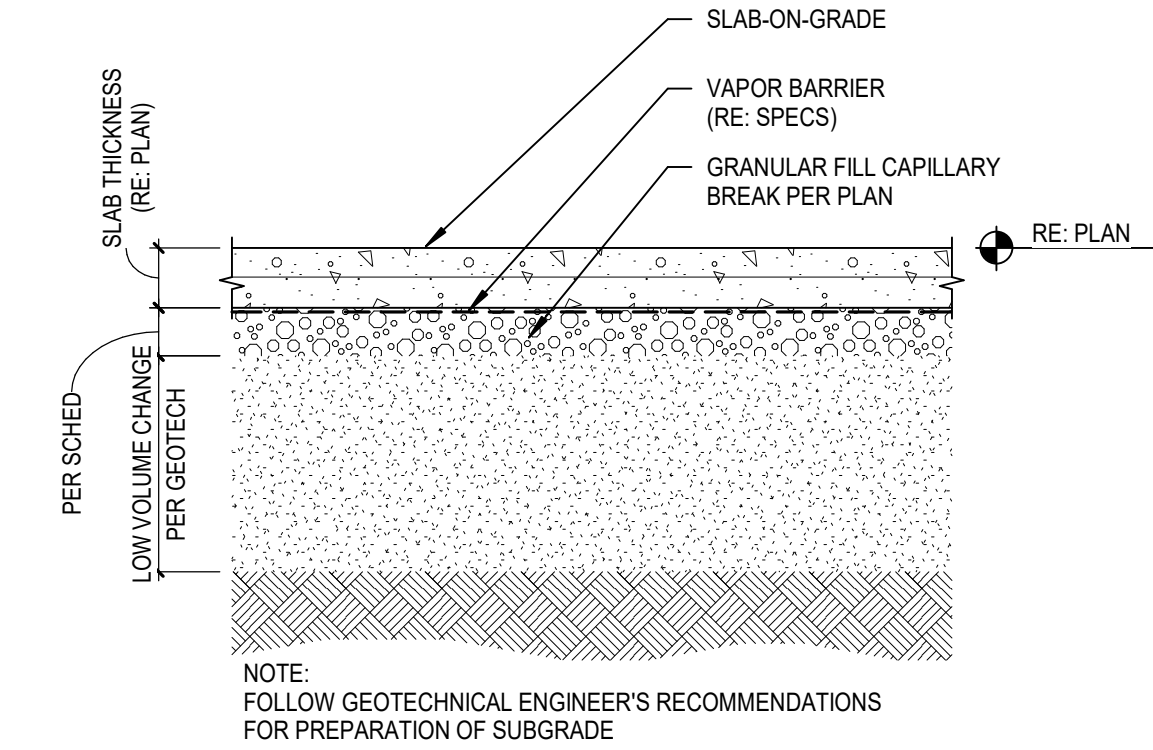


STEEL JOIST SYMBOLS



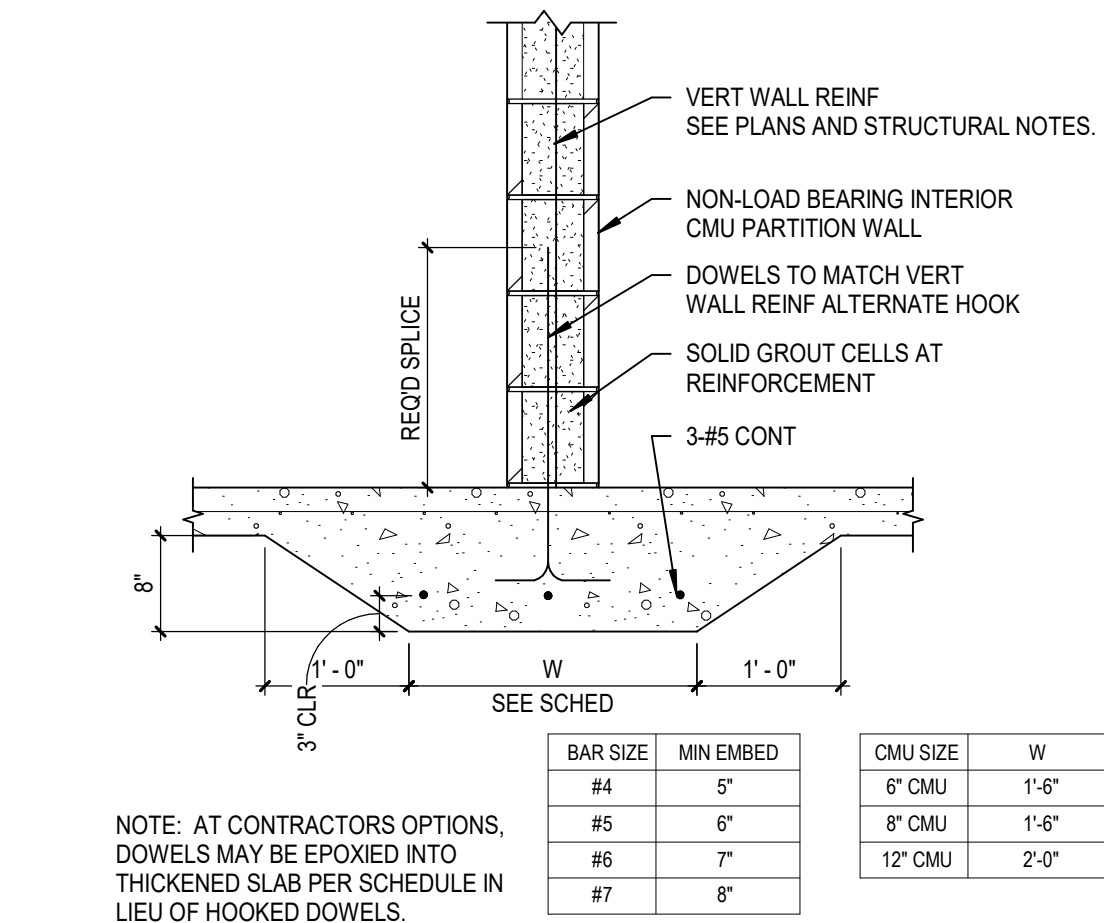
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1



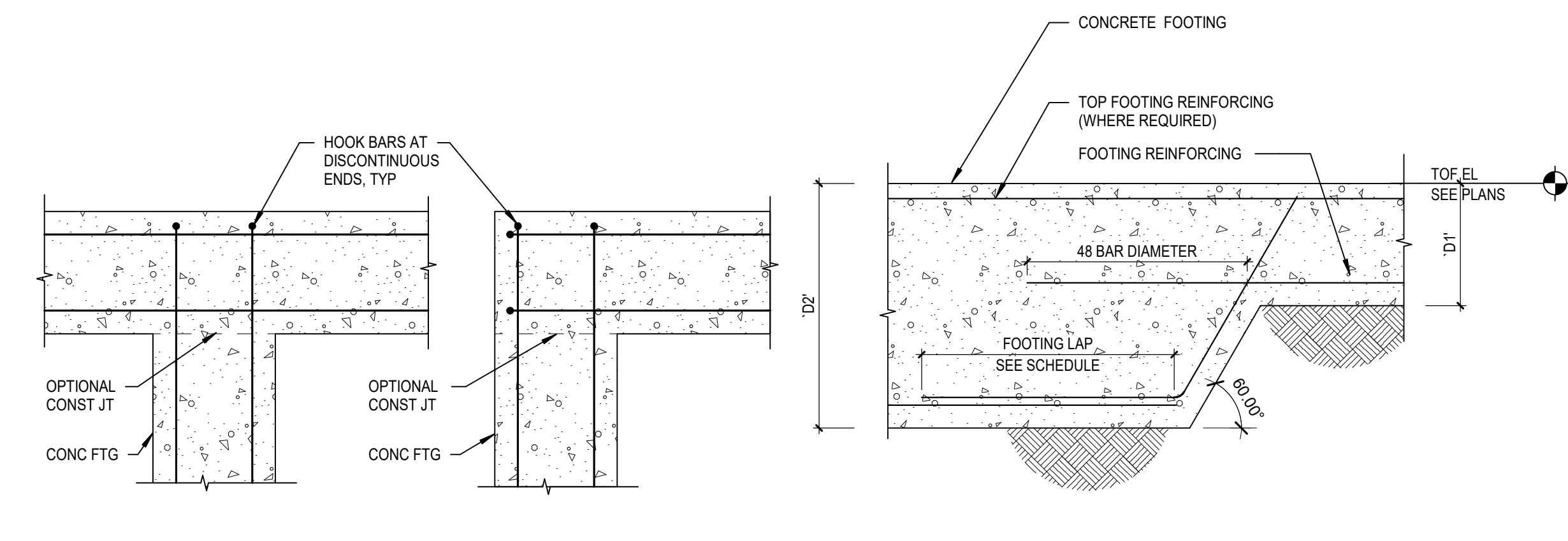
1A TYP SLAB-ON-GRADE DETAIL
S3.1 NO SCALE

2

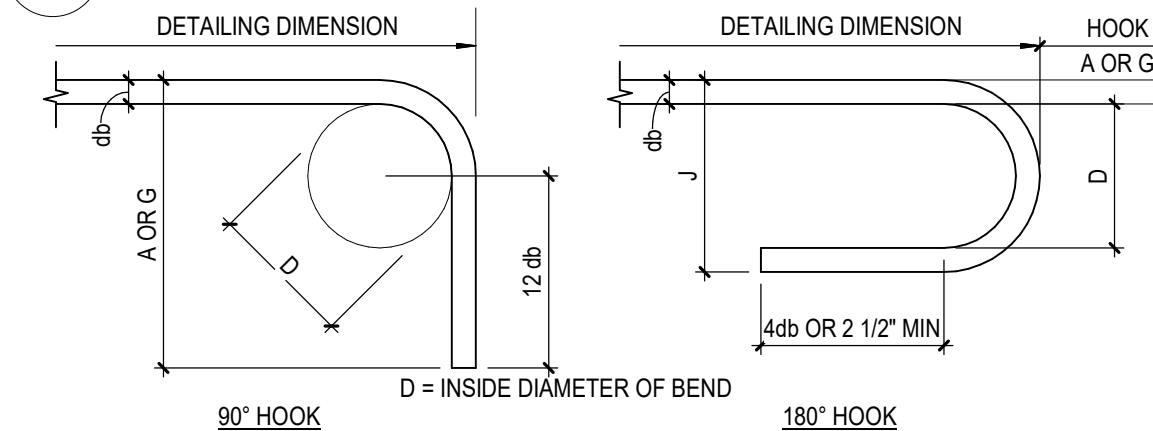


2A TYP CMU PARTITION WALL DETAIL
S3.1 NO SCALE

3



3A TYP FTG REINF DETAIL
S3.1 NO SCALE



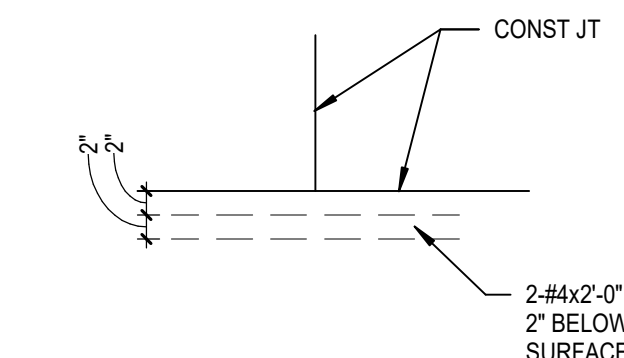
RECOMMENDED END HOOKS, ALL GRADES				
BAR SIZE	FINISHED BEND DIAMETER (D) (IN)	180° HOOKS A OR G (IN)	180° HOOKS J (IN)	90° HOOKS A OR G (IN)
#3	2 1/4	5	3	6
#4	3	6	4	8
#5	3 3/4	7	5	10
#6	4 1/2	8	6	12
#7	5 1/4	10	7	14
#8	6	11	8	16
#9	9 1/2	15	11	19
#10	10 3/4	17	13 1/4	22
#11	12	19	14 3/4	24
#14	18 1/4	27	21 3/4	31
#18	24	36	28 1/2	41

4A END HOOK TYPES
S3.1 NO SCALE

ACI TENSION LAP SPICE LENGTHS (IN) FOR $f_c = 4,000$ PSI MINIMUM					
BAR SIZE	LAP CLASS	$f_c = 4,000$ PSI			
		TOP BARS		OTHER BARS	
		CASE 1	CASE 2	CASE 1	CASE 2
#3	A	18	28	14	21
	B	24	36	19	28
#4	A	23	37	19	28
	B	32	48	25	37
#5	A	31	46	24	36
	B	40	60	31	46
#6	A	37	55	28	43
	B	48	72	37	55
#7	A	54	81	42	62
	B	70	105	54	81
#8	A	62	92	47	71
	B	80	120	62	92
#9	A	70	104	54	80
	B	90	136	70	104
#10	A	78	117	60	90
	B	102	153	79	117
#11	A	87	130	67	100
	B	113	170	87	130

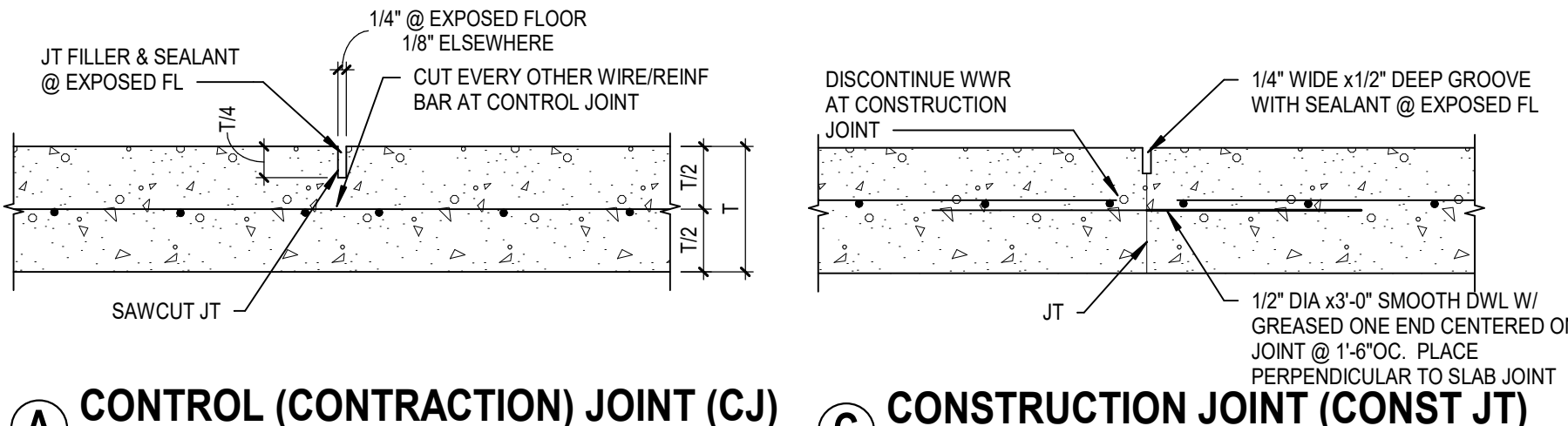
5A CONCRETE REINFORCING LAP SPICE SCHEDULE
S3.1 NO SCALE

INTERNAL CORNER

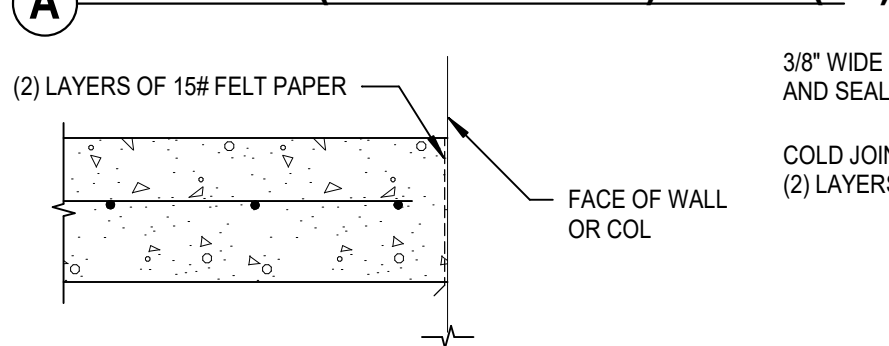


DISCONTINUOUS JT INTERSECTION

1B TYP SLAB-ON-GRADE
S3.1 NO SCALE



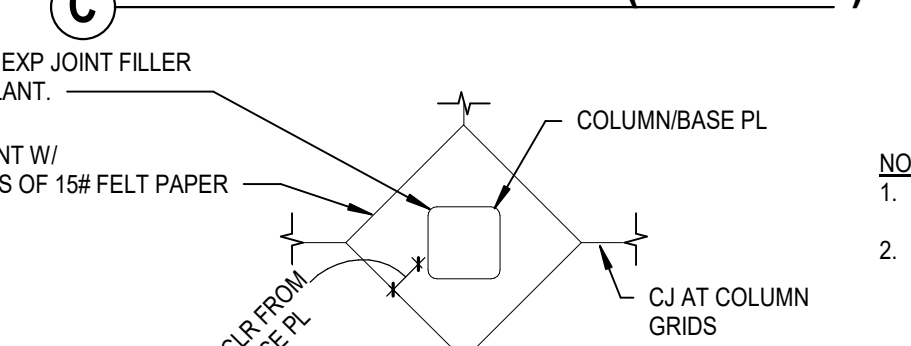
CONTROL (CONTRACTION) JOINT (CJ)



TYP SLAB-ON-GRADE JOINTS

1C TYP SLAB-ON-GRADE JOINTS
S3.1 NO SCALE

CONSTRUCTION JOINT (CONST JT)



ISOLATION JOINT @ COL

1D TYP SLAB-ON-GRADE JOINTS
S3.1 NO SCALE

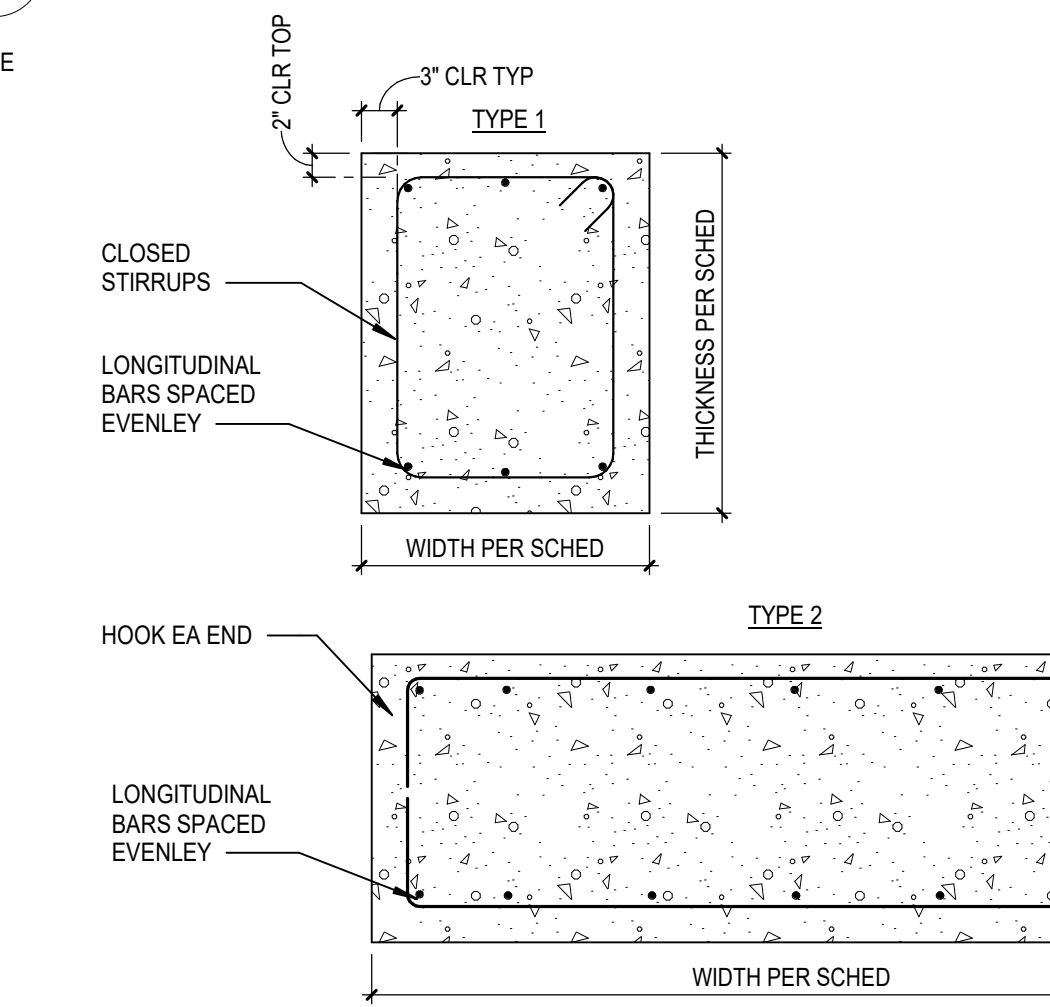
- NOTES:
- CONTROL JOINTS SHALL BE SPACED AT INTERVALS $< 10'-0"$ IN EACH DIRECTION.
 - CONTRACTOR SHALL COORDINATE JOINT SPACING WITH ARCHITECTURAL REQUIREMENTS AS APPLICABLE. SUBMIT JOINT LAYOUT FOR ARCHITECT/ENGINEER'S REVIEW.
 - JOINT LAYOUT SHOULD BE RELATIVELY SQUARE WHENEVER POSSIBLE. LENGTH / WIDTH ASPECT RATIO SHALL BE LESS THAN 2:1.

4

5

TYP STEP FOOTING DETAIL

3C TYP STEP FOOTING DETAIL
S3.1 NO SCALE



4C TYP WALL FOOTING DETAIL
S3.1 NO SCALE

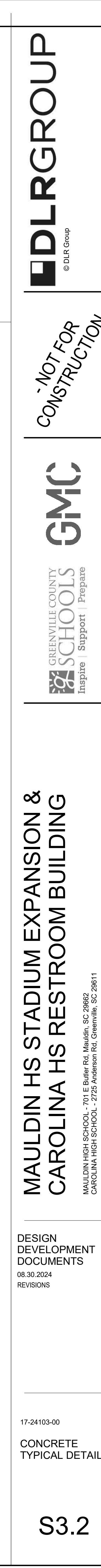
TYP BOT STEP FTG DETAIL

3B TYP BOT STEP FTG DETAIL
S3.1 NO SCALE

BAR SIZE	$f_c = 3,000$				$f_c = 4,000$				$f_c = 5,000$				$f_c = 6,000$				$f_c = 7,000$				$f_c = 8,000$			
	Ldb	0.7Ldb	Ldb	0.7Ldb	Ldb	0.7Ldb	Ldb	0.7Ldb	Ldb	0.7Ldb	Ldb	0.7Ldb	Ldb	0.7Ldb	Ldb	0.7Ldb	Ldb	0.7Ldb	Ldb	0.7Ldb	Ldb	0.7Ldb	Ldb	0.7Ldb
#3	8	6	7	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
#4	11	8	9	7	8	6	8	6	8	6	8	6	7	6	7	6	7	6	7	6	7	6	7	6
#5	14	10	12	8	11	7	10	7	9	6	8	6	9	6	8	6	9	6	8	6	9	6	8	6
#6	16	12	14	10	13	9	12	8	11	8	10	7	11	8	10	7	11	8	10	7	11	8	10	7
#7	19	13	17	12	15	10	14	9	13	9	12	8	13	9	12	8	13	9	12	8	13	9	12	8
#8	22	15	19	13	17	12	15	11	14	10	13	9	15	11	14	10	13	9	15	11	14	10	13	9
#9	25	17	21	15	19	13	17	12	16	11	15	11	17	12	16	11	15	11	17	12	16	11	15	11
#10	28	19	24	17	22	15	20	14	18	13	17	12	20	14	18	13	17	12	20	14	18	13	17	12
#11	31	22	27	19	24	17	22	15	20	14	19	13	23	15	20	14	19	13	23	15	20	14	19	13
#14	37	NA	32	NA	29	NA	26	NA	24	NA	23	NA	27	NA	24	NA	23	NA	27	NA	24	NA	23	NA
#18	49	NA	43	NA	38	NA	35	NA	32	NA	30	NA	35	NA	30	NA	30	NA	35	NA	30	NA	30	NA

- NOTES:
- L_{db} = DEVELOPMENT LENGTH OF STANDARD HOOKS IN TENSION (INCHES).
 - L_{db} = L_{db} UNLESS CONDITIONS OF ITEM 3 ARE SATISFIED.
 - $L_{db} = 0.7 L_{db}$ FOR #11 BARS AND SMALLER WHEN SIDE COVER (NORMAL TO PLANE OF HOOK) IS NOT LESS THAN 2" AND FOR 90° HOOKS. COVER ON BAR EXTENSION BEYOND HOOK IS NOT LESS THAN 2".
 - HOOKS ARE NOT CONSIDERED EFFECTIVE FOR DEVELOPING BARS IN COMPRESSION.
 - L_{db} SHALL BE MULTIPLIED BY 1.2 FOR EPOXY-COATED HOOKED BARS.

4B DEVELOP LENGTHS OF STD HOOKS
S3.1 NO SCALE

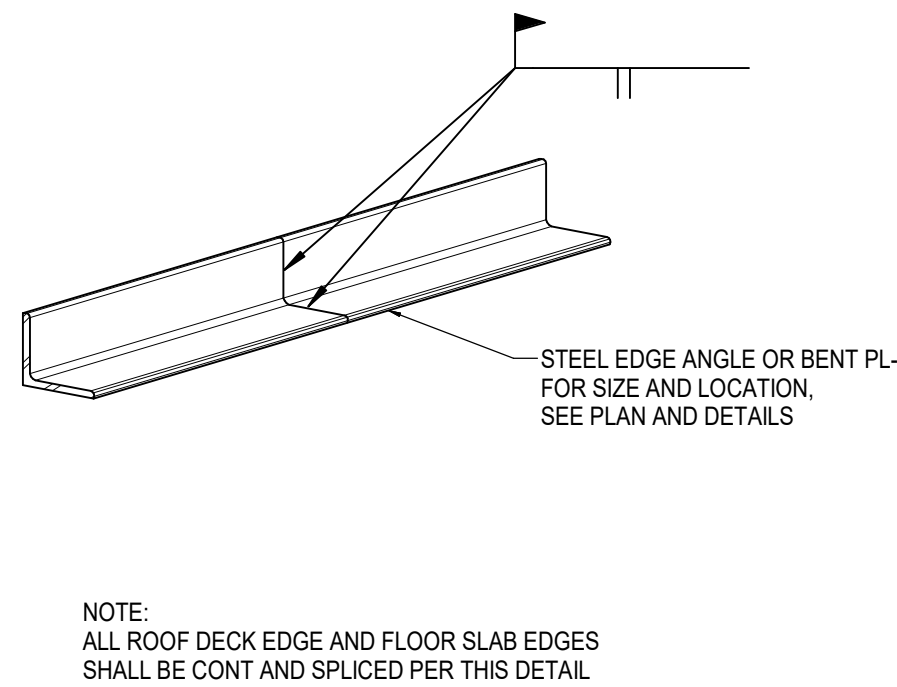




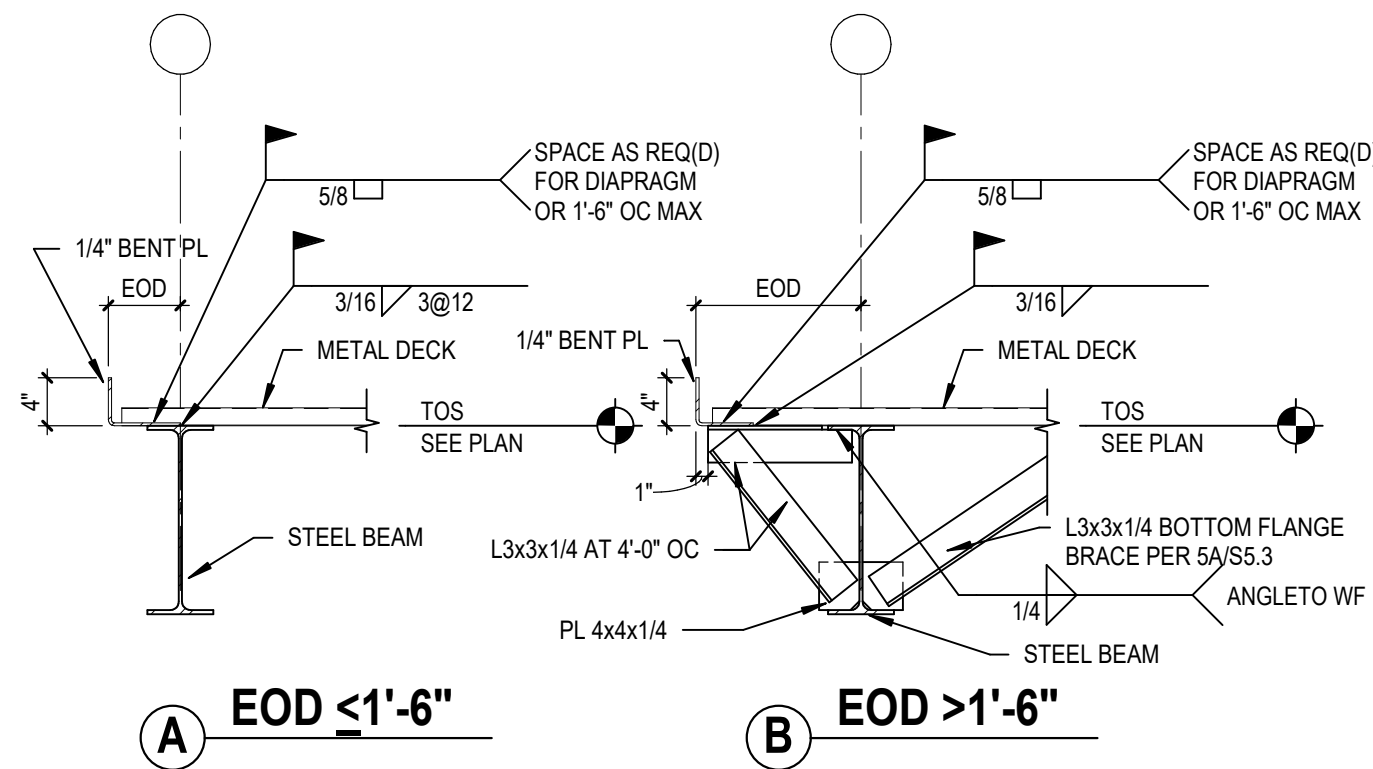
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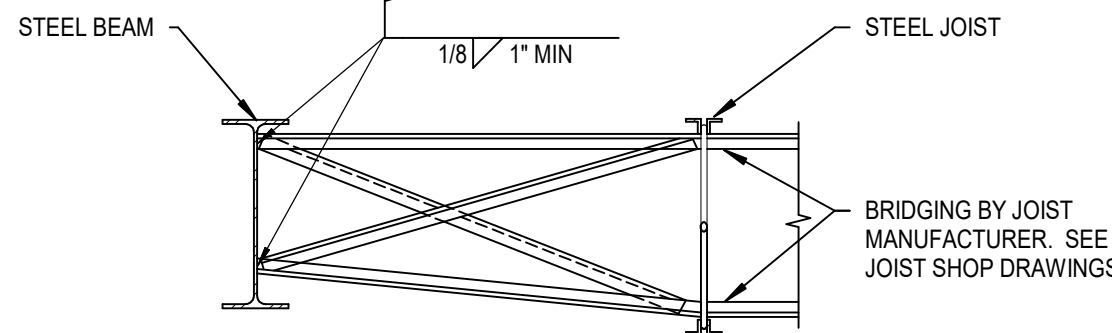
JST SEAT DEPTH	ANGLE SIZE
2-1/2"	L2-1/2x2-1/2x3/16
3-1/2"	L3-1/2x3x1/4 LLV
5"	L5x3x1/4 LLV
10"	BENT PL "D"x3"x1/4" LLV



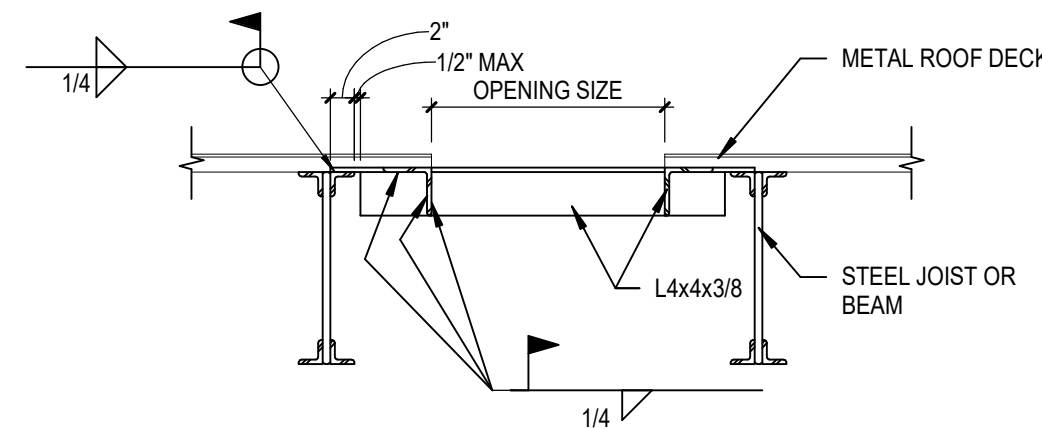
NOTE:
ALL ROOF DECK EDGE AND FLOOR SLAB EDGES
SHALL BE CONT AND SPLICED PER THIS DETAIL



1C TYP EDGE OF DECK DETAIL
S5.1 SCALE: 3/4" = 1'-0"

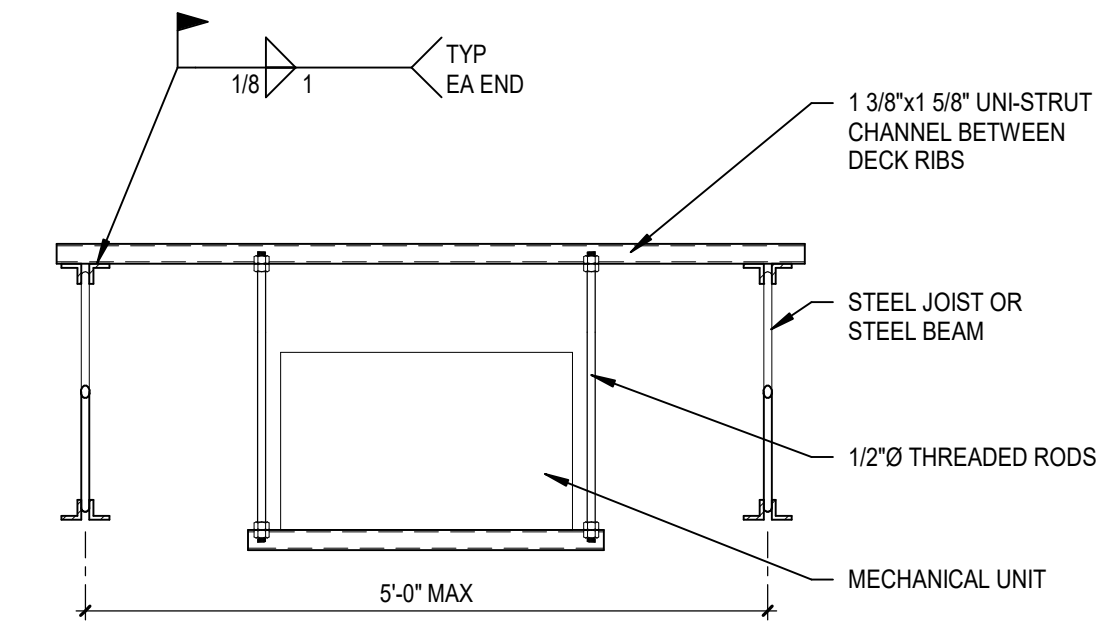


2C TYP JOIST BRIDGING DETAIL
S5.1 NO SCALE



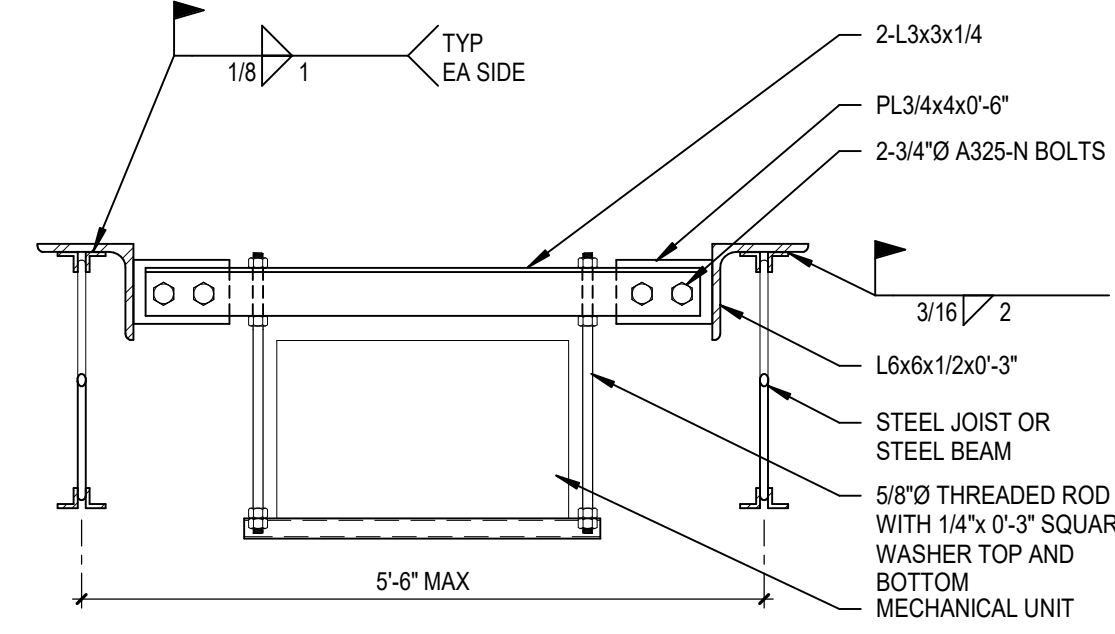
NOTE:
TYPICAL DETAIL APPLIES TO ALL OPENINGS 6" AND LARGER.

2D TYP ROOF OPENING DETAIL
S5.1 NO SCALE



NOTE:
1. GENERAL CONTRACTOR SHALL VERIFY SIZE AND LOCATION WITH MECHANICAL CONTRACTOR.
2. PROVIDE SEISMIC BRACING IN ACCORD WITH MECHANICAL SPECIFICATIONS AND DETAILS.
3. WEIGHT OF MECHANICAL UNIT EQUAL TO OR LESS THAN 400 LBS PER CHANNEL

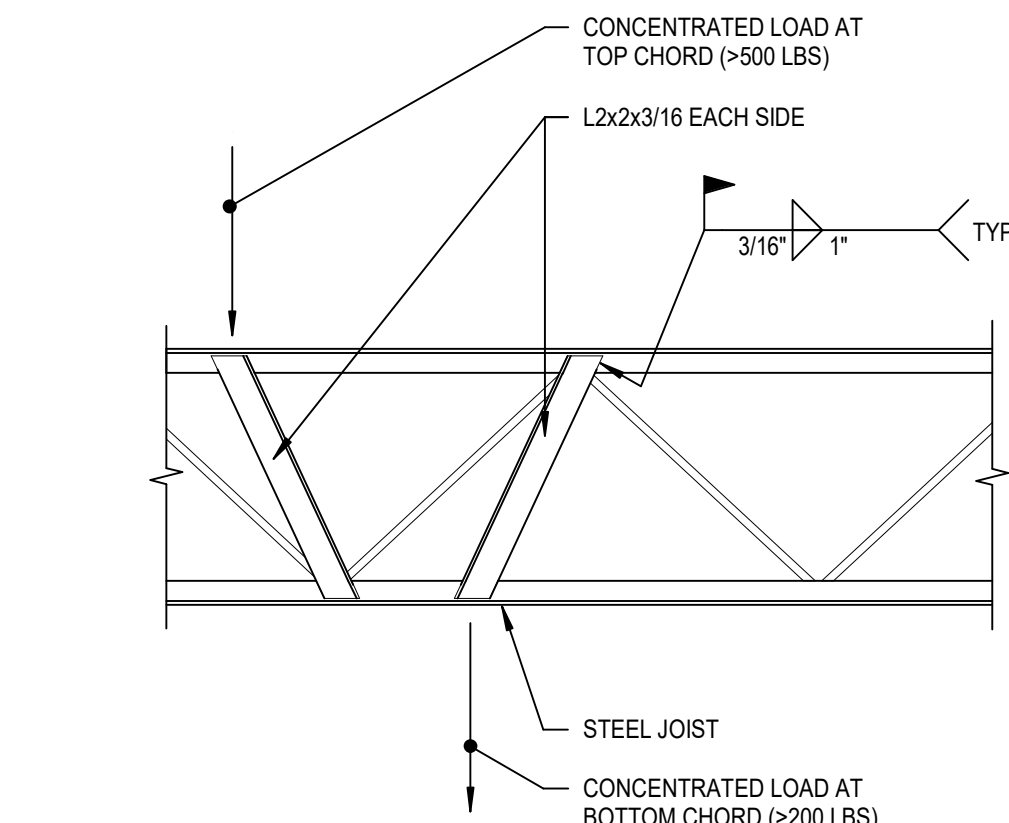
2E TYP HANGING MECH UNIT DETAIL
S5.1 NO SCALE



NOTE:
1. GENERAL CONTRACTOR SHALL VERIFY SIZE AND LOCATION WITH MECHANICAL CONTRACTOR.
2. PROVIDE SEISMIC BRACING IN ACCORD WITH MECHANICAL SPECIFICATIONS AND DETAILS.
3. WEIGHT OF MECHANICAL UNIT GREATER THAN 400 LBS PER ANGLE, BUT LESS THAN 700 LBS PER ANGLE

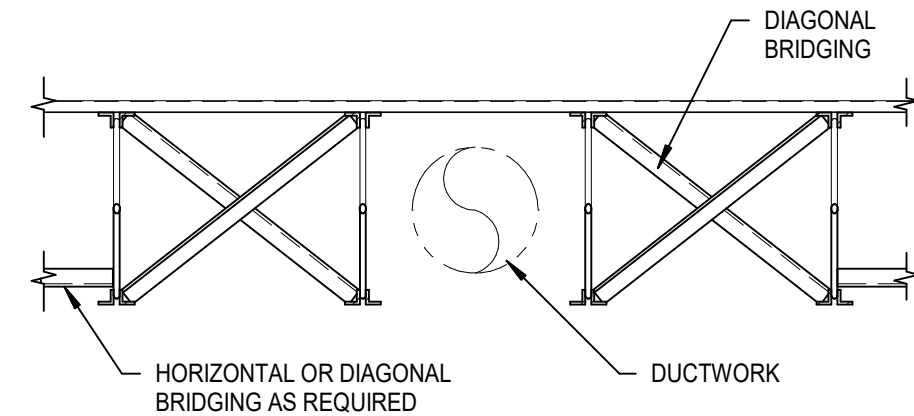
2F TYP HANGING MECH UNIT DETAIL
S5.1 NO SCALE

2



NOTE:
1. DESIGN ALL JOIST TOP AND BOTTOM CHORDS FOR BEND CHECK LOADS AS SHOWN. REINFORCEMENT ONLY REQUIRED WHERE LOADS EXCEED LOADS SHOWN.
2. PROVIDE REINFORCEMENT WHEN CONCENTRATED LOAD IS MORE THAN 3" FROM PANEL POINT AND EXCEEDS LOAD SHOWN.

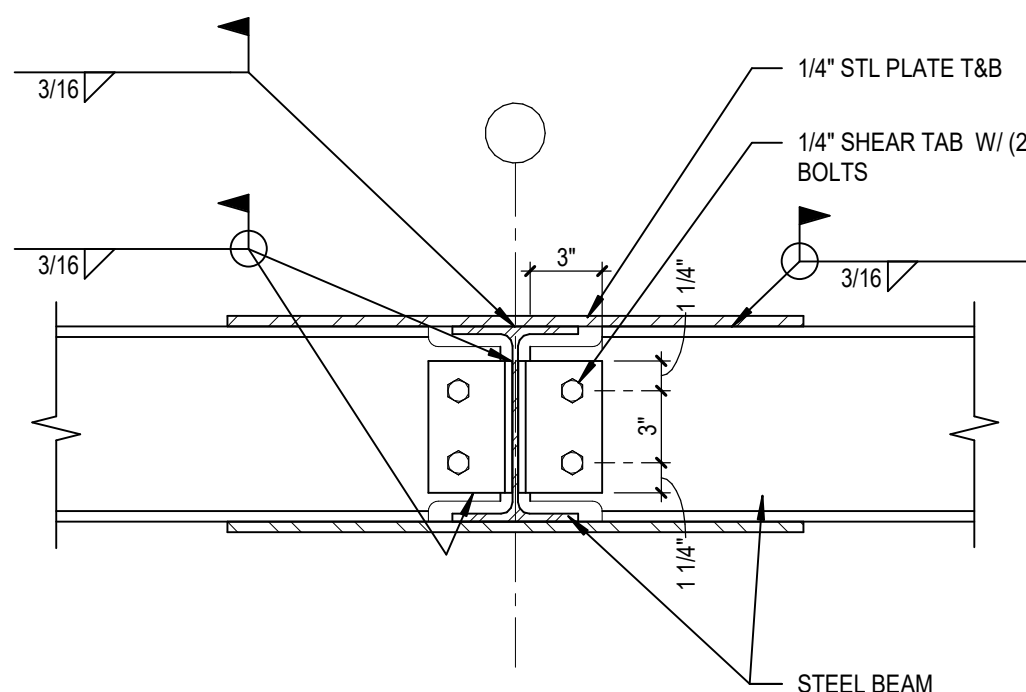
2A TYP JOIST REINFORCING DETAIL
S5.1 NO SCALE



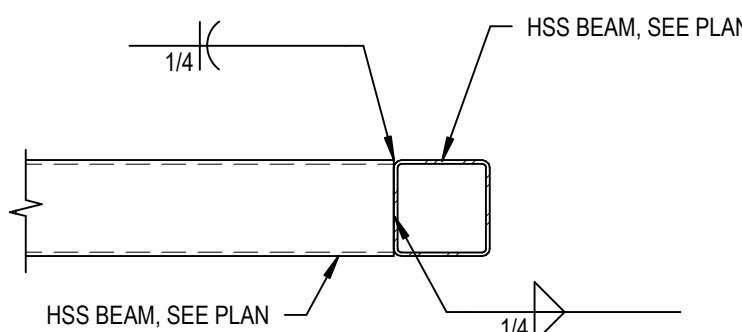
NOTE:
1. USE ONLY WHERE DUCTS ARE SHOWN BETWEEN JOISTS ON MECHANICAL DRAWINGS. VERIFY LOCATION WITH CONTRACTOR.
2. DO NOT INSTALL DUCTS IN TWO ADJACENT JOIST SPACES.
3. COORDINATE BRIDGING WITH JOIST SUPPLIER.

2B TYP JOIST BRIDGING DETAIL
S5.1 NO SCALE

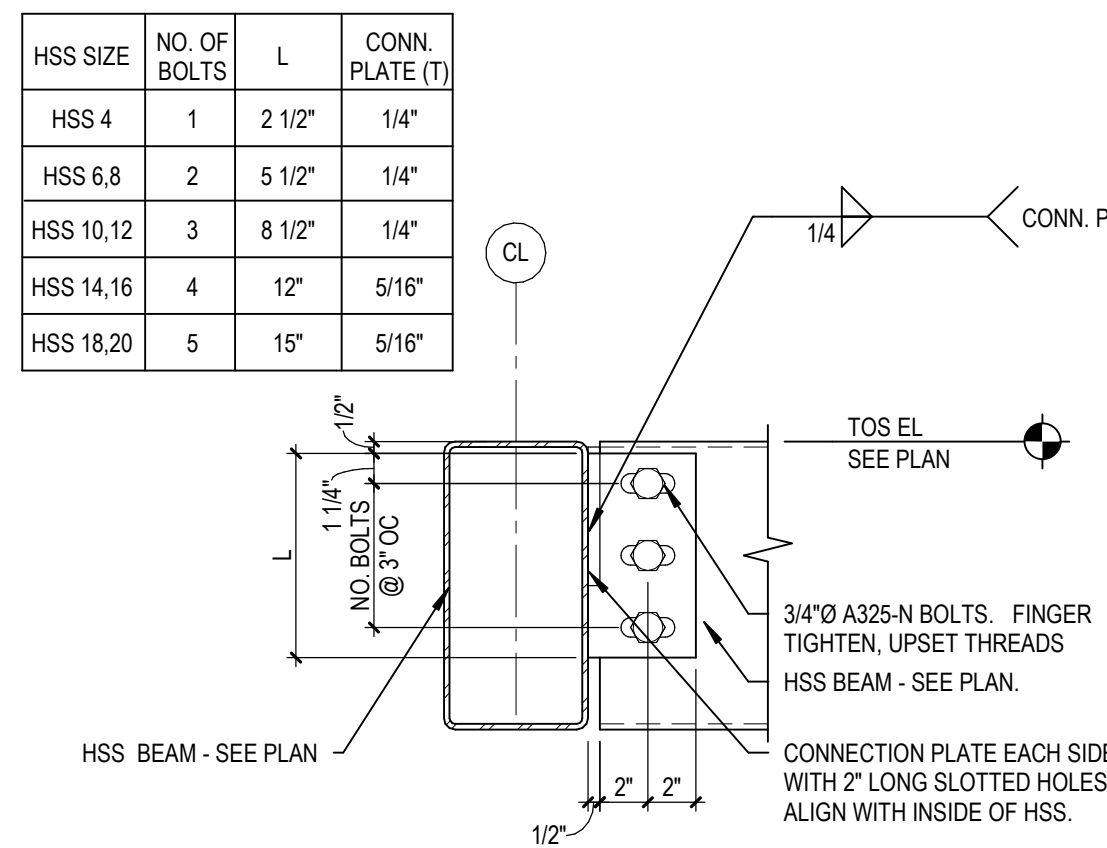
3



3A TYP WF BEAM MOMENT CONNECTION DETAIL
S5.1 NO SCALE



3B HSS MOMENT CONNECTION DETAIL
S5.1 NO SCALE



3C TYP HSS BEAM / BEAM CONNECTION
S5.1 NO SCALE

4

5

GENERAL PLUMBING NOTES

- 1.1 GENERAL PLUMBING NOTES
- A. THESE NOTES SHALL BE GENERALLY APPLIED TO ALL PLUMBING DRAWINGS. AS THEY ARE GENERAL IN NATURE, THEY MAY NOT BE SPECIFICALLY CALLED OUT ON THE PLANS. REFERENCE THE INDIVIDUAL DRAWINGS AS WELL AS DIVISION 22 SPECIFICATIONS FOR ADDITIONAL CONTRACT DOCUMENT REQUIREMENTS.
- B. SHOULD ANY CONFLICT OCCUR BETWEEN ANY PORTIONS OF THE CONTRACT DOCUMENTS (DRAWINGS AND SPECIFICATIONS), THE CONTRACTOR IS DEEMED TO HAVE BASED THEIR BID PRICE ON THE MORE EXPENSIVE MATERIAL, EQUIPMENT, PRODUCT OR WORK, UNLESS THEY HAVE REQUESTED AND OBTAINED A WRITTEN CLARIFICATION OR DECISION IN REGARD TO THE CONFLICT FROM THE ARCHITECT/ENGINEER.
- DESIGNER NOTE: THE ABOVE NOTE SHOULD REALLY BE IN THE SPECIFICATION (GENERAL REQS OF MECHANICAL EQUIPMENT), BUT, RECOGNIZING THAT NOT ALL REGIONS RETAINED THIS SPEC SECTION (IT WAS DELETED FROM AIA MASTERSPEC SOME TIME AGO), THEN IT IS APPROPRIATE HERE.**
- C. DRAWINGS AND MEASUREMENTS:
- THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL SCOPE OF THE WORK (I.E., ARRANGEMENT OF SYSTEMS AND EQUIPMENT, EXCEPT WHEN THEY HAVE BEEN SPECIFICALLY DIMENSIONED OR DETAILED).
 - PLUMBING PLANS ARE INTENDED TO SHOW SIZE, CAPACITY, APPROXIMATE LOCATION, DIRECTION, AND GENERAL RELATIONSHIP OF ONE WORK TRADE TO ANOTHER.
 - COORDINATION: THE PLUMBING DESIGN SHALL BE COORDINATED WITH ALL OTHER ASPECTS OF THE BUILDING. TO THAT END, THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR REVIEWING THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL AND CIVIL DRAWINGS WHERE AVAILABLE, AS WELL AS PHYSICALLY OBSERVING FIELD CONDITIONS BEFORE PERFORMING ANY WORK. EXTRACTS WILL NOT BE PAID TO MOVE PIPING DUE TO CONFLICTS ARISING FROM LACK OF COORDINATION.
 - REFER TO THE ARCHITECTURAL DRAWINGS FOR BUILDING ELEVATIONS, CEILING DETAILS, PARTITIONS, AND OCCUPANCIES.
 - REFER TO STRUCTURAL DRAWINGS TO COORDINATE PIPING LAYOUT WITH STRUCTURAL ELEMENTS OF THE BUILDING.
 - REFER TO THE FIRE PROTECTION DRAWINGS (WHEN AVAILABLE) AND MECHANICAL DRAWINGS TO ASSESS THE CONGESTION ABOVE CEILINGS. THE PLUMBING CONTRACTOR SHALL SPECIFICALLY BE CONSCIOUS OF ANY HORIZONTAL MECHANICAL EQUIPMENT LOCATIONS AS WELL AS THEIR CLEAR SERVICE SPACE REQUIREMENTS IN ADDITION TO ANY DUCTWORK OR HYDRONIC PIPING.
 - CONTRACT DRAWINGS SHALL ONLY SERVE TO SHOW THE GENERAL ARRANGEMENT OF EQUIPMENT AND STRUCTURE. SUCH DRAWINGS SHALL NOT BE CONSIDERED A SUBSTITUTE FOR FIELD VERIFICATION OF CONDITIONS. COORDINATION SHALL OCCUR PRIOR TO FABRICATION, PURCHASE, AND/OR INSTALLATION OF ALL WORK. DISCUSS, COORDINATE AND COOPERATE WITH OTHER TRADES AND COORDINATE THE WORK WITH THEIRS. COORDINATE CEILING CAVITY SPACE CAREFULLY WITH OTHER TRADES. BRING ANY CONFLICTS TO THE ATTENTION OF THE ARCHITECT/ENGINEER.
 - AS THE DRAWINGS ARE OF SMALL SCALE, IT IS NOT POSSIBLE TO SHOW ALL NECESSARY OFFSETS, FITTINGS, AND ACCESSORIES. OBTAIN EXACT LOCATIONS, FIELD MEASUREMENTS, ETC., AT THE SITE PRIOR TO THE FABRICATION OF ANY MATERIAL OR ORDERING OF EQUIPMENT.
 - THE DESIGN DRAWINGS AND SPECIFICATIONS ARE BASED ON THE CHARACTERISTICS OF THE EQUIPMENT SCHEDULED / SPECIFIED. ALL CHANGES REQUIRED BY THE USE OF OTHER MANUFACTURERS (INCLUDING MANUFACTURERS THAT ARE LISTED IN THE SPECIFICATIONS) SHALL BE MADE BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
 - THESE CHANGES SHALL INCLUDE, BUT NOT BE LIMITED TO REVISIONS TO FOUNDATIONS, ELECTRICAL CHANGES, SPACE REQUIRED FOR PLACEMENT OF EQUIPMENT, EQUIPMENT BASES, PIPING, CONTROLS, WIRING, WALL OR BUILDING OPENINGS, SERVICE ACCESS REQUIREMENTS, PIPING AND STRUCTURAL MODIFICATIONS.
 - REFER TO THE CODE PLANS FOR FIRE AND/OR SMOKE CONSTRUCTION RATINGS, MAINTAIN INDICATED FIRE AND/OR SMOKE RATING OF WALLS, PARTITIONS, CEILINGS, AND FLOORS AT PIPE AND DUCT PENETRATIONS. SEAL PIPE AND DUCT PENETRATIONS WITH FIRESTOP MATERIALS. REFER TO DIVISION 07 SECTIONS PENETRATION FIRESTOPPING AND JOINT FIRESTOPPING FOR THROUGH PENETRATION FIRESTOP ASSEMBLY PRODUCT SPECIFICATIONS. INSTALLATION OF FIRESTOP MATERIALS IS SPECIFIED AS WORK OF DIVISION 22.
 - WORK SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE 2012 INTERNATIONAL PLUMBING CODE, LOCAL AMENDMENTS, LAWS AND COVERING BODIES, WHERE THE PLANS AND/OR SPECIFICATIONS EXCEED THE GOVERNING CODE REQUIREMENTS, THE PLANS AND SPECIFICATIONS WILL GOVERN.
- DESIGNER NOTE: OBVIOUSLY, THE CODE REFERENCED IN THIS LOCATION NEEDS TO MATCH THE CODE PLAN. THERE HAS BEEN SOME DISCUSSION ON LOOKING INTO WHETHER THIS CAN BE AUTOMATED (COPY MONITOR) FROM THE CP SHEETS. UNTIL THAT OCCURS, IT IS THE DESIGNER'S RESPONSIBILITY TO CONFIRM THE CODE THE PROJECT IS DESIGNED UNDER AND TO EDIT THE ABOVE PARAGRAPH APPROPRIATELY.**
- F. EXTERIOR EXPOSED GAS PIPING SHALL BE PAINTED IN ACCORDANCE WITH DIVISION 09, PAINT TYPE AND COLOR SHALL BE AS SPECIFIED IN DIVISION 09.
- DESIGNER NOTE: RETAIN IF YOU HAVE GAS PIPING ON YOUR PROJECT. THE PIPE WILL BE UNSIGHTLY WHEN IT BEGINS TO RUST. COMMUNICATE TO YOUR ARCHITECT THE NEED FOR PAINTING / COATING OF THE GAS PIPING SO IT CAN BE INCLUDED IN THEIR EXTERIOR PAINT SPEC. IT IS MY EXPERIENCE INTERIOR GAS PIPE IS PAINTED WHEN EXPOSED VIA THE INTERIORS DIV 09 SPEC.**
- G. PROVIDE COORDINATION DRAWINGS WHERE REQUIRED BY THE SPECIFICATIONS. RFIs RELATED TO COORDINATION ITEMS WILL NOT BE REVEALED UNLESS COORDINATION DRAWINGS HAVE BEEN SUBMITTED.
- H. REFER TO THE PLUMBING FIXTURE SCHEDULE FOR NON-ACCESSIBLE PLUMBING FIXTURE MOUNTING HEIGHTS. COORDINATE WITH THE ARCHITECTURAL PLANS FOR THE MOUNTING HEIGHT OF ACCESSIBLE PLUMBING FIXTURES.
- DESIGNER NOTE: AS WRITTEN, THIS NOTE IS CORRECT AND SHOULD BE FOLLOWED. THE PLUMBING DESIGNER NEEDS TO COORDINATE WITH ARCHITECTURE AND CONFIRM WHICH MOUNTING HEIGHTS ARE SHOWN ON THE INTERIOR ELEVATIONS AND/OR TYPICAL MOUNTING HEIGHT ELEVATIONS. ARCHITECTURE HAS INDICATED SOME AHJs ONLY WANT TO REVIEW THE ACCESSIBLE FIXTURE MOUNTING HEIGHTS AND THAT IS WHY ONLY THE ACCESSIBLE FIXTURES HAVE BEEN SHOWN ARCHITECTURALLY. WE ARE RESPONSIBLE TO SHOW HEIGHTS ON OUR PLUMBING FIXTURE SCHEDULE THAT ARE NOT SHOWN ON THE ARCHITECTURAL ELEVATIONS.**
- I AM SUGGESTING FOR ACCESSIBLE PLUMBING FIXTURES THAT WE ENTER "SEE SHEET A2.1" (OR OTHER SHEET) UNDER THE MOUNTING HEIGHT COLUMNS OF THE PF SCHEDULE. CONFIRM THE CORRECT SHEET NUMBER WITH ARCHITECTURAL.**
- I. COORDINATE ALL UNDERGROUND PIPING (SANITARY, WASTE, VENT & STORM DRAINAGE) WITH STRUCTURAL FOUNDATIONS, SITE UTILITIES SERVICES, AND BUILDING SERVICES PIPING. OFFSET UNDERGROUND PIPING TO AVOID FOUNDATION PENETRATIONS. WHERE IT IS IMPOSSIBLE TO AVOID FOUNDATIONS, SLEEVE PIPE PENETRATIONS AS INDICATED IN STRUCTURAL DRAWINGS AND SPECIFICATIONS WHEN APPLICABLE. CONTACT THE ENGINEER WHEN NO SLEEVE INFORMATION IS PROVIDED OR CONDITIONS DIFFER FROM STRUCTURAL DRAWINGS.
- DESIGNER NOTE: THE ABOVE NOTE AS WELL AS THIS DESIGNER NOTE WAS REVIEWED AND CO-AUTHORED BY JAKE MCCONNELL (DLR GROUP NATIONAL ST DISCIPLINE LEADER). JAKE INDICATED THERE ARE MANY DIFFERENT TYPES OF FOUNDATIONS AND A SLEEVE ISN'T ALWAYS THE RIGHT ANSWER. DEPENDING ON THE TYPE OF FOUNDATION, PENETRATION OPENING, REBAR SPACING, ETC. SOME CONDITIONS MAY REQUIRE BLOCK-OUTS OR MODIFICATIONS TO THE FOUNDATION TO ALLOW PASSAGE OF PIPING. WHILE SOME PROJECTS MAY HAVE A "STANDARD PIPE PENETRATION DETAIL" FOR THE COMMON BEARING FOUNDATIONS, SOME PROJECTS OR REGIONS MAY NOT USE / HAVE STANDARD PIPE SLEEVE DETAILS AND MAY REQUIRE COORDINATION ON ALL PENETRATIONS SO YOU SHOULD REVIEW WITH YOUR ST DESIGN ENGINEER.**
- J. ALL MATERIALS EXPOSED WITHIN AN AIR PLENUM SHALL BE NONCOMBUSTIBLE OR HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE DEVELOPMENT INDEX OF NOT MORE THAN 50.
- K. WHERE LOCATIONS OF ANY EXISTING UTILITY SERVICES ARE SHOWN, THEY SHALL BE CONSIDERED AS APPROXIMATE. LOCATIONS OF ANY EXISTING UTILITY SERVICES SHALL BE CONFIRMED BY THE CONTRACTOR PRIOR TO BEGINNING ANY CONSTRUCTION OR EXCAVATION. COORDINATE UTILITY SERVICE CONNECTION POINTS WITH EXTERIOR UNDERGROUND AND OVERHEAD UTILITIES AND SERVICES. COMPLY WITH REQUIREMENTS OF GOVERNING REGULATIONS, FRANCHISED SERVICE COMPANIES, AND CONTROLLING AGENCIES. THE CONTRACTOR IS RESPONSIBLE FOR AND SHALL BEAR ALL COSTS ASSOCIATED WITH DAMAGE TO ANY EXISTING UTILITIES DURING CONSTRUCTION.
- L. EQUIPMENT LOCATION AND ACCESS:
- LOCATE EQUIPMENT WHICH MUST BE SERVICED, OPERATED, OR MAINTAINED IN ACCESSIBLE LOCATIONS. EQUIPMENT SHALL INCLUDE BUT NOT BE LIMITED TO WATER HEATERS, WATER CONDITIONING EQUIPMENT, VALVES, TRAPS, CLEANOUTS, MOTORS, CONTROLLERS, AND LOW POINT DRAIN LOCATIONS. MINOR DEVIATIONS FROM THE CONTRACT DRAWINGS MAY BE ALLOWED TO PROVIDE BETTER ACCESSIBILITY UNDER THE CONDITION THE CHANGES ARE REVIEWED & APPROVED BY THE ARCHITECT/ENGINEER PRIOR TO MAKING THE CHANGE.
 - INACCESSIBLE INSTALLATION: WHERE THE ENGINEER DETERMINES THAT THE CONTRACTOR HAS INSTALLED EQUIPMENT SUCH THAT IT IS NOT CONVENIENTLY ACCESSIBLE FOR OPERATION AND/OR MAINTENANCE, THE EQUIPMENT WILL BE REMOVED AND REINSTALLED OR REMEDIAL ACTION SHALL BE PERFORMED AS SO AS TO MAKE THE INSTALLATION CONVENIENTLY ACCESSIBLE AT NO ADDITIONAL COST TO THE OWNER. THE TERM "CONVENIENTLY ACCESSIBLE" IS DEFINED AS CAPABLE OF BEING REACHED WITHOUT THE USE OF LADDERS, OR WITHOUT CLIMBING OR CRAWLING UNDER OR OVER OBSTACLES SUCH AS ELECTRICAL CONDUIT, MOTORS, FANS, PUMPS, BELT GUARDS, TRANSFORMERS, HIGH VOLTAGE LINES, PIPING, AND DUCTWORK.
 - EXCEPTION: ACCESSING VALVES FROM A LADDER IS ACCEPTABLE WHEN INSTALLED AS OUTLINED IN OTHER PARAGRAPHS OF THESE NOTES. ACCESSING POINT-OF-USE (WATER HEATER(S)) THAT ARE LOCATED ABOVE A CEILING WHERE INDICATED AND DETAILED ON THE DRAWINGS.
- M. PIPE RUNS SHALL BE INSTALLED TO AVOID INTERFERENCE WITH OTHER WORK/TRADES. INSTALL PIPING AT RIGHT ANGLES TO OR PARALLEL WITH BUILDING WALLS OR COLUMN CENTER LINES. DIAGONAL PIPING RUNS ARE PROHIBITED UNLESS SPECIFICALLY INDICATED OTHERWISE. LOCATE GROUPS OF PIPING PARALLEL TO EACH OTHER WITH SPACE PIPING INCLUDING ANY INSULATION TO PROVIDE A 1-INCH MINIMUM CLEARANCE BETWEEN ADJACENT PIPING OR OTHER SURFACES. SPACE PIPING TO PERMIT VALVE SERVICING OR REPLACEMENT.
- N. IN AREAS WHERE PIPING IS INSTALLED ABOVE A CEILING AND THERE IS CONGESTED CEILING SPACE, INSTALL THE PIPING AS HIGH AS POSSIBLE WHILE GIVING CONSIDERATION OF OTHER TRADES AND THE SERVICEABILITY OF THE SYSTEMS, WHERE VALVES ARE SHOWN, THEY SHALL BE INSTALLED NO MORE THAN 18-INCHES ABOVE THE CEILING. IF IT IS NECESSARY TO INSTALL OFFSET(S) IN THE PIPING SO THE VALVES ARE INSTALLED NO MORE THAN 18-INCHES ABOVE THE CEILING, INSTALL A DRAIN VALVE WITH HOSE END CONNECTION FOR EACH SYSTEM ADJACENT TO THE ISOLATION VALVE(S). IF THERE IS AN OFFSET UP ON THE OUTLET SIDE OF THE ISOLATION VALVE(S), THEN PROVIDE A SECOND DRAIN VALVE AT THAT LOCATION.
- DESIGNER NOTE: EDIT MOUNTING HEIGHT AS APPLICABLE TO YOUR PROJECT. EIGHTEEN (18-INCHES) WAS USED AS AN EXAMPLE. I HAVE HAD CLIENTS SAY 24-INCHES WAS THE MAXIMUM. CONSIDER SHOWING A SECTION ON THE DRAWINGS (IF NECESSARY) TO CONVEY CLEARANCES, CONGESTION AND YOUR DESIGN INTENT.**
- THIS DIAGRAM DEPICTS WHAT IS NARRATED ABOVE
- ISOLATION VALVE AT 18" ABOVE CEILING
- PIPING MOUNTED AS HIGH AS POSSIBLE.
- THE DOUBLE OFFSET CREATES A POCKET WHICH NECESSITATES THE 2 DRAIN VALVES SHOWN

- O. IN AREAS WHERE PIPING IS EXPOSED, INSTALL THE PIPING AS HIGH AS POSSIBLE. IF PRACTICABLE, INSTALL PIPING TIGHT TO STRUCTURE AND/OR STACKS ALONG AND TIGHT TO WALLS [AS SHOWN]. IF VALVES ARE SHOWN IN THE EXPOSED PIPING, INSTALL AN OFFSET(S) IN THE PIPING SO THE VALVES ARE INSTALLED NO MORE THAN 18" ABOVE. INSTALL A DRAIN VALVE WITH HOSE END CONNECTION FOR EACH SYSTEM ADJACENT TO THE ISOLATION VALVE(S). IF THERE IS AN OFFSET UP ON THE OUTLET SIDE OF THE ISOLATION VALVE(S), THEN PROVIDE A SECOND DRAIN VALVE AT THAT LOCATION.
- THIS DIAGRAM DEPICTS WHAT IS NARRATED ABOVE
- ISOLATION VALVE AT 10'-0" AFF
- PIPING MOUNTED AS HIGH AS POSSIBLE.
- THE DOUBLE OFFSET CREATES A POCKET WHICH NECESSITATES THE 2 DRAIN VALVES SHOWN
- DESIGNER NOTE: FOR THE PURPOSES OF DISCUSSION LET'S ASSUME THE FLOOR OR ROOF DECK ABOVE YOUR SPACE IS THE VICINITY OF 2'-0" AFF SO THE PIPING MIGHT BE INSTALLED AT 18'-0" AFF TO BE BELOW STRUCTURE. WITHOUT AN ANY PIPING OFFSETS THE VALVES WOULD BE INSTALLED AT 18' AFF AND BASICALLY INACCESSIBLE. ALSO, CONSIDER THAT VALVE SPECS OFTEN READ (USUALLY IN THE CONTEXT OF MECHANICAL ROOMS) THAT CHAIN OPERATORS ARE TO BE PROVIDED FOR LARGE VALVES LOCATED 10 FEET OR HIGHER ABOVE THE FLOOR. WHILE THE VALVES IN YOUR SPACE MIGHT NOT BE LARGE, WE GENERALLY CAN'T HAVE CHAIN OPERATORS TO OPERATE VALVES IN A SCHOOL, GYMNASIUM OR ANY OTHER BUILDING TYPE'S TALL SPACES. THE BEST PRACTICE IS TO LOCATE ISOLATION VALVES IN EXPOSED PIPING IN ROOMS SIMILAR TO THOSE DESCRIBED ABOVE. IF POSSIBLE, LOCATE ANY REQUIRED VALVES IN AN ADJACENT SPACE.**
- EDIT MOUNTING HEIGHT AS APPLICABLE TO YOUR PROJECT. TEN 11'-0" AFF WAS USED AS AN EXAMPLE AS IT CAN BE ACCESSED FROM A 6 TO 8 FOOT STEP LADDER.
- P. PLUMBING EQUIPMENT, PIPING, OR ACCESSORIES SHOULD NOT BE LOCATED WITHIN ELECTRICAL EQUIPMENT ROOMS UNLESS INDICATED ON THE DRAWINGS. WHERE PIPING AND EQUIPMENT ARE INDICATED TO BE INSTALLED WITHIN ELECTRICAL EQUIPMENT ROOMS, MAINTAIN THE ELECTRICAL CODE REQUIRED WORKING AND DEDICATED SPACES.
- DESIGNERS NOTE: PLEASE REVIEW "UNDERSTANDING NFPA 70E, STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE..." FOR DLR GROUP MECHANICAL ENGINEERS"**
- Q. PLUMBING EQUIPMENT, PIPING, OR ACCESSORIES NOT USED IN CONNECTION WITH THE OPERATION OF THE ELEVATOR SHALL NOT BE INSTALLED IN ANY HOSTWAY, MACHINERY SPACE, MACHINE ROOM, CONTROL SPACE OR CONTROL ROOM.

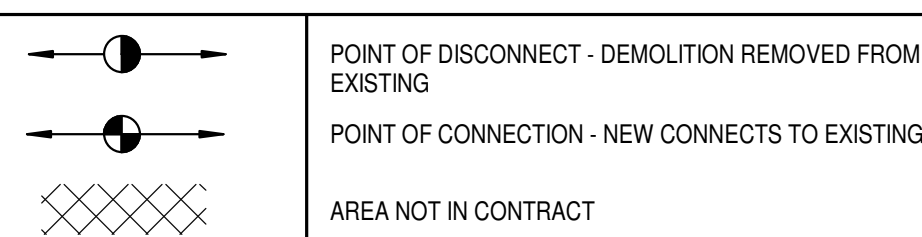
- DESIGNERS NOTE: THE ONLY PLUMBING PIPING THAT CAN BE INSTALLED IN THE VICINITY OF THE ELEVATOR IS A SUMP PUMP AND ITS ASSOCIATED PIPING. GENERALLY A SUMP PUMP & PIT ARE PROVIDED IN THE ELEVATOR SHAFT. OFTEN THESE THERE ARE LOCAL AMENDMENTS. CONFIRM WITH YOUR EOR.**
- R. PLUMBING EQUIPMENT, PIPING, OR ACCESSORIES SHALL NOT PASS THRU OR OVER ANY SERVER (COMM / IT) ROOMS.
- DESIGNER'S NOTE: BEST PRACTICE IS, AS THE NOTE STATES TO AVOID PIPING THRU OR OVER ANY SERVER (COMM / IT) ROOM. IN THE K-12 WORLD THERE MAY AN EXCEPTION TO THIS WHERE YOU COULD HAVE SOME KIND OF SECONDARY CONTAINMENT TO PROTECT THE SERVERS FROM CONDENSATION / LEAKS, OR BREAKS BUT... THIS SHOULD ONLY BE CONSIDERED AS A LAST RESORT AND ONLY WITH COUNSEL FROM THE ELECTRICAL EOR.**
- IN THE WORKPLACE OR OTHER SECTORS IT IS DOUBTFUL THAT SECONDARY CONTAINMENT COULD EVEN BE CONSIDERED.**
- S. RUN OVI, HW AND HWC LINES FULL SIZE THE ENTIRE LENGTH OF THE PLUMBING CHASE. BRANCH OFF TO INDIVIDUAL PLUMBING FIXTURES WITH PIPE SIZES AS SHOWN ON THE PLUMBING FIXTURE CONNECTION SCHEDULE. REFER TO PLUMBING RISER / ISOMETRIC DIAGRAMS FOR PIPING SIZES NOT SHOWN ON THE PLANS OR PLUMBING FIXTURE CONNECTION SCHEDULE.

- EVERYONE NEEDS TO READ THESE NOTES. CHAMPIONS NEED TO REINFORCE TO THEIR STAFF THIS IS THE INTENDED PRACTICE FOR FORWARD
- T. INSTALL HANGERS FOR METALLIC PIPE AND TUBING NOT TO EXCEED THE MAXIMUM HORIZONTAL AND VERTICAL SPACING AND MINIMUM HANGER ROD DIMENSIONS TO COMPLY WITH THE [INTERNATIONAL PLUMBING CODE (IPC)] [UNIFORM PLUMBING CODE (UPC)] [OTHER PLUMBING CODE] MSS SP-58 STANDARD PRACTICE FOR PIPE HANGERS AND SUPPORTS, LOCALLY ENFORCED CODES AND AHJ REQUIREMENTS, WHICHEVER ARE MOST STRINGENT. WHERE CONFLICTS ARISE BETWEEN THE PLUMBING CODE REQUIREMENTS, MSS SP-58 AND THE PROJECT SPECIFICATIONS, THE MOST RESTRICTIVE OR THE REQUIREMENT THAT SPECIFIES SUPPORTS WITH HIGHEST LOAD RATINGS OR SHORTEST HANGER SPACING SHALL APPLY.
- DESIGNER'S NOTE: THERE ARE SOME ISSUES AND CONFLICTS THAT MADE THE ABOVE NOTE DIFFICULT TO WRITE. SO THIS CAN BE UNDERSTOOD:**
- THE AIA MASTERSPEC IS INCONSISTENT. SOME SPECS READ "COMPLY WITH MSS SP-58". OTHERS READ "MSS SP-58, LOCALLY ENFORCED CODES, AND AUTHORITIES HAVING JURISDICTION WHICHEVER ARE MOST STRINGENT". OTHER SPECS THAT INCLUDE PLASTIC, GLASS (PIPES OTHER THAN METAL) READ "MANUFACTURER'S WRITTEN INSTRUCTIONS, LOCALLY ENFORCED CODES, AND AUTHORITIES HAVING JURISDICTION REQUIREMENTS, WHICHEVER ARE MOST STRINGENT".
 - CODES ARE REQUIRED YET THERE IS NO MENTION OF THEM IN AIA MASTERSPEC UNLESS YOU REASON "LOCALLY ENFORCED CODES" AS THE PLUMBING CODE. MSS SP-58 IS A REFERENCE STANDARD BUT HAS BEEN IN SPECS FOR AS LONG AS I CAN REMEMBER.
 - THEN, THE IPC OR A1 SPECIFIES HORIZONTAL + VERTICAL HANGER SPACING (DOES NOT ADDRESS HANGER ROD (ATR) SIZE).
 - THE UPC CODE SPECIFIES BOTH HORIZONTAL + VERTICAL HANGER SPACING AND DOES ADDRESS ATR SIZE.
 - MSS SP-58 ADDRESSES HORIZONTAL HANGER SPACING ONLY (NOT VERTICAL) BUT DOES ADDRESS ATR DIAMETER.
 - I FEEL AS A PRACTICE WE NEED TO ASK FOR SHOP DRAWINGS WITH A SCHEDULE FOR HANGER SPACING AND ATR SIZE FOR PROJECT RECORD PURPOSES.
1. WHERE HANGER SPACING DOES NOT CORRESPOND WITH JOIST OR RIB SPACING, USE STRUCTURAL STEEL CHANNELS SECURED DIRECTLY TO JOIST AND RIB STRUCTURE TO MEET THE REQUIRED HANGER SPACING. THEN, SUSPEND THE EQUIPMENT AND PIPING FROM THE CHANNELS. HOLES WILL NOT BE DRILLED OR BURNED IN STRUCTURAL STEEL WITHOUT PRIOR WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD.
2. PROVIDE ADDITIONAL SUPPORTS AT VALVES, STRAINERS, INLINE PUMPS AND OTHER HEAVY COMPONENTS. PROVIDE SUPPORT WITHIN ONE FOOT OF EACH PIPE ELBOW.
3. INSTALL HANGERS FOR PLASTIC, FRP OR GLASS PIPING WITH THE MAXIMUM HORIZONTAL SPACING AND MINIMUM ROD DIAMETERS, TO COMPLY WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS, LOCALLY ENFORCED CODES, AND AUTHORITIES HAVING JURISDICTION REQUIREMENTS, WHICHEVER ARE MOST STRINGENT.
4. SUPPORT VERTICAL RUNS OF PLASTIC, FRP OR GLASS PIPING TO COMPLY WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS, LOCALLY ENFORCED CODES, AND AUTHORITIES HAVING JURISDICTION REQUIREMENTS, WHICHEVER ARE MOST STRINGENT.
5. THE USE OF CHAINS, WIRE, CABLE OR STRAP HANGERS ARE NOT ALLOWED FOR PIPE SUPPORTS.
6. REFER TO GENERAL SEISMIC NOTES FOR ADDITIONAL REQUIREMENTS FOR PROJECTS SUBJECTED TO SEISMIC DESIGN REQUIREMENTS.
- U. PROVIDE SHUT OFF VALVES FOR ALL BRANCH WATER PIPING WHERE THE BRANCH CONNECTS TO THE MAIN [AS SHOWN]. LOCATE / ORIENT THE VALVES TO PERMIT PROPER OPERATION AND ACCESS FOR MAINTENANCE. GENERALLY, LOCATE VALVE STEMS IN OVERHEAD PIPING IN HORIZONTAL POSITION. PROVIDE A UNION ADJACENT TO ONE END OF ALL THREADED END VALVES. AS A RULE, THE VALVES SHALL BE INSTALLED NO MORE THAN 18-INCHES ABOVE AN ACCESSIBLE CEILING. IF THE CEILING IS NOT ACCESSIBLE, PROVIDE A MINIMUM 18" X 18" SIZE LOCKABLE ACCESS PANEL TO ACCESS TO SERVICE AND/OR REPLACE THE VALVES.
1. ANY BRANCH PIPING FROM MAIN SERVING MORE THAN ONE PLUMBING FIXTURE SHALL HAVE SHUT-OFF VALVES.

- DESIGNER NOTE: YOU SHOULD MAKE EVERY ATTEMPT TO SHOW ALL OF THE REQUIRED VALVES AND EDIT THE ABOVE PARAGRAPH ACCORDINGLY. OBVIOUSLY THE CONTRACTOR NEEDS TO BE ABLE TO REVIEW OUR DRAWINGS TO GET THEIR QUANTITY & COST CORRECT. WE NEED TO KNOW WHERE THE VALVES ARE LOCATED FOR THE PURPOSES OF ACCESSIBILITY. IF AN ACCESS PANEL IS REQUIRED WE NEED TO COMMUNICATE THAT INFORMATION TO ARCHITECTURAL.**
- V. SANITARY DRAINAGE PIPING SHALL SLOPE IN ACCORDANCE WITH THE TABLE BELOW FROM THE 2001 INTERNATIONAL PLUMBING CODE:
1. GREASE WASTE DRAINAGE PIPING UPSTREAM OF A GREASE INTERCEPTOR SHALL SLOPE AT NOT LESS THAN 1/4 INCH PER FOOT.
- | PIPE SIZE (IN) | MINIMUM SLOPE (INCH PER LF) |
|----------------|-----------------------------|
| <= 2.5 | 1/4 |
| 3 TO 6 | 1/8 |
| >= 8 | 1/16 |
- DESIGNER'S NOTE: THE ABOVE IS FOR THE IPC 2021 CODE. CONFIRM THE CODE AND THE YEAR YOU ARE DESIGNING UNDER AND EDIT THE TABLE & ABOVE PARAGRAPH ACCORDINGLY. THERE CAN BE QUITE A VARIANCE IN CODE REQUIRED SLOPE. FOR EXAMPLE PER PAR 708.1 OF THE 2015 UPC "HORIZONTAL DRAINAGE PIPING SHALL BE RUN IN A PRACTICAL ALIGNMENT AND A UNIFORM SLOPE OF NOT LESS THAN 1/4" FT OR 2% TOWARD THE POINT OF DISPOSAL PROVIDED THAT, WHERE IT IS IMPRACTICAL DUE TO DEPTH OF STREET SEWER, TO THE STRUCTURAL FEATURES, OR TO THE ARRANGEMENT OF THE OR STRUCTURE TO OBTAIN A SLOPE OF 1/4" FT OR 2%, SUCH PIPE OR PIPING 4" OR LARGER IN DIAMETER SHALL BE PERMITTED TO HAVE A SLOPE OF NOT LESS THAN 1/8" FT OR 1% WHERE FIRST APPROVED BY THE AUTHORITY HAVING JURISDICTION."**
- WE ARE CONSIDERING DEVELOPING THE ABOVE TABLE FOR VARIOUS YEARS OF THE IPC, UPC AND OTHER CODES USED THROUGHOUT THE GROUP. THAT IS THOUGHT TO BE SUMMER INTERM WORK.
- ALSO, STORM DRAIN DOES NOT NECESSARILY SLOPE THE SAME AS SANITARY PIPING. AS THE DESIGNER, YOU NEED TO BE AWARE OF THIS AS IT AFFECTS THE AMOUNT OF ROOF SURFACE YOUR DRAIN CAN HANDLE AS WELL AS ITS SIZE.
- W. CONDENSATE SHALL NOT DISCHARGE INTO A STREET, ALLEY OR ONTO GRADE. CONDENSATE DRAINS FROM ALL COOLING COILS AND EVAPORATORS SHALL BE CONVEYED FROM THE DRAIN PAN OUTLET TO A DRYWELL AS SHOWN ON THE PLANS.

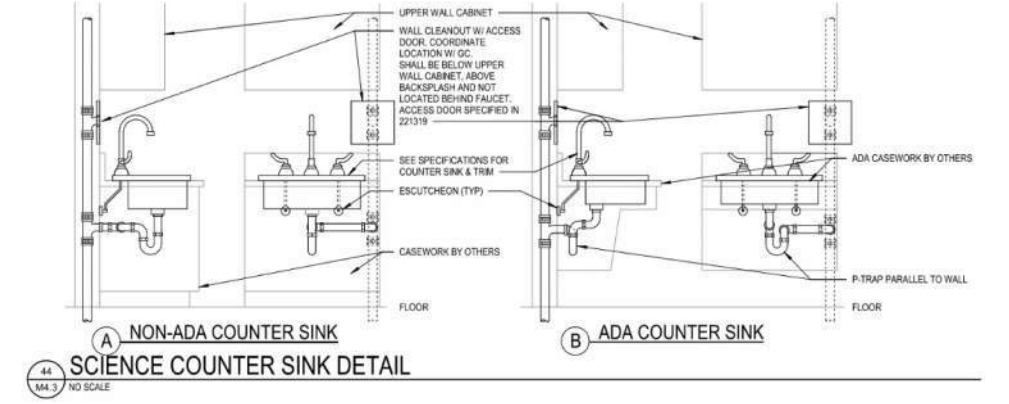
- DESIGNER NOTE: PER MARK KIRBY, THIS NOTE IS REQUIRED FOR FLA WORK BUT COULD APPLY ELSEWHERE. WHEN USED, MAKE SURE YOU LOCATE THE DRYWELL(S) ON YOUR DRAWINGS.**
- THIS DIAGRAM DEPICTS WHAT IS NARRATED ABOVE
- ISOLATION VALVE AT 18" ABOVE CEILING
- PIPING MOUNTED AS HIGH AS POSSIBLE.
- THE DOUBLE OFFSET CREATES A POCKET WHICH NECESSITATES THE 2 DRAIN VALVES SHOWN

GENERAL SYMBOLS



PIPING ANNOTATIONS

SCHEMATIC	3D	DESCRIPTION
		EXISTING TO REMAIN - (E) or EXIST
		ITEM TO BE DEMOLISHED - (D) or DEMO
		PIPE SIZE TAG (DIAMETER WITH SYSTEM NAME)
		ABOVE GROUND PIPING
		BELOW GROUND PIPING
		PIPE SLOPE
		PIPE INVERT ELEVATION
		MECHANICAL EQUIPMENT TAG
		MECHANICAL EQUIPMENT CLEARANCE



- AA. PROVIDE A BARRIER TYPE FLOOR DRAIN TRAP SEAL PROTECTION DEVICE (AS DEFINED BY THE ASSE 1072 STANDARD) EQUAL TO SURFACEL BRAND.

- DESIGNER NOTE: INQUIRE WITH YOUR EOR REGARDING THE NECESSITY OF HAVING SOME FORM OF FLOOR DRAIN TRAP SEAL PROTECTION IN SOME REGIONS (IE REGION FOR EXAMPLE) THE DEVICE DESCRIBED ABOVE CANNOT BE USED. WHERE APPLICABLE BY YOUR PLUMBING CODE THE PREFERENCE IS THIS NOTE SHOULD BE USED AS EITHER A KEYED NOTE OR A NOTE THAT IS ADDED TO THE PD SCHEDULE. IF THAT IS THE CASE, CUT & PASTE TO EITHER OF THOSE LOCATIONS.**

- BB. WATER HAMMER ARRESTORS WILL BE INSTALLED IN WATER PIPING ACCORDING TO PSI/WH 201. WATER HAMMER ARRESTORS SHALL BE INSTALLED WITH INLET ISOLATION VALVES TO ALLOW FOR MAINTENANCE.

- DESIGNER NOTE: THE PREFERRED PRACTICE IS FOR DLR GROUP ENGINEERS TO SIZE AND SHOW THE LOCATIONS OF THE WHAS USING THE EXAMPLE OF A TOILET ROOM WITH TILED WALLS. THE ARCHITECTS MAY NEED TO KNOW THE LOCATION OF THE ARRESTORS SO THE ACCESS PANEL CAN BE INTEGRATED INTO THEIR TILE PATTERN.**

- CC. THE DETAILS SHOWN ON THE DETAIL SHEETS APPLY TO ALL PLUMBING PLANT SHEETS. THE DETAILS ARE TO BE FOLLOWED FOR THE INSTALLATION OF ALL COMPONENTS AND EQUIPMENT SHOWN.

- DESIGNER'S NOTE: IF A DETAIL IS SHOWN ON THE DETAIL SHEETS, THEN IT NEEDS TO BE REFERENCED. WE PROVIDE DETAILS ON OUR PROJECTS TO DESCRIBE VARIOUS SYSTEMS AND/OR THEIR COMPONENTS. SOMETIMES DETAILS ARE SHOWN TO SHOW OUR SYSTEM'S RELATIONSHIP TO OTHER TRADES. THERE CAN BE A COUPLE OF PHILOSOPHIES OR METHODS FOR HOW WE CAN REFERENCE THE DETAILS.**

- THE MOST SPECIFIC WAY TO REFERENCE A DETAIL IS TO USE DETAIL BUBBLE CALLOUTS AND TO REFERENCE THE DETAIL AT LEAST ONCE ON EACH SHEET (IF APPLICABLE). THIS IS THE BEST WAY TO REFERENCE THE ONE-SI-TWO-SI TYPE OF APPLICATION OF A DETAIL. IF A DETAIL IS TO BE APPLIED MULTIPLE / MANY TIMES ON A SHEET, YOU CAN STILL DO A BUBBLE CALLOUT WHERE YOU REFERENCE THE DETAIL ONCE AND USE (TYP). AN EXAMPLE OF THIS METHOD OF REFERENCING MIGHT BE A SLEEVE THRU A FOUNDATION.
- A SECOND METHOD COULD THAT CAN BE USED FOR THE (TYP) APPLICATION WOULD BE FOR ITEMS THAT MIGHT OCCUR TYPICALLY ON EVERY HVAC SHEET (METAL) SHEET. THE EXAMPLE BELOW WAS FOR A VAV SYSTEM: COPY PASTE TO LEGEND FOR HVAC GENERAL SHEET NOTES.

- DETAILS FOR ITEMS SHOWN ON THIS SHEET ARE REFERRED AS FOLLOWS:
- FOR AIR TERMINAL UNIT CONNECTION DETAIL (TYP) SEE
- FOR DUCT HANGING DETAIL SEE
- FOR EXPOSED DUCTWORK / PIPING INSTALLATION DETAIL SEE
- FOR LOW VELOCITY BRANCH DUCT TAKE-OFF DETAIL (TYP) SEE
- FOR PIPE INSULATION/HANGING DETAIL, SEE DETAIL
- THEN ON THE HVAC PIPING SHEET ANOTHER EXAMPLE... COPY PASTE TO LEGEND FOR HVAC PIPING GENERAL SHEET NOTES:
- DETAILS FOR ITEMS SHOWN ON THIS SHEET ARE REFERRED AS FOLLOWS:
- FOR AIR TERMINAL UNIT CONNECTION DETAIL (TYP) SEE
- FOR EXPOSED DUCTWORK / PIPING INSTALLATION DETAIL SEE
- FOR PIPE INSULATION/HANGING DETAIL, SEE DETAIL
- FOR EXPANSION LOOP DETAIL SEE
- FOR PIPE ANCHOR AND GUIDE DETAIL SEE
- FOR FLUSHING PIPING CONNECTION DETAIL, SEE DETAIL
- FOR LOW POINT DRAIN DETAIL (TYP) SEE
- FOR RADIATION UNIT CONNECTION DETAIL (TYP) SEE DETAIL

- YOU HAVE OPTIONS BUT THE MAIN POINT IS THE DETAILS NEED TO BE REFERENCED.

PLUMBING SYMBOLS

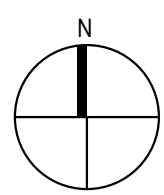
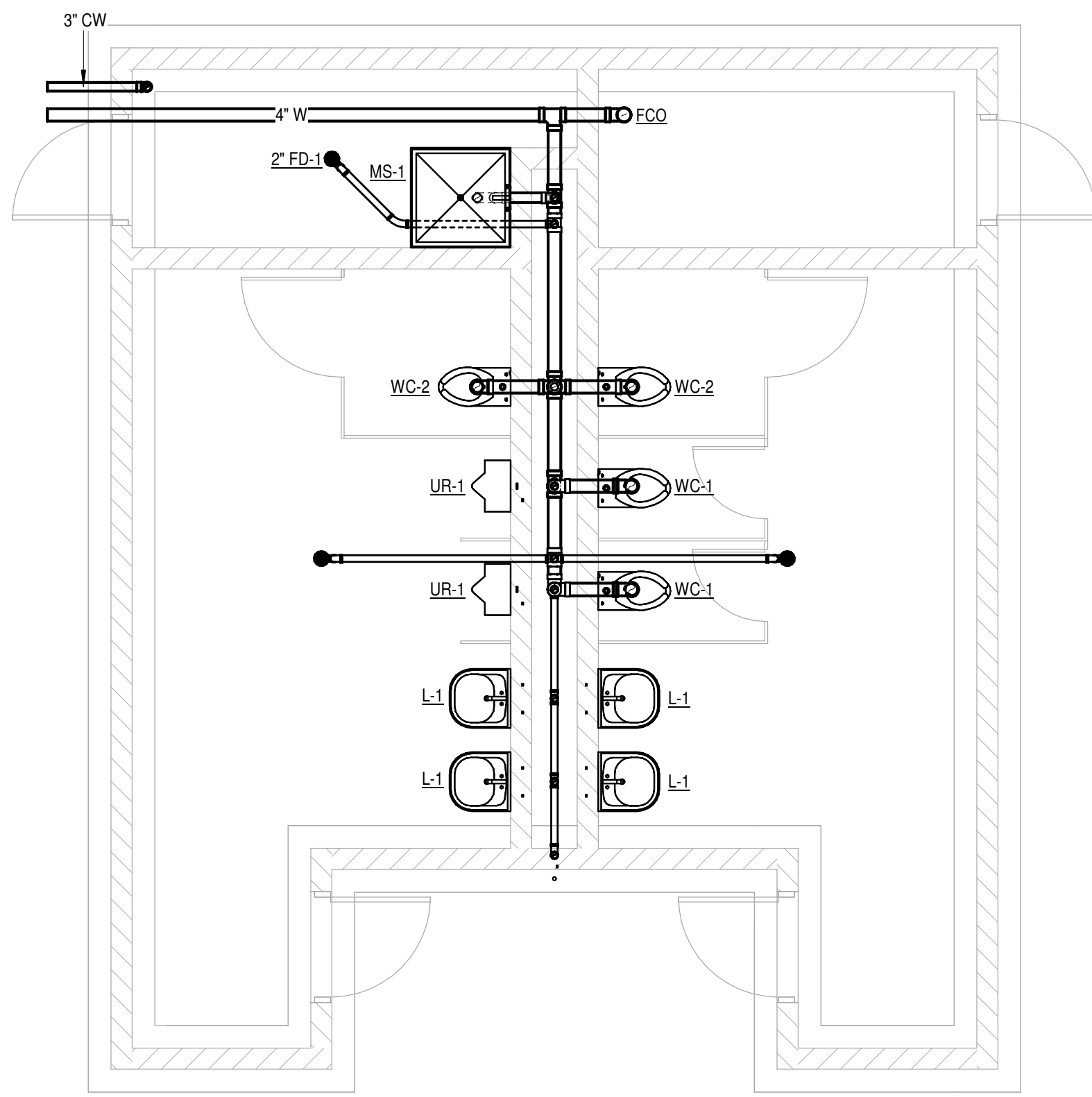
SCHEMATIC	3D	DESCRIPTION
		DOMESTIC COLD WATER (LINE/TYPE)
		DOMESTIC HOT WATER (LINE/TYPE)
		DOMESTIC HOT WATER REIRC (LINE/TYPE)
		LAB NITROGEN VENT
		ACID VENT
		GREASE VENT
		OIL VENT
		INDIRECT WASTE
		SANITARY VENT
		CLEAN OUT
		WALL CLEAN OUT
		FLOOR CLEAN OUT
		GRADE CLEAN OUT (DOUBLE CLEAN OUT)
		FLOOR DRAIN / FLOOR SINK
		DOWNSPOUT NOZZLE
		ROOF DRAIN / OVERFLOW DRAIN
		WALL HYDRANT
		HOSE BIBB
		WATER HAMMER ARRESTER
		ANESTHESIA EVACUATOR
		MEDICAL COMPRESSED AIR OUTLET
		DEIONIZED WATER OUTLET
		DISTILLED WATER OUTLET
		NATURAL GAS OUTLET
		NITROGEN OUTLET
		NITROUS OXIDE OUTLET
		OXYGEN OUTLET
		VACUUM INLET
		RISER TAG
		ROOF DRAIN TAG
		PLUMBING FIXTURE TAG

PIPING VALVES AND FITTINGS

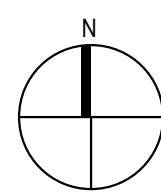
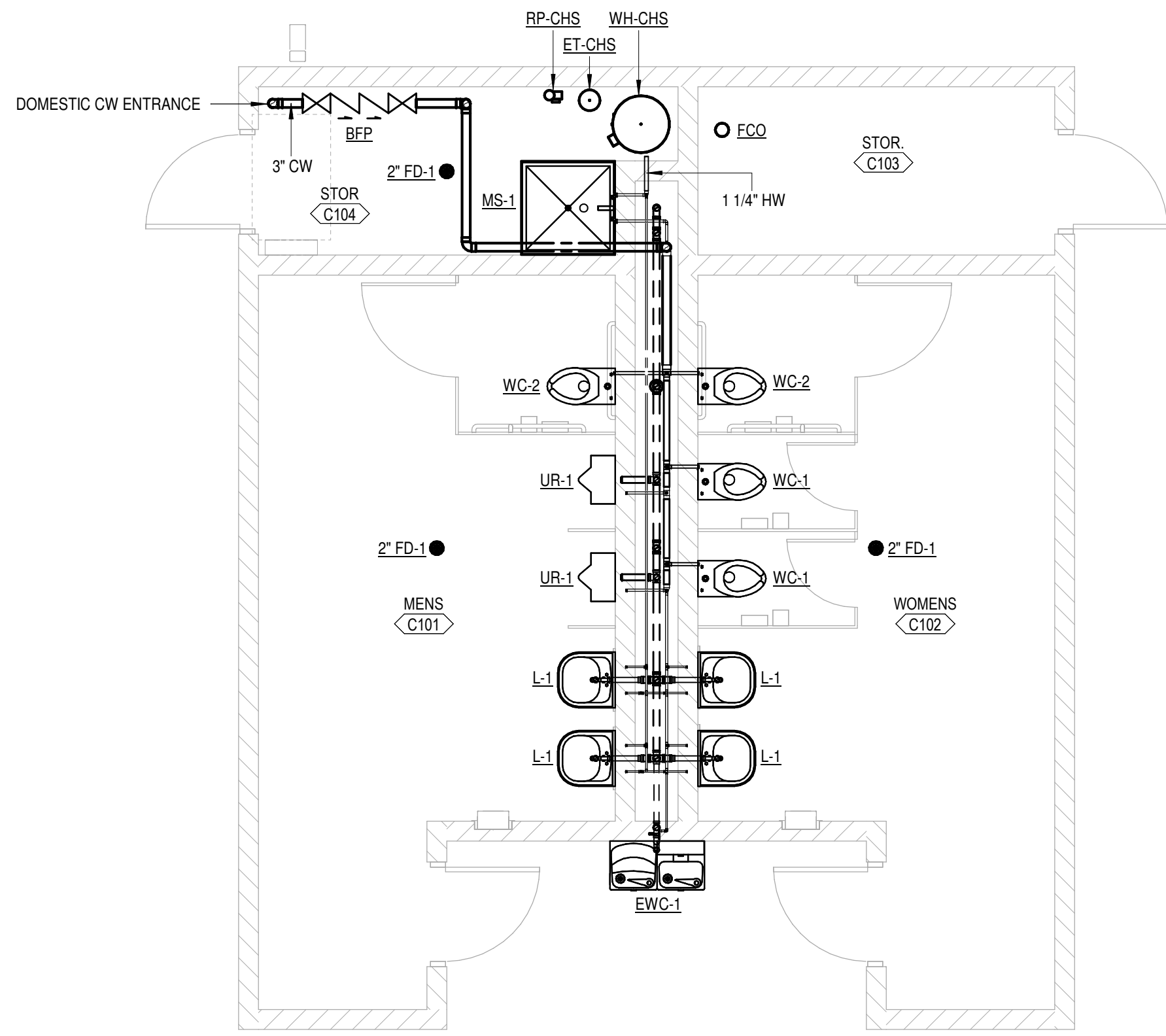
SCHEMATIC	3D	DESCRIPTION
		PIPE DROP
		PIPE RISE
		PIPE TEE DOWN
		PIPE TEE UP
		CONCENTRIC REDUCER
		ECCENTRIC REDUCER
		PIPE CAP
		PIPE ALIGNMENT GUIDE
		PIPE ANCHOR
		FLOW DIRECTION
		EXPANSION JOINT
		FLEXIBLE CONNECTION
		UNION
		DIRECTION OF PIPE PITCH
		AQUASTAT
		EXPANSION LOOP
		BALANCING VALVE
		BALANCING VALVE W/ METERING POINTS
		BALL VALVE
		BUTTERFLY VALVE
		CHECK VALVE
		STEAM TRAP
		GATE VALVE
		CIRCUIT SETTER
		MANUAL AIR VENT
		AUTOMATIC AIR VENT
		PLUG VALVE
		PRESSURE GAUGE
		SOLENOID VALVE
		ANGLE VALVE
		AUTOMATIC CONTROL VALVE 2-WAY
		AUTOMATIC CONTROL VALVE 3-WAY
		AUTOMATIC FLOW CONTROL VALVE
		STRAINER
		PRESSURE AND TEMPERATURE TEST PORT
		THERMOMETER
		PRESSURE REDUCING VALVE (WATER SYSTEMS)
		PRESSURE REGULATING VALVE (GAS SYSTEMS)
		RELIEF VALVE
		FLOW MEASURING DEVICE
		BACKFLOW PREVENTER
		UNION

SHEET INDEX

P0.1	PLUMBING GENERAL NOTES & SYMBOLS
P1.1B	CAROLINA HS RESTROOMS - PLUMBING PLANS
P1.1A	MAULDIN HS RESTROOMS - PLUMBING PLANS
P5.1	PLUMBING DETAILS
P6.1	PLUMBING SCHEDULES



CAROLINA HS RESTROOMS - UNDERGROUND PLUMBING PLAN
SCALE: 1/4" = 1'-0"



CAROLINA HS RESTROOMS - PLUMBING PLAN
SCALE: 1/4" = 1'-0"

SHEET NOTES



Autodesk Docs/17-24-103-00 Mauldin HS Stadium Seating Restroom Bldg/17-24-103-00 Mauldin HS Stadium Seating Restroom
Bldg MEP 2024 17-24-103-00 Mauldin HS Stadium Seating Restroom Bldg/17-24-103-00 Mauldin HS Stadium Seating Restroom
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3

4

5

DOMESTIC FIXTURE SCHEDULE																			
NOTES: 1. 2. 3. 4. 5.																			
ID	DESCRIPTION	QTY	MATERIAL DESCRIPTION	FINISH	TRIM			FLOW FIXTURE		FLUSH FIXTURE	PIPE CONNECTION SIZE (IN)			SPECIFICATION	BASIS OF DESIGN		NOTES		
					MANUFACTURER	MODEL	TYPE	WATER FLOW (GPM)	WATER TEMP (°F)		VOL PER FLUSH (GAL)	WASTE	VENT		WATER			MANUFACTURER	MODEL
									COLD	HOT					COLD	HOT			
EW-1	WATER COOLER - DUAL HEIGHT	2	GALVANIZED STEEL	STAINLESS STEEL CABINET				0.13	55		2"	1-1/2"	1/2"	TWO LEVEL WALL HUNG WATER COOLER WITH BOTTLE FILLING STATION. THE UNIT SHALL BE COMPLETE WITH CABINET, MOUNTING FRAME, SELF CLOSING EASY TOUCH SIDE AND FRONT PUSHBAR CONTROLS, FLEXIGUARD SAFETY BUBBLER, REFRIGERATING SYSTEM, AIR COOLED, 120 VOLT, 60 CYCLE, SINGLE PHASE POWER CONNECTION, FULLY AUTOMATIC, COMPLETE AND READY TO OPERATE.	ELKAY	EZSTLBWSSK			
L-1	LAVATORY - WALL HUNG - ADA	9	WHITE VITREOUS CHINA	WHITE	CHICAGO FAUCET CO	2200-4ABCP	MANUAL	0.5	55	120		1-1/2"	1-1/2"	1/2"	WALL HUNG LAVATORY WITH BACKSPASH, FAUCET HOLES ON 4" CENTERS, DECK MOUNTED FAUCET WITH 0.5 GPM AERATOR, EXTERNAL ASSE 1070 COMPLIANT THERMOSTATIC MIXING VALVE, GRID DRAIN, LOOSE KEY ANGLE STOPS AND SUPPLIES. INSULATE WATER AND WASTE WITH ADA INSULATION KIT. MOUNT AT ADA COMPLIANT HEIGHT.	SLOAN	SS-3003		
MS-1	JANITOR SINK	2	MOLDED STONE		CHICAGO FAUCET CO	897-CP	MANUAL	2.5	55	120		3"	2"	1/2"	SERVICE BASIN WITH CAP ON TWO SIDES, WITH CHROME PLATED 3" DRAIN AND CAST IRON TRAP. FAUCET SHALL INCLUDE PAIL HOOK AND ATMOSPHERIC VACUUM BREAKER SPOUT. FURNISH 5'-0" LENGTH OF 5-PLY GARDEN HOSE AND FITTINGS.	FIAT	MSB-2424		
UR-1	URINAL	4	WHITE VITREOUS CHINA	WHITE	SLOAN	ROYAL 186-0.125	MANUAL		55		0.125	2"	1-1/2"	3/4"	WALL HUNG URINAL WITH WASHOUT ACTION, TOP SPUD, SIZE 18" WITH INTEGRAL EXTENDED SHIELDS SUPPORTED BY THROUGH GOING BOLTS AND C.P. NUTS. SOLAR POWERED SENSOR ACTIVATED FLUSHOMETER.	SLOAN	SU-7009		
WC-1	WATER CLOSET - FLOOR MOUNT - FLUSH VALVE	9	WHITE VITREOUS CHINA	WHITE	SLOAN	ROYAL 111-1.1	MANUAL		55		1.1	4"	2"	1"	ELONGATED FLOOR MOUNTED WATER CLOSET, 1-1/2" TOP SPUD, WITH CHURCH 295CT ELONGATED OPEN FRONT SEAT.	SLOAN	ST-2009		
WC-2	WATER CLOSET - FLOOR MOUNT - FLUSH VALVE - ADA	4	WHITE VITREOUS CHINA	WHITE	SLOAN	ROYAL 111-1.1	MANUAL		55		1.1	4"	2"	1"	ELONGATED FLOOR MOUNTED WATER CLOSET, 1-1/2" TOP SPUD, WITH CHURCH 295CT ELONGATED OPEN FRONT SEAT. INSTALL AT ADA COMPLIANT HEIGHT.	SLOAN	ST-2029		

DOMESTIC EXPANSION TANK SCHEDULE																
NOTES: 1. 2. 3. 4. 5.																
ID	MATERIAL	FINISH	TYPE	ARRANGEMENT	VOLUME (GAL)	MAX ACCEPT FACTOR	ACCEPT VOLUME (GAL)	PRESS RELIEF (PSI)	PRE CHARGE PRESS (PSI)	UNIT DIMENSIONS (IN)		WEIGHT (LBS)	BASIS OF DESIGN		NOTES	
										DIA	HEIGHT		MANUFACTURER	MODEL		
(ET) CHS	STEEL - POLYPROPYLENE LINING	RED OXIDE PRIMER	FIXED DIAPHRAGM	INLINE	2	0.45	0.9	100	55	8"	14"	27	AMTROL	ST-SC		
(ET) MHS	STEEL - POLYPROPYLENE LINING	RED OXIDE PRIMER	FIXED DIAPHRAGM	INLINE	2	0.45	0.9	100	55	8"	14"	27	AMTROL	ST-SC		

DOMESTIC WATER CIRCULATING PUMP SCHEDULE																
NOTES:																
1. LEAD-FREE BRONZE PUMP.																
2. PROVIDE WITH AQUASTAT FOR PUMP CONTROL. CYCLE PUMP TO MAINTAIN A RECIRCULATING DHW TEMPERATURE OF (130 DEG F (ADJ.) AT...																
ID	TYPE	PUMP DATA		SPEED CONTROL	MOTOR DATA			ELECTRICAL DATA					WEIGHT (LBS)	BASIS OF DESIGN		NOTES
		FLOW (GPM)	PUMP HEAD (FT WG)		HP / WATTS	RPM	CONTROL TYPE	FLA (A)	MCA (A)	MOCP (A)	V	PH		HZ	MANUFACTURER	
RP-CHS	INLINE	14	16		0.04	3250	ECM	1.6	2	2.8	115	1	60	8	TACO	008-F6
RP-MHS	INLINE	14	16		0.04	3250	ECM	1.6	2	2.8	115	1	60	8	TACO	008-F6

ELECTRIC WATER HEATER SCHEDULE																		
NOTES: 1. 2. 3. 4. 5.																		
ID	TYPE	HEATING CAPACITY (KW)	WATER SIDE DATA						HEATING ELEMENT DATA		ELECTRICAL DATA				WEIGHT (LBS)	BASIS OF DESIGN		NOTES
			FLOW (GPM)		STORAGE		TEMPERATURE (°F)		QTY	FLA (A)	MCA (A)	MOCP (A)	VOLT (V)	PH		MANUFACTURER	MODEL	
			DESIGN	MIN	RECOVERY (GAL/H)	VOL (GAL)	ENT	LVG										
WH-CHS	STORAGE	5,000	0	0	24	20	55	140	1	24	30	35	208	1	73	AO SMITH	DEL-20	
WH-MHS	STORAGE	5,000	0	0	24	20	55	140	1	24	30	35	208	1	73	AO SMITH	DEL-20	

FLOOR DRAIN SCHEDULE												
NOTES: 1. 2. 3. 4. 5.												
ID	DESCRIPTION	QTY	MATERIAL DESCRIPTION		PRIMER CONNECTION	WASTE PIPE SIZE	VENT PIPE SIZE	PRIMER PIPE SIZE	SPECIFICATION	BASIS OF DESIGN		NOTES
			DRAIN BODY	STRAINER						MANUFACTURER	MODEL	
FD-1	FLOOR DRAIN	6	EPOXY COATED CAST IRON	NICKEL BRONZE	No	2"	2"		EPOXY COATED CAST IRON FLOOR DRAIN WITH ANCHOR FLANGE, REVERSIBLE CLAMPING COLLAR WITH PRIMARY & SECONDARY WEEPHOLES, ADJUSTABLE ROUND-HEEL PROOF-NICKEL BRONZE STRAINER, AND NO HUB OUTLET.	WATTS	FD-100-A	



NOT FOR CONSTRUCTION



MAULDIN HS STADIUM EXPANSION & CAROLINA HS RESTROOM BUILDING

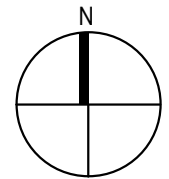
MAULDIN HIGH SCHOOL - 701 E Butler Pk., Mauldin, SC 29662
CAROLINA HIGH SCHOOL - 2725 Anderson Rd., Greenville, SC 29611

DESIGN DEVELOPMENT DOCUMENTS
08/30/2024
REVISIONS

17-24103-00
PLUMBING SCHEDULES

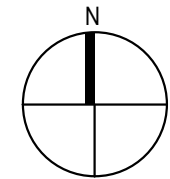
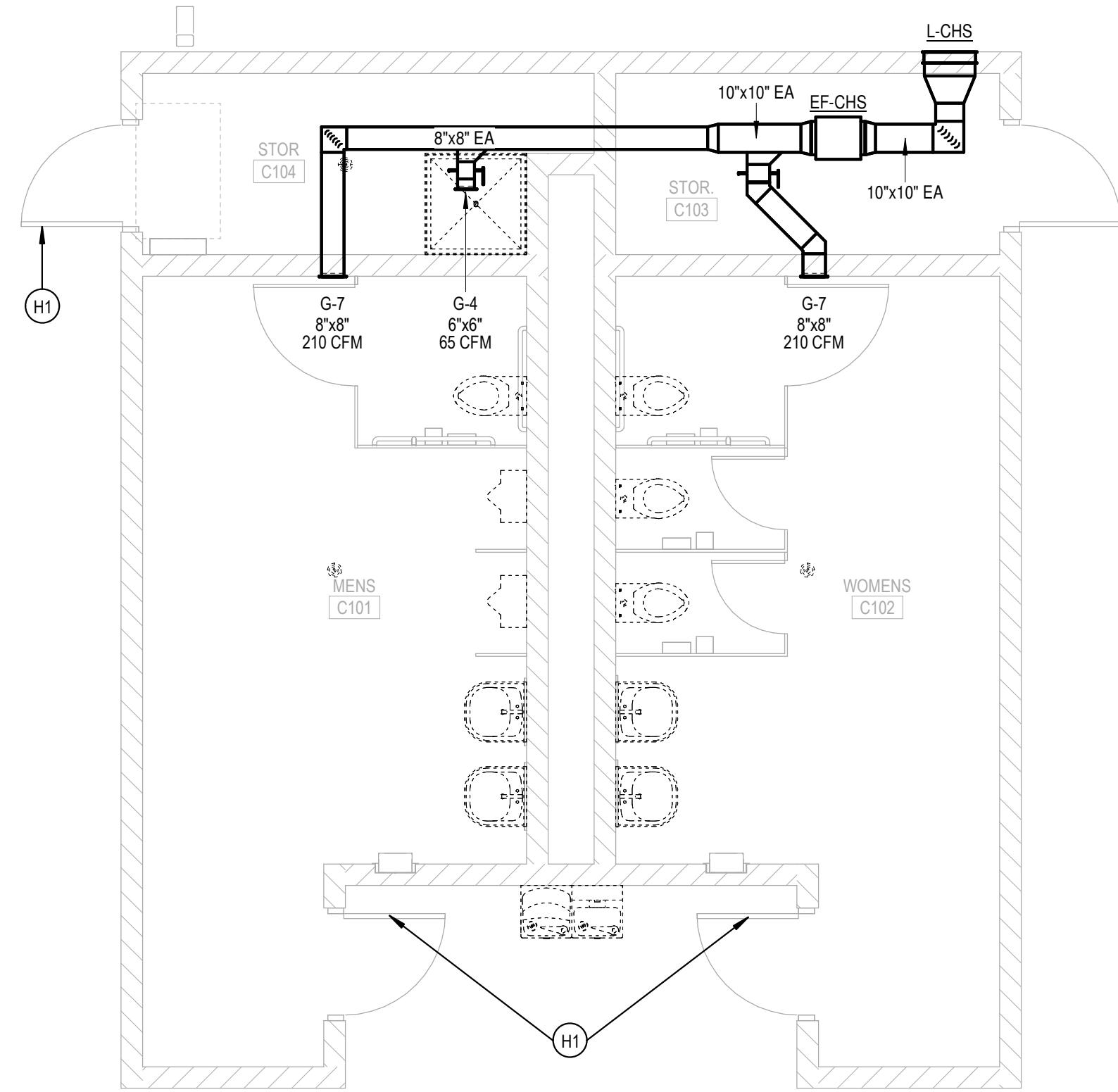
P6.1

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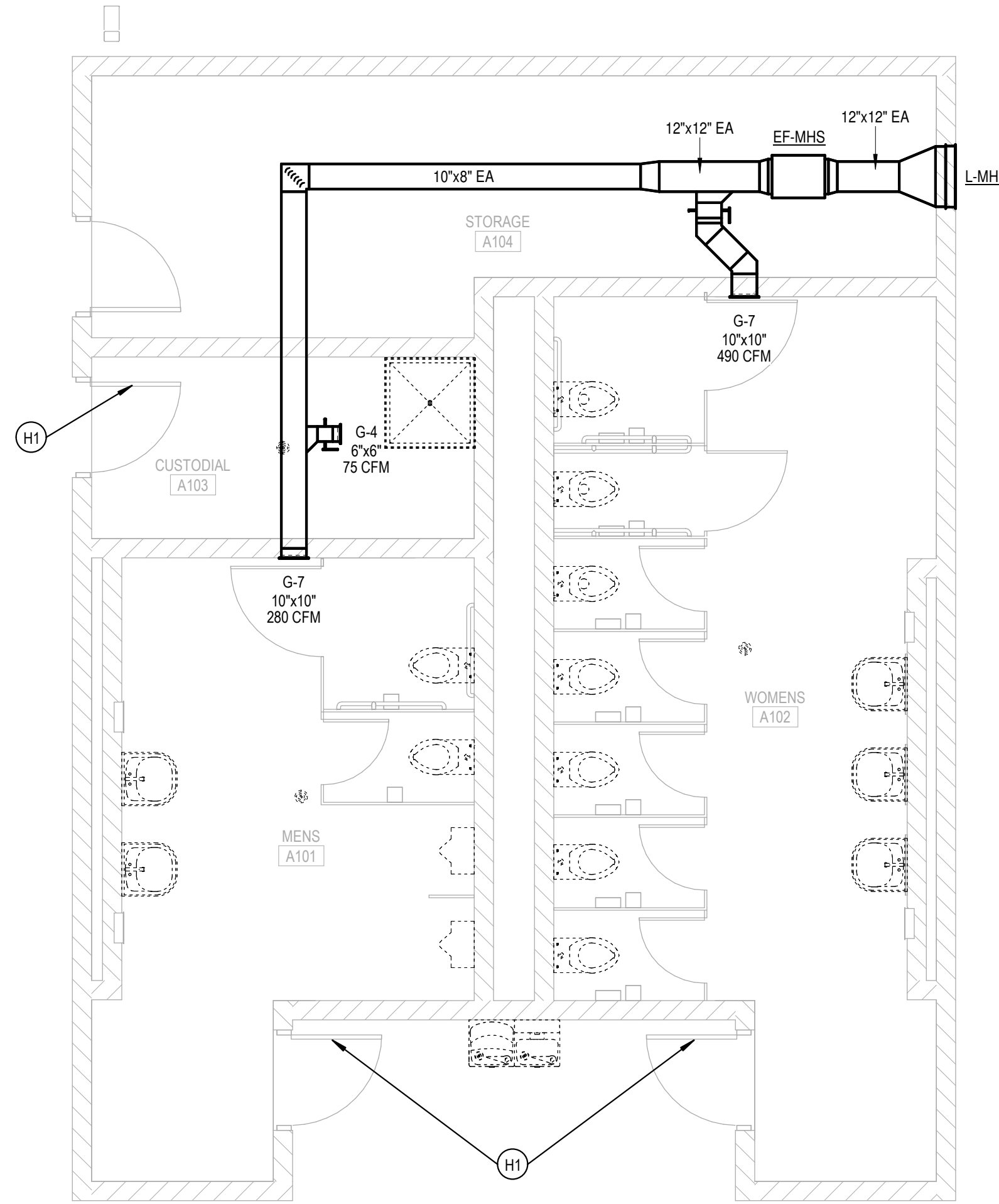
CAROLINA HS RESTROOMS - HVAC PLAN

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



MAULDIN HS RESTROOM - HVAC PLAN

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



SHEET NOTES

H1. DOOR LOUVERS TO BE PROVIDED FOR MAKE UP AIR. REFER TO ARCHITECTURAL PLANS FOR SIZES.

MAULDIN HS STADIUM EXPANSION & CAROLINA HS RESTROOM BUILDING

MAULDIN HIGH SCHOOL - 701 E Butler Pk. Mauldin, SC 29662
CAROLINA HIGH SCHOOL - 2725 Anderson Rd. Greenville, SC 29611

DESIGN
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17-24103-00
HVAC PLANS

M1.1

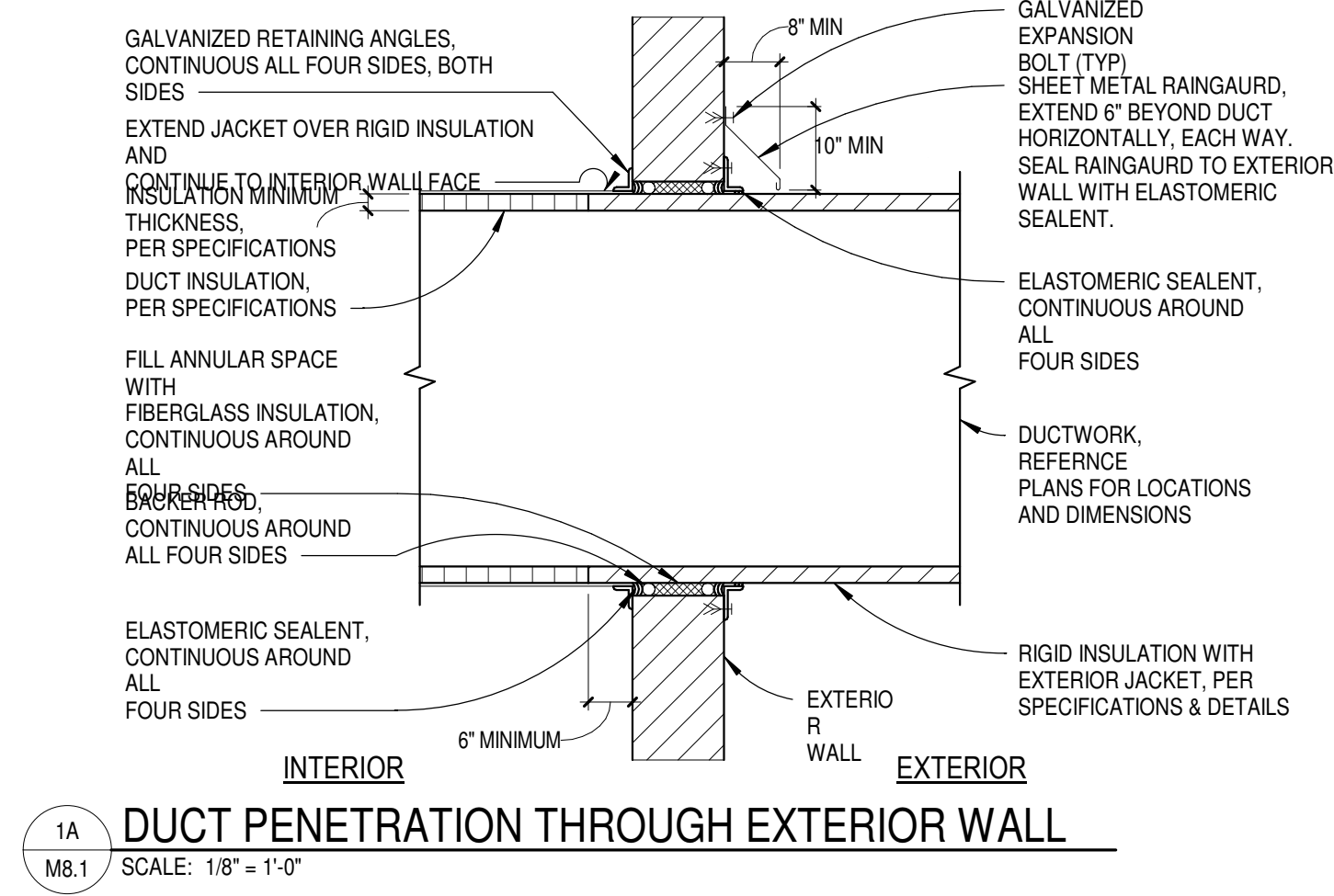


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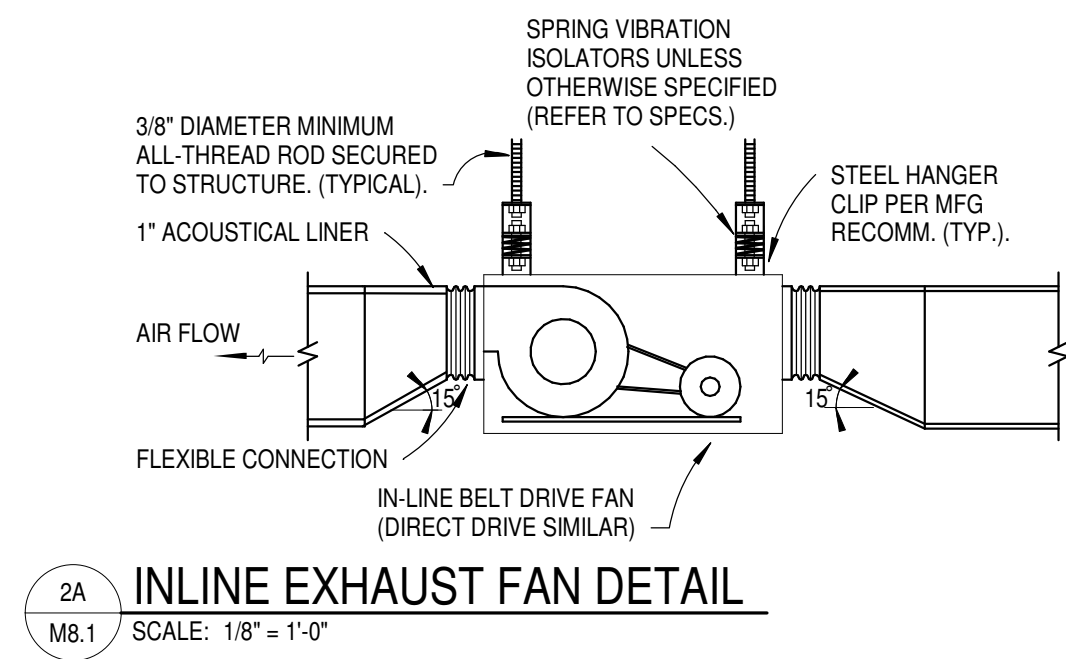


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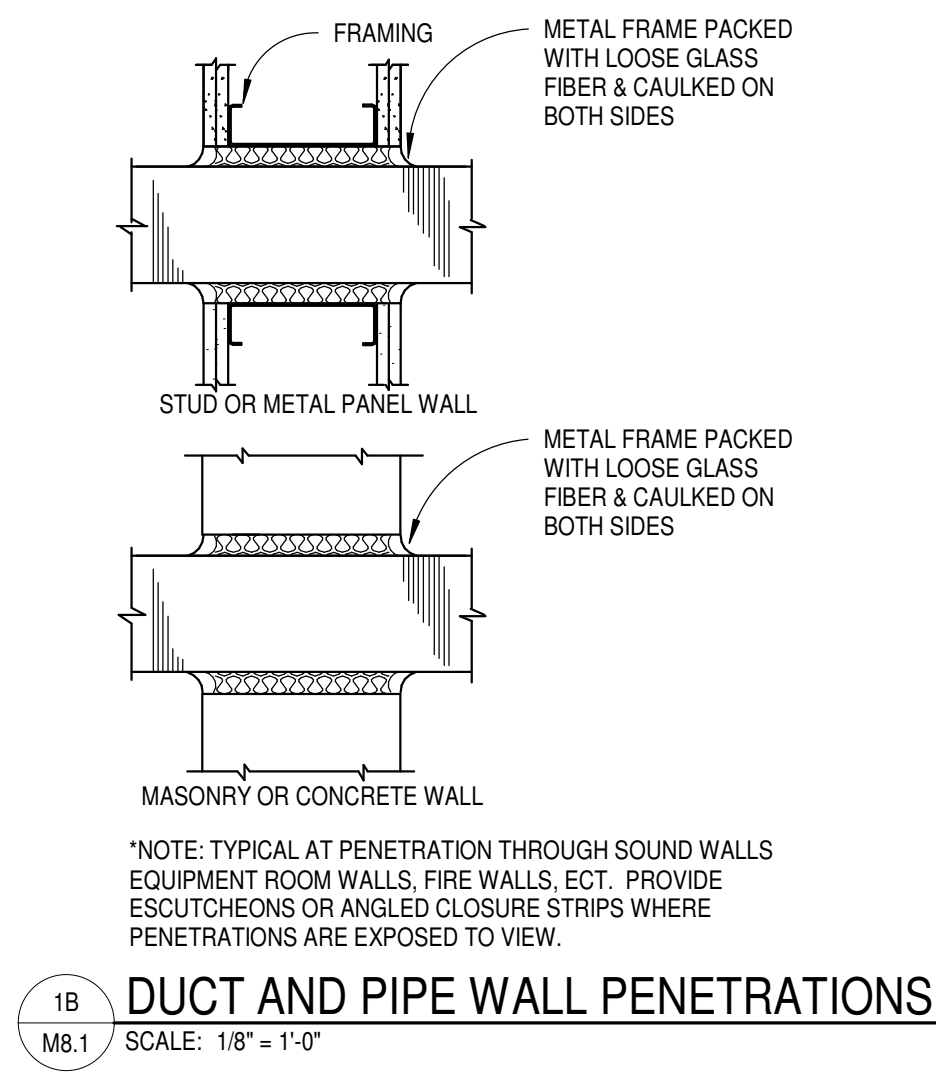
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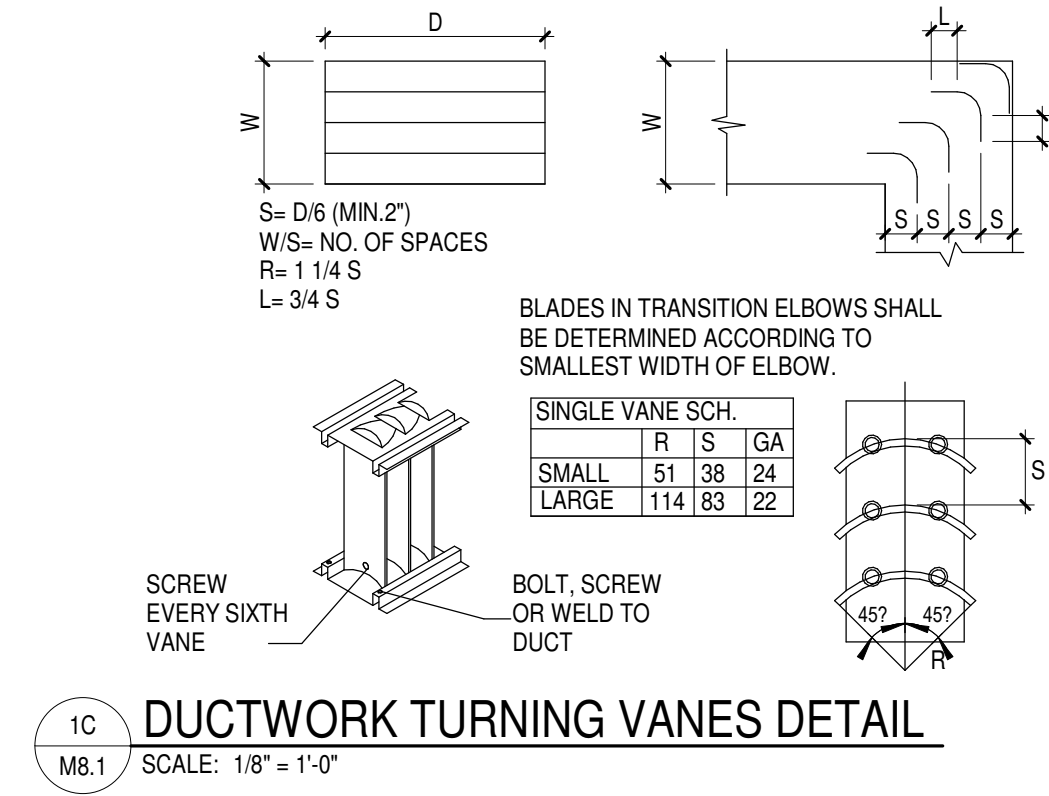
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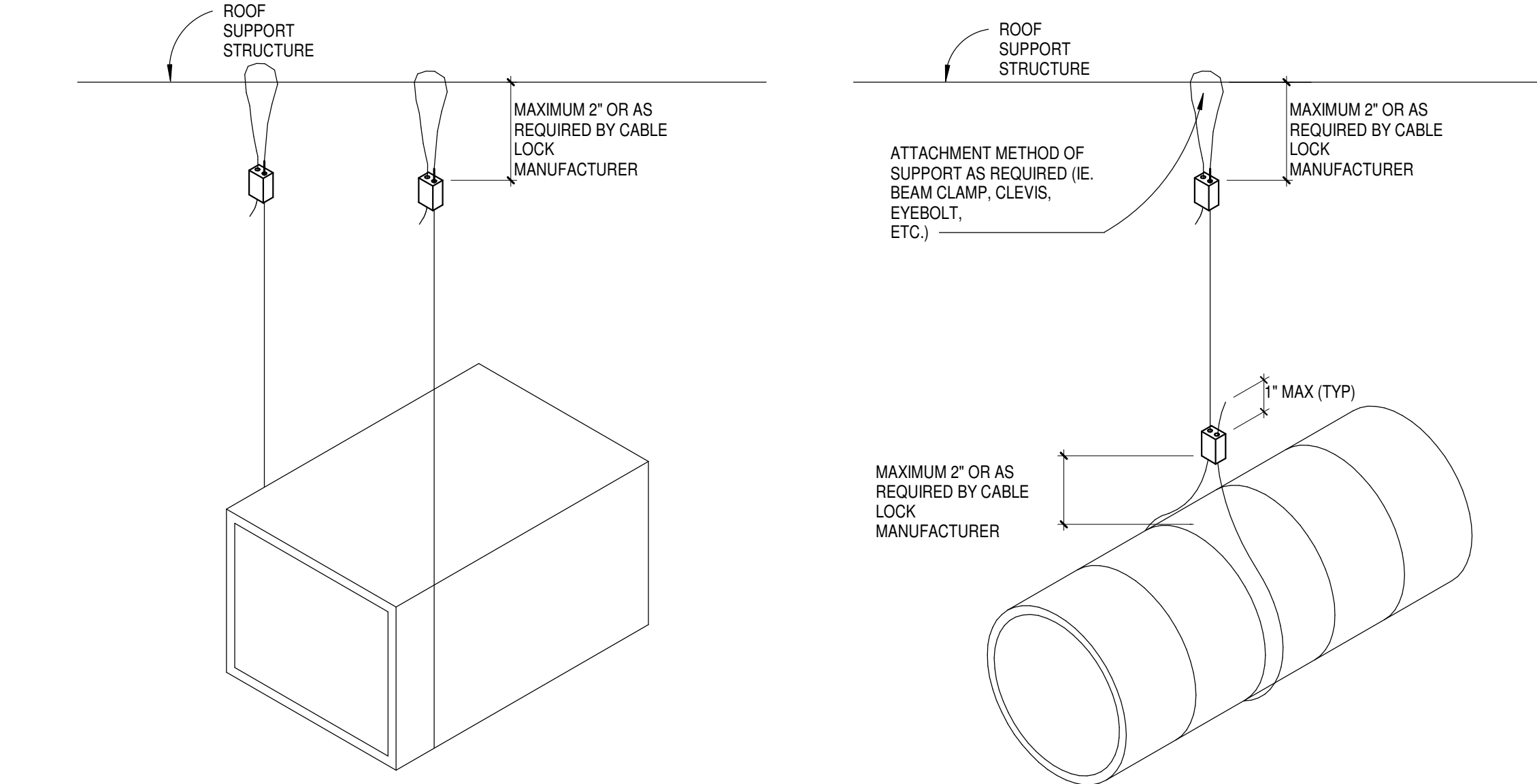
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1B DUCT AND PIPE WALL PENETRATIONS
SCALE: 1/8" = 1'-0"



1C DUCTWORK TURNING VANES DETAIL
SCALE: 1/8" = 1'-0"



1D EXPOSED DUCT HANGER DETAIL
SCALE: 1/8" = 1'-0"

ROUND DUCT HANGING TABLE				
MAXIMUM ROUND PIPE DIAMETER	10FT SPACING SINGLE WIRE	8FT SPACING SINGLE WIRE	5FT SPACING SINGLE WIRE	4FT SPACING SINGLE WIRE
10"	1/8	1/8	1/8	1/8
18"	1/8	1/8	1/8	1/8
24"	1/8	1/8	1/8	1/8
36"	1/8	1/8	1/8	1/8
50"	3/16	3/16	1/8	1/8
60"	3/16	3/16	3/16	1/8
64"	3/16	3/16	3/16	3/16

RECTANGULAR DUCT HANGING TABLE				
MAXIMUM HALF OF DUCT 10FT SPACING PERIMETER	1 PAIR	8FT SPACING 1 PAIR	5FT SPACING 1 PAIR	4FT SPACING 1 PAIR
P/2-30"	1/8	1/8	1/8	1/8
P/2-72"	1/8	1/8	1/8	1/8
P/2-96"	3/16	1/8	1/8	1/8
P/2-120"	3/16	3/16	1/8	1/8
P/2-168"	3/16	3/16	3/16	3/16
P/2-192"	3/16	3/16	3/16	3/16

NOTES:
1. TABLES ARE CALCULATED USING A NORMAL DUCT CONSTRUCTION AND REINFORCEMENT WEIGHT AS OUTLINED IN SMACNA DUCT CONSTRUCTION STANDARDS.
2. FOR WORKING LOAD LIMITS OF LOCKING MECHANISM REFER TO INDIVIDUAL MANUFACTURER'S RECOMMENDATIONS.
3. DO NOT EXCEED WORKING LOAD LIMITS OF LOCKING MECHANISM MANUFACTURER'S LIMITS.
4. DO NOT USE ASSEMBLY FOR OVERHEAD LIFTING.
5. DO NOT LUBRICATE, PAINT OR APPLY ANY COATINGS ON WIRE ROPE OR LOCKING MECHANISM.
6. USE ONLY WIRE ROPE SUPPLIED BY MANUFACTURER OF LOCKING MECHANISM OR WHICH MEETS OR EXCEEDS LOCKING MECHANISM MANUFACTURER'S SPECIFICATIONS.

FAN SCHEDULE														
NOTES: 1. 2. 3. 4. 5.														
ID	AIRFLOW (CFM)	FAN TYPE	FAN RPM	DRIVE	HP	FLA (A)	MCA (A)	MOCP (A)	V	PH	HZ	WEIGHT (LBS)	BASIS OF DESIGN MANUFACTURER	MODEL
EF-CHS	485	INLINE	1440	DIRECT	0.17	2.8	3.5	15	120	1	60	34	GREENHECK	SO-90-VG
EF-MHS	845	INLINE	1204	DIRECT	0.25	3.8	4.8	15	120	1	60	48	GREENHECK	SO-100-VG

LOUVER SCHEDULE									
NOTES: 1. 2. 3. 4. 5.									
ID	MATERIAL	DESIGN AIRFLOW (CFM)	FREE AREA (SF)	FREE AREA VELOCITY (FPM)	PRESS DROP (IN WG)	DIMENSIONS (IN) WIDTH	DIMENSIONS (IN) HEIGHT	BASIS OF DESIGN MANUFACTURER	MODEL
L-CHS	ALUMINUM	485	0.97	500	0.05	18"	18"	RUSKIN	ELF375DX
L-MHS	ALUMINUM	845	1.34	630	0.06	24"	18"	RUSKIN	ELF375DX

GRILLES, REGISTERS AND DIFFUSERS SCHEDULE								
NOTES: 1. SEE PLANS FOR NECK SIZE. 2. 3. 4. 5.								
ID	DESCRIPTION	FRAME TYPE	FACE (W" x H")	MATERIAL	FINISH	BASIS OF DESIGN		NOTES
G-4	LOUVERED GRILLE	SURFACE	SEE PLANS	STEEL	WHITE ENAMEL	TITUS	350RL	
G-7	LOUVERED GRILLE	SURFACE	SEE PLANS	ALUMINUM	WHITE ENAMEL	TITUS	350FL	

1

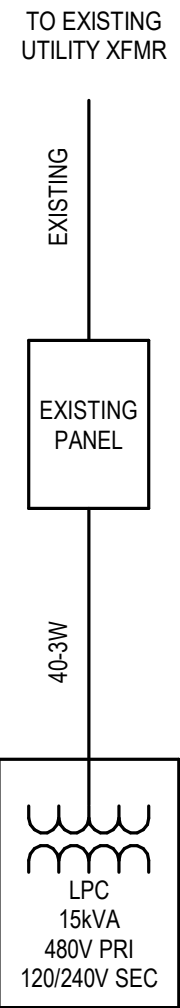
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3

4

5

FEEDER SCHEDULE - COPPER						
MARK (AMPS)	# SETS	Ø & N	GND	CONDUIT SIZE		
				MARK SUFFIX		
				-4W	-3W	-2W
15	1	12	12	3/4"	3/4"	3/4"
20	1	12	12	3/4"	3/4"	3/4"
25	1	10	10	3/4"	3/4"	3/4"
30	1	10	10	3/4"	3/4"	3/4"
35	1	8	10	3/4"	3/4"	3/4"
40	1	8	10	3/4"	3/4"	3/4"
45	1	6	10	1"	3/4"	3/4"
50	1	6	10	1"	3/4"	3/4"
60	1	4	10	1-1/4"	1"	3/4"
70	1	4	8	1-1/4"	1"	3/4"
80	1	3	8	1-1/4"	1-1/4"	1"
90	1	2	8	1-1/4"	1-1/4"	1"
100	1	1	8	1-1/2"	1-1/2"	1-1/4"
110	1	1	6	1-1/2"	1-1/2"	1-1/4"
125	1	1	6	1-1/2"	1-1/2"	1-1/4"
150	1	1/0	6	2"	1-1/2"	1-1/4"
175	1	2/0	6	2"	1-1/2"	1-1/4"
200	1	3/0	6	2"	2"	1-1/2"
225	1	4/0	4	2-1/2"	2"	1-1/2"
250	1	250	4	2-1/2"	2"	1-1/2"
300	1	350	4	3"	2-1/2"	2"
350	1	500	3	3-1/2"	3"	2-1/2"
400	1	600	3	3-1/2"	3"	2-1/2"
400	2	3/0	3	2"	2"	1-1/2"
450	2	4/0	2	2-1/2"	2"	1-1/2"
500	2	250	2	2-1/2"	2-1/2"	2"
600	2	350	1	3"	2-1/2"	2"
700	2	500	1/0	3-1/2"	3"	2-1/2"
800	2	600	1/0	3-1/2"	3"	2-1/2"
1000	3	400	2/0	3"	3"	2-1/2"
1200	3	600	3/0	3-1/2"	3-1/2"	3"
1600	4	600	4/0	3-1/2"	3-1/2"	3"
2000	5	600	250	4"	3-1/2"	3"
2500	6	600	350	4"	3-1/2"	3"
3000	8	500	400	3-1/2"	3"	2-1/2"
4000	10	600	500	4"	3-1/2"	3"
ABBREVIATIONS:						
Ø	PHASE					
N	NEUTRAL					
GND	EQUIPMENT GROUNDING CONDUCTOR					
-4W	FOUR WIRE + GROUND (3Ø,N,GND)					
-3W	THREE WIRE + GROUND (3Ø,GND or 2Ø,N,GND)					
-2W	TWO WIRE + GROUND					
NOTES:						
1.	CONDUCTOR AMPACITIES ARE BASED ON NEC TABLE 310.15(B)(16).					
2.	CONDUIT SIZES ARE BASED ON A MAXIMUM FILL RATIO OF 40%.					
3.	SCHEDULE SHALL BE USED FOR FEEDERS AND BRANCH CIRCUITS WHERE APPLICABLE.					
4.	ALL FEEDERS AND BRANCH CIRCUITS SHALL INCLUDE AN EQUIPMENT GROUNDING CONDUCTOR.					
5.	SCHEDULE IS VALID FOR TYPE THHN, THWN-2, AND XHHW-2 CONDUCTORS. SEE SPECIFICATIONS FOR CONDUCTOR TYPES REQUIRED.					
6.	SCHEDULE IS VALID FOR TYPE EMT, IMC, FMC, LFMC, HDPE, AND RMC-40 RACEWAYS. SEE SPECIFICATIONS FOR RACEWAY APPLICATIONS.					
7.	OPTIONAL CONFIGURATIONS (1 OR 2 SETS) ARE GIVEN FOR SOME SIZES.					
8.	NOT ALL SIZES USED.					

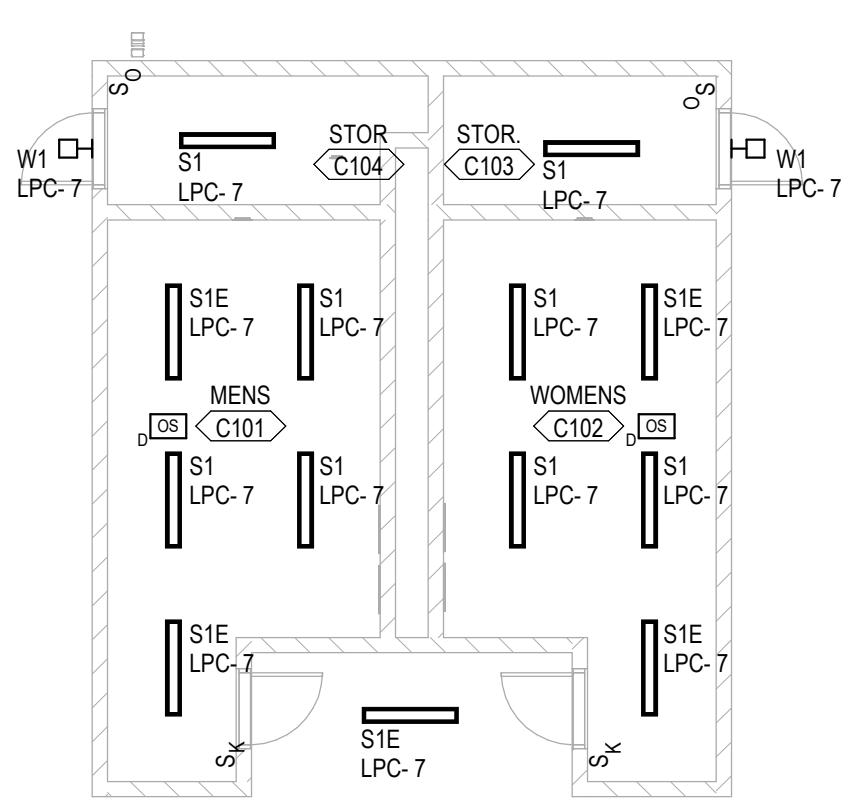
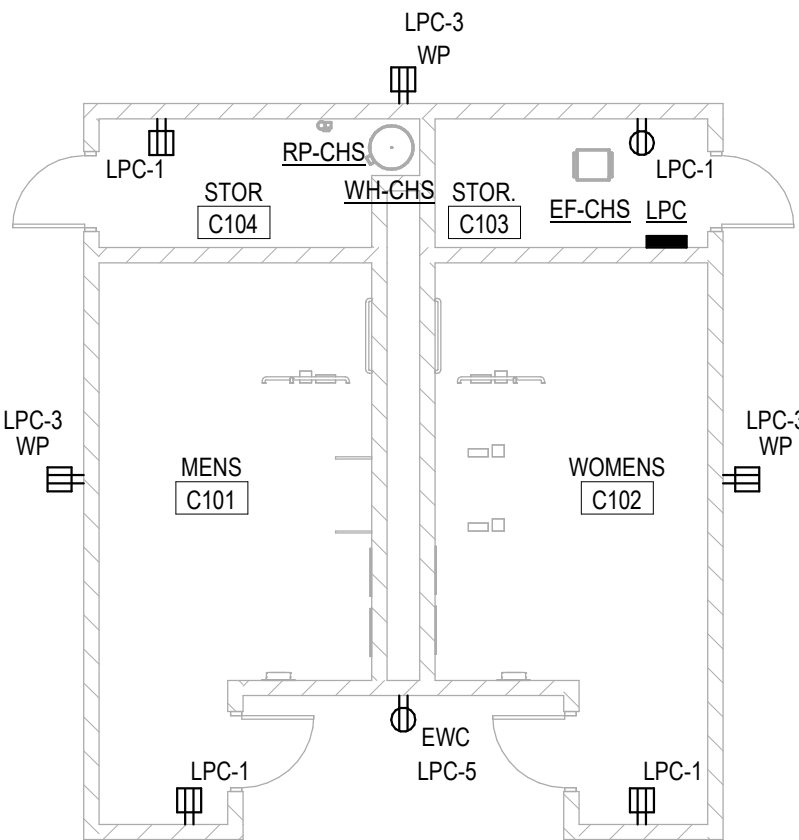


3 One-Line Diagram Carolina HS
E2.1 NO SCALE

PANEL: LPM																			
LOCATION: CUSTODIAL A103							VOLTS: 120/240				MOUNTING: SURFACE								
BUS RATING: 100 A							PHASES: 1				FED FROM:								
MAIN BREAKER: 602							WIRES: 3				INTEGRAL SPD: NO								
							SCOR: 22K				LUG ACCESSORIES: NO								
CKT	CIRCUIT DESCRIPTION					BKR TRIP	P	BKR TYPE	LOAD TYPE	PHASE A (VA)	PHASE B (VA)	LOAD TYPE	BKR TYPE	P	BKR TRIP	CIRCUIT DESCRIPTION	CKT		
1	R - INTERIOR					20	1		R	720	2,880					WH-MHS	2		
3	R - EXTERIOR					20	1		R		540	2,880	M				4		
5	R - EWC					20	1	G	R	180	184				1	20	6		
7	LIGHTING					20	1		L		456	456	M		1	20	8		
9	SPARE					20	1		Spare	0	0		Spare		1	20	10		
11	SPARE					20	1		Spare		0	0	Spare		1	20	12		
TOTAL LOAD:								3964 VA		4332 VA									
TOTAL AMPS								33.0 A		36.1 A									
LOAD TYPE	LOAD DESCRIPTION	CONNECTED LOAD (VA)	DEMAND D...	ESTIMATED DEMAND (VA)	DEMAND FACTOR NOTES					BKR TYPE	PANEL TOTALS								
L	LIGHTING	456 VA	125.00%	570 VA	CONTINUOUS LOAD @ 125%					G = GFCI (5mA)									
R	RECEPTACLES	1440 VA	100.00%	1440 VA	FIRST 10kVA @ 100%, REMAINDER @ 50%					GP = GFP (30mA)	CONNECTED LOAD: 8 kVA								
K	KITCHEN	0 VA	0.00%	0 VA	NON-DWELLING KITCHEN LOADS, NEC ART. 220					ST = SHUNT TRIP	ESTIMATED DEMAND: 10 kVA								
M	MOTOR	6216 VA	123.17%	7656 VA	LARGEST MOTOR, NEC ART. 430					LO = LOCK OUT	CONNECTED CURRENT: 34.6 A								
C	COOLING	0 VA	0.00%	0 VA							EMD CURRENT: 41.0 A								
H	HEATING	0 VA	0.00%	0 VA															
O	OTHER	0 VA	0.00%	0 VA															
Spare	SPARE	0 VA	0.00%	0 VA															
NOTES:																			

MECHANICAL EQUIPMENT SCHEDULE															
DISCONNECTING ABBREVIATIONS: MRTS - MOTOR RATED TOGGLE SWITCH															
STARTER ABBREVIATIONS: SWL - SWITCH WITH LIGHT															
ID	LOCATION		LOAD					VOLTAGE (V)	PHASE	DISCONNECT	STARTER	PANEL	CIRCUIT NO	CONDUIT & WIRE SIZE	NOTES
	NO.	NAME	HP	FLA (A)	MCA (A)	MOCF (A)	TOTAL LOAD (VA)								
FAN															
EF-CHS	C103	STOR.	0.17	2.8	3.5	15	336	120	1	MRTS		LPC	8	15-2W	
PUMP															
RP-CHS	C104	STOR.	0.04	1.6	2	2.8	184	115	1	MRTS		LPC	6	15-2W	
WATER HEATER															
WH-CHS	C104	STOR.	0	24	30	35	5,760	240	1	602, NF		LPC	2.4	35-2W	

LUMINAIRE SCHEDULE																				
LUMINAIRE CRITERIA			PRODUCT INFORMATION				SOURCE				ELECTRICAL INFORMATION					ADDITIONAL INFORMATION				
ID	DESCRIPTION	FINISH	MANUFACTURER	MODEL OR SERIES	LAMP	LUMENS	FT	COLOR TEMP	CRI	LIFE RATING	DIMMING TYPE	POWER SUPPLY OR	VOLTAGE	WATTAGE	FT	MOUNTING	MOUNTING HEIGHT	ACCESSORIES	SCHEDULE NOTES	
S1 S1E	4" STRIP LIGHT, VANDAL RESISTANT, WET LOCATION LISTED, SEAMLESS DIFFUSER FULLY UNIFORM (NO LED PRELUMINATION), EXTRUDED ALUMINUM RAILS/ROD/BACK CHANNELS	WHITE, BAKED-ON POWDER COAT	LITHONIA	CSV1	LED	3000		3500K	80	50K HOURS @ L70	0-10V DOWN TO 10%	INTEGRAL DRIVER	120	30		SUSPENDED	9'-0"	S1E - PROVIDE INTEGRAL EMERGENCY BATTERY PACK		
W1	RECTANGULAR OVER DOOR, WALL MOUNTED EXTERIOR FIXTURE WITH DOWNLIGHT DISTRIBUTION, BLACK POWDER COAT FINISH, SUITABLE FOR WET LOCATION UL LISTED, IP-65 RATED	BLACK, BAKED-ON POWDER COAT	LITHONIA	WDGE1	LED	2000		3500K	80	50K HOURS @ L70	0-10V DOWN TO 10%	INTEGRAL DRIVER	120	15		WALL, SURFACE	9'-0"	INTEGRAL PHOTOCELL		
GENERAL NOTES: A. PROVIDE UNITS MEETING FIXTURE SCHEDULE DESCRIPTION AND SPECIFICATION REQUIREMENTS. THE FIXTURE CATALOG NUMBER IS NOT COMPLETE. USE ONLY AS A GUIDELINE. B. LUMEN VALUES IN KEY PARAMETERS COLUMN ARE MINIMUM DELIVERED LUMENS, INCLUDING OPTIONS AND ACCESSORIES. C. DELIVERED LUMENS SHALL NOT EXCEED 25% OF VALUES LISTED OR 25% OF VALUE IF RANGE IS LISTED. D. ALL FIXTURES SHALL BE PAINTED AFTER FABRICATION.																				



CAROLINA HS RESTROOMS - ELECTRICAL
SCALE: 1/8" = 1'-0"

LEVEL 01 - AREA C - LIGHTING PLAN
SCALE: 1/8" = 1'-0"

MAULDIN HS STADIUM EXPANSION & CAROLINA HS RESTROOM BUILDING

MAULDIN HIGH SCHOOL - 701 E BUTLER RD, MAULDIN, SC 29662
CAROLINA HIGH SCHOOL - 2725 ANDERSON RD, GREENVILLE, SC 29611

DESIGN DEVELOPMENT DOCUMENTS 08.30.2024

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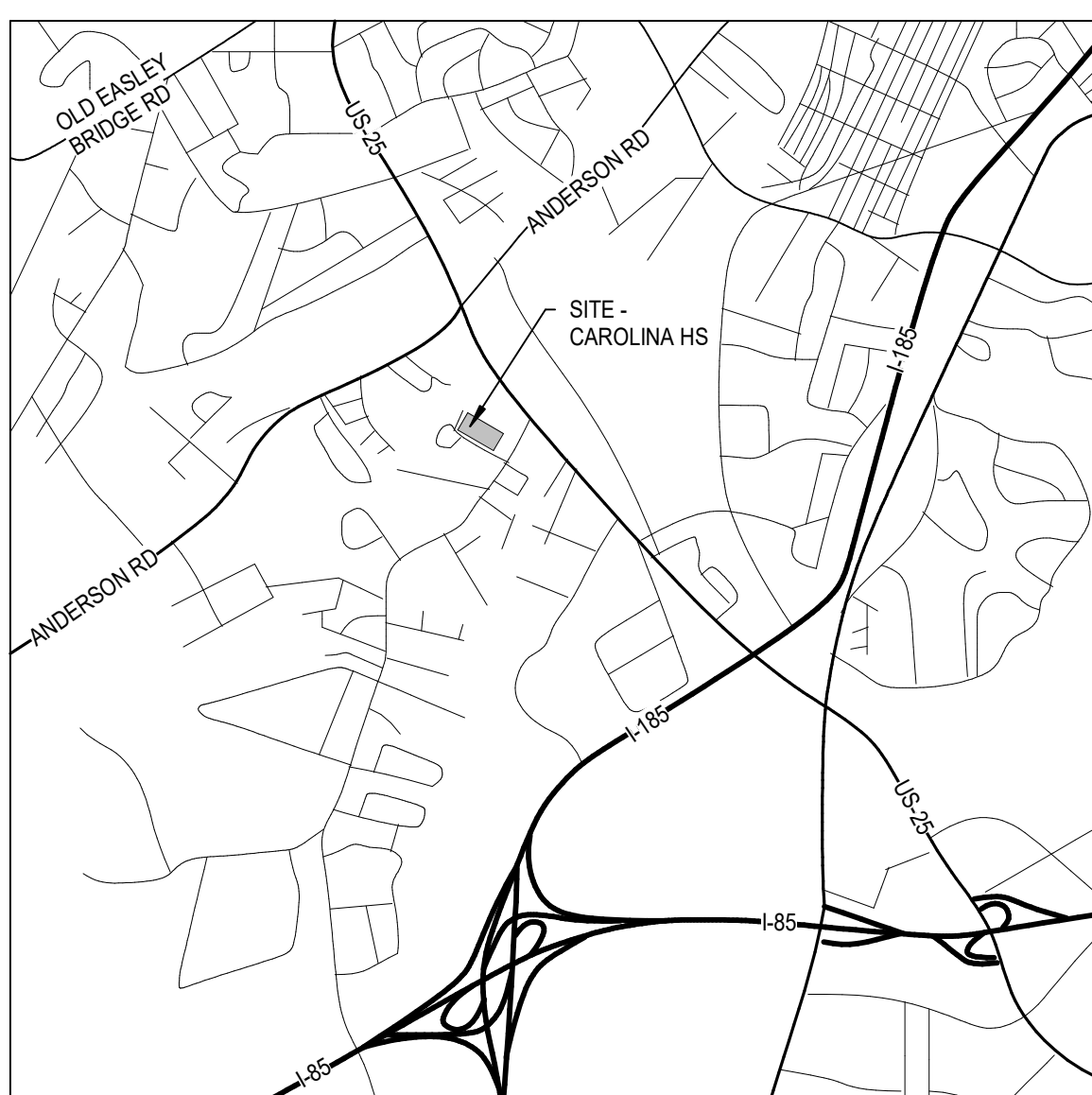
Map - Mauldin Location Map
SCALE: 1/2" = 1'-0"



Map - Mauldin Vicinity Map
SCALE: 1/2" = 1'-0"



Map - Carolina Location Map
SCALE: 1/2" = 1'-0"



Map - Carolina Vicinity Map
SCALE: 1/2" = 1'-0"

GENERAL CONSTRUCTION CONDITIONS:

1. THE TERM OF OWNER AS USED IN THESE SPECIFICATIONS AND NOTES SHALL INCLUDE THE OWNER OF THE PROPERTY, THE COMPANY OR PARTY THAT HIRED THE CONTRACTOR, THE COMPANY OR PARTY THAT SIGNED THE CONTRACT FOR THIS WORK AND THE AGENTS OF EACH. THE OWNER'S REPRESENTATIVE SHALL BE THE INDIVIDUAL OR PARTY ASSIGNED BY THE OWNER TO BE THE OWNER'S REPRESENTATIVE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY PERMITS, CONNECTION PERMITS, FEES, INSPECTIONS AND RECORD KEEPING REQUIRED BY ALL MUNICIPAL, UTILITY, HEALTH, ENVIRONMENTAL, STATE OR FEDERAL AGENCIES THAT MAY HAVE JURISDICTION. FURTHERMORE, THE CONTRACTOR SHALL BE RESPONSIBLE TO MEET OR EXCEED ALL REQUIREMENTS OF THE AGENCIES OR AUTHORITIES HAVING JURISDICTION OVER HIS WORK. ALL CONFLICTS IN REQUIREMENTS OF DIFFERENT AGENCIES, AUTHORITIES AND/OR THE DESIGN SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE BEFORE PROCEEDING.
3. THE CONTRACTOR SHALL BE RESPONSIBLE TO LOCATE AND MAINTAIN THE PROPERTY AND PROJECT LIMITS THROUGHOUT THE PROJECT. ALL CONFLICTS BETWEEN THE DESIGN AND THE PROJECT/PROPERTY LIMITS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE BEFORE PROCEEDING. UNLESS SPECIFIED IN THE CONTRACT DOCUMENTS OR SHOWN ON THE DRAWINGS THE OWNER HAS NOT SECURED ANY RIGHT OF WAYS, EASEMENTS OR AGREEMENTS WITH OTHER PROPERTY OWNERS OR PROPERTY USERS. THEREFORE, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SECURE AND MAINTAIN ANY TEMPORARY RIGHT OF WAYS, EASEMENTS, PERMITS OR AGREEMENTS HE MAY NEED TO PERFORM HIS WORK. ALL SUCH AGREEMENTS SHALL HOLD THE OWNER, ENGINEER AND HIS AGENTS HARMLESS AND THE RESPONSIBILITY OF THE CONTRACTOR TO BEAR ALL COSTS. THE CONTRACTOR SHALL COPY THE OWNER OR RELEASES OF ALL AGREEMENTS PRIOR TO FINAL PAYMENT BY THE OWNER TO THE CONTRACTOR.
4. UNLESS OTHERWISE NOTED ON THE DRAWINGS OR IN THE CONTRACT DOCUMENTS THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION SURVEY, LAYOUT AND RECORD DRAWINGS FOR THIS CONTRACT. ANY CONFLICTS IN SURVEY LAYOUT AND THE DESIGN OR AGENCIES REQUIREMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE PRIOR TO PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL PROTECT AND SAFEGUARD ALL EXISTING SURVEY MONUMENTS, CONTROL AND TIE-DOWNS. THE CONTRACTOR SHALL PAY ALL COSTS TO REPAIR OR REPLACED DAMAGED SURVEY MONUMENTS, CONTROL AND TIE-DOWNS.
5. NO CHANGES TO THE DESIGN OR MATERIALS SPECIFIED MAY BE MADE WITHOUT WRITTEN AUTHORIZATION BY THE ENGINEER OR IN THE CASE OF UTILITIES OR ROAD WORK TO BE DEDICATED, THE AUTHORITY RECEIVING DECISION. AT THE END OF THE CONTRACT, THE CONTRACTOR SHALL PROVIDE TO THE OWNER A RECORD SET OF DRAWING REFLECTING ALL CHANGES MADE BY THE CONTRACTOR.
6. EROSION CONTROL IS NECESSARY WHEN EVER SEDIMENT, DUST, EROSION, OR CONTAMINATED RUN-OFF MAY OCCUR. THE CONTRACTOR SHALL BE RESPONSIBLE TO PLACE AND MAINTAIN WHAT EVER EROSION CONTROL OR RUN-OFF PROTECTION IS REQUIRED TO PROTECT HIS WORK, THE WORK OF OTHERS, THE PROJECT, ADJACENT PROPERTIES AND THE HEALTH AND WELL BEING OF THE WORKER, PUBLIC AND SURROUNDING NATURAL RESOURCES. THEY SHALL BE FAMILIAR WITH ALL FEDERAL, STATE AND LOCAL REQUIREMENTS REGARDING EROSION AND RUN-OFF CONTROL.
7. THE CONTRACTOR SHALL BE FAMILIAR WITH THE PROJECT SITE AND ALL ADJACENT PEDESTRIAN, TRAFFIC AND BUSINESS USES. THE CONTRACTOR SHALL TAKE WHAT EVER PRECAUTIONS AND STEPS NECESSARY TO MAINTAIN SAFETY AND OPERATION OF THESE USES IN ACCORDANCE WITH THE STATE, COUNTY AND LOCAL REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COSTS AND DAMAGES CAUSED FROM HIS FAILURE TO TAKE PROPER AND ADEQUATE PRECAUTIONS. THE CONTRACTOR SHALL BE FAMILIAR WITH ALL FEDERAL, STATE AND LOCAL REQUIREMENTS REGARDING THESE USES.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COSTS AND DELAYS ASSOCIATED WITH WEATHER, GROUNDWATER, AND OTHER OCCURRENCES THAT COULD BE EXPECTED OR ARE COMMON WITH THIS TYPE WORK. THE CONTRACTOR SHALL REVIEW ALL PERTINENT DOCUMENTS INCLUDING SOILS REPORTS, SOILS BORINGS AND OTHER SOIL OR SITE DATA.
9. THE CONTRACTOR SHALL BE RESPONSIBLE TO SAVE AND PROTECT HIS WORK THROUGHOUT THE CONTRACT. ANY DAMAGES REQUIRING REPAIRS OR REPLACEMENT SHALL BE CORRECTED BY THE CONTRACTOR AT HIS EXPENSE.
10. WHEN WORK IS DONE WITHIN A ROAD, UTILITY OR PRIVATE EASEMENT, RIGHT OF WAY OR OTHER PROPERTY AGREEMENT THE CONTRACTOR SHALL DO ALL WORK WITHIN THAT AREA PER THE AUTHORITY HAVING JURISDICTION.
11. ALL UTILITIES ARE SHOWN PER SURFACE SURVEYS AND/OR RECORD MAPS AND MAY VARY FROM ACTUAL IN FIELD LOCATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UTILITY STAKE OUTS AND LOCATING UTILITIES PRIOR TO COMING TO WORK. ANY DAMAGE TO UTILITIES DUE TO IMPROPER STAKE OUT, LACK OF STAKE OUT OR THE FAILURE TO VERIFY DIFFERENCES BETWEEN DRAWINGS AND ACTUAL FIELD CONDITIONS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR, REPLACE OR PAY DAMAGES AT NO EXPENSE TO THE CONTRACT.

EROSION CONTROL:

1. PRIOR TO CONSTRUCTION EQUIPMENT ENTERING OR EXITING THE SITE, A CONSTRUCTION ENTRANCE SHALL BE BUILT UNLESS EXISTING CONDITIONS PREVENT ANY TRACKING OF DIRT, MUD, OR DEBRIS OFF THE SITE. THE CONTRACTOR WILL BE RESPONSIBLE TO KEEP ALL ROADS, PARKING LOTS, SIDEWALKS AND ADJACENT PROPERTIES FREE OF DIRT, MUD OR OTHER DEBRIS. THIS WILL INCLUDE BUILDING THE CONSTRUCTION ENTRANCE, SWEEPING, SCRAPING AND WASHING THE PAVEMENT SURFACES WHEN EVER NEEDED. THE CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AS SHOWN ON THE PLANS. IF A DETAIL IS NOT PROVIDED, CONSTRUCT THE ENTRANCE WITH CLEAN 2 TO 3 INCH STONE, 6 INCHES THICK, OVER STABILIZING FABRIC TO THE DIMENSIONS OF 12 FEET WIDE AND 50 LONG. THE ENTRANCE SHOULD BE LOCATED SO THAT ALL VEHICLES LEAVING THE SITE WILL UTILIZE IT.
2. ALL EROSION CONTROL DEVICES SHALL BE PLACED AS SHOWN ON THE DRAWINGS AND IN ACCORDANCE WITH FEDERAL, STATE, LOCAL AND MANUFACTURER RECOMMENDATIONS. THE CONTRACTOR SHALL PLACE AND MAINTAIN ALL EROSION CONTROL DEVICES AS NEEDED THROUGHOUT THE PROJECT.
3. SILT FENCE SHALL HAVE HARD WOOD STAKES 2X2 INCH AND 4 FEET LONG WOVEN INTO THE FABRIC. THE BASE OF THE SILT FENCE SHALL BE EXCAVATED SO AS TO PROVIDE AN AREA TO BURY THE BOTTOM OF THE FABRIC AT LEAST 8 INCHES INTO THE GROUND. THE STAKES SHALL BE DRIVEN TO A DEPTH THAT WILL PLACE THE BOTTOM FABRIC AT THE BOTTOM OF THE TRENCH. THEN BACKFILL THE BOTTOM FABRIC ON THE UPSTREAM SIDE WITH THE MATERIAL THAT WAS EXCAVATED.
4. SILT FENCE SHALL BE PLACED WHERE EVER SURFACE DRAINAGE CAN LEAVE THE SITE.
5. STONE FILTERS SHALL BE PLACED IN ALL DRAINAGE WAYS BUT NOT IN STREAMS, CREEKS OR RIVERS. STONE FILTERS SHALL CONSIST OF A UNIFORM MIX OF 1/4 TO 1/2 INCH CLEAN STONE PAAPPED IN FILTER FABRIC AND COVERED WITH 4 INCHES OF CLEAN 2 TO 3 INCH STONE.
6. SEDIMENT BASINS AND TRAPS SHALL BE PLACED AND MAINTAINED AS NEEDED. THEY SHALL BE SIZED TO PROVIDE ADEQUATE STORAGE TO ALLOW SEDIMENT TO PRECIPITATE OUT PRIOR DISCHARGING DOWN STREAM.
7. TEMPORARY SEEDING SHALL CONSIST OF LIME @ 1/4 TON PER ACRE, FERTILIZER 5-10-10 @ 600 POUNDS PER ACRE, RYEGRASS (ANNUAL OR PERENNIAL) @ 40 POUNDS PER ACRE AND STRAW MULCH @ 2 TON PER ACRE. LITE MESH SHALL BE PLACED OVER MULCH AND STAKED WHENEVER WINDS OR SLOPE WILL CAUSE THE MULCH AND SEED TO BECOME DEPLETED OR ERODED. AREAS SHALL BE TEMPORARY SEEDED WHEN THEY ARE SUBJECT TO EROSION AND WILL LIE DORMANT FOR A MONTH OR MORE.

CLEARING AND GRUBBING:

1. THE CONTRACTOR SHALL REVIEW PLANS AND IDENTIFY AND SAFELY MARK ALL PLANTS AND TREES TO BE SAVED. THE CONTRACTOR SHALL PROTECT ALL PLANTS AND TREES TO BE SAVED THROUGHOUT THE CONTRACT. THIS SHALL INCLUDE PROHIBITING ANY WORK WITHIN THE DRIP LINE OF THE TREE EXCEPT UNDER THE SUPERVISION OF A LICENSED LANDSCAPE ARCHITECT.
2. ALL AREAS TO BE CLEARED AND GRUBBED SHALL BE SURVEYED IN THE FIELD TO ESTABLISH THE APPROPRIATE LIMITS OF WORK.
3. THE CONTRACTOR SHALL TAKE WHAT EVER MEASURES NECESSARY TO LOCATE AND PROTECT EXISTING UTILITIES, STRUCTURES, AND OTHER FACILITIES TO REMAIN.
4. ALL TREES, SHRUBS, STUMPS, ROOTS AND OTHER DEBRIS SHALL BE REMOVED FROM SITE AND DISPOSED OF IN A LEGAL MANNER.
5. NO BURNING WILL BE ALLOWED ON SITE.

DEMOLITION:

1. THE CONTRACTOR SHALL INSPECT ALL STRUCTURES, FACILITIES AND AREAS SLATED FOR DEMOLITION TO GAIN A FULL UNDERSTANDING OF THE WORK REQUIRED. THE CONTRACTOR SHALL TAKE WHAT EVER MEASURES NECESSARY TO PROTECT THE SAFETY OF THE PUBLIC, HIS EMPLOYEES AND AGENTS DURING THE INSPECTIONS AND SUBSEQUENT WORK. THE OWNER, CLIENT AND ENGINEER ARE NOT RESPONSIBLE FOR THE CONDITION OF THE BUILDINGS, FACILITIES OR OTHER AREAS SLATED FOR DEMOLITION.
2. ALL MATERIALS NOT SLATED FOR REUSE MUST BE DISPOSED OF OFF SITE IN A LEGAL MANNER. THE CONTRACTOR MAY SALVAGE ALL MATERIALS NOT DESIGNATED BY THE OWNER TO BE SAVED. THE CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE AND STORE SAFELY ALL MATERIALS SLATED TO BE SAVED OR REUSED. THE CONTRACTOR SHALL DOCUMENT EXISTING CONDITIONS USING PHOTOGRAPHS PRIOR TO START OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS TO REPAIR OR REPLACE MATERIALS DAMAGED DUE TO HIS WORK OR FAILURE TO PROTECT THROUGHOUT THE DURATION OF HIS CONTRACT.
3. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH ALL APPROPRIATE UTILITY OWNERS, OPERATORS AND USERS PRIOR TO DISCONNECTION AND DEMOLITION. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE AUTHORITY HAVING JURISDICTION. ALL PLUGS, STOPS AND CAPS SHALL BE PER AGENCIES REQUIREMENTS AND IF NONE EXIST THEN A 3000 PSI CONCRETE PLUG WITH A THICKNESS EQUAL TO THE DIAMETER OF THE PIPE SHALL BE USED.
4. THE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY AND STOP ALL WORK IN AREAS WHERE HAZARDOUS MATERIALS ARE DISCOVERED. WHEN REQUIRED, THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE ENVIRONMENTAL AND HEALTH AGENCIES.
5. NO BURNING, EXPLOSIVES OR OTHER POTENTIALLY DANGEROUS METHODS OF DEMOTON WILL BE ALLOWED UNLESS WRITTEN PERMISSION IS GRANTED BY THE OWNER AND ALL APPROPRIATE PERMITS ARE GRANTED.
6. THE CONTRACTOR WILL PROVIDE WHAT EVER SAFETY EQUIPMENT AND DEVICES ARE NECESSARY TO PROTECT THE ADJACENT PROPERTIES, STRUCTURES AND OTHER AREAS SLATED TO REMAIN. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL COSTS TO REPAIR OR REPLACE ANY DAMAGE CAUSED BY HIS WORK. THIS WILL ALSO INCLUDE EROSION CONTROL, DUST CONTROL AND SETTLEMENT.
7. ALL AREAS SHALL BE BROUGHT BACK TO THEIR ORIGINAL GRADE OR THAT OF THE SURROUNDING AREA, WHICH EVER IS CLOSER TO THE FINAL GRADES OF THE PROJECT FOR THAT AREA. ALL AREAS REQUIRING FILL SHALL BE COMPACTED TO THE REQUIREMENTS OF THE AREA BUT IN NO CASE LESS THAN 90% OF MODIFIED PROCTOR (ASTM D 1557).

SITE CONCRETE:

1. THE DIMENSIONS SHALL BE THOSE SHOWN ON THE DRAWINGS. THE CONCRETE MIX SHALL BE 4000 PSI AT 28 DAYS MADE WITH TYPE I OR TYPE II CEMENT, PER ASTM C 150, AND AGGREGATES MEETING STATE DEPARTMENT OF TRANSPORTATION REQUIREMENTS. SLUMP FOR SLIP FORMING SHALL BE 1 INCH +/- 1/4 INCH AND FOR FORMED CONCRETE THE SLUMP SHALL BE 3 INCH +/- 1 INCH. AIR ENTRAINMENT MIXTURE SHALL MEET THE REQUIREMENTS OF ASTM C 260 4% +/- 1 1/4% FOR SLIP FORM WORK AND 6% +/- 1 1/4% FOR FORMED AND PLACED CONCRETE. WATER REDUCING AGENT SHALL CONFORM TO ASTM C 494, TYPE A. CURING COMPOUNDS SHALL CONFORM TO ASTM C309, TYPE I, CLASS A MOISTURE LOSS OF NOT MORE THAN .055 GR/50 CM WHEN APPLIED AT 200 SQ FT PER GALLON.
2. SIDEWALKS, GUTTERS AND CURBS SHALL BE PLACED ON COMPACTED SUBBASE, CONSISTENT WITH THE PAVEMENT SUBBASE, AS SHOWN ON THE DRAWINGS. WHEN SUBBASE DETAILS ARE MISSING AND NO AGENCY HAS JURISDICTION USE THE FOLLOWING: SIDEWALKS AND GUTTERS SHALL BE PLACED ON A MINIMUM OF 6 INCHES OF COMPACTED SUBBASE AND CURBS SHALL BE PLACED ON A MINIMUM OF 4 INCHES OF COMPACTED SUBBASE.
3. ALL FORMING, PLACEMENT, MATERIALS AND CURING SHALL CONFORM TO THE LATEST ADDITION OF ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" AND ALL SIMILAR STATE DEPARTMENT OF TRANSPORTATION REQUIREMENTS.
4. REINFORCING SHALL BE IN ACCORDANCE WITH THAT SPECIFIED ON THE DRAWINGS AND THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI) MANUAL OF STANDARD PRACTICES. REINFORCING STEEL SHALL BE ASTM A 615, GRADE 60, DEFORMED, WELDED WIRE FABRIC SHALL BE ASTM A 185, WELDED WIRE STEEL FABRIC.
5. SIDEWALKS AND GUTTERS SHALL HAVE A BROOM FINISH PERPENDICULAR TO FLOW WITH A PICTURE FRAME EDGE JOINT ALL THE WAY AROUND. CURBS SHALL HAVE A SMOOTH FINISH OR LIGHT RUB FINISH, BUT CONSISTENT THROUGHOUT THE PROJECT.
6. EXPANSION JOINTS SHALL BE PLACED EVERY 50 FEET AND AT ADJOINING STRUCTURES SUCH AS WALLS, MANHOLES AND VAULTS. EXPANSION JOINT MATERIAL SHALL BE PREMOLDED, 1/2 INCH MATERIAL WITH 1/4 INCH CAP IN ACCORDANCE WITH ASTM D1751. AFTER CONCRETE HAS SET, THE CAP SHOULD BE REMOVED AND VOID FILLED WITH WATERPROOF JOINT FILLER. CURB AND GUTTER SHALL BE CUT OR TOOK, JOINED TO 10 THE DEPTH EVERY 10 FEET. SIDEWALKS SHOULD HAVE TOOLED OR CUT JOINTS TO 1/3 THE DEPTH IN SQUARES OR AS CLOSE TO SQUARE AS POSSIBLE NOT EXCEEDING 5FT X5FT.

EARTHWORK:

1. PRIOR STARTING ANY CUTS OF FILLS THE CONTRACTOR SHALL STRIP AND STOCKPILE ALL TOPSOIL. STRIPPING OF TOPSOIL CAN ONLY COMMENCE AFTER THE CLEAR AND GRUB OPERATIONS ARE COMPLETE IN THAT AREA. TOPSOIL SHALL BE STOCKPILED IN AREAS DESIGNATED ON THE PLANS OR APPROVED BY THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL REVIEW THE SOILS REPORTS, BORING LOGS AND WHEN NECESSARY HIS OWN FIELD VERIFICATION SO AS TO BE FAMILIAR WITH THE DEPTH OF TOPSOIL. THE CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS TO PREVENT OVER AND UNDER REMOVAL.
2. UNLESS OTHERWISE NOTED, THE GRADES SHOWN ON THE PLANS ARE FINISHED GRADES. THEREFORE, PAVEMENT, FLOORS, SUBBASE AND OTHER IMPROVEMENTS MUST BE SUBTRACTED TO CALCULATE SUBGRADE ELEVATIONS.
3. THE CONTRACTOR SHALL MAINTAIN A SURVEY GRID OF NOT LESS THAN 100' X 100' OR OTHER MEANS ACCEPTABLE TO THE OWNER'S REPRESENTATIVE THAT WILL INDICATE LOCATION AND AMOUNT OF CUT OR FILLS REMAINING. AT SUBGRADE THIS GRID SHALL BE 50' X 50' WITH LOCATION AND FINAL GRADE MARKED CLEARLY OR SURVEY SHALL BE COMPLETED DEMONSTRATING THAT THE SUBGRADE IS +/- 0.1 FEET OF REQUIRED SUBGRADE.
4. UNLESS OTHERWISE NOTED ON THE DRAWINGS OR IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL RETAIN AND PAY ALL COST FOR SOIL COMPACTION TESTING TO BE PERFORMED BY AN INDEPENDENT TESTING LABORATORY. FOR EACH LIFT PLACED, COMPACTION TESTING SHALL BE DONE EVERY 2000 SQ. FT. IN TRENCHES, COMPACTION TESTING SHALL BE DONE EVERY OTHER LIFT WITH AT LEAST 1 TEST EVERY 100 LF.
5. COMPACTION REQUIREMENTS SHALL BE THOSE OUTLINED IN THE SOILS REPORT. IF THE SOILS REPORT IS NOT CLEAR OR DOES NOT GIVE REQUIREMENTS THE FOLLOWING WILL BE USED. UNDER AND TO 20 FEET OUTSIDE THE BUILDING ENVELOPE THE SOILS SHALL BE COMPACTED TO A MINIMUM OF 95% MAXIMUM DRY DENSITY PER ASTM D1557 (MODIFIED PROCTOR). UNDER PROPOSED OR FUTURE PAVEMENT AREAS, INCLUDING 10 FEET OUTSIDE SUCH AREAS, THE SOIL SHALL BE COMPACTED TO A MINIMUM OF 95% MAXIMUM DRY DENSITY PER ASTM D 1557 (MODIFIED PROCTOR). ALL LANDSCAPE AND LAWN AREAS SHALL BE COMPACTED TO 90% MAXIMUM DRY DENSITY PER ASTM D 1557 (MODIFIED PROCTOR). THE TESTING LAB SHALL TEST SOILS IN ACCORDANCE WITH ASTM D2922 (NUCLEAR METHOD) WITH PROCTORS FOR EACH SOIL TYPE.
6. UNLESS OTHERWISE NOTED IN THE SOILS REPORT OR ON THE DRAWINGS, THE ON SITE MATERIAL SHALL BE USED TO MAKE FILLS. ALL MATERIAL TO BE USED FOR FILL SHALL BE FREE OF ORGANICS, FROZEN MATERIAL, CONTAMINATED MATERIAL, DEBRIS AND ANY ROCKS LARGER THAN 4 INCHES. FOR FILL PLACEMENT WITHIN 1 FOOT OF SUBGRADE, NO ROCK SHALL BE GREATER THAN 2 INCHES IN DIAMETER. THE CONTRACTOR SHALL BEAR ALL COST ASSOCIATED WITH DRYING, SEGREGATING OR REQUIRED METHODS TO TREAT SOILS TO MEET COMPACTION AND OTHER REQUIREMENTS.
7. FILLS SHALL BE PLACED IN LIFTS NOT TO EXCEED 1 FOOT IN MASS FILLS AND 8 INCHES IN TRENCH OR RESTRICTED AREAS.
8. IF IMPORTED MATERIAL IS REQUIRED, THE SOURCE AND A RANDOM COMPOSITE SAMPLE SHALL BE REVIEWED BY THE TESTING LABORATORY PRIOR TO BEING BROUGHT TO SITE. THE TESTING LABORATORY SHALL TEST FOR PERCENT PASSING THE 200 SIEVE THAT DOES NOT EXCEED THE EXISTING ON SITE MATERIAL OR IN NO CASE GREATER THAN 35%. THEY SHALL ALSO VERIFY CONSISTENCY WITH EXISTING ON SITE MATERIALS AND ALL OTHER REQUIREMENTS. WAIVERS TO THESE REQUIREMENTS CAN ONLY BE GIVEN JOINTLY BY THE CITY OF MAULDIN AND THE GEOTECHNICAL ENGINEER THAT PREPARED THE SOILS REPORT.
9. THE TESTING LAB MAY RESTRICT SOME ON SITE MATERIALS FROM BEING USED AS FILL IN BUILDING OR PAVEMENT AREAS WHEN IT IS THEIR OPINION THAT THE MATERIAL WILL NOT MEET REQUIREMENTS STATED HERE. IF SUCH CONDITIONS DO EXIST AND OTHER MATERIAL IS NOT AVAILABLE ON SITE, THE OWNER'S REPRESENTATIVE MUST AUTHORIZE IN WRITING THE USE OF IMPORT MATERIAL UNLESS THERE WILL BE NO ADDITION COST TO THE CONTRACT.
10. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EARTHWORK OPERATIONS FROM WEATHER AND GROUND WATER INCLUDING KEEPING POSITIVE DRAINAGE, DIVERT DRAINAGE, DEWATERING AND SEALING DISTURBED AREAS WITH A STEEL DRUM ROLLER PRIOR TO INCREMENT WEATHER.
11. PRIOR PLACEMENT OF FILLS, IN AREAS WHERE THE FINAL FILL DEPTH WILL BE LESS THAN 4 FEET, THE AREA SHALL BE PROOF ROLLED WITH A 10 TON ROLLER OR A LOADED 10 WHEEL DUMP TRUCK. SOFT AREAS SHALL BE SCARIFIED, DRIED AND RE-COMPACTED PRIOR TO FILL BEING PLACED. RETEST BY PROOF ROLL AS NECESSARY.
12. ALL FINAL SUBGRADE UNDER PROPOSED PAVEMENT, BUILDING OR OTHER STRUCTURE SHALL BE PROOF ROLLED AS DESCRIBED ABOVE FOR THE IDENTIFYING OF SOFT AREAS. AREAS FOUND TO BE UNACCEPTABLE SHALL BE SCARIFIED, DRIED AND RE-COMPACTED. RETEST BY PROOF ROLL AS NECESSARY.
13. TRENCH EXCAVATION REQUIRING SHEETING, SHORING OR OTHER STABILIZING DEVICES SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER AND MEET ALL O.S.H.A. REQUIREMENTS. ALL EXCAVATIONS SHALL MAINTAIN SAFE SLOPES IN ACCORDANCE WITH LOCAL, STATE AND O. S. H. A. REQUIREMENTS. NO STOCKING OF MATERIAL CLOSE TO AN OPEN CUT OR STEEP SLOPE WILL BE PERMITTED IN AN EFFORT TO PREVENT CAVINS.
14. TRENCH EXCAVATIONS SHALL BE MADE UNIFORM AND STRAIGHT TO THE FOLLOWING WIDTHS: (FOR PIPES 36 INCHES OR LESS THE TRENCH WIDTH SHALL BE THE DIAMETER PLUS 2 FEET). (FOR PIPES 36 INCHES OR GREATER THE WIDTH SHALL BE THE DIAMETER PLUS 3 FEET). ADDITIONAL WIDTH WILL ONLY BE ALLOWED WHEN COMPACTION EQUIPMENT LIMITATIONS REQUIRE AND ONLY AFTER APPROVAL OF THE ENGINEER OF RECORD. NO MORE TRENCH SHALL BE OPEN IN ONE DAY THAN CAN BE PROPERLY BACKFILLED IN THAT SAME DAY TO MINIMIZE WEATHER AND SAFETY CONCERNS. WHEN BACKFILLING AROUND PIPES PROVIDE UNIFORM SUPPORT AT INVERT AND PROPER COMPACTION UNDER ALONG AND OVER THE PIPE. CARE SHALL BE GIVEN WHILE BACKFILLING AROUND PIPES TO PREVENT DAMAGE TO THE PIPES INCLUDING: PLACING BACKFILL BEDDING BY HAND, USING HAND OPERATED PLATE TAMPS OR JUMPING JACKS, AND OTHER LOAD RESTRICTIVE TECHNIQUES UNTIL FILLS ARE A MINIMUM OF 2 FEET OR MANUFACTURERS RECOMMENDED DEPTH, WHICHEVER IS GREATER, ABOVE THE TOP OF THE PIPE. COMPACTION SHALL BE USED AS NOT RELIEVED IN THESE AREAS AND WILL REMAIN AS STATED ON THE DRAWINGS OR ABOVE. IF CLEAN STONE IS USED AS A BEDDING OR ENCASEMENT FILTER FABRIC SHALL BE PLACED BETWEEN THE NATURAL SOILS AND BACKFILL AND THE STONE TO PREVENT MIGRATION OF FINES.
15. IF ROCK IS ENCOUNTERED THAT WAS NOT INDICATED ON THE PLANS OR SOILS REPORT, THE AREA FOR REMOVAL SHOULD BE MEASURED AND REVIEWED WITH THE OWNER'S REPRESENTATIVE PRIOR TO ROCK REMOVAL. ROCK WILL BE DEFINED AS THE NATURAL, EARTH MATERIALS THAT CAN NOT BE REMOVED WITH CONVENTIONAL EARTH WORKING EQUIPMENT.
16. WHERE ROCK IS ADJACENT TO A STRUCTURE OR UTILITY, THE ROCK SHALL BE REMOVED TO A MINIMUM OF 6 INCHES BELOW AND 1 TIMES THE DIAMETER, BUT NOT LESS THAN 1 FOOT OR GREATER THAN 3 FEET ON ANY SIDE.
17. NO EXPLOSIVES WILL BE ALLOWED UNTIL ALL PERMITS ARE GRANTED AND THE OWNER HAS SIGNED OFF. PRE AND POST BLAST REPORTS MUST BE KEPT AND RECORDED. ALL STRUCTURES WITHIN THE AREA OF THE BLAST MUST RECEIVE A PRE-BLAST SURVEY. ALL BLAST MANUFACTURERS' RECOMMENDATIONS SHALL BE FOLLOWED BY A LICENSED BLASTING OPERATOR.
18. UNLESS OTHERWISE NOTED ON THE DRAWINGS, THE CONTRACTOR SHALL REMOVE ALL EXCESS TOPSOIL, CULTURAL MATERIAL OR WASTE MATERIAL FROM SITE AND DISPOSE OF IN A LEGAL MANNER.

SEEDING AND LANDSCAPING:

1. TOPSOIL SHALL BE REMOVED FROM STOCKPILES AND SPREAD IN THE AREAS SHOWN ON THE PLANS. THE DEPTH OF TOPSOIL SHALL BE AS SHOWN ON THE PLANS. IF THE DEPTH OF TOPSOIL IS NOT GIVEN THE FOLLOWING SHALL BE USED: "A MINIMUM OF 4 INCHES IN LAWN AREAS" AND "A MINIMUM OF 12 INCHES IN LANDSCAPE PLANTING AREAS".
2. AFTER THE TOPSOIL IS IN PLACE IT SHALL BE FINE GRADED REMOVING ALL ROOTS, STICKS, STONES AND DEBRIS GREATER THAN 2 INCHES IN ANY DIMENSION. THE TOPSOIL SHALL BE FINE GRADED TO THE LINES AND GRADES SHOWN ON THE PLANS.
3. THE TOPSOIL SOIL SHALL HAVE A PH OF 5.5 TO 7.6 AND AN ORGANIC CONTENT OF 3 TO 20%. THE GRADATION OF THE TOPSOIL SHALL BE 100% PASSING 2 INCH SIEVE, 85 TO 100% PASSING THE 1 INCH SIEVE, 65 TO 100% PASSING THE 1/4 INCH SIEVE AND 20 TO 80% PASSING THE NO. 200 SIEVE.
4. LINE OF TYPE RECOMMENDED FOR SOIL CONDITIONING SHALL BE USED TO TREAT ACIDIC SOILS.
5. LAWN FERTILIZER SHALL BE 55% NITROGEN, 10% PHOSPHORUS AND 10% POTASH WHERE 50% OF THE NITROGEN IS DERIVED FROM UREA/FORM SOURCE.
6. LAWN SEED (WHEN NOT GIVEN ON THE PLANS) SHALL BE: 50% BY WEIGHT, 85% PURITY, 85% GERMINATION OF PENNFINE PERENNIAL RYE". 30% BY WEIGHT, 97% PURITY, 85% GERMINATION OF PENNLAWN RED FESCUE"; 20% BY WEIGHT, 85% PURITY, 80% GERMINATION OF COMMON KENTUCKY BLUEGRASS".
7. WHEN PLACING BY HYDROSEEDING APPLICATION FERTILIZER SHALL BE PLACED AT 80 POUNDS PER ACRE, HYDROMULCH AT 200 POUNDS PER ACRE, WATER AT 500 GALLONS PER ACRE AND SEED AT A MINIMUM OF 220 POUNDS PER ACRE. ALL OVER SPRAY AREAS SHALL BE PROPERLY CLEANED AND RESTORED AT NO EXPENSE TO THE CONTRACT.
8. IF PLACING BY MECHANICAL MEANS, FERTILIZER SHALL BE PLACED AT 25 POUNDS PER 1,000 SQUARE FEET, SEED AT 5 POUNDS PER 1,000 SQUARE FEET, AND STRAW MULCH AT 2 TONS PER ACRE. PLACE FERTILIZER AND SEED, THEN LIGHTLY RAKE AND THE ROLL WITH 200 POUND ROLLER. MULCH THE AREA AND THEN WATER. STRAW MAY NEED TO BE SECURED TO PREVENT IT BLOWING AWAY.
9. WATER LAWN AREAS AS NEEDED TO PROMOTE GROWTH. THE CONTRACTOR WILL BE RESPONSIBLE TO WATER, RESEED OR WORK WHEN NECESSARY TO INSURE THE GROWTH OF THE LAWN UNTIL A COMPLETE AND UNIFORM STAND OF GRASS HAS GROWN AND BEEN CUT AT LEAST TWICE.
10. UNLESS OTHERWISE NOTED ON THE DRAWINGS, ALL AREAS NOT RECEIVING STRUCTURES, PAVEMENT, RIP RAP, LANDSCAPING OR OTHER IMPROVEMENTS OR FUTURE IMPROVEMENTS SHALL BE CONSIDERED LAWN AREAS AND RECEIVE TOPSOIL AND SEEDING PER DRAWINGS AND ABOVE STATED REQUIREMENTS.
11. PLANTINGS SHALL BE SUPPLIED IN ACCORDANCE WITH THE PLANS AND ANSI 260.1 "AMERICAN STANDARD FOR NURSERY STOCK" IN GOOD HEALTH, VIGOROUS, AND FREE OF INSECTS, LARVAE, EGGS, DEFECTS AND DISEASE.
12. PLANTING BEDS SHALL BE PREPARED BY LOOSENING THE TOP 1 FOOT OF TOPSOIL. PLANTS SHALL BE LOCATED PER THE PLANS. THE HOLES SHALL BE EXCAVATED (PER THE DETAILS ON THE DRAWINGS) WITH THE CENTER SLIGHTLY HIGHER TO PROMOTE DRAINAGE. USE A TOPSOIL BACKFILL MIX OF 4 PARTS TOPSOIL, 1 PART PEAT MOSS, 1/2 PART WELL ROTTED MANURE, AND 10 POUNDS 5-10-5 PLANTING FERTILIZER AND PROPERLY MIXED PER CUBIC YARD. BERM AROUND PLANTS TO FORM A BOWL SHAPE.
13. WEEB BARRIER MADE FROM FIBERGLASS AND ULTRA-VIOLET LIGHT RESISTANT SHALL BE PLACED UNDER ALL PLANTING BEDS PRIOR MULCHING.
14. ALL TREES AND SHRUBS SHALL BE STAKED AS DETAILED ON THE DRAWINGS. TREE WRAPPING WILL BE PROVIDED AT THE BASE OF ALL TREES AS DETAILED.
15. MULCH SHALL BE 50% SHREDDED BARK AND 50% WOOD CHIPS, 1/4 TO 2 INCH IN SIZE, UNIFORMLY MIXED AND FREE OF ELM WOOD. MULCH SHALL BE PLACED UNIFORMLY OVER THE PLANTING BED ALLOWING NO WEEB BARRIER TO BE SEEN.
16. ALL LANDSCAPING SHALL BE GUARANTEED FOR ONE YEAR AFTER FINAL ACCEPTANCE. ANY PLANTINGS IN NEED OF REPLACEMENT WILL BE GUARANTEED FROM THE TIME OF REPLACEMENT IF AFTER FINAL ACCEPTANCE.

TRAFFIC SIGNAGE AND STRIPING:

1. PAVEMENT MARKINGS SHALL BE THE TYPE, COLOR, SIZE AND LOCATIONS SHOWN ON THE PLANS. IF THE INFORMATION ON THE PLANS IS NOT COMPLETE AND AUTHORITY HAVING JURISDICTION DOES NOT HAVE REQUIREMENTS REGARDING THE FOLLOWING: PAINT SHALL BE SUPPLIED IN ACCORDANCE WITH AASHTO, M 248 LATEST ADDITION. COLORS SHALL BE AS FOLLOWS (WHITE - PARKING STALLS, HANDICAP PARKING AND CHARACTERS, PARKING ISLANDS, TRAFFIC CONTROL LETTERING AND CHARACTERS AND FIRE LANES) (WHITE - STOP BARS, PEDESTRIAN CROSSINGS AND STOP LETTERING).
2. THE PAVEMENT SHALL BE CLEAN AND FREE OF DIRT, DUST, MOISTURE, OILS AND OTHER FOREIGN MATERIALS. ANY OLD PAVEMENT MARKINGS SHALL BE REMOVED UNLESS PAINTS ARE COMPATIBLE AND OVERLAY IDENTICALLY. THE SURFACE OF THE PAVEMENT PRIOR APPLICATION SHALL BE 45 DEGREES F AND RISING UNLESS MANUFACTURE'S RECOMMENDATIONS ARE GREATER.
3. THE SIGNAGE SHALL BE THE TYPE AND LOCATED PER THE DRAWINGS. THE SIGNAGE SHALL BE PROVIDED IN ACCORDANCE WITH THE LOCAL HIGHWAY, COUNTY HIGHWAY AND STATE DEPARTMENT OF TRANSPORTATION. IF LOCAL, COUNTY OR STATE CODES DO NOT EXIST USE AASHTO, M268.
4. POSTS, BRACKETS AND GUARD RAILS SHALL BE STEEL PER ASTM A 36, A 242, A 441, A 572, A 588, GRADE 50 AND HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A123. ALL CUTTING, DRILLING OR OTHER POLE MODIFICATIONS SHALL BE PAINTED WITH GALVANIZING PAINT. ALL BOLTS, NUTS AND WASHERS SHALL BE STAINLESS STEEL.
5. POST HOLES SHALL BE A MINIMUM OF FOUR FEET DEEP AND 12 INCHES IN DIAMETER UNLESS POOR SOILS OR FROST CONDITIONS REQUIRE GREATER DEPTH. SIGN POSTS SHALL BE KEPT PLUMB, 6 INCHES OFF BOTTOM AND CENTERED AS 3000 PSI CONCRETE IS PLACED AROUND THE POST. THE OVERALL SIGN AND POST SYSTEM SHOULD BE ABLE TO WITHSTAND 33 POUNDS PER SQUARE FOOT.
6. CONTRACTORS CAN PLACE SIGNS ON POSTS AFTER CONCRETE HAS CURED FOR SEVEN DAYS OR 1/2 STRENGTH IS ACHIEVED.
7. ALL HANDICAP STRIPING AND SIGNAGE SHALL MEET THE AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. LANE STRIPING AND SIGNAGE SHALL MEET THE REQUIREMENTS OF THE LOCAL BUILDING INSPECTOR AND FIRE DEPARTMENT.

STORM WATER SYSTEM:

1. THE STORM WATER SYSTEM SHALL BE SUPPLIED AND PLACED IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REQUIREMENTS. THE LOCAL STORM WATER AUTHORITY FOR THIS PROJECT IS GREENVILLE COUNTY AND THE EROSION CONTROL AND RUN-OFF AUTHORITY IS SCDCHE.
2. STORM DESIGN INCLUDES MANY VARIABLES, SUCH AS PIPE ROUGHNESS COEFFICIENT, THAT CAN AFFECT THE ACTUAL FINAL RUN-OFF. IF NO ALTERNATIVE MATERIALS ARE LISTED ON THE UTILITY DRAWINGS NO SUBSTITUTIONS MAY BE MADE BY THE CONTRACTOR UNLESS FIRST REVIEWED AND ACCEPTED BY THE ENGINEER.
3. ALL STORM MATERIAL SIZES, TYPES AND SPECIFICS ARE LISTED ON THE DRAWINGS. IF THE PLANS DO NOT LIST ALL INFORMATION OR ARE UNCLEAR USE THE FOLLOWING.
4. WHENEVER CLEAN STONE IS USED FOR BEDDING, BACKFILL, OR ENCASEMENT FILTER FABRIC SHALL BE PLACED BETWEEN THE NATURAL AND BACKFILL SOILS TO PREVENT MIGRATION OF FINES INTO THE VOIDS, AS NECESSARY. ANTI-SEEP COLLARS SHALL ALSO BE INCORPORATED AT THE PROJECT LIMIT AND ALONG THE PIPE TO PREVENT WATER FLOW WITHIN THE STONE BEDDING OR ENCASEMENT. ANTI-SEEP COLLARS MAY NOT BE REQUIRED WHEN USING PERFORATED PIPE. ANTI-SEEP COLLARS SHALL BE INCORPORATED AT POND AND BASIN OUTLETS TO PREVENT WATER MIGRATION ALONG PIPE BEDDING OR ENCASEMENT MATERIAL.
5. STORM PIPE 12 INCHES AND UP SHALL BE REINFORCED CONCRETE PIPE (RCP) WITH SMOOTH INTERIOR, IN ACCORDANCE WITH AASHTO M252 & M254 AND ASTM F406 & F667, WITH A MANNING FRICTION NUMBER (N) OF 0.012 OR LESS. UNLESS SOILS ARE CONSISTENTLY SAND OR SAND AND GRAVEL WITH NOT MORE THAN 15% OR LESS THAN 5% PASSING THE 200 SIEVE AND 100% PASSING THE 2 INCH SIEVE THE PIPE WILL BE ENCASED IN A UNIFORM GRAVEL WITH NOT MORE THAN 15% OR LESS THAN 5% PASSING THE 200 SIEVE AND 100% PASSING THE 2 INCH SIEVE FROM SIX INCHES BELOW TO SIX INCHES ABOVE THE OUTSIDE OF PIPE. INSTALL IN ACCORDANCE WITH ASTM F449 AND THE MANUFACTURERS RECOMMENDATIONS.
6. STORM PIPE BELOW 12 INCHES SHALL BE POLYVINYL CHLORIDE (PVC) PER ASTM D 3034, SDR 35 WITH GASKETS PER ASTM D 3212, ELASTOMERIC SEAL. THE PIPE SHALL BE BED 6 INCHES BELOW AND UP HALF ITS DIAMETER WITH A UNIFORM MIX OF GRAVEL OR CRUSH STONE 100% PASSING THE 1.5" SIEVE AND 10% TO 3% PASSING THE 200 SIEVE. THE MIX SHALL BE SUPPLEMENTED AS NEEDED TO REMOVE VOIDS. INCORPORATE FILTER FABRIC AROUND BEDDING OR GRADE STONE IF GROUND WATER, SILTS, OR SANDS ARE ENCOUNTERED.
7. END SECTIONS SHALL BE THE SAME MATERIAL AS THE PRECEDING PIPE AND APPROPRIATE COLLAR.
8. MANHOLES SHALL BE PROVIDED PER ASTM C 478 WITH STEEL CORE POLYETHYLENE STEPS. THE MANHOLE SHALL BE SIZED TO A MINIMUM OF 2 FOOT GREATER THAN THE LARGEST DIAMETER PIPE ENTERING OR EXISTING. INCREASE SIZE OF MANHOLE IF IN THE SAME HORIZONTAL PLANE THERE IS TWO AREAS WHERE THE AREA BETWEEN TWO PIPES IS LESS THAN 1/2 OF THE CIRCUMFERENCE IS SUPPORTED BY LESS THAN 1/2 OF THE DIAMETER OF THE MANHOLE. INVERTS SHALL BE SMOOTH CAST IN PLACE CONCRETE. UNLESS OTHERWISE INDICATED, 4 INCH WEEPS COVER WITH FILTER FABRIC AND 2 INCH STONE SHALL BE PROVIDED AT THE CROWN OF PIPES AND AT SUBGRADE ELEVATION. GASKETS BETWEEN RISERS SHALL BE RUBBER PER ASTM C 443. ADJUSTMENT RINGS SHALL BE PRECAST CONCRETE 4000 PSI AND 5 TO 8% AIR ENTRAINMENT.
9. INLETS SHALL MEET THE SAME REQUIREMENTS AS THOSE LISTED FOR MANHOLES.
10. GRATES SHALL BE RETICULINE AND GALVANIZED PER ASTM A123. MINIMUM GRATE OPENING SIZE WILL BE 24 INCHES X 24 INCHES AND DESIGN FOR A MINIMUM OF H-20 LOADING.
11. MANHOLE FRAMES AND COVERS SHALL BE PER ASTM A 48, CLASS 308, FULLY COATED WITH THE LETTERING "STORM" CAST INTO IT. THE MINIMUM SIZE WILL BE A 24 INCH INSIDE OPENING AND DESIGN FOR A MINIMUM OF H-20 LOADING.
12. CLEANOUTS SHALL BE MADE OF THE SAME PIPE MATERIAL AS THE CARRIER PIPE. A CAST IRON FRAME AND COVER SHALL BE PROVIDED FOR ACCESS AT GRADE AND DESIGNED FOR H-20 LOADING. THE CLEANOUT SHALL BE ENCASED IN STONE OF THE SAME TYPE AS THE PIPE BEDDING FOR THE FULL DEPTH OF THE CLEANOUT.
13. RIP RAP SHALL BE PLACED AT THE END OF ALL OUTFALL STRUCTURES. UNLESS OTHERWISE NOTED, THE RIP RAP SHALL BE A CLEAN DRAINAGE STONE WITH AVERAGE WEIGHTS OF 100 POUNDS. THE RIP RAP SHALL BE PLACED ON 1 FOOT OF GRAVEL SUBBASE OR STABILIZING FABRIC.
14. DRY WELLS SHALL MEET THE SAME REQUIREMENTS AS THOSE LISTED FOR MANHOLES WITH THE ADDITION OF OPENINGS OF APPROXIMATELY 15% OF THE RINGS INTERIOR SURFACE. THE OPENINGS SHALL BE 1 X 3 INCH SLOTS OR 1 INCH DIAMETER ON THE INSIDE SURFACE. DRY WELLS SHALL BE BACKFILLED WITH A MINIMUM OF 1 FOOT OF CLEAN STONE SIZED BETWEEN 3 AND 4 INCHES. OUTSIDE THE STONE THE ENTIRE STRUCTURE SHALL BE WRAPPED IN FILTER FABRIC TO PREVENT OUTSIDE SOILS FROM ENTERING THE STONE AND DRY WELL.
15. UNLESS OTHERWISE NOTED, TRENCH DRAINS SHALL BE MADE WITH 4 INCH PERFORATED CORRUGATED POLYETHYLENE PIPE ENCASED IN CLEAN STONE SIZED BETWEEN 2 INCH AND 1/4 INCH AND THEN WRAPPED IN FILTER FABRIC. OUTSIDE DIMENSIONS OF THE TRENCH DRAIN WILL NOT BE LESS THAN 1 FOOT.
16. ALL JOINTS BETWEEN PIPES AND PRECAST STRUCTURES SHALL BE MORTARED TIGHT.
17. ALL PIPE SHALL BE PLACED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATION AND TO THE LINES AND GRADES SHOWN ON THE DRAWINGS. CARE SHALL BE GIVEN DURING BACKFILL OPERATIONS NOT TO MOVE OR DAMAGE PIPE OR APPURTENANCES WHILE ACHIEVING THE APPROPRIATE COMPACTION REQUIREMENTS.
18. ALL SYSTEMS SHALL BE VISUALLY INSPECTED FOR ALIGNMENT AND WORKMANSHIP. ALL DEBRIS, DIRT OR OTHER FOREIGN OBJECTS SHALL BE REMOVED AND THE SYSTEM FLUSHED CLEAN.
19. ANY PIPES FOUND WITH DIAMETER DEFLECTIONS GREATER THAN 5% OF THE SPECIFIED PIPE DIAMETER WILL BE REPAIRED OR REPLACED. ANY ALIGNMENT DIFFERENTIALS GREATER THAN 5% OF THE DIAMETER OF THE PIPE WILL BE CORRECTED OR REPLACED.
20. ANY CLEANING, REPAIRS OR REPLACEMENT REQUIRED, DUE TO FAILURE OF TESTING OR POOR WORKMANSHIP, SHALL BE DONE BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE CONTRACT.

1

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4

5

A

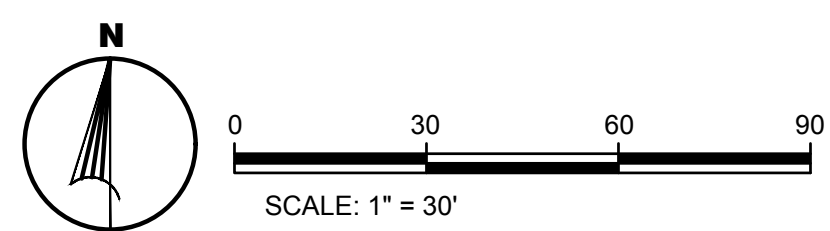
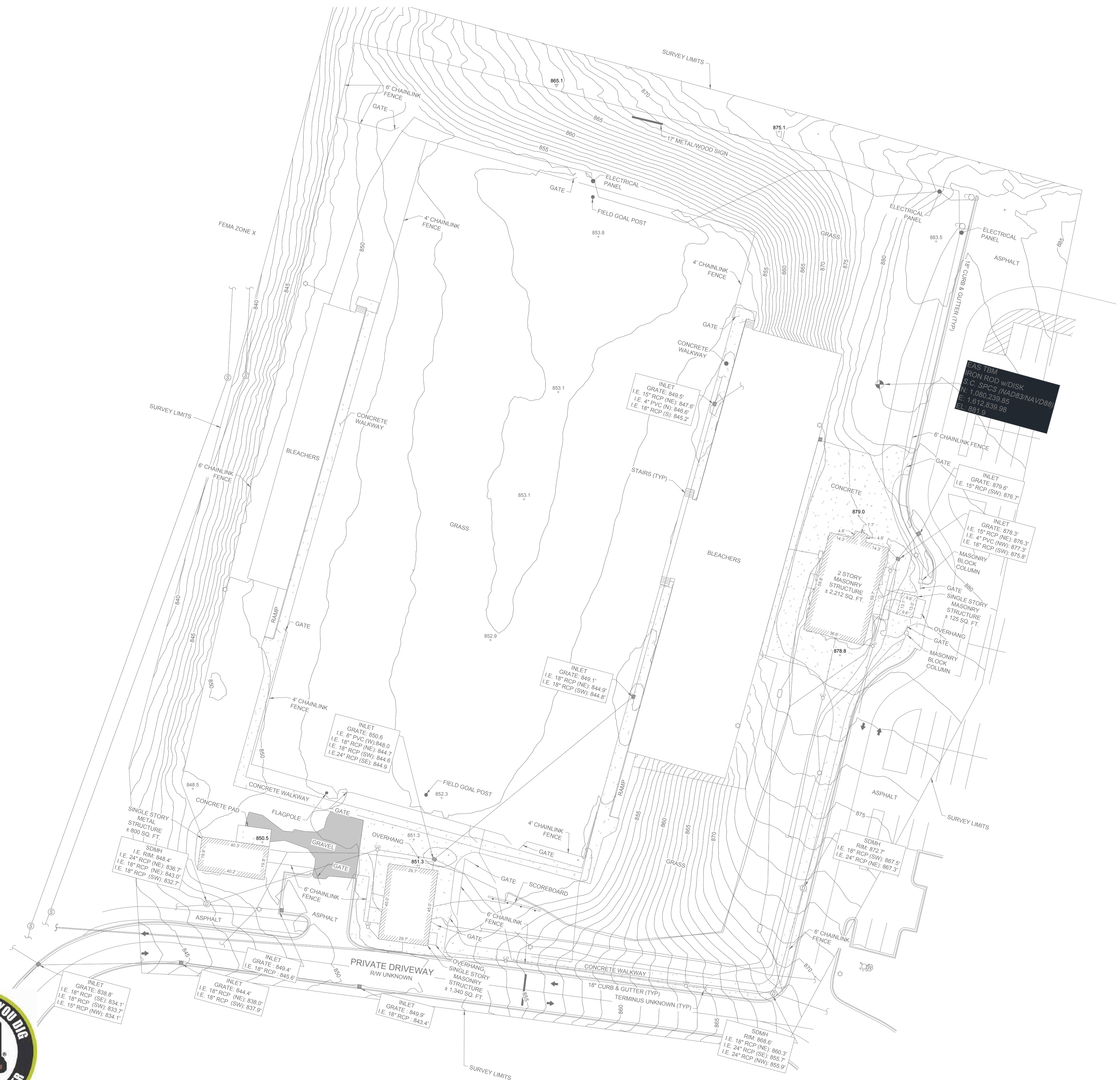
B

C

D

E

F





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NOT FOR CONSTRUCTION



GREENVILLE COUNTY SCHOOLS
Inspire Support Prepare

MAULDIN HS STADIUM EXPANSION & CAROLINA HS RESTROOM BUILDING

MAULDIN HIGH SCHOOL - 701 E Buair Rd, Mauldin, SC 29662
CAROLINA HS RESTROOM - 2750 Woodmont Rd, Greenville, SC 29611

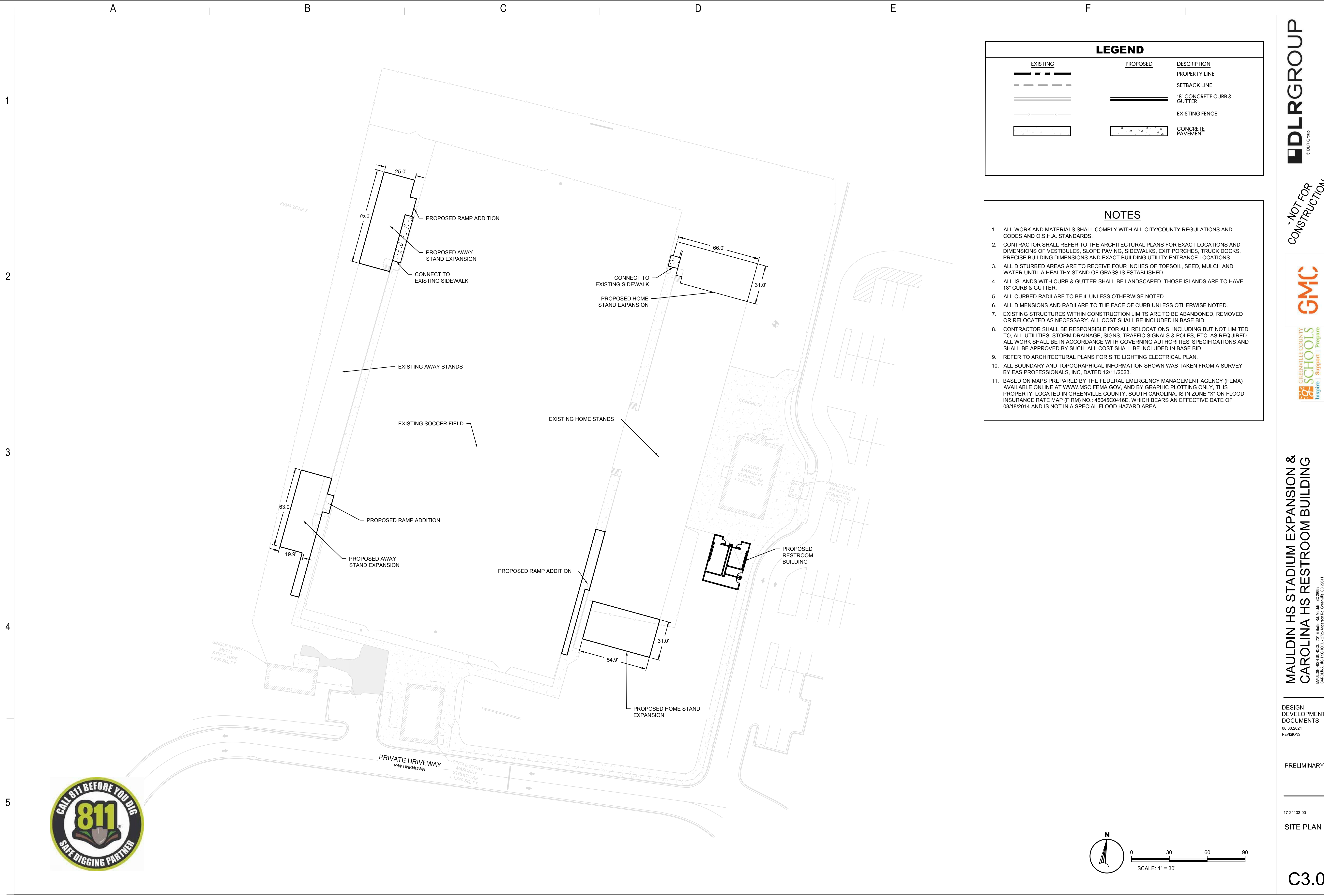
DESIGN DEVELOPMENT DOCUMENTS
08.30.2024
REVISIONS

PRELIMINARY

17-24103-00

EXISTING CONDITIONS

C1.1



LEGEND		
EXISTING	PROPOSED	DESCRIPTION
		PROPERTY LINE
		SETBACK LINE
		18" CONCRETE CURB & GUTTER
		EXISTING FENCE
		CONCRETE PAVEMENT

- NOTES
1.

ALL WORK AND MATERIALS SHALL COMPLY WITH ALL CITY/COUNTY REGULATIONS AND CODES AND O.S.H.A. STANDARDS.
2.

CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF VESTIBULES, SLOPE PAVING, SIDEWALKS, EXIT PORCHES, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
3.

ALL DISTURBED AREAS ARE TO RECEIVE FOUR INCHES OF TOPSOIL, SEED, MULCH AND WATER UNTIL A HEALTHY STAND OF GRASS IS ESTABLISHED.
4.

ALL ISLANDS WITH CURB & GUTTER SHALL BE LANDSCAPED. THOSE ISLANDS ARE TO HAVE 18" CURB & GUTTER.
5.

ALL CURBED RADII ARE TO BE 4' UNLESS OTHERWISE NOTED.
6.

ALL DIMENSIONS AND RADII ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
7.

EXISTING STRUCTURES WITHIN CONSTRUCTION LIMITS ARE TO BE ABANDONED, REMOVED OR RELOCATED AS NECESSARY. ALL COST SHALL BE INCLUDED IN BASE BID.
8.

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELOCATIONS, INCLUDING BUT NOT LIMITED TO, ALL UTILITIES, STORM DRAINAGE, SIGNS, TRAFFIC SIGNALS & POLES, ETC. AS REQUIRED. ALL WORK SHALL BE IN ACCORDANCE WITH GOVERNING AUTHORITIES' SPECIFICATIONS AND SHALL BE APPROVED BY SUCH. ALL COST SHALL BE INCLUDED IN BASE BID.
9.

REFER TO ARCHITECTURAL PLANS FOR SITE LIGHTING ELECTRICAL PLAN.
10.

ALL BOUNDARY AND TOPOGRAPHICAL INFORMATION SHOWN WAS TAKEN FROM A SURVEY BY EAS PROFESSIONALS, INC, DATED 12/11/2023.
11.

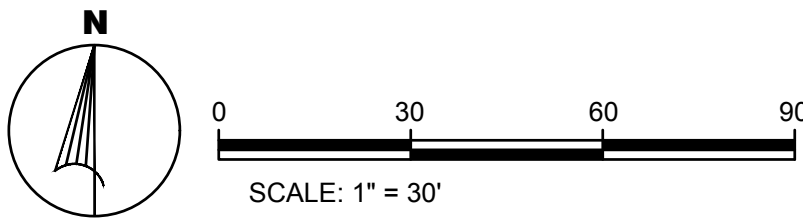
BASED ON MAPS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) AVAILABLE ONLINE AT WWW.MSC.FEMA.GOV, AND BY GRAPHIC PLOTTING ONLY, THIS PROPERTY, LOCATED IN GREENVILLE COUNTY, SOUTH CAROLINA, IS IN ZONE "X" ON FLOOD INSURANCE RATE MAP (FIRM) NO.: 45045C0416E, WHICH BEARS AN EFFECTIVE DATE OF 08/18/2014 AND IS NOT IN A SPECIAL FLOOD HAZARD AREA.

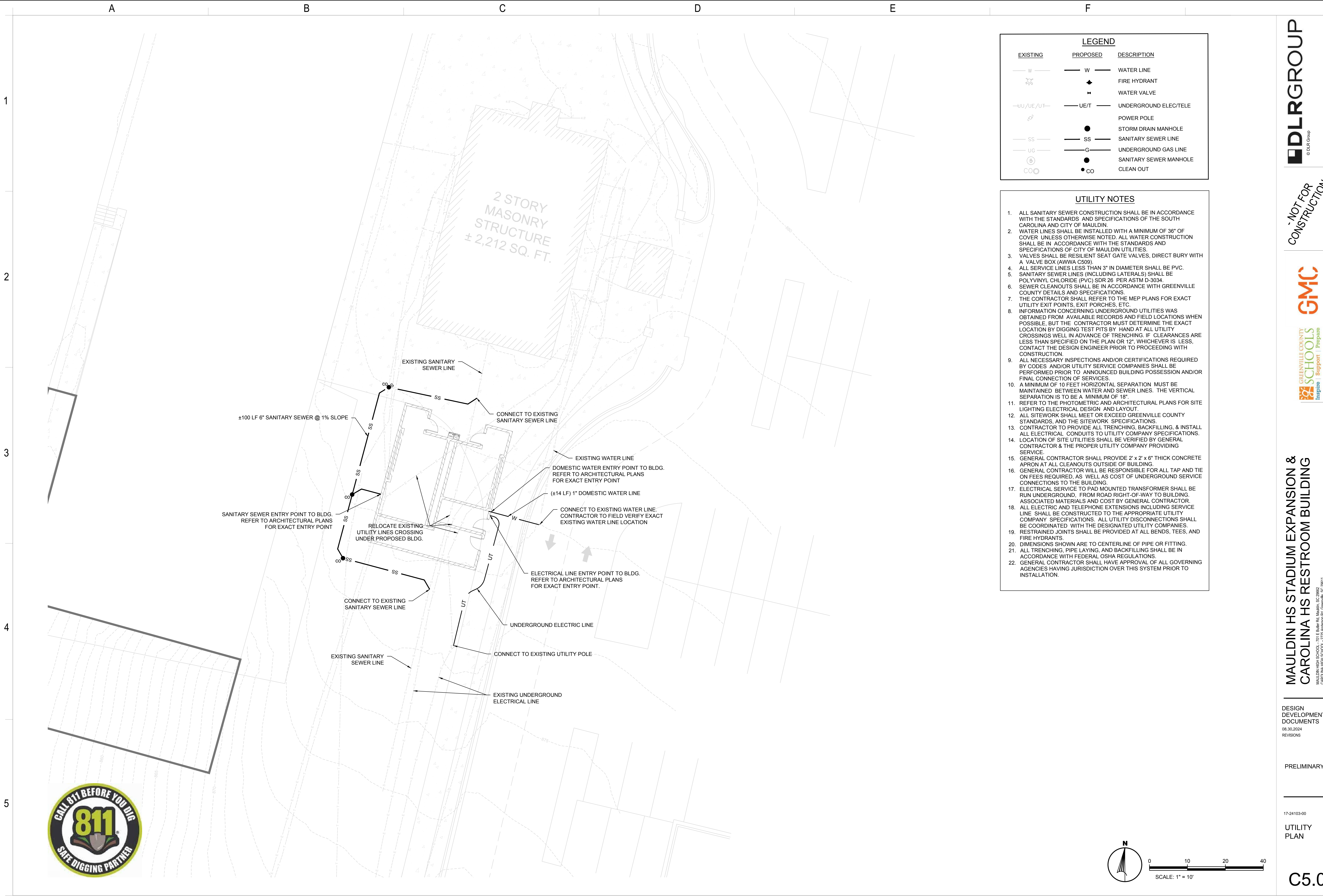


LEGEND		
EXISTING	PROPOSED	DESCRIPTION
		RIGHT OF WAY LINE
		CONTOUR LINE
		SPOT ELEVATION
		STORM DRAIN INLET
		STORM DRAIN PIPE

GRADING NOTES

1. CONTRACTOR IS RESPONSIBLE FOR DEMOLITION OF EXISTING STRUCTURES INCLUDING REMOVAL OF ANY EXISTING UTILITIES SERVING THE STRUCTURE. UTILITIES ARE TO BE REMOVED TO THE RIGHT-OF-WAY.
2. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF ALL EXISTING UTILITIES (ABOVE OR BELOW GROUND) AS SHOWN ON THESE PLANS ARE APPROXIMATE AND WERE LOCATED BASED ON EITHER VISUAL OBSERVATIONS AT THE SITE, EXISTING SURVEYS AND/OR FROM UTILITY OWNERS. GMC DOES NOT GUARANTEE THAT EXISTING UTILITY LOCATIONS SHOWN ARE EXACT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXACT LOCATIONS OF EXISTING UTILITIES (ABOVE OR BELOW GROUND) BEFORE BEGINNING ANY CONSTRUCTION. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANIES AND THE UTILITIES' PROTECTION CENTER AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY OWNER AND/OR ENGINEER OF ANY UTILITY CONFLICTS WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
3. ALL CUT OR FILL SLOPES SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED.
4. EXISTING DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIRED AS NEEDED, AND EXISTING PIPES TO BE CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.
5. EXISTING GRADE CONTOUR SHOWN AT 1 FOOT INTERVALS.
6. PROPOSED GRADE CONTOUR SHOWN AT 1 FOOT INTERVALS.
7. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.
8. ALL STORM PIPE ENTERING STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATERTIGHT.
9. ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT, AND SHALL HAVE TRAFFIC BEARING RING & COVERS. MANHOLES IN UNPAVED AREAS SHALL BE 6" ABOVE FINISH GRADE.
10. THE CONTRACTOR SHALL ADHERE TO ALL TERMS & CONDITIONS AS OUTLINED IN THE GENERAL N.P.D.E.S. PERMIT FOR STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES.
11. CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.
12. CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS.
13. ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATION SHALL RECEIVE 4 INCHES OF TOPSOIL. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES AS INDICATED ON THE EROSION CONTROL PLANS. CONTRACTOR SHALL GRASS DISTURBED AREAS UNTIL A HEALTHY STAND OF GRASS IS OBTAINED. AT A MINIMUM, 80% COVERAGE AND 80% DENSITY SHALL BE ACHIEVED PRIOR TO PROJECT CLOSEOUT.
14. CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO SAME.
15. ALL STORM STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED MORTAR INVERT FROM INVERT-IN TO INVERT-OUT.
16. CONTRACTOR SHALL VERIFY BENCHMARKS PRIOR TO SETTING FINISHED GRADES.
17. ALL A.D.A. SPACES SHALL BE GRADED TO HAVE A MAXIMUM SLOPE OF 2.00% IN ANY DIRECTION.
18. CONTRACTOR SHALL COORDINATE ALL EXCAVATION WITH GEOTECHNICAL TESTING COMPANY. ALL COMPACTION SHALL BE PER THE GEOTECHNICAL REPORT.
19. ANY IMPORT OR EXPORT OF SOIL AND/OR MATERIALS SHALL BE TO/FROM A PERMITTED BORROW/SPOIL SITE. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING DOCUMENTATION TO GEOTECHNICAL TESTING COMPANY FOR ANY AND ALL IMPORT/EXPORT SITES USED FOR CONSTRUCTION.
20. THE CONTRACTOR SHALL NOTIFY THE ENGINEER ANY AREAS THAT MAY TRAP STORMWATER RUNOFF AND/OR NOT DRAIN PROPERLY.

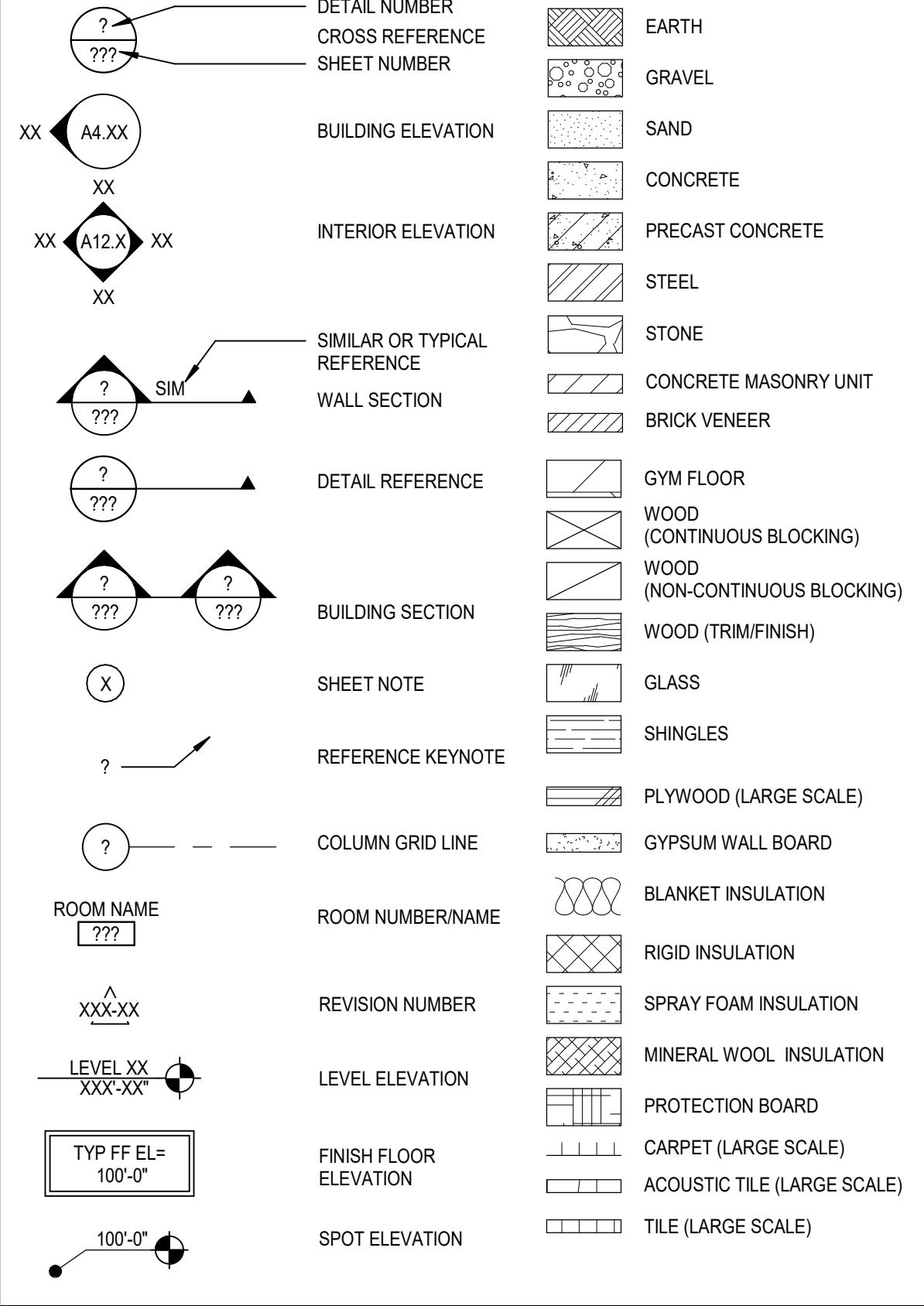




GENERAL ABBREVIATIONS

#	NUMBER
&	AND
@	AT
ADA	AMERICANS WITH DISABILITY ACT
ADDN	ADDITION OR ADDITIONAL
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
ALT	ALTERNATE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
Bldg	BUILDING
BSMT	BASEMENT
CL	CENTER LINE
CLG	CEILING
CM	CENTIMETER
CONC	CONCRETE
CONN(S)	CONNECTION(S)
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR(OR)
CTR	CENTER
D	DEPTH
DEG	DEGREE
DEMO	DEMOLISH OR DEMOLITION
DM	DIAMETER
DIM	DIMENSION
DIV	SPECIFICATION DIVISION
DN	DOWN
DTL	DETAIL
DWG(S)	DRAWING(S)
E	EAST
EA	EACH
EC	ELECTRICAL CONTRACTOR
EL	ELEVATION
ELEC	ELECTRICAL
ENG	ENGINEER
EQ	EQUAL
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
EXST	EXISTING
EXT	EXTERIOR
FIN	FINISHED
FL	FLOOR
FT	FEET
FT	FUTURE
GC	GENERAL CONTRACTOR
GOVT	GOVERNMENT
H	HEIGHT
HORIZ	HORIZONTAL
HT	HEIGHT
i.e.	THAT IS
IBC	INTERNATIONAL BUILDING CODE
INCH	INCH
INT	INTERIOR
LB(S)	POUND(S)
M	METER
MAX	MAXIMUM
MC	MECHANICAL CONTRACTOR
MECH	MECHANICAL
MEZZ	MEZZANINE
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MM	MILLIMETER
N	NORTH
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
OPP	OPPOSITE
OVHD	OVERHEAD
PAR	PARALLEL
PENT	PENTHOUSE
PLYWD	PLYWOOD
QTY	QUANTITY
REQ(D)	REQUIRE(D)
REV	REVISION(S)
RM	ROOM
RND	ROUND
S	SOUTH
SCHED	SCHEDULE
SECT	SECTION
SHT	SHEET
SIM	SIMILAR
SPEC	SPECIFICATION(S)
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURAL
SYM	SYMETRICAL
TEMP	TEMPORARY
Typ	TYPICAL
UNEX	UNEXCAVATED
UNFN	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
VEST	VESTIBULE
VIF	VERIFY IN FIELD
W	WEST
W/	WITH
W/O	WITHOUT

GENERAL SYMBOLS



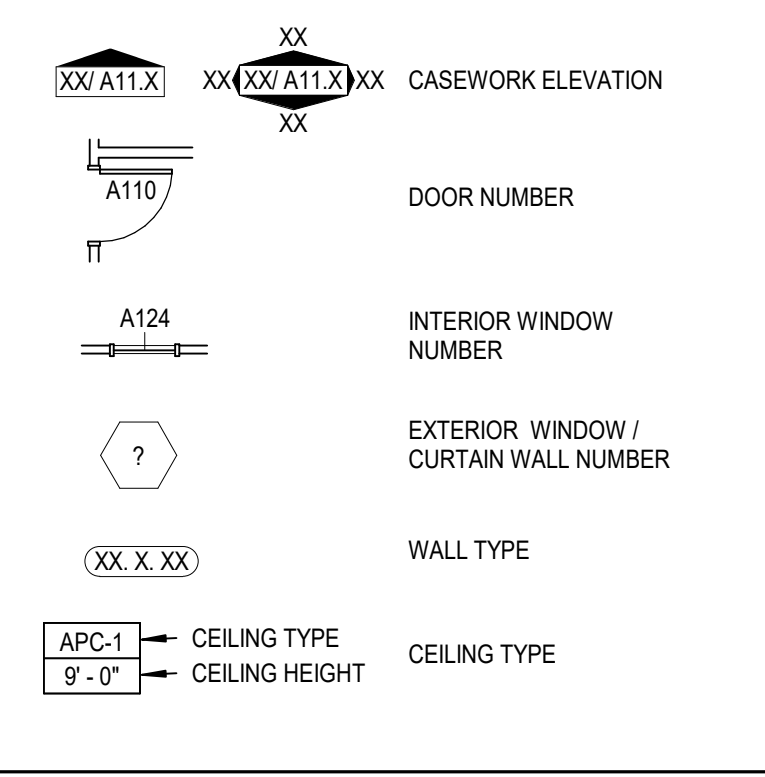
GENERAL NOTES

- GENERAL NOTES APPLY TO ALL SHEETS.
- DIMENSIONS ARE ACTUAL AND ARE TO FACE OF STUDS, FACE OF CONCRETE WALLS, FACE OF CMU WALLS, FACE OF FRAMES, OR CENTERLINE OF COLUMNS, UNLESS NOTED OTHERWISE.
- INCLUDE ALL OWNER-FURNISHED AND INSTALLED ITEMS AND OWNER-FURNISHED AND CONTRACTOR-INSTALLED ITEMS IN THE CONSTRUCTION SCHEDULE, AND SHALL COORDINATE WITH THE OWNER TO ACCOMMODATE THESE ITEMS.
- COORDINATE ALL MECHANICAL CHASE SIZES WITH THE MECHANICAL CONTRACTOR.
- CONSTRUCTION DOCUMENTS ARE COMPLEMENTARY. SEE DRAWING FOR QUANTITIES AND LOCATION OF WORK. SEE SPECIFICATIONS FOR QUALITIES AND CONDITIONS OF WORK.
- WORK: ALL ASPECTS OF THE WORK AND ITEMS NOT SPECIFICALLY MENTIONED, BUT NECESSARY TO MAKE A COMPLETE WORKING INSTALLATION, SHALL BE INCLUDED AND INDICATED IN THE CONTRACTOR'S BID.
- GENERAL SHEET NOTES ONLY APPLY TO PARTICULAR DRAWING OR SERIES OF DRAWINGS.
- NO ASBESTOS OR PCB CONTAINING MATERIALS SHALL BE USED ON THIS PROJECT.
- DO NOT SCALE DRAWINGS. DIMENSIONS NOTED PREVAIL. NOTIFY ARCHITECT IN CASE OF DISCREPANCY.
- HORIZONTAL AND VERTICAL DIMENSIONS ARE MINIMUM DIMENSIONS. CLEARANCES ARE GIVEN TO FINISH SURFACES. GC TO VERIFY ALL CLEARANCES. NOTIFY ARCHITECT IN CASE OF DISCREPANCY.

ARCHITECTURAL ABBREVIATIONS

ATE	ARCHITECT/ENGINEER	GL	GLASS	SCT	STRUCTURAL CLAY TILE
AB	AIR BARRIER	GMP	GUARANTEED MAXIMUM PRICE	SD	SOAP DISPENSER
ABS	ASBESTOS	GR	GUARD RAIL	SECY	SECRETARY
ACC	ADA ACCESSIBLE	GR	GRADE	SF	SQUARE FEET
ACR	ACRYLIC	GRS	GALVANIZED RIGID STEEL	SG	SPANDREL FLEET
ACT	ACOUSTIC CEILING TILE	GWB	GYPSUM WALL BOARD	SGL	SPECIALTY GLASS
AD	ACCESS DOOR	GYP	GYPSUM	SGL	SINGLE
ADJ	ADJUSTABLE	HC	HOLLOW CORE	SGV	SINGLE GAS VALVE
ADJT	ADJACENT	HD	HAND DRYER	SH	SHOWER
ADMIN	ADMINISTRATION	HDF	HIGH DENSITY FIBERBOARD	SHM	SECURITY HOLLOW METAL
AEC	AUTOMATED EXTERNAL DEFIBRILLATORS	HDR	HEADER	SLNT	SLANT
AL	ALUMINUM	HDWD	HARDWOOD	SM	SHEET METAL
ALUM	ALUMINUM	HDWR	HARDWARE	SND	SANITARY NAPKIN DISPOSAL
AP	ACCESS PANEL	HM	HOLLOW METAL	SNV	SANITARY NAPKIN VENDOR
APC	ACOUSTIC PANEL CEILING	HR	HOUR	SO	SENSOR OPERATED
ASPH	ASPHALT	HR	HANDRAIL	SPL	SOUND PRESSURE LEVEL
AUTO	AUTOMATIC	HS	HARDWARE SET	SQ	SQUARE
AVG	AVERAGE	HSS	HOLLOW STRUCTURAL SHAPE	SR	SURFACE MOUNTED ELECTRICAL RACEWAY
AWP	ACOUSTIC WALL PANEL	HVAC	HEATING VENTILATING AND AIR CONDITIONING	SS	SOLID SURFACE
B.O.	BOTTOM OF	IAW	IN ACCORDANCE WITH	SSA	STORM SHELTER AREA
BCS	BABY CHANGING STATION	ID	INSIDE DIAMETER	SSM	SOLID SURFACE
BD	BOARD	IF	INSIDE FACE	SSS	STAINLESS STEEL SHELF
BLK	BLOCK	IIP	INSULATED INFILL PANEL GLASS	SST	STAINLESS STEEL
BLKG	BLOCKING	IJ	ISOLATION JOINT	ST	STONE
BLKHD	BULKHEAD	IS	IN JOIST SPACE	STAGD	STAGGERED
BM(S)	BEAM(S)	INC	INCLUDE(ING)	STC	SOUND TRANSMISSION CLASS
BOT	BOTTOM	INSUL	INSULATION	STGR	STRINGER
BRDG	BRIDGING	JAN	JANITOR	SUBFL	SUBFLOOR
BRG	BEARING	JBE	JOIST BEARING ELEVATION	SUL	SULPHUR
BRKT	BRACKET	JBX	JUNCTION BOX	SURF	SURFACE
BT	BATHTUB	JCT	JUNCTION	SUSP	SUSPENDED
BTWN	BETWEEN	JFB	JOINT FILLER BOARD	SVF	SHEET VINYL FLOORING
CAB	CABINET	JJB	JOIST	SVF	SERVICE FIXTURE
CBD	CHALKBOARD	JT	JOINT	SVG	SERVICE FIXTURE GROUP
CER	CERAMIC	KCJ	KEYED CONSTRUCTION JOINT	T	TREAD
CF	CUBIC FEET	KD	KNOCKDOWN	TAG	TONGUE AND GROOVE
CFCI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED	KH	KITCHEN HOOD	T.O.	TOP OF
CFMF	COLD-FORMED METAL FRAMING	KIT	KITCHEN	TAN	TANGENT
CG	CLEAR FLOAT GLASS	L	ANGLE	TB	TOWEL BAR
CGD	CORNER GUARD	LAB	LABORATORY	TBO	TACK BOARD
CI	CAST IRON	LAM	LAMINATED	TC	TOILET COMPARTMENT PARTITION
CIG	CLEAR INSULATING GLASS	LAV	LAVATORY	TCR	TERRAZZO
CIP	CAST IN PLACE	LBR	LUMBER	TFG	TINTED FLOAT GLASS
CJ	CONTROL JOINT	LDG	LOADING	TH	TEMPERED GLASS
CJA	CONTROL JOINT ABOVE	LF	LINEAR FOOT	THK	THRESHOLD
CLO	CLOSET	LG	LENGTH (LONG)	THK	THICKNESS
CLR	CLEAR	LN	LINER	TIM	TENANT IMPROVEMENT
CMU	CONCRETE MASONRY UNIT	LNO	LINOLEUM	TIG	TINTED INSULATING GLASS
COL	COLUMN	LKR	LOCKER	TMR	TILT MIRROR UNIT
COM	COMMON	LOC	LOCATION	TOL	TOILET
COMB	COMBINATION	LONG	LONGITUDINAL	TOP	TOP OF PAVING
COMM	COMMUNICATIONS	LSC	LIFE SAFETY CODE	TRANS	TRANSVERSE
COMPR	COMPRESSIBLE	LTD	LUXURY VINYL TILE	TT	TERRAZZO TILE
CONF	CONFERENCE	LVT	LUXURY VINYL TILE	TTD	TOILET TISSUE DISPENSER
CONFIG	CONFIGURATION	MAG	MAGNETIC	TTG	TINTED TEMPERED FLOAT GLASS
CORR	CORRIDOR	MAINT	MAINTENANCE	TTG	TINTED TEMPERED INSULATING GLASS
CP	COVER PLATE	MAN	MANUAL	TW	TACK WALL
CPT	CARPET	MAS	MASONRY	UL	UNDERWRITERS LABORATORIES
CR	CHAIR RAIL	MATL	MATERIAL	UR	URNAL
CS	COUNTERSINK	MB	MOP BASIN	US	UTILITY SHELF
CSJ	CONSTRUCTION JOINT	MBD	MARKER BOARD	UTIL	UTILITY
CSWK	CASEWORK	MBH	MOPBROOM HOLDER	VB	VAPOR BARRIER
CT	CERAMIC TILE	MC	MEDICINE CABINET	VB	VINYL BASE
CTG	CLEAR TEMPERED FLOAT GLASS	MEMB	MEMBRANE	VCB	VENTED COVE BASE
CTIG	CLEAR TEMPERED INSULATING GLASS	MH	MANTLE	VF	VINYL FLOOR
CUP	CUP	MTD	MOUNTED	VOC	VOLATILE ORGANIC COMPOUND
CU	CUP	MTG	MOUNTING	VOL	VOLUME
CUJ	COMBINATION UNIT	MUL	MULLION	VP	VENEER PLASTER
CV	CONDOM VENDOR	NC	NOISE CRITERIA	VTL	VINYL TILE
CY	CUBIC YARD	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION	VWC	VINYL WALL COVERING
CYL	CYLINDER	NOM	NOMINAL	W	WIDE
DB	DECIBEL	O to O	OUT TO OUT	WB	WALL BASE
DBL	DOUBLE	OA	OVERALL	WC	WATER CLOSET
DC	DUST COLLECTOR	OFCl	OWNER FURNISHED CONTRACTOR INSTALLED	WC	WALL COVERING
DEPR	DEPRESSION(IONED)	OFF	OFFICE	WCL	WATER CLOSET/LAVATORY COMBINATION
DEPT	DEPARTMENT	OFI	OWNER FURNISHED OWNER INSTALLED	WD	WOOD
DET	DETENTION	OH	OPPOSITE HAND	WDF	WOOD FLOORING
DF	DRINKING FOUNTAIN	OPG(S)	OPENING(S)	WDW	WINDOW
DG	DOOR GRILLE	OSHA	OPERATIONAL SAFETY AND HEALTH ADMINISTRATION	WG	POLISHED WIRE GLASS
DIAL	DIAMETER	OTB	OPEN TO BELOW	WI	WROUGHT IRON
DPMG	DAMP-PROOFING	OVFL	OVERFLOW	WOM	WALK OFF MAT
DR	DOOR	P	PAINT	WR	WASTE RECEPTACLE
DSN	DOWNSPOUT NOZZLE	PAN B	PANIC BOLT	WRB	WEATHER RESISTANT BARRIER
DW	DISHWASHER	PB	PARTICLE BOARD	WW	WARM WHITE
DWL(S)	DOWEL(S)	PC	PRECAST CONCRETE	WWF	WELDED WIRE FABRIC
DWR	DRAWER	PCD	PAPER CUP DISPENSER	YD	YARD
EB	EXPANSION BOLT	PCT	PORCELAIN CERAMIC TILE		
EE	EACH END	PD	PANIC DEVICE		
EEW	EMERGENCY EYE WASH	PERF	PERFORATED		
EEWS	EMERGENCY EYE WASH SHOWER	PERP	PERPENDICULAR		
EFF	EFFICIENCY	PG	PATTERN GLASS		
EJ	EXPANSION JOINT	PIC	PORTABLE INSTRUMENT CONNECTION		
ELAS	ELASTOMERIC	PIG	PATTERN INSULATING GLASS		
ELAS	ELEVATOR	PL	PLATE		
EMER	EMERGENCY	PL	PROPERTY LINE		
ENCL	ENCLOSURE	PLAM	PLASTIC LAMINATE		
ENTR	ENTRANCE	PLBG	PLUMBING		
ERF	EPOXY RESIN FLOORING	PAR	PREFABRICATED		
EUI	ENERGY USE INTENSITY	PROJ	PROJECT(OR) (ION)		
EW	EACH WAY	PS	PROJECTION SCREEN		
EW	ELECTRIC WATER COOLER	PT	POINT		
EXP	EXPANSION	PTD	PAPER TOWEL DISPENSER		
EXP	EXPOSED	PTDR	COMBINATION TOWEL DISPENSER/RECEPTACLE		
F	FABRIC	PTN	PARTITION		
F.O.	FACE OF	PVC	POLYVINYL CHLORIDE		
FAB	FABRICATED(ION)	PWL	SOUND POWER LEVEL		
FAB	FACE BRICK	QGV	QUAD GAS VALVE		
FD	FLOOR DRAIN	QT	QUARRY TILE		
FDN	FOUNDATION	QTR RND	QUARTER ROUND		
FE	FIRE EXTINGUISHER	R	RISER		
FE	FIRE EXTINGUISHER CABINET	RAD	RADIUS		
FF	FINISH FLOOR	RB	RUBBER BASE		
FH	FIRE HYDRANT	RC	REMOTE CONTROL		
FHC	FIRE HOSE CABINET	RCP	REFLECTED CEILING PLAN		
FIG	FIGURE	RD	ROOF DRAIN		
FLX	FLASHING	REF	REFERENCE		
FLX	FLEXIBLE	REFL	REFLECTED		
FLG	FLOORING	REM	REMOVABLE		
FLM	FULL LENGTH MIRROR	RESIL	RESILIENT		
FLOR	FLUORESCENT	RF	RESILIENT FLOORING		
FO	FINISH OPENING	RF	RUBBER FLOOR		
FOC	FACE OF CONCRETE	RFM	RECESSED FLOOR MAT		
FOF	FACE OF FINISH	RH	ROBE HOOK		
FOM	FACE OF MASONRY	RHC	ROUGH IN AND CONNECT		
FOS	FACE OF STUD	S	SINK		
FOW	FACE OF WALL	SAT	SATURATED ACOUSTIC TREATMENT		
FP	FIREPROOFING	SAW	SOUND ABSORBING WALL UNITS		
FR	FIRE RESISTANT	SB	SPLASH BLOCK		
FRP	FIBERGLASS REINFORCED PANEL	SC	SOLID CORE		
FRT	FIRE RESISTANCE TREATED	SC	SHOWER CURTAIN		
FSS	FLOOR SINK	SCD	SHOWER CURTAIN HOOK		
FTG	FOOTING	SCR	SHOWER CURTAIN ROD		
FVC	FIRE VALVE CABINET				
FWC	FABRIC WALL COVERING				
G	GROUT				
GA	GAUGE				
GAL	GALLON				
GALV	GALVANIZED				
GB	GRAB BAR				
GD	GARBAGE DISPOSAL				
GEN	GENERAL				
GFA	GROSS FLOOR AREA				
GL	GLUE LAMINATED				

ARCHITECTURAL SYMBOLS



GENERAL ARCHITECTURAL NOTES

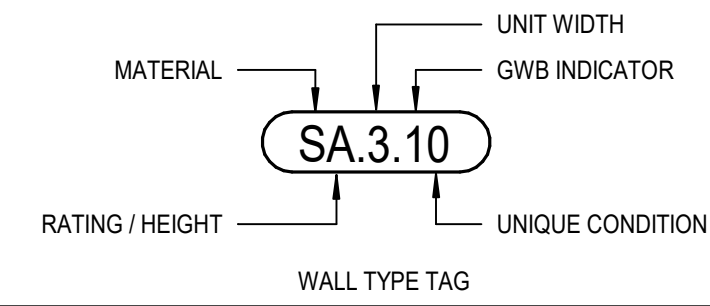
- ALL INTERIOR CMU WALLS SHALL BE 8 INCHES NOMINAL THICKNESS, UNLESS NOTED OTHERWISE. PARTITION TYPES SHALL BE DESIGNATED ON FLOOR PLANS (XX, X, XX, XX). THIS: SEE SHEET A0.1 FOR TYPES. ALL MASONRY WALLS AND INTERIOR STUD WALLS SHALL EXTEND TO UNDERSIDE OF FLOOR OR ROOF DECK ABOVE UNLESS NOTED OTHERWISE. PER PARTITION TYPE.
- PROVISIONS SHALL BE MADE AT ALL FULL HEIGHT NON-BEARING WALLS FOR 1 INCH VERTICAL MOVEMENT OF THE BUILDING STRUCTURE WITHOUT TRANSFER OF COMPRESSIVE LOADS TO WALL. FILL IRREGULARITIES BETWEEN TOP OF WALL AND DECK ABOVE WITH MINERAL WOOL INSULATION OR FIRE STOPPING MATERIALS AS REQUIRED TO MEET FIRE RATING OF RESPECTIVE WALLS. SEE DETAILS ON SHEET XXX.
- SEE STRUCTURAL DRAWINGS FOR BRACING OF NON-LOAD BEARING MASONRY WALLS.
- FURNISH AND INSTALL FIRE-TREATED WOOD BLOCKING OR METAL BACKING PLATE IN METAL STUD PARTITIONS FOR THE PROPER ANCHORAGE OF ALL WALL ATTACHED ITEMS, I.E. TOILET ACCESSORIES, CASEWORK, MILLWORK, WALL-MOUNTED FIXTURES, MARKER BOARDS, TACK BOARDS, DOOR STOPS, AUDIO VISUAL BRACKETS, AND OTHER WALL ATTACHED ITEMS.
- MASONRY CONTROL JOINTS (CJ) AND CONTROL JOINTS ABOVE (CAJ) SHALL BE LOCATED AS SHOWN ON THE FLOOR PLAN AND BUILDING ELEVATIONS, AND WHERE LARGE PLUMBING VENTS OR RISERS OCCUR IN SINGLE WYTHE MASONRY WALLS, AND WHERE MASONRY WALLS BEARING ON THE CONCRETE FLOOR SLAB ABOUT MASONRY WALLS BEARING ON CONCRETE FOOTINGS OR AS INDICATED ON DRAWINGS.

PARTITION TYPES DESCRIPTIONS

MATERIAL DESCRIPTION
S = STEEL (METAL STUDS)
W = WOOD STUDS
H = SHAFT WALLS
M = MASONRY
C = CONCRETE

RATING / HEIGHT
A = FULL HEIGHT / UNDERSIDE OF STRUCT (NOT RATED)
B = 6' ABOVE CEILING (NOT RATED)
C = UNDERSIDE OF CEILING (NOT RATED)
D = PARTIAL HEIGHT (NOT RATED)
E = VARIABLE HEIGHT (NOT RATED)
S = SMOKE PARTITION (NOT RATED)
0 = 0 HOUR RATED (CORRIDOR)
1 = 0.5 HOUR RATED
2 = 1 HOUR RATED
3 = 2 HOUR RATED
4 = 3 HOUR RATED
5 = 4 HOUR RATED

UNIT WIDTH / CONFIGURATION
F = FURRING STRIPS / CHANNELS
1 = 1 5/8" METAL
2 = 2 1/2" METAL / 1 1/2" WOOD
3 = 3 5/8" METAL
4 = 4" METAL / 3 1/2" WOOD / 3 5/8" CMU
6 = 6" METAL / 5 1/2" WOOD / 5 5/8" CMU / 8" CONC
8 = 8" METAL / 7 1/4" WOOD / 7 5/8" CMU / 8" CONC
10 = 10" CONC
12 = 11 5/8" CMU / 12" CONC
X = NON-STANDARD WIDTH. SEE DETAILS
D = DOUBLE STUD FRAMING
S = STAGGERED STUD FRAMING
GYPSUM WALLBOARD INDICATOR (NOT INCLUDING SHAFT LINER)
0 = NO GWB
1 = ONE LAYER, TAG SIDE
2 = ONE LAYER, EACH SIDE
3 = TWO LAYERS TAG SIDE, ONE LAYER OTHER
4 = TWO LAYERS, EACH SIDE
5 = TWO LAYERS TAG SIDE, NO GWB OTHER
6 = THREE LAYERS, EACH SIDE



Autodesk Docs/17-24-103-00 Mauldin HS Stadium Seating, Restroom Bldg/17-24-103-00 Mauldin HS Stadium Seating, Restroom
Bldg/17-24-103-00 Mauldin HS Stadium Seating, Restroom Bldg/17-24-103-00 Mauldin HS Stadium Seating, Restroom
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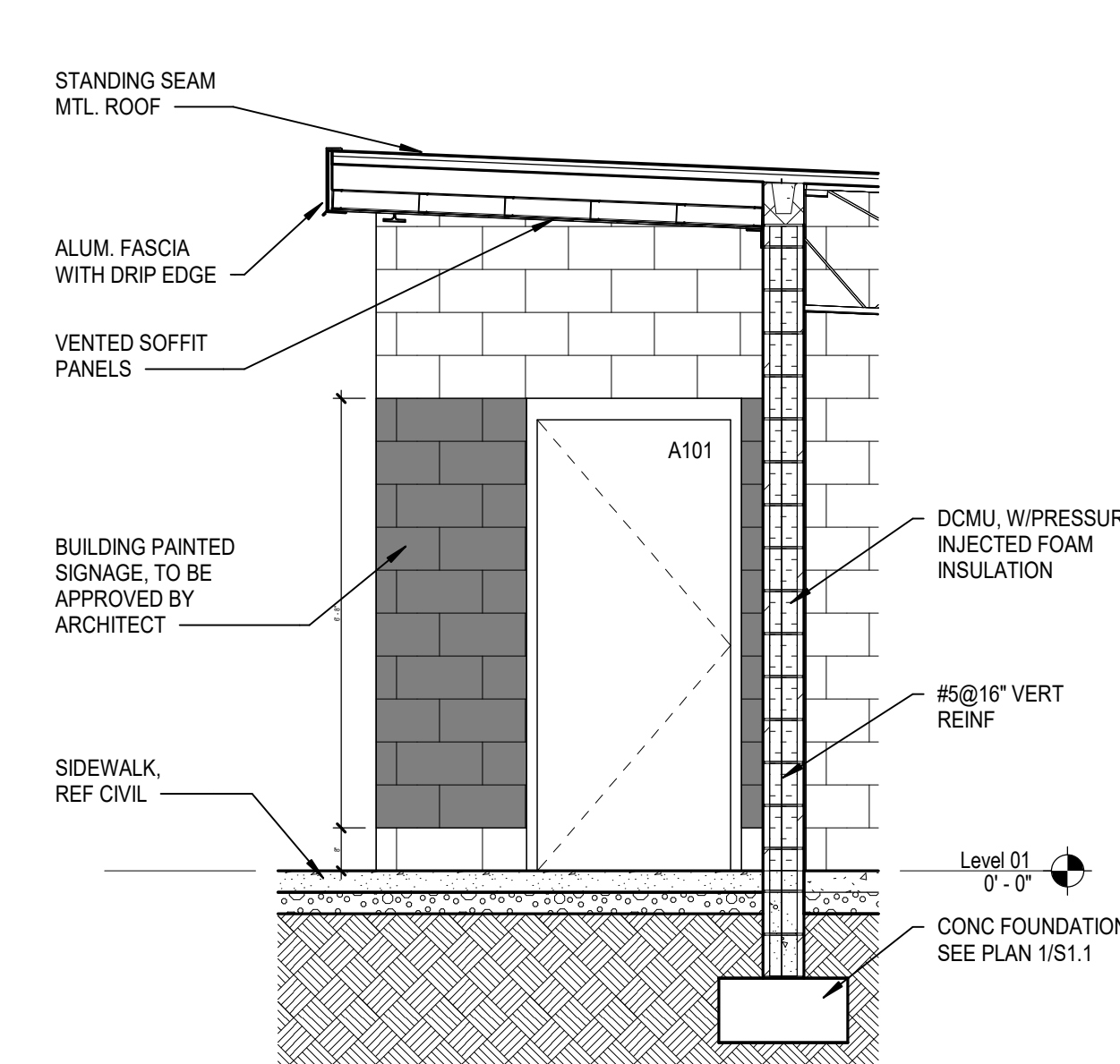
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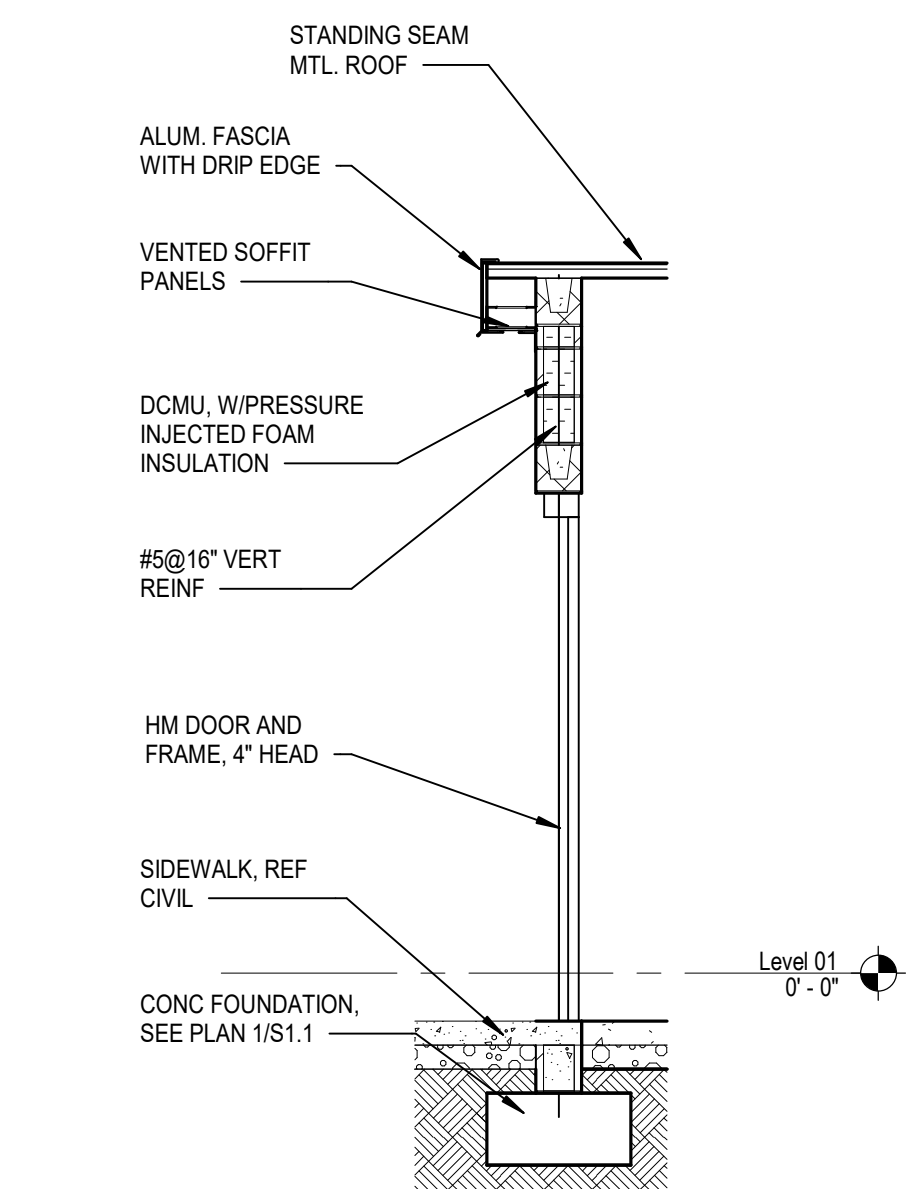
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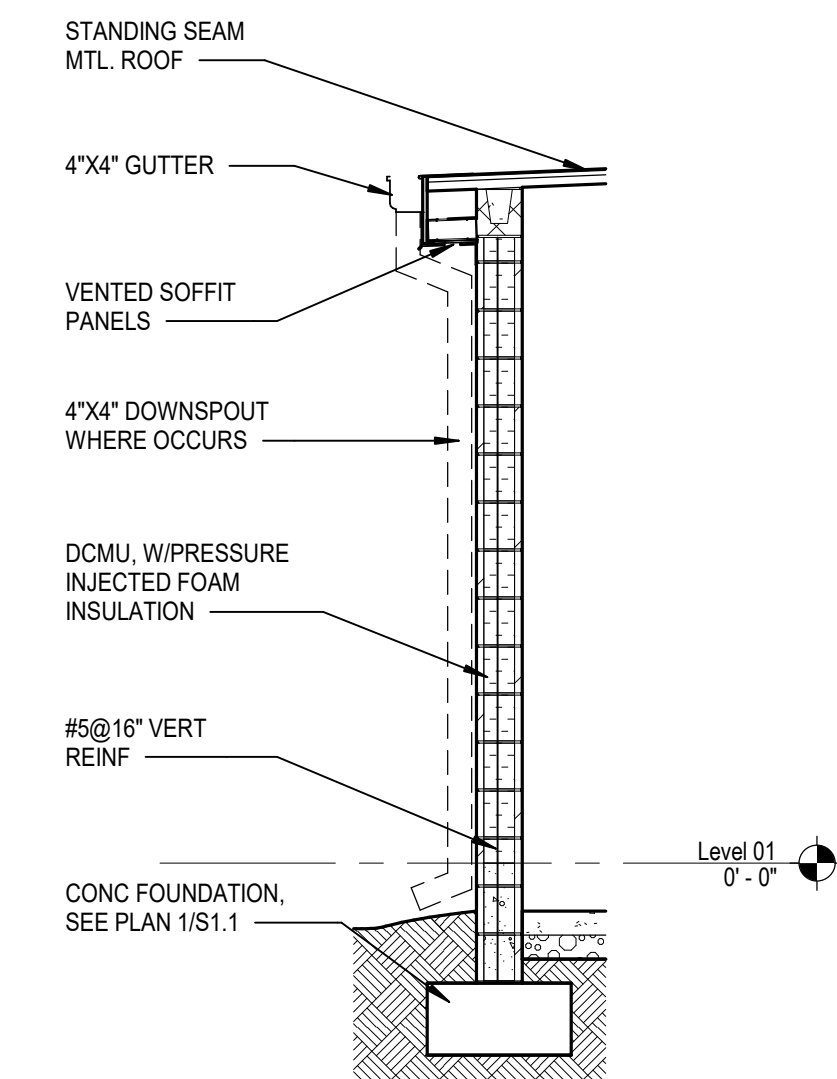
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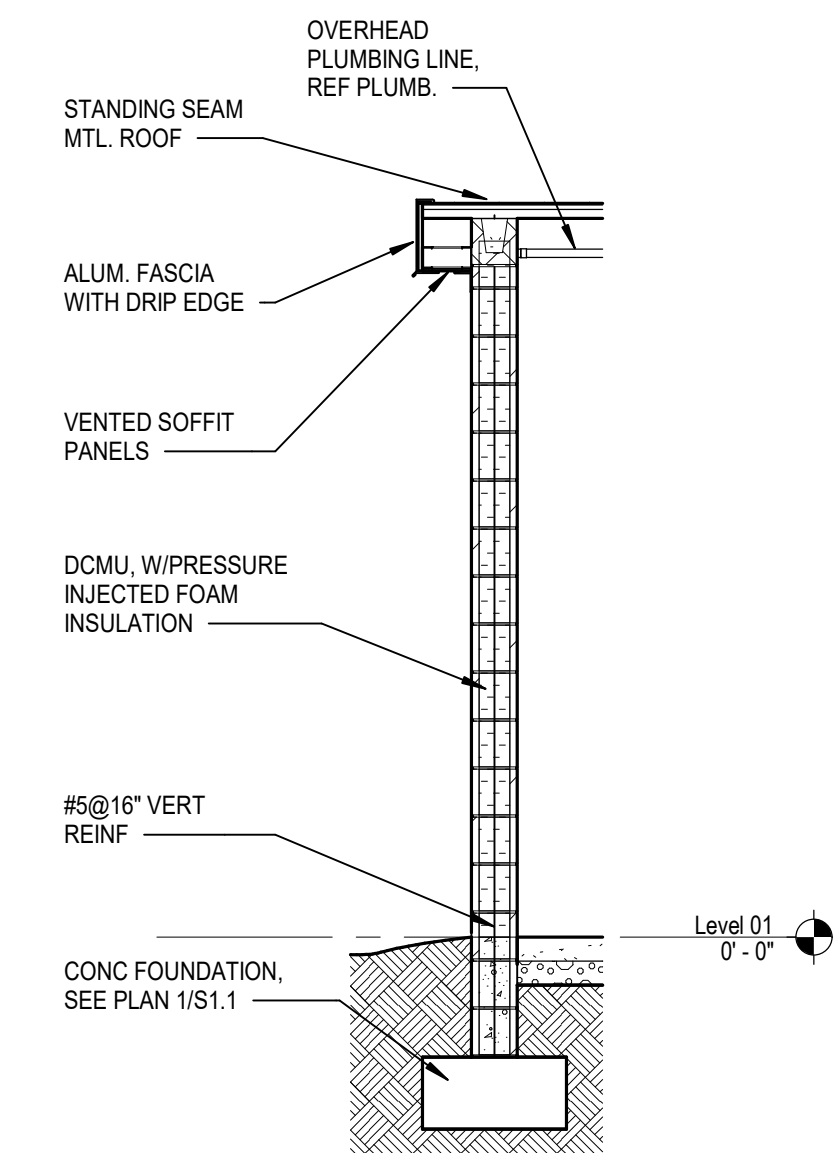
3A WALL SECTION
A1.1 SCALE: 3/8" = 1'-0"



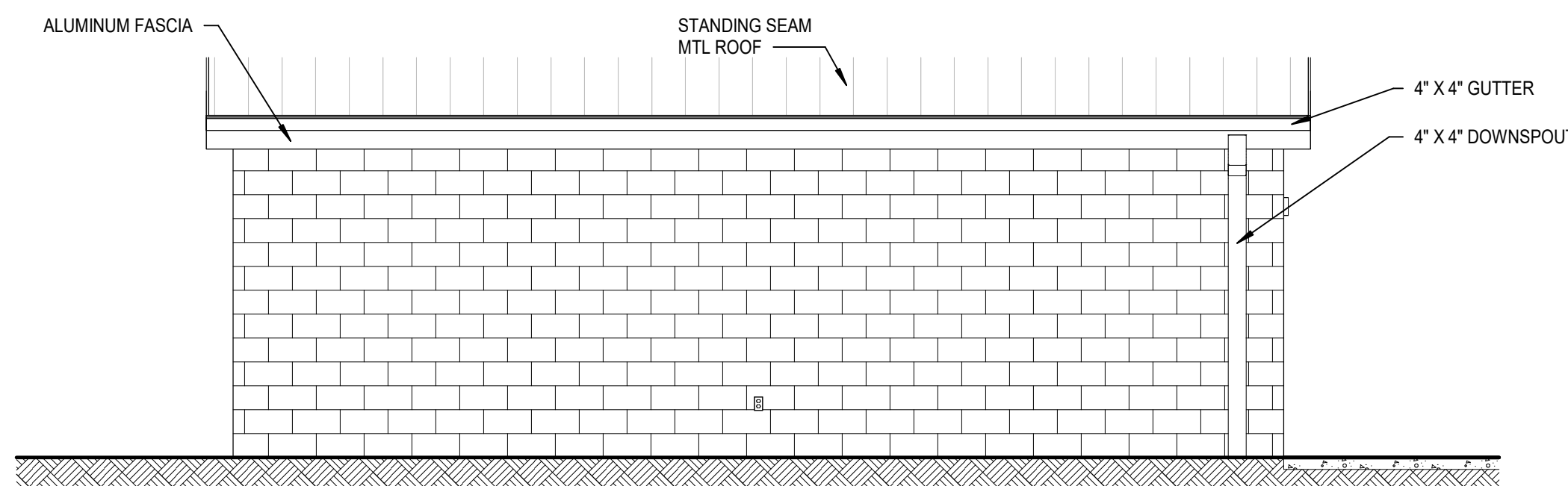
3B WALL SECTION
A1.1 SCALE: 3/8" = 1'-0"



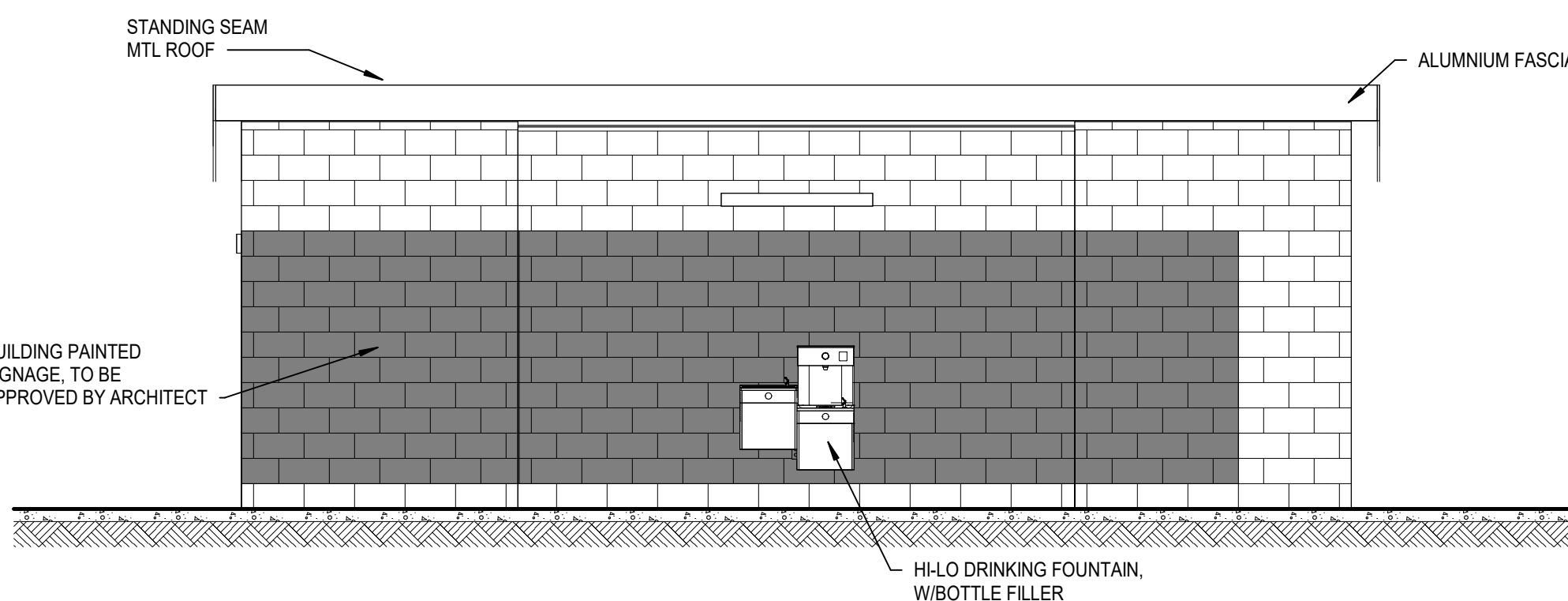
3C WALL SECTION
A1.1 SCALE: 3/8" = 1'-0"



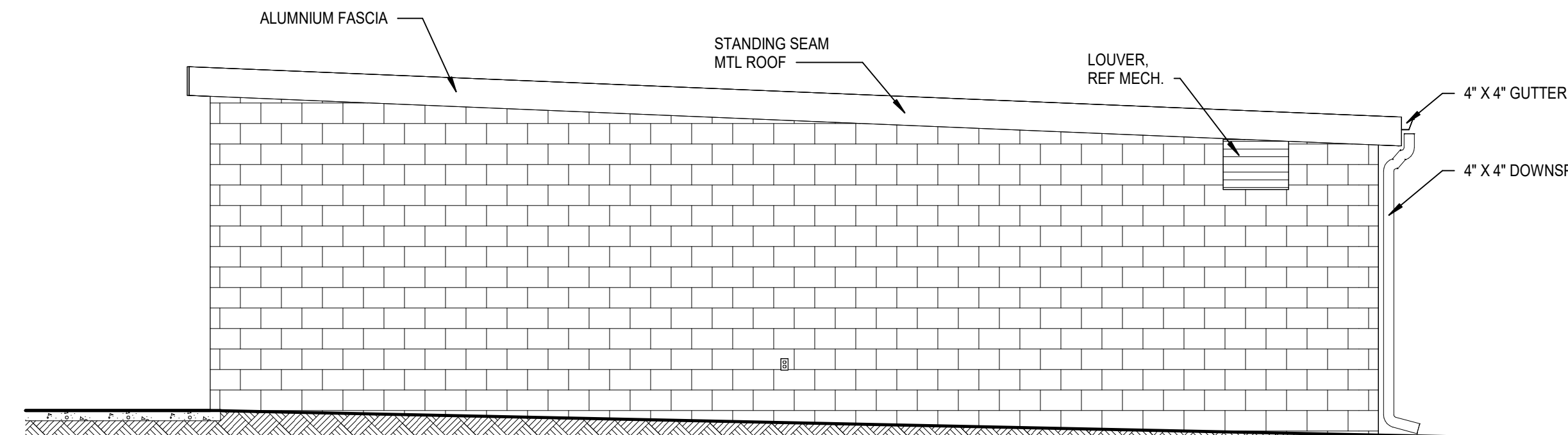
3D WALL SECTION
A1.1 SCALE: 3/8" = 1'-0"



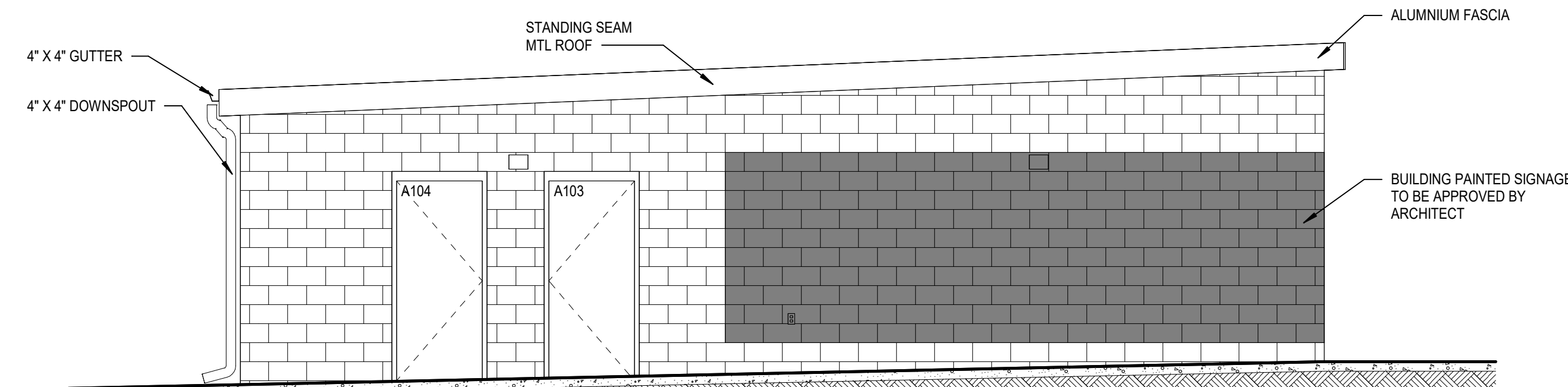
4A EXT. ELEVATION
A1.1 SCALE: 1/4" = 1'-0"



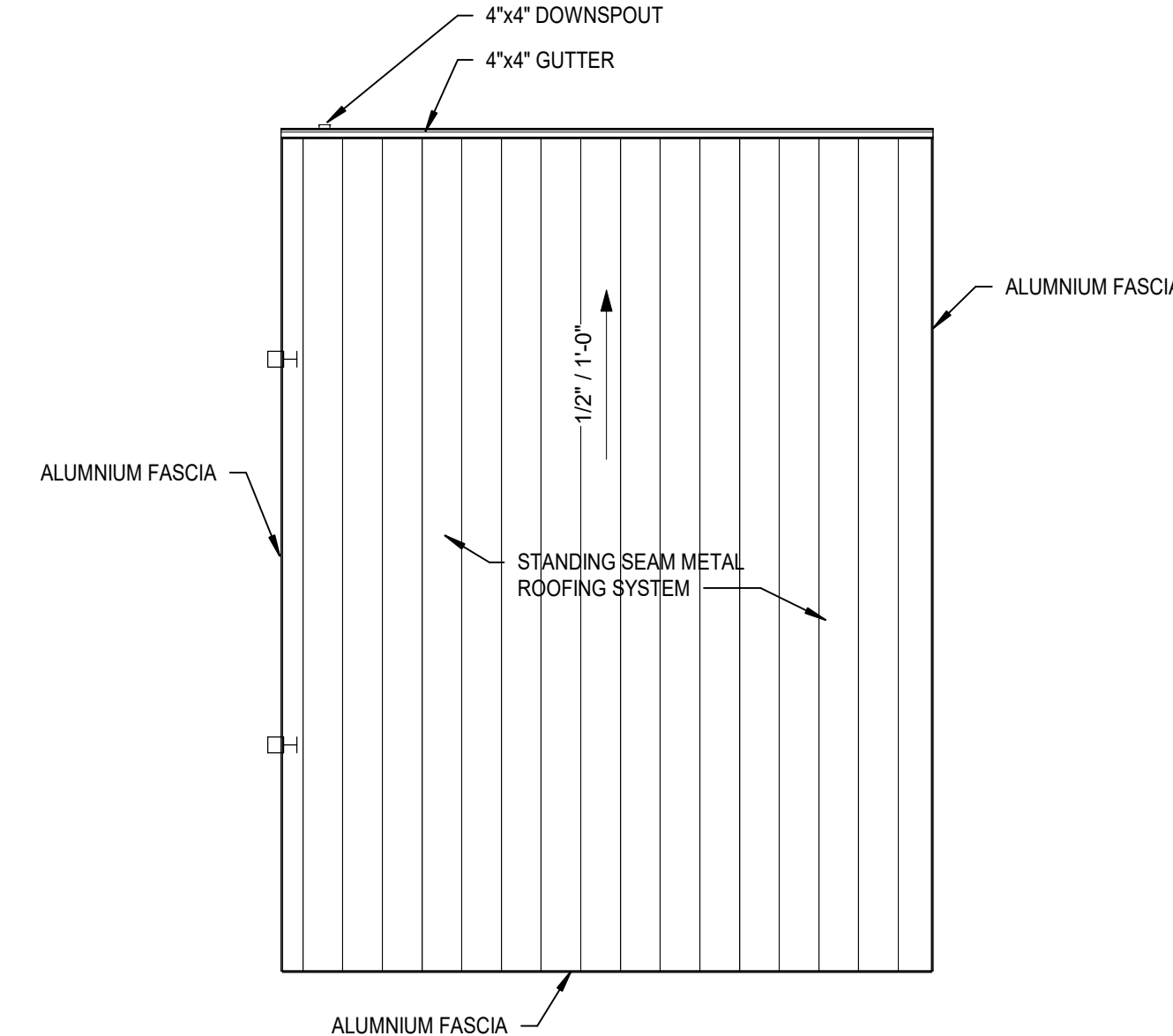
5A EXT. ELEVATION
A1.1 SCALE: 1/4" = 1'-0"



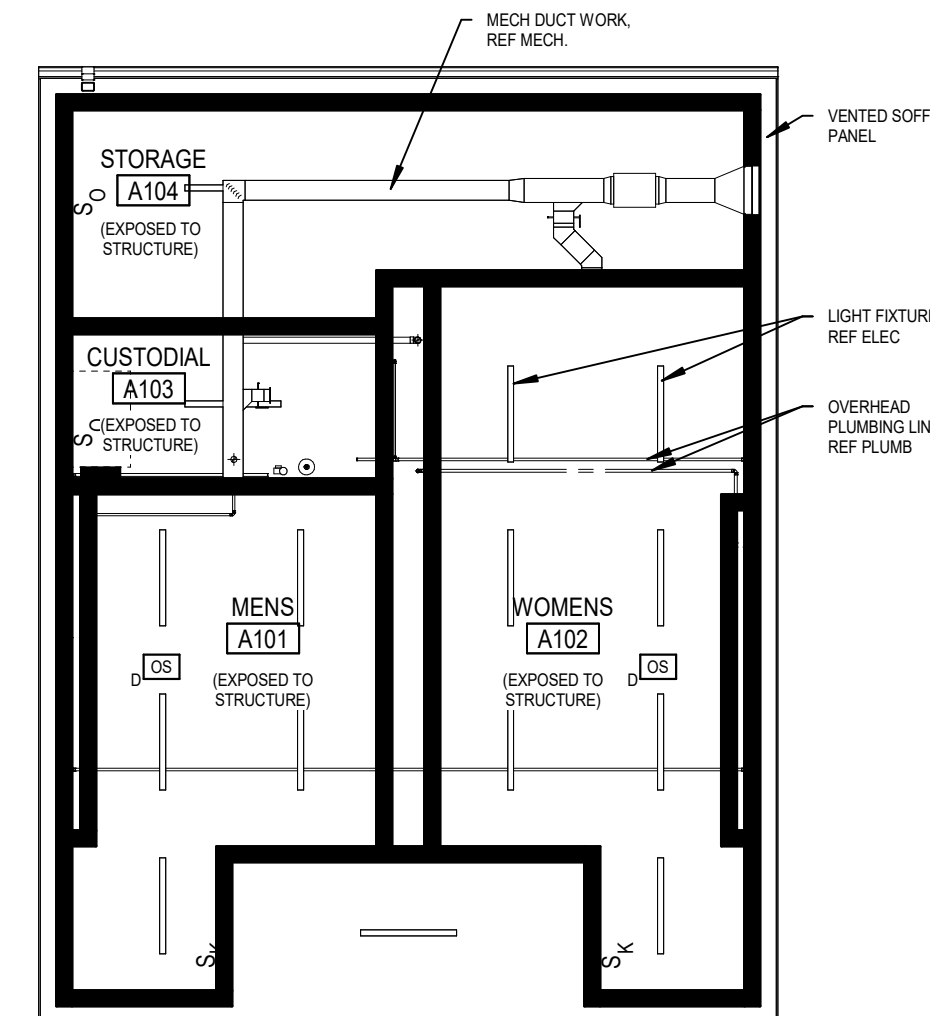
4C EXT. ELEVATION
A1.1 SCALE: 1/4" = 1'-0"



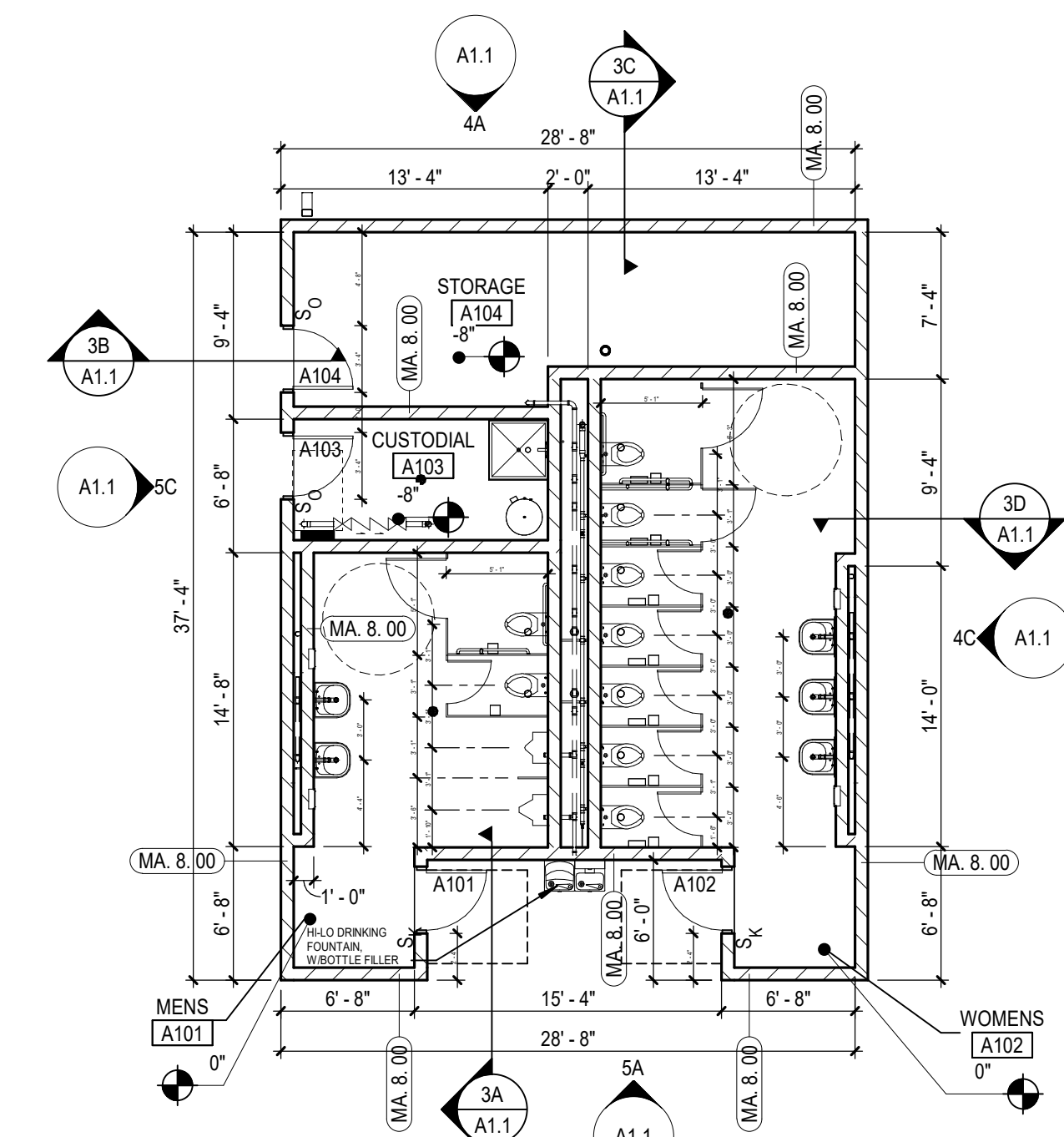
5C EXT. ELEVATION
A1.1 SCALE: 1/4" = 1'-0"



2E ROOF PLAN
A1.1 SCALE: 1/8" = 1'-0"



3E CEILING PLAN
A1.1 SCALE: 1/8" = 1'-0"



5E FLOOR PLAN
A1.1 SCALE: 1/8" = 1'-0"

GENERAL ARCHITECTURAL NOTES

- ALL INTERIOR CMU WALLS SHALL BE 8 INCHES NOMINAL THICKNESS, UNLESS NOTED OTHERWISE. PARTITION TYPES SHALL BE DESIGNATED ON FLOOR PLANS (XX X XX). THIS: SEE SHEET A1.1 FOR TYPES. ALL MASONRY WALLS AND INTERIOR STUD WALLS SHALL EXTEND TO UNDERSIDE OF FLOOR OR ROOF DECK ABOVE UNLESS NOTED OTHERWISE. PER PARTITION TYPE.
- PROVISIONS SHALL BE MADE AT ALL FULL HEIGHT NON-BEARING WALLS FOR 1-INCH VERTICAL MOVEMENT OF THE BUILDING STRUCTURE WITHOUT TRANSFER OF COMPRESSIVE LOADS TO WALL. FILL IRREGULARITIES BETWEEN TOP OF WALL AND DECK ABOVE WITH MINERAL WOOL INSULATION OR FIRE STOPPING MATERIALS AS REQUIRED TO MEET FIRE RATING OF RESPECTIVE WALLS. SEE DETAILS ON SHEET XX.X.
- SEE STRUCTURAL DRAWINGS FOR BRACING OF NON-LOAD BEARING MASONRY WALLS.
- FURNISH AND INSTALL FIRE-TREATED WOOD BLOCKING OR METAL BACKING PLATE IN METAL STUD PARTITIONS FOR THE PROPER ANCHORAGE OF ALL WALL ATTACHED ITEMS, I.E. TOILET ACCESSORIES, CASEWORK, MILLWORK, WALL-MOUNTED FIXTURES, MARKER BOARDS, TACK BOARDS, DOOR STOPS, AUDIO VISUAL BRACKETS, AND OTHER WALL ATTACHED ITEMS.
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ROOF PLAN GENERAL NOTES

- ROOF PLAN GENERAL NOTES APPLY TO ALL ROOF PLAN SHEETS.
- ROOF SLOPES ARE CREATED BY SLOPING THE ROOF STRUCTURE UNLESS NOTED OTHERWISE. SEE STRUCTURAL DRAWINGS FOR ELEVATIONS OF THE HIGH AND LOW POINTS TO DETERMINE PROPER TAPER IN INSULATION.
- SEE STRUCTURAL DRAWINGS FOR FRAMING AROUND ROOF PENETRATIONS.
- COORDINATE THE SIZE AND LOCATION OF ROOF PENETRATIONS FOR MECHANICAL AND ELECTRICAL EQUIPMENT. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR PENETRATIONS NOT SHOWN ON THIS DRAWING.

REFLECTED CEILING PLAN GENERAL NOTES

- IN AREAS WITH EXPOSED STRUCTURE CEILINGS, COORDINATE EXACT LOCATIONS OF MECHANICAL GRILLES, DIFFUSERS, DUCTWORK AND ELECTRICAL FIXTURES WITH EACH REPRESENTATIVE SUBCONTRACTOR.
- ALL WALLS EXTEND TO UNDERSIDE OF DECK EXCEPT THOSE SHOWN SHADED IN WHICH GYPSUM BOARD OR MASONRY EXTENDS MIN 4 INCHES ABOVE FINISHED CEILING. ALL METAL STUDS EXTEND TO UNDERSIDE OF FLOOR OR ROOF DECK.

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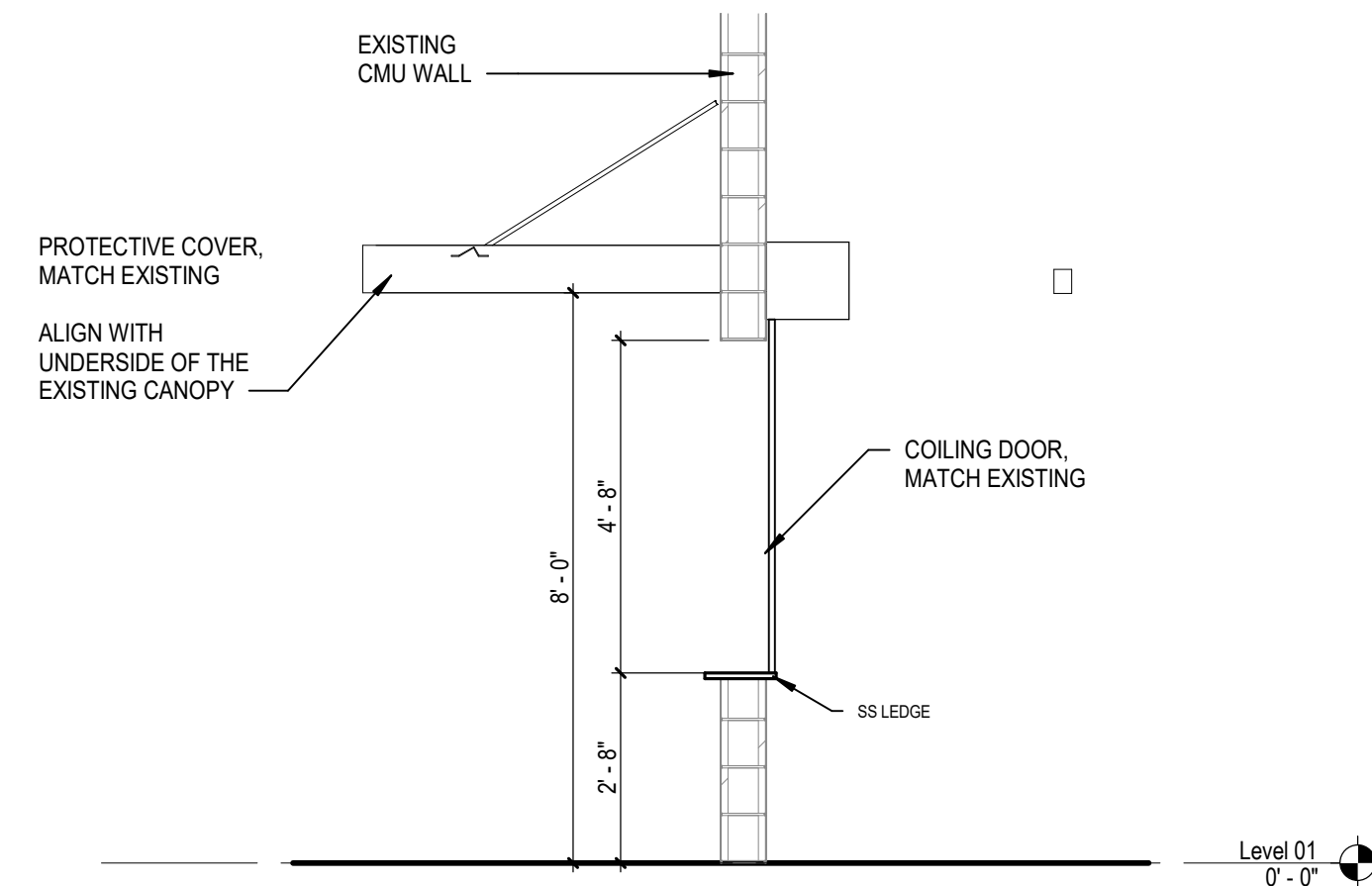
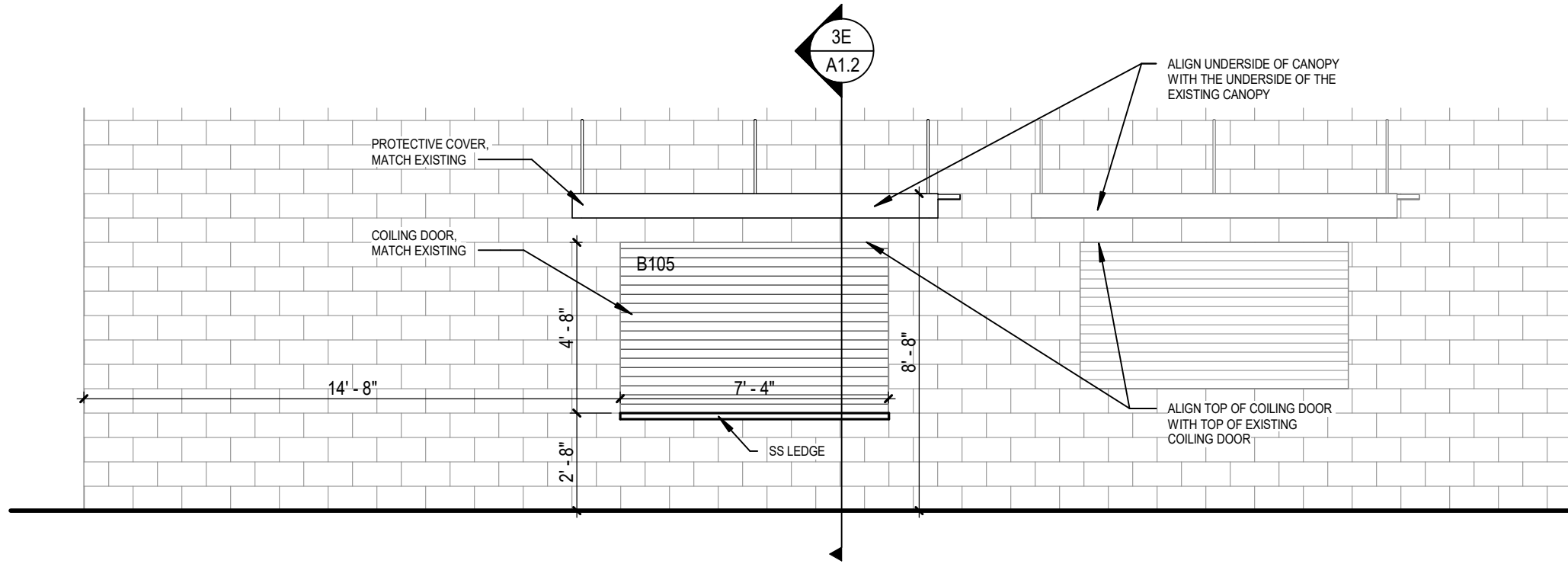
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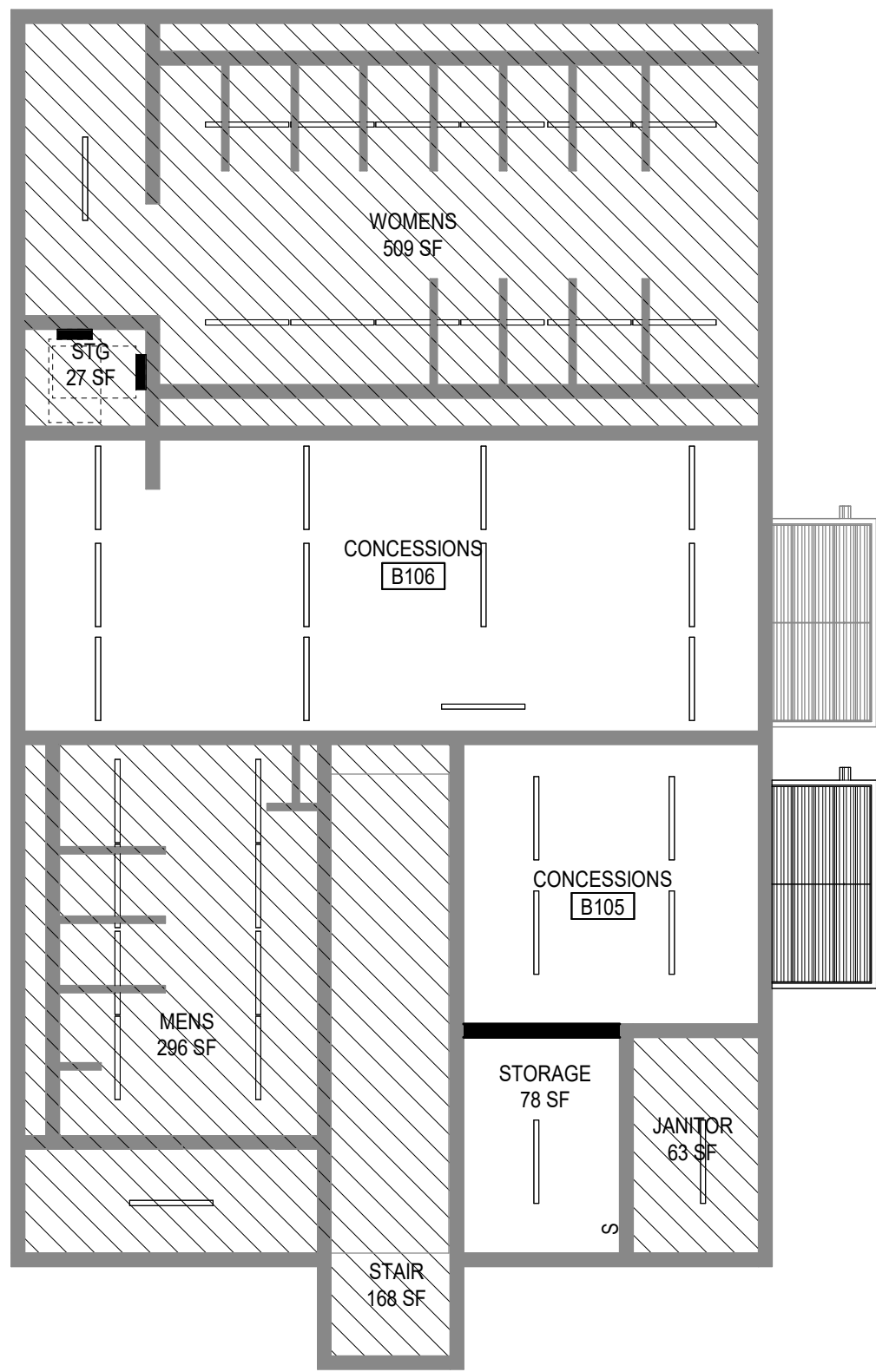
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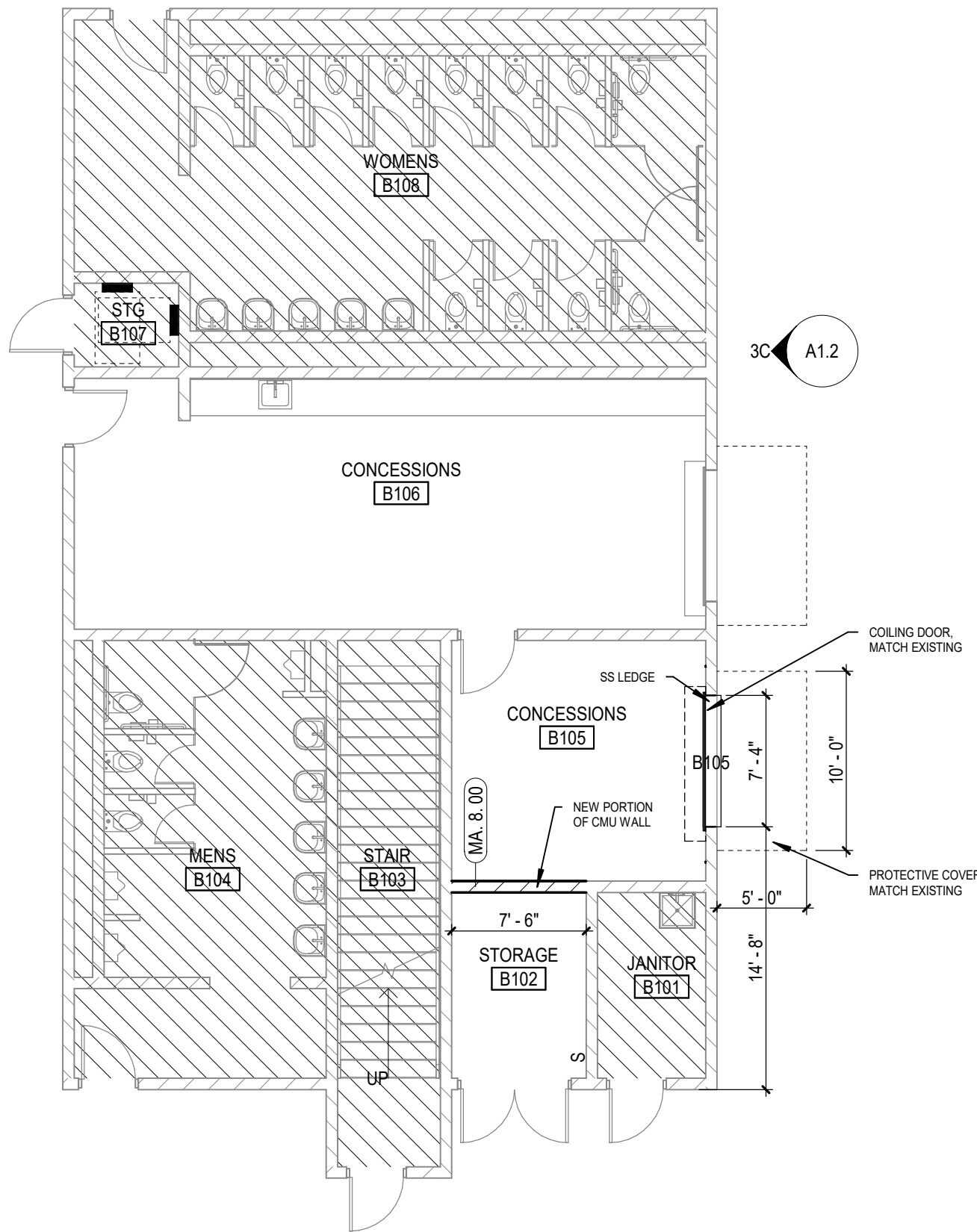
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MHS - Concessions Ext Elevation 01
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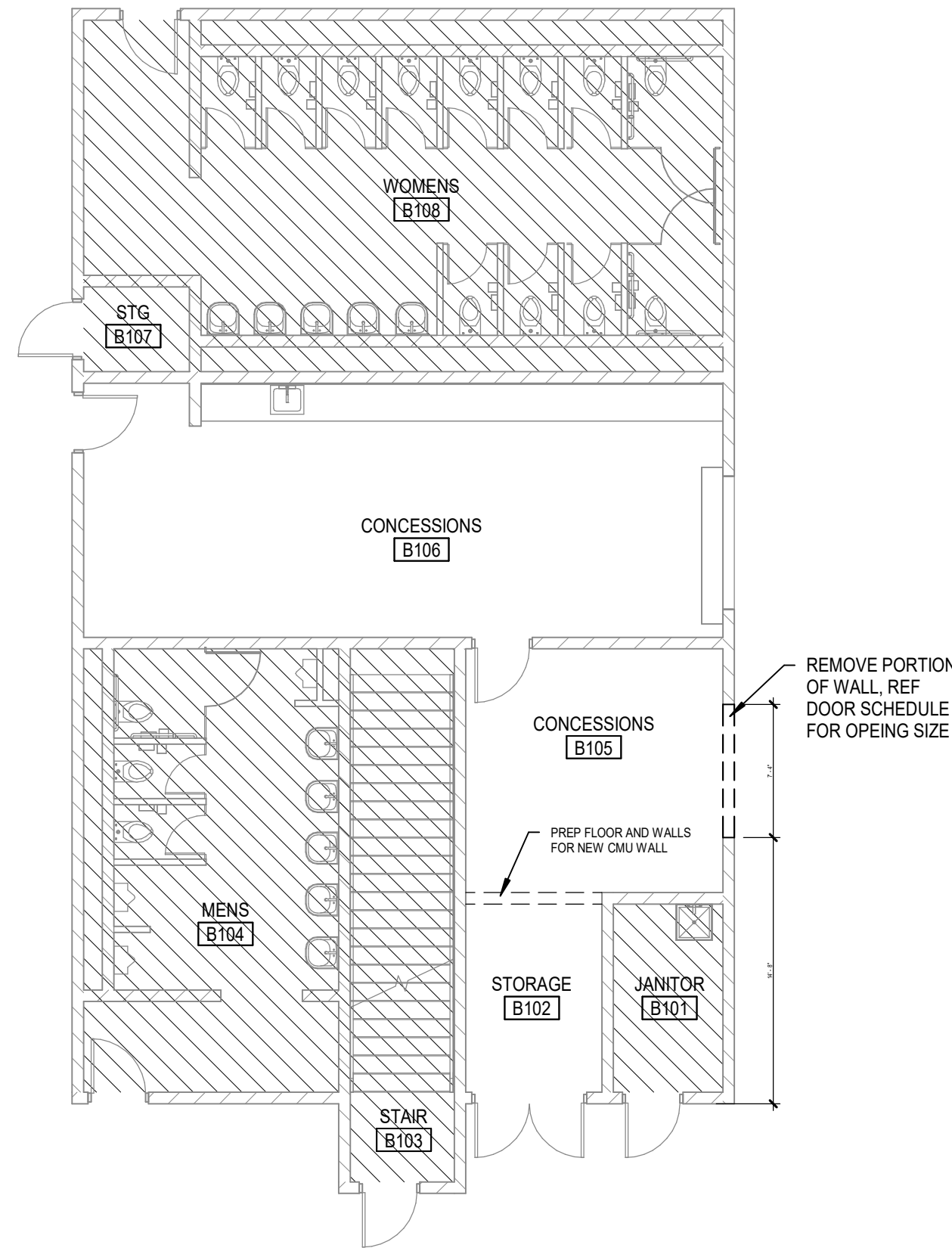
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A1.2
CEILING PLAN
SCALE: 1/8" = 1'-0"



3D
A1.2
FLOOR PLAN
SCALE: 1/8" = 1'-0"



3E
A1.2
DEMOLITION PLAN
SCALE: 1/8" = 1'-0"



GENERAL ARCHITECTURAL NOTES

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DEMOLITION GENERAL NOTES

DEMOLITION NOTES APPLY TO ALL DEMOLITION SHEETS.

THE CONTRACTOR SHALL:

- COORDINATE ALL DEMOLITION AND PHASING EFFORTS WITH THE ARCHITECT AND OWNER'S REPRESENTATIVE. EVERY EFFORT SHALL BE MADE TO MINIMIZE DISRUPTION OF OWNER'S OPERATIONS. EXCESSIVE NOISE OR VIBRATION SHALL BE PRE-APPROVED AND COORDINATED WITH THE OWNER'S REPRESENTATIVE. IN ALL CASES, PROVISIONS SHALL BE MADE FOR USER'S SAFETY.
- COORDINATE ANY DISRUPTION OF UTILITY SERVICES WITH THE OWNER AND AS SPECIFIED.
- MAINTAIN A SECURE, WEATHER-TIGHT ENCLOSURE AT ALL TIMES.
- VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
- REMOVE IN THEIR ENTIRETY ALL EXISTING WALLS, DOORS, MILLWORK, PLUMBING FIXTURES, CEILINGS, SOFFITS, MARKERBOARDS, AND OTHER ITEMS, AS REQUIRED TO EXECUTE THE DEMOLITION/CONSTRUCTION WORK DESCRIBED BY THE DRAWINGS.
- THE OWNER SHALL RESERVE THE RIGHT TO SALVAGE ANY MATERIALS.
- PROVIDE PROTECTION FOR ALL EXISTING BUILDING MATERIALS AND EQUIPMENT FROM DAMAGE DUE TO ANY DEMOLITION OR CONSTRUCTION-RELATED INCIDENT PERFORMED UNDER THIS CONTRACT.
- REPAIR OR REPLACE ITEMS THAT ARE DAMAGED AS A RESULT OF DEMOLITION OR CONSTRUCTION TO MATCH EXISTING FINISH AND/OR CONDITION.
- EXISTING MATERIALS SHALL NOT BE REUSED UNLESS NOTED OTHERWISE OR AS AUTHORIZED BY ARCHITECT.
- VERIFY AND MAINTAIN THE LOCATION OF EXISTING POWER, COMMUNICATION AND DATA CABLES TO PREVENT INTERRUPTION OF THEIR SERVICE.
- PATCH FLOOR, WALL AND CEILING PENETRATIONS RESULTING FROM REMOVAL OR RE-ROUTING OF NEW OR EXISTING PIPING, DUCTWORK, CONDUIT, AND OTHER ITEMS, AS REQUIRED TO MAINTAIN FIRE-RESISTANCE-RATED SEPARATIONS. FINISH AS REQUIRED FOR NEW OR EXISTING ADJACENT SURFACES.
- CAP ALL DISCONNECTED MECHANICAL PIPING LINES WITHIN THE WALL OR FLOOR. PATCH AND FINISH AS REQUIRED TO MATCH NEW OR EXISTING ADJACENT SURFACES.
- SEE MECHANICAL AND ELECTRICAL DRAWINGS AND NOTES FOR FURTHER SEQUENCING AND SCOPE OF WORK.
- WHERE CMU WALLS ARE INDICATED TO BE REMOVED, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCH/FINISH BY REMOVING CMU IN TOOTH-IN PATTERN BOTH SIDES OF DEMOLITION FOR CONTRACTOR TO TOOTH-IN NEW CMU PATCHES.



NOT FOR CONSTRUCTION



GREENVILLE COUNTY SCHOOLS
Inspire | Support | Prepare

MAULDIN HS STADIUM EXPANSION & CAROLINA HS RESTROOM BUILDING

MAULDIN HIGH SCHOOL - 701 E Butler Pk. Mauldin, SC 29662
CAROLINA HIGH SCHOOL - 2725 Anderson Rd, Greenville, SC 29611

DESIGN DEVELOPMENT DOCUMENTS
08.30.2024
REVISIONS

17-24-103-00
MAULDIN HS - CONCESSIONS BUILDING

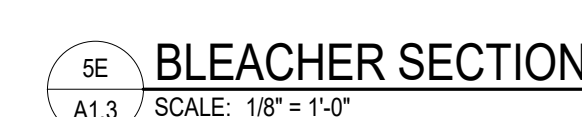
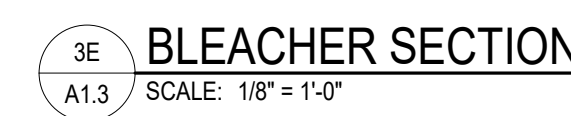
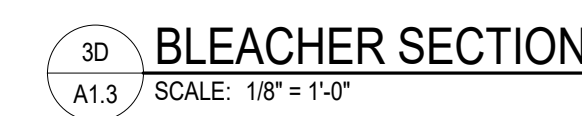
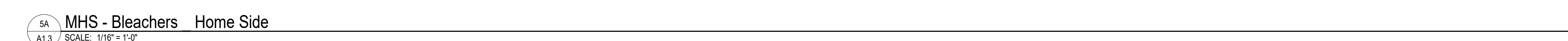
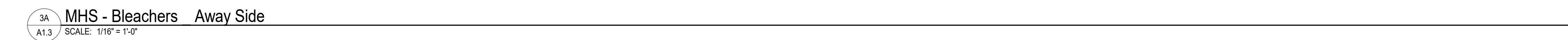
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DEMOLITION NOTES APPLY TO ALL DEMOLITION SHEETS

THE CONTRACTOR SHALL:

- A. COORDINATE ALL DEMOLITION AND PHASING EFFORTS WITH THE ARCHITECT AND OWNER'S REPRESENTATIVE. EVERY EFFORT SHALL BE MADE TO MINIMIZE DISRUPTION OF OWNER'S OPERATIONS. EXCESSIVE NOISE, VIBRATION, AND AIR POLLUTION SHALL BE PRE-APPROVED AND COORDINATED WITH THE OWNER'S REPRESENTATIVE. IN ALL CASES, PROVISIONS SHALL BE MADE TO PROTECT THE ADJACENT PROPERTY.
- B. COORDINATE ANY DISRUPTION OF UTILITY SERVICES WITH THE OWNER AND AS SPECIFIED.
- C. MAINTAIN A SECURE, WEATHER-TIGHT ENCLOSURE AT ALL TIMES.
- D. VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND LOCATIONS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
- E. REMOVE IN THEIR ENTIRETY ALL EXISTING WALLS, DOORS, WINDOWS, CHIMNEYS, FLOORS, CEILING, ROOF, ROOF MEMBERS, MARKERS/BORDS, AND OTHER ITEMS, AS REQUIRED TO EXECUTE THE DEMOLITION/CONSTRUCTION WORK DESCRIBED BY THE CONTRACT DOCUMENTS.
- F. THE OWNER SHALL RESERVE THE RIGHT TO SALVAGE ANY MATERIALS.
- G. PROVIDE PROTECTION FOR ALL EXISTING BUILDING MATERIALS AND EQUIPMENT FROM DAMAGE DUE TO ANY DEMOLITION OR CONSTRUCTION-RELATED INCIDENT PERFORMED UNDER THIS CONTRACT.
- H. REPAIR OR REPLACE ITEMS THAT ARE DAMAGED AS A RESULT OF DEMOLITION OR CONSTRUCTION TO MATCH EXISTING FINISHES.
- I. EXISTING MATERIALS SHALL NOT BE REUSED UNLESS NOTED OTHERWISE OR AS AUTHORIZED BY ARCHITECT.
- J. PREPARE AND MAINTAIN IN THE FIELD RECORDS OF DEMOLITION, POWER, COMMUNICATION AND DATA CABLES TO PREVENT INTERFERENCE OF THEIR SERVICE.
- K. PATCH FLOORS, WALLS, AND CEILING PENETRATIONS RESULTING FROM REMOVAL OF ROOF OR ROOF MEMBERS OR EXISTING FINISHES, DUCTWORK, CONDITE, AND OTHER ITEMS, AS REQUIRED TO MAINTAIN FIRE-RESISTANCE-RATED SEPARATIONS. FINISH AS REQUIRED TO MATCH EXISTING OR RECONSTRUCT ADJACENT WALLS.
- L. CAP ALL DISCONNECTED MECHANICAL PIPES WITHIN THE WALL OR FLOOR. PATCH AND FINISH AS REQUIRED TO MATCH EXISTING FINISHES.
- M. USE MECHANICAL AND ELECTRICAL DRAWINGS AND NOTES FOR FURTHER SEQUENCING AND SCOPE OF WORK.
- N. THE OWNER SHALL ARRANGE FOR THE NECESSARY REMOVAL, PREPARE ADJACENT WALLS TO RECEIVE NEW PATCH/FINISH BY REMOVING GROUT IN TOOTH-PAN PATTERN BOTH SIDES OF DEMOLITION FOR



Autodesk Docs/17-24-103-00 Mauldin HS Stadium Sealing, Restroom
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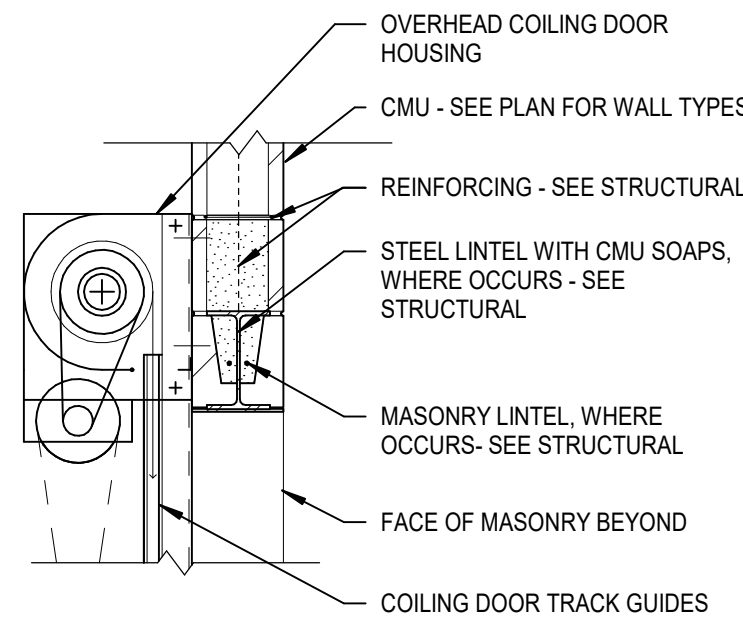
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DOOR AND FRAME SCHEDULE															
NUMBER	NO. OF PANELS	PANEL				FRAME				FIRE RATING	HARDWARE SET	DETAILS			
		WIDTH	HEIGHT	THICKNESS	MATERIAL	GLASS	TYPE	MATERIAL	TYPE			HEAD	JAMB LEFT	JAMB RIGHT	SILL
A101	1	3'-0"	7'-0"	2"	HM	-	F	HM	1	-	-	5A/A3.1	5B/A3.1	5B/A3.1	5C/A3.1
A102	1	3'-0"	7'-0"	2"	HM	-	F	HM	1	-	-	5A/A3.1	5B/A3.1	5B/A3.1	5C/A3.1
A103	1	3'-0"	7'-0"	2"	HM	-	F	HM	1	-	-	5A/A3.1	5B/A3.1	5B/A3.1	5C/A3.1
A104	1	3'-0"	7'-0"	2"	HM	-	F	HM	1	-	-	5A/A3.1	5B/A3.1	5B/A3.1	5C/A3.1
B105	1	7'-4"	4'-8"	2"	STL	-	C	STL	1	-	-	4A/A3.1	4B/A3.1	4B/A3.1	4C/A3.1
C101	1	3'-0"	7'-2"	2"	HM	-	F	HM	1	-	-	5A/A3.1	5B/A3.1	5B/A3.1	5C/A3.1
C102	1	3'-0"	7'-2"	2"	HM	-	F	HM	1	-	-	5A/A3.1	5B/A3.1	5B/A3.1	5C/A3.1
C104	1	3'-0"	7'-2"	2"	HM	-	F	HM	1	-	-	5A/A3.1	5B/A3.1	5B/A3.1	5C/A3.1
C105	1	3'-0"	7'-2"	2"	HM	-	F	HM	1	-	-	5A/A3.1	5B/A3.1	5B/A3.1	5C/A3.1

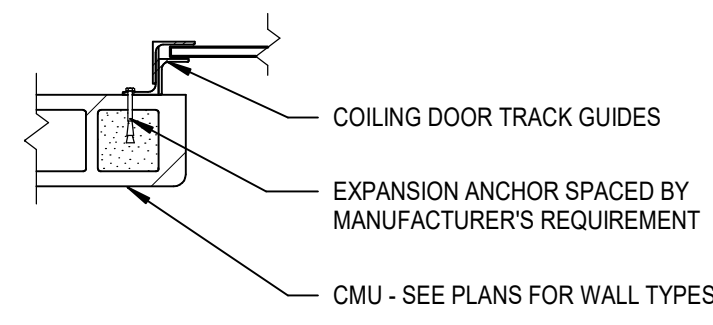


DOOR PANEL TYPES

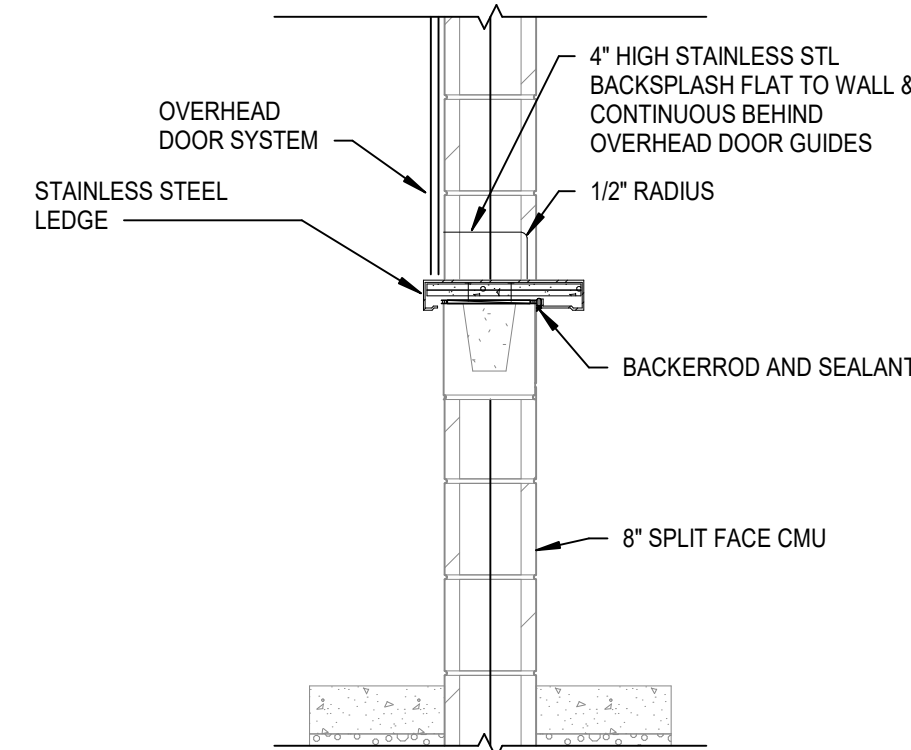
INTERIOR FRAME TYPES



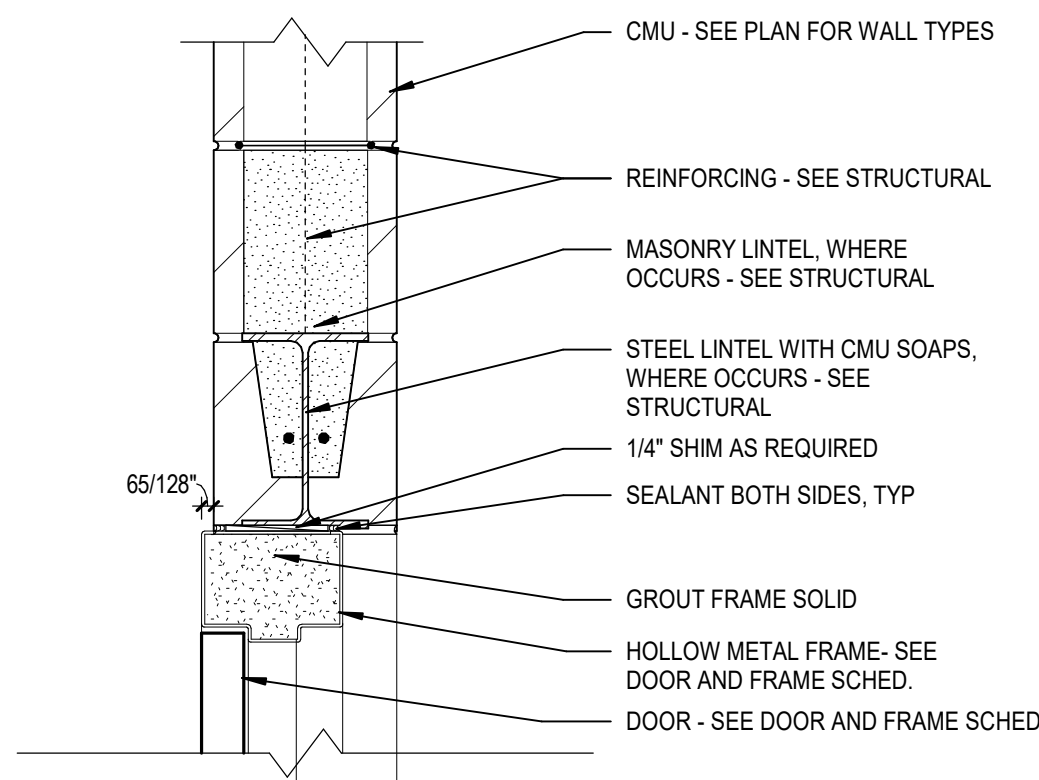
4A HEAD @ COILING DOOR
A3.1 SCALE: 3/4" = 1'-0"



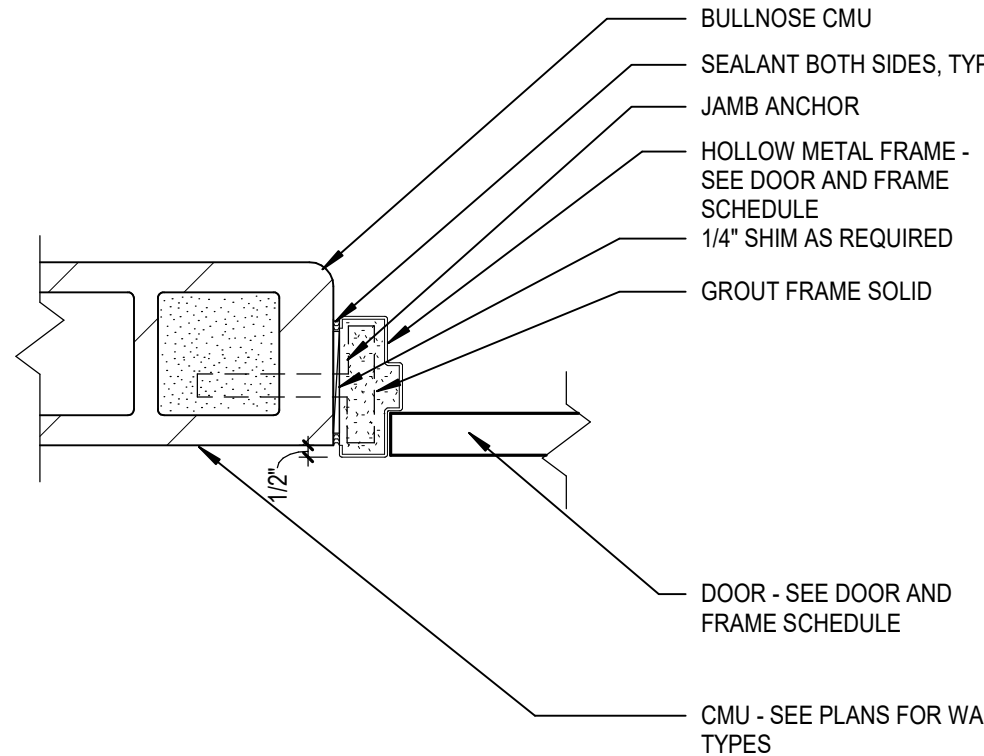
4B JAMB @ COILING DOOR
A3.1 SCALE: 3/4" = 1'-0"



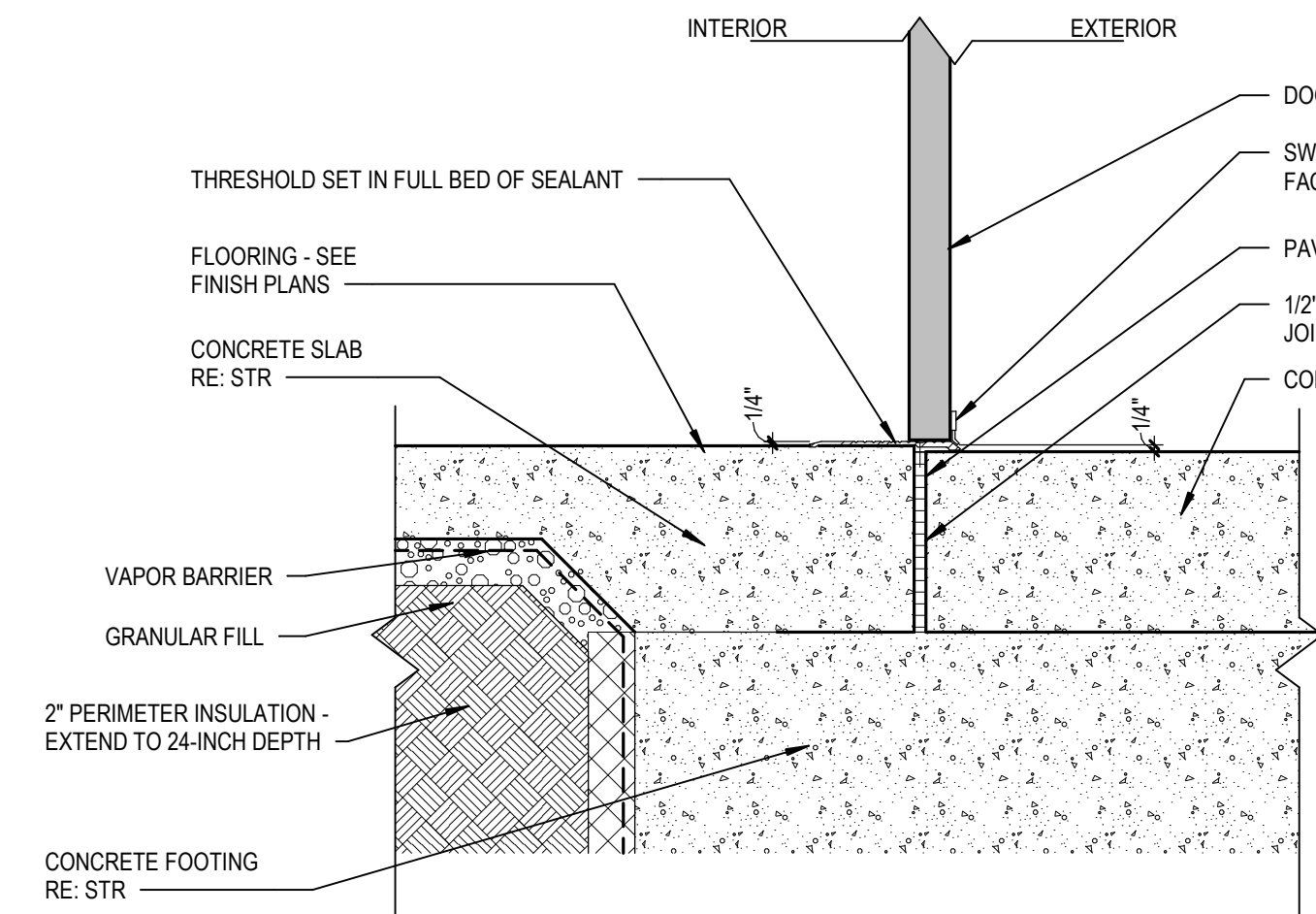
4C DR SL COILING
A3.1 SCALE: 3/4" = 1'-0"



5A HEAD DTL-HM DOOR @ INT CMU WALL
A3.1 SCALE: 1 1/2" = 1'-0"



5B JAMB DTL-HM DOOR @ INT CMU WALL
A3.1 SCALE: 1 1/2" = 1'-0"



5C Ext Door - Threshold
A3.1 SCALE: 1 1/2" = 1'-0"

ROOM FINISH SCHEDULE									
NUMBER	ROOM NAME	FLOOR FINISH	BASE FINISH	MATERIAL	WALL				COMMENTS
					NORTH	EAST	SOUTH	WEST	
A101	MENS								
A102	WOMENS								
A103	JAN.								
A104	STORAGE								
A102	WOMENS								
A101	MENS								
A104	STORAGE								
A108	WOMENS								
A109	MENS								
B108	WOMENS								
B106	CONCESSIONS								
B104	MENS								
B105	CONCESSIONS								
B102	STORAGE								
B101	JANITOR								
A116	CUSTODIAL								
A103	CUSTODIAL								
A118	WOMENS								
A119	MENS								
C102	WOMENS								
C101	MENS								
C103	CHASE								
C104	STOR								
C103	STOR								
B107	STO								
B103	STAIR								

ROOM FINISH SCHEDULE GENERAL NOTES

- A. SEE SPECIFICATION FOR PAINTING OF ITEMS NOT NOTED IN THE ROOM FINISH SCHEDULE OR FINISH PLANS.
B. EXPOSED CONCRETE FLOORS NOT SHOWN TO RECEIVE A FINISH SHALL RECEIVE LIQUID FLOOR TREATMENT OR CURING AND SEALING COMPOUND UNLESS NOTED OTHERWISE. SEE SPEC SECTION 03300.

ROOM FINISH SCHEDULE SPECIFIC NOTES

FLOOR NOTES:

- F1. DEPRESS CONCRETE SLAB 3/8 INCH FOR EPOXY TERRAZZO FLOORING. VERIFY DEPTH WITH MANUFACTURER.
F2. DEPRESS CONCRETE SLAB 3/8 INCH FOR RECESS FLOOR MAT AND FRAME. VERIFY RECESS DEPTH WITH MANUFACTURER.

WALL NOTES:

- W1. PAINT THE JANITOR'S CLOSET WALLS BUT NOT INSIDE THE CHASE AREA.
W2. PAINT EXPOSED STEEL COLUMNS P-7.

CEILING NOTES:

- C1. PAINT EXPOSED STEEL DECK P-7.
C2. PAINT EXPOSED STRUCTURE P-7.

MISCELLANEOUS ITEMS:

- M1. ----
M2. ----

GENERAL NOTES FOR ACCESSIBILITY

- A. ACCESSIBLE URINAL SHALL PROVIDE CLEAR FLOOR SPACE PER ADA SAD 2010 - 603.3.
B. ACCESSIBLE WATER CLOSETS SHALL PROVIDE CLEAR SPACE PER ADA SAD 2010 - 604.3.1.
C. ACCESSIBLE LAVATORIES AND SINKS SHALL PROVIDE CLEAR SPACE PER ADA SAD 2010 - 606.2.
D. ACCESSIBLE TOILET ROOMS SHALL PROVIDE A TURNING SPACE OF 60 INCHES IN DIAMETER PER ADA SAD 2010 - 304.3.1.
E. ACCESSIBLE WATER FOUNTAINS SHALL PROVIDE CLEAR FLOOR SPACE PER ADA SAD 2010 - 602.2.
F. ACCESSIBLE TOILET PARTITIONS SHALL COMPLY WITH ADA SAD 2010 - 604.8.1.
G. EXPOSED PIPES AND SURFACES UNDER LAVATORIES AND SINKS SHALL BE INSULATED PER ADA SAD 2010 - 606.5.

TOILET ACCESSORIES ABBREVIATIONS

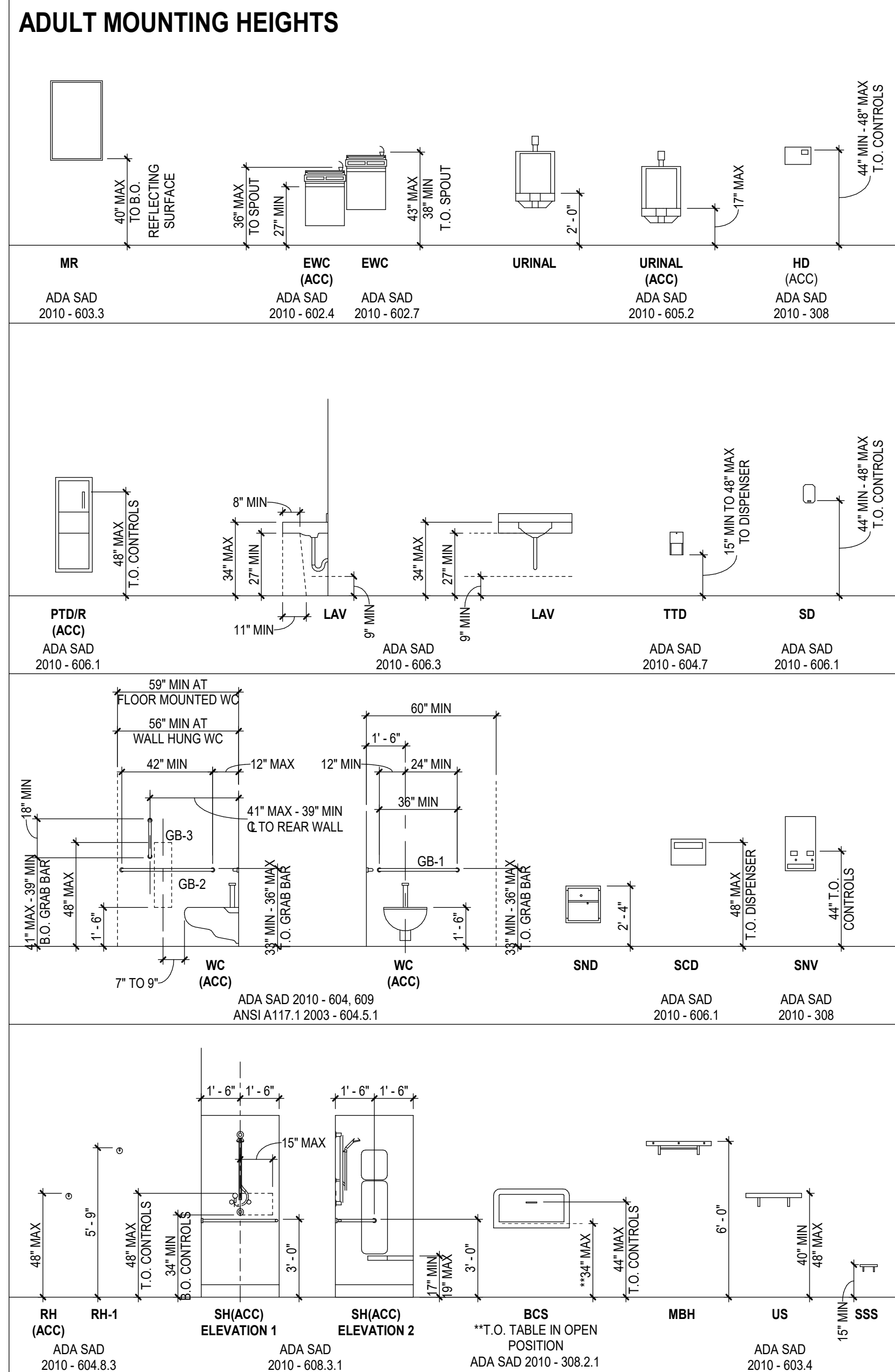
ABBREV	DESCRIPTION
ACC	ADA ACCESSIBLE
BCS	BABY CHANGING STATION
EWC	ELECTRIC WATER COOLER
GB-1	GRAB BAR (BACK WALL)
GB-2	GRAB BAR (SIDE WALL)
GB-3	GRAB BAR (VERTICAL)
GB-4	GRAB BAR (AMBULATORY STALL)
GB-5	GRAB BAR (SHOWER)
HD	HAND DRYER
LAV	LAVATORY
MBH	MOP/ROOM HOLDER
MR	MIRROR
MRS	MIRROR WITH SHELF
PTD	PAPER TOWEL DISPENSER
PTD/R	COMBINATION TOWEL DISPENSER/RECEPTACLE
RH	ROBE HOOK
SCD	SEAT COVER DISPENSER
SCR	SHOWER CURTAIN ROD
SD	SOAP DISPENSER
SND	SANITARY NAPKIN DISPOSAL
SNV	SANITARY NAPKIN VENDOR
SSS	STAINLESS STEEL SHELF
TTO	TOILET TISSUE DISPENSER
US	UTILITY SHELF
WC	WATER CLOSET
WR	WASTE RECEPTACLE

DOOR AND FRAME SCHEDULE GENERAL NOTES

- A. ALL EXTERIOR HOLLOW METAL FRAMES SHALL BE FILLED WITH INSULATION.
B. ALL INTERIOR HOLLOW METAL FRAMES SET IN MASONRY AND CONCRETE WALLS SHALL BE GROUTED SOLID.
C. ALL HOLLOW METAL FRAMES SET IN METAL STUD WALLS SHALL BE FILLED WITH MINERAL WOOL BLANKET INSULATION.
D. ALL EXTERIOR FRAMES SHALL BE INSTALLED WITH 1/4" SHIM AND SEALANT AROUND PERIMETER OF FRAME.
E. MASONRY LINTELS AND STEEL LINTELS ARE SHOWN ON STRUCTURAL DRAWINGS.
F. GLASS TYPES FOR DOORS ARE INDICATED IN THE DOOR GLAZING COLUMN OF THE DOOR AND FRAME SCHEDULE.
G. FOR COILING DOORS, GRILLES AND SECTIONAL DOORS, WIDTH AND HEIGHT DIMENSIONS SHOWN IN DOOR AND FRAME SCHEDULE REPRESENT FINISHED OPENING SIZE. CONTRACTOR TO COORDINATE EXACT SIZE OF DOOR WITH MANUFACTURER.
H. FRAME MANUFACTURER SHALL COORDINATE LOCATIONS OF ALL CONCEALED CONDUIT AND J-BOXES REQUIRED FOR SECURITY SYSTEM HARDWARE PRIOR TO MANUFACTURING OF HOLLOW METAL FRAMES AND COORDINATE WITH SECURITY HARDWARE AND DEVICES.
I. PROVIDE HEAD RECEIVERS AT ALUMINUM STOREFRONTS AND CURTAIN WALLS AS REQUIRED FOR STRUCTURAL DEFLECTION ALLOWANCE.
J. SEE SPECIFICATIONS HARDWARE SECTION FOR HARDWARE SETS NOTED IN DOOR AND FRAME SCHEDULE.

DOOR PANEL TYPE DESCRIPTIONS

- F. FLUSH PANEL
L. LOUVERED (BOTTOM)



1	A	GENERAL STRUCTURAL NOTES		B	GEOTECHNICAL & FOUNDATIONS		C	CONCRETE CONSTRUCTION		D	STRUCTURAL STEEL		E	STEEL JOISTS		F	MASONRY	
2	B	GENERAL		C			D			E			F			G		
3	C	1. THE DRAWINGS REPRESENT THE FINISHED STRUCTURE, NOT THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY GUYING AND BRACING REQUIRED TO ERECT AND HOLD THE STRUCTURE IN PROPER ALIGNMENT UNTIL ALL STRUCTURAL WORK AND CONNECTIONS HAVE BEEN COMPLETED. THE RESEARCH, DESIGN, SAFETY, ADEQUACY, AND INSPECTION OF ERECTION BRACING, SHORING, GUYING, TEMPORARY SUPPORTS, ETC., IS THE RESPONSIBILITY OF THE CONTRACTOR.		D	MINIMUM FOUNDATION EMBEDMENT BELOW GRADE 1'-4" (EXTERIOR FOOTINGS) 1'-6" (INTERIOR FOOTINGS) 2,500 PSF 80 PCF (FINE GRAINED BACKFILL) 95 PCF (FINE GRAINED BACKFILL) 90 PCF (GRANULAR BACKFILL) 300 PCF (FINE GRAINED BACKFILL) 360 PCF (GRANULAR BACKFILL) 0.25		E	1. THESE NOTES APPLY TO CONCRETE USED IN BUILDING CONSTRUCTION ONLY. SEE CIVIL/SITE WORK DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. 2. CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF ACI 301 AND ACI 318. 3. REFER TO DRAWINGS OF OTHER DISCIPLINES AND VENDOR DRAWINGS FOR EMBEDDED ITEMS AND RECESSES NOT SHOWN ON STRUCTURAL DRAWINGS. 4. SLEEVES OR OPENINGS, EXCEPT AS DETAILED ON THE STRUCTURAL DRAWINGS, SHALL NOT BE PLACED IN WALLS, JOISTS, BEAMS, GIRDERS, OR IN SLABS ADJACENT TO A COLUMN (WITHIN A DISTANCE EQUAL TO THE SLAB THICKNESS) UNLESS APPROVED BY THE ENGINEER. PLUMBING, MECHANICAL, & ELECTRICAL CONTRACTORS SHALL SUBMIT SIZES AND LOCATIONS OF ALL PENETRATIONS IN STRUCTURAL SLABS FOR THE ENGINEER'S APPROVAL. BEFORE THE SLAB IS PLACED, ALL PIPE PENETRATIONS THROUGH SLABS SHALL BE SLEEVED AND REINFORCING SHALL NOT BE CUT. CORING OF CONCRETE AFTER PLACEMENT IS NOT PERMITTED UNLESS APPROVED BY THE ENGINEER.		F	1. FABRICATOR QUALIFICATIONS: FABRICATOR SHALL BE ALSO CERTIFIED OR AN "APPROVED FABRICATOR" IN ACCORDANCE WITH THE BUILDING CODE AND APPROVED BY THE A.H.J. IN LIEU OF THE PREVIOUS. FABRICATOR SHALL INCLUDE IN THEIR BID THE SERVICES OF A SPECIAL INSPECTOR TO PROVIDE IN-PLANT INSPECTION/TESTING SERVICES FOR WORK COMPLETED ON THE FABRICATOR'S PREMISES TO MEET BUILDING CODE REQUIREMENTS. AT THE COMPLETION OF WORK, THE FABRICATOR SHALL SUBMIT A "CERTIFICATE OF COMPLIANCE" TO THE ARCHITECT AND A.H.J. STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH APPROVED CONSTRUCTION DOCUMENTS.		G	1. MASONRY CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR MASONRY STRUCTURES" (TMS 602), "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" (TMS 402), AND THE BUILDING CODE.				
		2. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S MEANS AND METHODS, SEQUENCES OF CONSTRUCTION, OR CONSTRUCTION TECHNIQUES USED TO PERFORM THE WORK. OBSERVATION VISITS TO THE SITE WILL NOT INVOLVE REVIEW OF THESE ITEMS. 3. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S SAFETY PROGRAM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL SAFETY PRECAUTIONS AND REGULATIONS DURING THE WORK. THE ENGINEER WILL NOT ADVISE ON, NOR ISSUE DIRECTION, AS TO SAFETY PRECAUTIONS AND PROGRAMS. OBSERVATION VISITS TO THE SITE WILL NOT INVOLVE REVIEW OF THESE ITEMS. 4. CONTRACTOR IS TO ESTABLISH AND VERIFY OPENINGS AND INSERTS FOR ITEMS TO BE INSTALLED BY OTHER TRADES PRIOR TO SUBMITTAL OF SHOP DRAWINGS AND CONSTRUCTION. 5. CONSTRUCTION MATERIAL AND EQUIPMENT LOADS PLACED ON THE STRUCTURE DURING THE CONSTRUCTION PROCESS SHALL NOT EXCEED THE DESIGN LIVE LOAD OF THE STRUCTURE NOTED IN THESE DRAWINGS. THE ENGINEER SHALL NOT BE RESPONSIBLE TO INVESTIGATE, NOR APPROVE, THE STRUCTURE FOR CONSTRUCTION MATERIAL OR EQUIPMENT LOADING. ERECTION OR CONSTRUCTION LOADS ARE NOT TO BE APPLIED UNTIL PROPER STRUCTURAL FRAMING CONNECTIONS ARE MADE, AND ALL TEMPORARY BRACING IS IN PLACE. THE CONTRACTOR SHALL DESIGN AND PROVIDE TEMPORARY BRACING OF THE STRUCTURE WHERE NECESSARY FOR CONSTRUCTION LOADS. 6. DETAILS THAT ARE NOTED AS "TYPICAL" OR "TYP" ON DETAIL TITLES ARE TO BE APPLIED TO THE PROJECT CONSTRUCTION AS GENERAL CONSTRUCTION METHODS UNLESS NOTED OTHERWISE. THESE DETAILS ARE NOT CUT AT ALL LOCATIONS WHERE THEY OCCUR, AND THEY MAY NOT BE CUT AT ALL. WHERE NO SPECIFIC DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR CONDITIONS ELSEWHERE ON THE PROJECT, SUBJECT TO APPROVAL OF THE ENGINEER. 7. DO NOT SCALE DRAWINGS. CONTRACTOR IS TO VERIFY ALL DIMENSIONS RELATIVE TO ARCHITECTURAL OR OTHER DISCIPLINE DRAWINGS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES MUST BE REPORTED TO THE ENGINEER PRIOR TO CONSTRUCTION. 8. WHERE DISCREPANCIES OCCUR BETWEEN GENERAL NOTES, PLANS, DETAILS, AND SPECIFICATIONS, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN, UNLESS APPROVED OTHERWISE BY THE ENGINEER IN WRITING PRIOR TO CONSTRUCTION. 9. THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE DRAWINGS OF ALL OTHER DISCIPLINES AND SPECIFICATIONS. THE CONTRACTOR SHALL ESTABLISH AND VERIFY THE REQUIREMENTS OF OTHER TRADES AS TO SLEEVES, CHASES, HANGERS, INSERT ANCHORS, HOLES, AND OTHER ITEMS TO BE PLACED OR SET IN THE STRUCTURAL WORK. DO NOT PENETRATE ANY STRUCTURAL ELEMENTS (BEAMS, COLUMNS, WALLS, SLABS, STEEL DECK, ETC) WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER. 10. IF THE ENGINEER'S SEAL AND SIGNATURE IS NOT AFFIXED TO THESE DRAWINGS, THESE DRAWINGS ARE INTENDED FOR PRELIMINARY PURPOSES ONLY AND SHALL NOT BE USED FOR CONSTRUCTION. 11. STRUCTURAL JOINT DIMENSIONS SHOWN ON PLANS AND DETAILS (EXPANSION, SEISMIC, SEPARATION, ETC) INDICATE THE MINIMUM CLEAR DISTANCE REQUIRED. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS AND INFORMATION.			2. SUBGRADE SHALL BE PREPARED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT AND PROJECT SPECIFICATIONS. 3. CONTRACTOR SHALL PROVIDE TEMPORARY FROST PROTECTION FOR FOUNDATIONS NOT CONSTRUCTED TO FROST DEPTH IF CONSTRUCTION IS TO TAKE PLACE IN WINTER MONTHS. CONTACT GEOTECHNICAL ENGINEER FOR GUIDANCE. 4. IF DISCREPANCIES EXIST BETWEEN THE CONTRACT DOCUMENTS AND THE GEOTECHNICAL REPORT, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN, UNLESS DETERMINED OTHERWISE BY THE ENGINEER IN WRITING. 5. ALL FOUNDATION EXCAVATIONS AND BEARING SURFACES SHALL BE OBSERVED AND APPROVED BY THE GEOTECHNICAL ENGINEER / TESTING AGENCY PRIOR TO PLACING FOUNDATION CONCRETE. 6. DEPTH/ELEVATIONS SHOWN ON PLANS AND DETAILS ARE MINIMUM. NOTIFY ENGINEER OF ANY NECESSARY DEVIATIONS FROM THE FOOTING ELEVATIONS SHOWN ON THE DRAWINGS PRIOR TO CONSTRUCTING THE FOOTINGS. 7. UNLESS NOTED OTHERWISE, COLUMN FOOTINGS SHALL BE CENTERED ON COLUMNS, AND WALL FOOTING SHALL BE CENTERED ON WALLS. 8. BACKFILL FOUNDATION WALLS WITH FREE DRAINING FILL AND PROVIDE A SUBSURFACE DRAINAGE SYSTEMS AS NOTED ON THE GEOTECHNICAL REPORT RECOMMENDATIONS. 9. ALL FOUNDATION WALLS WHERE GRADE IS NOT PRESENT ON BOTH SIDES ARE DESIGNED TO BE RESTRAINED IN THE COMPLETED STRUCTURE. CONNECTING CONSTRUCTION SHALL BE INSTALLED, INCLUDING INSTALLATION OF FLOOR/ROOF DIAPHRAGM AND THEIR ATTACHMENTS, PRIOR TO BACKFILLING WALL. CONCRETE DIAPHRAGMS SHALL REACH 100% OF REQUIRED 28 DAY COMPRESSIVE STRENGTH PRIOR TO BACKFILLING. ALTERNATIVELY, THE CONTRACTOR SHALL PROVIDE DESIGN AND CONSTRUCTION OF TEMPORARY BRACING THAT PROTECTS THE WALL AGAINST OVERSTRESS OR MOVEMENT UNTIL ALL SUPPORTING CONSTRUCTION IS COMPLETE AND CURED. THE CONTRACTOR'S ENGINEER IS RESPONSIBLE FOR THE DESIGN OF ALL TEMPORARY BRACING. 10. BACKFILLING AGAINST FOUNDATION WALLS WHERE GRADE IS PRESENT ON BOTH SIDES SHALL BE PERFORMED SO DIFFERENCE IN SOIL HEIGHT ON EACH SIDE OF THE WALL DOES NOT EXCEED ±FT. 11. NEW FOOTINGS LOCATED IMMEDIATELY ADJACENT TO EXISTING FOOTINGS SHALL BE FOUND AT THE SAME ELEVATION AS THE EXISTING FOUNDATIONS, UNO. THE EXISTING FOOTINGS SHALL NOT BE UNDERMINED BY NEW CONSTRUCTION, UNO. 12. DETERMINE THE LOCATION OF ALL NEW/EXISTING UNDERGROUND UTILITIES IN AND ADJACENT TO THE AREA OF WORK PRIOR TO COMMENCING EXCAVATION. COORDINATE UTILITY LOCATIONS WITH FOUNDATIONS AS REQUIRED. 13. CONTRACTOR SHALL CONFIRM THE AS-BUILT LOCATION OF ANY POTENTIAL NEW OR EXISTING STRUCTURES OR OBJECTS WITHIN THE ZONE OF EXCAVATION INCLUDING WORK PERFORMED AS A PORTION OF THIS PROJECT BEFORE EXCAVATING OR INSTALLING FOUNDATION ELEMENTS. NOTIFY THE STRUCTURAL ENGINEER BEFORE PROCEEDING WITH ANY EXCAVATION OR OTHER SITE WORK. IF THE EXCAVATION WILL CUT BELOW AN ADJACENT STRUCTURE'S BOTTOM OF FINISHED ELEVATION OR IF AN ADJACENT STRUCTURE IS UP SLOPE FROM THE PLANNED SITE WORK. 14. THE EXTERIOR VERTICAL FACE OF ALL EXPOSED SLAB TURNOUTS SHALL BE FORMED. THE SIDES OF FOOTINGS MAY BE EARTH FORMED AS LONG AS THE SOIL WILL MAINTAIN A VERTICAL FACE. ALL FOUNDATION STEEL WALLS AND RETAINING WALLS SHALL BE FORMED ON BOTH SIDES OF THE WALL. 15. CONTRACTOR SHALL PROVIDE FOR DE-WATERING OF EXCAVATIONS FROM SURFACE WATER, GROUND WATER OR SEEPAGE. 16. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING, UNDERPINNING AND PROTECTION OF EXISTING CONSTRUCTION. COMPLY WITH ALL APPLICABLE OSHA REGULATIONS.			3. MORTAR FOR ABOVE GRADE MASONRY SHALL CONFORM TO ASTM C270, TYPE S AND BELOW GRADE MASONRY SHALL BE TYPE M. ALL MORTAR SHALL MEET THE "PROPORTION SPECIFICATION" OF ASTM C270 AND BE MADE WITH PORTLAND CEMENT / LIME (NON-AR - ENTRAINED). MASONRY CEMENT IS NOT ACCEPTABLE. 4. UNO, ALL WALLS SHALL BE LAID IN RUNNING BOND. BOND CORNERS AND INTERSECTIONS OF LOAD BEARING WALLS, ALL UNITS SHALL BE LAID WITH FULL MORTAR JOINT THICKNESS ON HEAD, BED (FACE SHELL), WEBS, AND COLLAR JOINTS, UNLESS NOTED OTHERWISE. BED JOINT THICKNESS SHALL NOT EXCEED 5/8". 5. GROUT SHALL CONFORM TO ASTM C475 WITH A MIN. 28-DAY COMPRESSIVE STRENGTH OF 3,000 PSI BUT NOT LESS THAN THE SPECIFIED NET AREA COMPRESSIVE STRENGTH OF THE MASONRY UNITS. GROUT AGGREGATE SHALL NOT EXCEED 3/8". 6. FILL ALL BOND BEAMS, LINTELS, AND REINFORCED CELLS SOLID WITH GROUT. ALL MASONRY BELOW GRADE SHALL BE GROUTED SOLID BELOW HIGHEST ADJACENT GRADE. 7. MASONRY REINFORCING STEEL SHALL BE ASTM A615, GRADE 60. REINFORCING STEEL TO BE WELDED SHALL BE ASTM A706, GRADE 60. 8. HORIZONTAL JOINT REINFORCING SHALL COMPLY WITH ASTM A951 AND BE 9 GAUGE STANDARD LADDER TYPE, GALVANIZED, AT 16-INCHES ON CENTER. SPACE JOINT REINFORCING AT 8-INCHES ON CENTER AT NON-CAVITY MULTIMYTE WALLS. COLLAR JOINT BETWEEN WYTHES OF NON-CAVITY MULTIMYTE WALLS ARE TO BE MORTARED/GROUTED SOLID. 9. PROVIDE BOND BEAMS AT TOP OF ALL WALLS, ALL ROOF AND FLOOR LINES, AND WHERE INDICATED. MINIMUM BOND BEAM REINFORCING SHALL BE (2) #5 IN 4" AND 4" WIDE BOND BEAMS AND (2) #6 IN 12" WIDE BOND BEAMS. DISCONTINUE BOND BEAM REINFORCING AT CONTROL JOINTS EXCEPT AT FLOOR LEVELS, ROOF LEVELS, AND TOPS OF WALLS. PROVIDE CORNER BARS AT CORNERS AND WALL INTERSECTIONS. 10. ALL CMU WALL OPENINGS REQUIRE LINTELS. 11. SPICE LENGTHS FOR MASONRY REINFORCEMENT SHALL BE IN 72 TIMES THE REINFORCING BAR DIAMETER, UNO. 12. REINFORCING SHALL BE HUNG IN PLACE PRIOR TO GROUTING WITH AT LEAST TWO WIRE POSITIONERS PER GROUT POUR AND 4 REINFORCING SPLICES. POSITIONERS SHALL PROVIDE REBAR CENTER TO CENTER SPACING OF 2-38-INCH FOR 8" BLOCK AND 6-38" FOR 12" BLOCK, UNO. 13. VERTICAL REINFORCING SHALL BE AS FOLLOWS UNO ON PLANS OR DETAILS: 8" CMU: (1) #8 @ 1'-4" OC 12" CMU: (1) #8 @ 1'-4" OC 16" & 20" CMU: (1) #4 @ 5'-4" OC (1) #6 @ 5'-4" OC 15. UNO, PROVIDE ADDITIONAL REINFORCED CELL FOR THE FULL HEIGHT OF THE WALL AT EACH SIDE OF ALL OPENINGS, CONTROL JOINTS, EXPANSION JOINTS, WALL ENDS, WALL CORNERS, AND WALL INTERSECTIONS. 16. ALL VERTICAL REINFORCING REQUIRED BY THESE NOTES OR SHOWN ON THE PLANS SHALL EXTEND FROM THE FOUNDATION TO THE TOP OF WALL. PROVIDE DOWELS FROM FOUNDATION OR SUPPORTING STRUCTURE TO MATCH VERTICAL BAR SIZE AND SPACING. 17. MASONRY CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL AND ELECTRICAL CONTRACTORS AND BUILD IN OPENINGS FOR ELECTRICAL PANELS, CONDUITS, PIPES, FIRE EXTINGUISHER CABINETS, DUCTS, ETC. AS NOT TO INTERFERE WITH REINFORCED AND/OR GROUTED CELLS. PIPES AND CONDUITS PASSING HORIZONTALLY THROUGH WALLS SHALL BE SLEEVED. MINIMUM SPACING OF SLEEVES SHALL BE THREE SLEEVE DIAMETERS. 18. MORTAR JAIL PROJECTION INTO THE GROUT SPACE SHALL NOT EXCEED 1/2 INCH. 19. SPACE CONTROL JOINTS IN MASONRY WALLS SUCH THAT NO STRAIGHT RUN OF WALL EXCEEDS EITHER 2 TIMES WALL HEIGHT OR 25'-0". UNO, THE CONTRACTOR SHALL NOT PLACE CONTROL JOINTS ABOVE / BELOW OPENINGS, WITHIN SCHEDULED JAMB EXTENSIONS, OR WITHIN 16" OF BEAM/JOIST BEARING PLATES. CONTROL JOINTS SHALL JOINT HORIZONTALLY.										
DESIGN CRITERIA		1. ALL CONSTRUCTION, MATERIALS, AND WORKMANSHIP SHALL CONFORM TO THE REQUIREMENTS OF THESE DRAWINGS, SPECIFICATIONS, AND THE CODES, RULES AND REGULATIONS OF THE 2021 INTERNATIONAL BUILDING CODE (IBC), AS ADOPTED AND AMENDED BY THE CITY OF MAULDIN AND GREENVILLE HEREAFTER REFERRED TO AS THE BUILDING CODE. 2. MATERIAL, SPECIFIC DESIGN STANDARDS LISTED IN THESE GENERAL NOTES ARE THE VERSION REFERENCED BY THE BUILDING CODE. IF NOT REFERENCED BY THE BUILDING CODE, USE THE LATEST EDITION APPROVED BY THE AUTHORITY HAVING JURISDICTION ON THE DATE OF THE PERMIT ISSUANCE. 3. RISK CATEGORY II 4. DESIGN DEAD LOADS ROOF - TOTAL FLOOR 35 PSF (INCLUDES STRUCTURE SELF WEIGHT) 10 PSF 5. DESIGN LIVE LOADS ROOF LIVE LOAD 20 PSF FLOOR 100 PSF 6. SNOW LOADS GROUND SNOW LOAD, P _g 10 PSF MINIMUM UNIFORM ROOF SNOW LOAD, P _s 15 PSF 7. WIND LOADS BASIC WIND SPEED (3 SECOND GUST), V 108 MPH NOMINAL WIND SPEED, V ₃₀ 84 MPH EXPOSURE CATEGORY C TOPOGRAPHIC FACTOR, K _t 1.0 AIR DENSITY FACTOR, K _d 1.0 INTERNAL PRESSURE COEFFICIENT, C _{pi} ±0.18 COMPONENTS AND CLADDING: SEE LOADING DIAGRAMS 8. SEISMIC LOADS SITE CLASS D (ASSUMED) MAPPED SPECTRAL RESPONSE ACCELERATIONS S _s = 0.322 S ₁ = 0.097 DESIGN SPECTRAL RESPONSE ACCELERATIONS S _{DS} = 0.331 S ₁ = 0.155 SEISMIC DESIGN CATEGORY C IMPORTANCE FACTOR, I _e 1.0 SEISMIC FORCE RESISTING SYSTEM: ORDINARY REINFORCED MASONRY SHEAR WALLS RESPONSE MODIFICATION FACTOR, R 2.0 OVERSTRENGTH FACTOR, D _o 2.5 DEFLECTION AMPLIFICATION FACTOR, C _d 1.75 REDUNDANCY FACTOR, ρ 1.3 ANALYSIS PROCEDURE EQUIVALENT LATERAL FORCE SEISMIC RESPONSE COEFFICIENT, C _s 0.168 DESIGN BASE SHEAR, V _{base} 35 KIPS ELASTIC DESIGN STORY DRIFT 1.5% MAX 9. RAIN INTENSITY 3.48 INCH/HOUR		CONCRETE MIX DESIGNS		1. THE FOLLOWING ITEMS ARE REQUIRED STRUCTURAL SUBMITTALS AS DESCRIBED IN THE SPECIFICATIONS: a. 033000 CAST-IN-PLACE CONCRETE REINFORCING b. 042000 UNO MASONRY c. 051200 STRUCTURAL STEEL FRAMING d. 052100 STEEL JOIST FRAMING e. 053100 STEEL DECKING 2. THE FOLLOWING ITEMS ARE DELEGATED DESIGN (DEFERRED SUBMITTALS PER THE BUILDING CODE) AS DESCRIBED IN THE SPECIFICATIONS: a. 033000 CAST-IN-PLACE CONCRETE MIX DESIGNS b. 051200 STRUCTURAL STEEL CONNECTIONS c. 052100 STEEL JOIST FRAMING d. 055000 METAL FABRICATIONS e. 055215 PIPE AND TUBE RAILINGS 3. DELEGATED DESIGN SUBMITTAL CALCULATIONS AND/OR SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY THE ENGINEER RESPONSIBLE FOR THEIR PREPARATION AND SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW WITH THE SHOP DRAWING SUBMITTAL. ONCE REVIEWED, CONTRACTOR SHALL FORWARD TO THE A.H.J. FOR APPROVAL, FABRICATION AND INSTALLATION OF THE DELEGATED DESIGN SUBMITTAL ITEMS SHALL NOT OCCUR UNTIL APPROVAL OF THE A.H.J. IS RECEIVED.												
4	D	LATERAL LOAD RESISTANCE SYSTEM		E	1. LATERAL LOAD SYSTEM CONSISTS OF ROOF DIAPHRAGMS TRANSFERRING LATERAL LOADS TO MASONRY SHEAR WALLS.		F	1. VERIFY ALL TOP OF SLAB ELEVATIONS COMPLY WITH THE ARCHITECTURAL DRAWINGS. SEE ARCHITECTURAL FOR LOCATION AND EXTENT OF SPECIAL FINISHES OR TREATMENTS TO EXPOSED CONCRETE.		G	1. STEEL ANCHORING ELEMENTS SHALL BE THE SIZE AND GRADE SHOWN ON THE DRAWINGS AND MUST BE CLEAN, DRY AND FREE OF OIL, GREASE, AND CONTAMINANTS. DO NOT INCREASE OR DECREASE SIZE OF ANCHOR WITHOUT APPROVAL OF ENGINEER.							
		2. STEEL FRAME IS A "NON-SELF-SUPPORTING" STEEL FRAME REQUIRING INTERACTION OF THE STEEL FRAMING, ROOF DIAPHRAGMS AND SHEAR WALLS. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING AS NECESSARY TO PROVIDE SUPPORT OF FRAMING UNTIL ALL ATTACHMENTS ARE COMPLETE, INCLUDING STRUCTURAL STEEL, STRUCTURAL STEEL TO DIAPHRAGM/SHEAR WALLS, AND DIAPHRAGM TO SHEAR WALLS.			2. ALL INTERIOR SLABS ON GROUND/GRADE SHALL BE CAST ON A 15 MIL VAPOR RETARDER INSTALLED PER MANUFACTURER'S WRITTEN INSTRUCTIONS, PLACED OVER CRUSHED ROCK DRAINAGE MATERIAL, TO FORM A CAPILLARY BREAK OF THICKNESS NOTED ON DRAWINGS, BUT NOT LESS THAN THAT PRESCRIBED BY THE GEOTECHNICAL ENGINEER.			11. ALL PERSONNEL INSTALLING POST-INSTALLED ANCHORS SHALL BE TRAINED BY THE MANUFACTURER ON PROPER INSTALLATION TECHNIQUE. TRAINING DOCUMENTATION FROM THE MANUFACTURER SHALL BE AVAILABLE UPON REQUEST.										
5	E	1. LATERAL LOAD SYSTEM CONSISTS OF ROOF DIAPHRAGMS TRANSFERRING LATERAL LOADS TO MASONRY SHEAR WALLS.		F	2. PORTLAND CEMENT SHALL CONFORM TO ASTM C-150 OF THE TYPE SPECIFIED IN THE TABLE ABOVE.		G	4. GENERAL, CONTRACTOR SHALL SUBMIT CONTROL JOINT SHOP DRAWINGS AND PLACING SEQUENCES FOR APPROVAL PRIOR TO CONCRETE PLACEMENT. KEYED JOINTS WELD ONLY OCCUR AT CONSTRUCTION JOINTS. ALL CONSTRUCTION JOINTS MAY BE SAWCUT, UNO.		H	12. INSTALLATION OF ADHESIVE ANCHORS IN HORIZONTAL TO VERTICALLY OVERHEAD ORIENTATION SHALL BE DONE BY A CERTIFIED ADHESIVE ANCHOR INSTALLER (AAAS) CERTIFIED THROUGH ACI AND IN ACCORDANCE WITH ACI 318. PROOF OF CURRENT CERTIFICATION SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF INSTALLATION.							
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6	F	1. LATERAL LOAD SYSTEM CONSISTS OF ROOF DIAPHRAGMS TRANSFERRING LATERAL LOADS TO MASONRY SHEAR WALLS.		F	6. WATER SHALL BE CLEAR, POTABLE AND SHALL CONFORM TO ASTM C-84.		G	5. THE SLAB ON GROUND/GRADE IS NOT DESIGNED TO SUPPORT TRAFFIC FROM CRANES OR OTHER HEAVY CONSTRUCTION VEHICLES. CONTRACTOR SHALL REPAIR OR REPLACE DAMAGED CONCRETE SLABS.		H	14. SCREW ANCHORS IN CONCRETE MASONRY SHALL BE ONE OF THE FOLLOWING: a. HLTI KWIK BOLT T22 CONCRETE ANCHORS (ICC ESR-4266) b. DEWALT - POWER STUD-501 (ICC ESR-2818) / POWER STUD -502 (ICC ESR-2502) c. SIMPSON STRONG-TIE STRONG-BOLT 2 WEDGE ANCHORS (ICC ESR-3037)							
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7	G	1. LATERAL LOAD SYSTEM CONSISTS OF ROOF DIAPHRAGMS TRANSFERRING LATERAL LOADS TO MASONRY SHEAR WALLS.		G	8. REINFORCE SLABS, INCLUDING STAIR PANS AND LANDINGS, WITH 6x6 W2-1XW2.1 WWR, UNO.		H	6. REINFORCE SLABS, INCLUDING STAIR PANS AND LANDINGS, WITH 6x6 W2-1XW2.1 WWR, UNO.		I	16. EXPANSION BOLTS IN CONCRETE SHALL BE ONE OF THE FOLLOWING: a. HLTI KWIK BOLT T22 CONCRETE ANCHORS (ICC ESR-4266) b. DEWALT - POWER STUD-501 (ICC ESR-2818) / POWER STUD -502 (ICC ESR-2502) c. SIMPSON STRONG-TIE STRONG-BOLT 2 WEDGE ANCHORS (ICC ESR-3037)							
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8	H	1. LATERAL LOAD SYSTEM CONSISTS OF ROOF DIAPHRAGMS TRANSFERRING LATERAL LOADS TO MASONRY SHEAR WALLS.		H	9. PATCH ABANDONED HOLES AND SPALLS USING NON-SHRINK GROUT AND REPAIR FINISHES AS REQUIRED. ANCHORS PENETRATING THROUGH WATERPROOFING OR VAPOR MEMBRANES SHALL BE SEALED OR FLASHED.		I	18. ADHESIVE ANCHORS IN CONCRETE SHALL BE ONE OF THE FOLLOWING: a. HLTI HIT-HY 200 V3 ADHESIVE ANCHORING SYSTEM WITH SAFESET (ESR-4868) (FAST CURE APPLICATIONS) b. HLTI RE-400 V3 ADHESIVE ANCHORING SYSTEM (ESR-3814) c. HLTI RE-100 ADHESIVE ANCHORING SYSTEM (ICC ESR-3829) (STANDARD CURE APPLICATIONS) d. DEWALT AC208+ ADHESIVE ANCHORING SYSTEM (ICC ESR-4027) (FAST CURE APPLICATIONS) e. DEWALT PURE 220+ ADHESIVE ANCHORING SYSTEM (ICC ESR-5144) (STANDARD CURE APPLICATIONS) f. SIMPSON STRONG-TIE SET-3G ADHESIVE ANCHORING SYSTEM (ESR-4057) g. SIMPSON STRONG-TIE AT-XP ADHESIVE ANCHORING SYSTEM (AMPO USES ESR-263) h. SIMPSON STRONG-TIE SET-XP ADHESIVE ANCHORING SYSTEM (ESR-4058) (STANDARD CURE APPLICATIONS)		J	19. ANCHORS ARE NOT TO BE INSTALLED UNTIL CONCRETE OR GROUT HAS REACHED ITS DESIGN STRENGTH. ADHESIVE ANCHORS SHALL BE INSTALLED IN CONCRETE WITH A MIN. AGE OF 21 DAYS.							
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9	I	1. LATERAL LOAD SYSTEM CONSISTS OF ROOF DIAPHRAGMS TRANSFERRING LATERAL LOADS TO MASONRY SHEAR WALLS.		I	21. USE INSTALLATION PROCEDURES FOR CRACKED CONCRETE CONDITIONS. DO NOT CORE DRILL FOR ANCHOR HOLES WITHOUT ENGINEER APPROVAL.		J	22. PATCH ABANDONED HOLES AND SPALLS USING NON-SHRINK GROUT AND REPAIR FINISHES AS REQUIRED. ANCHORS PENETRATING THROUGH WATERPROOFING OR VAPOR MEMBRANES SHALL BE SEALED OR FLASHED.		K	23. PATCH ABANDONED HOLES AND SPALLS USING NON-SHRINK GROUT AND REPAIR FINISHES AS REQUIRED. ANCHORS PENETRATING THROUGH WATERPROOFING OR VAPOR MEMBRANES SHALL BE SEALED OR FLASHED.							
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11	K	1. LATERAL LOAD SYSTEM CONSISTS OF ROOF DIAPHRAGMS TRANSFERRING LATERAL LOADS TO MASONRY SHEAR WALLS.		K	29. PATCH ABANDONED HOLES AND SPALLS USING NON-SHRINK GROUT AND REPAIR FINISHES AS REQUIRED. ANCHORS PENETRATING THROUGH WATERPROOFING OR VAPOR MEMBRANES SHALL BE SEALED OR FLASHED.		L	30. PATCH ABANDONED HOLES AND SPALLS USING NON-SHRINK GROUT AND REPAIR FINISHES AS REQUIRED. ANCHORS PENETRATING THROUGH WATERPROOFING OR VAPOR MEMBRANES SHALL BE SEALED OR FLASHED.		M	31. PATCH ABANDONED HOLES AND SPALLS USING NON-SHRINK GROUT AND REPAIR FINISHES AS REQUIRED. ANCHORS PENETRATING THROUGH WATERPROOFING OR VAPOR MEMBRANES SHALL BE SEALED OR FLASHED.							
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12	L	1. LATERAL LOAD SYSTEM CONSISTS OF ROOF DIAPHRAGMS TRANSFERRING LATERAL LOADS TO MASONRY SHEAR WALLS.		L	33. PATCH ABANDONED HOLES AND SPALLS USING NON-SHRINK GROUT AND REPAIR FINISHES AS REQUIRED. ANCHORS PENETRATING THROUGH WATERPROOFING OR VAPOR MEMBRANES SHALL BE SEALED OR FLASHED.		M	34. PATCH ABANDONED HOLES AND SPALLS USING NON-SHRINK GROUT AND REPAIR FINISHES AS REQUIRED. ANCHORS PENETRATING THROUGH WATERPROOFING OR VAPOR MEMBRANES SHALL BE SEALED OR FLASHED.		N	35. PATCH ABANDONED HOLES AND SPALLS USING NON-SHRINK GROUT AND REPAIR FINISHES AS REQUIRED. ANCHORS PENETRATING THROUGH WATERPROOFING OR VAPOR MEMBRANES SHALL BE SEALED OR FLASHED.							
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13	M	1. LATERAL LOAD SYSTEM CONSISTS OF ROOF DIAPHRAGMS TRANSFERRING LATERAL LOADS TO MASONRY SHEAR WALLS.		M	37. PATCH ABANDONED HOLES AND SPALLS USING NON-SHRINK GROUT AND REPAIR FINISHES AS REQUIRED. ANCHORS PENETRATING THROUGH WATERPROOFING OR VAPOR MEMBRANES SHALL BE SEALED OR FLASHED.		N	38. PATCH ABANDONED HOLES AND SPALLS USING NON-SHRINK GROUT AND REPAIR FINISHES AS REQUIRED. ANCHORS PENETRATING THROUGH WATERPROOFING OR VAPOR MEMBRANES SHALL BE SEALED OR FLASHED.		O	39. PATCH ABANDONED HOLES AND SPALLS USING NON-SHRINK GROUT AND REPAIR FINISHES AS REQUIRED. ANCHORS PENETRATING THROUGH WATERPROOFING OR VAPOR MEMBRANES SHALL BE SEALED OR FLASHED.							
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14	N	1. LATERAL LOAD SYSTEM CONSISTS OF ROOF DIAPHRAGMS TRANSFERRING LATERAL LOADS TO MASONRY SHEAR WALLS.		N	40. PATCH ABANDONED HOLES AND SPALLS USING NON-SHRINK GROUT AND REPAIR FINISHES AS REQUIRED. ANCHORS PENETRATING THROUGH WATERPROOFING OR VAPOR MEMBRANES SHALL BE SEALED OR FLASHED.		O	41. PATCH ABANDONED HOLES AND SPALLS USING NON-SHRINK GROUT AND REPAIR FINISHES AS REQUIRED. ANCHORS PENETRATING THROUGH WATERPROOFING OR VAPOR MEMBRANES SHALL BE SEALED OR FLASHED.		P	42. PATCH ABANDONED HOLES AND SPALLS USING NON-SHRINK GROUT AND REPAIR FINISHES AS REQUIRED. ANCHORS PENETRATING THROUGH WATERPROOFING OR VAPOR MEMBRANES SHALL BE SEALED OR FLASHED.							
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15	O	1. LATERAL LOAD SYSTEM CONSISTS OF ROOF DIAPHRAGMS TRANSFERRING LATERAL LOADS TO MASONRY SHEAR WALLS.		O	44. PATCH ABANDONED HOLES AND SPALLS USING NON-SHRINK GROUT AND REPAIR FINISHES AS REQUIRED. ANCHORS PENETRATING THROUGH WATERPROOFING OR VAPOR MEMBRANES SHALL BE SEALED OR FLASHED.		P	45. PATCH ABANDONED HOLES AND SPALLS USING NON-SHRINK GROUT AND REPAIR FINISHES AS REQUIRED. ANCHORS PENETRATING THROUGH WATERPROOFING OR VAPOR MEMBRANES SHALL BE SEALED OR FLASHED.		Q	46. PATCH ABANDONED HOLES AND SPALLS USING NON-SHRINK GROUT AND REPAIR FINISHES AS REQUIRED. ANCHORS PENETRATING THROUGH WATERPROOFING OR VAPOR MEMBRANES SHALL BE SEALED OR FLASHED.							
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16	P	1. LATERAL LOAD SYSTEM CONSISTS OF ROOF DIAPHRAGMS TRANSFERRING LATERAL LOADS TO MASONRY SHEAR WALLS.		P	47. PATCH ABANDONED HOLES AND SPALLS USING NON-SHRINK GROUT AND REPAIR FINISHES AS REQUIRED. ANCHORS PENETRATING THROUGH WATERPROOFING OR VAPOR MEMBRANES SHALL BE SEALED OR FLASHED.		Q	48. PATCH ABANDONED HOLES AND SPALLS USING NON-SHRINK GROUT AND REPAIR FINISHES AS REQUIRED. ANCHORS PENETRATING THROUGH WATERPROOFING OR VAPOR MEMBRANES SHALL BE SEALED OR FLASHED.		R	49. PATCH ABANDONED HOLES AND SPALLS USING NON-SHRINK GROUT AND REPAIR							

INSPECTION OR EXECUTION TASKS AFTER MECHANICAL FASTENING			
	TASK	QC	QA
A.	Check spacing, type, and installation of support fasteners	P	P
B.	Check spacing, type, and installation of side/edge fasteners	P	P
C.	Check spacing, type, and installation of perimeter fasteners	P	P
D.	Verify repair activities	P	P
E.	Document acceptance or rejection on mechanical fasteners	P	P

P - Observe these items on an intermittent basis. Operations need not be delayed pending these inspections.
P - Perform these tasks prior to final acceptance for each item or element.

a. Frequency refer to the frequency of inspection, which may be continuous during the task listed or periodically during the listed task, as defined in the table.

NR = Not Required, P = Periodic C = Continuous

b. Required for the first 5,000 square feet (465 square meters) of AAC masonry.

c. Required after the first 5,000 square feet (465 square meters) of AAC masonry.

AISC 360 – TABLE N5.4.2		
INSPECTION TASKS DURING WELDING		
INSPECTION TASKS DURING WELDING	QC	QA
Control and handling of welding consumables • Packaging • Exposure Control	O	O
No welding over cracked task welds		O
Environmental conditions • Wind speed within limits • Precipitation and temperature		O
WPS Followed • Settings on welding equipment • Travel Speed • Selected welding materials • Shielding gas type / flow rate • Preheat applied • Interpass temperature maintained (min / max.) • Proper position (F, V, H, OH)		O
Welding techniques • Interpass and final cleaning • Each pass meets profile instructions • Each pass meets quality requirements	O	O
Placement and installation of steel headed stud anchors	P	P
O - Observe these items on a random basis. Operations need not be delayed pending these inspections. P - Perform these tasks for each welded joint or member.		

	TYPE	CONTINUOUS	PERIODIC	REFERENCED STANDARD (a)	IBC REFERENCE
1.	Inspect reinforcement, including prestressing tendons, and verify placement.	—	X	ACI 318: Ch. 20, 25.2, 25.3, 26.6.1-26.6.3	—
2.	Reinforcing bar welding:				
	a. Verify weldability of reinforcing bars other than ASTM A706.	—	X		
	b. Inspect single-pass fillet welds, maximum 5/16", and	—	X	AWS D1.4 ACI 318: 26.6.4	—
	c. Inspect all other welds.	X	—		
3.	Inspect anchors cast in concrete.	—	X	ACI 318: 17.8.2	—
4.	Inspect anchors post-installed in hardened concrete members. (b)				
	a. Adhesive anchors installed in horizontally or vertically inclined orientations to resist sustained/tension loads.	X	—	ACI 318: 17.8.2.4	—
	b. Mechanical anchors and adhesive anchors not defined in 4.a.	—	X	ACI 318: 17.8.2	—
5.	Verify use of required design mix.	—	X	ACI 318: 19.4, 26.4.3, 26.4.4	1904.1, 1904.2
6.	Prior to concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	X	—	ASTM C511 ASTM C172 ACI 318: 26.5, 26.12	—
7.	Inspect concrete and sholecrete placement for proper application techniques.	X	—	ACI 318: 26.5	—
8.	Verify maintenance of specified curing temperature and techniques.	—	X	ACI 318: 26.5.3-26.5.5	—
9.	Inspect prestressed concrete:				
	a. Application of prestressing forces; and	X	—	ACI 318: 26.6.1	—
	b. Grouting of bonded prestressing tendons.	X	—	—	—
10.	Inspect erection of precast concrete members.	—	X	ACI 318: 26.9	—
11.	For precast concrete diaphragm connections or reinforcement at joints classified as moderate or high deformability elements (MDF or HDJ) in structures assigned to Seismic Design Category C, D, E or F, inspect such connections and reinforcement in the field.			ACI 318: 26.13.1, 318.505.0	—
	a. Installation of the embedded part	X	—		
	b. Completion of the continuity of reinforcement across joints	X	—		
	c. Completion of connections in the field.	X	—		
12.	Inspect installation tolerances of precast concrete diaphragm connections for compliance with ACI 550.5.	—	X	ACI 318: 26.13.1, 318.505.0	—
13.	Verify in-situ concrete strength, prior to stressing of tendons in post-tensioned concrete and prior to removal of shores and forms from beams and structural slabs.	—	X	ACI 318: 26.11.2	—
14.	Inspect formwork for shape, location and dimensions of the concrete member being formed.	—	X	ACI 318: 26.11.1, 26.0	—
Where applicable, see also Section 1705.13. Special inspections for seismic resistance.					
a. Specific requirements for special inspection shall be included in the research report for the anchor issued by an approved source in accordance with 17.8.2.2 in ACI 318, or other qualification procedures. Where specific requirements are not provided, special inspection requirements shall be specified by the registered design professional and shall be approved by the building official prior to the commencement of the work.					

	TYPE	CONTINUOUS	PERIODIC
1.	Verify materials below shallow foundations are adequate to achieve the design bearing capacity	—	X
2.	Verify excavations are extended to proper depth and have reached proper material.	—	X
3.	Perform classification and testing of compacted fill materials.	—	X
4.	During fill placement, verify use of proper materials and procedures in accordance with the provisions of the approved geotechnical report. Verify densities and lift thicknesses during placement and compaction of compacted fill.	X	—
5.	Prior to placement of compacted fill, inspect subgrade and verify that site has been prepared properly.	—	X

a. Frequency refer to the frequency of inspection, which may be continuous during the task listed or periodically during the listed task, as defined in the table.

NR = Not Required, P = Periodic C = Continuous

b. Required for the first 5,000 square feet (465 square meters) of AAC masonry.

c. Required after the first 5,000 square feet (465 square meters) of AAC masonry.

AISC 360 – TABLE N5.4.2		
INSPECTION TASKS DURING WELDING		
INSPECTION TASKS DURING WELDING	QC	QA
Control and handling of welding consumables • Packaging • Exposure Control	O	O
No welding over cracked task welds		O
Environmental conditions • Wind speed within limits • Precipitation and temperature		O
WPS Followed • Settings on welding equipment • Travel Speed • Selected welding materials • Shielding gas type / flow rate • Preheat applied • Interpass temperature maintained (min / max.) • Proper position (F, V, H, OH)		O
Welding techniques • Interpass and final cleaning • Each pass meets profile instructions • Each pass meets quality requirements	O	O
Placement and installation of steel headed stud anchors	P	P

O - Observe these items on a random basis. Operations need not be delayed pending these inspections.
 P - Perform these tasks for each welded joint or member.

	TYPE	CONTINUOUS	PERIODIC	REFERENCED STANDARD (a)	IBC REFERENCE
1.	Inspect reinforcement, including prestressing tendons, and verify placement.	—	X	ACI 318: Ch. 20, 25.2, 25.3, 26.6.1-26.6.3	—
2.	Reinforcing bar welding:				
	a. Verify weldability of reinforcing bars other than ASTM A706.	—	X		
	b. Inspect single-pass fillet welds, maximum 5/16", and	—	X	AWS D1.4 ACI 318: 26.6.4	—
	c. Inspect all other welds.	X	—		
3.	Inspect anchors cast in concrete.	—	X	ACI 318: 17.8.2	—
4.	Inspect anchors post-installed in hardened concrete members. (b)				
	a. Adhesive anchors installed in horizontally or vertically inclined orientations to resist sustained/tension loads.	X	—	ACI 318: 17.8.2.4	—
	b. Mechanical anchors and adhesive anchors not defined in 4.a.	—	X	ACI 318: 17.8.2	—
5.	Verify use of required design mix.	—	X	ACI 318: 19.4, 26.4.3, 26.4.4	1904.1, 1904.2
6.	Prior to concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	X	—	ASTM C511 ASTM C172 ACI 318: 26.5, 26.12	—
7.	Inspect concrete and sholecrete placement for proper application techniques.	X	—	ACI 318: 26.5	—
8.	Verify maintenance of specified curing temperature and techniques.	—	X	ACI 318: 26.5.3-26.5.5	—
9.	Inspect prestressed concrete:				
	a. Application of prestressing forces; and	X	—	ACI 318: 26.6.1	—
	b. Grouting of bonded prestressing tendons.	X	—	—	—
10.	Inspect erection of precast concrete members.	—	X	ACI 318: 26.9	—
11.	For precast concrete diaphragm connections or reinforcement at joints classified as moderate or high deformability elements (MDF or HDJ) in structures assigned to Seismic Design Category C, D, E or F, inspect such connections and reinforcement in the field.			ACI 318: 26.13.1, 26.13.3	—
	a. Installation of the embedded part	X	—	—	—
	b. Completion of the continuity of reinforcement across joints	X	—	—	—
	c. Completion of connections in the field.	X	—	—	—
12.	Inspect installation tolerances of precast concrete diaphragm connections for compliance with ACI 550.5.	—	X	ACI 318: 26.13.1, 26.13.3	—
13.	Verify in-situ concrete strength, prior to stressing of tendons in post-tensioned concrete and prior to removal of shores and forms from beams and structural slabs.	—	X	ACI 318: 26.11.2	—
14.	Inspect formwork for shape, location and dimensions of the concrete member being formed.	—	X	ACI 318: 26.11.1, 26.20	—
Where applicable, see also Section 1705.13. Special inspections for seismic resistance.					
a. Specific requirements for special inspection shall be included in the research report for the anchor issued by an approved source in accordance with 17.8.2.2 in ACI 318, or other qualification procedures. Where specific requirements are not provided, special inspection requirements shall be specified by the registered design professional and shall be approved by the building official prior to the commencement of the work.					

	TYPE	CONTINUOUS	PERIODIC
1.	Verify materials below shallow foundations are adequate to achieve the design bearing capacity	—	X
2.	Verify excavations are extended to proper depth and have reached proper material.	—	X
3.	Perform classification and testing of compacted fill materials.	—	X
4.	During fill placement, verify use of proper materials and procedures in accordance with the provisions of the approved geotechnical report. Verify densities and lift thicknesses during placement and compaction of compacted fill.	X	—
5.	Prior to placement of compacted fill, inspect subgrade and verify that site has been prepared properly.	—	X

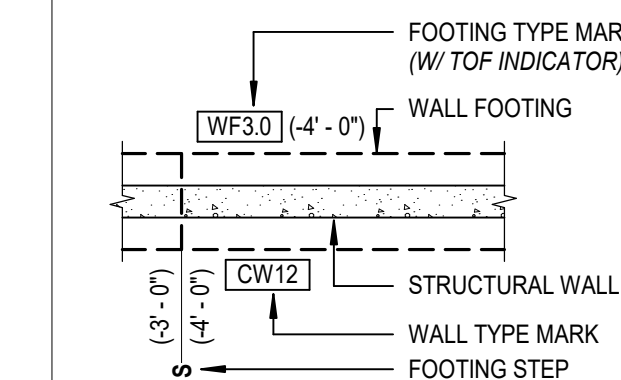
FOUNDATION PLAN GENERAL NOTES

- A. TOP OF SOG ELEVATION = $0' - 0''$ UNO. COORDINATE TOP OF SLAB WITH FLOOR FINISHES, SEE ARCHITECTURAL DRAWINGS.
- B. EXTERIOR TOP OF FOOTING (TOF) ELEVATION = $-1' - 8''$ UNO.
- C. INTERIOR TOP OF FOOTING (TOF) ELEVATION = $-1' - 8''$ UNO.
- D. SEE GEOTECHNICAL REPORT FOR SITE AND SUBGRADE PREPARATIONS.
- E. PROVIDE STOOPS/FROST SLABS AT ALL EXTERIOR DOORS. COORDINATE WITH CIVIL AND ARCHITECTURAL DRAWINGS.

ROOF FRAMING PLAN GENERAL NOTES

- A. SEE PLAN FOR TOP OF STEEL (TOS) ELEVATIONS/JOIST BEARING ELEVATIONS (JBE).
- B. TOP OF STEEL/JOIST ELEVATION (TOS) EQUAL TO BOTTOM OF DECK ELEVATION UNO.
- C. JOIST SLOPE DEPTH IS TO BE DETERMINED BASED ON ROOF DECK SLOPE. TOP OF STEEL ELEVATIONS TO BE DETERMINED BASED ON JOIST SLOPE DEPTHS.
- D. BEAMS/JOISTS SHALL BE SPACED EVENLY BETWEEN NEAREST COLUMN LINES AND LOCATED STRUCTURAL MEMBERS (WALLS, BEAMS) UNO.
- E. STEEL ANGLES OR BENT PLs ARE REQUIRED AT ALL DECK PERIMETERS, EVEN WHEN NOT INDICATED. REFERENCE TYPICAL DETAILS.
- F. STEEL MEMBERS AND CONNECTIONS EXPOSED TO THE WEATHER ARE TO BE GALVANIZED.

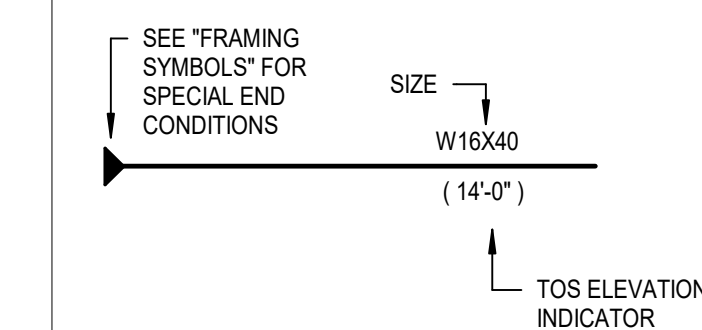
FOUNDATION SYMBOLS



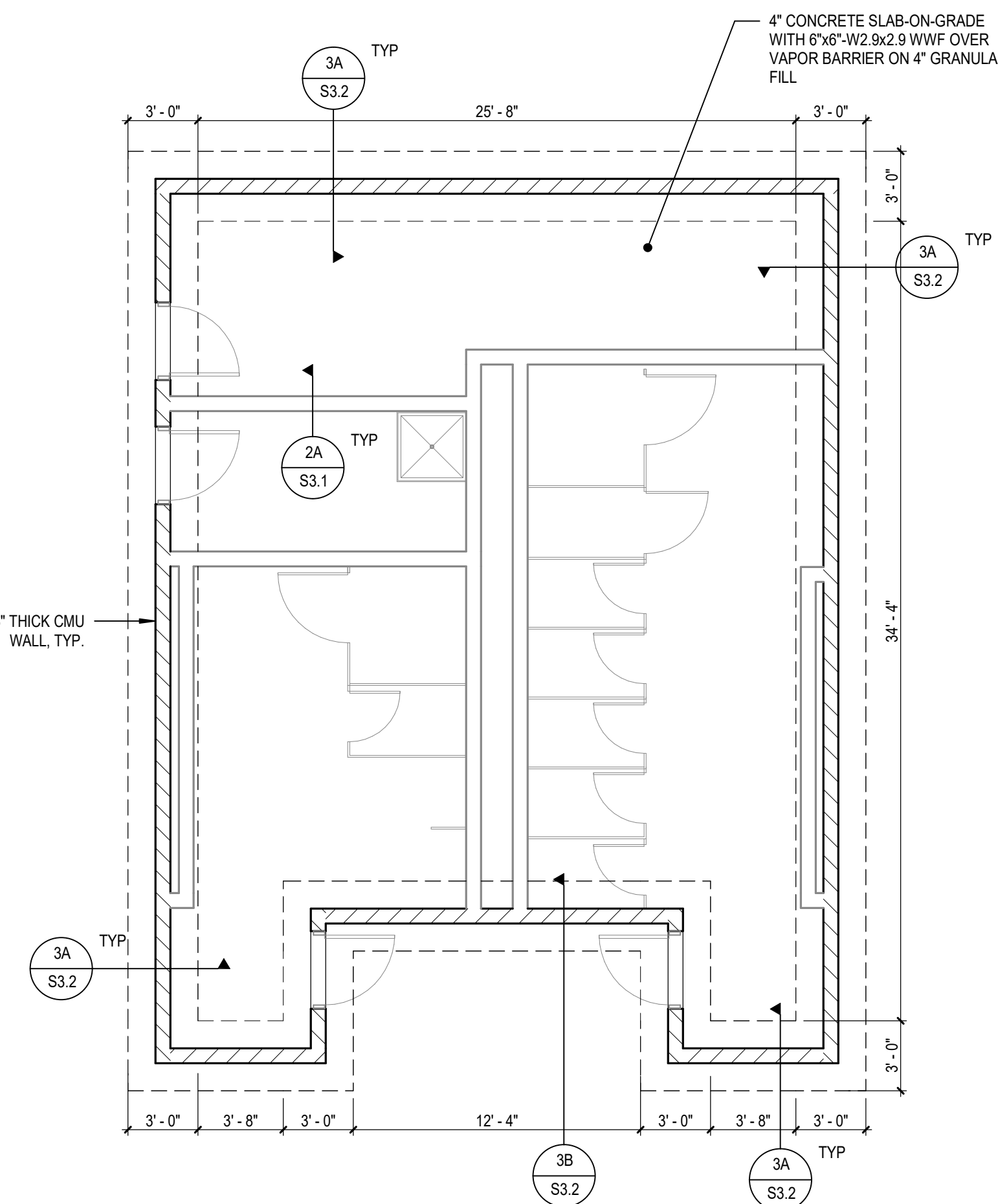
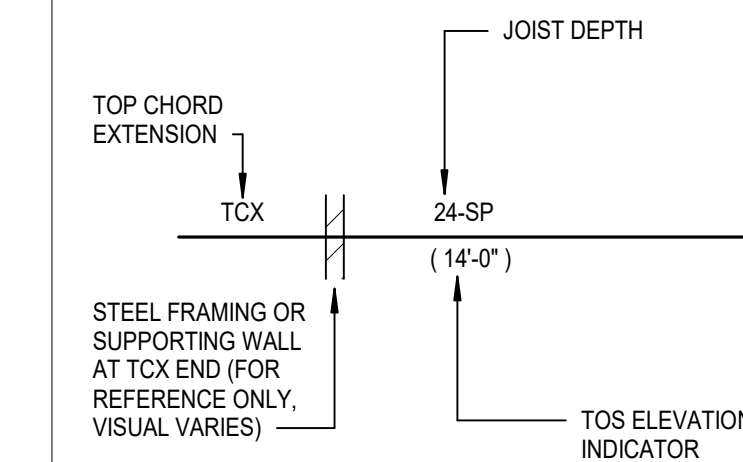
FRAMING SYMBOLS

- | | | |
|---|-----|--|
|  | MW# | MASONRY WALL TYPE MARK |
|  | ML# | MASONRY WALL LINTEL
(MLX INDICATES MASONRY LINTEL
PLX INDICATES PRECAST LINTEL
(W/ BOTTOM OF LINTEL ELEVATION INDICATOR |
|  | CJ | MASONRY WALL CONTROL JOINT |
|  | | STEEL BEAM TO STEEL BEAM MOMENT CONN |

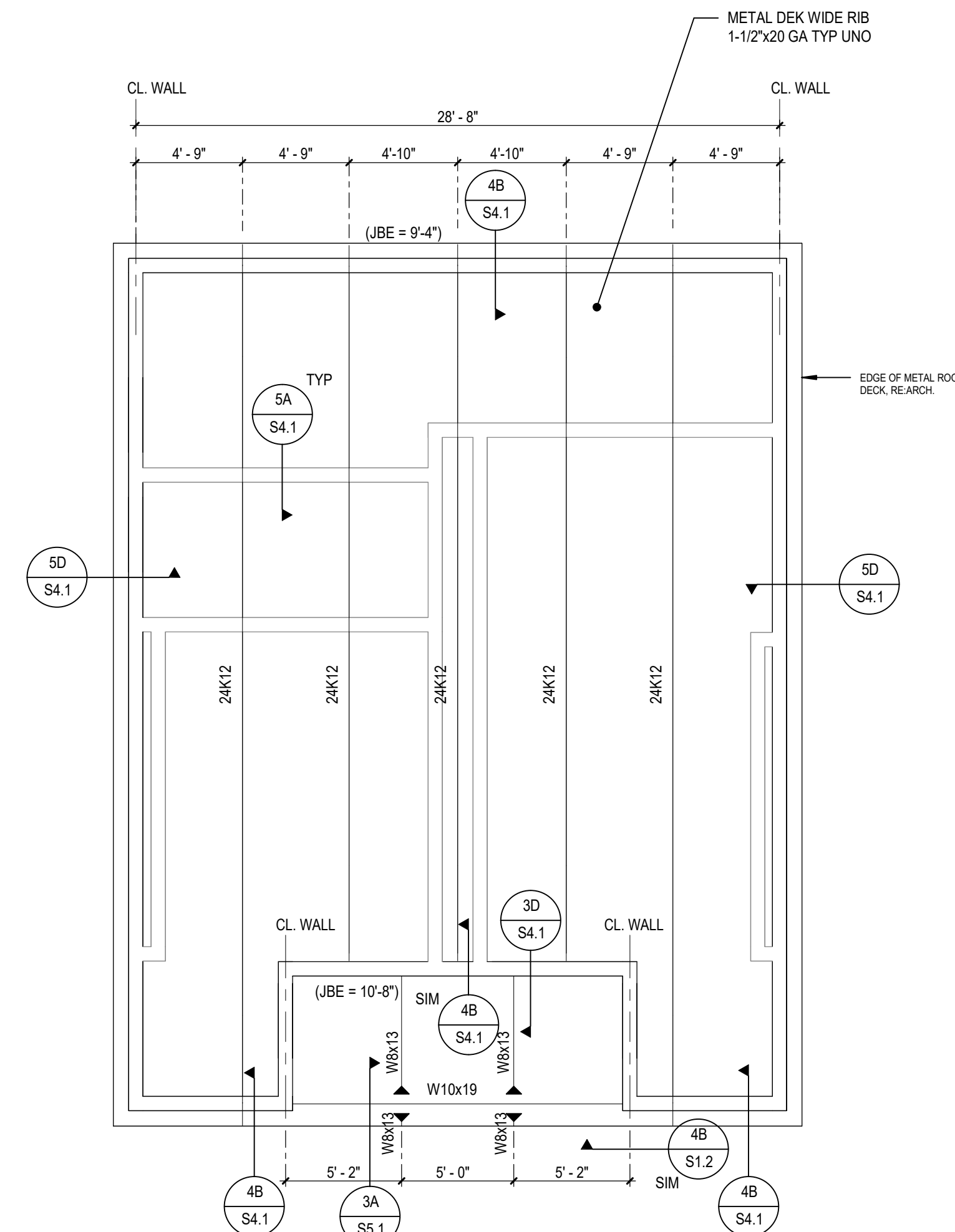
BEAM SYMBOLS



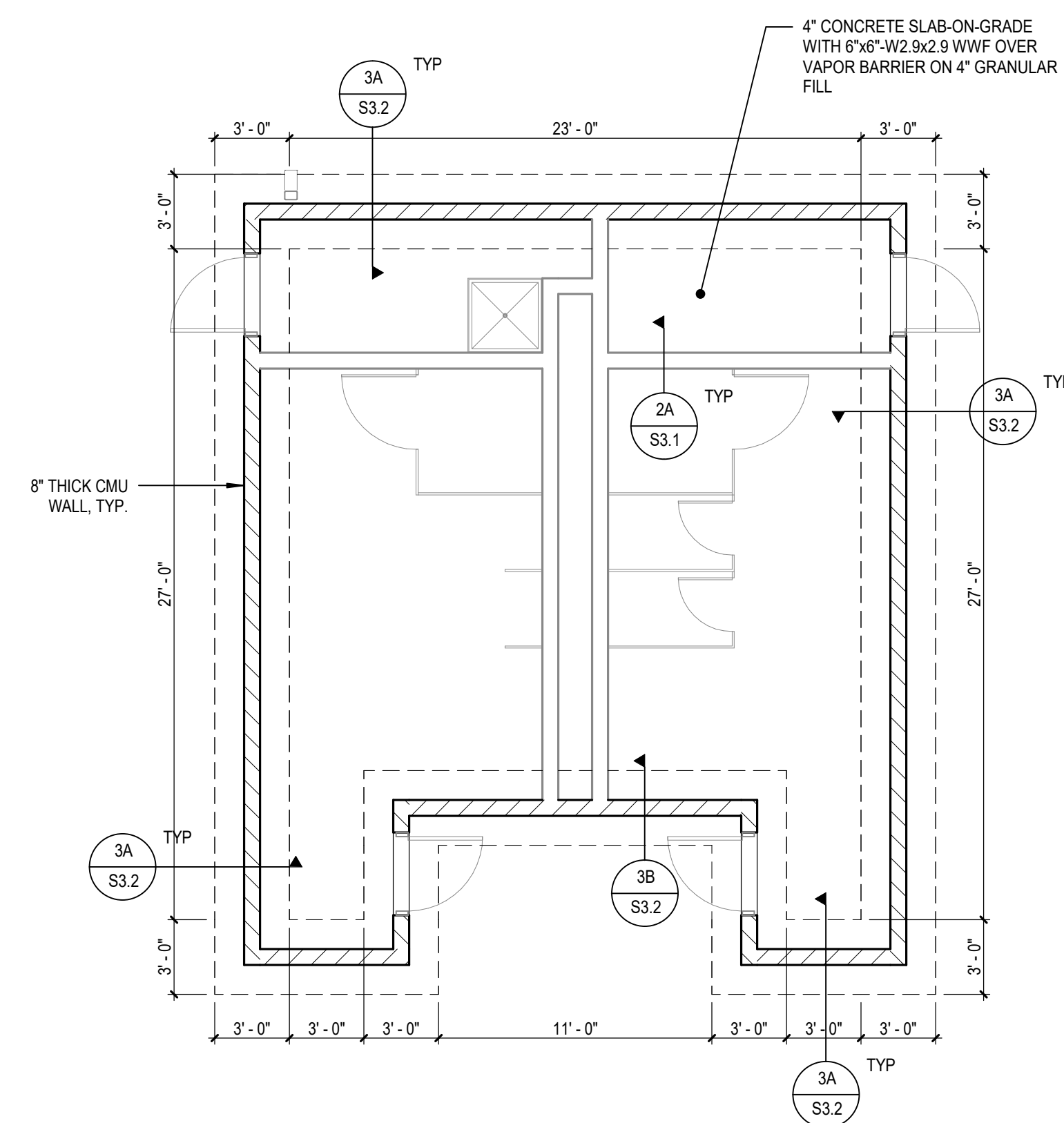
STEEL JOIST SYMBOLS



1 MAULIN HS FOUNDATION PLAN
S1.1 SCALE: 3/16" = 1'-0"



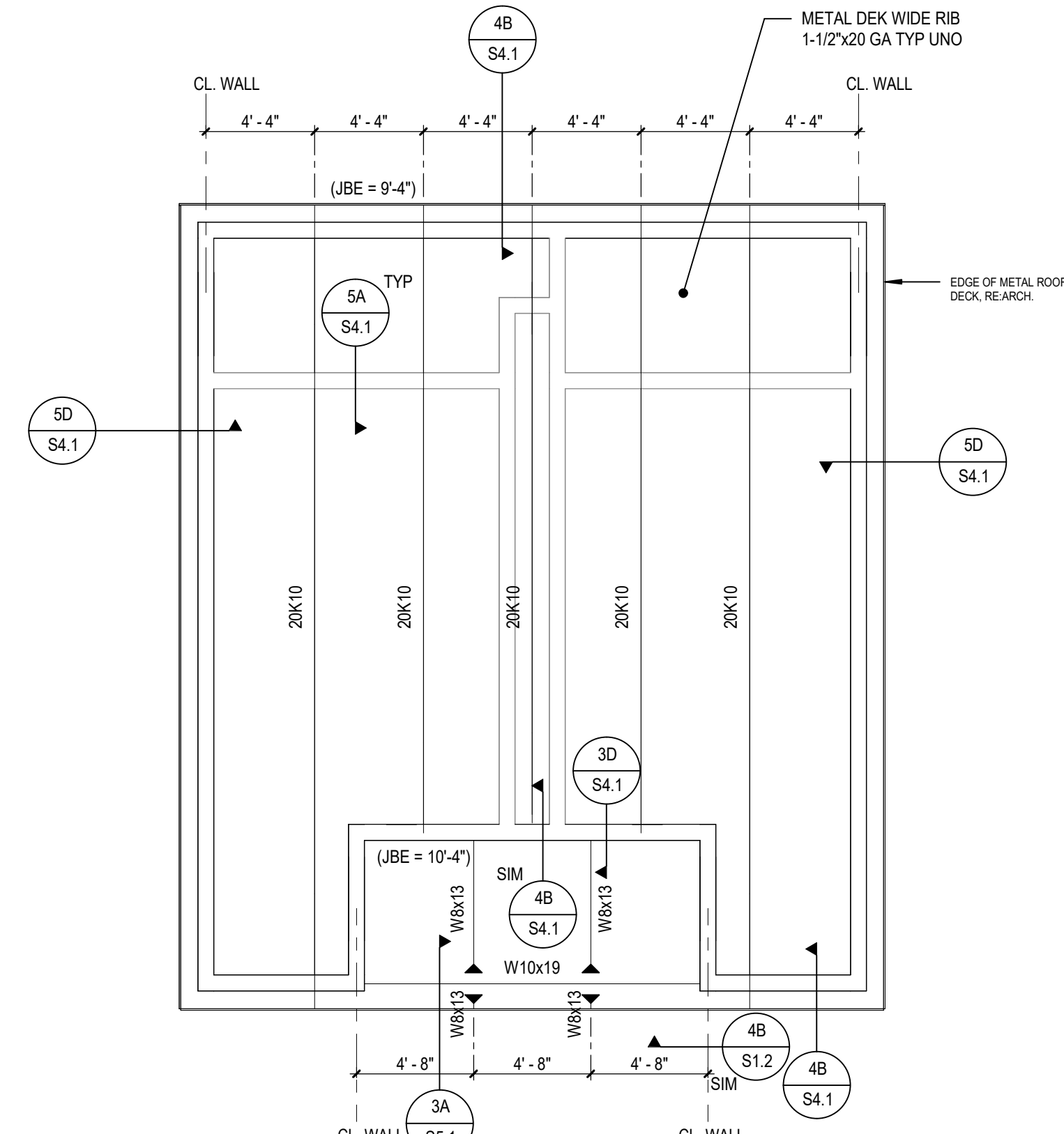
2 MAULIN HS STRUCTURAL ROOF PLAN
S1.1 SCALE: 3/16" = 1'-0"



3
S1.1

CAROLINA HS FOUNDATION PLAN

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



4 CAROLINA HS STR ROOF PLAN
S1.1 SCALE: 3/16" = 1'-0"

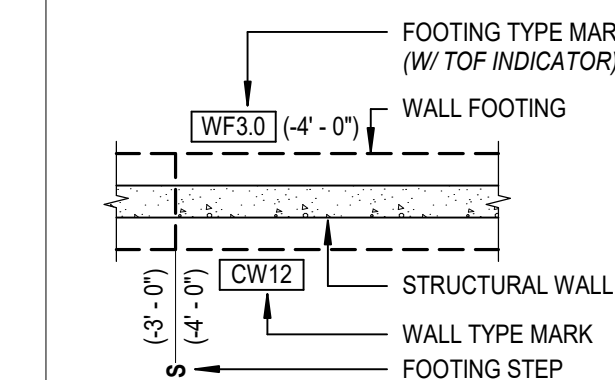
FOUNDATION PLAN GENERAL NOTES

- A. TOP OF SUG ELEVATION = $0' - 0''$ UNO. COORDINATE TOP OF SLAB WITH FLOOR FINISHES, SEE ARCHITECTURAL DRAWINGS.
- B. EXTERIOR TOP OF FOOTING (TOF) ELEVATION = $-1' - 8''$ UNO.
- C. INTERIOR TOP OF FOOTING (TOF) ELEVATION = $-1' - 8''$ UNO.
- D. SEE GEOTECHNICAL REPORT FOR SITE AND SUBGRADE PREPARATIONS.
- E. PROVIDE STOOPS/FROST SLABS AT ALL EXTERIOR DOORS. COORDINATE WITH CIVIL AND ARCHITECTURAL DRAWINGS.

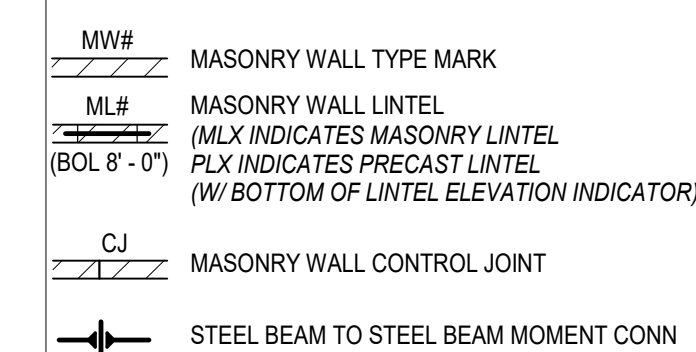
ROOF FRAMING PLAN GENERAL NOTES

- A. SEE PLAN FOR TOP OF STEEL (TOS) ELEVATIONS/JOIST BEARING ELEVATIONS (JBE).
- B. TOP OF STEEL/JOIST ELEVATION (TOS) EQUAL TO BOTTOM OF DECK ELEVATION UNO.
- C. JOIST SEAT DEPTHS TO BE DETERMINED BASED ON ROOF DECK SLOPE. TOP OF STEEL ELEVATIONS TO BE DETERMINED BASED ON JOIST SEAT DEPTHS.
- D. BEAMS/JOISTS SHALL BE SPACED EVENLY BETWEEN NEAREST COLUMN LINES AND LOCATED STRUCTURAL MEMBERS (WALLS, BEAMS) UNO.
- E. STEEL ANGLES OR BENT PLS ARE REQUIRED AT ALL DECK PERIMETERS, EVEN WHEN NOT INDICATED. REFERENCE TYPE 101 DETAILS.
- F. STEEL MEMBERS AND CONNECTIONS EXPOSED TO THE WEATHER ARE TO BE GALVANIZED.

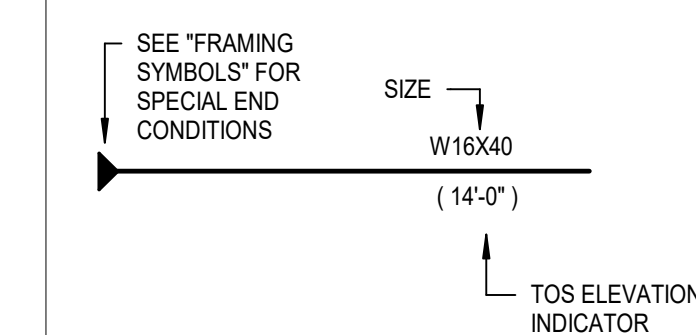
FOUNDATION SYMBOLS



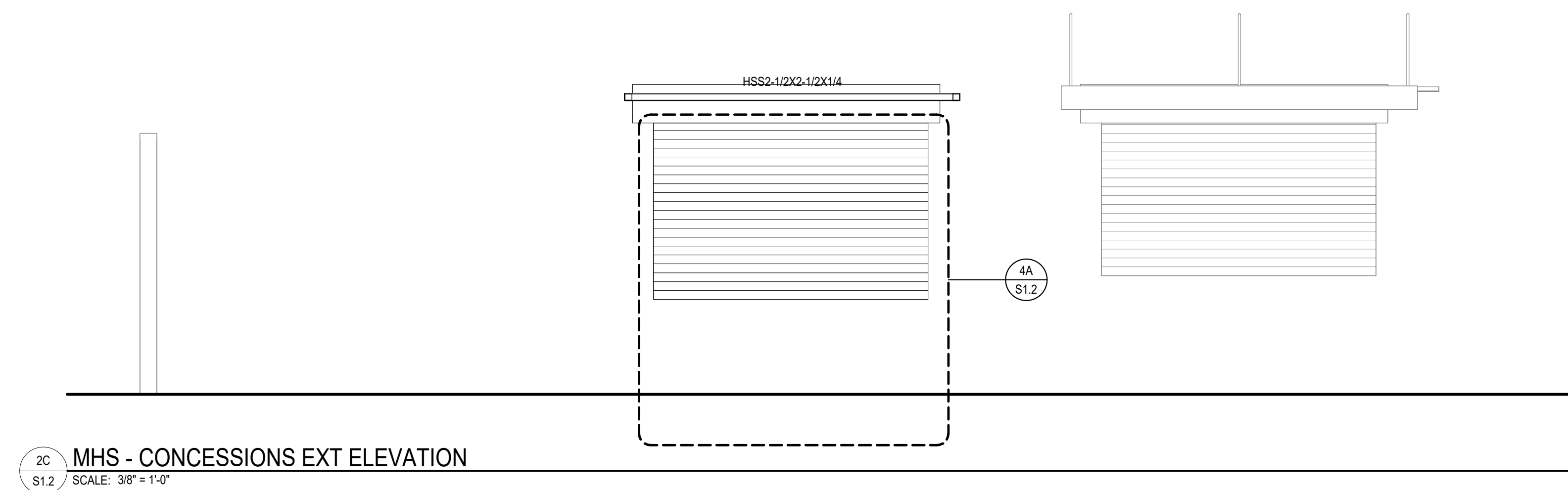
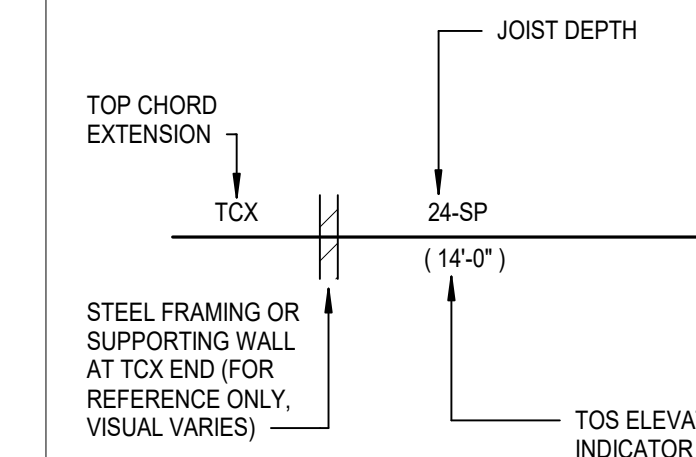
FRAMING SYMBOLS



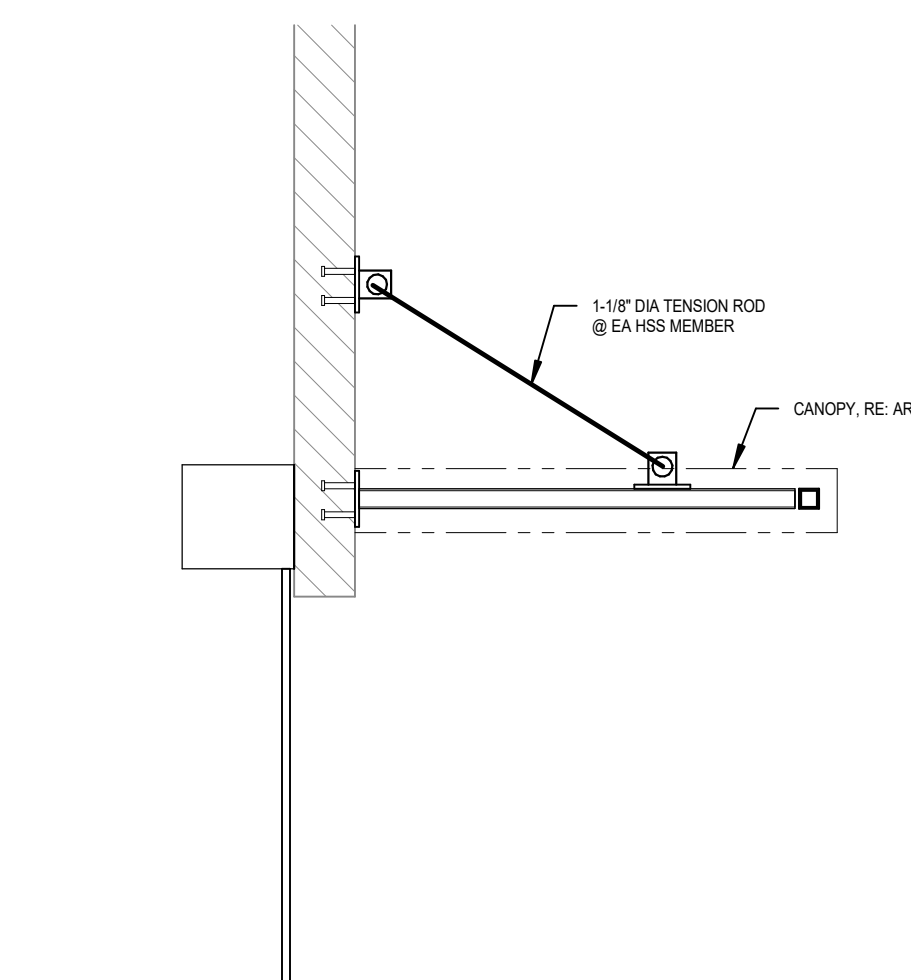
BEAM SYMBOLS



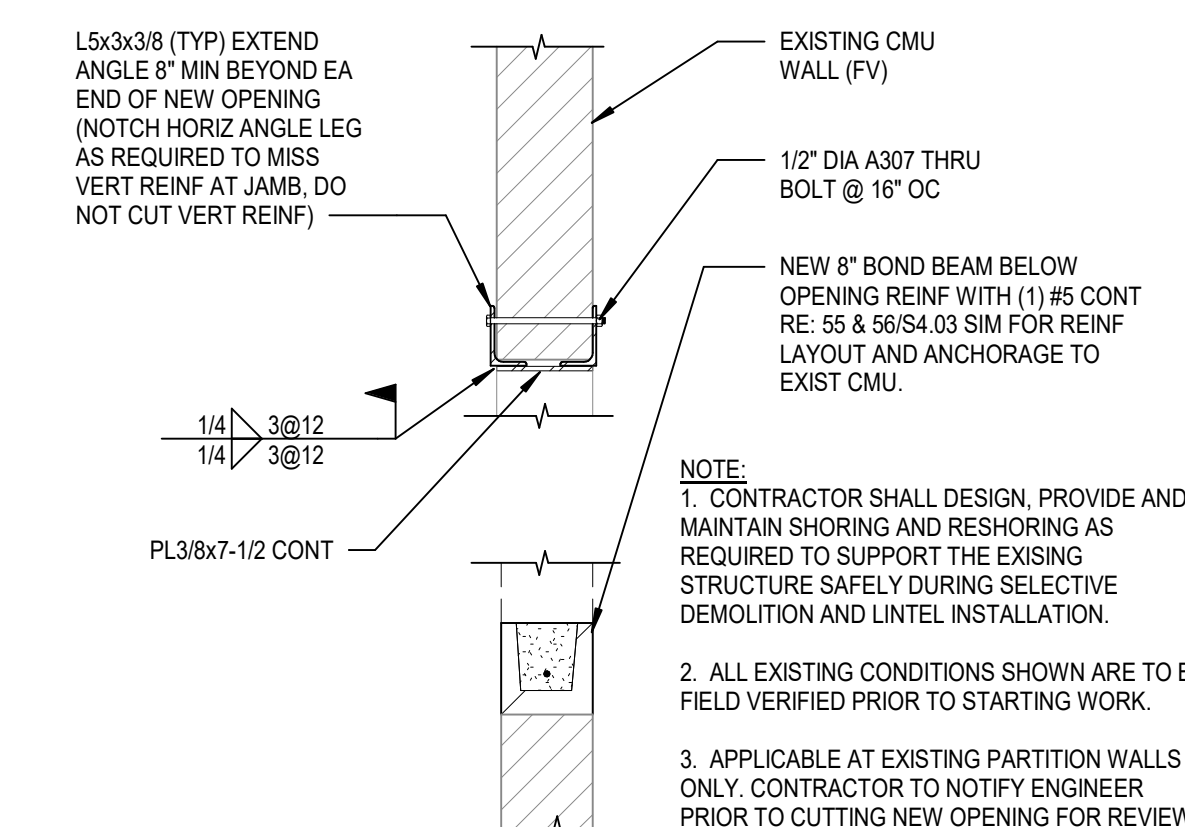
STEEL JOIST SYMBOLS



2C MHS - CONCESSIONS EXT ELEVATION
S1.2 SCALE: 3/8" = 1'-0"



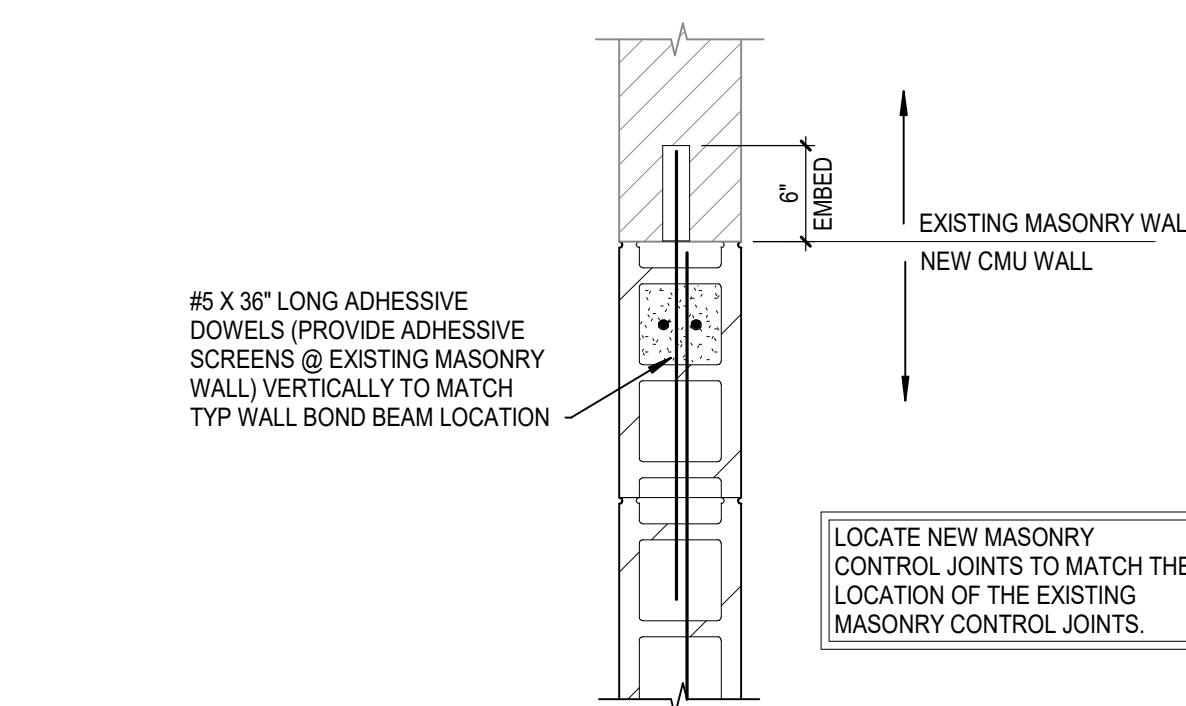
3C SECTION
S1.2 SCALE: 1/2" = 1'-0"



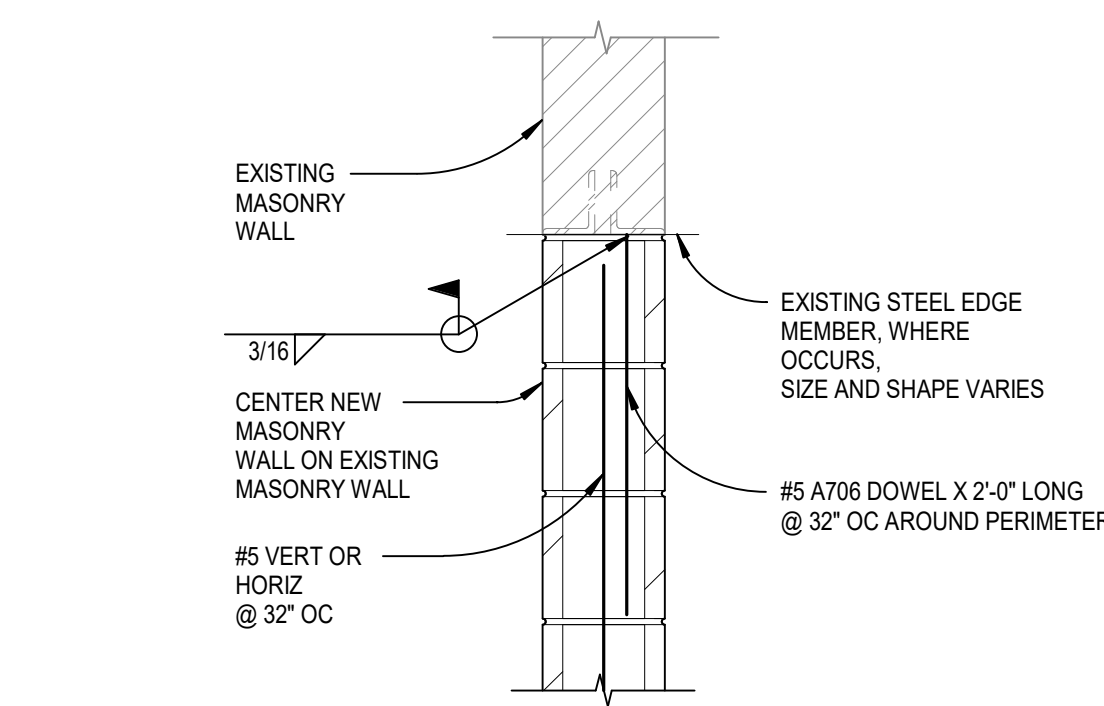
4C
S1.2

TYP CMU WALL OPENING DETAIL

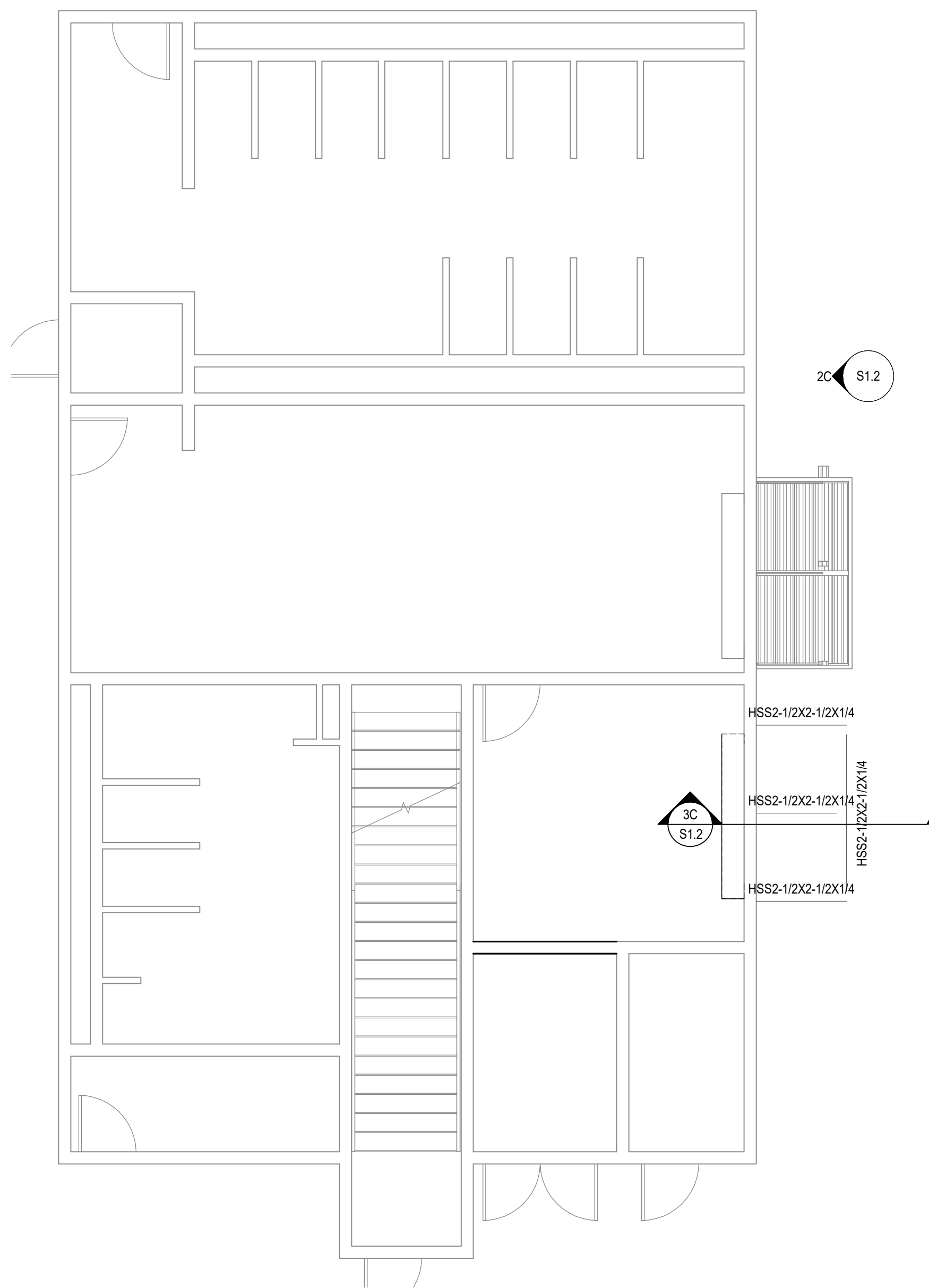
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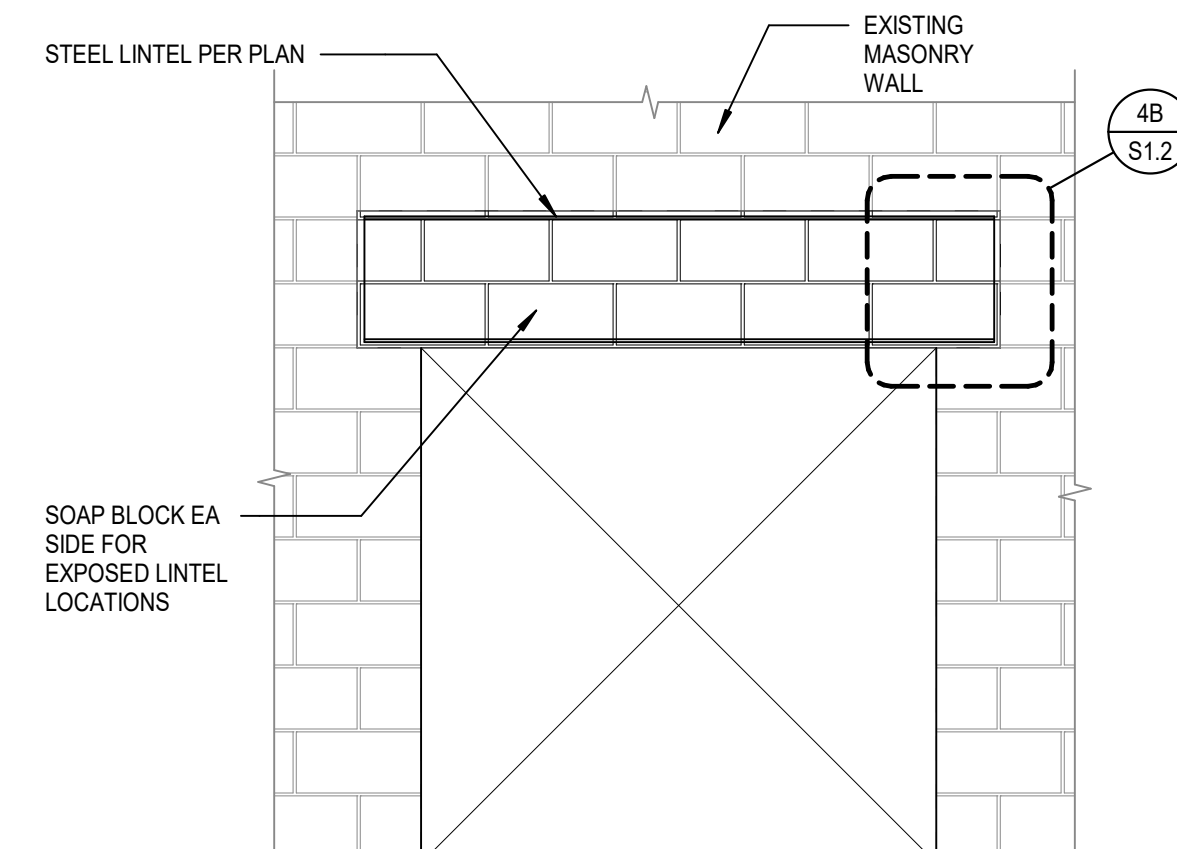
4D
S1.2



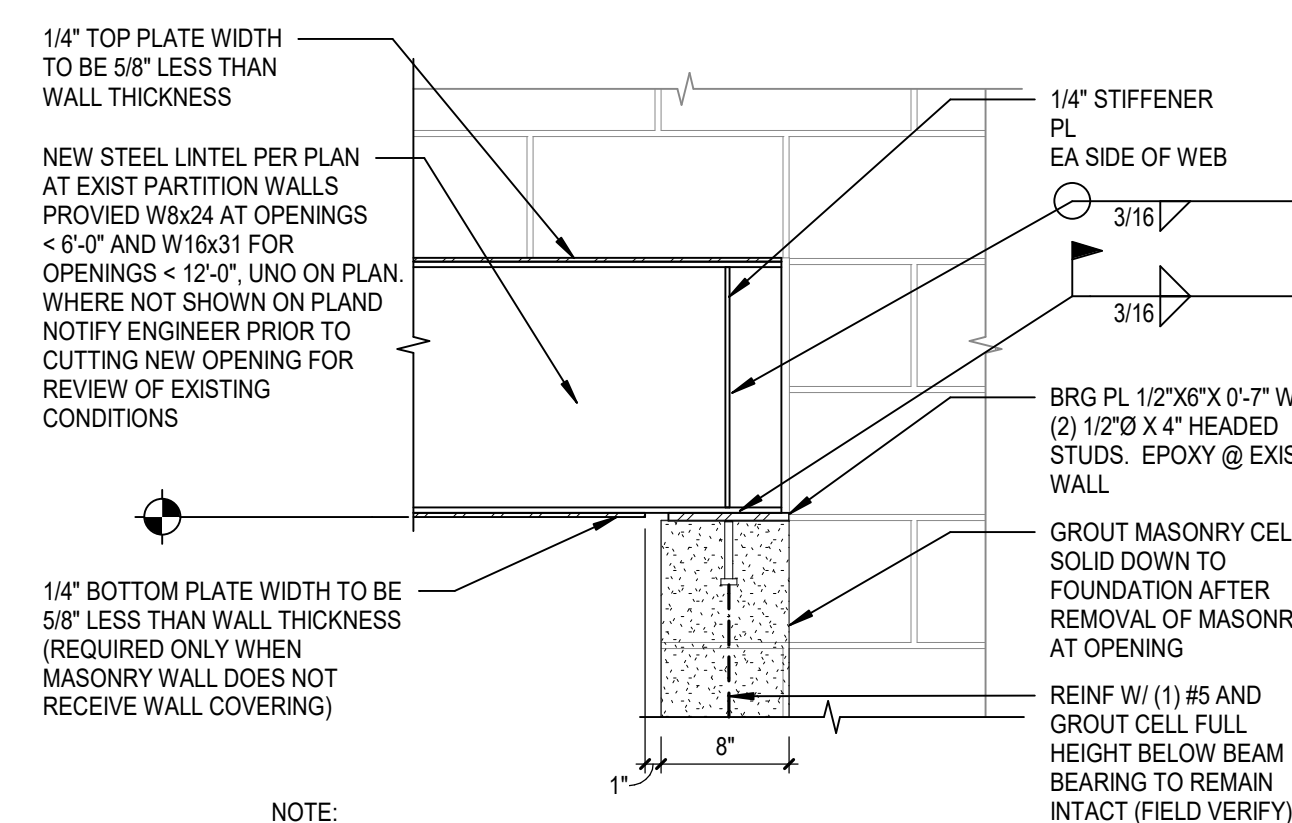
4E SECTION
S1.2 NO SCALE



3A MAULIN HS CONCESSION RENOVATION PLAN
S1.2 SCALE: 3/16" = 1'-0"



4A TYP CMU WALL OPENING DETAIL W/ STEEL LINTEL
S1.2 NO SCALE

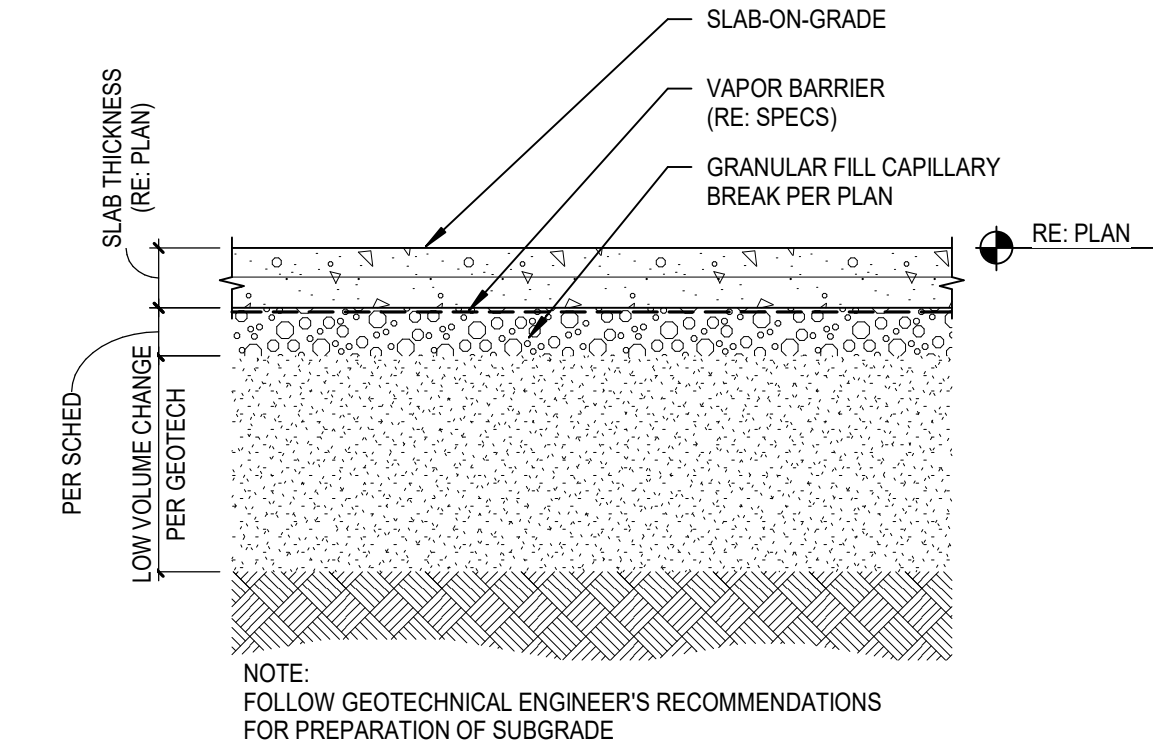


4B TYP STEEL LINTEL BRG DETAIL
S1.2 NO SCALE



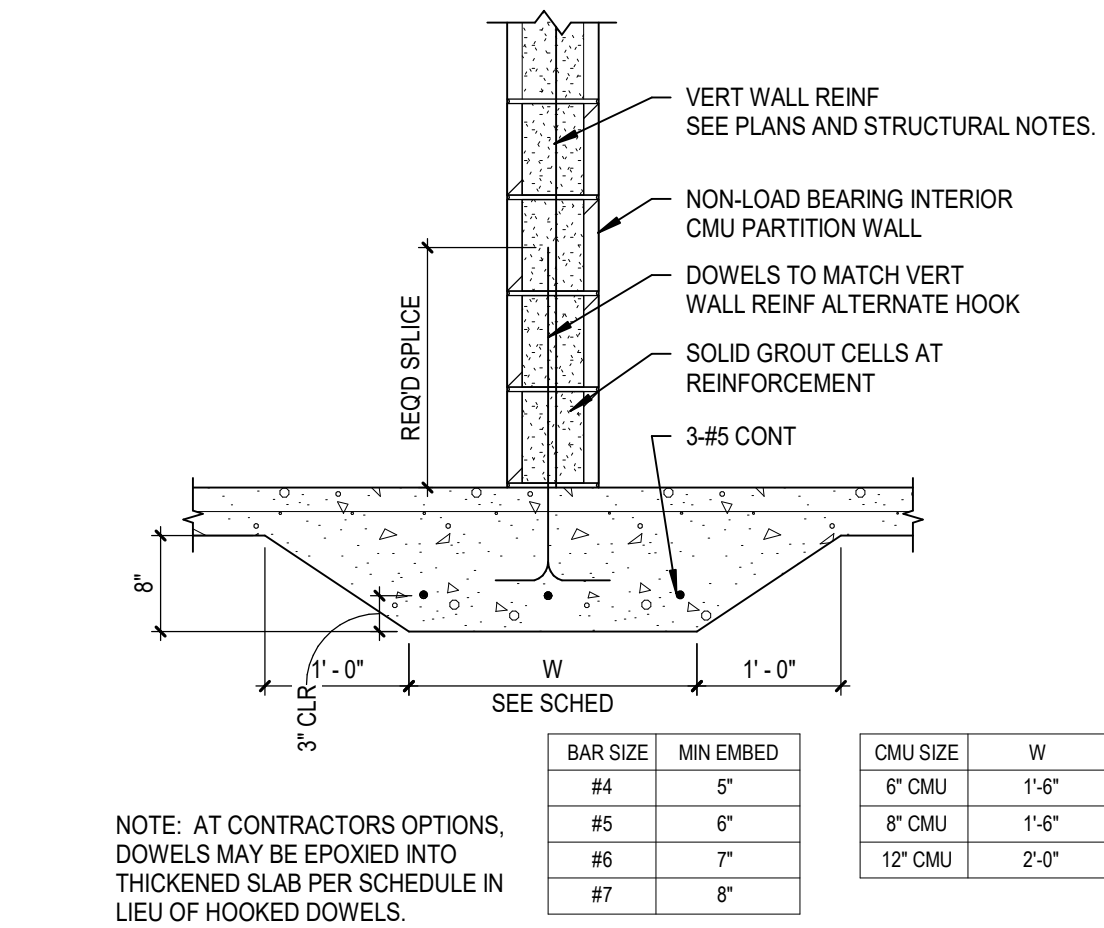
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1



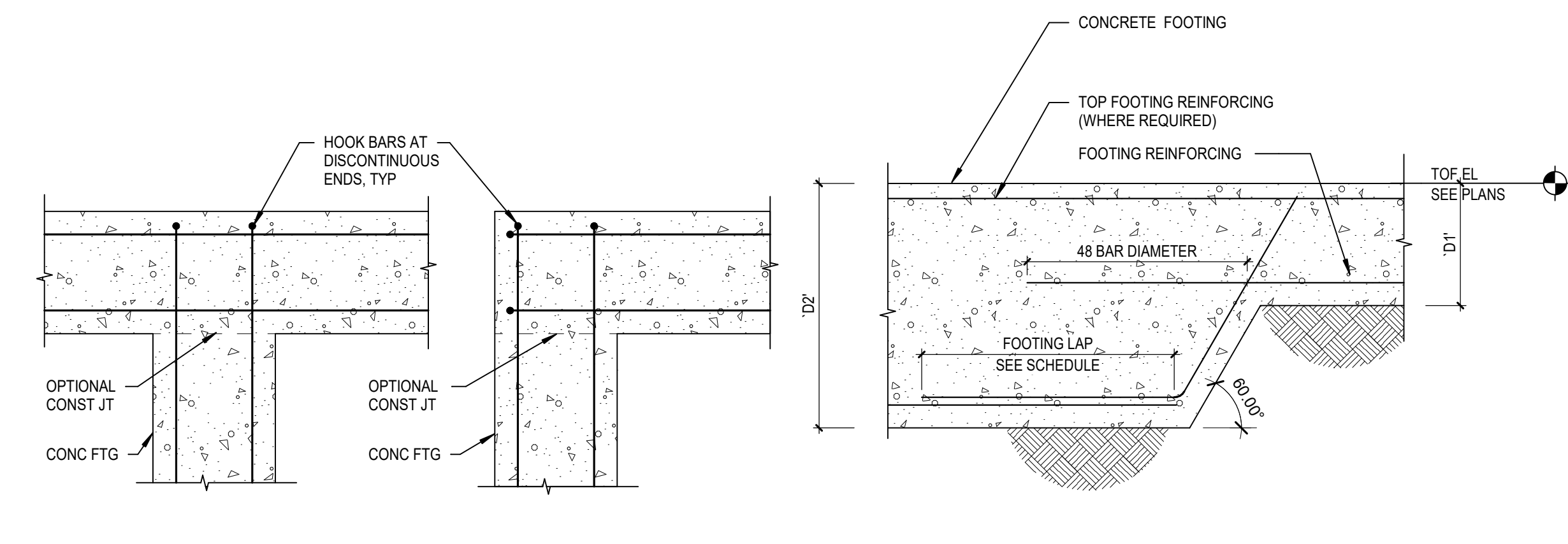
1A TYP SLAB-ON-GRADE DETAIL
S3.1 NO SCALE

2

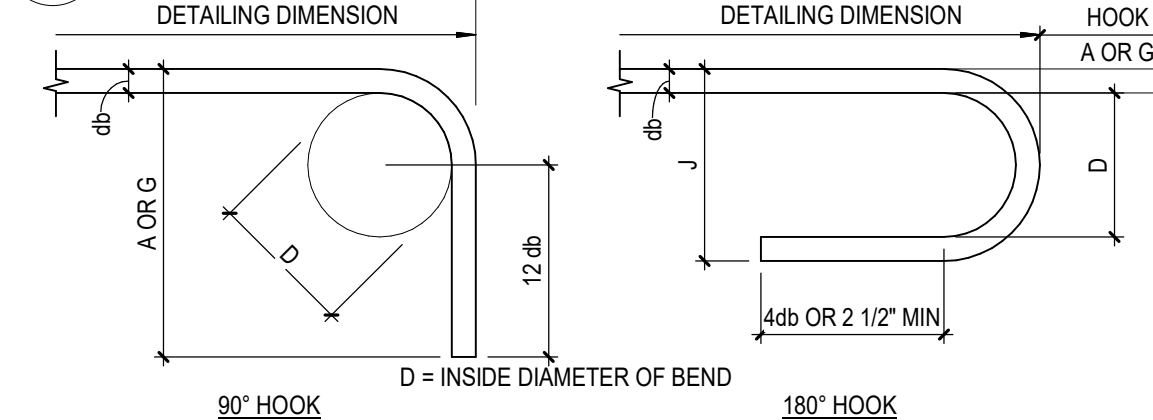


2A TYP CMU PARTITION WALL DETAIL
S3.1 NO SCALE

3



3A TYP FTG REINF DETAIL
S3.1 NO SCALE



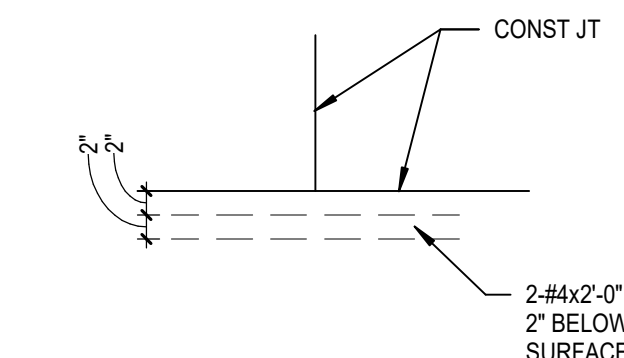
RECOMMENDED END HOOKS, ALL GRADES				
BAR SIZE	FINISHED BEND DIAMETER (D) (IN)	180° HOOKS A OR G (IN)	180° HOOKS J (IN)	90° HOOKS A OR G (IN)
#3	2 1/4	5	3	6
#4	3	6	4	8
#5	3 3/4	7	5	10
#6	4 1/2	8	6	12
#7	5 1/4	10	7	14
#8	6	11	8	16
#9	9 1/2	15	11	34
#10	10 3/4	17	13	44
#11	12	19	14	34
#14	18 1/4	27	21	34
#18	24	36	28	1/2
41				

4A END HOOK TYPES
S3.1 NO SCALE

ACI TENSION LAP SPLICE LENGTHS (IN) FOR $f_c = 4,000$ PSI MINIMUM					
BAR SIZE	LAP CLASS	$f_c = 4,000$ PSI			
		TOP BARS		OTHER BARS	
		CASE 1	CASE 2	CASE 1	CASE 2
#3	A	18	28	14	21
	B	24	36	19	28
#4	A	23	37	19	28
	B	32	48	25	37
#5	A	31	46	24	36
	B	40	60	31	46
#6	A	37	55	28	43
	B	48	72	37	55
#7	A	54	81	42	62
	B	70	105	54	81
#8	A	62	92	47	71
	B	80	120	62	92
#9	A	70	104	54	80
	B	90	136	70	104
#10	A	78	117	60	90
	B	102	153	79	117
#11	A	87	130	67	100
	B	113	170	87	130

5A CONCRETE REINFORCING LAP SPLICING SCHEDULE
S3.1 NO SCALE

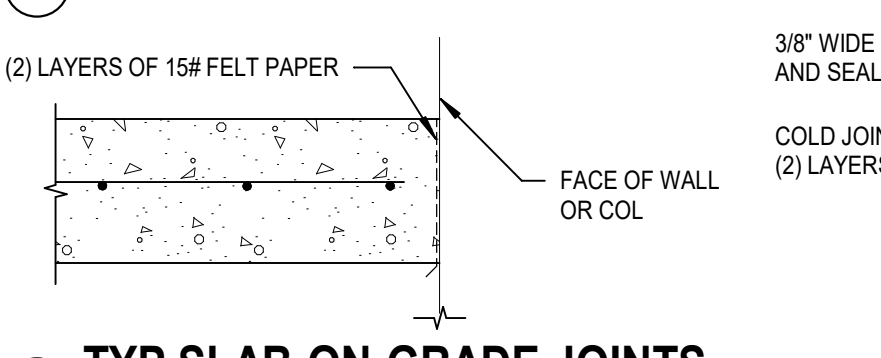
INTERNAL CORNER



DISCONTINUOUS JT INTERSECTION

1B TYP SLAB-ON-GRADE
S3.1 NO SCALE

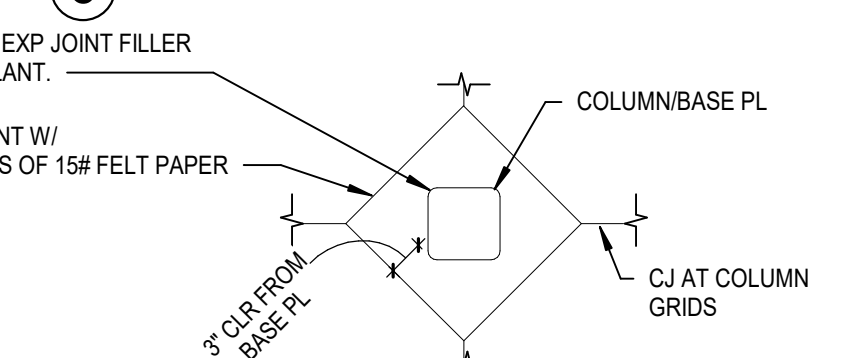
CONTROL (CONTRACTION) JOINT (CJ)



TYP SLAB-ON-GRADE JOINTS

1C TYP SLAB-ON-GRADE JOINTS
S3.1 NO SCALE

CONSTRUCTION JOINT (CONST JT)



ISOLATION JOINT @ COL

1D TYP SLAB-ON-GRADE JOINTS
S3.1 NO SCALE

- NOTES:
- CONTROL JOINTS SHALL BE SPACED AT INTERVALS $< 10'-0"$ IN EACH DIRECTION.
 - CONTRACTOR SHALL COORDINATE JOINT SPACING WITH ARCHITECTURAL REQUIREMENTS AS APPLICABLE. SUBMIT JOINT LAYOUT FOR ARCHITECT/ENGINEER'S REVIEW.
 - JOINT LAYOUT SHOULD BE RELATIVELY SQUARE WHENEVER POSSIBLE. LENGTH / WIDTH ASPECT RATIO SHALL BE LESS THAN 2:1.

4

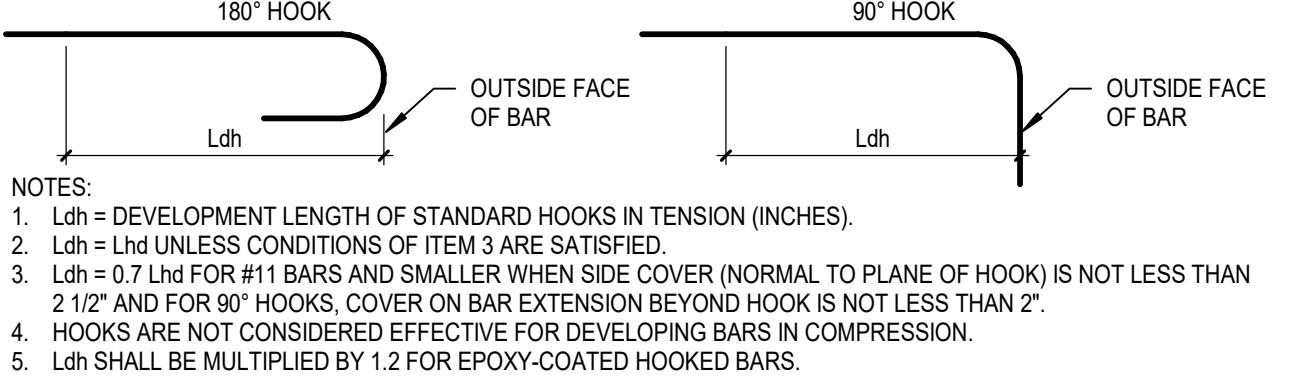
TYP BOT STEP FTG DETAIL

53.1 NO SCALE

53.2

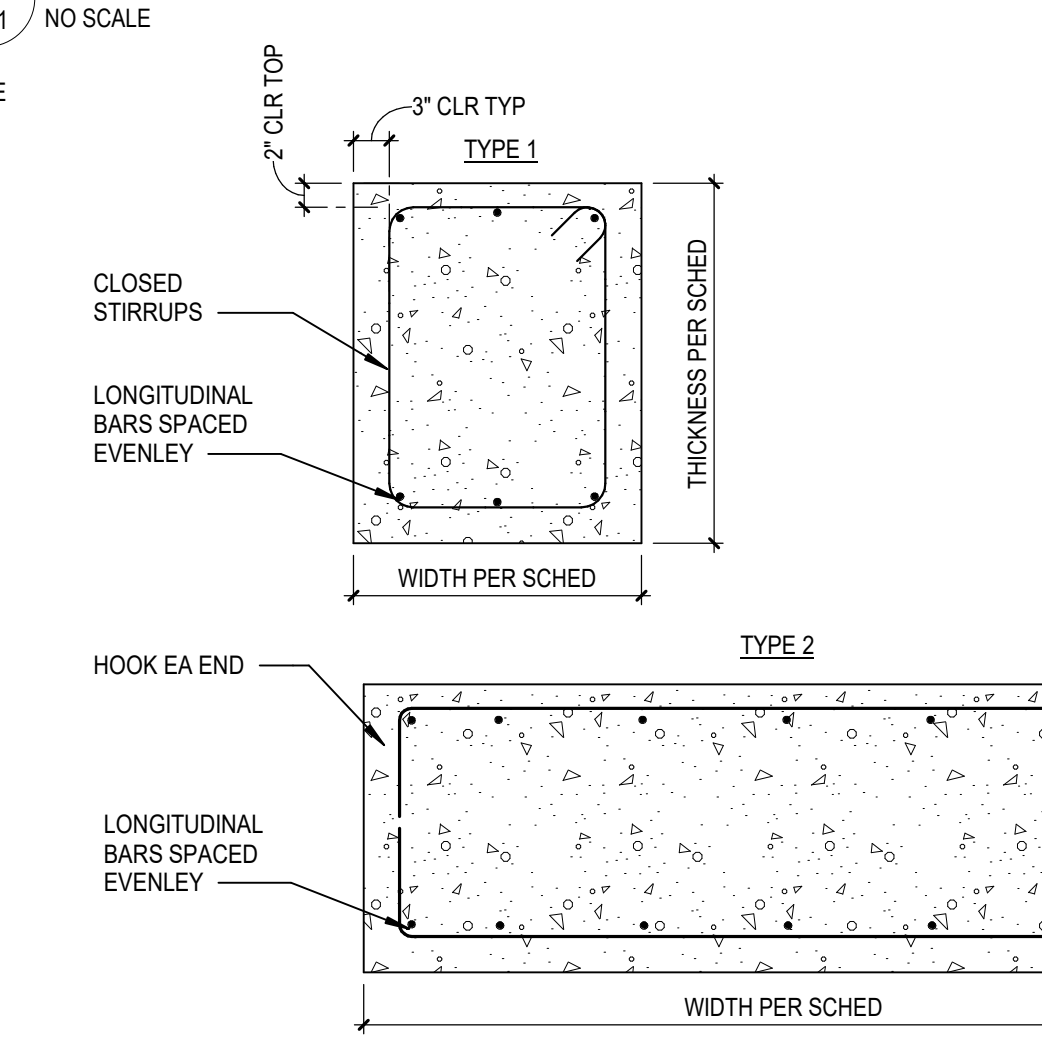
DEVELOPMENT LENGTHS OF STANDARD HOOKS IN TENSION, GRADE 60 REINFORCEMENT IN NORMAL WEIGHT CONCRETE

BAR SIZE	$f_c = 3,000$		$f_c = 4,000$		$f_c = 5,000$		$f_c = 6,000$		$f_c = 7,000$		$f_c = 8,000$	
	L_{db}	$0.7L_{db}$	L_{db}	$0.7L_{db}$	L_{db}	$0.7L_{db}$	L_{db}	$0.7L_{db}$	L_{db}	$0.7L_{db}$	L_{db}	$0.7L_{db}$
#3	8	6	7	6	6	6	6	6	6	6	6	6
#4	11	8	9	7	8	6	8	6	7	6	7	6
#5	14	10	12	8	11	7	10	7	9	6	8	6
#6	16	12	14	10	13	9	12	8	11	8	10	7
#7	19	13	17	12	15	10	14	9	13	9	12	8
#8	22	15	19	13	17	12	15	11	14	10	13	9
#9	25	17	21	15	19	13	17	12	16	11	15	11
#10	28	19	24	17	22	15	20	14	18	13	17	12
#11	31	22	27	19	24	17	22	15	20	14	19	13
#14	37	NA	32	NA	29	NA	26	NA	24	NA	23	NA
#18	49	NA	43	NA	38	NA	35	NA	32	NA	30	NA

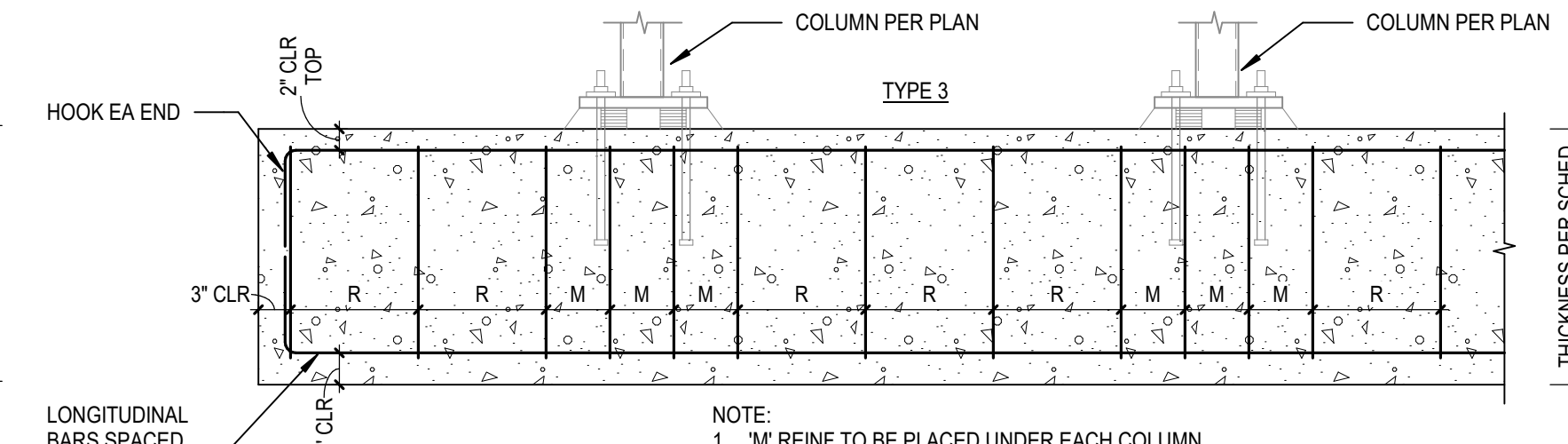


4B DEVELOP LENGTHS OF STD HOOKS
S3.1 NO SCALE

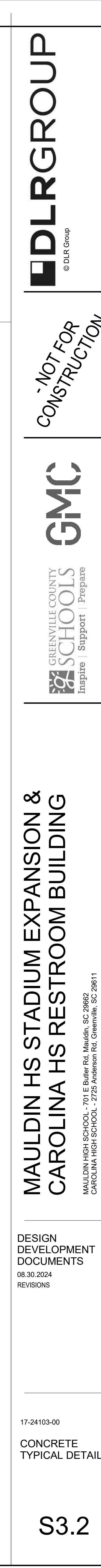
TYP STEP FOOTING DETAIL

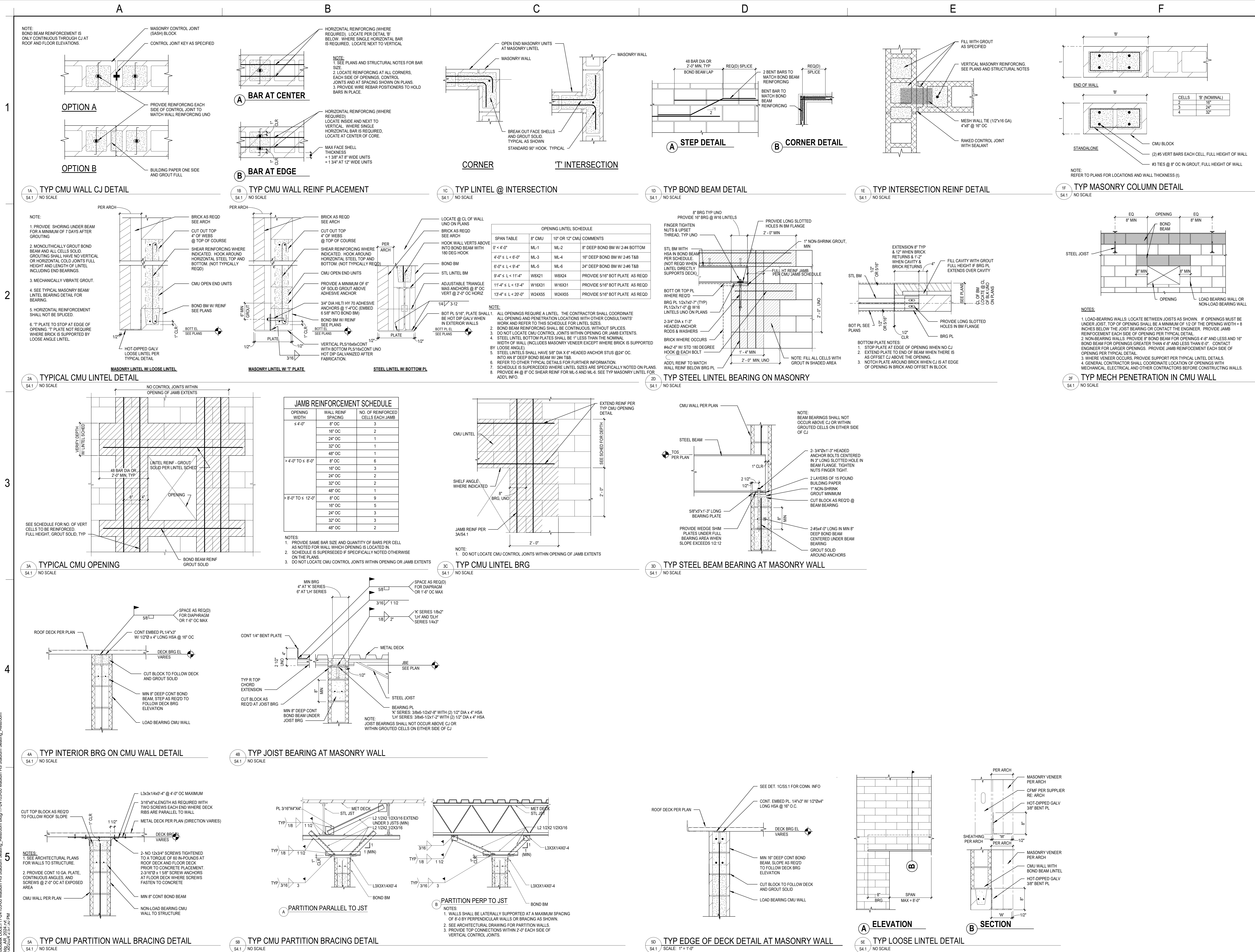


4C TYP WALL FOOTING DETAIL
S3.1 NO SCALE



4C TYP WALL FOOTING DETAIL
S3.1 NO SCALE

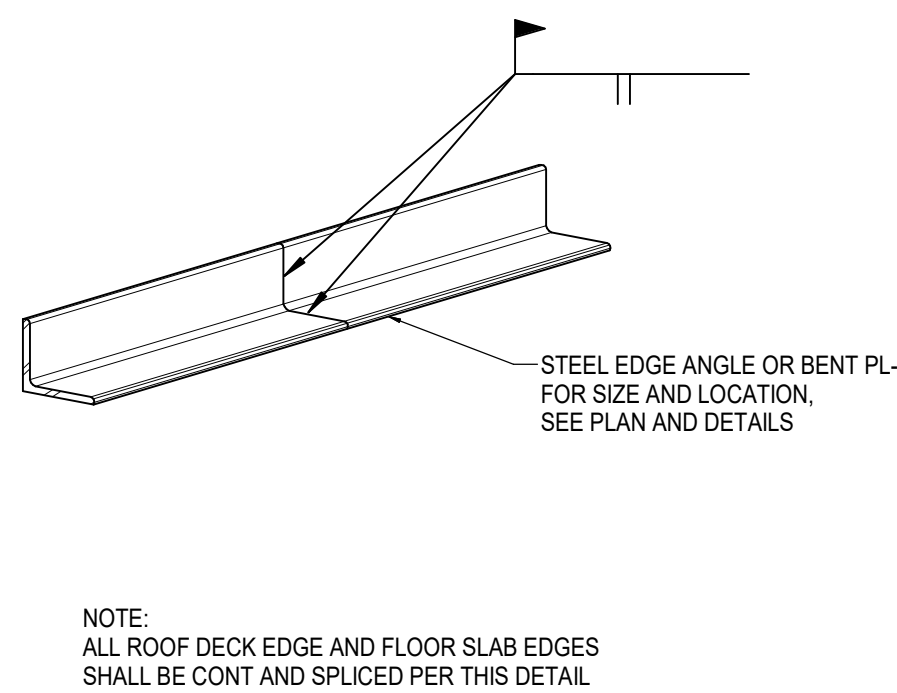




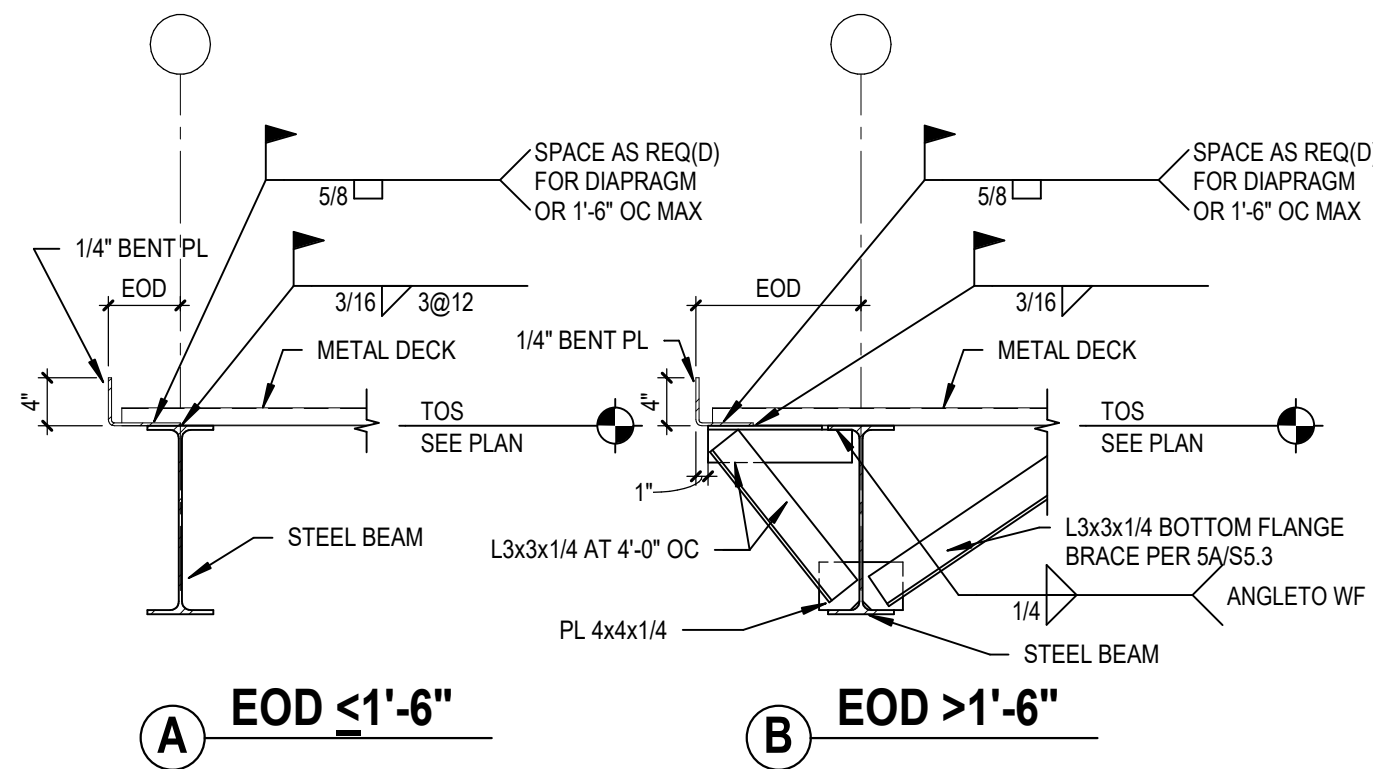
Autodesk Docs/17-24103-00 Mauldin HS Stadium Seating Restroom Bldg/17-24103-00 Mauldin HS Stadium Seating Restroom
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1

JST SEAT DEPTH	ANGLE SIZE
2-1/2"	L2-1/2x2-1/2x3/16
3-1/2"	L3-1/2x3x1/4 LLV
5"	L5x3x1/4 LLV
10"	BENT PL "D"x3"x1/4" LLV



NOTE:
ALL ROOF DECK EDGE AND FLOOR SLAB EDGES
SHALL BE CONT AND SPLICED PER THIS DETAIL

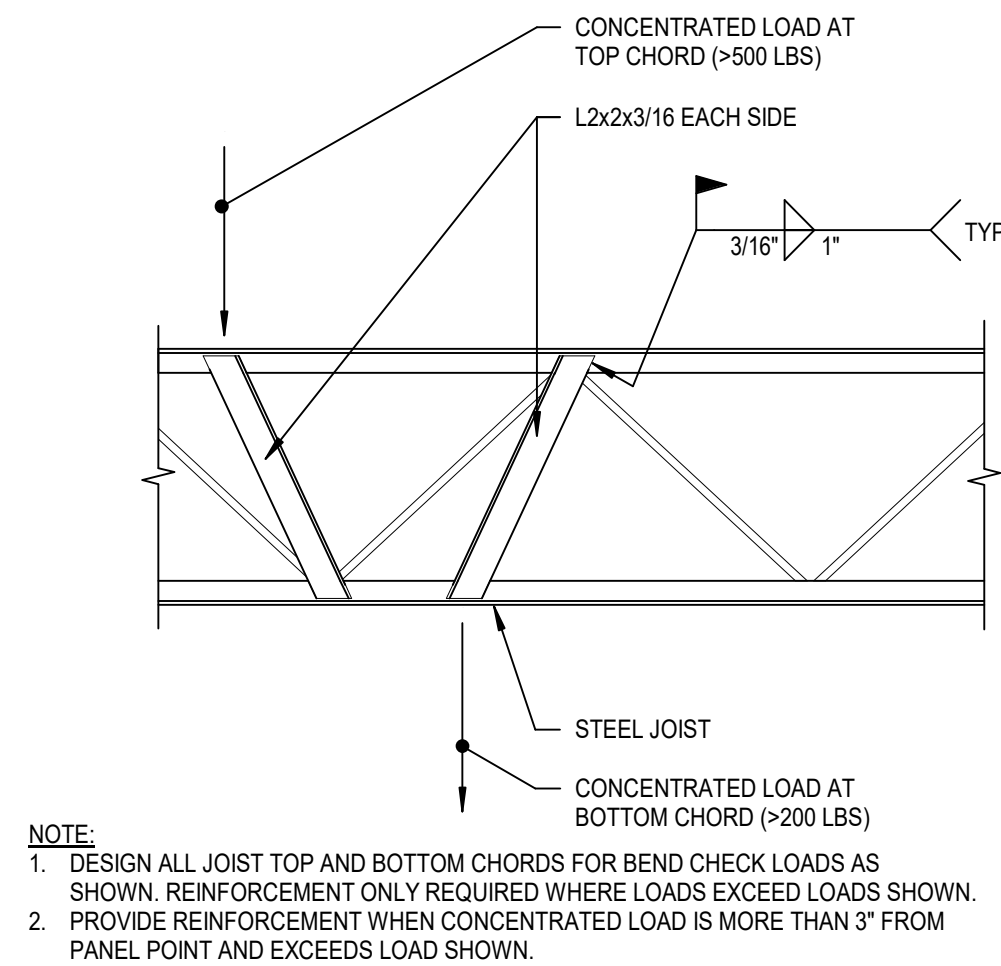


1A COLLECTOR ANGLE TABLE
S5.1 NO SCALE

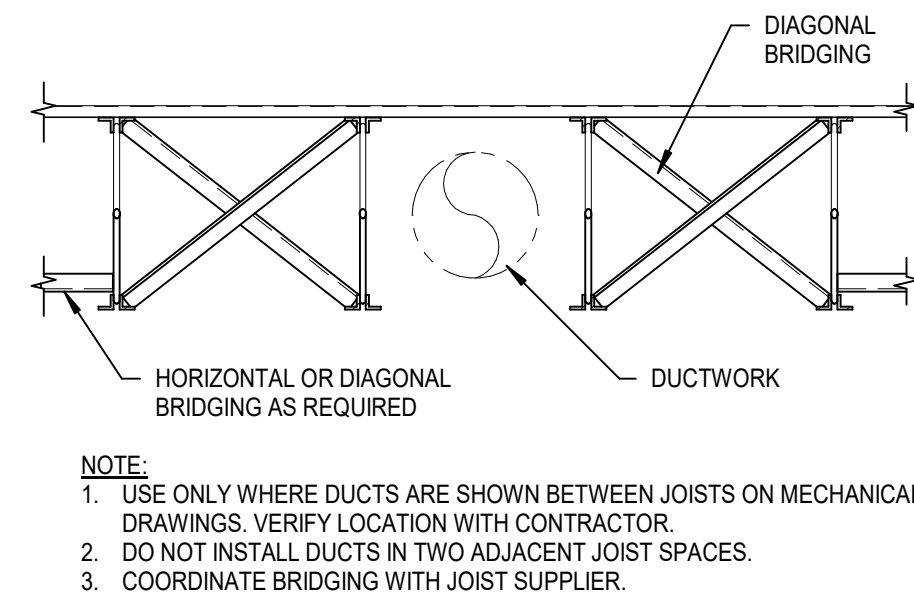
1B TYP CONT BENT PL SPLICE DET
S5.1 NO SCALE

1C TYP EDGE OF DECK DETAIL
S5.1 SCALE: 3/4" = 1'-0"

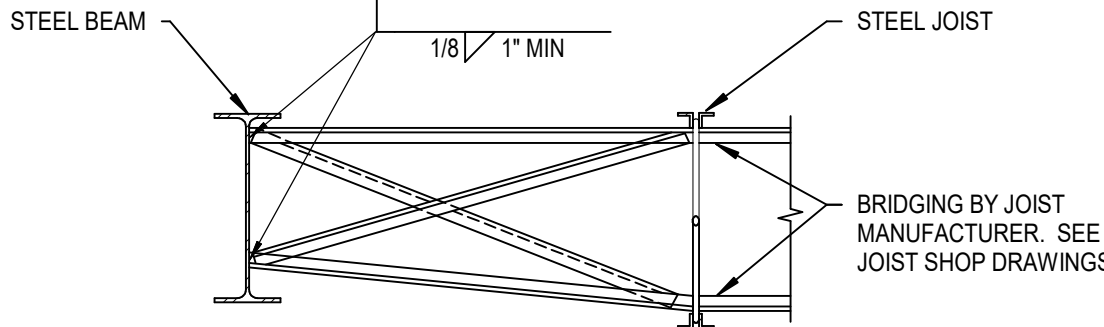
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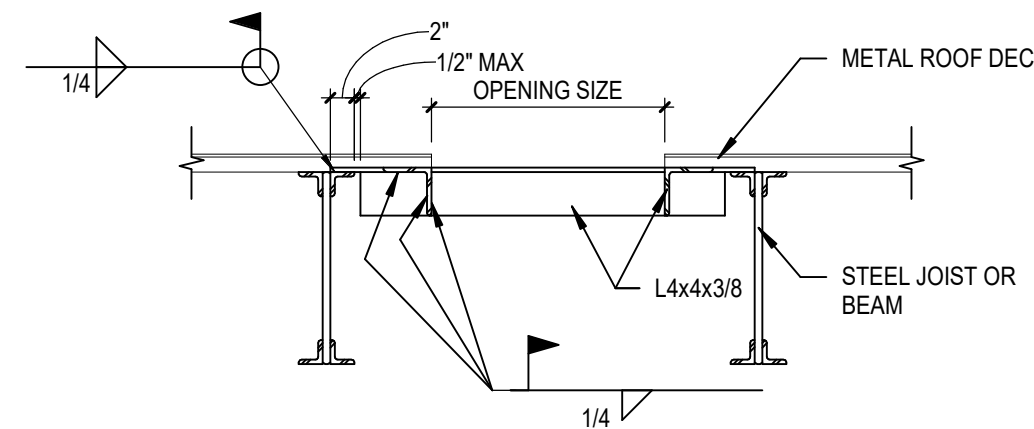
NOTE:
1. DESIGN ALL JOIST TOP AND BOTTOM CHORDS FOR BEND CHECK LOADS AS SHOWN. REINFORCEMENT ONLY REQUIRED WHERE LOADS EXCEED LOADS SHOWN.
2. PROVIDE REINFORCEMENT WHEN CONCENTRATED LOAD IS MORE THAN 3" FROM PANEL POINT AND EXCEEDS LOAD SHOWN.



2B TYP JOIST BRIDGING DETAIL
S5.1 NO SCALE

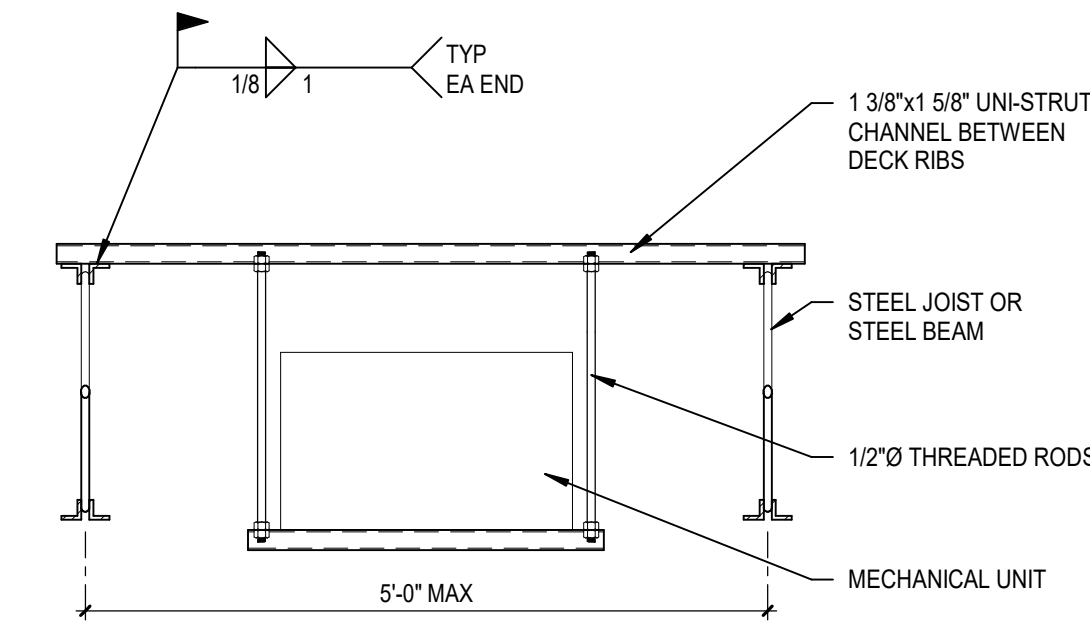


2C TYP JOIST BRIDGING DETAIL
S5.1 NO SCALE



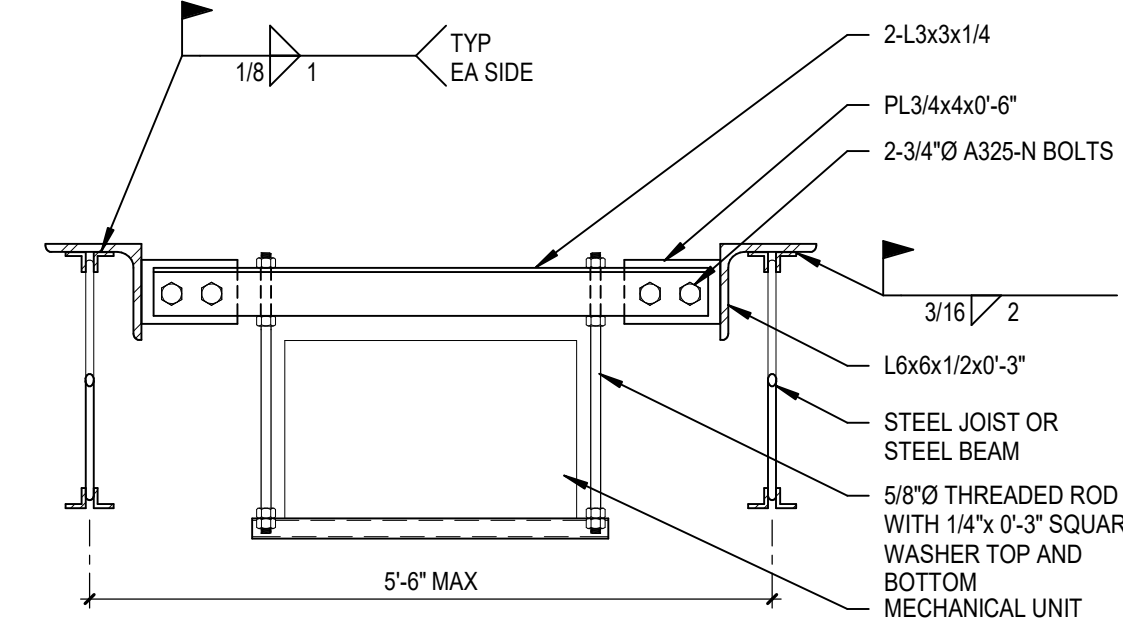
NOTE:
TYPICAL DETAIL APPLIES TO ALL OPENINGS 6" AND LARGER.

2D TYP ROOF OPENING DETAIL
S5.1 NO SCALE



NOTE:
1. GENERAL CONTRACTOR SHALL VERIFY SIZE AND LOCATION WITH MECHANICAL CONTRACTOR.
2. PROVIDE SEISMIC BRACING IN ACCORD WITH MECHANICAL SPECIFICATIONS AND DETAILS.
3. WEIGHT OF MECHANICAL UNIT EQUAL TO OR LESS THAN 400 LBS PER CHANNEL

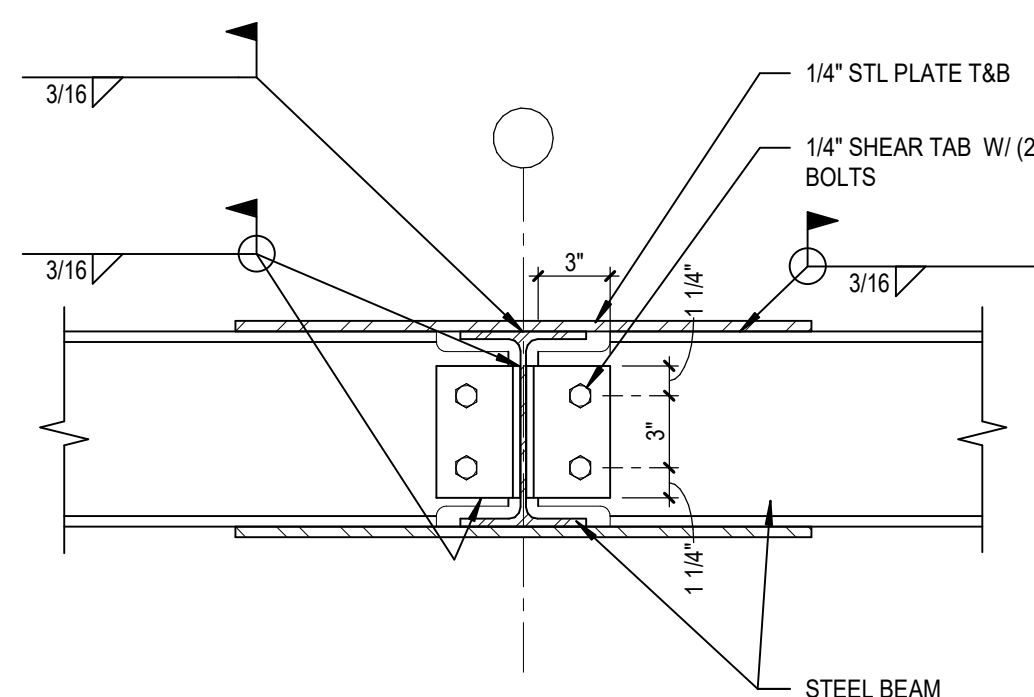
2E TYP HANGING MECH UNIT DETAIL
S5.1 NO SCALE



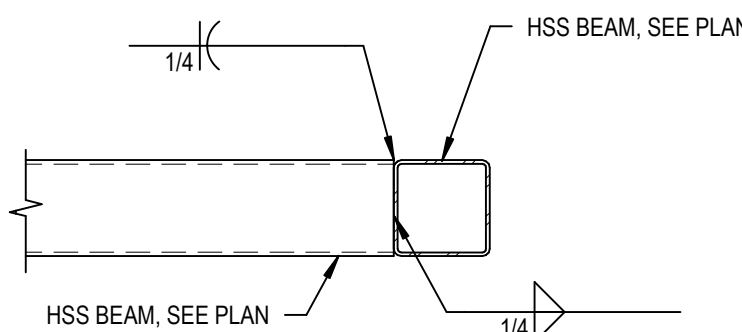
NOTE:
1. GENERAL CONTRACTOR SHALL VERIFY SIZE AND LOCATION WITH MECHANICAL CONTRACTOR.
2. PROVIDE SEISMIC BRACING IN ACCORD WITH MECHANICAL SPECIFICATIONS AND DETAILS.
3. WEIGHT OF MECHANICAL UNIT GREATER THAN 400 LBS PER ANGLE, BUT LESS THAN 700 LBS PER ANGLE

2F TYP HANGING MECH UNIT DETAIL
S5.1 NO SCALE

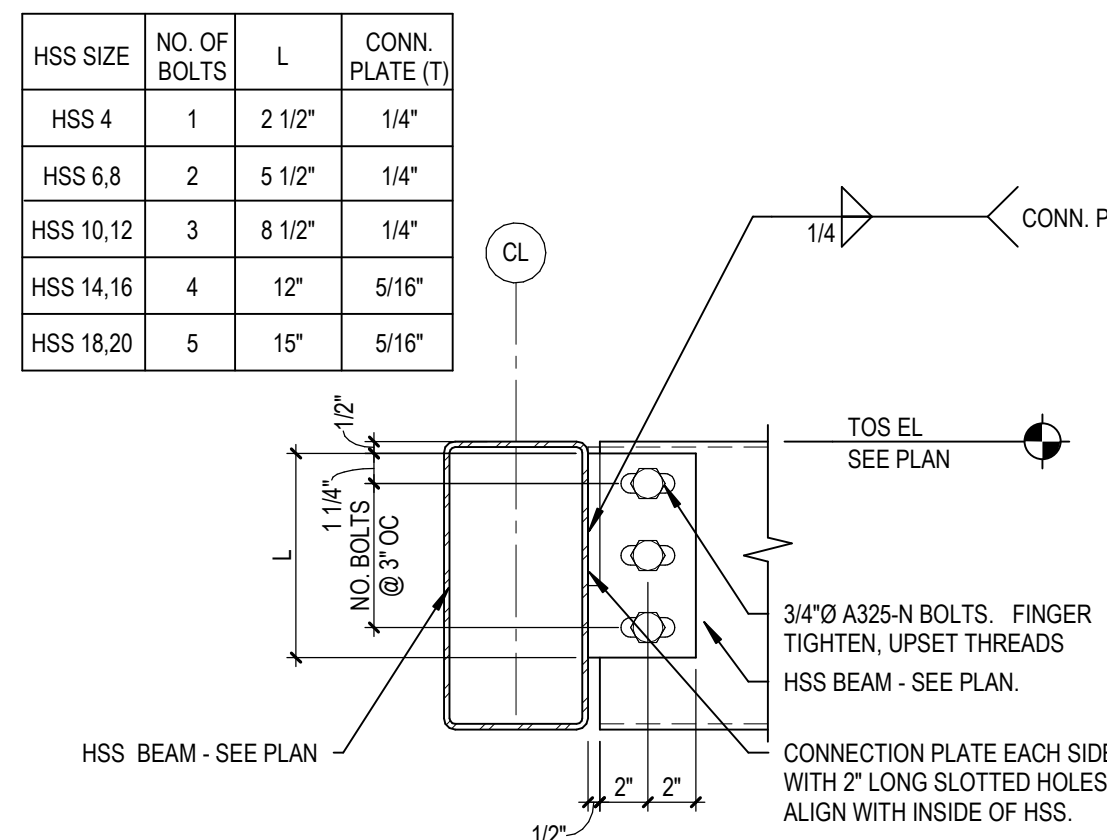
3



3A TYP WF BEAM MOMENT CONNECTION DETAIL
S5.1 NO SCALE



3B HSS MOMENT CONNECTION DETAIL
S5.1 NO SCALE



3C TYP HSS BEAM / BEAM CONNECTION
S5.1 NO SCALE

4

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[illegible]

DESIGNER NOTE: FEET ABOVE AN OPENABLE WINDOW, DOOR, OPENING, AIR INTAKE, OR VENT SHAFT, OR NO LESS THAN 3 FEET IN EVERY DIRECTION FROM A LOT LINE, ALLEY AND STREET EXCEPTED. INSTALLED ABOVE THE ROOF. THE PLUMBING VENTS SHALL BE LOCATED 18-INCHES ABOVE ROOF LEVEL[3]-FEET ABOVE A FLAT ROOF WHERE HEAVY SNOWFALL IS ANTICIPATED). FOR HOSPITAL APPLICATIONS, PLUMBING VENT PIPING SHALL TERMINATE NOT LESS THAN TWENTY FIVE (25) FEET FROM ANY AIR INTAKE OR VENT SHAFT.

DESIGNER NOTE: EDIT BRACKETED PARAGRAPHS DEPENDING ON SNOW DEPTH. CONSULT WITH STRUCTURAL TO DETERMINE IF HEAVY SNOWFALL IS CONSIDERED IN THEIR DESIGN. PROJECT IS NOT A HOSPITAL. LAST SENTENCE IS NOT NEEDED. COORDINATE WITH THE HVAC ENGINEER SO THAT YOUR PLUMBING VENTS DO NOT TERMINATE WITHIN EITHER 10 OF 25' OF AN AIR INTAKE.

Y. PROVIDE CLEANOUTS (FLOOR OR WALL AS REQUIRED) EVERY 100'. AT AGGREGATE CHANGING DIRECTION IN EXCESS OF 45°. AT THE END OF ALL SANITARY AND STORM DRAIN RUNS, AND THE BASE OF ALL SEWER AND STORM DRAIN STACKS. PROVIDE WHITHER INDICATED ON P OR NOT BASED ON ACTUAL FIELD ROUTING.

DESIGNER NOTE: GENERALLY DELETE THE NOTE ABOVE AS IT IS STRAIGHT FROM THE CODE AND NOT NECESSARY TO REPEAT. NOTE IS RETAINED FOR NC REGION'S USE.

Z. CLEANOUTS SHALL NOT BE LOCATED ABOVE CEILING FOR WASTE SYSTEMS. IN AREAS REQUIRING WASTE DRAN PIPING UNDER SUPPORTED STRUCTURAL FLOOR SLABS, THE CLEANOUTS SHALL BE ACCESSSED AT LEAST 6 INCHES ABOVE THE FLOOD LEVEL OF THE HIGHEST FIXTURE SERVED. CLEANOUT RISERS(SHALL BE PROPERLY PLUGGED AND PAINT TO MATCH THE ADJACENT SURFACE.

DESIGNER NOTE: CONSIDER USING THE NOTE ABOVE ON A MULTI-STORY BUILDING. IF YOU BUILDING IS 1-STORY, DELETE THE NOTE. THIS WAS AN ISSUE ON A MULTI-STORY HIGH SCHOOL IN OUR REGION BUT IS APPLICABLE TO ANY MULTI-STORY BUILDING. HOWEVER, IF THIS NOTE USED, THE SYSTEM NEEDS TO BE DESIGNED IN THIS MANNER (THIS ISN'T SOMETHING THAT JUST BE COVERED IN A NOTE), THE GRAPHIC BELOW IS AN ILLUSTRATION OF WHAT THE NC IS DESCRIBING.

A. NON-NADA COUNTER SINK
B. ADA COUNTER SINK
C. SCIENCE COUNTER SINK DETAIL

AA. PROVIDE A BARRIER TYPE FLOOR DRAIN TRAP SEAL PROTECTION DEVICE (AS DEFINED BY ANSI (JO72 STANDARD)) EQUAL TO SURESEAL® BRAND.

DESIGNER NOTE: INQUIRE WITH YOUR ECR REGARDING THE NECESSITY OF HAVING SOME TYPE OF FLOOR DRAIN TRAP SEAL PROTECTION. IN SOME REGIONS (ECR REGION FOR EXAMPLE) THE DEVICE DESCRIBED ABOVE CANNOT BE USED, WHERE ALLOWED BY YOUR PLUMBING CODE THE PREFERENCE IS THIS NOTE SHOULD BE USED AS EITHER A KEYED NOTE OR DETAIL THAT IS ADDED TO THE PD SCHEDULE. IF THAT IS THE CASE, CUT & PASTE TO EITHER OF THOSE LOCATIONS.

BB. WATER HAMMER ARRESTORS WILL BE INSTALLED IN WATER PIPING ACCORDING TO POLIWH WATER HAMMER ARRESTORS SHALL BE INSTALLED WITH NLET ISOCLON VALVES TO ALLOW FOR MAINTENANCE.

DESIGNER NOTE: THE PREFERRED PRACTICE IS FOR DLR GROUP ENGINEERS TO SIZE AND SHOW THE LOCATIONS OF THE WHAS. USING THE EXAMPLE OF A TOILET ROOM WITH TILED WALLS, THE ARCHITECTS MAY NEED TO KNOW THE LOCATION OF THE ARRESTORS SO THEY CAN ACCESS PANEL CAN BE INTEGRATED INTO THEIR TILE PATTERN.

CC. THE DETAILS SHOWN ON THE DETAIL SHEETS APPLY TO ALL PLUMBING PLAN SHEETS. THE DETAILS ARE TO BE FOLLOWED FOR THE INSTALLATION OF ALL COMPONENTS AND EQUIPMENT SHOWN.

DESIGNER'S NOTE: IF A DETAIL IS SHOWN ON THE DETAIL SHEETS, THEN IT NEEDS TO BE REFERENCED. WE PROVIDE DETAILS ON OUR PROJECTS TO DESCRIBE VARIOUS SYSTEMS AND/OR THEIR COMPONENTS. SOMETIMES DETAILS ARE SHOWN TO SHOW OUR SYSTEM'S RELATIONSHIP TO OTHER TRADES. THERE CAN BE A COUPLE OF PHILOSOPHIES ON HOW TO REFERENCE THEM. HERE ARE TWO METHODS:

- THE MOST SPECIFIC WAY TO REFERENCE A DETAIL IS TO USE DETAIL BUBBLE CALLOUT AND TO REFERENCE THE DETAIL AT LEAST ONCE ON EACH SHEET (IF APPLICABLE). THE BEST WAY TO REFERENCE THE ONE-SIDE-TWO-SIDE TYPE OF APPLICATION OF A DETAIL IS TO BE APPLIED MULTIPLE TIMES ON A SHEET. YOU CAN STILL DO A BUBBLE CALL OUT WHERE YOU REFERENCE THE DETAIL ONCE AND USE (TYP.) AN EXAMPLE OF THIS METHOD OF REFERENCING MIGHT BE A SLEEVE THRU A FOUNDATION.
- A SECOND METHOD COULD THAT CAN BE USED FOR THE (TYP) APPLICATION WOULD BE FOR ITEMS THAT MIGHT OCCUR TYPICALLY ON EVERY HVAC SHEET METAL SHEET. THE EXAMPLE BELOW WAS FOR A VAV SYSTEM. COPY PASTE TO LEGEND FOR HVAC GENERAL SHEET NOTES.

DETAILS FOR ITEMS SHOWN ON THIS SHEET ARE REFERRED AS FOLLOWS:

- FOR AIR TERMINAL UNIT CONNECTION DETAIL (TYP) SEE
- FOR DUCT HANGING DETAIL SEE
- FOR EXPPOSED DUCTWORK / PIPING INSTALLATION DETAIL SEE
- FOR LOW VELOCITY BRANCH DUCT TAKE-OFF DETAIL (TYP) SEE
- FOR PIPE INSULATION/HANGING DETAIL SEE DETAIL

THEN ON THE HVAC PIPING SHEET ANOTHER EXAMPLE... COPY PASTE TO LEGEND FOR HVAC PIPING GENERAL SHEET NOTES:

DETAILS FOR ITEMS SHOWN ON THIS SHEET ARE REFERRED AS FOLLOWS:

- FOR AIR TERMINAL UNIT CONNECTION DETAIL (TYP) SEE
- FOR EXPOSED DUCTWORK / PIPING INSTALLATION DETAIL SEE
- FOR PIPE INSULATION/HANGING DETAIL SEE DETAIL
- FOR EXPANSION LOOP DETAIL SEE
- FOR PIPE ANCHOR AND GUIDE DETAIL SEE
- FOR FLUSHING PIPING CONNECTION DETAIL SEE DETAIL
- FOR LOW POINT DRAIN DETAIL (TYP) SEE
- FOR RADIATION UNIT CONNECTION DETAIL (TYP) SEE DETAIL

YOU HAVE OPTION BUT THE MAIN POINT IS THE DETAILS NEED TO BE REFERENCED.

P0.1

1

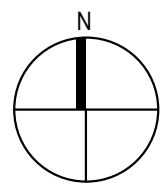
2

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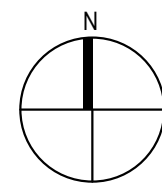
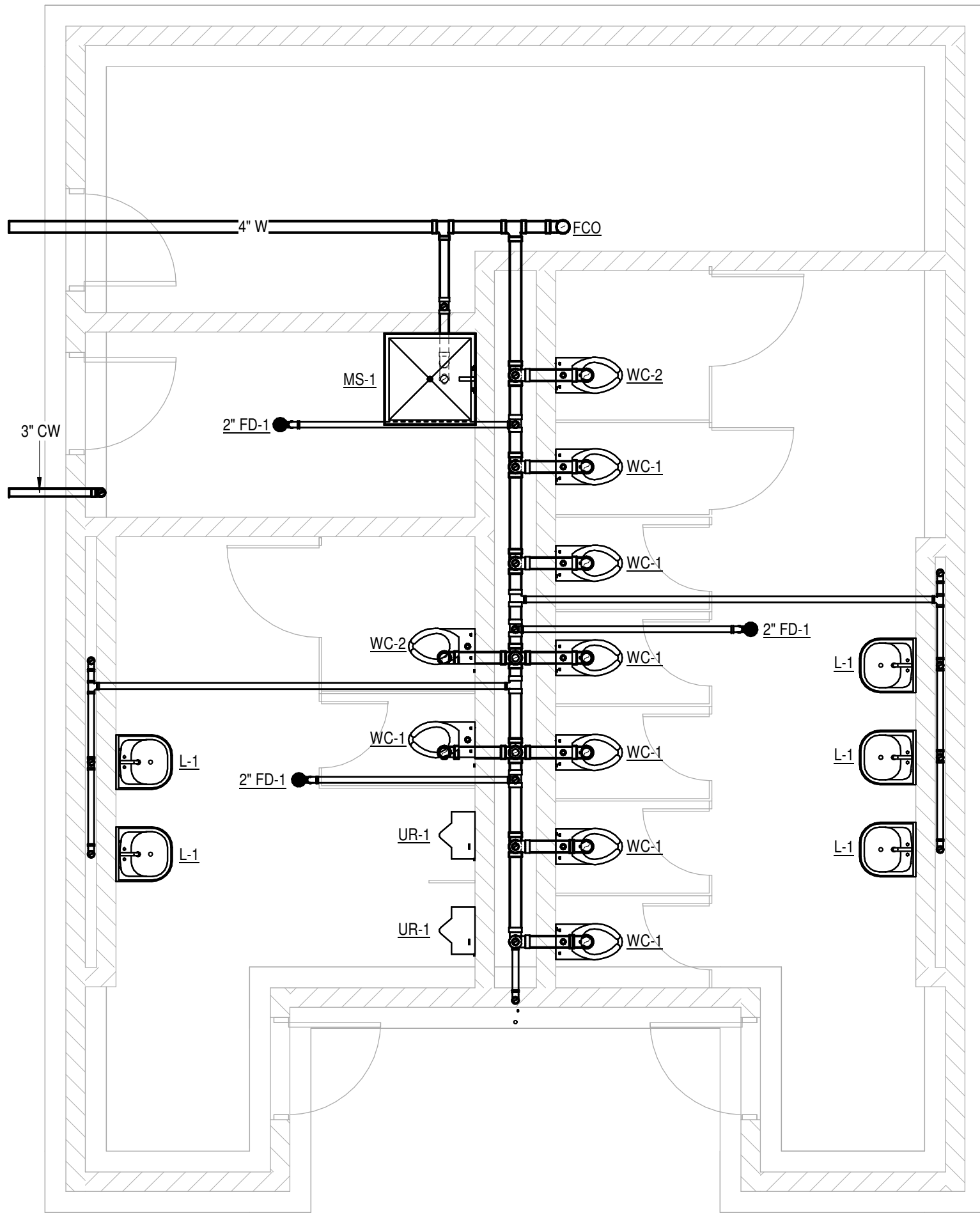
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Autodesk Docs/17-24103-00 Mauldin HS Stadium Seating, Restroom Bldg/17-24103-00 Mauldin HS Stadium Seating, Restroom
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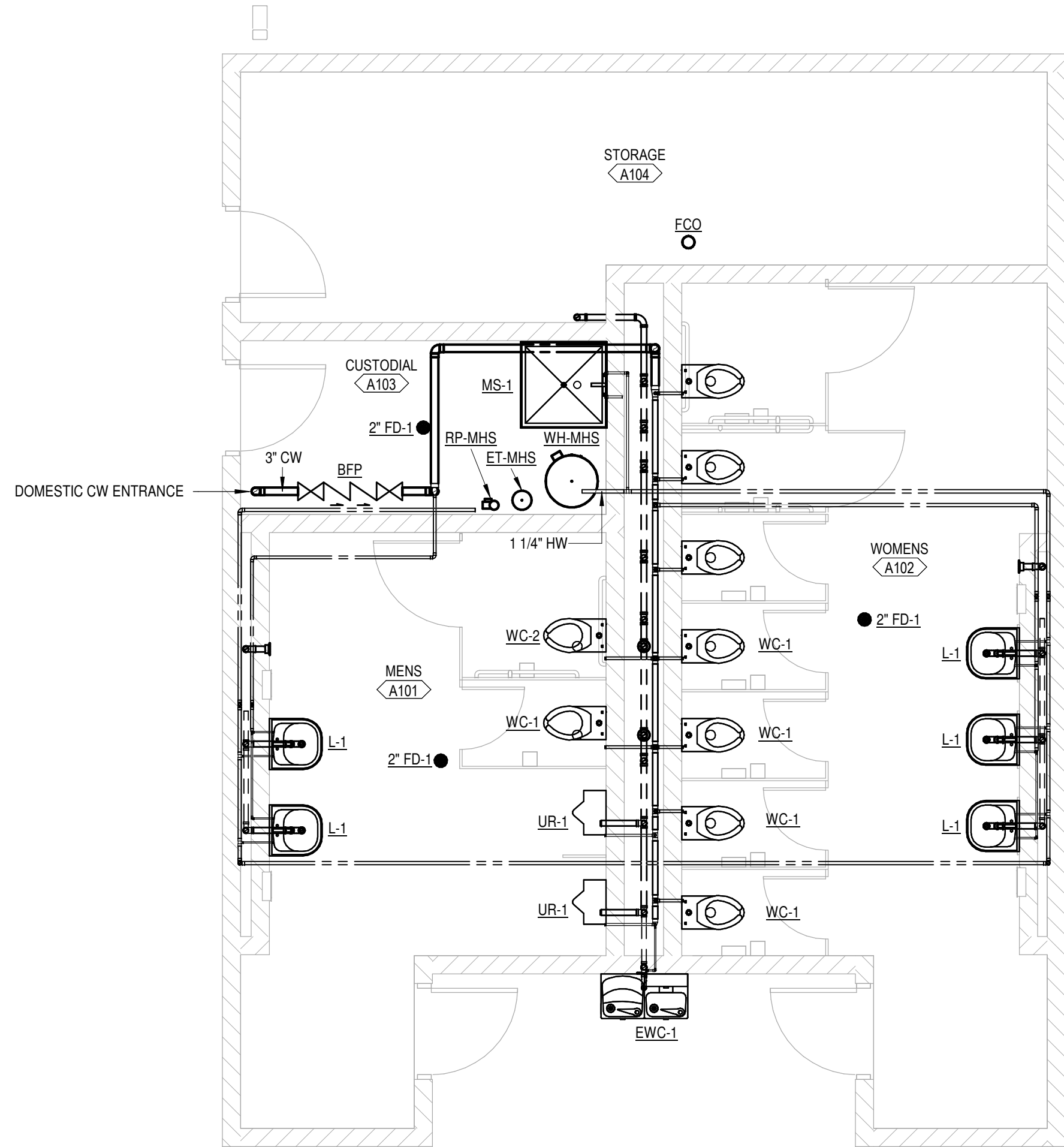
MAULDIN HS RESTROOMS - UNDERGROUND PLUMBING PLAN

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

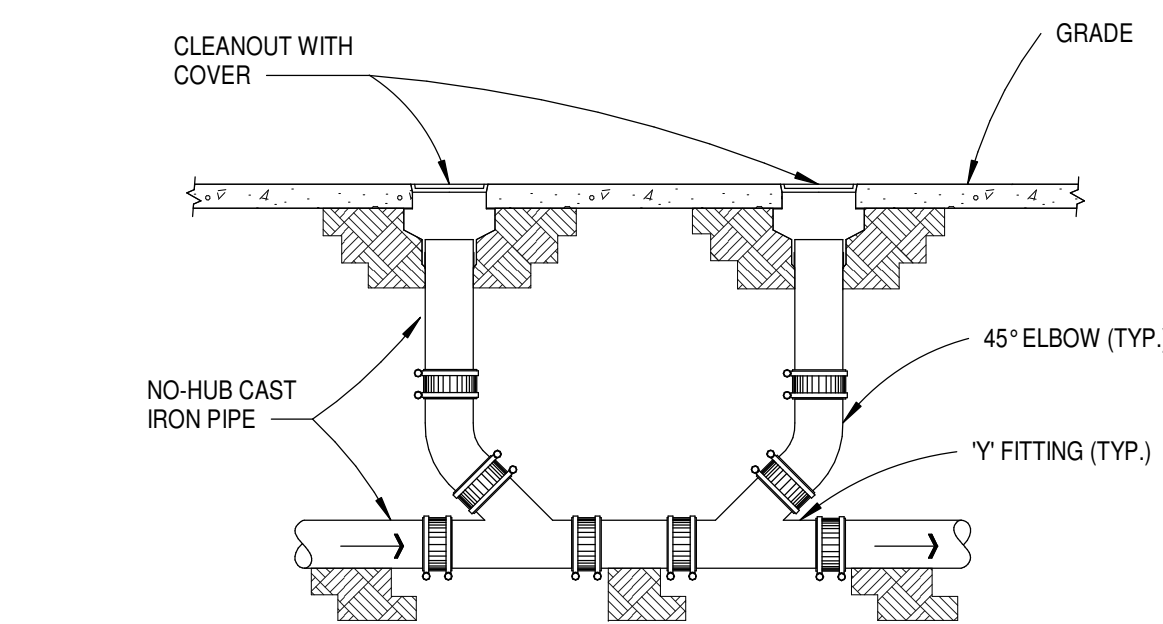


MAULDIN HS RESTROOMS - PLUMBING PLAN

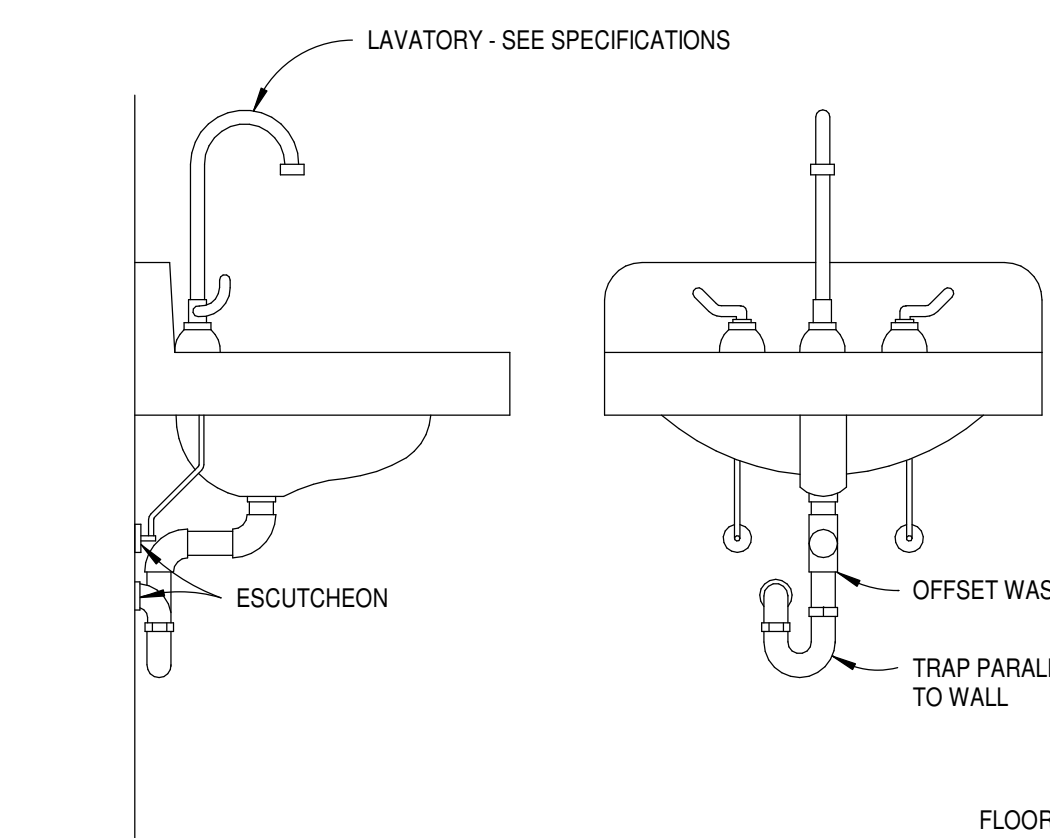
SCALE: 1/4" = 1'-0"



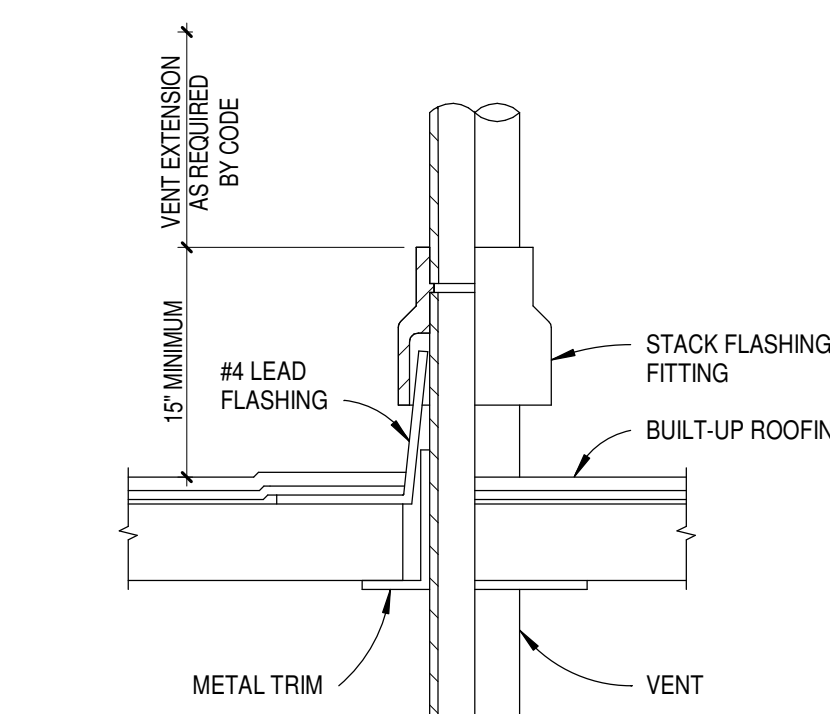
SHEET NOTES



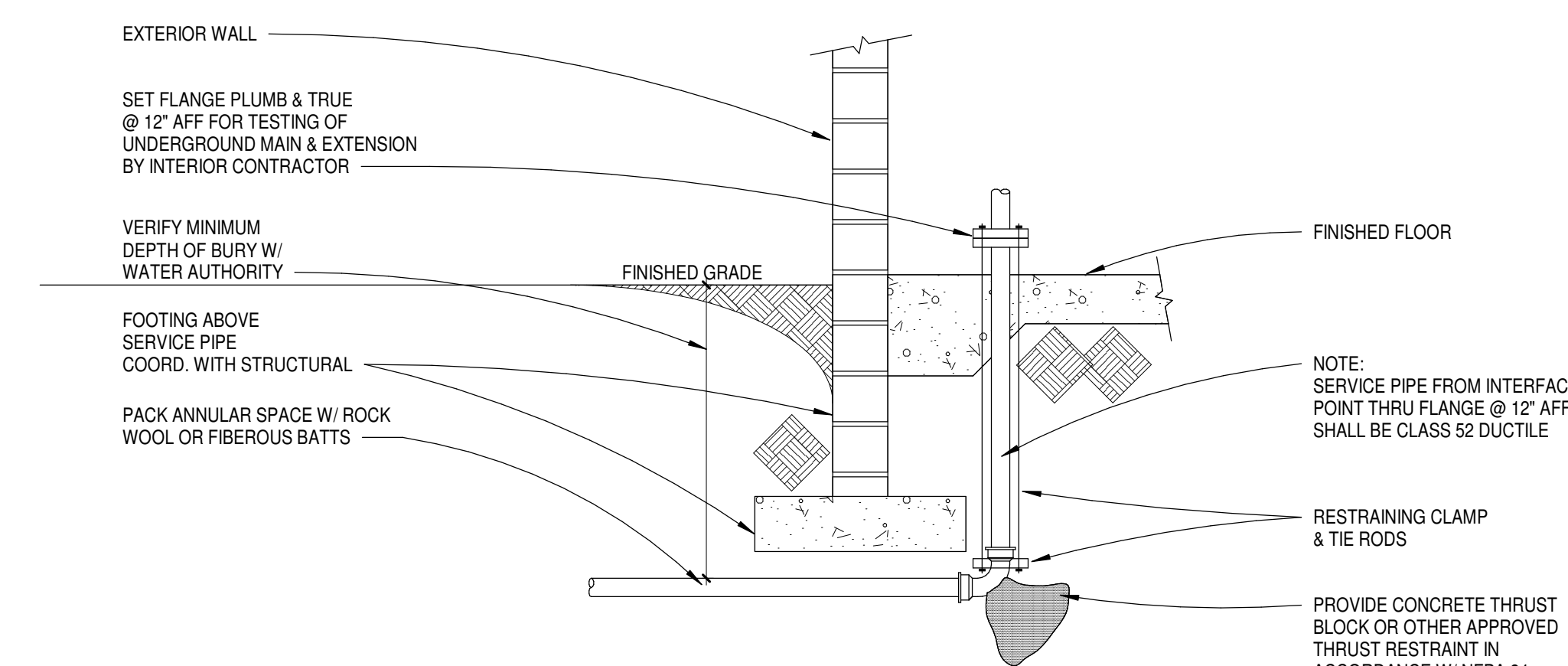
1A 2 WAY EXTERIOR CLEANOUT DETAIL
P5.1 SCALE: 1/8" = 1'-0"



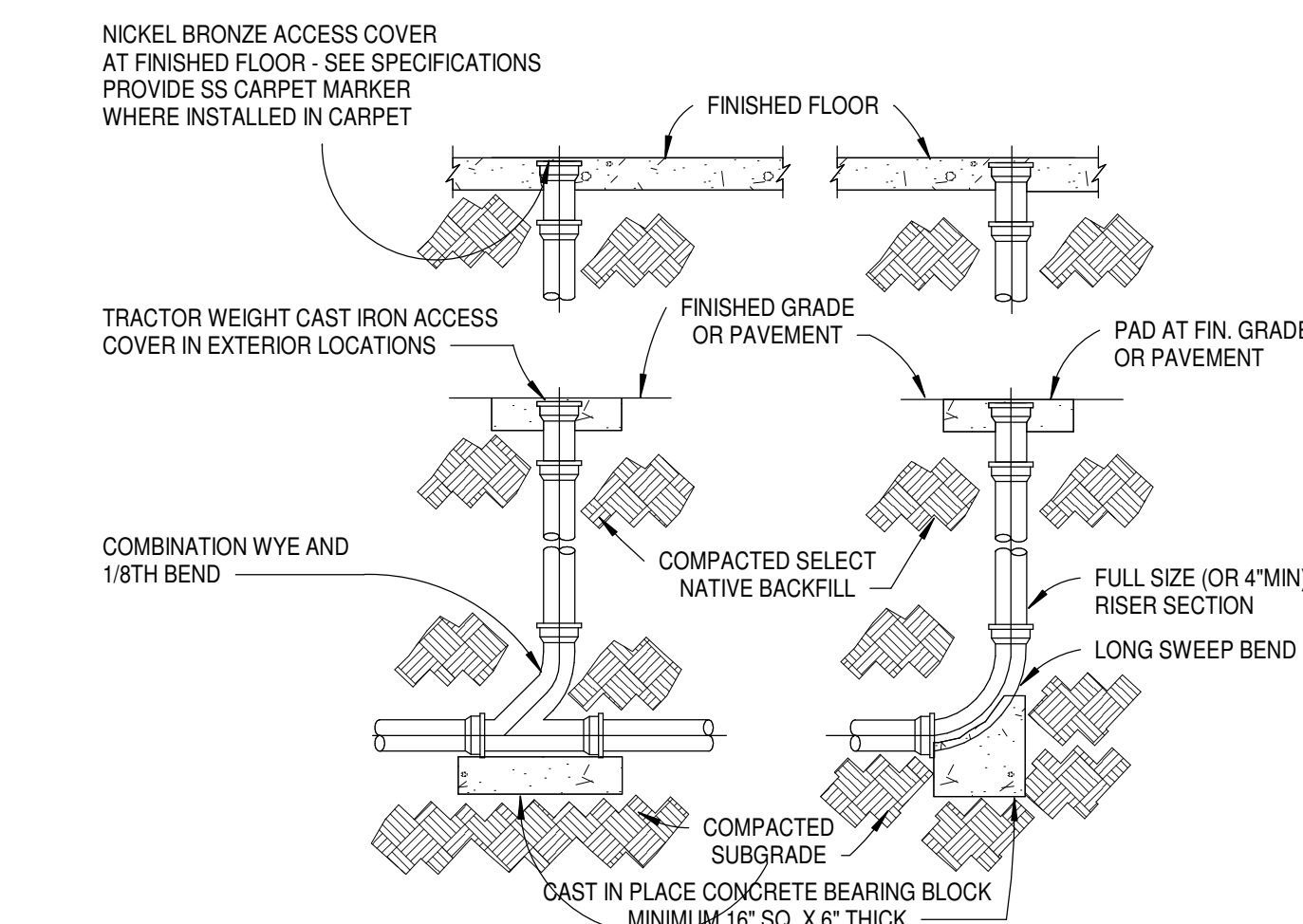
1B ADA ACCESSIBLE LAVATORY DETAIL
P5.1 SCALE: 1/8" = 1'-0"



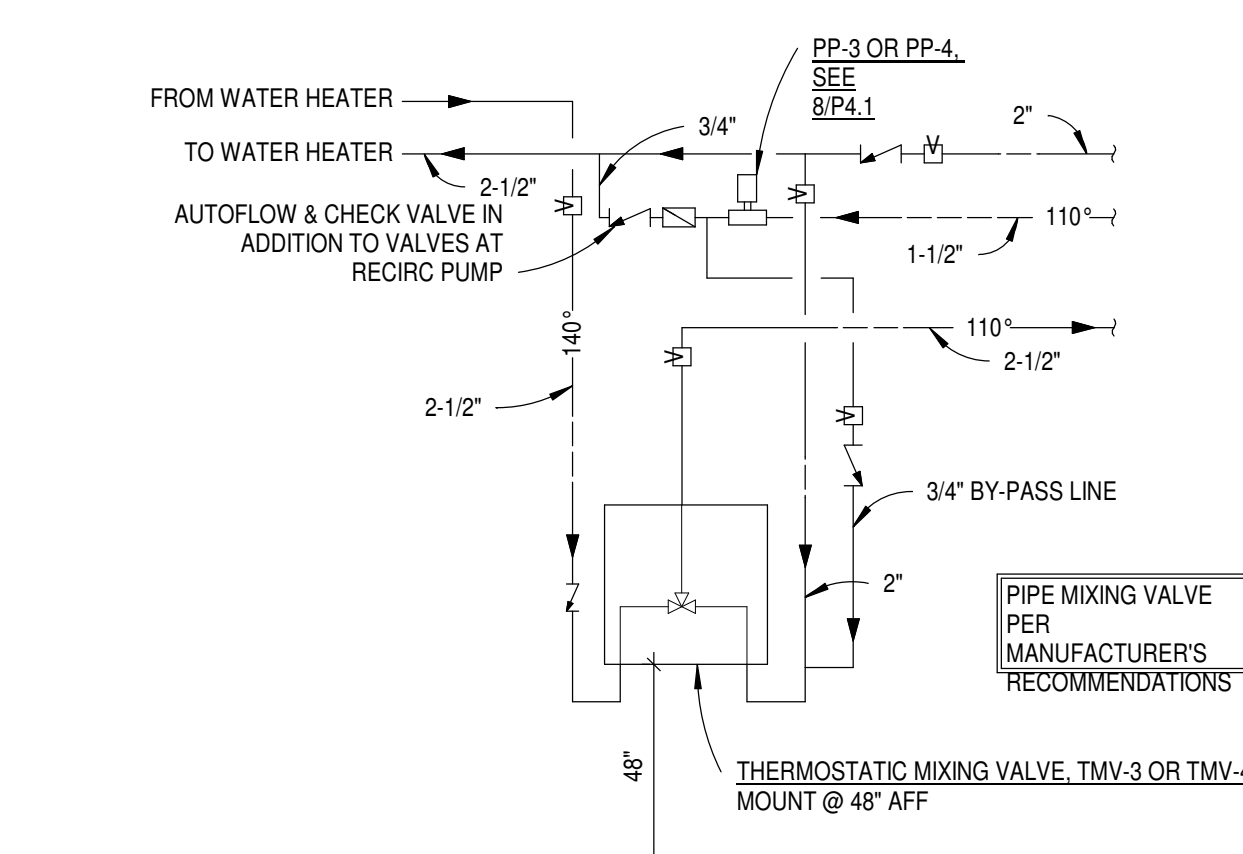
1C PLUMBING ROOF VENT DETAIL
P5.1 SCALE: 1/8" = 1'-0"



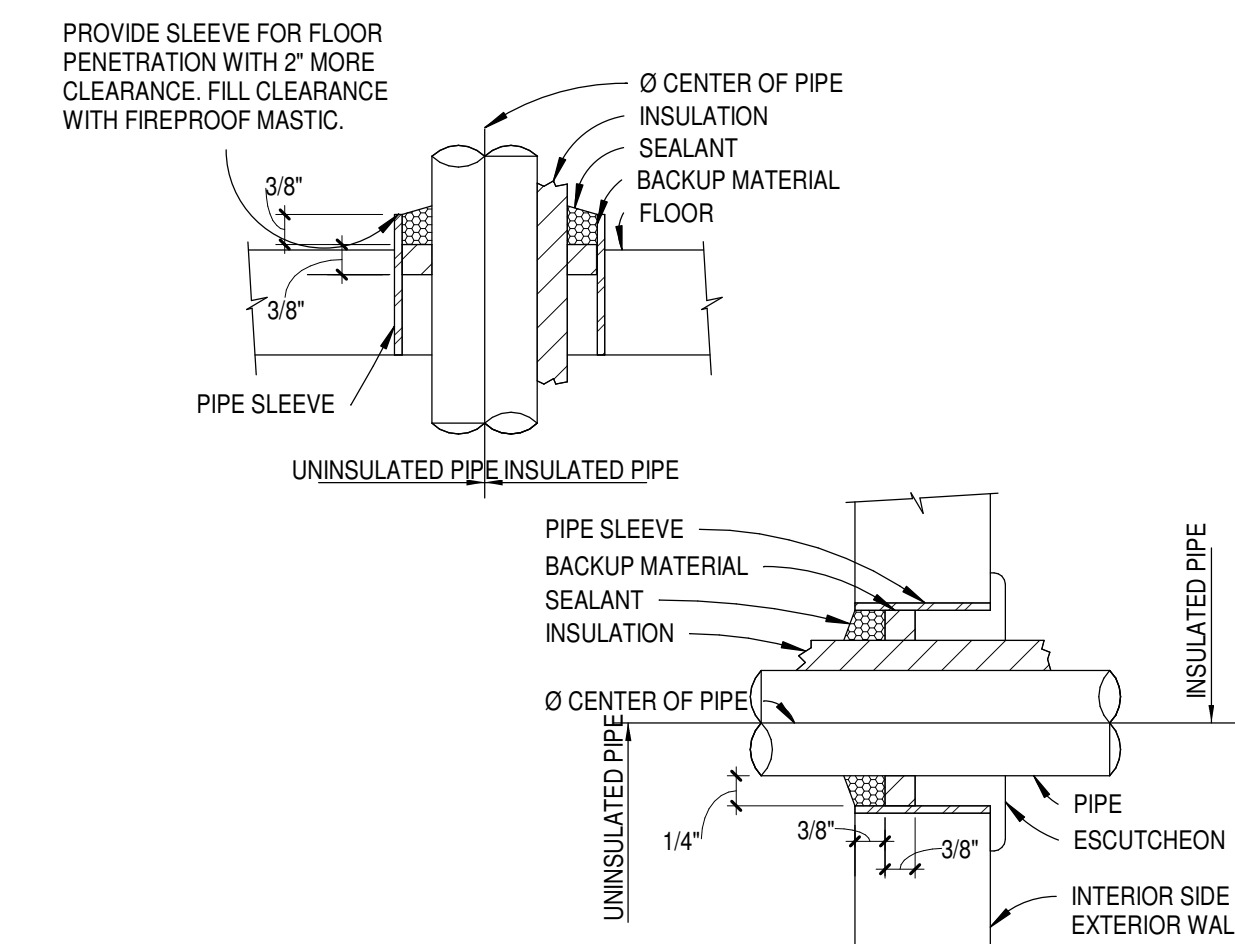
1D DOMESTIC WATER SERVICE ENTRANCE DETAIL
P5.1 SCALE: 1/8" = 1'-0"



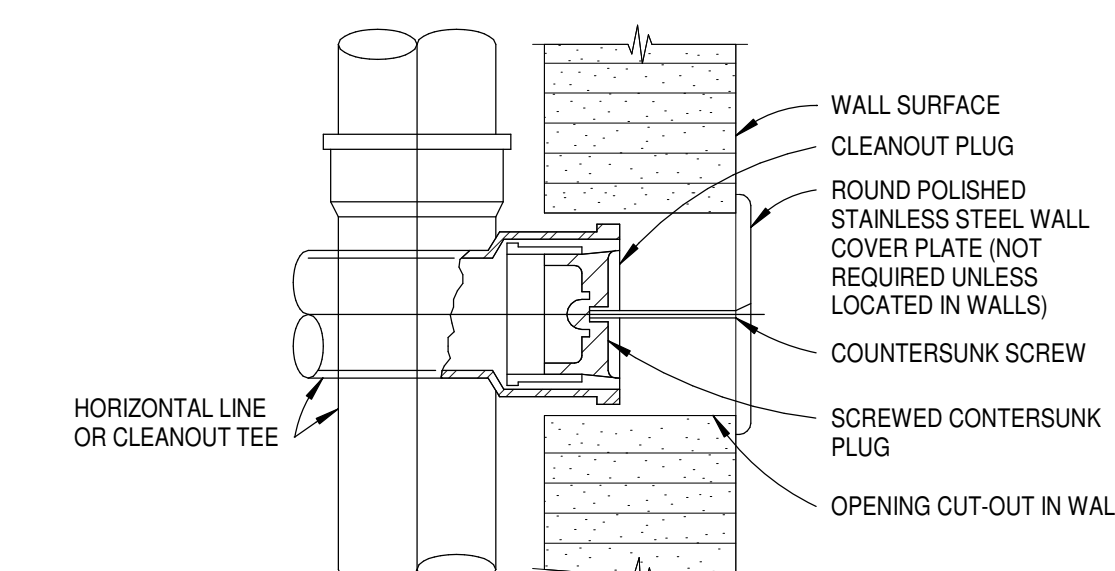
2A CLEANOUT DETAILS
P5.1 SCALE: 1/8" = 1'-0"



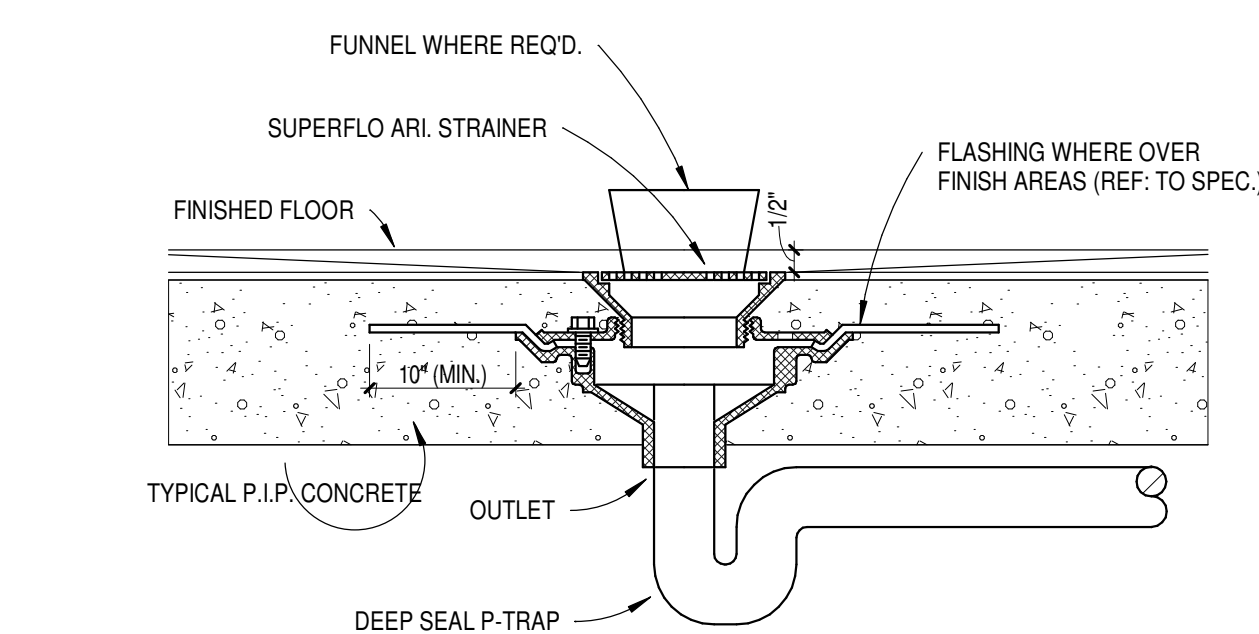
2B THERMOSTATIC MIXING VALVE DETAIL
P5.1 SCALE: 1/8" = 1'-0"



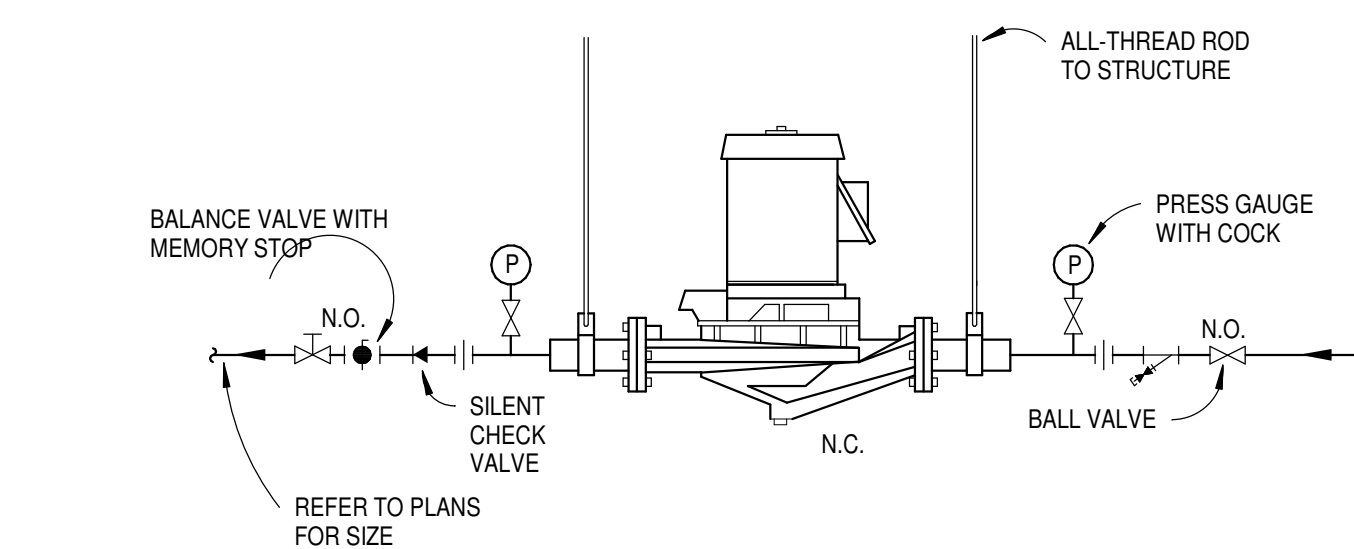
2C PIPE PENETRATIONS DETAIL



2D WALL CLEANOUT DETAIL
P5.1 SCALE: 1/8" = 1'-0"

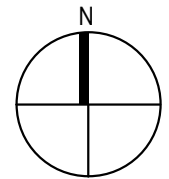


3A TYPICAL FLOOR DRAIN DETAIL SLAB ON GRADE DETAIL
P5.1 SCALE: 1/8" = 1'-0"



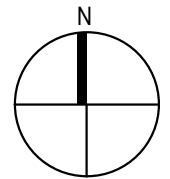
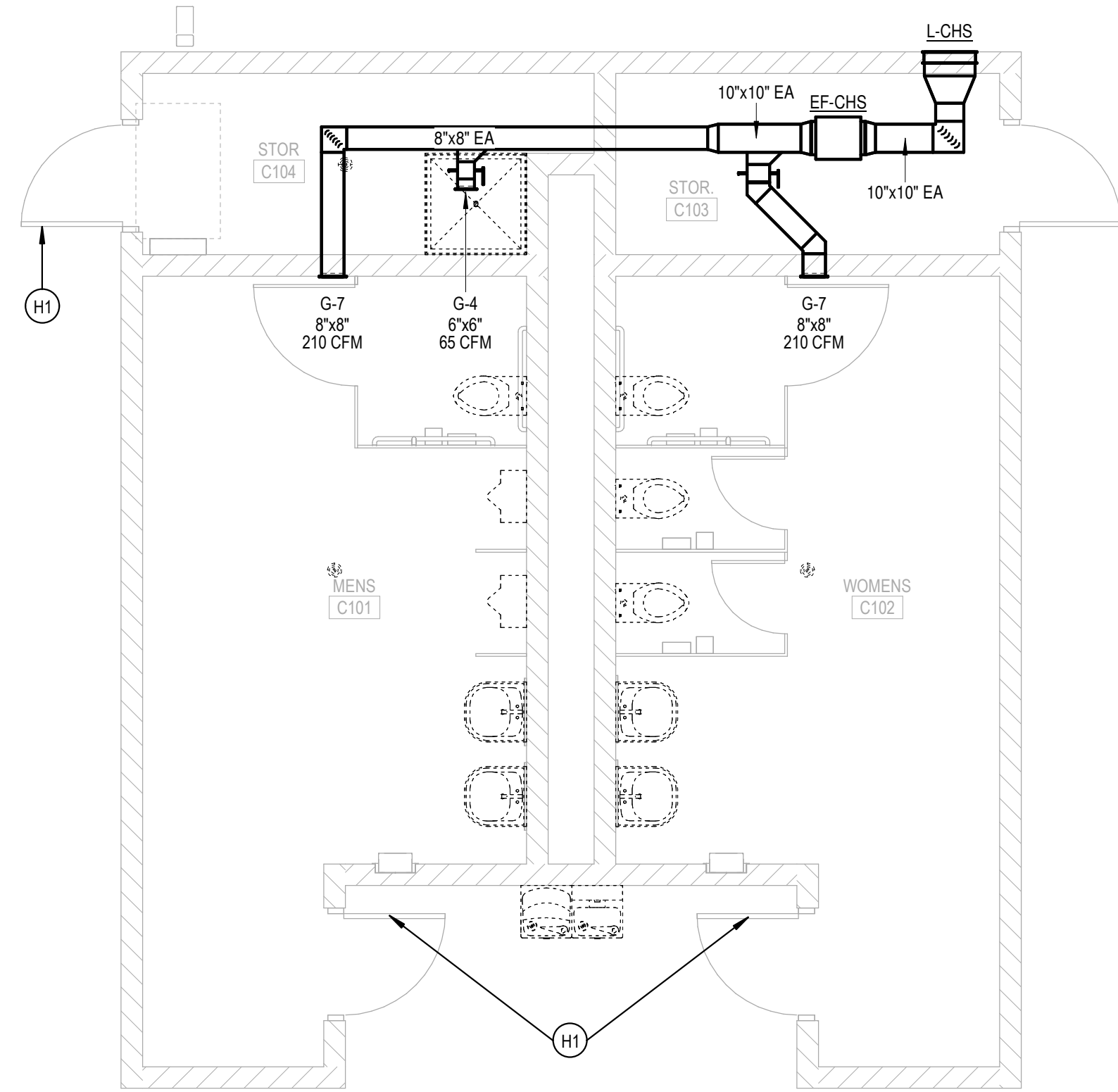
3B P5.1 INLINE CIRCULATOR PUMP DETAIL

Autodesk Docs/17-24103-00 Mauldin HS Stadium Seating Restroom Bldg/17-24103-00 Mauldin HS Stadium Seating Restroom Bldg
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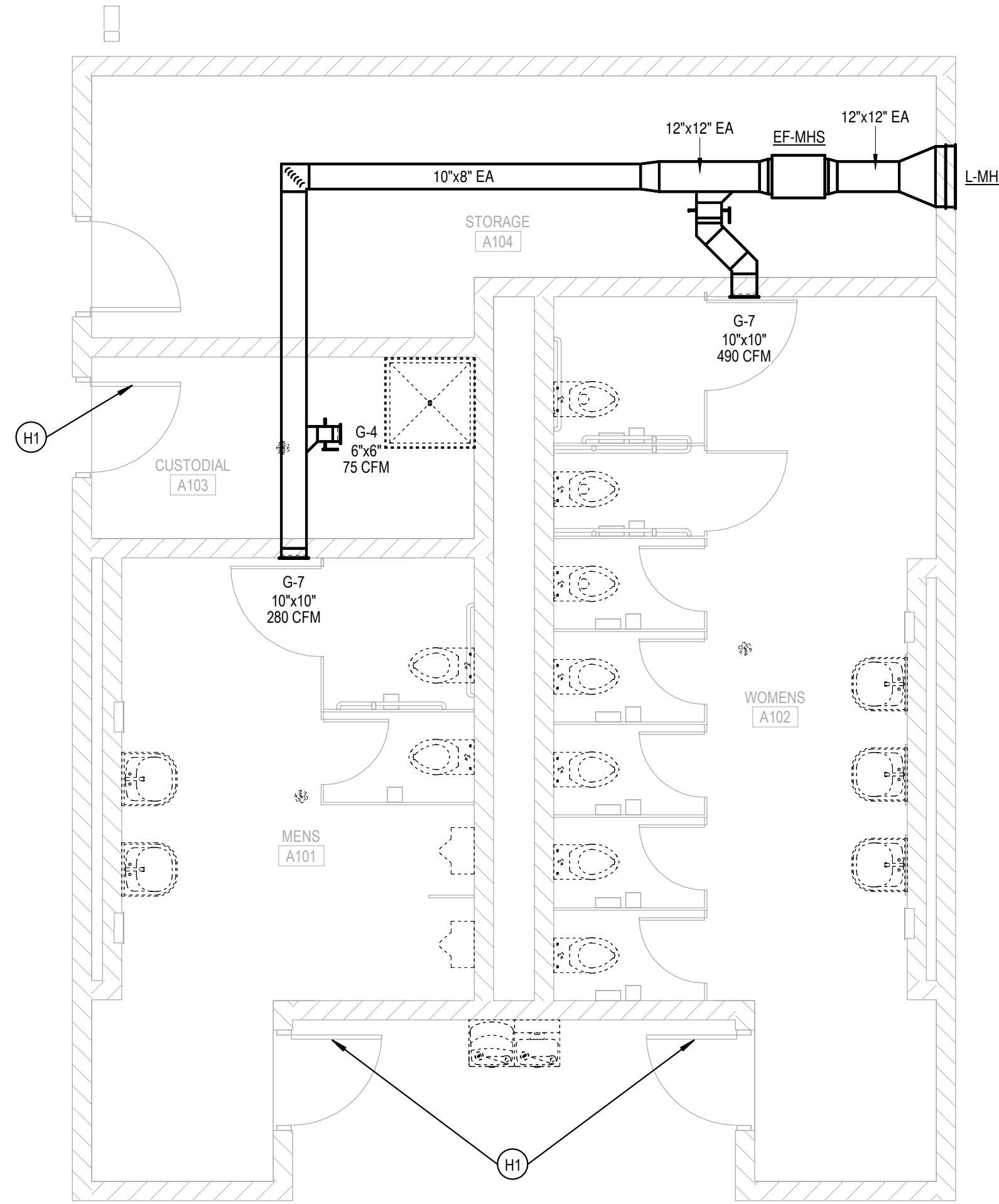
CAROLINA HS RESTROOMS - HVAC PLAN

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



MAULDIN HS RESTROOM - HVAC PLAN

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



SHEET NOTES

H1. DOOR LOUVERS TO BE PROVIDED FOR MAKE UP AIR. REFER TO ARCHITECTURAL PLANS FOR SIZES.



NOT FOR
CONSTRUCTION



MAULDIN HS STADIUM EXPANSION &
CAROLINA HS RESTROOM BUILDING

MAULDIN HIGH SCHOOL - 701 E Butler Pk. Mauldin, SC 29662
CAROLINA HIGH SCHOOL - 2725 Anderson Rd. Greenville, SC 29611

DESIGN
DEVELOPMENT
DOCUMENTS
08/30/2024
REVISIONS

17-24103-00
HVAC PLANS

M1.1



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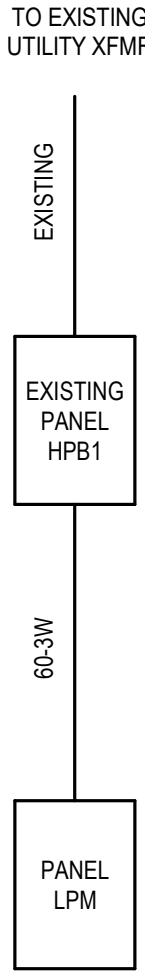
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5

Autodesk Docs/17-24-103-00 Mauldin HS Stadium Seating Restroom
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FEEDER SCHEDULE - COPPER									
MARK (AMPS)	#SETS	Ø & N	GND	CONDUIT SIZE			MARK SUFFIX		
				MARK SUFFIX					
				-4W	-3W	-2W			
15	1	12	12	3/4"	3/4"	3/4"			
20	1	12	12	3/4"	3/4"	3/4"			
25	1	10	10	3/4"	3/4"	3/4"			
30	1	10	10	3/4"	3/4"	3/4"			
35	1	8	10	3/4"	3/4"	3/4"			
40	1	8	10	3/4"	3/4"	3/4"			
45	1	6	10	1"	3/4"	3/4"			
50	1	6	10	1"	3/4"	3/4"			
60	1	4	10	1-1/4"	1"	3/4"			
70	1	4	8	1-1/4"	1"	3/4"			
80	1	3	8	1-1/4"	1-1/4"	1"			
90	1	2	8	1-1/4"	1-1/4"	1"			
100	1	1	8	1-1/2"	1-1/2"	1-1/4"			
110	1	1	6	1-1/2"	1-1/2"	1-1/4"			
125	1	1	6	1-1/2"	1-1/2"	1-1/4"			
150	1	1/0	6	2"	1-1/2"	1-1/4"			
175	1	2/0	6	2"	1-1/2"	1-1/4"			
200	1	3/0	6	2"	2"	1-1/2"			
225	1	4/0	4	2-1/2"	2"	1-1/2"			
250	1	250	4	2-1/2"	2"	1-1/2"			
300	1	350	4	3"	2-1/2"	2"			
350	1	500	3	3-1/2"	3"	2-1/2"			
400	1	600	3	3-1/2"	3"	2-1/2"			
400	2	3/0	3	2"	2"	1-1/2"			
450	2	4/0	2	2-1/2"	2"	1-1/2"			
500	2	250	2	2-1/2"	2-1/2"	2"			
600	2	350	1	3"	2-1/2"	2"			
700	2	500	1/0	3-1/2"	3"	2-1/2"			
800	2	600	1/0	3-1/2"	3"	2-1/2"			
1000	3	400	2/0	3"	3"	2-1/2"			
1200	3	600	3/0	3-1/2"	3-1/2"	3"			
1600	4	600	4/0	3-1/2"	3-1/2"	3"			
2000	5	600	250	4"	3-1/2"	3"			
2500	6	600	350	4"	3-1/2"	3"			
3000	8	500	400	3-1/2"	3"	2-1/2"			
4000	10	600	500	4"	3-1/2"	3"			
ABBREVIATIONS:									
Ø	PHASE								
N	NEUTRAL								
GND	EQUIPMENT GROUNDING CONDUCTOR								
-4W	FOUR WIRE + GROUND (3Ø,N,GND)								
-3W	THREE WIRE + GROUND (3Ø,GND or 2Ø,N,GND)								
-2W	TWO WIRE + GROUND								
NOTES:									
1.	CONDUCTOR AMPACITIES ARE BASED ON NEC TABLE 310.15(B)(16).								
2.	CONDUIT SIZES ARE BASED ON A MAXIMUM FILL RATIO OF 40%.								
3.	SCHEDULE SHALL BE USED FOR FEEDERS AND BRANCH CIRCUITS WHERE APPLICABLE.								
4.	ALL FEEDERS AND BRANCH CIRCUITS SHALL INCLUDE AN EQUIPMENT GROUNDING CONDUCTOR.								
5.	SCHEDULE IS VALID FOR TYPE THHN, THWN-2, AND XHHW-2 CONDUCTORS. SEE SPECIFICATIONS FOR CONDUCTOR TYPES REQUIRED.								
6.	SCHEDULE IS VALID FOR TYPE EMT, IMC, FMC, LFMC, HDPE, AND RNC-40 RACEWAYS. SEE SPECIFICATIONS FOR RACEWAY APPLICATIONS.								
7.	OPTIONAL CONFIGURATIONS (1 OR 2 SETS) ARE GIVEN FOR SOME SIZES.								
8.	NOT ALL SIZES USED.								

4
E1.1 One-Line Diagram Mauldin
NO SCALE

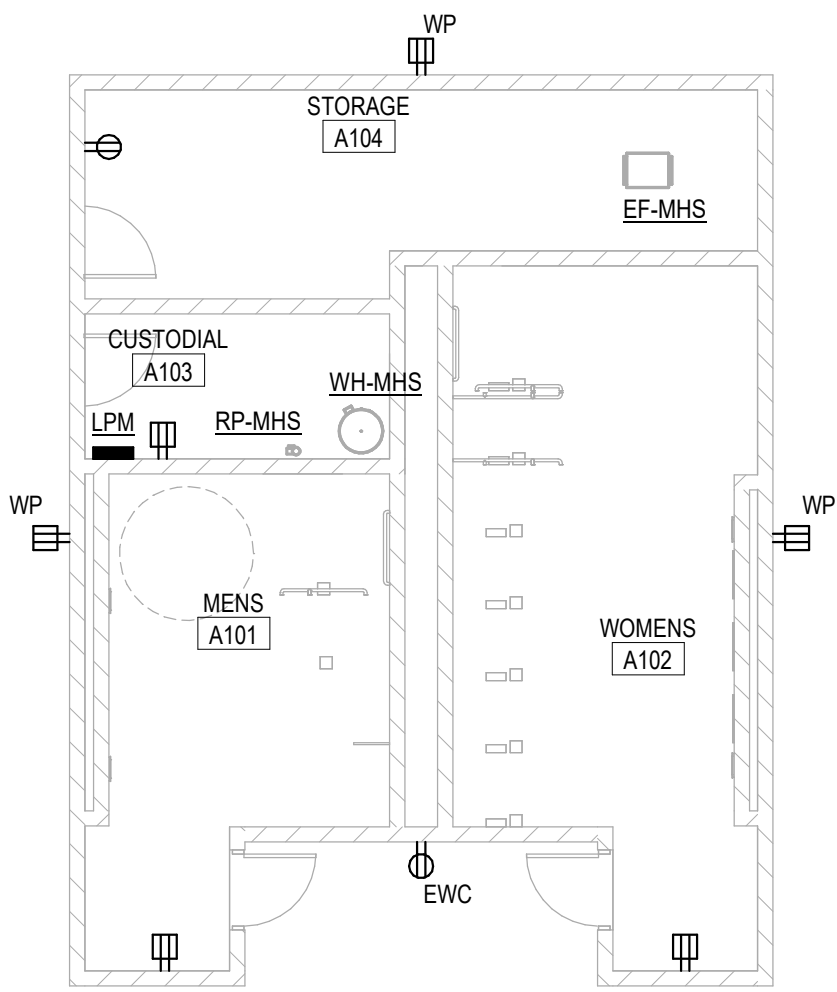


LUMINAIRE SCHEDULE																			
LUMINAIRE CRITERIA				PRODUCT INFORMATION				SOURCE				ELECTRICAL INFORMATION				ADDITIONAL INFORMATION			
ID	DESCRIPTION	FINISH	MANUFACTURER	MODEL OR SERIES	LAMP	LUMENS	FT	COLOR TEMP	CRI	LIFE RATING	DIMMING TYPE	POWER SUPPLY	VOLTAGE	WATTAGE	FT	MOUNTING	MOUNTING HEIGHT	ACCESSORIES	SCHEDULE NOTES
S1 S1E	4" STRIP LIGHT, VANDAL RESISTANT, WET LOCATION LISTED, SEAMLESS DIFFUSER FULLY UNIFORM (NO LED PIXELATION), EXTRUDED ALUMINUM HALOGEN/BACK CHANNELS	WHITE, BAKED-ON POWDER COAT	LITHONIA	CSV7	LED	3000		3500K	80	50K HOURS @ L70	0-10V DOWN TO 10%	INTEGRAL DRIVER	120	30		SUSPENDED	9'-0"	S1E - PROVIDE INTEGRAL EMERGENCY BATTERY PACK	
W1	RECTANGULAR OVER DOOR, WALL MOUNTED EXTERIOR FEATURE WITH DOWNLIGHT DISTRIBUTION, BLACK POWDER COAT FINISH, SUITABLE FOR WET LOCATION UL LISTED, IP-45 RATED	BLACK, BAKED-ON POWDER COAT	LITHONIA	WDGE1	LED	2000		3500K	80	50K HOURS @ L70	0-10V DOWN TO 10%	INTEGRAL DRIVER	120	15		WALL, SURFACE	9'-0"	INTEGRAL PHOTOCELL	
GENERAL NOTES: A. PROVIDE UNITS MEETING FIXTURE SCHEDULE DESCRIPTION AND SPECIFICATION REQUIREMENTS. THE FIXTURE CATALOG NUMBER IS NOT COMPLETE; USE ONLY AS A GUIDELINE. B. LUMEN VALUES IN KEY PARAMETERS COLUMN ARE MINIMUM DELIVERED LUMENS, INCLUDING OPTIONS AND ACCESSORIES. C. DELIVERED LUMENS SHALL NOT EXCEED 25% OF VALUES LISTED OR 25% OF VALUE IF RANGE IS LISTED. D. ALL FIXTURES SHALL BE FINISHED AFTER FABRICATION.																			

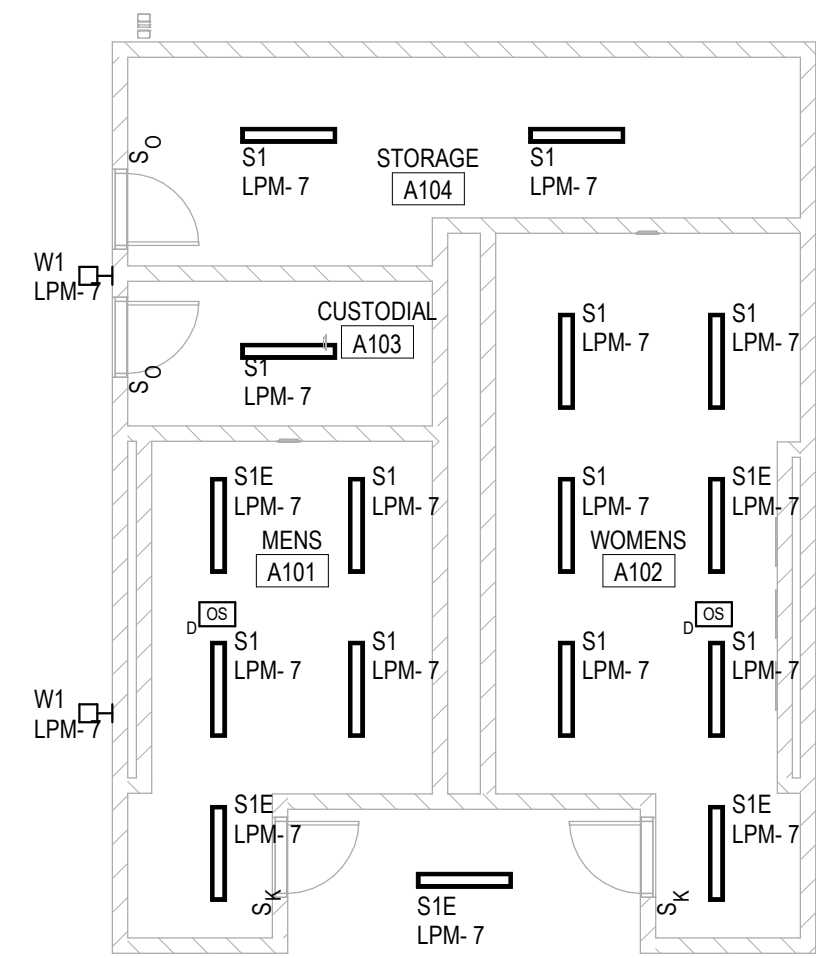
PANEL: LPM													
LOCATION: CUSTODIAL A103						VOLTS: 120/240				MOUNTING: SURFACE			
BUS RATING: 100 A						PHASES: 1				FED FROM:			
MAIN BREAKER: 602						WIRES: 3				INTEGRAL SPD: NO			
						SCCR: 22K				LUG ACCESSORIES: NO			
CKT	CIRCUIT DESCRIPTION	BKR TRIP	P	BKR TYPE	LOAD TYPE	PHASE A (VA)	PHASE B (VA)	LOAD TYPE	BKR TYPE	P	BKR TRIP	CIRCUIT DESCRIPTION	CKT
1	R - INTERIOR	20	1		R	720	2,880			2	35	WH-MHS	2
3	R - EXTERIOR	20	1		R		540	2,880	M				4
5	R - EWC	20	1	G	R	180	184		M	1	20	RP-MHS	6
7	LIGHTING	20	1		L		456	456	M	1	20	EF-MHS	8
9	SPARE	20	1		Spare	0	0		Spare	1	20	SPARE	10
11	SPARE	20	1		Spare				Spare	1	20	SPARE	12
TOTAL LOAD:						3964 VA		4332 VA					
TOTAL AMPS						33.0 A		36.1 A					
LOAD TYPE	LOAD DESCRIPTION	CONNECTED LOAD (VA)	DEMAN D.	ESTIMATED DEMAND (VA)	DEMAND FACTOR NOTES				BKR TYPE	PANEL TOTALS			
L	LIGHTING	456 VA	125.00%	570 VA	CONTINUOUS LOAD @ 125%				G = GFCI (5mA)				
R	RECEPTACLES	1440 VA	100.00%	1440 VA	FIRST 10kVA @ 100%, REMAINDER @ 50%				GP = GFF (30mA)	CONNECTED LOAD: 8 kVA			
K	KITCHEN	0 VA	0.00%	0 VA	NON-DWELLING KITCHEN LOADS; NEC ART. 220				ST = SHUNT TRIP	ESTIMATED DEMAND: 10 kVA			
M	MOTOR	6216 VA	123.17%	7656 VA	LARGEST MOTOR, NEC ART. 430				LO = LOCK OUT	CONNECTED CURRENT: 34.6 A			
C	COOLING	0 VA	0.00%	0 VA						EMD CURRENT: 41.0 A			
H	HEATING	0 VA	0.00%	0 VA									
O	OTHER	0 VA	0.00%	0 VA									
Spare	SPARE	0 VA	0.00%	0 VA									
NOTES:													

MECHANICAL EQUIPMENT SCHEDULE														
DISCONNECTING ABBREVIATIONS: MRTS - MOTOR RATED TOGGLE SWITCH														
STARTER ABBREVIATIONS: SWL - SWITCH WITH LIGHT														
ID	LOCATION		LOAD				VOLTAGE (V)	PHASE	DISCONNECT	STARTER	PANEL	CIRCUIT NO	CONDUIT & WIRE SIZE	NOTES
	NO.	NAME	HP	FLA (A)	MCA (A)	MOCF (A)								
FAN														
EF-MHS	A104	STORAGE	0.25	3.8	4.8	15	456	120	1	MRTS	LPM	8	15-2W	
PUMP														
RP-MHS	A103	CUSTODIAL	0.04	1.6	2	2.8	184	115	1	MRTS	LPM	6	15-2W	
WATER HEATER														
WH-MHS	A103	CUSTODIAL	0	24	30	35	5,760	240	1	602, NF	LPM	2,4	35-2W	

MAULDIN HS RESTROOM - POWER
SCALE: 1/8" = 1'-0"



MAULDIN HS RESTROOM - LIGHTING
SCALE: 1/8" = 1'-0"



E1.1

NOT FOR CONSTRUCTION

GREENVILLE COUNTY SCHOOLS
Inspire | Support | Prepare

MAULDIN HS STADIUM EXPANSION & CAROLINA HS RESTROOM BUILDING

DESIGN DEVELOPMENT DOCUMENTS
08/30/2024
REVISIONS

17-24103-00
MAULDIN HS - RESTROOM BUILDING

E1.1

DLR GROUP
© DLR Group

Autodesk Docs/17-24-103-00 Mauldin HS Stadium Seating Restroom Bldg/17-24-103-00 Mauldin HS Stadium Seating Restroom
Bldg MEP_2024.rvt
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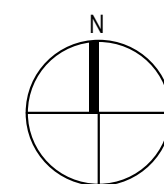
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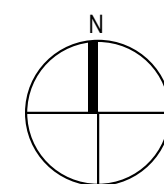
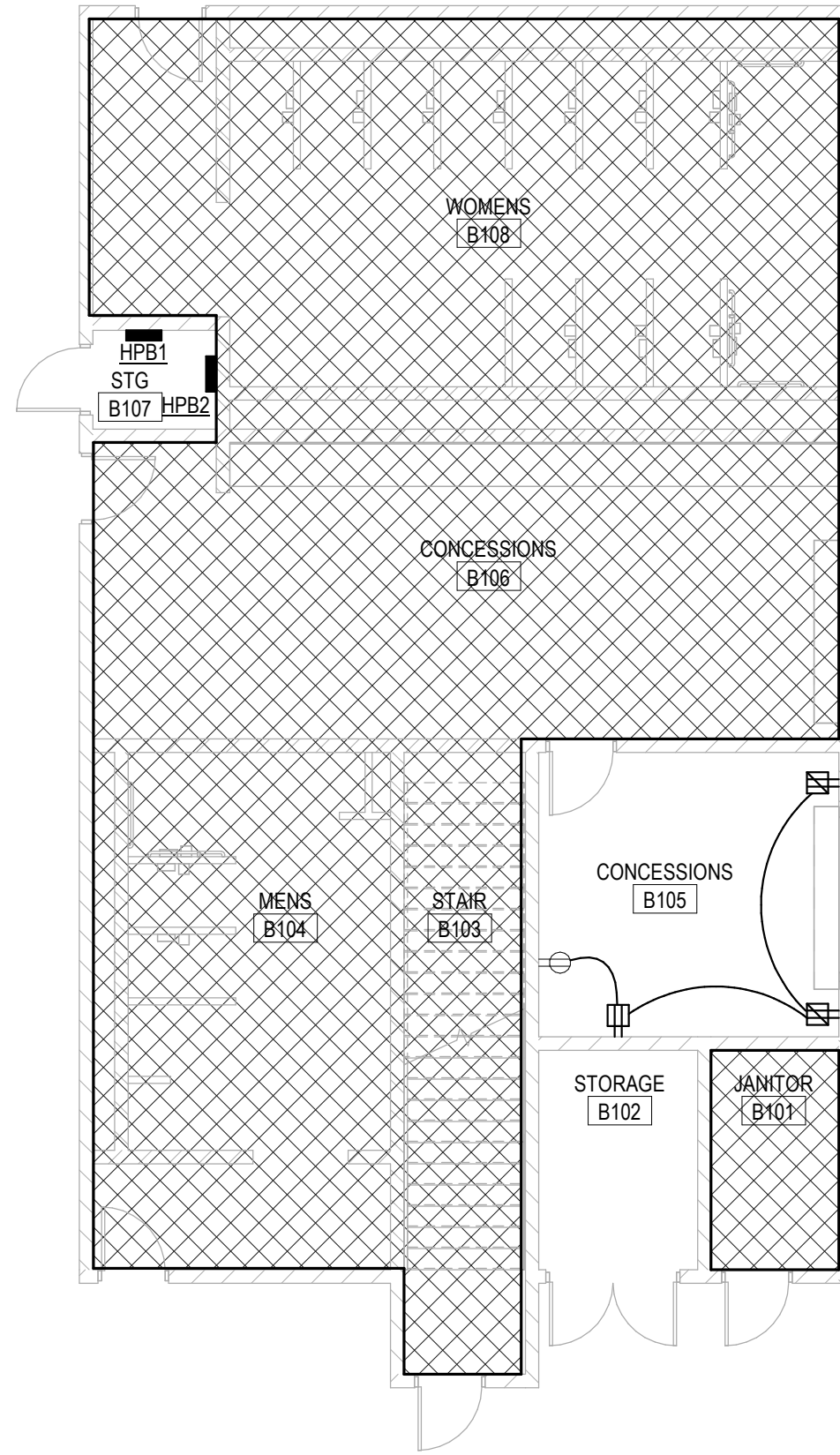
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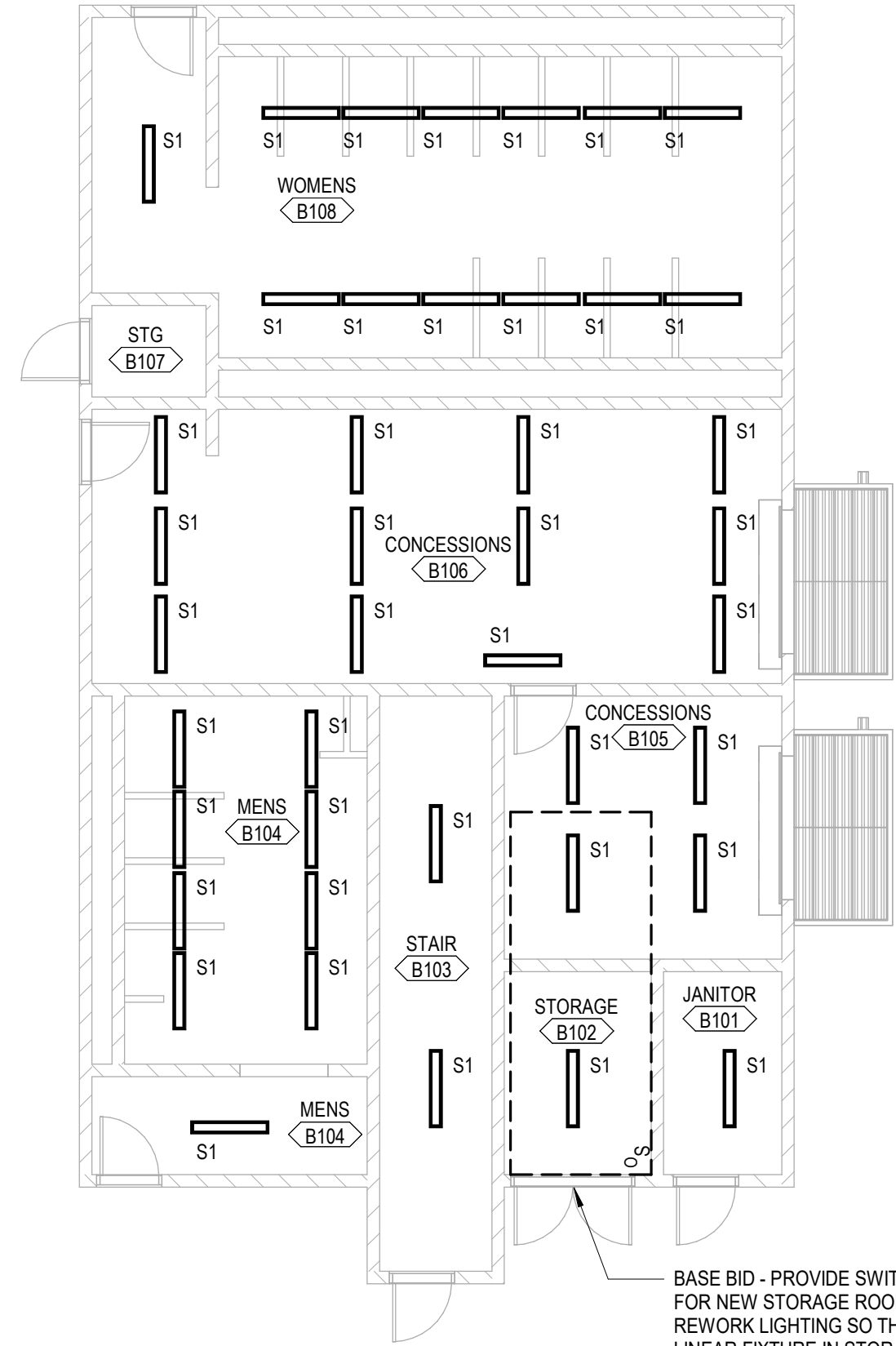
MAULDIN HS - CONCESSIONS - POWER

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



MAULDIN HS - CONCESSIONS - LIGHTING

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



BASE BID - PROVIDE SWITCH FOR NEW STORAGE ROOM. REWORK LIGHTING SO THAT LINEAR FIXTURE IN STORAGE IS CONTROLLED BY LOCAL CONTROL IN LIEU OF EXISTING CONCESSION CONTROLS. RELOCATE FIXTURES WITHIN SPACE AS NEEDED TO AVOID CONFLICTS WITH NEW WALL BETWEEN CONCESSIONS AND STORAGE.

GENERAL NOTES

- A ADD ALTERNATE #1 - REPLACE ALL 4" STRIP FIXTURES WITHIN BUILDING WITH LED EQUIVALENT FIXTURE. REUSE EXISTING CIRCUITS AND CONTROLS. ALL REMOVED FIXTURES AND LAMPS SHALL BE TURNED OVER TO OWNER'S MAINTENANCE GROUP.



NOT FOR
CONSTRUCTION



GREENVILLE COUNTY
SCHOOLS
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MAULDIN HS STADIUM EXPANSION &
CAROLINA HS RESTROOM BUILDING

MAULDIN HIGH SCHOOL - 701 E Butler Pk. Mauldin, SC 29662
CAROLINA HIGH SCHOOL - 2725 Anderson Rd, Greenville, SC 29611

DESIGN
DEVELOPMENT
DOCUMENTS

08/30/2024
REVISIONS

17-24103-00

MAULDIN HS -
CONCESSIONS

E1.2

ABBREVIATIONS

RELOCATED Ø	
A	AMPERE
AC	ABOVE COUNTER
AF	AMP FRAME (CIRCUIT BREAKER)
AIC	AMPERE INTERRUPTING CAPACITY
AL	ALUMINUM
AMP	AMPERE
AP	WIRELESS ACCESS POINT
AT	AMP TRIP (CIRCUIT BREAKER OR FUSE)
ATS	AUTOMATIC TRANSFER SWITCH
AV	AUDIO-VISIO, AUDIO-VISUAL
AWG	AMERICAN WIRE GAUGE
BAS	BUILDING AUTOMATION SYSTEM
BJ	BONDING JUMPER
BKR	BREAKER
BMS	BUILDING MANAGEMENT SYSTEM
C	CONDUIT
CAS	CASINO
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CE	COVER ELEVATION
CEM	CEMENT
CFCI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED
CG	CORNER GUARD
CH	CHANNEL
CJ	CONSTRUCTION JOINT
CKT	CIRCUIT
CKT BK	CIRCUIT BREAKER
CL	CIRCUIT LINE
CM	CEILING MOUNTED
CMP	CORRUGATED METAL PIPE
CO	CONDUIT ONLY
COMP	COMPOSITE
COORD	COORDINATE
COORD	COORDINATE
CSK	COUNTERSINK
CT	CURRENT TRANSFORMER
CTL	CONTROL
CU	COPPER
CWV	COMBINATION WASTE AND VENT
DB	DECIBEL
DC	DIRECT CURRENT
DISC	DISCONNECT
DP	DISTRIBUTION PANEBOARD
DW	DISHWASHER
ECS	EMERGENCY COMMUNICATION SYSTEM
EGB	ELECTRICAL GROUNDING BUSBAR
EDM	ESTIMATED MAXIMUM DEMAND
EMGB	ELECTRICAL MAIN GROUNDING BUSBAR
EP	EXPLOSION PROOF
ERMS	ENERGY REDUCTION MAINTENANCE SWITCH
EW	ELECTRIC WATER COOLER
FA	FIRE ALARM
FAA	FIRE ALARM ANNUNCIATOR
FACP	FIRE ALARM CONTROL PANEL
FC	FOOT CANDLE
FLA	FULL LOAD AMPS
FS	FLOW SWITCH
FSD	FIRE SMOKE DAMPER
G	EQUIPMENT GROUNDING CONDUCTOR
GEN	GENERATOR
GFI, GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFPE	GROUND FAULT PROTECTION OF EQUIPMENT
GND	EQUIPMENT GROUNDING CONDUCTOR
HH	HANDHOLE
HOA	HAND-OFF-AUTOMATIC
HP	HORSE POWER
IG	INTERCOM
IG	ISOLATED GROUND
JB	JUNCTION BOX
KAIC	THOUSAND AMPERE INTERRUPTING CIRCUIT
KV	KILOVOLT
KVA	KILOVOLT AMPERES
KW	KILOWATT
LT	LIGHT
LTG	LIGHTING
MCA	MINIMUM CIRCUIT AMPACITY
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CIRCUIT CENTER
MH	MANHOLE
MLO	MAN-LOOSE ONLY
MOCPP	MAXIMUM OVERCURRENT PROTECTION
MRTS	MOTOR RATED TOGGLE SWITCH
MSB	MAIN SWITCHBOARD
MTD	MOUNTED
MTG	MOUNTING
MTS	MAIN TRANSFER SWITCH
N	NEUTRAL
NC	NORMALLY CLOSED
NF	NOT-FUSED
NL	NIGHT LIGHT
NO	NORMALLY OPEN
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OSKY	OUTSIDE SCREW AND YOKE
P	POLE(S)
PA	PUBLIC ADDRESS
PB	PO BOX
PH	PHASE
PV	POST INDICATOR VALVE
PNL	PANEL
PWR	POWER
RCP	REFLECTED CEILING PLAN
RECP	RECEPTACLE
REF	REFERENCE
RESP	RESPONSIVE
SCCR	SHORT CIRCUIT CURRENT RATING
SD	SMOKE DAMPER
SEC	SECONDARY
SPD	SURGE PROTECTION DEVICE
SWBD	SWITCHBOARD
TBB	TELECOMMUNICATIONS BONDING BACKBONE
TC	TIME CLOCK
TGB	TELECOMMUNICATIONS GROUNDING BUSBAR
TGMB	TELECOMMUNICATIONS MAIN GROUNDING BUSBAR
TO	TELECOMMUNICATIONS OUTLET
TR	TELECOMMUNICATIONS ROOM
TS	TAMPER SWITCH
TV	TELEVISION
UG	UNDERGROUND
UPS	UNINTERRUPTABLE POWER SUPPLY
V	VOLT
V	VOLT-AMPERE
VFD	VARIABLE FREQUENCY DRIVE
W	WIRE
WA	TELECOMMUNICATIONS WORK AREA
WG	WIRE GUARD
W	WEATHER-PROOF (NEMA 3R)
XFMR	TRANSFORMER

NOTES

GENERAL NOTES

- 1 MODIFICATIONS TO EXISTING POWER DISTRIBUTION EQUIPMENT: MATCH EXISTING MANUFACTURER, SWITCH TYPE, FUSE TYPE, BREAKER TYPE AND KAIC RATING FOR ALL INSTALLED DEVICES.
- 2 EXISTING PANEL DIRECTORIES AT PANELS AFFECTED BY WORK: PROVIDE UPDATED TYPED PANEL DIRECTORY. CONSULT OWNER FOR INPUT ON LABELING OF ALL EXISTING CIRCUITS.
- 3 DEVICES AND LIGHT FIXTURES DENOTED 'ER' ARE EXISTING TO BE RELOCATED. NOTIFY A/E IF DEVICES OR FIXTURES ARE DAMAGED.

GENERAL SITE PLAN NOTES

- 1 ALL LIGHTING AND POWER CONDUCTORS SHALL BE INSTALLED BETWEEN 24" (MINIMUM) AND 36" (MAXIMUM) BELOW FINISHED GRADE.
- 2 ALL COMMUNICATIONS CONDUIT AND CABLES SHALL BE INSTALLED 36" (MINIMUM) BELOW FINISHED GRADE.
- 3 ALL CONDUCTORS FOR EXTERIOR LIGHTING AND POWER CIRCUITS SHALL BE #10 AWG MINIMUM.

GENERAL POWER NOTES

- 1 VERIFY ANY NEUTRAL WIRES REQUIRED ON 1Ø OR 3Ø MECHANICAL UNITS FURNISHED UNDER DIVISION 23. IF REQUIRED, PROVIDE NEUTRAL.
- 2 LOCATE SWITCHES FOR CONTROL OF FANS IN TWO-GANG BOX WITH LIGHT SWITCH WHERE APPLICABLE.
- 3 IN ADDITION TO DEVICES SHOWN, SEE SCHEDULE SHEETS FOR CONNECTIONS TO ALL MECHANICAL EQUIPMENT.

GENERAL LIGHTING NOTES

- 1 SEE LIGHT FIXTURE SCHEDULE AND SYMBOLS LEGEND FOR MOUNTING HEIGHTS, UNLESS NOTED OTHERWISE.
- 2 PROVIDE #14AWG MINIMUM CONDUCTORS FOR ALL EXTERIOR LIGHTING CIRCUITS.
- 3 SEE ARCHITECTURAL BUILDING ELEVATIONS FOR LOCATION OF BUILDING MOUNTED EXTERIOR LIGHT FIXTURES.
- 4 PROVIDE BEAD OF SILICONE SEALANT AROUND RECESSED BACK BOX PERIMETER AT ALL BUILDING MOUNTED EXTERIOR LIGHT FIXTURE LOCATIONS.
- 5 CIRCUIT FIXTURES DENOTED WITH 'N' AS UNSWITCHED NIGHT LIGHTS.
- 6 FIXTURES DENOTED WITH LOWER CASE LETTERS SHALL BE CONTROLLED BY SWITCHES DENOTED WITH THE SAME LOWER CASE LETTER IN EACH ROOM.

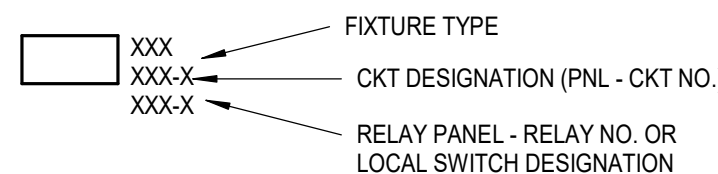
GENERAL DEVICE BOX NOTES

- 1 SEE SYMBOLS LEGEND THIS SHEET FOR MOUNTING HEIGHTS UNLESS NOTED OTHERWISE ON DRAWINGS.
- 2 ALL MOUNTING HEIGHTS ARE TO CENTERLINE OF BOXES UNLESS NOTES OTHERWISE.
- 3 DEVICES RECESSED IN MULLIONS. BACK BOXES TO BE RECESSED FOR FLUSH INSTALLATION OF DEVICE AND WALLPLATE. EXTEND CONDUIT DOWNWARD IN MULLION UP TO WALL ABOVE AND STUB OUT ABOVE ACCESSIBLE CEILING. IN AREAS WITH NO CEILING, EXTEND CONDUIT TOWARDS CABLING SOURCE TO ABOVE NEAREST ACCESSIBLE CEILING.

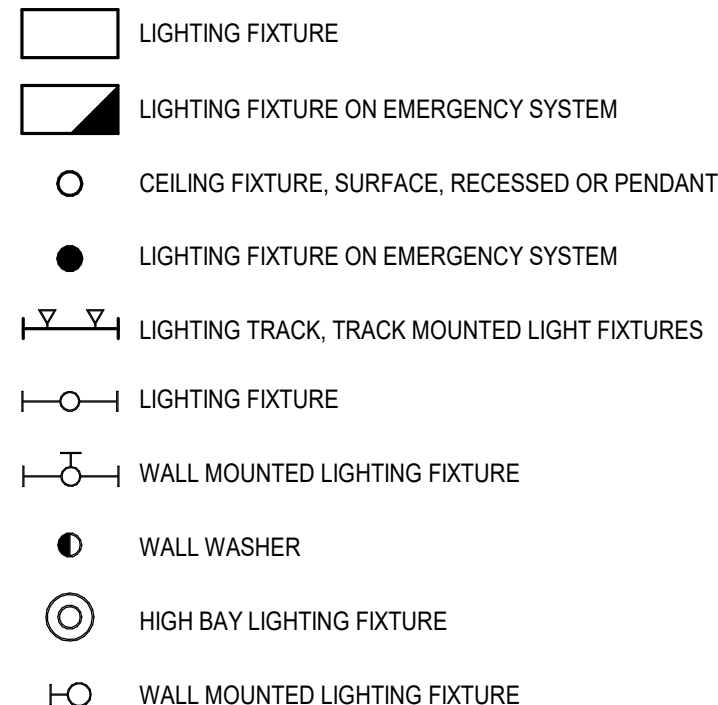
ELECTRICAL SYMBOLS

LIGHTING

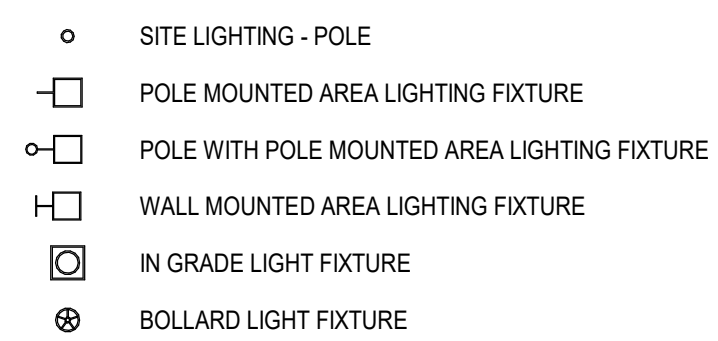
LIGHTING FIXTURE TAG



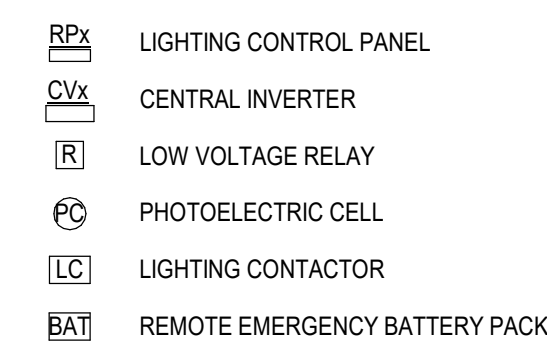
LIGHTING FIXTURES



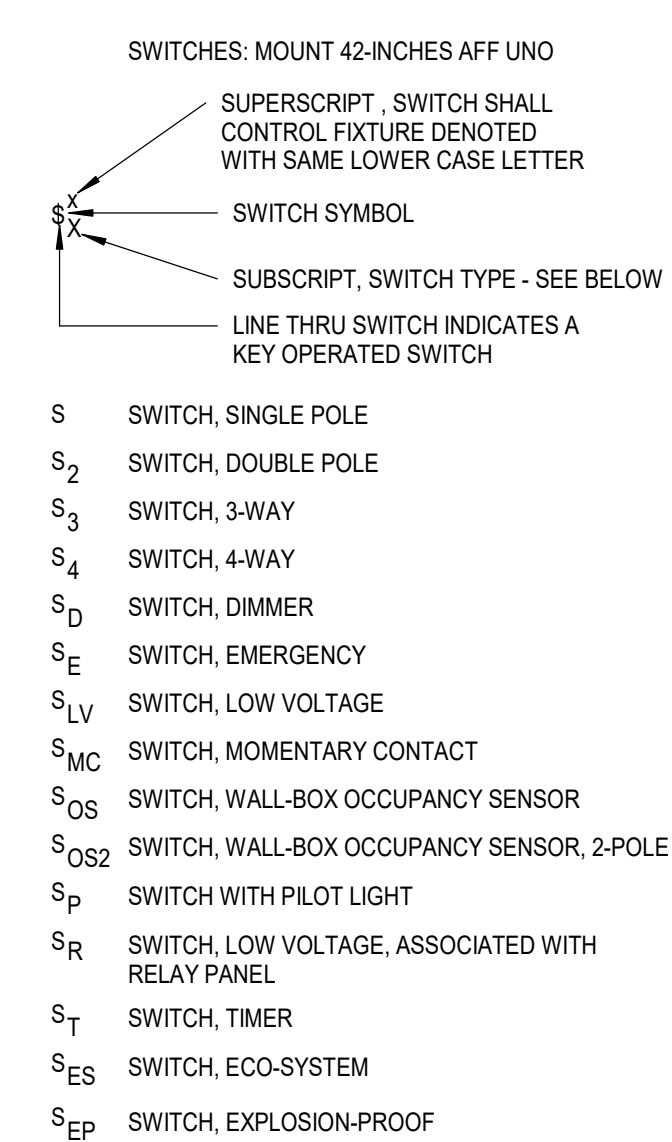
AREA LIGHTING



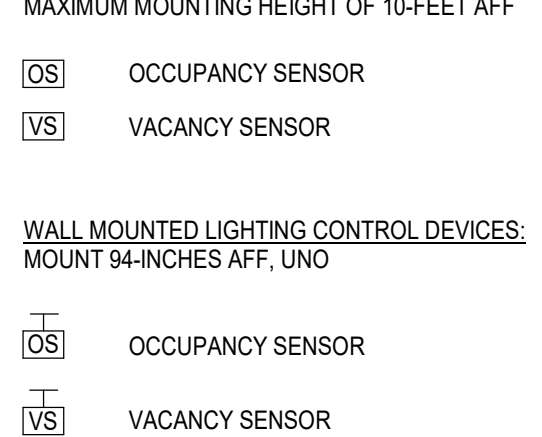
LIGHTING CONTROL DEVICES



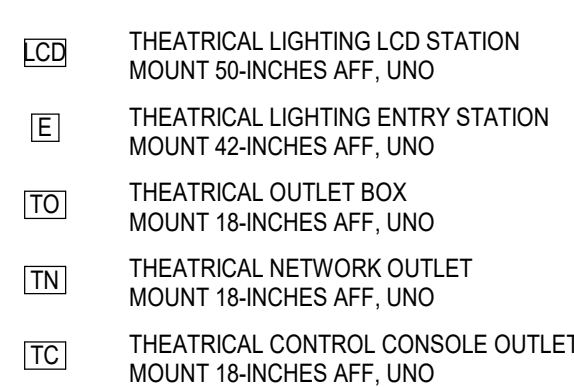
SWITCHES AND WALL-BOX CONTROLS



CEILING MOUNTED LIGHTING CONTROL DEVICES



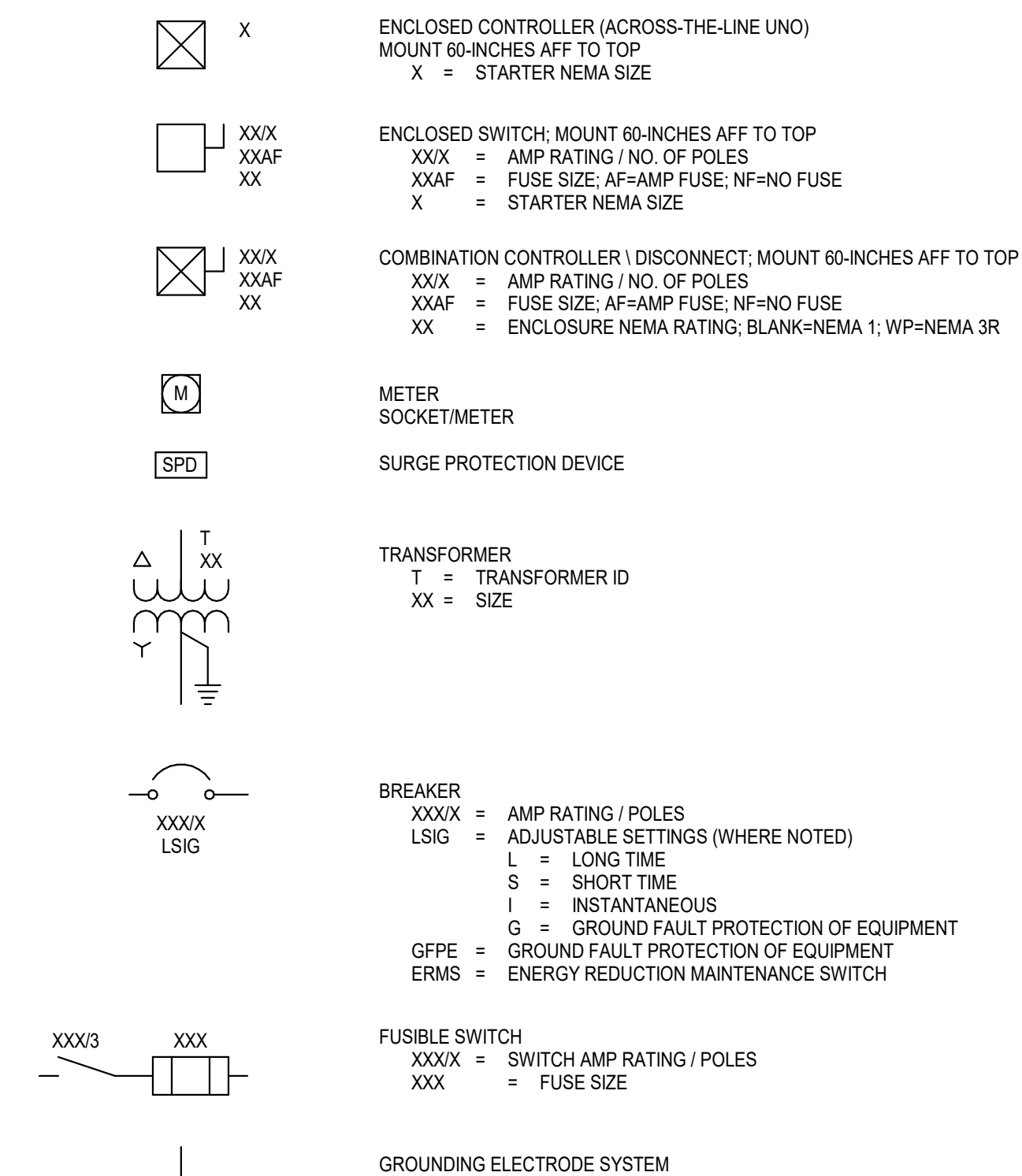
THEATRICAL LIGHTING DEVICES



POWER



ONE-LINE DIAGRAM



* NOTE *

ALL NOTES ON THIS SHEET ARE APPLICABLE TO ALL OTHER SHEETS IN THIS SET.

THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE APPLICABLE IN THIS SET OF DRAWINGS.

1

2

3

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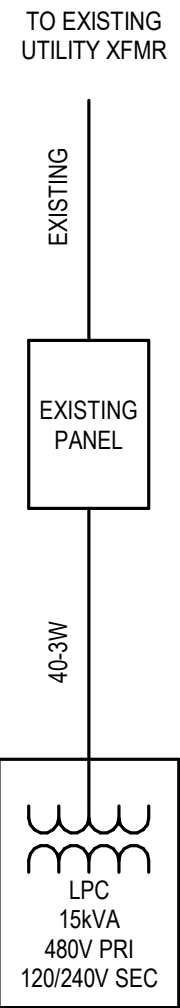
5

FEEDER SCHEDULE - COPPER						
MARK (AMPS)	# SETS	Ø & N	GND	CONDUIT SIZE		
				MARK SUFFIX		
15	1	12	12	3/4"	3/4"	3/4"
20	1	12	12	3/4"	3/4"	3/4"
25	1	10	10	3/4"	3/4"	3/4"
30	1	10	10	3/4"	3/4"	3/4"
35	1	8	10	3/4"	3/4"	3/4"
40	1	8	10	3/4"	3/4"	3/4"
45	1	6	10	1"	3/4"	3/4"
50	1	6	10	1"	3/4"	3/4"
60	1	4	10	1-1/4"	1"	3/4"
70	1	4	8	1-1/4"	1"	3/4"
80	1	3	8	1-1/4"	1-1/4"	1"
90	1	2	8	1-1/4"	1-1/4"	1"
100	1	1	8	1-1/2"	1-1/2"	1-1/4"
110	1	1	6	1-1/2"	1-1/2"	1-1/4"
125	1	1	6	1-1/2"	1-1/2"	1-1/4"
150	1	1/0	6	2"	1-1/2"	1-1/4"
175	1	2/0	6	2"	1-1/2"	1-1/4"
200	1	3/0	6	2"	2"	1-1/2"
225	1	4/0	4	2-1/2"	2"	1-1/2"
250	1	250	4	2-1/2"	2"	1-1/2"
300	1	350	4	3"	2-1/2"	2"
350	1	500	3	3-1/2"	3"	2-1/2"
400	1	600	3	3-1/2"	3"	2-1/2"
400	2	3/0	3	2"	2"	1-1/2"
450	2	4/0	2	2-1/2"	2"	1-1/2"
500	2	250	2	2-1/2"	2-1/2"	2"
600	2	350	1	3"	2-1/2"	2"
700	2	500	1/0	3-1/2"	3"	2-1/2"
800	2	600	1/0	3-1/2"	3"	2-1/2"
1000	3	400	2/0	3"	3"	2-1/2"
1200	3	600	3/0	3-1/2"	3-1/2"	3"
1600	4	600	4/0	3-1/2"	3-1/2"	3"
2000	5	600	250	4"	3-1/2"	3"
2500	6	600	350	4"	3-1/2"	3"
3000	8	500	400	5-1/2"	3"	2-1/2"
4000	10	600	500	4"	3-1/2"	3"

ABBREVIATIONS:
Ø PHASE
N NEUTRAL
GND EQUIPMENT GROUNDING CONDUCTOR
-4W FOUR WIRE + GROUND (3Ø,N,GND)
-3W THREE WIRE + GROUND (3Ø,GND or 2Ø,N,GND)
-2W TWO WIRE + GROUND

NOTES:
1. CONDUCTOR AMPACITIES ARE BASED ON NEC TABLE 310.15(B)(16).
2. CONDUIT SIZES ARE BASED ON A MAXIMUM FILL RATIO OF 40%.
3. SCHEDULE SHALL BE USED FOR FEEDERS AND BRANCH CIRCUITS WHERE APPLICABLE.
4. ALL FEEDERS AND BRANCH CIRCUITS SHALL INCLUDE AN EQUIPMENT GROUNDING CONDUCTOR.
5. SCHEDULE IS VALID FOR TYPE THHN, THWN-2, AND XHHW-2 CONDUCTORS. SEE SPECIFICATIONS FOR CONDUCTOR TYPES REQUIRED.
6. SCHEDULE IS VALID FOR TYPE EMT, IMC, FMC, LFMC, HDPE, AND RMC-40 RACEWAYS. SEE SPECIFICATIONS FOR RACEWAY APPLICATIONS.
7. OPTIONAL CONFIGURATIONS (1 OR 2 SETS) ARE GIVEN FOR SOME SIZES.
8. NOT ALL SIZES USED.

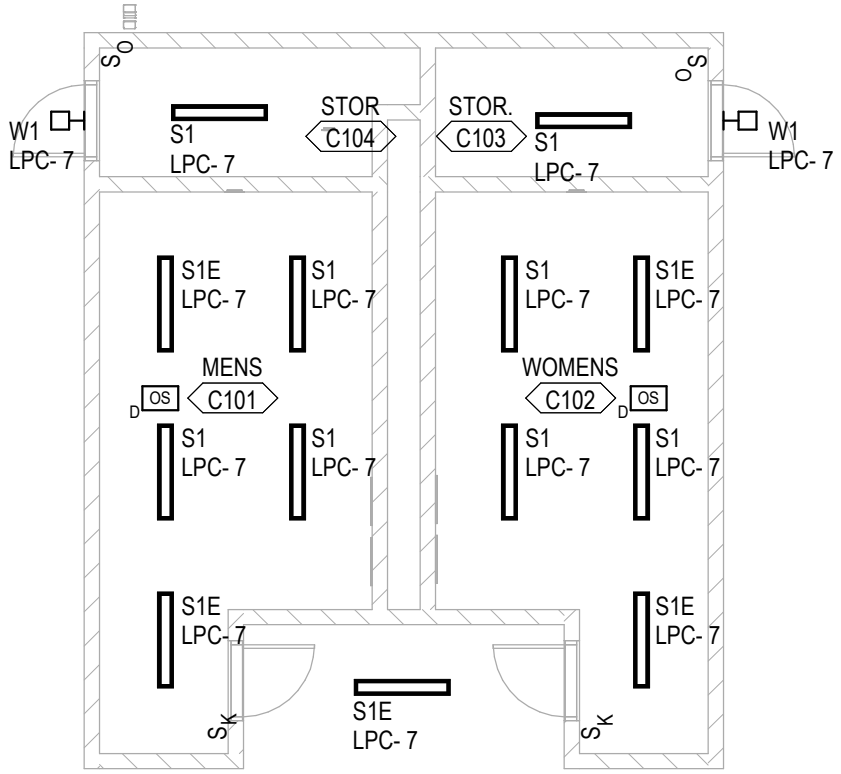
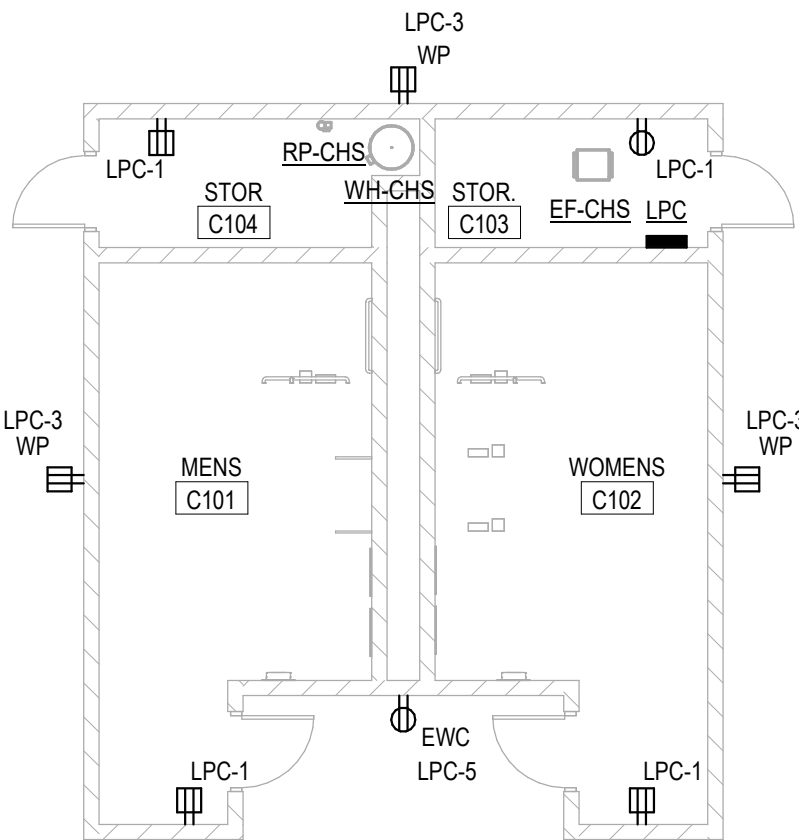
3 One-Line Diagram Carolina HS
E2.1 NO SCALE



LUMINAIRE SCHEDULE																				
LUMINAIRE CRITERIA			PRODUCT INFORMATION				SOURCE				ELECTRICAL INFORMATION					ADDITIONAL INFORMATION				
ID	DESCRIPTION	FINISH	MANUFACTURER	MODEL OR SERIES	LAMP	LUMENS	FT	COLOR TEMP	CRI	LIFE RATING	DIMMING TYPE	POWER SUPPLY OR	VOLTAGE	WATTAGE	FT	MOUNTING	MOUNTING HEIGHT	ACCESSORIES	SCHEDULE NOTES	
S1 S1E	4" STRIP LIGHT, VANDAL RESISTANT, WET LOCATION LISTED, SEAMLESS DIFFUSER FULLY UNIFORM (NO LED PRELATIONS), EXTRUDED ALUMINUM RAILS/ROD/BACK CHANNELS	WHITE, BAKED-ON POWDER COAT	LITHONIA	CSV1	LED	3000		3500K	80	50K HOURS @ L70	0-10V DOWN TO 10%	INTEGRAL DRIVER	120	30		SUSPENDED	9'-0"	S1E - PROVIDE INTEGRAL EMERGENCY BATTERY PACK		
W1	RECTANGULAR OVER DOOR, WALL MOUNTED EXTERIOR FIXTURE WITH DOWNLIGHT DISTRIBUTION, BLACK POWDER COAT FINISH, SUITABLE FOR WET LOCATION UL LISTED, IP-65 RATED	BLACK, BAKED-ON POWDER COAT	LITHONIA	WDGE1	LED	2000		3500K	80	50K HOURS @ L70	0-10V DOWN TO 10%	INTEGRAL DRIVER	120	15		WALL, SURFACE	9'-0"	INTEGRAL PHOTOCELL		
GENERAL NOTES: A. PROVIDE UNITS MEETING FIXTURE SCHEDULE DESCRIPTION AND SPECIFICATION REQUIREMENTS. THE FIXTURE CATALOG NUMBER IS NOT COMPLETE. USE ONLY AS A GUIDELINE. B. LUMEN VALUES IN KEY PARAMETERS COLUMN ARE MINIMUM DELIVERED LUMENS, INCLUDING OPTIONS AND ACCESSORIES. C. DELIVERED LUMENS SHALL NOT EXCEED 25% OF VALUES LISTED OR 25% OF VALUE IF RANGE IS LISTED. D. ALL FIXTURES SHALL BE PAINTED AFTER FABRICATION.																				

PANEL: LPM																	
LOCATION: CUSTODIAL A103							VOLTS: 120/240				MOUNTING: SURFACE						
BUS RATING: 100 A							PHASES: 1				FED FROM:						
MAIN BREAKER: 602							WIRES: 3				INTEGRAL SPD: NO						
							SCCR: 22K				LUG ACCESSORIES: NO						
CKT	CIRCUIT DESCRIPTION					BKR TRIP	P	BKR TYPE	LOAD TYPE	PHASE A (VA)	PHASE B (VA)	LOAD TYPE	BKR TYPE	P	BKR TRIP	CIRCUIT DESCRIPTION	CKT
1	R - INTERIOR					20	1		R	720	2,880					WH-MHS	2
3	R - EXTERIOR					20	1		R		540	2,880	M		2	35	4
5	R - EWC					20	1	G	R	180	184				1	20	6
7	LIGHTING					20	1		L		456	456	M		1	20	8
9	SPARE					20	1		Spare	0	0		Spare		1	20	10
11	SPARE					20	1		Spare		0	0	Spare		1	20	12
TOTAL LOAD:									3964 VA		4332 VA						
TOTAL AMPS									33.0 A		36.1 A						
LOAD TYPE	LOAD DESCRIPTION	CONNECTED LOAD (VA)	DEMAND D...	ESTIMATED DEMAND (VA)	DEMAND FACTOR NOTES					BKR TYPE	PANEL TOTALS						
L	LIGHTING	456 VA	125.00%	570 VA	CONTINUOUS LOAD @ 125%					G = GFCI (5mA)							
R	RECEPTACLES	1440 VA	100.00%	1440 VA	GP = GFP (30mA)						CONNECTED LOAD: 8 kVA						
K	KITCHEN	0 VA	0.00%	0 VA	NON-DWELLING KITCHEN LOADS; NEC ART. 220					ST = SHUNT TRIP	ESTIMATED DEMAND: 10 kVA						
M	MOTOR	6216 VA	123.17%	7656 VA	LARGEST MOTOR, NEC ART. 430					LO = LOCK OUT	CONNECTED CURRENT: 34.6 A						
C	COOLING	0 VA	0.00%	0 VA							EMD CURRENT: 41.0 A						
H	HEATING	0 VA	0.00%	0 VA													
O	OTHER	0 VA	0.00%	0 VA													
Spare	SPARE	0 VA	0.00%	0 VA													
NOTES:																	

MECHANICAL EQUIPMENT SCHEDULE													
DISCONNECTING ABBREVIATIONS: MRTS - MOTOR RATED TOGGLE SWITCH STARTER ABBREVIATIONS: SWL - SWITCH WITH LIGHT													
ID	LOCATION			LOAD				VOLTAGE (V)	PHASE	DISCONNECT	STARTER	PANEL	CIRCUIT NO
	NO.	NAME	HP	FLA (A)	MCA (A)	MOCF (A)	TOTAL LOAD (VA)						CONDUIT & WIRE SIZE
FAN													
EF-CHS	C103	STOR.	0.17	2.8	3.5	15	338	120	1	MRTS		LPC	8
PUMP													
RP-CHS	C104	STOR.	0.04	1.6	2	2.8	184	115	1	MRTS		LPC	6
WATER HEATER													
WH-CHS	C104	STOR.	0	24	30	35	5,760	240	1	602, NF		LPC	2.4



CAROLINA HS RESTROOMS - ELECTRICAL
SCALE: 1/8" = 1'-0"

LEVEL 01 - AREA C - LIGHTING PLAN
SCALE: 1/8" = 1'-0"

Mauldin High School Stadium Expansion & Carolina High School Restroom Building

Greenville County School District

Design Development

08.30.2024



Outline Specifications:

DIVISION 02 — EXISTING CONDITIONS

- 024119 - SELECTIVE DEMOLITION

DIVISION 03 -- CONCRETE

- 033000 CAST-IN-PLACE CONCRETE

DIVISION 04 -- MASONRY

- 042000 UNIT MASONRY

DIVISION 05 -- METALS

- 051200 STRUCTURAL STEEL FRAMING
- 052100 STEEL JOIST FRAMING
- 053100 STEEL DECKING

DIVISION 07 — THERMAL AND MOISTURE PROTECTION

- 074293 - SOFFIT PANELS
- 076200 - SHEET METAL FLASHING AND TRIM
- 077200 - ROOF ACCESSORIES

DIVISION 08 — OPENINGS

- 081113 - HOLLOW METAL DOORS AND FRAMES
- 083313 - COILING COUNTER DOORS
- 087100 - DOOR HARDWARE
- 088300 - MIRRORS

DIVISION 09 — FINISHES

- 092216 - NON-STRUCTURAL METAL FRAMING
- 096513 - RESILIENT BASE AND ACCESSORIES
- 099113 - EXTERIOR PAINTING
- 099123 - INTERIOR PAINTING

DIVISION 10 — SPECIALTIES

- 101423.16 - ROOM-IDENTIFICATION PANEL SIGNAGE
- 102113.17 - PHENOLIC-CORE TOILET COMPARTMENTS
- 102800 - TOILET BATH AND LAUNDRY ACCESSORIES

DIVISION 13 — SPECIAL CONSTRUCTION

- 133416 - PERMANENT I-BEAM STYLE GRANDSTAND
- 133418 - PERMANENT ALL ALUMINUM GRANDSTAND
- 102800 - TOILET BATH AND LAUNDRY ACCESSORIES

DIVISION 22 — PLUMBING

- 220500 - COMMON WORK RESULTS FOR PLUMBING
- 220517 - SLEEVES AND SLEEVE SEALS FOR PLUMBING PIPING
- 220518 - ESCUTCHEONS FOR PLUMBING PIPING
- 220519 - METERS AND GAGES FOR PLUMBING PIPING
- 220523 - GENERAL-DUTY VALVES FOR PLUMBING PIPING
- 220529 - HANGERS AND SUPPORTS FOR PLUMBING PIPING AND EQUIPMENT
- 220553 - IDENTIFICATION FOR PLUMBING PIPING AND EQUIPMENT
- 220700 - PLUMBING INSULATION
- 221116 - DOMESTIC WATER PIPING
- 221119 - DOMESTIC WATER PIPING SPECIALTIES
- 221123 - DOMESTIC WATER PUMPS
- 221316 - SANITARY WASTE AND VENT PIPING
- 221319 - SANITARY WASTE PIPING SPECIALTIES
- 223300 - ELECTRIC, DOMESTIC WATER HEATER
- 224000 - PLUMBING FIXTURES
- 224700 - DRINKING FOUNTAINS AND WATER COOLERS

DIVISION 23 — HEATING VENTILATING AND AIR CONDITIONING

- 230500 - COMMON WORK RESULTS FOR HVAC
- 230593 - TESTING, ADJUSTING, AND BALANCING FOR HVAC SYSTEMS
- 233113 - METAL DUCTS
- 233300 - AIR DUCT ACCESSORIES
- 233423 - HVAC POWER VENTILATORS
- 233713 - DIFFUSERS, REGISTERS, AND GRILLES
- 238239 - UNIT HEATER

DIVISION 26 — ELECTRICAL

- 260500 - COMMON WORK RESULTS FOR ELECTRICAL
- 260519 - LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES
- 260526 - GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS
- 260529 - HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS
- 260533 - RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS
- 260553 - IDENTIFICATION FOR ELECTRICAL SYSTEMS
- 260923 - LIGHTING CONTROL SYSTEMS AND DEVICES
- 262416 - PANELBOARDS
- 262726 - WIRING DEVICES
- 262816 - ENCLOSED SWITCHES AND CIRCUIT BREAKERS
- 265100 - LIGHTING

PRELIMINARY
PROJECT SCHEDULE

ID	Task Name	Duration	Start	Finish	Predecessors	Jun	3rd Quarter	Jul	Aug	Sep	4th Quarter	Oct	Nov	Dec	1st Quarter	Jan	Feb	Mar	2nd Quarter	Apr	May	Jun	3rd Quarter	Jul	Aug
1	Maudlin HS - Bleacher Expansion, New Restroom Building & Existing Building Renovations																								
2	Design	10 days	Fri 9/20/24	Thu 10/3/24																					
3	Construction Documents	10 days	Fri 9/20/24	Thu 10/3/24																					
4	Complete CD Package	10 days	Fri 9/20/24	Thu 10/3/24																					
5	Bidding	42 days	Wed 9/18/24	Thu 11/14/24																					
6	Design Team Updates CMAR Information Packet	6 days	Wed 9/18/24	Wed 9/25/24																					
7	Advertise for Bidders	1 day	Wed 9/25/24	Wed 9/25/24																					
8	Pre-Bid Conference	1 day	Fri 9/27/24	Fri 9/27/24																					
9	Final Questions	1 day	Tue 10/1/24	Tue 10/1/24																					
10	Final Addendum	1 day	Thu 10/3/24	Thu 10/3/24	9																				
11	Responses Due	1 day	Fri 10/11/24	Fri 10/11/24																					
12	Shortlist & Invitations	1 day	Wed 10/23/24	Wed 10/23/24	11																				
13	Interviews	1 day	Wed 11/6/24	Wed 11/6/24																					
14	Notice to Proceed	1 day	Thu 11/14/24	Thu 11/14/24																					
15	SCOSF Plan Review	22 days	Wed 9/18/24	Thu 10/17/24																					
16	Address DD Questions/Meeting Minutes	6 days	Wed 9/18/24	Wed 9/25/24																					
17	Construction Document Review	10 days	Fri 10/4/24	Thu 10/17/24																					
18	Site Plan Reviews	40 days	Mon 9/16/24	Fri 11/8/24																					
19	Town and County	40 days	Mon 9/16/24	Fri 11/8/24																					
20	First Submission	10 days	Mon 9/16/24	Fri 9/27/24																					
21	Respond to Comments	10 days	Mon 9/30/24	Fri 10/11/24	20																				
22	Second Submission	10 days	Mon 10/14/24	Fri 10/25/24	21																				
23	Approval	10 days	Mon 10/28/24	Fri 11/8/24	22																				
24	Sanitary Sewer & Water	40 days	Mon 9/16/24	Fri 11/8/24																					
25	First Submission	10 days	Mon 9/16/24	Fri 9/27/24																					
26	Respond to Comments	10 days	Mon 9/30/24	Fri 10/11/24	25																				
27	Second Submission	10 days	Mon 10/14/24	Fri 10/25/24	26																				
28	Approval	10 days	Mon 10/28/24	Fri 11/8/24	27																				
29	Issue for Construction Documents	1 day	Mon 11/11/24	Mon 11/11/24																					
30	Design Team Issues	1 day	Mon 11/11/24	Mon 11/11/24	23,28																				
31	Bleacher Order/Fabrication/Installation - Critical Path	230 days	Tue 9/10/24	Mon 7/28/25																					
32	Shop Drawings Complete	5 wks	Tue 9/10/24	Mon 10/14/24																					
33	GC Subcontractor Review/Contracts	5 days	Thu 11/14/24	Wed 11/20/24																					
34	Bleacher Order Placed	5 days	Thu 11/21/24	Wed 11/27/24	33																				
35	Bleachers Fabrication & Delivery (180 changed to 210 calendar days)	150 days	Tue 11/26/24	Mon 6/23/25	34																				
36	Bleacher Installation	5 wks	Tue 6/24/25	Mon 7/28/25	35																				
37	Key Dates of Note:																								
38	Stadiums Not In Use - 2024-2025 Winter	76 days	Mon 11/4/24	Mon 2/17/25																					
39	Stadiums Not In Use - 2025-2026 Summer	60 days	Mon 5/12/25	Fri 8/1/25																					
40	Last Day of School	1 day	Fri 5/23/25	Fri 5/23/25																					
41	First Day of School	1 day	Mon 8/11/25	Mon 8/11/25																					

Project: Preliminary Schedule U
Date: Fri 9/20/24

Task

Split

Milestone

Summary

Project Summary

Inactive Task

Inactive Milestone

Inactive Summary

Manual Task

Duration-only

Manual Summary Rollup

Manual Summary

Start-only

Finish-only

External Tasks

External Milestone

Deadline

Progress

Manual Progress