

# Mauldin High School Stadium Expansion & Carolina High School Restroom Building

Greenville County School District

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## **CMAR Information Packet**

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07.19.2024



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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.



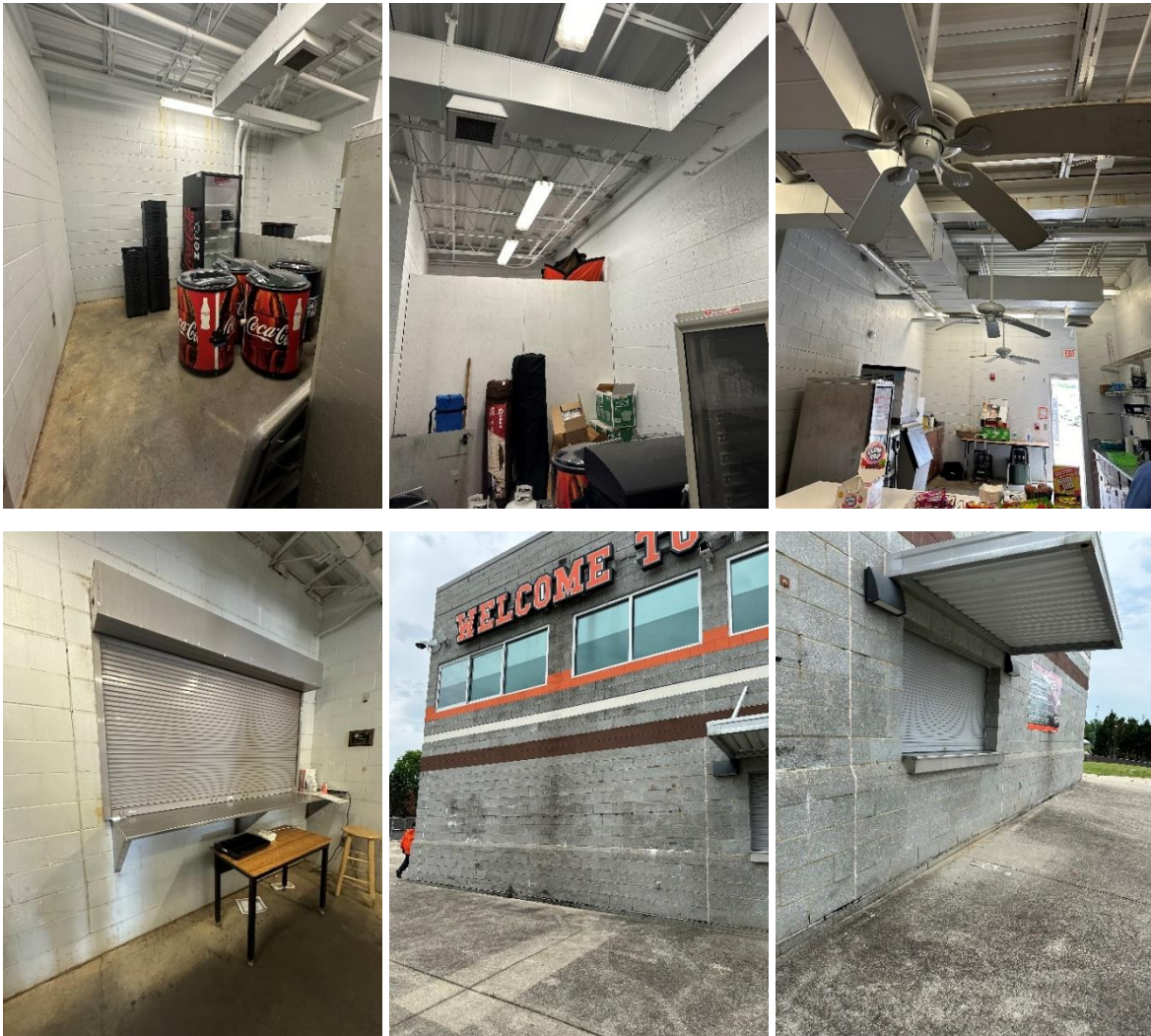
Images Below | Shown are the current bleachers on both the home and away sides. Both sides will be expanded to accommodate more spectators. The home side bleachers will require retaining wall expansions and enhancements to support the additional seating on either side. Additionally, improvements will 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 700 seats, with 350 seats added on each side, resulting in around 1,710 seats. Home seating will similarly increase by approximately 460 seats, with 230 seats added on each side, bringing the total to about 3,614 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,  $pg = 10$  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  $\Omega = 2\frac{1}{2}$  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.

- 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:

<b>Description</b>	<b>Summer (° F)</b>	<b>Winter (° F)</b>
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:
  - o 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.

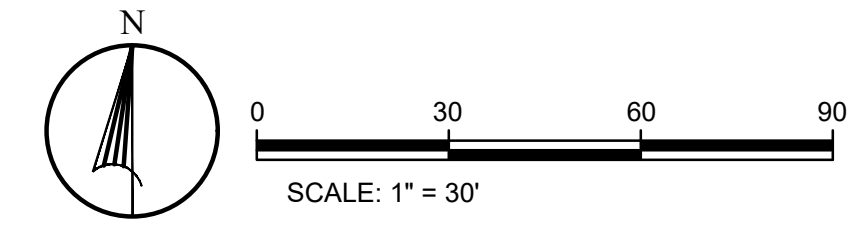
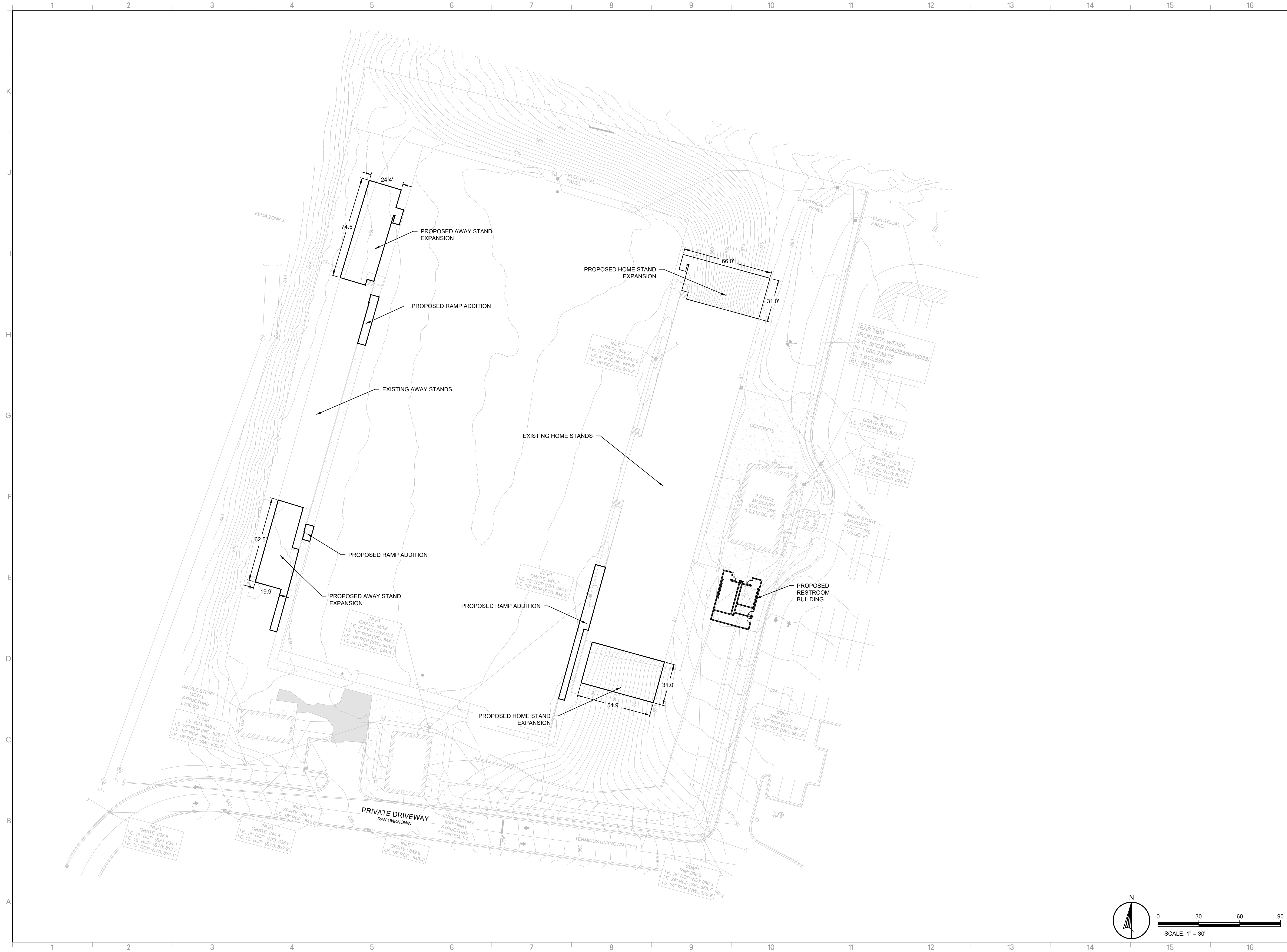
## Lighting Systems

(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.

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<h1 style="margin: 0;">PRELIMINARY</h1>	<p style="font-size: 8px; margin: 0;">PROJECT MANAGER: MGL DESIGNER: ELD, DBK, EHM</p>
<p style="font-size: 8px; margin: 0;">ISSUE DATE: 07-18-24</p>	<p style="font-size: 8px; margin: 0;">PRELIMINARY PLANS</p>
<p style="font-size: 8px; margin: 0;">SITE PLAN BLEACHER &amp; BATHROOM ADDITION</p>	
<p style="font-size: 8px; margin: 0;">MAULDIN HIGH SCHOOL BLEACHER AND RESTROOM ADDITION BIBLE CHURCH RD &amp; SC HWY 9 MAULDIN, SC GMC Project#CGRE230097</p>	
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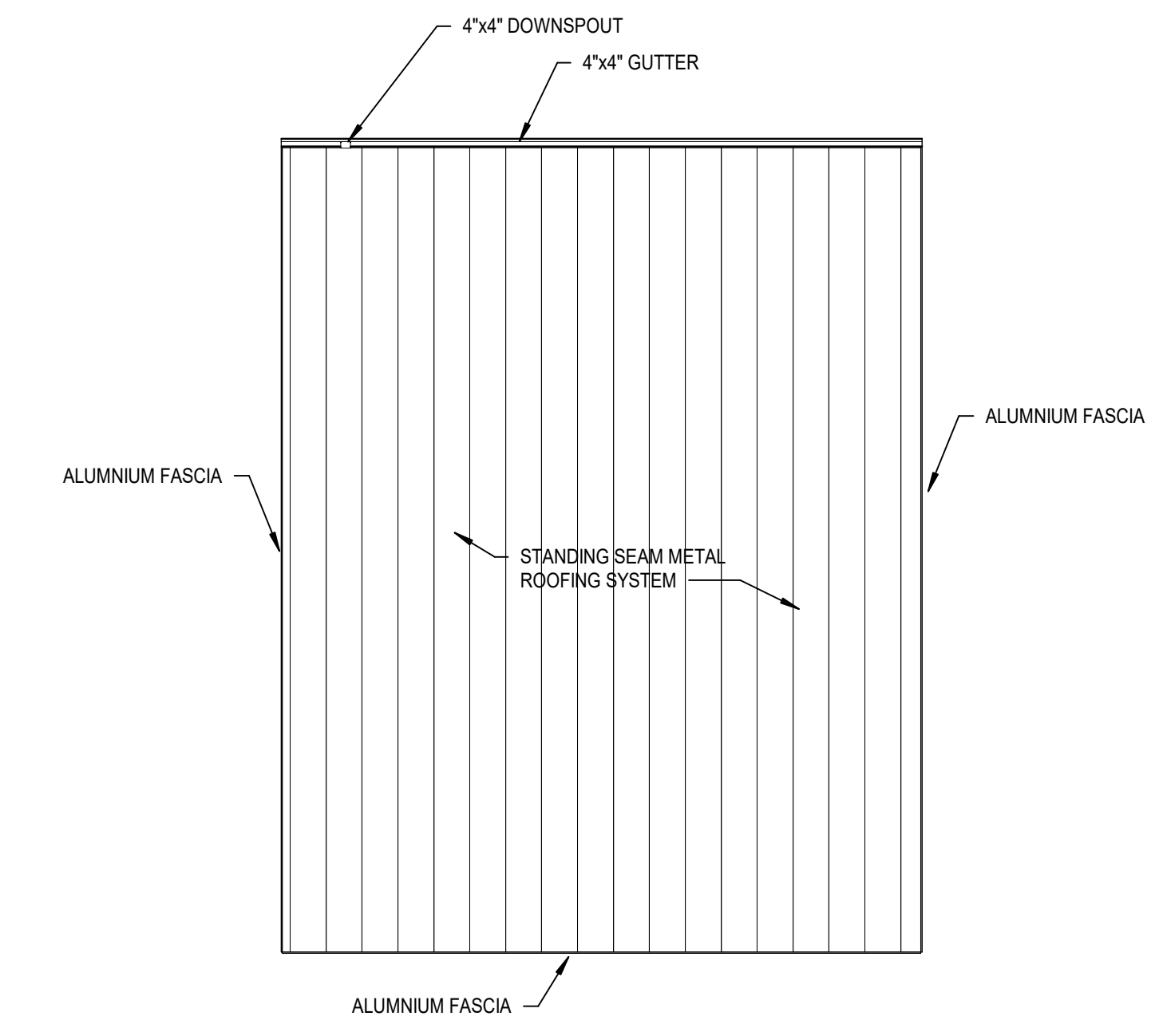
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GENERAL ARCHITECTURAL NOTES

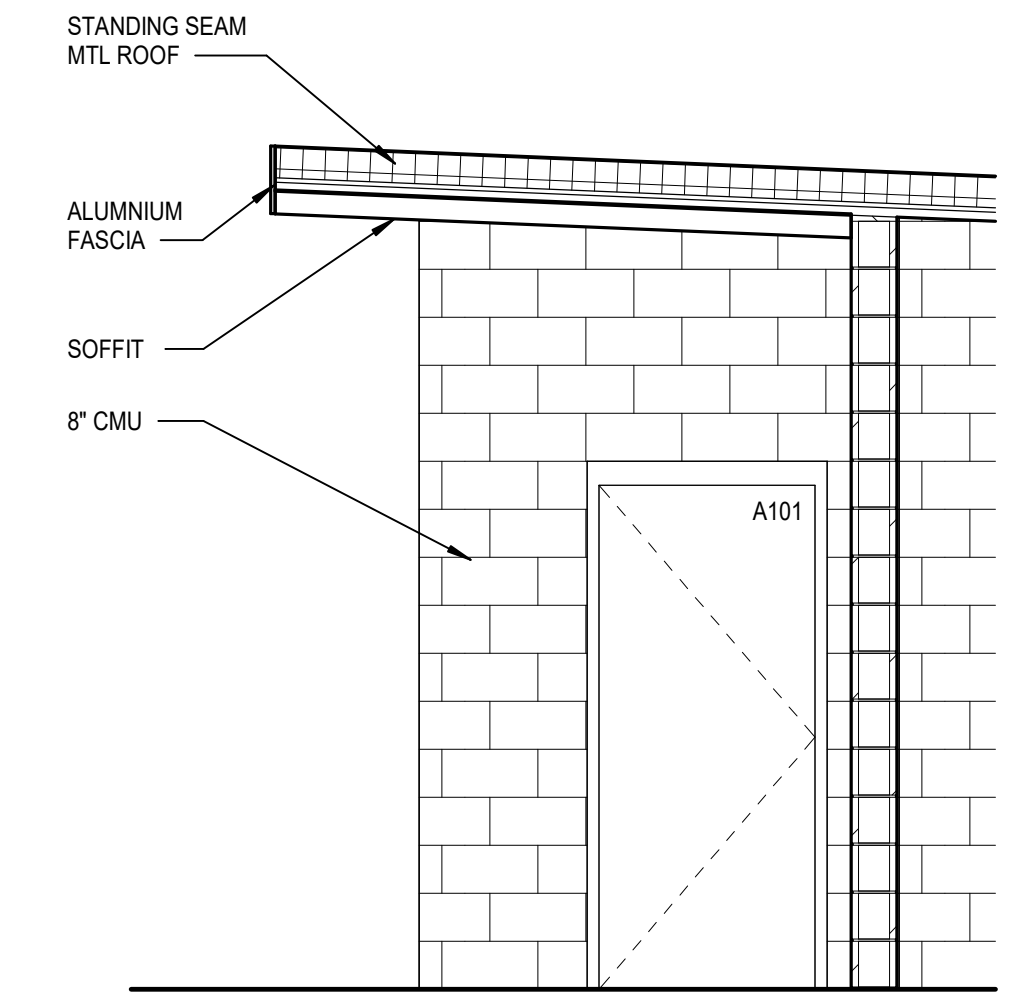
1. ALL INTERIOR CMU WALLS SHALL BE 8 INCHES NOMINAL THICKNESS UNLESS NOTED OTHERWISE.
2. PARTITION TYPES SHALL BE DESIGNATED ON FLOOR PLANS (XX-X, XX) THIS SHEET XXX FOR TYPES. ALL INTERIOR PARTITIONS ARE TYPE XXXX UNLESS NOTED OTHERWISE.
3. ALL MASONRY WALLS AND INTERIOR STUD WALLS SHALL EXTEND TO UNDERSIDE OF FLOOR OR ROOF DECK ABOVE UNLESS NOTED OTHERWISE PER PARTITION TYPE.
4. 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.
5. SEE STRUCTURAL DRAWINGS FOR BRACING OF NON-LOAD BEARING MASONRY WALLS.
6. 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.
7. GYPSUM BOARD SURFACES SHALL BE ISOLATED WITH CONTROL JOINTS WHERE SHOWN ON DRAWINGS AND AS DESCRIBED IN THE SPECIFICATIONS.
8. MASONRY CONTROL JOINTS (CJ) AND CONTROL JOINTS ABOVE (CIA) SHALL BE LOCATED AS SHOWN ON THE FLOOR PLAN AND BUILDING ELEVATIONS, AND WHERE LARGE PLUMBING VENTS OR RISERS OCCUR IN SINGLE IN THE MASONRY WALLS, AND WHERE MASONRY WALLS BEARING ON THE CONCRETE FLOOR SLAB ABUT MASONRY WALLS BEARING ON CONCRETE FOOTINGS OR AS INDICATED ON DRAWINGS.
9. "MBD" AND "TBD" INDICATE MARKER BOARDS AND TACK BOARDS ON PLANS. THE LENGTH PRECEDES THE DESIGNATION (EXAMPLE: 18" MBD). ALL BOARDS ARE 4'-0" TALL. SEE WALL ELEVATIONS OR SPECIFICATIONS FOR MOUNTING HEIGHT.
10. EXTEND FURRING CHANNELS AND GYPSUM BOARD UP 4 INCHES ABOVE FINISHED CEILING ON CMU WALLS.
11. SCRIBE GYPSUM WALL BOARD OF WALLS AND PARTITIONS TO IRREGULARITIES OF DECK ABOVE. SEAL TIGHTLY AROUND ALL PENETRATIONS.
12. PROVIDE SEISMIC BRACING FOR SUSPENDED CEILINGS OR AS SHOWN ON THE DRAWINGS.



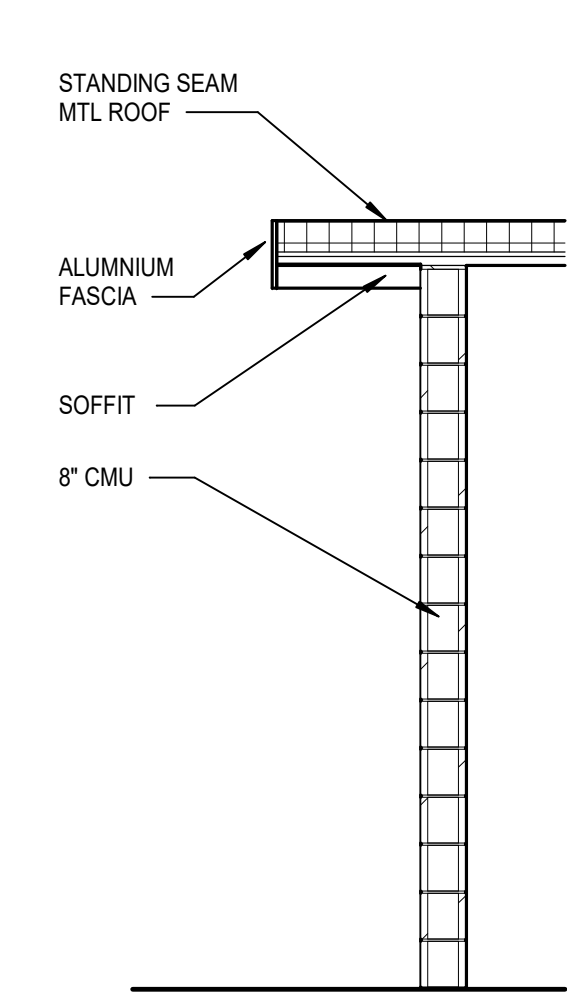
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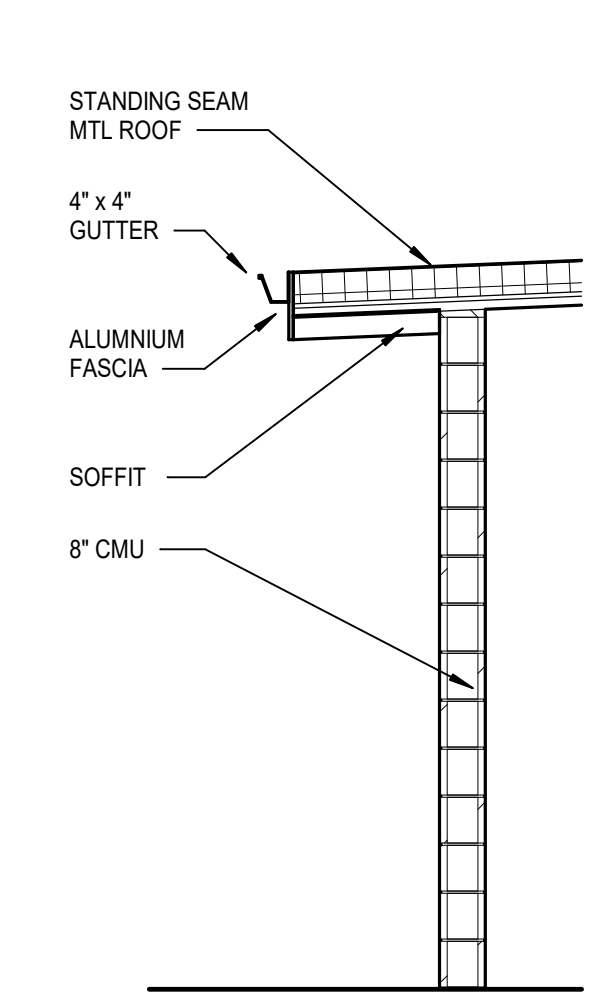
2E ROOF PLAN  
SCALE: 1/8" = 1'-0"



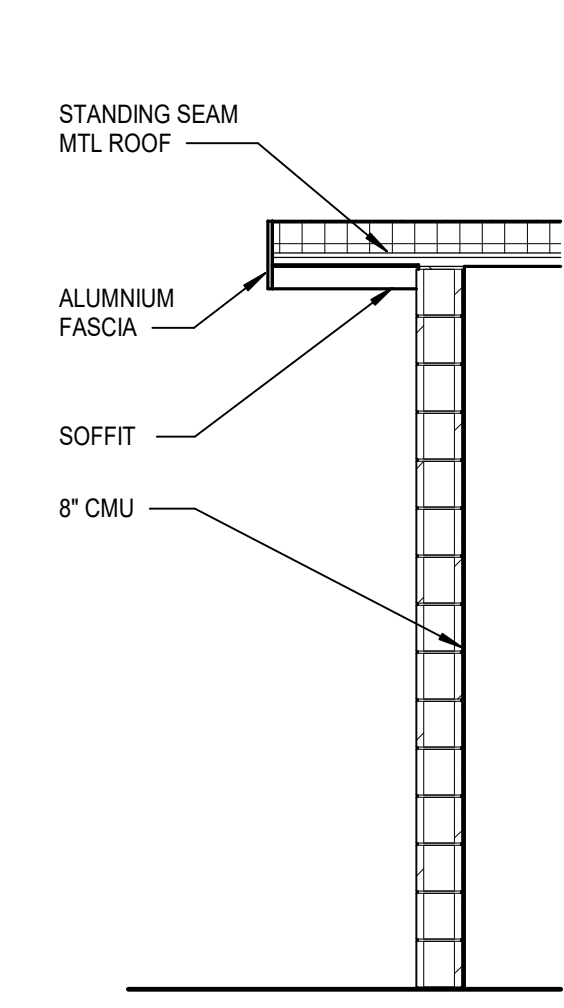
3A WALL SECTION  
SCALE: 3/8" = 1'-0"



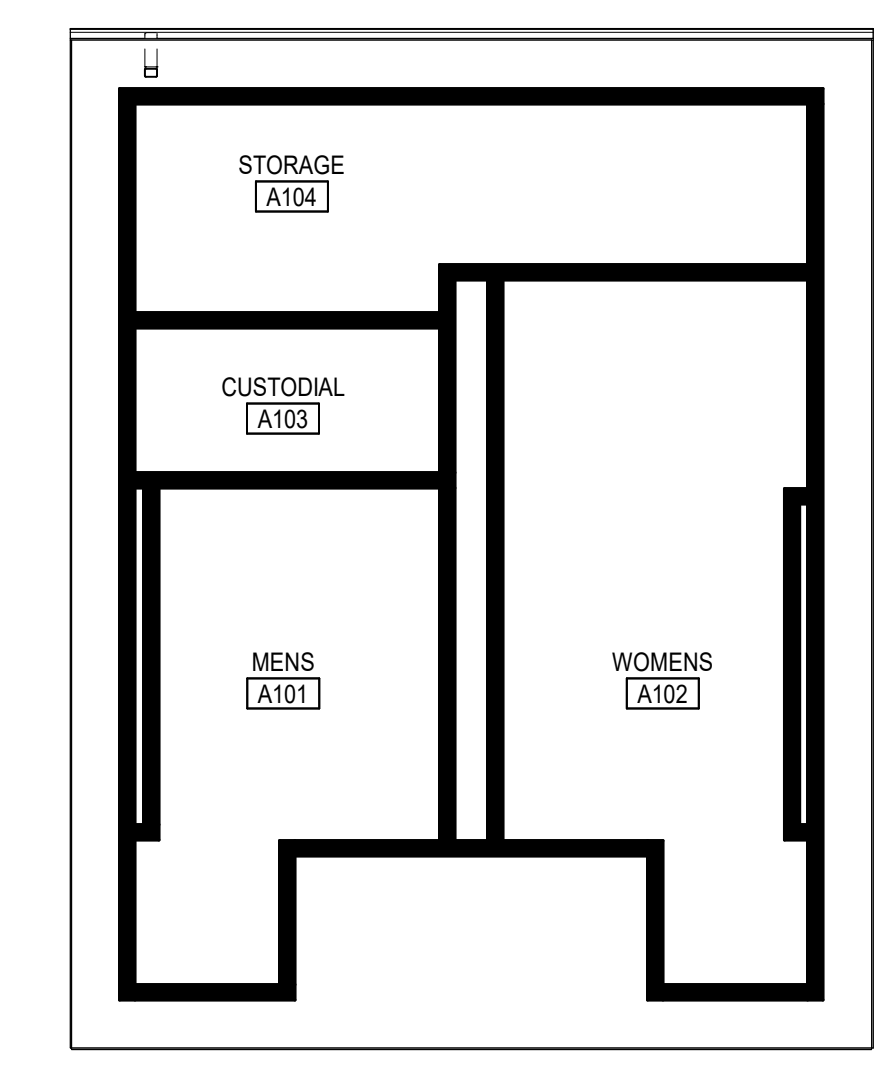
3B WALL SECTION  
SCALE: 3/8" = 1'-0"



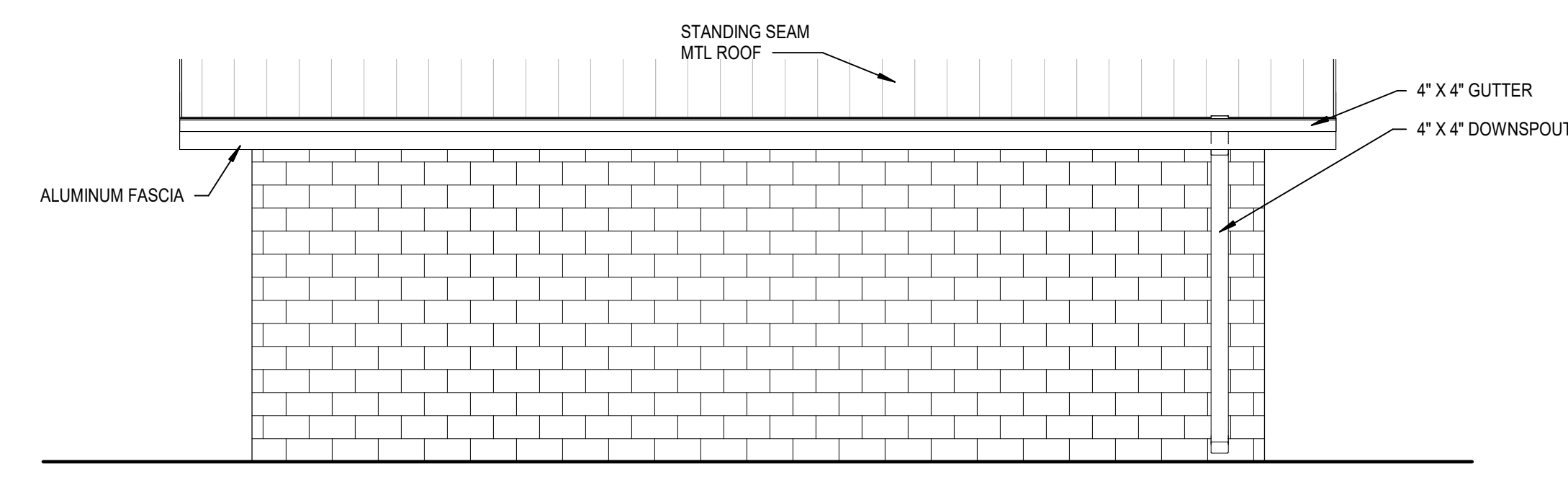
3C WALL SECTION  
SCALE: 3/8" = 1'-0"



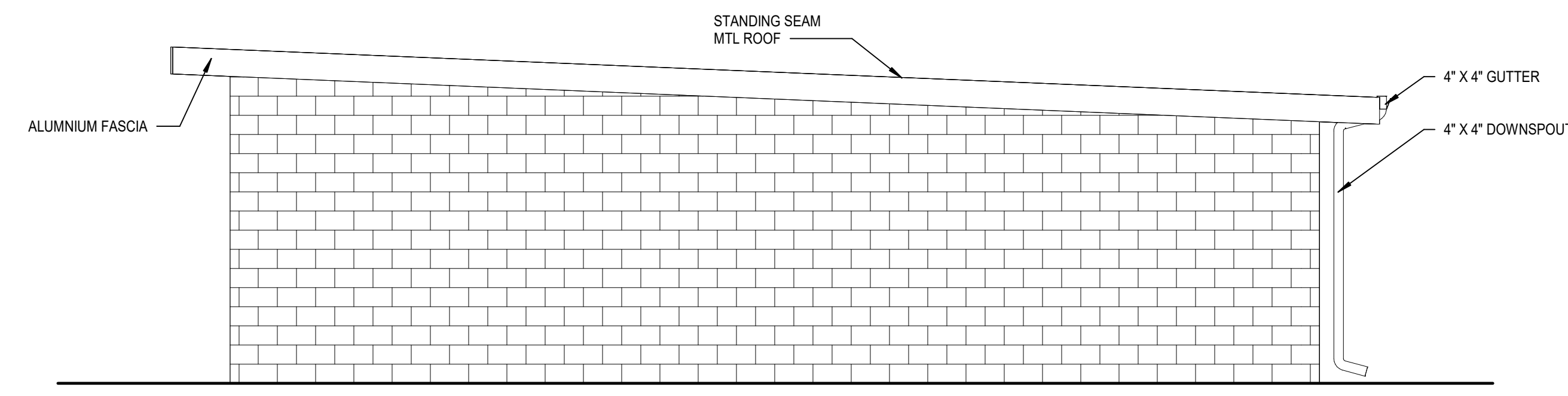
3D WALL SECTION  
SCALE: 3/8" = 1'-0"



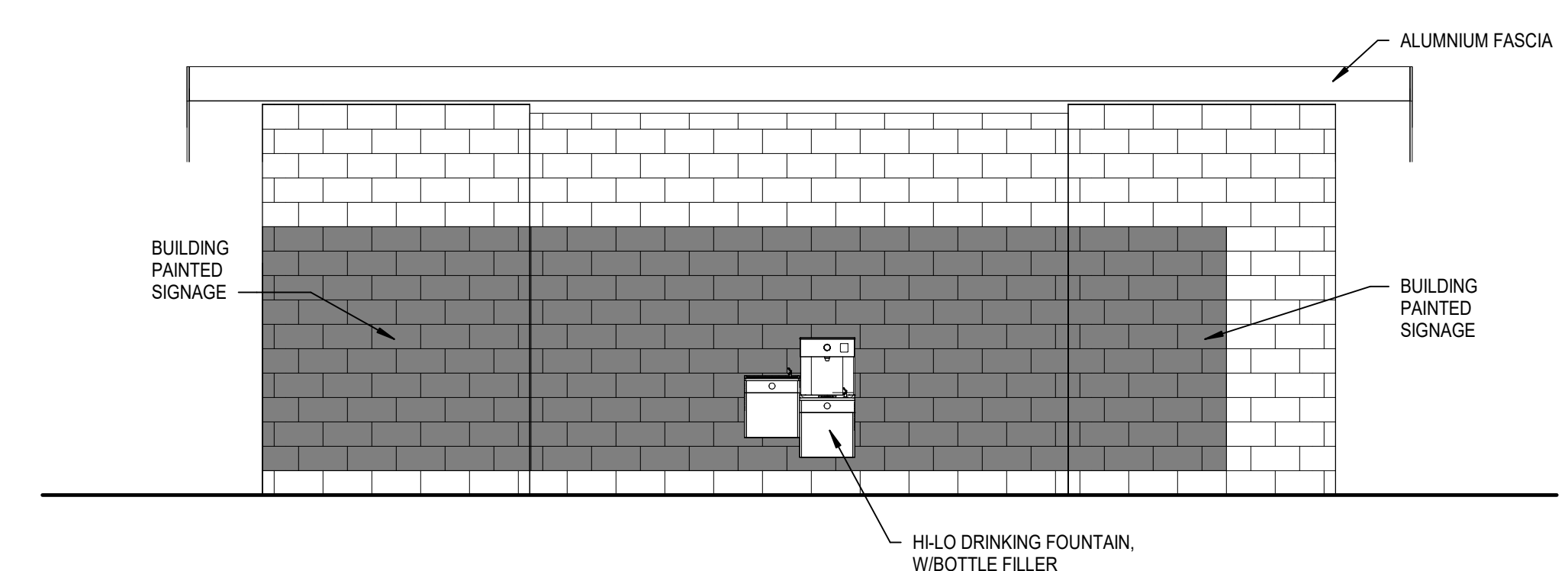
3E CEILING PLAN  
SCALE: 1/8" = 1'-0"



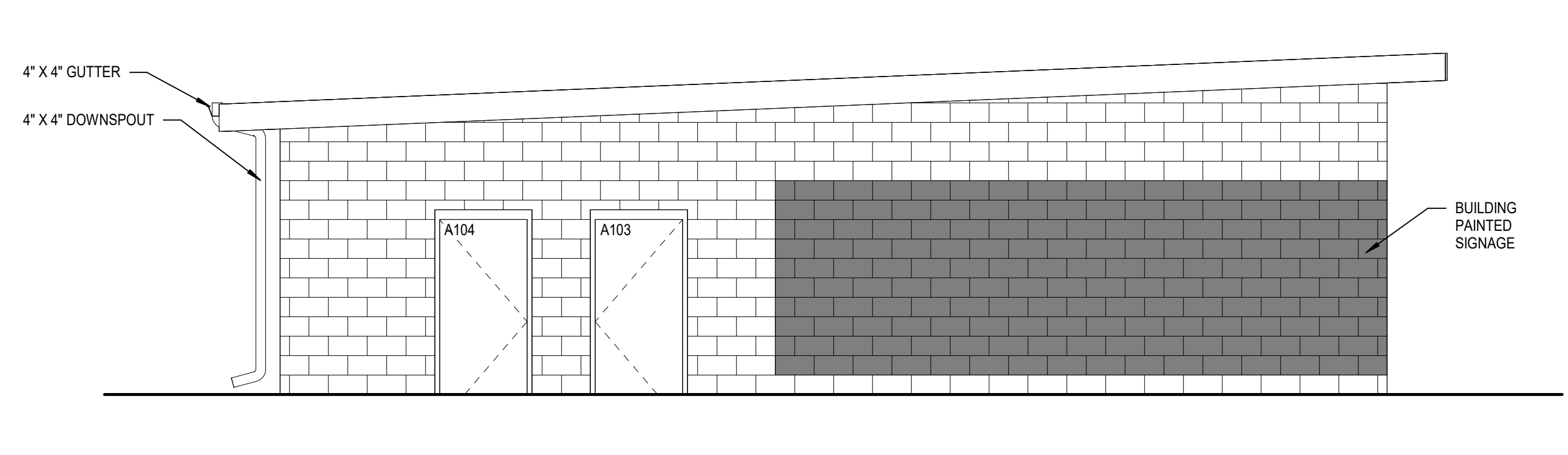
4A EXT. ELEVATION  
SCALE: 1/4" = 1'-0"



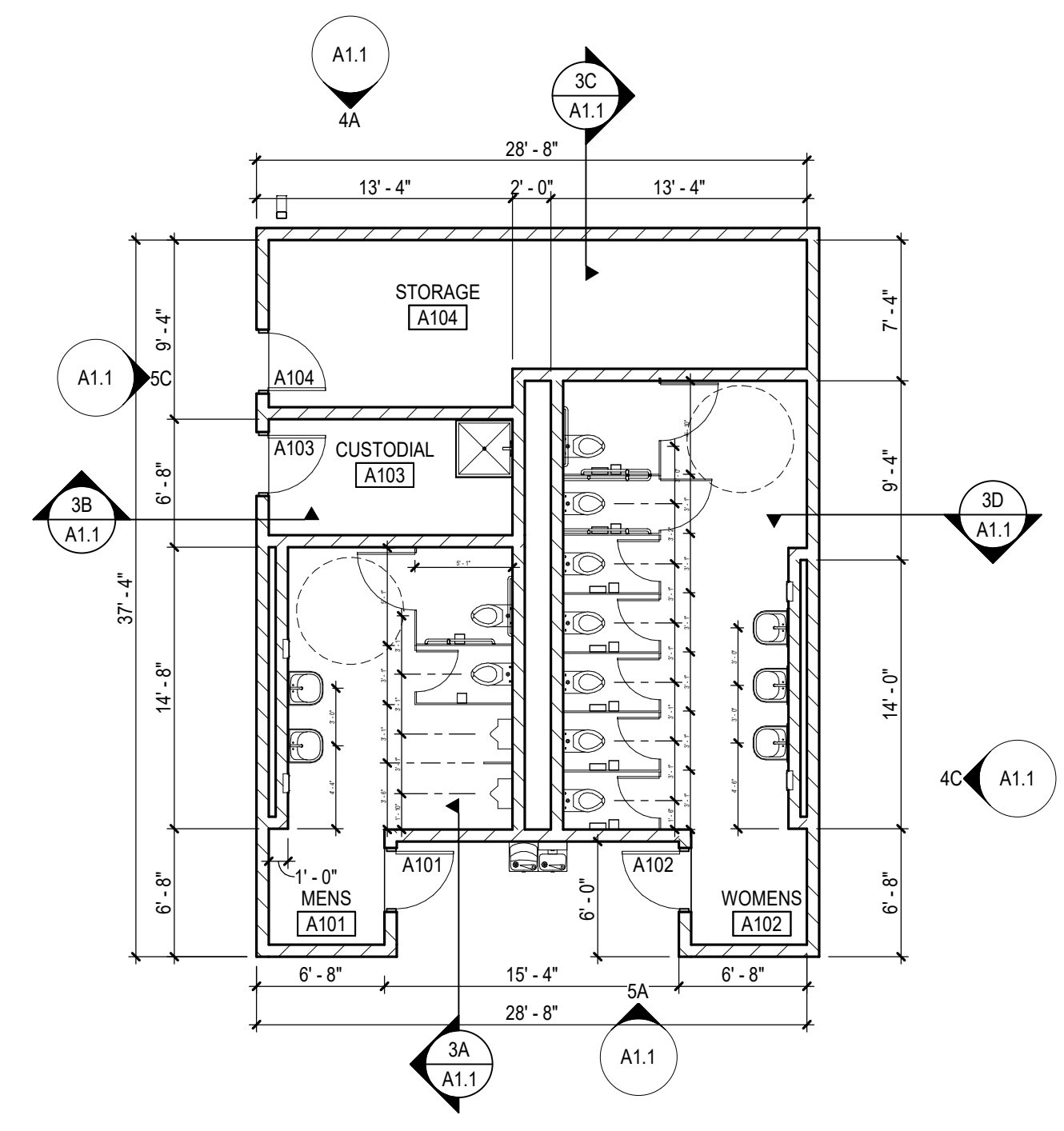
4C EXT. ELEVATION  
SCALE: 1/4" = 1'-0"



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



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



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

MAULDIN HS STADIUM EXPANSION & CAROLINA HS RESTROOM BUILDING  
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REVISIONS

17-24103-00  
MAULDIN HS - RESTROOM BUILDING

A1.1

Autodesk Docs/17-24103-00 Mauldin HS Stadium Seating, Restroom Bldg/17-24103-00 Mauldin HS Stadium Seating, Restroom Bldg\_2024\_07\_19\_10:24:24 AM



1  
2  
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5

A

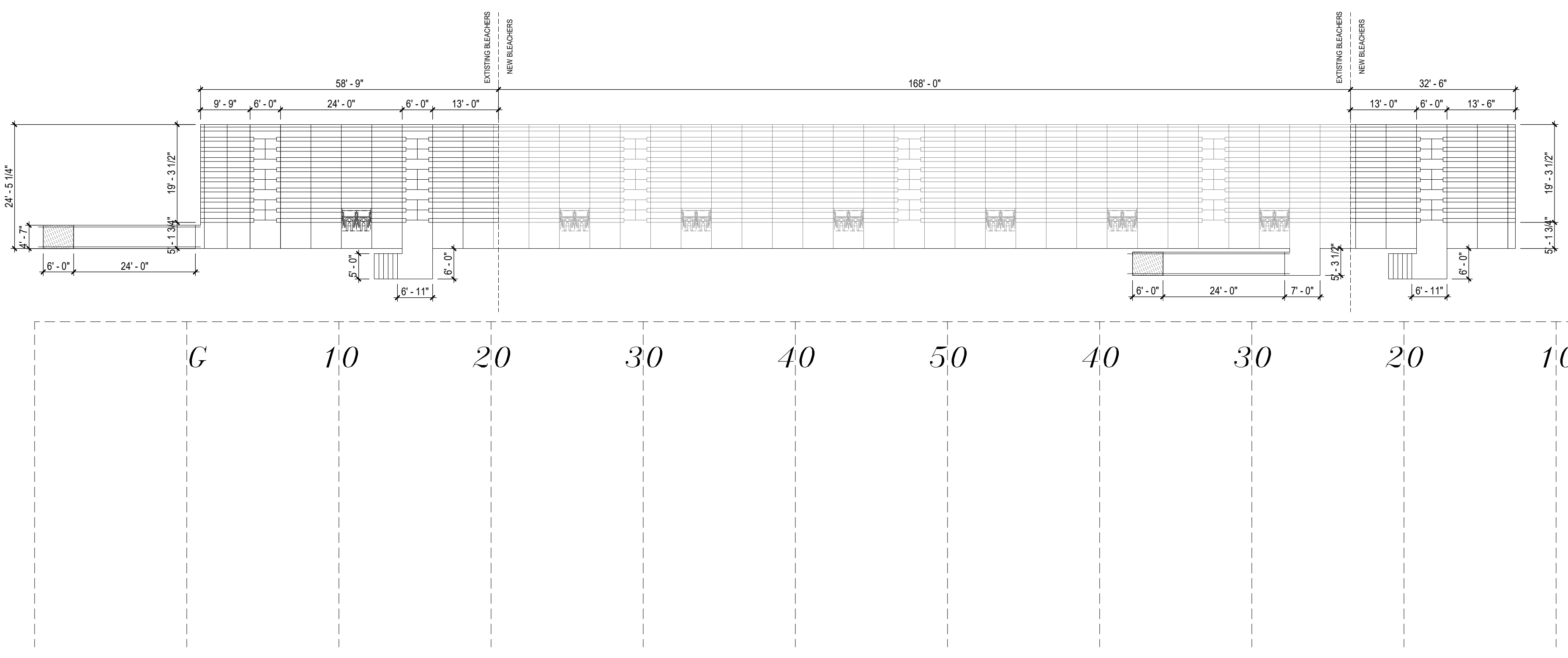
B

C

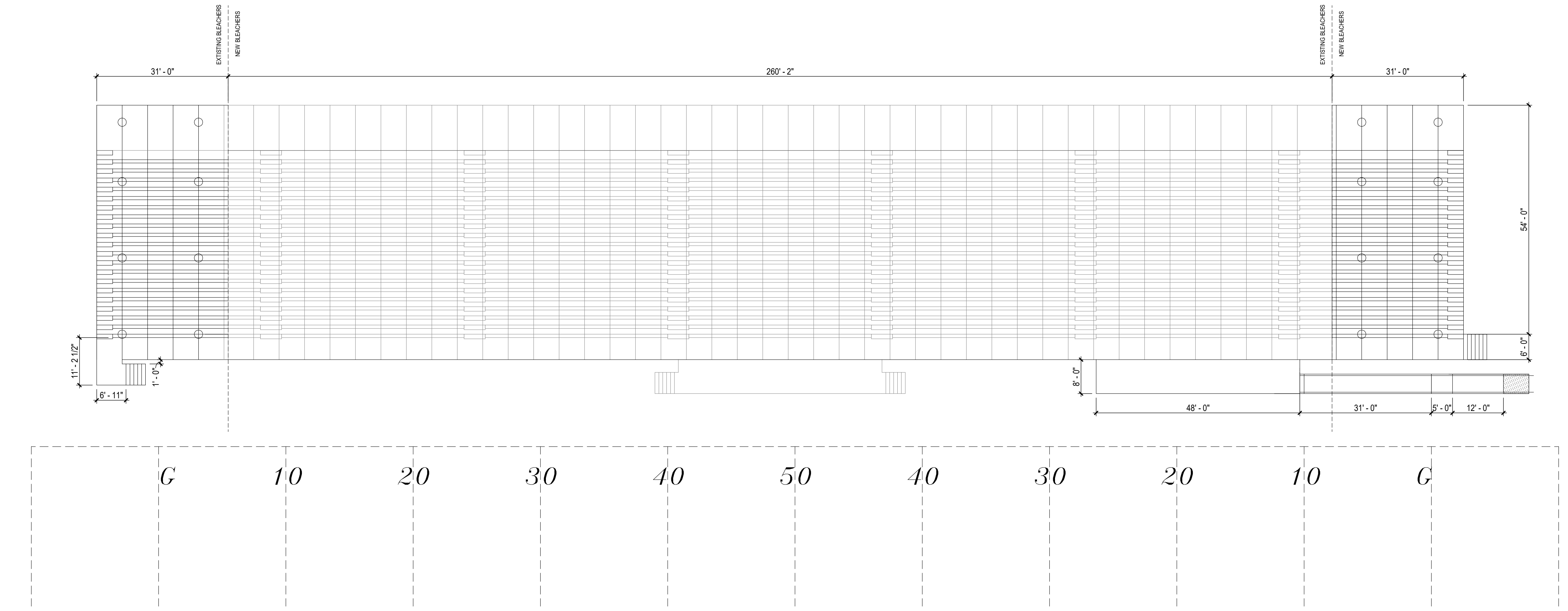
D

E

F



2 MHS - Bleachers Away Side  
SCALE: 1/16" = 1'-0"



1 MHS - Bleachers Home Side  
SCALE: 1/16" = 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) TYPES. SEE SHEET AXX FOR TYPES. ALL INTERIOR PARTITIONS ARE TYPE XXX UNLESS NOTED OTHERWISE.
- 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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- SCRIBE GYPSUM WALL BOARD OF WALLS AND PARTITIONS TO IRREGULARITIES OF DECK ABOVE. SEAL TIGHTLY AROUND ALL PENETRATIONS.
- PROVIDE SEISMIC BRACING FOR SUSPENDED CEILINGS OR AS SHOWN ON THE DRAWINGS.

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, CEILING, 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)

MAULDIN HS STADIUM EXPANSION & CAROLINA HS RESTROOM BUILDING  
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17-24103-00  
MAULDIN HS - BLEACHER ADDITIONS

A1.3

Autodesk Docs/17-24103-00 Mauldin HS Stadium Seating Restroom Blg/17-24103-00 Mauldin HS Stadium Seating Restroom  
Blg\_A1.3\_2024.11.19 PM  
17-24103-00-14-2024





















ID	Task Name	Duration	Start	Finish	Predecessors	Resource Names	3rd Quarter			4th Quarter			1st Quarter			2nd Quarter			3rd Quarter				
							Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug		
1	<b>Maudlin HS - Bleacher Expansion, New Restroom Building &amp; Existing Building Renovations</b> <b>Carolina HS - New Restroom Bldg., ADA Ramp at Existing Ticketbooth</b>																						
2																							
3	<b>SD/CMAR Selection</b>	<b>100 days</b>	<b>Mon 7/1/24</b>	<b>Fri 11/15/24</b>																			
4	Develop Design Narrative	14 days	Mon 7/1/24	Thu 7/18/24																			
5	Design Narrative and Documents for CM General Conditions	1 day	Fri 7/19/24	Fri 7/19/24																			
6	Review, Pricing, CM Selection	51 days	Mon 7/22/24	Mon 9/30/24	5																		
7	CM NTP	1 day	Tue 10/1/24	Tue 10/1/24	6																		
8	<b>Bleacher Bid Period &amp; Approval</b>	<b>30 days</b>	<b>Mon 10/7/24</b>	<b>Fri 11/15/24</b>																			
9	<b>Design Development</b>	<b>30 days</b>	<b>Mon 7/22/24</b>	<b>Fri 8/30/24</b>																			
10	Development	19 days	Mon 7/22/24	Thu 8/15/24	5																		
11	Complete DD Package	1 day	Fri 8/16/24	Fri 8/16/24	10																		
12	Owner Review	10 days	Mon 8/19/24	Fri 8/30/24	11																		
13	<b>Construction Documents</b>	<b>36 days</b>	<b>Mon 9/2/24</b>	<b>Mon 10/21/24</b>																			
14	Development	25 days	Mon 9/2/24	Fri 10/4/24	12																		
15	Complete CD Package	1 day	Mon 10/7/24	Mon 10/7/24	14																		
16	Final Owner and CMAR Review	10 days	Tue 10/8/24	Mon 10/21/24	15																		
17	<b>SCOSF Plan Review</b>	<b>46 days</b>	<b>Mon 8/19/24</b>	<b>Mon 10/21/24</b>																			
18	Table Top Review - DD Package This Week	5 days	Mon 8/19/24	Fri 8/23/24	11																		
19	Construction Document Review	10 days	Tue 10/8/24	Mon 10/21/24	15																		
20	<b>Site Plan Reviews</b>	<b>30 days</b>	<b>Mon 8/26/24</b>	<b>Fri 10/4/24</b>																			
21	<b>Town and County</b>	<b>30 days</b>	<b>Mon 8/26/24</b>	<b>Fri 10/4/24</b>																			
22	First Submission	10 days	Mon 8/26/24	Fri 9/6/24	18																		
23	Second Submission	10 days	Mon 9/9/24	Fri 9/20/24	22																		
24	Approval	10 days	Mon 9/23/24	Fri 10/4/24	23																		
25	<b>Sanitary Sewer &amp; Water</b>	<b>30 days</b>	<b>Mon 8/26/24</b>	<b>Fri 10/4/24</b>																			
26	First Submission	10 days	Mon 8/26/24	Fri 9/6/24	18																		
27	Second Submission	10 days	Mon 9/9/24	Fri 9/20/24	26																		
28	Approval	10 days	Mon 9/23/24	Fri 10/4/24	27																		
29	<b>Issue for Construction Documents</b>	<b>119 days</b>	<b>Tue 10/22/24</b>	<b>Fri 4/4/25</b>																			
30	Develop/Submit	5 days	Tue 10/22/24	Mon 10/28/24	216																		
31	Advertise for Bids	5 days	Sun 11/3/24	Thu 11/7/24																			
32	Bid Period	30 days	Fri 11/8/24	Thu 12/19/24	31																		
33	Bid Negotiations	10 days	Mon 12/30/24	Fri 1/10/25																			
34	Final GMP	60 days	Mon 1/13/25	Fri 4/4/25	33																		
35	<b>Southern Bleacher Company - Critical Path</b>	<b>246 days</b>	<b>Fri 7/19/24</b>	<b>Fri 6/27/25</b>																			
36	Contract Executed w/ DLR Group	1 day	Fri 7/19/24	Fri 7/19/24																			
37	Develop Documents	30 days	Mon 7/22/24	Fri 8/30/24	36																		
38	Shop Drawings Complete	5 wks	Mon 9/2/24	Fri 10/4/24	37																		
39	<b>Bleacher Order Placed</b>	<b>5 days</b>	<b>Mon 11/18/24</b>	<b>Fri 11/22/24</b>	8																		
40	Bleachers Fabrication & Delivery (180 calendar days)	130 days	Mon 11/25/24	Fri 5/23/25	39																		
41	Install	5 wks	Mon 5/26/25	Fri 6/27/25																			
42	<b>Construction</b>	<b>1 day</b>	<b>Mon 4/7/25</b>	<b>Mon 4/7/25</b>																			
43	NTP	1 day	Mon 4/7/25	Mon 4/7/25	34																		
44	Completion																						
45																							
46																							
47	<b>Key Dates</b>																						
48	Stadiums Not In Use - 2024-2025 Winter	76 days	Mon 11/4/24	Mon 2/17/25																			
49	Stadiums Not In Use - 2025-2026 Summer	41 days	Mon 5/12/25	Mon 7/7/25																			

Project: Draft Schedule 7.15.24 Date: Wed 7/17/24	Task		Project Summary		Manual Task		Start-only		Deadline	
	Split		Inactive Task		Duration-only		Finish-only		Progress	
	Milestone		Inactive Milestone		Manual Summary Rollup		External Tasks		Manual Progress	
	Summary		Inactive Summary		Manual Summary		External Milestone			

ID	Task Name	Duration	Start	Finish	Predecessors	Resource Names	3rd Quarter			4th Quarter			1st Quarter			2nd Quarter			3rd Quarter		
							Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
50	Last Day of School	1 day	Fri 5/23/25	Fri 5/23/25																	
51	First Day of School Estimated	1 day	Fri 8/1/25	Fri 8/1/25																	
52																					
53	 Submit Add Services Proposal	1 day	Fri 7/19/24	Fri 7/19/24																	
54	<b>Maudlin HS</b>																				
55	Changes to New Restroom Building (Custodial/Storage																				
56	Addition of Southern Bleacher Design to Architectural Scope																				
57	Renovations to Concessions Bldg. (Concessions Window/LED lighting in existing building)																				
58	<b>Carolina HS</b>																				
59	ADA Ramp Review and Addition to Project																				
60																					



Project: Draft Schedule 7.15.24 Date: Wed 7/17/24	Task		Project Summary		Manual Task		Start-only		Deadline	
	Split		Inactive Task		Duration-only		Finish-only		Progress	
	Milestone		Inactive Milestone		Manual Summary Rollup		External Tasks		Manual Progress	
	Summary		Inactive Summary		Manual Summary		External Milestone	