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**ADDENDUM NUMBER 05**

January 9, 2025

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**PROJECT:** FORT PAYNE HIGH SCHOOL COMPETITION GYM AND CLASSROOM ADDITION  
**ARCHITECT:** GOODWYN MILLS CAWOOD, LLC  
**PROGRAM MANAGER:** SCOUT PROGRAM MANAGEMENT  
**OWNER:** FORT PAYNE CITY SCHOOLS

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**GENERAL:**

- A. The following revisions and/or additions to the Drawings and Project Manual are hereby made a part of same, and shall be incorporated in the Work of the Contract the same as if originally included in the Bid and Construction Documents.
- B. Bidders shall acknowledge receipt of this Addendum in writing, as provided on the Proposal Form.
- C. When a revision and/or addition is called for to the Drawings or Project Manual, they shall be fully coordinated with and carried through all applicable Drawings and portions of the Project Manual, including in part, all related Civil, Landscaping, Architectural, Structural, Plumbing, Mechanical, Electrical, and other Documents.

**CLARIFICATIONS & PROJECT INFORMATION:**

- A. The bid date is CHANGED to Tuesday to January 28, 2025 at the Board of Education Bldg. Conference Room 45<sup>th</sup> Street, Fort Payne AL. Bids shall be received until 2:00 p.m. CST at which point they will be publicly opened.
- B. All proposed bidders shall hold an Alabama Contractors License

**DRAWINGS (replace the following sheets)**

- Sheet C-906
- Sheet G1.01
- Sheet G1.20
- Sheet A1.01
- Sheet A1.02
- Sheet A3.01
- Sheet A3.02
- Sheet A5.11
- Sheet A5.12
- Sheet A5.13
- Sheet A5.14

**SPECIFICATIONS**

- 01 1100A Attachment A to Proposal Form
- 00 2100 Allowances: **ADD-\$65,000 Allowance for Irrigation**

**RFI LOG**

See attached RFI log. Unanswered items will be addressed in a future addendum.

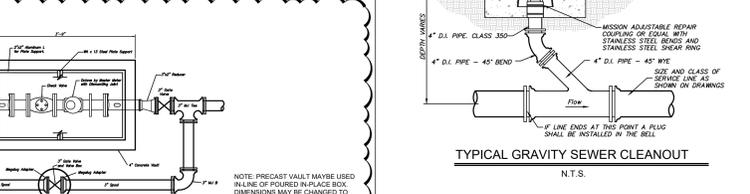
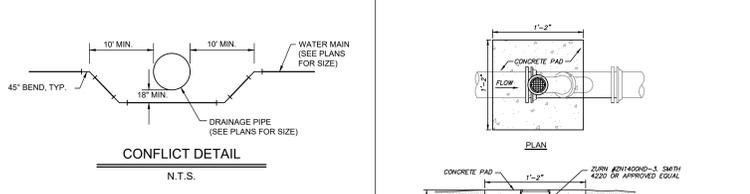
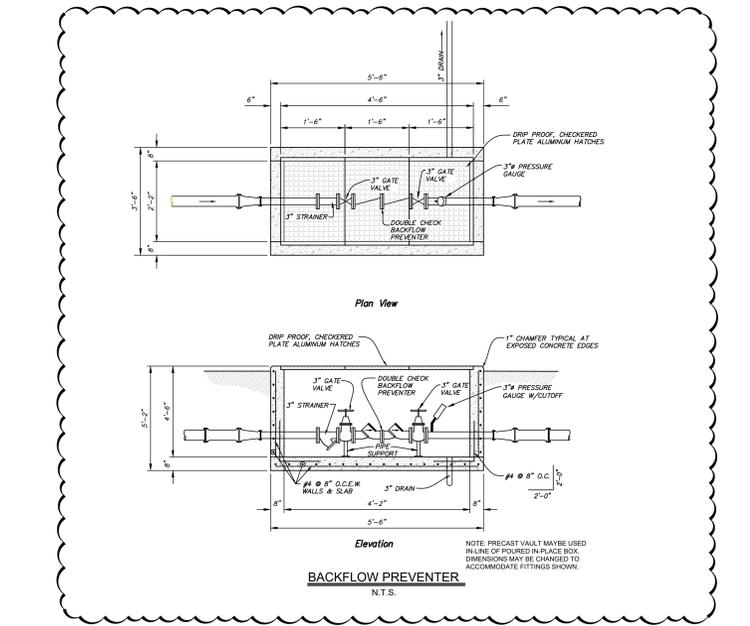
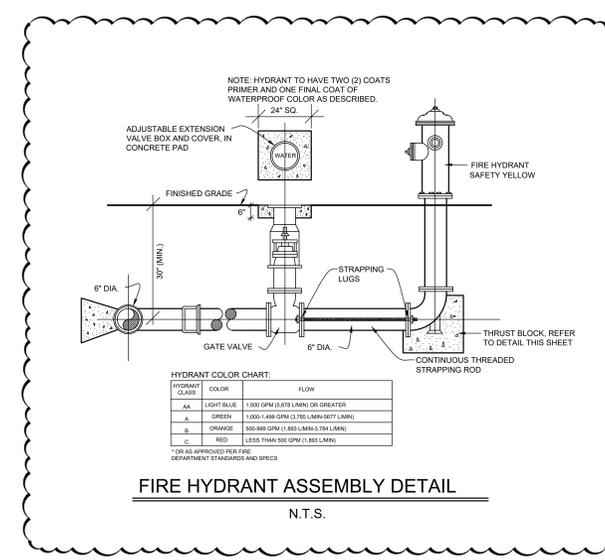
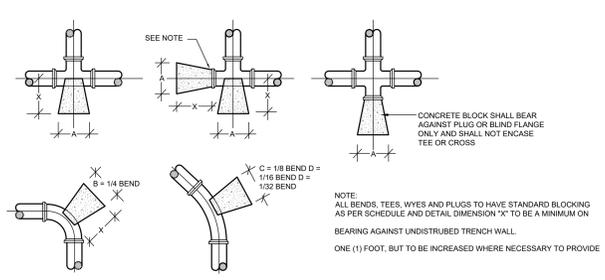
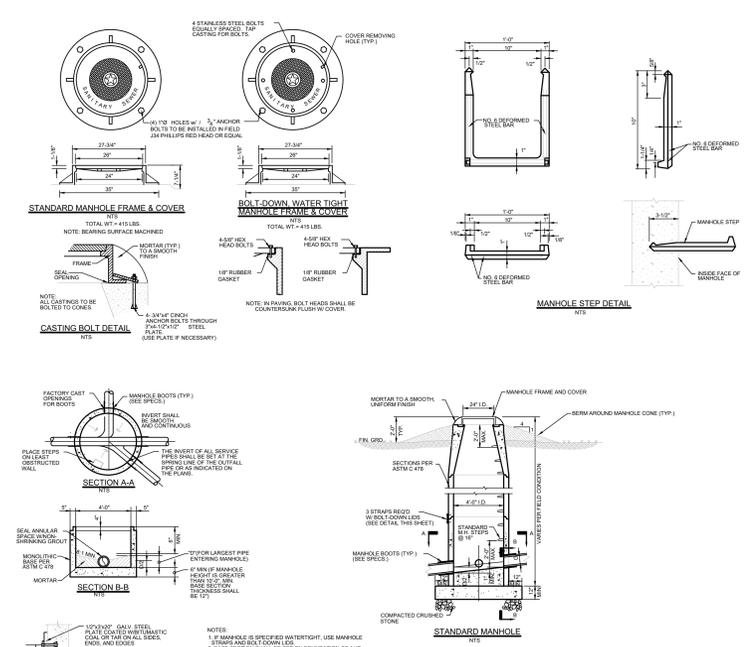
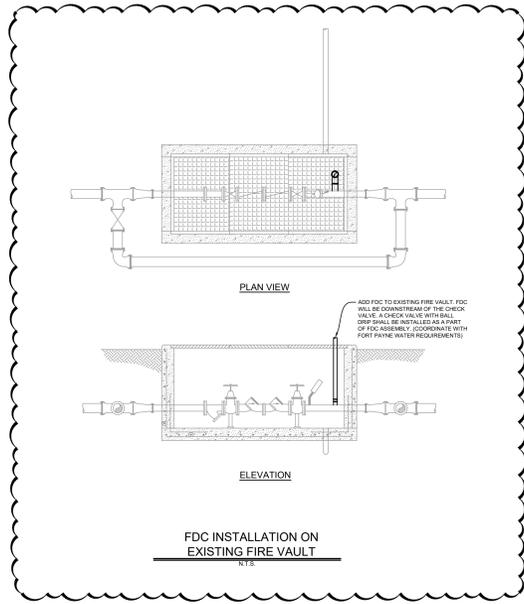
**ATTACHEMENTS**

- A. Pre-Bid Meeting Sign-In Sheet
- B. Fire Resistance Ratings – ANSI/UL 263 (Design No. D902)
- C. Fire Resistance Ratings – ANSI/UL 263 (Design No. J957)
- D. DCM Form K-9 (Owner & Architect Agreement)

**APPROVED SUBSTITUTIONS**

- A. Note: *All other submitted Substitution Requests were not approved.*

**END OF ADDENDUM NO. 5**



117 Jefferson Street North  
Huntsville, AL 35801  
T 256.539.3431  
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**ISSUE DATE**

DOM FINAL SUBMITTAL 11.14.24

ADDENDUM #2 12.12.24

ADDENDUM #4 01.03.25

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**WATER AND SEWER DETAILS**

201.45th STREET N.E.  
FORT PAYNE, AL 35967

**CHUN240037**

**C-906**  
Sheet of

CHUN  
Professional Engineer  
No. 28074  
Alabama  
01-017-2025

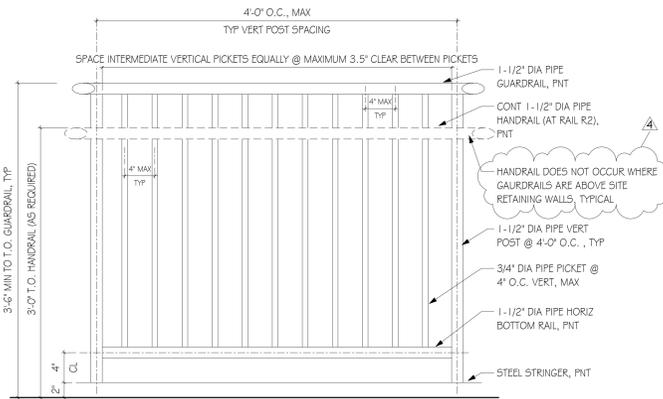


**RAILING GENERAL NOTES**

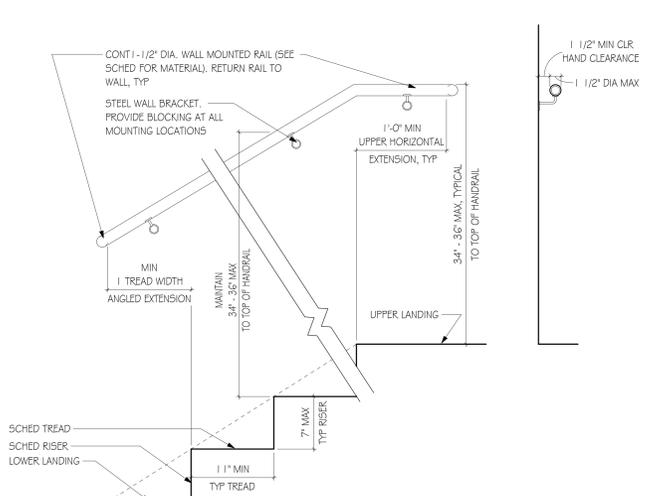
R.01. CODE COMPLIANCE: SEE GENERAL NOTES DIVISION 1 GENERAL REQUIREMENTS ITEM 1.09 FOR CODE COMPLIANCE.  
 R.02. MULTI-TRADE COORDINATION: SEE GENERAL NOTES DIVISION 1 GENERAL REQUIREMENTS ITEM 1.02 FOR MULTI-TRADE COORDINATION.  
 R.03. HANDRAIL DIMENSIONS: DIMENSIONS FOR HAND RAILINGS AS INDICATED IN CONTRACT DOCUMENTS. WIDTH BETWEEN HANDRAILS AT STAIRS AS INDICATED IN CONTRACT DOCUMENTS BUT SHALL NOT BE LESS THAN 44 INCHES CLEAR. WIDTH BETWEEN HANDRAILS AT RAMP AS INDICATED IN CONTRACT DOCUMENTS BUT SHALL NOT BE LESS THAN 36 INCHES. HEIGHT OF HANDRAILS ABOVE STAIR TREAD NOSING OR FINISH SURFACES OF RAMPS AS INDICATED IN CONTRACT DOCUMENTS BUT SHALL BE UNIFORM AND NOT LESS THAN 24 INCHES AND NOT MORE THAN 36 INCHES. DIAMETER OF HANDRAILS AS INDICATED IN CONTRACT DOCUMENTS BUT SHALL NOT HAVE AN OUTSIDE DIAMETER OF LESS THAN 1-1/4 INCHES AND NOT GREATER THAN 2 INCHES. NON-CIRCULAR HANDRAILS AS INDICATED IN CONTRACT DOCUMENTS BUT SHALL HAVE A PERIMETER DIMENSION OF AT LEAST 4 INCHES AND NOT GREATER THAN 6-1/4 INCHES WITH A MAXIMUM CROSS-SECTION DIMENSION OF 2-1/4 INCHES. EDGES SHALL HAVE A MINIMUM RADIUS OF 0.01 INCHES. HANDRAIL EXTENSIONS AS INDICATED IN CONTRACT DOCUMENTS, BUT WHERE HANDRAILS ARE NOT CONTINUOUS BETWEEN FLIGHTS, THE HANDRAILS SHALL EXTEND HORIZONTALLY AT LEAST 12 INCHES BEYOND THE TOP RISER AND CONTINUE TO SLOPE FOR THE DEPTH OF ONE TREAD BEYOND THE BOTTOM RISER. AT RAMPS WHERE HANDRAILS ARE NOT CONTINUOUS BETWEEN RUNS, THE HANDRAILS SHALL EXTEND HORIZONTALLY ABOVE THE LANDING 12 INCHES MINIMUM BEYOND THE TOP AND BOTTOM OF RAMP RUNS. THE EXTENSIONS OF HANDRAILS SHALL BE IN THE SAME DIRECTION OF THE STAIR FLIGHT AS STAIRWAYS AND RAMP RUNS AT RAMPS. CLEAR SPACE BETWEEN HANDRAIL AND WALL OR OTHER SURFACE AS INDICATED IN CONTRACT DOCUMENTS BUT SHALL BE A MINIMUM OF 1-1/2 INCHES.  
 R.04. GUARDRAIL DIMENSIONS: DIMENSIONS FOR GUARDRAILS AS INDICATED IN CONTRACT DOCUMENTS. HEIGHT OF GUARDRAILS ABOVE ADJACENT WALKING SURFACES, ADJACENT FIXED SEATING, OR THE LINE CONNECTING THE LEADING EDGE OF TREADS AS INDICATED IN CONTRACT DOCUMENTS BUT SHALL NOT BE LESS THAN 42 INCHES. OPENINGS IN GUARDRAILS AS INDICATED IN CONTRACT DOCUMENTS BUT SHALL NOT ALLOW THE PASSAGE OF A SPHERE 4 INCHES IN DIAMETER FROM THE WALKING SURFACE TO THE REQUIRED GUARD HEIGHT (FOR ROOF ACCESS SHALL PREVENT THE PASSAGE OF A SPHERE 21 INCHES IN DIAMETER). FROM A HEIGHT OF 36 INCHES TO 42 INCHES GUARDS SHALL NOT HAVE OPENINGS WHICH ALLOW PASSAGE OF A SPHERE 4-3/8 INCHES IN DIAMETER. THE TRIANGULAR OPENINGS AT THE OPEN SIDES OF A STAIR FORMED BY THE RISER, TREAD, AND BOTTOM RAIL SHALL NOT ALLOW PASSAGE OF A SPHERE 6 INCHES IN DIAMETER.

**RAILING ABBREVIATIONS**

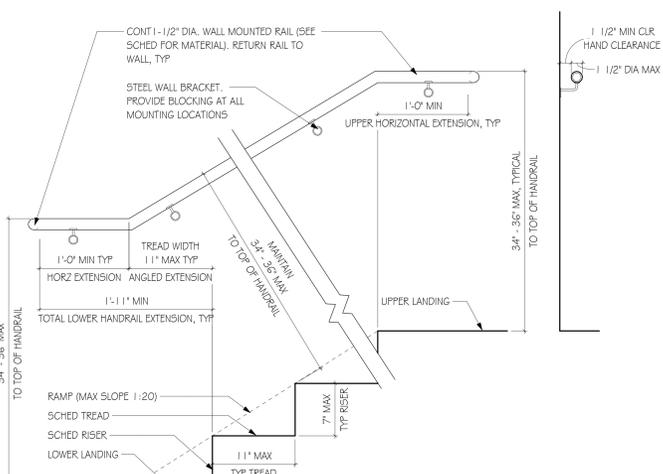
- WM - WALL MOUNTED
- FMW - FLOOR MOUNTED/WELDED TO EMBED
- FMC - FLOOR (TREAD/LANDING) MOUNTED/CORED
- PF - PREFINISHED
- PNT - PAINTED FINISH
- SST - STAINLESS STEEL
- STL - STEEL
- G - GLASS RAILING INFILL
- HR-1 - HANDRAIL
- HR-2 - DOUBLE SIDED HANDRAIL
- GR - GUARDRAIL
- SMW - STRINGER MOUNTED/WELDED
- ALUM - ALUMINUM
- CBL - CABLE RAILING INFILL
- WD - WOOD
- STN - STAINED FINISH
- SL - SEALED FINISH
- WI - WROUGHT IRON
- S5M - SIDE STRINGER MOUNTED



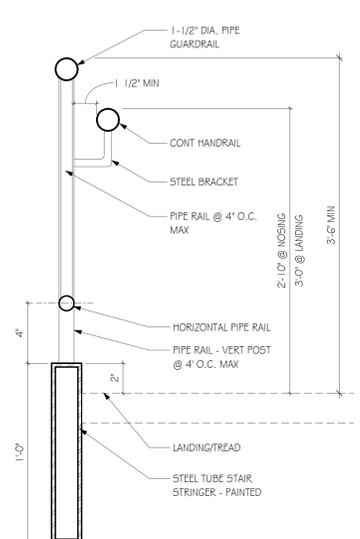
**J2 TYPICAL GUARDRAIL ELEVATION**  
SCALE: 1 1/2" = 1'-0"



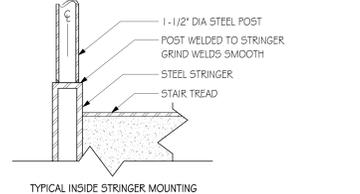
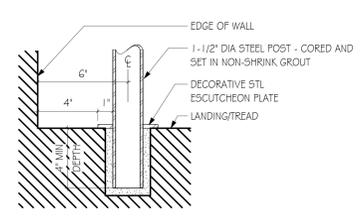
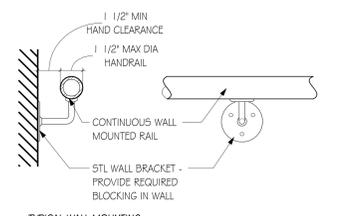
**E2 TYPICAL WALL MOUNTED HANDRAIL - SLOPED EXTENSION**  
SCALE: 1 1/2" = 1'-0"



**A2 TYPICAL WALL MOUNTED HANDRAIL - HORIZONTAL EXTENSION**  
SCALE: 1 1/2" = 1'-0"

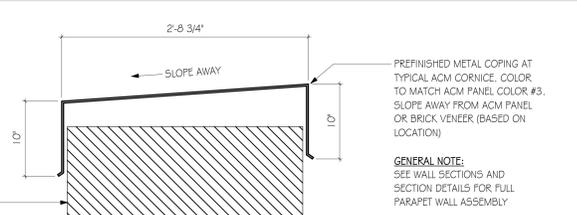


**F5 TYPICAL RAIL MOUNT - STRINGER**  
SCALE: 3" = 1'-0"

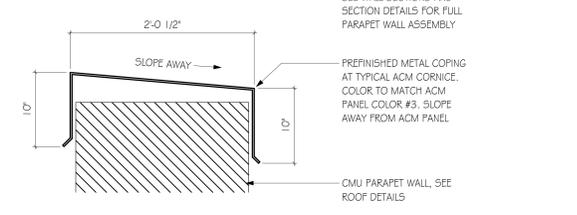


**A5 STRINGER, RAIL, CORE**  
SCALE: 3" = 1'-0"

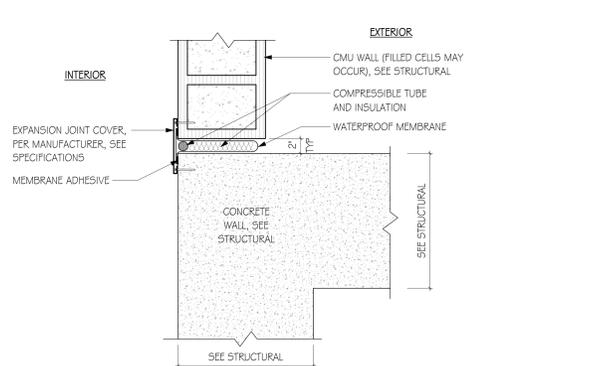
**K8 BRICK VENEER TO METAL SIDING**  
SCALE: 1 1/2" = 1'-0"



**G8 TYPICAL METAL COPING**  
SCALE: 1 1/2" = 1'-0"

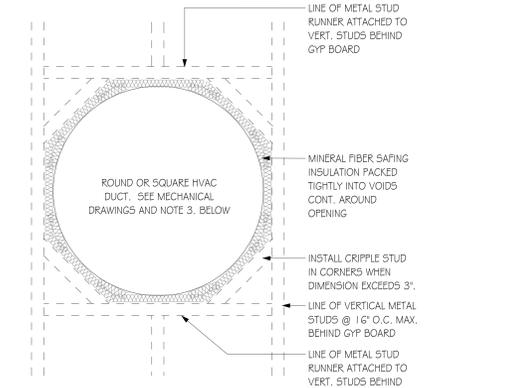


**D8 METAL COPING AT MAIN ENTRY**  
SCALE: 1 1/2" = 1'-0"

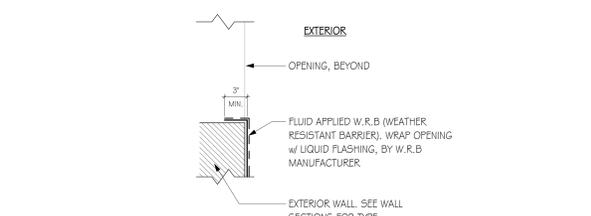


**A8 WALL EXPANSION JOINT - CMU TO CONCRETE**  
SCALE: 1 1/2" = 1'-0"

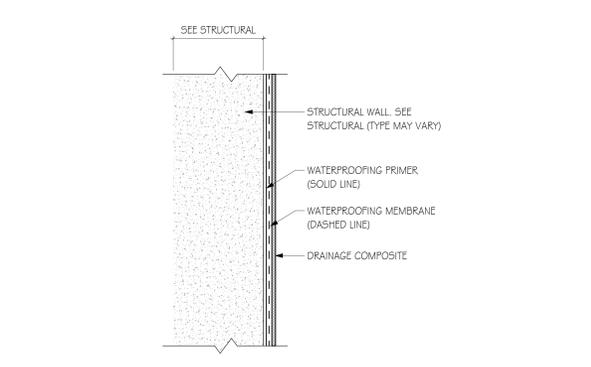
**K12 DETAIL - DUCT PENETRATIONS**  
SCALE: 1 1/2" = 1'-0"



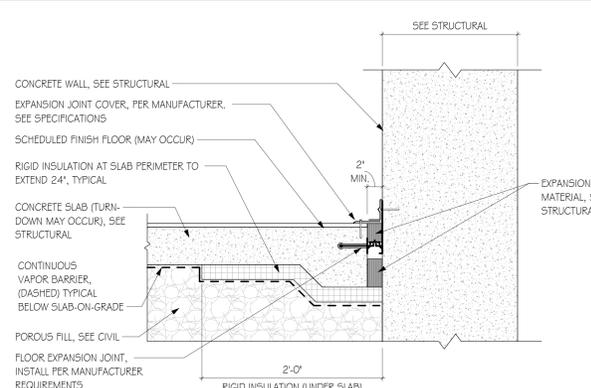
- NOTES:**
1. AT FIRE-RATED AND/OR SMOKE-RATED PARTITIONS, SEAL PENETRATION PER TESTED "THROUGH PENETRATION FIRESTOP SYSTEM". COMPLY WITH THE REQUIREMENTS OF IBC SECTION 712.3.3 AND WITH SPECIFICATION SECTION 07841.3 - PENETRATION FIRESTOPPING.
  2. AT NON-RATED PARTITIONS: CUT GYPSUM BOARD TIGHT TO DUCT (1/4" MAX. GAP AROUND PENETRATION) AND SEAL WITH FLEXIBLE SEALANT AS REQUIRED.
  3. IF DUCT IS TO BE INSULATED, DO NOT RUN DUCT INSULATION THROUGH THE WALL. FLARE DUCT INSULATION ONTO FACE OF WALL AROUND DUCT ON BOTH SIDES OF WALL AND SEAL DUCT INSULATION TO FACE OF WALL WITH INSULATION MASTIC



**G12 TYPICAL W.R.B. AT OPENING**  
SCALE: 1 1/2" = 1'-0"



**D12 TYPICAL VERTICAL WATERPROOFING**  
SCALE: 1 1/2" = 1'-0"



**A12 EXPANSION JOINT - FLOOR TO WALL**  
SCALE: 1 1/2" = 1'-0"

**GMC**

Goodwyn Mills Cawood, LLC  
 117 Jefferson Street North  
 Huntsville, AL 35801  
 T 256.539.3431  
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ISSUE	DATE
4	1/9/2025
3	1/9/2025
2	1/9/2025
1	1/9/2025

DCM # 20240548  
 GMC AHUNG20009

BRAWN BY: Auditor  
 CHECKED BY: Checker

STATE OF ALABAMA  
 REGISTERED ARCHITECT

Jay W Parkey  
 9063  
 Owens Cross Roads,  
 Alabama

1/9/2025

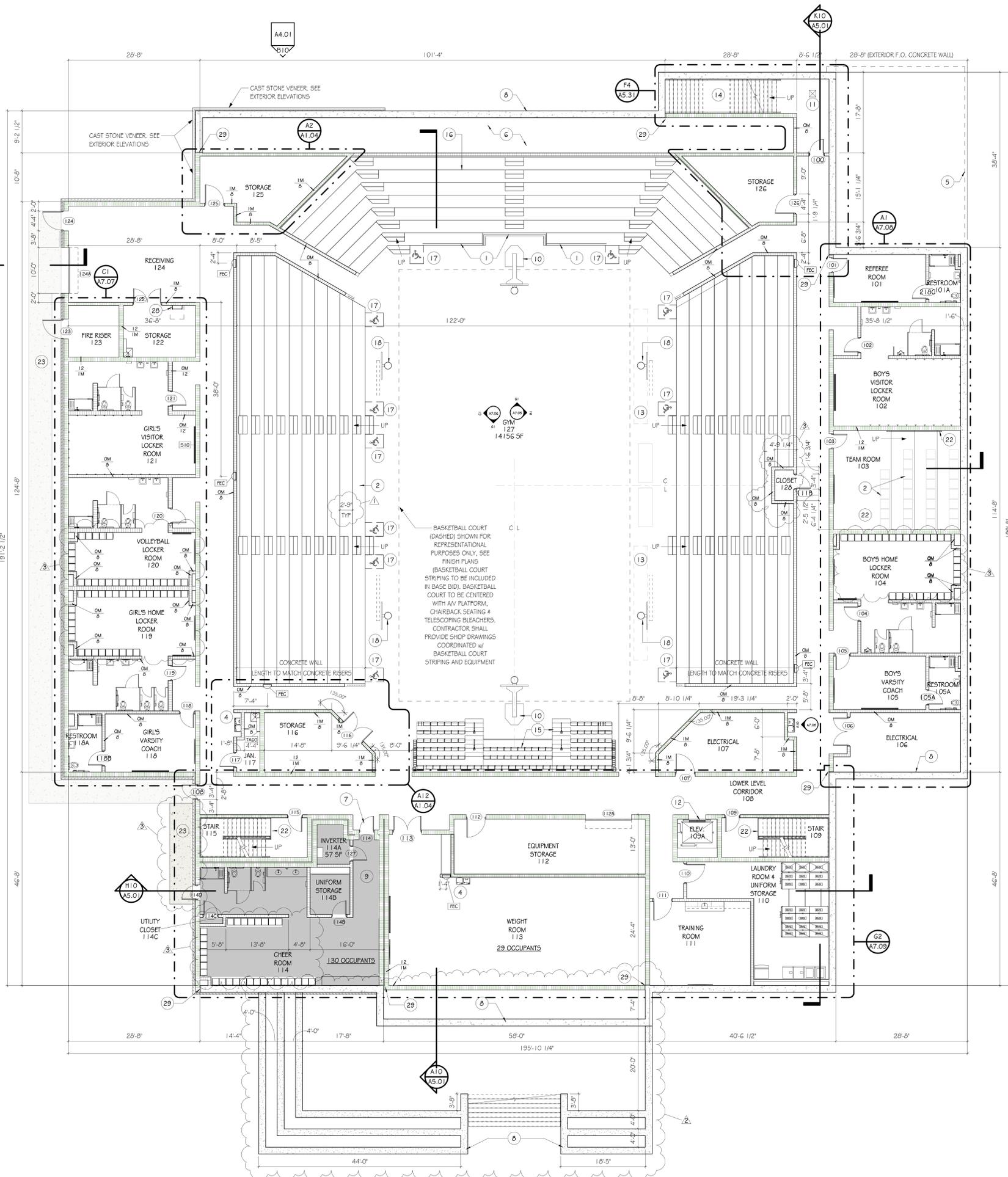
**TYPICAL CONSTRUCTION TYPES**

**FORT PAYNE COMPETITION GYM AND CLASSROOM ADDITION**

20145TH STREET NE,  
 FORT PAYNE, AL 35967

**G1.20**

1/9/2025 12:45:00 AM  
 TEMPLATE VERSION: 2021



**GENERAL NOTES - FLOOR PLAN**

1. RAILING CLEARANCES SHALL NOT EXCEED 4" CLEAR, TYPICAL WHERE RAILINGS TERMINATE AT WALLS, STAIRS OR ADJACENT RAILINGS.
2. REFER TO UL D992 REQUIREMENTS FOR COMPOSITE STEEL FLOOR AND ROOF ASSEMBLIES. SEE STRUCTURAL.
3. REFER TO UL J957 REQUIREMENTS FOR HOLLOWCORE ASSEMBLIES. SEE STRUCTURAL.

**KEY NOTES - FLOOR PLAN**

- 1 42" CABLE GUARDRAIL, SEE DETAILS
- 2 PRIORITY SEATING, SEE SPECIFICATIONS & SEATING PLAN
- 3 GLASS DISPLAY CASE, SEE SPECIFICATIONS
- 4 DRINKING FOUNTAIN w/ BOTTLE FILLER, COORDINATE w/ PLUMBING FOR WATER AND ELECTRICAL FOR POWER.
- 5 LOCATION OF EXTERIOR WALL ABOVE (DASHED)
- 6 4 x 4 FIRE RETARDANT PLYWOOD
- 7 TORNADO RESISTANT DOOR & FRAME, SEE SCHEDULE
- 8 CONCRETE RETAINING WALL, SEE STRUCTURAL
- 9 DESIGNATED STORM SHELTER (HATCHED REGION)
- 10 ROLLING BASKETBALL GOAL, O.F.O. (OWNER FURNISHED OWNER INSTALLED), SEE SPECIFICATIONS
- 11 CATCH BASIN, SEE CIVIL
- 12 MACHINE ROOMLESS ELEVATOR, SEE BUILDING SECTIONS AND/OR SPEC'S
- 13 TEAM SEATING AREA
- 14 EXTERIOR STAIR, SEE CIVIL
- 15 TELESCOPING BLEACHERS, SEE SEATING PLAN
- 16 STANDARD CHAIRBACK SEATING, SEE SEATING PLAN & SPECIFICATIONS
- 17 ADA DESIGNATED AISLE SEAT
- 18 RETRACTABLE CEILING MOUNTED BASKETBALL GOAL, O.F.O. (OWNER FURNISHED CONTRACTOR INSTALLED), SEE SPECIFICATIONS
- 19 50' x 94' REGULATION BASKETBALL COURT, SEE STRIPING PLAN
- 20 CAST-STONE WALL CAP w/ CONCRETE RETAINING WALL BELOW, SEE STRUCTURAL FOR RETAINING WALL DETAILS
- 21 CANOPY ABOVE, SEE EXTERIOR DETAILS
- 22 1 1/2" DIA. HANDRAIL, SHOP PRIMED & POWDER COATED
- 23 SIDEWALK, SEE CIVIL
- 24 AUDIO / VIDEO PLATFORM AT MAIN LEVEL, ALL COMPONENTS AND INSTALLATION BY SEATING MANUFACTURER
- 25 PREFINISHED METAL COPING, SEE SPECIFICATIONS
- 26 MECHANICAL ROOF TOP UNIT (SHOWN DASHED FOR REPRESENTATIONAL PURPOSES ONLY), SEE MECHANICAL DRAWINGS
- 27 SLOPED CONCRETE WALL (SEE STRUCTURAL) w/ RAILING ABOVE, RAILING COMPONENTS AND INSTALLATION BY RAILING MANUFACTURER.
- 28 ACCESS LADDER, SEE SPECIFICATIONS
- 29 EXPANSION JOINT, SEE STRUCTURAL
- 30 PREFABRICATED EXTRUDED ALUMINUM POST-SUPPORTED WALKWAY COVER, INSTALL PER MANUFACTURER REQUIREMENTS, SEE DETAILS
- 31 MECHANICAL CHASE
- 32 WALL MOUNTED SINK, COORDINATE w/ PLUMBING

**WALL LEGEND**

- INTERIOR GYPSUM ON METAL STUD
- 8" CMU
- 1-HOUR RATED 12" CMU
- CAST IN PLACE CONCRETE

**A6 FLOOR PLAN - LOWER LEVEL**  
SCALE: 1/8" = 1'-0"



Goodwyn Mills Cawood, LLC  
117 Jefferson Street North  
Huntsville, AL 35801  
T 256.539.3431  
GMCNETWORK.COM

ISSUE	DATE
1	DCM FINAL SUBMITTAL 11/24/24
2	ADDENDUM #1 12/6/24
3	ADDENDUM #2 12/2/24
4	ADDENDUM #4 12/2/25



**FORT PAYNE COMPETITION GYM AND CLASSROOM ADDITION**  
20145th STREET NE,  
FORT PAYNE, AL 35967

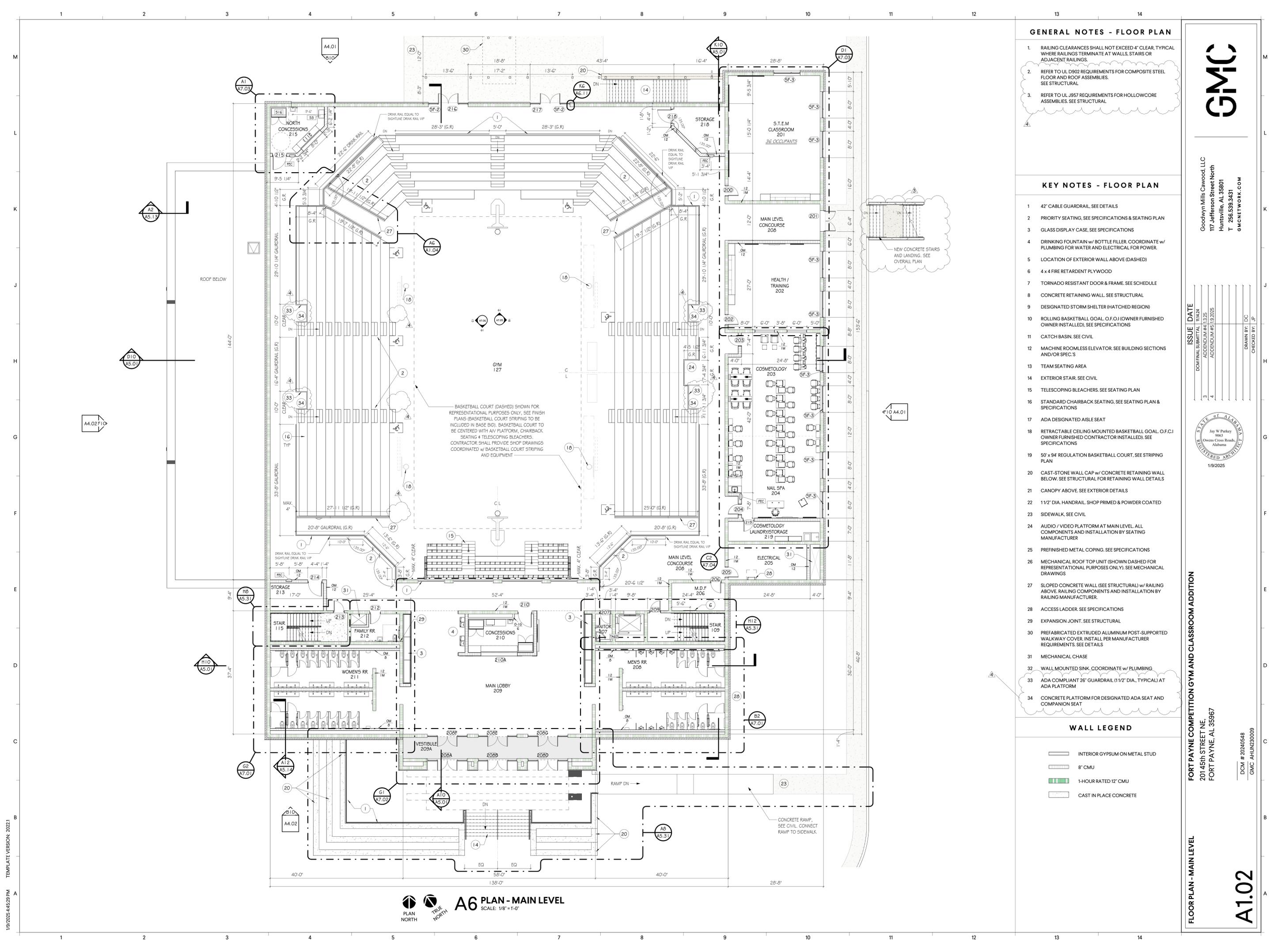
**FLOOR PLAN - LOWER LEVEL**

**A1.01**

DCM # 20240548  
GMC AHUN230009

BRAWN BY: DC  
CHECKED BY: JP

1/9/2025 1:56:38 AM TEMPLATE VERSION: 2021



**GENERAL NOTES - FLOOR PLAN**

1. RAILING CLEARANCES SHALL NOT EXCEED 4" CLEAR, TYPICAL WHERE RAILINGS TERMINATE AT WALLS, STAIRS OR ADJACENT RAILINGS.
2. REFER TO UL D992 REQUIREMENTS FOR COMPOSITE STEEL FLOOR AND ROOF ASSEMBLIES. SEE STRUCTURAL.
3. REFER TO UL J957 REQUIREMENTS FOR HOLLOWCORE ASSEMBLIES. SEE STRUCTURAL.

**KEY NOTES - FLOOR PLAN**

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- 31 MECHANICAL CHASE
- 32 WALL MOUNTED SINK. COORDINATE w/ PLUMBING
- 33 ADA COMPLIANT 26" GUARDRAIL (1 1/2" DIA., TYPICAL) AT ADA PLATFORM
- 34 CONCRETE PLATFORM FOR DESIGNATED ADA SEAT AND COMPANION SEAT

**WALL LEGEND**

- INTERIOR GYPSUM ON METAL STUD
- 8" CMU
- 1-HOUR RATED 12" CMU
- CAST IN PLACE CONCRETE



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ISSUE	DATE
DCM/FINAL SUBMITTAL	TR124
3	ADDENDUM #1 12/25
4	ADDENDUM #5 12/25



FLOOR PLAN - MAIN LEVEL

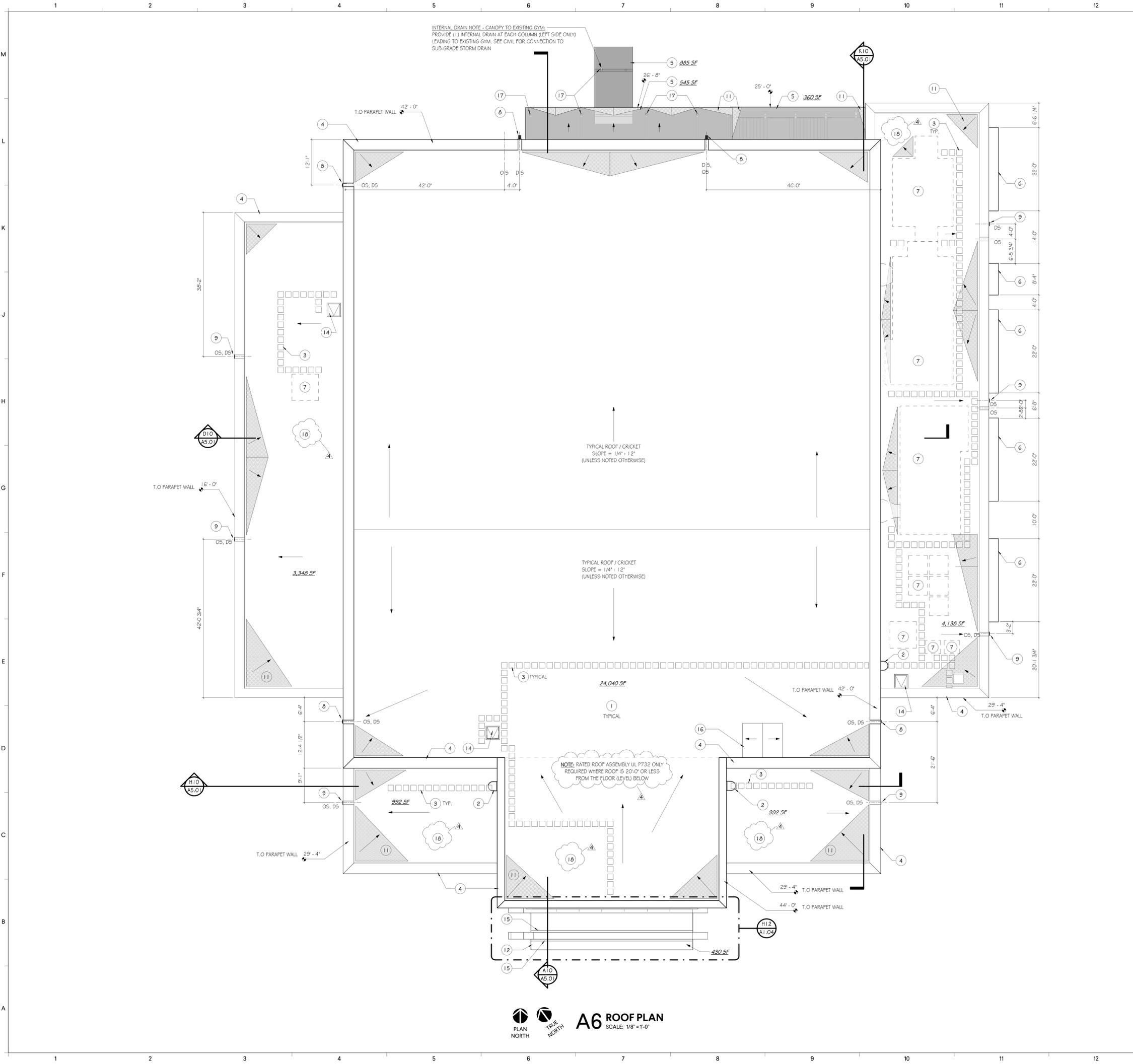
FORT PAYNE COMPETITION GYM AND CLASSROOM ADDITION  
 20145th STREET NE,  
 FORT PAYNE, AL 35967

DCM # 20240548  
 GMC AHUN230009

A1.02

**A6 PLAN - MAIN LEVEL**  
 SCALE: 1/8" = 1'-0"

1/9/2025 4:52:29 PM TEMPLATE VERSION: 2021



INTERNAL DRAIN NOTE - CANOPY TO EXISTING GYM.  
 PROVIDE (1) INTERNAL DRAIN AT EACH COLUMN (LEFT SIDE ONLY)  
 LEADING TO EXISTING GYM. SEE CIVIL FOR CONNECTION TO  
 SUB-GRADE STORM DRAIN

TYPICAL ROOF / CRICKET  
 SLOPE = 1/4" : 12"  
 (UNLESS NOTED OTHERWISE)

TYPICAL ROOF / CRICKET  
 SLOPE = 1/4" : 12"  
 (UNLESS NOTED OTHERWISE)

NOTE: RATED ROOF ASSEMBLY UL P732 ONLY  
 REQUIRED WHERE ROOF IS 20'-0" OR LESS  
 FROM THE FLOOR (LEVEL) BELOW

**A6 ROOF PLAN**  
 SCALE: 1/8" = 1'-0"

- ABBREVIATIONS - ROOF PLAN**
- OS = OVERFLOW SCUPPER
  - DS = DOWNSPOUT
  - QC = ON CENTER
  - SE = SQUARE FEET
- GENERAL NOTES - ROOF PLAN**
1. DOWNSPOUTS 6" (TYPICAL) UNLESS NOTED OTHERWISE
  2. PARAPET HEIGHTS ARE BASED ON LOWER LEVEL FLOOR ELEVATION (0'-0").
- KEY NOTES - ROOF PLAN**
1. TPO MEMBRANE ROOF ASSEMBLY. SEE WALL SECTIONS AND ROOF DETAILS
  2. ROOF ACCESS LADDER. SEE SPECIFICATIONS
  3. ROOF WALKING PADS. SEE SPECIFICATIONS
  4. PREFINISHED METAL COPING (CMU PARAPET WALL BELOW). SEE WALL SECTIONS & DETAILS
  5. PREFABRICATED METAL CANOPY. SEE SECTIONS
  6. PREFABRICATED METAL SUNSHADE. SEE SECTIONS
  7. ROOF TOP UNIT (MECHANICAL EQUIPMENT). LOCATIONS SHOWN ON ARCHITECTURAL ROOF PLAN ARE FOR REPRESENTATIONAL PURPOSES ONLY. SEE MECHANICAL DRAWINGS FOR APPROXIMATE LOCATIONS, CURBS AND ROOF PENETRATIONS
  8. 8" DOWNSPOUT (DS). PROVIDE CAST-IRON BOOT AT EACH DOWNSPOUT LOCATION. IN TURF PVC. DS IN CONG. COORDINATE W/ CIVIL TO CONNECT TO SUB-GRADE STORM DRAIN
  9. 6" DOWNSPOUT (DS). PROVIDE BOOT AT EACH DOWNSPOUT LOCATION. COORDINATE W/ CIVIL TO CONNECT TO SUB-GRADE STORM DRAIN
  10. OVERFLOW SCUPPER
  11. ROOF CRICKET (1/4" PER 12" SLOPE, TYPICAL)
  12. METAL CANOPY AT FRONT PLAZA. SEE WALL SECTIONS
  13. PREMANUFACTURED ROOF HATCH
  14. ROOF HATCH. SEE SPECIFICATIONS
  15. PREFINISHED METAL CHANNEL DRAIN. SLOPE TOWARDS INTERNAL DRAIN AT ACM PILASTER. SEE DETAILS
  16. T.P.O MEMBRANE ROOFING, TYPICAL (OVER ELEVATOR SHAFT)
  17. 4" SQUARE INTERNAL DRAIN. COORDINATE W/ CIVIL TO CONNECT TO SUB-GRADE STORM DRAIN.
  18. RATED ROOF ASSEMBLY (UL P732)

**GMC**

Goodwyn Mills Cawood, LLC  
 117 Jefferson Street North  
 Huntsville, AL 35801  
 T 256.539.3431  
 GMCNETWORK.COM

ISSUE	DATE
1	
2	
3	
4	

STATE OF ALABAMA  
 REGISTERED ARCHITECT  
 Jay W Parkey  
 9063  
 Owens Cross Roads,  
 Alabama  
 1/9/2025

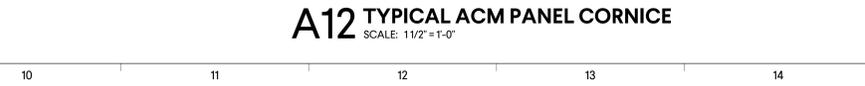
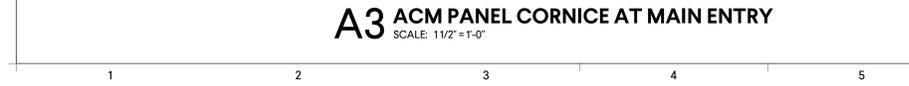
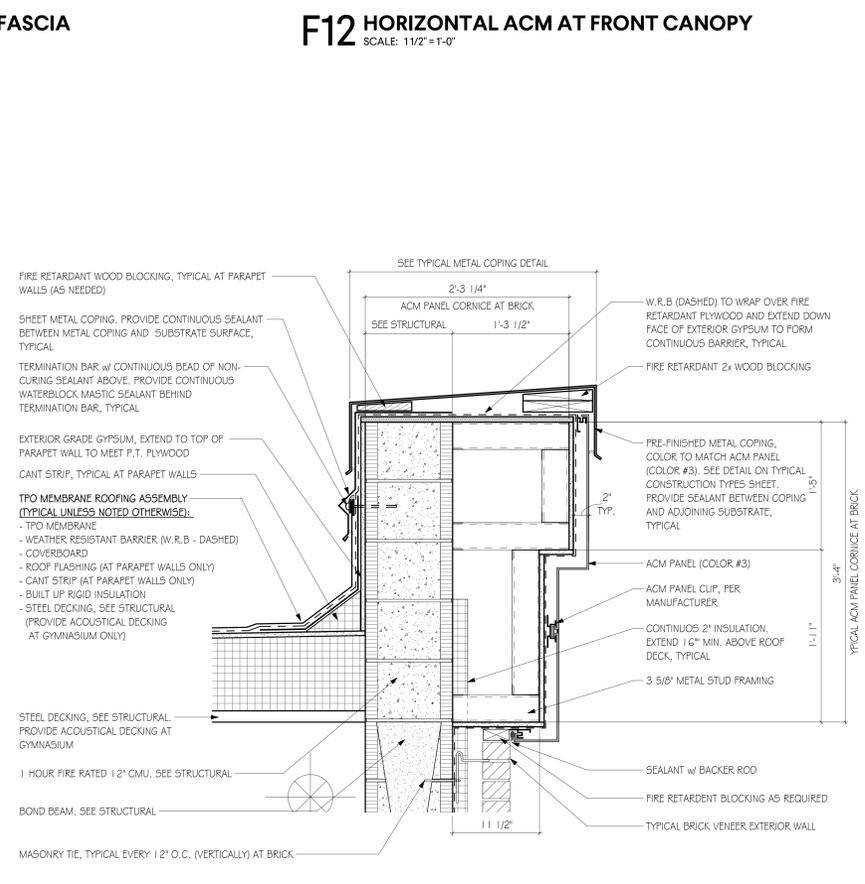
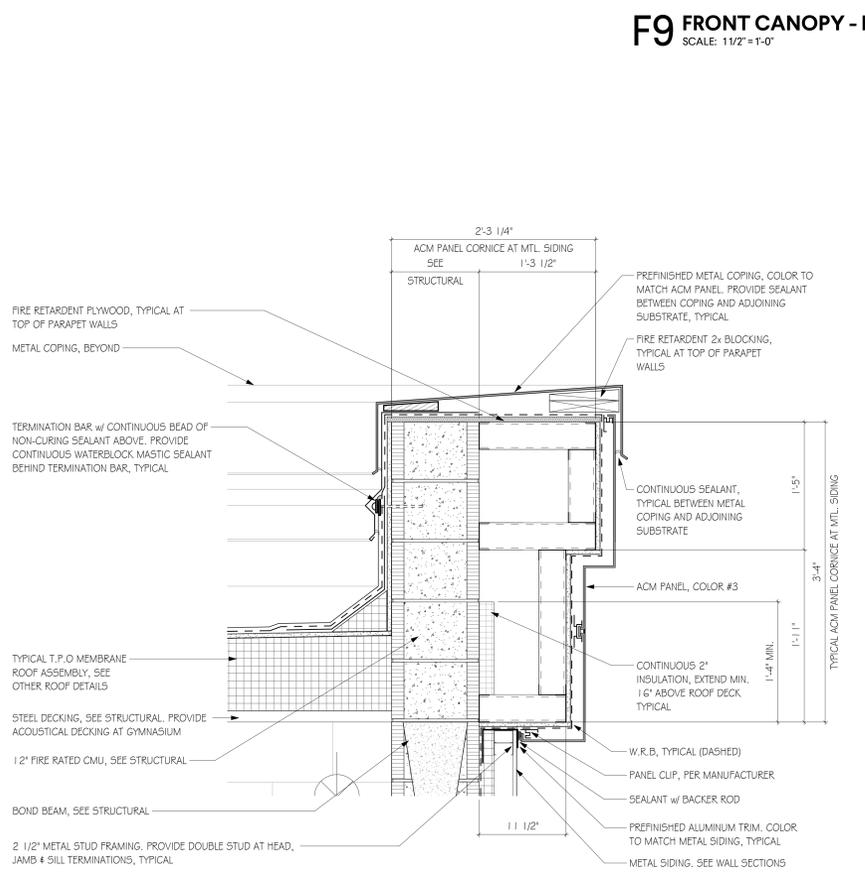
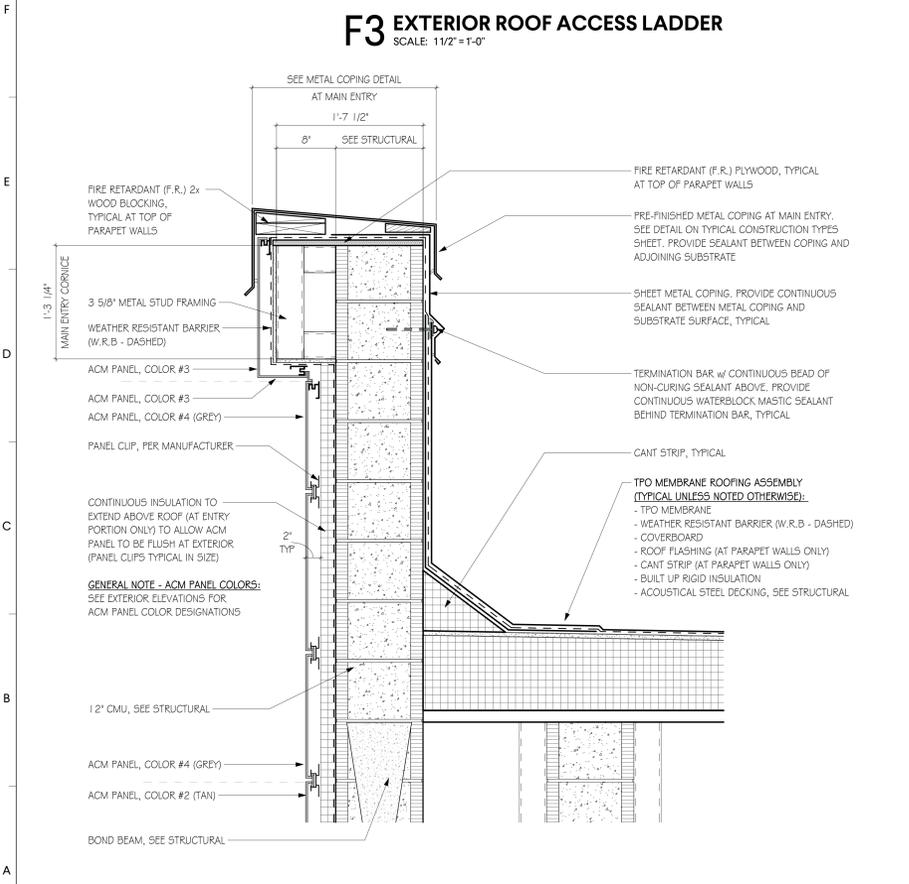
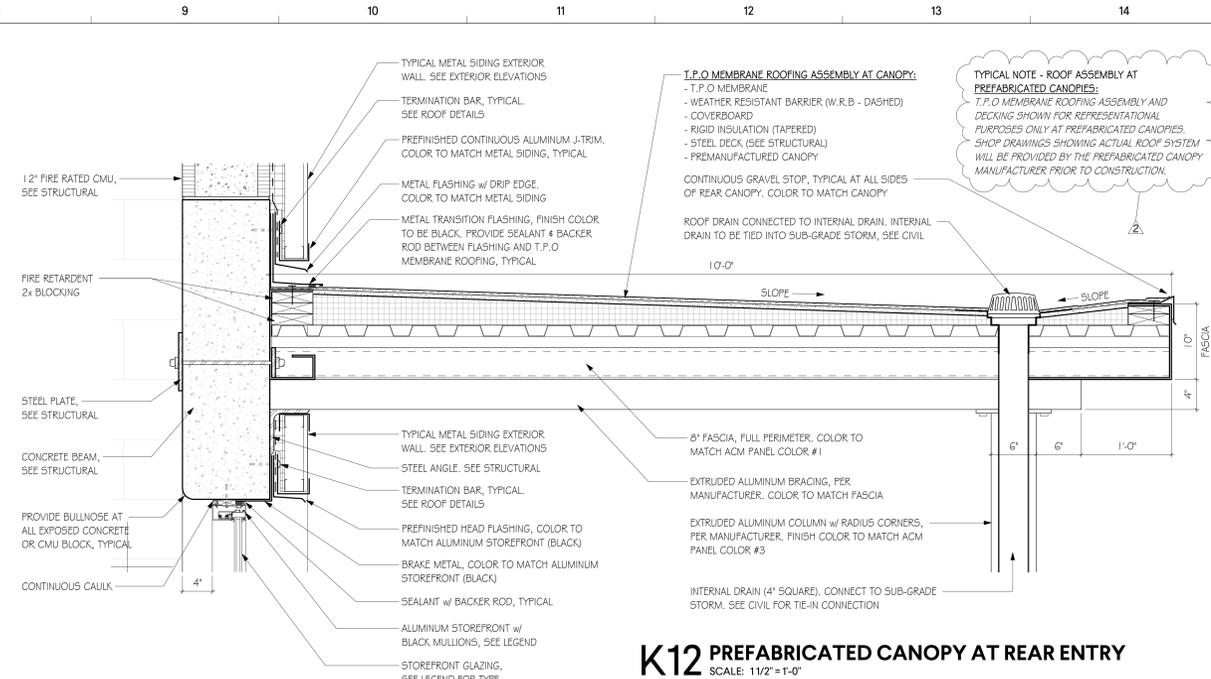
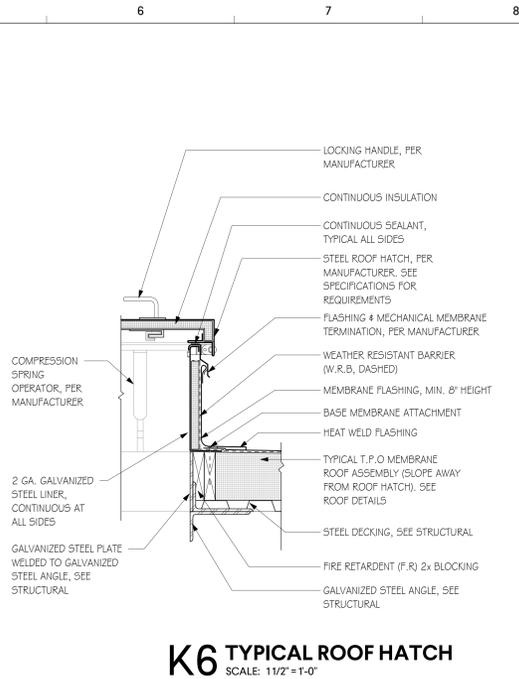
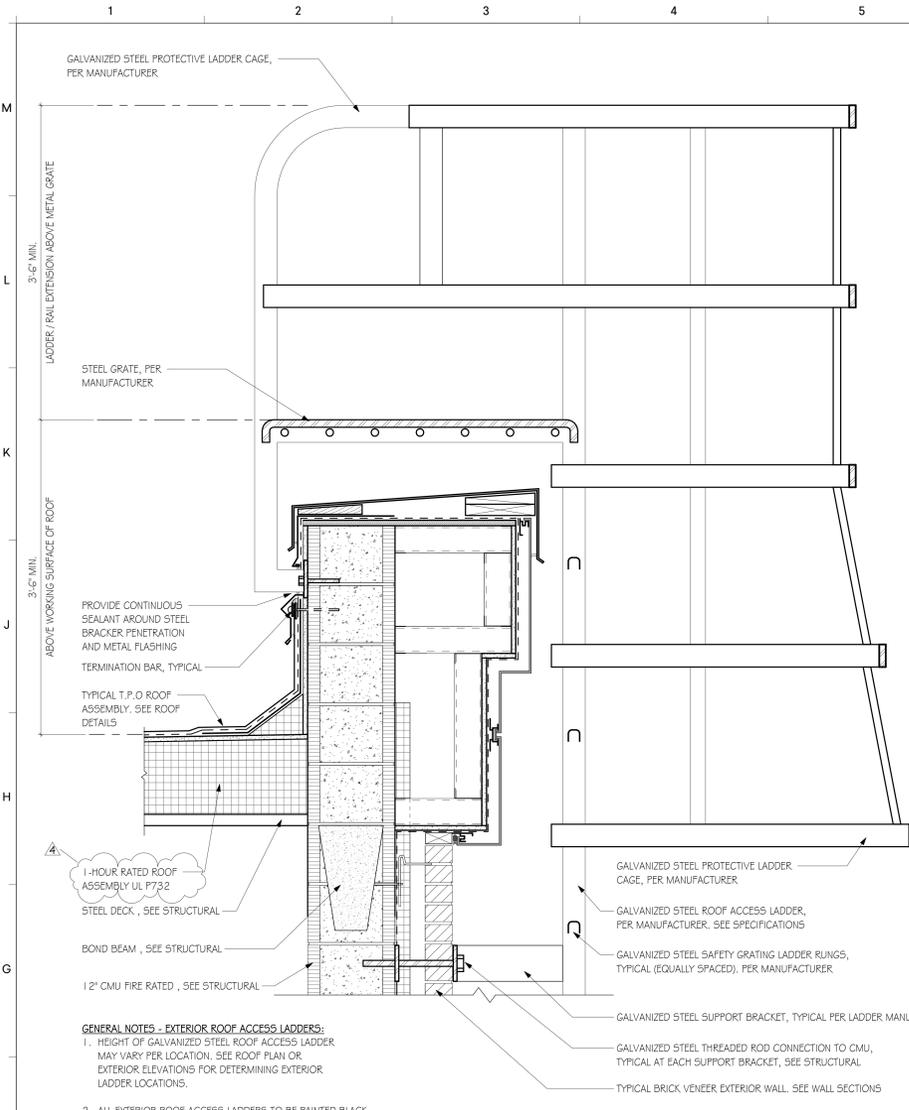
DCM # 20240548  
 GMC AHUN230009

**A3.01**

ROOF PLAN

FORT PAYNE COMPETITION GYM AND CLASSROOM ADDITION  
 20145th STREET NE,  
 FORT PAYNE, AL 35967

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**GMC**

Goodwyn Mills Cawood, LLC  
117 Jefferson Street North  
Huntsville, AL 35801  
T 256.539.3431  
GMCNETWORK.COM

ISSUE	DATE
DCM/FINAL SUBMITTAL	11/24
2	ADDENDUM #1 12/24
4	ADDENDUM #2 12/24
4	ADDENDUM #3 12/25

DRAWN BY: Author  
CHECKED BY: Checker

STATE OF ALABAMA  
REGISTERED ARCHITECT  
Jay W. Parkey  
9063  
Owens Cross Roads,  
Alabama  
1/9/2025

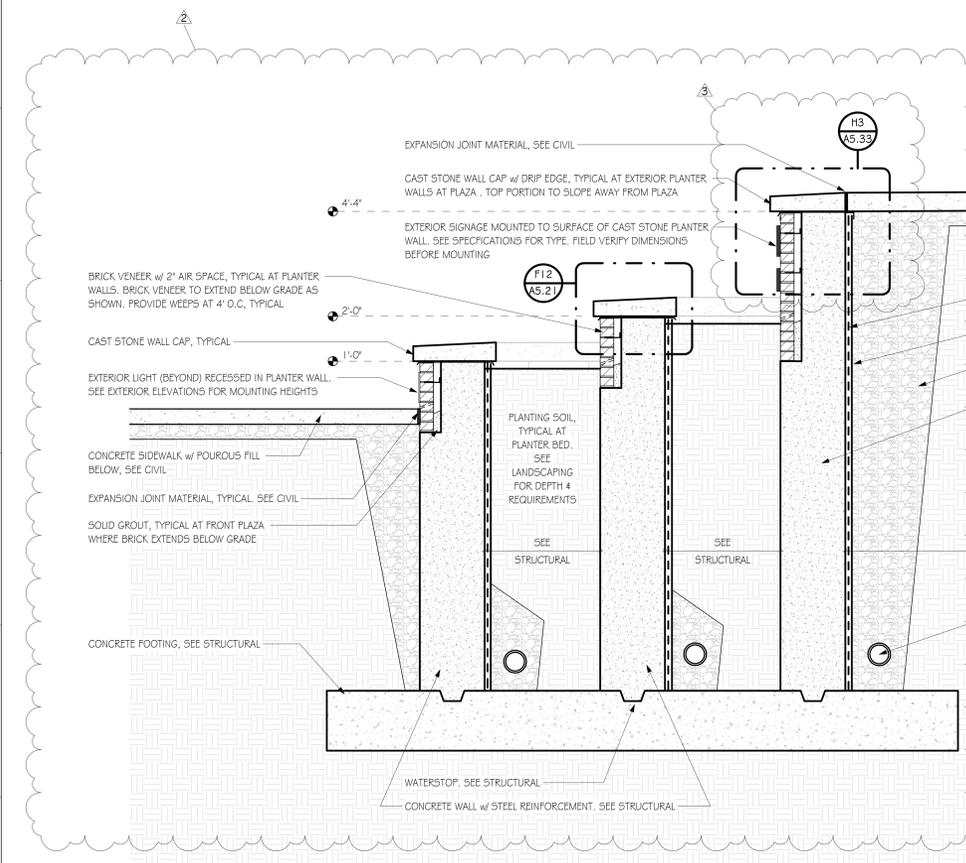
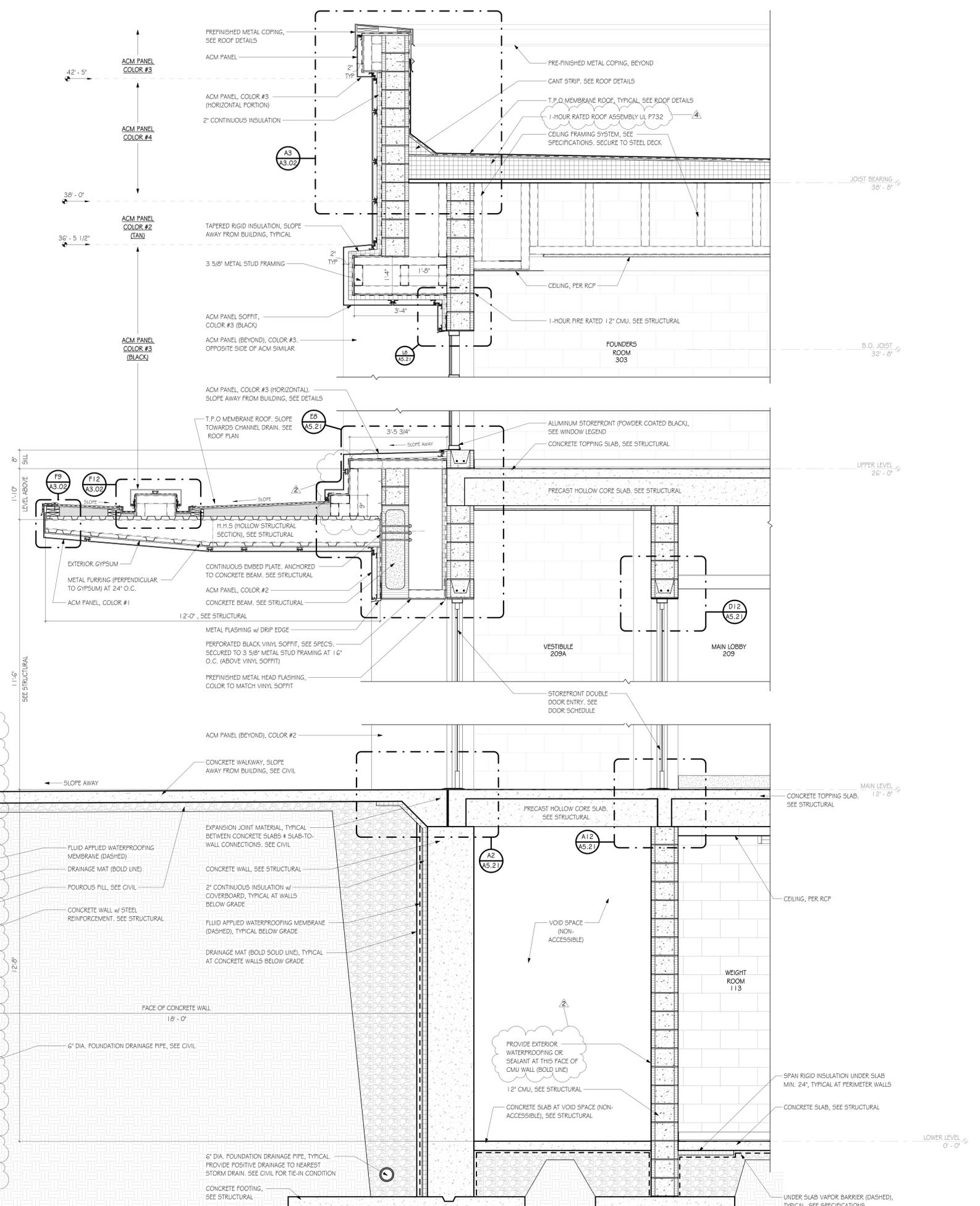
FORT PAYNE COMPETITION GYM AND CLASSROOM ADDITION  
20145TH STREET NE,  
FORT PAYNE, AL 35967

DCM # 20240548  
GMC AHUN230009

ROOF DETAILS

**A3.02**

ACM PANEL - COLOR LEGEND	
COLOR #1	GOLD
COLOR #2	TAN
COLOR #3	BLACK
COLOR #4	GREY



**A6 WALL SECTION - ENTRY WALL AT PLAZA**  
SCALE: 3/4" = 1'-0"



Goodwyn Mills Cawood, LLC  
117 Jefferson Street North  
Huntsville, AL 35801  
T 256.539.3431  
GMCNETWORK.COM

ISSUE	DATE
DCM FINAL SUBMITTAL	11/24/24
2	ADDENDUM #1 12/21/24
3	ADDENDUM #4 12/25
4	ADDENDUM #5 12/25



1/9/2025

BRAWN BY: *Author*  
CHECKED BY: *Checker*

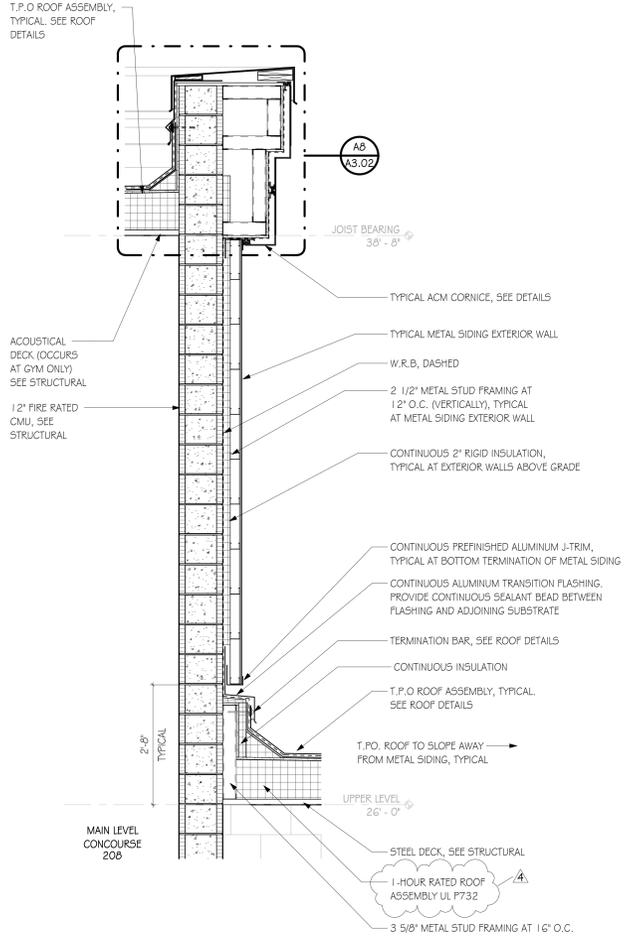
**FORT PAYNE COMPETITION GYM AND CLASSROOM ADDITION**  
20145th STREET NE,  
FORT PAYNE, AL 35967

DCM # 20240548  
GMC AHUN230009

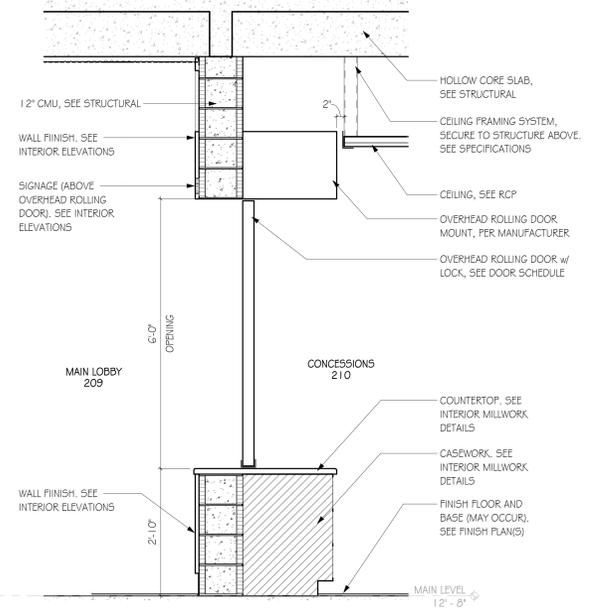
**WALL SECTIONS**

A5.11

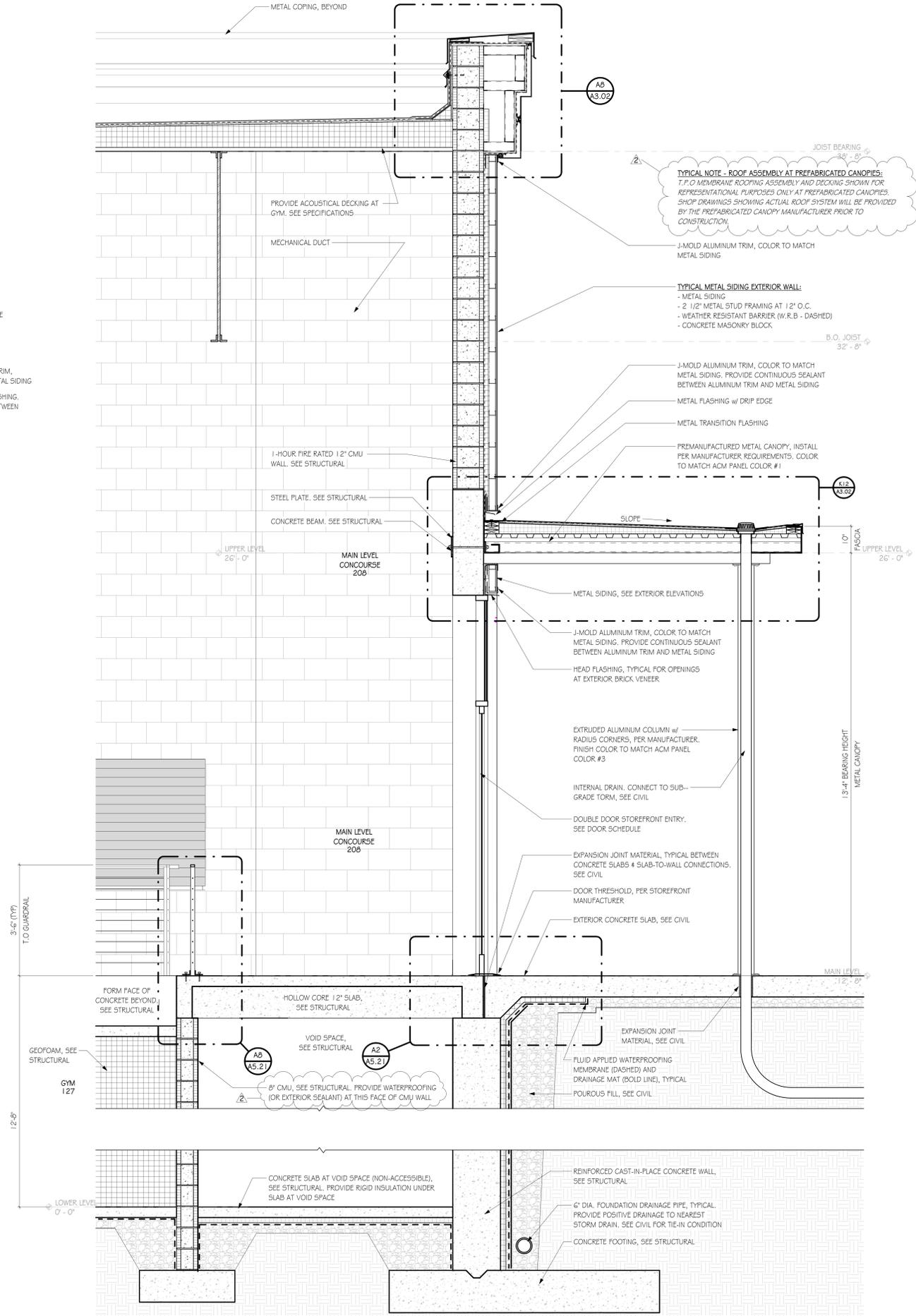
ACM PANEL - COLOR LEGEND			
COLOR #1	GOLD		
COLOR #2	TAN		
COLOR #3	BLACK		
COLOR #4	GREY		



**G6 METAL SIDING ABOVE CLASSROOMS**  
SCALE: 3/4" = 1'-0"



**D1 DOOR**  
SCALE: 3/4" = 1'-0"

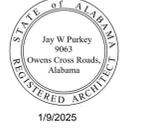


**A12 WALL SECTION - REAR ENTRY WALL**  
SCALE: 3/4" = 1'-0"



Goodwyn Mills Caswood, LLC  
117 Jefferson Street North  
Huntsville, AL 35801  
T 256.539.3431  
GMCNETWORK.COM

ISSUE	DATE
1	DCM/FINAL SUBMITTAL 1/14/24
2	ADDENDUM #2 12/27/24
4	ADDENDUM #5 12/25/25

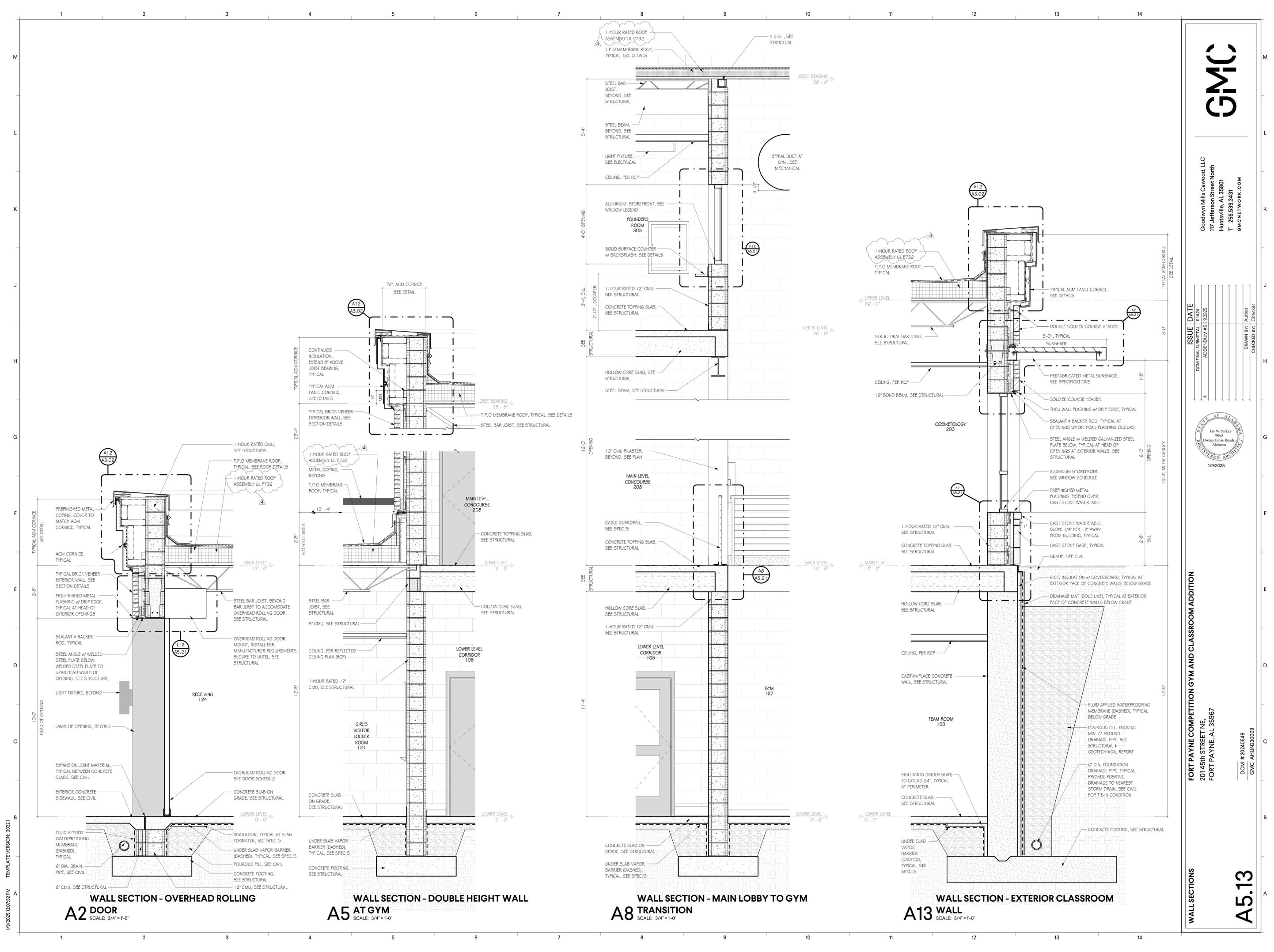


WALL SECTIONS  
FORT PAYNE COMPETITION GYM AND CLASSROOM ADDITION  
20145th STREET NE,  
FORT PAYNE, AL 35967

DCM # 20240548  
GMC AHUN230019

**A5.12**

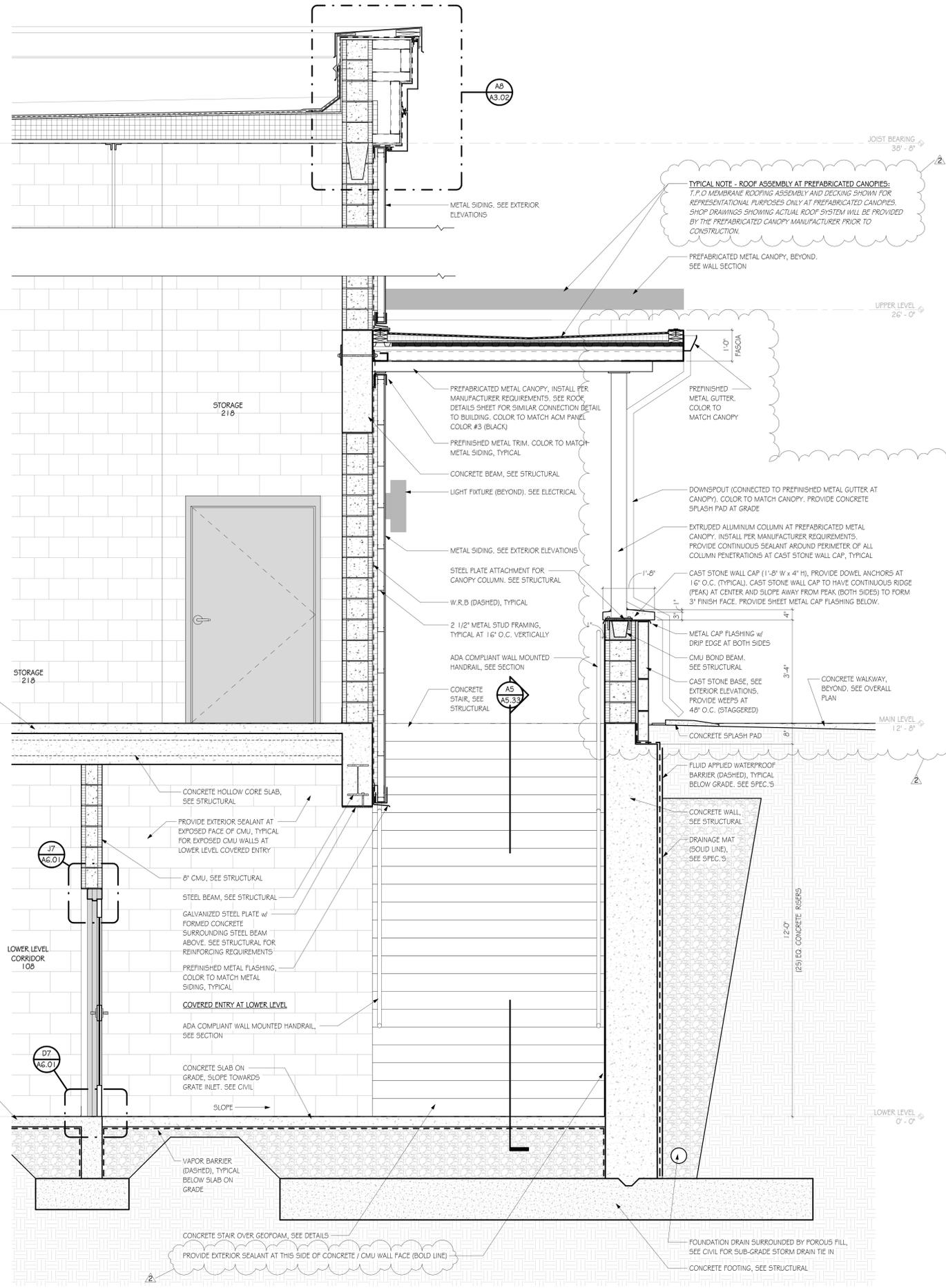
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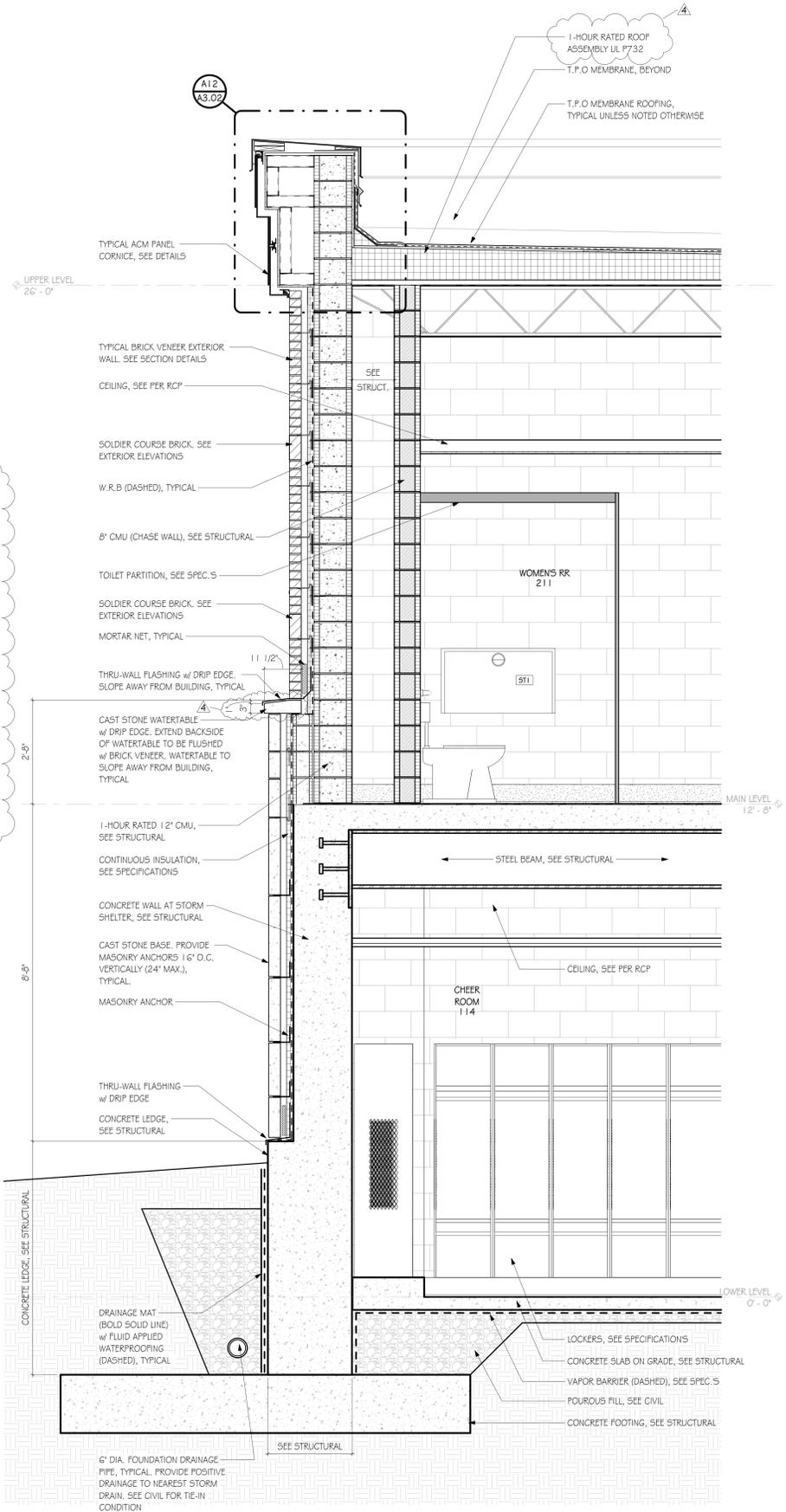
ISSUE	DATE
DCM FINAL SUBMITTAL	TR1424
ADDENDUM #5	12/2025
4	



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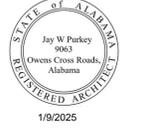


**LOWER LEVEL - COVERED ENTRY & A6 EXTERIOR STAIR**  
SCALE: 3/4" = 1'-0"



**STORM SHELTER - CAST STONE AT CHEER ROOM A12**  
SCALE: 3/4" = 1'-0"

ISSUE	DATE
1	DCM FINAL SUBMITTAL 1/14/24
2	ADDENDUM #1 12/22/24
4	ADDENDUM #5 12/20/25



1/9/2025

**FORT PAYNE COMPETITION GYM AND CLASSROOM ADDITION**  
201.45TH STREET NE,  
FORT PAYNE, AL 35967

DCM # 20240548  
GMC AHUN230009

---

CONTRACTOR

**ATTACHMENT A**  
**TO PROPOSAL FORM**

**1.1 UNIT PRICES:**

- A. The undersigned proposes the following Unit Prices for additions to or deductions from the Work wherein Unit Prices are applicable as determined by the Architect and Owner. These Unit Prices include all charges for labor and materials, fee, layout, supervision (field and home office), general expenses, taxes, insurance, overhead and profit, for Unit Item of Work in place. The Contract sum shall be increased or decreased based upon quantity difference multiplied by the applicable Unit Price, in accordance with the General Conditions.
- B. Refer to Section 01 2200 - "Unit Prices", and to the respective sections of the Specifications for the complete Unit Price Item description.
- C. Submit the following Unit Prices with the Proposal Form on Bid Date.

---

<b>ITEM DESCRIPTION:</b>	<b>UNIT:*</b>	<b>UNIT PRICE:</b>
A. Undercut and backfill in control areas	CY	\$ _____
B. Undercut and backfill in non-control areas	CY	\$ _____
C. Additional Soil:	CY	\$ _____
1. Topsoil	CY	\$ _____
2. Trench backfill	CY	\$ _____
3. Select fill or Open Site Areas (Offsite Source)	CY	\$ _____
4. Select fill or Open Site Areas (Onsite Source)	CY	\$ _____
5. Select Structural Fill	CY	\$ _____

---

**FORT PAYNE HIGH SCHOOL COMPETITION  
GYM AND CLASSROOM ADDITION  
FORT PAYNE CITY SCHOOLS**

**FORT PAYNE, AL**

D.	Sod	CY	\$ _____
E.	Concrete Sidewalk	SF	\$ _____
F.	Asphalt Paving	SY	\$ _____
G.	Dimmer Switches	EA	\$ _____
H.	Data Receptacles	EA	\$ _____
I.	Data Outlets	EA	\$ _____
J.	Fire Alarm Strobes	EA	\$ _____
K.	Fire Alarm Pulls	EA	\$ _____
L.	Exit Signs	EA	\$ _____
M.	Rock, Masonry, or Concrete Excavation in Trenches & Pits below elevations indicated	CY	\$ _____
N.	Rock, Masonry, or Concrete Excavation in Open Excavation below elevations indicated	CY	\$ _____
O.	Crushed Stone	TN	\$ _____
	a. Class II Rip-Rap with Filter Blanket	TN	\$ _____
	b. No. 2 Stone	TN	\$ _____
	c. No. 57 Stone	TN	\$ _____
	d. Dense Graded Aggregate Base Type B	TN	\$ _____
(*)	Legend to "unit" quantity abbreviations:	CY	Per "Cubic Yard"
		SY	Per "Square Yard"
		TN	Per "Ton"
		SF	Per "Square Foot"
		LF	Per "Linear Foot"

**END OF ATTACHMENT A TO PROPOSAL FORM**



# BXUV.D902 - FIRE-RESISTANCE RATINGS - ANSI/UL 263

## Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

## BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States

## BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States Design Criteria and Allowable Variances

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada Design Criteria and Allowable Variances

### Design No. D902

February 21, 2019

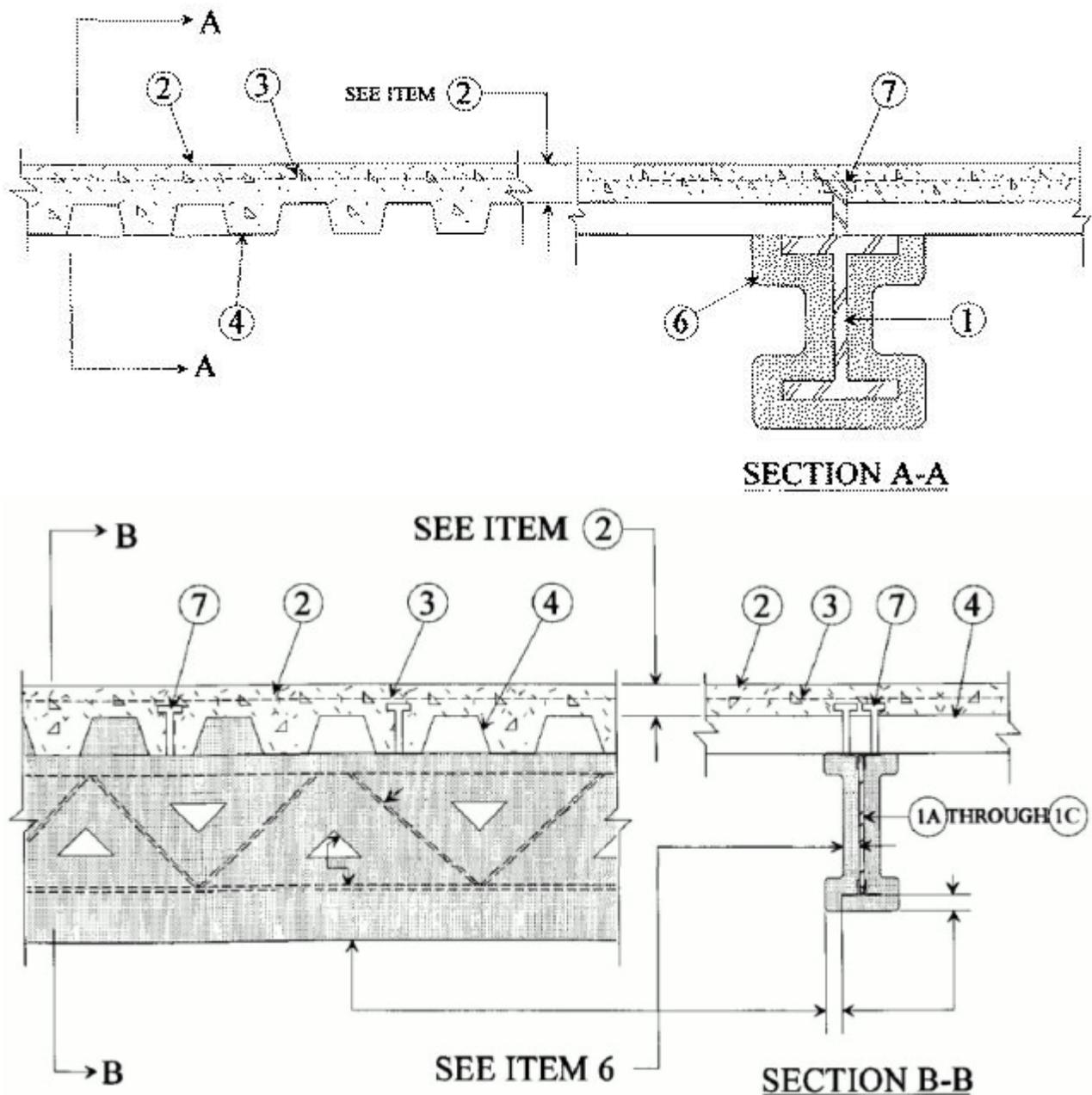
**Restrained Assembly Ratings — 1, 1-1/2, 2 and 3 Hr.**

**Unrestrained Assembly Ratings — 0, 1, 1-1/2, 2 or 3 Hr. (See Items 4 & 6)**

**Unrestrained Beam Ratings — 1, 1-1/2, 2 and 3 Hr.**

**This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7**

**\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**



1. **Beam** — W8X28, W8x24 or W6x12, min size, see Items 6A through 6E.

1A. **Steel Joists** — (Not Shown) — As an alternate to Item 1 — Composite or non-composite min 8k1 or min depth and weight shall be 8 in. and 4.9 lb/ft respectively. May be uncoated or provided with a shop coat of paint. Designed per S.J.I. specifications for a max design stress of 30,000 psi (30 ksi). Welded or bolted to end supports. The top chords shall consist of two angles measuring 1-1/4 by 1-1/4 by 0.127 in. thick. Bottom chords shall consist of two round bars measuring 0.566 in. in diam. or two angles measuring 1 by 1 by 0.125 in. thick. Bearing plates shall consist of two angles measuring 1-1/2 by 2 by 0.188 in. thick and 5-1/16 in. long.

1B. **Steel Joists** — (Not Shown) — As an alternate to Item 1 — Composite or non-composite min 12k5 or min depth and weight shall be 12 in. and 7.1 lb/ft respectively. May be uncoated or provided with a shop coat of paint. Designed per S.J.I. specifications for a max design stress of 30,000 psi (30 ksi). Welded or bolted to end supports. Top chords shall consist of two angles measuring 1-1/2 by 1-1/2 by 0.156 in. thick. Bottom chords shall consist of two round bars measuring 0.675 in. in diam. or two angles measuring 1 by 1 by 0.125 in. thick. Bearing plates shall consist of two angles measuring 2 by 2 by 0.192 in. thick and shall be min 4-15/16 in. long. The second web member at each end shall consist of 0.654 in. diam round bar. All remaining web members, including the end web members, shall consist of 0.774 in. diam round bars. Bridging per S.J.I. specifications is required when non-composite joists are used.

1C. **Steel Joists** — (Not Shown) — As an alternate to Item 1 — Composite or non-composite min 12k5 or min depth and weight shall be 12 in. and 7.1 lb/ft respectively. May be uncoated or provided with a shop coat of paint. Designed per S.J.I. specifications for a max design stress of 30,000 psi (30 ksi). Welded or bolted to end supports. Top chords shall consist of two angles measuring 1-1/2 by 1-1/2 by 0.156 in. thick. Bottom chord shall consist of two round bars measuring 0.675 in. in diam. or two angles measuring 1 by 1 by 0.125 in. thick. The

second web member at each end shall consist of 0.654 in. diam round bar. All remaining web members, including the end web members, shall consist of 0.774 in. diam round bars. Bridging per S.J.I. specifications is required when non-composite joists are used.

Note: Additional beams or joists from the N series designs may be substituted for the listed beam (item 1) or joist (item 1A) respectively. When joists are substituted, the restrained rating of the joist must be equal to or greater than the restrained rating of the assembly. Additional beam and joist substitution requirements are in the front of the Fire Resistance Directory - III. FLOOR-CEILINGS AND ROOF-CEILING, item 7 -Steel Joist or IV. BEAMS.

**2. Normal Weight or Light Weight Concrete** — Normal weight concrete, carbonate or siliceous aggregate, 3500 psi compressive strength, vibrated. Lightweight concrete, expanded shale or slate aggregate by rotary-kiln method or expanded clay aggregate by rotary-kiln or sintered-grate method, or pelletized expanded blast furnace slag aggregate, 3000 psi compressive strength, vibrated, 4 to 7 per cent entrained air.

Restrained Assembly Rating Hr	Concrete (Type)	Concrete Unit Weight pcf	Concrete Thkns In.
1	Normal Weight	147-153	3-1/2
1-1/2	Normal Weight	147-153	4
2	Normal Weight	147-153	4-1/2
3	Normal Weight	147-153	5-1/4
1	Light Weight	107-113	2-1/2
1	Light Weight	107-120	2-5/8
1-1/2	Light Weight	107-113	3
2	Light Weight	107-113	3-1/4
2	Light Weight	107-116	3-1/4*
2	Light Weight	114-120	3-1/2
3	Light Weight	107-113	4-3/16
3	Light Weight	114-120	4-7/16

\* With 2 and 3 in. deep steel floor units only.

**3. Welded Wire Fabric** — 6x6 - W1.4xW1.4.

**3A. Negative Reinforcement** — (Optional, Not Shown) Used in lieu of Item 3 and with Items 3B or 3C. For floor spans with concrete cast continuous over the supporting beams. Deformed bars designed to resist the support moments of the concrete slab in accordance with the latest ACI Building Code Specifications.

**3B. Fiber Reinforcement\*** — (Not Shown) — Required with Item 3A. Engineered synthetic fibers added to concrete mix to control shrinkage cracks in concrete. Fibers added to concrete mix at rate of 1 lb of fiber for each cubic yard of concrete.

**PROPEX OPERATING COMPANY L L C** — Fibermesh 150 and Fibermesh 300.

**3C. Fiber Reinforcement\*** — (Not Shown) — Required with Item 3A. Any fiber reinforcement bearing the UL Classification Marking for Fire Resistance, Classified for use in lieu of welded wire fabric.

See **Fiber Reinforcement** (CBXQ) Category for names of manufacturers.

**4. Steel Floor and Form Units\*** — Composite 1-1/2, 1-5/8, 2 or 3 in. deep galv units or 4-1/2 in. deep non-composite galv units. Fluted units may be phos/ptd. Min gauges are 22 MSG for fluted and 20/20 for cellular and partial cellular units. The following combinations of units may be used:

(1) All 24, 26, 28 or 36 in. wide cellular or partial cellular.

(2) All fluted.

(3) One or two 3 in. deep, 12 in. wide, 18/18 MSG min cellular alternating with 3 in. deep fluted or other cellular.

(4) Any blend of fluted and 24, 26, 28 or 36 in. wide cellular or partial cellular.

(5) Corrugated, nom 1-5/16 or 2 in. deep, 30 in. wide, 24 MSG min galv units with shear wires factory welded to deck corrugations. Welded to supports 12 in. OC through welding washers. For shear wire spacing of 8 in. or less the steel deck stress shall not exceed 20 KSI. For shear wire spacing greater than 8 in. OC but less than or equal to 12 in. OC steel deck stress shall not exceed 12 KSI.

**ASC STEEL DECK, DIV OF ASC PROFILES L L C** — 32 in. wide Types NH-32, NHN-32, NHF-32; 36 in. wide, Types BH-36, BHN-36, BHN-35-1/4, BHF-36, BHF-36A, 2WH-36, 2WHS-36, 2WHF-36, 2WHF-36A, 3WxH-36, 3WxHF-36, 3WxHF-36A, 3WH-36, 3WHF-36, 3WHF-36A, 3W-36, 3WF-36, DG3W-36, DG3WF-36. All units may be galvanized or Prime Shield. Non-cellular decks may be vented designated with a "V" suffix to the product name. Cellular deck top and bottom sections may be riveted together (designated with "Fr") vs. arc spot welded, "F"

**CANAM STEEL CORP** — 24 in. wide Type P-2432 composite or 36 in. wide Type P-3623, P-3606, P-3615 and 24 in wide Type P-2432 composite, Type P-3606 and P-3615 non-composite

**CANAM STEEL CORP** — 12 or 24 in. wide, Types 1-1/2, 2, or 3 in. LOK-Floor and LOK-Floor Cell; 36 in. wide, Types 2 or 3 in. LOK-Floor and LOK-Floor Cell; 24, 30 or 36 in. wide, Type 1-1/2 in. B-LOK and B-LOK Cell; 24 in. wide, Types N-LOK and N-LOK Cell

**CENTRIA, A DIVISION OF NCI GROUP, INC** — QL Types, 24 in. wide, 3 or 3 inverted, UKX, 21 or 21 inverted, 2 in. 99, 121, AKX, NKX, TKX; 24 or 30 in. wide GKX, GKXH, GKX-A; 36 in. wide 2 in. 99, AKX, WKX; 12 in. wide NKC, TKC; 12 in. wide non-composite Sec 12. Side joints of 99, 121, TKC, TKX, WKX may be welded together 60 in. OC. Side joints of 99, AKX, WKX, GKX, GKX-A, TKX may be fastened together with min 1 in. long No. 12x14 self-drilling, self-tapping steel screws 36 in. OC

**CHIA TEH CONSTRUCTION MATERIAL CO LTD** — 24 or 36 in. wide Mac-Lok 3; 24 in. wide CFD-3

**DECK WEST INC** — 36 in. wide Type B-DW, Inverted B-DW, BA-DW, Inverted BA-DW, 2-DW or 3-DW. Side joints of Type 2-DW and 3-DW may be fastened together with min 1 in. long No. 12 x 14 self-drilling, self-tapping steel screws 36 in. OC

**DESIGN ASSISTANCE CONSTRUCTION SYSTEMS INC** — 36 in. wide Type DACS1.5CD, or 24 in. wide Type DACS2.0CD, or DACS3.0CD

**EPIC METALS CORP** — 24 in. wide Types EC150, EC150 inverted, EC300, EC366, ECP150, ECP300, ECP366, ECA; 30 in. wide Types ECB150, ECBR150; 36 in. wide Types EC156, EC266, ECP266

**KAM INDUSTRIES LTD, DBA CORDECK** — 24 in. wide, Types 2 or 3 in. WDR

**MARLYN STEEL DECKS INC** — Type 1.5 CF, 2.0 CF or 3.0 CF

**NEW MILLENNIUM BUILDING SYSTEMS L L C** — 24 or 36 in. wide Types Mac-Lok 2, Mac-Lok 3; 24 in. wide Types B2C, B2FC, NC, NFC; 30 in. wide, Type B3C; 12 in. wide Mac-Way Cellular 45 MDW, 2-633 MTWA, 3-633 MTWA+. 30 in. wide, Mac-Cor Types 1 and 2

**NEW MILLENNIUM BUILDING SYSTEMS L L C** — 24 or 36 in. wide Types 2.0CD, 3.0CD, 2.0CFD, 3.0CFD, 3.0CFDES; 24, 30 or 36 in. wide Types 1.5CD, 1.5CDI, 1.5CDR, 1.5CFD. Fluted units may be phos/painted or galvanized.

**ROOF DECK INC** — 36 in. wide Types LOK-1-1/2, LOK-1-1/2R; 24 in. wide Types LOK-2, LOK-3

**VALLEY JOIST, SUB OF EBSICO INDUSTRIES INC** — 24 or 36 in. wide Types WVC 1-1/2 or WVC 2

**VERCO DECKING INC - A NUCOR CO** — FORMLOK™ deck types PLB, B, BR, PLN3, N3, PLN, N, PLW2, W2, PLW3, W3. Units are min 24 in. wide and may be galvanized, phos./ptd., or mill finish. Units may be cellular or acoustical cellular, with the suffix "CD" or "CD-AC" added to the product name, respectively. All non-cellular deck may be vented or non-vented. 12 in. wide PLW2, W2, PLW3 or W3 units may be blended with 24 or 36 in. wide PLW2, W2, PLW3 or W3 units, respectively; or Types PLN3-CD, N3-CD, PLN3, N3.

**VULCRAFT, DIV OF NUCOR CORP** — 24, 30 or 36 in. wide Types 1.5VL, 1.5VLI, 1.5PLVLI, 1.5VLP, 1.5 VLR, 1.5PLVLP; 24 or 36 in. wide Types 1.5VLP, 1.5PLVLP, 2VLI, 2.0PLVLI, 2VLJ, 3VLI, 3.0PLVLI, 3VLJ, 2VLP, 2.0PLVLP, 3VLP, 3.0PLVLP, 2VLP, 2.0PLVLP, 3VLP, 3.0PLVLP, 2VLP, 2.0PLVLP, 3VLP, 3.0PLVLP. Types 1.5VL, 1.5VLI, 1.5PLVLI, 1.5 VLR, 1.5VLP, 1.5PLVLP, 2VLI, 2.0PLVLI, 2VLJ, 3VLI, 3.0PLVLI, 3VLJ units may be phos/ptd. 24 or 36 in. wide Types 2VLJ, 3VLJ units ++ may be used for max 2 hr Restrained Assembly Rating. 36 in. wide Types 1.5 SB, 1.5 SBR; 24 or 36 in wide Types 2.0 SB, 3.0 SB, 36 in. wide Type High Strength 1.5 SBI, 36 in. wide Type High Strength 1.5 SBN; Units may be phos/ptd

Spacing of welds attaching units to supports shall be 12 in. OC for 12, 24, 36 in. wide units, four welds per sheet for 30 in. wide units. 6 in. OC for 18 in. wide and Sec. 12 units. Unless specified otherwise for specific units types, adjacent units button-punched or welded together 36 in. OC along side joints. For **3 Hr Rating**, units with overlapping type side joints welded together 24 in. OC max.

When a superimposed load of 250 PSF is desired the spacing of welds or button-punches shall not exceed 24 in. OC along side joints.

+ 12 in. wide, 1-1/2 in. deep Mac-Way units may be blended with 24 in. wide B2C or 30 in wide B3C units in a blend of one cell to one or more fluted units. 12 in. wide, 2 in. deep Mac-Way units may be blended with 24 or 36 in. wide Mac-Lock units in a blend of one cell to one or more fluted units. 12 in. wide, 3 in. deep Mac-Way units may be blended with 24 or 36 in. wide Mac-Lock 3 units in a blend of one cell to one or more fluted units. The side edge of the fluted units is placed on the top of the side edge of the Mac-Way unit and the two are welded together with welding washers spaced a max. of 32 in. OC for Mac-Lock 2 or 3 units and a max of 24 in. OC for the B2C or B3C units.

++ Side joints of Types 2VLJ or 3VLJ units may be fastened together with No. 8-3/4 in. long self-drilling Tek screws driven diagonally from the top side through the joint of the units at 36 in. O. C. max.

Alternate Construction — Non-composite units of the same type listed above may be used provided allowable loading is calculated on the basis of non-composite design.

The Unrestrained Assembly Rating is equal to the Unrestrained Beam Rating (See Item 6) for a max 3 Hr and is limited to the following units and limitations:

(a) 1-1/2, 2 and 3 in. deep, 24 or 36 in. wide, 22 MSG or thicker fluted with clear spans not more than 7 ft, 8 in.

(b) 1-1/2, 2 and 3 in. deep, 24 or 36 in. wide, 20 MSG or thicker fluted with clear spans not more than 8 ft, 8 in.

(c) 1-1/2 and 2 in. deep, 24 or 36 in. wide, 16 MSG or thicker fluted and 18/18 MSG or thicker cellular with clear spans not more than 9 ft, 11 in.

(d) 3 in. deep, 36 in. wide, 18 MSG or thicker fluted and 24 in. wide, 20/18 MSG or thicker cellular with clear spans not more than 13 ft, 2 in.

For assemblies utilizing 3-1/4 in. light weight concrete topping with a max Restrained Assembly Rating of 2 Hr, the Unrestrained Assembly Rating is equal to the Unrestrained Beam Rating (See Item 6) and is limited to the following floor units and spans:

(a) 1-1/2, 2 and 3 in. deep, 24 or 36 in. wide, 22 MSG fluted and 20/20 MSG cellular with clear spans not more than 9 ft, 6 in.

(b) 2 and 3 in. deep, 24 or 36 in. wide, 20 MSG fluted and 20/20 MSG cellular with clear spans not more than 10 ft, 0 in.

(c) 3 in. deep, 24 in. wide, 20 MSG fluted and 20/20 MSG cellular with clear spans not more than 13 ft, 2 in.

**4A. Steel Floor and Form Units\*** — As an alternate to Item 4, for use only when top of steel beam (Item 1) is filled solid with concrete for the full width of bearing from top of steel beam to top of concrete (Item 2):

**BAILEY METAL PRODUCTS LTD** — Type COMSLAB™ 210 and COMSLAB™ 225, Steel End Closure Flashing

**5. Joint Cover** — (Use with fluted units optional — Not Shown) — 2 in. wide cloth adhesive tape applied following the contour of the units.

**6. Spray-Applied Fire Resistive Materials\*** — Applied by spraying with water to the final thicknesses shown below. When fluted steel deck is used and the fire protection thickness selected is based on all fluted deck, the area between the steel deck and the top flange of the steel beam shall be filled. When fluted steel deck is used and the steel beam is sprayed with the thicknesses applicable to cellular of blended units, the area between the steel deck and the top flange of the steel beam shall be plugged. Beam surfaces must be clean and free of dirt, loose scale, and oil. Min average density of 13 pcf with min. individual density of 11 pcf for Types II, II HS, or DC/F. Min average and min individual densities of 22 pcf and 19 pcf, respectively, for type HP. For method of density determination, refer to Design Information Section. The thickness of the Spray-Applied Fire Resistive Materials on the Structural Members (Item 1, 1A, or 1B) shall be as follows:

Restrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Concrete Type	Min Thkns Spray Applied Resistive Mtl, In
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			<b>W8x28 When Deck Is All Fluted</b>	<b>W8x28 When Deck Is Blend or All Cellular</b>	<b>Joist Item 1A When Deck Is Fluted Cellular or Blend</b>	<b>Joist Item 1B When Deck Is Fluted Cellular or Blend</b>
1	1	NW	3/8,5/8*	3/8,11/16*	1+	—
1-1/2	1	NW	3/8,5/8*	3/8,11/16*	1-9/16	—
2	1	NW	3/8,5/8*	3/8,11/16*	2-1/16	—
2	2	NW	3/4	13/16	2-1/16	—
2	3	NW	1-3/16	1-5/16	—	3-1/4
3	1-1/2	NW	1/2	1/2	—	3-1/4
3	2	NW	3/4	13/16	—	3-1/4
3	3	NW	1-3/16	1-5/16	—	3-1/4
1	1	LW	3/8,5/8*	7/16,11/16*	1-1/8+	—
1-1/2	1	LW	3/8,5/8*	7/16,11/16*	1-3/4	—
2	1	LW	3/8,5/8*	7/16,11/16*	2-1/4	—
2	2	LW	1	1	2-1/4	—
2	3	LW	1-9/16	1-5/8	—	3-1/4
3	1-1/2	LW	5/8	11/16	—	3-1/4
3	2	LW	1	1	—	3-1/4
3	3	LW	1-9/16	1-5/8	—	3-1/4

\* This thickness applies when optional Item 12 or 13 are used over 3-1/4 in. light weight concrete topping.

\*\* This thickness applies when optional Item 12 or 13 are used over 3-1/4 in. light weight concrete topping.

+ When bottom chords consist of 1 by 1 by 0.125 in. thick steel angles, the thickness of spray-applied fire resistive material shall be increased by 1/4 in. on the bottom chord only.

**ISOLATEK INTERNATIONAL** — Type D-C/F, HP, II or Type II HS. Investigated for exterior use. Type EBS or Type X adhesive/surface sealer optional.

6A. **Spray-Applied Fire Resistive Materials\*** — Alternate to Item 6. See table below for appropriate thicknesses. When fluted steel deck is used and the fire protection thickness selected is based on all fluted deck, the area between the steel deck and the top flange of the steel beam shall be filled. When fluted steel deck is used and the steel beam is sprayed with the thicknesses applicable to cellular or blended units, the area between the steel deck and the top flange of the steel beam shall be plugged. Prepared by mixing with water and spray-applied in one or more coats to beam surfaces which must be clean and free of dirt, loose scale and oil. Min average density of 17.5 pcf with min individual value of 17.0 pcf. For method of density determination, see Design Information Section, Sprayed Material.

<b>Restrained Assembly Rating Hr</b>	<b>Unrestrained Beam Rating Hr</b>	<b>Min Thkns Applied Resistive Mtl, In</b>	
		<b>W8x28 When Deck Is All Fluted</b>	<b>W8x28 When Deck Is Blend or All Cellular</b>
1, 1-1/2, 2	1	5/16, 7/16*	5/16, 7/16*
2	2	11/16	13/16

2	3	1-1/16	1-5/16
3	1-1/2	1/2	9/16
3	2	11/16	13/16
3	3	1-1/16	1-5/16

\* This thickness applies when optional Items 12, 13 are used over 3-1/4 in. light weight concrete topping.

**ISOLATEK INTERNATIONAL** — Type 280

**6B. Spray-Applied Fire Resistive Materials\*** — Alternate to Items 6 and 6A. Prepared by mixing with water. Spray-applied in one or more coats to beam surfaces to a min final thickness as shown in the tables below. Beam surfaces must be clean and free of dirt, loose scale and oil. When fluted steel deck is used and the fire protection thickness selected is based on all fluted deck, the area between the steel deck and the top flange of the steel beam shall be filled. When fluted steel deck is used and the steel beam is sprayed with the thicknesses applicable to cellular or blended units, the area between the steel deck and the top flange of the steel beam shall be plugged. Min average and min individual density of 15 pcf and 14 pcf respectively for Types 300, 300AC, 300 ES, 300 HS, 300 N, 3000, 3000ES, and SB. For Types 400, 400 AC and 400 ES min average and min individual density of 22 pcf and 19 pcf respectively. Min avg density of 44 pcf with min ind value of 40 pcf for Types M-II and TG. Min avg density of 47 pcf, with min individual value of 43 pcf for Type M-II/P. The thickness of the material on the Structural Members (Item 1 and 1C) shall be as follows:

**Min Thkns Spray Applied Resistive Mtl, In**

<b>Restrained Assembly Rating Hr</b>	<b>Unrestrained Beam Rating Hr</b>	<b>W8x28 When Deck Is All Fluted</b>	<b>W8x28 When Deck Is Blend or All Cellular</b>	<b>Joist (Item 1C) When Deck Is Fluted Cellular or Blend</b>
1	1	5/16, 7/16*	5/16, 7/16*	9/16+
1-1/2	1	5/16, 7/16*	5/16, 7/16*	1
2	1	5/16, 7/16*	5/16, 7/16*	1-3/8
2	2	11/16	13/16	1-3/8
2	3	1-1/16	1-5/16	2-1/4
3	1-1/2	1/2	9/16	2-1/4
3	2	11/16	13/16	2-1/4
3	3	1-1/16	1-5/16	2-1/4

\* This thickness applies when optional Item 12 or 13 are used over 3-1/4 in. light weight concrete topping.

+ When bottom chords consist of 1 in. by 1 in. by 0.125 in. thick steel angles, the thickness of spray-applied fire resistive material shall be increased by 1/4 in. on the bottom chord only.

**BERLIN CO LTD** — Types 300, 300ES, 300N, SB, or 400; Type M-II, TG and M-II/P

**GREENTECH THERMAL INSULATION PRODUCTS MFG CO L L C** — Types 300, 300AC, 400, or 400AC; Type M-II, TG and M-II/P

**ISOLATEK INTERNATIONAL** — Types 300, 300AC 300ES, 300HS, 300N, SB, 400, 400AC, 400ES, 3000 or 3000ES; Type M-II, TG and M-II/P

**NEWKEM PRODUCTS CORP** — Types 300, 300ES, 300N, 400, or SB; Type M-II, TG and M-II/P

6C. **Mastic and Intumescent Coatings\*** — As an alternate to Items 6 through 6B. For use with fluted steel floor and form units only. Min. size W8x24 or W6x12 beams shall be primed with a phenolic modified alkyd primer, a metal alkyd primer, an acrylic primer or an epoxy primer at a nominal thickness of 2 mil. Coating spray or brush applied in accordance with the manufacturer's instructions at the min dry thickness as shown in the table below. The thickness shown below includes the primer thickness. Flutes above beam to be completely filled with minimum 6 pcf mineral wool insulation, or the top flange of the beam to be protected with the same thickness of coating as required on the beam.

Minimum Dry Thickness mils	Minimum Dry Thickness mm	Beam Size	Unrestrained Beam Rating Hr	Restrained Assembly Rating Hr
53	1.34	W8x24	1	2
95	2.41	W8x24	1-1/2	3
73	1.83	W6x12	1	2
123	3.10	W6x12	1-1/2	3

**BERLIN CO LTD** — Type WB 3. Investigated for Interior General Purpose. Type WB 4, Investigated for Interior General Purpose. Type WB4, Investigated for Exterior Use with top coat as described in Item 6E

**GREENTECH THERMAL INSULATION PRODUCTS MFG CO L L C** — Type WB 3. Investigated for Interior General Purpose. Type WB 4, Investigated for Interior General Purpose. Type WB4, Investigated for Exterior Use with top coat as described in Item 6E

**ISOLATEK INTERNATIONAL** — Type SprayFilm-WB 3 and Type WB 3. Investigated for Interior General Purpose. Type SprayFilm-WB 4 and Type WB 4, Investigated for Interior General Purpose. Type SprayFilm-WB 4 and Type WB4, Investigated for Exterior Use with top coat as described in Item 6E

**NEWKEM PRODUCTS CORP** — Type WB 3. Investigated for Interior General Purpose. Type WB 4, Investigated for Interior General Purpose. Type WB4, Investigated for Exterior Use with top coat as described in Item 6E

6D. **Mastic and Intumescent Coatings\*** — As an alternate to Items 6 through 6C. For use with normal weight concrete. Min. size W8x28 beams shall be primed with a phenolic modified alkyd primer a metal alkyd primer, an acrylic primer or an epoxy primer at a nominal thickness of 2 mil. Coating spray or brush applied in accordance with the manufacturer's instructions at the min dry thickness as shown in the table below. The thickness shown below includes the primer thickness. The top surface of the top flange where fluted units are used must be protected with the coating material at the same min dry thickness at a min distance of 1 in. (25 mm) inward from the flange tip on both sides of the beam. Mineral wool insulation optional above top surface of the beam.

Minimum Dry Thickness mils	Minimum Dry Thickness mm	Steel Floor Units	Unrestrained Beam Rating Hr	Restrained Assembly Rating Hr
103	2.62	Fluted or Cellular	1-1/2	2
179	4.55	Cellular	1-1/2	3
341	8.67	Cellular	2	3

**BERLIN CO LTD** — Type WB 3. Investigated for Interior General Purpose. Type WB 4, Investigated for Interior General Purpose. Type WB 4, Investigated for Exterior Use with top coat as described in Item 6E

**GREENTECH THERMAL INSULATION PRODUCTS MFG CO L L C** — Type WB 3, Investigated for Interior General Purpose. Type WB 4, Investigated for Interior General Purpose. Type WB 4, Investigated for Exterior Use with top coat as described in Item 6E

**ISOLATEK INTERNATIONAL** — Type SprayFilm-WB 3 and Type WB 3. Investigated for Interior General Purpose. Type SprayFilm-WB 4 and Type WB 4, Investigated for Interior General Purpose. Type SprayFilm-WB 4 and Type WB 4, Investigated for Exterior Use with top coat as described in Item 6E

**NEWKEM PRODUCTS CORP** — Type WB 3. Investigated for Interior General Purpose. Type WB 4, Investigated for Interior General Purpose. Type WB4, Investigated for Exterior Use with top coat as described in Item 6E

6E. **Top Coat** — Type SprayFilm — TOPSEAL and Type TOPSEAL required for Exterior Use, applied at a minimum dry thickness of 14 mils (0.34 mm) over the intumescent material.

See Classification information in the **Mastic and Intumescent Coating** (CDWZ) category, Isolatek International, for mixing requirements.

6F. **Mastic and Intumescent Coatings\*** — As an alternate to Items 6 through 6D. For use with normal weight or light weight concrete and fluted steel floor and form units only. Min size W8x24 beams shall be primed with a phenolic modified alkyd primer at a thickness of 2 mils or a epoxy primer at a nominal thickness of 1 mil. Coating spray or brush applied in accordance with the manufacturer's instructions at the thicknesses shown below. The thickness includes the thickness of primer. The top surface of the top flange where fluted units are used must be protected with the coating material at the same min dry thickness or filled with nominal 4 pcf mineral wool.

Minimum Dry Thickness mils	Minimum Dry Thickness mm	Beam Size	Unrestrained Beam Rating Hr	Restrained Assembly Rating Hr
35	0.88	W8x24	1	2
66	1.68	W8x24	1-1/2	3

**GREENTECH THERMAL INSULATION PRODUCTS MFG CO L L C** — Type WB-5. Investigated for Interior General Purpose

**ISOLATEK INTERNATIONAL** — Type WB-5. Investigated for Interior General Purpose

7. **Shear Connector Studs** — (Optional) — Studs, 3/4 in. diam by 3 in. long, for 1-1/2 in. deep form units to 5-1/4 in. long for 3 in. deep form units, headed type or equivalent per AISC specifications. Welded to the top flange of the beam through the steel form units.

8. **Lath Hanger** — (Optional, Not Shown) For use in caged beams with Items 6, 6A or 6B Galv steel 6 SWG min diam spaced 27 in. O. C.

9. **Clips** — (Optional, Not Shown) For use in caged beams with Items 6, 6A or 6B No. 24 MSG spring steel pushed on to top and bottom flanges of beam spaced 6 in. O. C. max.

10. **Metal Lath** — (Optional, Not Shown) — For use in caged beams with Items 6, 6A or 6B 3/8 in. diamond mesh or rib lath, 3.4 lbs per sq yd expanded steel attached to beam with clips spaced 6 in. OC max; or tied to lath hangers with 18 SWG galv steel wire spaced 6 in. OC max.

11. **Electrical Inserts\*** — (Not Shown) — Classified as "Outlet Boxes and Fittings Classified for Fire Resistance".

12. **Mineral and Fiberboards\*** — (Optional, Not Shown) — Applied over concrete floor with no restriction on board thickness. When mineral and fiber boards are used, the unrestrained beam rating shall be increased by a minimum of 1/2 hr.

See **Mineral and Fiber Board** (CERZ) category for names of manufacturers.

13. **Foamed Plastic\*** — (Optional, Not Shown) — Consisting of polyisocyanurate or urethane roof insulations. Applied over concrete floor with no restrictions on thickness. When polyisocyanurate or urethane insulation is used, the unrestrained beam rating shall be increased by a minimum of 1/2 hr.

See **Foamed Plastic** (CCVW) for list of manufacturers.

14. **Insulating Concrete** — (Optional, Not Shown) — Various types of insulating concrete prepared and applied as follows:

A. Vermiculite Concrete - Blend 6 to 8 cu ft of **Vermiculite Aggregate\*** to 94 lb Portland cement and air entraining agent. Min thickness of 2 in. as measured to the top surface of the structural concrete or foamed plastic (Item 15) when it is used. See **Vermiculite Aggregate** (CJZZ) category for names of Classified companies.

B. Cellular **Concrete-Roof Topping Mixture\*** - Concentrate mixed with water and Portland cement per manufacturer's specifications. Min. thickness of 2-in. as measured to the top surface of the structural concrete or foamed plastic (Item 15 and 15A) when used. Cast dry density and 28-day min compressive strength of 190 psi as determined with ASTM C495-66.

**AERIX INDUSTRIES** — Cast dry density of 37 (+ or -) 3.0 pcf

**CELCORE INC** — Type Celcore with cast dry density of 31 (+ or - 3.0) pcf or Type Celcore MF with cast dry density of 29 (+ or - 3.0) pcf

**ELASTIZELL CORP OF AMERICA** — Type II, with a cast dry density of 39 (+ or - 3.0) pcf

**SIPLAST INC** — Mix #1, Cast dry density of 32 (+ or -) 3 pcf

**SIPLAST INC** — Mix #2, Cast dry density of 36 (+ or -) 3 pcf

C. Cellular **Concrete-Roof Topping Mixture\*** - Foam concentrate mixed with water, Portland cement and UL Classified Vermiculite Aggregate per manufacture's application instructions. Cast dry density of 33 (+ or -) 3 pcf and 28 day compressive strength of min 250 psi as determined in accordance with ASTM C495-86.

**AERIX INDUSTRIES** — Mix #3

**ELASTIZELL CORP OF AMERICA** — Type II. Mix #1 of cast dry density 39 (+ or -) 3.0 pcf, Mix #2 of cast dry density 40 (+ or -) 3.0 pcf, Mix #3 of cast dry density 47 (+ or -) 3.0 pcf

**SIPLAST INC** — Mix #3

D. Perlite Concrete - 6 cu ft of **Perlite Aggregate\*** to 94 lb of Portland Cement and 1-1/2 pt air entraining agent. Min thickness 2 in. as measured to the top surface of structural concrete or foamed plastic (Item 15A) when it is used.

See **Perlite Aggregate** (CFFX) in Fire Resistance Directory for names of Classified companies.

15. **Foamed Plastic\*** — (Optional, Not Shown) — For use only with vermiculite (Item 14A) or cellular (Item 14B) concretes-Rigid polystyrene foamed plastic insulation having slots and/or holes sandwiched between vermiculite concrete slurry which is applied to the normal or light weight concrete surface and vermiculite concrete topping (Item 14A).

See **Foamed Plastic\*** (BRYX) category in Building Materials Directory or **Foamed Plastic\*** (CCVW) Category in Fire Resistance Directory for list of Classified companies.

15A. **Foamed Plastic\*** — (Not Shown) — For use only with cellular or perlite concrete. Nominal 24 by 48 in. polystyrene foamed plastic insulation boards having a density of 1.0 (+ or - 0.1) pcf, encapsulated within concrete topping. Each insulation board shall contain six nominal 3 in. diameter holes oriented in two rows of three holes each with the holes spaced 12 in. OC transversely and 16 in. OC longitudinally.

See **Foamed Plastic\*** (BRYX) category in Building Materials Directory or Foamed Plastic\* (CCYW) category in Fire Resistance Directory for list of Classified companies.

16. **Roof Covering Materials\*** — (Optional, Not Shown) — Consisting of materials compatible with insulations described herein which provide Class A, B or C coverings.

See Built-Up Roof Covering Materials in Building Materials Directory.

17. **Insulated Concrete** — (Optional, Not Shown) — various types of insulated concrete prepared and applied in the thickness indicated.

A. **Vermiculite Concrete** — Mix consists of 6 cu ft of Vermiculite Aggregate\*, 94 lbs of Portland cement and 6 oz of air entraining agent. Thickness to be 2 in min from the top plane of steel roof deck.

**ELASTIZELL CORP OF AMERICA** — Types MS16-U, MSV 200.

B. **Perlite Concrete** — Mix consists of 6.2 cu ft **Perlite Aggregate\*** to 94 lbs of Portland cement and 1-1/2 pt air entraining agent. Compressive strength 80 psi min.

See **Perlite Aggregate** (CFFX) category for names of Classified companies.

18. **Wall and Partition Facings and Accessories** — (Optional, Not Shown) Sound barrier for use with items 19 and 20: Acoustic Sleeper Pads stapled or adhered to the underside of the subflooring panels spaced 24 in. OC.

**STC ARCHITECTURAL PRODUCTS L L C DBA STC SOUND CONTROL** — Acoustic Sleeper

19. **Structural Cement Fiber Units\*** — (Optional, Not Shown) - (For use with item 18) - Min 3/4 in. thick tongue and groove non-combustible structural cement fiber board loosely laid over concrete.

**ECTEK INTERNATIONAL INC** — Armoroc Panel

**UNITED STATES GYPSUM CO** — USG Structural Panel

**EASI BUILDING PRODUCTS, INC.** — Versaroc

20. **Building Units\*** — (Optional, Not Shown) - (For use with item 18) - Panels loosely laid over concrete.

**DRAGONBOARD USA L L C** — Type DragonBoard, DragonBoard Flooring

**EXTREMEGREEN BUILDING PRODUCTS LLC** — Type 3/4 in. Shiplap Edge Extremegreen™ Board, 5/8 in. Tapered Edge Extremegreen™ Board, 1/2 in. Tapered Edge Extremegreen™ Board.

**\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2019-02-21

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# BXUV.J957 - FIRE-RESISTANCE RATINGS - ANSI/UL 263

## Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

## BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States

## BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States Design Criteria and Allowable Variances

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada Design Criteria and Allowable Variances

### **Design No. J957**

January 02, 2019

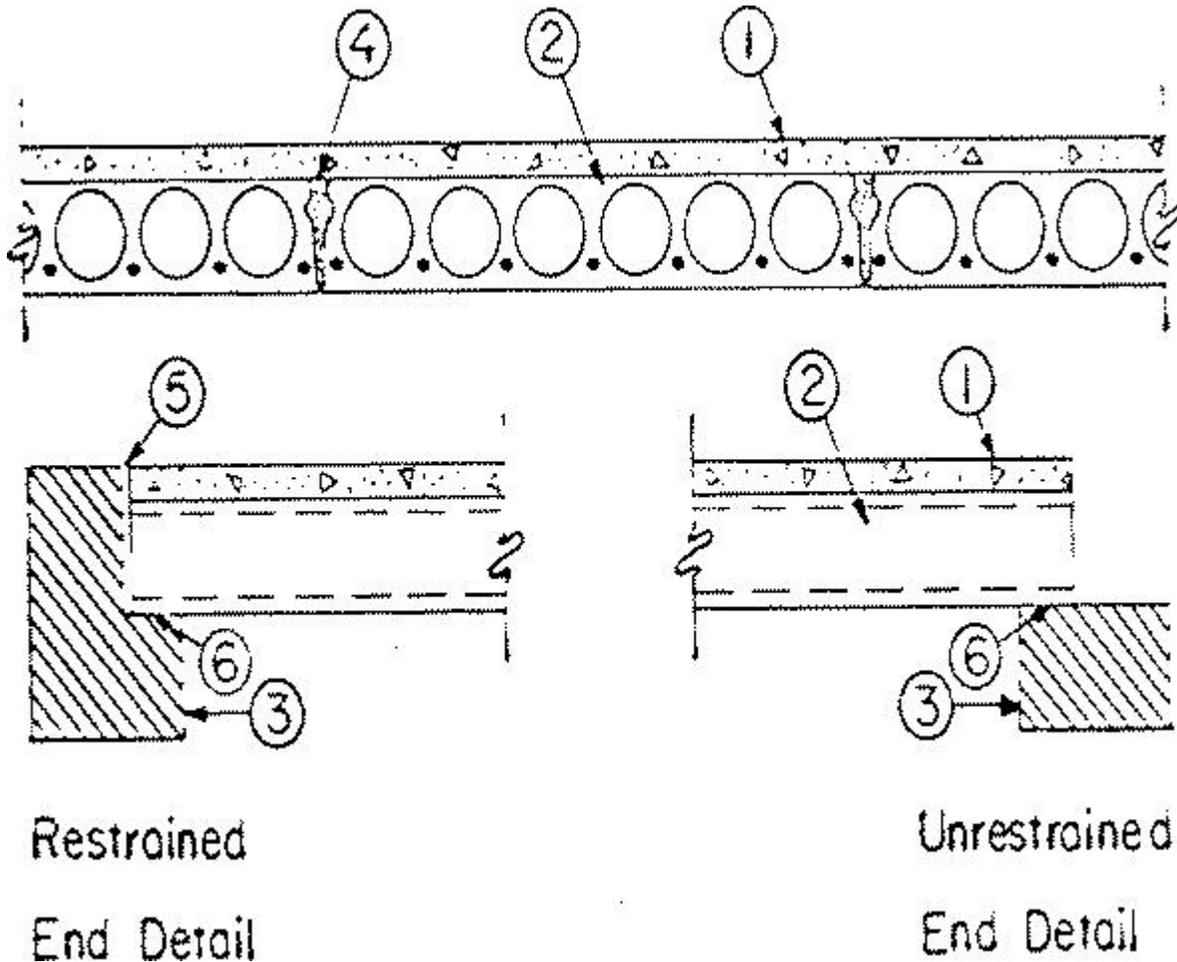
**Restrained Assembly Ratings — 2 and 3 Hr. (See Item 1)**

**Unrestrained Assembly Rating — 1 and 2 Hr.**

**Unrestrained Beam Rating — 1, 1-1/2, 2, 3 (See Items 8, 8A)**

**This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7**

**\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**



1. **Concrete Topping** — 3000 psi compressive strength, 110 to 153 pcf unit weight. Normal weight aggregate.

Rating Hr	Min Thkns In.
2	0
3	1

1A. **Floor Topping Mixture\*** — Alternate to Item 1 - Min 1/2 in. thickness of floor topping mixture having a min compressive strength of 1100 psi. Mixture shall consist of 6.8 gal of water to 80 lbs of floor topping mixture to 1.9 cu ft of sand.

**HACKER INDUSTRIES INC** — Firm-Fill Gypsum Concrete, Firm-Fill 2010, Firm-Fill 3310, Firm-Fill 4010, Gyp-Span Radiant

**Floor Mat Materials\*** — (Optional) — Floor mat material nom 1/8 in. (3 mm) thick loose laid over the precast concrete unit. Floor topping thickness shall be a min of 3/4 in. (19 mm).

**HACKER INDUSTRIES INC** — FIRM-FILL SCM 125

**Alternate Floor Mat Materials - (Optional)** — Floor mat material nom 1/4 in. (6 mm) thick loose laid over the precast concrete unit. Floor topping thickness shall be a min of 1 in. (25 mm).

**HACKER INDUSTRIES INC** — Type FIRM-FILL SCM 250

**Alternate Floor Mat Materials - (Optional)** — Floor mat material nom 3/8 in. (10 mm) thick loose laid over the precast concrete unit. Floor topping thickness shall be a min of 1-1/4 in. (32 mm)

**HACKER INDUSTRIES INC** — FIRM-FILL SCM 400

**Alternate Floor Mat Materials - (Optional)** — Floor mat material nom 3/4 in. (19 mm) thick loose laid over the precast concrete unit. Floor topping thickness shall be a min of 1-1/2 in. (38 mm).

**HACKER INDUSTRIES INC** — Type FIRM-FILL SCM 750

**Metal Lath (Optional)** — For use with 3/8 in. (10 mm), or greater, floor mat materials, 3/8 in. expanded steel diamond mesh, 3.4 lbs/sq yd placed over the floor mat material. Hacker Floor Primer to be applied prior to the placement of the metal lath. When metal lath is used, floor topping thickness a nom 1 in. (25 mm) over the floor mat.

1B. **Floor Topping Mixture\*** — Alternate to Items 1 and 1A - Min 3/4 in. thickness of floor topping mixture having a min compressive strength of 1100 psi. Mixture shall consist of 6.8 gal of water to 80 lbs of floor topping mixture to 1.9 cu ft of sand.

**HACKER INDUSTRIES INC** — Firm-Fill Gypsum Concrete, Firm-Fill High Strength, Gyp-Span Radiant

**Floor Mat Materials\* — (Optional)** — Floor mat material nom 5/64 in. (2 mm) thick adhered to precast concrete unit with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of floor-topping mixture. Floor topping thickness a min 1 in. over the floor mat.

**ECORE INTERNATIONAL INC** — Type QTscu 4002

**HACKER INDUSTRIES INC** — Type Hacker Sound-Mat

**Alternate Floor Mat Materials — (Optional)** — Floor mat material nom 1/4 in. (6 mm) thick adhered to precast concrete unit with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of a min 1-1/4 in. (32 mm) of floor-topping mixture.

**ECORE INTERNATIONAL INC** — Type QTrbm 3006-3

**HACKER INDUSTRIES INC** — Type Hacker Sound-Mat II

**Metal Lath (Optional)** — For use with 3/8 in. (10 mm) floor mat materials, 3/8 in. expanded steel diamond mesh, 3.4 lbs/sq yd placed over the floor mat material. Hacker Floor Primer to be applied prior to the placement of the metal lath. When metal lath is used, floor topping thickness a nom 1-1/4 in. over the floor mat.

1C. **Finish Flooring — Floor Topping Mixture\*** — Min. 3/4 in. thickness of floor topping mixture having a minimum compressive strength of 1500 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

**MAXXON CORP** — Type D-C, GC, GC 2000, L-R, T-F, CT, SS

**RAPID FLOOR SYSTEMS** — Type RF, RFP, RFU, Ortecrete.

**Floor Mat Materials\*** — (Optional)—Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material.

**MAXXON CORP** — Type Acousti-Mat 1/8, Acousti-Mat 1/4, Acousti-Mat 1/4 Premium, Acousti-Mat 3/8, Acousti-Mat 3/8 Premium, Acousti-Mat 3/4, Acousti-Mat 3/4 Premium, Acousti-Top.

**Floor Mat Reinforcement** — (Optional) - Refer to manufacturer's instructions regarding minimum thickness of floor topping for use with floor mat reinforcement.

**Metal Lath (Optional)** — 3/8 in. expanded galvanized steel diamond mesh, 3.4 lbs/sq yd loose laid over the floor mat material.

**Fiber Glass Reinforcement** - (Optional, Not Shown) - 0.015 in. thick PVC coated non-woven fiberglass mesh, 0.368 lbs/sq yd loose laid over the floor mat material.

1D. **Alternate Floor Topping Mixture\*** — Compressive strength to be 1800 psi min. Min. thickness to be 3/4 in. Refer to manufacturer's instructions accompanying the material for specific mix design.

**UNITED STATES GYPSUM CO** — Types LRK, HSLRK, CSD

**USG MEXICO S A DE C V** — Types LRK, HSLRK, CSD

**Floor Mat Materials\*** — (Optional) - Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material.

**UNITED STATES GYPSUM CO** — Types SAM, LEVELROCK® Brand Sound Reduction Board, LEVELROCK® Brand Floor Underlayment SRM-25.

**Alternate Floor Mat Materials\*** — (Optional) - Floor mat material nom 3/8 in. thick loose laid over the subfloor. Floor topping thickness

a min 3/4 in. over the floor mat.  
**GRASSWORX L L C** — Type SC50.

1E. **Alternate Floor Topping Mixture\*** — Compressive strength to be 1000 psi min. Thickness to be 3/4 in. min. Refer to manufacturer's instructions accompanying the material for specific mix design.

**ACG MATERIALS** — Accu-Crete types NexGen, Green, Prime, B, M, and PrePour, AccuRadiant, AccuLevel types G40, SD30, and G50.

**Alternate Floor Mat Material\*** - (Optional) - Floor mat material nominal 2 - 9.5 mm thick loose laid over the subfloor. Floor topping shall be a min of 3/4 in.

**ACG MATERIALS** — AccuQuiet types P80, C40, D13, D-18, D25, DX38, EM.125, EM.125S, EM.250, EM.250S, EM.375, EM.375S, EM.750, and EM.750S.

1F. **Alternate Floor Topping Mixture\*** — Compressive strength to be 1000 psi min. Thickness to be 3/4 in. min. Refer to manufacturer's instructions accompanying the material for specific mix design.

**FORMULATED MATERIALS LLC** — Types FR-25, FR-30, SiteMix, and SiteMix SL.

**Alternate Floor Mat Material\*** — (Optional) — Floor mat material nominal 2 - 9.5 mm thick loose laid over the subfloor. Floor topping shall be a min of 3/4 in.

**FORMULATED MATERIALS LLC** — Types M1, M2, M3, R1, and R2.

1G. **Alternate Floor Topping Mixture\*** — Compressive strength to be 2100 psi min. Thickness to be 3/4 in. min. Refer to manufacturer's instructions accompanying the material for specific mix design.

2. **Precast Concrete Units\*** — Nom 8, 10, 12 or 14 in. thick units. Normal weight aggregate. Cross section similar to the above illustration.  
**BOCCELLA PRECAST L L C**

**HOLLOWCORE INC**

3. **End Details** — Restrained and unrestrained.

4. **Joint** — Clearance between slabs at bottom, full length, 1/16 in. min, 5/16 in. max, grouted full length with sand-cement grout (3500 psi min compressive strength) to a max depth of 4-1/2 in. This depth may be maintained by placing a compressible material in the bottom of the joint before applying grout.

Note: A 3/4 in. lateral expansion joint to be provided the full length and depth of the slabs every 14 ft. Expansion should be obtained with noncombustible, compressible material, for example, 24 sheets of 1/16 in. thick ceramic fiber paper (total thickness equals 1-1/2 in.).

5. **End Clearance** — Clearance for expansion at each end of slabs shall be equal to (3/16 plus or minus 1/16 in.) L/17 in., where "L" is equal to length of span in feet.

6. **Min Bearing** — 1-1/2 in.

7. **Beam** — (Optional, Not Shown) — W8x28 min size. The Precast Concrete Units shall be welded to the top flange of the beam by means of weld plates (spaced 48 in. OC max) incorporated in the Units.

8. **Spray-Applied Fire Resistive Materials\*** — (Not Shown) — Applied by mixing with water and spraying in one or more coats the final thicknesses as shown in the table below, on the steel beam following the beam contour. Surfaces of the beam shall be clean and free of dirt, loose scale and oil. Min avg and min ind density of 15/14 pcf respectively. Min avg and min ind density of 22/19 pcf respectively for Types Z-106, Z-106/G, Z-106/HY. Min avg and min ind density of 19/18 pcf respectively for Type 7GP and 7HD. For method of density determination, refer to Design Information Section.

Restrained Assembly Rating Hr	Unrestrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Thkns on Beam In.
2	1	1	7/16

2	1-1/2	1-1/2	3/4
2	2	2	1
3	1-1/2	1-1/2	3/4
3	2	2	1
3	2	3	1-5/16

**ARABIAN VERMICULITE INDUSTRIES** — Types MK-10 HB, MK-10 HB Extended Set.

**GCP KOREA INC** — Types MK-6/CBF, MK-6/ED, MK-6/HY, MK-6/HB, MK-6s, MK-10 HB, MK-10 HB Extended Set, Monokote Acoustic 1, Monokote Acoustic 5, Z-106, Z-106/G.

**PYROK INC** — Type LD.

**SOUTHWEST FIREPROOFING PRODUCTS CO** — Types 4, 5, 5EF, 5GP, 5MD, 7GP, 7HD, 8EF, 8GP, 8MD, 9EF, 9GP, 9MD.

**GCP APPLIED TECHNOLOGIES INC** — Types MK-6/HY, MK-6/HB, MK-6s, MK-10 HB, MK-10 HB Extended Set, Monokote Acoustic 1, Monokote Acoustic 5, RG, Z-106, Z-106/G, Z-106/HY.

8A. **Spray-Applied Fire Resistive Materials\*** — (Not Shown) - As an alternate to Item 8 — Applied by spraying with water to the final thickness as shown in the table below, to the steel beam following the beam contour. Surfaces of the beam shall be clean and free of dirt, loose scale and oil. Min avg and min ind density of 13 and 11 pcf, respectively for Type D-C/F, II, or II HS. Min avg and min ind densities of 22 and 19 pcf, respectively, for Type HP. For method of density determination, refer to Design Information Section, Sprayed Material.

Restrained Assembly Rating Hr	Unrestrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Thkns on Beam In.
2	1	1	3/8
2	1-1/2	1-1/2	11/16
2	2	2	1
3	1-1/2	1-1/2	11/16
3	2	2	1
3	2	3	1-5/8

**ISOLATEK INTERNATIONAL** — Type D-C/F, HP, II, or II HS.

8B. **Spray-Applied Fire Resistive Materials\*** — (Not Shown) - As an alternate to Item 8 and 8A — Applied by spraying with water to the final thickness as shown in the table below, to the steel beam following the beam contour. Surfaces of the beam shall be clear and free of dirt, loose scale and oil. Minimum average and minimum individual density of 15 and 14 pcf, respectively, for Types 300, 300AC, 300ES, 300HS, 300N, 3000, 3000ES and SB. For Types 400AC and 400ES min average and min individual density of 22 and 19 pcf, respectively. For method of density determination, refer to Design Information Section, Sprayed Material.

Restrained Assembly Rating, Hr	Unrestrained Assembly Rating, Hr	Unrestrained Beam Rating, Hr	Min Thkns On Beam In.
2	1	1	5/16
2	1-1/2	1-1/2	1/2

2	2	2	11/16
3	1-1/2	1-1/2	1/2
3	2	2	11/16
3	2	3	1-1/16

**BERLIN CO LTD** — Types 300, 300ES, 300N or SB.

**GREENTECH THERMAL INSULATION PRODUCTS MFG CO L L C** — Types 300, 300AC, or 400AC.

**ISOLATEK INTERNATIONAL** — Types 300, 300AC, 300ES, 300HS, 300N, SB, 400AC, 400ES, 3000 or 3000ES.

**NEWKEM PRODUCTS CORP** — Types 300, 300ES, 300N or SB.

8C. **Spray-Applied Fire Resistive Materials\*** — (Not Shown) As an alternate to Item 8, 8A, and 8B — Applied by spraying with water to the final thickness as shown in the table below, to the steel beam following the beam contour. Surfaces of the beam shall be clear and free of dirt, loose scale and oil. Minimum average and minimum individual density of 17.5 and 16 pcf, respectively for Type 300TW. Minimum average and minimum individual density of 22 and 19 pcf, respectively for Type 400. For method of density determination, refer to Design Information Section, Sprayed Material.

Restrained Assembly Rating, Hr	Unrestrained Assembly Rating, Hr	Unrestrained Beam Rating, Hr	Min Thkns On Beam In.
2	1	1	5/16
2	1-1/2	1-1/2	1/2
2	2	2	11/16
3	1-1/2	1-1/2	1/2
3	2	2	11/16
3	2	3	1-1/16

**GREENTECH THERMAL INSULATION PRODUCTS MFG CO L L C** — Type 400.

**ISOLATEK INTERNATIONAL** — Type 300TW or Type 400.

**NEWKEM PRODUCTS CORP** — Type 400.

The thickness of Spray-Applied Fire Resistive Materials shown in the table below are applicable when the beams are supporting solid subfloors or floor assemblies containing only fluted floor or form units.

Rating Hr	Restrained Beam Rating Hr	Unrestrained Beam Rating Hr
1	7/16	7/16
1-1/2	1/2	3/4
2	13/16	1
3	1-5/16	1-5/16

4	1-5/8	1-5/8
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**CARBOLINE CO** — Types 15, 15HY, 22.

8D. **Spray-Applied Fire Resistive Materials\*** — (Not Shown) As an alternate to Item 8, 8A, 8B and 8C — Applied by mixing with water and spraying in one or more coats the final thicknesses as shown in the table below, on the steel beam following the beam contour. Surfaces of the beam shall be clean and free of dirt, loose scale and oil. Min avg and min ind density of 15/14 pcf respectively. Min avg and min ind density of 22/19 pcf respectively for Types Z-106, Z-106/G, Z-106/HY. For method of density determination, refer to Design Information Section.

<b>Restrained Assembly Rating Hr</b>	<b>Unrestrained Assembly Rating Hr</b>	<b>Unrestrained Beam Rating Hr</b>	<b>Thkns on Beam In.</b>
2	1	1	3/8
2	1-1/2	1-1/2	5/8
2	2	2	7/8
3	1-1/2	1-1/2	5/8
3	2	2	7/8
3	2	3	1-7/16

**GCP KOREA INC** — Types MK-6CBF, MK-6ED, MK-6HY, MK-6HY Extended Set, MK-6/HB, MK-6s, MK-10 HB, MK-10 HB Extended Set, Z-106, Z-106/G.

**GCP APPLIED TECHNOLOGIES INC** — MK-6HY, MK-6HY Extended Set, MK-6/HB, MK-6s, MK-10 HB, MK-10 HB Extended Set, RG, Z-106, Z-106/G, Z106/HY.

9. **Metal Lath** — (Not Shown) — Required when Type 7HD is applied - Metal lath shall be 3/8 in. expanded diamond mesh, weighing 3.4 lb per sq yd. Secured to underside through steel washers with an outside diam of 1/2 in. with fasteners spaced 12 in. OC in both directions with lath edges overlapped approx 3 in.

**\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

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