



OFFICE OF COUNTY MAYOR GLENN JACOBS

Procurement Division, 1000 N. Central Street, Suite 100, Knoxville, TN 37917

**Knox County Procurement Division
Addendum I to Invitation for Bid 3505
Innovative School Model Renovations – Phase 1**

Addendum Date: January 18, 2024

Buyer: Ben Sharbel

Opening Date: January 23, 2024 at 4:00 PM

Total Page(s): Twelve (12)

Notes and Clarifications:

1. Please see Addendum I from DIA.

End of Addendum I.

A handwritten signature in blue ink that reads "Ben Sharbel".

Ben Sharbel, CPPO, CPPB
Supervisor of Property Development & Asset Management
Knox County Procurement Division



Design Innovation

ARCHITECTS + INTERIORS + PLANNING

LEWIS GROUP ARCHITECTS

ADDENDUM #01

Project Name: **Knox County Schools ISM Phase 01**
Project No: **DIA_22100**

File No.: J04

Date: January 17, 2023

To: All Bidding Contractors of Record

Owner: Knox County Schools
Attention: Knox County Procurement Division
1000 N. Central Street, Suite 100
Knoxville, TN 37917

Architect: Design Innovation (DIA)
402 S. Gay Street, Suite 201
Knoxville, TN 37902

This Addendum forms a part of the Contract Documents and modifies the original Bidding Documents dated December 01, 2023, as noted below. The items listed below shall supersede the previous information in the previously issued Bidding Documents and shall be incorporated into the entire Work described therein. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject Bidder to disqualification.

This Addendum consists of three (3) pages and the attached documents as listed below.

Attachments:

1. Specification Sections: 13 31 12
2. Drawings:
 - a. Halls Middle School: A000, A101

Changes to prior Addenda:

3. None.

Changes to Bidding Requirements:

4. None

Changes to Agreement:

5. None

Changes to Conditions of the Contract:

6. None

Changes to Specifications:

7. Section 02 41 19: Part 3.5 SELECTIVE DEMOLITIONS GENERAL, A.5. to be revised as follows, "Maintain fire watch during and for at least **30 minutes** after flame-cutting operations.
8. Section 06 10 00: Part 2.1, A.2 to be revised as follows, "For exposed lumber indicated to receive a stained or natural finish, **omit grade stamp and provide certificates of grade compliance issued by grading agency.**"
9. Section 06 10 00: Part 2.3, A to be revised as follows, "Equipment Backing Panels: Plywood, DOC PS1, Exterior, A-C, **fire-retardant treated**, in thickness indicated or, if not indicated, not less than **3/4-inch** nominal thickness.

[https://diarchitects-my.sharepoint.com/personal/jarellano_dia-arch_com/Documents/22100 2024-01-17 addendum 01.docx](https://diarchitects-my.sharepoint.com/personal/jarellano_dia-arch_com/Documents/22100%202024-01-17%20addendum%2001.docx)

402 S. Gay Street, Suite 201, Knoxville, Tennessee 37902 ph 865.637.8540 fx 865.544.3840 www.dia-arch.com

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10. Section 08 11 13: Part 2.3, B.1.g to be revised as follows, "Fire-Rated Core: Manufacturer's standard vertical steel stiffener core for fire-rated doors."
 - a. Revised Part 2.9.D.1 to be revised as follows, "Provide stops and moldings flush with face of door, and with **square** stops.
11. Section 08 14 16:
 - a. Part 2.3 A.1 to be revised as follows, "Provide **labels** from **AWI** certification program indicating that doors comply with requirements of grades specified."
 - b. **Delete subsections a. and b.** under Part 2.3, A.1 Quality Standard.
 - c. Part 2.4, A.2 Performance Grade: ANSI/WDMA I.S 1A **Extra Heavy Duty**.
 - d. Part 2.4, A – **Delete Section 3. Performance Grade by Location**.
12. Section 09 68 13: Part 3.3, Section B Installation Method: **As recommended in writing by carpet tile manufacturer.**
13. Section 12 32 16:
 - a. Part 2.2.C Design: selection to be **Frameless**.
 - b. Part 2.2.C.1 **Option to be Flush Overlay**.

Changes to Drawings:

14. Halls Middle School, sheet A000 – Wall type S6 revised, notes added
15. Halls Middle School, sheet A101 – Detail 5 & Plan 3 revised.

Questions & Answers / Clarifications:

(Note these are the questions received from Bidders. These answers do amend the documents and are binding.)

GENERAL

1. During the pre-bid meeting there was mention of flooring materials being supplied by owner. What materials for flooring will be provided by Owner and installed by contractor?
Response: LVP, LVT, Carpet Tile, and Mastic will be provided by Owner.
2. Specification section 133123 Tensioned Fabric Structures is currently missing. Will this be provided?
Response: Yes, this has been included with Addendum #01.
3. Can work occur during school hours?
Response: Yes, Contractor to coordinate with KCS Facilities.
4. Can more than one school be under construction at the same time?
Response: Yes.
5. Will the wall mounted white board be provided by Owner? If not, what are dimensions?
Response: Yes, wall mounted white boards will be provided by Owner.
6. Is E&O Miscellaneous Policy required being that this is Construction, not design?
Response: No. These are not required. The insurance items required are indicated on the checklist as "yes" in column 1 of the document.
7. Is Garage Liability & Garagekeeper Liability Required?
Response: No. These are not required. The insurance items required are indicated on the checklist as "yes" in column 1 of the document.

FARRAGUT MIDDLE SCHOOL

8. The electrical plans don't show any new electrical for the new print shop equipment. Can you confirm this is the intent?
Response: Yes, this work has already been performed
9. In regard to the install of print shop equipment, will KCS move the equipment into the print shop?
Response: GC shall not be responsible for moving equipment into print shop - Owner shall be responsible for all aspects of equipment procurement, delivery, & installation/set up.
10. Can you confirm location of new Condensing Unit?
Response: Locate as shown on sheet A101

HALLS MIDDLE SCHOOL

11. Can you confirm the wall type of the new wall in library?
Response: See revised sheet A000
12. What is details for Book Drop?
Response: See revised sheet A101

BEARDEN MIDDLE SCHOOL

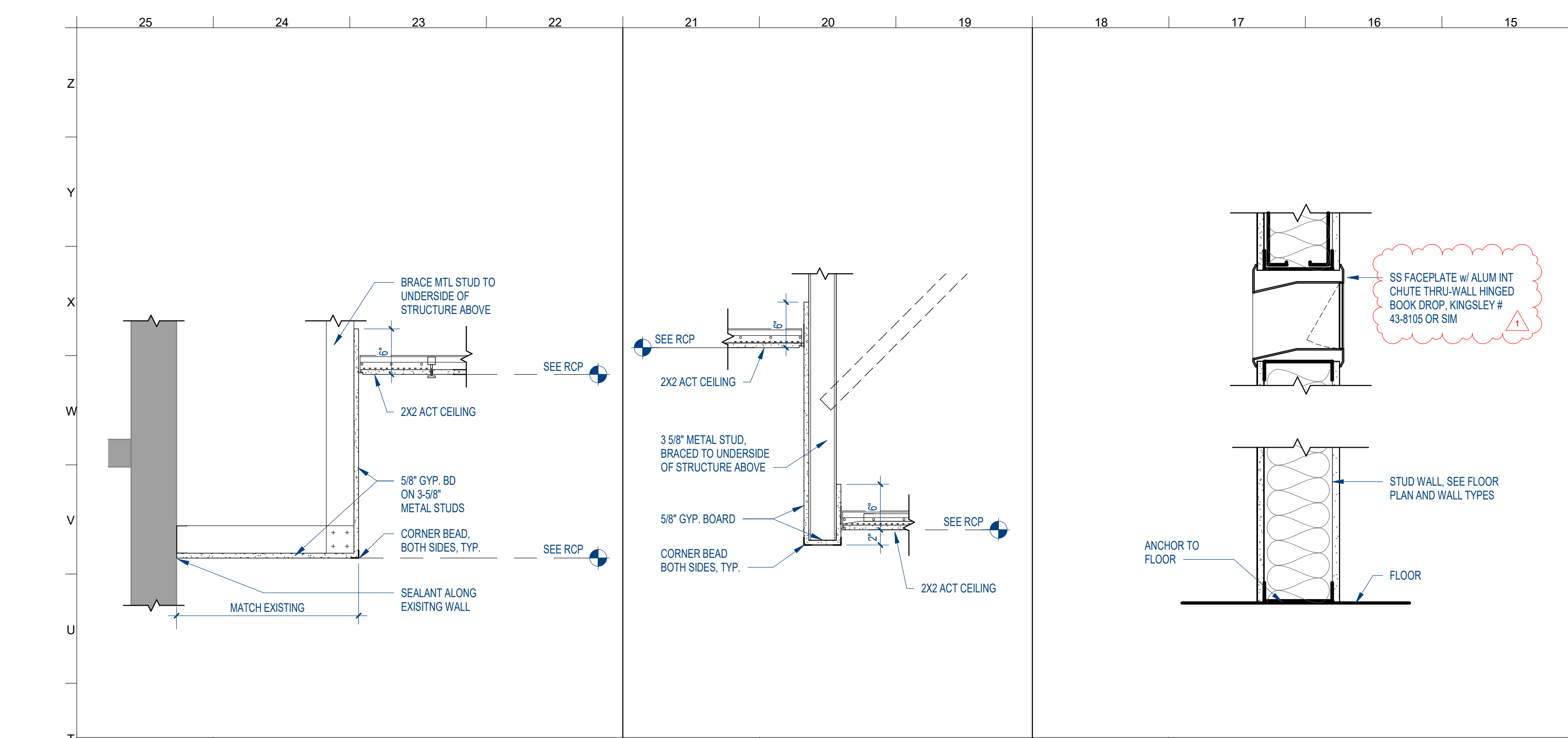
13. Please verify wall height at new IT Closet.
Response: Wall height of new IT Closet to match adjacent door recess, approximately 8'-0" tall.
14. On Sheet A101, what is keyed note 04 referring to? This is blacked out and not legible.

Response: Keyed Note #04: EXISTING PLATFORM TO REMAIN IN NEW IT CLOSET

15. On Sheet A501, the Door Schedule depicting Door 105B and 105C to have frame type 3. Only two types are listed in the Frame Types detail. Please advise what is desired here.

Response: Doors 105B and 105C to have frame type #1. Frame type #3 is Not Used.

End of Addendum



ROOM FINISH SCHEDULE						
ROOM NO.	ROOM NAME	FLOOR FINISH	BASE FINISH	WALL FINISH	CEILING MATERIAL	NOTES
101	AUDIO-VISUAL STUDIO	LVT-1	RB-1	PT-1	ACT-1	ALL SOFFITS TO BE PAINTED
201	CORRIDOR	LVT-1	RB-1	PT-1	ACT-1	NEW ACT TO MATCH EXISTING CEILING HEIGHT IN ADJACENT HALL
202	LIBRARY	CPT-1	RB-1	PT-1	-	ALL SOFFITS TO BE PAINTED

ROOM FINISH LEGEND					
DESIGNATION	MATERIAL	MANUFACTURER	STYLE NAME OR NO. (if)	COLOR NAME	NOTES
ACOUSTIC CEILING TILE					
ACT-1	ACOUSTIC CEILING TILE	ARMSTRONGS	24" X 24"	DUNE	
CARPET					
CPT-1	CARPET TILE	KINETEX			
GLAZING					
GL-1	GLAZING				ALL NEW GLAZING TO BE TEMPERED
PAINT					
PT-1	PAINT				TO BE SELECTED BY ARCHITECT
PT-2	PAINT				TO BE SELECTED BY ARCHITECT
RESILIENT					
LVT-1	LUXURY VINYL TILE	J+J FLOORING			
RB-1	RUBBER BASE				
TRANSITION					
TR-1	TRANSITION	SCHLUTER	VINPRO-U	BRUSHED CHROME	

GENERAL NOTES

FLOOR PLANS

A CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS CONCERNING THE SCOPE OF WORK OF THIS PROJECT PRIOR TO COMMENCING WITH THE ASSOCIATED WORK. IN THE EVENT THE DIMENSIONS ARE IN QUESTION OR IF ANY DISCREPANCIES ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT FOR CLARIFICATION PRIOR TO PROCEEDING WITH THE WORK. FAILURE TO DO SO CONSTITUTES THE CONTRACTOR'S ACCEPTANCE OF THE WORK AS SHOWN.

B DIMENSIONS ARE TO FACE OF STUD OR FACE OF MASONRY / CONCRETE, UNLESS NOTED OTHERWISE.

C THE ROUGH OPENING OF A NEW DOOR GRAPHICALLY SHOWN IN THE CORNER OF A ROOM UNDIMENSIONED SHALL BE 2" OR 3" IN MASONRY WALLS AS GRAPHICALLY INDICATED ON PLANS) OR 6" IN STUD FRAMED WALLS (AS GRAPHICALLY INDICATED ON PLANS) FROM THE INSIDE CORNER, UNLESS NOTED OR DIMENSIONED OTHERWISE.

D THE ROUGH OPENING OF A NEW DOOR GRAPHICALLY SHOWN IN THE CENTER OF A WALL UNDIMENSIONED SHALL BE ENTERED ON WALL, UNLESS NOTED OR DIMENSIONED OTHERWISE.

E IN SPACES OPEN TO EXPOSED STRUCTURE ABOVE, PERIMETER WALLS OF SPACE SHALL EXTEND TO UNDERSIDE OF ROOF / FLOOR DECKING ABOVE.

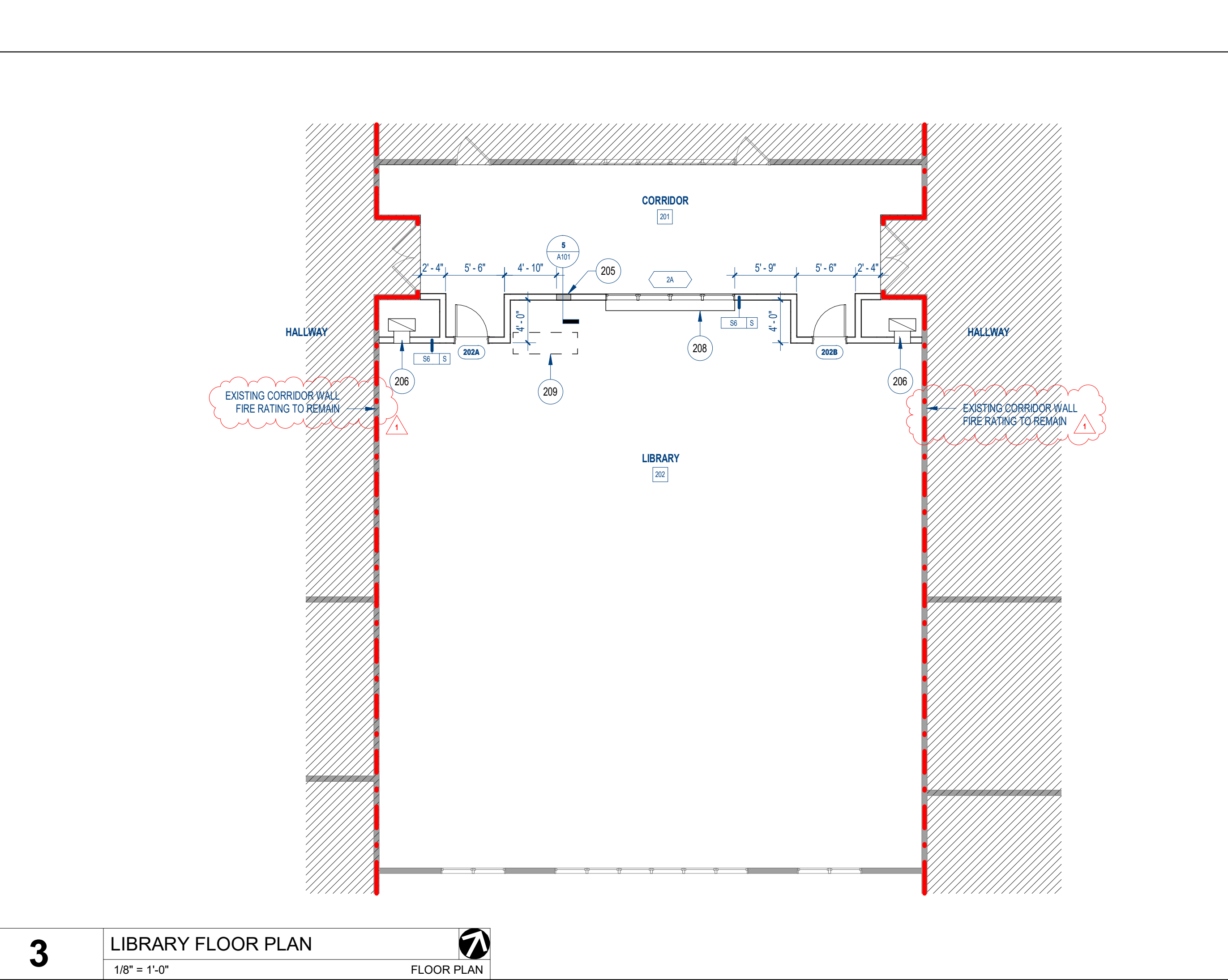
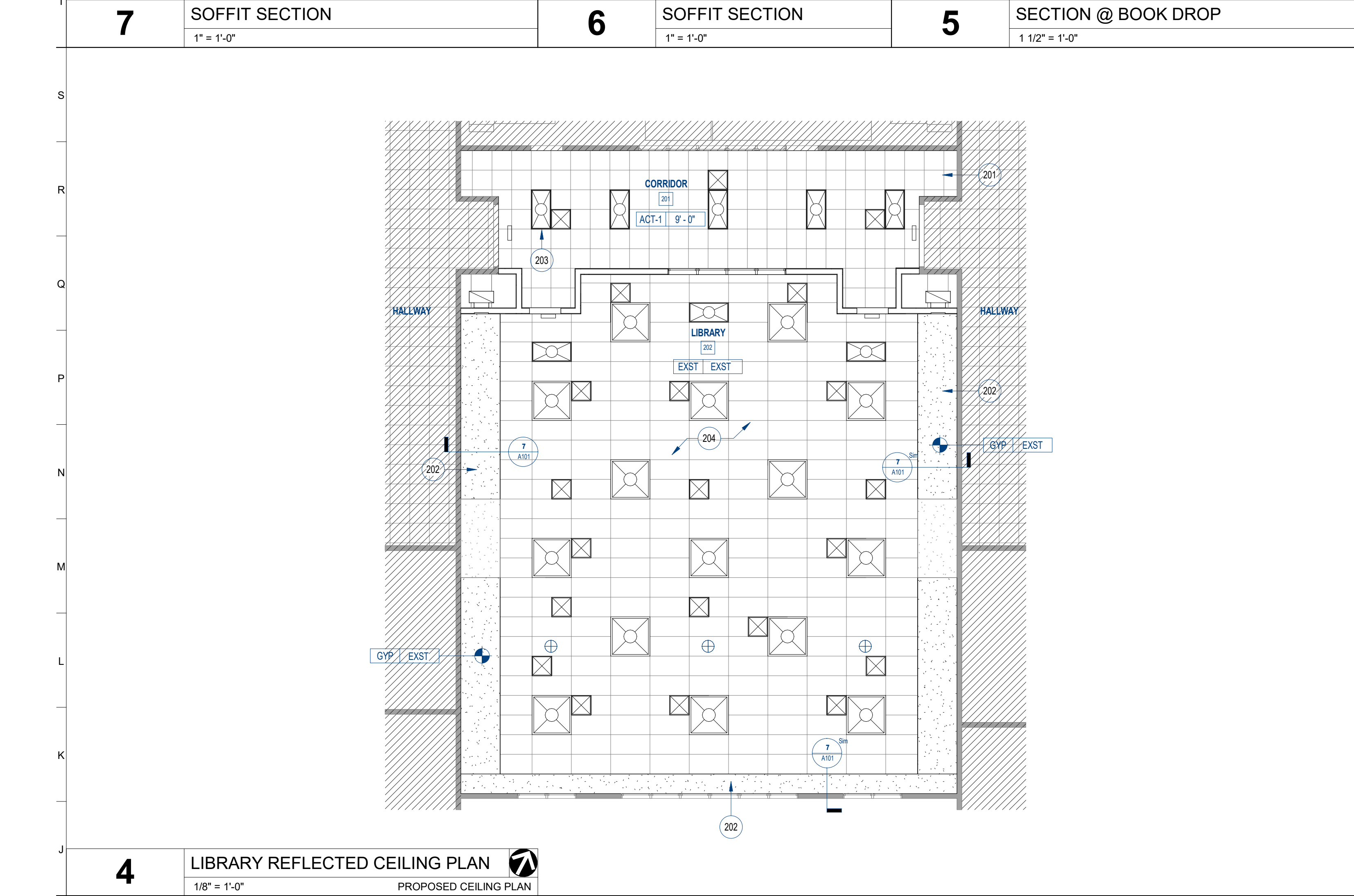
F ALL WALLS ARE TO BE EXTENDED TO UNDERSIDE OF DECK (ROOF OR FLOOR), UNLESS NOTED OTHERWISE.

G ALL LOCATIONS WHERE BRICK VENEER BUTTS INTO CMU OR CAST STONE, A SOFT JOINT WITH BACKER ROD AND SEALANT SHALL BE PROVIDED.

H ALL EXPOSED STEEL SHALL BE FULLY AND COMPLETELY PAINTED WITH HIGH PERFORMANCE & FIRE RESISTIVE COATINGS PRIOR TO INSTALLATION, UNLESS NOTED OTHERWISE. REFER TO STRUCTURAL DRAWINGS & SPECIFICATIONS.

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GENERAL NOTES

REFLECTED CEILING PLANS

A ALL CEILING HEIGHTS ARE ABOVE FINISH FLOOR ELEVATION.

B COORDINATE INSTALLATION OF SPRINKLER HEADS WITH ARCHITECT UPON SHOP DRAWING SUBMITTAL.

C DIMENSIONS ON REFLECTED CEILING PLAN ARE SHOWN TO FACE OF GYPSUM BOARD UNLESS NOTED OTHERWISE.

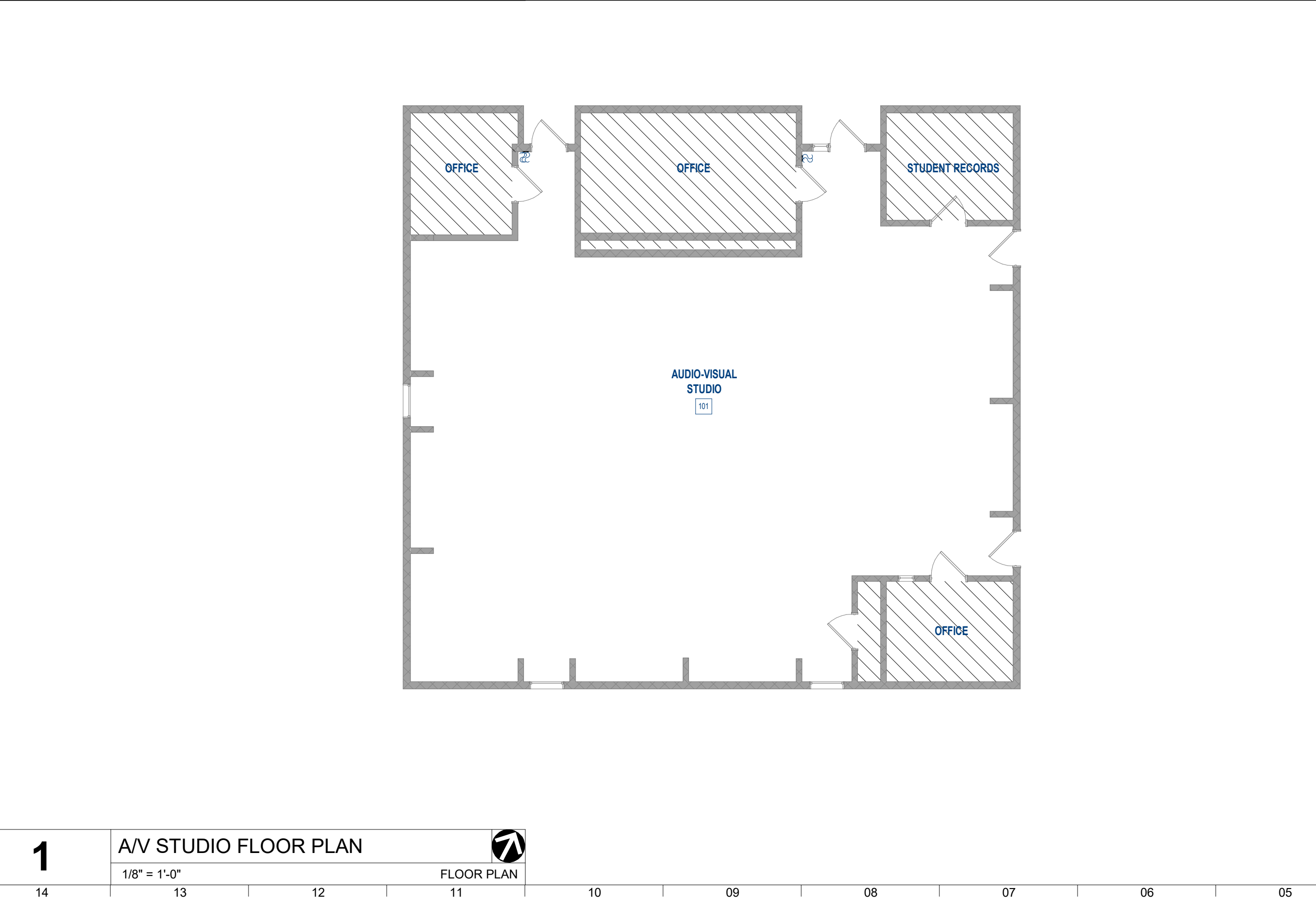
D ALL EXIT SIGNS, LIGHT FIXTURES, SPEAKERS, AUDIO VISUAL DEVICES, SMOKE DETECTORS AND/OR OTHER DEVICE LOCATIONS SHOWN IN THE REFLECTED CEILING PLAN SHALL BE LOCATED IN THE CENTER OF THE CEILING TILE OR PANELS UNLESS NOTED OTHERWISE.

E PROVIDE SEISMIC BRACING AS REQUIRED BY LOCAL CODE.

GRAPHIC LEGEND			
NOT TO SCALE		REFLECTED CEILING PLANS	
	21 - 21 x 21 ACOUSTIC CEILING TILE		PENDANT FIXTURE
	2 x 4 FLUORESCENT FIXTURE		SLOT DIFFUSER
	2 x 2 FLUORESCENT FIXTURE		DIFFUSER - SUPPLY
	TRACK LIGHT		DIFFUSER - RETURN
	PENDANT FIXTURE		EXIT SIGN

KEYNOTES		
NO.	REV. DESCRIPTION	DATE
1	REV. DESCRIPTION	yyyy-mm-dd

KEYNOTES		
CEILING PLAN KEYNOTES		
105	RESET EXISTING LIGHTS IN NEW CEILING. SEE ELECTRICAL DRAWINGS	
201	NEW 2X2 ACT CEILING. HEIGHT TO MATCH EXISTING ADJACENT HALLWAY CEILING	
202	NEW GYP BOARD SOFFIT. HEIGHT TO MATCH EXISTING	
203	NEW AND/OR EXISTING LIGHT FIXTURE(S) IN NEW CEILING GRID	
204	RESET EXISTING ACT CEILING, LIGHTS AND HVAC THIS AREA	



KEYNOTES

FLOOR PLAN KEYNOTES

205 NEW THRU-WALL BOOK DEPOSIT / DROP OFF, VERIFY OPENING SIZE W/ MFR

206 RELOCATED LOW WALL RETURN IN NEW FULL HEIGHT CMU WALL

208 EXISTING SHELVING TO BE RELOCATED ALONG NEW WALL

209 NEW DESK N.L.C. - RUN POWER TO CHARGING STATION, SEE ELEC. DRAWINGS

KEYNOTES

CEILING PLAN KEYNOTES

105 RESET EXISTING LIGHTS IN NEW CEILING. SEE ELECTRICAL DRAWINGS

201 NEW 2X2 ACT CEILING. HEIGHT TO MATCH EXISTING ADJACENT HALLWAY CEILING

202 NEW GYP BOARD SOFFIT. HEIGHT TO MATCH EXISTING

203 NEW AND/OR EXISTING LIGHT FIXTURE(S) IN NEW CEILING GRID

204 RESET EXISTING ACT CEILING, LIGHTS AND HVAC THIS AREA

KEY PLAN

NOT TO SCALE

A101

A04

PROJECT DATE 2023-12-01

PROJECT NUMBER 22100

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SHEET DESCRIPTION
FLOOR PLANS,
REFLECTED CEILING
PLANS & SCHEDULES

11/17/2024 10:57:02 AM

RENOVATIONS FOR KNOX COUNTY SCHOOLS:
HALLS MIDDLE SCHOOL
4317 E EMORY RD. KNOXVILLE, TN 37938

SECTION 13 31 23 – TENSIONED FABRIC STRUCTURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
1. Section includes a tensioned fabric canopy system as shown on Drawings and specified in this Section.
 2. Architect's drawings indicate design intent with respect to sizes, shapes, and configurations of the tensioned fabric canopy. Provide all components and accessories required for complete tensioned fabric canopy system, whether or not specifically shown or specified.
 3. The tensioned fabric structure will assume bolted/pinned connections for field assembly. No field welding will be permitted.
- B. The tensioned fabric structure Subcontractor shall be responsible for the structural design, detailing, fabrication, supply, and installation of the Work specified herein. The intent of this specification is to establish in the first instance an undivided, single-source responsibility of the Subcontractor for all of the foregoing functions.
- C. All element sizes, material strengths, forces and quantities shown on the contract documents are to be taken as a developed concept. Final structural analysis and design are the responsibility of the subcontractor. The subcontractor is responsible at the time of bid to determine any additional costs related to their design and member sizing for the fabric roof.
- D. Subcontractor's Work shall include the structural design, supply, fabrication, shipment, and erection of the following items:
1. The architectural membrane as indicated on the drawings and in these specifications.
 2. Cables and fittings.
 3. Perimeter, catenary, and sectionalized aluminum clamping system.
 4. Structural steel, including masts, trusses, struts, and beams as indicated on the drawings.
 5. Fasteners and gasketing.

1.2 REFERENCES

- A. Reference Standards: Except as otherwise shown or noted, all work shall comply with the requirements of the following codes and standards:
1. American Institute of Steel Construction (AISC).
 - a. Specifications for the Design, Fabrication, and Erection of Structural Steel for Buildings.
 - b. Code of Standard Practice for Steel Buildings and Bridges.
 - c. Specification for Structural Steel Buildings – Allowable Stress Design and Plastic Design.
 - d. Specification for Allowable Stress Design of Single-angle Members.
 - e. Seismic Provisions for Structural Steel Buildings.
 2. American Society of Civil Engineers.
 - a. ASCE 19: Structural Applications of Steel Cables for Buildings.
 3. American Society of Testing and Materials (ASTM).
 - a. ASTM A586: Standard Specifications for Zinc-Coated Steel Structural Strand.
 - b. ASTM A603: Standard Specifications for Zinc-Coated Steel Structural Wire Rope.
 - c. ASTM D4851-88: Standard Test Methods for Coated and Laminated Fabrics for Architectural Use.
 - d. ASTM E84: Standard Test Method for Surface Burning Characteristics of Building Materials.
 - e. ASTM E108: Standard Test Methods for Fire Test and Roof Coverings.
 - f. ASTM E136: Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750 degrees C.

- g. ASTM C423: Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.
- h. ASTM E424: Standard Test Method for Solar Energy Transmittance and Reflectance of Sheet Materials.
- 4. American Welding Society (AWS).
 - a. AWS D1.1: Structural Welding Code.
 - b. AWS 2.4: Symbols for Welding and Nondestructive Testing.
- 5. Aluminum Association
 - a. Specifications for Aluminum Structures
- 6. National Fire Protection Association (NFPA).
 - a. NFPA 701: Standard Methods for Fire Tests for Flame Propagation of Textiles and Films
- 7. Steel Structures Painting Council (SSPC).
 - a. Steel Structures Painting Manual, Volumes 1 and 2.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include styles, material descriptions, construction details, fabrication details, dimensions of individual components and profiles, hardware, fittings, mounting accessories, features, and finishes for tensioned fabric structures.
 - 2. Include rated capacities, light transmissions, and operating characteristics of furnished specialties and accessories.
- B. Design Drawings:
 - 1. Include plans, elevations, sections, mounting heights, and frame assembly details.
 - 2. Preliminary member sizes with wall thickness TBD.
 - 3. Preliminary footing layout and foundation design with final depth TBD.
 - 4. Show intended fabric attachment hardware and details.
 - 5. Identify direction, details and locations of fabric seams.
 - 6. Show details of fabric membrane dimensions including length of spans, sag in curvature and actual shaded area.
- C. Engineered Drawings (submit after Design Drawings have been approved):
 - 1. Calculations with Wet Stamp seal of a Professional Engineer with a license in the same state as the project location.
 - 2. Engineering Drawings with Wet Stamp seal of a Professional Engineer with a license in the same state as the project location.
 - 3. Include plans, elevations, sections, mounting heights, and frame assembly details.
 - 4. Provide frame member sizes and required wall thicknesses.
 - 5. Identify all welding requirements.
 - 6. Detail all bolted and/or pin connections for frame assembly.
 - 7. Identify required sizes of bolts, pins, plates and tubing.
 - 8. Verify the fabric meets minimum engineering requirements.
 - 9. Detail fabric attachment methods and identify thickness of all membrane plates, clamps and other attachment components.
 - 10. Call out all cable sizes and pretension requirements.
 - 11. Submit anchor-bolt plans before foundation work begins. Include location, diameter, and projection of anchor bolts required to attach the tensioned fabric structures to foundation. Indicate column reactions at each location.
- D. Samples for Initial Selection: Electronic file of available frame finish colors.
- E. Samples for Verification: for the following:
 - 1. Fabric: Qty (3) 8 ½" x 11" samples of fabric as selected by Architect.
 - 2. Frame Finish: Qty (3) Sample chips, not less than 2" x 3" in size.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer, Subcontractor, and professional engineer.
- B. Welding certificates.
- C. Sample Warranty: for fabric warranty.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For tensioned fabric structures to include in operation and maintenance manuals.
 - 1. Including the following:
 - a. Methods for maintaining tensioned fabric structure fabrics and finishes.
 - b. Precautions about cleaning materials and methods that could be detrimental to fabrics, finishes, and performance.

1.6 QUALITY ASSURANCE

- A. Subcontractor Qualifications: Shop that employs skilled workers who custom-fabricate tensioned fabric structures similar to those required for this Project and whose products have a record of successful in-service performance.
 - 1. Subcontractor's responsibilities include fabricating and installing tensioned fabric structures and providing professional engineering services needed to assume engineering responsibility.
 - 2. Subcontractor must have proven record of at least (10) successful projects of similar size and similar specified fabric material.
 - 3. Subcontractor must have been in continuous operation as a professional tensioned fabric structure manufacturer for minimum of (5) years prior to contract.
 - 4. Subcontractor's products must be completely manufactured entirely in its own factory by its own employees, including powder-coating, thereby ensuring complete quality control. Subcontractor must certify that no aspect of its production, including powder-coating, is contracted to third parties.

1.7 FIELD CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit installation of tensioned fabric structure in exterior locations to be performed according to Subcontractors' written instructions and warranty requirements.
- B. Field Measurements: Where tensioned fabric structure installation is indicated to fit to other work, verify dimensions of other work by field measurements before fabrication and indicate measurements on Shop Drawings. Allow clearances for fenestration operation throughout the entire operating range. Notify Architect of discrepancies. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

1.8 WARRANTY

- A. Warranty Period, on all upright posts, cables, and tensioning plates: 20 year warranty.
- B. Warranty Period, Fabric material including stitching thread against degradation, cracking or material breakdown resulting from ultraviolet exposure: 10 year warranty.
- C. Warranty Period, powder-coating: 1 year warranty.

PART 2 - PRODUCTS

TENSIONED FABRIC STRUCTURES

2.1 MANUFACTURERS

- A. Basis-of-Design: Subject to compliance with requirements, provide the tensioned fabric structures designed, engineered, fabricated and installed by the following:
 - 1. Shade Systems, Inc.: 4150 S.W. 19th Street, Ocala, FL 34474
 - 2. Or Equal.
- B. Source Limitations: Obtain tensioned fabric structures from single source from single Subcontractor.

2.2 DESCRIPTION

- A. General: Provide a tensioned fabric structure system that complies with requirements specified herein by testing the Subcontractor's corresponding membrane system in accordance with the indicated test methods.
- B. Regulatory Requirements: Provide tensioned fabric canopy system complying with requirements and limitations of authorities having jurisdiction that are within Contractor's control.
 - 1. Building Code Criteria: The tensioned fabric structure shall comply with the International Building Code, 2012 and 2018.
 - 2. Comply with local building codes and respective loading criteria for Snow Loads, Live Loads, Dead Loads, Wind Speed, and Seismic Loads.
 - a. 2018 IBC / ASCE 7-16
 - 1) Wind Loads V=115 mpg, Exposure B
 - 2) Live Loads 5 psf or 200lb
 - 3) Snow Loads, Pg= 10 psf, Ce=1.0, Ct=1.2, Is=1.1
 - b. 2012 IBC / ASCE 7-10
 - 1) Wind Loads, V=120mph, Exposure B
 - 2) Live Loads, 5 psf or 200lb
 - 3) Snow Loads, Pg=10psf, Ce=1.0, Ct=1.2, Is=1.1
 - 3. Submittal documents shall include design loads and shall be sealed by a licensed engineer.
 - 4. Life Safety: Tensioned fabric structure shall be detailed so that no life safety issue is created in the event of a loss of a part of the membrane. The tensioned fabric structure shall not rely on the membrane for structural stability.
- C. MATERIAL
 - 1. All materials shall be structurally sound and appropriate for safe use. Product durability shall be ensured by the use of corrosion-resistant metals such as stainless steel, and coatings such as zinc-plating, galvanizing, and powder-coating on steel parts, subject to the Project-Specific requirements below. Fabrics used shall include UV-stabilizers and fire retardants for longevity and safety.
- D. WELDMENTS
 - 1. All tubing members are factory-welded by Certified Welders to American Welding Society (AWS) specifications and to the highest standards of quality workmanship. Weldments are finished with a zinc-rich galvanized coating. No field welding is required in the assembly of Shade Systems products.
- E. POSTS, STRUCTURAL FRAME TUBING, AND HARDWARE
 - 1. All tubing used shall be cold-formed and milled per ASTM A-135 and ASTM A-500. Material testing is in accordance with ASTM E-8. Minimum yield is 40,000 psi with a minimum tensile strength of 45,000 psi on all posts. All tubing shall be pre-cut to appropriate lengths, and where applicable all outside surfaces shall be galvanized, with an interior corrosion-resistant zinc-rich coating. Where required, support pipes shall be schedule 40 hot-dip galvanized or powder-coated black steel. All fastening hardware shall be stainless steel.
- F. ARCHITECTURAL POWDER-COATING PROCESS

1. All powder-coated parts undergo a rigorous multi-step process to ensure colorfastness and durability per the specific sequential steps itemized below. All parts are completely sandblasted, pre-treated, and coated with coastal primer prior to powder coating. Powder-coating is then electrostatically applied and oven-cured at 375 to 425 degrees Fahrenheit. Powders shall meet or exceed ASTM standards for Adhesion, Hardness, Impact, Flexibility, Overbake Resistance, and Salt Spray Resistance. Colors shall be specified.

G. STANDARD FOOTINGS

1. Footings shall be designed to meet the requirements of both the 2012 and 2018 versions of the International Building Code (IBC) for the specific structure. Columns shall be provided as standard direct embedment type footings. Submittal documents shall include foundation drawings sealed by a licensed engineer.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine structural steel framing and other substrates, with installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work
- B. Prepare written report, endorsed by Installer, listing conditions detrimental to performance.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 ERECTION

- A. Proceed with installation of tensioned fabric structure only when existing and forecasted weather conditions will permit work to be performed in accordance with Subcontractor's recommendations.
- B. Erect frame and fabric in accordance with the procedures of the approved Subcontractor.
- C. Adequate prestress shall be applied to eliminate fabric wrinkles and excess cable sag. Membranes with extreme twist and/or shallow catenary curves may be more prone to wrinkles. The wrinkles should be minimized with adjustments and should not be a distraction when looking at the project as a whole.

3.3 FIELD QUALITY CONTROL

- A. Subcontractor's Field Service: Engage a factory-authorized service representative to test and inspect components, assemblies, and equipment installations, including connections.

3.4 ADJUSTING

- A. Occupancy Adjustments: When requested within 12 months from date of Substantial Completion, provide on-site assistance in adjusting system to suit actual occupied conditions. Provide up to one visit to Project during other-than-normal occupancy hours for this purpose.

3.5 CLOSEOUT ACTIVITIES

- A. Demonstration: Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust cable and fabric tension and to clean and maintain canopy fabric.

END OF SECTION 13 31 23