ADDENDUM NO. 01
February 10, 2022

To Drawings and Specifications dated February 2, 2022.

FRIENDSWOOD HIGH SCHOOL ADDITIONS & RENOVATIONS
FOR FRIENDSWOOD I.S.D.

Prepared by: PBK
11 Greenway Plaza, 22nd Floor
Houston, TX 77046-1104
PBK Project No: 20381

Notice to Bidders

A. Receipt of this Addendum shall be acknowledged on the Bid Form.

B. This Addendum forms part of the Contract documents for the above referenced project and shall be incorporated integrally therewith.

C. Each bidder shall make necessary adjustments and submit his proposal with full knowledge of all modifications, clarifications, and supplemental data included therein. Where provisions of the following supplemental data differ from those of the original Contract Documents, this Addendum shall govern.

GENERAL

Item No. 1 See the attached Pre-proposal Conference agenda.

Item No. 2 See the attached Pre-proposal Conference sign-in sheets.

Item No. 3 Electronic format of the "Revit Model" is available at the link below. The "Revit Model" is being made available as a courtesy and solely for information only. The “Revit Model” is a "Reference Only" document and is not a part of the "Contract Documents". Information contained in the "Revit Model" may or may not differ from the "Contract Documents" and should be used with caution. Any user/viewer of the “Revit Model” assumes all risk associated with its use.
https://pbk.exavault.com/share/view/2uibw-7pe4ygq

SPECIFICATIONS

Item No. 4 **Section 09 21 16: Gypsum Board Assemblies:** Replace section in its entirety.

DRAWINGS

Item No. 5 **Sheet A-201D:**
a) Add three recessed lighting fixtures at the AV Studio.
b) Remove four linear lighting fixtures at the Coffee Bar.

Item No. 6 **Sheet TE 621:**
a) Detail 5 – Note added to indicate that SH fixture at center of plan West wall to be deleted if Add Alternate #13 is taken. Reference SKT-001.
b) Detail 5 – Change circuit designation for zoned SH fixtures to “LCP-11/42”.

Item No. 7 **Sheet TE 631:** Fixture designation tag “SN” added to track lights located in the Black Box control booth.

Item No. 8 **Sheet TL 020:** Detail 5 – Removed CRP 209 from control riser diagram and update naming of remaining CRPs to “CRP 206, CRP 207, CRP 208”. Reference SKT-002.

Item No. 9 **Sheet TR 111:** Replace sheet in its entirety.

Item No. 10 **Sheet TR 112:**
a) Detail 3 – Section updated to reflect changes to Black Box pipe grid and track layout. Reference SKT-003.

b) Black Box curtain schedule updated. Reference SKT-004.

Item No. 11 **Sheet M-101E:** Provide 70 feet of ¾" condensate line from HCU-01 to lavatory tail piece.

Item No. 12 **Sheet M-101H:**
a) Provide 70 feet of ¾" condensate line from HCU-03 to lavatory tail piece.
b) Provide 30 feet of ¾" condensate line from HCU-04 to lavatory tail piece.
c) Provide 30 feet of ¾" condensate line from HCU-02 to lavatory tail piece.
d) 24" x 24" duct from RH-H-01 is split into 24" x 12".

Item No. 13 **Sheet M-101P:**
a) Provide 40 feet of ¾" condensate line from FCU-P1-01 to lavatory tail piece.
b) Replace FCU-P1-01 from ducted unit to wall mounted unit.
c) Add (4) fire dampers at each penetration of fire rated wall for Boiler K142A.
d) Add (2) type 'F' return air grilles in Girls RR and Shower K149.
e) Add (1) flue vent for new water heater as described (total of two flue vents): domestic gas water heater and concentric vent kit shall be provided by plumbing contractor. Refer to plumbing drawings and specifications. Mechanical contractor shall provide and install 4"ø flue duct with concentric vent as shown in detail 03/M-603.

Item No. 14 **Sheet M-101R:** Add (1) 14"x14" return air opening above door in Office R106.

Item No. 15 **Sheet M-101T:**
a) Provide 25 feet of ¾" condensate line from FCU-T1-01 to floor sink inside boiler's room.
b) Provide 60 feet of refrigerant piping from ACCU-T1-01 to FCU-T1-01. Exterior piping shall be insulated and wrapped with aluminum jacketing.
c) Add (1) fire damper at penetration of Boiler R112 from supply fan SF-T1-01.
d) Add (6) 25 feet of 4"Ø exhaust duct taps to be connected to each wood fabrication equipment to be specified by owner.
e) Add (2) 25 feet of 6"Ø exhaust duct tap and connected to floor sweep.

Item No. 16 **Sheet M-102P:** Exposed ductwork from RH-P-01 shall be double wall flat oval.

Item No. 17 **Sheet M-102R:**
a) Provide 60 feet of ¾" condensate line from FCU-S1-01 to lavatory tail piece.
b) Provide FCU-S1-01 as wall mounted unit per schedule along with sensor device.

Item No. 18 **Sheet M-201:** Duct associated with EF-K1-01 to be sized as 16"x16".

Item No. 19 **Sheet M-202:** Add motorized damper at intake of OAHU-E1-01. Damper by equipment manufacturer and actuator by BAS.

Item No. 20 **Sheet M-203:**
a) Add motorized damper at intake of OAHU-F1-01. Damper by equipment manufacturer and actuator by BAS.
b) Add motorized damper at intake and discharge of OAHU-M1-02. Damper by equipment manufacturer and actuator by BAS.

Item No. 21 **Sheet M-204:** Add motorized damper at intake and discharge of OAHU-M1-01. Damper by equipment manufacturer and actuator by BAS.

Item No. 22 **Sheet M-301:** Keyed note 1: revise "Provide new curb adapter as required" to "Provide new curb as required." Curb adapters shall not be utilized.

Item No. 23 **Sheet K2:** Revise Concessions plan to accommodate mechanical chase walls.

Attachments include 25 additional sheets and ends with drawing K2 dated 02/10/22.

02/10/2022

FRIENDSWOOD HIGH SCHOOL ADDITIONS AND RENOVATIONS

FRIENDSWOOD INDEPENDENT SCHOOL DISTRICT

PRE-PROPOSAL CONFERENCE

PBK Project No.: 20381

AGENDA

Thursday, February 10, 2022, at 10:00 A.M.
Friendswood ISD Board Room
402 Laurel Drive, Friendswood, Texas 77546

I. Introductions

A. OWNER: Friendswood Independent School District
- 01 Mr. Thad Roher ..... Superintendent of Schools
- 02 Mr. Erich Kreiter ..... Executive Director of Facilities and Construction
- 03 Ms. Amber Petree ..... Chief Financial Officer
- 04 Ms. Kim Dingell ..... Business Coordinator

B. ARCHITECT: PBK
- 01 Greg Prince ..... Partner-In-Charge
- 02 Robert Mohler ..... Project Manager
- 03 Darius Spurlock ..... Field Representative

C. CIVIL/SPORTS: DIG Engineers/PBK Sports
- 01 Trace Cryer ..... Principal

D. MEPT: LEAF Engineers
- 01 Matt Sickorez ..... Sr. Project Manager

E. STRUCTURAL: Kubala Engineers
- 01 John Kubala ..... President
- 02 Maria Sharifi ..... Project Manager

F. BUILDING ENVELOPE: BEAM Professionals
- 01 Jason Benoit ..... Project Manager

G. ACOUSTICAL/AV: Jaffe Holden
- 01 Carlos Rivera ..... Project Manager

H. THEATRICAL: Schuler Shook
- 01 Heather McAkoy ..... Project Manager

I. FOODSERVICE: Foodservice Design Professionals
- 01 Duane Mikkelson ..... Project Manager

II. Proposal Date: **Tuesday, February 22, 2022**

Proposal Times:
2:00 PM – Base Proposals
3:00 PM – Alternate Proposals
3:30 PM – Proposal Opening

Proposals Received:
Friendswood ISD Administration Building
302 Laurel Drive
Friendswood, Texas 77546

Proposal Opening: Friendswood ISD Administration Annex
Training Room #1
402 Laurel Drive
Friendswood, Texas 77546

III. Changes/Addenda:

A. Any changes arising out of questions requiring interpretation, clarification or correction to the Proposal Documents will be made by Addendum.

IV. Instruction to Offerors:

A. In order for the Owner to properly evaluate each proposer's qualifications, each proposer shall submit an **AIA Document A305-2020** Contractor's Qualification Statement, with all required attachments and information.

The Contractor's Qualification Statement shall be submitted by **Thursday, February 10th, 2022 by 3:30 P.M. to the Friendswood ISD Administration Building.** In addition to the information contained in the Statement form, offerors shall also address the selection criteria issues listed under the paragraph below for Determination of Successful Respondent and Award of Contract.
(*Qualification Statements submitted by fax or electronic transmission will not be accepted.)

B. Selection / Evaluation Criteria: The Offeror shall be selected in accordance with selection criteria provided as part of Section 00 21 00 in the project manual.

V. Proposal Forms (Proposal forms and supporting information shall be provided in duplicate). All proposals must be delivered sealed to the above address at or before the scheduled time and date for proposal opening. Proposals will be received at no other location. If Proposal is sent by U.S. Mail, it must be sent Certified Mail.

A. Base Proposal (Shall Be Due By 2:00 PM on Tuesday, February 22, 2022).
B. Alternate Proposal (Shall Be Due By 3:00 PM on Tuesday, February 22, 2022).
C. Other required forms as noted in Section 00 20 00.

VI. Base Proposal and Contract Time

A. The Work shall commence upon Notice to Proceed, and the various portions defined below shall be Substantially Complete by the following Substantial Completion dates:
1. Detention, Practice Fields, and Privacy Fencing: July 29, 2022
2. PAC, Gym Addition, and Tennis Court Buildings: June 30, 2023
3. Remainder of the Work (Including Interior Renovations): December 15, 2023

B. Refer to Section 01 32 00 for other scheduling requirements, and to Document 00 73 00 - Supplementary Conditions for information concerning liquidated damages.

C. Liquidated Damages
1. Liquidated Damages for the work shall be established as $1,000.00 per day for each and every calendar day that the work is not substantially complete beyond the agreed date which the contractor has agreed to for Substantial Completion of the Work included in the Contract Documents.
2. Liquidated Damages for the punch list not being completed within 90 days of receipt shall be established as $500.00 per day per calendar day that the punch list is not complete.
3. Liquidated Damages for failure to close out the project within 60 days of Substantial Completion shall be established as $500.00 per day per calendar day for each separate final substantial completion date.

VII. Allowances:

A. As listed and described in Section 01 21 00.

VIII. Alternates:

A. As listed and described in Section 01 23 00.

IX. Miscellaneous Job Conditions (Refer to Sections 00 72 00, 00 73 00 and 01 50 00):

A. Conduct at Job Site/Occupied Campus
B. FISD Badging
C. Site Logistics Plan
D. Utilities
   1. Temporary Power
   2. Temporary Water
E. Temporary Facilities
   1. Field offices
   2. Storage facilities
   3. Sanitary facilities
F. Signs
G. Barriers
H. Security
I. Superintendent
J. Construction Fencing
K. Cleaning
L. First Aid
M. Fire Protection
N. Construction Aids (scaffolds, staging, ladders, etc.)
O. Parking Facilities

X. ADDITIONAL ITEMS

A. Substitutions – no substitutions will be considered unless submitted on provided substitution form
B. Schedule of Values
C. Applications for Payment
D. Performance and Payment Bonds – 100%
E. Bid Bond
F. Sub-contractor information to be submitted, with proposal. The following categories are required:
   - Mechanical
   - Plumbing
   - Electrical
   - Sports Lighting
   - Fire Alarm
   - Audio/Visual
   - Cabling
   - Technology (Data/Voice)
   - Roofing Contractor and Proposed Roofing Superintendent
   - Masonry
   - Structural Steel Supplier
   - Structural Steel Erector
   - Earthwork
   - Concrete
   - Site Utilities
   - Casework
   - Storefront/Curtainwall
   - Drywall
   - Fire Sprinkler

- Painting
- Door/Hardware
- Flooring

G. Site Work (Tennis Courts and related scope) is currently under-way on the property northwest of Mustang Drive.
H. Special Owner Requirements

XI. **Discussion Items / Questions** (Last day to send questions: Tuesday, February 15th, 2022 by 2:00 pm. Email questions to FISD - Kim Dingell kdingell@fisdk12.net and PBK - Robert Mohler robert.mohler@pbk.com)

XII. **Site Tour** (702 Greenbriar Drive, Friendswood, Texas 77546 – Meet at School Main Entrance)

FRIENDSWOOD HIGH SCHOOL ADDITIONS AND RENOVATIONS

CSP #22-005

PRE-CONFERENCE MEETING & SITE WALK-THROUGH

SIGN IN SHEET

THURSDAY, FEBRUARY 10, 2022 AT 10:00AM

NAME (PLEASE PRINT)	COMPANY	EMAIL ADDRESS	PHONE NUMBER
Robert Mohler	PBK		
Jason Traylor	Traylor Mechanical		
Barclay Pittman	S&P		
John Marshall	S&P		
Matt Sickorez	Leaf Engineers		
Josh Ezernack	Willbanks		
Brandon Watson	Division One Construction		
Richard Poe	ICI Construction		
Mickey Gammenthaler	Flintco LLC		
Jessica Javis	Willbanks		
Jeff Teetz	TriCo Mechanical		
Jeff Manthei	Marshall Construction		
Danny Strucick	S&P		
Danny Faust	Gurry Mechanical		
Gina Cagna	Johnson Controls		

▲1 SECTION 09 21 16 - GYPSUM BOARD ASSEMBLIES

PART 3 - GENERAL

3.3 RELATED DOCUMENTS

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

3.4 SUMMARY

A. Section Includes: Requirements including but not limited to:
   1. Gypsum Board.
   2. Partition Framing Systems.
   3. Exterior Gypsum Board for Ceilings and Soffits.
   4. Reinforced Gypsum Board Sheathing (Tile Backer Board).
   5. Cementitious Backer Units.
   6. Ceiling Suspension Systems.
   7. Acoustically Enhanced Gypsum Board:
   8. Impact Resistant Gypsum Board.
   9. Accessories necessary for a complete installation.

3.5 PERFORMANCE REQUIREMENTS

A. Performance Requirements: Comply with manufacturer's load tables and the following design pressures and deflections:
   1. Stairs, Elevator Hoistways, and Vertical Shafts: 1/120 at 10 psf.
   2. Ground Floor Lobbies: 1/120 at 15 psf.
   3. Partitions Receiving Stone Cladding, Lath and Plaster, or Plaster Veneer: 1/360 at 15 psf.
   4. Partitions Receiving Monitors, Televisions, Heavy Audio/Visual Equipment: 1/360 at 15 psf.
   5. Typical Partitions: 1/240 at 5 psf.
   6. Other Partitions: 1/240 at 5 psf.
      a. Maximum Deflection:
         1) L/240 at 5 lbf per sq. ft.
         2) L/120 at 5 lbf per sq. ft.
         3) L/120 at 7.5 lbf per sq. ft.
         4) L/120 at 10 lbf per sq. ft.

B. Fire Resistance Rated Assemblies: For fire resistance rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing agency.

C. STC Rated Assemblies: For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.

3.6 SUBMITTALS

A. Product Data: Submit For each type of drywall including calculations for loadings and stresses of exterior walls and specially fabricated framing based on manufacturer’s load tables.

B. Shop Drawings: Indicate locations, fabrication, and installation of control and expansion joints including plans, elevations, sections, details of components, and attachments to other units of Work.
   1. Submit joint layout. Determine any anticipated areas of cracking or diminished resistance of cracking.

C. Samples:
   1. Trim Accessories: Full size Sample in 12 inch (300 mm) long length for each trim accessory indicated.
   2. Textured Finishes: 12 inch by 12 inch (300 mm by 300 mm) for each textured finish indicated and on same backing indicated for Work.

D. Calculations: Submit calculations verifying steel partition stud minimum base metal thickness and depth compliance with Code and ASTM C645 for height, load, and deflection.

E. Evaluation Reports: ICC-ES reports for steel studs and runners and firestop tracks.

3.7 QUALITY ASSURANCE

A. Regulatory Requirements:
   1. Comply with applicable requirements of IBC for interior finishes.
   2. Fire Resistance Rated Assemblies: For fire resistance rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing agency.

B. Single Source Responsibility:
   1. Framing Members: Obtain steel framing members from single manufacturer.
   2. Panel Products: Obtain each type of gypsum board and other panel products from single manufacturer.
   3. Finishing Materials: To the extent possible, obtain finishing materials from same manufacturer supplying gypsum board products. When not possible, obtain materials from manufacturer acceptable to gypsum board manufacturer.

3.8 DELIVERY, STORAGE AND HANDLING

A. Deliver materials in original packages, containers, or bundles bearing brand name and identification of manufacturer or supplier.

B. Store materials inside under cover and keep them dry and protected against weather, condensation, direct sunlight, construction traffic, and potential causes of damage. Stack panels flat and supported on risers on a flat platform to prevent sagging.

3.9 PROJECT CONDITIONS

A. Environmental Limitations: Comply with ASTM C840 for gypsum board manufacturer's written instructions, whichever are more stringent.
   1. Do not install paper faced gypsum panels until installation areas are enclosed and conditioned.

B. Room Temperatures: Maintain minimum 40 degrees F (4 degrees C). For adhesive attachment and finishing of gypsum board, maintain minimum 50 degrees F (10 degrees C) for 48 hours before application and continuously after until dry. Do not exceed 95 degrees F (35 degrees C) when using temporary heat sources.

C. Ventilation: Ventilate building spaces as required to dry joint treatment materials. Avoid drafts during hot, dry weather to prevent finishing materials from drying too rapidly.

D. Do not install panels that are wet, moisture damaged, and mold damaged.
   1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
   2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

1.8 WARRANTY

A. Warrant the Work specified for one (1) year against becoming unserviceable or causing an objectionable appearance resulting from either defective or nonconforming materials or workmanship.

B. In addition, provide warranty from the manufacturer for the following products:
   1. Exterior sheathing weathering warranty covering in-place exposure damage to exterior sheathing for twelve (12) months.
   2. Exterior sheathing warranty against manufacturing defects for five (5) years.
   3. Abuse Resistant Panel weathering warranty covering in-place exposure damage to sheathing for six (6) months.
   4. Abuse Resistant Panel warranty against manufacturing defects for three (3) years.
   5. Glass-mat sheathing weathering warranty covering in-place exposure damage to sheathing for three (3) months.
   6. Glass-mat sheathing warranty against manufacturing defects for three (3) years.
   7. Tile backer board warranty against manufacturing defects for 20 years.

PART 4 - PRODUCTS

4.3 MATERIALS

A. Manufacturers: Listed manufactures whose products meet or exceed the specifications are approved for use on the Project. Other manufacturers must have a minimum of five (5) years' experience manufacturing equivalent products to those specified and comply with Division 1 requirements regarding substitutions to be considered.
   1. Steel Studs and Tracks:
      a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
         1) ClarkDietrich; (888) 437-3244.
         2) CEMCO; California Expanded Metal Products Co.; (800) 775-2362.
         3) MBA Building Supplies; (888) 248-8076.
         4) Mill Steel Framing; (800) 247-6455.
         5) MRI Steel Framing, LLC.; (630) 616-1850.
         6) Phillips Manufacturing Co.; (800) 822-5055.
         7) Steel Network, Inc. (The); (888) 474-4876.
         8) Telling Industries; (866) 372-6384.

   2. Ceiling Grid:
      a. Armstrong World Industries, Inc.; Drywall Grid Systems.
      b. Chicago Metallic Corporation; 640-C.
      c. CertainTeed Corporation.
      d. USG Corporation; Drywall Suspension System.

   3. Gypsum Board:
      a. Certainteed Corporation.
      b. Georgia Pacific.

c. National Gypsum Company.
d. USG Corporation.

4. Tile Backer Board: Fiberock Interior Aqua-Tough; USG Corporation or comparable product by Architect.

5. Glass Mat Gypsum Sheathing Board:
   a. Certainteed Corporation.
   b. Georgia Pacific.
   c. National Gypsum Company.
   d. USG Corporation.

6. Cementitious Board:
   a. CertainTeed Corporation.
   b. Custom Building Products.
   c. National Gypsum Company.
   d. United States Gypsum Company.

~~7. Base Trim:~~
   ~~a. Waterguard; www.keepsdrywalldry.com, (800) 653-8785.~~
   ~~b. Substitutions, refer to Division 1.~~

B. Framing Members: ASTM C 754 for component sizes and conditions under specified maximum deflection and lateral loading conditions indicated.
   1. Steel Sheet Components: Comply with AISI S220 requirements for metal.
   2. Protective Coating: ASTM A 653/A 653M, G60 (Z180), hot dip galvanized.

C. Steel Framing Components: ASTM C 754 for conditions indicated; hot dip galvanize complying with ASTM A 653M Z180.
   1. Steel Studs and Runners: AISI S220, 0.0179 inch (0.45 mm) minimum base metal thickness; Depth indicated on Drawings.
   2. Flat Strap and Backing Plate: Steel sheet for blocking and bracing in length and width indicated. Minimum Base Metal Thickness: 0.0179 inch (0.45 mm).
   3. Cold Rolled Channel Bridging: 0.0538 inch (1.37 mm) bare steel thickness, with minimum 1/2 inch (12.7 mm) wide flanges. Depth indicated on Drawings.
   4. Clip Angle: Not less than 1-1/2 inches by 1-1/2 inches (38.1 mm by 38.1 mm), 0.068 inch (1.73 mm) thick, galvanized steel.
   5. Hat Shaped, Rigid Furring Channels: ASTM C 645; 0.0179 inch (0.45 mm) minimum base metal thickness; Depth indicated on Drawings.
   6. Resilient Furring Channels: 1/2 inch (12.7mm) deep, steel sheet members designed to reduce sound transmission. Configuration: Asymmetrical or hat shaped.
   7. Cold Rolled Furring Channels: 0.0538 inch (1.37mm) bare steel thickness, with minimum 1/2 inch (12.7mm) wide flanges.
      a. Depth: Indicated on Drawings.
      b. Furring Brackets: Adjustable, corrugated edge type of steel sheet with minimum bare steel thickness of 0.0312 inch (0.79 mm).
      c. Tie Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.0625 inch (1.59mm) diameter wire, or double strand of 0.0475 inch (1.21mm) diameter wire.
   8. Z Shaped Furring: With slotted or nonslotted web, face flange of 1-1/4 inches (31.8 mm), wall attachment flange of 7/8 inch (22.2 mm), minimum bare metal thickness of 0.0179 inch (0.45 mm), and depth required to fit insulation thickness indicated.
   9. Auxiliary Framing Materials: Fasteners of type, material, size, corrosion resistance, holding power, and other properties required to fasten steel members to substrates.
   10. Slip Type Head Joints: Where indicated, provide one of the following:

a. Single Long Leg Runner System: ASTM C 645 top runner with 2 inch (50.8 mm) deep flanges in thickness not less than indicated for studs, installed with studs friction fit into top runner and with continuous bridging, located within 12 inches (305 mm) of the top of studs to provide lateral bracing.
b. Double Runner System: ASTM C 645 top runners, inside runner with 2 inch (50.8 mm) deep flanges in thickness not less than indicated for studs and fastened to studs, and outer runner sized to friction fit inside runner.
c. Deflection Track: Steel sheet top runner manufactured to prevent cracking of finishes applied to interior partition framing resulting from deflection of structure above; in thickness not less than indicated for studs and in width to accommodate depth of studs. Provide one of the following:
   1) ClarkDietrich; MaxTrak Slotted Deflection Track.
   2) Steel Network Inc. (The); VertiClip SLD or VertiTrack VTD Series.
   3) Superior Metal Trim; Superior Flex Track System (SFT).

11. Firestop Tracks: Top runner manufactured to allow partition heads to expand and contract with movement of the structure while maintaining continuity of fire resistance rated assembly indicated; in thickness not less than indicated for studs and in width to accommodate depth of studs. Provide one of the following:
    a. ClarkDietrich; BlazeFrame Fire Stop Deflection.
    b. Fire Trak Corp.; Fire Trak attached to studs with Fire Trak Slip Clip.
    c. Grace Construction Products; FlameSafe FlowTrak System.
    d. Metal-Lite, Inc.; The System.
    e. Steel Network Inc. (The); VertiClip SLD or VertiTrack VTD Series as applicable.

D. Ceiling Suspension Components:
1. Tie Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.0625 inch (1.59 mm) diameter wire.
2. Hanger Attachments to Concrete:
   a. Anchors: Postinstalled, chemical anchor or postinstalled, expansion anchor fabricated from corrosion resistant materials with holes or loops for attaching wire hangers and capable of sustaining, without failure, a load equal to 5 times that imposed by construction as determined by testing according to ASTM E 488 by an independent testing agency.
   b. Powder Actuated Fasteners: Suitable for application indicated, fabricated from corrosion resistant materials with clips or other devices for attaching hangers of type indicated, and capable of sustaining, without failure, a load equal to 10 times that imposed by construction as determined by testing according to ASTM E 1190 by an independent testing agency.

3. Wire Hangers: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.162 inch (4.12 mm) diameter.
4. Carrying Channels: Cold rolled, commercial steel sheet with base metal thickness of 0.0538 inch (1.37 mm) and minimum 1/2 inch (12.7 mm) wide flanges. Depth indicated on Drawings.
5. Furring Channels (Furring Members):
   a. Cold Rolled Channels: 0.0538 inch (1.37 mm) bare steel thickness, with minimum 1/2 inch (12.7 mm) wide flanges, 3/4 inch (19.1 mm) deep.
   b. Steel Studs: ASTM C 645; minimum base metal thickness of 0.0312 inch (0.79 mm); Depth indicated on Drawings.
   c. Hat Shaped, Rigid Furring Channels: ASTM C 645, 7/8 inch (22.2 mm) deep; Minimum base metal thickness of 0.0312 inch (0.79 mm).

6. Resilient Furring Channels: 1/2 inch (12.7 mm) deep members designed to reduce sound transmission. Configuration: Hat shaped.

7. Grid Suspension System for Ceilings: ASTM C 645, direct hung system composed of main beams and cross furring members that interlock.

E. Gypsum Board: ASTM C 1396/C 1396M, applicable to type of gypsum board indicated and whichever is more stringent.
   1. Core: Use Type X throughout
      a. Thickness: 5/8 inch (15.9 mm).
      b. Long Edges: Tapered and featured (rounded or beveled) for prefilling.

   2. Ceiling Type: Manufactured for sag resistance
      a. Thickness: 1/2 inch (13mm).
      b. Long Edges: Tapered.

   3. Moisture and Mold Resistant Type: Type X with moisture and mold resistant core and surfaces. Core:
      a. Thickness: 5/8 inch (15.9 mm).
      b. Long Edges: Tapered.

F. Impact Resistant Gypsum Board: ASTM C 1396/C 1396M gypsum board, tested according to ASTM C 1629/C 1629M.
   1. Core and Thickness: 5/8 inch (15.9 mm), Type X.
   2. Surface Abrasion: ASTM C 1629/C 1629M, meets or exceeds Level 1 requirements.
   3. Indentation: ASTM C 1629/C 1629M, meets or exceeds Level 1 requirements.
   4. Soft Body Impact: ASTM C 1629/C 1629M, meets or exceeds Level 1 requirements.
   5. Hard Body Impact: ASTM C 1629/C 1629M, meets or exceeds Level 1 requirements according to test in Annex A1.
   6. Long Edges: Tapered.
   7. Mold Resistance: ASTM D 3273, score of 10 as rated according to ASTM D 3274.

G. Acoustically Enhanced Gypsum Board: ASTM C 1396/C 1396M. Multilayer products constructed of two layers of gypsum boards sandwiching a viscoelastic sound-absorbing polymer core.
   1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
      a. National Gypsum Company; (704) 365-7300.
      b. Quiet Solution; (800) 797-8159.

   2. Core: 1-3/8 inch (35 mm), regular type.
   3. Long Edges: Tapered.

H. Reinforced Gypsum Sheathing (Tile Backer Board): ASTM C 1278/C 1278M, standard edges. Cellulose fiber reinforced panels may be used in lieu of cementitious board.
   1. Core and Thickness: 1/2 inch (12.7 mm) or 5/8 inch (15.9 mm) to match conditions, Type X.
   2. Long Edge: Tapered.
   3. Mold Resistance: ASTM D 3273, score of 10 as rated according to ASTM D 3274.

I. Glass Mat Gypsum Sheathing Board: ASTM C 1177/C 1177M, with fiberglass mat laminated to both sides and with standard edges.
   1. Thickness: 5/8 inch (15.9 mm).
   2. Size: 48 inches by 96 inches (1219 mm by 2438 mm).
   3. Long Edges: Tapered.

J. Fire rated, Glass Mat Gypsum Sheathing Board: ASTM C 1177/C 1177M, with fiberglass mat laminated to both sides and with standard edges.
   1. Core: Type X
   2. Thickness: 5/8 inch (15.9 mm).

3. Size: 48 inches by 96 inches (1219 mm by 2438 mm).
4. Long Edges: Tapered.

K. Cementitious Backer Units: ANSI A118.9 and ASTM C 1288 or ASTM C 1325.
1. Thickness: 5/8 inch (15.9 mm) to match conditions.
2. Long Edges: Standard.
3. Mold Resistance: ASTM D 3273, score of 10 as rated according to ASTM D 3274.

L. Exterior Gypsum Board For Ceilings and Soffits:
1. Glass Mat Gypsum Sheathing Board: ASTM C 1177/C 1177M, with fiberglass mat laminated to both sides and with standard edges.
a. Core: 5/8 inch (15.9 mm), Type X.

~~M. Base Trim: Installed continuously at floor level of all GDW throughout building.~~
~~1. Poly Vinyl Chloride (PVC) compound meeting the requirements of ASTM C1047. ASTM D3678, ASTM D3679, and ASTM D4216.~~
~~2. Sizes:~~
~~a. 2 inch (50.8 mm) height X 1/2 inch (12.7 mm) depth or 2-inch (50.8 mm) X 5/8 inch (15.875 mm).~~

N. Exterior Trim: ASTM C 1047, hot dip galvanized steel sheet, plastic, or rolled zinc.
1. Shapes:
a. Cornerbead.
b. LC Bead: J shaped; exposed long flange receives joint compound.
c. Expansion (Control) Joint: One piece, rolled zinc with V shaped slot and removable strip covering slot opening.

O. Interior Trim: ASTM C 1047; galvanized or aluminum coated steel sheet, rolled zinc, plastic, or paper faced galvanized steel sheet.
1. Poly Vinyl Chloride (PVC) compound meeting the requirements of ASTM C1047. ASTM D3678, ASTM D3679, and ASTM D4216.
2. Shapes:
a. Cornerbead.
b. Bullnose bead.
c. LC Bead: J shaped; exposed long flange receives joint compound.
d. L Bead: L shaped; exposed long flange receives joint compound.
e. U Bead: J shaped; exposed short flange does not receive joint compound.
f. Expansion (control) joint.

3. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
a. Fry Reglet Corporation; (800) 237-9773.
b. Gordon, Inc.; (888) 877-8746.
c. Pittcon Industries; (301) 927-1000.
d. USG Corporation.

P. Continuous Corner: Extruded Aluminum; continuous integral fin for surface contact with gypsum board; 7/8 inch (22 mm) wide, tapered to edge; punched with holes staggered to accept screw fastening. Prime with corrosion resistant primer. Provide Pittcon Softforms SO-HSE-90 or Schluter.
1. Basis of Design: Pittcon Softforms SO-HSE-90; Subject to compliance with requirements, provide basis of design or comparable by one of the following:
a. Fry Reglet Corporation; (800) 237-9773.
b. Pittcon Industries; (301) 927-1000.
c. Schluter; (888) 472-4588.

Q. Joint Treatment: ASTM C 475/C 475M.
   1. Joint Tape:
      a. Exterior Gypsum Soffit Board: Paper.
      b. Joint Compound for Exterior Applications, Glass Mat Gypsum Sheathing Board: Recommended by sheathing board manufacturer.
      c. Joint Tape, Interior Gypsum Board: Paper.

   2. Joint Compound:
      a. Gypsum Board: Prefilling: At open joints, rounded or beveled panel edges, and damaged surface areas, use setting type taping compound.
         1) Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use setting type taping compound.
            a) Use setting type compound for installing paper faced metal trim accessories.

         2) Fill Coat: For second coat, use setting type, sandable topping compound.
         3) Finish Coat: For third coat, use setting type, sandable topping compound.
         4) Skim Coat: For final coat of Level 5 finish, use setting type, sandable topping compound.

      b. Cementitious Units: Recommended by backer unit manufacturer.
      c. Tile Backing Panels: Recommended by backer unit manufacturer.
      d. Water Resistant Gypsum Backing Board: Use setting type taping compound and setting-type, sandable topping compound.
      e. Joint Compound, Glass Mat Sheathing Board: Recommended by sheathing board manufacturer.

R. Auxiliary Gypsum Materials: Comply with referenced installation standards and manufacturer's written recommendations.
   1. Steel Drill Screws: ASTM C 1002, use screws complying with ASTM C 954 for fastening panels to steel members from 0.033 to 0.112 inch (0.84 to 2.84 mm) thick.
   2. Sound Attenuation Blankets: ASTM C 665, Type I (blankets without membrane facing) produced by combining thermosetting resins with mineral fibers manufactured from glass, slag wool, or rock wool.
      a. Fire Resistance Rated Assemblies: Comply with mineral-fiber requirements of assembly.

   3. Control Joints: Metal (USG #093 / Dietrich 093 Control Joint) type with 1/4 inch open joint, perforated flanges for floating in place.
   4. Acoustical Sealant: Nonsag, paintable, nonstaining latex sealant complying with ASTM C 834. Product effectively reduces airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E 90.
      a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
         1) Hilti, Inc.;(800) 879-8000.
         2) Pecora Corporation; (800) 523-6688.
         3) Specified Technologies, Inc.; (800) 992-1180.
         4) United States Gypsum Company; (800) 950-3839.

PART 5 - EXECUTION

5.3 EXAMINATION

A. Examine areas and substrates including welded hollow metal frames, cast in anchors, and structural framing, for compliance with requirements and other conditions affecting performance. Proceed with installation after unsatisfactory conditions have been corrected.

5.4 PREPARATION

A. Suspended Assemblies: Coordinate installation of suspension systems with installation of overhead structure to ensure that inserts and other provisions for anchorages to building structure have been installed to receive hangers at spacing required to support the Work and that hangers will develop their full strength. Furnish concrete inserts and other devices indicated to other trades for installation in advance of time needed for coordination and construction.

5.5 INSTALLATION

A. Installation Standard: ASTM C 754, except comply with framing sizes and spacing indicated.

B. Gypsum Board Assemblies: Comply with requirements in ASTM C 840 applicable to framing installation.

C. Control joints shall be located 30 feet-0 inches on center maximum and along building expansion joints, unless noted otherwise on drawings. Locations shall be reviewed with Architect prior to final placement.

D. Suspension System: Isolate suspension systems from building structure where they abut or are penetrated by building structure to prevent transfer of loading imposed by structural movement.
   1. Suspend hangers from building structure:
      a. Install hangers plumb and free from contact with insulation or objects within ceiling plenum that are not part of supporting structural or suspension system. Splay hangers where required to miss obstructions and offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.
      b. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with locations of hangers required to support standard suspension system members, install supplemental suspension members and hangers in the form of trapezes or equivalent devices.
         1) Size supplemental suspension members and hangers to support ceiling loads within performance limits established by referenced installation standards.
      c. Do not attach hangers to steel roof deck.
      d. Do not attach hangers to permanent metal forms. Furnish cast in place hanger inserts that extend through forms.
      e. Do not attach hangers to rolled in hanger tabs of composite steel floor deck.
      f. Do not connect or suspend steel framing from ducts, pipes, or conduit.
   2. Fire Resistance Rated Assemblies: Wire tie furring channels to supports.

E. Grid Suspension Systems: Attach perimeter wall track or angle where grid suspension systems meet vertical surfaces. Mechanically join main beam and cross furring members to each other and butt cut to fit into wall track. Do not install rivets.

F. Framing Assembly: Where studs are installed directly against exterior masonry walls or dissimilar metals at exterior walls, install isolation strip between studs and exterior wall.

1. Install studs so flanges within framing system point in same direction. Space studs in single layer application as indicated on drawings.
2. Install tracks (runners) at floors and overhead supports. Extend framing full height to structural supports or substrates above suspended ceilings, except where partitions are indicated to terminate at suspended ceilings. Continue framing around ducts penetrating partitions above ceiling.
    a. Acoustical Sealant: Install continuous ribbon of acoustical sealant under floor track. Refer to Section 07 92 00.
    b. Door Openings: Screw vertical studs at jambs to jamb anchor clips on door frames; install runner track section (for cripple studs) at head and secure to jamb studs.
        1) Install two studs at each jamb, unless otherwise indicated.
        2) Install cripple studs at head adjacent to each jamb stud, with minimum 1/2 inch (12.7mm) clearance from jamb stud to allow for installation of control joint in finished assembly.
        3) Extend jamb studs through suspended ceilings and attach to underside of overhead structure.

    c. Other Framed Openings: Frame openings other than door openings the same as required for door openings, unless otherwise indicated. Install framing below sills of openings to match framing required above door heads.

3. Installation Tolerance: Install each framing member so fastening surfaces vary not more than 1/8 inch (3 mm) from the plane formed by faces of adjacent framing.

G. Gypsum Panels: Comply with ASTM C 840. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.
1. Install ceiling panels across framing to minimize the number of abutting end joints and to avoid abutting end joints in central area of each ceiling. Stagger abutting end joints of adjacent panels not less than one framing member.
2. Install panels with face side out. Butt panels together for a light contact at edges and ends with not more than 1/16 inch (1.5 mm) of open space between panels. Do not force into place.
3. Locate edge and end joints over supports, except in ceiling applications where intermediate supports or gypsum board back blocking is provided behind end joints. Do not place tapered edges against cut edges or ends. Stagger vertical joints on opposite sides of partitions. Do not make joints other than control joints at corners of framed openings.
4. Form control and expansion joints with space between edges of adjoining gypsum panels.
5. Cover both faces of support framing with gypsum panels in concealed spaces, except in chases braced internally.
    a. Unless concealed application is indicated or required for sound, fire, air, or smoke ratings, coverage may be accomplished with scraps of not less than 8 sq. ft. (0.7 sq. m) in area.
    b. Fit gypsum panels around ducts, pipes, and conduits.
    c. Where partitions intersect structural members projecting below underside of floor/roof slabs and decks, cut gypsum panels to fit profile formed by structural members; allow 1/4 inch to 3/8 inch (6.4 mm to 9.5 mm) wide joints to install sealant.

6. Isolate perimeter of gypsum board applied to nonload bearing partitions at structural abutments and floors. Provide 1/4 inch to 1/2 inch (6.4mm to 12.7mm) wide spaces at these locations, and trim edges with edge trim where edges of panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.
7. Acoustical Sealant: Install continuous ribbon of acoustical sealant under floor track. Refer to Section 07 92 00.
8. Attachment to Steel Framing: Attach panels so leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.

H. Gypsum Board: Install interior gypsum board where indicated on drawings.
   1. Single Layer Application:
      a. On ceilings, apply gypsum panels before wall/partition board application to greatest extent possible and at right angles to framing, unless otherwise indicated.
      b. On partitions/walls, apply gypsum panels vertically (parallel to framing), unless otherwise indicated or required by fire resistance rated assembly, and minimize end joints. Stagger abutting end joints not less than one framing member in alternate courses of panels.
      c. Fastening Methods: Apply gypsum panels to supports with steel drill screws.

   2. Multilayer Application:
      a. On partitions/walls, apply gypsum board indicated for base layers and face layers vertically (parallel to framing) with joints of base layers located over stud or furring member and face-layer joints offset at least one stud or furring member with base-layer joints unless otherwise indicated or required by fire-resistance-rated assembly. Stagger joints on opposite sides of partitions.
      b. On Z shaped furring members, apply base layer vertically (parallel to framing) and face layer either vertically (parallel to framing) or horizontally (perpendicular to framing) with vertical joints offset at least one furring member. Locate edge joints of base layer over furring members.
      c. Fastening Methods: Fasten base layers and face layers separately to supports with screws.

I. Backing Panels:
   1. Cementitious Backer Units: ANSI A108.11; install where indicated with 1/4 inch (6.4 mm) gap where panels abut other construction or penetrations. Where tile backing panels abut other types of panels in same plane, shim surfaces to produce a uniform plane across panel surfaces.

J. Exterior Gypsum Board Soffits: Apply panels perpendicular to supports, with end joints staggered and located over supports.
   1. Install with 1/4 inch (6.4 mm) open space where panels abut other construction or structural penetrations.
   2. Fasten with corrosion-resistant screws.

K. Trim Accessories: For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Attach trim according to manufacturer's written instructions.
   1. Control Joints: Install control joints according to ASTM C 840 and in specific locations approved by Architect for visual effect.
   2. Exterior Trim: Install in the following locations:
      a. Cornerbead: Use at outside corners.
      b. LC Bead: Use at exposed panel edges.

   3. Interior Trim: Install in the following locations:
      a. Cornerbead: Use at outside corners, unless otherwise indicated.
      b. Bullnose Bead: Use at outside corners.
      c. LC Bead: Use at exposed panel edges.
      d. L Bead: Use where indicated or necessary.
      e. U Bead: Use at exposed panel edges.

L. Gypsum Board Finishing: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere required to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.
   1. Prefill open joints, rounded or beveled edges, and damaged surface areas.
   2. Apply joint tape over gypsum board joints, except those with trim having flanges not intended for tape.

3. Gypsum Board Finish Levels: Finish panels to levels indicated below and according to ASTM C 840:
   a. Level 1: Ceiling plenum areas, concealed areas, and where indicated.
   b. Level 2: Panels that are substrate for tile.
   c. Level 3: Surfaces be coated with drywall primer prior to final finishes. Heavy or medium texture finishes before final painting, or where heavy-grade wall coverings are to be applied as the final decoration. This level of finish is not recommended where smooth painted surfaces, or light to medium weight wall coverings as specified. Janitorial, Electrical, Technology, & Mechanical Rooms.
   d. Level 4: For surfaces receiving wall coverings of semigloss and eggshell paints. Hallways, Classrooms & Offices with ceilings 10’ or lower
   e. Level 5: For surfaces receiving semigloss and eggshell paint and surfaces subjected to severe lighting. Banda Hall, Libraries, Commons, Flex Spaces & Hallways with Ceilings higher than 10’.

4. Glass Mat Gypsum Sheathing Board: Finish according to manufacturer's written instructions for use as exposed soffit board.
5. Glass Mat Faced Panels: Finish according to manufacturer's written instructions.

3.4 SOUNDPROOFING OF CONSTRUCTION

A. Penetrations of single-wythe masonry and concrete constructions
   1. Ductwork
      a. Install a metal sleeve at the penetration. Size the sleeve to allow for 1” thick sheet insulation and normal duct clearances. Line the sleeve with 1” thick elastomeric closed cell neoprene sheet insulation, 1.5 PCF fiberglass insulation, or mineral wool.
      b. Install duct through lined sleeve and seal airtight with acoustical sealant or fire-rated acoustical sealant if partition is fire-rated.
      c. Do not rigidly secure duct to wall with angles.

   2. Pipe/conduit diameter = 1” or larger
      a. Install a metal sleeve at the penetration. Size the sleeve to allow for 1/2” thick pipe insulation and normal pipe clearances. Line the sleeve with 1/2” thick elastomeric closed cell neoprene pipe insulation, 1.5 PCF fiberglass insulation, or mineral wool.
      b. Install pipe/conduit through lined sleeve and seal airtight with acoustical sealant or fire-rated acoustical sealant if partition is fire-rated.
      c. Do not rigidly secure pipe/conduit to wall with angles.

   3. Pipe/conduit diameter < 1”
      a. Wrap pipe/conduit with 1/2” thick elastomeric closed cell neoprene pipe insulation, 1.5 PCF fiberglass insulation, or mineral wool. Extend wrapping a minimum of 2” beyond the width of the partition on either side.
      b. Grout tightly to the neoprene pipe insulation on the pipe/conduit.
      c. Trim neoprene pipe insulation to the width of the partition, and seal airtight with acoustical sealant or fire-rated acoustical sealant if partition is fire-rated.

B. Penetrations of single stud drywall constructions
   1. Ductwork
      a. Wrap duct with 1” thick elastomeric closed cell neoprene sheet insulation, 1.5 PCF fiberglass insulation or mineral wool. Extend sheet insulation a minimum of 2-inches beyond the width of the partition on either side.
      b. Install drywall tight to the sheet insulation.
      c. Trim sheet insulation to the width of the partition, and seal airtight with acoustical sealant or fire-rated acoustical sealant if partition is fire-rated.

2. Pipe/conduit diameter = 1” or larger
   a. Wrap with 1/2” thick elastomeric closed cell neoprene pipe insulation, 1.5 PCF fiberglass insulation or mineral wool. Extend wrapping a minimum of 2-inches beyond the width of the partition on either side.
   b. Install a metal pipe sleeve around the neoprene insulation.
   c. Install the drywall around the sleeve and spackle tightly to full thickness of partition.
   d. Trim pipe insulation and sleeve to the width of the partition, and seal airtight with acoustical sealant or fire-rated acoustical sealant if partition is fire-rated.

3. Pipe/conduit diameter < 1”
   a. Wrap with 1/2” thick closed cell neoprene pipe insulation, 1.5 PCF fiberglass insulation or mineral wool. Extend wrapping a minimum of 2-inches beyond the width of the partition on either side.
   b. Install the drywall tight to the neoprene pipe wrap.
   c. Trim neoprene insulation to the width of the partition, and seal airtight with acoustical sealant or fire-rated acoustical sealant if partition is fire-rated.

C. Multiple duct/pipe/conduit penetrations
   1. Where a series of duct, conduits or pipes are penetrating the wall/floor/ceiling, each duct/conduit/pipe shall be separated by minimum 4” in all directions.
   2. Multiple duct/pipe/conduit penetrations at one location (i.e., one large opening for a series of pipe runs) are not recommended.

D. Penetrations double stud drywall and/or combination constructions
   1. Use same techniques described above EXCEPT do not bridge the two studs or wythes with solid members such as sleeves or stud frames. Each sleeve or frame must be completely separate for each individual wythe or stud.

3.5 PROTECTION

A. Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.

B. Remove and replace panels that are wet, moisture damaged, and mold damaged.
   1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
   2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

3.6 WORKMANSHIP TOLERANCES

A. Visual: Correct any nicks, bumps, out-of-level or out - of-plumb areas detectable to the naked eye.

B. Walls: 3/8 inch maximum deviation from vertical.

C. Bumps in Boards: Maximum 1/8 inch in 24 inches.

D. Corners: Maximum out-of-square 1/8 inch in 16 inches.

E. Float solid between corner beads less than 36 inches apart. Surfaces that appear concave are not acceptable.

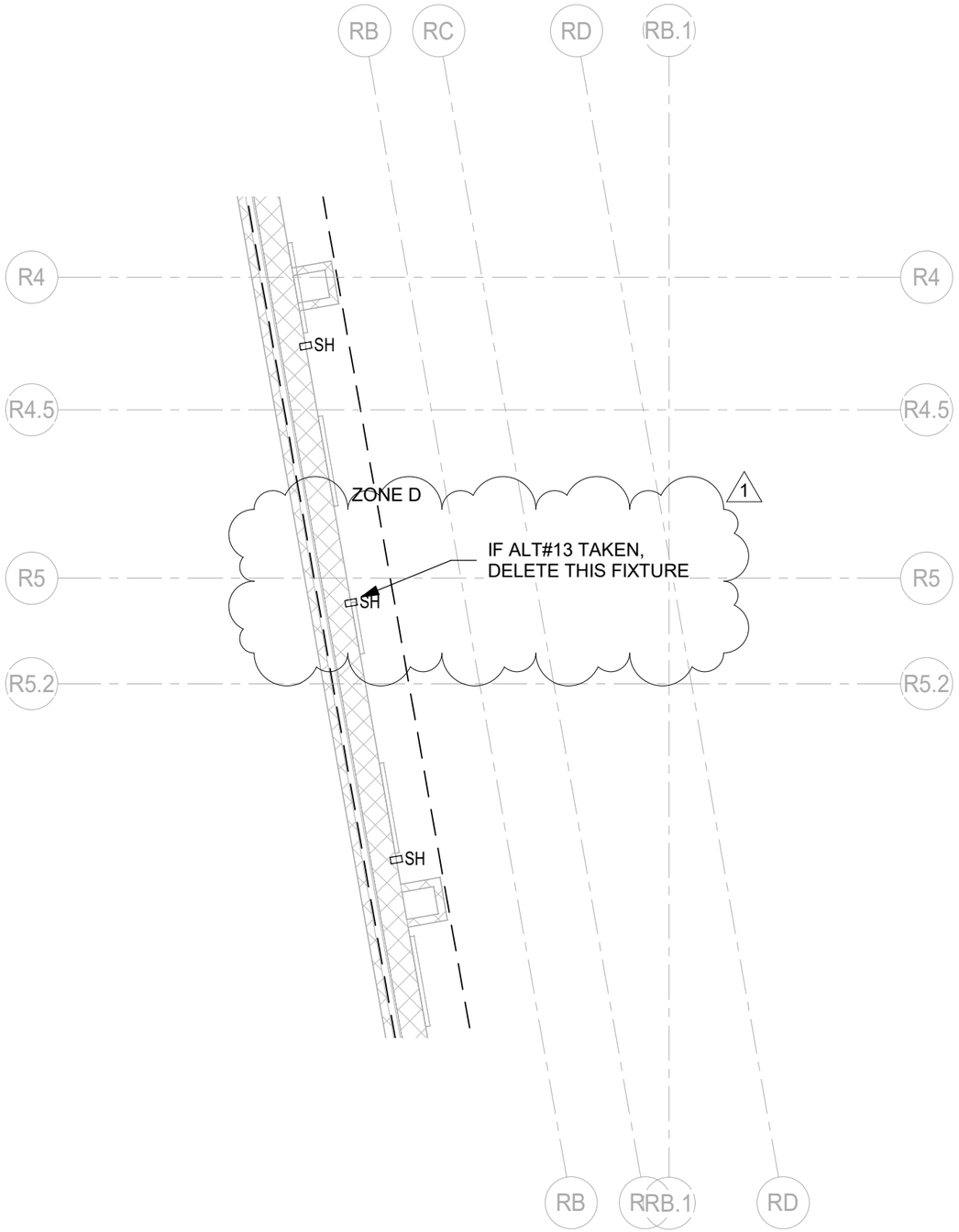
F. Provide "J" mold and continuous 1/4 inch reveal wherever gypsum board directly abutts other material or when end is exposed. All reveals to be caulked.

G. Float Control Joints flush with wall surface so that ceiling wall mold specified separately will align with wall surface flat and straight.

3.7 COMMENCEMENT RESTRICTIONS

A. Interior gypsum wallboard and ceiling board installation may not commence until all exterior dampproofing and roofing are completed and roof top equipment is fully installed and flashed and exterior wall openings are protected.

END OF SECTION 09 21 16

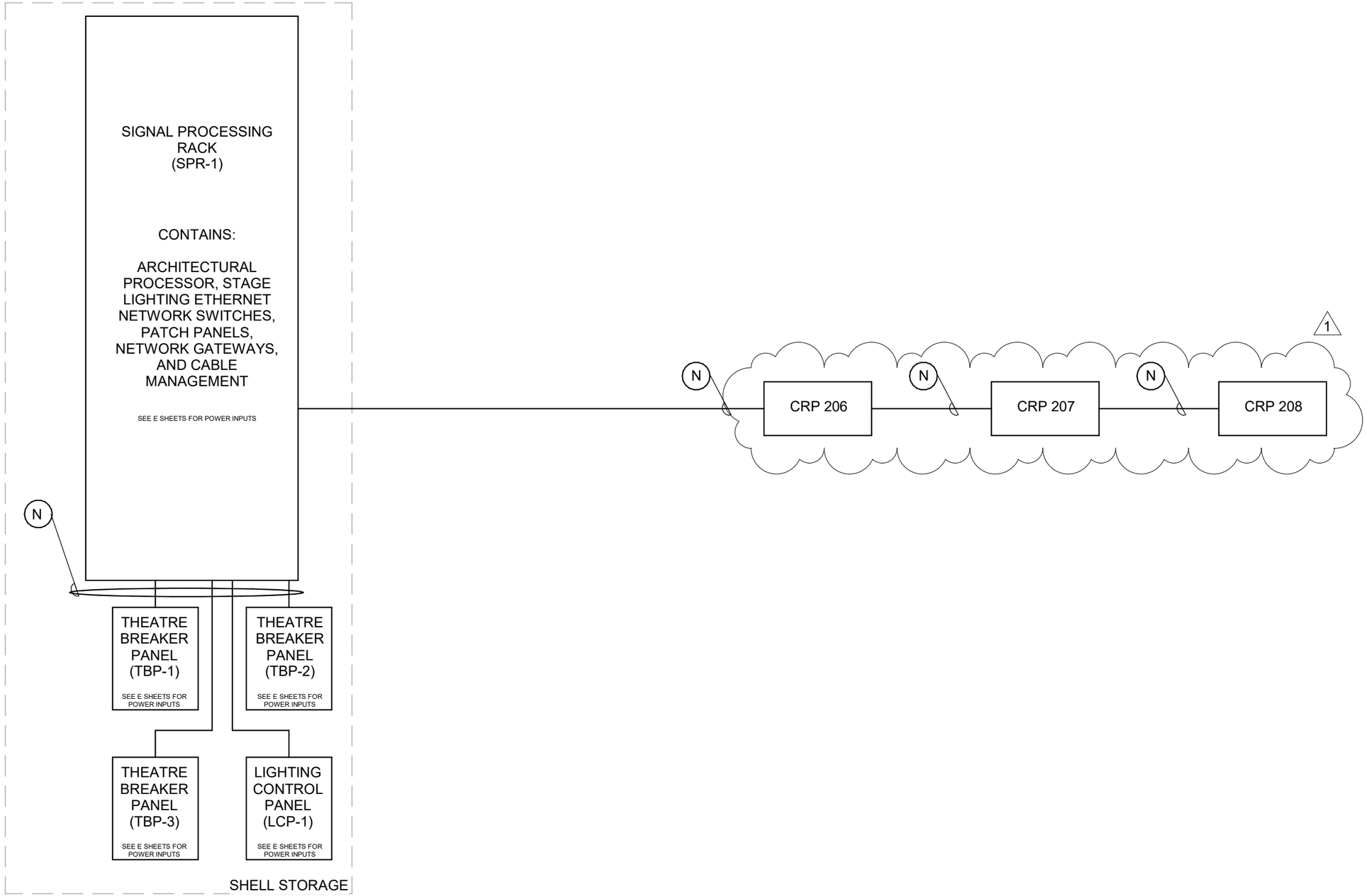


05 PLAN - BLACK BOX, WORK AND RUN LIGHTS, STAGE LEVEL

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

FRIENDSWOOD HIGH SCHOOL ADDITIONS AND RENOVATIONS			
REFERENCE DETAIL 05/TL 621			
DATE:	02/10/22	DWG.:	SKT-001
JOB #:	2097.00	DRAWN:	ZRB
SCALE: AS NOTED		CHECKED:	HM

THEATRE PLANNERS / LIGHTING DESIGNERS
Schuler Shook
325 NORTH SAINT PAUL
SUITE 3250
DALLAS, TX 75201
T 214 747 8300
schulershook.com

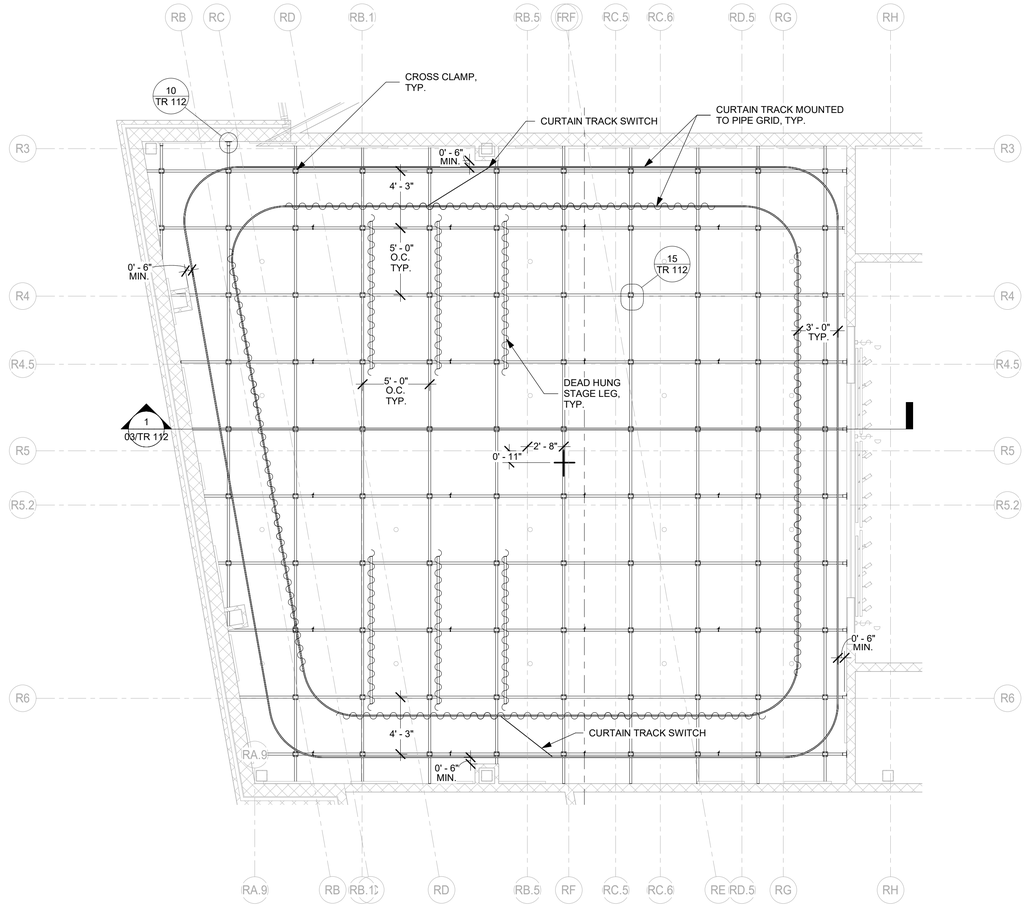


05 DIAGRAM - AUDITORIUM THEATRE LIGHTING, CONTROL RISER

NO SCALE

FRIENDSWOOD HIGH SCHOOL ADDITIONS AND RENOVATIONS			
REFERENCE DETAIL 05/TL 020			
DATE: 02/10/22		DWG.:	SKT-002
JOB #: 2097.00		DRAWN:	ZRB
SCALE: AS NOTED		CHECKED:	HM

THEATRE PLANNERS / LIGHTING DESIGNERS
Schuler Shook
325 NORTH SAINT PAUL
SUITE 3250
DALLAS, TX 75201
T 214 747 8300
schulershook.com



03 RCP - BLACK BOX PIPE GRID
3/16" = 1'-0"

PBK

ARCHITECT PBK Architects, Inc.
PBK.com
HOUSTON
11 Greenway Plaza, 22nd Floor
Houston, TX 77046
713-965-0608 P
713-961-4571 F
TX Firm: BR 1608

CIVIL
SSG
T 713-965-0608
SPORTS
PBK SPORTS
T 281-528-1697
LANDSCAPE
EDGELAND
T 713-965-0608
STRUCTURAL
KUBALA ENGINEERS
T 800-248-3674
MEP/T
LEAF ENGINEERS
T 713-940-3200
ENVELOPE
BEAM
T 713-940-3201
AV / ACOUSTIC
JAFFE HOLDEN
T 713-807-7100
THEATRICAL
SCHEILER SHOOK
T 214-747-8300
FOOD SERVICE
FOOD DESIGN PROFESSIONALS
T 281-350-2323

FRIENDSWOOD HIGH SCHOOL ADDITIONS AND RENOVATIONS
702 Greenbriar Dr.
Friendswood, TX 77546
ISSUE FOR PROPOSAL

FRIENDSWOOD INDEPENDENT SCHOOL DISTRICT

U
K J
H E D A
L
N M F C B
G
P
Q R S
T

KEY PLAN
NORTH: PLAN TRUE

CLIENT
FRIENDSWOOD ISD

DATE	PROJECT NUMBER
02/02/2022	20381

DRAWING HISTORY

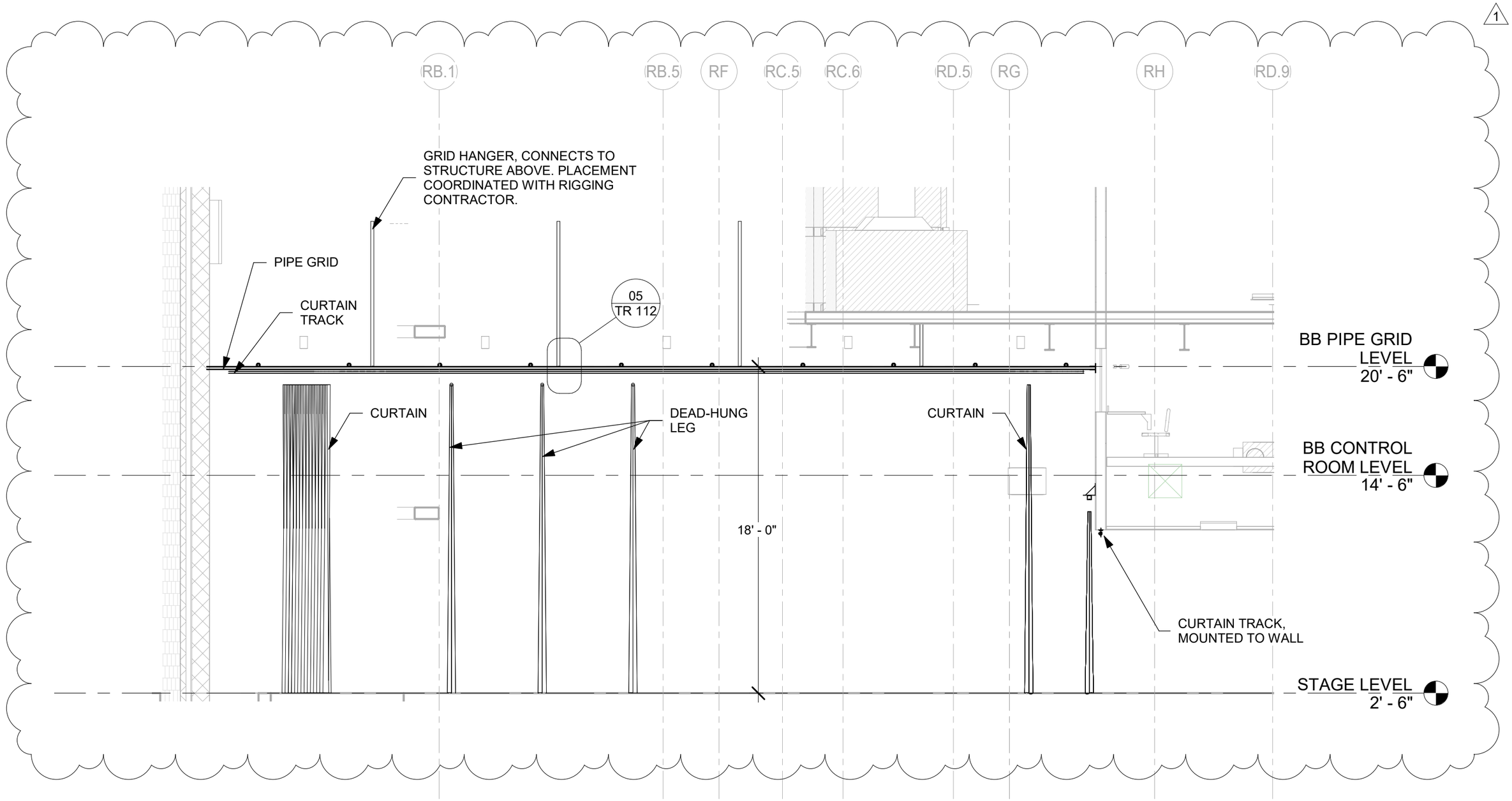
No.	Description	Date
1	ADDENDUM #1	02/10/2022

ISSUE FOR PROPOSAL

THEATRE RIGGING - BLACK BOX RCP

TR 111

File Path: BIM 360://Friendswood HS PAC/THEA/21 20381 FHS.rvt
CHECKED BY:
Checker
DRAWN BY:
Author
Plot Stamp:
2/8/2022 9:10:33 AM



03 SECTION - BLACK BOX PIPE GRID

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

FRIENDSWOOD HIGH SCHOOL ADDITIONS AND RENOVATIONS	
REFERENCE DETAIL 03/TR 112	
DATE: 02/10/22 JOB #: 2097.00 SCALE: AS NOTED	DWG.: SKT-003 DRAWN: ZRB CHECKED: HM

THEATRE PLANNERS / LIGHTING DESIGNERS
Schuler Shook
325 NORTH SAINT PAUL
SUITE 3250
DALLAS, TX 75201
T 214 747 8300
schulershook.com

1

CURTAIN SCHEDULE - BLACK BOX

SET	CURTAIN DESCRIPTION	QTY. OF PANELS	HEIGHT VERIFY ACTUAL CONDITIONS	WIDTH VERIFY ACTUAL CONDITIONS	FULLNESS	FABRIC	COLOR	TRACK TYPE	TRACK LENGTH VERIFY ACTUAL CONDITIONS	COMMENTS
A	PERIMETER MASKING PANELS	13	17' - 0"	12' - 0"	FLAT	IFR DOUBLE SIDED 21oz VELOUR	BLACK	ADC 140	300'	APPROXIMATE TRACK LENGTH INCLUDES BOTH INNER AND OUTER TRACKS
B	LEGS	6	17' - 0"	18' - 0"	FLAT	IFR 21oz VELOUR	BLACK	ADC 140	N/A	
C	STORAGE MASKING CURTAIN	1	10' - 0"	36' - 9"	100%	IFR 32oz VELOUR	HYACINTH	ADC 140	28'	PROVIDE WITH HIDDEN SNAPHOOKS

NOTE: ALL FABRICS TO BE IFR UNLESS OTHERWISE NOTED.

13 SCHEDULE - CURTAIN SCHEDULE, BLACK BOX

NO SCALE

FRIENDSWOOD HIGH SCHOOL ADDITIONS AND RENOVATIONS

REFERENCE DETAIL 13/TR 112

DATE: 02/10/22
JOB #: 2097.00
SCALE: AS NOTED

DWG.: SKT-004
DRAWN: ZRB
CHECKED: HM

THEATRE PLANNERS / LIGHTING DESIGNERS
Schuler Shook
325 NORTH SAINT PAUL
SUITE 3250
DALLAS, TX 75201
T 214 747 8300
schulershook.com

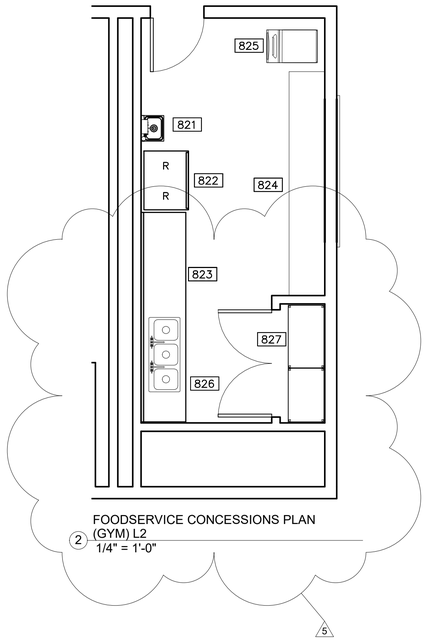
FS CONCESSIONS PLAN

K2

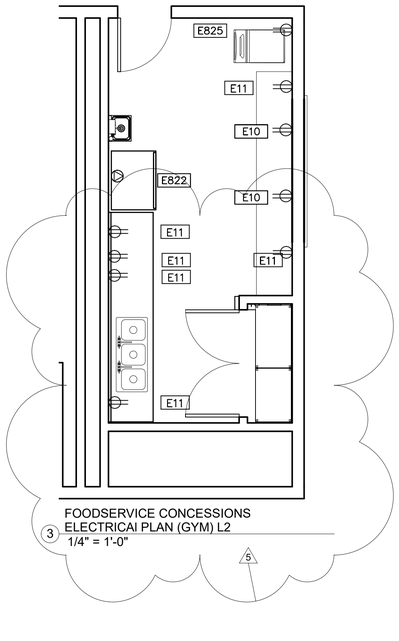
FOR BLUEBEAM LABELING/OCR:

0"

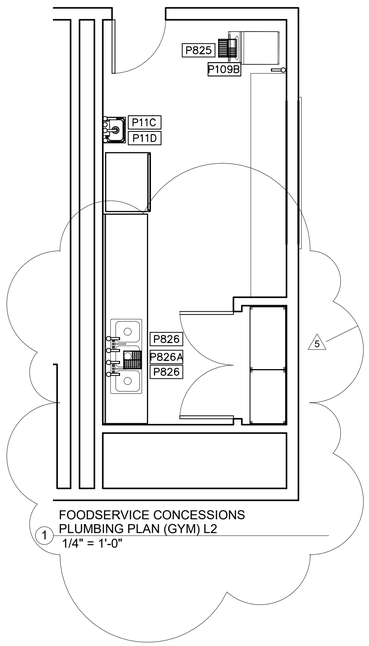
1"



FOODSERVICE CONCESSIONS PLAN (GYM) L2
2 1/4" = 1'-0"



FOODSERVICE CONCESSIONS ELECTRICAI PLAN (GYM) L2
3 1/4" = 1'-0"



FOODSERVICE CONCESSIONS PLUMBING PLAN (GYM) L2
1 1/4" = 1'-0"

FOODSERVICE EQUIPMENT SCHEDULE CONCESSIONS			
FDP ITEM	QTY	FDP DESCRIPTION	FDP REMARKS
818	1	MIXER STAND	
821	1	HAND SINK	PROVIDED BY DIV. 22
822	1	BEVERAGE MERCHANDISER	
823	1	BACK COUNTER	MILLWORK BY ARCHITECT
824	1	SNACK BAR COUNTER	MILLWORK BY ARCHITECT
825	1	ICE MACHINE W/ BIN	
826	1	DROP-IN THREE COMP SINK	
827	1	STORAGE SHELVING	

REFER TO SHEETS K1.5.1 & K1.5.2 FOR ELECTRICAL AND PLUMBING DETAILS, NOTE AND SCHEDULES

PBK

ARCHITECT PBK Architects, Inc.
HOUSTON PBK.com
11 Greenway Plaza, 22nd Floor
Houston, TX 77046
713-965-0608 P
713-961-4571 F
TX Firm: BR 1608

CIVIL
DIG
T 713-965-0608

SPORTS
PBK SPORTS
T 281-528-1697

STRUCTURAL
KUBALA ENGINEERS
T 800-246-3674

MEPT
LEAF ENGINEERS
T 713-940-3300

ENVELOPE
BEAM
T 713-940-3201

AV / ACOUSTIC
JAFFE HOLDEN
T 713-807-7100

THEATER
SCHULER SHOOK
T 214-747-8300

FOOD SERVICE
FOOD DESIGN PROFESSIONAL
T 281-350-2323

FRIENDSWOOD HIGH SCHOOL ADDITIONS AND RENOVATIONS

702 Greenbriar Dr
Friendswood, TX 77546

ISSUE FOR PROPOSAL

CLIENT
FRIENDSWOOD ISD

DATE 02/02/2022

PROJECT NUMBER 20381

DRAWING HISTORY

No.	Description	Date
5	ADDENDUM 1	2/9/22

ISSUE FOR PROPOSAL

FS CONCESSIONS PLAN

K2

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