

Addendum Number 01

March 14, 2025

To Drawings and Specifications dated <u>March 10, 2024</u> 2024 Watkins & Rowe MS and Cy Park HS Renovations Cypress Fairbanks Independent School District

CFISD Proposal Number: 24-02-5753-R-RFP

Prepared by: PBK Architects, Inc. 11 Greenway Plaza, 22nd Floor Houston, Texas 77046

PBK Project No's.: 240058/240059

Notice to Proposers:

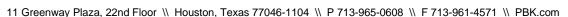
- A. Receipt of this Addendum shall be acknowledged on the Proposal Form.
- B. This Addendum forms part of the Contract documents for the above referenced project and shall be incorporated integrally therewith.
- C. Each proposer shall make necessary adjustments and submit his proposal with full knowledge 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 ITEMS

Item No. 01: All questions shall be directed to PBK Architects – attention: Juan Noriega at <u>juan.noriega@pbk.com</u> and Sutton Hardt at <u>sutton.hardt@pbk.com</u>.

SPECIFICATIONS

Item No. 02: Section AA Request for Competitive Sealed Proposals a. Revise section Pre-Proposal Conference: Monday, March 17, 2025 at 10:00AM at Cypress-Fairbanks Independent School District, Facilities & Construction Conference Room, 11430-B Perry Road, Houston, Texas 77064. Representatives of the Architect and Owner will be present at this meeting. All offerors are encouraged to attend. Section 07 42 13 Metal Wall Panels Item No. 03: a. Section added in it its entirety. Item No. 04: Section 08 71 00 Door Hardware (Rowe MS) a. Section added in its entirety. Item No. 05: Section 08 71 00 Door Hardware (Watkins MS) a. Section added in its entirety. Item No. 06: Section 08 71 00 Door Hardware (CyPark HS) a. Section added in its entirety. Section 10 51 13 Metal Lockers Item No. 07: a. Replace section 2.3 Locker Types



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	a. Type 'A' Art Lockers: 12" wide by 12" high by 24" deep, 6 tier, with interior hooks, louvered door, solid back, ends, filler, slope tops, and 4" high CMU base. Color shall be as selected by Architect from manufacturer's full color range.
Item No. 08:	Section 12 93 00 Site Furnishings a. Section added in its entirety.
Item No. 09:	Section 23 25 13 - Circulation Water System Chemical Treatment, replace this section in its entirety with attached.
Item No. 10:	Section 23 73 13 - Air Handling Units, replace this section in its entirety with attached.
Item No. 11:	Section 23 82 18 - Ductless Mini Splits, replace this section in its entirety with attached.
DRAWINGS -	(Watkins MS – Volume 1)
Item No. 12	Sheet ASD101 – DEMOLITION ARCHITECURAL SITE PLAN A. Keynote 02 41 00.S11 removed.
Item No. 13	Sheet AD-201.1 - 1ST FLOOR DEMOLITION CEILING PLAN - ENLARGED AREASA. Reception grid changed from demo tiles only to demo tiles and grid.B. Areas not in contract were updated in detail 4.
Item No. 14	 Sheet A-101D – 1ST FLOOR PLAN & SCHEDULES – AREA D A. Added paint (P4) to the wall finish schedule for the waiting and reception areas. B. Tagged storefronts that are receiving security film. Re: A-811 for storefront elevations.
Item No. 15	Sheet A-101F – 1 ST FLOOR PLAN & SCHEDULES – AREA F A. 4" Concrete Curb added along the perimeter of the Kiln Rm F1030 B. Added Keynote 04 20 00.CU5
Item No. 16	 Sheet A-501 - EXTERIOR ELEVATIONS – ORCHESTRA ADDITION A. Extents of new roof graphically clarified on Details 26,12, & 06. B. Detail 18 Orchestra Ext. Elevation: added keynote 32 33 00.BB2 to benches
Item No. 17	Sheet A-711 – WALL SECTION DETAILS A. Details 02, 03, 08, and 09 were deleted from sheet.
Item No. 18	Sheet 811 - DOORS - WINDOWS PANEL & FRAME TYPES A. Added storefront elevations that are receiving security film. Re: A-101D for storefront locations.
Item No. 19	Sheet AF100 – FINISH SCHEDULE A. Included CP4 in the finish schedule
Item No. 20	Sheet AF101 – 1 ST FLOOR FINISH PLAN - COMPOSITE A. Added CP4 to the finish floor legend and applied it to the waiting and reception areas.
Item No. 21	E-301F – ELECTRICAL POWER 1ST FLOOR PLAN – AREA F A. Revise power layout in Manufacturing Classroom-1 F1026-1.
Item No. 22	E-502 – ELECTRICAL PANEL SCHEDULE A. Replace CKT 10 and CKT 12 with spare 20A breaker.
Item No. 23	T-002 – TECHNOLOGY DEMOLITION FLOOR PLAN – LEVEL 1 – AREA E A. Orchestra E1020, update motion detectors to existing be demolished.
Item No. 24	T-204 – TECHNOLOGY FLOOR PLAN – LEVEL 1 – AREA E A. No longer showing existing motion detectors in Orchestra E1020.

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- Item No. 25 T-205 TECHNOLOGY FLOOR PLAN LEVEL 1 AREA F
 - A. Add intercom speaker to Storage F1029.
 - B. Adjust D2 outlet elevation in Manufacturing classroom F1026.
 - C. Relocate D1 outlet in Mechanical F1027 to BMCS location.
 - D. Adjust door contact location on door F1052.

DRAWINGS -	(Cy-Park HS – Volume 2)
ltem No. 26	 Sheet AS-401 - ENLARGED SITE PLAN A. Added note to provide flashing between new canopy and existing adjacent wall at 04/AS-401. B. Added note for GC to coordinate canopy end cap and flashing between new and existing aluminum canopy system at 04/AS-401.
Item No. 27	 Sheet AD101D - 1ST FLOOR DEMOLITION PLAN - AREA D A. Added keynote 02 41 00.S15 "Salvage existing computer station, uninstall, preserve, store, and protect for reinstallation at new location. Re: Plan for new location.
Item No. 28	Sheet A-101A - 1ST FLOOR PLAN & SCHEDULES - AREA A A. Tagged storefronts that are receiving security film. Re: A-823 for storefront elevations
Item No. 29	Sheet A-101B – 1ST FLOOR PLAN & SCHEDULES – AREA B A. Tagged storefronts that are receiving security film. Re: A-823 for storefront elevations
Item No. 30	Sheet A-101C – 1ST FLOOR PLAN & SCHEDULES – AREA C A. Tagged storefronts that are receiving security film. Re: A-823 for storefront elevations
Item No. 31	Sheet A-101D – 1ST FLOOR PLAN & SCHEDULES – AREA D A. Tagged storefronts that are receiving security film. Re: A-823 for storefront elevations
Item No. 32	Sheet A-101E – 1ST FLOOR PLAN & SCHEDULES – AREA E A. Tagged storefronts that are receiving security film. Re: A-823 for storefront elevations
Item No. 33	Sheet A-101N – 1 ST FLOOR PLAN & SCHEDULES – AREA N A. Tagged storefronts that are receiving security film. Re: A-823 for storefront elevations
Item No. 34	Sheet A-101P – 1 ST FLOOR PLAN & SCHEDULES – AREA P A. Tagged storefront that is receiving security film. Re: A-811 for storefront elevation
Item No. 35	Sheet A-501 – EXTERIOR ELEVATIONS – COMPOSITE & ENLARGED A. Updated Existing/New Construction tags that were conflicting at 30/A-501.
Item No. 36	Sheet A-521 – INTERIOR ELEVATIONS A. Added sill height dimension for marker board at 22/A-521 B. Updated 28/A-521, 30/A-521 to have STRUCTURAL GLAZED TILE "QUICKBASE".
Item No. 37	Sheet A-801 – PARTITION TYPES - CMU & MTL STUD A. Added partition type M4.C to 01/A-801.
Item No. 38	Sheet A-811 - DOORS & WINDOWS - PANEL / FRAME TYPES & DETAILS A. Added storefront elevation that is receiving security film. Re: A-101P for storefront location
Item No. 39	Sheet A-823 – WINDOWS & STOREFRONT ELEVATIONS A. Added sheet in its entirety.
Item No. 40	Sheet AF101.1 – 1ST LEVEL – FINISH FLOOR PLAN – ENLARGED AREAS A. Detail 24/AF101.1 – Provide finish CP1 at locations indicated at Area A, Reception/Waiting.
Item No. 41	Sheet A-841 – CASEWORK ELEVATIONS & DETAILS Project No. 240058/240059 – Addendum No. 01



	A. Detail 8 Art- North Elevation, revised locker count and width.
Item No. 42	M111A - MECHANICAL DEMOLITION FLOOR PLAN - LEVEL 1 - AREA A A. Relocate existing supply diffuser. B. Add keynote #3 and #4.
Item No. 43	M211A - MECHANICAL FLOOR PLAN - LEVEL 1 - AREA A A. Reception a1303, Relocate existing supply diffuser. B. Add keynote #2.
Item No. 44	M211D - MECHANICAL FLOOR PLAN - LEVEL 1 - AREA D A. Art D1103, Relocate EF-75.
Item No. 45	2/M211L - MECHANICAL FLOOR PLAN - LEVEL 1 - AREA L A. Mechanical L1372, add smoke detectors.
ltem No. 46	2/M212C - MECHANICAL FLOOR PLAN - LEVEL 2 - AREA C A. Revise keynote #1. B. Corr C1292, revise supply diffuser CFM.
Item No. 47	M213 - MECHANICAL FLOOR PLAN - CENTRAL PLANT OFFICE A. Relocate DMSCU-1. B. Revise keynote #2. C. Add keynote #7.
Item No. 48	M401 - MECHANICAL DETAILS, AND LEGENDS A. Revise detail #4. B. Revise detail #5. C. Revise duct liner and insulation detail.
ltem No. 49	M402 - MECHANICAL DETAILS, AND LEGENDS A. Add new sheet for details.
ltem No. 50	M501 - MECHANICAL SCHEDULES A. Revise grille schedule. B. Revise fan schedule.
DRAWINGS -	(Rowe MS – Volume 3)
Item No. 51	Sheet A-101A - 1ST FLOOR PLAN & SCHEDULES - AREA A A. Tagged storefronts that are receiving security film. Re: A-823 for storefront elevations
Item No. 52	Sheet A-101B - 1ST FLOOR PLAN & SCHEDULES - AREA B A. Tagged storefront that are receiving security film. Re: A-823 for storefront elevations
Item No. 53	Sheet A-101C - 1ST FLOOR PLAN & SCHEDULES - AREA C A. Tagged storefront that are receiving security film. Re: A-823 for storefront elevations
Item No. 54	Sheet A-101D - 1ST FLOOR PLAN & SCHEDULES - AREA D A. Tagged storefront that are receiving security film. Re: A-823 for storefront elevations
Item No. 55	Sheet A-101H - 1ST FLOOR PLAN & SCHEDULES - AREA H A. Tagged storefront that are receiving security film. Re: A-823 for storefront elevations
ltem No. 56	Sheet A-823 - WINDOWS & STOREFRONT ELEVATIONS A. Added sheet in its entirety.
Item No. 57	E-100 – ELECTRICAL COMPOSITE FLOOR PLAN

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- A. Add existing panel HB, existing XFMR TLB and existing panel LB.
- Item No. 58 E-101 ELECTRICAL SITE PLAN A. Add conduit run for ne Storage Building
- Item No. 59 E-301 ELECTRICAL POWER PLANS A. Revise power layout in Storage Building.
- Item No. 60 E-301 DETAILS AND SCHEDULES A. Add Existing Panel HB schedule and New Panel LFS Schedule.
- Item No. 61 E-401 ELECTRICAL ONE-LINE DIAGRAM.
- Item No. 62 M202 MECHANICAL FLOOR PLAN LEVEL 1 STORAGE BUILDING A. Add exhaust and intake to storage building.
- Item No. 63 M301 MECHANICAL DETAILS, LEGENDS, AND SCHEDULE A. Add fan schedule. B. Add grille schedule.
- Item No. 64
 T-100 TECHNOLOGY COMPOSITE FLOOR PLAN LEVEL 1

 A. Provide technology/security design for athletic storage building.

 B. Indicate door contacts on man door and overhead door of athletic storage building.

 C. Provide conduit size, pathway and instructions from existing middle school to new athletic storage building.

END OF ADDENDUM NO. 01

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SECTION 07 42 10 - METAL WALL PANELS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes: Requirements including but not limited to:
 - 1. Concealed fastened metal wall panels as part of the assembly.
 - 2. Accessories necessary for a complete installation.

1.3 PERFORMANCE REQUIREMENTS

A. <u>Delegated Design: Engage a qualified professional engineer, licensed in the State of Texas with</u> <u>experience in the design of metal composite wall panels as part of curtainwalls and aluminum</u> <u>storefront systems to design and coordinate the cladding assembly using performance</u> requirements and design criteria indicated.

1.4 SYSTEM REQUIREMENTS

A. Modular Metal Panel System: Rainscreen design consisting of dry seal joinery designed, attachment system components, and associated necessary to minimize water penetration and induce air circulation in the space behind the panel system. Moisture weeping trim at panel base details allows water to drain out of the system.

1.5 SUBMITTALS

- A. <u>Product Data: Technical data including construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of panel and accessory.</u>
- B. <u>Shop Drawings: Provide shop drawings prepared by manufacturer or manufacturer's authorized</u> <u>dealer. Include full elevations showing openings and penetrations. Include details of each condition</u> <u>of installation and attachment. Provide details at a minimum scale 3-inch per foot of all required trim</u> <u>and extrusions needed for a complete installation.</u>
 - 1. Include data indicating compliance with performance requirements.
 - 2. Indicate points of supporting structure that must coordinate with modular metal panel system installation.
- C. <u>Samples:</u>
 - 1. One (1) ft long sample of each listed panel, including clips (if applicable) & fasteners
 - 2. <u>Minimum 2" x 4" chip of specified finish.</u>
- D. <u>Qualification Information: For Installer and Installer's field supervisor.</u>
- E. <u>Warranty: Manufacturer's sample warranty as specified.</u>

1.6 DELIVERY AND STORAGE

A. <u>All panels shall be delivered with appropriate packaging to provide protection against transportation</u> damage. Materials damaged in shipping or storage shall not be used. B. <u>Store all materials and accessories above ground on well-skidded platforms. Store under waterproof covering.</u> Provide proper ventilation to panels to prevent condensation build-up between panels.

1.7 COORDINATION

- A. <u>Coordinate work with installation of associated metal flashings and manufactured roof panels.</u>
- B. <u>General contractor shall coordinate with all subcontractors including masonry, waterproofing</u> membrane, sheathing work, and framing to ensure walls are plumb and ready to accept fasteners and panel systems.
- C. <u>Pre-construction meeting required with owner and architect.</u> Representatives from all associated trades shall attend to coordinate arrival, delivery, and installation of products and materials.

1.8 WARRANTY

- A. <u>Warrant the work specified herein for five (5) years against becoming unserviceable or causing</u> <u>an objectionable appearance resulting from either defective or non-conforming materials or</u> <u>workmanship.</u>
- B. Provide a manufacturer's twenty (20) year finish integrity warranty.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Basis of Design Manufacturer: Berridge Manufacturing Company. Other manufacturers may bid this project provided they comply with all requirements of this specification. Product listed is considered basis of design and owner shall not be responsible for any costs resulting from change of manufacturer including sizes, trim pieces, structural, or system components. Manufacturers listed below who produce equivalent products to those specified are approved for use on the Project. Other manufacturers must have a minimum of ten (10) years' experience manufacturing products meeting or exceeding the specifications and comply with Division 1 requirements regarding substitutions to be considered.
 - 1. <u>Alucoil North America LLC.</u>
 - 2. CENTRIA Architectural Systems.
 - 3. <u>Citadel Architectural Systems, Inc.</u>

2.2 MATERIALS

- A. <u>Metal Wall Panel (MP-1):</u>
 - 1. <u>Materials:</u>
 - a. <u>Prefinished Sheet Material: 24 gauge thick Galvalume® steel sheet, minimum yield 50,000 PSI, roll formed in continuous lengths, ASTM A792.</u>
 - b. Finish: Kynar 500 or Hylar 5000 Fluoropolymer coating, applied by the manufacturer on a continuous coil coating line, with a top side dry film thickness of 0.70 to 0.90 mil over 0.25 to 0.35 mil prime coat, to provide a total dry film thickness of 0.95 to 1.25 mil. Bottom side shall be coated with primer with a dry film thickness of 0.25 mil. Finish shall conform to all tests for adhesion, flexibility, and longevity as specified by the Kynar 500 or Hylar 5000 finish supplier. Color shall be as selected by Architect from manufacturer's available colors. Interior surface finish shall be manufacturer's full range of colors.
 - c. <u>Touch-up Paint: Paint burns, scars, welds, and damaged and rusted surfaces with</u> <u>cold galvanizing paint in accordance with ASTM A780.</u> Acceptable Products <u>include ZRC Cold Galvanizing Compound or Galvilite manufactured by ZRC</u>

Worldwide, Marshfield, MA; Galvax Zinc-rich Cold Galvanizing Coating manufactured by Alvin Products, Inc., Lawerence, MA; or paint complying with military specification MILP-21035A, Type I or II.

- d. <u>Strippable Film: Shall be applied to the top side of the painted coil to protect the finish during fabrication, shipping and field handling. This strippable film must be removed before installation.</u>
- e. <u>Accessories:</u>
 - 1) <u>Sealant: As specified in Section 07 92 00.</u>
 - 2) Cold Formed Metal Framing: As specified in Section 05 40 00.
 - 3) <u>Girts, Sub-girts, purlins: 16 gauge minimum thickness (55,000 psi minimum yield thickness) galvanized steel, with Stainless Steel screws to meet application.</u>
 - 4) <u>Fasteners: long-life, corrosion resistant screws supplied or instructed by</u> panel manufacturer to suit application spaced according to UL requirements, color matched to match metal panel color.
 - 5) <u>Clips, miscellaneous fasteners: galvanized steel as supplied or instructed</u> by panel manufacturer.
 - 6) <u>Metal Trim, closures, and flashing: Exposed adjacent flashing shall be the</u> <u>same material and finish as panel system.</u>
 - 7) <u>Separate dissimilar metals with asphalt-saturated building felt or a</u> <u>bituminous coating to prevent galvanic action.</u>
 - 8) Dampproofing: refer to section 07 11 00.
- 2. <u>Profile/Dimensions: 7/8 inch thick panel 16 inch coverage width, in continuous</u> <u>length up to 40 feet-0 inches, with interlocking design with concealed fasteners.</u>
- 3. <u>Approved Product/Manufacturer: 'HR-16' Panel manufactured by Berridge</u> <u>Manufacturing Co., Houston, TX; (800) 231-8127, or Architect approved equal.</u>
- C. All Cold-Formed Metal Framing for Metal Wall Panels to be designed by a Texas Licensed Profession Engineer per spec. Section 05 40 00, Professional Engineer
 - E. Accessories:
 - 1. <u>Zees: 16 gauge minimum thickness galvanized steel, 2 inch rise minimum, or as required</u> to align with existing conditions.
 - 2. <u>Sub-Girt Fasteners: Stainless Steel screws to meet application.</u>
 - 3. <u>Concealed Fasteners: Stainless Steel screws supplied or recommended by panel</u> manufacturer to suit application.
 - 4. <u>Metal Trim at Siding Panels: 0.060 inch thick pre-finished aluminum sheet, matching finish</u> <u>type and color of siding panels.</u>
 - 5. <u>Closures: 0.060 inch thick aluminum sheet, mill finish.</u>
 - 6. <u>Separate dissimilar metals with asphalt-saturated building felt or a bituminous coating to</u> prevent galvanic action.
 - 7. Air Barrier: High temperature air barrier. Re: 07 26 00.
 - 8. Polyisocynurate: Shall comply with NFPA 285 & ASTM G 2357 & ASTM E 331. Thickness shall be 2-inch.
 - 9. Access Panels: Refer to 08 31 13 Specification.

PART 3 - EXECUTION

3.1 EXAMINATION OF MODULAR METAL PANEL SYSTEM

A. <u>Examine substrates, areas, and conditions, with Installer present, for compliance with</u> requirements for installation tolerances, metal composite material panel supports, and other conditions affecting performance of the Work.

- 1. Examine wall framing to verify that girts, angles, channels, studs, and other structural panel support members and anchorage have been installed within alignment tolerances required by metal composite material wall panel manufacturer.
- 2. Examine wall sheathing to verify that sheathing joints are supported by framing or blocking and that installation is within flatness tolerances required by metal composite material wall panel manufacturer.
 - a. Verify that air or water resistive barriers have been installed over sheathing or backing substrate to prevent air infiltration or water penetration.
- B. <u>Examine roughing in for components and assemblies penetrating metal composite material</u> panels to verify actual locations of penetrations relative to seam locations of metal composite material panels before installation.
- C. <u>Proceed with installation after correcting unsatisfactory conditions.</u>

3.2 PREPARATION

A. <u>Miscellaneous Supports: Install subframing, furring, and other miscellaneous panel support</u> members and anchorages according to ASTM C 754 and metal composite material panel as required by manufacturer's written recommendations.

3.3 ERECTION TOLERANCES

A. <u>Installation Tolerances: Shim and align metal composite material wall panel units within installed</u> tolerance of 1/4 inch in 20 feet (6 mm in 6 m), nonaccumulative, on level, plumb, and location lines as indicated, and within 1/8 inch (3 mm) offset of adjoining faces and of alignment of matching profiles.

3.4 FIELD QUALITY CONTROL

- A. <u>Testing Agency: Owner will engage a qualified independent testing agency to perform field tests</u> <u>and inspections.</u>
- B. <u>Water Spray Test: After installation, test area of assembly directed by Architect for water</u> penetration according to AAMA 501.2.
- C. <u>Manufacturer Field Service: Engage a factory authorized service representative to test and</u> inspect completed metal composite material wall panel installation, including accessories.
- D. <u>Metal composite material wall panels are considered defective if they do not pass test and inspections.</u>
- E. <u>Additional tests and inspections, at Contractor's expense, are performed to determine</u> <u>compliance of replaced or additional work with specified requirements.</u>
- F. <u>Prepare test and inspection reports.</u>

3.5 CLEANING AND PROTECTION

A. <u>Remove temporary protective coverings and strippable films as metal composite material</u> panels are installed, unless otherwise indicated in manufacturer's written installation instructions. On completion of metal composite material panel installation, clean finished surfaces as recommended by metal composite material panel manufacturer. Maintain in a clean condition during construction.

- B. <u>After metal composite material panel installation, clear weep holes and drainage channels of obstructions, dirt, and sealant.</u>
- C. <u>Replace metal composite material panels that have been damaged or have deteriorated beyond</u> <u>successful repair by finish touchup or similar minor repair procedures.</u>

END OF SECTION 07 42 10

SECTION 087100 - DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes commercial door hardware for the following:
 - 1. Swinging doors.
 - 2. Other doors to the extent indicated.
- B. Door hardware includes, but is not necessarily limited to, the following:
 - 1. Mechanical door hardware.
 - 2. Electromechanical door hardware.
 - 3. Cylinders specified for doors in other sections.
- C. Related Sections:
 - 1. Division 08 Section "Door Hardware Schedule".
 - 2. Division 08 Section "Hollow Metal Doors and Frames".
 - 3. Division 08 Section "Interior Aluminum Doors and Frames".
 - 4. Division 08 Section "Plastic Laminate Faced Wood Doors".
- D. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.
 - 1. ANSI A117.1 Accessible and Usable Buildings and Facilities.
 - 2. ICC/IBC International Building Code.
 - 3. NFPA 70 National Electrical Code.
 - 4. NFPA 80 Fire Doors and Windows.
 - 5. NFPA 101 Life Safety Code.
 - 6. NFPA 105 Installation of Smoke Door Assemblies.
 - 7. State Building Codes, Local Amendments.
- E. Standards: All hardware specified herein shall comply with the following industry standards:

- 1. ANSI/BHMA Certified Product Standards A156 Series
- 2. UL10C Positive Pressure Fire Tests of Door Assemblies

1.3 SUBMITTALS

- A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.
- B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
 - 1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."
 - 2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening. Organize door hardware sets in same order as in the Door Hardware Sets at the end of Part 3. Submittals that do not follow the same format and order as the Door Hardware Sets will be rejected and subject to resubmission.
 - 3. Content: Include the following information:
 - a. Type, style, function, size, label, hand, and finish of each door hardware item.
 - b. Manufacturer of each item.
 - c. Fastenings and other pertinent information.
 - d. Location of door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
 - e. Explanation of abbreviations, symbols, and codes contained in schedule.
 - f. Mounting locations for door hardware.
 - g. Door and frame sizes and materials.
 - h. Warranty information for each product.
 - 4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.
- C. Shop Drawings: Details of electrified access control hardware indicating the following:
 - 1. Wiring Diagrams: Upon receipt of approved schedules, submit detailed system wiring diagrams for power, signaling, monitoring, communication, and control of the access control system electrified hardware. Differentiate between manufacturer-installed and field-installed wiring. Include the following:

- a. Elevation diagram of each unique access controlled opening showing location and interconnection of major system components with respect to their placement in the respective door openings.
- b. Complete (risers, point-to-point) access control system block wiring diagrams.
- c. Wiring instructions for each electronic component scheduled herein.
- 2. Electrical Coordination: Coordinate with related sections the voltages and wiring details required at electrically controlled and operated hardware openings.
- D. Proof of Certification: Provide copy of manufacturer(s) official certification or accreditation document indicating proof of status as a qualified installer of Windstorm assemblies.
- E. Keying Schedule: After a keying meeting with the owner has taken place prepare a separate keying schedule detailing final instructions. Submit the keying schedule in electronic format. Include keying system explanation, door numbers, key set symbols, hardware set numbers and special instructions. Owner must approve submitted keying schedule prior to the ordering of permanent cylinders/cores.
- F. Informational Submittals:
 - 1. Product Test Reports: Indicating compliance with cycle testing requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified independent testing agency.
- G. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Submittals.

1.4 QUALITY ASSURANCE

- A. Manufacturers Qualifications: Engage qualified manufacturers with a minimum 5 years of documented experience in producing hardware and equipment similar to that indicated for this Project and that have a proven record of successful in-service performance.
- B. Installer Qualifications: A minimum 3 years documented experience hardware similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.
- C. Door Hardware Supplier Qualifications: Experienced commercial door hardware distributors with a minimum 5 years documented experience supplying hardware installations comparable in material, design, and extent to that indicated for this Project. Supplier recognized as a factory direct distributor by the manufacturers of the primary materials with a warehousing facility in Project's vicinity. Supplier to have on staff a certified Architectural Hardware Consultant (AHC) available during the course of the Work to consult with Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying.
- D. Integrated Wiegand, Wireless, and IP-Enabled Access Control Products Supplier Qualifications: Integrated access control products and accessories are required to be supplied and installed

through current members of the ASSA ABLOY "Authorized Channel Partner" (ACP) and "Certified Integrator" (CI) programs. Suppliers are to be factory trained, certified prior to project bid, and a direct purchaser of the specified product. Installers are to be factory trained, certified prior to project bid, and are responsible for commissioning, servicing, and warranting the installed equipment specified for the project.

- E. Source Limitations: Obtain each type and variety of door hardware specified in this section from a single source unless otherwise indicated.
 - 1. Electrified modifications or enhancements made to a source manufacturer's product line by a secondary or third party source will not be accepted.
 - 2. Provide electromechanical door hardware from the same manufacturer as mechanical door hardware, unless otherwise indicated
- F. Each unit to bear third party permanent label demonstrating compliance with the referenced standards.
- G. Keying Conference: Conduct conference to comply with requirements in Division 01 Section "Project Meetings." Keying conference to incorporate the following criteria into the final keying schedule document:
 - 1. Function of building, purpose of each area and degree of security required.
 - 2. Plans for existing and future key system expansion.
 - 3. Requirements for key control storage and software.
 - 4. Installation of permanent keys, cylinder cores and software.
 - 5. Address and requirements for delivery of keys.
- H. Pre-Submittal Conference: Conduct coordination conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier(s), Installer(s), and Contractor(s) to review proper methods and the procedures for receiving, handling, and installing door hardware.
 - 1. Prior to installation of door hardware, conduct a project specific training meeting to instruct the installing contractors' personnel on the proper installation and adjustment of their respective products. Product training to be attended by installers of door hardware (including electromechanical hardware) for aluminum, hollow metal and wood doors. Training will include the use of installation manuals, hardware schedules, templates and physical product samples as required.
 - 2. Inspect and discuss electrical roughing-in, power supply connections, and other preparatory work performed by other trades.
 - 3. Review sequence of operation narratives for each unique access controlled opening.
 - 4. Review and finalize construction schedule and verify availability of materials.
 - 5. Review the required inspecting, testing, commissioning, and demonstration procedures
- I. At completion of installation, provide written documentation that components were applied to manufacturer's instructions and recommendations and according to approved schedule.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site.
- B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.
- C. Deliver, as applicable, permanent keys, cylinders, cores and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

1.6 COORDINATION

- A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.
- B. Door Hardware and Electrical Connections: Coordinate the layout and installation of scheduled electrified door hardware and related access control equipment with required connections to source power junction boxes, low voltage power supplies, detection and monitoring hardware, and fire and detection alarm systems.
- C. Door and Frame Preparation: Doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

1.7 WARRANTY

- A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.
- B. Warranty Period: Written warranty, executed by manufacturer(s), agreeing to repair or replace components of standard and electrified door hardware that fails in materials or workmanship within specified warranty period after final acceptance by the Owner. Failures include, but are not limited to, the following:
 - 1. Structural failures including excessive deflection, cracking, or breakage.
 - 2. Faulty operation of the hardware.
 - 3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
 - 4. Electrical component defects and failures within the systems operation.
- C. Standard Warranty Period: One year from date of Substantial Completion, unless otherwise indicated.

- D. Special Warranty Periods:
 - 1. Lifetime for mortise locks and latches.
 - 2. Five years for exit hardware.
 - 3. Ten years for electric latch retraction exit motors
 - 4. Twenty-five years for manual surface door closer bodies.
 - 5. Two years for electromechanical door hardware.
 - 6. Lifetime for SN200 readers.

1.8 MAINTENANCE SERVICE

- A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.
- 1.9 OWNER STOCK See Attic Stock at the end of Hardware Schedule.

PART 2 - PRODUCTS

2.1 SCHEDULED DOOR HARDWARE

- A. General: Provide door hardware for each door to comply with requirements in Door Hardware Sets and each referenced section that products are to be supplied under.
- B. Designations: Requirements for quantity, item, size, finish or color, grade, function, and other distinctive qualities of each type of door hardware are indicated in the Door Hardware Sets at the end of Part 3. Products are identified by using door hardware designations, as follows:
- C. Named Manufacturer's Products: Product designation and manufacturer are listed for each door hardware type required for the purpose of establishing requirements. Manufacturers' names are abbreviated in the Door Hardware Schedule.
- D. Substitutions: Requests for substitution and product approval for inclusive mechanical and electromechanical door hardware in compliance with the specifications must be submitted in writing and in accordance with the procedures and time frames outlined in Division 01, Substitution Procedures. Approval of requests is at the discretion of the architect, owner, and their designated consultants.

2.2 HANGING DEVICES

- A. Hinges: ANSI/BHMA A156.1 certified butt hinges with number of hinge knuckles as specified in the Door Hardware Sets.
 - 1. Quantity: Provide the following hinge quantity, unless otherwise indicated:

- a. Two Hinges: For doors with heights up to 60 inches.
- b. Three Hinges: For doors with heights 61 to 90 inches.
- c. Four Hinges: For doors with heights 91 to 120 inches.
- d. For doors with heights more than 120 inches, provide 4 hinges, plus 1 hinge for every 30 inches of door height greater than 120 inches.
- 2. Hinge Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:
 - a. Widths up to 3'0": 4-1/2" standard or heavy weight as specified.
 - b. Sizes from 3'1" to 4'0": 5" standard or heavy weight as specified.
- 3. Hinge Weight and Base Material: Unless otherwise indicated, provide the following:
 - a. Exterior Doors: Heavy weight, non-ferrous, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate standard weight.
 - b. Interior Doors: Standard weight, steel, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate heavy weight.
- 4. Hinge Options: Comply with the following where indicated in the Hardware Sets or on Drawings:
 - a. Non-removable Pins: Provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for the all out-swinging lockable doors.
- 5. Acceptable Manufacturers:
 - a. Hager Companies (HA).
 - b. McKinney Products (MK).
 - c. Stanley Hardware (ST).
- B. Continuous Geared Hinges: ANSI/BHMA A156.26 Grade 1-600 certified continuous geared hinge. with minimum 0.120-inch thick extruded 6060 T6 aluminum alloy hinge leaves and a minimum overall width of 4 inches. Hinges are non-handed, reversible and fabricated to template screw locations. Factory trim hinges to suit door height and prepare for electrical cutouts.
 - 1. Acceptable Manufacturers:
 - a. McKinney Products (MK).
 - b. Pemko Manufacturing (PE).
 - c. Stanley Hardware (ST).

2.3 POWER TRANSFER DEVICES

A. Concealed Quick Connect Electric Power Transfers: Provide concealed wiring pathway housing mortised into the door and frame for low voltage electrified door hardware. Furnish with Molex[™] standardized plug connectors and sufficient number of concealed wires (up to 12) to

accommodate the electrified functions specified in the Door Hardware Sets. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Wire nut connections are not acceptable.

- 1. Acceptable Manufacturers:
 - a. Pemko Manufacturing (PE) EL-CEPT Series.
 - b. Securitron (SU) EL-CEPT Series.
 - c. Stanley Hardware (ST) EPT-12C Series.
- B. Electric Door Wire Harnesses: Provide electric/data transfer wiring harnesses with standardized plug connectors to accommodate up to twelve (12) wires. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Provide sufficient number and type of concealed wires to accommodate electric function of specified hardware. Provide a connector for through-door electronic locking devices and from hinge to junction box above the opening. Wire nut connections are not acceptable. Determine the length required for each electrified hardware component for the door type, size and construction, minimum of two per electrified opening.
 - 1. Provide one each of the following tools as part of the base bid contract:
 - a. McKinney Products (MK) Electrical Connecting Kit: QC-R001.
 - b. McKinney Products (MK) Connector Hand Tool: QC-R003.

2.4 DOOR OPERATING TRIM

- A. Flush Bolts and Surface Bolts: ANSI/BHMA A156.3 and A156.16, Grade 1, certified.
 - 1. Manual flush bolts to be furnished with top rod of sufficient length to allow bolt location approximately six feet from the floor.
 - 2. Furnish dust proof strikes for bottom bolts.
 - 3. Surface bolts to be minimum 8" in length and U.L. listed for labeled fire doors and U.L. listed for windstorm components where applicable.
 - 4. Provide related accessories (mounting brackets, strikes, coordinators, etc.) as required for appropriate installation and operation.
 - 5. Acceptable Manufacturers:
 - a. Ives (IV).
 - b. Rockwood Manufacturing (RO).
 - c. Trimco (TC).
- B. Door Push Plates and Pulls: ANS/BHMA A156.6 certified door pushes and pulls of type and design specified in the Hardware Sets. Coordinate and provide proper width and height as required where conflicting hardware dictates.
 - 1. Push/Pull Plates: Minimum .050 inch thick, size as indicated in hardware sets, with beveled edges, secured with exposed screws unless otherwise indicated.
 - 2. Door Pull and Push Bar Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door unless otherwise indicated.

- 3. Offset Pull Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door and offset of 90 degrees unless otherwise indicated.
- 4. Fasteners: Provide manufacturer's designated fastener type as indicated in Hardware Sets.
- 5. Acceptable Manufacturers:
 - a. Ives (IV).
 - b. Rockwood Manufacturing (RO).
 - c. Trimco (TC).

2.5 CYLINDERS AND KEYING

- A. General: Cylinder manufacturer to have minimum (10) years experience designing secured master key systems and have on record a published security keying system policy.
- B. Source Limitations: Obtain each type of keyed cylinder and keys from the same source manufacturer as locksets and exit devices, unless otherwise indicated.
 - 1. Acceptable Manufacturers:
 - a. Stanley Best (BE).
 - b. Sargent Cylinder Housings
 - c. No Substitution.
- C. Cylinders: Original manufacturer cylinders complying with the following:
 - 1. Mortise Type: Threaded cylinders with rings and cams to suit hardware application.
 - 2. Rim Type: Cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
 - 3. Bored-Lock Type: Cylinders with tailpieces to suit locks.
 - 4. Mortise and rim cylinder collars to be solid and recessed to allow the cylinder face to be flush and be free spinning with matching finishes.
 - 5. Keyway: Match Facility Standard.
- D. Keying System: Each type of lock and cylinders to be factory keyed.
 - 1. Conduct specified "Keying Conference" to define and document keying system instructions and requirements.
 - 2. Furnish factory cut, nickel-silver large bow permanently inscribed with a visual key control number as directed by Owner.
 - 3. Existing System: Key locks to Owner's existing system.
- E. Key Quantity: Provide the following minimum number of keys:
 - 1. Change Keys per Cylinder: Two (2)
 - 2. Twenty construction cores
 - 3. 50 Key Blanks Best "A" Keyway
 - 4. Temporary (green) core keys: 1 key per lockset

- F. Construction Keying: Provide temporary keyed construction cores. Green Best Cores No Substitution. All Best temporary cores to be returned to the district at the end of the project.
- G. Key Registration List (Bitting List):
 - 1. Provide keying transcript list to Owner's representative in the proper format for importing into key control software.
 - 2. Provide transcript list in writing or electronic file as directed by the Owner.
- H. Key Control Cabinet: Provide a key control system including envelopes, labels, and tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent markers, and standard metal cabinet. Key control cabinet shall have expansion capacity of 150% of the number of locks required for the project. Provide a new cabinet to all new construction projects. Use Lund 1205-B as a basis of design.
 - 1. Acceptable Manufacturers:
 - a. Lund Equipment (LU).
 - b. MMF Industries (MM).
 - c. Telkee (TK).

2.6 MECHANICAL LOCKS AND LATCHING DEVICES

- A. Mortise Locksets, Grade 1 (Heavy Duty): ANSI/BHMA A156.13. Locksets are to be manufactured with a corrosion resistant steel case and be field-reversible for handing without disassembly of the lock body.
 - 1. Acceptable Manufacturers
 - a. Sargent Manufacturing (SA) 8200 Series No substitutions
 - b. Sargent Manufacturing (SA) 10X Series No substitutions
 - 1) Use at student restrooms or as directed by Cy Fair ISD

2.7 AUXILIARY LOCKS

- A. Tubular Deadlocks: Deadlocks to be products of the same source manufacturer and keyway as other specified locksets.
 - 1. Acceptable Manufacturers:
 - a. Marks (MX) 130 Series.
 - b. Sargent Manufacturing (SA) 480 Series.

2.8 LOCK AND LATCH STRIKES

- A. Strikes: Provide manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, unless otherwise indicated, and as follows:
 - 1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.
 - 2. Aluminum-Frame Strike Box: Provide manufacturer's special strike box fabricated for aluminum framing.
- B. Standards: Comply with the following:
 - 1. Strikes for Mortise Locks and Latches: BHMA A156.13.
 - 2. Strikes for Auxiliary Deadlocks: BHMA A156.5.
 - 3. Dustproof Strikes: BHMA A156.16.

2.9 CONVENTIONAL EXIT DEVICES

- A. General Requirements: All exit devices specified herein shall meet or exceed the following criteria:
 - 1. At doors not requiring a fire rating, provide devices complying with NFPA 101 and listed and labeled for "Panic Hardware" according to UL305. Provide proper fasteners as required by manufacturer including sex nuts and bolts at openings specified in the Hardware Sets.
 - 2. Where exit devices are required on fire rated doors, provide devices complying with NFPA 80 and with UL labeling indicating "Fire Exit Hardware". Provide devices with the proper fasteners for installation as tested and listed by UL. Consult manufacturer's catalog and template book for specific requirements.
 - 3. Except on fire rated doors, provide exit devices with hex key dogging device to hold the pushbar and latch in a retracted position. Provide optional keyed cylinder dogging on devices where specified in Hardware Sets.
 - 4. Devices must fit flat against the door face with no gap that permits unauthorized dogging of the push bar. The addition of filler strips is required in any case where the door light extends behind the device as in a full glass configuration.
 - 5. Lever Operating Trim: Where exit devices require lever trim, furnish manufacturer's heavy duty escutcheon trim with threaded studs for thru-bolts.
 - a. Lock Trim Design: As indicated in Hardware Sets, provide finishes and designs to match that of the specified locksets.
 - b. Where function of exit device requires a cylinder, provide a cylinder (Rim or Mortise) as specified in Hardware Sets.
 - 6. Rail Sizing: Provide exit device rails factory sized for proper door width application.

- 7. Through Bolt Installation: For exit devices and trim as indicated (TB) in Door Hardware Sets.
- 8. Provide Less Dogging (LD) at all exit devices.
- 9. Add 31- Prefix to all exit devices being provided at two inch aluminum doors.
- 10. No self-tapping screws allowed.
- B. Conventional Push Rail Exit Devices (Heavy Duty): ANSI/BHMA A156.3, Grade 1 certified panic and fire exit hardware devices furnished in the functions specified in the Hardware Sets. Exit device latch to be stainless steel, pullman type, with deadlock feature.
 - 1. Acceptable Manufacturers:
 - a. Sargent Manufacturing (SA) 80 Series.
 - b. No Substitution.
- C. Tube Steel Removable Mullions: ANSI/BHMA A156.3 removable steel mullions with malleable-iron top and bottom retainers and a primed paint finish.
 - 1. Provide keyed removable feature where specified in the Hardware Sets.
 - 2. Provide stabilizers and mounting brackets as required.
 - 3. Provide electrical quick connection wiring options as specified in the hardware sets.
 - 4. Acceptable Manufacturers:
 - a. Stanley Precision (PR) 822 Series.
 - b. No Substitution.

2.10 INTEGRATED WIEGAND OUTPUT ACCESS CONTROL EXIT DEVICES

- A. Wiegand Output Integrated Card Reader Exit Hardware: Wiegand output ANSI 156.3 Grade 1 rim, mortise, and vertical rod exit device hardware with integrated proximity card reader, latchbolt and touchbar monitoring, and request-to-exit signaling, in one complete unit. Hard wired, solenoid driven locking/unlocking control of the lever handle exit trim with 3/4" throw latch bolt. U.L listed and labeled for either panic or "fire exit hardware" for use on up to 3 hour fire rated openings. Available with or without keyed high security cylinder override.
 - 1. Open architecture, hard wired platform supports centralized control of locking units with new or existing Wiegand compatible access control systems. Inside push bar (request-to-exit) signaling and door position (open/closed status) monitoring (via separately connected DPS).
 - 2. Reader supports either HID 125 kHz proximity (up to 39 bits, including Corporate 1000) or 13.56 MHz (2K-32K) iClass® credentials.

- 3. 12VDC external power supply required for reader, with optional 24VDC operation available with iClass® reader (125 kHz reader is always 12VDC). 24VDC required for solenoid operated exit trim (12VDC if applicable). Fail safe or fail secure options.
- 4. Installation requires only one cable run from the exit hardware to the access control panel without requirements for additional proprietary lock panel interface boards or modules.
- 5. Acceptable Manufacturers:
 - a. Sargent Manufacturing (SA) SN 56-SN20080 Series Exits. x SPAR04867
 - b. Sargent Manufacturing (SA) SN SN2008200 Series Locks.
 - c. No Substitution.

2.11 DOOR CLOSERS

- A. All door closers specified herein shall meet or exceed the following criteria:
 - 1. General: Door closers to be from one manufacturer, matching in design and style, with the same type door preparations and templates regardless of application or spring size. Closers to be non-handed with full sized covers including installation and adjusting information on inside of cover.
 - 2. Standards: Closers to comply with UL-10C for Positive Pressure Fire Test and be U.L. listed for use of fire rated doors.
 - 3. Cycle Testing: Provide closers which have surpassed 15 million cycles in a test witnessed and verified by UL.
 - 4. Size of Units: Comply with manufacturer's written recommendations for sizing of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Where closers are indicated for doors required to be accessible to the physically handicapped, provide units complying with ANSI ICC/A117.1.
 - 5. Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets.
 - 6. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.
 - 7. Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates, and through-bolt and security type fasteners as required for proper installation.
 - 8. Through Bolt Installation: All door closers are to be installed with (TB) through bolting as indicated in Door Hardware Sets.
 - 9. No self-tapping screws allowed.
- B. Door Closers, Surface Mounted (Heavy Duty): ANSI/BHMA A156.4, Grade 1 surface mounted, heavy duty door closers with complete spring power adjustment, sizes 1 thru 6; and

fully operational adjustable according to door size, frequency of use, and opening force. Closers to be rack and pinion type, one piece cast iron or aluminum alloy body construction, with adjustable backcheck and separate non-critical valves for closing sweep and latch speed control. Provide non-handed units standard.

- 1. Acceptable Manufacturers:
 - a. Sargent Manufacturing (SA) TB 351 Series.

2.12 SURFACE MOUNTED CLOSER HOLDERS

- A. Electromagnetic Door Holders: Certified ANSI A156.15 electromagnetic door holder/releases with a minimum 20 to 40 pounds holding power and single coil construction able to accommodate.12VDC, 24VAC, 24VDC and 120VAC. Coils to be independently wound, employing an integral fuse and armatures to include a positive release button.
 - 1. Acceptable Manufacturers:
 - a. LCN Door Closers (LC) SEM7800 Series.
 - b. Rixson (RF) 980/990 Series.
 - c. Sargent Manufacturing (SA) 1560 Series.

2.13 ARCHITECTURAL TRIM

- A. Door Protective Trim
 - 1. General: Door protective trim units to be of type and design as specified below or in the Hardware Sets.
 - 2. Size: Fabricate protection plates (kick, armor, or mop) not more than 2" less than door width (LDW) on stop side of single doors and 1" LDW on stop side of pairs of doors, and not more than 1" less than door width on pull side. Coordinate and provide proper width and height as required where conflicting hardware dictates. Height to be as specified in the Hardware Sets.
 - 3. Protection Plates: ANSI/BHMA A156.6 certified protection plates (kick, armor, or mop), fabricated from the following:
 - a. Stainless Steel: 300 grade, 050-inch thick.
 - 4. Options and fasteners: Provide manufacturer's designated fastener type as specified in the Hardware Sets. Provide countersunk screw holes.
 - 5. Acceptable Manufacturers:
 - a. Ives (IV).
 - b. Rockwood Manufacturing (RO).

c. Trimco (TC).

2.14 DOOR STOPS AND HOLDERS

- A. General: Door stops and holders to be of type and design as specified below or in the Hardware Sets.
- B. Door Stops and Bumpers: ANSI/BHMA A156.16, Grade 1 certified door stops and wall bumpers. Provide wall bumpers, either convex or concave types with anchorage as indicated, unless floor or other types of door stops are specified in Hardware Sets. Do not mount floor stops where they will impede traffic. Where floor or wall bumpers are not appropriate, provide overhead type stops and holders.
 - 1. Acceptable Manufacturers:
 - a. Ives (IV).
 - b. Rockwood Manufacturing (RO).
 - c. Trimco (TC).
- C. Overhead Door Stops and Holders: ANSI/BHMA A156.6, Grade 1 certified overhead stops and holders to be surface or concealed types as indicated in Hardware Sets. Track, slide, arm and jamb bracket to be constructed of extruded bronze and shock absorber spring of heavy tempered steel. Provide non-handed design with mounting brackets as required for proper operation and function.
 - 1. Acceptable Manufacturers:
 - a. Do not use overhead stops/holders

2.15 ARCHITECTURAL SEALS

- A. General: Thresholds, weatherstripping, and gasket seals to be of type and design as specified below or in the Hardware Sets. Provide continuous weatherstrip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated. At exterior applications provide non-corrosive fasteners and elsewhere where indicated.
- B. Smoke Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke control ratings indicated, based on testing according to UL 1784.
 - 1. Provide smoke labeled perimeter gasketing at all smoke labeled openings.
- C. Fire Labeled Gasketing: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to UL-10C.
 - 1. Provide intumescent seals as indicated to meet UL10C Standard for Positive Pressure Fire Tests of Door Assemblies, and UBC 7-2, Fire Tests of Door Assemblies.

- D. No Replaceable Seal Strips allowed: Provide only those units where they can be screw applied..
- E. Acceptable Manufacturers:
 - 1. National Guard Products (NG).
 - 2. Pemko Manufacturing (PE).
 - 3. Reese Enterprises, Inc. (RE).

2.16 ELECTRONIC ACCESSORIES

- A. Door Position Switches: Door position magnetic reed contact switches specifically designed for use in commercial door applications. On recessed models the contact and magnetic housing snap-lock into a 1" diameter hole. Surface mounted models include wide gap distance design complete with armored flex cabling. Provide SPDT, N/O switches with optional Rare Earth Magnet installation on steel doors with flush top channels.
 - 1. Acceptable Manufacturers:
 - a. Provided by Security
- B. Switching Power Supplies: Provide UL listed or recognized filtered and regulated power supplies. Provide single, dual, or multi-voltage units as shown in the hardware sets. Units must be expandable up to eight Class 2 power limited outputs. Units must include the capability to incorporate a battery backup option with integral battery charging capability in addition to operating the DC load in event of line voltage failure. Provide the least number of units, at the appropriate amperage level, sufficient to exceed the required total draw for the specified electrified hardware and access control equipment.
 - 1. Acceptable Manufacturers:
 - a. Provided by Security

2.17 FABRICATION

A. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to manufacturers recognized installation standards for application intended.

2.18 FINISHES

- A. Standard: Designations used in the Hardware Sets and elsewhere indicate hardware finishes complying with ANSI/BHMA A156.18, including coordination with traditional U.S. finishes indicated by certain manufacturers for their products.
- B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware.

C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine scheduled openings, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.
- B. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

3.2 PREPARATION

- A. Hollow Metal Doors and Frames: Comply with ANSI/DHI A115 series.
- B. Wood Doors: Comply with ANSI/DHI A115-W series.

3.3 INSTALLATION

- A. Install each item of mechanical and electromechanical hardware and access control equipment to comply with manufacturer's written instructions and according to specifications.
 - 1. Installers are to be trained and certified by the manufacturer on the proper installation and adjustment of fire, life safety, and security products including: hanging devices; locking devices; closing devices; and seals.
- B. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:
 - 1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
 - 2. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
 - 3. Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities."
 - 4. Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.
- C. Integrated Wiegand access control products are required to be installed through current members of the ASSA ABLOY "Certified Integrator" (CI) program.
- D. Retrofitting: Install door hardware to comply with manufacturer's published templates and written instructions. Where cutting and fitting are required to install door hardware onto or into

surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.

- E. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."
- F. Storage: Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.
- G. No self-tapping screws allowed.

3.4 FIELD QUALITY CONTROL

A. Field Inspection: Supplier will perform a final inspection of installed door hardware and state in report whether work complies with or deviates from requirements, including whether door hardware is properly installed, operating and adjusted.

3.5 ADJUSTING

- A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.
- B. Final Adjustment: Installer shall return and make final adjustment of all hardware once all air conditioning test and balance is complete. Final adjustment shall be made while air conditioner system is operating. Coordinate with General Contractor and Owner.

3.6 CLEANING AND PROTECTION

- A. Protect all hardware stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.
- B. Clean adjacent surfaces soiled by door hardware installation.
- C. Clean operating items as necessary to restore proper finish. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of owner occupancy.

3.7 DEMONSTRATION

A. Instruct Owner's maintenance personnel to adjust, operate, and maintain mechanical and electromechanical door hardware.

3.8 DOOR HARDWARE SETS

The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.

A. Manufacturer's Abbreviations:

MK - McKinney
 OT - OTHER
 PE - Pemko
 RO - Rockwood
 PR - Precision
 MX - Marks
 SA - Sargent
 AD - Adams Rite
 BE - Best Access Systems
 HS - HES
 SU - Securitron
 KD - Keedex
 LO - Locinox

Hardware Sets based on 02/20/2025 Owner Notes **At existing doors / frames, all conditions must be field verified prior to order. At aluminum frames, gasket is by frame manufacturer. **Confirm EPT v/s door loop at all access control locations. **Confirm all fire ratings and provide compliant hardware.

<u>Set: 1.0</u>

Description: Not Used

1 Set	Not Used		OT		
<u>Set: 2.0</u> Doors: H101A, H105A, H105C Description: Add Exit Device-8816 RH	R, 704 ETL 462				
 Rim Exit Sec CR x SPAR#NC-E11 Exit Device Trim Interchangeable Core Const. Core Door Stop Balance of hardware 	19 LD 43 49 70 8816 ETL 70 704ETL I/CK-7 7190224 462 Existing to remain	US32D US26D 626 Green US2C	SA SA BE BE RO OT		
Notes: If openings are fire rated, add 12	704 at LHR				
Set: 3.0 Doors: H101B, H101C Description: Add Exit Device-8816 RHR, 704 ETL LHR					
 Rim Exit Sec CR x SPAR#NC-E11 Exit Device Trim 	19 LD 43 49 70 8816 ETL 70 704ETL	US32D US26D	SA SA		

1	Exit Device Trim	70 704ETL	US26D	SA
3	Interchangeable Core	I/CK-7	626	BE
3	Const. Core	7190224	Green	BE
1	Balance of hardware	Existing to remain		OT

Notes: If openings are fire rated, add 12-

Set: 4.0

Doors: A131C, A131D, H105B Description: Add SN200 Exit, 8810, EPT

1	Electric Power Transfer	EL-CEPT	630	SU
1	Rim Exit x SPAR04867/NC-E11	19 LD TB 43 70 56-SN200-8804	US32D	SA
1	Rim Exit EO x SPAR#NC-E11	19 LD TB 43 8810	US32D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	ElectroLynx Harness	QC-C1500P		MK
2	ElectroLynx Harness	QC-C***P (length as req'd)		MK
1	Power Supply	Provided by security		SU
1	Balance of hardware	Existing to remain		OT

Notes: Doors are normally closed and secure. Presentation of valid credential will allow entry by pull. Upon loss of power, doors will remain secure. Free egress at all times. 8810 at LHR. If openings are fire rated, add 12-

16275

<u>Set: 5.0</u>

Doors: E102A, E102B, G121B, G124B Description: Add SN200 LT Loop

1	Rim Exit x SPAR04867/NC-E11	19 LD TB 43 70 56-SN200-8804	US32D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	ElectroLynx Harness	QC-C1500P		MK
2	ElectroLynx Harness	QC-C***P (length as req'd)		MK
1	Door Loop	DL-2		AK
2	Door Position Switch	By Security.		OT
1	Power Supply	Provided by security		SU
1	Balance of hardware	Existing to remain		OT
2	Viewer	622 x door thickness	DCRM	RO

Notes: Doors are normally closed and secure. Presentation of valid credential will allow entry by pull. Upon loss of power, doors will remain secure. Free egress at all times. If openings are fire rated, add 12-

<u>Set: 5.1</u>

Doors: E122B, R101E Description: Add SN200 LT EPT

1	Electric Power Transfer	EL-CEPT	630	SU
1	Rim Exit x SPAR04867/NC-E11	19 LD TB 43 70 56-SN200-8804	US32D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	ElectroLynx Harness	QC-C1500P		MK
2	ElectroLynx Harness	QC-C***P (length as req'd)		MK
2	Door Position Switch	By Security.		OT
1	Power Supply	Provided by security		SU
1	Balance of hardware	Existing to remain		OT

Notes: Doors are normally closed and secure. Presentation of valid credential will allow entry by pull. Upon loss of power, doors will remain secure. Free egress at all times. If openings are fire rated, add 12-

<u>Set: 6.0</u>

Doors: A101A, A101B, A102C, H109B Description: Add 8810 LT

1	Rim Exit EO x SPAR#NC-E11	19 LD TB 43 8810	US32D	SA
1	Balance of hardware	Existing to remain		OT

Notes: If openings are fire rated, add 12-

<u>Set: 7.0</u> Doors: E101A Description: Add 8810 LT - 462

	Rim Exit EO x SPAR#NC-E11 Door Stop Balance of hardware	19 LD TB 43 8810 462 Existing to remain	US32D US2C	SA RO OT
N	otes: If openings are fire rated, add 12	-		
D	e t: 8.0 pors: B102, C102, D102, E101B, E11 escription: Add 8810 LT - 462 Reader			
1	Rim Exit EO x SPAR#NC-E11 Door Stop H1 Reader Balance of hardware	19 LD TB 43 8810 462 Existing to remain Existing to remain	US32D US2C	SA RO OT
N	otes: 8810 replace at LHR. If opening	s are fire rated, add 12-		
D	e t: 9.0 pors: A102D, B101A, C101A, D101A escription: Add 8810 LT - Reader to r			
	Rim Exit EO x SPAR#NC-E11 H1 Reader Balance of hardware	19 LD TB 43 8810 Existing to remain Existing to remain	US32D	SA OT
N	otes: 8810 replace at LHR. If opening	s are fire rated, add 12-		
D	e <mark>t: 10.0</mark> pors: F104B escription: Add Sgl SN200 Exit - Loo	p - 462 - Peep		
$ \begin{array}{c} 1\\1\\1\\1\\2\\1\\1\\1\\1\\2\\1\end{array} \end{array} $	Rim Exit x SPAR04867/NC-E11 Interchangeable Core Const. Core Door Stop ElectroLynx Harness ElectroLynx Harness Door Loop Door Position Switch Power Supply Balance of hardware Viewer Card reader	19 LD TB 43 70 56-SN200-8804 I/CK-7 7190224 462 QC-C1500P QC-C***P (length as req'd) DL-2 By Security. Provided by security Existing to remain 622 x door thickness By security Contractor	US32D 626 Green US2C DCRM	SA BE RO MK MK AK OT SU OT RO OT

Notes: Doors are normally closed and secure. Presentation of valid credential will allow entry by pull. Upon loss of power, doors will remain secure. Free egress at all times. If openings are fire rated, add 12-

16275

Set: 11.0

Doors: F109 Description: 9500 ES - 2N

1	Electric Strike	9500	630	HS
1	ElectroLynx Harness	QC-C***P (length as req'd)		MK
1	Door Position Switch	By Security.		OT
1	Power Supply	Provided by security		SU
1	Balance of hardware	Existing to remain		OT
1	Access Control	2N Station		OT

Notes: Include 2N Station

Set: 12.0

Doors: A132A Description: Add HO Closer

1	Door Closer w/ HO	TB 351 H (inswing)/ PSH (outswing) As Req	EN	SA
1	Balance of hardware	Existing to remain	OT	

Notes: Add hold open closer arm to non-rated doors only.

Set: 13.0

Doors: G102, G110, G111, G119 Description: Add PSH closer arm

1	Parallel Hold Open Arm	25-PSH	EN	SA
1	Balance of hardware	Existing to remain		OT

Notes: Add hold open closer arm to non-rated doors only.

Set: 14.0

Doors: F108B Description: Add 2ea 462

2 1	2 Door Stop462U1 Balance of hardwareExisting to remain		US2C	RO OT	
Do	Set: 15.0 Doors: A127 Description: Existing - Add 8238				
1	Classroom Security Intruder Lock	V01 EMB 70 8238 VN1L 90-3/8" Co	llar	US26D	
2	Interchangeable Core	I/CK-7	626	BE	
2	Const. Core	7190224	Green	BE	
1	Balance of hardware	Existing to remain		OT	

Set: 16.0

Doors: A103, A107, A108, A109, A111, A113, A114, A119A, A119C, A120, A121, A123, A125, B215, B215A, B216, B217, B308, B316, B317, B318, B319 Description: Existing - Add 8205

1	Office/Entry Lock	70 8205 LL	US26D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Balance of hardware	Existing to remain		OT

Set: 16.1

Doors: A105A Description: **Sgl - ASF SN200 Lock Closer

1	Continuous Hinge	CFM SLF-HD1 PT x Dr. Ht.		PE
1	Electric Power Transfer	EL-CEPT	630	SU
1	SN200 Mort Lock	70 SN200-82271 OL	US26D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Door Closer	TB 351 O/P9 (type as required)	EN	SA
1	Door Stop	481H	US26D	RO
1	ElectroLynx Harness	QC-C1500P		MK
1	ElectroLynx Harness	QC-C***P (length as req'd)		MK
1	Door Position Switch	By Security.		OT
1	Power Supply	Provided by security		SU
1	Gasketing	By the frame manufacturer		OT

Notes: Door is normally closed and secure. Presentation of valid credential allows entry by trim. Upon loss of power, door will remain secure. Free egress at all times.

Set: 17.0

Doors: A102B Description: No work

1 All hardware	Existing to remain	ОТ
<u>Set: 18.0</u> Doors: S108		
Description: Existing add 351 parallel hold open closer, armor plate		

1 Surface Closer	TB 351 PSH	EN	SA
1 Armor Plate	K1050 36" CSK BEV	US32D	RO
1 Balance of hardware	Existing to remain		OT
1 Keedex Lock Protector	K12S - SGT		OT

Set: 19.0

Doors: Stops Description: To be used as needed during installation

20	Door Stop	481H U	S26D	RO

Set: Attic

Doors: MISC Description: **Attic Stock - EVERY CAMPUS

1 Hydraulic Gate Closer & Hinge	MAMMOTH-180-HD	9005	OT
5 Quick Fix Bolts	MAMMOTH-P00006000		OT
5 Mullion Lock	98-2520		SA
5 Mullion Lock	98-2518		SA
5 Classroom Security Intruder Lock	8238 Lock Body	US26D	SA
5 130KB	Thumbturn Kit	26D	SA
50 Interchangeable Core	I/CK-7	626	BE
12 Regular Hold Open Arm	25-Н	EN	SA
12 Parallel Hold Open Arm	25-PSH	EN	SA
4 SN200 Reader	52 6027 (Exit/Lock)		OT

Notes: All attic stock ships direct to	
Director of Technical Services	
Cy Fair ISD Lockshop	
11430 Perry Road	
Houston, Texas 77064	**DO NOT ship to jobsite. Distributor to ship directly to Cy Fair.

END OF SECTION 087100

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SECTION 087100 – DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes commercial door hardware for the following:
 - 1. Swinging doors.
 - 2. Other doors to the extent indicated.
- B. Door hardware includes, but is not necessarily limited to, the following:
 - 1. Mechanical door hardware.
 - 2. Electromechanical door hardware.
 - 3. Cylinders specified for doors in other sections.
- C. Related Sections:
 - 1. Division 08 Section "Door Hardware Schedule".
 - 2. Division 08 Section "Hollow Metal Doors and Frames".
 - 3. Division 08 Section "Interior Aluminum Doors and Frames".
 - 4. Division 08 Section "Plastic Laminate Faced Wood Doors".
- D. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.
 - 1. ANSI A117.1 Accessible and Usable Buildings and Facilities.
 - 2. ICC/IBC International Building Code.
 - 3. NFPA 70 National Electrical Code.
 - 4. NFPA 80 Fire Doors and Windows.
 - 5. NFPA 101 Life Safety Code.
 - 6. NFPA 105 Installation of Smoke Door Assemblies.
 - 7. State Building Codes, Local Amendments.
- E. Standards: All hardware specified herein shall comply with the following industry standards:
 - 1. ANSI/BHMA Certified Product Standards A156 Series
 - 2. UL10C Positive Pressure Fire Tests of Door Assemblies

1.3 SUBMITTALS

- A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.
- B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
 - 1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."
 - 2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening. Organize door hardware sets in same order as in the Door Hardware Sets at the end of Part 3. Submittals that do not follow the same format and order as the Door Hardware Sets will be rejected and subject to resubmission.
 - 3. Content: Include the following information:
 - a. Type, style, function, size, label, hand, and finish of each door hardware item.
 - b. Manufacturer of each item.
 - c. Fastenings and other pertinent information.
 - d. Location of door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
 - e. Explanation of abbreviations, symbols, and codes contained in schedule.
 - f. Mounting locations for door hardware.
 - g. Door and frame sizes and materials.
 - h. Warranty information for each product.
 - 4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.
- C. Shop Drawings: Details of electrified access control hardware indicating the following:
 - 1. Wiring Diagrams: Upon receipt of approved schedules, submit detailed system wiring diagrams for power, signaling, monitoring, communication, and control of the access control system electrified hardware. Differentiate between manufacturer-installed and field-installed wiring. Include the following:

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- a. Elevation diagram of each unique access controlled opening showing location and interconnection of major system components with respect to their placement in the respective door openings.
- b. Complete (risers, point-to-point) access control system block wiring diagrams.
- c. Wiring instructions for each electronic component scheduled herein.
- 2. Electrical Coordination: Coordinate with related sections the voltages and wiring details required at electrically controlled and operated hardware openings.
- D. Proof of Certification: Provide copy of manufacturer(s) official certification or accreditation document indicating proof of status as a qualified installer of Windstorm assemblies.
- E. Keying Schedule: After a keying meeting with the owner has taken place prepare a separate keying schedule detailing final instructions. Submit the keying schedule in electronic format. Include keying system explanation, door numbers, key set symbols, hardware set numbers and special instructions. Owner must approve submitted keying schedule prior to the ordering of permanent cylinders/cores.
- F. Informational Submittals:
 - 1. Product Test Reports: Indicating compliance with cycle testing requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified independent testing agency.
- G. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Submittals.

1.4 QUALITY ASSURANCE

- A. Manufacturers Qualifications: Engage qualified manufacturers with a minimum 5 years of documented experience in producing hardware and equipment similar to that indicated for this Project and that have a proven record of successful in-service performance.
- B. Installer Qualifications: A minimum 3 years documented experience hardware similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.
- C. Door Hardware Supplier Qualifications: Experienced commercial door hardware distributors with a minimum 5 years documented experience supplying hardware installations comparable in material, design, and extent to that indicated for this Project. Supplier recognized as a factory direct distributor by the manufacturers of the primary materials with a warehousing facility in Project's vicinity. Supplier to have on staff a certified Architectural Hardware Consultant (AHC) available during the course of the Work to consult with Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying.

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- D. Integrated Wiegand, Wireless, and IP-Enabled Access Control Products Supplier Qualifications: Integrated access control products and accessories are required to be supplied and installed through current members of the ASSA ABLOY "Authorized Channel Partner" (ACP) and "Certified Integrator" (CI) programs. Suppliers are to be factory trained, certified prior to project bid, and a direct purchaser of the specified product. Installers are to be factory trained, certified prior to project bid, and are responsible for commissioning, servicing, and warranting the installed equipment specified for the project.
- E. Source Limitations: Obtain each type and variety of door hardware specified in this section from a single source unless otherwise indicated.
 - 1. Electrified modifications or enhancements made to a source manufacturer's product line by a secondary or third party source will not be accepted.
 - 2. Provide electromechanical door hardware from the same manufacturer as mechanical door hardware, unless otherwise indicated
- F. Each unit to bear third party permanent label demonstrating compliance with the referenced standards.
- G. Keying Conference: Conduct conference to comply with requirements in Division 01 Section "Project Meetings." Keying conference to incorporate the following criteria into the final keying schedule document:
 - 1. Function of building, purpose of each area and degree of security required.
 - 2. Plans for existing and future key system expansion.
 - 3. Requirements for key control storage and software.
 - 4. Installation of permanent keys, cylinder cores and software.
 - 5. Address and requirements for delivery of keys.
- H. Pre-Submittal Conference: Conduct coordination conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier(s), Installer(s), and Contractor(s) to review proper methods and the procedures for receiving, handling, and installing door hardware.
 - 1. Prior to installation of door hardware, conduct a project specific training meeting to instruct the installing contractors' personnel on the proper installation and adjustment of their respective products. Product training to be attended by installers of door hardware (including electromechanical hardware) for aluminum, hollow metal and wood doors. Training will include the use of installation manuals, hardware schedules, templates and physical product samples as required.
 - 2. Inspect and discuss electrical roughing-in, power supply connections, and other preparatory work performed by other trades.
 - 3. Review sequence of operation narratives for each unique access controlled opening.
 - 4. Review and finalize construction schedule and verify availability of materials.
 - 5. Review the required inspecting, testing, commissioning, and demonstration procedures
- I. At completion of installation, provide written documentation that components were applied to manufacturer's instructions and recommendations and according to approved schedule.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site.
- B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.
- C. Deliver, as applicable, permanent keys, cylinders, cores and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

1.6 COORDINATION

- A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.
- B. Door Hardware and Electrical Connections: Coordinate the layout and installation of scheduled electrified door hardware and related access control equipment with required connections to source power junction boxes, low voltage power supplies, detection and monitoring hardware, and fire and detection alarm systems.
- C. Door and Frame Preparation: Doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

1.7 WARRANTY

- A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.
- B. Warranty Period: Written warranty, executed by manufacturer(s), agreeing to repair or replace components of standard and electrified door hardware that fails in materials or workmanship within specified warranty period after final acceptance by the Owner. Failures include, but are not limited to, the following:
 - 1. Structural failures including excessive deflection, cracking, or breakage.
 - 2. Faulty operation of the hardware.
 - 3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
 - 4. Electrical component defects and failures within the systems operation.

- C. Standard Warranty Period: One year from date of Substantial Completion, unless otherwise indicated.
- D. Special Warranty Periods:
 - 1. Lifetime for mortise locks and latches.
 - 2. Five years for exit hardware.
 - 3. Ten years for electric latch retraction exit motors
 - 4. Twenty-five years for manual surface door closer bodies.
 - 5. Two years for electromechanical door hardware.
 - 6. Lifetime for SN200 readers.

1.8 MAINTENANCE SERVICE

- A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.
- 1.9 OWNER STOCK See Attic Stock at the end of Hardware Schedule.

PART 2 - PRODUCTS

2.1 SCHEDULED DOOR HARDWARE

- A. General: Provide door hardware for each door to comply with requirements in Door Hardware Sets and each referenced section that products are to be supplied under.
- B. Designations: Requirements for quantity, item, size, finish or color, grade, function, and other distinctive qualities of each type of door hardware are indicated in the Door Hardware Sets at the end of Part 3. Products are identified by using door hardware designations, as follows:
- C. Named Manufacturer's Products: Product designation and manufacturer are listed for each door hardware type required for the purpose of establishing requirements. Manufacturers' names are abbreviated in the Door Hardware Schedule.
- D. Substitutions: Requests for substitution and product approval for inclusive mechanical and electromechanical door hardware in compliance with the specifications must be submitted in writing and in accordance with the procedures and time frames outlined in Division 01, Substitution Procedures. Approval of requests is at the discretion of the architect, owner, and their designated consultants.

2.2 HANGING DEVICES

- A. Hinges: ANSI/BHMA A156.1 certified butt hinges with number of hinge knuckles as specified in the Door Hardware Sets.
 - 1. Quantity: Provide the following hinge quantity, unless otherwise indicated:
 - a. Two Hinges: For doors with heights up to 60 inches.
 - b. Three Hinges: For doors with heights 61 to 90 inches.
 - c. Four Hinges: For doors with heights 91 to 120 inches.
 - d. For doors with heights more than 120 inches, provide 4 hinges, plus 1 hinge for every 30 inches of door height greater than 120 inches.
 - 2. Hinge Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:
 - a. Widths up to 3'0": 4-1/2" standard or heavy weight as specified.
 - b. Sizes from 3'1" to 4'0": 5" standard or heavy weight as specified.
 - 3. Hinge Weight and Base Material: Unless otherwise indicated, provide the following:
 - a. Exterior Doors: Heavy weight, non-ferrous, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate standard weight.
 - b. Interior Doors: Standard weight, steel, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate heavy weight.
 - 4. Hinge Options: Comply with the following where indicated in the Hardware Sets or on Drawings:
 - a. Non-removable Pins: Provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for the all out-swinging lockable doors.
 - 5. Acceptable Manufacturers:
 - a. Hager Companies (HA).
 - b. McKinney Products (MK).
 - c. Stanley Hardware (ST).
- B. Continuous Geared Hinges: ANSI/BHMA A156.26 Grade 1-600 certified continuous geared hinge. with minimum 0.120-inch thick extruded 6060 T6 aluminum alloy hinge leaves and a minimum overall width of 4 inches. Hinges are non-handed, reversible and fabricated to template screw locations. Factory trim hinges to suit door height and prepare for electrical cutouts.
 - 1. Acceptable Manufacturers:
 - a. McKinney Products (MK).

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- b. Pemko Manufacturing (PE).
- c. Stanley Hardware (ST).

2.3 POWER TRANSFER DEVICES

- A. Concealed Quick Connect Electric Power Transfers: Provide concealed wiring pathway housing mortised into the door and frame for low voltage electrified door hardware. Furnish with MolexTM standardized plug connectors and sufficient number of concealed wires (up to 12) to accommodate the electrified functions specified in the Door Hardware Sets. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Wire nut connections are not acceptable.
 - 1. Acceptable Manufacturers:
 - a. Pemko Manufacturing (PE) EL-CEPT Series.
 - b. Securitron (SU) EL-CEPT Series.
 - c. Stanley Hardware (ST) EPT-12C Series.
- B. Electric Door Wire Harnesses: Provide electric/data transfer wiring harnesses with standardized plug connectors to accommodate up to twelve (12) wires. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Provide sufficient number and type of concealed wires to accommodate electric function of specified hardware. Provide a connector for through-door electronic locking devices and from hinge to junction box above the opening. Wire nut connections are not acceptable. Determine the length required for each electrified hardware component for the door type, size and construction, minimum of two per electrified opening.
 - 1. Provide one each of the following tools as part of the base bid contract:
 - a. McKinney Products (MK) Electrical Connecting Kit: QC-R001.
 - b. McKinney Products (MK) Connector Hand Tool: QC-R003.

2.4 DOOR OPERATING TRIM

- A. Flush Bolts and Surface Bolts: ANSI/BHMA A156.3 and A156.16, Grade 1, certified.
 - 1. Manual flush bolts to be furnished with top rod of sufficient length to allow bolt location approximately six feet from the floor.
 - 2. Furnish dust proof strikes for bottom bolts.
 - 3. Surface bolts to be minimum 8" in length and U.L. listed for labeled fire doors and U.L. listed for windstorm components where applicable.
 - 4. Provide related accessories (mounting brackets, strikes, coordinators, etc.) as required for appropriate installation and operation.
 - 5. Acceptable Manufacturers:
 - a. Ives (IV).
 - b. Rockwood Manufacturing (RO).
 - c. Trimco (TC).

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- B. Door Push Plates and Pulls: ANS/BHMA A156.6 certified door pushes and pulls of type and design specified in the Hardware Sets. Coordinate and provide proper width and height as required where conflicting hardware dictates.
 - 1. Push/Pull Plates: Minimum .050 inch thick, size as indicated in hardware sets, with beveled edges, secured with exposed screws unless otherwise indicated.
 - 2. Door Pull and Push Bar Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door unless otherwise indicated.
 - 3. Offset Pull Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door and offset of 90 degrees unless otherwise indicated.
 - 4. Fasteners: Provide manufacturer's designated fastener type as indicated in Hardware Sets.
 - 5. Acceptable Manufacturers:
 - a. Ives (IV).
 - b. Rockwood Manufacturing (RO).
 - c. Trimco (TC).

2.5 CYLINDERS AND KEYING

- A. General: Cylinder manufacturer to have minimum (10) years experience designing secured master key systems and have on record a published security keying system policy.
- B. Source Limitations: Obtain each type of keyed cylinder and keys from the same source manufacturer as locksets and exit devices, unless otherwise indicated.
 - 1. Acceptable Manufacturers:
 - a. Stanley Best (BE).
 - b. Sargent Cylinder Housings
 - c. No Substitution.
- C. Cylinders: Original manufacturer cylinders complying with the following:
 - 1. Mortise Type: Threaded cylinders with rings and cams to suit hardware application.
 - 2. Rim Type: Cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
 - 3. Bored-Lock Type: Cylinders with tailpieces to suit locks.
 - 4. Mortise and rim cylinder collars to be solid and recessed to allow the cylinder face to be flush and be free spinning with matching finishes.
 - 5. Keyway: Match Facility Standard.
- D. Keying System: Each type of lock and cylinders to be factory keyed.
 - 1. Conduct specified "Keying Conference" to define and document keying system instructions and requirements.

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- 2. Furnish factory cut, nickel-silver large bow permanently inscribed with a visual key control number as directed by Owner.
- 3. Existing System: Key locks to Owner's existing system.
- E. Key Quantity: Provide the following minimum number of keys:
 - 1. Change Keys per Cylinder: Two (2)
 - 2. Twenty construction cores
 - 3. 50 Key Blanks Best "A" Keyway
 - 4. Temporary (green) core keys: 1 key per lockset
- F. Construction Keying: Provide temporary keyed construction cores. Green Best Cores No Substitution. All Best temporary cores to be returned to the district at the end of the project.
- G. Key Registration List (Bitting List):
 - 1. Provide keying transcript list to Owner's representative in the proper format for importing into key control software.
 - 2. Provide transcript list in writing or electronic file as directed by the Owner.
- H. Key Control Cabinet: Provide a key control system including envelopes, labels, and tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent markers, and standard metal cabinet. Key control cabinet shall have expansion capacity of 150% of the number of locks required for the project. Provide a new cabinet to all new construction projects. Use Lund 1205-B as a basis of design.
 - 1. Acceptable Manufacturers:
 - a. Lund Equipment (LU).
 - b. MMF Industries (MM).
 - c. Telkee (TK).

2.6 MECHANICAL LOCKS AND LATCHING DEVICES

- A. Mortise Locksets, Grade 1 (Heavy Duty): ANSI/BHMA A156.13. Locksets are to be manufactured with a corrosion resistant steel case and be field-reversible for handing without disassembly of the lock body.
 - 1. Acceptable Manufacturers
 - a. Sargent Manufacturing (SA) 8200 Series No substitutions
 - b. Sargent Manufacturing (SA) 10X Series No substitutions
 - 1) Use at student restrooms or as directed by Cy Fair ISD

2.7 AUXILIARY LOCKS

- A. Tubular Deadlocks: Deadlocks to be products of the same source manufacturer and keyway as other specified locksets.
 - 1. Acceptable Manufacturers:
 - a. Marks (MX) 130 Series.
 - b. Sargent Manufacturing (SA) 480 Series.

2.8 LOCK AND LATCH STRIKES

- A. Strikes: Provide manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, unless otherwise indicated, and as follows:
 - 1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.
 - 2. Aluminum-Frame Strike Box: Provide manufacturer's special strike box fabricated for aluminum framing.
- B. Standards: Comply with the following:
 - 1. Strikes for Mortise Locks and Latches: BHMA A156.13.
 - 2. Strikes for Auxiliary Deadlocks: BHMA A156.5.
 - 3. Dustproof Strikes: BHMA A156.16.

2.9 CONVENTIONAL EXIT DEVICES

- A. General Requirements: All exit devices specified herein shall meet or exceed the following criteria:
 - 1. At doors not requiring a fire rating, provide devices complying with NFPA 101 and listed and labeled for "Panic Hardware" according to UL305. Provide proper fasteners as required by manufacturer including sex nuts and bolts at openings specified in the Hardware Sets.
 - 2. Where exit devices are required on fire rated doors, provide devices complying with NFPA 80 and with UL labeling indicating "Fire Exit Hardware". Provide devices with the proper fasteners for installation as tested and listed by UL. Consult manufacturer's catalog and template book for specific requirements.
 - 3. Except on fire rated doors, provide exit devices with hex key dogging device to hold the pushbar and latch in a retracted position. Provide optional keyed cylinder dogging on devices where specified in Hardware Sets.

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- 4. Devices must fit flat against the door face with no gap that permits unauthorized dogging of the push bar. The addition of filler strips is required in any case where the door light extends behind the device as in a full glass configuration.
- 5. Lever Operating Trim: Where exit devices require lever trim, furnish manufacturer's heavy duty escutcheon trim with threaded studs for thru-bolts.
 - a. Lock Trim Design: As indicated in Hardware Sets, provide finishes and designs to match that of the specified locksets.
 - b. Where function of exit device requires a cylinder, provide a cylinder (Rim or Mortise) as specified in Hardware Sets.
- 6. Rail Sizing: Provide exit device rails factory sized for proper door width application.
- 7. Through Bolt Installation: For exit devices and trim as indicated (TB) in Door Hardware Sets.
- 8. Provide Less Dogging (LD) at all exit devices.
- 9. Add 31- Prefix to all exit devices being provided at two inch aluminum doors.
- 10. No self-tapping screws allowed.
- B. Conventional Push Rail Exit Devices (Heavy Duty): ANSI/BHMA A156.3, Grade 1 certified panic and fire exit hardware devices furnished in the functions specified in the Hardware Sets. Exit device latch to be stainless steel, pullman type, with deadlock feature.
 - 1. Acceptable Manufacturers:
 - a. Sargent Manufacturing (SA) 80 Series.
 - b. No Substitution.
- C. Tube Steel Removable Mullions: ANSI/BHMA A156.3 removable steel mullions with malleable-iron top and bottom retainers and a primed paint finish.
 - 1. Provide keyed removable feature where specified in the Hardware Sets.
 - 2. Provide stabilizers and mounting brackets as required.
 - 3. Provide electrical quick connection wiring options as specified in the hardware sets.
 - 4. Acceptable Manufacturers:
 - a. Stanley Precision (PR) 822 Series.
 - b. No Substitution.

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2.10 INTEGRATED WIEGAND OUTPUT ACCESS CONTROL EXIT DEVICES

- A. Wiegand Output Integrated Card Reader Exit Hardware: Wiegand output ANSI 156.3 Grade 1 rim, mortise, and vertical rod exit device hardware with integrated proximity card reader, latchbolt and touchbar monitoring, and request-to-exit signaling, in one complete unit. Hard wired, solenoid driven locking/unlocking control of the lever handle exit trim with 3/4" throw latch bolt. U.L listed and labeled for either panic or "fire exit hardware" for use on up to 3 hour fire rated openings. Available with or without keyed high security cylinder override.
 - 1. Open architecture, hard wired platform supports centralized control of locking units with new or existing Wiegand compatible access control systems. Inside push bar (request-to-exit) signaling and door position (open/closed status) monitoring (via separately connected DPS).
 - 2. Reader supports either HID 125 kHz proximity (up to 39 bits, including Corporate 1000) or 13.56 MHz (2K-32K) iClass® credentials.
 - 3. 12VDC external power supply required for reader, with optional 24VDC operation available with iClass® reader (125 kHz reader is always 12VDC). 24VDC required for solenoid operated exit trim (12VDC if applicable). Fail safe or fail secure options.
 - 4. Installation requires only one cable run from the exit hardware to the access control panel without requirements for additional proprietary lock panel interface boards or modules.
 - 5. Acceptable Manufacturers:
 - a. Sargent Manufacturing (SA) SN 56-SN20080 Series Exits. x SPAR04867
 - b. Sargent Manufacturing (SA) SN SN2008200 Series Locks.
 - c. No Substitution.

2.11 DOOR CLOSERS

- A. All door closers specified herein shall meet or exceed the following criteria:
 - 1. General: Door closers to be from one manufacturer, matching in design and style, with the same type door preparations and templates regardless of application or spring size. Closers to be non-handed with full sized covers including installation and adjusting information on inside of cover.
 - 2. Standards: Closers to comply with UL-10C for Positive Pressure Fire Test and be U.L. listed for use of fire rated doors.
 - 3. Cycle Testing: Provide closers which have surpassed 15 million cycles in a test witnessed and verified by UL.
 - 4. Size of Units: Comply with manufacturer's written recommendations for sizing of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Where closers are indicated for doors required to be accessible to the physically handicapped, provide units complying with ANSI ICC/A117.1.

- 5. Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets.
- 6. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.
- 7. Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates, and through-bolt and security type fasteners as required for proper installation.
- 8. Through Bolt Installation: All door closers are to be installed with (TB) through bolting as indicated in Door Hardware Sets.
- 9. No self-tapping screws allowed.
- B. Door Closers, Surface Mounted (Heavy Duty): ANSI/BHMA A156.4, Grade 1 surface mounted, heavy duty door closers with complete spring power adjustment, sizes 1 thru 6; and fully operational adjustable according to door size, frequency of use, and opening force. Closers to be rack and pinion type, one piece cast iron or aluminum alloy body construction, with adjustable backcheck and separate non-critical valves for closing sweep and latch speed control. Provide non-handed units standard.
 - 1. Acceptable Manufacturers:
 - a. Sargent Manufacturing (SA) TB 351 Series.

2.12 SURFACE MOUNTED CLOSER HOLDERS

- A. Electromagnetic Door Holders: Certified ANSI A156.15 electromagnetic door holder/releases with a minimum 20 to 40 pounds holding power and single coil construction able to accommodate.12VDC, 24VAC, 24VDC and 120VAC. Coils to be independently wound, employing an integral fuse and armatures to include a positive release button.
 - 1. Acceptable Manufacturers:
 - a. LCN Door Closers (LC) SEM7800 Series.
 - b. Rixson (RF) 980/990 Series.
 - c. Sargent Manufacturing (SA) 1560 Series.

2.13 ARCHITECTURAL TRIM

- A. Door Protective Trim
 - 1. General: Door protective trim units to be of type and design as specified below or in the Hardware Sets.

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- 2. Size: Fabricate protection plates (kick, armor, or mop) not more than 2" less than door width (LDW) on stop side of single doors and 1" LDW on stop side of pairs of doors, and not more than 1" less than door width on pull side. Coordinate and provide proper width and height as required where conflicting hardware dictates. Height to be as specified in the Hardware Sets.
- 3. Protection Plates: ANSI/BHMA A156.6 certified protection plates (kick, armor, or mop), fabricated from the following:
 - a. Stainless Steel: 300 grade, 050-inch thick.
- 4. Options and fasteners: Provide manufacturer's designated fastener type as specified in the Hardware Sets. Provide countersunk screw holes.
- 5. Acceptable Manufacturers:
 - a. Ives (IV).
 - b. Rockwood Manufacturing (RO).
 - c. Trimco (TC).

2.14 DOOR STOPS AND HOLDERS

- A. General: Door stops and holders to be of type and design as specified below or in the Hardware Sets.
- B. Door Stops and Bumpers: ANSI/BHMA A156.16, Grade 1 certified door stops and wall bumpers. Provide wall bumpers, either convex or concave types with anchorage as indicated, unless floor or other types of door stops are specified in Hardware Sets. Do not mount floor stops where they will impede traffic. Where floor or wall bumpers are not appropriate, provide overhead type stops and holders.
 - 1. Acceptable Manufacturers:
 - a. Ives (IV).
 - b. Rockwood Manufacturing (RO).
 - c. Trimco (TC).
- C. Overhead Door Stops and Holders: ANSI/BHMA A156.6, Grade 1 certified overhead stops and holders to be surface or concealed types as indicated in Hardware Sets. Track, slide, arm and jamb bracket to be constructed of extruded bronze and shock absorber spring of heavy tempered steel. Provide non-handed design with mounting brackets as required for proper operation and function.
 - 1. Acceptable Manufacturers:
 - a. Do not use overhead stops/holders

2.15 ARCHITECTURAL SEALS

- A. General: Thresholds, weatherstripping, and gasket seals to be of type and design as specified below or in the Hardware Sets. Provide continuous weatherstrip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated. At exterior applications provide non-corrosive fasteners and elsewhere where indicated.
- B. Smoke Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke control ratings indicated, based on testing according to UL 1784.
 - 1. Provide smoke labeled perimeter gasketing at all smoke labeled openings.
- C. Fire Labeled Gasketing: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to UL-10C.
 - 1. Provide intumescent seals as indicated to meet UL10C Standard for Positive Pressure Fire Tests of Door Assemblies, and UBC 7-2, Fire Tests of Door Assemblies.
- D. No Replaceable Seal Strips allowed: Provide only those units where they can be screw applied..
- E. Acceptable Manufacturers:
 - 1. National Guard Products (NG).
 - 2. Pemko Manufacturing (PE).
 - 3. Reese Enterprises, Inc. (RE).

2.16 ELECTRONIC ACCESSORIES

- A. Door Position Switches: Door position magnetic reed contact switches specifically designed for use in commercial door applications. On recessed models the contact and magnetic housing snap-lock into a 1" diameter hole. Surface mounted models include wide gap distance design complete with armored flex cabling. Provide SPDT, N/O switches with optional Rare Earth Magnet installation on steel doors with flush top channels.
 - 1. Acceptable Manufacturers:
 - a. Provided by Security
- B. Switching Power Supplies: Provide UL listed or recognized filtered and regulated power supplies. Provide single, dual, or multi-voltage units as shown in the hardware sets. Units must be expandable up to eight Class 2 power limited outputs. Units must include the capability to incorporate a battery backup option with integral battery charging capability in addition to operating the DC load in event of line voltage failure. Provide the least number of units, at the appropriate amperage level, sufficient to exceed the required total draw for the specified electrified hardware and access control equipment.

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- 1. Acceptable Manufacturers:
 - a. Provided by Security

2.17 FABRICATION

A. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to manufacturers recognized installation standards for application intended.

2.18 FINISHES

- A. Standard: Designations used in the Hardware Sets and elsewhere indicate hardware finishes complying with ANSI/BHMA A156.18, including coordination with traditional U.S. finishes indicated by certain manufacturers for their products.
- B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware.
- C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine scheduled openings, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.
- B. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

3.2 PREPARATION

- A. Hollow Metal Doors and Frames: Comply with ANSI/DHI A115 series.
- B. Wood Doors: Comply with ANSI/DHI A115-W series.

3.3 INSTALLATION

- A. Install each item of mechanical and electromechanical hardware and access control equipment to comply with manufacturer's written instructions and according to specifications.
 - 1. Installers are to be trained and certified by the manufacturer on the proper installation and adjustment of fire, life safety, and security products including: hanging devices; locking devices; closing devices; and seals.
- B. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:
 - 1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
 - 2. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
 - 3. Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities."
 - 4. Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.
- C. Integrated Wiegand access control products are required to be installed through current members of the ASSA ABLOY "Certified Integrator" (CI) program.
- D. Retrofitting: Install door hardware to comply with manufacturer's published templates and written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.
- E. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."
- F. Storage: Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.
- G. No self-tapping screws allowed.

3.4 FIELD QUALITY CONTROL

A. Field Inspection: Supplier will perform a final inspection of installed door hardware and state in report whether work complies with or deviates from requirements, including whether door hardware is properly installed, operating and adjusted.

3.5 ADJUSTING

- A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.
- B. Final Adjustment: Installer shall return and make final adjustment of all hardware once all air conditioning test and balance is complete. Final adjustment shall be made while air conditioner system is operating. Coordinate with General Contractor and Owner.

3.6 CLEANING AND PROTECTION

- A. Protect all hardware stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.
- B. Clean adjacent surfaces soiled by door hardware installation.
- C. Clean operating items as necessary to restore proper finish. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of owner occupancy.

3.7 DEMONSTRATION

A. Instruct Owner's maintenance personnel to adjust, operate, and maintain mechanical and electromechanical door hardware.

3.8 DOOR HARDWARE SETS

The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.

A. Manufacturer's Abbreviations:

1. MK - McKinney 2. OT - OTHER

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PE - Pemko
 RO - Rockwood
 PR - Precision
 MX - Marks
 SA - Sargent
 AD - Adams Rite
 BE - Best Access Systems
 HS - HES
 SU - Securitron
 KD - Keedex
 LO - Locinox

Hardware Sets

Set: 1.0

Doors: A1002, F1028, G1032 Description: Existing add SN200 8504 and 8510 exit

1	Electric Power Transfer	EL-EPT		SU
1	Rim Exit Device, Storeroom	LD 19 TB 43 56 70 SN200 8504 Less Trim	US32D	SA
1	Rim Exit Device, Exit Only	19 TB 43 8510 EO	US32D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
2	Surface Closer	7500 TBGN	689	NO
1	ElectroLynx Harness	QC-C1500P		MK
1	ElectroLynx Harness	QC-C***P (length as req'd)		MK
1	Balance of hardware	Existing to remain		OT

Set: 2.0

Doors: D1012A

Description: Existing add 8504 and 8510 exits

1	Rim Exit Device, Storeroom	LD 19 TB 43 70 8504 Less Trim	US32D	SA
1	Rim Exit Device, Exit Only	19 TB 43 8510 EO	US32D	SA
1	Balance of hardware	Existing to remain		OT

<u>Set: 3.0</u>

Doors: D143, D158, D160A, D160B, D258, D260A, G308A Description: Existing add 8204 and 7500

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1	Storeroom/Closet Lock	70 8204 LL	US26D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Surface Closer	7500 TBGN	689	NO
1	Balance of hardware	Existing to remain		OT

Set: 4.0

Doors: A700

Description: Existing add 8804 and 8810 PSB

1	Rim Exit Device, Storeroom	LD 19 TB 43 70 8804 PSB	US32D	SA
1	Rim Exit Device, Dummy	LD 19 TB 43 8810 PSB	US32D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
2	Surface Closer	7500 TBGN	689	NO
1	Balance of hardware	Existing to remain		OT

Set: 5.0

Doors: A1000, D1013B Description: Existing add SN200 exit, 7500 closer and loop

1	Rim Exit x SPAR04867/NC-E11	19 LD TB 43 70 56-SN200-8804	US32D	SA
1	Vandal Resistant Trim	826	US32D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Surface Closer	7500 TBGN	689	NO
1	ElectroLynx Harness	QC-C1500P		MK
1	ElectroLynx Harness	QC-C***P (length as req'd)		MK
1	Door Loop	DL-2		AK
2	Viewer	622	CRM	RO
1	Balance of hardware	Existing to remain		OT

<u>Set: 6.0</u>

Doors: D1014 Description: Existing add SN200 exit, 7500 closer and EPT

1	Electric Power Transfer	EL-EPT		SU
1	Rim Exit x SPAR04867/NC-E11	19 LD TB 43 70 56-SN200-8804	US32D	SA
1	Vandal Resistant Trim	826	US32D	SA
1	Interchangeable Core	I/CK-7	626	BE

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1	Const. Core	7190224	Green	BE
1	Surface Closer	7500 TBGN	689	NO
1	ElectroLynx Harness	QC-C1500P		MK
1	ElectroLynx Harness	QC-C***P (length as req'd)		МК
1	Balance of hardware	Existing to remain		OT

Set: 7.0

Doors: D1015, D1018

Description: Existing add SN200 8500 exit, closer, threshold, loop

1	Rim Exit Device, Storeroom	LD 19 TB 43 56 70 SN200 8504 Less Trim	US32D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Surface Closer	7500 TBGN	689	NO
1	Threshold	2005AT MSES25SS X Opening Width		PE
1	ElectroLynx Harness	QC-C1500P		MK
1	ElectroLynx Harness	QC-C***P (length as req'd)		MK
1	Door Loop	DL-2		AK
1	Balance of hardware	Existing to remain		OT

<u>Set: 8.0</u>

Doors: E1021A

Description: Existing add 8510 exit, closer, threshold

1	Rim Exit Device, Exit Only	19 TB 43 8510 EO	US32D	SA
1	Surface Closer	7500 TBGN	689	NO
1	Threshold	2005AT MSES25SS X Opening Width		PE
1	Balance of hardware	Existing to remain		OT

<u>Set: 9.0</u>

Doors: E1021B Description: Existing add 8510 exit

1	Rim Exit Device, Exit Only	19 TB 43 8510 EO	US32D	SA
1	Balance of hardware	Existing to remain		OT

Set: 10.0

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Doors: F1025B.

Description: Existing add SN200 FSW exit, closer, loop, gasketing

1	Rim Exit Device, Storeroom	19 TB 43 56 70 SN200 8804 FSW	US32D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Surface Closer	7500 TBGN	689	NO
1	Gasketing	2891APK (head & jambs)		PE
1	ElectroLynx Harness	QC-C1500P		MK
1	ElectroLynx Harness	QC-C***P (length as req'd)		MK
1	Door Loop	DL-2		AK
2	Viewer	622	CRM	RO
1	All hardware	Existing to remain		OT

Set: 11.0

Doors: D1013A, D107B, D109A, D251B, D259B, DS233, DS234A Description: Existing add 8816 exit, closer, floor stop

1	Rim Exit Device	LD 19 TB 43 49 70 8816 ETL	US32D	SA
2	Interchangeable Core	I/CK-7	626	BE
2	Const. Core	7190224	Green	BE
1	Surface Closer	7500H TBGN	689	NO
1	Door Stop	481H	US26D	RO
1	Balance of hardware	Existing to remain		OT

Set: 12.0

Doors: CS230C, CS231B, D107A, D109B, D159A, D163A, B175B Description: Existing add 8804 and 7500

1	Rim Exit SPAR NC-E11	LD 19 TB 43 70 8804 ETL	US32D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Surface Closer	7500H TBGN	689	NO
1	Balance of hardware	Existing to remain		OT

Set: 13.0

Doors: E1048

Description: New 8204 pair

6	Hinge, Full Mortise	TA2714 U	S26D	MK

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1	Surface Bolt	580-12 @ top only	US26D	RO
1	Storeroom/Closet Lock	70 8204 LL	US26D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Surface Closer	7500 TBGN	689	NO
2	Door Stop	481H	US26D	RO
2	Silencer	608		RO

Set: 14.0

Doors: A187A, B175B, E1020B Description: Existing add 8816 and 7500

1	Rim Exit Device	LD 19 TB 43 49 70 8816 ETL	US32D	SA
2	Interchangeable Core	I/CK-7	626	BE
2	Const. Core	7190224	Green	BE
1	Surface Closer	7500H TBGN	689	NO
1	Balance of hardware	Existing to remain		OT

Set: 15.0

Doors: G300K

Description: Existing add 8804 and 7500, door viewers

2	Viewer	622	CRM	RO
1	Balance of hardware	Existing to remain		OT

Set: 16.0

Doors: C1010

Description: Existing add 8510 exit and mounting insert @ RHR leaf

1	Rim Exit Device, Exit Only	19 TB 43 8510 EO	US32D	SA
1	68-1375	Mounting Rail Insert		SA
1	Balance of hardware	Existing to remain		OT

Notes: remove cylinder dogging on exiting rail with 68-1375 mounting rail insert.

Set: 17.0

Doors: D1012B

Description: Existing add SN200 8500 exit and 8510 exit, new 2N station

1 Rim Exit Device, Storeroom LD 19 TB 43 56 70 8504 Less Trim US32D SA

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1	Rim Exit Device, Exit Only	19 TB 43 8510 EO	US32D	SA
1	Power Supply	Provided by security		SU
1	Balance of hardware	Existing to remain		OT

Notes: Add 2N station

Set: 18.0

Doors: G302 Description: Existing add 8804 less trim and 7500

1	Rim Exit Device	LD 19 TB 43 49 70 8816 ETL	US32D	SA
2	Interchangeable Core	I/CK-7	626	BE
2	Const. Core	7190224	Green	BE
1	Surface Closer	7500 TBGN	689	NO
2	Viewer	622	CRM	RO
1	Balance of hardware	Existing to remain		OT

Notes: bondo and paint at existing holes

Set: 19.0

Doors: G300 Description: Existing add 8816 and 7500, door viewers

1	Rim Exit Device	LD 19 TB 43 49 70 8816 ETL	US32D	SA
2	Interchangeable Core	I/CK-7	626	BE
2	Const. Core	7190224	Green	BE
1	Surface Closer	7500 TBGN	689	NO
2	Viewer	622	CRM	RO
1	Balance of hardware	Existing to remain		OT

Set: 20.0

Doors: D259C, D261A, DS234B

Description: Existing add 8804, closer and floor stop

1	Rim Exit SPAR NC-E11	LD 19 TB 43 70 8804 ETL	US32D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Surface Closer	7500H TBGN	689	NO
1	Door Stop	481H	US26D	RO
1	Balance of hardware	Existing to remain		OT

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Set: 21.0

Doors: D207A, D207B Description: Existing add 8816 exit, closer, floor stop, trim

1	Rim Exit Device	LD 19 TB 43 49 70 8816 ETL	US32D	SA
1	Exit Device Trim	70 704-ETL	US26D	SA
2	Interchangeable Core	I/CK-7	626	BE
2	Const. Core	7190224	Green	BE
2	Surface Closer	7500H TBGN	689	NO
2	Door Stop	481H	US26D	RO
1	Balance of hardware	Existing to remain		OT

Set: 22.0

Doors: CS230B, CS231A, F1024A, F1025A Description: Existing add 8816 exit and closer

1	Rim Exit Device	LD 19 TB 43 49 70 8816 ETL	US32D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Surface Closer	7500H TBGN	689	NO
1	Balance of hardware	Existing to remain		OT

Set: 22.1

Doors: G1034A

Description: Existing add 8816 exit and closer

1	Rim Exit Device	LD 19 TB 43 49 70 8816 ETL	US32D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Surface Closer	7500H TBGN	689	NO
2	Viewer	622	CRM	RO
1	Balance of hardware	Existing to remain		OT

Set: 23.0

Doors: F316A, G316B

Description: Existing add 8816 closer, 70-704 exit trim

1	Rim Exit Device	LD 19 TB 43 49 8816 ETL	US32D	SA
1	Exit Device Trim	70 704-ETL	US26D	SA

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1	Mortise Cylinder	70 42	US32D	SA
1	Interchangeable Core	I/CK-7	626	BE
2	Surface Closer	7500H TBGN	689	NO
3	Const. Core	7190224	Green	BE

Notes: 8816 exit and 70-704 trim at LHR leaf only.

Set: 24.0

Doors: G1034B

Description: Existing add SN200 8804 FSW, closer, loop, door viewers

1	Rim Exit Device, Storeroom	19 TB 43 56 70 SN200 8804 FSW	US32D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Surface Closer	7500 TBGN	689	NO
1	ElectroLynx Harness	QC-C1500P		MK
1	ElectroLynx Harness	QC-C***P (length as req'd)		MK
1	Door Loop	DL-2		AK
2	Viewer	622	CRM	RO
1	Balance of hardware	Existing to remain		OT

Set: 25.0

Doors: F103 Description: Existing add 8204

1	Storeroom/Closet Lock	70 8204 LL	US26D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Balance of hardware	Existing to remain		OT

Set: 26.0

Doors: F354C, F354D

Description: Existing add 8204 and 7500

1	Storeroom/Closet Lock	70 8204 LL	US26D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Surface Closer	7500H TBGN	689	NO
1	Balance of hardware	Existing to remain		OT

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Set: 27.0

Doors: CA1, CA14, CA15, CA16, CA17, CA18, CA19, CA2, CA20, CA3, CA4, CA5, D111, DA10, DA122, DA13B, DA9 Description: Existing add 8205

1	Office/Entry Lock	70 8205 LL	US26D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Balance of hardware	Existing to remain		OT

Set: 28.0

Doors: CA22, G308B

Description: Existing add 8205 w/ indicator

1	Office/Entry Lock	V01 EMB 70 8205 VN1L	US26D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	All hardware	Existing to remain		OT

Set: 29.0

Doors: CA21 Description: Existing 8205 and HO closer

1	Office/Entry Lock	70 8205 LL	US26D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Surface Closer	7500H TBGN	689	NO
1	Balance of hardware	Existing to remain		OT

Set: 30.0

Doors: E224, E225 Description: New 8215 STC

1	Gasket, threshold, door bottom	By the STC door manufacturer		OT
3	Hinges	By the STC door manufacturer		OT
1	Passage Latch	8215 LL	US26D	SA
1	Door Stop	462	US2C	RO

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Notes:

Door hardware is specified for design intent. Confirm hardware compatibility and design meets the door manufacturer's approved assembly testing for the STC level indicated.

Set: 31.0

Doors: D258A

Description: Existing add 8250 and closer

1	Hotel Guest Lock Lock	V20 LC 8250 VN1L	US26D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Mortise Cylinder for Hotel Lock	1E-7G4 C208 RP3	626	BE
1	Surface Closer	7500 TBGN	689	NO
1	Balance of hardware	Existing to remain		OT

Set: 32.0

Doors: .F354E, A189B, C101A, C103, C104, C105, C106, C107, C151, C152, C153, C154, C155, C200, C201, C202, C203B, C204, C205B, C251, C252, C253, C254, C255, D110, D141, DA36, E112, E113, E114, E115, E116, E117, E118, E119, E167, E168, E169, E170, E171, E173, E210, E211, E212, E213, E214, E215, E263, E264, E265, E266, E267, E268, G306, G307, G308, G310A, G312A, G314, G1031B

Description: Existing add 8238 and 7500

1	Classroom Security Intruder Lock	V01 EMB 70 8238 VN1L 90-3/8" Collar	US26D	SA
2	Interchangeable Core	I/CK-7	626	BE
2	Const. Core	7190224	Green	BE
1	Surface Closer	7500H TBGN	689	NO
1	Balance of hardware	Existing to remain		OT

Set: 33.0

Doors: F1029A, F1042

Description: Existing add 8238

1	Classroom Security Intruder Lock	V01 EMB 70 8238 VN1L 90-3/8" Collar	US26D	SA
2	Interchangeable Core	I/CK-7	626	BE
2	Const. Core	7190224	Green	BE
1	Balance of hardware	Existing to remain		OT

Set: 34.0

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Doors: C100, C147, E144, E261 Description: Existing add HO closer pair of doors

2	Surface Closer	7500H TBGN	689	NO
1	Balance of hardware	Existing to remain		OT

Set: 35.0

Doors: A187B

Description: New 8816 exit

1	Continuous Hinge	CFM HD1 x Dr. Ht.		PE
1	Rim Exit Device	LD 19 TB 43 49 70 8816 ETL	US32D	SA
2	Interchangeable Core	I/CK-7	626	BE
2	Const. Core	7190224	Green	BE
1	Surface Closer	7500H TBGN	689	NO
1	Kick Plate	K1050 10" CSK BEV	US32D	RO
3	Silencer	608		RO

Set: 36.0

Doors: B175A, D159B, D163B

Description: **Pr Ext - ASF - Exit Device- SN200/DT - KR Mullion - Closer w/Stop Arm -Access Control

2	Stabilizer	ST989	Dull Black	PR
1	Rim Exit Device	LD 19 TB 43 49 70 8816 ETL	US32D	SA
2	Interchangeable Core	I/CK-7	626	BE
2	Const. Core	7190224	Green	BE
1	Surface Closer	7500H TBGN	689	NO
1	Balance of hardware	Existing to remain		OT

Notes: Operation: Doors normally closed and locked. Valid card at the card reader retracts the latch on the active leaf for entry. Free egress at all times. Door status monitored. Confirm specified hardware is compatible with aluminum door manufacturer.

Set: 37.0

Doors: F1030. F1029 Description: New storeroom lock w/ closer

3	Hinge, Full Mortise	TA2714	US26D MK
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1	Storeroom/Closet Lock	70 8204 LL	US26D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Surface Closer	7500 TBGN	689	NO
1	Door Stop	481H	US26D	RO
3	Silencer	608		RO

Set: 38.0

Doors: .D208B Description: New 82271 lock

3	Hinge, Full Mortise	TA2714	US26D	MK
1	Electric Power Transfer	EL-EPT		SU
1	Access Control Mort Lock	70 SN200-82271-24V LNL	US26D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Surface Closer	7500 TBGN	689	NO
1	Door Stop	481H	US26D	RO
1	ElectroLynx Harness	QC-C1500P		MK
1	ElectroLynx Harness	QC-C***P (length as req'd)		MK
1	Power Supply	Provided by security		SU

Set: 39.0

Doors: E127

Description: New storeroom lock w/ closer pair of doors

2	Continuous Hinge	CFM HD1 x Dr. Ht.		PE
1	Surface Bolt	580-12 @ top only	US26D	RO
1	Storeroom/Closet Lock	70 8204 LL	US26D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Surface Closer	7500 TBGN	689	NO
2	Door Stop	481H	US26D	RO
2	Silencer	608		RO

Set: 39.1

Doors: A189C

Description: New 8804 pair w/ mullion

2	Continuous Hinge	CFM HD1 x Dr. Ht.	PE

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1	Mullion	KR822 (FLK as req)	600	PR
2	Stabilizer	ST989	Dull Black	PR
2	Rim Exit SPAR NC-E11	LD 19 TB 43 70 8804 ETL	US32D	SA
3	Interchangeable Core	I/CK-7	626	BE
1	Mullion Cylinder	70 34 x 1KB-3	US32D	SA
3	Const. Core	7190224	Green	BE
2	Surface Closer	7500 TBGN	689	NO
2	Door Stop	481H	US26D	RO
2	Silencer	608		RO

Set: 40.0

Doors: A1006

Description: New SN200 exit w/ 826 trim, loop

1	Continuous Hinge	CFM HD1 PT x Dr. Ht.		PE
1	Rim Exit x SPAR04867/NC-E11	19 LD TB 43 70 56-SN200-8804	US32D	SA
1	Vandal Resistant Trim	826	US32D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Surface Closer	7500 TBGN	689	NO
1	Door Stop	462	US2C	RO
1	Gasketing	2891APK (head & jambs)		PE
1	Rain Guard	346C x Frame Width		PE
1	Sweep	18061CNB x Dr. Width		PE
1	Threshold	2005AT MSES25SS X Opening Width		PE
1	ElectroLynx Harness	QC-C1500P		MK
1	ElectroLynx Harness	QC-C***P (length as req'd)		MK
1	Door Loop	DL-2		AK
1	Power Supply	Provided by security		SU
2	Viewer	622	CRM	RO

Set: 41.0

Doors: A187D Description: New push/pull

1	Continuous Hinge	CFM HD1 x Dr. Ht.		PE
1	Push Plate	70E	US32D	RO
1	Pull Plate	111x70C	US32D	RO

1	Surface Closer	7500 TBGN	689	NO
1	Door Stop	481H	US26D	RO
3	Silencer	608		RO

Set: 42.0

Doors: B191A, B191B

Description: New 8804 and 8816 exits, keyed mullion

2	Continuous Hinge	CFM HD1 x Dr. Ht.		PE
1	Mullion	KR822 (FLK as req)	600	PR
1	Rim Exit Device	LD 19 TB 43 49 70 8816 ETL	US32D	SA
1	Rim Exit SPAR NC-E11	LD 19 TB 43 70 8804 ETL	US32D	SA
1	Mortise Cylinder	70 42	US32D	SA
4	Interchangeable Core	I/CK-7	626	BE
4	Const. Core	7190224	Green	BE
2	Surface Closer	7500 TBGN	689	NO
2	Door Stop	481H	US26D	RO
2	Silencer	608		RO

Set: 43.0

Doors: F1024B.

Description: New 2N station, 56-8804 FSW exit

1	Continuous Hinge	CFM HD1 x Dr. Ht.		PE
1	Rim Exit Device, Storeroom	19 TB 43 56 70 8804 FSW	US32D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Surface Closer	7500 TBGN	689	NO
1	Armor Plate	K1050 36" CSK BEV	US32D	RO
1	Door Stop	462	US2C	RO
1	Gasketing	2891APK (head & jambs)		PE
1	Sweep	18061CNB x Dr. Width		PE
1	Threshold	2005AT MSES25SS X Opening Width		PE
1	ElectroLynx Harness	QC-C1500P		MK
1	ElectroLynx Harness	QC-C***P (length as req'd)		MK
1	Door Loop	DL-2		AK
1	Filler Plate	SFASA		RO
1	Exit Device Strike Plate	648		SA

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Notes: New 2N station

Set: 44.0

Doors: F1022B

Description: New 2N station, 56-8804 w/ 826 trim

1	Continuous Hinge	CFM HD1 x Dr. Ht.		PE
1	Rim Exit Device, Storeroom	LD 19 TB 43 56 70 8804	US32D	SA
1	Vandal Resistant Trim	826	US32D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Surface Closer	7500H TBGN	689	NO
1	Armor Plate	K1050 36" CSK BEV	US32D	RO
1	Door Stop	462	US2C	RO
1	Gasketing	2891APK (head & jambs)		PE
1	Sweep	18061CNB x Dr. Width		PE
1	Threshold	2005AT MSES25SS X Opening Width		PE
1	ElectroLynx Harness	QC-C1500P		MK
1	ElectroLynx Harness	QC-C***P (length as req'd)		MK
1	Door Loop	DL-2		AK
2	Viewer	622	CRM	RO
1	Keedex Lock Protector	K12S - SGT		OT

Notes: New 2N station

Set: 45.0

Doors: F110 Description: New storeroom lock w/ closer, armor plate

1	Continuous Hinge	CFM HD1 x Dr. Ht.		PE
1	Storeroom/Closet Lock	70 8204 LL	US26D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Surface Closer	7500H TBGN	689	NO
1	Armor Plate	K1050 36" CSK BEV	US32D	RO
1	Door Stop	462	US2C	RO
3	Silencer	608		RO
2	Viewer	622	CRM	RO

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Set: 46.0

Doors: E1020A, G1033

Description: New SN200 8804 FSW exterior exit

1	Continuous Hinge	CFM HD1 x Dr. Ht.		PE
1	Rim Exit Device, Storeroom	19 TB 43 56 70 SN200 8804 FSW	US32D	SA
1	Vandal Resistant Trim	826	US32D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Surface Closer	7500 TBGN	689	NO
1	Door Stop	462	US2C	RO
1	Gasketing	2891APK (head & jambs)		PE
1	Sweep	18061CNB x Dr. Width		PE
1	Threshold	2005AT MSES25SS X Opening Width		PE
1	ElectroLynx Harness	QC-C1500P		MK
1	ElectroLynx Harness	QC-C***P (length as req'd)		MK
1	Door Loop	DL-2		AK
2	Viewer	622	CRM	RO

Set: 47.0

Doors: F311DA., F311DB.

Description: New office lock w/ closer

3	Hinge, Full Mortise	TA2714	US26D	MK
1	Classroom Lock	70 8237 LL	US26D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Surface Closer	7500 TBGN	689	NO
1	Door Stop	481H	US26D	RO
3	Silencer	608		RO

Set: 48.0

Doors: MISC

Description: **Attic Stock - EVERY CAMPUS

1	Hydraulic Gate Closer & Hinge	MAMMOTH-180-HD	9005	OT
5	Quick Fix Bolts	MAMMOTH-P00006000		OT
10	Classroom Security Intruder Lock Body	8238	US26D	SA

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Doors: F1052.

2 SN200 Mort Lock body	SN200-82271	US26D	SA
50 Interchangeable Core	I/CK-7	626	BE
50 Key Blanks	Best "A" Keyway		BE
4 SN200 Reader	52 6027 (Exit / Lock)	26D	SA

Notes: All attic stock ships direct to Director of Technical Services Cy Fair ISD Lockshop 11430 Perry Road Houston, Texas 77064

Set: 49.0

Description: New exterior 8204 pair

2	Continuous Hinge	CFM HD1 x Dr. Ht.		PE
2	Surface Bolt	580-12	US26D	RO
1	Storeroom/Closet Lock	70 8204 LL	US26D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Surface Closer	7500 TBGN	689	NO
2	Door Stop	462	US2C	RO
1	Gasketing	2891APK (head & jambs)		PE
1	Rain Guard	346C x Frame Width		PE
2	Sweep	18061CNB x Dr. Width		PE
1	Threshold	2005AT MSES25SS X Opening Width		PE

Set: 50.0

Doors: Stops Description: To be used as needed during installation

20 Do	oor Stop	481H		US26D	RO
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SECTION 087100 – DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes commercial door hardware for the following:
 - 1. Swinging doors.
 - 2. Other doors to the extent indicated.
- B. Door hardware includes, but is not necessarily limited to, the following:
 - 1. Mechanical door hardware.
 - 2. Electromechanical door hardware.
 - 3. Cylinders specified for doors in other sections.
- C. Related Sections:
 - 1. Division 08 Section "Door Hardware Schedule".
 - 2. Division 08 Section "Hollow Metal Doors and Frames".
 - 3. Division 08 Section "Interior Aluminum Doors and Frames".
 - 4. Division 08 Section "Plastic Laminate Faced Wood Doors".
- D. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.
 - 1. ANSI A117.1 Accessible and Usable Buildings and Facilities.
 - 2. ICC/IBC International Building Code.
 - 3. NFPA 70 National Electrical Code.
 - 4. NFPA 80 Fire Doors and Windows.
 - 5. NFPA 101 Life Safety Code.
 - 6. NFPA 105 Installation of Smoke Door Assemblies.
 - 7. State Building Codes, Local Amendments.
- E. Standards: All hardware specified herein shall comply with the following industry standards:
 - 1. ANSI/BHMA Certified Product Standards A156 Series
 - 2. UL10C Positive Pressure Fire Tests of Door Assemblies

1.3 SUBMITTALS

- A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.
- B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
 - 1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."
 - 2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening. Organize door hardware sets in same order as in the Door Hardware Sets at the end of Part 3. Submittals that do not follow the same format and order as the Door Hardware Sets will be rejected and subject to resubmission.
 - 3. Content: Include the following information:
 - a. Type, style, function, size, label, hand, and finish of each door hardware item.
 - b. Manufacturer of each item.
 - c. Fastenings and other pertinent information.
 - d. Location of door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
 - e. Explanation of abbreviations, symbols, and codes contained in schedule.
 - f. Mounting locations for door hardware.
 - g. Door and frame sizes and materials.
 - h. Warranty information for each product.
 - 4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.
- C. Shop Drawings: Details of electrified access control hardware indicating the following:
 - 1. Wiring Diagrams: Upon receipt of approved schedules, submit detailed system wiring diagrams for power, signaling, monitoring, communication, and control of the access control system electrified hardware. Differentiate between manufacturer-installed and field-installed wiring. Include the following:
 - a. Elevation diagram of each unique access controlled opening showing location and interconnection of major system components with respect to their placement in the respective door openings.

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- b. Complete (risers, point-to-point) access control system block wiring diagrams.
- c. Wiring instructions for each electronic component scheduled herein.
- 2. Electrical Coordination: Coordinate with related sections the voltages and wiring details required at electrically controlled and operated hardware openings.
- D. Proof of Certification: Provide copy of manufacturer(s) official certification or accreditation document indicating proof of status as a qualified installer of Windstorm assemblies.
- E. Keying Schedule: After a keying meeting with the owner has taken place prepare a separate keying schedule detailing final instructions. Submit the keying schedule in electronic format. Include keying system explanation, door numbers, key set symbols, hardware set numbers and special instructions. Owner must approve submitted keying schedule prior to the ordering of permanent cylinders/cores.
- F. Informational Submittals:
 - 1. Product Test Reports: Indicating compliance with cycle testing requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified independent testing agency.
- G. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Submittals.

1.4 QUALITY ASSURANCE

- A. Manufacturers Qualifications: Engage qualified manufacturers with a minimum 5 years of documented experience in producing hardware and equipment similar to that indicated for this Project and that have a proven record of successful in-service performance.
- B. Installer Qualifications: A minimum 3 years documented experience hardware similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.
- C. Door Hardware Supplier Qualifications: Experienced commercial door hardware distributors with a minimum 5 years documented experience supplying hardware installations comparable in material, design, and extent to that indicated for this Project. Supplier recognized as a factory direct distributor by the manufacturers of the primary materials with a warehousing facility in Project's vicinity. Supplier to have on staff a certified Architectural Hardware Consultant (AHC) available during the course of the Work to consult with Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying.
- D. Integrated Wiegand, Wireless, and IP-Enabled Access Control Products Supplier Qualifications: Integrated access control products and accessories are required to be supplied and installed through current members of the ASSA ABLOY "Authorized Channel Partner" (ACP) and "Certified Integrator" (CI) programs. Suppliers are to be factory trained, certified prior to project bid, and a direct purchaser of the specified product. Installers are to be factory trained, certified

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prior to project bid, and are responsible for commissioning, servicing, and warranting the installed equipment specified for the project.

- E. Source Limitations: Obtain each type and variety of door hardware specified in this section from a single source unless otherwise indicated.
 - 1. Electrified modifications or enhancements made to a source manufacturer's product line by a secondary or third party source will not be accepted.
 - 2. Provide electromechanical door hardware from the same manufacturer as mechanical door hardware, unless otherwise indicated
- F. Each unit to bear third party permanent label demonstrating compliance with the referenced standards.
- G. Keying Conference: Conduct conference to comply with requirements in Division 01 Section "Project Meetings." Keying conference to incorporate the following criteria into the final keying schedule document:
 - 1. Function of building, purpose of each area and degree of security required.
 - 2. Plans for existing and future key system expansion.
 - 3. Requirements for key control storage and software.
 - 4. Installation of permanent keys, cylinder cores and software.
 - 5. Address and requirements for delivery of keys.
- H. Pre-Submittal Conference: Conduct coordination conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier(s), Installer(s), and Contractor(s) to review proper methods and the procedures for receiving, handling, and installing door hardware.
 - 1. Prior to installation of door hardware, conduct a project specific training meeting to instruct the installing contractors' personnel on the proper installation and adjustment of their respective products. Product training to be attended by installers of door hardware (including electromechanical hardware) for aluminum, hollow metal and wood doors. Training will include the use of installation manuals, hardware schedules, templates and physical product samples as required.
 - 2. Inspect and discuss electrical roughing-in, power supply connections, and other preparatory work performed by other trades.
 - 3. Review sequence of operation narratives for each unique access controlled opening.
 - 4. Review and finalize construction schedule and verify availability of materials.
 - 5. Review the required inspecting, testing, commissioning, and demonstration procedures
- I. At completion of installation, provide written documentation that components were applied to manufacturer's instructions and recommendations and according to approved schedule.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site.

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- B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.
- C. Deliver, as applicable, permanent keys, cylinders, cores and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

1.6 COORDINATION

- A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.
- B. Door Hardware and Electrical Connections: Coordinate the layout and installation of scheduled electrified door hardware and related access control equipment with required connections to source power junction boxes, low voltage power supplies, detection and monitoring hardware, and fire and detection alarm systems.
- C. Door and Frame Preparation: Doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

1.7 WARRANTY

- A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.
- B. Warranty Period: Written warranty, executed by manufacturer(s), agreeing to repair or replace components of standard and electrified door hardware that fails in materials or workmanship within specified warranty period after final acceptance by the Owner. Failures include, but are not limited to, the following:
 - 1. Structural failures including excessive deflection, cracking, or breakage.
 - 2. Faulty operation of the hardware.
 - 3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
 - 4. Electrical component defects and failures within the systems operation.
- C. Standard Warranty Period: One year from date of Substantial Completion, unless otherwise indicated.
- D. Special Warranty Periods:
 - 1. Lifetime for mortise locks and latches.
 - 2. Five years for exit hardware.

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- 3. Ten years for electric latch retraction exit motors
- 4. Twenty-five years for manual surface door closer bodies.
- 5. Two years for electromechanical door hardware.
- 6. Lifetime for SN200 readers.

1.8 MAINTENANCE SERVICE

- A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.
- 1.9 OWNER STOCK See Attic Stock at the end of Hardware Schedule.

PART 2 - PRODUCTS

2.1 SCHEDULED DOOR HARDWARE

- A. General: Provide door hardware for each door to comply with requirements in Door Hardware Sets and each referenced section that products are to be supplied under.
- B. Designations: Requirements for quantity, item, size, finish or color, grade, function, and other distinctive qualities of each type of door hardware are indicated in the Door Hardware Sets at the end of Part 3. Products are identified by using door hardware designations, as follows:
- C. Named Manufacturer's Products: Product designation and manufacturer are listed for each door hardware type required for the purpose of establishing requirements. Manufacturers' names are abbreviated in the Door Hardware Schedule.
- D. Substitutions: Requests for substitution and product approval for inclusive mechanical and electromechanical door hardware in compliance with the specifications must be submitted in writing and in accordance with the procedures and time frames outlined in Division 01, Substitution Procedures. Approval of requests is at the discretion of the architect, owner, and their designated consultants.

2.2 HANGING DEVICES

- A. Hinges: ANSI/BHMA A156.1 certified butt hinges with number of hinge knuckles as specified in the Door Hardware Sets.
 - 1. Quantity: Provide the following hinge quantity, unless otherwise indicated:
 - a. Two Hinges: For doors with heights up to 60 inches.
 - b. Three Hinges: For doors with heights 61 to 90 inches.
 - c. Four Hinges: For doors with heights 91 to 120 inches.

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- d. For doors with heights more than 120 inches, provide 4 hinges, plus 1 hinge for every 30 inches of door height greater than 120 inches.
- 2. Hinge Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:
 - a. Widths up to 3'0": 4-1/2" standard or heavy weight as specified.
 - b. Sizes from 3'1" to 4'0": 5" standard or heavy weight as specified.
- 3. Hinge Weight and Base Material: Unless otherwise indicated, provide the following:
 - a. Exterior Doors: Heavy weight, non-ferrous, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate standard weight.
 - b. Interior Doors: Standard weight, steel, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate heavy weight.
- 4. Hinge Options: Comply with the following where indicated in the Hardware Sets or on Drawings:
 - a. Non-removable Pins: Provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for the all out-swinging lockable doors.
- 5. Acceptable Manufacturers:
 - a. Hager Companies (HA).
 - b. McKinney Products (MK).
 - c. Stanley Hardware (ST).
- B. Continuous Geared Hinges: ANSI/BHMA A156.26 Grade 1-600 certified continuous geared hinge. with minimum 0.120-inch thick extruded 6060 T6 aluminum alloy hinge leaves and a minimum overall width of 4 inches. Hinges are non-handed, reversible and fabricated to template screw locations. Factory trim hinges to suit door height and prepare for electrical cut-outs.
 - 1. Acceptable Manufacturers:
 - a. McKinney Products (MK).
 - b. Pemko Manufacturing (PE).
 - c. Stanley Hardware (ST).

2.3 POWER TRANSFER DEVICES

A. Concealed Quick Connect Electric Power Transfers: Provide concealed wiring pathway housing mortised into the door and frame for low voltage electrified door hardware. Furnish with Molex[™] standardized plug connectors and sufficient number of concealed wires (up to 12) to accommodate the electrified functions specified in the Door Hardware Sets. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Wire nut connections are not acceptable.

- 1. Acceptable Manufacturers:
 - a. Pemko Manufacturing (PE) EL-CEPT Series.
 - b. Securitron (SU) EL-CEPT Series.
 - c. Stanley Hardware (ST) EPT-12C Series.
- B. Electric Door Wire Harnesses: Provide electric/data transfer wiring harnesses with standardized plug connectors to accommodate up to twelve (12) wires. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Provide sufficient number and type of concealed wires to accommodate electric function of specified hardware. Provide a connector for through-door electronic locking devices and from hinge to junction box above the opening. Wire nut connections are not acceptable. Determine the length required for each electrified hardware component for the door type, size and construction, minimum of two per electrified opening.
 - 1. Provide one each of the following tools as part of the base bid contract:
 - a. McKinney Products (MK) Electrical Connecting Kit: QC-R001.
 - b. McKinney Products (MK) Connector Hand Tool: QC-R003.

2.4 DOOR OPERATING TRIM

- A. Flush Bolts and Surface Bolts: ANSI/BHMA A156.3 and A156.16, Grade 1, certified.
 - 1. Manual flush bolts to be furnished with top rod of sufficient length to allow bolt location approximately six feet from the floor.
 - 2. Furnish dust proof strikes for bottom bolts.
 - 3. Surface bolts to be minimum 8" in length and U.L. listed for labeled fire doors and U.L. listed for windstorm components where applicable.
 - 4. Provide related accessories (mounting brackets, strikes, coordinators, etc.) as required for appropriate installation and operation.
 - 5. Acceptable Manufacturers:
 - a. Ives (IV).
 - b. Rockwood Manufacturing (RO).
 - c. Trimco (TC).
- B. Door Push Plates and Pulls: ANS/BHMA A156.6 certified door pushes and pulls of type and design specified in the Hardware Sets. Coordinate and provide proper width and height as required where conflicting hardware dictates.
 - 1. Push/Pull Plates: Minimum .050 inch thick, size as indicated in hardware sets, with beveled edges, secured with exposed screws unless otherwise indicated.
 - 2. Door Pull and Push Bar Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door unless otherwise indicated.
 - 3. Offset Pull Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door and offset of 90 degrees unless otherwise indicated.

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- 4. Fasteners: Provide manufacturer's designated fastener type as indicated in Hardware Sets.
- 5. Acceptable Manufacturers:
 - a. Ives (IV).
 - b. Rockwood Manufacturing (RO).
 - c. Trimco (TC).

2.5 CYLINDERS AND KEYING

- A. General: Cylinder manufacturer to have minimum (10) years experience designing secured master key systems and have on record a published security keying system policy.
- B. Source Limitations: Obtain each type of keyed cylinder and keys from the same source manufacturer as locksets and exit devices, unless otherwise indicated.
 - 1. Acceptable Manufacturers:
 - a. Stanley Best (BE).
 - b. Sargent Cylinder Housings
 - c. No Substitution.
- C. Cylinders: Original manufacturer cylinders complying with the following:
 - 1. Mortise Type: Threaded cylinders with rings and cams to suit hardware application.
 - 2. Rim Type: Cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
 - 3. Bored-Lock Type: Cylinders with tailpieces to suit locks.
 - 4. Mortise and rim cylinder collars to be solid and recessed to allow the cylinder face to be flush and be free spinning with matching finishes.
 - 5. Keyway: Match Facility Standard.
- D. Keying System: Each type of lock and cylinders to be factory keyed.
 - 1. Conduct specified "Keying Conference" to define and document keying system instructions and requirements.
 - 2. Furnish factory cut, nickel-silver large bow permanently inscribed with a visual key control number as directed by Owner.
 - 3. Existing System: Key locks to Owner's existing system.
- E. Key Quantity: Provide the following minimum number of keys:
 - 1. Change Keys per Cylinder: Two (2)
 - 2. Twenty construction cores
 - 3. 50 Key Blanks Best "A" Keyway
 - 4. Temporary (green) core keys: 1 key per lockset
- F. Construction Keying: Provide temporary keyed construction cores. Green Best Cores No Substitution. All Best temporary cores to be returned to the district at the end of the project.

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- G. Key Registration List (Bitting List):
 - 1. Provide keying transcript list to Owner's representative in the proper format for importing into key control software.
 - 2. Provide transcript list in writing or electronic file as directed by the Owner.
- H. Key Control Cabinet: Provide a key control system including envelopes, labels, and tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent markers, and standard metal cabinet. Key control cabinet shall have expansion capacity of 150% of the number of locks required for the project. Provide a new cabinet to all new construction projects. Use Lund 1205-B as a basis of design.
 - 1. Acceptable Manufacturers:
 - a. Lund Equipment (LU).
 - b. MMF Industries (MM).
 - c. Telkee (TK).

2.6 MECHANICAL LOCKS AND LATCHING DEVICES

- A. Mortise Locksets, Grade 1 (Heavy Duty): ANSI/BHMA A156.13. Locksets are to be manufactured with a corrosion resistant steel case and be field-reversible for handing without disassembly of the lock body.
 - 1. Acceptable Manufacturers
 - a. Sargent Manufacturing (SA) 8200 Series No substitutions
 - b. Sargent Manufacturing (SA) 10X Series No substitutions
 - 1) Use at student restrooms or as directed by Cy Fair ISD

2.7 AUXILIARY LOCKS

- A. Tubular Deadlocks: Deadlocks to be products of the same source manufacturer and keyway as other specified locksets.
 - 1. Acceptable Manufacturers:
 - a. Marks (MX) 130 Series.
 - b. Sargent Manufacturing (SA) 480 Series.

2.8 LOCK AND LATCH STRIKES

A. Strikes: Provide manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, unless otherwise indicated, and as follows:

- 1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.
- 2. Aluminum-Frame Strike Box: Provide manufacturer's special strike box fabricated for aluminum framing.
- B. Standards: Comply with the following:
 - 1. Strikes for Mortise Locks and Latches: BHMA A156.13.
 - 2. Strikes for Auxiliary Deadlocks: BHMA A156.5.
 - 3. Dustproof Strikes: BHMA A156.16.

2.9 CONVENTIONAL EXIT DEVICES

- A. General Requirements: All exit devices specified herein shall meet or exceed the following criteria:
 - 1. At doors not requiring a fire rating, provide devices complying with NFPA 101 and listed and labeled for "Panic Hardware" according to UL305. Provide proper fasteners as required by manufacturer including sex nuts and bolts at openings specified in the Hardware Sets.
 - 2. Where exit devices are required on fire rated doors, provide devices complying with NFPA 80 and with UL labeling indicating "Fire Exit Hardware". Provide devices with the proper fasteners for installation as tested and listed by UL. Consult manufacturer's catalog and template book for specific requirements.
 - 3. Except on fire rated doors, provide exit devices with hex key dogging device to hold the pushbar and latch in a retracted position. Provide optional keyed cylinder dogging on devices where specified in Hardware Sets.
 - 4. Devices must fit flat against the door face with no gap that permits unauthorized dogging of the push bar. The addition of filler strips is required in any case where the door light extends behind the device as in a full glass configuration.
 - 5. Lever Operating Trim: Where exit devices require lever trim, furnish manufacturer's heavy duty escutcheon trim with threaded studs for thru-bolts.
 - a. Lock Trim Design: As indicated in Hardware Sets, provide finishes and designs to match that of the specified locksets.
 - b. Where function of exit device requires a cylinder, provide a cylinder (Rim or Mortise) as specified in Hardware Sets.
 - 6. Rail Sizing: Provide exit device rails factory sized for proper door width application.
 - 7. Through Bolt Installation: For exit devices and trim as indicated (TB) in Door Hardware Sets.
 - 8. Provide Less Dogging (LD) at all exit devices.

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- 9. Add 31- Prefix to all exit devices being provided at two inch aluminum doors.
- 10. No self-tapping screws allowed.
- B. Conventional Push Rail Exit Devices (Heavy Duty): ANSI/BHMA A156.3, Grade 1 certified panic and fire exit hardware devices furnished in the functions specified in the Hardware Sets. Exit device latch to be stainless steel, pullman type, with deadlock feature.
 - 1. Acceptable Manufacturers:
 - a. Sargent Manufacturing (SA) 80 Series.
 - b. No Substitution.
- C. Tube Steel Removable Mullions: ANSI/BHMA A156.3 removable steel mullions with malleable-iron top and bottom retainers and a primed paint finish.
 - 1. Provide keyed removable feature where specified in the Hardware Sets.
 - 2. Provide stabilizers and mounting brackets as required.
 - 3. Provide electrical quick connection wiring options as specified in the hardware sets.
 - 4. Acceptable Manufacturers:
 - a. Stanley Precision (PR) 822 Series.
 - b. No Substitution.

2.10 INTEGRATED WIEGAND OUTPUT ACCESS CONTROL EXIT DEVICES

- A. Wiegand Output Integrated Card Reader Exit Hardware: Wiegand output ANSI 156.3 Grade 1 rim, mortise, and vertical rod exit device hardware with integrated proximity card reader, latchbolt and touchbar monitoring, and request-to-exit signaling, in one complete unit. Hard wired, solenoid driven locking/unlocking control of the lever handle exit trim with 3/4" throw latch bolt. U.L listed and labeled for either panic or "fire exit hardware" for use on up to 3 hour fire rated openings. Available with or without keyed high security cylinder override.
 - 1. Open architecture, hard wired platform supports centralized control of locking units with new or existing Wiegand compatible access control systems. Inside push bar (request-to-exit) signaling and door position (open/closed status) monitoring (via separately connected DPS).
 - 2. Reader supports either HID 125 kHz proximity (up to 39 bits, including Corporate 1000) or 13.56 MHz (2K-32K) iClass® credentials.
 - 3. 12VDC external power supply required for reader, with optional 24VDC operation available with iClass® reader (125 kHz reader is always 12VDC). 24VDC required for solenoid operated exit trim (12VDC if applicable). Fail safe or fail secure options.
 - 4. Installation requires only one cable run from the exit hardware to the access control panel without requirements for additional proprietary lock panel interface boards or modules.

- 5. Acceptable Manufacturers:
 - a. Sargent Manufacturing (SA) SN 56-SN20080 Series Exits. x SPAR04867
 - b. Sargent Manufacturing (SA) SN SN2008200 Series Locks.
 - c. No Substitution.

2.11 DOOR CLOSERS

- A. All door closers specified herein shall meet or exceed the following criteria:
 - 1. General: Door closers to be from one manufacturer, matching in design and style, with the same type door preparations and templates regardless of application or spring size. Closers to be non-handed with full sized covers including installation and adjusting information on inside of cover.
 - 2. Standards: Closers to comply with UL-10C for Positive Pressure Fire Test and be U.L. listed for use of fire rated doors.
 - 3. Cycle Testing: Provide closers which have surpassed 15 million cycles in a test witnessed and verified by UL.
 - 4. Size of Units: Comply with manufacturer's written recommendations for sizing of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Where closers are indicated for doors required to be accessible to the physically handicapped, provide units complying with ANSI ICC/A117.1.
 - 5. Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets.
 - 6. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.
 - 7. Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates, and through-bolt and security type fasteners as required for proper installation.
 - 8. Through Bolt Installation: All door closers are to be installed with (TB) through bolting as indicated in Door Hardware Sets.
 - 9. No self-tapping screws allowed.
- B. Door Closers, Surface Mounted (Heavy Duty): ANSI/BHMA A156.4, Grade 1 surface mounted, heavy duty door closers with complete spring power adjustment, sizes 1 thru 6; and fully operational adjustable according to door size, frequency of use, and opening force. Closers to be rack and pinion type, one piece cast iron or aluminum alloy body construction, with adjustable backcheck and separate non-critical valves for closing sweep and latch speed control. Provide non-handed units standard.

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- 1. Acceptable Manufacturers:
 - a. Sargent Manufacturing (SA) TB 351 Series.

2.12 SURFACE MOUNTED CLOSER HOLDERS

- A. Electromagnetic Door Holders: Certified ANSI A156.15 electromagnetic door holder/releases with a minimum 20 to 40 pounds holding power and single coil construction able to accommodate.12VDC, 24VAC, 24VDC and 120VAC. Coils to be independently wound, employing an integral fuse and armatures to include a positive release button.
 - 1. Acceptable Manufacturers:
 - a. LCN Door Closers (LC) SEM7800 Series.
 - b. Rixson (RF) 980/990 Series.
 - c. Sargent Manufacturing (SA) 1560 Series.

2.13 ARCHITECTURAL TRIM

- A. Door Protective Trim
 - 1. General: Door protective trim units to be of type and design as specified below or in the Hardware Sets.
 - 2. Size: Fabricate protection plates (kick, armor, or mop) not more than 2" less than door width (LDW) on stop side of single doors and 1" LDW on stop side of pairs of doors, and not more than 1" less than door width on pull side. Coordinate and provide proper width and height as required where conflicting hardware dictates. Height to be as specified in the Hardware Sets.
 - 3. Protection Plates: ANSI/BHMA A156.6 certified protection plates (kick, armor, or mop), fabricated from the following:
 - a. Stainless Steel: 300 grade, 050-inch thick.
 - 4. Options and fasteners: Provide manufacturer's designated fastener type as specified in the Hardware Sets. Provide countersunk screw holes.
 - 5. Acceptable Manufacturers:
 - a. Ives (IV).
 - b. Rockwood Manufacturing (RO).
 - c. Trimco (TC).

2.14 DOOR STOPS AND HOLDERS

- A. General: Door stops and holders to be of type and design as specified below or in the Hardware Sets.
- B. Door Stops and Bumpers: ANSI/BHMA A156.16, Grade 1 certified door stops and wall bumpers. Provide wall bumpers, either convex or concave types with anchorage as indicated, unless floor or other types of door stops are specified in Hardware Sets. Do not mount floor stops where they will impede traffic. Where floor or wall bumpers are not appropriate, provide overhead type stops and holders.
 - 1. Acceptable Manufacturers:
 - a. Ives (IV).
 - b. Rockwood Manufacturing (RO).
 - c. Trimco (TC).
- C. Overhead Door Stops and Holders: ANSI/BHMA A156.6, Grade 1 certified overhead stops and holders to be surface or concealed types as indicated in Hardware Sets. Track, slide, arm and jamb bracket to be constructed of extruded bronze and shock absorber spring of heavy tempered steel. Provide non-handed design with mounting brackets as required for proper operation and function.
 - 1. Acceptable Manufacturers:
 - a. Do not use overhead stops/holders

2.15 ARCHITECTURAL SEALS

- A. General: Thresholds, weatherstripping, and gasket seals to be of type and design as specified below or in the Hardware Sets. Provide continuous weatherstrip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated. At exterior applications provide non-corrosive fasteners and elsewhere where indicated.
- B. Smoke Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke control ratings indicated, based on testing according to UL 1784.
 - 1. Provide smoke labeled perimeter gasketing at all smoke labeled openings.
- C. Fire Labeled Gasketing: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to UL-10C.
 - 1. Provide intumescent seals as indicated to meet UL10C Standard for Positive Pressure Fire Tests of Door Assemblies, and UBC 7-2, Fire Tests of Door Assemblies.

- D. No Replaceable Seal Strips allowed: Provide only those units where they can be screw applied.
- E. Acceptable Manufacturers:
 - 1. National Guard Products (NG).
 - 2. Pemko Manufacturing (PE).
 - 3. Reese Enterprises, Inc. (RE).

2.16 ELECTRONIC ACCESSORIES

- A. Door Position Switches: Door position magnetic reed contact switches specifically designed for use in commercial door applications. On recessed models the contact and magnetic housing snap-lock into a 1" diameter hole. Surface mounted models include wide gap distance design complete with armored flex cabling. Provide SPDT, N/O switches with optional Rare Earth Magnet installation on steel doors with flush top channels.
 - 1. Acceptable Manufacturers:
 - a. Provided by Security
- B. Switching Power Supplies: Provide UL listed or recognized filtered and regulated power supplies. Provide single, dual, or multi-voltage units as shown in the hardware sets. Units must be expandable up to eight Class 2 power limited outputs. Units must include the capability to incorporate a battery backup option with integral battery charging capability in addition to operating the DC load in event of line voltage failure. Provide the least number of units, at the appropriate amperage level, sufficient to exceed the required total draw for the specified electrified hardware and access control equipment.
 - 1. Acceptable Manufacturers:
 - a. Provided by Security

2.17 FABRICATION

A. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to manufacturers recognized installation standards for application intended.

2.18 FINISHES

A. Standard: Designations used in the Hardware Sets and elsewhere indicate hardware finishes complying with ANSI/BHMA A156.18, including coordination with traditional U.S. finishes indicated by certain manufacturers for their products.

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- B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware.
- C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine scheduled openings, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.
- B. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.
- 3.2 PREPARATION
 - A. Hollow Metal Doors and Frames: Comply with ANSI/DHI A115 series.
 - B. Wood Doors: Comply with ANSI/DHI A115-W series.

3.3 INSTALLATION

- A. Install each item of mechanical and electromechanical hardware and access control equipment to comply with manufacturer's written instructions and according to specifications.
 - 1. Installers are to be trained and certified by the manufacturer on the proper installation and adjustment of fire, life safety, and security products including: hanging devices; locking devices; closing devices; and seals.
- B. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:
 - 1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
 - 2. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
 - 3. Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities."

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- 4. Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.
- C. Integrated Wiegand access control products are required to be installed through current members of the ASSA ABLOY "Certified Integrator" (CI) program.
- D. Retrofitting: Install door hardware to comply with manufacturer's published templates and written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.
- E. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."
- F. Storage: Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.
- G. No self-tapping screws allowed.

3.4 FIELD QUALITY CONTROL

A. Field Inspection: Supplier will perform a final inspection of installed door hardware and state in report whether work complies with or deviates from requirements, including whether door hardware is properly installed, operating and adjusted.

3.5 ADJUSTING

- A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.
- B. Final Adjustment: Installer shall return and make final adjustment of all hardware once all air conditioning test and balance is complete. Final adjustment shall be made while air conditioner system is operating. Coordinate with General Contractor and Owner.

3.6 CLEANING AND PROTECTION

- A. Protect all hardware stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.
- B. Clean adjacent surfaces soiled by door hardware installation.

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C. Clean operating items as necessary to restore proper finish. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of owner occupancy.

3.7 DEMONSTRATION

A. Instruct Owner's maintenance personnel to adjust, operate, and maintain mechanical and electromechanical door hardware.

3.8 DOOR HARDWARE SETS

The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.

A. Manufacturer's Abbreviations:

MK - McKinney
 OT - OTHER
 PE - Pemko
 RO - Rockwood
 PR - Precision
 MX - Marks
 SA - Sargent
 AD - Adams Rite
 BE - Best Access Systems
 HS - HES
 SU - Securitron
 KD - Keedex
 LO - Locinox

Cy Park

Hardware Sets

Set: 1.0

Doors: C1139, F1101A, K1101B, M1115A Description: Existing Add 8810 exit

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1	Rim Exit Device, Exit Only	LD 19 TB 43 8810 EO	US32D	SA
1	Balance of hardware	Existing to remain		OT

Set: 1.1

Doors: N1100B, N1100C Description: No work

Notes: Keep existing H1 reader.

<u>Set: 2.0</u>

Doors: L1120B, L1140A, L1140B, L1144B, L1144D, M1133B Description: Existing Add 8804 and 8816 exits, parallel HO closers

1	Rim Exit Device, Storeroom	LD 19 TB 43 70 8804 ETL	US32D	SA
1	Rim Exit Device	LD 19 TB 43 49 70 8816 ETL	US32D	SA
3	Interchangeable Core	I/CK-7	626	BE
3	Const. Core	7190224	Green	BE
2	Surface Closer	TB 351 PSH	EN	SA
1	Balance of hardware	Existing to remain		OT

Set: 3.0

Doors: C1101C, C1104B, C1110B, C1111B, D1121B, D1145B, L1100B Description: Existing Add SN200 Exit, Loop

1	Rim Exit x SPAR04867/NC-E11	19 LD TB 43 70 56-SN200-8804	US32D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	ElectroLynx Harness	QC-C1500P		MK
1	ElectroLynx Harness	QC-C***P (length as req'd)		MK
1	Door Loop	DL-2		AK
1	Power Supply	Provided by security		SU
2	Viewer	622	CRM	RO
1	Balance of hardware	Existing to remain		OT

Notes: Doors are normally closed and secure. Presentation of valid credential will allow entry by pull. Upon loss of power, doors will remain secure. Free egress at all times. Reuse existing Trim. Remove cylinder dogging on exiting rail with 68-1375 mounting rail insert.

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Set: 3.1

Doors: N1100A, P1114 Description: Existing Add SN200 Exit, Loop

1	Rim Exit x SPAR04867/NC-E11	19 LD TB 43 70 56-SN200-8804	US32D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	ElectroLynx Harness	QC-C1500P		MK
1	ElectroLynx Harness	QC-C***P (length as req'd)		MK
1	Door Loop	DL-2		AK
1	Power Supply	Provided by security		SU
1	Balance of hardware	Existing to remain		OT

Notes: Doors are normally closed and secure. Presentation of valid credential will allow entry by pull. Upon loss of power, doors will remain secure. Free egress at all times. Reuse existing Trim. Remove cylinder dogging on exiting rail with 68-1375 mounting rail insert.

Set: 4.0

Doors: K1100A, M1100B, M1129A Description: Existing Add SN200 Exit, Loop

1	Rim Exit x SPAR04867/NC-E11	19 LD TB 43 70 56-SN200-8804	US32D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	ElectroLynx Harness	QC-C1500P		MK
1	ElectroLynx Harness	QC-C***P (length as req'd)		MK
1	Door Loop	DL-2		AK
1	Power Supply	Provided by security		SU
2	Viewer	622	CRM	RO
1	Balance of hardware	Existing to remain		OT

Notes: Doors are normally closed and secure. Presentation of valid credential will allow entry by pull. Upon loss of power, doors will remain secure. Free egress at all times. Reuse existing Trim. Remove cylinder dogging on exiting rail with 68-1375 mounting rail insert.

<u>Set: 5.0</u>

CYPRESS, TX

Doors: B1153A, C1137B, D1115, D1139B, D1146A, E1100A, E1100B, E1105A, G1102C, G1102D, G1103A, H1115A, H1126A, H1143A, L1150A, L1150C, P1121 Description: Existing Add SN200 and 8810 exit

1	Electric Power Transfer	EL-EPT		SU
1	Rim Exit Device, Exit Only	LD 19 TB 43 8810 EO	US32D	SA
1	Rim Exit x SPAR04867/NC-E11	19 LD TB 43 70 56-SN200-8804	US32D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	ElectroLynx Harness	QC-C1500P		MK
1	ElectroLynx Harness	QC-C***P (length as req'd)		MK
1	Balance of hardware	Existing to remain		OT

Set: 5.1

Doors: J1130B, L1111A

Description: Existing Add SN200 and 8810 exit. Loop

2	Electric Power Transfer	EL-EPT		SU
1	Rim Exit Device, Exit Only	LD 19 TB 43 8810 EO	US32D	SA
1	Rim Exit x SPAR04867/NC-E11	19 LD TB 43 70 56-SN200-8804	US32D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	ElectroLynx Harness	QC-C1500P		MK
1	ElectroLynx Harness	QC-C***P (length as req'd)		MK
1	Door Loop	DL-2		AK
2	Viewer	622	CRM	RO
1	Balance of hardware	Existing to remain		OT

Set: 6.0

Doors: G1102A, G1102B

Description: Existing Add SN200 and 8810 exit. Loop

1	Electric Power Transfer	EL-EPT		SU
1	Rim Exit Device, Exit Only	19 TB 43 8810 EO	US32D	SA
1	Rim Exit Device	19 TB 43 70 56-SN200-8804	US32D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	ElectroLynx Harness	QC-C1500P		MK

1	ElectroLynx Harness	QC-C***P (length as req'd)	MK
1	Balance of hardware	Existing to remain	OT

Set: 7.0

Doors: L1150B

Description: Existing Add SN200 and 8810 exit. Loop

1	Electric Power Transfer	EL-EPT		SU
1	Rim Exit x SPAR04867/NC-E11	19 LD TB 43 70 56-SN200-8804	US32D	SA
1	Rim Exit Device, Exit Only	19 TB 43 8810 EO	US32D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	ElectroLynx Harness	QC-C1500P		MK
1	ElectroLynx Harness	QC-C***P (length as req'd)		MK
1	Balance of hardware	Existing to remain		OT

<u>Set: 8.0</u>

Doors: F1110A, F1117A, K1127B

Description: Existing Add SN200 exit, loop, sweep and threshold

1	Rim Exit x SPAR04867/NC-E11	19 LD TB 43 70 56-SN200-8804	US32D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Gasketing	2891APK (head & jambs)		PE
1	Sweep	18061CNB x Dr. Width		PE
1	Threshold	2005AT MSES25SS X Opening Width		PE
1	ElectroLynx Harness	QC-C1500P		MK
1	ElectroLynx Harness	QC-C***P (length as req'd)		MK
1	Door Loop	DL-2		AK
2	Viewer	622	CRM	RO

<u>Set: 9.0</u>

Doors: F1101B

Description: Existing Add SN200 and 8810 exit, new mullion

1	Electric Power Transfer	EL-EPT		SU
1	Mullion	822 (FL as req)	600	PR

CYPRESS, TX

1	Rim Exit Device, Exit Only	LD 19 TB 43 8810 EO	US32D	SA
1	Rim Exit x SPAR04867/NC-E11	19 LD TB 43 70 56-SN200-8804	US32D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	ElectroLynx Harness	QC-C1500P		MK
1	ElectroLynx Harness	QC-C***P (length as req'd)		MK
1	Balance of hardware	Existing to remain		OT

Set: 10.0

Doors: G1103B Description: Existing Add SN200 and 8810 exit, keyed mullion

1	Electric Power Transfer	EL-EPT		SU
1	Mullion	KR822 (FLK as req)	600	PR
1	Rim Exit Device, Exit Only	LD 19 TB 43 8810 EO	US32D	SA
1	Rim Exit x SPAR04867/NC-E11	19 LD TB 43 70 56-SN200-8804	US32D	SA
2	Interchangeable Core	I/CK-7	626	BE
2	Const. Core	7190224	Green	BE
1	ElectroLynx Harness	QC-C1500P		MK
1	ElectroLynx Harness	QC-C***P (length as req'd)		MK
1	Balance of hardware	Existing to remain		ОТ

Set: 11.0

Doors: J1130A

Description: Existing add SN200 and 8810 exit, loop, threshold

1	Rim Exit Device, Exit Only	1 LD 19 TB 43 8810 EO	US32D	SA
1	Rim Exit x SPAR04867/NC-E11	19 LD TB 43 70 56-SN200-8804	US32D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Threshold	2005AT MSES25SS X Opening Width		PE
1	Door Loop	DL-2		AK
1	Balance of hardware	Existing to remain		OT
1 1 1	Door Loop	Width DL-2		AK

Set: 12.0

Doors: A1100A Description: Existing Add 2N station

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1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Balance of hardware	Existing to remain		OT

Notes: Add 2N station

Set: 13.0

Doors: A1100B., K1101A, M1115B

Description: Existing Add 8804 and 8810 exit less trim

1	Rim Exit Device, Exit Only	LD 19 TB 43 8810 EO	US32D	SA
1	Rim Exit Device, Storeroom	LD 19 TB 43 70 8804 Less Pull	US32D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Balance of hardware	Existing to remain		OT

Set: 14.0

Doors: A1113, A1131 Description: Existing add 8204 LL

1	Storeroom/Closet Lock	70 8204 LL	US26D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Balance of hardware	Existing to remain		OT

Set: 15.0

Doors: A1149, C1128 Description: Existing Add 8204 w/ Dummy Cylinder

1	Storeroom/Closet Lock	70 8204 LL	US26D	SA
1	Cylinder	Dummy Cylinder	US32D	SA
1	Balance of hardware	Existing to remain		OT

Set: 16.0

Doors: H1119 Description: Existing Add 8204 and parallel HO closer

1 Storeroom/Closet Lock 70 8204 I	L US26D S.	А
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CYPRESS, TX

1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Surface Closer	TB 351 PSH	EN	SA
1	Balance of hardware	Existing to remain		OT

Set: 17.0

Doors: A1124, A1162, C1128A, J1111A

Description: Existing Add 8238

1	Classroom Security Intruder Lock	V01 EMB 70 8238 VN1L 90-3/8" Collar	US26D	SA
2	Interchangeable Core	I/CK-7	626	BE
2	Const. Core	7190224	Green	BE
1	Balance of hardware	Existing to remain		OT

Set: 18.0

Doors: B2116, B3116, C3116, D2117, D3117

Description: Existing add 8238 and 351 closer w/ parallel HO arm

1	Classroom Security Escutcheon Kit	IS V01 8238 VN1L LH	US26D	SA
2	Interchangeable Core	I/CK-7	626	BE
2	Const. Core	7190224	Green	BE
1	Surface Closer	TB 351 PSH	EN	SA
1	Balance of hardware	Existing to remain		OT

Set: 19.0

Doors: .A3102A, .A3102B, .C1111A, .H1106A, .H1106B, A1155, A1163, A2101A, A2101B, A2105A, A2105B, A3101A, A3101B, A3103A, A3103B, A3105A, A3105B, B1110A, B1115A, B1116, B1126, B1127, B1140, B1141, B1145A, B1145B, B1151A, B1151B, B2100A, B2100B, B2101A, B2101B, B2106A, B2106B, B3100A, B3100B, B3103A, B3103B, B3105A, B3105B, B3106A, B3106B, C1100A, C1101A, C1110A, C1113, C1124, C1125A, C1126A, C1126B, C1130A, C1130B, C1131A, C1131B, C1132A, C1132B, C2100B, C2100C, C2101A, C2101B, C2105A, C2105B, C2106B, C3100B, C3100C, C3103A, C3103B, C3105A, C3105B, C3106A, C3106B, D1103, D1104A, D1104B, D1106, D1110A, D1110B, D1121A, D1137A, D1137B, D1140A, D1140B, D1143A, D1143B, D1145A, D2103A, D2103B, D2107A, D2107B, D2108A, D2108B, D3102, D3105A, D3105B, D3107A, D3107B, D3108A, D3108B, H1102A, H1102B, H1116, H1120, J1107A, J1107B, J1124A, J1124B, J1125, J1126, K1105, K1114A

Description: Existing add parallel HO closer

1	Surface Closer	TB 351 PSH	EN	SA
1	Balance of hardware	Existing to remain		OT

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Set: 20.0

Doors: .L1120A, F1100A, F1100B, G1100A, G1100B, G1100C, G1100D, G1100E, G1100F, G1100G, G1100H, G1101A, G1101B, G1101C, G1101D, G1101E, L1111B, L1144A, L1144C Description: Existing add parallel HO closer pair of doors

2	Surface Closer	TB 351 PSH	EN	SA
1	Balance of hardware	Existing to remain		OT
		<u>Set: 21.0</u>		
Doors	s: .J1129A, J1101, J1102, J1	103, J1116		
Desci	ription: Existing add hold op	en closer		
1	Surface Closer	TB 351 H	EN	SA
1	Balance of hardware	Existing to remain		OT
		Set: 22.0		
Doors	s: A1152A	<u></u>		
Desci	ription: Existing add 8816 ex	it and 704 trim		
1	Rim Exit Device	LD 19 TB 43 49 70 8816	US32D	SA
1	Exit Device Trim	70 704-ETL	US26D	SA
2	Interchangeable Core	I/CK-7	626	BF

2Interchangeable CoreI/CK-7626BE2Const. Core7190224GreenBE1Balance of hardwareExisting to remainOT

Set: 22.1

Doors: P1122 Description: Existing add 8816 exit and 704 trim, 462 stops

1	Rim Exit Device	LD 19 TB 43 49 70 8816	US32D	SA
1	Exit Device Trim	70 704-ETL	US26D	SA
2	Interchangeable Core	I/CK-7	626	BE
2	Const. Core	7190224	Green	BE
2	Door Stop	481H	US26D	RO

Set: 22.2

Doors: P1117 Description: Existing add 8816

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1	Rim Exit Device	LD 19 TB 43 49 70 8816 ETL	US32D	SA
2	Interchangeable Core	I/CK-7	626	BE
2	Const. Core	7190224	Green	BE
1	Balance of hardware	Existing to remain		OT

Set: 23.0

Doors: L1372.

Description: New storeroom lock pair w/ closer

6	Hinge, Full Mortise	TA2714	US26D	MK
1	Surface Bolt	580-12 top only	US26D	RO
1	Storeroom/Closet Lock	70 8204 LL	US26D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Door Closer	TB 351 O/P9 (type as required)	EN	SA
2	Door Stop	481H	US26D	RO
2	Silencer	608		RO

Set: 24.0

Doors: A1103B

Description: New office thumbturn

1	130KB	Thumbturn Kit	26D	SA
1	Balance of hardware	Existing to remain		OT

Set: 25.0

Doors: C2291A., C2291B., D1294A., D1294B., K1127A Description: New classroom security lock w/ closer

1	Continuous Hinge	CFM HD1 x Dr. Ht.		PE
1	Classroom Security Intruder Lock	V01 EMB 70 8238 VN1L 90-3/8" Collar	US26D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Surface Closer	TB 351 PSH	EN	SA
3	Silencer	608		RO

Set: 25.1

Doors: L1421.

Description: New 8804 w/ STC

1	Cam Hinge	By Door MFG		PE
1	Rim Exit Device, Storeroom	LD 19 TB 43 70 8804 ETL	US32D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Surface Closer	TB 351 P9	EN	SA
1	Gasketing	By Door MFG		PE
1	Sweep	18061CNB x Dr. Width		PE
1	Threshold	2005AT MSES25SS X Opening Width		PE

Note: If doors are 2" add 31- to exits

Set: 26.0

Doors: D1158.

Description: New storeroom lock w/ HO closer

3	Hinge, Full Mortise	TA2714	US26D	MK
1	Storeroom/Closet Lock	70 8204 LL	US26D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Surface Closer	TB 351 H	EN	SA
1	Door Stop	481H	US26D	RO
3	Silencer	608		RO

Set: 27.0

Doors: D1300., D1301., L1134., L1135., L1307., L1314. Description: New storeroom lock

3	Hinge, Full Mortise	TA2714	US26D	MK
1	Storeroom/Closet Lock	70 8204 LL	US26D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Door Stop	481H	US26D	RO
3	Silencer	608		RO

Set: 28.0

Doors: L1136. Description: New classroom lock

CYPRESS, TX

3	Hinge, Full Mortise	TA2714	US26D	MK
1	Classroom Lock	70 8237 LL	US26D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Door Stop	481H	US26D	RO
3	Silencer	608		RO

Set: 29.0

Doors: D1340., L1276.

Description: New exterior SN200 exit

1	Continuous Hinge	CFM HD1 PT x Dr. Ht.		PE
1	Electric Power Transfer	EL-EPT		SU
1	Rim Exit x SPAR04867/NC-E11	19 LD TB 43 70 56-SN200-8804	US32D	SA
1	Vandal Resistant Trim	826	US32D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Door Closer	TB 351 O/P9 (type as required)	EN	SA
1	Door Stop	462	US2C	RO
1	Gasketing	2891APK (head & jambs)		PE
1	Sweep	18061CNB x Dr. Width		PE
1	Threshold	2005AT MSES25SS X Opening Width		PE
1	ElectroLynx Harness	QC-C1500P		MK
1	ElectroLynx Harness	QC-C***P (length as req'd)		MK
1	Position Switch	DPS-M / W-BK		SU
1	Power Supply	Provided by security		SU

Set: 30.0

Doors: K1128D Description: Add 2N station

1	Power Supply	Provided by security	SU
1	Balance of hardware	Existing to remain	OT

Notes: New 2N station

Set: 30.1

Doors: P1103

Description: New exterior exit with 2N station

1	Continuous Hinge	CFM HD1 PT x Dr. Ht.		PE
1	Electric Power Transfer	EL-EPT		SU
1	Rim Exit - 2N SPAR#04867/NC-E11	LD 19 TB 43 56 70 8804 Less Pull	US32D	SA
1	Vandal Resistant Trim	826	US32D	SA
1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Surface Closer	TB 351 PSH	EN	SA
1	Armor Plate	K1050 36" CSK BEV	US32D	RO
1	Door Stop	462	US2C	RO
1	Gasketing	2891APK (head & jambs)		PE
1	Sweep	18061CNB x Dr. Width		PE
1	Threshold	2005AT MSES25SS X Opening Width		PE
1	ElectroLynx Harness	QC-C1500P		MK
1	ElectroLynx Harness	QC-C***P (length as req'd)		MK
1	Position Switch	DPS-M / W-BK		SU
1	Power Supply	Provided by security		SU
1	Keedex Lock Protector	K12S - SGT		OT

Notes: New 2N station

Set: 31.0

Doors: A1106, A1108, A1111, A1112, A1114, A1115, A1116A, A1132, A1134, A1136A, A1137, A1138A, A1139, A1150, B1103, B1104, B1105, B1106, B1107, B1108, B2232, B2236, B2240, B2241, B2242, B2243, B3132, B3135, B3136, B3140, B3141, B3142, B3143, D2133, D2134, D2137, D2138, D2139, D2140, D2141, D3133, D3134, D3135, D3139, D3140, D3141, D3142

Description: Replace thumbturn

1 1	130KB Balance of hardware	Thumbturn Kit Existing to remain	26D	SA OT		
Set: 31.1 Doors: A1133 Description: New SN200 lock						
Descrip	uoli. Inew SIN200 lock					
3 1	Hinge, Full Mortise Electric Power Transfer	TA2714 EL-EPT	US26D	MK SU		
1	Access Control Mort Lock	70 SN200-82271-24V OL	US26D	SA		

CYPRESS, TX

1	Interchangeable Core	I/CK-7	626	BE
1	Const. Core	7190224	Green	BE
1	Door Closer	TB 351 O/P9 (type as required)	EN	SA
1	Door Stop	481H	US26D	RO
3	Silencer	608		RO
1	ElectroLynx Harness	QC-C1500P		MK
1	ElectroLynx Harness	QC-C***P (length as req'd)		MK
1	Position Switch	DPS-M / W-BK		SU
1	Power Supply	Provided by security		SU

Set: 32.0

Doors: MISC

Description: **Attic Stock - EVERY CAMPUS

1	Hydraulic Gate Closer & Hinge	MAMMOTH-180-HD	9005	ОТ
5	Quick Fix Bolts	MAMMOTH-P00006000		OT
10	Classroom Security Intruder Lock Body	8238	US26D	SA
10	130KB	Thumbturn Kit	26D	SA
50	Interchangeable Core	I/CK-7	626	BE
50	Key Blanks	Best "A" Keyway		BE
12	Regular Hold Open Arm	25-Н	EN	SA
12	Parallel Hold Open Arm	25-PSH	EN	SA
4	SN200 Reader	52 6027 (Exit / Lock)	26D	SA

Notes: All attic stock ships direct to Director of Technical Services Cy Fair ISD Lockshop 11430 Perry Road Houston, Texas 77064 All attic stock to ship directly to Cy Fair. DO NOT ship to jobsite.

Set: 33.0

Doors: L1305., L1306., L1315., L1359.L1314 Description: New 8237 STC

1	Gasket, threshold, door bottom	By the STC door manufacturer	OT
3	Hinges	By the STC door manufacturer	OT

CYPRESS, TX

1	Classroom Lock	70 8237 LL	US26D	SA
1	Door Stop	462	US2C	RO

Notes:

Door hardware is specified for design intent. Confirm hardware compatibility and design meets the door manufacturer's approved assembly testing for the STC level indicated.

Set: 34.0

Doors: Stops Description: To be used as needed during installation

20 Door Stop

481H

US26D RO

SECTION 23 25 13 - CIRCULATING WATER SYSTEM CHEMICAL TREATMENT

PART 1 – GENERAL

1.1 WORK INCLUDED

- A. Provide equipment, chemicals and treatment materials for the complete water treatment system.
- B. Determine which chemicals to use from the results of a water sample analysis taken from the building domestic water supply.
- C. Provide water treatment products, holding reservoirs, equipment and labor for testing, cleaning, flushing and dispensing products to achieve the required water quality for each system specified.
 - 1. Closed chilled and hot water systems
 - 2. The cooling tower condenser water system
- D. Entire existing chilled water system shall be fully cleaned and flushed prior to the operation of chillers.
- E. Test all existing closed and open water systems and provide report to Owner and Engineer.

1.2 SERVICE AND SUPPLIES

- A. All work shall be performed by a qualified, full-time, Water Program Manager.
 - 1. Specialist in the field of industrial water treatment.
 - 2. Facilities include water analysis laboratory, development facilities and service department.
- B. Provide a water treatment test set for each system (pH, alkalinity, hardness, chloride) for field use including test equipment and reagents as required for specific use with the treatment products employed.
- C. Where specialized supplementary testing or control equipment is required, provide appropriate items.
- D. Provide a water management and service program for a period of one year beginning at substantial completion. Make routine visits bi-weekly during first two months of operation and monthly during the remainder of the specified period.
- E. Routing Services
 - 1. Check and adjust water treatment system operation.
 - 2. Instruct, train and advise operating personnel.
 - 3. Check efficiency of chemicals and chemical applications.
 - 4. Replenish chemicals and replace expendables.
 - 5. Clean or replace filter in feeder.
- F. Chemically clean the piping system.
- G. Provide a complete laboratory analysis of water samples. Insert in the Owner's manuals.
- H. Provide review of report figures in the field water testing.

1.3 QUALITY ASSURANCE

- A. Acceptable program manager shall have:
 - 1. Research and development facilities.
 - 2. Regional laboratories capable of making water analysis.
 - 3. A service department and qualified technical service representatives located within a reasonable distance of the project site.
 - 4. Service representatives who are registered Engineers or factory-certified technicians with not less than 5 years of water treatment experience with the water treatment system manufacturer.
- B. Ensure that all products, packaging, blow-down or other effluents do not violate local, state, or federal laws or regulations. Use only chemicals that are registered, when required, with the U.S. Department of Agriculture or the U.S. Environmental Protection Agency and that are labeled as required by law.
- C. Provide electrical products that have been tested, listed and labeled by Underwriters Laboratories and comply with the National Electrical Manufacturers Association Standards.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Nalco Water – Ecolab (Danny Short 832-823-9716 <u>danny.short@ecolab.com</u>)

2.2 CLOSED CHILLED AND HOT WATER SYSTEM

- A. Side stream stainless steel filter feeders in the hot water and chilled water systems:
 - 1. Rated at 40-gpm capacity.
 - 2. Operating conditions: 200 psig and 250°F.
 - 3. Single filter cartridge.
 - 4. Cartridge #:
 - a. NALCO 231-FMPIC405HT
 - b. WATTS #FMPIC405HT
 - 5. Fabricated hot dipped galvanized steel support legs and frame. Refer to detail drawing for requirements.
 - 6. Provide sufficient quantity of filter cartridges for warranty period. Minimum of two additional cartridges provided to owner.
 - 7. Provide (2) two drains for filter housing. (1) clean water drain, (1) dirty water drain.
- B. Acceptable Manufacturers: Side Stream Cartridge Filter Housing
 - 1. NALCO #231-FMJCH40
 - 2. WATTS #FMJCH40
- C. Treatment chemicals:
 - 1. Furnished as a concentrated liquid in 5 gallon pails
 - 2. A corrosion inhibitor of the nitrite-borate type equal to Nalco 2534.
 - 3. Maintained at a nitrite residual of 600 800 ppm in chilled loops and 1000-1500 in hot loops.
 - 4. With effective copper and black iron corrosion inhibitors.
 - 5. Form a protective film to prevent corrosion and scale formation.
 - 6. Have colored dye to indicate presence.
 - 7. Compatible with all system elements.

D. Multiple chemicals used in a common system shall be compatible.

PART 3 – EXECUTION

3.1 INSTALLATION/START-UP

- A. In accordance with manufacturer's recommendations.
- B. Anchor the chemical filter feeder to a concrete housekeeping pad using wedge type expansion anchors.
- C. Clean and flush closed loops systems.
 - 1. Clear water flush systems before introducing chemical cleaners.
 - 2. Chemical cleaner shall be introduced into the systems to remove construction related oils, greases, threading compounds, and silt.
 - 3. Chemical Cleaner shall passivate and pre-film pipe system.

3.2 WATER ANALYSIS

- A. The chemical treatment agency shall provide the services of a testing laboratory to perform a site water analysis. As a minimum, conduct the following tests in accordance with ASTM standards and to the satisfaction of the Owner/Architect/Engineer.
 - 1. Silica in water and wastewater.
 - 2. Acidity or alkalinity of water.
 - 3. Iron in water.
 - 4. Hardness of water.
 - 5. Ph of water.
 - 6. Particulate and Dissolved Matter, Solids or Residue in Water.
 - 7. Turbidity in water.
 - 8. Corrosivity of water in absence of heat transfer.
 - 9. Standard practices for sampling water.
- B. Take water samples in accordance with ASTM.
- C. Prepare a test report in accordance with ASTM for each of the tests conducted.
- D. Submit the test reports to the Architect/Engineer.

3.3 CHEMICAL TREATMENT

- A. The chemical treatment agency shall provide complete services necessary for chemically cleaning and treatment the following systems:
 - 1. Chilled water.
 - 2. Hot water.
- B. The chemical treatment agency shall provide, but not be limited to the following:
 - 1. Equipment and installation.
 - 2. Chemicals.
 - 3. Analytical and testing work.
 - 4. Inspection.
 - 5. Calculations.
 - 6. Assistance to the trade installing the piping.
 - 7. Instruction to Owner.
- C. Determine which chemicals to use from the results of site water analysis. Provide the chemical necessary to achieve the desired water condition.

- D. Examine and supervise flushing and pipe cleaning operations and verify that the systems are clean, free of debris and rust and other construction materials before starting water treatment.
- E. After the piping has been flushed, cleaned, rinsed and charged with chemicals, then start-up and operate the chemical treatment equipment to provide steady, stable characteristics for the systems treated.
- F. During construction, instruct the Contractor in the field piping and wiring of chemical feeding equipment. If such piping and wiring details are not shown on the Contract Drawings, then provide all equipment, piping, wiring, instrumentation and chemicals to provide a complete and operating system without additional cost.
- G. After the chemical treatment is functioning as intended, the chemical treatment agency shall demonstrate to the Architect/Engineer the chemical treatment operation.

3.4 OWNER TRAINING

- A. A chemical treatment agency, in conjunction with the chemical treatment equipment manufacturer's factory representative, shall train the Owner to operate and maintain the chemical treatment system as a whole and in part for each piece of equipment.
- B. Furnish to the Owner a chemical treatment administration manual covering the chemical treatment program for each of the systems treated. The manual shall include, but not be limited to:
 - 1. Name, address and telephone number of the chemical treatment agency and each of the equipment manufacturers.
 - 2. Operation and maintenance manuals.
 - 3. Test reports.
 - 4. Chemical data sheets.
 - 5. A narrative describing the chemical treatment program for each of the systems being treated.

3.5 TESTING AND INSPECTION

- A. After the systems have been accepted, the chemical treatment agency shall visit the site every month during the warranty period.
- B. During each visit:
 - 1. Check and adjust the chemical treatment equipment.
 - 2. Check the chemistry of the treated system to confirm the chemicals are maintaining the system as intended.
 - 3. Advise and instruct the Owner on operational changes made to the chemical treatment program.
 - 4. Take a water sample of each system being chemically treated and have the samples tested by a testing laboratory. Prepare a report for each water sample and submit it to the Owner. Include in the test report the changes that need to be made to the chemical treatment program.
 - 5. Maintain complete records of the treatment program for each system at the project site. Keep the records in a hardbound manual with the building manager. A second copy shall be maintained by the agency for the agency's records.
- C. Routine visits must be coordinated with the Owner.
- D. Send copy of monthly report to Engineer for Verification.

END OF SECTION 23 25 13

SECTION 23 73 13 - AIR HANDLING UNITS

PART 1 - GENERAL

1.1 WORK INCLUDED

A. Furnish and install air handling units with casing, fans, coils, filters and special items.

1.2 RELATED WORK

- A. Division 23 Mechanical
 - 1. Air Balance
 - 2. Ductwork
 - 3. Controls
 - 4. Electrical Provisions of Mechanical Work
 - 5. Air Filtration
 - 6. Heating and Cooling Coils
 - 7. Other applicable sections

1.3 PERFORMANCE

- A. Unit capacities and characteristics as indicated.
 - 1. Units must be certified in accordance with ARI Standard 430-66.
 - 2. UL 1995 certification for safety including electric heat.
 - 3. ARI 430 listed and meet NFPA 90A requirements.

1.4 SHOP DRAWINGS

- A. Indicate assembly, unit dimensions, weight loading required clearances, construction details, field connection details, and electrical characteristics and connection requirements.
- B. Submit fan performance curve for each unit:
 - 1. Plot fan volume against static pressure, horsepower and efficiency.
 - 2. Show point of rating based on static requirements of the system.
 - 3. Chart of specific sound power level at each octave band center frequency.
 - 4. For variable volume units, plot fan volume over entire range.
- C. Submit for review a unit internal static pressure loss calculation.
 - 1. Provide an itemized list of static pressure loss at the scheduled CFM for each unit component including and not limited to:
 - a. Coils
 - b. Dirty filters
 - c. Fan and unit system effect
 - d. Cabinet and cabinet inlet and outlet
 - e. Unit mounted dampers
 - 2. If a unit mounted outside air pretreatment section without supply fan, "piggyback" is specified:
 - a. Provide an itemized static pressure loss as indicated above.
 - b. Determine losses for unit configuration, i.e. parallel or series.
 - c. Include losses in the primary unit internal static pressure required by configuration.
 - 3. The air handling unit schedule indicates static pressure external to the unit and does not include any losses associated with the air handling equipment.

1.5 ENVIRONMENTAL REQUIREMENTS

A. Do not operate units until ductwork is clean, filters are in place, bearings lubricated, condensate properly tapped, piping connections verified and leak tested, belts aligned and tensioned, all shipping braces have been removed, and fan has been tested under observation.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Inspect for transportation damage and store in a clean, dry location. Protect from weather and construction traffic.
- B. Manufacturer shall provide quick shipment options to minimize product lead times.

1.7 WARRANTY

A. The Air Handling Unit manufacturer shall provide a full machine parts and labor warranty for a period of one (1) year from substantial completion.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Carrier
- B. Daikin
- C. JCI
- D. Temtrol
- E. Thermal
- F. Trane

2.2 MISCELLANEOUS REQUIREMENTS

- A. Provide factory assembled units. Large units may be shipped in sections, at contractor's option, to enable entrance to building, or for oversize shipping reasons only.
- B. Furnish units with sealing and fastening hardware supplied by the manufacturer. Include written instructions needed to complete field assembly of the components.
- C. Provide units designed and constructed so that coils, panels, fan housing and fans can be removed without affecting the structural integrity of the unit.
- D. Unit casing panels shall be double wall construction with solid galvanized exterior and solid galvanized interior. Panels shall have a minimum thermal resistance of R-13. The casing shall not exceed 0.0042 inch deflection per inch of panel span at 1.5 times the design static pressure up to a maximum of +8 inches in all positive pressure sections and -8 inches in all negative pressure sections.
- E. Provide full perimeter base rail channel under units constructed of heavy gauge galvanized steel (minimum 10 gauge) and intermediate cross members to assure unit integrity. Provide minimum size base rail to ensure proper trapping and slope of condensate drain (minimum 6 inch from bottom of drain opening).

- F. Fan assembly shall be provided with 1" deflection internally mounted spring vibration isolation under the fan and motor base on units with coils less than 8 sq. ft. and 2" deflection internally mounted spring vibration isolation under the fan and motor base with coils greater than 8 sq. Ft. Units with coils over 35 sq. ft. shall have spring thrust restraints securing the fan housing to the discharge opening panel on units. Fan motor shall be internally mounted. Provide internal flex connection of fan discharge. Maximum acceptable RPM of fan shall not exceed 1000.
- G. Provide factory installed removable hinged access doors in the following locations:
 - 1. Entering and leaving side of all coils to allow for cleaning of coils on both sides of unit.
 - 2. Each side of filter compartment to allow changing of filters from either side.
 - 3. Each side of motor compartment to allow motor and isolation access.
 - 4. Each side of condensate drain pan to allow for cleaning and inspection.
 - 5. Swing the doors against the casing static pressure.
- H. Provide all coil modules, including heating coil modules, with stainless steel drain pans to facilitate cleaning and maintenance of the coils. Drain pan to extend 10" minimum downstream of cooling coil.
- I. Provide coils with stainless steel casings, end plates, tube supports and top & bottom plates.
- J. Units shall meet ASHRAE III Class 6 Low Leakage Standard. Casing shall have less than a 1% leakage rate at plus or minus 8 inches W.G.

2.3 DRAW THROUGH AIR HANDLING UNITS – VARIABLE AIR VOLUME

- A. Provided with:
 - 1. Non-Overloading direct drive plenum fans. Provide minimum number of fans as indicated on drawings.
 - 2. Insulated sheet metal cabinet with removable panels for access to the interior.
 - 3. Hinged double wall doors with two-step safety handles.
- B. Drive assembly:
 - 1. Sized for 50% overload.
- C. Motors and Control:
 - 1. Totally enclosed, fan cooled, Variable speed, 1750 rpm.
 - 2. Maximum operating point of 70 Hz.
 - 3. Minimum 90% nominal efficiency at loads of 70%-100%.
 - 4. Premium efficiency inverter duty
 - 5. NEMA B design, with Class B insulation, capable to operate continuously at 104 deg F without tripping overloads.
 - 6. +/- 10% voltage utilization range to protect against voltage variation.
 - 5. Cast iron frame and end plate
 - 6. Forged steel lifting eye
 - 7. Oversized conduit box with ground lug
 - 8. Provide with factory installed shaft grounding rings by Aegis
 - 9. Motor selected so that the brake horsepower required to deliver the design air quantity at the system static pressure will not exceed the motor nameplate rating.
- D. Supply Fans:
 - 1. Single width, single inlet, backward curved welded aluminum plenum fan.
 - 2. Statically and dynamically balanced to a BV-3 per AMCA 204 test standard.

- 3. Tested after being installed in the fan sections.
- 4. Selected for the design air quantities and pressure of the system.
- 5. Mounted on a common shaft if multiple wheels.
- 6. The fan shall be rated in accordance with AMCA 210 for performance and AMCA 260 for sound.
- 7. Minimum of Class II fan.
- E. Fans selected with isolation shall be internally isolated with spring isolators. A flexible connection shall be installed between fan and unit casing to ensure complete isolation. Flexible connection shall comply with NFPA 90A and UL 181 requirements. If fans and motors are not internally isolated, then the entire unit shall be externally isolated from the building, including supply and return duct work, piping, and electrical connections. External isolation shall be furnished by the installing contractor to avoid transmission of noise and vibration through the ductwork and building structure.
- F. Each direct drive fan in a multiple-fan array shall be provided with integral back flow prevention: a backdraft damper that prohibits recirculation of air in the event a fan or multiple fans become disabled. Dampers are tested and rated based on AMCA Standard 500. Dampers to be heavy duty type capable of a maximum back pressure that exceeds the design total static pressure with minimal leakage. The dampers should have a minimal total effect on airflow performance; both pressure drop when open and system effect on the fan. The damper blades and frame shall be extruded aluminum with blade edge seals locked into the blade edge. Adhesive type seals are unacceptable. AHU manufacturer responsible for providing proper spacing upstream of dampers to ensure full, uniform airflow through upstream components. For units where the damper(s) are supplied at the jobsite, the installing contractor shall contract a certified TAB contractor to verify uniform airflow thru upstream components.
- G. Select fan to operate at or near its maximum efficiency point when handling the required air quantity and static pressure.
- H. Stainless steel condensate pan with positive slope in all directions to outlet. Line the condensate drain pan with minimum 1-1/2" waterproof insulation.
- I. Insulation, vapor barriers, facings and adhesives shall have:
 - 1. Flame spread not higher than 25.
 - 2. Smoke developed rating not higher than 50.
- J. Double wall casing construction. Construct interior casing panels with 3 lb. minimum density insulation for acoustical and condensation control.
 - 1. Condensation on the exterior of the air handling units is not acceptable.
- K. Filter section:
 - 1. Constructed with substantial hinges.
 - 2. Neoprene gasketing.
 - 3. Permanent quick release latching devices.
 - 4. Arranged to accommodate 2" thick filters as specified.
 - 5. Filter rack shall be factory manufactured to accommodate the filter sizes listed below. Field alterations to filter section is unacceptable.
 - 6. Low velocity angled filter section unless otherwise specified.
 - 7. 16x20x2, 16x25x2, 20x20x2, 20x25x2 only.
- L. Cooling coils as specified. Extend drain and vent piping through cabinets. Provide grommets at all pipe penetrations through cabinets.
- M. Heating coils as specified. Extend drain and vent piping through cabinets. Provide

AIR HANDLING UNITS 23 73 13 - 4 grommets at all pipe penetrations through cabinets.

- N. Provide units with factory fabricated mixing box section that include an additional 2" thick metal perforated inner liner which utilizes fiberglass insulation. Liner shall be installed on all walls and top surface.
- O. Provide each fan section with an additional 2" think perforated metal inner liner which utilizes fiberglass insulation. Liner shall be installed on all walls and top surface.
- P. Factory dynamic fan balancing shall be conducted from 16Hz to 60Hz to identify and eliminate critical speeds to ensure stable operation through the entire operating range of the fan and drive assembly. Field fan balancing is not acceptable. Forward factory balancing test report to Engineer upon request.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install air handling units according to manufacturer's instructions.
- B. Provide additional drive packages as required by the Testing and Balancing firm.
- C. Air leaks detectable by sound or touch are to be corrected.
- D. Air handling units are to be properly supported to prevent flexing, bending or distorting base rails.
- E. All coils and drain pans are to be cleaned prior to substantial completion if units are used during construction.
- F. Clean all air handling units and return to original manufacturer's condition prior to substantial completion. Vacuum clean all debris from inside air handling equipment.
- G. Install piping to unit with full size 6 inch long dirt leg with 1/2" valve at bottom for cleaning.
- H. Provide for positive gravity drainage of coil condensate. Pipe full size of unit connection.
- I. Adjust fan drives as required to obtain scheduled capacities as directed by the Test and Balance Firm to include sheave and belt replacement.
- J. Align belts to eliminate wear and vibration of belts.
- K. Verify correct drainage of condensate from condensate pan.
- L. Verify correct rotation of fan and wiring of motor.
- M. Lubricate all greaseable ball bearings with manufacturer's suggested lubricant.
- N. Replace filters as required if units are used during construction.

- O. Provide piping installation so that after piping is completed and insulated there is full access to service unit and remove fan housing. Piping to coils shall not block fan section access or cause damage to piping insulation during access.
- P. AHU motors must be wired with Kernay connections inside motor terminal boxes. No wire nuts. Kernay connections must be wrapped with rubber and electrical tape for insulation.

3.2 IDENTIFICATION

- A. Furnish each unit with a durable, deep etched, .025" thick, factory installed aluminum identification plate, permanently mounted with the following information:
 - 1. Unit identification as indicated on Contract Drawings.
 - 2. Serial Number.
 - 3. Model Number.
 - 4. Capacity (CFM) and static pressure.
 - 5. Motor HP.
 - 6. Unit power supply: Volts / PH / Amps.
 - 7. Supply Fan Type.
 - 8. Coil GPM and pressure drop.
 - 9. Sales Order #.
 - 10. Date unit manufactured.

END OF SECTION 23 73 13

SECTION 23 82 18 - DUCTLESS MINI SPLIT DX UNITS

PART 1 - GENERAL

1.1 WORK INCLUDED

A. Furnish and install mini split system. Complete with a slim silhouette, compact, high wall fan coil section with a wired wall mounted thermostat and a slim silhouette horizontal discharge outdoor condensing unit. Unit shall be provided with inverter driven compressor, pre-charged with R410A or R32 refrigerant. air-cooled condensing units complete with casing, compressor, condenser coil, condenser fan and controls required for a split air conditioning system.

1.2 RELATED WORK

- A. Refrigerant Piping.
- B. Electrical Provisions of Mechanical Work.

1.3 PERFORMANCE

A. Provide performance as scheduled on drawings, and head pressure control to enable unit to operate in temperatures as low as 20 degrees F. ambient.

1.4 QUALITY ASSURANCE

- A. The units shall be tested by a Nationally Recognized Testing Laboratory (NRTL) and bear the ETL label.
- B. All wiring shall be in accordance with the National Electrical Code (N.E.C.).
- C. The units shall be rated in accordance with Air-conditioning, Heating, and Refrigeration Institute's (AHRI) Standard 210 and bear the AHRI Certification label.
- D. The units shall be manufactured in a facility registered to ISO 9001 Quality assurance Standards and ISO 14001 which are set of standards applying to sustainability and environmental protection set by the International Standard Organization (ISO).
- E. A pressure charge of R410A or R32 refrigerant sufficient for up to twenty-five (25) feet of refrigerant tubing shall be provided in the outdoor condensing unit.
- F. A dry air holding charge shall be provided in the indoor section.

1.5 WARRANTY

Unit shall have a manufacturer's parts and defects warranty for a period five (5) years from the date of the original installation. The compressor shall have a warranty of seven (7) years from date of installation. Warranties shall start at the date of substantial completion.

PART 2 - PRODUCTS

2.0 ACCEPTABLE MANUFACTURERS

A. Daikin

- B. Trane Mitsubishi
- C. LG

2.1 INDOOR UNIT GENERAL

- A. The indoor shall be factory assembled, wired and run tested. Contained within the unit cabinet shall be all factory wiring, internal piping, electronic control circuit board and fan with fan motor.
- B. The unit shall have a self-diagnostic function, 3-minute time delay mechanism, and auto restart after power interruption function, an emergency operation function and a test run switch.
- C. Indoor unit and refrigerant pipes shall be charged with dry air before shipment from the factory. All refrigerant piping must be insulated.

2.2 CABINET

- A. The casing shall have a smooth front, top return, in a white finish.
- B. Multi directional drain and refrigerant piping offering four (4) directions for refrigerant piping and two (2) directions for draining shall be standard.
- C. There shall be a separate installation plate which secures the unit firmly to the wall. Secure mounting of plate and all mounting hardware shall be furnished by and be the responsibility of the installer.

2.3 FAN

- A. The indoor unit fan shall be an assembly with a line-flow fan direct driven by a single motor mounted in rubber motor mount.
- B. The fan shall be statically and dynamically balanced and run on a motor with permanently lubricated bearings.
- C. Manual adjustable vertical guide vanes shall be provided with the ability to change the airflow from side to side (left to right).
- D. An integral, motorized, horizontal air sweep flow louver shall provide an automatic change in airflow by directing the air up and down to provide for uniform air distribution.
- E. The indoor unit fan motor shall operate in four (4) selectable speeds, Powerful, High, Medium, and Low.

2.4 FILTER

A. Return air shall be filtered by means of easily removed, washable, Catechin air filter and an anti-allergy enzyme filter – blue bellows type.

2.5 COIL

A. The indoor unit (evaporator) coil shall be of nonferrous construction with smooth, precoated aluminum fins on copper tubing.

- B. Tubing shall have inner groves for high efficiency heat exchange.
- C. All tube joints shall be brazed with PhosCopper or silver alloy.
- D. The coil shall be pressure tested at the factory.
- E. A sloped condensate pan and drain shall be provided under the coil. Drain connections shall be provided at each end of the drain pan.

2.6 ELECTRICAL

- A. Power for the indoor unit shall be supplied from the outdoor unit.
- B. Power supply shall be as indicated on the drawings.
- C. The unit shall be equipped with a micro-processor control system directing indoor and outdoor unit coordinated operation.
- D. The indoor unit shall not have any supplemental electrical heat elements.

2.7 CONTROL

- A. This system shall have a wired wall mounted thermostat/controller to perform input functions necessary to operate the system. The controller shall consist of a Power On / Off switch, Mode Selector, Temperature Setting, Timer Control, Fan Speed Select and Auto Vane Selector.
- B. Temperature changes shall be by 1°F increments with a range of 65°F to 87°F.
- C. There shall be a 24 hour On / Off timer.
- D. The microprocessor located in the indoor unit shall have the capability of sensing return air temperature and indoor coil temperature, receiving and processing commands from the space controller, providing emergency operation and controlling the outdoor unit.
- E. The control voltage between the indoor unit and the outdoor unit shall be 115 volts, AC.
- F. The system shall be capable of automatic restart when power is restored after power interruption.
- G. The control system shall control the operation of the air sweep louvers, as well as provide on / off and system / mode function switching.

2.8 OUTDOOR UNIT GENERAL

- A. The outdoor unit is designed specifically for use with the indoor units. The outdoor unit shall be completely factory assembled, internally piped and wired. Each unit shall be run tested at the factory.
- B. When refrigerant lines are exposed on exterior of building provide "LINE-HIDE" line set cover system.
 - 1. Material, Weather resistant, UV stabilized, ASA/PVC/ABS/Poly/PE
 - 2. Assembly Screws, stainless steel.

2.9 UNIT CABINET

- A. The casing shall be fabricated from zinc coated steel, bonderized with an electrostatically applied, thermally bonded, acrylic or polyester powder coating for corrosion protection.
- B. Case and mounting feet shall be as follows:
 - 1. The base shall be of Aluminum-Zinc-Magnesium alloy coated steel, with welded mounting feet.
- C. Cabinet mounting and construction shall be sufficient to withstand 155 MPH wind speed conditions for use in Hurricane condition areas. Mounting, base support, and other installation to meet Hurricane Code Conditions shall be by others.

2.10 FAN

- A. The unit shall be furnished with a directive drive propeller type fan, statically and dynamically balanced for smooth and quiet operation.
- B. The fan motor shall have inherent protection, be equipped with permanently lubricated bearings. The fan motor shall be mounted and isolated for quiet operation.
- C. The fan shall be provided with a raised guard to prevent contact with moving parts.
- D. The outdoor unit shall have horizontal discharge airflow.

2.11 COMPRESSOR

- A. The compressor shall be a high performance, inverter driven rotary type.
- B. Compressor shall be mounted using rubber isolating bushings to avoid the transmission of vibration.
- C. Compressor shall be protected by an automatic over current relay and a thermal overload switch.

2.12 OPERATION

- A. The outdoor unit shall have an accumulator.
- B. The outdoor unit must have the ability to operate with a maximum height difference of 35 feet between indoor and outdoor units.
- C. The unit shall have a maximum refrigerant tubing length of 65 feet between indoor and outdoor units without the need for line size changes, traps or additional oil. All refrigerant lines must be insulated.
- D. The unit shall be pre-charged for a maximum of 25 feet of refrigerant tubing.

2.13 ELECTRICAL

- A. Power supply shall be as indicated on the drawings.
- B. The outdoor unit shall be controlled by the microprocessor located in the indoor unit. The control voltage between the indoor unit and the outdoor unit shall be 115 volts, AC.

2.14 WALL OR ROOF BRACKET

A. As indicated on the drawings, provide each unit 3 tons and below with a stainless steel

DUCTLESS MINI SPLIT DX UNITS 23 82 18 - 4 mini-split condenser bracket.

- B. Unit shall be constructed for a maximum weight of 300 lbs.
- C. Unit shall be manufactured by Rectorseal model #WBB-300SS or Diveritech model #QSWB4000SS or approved equal.

2.15 CONDENSATE PUMPS

- A. A condensate pump shall only be provided as a means of condensate disposal when a gravity drain is not available.
- B. Provide a Little Giant Model #554642 VCMA-20ULS-C-PRO-20.
- C. Unit shall be provided with anti-sweat sleeve, tank bracket and overflow detection switch.
- D. Condensate pump shall be wall mounted. Mount pump under wall cassette.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Mount condensing units on 4" foundation pads and pipe as shown on Drawings or as recommended by the equipment manufacturer. Install refrigerant filter dryer and sight indicating glass.
- B. Install units on vibration isolation pads.
- C. Ensure unit provided will meet the refrigerant and line lengths required by the installation as indicated on the drawings.
- D. Provide convenience water and electrical within 50 feet of new condensing unit.

3.2 CONTROL WIRING

A. Furnish and install control wiring as required. Install control wiring in conduit.

3.3 DELIVERY, STORAGE AND HANDLING

- A. Unit shall be stored and handled according to the manufacturer's recommendations.
- B. The wired controller shall be shipped inside the carton with the indoor unit and able to withstand 105°F storage temperatures and 95% relative humidity without adverse effect.

3.4 START-UP

- A. Follow the manufacturer's start-up procedures.
- B. Provide flexible elastomeric rubber closed cell insulation to prevent condensation from occurring op suction piping. After completion of successful start-up, installing contractor shall seal all openings in insulation and apply a protective aluminum sheetmetal jacket over insulation exposed on exterior of building.

END OF SECTION 23 82 18

SECTION 12 93 00 - SITE FURNISHINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUBMITTALS

- A. <u>Product Data: Include full range of standard color selections.</u>
- B. <u>Shop Drawings: Indicate materials, dimensions, tolerances, welding, fasteners, hardware, mounting, finish, and accessories.</u>
- C. <u>Quality Assurance Submittals:</u>
 - 1. Qualifications: Proof of manufacturer qualifications.
 - 2. Manufacturer's Installation Instructions.
- D. Samples: Provide actual samples of finish materials indicating complete range of colors and textures available for Architect's selection, minimum 2 inch by 2 inch.

1.3 QUALITY ASSURANCE

A. <u>Manufacturer Qualifications: Minimum five years experience in producing products of the type</u> <u>specified.</u>

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- B. Handling: Protect materials and finish from damage during handling and installation.

PART 2 - PRODUCTS

2.1 APPROVED MANUFACTURER

A. Specifications are based on products of listed manufacturer. Other manufacturers must have a minimum of five (5) years experience manufacturing products meeting or exceeding the specifications and comply with Division 1 requirements regarding substitutions to be considered.

2.2 SITE SEATING

- <u>A.</u> Provide site benches as manufactured by Landscape Forms, Inc. or comparable product approved by Architect.
- B. Color: Metallic Titanium.
- C. Three (3) Style: "Presidio" benches with backs.
- D. Accessories: Provide fasteners, anchors, and miscellaneous materials required for complete installation.
- E. Mounting Type: Embedded.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. <u>Examine substrates upon which site furnishings will be installed.</u> <u>1.</u> <u>Verify that surfaces are clean, flat and level.</u>
- B. <u>Coordinate with responsible entity to perform corrective work on unsatisfactory substrates.</u>
- C. <u>Commencement of work by installer is acceptance of substrate.</u>

3.2 INSTALLATION

- A. Install products in accordance with manufacturer's installation instructions.
- B. <u>Install products level, plumb, square, accurately aligned, correctly located per drawings, and</u> <u>without warp.</u>
- C. <u>Embedded mounting: Embed in accordance with manufacturer's instructions.</u>
- D. <u>Use hardware and fasteners in accordance with manufacturer's instructions.</u>
- E. <u>Repair minor damage to finishes, in accordance with manufacturer's instructions and as approved</u> by Architect.

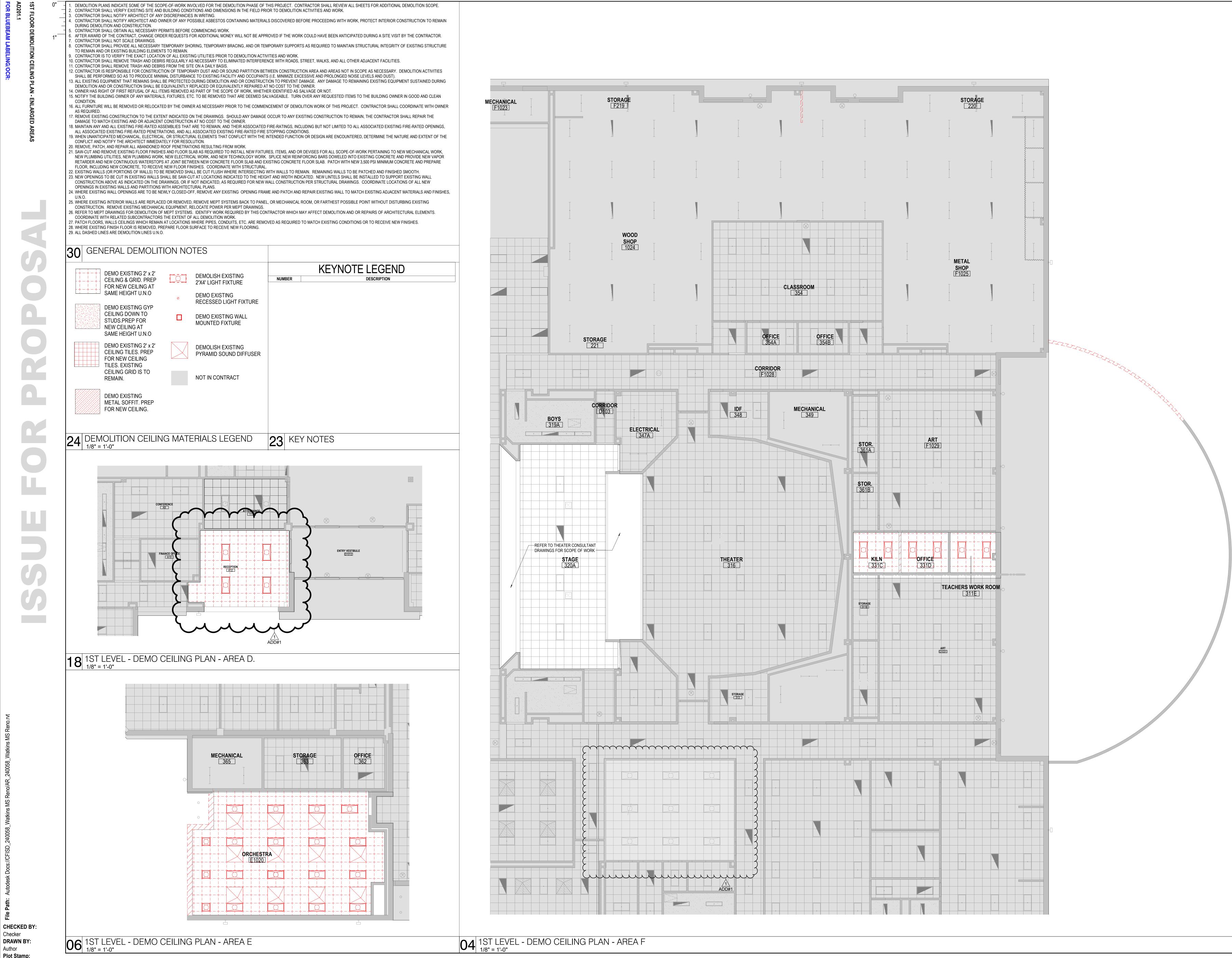
3.3 CLEANING

A. Follow manufacturer's instructions.

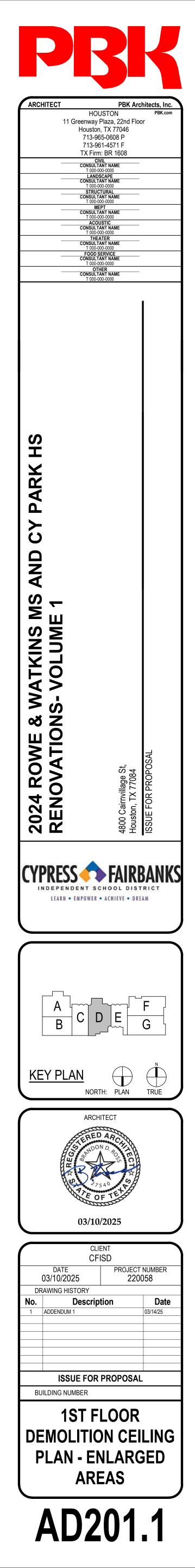
3.4 PROTECTION

A. <u>Protect site furnishings from damage due to other construction operations.</u>

END OF SECTION 12 93 00



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DOOR SCHEDULE REMARKS

- . ELEC. DOOR OPENER W/ HC BUTTON ON INSIDE AND OUTSIDE OF DOOR 2. ELEC. CONTROLLED ACCESS HARDWARE WITH CARD READER B. ELEC. CONTROLLED ACCESS HARDWARE WITH PUSH-BUTTON ELEC. CONTROLLED ACCESS HARDWARE, ROUGH-IN ONLY
- 5. DOOR BUZZER DOOR CHIME ON OPEN MAGNETIC HOLD-OPEN, CONNECT TO FIRE ALARM B. MAGNETIC HOLD-OPEN, CONNECT TO SECURITY SYSTEM
-). SOUND DOOR **OPERABLE WALLS, OVERHEAD DOORS AND GRILLES**
- 0. SOUND RATED DOOR ASSEMBLY, STC AS SPECIFIED 1. WINDSTORM DOOR HARDWARE SHALL BE TESTED AS PART OF A COMPLETE DOOR OPENING ASSEMBLY. THE TESTED DOOR OPENING ASSEMBLY SHALL INCLUDE DOOR HARDWARE. THE ENTIRE DOOR
- OPENING, INCLUDING DOOR HARDWARE, SHALL BE BY DOOR MANUF. 12. ACOUSTICAL GLASS TO MEET FIRE DOOR ASSEMBLY REQUIREMENTS FOR FIRE RATING INDICATED
- 13. MANUAL OPERATION 14. ELEC MOTOR OPERATION WITH KEY SWITCH CONTROL, KEY SWITCH ON ONE SIDE OF DOOR ONLY 15. ELEC MOTOR OPERATION WITH KEY SWITCH CONTROL, KEY SWITCH ON BOTH SIDES OF DOOR
- 16. ELEC MOTOR OPERATION WITH PUSH-BUTTON CONTROL ON ONE SIDE OF DOOR ONLY 17. AUTOMATIC OPEN ON FIRE ALARM ACTIVATION U.N.O.
- 18. AUTOMATIC CLOSE ON FIRE ALARM ACTIVATION

FINISH SCHEDULE NOTES AND REMARKS

GENERAL NOTES:

ALL SCHEDULED DIRECTIONS (NORTH, EAST, SOUTH, WEST) ARE PER PLAN DIRECTIONS, NOT TRUE COMPASS DIRECTIONS.

ALL FINISH MATERIALS SHALL MEET FLAME SPREAD RATINGS PER THE BUILDING CODE.

PROTECT ALL FINISHED FLOORING SURFACES FROM DAMAGE DURING ALL CONSTRUCTION PHASES. CARPET PATTERNS SHALL RUN PARALLEL TO CORRIDOR U.N.O.

PROVIDE AND INSTALL BULLNOSE TRIM AT ALL TRANSITIONS FROM CERAMIC WALL TILE TO OTHER MATERIALS U.N.O.

PAINT ALL H.M. DOORS ______ U.N.O.

REMARKS:

PAINT ALL H.M. DOOR FRAMES TO MATCH ADJACENT WALL COLOR U.N.O. 2. 3/4" TREATED PLYWOOD WAINSCOT FULL HEIGHT ALL AROUND, PAINT

WINDOW SCHEDULE REMARKS

PROVIDE MINI BLINDS . PROVIDE MANUAL SUNSHADE

. PROVIDE MOTORIZED SUNSHADE . PROVIDE MOTORIZED SUNSHADE AND BLACKOUT SHADE . PROVIDE BLACKOUT SHADE

EXISTING DOOR SCHEDULE - 1ST FLOOR - AREA D

	DOOR			PA	NEL				FR/	ME						GENERAL
											DETAIL		FIRE		HARDWARE	
NUMBER	WIDTH	HEIGHT	TYPE	THK	MATL	FINISH	TYPE	MATL	FINISH	JAMB	HEAD	SILL	RATING	STC	SET	REMARKS
D107A	2'-9 1/2"	6'-6 3/4"	F	1 3/4"	EXIST	EXIST		EXIST	EXIST							
D107B	2'-8 1/4"	6'-6 3/4"	F	1 3/4"	EXIST	EXIST		EXIST	EXIST							
D109A	2'-8 1/4"	6'-6 3/4"	F	1 3/4"	EXIST	EXIST		EXIST	EXIST							
D109B	2'-8 1/4"	6'-6 3/4"	F	1 3/4"	EXIST	EXIST		EXIST	EXIST							
D110	3'-0"	6'-10"	NV-1	1 3/4"	EXIST	EXIST	001	EXIST	EXIST							
D141	3'-0"	6'-10"	NV-1	1 3/4"	EXIST	EXIST	001	EXIST	EXIST							
D143	3'-0"	6'-10"	F	1 3/4"	EXIST	EXIST	001	EXIST	EXIST							
D158	3'-0"	6'-10"	F	1 3/4"	EXIST	EXIST	001	EXIST	EXIST							
D159A	3'-0"	6'-10"	NV-1	1 3/4"	EXIST	EXIST	001	EXIST	EXIST							
D159B	3'-0"	6'-10"	NV-1	1 3/4"	EXIST	EXIST	001	EXIST	EXIST							
D160A	3'-0"	6'-10"	F	1 3/4"	EXIST	EXIST	001	EXIST	EXIST							
D160B	3'-0"	6'-10"	F	1 3/4"	EXIST	EXIST	001	EXIST	EXIST							
D160C	3'-0"	6'-10"	F	1 3/4"	EXIST	EXIST	001	EXIST	EXIST							
D160D	3'-0"	6'-10"	F	1 3/4"	EXIST	EXIST	001	EXIST	EXIST							
D163A	3'-0"	6'-10"	NV-1	1 3/4"	EXIST	EXIST	001	EXIST	EXIST							
D163B	3'-0"	6'-10"	NV-1	1 3/4"	EXIST	EXIST	001	EXIST	EXIST							
D1012A	5'-9 1/2"	6'-6 3/4"		2"	EXIST	EXIST	001	EXIST	EXIST							CARD READER
D1012B	5'-9 1/2"	6'-6 3/4"		2"	EXIST	EXIST	001	EXIST	EXIST							CARD READER/2N
D1013A	3'-0"	6'-10"	F	1 3/4"	EXIST	EXIST	001	EXIST	EXIST							
D1013B	3'-0"	6'-10"	F	1 3/4"	EXIST	EXIST	001	EXIST	EXIST							CARD READER
D1014	5'-0 5/8"	11'-7 121/128"	HG-2	1 3/4"	EXIST	EXIST		EXIST	EXIST							CARD READER
D1015	2'-8 1/4"	6'-6 3/4"	F	1 3/4"	EXIST	EXIST		EXIST	EXIST							CARD READER
D1018	2'-8 1/4"	6'-6 3/4"	F	1 3/4"	EXIST	EXIST		EXIST	EXIST							CARD READER
DA9	3'-0"	6'-10"	F	1 3/4"	EXIST	EXIST	001	EXIST	EXIST							
DA10	3'-0"	6'-10"	F	1 3/4"	EXIST	EXIST	001	EXIST	EXIST							
DA13A	3'-0"	6'-10"	F	1 3/4"	EXIST	EXIST	001	EXIST	EXIST							
DA13B	3'-0"	6'-10"	F	1 3/4"	EXIST	EXIST	001	EXIST	EXIST							
DA36	3'-0"	6'-10"	F	1 3/4"	EXIST	EXIST	001	EXIST	EXIST							
DA122	3'-0"	6'-10"	F	1 3/4"	EXIST	EXIST	001	EXIST	EXIST							
DLGIA	3'-0"	6'-10"	F	1 3/4"	EXIST	EXIST	001	EXIST	EXIST							
Grand total:	30															

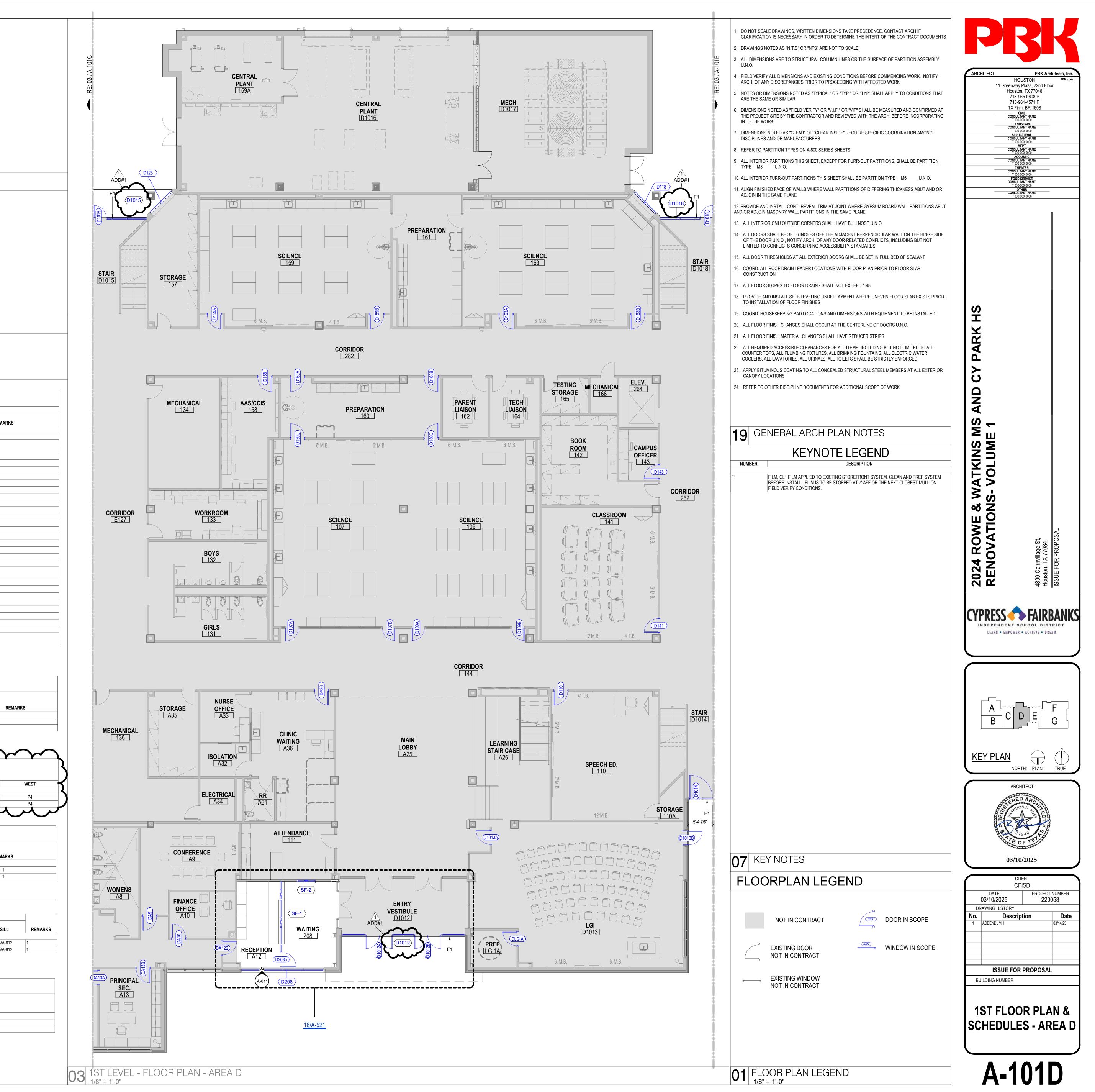
	DOOR				PANEL				FR	AME				GENER	AL		
NUMBER	WIDTH	HEIGHT	TYPE	тнк	MATL	FINISH	TYPE	MATL	FINISH	JAMB	DETAIL HEAD	SILL	FIRE RATING	STC	HARDWARE SET		REMA
D208b	3'-0"	7'-0"	HG-2	1 3/4"	ALUM/GL	ALUM		ALUM	ALUM	08/A-812	14/A-812	02/A-812				NEW DOOR	
Grand total:	1								•								

		ROOM DATA			BASE			WALL FINISHES	6
NU	MBER		NAME		FINISH	NORTH	EAST	T	SOUTH
	208	WAITING			RB2	P4	P4		P4
					RB2	P4	P4		P4
		RECEPTION	\mathcal{M}				شهر		
			NG WIN	IDOW S		DULE - 1	شهر	YEL ARE	
					SCHE	DULE - 1	شهر	YEL ARE	

	NEW WINDOW SCHEDULE - 1ST LEVEL - AREA D												
		SIZE								DETAILS			
NUMBER	WIDTH	HEIGHT	SILL HEIGHT	ELEVATION	MATERIAL	FINISH	FIRE RATING	STC	GLAZIN G TYPE	JAMB	HEAD	SILL	
											1		
D118	6'-6"	9'-0"	4'-0"	06/A-811	ALUM	BRONZE				11/A-812	17/A-812	05/A-812	
D123	6'-6"	9'-0"	4'-0"	06/A-811	ALUM	BRONZE				11/A-812 17/A-812 05/A-812			

		NEW	STOR	EFRC	NT S	CHED	ULE - 1	ST LE	/EL AREA D.		
	FRAME SIZE W x H		FRAME SIZE W x H			FRAME DETAILS					
NUMBER	WIDTH	HEIGHT	ELEVATION	FRAME MATERIAL	FRAME DEPTH	HEAD	JAMB	SILL	REMARKS		
SF-1	19'-5 93/256"	10'-0 5/8"	15/A-521	ALUM		14/A-812	08/A-812	02/A-812	1		
SF-2											

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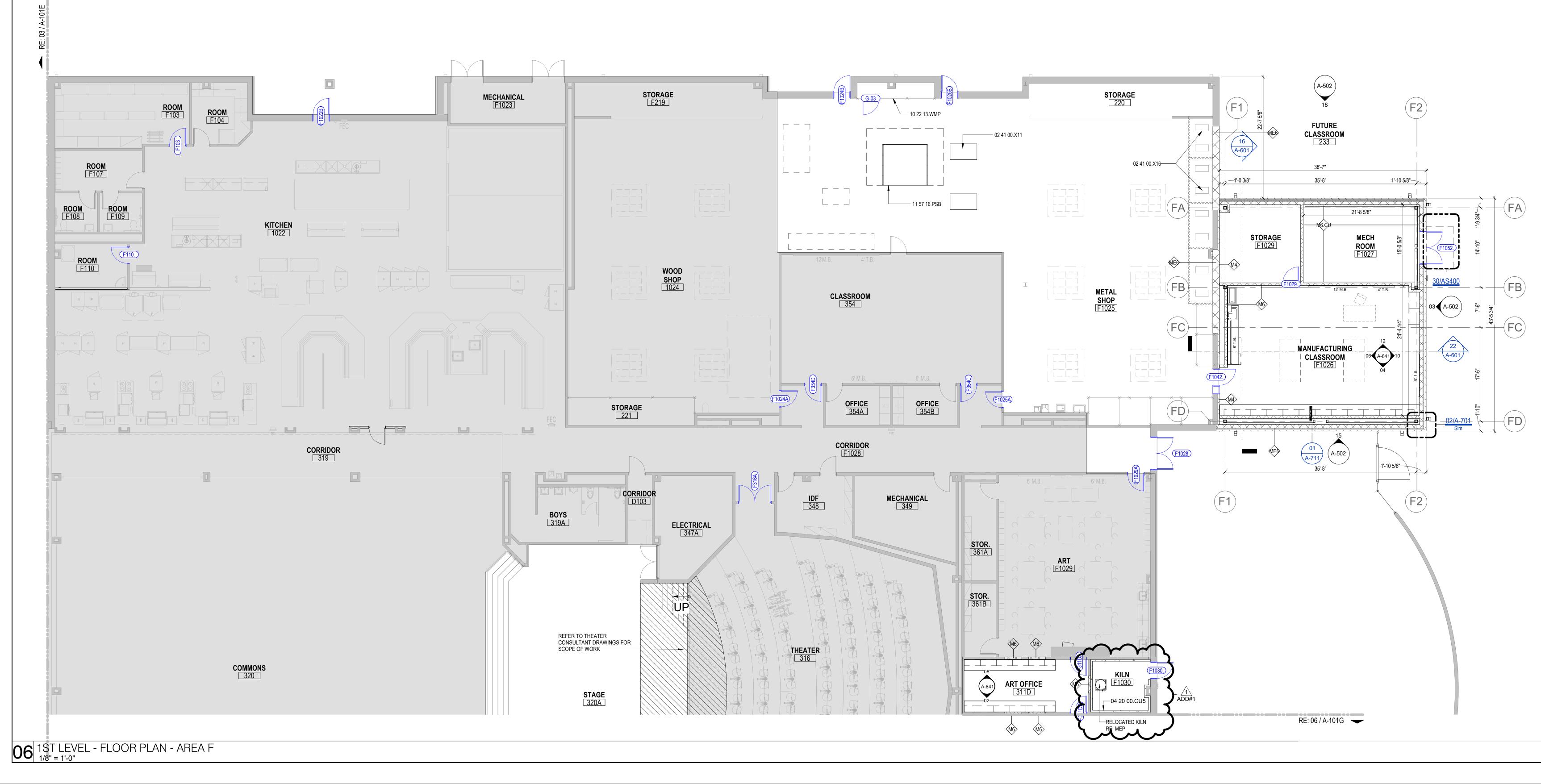
1.	DO NOT SCALE DRAWINGS, WRITTEN DIMENSIONS TAKE PRECEDENCE, CONTACT ARCH IF CLARIFICATION IS NECESSARY IN ORDER TO DETERMINE THE INTENT OF THE CONTRACT DOCUMENTS
	DRAWINGS NOTED AS "N.T.S" OR "NTS" ARE NOT TO SCALE
	ALL DIMENSIONS ARE TO STRUCTURAL COLUMN LINES OR THE SURFACE OF PARTITION ASSEMBLY U.N.O.
	FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS BEFORE COMMENCING WORK. NOTIFY ARCH. OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH AFFECTED WORK
	NOTES OR DIMENSIONS NOTED AS "TYPICAL" OR "TYP." OR "TYP" SHALL APPLY TO CONDITIONS THAT ARE THE SAME OR SIMILAR
6.	DIMENSIONS NOTED AS "FIELD VERIFY" OR "V.I.F." OR "VIF" SHALL BE MEASURED AND CONFIRMED AT THE PROJECT SITE BY THE CONTRACTOR AND REVIEWED WITH THE ARCH. BEFORE INCORPORATING INTO THE WORK
7.	DIMENSIONS NOTED AS "CLEAR" OR "CLEAR INSIDE" REQUIRE SPECIFIC COORDINATION AMONG DISCIPLINES AND OR MANUFACTURERS
	REFER TO PARTITION TYPES ON A-800 SERIES SHEETS ALL INTERIOR PARTITIONS THIS SHEET, EXCEPT FOR FURR-OUT PARTITIONS, SHALL BE PARTITION
10.	TYPEM8 U.N.O. ALL INTERIOR FURR-OUT PARTITIONS THIS SHEET SHALL BE PARTITION TYPEM6 U.N.O.
	ALIGN FINISHED FACE OF WALLS WHERE WALL PARTITIONS OF DIFFERING THICKNESS ABUT AND OR ADJOIN IN THE SAME PLANE PROVIDE AND INSTALL CONT. REVEAL TRIM AT JOINT WHERE GYPSUM BOARD WALL PARTITIONS ABUT
AN	D OR ADJOIN MASONRY WALL PARTITIONS IN THE SAME PLANE ALL INTERIOR CMU OUTSIDE CORNERS SHALL HAVE BULLNOSE U.N.O.
14.	ALL DOORS SHALL BE SET 6 INCHES OFF THE ADJACENT PERPENDICULAR WALL ON THE HINGE SIDE OF THE DOOR U.N.O., NOTIFY ARCH. OF ANY DOOR-RELATED CONFLICTS, INCLUDING BUT NOT LIMITED TO CONFLICTS CONCERNING ACCESSIBILITY STANDARDS
	ALL DOOR THRESHOLDS AT ALL EXTERIOR DOORS SHALL BE SET IN FULL BED OF SEALANT COORD. ALL ROOF DRAIN LEADER LOCATIONS WITH FLOOR PLAN PRIOR TO FLOOR SLAB CONSTRUCTION
17.	ALL FLOOR SLOPES TO FLOOR DRAINS SHALL NOT EXCEED 1:48
18.	PROVIDE AND INSTALL SELF-LEVELING UNDERLAYMENT WHERE UNEVEN FLOOR SLAB EXISTS PRIOR TO INSTALLATION OF FLOOR FINISHES
	COORD. HOUSEKEEPING PAD LOCATIONS AND DIMENSIONS WITH EQUIPMENT TO BE INSTALLED
	ALL FLOOR FINISH CHANGES SHALL OCCUR AT THE CENTERLINE OF DOORS U.N.O. ALL FLOOR FINISH MATERIAL CHANGES SHALL HAVE REDUCER STRIPS
22.	ALL REQUIRED ACCESSIBLE CLEARANCES FOR ALL ITEMS, INCLUDING BUT NOT LIMITED TO ALL COUNTER TOPS, ALL PLUMBING FIXTURES, ALL DRINKING FOUNTAINS, ALL ELECTRIC WATER COOLERS, ALL LAVATORIES, ALL URINALS, ALL TOILETS SHALL BE STRICTLY ENFORCED
23.	APPLY BITUMINOUS COATING TO ALL CONCEALED STRUCTURAL STEEL MEMBERS AT ALL EXTERIOR CANOPY LOCATIONS
24.	REFER TO OTHER DISCIPLINE DOCUMENTS FOR ADDITIONAL SCOPE OF WORK
1	9 GENERAL ARCH PLAN NOTES
•	9 GENERAL ARCH PLAN NOTES KEYNOTE LEGEND DESCRIPTION
•	KEYNOTE LEGEND
•	KEYNOTE LEGEND NUMBER DESCRIPTION FILM, GL1 FILM APPLIED TO EXISTING STOREFRONT SYSTEM. CLEAN AND PREP SYSTEM BEFORE INSTALL. FILM IS TO BE STOPPED AT 7' AFF OR THE NEXT CLOSEST MULLION.
•	KEYNOTE LEGEND NUMBER DESCRIPTION FILM, GL1 FILM APPLIED TO EXISTING STOREFRONT SYSTEM. CLEAN AND PREP SYSTEM BEFORE INSTALL. FILM IS TO BE STOPPED AT 7' AFF OR THE NEXT CLOSEST MULLION.
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EXISTING DOOR SCHEDULE - 1ST FLOOR - AREA F GENERAL DETAIL FIRE HARDWARE THK MATL FINISH TYPE MATL FINISH JAMB HEAD SILL RATING STC SET REMARKS NUMBER | WIDTH | HEIGHT F103 EXIST EXIST 001 F316A EXIST EXIST 001 EXIST EXIST 1 3/4" 6'-0" 6'-10" F EXIST EXIST F354C EXIST 001 1 3/4" NV-1 EXIST F354D 001 EXIST F1024A EXIST EXIST NV-1 1 3/4" EXIST 001 3'-0" 6'-10" F1025A EXIST EXIST EXIST 3'-0" 6'-10" NV-1 1 3/4" 001 F1028 6'-0" 6'-10" F 1 3/4" EXIST EXIST 001 EXIST EXIST CARD READER F1029A 3'-0" 6'-10" NV-1 1 3/4" EXIST EXIST 001 EXIST EXIST Grand total: 8

NEW DOOR SCHEDULE - 1ST FLOOR - AREA F CENEDA

	wtwt				PANEL				FR	AME						GENERAL
											DETAIL		FIRE		HARDWARE	
NUMBER	WIDTH	HEIGHT	TYPE	ТНК	MATL	FINISH	TYPE	MATL	FINISH	JAMB	HEAD	SILL	RATING	STC	SET	REMARKS
=		01.40		4.044			001			00/1 0/0	1-1-010					
F110.	3'-0"	6'-10"	NV-1	1 3/4"	WD	PL-1	001	HM	PT	09/A-812	15/A-812	03/A-812				
F311DA.	3'-0"	6'-10"	F	1 3/4"	WD	PL-1	001	HM	PT	09/A-812	15/A-812	03/A-812				
F311DB.	3'-0"	6'-10"	F	1 3/4"	WD	PL-1	001	HM	PT	09/A-812	15/A-812	03/A-812				
F1022B.	3'-0"	6'-10"	F	1 3/4"	WD	PL-1	001	EXIST	EXIST	07/A-812	13/A-812	01/A-812				2N
F1024B.	3'-0"	6'-10"	F	1 3/4"	WD	PL-1	001	EXIST	EXIST	07/A-812	13/A-812	01/A-812				CARD READER/2N
F1025B.	3'-0"	6'-10"	F	1 3/4"	WD	PL-1	001	EXIST	EXIST	07/A-812	13/A-812	01/A-812				CARD READER
F1029.	3'-0"	6'-10"	F	1 3/4"	HM	HM	001	HM	PT	09/A-812	15/A-812	03/A-812				
F1030.	3'-0"	6'-10"	F	1 3/4"	WD	PL-1	001	HM	PT	07/A-812	13/A-812	01/A-812				CARD READER
F1042.	3'-0"	6'-10"	F	1 3/4"	ALUM/GL	ALUM/GL	011	ALUM	PT	10/A-812	16/A-812	04/A-812				
F1052.	6'-0"	6'-10"	F	1 3/4"	WD	PL-1	001	HM	PT	07/A-812	13/A-812	01/A-812				
Grand total	: 10	•														

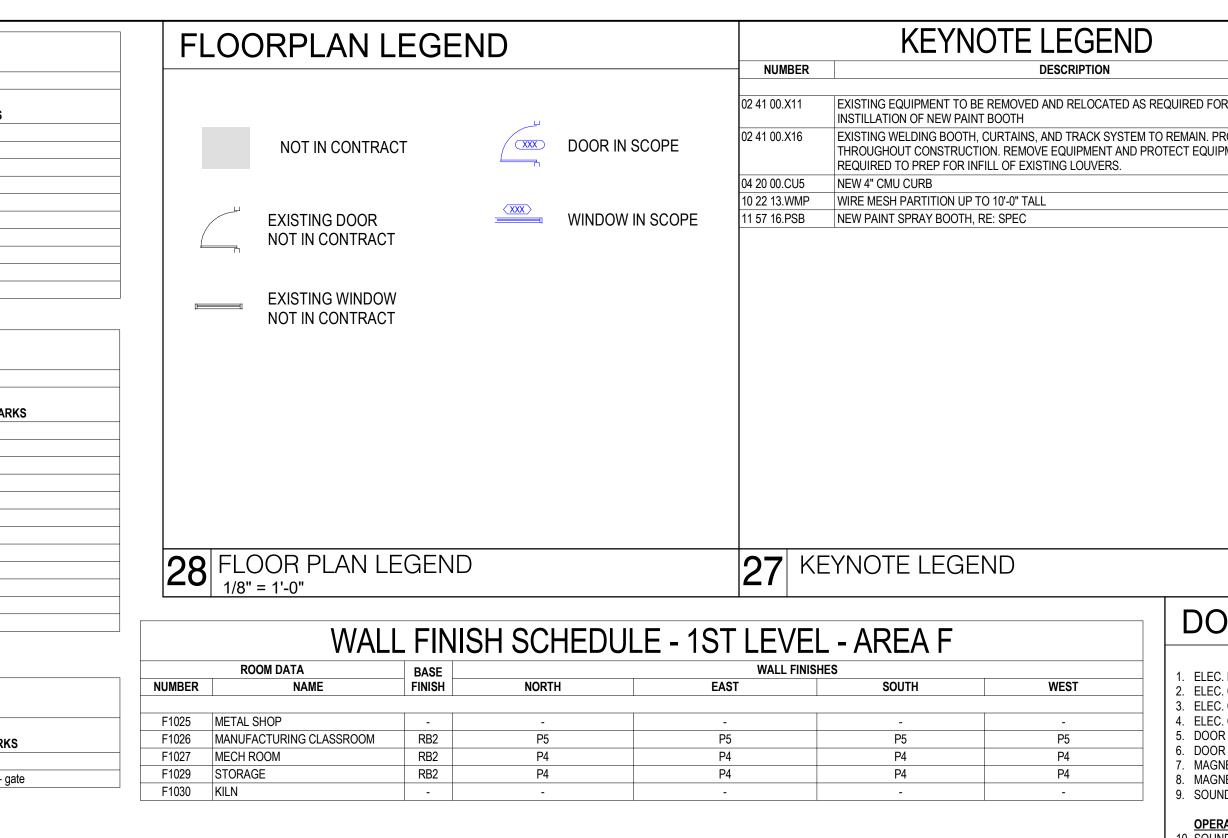
	AREA F - GATE SCHEDULE											
			ZE	SI								
REMARKS	H.W.	MTL	Н	W	MARK							
AREA F - gate		Chainlink	6'-0"	3'-0"	G-03							
					I							



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NEW WINDOW SCHEDULE - 1ST LEVEL AREA F	11. WINDSTORM DOOR HARDWARE SHALL BE TESTED AS PAF THE TESTED DOOR OPENING ASSEMBLY SHALL INCLUDE OPENING, INCLUDING DOOR HARDWARE, SHALL BE BY DO
FRAME SIZE W x H FRAME DETAILS	12. ACOUSTICAL GLASS TO MEET FIRE DOOR ASSEMBLY REQ
FRAME	13. MANUAL OPERATION
NUMBER WIDTH HEIGHT ELEVATION MATERIAL FRAME FINISH HEAD JAMB SILL REMARKS	14. ELEC MOTOR OPERATION WITH KEY SWITCH CONTROL, K
	15. ELEC MOTOR OPERATION WITH KEY SWITCH CONTROL, K
F1026 14'-0" 1'-6" 03/A-811 ALUM BRONZE 17/A-812 11/A-812 05/A-812	16. ELEC MOTOR OPERATION WITH PUSH-BUTTON CONTROL 17. AUTOMATIC OPEN ON FIRE ALARM ACTIVATION U.N.O.
	18. AUTOMATIC CLOSE ON FIRE ALARM ACTIVATION

	 NOTES OR DIMENSIONS NOTED AS "TYPICAL" OR "TYP." OR "TYP" SHALL APPLY TO CONDITIONS T ARE THE SAME OR SIMILAR DIMENSIONS NOTED AS "FIELD VERIFY" OR "V.I.F." OR "VIF" SHALL BE MEASURED AND CONFIRME THE PROJECT SITE BY THE CONTRACTOR AND REVIEWED WITH THE ARCH. BEFORE INCORPORATINTO THE WORK DIMENSIONS NOTED AS "CLEAR" OR "CLEAR INSIDE" REQUIRE SPECIFIC COORDINATION AMONG 	 18. PROVIDE AND INSTALL SELF-LEVELING UNDERLAYMENT WHERE UNEVEN FLOOR SLAB EXISTS PRINT TO INSTALLATION OF FLOOR FINISHES 19. COORD. HOUSEKEEPING PAD LOCATIONS AND DIMENSIONS WITH EQUIPMENT TO BE INSTALLED
	 DISCIPLINES AND OR MANUFACTURERS 8. REFER TO PARTITION TYPES ON A-800 SERIES SHEETS 9. ALL INTERIOR PARTITIONS THIS SHEET, EXCEPT FOR FURR-OUT PARTITIONS, SHALL BE PARTITIC TYPEM8 U.N.O. 10. ALL INTERIOR FURR-OUT PARTITIONS THIS SHEET SHALL BE PARTITION TYPEM8.F U.N.O. 11. ALIGN FINISHED FACE OF WALLS WHERE WALL PARTITIONS OF DIFFERING THICKNESS ABUT AND ADJOIN IN THE SAME PLANE 12. PROVIDE AND INSTALL CONT. REVEAL TRIM AT JOINT WHERE GYPSUM BOARD WALL PARTITIONS AND OR ADJOIN MASONRY WALL PARTITIONS IN THE SAME PLANE 	 COOLERS, ALL LAVATORIES, ALL URINALS, ALL TOILETS SHALL BE STRICTLY ENFORCED 23. APPLY BITUMINOUS COATING TO ALL CONCEALED STRUCTURAL STEEL MEMBERS AT ALL EXTERIO CANOPY LOCATIONS D OR 24. REFER TO OTHER DISCIPLINE DOCUMENTS FOR ADDITIONAL SCOPE OF WORK
	AND OK ADJOIN WASONKT WALL FARTHONS IN THE SAWE FLANE	
	26 GENERAL ARCH PLAN NOTES	
OR SC	26 GENERAL ARCH PLAN NOTES	ISH SCHEDULE NOTES AND REMARKS

OPERABLE WALLS, OVERHEAD DOORS AND GRILLES 10. SOUND RATED DOOR ASSEMBLY, STC AS SPECIFIED NDSTORM DOOR HARDWARE SHALL BE TESTED AS PART OF A COMPLETE DOOR OPENING ASSEMBLY. E TESTED DOOR OPENING ASSEMBLY SHALL INCLUDE DOOR HARDWARE. THE ENTIRE DOOR

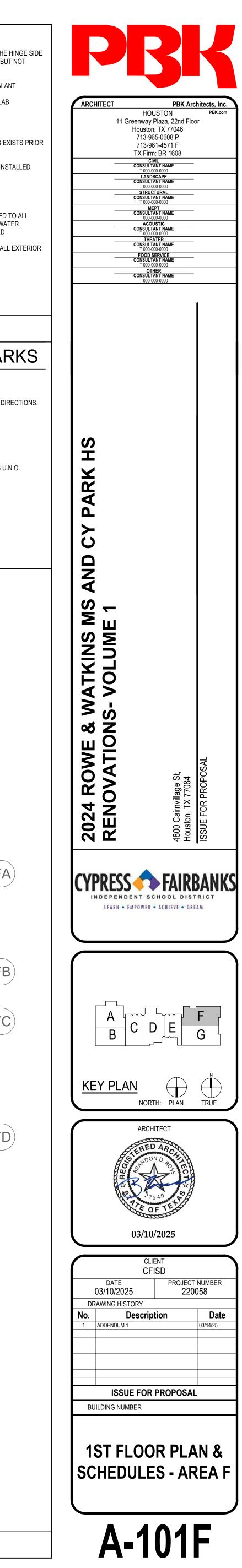
PENING, INCLUDING DOOR HARDWARE, SHALL BE BY DOOR MANUF. COUSTICAL GLASS TO MEET FIRE DOOR ASSEMBLY REQUIREMENTS FOR FIRE RATING INDICATED NUAL OPERATION EC MOTOR OPERATION WITH KEY SWITCH CONTROL, KEY SWITCH ON ONE SIDE OF DOOR ONLY C MOTOR OPERATION WITH KEY SWITCH CONTROL, KEY SWITCH ON BOTH SIDES OF DOOR EC MOTOR OPERATION WITH PUSH-BUTTON CONTROL ON ONE SIDE OF DOOR ONLY

RKS

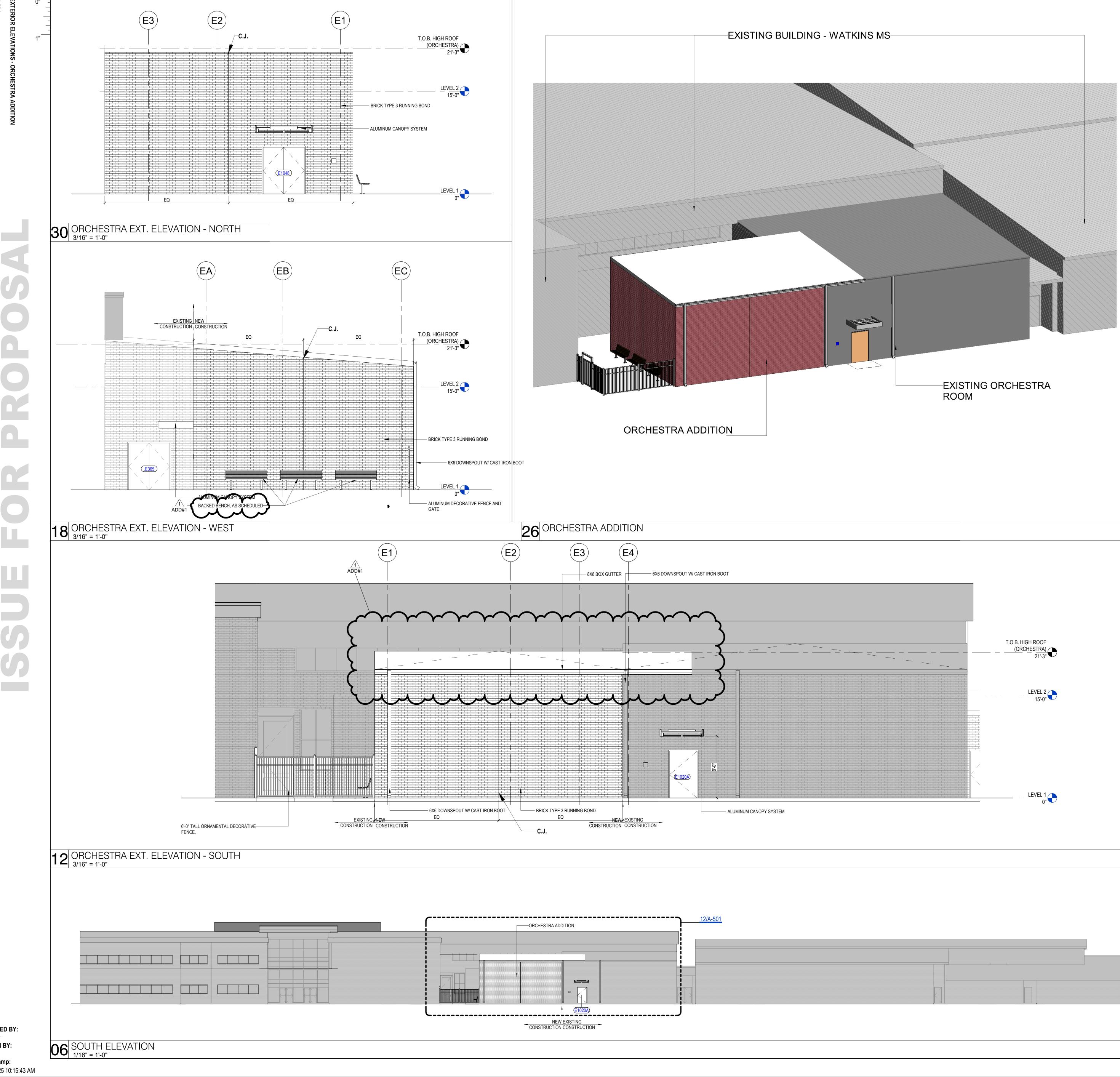
PROVIDE AND INSTALL BULLNOSE TRIM AT ALL TRANSITIONS FROM CERAMIC WALL TILE TO OTHER MATERIALS U.N.O. PAINT ALL H.M. DOORS ______ U.N.O.

REMARKS:

1. PAINT ALL H.M. DOOR FRAMES TO MATCH ADJACENT WALL COLOR U.N.O. 2. 3/4" TREATED PLYWOOD WAINSCOT FULL HEIGHT ALL AROUND, PAINT







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GENERAL ELEVATION NOTES

- ALL BUILDING EXPANSION JOINT TO BE 1" UNLESS OTHERWISE NOTED.
 CONTROL JOINT IN MASONRY VENEER TO BE 3/8" TYPICAL UNLESS OTHERWISE NOTED. EXTEND FULL
- HEIGHT OF WALL. 1/2" EXPANSION JOINT FILLER ON BOTH ENDS OF ALL STEEL LINTEL ANGLES.
 CONTRACTOR SHALL PROVIDE WALL MOCK-UP. MOCK-UP TO BE 8' TALL, 8' WIDE. MOCK-UP TO INCLUDE A 4X4 WINDOW. MOCK-UP TO INCLUDE ALL FLASHING AND WATERPROOFING TO SHOW COMPLETE BUILDING ENVELOPE.
- 5. EXPOSED EXTERIOR STRUCTURAL STEEL TUBE MEMBERS SHALL BE PAINTED P-9. 6. STEEL MASONRY LINTELS SHALL BE GALVANIZED. 7. EXPOSED CONCRETE WALLS, COLUMNS, AND BEAMS SHALL BE RUBBED GROUT FINISH.
- 8. MASONRY WEEP AT 16" O.C. MAXIMUM. 9. EXTERIOR ALUMINUM STOREFRONT SYSTEM SHALL HAVE ALUMINUM SUB-SILLS WITH END DAMS
- 10. EXTERIOR ALUMINUM STOREFRONT SYSTEM SHALL HAVE CONTINUOUS ALUMINUM BACKFILLERS WITH CONTINUOUS PERIMETER ALUMINUM ANGLE. 11. FLEXIBLE MEMBRANE FLASHING AT WINDOWS SILLS AND LINTELS SHALL HAVE PRE-FORMED
- END DAMS. 12. MASONRY VENEER CONTROL JOINTS SHALL BE 3/8" AT INSIDE CORNERS. AT DISTANCES NOT TO EXCEED 3'-4" FROM OUTSIDE CORNERS, AND AT 30'-0" O.C. MAXIMUM. UNLESS NOTED
- OTHERWISE. REFERENCE EXTERIOR ELEVATIONS. 13. GUTTERS, CONDUCTOR HEADS, AND DOWNSPOUTS SHALL BE PRE-FINISHED SHEET METAL.
- COLOR SELECTED BY ARCHITECT. 14. DOWNSPOUTS SHALL HAVE 16 GAUGE PRE-FINISHED DOWNSPOUT BOOTS TO 6'-0" ABOVE FINISH GRADE. COLOR SELECTED BY ARCHITECT.
- 15. DOWNSPOUTS AND/OR ROOF DRAINS SHALL BE CONNECTED TO STORM DRAIN SYSTEM UNLESS OTHERWISE NOTED. REFERENCE CIVIL FOR STORM DRAIN CONNECTION DETAILS AND LOCATIONS.
- 16. CONTRACTOR SHALL PROVIDE MOCK-UP FOR EACH EXTERIOR CONDITION AND CONSTRUCTION ASSEMBLY TYPE. MOCK-UP SHALL INCLUDE METAL FLASHINGS, VERTICAL AND HORIZONTAL FLEXIBLE MEMBRANE FLASHINGS, AND WINDOW INSTALLATIONS AS DETAILED IN CONSTRUCTION DOCUMENTS. MOCK-UP SHALL BE A MINIMUM OF 8'-0" TALL X 16'-0" LONG WITH AN EXTERIOR CORNER, INTERIOR CORNER, AND VERTICAL CONTROL JOINTS.
- COORDINATE LOCATION OF MOCK-UP PANEL WITH ARCHITECT PRIOR TO CONSTRUCTION. 17. CONTRACTOR SHALL PAINT EXPOSED STEEL PER NOTES ON CONTRACT DRAWINGS.

EXTERIOR MATERIALS LEGEND

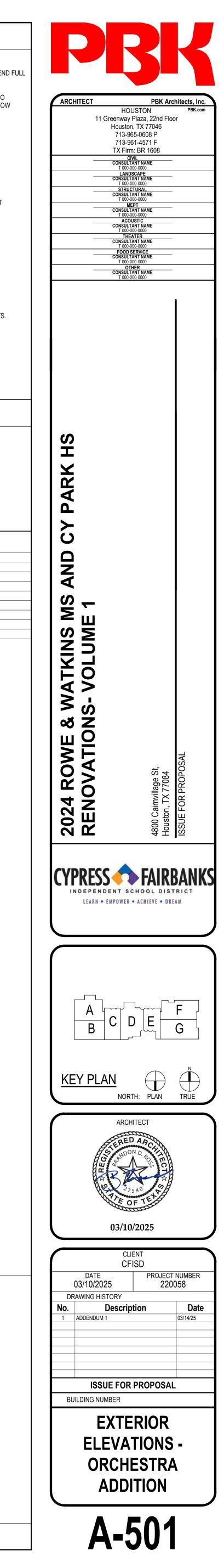


NOT IN CONTRACT

KEYNOTE LEGEND DESCRIPTION

NUMBER	DESCRIPTION	
04 20 00.BK3 (R)	BRICK TYPE 3 RUNNING BOND	
07 62 00.DSP	6X6 DOWNSPOUT W/ CAST IRON BOOT	
07 62 00.GTR	8X8 BOX GUTTER	
10 73 16.13.ACS	ALUMINUM CANOPY SYSTEM	
32 31 19.ADF	ALUMINUM DECORATIVE FENCE AND GATE	
32 31 19.ADFS	6'-0" TALL ORNAMENTAL DECORATIVE FENCE.	
32 33 00.BB2	BACKED BENCH, AS SCHEDULED	

	/	MANUFACTURING CLASSROOM ADDITION



Watkins MS R
240058
WS Reno/AR_
Watkins
FISD_240058_
Autodesk Docs://CFISD_
File Path:
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eno/AK_2400t	
Watkins MS R	
240058	
File Path: Autodesk Docs://CFISD_240058_Watkins MS Reno/AK_24008 Apple: Apple: Autodesk Docs://CFISD_240058_Watkins MS Reno/AK_24008	
HECKED BY: hecker RAWN BY:	

4'-11 1/8"

GL0

▼∞- 5'-0 1/2"

GL0

14

Å-812

3/ h

5'-0 1/2"

GL0

- /

4'-11 1/4"

GL0

14 WINDOW A200 - ELEVATION (1)

4'-11 1/4"

GL0

13 WINDOW A200 - ELEVATION (2)

4'-11 1/4"

GL0

4'-11 1/4"

GL0

4'-11 1/4"

GL0

4'-11 1/4"

GL0

_/

<mark>유 </mark>

12 WINDOW A200 - E		
12 WINDOW A200 - E	3'-3" 3'-3" GL0 GL0 GL0 GL0	
06 WINDOW TYPE 1 1/4" = 1'-0"		04 WINDOW TYPE 2

4'-11 1/4"

GL0

GL0

4'-11 1/4"

GL0

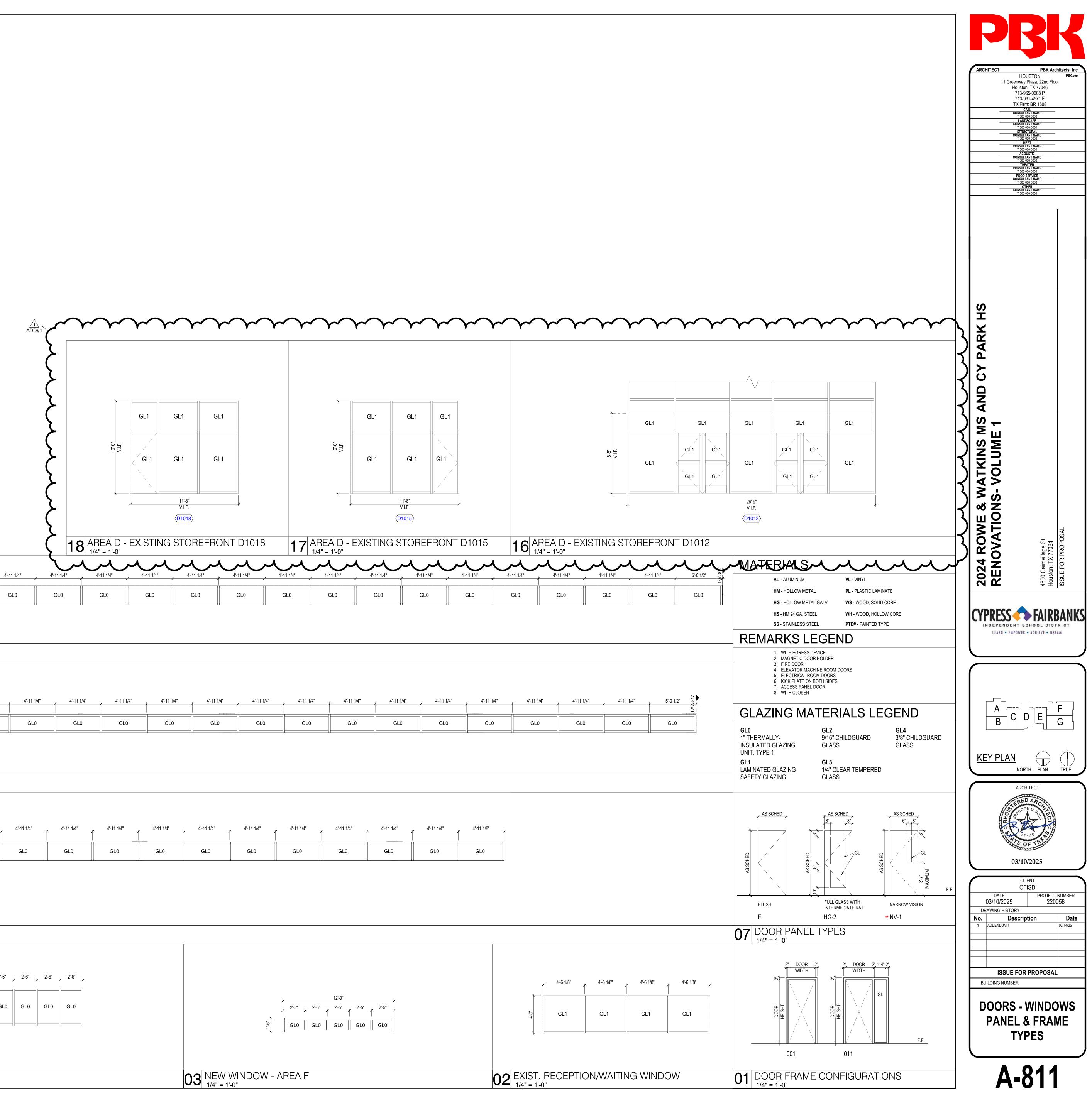
___/__

4'-11 1/4"

GL0

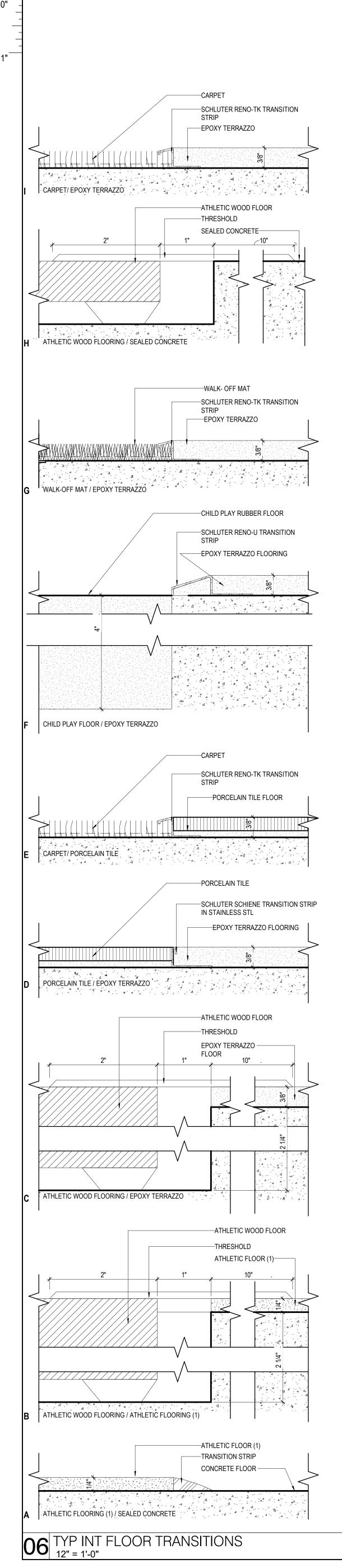
4'-11 1/4"

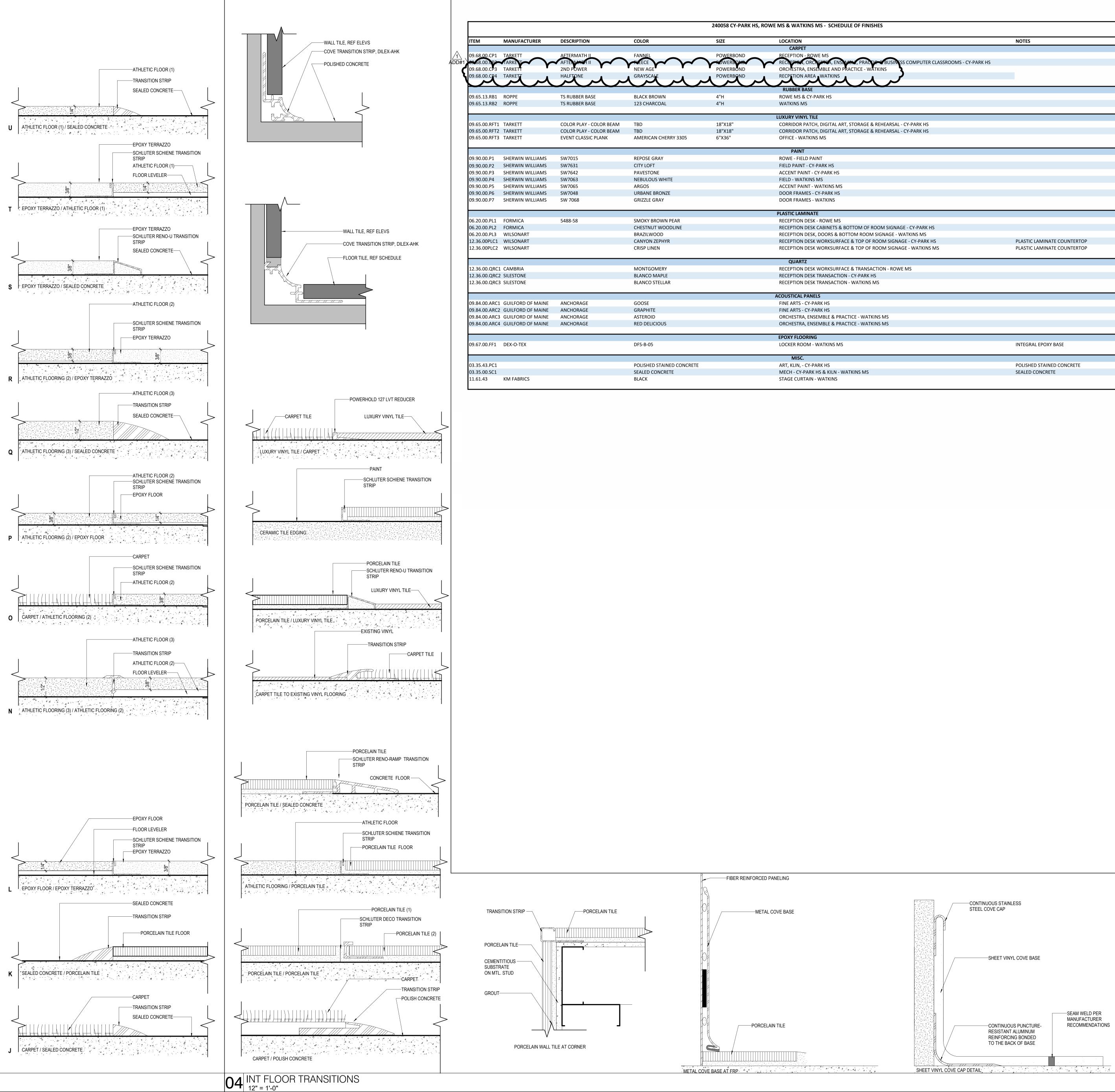
GL0

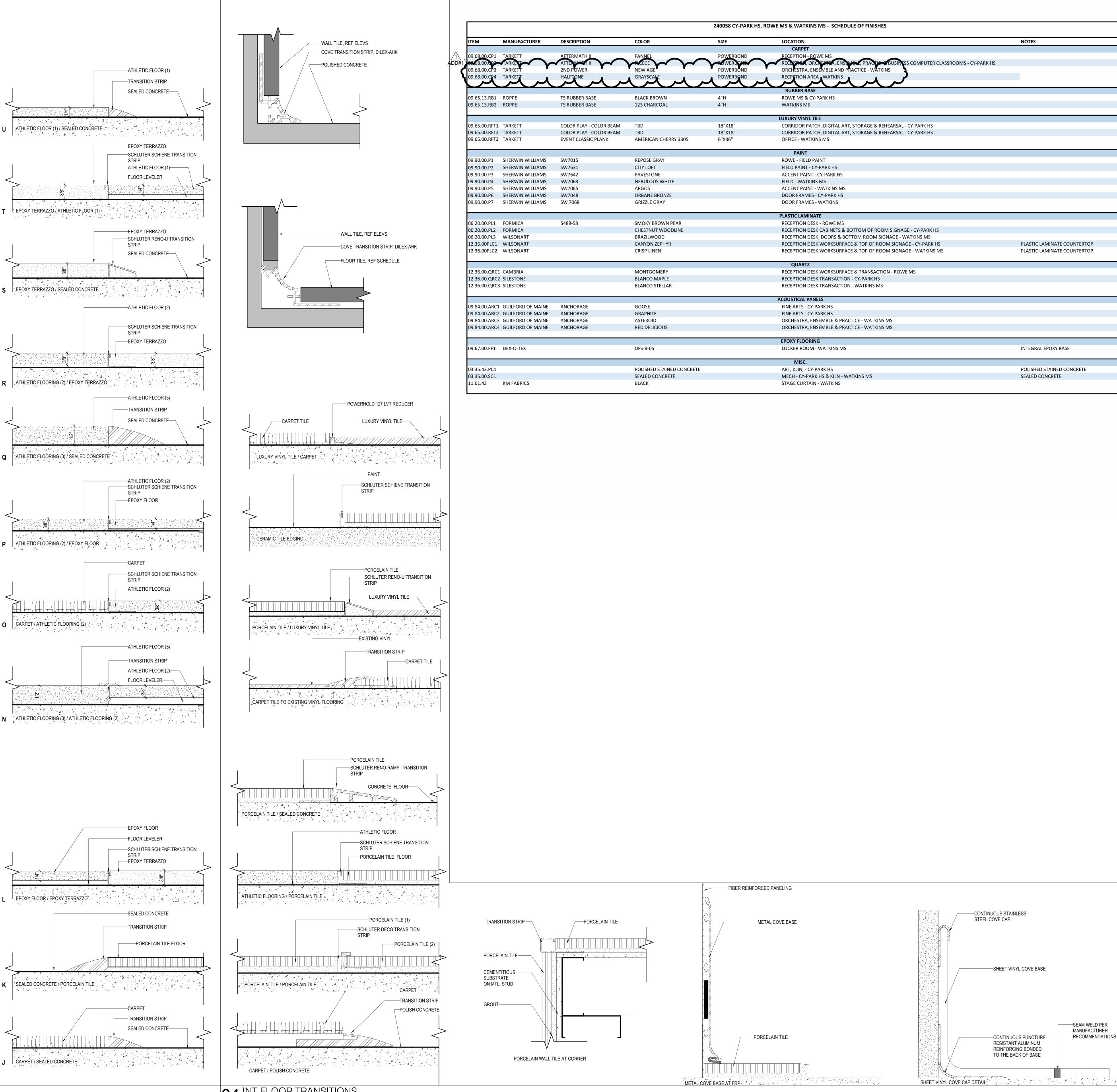




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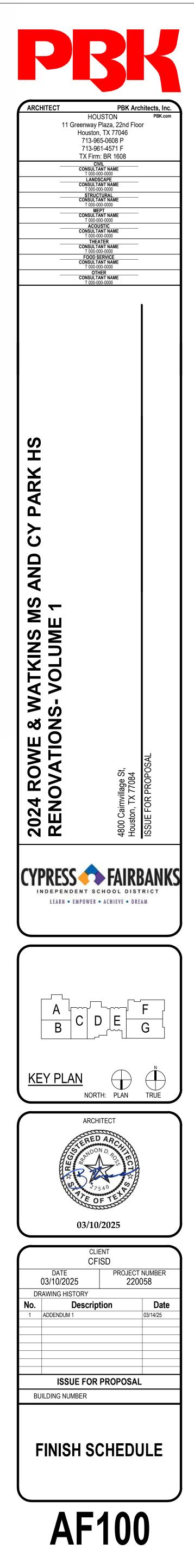






Plot Stamp: 3/14/2025 10:15:47 AM

	240058 CY-PARK HS, F	ROWE MS & WATKINS MS - SCHEDULE OF FINISHES	
DR	SIZE	LOCATION	NOTES
		CARPET	
	POWERBOND	RECEPTION - ROWE MS	
	ROWERBOMB	RECEPTION, ORCHESTRA, ENSINEL, PRACTIC & BUSINESS COMPUTER CLASSROOMS - CY-PARK HS	
AGE	POWERBOND	ORCHESTRA, ENSEMBLE AND PRACTICE - WATKINS	
'SCALE	POWERBOND	RECPETION AREA WATKINS	
		RUBBER BASE	
BROWN	4"H	ROWE MS & CY-PARK HS	
HARCOAL	4"H	WATKINS MS	
	4.011/24.011	LUXURY VINYL TILE	
	18"X18" 18"X18"	CORRIDOR PATCH, DIGITAL ART, STORAGE & REHEARSAL - CY-PARK HS CORRIDOR PATCH, DIGITAL ART, STORAGE & REHEARSAL - CY-PARK HS	
RICAN CHERRY 3305	6"X36"	OFFICE - WATKINS MS	
E CDAV		PAINT ROWE - FIELD PAINT	
SE GRAY			
OFT		FIELD PAINT - CY-PARK HS	
		ACCENT PAINT - CY-PARK HS	
		FIELD - WATKINS MS	
S NE REONZE		ACCENT PAINT - WATKINS MS DOOR FRAMES - CY-PARK HS	
NE BRONZE		DOOR FRAMES - WATKINS	
		DOOR TRAINES - WATKINS	
		PLASTIC LAMINATE	
KY BROWN PEAR		RECEPTION DESK - ROWE MS	
		RECEPTION DESK CABINETS & BOTTOM OF ROOM SIGNAGE - CY-PARK HS	
		RECEPTION DESK, DOORS & BOTTOM ROOM SIGNAGE - WATKINS MS	
ON ZEPHYR		RECEPTION DESK WORKSURFACE & TOP OF ROOM SIGNAGE - CY-PARK HS	PLASTIC LAMINATE COUNTERTOP
LINEN		RECEPTION DESK WORKSURFACE & TOP OF ROOM SIGNAGE - WATKINS MS	PLASTIC LAMINATE COUNTERTOP
		QUARTZ	
GOMERY		RECEPTION DESK WORKSURFACE & TRANSACTION - ROWE MS	
CO MAPLE		RECEPTION DESK TRANSACTION - CY-PARK HS	
O STELLAR		RECEPTION DESK TRANSACTION - WATKINS MS	
		ACOUSTICAL PANELS	
E		FINE ARTS - CY-PARK HS	
HITE		FINE ARTS - CY-PARK HS	
ROID		ORCHESTRA, ENSEMBLE & PRACTICE - WATKINS MS	
ELICIOUS		ORCHESTRA, ENSEMBLE & PRACTICE - WATKINS MS	
		EPOXY FLOORING	
3-05		LOCKER ROOM - WATKINS MS	INTEGRAL EPOXY BASE
		MISC.	
HED STAINED CONCRETE		ART, KLIN, - CY-PARK HS	POLISHED STAINED CONCRETE
ED CONCRETE		MECH - CY-PARK HS & KILN - WATKINS MS	SEALED CONCRETE
<		STAGE CURTAIN - WATKINS	



AF101 FOR BLUEBEAM LABELING/OCR:

CHECKED BY:

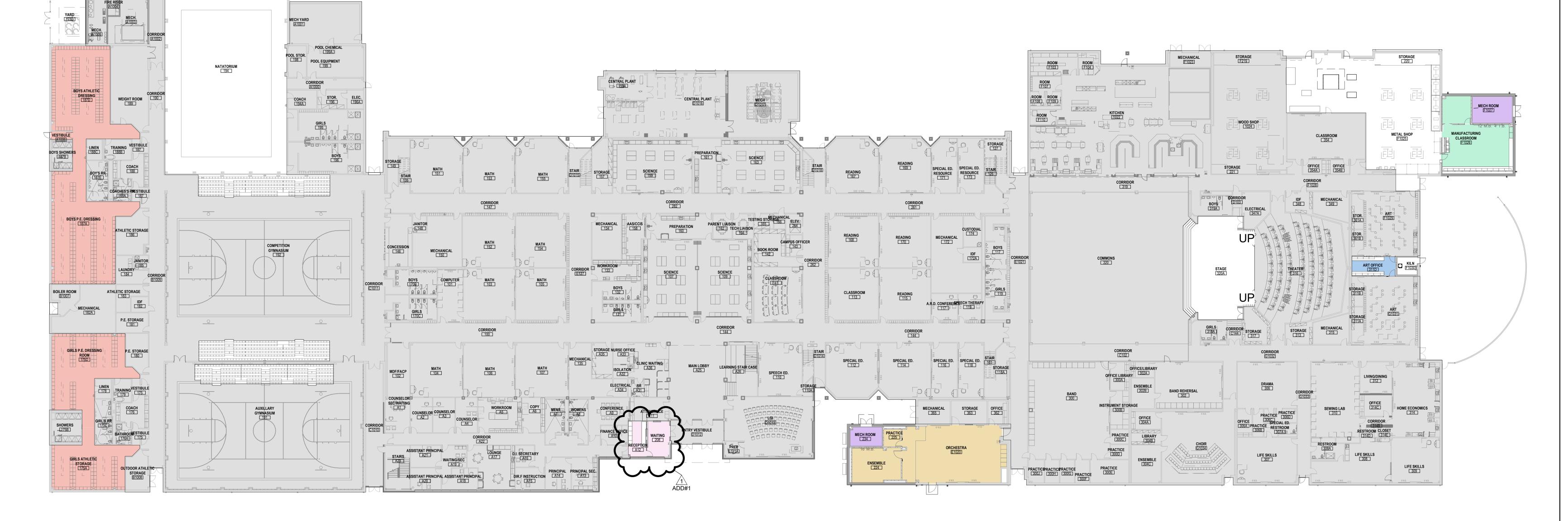
DRAWN BY:

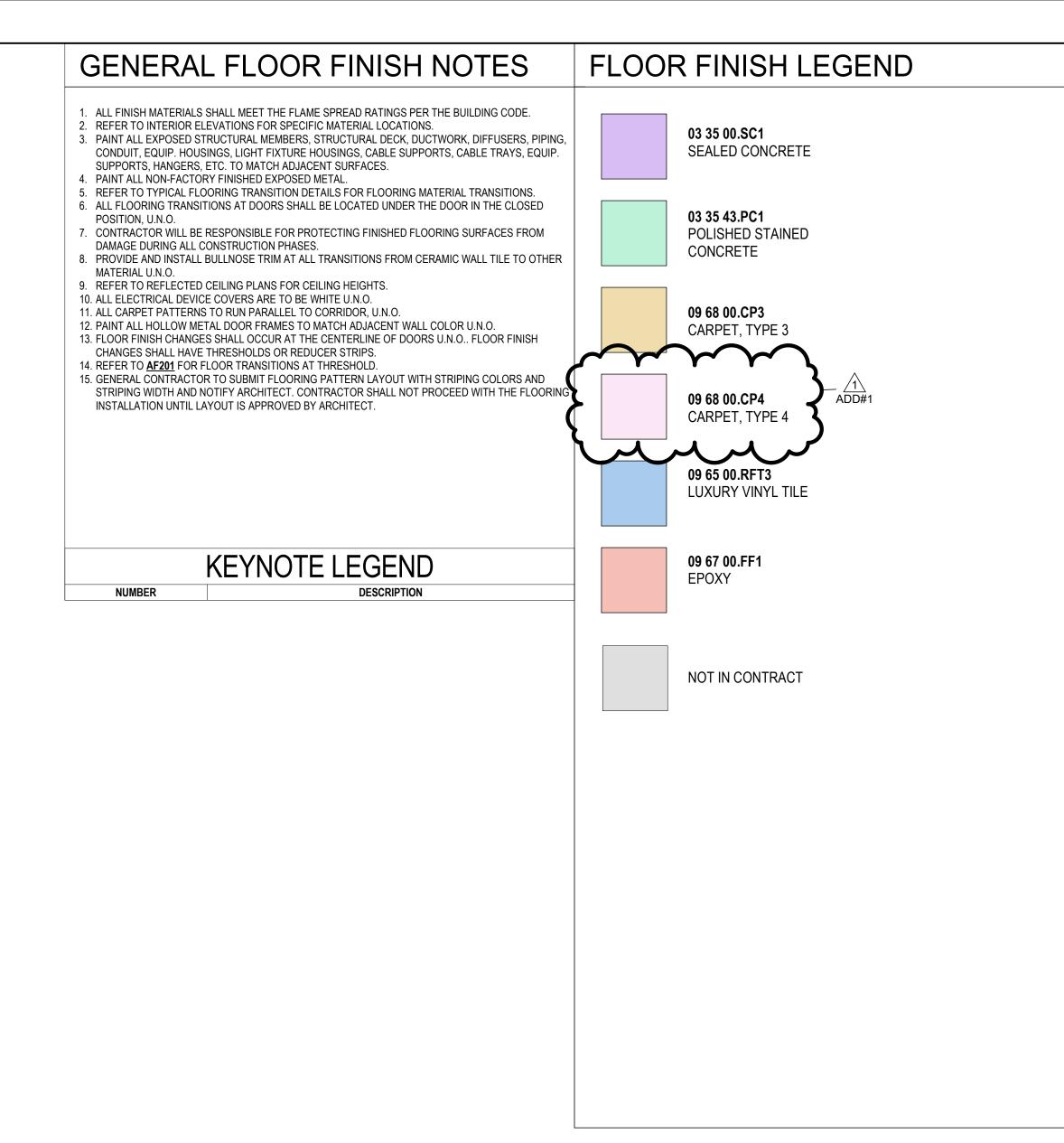
Author Plot Stamp: 3/14/2025 10:15:51 AM

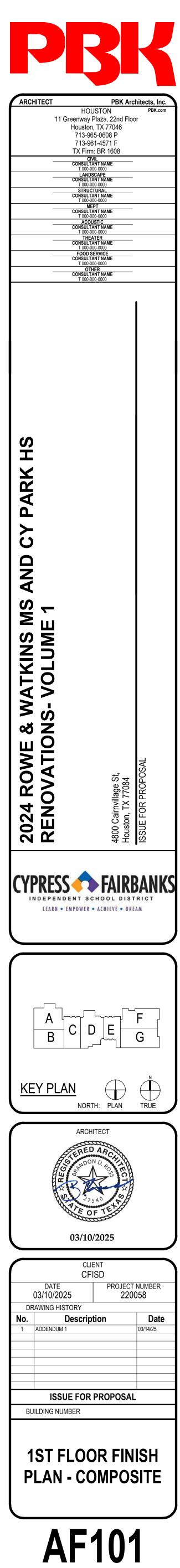
Checker

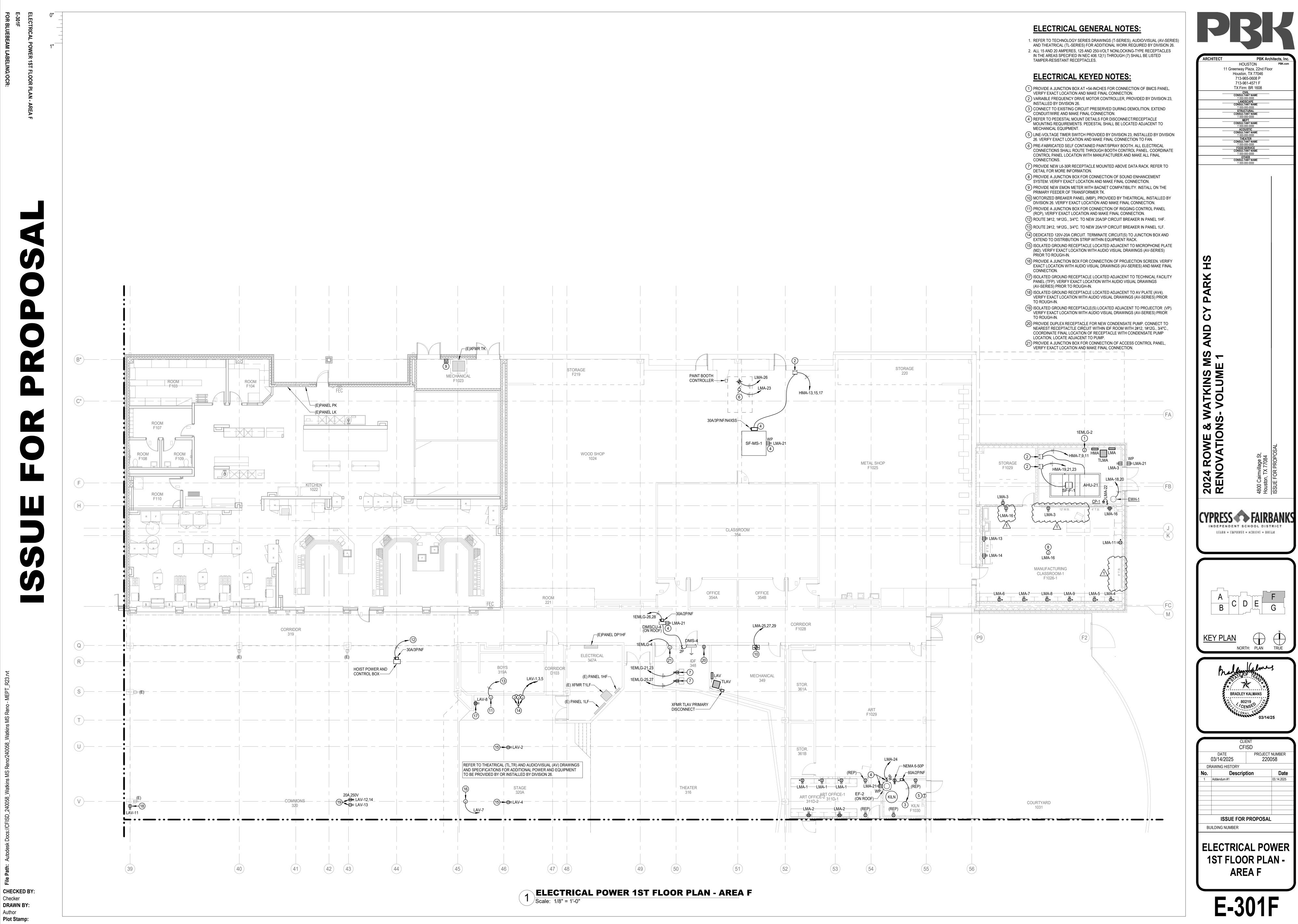
1ST FLOOR FINISH PLAN - COMPOS











Checker DRAWN BY: Author

Plot Stamp: 3/14/2025 10:06:09 AM



CHECKED BY: Checker DRAWN BY: Author Plot Stamp: 3/14/2025 10:06:11 AM

OCR

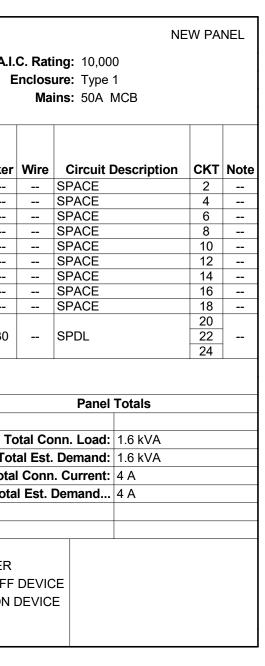
E-502 FOR E

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Br	an	ch Panel: L Location: ST Supply From: TLF Mounting: Sur	orage =s	E BUI	LDIN	IG		Volts: 120/20 Phases: 3 Wires: 4 Phase in k			A.I. E
Note	скт	Circuit Description	Wire	Brea	aker	A		В	с	Bre	eaker
	1	Lighting	#12	20	1	0.1 / 0.0)			1	
1	3	Exterior Lighting	#12	20	1			0.2 / 0.0		1	
	5	Receptacles	#12	20	1				0.9 / 0.0	1	
	7	Motorized Damper	#12	20	1	0.4 / 0.0)			1	
	9	SPARE		20	1			0.0 / 0.0		1	
	11	SPARE		20	1				0.0 / 0.0	1	
	13	SPARE		20	1	0.0 / 0.0)			1	
	15	SPARE		20	1			0.0 / 0.0		1	
	17	SPARE		20	1				0.0 / 0.0	1	
	19	SPARE		20	1	0.0 / 0.0)	0.0/0.0			0.0
	21	SPARE		20	1			0.0 / 0.0	0.0 / 0.0	3	30
	23	SPARE	 Tatal I	20	1			0.013/4	0.0 / 0.0	-	
			Total L			0.5 kVA	۱	0.2 kVA	0.9 kVA		
			fotal A	-		5 A		2 A	8 A		
Load	Class	sification		Co	onne	cted Load	De	emand Factor	Estimated		
HVAC	;				0.	4 kVA		100.00%	0.4 kVA		
Lighti	ng				0.	0 kVA		0.00%	0.0 kVA		Тс
Misce	-	US			0	8 kVA		100.00%	0.8 kVA		Tot
Recep						4 kVA		100.00%	0.4 kVA		Tota
Recep	Judoic	5		_	0.			100.0070	0.4 KVA		Tota
				_						_	TOLA
				_						_	
Notes	s:							Abbrevations:			
Contro	ol via	contactor, contactor con	trolled	via 24	./7 tir	neclock.		LF - PROVIDE	GFCI CIRCUIT E PERMANENT L PERMANENT	OCK	-OFF

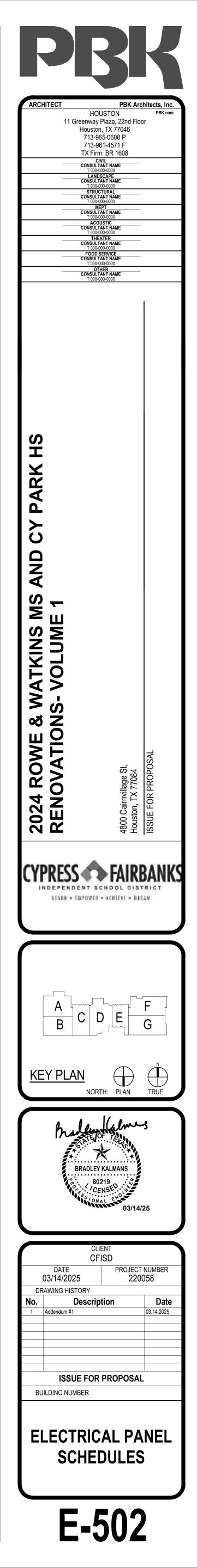
Br	an	ch Panel: 1	-	-										ISTIN	G
		Location: ME Supply From:	CHANI	CAL	172		Volts: 120/2 Phases: 3	08 Wye		A.I.C. Rating: 10,000 Enclosure: Type 1					
		Mounting: Sur	face				Wires: 4			Mains: 150A MCB					
							Phase in	k\/A							
Note	скт	Circuit Description	Wire	Brea	aker	А	В	с	Bre	eaker	Wire	Circuit E	Description	скт	Note
	1	EXIST. MTR		20	1	0.0 / 0.0			1	20		SPARE	•	2	
	3	EXIST. HAND DRYER		20	1		0.0 / 0.0		1	20		SPARE		4	
	5	EXIST. HAND DRYER		20	1			0.0 / 0.0	1	20		SPARE		6	
	7	EXIST. HAND DRYER		20	1	0.0 / 0.0			1	20		SPARE		8	
	9	EXIST. HAND DRYER		20	1		0.0 / 0.7		1	20	#12		les Room	10	1
	11	EXIST. RECPT 171		20	1			0.0 / 0.9	1	20	#12	Receptac		12	1
	13	EXIST. RECPT 171		20	1	0.0 / 0.0			<u> </u>					14	
	15	EXIST. RECPT 170		20	1		0.0 / 0.0		1			SPACE		16	
	17	EXIST. RECPT 170		20	1			0.0 / 0.0	1			SPACE		18	
	19	EXIST. RECPT 116		20	1	0.0 / 0.0			1			SPACE		20	
	21	EXIST. RECPT 116		20	1	0.07 0.0	0.0 / 0.0		1			SPACE		22	
	23	EXIST. RECPT 118		20	1			0.0 / 0.0	1			SPACE		24	
	25	EXIST. RECPT 118		20	1	0.0 / 0.0			1			SPACE		26	
	27	SPACE			1	0.07 0.0	0.0 / 0.0		1			SPACE		28	
	29	SPACE			1		0.070.0	0.0 / 0.0	1			SPACE		30	
	31	SPACE			1	0.0 / 0.0			1			SPACE		32	
	33	SPACE			1	0.07 0.0	0.0 / 0.0		1			SPACE		34	
	35	SPACE			1		0.070.0	0.0 / 0.0	1			SPACE		36	
	37	SPACE			1	0.0 / 0.0		0.070.0	1			SPACE		38	
	39	SPACE			1	0.070.0	0.0 / 0.0		1			SPACE		40	
	41	SPACE			1		0.070.0	0.0 / 0.0	1			SPACE		42	
			Total L		· · ·	0.0 kVA	0.7 kVA	0.9 kVA	· ·						
					L	0.0 KVA	7 A								
	01		otal A	<u> </u>		-		8 A				D 1	T . (.) .		
		sification		C	onne	cted Load	Demand Factor	Estimated				Panel	Totals		
Recep	ptacles	S			1.6	5 kVA	100.00%	1.6 kVA							
										Тс	otal Co	onn. Load:	1.6 kVA		
										Tot	al Est	. Demand:	1.6 kVA		
				_					-		-				
				_					_			n. Current:			
				_					_	Tota	I Est.	Demand	4 A		
									-						
Notes	s:						Abbrevations)):							
1 : AC	DD NE	W CIRCUIT BREAKER					G - PROVIDE	GFCI CIRCUIT B	REA	KER					
								E PERMANENT L				CE			
							_			-		-			
								E PERMANENT L	.UCK	-UN I	DEVIC				



Br	an	ch Panel: H Location: ME Supply From: DP Mounting: Sur	CH RC 1HF		1027	7	Volts: 277/48 Phases: 3 Wires: 4 Phase in k				Inclos	ing: 18,00 ure: Type ins: 100A	0 1	ew pa	NEL
Note	скт	Circuit Description	Wire	Brea	ıker	Α	В	c	Bre	eaker	Wire	Circuit [Description	СКТ	Note
1010	1		, , , , , , , , , , , , , , , , , , ,	Dice		9.6 / 0.5			1	20	#12	Lighting		2	
-	3	XFMR TLMA	1-L	50	3	,	9.6 / 0.0		1	20		SPARE		4	
	5							8.4 / 0.0	1	20		SPARE		6	
	7	-				0.0 / 0.0			1	20		SPARE		8	
-		AHU-1	#12	20	3		0.0 / 0.0	0.0/0.0	1	20		SPARE		10	
	<u>11</u> 13					0.7 / 0.0		0.0 / 0.0	1	20		SPARE SPACE		12 14	
		SF-MS-1	#12	20	3	0.770.0	0.7 / 0.0		1			SPACE		14	
	17		<i>π</i> ι ∠	20			0.770.0	0.7 / 0.0	1			SPACE		18	
	19					0.2 / 0.0		0.170.0	1			SPACE		20	
	21	HVAC MECH ROOM		20	3	0.2 / 0.0	0.2 / 0.0		1			SPACE		22	
	23	F1027						0.2 / 0.0	1			SPACE		24	
		SPACE			1	0.0 / 0.0			1			SPACE		26	
		SPACE			1		0.0 / 0.0		1			SPACE		28	
		SPACE			1	0.0.1.0.0		0.0 / 0.0	1			SPACE		30	
	31 33	SPACE SPACE			1	0.0 / 0.0			1			SPACE		32 34	
		SPACE			1		0.0 / 0.0	0.0 / 0.0	1			SPACE SPACE		34	
		SPACE			1	0.0 / 0.0)	0.070.0				JFACE		38	
		SPACE			1	0.070.0	0.0 / 0.0		3	30		SPDL		40	I
		SPACE			1			0.0 / 0.0	1					42	
		1	Total L	oad:		11.1 kVA	A 10.6 kVA	9.4 kVA				1			1
		1	Total A	mps:	L	41 A	39 A	34 A							
Load	Class	sification		Co	onne	cted Load	Demand Factor	Estimated				Panel	Totals		
HVAC	;				3.2	2 kVA	100.00%	3.2 kVA							
Lightir						5 kVA	125.00%	0.6 kVA		Тс	otal Co	onn. Load:	31.1 kVA		
<u> </u>	. <u>.</u> Ilaneo	ous				7 kVA	100.00%	22.7 kVA				Demand:			
	otacles			_		7 kVA	100.00%	4.7 kVA	+			. Current:			
		<u> </u>		_	7.1		100.0070	1.7 1.77				Demand			
										1010	u 231.	bernanu			
Notes							Abbrevations	:							
							G - PROVIDE LF - PROVIDE	GFCI CIRCUIT B PERMANENT L PERMANENT L	оск	-OFF					

		ch Panel: L	CH RC		102	7	Volts: 120	/208 Wye	NEW PANEL								
		Supply From: TLI					Phases: 3			Enclosure: Type 1							
		Mounting: Sur	face				Wires: 4		Mains: 150A MCB								
							Phase i	n kVA									
oto	скт	Circuit Description	Wire	Brea	kor	А	В	с	Br	reaker	Wire	Circuit F	Description	скт	Note		
	1	Receptacles OFFICE	#12	20	1	0.5 / 0.7			1	20	#12		es OFFICE	2			
	3	Receptacles	#12	20	1	0.070.1	0.5 / 0.2		1		#12	Receptacle		4			
	5	Receptacles	#12	20	1		0.070.2	0.2 / 0.2	1			Receptacle		6			
	7	Receptacles	#12	20	1	0.2/0.2	2	0.2, 0.2	- 1	20	#12	Receptacl		-8-	.		
	9	Receptacles	#12	20	1		0.2 / 0.0		ſĨ			SPARE		10			
	11	Receptacles	#12	20	1			0.2 / 0.0	1	20		SPARE		12			
	13	Receptacles	#12	20	1	0.2/0.2	2		$\forall \dot{h}$	1201			s		سب		
	15	· ·		1			0.5 / 0.7		1		#12	Receptacle		16			
	17	Marquee Signage	#8	20	2			0.5 / 0.0	-	-		-		18			
	19	Rigging Control Panel	#8	20	1	0.5 / 0.0)		2	30	#10	EWH-1		20	1		
	21	Receptacles	#8	20	1		0.7 / 0.1		1	20	#12	CP-1		22			
	23	Paint Booth Fan	#12	20	1			0.5 / 0.2	1	20	#12	EF-3		24			
	25	Materized Breeker				6.7 / 0.5	5		1	20	#12	Paint Boot	h Lgt/Recept	26			
	27	Motorized Breaker Panel (MBP)	#3	100	3		6.7 / 0.0		1	20		SPARE		28			
	29							6.7 / 0.0	1	20		SPARE		30			
-	31	SPARE		20	1	0.0 / 0.0			1	20		SPARE		32			
-	33	SPARE		20	1		0.0 / 0.0		1	20		SPARE		34			
		SPARE		20	1			0.0 / 0.0	1	20		SPARE		36			
		SPARE		20	1	0.0 / 0.0			1	20		SPARE		38			
•		SPARE		20	1		0.0 / 0.0		1	20		SPARE		40			
	41	SPARE		20	1			0.0 / 0.0	1	20		SPARE		42			
•	43	SPARE		20	1	0.0 / 0.0			1	20		SPARE		44			
•		SPARE		20	1		0.0 / 0.0		1	20		SPARE		46			
-		SPARE		20	1			0.0 / 0.0	1	20		SPARE		48			
-	49	SPARE		20	1	0.0 / 0.0			_					50	_		
•	51	SPARE		20	1		0.0 / 0.0	0.0.1.0.0	3	30		SPDL		52			
-	53	SPARE		20	1			0.0 / 0.0	_					54			
			Total L			9.6 kVA		8.4 kVA									
		7	otal A	mps:		82 A	82 A	70 A									
ad	Class	sification		Co	onne	cted Load	Demand Facto	r Estimated				Panel	Totals				
AC/	;				0.	3 kVA	100.00%	0.3 kVA									
sce	llanec	DUS			22	.7 kVA	100.00%	22.7 kVA		Т	otal Co	onn. Load:	27.7 kVA				
	otacle					7 kVA	100.00%	4.7 kVA				Demand:					
	nacio	5			-т.		100.0070	7.7 KVA									
												n. Current:					
										Tota	al Est.	Demand	(7 A				
tes	;			I			Abbrevatio	ns:									
								DE GFCI CIRCUIT									
								DE PERMANENT									
							LO - PROVI	DE PERMANENT	LOC	K-ON	DEVIC	E					

	Location: ME Supply From: TL/ Mounting: Su	٩V	CAL	349		Volts: 120/20 Phases: 3 Wires: 4 Phase in k	·	A.I.C. Rating: 10,000 Enclosure: Type 1 Mains: 100A MCB						
СКТ	Circuit Description	Wire	Brea	aker	А	В	С	Bre	eaker	Wire	Circuit [Description	скт	Note
1	Equipment Rack	#12	20	1	0.5 / 0.2			1	20	#12			2	
3	Equipment Rack		20	1		0.5 / 0.2		1	20	#12	AV Recep	tacle	4	
5	Equipment Rack			1			0.5 / 0.2	1	20				6	
-					0.5 / 0.5								-	
						0.5 / 0.5		1	20	#12	AV Recep	tacle		
							0.2 / 1.0	2	20	#12	Projector F	Receptacle		4
				-	1.0 / 1.0						-			
						0.0 / 0.0	0.0/0.0			-				
					0.0 / 0.0		0.0 / 0.0			-				
					0.070.0			_						
						0.070.0	0.0/0.0	_						
					00/00		0.070.0	_						
					0.070.0									
						0.070.0	00/00	_						
					00/00		0.070.0	_						
				-	0.070.0									
						0.070.0	0.0/0.0							
					0.0 / 0.0									
39						0.0 / 0.0		3	30		SPDL			i
41	SPACE			1			0.0 / 0.0						42	1
		Total L	.oad:	· - [3.7 kVA	1.7 kVA	1.9 kVA							
				L										
Class				nno	-						Danol	Totale		
											i anci	10(013		
												701)/4		
otacles	8			0.7	(KVA	100.00%	0.7 KVA							
									Tota	I Conr	n. Current:	20 A		
									Tota	al Est.	Demand	20 A		
51											ISOLAI	ED GROUN	D ROS)
						LF - PROVIDE	PERMANENT L	.OCK	-OFF	DEVI	CE			
						LO - PROVIDE	PERMANENT I	OCK	-ON	DEVIC	E			
	3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 Class	CKT Circuit Description 1 Equipment Rack 3 Equipment Rack 5 Equipment Rack 5 Equipment Rack 7 Projection Screen 9 AV Receptacle 11 AV Receptacle 13 Projector Receptacle 15 SPACE 19 SPACE 21 SPACE 23 SPACE 24 SPACE 25 SPACE 26 SPACE 27 SPACE 31 SPACE 33 SPACE 34 SPACE 35 SPACE 36 SPACE 37 SPACE 39 SPACE 31 SPACE 32 SPACE 33 SPACE 34 SPACE 35 SPACE 39 SPACE 41 SPACE 1 Space 1 Space	Mounting: Surface CKT Circuit Description Wire 1 Equipment Rack #12 3 Equipment Rack #12 5 Equipment Rack #12 7 Projection Screen #12 9 AV Receptacle #12 11 AV Receptacle #8 13 Projector Receptacle #12 15 SPACE 17 SPACE 19 SPACE 21 SPACE 23 SPACE 24 SPACE 25 SPACE 26 SPACE 27 SPACE 33 SPACE 34 SPACE 35 SPACE 39 SPACE 39 SPACE 30 SPACE 31 SPACE 33 SPACE	Mounting: Surface CKT Circuit Description Wire Breat 1 Equipment Rack #12 20 3 Equipment Rack #12 20 5 Equipment Rack #12 20 7 Projection Screen #12 20 9 AV Receptacle #12 20 11 AV Receptacle #8 20 13 Projector Receptacle #12 20 15 SPACE 17 SPACE 19 SPACE 21 SPACE 23 SPACE 24 SPACE 25 SPACE 26 SPACE 33 SPACE 34 SPACE 35 SPACE 39 SPACE <td>Mounting: Surface CKT Circuit Description Wire Breaker 1 Equipment Rack #12 20 1 3 Equipment Rack #12 20 1 5 Equipment Rack #12 20 1 7 Projection Screen #12 20 1 9 AV Receptacle #12 20 1 11 AV Receptacle #12 20 1 13 Projector Receptacle #12 20 1 14 AV Receptacle #12 20 1 15 SPACE 1 17 SPACE 1 19 SPACE 1 21 SPACE 1 23 SPACE 1 24 SPACE 1 33 SPACE 1 34 SPACE 1</td> <td>CKT Circuit Description Wire Breaker A 1 Equipment Rack #12 20 1 0.5 / 0.2 3 Equipment Rack #12 20 1 0.5 / 0.2 3 Equipment Rack #12 20 1 0.5 / 0.2 5 Equipment Rack #12 20 1 0.5 / 0.2 9 AV Receptacle #12 20 1 0.5 / 0.5 9 AV Receptacle #12 20 1 0.5 / 0.5 9 AV Receptacle #12 20 1 1.0 / 1.0 11 AV Receptacle #8 20 1 1.0 / 1.0 15 SPACE 1 1.0 / 1.0 15 SPACE - 1 0.0 / 0.0 21 SPACE - 1 0.0 / 0.0 225 SPACE - 1 0.0 / 0.0 23 SPACE - 1 0.0 / 0.0 33 SPACE </td> <td>Mounting: Surface Wires: 4 Phase in k CKT Circuit Description Wire Breaker A B 1 Equipment Rack #12 20 1 0.5/0.2 0.5/0.2 3 Equipment Rack #12 20 1 0.5/0.2 0.5/0.2 5 Equipment Rack #12 20 1 0.5/0.5 0.5/0.2 9 AV Receptacle #12 20 1 0.5/0.5 0.5/0.5 9 AV Receptacle #12 20 1 0.5/0.5 0.5/0.5 11 AV Receptacle #12 20 1 1.0/1.0 0.5/0.5 13 Projector Receptacle #12 20 1 1.0/1.0 0.0/0.0 15 SPACE 1 0.0/0.0 0.0/0.0 21 SPACE - 1 0.0/0.0 0.0/0.0 23 SPACE - 1 0.0/0.0 0.0/0.0 23 SPACE -<</td> - 1 0.0/0.0 0.0/0.0	Mounting: Surface CKT Circuit Description Wire Breaker 1 Equipment Rack #12 20 1 3 Equipment Rack #12 20 1 5 Equipment Rack #12 20 1 7 Projection Screen #12 20 1 9 AV Receptacle #12 20 1 11 AV Receptacle #12 20 1 13 Projector Receptacle #12 20 1 14 AV Receptacle #12 20 1 15 SPACE 1 17 SPACE 1 19 SPACE 1 21 SPACE 1 23 SPACE 1 24 SPACE 1 33 SPACE 1 34 SPACE 1	CKT Circuit Description Wire Breaker A 1 Equipment Rack #12 20 1 0.5 / 0.2 3 Equipment Rack #12 20 1 0.5 / 0.2 3 Equipment Rack #12 20 1 0.5 / 0.2 5 Equipment Rack #12 20 1 0.5 / 0.2 9 AV Receptacle #12 20 1 0.5 / 0.5 9 AV Receptacle #12 20 1 0.5 / 0.5 9 AV Receptacle #12 20 1 1.0 / 1.0 11 AV Receptacle #8 20 1 1.0 / 1.0 15 SPACE 1 1.0 / 1.0 15 SPACE - 1 0.0 / 0.0 21 SPACE - 1 0.0 / 0.0 225 SPACE - 1 0.0 / 0.0 23 SPACE - 1 0.0 / 0.0 33 SPACE	Mounting: Surface Wires: 4 Phase in k CKT Circuit Description Wire Breaker A B 1 Equipment Rack #12 20 1 0.5/0.2 0.5/0.2 3 Equipment Rack #12 20 1 0.5/0.2 0.5/0.2 5 Equipment Rack #12 20 1 0.5/0.5 0.5/0.2 9 AV Receptacle #12 20 1 0.5/0.5 0.5/0.5 9 AV Receptacle #12 20 1 0.5/0.5 0.5/0.5 11 AV Receptacle #12 20 1 1.0/1.0 0.5/0.5 13 Projector Receptacle #12 20 1 1.0/1.0 0.0/0.0 15 SPACE 1 0.0/0.0 0.0/0.0 21 SPACE - 1 0.0/0.0 0.0/0.0 23 SPACE - 1 0.0/0.0 0.0/0.0 23 SPACE -<	Mounting: Surface Wire: 4 Phase in kVA CKT Circuit Description Wire Breaker A B C 1 Equipment Rack #12 20 1 0.5/0.2 0.5/0.2 0.5/0.2 5 Equipment Rack #12 20 1 0.5/0.5 0.2/1.0 7 Projection Screen #12 20 1 0.5/0.5 0.2/1.0 1 AV Receptacle #12 20 1 1.0/1.0 0.2/1.0 13 Projector Receptacle #12 20 1 1.0/1.0 0.2/1.0 13 Projector Receptacle #12 20 1 1.0/1.0 0.0/0.0 15 SPACE - - 1 0.0/0.0 0.0/0.0 23 SPACE - 1 0.0/0.0 0.0/0.0 0.0/0.0 25 SPACE - 1 0.0/0.0 0.0/0.0 0.0/0.0 25 SPACE -<	Mounting: Surface Wires: 4 Phase in kVA CKT Circuit Description Wire Breaker A B C Breaker 1 Equipment Rack #12 20 1 0.5/0.2 1 1 3 Equipment Rack #12 20 1 0.5/0.2 1 1 5 Equipment Rack #12 20 1 0.5/0.5 1 1 9 AV Receptacle #12 20 1 0.5/0.5 1 1 11 AV Receptacle #12 20 1 1.0/1.0 0.2/1.0 2 13 Projector Receptacle #12 20 1 1.0/1.0 0.2/1.0 2 13 SPACE - 1 0.0/0.0 1 1 23 SPACE - 1 0.0/0.0 1 1 23 SPACE - - 1 0.0/0.0 1 1 <td< td=""><td>Mounting: Surface Wires: 4 Phase in KVA CKT Circuit Description Wire Breaker A B C Breaker 1 Equipment Rack #12 20 1 0.5/0.2 1 20 3 Equipment Rack #12 20 1 0.5/0.2 1 20 5 Equipment Rack #12 20 1 0.5/0.5 1 20 7 Projection Screen #12 20 1 0.5/0.5 1 20 11 AV Receptacle #12 20 1 0.0/0.0 1 20 13 Projector Receptacle #12 20 1 1.0/1.0 0.2/1.0 2 20 15 SPACE - - 1 0.0/0.0 1 20 13 Projector Receptacle #12 20 1 0.0/0.0 1 20 23 SPACE - - 1 0.0/0.0 1 <</td><td>Mounting: Surface Wires: 4 Phase in kVA Max Max CKT Circuit Description Wire Breaker A B C Breaker Wire 1 Equipment Rack #12 20 1 0.5/0.2 1 20 #12 3 Equipment Rack #12 20 1 0.5/0.2 1 20 #12 7 Projection Screen #12 20 1 0.5/0.5 0.5/0.2 1 20 #12 9 AV Receptacle #18 20 1 1.0/1.0 0.5/0.5 1 20 #12 11 AV Receptacle #12 20 1 1.0/1.0 0.5/0.0 1 20 #12 13 Projector Receptacle #12 20 1 1.0/1.0 0.0/0.0 1 20 15 SPACE -1 0.0/0.0 1 20 25 SPACE -1 0.0/0.0 1 20 25 SPACE -1 0.0/0.0 1 20 25 SPACE -1 0.0/0.0 1 20 -</td><td>Mounting: Surface Wires: 4 Phase in KVA Maine: 10A CKT Circuit Description Wire Breaker A B C Breaker Wire Circuit I Circuit Description 1 Equipment Rack #12 20 1 0.5/0.2 1 20 #12 AV Recept 20 1 20 12 AV Recept 20 1 20 12 AV Recept 20 40 40 20 7 Projection Screen #12 20 1 0.5/0.5 0.5/0.2 1 20 #12 AV Recept 20 40 Recept 20 #12 AV Recept 20 #12</td></td<> <td>Mounting: Surface Wires: 4 Wires: 4 Mains: 100A MCB CKT Circuit Description Wire Brase in KVA B C Brase Wire Circuit Description Vire Vire Circuit Description Vire Vire<!--</td--><td>Mounting: Surface Wires: 4 B C Berse Muss: Circuit Description Circuit Description</td></td>	Mounting: Surface Wires: 4 Phase in KVA CKT Circuit Description Wire Breaker A B C Breaker 1 Equipment Rack #12 20 1 0.5/0.2 1 20 3 Equipment Rack #12 20 1 0.5/0.2 1 20 5 Equipment Rack #12 20 1 0.5/0.5 1 20 7 Projection Screen #12 20 1 0.5/0.5 1 20 11 AV Receptacle #12 20 1 0.0/0.0 1 20 13 Projector Receptacle #12 20 1 1.0/1.0 0.2/1.0 2 20 15 SPACE - - 1 0.0/0.0 1 20 13 Projector Receptacle #12 20 1 0.0/0.0 1 20 23 SPACE - - 1 0.0/0.0 1 <	Mounting: Surface Wires: 4 Phase in kVA Max Max CKT Circuit Description Wire Breaker A B C Breaker Wire 1 Equipment Rack #12 20 1 0.5/0.2 1 20 #12 3 Equipment Rack #12 20 1 0.5/0.2 1 20 #12 7 Projection Screen #12 20 1 0.5/0.5 0.5/0.2 1 20 #12 9 AV Receptacle #18 20 1 1.0/1.0 0.5/0.5 1 20 #12 11 AV Receptacle #12 20 1 1.0/1.0 0.5/0.0 1 20 #12 13 Projector Receptacle #12 20 1 1.0/1.0 0.0/0.0 1 20 15 SPACE -1 0.0/0.0 1 20 25 SPACE -1 0.0/0.0 1 20 25 SPACE -1 0.0/0.0 1 20 25 SPACE -1 0.0/0.0 1 20 -	Mounting: Surface Wires: 4 Phase in KVA Maine: 10A CKT Circuit Description Wire Breaker A B C Breaker Wire Circuit I Circuit Description 1 Equipment Rack #12 20 1 0.5/0.2 1 20 #12 AV Recept 20 1 20 12 AV Recept 20 1 20 12 AV Recept 20 40 40 20 7 Projection Screen #12 20 1 0.5/0.5 0.5/0.2 1 20 #12 AV Recept 20 40 Recept 20 #12 AV Recept 20 #12	Mounting: Surface Wires: 4 Wires: 4 Mains: 100A MCB CKT Circuit Description Wire Brase in KVA B C Brase Wire Circuit Description Vire Vire Circuit Description Vire Vire </td <td>Mounting: Surface Wires: 4 B C Berse Muss: Circuit Description Circuit Description</td>	Mounting: Surface Wires: 4 B C Berse Muss: Circuit Description Circuit Description



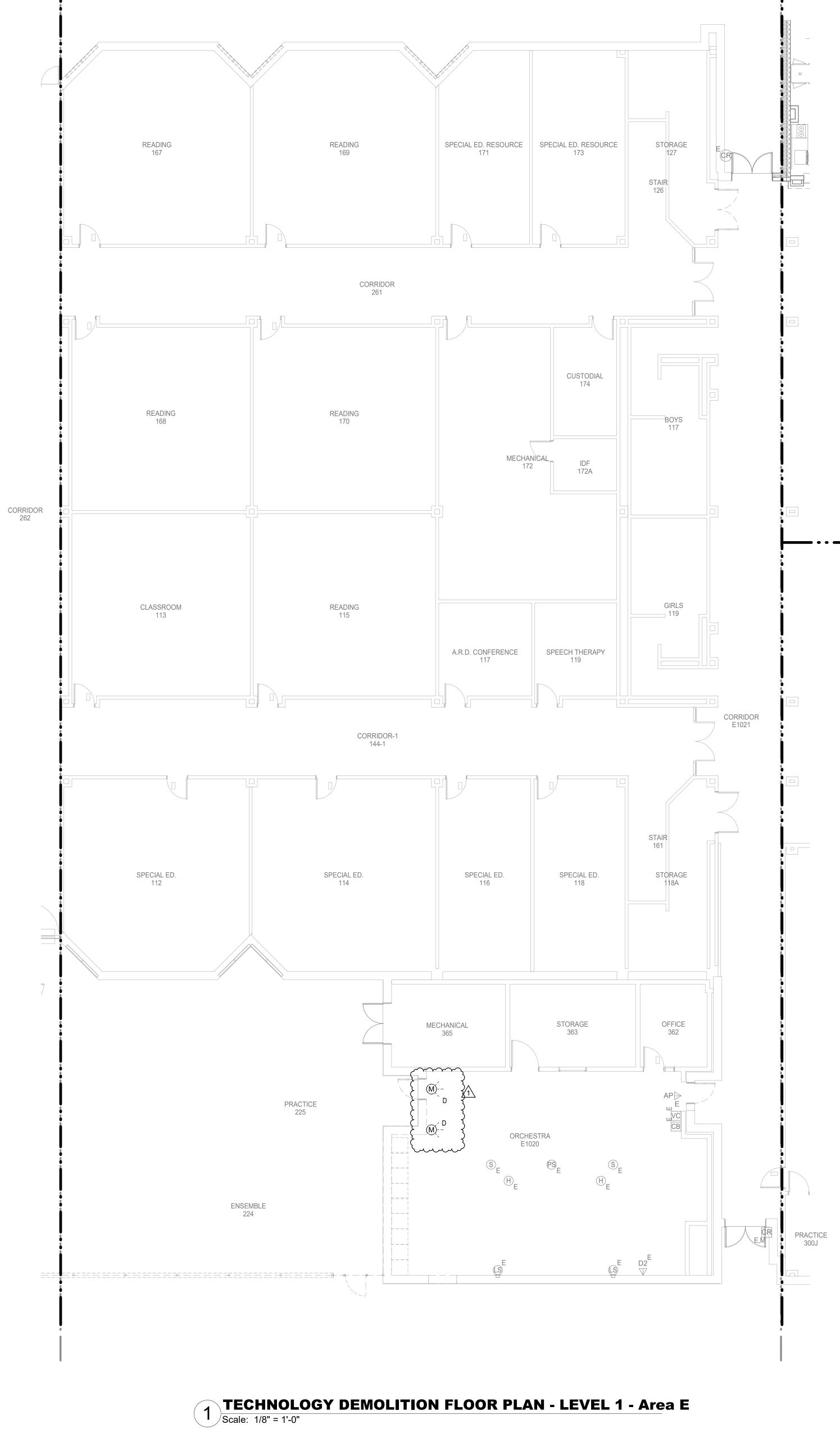
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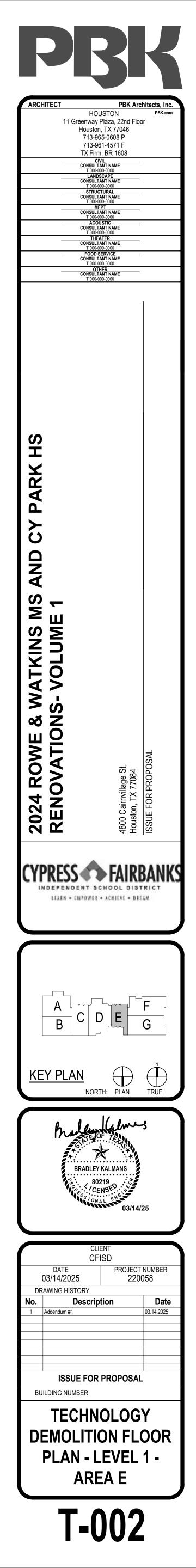
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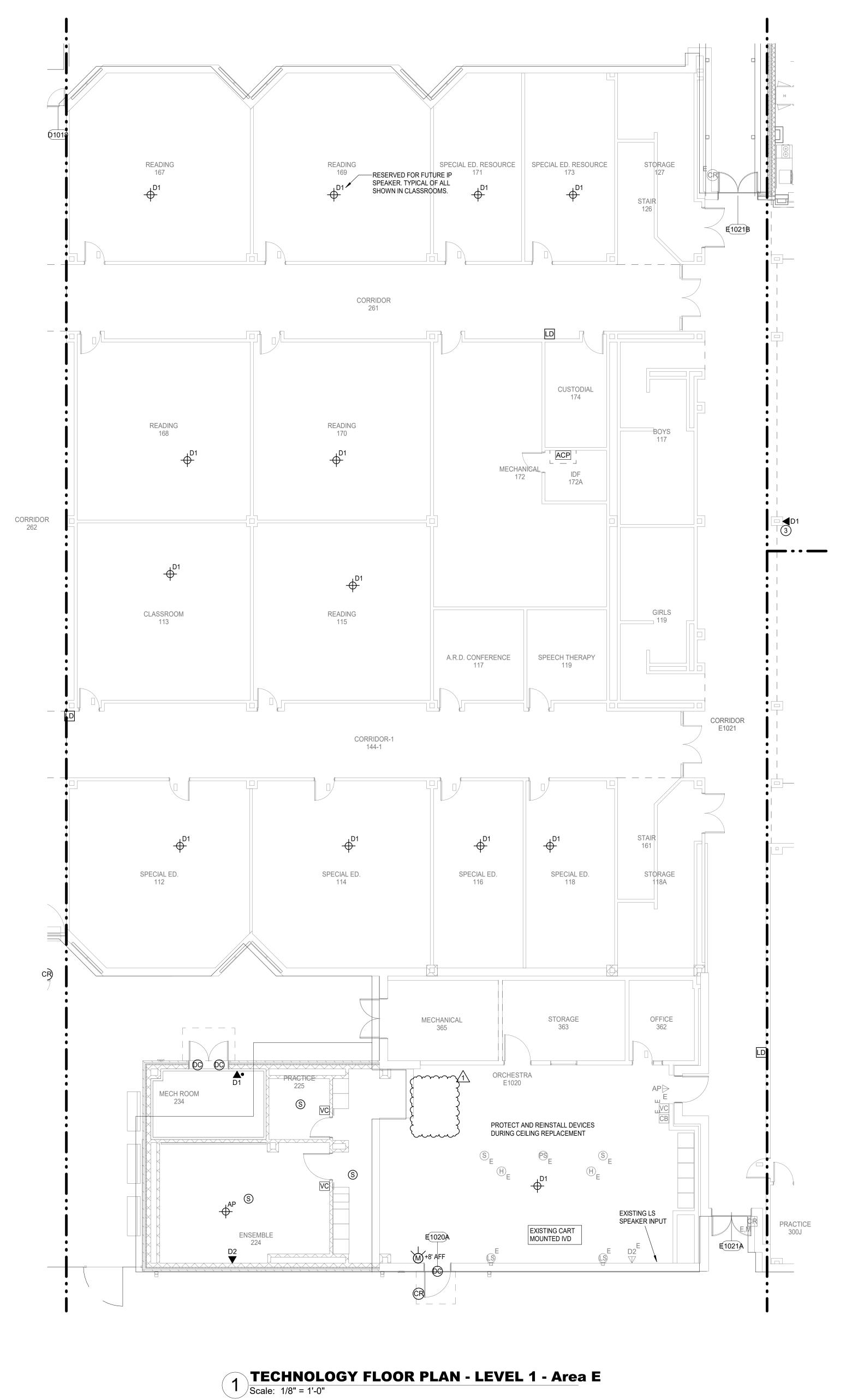


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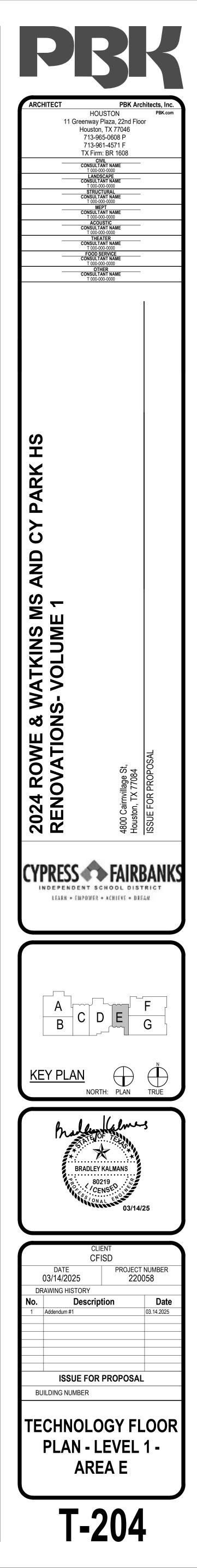
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TECHNOLOGY PLAN GENERAL NOTES

- COORDINATE ALL FINAL MOUNTING HEIGHTS, FOR WALL MOUNTED DEVICES, PRIOR TO ROUGH-IN. COORDINATE WITH ARCHITECT, OWNER AND ENGINEER. Α
- COORDINATE ALL CEILING DEVICE LOCATIONS WITH ARCHITECTURAL DRAWINGS AND INTERIOR DESIGN CONSULTANT(IF APPLICABLE) PRIOR TO ROUGH-IN. В
- С REFERENCE TECHNOLOGY SITE PLAN, COMPOSITE, NOTES & LEGENDS AND DETAILS FOR ADDITIONAL INFORMATION AND DEVICE/OUTLET LOCATIONS.
- CONTRACTOR TO COORDINATE INTERCOM SPEAKER MOUNTING TYPES WITH D ARCHITECTURAL CEILING PLANS PRIOR TO FINAL SPEAKER SELECTION. COORDINATE WITH ENGINEER ON ANY DISCREPANCIES.
- CONTRACTOR TO COORDINATE ALL DROP LOCATIONS WITH FURNITURE. COORDINATE WITH ARCHITECT AND OWNER FOR MORE INFORMATION. F
- ALL EXISTING LOCKDOWN BUTTONS THAT ARE BEING REUSED SHALL HAVE EXISTING F WIRING DEMOLISHED AND REPLACED BY CONTRACTOR WITH HOME RUNS TO HEAD

END.



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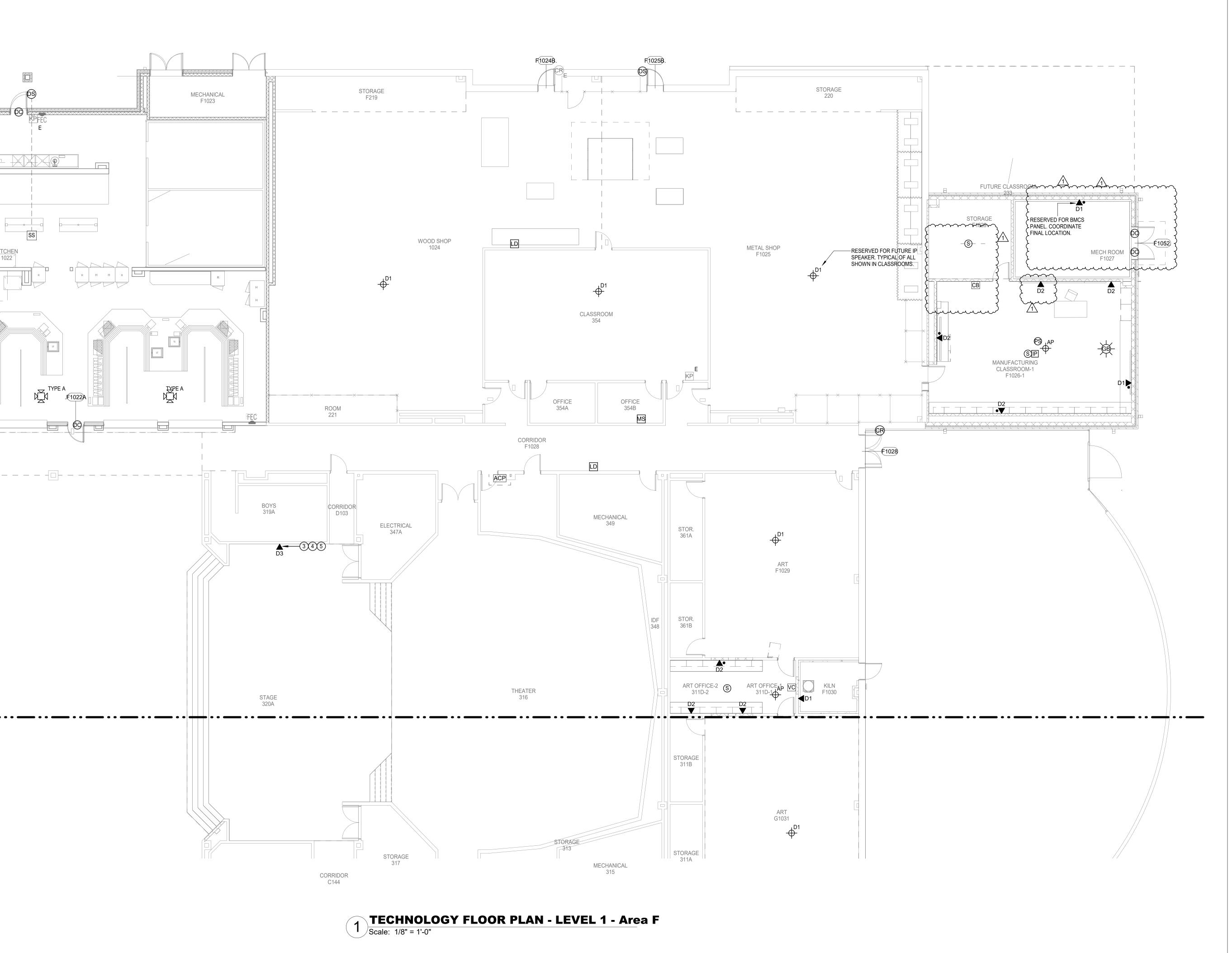
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TYPE A

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TECHNOLOGY PLAN KEYED NOTES

- NETWORK DROP RESERVED FOR WIRELESS CONNECTION TO MARQUEE. COORDINATE FINAL LOCATION WITH BUILDING SIGNAGE. REFERENCE ELECTRICAL SITE PLAN FOR MORE INFORMATION. CONTRACTOR TO PROVIDE AND INSTALL 1-2" CONDUIT CONNECTING NEW ATHLETIC
- STORAGE BUILDING TO EXISTING TRACTOR STORAGE BUILDING TO EXISTING INTRUSION PANEL. CONTRACTOR TO PROVIDE AND INSTALL INTRUSION WIRING TO CONNECT NEW INTRUSION DEVICES TO EXISTING INTRUSION PANEL.
- NETWORK OUTLET RESERVED FOR AV SYSTEM DEVICES AND HEAD END RACK. 3 COORDINATE WITH AV CONSULTANT DRAWINGS ON FINAL AV RACK LOCATION AND DEVICES.
- FIRE ALARM CONTRACTOR TO PROVIDE A CONTACT CLOSURE TO THE AUDIO-VIDEO 4 RACK FOR EMERGENCY MUTING OF AUDIO SYSTEM WHEN SYSTEM IS IN ALARM.
- INTERCOM CONTRACTOR TO PROVIDE A CONTACT CLOSURE TO THE AUDIO-VIDEO RACK FOR LOCKDOWN EMERGENCY MUTING OF AUDIO SYSTEM WHEN SYSTEM IS IN ALARM.

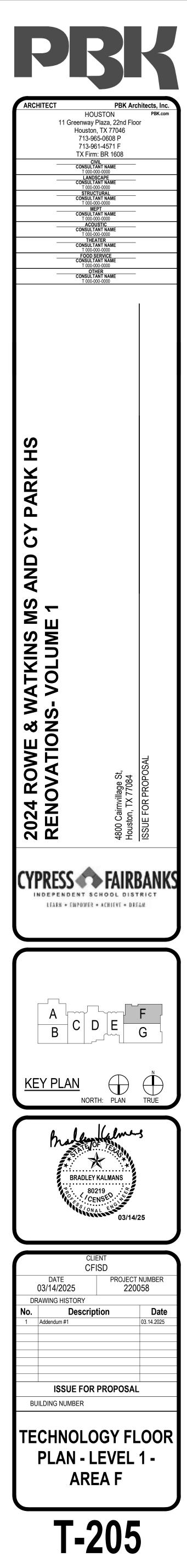
TECHNOLOGY PLAN GENERAL NOTES

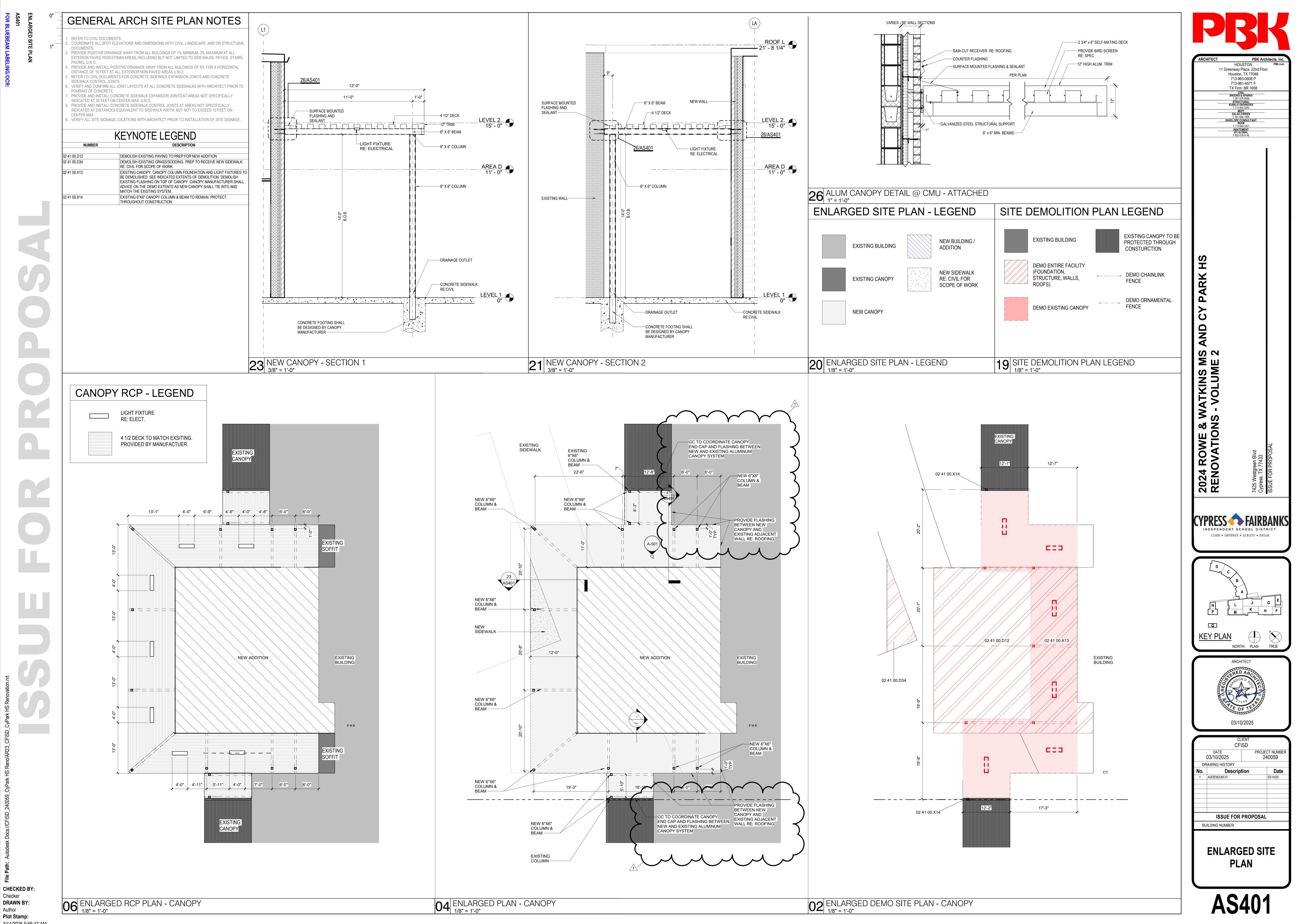
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END.

- COORDINATE ALL FINAL MOUNTING HEIGHTS, FOR WALL MOUNTED DEVICES, PRIOR TO ROUGH-IN. COORDINATE WITH ARCHITECT, OWNER AND ENGINEER.
- COORDINATE ALL CEILING DEVICE LOCATIONS WITH ARCHITECTURAL DRAWINGS AND INTERIOR DESIGN CONSULTANT (IF APPLICABLE) PRIOR TO ROUGH-IN.
- REFERENCE TECHNOLOGY SITE PLAN, COMPOSITE, NOTES & LEGENDS AND DETAILS С FOR ADDITIONAL INFORMATION AND DEVICE/OUTLET LOCATIONS.
- CONTRACTOR TO COORDINATE INTERCOM SPEAKER MOUNTING TYPES WITH D ARCHITECTURAL CEILING PLANS PRIOR TO FINAL SPEAKER SELECTION. COORDINATE WITH ENGINEER ON ANY DISCREPANCIES.
- CONTRACTOR TO COORDINATE ALL DROP LOCATIONS WITH FURNITURE. COORDINATE WITH ARCHITECT AND OWNER FOR MORE INFORMATION.
- ALL EXISTING LOCKDOWN BUTTONS THAT ARE BEING REUSED SHALL HAVE EXISTING F WIRING DEMOLISHED AND REPLACED BY CONTRACTOR WITH HOME RUNS TO HEAD

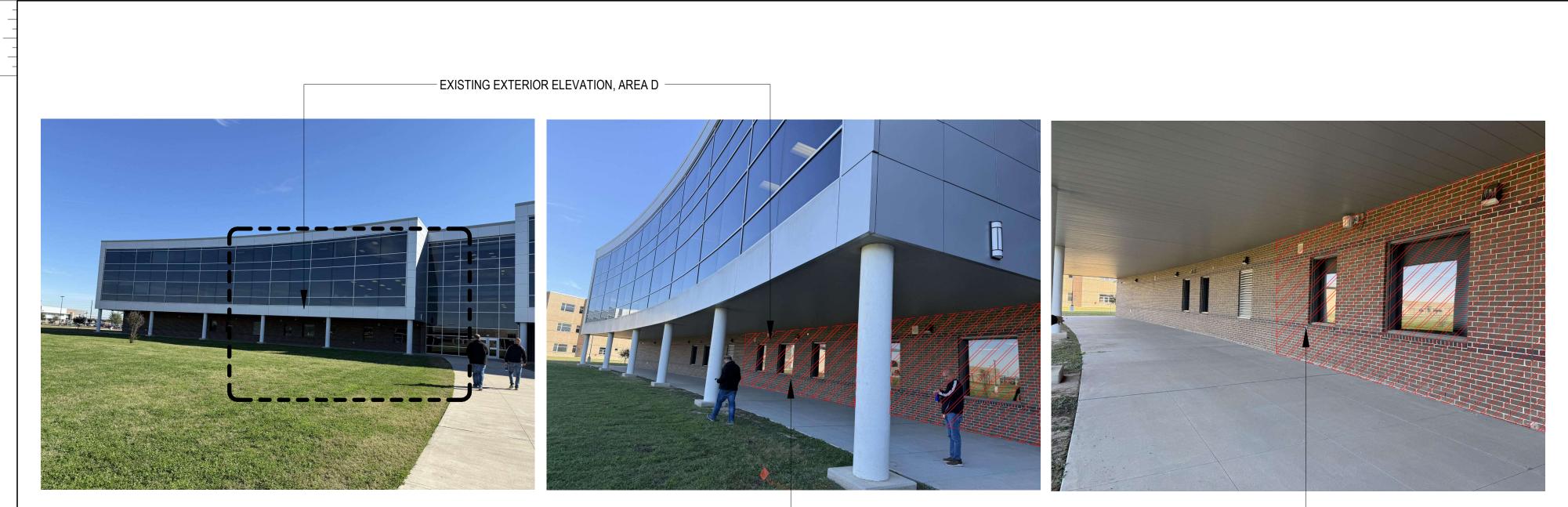




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30 EXISTING PHOTOS - AREA D - EXTERIOR ELEVATION



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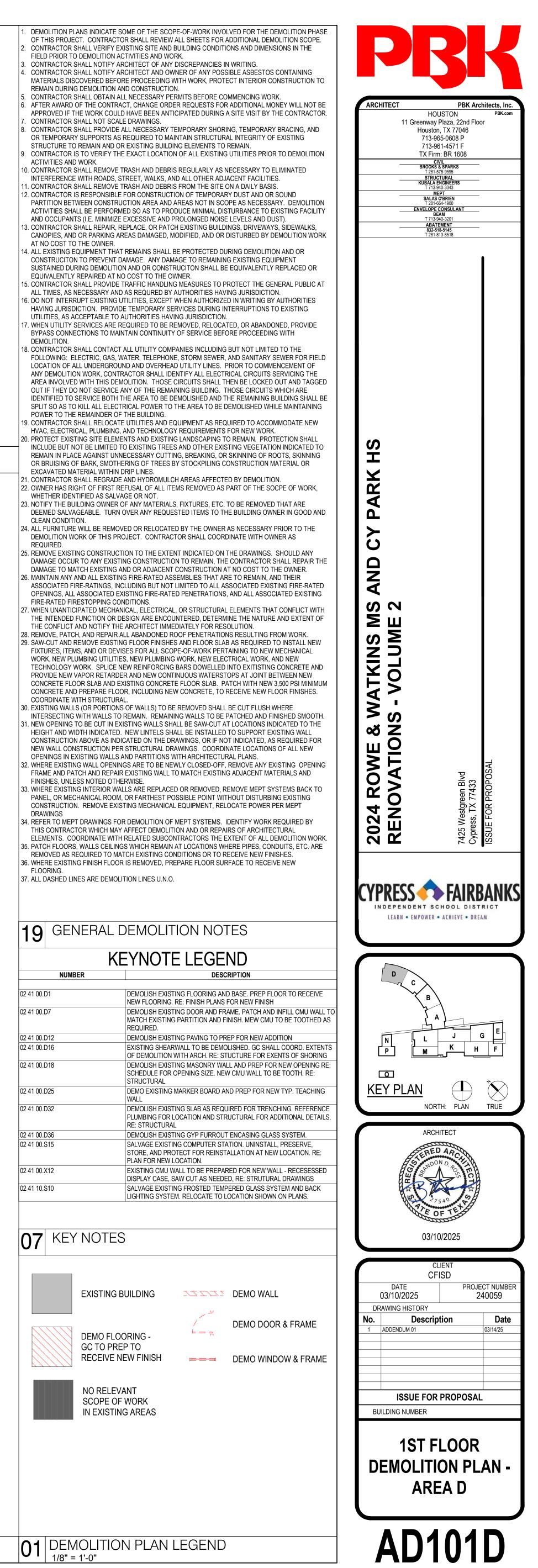


ENLARGED PHOTOS OF EXISTING EXTERIOR WALL TO BE DEMOLISHED, AREA D, PREP FOR NEW CONSTRUCTION

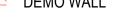


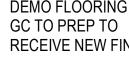
DEMOLISH EXISTING GYP FURROUT ENCASING GLASS SYSTEM.



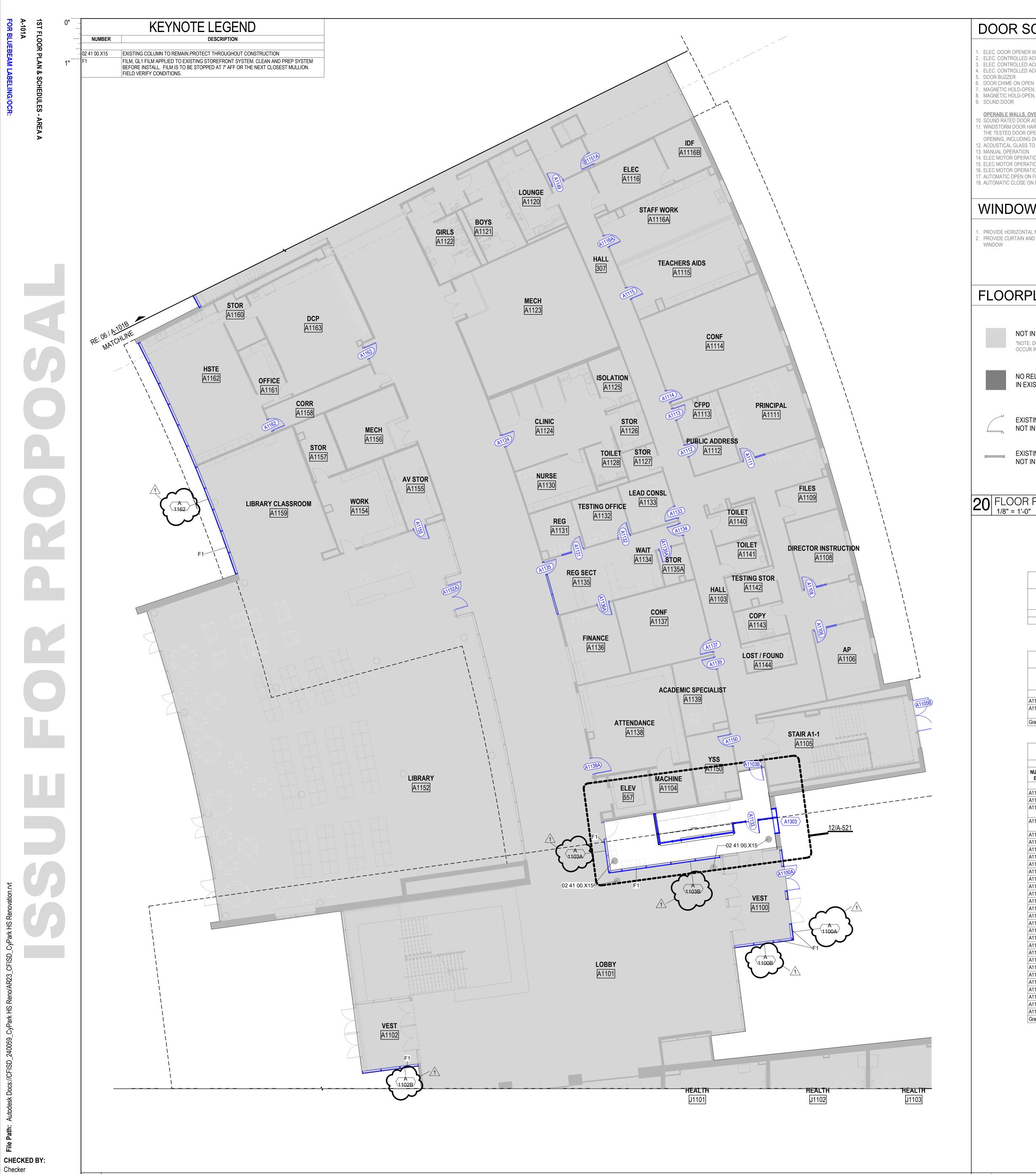












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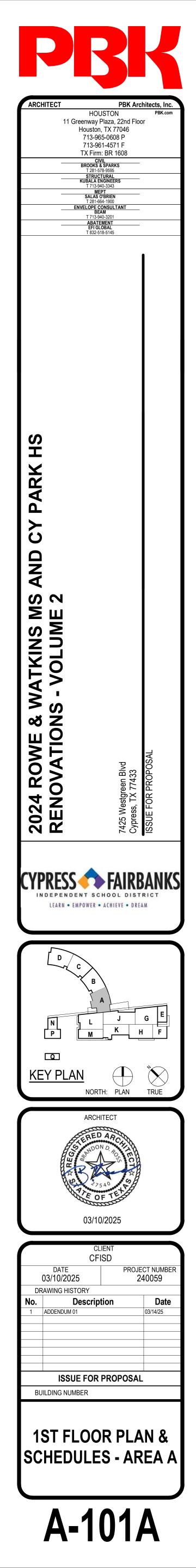
R SCHEDULE REMARKS	 DO NOT SCALE DRAWINGS, WRITTEN DIMENSIONS TAKE PRECEDENCE, CONTACT ARCH IF CLARIFICATION IS NECESSARY IN ORDER TO DETERMINE THE INTENT OF THE CONTRACT DOCUMENTS
R OPENER W/ HC BUTTON ON INSIDE AND OUTSIDE OF DOOR	2. DRAWINGS NOTED AS "N.T.S" OR "NTS" ARE NOT TO SCALE
TROLLED ACCESS HARDWARE WITH CARD READER TROLLED ACCESS HARDWARE WITH PUSH-BUTTON TROLLED ACCESS HARDWARE, ROUGH-IN ONLY	 ALL DIMENSIONS ARE TO STRUCTURAL COLUMN LINES OR THE SURFACE OF PARTITION ASSEMBLY U.N.O.
ZER IE ON OPEN HOLD-OPEN, CONNECT TO FIRE ALARM	 FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS BEFORE COMMENCING WORK. NOTIFY ARCH. OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH AFFECTED WORK
HOLD-OPEN, CONNECT TO SECURITY SYSTEM DR	5. NOTES OR DIMENSIONS NOTED AS "TYPICAL" OR "TYP." OR "TYP" SHALL APPLY TO CONDITIONS THAT ARE THE SAME OR SIMILAR
WALLS, OVERHEAD DOORS AND GRILLES TED DOOR ASSEMBLY, STC AS SPECIFIED M DOOR HARDWARE SHALL BE TESTED AS PART OF A COMPLETE DOOR OPENING ASSEMBLY D DOOR OPENING ASSEMBLY SHALL INCLUDE DOOR HARDWARE. THE ENTIRE DOOR	6. DIMENSIONS NOTED AS "FIELD VERIFY" OR "V.I.F." OR "VIF" SHALL BE MEASURED AND CONFIRMED AT THE PROJECT SITE BY THE CONTRACTOR AND REVIEWED WITH THE ARCH. BEFORE INCORPORATING INTO THE WORK
NCLUDING DOOR HARDWARE, SHALL BE BY DOOR MANUF. L GLASS TO MEET FIRE DOOR ASSEMBLY REQUIREMENTS FOR FIRE RATING INDICATED PERATION	 DIMENSIONS NOTED AS "CLEAR" OR "CLEAR INSIDE" REQUIRE SPECIFIC COORDINATION AMONG DISCIPLINES AND OR MANUFACTURERS
OR OPERATION WITH KEY SWITCH CONTROL, KEY SWITCH ON ONE SIDE OF DOOR ONLY OR OPERATION WITH KEY SWITCH CONTROL, KEY SWITCH ON BOTH SIDES OF DOOR	8. REFER TO PARTITION TYPES ON A-800 SERIES SHEETS
OR OPERATION WITH PUSH-BUTTON CONTROL ON ONE SIDE OF DOOR ONLY COPEN ON FIRE ALARM ACTIVATION U.N.O. CCLOSE ON FIRE ALARM ACTIVATION	 ALL INTERIOR PARTITIONS THIS SHEET, EXCEPT FOR FURR-OUT PARTITIONS, SHALL BE PARTITION TYPEM6U.N.O.
	10. ALL INTERIOR FURR-OUT PARTITIONS THIS SHEET SHALL BE PARTITION TYPEM6U.N.O.
DOW SCHEDULE REMARKS	11. ALIGN FINISHED FACE OF WALLS WHERE WALL PARTITIONS OF DIFFERING THICKNESS ABUT AND OR ADJOIN IN THE SAME PLANE
ORIZONTAL MINI BLINDS URTAIN AND TRACK SYSTEM MOUNTED TO CEILING TILE. CENTER OF TRACK TO BE 4" FROM	12. PROVIDE AND INSTALL CONT. REVEAL TRIM AT JOINT WHERE GYPSUM BOARD WALL PARTITIONS ABUT AND OR ADJOIN MASONRY WALL PARTITIONS IN THE SAME PLANE
URTAIN AND TRACK SYSTEM MOUNTED TO CEILING TILE. CENTER OF TRACK TO BE 4 FROM	13. ALL INTERIOR CMU OUTSIDE CORNERS SHALL HAVE BULLNOSE U.N.O.
	14. ALL DOORS SHALL BE SET 6 INCHES OFF THE ADJACENT PERPENDICULAR WALL ON THE HINGE SIDE OF THE DOOR U.N.O., NOTIFY ARCH. OF ANY DOOR-RELATED CONFLICTS, INCLUDING BUT NOT LIMITED TO CONFLICTS CONCERNING ACCESSIBILITY STANDARDS
	15. ALL DOOR THRESHOLDS AT ALL EXTERIOR DOORS SHALL BE SET IN FULL BED OF SEALANT
ORPLAN LEGEND	16. COORD. ALL ROOF DRAIN LEADER LOCATIONS WITH FLOOR PLAN PRIOR TO FLOOR SLAB CONSTRUCTION
	17. ALL FLOOR SLOPES TO FLOOR DRAINS SHALL NOT EXCEED 1:48
NOT IN CONTRACT	18. PROVIDE AND INSTALL SELF-LEVELING UNDERLAYMENT WHERE UNEVEN FLOOR SLAB EXISTS PRIOR TO INSTALLATION OF FLOOR FINISHES
*NOTE: DOOR HW RELATED SCOPE OF WORK TO OCCUR WHERE NOTED, RE: SPEC	19. COORD. HOUSEKEEPING PAD LOCATIONS AND DIMENSIONS WITH EQUIPMENT TO BE INSTALLED
OGGOR WHERE NOTED, RE. SI EG	20. ALL FLOOR FINISH CHANGES SHALL OCCUR AT THE CENTERLINE OF DOORS U.N.O.
	21. ALL FLOOR FINISH MATERIAL CHANGES SHALL HAVE REDUCER STRIPS
NO RELEVANT SCOPE OF WORK IN EXISTING AREAS	22. ALL REQUIRED ACCESSIBLE CLEARANCES FOR ALL ITEMS, INCLUDING BUT NOT LIMITED TO ALL COUNTER TOPS, ALL PLUMBING FIXTURES, ALL DRINKING FOUNTAINS, ALL ELECTRIC WATER COOLERS, ALL LAVATORIES, ALL URINALS, ALL TOILETS SHALL BE STRICTLY ENFORCED
	23. APPLY BITUMINOUS COATING TO ALL CONCEALED STRUCTURAL STEEL MEMBERS AT ALL EXTERIOR CANOPY LOCATIONS
EXISTING DOOR NOT IN CONTRACT	24. REFER TO OTHER DISCIPLINE DOCUMENTS FOR ADDITIONAL SCOPE OF WORK
EXISTING WINDOW	
DOR PLAN LEGEND	19 GENERAL ARCH PLAN NOTES
= 1'-0"	

			NEW	/ WIND	OW S	CHEI	DULE	E - 1	ST LI	EVEL - A	AREA A						
	SIZE		SIZE		SIZ										DETAILS		
WT	WIDTH	HEIGHT	SILL HEIGHT	ELEVATION	MATERIAL	FINISH	FIRE RATING	STC	GLAZING TYPE	JAMB	HEAD	SILL	REMARKS				
A1303	6' - 0"	6' - 0"	3' - 0"	01/A-501	ALUM	PT							1				

				NEW	DOO	R SCH	IEDU	LE - 1	ST FL	OOR -	- AREA A
		GENERAL									
	SIZE	NxH						DETAIL			
WT	WIDTH	HEIGHT	TYPE	FINISH	MATL	FINISH	HEAD	JAMB	SILL	FIRE RATING	REMARKS
A1103B.	3' - 0"	6' - 10"	NV-1	PL-1	HM	PT	18/A-811	12/A-811	06/A-811		
A1133.	3' - 0"	6' - 9 1/2"	HG-2	ALUM	ALUM	ALUM	14/A-811	08/A-811	02/A-811		CARD READER
Grand total	: 2			1							1

EXISTING DOOR SCHEDULE - 1ST FLOOR - AREA A

	DOOR			P	ANEL				FRAME						0	GENERAL
NUMB						FINIS					DETAIL		FIRE		HARDWARE	
ER	WIDTH	HEIGHT	TYPE	тнк	MATL	Н	TYPE	MATL	FINISH	JAMB	HEAD	SILL	RATING	STC	SET	REMARKS
					•											
A1100A	6' - 0"	7' - 5"		1 3/4"	EXIST.			EXIST.								2N
A1105B	7' - 9"	7' - 3"		1 3/4"	EXIST.			EXIST.								CARD READER
A1105K	3' - 3"	7' - 0"	HG-2	1 3/4"	EXIST.	EXIS T.		EXIST.	<by category=""></by>							CARD READER
A1105L	3' - 3"	7' - 0"		1 3/4"	<by category=""></by>	EXIS T.										
A1106	3' - 0"	6' - 10"		2"	EXIST.			EXIST.								
A1108	3' - 0"	6' - 10"		2"	EXIST.			EXIST.								
A1111	3' - 0"	6' - 10"		2"	EXIST.			EXIST.								
A1112	3' - 0"	6' - 10"		1 3/4"	EXIST.			EXIST.								
A1113	3' - 0"	6' - 10"		1 3/4"	EXIST.			EXIST.								
A1114	3' - 0"	6' - 10"		1 3/4"	EXIST.			EXIST.								
41115	3' - 0"	6' - 10"		1 3/4"	EXIST.			EXIST.								
A1116A	3' - 0"	6' - 10"		1 3/4"	EXIST.			EXIST.								
A1124	3' - 0"	6' - 10"		1 3/4"	EXIST.			EXIST.								
A1131	3' - 0"	6' - 10"		2"	EXIST.			EXIST.								
A1132	3' - 0"	6' - 10"		1 3/4"	EXIST.			EXIST.								
A1133	3' - 0"	6' - 10"		1 3/4"	EXIST.			EXIST.								
A1134	3' - 0"	6' - 10"		1 3/4"	EXIST.			EXIST.								
A1135	3' - 0"	6' - 10"		2"	EXIST.			EXIST.								
A1135A	3' - 0"	6' - 10"		1 3/4"	EXIST.			EXIST.								
A1136A	3' - 0"	6' - 10"		1 3/4"	EXIST.			EXIST.								
A1137	3' - 0"	6' - 10"		1 3/4"	EXIST.			EXIST.								
A1138A	4' - 0"	6' - 10"		1 3/4"	EXIST.			EXIST.								
A1139	3' - 0"	6' - 10"		1 3/4"	EXIST.			EXIST.								
A1149	3' - 0"	6' - 10"		1 3/4"	EXIST.			EXIST.								
41150	3' - 0"	6' - 10"		1 3/4"	EXIST.			EXIST.								
A1152A	6' - 5"	6' - 9"		1 3/4"	EXIST.			EXIST.								
A1155	3' - 0"	6' - 10"		1 3/4"	EXIST.			EXIST.								
A1162	3' - 0"	6' - 10"		1 3/4"	EXIST.			EXIST.								
A1163	3' - 0"	6' - 10"		1 3/4"	EXIST.			EXIST.								
Grand to						L									1	1





PANEL					FRA	ME			GENERAL				
ΡE	THK	MATL	FINISH	TYPE	MATL	FINISH	JAMB	DETAIL HEAD	SILL	FIRE RATING	STC	HARDWARE SET	REMARK
					1								
	1 3/4"												
	1 3/4"												
	1 3/4"												
	1 3/4"												
	1 3/4"												
	1 3/4"												
	1 3/4"												
	1 3/4"												
	1 3/4"												
	2"												
	1 3/4"												
	1 3/4"												CARD READER
	1 3/4"												
	1 3/4"												
	1 3/4"												
	1 3/4"												
	1 3/4"												
	1 3/4"												
	1 3/4"												
	1 3/4"												CARD READER

STAIR B2-1 B1139

LGI B1151

RE:106 | A-10

3.	DRAWINGS NOTED AS "N.T.S" OR "NTS" ARE NOT TO SCALE ALL DIMENSIONS ARE TO STRUCTURAL COLUMN LINES OR THE SURFACE OF PARTITION ASSEMBLY
4.	ALL DIVILINGIONS AND TO STRUCTURAL COLUMIN LINES ON THE SURFACE OF PARTITION ASSEMILT
5.	U.N.O. FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS BEFORE COMMENCING WORK. NOTIFY
	ARCH. OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH AFFECTED WORK NOTES OR DIMENSIONS NOTED AS "TYPICAL" OR "TYP." OR "TYP" SHALL APPLY TO CONDITIONS THAT
6.	ARE THE SAME OR SIMILAR DIMENSIONS NOTED AS "FIELD VERIFY" OR "V.I.F." OR "VIF" SHALL BE MEASURED AND CONFIRMED AT THE PROJECT SITE BY THE CONTRACTOR AND REVIEWED WITH THE ARCH. BEFORE INCORPORATING
7	INTO THE WORK DIMENSIONS NOTED AS "CLEAR" OR "CLEAR INSIDE" REQUIRE SPECIFIC COORDINATION AMONG
	DISCIPLINES AND OR MANUFACTURERS
	ALL INTERIOR PARTITIONS THIS SHEET, EXCEPT FOR FURR-OUT PARTITIONS, SHALL BE PARTITION TYPEM6 U.N.O.
	ALL INTERIOR FURR-OUT PARTITIONS THIS SHEET SHALL BE PARTITION TYPE _M6 U.N.O. ALIGN FINISHED FACE OF WALLS WHERE WALL PARTITIONS OF DIFFERING THICKNESS ABUT AND OR ADJOIN IN THE SAME PLANE
	PROVIDE AND INSTALL CONT. REVEAL TRIM AT JOINT WHERE GYPSUM BOARD WALL PARTITIONS ABU O OR ADJOIN MASONRY WALL PARTITIONS IN THE SAME PLANE
13.	ALL INTERIOR CMU OUTSIDE CORNERS SHALL HAVE BULLNOSE U.N.O.
14.	ALL DOORS SHALL BE SET 6 INCHES OFF THE ADJACENT PERPENDICULAR WALL ON THE HINGE SIDE OF THE DOOR U.N.O., NOTIFY ARCH. OF ANY DOOR-RELATED CONFLICTS, INCLUDING BUT NOT LIMITED TO CONFLICTS CONCERNING ACCESSIBILITY STANDARDS
15.	ALL DOOR THRESHOLDS AT ALL EXTERIOR DOORS SHALL BE SET IN FULL BED OF SEALANT
16.	COORD. ALL ROOF DRAIN LEADER LOCATIONS WITH FLOOR PLAN PRIOR TO FLOOR SLAB CONSTRUCTION
	ALL FLOOR SLOPES TO FLOOR DRAINS SHALL NOT EXCEED 1:48
	PROVIDE AND INSTALL SELF-LEVELING UNDERLAYMENT WHERE UNEVEN FLOOR SLAB EXISTS PRIOF TO INSTALLATION OF FLOOR FINISHES
	COORD. HOUSEKEEPING PAD LOCATIONS AND DIMENSIONS WITH EQUIPMENT TO BE INSTALLED ALL FLOOR FINISH CHANGES SHALL OCCUR AT THE CENTERLINE OF DOORS U.N.O.
21.	ALL FLOOR FINISH MATERIAL CHANGES SHALL HAVE REDUCER STRIPS
	ALL REQUIRED ACCESSIBLE CLEARANCES FOR ALL ITEMS, INCLUDING BUT NOT LIMITED TO ALL COUNTER TOPS, ALL PLUMBING FIXTURES, ALL DRINKING FOUNTAINS, ALL ELECTRIC WATER COOLERS, ALL LAVATORIES, ALL URINALS, ALL TOILETS SHALL BE STRICTLY ENFORCED
	APPLY BITUMINOUS COATING TO ALL CONCEALED STRUCTURAL STEEL MEMBERS AT ALL EXTERIOR CANOPY LOCATIONS
24.	REFER TO OTHER DISCIPLINE DOCUMENTS FOR ADDITIONAL SCOPE OF WORK
2. 3. 4. 5. 6.	ELEC. DOOR OPENER W/ HC BUTTON ON INSIDE AND OUTSIDE OF DOOR ELEC. CONTROLLED ACCESS HARDWARE WITH CARD READER ELEC. CONTROLLED ACCESS HARDWARE WITH PUSH-BUTTON ELEC. CONTROLLED ACCESS HARDWARE, ROUGH-IN ONLY DOOR BUZZER DOOR CHIME ON OPEN MAGNETIC HOLD-OPEN, CONNECT TO FIRE ALARM
2. 3. 4. 5. 6. 7. 8.	ELEC. CONTROLLED ACCESS HARDWARE WITH CARD READER ELEC. CONTROLLED ACCESS HARDWARE WITH PUSH-BUTTON ELEC. CONTROLLED ACCESS HARDWARE, ROUGH-IN ONLY DOOR BUZZER DOOR CHIME ON OPEN
2. 3. 4. 5. 6. 7. 8. 9. 10 11 12 13 14 15	ELEC. CONTROLLED ACCESS HARDWARE WITH CARD READER ELEC. CONTROLLED ACCESS HARDWARE WITH PUSH-BUTTON ELEC. CONTROLLED ACCESS HARDWARE, ROUGH-IN ONLY DOOR BUZZER DOOR CHIME ON OPEN MAGNETIC HOLD-OPEN, CONNECT TO FIRE ALARM MAGNETIC HOLD-OPEN, CONNECT TO SECURITY SYSTEM SOUND DOOR OPERABLE WALLS, OVERHEAD DOORS AND GRILLES SOUND RATED DOOR ASSEMBLY, STC AS SPECIFIED WINDSTORM DOOR HARDWARE SHALL BE TESTED AS PART OF A COMPLETE DOOR OPENING ASSEMI THE TESTED DOOR OPENING ASSEMBLY SHALL INCLUDE DOOR HARDWARE. THE ENTIRE DOOR OPENING, INCLUDING DOOR HARDWARE, SHALL BE BY DOOR MANUF. ACOUSTICAL GLASS TO MEET FIRE DOOR ASSEMBLY REQUIREMENTS FOR FIRE RATING INDICATED MANUAL OPERATION ELEC MOTOR OPERATION WITH KEY SWITCH CONTROL, KEY SWITCH ON ONE SIDE OF DOOR ONLY ELEC MOTOR OPERATION WITH KEY SWITCH CONTROL, KEY SWITCH ON BOTH SIDES OF DOOR
2. 3. 4. 5. 6. 7. 8. 9. 10 11 12 13 14 15 16 17	ELEC. CONTROLLED ACCESS HARDWARE WITH CARD READER ELEC. CONTROLLED ACCESS HARDWARE WITH PUSH-BUTTON ELEC. CONTROLLED ACCESS HARDWARE, ROUGH-IN ONLY DOOR BUZZER DOOR CHIME ON OPEN MAGNETIC HOLD-OPEN, CONNECT TO FIRE ALARM MAGNETIC HOLD-OPEN, CONNECT TO SECURITY SYSTEM SOUND DOOR OPERABLE WALLS, OVERHEAD DOORS AND GRILLES SOUND RATED DOOR ASSEMBLY, STC AS SPECIFIED WINDSTORM DOOR HARDWARE SHALL BE TESTED AS PART OF A COMPLETE DOOR OPENING ASSEMI THE TESTED DOOR OPENING ASSEMBLY SHALL INCLUDE DOOR HARDWARE. THE ENTIRE DOOR OPENING, INCLUDING DOOR HARDWARE, SHALL BE BY DOOR MANUF. ACOUSTICAL GLASS TO MEET FIRE DOOR ASSEMBLY REQUIREMENTS FOR FIRE RATING INDICATED MANUAL OPERATION ELEC MOTOR OPERATION WITH KEY SWITCH CONTROL, KEY SWITCH ON ONE SIDE OF DOOR ONLY
2. 3. 4. 5. 6. 7. 8. 9. 10 11 12 13 14 15 16 17	ELEC. CONTROLLED ACCESS HARDWARE WITH CARD READER ELEC. CONTROLLED ACCESS HARDWARE WITH PUSH-BUTTON ELEC. CONTROLLED ACCESS HARDWARE, ROUGH-IN ONLY DOOR BUZZER DOOR CHIME ON OPEN MAGNETIC HOLD-OPEN, CONNECT TO FIRE ALARM MAGNETIC HOLD-OPEN, CONNECT TO SECURITY SYSTEM SOUND DOOR OPERABLE WALLS, OVERHEAD DOORS AND GRILLES SOUND RATED DOOR ASSEMBLY, STC AS SPECIFIED WINDSTORM DOOR HARDWARE SHALL BE TESTED AS PART OF A COMPLETE DOOR OPENING ASSEM THE TESTED DOOR OPENING ASSEMBLY SHALL INCLUDE DOOR HARDWARE. THE ENTIRE DOOR OPENING, INCLUDING DOOR HARDWARE, SHALL BE BY DOOR MANUF. ACOUSTICAL GLASS TO MEET FIRE DOOR ASSEMBLY REQUIREMENTS FOR FIRE RATING INDICATED MANUAL OPERATION ELEC MOTOR OPERATION WITH KEY SWITCH CONTROL, KEY SWITCH ON ONE SIDE OF DOOR ONLY ELEC MOTOR OPERATION WITH KEY SWITCH CONTROL, KEY SWITCH ON BOTH SIDES OF DOOR ELEC MOTOR OPERATION WITH PUSH-BUTTON CONTROL ON ONE SIDE OF DOOR ONLY AUTOMATIC OPEN ON FIRE ALARM ACTIVATION U.N.O.
2. 3. 4. 5. 6. 7. 8. 9. 10 11 12 13 14 15 16 17 18	ELEC. CONTROLLED ACCESS HARDWARE WITH CARD READER ELEC. CONTROLLED ACCESS HARDWARE, ROUGH-IN ONLY DOOR BUZZER DOOR CHIME ON OPEN MAGNETIC HOLD-OPEN, CONNECT TO FIRE ALARM MAGNETIC HOLD-OPEN, CONNECT TO SECURITY SYSTEM SOUND DOOR OPERABLE WALLS, OVERHEAD DOORS AND GRILLES SOUND RATED DOOR ASSEMBLY, STC AS SPECIFIED WINDSTORM DOOR HARDWARE SHALL BE TESTED AS PART OF A COMPLETE DOOR OPENING ASSEMI THE TESTED DOOR OPENING ASSEMBLY SHALL INCLUDE DOOR HARDWARE. THE ENTIRE DOOR OPENING, INCLUDING DOOR HARDWARE, SHALL BE BY DOOR MANUF. ACOUSTICAL GLASS TO MEET FIRE DOOR ASSEMBLY REQUIREMENTS FOR FIRE RATING INDICATED MANUAL OPERATION ELEC MOTOR OPERATION WITH KEY SWITCH CONTROL, KEY SWITCH ON ONE SIDE OF DOOR ONLY ELEC MOTOR OPERATION WITH KEY SWITCH CONTROL, KEY SWITCH ON BOTH SIDES OF DOOR ELEC MOTOR OPERATION WITH PUSH-BUTTON CONTROL ON ONE SIDE OF DOOR ONLY AUTOMATIC OPEN ON FIRE ALARM ACTIVATION U.N.O. AUTOMATIC CLOSE ON FIRE ALARM ACTIVATION U.N.O.
2. 3. 4. 5. 6. 7. 8. 9. 10 11 12 13 14 15 16 17	ELEC. CONTROLLED ACCESS HARDWARE WITH CARD READER ELEC. CONTROLLED ACCESS HARDWARE, ROUGH-IN ONLY DOOR BUZZER DOOR CHIME ON OPEN MAGNETIC HOLD-OPEN, CONNECT TO FIRE ALARM MAGNETIC HOLD-OPEN, CONNECT TO SECURITY SYSTEM SOUND DOOR OPERABLE WALLS. OVERHEAD DOORS AND GRILLES SOUND RATED DOOR ASSEMBLY, STC AS SPECIFIED WINDSTORM DOOR HARDWARE SHALL BE TESTED AS PART OF A COMPLETE DOOR OPENING ASSEMI THE TESTED DOOR OPENING ASSEMBLY SHALL INCLUDE DOOR HARDWARE. THE ENTIRE DOOR OPENING, INCLUDING DOOR HARDWARE, SHALL BE BY DOOR MANUF. ACOUSTICAL GLASS TO MEET FIRE DOOR ASSEMBLY REQUIREMENTS FOR FIRE RATING INDICATED MANUAL OPERATION ELEC MOTOR OPERATION WITH KEY SWITCH CONTROL, KEY SWITCH ON ONE SIDE OF DOOR ONLY ELEC MOTOR OPERATION WITH KEY SWITCH CONTROL, KEY SWITCH ON BOTH SIDES OF DOOR ELEC MOTOR OPERATION WITH PUSH-BUTTON CONTROL ON ONE SIDE OF DOOR ONLY AUTOMATIC OPEN ON FIRE ALARM ACTIVATION U.N.O. AUTOMATIC CLOSE ON FIRE ALARM ACTIVATION U.N.O.
2. 3. 4. 5. 6. 7. 8. 9. 10 11 12 13 14 15 16 17 18	ELEC. CONTROLLED ACCESS HARDWARE WITH CARD READER ELEC. CONTROLLED ACCESS HARDWARE WITH PUSH-BUTTON ELEC. CONTROLLED ACCESS HARDWARE, ROUGH-IN ONLY DOOR BUZZER DOOR CHIME ON OPEN MAGNETIC HOLD-OPEN, CONNECT TO FIRE ALARM MAGNETIC HOLD-OPEN, CONNECT TO SECURITY SYSTEM SOUND DOOR DERABLE WALLS, OVERHEAD DOORS AND GRILLES SOUND RATED DOOR ASSEMBLY, STC AS SPECIFIED WINDSTORM DOOR HARDWARE SHALL BE TESTED AS PART OF A COMPLETE DOOR OPENING ASSEMINTHE TESTED DOOR OPENING ASSEMBLY SHALL INCLUDE DOOR HARDWARE. THE ENTIRE DOOR OPENING, INCLUDING DOOR HARDWARE, SHALL BE BY DOOR MANUF. ACOUSTICAL GLASS TO MEET FIRE DOOR ASSEMBLY REQUIREMENTS FOR FIRE RATING INDICATED MANUAL OPERATION ELEC MOTOR OPERATION WITH KEY SWITCH CONTROL, KEY SWITCH ON ONE SIDE OF DOOR ONLY AUTOMATIC OPEN ON FIRE ALARM ACTIVATION U.N.O. AUTOMATIC CLOSE ON FIRE ALARM ACTIVATION U.N.O. AUTOMATIC CLOSE ON FIRE ALARM ACTIVATION BOOR SCHEDULE REMARKS

FLOORPLAN LEGEND

NOT IN CONTRACT *NOTE: DOOR HW RELATED SCOPE OF WORK TO OCCUR WHERE NOTED, RE: SPEC

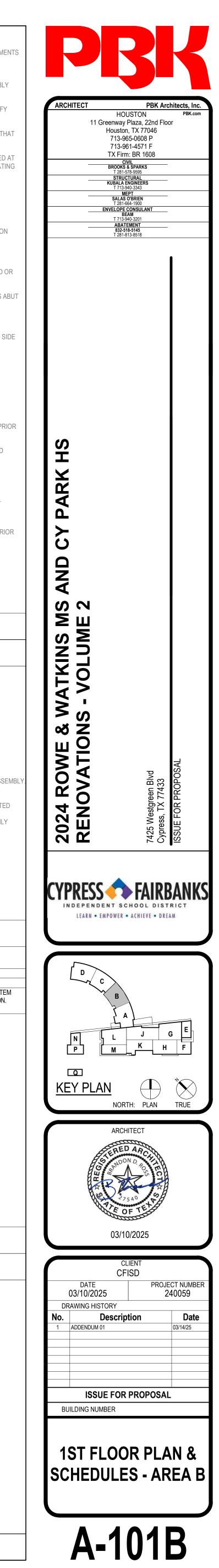


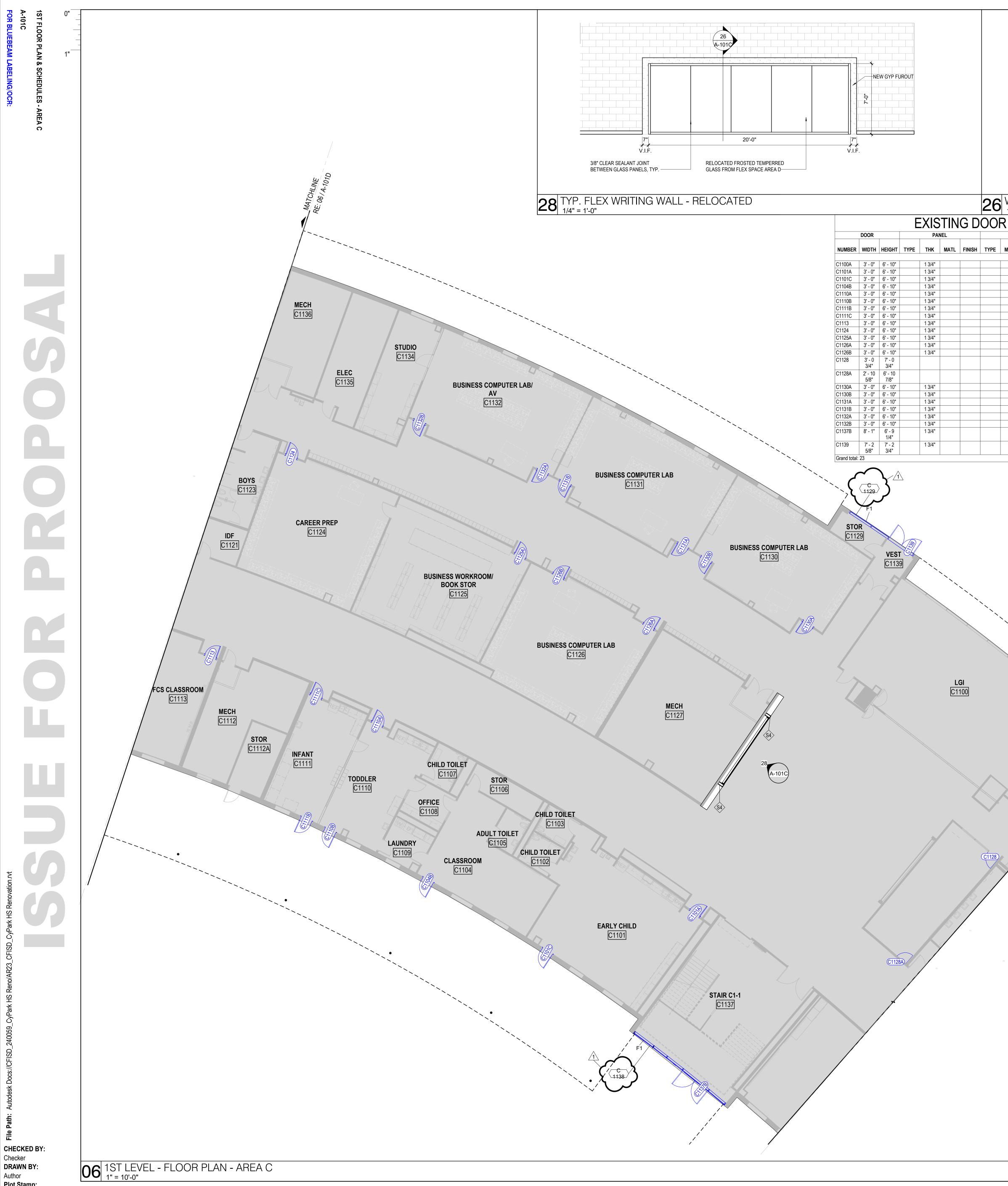
NO RELEVANT SCOPE OF WORK IN EXISTING AREAS



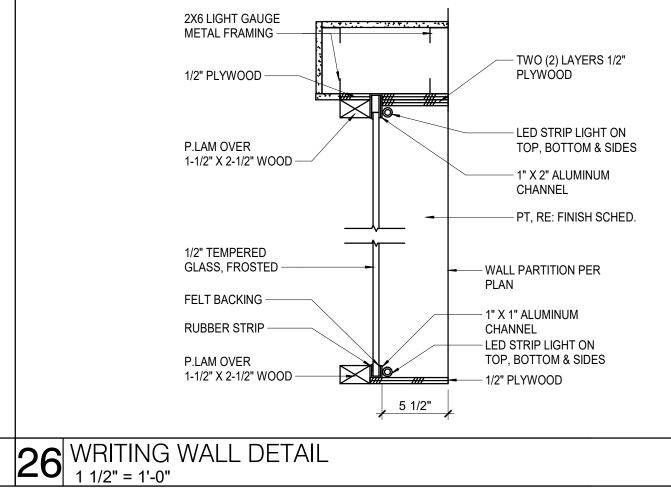
EXISTING WINDOW NOT IN CONTRACT

01 FLOOR PLAN LEGEND



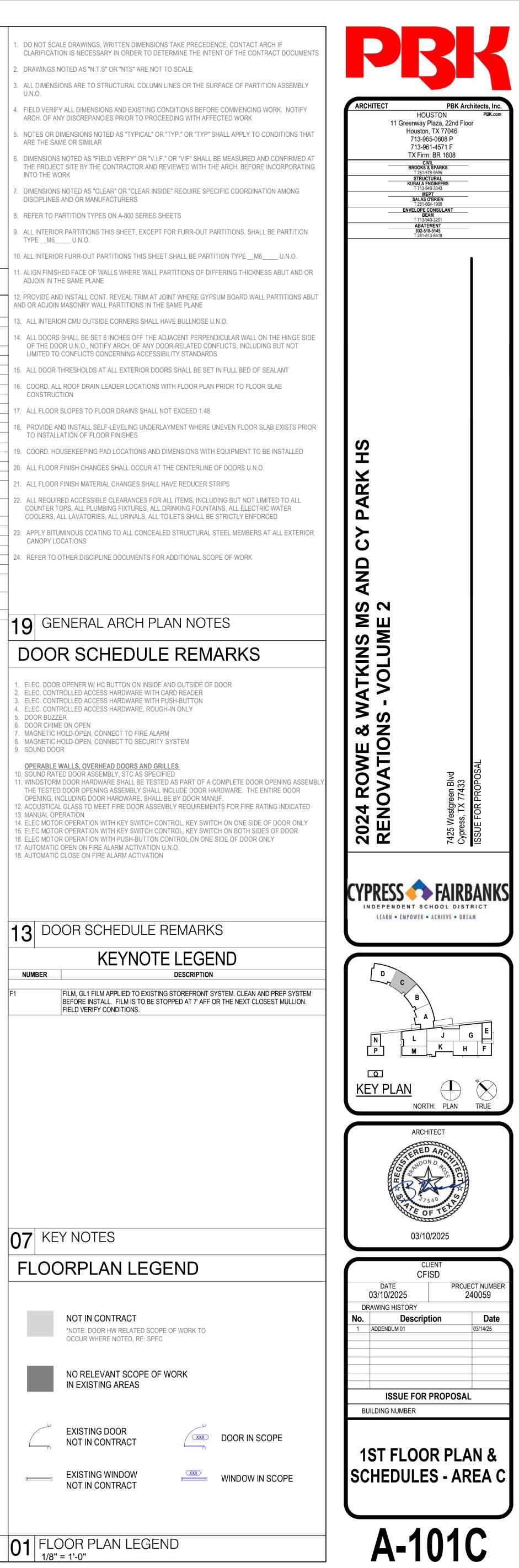


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EXISTING DOOR SCHEDULE - FIRST FLOOR - AREA C GENERAL

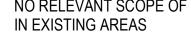
			DETAIL		FIRE		HARDWARE	
IATL	FINISH	JAMB	HEAD	SILL	RATING	STC	SET	REMARKS
								NEW CARD READER
								NEW CARD READER
								NEW CARD READER
								NEW CARD READER
								CARD READER
								REPLACE CARD READER
	1	1	1	1	1 1		1	1





FILM, GL1 FILM APPLIED TO EXISTING STOREFRONT SYSTEM. CLEAN AND PREP SYS
BEFORE INSTALL. FILM IS TO BE STOPPED AT 7' AFF OR THE NEXT CLOSEST MULLIC
FIELD VERIFY CONDITIONS.







FINISH SCHEDULE NOTES AND REMARKS

GENERAL NOTES: ALL SCHEDULED DIRECTIONS (NORTH, EAST, SOUTH, WEST) ARE PER PLAN DIRECTIONS, NOT TRUE COMPASS DIRECTIONS.

ALL FINISH MATERIALS SHALL MEET FLAME SPREAD RATINGS PER THE BUILDING CODE.

PROTECT ALL FINISHED FLOORING SURFACES FROM DAMAGE DURING ALL CONSTRUCTION PHASES.

CARPET PATTERNS SHALL RUN PARALLEL TO CORRIDOR U.N.O.

PROVIDE AND INSTALL BULLNOSE TRIM AT ALL TRANSITIONS FROM CERAMIC WALL TILE TO OTHER MATERIALS U.N.O.

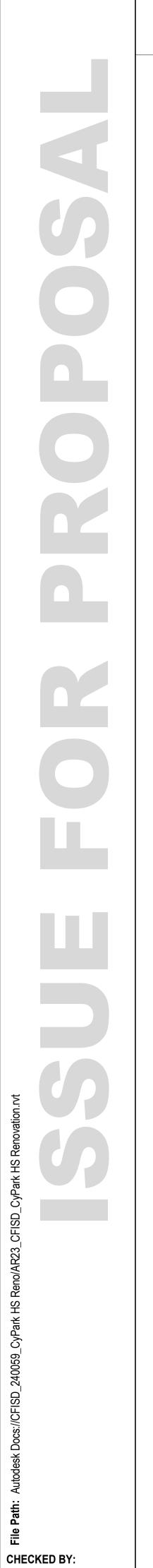
REMARKS:

. 3/4" TREATED PLYWOOD WAINSCOT FULL HEIGHT ALL AROUND, PAINT

WINDOW SCHEDULE REMARKS

PROVIDE HORIZONTAL MINI BLINDS . PROVIDE CURTAIN AND TRACK SYSTEM MOUNTED TO CEILING TILE. CENTER OF TRACK TO BE 4" FROM WINDOW

			E	EXIS	5 I IN	(
	DOOR			PA	NEL	- -
NUMBER	WIDTH	HEIGHT	TYPE	тнк	MATL	
D1103	3' - 0"	6' - 10"		1 3/4"		1
D1104A	3' - 0"	6' - 10"		1 3/4"		Ī
D1104B	3' - 0"	6' - 10"		1 3/4"		T
D1106	3' - 0"	6' - 10"		1 3/4"		1
D1110A	3' - 0"	6' - 10"		1 3/4"		1
D1110B	3' - 0"	6' - 10"		1 3/4"		
D1115	6' - 3"	6' - 11"		1 3/4"		
D1121A	4' - 0"	6' - 10"		1 3/4"		1
D1121B	4' - 0"	6' - 10"		1 3/4"		
D1137A	3' - 0"	6' - 10"		1 3/4"		1
D1137B	3' - 0"	6' - 10"		1 3/4"		1
D1139B	8' - 0"	7' - 3"		1 3/4"		1
D1140A	3' - 0"	6' - 10"		1 3/4"		
D1140B	3' - 0"	6' - 10"		1 3/4"		
D1143A	3' - 0"	6' - 10"		1 3/4"		
D1143B	3' - 0"	6' - 10"		1 3/4"		1
D1145A	4' - 0"	6' - 10"		1 3/4"		1
D1145B	4' - 0"	6' - 10"		1 3/4"		
D1146A	5' - 10"	7' - 0"		1 3/4"		1
Grand total:	19					

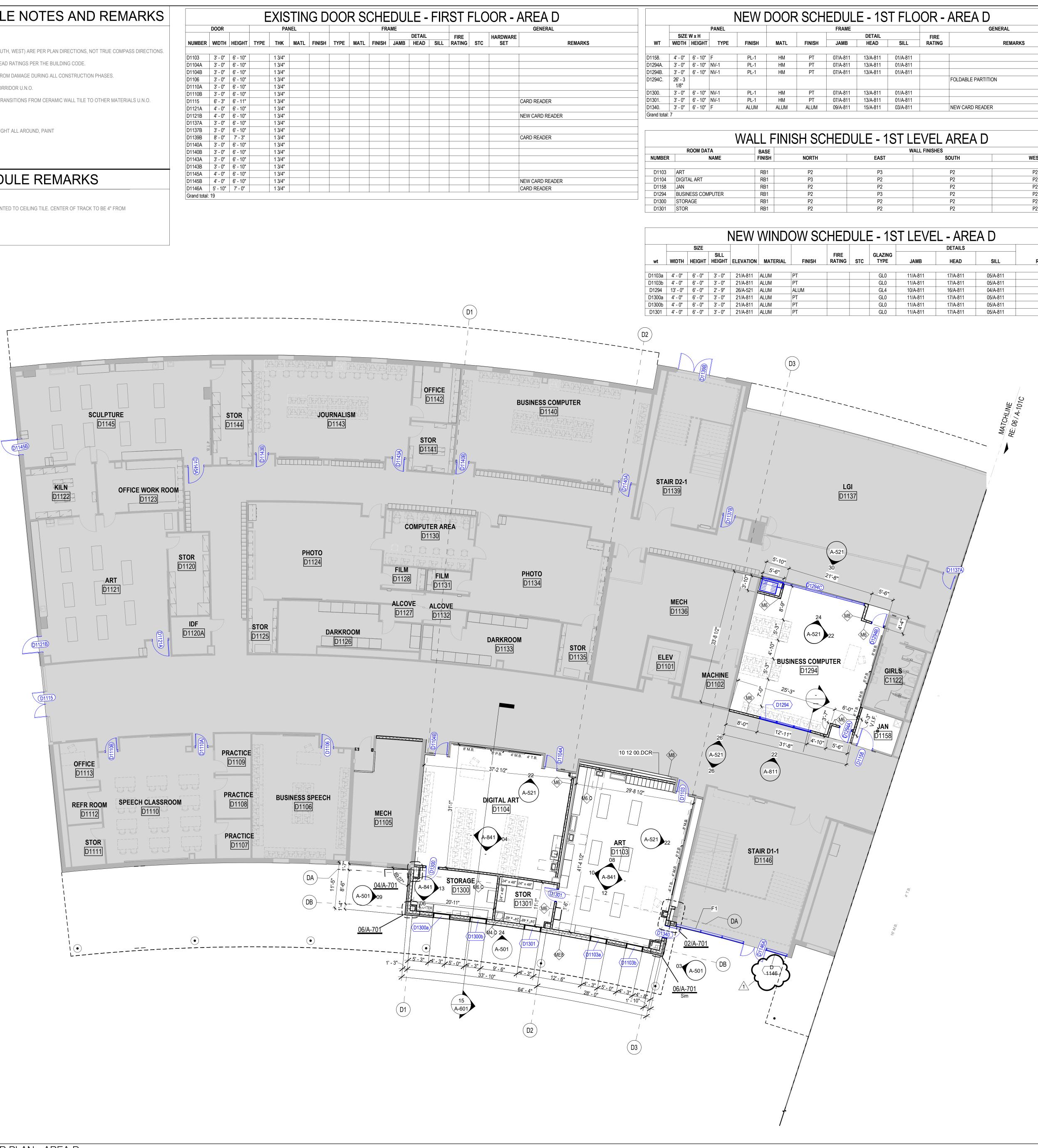


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	FRAME				GENERAL					
		DETAIL		FIRE						
INISH	JAMB	HEAD	SILL	RATING	REMARKS					
PT	07/A-811	13/A-811	01/A-811							
PT	07/A-811	13/A-811	01/A-811							
PT	07/A-811	13/A-811	01/A-811							
					FOLDABLE PARTITION					
PT	07/A-811	13/A-811	01/A-811							
PT	07/A-811	13/A-811	01/A-811							
ALUM	09/A-811	15/A-811	03/A-811		NEW CARD READER					

	W	ALL FINISHES	
ORTH	EAST	SOUTH	WEST
P2	P3	P2	P2
P3	P2	P2	P2
P2	P2	P2	P2
P2	P3	P2	P2
P2	P2	P2	P2
P2	P2	P2	P2

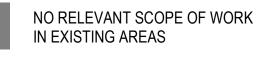
					DETAILS		
NISH	FIRE RATING	STC	GLAZING TYPE	JAMB	HEAD	SILL	REMARKS
			GL0	11/A-811	17/A-811	05/A-811	1
			GL0	11/A-811	17/A-811	05/A-811	1
			GL4	10/A-811	16/A-811	04/A-811	2
			GL0	11/A-811	17/A-811	05/A-811	1
			GL0	11/A-811	17/A-811	05/A-811	1
			GL0	11/A-811	17/A-811	05/A-811	1

1 <u>0 12 00.</u> -1	DCR	RECESSED DISPLAY CASE, 10'-0" W X 4'-0" H X 14" D, RE: 19/A-841 FILM, GL1 FILM APPLIED TO EXISTING STOREFRONT SYSTEM. CLEAN AND PREP SYSTE BEFORE INSTALL. FILM IS TO BE STOPPED AT 7' AFF OR THE NEXT CLOSEST MULLION. FIELD VERIFY CONDITIONS.
	IBER	KEYNOTE LEGEND DESCRIPTION
16. ELE 17. AUT	C MOTO	R OPERATION WITH PUSH-BUTTON CONTROL ON ONE SIDE OF DOOR ONLY OPEN ON FIRE ALARM ACTIVATION U.N.O. CLOSE ON FIRE ALARM ACTIVATION
OPI 12. ACC 13. MAI 14. ELE	ENING, IN DUSTICAI NUAL OP C MOTO	D DOOR OPENING ASSEMBLY SHALL INCLUDE DOOR HARDWARE. THE ENTIRE DOOR NCLUDING DOOR HARDWARE, SHALL BE BY DOOR MANUF. L GLASS TO MEET FIRE DOOR ASSEMBLY REQUIREMENTS FOR FIRE RATING INDICATE ERATION R OPERATION WITH KEY SWITCH CONTROL, KEY SWITCH ON ONE SIDE OF DOOR ONLY R OPERATION WITH KEY SWITCH CONTROL, KEY SWITCH ON BOTH SIDES OF DOOR
9. SOU <u>OPI</u> 10. SOU 11. WIN	JND DOC ERABLE V JND RATI	OR WALLS, OVERHEAD DOORS AND GRILLES ED DOOR ASSEMBLY, STC AS SPECIFIED // DOOR HARDWARE SHALL BE TESTED AS PART OF A COMPLETE DOOR OPENING ASSE
5. DO 6. DO 7. MA	OR BUZZ OR CHIMI GNETIC H	ROLLED ACCESS HARDWARE, ROUGH-IN ONLY ER E ON OPEN HOLD-OPEN, CONNECT TO FIRE ALARM HOLD-OPEN, CONNECT TO SECURITY SYSTEM
1. ELE 2. ELE 3. ELE	C. DOOR C. CONT C. CONT	R OPENER W/ HC BUTTON ON INSIDE AND OUTSIDE OF DOOR ROLLED ACCESS HARDWARE WITH CARD READER ROLLED ACCESS HARDWARE WITH PUSH-BUTTON
19		ENERAL ARCH PLAN NOTES
		OCATIONS OTHER DISCIPLINE DOCUMENTS FOR ADDITIONAL SCOPE OF WORK
CO	OLERS, A	OPS, ALL PLUMBING FIXTURES, ALL DRINKING FOUNTAINS, ALL ELECTRIC WATER ALL LAVATORIES, ALL URINALS, ALL TOILETS SHALL BE STRICTLY ENFORCED JMINOUS COATING TO ALL CONCEALED STRUCTURAL STEEL MEMBERS AT ALL EXTERIO
22. AL	L REQUIF	FINISH MATERIAL CHANGES SHALL HAVE REDUCER STRIPS
		FINISH CHANGES SHALL OCCUR AT THE CENTERLINE OF DOORS U.N.O.
TC	INSTALL	ND INSTALL SELF-LEVELING UNDERLAYMENT WHERE UNEVEN FLOOR SLAB EXISTS PRI LATION OF FLOOR FINISHES DUSEKEEPING PAD LOCATIONS AND DIMENSIONS WITH EQUIPMENT TO BE INSTALLED
CC	NSTRUC	
		THRESHOLDS AT ALL EXTERIOR DOORS SHALL BE SET IN FULL BED OF SEALANT
OF	THE DO	S SHALL BE SET 6 INCHES OFF THE ADJACENT PERPENDICULAR WALL ON THE HINGE SI OR U.N.O., NOTIFY ARCH. OF ANY DOOR-RELATED CONFLICTS, INCLUDING BUT NOT O CONFLICTS CONCERNING ACCESSIBILITY STANDARDS
13. AL	L INTERIO	OR CMU OUTSIDE CORNERS SHALL HAVE BULLNOSE U.N.O.
12. PRC	VIDE AN	ID INSTALL CONT. REVEAL TRIM AT JOINT WHERE GYPSUM BOARD WALL PARTITIONS A
11. ALI(GN FINISI	HED FACE OF WALLS WHERE WALL PARTITIONS OF DIFFERING THICKNESS ABUT AND C
TYF	PEM6_	IR PARTITIONS THIS SHEET, EXCEPT FOR FURR-OUT PARTITIONS, SHALL BE PARTITION U.N.O. IR FURR-OUT PARTITIONS THIS SHEET SHALL BE PARTITION TYPE _M6 U.N.O.
		ARTITION TYPES ON A-800 SERIES SHEETS
		S NOTED AS "CLEAR" OR "CLEAR INSIDE" REQUIRE SPECIFIC COORDINATION AMONG AND OR MANUFACTURERS
THE		S NOTED AS "FIELD VERIFY" OR "V.I.F." OR "VIF" SHALL BE MEASURED AND CONFIRMED CT SITE BY THE CONTRACTOR AND REVIEWED WITH THE ARCH. BEFORE INCORPORATI ORK
ARE	THE SA	DIMENSIONS NOTED AS "TYPICAL" OR "TYP." OR "TYP" SHALL APPLY TO CONDITIONS TH ME OR SIMILAR
		Y ALL DIMENSIONS AND EXISTING CONDITIONS BEFORE COMMENCING WORK. NOTIFY NY DISCREPANCIES PRIOR TO PROCEEDING WITH AFFECTED WORK
3. ALL U.N		IONS ARE TO STRUCTURAL COLUMN LINES OR THE SURFACE OF PARTITION ASSEMBLY

07 KEY NOTES

FLOORPLAN LEGEND

NOT IN CONTRACT *NOTE: DOOR HW RELATED SCOPE OF WORK TO OCCUR WHERE NOTED, RE: SPEC

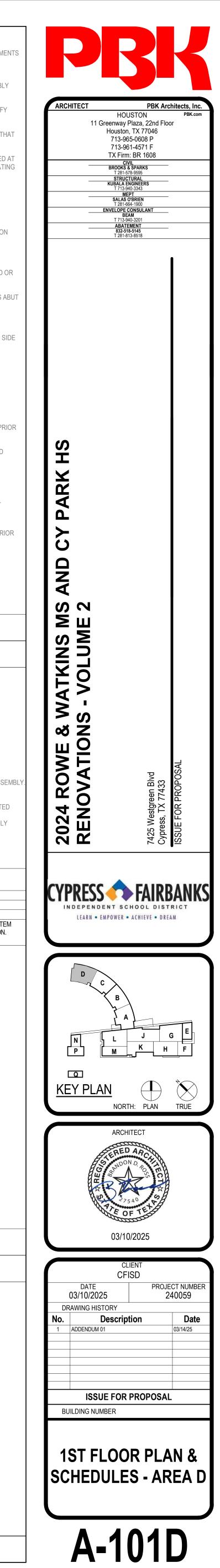




DOOR IN SCOPE

EXISTING WINDOW NOT IN CONTRACT

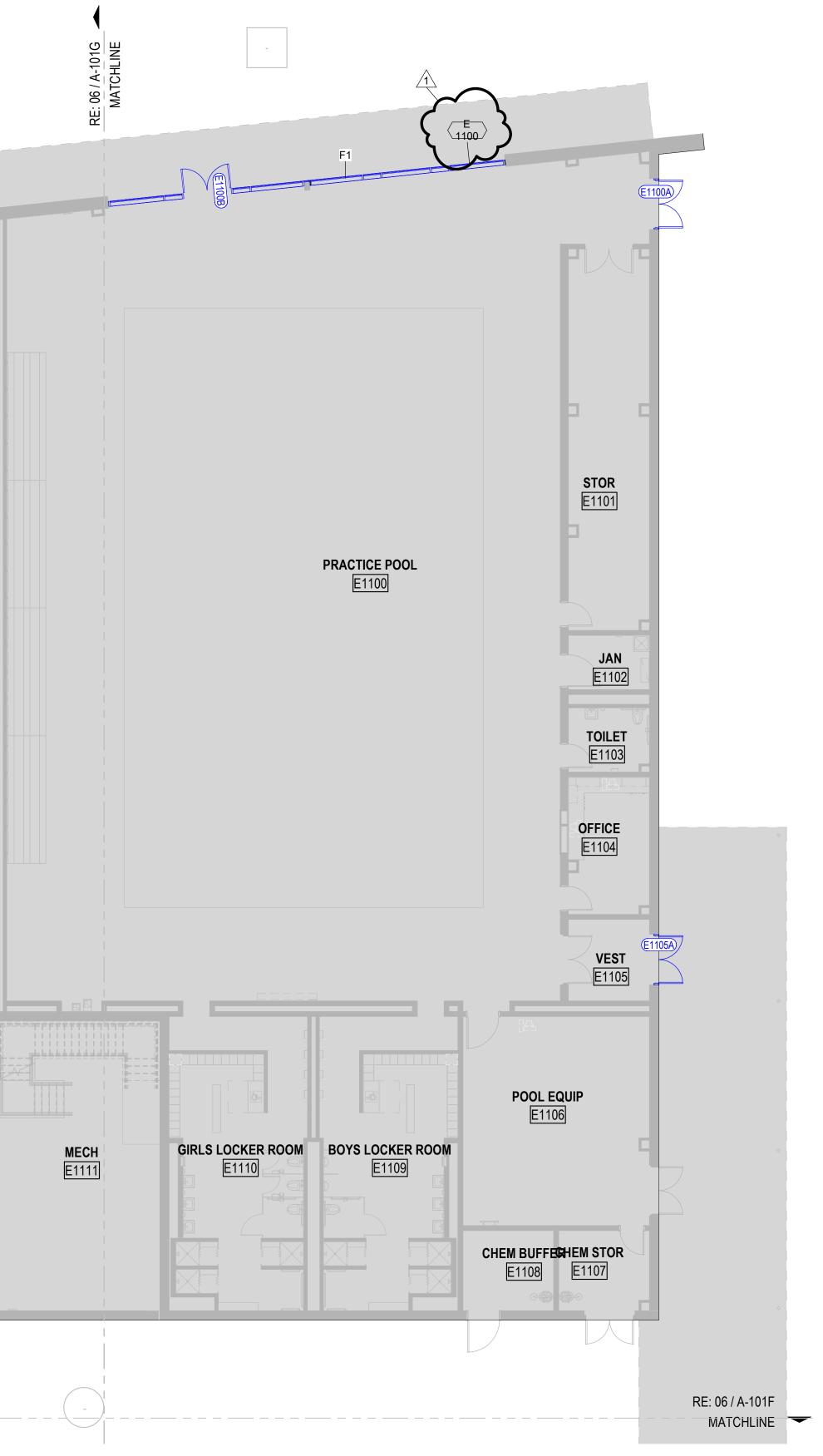
01 FLOOR PLAN LEGEND

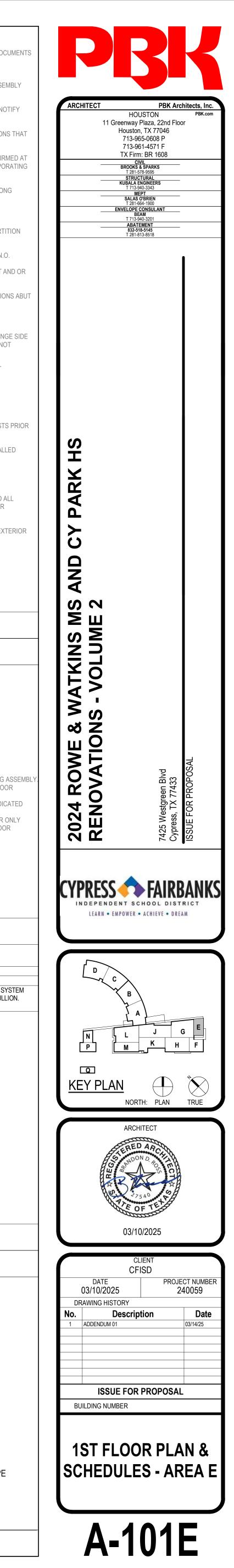


FOR BLUEBEAM LABELING/OCR:	0"					
Reno/AR23_CFISD_CyPark HS Renovation.rvt						
Chec	WN BY:	06 1ST LEVEL	- FLOOR PLAN -	AREA E		

Author Plot Stamp: 3/14/2025 9:57:57 AM

DOOR	EXISTIN	IG DOO		EDULE -	FIRST	FLOOR -	AREA E	1. DO NOT SCALE DRAWINGS, WRITTEN DIMENSIONS TAKE PRECEDENCE, CONTACT ARCH IF CLARIFICATION IS NECESSARY IN ORDER TO DETERMINE THE INTENT OF THE CONTRACT DOCUMI
NUMBER WIDTH HEIGHT TYPE		FINISH TYPE	FR. MATL FINISH	DETAIL	FIRE SILL RATING	HARDWARE STC SET		CLARIFICATION IS NECESSARY IN ORDER TO DETERMINE THE INTENT OF THE CONTRACT DOCUMN DRAWINGS NOTED AS "N.T.S" OR "NTS" ARE NOT TO SCALE
E1100A 6' - 0" 7' - 0" E1100B 6' - 0" 6' - 10" E1105A 6' - 0" 7' - 0"	2" 1 3/4" 2"						NEW CARD READER NEW CARD READER NEW CARD READER	U.N.O. 4. FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS BEFORE COMMENCING WORK. NOTIF
Grand total: 3								ARCH. OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH AFFECTED WORK 5. NOTES OR DIMENSIONS NOTED AS "TYPICAL" OR "TYP." OR "TYP" SHALL APPLY TO CONDITIONS TH ARE THE SAME OR SIMILAR
								 DIMENSIONS NOTED AS "FIELD VERIFY" OR "V.I.F." OR "VIF" SHALL BE MEASURED AND CONFIRMED THE PROJECT SITE BY THE CONTRACTOR AND REVIEWED WITH THE ARCH. BEFORE INCORPORAT INTO THE WORK
								 DIMENSIONS NOTED AS "CLEAR" OR "CLEAR INSIDE" REQUIRE SPECIFIC COORDINATION AMONG DISCIPLINES AND OR MANUFACTURERS
								 REFER TO PARTITION TYPES ON A-800 SERIES SHEETS ALL INTERIOR PARTITIONS THIS SHEET, EXCEPT FOR FURR-OUT PARTITIONS, SHALL BE PARTITION
								TYPEM6 U.N.O. 10. ALL INTERIOR FURR-OUT PARTITIONS THIS SHEET SHALL BE PARTITION TYPEM6 U.N.O.
								11. ALIGN FINISHED FACE OF WALLS WHERE WALL PARTITIONS OF DIFFERING THICKNESS ABUT AND ADJOIN IN THE SAME PLANE
								 12. PROVIDE AND INSTALL CONT. REVEAL TRIM AT JOINT WHERE GYPSUM BOARD WALL PARTITIONS AND OR ADJOIN MASONRY WALL PARTITIONS IN THE SAME PLANE 13. ALL INTERIOR CMU OUTSIDE CORNERS SHALL HAVE BULLNOSE U.N.O.
								14. ALL DOORS SHALL BE SET 6 INCHES OFF THE ADJACENT PERPENDICULAR WALL ON THE HINGE S OF THE DOOR U.N.O., NOTIFY ARCH. OF ANY DOOR-RELATED CONFLICTS, INCLUDING BUT NOT LIMITED TO CONFLICTS CONCERNING ACCESSIBILITY STANDARDS
								15. ALL DOOR THRESHOLDS AT ALL EXTERIOR DOORS SHALL BE SET IN FULL BED OF SEALANT
								 COORD. ALL ROOF DRAIN LEADER LOCATIONS WITH FLOOR PLAN PRIOR TO FLOOR SLAB CONSTRUCTION ALL FLOOR SLOPES TO FLOOR DRAINS SHALL NOT EXCEED 1:48
								18. PROVIDE AND INSTALL SELF-LEVELING UNDERLAYMENT WHERE UNEVEN FLOOR SLAB EXISTS PR TO INSTALLATION OF FLOOR FINISHES
1100A								 COORD. HOUSEKEEPING PAD LOCATIONS AND DIMENSIONS WITH EQUIPMENT TO BE INSTALLED ALL FLOOR FINISH CHANGES SHALL OCCUR AT THE CENTERLINE OF DOORS U.N.O.
								 ALL FLOOR FINISH MATERIAL CHANGES SHALL HAVE REDUCER STRIPS ALL REQUIRED ACCESSIBLE CLEARANCES FOR ALL ITEMS. INCLUDING BUT NOT LIMITED TO ALL
								COUNTER TOPS, ALL PLUMBING FIXTURES, ALL DRINKING FOUNTAINS, ALL ELECTRIC WATER COOLERS, ALL LAVATORIES, ALL URINALS, ALL TOILETS SHALL BE STRICTLY ENFORCED
								 23. APPLY BITUMINOUS COATING TO ALL CONCEALED STRUCTURAL STEEL MEMBERS AT ALL EXTERN CANOPY LOCATIONS 24. REFER TO OTHER DISCIPLINE DOCUMENTS FOR ADDITIONAL SCOPE OF WORK
								19 GENERAL ARCH PLAN NOTES
								DOOR SCHEDULE REMARKS
								1. ELEC. DOOR OPENER W/ HC BUTTON ON INSIDE AND OUTSIDE OF DOOR
								 ELEC. CONTROLLED ACCESS HARDWARE WITH CARD READER ELEC. CONTROLLED ACCESS HARDWARE WITH PUSH-BUTTON ELEC. CONTROLLED ACCESS HARDWARE, ROUGH-IN ONLY DOOR BUZZER
								 DOOR CHIME ON OPEN MAGNETIC HOLD-OPEN, CONNECT TO FIRE ALARM MAGNETIC HOLD-OPEN, CONNECT TO SECURITY SYSTEM
								 9. SOUND DOOR OPERABLE WALLS, OVERHEAD DOORS AND GRILLES 10. SOUND RATED DOOR ASSEMBLY, STC AS SPECIFIED
								 WINDSTORM DOOR HARDWARE SHALL BE TESTED AS PART OF A COMPLETE DOOR OPENING ASS THE TESTED DOOR OPENING ASSEMBLY SHALL INCLUDE DOOR HARDWARE. THE ENTIRE DOOR OPENING, INCLUDING DOOR HARDWARE, SHALL BE BY DOOR MANUF. ACOUSTICAL GLASS TO MEET FIRE DOOR ASSEMBLY REQUIREMENTS FOR FIRE RATING INDICATE
								 MANUAL OPERATION ELEC MOTOR OPERATION WITH KEY SWITCH CONTROL, KEY SWITCH ON ONE SIDE OF DOOR ONLINE ELEC MOTOR OPERATION WITH KEY SWITCH CONTROL, KEY SWITCH ON BOTH SIDES OF DOOR ELEC MOTOR OPERATION WITH PUSH-BUTTON CONTROL ON ONE SIDE OF DOOR ONLY
								17. AUTOMATIC OPEN ON FIRE ALARM ACTIVATION U.N.O. 18. AUTOMATIC CLOSE ON FIRE ALARM ACTIVATION
0								
								13 DOOR SCHEDULE REMARKS
								KEYNOTE LEGEND
E1105A								NUMBER DESCRIPTION F1 FILM, GL1 FILM APPLIED TO EXISTING STOREFRONT SYSTEM. CLEAN AND PREP SYSTEM
•								BEFORE INSTALL. FILM IS TO BE STOPPED AT 7' AFF OR THE NEXT CLOSEST MULLION FIELD VERIFY CONDITIONS.
•								
								N7 KEY NOTES
								07 KEY NOTES FLOORPLAN LEGEND
RE: 06 / A-101F MATCHLINE								
								*NOTE: DOOR HW RELATED SCOPE OF WORK TO OCCUR WHERE NOTED, RE: SPEC
								NO RELEVANT SCOPE OF WORK IN EXISTING AREAS
								EXISTING DOOR NOT IN CONTRACT
								EXISTING WINDOW
								N1 FLOOR PLAN LEGEND
								$\ \mathbf{U}\mathbf{I}\ _{1/8"} = 1'-0"$



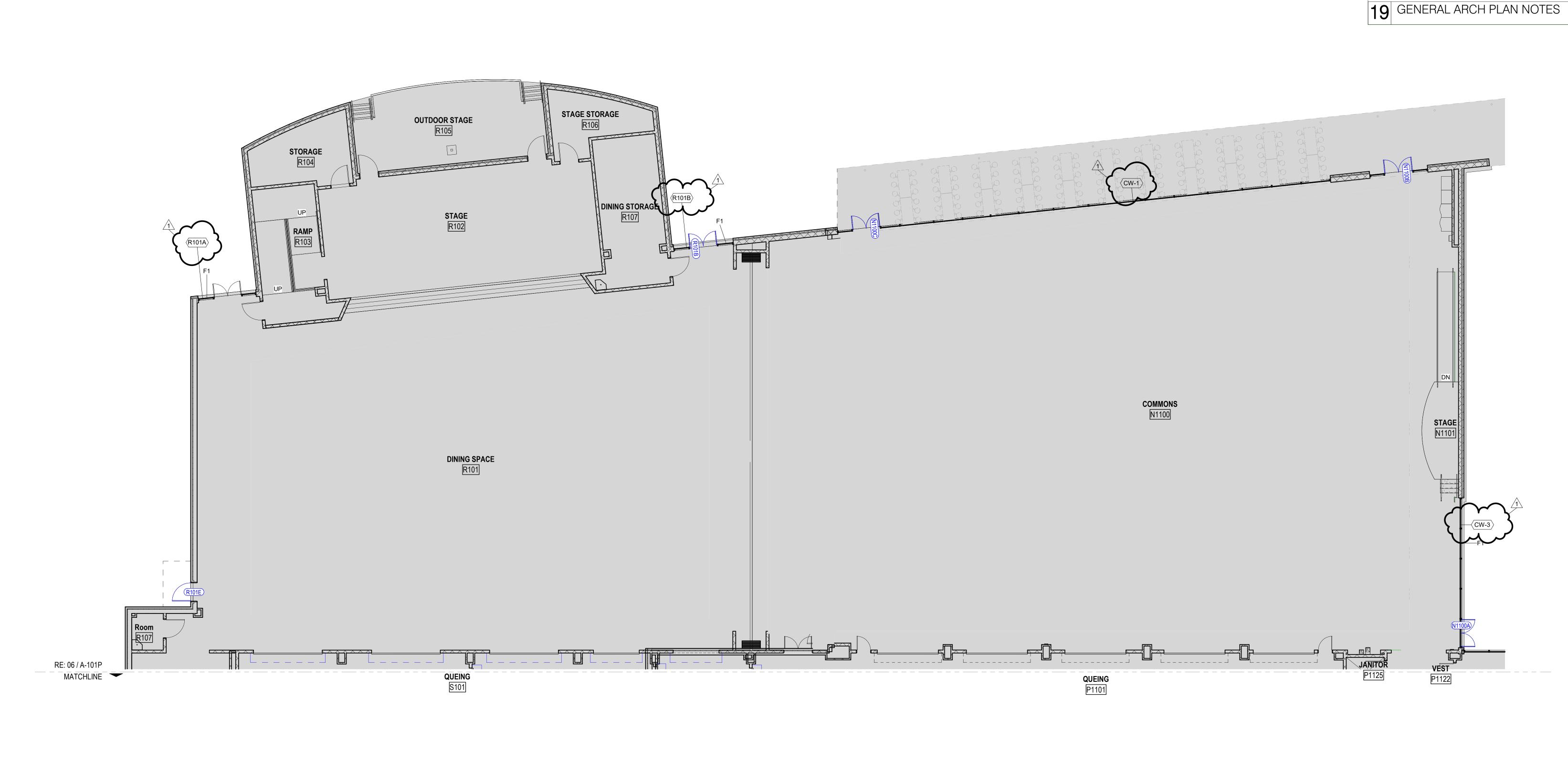


A-101N FOR BLUEBEAM LABELING/OCR:

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		E	EXIS	STIN	GD	00	R S	CHE	EDU	LE -	FIR	ST F	FLOC	DR -	- ARE	AN
DOOR			PANEL				FRAME						GENERAL			
										DETAIL FIRE			HARDWARE	7		
NUMBER	WIDTH	HEIGHT	HEIGHT TYPE	TYPE THK	MATL	FINISH	TYPE	MATL	FINISH	JAMB	HEAD	SILL	RATING	STC	SET	Comments
N1100A	6' - 0"	6' - 10 3/4"		1 3/4"												
N1100B	6' - 1 1/2"	6' - 10 3/4"		1 3/4"												KEEP EXISTING CARD READE
N1100C	6' - 0 3/8"	7' - 0"		1 3/4"												KEEP EXISTING CARD READE
R101B	6' - 0"	7' - 0"		1 3/4"												KEEP EXISTING CARD READE
R101E	4' - 0"	6' - 10"		1 3/4"												CARD READER.



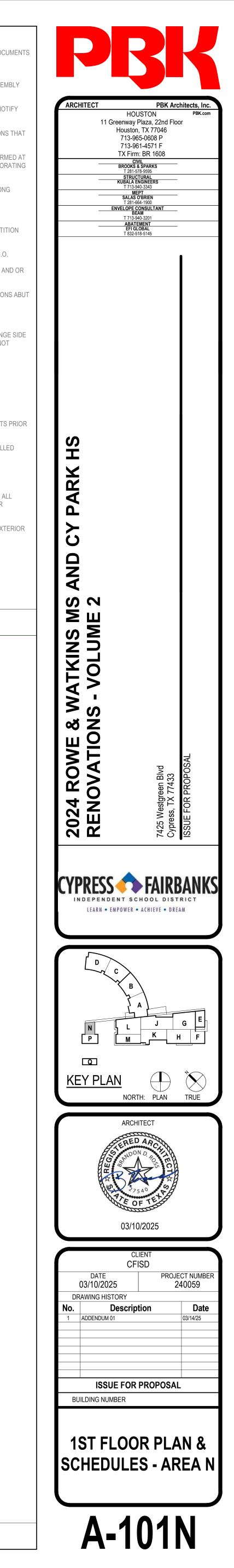
06 1ST LEVEL - FLOOR PLAN - AREA N 1" = 10'-0"

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File

	DOOR SCHEDULE REMARKS	FLC	DORPLAN LEGI	END	
	 ELEC. DOOR OPENER W/ HC BUTTON ON INSIDE AND OUTSIDE OF DOOR ELEC. CONTROLLED ACCESS HARDWARE WITH CARD READER ELEC. CONTROLLED ACCESS HARDWARE WITH PUSH-BUTTON ELEC. CONTROLLED ACCESS HARDWARE, ROUGH-IN ONLY DOOR BUZZER DOOR CHIME ON OPEN MAGNETIC HOLD-OPEN, CONNECT TO FIRE ALARM MAGNETIC HOLD-OPEN, CONNECT TO SECURITY SYSTEM SOUND DOOR 		NOT IN CONTRACT *NOTE: DOOR HW RELATED SCOPE OCCUR WHERE NOTED, RE: SPEC	E OF WORK TO	
-	OPERABLE WALLS, OVERHEAD DOORS AND GRILLES 10. SOUND RATED DOOR ASSEMBLY, STC AS SPECIFIED 11. WINDSTORM DOOR HARDWARE SHALL BE TESTED AS PART OF A COMPLETE DOOR OPENING ASSEMBLY. THE TESTED DOOR OPENING ASSEMBLY SHALL INCLUDE DOOR HARDWARE. THE ENTIRE DOOR		NO RELEVANT SCOPE OF IN EXISTING AREAS	WORK	
_	OPENING, INCLUDING DOOR HARDWARE, SHALL BE BY DOOR MANUF. 12. ACOUSTICAL GLASS TO MEET FIRE DOOR ASSEMBLY REQUIREMENTS FOR FIRE RATING INDICATED 13. MANUAL OPERATION 14. ELEC MOTOR OPERATION WITH KEY SWITCH CONTROL, KEY SWITCH ON ONE SIDE OF DOOR ONLY 15. ELEC MOTOR OPERATION WITH KEY SWITCH CONTROL, KEY SWITCH ON BOTH SIDES OF DOOR 16. ELEC MOTOR OPERATION WITH PUSH-BUTTON CONTROL ON ONE SIDE OF DOOR ONLY		EXISTING DOOR		DOOR IN SCOP
	17. AUTOMATIC OPEN ON FIRE ALARM ACTIVATION U.N.O. 18. AUTOMATIC CLOSE ON FIRE ALARM ACTIVATION		EXISTING WINDOW		WINDOW IN SC
			FLOOR PLAN LEGEN 1/8" = 1'-0"	1D	

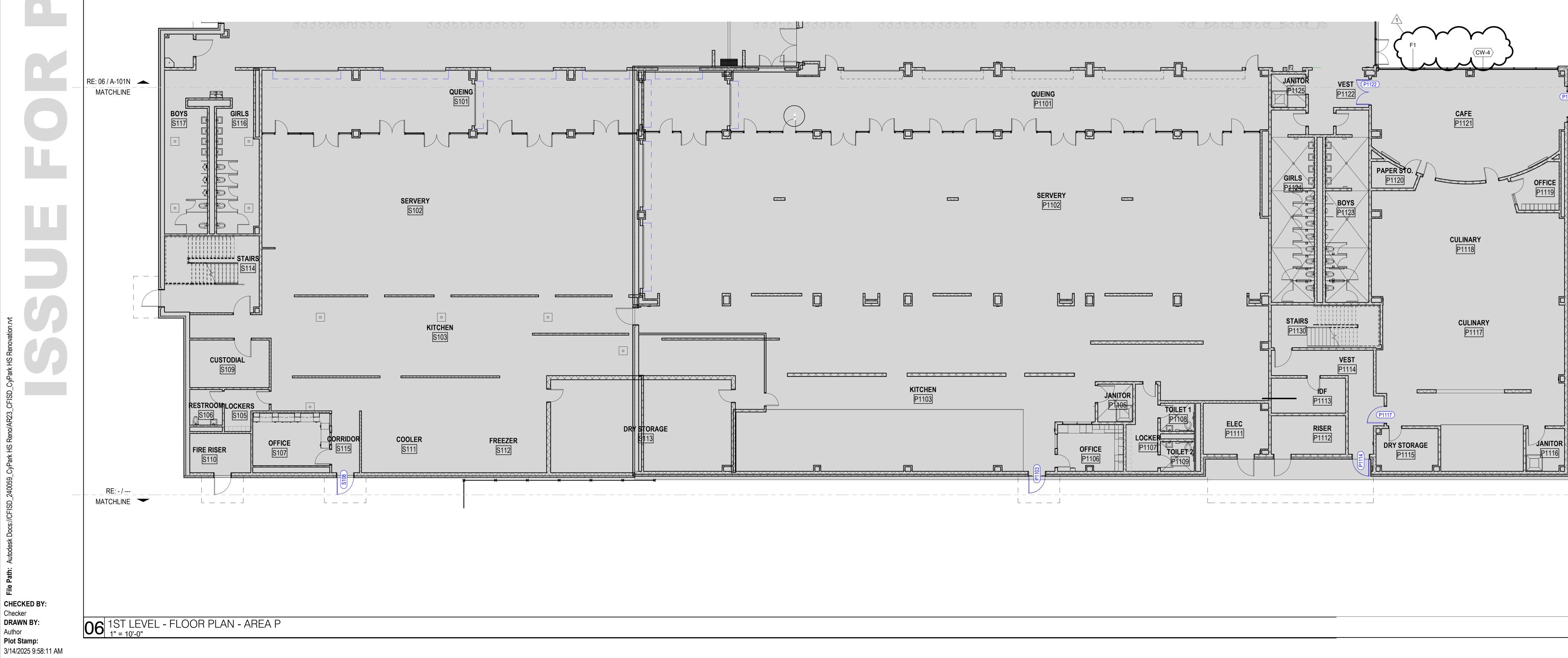
		KEYNOTE LEGEND	1. DO NOT SCALE DRAWINGS, WRITTEN DIMENSIONS TAKE PRECEDENCE, CONTACT ARCH IF
	NUMBER	DESCRIPTION	CLARIFICATION IS NECESSARY IN ORDER TO DETERMINE THE INTENT OF THE CONTRACT DOCUM
	F1	FILM, GL1 FILM APPLIED TO EXISTING STOREFRONT SYSTEM. CLEAN AND PREP SYSTEM BEFORE INSTALL. FILM IS TO BE STOPPED AT 7' AFF OR THE NEXT CLOSEST MULLION. FIELD VERIFY CONDITIONS.	 ALL DIMENSIONS ARE TO STRUCTURAL COLUMN LINES OR THE SURFACE OF PARTITION ASSEMB U.N.O.
			 FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS BEFORE COMMENCING WORK. NOTIF ARCH. OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH AFFECTED WORK
			5. NOTES OR DIMENSIONS NOTED AS "TYPICAL" OR "TYP." OR "TYP" SHALL APPLY TO CONDITIONS T ARE THE SAME OR SIMILAR
			6. DIMENSIONS NOTED AS "FIELD VERIFY" OR "V.I.F." OR "VIF" SHALL BE MEASURED AND CONFIRME THE PROJECT SITE BY THE CONTRACTOR AND REVIEWED WITH THE ARCH. BEFORE INCORPORA INTO THE WORK
			7. DIMENSIONS NOTED AS "CLEAR" OR "CLEAR INSIDE" REQUIRE SPECIFIC COORDINATION AMONG DISCIPLINES AND OR MANUFACTURERS
SCOPE			8. REFER TO PARTITION TYPES ON A-800 SERIES SHEETS
			9. ALL INTERIOR PARTITIONS THIS SHEET, EXCEPT FOR FURR-OUT PARTITIONS, SHALL BE PARTITIC TYPEM6 U.N.O.
N SCOPE			10. ALL INTERIOR FURR-OUT PARTITIONS THIS SHEET SHALL BE PARTITION TYPEM6 U.N.O.
			11. ALIGN FINISHED FACE OF WALLS WHERE WALL PARTITIONS OF DIFFERING THICKNESS ABUT AND ADJOIN IN THE SAME PLANE
			12. PROVIDE AND INSTALL CONT. REVEAL TRIM AT JOINT WHERE GYPSUM BOARD WALL PARTITIONS AND OR ADJOIN MASONRY WALL PARTITIONS IN THE SAME PLANE
	26 K	EY NOTES	13. ALL INTERIOR CMU OUTSIDE CORNERS SHALL HAVE BULLNOSE U.N.O.
			14. ALL DOORS SHALL BE SET 6 INCHES OFF THE ADJACENT PERPENDICULAR WALL ON THE HINGE OF THE DOOR U.N.O., NOTIFY ARCH. OF ANY DOOR-RELATED CONFLICTS, INCLUDING BUT NOT LIMITED TO CONFLICTS CONCERNING ACCESSIBILITY STANDARDS
			15. ALL DOOR THRESHOLDS AT ALL EXTERIOR DOORS SHALL BE SET IN FULL BED OF SEALANT
			16. COORD. ALL ROOF DRAIN LEADER LOCATIONS WITH FLOOR PLAN PRIOR TO FLOOR SLAB CONSTRUCTION
			17. ALL FLOOR SLOPES TO FLOOR DRAINS SHALL NOT EXCEED 1:48
			18. PROVIDE AND INSTALL SELF-LEVELING UNDERLAYMENT WHERE UNEVEN FLOOR SLAB EXISTS P TO INSTALLATION OF FLOOR FINISHES
			19. COORD. HOUSEKEEPING PAD LOCATIONS AND DIMENSIONS WITH EQUIPMENT TO BE INSTALLED
			20. ALL FLOOR FINISH CHANGES SHALL OCCUR AT THE CENTERLINE OF DOORS U.N.O.
			21. ALL FLOOR FINISH MATERIAL CHANGES SHALL HAVE REDUCER STRIPS
			22. ALL REQUIRED ACCESSIBLE CLEARANCES FOR ALL ITEMS, INCLUDING BUT NOT LIMITED TO ALL COUNTER TOPS, ALL PLUMBING FIXTURES, ALL DRINKING FOUNTAINS, ALL ELECTRIC WATER COOLERS, ALL LAVATORIES, ALL URINALS, ALL TOILETS SHALL BE STRICTLY ENFORCED
			23. APPLY BITUMINOUS COATING TO ALL CONCEALED STRUCTURAL STEEL MEMBERS AT ALL EXTER CANOPY LOCATIONS
			24. REFER TO OTHER DISCIPLINE DOCUMENTS FOR ADDITIONAL SCOPE OF WORK



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DOOR PANEL			PANEL			FRAME						GENERAL					
]							DETAIL		FIRE	HARDWARE			
NUMBER	WIDTH	HEIGHT	TYPE	Phase Created	THK	MATL	FINISH	TYPE	MATL	FINISH	JAMB	HEAD	SILL	RATING	STC	SET	Comments
				•													
P1103	4' - 0"	6' - 10"		Existing	1 3/4"												NEW DOOR/2N.
P1114	4' - 0"	6' - 10"		Existing	1 3/4"												
P1117	4' - 0"	6' - 10"		Existing	1 3/4"												
P1121	6' - 0"	6' - 10 3/4"		Existing	1 3/4"												
P1122	6' - 0"	7' - 0"		Existing	2"												

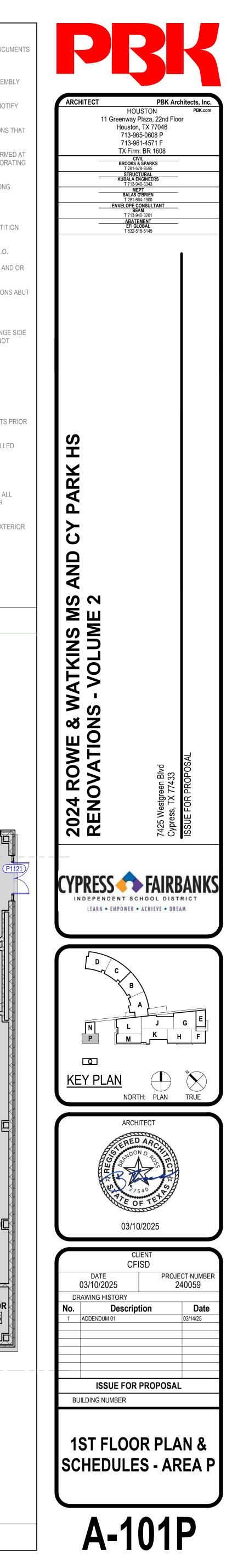
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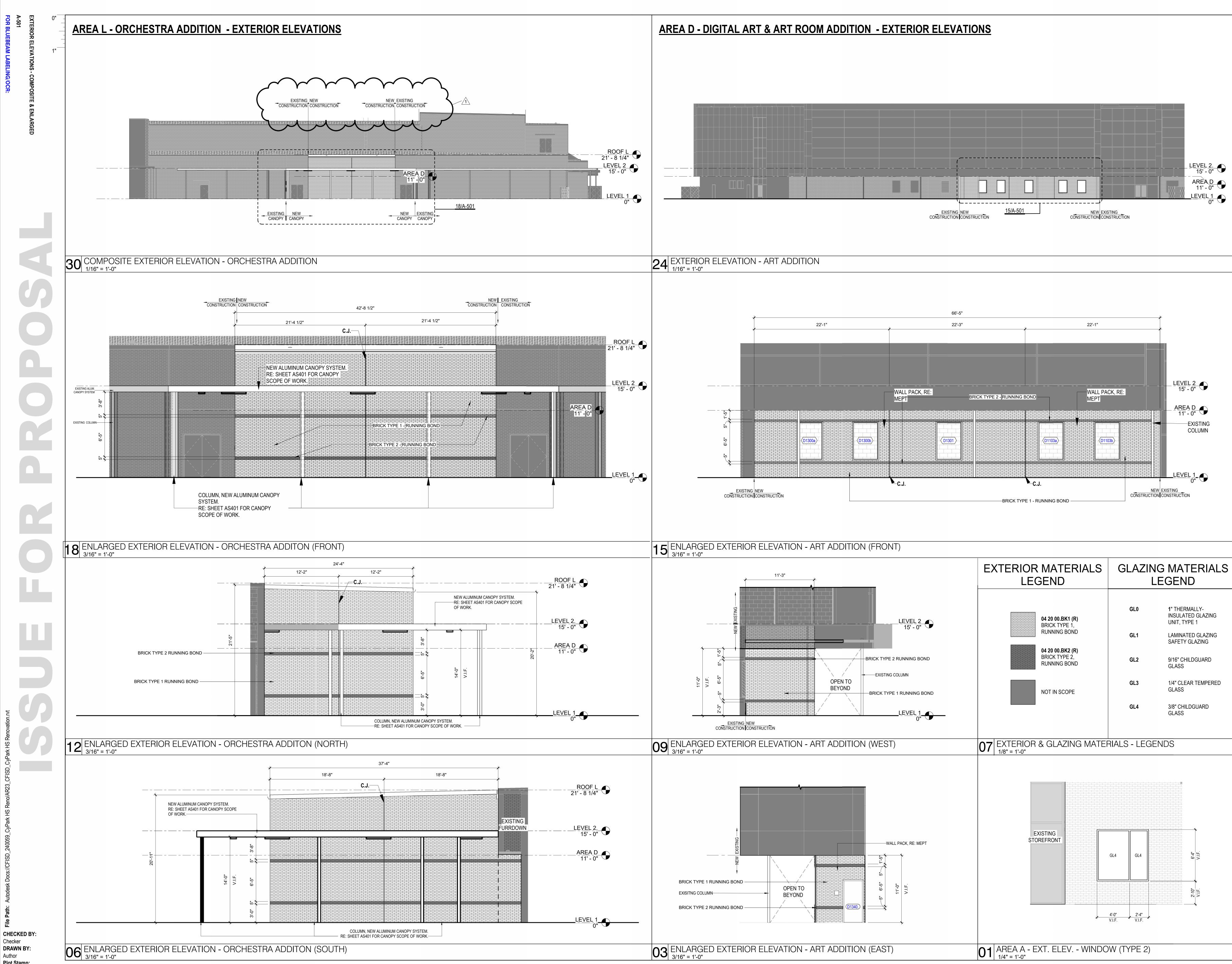


	DOOR SCHEDULE REMARKS	FLOORPLAN LEGEND
nments	 ELEC. DOOR OPENER W/ HC BUTTON ON INSIDE AND OUTSIDE OF DOOR ELEC. CONTROLLED ACCESS HARDWARE WITH CARD READER ELEC. CONTROLLED ACCESS HARDWARE WITH PUSH-BUTTON ELEC. CONTROLLED ACCESS HARDWARE, ROUGH-IN ONLY DOOR BUZZER DOOR CHIME ON OPEN MAGNETIC HOLD-OPEN, CONNECT TO FIRE ALARM MAGNETIC HOLD-OPEN, CONNECT TO SECURITY SYSTEM SOUND DOOR OPERABLE WALLS, OVERHEAD DOORS AND GRILLES SOUND DOOR OPERABLE WALLS, OVERHEAD DOORS AND GRILLES SOUND RATED DOOR ASSEMBLY, STC AS SPECIFIED WINDSTORM DOOR HARDWARE SHALL BE TESTED AS PART OF A COMPLETE DOOR OPENING ASSEMBLY THE TESTED DOOR OPENING ASSEMBLY SHALL INCLUDE DOOR HARDWARE. THE ENTIRE DOOR OPENING, INCLUDING DOOR HARDWARE, SHALL BE BY DOOR MANUF. ACOUSTICAL GLASS TO MEET FIRE DOOR ASSEMBLY REQUIREMENTS FOR FIRE RATING INDICATED MANUAL OPERATION ELEC MOTOR OPERATION WITH KEY SWITCH CONTROL, KEY SWITCH ON ONE SIDE OF DOOR ONLY ELEC MOTOR OPERATION WITH KEY SWITCH CONTROL, NO NO BOTH SIDES OF DOOR ELEC MOTOR OPERATION WITH KEY SWITCH CONTROL ON ONE SIDE OF DOOR ONLY ELEC MOTOR OPERATION WITH KEY SWITCH CONTROL ON ONE SIDE OF DOOR ONLY AUTOMATIC OPEN ON FIRE ALARM ACTIVATION U.N.O. AUTOMATIC CLOSE ON FIRE ALARM ACTIVATION U.N.O. 	NOT IN CONTRACT "NOTE: DOOR HW RELATED SCOPE OF WORK TO OCCUR WHERE NOTED, RE: SPEC" NO RELEVANT SCOPE OF WORK IN EXISTING AREAS Image: Strate of the existing of the exi
	28 KEY NOTES	27 FLOOR PLAN LEGEND

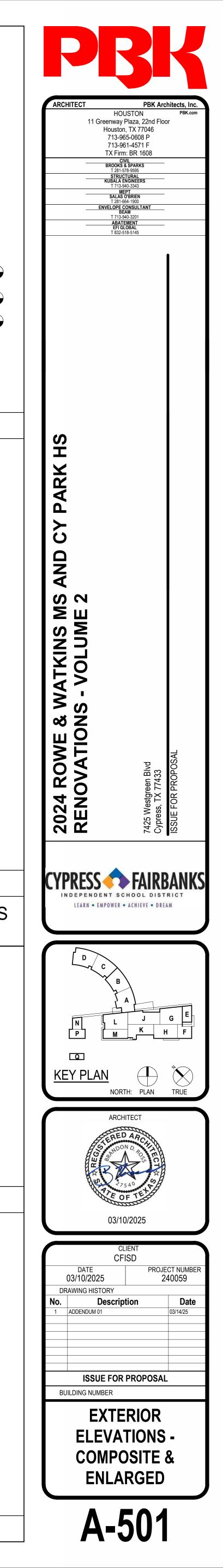
	KEYNOTE LEGEND	1. DO NOT SCALE DRAWINGS, WRITTEN DIMENSIONS TAKE PRECEDENCE, CONTACT ARCH IF
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		 FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS BEFORE COMMENCING WORK. NOTIF ARCH. OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH AFFECTED WORK
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SCOPE		10. ALL INTERIOR FURR-OUT PARTITIONS THIS SHEET SHALL BE PARTITION TYPEM6 U.N.O.
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		12. PROVIDE AND INSTALL CONT. REVEAL TRIM AT JOINT WHERE GYPSUM BOARD WALL PARTITIONS AND OR ADJOIN MASONRY WALL PARTITIONS IN THE SAME PLANE
	26 KEY NOTES	13. ALL INTERIOR CMU OUTSIDE CORNERS SHALL HAVE BULLNOSE U.N.O.
		14. ALL DOORS SHALL BE SET 6 INCHES OFF THE ADJACENT PERPENDICULAR WALL ON THE HINGE OF THE DOOR U.N.O., NOTIFY ARCH. OF ANY DOOR-RELATED CONFLICTS, INCLUDING BUT NOT LIMITED TO CONFLICTS CONCERNING ACCESSIBILITY STANDARDS
		15. ALL DOOR THRESHOLDS AT ALL EXTERIOR DOORS SHALL BE SET IN FULL BED OF SEALANT
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		19. COORD. HOUSEKEEPING PAD LOCATIONS AND DIMENSIONS WITH EQUIPMENT TO BE INSTALLED
		20. ALL FLOOR FINISH CHANGES SHALL OCCUR AT THE CENTERLINE OF DOORS U.N.O.
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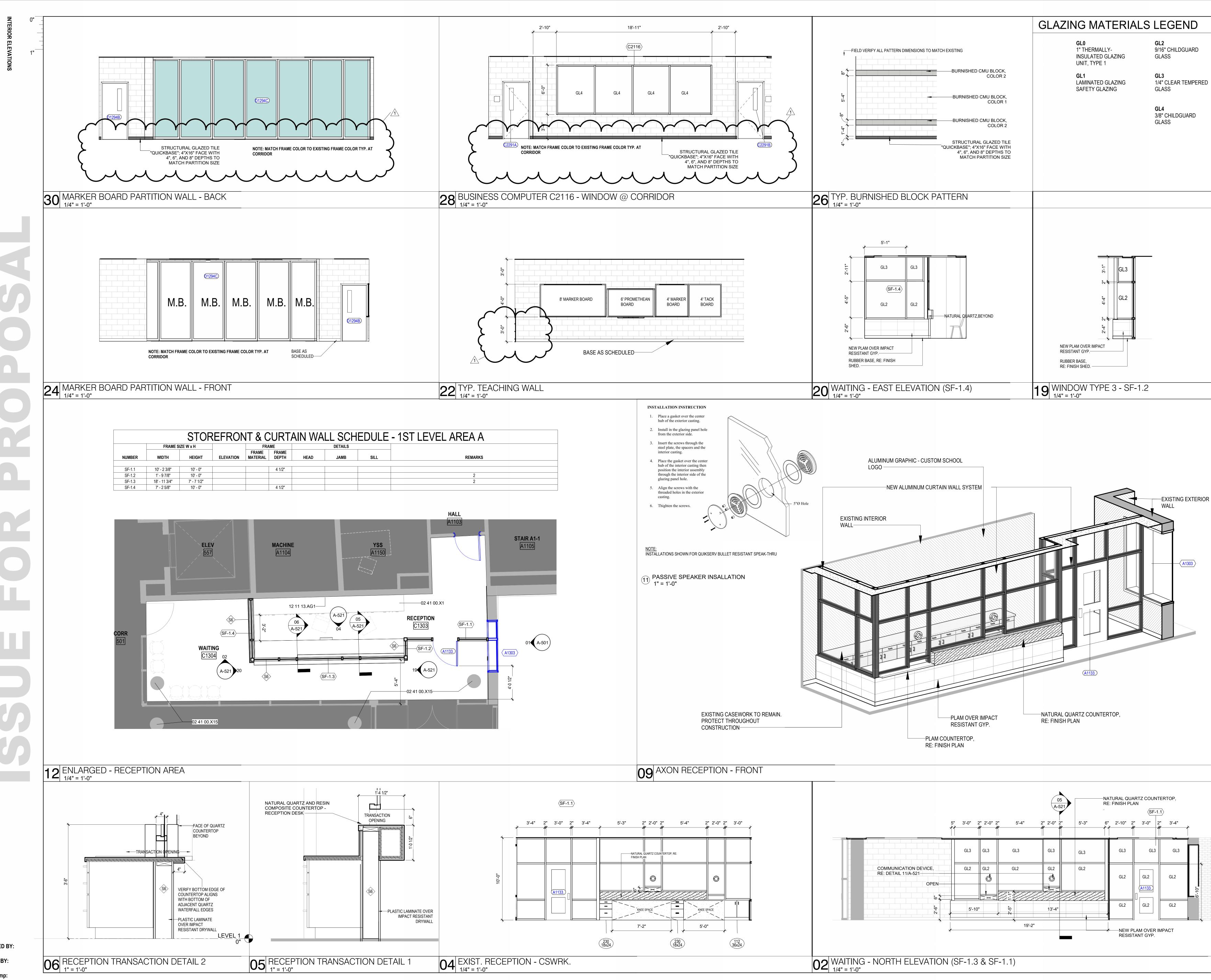
19 GENERAL ARCH PLAN NOTES



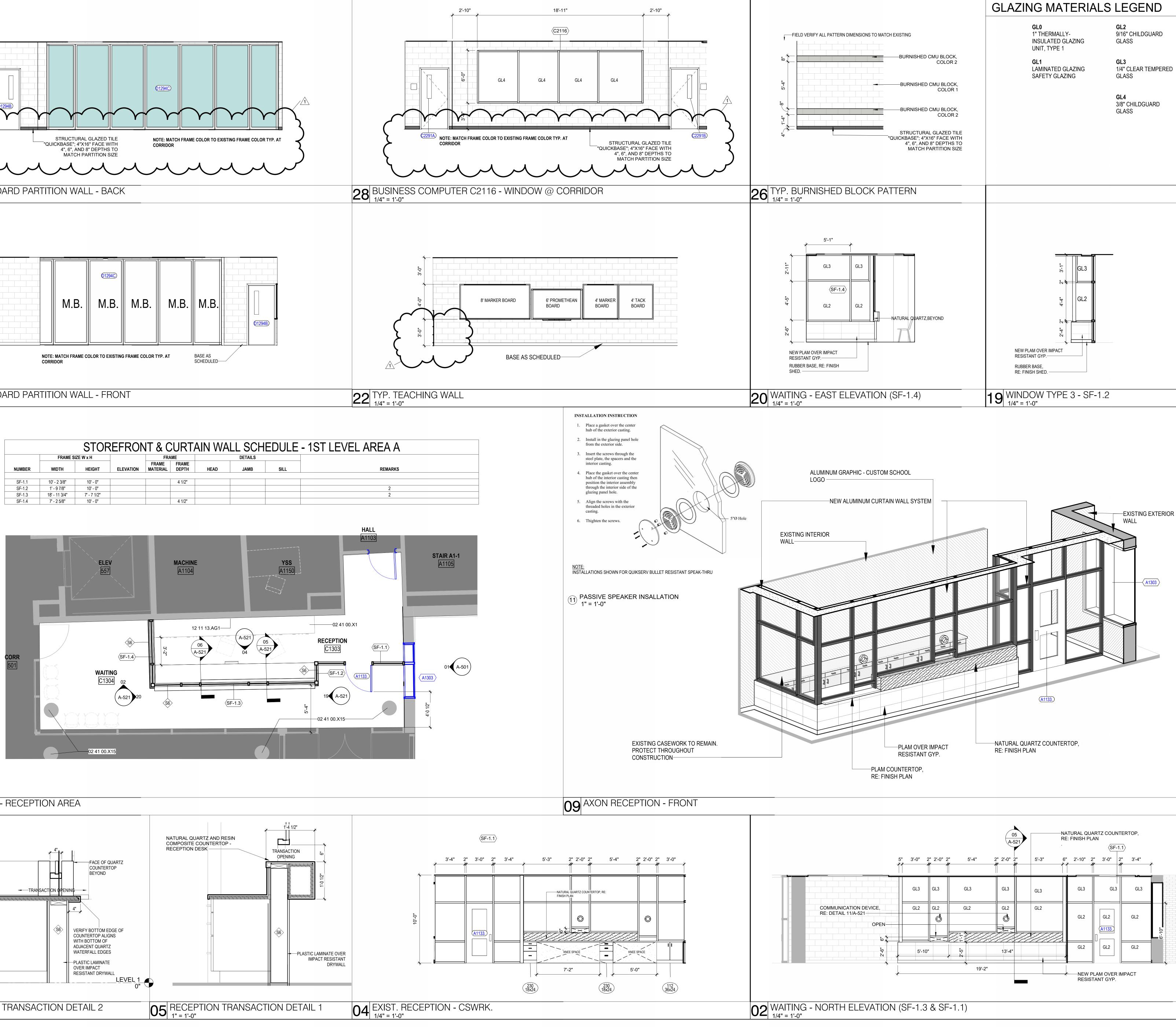


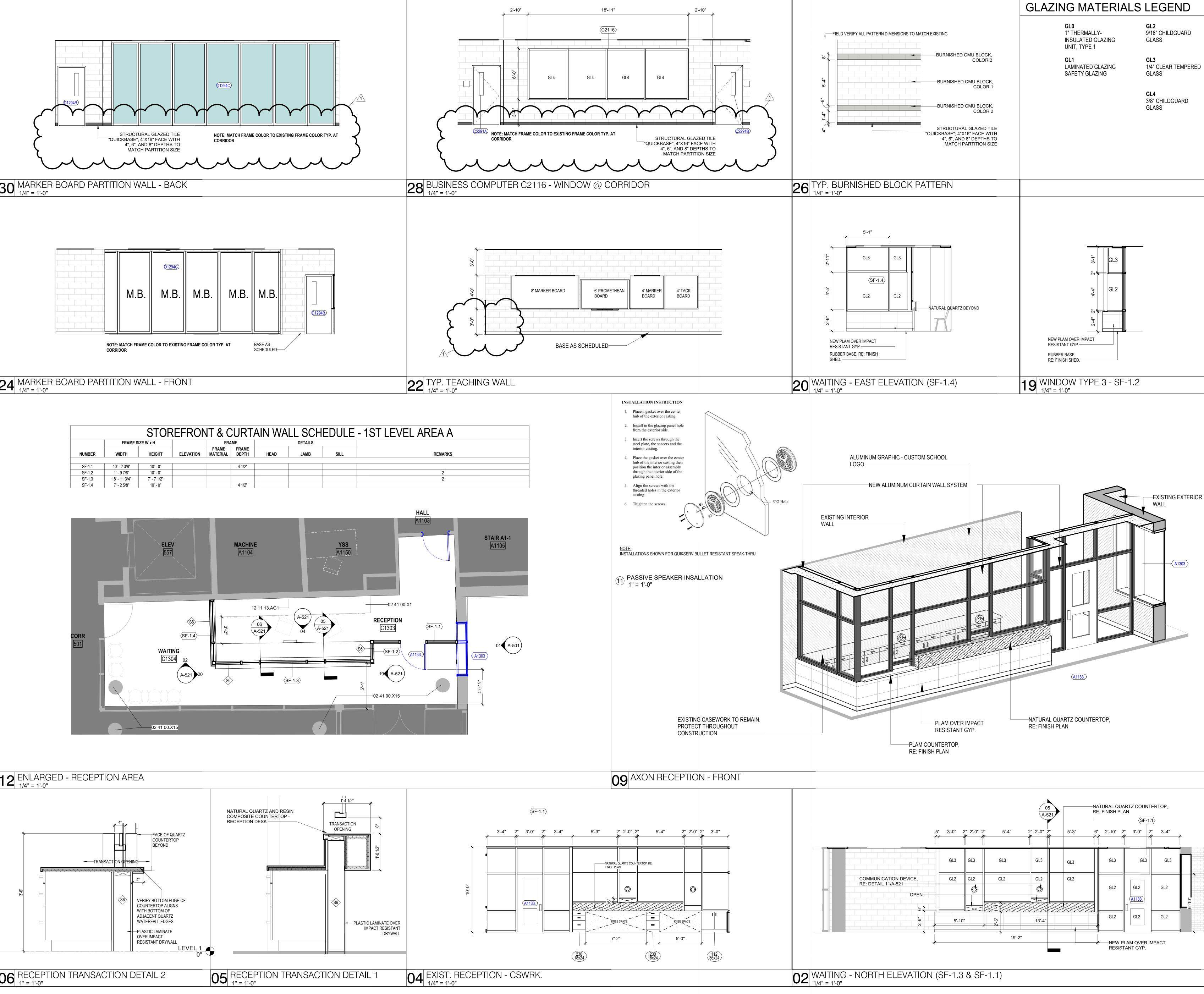
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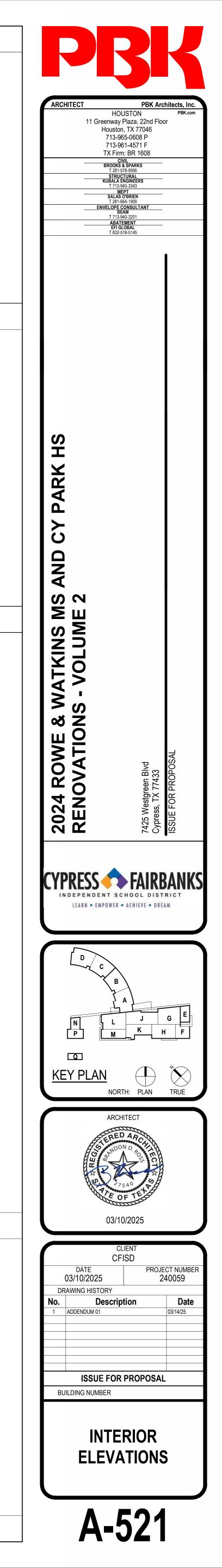


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NUMBER	WIDTH	HEIGHT	ELEVATION	FRAME MATERIAL	FRAME DEPTH	HEAD	JAMB	SILL
SF-1.1	10' - 2 3/8"	10' - 0"			4 1/2"			
SF-1.2	1' - 9 7/8"	10' - 0"						
SF-1.3	18' - 11 3/4"	7' - 7 1/2"						
SF-1.4	7' - 2 5/8"	10' - 0"			4 1/2"			



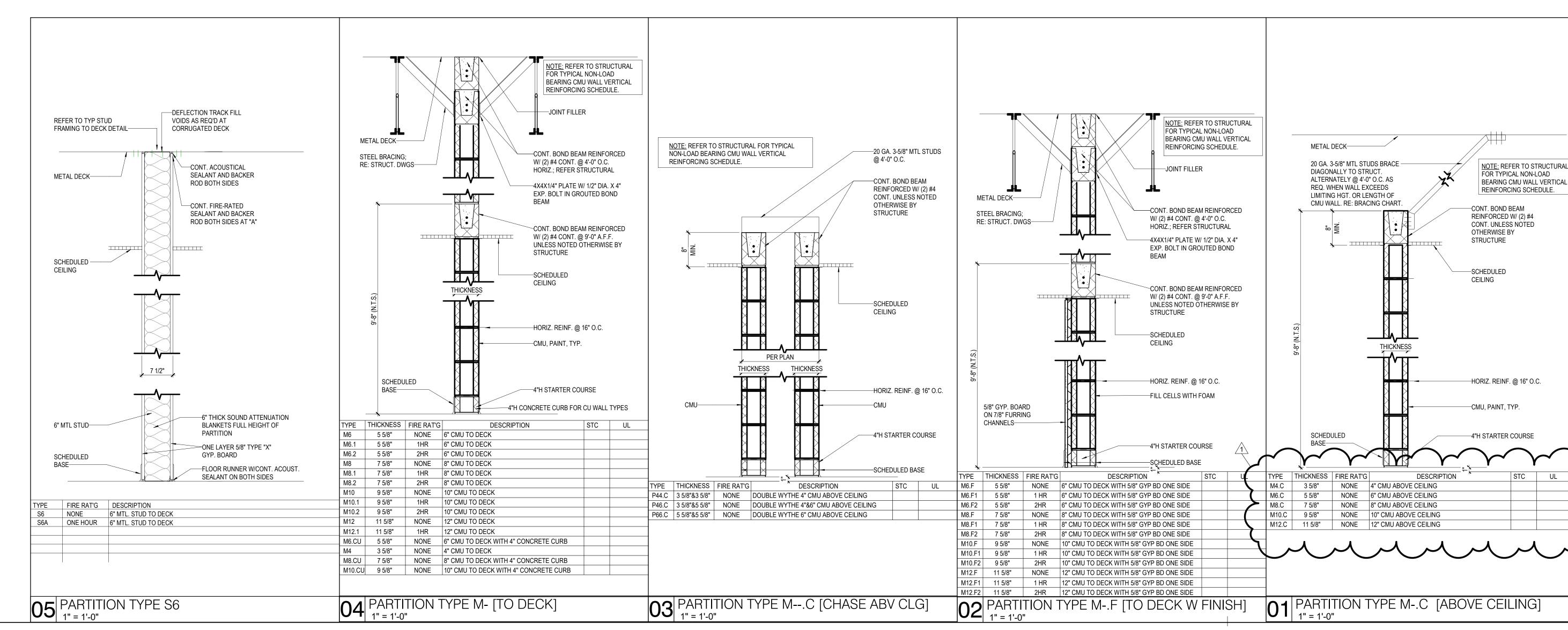


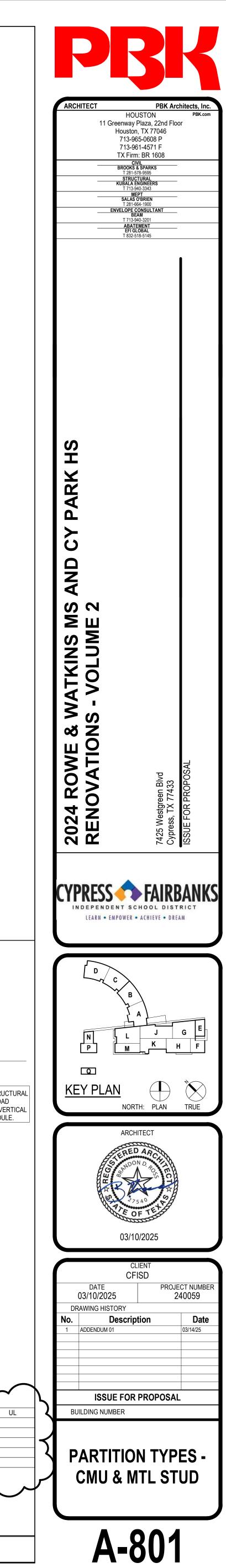
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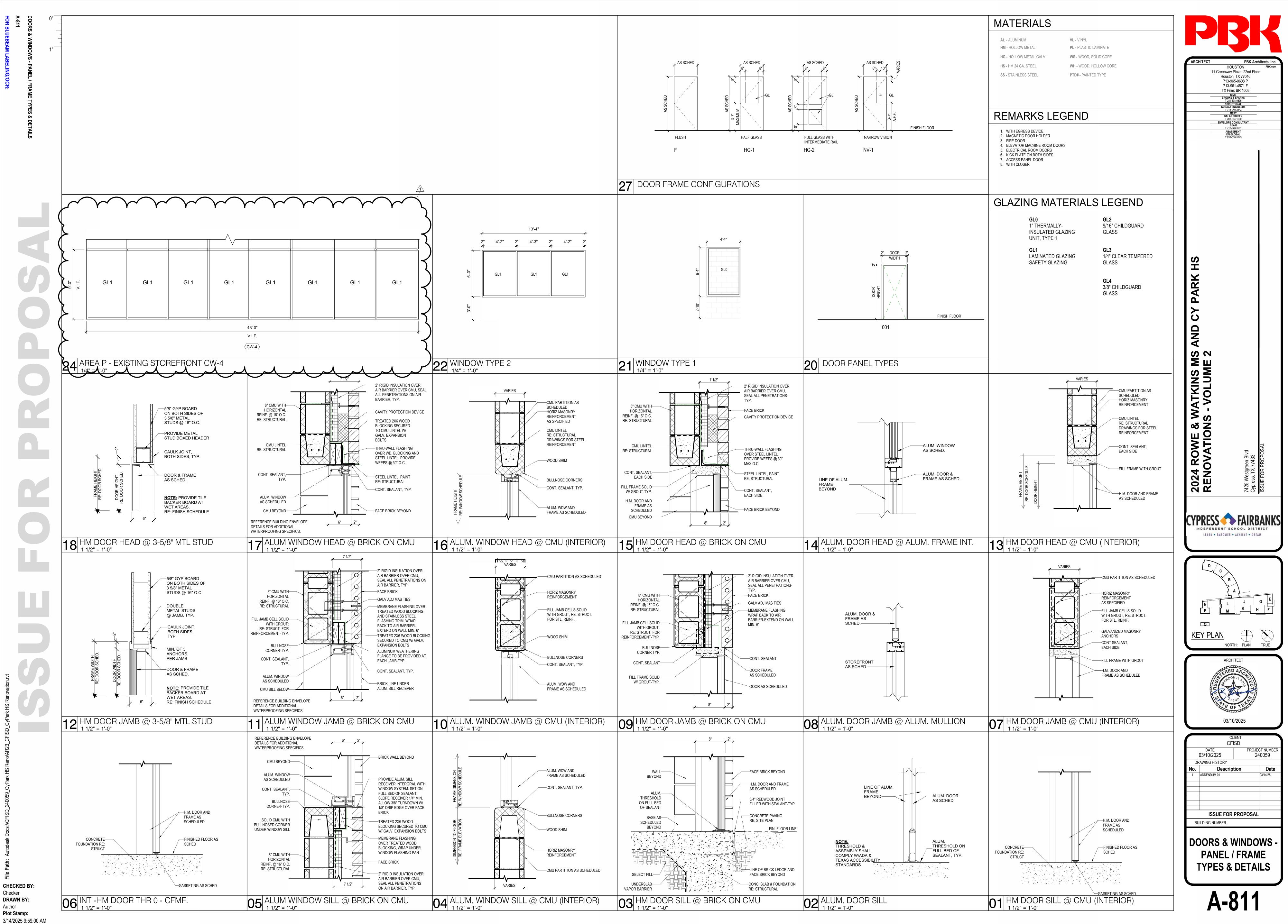


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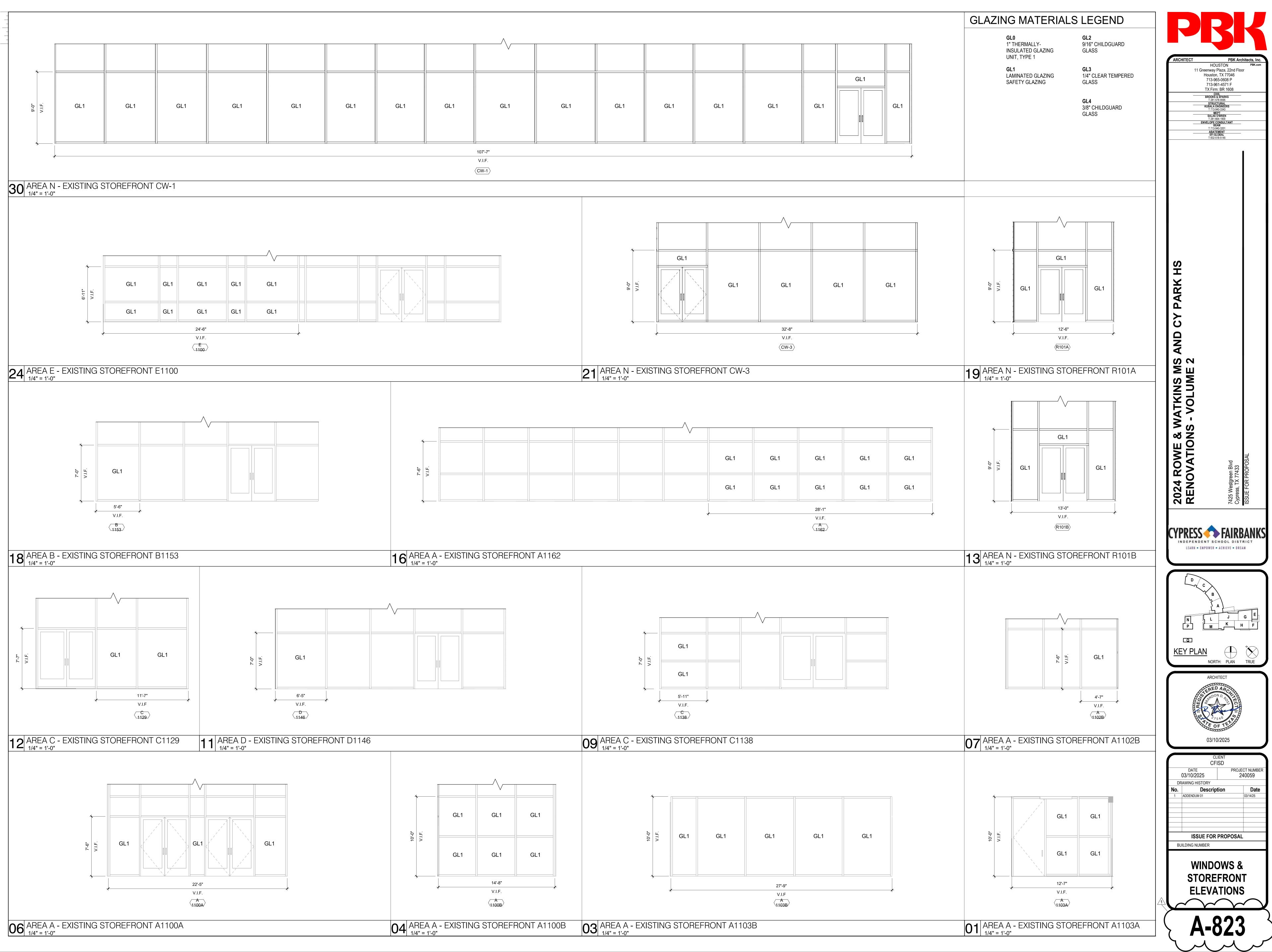
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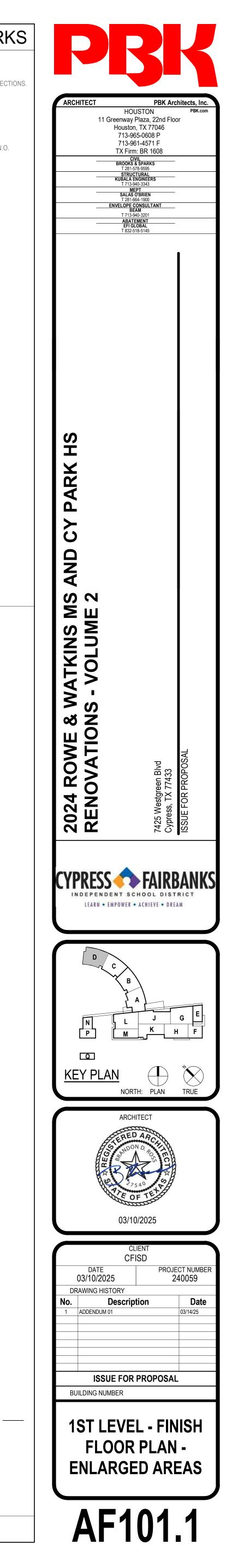


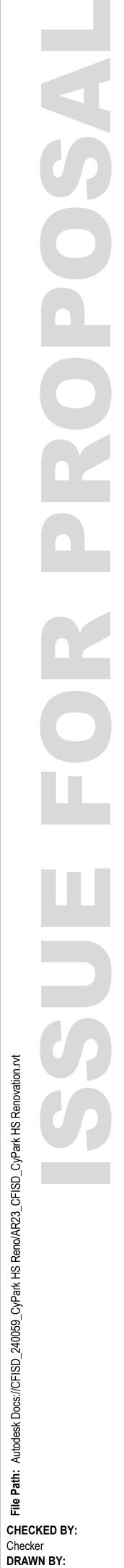


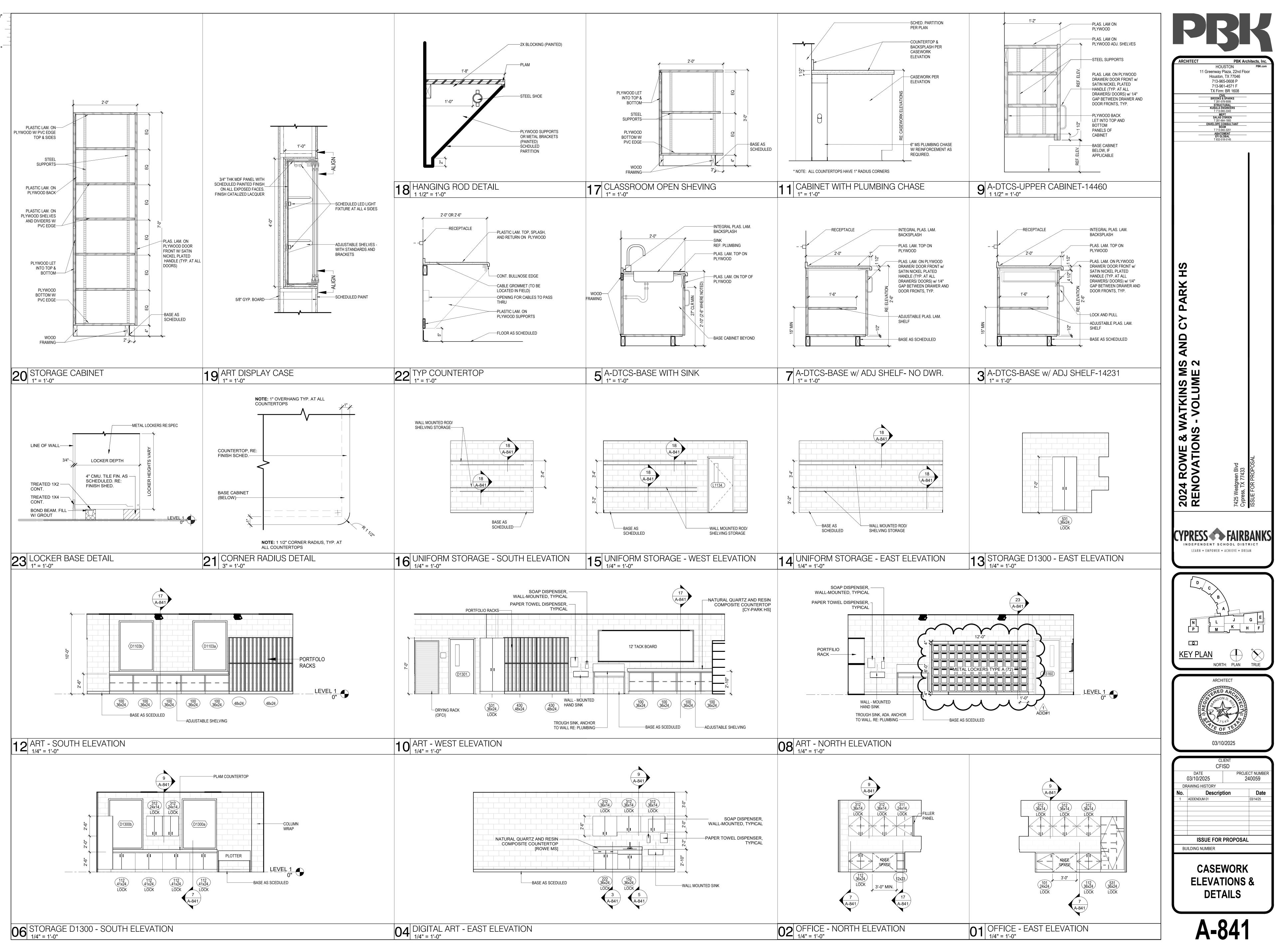




	FINISH SCHEDULE NOTES AND REMARK
P1, CARPET TYPE 1	GENERAL NOTES: ALL SCHEDULED DIRECTIONS (NORTH, EAST, SOUTH, WEST) ARE PER PLAN DIRECTIONS, NOT TRUE COMPASS DIRECT ALL FINISH MATERIALS SHALL MEET FLAME SPREAD RATINGS PER THE BUILDING CODE. PROTECT ALL FINISHED FLOORING SURFACES FROM DAMAGE DURING ALL CONSTRUCTION PHASES. CARPET PATTERNS SHALL RUN PARALLEL TO CORRIDOR U.N.O. PROVIDE AND INSTALL BULLNOSE TRIM AT ALL TRANSITIONS FROM CERAMIC WALL TILE TO OTHER MATERIALS U.N.O.
P2, CARPET TYPE 2	REMARKS: 1. 3/4" TREATED PLYWOOD WAINSCOT FULL HEIGHT ALL AROUND, PAINT
FT1, LUXURY VINYL TILE TYPE 1	
FT2, LUXURY VINYL TILE TYPE 2	
C1, SEALED CONCRETE	
XISTING TO REMAIN	







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;HANICAL DEMOLITION FLOOR PLAN - LEVEL 1 - ARE,

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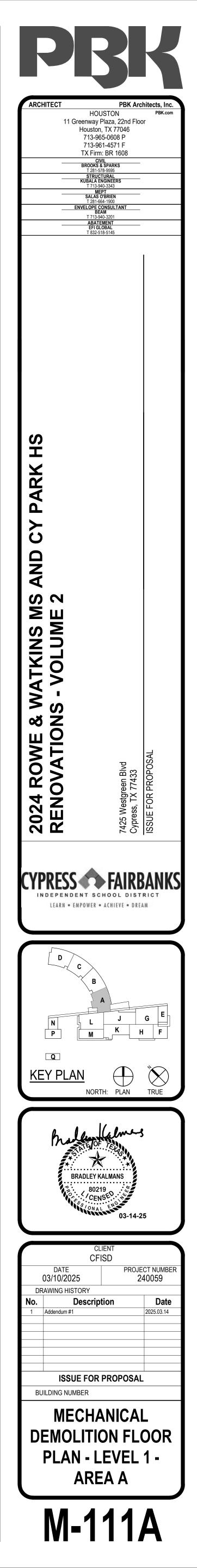
MECHANICAL DEMOLITION GENERAL NOTES:

- 1. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC, AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR DUCT SYSTEMS.
- ALL MECHANICAL SYSTEMS SHOWN ON THIS PLAN ARE FROM EXISTING PRELIMINARY FIELD WORK. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL LOCATIONS AND SIZES OF MECHANICAL SYSTEMS PRIOR TO THE START OF WORK.
- REMOVE ALL EXISTING SPACE MOUNTED TEMPERATURE AND HUMIDITY SENSORS NOT BEING REUSED. PROVIDE STAINLESS STEEL COVER PLATES.
- OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL HVAC EQUIPMENT BEING REMOVED FROM THIS PROJECT. THIS INCLUDES BUT NOT LIMITED TO VAV UNITS, EXHAUST FANS, DUST COLLECTORS, AND AIR HANDLERS AND CONTROLS.
 THROUGHOUT CONSTRUCTION, THE CONTRACTOR IS
- 3. THROUGHOUT CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY AND RENTAL EQUIPMENT, INCLUDING POWER FOR SUCH EQUIPMENT, AND TO PROVIDE PHASING TO ENSURE SPACE TEMPERATURE AND HUMIDITY IS MAINTAINED. REFER TO SPECIFICATION 23 05 11 MECHANICAL ALTERATIONS PROJECT PROCEDURES, ARTICLE 3.8 FOR ADDITIONAL REQUIREMENTS. CONTRACTOR SHALL REVIEW ALL REQUIREMENTS PRIOR TO BID.

MECHANICAL DEMOLITION KEYED NOTES:

(1) EXISTING DUAL DUCT BOX SHALL REMAIN.

2 EXISTING DUCTWORK SHALL REMAIN.
 1 3 EXISTING SUPPLY AIR DIFFUSER SHALL BE RELOCATED RE: 1/M211A.
 4 EXISTING DUCTWORK SHALL BE REMOVED TO POINT INDICATED.



STAIR B1-1 B1153

HSTE A1162

A1163

CORR

A1158

STOR A1157

OFFICE A1161

LIBRARY CLASSROOM

A1159

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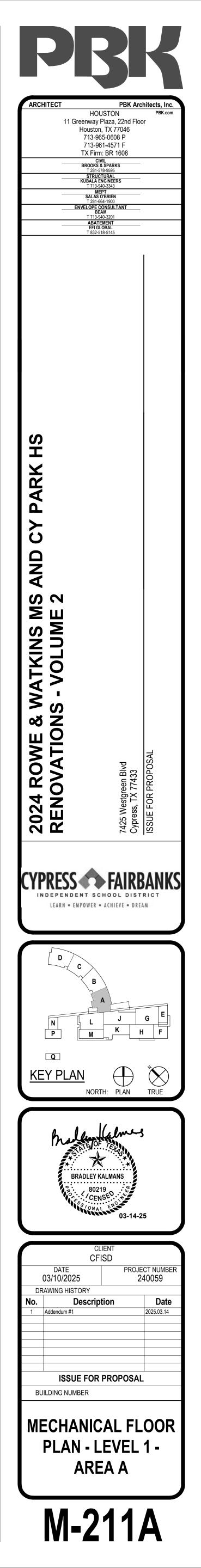
1 MECHANICAL FLOOR PLAN - LEVEL 1 - PLAN AREA A Scale: 1/8" = 1'-0"

MECHANICAL GENERAL NOTES:

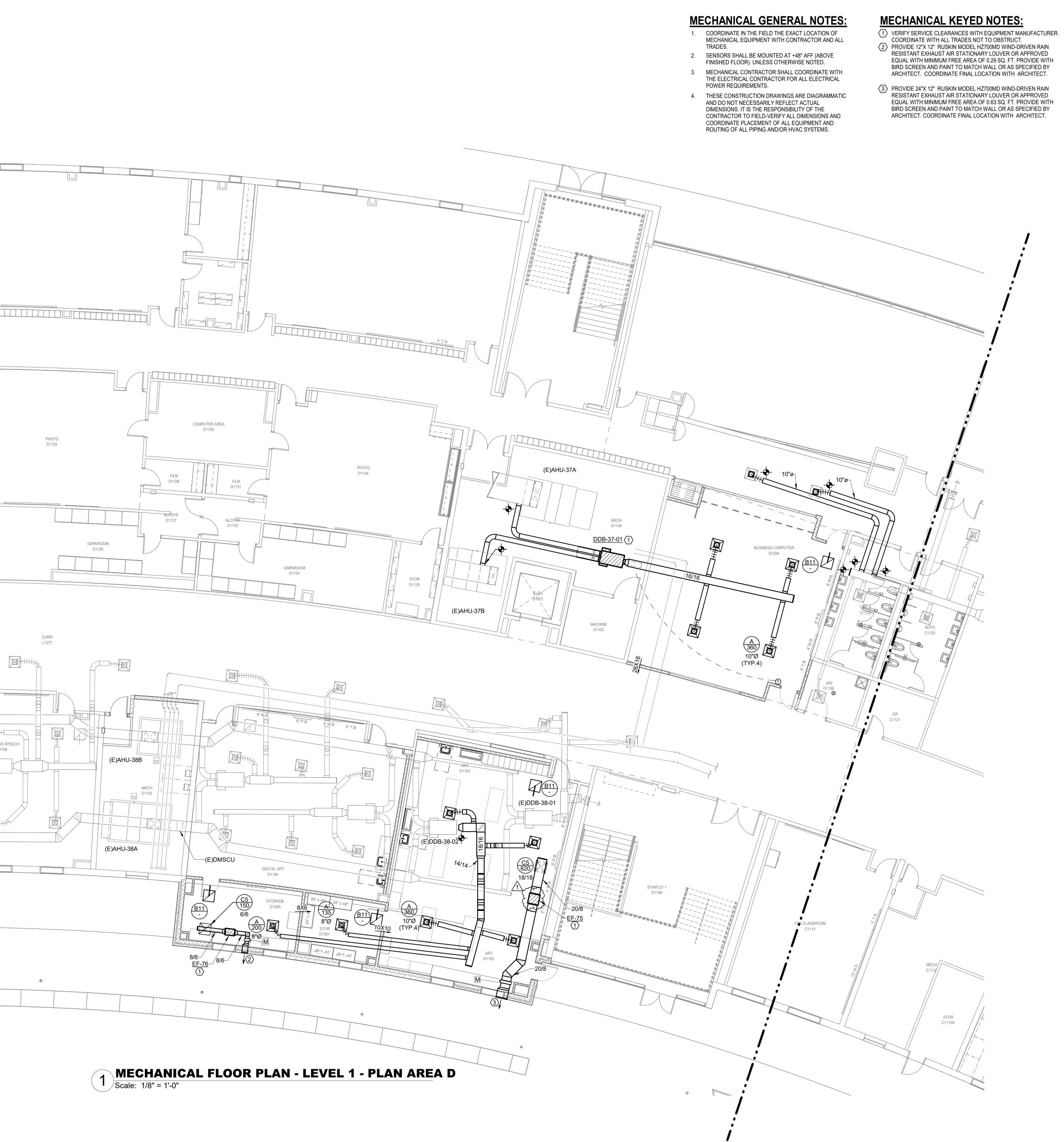
- 1. COORDINATE IN THE FIELD THE EXACT LOCATION OF MECHANICAL EQUIPMENT WITH CONTRACTOR AND ALL TRADES.
- 2. SENSORS SHALL BE MOUNTED AT +48" AFF (ABOVE FINISHED FLOOR). UNLESS OTHERWISE NOTED.
- 3. MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR ALL ELECTRICAL POWER REQUIREMENTS.
- 4. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR HVAC SYSTEMS.

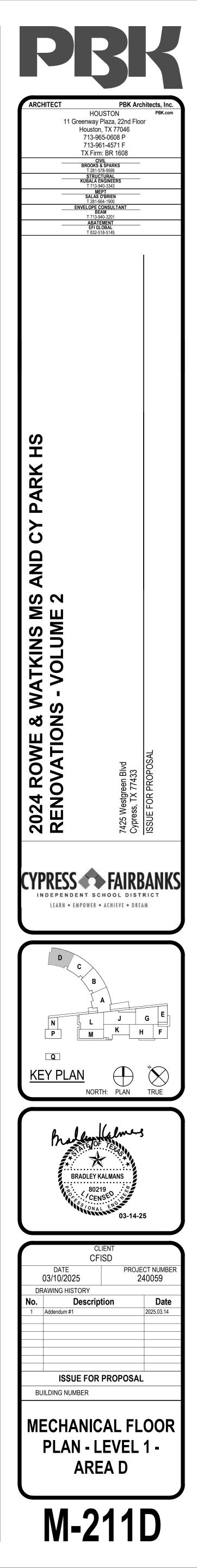
MECHANICAL KEYED NOTES

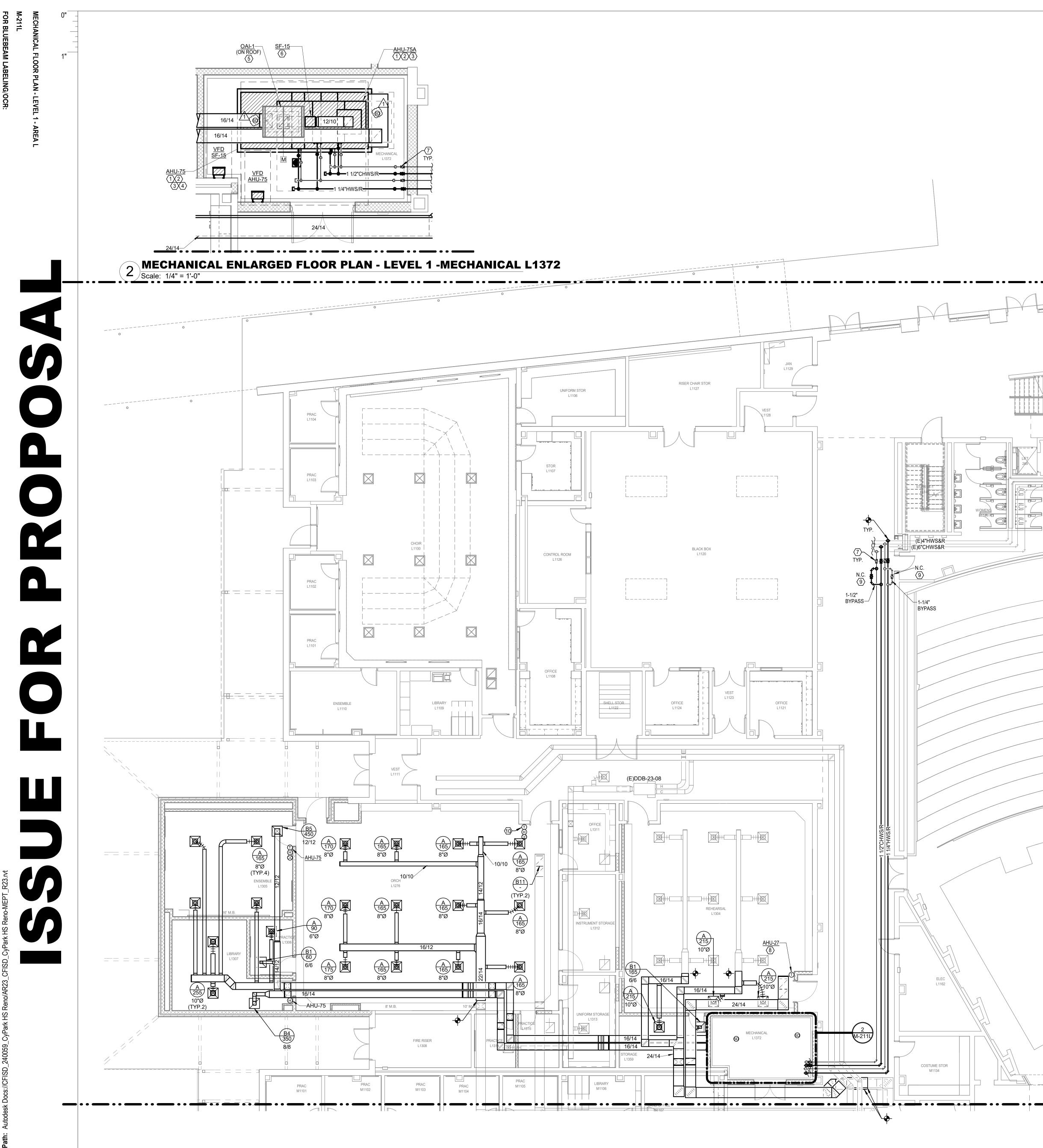
 $\langle 1 \rangle$ RE-BALANCE EXISTING SUPPLY AIR DIFFUSER TO INDICATED AIR ELOW CEM. 2 EXISTING SUPPLY AIR DIFFUSER NEW LOCATION.}



M-211D FOR BLUEBEAM LABELING/OCR:	MECHANICAL FLOOR PLAN - LEVEL 1 - AREA D	0"									
									4'T.B.		
						ART			DR 20	CORR 469	
											STOR D1125
						ROOM 12 STOR BUIL	SPEE	CH CLASSROOM D1110			
HS Reno/AR23_CFISD_CyPark HS Reno-ME					0				•		
File Path: Autodesk Docs://CFISD_240059_CyPark Chark Docs://CFISD_240059_CyPark Anthor Anthor Anthor Stat 3/17(5) 240059_CyPark	BY:	AM									







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Plot Stamp: 3/14/2025 11:28:05 AM 1 MECHANICAL FLOOR PLAN - LEVEL 1 - PLAN AREA L Scale: 1/8" = 1'-0"

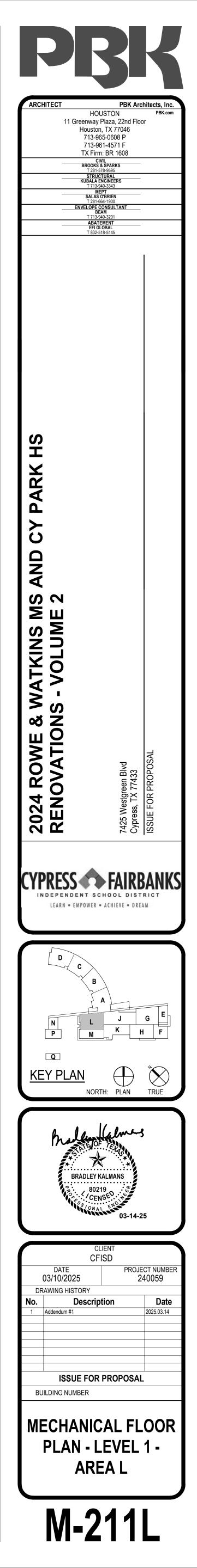
MECHANICAL GENERAL NOTES: 1. COORDINATE IN THE FIELD THE EXACT LOCATION OF

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VEST

MECHANICAL KEYED NOTES: $\langle 1 \rangle$ VERIFY SERVICE CLEARANCES FOR AIR FILTER, FAN

- SHAFT AND COIL REMOVAL WITH EQUIPMENT MANUFACTURER. COORDINATE WITH ALL TRADES NOT TO OBSTRUCT. $\langle 2 \rangle$ ROUTE FULL SIZE CONDENSATE DRAIN PIPING TO FLOOR
- SINK (SEE PLUMBING DRAWING FOR EXACT LOCATION). INSTALL CONDENSATE TRAP AS RECOMMENDED PER MANUFACTURER.
- $\langle 3 \rangle$ REFER TO DETAILS FOR AHU COIL PIPING. $\overline{\langle 4 \rangle}$ PROVIDE 4" THICK CONCRETE HOUSEKEEPING PAD.
- $\langle 5 \rangle$ ROUTE DUCTWORK AT SIZE INDICATED UP TO
- RELIEF/INTAKE ON ROOF. TRANSITION DUCTWORK TO CONNECT TO RELIEF/INTAKE OPENING.
- $\langle 6 \rangle$ PROVIDE FULL SIZE PLENUM AT RETURN AIR INLET FOR AHU AS SHOWN AND INSTALL TEMPERATURE SENSOR.
- $\langle 7 \rangle$ PROVIDE ISOLATION VALVE.
- $\langle 8 \rangle$ EXTEND EXISTING CONTROL WIRES FROM TEMPERATURE SENSOR TO MAKE FINAL CONNECTION.
- $\langle 9 \rangle$ PROVIDE NEW BYPASS PIPING AND VALVES AS SHOWN TO ALLOW FOR ISOLATING THE NEW PIPING FROM THE EXISTING HYDRONIC LOOPS. TESTING, FLUSHING, AND TREATEMENT OF NEW PIPING SHALL BE PERFORMED PRIOR TO OPENING THE NEW PIPING TO THE EXISTING HYDRONIC LOOPS. PURGERITE OR COMPARABLE COMPANY SHALL PROVIDE ASSISTANCE TO THE MECHANICAL CONTRACTOR TO CONFIRM FLUSHING AND CLEANING AT DESIGN SYSTEM FLOW RATES. CHEMICAL TREATEMENT MANUFACTURER SHALL TEST WATER TO CONFIRM COMPLIANCE OF
- A1102 FLUSHING AND TREATMENT OF WATER PRIOR TO OPENING THE NEW PIPING VALVES TO THE EXISTING HYDRONIC LOOP. (10) PROVIDE NEW CONTROL WIRING FROM TEMPERATURE SENSOR TO (E)AHU-26. TOIL F BOX OFFICE VEST 266 LIGHTING CONTROL L1145 L1144 MECH SOUND / VIDEO 529 AUDITORIUM L1140 SOUND





MECHANICAL GENERAL NOTES:

1. COORDINATE IN THE FIELD THE EXACT LOCATION OF MECHANICAL EQUIPMENT WITH CONTRACTOR AND ALL TRADES.

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WORK ROOM C2137

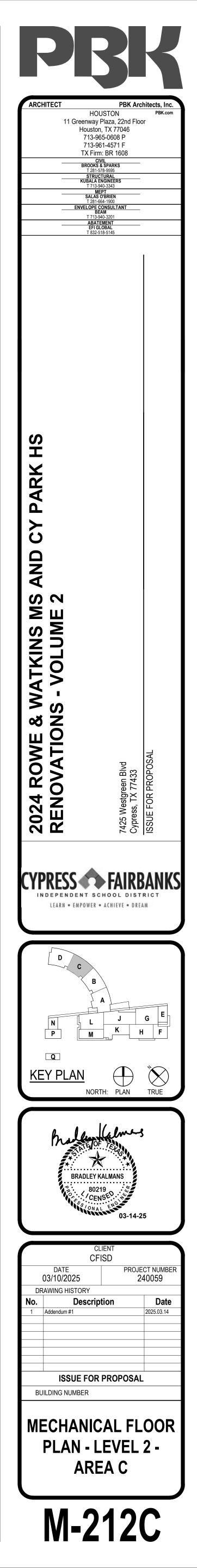
B11 -

CORF

WORK ROOM C2135

C2133

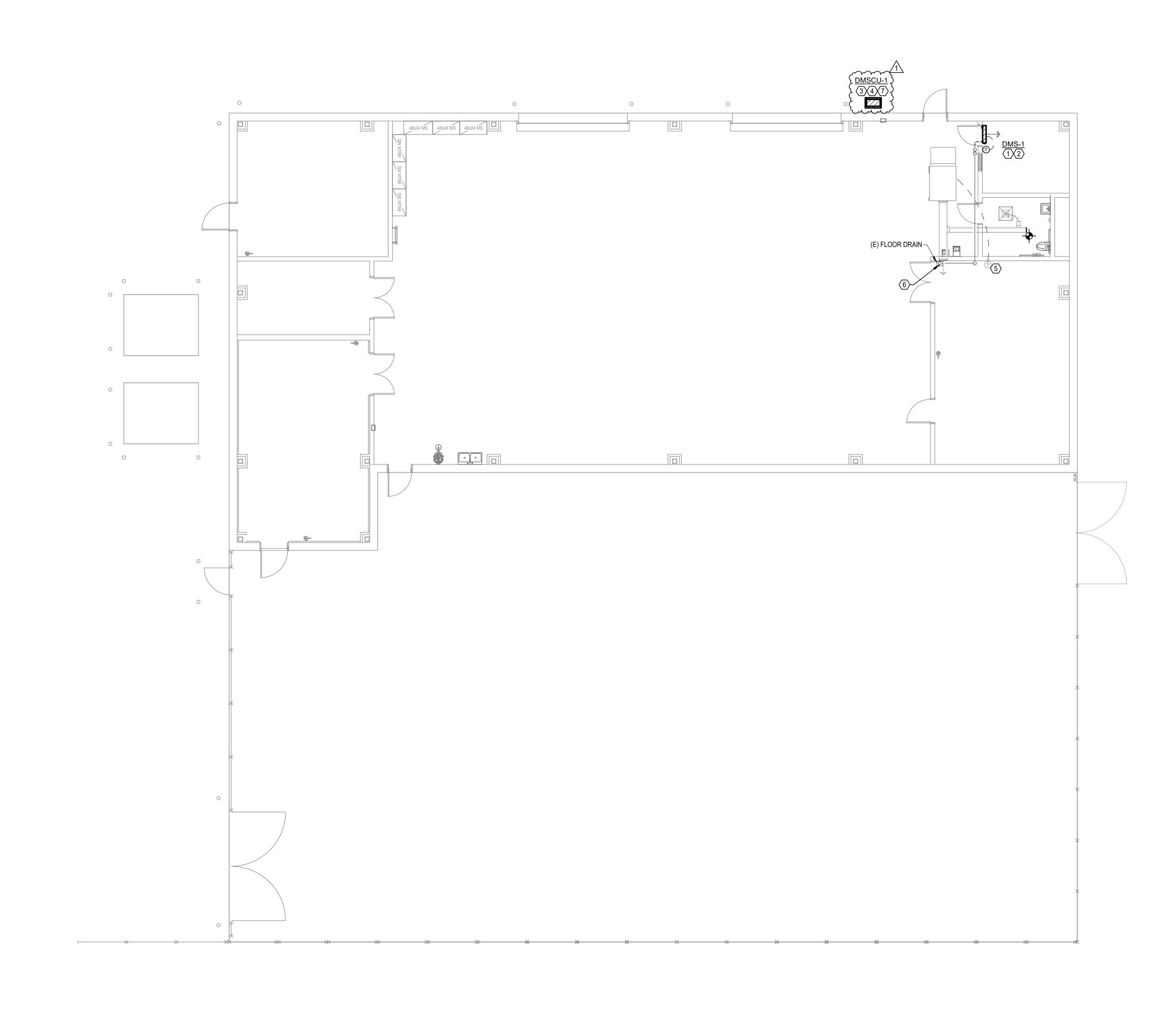
MECHANICAL KEYED NOTES: 1 REBALANCE EXISTING DUAL DUCT BOX TO 600 CFM. ammuni



1-213 OR E

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1 MECHANICAL FLOOR PLAN - LEVEL 1 - CENTRAL PLANT Scale: 1/8" = 1'-0"

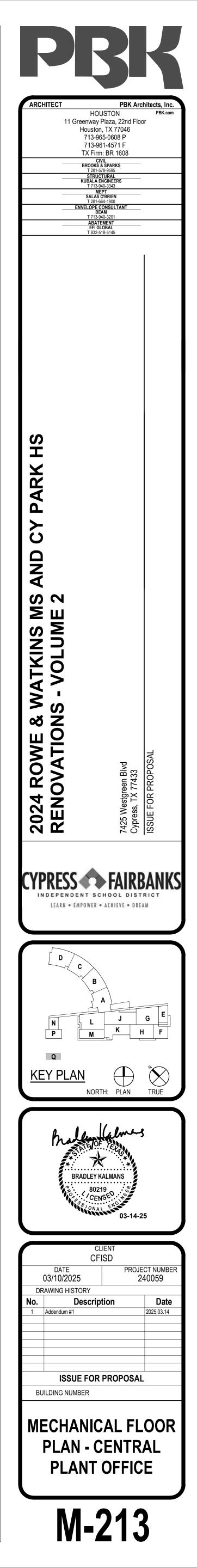
MECHANICAL GENERAL NOTES: 1. COORDINATE IN THE FIELD THE EXACT LOCATION OF

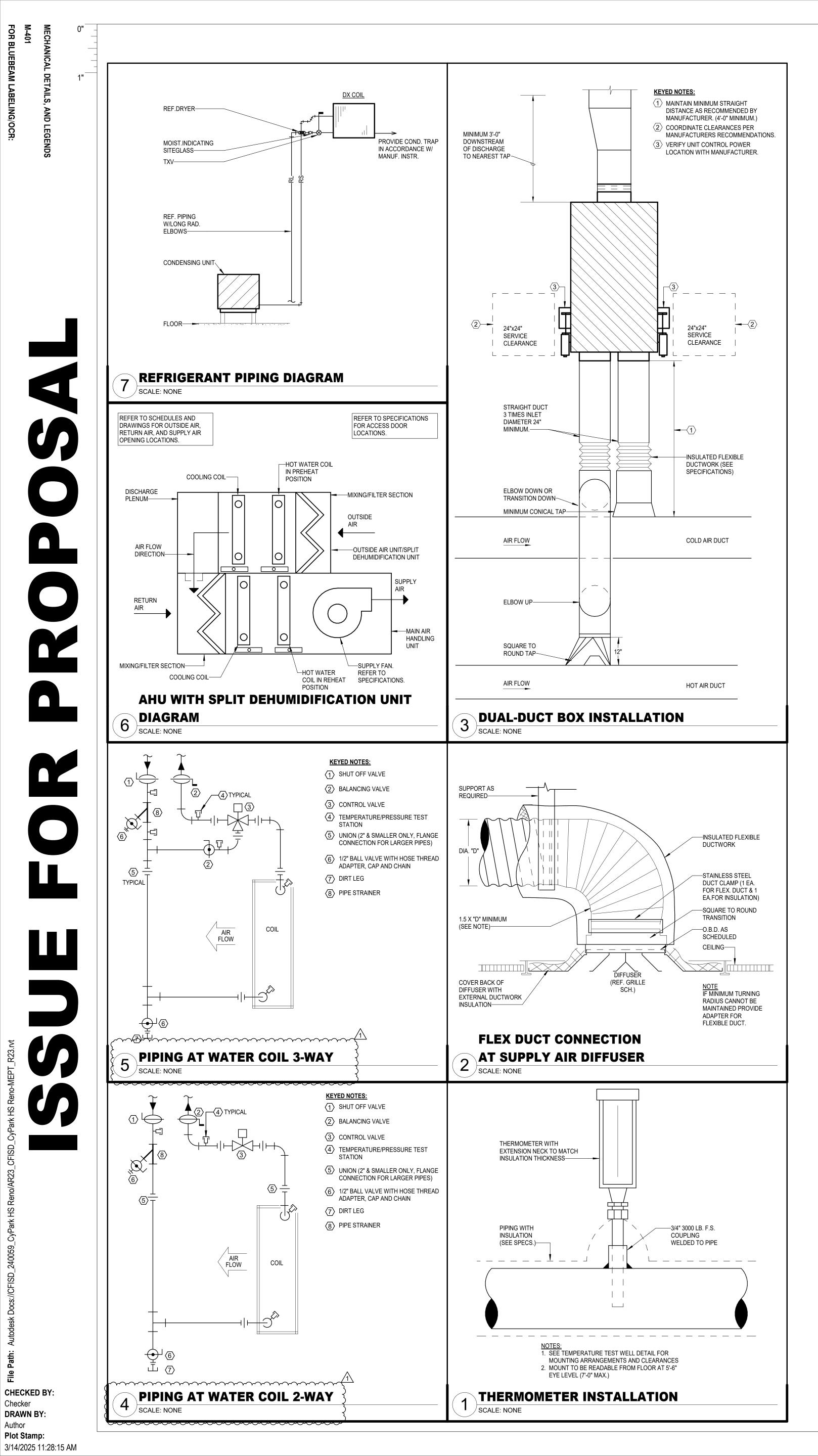
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MECHANICAL KEYED NOTES:

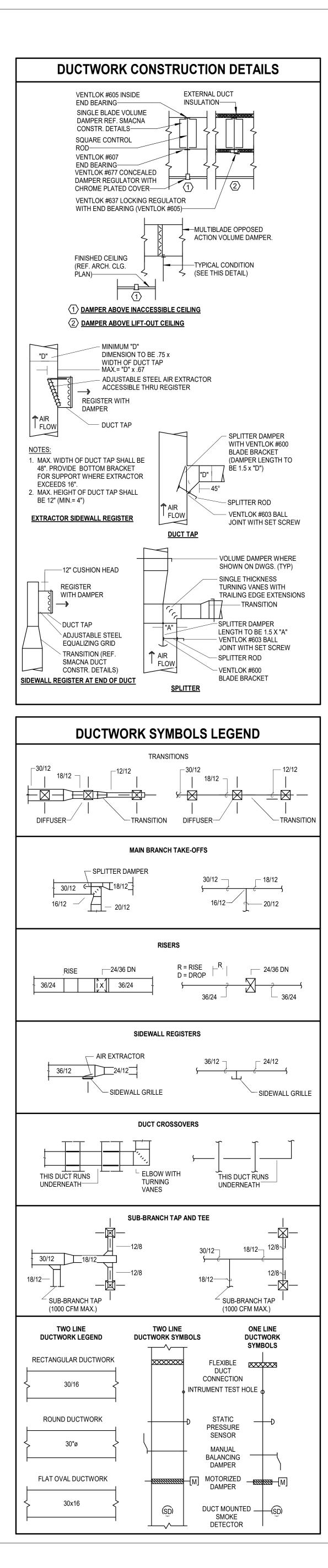
(1) VERIFY SERVICE CLEARANCES WITH EQUIPMENT MANUFACTURER. COORDINATE WITH ALL TRADES NOT TO OBSTRUCT CONDENSING UNIT ON GROUND. SIZE LINES PER

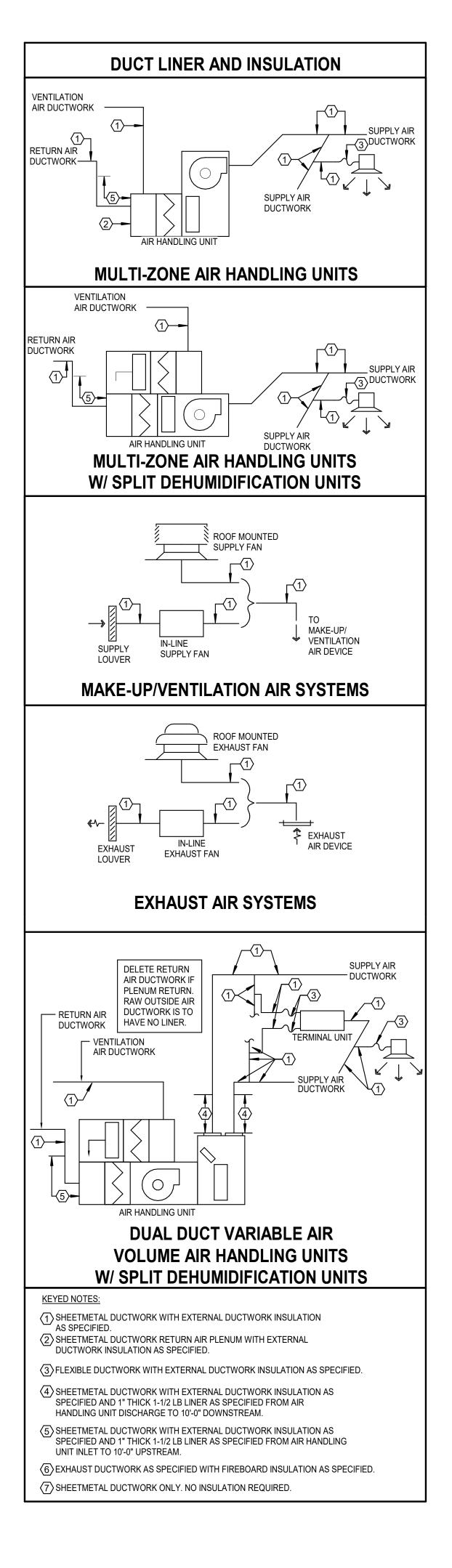
- MANUFACTURER'S RECOMMENDATION. SHALL BE NOT LESS THAN 7/3" AFF.
 VERIFY SERVICE CLEARANCES FOR AIR FILTER, FAN SHAFT AND COIL REMOVAL WITH EQUIPMENT MANUFACTURER. COORDINATE WITH ALL TRADES NOT TO OPPTPLICT
- TO OBSTRUCT. $\langle \overline{4} \rangle$ ROUTE REFRIGERANT PIPING TO ASSOCIATED INDOOR UNIT.
- 5 PROVIDE NEW CONTROL WIRING FROM EXISTING TEMPERATURE SENSOR TO (E)FCU-4.
- 6 ROUTE FULL SIZE CONDENSATE PIPE TO EXISTING FLOOR DRAIN. 7 MOUNT UNIT ON 4" HOUSEKEEPING CONCRETE PAD.

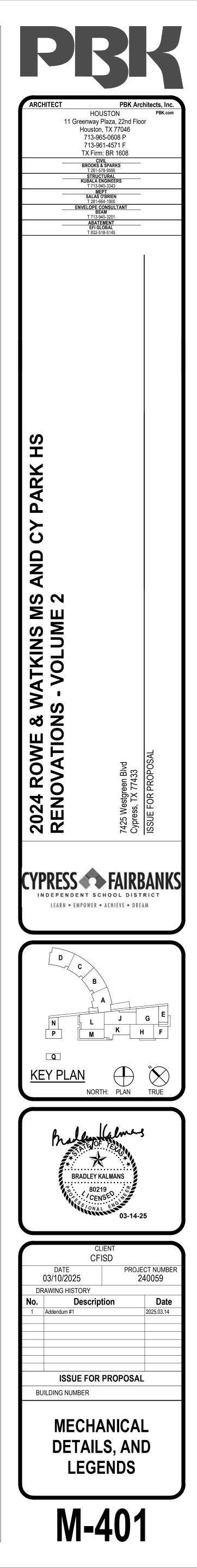




	SYMBOL LEGEND
SYMBOL	DESCRIPTION (DISREGARD ITEMS NOT SHOWN ON PLANS)
GENERAL	KEY NOTE TAG
	REVISION TAG
	K SUPPLY AIR DUCTWORK
	RETURN AIR AND OUTSIDE AIR DUCTWORK
\mathbb{A}^{\ddagger}	
\mathbb{X}	FLEXIBLE DUCTWORK SUPPLY AIR DUCTWORK THROUGH HORIZONTAL PARTITION
	RETURN AIR DUCTWORK THROUGH HORIZONTAL PARTITION
	EXHAUST AIR DUCTWORK THROUGH HORIZONTAL PARTITION FIRE DAMPER (VERTICAL)
•	FIRE DAMPER (HORIZONTAL)
∠Ŝ∖ ĵ	SMOKE DAMPER (VERTICAL)
(Ŝ) ∧ ∠FS∖	SMOKE DAMPER (HORIZONTAL) COMBINATION FIRE & SMOKE DAMPER (VERTICAL)
FS	COMBINATION FIRE & SMOKE DAMPER (HORIZONTAL)
	MANUAL BALANCING DAMPER (SEE DAMPER SCHEDULE) MOTORIZED DAMPER (SEE DAMPER SCHEDULE)
SENSORS	
T	THERMOSTAT AND TEMPERATURE SENSOR
(H) (SD)	HUMIDISTAT SMOKE DETECTOR
Û	HEAT DETECTOR
	GRILLE SIZE TAG (REFER TO GRILLE SIZE LEGEND)
\boxtimes	SUPPLY AIR GRILLE WITH FOUR-WAY THROW
	SUPPLY AIR GRILLE WITH THREE-WAY THROW
	SUPPLY AIR GRILLE WITH TWO-WAY THROW SUPPLY AIR GRILLE WITH TWO-WAY CORNER THROW
	SUPPLY AIR GRILLE WITH ONE-WAY THROW
	RETURN AIR GRILLE WITH SOUND BOOT EXHAUST AIR GRILLE
	SUPPLY AIR SIDEWALL GRILLE
20X12	RETURN AIR SIDEWALL GRILLE RETURN AIR OPENING ABOVE CEILING
PIPING	
-CWS&R-	CONDENSER WATER SUPPLY & RETURN (TOTAL OF TWO PIPES, ONLY ONE PIPE SHOWN FOR DRAWING CLARITY)
-CWS-	CONDENSER WATER SUPPLY
-CWR-	CONDENSER WATER RETURN
-CHWS&R-	CHILLED WATER SUPPLY & RETURN (TOTAL OF TWO PIPES, ONLY ONE PIPE SHOWN FOR DRAWING CLARITY)
-CHWS-	CHILLED WATER SUPPLY CHILLED WATER RETURN
-HWS&R-	HOT WATER FOR HYDRONIC HEATING SUPPLY & RETURN (TOTAL OF TWO
-HWS-	PIPES, ONLY ONE PIPE SHOWN FOR DRAWING CLARITY) HOT WATER FOR HYDRONIC HEATING SUPPLY
-HWR-	HOT WATER FOR HYDRONIC HEATING RETURN
D	
—AD—	AUXILLARY CONDENSATE DRAIN LINE REFRIGERANT LIQUID & GAS RECIRCULATION LINE (TOTAL OF
-RLR-	TWO PIPES, ONLY ONE PIPE SHOWN FOR DRAWING CLARITY)
—RL— —HG—	REFRIGERANT LIQUID LINE REFRIGERANT HOT GAS LINE
—RS—	REFRIGERANT SUCTION LINE
우 우	ELBOW UP ELBOW DOWN
	90° ELBOW
×	45° ELBOW
+± ;;;	TEE TEE DOWN
-+0+	TEE UP
	TOP BRANCH CONNECTION BOTTOM BRANCH CONNECTION
	FLANGE
	CONTINUATION FLOOR DRAIN (REFER TO PLUMBING DRAWINGS)
_ −×	GATE VALVE
\ ↓ ↓ ↓	GLOBE VALVE CHECK VALVE
	BUTTERFLY VALVE
∲ ₽	BUTTERFLY VALVE WITH OPERATOR
₽ ₩	PLUG VALVE TWO-WAY CONTROL VALVE
-&-	THREE-WAY CONTROL VALVE
(R)(R)	PRESSURE REDUCING VALVE PRESSURE RELIEF VALVE
-ф-	BALL VALVE
+++-	STRAINER
	UNION THERMOMETER WELL
	PETE'S PLUG
 ₽	PRESSURE GAUGE TEMPERATURE SENSOR IN PIPE
⊒	VENTURI FLOW METER
	FLOW SWITCH
(FM) 	FLOW MEASURING STATION EXPANSION JOINT
	FLEXIBLE CONNECTION
<u> </u>	GAUGE COCK
	SITE GLASS DIFFERENTIAL PRESSURE SENSOR
	TURBINE FLOW METER
	ANCHOR PIPE GUIDE
RENOVATIO	
	POINT OF CONNECTION FROM NEW TO EXISTING
	ITEM TO REMAIN ITEM TO BE REMOVED



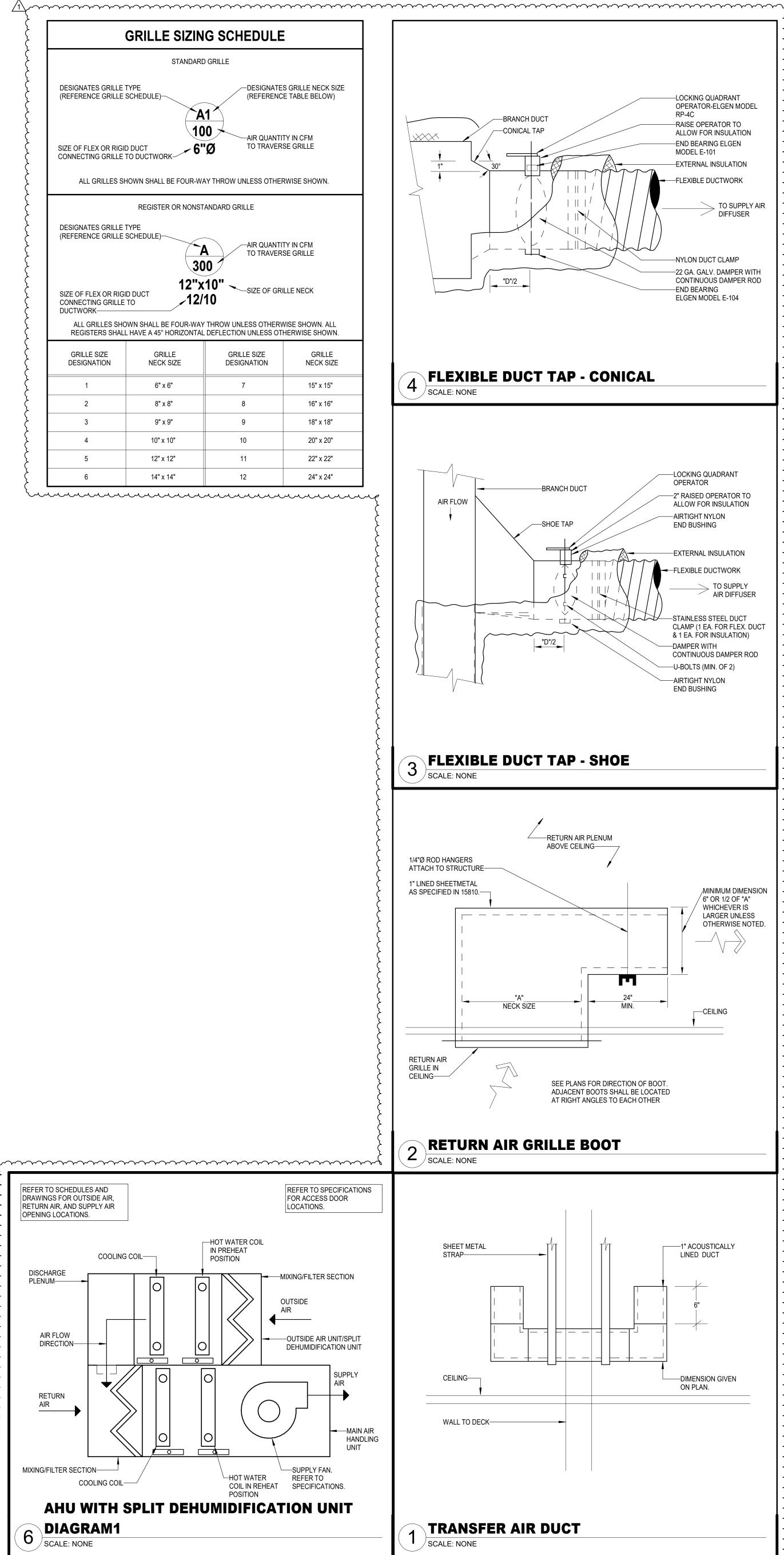


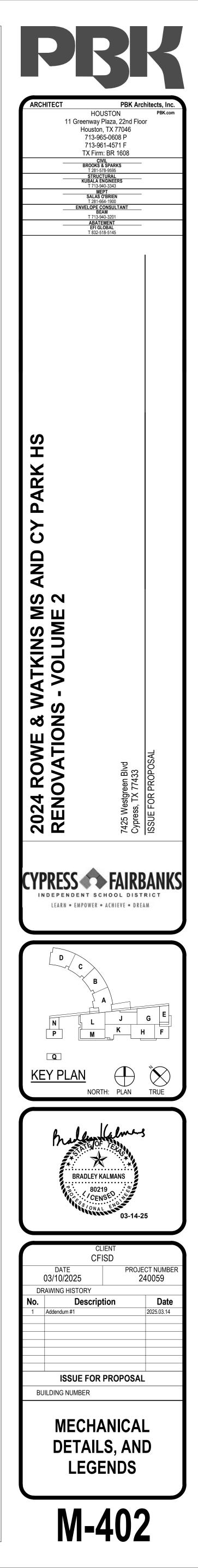


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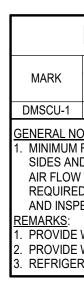
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													AIF	R HANI	DLING UNI	Т										
			FAN					COOLING					HEATING			PIPE S TO COIL		BASIS OF DESIGN								
MARK	SUPPLY AIR CFM	OUTSIDE AIR CFM	EXT. STATIC PRESSURE (IN. W.C)	HORSE POWER	C V	PH		ENTERING DRY BULB			LEAVING WET BULB	ENTERING TEMP (°F)		PRESSURE DROP (FT.)		MIN. HEATING CAPACITY	ENTERING TEMP. (°F)	WATER GPM	PRESSURE DROP (FT.)	CHILLED WATER	HOT WATER	MANUFACTURER	MODEL	MCA	MOCP	REMARKS
AHU-75	1,260	400	1.50	1.5	480	3	60	75.0	62.5	52.9	52.1	45	6.3	15.0	72.0	38,821	130.0	3.9	10.0	1"	1"	-	-	-1	-1	1,4,5,6,7,9,12,14,
AHU-75A	400	400						98.0	80.0	53.0	52.0	45	6.6	15.0	72.0	18,662	130.0	1.9	10.0	1 1/4"	3/4"	-	-	0	20	2,4,5,8,10,12,15,17
HORSEF 2. MAINTA OPEN A	POWER AS RE	EQUIRED TO I	INIT CASING M MEET YOUR TO OR COIL PULL ORS ON UNIT F	OTAL PRESSU AS RECOMM	URE LOS IENDED	SS. CO BY UN	oordin Nit Man	NATE WITH ELE NUFACTURER.	ECTRICIAN. MAINTAIN MI	NIMUM CLEAF	RANCE AS REG	QUIRED TO		2. VE 3. PF 4. PF 5. PF 6. PF 7. PF 8. PF	ELOCITY NOT TO EX ELOCITY NOT TO EX COVIDE VERTICAL L COVIDE HORIZONTA COVIDE VARIABLE V COVIDE CONSTANT COVIDE FRONT DISC COVIDE TOP DISCHA COVIDE TWO-WAY ((CEED 450 FP JNIT. AL UNIT. /OLUME UNIT VOLUME UNI CHARGE. ARGE.	M ON COOLIN WITH VARIAB T WITH VARIA	IG COIL. BLE FREQ BLE FRE(12. PF 13. PF 14. PF 15. PF 16. PF 17. VE 17. UN (LISTE SPAC SPLIT OF M/	ROVIDE TWO-WAY F ROVIDE THREE-WAY ROVIDE HOT WATEF ROVIDE UNIT WATEF ROVIDE UNIT WITH F ROVIDE UNIT WITH F ROVIDE UNIT WITH F ELOCITY NOT TO EX UNIT INDICATED SHAI ED ABOVE). UNIT INF E, COOLING COIL A DEHUMIDIFICATION AIN AIR HANDLER U PLIT DEHUMIDIFICAT	Y HEATING CONTI R COIL IN PRE-HE. R COIL IN REHEAT ANGLED FILTER SE FLAT FILTER SEC (CEED 700 FPM OI LL BE STACKED C CLUDES ANGLED IND DISCHARGE F N UNIT SHALL DEI INIT UPSTREAM C	ROL VALVES. AT POSITION. FOSITION. TION. N COOLING COIL. DAU FURNISHED V FILTER MIXING E PLENUM. UNIT DC LIVER OUTSIDE A DF COIL.	WITH ASSOCI BOX, PREHEAT DES NOT HAVE IR TO MIXING	COIL, ACCESS FAN SECTION. BOX SECTION

		0514	EXT. STATIC PRESSURE	
TAG	LOCATION	CFM	(IN.W.C.)	MAX R
EF-75	ART D1103	820	0.50	110
EF-76	STORAGE D1300	150	0.50	142
SF-15	MECHANICAL L1372	400	0.50	150
 MINIMUM REC MAINTENANC <u>REMARKS</u>: PROVIDE WIT <u>PROVIDE WIT</u> <u>PROVIDE WIT</u> PROVIDE WIT PROVIDE WIT 	L PRESSURE LOSS. INCRE COMMENDED CLEARANCE E, AND INSPECTION. MAIN H DISCONNECT. H MOTORIZED DAMPER H EC MOTOR. H SPEED CONTROLLER. N FROM STRUCTURE WITH	AROUND UNIT IS 1 TAIN MINIMUM ELE	12 INCHES ON NON ECTRICAL CLEARAI	-SERVICE NCE AS RE



	GRILLE												
MARK	SERVICE	TYPE	DAMPER	CONSTRUCTION MATERIAL	FINISH COLOR	MANUFACTURER	MODEL NUMBER	DESCRIPTION					
А	SUPPLY AIR	DIFFUSER	-	STEEL	-	TITUS	TDC	EXPOSED T-BAR CEILING FRAME STYLE WITH 24"X24" OR 12"X12" LOUVERED FACE					
В	RETURN AIR	GRILLE	-	STEEL	-	TITUS	{350} <u>/1</u>	SINGLE DEFLECTION GRILLE WITH HORIZONTAL FRONT BARS.					
С	EXHAUST AIR	DIFFUSER	-	STEEL	δ		(350)	SINGLE DEFLECTION GRILLE WITH HORIZONTAL FRONT BARS }					
1. DAMPE	<u>GENERAL NOTES</u> : 1. DAMPERS NOTED AS U.L. SHALLBE A 'U.L.' CLASSIFIED CEILING RADIATION DAMPER WITH THERMAL BLANKET. 2. COORDINATE FINAL AIR DEVICE LOCATION AND FINISH COLOR WITH ARCHITECT. REMARKS:												

	RELIFE VENT & O.A. INTAKE											
MARK	CFM	MAX S.P. (IN.)	MIN. THROAT AREA	MODEL NUMBER	SERVES	REMARKS						
OAI-1	400	0.1 1.5		GI	AHU-1A	1,2,3						
2. PROV	ide with roo ide with biri ide with mo ⁻	SCREE!	Ν.	1	1							

	DAMPER											
MARK	ACTUATOR	DUTY	BLADE ACTION	MANUFACTURER	MODEL NUMBER	REMARKS						
D-1	MANUAL BALANCING	UNDER 9" WIDE	N/A	N/A	N/A	SEE SMACNA CONSTRUCTION DETAILS REFERENCED "TYPICAL CONSTRUCTION DETAILS FOR LOW VELOCITY DUCTS."						
D-2	MANUAL BALANCING	OVER 9" WIDE	OPPOSED	RUSKIN	MD-35	MANUAL DAMPER WITH STANDARD CONSTRUCTION FEATURES AND VENTLOCK #639 LOCKING REGULATOR.						
D-3	MOTORIZED	OVER 9" WIDE	OPPOSED	RUSKIN	CD-60	LOW LEAKAGE DAMPER WITH BLADE SEALS						
NOTES: N/A - I		1										

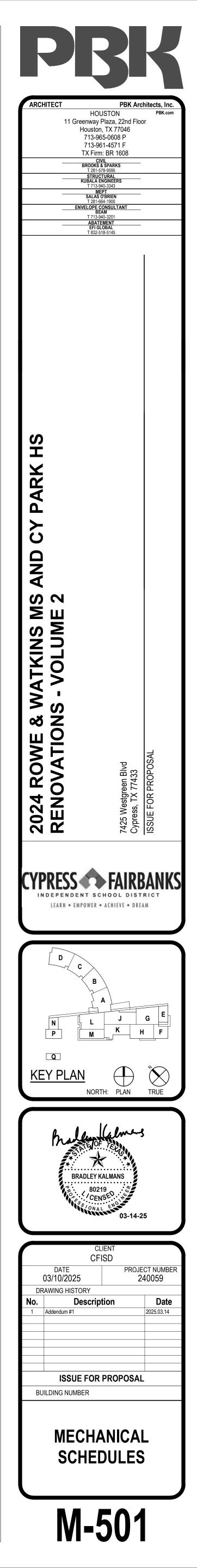
	FAN SCHEDULE													
IC			CUF	RRENT C	HAR									
E						LOCALLY								
	MAX RPM	HORSE POWER	V	P	F	SWITCHED	INTERLOCK WITH	FAN TYPE		MANUFACTURER	MODEL NUMBER	REMARKS		
	1103	0.25	120	1	60		1 -	INLINE		COOK	SQND	1,2,3,4,5		
	1420	0.25	120	1	60	-	AHU-38	INLINE		COOK	SQND	{1,2,3,4,5		
	1500	0.25	120	1	60	-	AHU-75	INLINE	DIRECT?	COOK	SQND	لر 1,2,3,4,5		

ORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO QUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN. ON NON-SERVICE SIDES AND 30 INCHES ON SERVICE SIDES. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, CLEARANCE AS REQUIRED BY NEC.

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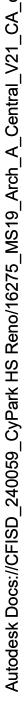
DUCTLESS MINI-SPLIT - OUTDOC	R UNIT		Γ		DU	AL D	UCT TE	RMINA	BOX	
MIN. TOTAL OUTDOOR MINIMUM CURRENT CHARAC. CAPACITY AIR EER/ (PTTUL) TEMP (°E) SEEP V PH F	EER/			MARK	COOL		NG INLET	HEA MAXIMUM	TING INLET	REMARKS
(BTUH) TEMP (°F) SEER V PH F 1 17,100 90 -/15.2 120 1 60	MARK DMS-1	1,2,3		WATAK	MAX.	MIN.	DIAMETER SIZE (IN.)	CFM	DIAMETER SIZE (IN.)	
NOTES:				DDB-37-01	1,440	460	12	1155	12	-
IM RECOMMENDED CLEARANCE AROUND ROOFTOP UNIT IS 12 IN AND 30 INCHES ON SERVICE SIDES. MAINTAIN MINIMUM CLEARAN OW AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINI RED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERV SPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQ : DE WITH LOW AMBIENT CONTROL DOWN TO 20°F. DE WITH DISCONNECT SWITCH. SERANT LINES TO BE SIZED PER MANUFACTURER'S REQUIREMEN	CE FOR CONDE MUM CLEARAN ICE, MAINTENA UIRED BY NEC.	ENSER CE AS NCE,	1 2 3 4 <u>R</u>	SHALL BE 2. MAXIMUM 3. SUSPEND UNISTRUT FOR MORE 4. UNITS TO	STATIC P 0.2" W.G. VELOCIT UNIT WIT RUNNER DETAILS BE MOUN	Y THROU TH FOUR RS SECUE S. ITED BET	RE DROP OF AL JGH DUCT INLI THREADED HA RED TO STRUG TWEEN BEAMS GHTS WHEREV	ET SHALL BE 2 ANGER RODS CTURE. REFEI S AND 18" MAX	2,000 FPM. ATTACHED TO R TO MANUFA	O TWO CTURER

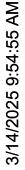
			FAN					AIR TEMPER	RATURE (°F)		COOLING		
MARK	SUPPLY AIR CFM	OUTSIDE AIR CFM	EXT.STATIC PRESSURE (IN. W.C.)	HORSE POWER (WATTS)	CURRE V	ENT CI P	HARAC. F	ENTERING DRY BULB	ENTERING WET BULB	MIN. TOTAL CAPACITY (BTUH)	MIN. SENS. CAPACITY (BTUH)	MINIMUM EER/ SEER	REMARKS
DMS-1	370	0	0.10	40.0	208	1	60	75.0	62.5	17,100	13,680	/15.2-	1,2,3,4,5,
FILTER AND OBTAIN TOTA YOUR TOTAL MAINTAIN MI	UNIT CASING M AL PRESSURE PRESSURE LO NIMUM CLEAR	AUST BE ADD Loss. Incre DSS. Coord Ance for Co N Minimum C	/ATER COILS W DED TO EXTERN EASE HORSEPC DINATE WITH EL OIL PULL AS RE CLEARANCE AS	AL STATIO WER AS I ECTRICIA COMMENI REQUIRE) press Requir N. Ded by	SURE ED TC UNIT PEN A	TO D MEET	3. REFI 4. INDC 5. PRO ASPI WAL	RIGERANT LIN DOR UNIT IS PO VIDE INTEGRA EN PUMPS OR L UNIT. REFEF	PROGRAMMABLE \ ES TO BE SIZED P OWERED FROM OU L MINI SPLIT CONI EQUAL. CONDENS TO MANUFACTUR	ER MANUFACTUR JTDOOR UNIT. DENSATE PUMP K SATE PUMP SHALI RER INSTALLATIOI	ER'S REQUIREM IT ASP-MA-UNI I _ BE INSTALLED N INSTRUCTION	MINI AQUA BY INSIDE HIGH S.



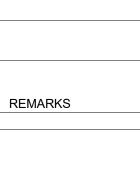
				PANEL				FRAME			
	DOOR	SIZ	EWxH						DETAILS		FIRE RATING
WΤ	ELEV.	W	Н	MATL.	FINISH	MATL.	FINISH	HEAD	JAMB	SILL	LABEL
\105A	HG-2	3' - 4"	6' - 11"	ALUM/GL	ALUM	ALUM	ALUM	22/A-521	21/A-521	26/A-521	
	HG-2								-		

			FRAM	EWXH		DETAILS	
Mark	ELEVATION	FRAME MATERIAL	Width	Height	HEAD	JAMB	SILL
SF-1	1.01	ALUM	23' - 5 13/16"	7' - 6 5/32"	22/A-521	21/A-521	26/A-521









Comments

	D 00		
		RPANEL	
		EWxH	
wt	W	H	REMARKS
A101A	6' - 0"		CARD READER
A101B	6' - 0"		CARD READER
A102B	6' - 0"	6' - 10 1/2"	KEEP EXISTING CARD READER
A102C	6' - 0"	6' - 10 1/2"	
A102D	6' - 0"	6' - 10 1/2"	KEEP EXISTING CARD READER
A103	3' - 0"	6' - 10"	
A107	3' - 0"	6' - 10"	
A108	3' - 0"	6' - 10"	
A109	3' - 0"	6' - 10"	
A111	3' - 0"	6' - 10"	
A113	3' - 0"	6' - 10"	
A114	3' - 0"	6' - 10"	
A119A	3' - 0"	6' - 10"	
A119C	3' - 0"	6' - 10"	
A120	3' - 0"	6' - 10"	
A121	3' - 0"	6' - 10"	
A123	3' - 0"	6' - 10"	
A125	3' - 0"	6' - 10"	
A127	3' - 0"	6' - 10"	
A131C	6' - 0"	6' - 8 1/2"	
A131D	6' - 0"	6' - 8 1/2"	
A132A	3' - 0"	6' - 10"	

1. ALL DIMENSIONS ARE TO FACE OF THE FINISHED WALL UNLESS NOTED

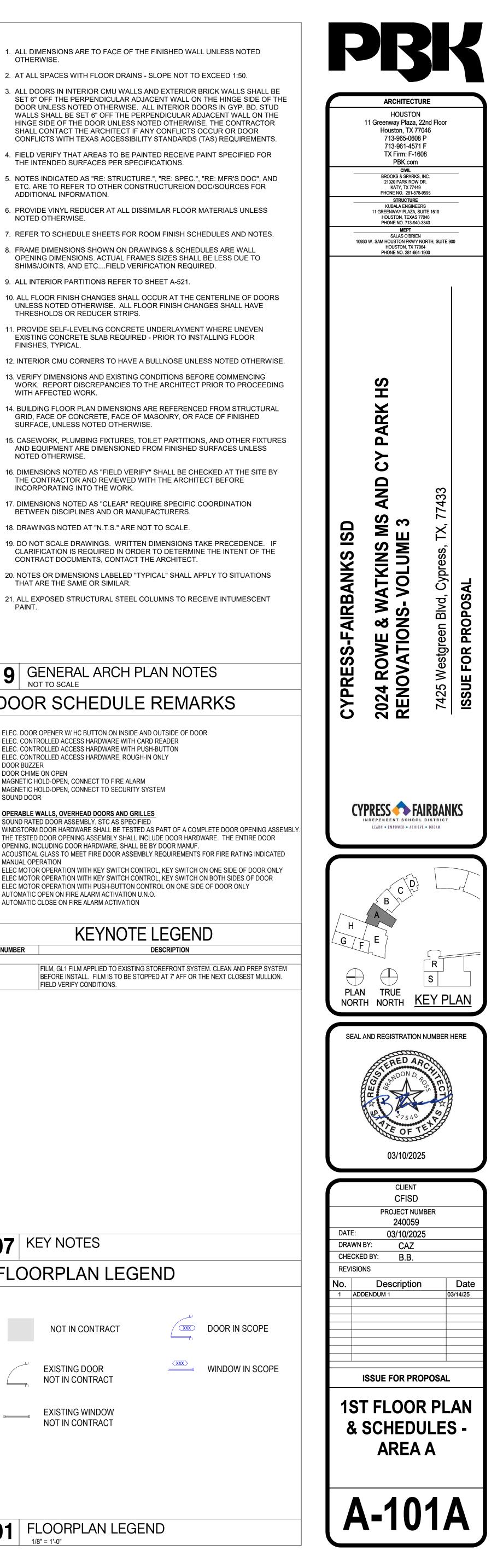
SHALL CONTACT THE ARCHITECT IF ANY CONFLICTS OCCUR OR DOOR

2. AT ALL SPACES WITH FLOOR DRAINS - SLOPE NOT TO EXCEED 1:50.

THE INTENDED SURFACES PER SPECIFICATIONS.

ADDITIONAL INFORMATION.

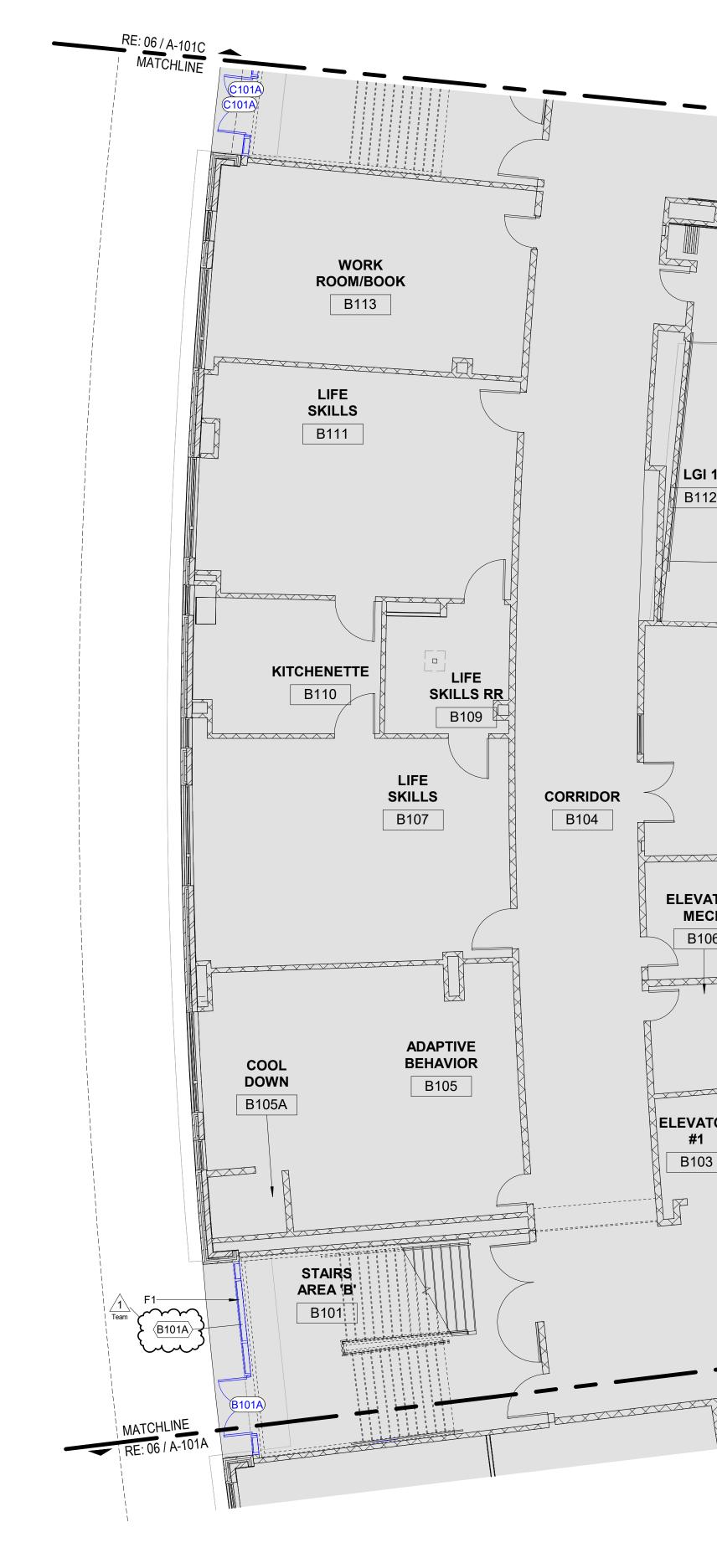
OTHERWISE.



DOOR SCHEDULE REMARKS	
 ELEC. DOOR OPENER W/ HC BUTTON ON INSIDE AND OUTSIDE OF DOOR ELEC. CONTROLLED ACCESS HARDWARE WITH CARD READER ELEC. CONTROLLED ACCESS HARDWARE WITH PUSH-BUTTON ELEC. CONTROLLED ACCESS HARDWARE, ROUGH-IN ONLY DOOR BUZZER DOOR CHIME ON OPEN MAGNETIC HOLD-OPEN, CONNECT TO FIRE ALARM MAGNETIC HOLD-OPEN, CONNECT TO SECURITY SYSTEM SOUND DOOR 	
 OPERABLE WALLS, OVERHEAD DOORS AND GRILLES 10. SOUND RATED DOOR ASSEMBLY, STC AS SPECIFIED 11. WINDSTORM DOOR HARDWARE SHALL BE TESTED AS PART OF A COMPLETE DOOR OPENING ASSEMBLY. THE TESTED DOOR OPENING ASSEMBLY SHALL INCLUDE DOOR HARDWARE. THE ENTIRE DOOR OPENING, INCLUDING DOOR HARDWARE, SHALL BE BY DOOR MANUF. 12. ACOUSTICAL GLASS TO MEET FIRE DOOR ASSEMBLY REQUIREMENTS FOR FIRE RATING INDICATED 13. MANUAL OPERATION 14. ELEC MOTOR OPERATION WITH KEY SWITCH CONTROL, KEY SWITCH ON ONE SIDE OF DOOR ONLY 15. ELEC MOTOR OPERATION WITH KEY SWITCH CONTROL, KEY SWITCH ON BOTH SIDES OF DOOR 16. ELEC MOTOR OPERATION WITH PUSH-BUTTON CONTROL ON ONE SIDE OF DOOR ONLY 17. AUTOMATIC OPEN ON FIRE ALARM ACTIVATION U.N.O. 	

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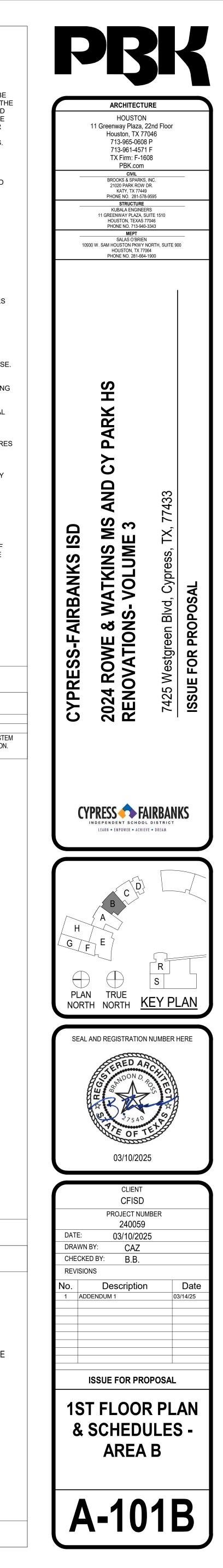
06 FIRST FLOOR PLAN - AREA 'B'

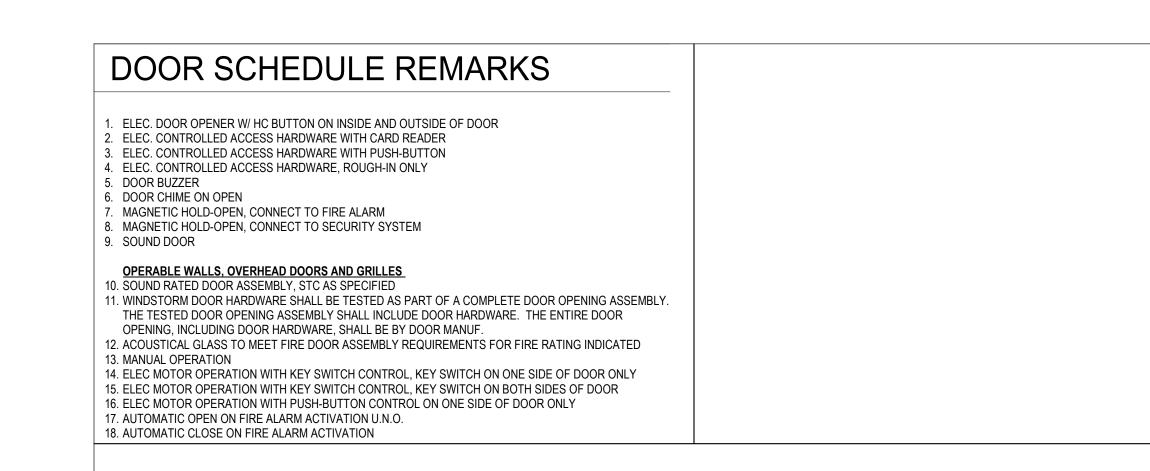


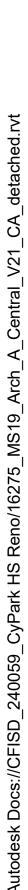
						E	XISTING	DOOR S	SCHEDULE-	FIRST FLO	OR ARI	EA B			
					DOOR	PANEL			DOO	R FRAME				DETAIL	S
			Door	PAIR/	SIZE \	NхН					MATL	TYP			
MARK	LEVEL	AREA	Elevation	SING	W	Н	MATL.	ELEV.	W	Н		E	SILL	JAMB	
B101A	1st FLOOR	В	FG		5' - 6"	6' - 8"	AL				AL		-	Ref. W.E.	2
B102	1st FLOOR	В	FG		5' - 6"	6' - 8"	AL				AL		-	Ref. W.E.	2
Grand to	tal: 2									1				-	-



	1. ALL DIMENSIONS ARE TO FACE OF THE FINISHED WALL UNLESS NOTED OTHERWISE.
FIRE RATING LABELFIRE REMARKS21/A-540KEEP EXISTING CARD READER21/A-540KEEP EXISTING CARD READER	 AT ALL SPACES WITH FLOOR DRAINS - SLOPE NOT TO EXCEED 1:50. ALL DOORS IN INTERIOR CMU WALLS AND EXTERIOR BRICK WALLS SHALL BE SET 6" OFF THE PERPENDICULAR ADJACENT WALL ON THE HINGE SIDE OF THE DOOR UNLESS NOTED OTHERWISE. ALL INTERIOR DOORS IN GYP. BD. STUD WALLS SHALL BE SET 6" OFF THE PERPENDICULAR ADJACENT WALL ON THE HINGE SIDE OF THE DOOR UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL CONTACT THE ARCHITECT IF ANY CONFLICTS OCCUR OR DOOR CONFLICTS WITH TEXAS ACCESSIBILITY STANDARDS (TAS) REQUIREMENTS. FIELD VERIFY THAT AREAS TO BE PAINTED RECEIVE PAINT SPECIFIED FOR
	 THE INTENDED SURFACES PER SPECIFICATIONS. 5. NOTES INDICATED AS "RE: STRUCTURE.", "RE: SPEC.", "RE: MFR'S DOC", AND ETC. ARE TO REFER TO OTHER CONSTRUCTUREION DOC/SOURCES FOR ADDITIONAL INFORMATION. 6. PROVIDE VINYL REDUCER AT ALL DISSIMILAR FLOOR MATERIALS UNLESS NOTED OTHERWISE.
	 REFER TO SCHEDULE SHEETS FOR ROOM FINISH SCHEDULES AND NOTES. FRAME DIMENSIONS SHOWN ON DRAWINGS & SCHEDULES ARE WALL OPENING DIMENSIONS. ACTUAL FRAMES SIZES SHALL BE LESS DUE TO SHIMS/JOINTS, AND ETCFIELD VERIFICATION REQUIRED. ALL INTERIOR PARTITIONS REFER TO SHEET A-521.
	 ALL FLOOR FINISH CHANGES SHALL OCCUR AT THE CENTERLINE OF DOORS UNLESS NOTED OTHERWISE. ALL FLOOR FINISH CHANGES SHALL HAVE THRESHOLDS OR REDUCER STRIPS. PROVIDE SELF-LEVELING CONCRETE UNDERLAYMENT WHERE UNEVEN EXISTING CONCRETE SLAB REQUIRED - PRIOR TO INSTALLING FLOOR FINISHES, TYPICAL.
	 12. INTERIOR CMU CORNERS TO HAVE A BULLNOSE UNLESS NOTED OTHERWISE. 13. VERIFY DIMENSIONS AND EXISTING CONDITIONS BEFORE COMMENCING WORK. REPORT DISCREPANCIES TO THE ARCHITECT PRIOR TO PROCEEDING WITH AFFECTED WORK. 14. BUILDING FLOOR PLAN DIMENSIONS ARE REFERENCED FROM STRUCTURAL GRID, FACE OF CONCRETE, FACE OF MASONRY, OR FACE OF FINISHED SURFACE, UNLESS NOTED OTHERWISE. 15. CASEWORK, PLUMBING FIXTURES, TOILET PARTITIONS, AND OTHER FIXTURES AND EQUIPMENT ARE DIMENSIONED FROM FINISHED SURFACES UNLESS NOTED OTHERWISE.
	 16. DIMENSIONS NOTED AS "FIELD VERIFY" SHALL BE CHECKED AT THE SITE BY THE CONTRACTOR AND REVIEWED WITH THE ARCHITECT BEFORE INCORPORATING INTO THE WORK. 17. DIMENSIONS NOTED AS "CLEAR" REQUIRE SPECIFIC COORDINATION BETWEEN DISCIPLINES AND OR MANUFACTURERS.
	 18. DRAWINGS NOTED AT "N.T.S." ARE NOT TO SCALE. 19. DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS TAKE PRECEDENCE. IF CLARIFICATION IS REQUIRED IN ORDER TO DETERMINE THE INTENT OF THE CONTRACT DOCUMENTS, CONTACT THE ARCHITECT. 20. NOTES OR DIMENSIONS LABELED "TYPICAL" SHALL APPLY TO SITUATIONS THAT ARE THE SAME OR SIMILAR. 21. ALL EXPOSED STRUCTURAL STEEL COLUMNS TO RECEIVE INTUMESCENT PAINT.
	19 GENERAL ARCH PLAN NOTES NOT TO SCALE KEYNOTE LEGEND
	NUMBER DESCRIPTION F1 FILM, GL1 FILM APPLIED TO EXISTING STOREFRONT SYSTEM. CLEAN AND PREP SYSTEM BEFORE INSTALL. FILM IS TO BE STOPPED AT 7' AFF OR THE NEXT CLOSEST MULLION. FIELD VERIFY CONDITIONS.
	07 KEY NOTES
MATCHLINE RE: 06 / A-101A	FLOORPLAN LEGEND
	NOT IN CONTRACT
	EXISTING WINDOW NOT IN CONTRACT
	01 FLOORPLAN LEGEND





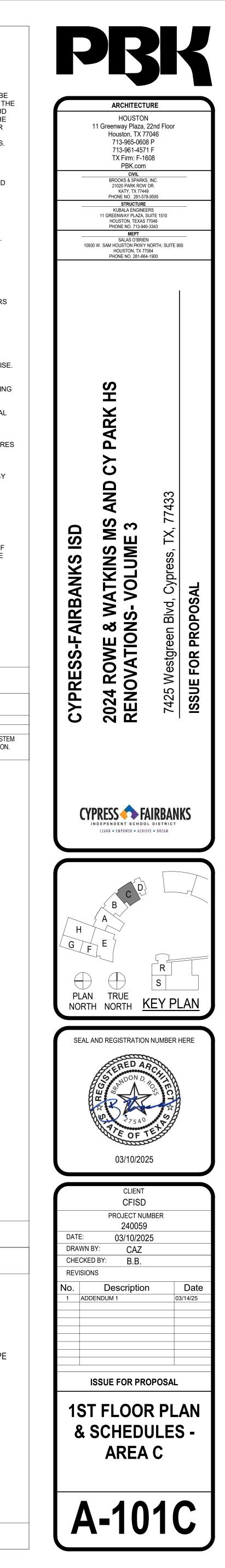


06 FIRST FLOOR PLAN - AREA 'C'



									EXIS	TING [DOOR SO	CHEDUL	E- FIF	RST FL	_OOR AREA
				Door		DOOR	PANEL			DO	OR FRA	ME			DETAI
				Elevatio	PAIR/	SIZE	WхН					MATL	TYP		
	wt	LEVEL	AREA	n	SING	W	Н	MATL.	ELEV.	W	н		Е	SILL	JAMB
С	:101A	1st FLOOR	С	FG		5' - 6"	6' - 8"	AL				AL		-	Ref. W.E.
С	:102	1st FLOOR	С	FG		5' - 6"	6' - 8"	AL				AL		-	Ref. W.E.
G	Grand to	tal: 2									•				

S	 ALL DIMENSIONS ARE TO FACE OF THE FINISHED WALL UNLESS NOTED OTHERWISE. AT ALL SPACES WITH FLOOR DRAINS - SLOPE NOT TO EXCEED 1:50. ALL DOORS IN INTERIOR CMU WALLS AND EXTERIOR BRICK WALLS SHALL BE SET 6" OFF THE PERPENDICULAR ADJACENT WALL ON THE HINGE SIDE OF THE DOOR UNLESS NOTED OTHERWISE. ALL INTERIOR DOORS IN GYP. BD. STUD WALLS SHALL BE SET 6" OFF THE PERPENDICULAR ADJACENT WALL ON THE HINGE SIDE OF THE DOOR UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL CONTACT THE ARCHITECT IF ANY CONFLICTS OCCUR OR DOOR CONFLICTS WITH TEXAS ACCESSIBILITY STANDARDS (TAS) REQUIREMENTS. FIELD VERIFY THAT AREAS TO BE PAINTED RECEIVE PAINT SPECIFIED FOR THE INTENDED SURFACES PER SPECIFICATIONS. NOTES INDICATED AS "RE: STRUCTURE.", "RE: SPEC.", "RE: MFR'S DOC", AND ETC. ARE TO REFER TO OTHER CONSTRUCTUREION DOC/SOURCES FOR ADDITIONAL INFORMATION. PROVIDE VINYL REDUCER AT ALL DISSIMILAR FLOOR MATERIALS UNLESS NOTED OTHERWISE. REFER TO SCHEDULE SHEETS FOR ROOM FINISH SCHEDULES AND NOTES. FRAME DIMENSIONS SHOWN ON DRAWINGS & SCHEDULES ARE WALL OPENING DIMENSIONS ACTUAL FRAMES SIZES SHALL BE LESS DUE TO SHIMSJOINTS, AND ETCFIELD VERIFICATION REQUIRED. ALL INTERIOR PARTITIONS REFER TO SHEET A-521. ALL INTERIOR PARTITIONS REFER TO SHEET A-521. ALL INTERIOR PARTITIONS REFER TO SHEET A-521. ALL INTERIOR CONCRETE STRIPS. PROVIDE SELF-LEVELING CONCRETE UNDERLAYMENT WHERE UNEVEN EXISTING CONCRETE SLAB REQUIRED - PRIOR TO INSTALLING FLOOR FINISHES, TYPICAL. INTERIOR CMU CORNERS TO HAVE A BULLNOSE UNLESS NOTED OTHERWISE. VERIFY DIMENSIONS AND EXISTING CONDITIONS BEFORE COMMENCING WORK. REPORT DISCREPANCIES TO THE ARCHITECT PRIOR TO PROCEEDING WITH AFFECTED WORK. EDIMENSIONS AND EXISTING CONDITIONS ARE REFERENCED FROM STRUCTURAL GRUD FLOOR PLAN DIMENSIONS ARE REFERENCED FROM STRUCTURAL GRUD FLOOR PLAN DIMENSIONS ARE REFERENCED FROM
	19. DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS TAKE PRECEDENCE. IF CLARIFICATION IS REQUIRED IN ORDER TO DETERMINE THE INTENT OF THE
TCHLINE	CONTRACT DOCUMENTS, CONTACT THE ARCHITECT. 20. NOTES OR DIMENSIONS LABELED "TYPICAL" SHALL APPLY TO SITUATIONS THAT ARE THE SAME OR SIMILAR.
	21. ALL EXPOSED STRUCTURAL STEEL COLUMNS TO RECEIVE INTUMESCENT PAINT.
	19 GENERAL ARCH PLAN NOTES
	19 GENERAL ARCH PLAN NOTES NOT TO SCALE KEYNOTE LEGEND
	NUMBER DESCRIPTION
	F1 FILM, GL1 FILM APPLIED TO EXISTING STOREFRONT SYSTEM. CLEAN AND PREP SYSTEM BEFORE INSTALL. FILM IS TO BE STOPPED AT 7' AFF OR THE NEXT CLOSEST MULLION. FIELD VERIFY CONDITIONS.
MATCHLINE RE: 06 / A-101B	07 KEY NOTES
	07 KEY NOTES
	FLOORPLAN LEGEND
	NOT IN CONTRACT
	EXISTING DOOR NOT IN CONTRACT
	EXISTING WINDOW
	NOT IN CONTRACT



DOOR SCHEDULE REMARKS
 ELEC. DOOR OPENER W/ HC BUTTON ON INSIDE AND OUTSIDE OF DOOR ELEC. CONTROLLED ACCESS HARDWARE WITH CARD READER ELEC. CONTROLLED ACCESS HARDWARE WITH PUSH-BUTTON ELEC. CONTROLLED ACCESS HARDWARE, ROUGH-IN ONLY DOOR BUZZER DOOR CHIME ON OPEN MAGNETIC HOLD-OPEN, CONNECT TO FIRE ALARM MAGNETIC HOLD-OPEN, CONNECT TO SECURITY SYSTEM SOUND DOOR
 OPERABLE WALLS, OVERHEAD DOORS AND GRILLES. 10. SOUND RATED DOOR ASSEMBLY, STC AS SPECIFIED 11. WINDSTORM DOOR HARDWARE SHALL BE TESTED AS PART OF A COMPLETE DOOR OPENING ASSEMBLY. THE TESTED DOOR OPENING ASSEMBLY SHALL INCLUDE DOOR HARDWARE. THE ENTIRE DOOR OPENING, INCLUDING DOOR HARDWARE, SHALL BE BY DOOR MANUF. 12. ACOUSTICAL GLASS TO MEET FIRE DOOR ASSEMBLY REQUIREMENTS FOR FIRE RATING INDICATED 13. MANUAL OPERATION 14. ELEC MOTOR OPERATION WITH KEY SWITCH CONTROL, KEY SWITCH ON ONE SIDE OF DOOR ONLY 15. ELEC MOTOR OPERATION WITH KEY SWITCH CONTROL, KEY SWITCH ON BOTH SIDES OF DOOR 16. ELEC MOTOR OPERATION WITH PUSH-BUTTON CONTROL ON ONE SIDE OF DOOR ONLY 17. AUTOMATIC OPEN ON FIRE ALARM ACTIVATION U.N.O. 18. AUTOMATIC CLOSE ON FIRE ALARM ACTIVATION

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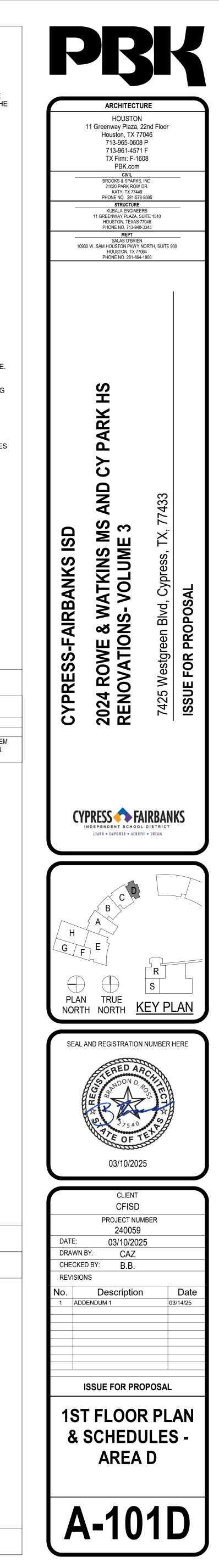
								EXIS	TING E	DOOR SC	HEDUL	.E- FIR	ST FL	LOOR ARE
			Door		DOOR	PANEL			DO	OR FRAM	ΛE			DETAI
			Elevatio	PAIR/	SIZE	WxH					MATL	TYP		
MARK	LEVEL	AREA	n	SING	W	Н	MATL.	ELEV.	W	н		E	SILL	JAMB
	1	ł				•				•				-
D101A	1st FLOOR	D	FG		5' - 8"	6' - 8"	AL				AL		-	Ref. W.E.
D102	1st FLOOR	D	FG		5' - 8"	6' - 8"	AL				AL		-	Ref. W.E.
Grand to	tal: 2							·			•		•	•

RE	A D					
AIL	S		CTRL	FIRE		
			ACCES	RATING		
3	HEAD	H.W.	S	LABEL	HW SET	REMARKS
E.	21/A-540					KEEP EXISTING CARD READER
E.	21/A-540					KEEP EXISTING CARD READER

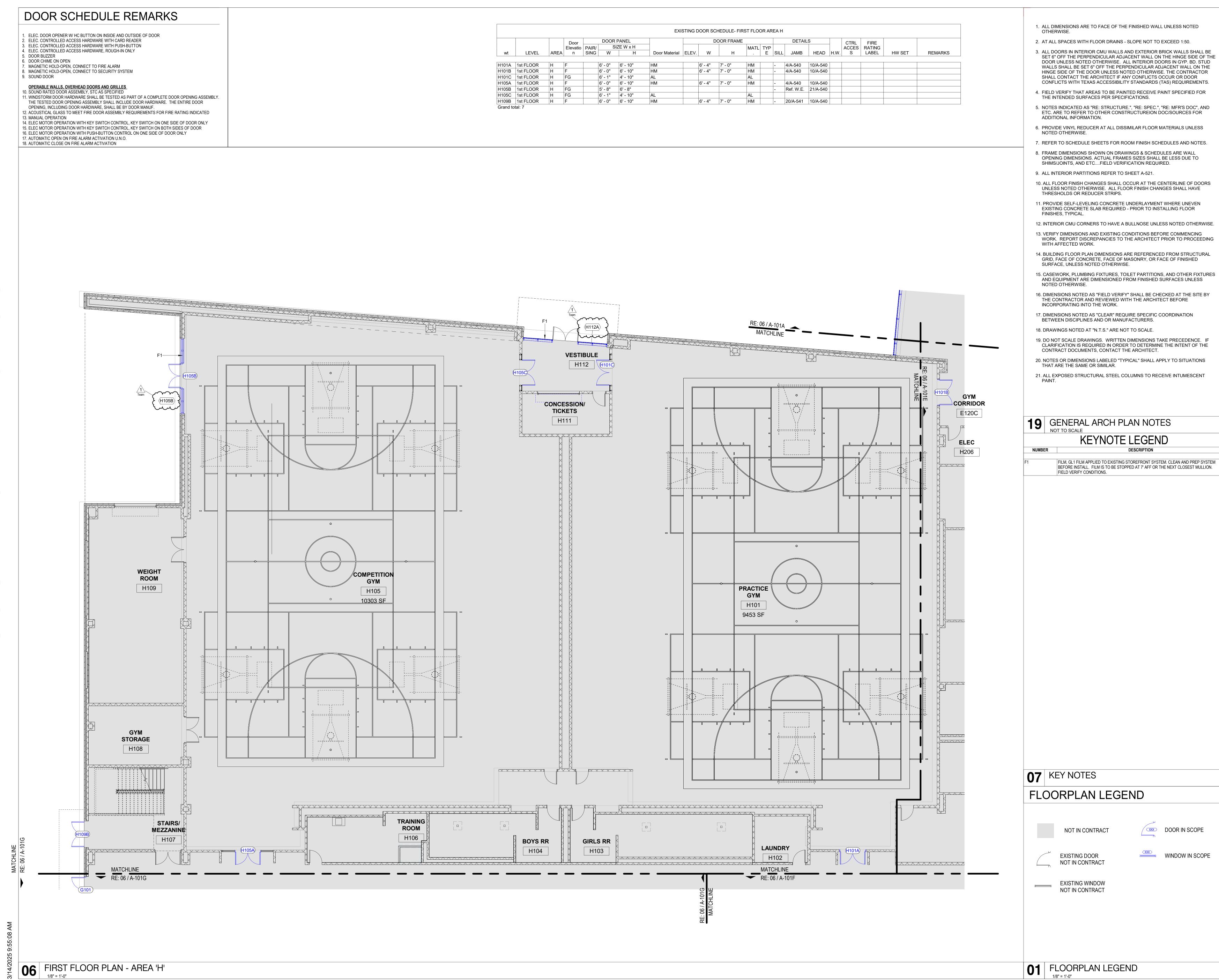
2. AT ALL SPACES WITH FLOOR DRAINS - SLOPE NOT TO EXCEED 1:50.
3. ALL DOORS IN INTERIOR CMU WALLS AND EXTERIOR BRICK WALLS SHALL BE SET 6" OFF THE PERPENDICULAR ADJACENT WALL ON THE HINGE SIDE OF THE DOOR UNLESS NOTED OTHERWISE. ALL INTERIOR DOORS IN GYP. BD. STUD WALLS SHALL BE SET 6" OFF THE PERPENDICULAR ADJACENT WALL ON THE HINGE SIDE OF THE DOOR UNLESS NOTED OTHERWISE. THE CONTRACTOR
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 REFER TO SCHEDULE SHEETS FOR ROOM FINISH SCHEDULES AND NOTES. 8. FRAME DIMENSIONS SHOWN ON DRAWINGS & SCHEDULES ARE WALL
 9. ALL INTERIOR PARTITIONS REFER TO SHEET A-521.
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11. PROVIDE SELF-LEVELING CONCRETE UNDERLAYMENT WHERE UNEVEN EXISTING CONCRETE SLAB REQUIRED - PRIOR TO INSTALLING FLOOR FINISHES, TYPICAL.
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21. ALL EXPOSED STRUCTURAL STEEL COLUMNS TO RECEIVE INTUMESCENT PAINT.
19 GENERAL ARCH PLAN NOTES
KEYNOTE LEGEND NUMBER
F1 FILM, GL1 FILM APPLIED TO EXISTING STOREFRONT SYSTEM. CLEAN AND PREP SYSTEM BEFORE INSTALL. FILM IS TO BE STOPPED AT 7' AFF OR THE NEXT CLOSEST MULLION.
FIELD VERIFY CONDITIONS.
07 KEY NOTES FLOORPLAN LEGEND
NOT IN CONTRACT DOOR IN SCOPE
EXISTING DOOR WINDOW IN SCOPE
NOT IN CONTRACT
 N1 FLOORPLAN LEGEND
01 FLOORPLAN LEGEND

1. ALL DIMENSIONS ARE TO FACE OF THE FINISHED WALL UNLESS NOTED

OTHERWISE.

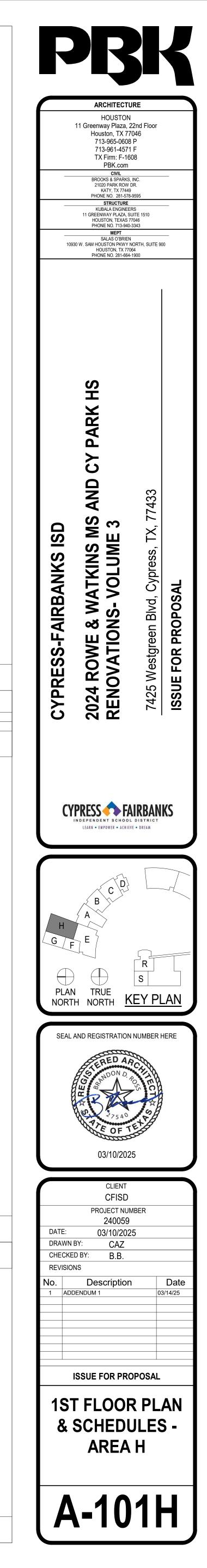


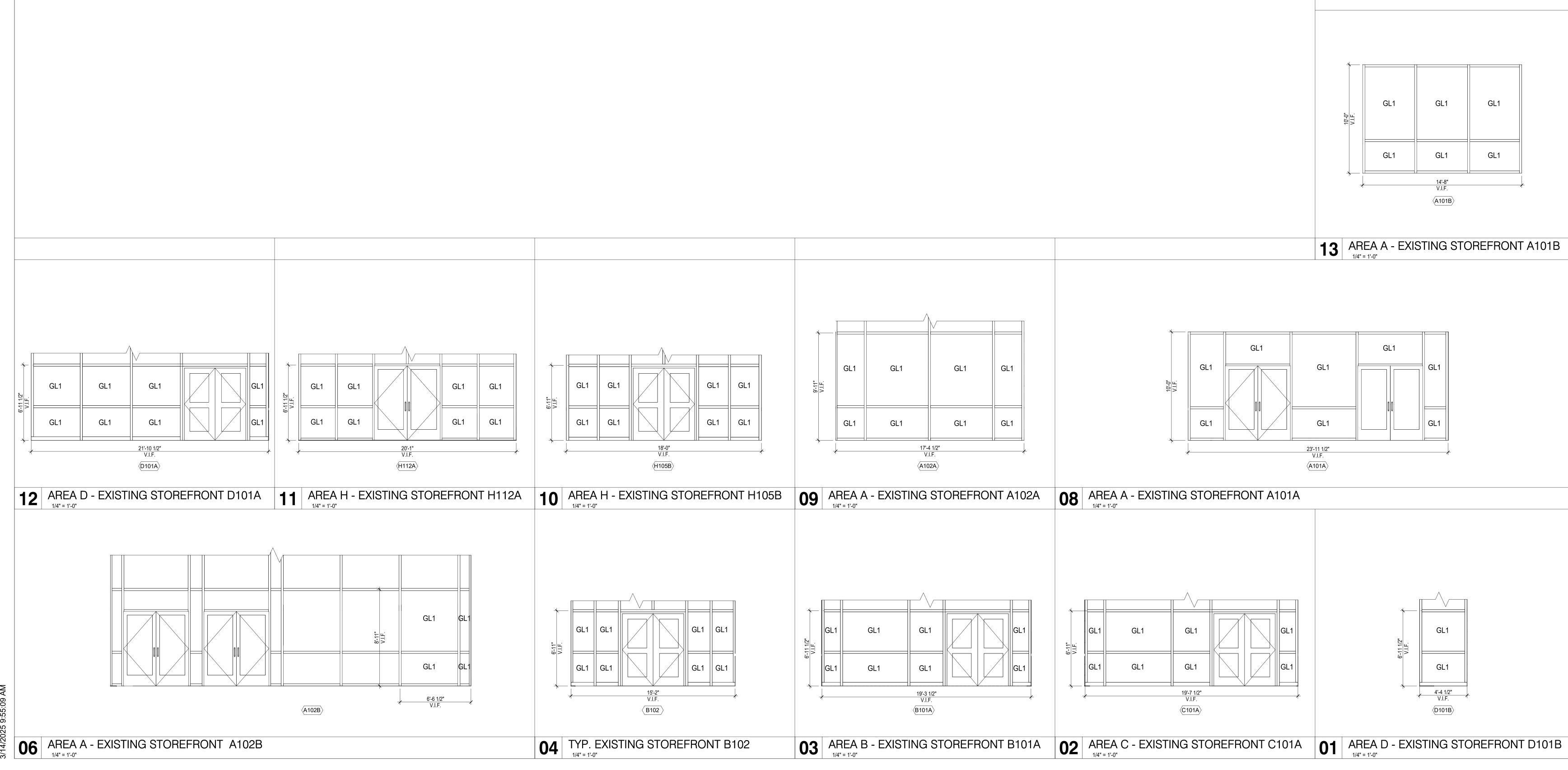
DOOR SCHEDULE REMARKS	
 ELEC. DOOR OPENER W/ HC BUTTON ON INSIDE AND OUTSIDE OF DOOR ELEC. CONTROLLED ACCESS HARDWARE WITH CARD READER ELEC. CONTROLLED ACCESS HARDWARE WITH PUSH-BUTTON ELEC. CONTROLLED ACCESS HARDWARE, ROUGH-IN ONLY DOOR BUZZER DOOR CHIME ON OPEN MAGNETIC HOLD-OPEN, CONNECT TO FIRE ALARM MAGNETIC HOLD-OPEN, CONNECT TO SECURITY SYSTEM SOUND DOOR 	
OPERABLE WALLS, OVERHEAD DOORS AND GRILLES 10. SOUND RATED DOOR ASSEMBLY, STC AS SPECIFIED 11. WINDSTORM DOOR HARDWARE SHALL BE TESTED AS PART OF A COMPLETE DOOR OPENING ASSEMBLY. THE TESTED DOOR OPENING ASSEMBLY SHALL INCLUDE DOOR HARDWARE. THE ENTIRE DOOR OPENING, INCLUDING DOOR HARDWARE, SHALL BE BY DOOR MANUF.	
 ACOUSTICAL GLASS TO MEET FIRE DOOR ASSEMBLY REQUIREMENTS FOR FIRE RATING INDICATED MANUAL OPERATION ELEC MOTOR OPERATION WITH KEY SWITCH CONTROL, KEY SWITCH ON ONE SIDE OF DOOR ONLY ELEC MOTOR OPERATION WITH KEY SWITCH CONTROL, KEY SWITCH ON BOTH SIDES OF DOOR ELEC MOTOR OPERATION WITH PUSH-BUTTON CONTROL ON ONE SIDE OF DOOR ONLY AUTOMATIC OPEN ON FIRE ALARM ACTIVATION U.N.O. AUTOMATIC CLOSE ON FIRE ALARM ACTIVATION 	



							EXI	STING [DOOR SC	HEDULE- FIR	ST FLO	OR AR	EA H	
			Door		DOOR	PANEL			D	OOR FRAME				
			Elevatio	PAIR/	SI	ZE W x H					MATL	TYP		
wt	LEVEL	AREA	n	SING	W	Н	Door Material	ELEV.	W	Н		Е	SILL	
		-						-						
H101A	1st FLOOR	Н	F		6' - 0"	6' - 10"	HM		6' - 4"	7' - 0"	HM		-	4/A
H101B	1st FLOOR	Н	F		6' - 0"	6' - 10"	HM		6' - 4"	7' - 0"	HM		-	4/A
H101C	1st FLOOR	Н	FG		6' - 1"	4' - 10"	AL				AL			
H105A	1st FLOOR	Н	F		6' - 0"	6' - 10"	HM		6' - 4"	7' - 0"	HM		-	4/A
H105B	1st FLOOR	Н	FG		5' - 8"	6' - 8"							-	Ref
H105C	1st FLOOR	Н	FG		6' - 1"	4' - 10"	AL				AL			
H109B	1st FLOOR	Н	F		6' - 0"	6' - 10"	HM		6' - 4"	7' - 0"	HM		-	20/
Grand to			•	1	0	0.0			U			1	1	120

)1	FLOORPLAN LEGEND





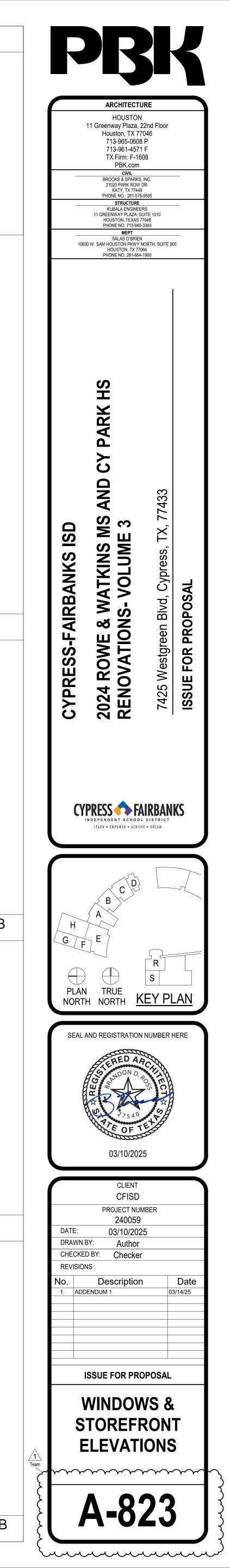
GLAZING MATERIALS LEGEND

GL0 1" THERMALLY-INSULATED GLAZING UNIT, TYPE 1

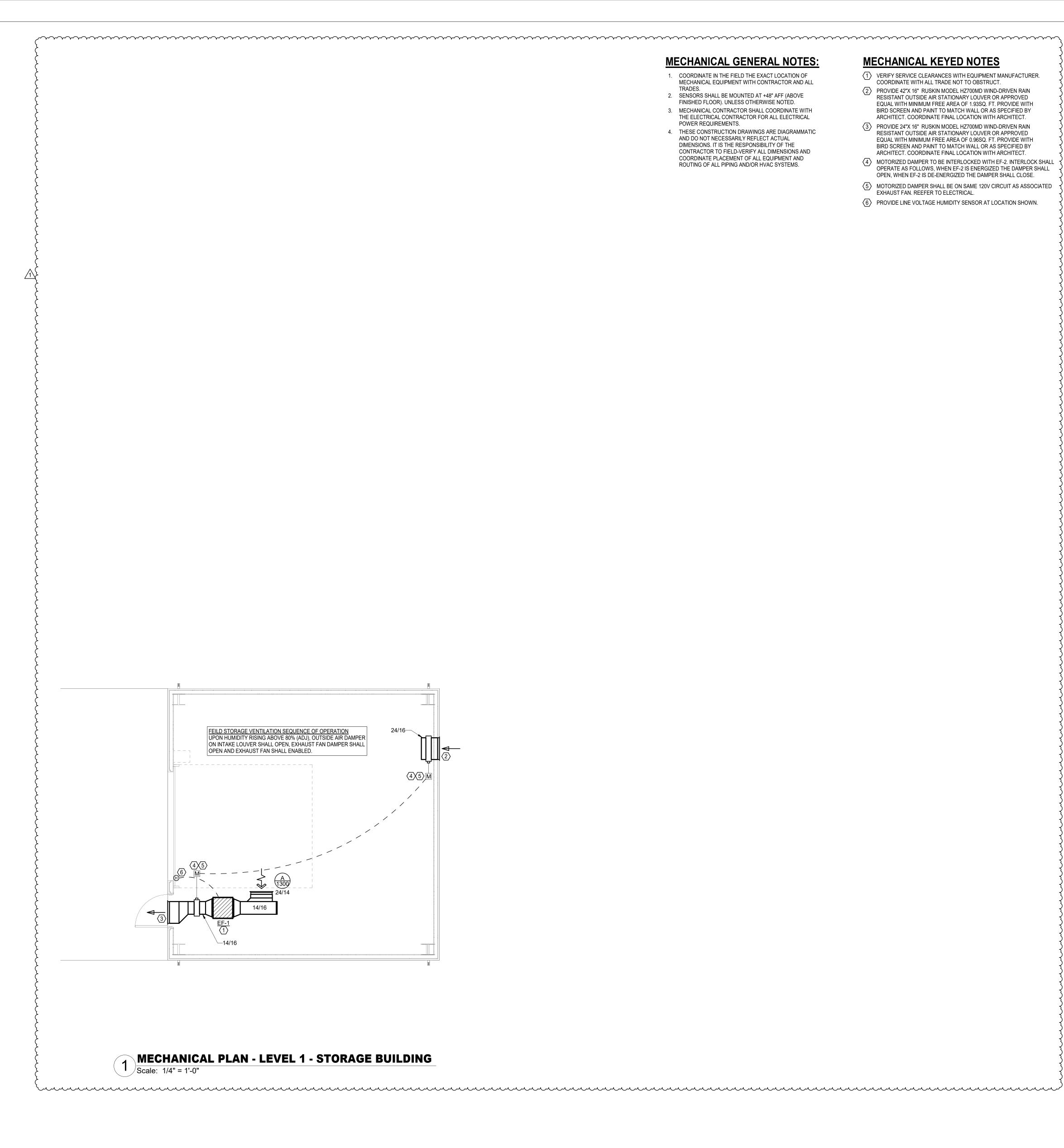
GL1 LAMINATED GLAZING SAFETY GLAZING **GL2** 9/16" CHILDGUARD GLASS

GL3 1/4" CLEAR TEMPERED GLASS

GL4 3/8" CHILDGUARD GLASS



7



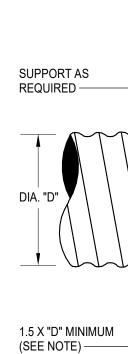
MECHANICAL GENERAL NOTES:

- 1. COORDINATE IN THE FIELD THE EXACT LOCATION OF MECHANICAL EQUIPMENT WITH CONTRACTOR AND ALL
- TRADES. 2. SENSORS SHALL BE MOUNTED AT +48" AFF (ABOVE
- FINISHED FLOOR). UNLESS OTHERWISE NOTED. 3. MECHANICAL CONTRACTOR SHALL COORDINATE WITH
- THE ELECTRICAL CONTRACTOR FOR ALL ELECTRICAL POWER REQUIREMENTS. 4. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR HVAC SYSTEMS.

MECHANICAL KEYED NOTES

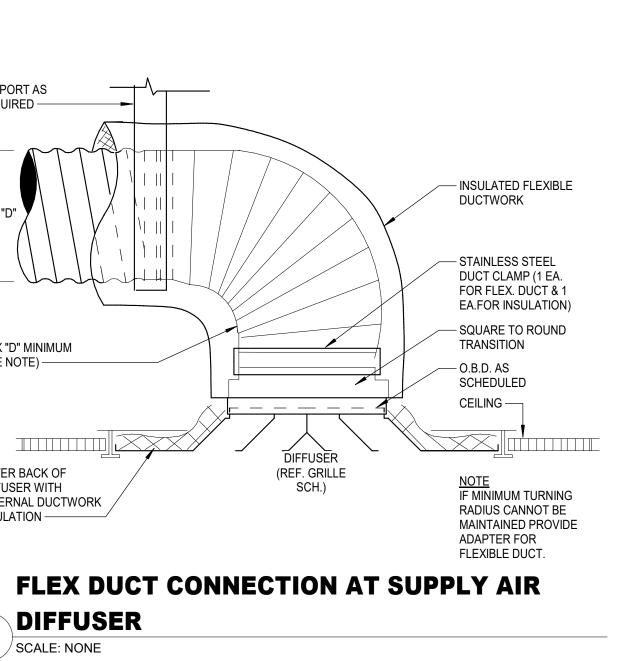
- (1) VERIFY SERVICE CLEARANCES WITH EQUIPMENT MANUFACTURER. COORDINATE WITH ALL TRADE NOT TO OBSTRUCT. (2) PROVIDE 42"X 16" RUSKIN MODEL HZ700MD WIND-DRIVEN RAIN RESISTANT OUTSIDE AIR STATIONARY LOUVER OR APPROVED EQUAL WITH MINIMUM FREE AREA OF 1.93SQ. FT. PROVIDE WITH
- BIRD SCREEN AND PAINT TO MATCH WALL OR AS SPECIFIED BY ARCHITECT. COORDINATE FINAL LOCATION WITH ARCHITECT. (3) PROVIDE 24"X 16" RUSKIN MODEL HZ700MD WIND-DRIVEN RAIN RESISTANT OUTSIDE AIR STATIONARY LOUVER OR APPROVED EQUAL WITH MINIMUM FREE AREA OF 0.96SQ. FT. PROVIDE WITH BIRD SCREEN AND PAINT TO MATCH WALL OR AS SPECIFIED BY
- ARCHITECT. COORDINATE FINAL LOCATION WITH ARCHITECT. (4) MOTORIZED DAMPER TO BE INTERLOCKED WITH EF-2. INTERLOCK SHALL OPERATE AS FOLLOWS, WHEN EF-2 IS ENERGIZED THE DAMPER SHALL OPEN, WHEN EF-2 IS DE-ENERGIZED THE DAMPER SHALL CLOSE.
- (5) MOTORIZED DAMPER SHALL BE ON SAME 120V CIRCUIT AS ASSOCIATED EXHAUST FAN. REEFER TO ELECTRICAL.
- (6) PROVIDE LINE VOLTAGE HUMIDITY SENSOR AT LOCATION SHOWN.

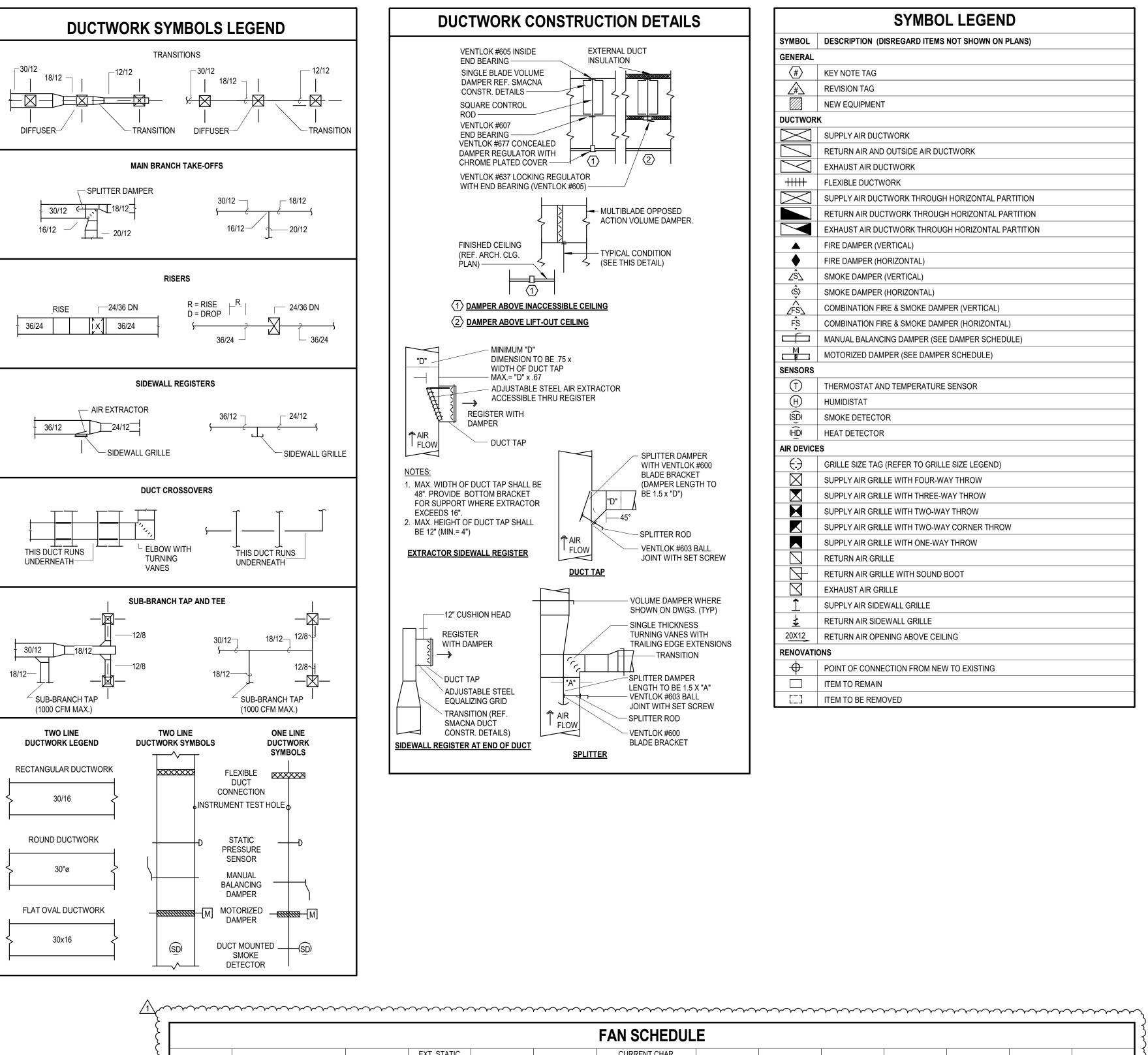


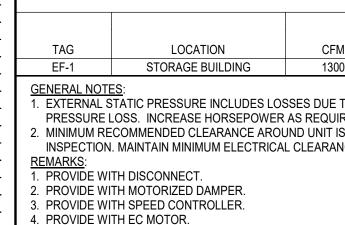


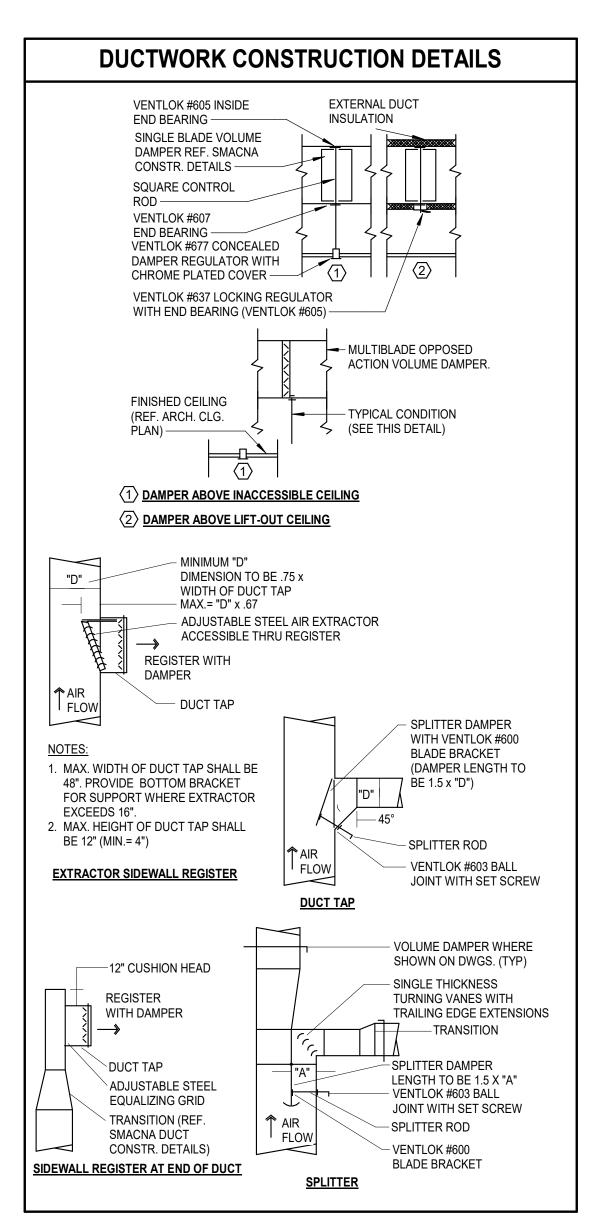
COVER BACK OF DIFFUSER WITH EXTERNAL DUCTWORK INSULATION ------











	SYMBOL LEGEND
SYMBOL	DESCRIPTION (DISREGARD ITEMS NOT SHOWN ON PLANS)
GENERAL	
$\langle \# \rangle$	KEY NOTE TAG
	REVISION TAG
	NEW EQUIPMENT
DUCTWOR	٢
\sum	SUPPLY AIR DUCTWORK
	RETURN AIR AND OUTSIDE AIR DUCTWORK
\sum	EXHAUST AIR DUCTWORK
+++++	FLEXIBLE DUCTWORK
\sum	SUPPLY AIR DUCTWORK THROUGH HORIZONTAL PARTITION
	RETURN AIR DUCTWORK THROUGH HORIZONTAL PARTITION
	EXHAUST AIR DUCTWORK THROUGH HORIZONTAL PARTITION
	FIRE DAMPER (VERTICAL)
•	FIRE DAMPER (HORIZONTAL)
∠ŝ∖	SMOKE DAMPER (VERTICAL)
<\$>	SMOKE DAMPER (HORIZONTAL)
	COMBINATION FIRE & SMOKE DAMPER (VERTICAL)
F\$	COMBINATION FIRE & SMOKE DAMPER (HORIZONTAL)
	MANUAL BALANCING DAMPER (SEE DAMPER SCHEDULE)
	MOTORIZED DAMPER (SEE DAMPER SCHEDULE)
SENSORS	
1	THERMOSTAT AND TEMPERATURE SENSOR
(H)	HUMIDISTAT
(ŚD)	SMOKE DETECTOR
(HD)	HEAT DETECTOR
	S
(-)	GRILLE SIZE TAG (REFER TO GRILLE SIZE LEGEND)
	SUPPLY AIR GRILLE WITH FOUR-WAY THROW
	SUPPLY AIR GRILLE WITH THREE-WAY THROW
	SUPPLY AIR GRILLE WITH TWO-WAY THROW
	SUPPLY AIR GRILLE WITH TWO-WAY CORNER THROW
	SUPPLY AIR GRILLE WITH ONE-WAY THROW
	RETURN AIR GRILLE
	RETURN AIR GRILLE WITH SOUND BOOT
 ↑	
	SUPPLY AIR SIDEWALL GRILLE
<u>5</u> 20X12	RETURN AIR SIDEWALL GRILLE
	RETURN AIR OPENING ABOVE CEILING
	POINT OF CONNECTION FROM NEW TO EXISTING
Ψ	ITEM TO REMAIN
	ITEM TO REMAIN
L_J	

EXT. STATIC PRESSURE (IN.W.C.) MAX RPM HORSE POWER V P F LOCALLY SWITCHED INTERLOCK WITH FAN TYPE DRIVE TYPE MANUFACTURER MODEL NUMBER 00 0.50 1103 0.5 120 1 60 - TSTAT INLINE BELT COOK SQNB E TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN JIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN. 'IS 12 INCHES ON NON-SERVICE SIDES AND 30 INCHES ON SERVICE SIDES. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENAND	PRESS M (IN.W. 00 0.50	URE .C.) MAX RPM D 1103		V	P 1	F				DRIVE TYPE	MANUFACTURER		
M (IN.W.C.) MAX RPM HORSE POWER V P F SWITCHED INTERLOCK WITH FAN TYPE DRIVE TYPE MANUFACTURER MODEL NUMBER 10 0.50 1103 0.5 120 1 60 - TSTAT INLINE BELT COOK SQNB TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN IRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN. IS 12 INCHES ON NON-SERVICE SIDES AND 30 INCHES ON SERVICE SIDES. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENAND	M (IN.W. 00 0.50	.C.) MAX RPM D 1103		V 120	P 1	F 60				DRIVE TYPE	MANUFACTURER		DEMARK
TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN RED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN. S 12 INCHES ON NON-SERVICE SIDES AND 30 INCHES ON SERVICE SIDES. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANC	I		0.5	120	1	60	-	TSTAT					REMARK
RED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN. S 12 INCHES ON NON-SERVICE SIDES AND 30 INCHES ON SERVICE SIDES. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANC	O DUCTWORK, A							101/11	INLINE	BELT	COOK	SQNB	1,2,3,4
ICE AS REQUIRED BY NEC.	S 12 INCHES ON NO	ON-SERVICE SIDES AND		-	-		UM CLEARANCE	AS REQUIRED TO OP	EN ACCESS AND	CONTROL DOOR	S ON UNIT FOR SEF	RVICE, MAINTENANC	CE, AND

}	GRILLE								
}	MARK	SERVICE	TYPE	DAMPER	CONSTRUCTION MATERIAL	FINISH COLOR	MANUFACTURER	MODEL NUMBER	DESCRIPTION
{	A	EXHAUST AIR	GRILLE	-	STEEL	-	TITUS	350RL	DOUBLE DEFLECTION SIDEWALL GRILLE WITH HORIZONTAL FRONT BARS. SURFACE MOUNTED
		ERS NOTED AS DINATE FINAL			LASSIFIED CEILING ND FINISH COLOR		ON DAMPER WITH T CHITECT.	HERMAL BLAN	IKET.

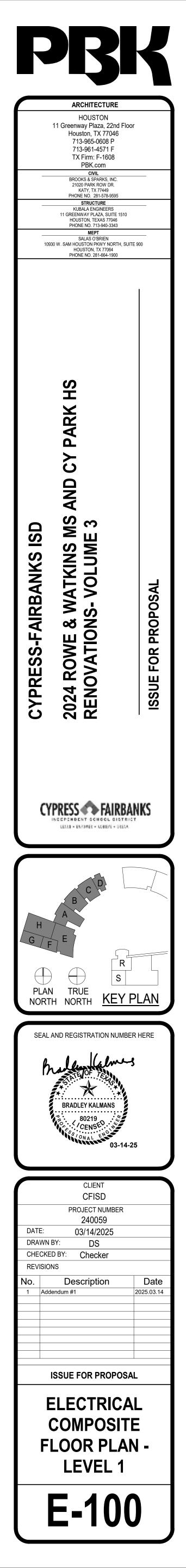


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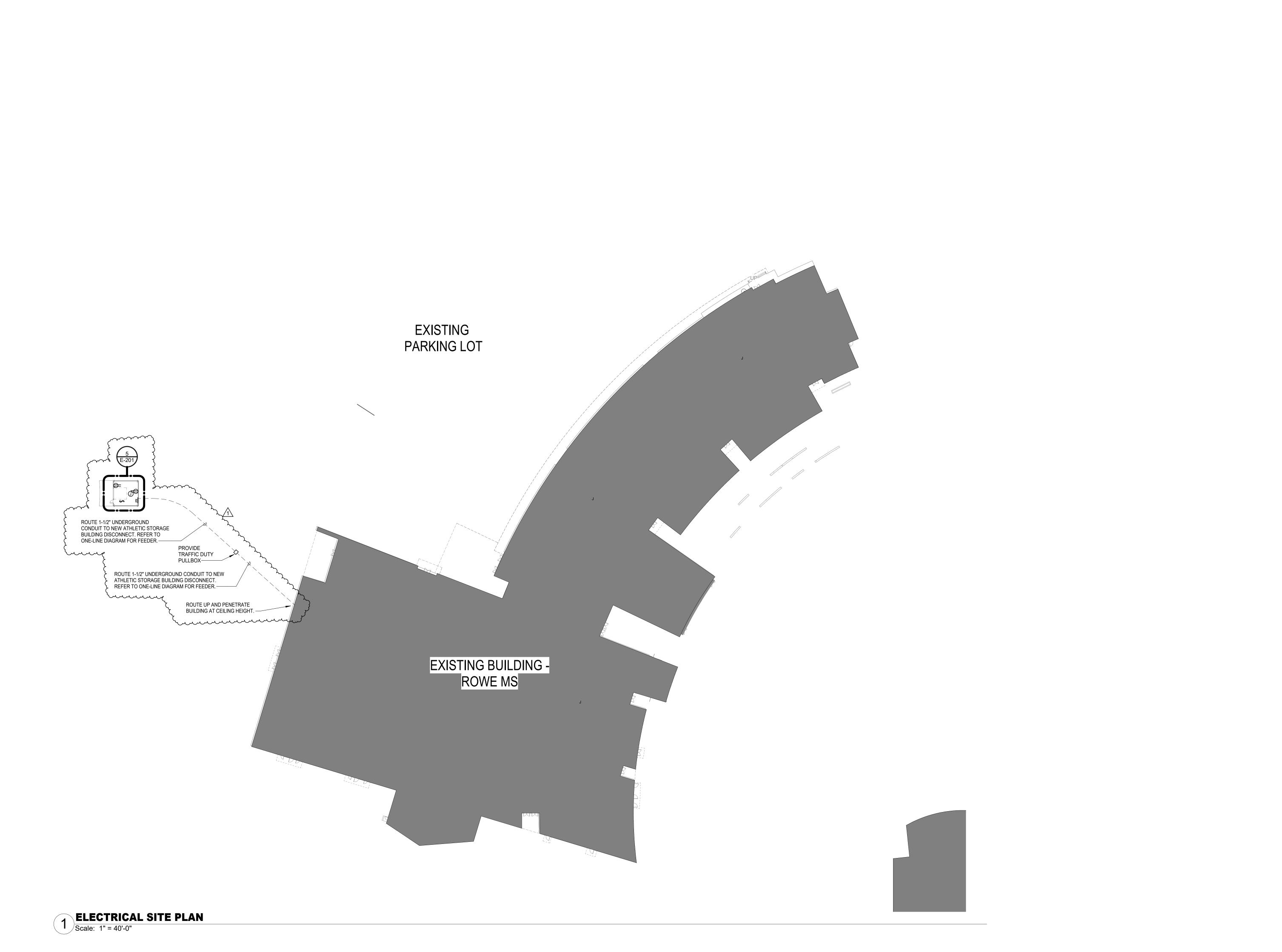


1 ELECTRICAL COMPOSITE FLOOR PLAN - LEVEL 1 Scale: 1" = 30'-0"

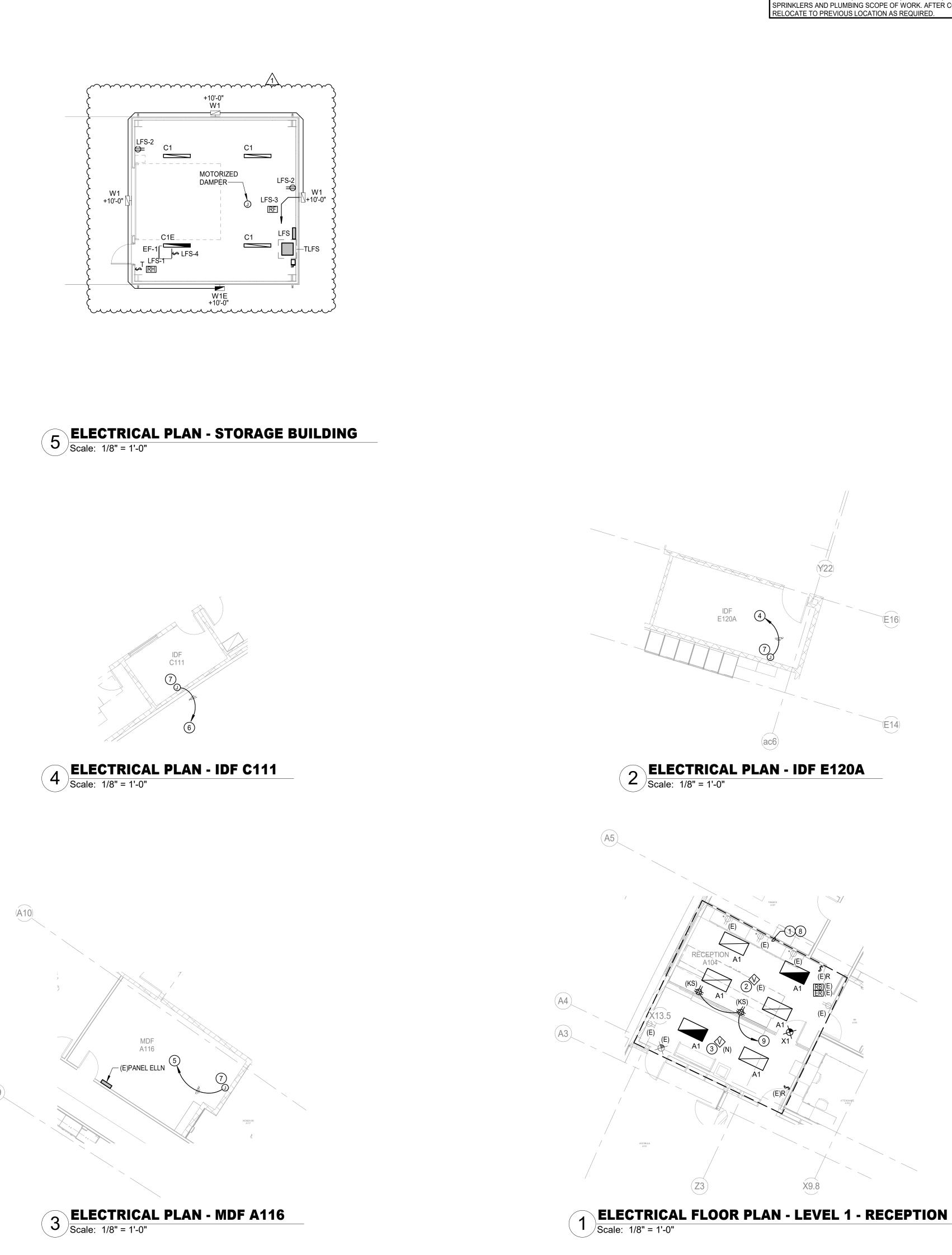


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WHERE ANY NEW WALL TERMINATES AT THE SAME LOCATION AS AN EXISTING WALL MOUNTED ELECTRICAL AND TECHNOLOGY DEVICE, CONTRACTOR SHALL RELOCATE DEVICE AND EXTEND WIRING AND CONDUIT AS INSTRUCTED BY OWNER OR ITS REPRESENTATIVE.

PROVIDE NEW POWER DEVICES AND SWITCH BOX EXTENSIONS IN ALL AREAS WHERE GYPSUM BOARD OR OTHER WALL COVERING ADDS TO THE THICKNESS OF WALLS. SEE ARCHITECTURAL DRAWINGS FOR AREAS AFFECTED.

WHERE ANY EXISTING JUNCTION BOX AND/OR PULLBOX IS LOCATED AT A NEW NON-ACCESSIBLE CEILING AREA, CONTRACTOR SHALL RELOCATE DEVICE AND EXTEND WIRING AND CONDUIT ABOVE NEAREST ACCESSIBLE CEILING AS INSTRUCTED BY OWNER OR ITS REPRESENTATIVE. SEE ARCHITECTURAL DRAWINGS FOR AREAS AFFECTED.

TEMPORARILY DISCONNECT AND REMOVE ALL CEILING / WALL MOUNTED ELECTRICAL AND FIRE ALARM DEVICES FOR AREAS THAT REQUIRE CEILING / WALL REMOVALS AND/OR REPLACEMENT, INCLUDING MECHANICAL, TECHNOLOGY, FIRE ALARM, FIRE SPRINKLERS AND PLUMBING SCOPE OF WORK. AFTER COMPLETION

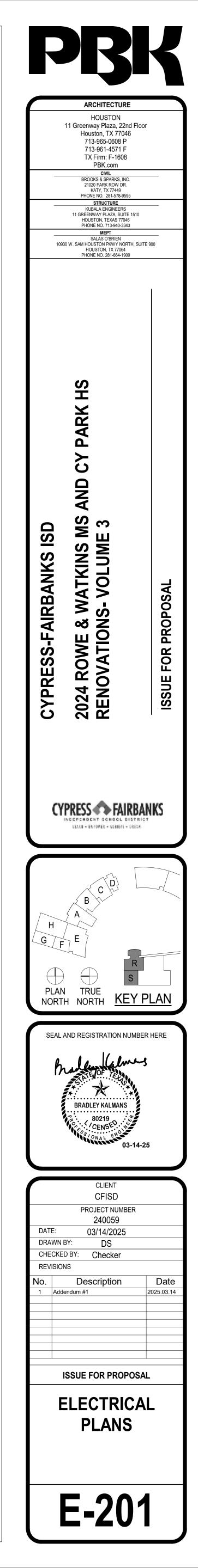
ELECTRICAL GENERAL NOTES:

- 1. UNLESS NOTED OTHERWISE, ALL EXISTING ELECTRICAL SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, RELAY PANELS ETC...SHALL REMAIN.
- 2. ELECTRICAL CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY PROBLEMS PERTAINING TO CIRCUIT AVAILABILITY OR LOAD CAPACITY PRIOR TO
- INSTALLATION. 3. CONTRACTOR SHALL REFER TO MECHANICAL AND PLUMBINGDRAWINGS FOR EXACT LOCATION OF MECHANICAL ANDPLUMBING EQUIPMENT AND SCHEDULES. CONTRACTORSHALL PROVIDE ALL ELECTRICAL DISCONNECTS, BRANCH CIRCUITRY, STARTERS/CONTROLS, CIRCUIT BREAKERS AND CONNECTIONS REQUIRED TO POWER EQUIPMENT.
- 4. CONTRACTOR TO COORDINATE EXACT LOCATION OF DISCONNECT SWITCHES, JUNCTION BOXES AND SINGLE POLE TOGGLE SWITCHES FOR MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR PRIOR TO INSTALLATION. 5. CONTRACTOR SHALL REFER TO TECHNOLOGY SERIES CONSTRUCTION
- DOCUMENTS FOR EXACT LOCATION AND REQUIREMENTS OF ALL LOW VOLTAGE BACK BOXES, FITTINGS, AND CONDUITS. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. 6. CONNECT NEW LIGHT FIXTURES TO EXISTING NORMAL AND EMERGENCY
- CIRCUITS LEFT IN PLACE AFTER DEMOLITION OR NEW AS SHOWN. PROVIDE EMERGENCY CIRCUIT FOR HATCHED FIXTURES AND/OR EXIT SIGNS. EXTEND WIRING WITH MATCHING CONDUCTORS / CONDUIT TO EXISTING LOCATION AND/OR NEW FIXTURES. FIELD VERIFY CONNECTED LOAD NOT TO EXCEED 15-AMPERES. (TYPICAL) 7. LOCATION OF NEW / REPLACEMENT LIGHT FIXTURES SHALL RE-USE EXISTING
- J-BOX AND EXISTING LIGHT FIXTURE WHIPS AS PRACTICAL. EXTEND WIRING WITH MATCHING CONDUCTORS / CONDUIT AND PROVIDE NEW J-BOX ABOVE ACCESIBLE CEILING WITH 1/2-INCH FLEXIBLE STEEL CONDUIT OR STEEL MC CABLE, LENGTH NOT TO EXCEED 6-FEET, "DAISY CHAINING"LIGHT FIXTURES INSTALLED FOR LAY-IN CEILING AREAS IS NOT ALLOWED. FOR NON-ACCESIBLE CEILINGS, LIGHT FIXTURE WHIPS SHALL BE 12-INCH FLEXIBLE STEEL CONDUIT, LENGTH AS REQUIRED TO MAKE A TAP AT AN ACCESSIBLE J-BOX. RECESSED
- LIGHT FIXTURES IN NON-ACCESSIBLE CEILINGS MAY BE DAISY CHAINED USING THE LIGHT FIXTURE'S INTEGRAL, UL LISTED J-BOX OR INTERNAL WIRE WAY THAT IS ACCESSIBLE THROUGH FIXTURE FROM BELOW THE CEILING. REFER TO SPECIFICATION SECTION 26 05 33 CONDUIT SYSTEMS.
- 8. PROVIDE NEW LIGHTING CONTROLS, SENSORS AND ASSOCIATED DEVICES, 20A EMERGENCY LOAD CONTROL RELAYS AND/OR TRANSFER SWITCHES WHERE INDICATED. REFER TO SPECIFICATIONS AND DETAIL SHEETS.
- 9. LOCATE DIGITAL LIGHTING CONTROLLER AND/OR EMERGENCY LOAD CONTROL RELAY/TRANSFER SWITCH ABOVE ACCESSIBLE CEILING 12-FEET AFF OR BELOW ADJACENT TO SWITCH CONTROLLING THE SPACE; IN NON-ACCESSIBLE AND/OR HIGH CEILING AREAS, LOCATE DIGITAL LIGHTING CONTROLLER IN ADJACENT ANCILLARY AREA WITH ACCESSIBLE CEILING; IN AREAS WITH NO CEILING AND/OR IN EXTERIOR APPLICATIONS LOCATE ADJACENT TO NORMAL POWER PANEL SERVING THE LOAD. PROVIDE LABEL, GRID MARKERS WITH WORDING PER SPECIFICATIONS.
- 10. OCCUPANCY/VACANCY SENSOR AND DAYLIGHTING SENSOR LOCATIONS INDICATE SPACE OR AREA CONTROLLED, CONTRACTOR TO PROVIDE ACTUAL QUANTITIES, TYPES, AND MOUNTING LOCATIONS AS RECOMMENDED BY MANUFACTURER AND IECC-2015 C405. 11. PROVIDE A CONSTANT HOT FOR NEW EXIT SIGNAGE LOCATIONS FROM

ELECTRICAL KEYED NOTES:

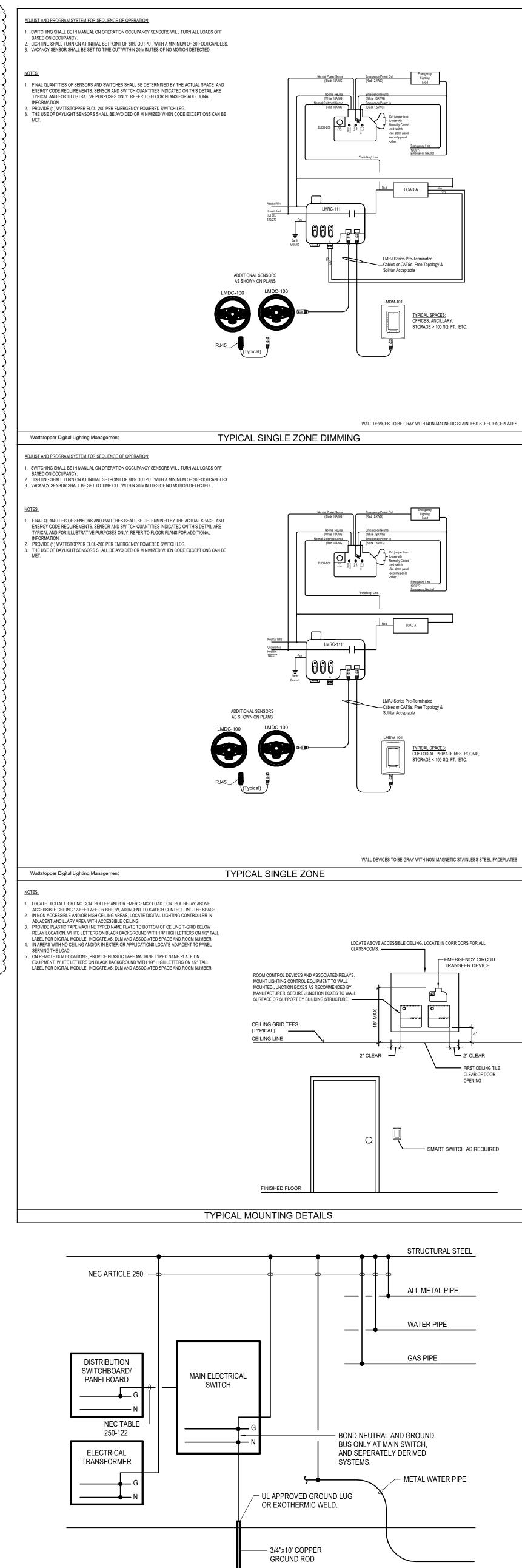
EMERGENCY CIRCUITRY SERVING SPACE.

- (1) DISCONNECT AND REMOVE EXISTING LIGHTING FIXTURES AND ASSOCIATED LIGHTING CONTROLS CEILING DEVICES FOR DEMOLITION OF EXISTING CEILING. PROVIDE NEW LIGHT FIXTURES AS SHOWN AND CONNECT TO EXISTING CIRCUITRY. EXTEND CONDUIT/WIRE AND MAKE FINAL CONNECTION.
- (2) EXISTING LIGHTING CONTROL DEVICE. RE-CONNECT TO EXISTING LIGHTING CONTROLLER. REFER TO DETAILS.
- (3) NEW LIGHTING CONTROL DEVICE. CONNECT TO EXISTING LIGHTING CONTROLLER. REFER TO DETAILS.
- (4) ROUTE 2#12,1#12G.,3/4"C. TO NEW 20A/1P CIRCUIT BREAKER IN PANEL ELLN.
- PROVIDE WITH LOCK-ON DEVICE. (5) ROUTE 2#12,1#12G.,3/4"C. TO NEW 20A/1P CIRCUIT BREAKER IN PANEL ELLH.
- PROVIDE WITH LOCK-ON DEVICE. 6 ROUTE 2#12,1#12G.,3/4"C. TO NEW 20A/1P CIRCUIT BREAKER IN PANEL ELLB. PROVIDE WITH LOCK-ON DEVICE.
- 7 PROVIDE A JUNCTION BOX FOR CONNECTION OF ACCESS CONTROL PANEL. VERIFY EXACT LOCATION AND MAKE FINAL CONNECTION. (8) DISCONNECT AND REMOVE WIRING DEVICES ASSOCIATED WITH THE
- DEMOLITION OF EXISTING RECEPTION DESK BACK TO NEAREST ACTIVE JUNCTION BOX, LEAVE CIRCUIT(S) INTACT FOR RE-USE.
- (9) CONNECT TO EXISTING CIRCUIT PRESERVED DURING DEMOLITION, EXTEND CONDUIT/WIRE AND MAKE FINAL CONNECTION.



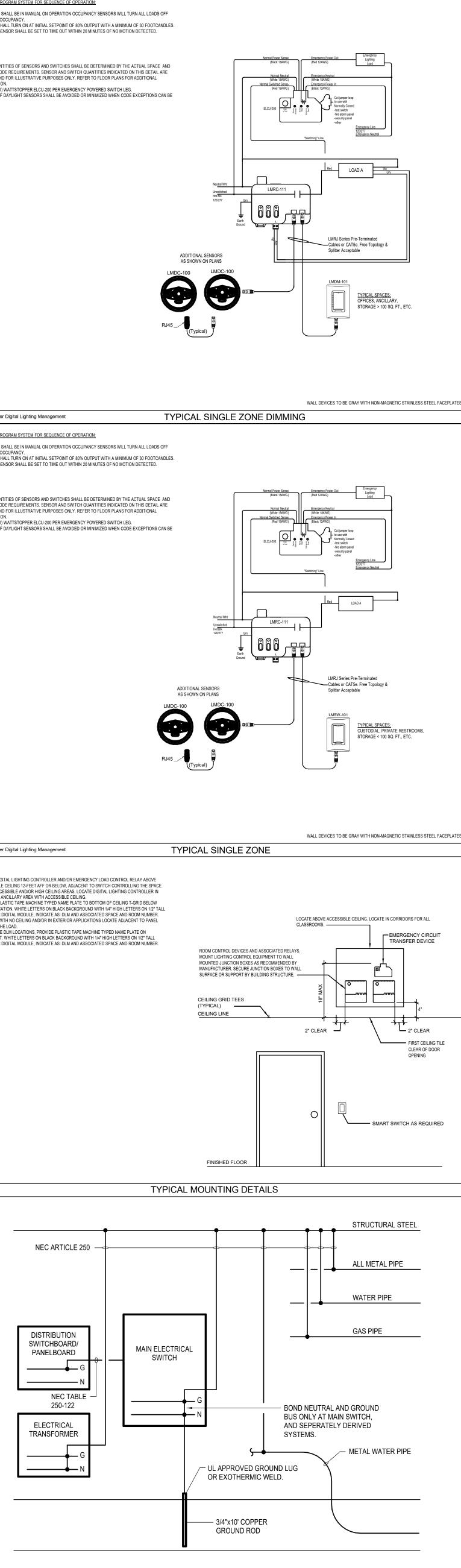
Branch Panel: HB Location: ELEC H206 Supply From: Mounting: Surface		Volts: 277/4 Phases: 3 Wires: 4 Phase in	-		A.I.C. Rating: Enclosure: Mains:		EXISTING	
Note CKT Circuit Description	Wire Breaker	A B	с	Breaker Wir		it Description	скт	No
1 EXISTING LIGHTING 3 EXISTING LIGHTING	20 1 20 1	0.0/0.0		1 20	EXISTING LIGHTING		2	
5 EXISTING LIGHTING	20 1		0.0 / 0.0	3 175	TLB		6	
7 EXISTING LIGHTING	20 1	0.0 / 0.0					8	
9 EXISTING LIGHTING	20 1	0.0/0.0	0.0 / 0.4	1 20	EXISTING LIGHTING		10	-
11 EXISTING LIGHTING 13 SPACE	20 1	0.0 / 0.9	0.0 / 0.4	3 50 1-L	TLFS		12 14	-
15 SPACE	1	0.0 / 0.0					16	
17 SPACE	1		0.0 / 0.0	1	_		18	-
19 SPACE	1	0.0 / 0.0		1			20	-
21 SPACE 23 SPACE	1	0.0 / 0.0	0.0 / 0.0	1			22 24	
25 SPACE	1	0.0 / 0.0		1	SPACE		26	
27 SPACE	1	0.0 / 0.0	0.0153	1			28	
29 SPACE 31 SPACE	1	0.0 / 0.0	0.0 / 0.0	1	00.05		30 32	
31 SPACE	1	0.0 / 0.0		1			32	
35 SPACE	1		0.0 / 0.0	1	SPACE		36	
37 SPACE	1	0.0/0.0		1			38	
39 SPACE 41 SPACE	1	0.0 / 0.0	0.0 / 0.0	1			40 42	
	Total Load:	0.9 kVA 0.0 kVA	0.070.0 0.4 kVA	+ · · · · · · ·			142	
	Total Amps:	3 A 0 A	2 A					
Load Classification	Connected Load	Demand Factor		ed Demand		Panel Totals		
HVAC	0.4 kVA	100.00%		4 kVA				
Lighting	0.0 kVA	0.00%) kVA		n. Load: 1.2 kVA		
Miscellaneous	0.5 kVA	100.00%		5 kVA		Demand: 1.2 kVA		
Receptacles	0.4 kVA	100.00%	0.4	4 kVA	Total Conn. (
					Total Est. Demand	Current: 1 A		
Branch Panel: LFS		M - PROVIDE M	ETERING DE'	LOCK-ON DEV VICE			New Panel	
Branch Panel: LFS Location: Supply From: TLFS Mounting: Surface		M - PROVIDE M Volts: 120/2 Phases: 3 Wires: 4	ETERING DE'		A.I.C. Rating: Enclosure:	10,000	New Panel	
Location: Supply From: TLFS Mounting: Surface		M - PROVIDE M Volts: 120/2 Phases: 3 Wires: 4 Phase in	ETERING DE		A.I.C. Rating: Enclosure: Mains:	10,000 Type 1 100A MCB		
Location: Supply From: TLFS Mounting: Surface	Wire Breaker #12 20 1	M - PROVIDE M Volts: 120/2 Phases: 3 Wires: 4 Phase in	ETERING DE'	VICE	A.I.C. Rating: Enclosure: Mains: re Circui	10,000 Туре 1	СКТ	Nc
Location: Supply From: TLFS Mounting: Surface Note CKT Circuit Description 1 Lighting 3 Exterior Lighting	#12 20 1 #12 20 1	M - PROVIDE M Volts: 120/2 Phases: 3 Wires: 4 Phase in	ETERING DE 08 Wye • kVA C	VICE Breaker Wir 1 20 #12 1 20 #12	A.I.C. Rating: Enclosure: Mains: 2 Receptacles 2 EF-1	10,000 Type 1 100A MCB	СКТ 2 4	No
Location: Supply From: TLFS Mounting: Surface Note CKT 1 Lighting 3 Exterior Lighting 5	#12 20 1 #12 20 1 20 1	M - PROVIDE M Volts: 120/2 Phases: 3 Wires: 4 Phase in A B 0.0 / 0.4 0.5 / 0.4	ETERING DE	VICE Breaker Wir 1 20 #12 1 20 #12 1 20	A.I.C. Rating: Enclosure: Mains: 2 Receptacles 2 EF-1 SPARE	10,000 Type 1 100A MCB	CKT 2 4 6	No
Location: Supply From: TLFS Mounting: Surface Note CKT 1 Lighting 3 Exterior Lighting 5 SPARE 7 SPARE 9 SPARE	#12 20 1 #12 20 1 20 1 20 1 20 1 20 1	M - PROVIDE M Volts: 120/2 Phases: 3 Wires: 4 Phase in A B 0.0 / 0.4 0.5 / 0.4	ETERING DE'	VICE Breaker Wir 1 20 #12 1 20 #12 1 20 1 20 1 20 1 20	A.I.C. Rating: Enclosure: Mains: 2 Receptacles 2 EF-1 SPARE SPARE SPARE SPARE	10,000 Type 1 100A MCB	CKT 2 4 6 8 10	No
Location: Supply From: TLFS Mounting: Surface Note CKT Circuit Description 1 Lighting 3 Exterior Lighting 5 SPARE 7 SPARE 9 SPARE 11 SPARE 11 SPARE	#12 20 1 #12 20 1 20 1 20 1 20 1 20 1 20 1 20 1	M - PROVIDE M Volts: 120/2 Phases: 3 Wires: 4 Phase in A B 0.0 / 0.4 0.5 / 0.4 0.0 / 0.0	ETERING DE 08 Wye • kVA C	VICE Breaker Wir 1 20 #12 1 20 #12 1 20 1 20 1 20 1 20 1 20	A.I.C. Rating: Enclosure: Mains: 2 Receptacles 2 EF-1 SPARE SPARE SPARE SPARE SPARE SPARE	10,000 Type 1 100A MCB	CKT 2 4 6 8 10 12	
Location: Supply From: TLFS Mounting: Surface Note CKT Lighting 1 Lighting 3 Exterior Lighting 5 SPARE 7 SPARE 9 SPARE 11 SPARE 13 SPARE	#12 20 1 #12 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1	M - PROVIDE M Volts: 120/2 Phases: 3 Wires: 4 Phase in 0.0 / 0.4 0.5 / 0.4 0.0 / 0.0 0.0 / 0.0	ETERING DE'	VICE Breaker Wir 1 20 #12 1 20 #12 1 20 1 20 1 20 1 20 1 20 1 20 1 20	A.I.C. Rating: Enclosure: Mains: 2 Receptacles 2 EF-1 SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE	10,000 Type 1 100A MCB	CKT 2 4 6 8 10 12 14	No
Location: Supply From: TLFS Mounting: SurfaceNoteCKTCircuit Description1Lighting3Exterior Lighting5SPARE7SPARE9SPARE11SPARE13SPARE13SPARE15SPARE17SPARE	#12 20 1 #12 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1	M - PROVIDE M Volts: 120/2 Phases: 3 Wires: 4 Phase in 0.0 / 0.4 0.5 / 0.4 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0	ETERING DE'	VICE Breaker Wir 1 20 #12 1 20 #12 1 20 1 20	A.I.C. Rating: Enclosure: Mains: 2 Receptacles 2 EF-1 SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE	10,000 Type 1 100A MCB	CKT 2 4 6 8 10 12 14 14 16 18	
Location: Supply From: TLFS Mounting: SurfaceNoteCKTCircuit Description1Lighting3Exterior Lighting5SPARE7SPARE9SPARE11SPARE13SPARE15SPARE17SPARE19SPARE19SPARE19SPARE19SPARE	#12 20 1 #12 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1	M - PROVIDE M Volts: 120/2 Phases: 3 Wires: 4 Phase in 0.0 / 0.4 0.5 / 0.4 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0	ETERING DE 08 Wye kVA C 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0	VICE Breaker Wir 1 20 #12 1 20 #12 1 20 1 20	A.I.C. Rating: Enclosure: Mains: 2 Receptacles 2 EF-1 SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE	10,000 Type 1 100A MCB	CKT 2 4 6 8 10 12 14 14 16 18 20	
Location: Supply From: TLFS Mounting: SurfaceNoteCKTCircuit Description1Lighting3Exterior Lighting5SPARE7SPARE9SPARE11SPARE13SPARE15SPARE17SPARE19SPARE19SPARE19SPARE19SPARE19SPARE	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	M - PROVIDE M Volts: 120/2 Phases: 3 Wires: 4 Phase in 0.0 / 0.4 0.5 / 0.4 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0	ETERING DE'	VICE Breaker Wir 1 20 #12 1 20 #12 1 20 1 20	A.I.C. Rating: Enclosure: Mains: 2 Receptacles 2 EF-1 SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE	10,000 Type 1 100A MCB	CKT 2 4 6 8 10 12 14 14 16 18 20 22	
Location: Supply From: TLFS Mounting: SurfaceNoteCKTCircuit Description1Lighting3Exterior Lighting5SPARE7SPARE9SPARE11SPARE13SPARE15SPARE17SPARE19SPARE21SPARE23SPARE23SPARE25SPACE	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	M - PROVIDE M Volts: 120/2 Phases: 3 Wires: 4 Phase in 0.0 / 0.4 0.0 / 0.4 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0	ETERING DE 08 Wye kVA C 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0	VICE Breaker Wir 1 20 #12 1 20 #12 1 20 1 20	A.I.C. Rating: Enclosure: Mains: Mains: 2 Receptacles 2 EF-1 SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE	10,000 Type 1 100A MCB	CKT 2 4 6 8 10 12 14 16 18 20 22 22 24 26	-
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Location: Supply From: TLFS: Mounting: Surface Note CKT Circuit Description 1 Lighting 3 Exterior Lighting 5 SPARE 7 SPARE 7 SPARE 7 SPARE 11 SPARE 13 SPARE 15 SPARE 15 SPARE 15 SPARE 17 SPARE 21 SPARE 23 SPARE 23 SPARE 25 SPACE 27 SPACE 33 SPACE 33 SPACE 33 SPACE 33 SPACE 37 SPACE 37 SPACE 37 SPACE 39 SPACE 31 SPACE 31 SPACE 31 SPACE 41 SPACE 41 SPACE 41 SPACE 41 SPACE 41 SPACE	#12 20 1 #12 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 1 1 1 1 - 1 - 1 - 1 - 1 - 1 </td <td>M - PROVIDE M Volts: 120/2 Phases: 3 Wires: 4 Phase in M - 0.5 / 0.4 0.0 / 0.4 0.0 / 0.4 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0</td> <td>ETERING DE</td> <td>VICE Breaker Wir 1 20 #12 1 20 #12 1 20 #12 1 20 1 20 1 1 1 1 1 3 30 KVA 5 KVA</td> <td>A.I.C. 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Location: Supply From: TLFS Monting: Surface Note CKT Circuit Description 1 Lighting 1 3 Exterior Lighting 1 5 SPARE 1 7 SPARE 1 13 SPARE 1 15 SPARE 1 15 SPARE 1 15 SPARE 1 17 SPARE 1 19 SPARE 1 13 SPARE 1 14 SPARE 1 27 SPACE 1 33 SPACE 1	#12 20 1 #12 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 20 1 1 1 1 1 - 1 - 1 - 1 - 1 - 1 </td <td>M - PROVIDE M Volts: 120/2 Phases: 3 Wires: 4 Phase in M - 0.5 / 0.4 0.0 / 0.4 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0</td> <td>ETERING DE 08 Wye</td> <td>VICE Breaker Wir 1 20 #12 1 20 #12 1 20 #12 1 20 1 20 1 1 1 3 30 BREAKER LOCK-OFF DEV</td> <td>A.I.C. Rating: Enclosure: Mains: Mains: 2 Receptacles 2 EF-1 SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE</td> <td>10,000 Type 1 100A MCB it Description</td> <td>CKT 2 4 6 8 10 12 14 14 16 18 20 22 22 24 24 26 28 30 32 34 36 38 40</td> <td></td>	M - PROVIDE M Volts: 120/2 Phases: 3 Wires: 4 Phase in M - 0.5 / 0.4 0.0 / 0.4 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0 0.0 / 0.0	ETERING DE 08 Wye	VICE Breaker Wir 1 20 #12 1 20 #12 1 20 #12 1 20 1 20 1 1 1 3 30 BREAKER LOCK-OFF DEV	A.I.C. 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		CATALOG NUMBER
Type Mark	MANUFACTU	RER MODEL
A1	DAYBRITE	2FPZ48L840-4-DS-UNV-DIM
C1	DAY-BRITE	FSX440L840-UNV + FSXWG4
C1E	DAY-BRITE	FSX440L840-UNV + BSL6LST + FSXWG4
W1	GARDCO	PWS-1150-NW-G2-4-UNV-DD- BRZ
W1E	GARDCO	PWS-1150-NW-G2-4-UNV-DD- BRZ-EM
X1	CHLORIDE	44RLU1WR
·		
		LIG
	Туре	Sensor Operation
	RB	VACANCY - MANUAL ON / AUTO C
	RF	NONE
	RH	NONE
	ER	-



	Dri	ver / Light	Engine	Ð		
MOUNTING	LUMENS/TYP E	ССТ	CRI	VOLTAGE	LOAD	REMARKS
RECESSED	4800L LED	4000 K	80	277 V	47 W	2x4 FLAT PANEL, OPAQUE ACRYLIC LENS, 0-10V DIMMING, DLC LISTED.
SURFACE / CHAIN HANG	LED / 4000LU	4000 K	80	277 V	33 W	4-FOOT STRIP, FROSTED ACRYLIC LENS, WIREGUARD, CHAIN HANG KIT, DLC LISTED.
SURFACE / CHAIN HANG	LED / 4000LU	4000 K	80	277 V	33 W	4-FOOT STRIP, FROSTED ACRYLIC LENS, WIREGUARD, CHAIN HANG KIT, DLC LISTED. PROVIDE WITH 90-MIN EMERGENCY BATTERY PACK.
WALL	LED / 5310LU	4000 K	80	277 V	51 W	ARCHITECTURAL WALLPACK, TYPE IV DISTRIBUTION, BRONZE FINISH, DLC LISTED.
WALL	LED / 5310LU	4000 K	80	277 V	51 W	ARCHITECTURAL WALLPACK, TYPE IV DISTRIBUTION, BRONZE FINISH, DLC LISTED. PROVIDE WITH 90-MIN EMERGENCY BATTERY PACK.
SURFACE	LED	4000 K	80	277 V	1 W	SINGLE-FACED EDGE-LIT EXIT SIGN, UNIVERSAL MOUNT, AC ONLY, WHITE HOUSING, RED LETTERING, MIRROR BACKGROUND. PROVIDE CHEVRON DIRECTIONAL ARROWS PER PLANS OR AS DIRECTED BY AHJ.

	# of Lighting	
	Zones	Description
OFF	1	ROOM CONTROLLER; ON/OFF SWITCH (NO DIMMING).
	1	ON/OFF SPRING WOUND MECHANICAL TIMER SWITCH, 20-AMPERE, 12-HOUR WITH HOLD. WIRE MULTIPLE TIME SWITCHES IN PARALLEL FOR MULTIPLE ENTRY/EXIT DOORS.
	1	ON/OFF SPRING WOUND MECHANICAL TIMER SWITCH, 20-AMPERE, 12-HOUR WITH HOLD. WIRE MULTIPLE TIMER SWITCHES IN PARALLEL FOR MULTIP ENTRY/EXIT DOORS.
	-	UL924 LOAD CONTROL RELAY, PLENUM RATED, 0-10V COMPATIBLE, 16A MINIMUM

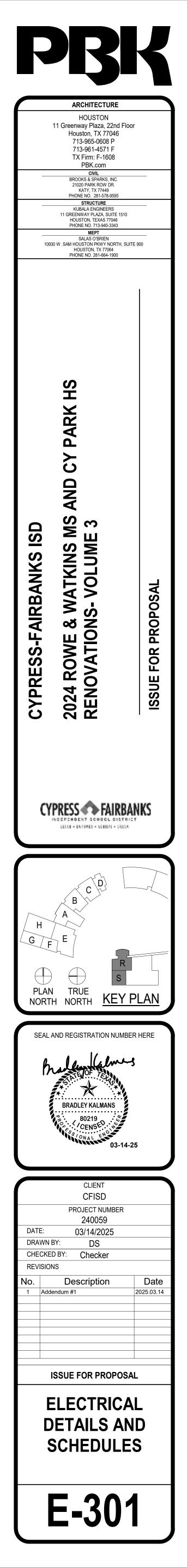


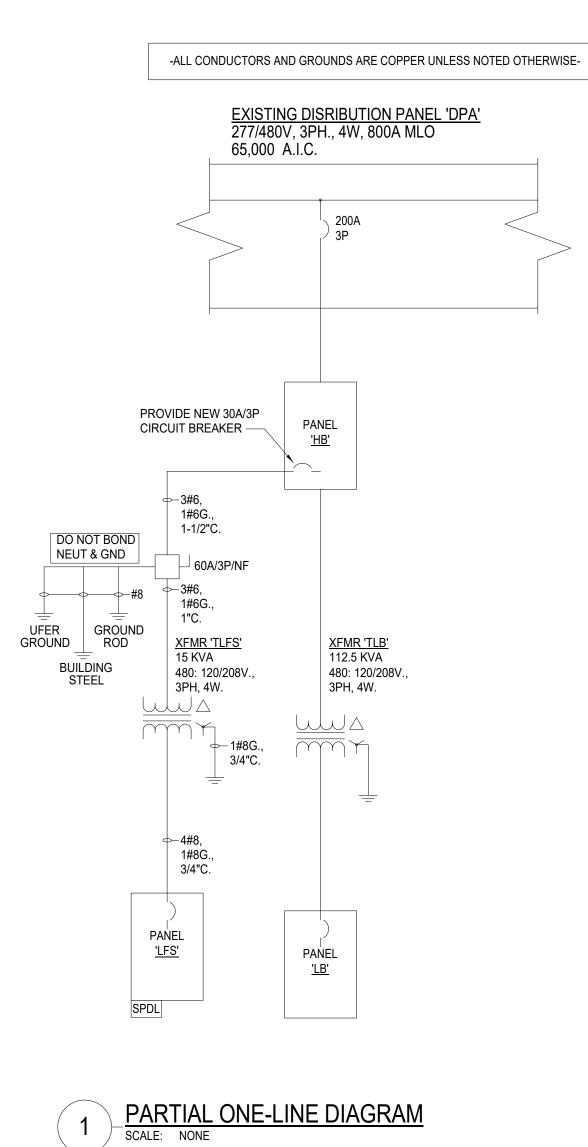
GROUNDING DETAIL

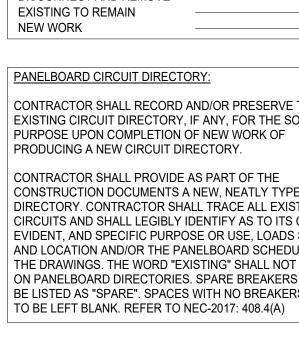
SYMBOL	DESCRIPTION (DISREGARD ITEMS NOT SHOWN ON PLANS)
LIGHTING (L	LETTER DENOTES TYPE - SEE LIGHT FIXTURE SCHEDULE)
	LIGHT FIXTURE - RECESSED OR SURFACE MOUNTED
0	LIGHT FIXTURE - RECESSED OR SURFACE MOUNTED ON EMERGENCY CIRCUIT DOWNLIGHT FIXTURE
	DOWNLIGHT FIXTURE ON EMERGENCY CIRCUIT
ю	LIGHT FIXTURE - WALL MOUNTED
HØ	LIGHT FIXTURE - WALL MOUNTED ON EMERGENCY CIRCUIT
X	EXIT LIGHT - CEILING MOUNTED ON EMERGENCY CIRCUIT
ЬX	EXIT LIGHT - WALL MOUNTED ON EMERGENCY CIRCUIT
	CONTROLS & DEVICES
\$ \$ ³	LINE VOLTAGE SINGLE POLE SWITCH
φ ³ \$4	LINE VOLTAGE 4-WAY SWITCH
\$K	LINE VOLTAGE MOMENTARY DPST KEYED SWITCH
\$ ^D	LINE VOLTAGE DIMMER SWITCH, SIZE AND TYPE AS REQUIRED
\$ ^P	LINE VOLTAGE SWITCH WITH PILOT LIGHT
\$⊺	6-HOUR ROTARY TIMER SWITCH WITH NO HOLD U.N.O.
	PUSH BUTTON EPO SWITCH WITH COVER
\$ ^{MC} ⊄R	LOW VOLTAGE MOMENTARY CONTACT SWITCH
\$ ^R \$ ^B	LOW VOLTAGE DIGITAL KEYPAD LOW VOLTAGE BUILDING MANAGEMENT (BMCS) LOCAL OVERRIDE SWITCH
φ ² (§)	OCCUPANCY SENSOR (AUTO ON / AUTO OFF WITHIN 20-MINUTES)
\otimes	VACANCY SENSOR (MANUAL ON / AUTO OFF WITHIN 20-MINUTES)
\diamond	PHOTOCELL SENSOR
R#]	ROOM CONTROLLER ('#' DENOTES TYPE - SEE LIGHTING CONTROLS SCHEDULE AND DETAILS)
ER	EMERGENCY LOAD CONTROL RELAY. MINIMUM 16A AND 0-10V COMPATIBLE. PROVIDE U.L. 924 U.N.O.
	LES AND OUTLETS
⊖	SIMPLEX RECEPTACLE DUPLEX RECEPTACLE
⊖U	DUPLEX RECEPTACLE WITH TWO USB CHARGING PORTS.
€	125/250 VOLT, 1 PHASE, 3-WIRE, 20 AMPS UNLESS NOTED OTHERWISE
\$	DOUBLE DUPLEX IN 2-GANG BOX WITH SINGLE COVER PLATE
⊕U	DOUBLE DUPLEX WITH TWO USB CHARGING PORTS IN 2-GANG BOX WITH SINGLE COVER PLATE
₿	DOUBLE DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE IN 2-GANG BOX WITH SINGLE COVER PLATE
₽	DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE
\square	FLUSH FLOOR DUPLEX RECEPTACLE OUTLET
Ð	FLUSH FLOOR DOUBLE DUPLEX RECEPTACLE OUTLET
$\Phi \Delta$	CONCEALED SERVICE MULTI-ACCESS FLOOR BOX WITH DUPLEX RECEPTACLE AND DATA OUTLET. REFER TO TECHNOLOGY SERIES DRAWINGS FOR DATA CABLE QUANTIES.
	CONCEALED SERVICE MULTI-ACCESS FLOOR BOX WITH DOUBLE DUPLEX RECEPTACLE AND DATA OUTLET.
⊕∆	REFER TO TECHNOLOGY SERIES DRAWINGS FOR DATA CABLE QUANTIES.
0	JUNCTION BOX
	FLUSH REMOTE GFCI DEVICE (LOCATE IN READILY ACCESSIBLE LOCATION) NTROLLERS AND EQUIPMENT
()	MOTOR, MAKE FINAL MOTOR CONNECTION
\$	MOTOR-RATED SWITCH. 20A UNLESS INDICATED OTHERWISE.
Ū.	DISCONNECT SWITCH AS REQUIRED
R	COMBINATION MOTOR STARTER/DISCONNECT SWITCH AS REQUIRED
\boxtimes	MOTOR STARTER
•	PREWIRED DEVICE, MAKE ELECTRICAL FINAL CONNECTIONS
VFD	VARIABLE FREQUENCY DRIVE MOTOR CONTROLLER FURNISHED BY MECHANICAL CONTRACTOR AND INSTALLED BY ELECTRICAL CONTRACTOR.
[HF]	HIGH EFFICIENCY HARMONIC FILTER FURNISHED BY MECHANICAL CONTRACTOR AND INSTALLED BY ELECTRICAL CONTRACTOR.
 [T]	LOW VOLTAGE TRANSFORMER, SIZE AND TYPE AS REQUIRED.
	CHIME/BUZZER
ELECTRICA	L EQUIPMENT
	ELECTRICAL PANELBOARD; REFER TO FLOOR PLANS FOR VOLTAGE.
	DRY TYPE TRANSFORMER
	PLYWOOD TELEPHONE BACKBOARD
	CONDUIT
	CONDUIT BELOW FLOOR, SLAB, OR GRADE
	3/4"C. UNLESS OTHERWISE NOTED; LONG HATCH, NEUTRAL; SHORT
	HATCH, PHASE; LONG HATCH & HOOK, INSULATED GROUND. NO HATCHES INDICATES 2 CONDUCTORS.
	ARROW INDICATES HOMERUN.
+	PARTIAL ELECTRICAL HOME RUN
	S AND ABBREVIATIONS
WP	INDICATES 'WEATHERPROOF'
H NL	INDICATES 'HORIZONTAL' INDICATES 'NIGHT LIGHT'.
TP	INDICATES 'TAMPER PROOF'
(KS)	INDICATES 'KNEE SPACE'. LOCATE WIRING DEVICE IN KNEESPACE
U.N.O.	INDICATES 'UNLESS NOTED OTHERWISE'
(E)	INDICATES EXISTING TO REMAIN
(R)	INDICATES REPLACE DEVICE AND COVERPLATE.
•	NEXT TO ANY SYMBOL INDICATES FINAL ROUGH-IN FIELD COORDINATION BY CONTRACTOR WITH ARCHITECTURAL MILLWORK DRAWINGS AND OTHER TRADES
ENERAL NO	IOR BUILDING ELECTRICAL EQUIPMENT TO BE WEATHERPROOF NEMA-4X MINIMUM.

1. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION AND MOUNTING HEIGHTS OF ALL LIGHTING FIXTURES AND ELECTRICAL

- DEVICES.
- 2. ALL LIGHT FIXTURES IN MECHANICAL AREAS SHALL BE COORDINATED WITH MECHANICAL AND PLUMBING EQUIPMENT TO AVOID CONFLICTS. LOCATE LIGHT FIXTURES ON PERIMETER WALLS OF MECHANICAL AREAS WHERE PRACTICAL.
- 3. ALL EMPTY CONDUIT SHALL HAVE PULL STRING.
- 4. EACH CONDUIT SHALL BE LIMITED TO (3) CIRCUITS MAXIMUM. 5. VERIFY MOUNTING HEIGHTS OF RECEPTACLES WITH CASEWORK ELEVATIONS PRIOR TO ROUGH-IN. REFER TO ARCHITECTURAL DRAWINGS FOR ROOM ELEVATIONS FOR LOCATION AND COORDINATION OF ELECTRICAL OUTLETS. AT KNEESPACE LOCATIONS, LOCATE ELECTRICAL OUTLETS WITHIN KNEESPACE, UNLESS NOTED OTHERWISE. AT COUNTERS WITH OUT KNEESPACE, LOCATE OUTLETS HORIZONTALLY 6" ABOVE BACK SPLASH, UNLESS NOTED OTHERWISE.
- 6. ALL FIRE ALARM DEVICES, RECEPTACLES, SWITCHES, AND WIRING DEVICES IN MECHANICAL AND ELECTRICAL ROOMS ARE TO BE RECESSED IN WALLS.
- 7. ALL LIGHTING, RECEPTACLE, AND EQUIPMENT BRANCH CIRCUITS CONDUITS SHALL CONTAIN A GROUND WIRE. USING THE CONDUIT SYSTEM AS THE ONLY GROUND PATH IS NOT ACCEPTABLE. 10. CENTER ALL EXIT SIGNS OVER DOORS.







LINETYPE LEGEND _____

PANELBOARD CIRCUIT DIRECTORY:

CONTRACTOR SHALL RECORD AND/OR PRESERVE THE EXISTING CIRCUIT DIRECTORY, IF ANY, FOR THE SOLE

PRODUCING A NEW CIRCUIT DIRECTORY.

CONSTRUCTION DOCUMENTS A NEW, NEATLY TYPED DIRECTORY. CONTRACTOR SHALL TRACE ALL EXISTING

CIRCUITS AND SHALL LEGIBLY IDENTIFY AS TO ITS CLEAR, EVIDENT, AND SPECIFIC PURPOSE OR USE, LOADS SERVED AND LOCATION AND/OR THE PANELBOARD SCHEDULE ON THE DRAWINGS. THE WORD "EXISTING" SHALL NOT BE USED

ON PANELBOARD DIRECTORIES. SPARE BREAKERS ARE TO BE LISTED AS "SPARE". SPACES WITH NO BREAKERS ARE TO BE LEFT BLANK. REFER TO NEC-2017: 408.4(A)

ALL EQUIPMENT/MATERIALS TO BE INSTALLED SHALL BE LISTED AND LABELED FOR THE INTENDED USE, AND INCLUDED IN A LIST PUBLISHED BY AN APPROVED AGENCY. ONLY LISTED AND LABELED EQUIPMENT/MATERIALS SHALL BE USED IN ACCORDANCE WITH ANY INSTRUCTIONS INCLUDED IN THE LISTING OR LABELING PER NEC ARTICLE 110.3(B), CITY OF HOUSTON ELECTRICAL CODE SECTION 508, AND AUTHORITY HAVING JURISDICTION REQUIREMENTS.



