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NOTICE TO ALL CONTRACTORS AND SUB-CONTRACTORS

February 23, 2024

Roosevelt Lofts - Historic Rehabilitation & New Apartments - 22-3281

ADDENDUM NO. 2

YOU ARE INSTRUCTED TO READ AND TO NOTE THE FOLLOWING DESCRIBED CHANGES, CORRECTIONS, CLARIFICATIONS, OMISSIONS, DELETIONS, ADDITIONS, APPROVALS, AND STATEMENTS PERTINENT TO THE CONTRACT AND CONSTRUCTION DOCUMENTS. THIS ADDENDUM IS A PART OF THE CONTRACT AND CONSTRUCTION DOCUMENTS AND SHALL GOVERN IN THE PERFORMANCE OF THE WORK.

GENERAL & CLARIFICATIONS

1. None

SPECIFICATIONS

- Section 01030 Alternates Add Alternate #4
 Section 05400 Cold Framing section has been updated to add interior non-load-bearing wall framing, that needs to be a minimum of 20 gauge, 30 mils thick.

- Section 07213 Part 3, 3.02, F Note 2 corrected to the 2021 IECC
 Section 142400 Part 1, 1.01 Summary, Note 5 has been corrected to the IBC 2021
 Section 223000 Part 1, 1.3 Reference Standards, Note B has been corrected to the IPC 2021
 Section 232300
 a. 2.1 Piping add Copper Line Sets: ASTM B1003

CIVIL - Drawings

- Sheet C3.0 -
 - At existing parking lot: Existing Asphalt pavement to be removed along with a sufficient depth of subgrade to accommodate new pavement.
 - Remove existing pavement at entrance. b.
 - Remove concrete sidewalk and steps to back of curb.
- 2. Sheet C4.0 -
 - Existing asphalt parking lot to be replaced.
 - b. Add Paving Note. Base Bid: Pavement to be 2.5" of Type C or D plant mix AC on 14" of crushed limestone base on compacted subbase. Base may be reduced at the rate of 1" of AC for every 2.5" of granular base. Alternate Bid: 6.5" of PCC on compacted base.
- 3. Sheet C5.0 -
 - The Sanitary Sewer Line to Chadbourne has been relocated.
 - b. A second Sanitary Sewer Line has been added to extend out to College Avenue.

ARCHITECTURAL - Drawings

- Cover Sheet Updated to show new dated plans (2-23-24) and new sheet D2.2
- CFP2 Legend has been revised to reflect the correct Table designations in the IBC.
- Sheet D1.1 Demolition Site Plan Notes, Specific. Note 2 has been changed. Existing asphalt parking lot to be removed. Ref. Civil Dwgs. Prep for installation of new parking lot.
- Sheet D2.1 -
 - Note 5 has been added: Remove existing damaged top stair and portion of concrete slab. Prep area for installation and repair of slab and top stair riser.
 - Note 5 has been added to plan.
- Sheet D2.2 this sheet has been added. Sheet A1.1 General Site Notes
 - a. Note 8 has been changed. Landscaping shall be included in the scope of work.
 - b. Note 15 has been changed. Planters along College: contractor to provide and install new landscape fabric, 2" of black mulch and 1 tree per planters.
 - Note 16 was added: Landscape contractor to provide, along with their bids, irrigation plan and plantings plan for courtyard, east side yard, planters along college, and roof top planters. Plans are subject to review and approval by architect and owner.
- Sheet A1.2
 - a. New Parking Lot:

- i. Base bid: new asphalt
- ii. Alternate bid: new concrete
- b. Added Note: new Concrete drive approach and sidewalk.
- Sheet A2.0
 - a. Added a "Top of Wall Detail" for the metal stud alternate.
 - b. Architectural Floor Plan Notes Note 9, has been corrected to the 2021 IBC.
- Sheet A2.1 Detail B scale of drawing has been corrected.

- STRUCTURAL- Drawings
 Sheet S1.0 Revised and added plan notes along with clarifying floor repair area.
 - 2. Sheet S2.0 Added notes and details at the canopies.
 - 3. Sheet S5.0 Added 2 canopy details.

MECHANICAL - Drawings

- Sheet M1.1 Dryer exhaust has been added to Apt. 4 (#114)
- Sheet M1.2 Apt. 16 (#212) bathroom exhaust has been relocated.
- 3.
- Sheet M1.3 Apt. 24 (#312) bathroom exhaust has been relocated.

 Sheet M1.4 Dryer exhaust termination for Apt. 4 (#114) has been added and location of bathroom 4. exhaust termination from Apts. 16 (#212) & 24 (#312) has been relocated.
- Sheet M1.5 Entire drawing has been revised to relocated and re-route under floor plumbing to limit the cutting and patching in the existing terrazzo flooring.
- Sheet M1.8 Wall hydrants have been added and roof patio hydrant has been added. Sheet M1.9 Roof hydrant has been added for patio and roof.
- Sheet M1.10 Wall hydrant has been added at the penthouse to service the roof.

Receipt of this Addendum shall be noted on the Bid Form.

END OF ADDENDUM NO. 2

Attachments:

Revised Sheets: Cover Sheet, C3.0, C4.0, C5.0, CFP2, D1.1, D2.1, A1.1, A1.2, A2.0, A2.1, S1.0, S1.1, S5.0, M1.1, M1.2, M1.3, M1.4, M1.5,

M1.8, M1.9, M1.10 New Sheet: D2.2

Revised Spec. Section 01030 Alternates Revised Spec. Section 05400 Cold Framing Revised Spec. Section 07213 Batt Insulation Revised Spec. Section 142400 Elevators

Revised Spec. Section 223000 Plumbing Equipment

SECTION 01030

ALTERNATES

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for alternates.

1.3 GENERAL

- 1. The General Contractor shall state in his Bid Form the amount of dollars to be ADDED or DEDUCTED from his Base Bid for the following Alternates.
- 2. Alternates are not in order of acceptance.
- 3. It shall be the responsibility of the General Contractor to advise all necessary personnel and suppliers as to the nature and extent of all alternates selected by the owner.
- 4. Circle Add or Deduct to indicate that the alternate price is to be added or subtracted from the base bid.

1.4 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be added to or deducted from the Base Bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
 - 1. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.5 PROCEDURES

- A. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
 - 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.
- C. Execute accepted alternates under the same conditions as other work of the Contract.
- D. Schedule: A Schedule of Alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

01030 Alternates

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

3.1	SCHEDULE OF ALTERNATES			
 ALTERNATE NO. 1 Contractor shall state amount of dollars to be deducted from the Base Bid for all work, labor materials, associated with painting the walls at Hallway #017 and Community Room #121 in wallpaper. 				
	Deduct \$			
2.	ALTERNATE NO. 2 Contractor shall state amount of dollars to be deducted from the Base Bid for all work, labor and materials, associated with eliminating the new roof top deck including, by not limited to: paver system, planter boxes, trellis, railing, ramp and handrail at interior, exterior accent wall lights and hanging lights, and door #217 (change to Window Type M in lieu of door and sidelight).			
	Deduct \$			
3.	ALTERNATE NO. 3 Contractor shall state amount of dollars to be added or deducted from the Base Bid for all work, labor and materials associated with using metal studs for interior partition walls in lieu of wood studs.			
	Add/Deduct \$			
4.	ALTERNATE NO. 4 Contractor shall state amount of dollars to be added or deducted from the Base Bid for all work, labor and materials associated with repouring the parking lot with concrete in lieu of asphalt. Ref. Civil Drawings for more information.			
	Add/Deduct \$			
5.	ALTERNATE NO. 5 As specified by Addendum.			

END OF SECTION

01030 Alternates

Add/Deduct \$

SECTION 054000

COLD-FORMED METAL FRAMING

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 SUMMARY

- A. This Section includes the following:
 - 1. Interior non-load-bearing wall framing
 - 2. Ceiling joist framing.
- B. Related Sections include the following:
 - 1. Division 05 Section "Cold-Formed Metal Trusses."
 - 2. Division 05 Section "Metal Fabrications" for masonry shelf angles and connections.
 - 3. Division 09 Section "Non-Structural Metal Framing" for interior non-load-bearing, metal-stud framing and ceiling-suspension assemblies.
 - 4. Division 09 Section "Gypsum Board Shaft Wall Assemblies" for interior non-load-bearing, metal-stud-framed, shaft-wall assemblies.

1.3 PERFORMANCE REQUIREMENTS

- A. Structural Performance: Provide cold-formed metal framing capable of withstanding design loads within limits and under conditions indicated.
 - 1. Design framing system to maintain clearances at openings, to allow for construction tolerances, and to accommodate live load deflection of primary building structure as follows:
 - a. Upward and downward movement of **1 inch.**
- B. Cold-Formed Steel Framing, General: Design according to AISI's "Standard for Cold-Formed Steel Framing General Provisions."
 - 1. Headers: Design according to AISI's "Standard for Cold-Formed Steel Framing Header Design."
 - 2. Design exterior non-load-bearing wall framing to accommodate horizontal deflection without regard for contribution of sheathing materials.

1.4 SUBMITTALS

- A. Product Data: For each type of cold-formed metal framing product and accessory indicated.
- B. Shop Drawings: Show layout, spacings, sizes, thicknesses, and types of cold-formed metal framing; fabrication; and fastening and anchorage details, including mechanical fasteners. Show reinforcing channels, opening framing, supplemental framing, strapping, bracing, bridging, splices, accessories, connection details, and attachment to adjoining work.

1.5 QUALITY ASSURANCE

- A. Welding: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code--Steel," and AWS D1.3, "Structural Welding Code--Sheet Steel."
- B. Fire-Test-Response Characteristics: Where indicated, provide cold-formed metal framing identical to that of assemblies tested for fire resistance per ASTM E 119 by a testing and inspecting agency acceptable to authorities having jurisdiction.
- C. AISI Specifications and Standards: Comply with AISI's "North American Specification for the Design of Cold-Formed Steel Structural Members" and its "Standard for Cold-Formed Steel Framing General Provisions."

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Protect cold-formed metal framing from corrosion, deformation, and other damage during delivery, storage, and handling.
- B. Store cold-formed metal framing, protect with a waterproof covering, and ventilate to avoid condensation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering cold-formed metal framing that may be incorporated into the Work include, but are not limited to, the following:
- B. Manufacturers: Subject to compliance with requirements, provide cold-formed metal framing by one of the following:
 - 1. Allied Studco.
 - 2. AllSteel Products, Inc.
 - 3. California Expanded Metal Products Company.
 - 4. Clark Steel Framing.
 - 5. Consolidated Fabricators Corp.; Building Products Division.
 - 6. Craco Metals Manufacturing, LLC.
 - 7. Custom Stud, Inc.
 - 8. Dale/Incor.
 - 9. Design Shapes in Steel.
 - 10. Dietrich Metal Framing; a Worthington Industries Company.
 - 11. Formetal Co. Inc. (The).
 - 12. Innovative Steel Systems.
 - 13. MarinoWare; a division of Ware Industries.
 - 14. Quail Run Building Materials, Inc.
 - 15. SCAFCO Corporation.
 - 16. Southeastern Stud & Components, Inc.
 - 17. Steel Construction Systems.
 - 18. Steeler, Inc.
 - 19. Super Stud Building Products, Inc.
 - 20. United Metal Products, Inc.

2.2 MATERIALS

- A. Steel Sheet: ASTM A 1003/A 1003M, Structural Grade, Type H, metallic coated, of grade and coating weight as follows:
 - 1. Grade: 50 KSI. 2. Coating: **G60**.

- B. Steel Sheet for **Vertical Deflection** Clips: ASTM A 653/A 653M, structural steel, zinc coated, of grade and coating as follows:
 - 1. Grade: 50 (340), Class 1 or 2.
 - 2. Coating: G60.

2.3 INTERIOR NON-LOAD-BEARING WALL FRAMING

- A. Steel Studs: Manufacturer's standard C-shaped steel studs, of web depths indicated, punched, with stiffened flanges, and as follows:
 - 1. Minimum Base-Metal Thickness: 20 gauge, 30 mil
 - 2. Flange Width: **1-5/8 inches (41 mm)**.
 - 3. Sizes: As indicated on drawings
- B. Steel Track: Manufacturer's standard U-shaped steel track, of web depths indicated, unpunched, with unstiffened flanges, and as follows:
 - 1. Minimum Base-Metal Thickness: **Matching steel studs**.
 - 2. Flange Width: **1-1/4 inches** (**32 mm**).
- C. Vertical Deflection Clips: Manufacturer's standard **bypass** clips, capable of accommodating upward and downward vertical displacement of primary structure through positive mechanical attachment to stud web.
 - 1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 2. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Dietrich Metal Framing; a Worthington Industries Company.
 - b. MarinoWare, a division of Ware Industries.
 - c. SCAFCO Corporation
 - d. The Steel Network, Inc.
- D. Single Deflection Track: Manufacturer's single, deep-leg, U-shaped steel track; unpunched, with unstiffened flanges, of web depth to contain studs while allowing free vertical movement, with flanges designed to support horizontal and lateral loads and transfer them to the primary structure, and as follows:
 - 1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 2. Minimum Base-Metal Thickness: 0.0428 inch (1.09 mm).
 - 3. Flange Width: 2 ½".

2.4 CEILING JOIST FRAMING

- A. Steel Ceiling Joists: Manufacturer's standard C-shaped steel sections, of web depths indicated, **unpunched**, with stiffened flanges, and as follows:
 - 1. Minimum Base-Metal Thickness: 0.0329 inch (0.84 mm).
 - 2. Flange Width: **1-5/8 inches (41 mm).**

2.5 FRAMING ACCESSORIES

- A. Fabricate steel-framing accessories from steel sheet, ASTM A 1003/A 1003M, Structural Grade, Type H, metallic coated, of same grade and coating weight used for framing members.
- B. Provide accessories of manufacturer's standard thickness and configuration, unless otherwise indicated, as follows:
 - 1. Supplementary framing.
 - 2. Bracing, bridging, and solid blocking.
 - 3. Web stiffeners.
 - 4. Anchor clips.
 - 5. End clips.
 - 6. Foundation clips.
 - 7. Gusset plates.

- 8. Stud kickers, knee braces, and girts.
- 9. Joist hangers and end closures.
- 10. Hole reinforcing plates.
- 11. Backer plates.

2.6 ANCHORS, CLIPS, AND FASTENERS

- A. Steel Shapes and Clips: ASTM A 36/A 36M, zinc coated by hot-dip process according to ASTM A 123/A 123M.
- B. Anchor Bolts: ASTM F 1554, Grade **36** threaded carbon-steel **hex-headed bolts headless, hooked bolts** and carbon-steel nuts; and flat, hardened-steel washers; zinc coated by **mechanically deposition according to ASTM B 695, Class 50**.
- C. Expansion Anchors: Fabricated from corrosion-resistant materials, with capability to sustain, without failure, a load equal to 5 times design load, as determined by testing per ASTM E 488 conducted by a qualified independent testing agency.
- D. Power-Actuated Anchors: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with capability to sustain, without failure, a load equal to 10 times design load, as determined by testing per ASTM E 1190 conducted by a qualified independent testing agency.
- E. Mechanical Fasteners: ASTM C 1513, corrosion-resistant-coated, self-drilling, self-tapping steel drill screws.
 - 1. Head Type: Low-profile head beneath sheathing, manufacturer's standard elsewhere.
- F. Welding Electrodes: Comply with AWS standards.

2.7 MISCELLANEOUS MATERIALS

- A. Galvanizing Repair Paint: **ASTM A 780**.
- B. Cement Grout: Portland cement, ASTM C 150, Type I; and clean, natural sand, ASTM C 404. Mix at ratio of 1 part cement to 2-1/2 parts sand, by volume, with minimum water required for placement and hydration.
- C. Nonmetallic, Nonshrink Grout: Premixed, nonmetallic, noncorrosive, nonstaining grout containing selected silica sands, portland cement, shrinkage-compensating agents, and plasticizing and water-reducing agents, complying with ASTM C 1107, with fluid consistency and 30-minute working time.
- D. Shims: Load bearing, high-density multimonomer plastic, nonleaching.
- E. Sealer Gaskets: Closed-cell neoprene foam, 1/4 inch (6.4 mm) thick, selected from manufacturer's standard widths to match width of bottom track or rim track members.

2.8 FABRICATION

- A. Fabricate cold-formed metal framing and accessories plumb, square, and true to line, and with connections securely fastened, according to referenced AISI's specifications and standards, manufacturer's written instructions, and requirements in this Section.
 - 1. Fabricate framing assemblies using jigs or templates.
 - 2. Cut framing members by sawing or shearing; do not torch cut.
 - 3. Fasten cold-formed metal framing members by welding, screw fastening, clinch fastening, or riveting as standard with fabricator. Wire tying of framing members is not permitted.
 - a. Comply with AWS D1.3 requirements and procedures for welding, appearance and quality of welds, and methods used in correcting welding work.
 - b. Locate mechanical fasteners and install according to Shop Drawings, with screw penetrating joined members by not less than three exposed screw threads.

- 4. Fasten other materials to cold-formed metal framing by welding, bolting, or screw fastening, according to Shop Drawings.
- B. Reinforce, stiffen, and brace framing assemblies to withstand handling, delivery, and erection stresses. Lift fabricated assemblies to prevent damage or permanent distortion.
- C. Fabrication Tolerances: Fabricate assemblies level, plumb, and true to line to a maximum allowable tolerance variation of 1/8 inch in 10 feet (1:960) and as follows:
 - 1. Spacing: Space individual framing members no more than plus or minus 1/8 inch (3 mm) from plan location. Cumulative error shall not exceed minimum fastening requirements of sheathing or other finishing materials.
 - 2. Squareness: Fabricate each cold-formed metal framing assembly to a maximum out-of-square tolerance of 1/8 inch (3 mm).

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine supporting substrates and abutting structural framing for compliance with requirements for installation tolerances and other conditions affecting performance.
 - 1. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Before sprayed fire-resistive materials are applied, attach continuous angles, supplementary framing, or tracks to structural members indicated to receive sprayed fire-resistive materials.
- B. After applying sprayed fire-resistive materials, remove only as much of these materials as needed to complete installation of cold-formed framing without reducing thickness of fire-resistive materials below that are required to obtain fire-resistance rating indicated. Protect remaining fire-resistive materials from damage.
- C. Install load bearing shims or grout between the underside of wall bottom track or rim track and the top of foundation wall or slab at stud or joist locations to ensure a uniform bearing surface on supporting concrete or masonry construction.
- D. Install sealer gaskets to isolate the underside of wall bottom track or rim track and the top of foundation wall or slab at stud or joist locations.

3.3 INSTALLATION, GENERAL

- A. Cold-formed metal framing may be shop or field fabricated for installation, or it may be field assembled.
- B. Install cold-formed metal framing according to AISI's "Standard for Cold-Formed Steel Framing General Provisions" and to manufacturer's written instructions unless more stringent requirements are indicated.
- C. Install shop- or field-fabricated, cold-formed framing and securely anchor to supporting structure.
 - 1. Screw, bolt, or weld wall panels at horizontal and vertical junctures to produce flush, even, true-to-line joints with maximum variation in plane and true position between fabricated panels not exceeding 1/16 inch (1.6 mm).
- D. Install cold-formed metal framing and accessories plumb, square, and true to line, and with connections securely fastened.
 - 1. Cut framing members by sawing or shearing; do not torch cut.
 - 2. Fasten cold-formed metal framing members by welding, screw fastening, clinch fastening, or riveting. Wire tying of framing members is not permitted.

- a. Comply with AWS D1.3 requirements and procedures for welding, appearance and quality of welds, and methods used in correcting welding work.
- b. Locate mechanical fasteners and install according to Shop Drawings, and complying with requirements for spacing, edge distances, and screw penetration.
- E. Install framing members in one-piece lengths unless splice connections are indicated for track or tension members.
- F. Install temporary bracing and supports to secure framing and support loads comparable in intensity to those for which structure was designed. Maintain braces and supports in place, undisturbed, until entire integrated supporting structure has been completed and permanent connections to framing are secured.
- G. Do not bridge building expansion and control joints with cold-formed metal framing. Independently frame both sides of joints.
- H. Install insulation, specified in Division 07 Section "Thermal Insulation," in built-up exterior framing members, such as headers, sills, boxed joists, and multiple studs at openings, that are inaccessible on completion of framing work.
- I. Fasten hole reinforcing plate over web penetrations that exceed size of manufacturer's standard punched openings.
- J. Erection Tolerances: Install cold-formed metal framing level, plumb, and true to line to a maximum allowable tolerance variation of 1/8 inch in 10 feet (1:960) and as follows:
 - 1. Space individual framing members no more than plus or minus 1/8 inch (3 mm) from plan location. Cumulative error shall not exceed minimum fastening requirements of sheathing or other finishing materials.

3.4 EXTERIOR NON-LOAD-BEARING WALL INSTALLATION

- A. Install continuous tracks sized to match studs. Align tracks accurately and securely anchor to supporting structure as indicated.
- B. Fasten both flanges of studs to bottom track, unless otherwise indicated. Space studs as follows:
 - 1. Stud Spacing: 16 inches (406 mm).
- C. Set studs plumb, except as needed for diagonal bracing or required for nonplumb walls or warped surfaces and similar requirements.
- D. Isolate non-load-bearing steel framing from building structure to prevent transfer of vertical loads while providing lateral support.
 - 1. Install single-leg deflection tracks and anchor to building structure.
 - 2. Install double deep-leg deflection tracks and anchor outer track to building structure.
 - 3. Connect vertical deflection clips to **infill** studs and anchor to building structure.
- E. Install horizontal bridging in wall studs, spaced in rows indicated on Shop Drawings but not more than 48 inches (1220 mm) apart. Fasten at each stud intersection.
 - Top Bridging for Single Deflection Track: Install row of horizontal bridging within [12 inches (305 mm) of single deflection track. Install a combination of flat, taut, steel sheet straps of width and thickness indicated and stud or stud-track solid blocking of width and thickness matching studs. Fasten flat straps to stud flanges and secure solid blocking to stud webs or flanges.
 - a. Install solid blocking at **96-inch centers.**
 - 2. Bridging: Cold-rolled steel channel, welded or mechanically fastened to webs of punched studs.
 - 3. Bridging: Combination of flat, taut, steel sheet straps of width and thickness indicated and studtrack solid blocking of width and thickness to match studs. Fasten flat straps to stud flanges and secure solid blocking to stud webs or flanges.
 - 4. Bridging: Proprietary bridging bars installed according to manufacturer's written instructions.

F. Install miscellaneous framing and connections, including stud kickers, web stiffeners, clip angles, continuous angles, anchors, fasteners, and stud girts, to provide a complete and stable wall-framing system.

3.5 JOIST INSTALLATION

- A. Install perimeter joist track sized to match joists. Align and securely anchor or fasten track to supporting structure at corners, ends, and spacings indicated on Shop Drawings.
- B. Install joists bearing on supporting frame, level, straight, and plumb; adjust to final position, brace, and reinforce. Fasten joists to both flanges of joist track.
 - 1. Install joists over supporting frame with a minimum end bearing of 1-1/2 inches (38 mm).
 - 2. Reinforce ends and bearing points of joists with web stiffeners, end clips, joist hangers, steel clip angles, or steel-stud sections as indicated on Shop Drawings.
- C. Space joists not more than 2 inches (51 mm) from abutting walls, and as follows:
 - 1. Joist Spacing: **As indicated**.
- D. Frame openings with built-up joist headers consisting of joist and joist track, nesting joists, or another combination of connected joists if indicated.
- E. Install joist reinforcement at interior supports with single, short length of joist section located directly over interior support, with lapped joists of equal length to joist reinforcement, or as indicated **on Shop Drawings**.
- F. Install bridging at intervals indicated **on Shop Drawings**. Fasten bridging at each joist intersection as follows:
 - 1. Bridging: Joist-track solid blocking of width and thickness indicated, secured to joist webs.
 - 2. Bridging: Combination of flat, taut, steel sheet straps of width and thickness indicated and joist-track solid blocking of width and thickness indicated. Fasten flat straps to bottom flange of joists and secure solid blocking to joist webs.
- G. Secure joists to load-bearing interior walls to prevent lateral movement of bottom flange.
- H. Install miscellaneous joist framing and connections, including web stiffeners, closure pieces, clip angles, continuous angles, hold-down angles, anchors, and fasteners, to provide a complete and stable joist-framing assembly.

3.6 FIELD QUALITY CONTROL

- A. Testing: Owner will engage a qualified independent testing and inspecting agency to perform field tests and inspections and prepare test reports.
- B. Field and shop welds will be subject to testing and inspecting.
- C. Testing agency will report test results promptly and in writing to Contractor and Architect.
- D. Remove and replace work where test results indicate that it does not comply with specified requirements.
- E. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.7 REPAIRS AND PROTECTION

A. Galvanizing Repairs: Prepare and repair damaged galvanized coatings on fabricated and installed cold-formed metal framing with galvanized repair paint according to ASTM A 780 and manufacturer's written instructions.

В.	Provide final protection and maintain conditions, in a manner acceptable to manufacturer and Installer, that ensure that cold-formed metal framing is without damage or deterioration at time of Substantial Completion.						
	END OF SECTION 054000						

SECTION 07213

BATT INSULATION

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Sound batt insulation.

1.02 REFERENCES

- A. ASTM C665 Mineral Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing.
- B. ASTM E84 Test Method for Surface Burning Characteristics of Building Materials.

1.03 SYSTEM DESCRIPTION

A. Materials of This Section: Provide continuity of thermal barrier at building enclosure with thermal insulating materials in attic and walls. Overlap insulations to ensure complete thermal envelope at all exterior surfaces.

1.04 COORDINATION

A. Coordinate the work with all related Sections for installation of vapor retarder and other forms of insulation.

PART 2 PRODUCTS

2.01 MANUFACTURERS - INSULATION MATERIALS

- A. OWENS-CORNING Pink Next Gen Fiberglas Insulation, Unfaced
- B. Substitutions: Under provisions of the General Requirements.

2.02 MATERIALS

- A. Batt Insulation, Walls: ASTM C665; preformed glass fiber batts; loose laid and taped, conforming to the following:
 - 1. Thermal Resistance: R-11 min.
 - 2. Facing: Unfaced
 - 3. Batt Sizes: 3-1/2" and 5-1/2"
- C. Sound Batt Insulation:
 - 1. Batt size: 3-1/2" and 5-1/2"
 - 2. Facing: Unfaced.
- D. Tape: Self-adhering type as recommended by the manufacturer, mesh reinforced, 2 inches wide.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify site conditions.
- B. Verify that substrate, adjacent materials, and insulation are dry and ready to be installed.

3.02 INSTALLATION

- A. Install insulation and vapor retarder in accordance with manufacturer's instructions.
- B. Trim insulation neatly to fit spaces. Insulate miscellaneous gaps and voids.
- C. Fit insulation tight in spaces and tight to exterior side of mechanical and electrical services within the plane of insulation.
- D. Install with applied vapor retarder membrane facing warm side of building spaces. Lap ends and side flanges of membrane, caulk or tape.
- E. Tape seal butt ends, lapped flanges, and tears or cuts in membrane.

07213-1 Batt Insulation

- F. Place loose-fill insulation into spaces and onto surfaces as shown, either by pouring or by machine blowing to comply with ASTM C 1015. Level horizontal applications to uniform thickness as indicated, lightly settle to uniform density, but do not compact excessively.
 - 1. For cellulosic loose-fill insulation, comply with the Cellulose Insulation Manufacturers Association's Special Report #3, "Standard Practice for Installing Cellulose Insulation."
 - 2. IECC 2021 installation requirements, follow all requirements and recommendations.

END OF SECTION 07213

07213-2 Batt Insulation

SECTION 142400

ELECTRIC TRACTION ELEVATORS

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes: Electric Traction, machine room-less, code-compliant elevator designed for retrofit in an existing shaft. Reference drawings and details including:
 - 1. Standard pre-engineered passenger elevator.
 - 2. Elevator car enclosures, hoistway entrances, and signal equipment.
 - 3. Operation and control systems.
 - 4. Accessibility provisions for physically disabled persons.
 - 5. Elevator car shall accommodate ambulance stretcher, IBC 2021, 3002.4.
 - 6. Equipment, machines, controls, systems, and devices as required for safely operating the specified elevators at their rated speed and capacity.
 - 7. Materials and accessories as required to complete the elevator installation.

B. Related Sections:

- 1. Division 1 General Requirements: Meet or exceed all referenced sustainability requirements.
- 2. Division 3 Concrete: Installing inserts, sleeves and anchors in concrete.
- 3. Division 4 Masonry: Installing inserts, sleeves and anchors in masonry.
- Division 5 Metals:
 - a. Providing hoist beams, pit ladders, steel framing, auxiliary support steel, and divider beams for supporting guide-rail brackets.
 - b. Providing steel angle sill supports and grouting hoistway entrance sills and frames.
- 5. Division 9 Finishes: Providing elevator car finish flooring and field painting unfinished and shop primed ferrous materials.
- 6. Division 22 Plumbing:
 - a. Sump pit and oil interceptor.
- 7. Division 23: Heating, Ventilation, and Air Conditioning
 - a. Heating and ventilating hoistways
- 8. Division 16 Sections:
 - a. Providing electrical service to elevators, including fused disconnect switches.
 - b. Emergency power supply, transfer switch, and auxiliary contacts.
 - c. Heat and smoke sensing devices.
 - d. Convenience outlets and illumination in machine room, hoistway, and pit.
- C. Work Not Included: General contractor shall provide the following in accordance with the requirements of the Model Building Code and ANSI A17.1 Code. For specific rules, refer to ANSI A17.1, Section 300 for hydraulic elevators. State or local requirements must be used if more stringent.
 - 1. Elevator hoist beam to be provided at top of elevator shaft. Beam must be able to accommodate proper loads and clearances for elevator installation and operation.
 - 2. Elevator rail supports and columns as needed to support new elevator rails & cab within and tied into existing shaft.
 - 3. Supply in ample time for installation by other trades, inserts, anchors, bearing plates, brackets, supports, and bracing including all setting templates and diagrams for placement.
 - 4. Any existing openings that require infill shall be a minimum two hours of fire rating. Hoistway should be clear and plumb with variations not to exceed 1/2" at any point.
 - 5. Elevator hoistways shall have barricades, as required.
 - 6. Install bevel guards at 75° on all recesses, projections or setbacks over 2" (4" for A17.1 2000 areas) except for loading or unloading.
 - 7. Provide rail bracket supports at pit, each floor, and roof. For guide rail bracket supports, provide divider beams between hoistway at each floor and roof.
 - 8. Pit floor shall be level and free of debris. Reinforce dry pit to sustain normal vertical forces from rails and buffers.

- 9. Where pit access is by means of the lowest hoistway entrance, a vertical ladder of non-combustible material extending 42" minimum, (48" minimum for A17.1-2000 areas) shall be provided at the same height, above sill of access door or handgrips.
- 10. When heat, smoke, or combustion sensing devices are required, connect to elevator machine room terminals. Contacts on the sensors should be sided for 120 volt D.C.
- 11. Install and furnish finished flooring in elevator cab.
- 12. Finished floors and entrance walls are not to be constructed until after sills and door frames are in place. Consult elevator contractor for rough opening size. The general contractor shall supply the drywall framing so that the wall fire resistance rating is maintained, when drywall construction is used.
- 13. Where sheet rock or drywall construction is used for front walls, it shall be of sufficient strength to maintain the doors in true lateral alignment. Drywall contractor to coordinate with elevator contractor.
- 14. Before erection of rough walls and doors; erect hoistway sills, headers, and frames. After rough walls are finished; erect fascias and toe guards. Set sill level and slightly above finished floor at landings.
- 15. To maintain legal fire rating (masonry. Steel & Wood construction), door frames are to be anchored to walls and properly grouted in place.
- 16. The elevator wall shall interface with the hoistway entrance assembly and be in strict compliance with the elevator contractor's requirements.
- 17. General Contractor shall fill and grout around entrances, as required.
- 18. Elevator sill supports shall be provided at each opening.
- 19. All walls and sill supports must be plumb where openings occur.
- 20. Locate a light fixture and convenience outlet in pit with switch located adjacent to the access door.
- 21. A light switch and fused disconnect switch for each elevator should be located inside the machine room adjacent to the door, where practical, per the National Electrical Code (NFPA No. 70).
- 22. As indicated by elevator contractor, provide a light outlet for each elevator, in center of hoistway (or in the machine room).
- 23. For signal systems and power operated door: provide ground and branch wiring circuits, including main line switch. For car light and fan: provide a feeder and branch wiring circuits, including main line switch.
- 24. Wall thickness may increase when fixtures are mounted in drywall. These requirements must be coordinated between the general contractor and the elevator contractor.
- 25. Provide supports, patching and recesses to accommodate hall button boxes, signal fixtures, etc.
- 26. Locate telephone and convenience outlet on control panel.
- D. Industry and government standards
 - 1. ICC/ANSI A117.1 Accessible and Usable Buildings and Facilities
 - 2. ADAAG Accessibility Guidelines for Buildings and Facilities
 - 3. ANSI/NFPA 70 National Electrical Code
 - 4. ANSI/NFPA 80 Standard for Fire Doors and Fire Windows
 - 5. ASME/ANSI A17.1 Safety Code for Elevators and Escalators

1.02 SUBMITTALS

- A. Product data: When requested, the elevator contractor will provide standard cab, entrance and signal fixture data to describe product for approval.
- B. Shop drawings:
 - 1. Retrofit, Historic Building: Shaft walls to be reconstructed. Field verify and illustrate existing conditions and dimensions: pit, floor elevations, etc.
 - 2. Retrofit, Historic Building: Report of recommendations and items of concern based on review of structural and electrical engineer's documents and drawings.
 - 3. Show new equipment arrangement, control space, pit, and hoistway. Provide plans, elevations, sections, and details of assembly, erection, anchorage, and equipment location.

- 4. Indicate elevator system capacities, sizes, performances, safety features, finishes and other pertinent information.
- 5. Show floors served, travel distances, maximum loads imposed on the building structure at points of support and all similar considerations of the elevator work.
- 5. Indicate electrical power requirements and branch circuit protection device recommendations.
- C. Powder Coat Paint selection: Submit manufacturer's standard selection charts for exposed finishes and materials.
- Plastic laminate selection: Submit manufacturer's standard selection charts for exposed finishes and materials.
- E. Metal Finishes: Upon request, standard metal samples provided.
- F. Operation and maintenance data. Include the following:
 - 1. Owner's Manual and Wiring Diagrams.
 - 2. Parts list, with recommended parts inventory.

1.03 QUALITY ASSURANCE

- A. Manufacturer Qualifications: An approved manufacturer with minimum 15 years' experience in manufacturing, installing, and servicing elevators of the type required for the project.
 - 1. Must be the manufacturer of the power unit, controller, signal fixtures, door operators cab, entrances, and all other major parts of the elevator operating equipment.
 - a. The major parts of the elevator equipment shall be manufactured in the United States, and not be an assembled system.
 - 2. The manufacturer shall have a documented, on-going quality assurance program.
 - 3. ISO-9001:2000 Manufacturer Certified
 - 4. ISO-14001:2004 Environmental Management System Certified
- B. Installer Qualifications: The manufacturer or an authorized agent of the manufacturer with not less than 15 years of satisfactory experience installing elevators equal in character and performance to the project elevators.
- C. Regulatory Requirements:
 - 1. ASME/ANSI A17.1 Safety Code for Elevators and Escalators, latest edition or as required by the local building code.
 - 2. Building Code: National.
 - 3. NFPA 70 National Electrical Code.
 - 4. NFPA 80 Fire Doors and Windows.
 - 5. Americans with Disabilities Act Accessibility Guidelines (ADAAG).
 - 6. CAN/CSA B44 Safety Code for Elevators and Escalators.
- D. Fire-rated Entrance Assemblies: Opening protective assemblies including frames, hardware, and operation shall comply with ASTM E2074, CAN4-S104 (ULC-S104), UL10(B), and NFPA 80. Provide entrance assembly units bearing Class B or 1 1/2 hour label by a Nationally Recognized Testing Laboratory (2 hour label in Canada).
- E. Inspection and testing: Elevator Installer shall obtain and pay for all required inspections, tests, permits, and fees for elevator installation.
 - 1. Arrange for inspections and make required tests.
 - 2. Deliver to the Owner upon completion and acceptance of elevator work.
- F. Product Qualifications:
 - 1. LCA, EPD, and HPD data must be provided for all major components of the elevator system.
 - 2. LCA data must be compatible with GaBI Software.
 - 3. Environmental Product Declaration (EPD): Publicly available, critically reviewed life cycle analysis having at least a cradle-to-gate scope.
 - 4. GreenScreen Chemical Hazard Analysis: All ingredients of 100 parts-per-million or greater evaluated using GreenScreen for Safer Chemicals Method v1.2.
 - 5. Health Product Declarations (HPD v2 or later): Complete, published declaration with full disclosure of known hazards, prepared using the Health Product Declaration Collaborative's "HPD builder" on-line tool; Unknown hazard listed will not be considered acceptable.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Manufacturing will deliver elevator materials, components, and equipment and the contractor is responsible to provide secure and safe storage on job site.

1.05 PROJECT CONDITIONS

- A. Prohibited Use: Elevators shall not be used for temporary service or for any other purpose during the construction period before Substantial Completion and acceptance by the purchaser unless agreed upon by Elevator Contractor and General Contractor with signed temporary agreement.
- B. Retrofit: This project is considered a retrofit. Elevator & equipment to be installed within an a reconstructed hoistway in a historic building. Elevator manufacturers and installer are required to visit the site prior to bidding for evaluation of existing conditions. Bids should include any special conditions and recommendations found during pre-bid investigations. Elevator manufacturer, contractor, and installer shall alert the architect to any discrepancies or concerns found during site and field verification prior to the bid date.

1.06 WARRANTY

A. Warranty: Submit elevator manufacturer's standard written warranty agreeing to repair, restore or replace defects in elevator work materials and workmanship not due to ordinary wear and tear or improper use or care for 12 months after completion of installation or acceptance thereof by beneficial use, whichever is earlier.

1.07 MAINTENANCE

- A. Furnish maintenance and call back service for a period of 1 year for each elevator after completion of installation or acceptance thereof by beneficial use, whichever is earlier, during normal working hours, excluding callbacks. Service shall consist of periodic examination of the equipment, adjustment, lubrication, cleaning, supplies, and parts to keep the elevators in proper operation.
 - 1. Manufacturer shall have a service office and full-time service personnel within a 150 mile radius of the project site.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Provide AC gearless machine room-less elevator systems subject to compliance with the design and performance requirements of this specification. Elevator manufacturers may include but are not limited to one of the following:
 - 1) Approved Manufacturers: KONE, Schindler, TKE, Otis, or other approved by architect.
 - a. Other acceptable machine room-less products: manufacturer with minimum 15 years' experience in manufacturing, installing and servicing elevators of the type required for this project.

2.2 ELEVATORS

- A. Elevator System, General: Manufacturer's standard elevator systems. Unless otherwise indicated, manufacturer's standard components shall be used, as included in standard elevator systems and as required for complete system.
- B. Electric Traction, Machine-room less Passenger Elevator
- C. Elevator Description:
 - 1. Elevator Equipment: Machine Room Less (MRL) gearless traction elevator
 - 2. Equipment Control: KCM831 (or per manufacturer's recommendations)
 - 3. Drive: Regenerative
 - 4. Quantity of Elevators: 1
 - 5. Landings: 3
 - 6. Openings: 3 front openings, 0 back openings
 - 7. Travel: 23'-6" approx. (field verify)

- 8. Rated Capacity: **3,500 lb min.**
- 9. Rated Speed: **150 FPM min.**
- 10. Clear inside dimensions: (WxD) 5'-8" x 7'-9.5"
- 11. Hoistway Dimensions: 7'-8" x 9'-6.5", Pit 4'-0"
- 12. Cab Height: 8'-0"
- 13. Clear height under suspended ceiling: 7'-6"
- 14. Entrance width and type: 4'-0" and right/left openings
- 15. Entrance height: 7'-0"
- 16. Main Power Supply: 208 V Volts + 5%, three phase
- 17. Operation: Simplex
- 18. Machine Location: inside the hoistway mounted on car guide rail
- 19. Control Space Location: Integrated control
- 20. Elevator equipment shall conform to the requirements of seismic zone: **non-seismic**, **Zone 0 (San Angelo, Texas)**
- 21. Maintenance Service Period: 12 months
- 22. Auxiliary Operations:
 - a. Battery-powered automatic evacuation.
 - b. Earthquake Emergency Operation: Comply with requirements in ASME A17.1/CSA B44.
 - c. Automatic dispatching of loaded car.
 - d. Nuisance-call cancel.
 - e. Loaded-car bypass.
 - f. Distributed parking.
 - g. Off-peak operation.
 - h. Automatic operation of lights and ventilation fans.
 - i. **Priority** service at **all** floors.
 - j. Independent service for **one car**.

D. Performance Requirements

- 1. Car Performance
 - a. Car Speed \pm 5% of contract speed under any loading condition or direction of travel
 - b. Car Capacity: safely lower, stop and hold (per code) up to 125% of rated load
- 2. System Performance
 - a. Vertical Vibration (max): 15 mg ISO187338/ISO 8041 system pk pk
 - b. Horizontal Vibration (max): 12 mg ISO187338/ISO 8041 system pk pk
 - c. Jerk Rate (max): 3.3 ft/sec3
 - d. Acceleration (max): 1.3 ft/sec2
 - e. In Car Noise: 55 dB(A) Maximum
 - f. Leveling accuracy: ± 0.2 inches
 - g. Starts per hour (max): 240
- 3. Additional Requirements:
 - a. Must be able to accommodate a stretcher per IBC 2012 regulations.
 - b. Provide inspection certificate in each car, mounted under acrylic cover with frame made from **satin stainless steel.**

2.3 EQUIPMENT: CONTROL COMPONENTS AND CONTROL SPACE

- A. Controller: provide microcomputer-based control system to perform all functions
 - 1. All high voltage (110V or above) contact points inside the controller cabinet shall be protected from accidently contact in a situation where the controller doors are open.
 - 2. Controller shall be separated into two distinct halves; motor drive side and control side. High voltage motor power conductors shall be routed and physically segregated from the rest of the controller.

- 3. Provide a serial cardrack and main CPU board containing a non-erasable EPROM and operating system firmware.
- 4. Variable field parameters and adjustments shall be contained in a non-volatile memory module.
- B. Drive: provide variable voltage variable frequency AC drive system to develop high starting torque with low starting current.
- C. Controller Location: Locate controller(s) in the front wall integrated with the top landing entrance frame, machine side of the elevator. One non-fused phase permanent power in hoistway at top landing. A separate space should not be required.

2.4 EQUIPMENT: HOISTWAY COMPONENTS

- A. Machine: AC gearless machine, with permanent magnet synchronous motor, direct current electromechanical disc brakes, and integral traction drive sheave, mounted to the car guide rail at the top of the hoistway.
- B. Governor: friction type over-speed governor rated for the duty of the elevator specified.
- C. Buffers, Car and Counterweight: Polyurethane buffer
- D. Hoistway Operating Devices:
 - 1. Emergency stop switch in pit
 - 2. Terminal stopping switches
 - 3. Emergency stop switch on the machine
- E. Positioning System: system consisting of magnets and proximity switches
- F. Guide Rails and attachments: steel rails with brackets and fasteners

2.5 EQUIPMENT: HOISTWAY ENTRANCES

- A. Hoistway entrances
 - 1. Sills: extruded Aluminum
 - 2. Doors: hollow metal construction with vertical internal channel reinforcements
 - 3. Fire Rated Hoistway Entrance Assemblies: Door and frame assemblies shall comply with NFPA 80 and be listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction based on testing at as close-to-neutral pressure as possible according to NFPA 252 or UL 10B
 - a. Fire Protection Rating: 1-1/2 hours
 - 4. Entrance Finish: Satin Stainless Steel, No. 4 finish
 - 5. Entrance Markings Jamb Plates: Provide standard entrance jamb tactile markings on both jambs, at all floors. Plate Mounting: Refer to manufacturer drawings.

2.6 EQUIPMENT: CAR COMPONENTS

- A. Car Frame: Provide car frame with adequate bracing to support the platform and car enclosure
- B. Car Safeties: Device will be provided and mounted under the car platform, securely bolted to the car frame. The safety will be actuated by a centrifugal governor mounted at the top of the hoistway. The safety is designed to operate in case the car attains excessive descending speed.
- C. Platform: platform shall be all steel construction
- D. Car Guides: Provide guide-shoes mounted to top and bottom of both car and counterweight frame. Each guide-show assembly shall be arranged to maintain constant contact on the rail surfaces. Provide retainers in areas with seismic design requirements.
- E. Cab Finish: To be selected from manufacturer's full line of materials/colors.
- F. Car Wall Finishes:
 - 1. Side Walls: To be selected from manufacturer's full line of materials/colors.
 - 2. Rear Wall: To be selected from manufacturer's full line of materials/colors.
 - 3. Car Front, Door and skirting: Satin Stainless Steel
 - 4. Ceiling: Satin Stainless Steel
 - 5. Handrails: **Satin Stainless Steel**
 - a. Rails to be located on side walls of car enclosure.

- 6. Sills: Aluminum Extruded
- 7. Flooring: by others, prepared to receive finish as indicated in Specifications and drawings
- 8. Provide hooks for protective pads in **all cars** and **one** complete set(s) of full-height protective pads.
- 9. Emergency Car Signals:
 - a. Emergency Siren: Siren mounted on top of cab that is activated when the alarm button in the car operating panel is engaged. Siren shall have rated sound pressure level of 80 dB(A) at a distance of three feet from device. Siren shall respond with a delay of not more than one second after activation of alarm button.
 - b. Emergency Car Lighting: Provide Emergency power unit employing a 12-volt sealed rechargeable battery and totally static circuits shall illuminate the elevator car and provide current to the alarm bell in the event of building power failure.
 - c. Emergency Exit Contact: An electrical contact shall be provided on the car-top
 - d. Ventilation: Manufacturer's standard cab fan.

2.7 EQUIPMENT: SIGNAL DEVICES AND FIXTURES

- A. Car Operating Panel: Provide car operating panel with all push buttons, key switches, and message indicators for elevator operation. Fixture finish to be satin stainless steel.
 - 1. Main flush mounted car operating panel shall contain a bank of round, mechanical, illuminated buttons, marked to correspond to landings served, emergency call button, door open button, door close button, and key switches for lights, inspection, and exhaust fan. Buttons have Amber Dot Matrix illumination (halo). All buttons to have raised text and Braille marking on the left-hand side. The car operating display panel shall be Amber Dot Matrix. All texts, when illuminated, shall be Amber Dot Matrix. The car operating panel shall have a satin stainless-steel finish.
 - 2. Additional Feature of car operating panel shall include:
 - a. Car position indicator within operating panel satin Stainless Steel
 - b. Elevator Data Plate marked with elevator company and car number on car top
 - c. Help Buttons with raised markings
 - d. In car stop switch per local code.
 - e. Call Cancel Button
- B. Hall Fixtures: Wall mounted hall fixtures shall be provided with necessary push buttons and key switches for elevator operation. Wall mounted hall fixtures shall have a Satin Stainless Steel finish.
 - 1. Hall fixtures shall feature round, mechanical, buttons in applied mount face frame. Hall fixtures shall correspond to options available from that landing. Buttons shall be in a vertically mounted fixture.
- C. Car Lantern and Chime: A directional lantern visible from the corridor shall be provided in the car entrance. When the car stops and doors are opening, the lantern shall indicate the direction in which the car is to travel, and a chime will sound. The chime will sound once for up and twice for down. The car riding lantern face plate shall have a Satin Stainless Steel finish.
- D. Car-Control Stations: Provide manufacturer's standard **recessed** car-control stations. Mount in return panel adjacent to car door unless otherwise indicated.
 - 1. Provide "No Smoking" sign matching car-control station, either integral with car-control station or mounted adjacent to it, with text and graphics as required by authorities having jurisdiction.
- E. Emergency Communication System: Two-way voice communication system, with visible signal, which dials preprogrammed number of monitoring station and does not require handset use. System is contained in flush-mounted cabinet, with identification, instructions for use, and battery backup power supply.

F. Firefighters' Two-Way Telephone Communication Service: Provide **flush-mounted cabinet telephone jack** in each car and required conductors in traveling cable for firefighters' two-way telephone communication service.

2.8 ELEVATOR OPERATION AND CONTROLLER

- A. Elevator Operation
 - 1. Simplex Collective Operation
 - 2. Relative System response Dispatching
- B. Standard Operating Features to include:
 - 1. Full Collective Operation
 - 2. Fan and Light Control
 - 3. Load Weighing Bypass
 - 4. Ascending Car Uncontrolled Movement Protection
 - 5. Top of Car Inspection Station
- C. Additional Operating Features to Include:
- D. Elevator Control System for Inspections and Emergency:
 - 1. Provide devices within controller to run the elevator in inspection operation.
 - 2. Provide devices on car top to run the elevator in inspection operation.
 - 3. Provide within controller an emergency stop switch to disconnect power from the brake and prevents motor from running
 - 4. Provide the means from the controller to mechanically lift and control the elevator brake to safely bring car to nearest available landing when power is interrupted
 - 5. Provide the means from the controller to reset the governor over speed switch and also trip the governor.
 - 6. Provide the means from the controller to reset the emergency brake when set because of an unintended car movement or ascending car over speed.
 - 7. Provide the means for the control to reset elevator earthquake operation.

2.9 EQUIPMENT: DOOR OPERATOR AND CONTROL

- A. Door Operator: A closed loop permanent magnet VVVF high-performance door operator shall be provided to open and close the car and hoistway doors simultaneously. Door movement shall be cushioned at both limits of travel. Electro-mechanical interlock shall be provided at each hoistway entrance to prevent operation of the elevator unless all doors are closed and locked. An electric contact shall be provided on the car at each car entrance to prevent the operation of the elevator unless the car door is closed.
- B. The door operator shall be arranged so that, in case of interruption or failure of electric power, the doors can be readily opened by hand from within the car, in accordance with applicable code. Emergency devices and keys for opening doors from the landing shall be provided as required by local code.
- C. Doors shall open automatically when the car has arrived at or is leveling at the respective landings. Doors shall close after a predetermined time interval or immediately upon pressing of a car button. A door open button shall be provided in the car. Momentary pressing of this button shall reopen the doors and reset the time interval.
- D. Door hangers and tracks shall be provided for each car and hoistway door. Tracks shall be contoured to match the hanger sheaves. The hangers shall be designed for power operation with provisions for vertical and lateral adjustment. Hanger sheaves shall have polyurethane tires and pre-lubricated sealed-for-life bearings.
- E. Electronic Door Safety Device. The elevator car shall be equipped with an electronic protective device extending the full height of the car. When activated, this sensor shall prevent the doors from closing or cause them to stop and reopen if they are in the process of closing. The doors shall remain open as long as the flow of traffic continues and shall close shortly after the last person passes through the door opening.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Before starting elevator installation, inspect hoistway, hoistway openings, pits and machine rooms/control space, as constructed and verify all critical dimensions, and examine supporting structures and all other conditions under which elevator work is to be installed. Do not proceed with elevator installation until unsatisfactory conditions have been corrected in a manner acceptable to the installer
- B. Retrofit: This project is considered a retrofit. Elevator & equipment to be installed within a reconstructed hoistway in a historic building. Elevator manufacturer and installer are required to visit the site prior to shop drawing construction for evaluation of existing conditions. Shop drawings should include any special conditions and recommendations found during pre-bid investigations. Elevator manufacturer, contractor, and installer shall immediately alert the architect to any discrepancies or concerns found during site and field verification.
- C. Prior to start of work, verify hoistway is in accordance with shop drawings. Dimensional tolerance of hoistway from shop drawings: -0 inches +2 inches. Do not begin work of this section until dimensions are within tolerances.
- D. Prior to start of work, verify projections greater than two inches (four inches if ASME A17.1/CSA B44 2000 applies) must be beveled not less than 75 degrees from horizontal.
- E. Prior to start of work, verify landings have been prepared for entrance sill installation. Traditional sill angle or concrete sill support shall not be required.
- F. Prior to start of work, verify elevator pit has been constructed in accordance with requirements, is dry and reinforced to sustain vertical forces, as indicated in approved submittal. Verify that sumps or sump pumps located within pit will not interfere with installed elevator equipment.
- G. Prior to start of work, verify control space has been constructed in accordance with requirements, with access coordinated with elevator shop drawings, including sleeves and penetrations.
- H. Verify installation of GFCI protected 20-amp in pit and adjacent to each signal control cabinet in control space.

3.02 PREPARATION

A. Coordinate installation of anchors, bearing plates, brackets and other related accessories.

3.03 INSTALLATION

- A. Install elevator systems components and coordinate installation of hoistway wall construction.
 - 1. Work shall be performed by competent elevator installation personnel in accordance with ASME A17.1, manufacturer's installation instructions and approved shop drawings.
 - 2. Comply with the National Electrical Code for electrical work required during installation.
- B. Coordination: Coordinate elevator work with the work of other trades, for proper time and sequence to avoid construction delays. Use benchmarks, lines, and levels designated by the Contractor, to ensure dimensional coordination of the work.
- C. Alignment: Coordinate installation of hoistway entrances with installation of elevator guide rails for accurate alignment of entrances with cars. Where possible, delay final adjustment of sills and doors until car is operable in shaft. Reduce clearances to minimum safe, workable dimensions at each landing.
- D. Lubricate operating parts of system where recommended by manufacturer.

3.04 FIELD QUALITY CONTROL

A. Acceptance testing: Upon completion of the elevator installation and before permitting use of elevator, perform acceptance tests as required by A17.1 Code and local authorities having jurisdiction. Perform other tests, if any, as required by governing regulations or agencies.

B. Advise Owner, Contractor, Architect, and governing authorities in advance of dates and times tests are to be performed on the elevator.

3.05 ADJUSTING

A. Make necessary adjustments of operating devices and equipment to ensure elevator operates smoothly and accurately.

3.06 CLEANING

- A. Before final acceptance, remove protection from finished surfaces and clean and polish surfaces in accordance with manufacturer's recommendations for type of material and finish provided. Stainless stall shall be cleaned with soap and water and dried with a non-abrasive surface; shall not be cleaned with bleached-based cleansers.
- B. At completion of elevator work, remove tools, equipment, and surplus materials from site. Clean equipment rooms and hoistway. Remove trash and debris.
 - a. Use environmentally preferable and low VOC emitting cleaners for each application type. Cleaners that contain solvents, pine and/or citrus oils are not permitted.

3.07 PROTECTION

A. At time of Substantial Completion of elevator work, or portion thereof, provide suitable protective coverings, barriers, devices, signs, or other such methods or procedures to protect elevator work from damage or deterioration. Maintain protective measures throughout remainder of construction period.

3.08 TESTING AND INSPECTIONS

- A. Perform recommended and required testing in accordance with authority having jurisdiction
- B. Obtain required permits and provide originals to Owner/Architect.

3.09 DEMONSTRATION

- A. Instruct Owner's personnel in proper use, operations, and daily maintenance of elevators. Review emergency provisions, including emergency access and procedures to be followed at time of failure in operation and other building emergencies. Train Owner's personnel in normal procedures to be followed in checking for sources of operational failures or malfunctions.
- B. Make a final check of each elevator operation, with Owner's personnel present, immediately before date of substantial completion. Determine that control systems and operating devices are functioning properly.

END OF SECTION 14240

SECTION 223000

PLUMBING EQUIPMENT

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Diaphragm-type compression tanks.
- B. Sump pumps.
- C. Water heaters.
- D. Pumps.
 - 1. Circulators.
- E. Water pressure booster system.

1.2 REFERENCE STANDARDS

- A. ABMA STD 9 Load Ratings and Fatigue Life for Ball Bearings; 2015.
- B. ABMA STD 11 Load Ratings and Fatigue Life for Roller Bearings; 2014.

1.3 REFERENCE STANDARDS

- A. ASME BPVC-VIII-1 Boiler and Pressure Vessel Code, Section VIII, Division 1 Rules for Construction of Pressure Vessels; The American Society of Mechanical Engineers; 2013.
- B. ICC (IPC) International Plumbing Code; 2021.
- C. UL 174 Standard for Household Electric Storage Tank Water Heaters; Underwriters Laboratories Inc.; Current Edition, Including All Revisions.
- D. UL 778 Standard for Motor-Operated Water Pumps; Current Edition, Including All Revisions.
- E. UL 1453 Standard for Electric Booster and Commercial Storage Tank Water Heaters; Underwriters Laboratories Inc.; Current Edition, Including All Revisions.

1.4 SUBMITTALS

A. Product Data:

- 1. Provide dimension drawings of water heaters indicating components and connections to other equipment and piping.
- 2. Indicate pump type, capacity, power requirements.
- 3. Provide certified pump curves showing pump performance characteristics with pump and system operating point plotted. Include NPSH curve when applicable.
- 4. Provide electrical characteristics and connection requirements.

B. Shop Drawings:

- Indicate dimensions of tanks, tank lining methods, anchors, attachments, lifting points, tappings, and drains.
- C. Project Record Documents: Record actual locations of components.
- D. Operation and Maintenance Data: Include operation, maintenance, and inspection data, replacement part numbers and availability, and service depot location and telephone number.
- E. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section, with minimum three years of documented experience.
- B. Identification: Provide pumps with manufacturer's name, model number, and rating/capacity identified by permanently attached label.

C. Performance: Ensure pumps operate at specified system fluid temperatures without vapor binding and cavitation, are non-overloading in parallel or individual operation, operate within 25 percent of midpoint of published maximum efficiency curve.

1.6 CERTIFICATIONS

- A. Water Heaters: NSF approved.
- B. Electric Water Heaters: UL listed and labeled to UL 174 or UL 1453.
- C. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories Inc., as suitable for the purpose specified and indicated.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Provide temporary inlet and outlet caps. Maintain caps in place until installation.

1.8 WARRANTY

A. Provide five year manufacturer warranty for domestic water heaters.

PART 2 PRODUCTS

2.1 WATER HEATER MANUFACTURERS

- A. A.O. Smith Water Products Co: www.hotwater.com.
- B. Rheem Manufacturing Company: www.rheem.com.

2.2 ELECTRIC WATER HEATERS

- A. Type: Automatic, electric, vertical storage.
- B. Electrical Characteristics:
 - 1. 208 volts, single phase.
- C. Tank: Glass lined welded steel, thermally insulated with one inch thick glass fiber; encased in corrosion-resistant steel jacket; baked-on enamel finish.
- D. Controls: Automatic water thermostat with externally adjustable temperature range from 120 to 170 degrees F, flanged or screw-in nichrome elements, enclosed controls and electrical junction box .
- E. Accessories: Provide:
 - 1. Water Connections: Brass.
 - 2. Dip tube: Brass.
 - 3. Drain Valve.
 - 4. Anode: Magnesium

2.3 DIAPHRAGM-TYPE COMPRESSION TANKS

A. Manufacturers:

- 1. Amtrol Inc: www.amtrol.com/#sle.
- 2. ITT Bell & Gossett: www.bellgossett.com.
- 3. Taco, Inc: www.taco-hvac.com.
- B. Construction: Welded steel, tested and stamped in accordance with ASME BPVC-VIII-1; supplied with National Board Form U-1, rated for working pressure of 125 psig, with flexible EPDM diaphragm sealed into tank, and steel legs or saddles.
- C. Accessories: Pressure gage and air-charging fitting, tank drain; precharge to 12 psig.

2.4 IN-LINE CIRCULATOR PUMPS

- A. Casing: Bronze, rated for 125 psig working pressure, with stainless steel rotor assembly.
- B. Impeller: Bronze.
- C. Shaft: Alloy steel with integral thrust collar and two oil lubricated bronze sleeve bearings.
- D. Seal: Carbon rotating against a stationary ceramic seat.
- E. Drive: Flexible coupling.

2.5 PRESSURE BOOSTER SYSTEMS

- A. System: Packaged with two pumps, factory assembled, tested, and adjusted; shipped to site as integral unit; consisting of pumps, variable frequency drives, valves, and piping, with control panel assembled on fabricated steel base with structural steel framework.
- B. Controls and Instruments: Locate in NEMA 250 Type 1 general purpose enclosure with main disconnect interlocked with door, fused circuit for each motor, variable frequency drives, control circuit transformer with fuse protection, selector switch for each pump, low limit pressure switch, low pressure alarm light, running lights, current sensing devices, minimum run timers, manual alternation, and suction and discharge pressure gages.
- C. Lead Pump: Operate continuously with lag pump operating on system demand. Should lead pump fail to operate, next pump in sequence shall start automatically.
- D. Time Delay Relay: Prevent lag pump short cycling on fluctuating demands.
- E. Thermal Bleed Circuit with Solenoid Valve: Prevent overheating during low demand.
- F. Low Pressure Control: Stop pump operation if incoming water pressure drops to atmospheric.
- G. Pump Switch: Permit manual or automatic operation.
- H. Valving: Each pump outlet combination pressure reducing and check valve to maintain constant system pressure. Provide gate or butterfly valves on suction and discharge of each pump. Provide check valve on each pump discharge.
- I. Performance: On drawings

2.6 SUBMERSIBLE SUMP PUMPS

- A. Type: Completely submersible, vertical, centrifugal.
- B. Casing: Cast iron pump body and oil filled motor chamber.
- C. Impeller: Cast iron; open non-clog, stainless steel shaft.
- D. Bearings: Ball bearings.
- E. Sump: Fiberglass basin with steel cover plate, dimensions as indicated on drawings.
- F. Accessories: Oil resistant 6 foot cord and plug with three-prong connector for connection to electric wiring system including grounding connector.

2.7 SANITARY SEWAGE PUMPS

- A. Centrifugal Solids Handling:
 - 1. General: Non-clogging centrifugal type suitable for pumping solids up to 3 inches in diameter without internal interstices that can collect stringy materials and solids resulting in clogging.
 - 2. Casing:
 - a. Capable of withstanding operating pressures 50 percent greater than the maximum operating pressure.
 - b. Plugged and tapped holes for draining and venting pump.
 - c. Volute to consist of smooth passages.
 - d. Configuration to permit removal of impeller without disturbing discharge and suction connections.
 - e. Handhole to allow cleaning and inspection of pump interior.
 - f. Lifting eyes to facilitate handling of pump.
 - 3. Impeller:
 - a. Design to consist of smooth passages to prevent clogging and pass fibrous or stringy material.
 - b. Securely keyed to shaft with locking arrangement preventing loosening by torque from either forward or reverse direction.
 - c. Balance statically, dynamically, and hydraulically within the operating range and to the first critical speed at 150 percent of the maximum operating speed.
 - 4. Wearing Rings:

- a. Provide renewable wearing rings on the casing and impeller with wearing surfaces normal to the axis of rotation.
- b. Construction: Cast iron.
- c. Factory designed for simple maintenance and secured to prevent rotation.
- d. In lieu of wearing rings on impeller and casing, replaceable steel wear plates fastened to casing may be used.

5. Pump Shaft:

- a. Provide with adequate size and strength to transmit full driver horsepower with liberal safety factor
- b. Fabricate from stainless steel.
- 6. Pump Shaft Sleeve:
 - a. Fabricate from stainless steel.
 - b. Seal joint between shaft and sleeve to prevent leakage.
 - c. Stuffing Box:
 - 1) Factory designed for minimum 5 rings of packing with removable split type glands.
 - 2) Fabricate from same material as casing and water sealed.
- 7. Mechanical Seal System:
 - a. Furnish single seals to seal pump shaft against leakage.
 - b. Each seal to be held in place by its own spring system, supplemented by external liquid pressures.
 - c. System to be readily removable from the shaft.
- 8. Bearings:
 - a. Provide ball type designed to handle all thrust loads in either direction.
 - b. Furnish with a L-10 life of minimum 50,000 hours as required by ABMA 9 or ABMA 11.
 - e. Pumps depending only on hydraulic balance and thrust are not acceptable.
- 9. Lubrication:
 - a. Bearing:
- 10. Pump Support:
- 11. Coupling:
 - a. Provide heavy duty, flexible type, locked to the shaft.
 - b. Disconnection of the coupling possible without removing the driver half or the pump half of the coupling from the shaft.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install plumbing equipment in accordance with manufacturer's instructions, as required by code, and complying with conditions of certification, if any.
- B. Coordinate with plumbing piping and related fuel piping work to achieve operating system.
- C. Pumps:
 - 1. Provide line sized isolating valve and strainer on suction and line sized soft seated check valve and balancing valve on discharge.
 - Decrease from line size with long radius reducing elbows or reducers. Support piping adjacent to pump such that no weight is carried on pump casings. Provide supports under elbows on pump suction and discharge line sizes 4 inches and over.
 - 3. Ensure pumps operate at specified system fluid temperatures without vapor binding and cavitation, are non-overloading in parallel or individual operation, and operate within 25 percent of midpoint of published maximum efficiency curve.

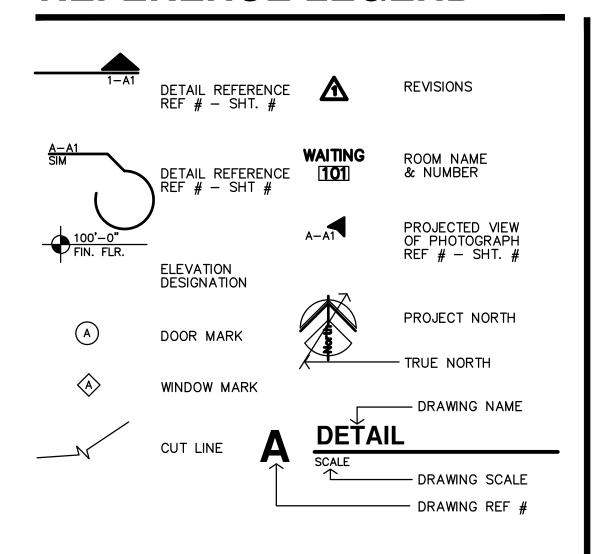
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ROOSEVELT LOFTS

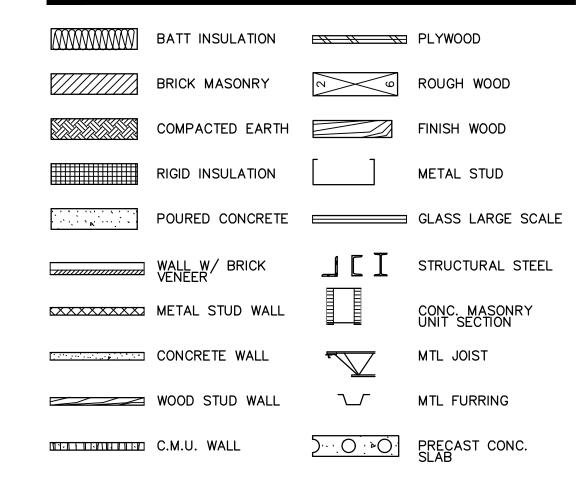
HISTORIC REHABILITATION - APARTMENTS

SAN ANGELO, 22-3281 **TEXAS**

REFERENCE LEGEND



MATERIAL LEGEND





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Structural Engineer;



Engineering Consultants

1227 North Main Street Hutchinson, KS 67501 ph. (620) 665-6394 fax (620) 665-0218

ABBREVIATIONS	gg	linan@2010ngmooro.com	info@echutch.com
& AND Angle At Centerline Diameter or Round Herein Pound or Number Acous. Acoustical Adj. Adjustable A.F.F. Above Finished Floor Aggr. Aggregate Al. Aluminum Approx. Approximate Arch. Architect or Architectural Asb. Asbestos Asph. Asphalt A.V. Audio Visual Bd. Board Bitum. Bituminous Bldg. Building Blk, Block Blk'g. Blocking Bm. Beam Bot. Bottom BO BY OWNER Brg. Bearing Brk. Brick Cab. Cabinet Cir. Counter Col. Column Conc. Conc. Concrete Cant. Counter Col. Column Conc. Counter Col. Column Conc. Conc. Concrete Cant. Counter Col. Column Conc. Counter Col. Column Conc. Counter Col. Column Conc. Counter Col. Column Conc. Conc. Concrete Col. Counter Col. Column Conc. Counter Col. Column Conc. Counter Col. Column Conc. Conc. Counter Col. Counter Col. Column Conc. Counter Col. Column Conc. Conc. Counter Col. Column Conc. Conc. Counter Col. Column Conc. Counter Col. Column Conc. Counter Col. Column Conc. Conc. Counter Col. Column Conc. Conc. Counter Col. Column Conc. Counter Col. Column Conc. Conc. Counter Col. Column Conc. Counter Col. Column Conc. Counter Col. Column Conc. Conce CT. Ceramic Tile CMU Corcrete Masonry Unit Ctr. Ceramic Tile CMU Concrete Masonry Unit Det. Detail Det.	Exp. Expansion Ext. Exterior F.A. Fire Alarm F.D. Floor Drain Fdn. Foundation F.E. Fire Extinguisher F.E.C. F.E. Cabinet Fin. Floor Flash. Flashing If Flow line Ft. Foot or feet Furr. Furring Fut. Future Ga. Gauge Galv. Galvanized G.B. Grab Bar Gl. Glass Gnd. Ground Gr. Grade Gyp. Gypsum Hr. Height Hat. Height I.D. Inside Diame Insul. Insulation Int. Interior Jan Janitor Jt. Joint Kit. Kitchen Kit. Kitchen Lab. Laboratory Lam. Laminate Lav. Lavatory Lkr. Locker Lt. Light Mas. Masonry Max. Maximum M.C. Medicine Cal Mech. Mechanical Mech. Mechanical Mech. Mechanical Merh. Membrane Met. Metal Mfr. Manufacture Met. Metal Mfr. Manufacture Met. Metal Mfr. Manufacture Misc. Miscellaneou H.M. Hollow Metal H.M. Hollow Metal Horiz. Horizontal Mtd. Mounted	N.T.S. Not To Scale O/ On or Over Obs. Obscure O.C. On Center O.D. Diameter Opp. Opposite P. Paint Pl. Plate P.Lam. Plastic Laminate Plas. Plaster Plywd. Plywood Pr. Pair P.T.D. Paper Towel Dispenser Pt. Point P.T.R. Paper Towel Receptacle T Q.T. Quarry Tile R. Riser Rad. Radius R.O. Rough Op R.O. Rough Op R.O. Rough Op S.B. Splash Bl S.C. Solid Core Sched. Schedule S.D. Soap Disp Sect. Section Shr. Shower Sht. Sheet Sim. Similar S.N.D. Sanitary I S.N.R. Sanitary I Spec. Specificat Std. Stainless Std. Stainless Std. Stainless Std. Standard Stl. Steel Stor. Storage Strl. Structura Susp. Suspende S.V. Sheet Vin Sym. Symmetri Tex. Texture	T.&G. Tongue & Groove Thk. Thick T.O.M. Top Of Masonry T.O.S. Top Of Steel T.P. Top Of Pavement T.P.D. Toilet Paper Dispenser T.V. Television T.W. Tackwall Typ. Typical Trd. Tread U.O.N. Unless Otherwise Noted Ur. Urinal Napkin Disp. Napkin Recep. V.C.T. Vinyl Composition Tile V.B. Vapor Barrier Vert. Vertical Vest. Vestibule Vyl. Vinyl W. West W/ With W/ With W/ With W/ With W/ With W/ Wood Wp. Waterproof Wdw. Window Wsct. Wainscot Wasser.

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CODE FOOT PRINT ADA DIAGRAMS AND INFORMATION

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ANSI-3 ANSI DIAGRAMS AND INFORMATION FAIR HOUSING DIAGRAMS AND INFORMATION UFAS DIAGRAMS AND INFORMATION

TAS DIAGRAMS AND INFORMATION TAS DIAGRAMS AND INFORMATION

(DRAWINGS SUBMITTED FOR SEPARATE PERMIT REVIEW)

CIVIL COVER SHEET SURVEY (DATED 2-15-2023)

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UTILITY PLAN GRADING PLAN

GRADING PLAN (ENLARGED) SITE DETAILS

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2-23-2024

PERMIT & BID SET UPDATED PER ADDENDUM #2 2-23-2024



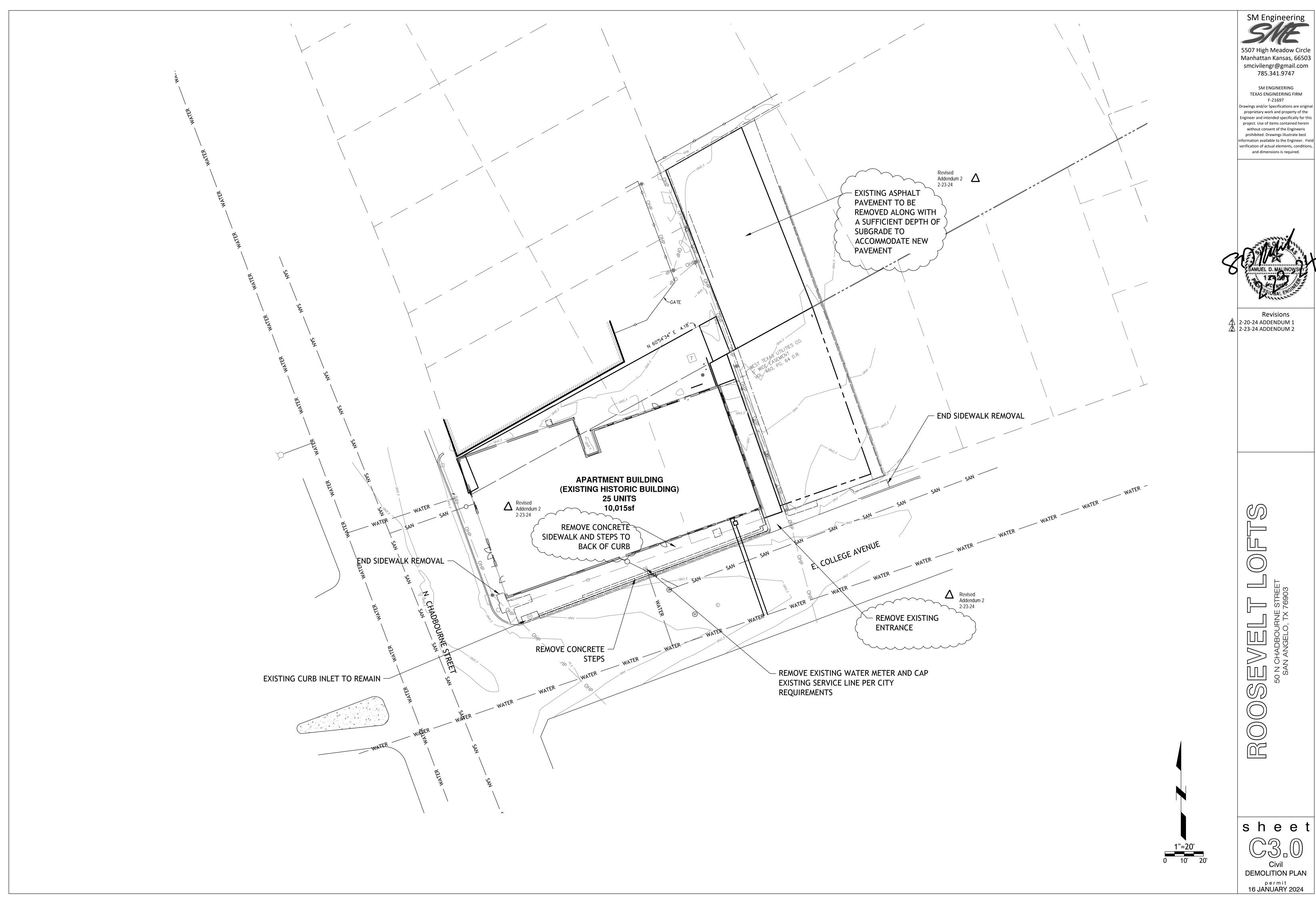
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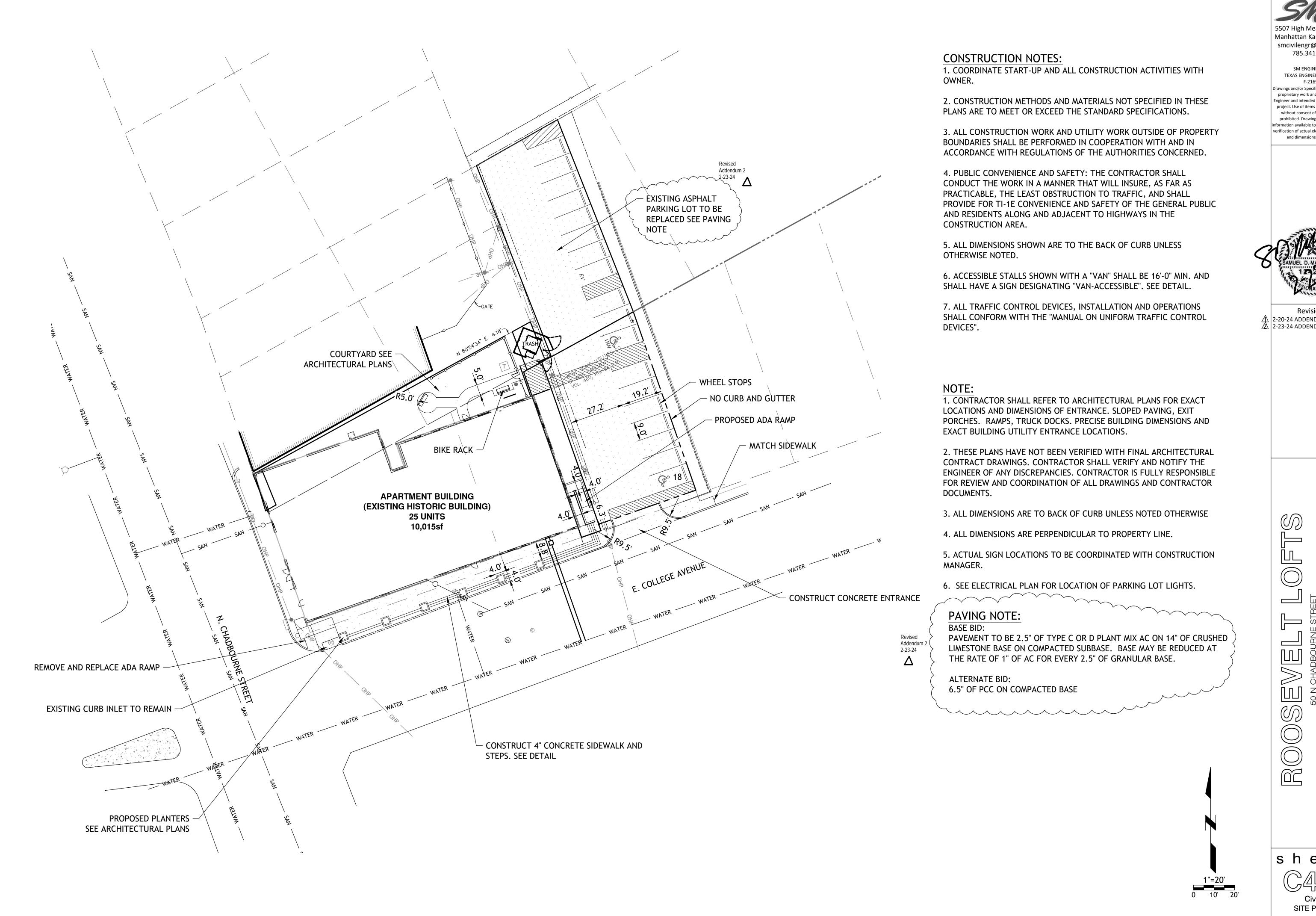
730 N. Ninth St. 1881 Main Street, Suite 301 Kansas City, MO 64108 jgr@jgrarchitects.com

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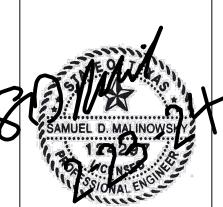
Manhattan Kansas, 66503

SM Engineering

smcivilengr@gmail.com 785.341.9747

> SM ENGINEERING TEXAS ENGINEERING FIRM

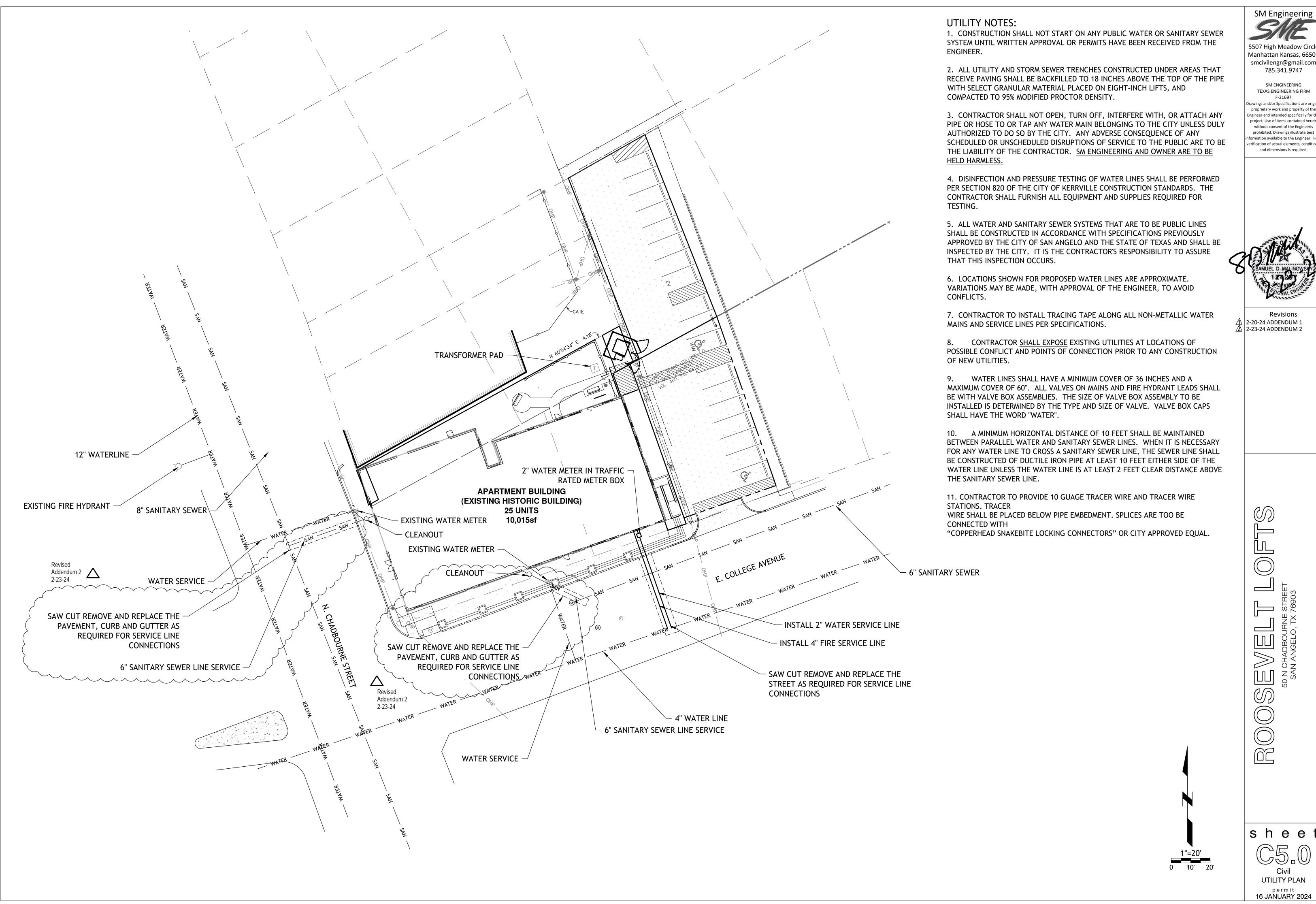
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Revisions 2-20-24 ADDENDUM 1 2 2-23-24 ADDENDUM 2

sheet

SITE PLAN permit 16 JANUARY 2024

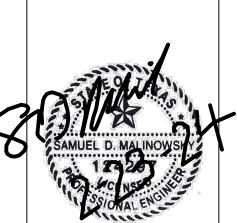


SM Engineering 5507 High Meadow Circle

Manhattan Kansas, 66503 smcivilengr@gmail.com 785.341.9747

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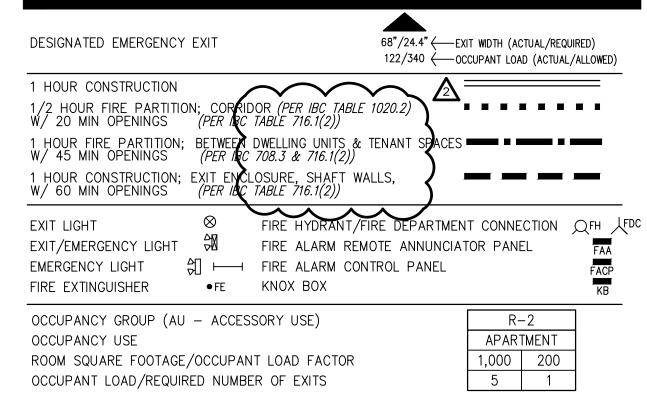
UTILITY PLAN

REVISION: 2-23-2024

2-23-2024 DATE: 1-16-2024

CFP2

LEGEND



EXITING: REF PLANS ON THIS SHEET

OCCUPANT LOAD: 187 TOTAL

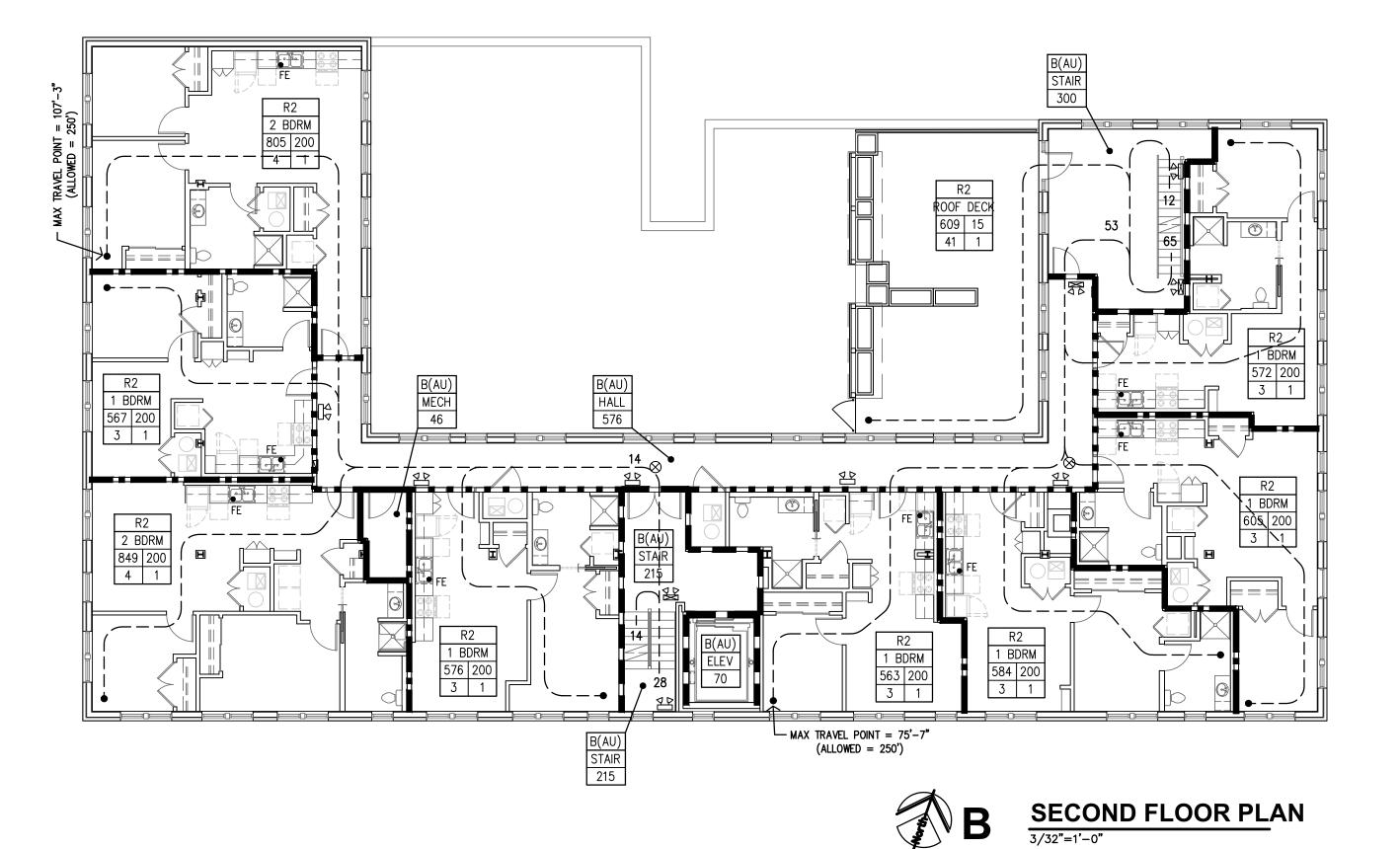
FIRST FLOOR: 94 TOTAL

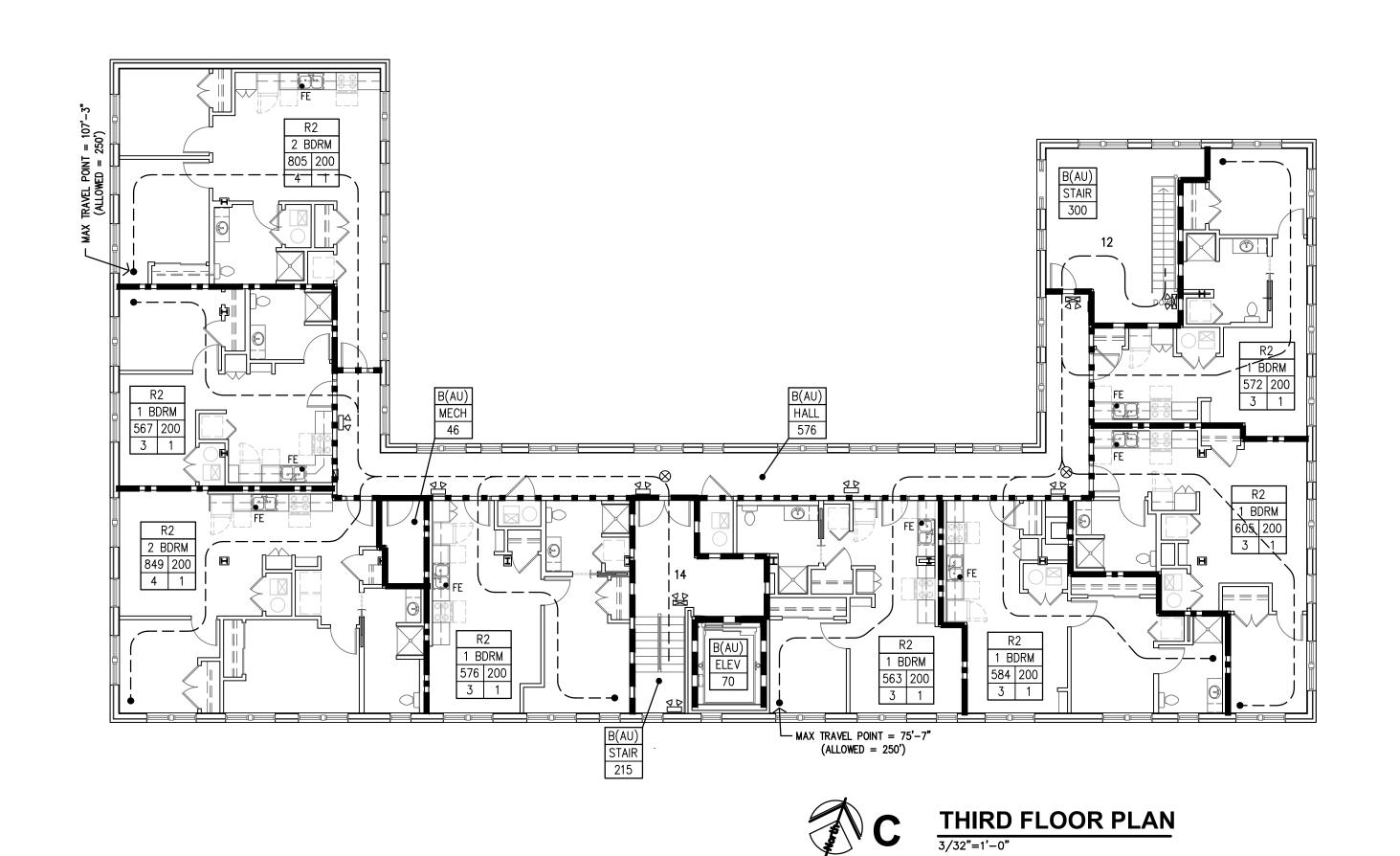
SECOND FLOOR: 67 TOTAL

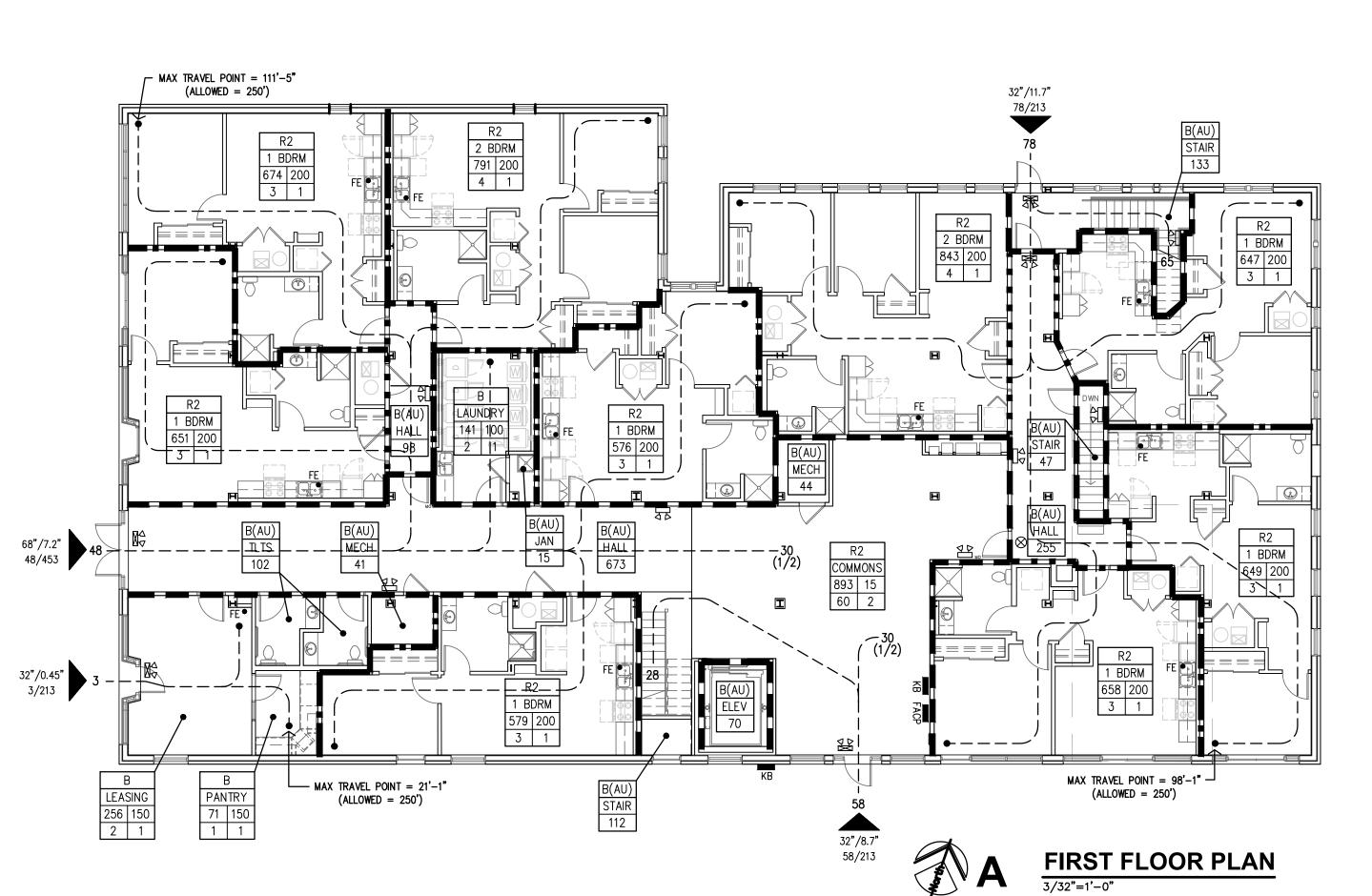
THIRD FLOOR: 26 TOTAL

OCCUPANT LOAD FACTORS:

OCCUPANCY	USE	LOAD FACTOR MAX.	OCC LD=1 EXIT
В	COMMONS	15 sf/OCCUPANT	49
В	OFFICE	100 sf/OCCUPANT	49
В	MECH/ELEC	300 sf/OCCUPANT	49
R-2	APARÍMENT	200 sf/OCCUPANT	10







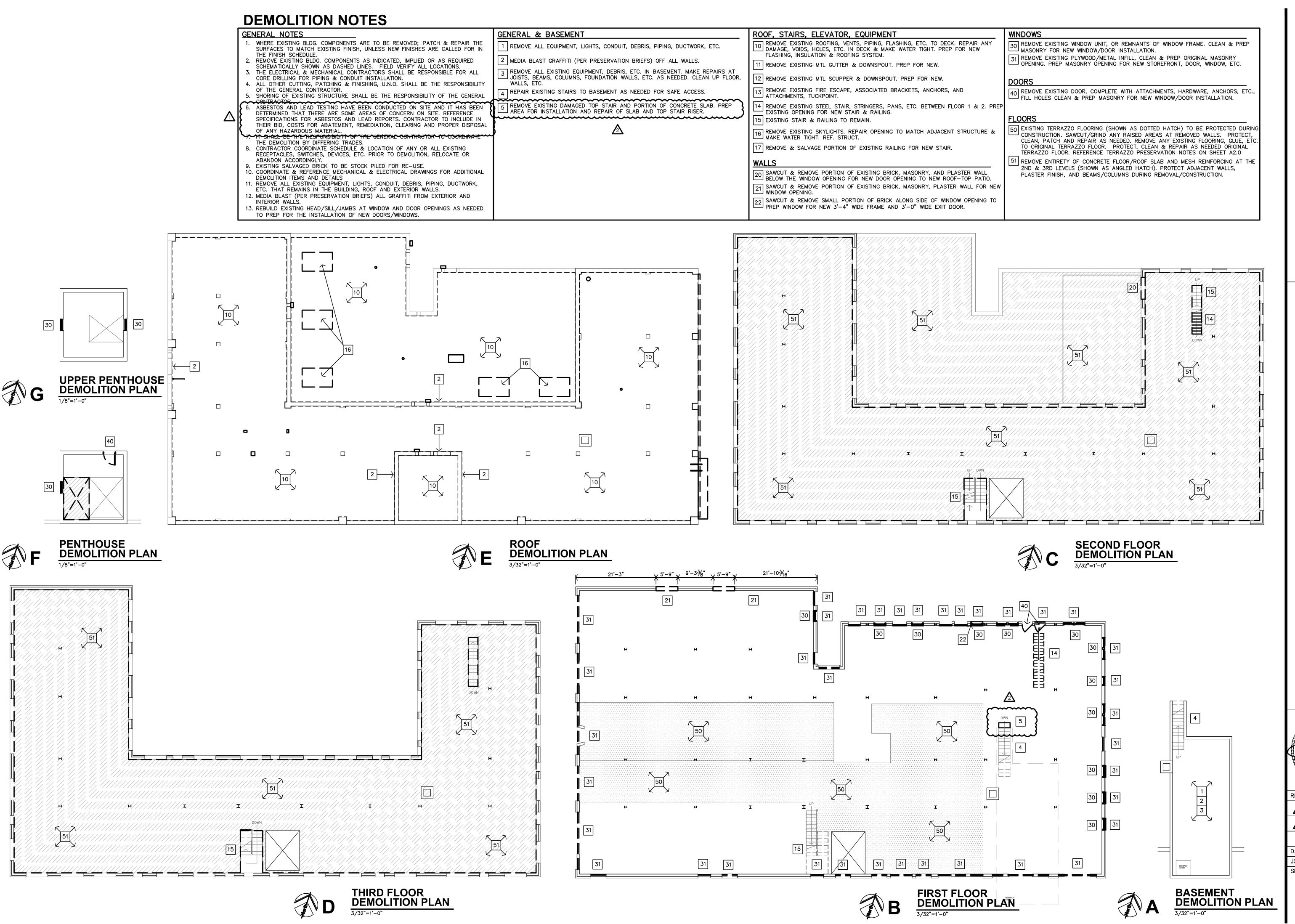
2-23-2024

SHEET NO.:

SITE DEMOLITION PLAN
1/16"=1'-0"

1-16-2024 22-3281

D1.1



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2-20-2024 2-23-2024

1-16-2024 22-3281 SHEET NO .:

2-23-2024

1-16-2024

SHEET NO.:

22-3281 O

TERRAZZO FLOORING IS.

2. DARK LINES INDICATE LOCATIONS OF NEW UNDER—SLAB PIPES/PLUMBING.

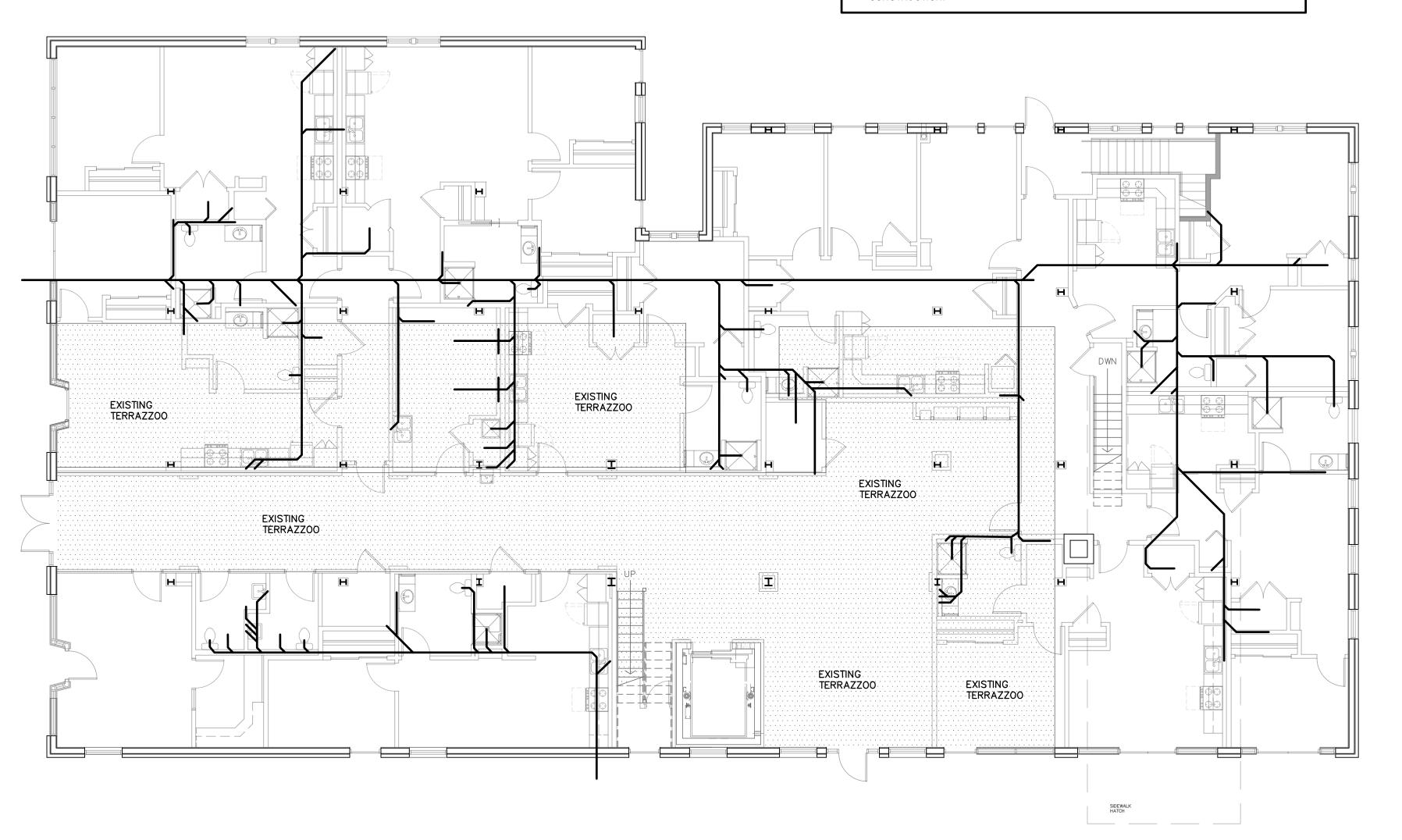
3. ANY AND ALL TRENCHING LOCATED WITHIN THE TERRAZZO AREAS SHALL BE RESTRICTED TO A MAXIMUM OF 12"—16" WIDE. CONTRACTOR TO NOTIFY ARCHITECT OF ANY AREAS OF CONCERN PRIOR TO CUTTING.

4. ANY AND ALL TRENCHING LOCATED WITHIN THE TERRAZZO AREAS SHALL BE CAREFULLY CUT WITH PRECISION. CUTS SHALL BE STRAIGHT AND CONSISTENT SO THAT PATCHING AND TRANSITION LINES LOOK CLEAN AND STRAIGHT.

5. WHERE POSSIBLE, TRENCHING WITHIN TERRAZZO AREA SHALL OCCUR BENEATH CABINETS. SHOWERS. NEW WALLS. ETC.

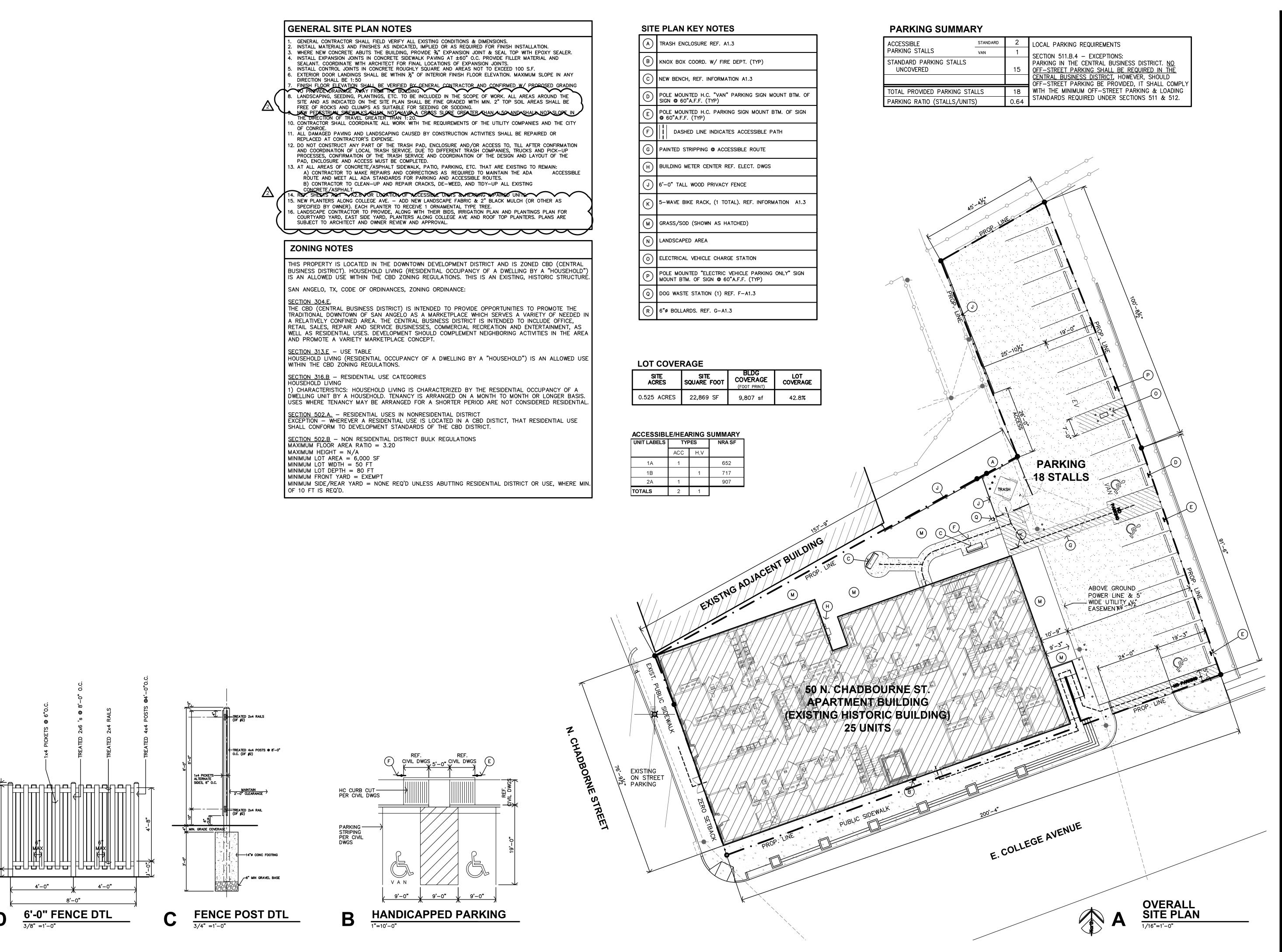
CABINETS, SHOWERS, NEW WALLS, ETC. . ALL AREAS OF TERRAZZO SHALL BE PROTECTED DURING DEMOLITION AND CONSTRUCTION.

FLOORING TRENCH NOTES









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<u>2</u> 2-23-2024

1-16-2024 22-3281 SHEET NO .:

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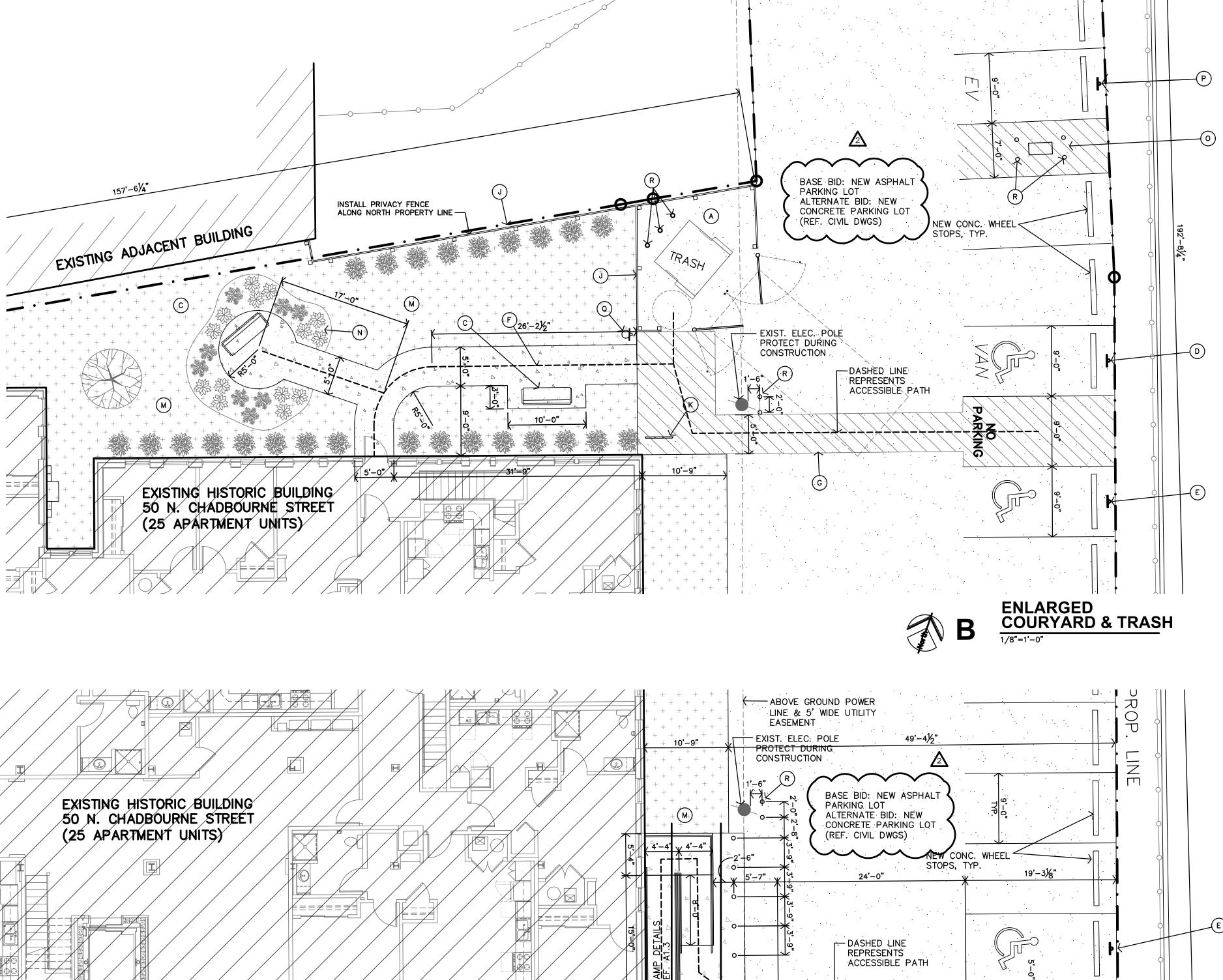
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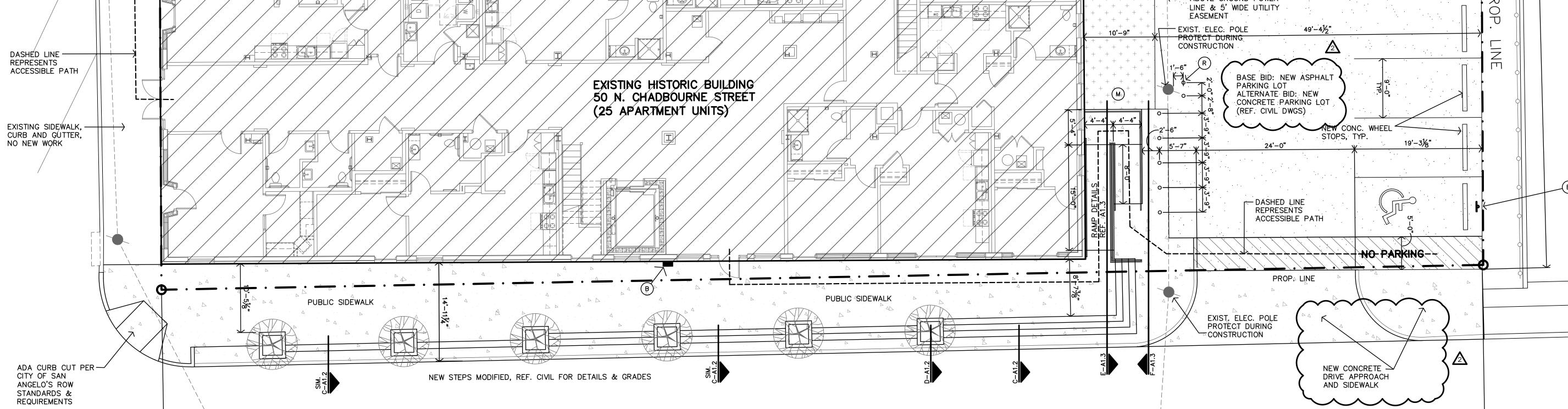
REVISION:

2-23-2024

DATE: 1-16-2024 22-3281 SHEET NO.:

A1.2





200'-31/4"

4'-0"

#4 @ 12" O.C.-EA. WAY

1'-0"

2'-9" 3 TREADS @ 11" EA.

PLANTER BOX
1/2"=1'-0"

EXTERIOR STEPS

1/2"=1'-0"

EL. VARIES
REF. GRADING

EL. VARIES
REF. GRADING

#3 @ 12" O.C. EA. WAY

FILL & COMPACT
SUBGRADE
FILL & COMPACT
SUBGRADE

- 4'-0" SQ PLANTER BOX BEYOND

— 1/2" EXP. JOINT

FILL & COMPACT SUBGRADE

— 4" TH. CONC. SIDEWALK

- 4" SQ PLANTER BOX BEYOND

— 4" TH. CONC. SIDEWALK

FILL & COMPACT SUBGRADE

INSTALL MATERIALS AND/OR FINISHES AS INDICATED, IMPLIED OR AS REQUIRED FOR COMPLETE & FINISHED

ALL WORK SHALL BE IN CONFORMANCE W/ APPLICABLE BUILDING CODES & ORDINANCES.

ALL NEW CONSTRUCTION SHALL BE IN CONFORMANCE TO ADA REQUIREMENTS. REFERENCE ADA FOR TYPICAL MIN. CLEARANCE REQUIRED. IF THERE IS A DISCREPANCY BETWEEN DRAWINGS AND FIELD CONDITIONS NOTIFY ARCHITECT PRIOR TO PROCEEDING WITH WORK SO THAT ANY ISSUES MAY BE CLARIFIED.

NEW DOORS ARE TYPICALLY LOCATED WITH HINGE-SIDE JAMB 4" FROM ADJACENT WALL UNLESS NOTED OTHERWISE OR REQUIRED TO MEET LATCH-SIDE CLEARANCE PER ADA. MHO = INDICATES DOOR WITH MAGNETIC HOLD OPEN. FEC = FIRE EXTINGUISHER CABINET & FE = FIRE EXTINGUISHER.

FIRE EXTINGUISHERS SHALL BE INSTALLED & PROVIDED IN ACCORDANCE W/ NFPA 10 & 2012 IBC, SECTION 906.1. REF. SHEET A2.1 CONTRACTOR TO VERIFY EXISTING FIRE EXTINGUISHER CABINET LOCATIONS AND SIZE WILL MEET FOR NEW EXTINGUISHER. D. CONTRACTOR TO VERIFY EXISTING FIRE EXTINGUISHER CABINET LOCATIONS AND SIZE WILL MEET FOR NEW

EXTINGUISHER. FURNITURE SHOWN IS BY OWNER or TENANT.

SUBMIT VERIFICATION THAT ALL CONSTRUCTION MATERIAL WILL MEET <u>US EPA</u> CRITERIA PARTICULARLY MATERIALS THAT WILL BE OBTAINED FROM INTERNATIONAL SOURCES. ALSO PROVIDE VERIFICATION THAT THE CONSTRUCTION WILL NOT RESULT IN OR CONTAIN HAZARDOUS MATERIALS.

APARTMENT GENERAL NOTES

3. ALL BLOCKING TO BE 2x8 FIRE TREATED

ALL WALL DIMENSIONS ARE TO FACE OF GYP. BD. UNLESS NOTED OTHERWISE. CONTRACTOR TO PROVIDE FIRE BLOCKING AT NEW PARTY WALL AT 10'-0" O.C., TYPICAL. CONTRACTOR TO

PROVIDE FIRE BLOCKING AT PARTY WALL AT ALL BACK TO BACK ELECTRICAL OUTLETS. PROVIDED AND INSTALL ALL FIRE BLOCKING AND DRAFTSTOPS PER 2021 IBC, SECTION 718.2. ALL PENETRATIONS THRU RATED WALLS AND/OR FLOOR ASSEMBLIES SHALL BE FIRESTOPPED PER APPROVED

FE = FIRE EXTINGUISHER, WALL MOUNTED. LOCATION TO BE APPROVED BY LOCAL FIRE MARSHALL. FIRE EXTINGUISHERS SHALL BE INSTALLED & PROVIDED IN ACCORDANCE W/ NFPA 10 & 2021 IBC, SECTION 906.

KITCHEN & BATH RECEPTACLES ABOVE COUNTERTOP TO BE @ 44"max ABOVE FIN FLR. ADAPTABLE UNITS: (ALL UNITS, EXCEPT FOR ACCESSIBLE UNIT) • KITCHEN & BATH - REMOVABLE CABINET FRONTS @ SINKS & WORK SURFACE NEXT TO STOVE. WALLS

SHALL BE FINISHED & FLOORING CONTINUOUS UNDERNEATH. NO PLUMBING MODIFICATIONS ALLOWED AFTER CABINET FRONT IS REMOVED. • CONTRACTOR SHALL PROVIDE HOT WATER & DRAIN PIPES & DISPOSAL COVERS. OWNER TO INSTALL COVERS AFTER CABINET FRONT IS REMOVED AT LATER DATE.

• CONTRACTOR TO INSTALL 2x8 FIRE TREATED BLOCKING IN WALLS FOR ALL COUNTERTOPS/SUPPORT BRACES, SHOWER SURROUND & BASES, FUTURE GRAB BARS AND FUTURE SHOWER SEATS, ETC. AS REQ'D (REF. SHEET A8.6)

• ALL TOILETS SHALL BE ADA COMPLIANT (17"-19" HIGH).

• INSTALL PLASTIC COATED WIRE CLOTHES SHELF & ROD @ 69" AFF

ACCESSIBLE UNITS:

• CONTRACTOR SHALL PROVIDE & INSTALL HOT WATER & DRAIN PIPES & DISPOSAL COVERS WHERE PIPING IS EXPOSED. • CONTRACTOR TO INSTALL 2x8 FIRE TREATED BLOCKING IN WALLS FOR ALL INSTALLED GRAB BARS. COUNTERTOPS/SUPPORT BRACES, SHOWER SURROUND & BASES, SHOWER SEATS, ETC. AS REQ'D. (REF. SHEET A8.6)

• ALL TOILETS SHALL BE ADA COMPLIANT (17"-19" HIGH).

• INSTALL PLASTIC COATED WIRE CLOTHES SHELF & ROD. HEIGHT AS NOTED.

HEARING/VISION IMPAIRED:

◆ ALL ADAPTABLE UNITS NOTES • CONTRACTOR SHALL INSTALL EQUIPMENT REQUIRED PER 2010 ADA SEC. 809.5. & ICC A117.1-2021

. PER CODE, A TOTAL OF 2 ACCESSIBLE UNITS ARE PROVIDED. THESE ARE LOCATED ON FLOORS 1 AND 2 OF THE BUILDING IO.ALL UNITS WILL COMPLY WITH THE VISITABILITY REQUIREMENTS AS OUTLINED IN THE TEXAS ACCESSIBILITY STANDARDS

1.THE FOLLOWING AMENITIES SHALL BE PROVIDED AT ALL UNITS: a. ALL BEDROOMS, DINING ROOMS AND LIVING ROOMS TO BE WIRED WITH CURRENT CABLING TECHNOLOGY FOR DATA & PHONE.

b. LAUNDRY CONNECTIONS c. EXHAUST/VENT FANS (VENTED TO OUTSIDE) IN ALL BATHROOMS

d. SCREENS ON ALL OPERABLE WINDOWS DISPOSAL ENERGY-STAR OR EQUIVALENTLY RATED DISHWASHER ENERGY-STAR OR EQUIVALENTLY RATED REFRIGERATOR WITH ICE MAKER

OVEN/RANGE BLIND'S OR WINDOW COVERINGS FOR ALL WINDOWS AT LEAST ONE ENERGY-STAR OR EQUIVALENTLY RATED CEILING FAN PER UNIT

ENERGY-STAR OR EQUIVALENTLY RATED LIGHTING ALL AREAS OF UNIT WILL BE HEATED AND AIR-CONDITIONED m. ENERGY STAR OR EQUIVALENTLY RATED WINDOWS

COVERED ENTRIES o. NINE FOOT CEILINGS IN LIVING ROOMS AND ALL BEDROOMS p. MICROWAVE OVENS

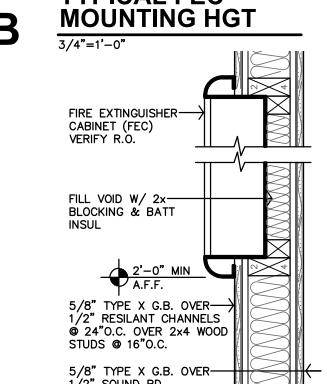
SELF-CLEANING OR CONTINUOUS CLEANING OVENS BUILT-IN (RECESSED INTO THE WALL) SHELVING UNIT KITCHEN PANTRY WITH SHELVING

HARD FLOOR SURFACES IN OVER 50% OF UNIT NRA. RECESSED LED LIGHTING OR LED LIGHTING FIXTURES IN KITCHEN AND LIVING AREAS v. ENERGY-STAIR OR EQUIVALENTLY RATED CEILING FANS IN ALL BEDROOMS.

w. EPA WATERSENSE OR EQUIVALENTLY QUALIFIED TOILETS IN ALL BATHROOMS. x. EPA WATERSENSE OF EQUIVALENTLY QUALIFIED SHOWERHEADS AND FAUCETS IN ALL BATHROOMS.

-HANDLE SHALL BE NO HIGHER THAN 48"AFF





T. BATH MATRIX REF. SI		REF. SHEETS A8.3-A8.6
	UNIT NO.	
		SIMILAR
SSIBLE TYPE 1	109	
2	112	118,122,126,212,312
3	113	
4	202,302	201,301
5	127	
6	123	
SSIBLE TYPE 7	203	303
8	207,307	114
9	209,309	
10	211,311	
11	213,313	

12,113,114,118,122,201,30

209,309

212,213,312,31

PARTITION SCHEDULE

● 2x4 WOOD STUDS = 3-5/8" METAL STUDS

● 2x6 WOOD STUDS = 6" METAL STUDS

—2 LAYERS 5/8" TYPE X G.B.

(5/8" TYPE X M.R. G.B. @

-2x4 WOOD STUDS @ 16"o.c.

STC 50 1-HOUR RATED (UL U305)

FULL HEIGHT

2x4 STUDS)

(NOM.7")

4"_{*} 8"

1-HOUR RATED (UL U305)

-5/8" TYPE X G.B. EACH SIDE

TYPE 3

NON-RATED

FULL HEIGHT

(5/8" TYPE X M.R. G.B. @

WÉT AREAS ONLY)

2x6 WOOD STUDS @ 16"o.c.

_____5/8" TYPE X G.B.

TYPICAL ELEVATOR

DEFLECTION CHANNEL-

WHERE STRUCT. MEMBERS INTERFERE W/ WALL, FRAME AROUND STRUCT. MEMBER & EXTEND G.B.TO DECK.

FIRE SAFING INSUL-

FULL HEIGHT

-8" CMU (REF. STRUCT)

-3 1/2" BATT INSULATION

—2x4 WOOD STUDS @ 16"o.c.

1-HOUR RATED (UL U905)

TYPE 5

APT. KITCHEN MATRIX

TYPE 3 (NOT USED

ACCESSIBLE TYPE 7

TYPE 4

TYPE 6

TYPE 8

TYPE 9

TYPE 10

TYPE

TYPE
TYPE
TYPE
ACCE
TYPE
TYPE
TYPE
TYPE

5-1/2" BATT INSULATION

(USES 2x6 STUDS INSTEAD OF

RESILIENT CHANNELS @ 24"O.C. (5/8" TYPE X M.R. G.B. @ WET

WET AREAS ONLY)

ÀREAS ONLY)

3 1/2" BATT INSULATION

5⁷/₈"

(NOM. 6")

ALTERNATE: INSTALL METAL STUDS IN PLACE OF WOOD STUDS.

ALL WALLS TO BE EXTEND TO STRUCTURE, UNLESS NOTED OR DETAILED OTHERWISE

• REE SHEETS CEP. A7.1 & A7.2 FOR RATED WALLS LOCATIONS & CODE INFORMATION

● LOAD BEARING WALLS & FIRE PARTITIONS SHALL EXTEND TO DECK, SEALED SMOKE TIGHT.

43/4"

(NOM.5")

5/8" TYPE X G.B. EACH SIDE (5/8" TYPE X M.R. G.B. ©

WÉT AREAS ONLY)

2x4 WOOD STUDS @ 16"o.c.

3 1/2" BATT INSULATION

FULL HEIGHT

5"or7"

2x4 or 2x6 WOOD—

STUDS @ 16"o.c.

3 1/2" BATT---

INSÚLATION

MASONRY WALL

1-HOUR RATED FULL HGT

NON-RATED FULL HGT

WALL LEGEND

REF. SHEETS A9.4-A9.5

MIRRORED

SIMILAR

TYPE 2

TYPE 2r

TYPE 4

NON-RATED

FULL HEIGHT

NON-RATED FULL HEIGHT

1-HOUR RATED (UL U305)

HISTORIC PRESERVATION NOTES

1. WORK SHALL NOT DAMAGE ANY EXISTING MASONRY, ORNAMENT

OR CHARACTER-DEFINING FEATURES. CONTRACTOR TO PROTECT

MASONRY REHABILITATION SHALL CONSIST OF SPOT REPOINTING

WORK SHALL CONFORM TO PRESERVATION STANDARDS OUTLINED

IN THE NATIONAL PARK SERVICE PRESERVATION BRIEFS 1,2 & 6.

NATIONAL PARK SERVICE PRESERVATION BRIEF 2 SPECIFIES THE RECOMMENDED COMPOSITION OF MORTARS USED IN HISTORIC

SALVAGED FOR REUSE. IF EXISTING STONE IS DAMAGED BEYOND

REPAIR, NEW MATERIAL MUST MATCH THE HISTORIC/EXISTING IN

IF IT IS NECESSARY TO REMOVE PAINT, SOILING, OR BIO GROWTH FROM EXTERIOR BRICK/STONE, IT SHOULD BE ACCOMPLISHED

USING THE GENTLEST MEANS POSSIBLE TO AVOID DAMAGING THE

STUCCO REPAÍR SHOULD BE ACCOMPLISHED IN ACCORDANCE WITH

1. ANY REMAINING WINDOWS ARE TO BE REMOVED AND REPLACED

CLOSELY AS POSSIBLE IN CONFIGURATION, PROFILE, AND

GLASS IN WINDOWS MUST BE CLEAR, COLORLESS, AND

AS INDICATED ON THE DRAWINGS AND SPECIFIC KEYNOTES PER

BUILDING LOCATION. NEW WINDOWS MUST MATCH EXISTING AS

NEW WINDOWS MAY BE ALUMINUM OR ALUMINUM-CLAD WOOD.

NON-REFLECTIVE WITH NO LESS THAN 69% VLT AND NO GREATER

THE MISSING STOREFRONT & TILE WAINSCOT AT THE FIRST FLOOR

FEATURES AND SHOULD RETAINED OR REPLACED IF MISSING, TO

2. ALL TRANSOMS ABOVE STOREFRONT SHALL BE REPLACED WITH

NEW ALUMINUM STOREFRONT AND ETCHED/FROSTED GLAZING.

3. ALL DECORATIVE WOOD TRANSOM CANOPIÉS SHALL BE REPAIRED

WOOD CANOPY & ATTACHMENT ACCESSORIES AT THE SOUTH

TO BE INSTALLED AT THE WEST ENTRANCE TO MATCH THE

ENTRANCE IS TO BE RESTORED AND REPAIRED. NEW CANOPY IS

1. NEW PARTITIONS SHOULD NOT INTERSECT WINDOWS. ANY PARTITION

INTERIOR PLASTER WALLS SHALL REMAIN, BE REPAIRED AND

STAIR STRINGERS, PANS, RAILS (WEAR REMAINING) SHALL BE

1. NEW HVAC SHALL RUN ABOVE CEILINGS AND DUCTS ARE NOT TO

ELECTRICAL CONDUIT SHALL RUN ABOVE CEILINGS AND WITHIN

1. REPAIR OR REPLACE ROOF SURFACE AS NEEDED. NEW FLASHING

AT BRICK/STONE PARAPET SHALL MATCH BRICK/STONE IN COLOR.

FROM THE PARAPET SO THAT IT IS MINIMALLY, IF AT ALL, VISIBLE

ANY NEW STRUCTURES, HVAC EQUIPMENT SHALL BE HELD BACK

WALLS (EXCEPT AT PLASTER WALLS). EXPOSED CONDUIT SHALL BE

ROOFTOP EQUIPMENT SHALL NOT BE VISIBLE FROM GROUND.

RAILINGS, POSTS AND TOPPERS. CLEAN & REPAIR.

PAINTED TO MATCH ADJACENT SURFACES.

4. NEW PLUMBING SHALL NOT BE EXPOSED.

OR DROPPED CEILING THAT JOGS IN FRONT OF WINDOWS SHOULD

REPLACED. FISHED TEXTURE, AND THICKENS TO MATCH EXISTING.

TERRAZZO FLOORS ON FIRST FLOOR SHALL BE GRINDED DOWN AT

AREAS WHERE WALLS WERE REMOVED, CLEANED AND REPAIRED.

RETAINED IN MOST AREAS (REFERENCE PLAN). REPLACE MISSING

ALONG CHADBOURNE & COLLEGE AVE. ARE CHARACTER DEFINING

DETERIORATED MORTAR SHOULD BE REMOVED TO SOUND MORTAR.

AND REPAIR/REPLACEMENT OF ISOLATED DETERIORATION. ALL

NEW MORTAR SHOULD MATCH EXISTING IN COLOR, TEXTURE,

4. ANY EXISTING BRICK/STONE TO BE REMOVED SHOULD BE

HISTORIC MASONRY. CONTACT AND REFER TO HISTORIC CONSULTANTS/SPECIALISTS FOR TREATMENT OPTIONS.

NATIONAL PARK SERVICE PRESERVATION BRIEF 22.

STRUCTURE, MASONRY AND EXTERIOR WALLS

COMPOSITION, AND JOINT PROFILE.

SIZE, COLOR, AND TEXTURE.

DURING CONSTRUCTION.

BUILDINGS.

<u>windows</u>

DIMENSION.

ALUM. STOREFRONT

THAN 11% VLR.

MATCH EXISTING.

OR REPLACED.

INTERIOR

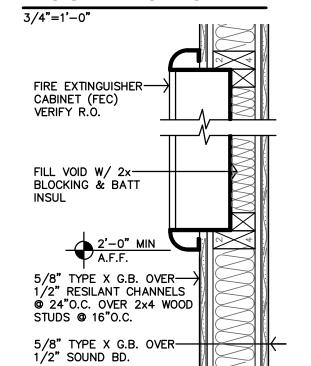
EXISTING SOUTH CANOPY.

MECHANICAL, ELECTRICAL, PLUMBING

BE EXPOSED.

FROM THE GROUND.

BE HELD BACK A MIN. OF 3 FEET.



FIRE EXTINGUISHER **CABINET DTL @ 1HR WALL** **APARTMENT CHART**

TYPE OF APARTMENT	1ST FLOOR	2ND FLOOR	3RD FLOOR	TOTA
ACCESSIBLE UNITS	#109	#203		2
ADAPTABLE HEARING/VISION IMPAIRED UNIT	#112			1
ADAPTABLE UNITS	AL	ALL REMAINING UNITS		
TOTAL	24	14	9	25

 1BED ACCESSIBLE 2BED ACCESSIBLEHEARING & VISION

UNIT NUMBERS SHOWN ARE FOR CONSTRUCTION PURPOSES ONLY & DO NOT REFLECT FINAL UNIT NUMBERING/LETTERING

SQUARE FOOTAGE

	NO.	UNIT	TDHCA NRA	IBC 2021	
	#109	APARTMENT 1 (1-bedroom)	630 sf	579 sf	
	#112	APARTMENT 2 (1-bedroom)	703 sf	651 sf	
OR.	#113	APARTMENT 3 (1-bedroom)	724 sf	674 sf	
FLOOR	#114	APARTMENT 4 (2-bedroom)	844 sf	791 sf	
	#118	APARTMENT 5 (1-bedroom)	608 sf	576 sf	
FIRST	#122	APARTMENT 6 (1-bedroom)	704 sf	658 sf	
ᇤ	#123	APARTMENT 7 (1-bedroom)	706 sf	649 sf	
	#126	APARTMENT 8 (1-bedroom)	(719)s f	642 sf	
	#127	APARTMENT 9 (2-bedroom)	901 sf	843 sf	
	#201	APARTMENT 10 (2-bedroom)	877 sf	805 sf	
R	#202	APARTMENT 11 (1-bedroom)	604 sf	567 sf	
FLOOR	#203	APARTMENT 12 (2-bedroom)	910 sf	849 sf	
	#207	APARTMENT 13 (1-bedroom)	620 sf	576 sf	
SECOND	#209	APARTMENT 14 (1-bedroom)	610 sf	563 sf	
ပ္က	#211	APARTMENT 15 (1-bedroom)	613 sf	584 sf	
S	#212	APARTMENT 16 (1-bedroom)	655 sf	605 sf	
	#213	APARTMENT 17 (1-bedroom)	630 sf	572 sf	
	#301	APARTMENT 18 (2-bedroom)	877 sf	805 sf	
D FLOOR	#302	APARTMENT 19 (1-bedroom)	604 sf	567 sf	
	#303	APARTMENT 20 (2-bedroom)	910 sf	849 sf	
	#307	APARTMENT 21 (1-bedroom)	620 sf	576 sf	
	#309	APARTMENT 22 (1-bedroom)	610 sf	563 sf	
THIRD	#311	APARTMENT 23 (1-bedroom)	613 sf	584 sf	
l⊢	#312	APARTMENT 24 (1-bedroom)	655 sf	605 sf	
	#313	APARTMENT 25 (1-bedroom)	630 sf	572 sf	

REVISION: 2-20-2024 2-23-2024

1-16-2024 22-3281 SHEET NO .:

amR

9

Jone

Jones Gillam Renz
730 N. Ninth 1881 Main Street, Suite 301
Salina, KS 67401 Kansas City, MO 64108
785.827.0386 jgr@jgrarchitects.com

HISTORIC REHABILITATION - APARTMENTS
IGELO,
TE

GERED ARCHITECTURE OF TELESCOPE

REVISION: 2-23

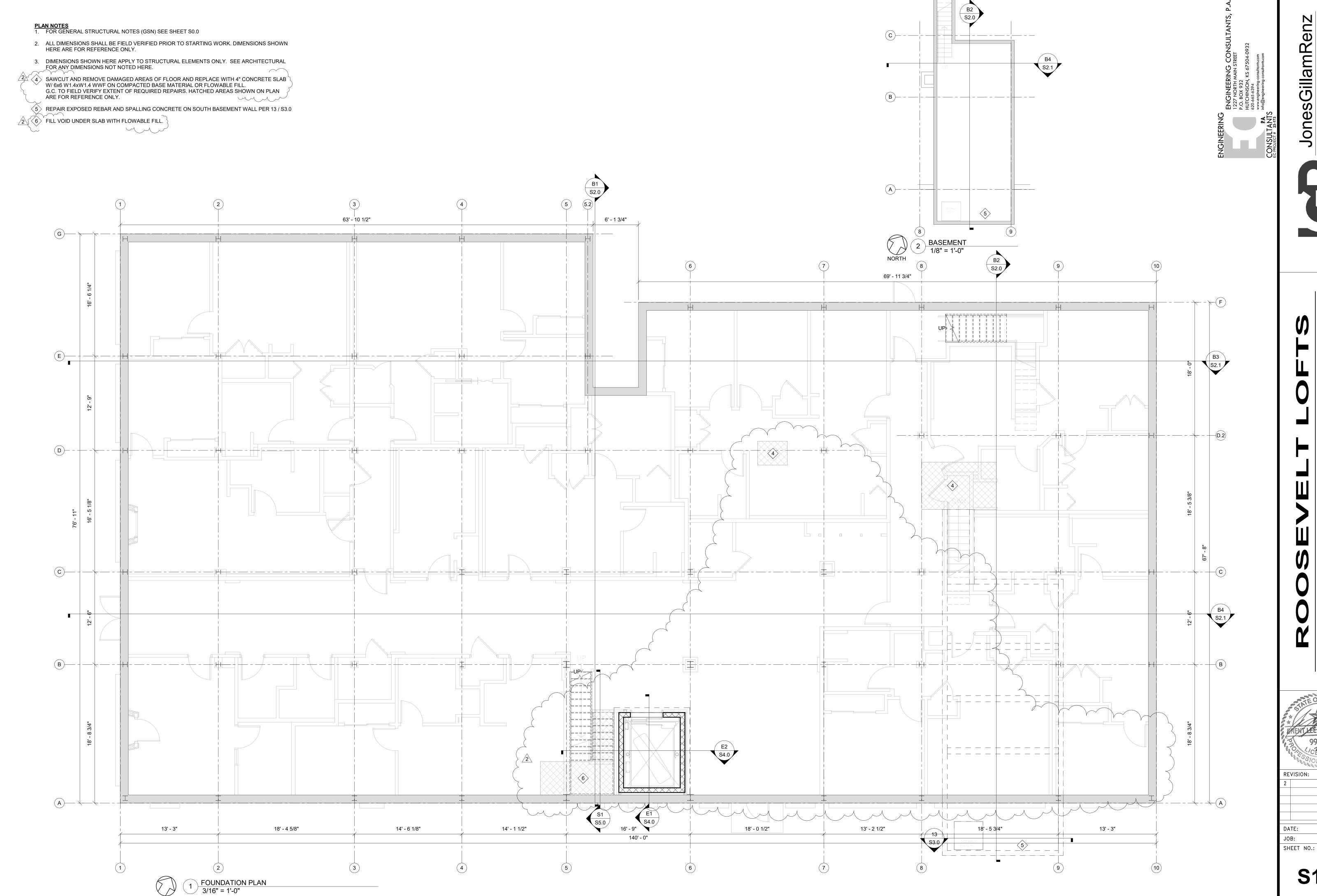
2-23-2024

DATE: 1−16−2024

JOB: 22−3281

SHEET NO.:

A2.1



2-23-2024 1-16-2024

22-3281

S1.0

4. 2-1/2" TOTAL DEPTH CONCRETE SLAB OVER METAL DECK:
NORMAL WEIGHT CONCRETE W/ 6x6 W2.9xW2.9 WWF AT MIDHEIGHT OF
CONCRETE W/ 1.0C24 METAL DECK.
ATTACH DECK TO PERPENDICULAR SUPPORTS W/ #12 TEK SCREWS IN 33/4
PATTERN. ATTACH DECK TO PARALLEL SUPPORTS W/ #12 TEK SCREWS @ 12" O.C.
DECK SIDE LAP CONNECTION TO BE (1) #10 TEK SCREW PER DECK SPAN. 3 SPAN
MINIMUM FOR STEEL DECK.

5. METAL ROOF DECK:

NEW ROOF DECK.

NEW ROOF DECK TO BE 1.5C24 METAL DECK.

ATTACH DECK TO PERPENDICULAR SUPPORTS WITH #12 TEK SCREWS AT EVERY
FLUTE. ATTACH DECK TO PARALLEL SUPPORTS WITH #12 TEK SCREWS AT 12" O.C.

DECK SIDE LAP CONNECTION TO BE (1) #10 TEK SCREW PER DECK SPAN. 3 SPAN

6 DELAMINATION ON BEAM

A. CLEAN AND REMOVE RUST AND SCALE.

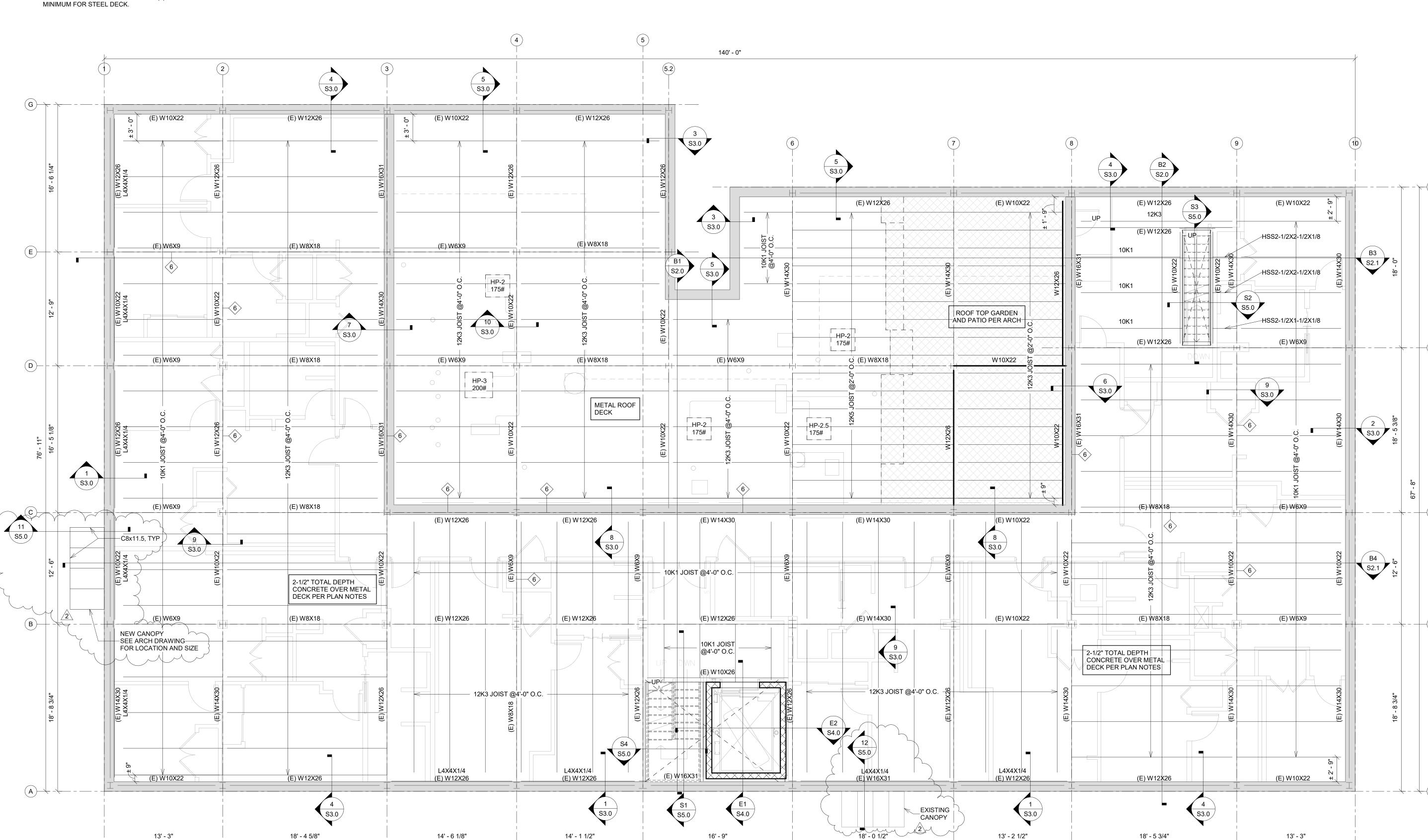
B. CHECK REMAINING THICKNESS.
C. WHERE MORE THAN 25% OF ORIGINAL THICKNESS IS MISSING. WE

C. WHERE MORE THAN 25% OF ORIGINAL THICKNESS IS MISSING, WELD 5/16" COVER PLATE W/ MIN. 6" ON EACH SIDE OF DAMAGE.
D. PRIME AND PAINT REPAIRED AREA AFTER REPAIR IS COMPLETE

7. CONTRACTOR TO FIELD VERIFY CONDITION OF ALL EXISTING BEAMS. ADDITIONAL REPAIRS MAY BE REQUIRED BEYOND THOSE NOTED.

HUTCHINSON SULTANT

1227 NORTH MAIN STREET
12



140' - 0"

HISTORIC REHABILITATION - APARTME ANGELO,

REVISION:

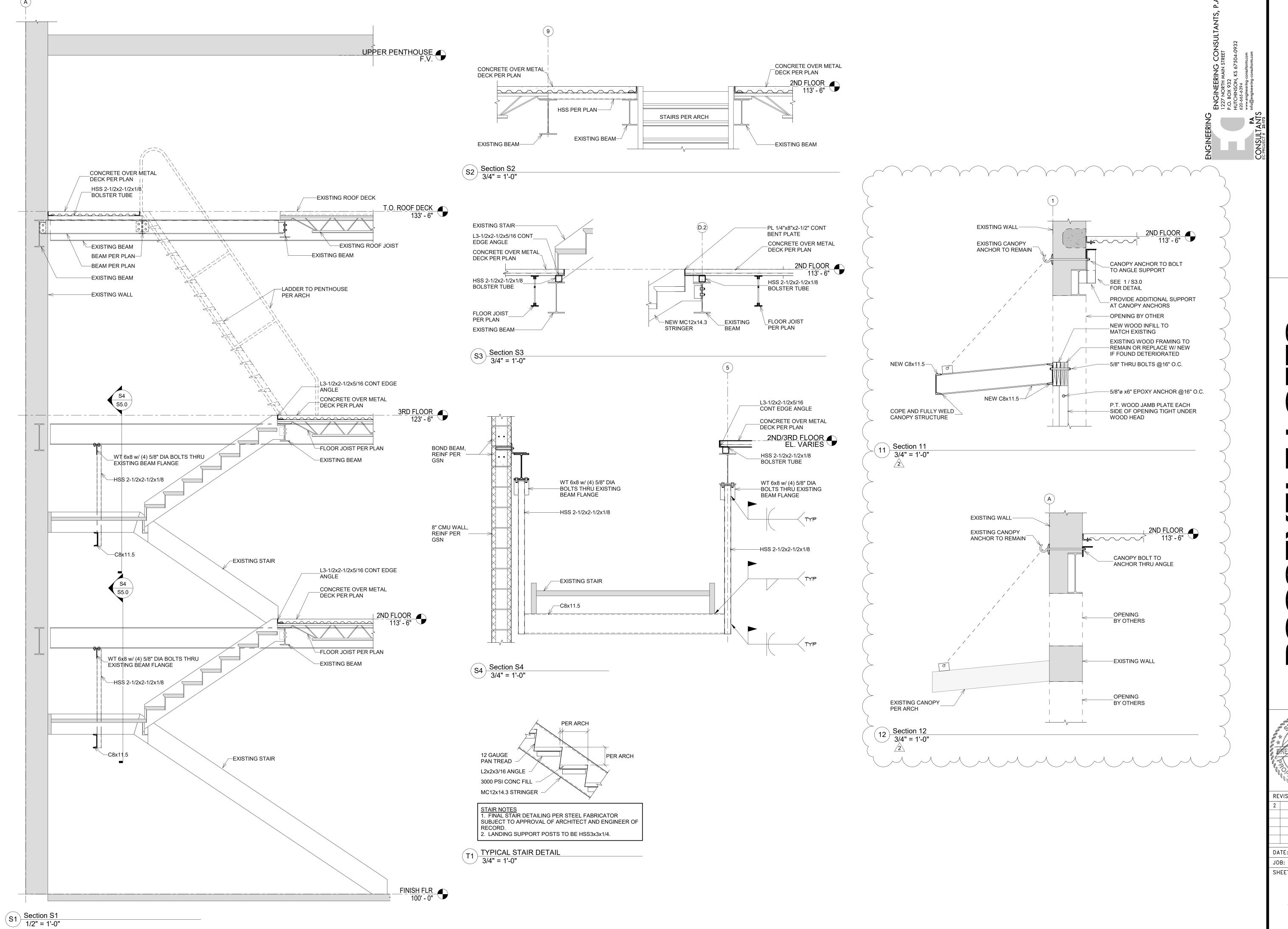
2 2-23-2024

DATE: 1-16-2024

JOB: 22-3281

SHEET NO.:

S1.1



ROOSEVELT LOFTS
HISTORIC REHABILITATION - APARTMENTS
ANGELO,
TEXAS

A NAS

S5.0

NOTE: ALL EXHAUST FANS AND AIR DEVICES THAT PENETRATE A CEILING ASSEMBLY SHALL BE PROVIDED WITH A U.L. LISTED RADIATION DAMPER, GREENHECK CRD OR EQUIIVALENT.

1 FIRST FLOOR HVAC PLAN
1/8" = 1'-0"





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January 2024

MECHANICAL NOTES BY SYMBOL

1. PROVIDE UL LISTED DRYER BOX EQUAL TO IN-O-VATE TECHNOLOGIES IN WALL INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, AND ROUTE 4"Ø DRYER EXHAUST DUCT TO WALL CAP WITH BACKDRAFT DAMPER. MAXIMUM ALLOWABLE EQUIVALENT DUCT LENGTH = 35'. UTILIZE LONG RADIUS SMOOTH ELBOWS WHERE REQUIRED. MAXIMUM EQUIVALENT DUCT LENGTH MAY BE INCREASE WHERE DRYER MANUFACTURER'S INSTALLATION INSTRUCTIONS ALLOW, AND DOCUMENTATION IS PROVIDED TO CODE OFFICIAL PRIOR TO CONCEALMENT INSPECTION. COORDINATE EXACT REQUIREMENTS WITH EQUIPMENT PROVIDED. PROVIDE PERMANENT LABEL IDENTIFYING EQUIVALENT LENGTH OF DRYER DUCT INSTALLED PER IMC 504.

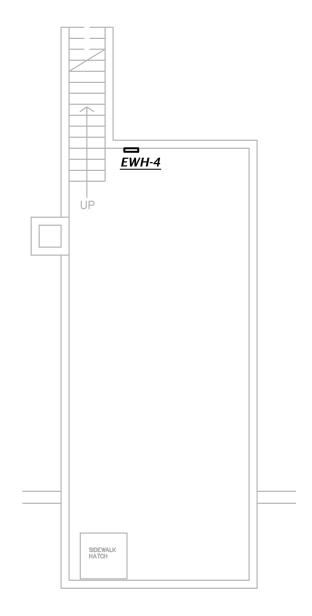
NOTE: ANNULAR SPACE AROUND DUCT IS TO BE SEALED AT ALL PENETRATIONS OF FLOORS AND CEILINGS WITH U.L. LISTED FIRE STOPPING SYSTEM.

- 2. PROVIDE UL LISTED DRYER BOX EQUAL TO IN-O-VATE TECHNOLOGIES IN WALL INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, AND ROUTE 4"Ø DRYER EXHAUST DUCT TO ROOF JACK WITH BACKDRAFT DAMPER. MAXIMUM ALLOWABLE EQUIVALENT DUCT LENGTH = 35'. UTILIZE LONG RADIUS SMOOTH ELBOWS WHERE REQUIRED. MAXIMUM EQUIVALENT DUCT LENGTH MAY BE INCREASE WHERE DRYER MANUFACTURER'S INSTALLATION INSTRUCTIONS ALLOW, AND DOCUMENTATION IS PROVIDED TO CODE OFFICIAL PRIOR TO CONCEALMENT INSPECTION. COORDINATE EXACT REQUIREMENTS WITH EQUIPMENT PROVIDED. PROVIDE PERMANENT LABEL IDENTIFYING EQUIVALENT LENGTH OF DRYER DUCT INSTALLED PER IMC 504. NOTE: ANNULAR SPACE AROUND DUCT IS TO BE SEALED AT ALL PENETRATIONS OF FLOORS AND CEILINGS WITH U.L. LISTED FIRE STOPPING SYSTEM.
- 3. ROUTE REFRIGERANT PIPING FROM BLOWER COIL TO MATCHING HEAT PUMP CONCEALED ABOVE CEILINGS AND IN WALLS . SEE M1.4 FOR HEAT PUMP LOCATIONS.
- 4. MOUNT TRANSFER GRILLE IN BEDROOM 6" BELOW CEILING AND MOUNT TRANSFER GRILLE ON OPPOSITE SIDE OF WALL 6" ABOVE FINISHED FLOOR. LINE STUD CAVITY WITH SHEET METAL.
- 5. PROVIDE AUXILIARY DRAIN PAN BELOW BLOWER COIL AND PIPE OVERFLOW DRAIN TO FLOOR DRAIN. 6. ROUTE 4" EXHAUST UP IN WALL TO ROOF. DUCTS SHALL BE RUN IN WALLS CONTINUOUS FROM
- ROUTING AND WALL LOCATIONS WITH G.C. AND EXISTING CONDITIONS. 7. CONNECT OUTDOOR AIR DUCT TO RETURN DUCT AT BLOWER COIL AND BALANCE AS INDICATED

EXHAUST FAN TO EXTERIOR OF BUILDING WITHOUT BEING COMBINED. COORDINATE EXACT

- 8. OUTDOOR AIR DUCT UP TO INTAKE HOOD ON ROOF, SEE ROOF PLAN ON M1.4 FOR MORE
- INFORMATION. 9. ROUTE 6"Ø OUTDOOR AIR INTAKE TO WALL CAP WITH BIRD SCREEN.
- 10. PROVIDE DRYER WALL CAP EQUAL TO INNOVATE TECHNOLOGIES 'DRYER WALL VENT' IN COLOR AS SELECTED BY ARCHITECT. COORDINATE EXACT MOUNTING HEIGHT AND LOCATION WITH
- 11. MOUNT DRYER MAKE-UP AIR GRILLE LOW IN WALL BEHIND DRYER.
- 12. ROUTE UP THROUGH ROOF AND TRANSITION TO CONNECTION AT INTAKE HOOD.
- 13. ROUTE CONDENSATE FROM INDOOR UNIT TO INDIRECT CONNECTION AT DRAIN BOX IN LAUNDRY CLOSET. COORDINATE WITH PLUMBING CONTRACTOR.
- 14. ROUTE REFRIGERANT PIPING CONCEALED IN WALLS AND ABOVE CEILING FROM INDOOR UNIT TO MATCHING HEAT PUMP UNIT ON ROOF. FIELD COORDINATE EXACT ROUTING WITH EXISTING CONDITIONS AND OTHER TRADES.
- 15. ROUTE CONDENSATE FROM INDOOR UNIT TO INDIRECT CONNECTION AT DRAIN BOX IN LAUNDRY CLOSET. COORDINATE WITH PLUMBING CONTRACTOR.
- 16. THERMOSTAT SHALL BE CONFIGURED TO PROVIDE A TEMPERATURE RANGE OR DEADBAND OF NOT LESS THAN 5°F BETWEEN CHANGEOVER FROM HEATING TO COOLING MODES.

- ALL DUCTWORK SHALL BE SEALED PER 2021 IECC REQUIREMENTS. COORDINATE REQUIREMENTS WITH G.C.
- DUCTWORK AT SUPPLY, RETURN, AND TRANSFER AIR REGISTERS SHALL BE SEALED TO FLOOR, WALL, OR CEILING USING HVAC



BASEMENT HVAC PLAN

1/8" = 1'-0"



1-16-2024 **REVISION:**

1 Addendum #2 02-20-2024

1-16-2024 21-3166

SHEET NO .:

NOTE: ALL EXHAUST FANS AND AIR DEVICES THAT PENETRATE A CEILING ASSEMBLY SHALL BE PROVIDED WITH A U.L. LISTED RADIATION DAMPER, GREENHECK CRD OR EQUIVALENT.

SECOND FLOOR HVAC PLAN

1/8" = 1'-0"





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mail@LSTengineers.com

January 2024

MECHANICAL NOTES BY SYMBOL

- EXACT ROUTING AND SOFFIT LOCATION WITH G.C. AND ARCHITECT.
- 3. PROVIDE UL LISTED DRYER BOX EQUAL TO IN-O-VATE TECHNOLOGIES IN WALL INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, AND ROUTE 4"Ø DRYER EXHAUST DUCT TO ROOF JACK WITH BACKDRAFT DAMPER. MAXIMUM ALLOWABLE EQUIVALENT DUCT LENGTH = 35'. COORDINATE EXACT REQUIREMENTS WITH EQUIPMENT PROVIDED. PROVIDE PERMANENT LABEL IDENTIFYING EQUIVALENT LENGTH OF DRYER DUCT INSTALLED PER IMC 504. NOTE: ANNULAR SPACE AROUND DUCT IS TO BE SEALED AT ALL PENETRATIONS OF FLOORS AND CEILINGS WITH U.L. LISTED FIRE STOPPING SYSTEM.
- 4. ROUTE REFRIGERANT PIPING FROM BLOWER COIL TO MATCHING HEAT PUMP CONCEALED ABOVE CEILINGS AND IN WALLS . SEE M1.4 FOR HEAT PUMP LOCATIONS.
- 7. ROUTE 4" EXHAUST UP IN WALL TO ROOF. DUCTS SHALL BE RUN IN WALLS CONTINUOUS FROM EXHAUST FAN TO EXTERIOR OF BUILDING WITHOUT BEING COMBINED. COORDINATE EXACT ROUTING AND WALL LOCATIONS WITH G.C. AND EXISTING CONDITIONS.
- 8. ROUTE DUCTWORK UP TO SUPPLY GRILLE AT FLOOR ABOVE.
- 9. CONNECT OUTDOOR AIR DUCT TO RETURN DUCT AT BLOWER COIL AND BALANCE AS INDICATED
- 10. 8"Ø OUTDOOR AIR DUCT FROM FLOOR ABOVE, SEE M1.3 FOR CONTINUATION. 11. TRANSITION TO 16/10 RETURN DUCT AND ROUTE UP TO 3RD FLOOR, SEE M1.3 FOR
- 12. ROUTE OPEN ENDED TRANSFER DUCT FROM MECHANICAL CLOSET THROUGH LOWERED CEILING, TRANSITION TO WALL MOUNTED RETURN GRILLE IN APARTMENT.
- 13. MOUNT RETURN GRILLE LOW IN WALL.
- 15. ROUTE REFRIGERANT PIPING CONCEALED IN WALLS AND ABOVE CEILING FROM INDOOR UNIT TO MATCHING HEAT PUMP UNIT ON ROOF. FIELD COORDINATE EXACT ROUTING WITH EXISTING CONDITIONS AND OTHER TRADES.
- 16. ROUTE CONDENSATE PIPING FROM INDOOR UNIT CONCEALED IN WALL TO FLOOR DRAIN IN MECHANICAL CLOSET. FIELD COORDINATE ROUTING WITH OTHER TRADES.
- 18. THERMOSTAT SHALL BE CONFIGURED TO PROVIDE A TEMPERATURE RANGE OR DEADBAND OF NOT

- ALL DUCTWORK SHALL BE SEALED PER 2021 IECC
- DUCTWORK AT SUPPLY, RETURN, AND TRANSFER AIR REGISTERS SHALL BE SEALED TO FLOOR, WALL, OR CEILING USING HVAC

- 1. TRANSITION FROM 8"Ø TO 12/4 DUCT AND ROUTE BELOW BEAM IN SOFFIT. INSTALL DUCT AS HIGH AS POSSIBLE TO BEAM. COORDINATE EXACT ROUTING AND SOFFIT LOCATION WITH G.C. AND ARCHITECT.
- 2. DUCT TO BE ROUTED IN SOFFIT, INSTALL AS HIGH AS POSSIBLE TO STRUCTURE. COORDINATE
- 5. MOUNT TRANSFER GRILLE IN BEDROOM 6" BELOW CEILING AND MOUNT TRANSFER GRILLE ON OPPOSITE SIDE OF WALL 6" ABOVE FINISHED FLOOR. LINE STUD CAVITY WITH SHEET METAL.
- 6. PROVIDE AUXILIARY DRAIN PAN BELOW BLOWER COIL AND PIPE OVERFLOW DRAIN TO FLOOR DRAIN.

- 14. SEE ROOF PLAN ON M1.4 FOR MORE INFORMATION.
- 17. ROUTE CONDENSATE PIPING FORM INDOOR UNIT ABOVE CONCEALED ABOVE CEILING TO FLOOR DRAIN IN MECHANICAL CLOSET. FIELD COORDINATE EXACT ROUTING WITH EXISTING CONDITIONS AND OTHER TRADES.
- LESS THAN 5°F BETWEEN CHANGEOVER FROM HEATING TO COOLING MODES.

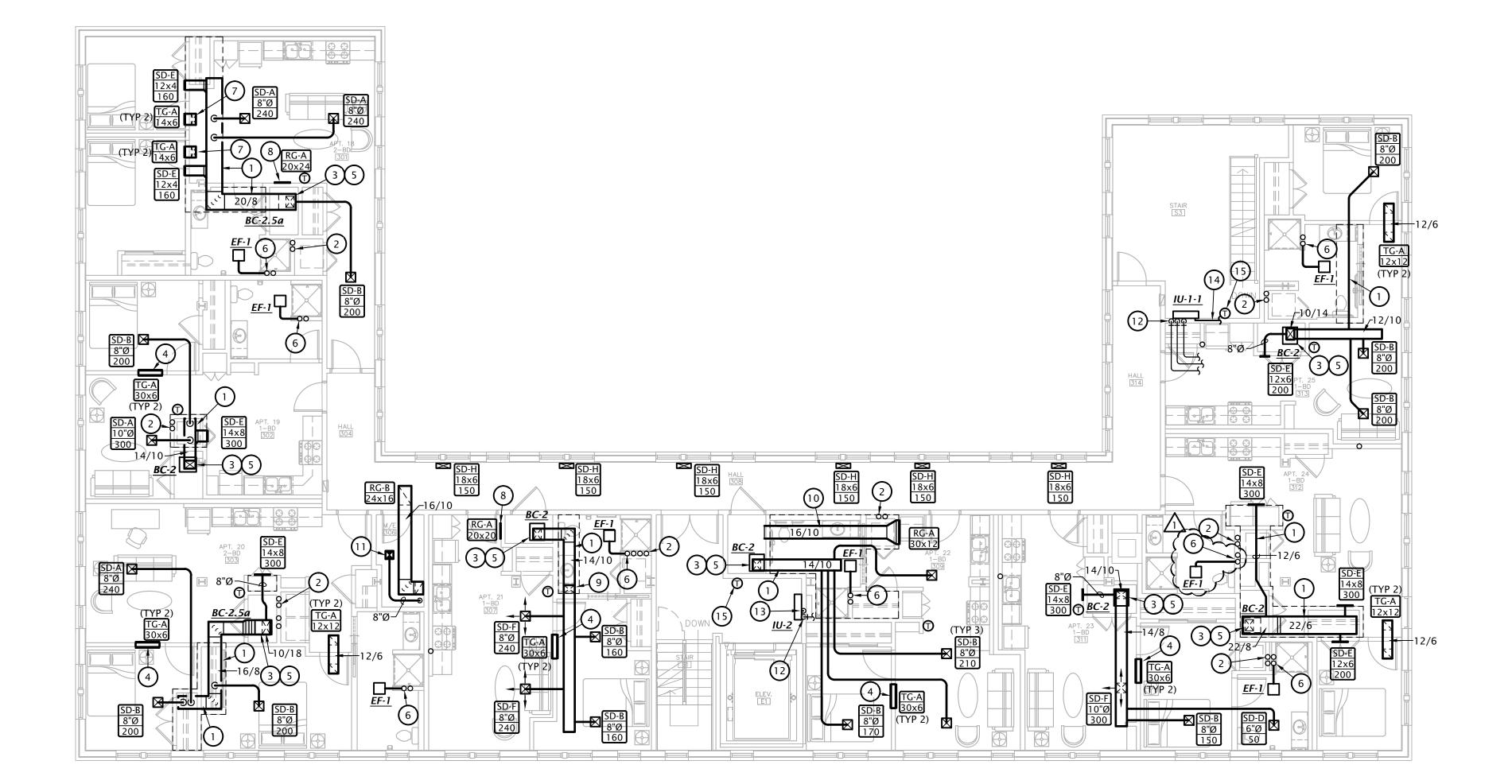
REQUIREMENTS. COORDINATE REQUIREMENTS WITH G.C.



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NOTE: ALL EXHAUST FANS AND AIR DEVICES THAT PENETRATE A CEILING ASSEMBLY SHALL BE PROVIDED WITH A U.L. LISTED RADIATION DAMPER, GREENHECK CRD OR EQUIIVALENT.

THIRD FLOOR HVAC PLAN

1/8" = 1'-0"





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January 2024

Gillam

MECHANICAL NOTES BY SYMBOL

- 1. DUCT TO BE ROUTED IN LOWERED CEILING/ SOFFIT, INSTALL AS HIGH AS POSSIBLE TO STRUCTURE. COORDINATE EXACT ROUTING AND SOFFIT LOCATION WITH G.C. AND ARCHITECT.
- 2. PROVIDE UL LISTED DRYER BOX EQUAL TO IN-O-VATE TECHNOLOGIES IN WALL INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, AND ROUTE 4"Ø DRYER EXHAUST DUCT TO ROOF JACK WITH BACKDRAFT DAMPER. MAXIMUM ALLOWABLE EQUIVALENT DUCT LENGTH = 35'. COORDINATE EXACT REQUIREMENTS WITH EQUIPMENT PROVIDED. PROVIDE PERMANENT LABEL IDENTIFYING EQUIVALENT LENGTH OF DRYER DUCT INSTALLED PER IMC 504. NOTE: ANNULAR SPACE AROUND DUCT IS TO BE SEALED AT ALL PENETRATIONS OF FLOORS AND CEILINGS WITH U.L. LISTED FIRE STOPPING SYSTEM.

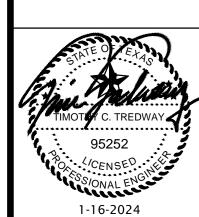
- 6. ROUTE 4" EXHAUST UP IN WALL TO ROOF. DUCTS SHALL BE RUN IN WALLS CONTINUOUS FROM EXHAUST FAN TO EXTERIOR OF BUILDING WITHOUT BEING COMBINED. COORDINATE EXACT ROUTING AND WALL LOCATIONS WITH G.C. AND EXISTING CONDITIONS.
- 7. MOUNT TRANSFER GRILLE IN BEDROOM WALL AND DUCT TO GRILLE IN SOFFIT.
- 8. MOUNT RETURN GRILLE LOW IN WALL.
- 9. ROUTE DUCT BELOW BEAM IN SOFFIT, TRANSITION UP TO ABOVE BEDROOM CEILING.
- TRANSITION TO WALL MOUNTED RETURN GRILLE IN APARTMENT.
- 11. OUTDOOR AIR DUCT UP TO INTAKE HOOD ON ROOF, SEE ROOF PLAN ON M1.4 FOR MORE INFORMATION.
- 12. ROUTE REFRIGERANT PIPING CONCEALED IN WALLS AND ABOVE CEILING FROM INDOOR UNIT TO MATCHING HEAT PUMP UNIT ON ROOF. FIELD COORDINATE EXACT ROUTING WITH EXISTING CONDITIONS AND OTHER TRADES.
- ABOVE FLOOR DRAIN IN MECHANICAL ROOM AT FLOOR BELOW.
- MECHANICAL CLOSET. FIELD COORDINATE ROUTING WITH OTHER TRADES.
- 15. THERMOSTAT SHALL BE CONFIGURED TO PROVIDE A TEMPERATURE RANGE OR DEADBAND OF NOT LESS THAN 5°F BETWEEN CHANGEOVER FROM HEATING TO COOLING MODES.

- 3. ROUTE REFRIGERANT PIPING FROM BLOWER COIL TO MATCHING HEAT PUMP CONCEALED ABOVE CEILINGS AND IN WALLS . SEE M1.4 FOR HEAT PUMP LOCATIONS.
- 4. MOUNT TRANSFER GRILLE IN BEDROOM 6" BELOW CEILING AND MOUNT TRANSFER GRILLE ON OPPOSITE SIDE OF WALL 6" ABOVE FINISHED FLOOR. LINE STUD CAVITY WITH SHEET METAL.
- 5. PROVIDE AUXILIARY DRAIN PAN BELOW BLOWER COIL AND PIPE OVERFLOW DRAIN TO FLOOR DRAIN.

- 10. ROUTE OPEN ENDED TRANSFER DUCT FROM MECHANICAL CLOSET THROUGH LOWERED CEILING,

- 13. ROUTE CONDENSATE PIPING FROM INDOOR UNIT DOWN CONCEALED IN WALL AND ROUTE TO
- 14. ROUTE CONDENSATE PIPING FROM INDOOR UNIT CONCEALED IN WALL TO FLOOR DRAIN IN

- ALL DUCTWORK SHALL BE SEALED PER 2021 IECC REQUIREMENTS. COORDINATE REQUIREMENTS WITH G.C.
- DUCTWORK AT SUPPLY, RETURN, AND TRANSFER AIR REGISTERS SHALL BE SEALED TO FLOOR, WALL, OR CEILING USING HVAC



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1 ROOF HVAC PLAN
1/8" = 1'-0"





MECHANICAL NOTES BY SYMBOL

- 2. ROUTE REFRIGERANT PIPING FROM HEAT PUMP TO INDOOR UNIT BELOW. PROVIDE ROOF CURB COORDINATE WITH EXISTING CONDITIONS AND OTHER TRADES. COORDINATE CURB
- 3. PROVIDE PIPE CURB EQUAL TO PATE AT DUCT PENETRATIONS OF ROOF. COORDINATE REQUIREMENTS WITH G.C. DO NOT USE PITCH POCKETS. TERMINATE WITH GOOSE NECK, SEE
- 4. PROVIDE PIPE CURB FOR MULTIPLE EXHAUST TERMINATIONS ON ROOF WHERE PENETRATIONS ARE GROUPED TOGETHER.
- 5. SEE DETAIL 2:M6.3 FOR REFRIGERANT PIPING ROUTED ALONG ROOF.

MOUNT HEAT PUMP ON METAL SUPPORT FRAME ABOVE ROOF ON PAD VIBRATION ISOLATORS. COORDINATE REQUIREMENTS STRUCTURAL ENGINEER AND G.C.

WITH PIPING PENETRATION ASSEMBLY EQUAL TO ALTA PRODUCTS SIGRIST PIPE CHASE HOUSING. PROVIDE WITH EXIT SEALS FOR REFRIGERANT PIPING AND ELECTRICAL CONDUIT FOR EACH HEAT PUMP AND ONE ADDITIONAL SPARE EXIT SEAL. FIELD LOCATE PIPE CHASE LOCATIONS AND REQUIREMENTS WITH G.C. DETAIL 1:M6.3 FOR MORE INFORMATION.

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SHEET NO .:





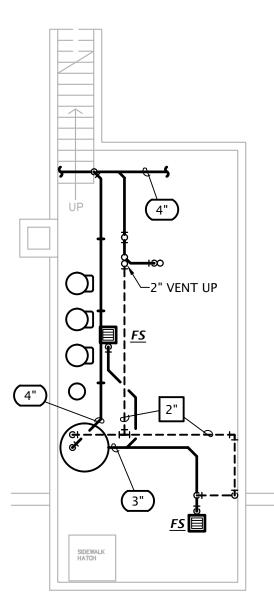
- NOTES:

 SEE ROUGH-IN REQUIREMENTS IN PLUMBING SCHEDULE ON SHEET M6.1 FOR ADDITIONAL INFORMATION.
- PIPING SHALL NOT BE ROUTED VERTICALL IN FIREWALLS SEPARATING UNITS. ALL PIPING SHALL BE ROUTED VERTICALLY IN FURRED OUT WALL AS INDICATED ON PLANS.
- WHERE PIPING PENETRATES FIRE RATED ASSEMBLIES, INSTALL PER ARCH. DETAILS.

PLUMBING SIZING SYMBOLS			
(X")	DRAIN (X = SIZE)		
X"	VENT (X = SIZE)		
(X")	WASTE STACK VENT (X = SIZE)		
ALL OFFSET	CK VENT NOTE: S ARE PROHIBITED BETWEEN LOWEST AND HIGHEST AIN CONNECTION TO WASTE STACK VENT (IPC 913.2)		

WASTE AND VENT NOTES BY SYMBOL

- 1. PROVIDE LINT INTERCEPTOR FOR WASHING MACHINES EQUAL TO SMITH MFG. CO. 8910-50, RATED FOR 50 GPM FLOW RATE, PRIMARY AND SECONDARY LINT SCREENS, SECURED AND GASKETED STEEL COVER, 3" INLET AND OUTLET. PROVIDE WITH EXTENSIONS AS REQUIRED.
- 2. PROVIDE DRAIN BOX IN LAUNDRY CLOSET FOR INDIRECT CONNECTION OF CONDENSATE DRAIN FROM INDOOR UNIT LOCATED IN HALLWAY. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH M.C.
- PROVIDE DRAIN BOX IN WALL OF LAUNDRY ROOM FOR INDIRECT CONNECTION OF CONDENSATE DRAIN FROM INDOOR UNIT LOCATED IN HALLWAY. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH M.C.
- 4. ELEVATOR SUMP PUMP. SEE DETAIL 3:M6.3.
- 5. ELEVATOR SUMP PUMP CONTROL PANEL. COORDINATE WITH E.C.
- 6. EXTEND ELEVATOR SUMP PUMP DISCHARGE TO DAYLIGHT. COORDINATE WITH CIVIL







CONNECT DISHWASHER TO

DISHWASHER CONNECTION AT

GARBAGE DISPOSER. (TYPICAL) —

COORDINATE LOCATION

WITH ARCHITECT. —

OF DOWNSPOUT NOZZLES

CONNECT DISHWASHER TO

SEE CIVIL DRAWINGS

DISHWASHER CONNECTION AT

GARBAGE DISPOSER. (TYPICAL)

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M1.8



		ALTERNATE MATERIAL/SIZE			
		Cross-linked polyethylene (PEX)	Polypropyle (PP)		
COPPER PIPE SIZE INDICATED	1/2"	3/4"	1/2"		
	3/4"	1"	1"		
	1"		1-1/4"		
	1-1/4"		1-1/2"		
	1-1/2"		2"		
	2"		2-1/2"		
	2-1/2"		3"		
Ú	3"		3-1/2"		
Nota: Din	o cizac indic	Nota: Pina sizes indicated on drawings are for Tv			

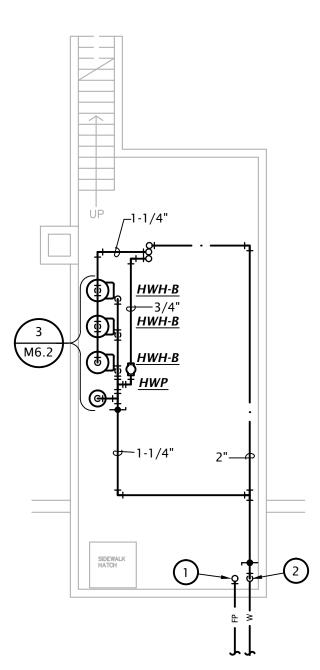
Note: Pipe sizes indicated on drawings are for Type L copper pipe. If alternate materials are used, sizes shall be as indicated above. Where no pipe size is shown, use of indicated material in design pipe size is prohibited. Do not use materials other than those

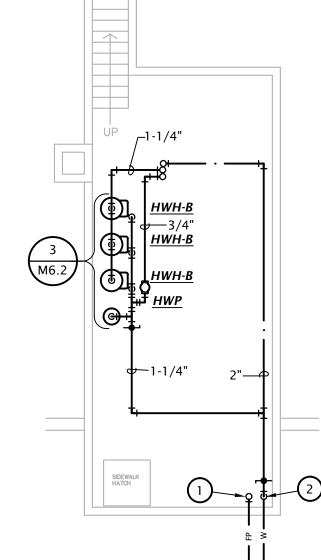
- PIPING SHALL NOT BE INSTALLED ABOVE ELECTRICAL PANELS.
- COORDINATE INSTALLATION OF PIPING IN MECHANICAL CLOSET W/ M.C. & E.C. • SEE PLUMBING FIXTURE SCHEDULE ON SHEET P6.1 FOR FIXTURE ROUGH-IN
- INFORMATION. INSULATE ALL HW PIPING PER SPECIFICATIONS.

DOMESTIC WATER PLAN NOTES BY SYMBOL

- 1. FIRE PROTECTION SERVICE ENTRANCE. INSTALL IN ACCORDANCE WITH NFPA 13. COORDINATE LOCATION OF ALL VALVES AND APPURTENANCES WITH AHJ.
- 2. PROVIDE SHUT-OFF VALVE AT WATER SERVICE ENTRANCE WITH PRESSURE REDUCING VALVE SET TO 80 PSI IF REQUIRED. COORDINATE REQUIREMENTS WITH CITY OF SAN
- PROVIDE 1" WATER SERVICE TO APARTMENT WITH SHUT-OFF VALVE. SEE TYPICAL APARTMENT RISER DIAGRAM ON SHEET M6.2 FOR ADDITIONAL INFO.
- 4. PROVIDE 1/2" VALVED BRANCH BELOW SINK AND CONNECT DISHWASHER. ROUTE PIPING ALONG BACK OF CABINETRY, COORDINATE EXACT ROUTING WITH G.C. COORDINATE EXACT REQUIREMENTS WITH DISHWASHER PROVIDED.
- 5. ROUTE 2" CW, 1-1/4" HW, AND 3/4" HW RECIRC. DOWN TO BASEMENT.
- 6. HOT WATER RECIRC LOOP SHALL DROP IN WALL TO LIMIT HOT WATER BRANCH TO PUBLIC LAVATORY TO 2 FT MAX.

- CONNECT TO DOMESTIC COLD WATER BRANCH UPSTREAM OF APARTMENT SHUT-OFF AND TENANT METER AND PROVIDE VALVED BRANCH TO WALL HYDRANT.
- ROUTE 3/4" BRANCH UP TO ROOF HYDRANT. PROVIDE 1/8" DRAIN DRAIN FROM ROOF HYDRANT TO ABOVE NEAREST FLOOR DRAIN IN MECH CLOSET.





2 BASEMENT DOMESTIC WATER PLAN

1/8' = 1'-0"



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JOB:	21-3166
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M1.9



		ALTERNATE MATERIAL/SIZE		
		Cross-linked polyethylene (PEX)	Polypropylene (PP)	
COPPER PIPE SIZE INDICATED	1/2"	3/4"	1/2"	
	3/4"	1"	1"	
	1"		1-1/4"	
	1-1/4"		1-1/2"	
	1-1/2"		2"	
	2"		2-1/2"	
	2-1/2"		3"	
0	3"		3-1/2"	
		·	·	

Note: Pipe sizes indicated on drawings are for Type L copper pipe. If alternate materials are used, sizes shall be as indicated above. Where no pipe size is shown, use of indicated material in design pipe size is prohibited. Do not use materials other than those

PIPING SHALL NOT BE INSTALLED ABOVE ELECTRICAL PANELS.

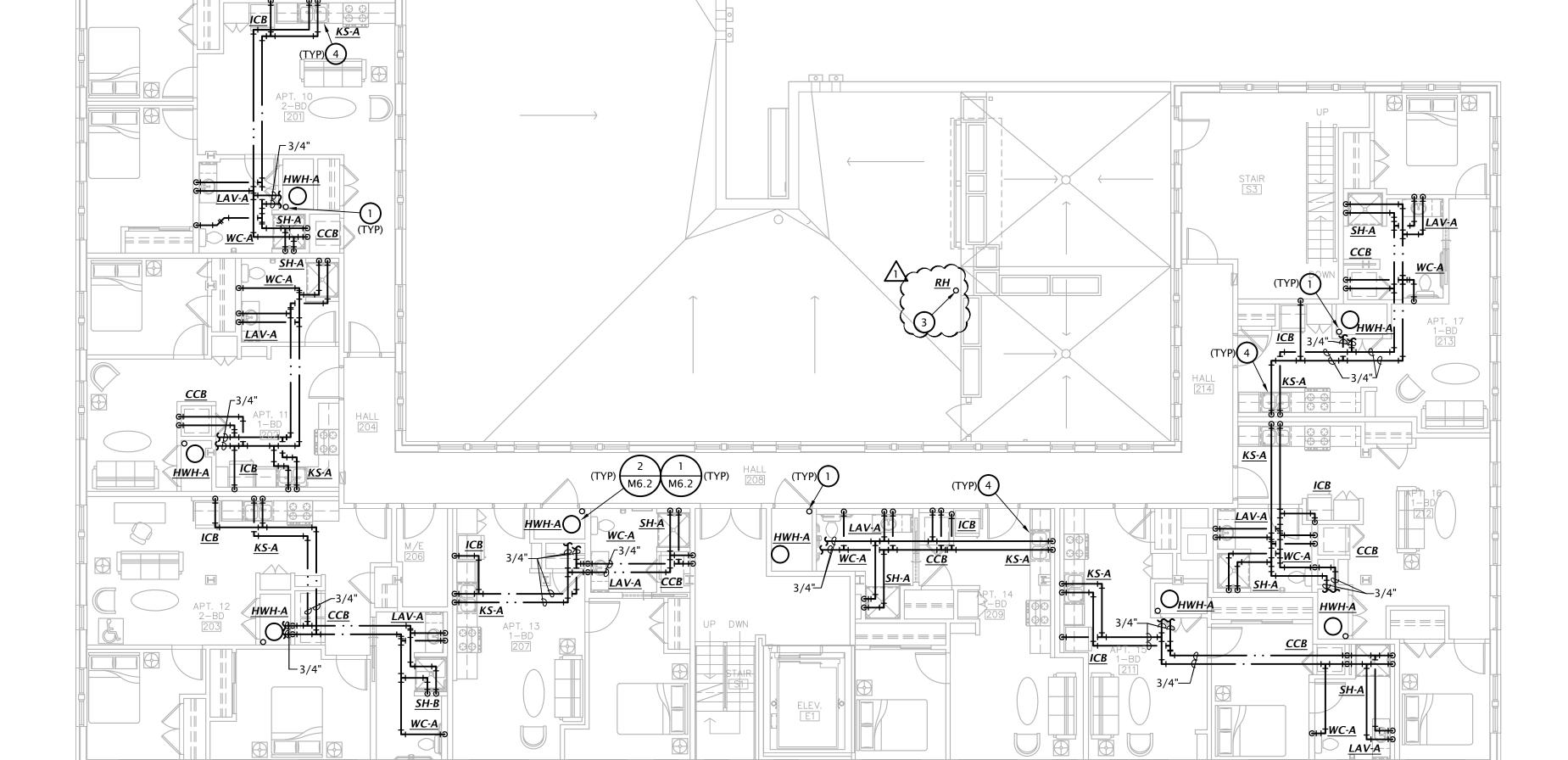
- COORDINATE INSTALLATION OF PIPING IN MECHANICAL CLOSET W/ M.C. & E.C.
- SEE PLUMBING FIXTURE SCHEDULE ON SHEET P6.1 FOR FIXTURE ROUGH-IN INFORMATION.
- INSULATE ALL HW PIPING PER SPECIFICATIONS.

DOMESTIC WATER PLAN NOTES BY SYMBOL

1. PROVIDE 1" WATER SERVICE TO APARTMENT WITH SHUT-OFF VALVE. SEE TYPICAL APARTMENT DOMESTIC WATER RISER DIAGRAM ON SHEET M6.2 FOR ADDITIONAL INFO.

- 2. PROVIDE 1/2" VALVED BRANCH BELOW SINK AND CONNECT DISHWASHER. ROUTE PIPING ALONG BACK OF CABINETRY, COORDINATE EXACT ROUTING WITH G.C. COORDINATE
- EXACT REQUIREMENTS WITH DISHWASHER PROVIDED.

 3. FIELD COORDINATE EXACT LOCATION OF ROOF HYDRANT WITH ARCHITECT AND OTHER TRADES PRIOR TO ROUGH-IN. COORDINATE INSTALLATION WITH G.C.

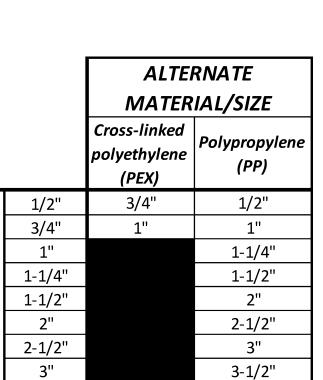


1 SECOND FLOOR DOMESTIC WATER PLAN 1/8' = 1'-0"

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Note: Pipe sizes indicated on drawings are for Type L copper pipe. If alternate materials are used, sizes shall be as indicated above. Where no pipe size is shown, use of indicated material in design pipe size is prohibited. Do not use materials other than those

- PIPING SHALL NOT BE INSTALLED ABOVE ELECTRICAL PANELS. • COORDINATE INSTALLATION OF PIPING IN MECHANICAL CLOSET W/ M.C. & E.C.
- SEE PLUMBING FIXTURE SCHEDULE ON SHEET P6.1 FOR FIXTURE ROUGH-IN
- INFORMATION. INSULATE ALL HW PIPING PER SPECIFICATIONS.

DOMESTIC WATER PLAN NOTES BY SYMBOL

- 1. PROVIDE 1" WATER SERVICE TO APARTMENT WITH SHUT-OFF VALVE. SEE TYPICAL APARTMENT DOMESTIC WATER RISER DIAGRAM ON SHEET M6.2 FOR ADDITIONAL INFO.
- 2. PROVIDE 1/2" VALVED BRANCH BELOW SINK AND CONNECT DISHWASHER. ROUTE PIPING ALONG BACK OF CABINETRY, COORDINATE EXACT ROUTING WITH G.C. COORDINATE EXACT REQUIREMENTS WITH DISHWASHER PROVIDED.
- CONNECT TO DOMESTIC COLD WATER BRANCH UPSTREAM OF APARTMENT SHUT-OFF AND TENANT METER AND PROVIDE VALVED BRANCH UP TO PENTHOUSE AND PROVIDE WALL HYDRANT WH ON ROOF. LOCATE WALL HYDRANT 18" ABOVE ROOF IN PENTHOUSE WALL.

