

Texas A&M University - Corpus Christi Chaparral Building Renovations

TAMU-CC Project #157191FY21 TAMU-CC Proposal #CSP3-003

PROJECT # 2021-11

223 N. Chaparral St. Corpus Christi, TX 78401

Issue Date: 09/07/2023



The following additions, deletions, modifications, or clarifications shall be made to the appropriate sections of the plans and specifications and shall become a part of the Contract Documents. Bidders shall acknowledge receipt of this Addendum in the space provided on the Bid form.

MAKE THE FOLLOWING ADDITIONS, MODIFICATIONS OR DELETIONS TO THE DRAWINGS AND SPECIFICATIONS

ADDITIONAL DOCUMENTATION

- ITEM No.01 Pre-Proposal Meeting Minutes & Attendee Sign-In DOCUMENTATION: Refer to attached.
- ITEM No.02 Requests for additional site visits must be coordinated through: Roger Padon, Project Manager, TAMU-CC
 Roger.Padon@tamucc.edu

CLARIFICATIONS

- The entire new roof has been removed from this scope of work and will be addressed under future separate contract.
- ITEM No.02 Emergency generator has been removed from this scope of work and will be addressed under future separate contract.
- ITEM No.03 Refer to Detail S201 for typical slab-on-grade infill detail.
- ITEM No.04 Refer to Detail S202 and S203 for typical elevated slab infill details.
- ITEM No.05 Window Coverings are indicated in keynotes found on Sheets A1.401 and A1.404. Additionally, these locations have been added to the first and fourth floor plans.
- ITEM No.06 Refer to MEP schedule for base rail in lieu of housekeeping pad.
- ITEM No.07 CL04 (Baffle Ceilings) are shown in four (4) locations on the first floor. <u>All</u> locations are to be included in Alternate 2. (Reference Sheet A1.201 LEVEL 1 RCP.)
- ITEM No.08 CL04 (Baffle Ceilings) are shown in three (3) locations on the fourth floor. <u>All</u> locations are to be included in Alternate 3. (Reference Sheet A1.204 LEVEL 4 RCP.)

MODIFICATIONS TO THE CONTRACT SPECIFICATIONS

COMPETITIVE SEALED PROPOSAL (CSP) FORMS

- ITEM No.01 Form C-3C CSP SUPPLEMENTAL INSTRUCTIONS FOR COMPETITIVE SEALED PROPOSALS
 - Bid Date Extension: Competitive Sealed Proposals (CSP) will be received until 2:00p.m, Tuesday, September 19, 2023.
 - DOCUMENTATION: REPLACE Form C-3C entirely with attached.
- ITEM No.02 Form C-4 CSP, Part 1 Technical Sealed Proposal, Competitive Sealed Proposal DOCUMENTATION: Replace Form C-4 CSP entirely with attached.

DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS

ITEM No.01 - 00 01 10 TABLE OF CONTENTS

<u>REMOVE</u> 09 51 26 WOOD CEILINGS (CL03) – Wood Ceilings are Not Used. Refer to Sheet A9.100 for CL03 Suspended Acoustic Panel Ceiling.

REMOVE 09 77 56 INTERIOR SURFACING ARCHITECTURAL FILM - Not Used.

DIVISION 01 – GENERAL REQUIREMENTS

ITEM No.01 - 01 11 00 SUMMARY OF WORK (TAMU-CC)

REPLACE Paragraph 1.02 WORK COVERED BY CONTRACT DOUMENTS, Section A. with the following:

The Work of this Contract comprises the general construction of Texas A&M University - Corpus Christi's downtown building, a five-story high 70+ year old facility approximately 79,000 square feet. The project scope consists of general and MEP demolition, installation of two new elevators, renovations to the ground level and fourth floor, leaving remaining floors as shell space, replacement of mechanical, electrical, and plumbing systems to accommodate the new proposed functions located at 223 N. Chaparral St., Corpus Christi, Texas 78401 (a Texas A&M University - Corpus Christi owned facility) for the Board of Regents of The Texas A&M University System.

ITEM No.02 - 01 23 00 ALTERNATES
REPLACE Section 01 23 00 with the attached.

ITEM No.03 - 01 41 19 WINDSTORM CONSTRUCTION REQUIREMENTS
REMOVE 01 41 19.1 TAMU-CC Re-Roof WPI-1 from specifications entirely.

DIVISION 02 - EXISTING CONDITIONS

ITEM No.01 - 02 41 19 SELECTIVE DEMOLITION

REMOVE Paragraph E, page 02 41 19 – 5/5 in its entirety.

DIVISION 07 – THERMAL AND MOISTURE PROTECTION

ITEM No.01 - REMOVE Section 07 01 50.19 PREPARATION FOR REROOFING in its entirety.

ITEM No.02 - <u>REMOVE</u> Section 07 52 16 STYRENE-BUTADIENE-STYRNE (SBS) MODIFIED BITUMINOUS MEMBRANE ROOFING entirely.

ITEM No.03 - REMOVE Section 07 72 00 ROOF ACCESSORIES entirely.

DIVISION 09 - FINISHES

ITEM No.02 - 09 51 13 ACOUSTICAL PANEL CEILINGS (TYPE CL02)

REPLACE Paragraph 2.2 ACOUSTICAL PANELS – Type CL02, Section A, D, H with the following:

2.2 ACOUSTICAL PANEL CEILINGS (TYPE CL02 & CL03)

- A. <u>Basis of Design Product: Subject to compliance with requirements, provide</u> **Armstrong, Cirrus, Product #556** or comparable product by one of the following.
- D. Color: White Tile and Grid (CL02), Black Tile and Grid (CL03)
- H. Edge / Joint Detail: Angled Tegular

DIVISION 23 – HEATING VENTILATING AND AIR CONDITIONING (HVAC)

- ITEM No.01 ADD Specification Section 23 55 40 HYDRONIC PUMPS attached to Project Manual.
- ITEM No.02 <u>ADD</u> Specification Section 23 55 46 HYDRONIC WATER TREATMENT SYSTEMS attached to Project Manual.

DIVISION 26 - ELECTRICAL

- ITEM No.01 REMOVE Section 26 32 00 NATURAL GAS ENGINE GENERATOR in its entirety.
- ITEM No.02 REMOVE Section 26 33 00 AUTOMATIC TRANSFER SWITCH in its entirety.

MODIFICATIONS TO THE CONTRACT DRAWINGS

00 FRONT END

- ITEM No.01 REPLACE Sheet A0.0 COVER [Dated 08/04/2023] with revised & attached Sheet A0.0 COVER [Dated 09/07/2023].
- ITEM No.02 REPLACE Sheet A0.1 INDEX OF DRAWINGS [Dated 08/04/2023] with revised & attached Sheet A0.1 INDEX OF DRAWINGS [Dated 09/07/2023].
- ITEM No.01 Sheet A0.7

 <u>REMOVE</u> "GENERAL NOTES ROOFING" from sheet entirely.

01_ARCHITECTURAL DEMOLITION

ITEM No.01 - REMOVE Sheet AD1.6 DEMOLITION ROOF PLAN entirely from contract documents.

02 CIVIL

N/A

03 STRUCTURAL

- ITEM No.03 REPLACE Sheet S2 GENERAL NOTES [Dated 06/02/2023] with revised & attached Sheet S2 GENERAL NOTES [Dated 09/06/23].
- ITEM No.04 REPLACE Sheet S3 PLATFORM DETAILS [Dated 06/02/2023] with revised & attached Sheet S3 PLATFORM DETAILS [Dated 09/06/23].
- ITEM No.05 ADD Sheet S4 PLATFORM FRAMING PLAN attached.

04_ARCHITECTURAL

- ITEM No.01 REMOVE Sheet A1.106 ROOF PLAN LEVEL 06 entirely from contract documents.
- ITEM No.02 REMOVE Sheet A1.107 ROOF DETAILS entirely from contract documents.
- ITEM No.06 REPLACE Sheet A1.01 FLOOR PLAN LEVEL 01 [Dated 08/04/2023] with revised & attached Sheet A1.01 FLOOR PLAN LEVEL 01 [Dated 09/07/2023].
- ITEM No.07 REPLACE Sheet A1.04 FLOOR PLAN LEVEL 04 [Dated 08/04/2023] with revised & attached Sheet A1.04 FLOOR PLAN LEVEL 04 [Dated 09/07/2023].
- ITEM No.03 Sheets A1.201, A1.202, A1.203, A1.204, & A1.205 RELECTED CEILING PLANS DELETE Keynote 13 entirely.
- ITEM No.08 REPLACE Sheet A2.101 BUILDING ELEVATIONS [Dated 08/04/2023] with revised & attached Sheet A2.101 BUILDING ELEVATIONS [Dated 09/07/2023].
- ITEM No.09 REPLACE Sheet A2.102 BUILDING ELEVATIONS [Dated 08/04/2023] with revised & attached Sheet A2.102 BUILDING ELEVATIONS [Dated 09/07/2023].
- ITEM No.10 ADD Sheet A4.101 DETAILS [Dated 09/07/2023] attached.
- ITEM No.11 REPLACE Sheet A7.100 EXTERIOR & INTERIOR ALUMNIUM GLAZING SYSTEMS [Dated 08/04/2023] with revised & attached Sheet A7.100 EXTERIOR & INTERIOR ALUMNIUM GLAZING SYSTEMS [Dated 09/07/2023].

05 MECHANICAL

- ITEM No.01 REPLACE Sheet M1.400 MECHANICAL FLOOR PLAN LEVEL 4 [Dated 08/04/2023] with revised & attached Sheet M1.400 MECHANICAL FLOOR PLAN LEVEL 4 [Dated 09-07-23].
- ITEM No.02 REPLACE Sheet M1.600 MECHANICAL FLOOR PLAN ROOF DECK [Dated 08/04/2023] with revised & attached Sheet M1.600 MECHANICAL FLOOR PLAN ROOF DECK [Dated 09-07-23].
- ITEM No.03 REPLACE Sheet M3.100 MECHANICAL SCHEDULES [Dated 08/04/2023] with revised & attached Sheet M3.100 MECHANICAL SCHEDULES [Dated 09-07-23].
- ITEM No.04 REPLACE Sheet M3.101 MECHANICAL SCHEDULES [Dated 08/04/2023] with revised & attached Sheet M3.101 MECHANICAL SCHEDULES [Dated 09-07-23].
- ITEM No.05 REPLACE Sheet M3.102 MECHANICAL SCHEDULES [Dated 08/04/2023] with revised & attached Sheet M3.102 MECHANICAL SCHEDULES [Dated 09-07-23].
- ITEM No.06 REPLACE Sheet M4.100 MECHANICAL DETAILS [Dated 08/04/2023] with revised & attached Sheet M4.100 MECHANICAL DETAILS [Dated 09-07-23].

06 ELECTRICAL

- ITEM No.01 REPLACE Sheet E1.100 ELECTRICAL LIGHTING PLAN LEVEL 1 [Dated 08/04/2023] with revised & attached Sheet E1.100 ELECTRICAL LIGHTING PLAN- LEVEL 1 [Dated 09-07-23].
- ITEM No.02 REPLACE Sheet E1.400 ELECTRICAL LIGHTING PLAN LEVEL 4 [Dated 08/04/2023] with revised & attached Sheet E3.100 E1.400 ELECTRICAL LIGHTING PLAN LEVEL 4 [Dated 09-07-23].
- ITEM No.03 REPLACE Sheet E2.100 ELECTRICAL POWER PLAN LEVEL 1 [Dated 08/04/2023] with revised & attached Sheet E2.100 ELECTRICAL POWER PLAN- LEVEL 1 [Dated 09-07-23].
- ITEM No.04 REPLACE Sheet E2.600 ELECTRICAL POWER PLAN ROOF DECK [Dated 08/04/2023] with revised & attached Sheet E2.600 ELECTRICAL POWER PLAN ROOF DECK [Dated 09-07-23].
- ITEM No.05 REPLACE Sheet E3.100 SPEICAL SYSTEMS PLAN LEVEL 1 [Dated 08/04/2023] with revised & attached Sheet E3.100 SPECIAL SYSTEMS PLAN- LEVEL 1 [Dated 09-07-23].
- ITEM No.06 REPLACE Sheet E4.100 ONE-LINE DIAGRAM [Dated 08/04/2023] with revised & attached Sheet E4.100 ONE-LINE DIAGRAM [Dated 09-07-23].
- ITEM No.07 REPLACE Sheet E5.100 PANELS AND SCHEDULES [Dated 08/04/2023] with revised & attached Sheet E5.100 PANELS AND SCHEDULES [Dated 09-07-23].

07_PLUMBING

- ITEM No.01 REPLACE Sheet P1.100 PLUMBING DWV FLOOR PLAN LEVEL 1 [Dated 08/04/2023] with revised & attached Sheet P1.100 PLUMBING DWV FLOOR PLAN LEVEL 1 [Dated 09-07-23].
- ITEM No.02 REPLACE Sheet P1.200 PLUMBING DWV FLOOR PLAN LEVEL 2 [Dated 08/04/2023] with revised & attached Sheet P1.200 PLUMBING DWV FLOOR PLAN LEVEL 2 [Dated 09-07-23].
- ITEM No.03 REPLACE Sheet P1.300 PLUMBING DWV FLOOR PLAN LEVEL 3 [Dated 08/04/2023] with revised & attached Sheet P1.300 PLUMBING DWV FLOOR PLAN LEVEL 3 [Dated 09-07-23].
- ITEM No.04 REPLACE Sheet P1.400 PLUMBING DWV FLOOR PLAN LEVEL 4 [Dated 08/04/2023] with revised & attached Sheet P1.400 PLUMBING DWV FLOOR PLAN LEVEL 4 [Dated 09-07-23].
- ITEM No.05 REPLACE Sheet P1.500 PLUMBING DWV FLOOR PLAN LEVEL 5 [Dated 08/04/2023] with revised & attached Sheet P1.500 PLUMBING DWV FLOOR PLAN LEVEL 5 [Dated 09-07-23].

- ITEM No.06 REPLACE Sheet P1.600 PLUMBING DWV FLOOR PLAN ROOF DECK [Dated 08/04/2023] with revised & attached Sheet P1.600 PLUMBING DWV FLOOR PLAN ROOF DECK [Dated 09-07-23].
- ITEM No.07 REPLACE Sheet P2.100 PLUMBING WATER AND GAS FLOOR PLAN LEVEL 1 [Dated 08/04/2023] with revised & attached Sheet P2.100 PLUMBING WATER AND GAS FLOOR PLAN LEVEL 1 [Dated 09-07-23].
- ITEM No.08 REPLACE Sheet P2.200 PLUMBING WATER AND GAS FLOOR PLAN LEVEL 2 [Dated 08/04/2023] with revised & attached Sheet P2.200 PLUMBING WATER AND GAS FLOOR PLAN LEVEL 2 [Dated 09-07-23].
- ITEM No.09 REPLACE Sheet P2.300 PLUMBING WATER AND GAS FLOOR PLAN LEVEL 3 [Dated 08/04/2023] with revised & attached Sheet P2.300 PLUMBING WATER AND GAS FLOOR PLAN LEVEL 3 [Dated 09-07-23].
- ITEM No.10 REPLACE Sheet P2.400 PLUMBING WATER AND GAS FLOOR PLAN LEVEL 4 [Dated 08/04/2023] with revised & attached Sheet P2.400 PLUMBING WATER AND GAS FLOOR PLAN LEVEL 4 [Dated 09-07-23].
- ITEM No.11 REPLACE Sheet P2.500 PLUMBING WATER AND GAS FLOOR PLAN LEVEL 5 [Dated 08/04/2023] with revised & attached Sheet P2.500 PLUMBING WATER AND GAS FLOOR PLAN LEVEL 5 [Dated 09-07-23].
- ITEM No.12 REPLACE Sheet P2.600 PLUMBING WATER AND GAS FLOOR PLAN ROOF DECK [Dated 08/04/2023] with revised & attached Sheet P2.600 PLUMBING WATER AND GAS FLOOR PLAN ROOF DECK [Dated 09-07-23].
- ITEM No.13 REPLACE Sheet P5.100 DWV RISER DIAGRAM [Dated 08/04/2023] with revised & attached Sheet P5.100 DWV RISER DIAGRAM [Dated 09-07-23].
- ITEM No.14 REPLACE Sheet P5.200 WATER AND GAS RISER DIAGRAM [Dated 08/04/2023] with revised & attached Sheet P5.200 WATER AND GAS RISER DIAGRAM [Dated 09-07-23].

REQUEST FOR INFORMATION (BID QUESTIONS)

ITEM No.01 - Note 4 on Sheet M1.600 states "Install condensing unit on platform curb. Secure unit to the curb on all four sides." Please provide a detail for securing condensing units to the structural platform shown on Structural Sheet S3. As the structural mechanical platform is listed as Alternate No.1 please provide a detail for mounting the condensing units if this alternate is not elected.

RESPONSE: Per Plan Note on updated steel platform plan provided: Weld galvanized L4x4x3/8 to existing beams/ new angles at unit bearing locations. Coordinate bearing locations with unit Manufacturer's shop drawings. Unless noted otherwise on unit anchorage details, connect unit/ curb to angle/ beam below with minimum of 3/4" diameter thru-bolts at each end of unit and at 48-inch centers max.

ITEM No.02 - Section 23 29 00, Page 4, Paragraph 3.03-H details the requirements for internal duct liner. The specification requires Supply and Return air to be lined up to a point 15 ft from the connection to an "HVAC Unit." Is the term "HVAC Unit" to include air terminal units? If so, is round duct serving individual air devices to be lined if it falls within 15 ft of an air terminal unit?

RESPONSE: If the duct after the terminal unit is exposed to view it shall be internally. If the duct after the terminal unit is concealed above a non-visible ceiling (lay-in tile or gypsum) it shall be externally insulated.

- Hydronic Piping Section 23 55 10 does not give a specification for hot water piping. Please confirm specification for chilled water piping shall be applicable for hot water hydronic piping.
 - **RESPONSE:** Specification 23 55 10 applies to both hot and chill water piping.
- Will Copper, Type L be acceptable for hydronic piping applications where pipe is 2-inches or smaller?
 RESPONSE: Type L Copper will be acceptable in lieu of type K. See amended specifications.
- ITEM No.05 EMCS Specification Section 23 95 00, Page 10, Paragraph 2.1 states each EMCS vendor shall be submitted as an alternate. The Alternates specification and proposal form do not show a EMCS alternate. Please clarify.
 RESPONSE: The contractor shall provide a separate line item price for each manufacturer listed so the owner can determine best value. Refer to updated CSP Proposal Form and Alternates Specification Section 01 23 00.
- ITEM No.06 The Air Handling Unit Schedule on Sheet M3.100 lists Daikin as the Basis of Design with Note 15 listing Thermal, Temptrol and Trane as equivalent approved manufacturers. Applied Air Handling Unit Specification Section 23 58 55 lists Trane as Basis of Design with Temptrol, Daikin and JCl as equivalent approved manufacturers. Please clarify which manufacturers will be acceptable for Air Handling Units.
 RESPONSE: Acceptable manufacturers are Daikin, Trane, Thermal, and Temptrol.
- ITEM No.07 Note 10 of the DX Split Air Handling Schedule on Sheet M3.102 lists Trane and Daikin as equivalent approved manufacturers. DX Fan Coil Unit Specification Section 23 58 54 lists fan coil unit equivalent approved manufacturers as Trane, Carrier, York or McQuay. Please clarify which manufacturers will be acceptable for DX Fan Coil Units.
 RESPONSE: For the DX AHU Schedule and related condensing unit schedule, the equivalent acceptable manufacturers are Vertin, Stulz, and Liebert.
- ITEM No.08 Please provide a specification for hydronic pumps BHWP 1 & 2.

 RESPONSE: See Addendum Specification Section 23 55 40 attached.
- ITEM No.09 VAV-110 appears to be scheduled twice on Sheet M3.101. **RESPONSE:** See the updated schedule on revised Sheet M3.101 of this addendum.
- ITEM No.10 It appears that there might be some mislabeled equipment between the mechanical schedules and the plan sheets. Please clarify equipment marking and mechanical schedules.
 - a. The following equipment is shown on mechanical plans but listed on mechanical schedules:
 - i. CU-8 (Sheet M1.600)
 - ii. CU-11 (Sheet M1.600)
 - iii. CU-15 (Sheet M1.600)
 - iv. CU-4B (Sheet M1.600)
 - v. AHU-8 (Sheet M1.200)
 - vi. AHU-11 (Sheet M1.400)
 - b. The following equipment is listed on the mechanical schedules Sheet M3.102 but not shown on plans:

- i. CU-1
- ii. CU-2
- iii. CU-4
- iv. DX-AHU-1
- v. DX-AHU-4
- **RESPONSE:** See the updated schedule on revised sheets of this addendum.
- Please confirm the owner will provide builders risk on the existing structure throughout construction. If we are to carry we will need to know the replacement value.

 RESPONSE: The owner will not provide builders risk on the existing structure through construction. The replacement value is \$2,600,000.
- ITEM No.12 Can you clarify raco frame or storefronts for the interior glazing systems? Details and specifications are conflicting.
 RESPONSE: Raco interior aluminum framing system.
- ITEM No.13 097756 is listed in the specs index, but there is no spec. Can you clarify? RESPONSE: Not used. Remove from Project Manual.
- Note 22 general roofing note on A0.7 states to conduct flood and leak tests. Can you clarify if this needs to be a third-party test?
 RESPONSE: Delete GENERAL NOTES ROOFING from A0.7. The entire new roof has been removed from this phase and will be addressed under separate contract.
- There are notes to paint all exposed concrete. Can you clarify on levels 2, 3, and 5 where there is no finish out work that we do not need to paint any exposed concrete?

 RESPONSE: All existing concrete is to be left exposed and unpainted on all floors.
- ITEM No.16 Can you clarify general note 8 of interior elevations on A0.7?

 RESPONSE: Exposed ceilings are to be left unpainted on <u>all levels</u>. Existing exposed concrete floors on Level 1 & 4 are to receive sealer.
- ITEM No.17 Note 20 on A1.00 does not match civil plans on chaparral street. Please clarify. **RESPONSE:** Delete Note 20 on Sheet A1.00.
- ITEM No.18 C.201 States sanitary to be replaced by pipe bursting and to see MEP. There is nothing shown on the MEP drawings for pipe bursting. Please clarify.
 RESPONSE: Pipe bursting shown on Note 3: Sheet DP1.100.
- ITEM No.19 C.201 states to adjust water and gas line as needed for new sanitary. Please provide elevations of existing utilities. If these lines do need to be adjusted, please clarify to what extent.

 RESPONSE: Existing water and gas elevations are unknown, and locations are

approximate based on available records. Contractor shall field verify prior to start of construction and coordinate with engineer.

- ITEM No.20 Can you clarify if detail 3 on A1.107 will require new wood blocking or if that is existing to remain?
 RESPONSE: This sheet has been removed from the contract documents entirely per this addendum.
- ITEM No.21 Can you provide a detail for patching any holes with reinforced concrete? See note 11 on A1.201.
 RESPONSE: Refer to Detail S201 for typical slab-on-grade infill detail. Refer to Details S202 and S203 for typical elevated slab infill details.

- ITEM No.22 Can you clarify what the yellow circles are at restroom vestibule A415 on A1.204?

 RESPONSE: Disregard yellow circles on Sheet A1.204.
- A4.000 wall sections have details referring to A4.101. There is no drawing A4.101.
 Please clarify.
 RESPONSE: Sheet A4.101 is included in this addendum.
- ITEM No.24 I believe note 13 on A1.202, A1.203, and A1.205 is a typo. Can you clarify?

 RESPONSE: Correct. Delete Keynote 13 on Sheets A1.201, A1.202, A1.203, A1.204 & A1.205. Refer to Keynote 1.
- ITEM No.25 Can you clarify with the structural engineer that we do not need a detail for the 2 exterior louvers we are cutting into the exterior tilt wall?
 RESPONSE: Louver openings through typical 6-inch-thick perimeter wall do not require additional reinforcement. Louvers MUST NOT be cut through thickened pilaster section of wall.
- Wall finish legend on A6.101 has TL04 at reception wall, but I cannot find it on the elevations or finish plan. Can you clarify there is no TL03 or TL04?
 RESPONSE: Correct. TL03 and TL04 are not used.
- ITEM No.27 Floor plan at A413 does not show a quartz countertop. Room finish schedule A9.100 schedules a quartz top. Please clarify.

 RESPONSE: Yes, women's' restrooms shall have a quartz countertop as indicated on elevation 4/A5.104.
- Can you clarify elevation 15 of the interior glazing systems on A7.100 is to be a mirror door and window per note 3 on A1.404? Can you provide a specification for this? Can you also clarify that door #431 to OPS will be the same type of door? Note 3 on A1.404 only points to conference room door #428.
 <u>RESPONSE:</u> Delete Note 3 on Sheet A1.404, A1.402, A1.403, A1.404 & A1.405. There are no mirror doors / windows in scope.
- ITEM No.29 Can you provide a structural detail for the new reinforced concrete infill at the penthouse sheet A5.300?

 RESPONSE: Refer to Details S202 and S203 for typical elevated slab infill details.
- ITEM No.30 Structural plans, roof plan A1.106, and M1.600 for the mechanical platform are all conflicting. The mechanical platform on M1.600 looks to be a new structure and states to reference structural drawings. The structural drawings do not show this platform. Please clarify.

 RESPONSE: Refer to updated plan showing extents of steel platform.
- ITEM No.31 Can you provide structural details for the reinforcement and attachment of the generator at the roof?
 RESPONSE: The (future) generator will not bear on the roof. The (future) generator must be supported by elevated steel platform, not the roof.
- ITEM No.32 Architectural and electrical demolition and new lighting scope is conflicting. Architectural shows some ceilings to remain on floors 2, 3, and 5. However the demo plans also state to remove all lighting, conduit, etc. Electrical plans also show new lighting and conduit. How do we accomplish the full electrical scope without demolition of all ceilings on all floors?

- **RESPONSE:** Vacant floors 2, 3, and 5 to have temporary setup. All new electrical conduit / wires and lighting fixtures to be exposed on areas with existing to remain ceiling.
- ITEM No.33 Can the temporary AC's remain throughout construction? If not there will be additional costs for us to provide temp AC's to control temperature and humidity.

 RESPONSE: Yes, temporary AC's can remain throughout the construction.
- ITEM No.34 Can you please clarify specification section 014500? Is this only if retesting is required?

 RESPONSE: Testing (and retesting as required) is the responsibility of the general contractor.
- ITEM No.35 Can you clarify if that exterior frame for the louver detail on A4.000 is to be aluminum or galvanized?
 RESPONSE: The frame shall be 6" (152) deep, 6063T6 extruded aluminum with .095" (2.4) nominal wall thickness.
- ITEM No.36 Is a chemical feeder required for the hot water system? There is not one shown or noted on the plans and hydronic specifications don't specify a shot feeder or chemicals.

 RESPONSE: Yes. Refer to Specification Section 23 55 46.
- ITEM No.37 Please provide details for hydronic pump, boiler and make up water connections. **RESPONSE:** See the updated details included in this addendum.
- ITEM No.38 Please provide a specification for boilers.

 RESPONSE: See the updated specifications included in this addendum.
- There is not a specification for indoor exposed rectangular duct. Please confirm indoor exposed rectangular duct may be single wall, internally lined duct with an R-Value of 6.

 RESPONSE: Ductwork shall be a double wall with a thermal R-value of 6.
- ITEM No.40 Plumbing Sheet P1.100 shows below grade and below slab 6" SS (Sanitary Sewer) beneath existing slab. Who is responsible for saw cutting and patching of the existing slab for this system?

 RESPONSE: Reference structural drawings and coordinate with GC.

END OF ADDENDUM #1

PRE-PROPOSAL MEETING MINUTES



TEXAS A&M UNIVERSITY – CORPUS CHRISTI CSP3-0003 CHAPARRAL BUILDING RENOVATIONS TAMU-CC PROJECT NO. 157191FY21

DATE: August 23, 2023

LOCATION: TAMU-CC Purchasing Building, 6300 Ocean Drive, Unit 5731, Corpus Christi, TX 78412

TIME: 10:00 - 10:30 AM

1. INTRODUCTIONS - Will Hobart

2. BID DUE & OPENING - Will Hobart

- a. Bids are due Friday, September 8, 2023 @ 2:00 PM and shall be delivered to: Texas A&M University – Corpus Christi Procurement Office
 6300 Ocean Dr. Unit 5731 Corpus Christi, TX 78421-5731
- b. Proposals will be publicly opened and read aloud in Room 110 at that time.
- c. Note: Discussion took place on extending bid date. Any change to bid schedule will be issued by addenda.

3. BID FORM - Will Hobart

- a. Project Offer
- b. Addenda
- c. Contract Time

4. HUB SUBCONTRACTING PLAN - Ruben Gonzalez

5. QUESTIONS DURING BIDDING - Will Hobart

Direct questions in writing to Will Hobart via email to will.hobart@tamucc.edu.

Deadline for submission of questions is August 25th, by 5:00 pm.

All inquiries will result in written responses, via Addendum to this CSP, on August 30th, with copies to the TAMU-CC purchasing website.

6. PROJECT DESCRIPTION / SCOPE OF WORK - Jodi Smith Goings, TRA

- a. Project Identification: TAMU-CC Project #157191FY21 / Proposal #CSP3-0003
 - i. Project Location: 223 North Chaparral St., Texas, 78401
- Owner: Texas A&M University-Corpus Christi, 6300 Ocean Drive, Corpus Christi, TX 78412
 - i. Owner's Representative: Roger Padon, Project Manager Admin. Operations
- c. Architect: Turner | Ramiez Architects, 3751 S. Alameda St., Corpus Christi, TX 78411
 - i. Architect's Representative: Jodi Smith Goings, Project Manager
- d. The Work of Project is defined by the Contract Documents and includes, but is not limited to, the following:

- i. Renovations and general construction of the TAMU-CC Chaparral St. Downtown building, a five-story high, 70+ year old facility approximately 79,000 square feet. The project consists of build out of the first and fourth floor, shell space, new roof and includes four (4) alternates.
- e. Type of Contract:
 - i. Project will be constructed under a single prime contract.

7. CODE INFORMATION - Jodi Smith Goings

- a. 5 Story Building
- b. Type II-A Construction
- c. Sprinkled Building

8. ALTERNATE-COST SAVINGS & ALLOWANCES - Jodi Smith Goings

- a. General Contractors and Sub-Contractors are encouraged to provide a list of alternates and/or cost savings.
- b. Schedule of Alternates:
 - i. Roof top mechanical platform. (Additive Alternate)
 - ii. First floor baffle ceiling system where identified. (Additive Alternate)
 - iii. Fourth floor baffle ceiling system where identified. (Additive Alternate)
 - **iv.** Millwork rubber wall base in lieu of specified traditional base throughout. (Additive Alternate).

9. ADDENDUM - Will Hobart / Jodi Smith Goings

a. Addendum #01 – Anticipated 08.30.2023.

10. PERMITS, LICENSES, CERTIFICATES, AND FEES – Jodi Smith Goings

- a. General Contractor Bonds
- b. Builder's Risk Insurance
- c. Liability and Worker's Compensation Insurance
- d. Licenses
- e. This is state owned property, meaning a building permit is not required. Other permits may still be required for connecting to public utilities (water, sewer, gas) and working in the ROW.

11. QUESTIONS - Will Hobart / Jodi Smith Goings

12. SITE TOUR

 A site visit took place immediately following the Pre-Proposal Conference at 223 N. Chaparral St., Corpus Christi, TX 78401

ATTACHMENTS: Pre-Proposal Conference Sign-In Sheet

SIGN-IN SHEET

TAMU-CC Chaparral Building Renovations

Pre-Proposal Conference
August 23, 2023
TAMU-CC Purchasing Building
6300 Ocean Drive, Unit 5731, Corpus Christi, Texas 78412



NAME	ORGANIZATION	EMAIL
Jodi Smith Goings	Turner Ramirez Architects	jodi@trarch.com
Scott Meares	TAMU-CC	Scott.meares@tamucc.edu
Patrick Hoffman	Barcom Construction	Patrick@barcomcc.com
Robert Abbots	Remediators / Absolute Demolition	Robert@Absolutedemolition.com
Jeremy Baugh	Victory Building Team	jeremy@victorybuildingteam.com
Will Hobart	TAMU-CC	Will.hobart@tamucc.edu
Jose Espinoza	Victoria Air Conditioning	Joseespinoza@victoriaair.com
Chase Philips	South Texas Building Partners	rm@stbp.com
Jim Merrill	Pro Tech Mechanical	jmerrill@protechmech.com
Roger Padon	TAMU-CC	Roger.padon@tamucc.edu
Ed Klash	Barcom Construction	ed@barcomcc.com
Laughtan Moller	Barcom Construction	lmoller@barcom.om
Mike Munoz	Beecroft Construction	mam@beecroftconstruction.com
Este San Jasso	Victoria Air Conditioning	estesanjasso@victoriaair.com
Carlos Gutierrez	NRG Engineering	carlos@nrgcc.com
Francisco J. Rodriguez	NRG Engineering	frank@nrgcc.com
Shannon Reynolds	Beecroft Construction	slr@beecroftconstruction.com
Omar Ramirez	Beecroft Construction	or@beeecroftconstruction.com

THE TEXAS A&M UNIVERSITY SYSTEM SUPPLEMENTAL INSTRUCTIONS FOR COMPETITIVE SEALED PROPOSALS

These "Supplemental Instructions for Competitive Sealed Proposals," amend and supplement the "Instructions for Competitive Sealed Proposals" and shall govern in the event of any conflict with the "Instructions for Competitive Sealed Proposals."

1.0 PROPOSAL DOCUMENTS:

- 1.1. Drawings and Specifications have been prepared by the architectural/engineering (A/E) firm of Turner | Ramirez. Documents include Drawings and Specifications dated 08/04/2023.
- 1.2. Information inquiries regarding the Competitive Sealed Proposals (CSP) method of procurement should be directed to Will Hobart, Director of Procurement & Disbursements, Texas A&M University-Corpus Christi, 361-825-2616.
- 1.3. Inquiries regarding the technical aspects of the Drawings, Specifications and other CSP documents should be directed to Will Hobart, Director of Procurement & Disbursements, Texas A&M University-Corpus Christi, 361-825-2616.

2.0 PROPOSAL DEADLINE AND REQUIRED SUBMITTALS:

- 2.1. Proposals will be received by the Director of Procurement & Disbursements, Texas A&M University-Corpus Christi, 6300 Ocean Dr, Unit 5731, Corpus Christi, TX 78412-5731, in parts, at times and dates as follows:
- 2.2. PART 1 BASE BID PRICING ONLY COMPETITIVE SEALED PROPOSAL, will be received by the Director of Procurement & Disbursements at the aforementioned location until 2:00 pm CST, Tuesday, September 19, 2023, then publicly opened and read aloud after review of Part 3.
 - 2.2.1. Part 1 Proposals must include the following:
 - 2.2.1.1. One (1) executed original Competitive Sealed Proposal, PART 1 (A&M SYSTEM Form C-4 CSP), sealed and labeled in separate envelope.
 - 2.2.1.2. Certified or Cashier's Check or One (1) executed original Bid/Proposal Bond (A&M SYSTEM Form C-2), sealed in the small envelope affixed to the outside of the envelope.
 - 2.2.2. FAILURE TO SUBMIT A COMPLETE PROPOSAL WILL BE VIEWED BY THE OWNER AS A NON-RESPONSIVE PROPOSAL WHICH WILL BE SUBJECT TO REJECTION.
- 2.3. Six (6) copies of PART 2, TECHNICAL PROPOSAL, PROPOSER'S QUALIFICATIONS, will be received until 2:00 pm CST, Tuesday, September 19, 2023, by the Director of Procurement & Disbursements at the aforementioned location. Include a copy of information on an electronic formatted media device.

- 2.4. One (1) copy of PART 3, TECHNICAL PROPOSAL, HISTORICALLY UNDERUTILIZED BUSINESS SUBCONTRACTING PLAN, will be received 2:00 pm CST, Tuesday, September 19, 2023, by the Director of Procurement & Disbursements at the aforementioned location. The HUB Subcontracting Plan shall be clearly labeled "HUB Subcontracting Plan, Chaparral Building Renovations, Project No. CSP3-003". Sections shall be appropriately tabbed for easy reference.
 - 2.4.1. FAILURE TO SUBMIT A COMPLETE AND ACCEPTABLE HUB SUBCONTRACTING PLAN WILL BE VIEWED BY THE OWNER AS A NON-RESPONSIVE PROPOSAL WHICH WILL BE REJECTED.
 - 2.4.1.1. NOTE TO GENERAL CONTRACTOR:

 THE HUB SUBCONTRACTING PLAN (HSP), SUBMITTED AS PART 3

 OF THE CSP PROCESS, WILL BECOME A PART OF ANY

 CONSTRUCTION CONTRACT RESULTING FROM THIS

 SOLICITATION.
- 2.5. Proposals submitted by U.S. Mail shall be addressed to:

Will Hobart, Director of Procurement & Disbursements, Texas A&M University-Corpus Christi 6300 Ocean Drive, Unit 5731 Corpus Christi, TX 78412-5731

****NOTE*** Proposals sent via U.S. Mail must allow sufficient time for internal delivery to the physical office described below.

Proposals submitted by commercial courier or hand delivery shall be addressed to

Will Hobart, Director of Procurement & Disbursements, Texas A&M University-Corpus Christi 6300 Ocean Drive, Unit 5731 Corpus Christi, TX 78412-5731

Delivery of all proposal parts to the physical location above prior to the submittal deadlines set forth above is the responsibility of the proposer.

2.6. Proposals will be publicly opened, and the names of the respondents and the monetary proposals publicly read aloud at 2:00 pm CST, Tuesday, September 19, 2023, in the Texas A&M University- Corpus Christi Procurement office at 6300 Ocean Drive, Unit 5731 (Purchasing Bldg), Room 110, Corpus Christi, TX 78412-5731

3.0 PRE-PROPOSAL MEETING:

3.1. August 23rd, in the Purchasing Bldg, 6300 Ocean Drive, Unit 5731, Corpus Christi, TX 78412, at 10:00 am. (Site walkthrough will follow meeting)

3.2. An Additional site walk through has been scheduled for Tuesday, August 28, 2023. The building will be open from 2:00-4:00 pm.

4.0 EVALUATION AND CONTRACT AWARD PROCESS:58'

4.1. The A&M System reserves the right not to award the Base Bid or any or all of the Alternates.

5.0 BUILDING SITE LOCATION:

5.1. The building site is located at the following address;

223 NORTH CHAPARRAL STREET CORPUS CHRISTI, TEXAS 78401

PART 1

TECHNICAL PROPOSAL

COMPETITIVE SEALED PROPOSAL

(Fir	m Name)
•	,
	11
(A	ddress)
(City/Sta	ate/Zip Code)
(Chy/Sta	ite/Zip Code)
(Phone)	(Fax)
(I Holle)	(rax)

For

Chaparral Building Renovations

Texas A&M University-Corpus Christi

Corpus Christi, Texas

TAMU-CC Project No. 157191FY21

Project No.	157191FY21	
Proposal Of:		
	(I egg	d Firm Name)

COMPETITIVE SEALED PROPOSAL to THE BOARD OF REGENTS of THE TEXAS A&M UNIVERSITY SYSTEM FOR THE FOLLOWING WORK

Chaparral Building Renovations Texas A&M University-Corpus Christi Corpus Christi, Texas

The undersigned, as a designated representative of the proposer, declares such firm is the only entity, as principal, with any interest in this Proposal and the Proposal is made without collusion with any other entity. The proposer affirms that the form of Contract, Instructions for Competitive Sealed Proposals, Supplemental Instructions for Competitive Sealed Proposal, Addenda, selection criteria, estimated budget, Specifications and the Drawings pertaining to this Proposal have been examined and the firm has also examined the locations, conditions and classes of materials for the proposed Work and agrees to provide all necessary machinery, tools, apparatus and construction means to accomplish the Work described in the Contract Documents in the manner prescribed.

The proposer agrees the quantities of Work to be performed and materials to be furnished may be increased or decreased as may be considered necessary, in the sole opinion of the Owner's Representative, to complete the Work as planned and contemplated. Adjustment for changes in Work will be in accordance with the Owner's current Uniform General and Supplementary Conditions.

 $Proposal\ amounts\ must\ be\ shown\ in\ both\ words\ and\ figures.\ In\ case\ of\ discrepancy,\ the\ amount\ shown\ in\ words\ will\ govern.$

	The proposer acknowledges receipt and in	acorporation of the following	ing addenda into this Prop	osal:
No.				
Dated				
No.				
Dated				
No.				
Dated		_		
	Is proposer a corporation? Check One:	Yes □	No □.	

If proposer is subject to the Texas Franchise Tax, a "Certificate of Good Standing" issued by the Texas Comptroller of Public Accounts must be submitted with the Proposal.

A "nonresident proposer" is equivalent to a "nonresident bidder," and a "Texas Resident Proposer" is equivalent to a "Texas Resident Bidder," as defined hereafter and may be awarded a Contract in accordance with Chapter 2252, Texas Government Code, as partially quoted below:

"...(3) "Nonresident bidder" refers to a person who is not a resident.

6

(4) "Resident bidder" refers to a person whose principal place of business is in this state, including a contractor whose ultimate parent company or majority owner has its principal place of business in this state."

In the space below, enter the address of the proposer's place of business and, if applicable, the name and address of the proposer's ultimate parent company or majority owner.

Ult	imate parent company or majority owner's name and the address of its principal place of business

BASE PROPOSAL AMOUNT

Total amount for the furnishing of all labor, materials, services, equipment and appliances required in conjunction with and properly incidental to all Work (demolition, site work, general construction, mechanical, plumbing, electrical and data/telecommunications work not including Work listed as alternates) for construction of the Chaparral Building Renovations Project in Corpus Christi, Texas, in conformance with Drawings and Specifications prepared by Turner Ramirez Architects, Corpus Christi, Texas.

(Amount In Words)		
	DOLLARS (\$)
		(Amount In Figures)

ALTERNATES

- A. The undersigned Bidder proposes the amount below be added to or deducted from the Base Bid if particular alternates as described in Section 01 23 00 "Alternates" are accepted by Owner. Amounts listed for each alternate include costs of related coordination, modification, or adjustment.
- B. If the alternate does not affect the Contract Sum, the Bidder shall indicate "NO CHANGE."
- C. If the alternate does not affect the Work of this Contract, the Bidder shall indicate "NOT APPLICABLE."
- D. The Bidder shall be responsible for determining from the Contract Documents the affects of each alternate on the Contract Time and the Contract Sum.
- E. Owner reserves the right to accept or reject any alternate, in any order, and to award or amend the Contract accordingly within 180 days of the Notice of Award unless otherwise indicated in the Contract Documents.
- F. Acceptance or non-acceptance of any alternates by the Owner shall have no affect on the Contract Time unless the "Schedule of Alternates" Article below provides a formatted space for the adjustment of the Contract Time.

SCHEDULE OF ALTERNATES

ADD		NO CHANGE_			,
(A I				Dollars (\$	
(Amount In	,			,	unt In Figures)
ADD	DEDUCT	calendar days to	adjust the Contra	ect Time for this alterna	ate.
lternate No. 135.	2: Add alterna	te to provide and i	nstall CL04 baffle	ceiling system at Cor	ridor A101 and Galle
ADD_	DEDUCT	NO CHANGE_	NOT APPLIC	CABLE	
				Dollars (\$).
(Amount In	Words)			(Amo	unt In Figures)
ADD	DEDUCT	calendar days to	adjust the Contra	act Time for this alterna	ate.
427 Elevator	Lobby, and A42			e ceiling system at fou	rth floor A402 Loung
				Dollars (\$).
(Amount In	Words)			(Amo	unt In Figures)
ADD	DEDUCT	calendar days to	adjust the Contra	act Time for this alterna	ate.
ase at location	ns identified on i	provide and install l room finish schedu NO CHANGE_	e.	rubber wall base in lieu	of traditional vinyl w
				Dollars (\$).
(Amount In	Words)			(Amo	unt In Figures)
ADD	DEDUCT	calendar days to	adjust the Contra	act Time for this alterna	ate.
chneider Elec				or shall provide <u>Base b</u> ontrols manufacturers	
ADD_	DEDUCT	NO CHANGE_	NOT APPLIC	CABLE	
				Dollars (\$).
(Amount In	Words)			(Amo	unt In Figures)
ADD	DEDUCT	calendar days to	adjust the Contra	ct Time for this alterna	ate.

Alternate No. 5	B: Johnson Co	ontrols Metasys			
ADD	_ DEDUCT	NO CHANGE_	NOT APPLICAB	BLE	
(Amount In V					Amount In Figures)
,	ŕ		li de Gerena	·	,
ADD	_ DEDUCT	calendar days to	adjust the Contract T	ime for this al	ternate.
CONSTRUCTI	ON TIME:				
	signed agrees to	o complete all Wor	k in the following num	nber of calenda	ar days from the Notice to
Proceed:					
(Words)			(Proposar to con	((Numerals)
(Wolds)			(Froposer to con	ipiete)	(Inumerals)
ITEM NUMBER (ONE—PRICE	PER PHASE			
			installation, complete	as described i	n the specifications will be:
a. Please prov	vide a pricing b	oreak out by schedu	lle of values, for each	phase of the w	ork.
•	1 0	•	•	•	
	. d. D	1. 1. 1	1 D'1 D	1D 1/TA	MIGE CO: 4
					MUS Form C-2) in the rable without recourse to
the order of the Boa	rd of Regents of	of The Texas A&M	University System. U	Use of a surety	company bid bond form is
NOT acceptable and	d will constitute	e an irregular propo	osal which will be reject	cted.	
		his Proposal will n	ot be withdrawn for a p	period of ninet	y (90) days from the date of
the Proposal openin	g.				
The propos	ser further agre	ees to pay Liquidat	ed Damages per calen	dar day for fa	ilure to complete the work
		dance with Section	9.11 of the Uniform Ge	eneral and Sup	plementary Conditions and
as established in the	Contract.				
			.1 and 10.2 in the Instr hapter 231, Texas Fan		empetitive Sealed Proposals
Failure to o	complete all po	ortions of this Propo	osal form may cause th	e entire Propo	sal to be rejected.
Proposer:					
-			Federal Tov	I D No	
			—	1. D. 110.	
(Legal Fin	rm Name)				

By: ___

The Texas A&M University System Form C-4 CSP 073107

(Signature)	
(Print or Type Name)	
Title:	Name(s) of individual(s), proprietor(s), partner(s), share holders(s), or owner(s) with an ownership interest of at least 25% of the business entity executing this
Address	Proposal.
Address:	Name:
	Name:
Phone No.:	 Name:
FAX No.:	
E-mail Address:	Name:

SECTION 01 23 00

ALTERNATES

PART 1 - GENERAL

1.01 SECTION INCLUDES:

- A. Identification of Alternates.
- B. Description of Alternates.

1.02 RELATED SECTIONS:

- A. Section 01 11 00 Summary of Work.
- B. Divisions 2 through 35: Specific sections could be affected by any Alternate.

1.03 IDENTIFICATION OF ALTERNATES:

- A. Alternates will be selected at the option of Owner. Alternates accepted by Owner for incorporation into the Work are identified in the Contract.
- B. Coordinate related Work and modify surrounding Work as required to complete the Work, including changes required by each Alternate, designated in the Contract.

1.04 DESCRIPTION OF ALTERNATES:

- A. Alternate No. 1: Roof top mechanical platform; refer to structural drawing S3.
- B. Alternate No. 2: Add alternate to provide and install CL04 baffle ceiling system at Corridor A101 and Gallery A135.
- C. Alternate No. 3: Add alternate to provide and install CL04 baffle ceiling system at fourth floor A402 Lounge, A427 Elevator Lobby, and A429 Reception.
- D. Alternate No. 4: Alternate to provide and install RWB-1 millwork rubber wall base in lieu of traditional vinyl wall base at locations identified on room finish schedule.
- E. Alternate No. 5: Building Energy Management System: Contractor shall provide Base bid pricing for Schneider Electric. Provide an alternate price for each of the BMS controls manufacturers as follows:

Alternate 5A: Siemens BMS Controls

Alternate 5B: Johnson Controls Metasys BMS Controls

07/22

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION

SECTION 23 55 40 HVAC PUMPS

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Vertical In-line pumps.
- B. Close coupled pumps.
- C. Base mounted pumps.

1.02 RELATED WORK

- A. Section 231700 Motors and Motor Controllers
- B. Section 232400 Sound & Vibration Control.
- C. Section 232600 Piping Insulation.
- D. Section 235510 Hydronic Piping Above Grade

1.03 REFERENCES

A. ANSI/UL 778 - Motor Operated Water Pumps.

1.04 QUALITY ASSURANCE

- A. Manufacturer: Company specializing in manufacture, assembly, and field performance of pumps with minimum five years experience.
- B. Alignment: Base mounted pumps shall be aligned by qualified millwright and alignment certified.
- C. Impellers: All impellers shall be dynamically balanced.
- D. The mechanical contractor shall be responsible for accurately checking all pumping heads, based upon the actual piping and equipment installation. The contractor shall be responsible for furnishing pumps and motors of proper sizes suitable for the actual installation. Do not provide pumps with capacities less than the amount indicated on the drawings.

1.05 SUBMITTALS

A. Submit shop drawings and product data under provisions of Division 1.

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TRA Project No.: 2021-11

23 55 40 - 1/5 HYDRONIC PUMPS 08/04/2023

- B. Submit certified pump curves showing performance characteristics with pump and system operating point plotted. Include NPSH curve when applicable.
- C. Submit manufacturer's installation instructions under provisions of Division 1.

1.06 OPERATION AND MAINTENANCE DATA

- A. Submit operation and maintenance data under provisions of Division 1.
- B. Include installation instructions, assembly views, lubrication instructions, and replacement parts list.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site under provisions of Division 1.
- B. Store and protect products under provisions of Division 1.

1.08 EXTRA PARTS

A. Provide one set of replacement mechanical seals for each size of pump. After the pumps are in operation for ninety days, the Contractor shall check the seals and replace any that are defective. If the replacement seals are not used during the 90 day operational period, they shall be delivered to the Owner.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Taco.
- B. Aurora.
- C. Bell and Gossett.
- D. Armstrong
- E. Substitutions: Under provisions of Division 1.

2.02 GENERAL CONSTRUCTION REQUIREMENTS

A. Balance: Rotating parts, statically and dynamically.

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- B. Construction: To permit servicing without breaking piping or motor connections.
- C. Pump Motors: Operate at 1750 rpm unless specified otherwise. Provide totally enclosed motors when mounted outdoors. Refer to Section 231700.
- D. Pump Connections: Flanged, for pipe size two inches and larger. Provide union for pipe sizes less than two inches.
- E. Critical speed of each pump shall be at least 115% of the running speed listed in the schedule.

2.03 CLOSE COUPLED PUMPS

- A. Type: Horizontal shaft, single stage, close coupled, radially split casing, for 125 psig maximum working pressure.
- B. Casing: Cast iron, with suction and discharge gage ports, renewable bronze casing wearing rings, seal flush connection, drain plug, flanged suction and discharge.
- C. Impeller: Bronze, fully enclosed, keyed to motor shaft extension.
- D. Shaft: Stainless steel.
- E. Seal: Packing gland with minimum four rings graphite impregnated packing and bronze lantern rings, 230 degrees F (110 degrees C) maximum continuous operating temperature.

2.04 VERTICAL IN-LINE PUMPS

- A. Type: Vertical, single stage, close coupled, radially or horizontally split casing, for in-line mounting, for 175 psig working pressure.
- B. Casing: Cast iron, with suction and discharge gage port, casing wear ring, seal flush connection, drain plug, flanged suction and discharge.
- C. Impeller: Bronze, fully enclosed, keyed directly to motor shaft or extension.
- D. Shaft: Stainless steel with shaft grounding rings.
- E. Seal: Carbon rotating against a stationary ceramic seat viton fitted, 225 degrees F maximum continuous operating temperature.

2.05 BASE MOUNTED PUMPS

A. Type: Horizontal shaft, single stage, direct connected, radially split casing, for 125

psig maximum working pressure.

- B. Motors: Indoor applications shall have open drip proof motors. Outdoor applications shall have TEFC motors.
- C. Casing: Cast iron, with suction and discharge gage ports, renewable bronze casing wearing rings, seal flush connection, drain plug, flanged suction and discharge.
- D. Impeller: Bronze, fully enclosed, keyed to shaft.
- E. Bearings: Grease or Permanently lubricated roller or ball bearings, 40,000 hour minimum life.
- F. Shaft: Alloy steel with stainless steel shaft sleeve.
- G. Seal: Carbon rotating against a stationary ceramic seat, 225 degrees F maximum continuous operating temperature.
- H. Drive: Flexible coupling with coupling guard.
- I. Baseplate: Cast iron or fabricated steel with integral drain rim. Galvanized when located outdoors.
- J. For pumps driven by motors 25 horsepower and larger, the steel base shall be fabricated of structural shapes and formed steel sections. The main structural member and formed steel section shall have a depth of at least 1/12 the overall length of the base but not less than 4 inches. The base shall be filled with concrete or grout after installation.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install pumps in accordance with manufacturer's instructions.
- B. Provide access space around pumps for service. Provide no less than minimum as recommended by manufacturer.
- C. 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.
- D. Pumps shall be free of flashing and cavitation at all flow rates from 25% to 125% of design flow under the suction conditions of the pump installation.

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- E. The impeller selected for compliance with design requirements shall not exceed 85% of cutwater diameter for the selected pump casing size. This shall be clearly certified on the Shop Drawing submittal.
- F. 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. For close coupled or base mounted pumps, provide supports under elbows on pump suction and discharge lines.
- G. Provide line sized shut-off valve and strainer on pump suction, and line sized soft seat check valve and balancing valve on pump discharge.
- H. Provide air cock and drain connection on horizontal pump casings.
- I. Provide drains for bases and seals, piped to and discharging into floor drains.
- J. Lubricate pumps before start-up.
- K. Install close coupled and base mounted pumps on concrete base, with anchor bolts, set and level, and grout in place.
- L. Qualified millwright shall check, align, and certify base mounted pumps prior to start-up.

END OF SECTION 23 55 40

Texas A&M University - CC Chaparral Building Renovations

SECTION 23 55 46 HYDRONIC WATER TREATMENT SYSTEMS

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

- A. The requirements of the General Conditions and Supplementary Conditions apply to all work herein.
- B. The Basic Materials and Methods, Section 230500, are included as a part of this Section as though written in full in this document.

1.02 SCOPE

Scope of the Work shall include the furnishing and complete installation of the equipment covered by this Section, with all auxiliaries, ready for owner's use. There is an existing chemical treatement system in place for the chill water system. The contractor shall be responsible for coordinating the existing system including flushing and maintaining the system during construction. The hot water treatment system is a new system to be installed under this contract.

1.03 DESCRIPTION OF WORK

- A. Work Included: Perform water analysis and provide all water treatment products, holding reservoirs, equipment and labor for testing, cleaning, flushing and dispensing products to control water quality for each system specified hereinafter as follows:
 - 1. Chilled water system.
 - 2. Hot water system
- B. Chemicals: Provide, at no additional cost to the Owner, all chemicals required for operating and testing all water treatment systems prior to and for three months after acceptance by the Owner.
- C. Instructions: Provide operating and maintenance instructions for each water treatment system; include one set in each Owner's Manual and deliver one set to Owner's operating personnel.
- D. Testing Equipment and Reagents: Furnish suitable water treatment testing equipment for each system, complete with apparatus and reagents necessary for operation prior to and for three months after acceptance by the Owner.
- E. Service Representative: Furnish the services of a qualified service representative to instruct Owner's operating personnel in proper operation and maintenance of water treatment equipment, systems and tests required. Service representative shall return to the site bi-weekly during first 2 months of operation and monthly during the remainder of the guarantee period. At such time, service representative shall check and adjust

water treatment system operation, check efficiency of chemicals and chemical applications, and instruct and advise operating personnel.

- F. Replacement and Rework: Replace defective or nonconforming materials and equipment with new materials and equipment at no additional cost to the Owner for 1 year after successful start-up of the system. All warranty work shall be FOB as installed at the project site.
 - 1. Guarantee: Provide system produced by manufacturer who is willing to execute the required guarantee.
 - 2. Agreement to Maintain: Provide system produced by manufacturer who is willing to execute (with the Owner) the required agreement for continued maintenance of the system.

1.04 QUALITY ASSURANCE

- A. Qualifications: The Contractor for work under this Section shall have:
 - 1. Research and development facilities.
 - 2. Regional laboratories capable of making water analysis.
 - 3. A service department and qualified technical service representative located within a reasonable distance of the project site.
 - 4. Service representatives who are Registered Engineers or factory-certified technicians with not less than 5 years of water treatment experience with the water treatment system manufacturer.
- B. Packaging and Labeling: Supply water treatment chemicals in metal drums, fiber drums with plastic liners, or plastic lined "liqui-paks" as best suited to the materials. Paper bags or unlined cardboard cartons will not be acceptable. Use only chemicals in domestic water systems, and all coincides regardless of where used, which are registered with the U.S. Department of Agriculture (USDA) or the U.S. Environmental Protection Agency (EPA) and which are labeled as required by law.
- C. Electrical Standards: Provide electrical products which have been tested, listed and labeled by Underwriters Laboratories (UL) and which comply with National Electrical Manufacturers' Association (NEMA) standards.
- D. Chemical Standards: Provide chemical products acceptable under state and local pollution control or other governing regulations.

1.05 SUBMITTALS

- A. Test reports: Submit test reports certified by an officer of the firm, on water treatment company letterheads, of samples of each treated water system specified. Comply with ASTM D 596 for reporting. Indicate the ASTM best methods for each test.
- B. Shop Drawings: Submit shop drawings for each water treatment system. Show wiring,

piping and tubing sizes, fittings, accessories, valves and connections.

- C. Guarantee: Submit written guarantee signed by the Manufacturer and countersigned by the Installer and Contractor, agreeing to adjust or replace the chemicals in the systems as required to achieve the required performance, during a 1-year period following the final start-up or the continued operation of the chillers.
- D. Agreement to Maintain: Prior to the time of final acceptance, the Manufacturer of the chilled water treating system shall submit four copies of an "Agreement for Continued Service and the Owner's possible acceptance." Offer terms and conditions for furnishing chemicals and providing continued testing and equipment for a 1-year period with option for renewal of the Agreement by Owner.

PART 2 - PRODUCTS

2.01 GENERAL

- A. Water Analysis: Determine which chemicals to use from the results of a water sample analysis taken from the building site by the system manufacturer. Provide ingredients necessary to achieve the desired water conditions.
- B. Pre-Treatment: Treat water piping systems with chemicals to remove and permit flushing of mill scale, oil, grease and other foreign matter. Chemicals shall be equal to Nalco 2578 prepping compound.
- C. FDA and USDA Approval: Use only FDA and USDA-approved products in system with direct connection to domestic water systems.
- D. Governing Laws: Ensure that neither products, waste, blow-down nor other effluents violate local, state, EPA, or other agency regulations in effect in the project area.

2.02 CHILLED AND HOT WATER SYSTEMS

- A. Chemicals: Provide water treatment products which contain inhibitors that perform the following:
 - 1. Form a protective film to prevent corrosion and scale formation;
 - 2. Scavenge oxygen and protect against scale;
 - 3. Remain stable throughout operating temperature range, and;
 - 4. Are compatible with pump seals and other elements in the system.
 - 5. The inhibitor shall be a boron-nitrate corrosion inhibitor compound, equal to Nalco 2534.
- B. Equipment: For each system, provide a 5-gallon filter feeder constructed of materials which are impervious to the products dispensed. Feeder shall be designed for not less than 200-psig operating pressure. Filter feeder shall be as manufactured by efficiency Dynamics Model FF-50 or approved equal.

C. Test Kit: Provide test kit and reagents for determining proper water conditions.

PART 3 - EXECUTION

3.01 PIPING SYSTEMS PREPARATION

- A. General: After piping systems are erected and proven free of leaks, administer chemicals required for preparation treatment and flushing. Apply chemicals for the time period and in the concentration recommended by the water treatment manufacturer for this portion of the work.
- В. Testing: Perform test procedures and submit a written report of test conditions and results to the Engineer. If test results are unsatisfactory, repeat preparation treatment as necessary to achieve test results approved by the Owner's insurance carrier and the Engineer.

3.02 **FLUSHING**

A. Drain preparation and boil out products from the systems. Flush with clean water until system tests prove systems are free of preparation and boil out products and other contaminants prior to administering system water treatment as specified hereinbefore.

3.03 **CHILLED WATER SYSTEMS**

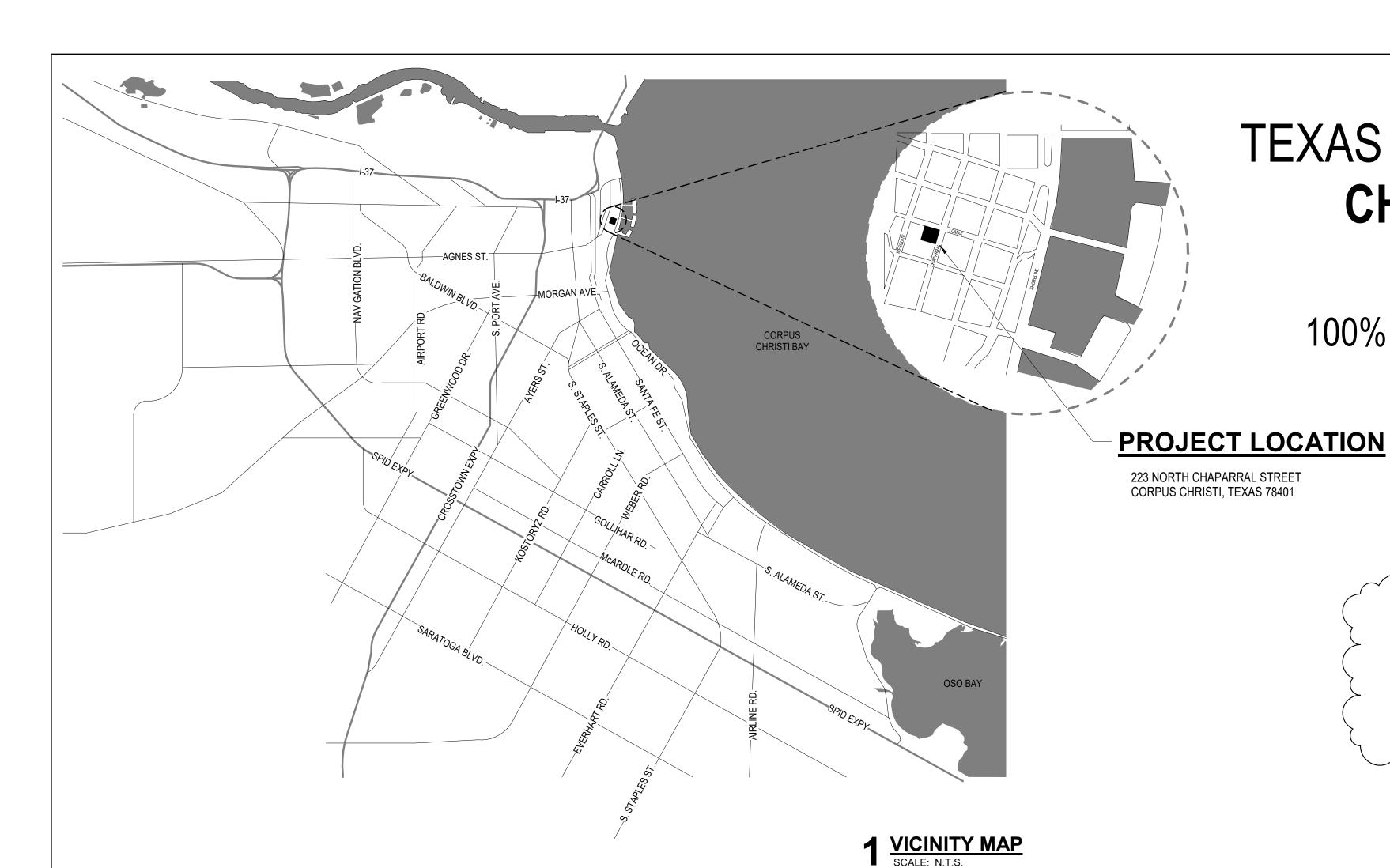
- A. Treatment: Treat initial water charge to water system, after system has been flushed and prepped, to achieve a water quality as specified.
- B. Start-up Procedures: During water system start-up, operate water treating system (after charging with specified chemicals) to maintain the required steady-state characteristics of water. Demonstrate system operation to Owner's operating personnel.
- C. Prepare certified test report for each required water performance Reports: characteristic. Comply with the following ASTM standard, where applicable:
 - 1. D859 - Tests for Silica in Water and Water Waste.
 - 2. D1067 - Tests for Acidity or Alkalinity of Water.
 - 3. D1068 - Tests for Iron in Water and Waste Water.
 - 4. D1126 - Tests for Hardness in Water.
 - 5. D1128 - Identification of Types of Microorganisms and Microscopic Matter in Water and Waste Water.
 - 6. D3370 - Sampling Water.
- D. Water Chemistry: Where water chemistry substantiates that pH control is not necessary, chemical fee shall be based on water makeup qualities. Water analysis shall be based on the full parameters of operation, and all possible water supplies. Total hardness and "M" alkalinity of the makeup water will be the determining factor along

with the technical limitations of the inhibitors.

3.04 PERSONNEL TRAINING

A. Operator Training: Train Owner's personnel in use and operation of chilled water treating systems including preparation of chemical solution reservoir. A Program Administration Manual shall be furnished encompassing all systems in this section of the Specifications.

END OF SECTION



TEXAS A&M UNIVERSITY - CORPUS CHRISTI CHAPARRAL BUILDING RENOVATIONS

223 NORTH CHAPARRAL STREET CORPUS CHRISTI, TEXAS 78401

100% CONSTRUCTION DOCUMENTS - AUGUST 04, 2023

TAMU-CC CONTRACT #: 20172914 TAMU-CC PROJECT #: 157191FY21 TRA PROJECT #: 2021-11

ADDENDUM NO. 2 - SEPTEMBER 07, 2023



UNIVERSITY - CORPUS CHRISTI - BUILDING RENOVATIONS

PROJECT DESIGN TEAM

TURNER RAMIREZ ARCHITECTS

3751 S. ALAMEDA STREET CORPUS CHRISTI, TEXAS 78411

ASSOCIATE ARCHITECT

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NRG ENGINEERING

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CIVIL ENGINEER

YORK ENGINEERING

CORPUS CHRISTI, TEXAS (361) 245-9400

STRUCTURAL ENGINEER

REM ENGINEERING

2218 BASSE ROAD SAN ANTONIO, TEXAS 78213 (210) 320-1199



TURNER | RAMIREZ ARCHITECTS

3751 S. ALAMEDA ST. CORPUS CHRISTI, TX 78411

p (361)994-8900

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ADD ALTERNATE TO PROVIDE AND INSTALL CL04 BAFFLE CEILING SYSTEM ON FOURTH FLOOR A402 LOUNGE AND A427 ELEVATOR LOBBY & RECEPTION A429 (3 LOCATIONS TOTAL). BASE BID TO INCLUDE EXPOSED, UNPAINTED STRUCTURE.

4 ADD ALTERNATE TO PROVIDE AND INSTALL RWB-1 TARKETT JOHNSONITE MILLWORK WALL BASE IN LIEU OF TARKETT JOHNSONITE TRADITIONAL VINYL (RWB-2) @ LOCATIONS IDENTIFIED IN ROOM

5B PROVIDE ALTERNATE PRICE FOR BUILDING MANAGEMENT SYSTEM CONTROLS FROM JOHNSON

DESCRIPTION

2 ADD ALTERNATE TO PROVIDE AND INSTALL CL04 BAFFLE CEILING SYSTEM AT 3 LOCATIONS ON FIRST FLOOR CORRIDOR A101 AND GALLERY A135 (4 LOCATIONS TOTAL). BASE BID TO INCLUDE EXPOSED,

BID TO INCLUDE SCHNEIDER ELECTRIC BMS)

1 ROOF TOP MECHANICAL PLATFORM; REFER TO STRUCTURAL DRAWING S3

5A PROVIDE ALTERNATE PRICE FOR BUILDING MANAGEMENT SYSTEM CONTROLS FROM SIEMENS (BASE

CONTROLS METAYS (BASE BID TO INCLUDE SCHNEIDER ELECTRIC BMS)

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PROJECT ISSUE DATE:

PROJECT NUMBER:

SHEET IDENTIFICATION

PHASE: 100% CONSTRUCTION DOCUMENTS

COVER

06 _ ELECT DE1.100	ELECTRICAL DEMOLITION PLAN - LEVEL 1
DE1.200	ELECTRICAL DEMOLITION PLAN - LEVEL 2
DE1.300	ELECTRICAL DEMOLITION PLAN - LEVEL 3
DE1.400	ELECTRICAL DEMOLITION PLAN - LEVEL 4
DE1.500	ELECTRICAL DEMOLITION PLAN - LEVEL 5
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E1.300	ELECTRICAL LIGHTING PLAN - LEVEL 3
E1.400	ELECTRICAL LIGHTING PLAN - LEVEL 4
E1.500	ELECTRICAL LIGHTING PLAN - LEVEL 5
E1.600	ELECTRICAL LIGHTING PLAN - ROOF DECK

ELECTRICAL LIGHTING PLAN - ROOF DECK ELECTRICAL POWER PLAN - LEVEL 1 ELECTRICAL POWER PLAN - LEVEL 2 E2.300 ELECTRICAL POWER PLAN - LEVEL 3 ELECTRICAL POWER PLAN - LEVEL 4 ELECTRICAL POWER PLAN - LEVEL 5 E2.600 ELECTRICAL POWER PLAN - ROOF DECK

- E3.100 SPECIAL SYSTEMS PLAN - LEVEL 1 SPECIAL SYSTEMS PLAN - LEVEL 2 E3.300 SPECIAL SYSTEMS PLAN - LEVEL 3
- E3.400 SPECIAL SYSTEMS PLAN - LEVEL 4 SPECIAL SYSTEMS PLAN - LEVEL 5 E3.600 SPECIAL SYSTEMS PLAN - ROOF DECK E4.100 ONE-LINE DIAGRAM E5.100 PANELS AND SCHEDULES
- E5.200 PANELS AND SCHEDULES E5.300 PANELS AND SCHEDULES E5.400 PANELS AND SCHEDULES ELECTRICAL DETAILS E6.200 ELECTRICAL DETAILS

P5.200 WATER AND GAS RISER DIAGRAM

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P4.100	PLUMBING DETAILS
P5.100	DWV RISER DIAGRAM

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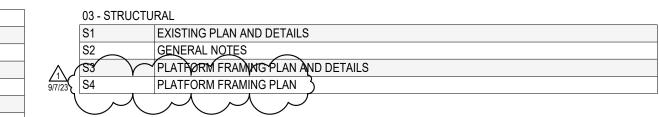
CODE PLAN - LEVEL 04 CODE PLAN - LEVEL 05

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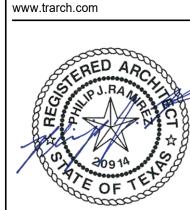
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M4.102	MECHANICAL DETAILS



TEXAS A&M UNIVERSITY - CORPUS CHRISTI
CHAPARRAL BUILDING RENOVATIONS
223 N. CHAPARRAL STREET
CORPUS CHRISTI, TEXAS 78411
CONTRACT #:20172914
PROJECT #:157191FY21

TURNER | RAMIREZ ARCHITECTS 3751 S. ALAMEDA ST. CORPUS CHRISTI, TX 78411 p (361)994-8900



1	Revision 2	09/07/2023
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REV.	DESCRIPTION	DATE
PROJECT	ISSUE DATE:	08/04/20
PHASE:	100% CONSTRUCTI	ON DOCUMEN
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- GC-1 The contract structural documents represent the finished modifications to the existing structure, and, except where specifically shown, do not indicate the method or means of construction. The Contractor shall supervise and direct the work and shall be solely responsible for all construction means, methods, procedures, techniques, and sequence.
- GC-2 The structure has been designed to resist design loads only as a completed structure. Applications of construction loads to the partially completed structure shall be considered by the Contractor and so included in the design of shoring, bracing, formwork, and any other supporting elements provided for construction of the structure. During erection and until all permanent connections are made, the Contractor must provide temporary bracing to brace the structure in all directions.
- GC-3 The Engineer shall not have control or charge of, and shall not be responsible for, construction means, methods techniques, sequences, or procedures for safety precautions and programs in connection with the work, for the acts or omission of the Contractor, Subcontractor, or any other persons performing any of the work, or for the failure of any of them to carry out the work in accordance with the contract documents.
- GC-4 General Contractor shall check and verify all dimensions, elevations and existing conditions, (both new and existing) reporting any discrepancies to the Engineer before proceeding with any phase of the work as he will be responsible for all work fitting as intended by the construction documents.
- GC-5 General Contractor must coordinate all platform dimensions with the shop drawings for the units to confirm that the units will be supported at all bearing locations. The General Contractor shall report any discrepancies to the Engineer before fabrication of materials and before proceeding with any phase of the work as he will be responsible for all work fitting as intended by the drawings.
- GC-6 At 4'-6" along the building perimeter and at 6'-2" in each direction from the interior column centerlines (12'-4" square at each column), the existing slab cannot be cut for any new penetrations. At areas outside of these zones, the Contractor must locate all rebar prior to cutting the slab. All propose mechanical openings through the slab must be located to clear (not cut) the rebar as much as possible. Contact the Engineer if any proposed openings in the allowable areas (outside of the excluded areas) will cut more than two (2) bars

STRUCTURAL DESIGN CRITERIA

- SD-1 A. Live loads:
- 1. New Floor Infill- 70 PSF (Must Be Posted)
- 40 PSF Catwalk
- 3. Combinations in accordance with IBC 1605.3.1
- B. Wind loads ASCE 7-16 (IBC 1609.1) Design Wind Speed (MPH) 144 (Vult) (IBC Table 1609.3.1) Exposure classification C
- C. Ground Snow Load 0 PSF (IBC Figure 1608.2)
- D. Seismic Design Category

SD-2 Applicable codes:

- A. 2015 International Building Code B. ASCE 7-10
- C. ACI 318-14 D. AISC Fourteenth Edition 2011
- CONCRETE/REINFORCING:

E. AWS D1.1

- CR-1 All concrete shall test 4000 PSI at 28 days and shall be in accordance with ACI 301. Welded wire shall conform to ASTM Specification A185 (flat sheets only). Concrete strength tests of the installed concrete by the Testing Lab retained by the Owner must be obtained by the Contractor and submitted to the Engineer. The Contractor shall notify the Engineer and Testing Lab a minimum of 48 hours in advance of any concrete placement. The Contractor shall not place any concrete until all reinforcing steel placement has been reviewed by the Testing Lab and Engineer AND all corrections made by the Contractor. It is the Contractor's responsibility to ensure that all corrections have been made.
- CR-2 Where expansion bolts (exp. bolt) are shown, they shall be Simpson Strong-Tie Wedge-All or approved equal. Expansion anchors shall be installed using minimum depths, edge distances and spacing (unless otherwise noted), as recommended by the anchor manufacturer and shall be tightened to the torque requirements of the manufacturer. The Contractor must locate and mark all existing rebar in areas to receive expansion bolts. Care shall be taken in placing expansion bolts to avoid conflicts with existing rebar.

STRUCTURAL STEEL

- ST-1 All structural steel shall conform to ASTM Specifications A36 except wide flange shapes shall conform to ASTM A992 GR50. Structural steel details and connections shall conform to the standards of the AISC. Splicing of structural steel members is prohibited. Any member having a splice not shown and detailed on the construction documents or approved shop drawings will be rejected. All welding shall conform to the American Welding Society Code. Use E70 series electrodes for all structural steel welds.
- ST-2 All connections shall have 3/4" diameter bolts at 3" on center for full depth of beam as a minimum. Field connections shall be equivalent to standard bolted connections using 3/4" diameter ASTM A325X bolts unless otherwise shown. Connections shall be bolted or welded - See details.
- ST-3 All structural steel members including bolts and miscellaneous steel members shall be hot-dip galvanized after fabrication. Apply zinc rich field galvanizing over all field welded areas.

- ST-4 All connection plates and angles for structural steel shall be 3/8" thick at 3/4"
- ST-5 The Contractor shall submit product data on the galvanized grating material to be used at the catwalks. The grating must be oriented to span in the directions shown on the plan. Product submittal must include typical anchorage details to wide flange beams. Anchorage details shall include the ability to remove sections of grating as needed to access areas below the catwalk for routine mechanical unit and roof maintenance.

ELEVATOR MISCELLANEOUS STEEL

- EL-1 General Contractor shall be responsible for supplying and installing supplementary framing at floor elevations as required by elevator manufacturer to support guide rails at no additional cost to the owner. Coordinate size and location of supplementary framing with elevator supplier and structural steel supplier.
- EL-2 Contractor shall coordinate hoist beam requirements with Elevator Manufacturer. Refer to Detail S104 for hoist beam size and typical hoist beam connection to existing concrete beams. Contractor shall coordinate hoist beam location and elevation with Elevator Manufacturer. If hoist beam will conflict with elevator operation after installation, then the hoist beam shall be removed following the installation of the elevator.
- EL-3 General Contractor must coordinate all existing elevator pit dimensions with the manufacturer's shop drawings prior to starting work and ordering elevator. Contact Mechanical Engineer and Structural Engineer if pit modifications will be

IN-FILL SLABS ON FORM DECK CONSTRUCTION

- FD-1 Floor slabs shall be 3", 3000 PSI normal-weight concrete on 9/16" deep, 26 gage galvanized corrugated metal deck 0.6C26 as manufactured by Vulcraft or approved equal. Each deck sheet shall span over at least 4 supports. Deck shall conform to SDI Standards and shall have the following properties:
 - Ip = 0.015 IN4/FTIn = 0.015 IN4/FT
 - Sp = 0.043 IN3/FT
 - Sn = 0.043 IN3/FT
 - Fy = 60 K.S.I.

Reinforce slabs with 6" x 6" - W2.9 x W2.9 welded wire mesh flat sheets only lapped one mesh plus 2" at ends and sides. Locate mesh in center of net slab thickness.

- FD-2 Attach floor deck to supports with 5/8" diameter puddle welds in each flute made through the manufacturer's standard weld washers and with #10 TEK screws at 24-inch centers at sidelaps. Lap corrugated metal deck 3" at ends and sides of sheet.
- FD-3 Concrete strength tests of the installed concrete by the Testing Lab retained by the Owner must be obtained by the Contractor and submitted to the Engineer. The Contractor shall notify the Engineer and Testing Lab a minimum of 48 hours in advance of any concrete placement. The Contractor shall not place any concrete until all reinforcing steel placement has been reviewed by the Testing Lab and Engineer AND all corrections made by the Contractor. It is the Contractor's responsibility to ensure that all corrections have been made.

TEXAS DEPARTMENT OF INSURANCE WINDSTORM INSPECTION REQUIREMENTS

TDI-1 Submit TDI compliant roofing documentation on proposed re-roof materials. The

- installation method to be used must be clearly shown on the shop drawings. The installation method must have accompanying TDI approved documentation.
- The Structural Engineer must be allowed to inspect the installation of all roofing materials prior to the installation of any subsequent layers of roofing materials.
- TDI-2 All exterior doors and windows must comply with and be installed in accordance with ASTM E1886, ASTM E1996 and TDI requirements.
- TDI-3 Submit P.E. sealed shop drawings for all exterior doors and windows to be installed showing compliance with the above listed requirements and applicable wind loads. The installation method to be used must be clearly shown on the shop drawings. The installation method must have accompanying TDI approved documentation.

The Structural Engineer must be allowed to inspect the installation of all door and window fasteners prior to the installation of the glazing.

APPLICABILITY OF TYPICAL DETAILS

TD-1 Typical Details shall apply to ALL such situations and conditions which are similar to the condition shown on the detail or verbally described in the title of the detail or notes on the detail. Typical Details shall apply regardless of whether or not the detail section mark is cut on the plans.

MISCELLANEOUS

- M-1 Changes shall not be made to the drawings without written approval of the Engineer.
- M-2 Shop drawings shall be submitted for all structural items including expansion bolts, structural steel, steel grating, concrete mix design, metal form deck, exterior doors and windows and roofing materials.

The Contractor must submit all shop drawings for review a minimum of ten (10) working days prior to their due date back to the supplier. Failure to do so will be the responsibility of the Contractor.

M-3 Contractor must field verify dimensions and elevations of existing plinths.

SITE OBSERVATION BY THE STRUCTURAL ENGINEER

SV-1 Periodic site observations by field representatives of the Structural Engineer are solely for the purpose of determining if the work of the Contractor is proceeding in general accordance with the structural contract documents. These limited site observations should not be construed as exhaustive or continuous to check the quality or quantity of the work, but rather periodic in an effort to guard the Owner against defects or deficiencies in the work of the Contractor.

GENERAL NOTES

- SV-2 Do not cover up structural framing until it has been reviewed by the Engineer and Testing Lab.
- SV-3 The Contractor shall not place any concrete until all reinforcing steel placement has been reviewed by the Testing Lab and Engineer AND all corrections made by the Contractor. It is the Contractor's responsibility to ensure that all corrections have been made.

REPRODUCTION NOTE

R-1 The use of reproductions of these contract drawings by any contractor, subcontractor, erector, fabricator, or material supplier in lieu of preparation of shop drawings signifies his acceptance of all information shown hereon as correct, and obligates himself to any job expense, real or implied, arising due to any errors that may occur hereon.

BOLT L4 X 4 X 3/8" X 0'-4" LONG TO EXISTING -

LOCATE REBAR PRIOR TO DRILLING HOLES FOR

BOLTS. REBAR MUST NOT BE CUT OR DAMAGED

EMBEDMENT/

BEAM W/ (I) 3/4" PSIMPSON STRONG-TIE

WEDGE-ALL ANCHOR CONTRACTOR MUST

EXISTING SLAB

DURING BOLT INSTALLATION.

EXISTING BEAM

-NEW C5 X 6.7 FLOOR JOISTS

@ 2'-3" CTRS MAX SPACING

- NEW 3" SLAB ON FORM DECK

1/4

CLEAR

- WELD CONT. L3 X 3 X 1/4 TO

CHANNELS MITER AND WELD

EXISTING SLAB —

5202

AT CORNERS

-EXISTING

BEAM

SEE GENERAL NOTES

FIELD VERIFY

RUN CHANNEL IN SHORTEST DIRECTION BETWEEN SUPPORTS

TYPICAL ELEVATED SLAB INFILL DETAIL

SAWCUT AND REMOVE EXIST. SLAB AS REQUIRED FILL VOID WITH 4.000 TO ACCOMMODATE NEW LINES. P.S.I. CONCRETE. -# 4 @ 16" CTRS. MAX. ROUGHEN SURFACE AND -CLEAN PRIOR TO PLACING -# 4 DOWELS @ 16" CTRS. EXISTING SLAB TO -LAP I'-8" REMAIN. VERIFY IO MIL STEGO WRAP (TYP.). -DRILL 5/8"4 HOLES AND NO LARGER - CLEAN WITH COMPACTED NON EXPANSIVE FILL COMP. AIR AND WIRE MATERIAL OR FLOWABLE FILL. BRUSH. INSTALL DOWELS WITH EPOXY. SEE M.E.P. DWGS. FOR PIPE LOCATION AND ELEVATION. I. COORDINATE ALL NEW LINE LOCATIONS WITH M.E.P. DRAWINGS. 2. SEE ARCHL. DWGS. FOR LOCATION WHERE SLAB SLOPES TOWARD NEW FLOOR DRAINS. 3. LOCATE ALL EXISTING UTILITY LINES PRIOR TO STARTING WORK. 4. DO NOT UNDERMINE EXISTING SLAB.

> TYPICAL SLAB CUT OUT DETAIL AT NEW PIPE (SLAB ON GRADE FOUNDATION ONLY)

S201

WELD CONT. L3 X 3 X I/4 TO CHANNELS. CONNECT TO - EXISTING SLAB W/POWER ACTUATER FASTENERS IN PREDRILLED HOLES @ 18" CTRS. MITER AND WELD AT NEW 3" SLAB ON -CORNERS FORM DECK -EXISTING SLAB -SEE GENERAL NOTES NEW C5 X 6.7 FLOOR JOISTS @ 2'-3" CTRS MAX SPACING

TYPICAL ELEVATED SLAB INFILL DETAIL

p (361)994-8900 www.trarch.com

751 S. ALAMEDA ST. CORPUS CHRISTI, TX 78411

URNER | RAMIREZ ARCHITECTS

ROBERT ENRIQUEZ MARTINEZ 89387 *■ 2218 BASSE RD.* SAN ANTONIO, TX 78213 (210) 320-1199 robert@remengineeringcorp.com THE SEAL APPEARING ON T.B.P.E. FIRM NO. 6944 BY ROBERT E. MARTINEZ, P.E. # 89387 REM PROJECT NO. 23-056

DESCRIPTION PROJECT ISSUE DATE: 06/02/2023 DRAWN BY: REM STAFF CHECKED BY: PROJECT NUMBER: SHEET IDENTIFICATION

GENERAL NOTES

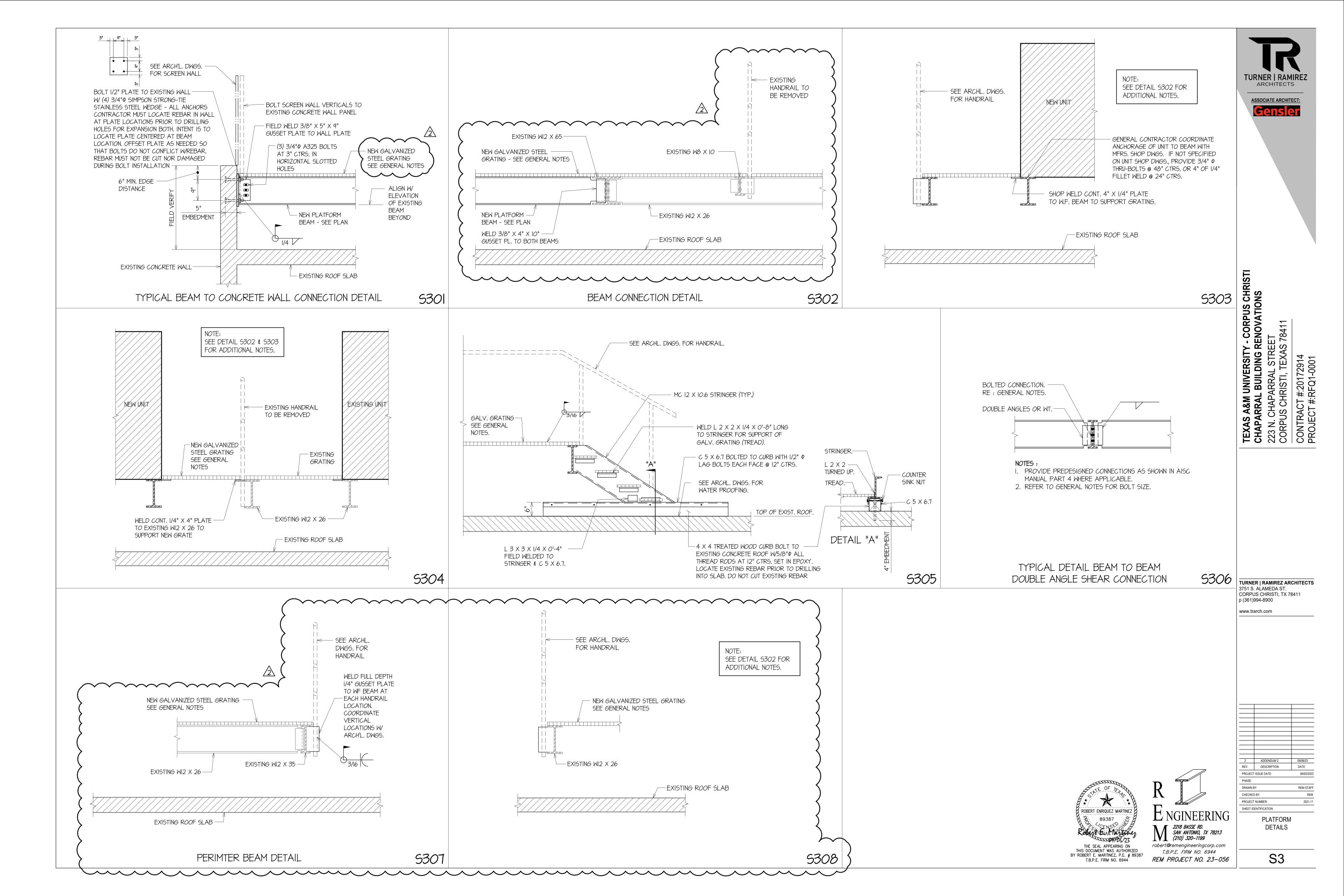
S2

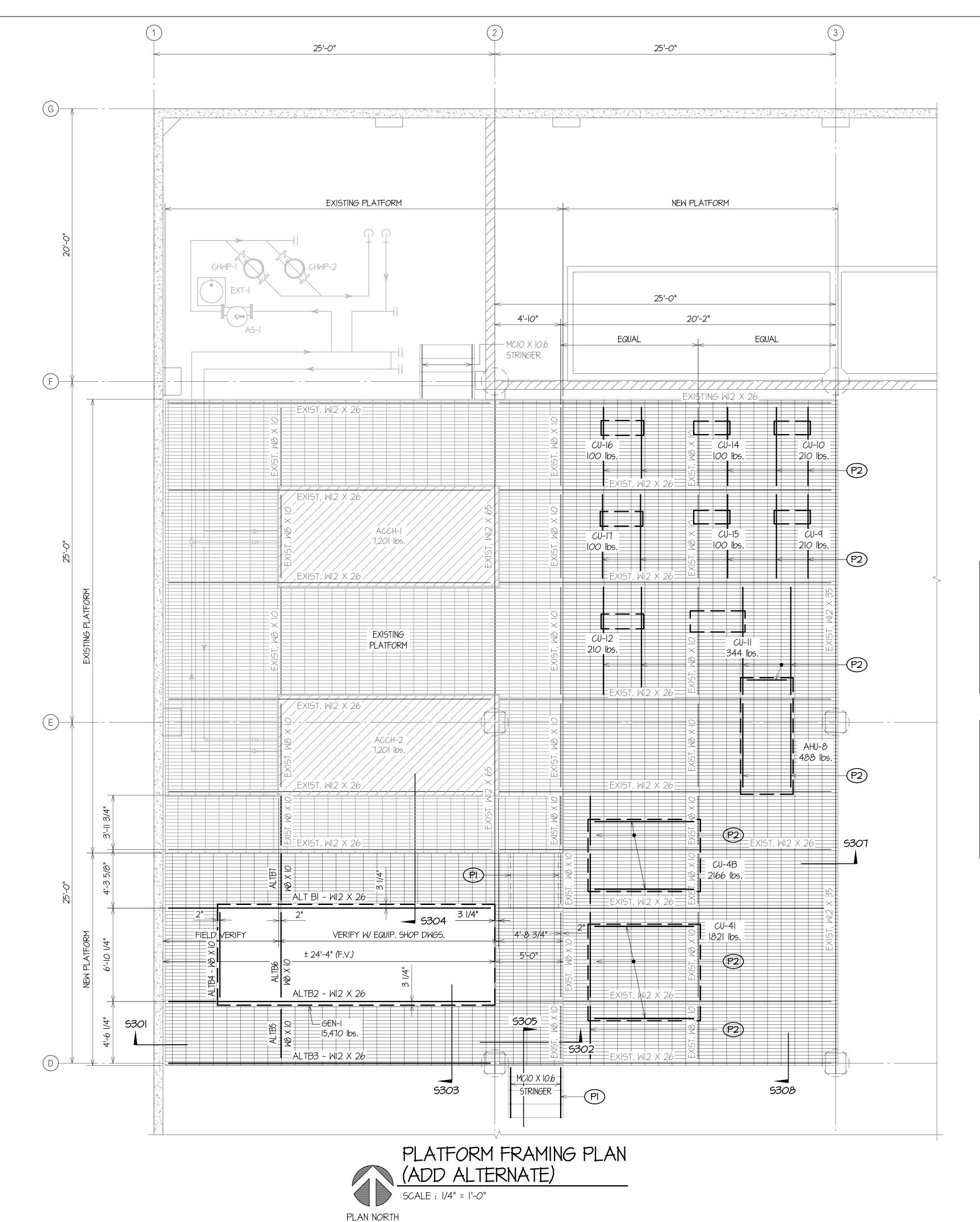
223 N. CH CORPUS

ERSITY - CORPUS CH DING RENOVATIONS

TURNER I RAMIREZ ARCHITECTS

ASSOCIATE ARCHITECT:





NOT TRUE NORTH

CONTRACTOR MUST VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO STARTING WORK

LOCATE ALL UTILITY LINES PRIOR TO STARTING WORK.

COORDINATE ALL DEMOLITION WORK WITH THE MECHANICAL DEMOLITION PLAN.

EXISTING NOTE :

CONTRACTOR MUST FIELD VERIFY ALL EXISTING DIMENSIONS, ELEVATIONS AND CONDITIONS PRIOR TO FABRICATION OF STEEL. CONTRACTOR MUST EXPOSE ALL EXISTING CONDITIONS AS REQUIRED TO VERIFY THAT CONDITIONS MATCH WHAT ARE SHOWN ON THE STRUCTURAL DRAWINGS. CONDITIONS THAT DEVIATE FROM THOSE SHOWN ON THE DRAWINGS MUST BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER. DETAILS SHOWN ON THE CONTRACT DOCUMENTS ARE SUBJECT TO CHANGE PENDING FINAL FIELD VERIFICATION BY THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE EXISTING CONDITIONS AS EARLY AS POSSIBLE IN THE JOB PRIOR TO ORDERING OR PURCHASING ANY MATERIALS.

EXISTING ROOF PLAN NOTES :

ALL STEEL MEMBERS SHALL BE GALVANIZED.

2. COORDINATE ALL BEAM DIMENSIONS WITH EQUIPMENT MFR'S. CUT SHEETS TO ENSURE THAT UNIT BEARS PROPERLY ON SUPPORTS.

PLATFORM FRAMING KEYED NOTES:

- PI) REMOVE EXISTING STRINGERS AND STAIRS AND RE-INSTALL
- P2 WELD NEW GALVANIZED L4 X 4 X 3/8 TO EXISTING BEAMS / NEW ANGLES AT UNIT BEARING LOCATIONS. COORDINATE BEARING LOCATIONS WITH UNIT MFR'S. SHOP DWGS. UNLESS NOTED OTHERWISE ON UNIT ANCHORAGE DETAILS, CONNECT UNIT / CURB TO ANGLE / BEAM WITH MINIMUM OF 3/4" THRU-BOLTS AT EACH END OF UNIT AND AT 48" CTRS. MAX.

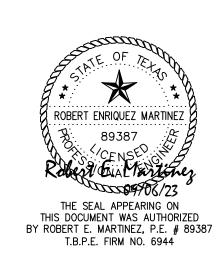


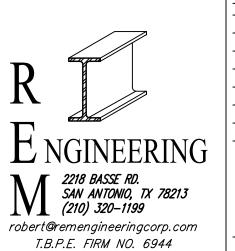
TEXAS A&M UNIVERSITY - CORPUS CHRISTI CHAPARRAL BUILDING RENOVATIONS 223 N. CHAPARRAL STREET

TURNER | RAMIREZ ARCHITECTS

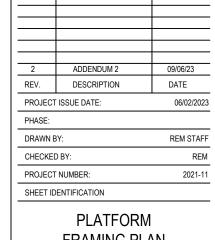
3751 S. ALAMEDA ST.
CORPUS CHRISTI, TX 78411

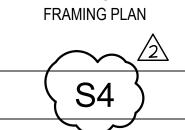
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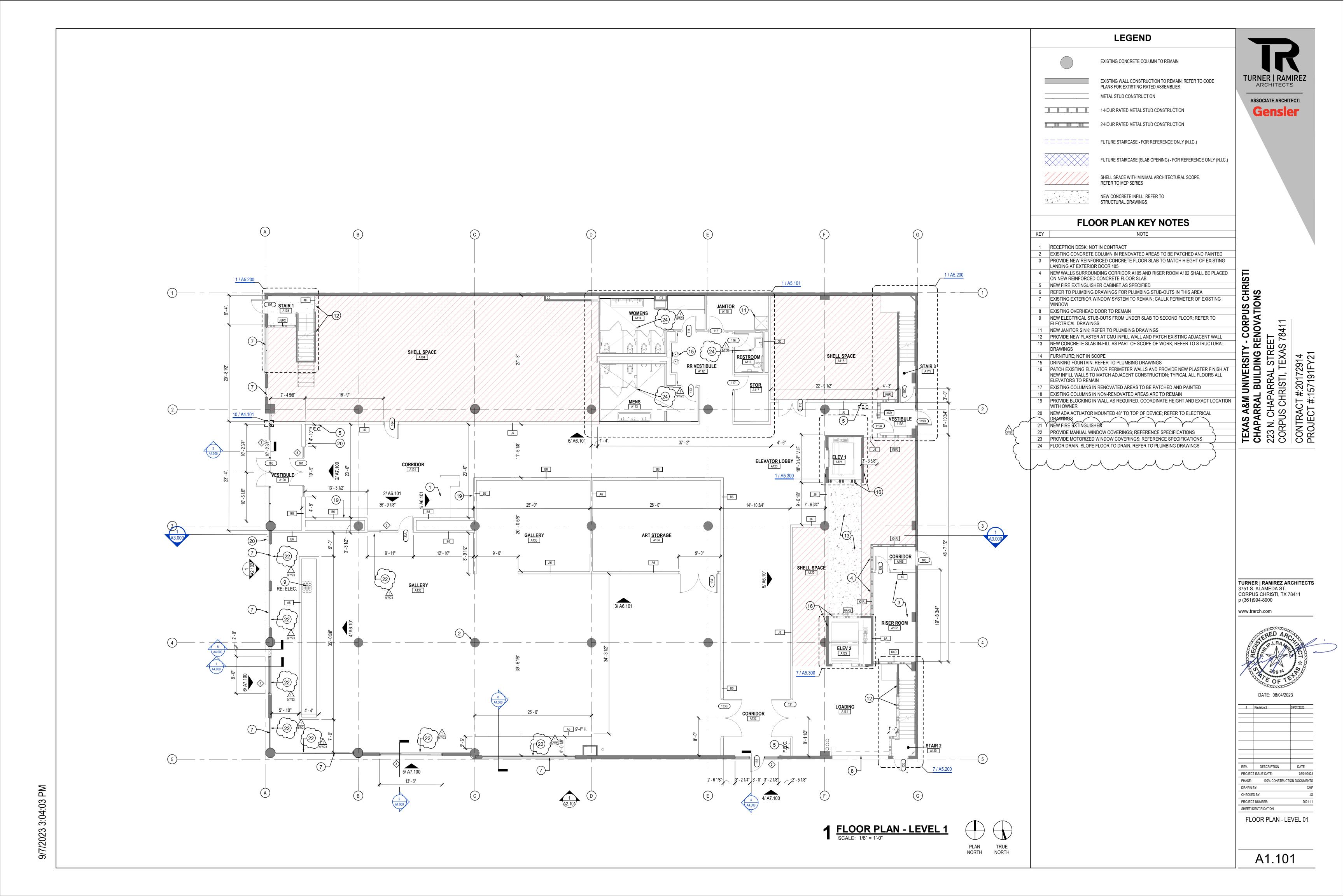


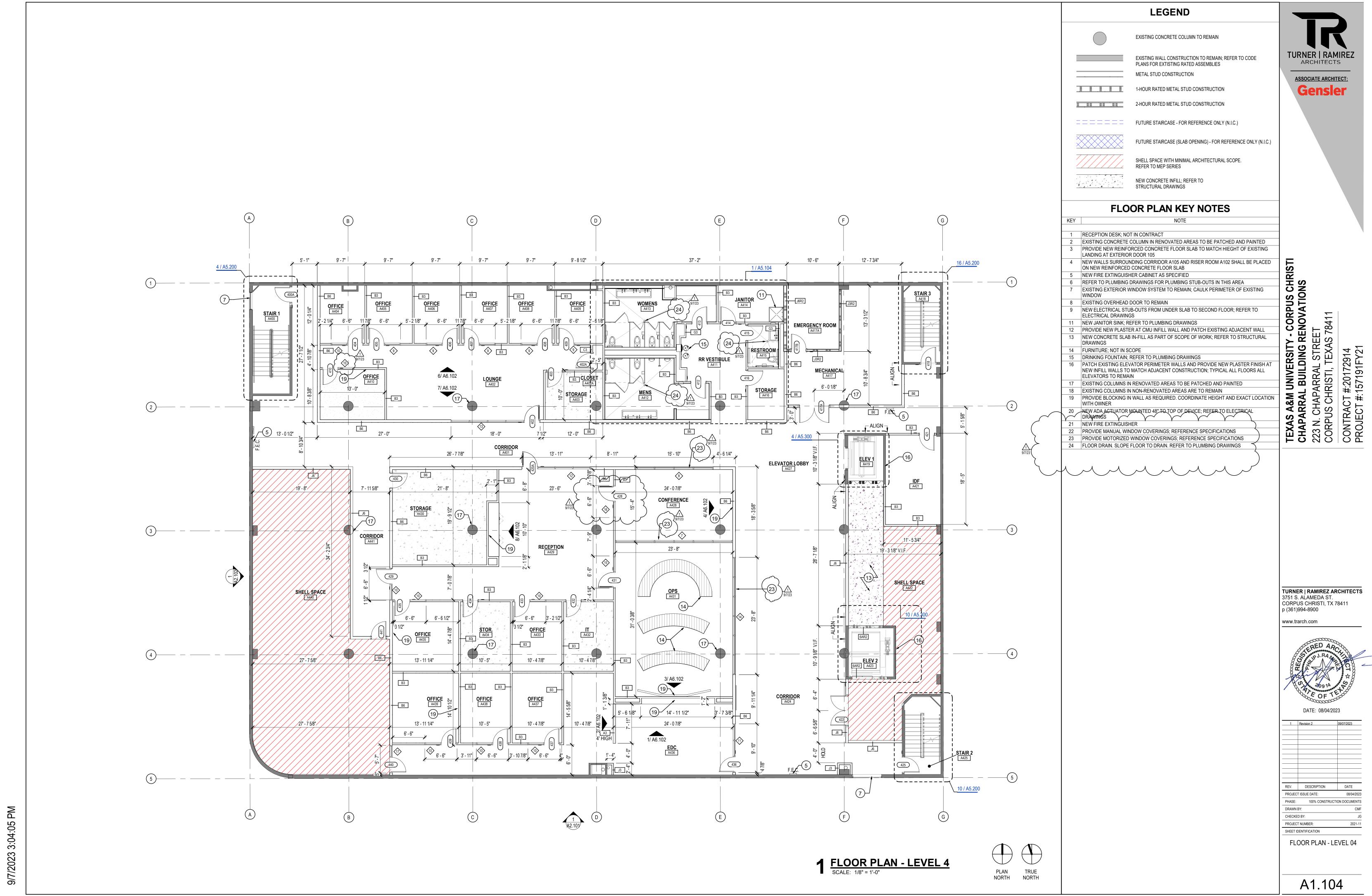


REM PROJECT NO. 23-056



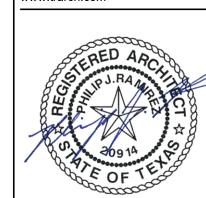






TEXAS A&M UNIVERSITY - CORPUS CHRISTI CHAPARRAL BUILDING RENOVATIONS 223 N. CHAPARRAL STREET CORPUS CHRISTI, TEXAS 78411 CONTRACT #:20172914 PROJECT #:157191FY21

TURNER | RAMIREZ ARCHITECTS 3751 S. ALAMEDA ST. CORPUS CHRISTI, TX 78411 p (361)994-8900 www.trarch.com



1	Revision 2	09/07/2023
REV.	DESCRIPTION	DATE
PROJEC	T ISSUE DATE:	08/04/2023
PHASE:	100% CONSTRUCTI	ON DOCUMENTS
DRAWN	BY:	CMF
CHECKE	D BY:	JG
PROJEC	T NUMBER:	2021-11

BUILDING ELEVATIONS

SHEET IDENTIFICATION

EXISTING ADJACENT BUILDING

— EXISTING OVERHEAD NEW EXTERIOR DOOR, COILING DOOR TO FRAME AND ASSOCIATED

REMAIN

FRAME AND ASSOCIATED

1 NORTH ELEVATION
SCALE: 1/8" = 1'-0"

HARDWARE

— NEW EXTERIOR ALUMINUM WINDOW SYSTEM

1 / A7.100

A2.101

NEW EXTERIOR WALL INFILL — CONSISTING OF 8" CMU WALL AND EXTERIOR WALL TILE TO MATCH EXISTING ADJACENT

EXISTING WINDOW
SYSTEM TO REMAIN; RECAULK WINDOW SYSTEM

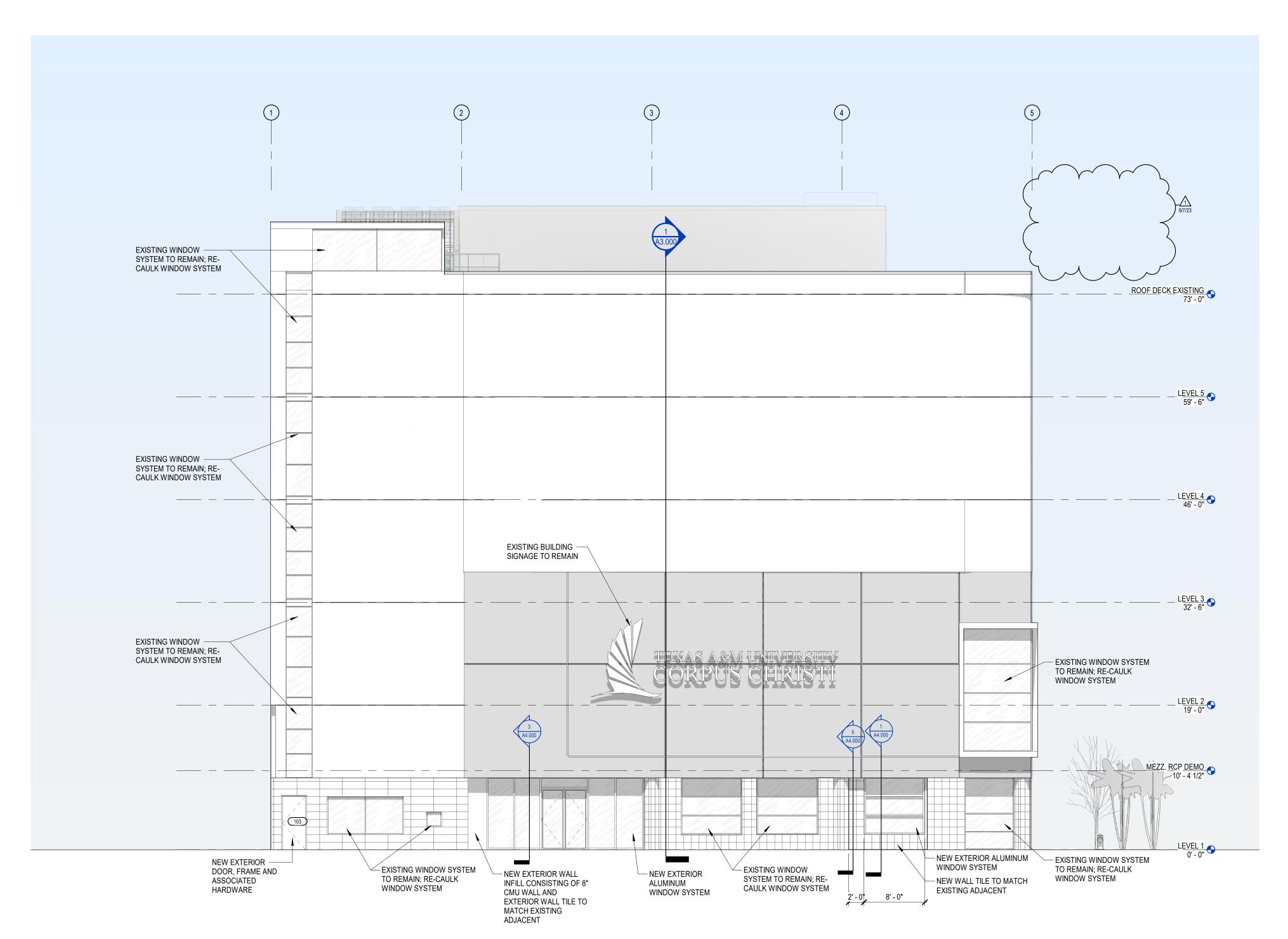
NEW EXTERIOR WALL INFILL
CONSISTING OF 8" CMU WALL
AND EXTERIOR WALL TILE TO
MATCH EXISTING ADJACENT

NEW EXTERIOR 1/A7.100

ALUMINUM WINDOW SYSTEM

— EXISTING WINDOW SYSTEM TO REMAIN; RE-CAULK WINDOW SYSTEM

TEXAS A&M UNIVERSITY - CORPUS CHRISTI
CHAPARRAL BUILDING RENOVATIONS
223 N. CHAPARRAL STREET
CORPUS CHRISTI, TEXAS 78411
CONTRACT #:20172914
PROJECT #:157191FY21



9/7/2023 3:04:29 PM

DATE: 08/04/2023

1 Revision 2 09/07/2023

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REV. DESCRIPTION DATE

PROJECT ISSUE DATE: 08/04/2023

PHASE: 100% CONSTRUCTION DOCUMENTS

DRAWN BY: CMF

CHECKED BY: JG

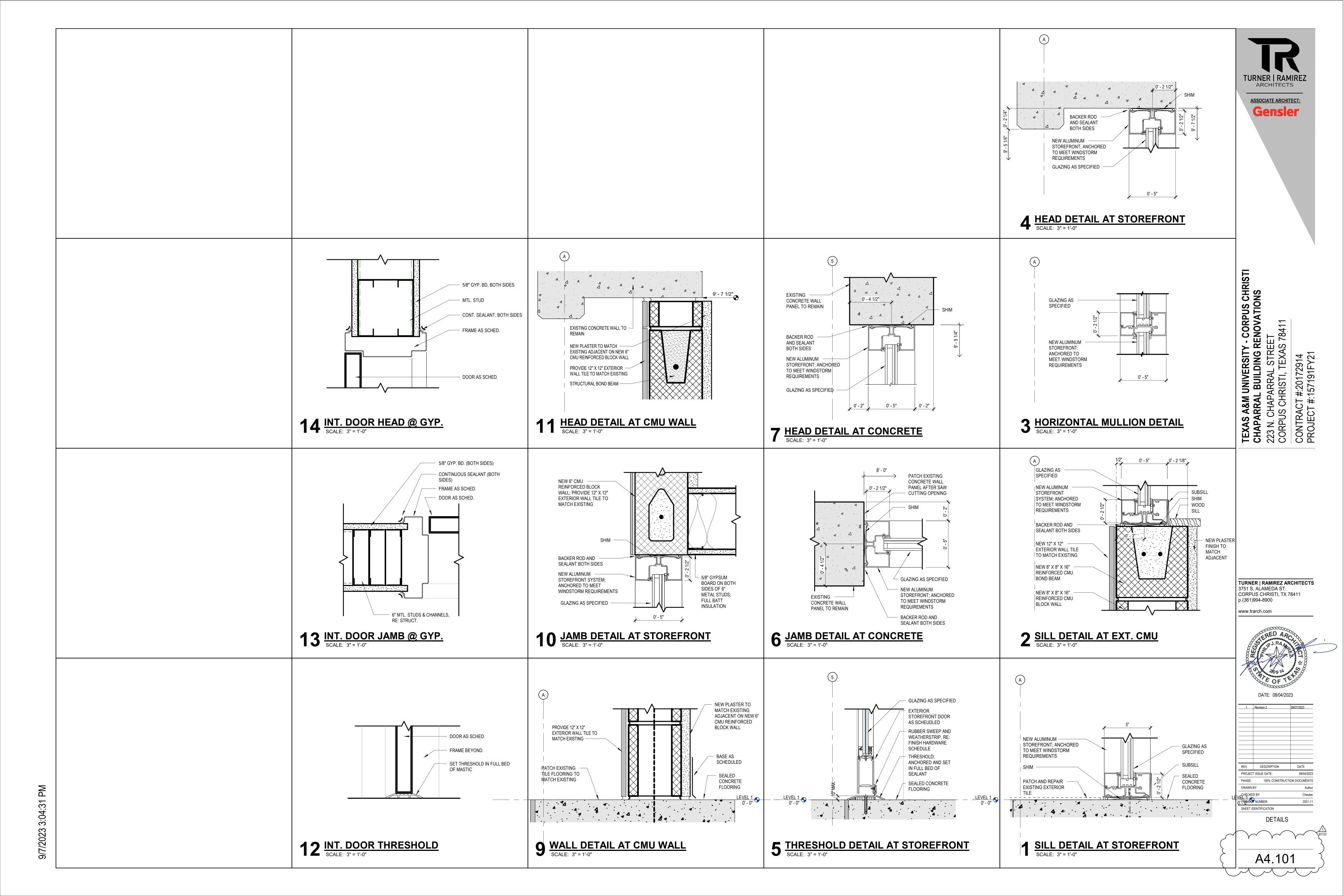
PROJECT NUMBER: 2021-11

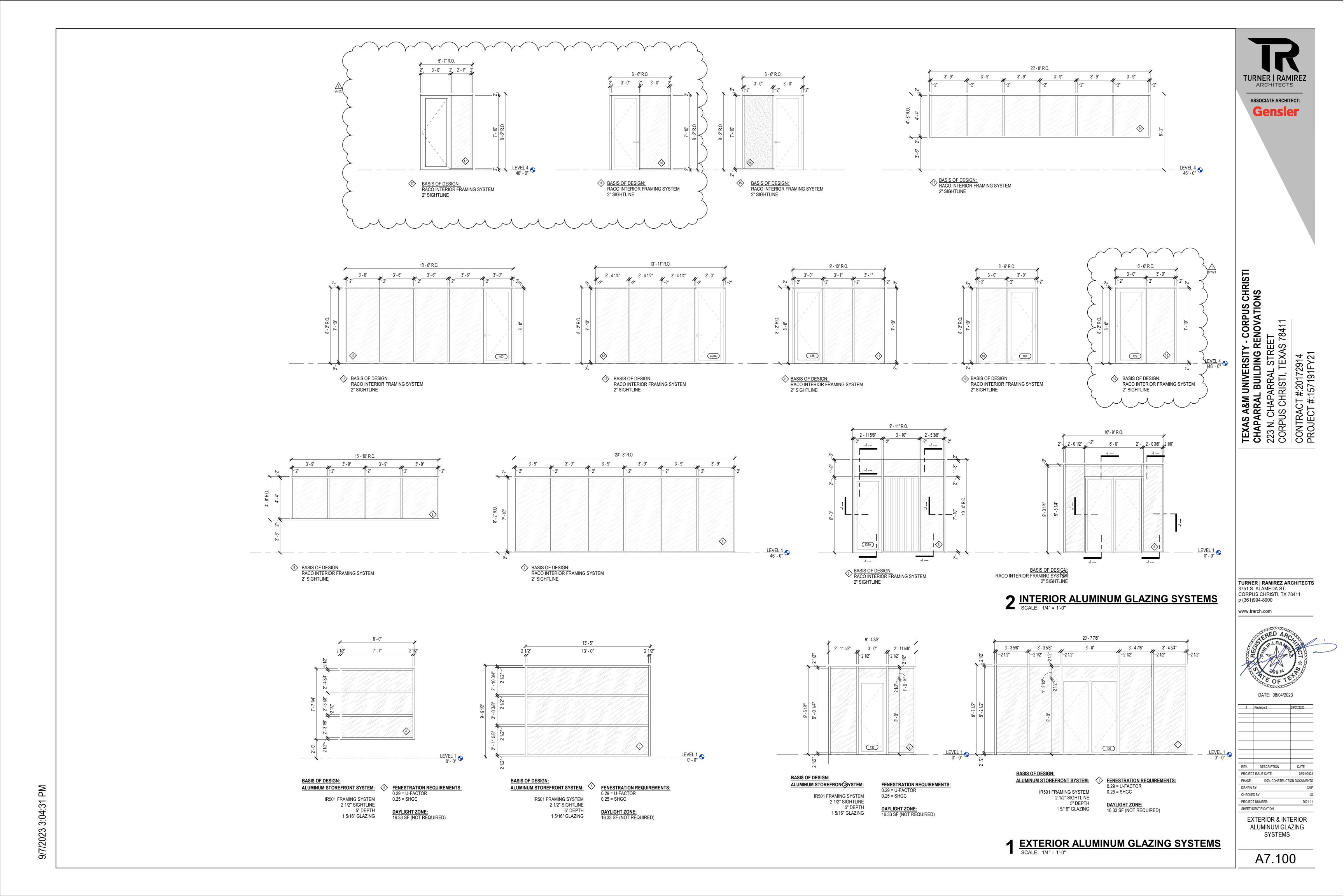
BUILDING ELEVATIONS

SHEET IDENTIFICATION

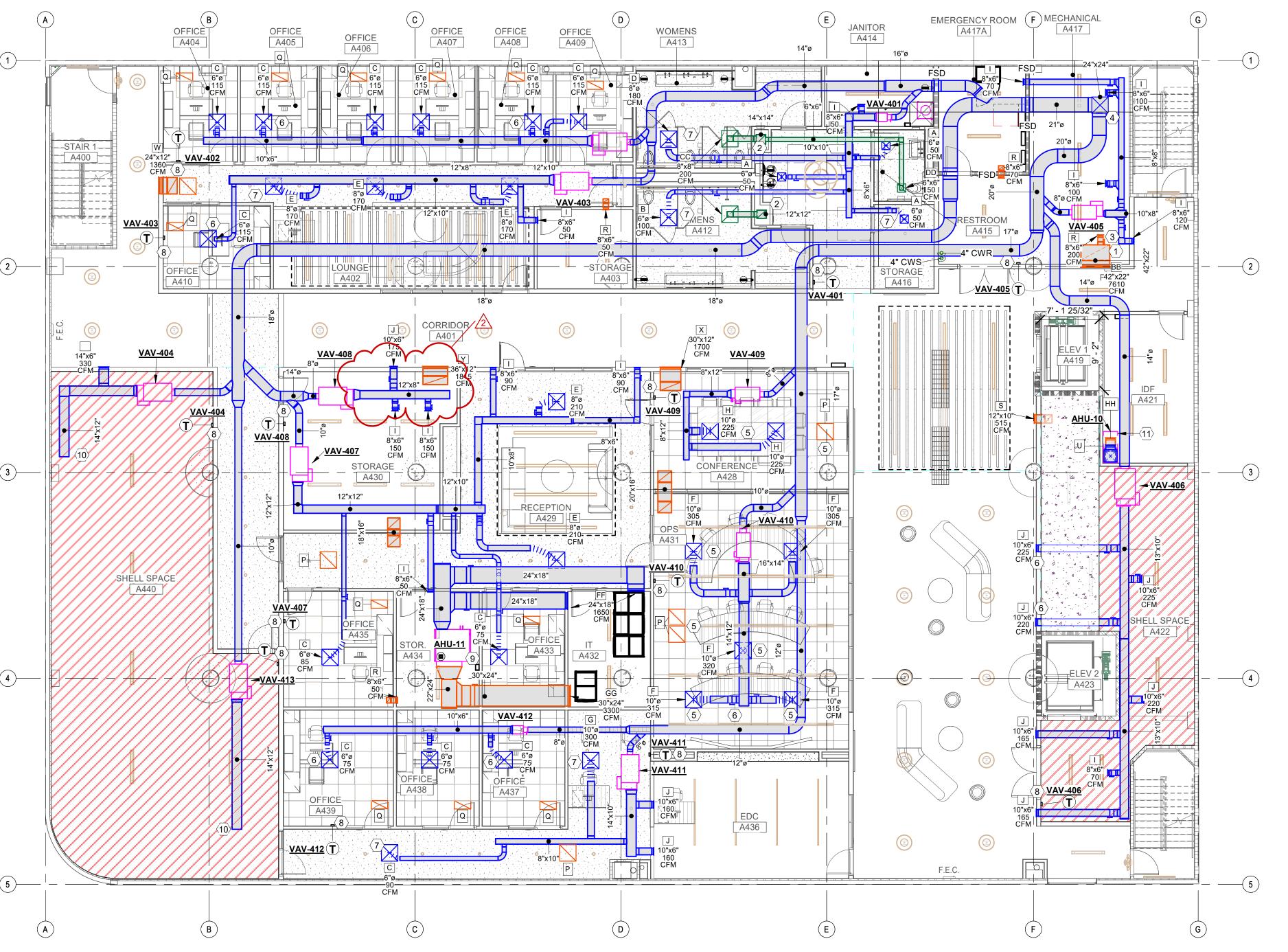
A2.102

1 EAST ELEVATION
SCALE: 1/8" = 1'-0"









MECHANICAL FLOOR PLAN - LEVEL 4

1/8" = 1'-0"

	Mechanical Keynotes
1	PROVIDE DUCT WITH ELBOW SILENCER.
2	ROUTE EXHAUST DUCT UP TO ROOF EXHAUST FAN. PROVIDE NECESSARY TRANSITIONS AND ADD FIRE DAMPER.
3	ROUTE 42X22 DUCT DOWN TO THE THIRD FLOOR. PROVIDE NECESSARY TRANSITIONS AND ADD FIRE DAMPER.
4	ROUTE 24X24 SA DUCT DOWN TO THE THIRD FLOOR. PROVIDE NECESSARY TRANSITIONS AND ADD FIRE DAMPER.
5	ALL DIFFUSERS LOCATED IN CONFERENCE ROOM A428 AND OPS ROOM A431 TO HAVE A BLACK FINISH.
6	PROVIDE MANUAL BALANCING DAMPERS AT ALL RUNOFFS SHOWN OR NOT. TYPICAL.
7	PROVIDE YOUNG REMOTE DAMPERS OPERATOR SIMILAR TO YOUNG'S REGULATOR WITH CEILING ESCUTCHEON FOR BALANCING DIFFUSERS AT ALL DIFFUSERS WITH GYPSON BOARD CEILING. (TYPICAL)
8	PROVIDE WALL THERMOSTAT AT 48" A.F.F.
9	ROUTE CONDENSATE DRAIN LINE FULL SIZE TO STORAGE ROOM FLOOR DRAIN. REFER TO PLUMBING PLAN FOR LOCATIONS.
10	PROVIDE COVER WITH HARDWARE CLOTH.
11	ROUTE CONDENSATE DRAIN LINE FULL SIZE TO NEAREST FLOOR DRAIN REFER TO PLUMBING PLAN FOR LOCATIONS.

ENGINEERING

5656 S. STAPLES, SUITE 360,
CORPUS CHRISTI, TX 78411

P - 361.852.2727 F - 361.852.2922
TEXAS ENGINEERING FIRM NO.

005318 22042

PROJECT ISSUE DATE: 08/04/2023 PHASE: 100% CONSTRUCTION DOCUMENTS DRAWN BY: CHECKED BY: PROJECT NUMBER: PROJECT #:RFQ1-0001 SHEET IDENTIFICATION MECHANICAL FLOOR PLAN - LEVEL 4

REV. DESCRIPTION DATE

TURNER | RAMIREZ ARCHITECTS

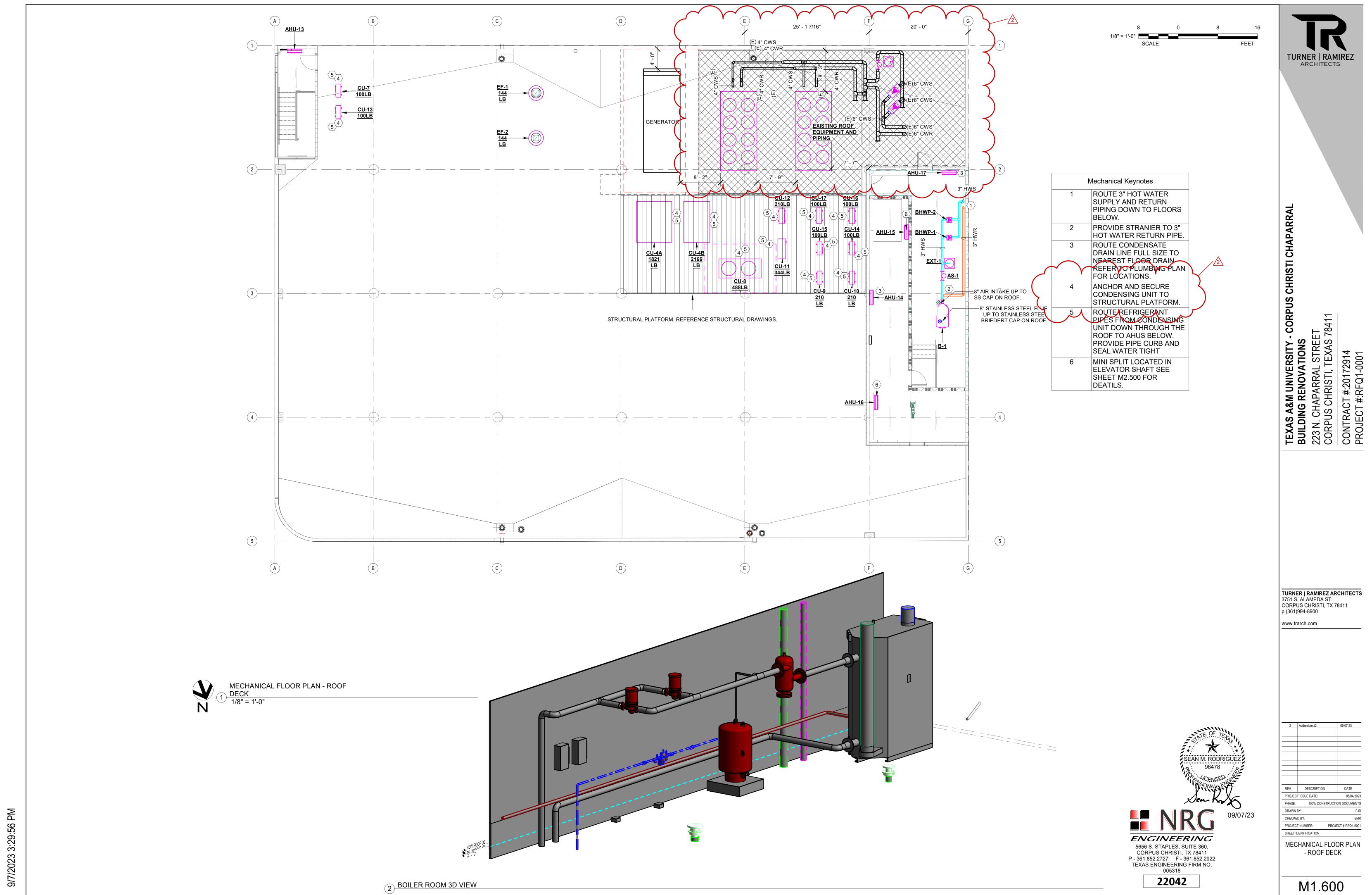
DATE: 12/02/2022

3751 S. ALAMEDA ST. CORPUS CHRISTI, TX 78411

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M1.400



	TAG		AHU-1	AHU-2	AHU-3	AHU-4	AHU-5	
	MANUFACTURER MODEL		DAIKIN CAH021GDAM	FUTURE	FUTURE	DAIKIN CAH018GDAM	FUTURE	
	TYPE		INDOOR HDT			INDOOR HDT		
	SERVICE		PAD MOUNTED 1ST FLOOR			PAD MOUNTED 4TH FLOOR		
	TOTAL AIRFLOW (ACFM)		11,315			9,760		
	HEATING AIRFLOW (ACFM)		3,395			2,928		
	OUTSIDE AIRFLOW (ACFM) % OUTSIDE AIR		2,160 19%			1,430 15%		
	ELEVATION (FT ABOVE MSL)		20			40		
	UNIT WEIGHT (LBS) PRE-FILTER	TYPE	5,123 MERV-13			5,989 MERV-13A		
		MEDIA	4" PLEATED			4" PLEATED		
		LOADING FINAL PRESSURE DROP (IN. W.C.)	SIDE LOAD			SIDE LOAD		
		MAX. VELOCITY (FPM)	0.58 398			0.57 359		
	FINAL-FILTER	TYPE	N/A			N/A		
	GENERAL	MIN. ROWS/FINS PER INCH (RA/OA) ENTERING AIR DB/WB (F) (RA/OA)	N/A N/A			(8/10)/(8/12) (75/62.5)/(83.4/80.4)		
		COIL CFM (RA/OA)	N/A			(8270)/(1430)		
		LEAVING AIR DB/WB (F) (RA/OA) TOTAL CAPACITY (MBH) (RA/OA)	N/A N/A			(51/49.9)/(51.6/51.4) (292.3/147.8)		
		SENSIBLE CAPACITY (MBH) (RA/OA)	N/A			(216.7/49.65)		
		MAX. PRESSURE DROP (RA/OA) COIL MODEL (RA/OA)	N/A N/A			(0.83/0.80) (5EJ1008B/5EJ1208C)		
	GENERAL	MIN. ROWS/FINS PER INCH	1/7			1/6		
0.11	AIR SIDE	ENTERING AIR DB (F)	32.0			32.0		
NC		LEAVING AIR DB (F) COIL CFM	53.0 2160			53.7 1430		
		SENSIBLE CAPACITY (MBH)	49			34		
		MAX. PRESSURE DROP (IN. W.C.) FACE VELOCITY (FPM)	0.02 175			0.02 272		
	WATER SIDE	HW FLOW (GPM)	3.1			2.1		
		ENTERING WATER TEMP. (F) LEAVING WATER TEMP. (F)	140			140 107		
		MIN. VELOCITY (FPS)	108 0.7			0.7		
		FOULING FACTOR, (ft2•°F• hr)/BTU	0.00025			0.00025		
	GENERAL	MAX PRESSURE DROP (FT HEAD) MIN. ROWS/FINS PER INCH	0.10 6/10			0.20 6/9		
	AIR SIDE	ENTERING AIR DB/WB (F)	83.4/80.4			83.4/80.0		
ON		LEAVING AIR DB/WB (F) COIL CFM	46.9/46.7 2160			50.3/50.1 1430		
		TOTAL CAPACITY (MBH)	244			149.9		
		SENSIBLE CAPACITY (MBH)	86.3			51.7		
		MAX. PRESSURE DROP (IN. W.C.) FACE VELOCITY (FPM)	0.15 167			0.39 251		
	WATER SIDE	CW FLOW (GPM)	40.2			24.9		
		ENTERING WATER TEMP. (F) LEAVING WATER TEMP. (F)	42 54			42 54		
		MIN. VELOCITY (FPS)	3.2			3.8		
		FOULING FACTOR, (ft2•°F• hr)/BTU	0.00025			0.00025		
		MAX PRESSURE DROP (FT HEAD) RETURN AIRFLOW (CFM)	7.0 9155.0			9.6 8330.0		
	GENERAL	ROWS/FINS PER INCH	6/13			6 / 12		
		ENTERING AIR DB (F)	75.0			75.0		
		ENTERING AIR WB (F) LEAVING AIR DB (F)	62.5 49.8			62.5 50.2		
		LEAVING AIR WB (F)	49.5			49.9		
		TOTAL CAPACITY (MBH) SENSIBLE CAPACITY (MBH)	333.256 252.44			293.9 224.5		
		MAX. PRESSURE DROP (IN. W.C.)	0.750			0.7		
	WATER SIDE	FACE VELOCITY (FPM)	455			411		
	WATER SIDE	CHW FLOW (GPM) ENTERING WATER TEMP. (F)	57.6 42			48.8		
		LEAVING WATER TEMP. (F)	54			53		
		MIN. VELOCITY (FPS) FOULING FACTOR, (ft2•°F• hr)/BTU	2.9 0.00025			2.8 0.00025		
		MAX. PRESSURE DROP (FT HEAD)	6.5			5.5		
	FAN	TYPE	PLENUM			PLENUM		
		FAN QUANTITY POSITION	1 DRAW THRU			1 DRAW THRU		
		DRIVE	DIRECT			DIRECT		
		DISCHARGE CONFIGURATION TOTAL AIRFLOW (CFM)	HORIZONTAL 11,315			TOP HORIZONTAL 9,760		
		EXTERNAL STATIC (IN. W.C.)	2.25			4.25		
		TOTAL STATIC (IN. W.C.)	5.97			6.37		
		MAX FAN RPM FAN EFFICIENCY GRADE (FEG)	1,200 PREMIUM			2,547 PREMIUM		
	MOTOR	MOTOR HP (EACH FAN)	25.0			25.0		
		MOTOR BHP (EACH FAN)	18.1			18.1		
		TYPE ECM ODP	V			V		
		TEFC / TEAO	X			X		
		INVERTER DUTY	X			X		
		MOTOR SPEED (RPM) MOTOR VOLTS / PH	1,750 208 / 3			1,750 208 / 3		
		MCA/MOCP	70/80			70/80		
		FULL LOAD AMPS (FLA)	70.0			70.0		
AL .		VOLTS / PHASE / HZ LIGHTS+SWITCH VOLTS/PH/HZ	208 / 3 / 60			208 / 3 / 60		
		MCA	5			5		
		MOCP	20			20		
NSIONS			116"X82"			152"X82"		
			ALL			ALL		

	TITUS 350 FL		RETURN MDF ROOM	16 X 14	14 X 12	1	16 X 14	1	26		-	ALU			
. SI 2. SI 3. L/ 4. SI 5. DI	RDER TYPE URFACE MOUNT NAP-IN AY-IN PLINE ROPPED EVELED	1. 2. 20 3.	OW PATTERN 1-WAY 2-WAY 5. 2-WAY, OPPOSI 3-WAY 4-WAY+	ITE		04 MILI 26 WH MATER ST'L 22	JMINUM L (STD) IITE	TEEL.		TR PF AG AG AG EG L S	SS SS PLAST A ALUM PI i-15 STEEL DAI i-15-AA ALU i-15-SS STA IT EARTHQ FRONT BLA FRONT BLA i-85 BUTTERFI i EQUAL	OUNT FRAME ER FRAME LASTER FRAME MPER MINUM DAMPER INLESS STEEL D IUAKE TABS DE LONG ORIEN DE SHORT ORIE LY DAMPER IZING GRID REDUCING VANI	AMPER TAMOR NTATION	96478 S/ONAL	
					·								R	G	09

AIR DEVICE SCHEDULE

FACE SIZE

12 X 12

20 X 20

10 X 8

12 X 8

14 X 8

16 X 8

4' X 1" SLOT

4' X 1" SLOT

8"□

20 X 20

20 X 10

10 X 8

14 X 12

16 X 12

16 X 16

18 X 10

26 X 14

32 X 14

38 X 14

44 X 40

50 X 50

44 X 24

20 X 20

12 X 12

4' X 1" SLOT

26 X 20

32 X 26

BORDER TYPE

BLOW PATTERN

MAT'L.

ALU

OPTIONS/NOTES

AG-15-AA

AG-15-AA

AG-15-AA

AG-15-AA

AG-15-AA

AG-15-AA

AG-15-AA

AG-15-AA

AG-15-AA

PROVIDE PLENUM

BOX

AG-15-AA

AG-15-AA

AG-15-AA

AG-15-AA

AG-15-AA

AG-15-AA

AG-15-AA

AG-15-AA

AG-15-AA

FINISH

26

26

26

26

26

MODULE SIZE

12 X 12

24 X 24

10 X 8

12 X 8

14 X 8

16 X 8

4' X 1" SLOT

4' X 1" SLOT

24 X 24

24 X 12

10 X 8

14 X 12

16 X 12

16 X 16

18 X 10

32 X 14

38 X 14

44 X 40

50 X 50

44 X 24

24 X 24

12 X 12

4' X 1" SLOT

26 X 20

32 X 26

SERVICE

SUPPLY

RETURN

RETURN

RETURN

RETURN

RETURN

RETURN

RETURN

EXHAUST

RETURN

IT ROOM

RETURN IT ROOM

PLAN MARK

MANUF. & MODEL NUMBER

TITUS OMNI

OMNI

TITUS OMNI

OMNI

OMNI

TITUS OMNI

OMNI

OMNI

TITUS 300 FL

300 FL

TITUS 300 FL

300 FL

TITUS FL-10

FL-10

TND-AA

TITUS 50F

350 FL

350 FL

350 FL

350 FL

TITUS

ВВ

NECK SIZE

6"□

6"□

6"□

8"□

8"□

10"□

10"□

12"□

8 X 6

10 X 6

12 X 6

14 X 6

48 X 4

8"□

8 X 6

12 X 10

14 X 10

14 X 14

16 X 8

24 X 12

30 X 12

36 X 12

42 X 38

48 X 48

42 X 22

8 X 8

6 X 6

24 X 18

30 X 24

ENGINEERING 5656 S. STAPLES, SUITE 360, CORPUS CHRISTI, TX 78411 P - 361.852.2727 F - 361.852.2922 TEXAS ENGINEERING FIRM NO. 005318

22042

CHAPARRAL CHRISTI TEXAS A&M UNIVERSITY - CORPUS CI BUILDING RENOVATIONS 223 N. CHAPARRAL STREET CORPUS CHRISTI, TEXAS 78411 CONTRACT #:20172914 PROJECT #:RFQ1-0001

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REV. DESCRIPTION DATE PROJECT ISSUE DATE:

PHASE: 100% CONSTRUCTION DOCUMENTS PROJECT NUMBER: PROJECT #:RFQ1-0001 SHEET IDENTIFICATION

MECHANICAL SCHEDULES

M3.100

. PROVIDE WITH PREMIUM EFFICIENCY FAN MOTOR WITH SHAFT GROUNDING RINGS FOR USE WITH VARIABLE FREQUENCY DRIVE. 5. PROVIDE UNIT WITH VARIABLE FREQUENCY DRIVE.

6. PROVIDE CHILLED WATER COILS WITH 2-WAY AUTOMATIC PRESSURE INDEPENDENT CONTROL VALVES.

. PROVIDE HOT WATER COILS WITH 2-WAY AUTOMATIC PRESSURE INDEPENDENT CONTROL VALVES.

8. PROVIDE STAINLESS STEEL IAO COMPLIANT DRAIN PAN.

9. PROVIDE STAINLESS STEEL CASING, AND FRAME FOR HYDROINIC COILS.

10. OUTSIDE AIR COILS TO HAVE 10,000 HOUR COIL COATING EQUIVALENT TO ENERGY GUARDS E-COAT.

11. UNITS SHALL HAVE MARINE GRADE LIGHTS.

11. UNITS SHALL HAVE MARINE GRADE LIGHTS.

12. PROVIDE UV LIGHTS IN FAN SECTION AND IN ALL COOLING COIL SECTIONS.

13. PROVIDE INTERNAL ISOATION FAN/MOTOR ASSEMBLY FOR ALL DDF FAN ARE 13. PROVIDE INTERNAL ISOATION FAN/MOTOR ASSEMBLY FOR ALL DD FAN ARRAYS. MINIMUM 1" DEFLECTION.

14. INSTALL ALL FLOOR MOUNTED UNITS ON A 10" BASE RAIL.

14. INSTALL ALL FLOOR MOUNTED UNITS ON A 10" BASE RAIL. 15. EQUIVALENT MANUFACTURES ARE DAIKIN, THERMAL, TEMPTROI, AND TRANE. SPECIAL NOTE FOR AHU-4:

A. AHU-4 SHALL HAVE A DX COOLING COIL AND CHILL WATER COILING IN BOTH

THE OUTSIDE AIR SECTION AND IN THE MAIN RA SECTION.

273

1.00 0.50 0.08

32

24

910 0.50

1/2

208/1

910

26.0

1.8 | 63.2 | 89.5 | 140.0 | 110.0 | 0.22 | 0.98

CHAPARRA

CHRISTI

1. Selections are based on Price as Manufacturer.

AHU-4

2. All performance based on tests conducted in accordance with ASHRAE 130-2008 and AHRI 880-2011.

16x15

3. All NC levels determined using AHRI 885-2008 Appendix E.

4. All airflow, pressure losses and heating performance values have been corrected for altitude. 5. Units of measure: dimensions (in), airflow (cfm), water flow (gpm), air pressure (in wg), water head losses (ft) and temperatures (degF).

78.54

6. PROVIDE DOOR INTERLOCK DISCONNECT FOR EACH UNIT.

FDC 30 10

7. Provide factory-mounted and pre-programmed, pressure-independent, BACnet DDC controller with airflow measurement

8. Provide with zone temperature sensor.

9. Provide with factory-wired discharge air temperature sensor

10. Provide 1" Fibre Free liner.

11. Provide unit-mounted control power transformer and disconnect

NONE EARL DOWNEDED N/AN/ TEDAMNIAL	LIVUT COLLEGIU E
NON FAN POWERED VAV TERMINAL	UNII SCHEDULE

1668

HW Heating Coil Volts/Ph. CFM MBH GPM - 220 10.9 0.7 - 140 7.0 0.5 - 140 7.0 0.5 - 320 15.8 1.1 - 320 15.8 1.1 - 430 22.2 1.5 - 430 22.2 1.5	52.0 97.4 140.0 110.0 0.19 52.0 97.7 140.0 110.0 0.18 52.0 97.7 140.0 110.0 0.18 52.0 97.3 140.0 110.0 0.24 52.0 97.3 140.0 110.0 0.25	W.P.D. ROWS FINS/IN. 0.17 2 10 0.06 2 10 0.06 2 10 0.41 2 10	Electrical MCA MOP
- 220 10.9 0.7 - 140 7.0 0.5 - 140 7.0 0.5 - 320 15.8 1.1 - 320 15.8 1.1 - 430 22.2 1.5 - 430 22.2 1.5	52.0 97.4 140.0 110.0 0.19 52.0 97.7 140.0 110.0 0.18 52.0 97.7 140.0 110.0 0.18 52.0 97.3 140.0 110.0 0.24 52.0 97.3 140.0 110.0 0.25	0.17 2 10 0.06 2 10 0.06 2 10 0.41 2 10	MCA MOP
- 140 7.0 0.5 - 140 7.0 0.5 - 320 15.8 1.1 - 320 15.8 1.1 - 430 22.2 1.5 - 430 22.2 1.5	52.0 97.7 140.0 110.0 0.18 52.0 97.7 140.0 110.0 0.18 52.0 97.3 140.0 110.0 0.24 52.0 97.3 140.0 110.0 0.25	0.06 2 10 0.06 2 10 0.41 2 10	
- 140 7.0 0.5 - 320 15.8 1.1 - 320 15.8 1.1 - 430 22.2 1.5 - 430 22.2 1.5	52.0 97.3 140.0 110.0 0.24 52.0 97.3 140.0 110.0 0.25	0.06 2 10 0.41 2 10	
- 320 15.8 1.1 - 320 15.8 1.1 - 430 22.2 1.5 - 430 22.2 1.5	52.0 97.3 140.0 110.0 0.24 52.0 97.3 140.0 110.0 0.25	0.41 2 10	
- 320 15.8 1.1 - 430 22.2 1.5 - 430 22.2 1.5	52.0 97.3 140.0 110.0 0.25		
- 430 22.2 1.5 - 430 22.2 1.5			
- 430 22.2 1.5		0.41 2 10	
	52.0 99.4 140.0 110.0 0.19	0.33 2 10	
- 430 22.2 1.5	52.0 99.4 140.0 110.0 0.19	0.33 2 10	
	52.0 99.4 140.0 110.0 0.19	0.33 2 10	
- 144 7.2 0.5	52.0 97.7 140.0 110.0 0.23	0.07 2 10	
- 90 4.6 0.3	52.0 97.9 140.0 110.0 0.09	0.02 2 11	
-	430 22.2 1.5 144 7.2 0.5	430 22.2 1.5 52.0 99.4 140.0 110.0 0.19 144 7.2 0.5 52.0 97.7 140.0 110.0 0.23	430 22.2 1.5 52.0 99.4 140.0 110.0 0.19 0.33 2 10 144 7.2 0.5 52.0 97.7 140.0 110.0 0.23 0.07 2 10

BOILER SCHEDULE

HEAT EXCHANGER

EFFICIENCY

MARK TYPE

FUEL

VAV-413

9. Provide with factory-wired discharge air temperature sensor 10. Provide 1" Fibre Free liner.

11. Provide unit-mounted control power transformer and disconnect

	B-1 HYDRONIC HEATING		ELECTRIC UI	NIT HEA	TER SC	HED
	NATURAL GAS		MARK	EUH-1		
<u> </u>	316L STAINLESS STEEL		1717 11 11 1			

INPUT BTUH	1,999,000	
OUTPUT BTUH	1,923,000	
TURNDOWN	25/1	
EWT/LWT	110/140	
TEMPERATURE RISE	30	
GALLONS PER HOUR PRODUCED	N/A	
WATER FLOW GPM	128	
PRESSURE DROP FT. HD.	90	
FLUE SIZE/TYPE	8" (CAT IV)	
COMBUSTION AIR INLET SIZE	8"	
PUMP INCLUDED	YES-ECM	
PUMP HP	1/208-230/1	
VOLTAGE	120	

PHASE HERTZ 60 MOCP 13 MANUFACTURE LOCHINVAR WEIGHT (LBS) 2570 MODEL No. FB-2001 NOTES:

NOTES:

I. DISCONNECT PROVIDED BY AND INSTALLED BY DIVISION 16. PROVIDE UNIT WITH SINGLE POINT POWER CONNECTION.

AND SEPARATE PUMP POWER CONNECTION. 2. PROVIDE WITH WATER FLOW SWITCH, LOW WATER CUTOFF WITH TEST LIGHT AND MANUAL RESET,

MANUAL RESET HIGH LIMIT, ASME CSD-1, HI AND LOW PRESSURE SWITCHES, AIR PRESSURE SWITCH, ASME 160 LB W.P. HEAT EXCHANGER, ASME "H" STAMP, LESS THAN

10ppm Nox, MODULATION DOWN TO 10% OF FULL FIRE, FACTORY SUPPLIED PUMP WITH TIME DELAY (FIELD MOUNTED),

75PSI PRESSURE RELIEF VAVLE, TEMPERATURE AND PRESSURE GAUGES,

INDICATOR LIGHTS, IGNITION LOCKOUT ALARM, AND THE CAPABILITY TO OPERATE OFF INTERNAL OR

EXTERNAL CONTROLS. . PROVIDE CATEGORY IV FLUE VENT. ROUTE AS STRAIGHT AS POSSIBLE WITH NO MORE THAN TWO

45 DEGREE ELBOWS.

4. PROVIDE MINIMUM 24" CLEARANCE ON ALL SIDES OF THE BOILER. INSTALL AS PER THE MANUFACTURE'S

INSTALLATION INSTRUCTIONS.

5. PROVIDE CONTROLLER BY MANUFACTURER. CONTROLLER SHALL HAVE BACNET MSTP COMMUNICATIONS

FOR INTEGRATION WITH EMCS.

6. PROVIDE BOILER WITH CONDENSATE NEUTRALIAZTION KIT. 7. PROVIDE YEAR PARTS WARRANTY AND 10 YEAR LIMITED WARRANTY.

. THE BOILER SHALL INITIALLY BE SET UP TO OPERATE AND BE LIMITED AT 50% CAPACITY THROUGH THE BOILER CONTROLS. AS MORE FLOORS ARE FINISHED OUT AND BROUGHT ON-LINE THE BOILER SHALL BE RECONFIGURED TO OPERATE AT

SERVES FIRE RISER

MANUFACTURER **REZNOR A102** MODEL EBHB-500 750 HORSEPOWER N/A VOLTS/PHASE/HERTZ 120/1/60

NOTES NOTES

MOUNT AT MANUFACTURERS RECOMMENDED HEIGHT.

PROVIDE MANUFACTURERS MOUNTING HARDWARE. PROVIDE HEATER WITH 24 VOLT CONTROL TRANSFORMER.

1,2,3,4,5,6

PROVIDE 24 VOLT THERMOSTAT, MOUNT AT SAME HEIGHT AS LIGHT SWITCH. PROVIDE HEATER WITH ALMOND FINISH.

EQUIVALENT MANUFACTURERS: REZNOR, MODINE, OR EQUAL. SET THERMOSTAT TO 40° FOR FREEZE PROTECTION

LOUVER SCHEDULE

SIZE (INCHES) (WXH) AIR FLOW (CFM) FREE AREA (FT2) INTAKE OR EXHAUST NOTES RUSKIN MODEL NUMBERS PRESSURE DROP (IN WG) L1 AHU-1&2 EME6325D 38X42 4320 3.83 INTAKE 2,3,4,5 2.37 L2 EME6625D 40X28 2860 0.09 INTAKE AHU-3&4 2,3,4,5

NOTES:

1. PROVIDE WITH GRAVITY BACKDRAFT DAMPER (EXHAUST LOUVERS ONLY).

2. PROVIDE WITH FLANGED FRAME.

PROVIDE WITH INSECT SCREEN AND 2 COAT KYNAR FINISH - REF. ARCHITECTURAL SPECS.

4. RUSKIN, GREENHECK, AND UNITED ENERTECH ARE APPROVED EQUALS.

5. LOUVERS SHALL BE HURRICANE RATED AND MEET TWIA REQUIREMENTS FOR 120 MPH FOR A 3-SECOND GUST.

TURNER | RAMIREZ ARCHITECTS 3751 S. ALAMEDA ST. CORPUS CHRISTI, TX 78411 p (361)994-8900

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SEAN M. RODRIGUEZ 96478 **ENGINEERING**

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REV. DESCRIPTION DATE PROJECT ISSUE DATE: 08/04/2023 100% CONSTRUCTION DOCUMENTS DRAWN BY CHECKED BY: PROJECT NUMBER: PROJECT #:RFQ1-0001 SHEET IDENTIFICATION

MECHANICAL SCHEDULES

M3.101

005318 22042 NOTES:

1. UNIT SHALL BE EPOXY COATED AND FULLY INSULATED. 2. TANK SHALL HAVE A SERVICEABLE AND REMOVABLE STRAINER.

3. INSTALL THE UNIT AS PER THE MANUFCATURES INSTRUCTIONS. 4. COMPLETELY INSULATE THE ENTIRE UNIT. EQUIPMENT LOCATED

OUTDOORS SHALL HAVE AN ALUMINUM JACKETING. 5. PROVIDE ALL REQUIRED ISOLATION VALVES, DRAIN VALVES, AND

SERVICE VALVES FOR THE UNIT. REFER TO THE DETAILS FOR MORE INFORMATION.

6. EQUIVALENT MANUFACTURES ARE B&G

7. TANK SHALL BE ASME RATED.

EXPANSION TANK SCHEDU	JLE	
MARK	EXT-1	
SERVES	HEATING WTR SYSTEM	
TANK VOLUME (GAL.)	228	
ACCEPTANCE VOLUME (GAL)	228	
MAX OPERATING PRESSURE	125	
MAX TEMPERATURE (def F)	240	
HYDRONIC CONNECTION	3/4"	
UNIT WEIGHT (LBS)	115	
MANUFACTURE	BELL & GOSSET	
MODEL NO.	B-35	
NOTES:	1 THRU 8	
NOTES:		

1. UNIT SHALL BE EPOXY COATED AND FULLY INSULATED.

2. PROVIDE UNIT WITH 6" THICK HOUSEKEEPING PAD THAT EXTENDS 6" PAST THE UNIT ON ALL SIDES.

3. INSTALL THE UNIT AS PER THE MANUFCATURES INSTRUCTIONS.

4. COMPLETELY INSULATE THE ENTIRE UNIT. EQUIPMENT LOCATED OUTDOORS SHALL HAVE AN ALUMINUM JACKETING.

5. PROVIDE ALL REQUIRED ISOLATION VALVES, DRAIN VALVES, AND SERVICE VALVES FOR THE UNIT. REFER TO THE DETAILS FOR MORE INFORMATION.

6. EQUIVALENT MANUFACTURES ARE AMTROL AND ELBI

7. TANKS SHALL HAVE A REMOVABLE TYPE BLADDER/DIAPHRAGM. 8. TANK SHALL BE ASME RATED.

8. TANK SHALL BE ASME RATED.		
PUMP SCHEDULE		
MARK	BHWP-1&2	
SERVES	BUILDING	
SYSTEM FLUID TYPE	HOT WATER	
STYLE	INLINE	
FLOW TYPE	VARIABLE	
OPERATION	-	
FLOW PER PUMP GPM	91	
HEAD (FT OF H20)	90	
MIN FLOW	12.8	
APPROX. PUMP EFF. (%)	67.60%	
APPROX. PUMP IMPELLER DIA. (INCHES)	5.25	
MOTOR RPM	3600	
FRAME SIZE	213JM	
HORSEPOWER	5	
VOLTS/PH	208/3	
VFD REQUIRED	YES	
WEIGHT	71	
MANUFACTURE	BELL & GOSSETT	
MODEL No.	SERIES e90 1.25AAB	
NOTES:	ALL	

NOTES:

1. PROVIDE UNIT WITH VARIABLE FREQUENCY DRIVE. DRIVE SHALL BE PROVIDED WITH NEMA 12 ENCLOSURE WHEN LOCATED INSIDE AND A NEMA 3R ENCLOSURE WHEN LOCATED OUTSIDE. DRIVE TERMINALS SHALL BE ABLE TO ACCEPT THE WIRE SIZE

SHOWN ON THE ELECTRICAL DRAWINGS. COORDINATE WITH DIVISION 26. SEE SPECIFICATION 23 17 20 2. INSTALL PUMP ON PIPE STAND. MODIFY PIPE STAND AS REQUIRED FOR NEW PUMP.

CONNECTIONS. PROVIDE END SUCTION DIFFUSERS ON THE SUCTION SIDE OF THE PUMP.

3. INSTALL PUMP AS SHOWN ON PLANS. PROVIDE A MINIMUM OF 5 PIPE DIAMETERS BETWEEN FITTINGS, CONNECTIONS, TRANSITIONS, AND ALL OTHER ACCESSORIES FOR PROPER WATER FLOW. PROVIDE FLEXIBLE CONNECTIONS AT ALL PUMP

4. PUMP SHALL BE INTERNRALLY FLUSHED MECHANICAL SEAL AND TEFC MOTOR. INSULATE PUMP FOR EXTERIOR INSTALLATION.

5. PROVIDE PUMP WITH ISOLATION VALVE AND CHECK VALVE.

6. PUMP SHALL HAVE STAINLESS STEEL SHAFT.

7. INTERLOCK PUMP WITH THE DDC SYSTEM AND/OR CHILLER CONTROLS FOR PROPER OPERATION. 8. PROVIDE SHAFT GROUNDING ON ALLYFD RATED MOTORS

9. EQUIVALENT PUMP MF S ARE B&G, TA O, ARMSTRONG.

10. PUMPS SHALL INITIALLY BE SET UP AS 100% REDUNDANT AND OPERATE ON A BI WEEKLY SWITCH OVER

SCHEDULE. AS MORE FLOORS ARE FINIHSED OUT AND BROUGHT ON-LINE THE PUMPS SHALL BE RECONFIGURED TO OPERATE IN A PARALLEL OPERATION.

AIR HANDLER SCHEDULE

DX MINISPLIT UNIT SCHEDULE

MARK	AHU-7,15,16,17	AHU-13	AHU-14	AHU-9,10,12
SERVES	STAIRWELL/TOP OF ELEVATOR/BOILER	STAIRWELL	ROOF ELEV. ROOM	IDF ROOMS
TYPE	WALL MOUNTED	WALL MOUNTED	WALL MOUNTED	VERTICAL
MIN-MAX SUPPLY (CFM)	265-455	635-775	635-775	635-775
FAN MOTOR TYPE	DC MOTOR	DC MOTOR	DC MOTOR	DC MOTOR
COOLING COIL (MBTUH) MAX/MIN	12/4.4	24/10	18/5.6	36/14.6
NOMINAL TONNAGE	1	2	1.5	3
ENTERING TEMPS(DB/WB)	74/58.7	74/58.7	74/58.7	74/58.7
VOLTS/PH/HZ	230/1/60	230/1/60	230/1/60	230/1/60
MCA(MOCP)	1	1	1	5.63
MANUFACTURER	MITSUBISHI	MITSUBISHI	MITSUBISHI	MITSUBISHI
MODEL NO.	TPKA0A0121LA10A	TPKA0A0241KA80A	TPKA0A0121LA10A	TPVA0A0361AA70A
NOTES	1,2,3,4,5,8	1,2,3,4,5,8	1,2,3,4,5,8	1,2,3,4,6,8
CONDENSING UNIT SCHEDULE				~
MARK	CU-7,15,16,17	CU-13	CU-14	CU-9,10,12
SERVES	AHU-7,15,16,17	AHU-13	AHU-14	AHU-9,10,12
NOMINAL TONNAGE	1	2	1.5	3
SEER	21	21.4	21.4	19.3
MCA	11	19	19	25
MOCP	28	26	26	30
VOLTS/PH.HZ	230/1/60	230/1/60	230/1/60	230/1/60
MANUFACTURER	MITSUBISHI	MITSUBISHI	MITSUBISHI	MITSUBISHI
MODEL NO.	TRUYA0121KA70NA	TRUYA0181KA70NA	TRUYA0241KA70NA	TRUYA0361KA70BA
NOTES	2,3,8	2,3,8	2,3,8	2,3,8

AHU-4 CONDENS	SING UNIT SCH	HEDULE				
MARK	CU-4A (OA PATH)	CU-4B (RA PATH)				
SERVES	AHU-4	AHU-4	7			
TOT REFRI. EFFECT	174.2	309.65				
ТОТ МВТИН	293.95	292.3				
AMBIENT TEMP.	105	105)		
EER(IEER)	12.3(13)	11.8(14.1)	$ \downarrow $			
VOLTS/PH	208/3/60	208/3/60				
COMPRESSOR QUANTITY	2	4				
MCA	71.9	140				
MOCP	90	175				
MFG	DAIKIN	DAIKIN				
MODEL No.	RCS015D	RCS030D				
NOTES:	ALL	ALL				
		7				

1. PROVIDE UNIT WITH MICROBLUE OR MEGABLUE CONDENSATE PUMP AND RESERVOIR WITH OVERFLOW SENSOR

AND LOW PRESSURE SWITCHES, CRANKCASE HEATERS, NON-BLEED PORT, AND ADJUSTABLE EXPANSION VALVE.

3. DO NOT EXCEED MANUFACTURES RECOMMENDED REFRIGERENT LINE LENGTHS.

4. PROVIDE WIRED THERMOSTAT.

LUNIT SHALL BE WALL MOUNTED COOLING ONLY UNIT.

6. PROVIDE 24" TALL STAND/PLENUM BASE FOR VERTICAL UNITS.

8. ACCEPTABLE MANUFACTURES ARE MITSUBISHI OR DAIKIN.

7. PROVIDE RUBBER IN SHEAR ISOLATORS FOR SUSPENDED AIR HANDLER.

2. SIZE REFRIGERANT LINES AS PER THE MANUFACTURERS INSTRUCTIONS. PROVIDE INVERTER DRIVEN COMPRESSORS, HIGH

PROVIDE PRESSURE TAPS ON INLET AND OUTLET OF INDOOR COILS. PROVIDE SUCTION ACCUMULATORS ON ALL UNITS.

1. PROVIDE COMPRESSOR WITH 5 YEAR WARRANTY. 2. SIZE REFRIGERANT LINES PER MANUFACTURES RECOMMENDATIONS. PROVIDE HIGH AND LOW PRESSURE

SWITCHES, LIQUID LINE FILTER DRIER, CRANKCASE HEATERS AND NON-BLEED PORT, ADJUSTABLE

TXV VALVE. PROVIDE LIQUID LINE SIGHT GLASS AND PRESSURE TAPS ON INLET AND OUTLET OF INDOOR COILS.

3. UNITS SHALL BE USED FOR EMERGENCY OPERATIONS AND RUN FOR 12 HOURS EVERY OTHER SATURDAY. UNIT SHALL BE

CONTROLLED BY THE BUILDING ENERGY MANAGEMENT SYSTEM.

DX SPLIT AIR HANDLING UNIT SCHEDULE

- 11						\
1		MARK	DX-AHU-8	DX-AHU-11		
	(SERVES	MDF 2ND FLOOR	IT ROOM 4TH FLOOR		
		TYPE	CV	CV	\	
1		SUPPLY (CFM)	2875	3600		
1		EXT. SP. (IN. WG)	0.5	0.5		
	7	FAN MOTOR HORSEPOWER	0.5	0.5		
	\	EAN MOTOR TYPE	ECM	ECM		/
\dashv		FAN STYLE/CONFIGURATION	VERT	HORIZ.		
-(COOLING COIL			1	
ľ		EAT DB/WB (F)	74/58.6	74/58.7		
	(LAT DB/WB (F)	55/50.8	55/50.9		
		TOTAL GRAND (MBTUH)	61	77	7	
4		TOTAL SENSIBLE (MBTUH)	60.8	76	1	
۱		ELECTRICAL DATA				
-	7	VOLTS/PH/HZ	208/3/60	208/3/60		
-	\	MCA	42.9	8.1		/
4		MOCP	80	15		
_(MANUFACTURE	Vertiv	Vertiv	_ <	
╝		MODEL No.	PX029/Upflow	MT060		
	(NOTES:	1,2,3,6,7,8,9	1,2,3,4,5,6,7,8,9		
					\prec	•

1. PROVIDE 2" PLEATED 30% EFFICIENT MERV 13 FILTERS FOR THE AHU.

2. PROVIDE SLIDE OUT FILTER FRAME ON RETURN INLET OF AIR HANDLER.

2 PROVIDE WITH SINGLE POINT OF ELECTRICAL CONNECTION FOR EACH UNIT. THE UNITS SHALL BE CONSTANT VOLUME. STARTERS FOR AHUS PROVIDED BY DIVISION 16 AND INSTALLED BY DIVISION 16. COORDINATE WITH DIVI<mark>S</mark>ION 16 FOR THIS EQUIPMENT.

4. PROVIDE RUBBER IN SHEAR ISOLATORS FOR SUSPENDED AIR HANDLER.

5. PROVIDE SECONDARY DRAIN PAN WITH EMERGENCY FLOAT SWITCH. INTERLOCK FLOAT SWITCH WITH UNIT SAFETIES. 6. PROVIDE ALL SENSORS, ACCESSORIES, CONTROL POINTS, AND INTERLOCKS FOR THE AHUS AND THEIR RESPECTIVE

ACCUS TO BE PROPERLY OPERATED AND STAGED BY THE DDC SYSTEM. COORDINATE ALL THE REQUIRED

CONTROLS WITH THE EQUIPMENT TYPE, CONFIGURATION, NUMBER OF DX STAGES, REFRIGERATION CIRCUITS, CONTROLS SEQUENCES AND SPECIFICATIONS. ALL CONTROLS SHALL BE COMPATIBLE WITH THE DISTRICT STANDARDS. 7. INSTALL ALL UNITS AS PER THE MANUFACTURERS SPECIFICATIONS AND RECOMMENDATIONS. PROVIDE THE

► MANUFACTURERS MINIMUM CLEARANCES FOR OPERATION AND SERVICE OF THE UNIT. COORDINATE THE INSTALLATION OF THE UNIT WITH ALL OTHER DISCIPLINES, DUCTWORK, STRUCTURE, ELECTRICAL, AND ALL OTHER OBSTRUCTION PRIOR TO INSTALLATION OF THE UNIT, ITS EQUIPMENT PAD, AND ALL ACCESSORIES.

8. MECHANICAL SPACES HAVE BEEN DESIGNED AROUND THE SPECIFIED MANUFACTURER. ALTERINATE MANUFACTURERS EQUIPMENT SHALL NOT EXCEED THE SPECIFIED MANUFACTURES PHYSICAL DIMENSIONS AND WEIGHTS.

9. EQUIVALNET MANIFATURE ARE TRANE AND DAIKIN.

CONDENSING U	JNIT SCHED	ULE			
MARK	CU-8	CU-11			
SERVES	AHU-8	AHU-11			
TOT MBTUH	61	77			
AMBIENT TEMP.	100	100			
VOLTS/PH	208/3/60	208/3/60			
MCA	5.7.	26.2			
MOCP	15	50			
MFG	Vertiv	Vertiv			
MODEL No.	MCL055	PFD067			
NOTES:	1,2,3	1,2,3			

1. PROVIDE COMPRESSOR WITH 5 YEAR WARRANTY.

2. PROVIDE RAWAL "APR" HOT GAS BYPASS CONTROL DEVICE TO PROVIDE MODULATING.

CAPACITY CONTROL.

3. SIZE REFRIGERANT LINES PER MANUFACTURES RECOMMENDATIONS. PROVIDE HIGH AND LOW PRESSURE SWITCHES, LIQUID LINE FILTER DRIER, CRANKCASE HEATERS AND NON-BLEED PORT, ADJUSTABLE TXV VALVE. PROVIDE LIQUID LINE SIGHT GLASS AND PRESSURE TAPS ON INLET AND OUTLET OF INDOOR COILS.

FAN SCHE	DULE	
MARK	EF-1	EF-2
SERVES	RESTROOMS	RESTROOMS
DRIVE	DIRECT	DIRECT
CFM	2250	2250
E.S.P. IN W.G.	0.74	0.74
HORSEPOWER	2	2
RPM (MAX.)	2250	2250
SONES (MAX.)	10.5	10.5
VOLTS/PHASE/HERTZ	208/1/60	208/1/60
MANUFACTURER	GREENHECK	GREENHECK
MODEL NUMBER	G-200HP-VG	G-200HP-VG
WEIGHT	144	144
NOTES	1, 2, 3	1, 2, 3
	MARK SERVES DRIVE CFM E.S.P. IN W.G. HORSEPOWER RPM (MAX.) SONES (MAX.) VOLTS/PHASE/HERTZ MANUFACTURER MODEL NUMBER WEIGHT	SERVES RESTROOMS DRIVE DIRECT CFM 2250 E.S.P. IN W.G. 0.74 HORSEPOWER 2 RPM (MAX.) 2250 SONES (MAX.) 10.5 VOLTS/PHASE/HERTZ 208/1/60 MANUFACTURER GREENHECK MODEL NUMBER G-200HP-VG WEIGHT 144

1. FAN SHALL BE DIRECT DRIVE WITH MOTOR MOUNTED SPEED CONTROL RELAY, PREWIRED INTEGRAL DISCONNECT SWITCH, AND BACKDRAFT DAMPER. 2. EXHAUST FAN SHALL BE CONTROLLED BY BUILDING MANAGEMENT SYSTEM COORDINATE WITH ELECTRICAL.

3. EQUIVALENT MANUFACTURES ARE COOK AND GREENHECK.

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22042

MECHANICAL SCHEDULES

REV. DESCRIPTION DATE

PHASE: 100% CONSTRUCTION DOCUMENTS

08/04/2023

PROJECT #:RFQ1-0001

PROJECT ISSUE DATE:

SHEET IDENTIFICATION

DRAWN BY: CHECKED BY: PROJECT NUMBER:

TURNER | RAMIREZ ARCHITECTS

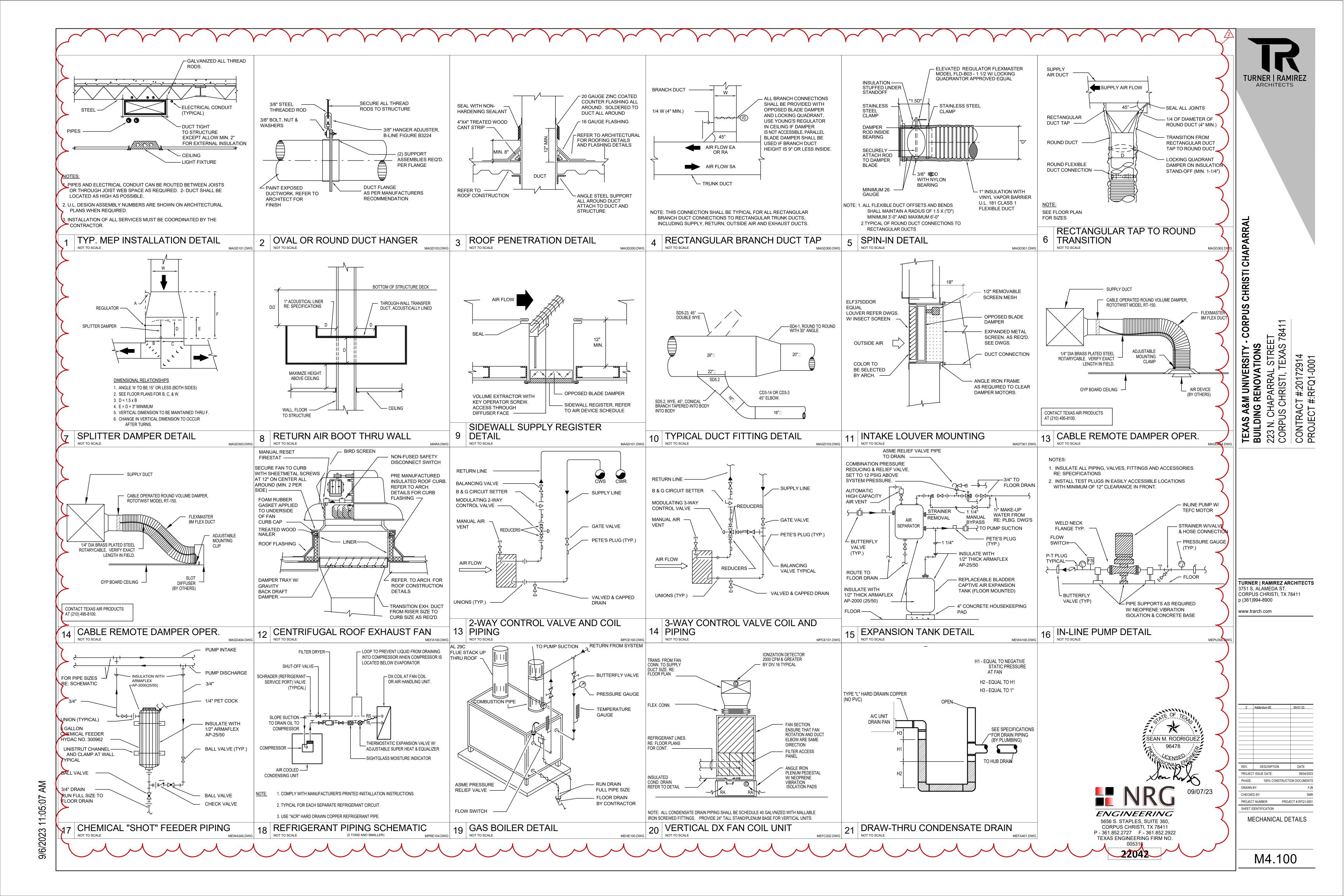
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M3.102

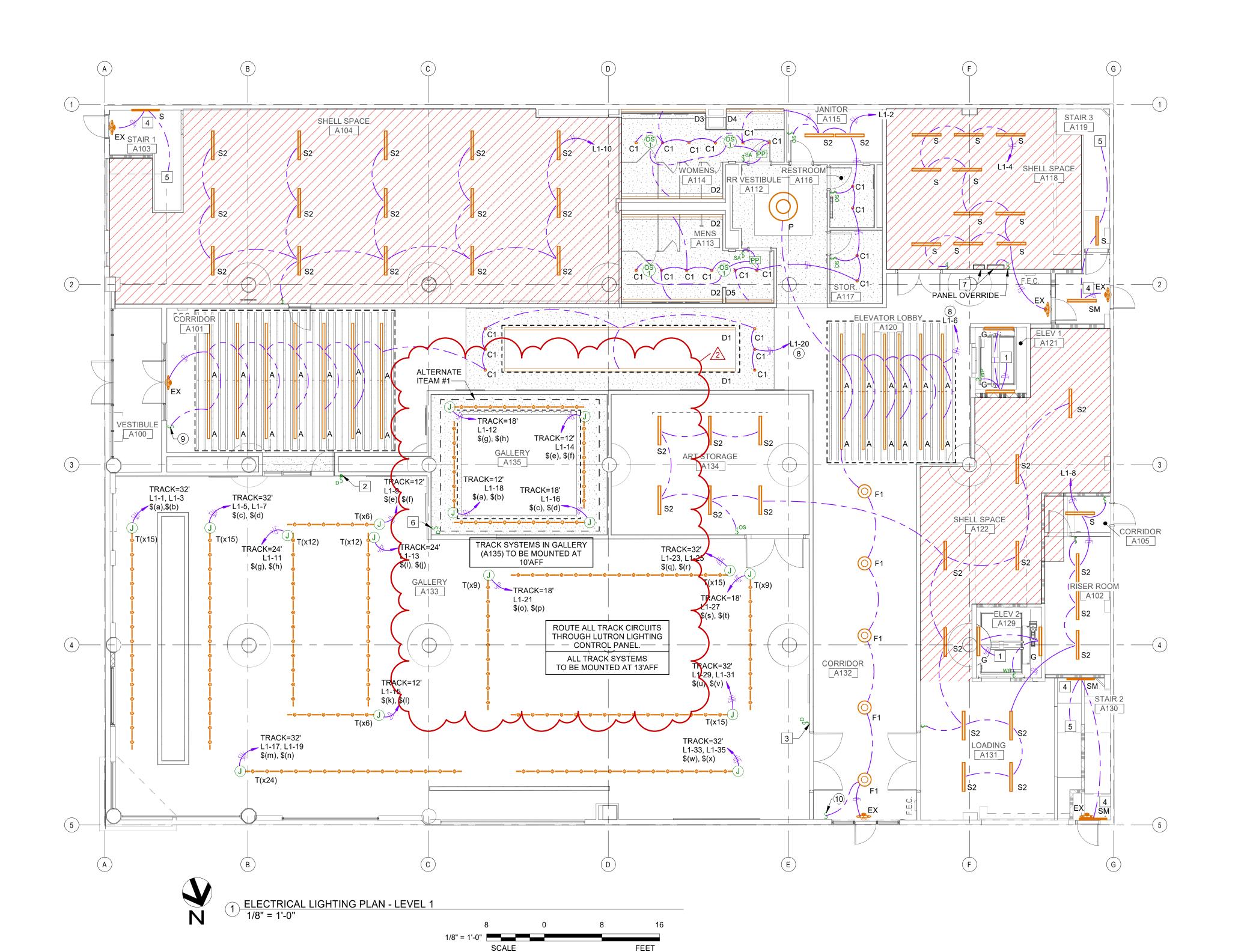


ELECTRICAL LIGHTING
PLAN - LEVEL 1

PROJECT #:RFQ1-0001

CHECKED BY:
PROJECT NUMBER:

E1.100



ELECTRICAL GENERAL NOTES:

- A. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS AT THE JOB SITE BEFORE COMMENCING ANY PHASE OF THE WORK. ADJUSTMENTS FOR FIT AND COORDINATION SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER. NOTIFY ENGINEER OF ANY CONFLICTS, DISCREPANCIES OR OMISSIONS PRIOR TO COMMENCEMENT OF THE CONTRACT WORK.
- B. CONTRACTOR SHALL REVIEW ALL ARCHITECTURAL, CIVIL, MECHANICAL & STRUCTURAL DRAWINGS AND SPECIFICATIONS FOR ANY ADDITIONAL REQUIREMENTS.
- C. CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER TRADES.
- ALL CONDUIT SHALL BE AS STRAIGHT AS POSSIBLE AND PARALLEL OR PERPENDICULAR TO BUILDING LINES.
- E. ALL WORK SHALL COMPLY WITH CURRENTLY ADOPTED VERSION OF NATION ELECTRICAL CODE.
- SEAL ALL WALL, ROOF, AND FLOOR PENETRATIONS WITH UL LISTED FIRE SEALANT.
- G. ALL CONDUIT SHALL BE ROUTED CONCEALED WITHIN WALLS AND/OR ABOVE CEILINGS, WHERE APPLICABLE.
- REFER TO 1/E6.100 PLANS FOR EXACT LOCATIONS AND MOUNTING HEIGHTS OF ALL FIXTURES PRIOR TO ROUGH-IN.

EXIT SIGNS TO BE MOUNTED ABOVE DOOR THRESHOLD

REFERANCE SENSOR SCHEDULE ON SHEET E5.100 FOR ALL CONTROLLS.

SENSOR LAYOUT IS BASED ON LUTRON COVERAGE PATTERNS.
ADJUST QUANTITIES AND LOCATIONS FOR APPROVED
SUBSTITUTION

ALL SENSORS SHALL BE LINE VOLTAGE, WITH PROVIDED HOT, NEUTRAL AND GROUND CONDUCTORS AS REQUIRED. PROVIDE COPIES OF SENSOR OPERATION INSTRUCTIONS TO OWNER.

SET TIME DELAY TO 20-30 MINUTES FOR ALL OCCUPANCY SENSORS. SINGLE RELAY WALL SWITCH AND CEILING MOUNTED SENSORS TO BE SET TO MANUAL ON, AUTO OFF. REST ROOMS AND CORRIDORS SET THE SENSORS TO AUTO ON/AUTO OFF. DUAL RELAY WALL SWITCH SHALL BE SET TO MANUAL ON MODE RELAY 1, AUTO ON RELAY 2.

ALTERNATE #1 - REMOVE HARD CEILING EXTEND AIRCRAFT CABLE AND/OR ALLTHREAD TO STRUCTURE. TRACK SYSTEM TO BE MOUNTED

ELECTRICAL KEYNOTES

- CONTINUE CIRCUIT TO ELEVATOR SHAFT LIGHT FIXTURES.

 PROVIDE SWITCH BANK WITH LUTRON WALLSTATIONS
 #QSWS2-2RLDI-WH-D FOR TRACK LIGHTING. SWITCH BANK SHALL
 INCLUDE 7 WALLSTATIONS EACH WITH 2 SWITCH CONFIGURATIONS
 FOR TRACK SYSTEM, (A) (N).
- PROVIDE SWITCH BANK WITH LUTRON WALLSTATIONS
 #QSWS2-2RLDI-WH-D FOR TRACK LIGHTING. SWITCH BANK SHALL
 INCLUDE 5 WALLSTATIONS EACH WITH 2 SWITCH CONFIGURATIONS
 FOR TRACK SYSTEM, (O) (X).
- TYPICAL: STAIR-WELL LIGHTING FIXTURES TO BE ILLUMINATED AT 1% 24HRS PER DAY AND HAVE INTEGRAL DRIVER AND OCCUPANCY SENSOR TO INCREASE LIGHT OUTPUT TO 100% UPON DETECTION OF OCCUPANT.
- 5 CONTINUE SWITCHLEG TO OTHER FLOOR FIXTURES IN STAIR-WELL.
 6 PROVIDE SWITCH BANK WITH LUTRON WALLSTATIONS
 #QSWS2-2RLDI-WH-D FOR TRACK LIGHTING. SWITCH BANK SHALL
 INCLUDE 4 WALLSTATIONS EACH WITH 2 SWITCH CONFIGURATIONS
 FOR TRACK SYSTEM, (A) (H).
- 7 PROVIDE LIGHTING CONTROL PANEL/GATEWAY LUTRON
 #QP5-2L-POE AND #ALPD10S-BBBBBBBBBB, FOR ART GALLERY
 TRACK LIGHTS AND HALLWAY COORIDOR TIME CONTROL. ALL
 CIRCUITS SHALL TURN ON/OFF WITH BMS SCHEDULE, VERIFY TIMES
 WITH OWNER. REFERENCE LIGHTING CONTROL PANEL ON SHEET
- 8 ROUTE CIRCUIT THROUGH LIGHTING CONTROL PANEL,
- COORDINATE WITH OWNER ON TIME SCHEDULE.

 9 PROVIDE MANUAL OVERIDE FOR CORRIDOR LIGHTS CIRCUIT L1-20.
- 10 PROVIDE MANUAL OVERIDE FOR CORRIDOR LIGHTS CIRCUIT L1-6.

09/07/23

JOHN A. RODRIGUEZ III
90273

VCENSED

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TEXAS ENGINEERING FIRM NO. 005318

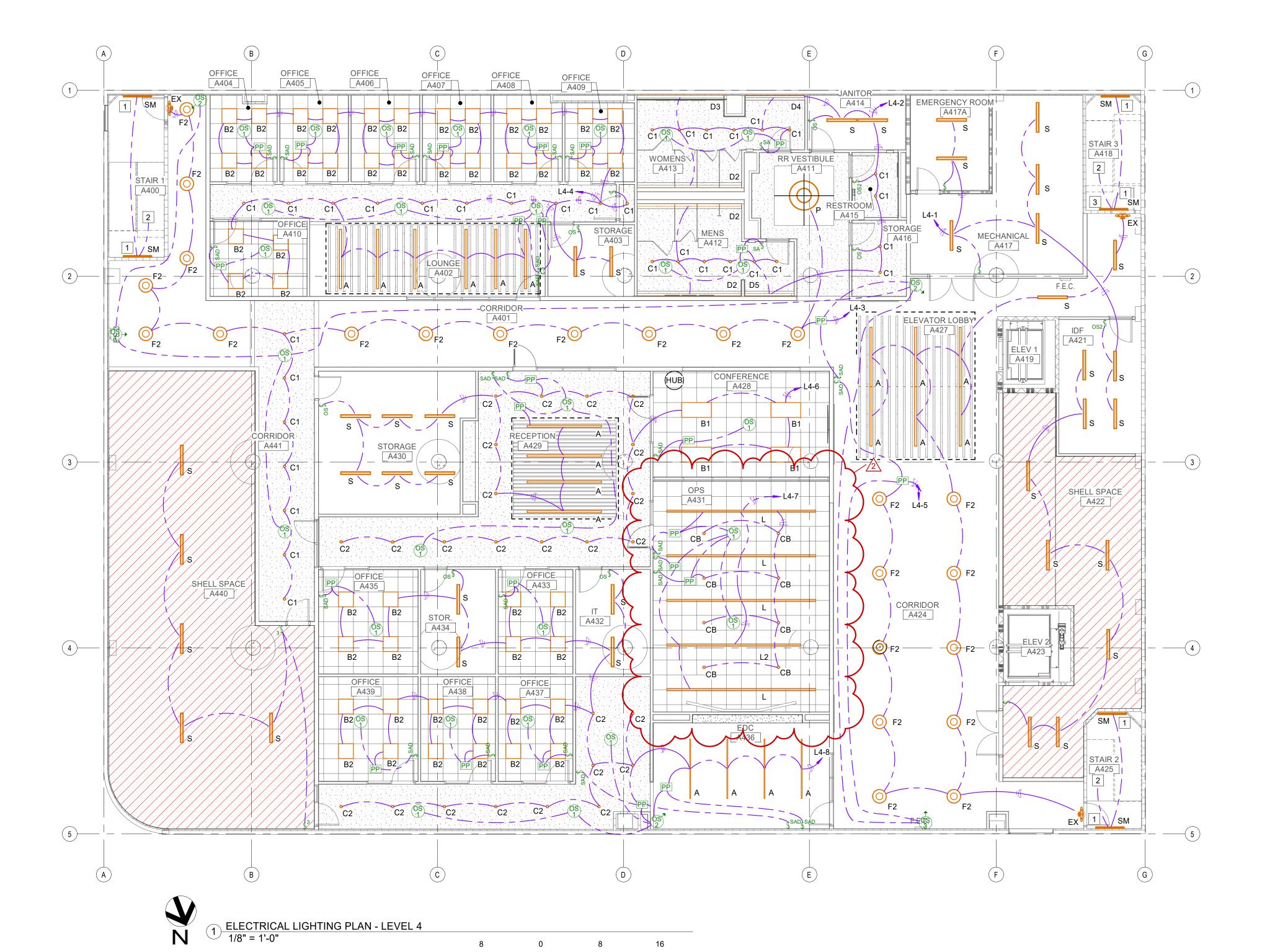
22042

CORPUS CHRISTI, TX 78411

SHEET IDENTIFICATION **ELECTRICAL LIGHTING** PLAN - LEVEL 4

PROJECT #:RFQ1-0001

E1.400



ELECTRICAL GENERAL NOTES:

INDICATED.

- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS AT THE JOB SITE BEFORE COMMENCING ANY PHASE OF THE WORK. ADJUSTMENTS FOR FIT AND COORDINATION SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER. NOTIFY ENGINEER OF ANY CONFLICTS, DISCREPANCIES OR OMISSIONS PRIOR TO COMMENCEMENT OF THE CONTRACT WORK.
- CONTRACTOR SHALL REVIEW ALL ARCHITECTURAL, CIVIL, MECHANICAL & STRUCTURAL DRAWINGS AND SPECIFICATIONS FOR ANY ADDITIONAL REQUIREMENTS.
- CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER TRADES.
- ALL CONDUIT SHALL BE AS STRAIGHT AS POSSIBLE AND PARALLEL OR PERPENDICULAR TO BUILDING LINES.
- ALL WORK SHALL COMPLY WITH CURRENTLY ADOPTED VERSION OF NATION ELECTRICAL CODE.
- SEAL ALL WALL, ROOF, AND FLOOR PENETRATIONS WITH UL LISTED FIRE
- ALL CONDUIT SHALL BE ROUTED CONCEALED WITHIN WALLS AND/OR ABOVE CEILINGS, WHERE APPLICABLE.
- REFER TO 1/E6.100 PLANS FOR EXACT LOCATIONS AND MOUNTING HEIGHTS OF ALL FIXTURES PRIOR TO ROUGH-IN.

CIRCUIT EXIT SIGNS & EMERGENCY LIGHTS (IF APPLICABLE) TO UNSWITCHED SIDE OF LIGHTING CIRCUIT SERVING AREA IN WHICH LOCATED, TYPICAL. ALL EMERGENCY BATTERY PACKS SHALL BE CIRCUITED TO UNSWITCHED SIDE OF CIRCUIT

REFERANCE SENSOR SCHEDULE ON SHEET E5.100 FOR ALL

SENSOR LAYOUT IS BASED ON LUTRON COVERAGE PATTERNS. ADJUST QUANTITIES AND LOCATIONS FOR APPROVED SUBSTITUTION.

ALL SENSORS SHALL BE LINE VOLTAGE, WITH PROVIDED HOT, NEUTRAL AND GROUND CONDUCTORS AS REQUIRED. PROVIDE COPIES OF SENSOR OPERATION INSTRUCTIONS TO OWNER.

SET TIME DELAY TO 20-30 MINUTES FOR ALL OCCUPANCY SENSORS. SINGLE RELAY WALL SWITCH AND CEILING MOUNTED SENSORS TO BE SET TO MANUAL ON, AUTO OFF. REST ROOMS AND CORRIDORS SET THE SENSORS TO AUTO ON/AUTO OFF. DUAL RELAY WALL SWITCH SHALL BE SET TO MANUAL ON MODE RELAY 1, AUTO ON RELAY 2.

ELECTRICAL KEYNOTES

TYPICAL: STAIR-WELL LIGHTING FIXTURES TO BE ILLUMINATED AT 1% 24HRS PER DAY AND HAVE INTEGRAL DRIVER AND OCCUPANCY SENSOR TO INCREASE LIGHT OUTPUT TO 100% UPON DETECTION OF OCCUPANT.

CONTINUE SWITCHLEG TO OTHER FLOOR FIXTURES IN STAIR-WELL.

FIXTURE MOUNTED ABOVE THRESHOLD.

ENGINEERING 5656 S. STAPLES, SUITE 360, CORPUS CHRISTI, TX 78411 P - 361.852.2727 F - 361.852.2922 TEXAS ENGINEERING FIRM NO. 005318

22042

9/7/2023 2:23:10 PM

DRAWN BY: CHECKED BY: PROJECT NUMBER:

REV. DESCRIPTION DATE

PROJECT ISSUE DATE: 08/04/2023

PHASE: 100% CONSTRUCTION DOCUMENTS

DRAWN BY: CEG

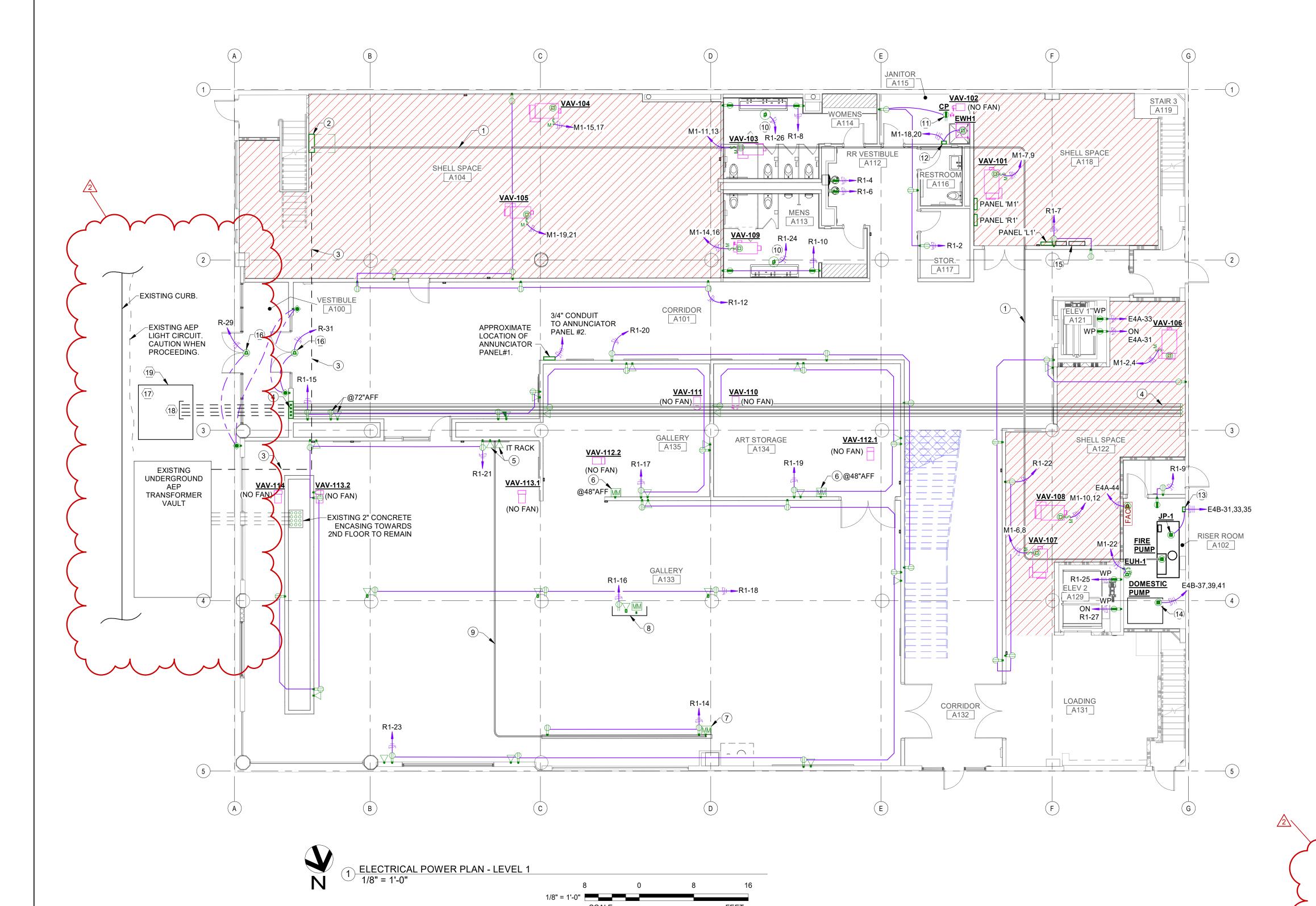
PROJECT #:RFQ1-0001

ELECTRICAL POWER PLAN
- LEVEL 1

CHECKED BY:

PROJECT NUMBER:

E2.100



ELECTRICAL GENERAL NOTES:

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- D. ALL CONDUIT SHALL BE AS STRAIGHT AS POSSIBLE AND PARALLEL OR PERPENDICULAR TO BUILDING LINES.
- E. ALL WORK SHALL COMPLY WITH CURRENTLY ADOPTED VERSION OF NATION ELECTRICAL CODE.
- SEAL ALL WALL, ROOF, AND FLOOR PENETRATIONS WITH UL LISTED FIRE
- ALL CONDUIT SHALL BE ROUTED CONCEALED WITHIN WALLS AND/OR ABOVE CEILINGS, WHERE APPLICABLE.
- H. REFER TO 1/E6.100 PLANS FOR EXACT LOCATIONS AND MOUNTING HEIGHTS OF ALL FIXTURES PRIOR TO ROUGH-IN.

ELECTRICAL KEYNOTES

- 1 PROVIDE PRYSMIAN #LIFELINE MC-LSZH 2-HOUR FIRE RESISTIVE MULTICONDUCTOR CABLE, WITH HANGERS EVERY 4' OR EQUIVALENT TO FIRE PUMP.
- PROVIDE 1200A, 3PH, 4W, NEMA-1 SERVICE ENTRANCE RATED SWITCHBOARD WITH 1200AMP RATED MAIN BREAKER WITH GFI PROTECTION. 65KAIC RATED.
 - UNDERGROUND CONDUCTORS WITHIN EXISTING RACEWAY, PER ONE-LINE TO 1200A FIRE PUMP MAIN SWITCH.
- 4 PROVIDE (4) 4"C FOR TELECOMUNICATION. COUNDUITS TO RISE UP TO THE SECOND FLOOR TELECOM DEMARC.
- 5 PROVIDE 2 (411) 4" ELECTRICAL BOX WITH 8 DATA PORTS IN TOTAL, EACH WITH (1) 1"CONDUIT.
- PROVIDE (1) 1/2" CONDUIT FOR A/V, MOUNT AS INDICATED.
 PROVIDE (1) 3/4" CONDUIT FOR A/V, MOUNT AS INDICATED.
 PROVIDE POLE MOUNT WITH POWER, DATA, AND 1/2" AV
- CONDUIT FOR PROJECTOR, COORDINATE ADDITIONAL REQUERMENTS WITH OWNER PRIOR TO INSTALLATION.

 9 PROVIDE 1-1/2" CONDUIT FROM WALL ROUGH-IN TO A/V-RACK, COORDINATE ADDITIONAL REQUIERMENTS WITH
- OWNER PRIOR TO INSTALLATION.

 10 PROVIDE JUCTION BOX ABOVE ACCESSABLE CEILING, PROVIDE 120V POWER FOR 24V TRANSFROMER FOR ALL PLUMBING FIXTURES' IR SENSORS. FIELD COORDINATE
- EXACT LOCATION AND ADDITIONAL REQUIERMENTS WITH PLUMBING CONTRACTOR PRIOR TO INSTALLATION.

 11 PROVIDE RECEPTACLE FOR RECIRCULATING PUMP 'CP', MOUNT ABOVE CEILING, COORDINATE EXACT LOCATION
- MOUNT ABOVE CEILING, COORDINATE EXACT LOCATION WITH PLUMBING CONTRACTOR PRIOR TO INSTALLATION.

 30A/2P/NF/N1 DISCONNECT SWITCH, FIELD COORDINATE
- EXACT LOCATION.

 13 PROVIDE 30A/3P/NF/N-3R DISCONNECT SWITCH. FIELD
- COORDINATE EXACT LOCATION.
- 14 DOMESTIC PUMP SKID WITH INTEGRATED DISCONNECT SWITCH. COORDINATE EXACT POWER REQUIERMENTS WITH VINDOR PRIOR TO INSTALLATION.
- LUTRON LIGHTING CONTROL PANEL. REFERANCE ELECTRICAL LIGHTING PLAN E1.100 FOR ADDITIONAL INFORMATION.
- PROVIDE 120V POWER FOR ADA DOOR OPERATOR
 COORDINATE EXACT LOCATION OF OPERATOR AND
 PUSHBUTTONS WITH OWNER PRIOR TO INSTALLATION.
- 17 APPROXIMATE LOCATION OF BORE PIT FOR TELECOMMUNICATION, SIZE AS REQUIRED.
- TYPICAL: (4) 4"CONDUITS FOR TELECOMMUNICATION TO EXTEND INTO BORE PIT WITH PULL CORD, CAP AND LABEL CONDUITS. CONNECTION BY OWNER.
- 19 PROVIDE CONCRETE FOR SIDEWALK AS REQUIRED FOR FULL COVERAGE OF BORE PIT.



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DRAWN BY: CEG
CHECKED BY: JAR
PROJECT NUMBER: PROJECT #:RFQ1-0001
SHEET IDENTIFICATION

ELECTRICAL POWER PLAN - ROOF DECK

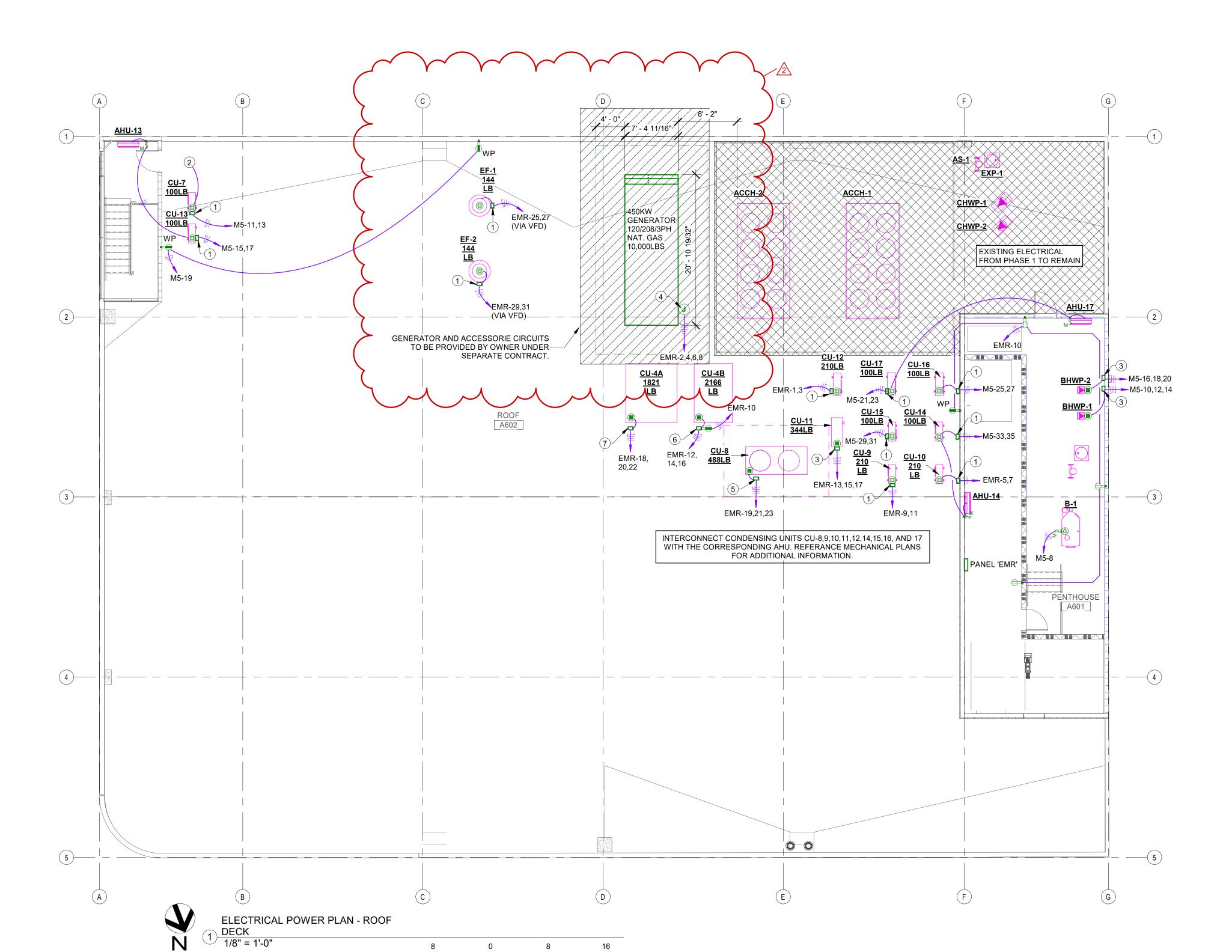
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5656 S. STAPLES, SUITE 360,
CORPUS CHRISTI, TX 78411

P - 361.852.2727 F - 361.852.2922
TEXAS ENGINEERING FIRM NO.

005318 **22042**

E2.600



ELECTRICAL GENERAL NOTES:

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- H. REFER TO 1/E6.100 PLANS FOR EXACT LOCATIONS AND MOUNTING HEIGHTS OF ALL FIXTURES PRIOR TO ROUGH-IN.

	ELECTRICAL KEYNOTES
1	30A/2P/NF/N3R DISCONNECT SWITCH, REFERENCE DISCONNECT MOUNTING DETAIL ON SHEET E6.100.
2	INTERCONNECT WITH THE CORRESPONDING AHU LOCATED IN STAIR-WELL #1
3	PROVIDE 60A/3P/NF/N-3R DISCONNECT SWITCH. FIELD COORDINATE EXACT LOCATION.
4	PROVIDE CIRCUITS FOR RECEPTACLE, BATTERY CHARGER, HEATER AND CONTROLLER IF INTEGRAL LOAD CENTER NOT PROVIDED. COORDINATE LOCATION AND ADDITIONAL REQUIREMENTS WITH VENDOR.
5	PROVIDE 30A/3P/NF/N-3R DISCONNECT SWITCH. FIELD COORDINATE EXACT LOCATION.
6	PROVIDE 200A/3P/NF/N-3R DISCONNECT SWITCH. FIELD COORDINATE EXACT LOCATION
7	PROVIDE 100A/3P/NF/N-3R DISCONNECT SWITCH. FIELD COORDINATE EXACT LOCATION

3751 S. ALAMEDA ST. CORPUS CHRISTI, TX 78411

SPECIAL SYSTEMS PLAN -LEVEL 1

PROJECT NUMBER: PROJECT #:RFQ1-0001

DRAWN BY: CHECKED BY:

E3.100



ELECTRICAL GENERAL NOTES:

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	ELECTRICAL KEYNOTES
1	COORDINATE POWER/DATA REQUIREMENTS AND LOCATION/ELEVATION WITH OWNER PRIOR TO INSTALLATION.
2	PROVIDE (1) 3" CONDUIT SLEEVE WITH PULL STRING FOR COMMUNICATION, CONDUIT SHALL HANG CLOSE TO CONCRETE CEILING.
3	PROVIDE (1) 4" CONDUIT SLEEVE FROM 1 FIRST FLOOR TO SECOND FLOOR, FOR CABLE TRAY CABLES.
4	ROUGHT 1" CONDUIT WITH PULL CORD AGAINST THE CEILING DECK TO A/V CABINET. COORDINATE LOCATION WITH OWNER.
5	APPROXIMATE LOCATION OF A/V CABINET. COORDINATE

ALL A/V, SECURITY, AND IT ROUGH-INS SHALL BE PROVIDED BY CONTRACTOR. ALL EQUIPMENT AND CABELING SHALL BE PROVIDED BY OWNER.

TO INSTALLATION.

ROUGH-INS AND CONDUIT ROUTING WITH OWNER PRIOR

ALL CONDUIT SHALL BE RUN UP AGAINST THE CEILING DECK OR AS HIGH AS POSSIBLE.

JOHN A. RODRIGUEZ III
90273

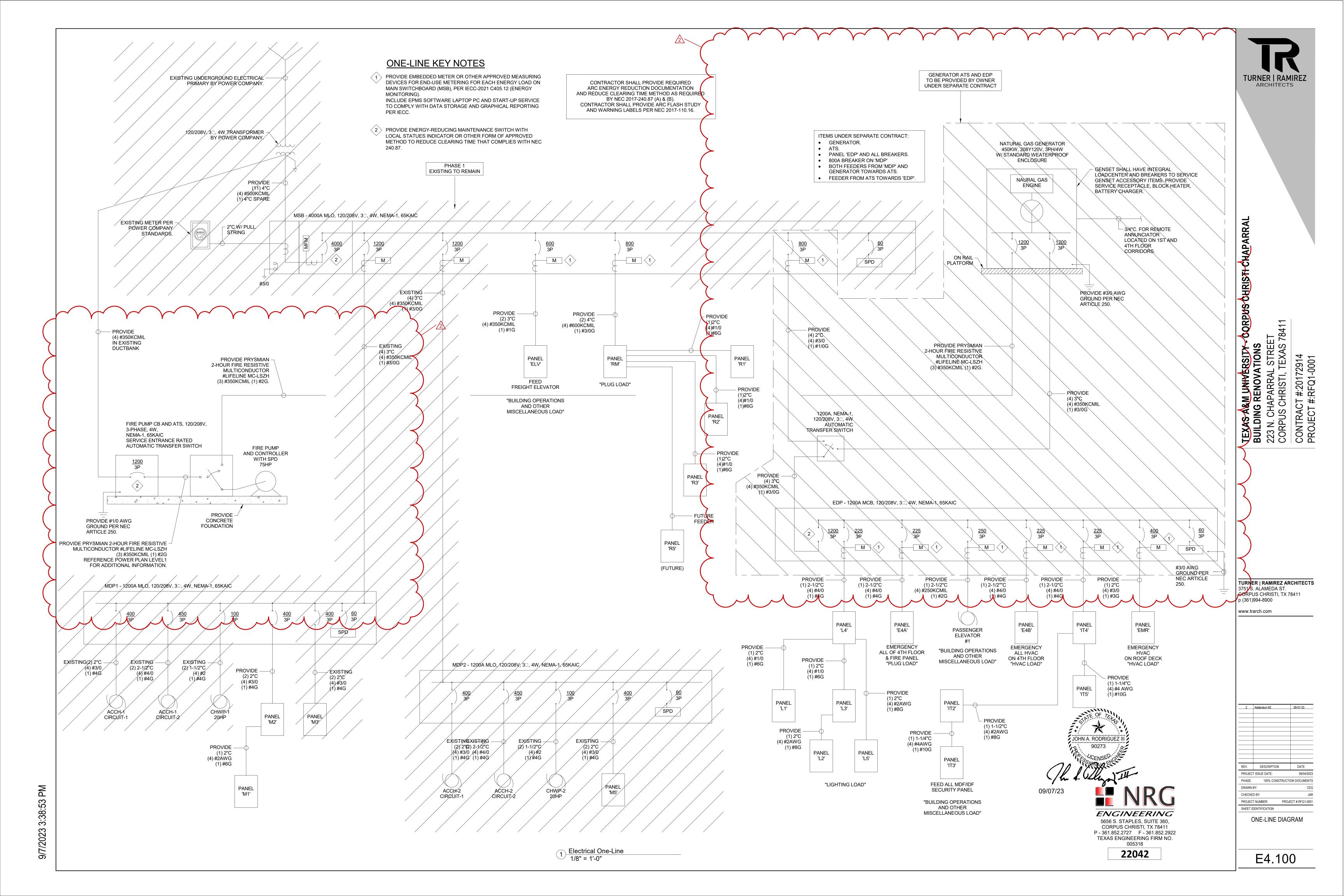
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**ENCINEERING*

5656 S. STAPLES, SUITE 360,
CORPUS CHRISTI, TX 78411
P - 361.852.2727 F - 361.852.2922
TEXAS ENGINEERING FIRM NO.
005318

22042

9/6/2023 11:41:43 AM



ESTIMATED ELECTRICAL L	OAD		120/208V, 3□, 4W
DESCRIPTION	CONNECTED LOAD	DEMAND FACTOR	NEC DEMAND
LIGHTING	45180	125%	56475
RECEPTACLES	36400	NEC 220-44	23200
KITCHEN EQUIPMENT	0	NEC 220-56	0
H.V.A.C.	79677	100%	79677
LARGEST MOTOR	0	125%	0
MOTOR LOAD	109679	100%	109679
MISC. SINGLE PHASE LOADS	57000	100%	57000
TOTAL VOLT-AMPERS	327936		326031
326031 VA / (208V*1.732)	=	905	AMPS

PANE	EL'MSB'	EXISTIN	NG			400	00 AMP, M.C.B, 120/208 V	, 3□, 4W,	S/N, SURFACE, NEMA 1,	100 KA/C
CKT#	LOAD SERVED	LOAD	CONDUIT & WIRE SIZE	BKR SIZE	АВ	C BKR SIZE	CONDUIT & WIRE SIZE	LOAD	LOAD SERVED	CKT#
1	SPD	-	#6 AWG	60/3 E	Α	800/3	PER ONE-LINE	PER ONE-LINE 120206		
		-	#6 AWG		В		PER ONE-LINE PER ONE-LINE	106528	PANEL 'EDP'	2
		-	#6 AWG			С		101202		(
3	MDP1	105684	PER ONE-LINE	1200/3 E	Α		PER ONE-LINE	7220		
		104084	PER ONE-LINE		В	800/3	PER ONE-LINE	4560	PANEL 'RM'	4
		104236	PER ONE-LINE			С	PER ONE-LINE	4500		(
	MDP2	97410	PER ONE-LINE	1200/3 E	Α		PER ONE-LINE	ONE-LINE 17100		\
5		96740	PER ONE-LINE		В	600/3	PER ONE-LINE		PANEL 'ELV'	6
		97270	PER ONE-LINE			С	PER ONE-LINE			
CONNECTED LOAD = 1001540 VA		PHASE A = 348220 VA			PHASE B = 329012 VA		PHASE C = 324308 VA			

PANE	EL'MDP1'	EXISTIN	IG			120	0 AMP, M.L.O, 120/208 \	/, 3□, 4W	/, S/N, SURFACE, NEMA 1	, 65 KAI
CKT#	LOAD SERVED	LOAD	CONDUIT & WIRE SIZE	BKR SIZE	АВС	BKR SIZE	CONDUIT & WIRE SIZE	LOAD	LOAD SERVED	СКТ
		-	#6 AWG		Α		PER ONE-LINE	8910	CHWP-1	'
1	SPD	-	#6 AWG	60/3 E	В	150/3 E	PER ONE-LINE	8910	20HP	7
		-	#6 AWG		С		PER ONE-LINE	8910		(
	ACCH-1	37440	PER ONE-LINE		Α		PER ONE-LINE	14454		
3	CIRCUIT #1	37440	PER ONE-LINE	400/3 E	В	400/3	PER ONE-LINE	12954	PANEL 'M2'	4 (
		37440	PER ONE-LINE		С	;	PER ONE-LINE	13606		
	ACCH-1	37920	PER ONE-LINE		Α		PER ONE-LINE	6960		
5	CIRCUIT #2	37920	PER ONE-LINE	450/3 E	В	225/3	PER ONE-LINE	6860	PANEL 'M3'	6
		37920	PER ONE-LINE		C	;	PER ONE-LINE	6360		

NOTE #1: E = EXISTING BREAKER

CONNECTED LOAD = 314004 VA

NOTE #1: E = EXISTING BREAKER

NOTE #1: E = EXISTING BREAKER

CKT#	LOAD SERVED	LOAD	CONDUIT & WIRE SIZE	BKR SIZE	A B C	BKR SIZE	CONDUIT & WIRE SIZE	LOAD	LOAD SERVED	CKT#
		-	#6 AWG		A		PER ONE-LINE	8910	CHWP-2	
1	SPD	-	#6 AWG	60/3 E	В	150/3 E	PER ONE-LINE	8910	20HP	2
		-	#6 AWG		С		PER ONE-LINE	8910		
	ACCH-2	37440	PER ONE-LINE		A		PER ONE-LINE	13140		
3	CIRCUIT #1	37440	PER ONE-LINE	400/3 E	В	400/3 E	PER ONE-LINE	12470	PANEL 'M5'	4
		37440	PER ONE-LINE		C		PER ONE-LINE	13000		
	ACCH-2	37920	PER ONE-LINE		A					
5	CIRCUIT #2	37920	PER ONE-LINE	450/3 E	В				SPACE	6
		37920	PER ONE-LINE		C					

			LIGHT FIX	TURE SCH	EDULE			
	TYPE	MANUFACTURER & CATALOG NO.	VOLTAGE	WATTS	LUMENS	TEMP	MOUNTED	DESCRIPTION
	Α	LSI #3RDI-8-LED-03L-03L-LF-UE-35-SFK-SP-SC-FA-72-UE-B-B-DIM2-CBA	120	48	6000	3500K	SUSPENDED	3" SUSPENDED DIR/IND LINEAR
1 [B1	LSI #PEC24-LED-HO-RAD-NW-UE	120	55	6000	3500K	RECESSED	2X4 LED TROFFER
	B2	LSI #PEC22-LED-HO-RAD-NW-UE	120	45	4500	3500K	RECESSED	2X2 LED TROFFER
	C1	HE WILLIAMS #6DR-TL-L10-8-35-DIM-UNV-O-W-OF-CS-CS-N-F1	120	9	1000	3500K	RECESSED	6" RECESSED CAN LIGHT
	C2	HE WILLIAMS #6DR-TL-L20-8-35-DIM-UNV-O-W-OF-CS-CS-N-F1	120	20	2000	3500K	RECESSED	6" RECESSED CAN LIGHT
	СВ	HE WILLIAMS #6DR-TL-L10-8-35-DIM-UNV-O-W-OF-BL-BL-N-F1	120	9	1000	3500K	RECESSED	6" RECESSED CAN LIGHT - NOTE #6
	D1	CORONET #LSR2-32'-35-MED-UNV-DB-CC-F-FL	120	224	20928	3500K	RECESSED	32' RECESSED LINEAR
	D2	CORONET #LSR2-14'-35-LOWUNV-DB-CC-F-FL	120	70	6748	3500K	RECESSED	14' RECESSED LINEAR
	D3	CORONET #LSR2-11'8"-35-LOW-UNV-DB-CC-F-FL	120	59	5308	3500K	RECESSED	11'8" RECESSED LINEAR
	D4	CORONET #LSR2-8'-35-LOW-UNV-DB-CC-F-FL	120	40	3648	3500K	RECESSED	8' RECESSED LINEAR
† F	D5	CORONET #LSR2-6'8"-35-LOW-UNV-DB-CC-F-FL	120	34	3100	3500K	RECESSED	6'8" RECESSED LINEAR
ł	EX	HE WILLIAMS #EXIT/CA-R-AF-BA-AC-D	120	4	-	-	SURFACE	EXIT/EMERGENCY LIGHT
	F1	CONTECH #CPL4-35K-MVD-RS-CBA	120	50	5650	3500K	PENDANT	PENDENT GENERAL LIGHT
J _	F2	CONTECH #CPL2-35K-MVD-RS-CBA	120	23	3150	3500K	PENDANT	PENDENT GENERAL LIGHT
	G	LSI #EG3-4-LED-4L-DA-S-UNV-DIM-40-80CRI	120	32	4000	4000K	SURFACE	VAPOR-TIGHT LED
·	L	CORONET #LSR3BKO-20'-35-HIGH-UNV-DB-BLK-T-BKO-NA-NA-NA	120	200	4320	3500K	RECESSED	20' BLACK RECESSED LINEAR
	L2	CORONET #LSR3BKO-18'-35-HIGH-UNV-DB-BLK-T-BKO-NA-NA	120	200	4320	3500K	RECESSED	18' BLACK RECESSED LINEAR
	Р	FORUM #ARCUD-33-65LED40/65LED40-WOL-C-CIR-120-WH-D10V	120	112	11700	3500K	SUSPENDED	RING SUSPENDED - NOTE #5
$+$ Γ	S	LSI #SDL4-LED-40L-FL-UNV-DIM1-40-80CRI	120	30	4000	4000K	SUSPENDED	4' LED STRIP LIGHT
	S2	LSI #SDL4-LED-60L-FL-UNV-DIM1-40-80CRI	120	44	6020	4000K	SUSPENDED	4' LED STRIP LIGHT
↓ ┌	SM	LSI #SDL4-LED-40L-FL-UNV-DIM1-40-80CRI-OCSUE	120	30	4000	4000K	SURFACE	4' LED STRIP LIGHT W/ MOTION SENSOR
	Т	CONTECH #NCTL9059-M-35C-D-CBA	120	29	2740	3500K	TRACK	TRACK HEAD NOTE #4

3751 S. ALAMEDA ST. CORPUS CHRISTI, TX 78411 p (361)994-8900 www.trarch.com

> DATE: 12/02/2022 2 Addendum #2 09-07-23

TURNER | RAMIREZ ARCHITECTS

CHRISTI CHAPARRAL

PANELS AND SCHEDULES

SHEET IDENTIFICATION

E5.100

ENGINEERING 5656 S. STAPLES, SUITE 360, CORPUS CHRISTI, TX 78411 P - 361.852.2727 F - 361.852.2922 TEXAS ENGINEERING FIRM NO. 005318

22042

9/7/2023 2:23:12 PM

PHASE C = 104236 VA PHASE A = 105684 VA PHASE B = 104084 VA

NOTE #1: CBA = COLOR BY ARCHITECT

NOTE #2: PROVIDE HANGER CHAIN MOUNTING ACCESSORIE #M38258 FOR FIXTURE 'S' & 'SM' IN ALL OPEN AREAS

NOTE #5: PROVIDE 2 CIRCLE PATTERN FIXTURE ON TOP OF EACH OTHER BOTTOM WITH A 4' DIAMETER, TOP WITH A 2' DIAMETER.

NOTE #4: PROVIDE 2CIRCUIT/2 NEUTRAL TRACK SYSTEM CONTECH #NTEK48 FOR TRACK HEAD 'T', PROVIDE ALL NECESSARY SUSPENTION MOUTING HARDWARE.

NOTE #3: PROVIDE SURFACE MOUNTING HARDWARE FOR FIXTURE 'SM' IN STAIRWELL

NOTE #6: CAN LIGHT TO HAVE BLACK TRIM FOR A BLACKED OUT FIXTURE.

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- PLUMBING CONTRACTOR TO FIELD COORDINATE WITH STRUCTURAL. ROUTE SANITARY LINES OUT AND AWAY FROM BEAMS WHERE POSSIBLE AND CROSS BEAMS PERPENDICULAR WITH SLEEVES AS REQUIRED.
- REMOVE AND CAP ABOVE CEILING LEVEL ALL DOMESTIC WATER AND VENT PIPING LOCATED IN WALLS THAT ARE TO BE DEMOLISHED.
- WHERE PLUMBING FIXTURES ARE TO BE REMOVED AND RELOCATED OR REPLACED, THE CONTRACTOR SHALL CUT AND REPAIR EXISTING WALLS, FLOORS AND CEILINGS AS NECESSARY TO MATCH NEW CONDITIONS

PERIMETER OR 6'-0" AROUND COLUMNS. USE EXISTING PENETRATIONS IN THOSE

PLUMBING DWV KEY NOTES:

- 1 REFER TO CIVIL PLANS FOR CONTINUATION.
- PROVIDE 1/2" CW LINE TO FLOOR DRAIN FOR TRAP PRIMER CONNECTION FROM WATER CLOSET. SEE DETAIL SHEET.
- NEW 6" STORM DRAIN. DROP FROM FLOOR ABOVE TO BELOW FLOOR IN EXISTING

POUTE CONDENSATE DRAIN INDIRECT TO FLOOR DRAIN. COORDINATE LOCATION

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- ROUTE DRAIN PIPING FROM LAVATORY ON EXTERIOR WALL IN WALL TO WASTE STACK. NO FLOOR PENETRATIONS WITHIN 5'6" OF PERIMETER WALL. INSULATE PIPE FOR SOUND ATTENUATION.



CHAPA CHRIS-

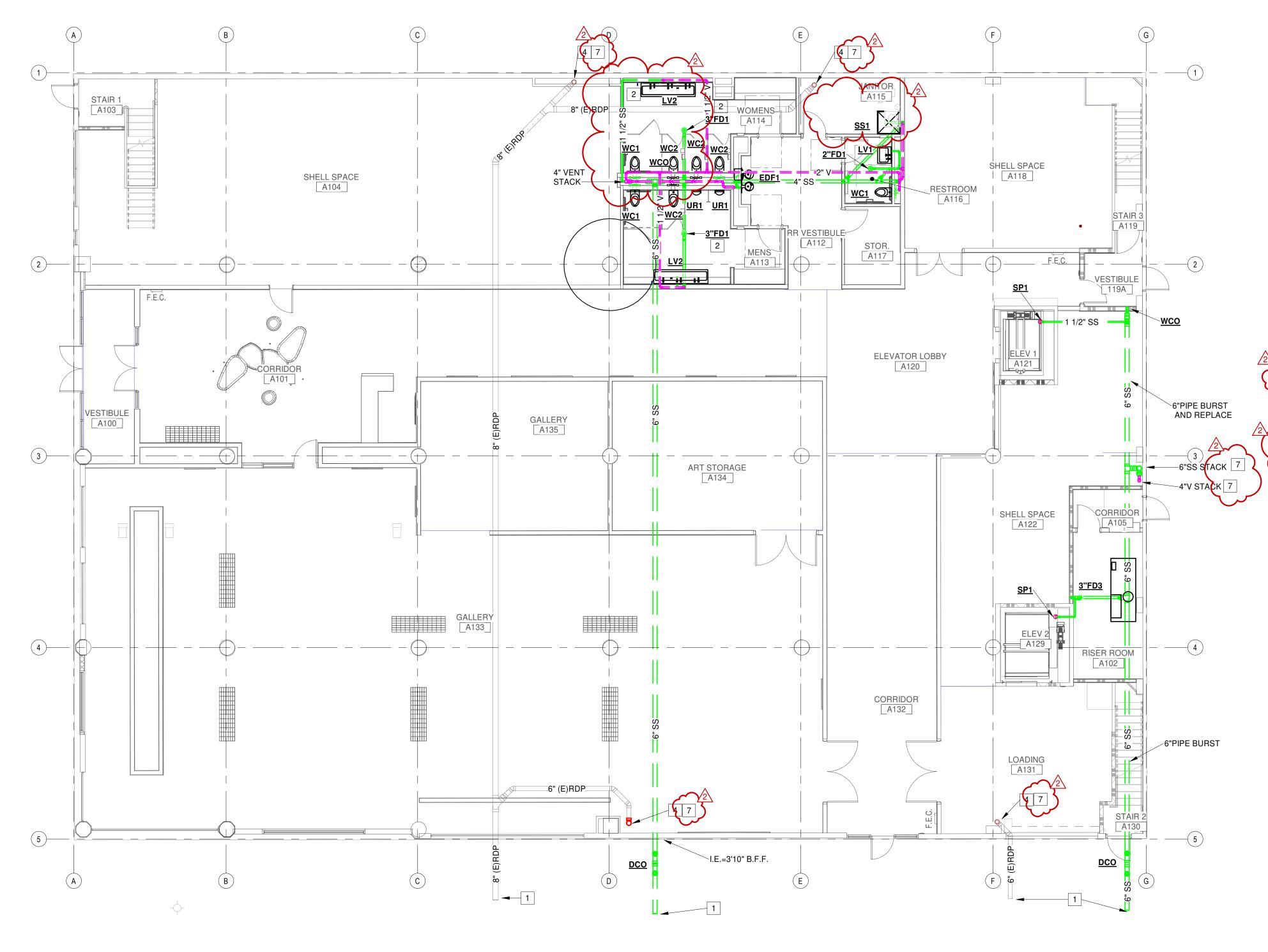
TURNER | RAMIREZ ARCHITECTS 3751 S. ALAMEDA ST. CORPUS CHRISTI, TX 78411 p (361)994-8900

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REV. DESCRIPTION DATE PROJECT ISSUE DATE: 08/04/2023 PHASE: 100% CONSTRUCTION DOCUMENTS DRAWN BY: CHECKED BY: PROJECT NUMBER: PROJECT #:RFQ1-0001

SHEET IDENTIFICATION PLUMBING DWV FLOOR PLAN - LEVEL 1

P1.100



PLUMBING DWV FLOOR PLAN - LEVEL 1

CHAPA

PLUMBING GENERAL NOTES:

Some of the Stack 7 × 6" WASTE STACK 7

MDF A213

2"FD3

MECHANICAL _A209_

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- PLUMBING CONTRACTOR TO FIELD COORDINATE WITH STRUCTURAL. ROUTE SANITARY LINES OUT AND AWAY FROM BEAMS WHERE POSSIBLE AND CROSS BEAMS PERPENDICULAR WITH SLEEVES AS REQUIRED.
- REMOVE AND CAP ABOVE CEILING LEVEL ALL DOMESTIC WATER AND VENT PIPING LOCATED IN WALLS THAT ARE TO BE DEMOLISHED.
- WHERE PLUMBING FIXTURES ARE TO BE REMOVED AND RELOCATED OR REPLACED, THE CONTRACTOR SHALL CUT AND REPAIR EXISTING WALLS, FLOORS AND CEILINGS AS NECESSARY TO MATCH NEW CONDITIONS
- PERIMETER OR 6'-0" AROUND COLUMNS. USE EXISTING PENETRATIONS IN THOSE

- NEW 6" STORM DRAIN. DROP FROM FLOOR ABOVE TO BELOW FLOOR IN EXISTING

PLUMBING DWV KEY NOTES:

- 1 REFER TO CIVIL PLANS FOR CONTINUATION.
- PROVIDE 1/2" CW LINE TO FLOOR DRAIN FOR TRAP PRIMER CONNECTION FROM WATER CLOSET. SEE DETAIL SHEET.
- ROUTE DRAIN PIPING FROM LAVATORY ON EXTERIOR WALL IN WALL TO WASTESTACK. NO FLOOR PENETRATIONS WITHIN 5'6" OF PERIMETER WALL. INSULATE PIPE FOR SOUND ATTENUATION.

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P1.200

PLUMBING DWV FLOOR PLAN - LEVEL 2

PLUMBING DWV FLOOR PLAN - LEVEL 2

3

6" RDS

6" RDP

4"V FROM RESTROOM BELOW

∕6"SS STACK

_____ = ___4" SS=_ | _____

CHA

CHRISTI

PLUMBING GENERAL NOTES:

1

STAIR 3

IDF A312

2"FD3

7 6"WASTE STACK 7 4" VENT STACK

A309

MECHANICAL

A308

3" SS 3"FD3

= 3" SS= =

<u>3"FD3</u>

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- SEAL ALL WALL, ROOF, AND FLOOR PENETRATIONS WITH UL LISTED FIRE
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PLUMBING DWV KEY NOTES:

- NEW 6" STORM DRAIN. DROP FROM FLOOR ABOVE TO BELOW FLOOR IN EXISTING FLOOR PENETRATION.
- POUTE CONDEMNATE BRAIN INDIRECT TO FLOOR DRAIN. COORDINATE LOCATION
- STACK. NO FLOOR PENETRATIONS WITHIN 5'6" OF PERIMETER WALL. INSULATE
- 7 REPLACE EXISTING PIPE WITH NEW IN EXISTING SLAB PENETRATIONS.

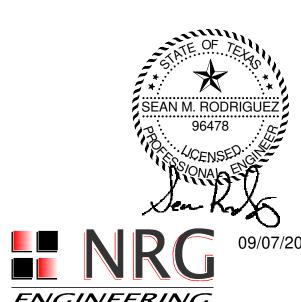
1 REFER TO CIVIL PLANS FOR CONTINUATION.

PROVIDE 1/2" CW LINE TO FLOOR DRAIN FOR TRAP PRIMER CONNECTION FROM WATER CLOSET. SEE DETAIL SHEET. 3 FLOOR DRAIN TO TIE IN ABOVE TRAP ON MOP SINK (SS1) AS INDIRECT WASTE, SEE DETAIL SHEET.

ROUTE DRAIN PIPING FROM LAVATORY ON EXTERIOR WALL IN WALL TO WASTE

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005318 22042 REV. DESCRIPTION DATE PROJECT ISSUE DATE: 08/04/2023 PHASE: 100% CONSTRUCTION DOCUMENTS DRAWN BY: CHECKED BY: PROJECT NUMBER: PROJECT #:RFQ1-0001 SHEET IDENTIFICATION PLUMBING DWV FLOOR

P1.300

PLAN - LEVEL 3

PLUMBING DWV FLOOR PLAN - LEVEL 3

1

2

4

9/6/2023 10:47:11 AM

A301A

A301B

Room A301C

A301D

A301E

6" RDS

OPEN SPACE

A301

∠4"V STACK

√6"SS STACK

6" RDP

TEE AND CAP FOR FUTURE BELOW FLOOR

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- POUTE CONDENSATE ARAIN INDIRECT TO FLOOR DRAIN. COORDINATE LOCATION ROUTE DRAIN PIPING FROM LAVATORY ON EXTERIOR WALL IN WALL TO WASTE STACK. NO FLOOR PENETRATIONS WITHIN 5'6" OF PERIMETER WALL. INSULATE PIPE FOR SOUND ATTENUATION.
- REPLACE EXISTING PIPE WITH NEW IN EXISTING SLAB PENETRATIONS.

TEXAS A&M UNIVERSITY - CORPL BUILDING RENOVATIONS 223 N. CHAPARRAL STREET CORPUS CHRISTI, TEXAS 78411 CONTRACT #:20172914 PROJECT #:RFQ1-0001

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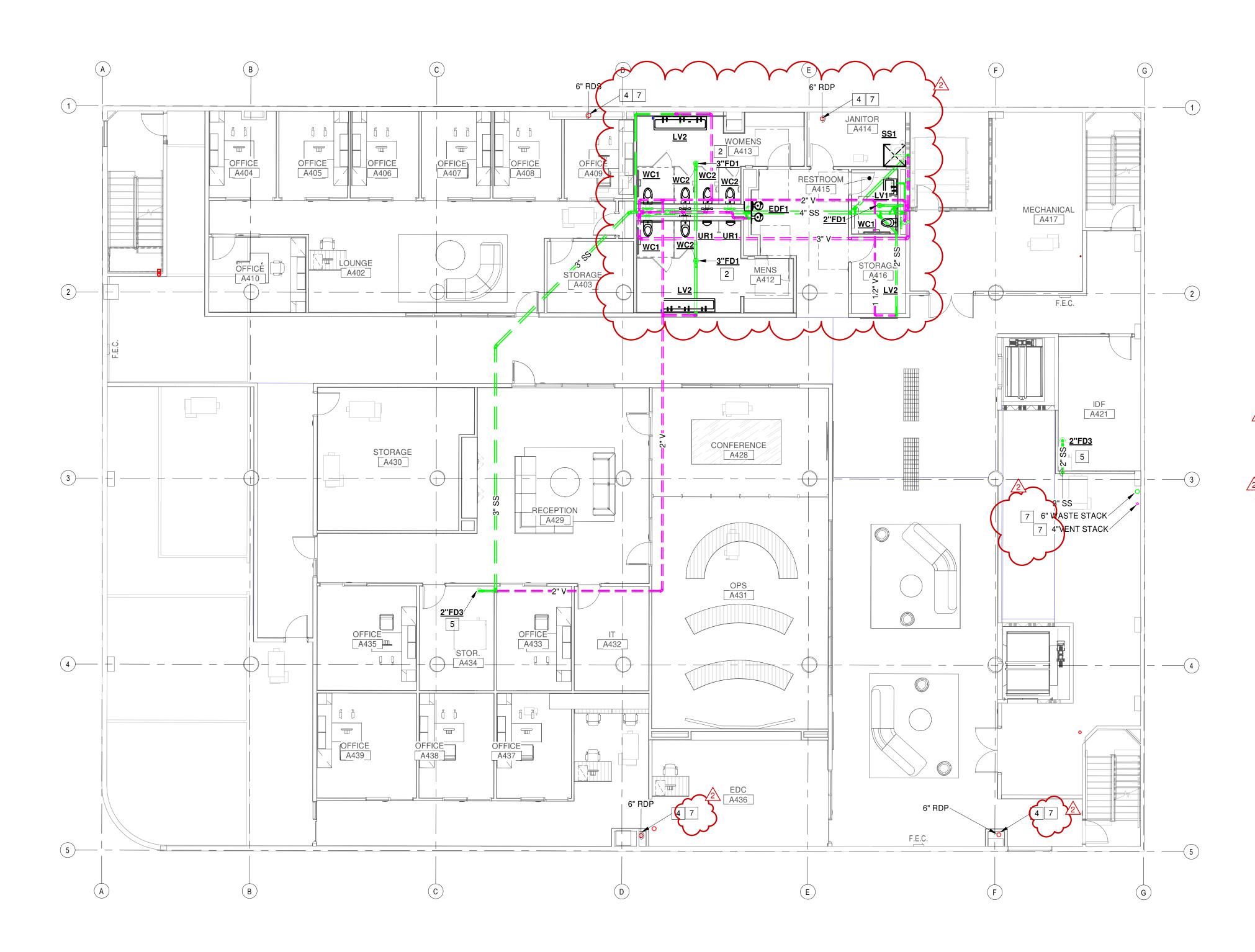
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> PLUMBING DWV FLOOR PLAN - LEVEL 4

> > P1.400



1 PLUMBING DWV FLOOR PLAN - LEVEL 4

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- 5. PLUMBING CONTRACTOR TO FIELD COORDINATE WITH STRUCTURAL. ROUTE SANITARY LINES OUT AND AWAY FROM BEAMS WHERE POSSIBLE AND CROSS BEAMS PERPENDICULAR WITH SLEEVES AS REQUIRED.
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PROVIDE 1/2" CW LINE TO FLOOR DRAIN FOR TRAP PRIMER CONNECTION FROM WATER CLOSET. SEE DETAIL SHEET.

FLOOR PENETRATION.

STACK. NO FLOOR PENETRATIONS WITHIN 5'6" OF PERIMETER WALL. INSULATE PIPE FOR SOUND ATTENUATION.

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P1.500

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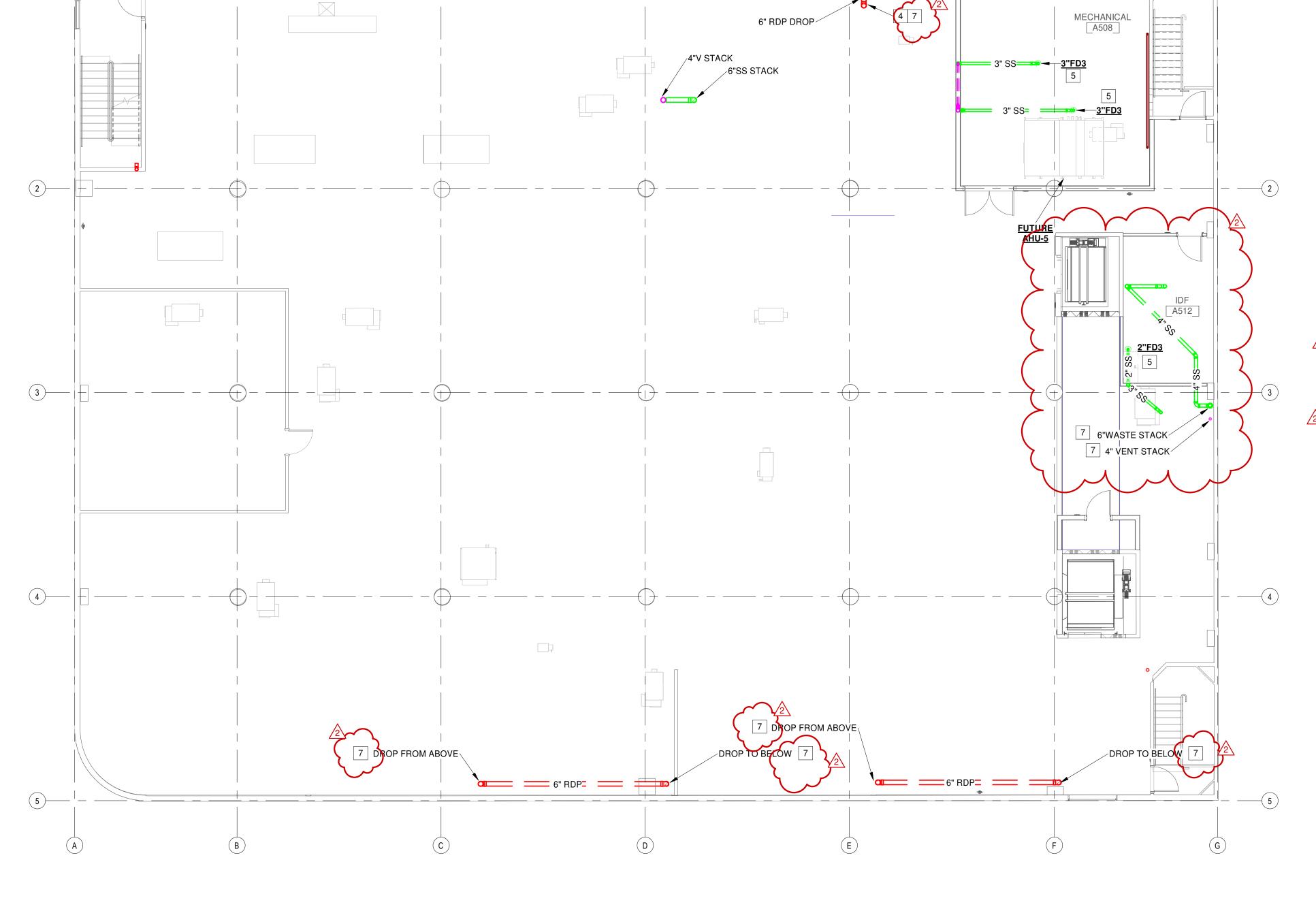
PLUMBING DWV FLOOR PLAN - LEVEL 5

08/04/2023

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PLUMBING DWV FLOOR PLAN - LEVEL 5

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REPLACE EXISTING PIPE WITH NEW IN EXISTING SLAB PENETRATIONS.

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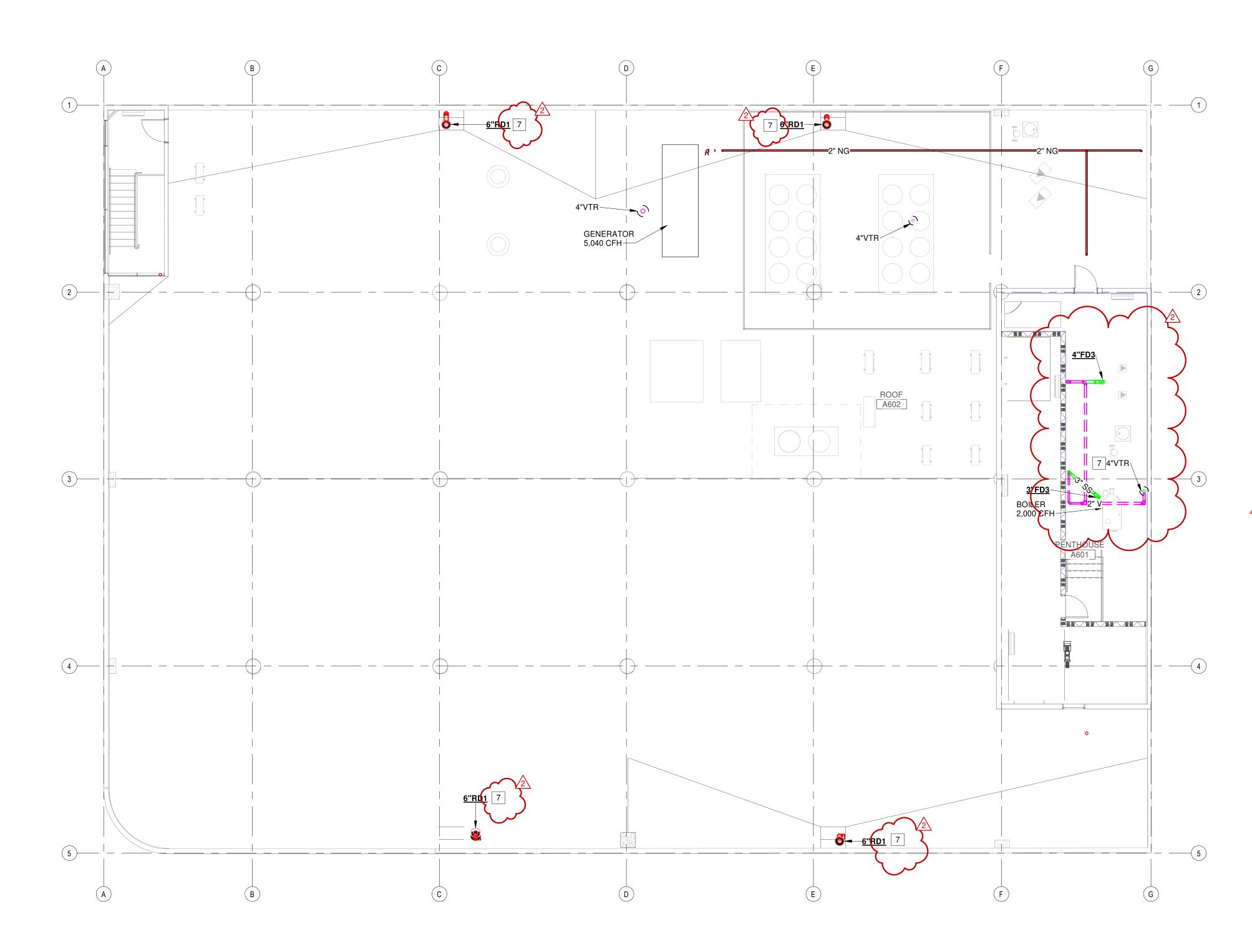
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P1.600

08/04/2023



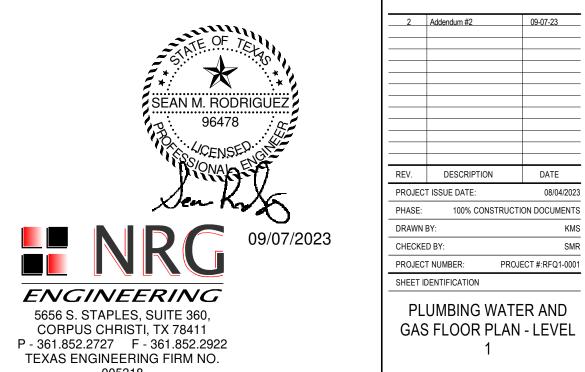
PLUMBING DWV FLOOR PLAN - ROOF

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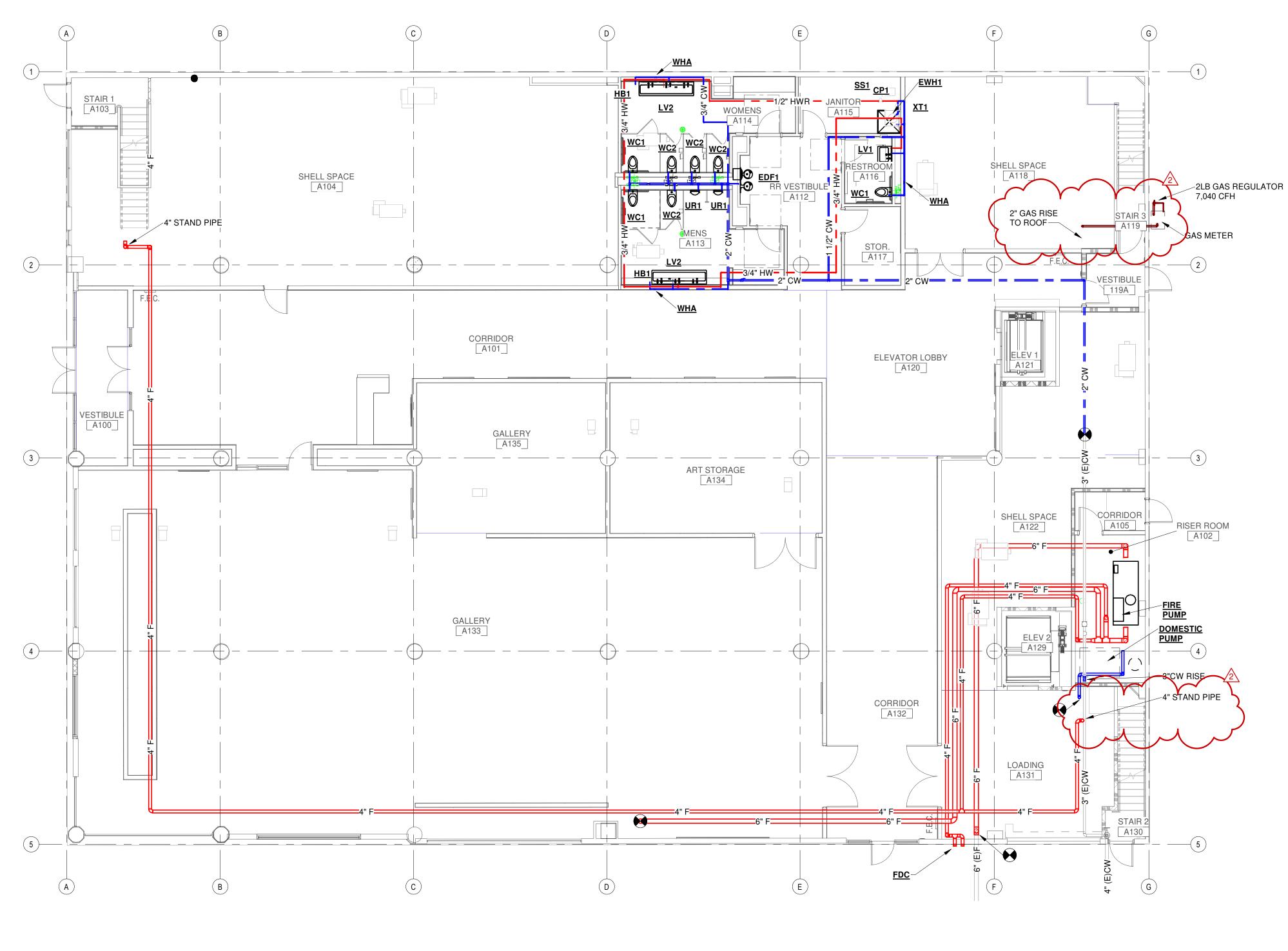


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PLUMBING WATER AND GAS FLOOR PLAN - LEVEL

08/04/2023

P2.100



PLUMBING WATER AND GAS FLOOR

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CHAPA

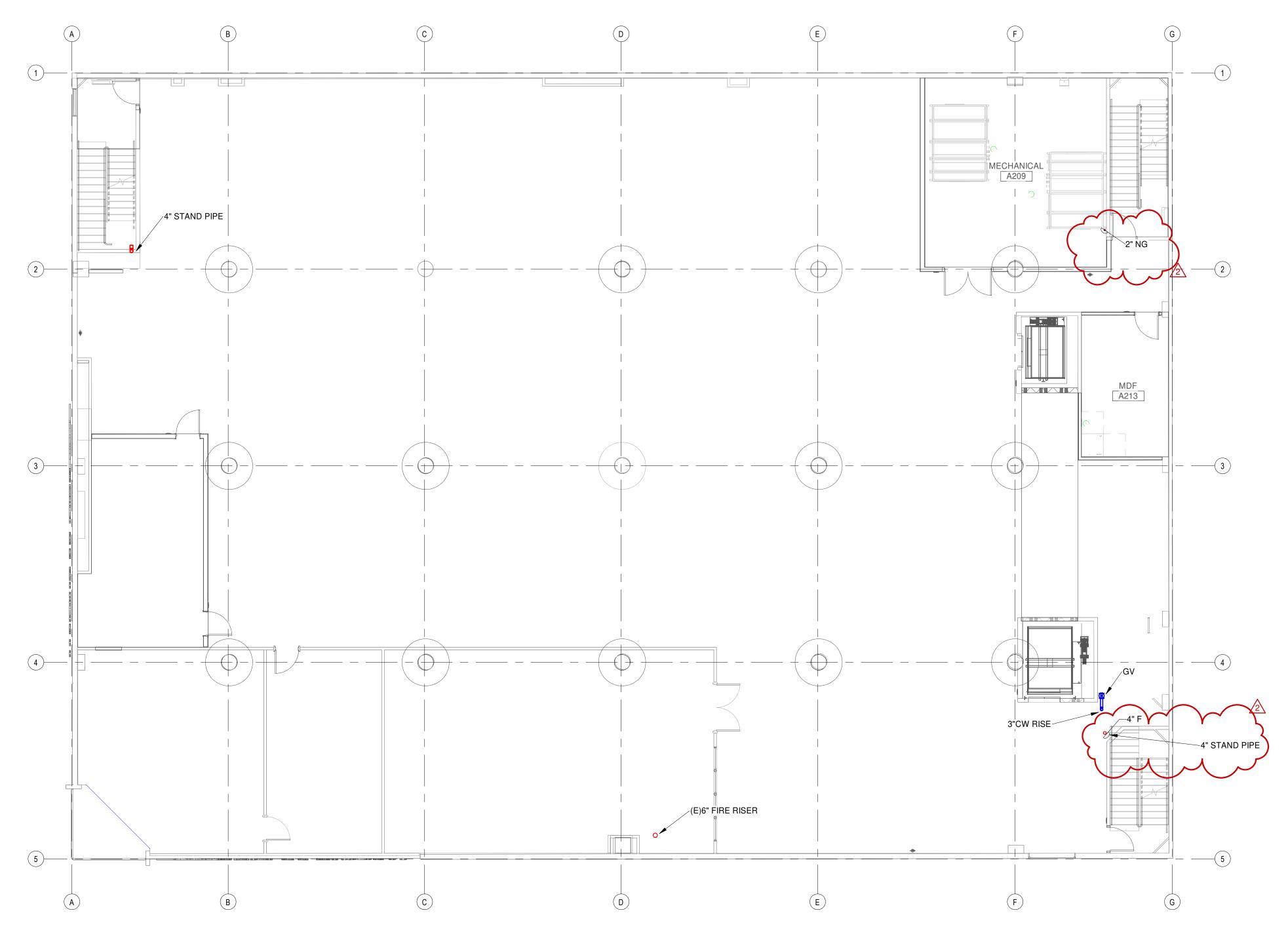
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SHEET IDENTIFICATION PLUMBING WATER AND GAS FLOOR PLAN - LEVEL

P2.200



PLUMBING WATER AND GAS FLOOR PLAN - LEVEL 2

1/8" = 1'-0"

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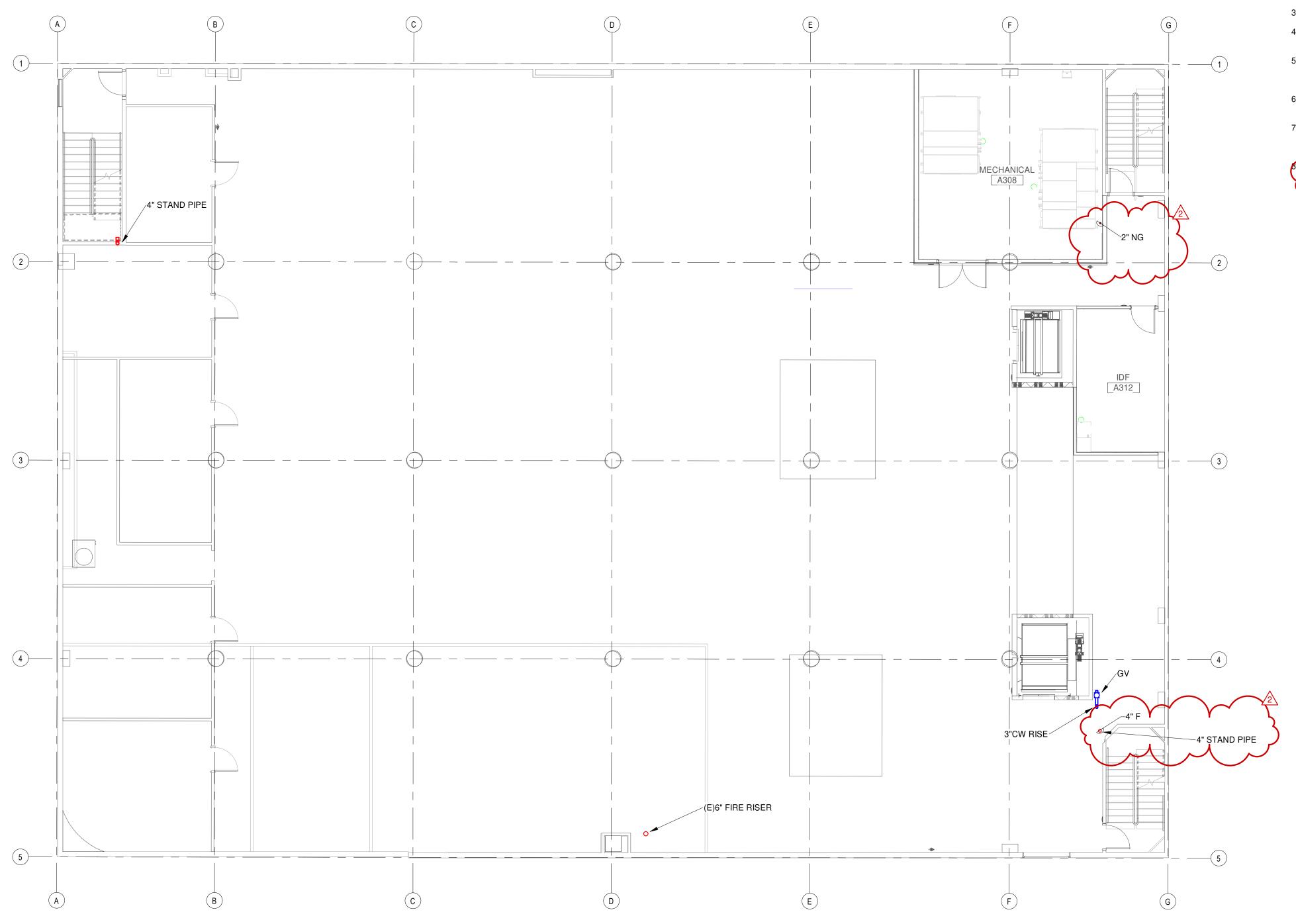


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SHEET IDENTIFICATION PLUMBING WATER AND GAS FLOOR PLAN - LEVEL

08/04/2023

P2.300





PLUMBING WATER AND GAS FLOOR PLAN - LEVEL 3

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005318 22042 SHEET IDENTIFICATION PLUMBING WATER AND GAS FLOOR PLAN - LEVEL

REV. DESCRIPTION DATE

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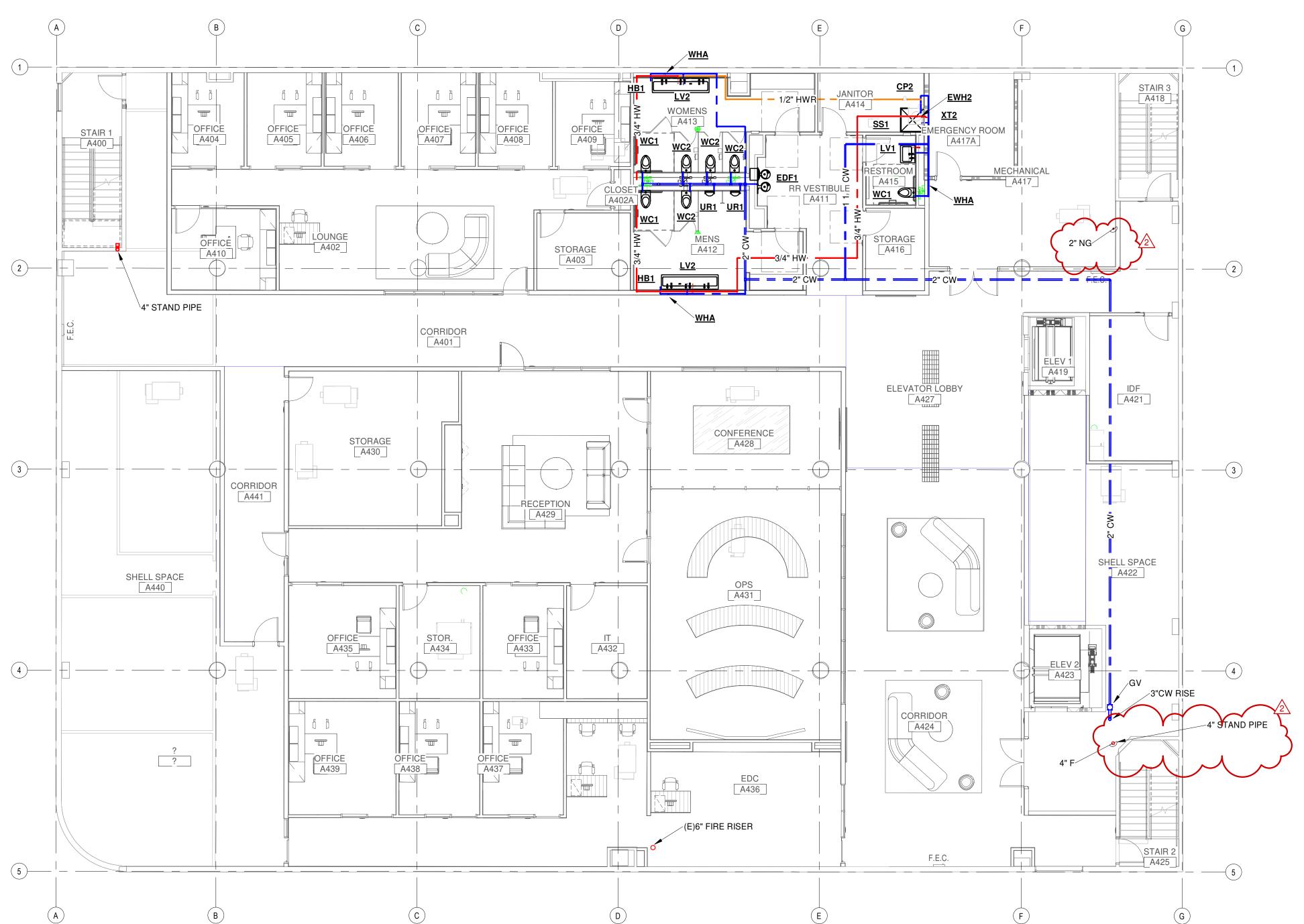
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P2.400



PLUMBING WATER AND GAS FLOOR PLAN - LEVEL 4



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CHAPA

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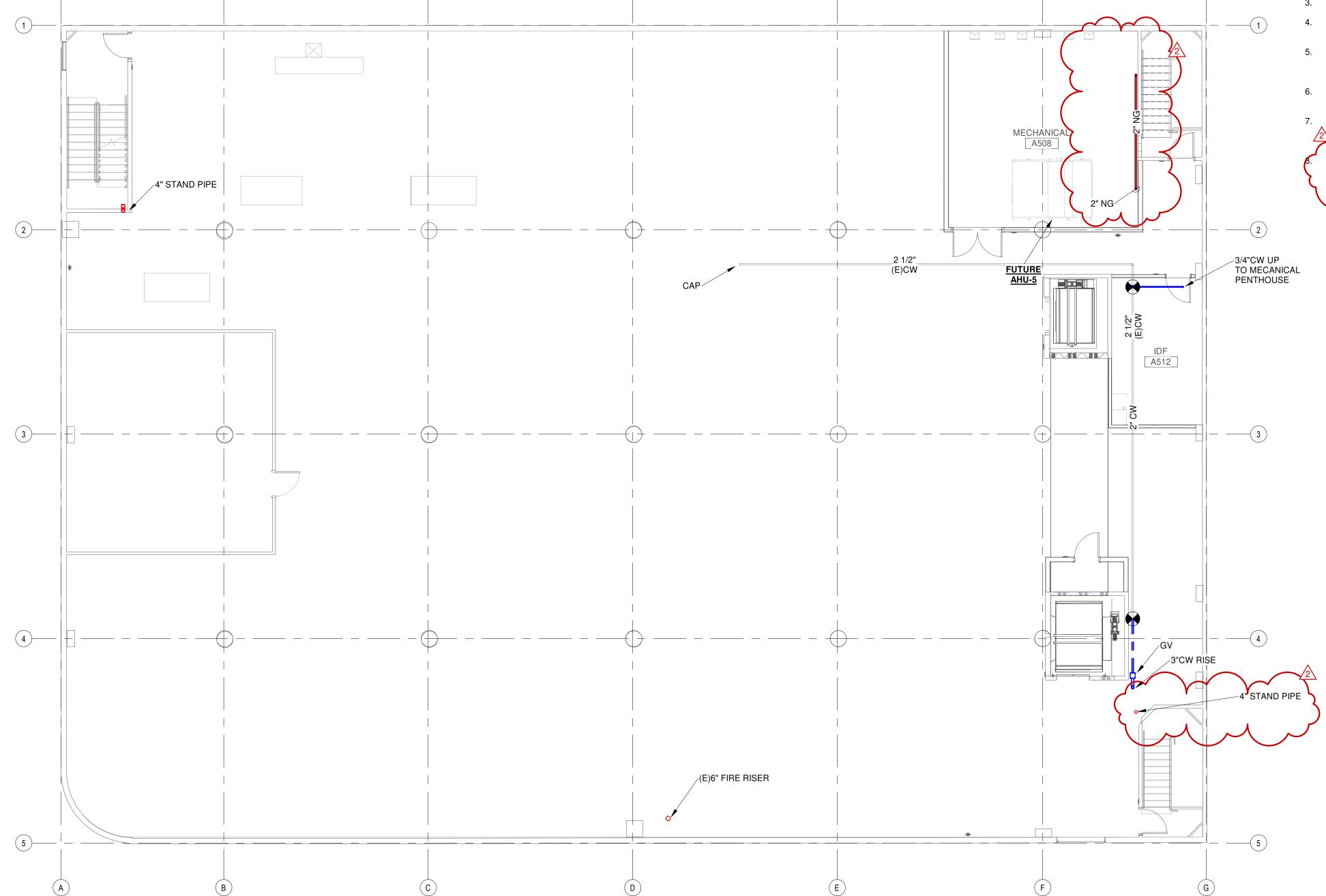
PLUMBING WATER AND GAS FLOOR PLAN - LEVEL

08/04/2023

PROJECT ISSUE DATE:

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PLUMBING WATER AND GAS FLOOR 1/8" = 1'-0"

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TEXAS ENGINEERING FIRM NO.

22042

SHEET IDENTIFICATION PLUMBING WATER AND GAS FLOOR PLAN - ROOF

REV. DESCRIPTION DATE

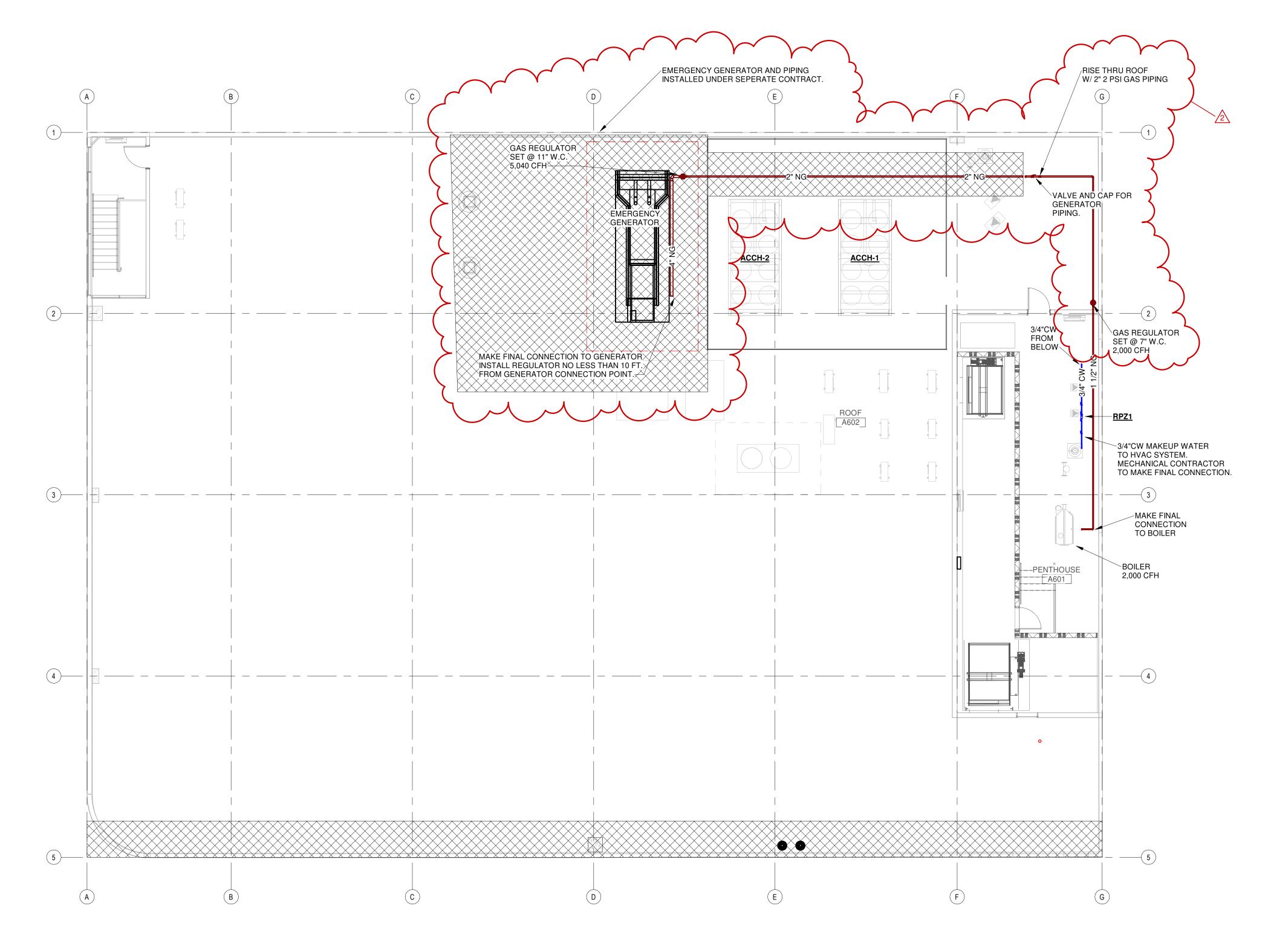
PHASE: 100% CONSTRUCTION DOCUMENTS

PROJECT NUMBER: PROJECT #:RFQ1-0001

PROJECT ISSUE DATE:

DRAWN BY: CHECKED BY:

P2.600



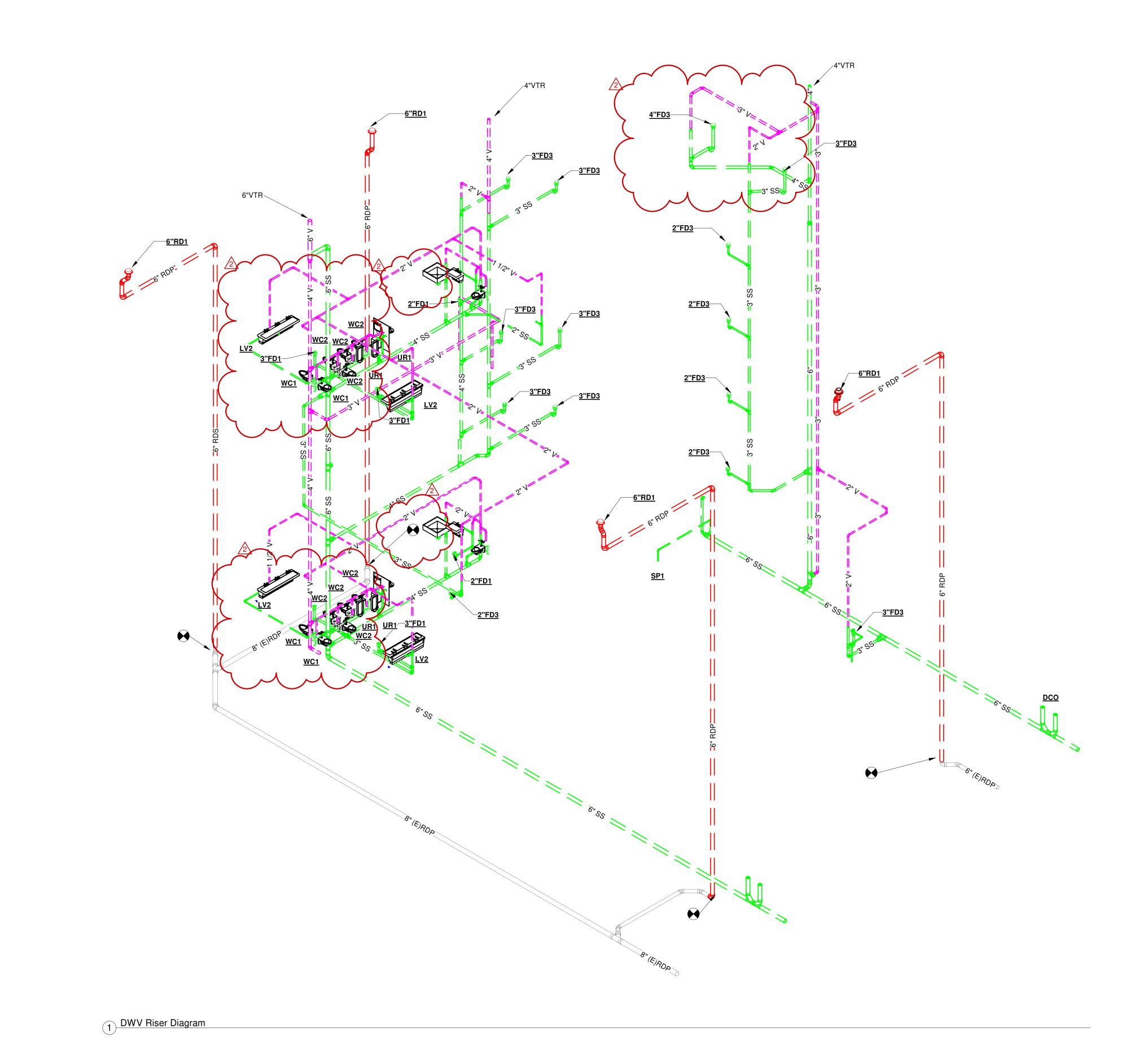
PLUMBING WATER AND GAS FLOOR PLAN - ROOF DECK

TEXAS A&M UNIVERSITY - CORPUS CHRISTI CHAPARRAL
BUILDING RENOVATIONS

223 N. CHAPARRAL STREET
CORPUS CHRISTI, TEXAS 78411

CONTRACT #:20172914

PROJECT #:RFQ1-0001



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REV. DESCRIPTION DATE PROJECT ISSUE DATE: PHASE: 100% CONSTRUCTION DOCUMENTS DRAWN BY: CHECKED BY: PROJECT NUMBER: PROJECT #:RFQ1-0001 SHEET IDENTIFICATION DWV RISER DIAGRAM

TURNER | RAMIREZ ARCHITECTS 3751 S. ALAMEDA ST. CORPUS CHRISTI, TX 78411 p (361)994-8900

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CONTRACT #:20172914

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 2
 Addendum #2
 09-07-23

 REV.
 DESCRIPTION
 DATE

 PROJECT ISSUE DATE:
 08/04/2023

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 DRAWN BY:
 KMS

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 SMR

WATER AND GAS RISER DIAGRAM

PROJECT NUMBER: PROJECT #:RFQ1-0001

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