CONSTRUCTION SET

1. IF THERE ARE ANY CONFLICTS BETWEEN ITEMS ON DRAWINGS AND GENERAL

2. ACTUAL SITE DIMENSIONS MAY VARY, CONTRACTOR TO VERIFY ALL DIMENSIONS

BEFORE STARTING WORK. CONTRACTOR TO NOTIFY ARCHITECT UPON DISCOVERY

NOTES, THE MOST STRINGENT REQUIREMENT AND HIGHEST PRICE PRODUCT GOVERNS



ALBANY INTERIOR REMODEL - MEZZANINE ADDITION

5995 W. AMELIA EARHART DRIVE, SALT LAKE CITY UTAH, 84116

Architect: Geroux Architects, PLLC Contact: Joe Geroux, NCARB 917.686.6517



APRIL 18, 2023

ZONING: Salt Lake City Zoning Ordinance (Title 21A)

Zone: Salt Lake City M-1 Use: Warehouse Lot Size: Allowable Building Height:

23,49 Acres Maximum Structure Height 85'-0" (Not Applicable) 31'-10" (Interior Remodel Only) Actual Building Height: Minimum Yard Requirements: Front & Corner Side 15'; Interior Side & Rear None

PROJECT DESCRIPTION:

The project includes the addition of a steel frame mezzanine within the existing warehouse facility. The mezzanine includes (2) exit stairs and (1) accessible elevator connecting the main warehouse floor area.

CODE REVIEW:

Applicable Codes: Salt Lake City Building Department & Fire Department 2018 IEBC - Compliance Method = Prescriptive Compliance Method (Ch 3 & 5). 2018 International Building Code (IBC) w/ Utah State Amendments which Include Building, Plumbing, Fuel/Gas, Mechanical, and Fire Codes.

2020 National Electrical Code (NEC) State of Utah Title 15A requirements have been compiled into these CD's 2018 International Energy Conservation Code (IECC) ANSI A117.1-2009

Occupancy	Existing Building = F-1
Construction Type	Existing Building = IIB (Ch 6)
Allowable Area	Unlimited

N/A (See 503.1.3) (Also Note 504.4 = 12 Stories w/ Sprinkler). Allowable Height

Actual Height 1 Story - 32'-10" at greatest height (Interior Remodel Only - No Exterior Changes)

Number of Exits 2 exits provided from mezzanine to main warehouse level.

10,690 sqft (Mezzanine Platform)

Category = DII Design Wind Speed = N/A Seismic Design

> Provided with Existing Building. All new modifications will be NFPA 13. Sprinkler Design is by Deffered Submittal. GC to Submit layout for Approval by

Salt Lake City Fire Department and Authority Having Jurisdiction.

508.3. Non - Required Fire Separations

Fire Resistance Ratings | See IBC Table 601 for Type II B - Building Elements (Hours)

Primary Structure = 0

Bearing Walls = 0 (0 Exterior; 0 Interior) Non Bearing Walls & Partitions Ext. / Int.= 0 Floor Construction = 0 (6" Concrete Slab on Grade)

Roof Construction = 0

Plumbing Fixtures

Actual Area

Sprinklers:

All minimum required plumbing fixtures are provided in existing building per IBC table 2902.1. Additional fixtures being provided for convience and proximity to office area.

SUBCONSULTANTS:

Structural Engineer: Dunn & Associates 380 W. 800 S. #100 Salt Lake City, Utah 84101

Mechanical Engineering Van Boerum & Frank Associates 181 E. 5600 S. Murray, Utah 84107

Electircal Engineering: Hunt Electric Inc. 1863 Alexander Street Salt Lake City, Utah 84119

LEGAL DESCRIPTION:

Lot 4, Bonneville Center Plat A Amended Lots 3 & 4.

DEFERRED SUBMITTALS:

- 2. Fire Suppression Calculations / Shop Drawing Submittal
- 3. Metal Stud Framing & Siesmic Connections
- Components per ASCE 7.

PROJECT DATA: SQFT AREA

Added Mezzanine = 10.690 saft Total Area = 10,690 sqft

EXISTING MINIMUM R-VALUES:

GLAZING (FENESTRATION U-FACTOR) ROOF R-VALUE

STEEL FRAMED WALL R-VALUE

SLAB R-VALUE (within 4' of interior foundation)

= R-30

= R-21 = R-10

ARCHITECTURAL FLOOR PLAN & WALL ASSEMBLIES REFLECTED CEILING PLAN **ROOF PLAN** ENLARGED FLOOR PLAN SECTIONS VERTICAL CIRCULATION DOOR & WINDOW SCHEDULES / DETAILS

GENERAL NOTES

OF ANY DISCREPENCIES.

SHEET INDEX:

FIRE LIFE SAFETY PLAN

GEN. NOTES & SPECIFICATIONS

COVER

GENERAL

STRU	CTURAL		
8001	STRUCTURAL NOTES	X	
S002	STRUCTURAL NOTES	×	
9003	STRUCTURAL NOTES	X	
S004	LOAD PLANS	X	
8101	FOOTING FOUNDATIONS PLAN	X	
\$102	MEZZANINE FRAMING PLAN	X	
\$201	MOMENT FRAME ELEVATIONS	X	
5202	MOMENT FRAME DETAILS	X	
9203	MOMENT FRAME DETAILS	X I	
S204	MOMENT FRAME DETAILS	X	
S401	STAIR FRAMING PLANS / ELEV	X	
S402	STAIR FRAMING DETAILS	X	
5501	FOOTING FOUNDATION DETAILS	X	
S502	FOOTING FOUNDATION DETAILS	Х	
S601	FLOOR FRAMING DETAILS	×	
S602	FLOOR FRAMING DETAILS	X	
5701	ROOF FRAMING DETAILS	X	
S702	ROOF FRAMING DETAILS		
\$801	SCHEDULES	X	
S802	SCHEDULES	X	
5803	SCHEDULES	X	

X

MECHANICAL / PLUMBING SYMBOLS - ABBREVIATIONS MECHANICAL FLOOR PLAN

DETAILS - SCHEDULES

DETAILS - SCHEDULES PLUMBING FLOOR PLAN DETAILS SCHEDULES

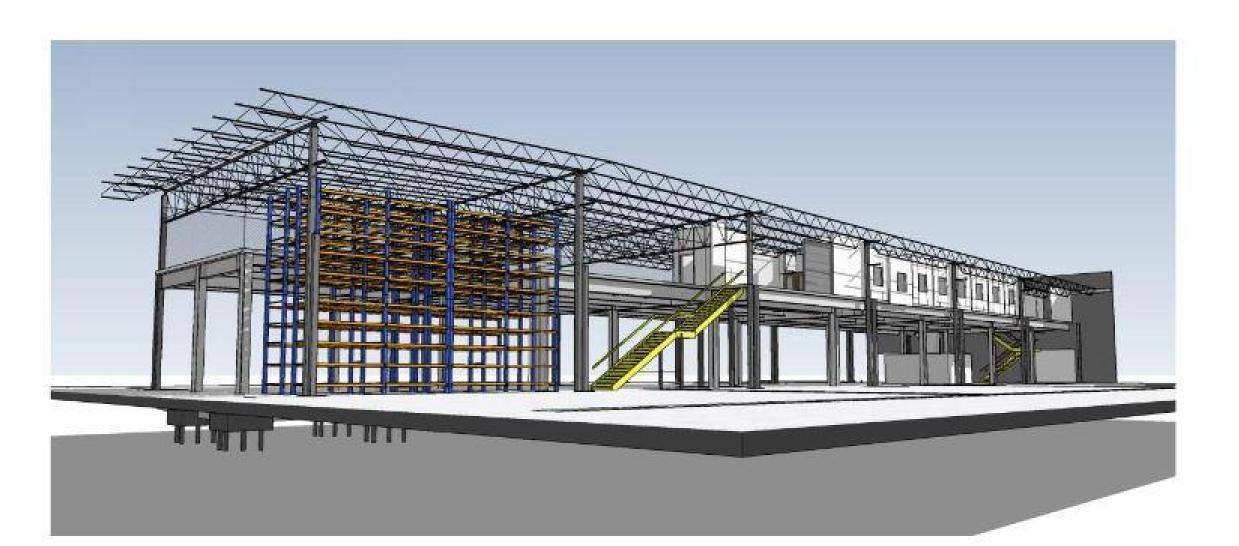
ELECTRICAL

SALT LAKE CITY BUILDING SERVICES THESE CONSTRUCTION DOCUMENTS HAVE BEEN

E001	ABBREV - SYMBOLS	X
E002	POWER SINGLE LINE	X
E003	DETAILS	X
E006	SCHEDULES	×
E007	SCHEDULES	X
E101	LV 1 - POWER PLAN	X
E102	LV 2 - MEZZANINE POWER PLAN	X
E201	LV 1 - ELECTRICAL PLAN	X
E202	LV 2 - MEZZANINE ELECTRICAL PLAN	X

7596-2684 7834-0864 7859-1093 9076-7702

- Fire Alarm Systems / Controls
- 4. Seismic Bracing for Mechanical, Electrical, Plumbing



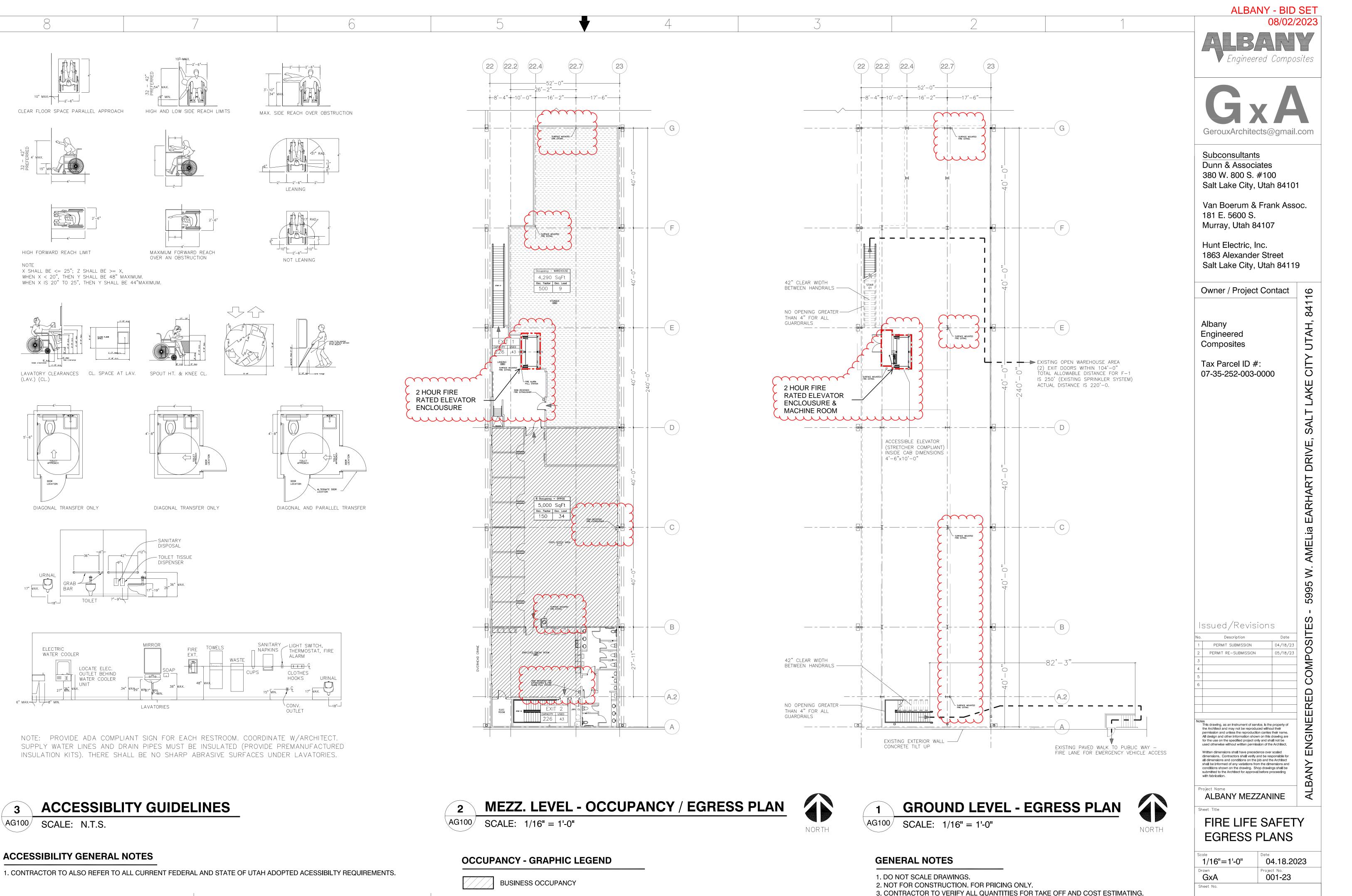
NEW MEZZANINE BUILDING PERMIT ONLY ANY PLUMBING, ELECTRICAL, AND MECHANICAL WORK MUST BE AUTHORIZED BY SEPARATE PERMIT **EXISTING WAREHOUSE**

KEY PLAN

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CLEAR FLOOR SPACE PARALLEL APPROACH

HIGH FORWARD REACH LIMIT

X SHALL BE <= 25"; Z SHALL BE >= X,

DIAGONAL TRANSFER ONLY

ELECTRIC WATER COOLER

SCALE: N.T.S.

ACCESSIBILITY GENERAL NOTES

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LOCATE ELEC. WATER COOLER

WHEN X < 20", THEN Y SHALL BE 48" MAXIMUM. WHEN X IS 20" TO 25", THEN Y SHALL BE 44"MAXIMUM.

LAVATORY CLEARANCES CL. SPACE AT LAV. SPOUT HT. & KNEE CL.

HIGH AND LOW SIDE REACH LIMITS

MAXIMUM FORWARD REACH

DIAGONAL TRANSFER ONLY

DISPOSAL

LAVATORIES

ACCESSIBLITY GUIDELINES

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WAREHOUSE OCCUPANCY

- TOILET TISSUE DISPENSER

OVER AN OBSTRUCTION

1.1 GENERAL NOTES

- A. The intent of these drawings and specifications is to include all labour, materials and services necessary for the completion of all work shown, prescribed or reasonably implied, but not limited to that explicitly indicated in the contract documents.
- See Cover for all applicable codes.
- Contractor to submit shop drawings to Architect for review for all products being installed. The approval of shop drawings will not relieve the contractor from responsibility for deviations from the drawings or specifications unless he or she has (in writing) brought to attention such deviations, at the time of submission, nor will it relieve the contract of responsibility for errors of any sort in the shop drawings.
- Dimensions shown in the documents take precedence over all others. Under no circumstances will dimensions be scaled directly from drawings. Large scale drawings take precedence over small scale drawings. The contractor will notify the Architect of any discrepancies or conflicts.
- Floor elevations are as noted with a drop between existing slab and new slab.
- The general contractor and all subcontractors will verify all dimensions and conditions on the job site prior to beginning of construction and report any discrepancies to the architect.
- The contractor shall have 1 hardcopy of the approved construction drawings and building permit on site for use by all parties.
- The general contractor / subcontractors will furnish adequate shoring, bracing, barricades and protective measures, etc., required to safely protect the entire construction site and periphery, and will be fully responsible for on site construction safety and protocols per local and state requirements.
- All symbols and abbreviations used on the drawings are considered to be construction standards. If the contractor has questions regarding abbreviations or their exact meaning, the contractor will notify the Architect for clarifications.
- Details marked "typical" will apply in all cases unless specifically indicated otherwise.
- No substitutions to the documents will be allowed without prior written approval by the Architect.
- The contractor will provide protection for all pedestrians, site visitors, employees, consultants and all others within the project area.
- Contractor shall assume responsibility for securing all chattel and real property on the job site.
- Contractor shall assume responsibility for fire, theft, destruction, or vandalism on job site during construction.
- All walls, floors, doors, & door frames shall be constructed plumb, level and true, and rigidly connected as required by seismic requirements per local and state building codes.
- Contractor will verify with equipment manufacturers required pad size and base, as well as verify locations for all mechanical and electrical equipment and power, water and drain installations prior to proceeding with work.
- The contractor shall verify all field measurements as necessary to insure proper fit of walls, doors, fixtures,
- and equipment The contractor will provide to the Owner an operations manual for all equipment installed including all
- instructions, warranties and documents pertaining to the aforementioned equipment. Contact between dissimilar metals must be protected to prevent any deterioration due to galvanic action or
- All installed materials and equipment shall bear a U.L., ASTM, I.C.B.O. or similarly accepted listing. All
- manufactured materials used must be installed bearing the appropriate labels identifying this fact.
- The Owner or Architect shall in no way be responsible for the means and methods of work performed, the safety in or about the site, performance of the work, or the timeliness in which the work is performed.
- The contractor shall not allow unauthorized personnel on the job site.
- All omissions and conflicts between the various elements of the drawings and/or specifications shall be brought to the attention of the Architect immediately before proceeding with any so work related to the possible omission or conflict. No changes are to be made unless the Architect and Owner is notified in
- The contractor shall be responsible for the enforcement of Federal and State of Utah Occupational Safety and Health Administration requirements and regulations.

DIVISION 2 - SITE WORK

2.1 SOILS ENGINEERING

A. All Load and Calculations are based on Existing Soils report. Contractor to verify with Architect if any diviation is discovered during construction.

2.2 GENERAL

A. The contractor shall feild verify the location of all existing utility services in the area to be excavated prior to the beginning of excavation. Bluestakes call numbers include 811, 801-208-2100. Contractor shall cal 811 before

B. Soil compaction and site preparation shall be in accordance with the certification of the letter from the soils / geotechincal engineer.

C. Finish excavation for foundation shall be neat and true to line with loose material removed from excavation.

D. The footing excavations shall be kept free from loose material and standing water

E. The contractor shall provide for dewatering of excavations for either surface water, seepage or ground water. F. The contractor shall provide and install all cribbing, sheathing and shoring required to safely retain any earth banks.

G. The contractor shall brace or protect from lateral loads the foundation and retaining walls until attached floors or slabs are completely in place and have attained full strength.

H. The contractor shall protect all utility and service lines encountered during excavation and backfilling. Damage to the lines caused during the course of construction to be repaired by contractor.

I. Footing backfill and utility trench backfill within building area shall be mechanically compacted in layers to the approval of the Architect, Soils or Structural Engineer. Flooding is not be permitted.

J. Subsurface drainage shall be provided behind retaining walls if retaining is installed.

K. Contractor to protect all existing landscaping and retore any damaged landscaping in kind.

L. The contractor shall coordinate all site work with the work of other trades to insure orderly progress of the total work and shall take precautionary measures to protect all underground work shown on the contract documents and other underground work not indicated.

M. The site shall be cleared of all stumps, roots and other deleterious materials to a depth of not less than twelve inches below ground surfaces in the area to be occupied by the building or proposed structure. N. All horizontal walking surfaces to be continuous and without abrupt vertical changes exceeding ½" maximum.

All horizontal walking surfaces will be maintained slip resistant. O. Any obstruction which overhangs a pedestrian's way will be a minimum of eighty inches above the walking surface as measured from the bottom of the obstruction.

DIVISION 3 - CONCRETE - SEE STRUCTURAL

DIVISION 4 - MASONRY - N/A

DIVISION 5 - STEEL - SEE STRUCTURAL.

DIVISION 6 - WOOD - N/A

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

7.1 FLASHING

A. All flashing, counterflashing, and coping when of metal shall be of not less than No. 26 U.S. gauge corrosion-resistant metal or as shown on plans or refer to SMACHA specifications.

B. Flash and counterflash at all roof to wall conditions. G.I. flash and caulk wood beams and outlookers

through exterior walls or roof surfaces.

C. Flash all exterior openings with approved waterproofing, which conforms to the standards of local and state codes. Flash at horizontal projections from vent, or battered exterior surface. D. Provide cap flashing on all exposed walls and at roof penetrations.

E. Provide a butyl based flexible flashing or a liquid applied flashing system at all wall penetrations.

7.2 SEALANTS

A. Caulk all flashings at doors, louvers and exterior openings. Sound caulk all top and bottom of walls on both sides at termination of gypsum board.

7.3 WATERPROOFING

A. Provide "HENRY" or equal liquid applied waterproofing on exterior face of elevator foundation walls.

7.4 INSULATION / SOUND BATT

A. All new walls run from new mezzanine concrete floor to underside of existing deck. Provide unfaced sound attenuation batt in all walls. See Wall Types for wall width.

7.5 ROOFING

A. GC To submitt all roofing penetration locations to Architect for Review prior to cutting any roof items. B. GC to repair all roof openings with UL Listed matching materials in kind.

DIVISION 8 - DOORS, WINDOWS, AND GLAZINGS

8.1 - GLASS - All interior windows to include insulated glass per approved submittal.

8.2 WEATHERSTRIPPING AND THRESHOLDS

A. All doors shall be weatherstripped for sound attenuation and protection.

B. Provide weatherstripping completely around doors.

8.3 HOLLOW METAL DOORS **GENERAL**

American National Standards Institute/Steel Door Institute (ANSI/A250.8) "Recommended Specifications for Standard Steel Doors and Frames." National Fire Protection Association (N.F.P.A.) #80 Standard for Fire Doors and Fire Windows, Steel Door Institute (S.D.I.) all publication standards. Door Hardware Institute (D.H.I.) all publication standards. U.L. 10C, fire listed products. American Society for Testing Materia(A.S.T.M.)A1008/A1008MStandard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved FormabilityA568/A568MStandard Specification for Steel, Sheet, Carbon, and High-Strength, Low-Alloy, Hot-Rolled and Cold-Rolled, General Requirements for A924/A924MStandard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip ProcessA653/A653MStandard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

Shop Drawings: Submit for fabrication and installation of steel doors and frames. Include details of each frame type, elevations of door design types, conditions at openings, details of construction, location and installation requirements of finish hardware and reinforcements, and details of joints and connections. Show anchorage and accessory items required for installation. Submit manufacturer's technical product data substantiating that products comply with requirements.

Provide Fire Rated Doors as Listed on the Door Schedule. Delivery Storage and Handling: For welded frames, provide channel steel shipping spreader welded to the bottom of each jamb at door opening to prevent damage in transit and jobsite handling. Shipping spreader shall be removed and replaced with a "setting" spreader at bottom of frame at time of frame installation (see "Installation"). General contractor shall inspect hollow metal work upon delivery for damage. Minor damage may be repaired provided refinished items are equal in all respects to new work and acceptable to architect; otherwise, remove and replace damaged items as required.

PRODUCTS

Manufacturers: CURRIES Company or approved equal. Steel Requirements: All doors and frames to be manufactured of commercial quality, stretcher leveled flatness, cold rolled steel per ASTM A1008 and A568 general requirements or galvanized steel sheet shall be as per ASTM A924 or A653 hot dip galvanized to A60 minimum coating weight standard. Internal reinforcing may be manufactured of hot rolled pickled and oiled steel per ASTM A1011.

Steel Doors: Comply with ANSI/A250.8/SDI 100. Provide metal doors in 20, 18, 16, or 14 gauge steel as (cont.) specified on plans in accordance with performance levels defined in ANSI/A250.8/SDI 100 and ANSI A250.4

Test Procedure and Acceptance Criteria for Physical Endurance. Door size cycle tested to be 4070 to

EXECUTION

Erection Installation: Install hollow metal units in accordance with manufacturer's instructions and final shop drawings. Fit doors to frames and floors with proper clearances and to achieve the maximum operational effectiveness and appearance of each unit. S.D.I. 122 "Installation and Troubleshooting Guide for Standard Steel Doors and Frames".

ROLL UP SERVICE DOORS.

- A. ANSI/DASMA 108 American National Standards Institute Standard Method For Testing Sectional Garage Doors And Rolling Doors: Determination Of Structural Performance Under Uniform Static Air Pressure Difference.
- B. NFRC 102 Test Procedure for Measuring the Steady-State Thermal Transmittance of Fenestration Systems.
- C. ASTM E 90 Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Element. ASTM E 330 - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference. ASTM A 653 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process. ASTM A 924 -Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip
- D. NEMA 250 Enclosures for Electrical Equipment (1000 Volts Maximum).
- E. NEMA MG 1 Motors and Generators.

DESIGN / PERFORMANCE REQUIREMENTS

- A. Single-Source Responsibility: Provide doors, tracks, motors, and accessories from one manufacturer for each type of door. Provide secondary components from source acceptable to manufacturer of primary components.
- B. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories, Inc. acceptable to authority having jurisdiction as suitable for purpose specified.

SUBMITTALS

- C. Product Data: Manufacturer's data sheets on each product to be used, including:
- Preparation instructions and recommendations.
- Storage and handling requirements and recommendations.
- 3. Details of construction and fabrication. 4. Installation instructions.
- C. Shop Drawings: Include detailed plans, elevations, details of framing members, anchoring methods, required clearances, hardware, and accessories. Include relationship with adjacent construction.

MANUFACTURER

Overhead Door Company or approved equal.

DIVISION 9 - FINISHES - See below and See A200 & A201

9.1 EXTERIOR METALS & MATERIALS - N/A

9.2 INTERIOR FINISH MATERIALS

A. Gypsum wallboard:

- 1. All gypsum wallboard shall be TYPE X or Equal and installed in accordance with the provisions of the 2018 IBC, applicable edition, State and local codes.
- 2. All walls to be 5/8" UL Listed gypsum wallboard unless otherwise noted. Refer to floor plans and sections for fire rated walls and assemblies.
- 4. The size & spacing of fasteners shall comply w/ 2018 IBC, State and local building codes.
- 3. Provide metal trim at all exposed edges and external corners. Metal trim shall be galvanized.

B. ADDITIONAL FINISH MATERIALS ON FOLLOWING PAGES.

DIVISION 10 - SPECIALTIES

10.1 - 60 Degree Ships Ladder (Roof Access)

Follow ASTM B 209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate. ASTM B 221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes. OSHA 1910.27 - Fixed Ladders.

SUBMITTALS

Shop Drawings: Detail fabrication and erection of each ladder indicated. Include plans, elevations, sections, and details of metal fabrications and their connections. Provide templates for anchors and bolts specified for installation under other Sections. Provide reaction loads for each hanger and bracket.

MANUFACTURERS

1. O'Keeffe's, Inc. (Tel: (415) 824-4900; info@okeeffes.com. Web: http://www.okeeffes.com. 2. National Ladder & Scaffold Co.; Upnovr; or approved equal.

WARRANTY

A. Manufacturer has responsibility for an extended Corrective Period for work of this Section for a period of 10 years commencing on the shipment date of the product against all the conditions indicated below, and when notified in writing from Owner, manufacturer shall promptly and without inconvenience and cost to Owner correct said deficiencies.

Defects in materials and workmanship.

Deterioration of material and surface performance below minimum OSHA standards as certified by independent third party testing laboratory. Ordinary wear and tear, unusual abuse or neglect excepted. Within the warranty period, the manufacturer shall, at its option, repair, replace, or refund the purchase price of

Manufacturer shall be notified immediately of defective products, and be given a reasonable opportunity to inspect the goods prior to return. Manufacturer will not assume responsibility, or compensation, for unauthorized repairs or labor. Manufacturer makes no other warranty, expressed or implied, to the merchantability, fitness for a particular purpose, design, sale, installation, or use, of the ladder; and shall not be liable for incidental or consequential damages, losses of or expenses, resulting from the use of ladder products.

EXTRA MATERIALS

Furnish touchup kit for each type and color of paint finish provided.



ALBANY - BID SET



Subconsultants Dunn & Associates 380 W. 800 S. #100 Salt Lake City, Utah 84101

Van Boerum & Frank Assoc. 181 E. 5600 S. Murray, Utah 84107

Hunt Electric, Inc. 1863 Alexander Street Salt Lake City, Utah 84119

Owner / Project Contact

841

UTAH,

CITY

DRIVE

HART

EAR

AMELia

5995

OSITE

OMP

Ö

ERED

04/18/22

Albany Engineered Composites

Tax Parcel ID #: 07-35-252-003-0000



Issued/Revisions

PERMIT SUBMISSION

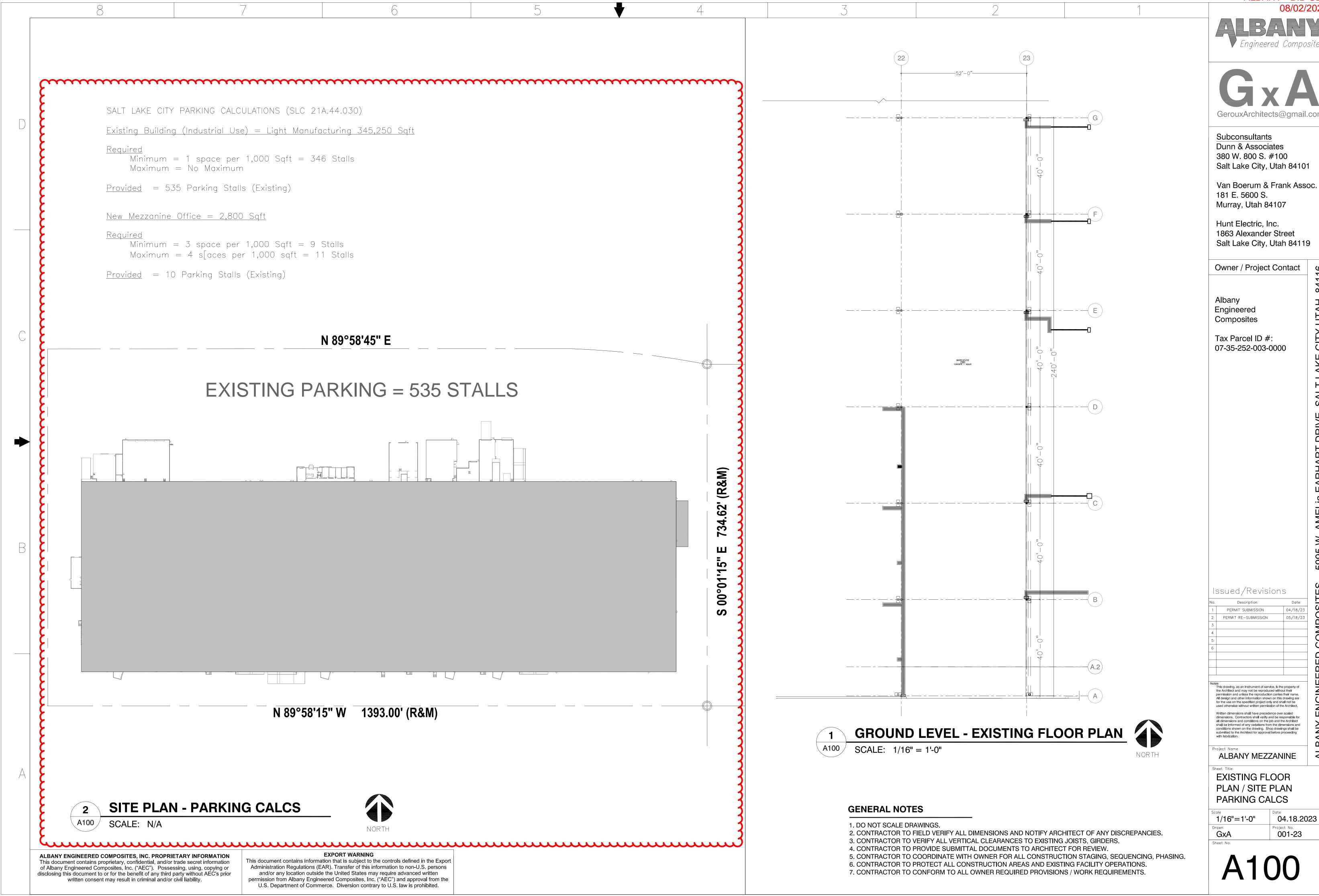
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ALBANY MECHANICAL

GENERAL NOTES & SPECIFICATIONS

04.18.2023 N/A 001-23 GxA



04.18.2023

OMP

▼ Engineered Composites

(22) (22.2) (22.4)

2 HOUR FIRE

_ _ _ _ _ _

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

CLEAR FLOOR AREA - CIRCULATION WAY

GRAPHIC LEGEND

GENERAL NOTES

1. DO NOT SCALE DRAWINGS.

RATED ELEVATOR

GROUND LEVEL - FLOOR PLAN

2. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND NOTIFY ARCHITECT OF ANY DISCREPANCIES

6. CONTRACTOR TO PROTECT ALL CONSTRUCTION AREAS AND EXISTING FACILITY OPERATIONS.

7. CONTRACTOR TO CONFORM TO ALL OWNER REQUIRED PROVISIONS / WORK REQUIREMENTS.

5. CONTRACTOR TO COORDINATE WITH OWNER FOR ALL CONSTRUCTION STAGING, SEQUENCING, PHASING.

3. CONTRACTOR TO VERIFY ALL VERTICAL CLEARANCES TO EXISTING JOISTS, GIRDERS.

4. CONTRACTOR TO PROVIDE SUBMITTAL DOCUMENTS TO ARCHITECT FOR REVIEW.

ENCLOSURÉ &

MACHINE ROOM

+8'-4"+10'-0"+16'-2"-17'-6"-

SURFACE MOUNTED FIRE EXTING.

SURFACE MOUNTED FIRE EXTING.



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Van Boerum & Frank Assoc. 181 E. 5600 S. Murray, Utah 84107

Hunt Electric, Inc. 1863 Alexander Street Salt Lake City, Utah 84119

Owner / Project Contact

Albany Engineered Composites

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05/18/23

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ALBANY MEZZANINE

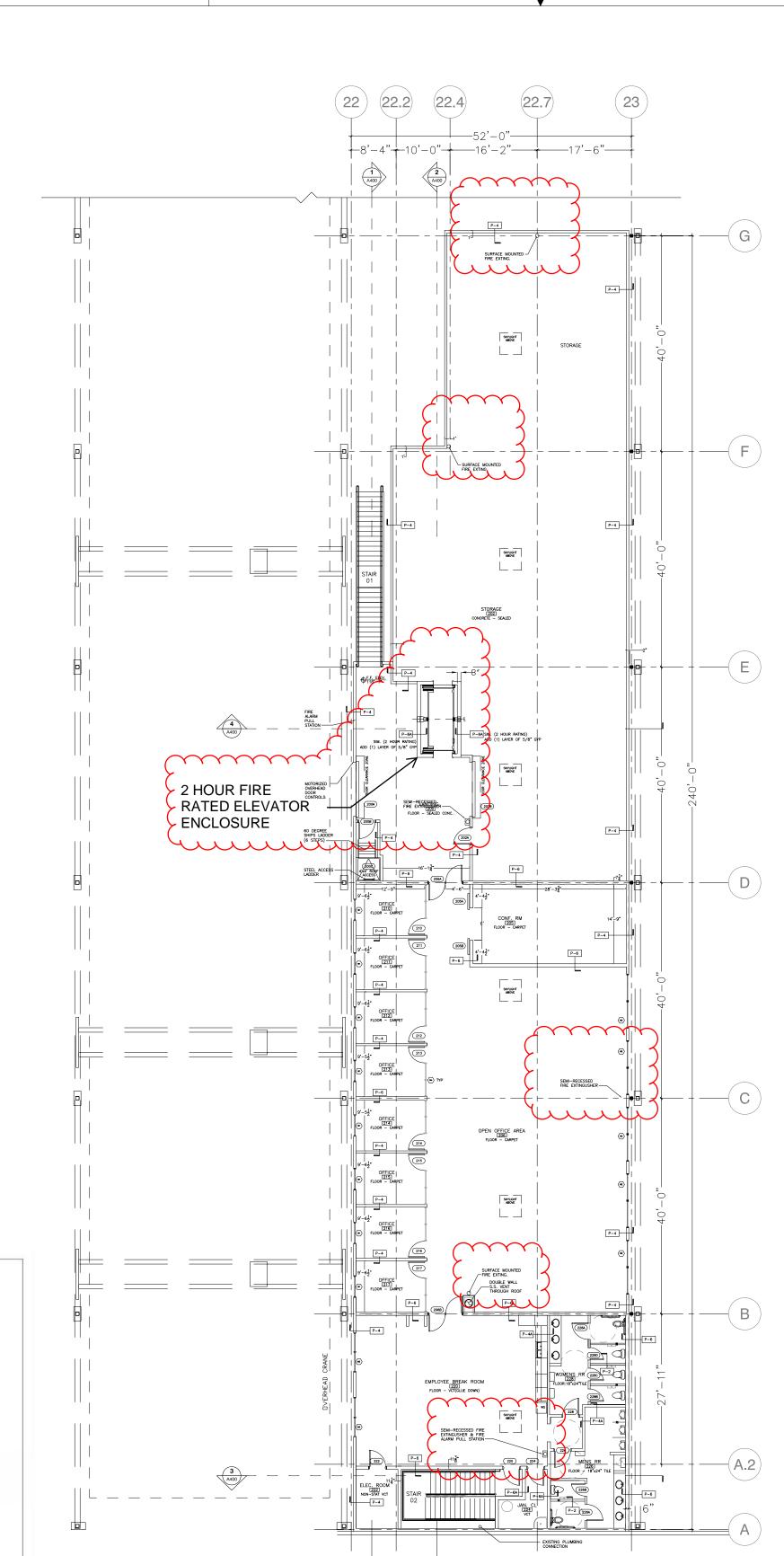
conditions shown on the drawing. Shop drawings shall be submitted to the Architect for approval before proceeding

FLOOR PLANS WALL ASSEMBLIES

04.18.2023 1/16"=1'-0"

001-23

GxA



MEZZANINE LEVEL - FLOOR PLAN



3. EMPLOYEE BREAKROOM 220 = PATCRAFT ADMIX VCT - 36"x36" - COLOR CLASSIC 00119-V1 BORDER w/ INSET COLOR SOAR 00437-V1

6. NOTE ABOVE PLAN FOR MISC. ITEMS

FLOOR FINISH MATERIAL

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SCALE: N.T.S.

P-2 UL - U419

SCALE: N.T.S.

ASSEMBLY REQUIREMENTS:

A200

P-4A

5/8" TYPE X GYPSUM SHEATHING

5/8" TYPE X GYPSUM WALLBOARD

5/8" TYPE X GYPSUM SHEATHING

5/8" TYPE X GYPSUM WALLBOARD

5/8" TYPE X GYPSUM SHEATHING

5/8" TYPE X GYPSUM WALLBOARD

5/8" TYPE X GYPSUM WALLBOARD

5/8" TYPE X GYPSUM WALLBOARD

5/8" TYPE X GYPSUM WALLBOARD SEE PLAN NOTES - FURRING WITH ADDITIONAL SOUND BATT AS SHOWN

6" METAL STUDS (MIN. 20 GA.) @ 16" O.C. R13 SOUND BATT INSULATION IN CAVITY

NOTE: JANITORS CLOSET 224 WALLS SHALL BE WASHABLE FRP

WALL TYPE ASSEMBLIES

WO LAYERS 5/8" [15.9 MM] SHEETROCK® ECOSMART GYPSUM PANEL (UL TYPE ULIX™)
-5/8" [92 MM] STEEL STUDS, EQ20 (0.018"), 24" [610 MM] O.C.
-1/2" [89 MM] FIBERCLASS INSULATION

UL WALL ASSEMBLY

PANELS TO 8'-0". COORDINATE HEIGHT w/ EXISTING TRUSS LOCATIONS

UL U419

4" METAL STUDS (MIN. 20 GA.) @ 16" O.C.

R13 SOUND BATT INSULATION IN CAVITY

& FULL HEIGHT CERAMIC TILE IN RESTROOMS

5/8" TYPE X MOSITURE RESISTANT GYPSUM WALLBOARD

SEE PLAN NOTES FOR WALL FINISH - FRP IN JANITORS CLOSET

4" METAL STUDS (MIN. 20 GA.) @ 16" O.C.

R13 SOUND BATT INSULATION IN CAVITY

4" METAL STUDS (MIN. 20 GA.) @ 16" O.C.

R13 SOUND BATT INSULATION IN CAVITY

(START WALL 8" ABOVE F.F.)

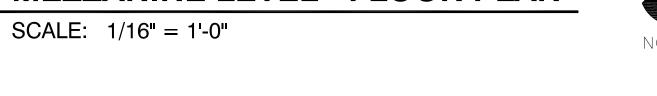
2" METAL STUDS (MIN. 20 GA.) @ 16" O.C.

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SN-P-1-11

FOR THE MOST UP-TO-DATE DETAILS INCLUDING CONSTRUCTION VARIATIONS, REFER TO THE PUBLISHED DESIGN. WHERE DESIGN NO. INDICATES PER: THE FIRE RATING IS BASED ON LABORATORY TEST DATA OF THE REFERENCE. WILLIARLY CONSTRUCTED ASSEMBLES.

SIMLARLY CONSTRUCTED ASSEMBLIES.
STUD SIZES AND INSULATION THICKNESS ARE MINIMUM UNLESS OTHERWISE STATED IN THE PUBLISHED ASSEMBLY.
STUD AND FASTENER SPACINGS ARE MAXIMUM UNLESS OTHERWISE STATED IN THE PUBLISHED ASSEMBLY.
PANEL ORIENTATION SHALL BE AS SPECIFIED IN THE PUBLISHED DESIGN.
FIRE-RATINGS ARE FROM BOTH SIDES UNLESS OTHERWISE STATED.
FIRE-RATINGS ARE MAINTAINED WITH ONE OR MORE OF THE FOLLOWING MODIFICATIONS: INCREASE STUD DEPTH,
INCREASE STUD MATERIAL THICKNESS, DECREASE STUD SPACING, DECREASE FASTENER SPACING, INCREASE
MINIMATION TREVANDES UP CO. AND TO PECULY.



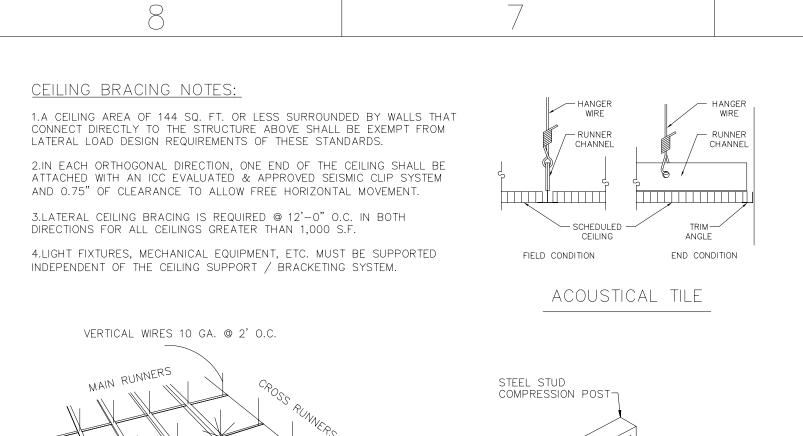
1. LANDING 200 & STORAGE 202 = SEALDED CONCRETE. PROVIDE ALTERNATE PRICE FOR

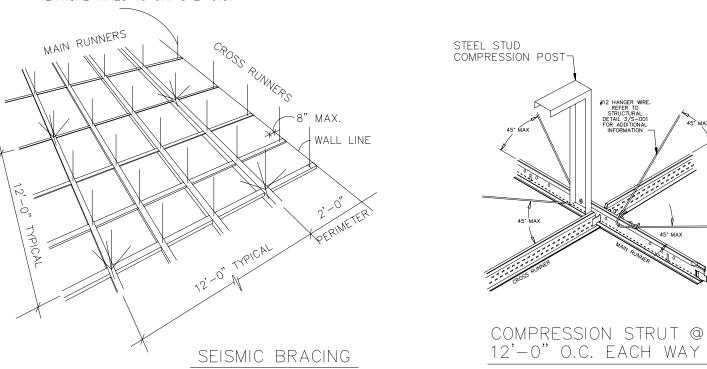
5. 4" RUBBER BASE (THROUGHOUT) = PATCRAFT - Totalworx - COLOR 66 SLATE

PATCRAFT ADMIX VCT - 36"x36" - COLOR CLASSIC 00119-V1. 2. ALL OFFICE AREAS = PATCRAFT HEIRLOOM TWEED - COLOR 00530 SHADOW LOOP.

4. RESTOOMS = DAL-TILE 18"x24" CERAMIC TILE. ARCHITECT TO SELECT.

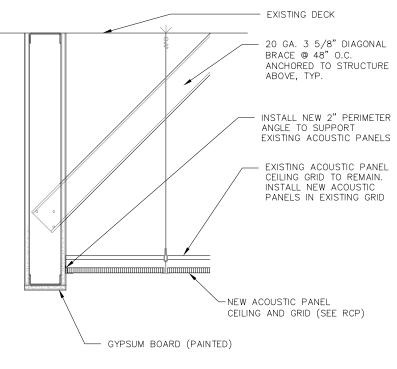
PATCRAFT CONACT: ZACHARY HAYS - 385.499.0965 - ZACHARY.HAYS@PATCRAFT.COM



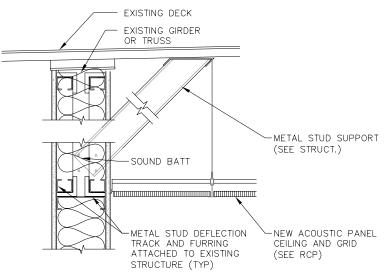


ACOUSTICAL TILE DETAILS

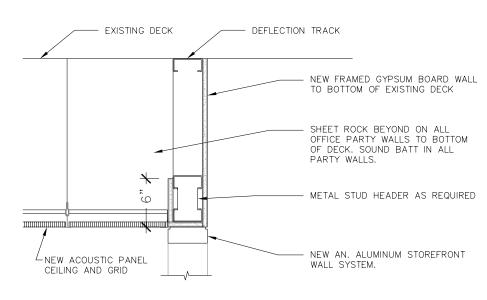
SCALE: N.T.S.



GYP. TO A.C.T. BULKHEAD



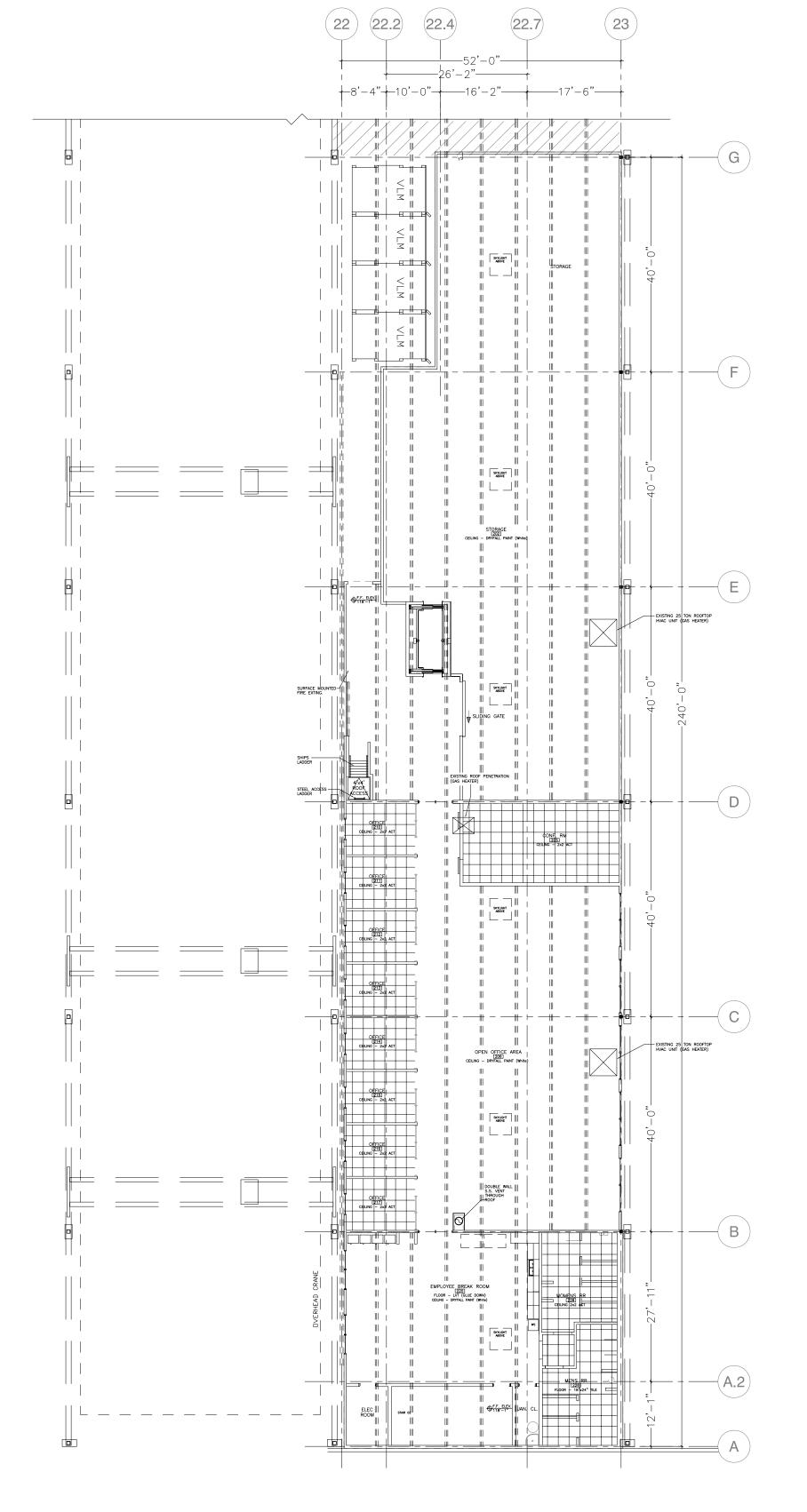
PARTY WALL TO EXISTING DECK



GYP. TO OPEN CEILING BULKHEAD

CEILING DETAILS SCALE: 1"=1'-0"

EXPORT WARNING



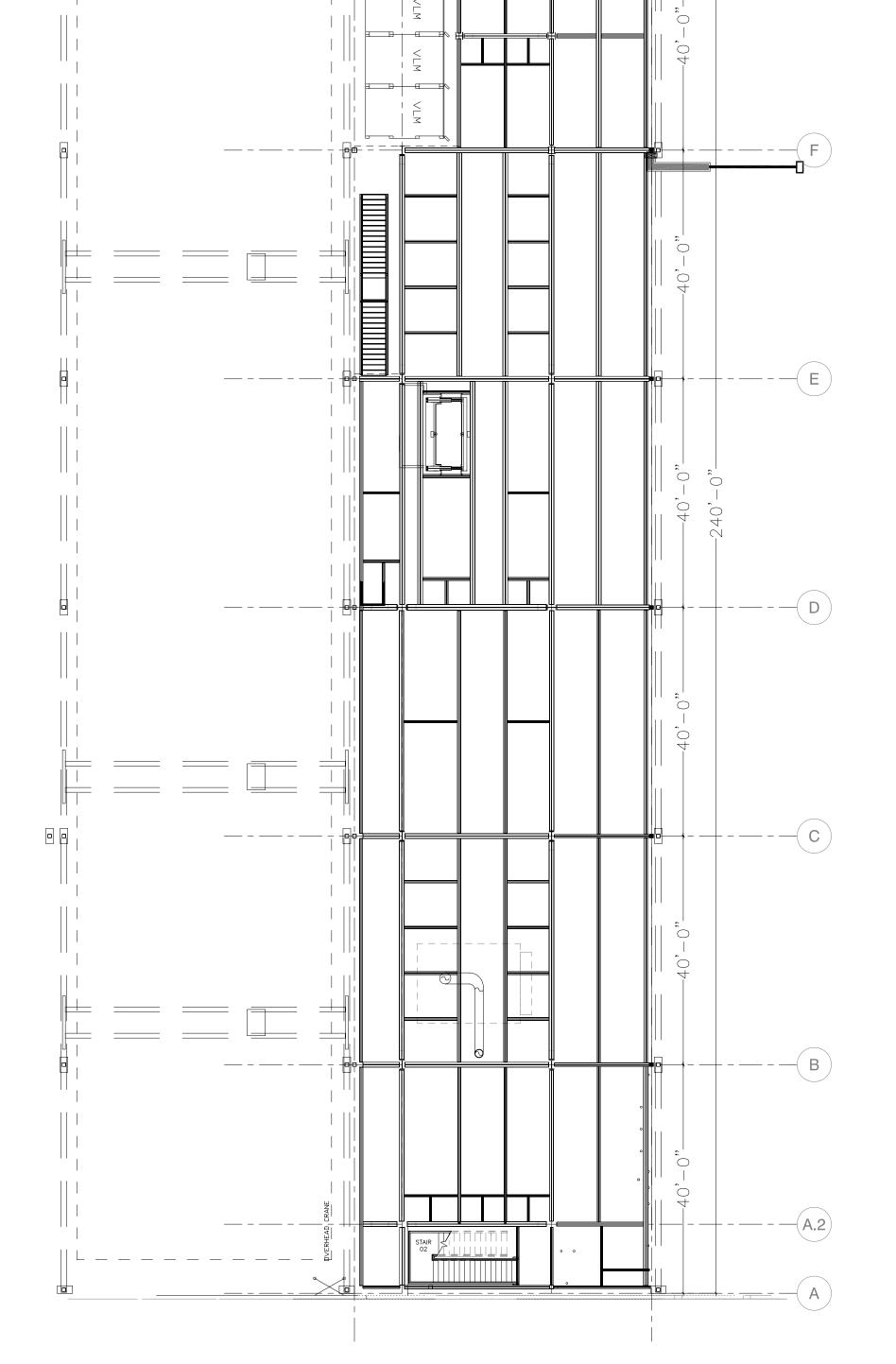
MEZZ. LEVEL - REF. CEILING PLAN SCALE: 1/16" = 1'-0"



CEILING FINISH MATERIALS

4. ELEVATOR CAB CIELING TO BE STAINLESS STEEL.

1. ACOUSTICAL CEILING TILES SHALL BE ARMSTRONG DUNE $2x2 \binom{5}{8}$ BEVELED TEGULAR $\binom{9}{16}$. 2. ALL CEILING PAINT TO BE WHITE (DRYFALL). 3. ALL EXPOSED DUCTWORK TO BE SPIRAL.



(22.2) (22.4)

+8'-4"+10'-0"+16'-2"-17'-6"—

GROUND LEVEL - REF. CEILING PLAN SCALE: 1/16" = 1'-0"



GENERAL NOTES

1. DO NOT SCALE DRAWINGS. 2. NOT FOR CONSTRUCTION. FOR PRICING ONLY. 3. CONTRACTOR TO VERIFY ALL QUANTITIES FOR TAKE OFF AND COST ESTIMATING.

4. SEE ELECTRICAL PLANS FOR LIGHTING. 5. SEE MECHANICAL PLANS FOR GRILLES, LOUVERS, VENTS. **V** Engineered Composites

ALBANY - BID SET

GerouxArchitects@gmail.com

Subconsultants Dunn & Associates 380 W. 800 S. #100 Salt Lake City, Utah 84101

Van Boerum & Frank Assoc. 181 E. 5600 S. Murray, Utah 84107

Hunt Electric. Inc. 1863 Alexander Street Salt Lake City, Utah 84119

Owner / Project Contact

Albany Engineered Composites

Tax Parcel ID #: 07-35-252-003-0000



Issued/Revisions

Date 04/18/23

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conditions shown on the drawing. Shop drawings shall be submitted to the Architect for approval before proceeding ALBANY MEZZANINE

REFLECTED **CEILING PLANS DETAILS**

1/16"=1'-0" 04.18.2023 001-23 GxA

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Subconsultants

181 E. 5600 S.

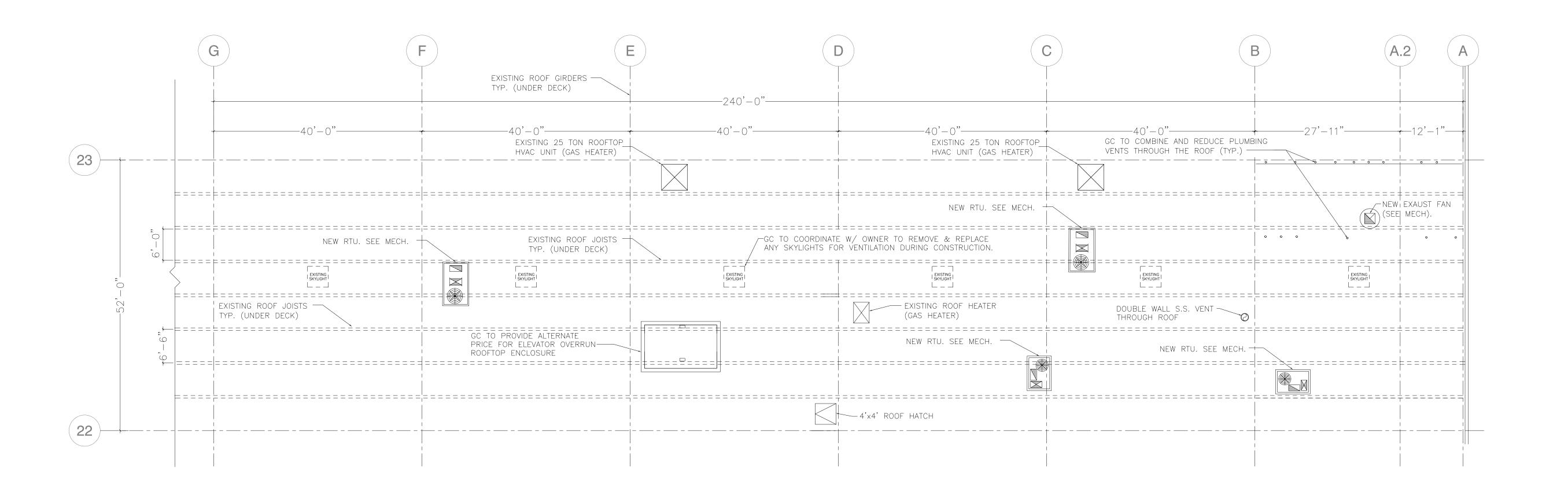
Murray, Utah 84107

Dunn & Associates

380 W. 800 S. #100

Salt Lake City, Utah 84101

Van Boerum & Frank Assoc.



2

ENLARGED ROOF PLAN - ABOVE MEZZ.

A202 / SCALE: 3/32'' = 1'-0'

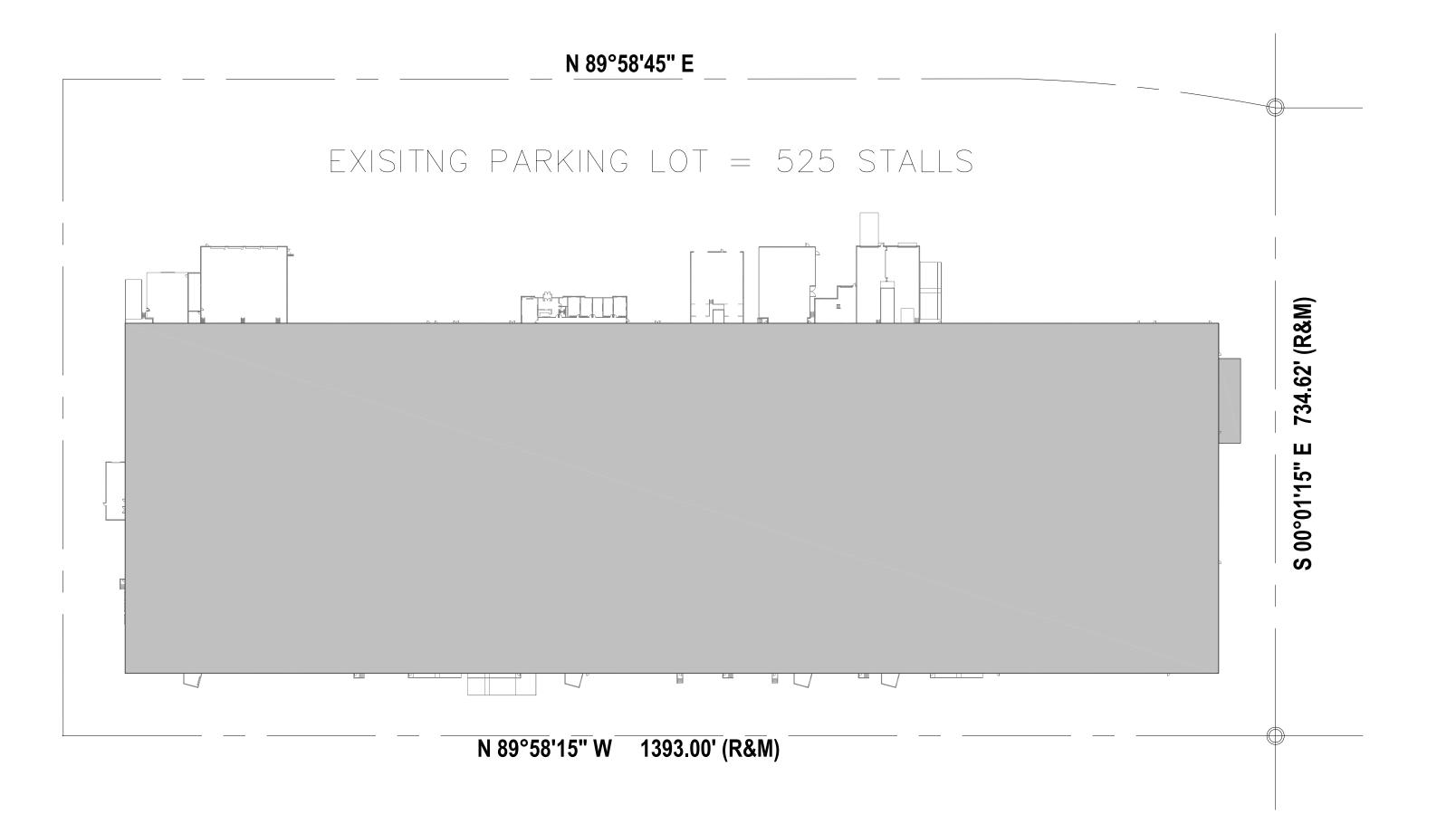


GENERAL NOTES

1. DO NOT SCALE DRAWINGS.

2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE BEGINNING WORK AND SHALL REPORT TO THE ARCHITECT ANY ERRORS, INCONSISTENCIES, OR OMISSIONS BEFORE BEGINNING WORK. SEE GENERAL NOTES AND SPECIFICATIONS.

- 3. CONTRACTOR TO TAKE NECESSARY MEASURES TO PROTECT THE EXISTING BUILDING FROM DAMAGE
- 4. CONTRACTOR TO PROVIDE SHOP DRAWINGS AND SUBMITTALS TO ARCHITECT / OWNER FOR REVIEW AND APPROVAL.
- 5. REFER TO STRUCTURAL DRAWINGS AND CALCULATIONS TO CONFIRM ALL SIZES AND ATTACHMENTS.
- 6. CONTRACTOR TO COMPLY WITH ALL REQUIRED SPECIAL INSPECTIONS IMPOSED BY TOWN OF SALT LAKE CITY.
- 7. CONTRACTOR TO LEAVE JOB SITE CLEAN OF ALL DEBRIS AT ALL TIMES. COORDINATE WITH ALBANY FACILITIES DIRECTOR ON CONSTRUCTION STAGING AREA, MITIGATION PLAN AND DUMPSTER LOCATION AS NECESSARY. BUILDING OWNER TO PROVIDE RESTROOM FOR ANY CONSTRUCTION WORKERS.
- 8. CONTRACTOR TO COORDINATE WITH LOCAL FIRE MARSHALL AS REQUIRED.
- 9. COORDINATE ADDITIONAL DEFERRED FIRE SPRINKLER SUBMITTAL AS REQUIRED WITH FIRE MARSHALL AND AUTHORITY HAVING JUSRIDICATION.



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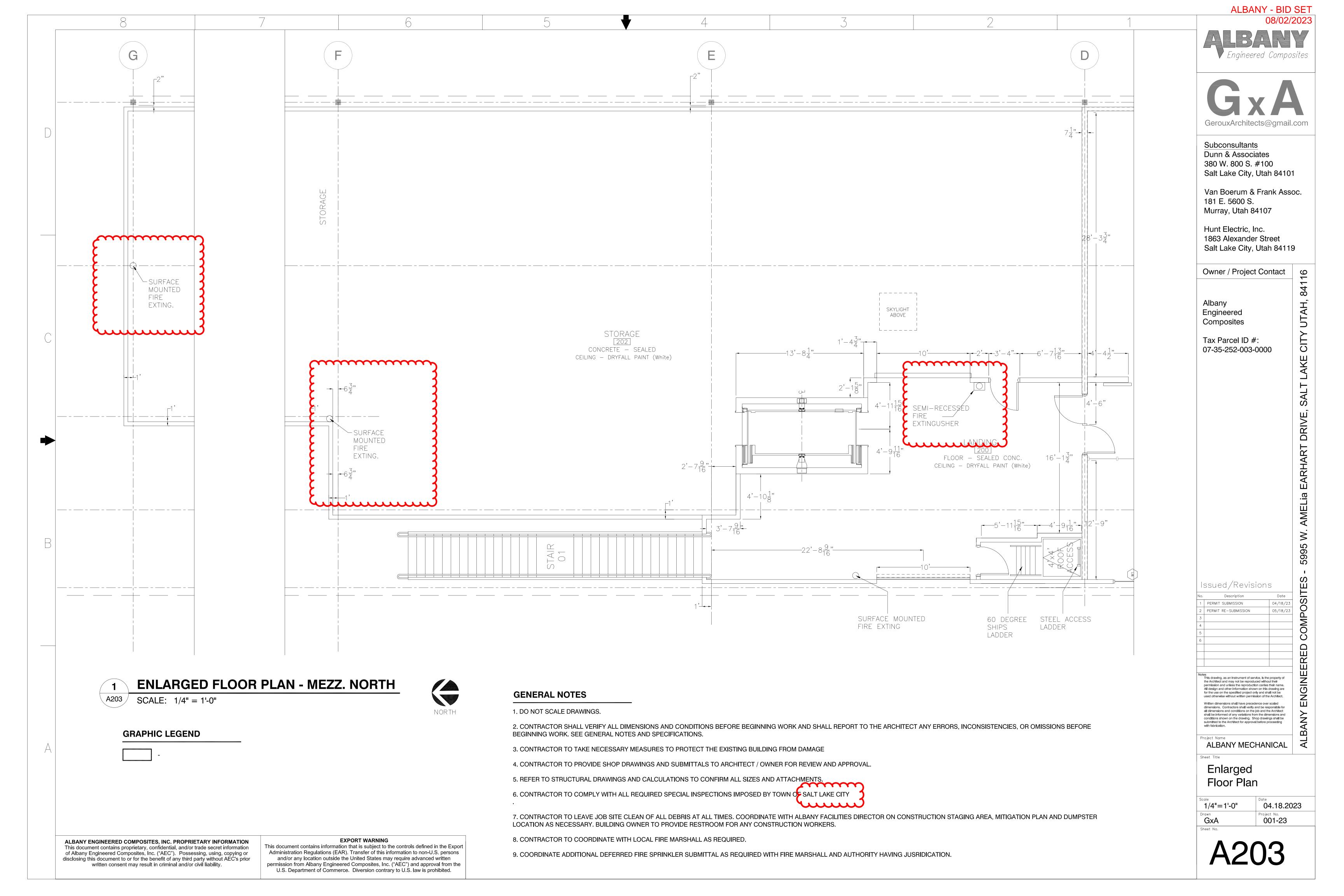
Hunt Electric, Inc. 1863 Alexander Street Salt Lake City, Utah 84119 Owner / Project Contact Albany Engineered Composites Tax Parcel ID #: 07-35-252-003-0000 Issued/Revisions PERMIT SUBMISSION 04/18/23 05/18/23 PERMIT RE-SUBMISSION OM \circ This drawling, as an instrument of service, is the property of the Architect and may not be reproduced without their permission and unless the reproduction carries their name. All design and other information shown on this drawing are for the use on the specified project only and shall not be used otherwise without written permission of the Architect Written dimensions shall have precedence over scaled dimensions. Contractors shall verify and be responsible for all dimensions and conditions on the job and the Architect shall be informed of any variations from the dimensions and conditions shown on the drawing. Shop drawings shall be submitted to the Architect for approval before proceeding ALBANY MECHANICAL **ROOF PLAN**

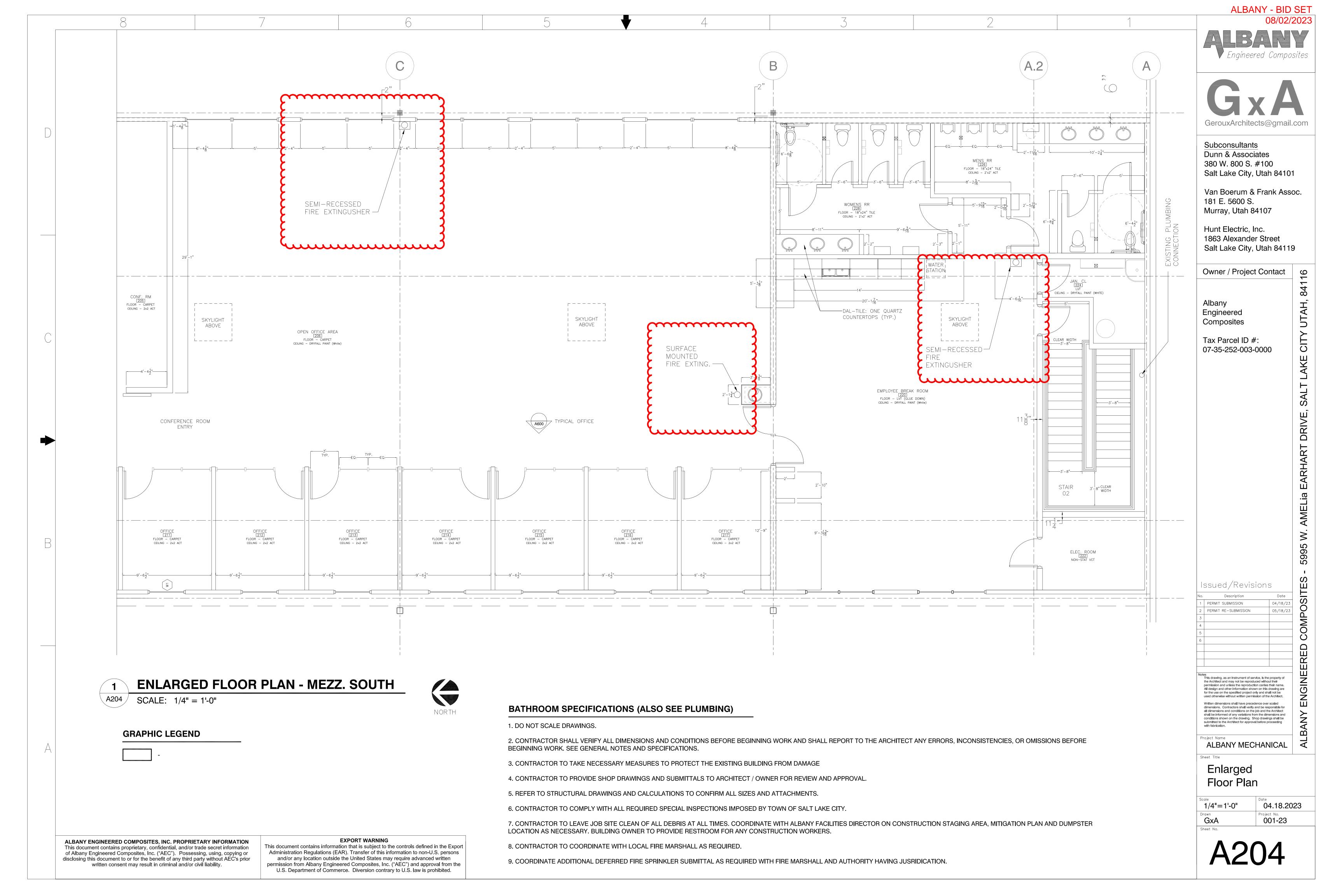
AS NOTED

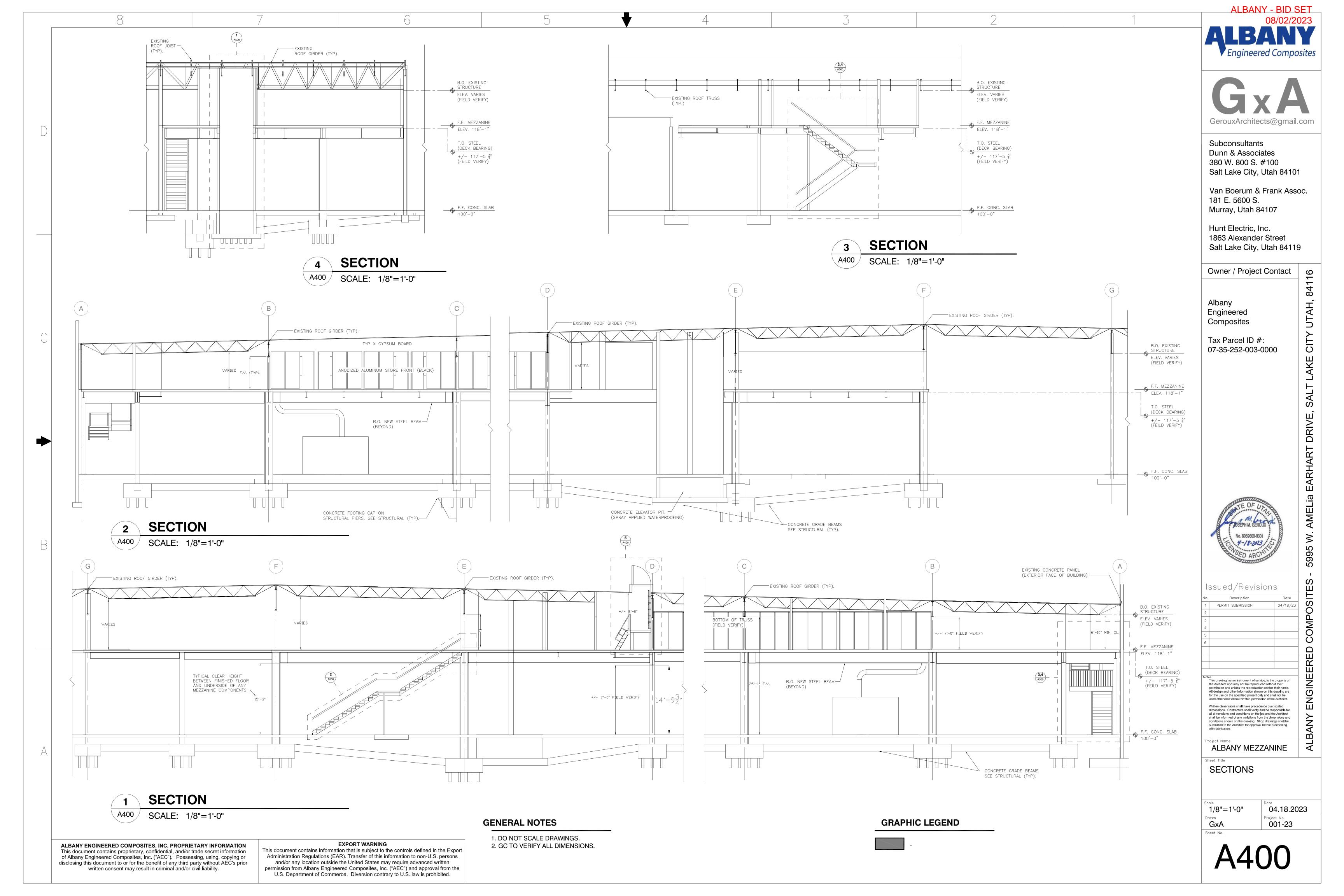
GxA

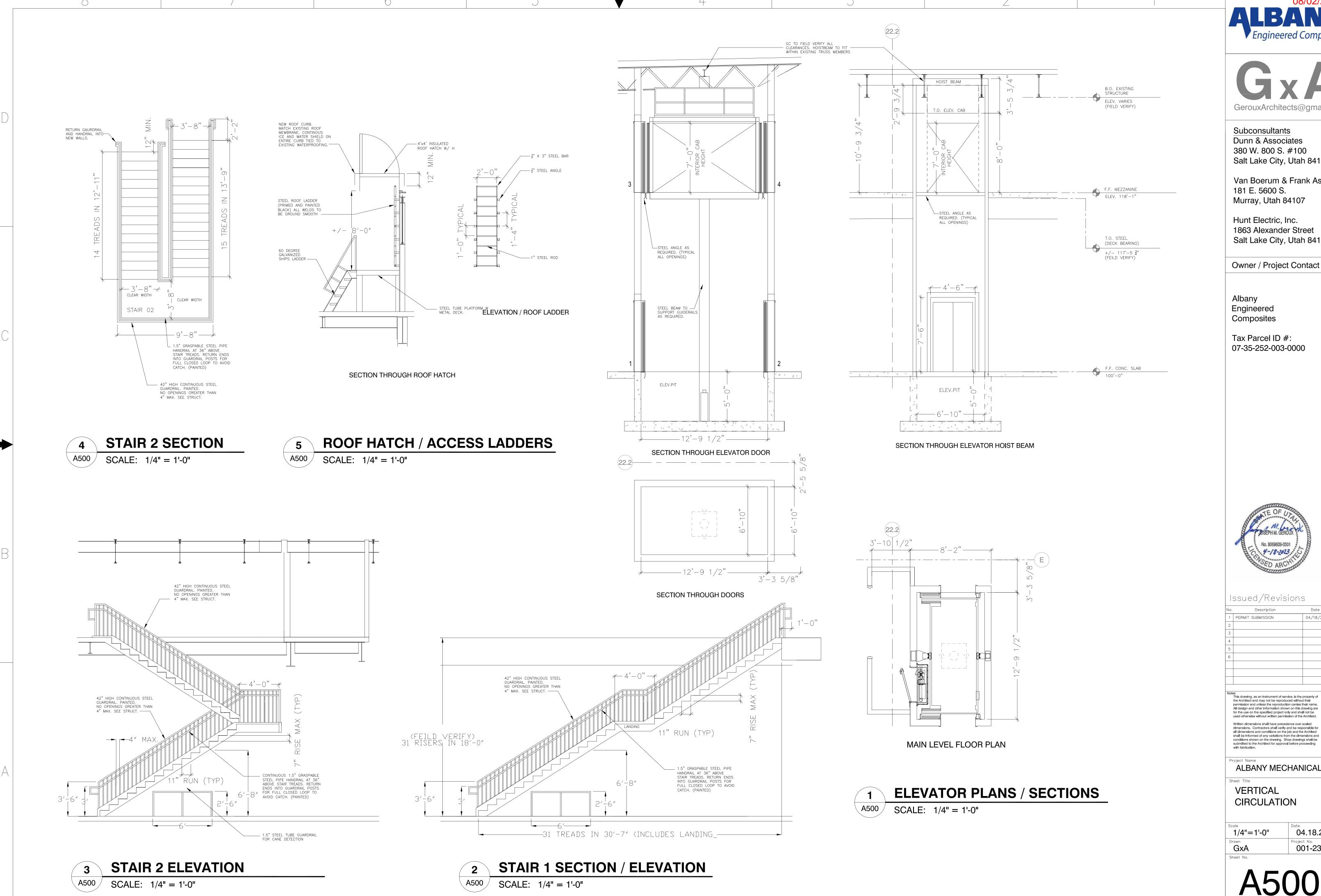
04.18.2023

001-23









ALBANY - BID SET **V** Engineered Composites

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Owner / Project Contact

Albany Engineered Composites

Tax Parcel ID #: 07-35-252-003-0000 CITY

LAKE

Issued/Revisions Date

04/18/23

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ALBANY MECHANICAL

VERTICAL CIRCULATION

04.18.2023 1/4"=1'-0" 001-23

▼ Engineered Composites

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Dunn & Associates 380 W. 800 S. #100 Salt Lake City, Utah 84101

Van Boerum & Frank Assoc. 181 E. 5600 S. Murray, Utah 84107

Hunt Electric, Inc. 1863 Alexander Street Salt Lake City, Utah 84119

Owner / Project Contact

UTAH,

CITY

5995

COMPOSITES

ERED

Tax Parcel ID #:

Subconsultants EXIT / LATCH-LEVER w/ PANIC 1/2" TEMPERED DOUBLE GLASS DOORS ON SLIDING OVERHEAD TRACK. RUSTICA OR APPROVED EQUAL. CRL 36LPMBL Albany Engineered Composites 07-35-252-003-0000 EXIT / LATCH-LEVER w/ PANIC

Issued/Revisions

No.	Description	Date
1	PERMIT SUBMISSION	04/18/23
2	PERMIT RE-SUBMISSION	05/18/23
3		
4		
5		
6		

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shall be informed of any variations from the dimensions and conditions shown on the drawing. Shop drawings shall be submitted to the Architect for approval before proceeding

with fabrication.

ALBANY MECHANICAL

DOOR & WINDOW SCHEDULES / DETAILS

04.18.2023

001-23

AS SHOWN GxA

DOOR # 100A 100B 200A 200B 200C

202A

202B

205A

205B

206A

206B

210

211

212

213

214

215

217

220

222

224

226

226A

226B

228

228A

228B

228C

228D

DOOK SCHEDULE

ROOM

ELEV.

MACH

ELEV.

MACH

LANDING

(ROLL UP)

LANDING

(SWING)

(LIFT)

LANDING

(ROLL UP)

STORAGE

(SWING)

(SLIDE)

(SLIDE)

OFFICE

(SWING)

OFFICE

(SWING)

OFFICE

(SWING)

OFFICE

(SWING)

OFFICE

(SWING)

OFFICE

(SWING) OFFICE

(SWING) OFFICE

(SWING) OFFICE

(SWING) OFFICE

(SWING) STAIR 02

(SWING) ELECTRICAL

(SWING) JANITOR

(SWING)

MENS RM.

(SWING)

TOILET

(SWING)

TOILET

(SWING)

(SWING)

TOILET

(SWING)

TOILET

(SWING)

TOILET

(SWING)

TOILET

(SWING)

WOMENS RM.

CONFERENCE | 3'x8'

CONFERENCE | 3'x8'

ROOF HATCH

SIZE

3'-6"x7'-0" (x) 2

3'-6"x7'-0"

10'X10'

3'X7'

4'×4'

10'X10'

3'X7'

3'X7' (PAIR)

3'X7' (PAIR)

3'X8'

3'X8'

3'X8'

3'X8'

3'X8'

3'X8'

3'X8'

3'X8'

3'X7'

3'X7'

3'X7'

3'X7'

3'X7' (ACC)

3'X7' (ACC)

2'-4"X7'

2'-4"X7'

2'-4"X7'

2'-4"X7'

3'X7'

DOOR

НМ

НМ

METAL

НМ

METAL

(INSUL)

METAL

НМ

STEEL

GLASS

STEEL

GLASS

WOOD

WOOD

WOOD

WOOD

WOOD

WOOD

WOOD

WOOD

WOOD

НМ

НМ

НМ

WOOD

WOOD

WOOD

WOOD

WOOD

WOOD

WOOD

WOOD

3A

3A

3A

3A

3A

3

PAINT

STAIN

STAIN

STAIN

STAIN

STAIN

STAIN

STAIN

STAIN

DOOR NOTES

MOTERIZED

PRIVACY / DEADBOLT

MANUFACTURER

MOTERIZED

HANDLES.

PRIVACY / LEVER

PRIVACY / DEADBOLT

PRIVACY / DEADBOLT

SWING / KICKPLATE ONLY

TOILET STALL PRIVACY LOCK

SWING / KICKPLATE ONLY

WALL STUDS VARY IN WIDTH.

SUBMITTAL FOR ALL DOORS,

90 MIN RATING / SECURITY LOCK

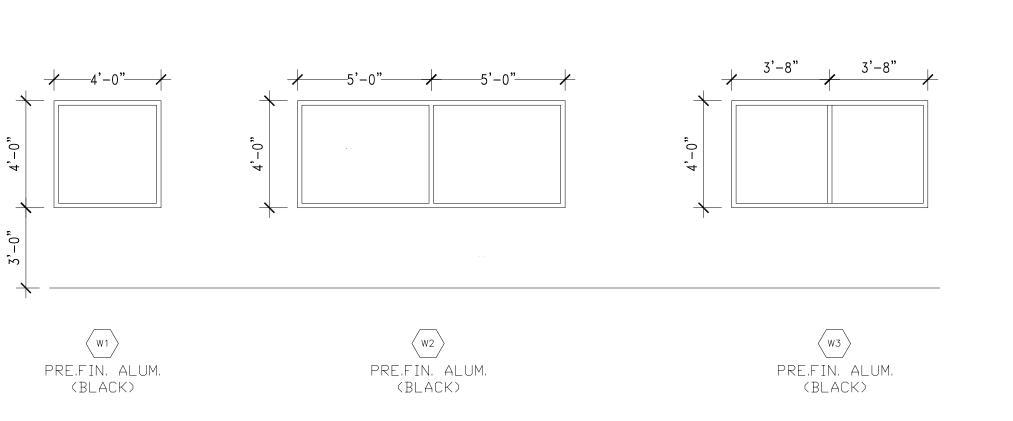
90 MIN RATING / SECURITY LOCK

FRAMES AND HARDWARE.

GC TO PROVIDE ARCHITECT WITH

TEMPERED GLASS TYPE 35 TYPE 4 OVERHEAD DOOR (MOTORIZED) 1/2" TEMPERED GLASS (CONFERENCE RM) STEEL FRAME FRAMELESS

____10'-0"-___



SEE DOOR SCHEDULE

TEMPERED GLASS

TYPE 3

WOOD W/ FULL LITE

(TYPICAL OFFICE DOOR)

ALUM, FRAME

SEE DOOR SCHEDULE

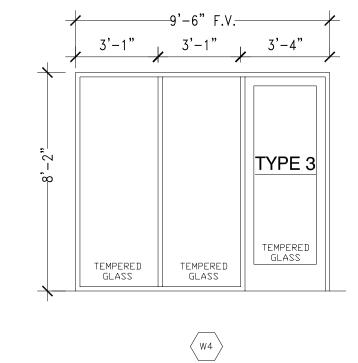
TYPE 3A

 $V \square \square \square$

(RESTROOM)

HM FRAME

SEE DOOR SCHEDULE



PRE.FIN. ALUM.

(BLACK)

DOOR / WINDOW TYPES

SCALE: N.T.S. A600

SEE DOOR 2" SCHEDULE 2

TYPE 1

HOLLOW METAL

DOOR & FRAME

(PAINTED)

SEE DOOR . SCHEDULE

 $0 \parallel 0$

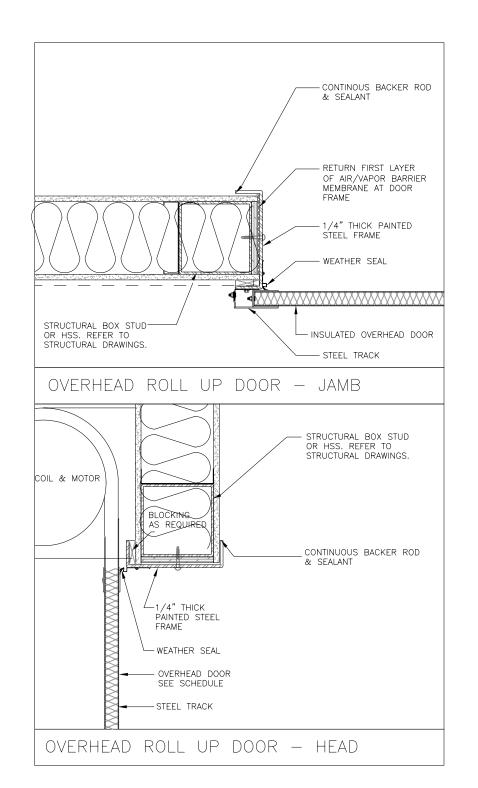
TYPE 2

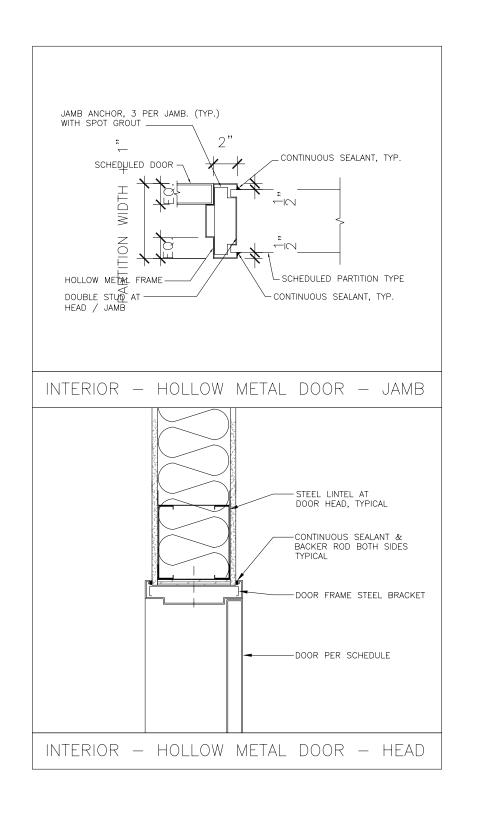
DOUBLE HOLLOW METAL

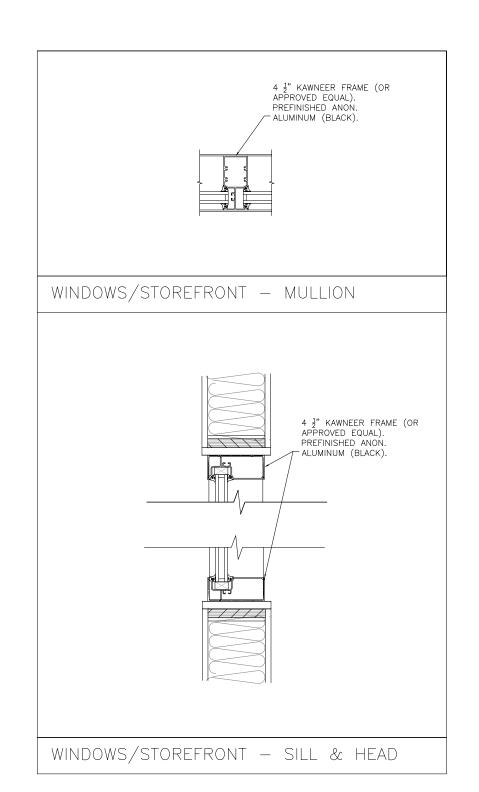
DOOR & FRAME

(PAINTED)

__REMOVABLE / CENTER RAIL







DOOR NOTES:

COORDINATE WITH OWNER ON MANUFACTURER, STYLE, FINISH TO COMPLY W/ ALBANY STANDARD ON ALL NEW LOCKSETS. 2. PROVIDE ARCHITECT WITH SAMPLES OF ALL DOOR MATERIALS AND COMPLETE SUBMITTAL FOR REVIEW.

A600

DOOR & WINDOW SCHEDULE

SCALE: N.T.S.

DOOR / WINDOW DETAILS

SCALE: 1 1/2" = 1'-0"

A600

POST-INSTALLED ANCHORS

exist, the most stringent requirement applies.

request for each circumstance to the Architect and Engineer for review.

A. Eligible adhesive anchors in concrete (normal weight only)

HIT-RE 500v3 by Hilti (ESR-3814)

2. SET-3G by Simpson (ESR-4057)

3. SET-XP by Simpson (ESR-2508)

5. Pure 110+ by Dewalt (ESR-3298)

AC200+ Gold by Dewalt (ESR-4027)

7. HIT-HY 200 V3 by Hilti (ESR-4868)

A. Eligible mechanical anchors in concrete

1. Kwik Bolt TZ2 by Hilti (ESR-4266)

2. Kwik HUS-EZ by Hilti (ESR-3027)

4. Strong-Bolt 2 by Simpson (ESR-3037)

8. Tapcon/Sammy Anchors by ITW (ESR-2202)

10. Power-Stud+ SD4 and SD6 Stainless by Dewalt (ESR-2502)

1. Steel deck shall comply with the latest requirements of the Steel Deck Institute.

2. Steel deck material shall comply with the manufacturer's ICC Report and have a minimum yield strength of 33ksi.

deck provided the attachment and loading meets the 'Suspended Loads from Metal Deck' detail supplied in the drawings.

as required to provide the equivalent loading of the specified deck under a 3-span condition.

10. Steel deck shall be galvanized (G60) when used above or below mechanical equipment rooms.

Type/Ga-----S(in3/ft)-----I (in4/ft)-----Concrete (Total)------Allowable shear value-----Notes

W3/20------0.510------0.907---------Typ. Floor

1. 12" on center to supports perpendicular to deck corrugations (4 welds per 36" wide sheet

9. Power-Stud+ SD2 by Dewalt (ESR-2502)

5. Titen HD by Simpson (ESR-2713)

6. Torq-cut by Simpson (ESR-2705)

. Trubolt+ by ITW (ESR-2427)

11. Snake+ by Dewalt (ESR-2272)

METAL DECKING

12. Screw-Bolt+ by Dewalt (ESR-3889)

13. Mini Undercut+ by Dewalt (ESR-3912)

approved by the engineer of record prior to the substitution.

6. All members supporting deck shall be dry before welding.

concrete, NW = Normal weight concrete):

minimum shear requirements):

D. Butt all end splices.

DEFERRED SUBMITTALS

C. Provide a 2" minimum bearing at all supports.

shall be available at the jobsite throughout construction.

given in the construction documents.

adhere to the painted deck.

7. Crimp seams before button punching or welding interlocking seams

9. All welds performed on roof deck or galvanized deck are to be painted.

2. 12" on center to all supports parallel to deck corrugations.

3. HDI-P TZ by Hilti (ESR-4236)

4. AT-XP by Simpson (IAPMO ES ER-0263)

1. Post-installed anchors shall only be used where specifically detailed or called for on the design drawings. If circumstances arise during construction

where the Contractor desires to substitute a post-installed anchor in place of a cast-in-place anchor, the Contractor shall submit a formal written

2. Follow all ICC Evaluation Report and manufacturers' requirements and recommendations for post-installed anchor installation. Where conflicts may

3. Post-installed anchors that are exposed to exterior conditions, or interior spaces where moisture can accumulate, shall be either galvanized or

5. For installation of adhesive anchors horizontally or vertically inclined, installers must have AMI/CRSI Adhesive Anchor Installer Certification.

6. Adhesive anchors shall be as specified in the Contract Documents. If no specific adhesive is specified, or if a particular product is preferred, the Contractor may submit a request for an adhesive from the following list prior to design of the anchor. Follow manufacturer and ICC evaluation report

7. Mechanical anchors shall be as specified in the Contract Documents. If no specific mechanical anchor is specified, or if a particular product is

8. The Contractor may also submit for review and approval, the manufacturer's ICC evaluation report of alternate anchor systems not listed above.

The alternate system shall provide minimum capacities equal to or greater than the specified anchor system. The alternate system shall be

3. All deck shall be 3-span continuous minimum. In areas where 3-span conditions are not possible, the contractor shall provide heavier gauge deck

4. Loads from plumbing, fire sprinklers, HVAC ducts, light fixtures, architectural elements, or equipment of any kind, may only be attached to the roof

5. Conduits are permitted in deck slabs subject to local code requirements and fire rating considerations. When conduit is installed in the slab, it shall

in bottom deck ribs. For conduits not able to meet spacing requirements, see typical detail for conduits in reinforced concrete over metal deck.

8. Where deck is to receive sprayed-on fire proofing, painted deck shall be coated with special paint that will allow the sprayed-on fire proofing to

11. Steel floor deck shall be phosphatized/painted, composite, with interlocking side seams with the following minimum properties (LW = Light weight

A. Weld deck to supporting framing members with 3/4" diameter puddle welds at the following spacing (Closer spacings may be used to develop

B. Attach interlocking seams with 3/16" diameter button punch at 18" on center or 1 1/2" top seam weld at 36" on center between adjacent pieces

1. Deferred submittals are items that are not part of our scope which require architectural and/or engineering review. Deferred submittals include

2. Deferred submittals shall first be submitted to the project architect and/or engineer for review and coordination. Upon completion of the

deferred submittal items are found to be in general conformance with the design drawings with no exceptions.

A. Exterior Façade Framing and Connections (by supplier) showing compliance with drift requirements

C. Seismic Bracing for mechanical, electrical and plumbing components per ASCE 7, Chapter 13 (by MEP consultant)

D.—Grouted Micropiles (by supplier). The jurisdiction may require this submittal to be included with permit.

E. Buckling Restrained Braces and their connections to structure (by supplier) to meet the applicable requirements of AISC 341

plans, details, calculations and/or other relevant design information stamped by a Professional Engineer licensed in the state in which construction

architect/engineer review, the architect/engineer will submit the deferred submittals to the Building Official for review and approval. The submittal to

the Building Official shall include a notation stating that the architect/engineer review has been performed and that the plans and calculations for the

3. Construction related to deferred submittals shall not commence until the Building Official has approved the submittal. Approved deferred submittals

4. Items requiring deferred submittals are listed below. These items shall be designed and fabricated by the manufacturer according to specifications

B. Steel Stairs and handrails (by steel stair manufacturer). Stair suppliers to provide any additional required support steel beyond that of the main

shall accommodate lateral building drifts listed in the Maximum Story Drift Table between adjacent floors, both perpendicular and parallel.

building framing system shown on the design drawings. Steel stairs shall be designed to the deflection limits in the Basis of Design notes, and

be limited to conduits the lesser of 2" in diameter or less than 1/3 the concrete thickness over the deck flutes, and that no crossovers occur, and

that conduit is spaced at least 18" apart with a 3/4" minimum cover and placed a minimum of 1" above top of deck flutes. Conduits shall not be run

Aluminum conduits in concrete slabs shall be coated or covered to prevent aluminum - concrete reaction and electrolytic action between aluminum

requirements for installation temperature of adhesive anchors. Adhesive anchors shall not be installed or cured outside of approved temperature

4. All holes in hollow, brick, or stone masonry shall be drilled in the "rotary-only" mode with the hammer function off.

ranges. Adhesive anchors may not be installed in concrete less than 21 days old without prior approval.

preferred, the Contractor may submit a request for an anchor from the following list prior to design of the anchor.

Hunt Electric, Inc.

Owner / Project Contact

Albany

Tax Parcel ID #: 07-35-252-003-0000

ALBANY MEZZANINE

2023.03.28

DIMENSIONS AND ELEVATIONS, AS THEY RELATE TO THE BUILDING IN GENERAL, i.e. GRID TO GRID DIMENSIONS OR DECK BEARING ELEVATIONS, ARE SUPPLIED BY THE ARCHITECT. THEY ARE PROVIDED ON THE STRUCTURAL PLANS AND DETAILS FOR THE CONVENIENCE OF THE CONTRACTOR. VERIFY DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL

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Engineered Composites

This drawing, as an instrument of service, is the property of the Architect and may not be reproduced without their permission and unless the reproduction carries their name All design and other information shown on this drawing are for the use on the specified project only and shall not be Written dimensions shall have precedence over scaled dimensions. Contractors shall verify and be responsible for all dimensions and conditions on the job and the Architect shall be informed of any variations from the dimensions shall be submitted to the Architect for approval before

Issued/Revisions

GENERAL STRUCTURAL NOTES

2023.03.28 JDD 22159

GENERAL STRUCTURAL NOTES

<u>GENERAL</u>

- 1. The structural notes are intended to complement the project specifications. Specific notes and details in the drawings shall govern over the structural notes and typical details.
- Typical details and sections shall apply where specific details are not shown. . The contractor shall verify all site conditions and dimensions. If actual conditions differ from those shown in the contract drawings, the contractor
- shall immediately notify the architect/engineer before proceeding with the fabrication or construction of any affected elements. Discrepancies should be brought the attention of the architect prior to fabrication or construction. 4. Drawings shall not be scaled for the purpose of preparing shop drawings or for construction. Where dimensions on the design drawings are not
- provided or inferred, the contractor may scale drawings only to estimate member lengths for the purpose of bidding Changes to these contract drawings may be made only by an authorized representative of Dunn Associates, Inc. Dunn Associates, Inc. shall not be
- held responsible or liable for any claims arising directly or indirectly from changes made without written authorization by an authorized representative of Dunn Associates, Inc. Omissions or conflicts between the contract drawings and/or specifications shall be brought to the attention of the architect/engineer before
- proceeding with any work involved. In case of conflict, follow the most stringent requirement as directed by the architect/engineer at no additional cost to the owner. The contractor shall submit a written request to the architect/engineer before proceeding with any changes, substitutions, or modifications. Any work done by the contractor before receiving written approval will be at the contractor's risk. These contract documents note and describe potential
- bid alternate details that may be requested from and approved by the Engineer of Record during the bidding and negotiation phase. The contractor may also submit to the architect/engineer for approval other substitutions or modifications to the design drawings as bid alternates during the bidding and negotiation phase. Field modifications to structural elements are not permitted without notification and approval by the Engineer of
- . The contractor shall coordinate with all trades any items that are to be integrated into the structural system such as openings, penetrations, mechanical and electrical equipment, etc. Structural drawings do not show all openings. Refer to other discipline drawings. Sizes and locations of mechanical and other equipment that differs from those shown on the contract drawings shall be reported to the architect/engineer. Contractor shall
- take measures as required to insure that construction loads shall not exceed design loads for the structure. 9. Any structural items shown on other discipline's drawings that are not shown on the structural drawings, but that are noted as "refer to structural
- drawings" for additional information, shall be brought to the attention of the structural engineer by the contractor. 10. Items such as fireproofing, waterproofing, insulation, vapor barrier, etc, may be shown or noted on structural drawings for reference only. Refer to the architectural drawings or specifications for more information.
- 11. The contractor shall be responsible for means, methods, techniques, sequences, and procedures in order to comply with the contract drawings and specifications. The contractor shall provide adequate shoring and bracing as required for the chosen method of erection. Shoring and bracing shall remain in place until final connections for the permanent members are completed. The building shall not be considered stable until all connections are completed. Walls shall not be considered self-supporting and shall be braced until the floor/roof system is completed
- 12. Site observations by a field representative of Dunn Associates, Inc. shall not be construed as approval of construction, the procedures, nor special
- 13. All work shall be done in accordance with OSHA requirements. Potential conflicts between these documents and OSHA requirements shall be brought to the attention of the structural engineer before proceeding with the work.
- Shop Drawings and submittals A. Shop drawings include plans, details, calculations and/or other relevant design information. Review of shop drawings and submittals by Dunn Associates, Inc. is for general compliance only and is not intended for approval. The shop drawing review shall not relieve the contractor from
- the responsibility of completing the project according to the contract documents. B. Submittals for the following items shall be submitted to the Project Architect/Engineer for review prior to fabrication and/or installation: 1. Concrete Mix Design
- Concrete Reinforcing
- Anchorage and Embeds Structural Steel
- Deferred Design Items C. Quality control submittals shall be submitted to special inspector for review prior to fabrication/installation. Courtesy copies shall be provided to the project architect and engineer for their records.
- D. Detailing and shop drawing production for structural elements will require information (including dimensions) contained in the architectural, structural and/or other consultants' drawings. The structural drawings shall be used in conjunction with the architectural and other consultant's drawings. See the Architectural Drawings for dimensions, doors, windows, non-bearing interior and exterior walls, elevations, slopes, stairs, curbs, drains, recesses, depressions, railings, waterproofing, finishes, chamfers, kerfs, etc.
- E. Shop drawings made from reproductions of the structural drawings will be rejected unless the contractor signs a release agreement prior to the shop drawings being reviewed. The contractor may also obtain electronic files of the plan sheets after signing a release agreement. Electronic files of the detail sheets and schedule sheets will not be made available.
- F. The Contractor may choose to submit shop drawings and submittals for review electronically. The Contractor may do this provided a minimum of one hard copy set is submitted for review. The submittal will be stamped as received by Dunn Associates, Inc. when the hard copy is received by our office. Hard copies of small submittals need not be submitted if the Contractor receives the approval for this exception by the Engineer of Record.

BASIS OF DESIGN

Governing Building Code---International Building Code 2018 .. Risk Category----Floor Live Loads A. Uniformly Distributed Loads 1. Offices + Partitions-------- 80 psf (reducible) -- 250 psf (unreducible) Heavy Storage ----100 psf (unreducible) Stair Loading (deferred submittal)----- B. Concentrated Loads . Offices ------ 2000 lbs Roof Live Load (Not concurrent with Roof Snow Load)------ 20 psf or 300 lbs . Seismic Design Criteria A. Mapped Spectral Response Accelerations 1-Second Acceleration---B. Design Spectral Response Accelerations 0.2-Second (Short) Period Acceleration---------- SDS = 1.057 1-Second Acceleration----- SD1 = 0.570 --- D - Default C. Site Class (Soil Profile)---D. Seismic Importance Factor--

FOUNDATION

 Soils Investigation Report:--2. Soil bearing pressure:--- 1500 psf - Assumed for design Frost Protection:

F105t F10tection
Clear excavations of debris and loose soil prior to placing footings. All footings shall bear on undisturbed natural sub-grade or engineered
compacted fill as noted in these drawings.
DTI WORK

<u>EARTHWORK</u>

- 1. Consult the project specifications for earthwork requirements. In absence of information, refer to the following notes.
- . Clearing: Remove all existing structures and associated foundations, slabs, fencing, asphalt, concrete, and incidental structures as necessary for project completion. The building area shall be stripped of all vegetation, topsoil, and debris. Following stripping, all undocumented fill soils and any remaining loose natural soils shall be excavated to expose competent natural soils.
- 3. Contractor shall provide temporary shoring for excavations as required. . Contractor shall provide measures necessary to prevent damage to or settlement of new or existing construction and utilities on or adjacent to
- Contractor shall provide dewatering as required to protect the site from flooding. . Proof roll the entire building pad area with normal compaction equipment to check for the presence of unsuitable fills, soft spots, or other
- undesirable materials or conditions. Remove sub-grade materials that are unsuitable and replace with compacted structural fill or 2,000 psi lean Compacted structural fill: All fill material shall be a well-graded granular material with a maximum size less than 3" and with not more than 15% passing a #200 sieve. Fill beneath footings shall be compacted to at least 95% of the maximum laboratory density as determined by ASTM D 1557.
- All fill shall be tested. Compacted structural fill shall be placed in lifts not exceeding 8" in uncompacted thickness. Floor slabs shall be underlain by a granular layer at least 4" thick. The granular layer shall have a maximum size less than 1" with not more than 5% passing a #200 sieve and shall be compacted to at least 90% of the maximum laboratory density as determined by ASTM D 1557.

9. The special inspector shall review all excavations and fill placement prior to placing concrete.

STRUCTURAL STEEL

- . Codes and Standards: Fabrication, Erection and Quality Control of structural steel shall comply with the latest edition of the following: A. American Institute of Steel Construction (AISC) 360, "Specification for Structural Steel Buildings," with "Commentary".
- B. AISC 341 "Seismic Provisions for Structural Steel Buildings." C. AISC 303 "Code of Standard Practice" excluding sections 3.4, 4.4 and 4.4.1
- D. AISC "Specification for Structural Joints Using High Strength Bolts" E. American Welding Society (AWS), Structural Welding Codes D1.1, D1.3, D1.4, and D1.8, except as modified by the "Steel Construction Manual".
- Material: A. Wide Flange Sections------ ASTM A992 (50 ksi) Notch-toughness requirements apply for Group 3, 4, and 5 shapes with flange thickness greater than 1 1/2" and plate 2" and thicker which are a part of the Seismic Load Resisting System (SLRS). Minimum Charpy V-Notch requirements are 20 ft-lbs at 70°F.
- -- ASTM A36 Braced/Moment Frames------ ASTM A572 Grade 50 --- ASTM A53 Grade B Type E/S D. Hollow Structural Shapes
- ---- ASTM A500 Grade C (50 ksi) Rectangular------ ASTM A500 Grade C (46 ksi) E. Other Structural Shapes (M, C, etc), Threaded Rod--- ASTM A36 F. Bolted Connections------ ASTM F3125 Grade A325 with ASTM A563 heavy hex nuts and ASTM F436 washers.
- G. Anchor Bolts All Columns unless noted otherwise: ASTM F1554 Grade 105 with ASTM A563 heavy hex nuts. Nuts to be snug tight. 2. Braced Frame/Moment Frame Columns unless noted otherwise: ASTM F1554 Grade 105 (equiv to A193 Grade B7) with ASTM A563 heavy hex nuts with 5/16" min plate washers. Bottom assembly to include double heavy hex nuts with similar washer. Nuts to be snug tight.
- H. Weld Filler Metal Shielded Metal Arc Welding-------- AWS A5.1, low-hydrogen only Low-hydrogen restrictions do not apply when welding sheet steels in accordance with AWS D1.3, including attaching these steels to
- structural members. 2. Gas-Metal & Metal-Cored Arc Welding----- AWS A5.18 Flux-Cored Arc Welding-----E7XT-4 or E7XT-11 electrodes are not permitted. 4. Intermixing of welds made from self-shielded welding electrodes with welds made by other processes is not allowed in seismic critical
- welds, unless tested in accordance with AWS D1.8, annex B. The Field Erection Contractor is responsible for verifying that intermixing of self-shielded weld metal with weld metal of other processes will not occur, or alternatively, the welding procedure is qualified by testing. 5. Where demand critical welds are required, provide filler metals meeting the following minimum mechanical properties: 58ksi yield strength,
- A. Welds may be performed in the shop or the field. Designations of field welds on the Contract Documents are shown where it is anticipated field welds may be required, and are shown only for the purpose of assisting the Contractor in the bidding process. The Contractor shall coordinate the welding sequence between sub-contractors, and any costs associated with variations in the welding sequence are outside the scope of the
- the 'k' region of wide flange members is prohibited unless noted otherwise. B. Provide full depth web stiffener plates at one side of all beams at all bearing points, unless noted otherwise. Stiffener plates shall be the ----- STIFFENER THICKNESS & WELD SIZE FLANGE WIDTH----Less than 8 1/4"-------- 1/4" & 3/16"
- b. Tighten these fasteners to a "snug tight" condition. the beam for the span and steel specified.
- Use A325N or A325X bolts or tension-controlled bolts. b. Pretension these fasteners as required by AISC "Specification for Structural Joints Using ASTM A325 or a A490 bolts."
- Systems (SLRS). 4. Fasteners and washers shall not be reused. Scrap dirty, rusted, or water-contaminated bolt assemblies. D. Reduced Beam Sections
- Freehand cutting is not permitted.
- Repair of gouges, notches, mill imperfections, shall conform to the requirements of the AISC and AWS provisions.
- Runoff tabs are to be removed unless noted otherwise. F. Backup Bars: Remove backup bars from connections in demand critical welds, unless noted otherwise. Backgouge the root and weld to sound metal. Reweld the gouged area and add a 5/16" reinforcing fillet weld. Backup bars may remain for top flange beam welds provided the
- backup bar is welded to column flanges with 5/16" fillet weld. G. Protected Zones: No connections, other than those on the design drawings, shall be made within the protected zone of the SLRS as identified in
- 1. Locate headed studs, welds, miscellaneous metal, etc outside of the protected zone. 2. Paint the protected zones with bright paint before and after fire coating operations to identify them. H. All welds not noted on drawings shall be minimum 1/4" fillet welds.
- I. All structural steel members shall be considered as an unrestrained fire-resistance-rated assembly. 4. Welding of Reinforcing Steel or Bolts A. Reinforcing Bars: Do not weld rebar except as specifically detailed in the drawings. In such cases, use only AWS standards. Do not substitute reinforcing bars for deformed bar anchors, structural bolts, or headed stud anchors.
- B. Do not weld anchor bolts, including "tack" welds. C. Headed Stud Anchor welding and Deformed Bar Anchor welding shall conform to the manufacturer's specifications.

CONCRETE

Concrete shall be supplied in accordance with ACI 318 and the following requirements

Concrete Use	Comp. Strength f 'c (psi)	Exposure Classes per ACI 318 19.3.1 (a,b,c)	Nominal Max. Aggregate Size
Footings / Pile Caps	4000	F0, S0, W0, C1	1 1/2"
Other Walls	4000	F0, S0, W0, C0	3/4"
Interior Slabs on Grade (d,e,f)	4000	F0, S0, W0, C0	3/4"
Light Wt. Concrete on Steel Deck (g)	3000	F0, S0, W0, C0	3/4"

a. Cement type (ASTM C150 or C595), max. water/cement ratio and fly ash to comply with ACI 318 Table 19.3.2.1.

- b. Air content ± 1.5%, to comply with ACI 318 Tables 19.3.2.1 and 19.3.3.1, initially measured at point of final placement and point of discharge. Subsequent measurements may occur only at point of discharge provided air content is adjusted to account for placement losses. Air content shall be adjusted for the use of admixtures, fly ash and aggregate size. Air-entraining admixtures shall comply with ASTM C260 (when used). c. Calcium chloride shall not be added to the concrete mix. Unreinforced concrete slabs on grade may use calcium chloride as permitted by ACI
- d. For any exposed slab on grade, the contractor is to notify the engineer of record at least 7 days prior to any pours to discuss the concrete mix design being used as well as present their means and methods of addressing concrete phenomena such as cracking, curling, spalling, etc. e. Interior slabs on grade shall have a drying shrinkage maximum of 0.040% by ASTM C157 (7-day soak time permitted). Test results shall be
- submitted with mix designs f. For slab on grade 6" or thicker, a maximum aggregate size of 1 1/2" is permitted. g. Contractor shall provide verification that mix design for lightweight concrete over metal deck has a maximum dry weight density of 110 ± 3 pcf
- per ASTM C567. Materials unless noted otherwise: --- ASTM C33 A. Normal Weight aggregates--- B. Light Weight aggregates -- ASTM C330
- C. Fly Ash, Class C or F Pozzolan------- ASTM C618 D. Reinforcing Steel -- ASTM A615 Grade 60 2. Subject to the above requirements, ASTM A615 Grade 75 steel may be used at the contractor's option, except in special moment frames, special concrete shear walls, shear stirrups or torsional reinforcement.
- F. Headed Stud Anchors (HSA) --------- ASTM A108 G. Anchor Bolts: See steel and/or wood section(s) of general notes. H. No aluminum conduit or product containing aluminum or any other material injurious to concrete shall be embedded in concrete. 2. Reinforce composite slabs over metal deck with the following welded wire reinforcement (minimum), based on the thickness of concrete above
 - A. Slab (above upper deck flute) 3 1/4" or thinner------ 6" x 6" W1.4/W1.4 B. Slab (above upper deck flute) 4" or thinner, but thicker than 3 1/4"----- 6" x 6" - W2.1/W2.1 C. Slab (above upper deck flute) thicker than 4"---------- 6" x 6" - W2.9/W2.9 3. Welded wire reinforcement may be substituted with macro synthetic fibers "coarse fibers" (per ASTM C-1116), made from virgin polyolefin, with

upper deck flutes. Welded wire reinforcement shall be placed 1" to 1 1/2" below the top of the slab:

- equivalent diameter between 0.016" and 0.05", having minimum aspect ratio (length/equivalent diameter) of 50, at a minimum rate of 4 lb / cubic yard. Fibers above finished slab shall not be burned off. Do not use fibers in architecturally finished or colored concrete. 4. The contractor shall be responsible for the design, detailing, care, placement and removal of all formwork and shores. A. Supporting forms and shoring shall not be removed until structural members have acquired sufficient strength to safely support their own
- weight and any construction load to which they may be subjected. In no case, however, shall forms and shoring be removed in less than 24 hours after concrete placement. B. Suspended slabs shall be re-supported after form removal until concrete reaches its 28-day specified compressive strength. 5. Reinforcement shall have the following concrete clear cover:
- A. Cast-in-place Concrete L. Cast against and permanently exposed to earth------ 3" 2. Formed concrete exposed to earth or weather: #6 thru #18 bars #5 and smaller bars--3. Concrete not exposed to weather or in contact with ground:

Slabs, Walls, Joists; #11 bars and smaller ----- 3/4'

E. Deformed Bar Anchors (DBA) ---

- Beams, Columns: Primary Reinforcement, Ties,----- 1 1/2" Stirrups, Spirals 6. Construction Joints and Control Joints: A. Provide a beveled 2" x 4" x continuous or intermittent keyway in all horizontal and vertical construction joints including between top of footing
- B. Control joints shall be installed in slabs on grade so the length to width ratio of the slab is no more than 1.25:1. Control joints shall be completed within 12 hours of concrete placement. Control joints may be installed by either: . Saw cut with depth of 1/4 the thickness of the slab

and foundation walls. In addition, all joints shall be intentionally roughened to a full amplitude of approximately 1/4".

- 2. Tooled joints with depth of 1/4 the thickness of the slab C. Install control joints in slabs on grade at a spacing not to exceed 30 times the slab thickness in any direction, unless noted otherwise. Construction joints in slabs on grade shall not exceed a distance of 125'-0" on center in any direction.
- D. Install construction joints in walls at a spacing not to exceed 30 times the wall thickness, except in concrete shear walls. For masonry walls above, align joints in concrete walls with masonry control joints E. Construction joints are not permitted in suspended slabs or beams unless specifically noted on the construction documents or submitted by the Contractor to the Engineer of Record for review.
- Construction A. Use chairs or other support devices recommended by the CRSI to support bar and tie reinforcement bars and WWR prior to placing concrete. WWR shall be continuously supported at 36" on center maximum. Reinforcing steel for slabs on grade shall be adequately supported on precast concrete units. Lifting the reinforcing off the grade during placement of concrete is not permitted.
- B. Contractor shall coordinate placement of all openings, curbs, dowels, sleeves, conduits, bolts, inserts and other embedded items prior to C. All embeds and dowels shall be securely tied to formwork or to adjacent rebar prior to concrete placement.
- D. No pipes, ducts, sleeves, etc. shall be placed in structural concrete unless specifically detailed or approved by the structural engineer. Penetrations through walls when approved shall be built into the wall prior to concrete placement. Penetrations will not be allowed in footings or grade beams unless detailed. Piping shall be routed around these elements and footings stepped to avoid piping. E. Reinforcing bars shall not be welded unless specifically shown on drawings. In such cases, use only AWS standards. Do not substitute reinforcing bars for DBAs or HSAs.
- Reinforcing bars shall not be field bent, except as shown in the contract drawings or permitted by the EOR. G. Top of concrete columns shall be flush (±1/4") with bottom of supported cast-in-place members. A. Lap splice lengths shall be detailed to comply with the "Reinforcing Bar Lap Splice Schedule" contained within the contract drawings.

1. Do not splice stirrups and ties. Do not splice vertical bars in retaining walls unless specifically shown.

C. At joints provide reinforcing dowels to match the member reinforcing, unless noted otherwise.

- 2. At shear wall boundary elements lap lengths shall be increased by 25%. 3. Splices may be made with mechanical splices capable of 125% of yield strength of the bar being spliced (Type 1). Splices located within lateral resisting elements shall also develop the tensile strength of the bar (Type 2). Mechanical splices shall be the positive connecting type coupler and shall meet all ACI requirements. Use "Cadweld", "Lenton" Standard Couplers, "Bar-Lock" or equal with internal protector.
- If mechanical splices are used, splices or couplers on adjacent bars shall be staggered a minimum of 24" apart along the longitudinal axis of the reinforcing bars. B. All 90, 135 and 180° hooks shown graphically in the drawings shall be detailed as ACI standard hooks, unless noted otherwise.
- D. At all discontinuous control or construction slab on grade joints, provide (2) #4 x 48". . Provide corner bars at intersecting wall corners using the same bar size and spacing as the horizontal wall reinforcing. F. All vertical reinforcing shall be doweled to footings, or to the structure below with the same size and spacing as the vertical reinforcing for the element above. Dowels extending into footings shall terminate with a 90° standard hook and shall extend to within 4" of the bottom of the footing. Footing dowels (#8 bars and smaller) with hooks need not extend more than 20" into footings.
- G. See details for reinforcing around miscellaneous openings. All recesses that interrupt reinforcing shall be reinforced the same as an opening. H. Reference ACI 315 for additional detailing requirements. 9. Contractor required to submit concrete mix design for review by the engineer prior to any placement of concrete. 10. All concrete shall be mixed and placed per ACI 304. Contractor shall refer to and follow the recommendations in ACI 305R for hot weather
- concreting and ACI 306R for cold weather concreting. 11. Construction activity or storage of materials shall not take place on newly placed concrete until the concrete achieves sufficient strength to provide adequate support.

COMPOSITE STEEL BEAMS

- 2. Composite beams are indicated on the framing plans with a suffix (nn). The number inside parentheses indicates the number of studs for this beam or section of beam. Beams or sections of beams shall have the studs spaced uniformly over the beam or section. The maximum spacing shall not
- 3. All headed stud anchors shall conform to ASTM A-108. Dimensions shall comply with AISC. Use 3/4" diameter studs. Headed studs shall extend 1 1/2" minimum (2" maximum) above the top of the steel deck after welding. Headed studs shall be applied through the metal deck to the top flange
- 4. The minimum on center spacing of stud connectors shall be 6 diameters along the longitudinal axis of the supporting composite beam and 4 diameters transverse to the longitudinal axis of the supporting composite beam.
- 7. Slab shall be screeded to a constant thickness as indicated.

DUNN ASSOCIATES, INC Consulting Structural Engineers

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 Seismic Design Category---F. Lateral Force Resisting System(s) Special Steel Moment Frames Response Modification Coefficient---2. System Overstrength Factor--------- Oo = 3 Deflection Amplification Factor-----Design Base Shear--------- V = Cs*W = 0.132W, where W is structural weight G. Analysis Procedure------- Equivalent Lateral Force Serviceability Criteria A. Interstory Seismic/Wind Drift------- Δa < 0.02h ('h' is story height) B. Deflection Limits----------- Total------ Live/Snow/Wind ---L/240----- L/360 ---- L/480----- L/600(1/4" max) ----- L/600(3/8" max) *Concrete floors are limited to X" long-term total deflection. **BUILDING MAXIMUM STORY DRIFT** Level Floor to floor Inelastic Story Drift height (feet) Story Drift (inch) __ Drift_Ratio_ Story Drift (inch) Drift Ratio 18' - 1" 0.434" 0.002 2.17" 0.01 munimunimung

70ksi tensile strength, 22% elongation, Charpy V-Notch toughnesses of 20ft-lbs at 0°F and 40 ft-lbs at 70°F. ----- ASTM A496 Deformed Bar Anchors (DBA)---------- ASTM A108 Headed Stud Anchors (HSA)-----K Non-Shrink Grout---------- ASTM C1107 Grade E Non-shrink grout shall be prepackaged, non-metallic and non-gaseous. Furnish certified independent test data to Structural Engineer. Compressive Strength in 28 days = 7,500 psi Refer to architectural drawings for structural steel fireproofing or architecturally exposed steel requirements. M. All steel, connectors and embeds exposed to weather shall be galvanized, unless noted otherwise. Structural Detailing 8 1/4" to 12 1/4"--------- 3/8" & 1/4" 12 1/4" to 16 1/2"--------- 1/2" & 5/16" 16 1/2" to 20 3/4"------- 5/8" & 3/8" C. Bolting and Fasteners

Design Engineer, and are the responsibility of the Contractor. Field welding is to be minimized where possible. Contractor is to verify that the sequencing of welds meets all safety regulations, and the requirements of the Construction Documents and their referenced codes. Welding in thickness called out below unless noted otherwise. Stiffeners shall be welded on both sides of the plate-to-flange and plate-to-web interfaces.

1. Ordinary steel-to-steel connections, simple span framing, and beam/girder-to-bearing plates are the standard connection used throughout the design drawings, unless noted otherwise: a. Use A325N bolts or tension-controlled bolts.

c. Where a steel-to-steel connection is not shown, provide a framed connection per AISC for one half the total uniform load capacity of 2. Pretensioned connections are shown on the structural design drawings. They join steel-to-steel connections, unless noted otherwise:

3. Slip Critical connections (SC) are shown on the structural design drawings. They join steel-to-steel connections in Seismic Load-Resisting

. Fabrication of the reduced flange sections of beams used in SLRS is restricted to mechanically guided thermal cutting processes. Flange cuts shall meet the requirements of AISC 358.

E. Weld Access Holes and Temporary Attachments Fabricate beam copes and weld access holes using the geometry described in AISC 360 Section J1.6.

. All beams supporting concrete over metal deck shall have headed stud anchors.

of the steel section or welded directly to the steel section.

5. Composite beams shall be precambered as shown on plans. On the plans, c=0.00" denotes precamber dimension (upward) in inches. 6. Camber tolerance shall be +1/4", -0".

PERMIT SET THESE STRUCTURAL DRAWINGS ARE BASED ON

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ARCHITECTURAL MODEL DATED 03.16.2023

DRAWINGS.

Engineered Composite

GerouxArchitects@gmail.com

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Hunt Electric, Inc. 1863 Alexander Street Salt Lake City, Utah 84119

Owner / Project Contact

Albany Engineered Composites

Tax Parcel ID #: 07-35-252-003-0000

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Issued/Revisions

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Written dimensions shall have precedence over scaled dimensions. Contractors shall verify and be responsible for all dimensions and conditions on the job and the Architect shall be informed of any variations from the dimensions shall be submitted to the Architect for approval before

ALBANY MEZZANINE

GENERAL

STRUCTURAL NOTES

2023.03.28 JDD 22159

GENERAL STRUCTURAL NOTES

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SPECIAL INSPECTION, TESTING AND STRUCTURAL OBSERVATION REQUIREMENTS

- Special Inspections and Testing
- A. Special inspections and testing as required per the approved construction documents and per IBC Chapter 17 shall be provided for this project
- unless waived by the Building Official. B. An independent agency, or agencies, employed by the Owner, shall perform the special inspection and testing services required.
- C. The special inspection and testing requirements of this section of the General Structural Notes and the special inspection tables serve as the Engineer of Record's statement of special inspections and structural observations required by IBC Chapter 17. Contractor Responsibilities (1704.4)
- A. Each Contractor responsible for the construction of a main wind or seismic force-resisting system, a designated seismic system, or a wind or seismic force-resisting component listed in the statement of special inspections shall submit a written statement of responsibility to the Building Official and Owner prior to commencing with the work involved. It shall contain acknowledgement of awareness of the special requirements
- contained in the statement of special inspection. B. The Contractor shall coordinate and cooperate with all the required inspections, testing, and/or structural observations required for the project.
- C. The Contractor shall maintain access to and exposure of the work which requires special inspection or testing. D. The Contractor shall not proceed with subsequent work until required inspections, testing, and/or structural observations have been provided.
- E. The Contractor shall correct all work found to be deficient, and re-test at no additional cost to the Owner.
- F. The Contractor shall notify the Engineer of Record at least (7) days prior to any required structural observations. G. Submit all required documentation to the Special Inspector for review.
- Special Inspector Responsibilities (1704.2) A. Prior to the start of the construction, each approved agency shall provide written documentation to the Building Official, demonstrating the competence and relevant experience or training of the special inspectors who will perform the special inspections and tests during construction.
- B. Special Inspectors shall keep records of their inspections and testing.
- C. Inspection reports shall indicate whether the work inspected was or was not completed in conformance to the approved construction
- D. Non-conforming work and/or discrepancies shall be brought to the Contractor's immediate attention for correction.
- E. The Special Inspector shall notify the Architect/Engineer of any non-conforming work or discrepancies that the Contractor cannot readily correct. F. Any uncorrected non-conforming work or discrepancies shall be brought to the attention of the Architect/Engineer and the Building Official prior
- to completion of that phase of the work. G. Submit the following to the Building Official:
- Special Inspections and Testing Reports.
- 2. Certificates of Compliance for:
- a. Fabrication of structural elements from approved fabricators. b. The seismic qualifications of nonstructural components, supports, and attachments.
- Reports of:
- a. Pre-construction tests for shotcrete. b. Material properties verifying compliance with the requirements of AWS D1.4 for weldability for reinforcing bars other than ASTM A706. c. Mill tests for ASTM A615 reinforcing bars used to resist earthquake induced forces in special moment frames, special structural walls
- or coupling beams in structures assigned to Seismic Design Category B, C, D, E, or F. 4. Special Inspections (1705) A. Special Cases (1705.1.1): Special Inspection and tests shall be required for proposed work that is, in the opinion of the Building Official, unusual
- in its nature, such as, but not limited to, the following:
- Construction materials and systems that are alternatives to materials and systems prescribed by the IBC.
- Unusual design applications of materials described in the IBC. Materials and systems required to be installed in accordance with additional manufacturer's instructions that prescribe requirements not contained in the IBC or in standards referenced by the IBC.
- B. Steel Construction (1705.2): The special inspections and nondestructive testing of steel construction in buildings shall be in accordance with the 1. Structural Steel. Special inspections and non-destructive testing of structural steel elements in buildings, structures, and portions
- thereof shall be in accordance with the Quality Assurance inspection requirements of AISC 360 and tables in the construction documents. Exception: Railing systems composed of structural steel elements shall be limited to welding inspection of welds at the
- Cold-Formed Steel Deck. Special inspections and qualification of welding special inspectors for cold-formed steel floor and roof deck shall be in accordance with the Quality Assurance inspection requirements of SDI QA/QC.
- C. Quality Control Submittals for Structural Steel Provide Level III non-destructive testing (NDT) personnel certifications.
- Provide welder qualification records to verify project welders are tested and qualified in accordance with AWS D1.1 before welding structural or miscellaneous steels, D1.3 before welding sheet steels (10 gauge and thinner), and D1.4 before welding reinforcing steel. Submit documentation to the approved inspection agency for review before welding.
- a. Special, restricted welder qualification testing is required for welders joining the bottom-flange through the weld access hole connection in demand critical welds. Qualify welders for the minimum groove angle and maximum deposition rate used in production. Follow the instructions for supplemental qualification testing in AWS D1.8, Section 5.1. Qualification testing must take place within two years from the start of this project.
- Provide welder identification methodology. The fabricator/erector shall maintain a system by which the welder who has welded a joint or member can be identified. Stamps, if used, shall be the low stress type.
- Provide welding procedures that comply with AWS D1.1, D1.3, D1.4, D1.8, as required by the project. Welding procedures shall be made available to welders and inspectors.
- a. Provide weld filler metal product data sheets identifying optimum welding parameters and storage conditions with each welding
- b. Identify the maximum welding heat input per inch of weld (KJ/in) permitted by the welding procedures Identify the maximum deposition rate that will be used while welding on any demand critical weld.
- Provide typical welding filler metal Certificates of Conformance that identify the WPS Heat Input Envelope. Provide a preliminary welding repair procedure to follow should welding repairs be required within the Seismic Protected Zone.
- Provide bolt storage and installation procedures to the approved inspection agency for review. Provide mill/material test reports (MTR) or certificates of conformance (CC) that verify compliance of furnished materials to the requirements of the approved contract documents. MTRs or CCs are required for structural shapes, plate, metal deck, fasteners, headed studs, DBAs, weld filler metal, and bolt assemblies used as primary, load-bearing members. Maintain the heat number
- traceability of structural shapes and plate used as primary, load bearing members. D. Structural Steel Non-Destructive Testing (NDT) Personnel Qualifications
- NDT personnel will: a. Qualify in accordance with the recommended practices of the American Society of Nondestructive Testing, SNT-TC-1A, latest
- b. Pass eve examinations meeting: (1) ASTM requirements at least once a year, and (2) AWS D1.1 every three years,
- c. Be certified in accordance with the AWS QC-1, latest edition. d. Level III must be qualified by ASNT testing in the applicable method under review.
- Only Level II and Level III technicians, qualified by testing in the applicable method, are permitted to interpret nondestructive testing
- Only Senior Certified or Certified Welding Inspectors (SCWI, CWI) are permitted to evaluate welds. Certified Associate Welding nspectors may evaluate welds when under the direct supervision of a SCWI and/or CWI.
- 4. Approved Inspection Agency will certify the following: a. Level III inspector has reviewed the NDT procedures.
- b. Project ultrasonic testing technicians, testing demand critical welds, are trained and qualified in accordance with AWS D1.8, Annex
- c. That the Inspection Agencies' ultrasonic testing procedures are qualified by weld mockups similar to AWS D1.1, Annex S. E. Structural Steel: Special inspection and non-destructive testing (NDT) are required during the fabrication and erection of any load-bearing members and assemblies. Special inspection, except NDT, may be waived when the work is performed in a fabricating shop, or by an erector approved by the Building Official to perform work without Special Inspection. NDT of welds completed in an approved fabricator's shop may be performed by the fabricator when approved by the Building Official. When the fabricator performs the NDT, the fabricator shall submit the NDT eports for review by the Special Inspector. Special inspection and NDT shall be provided per the special inspection tables for structural steel in
- the construction documents. 1. Perform all welding and welding special inspection activities in accordance with AWS D1.1, D1.3, D1.4, and D1.8, AISC 360 Chapter N, and AISC 341 Chapter J, as appropriate for the material form and welding methods employed. Approved methods and acceptance criteria are established in these codes.
- Perform all bolting and bolting inspection activities in accordance with AISC Specification for Structural Structural Joints Using High Strength Bolts, AISC 360 Chapter N, and AISC 341 Chapter J, as applicable.
- Non-Destructive Testing (NDT) of welds is required as follows: a. Ultrasonic testing (UT), magnetic particle testing (MT), penetrant testing (PT), and radiographic testing (RT), where required, shall be performed in accordance with AWS D1.1/D1.1M. Acceptance criteria shall be in accordance with AWS D1.1/D1.1M for statically
- loaded structures, unless otherwise designated on the design drawings or project specifications. b. All NDT shall be documented. NDT reports shall be distributed to the fabricator/erector, the Building Official, the Contractor, and
- c. Amount of NDT is permitted to be reduced according to AISC 360 Chapter N and AISC 341 Chapter J if appropriate criteria are met, and if approved by the Building Official and the Engineer of Record.
- d. Requirements for structures in Seismic Design Categories C thru F:
- Ultrasonic test all complete joint penetration groove · Magnetic particle test or penetrant test all thermally cut surfaces of access holes for flange or web thicknesses exceeding 2". Magnetic particle test or penetrant test all thermally cut surfaces of beam copes access holes for flange or web thicknesses
- exceeding 1 ½" for members of the seismic force resisting system in Seismic Design Categories C thru F. Any crack shall be deemed unacceptable.
- Special inspections and Testing for Non-Shrink Grout are required as follows: n. Periodic special inspection verifying the use of required mix design.
- b. Samples of non-shrink grout shall be tested for compressive strength at least daily, with additional tests required for each additional
- F. Concrete (1705.3): Special inspections and tests of concrete construction shall be performed in accordance with Table 1705.3 in the construction documents. Special inspections of welding of and qualifications of special inspectors for reinforcing bars shall be in accordance with the
- requirements of AWS D1.4 for special inspections and for special inspector qualifications. 2. In the absence of sufficient data or documentation providing evidence of conformance to quality standards for concrete materials, the building official shall require testing in accordance with the appropriate standards and criteria for the materials.

- G. Soils (1705.6): Special inspections and tests of existing site soil conditions, fill materials and placement, and load-bearing requirements shall be performed in accordance with the approved soils report and Table 1705.6 in the construction documents. The Special Inspector shall verify that during fill placement, proper materials and procedures are used. The approved geotechnical report and the construction documents shall be
- H. Driven Deep Foundations (1705.7): Special inspections and tests shall be performed during installation of driven deep foundation elements as specified in Table 1705.7 in the construction documents. The approved geotechnical report and the construction documents shall be used to determine compliance. . Helical Pile Foundations (1705.9): Continuous special inspections shall be performed during installation of helical pile foundations. Information

recorded shall include installation equipment used, pile dimensions, tip elevations, final depth, final installation torque and other pertinent data

- as required. The approved geotechnical report and the construction documents shall be used to determine compliance J. Fabricated Items (1705.10). Where fabrication of structural, load bearing or lateral load-resisting members or assemblies is being conducted on the premises of a fabricator's shop, special inspections of the fabricated items shall be performed during fabrication. Special inspections during fabrication are not required where the work is done on the premises of a fabricator registered and approved by the building official to perform such work without special inspection. At the completion of fabrication, the approved fabricators shall submit a certificate of compliance to the
- Owner for submittal to the Building Official stating that the work was performed in accordance with the approved construction documents. K. See architectural drawings for additional required inspections pertaining to sprayed fire-resistant materials (1705.14), mastic and intumescent fire-resistant coatings (1705.15), EIFS (1705.16), fire resistant penetrations and joints (1705.17), or smoke control systems (1705.18). L. Post-Installed Anchors: Special inspections and tests shall be performed during installation of post-installed anchors according to the
- requirements of the ICC Evaluation Report and table 1705.3 in the construction documents. 5. Special Inspections for Seismic Resistance (1705.12): Special inspections for seismic resistance are required for this project per IBC section
- A. Structural Steel (1705.12.1): Special Inspections for seismic resistance shall be in accordance with the following as applicable: 1. Seismic Force-Resisting Systems; Special Inspections of structural steel in the seismic force-resisting systems of buildings and structures assigned to Seismic Design Category B, C, D, E, or F shall be performed in accordance with the Quality Assurance
- requirements of AISC 341 and the construction documents. Structural Steel Elements; Special Inspections of structural steel elements in the seismic force-resisting systems of buildings and structures assigned to Seismic Design Category B, C, D, E, or F other than those covered in section5.A.1 above, including struts, collectors, chords, and foundation elements, shall be performed in accordance with the Quality Assurance requirements of AISC 341 and the construction documents
- B. Designated Seismic Systems (1705.12.4): For structures assigned to Seismic Design Category C, D, E, or F, the Special Inspector shall examine designated seismic systems requiring seismic qualifications in accordance with ASCE7 Section 13.2.2, and verify that label,
- anchorage and mounting conforms to the certificate of compliance. C. Architectural Components (1705.12.5): Periodic special inspection is required for the erection and fastening of exterior cladding, interior and exterior nonbearing walls and interior and exterior veneer in structures assigned to Seismic Design Category D, E, or F.
- Access Floors. Periodic special inspection is required for the anchorage of access floors in structures assigned to Seismic Design Category D, E, or F. D. Plumbing, Mechanical, and Electrical Components (1705.12.6): Periodic special inspection of plumbing, mechanical, and electrical components
- shall be required for the following: 1. Anchorage of electrical equipment for emergency and standby power systems in structures assigned to Seismic Design Category C, D,
- Anchorage of other electrical equipment is structures assigned to Seismic Design Category E or F. Installation and anchorage of piping systems designed to carry hazardous materials and their associated mechanical units in structures assigned to Seismic Design Category C, D, E, or F. Installation and anchorage of ductwork designed to carry hazardous materials in structures assigned to Seismic Design Category C, D,
- Installation and anchorage of vibration isolated systems in structures assigned to Seismic Design Category C, D, E, or F where the approved construction documents require a nominal clearance of 1/4" or less between the equipment support frame and restraint. Installation of mechanical and electrical equipment, including duct work, piping systems, and their structural supports, where automatic
- fire sprinkler systems are installed in structures assigned to Seismic Design Category C, D, E, or F to verify proper clearances have been maintained. Where flexible sprinkler hose fittings are used, special inspection of minimum clearances is not required. 6. Testing for Seismic Resistance (1705.13): Testing for seismic resistance is required for this project per IBC section 1705.13.
- Seismic Force-resisting Systems. Non-destructive testing of structural steel in the seismic force-resisting systems of structures assigned to Seismic Design Category B, C, D, E, or F shall be performed in accordance with the Quality Assurance requirements of Structural Steel Elements. Non-destructive testing of structural steel elements in the seismic force-resisting systems of structures assigned to Seismic Design Category B, C, D, E, or F shall be performed in accordance with the Quality Assurance requirements of
- B. Non-Structural Components (1705.13.2): For structures assigned to Seismic Design Category B, C, D, E, or F where the requirements of ASCE 7 Section 13.2.1 for nonstructural components, supports or attachments are met by seismic qualification as specified in Item #2 therein, the registered design professional of the applicable discipline shall specify on the approved construction documents the requirements for seismic qualification by analysis, testing, or experience data. Certificates of Compliance for the seismic qualification shall be submitted to the
- Building Official. Special Inspections for Wind Resistance (1705.11): Special inspections for wind resistance <u>are not</u> required for this project per IBC Section
- 3. Structural Observations/Site Observations (1704.6): Structural observations are not required for this project per IBC section 1704.6. A. Site Observations are part of the Dunn Associates, Inc. contract with the Architect/Owner. The stages of construction listed below will serve as suggested stages of construction to be observed. The Contractor shall notify (in writing) the Engineer of Record at least 7 days prior to the
- following stages of construction so that the Engineer may have the opportunity to review the work. Initial placing of any concrete, including but not limited to: footings, slabs on grade or concrete over steel deck
- Initial finish work B. Structural observation/Site observation reports will be provided to the Architect. Distribution to the Contractor, Owner, and/or Building Official
- will be through the Architect 9. Seismic/Wind Main Force Resisting Systems That Require Special Inspections A. Steel Moment Frames

B. Composite Steel and Concrete Deck Diaphragms

Anchor Bolt Above	JST	Joist	DEFINITION OF INSPECTION TASK ABBREVIATIONS
Alternate Architect Additional	K KLF KSF	Kip(s) = 1000 Pounds Kips Per Lineal Foot Kips Per Square Foot	O Observe: The inspector shall observe these functions on a random, daily basis. Operations need not be delayed pending observations.
Bottom Bar	LB	Pounds (#)	P Perform: These inspections shall be performed prior to the final acceptance of the item.

Below Maximum Beam MECH Mechanical Bottom MEZZ Mezzanine Bridging Bearing MFB Moment Frame Beam MFC MFR Moment Frame Column Between Manufacturer Beyond MIN Minimum MISC Miscellaneous Cantilevered Metal Control Joint

Complete Joint Penetration Not To Scale Center Line Non-shrink Column On Center Concrete Connection OPNG Opening Continuous Opposite Coordinate Center Power Actuated Fastener Pounds per Cubic Foot

PCF PEN PERP Deck Bearing Penetrate or Penetration **Deformed Bar Anchor** Perpendicular PJP Partial Joint Penetration **Demand Critical Weld** PLF Pounds per Lineal Foot PREFAB Diameter Prefabricated Pounds per Square Foot Dimension Pounds per Square Inch

Drawing REINF Existing REQD Each Each Face RTU Elevation SCHED Electrical Engineer Equal SFRS SIM

SOG Equipment Equally Spaced STD STIFF Each Way **Expansion Joint** STL Exterior STRUCT Foundation Footing

THRU Gage Galvanized General Structural Notes Headed Stud Anchor Hollow Structural Section

International Building Code

International Code Council

Seismic Force Resisting System Slab on Grade Standard Stiffener Structural Top and Bottom Top Bar Temperature Through Top of Typical Unless Noted Otherwise

Welded Wire Reinforcement

Working Point

Reinforce

Required

Roof Top Unit

condition and hole preparation, if specified, meet applicable 6. • Pre-installation verification testing by installation personnel observed P D O D and documented for fastener assemblies and methods used 7. Proper storage provided for bolts, nuts, washers and other fastener TABLE N5.6-2 COMBINED WITH TABLE J7-2

D Document: The inspector shall prepare reports indicating that the work has been performed in accordance with the

in the inspection report.

AISC AISC

contract documents. The report need not provide detailed measurements for joint fit-up, WPS settings, completed welds,

or other individual items listed in the tables. For shop fabrication, the report shall indicate the piece mark of the piece

inspected. For field work, the report shall indicate the reference grid lines and floor or elevation inspected. Work not in

TABLE N5.6-1 COMBINED WITH TABLE J7-1

INSPECTION TASKS PRIOR TO BOLTING

VISUAL INSPECTION TASKS PRIOR TO BOLTING

Manufacturer's certifications available for fastener materials

Fasteners marked in accordance with ASTM requirements

threads are to be excluded from shear plane)

5. • Connecting elements, including the appropriate faying surface

4. Proper bolting procedure selected for joint detail

3. Proper fasteners selected for the joint detail (grade, type, bolt length if O

compliance with the contract documents and whether the noncompliance has been satisfactorily repaired shall be noted

TASK DOC. TASK DOC.

0

0

0

0

	INSPECTION TASKS DURING BOLTING							
	AISC	AISC	C	QC)A		
	360	341	VISUAL INSPECTION TASKS DURING BOLTING	TASK	DOC.	TASK	DOC.	
1.	•	•	Fastener assemblies of suitable condition placed in all holes and washers (if required) and nuts are positioned as required	0	-	0	-	
2.	•	•	Joint brought to the snug-tight condition prior to the pretensioning operation	0	-	0	-	
3.	•	•	Fastener component not turned by the wrench prevented from rotating	0	-	0	-	
4.	•	•	Fasteners are pretensioned in accordance with the RCSC Specification progressing systematically from the most rigid point toward the free edges	0	-	0	-	

TABLE N5.6-3 COMBINED WITH TABLE J7-3 INSPECTION TASKS AFTER BOLTING						
AISC	AISC	VISUAL INSPECTION TASKS AFTER BOLTING	C	iC	C	A
360	341	VISUAL INSPECTION TASKS AFTER BOLTING	TASK	DOC.	TASK	DOC.
		Document acceptance or rejection of bolted connections	D			

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2023.03.28 PERMIT SET

> THESE STRUCTURAL DRAWINGS ARE BASED ON ARCHITECTURAL MODEL DATED 03.16.2023

DIMENSIONS AND ELEVATIONS, AS THEY RELATE TO THE BUILDING IN GENERAL, i.e. GRID TO GRID DIMENSIONS OR DECK BEARING ELEVATIONS, ARE SUPPLIED BY THE ARCHITECT. THEY ARE PROVIDED ON THE STRUCTURAL PLANS AND DETAILS FOR THE CONVENIENCE OF THE CONTRACTOR, VERIFY DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS.

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GENERAL STRUCTURAL NOTES

TABLE 1705.6: REQUIRED SPECIAL INSPECTIONS AND TESTS OF SOILS						
TYPE CONTINUOUS SPECIAL INSPECTION PERIODIC SPECIAL INSPECTION						
Verify materials below shallow foundations are adequate to achieve the design bearing capacity.	-	X				
Verify excavations are extended to proper depth and have reached proper material.	-	Х				
Perform classification and testing of compacted fill materials.	-	Х				
Verify use of proper materials, densities and lift thickness during placement and compaction of compacted fill.	X	-				
Prior to placement of compacted fill, inspect subgrade and verify that site has been prepared properly.	-	Х				

TABLE 1705.7: REQUIRED SPECIAL INSPECTIONS AND TESTS OF DRIVEN DEEP FOUNDATION ELEMENTS							
TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION					
Verify element materials, sizes and lengths comply with the requirements.	Χ	-					
Determine capacities of test elements and conduct additional load tests, as required.	X	-					
Inspect driving operations and maintain complete and accurate records for each element.	X	-					
Verify placement locations and plumbness, confirm type and size of hammer, record number of blows per foot of penetration, determine required penetrations to achieve design capacity, record tip and butt elevations and document any damage to foundation element.	X	-					
For steel elements, perform additional special inspections in accordance with Section 1705.2.	-	-					
6. For concrete elements and concrete-filled elements, perform tests and additional special inspections in accordance with Section 1705.3.	-	-					
7. For specialty elements, perform additional inspections as determined by the registered design professional in responsible charge.	-	-					

TABLE J9-1							
INSPECTION OF COMPOSITE STRUCTURES PRIOR TO CONCRETE PLACEMENT							
INSPECTION OF COMPOSITE STRUCTURES	(C	QA					
PRIOR TO CONCRETE PLACEMENT	TASK	DOC.	TASK	DOC.			
Material identification of reinforcing steel (Type/Grade)	0	-	0	-			
Determination of carbon equivalent for reinforcing steel other than ASTM A706	0	-	0	-			
Proper reinforcing steel size, spacing and orientation	0	-	0	-			
Reinforcing steel has not been rebent in the field	0	-	0	-			
Reinforcing steel has been tied and supported as required	0	-	0	-			
Required reinforcing steel clearances have been provided	0	-	0	-			
Composite member has required size	0	-	0	-			

TABLE J9-2 INSPECTION OF COMPOSITE STRUCTURES DURING CONCRETE PLACEMENT								
INSPECTION OF COMPOSITE STRUCTURES DURING CONCRETE PLACEMENT		QC	QA					
		DOC.	TASK	DOC.				
Concrete: Material identification (mix design, compressive strength, maximum large aggreg size, maximum slump)	0	D	0	D				
Limits on water added at the truck or pump	0	D	0	D				
Proper placement techniques to limit segregation	0	-	0	-				

TABLE J9-3 INSPECTION OF COMPOSITE STRUCTURES AFTER CONCRETE PLACEMENT							
INSPECTION OF COMPOSITE STRUCTURES AFTER CONCRETE PLACEMENT	TASK	DOC.	TASK	DOC.			
Achievement of minimum specified concrete compressive strength at specified age	-	D	-	D			

TABLE J8-1 OTHER INSPECTION TASKS								
OTHER INSPECTION TASKS	QC		QA					
official contractors		DOC.	TASK	DOC.				
RBS requirements, if applicable	Р	D	Р	D				
Protected zone - no holes and unapproved attachments made by fabricator or erector, as applicable	Р	D	Р	D				

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0.3. Department of Commerce. Diversion contrary to 0.3. law is promitted.

AISC	AISC	VICUAL INCRECTION TACKS PRIOR TO WELDING	C	(C	C)A
360	341	VISUAL INSPECTION TASKS PRIOR TO WELDING	TASK	DOC.	TASK DO	
•		Welder qualification records and continuity records	Р	-	0	-
•		Welding procedure specification (WPSs) available	Р	-	Р	-
•		Manufacturer certification for welding consumables available	Р	-	Р	-
•	•	Material identification (type/grade)	0	-	0	-
•	•	Welder identification system ^a	0	-	0	-
•	•	 Fit-up of groove welds (including joint geometry) Joint preparation Dimensions (alignment, root opening, root face, bevel) Cleanliness (condition of steel surfaces) Tacking (tack weld quality and location) Backing type and fit (if applicable) 	P/O**	1	0	•
	•	Fit-up of CJP groove welds of HSS T-, Y-, and K-joints without backing (including joint geometry) • Joint preparation • Dimensions (alignment, root opening, root face, bevel) • Cleanliness (condition of steel surfaces) • Tacking (tack weld quality and location)	P	-	0	-
•	•	Configuration and finish of access holes	0	-	0	-
•	•	Fit-up of fillet welds Dimensions (alignment, gaps at root) Cleanliness (condition of steel surfaces) Tacking (tack weld quality and location)	P/O**	-	0	-
•		Check welding equipment	0	_	0	_

^aThe fabricator or erector, as applicable, shall maintain a system by which a welder who has welded a joint or member can be identified, Stamps, if used, shall be low stress type.

** Follow performance of this inspection task for ten welds to be made by a given welder, with the welder demonstrating understanding of requirements and possession of skills and tools to verify these items, the Perform designation of this task shall be reduced to Observe, and the welder shall perform this task. Should the inspector determine that the welder has discontinued performance of this task, the task shall be returned to Perform until such time as the inspector has re-established adequate assurance that the welder will perform the inspection tasks listed.

TABLE N5.4-2 COMBINED WITH TABLE J6-2
VISUAL INSPECTION TASKS DURING WELDING

AISC	AISC	VICUAL INCRECTION TACKS DURING MELDING	C	(C	QA		
360	341	VIOLAL INOPELATION LAONO LINGUAL VVELLING	TASK	DOC.	TASK	DOC	
•	•	 WPS followed Settings on welding equipment Travel speed Selected welding materials Shielding gas type/flow rate Preheat applied Interpass temperature maintained (min/max) Proper position (F, V, H, OH) Intermix of filler metals avoided unless approved 	0	-	0	-	
	•	Use of qualified welders	0	-	0	-	
•	•	Control and handling of welding consumables Packaging Exposure control	0	-	0	-	
•	•	No welding over cracked tack welds	0	-	0	-	
•	•	Environmental conditions Wind speed within limits Precipitation and temperature	0	-	0	-	
•	•	Welding techniques Interpass and final cleaning Each pass within profile limitations Each pass meets quality requirements	0	-	0	-	
•		Placement and installation of steel headed stud anchors	Р	-	Р	-	

AISC	AISC	I VIOLAL INOPELLIUM TAOKO AFTER WELLING	C)C	C)A
360	341		TASK	DOC.	TASK	DOC.
•	•	Welds cleaned	0	-	0	-
•	•	Size, length and location of welds	Р	-	Р	-
•	•	 Welds meet visual acceptance criteria Crack prohibition Weld/ base-metal fusion Crater cross section Weld profiles and size Undercut Porosity 	Р	D	Р	D
•		Arc strikes	Р	-	Р	-
•		k-area ¹	Р	D	Р	D
•		Weld acceptance or rejection of welded joint or member	Р	-	Р	-
	•	Placement of reinforcing or contouring fillet welds (if required)	Р	D	Р	D
•	•	Backing removed, weld tabs removed and finished, and fillet welds added (if required)	Р	D	Р	D
•	•	Repair activities	Р	-	Р	D
•		Document acceptance or rejection of welded joint or member	Р	D	Р	D
•		No prohibited welds have been added without the approval of the EOR.	0	-	0	

for cracks within 3 in. (75mm) of the weld.

TABLE 1705.3: REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCE	ETE CONSTRUCTION
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TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	REFERENCED STANDARD ^a	IBC REFERENCE
Inspect reinforcement , including prestressing tendons, and verify placement	-	Х	ACI 318 Ch. 20, 25.2, 25.3, 26.6.1-26.6.3	1908.4
Reinforcing bar welding a. Verify weldability of reinforcing bars other than	-	Х	AWS D1.4 ACI 318: 26.6.4	-
ASTM A 706; b. Inspect single-pass fillet welds, maximum	-	X		
5/16"; and c. inspect all other welds	X	-		
3. Inspect anchors cast in concrete.	-	Х	ACI 318; 17.8.2	-
4. Inspect anchors post-installed in hardened concrete members. a. Adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension loads.	Х	-	ACI 318: 17.8.2.4	-
b. Mechanical anchors and adhesive anchors not defined in 4.a.	-	Х	ACI 318: 17.8.2	
5. Verify use of required design mix.	-	X	ACI 318: Ch 19, 26.4.3, 26.4.4	1904.1, 1904.2 1908.2, 1908.3
6. Prior to concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	X	-	ASTM C 172 ASTM C 31 ACI 318: 26.5, 26.12	1908.10
7. Inspect concrete and shotcrete placement for proper application techniques.	Х	-	ACI 318: 26.5	1908.6, 1908.7, 1908.8
8. Verify maintenance of specified curing temperature and techniques.	-	X	ACI 318: 26.5.3-26.5.5	1908.9
9. Inspect prestressed concrete for: a. Application of prestressing forces; and b. Grouting of bonded prestressing tendons.	X X		ACI 318: 26.10	-
10.Inspect erection of precast concrete members.	-	Х	ACI 318: Ch. 26.9	-
11. Verify in-situ concrete strength, prior to stressing of tendons in post-tensioned concrete and prior to removal of shores and forms from beams and structural slabs.	-	Х	ACI 318: 26.11.2	-
12.Inspect formwork for shape, location and dimensions of the concrete member being formed.	-	Х	ACI 318: 26.11.1.2(b)	-

For SI: 1 inch = 25.4 mm.

a. Where applicable, see Section 1705.12. Special inspection for seismic resistance.

b. Specific requirements for special inspection shall be included in the research report for the anchor issued by an approved source in accordance with 17.8.2 in ACI 318, or other qualification procedures. Where specific requirements are not provided, special inspection requirements shall be specified by the registered design professional and shall be approved by the building official prior to the commencement of the work.

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DRAWINGS.

GENERAL STRUCTURAL NOTES

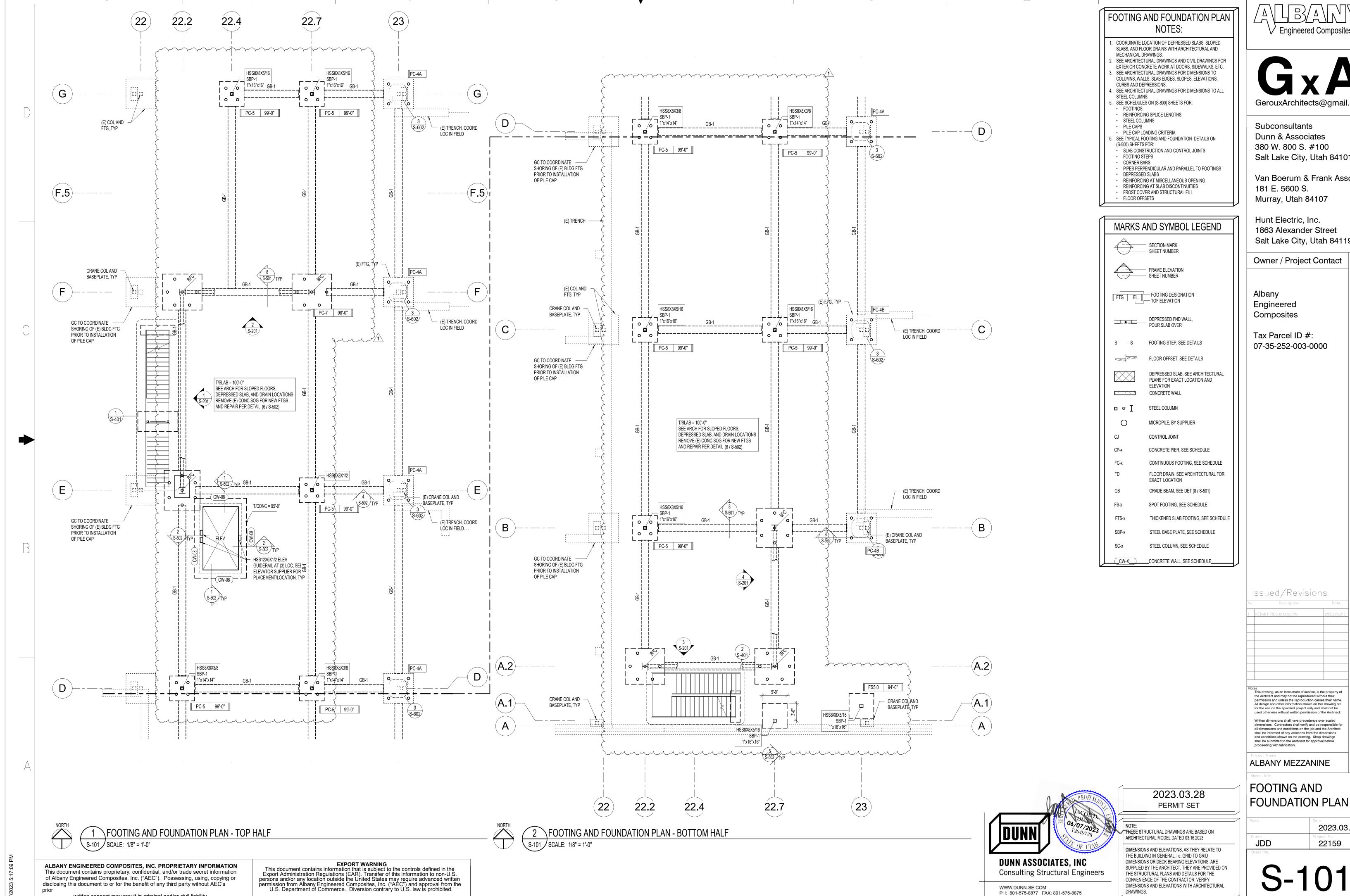
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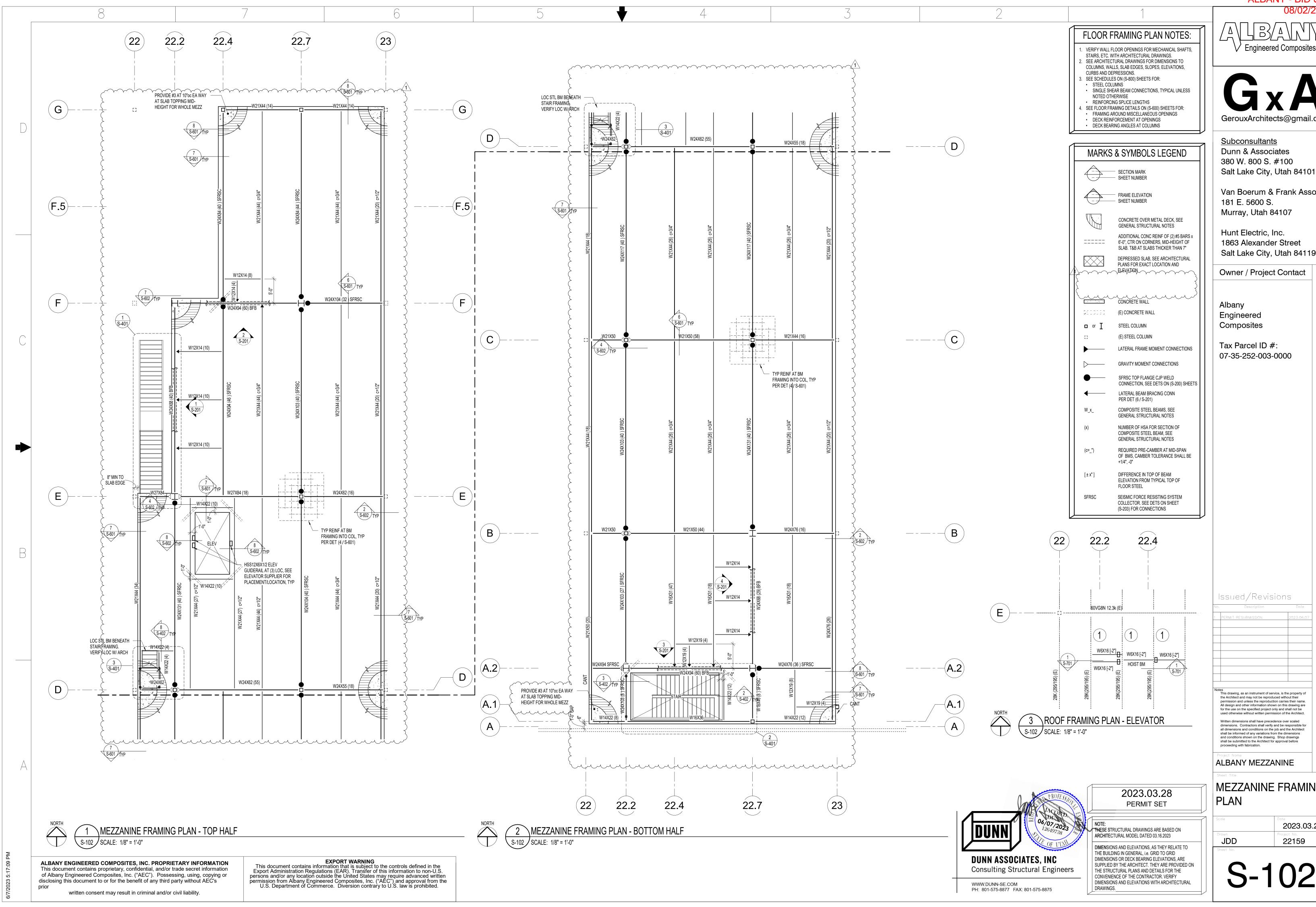
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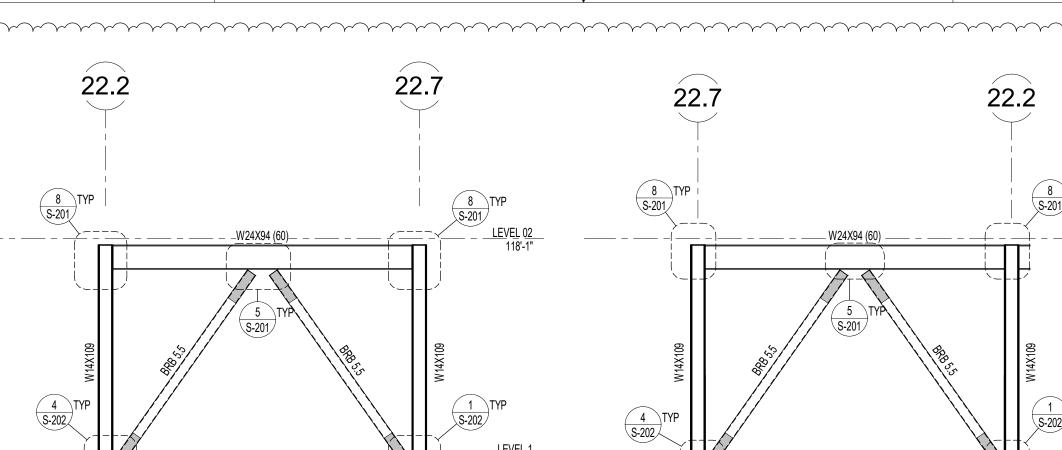
Written dimensions shall have precedence over scaled

BRACED FRAME ELEVATIONS

ARCHITECTURAL MODEL DATED 03.16.2023

DIMENSIONS AND ELEVATIONS, AS THEY RELATE TO

2023.03.28 JDD 22159



2 BRACED FRAME ELEVATION - GRID 'F' S-201 SCALE: 1/8" = 1'-0"

3 BRACED FRAME ELEVATION - GRID 'A.2'

4 4 4 4 4 4 4 4 4 4 4

S-201 | SCALE: 1/8" = 1'-0"

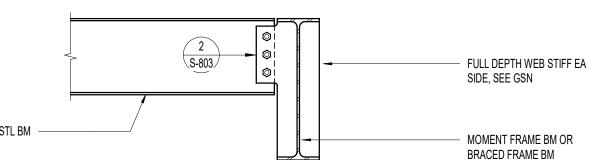
CONNECTION FOR BM NS OR FS, SEE PLAN STIFF PL NUMBER, SIZE AND LOC TO BE CONC OVER MTL FLR DESIGNED BY BRB DECK OR ROOF DECK SUPPLIER BRACE CONNECTION DESIGN BY BRB SUPPLIER SEE BRACED FRAME EL PROVIDE FOAM BLOCKOUT FOR ADDITIONAL INFO AROUND BRB LUGS AND CASINGS ENCASED IN CONC. 1 FOAM EA SIDE PERP TO BRACE, 3" FOAM BLOCKOUT EA SIDE PARALLEL TO BRACE

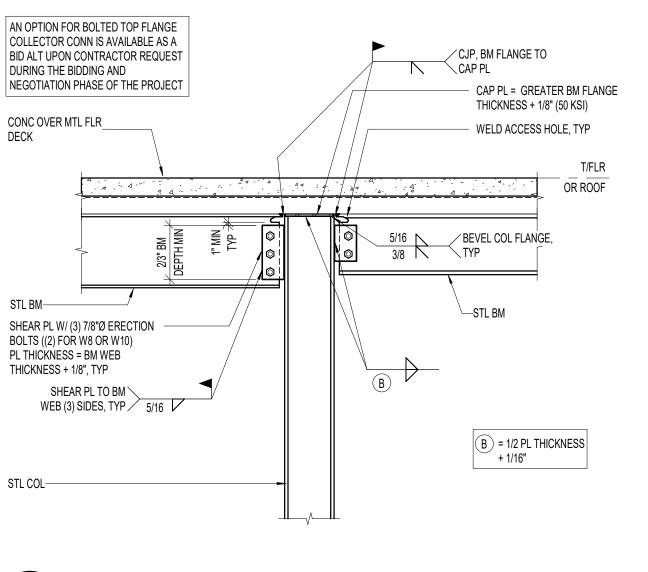
__W24X68 (40)_

1 BRACED FRAME ELEVATION - GRID '22.2'

S-201 | SCALE: 1/8" = 1'-0"

FLOOR OR ROOF DECK NOT SHOWN





S-201 NO SCALE:

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PROTECTED ZONE **BUCKLING RESTRAINED** IS GUSSET PL AND BRACE, TYP STL CORE TYPICAL BUCKLING RESTRAINED BRACE CONNECTION AT 5 INVERTED "V" DETAIL S-201 NO SCALE: AN OPTION FOR BOLTED TOP FLANGE COLLECTOR CONN IS AVAILABLE AS A BID ALT UPON CONTRACTOR REQUEST ✓ CJP, BM FLANGE TO DURING THE BIDDING AND CAP PL NEGOTIATION PHASE OF THE PROJECT

CAP PL = GREATER BM FLANGE THICKNESS + 1/8" (50 KSI) TO COL ∕ 5/16 V WELD ACCESS HOLE, TYP CONC OVER MTL FLR DECK T/FLR OR ROOF 1 1 40 1 40 1 / BEVEL COL FLANGE, SHEAR PL W/ (3) 7/8"Ø ERECTION (3) SIDES, TYP, BOLTS ((2) FOR W8 OR W10) SHEAR PL TO COL PL THICKNESS = BM WEB WEB AND STIFF PL THICKNESS + 1/8", TYP STIFF PL = GREATER BEAM FLANGE THICKNESS + 1/8" WEB (3) SIDES, TYP 5/16 (50 KSI) TYP (B) = 1/2 PL THICKNESS + 1/16" COL WEB STL COL-

7 TYPICAL SFRS COLLECTOR CONNECTOR S-201 NO SCALE: mente de la constanta de la co

6 TYPICAL STEEL BRACE BEAM S-201 NO SCALE:

DECK

8 TYPICAL SFRS COLLECTOR CONNECTOR

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FULL DEPTH WEB STIFF EA

 $K_{eff} = K_f x A_{sc} x E/L_{wp}$, WHERE L IS THE WP LENGTH AND A IS THE SPECIFIED CORE AREA. MINIMUM STROKE TO OCCUR AT EACH END OF BRACE IN TENSION AND COMPRESSION DIRECTIONS. CORE EXTENSION TO REMAIN STABLE OVER 2x'S THIS LENGTH.

(K eff), CALCULATE WORK POINT TO WORK POINT.

CASINGS SHALL BE A500 GRADE B OR A53 GRADE B.

__W24X68 (29)_

DESIGNATION AREA RATIO MIN* Fy MINIMUM Fy MAXIMUM 4.0 1.40 38

BRB 5.5 5.5 1.40 38 46

4 BRACED FRAME ELEVATION - GRID '22.7'

S-201 SCALE: 1/8" = 1'-0"

BRB PROTECTED ZONES SHALL INCLUDE THE STEEL CORE AND CONNECTION ELEMENTS AND SHALL SATISFY THE REQUIREMENTS OF SECTION F4 OF THE AISC 341-16 ADDITIONALLY ATTACHMENTS WHICH PENETRATE THE CASING (SCREWS, PINS, PAF, ETC) OR ANY ATTACHMENT SUPPORTING OVER 50lbs SHALL BE APPROVED BY THE ENGINEER OF RECORD AND THE BRB MANUFACTURER.

BRB SUPPLIER SHALL PROVIDE TEST RESULTS FOR SIMILAR BRACES IN ACCORDANCE WITH AISC 341-16.

INDICATES PROTECTED ZONE: PROTECTED ZONES FOR BRB FRAMES ARE GUSSET PLATES AND BRB STEEL CORES. ANY ATTACHMENT TO BRB'S SHOULD BE APPROVED BY THE ENGINEER OF RECORD AND THE BRB SUPPLIER, SEE DETAIL (xx/Sxxx) FOR LIMITS OF PROTECTED ZONE OF MOMENT FRAMES. WELDED, BOLTED, SCREWED OR SHOT IN ATTACHMENTS FOR PERIMETER EDGE ANGLE, EXT FACADES, PARTITIONS, DUCTWORK, PIPING, OR OTHER CONSTRUCTION SHALL NOT BE PLACED IN PROTECTED ZONES.

BUCKLING RESTRAINED BRACE FRAME SCHEDULE

BUCKLING RESTRAINED BRACE FRAME NOTES

CORE MATERIAL SHALL BE ASTM A36 MATERIAL SELECTED TO PROVIDE A MINIMUM TENSILE YIELD STRENGTH OF 38ksi AND

MAXIMUM TENSILE YIELD STRENGTH OF 46ksi. LUG PLATE, GUSSET PLATES AND ANY REPAD PLATES SHALL BE ASTM GR50.

BRB SUPPLIER SHALL DESIGN ABRACE CONNECTIONS IN ACCORDANCE WITH AISC 341-16. BRB SUPPLIER IS RESPONSIBLE FOR THE DESIGN OF THE CONNECTION OF THE BRB'S TO THE GUSSET AND THE GUSSET TO THE FRAME COLUMNS AND

. BRB SUPPLIER SHALL PROVIDE TESTED MATERIAL ADJUSTMENT FACTORS FOR COMPRESSION STRENGTH (β) AND STRAIN

DESIGN VALUE STIFFNESS MODIFICATION FACTOR (Ki) SHALL BE WITHIN ±10% OF ACTUAL STIFFNESS MODIFICATION FACTOR

2023.03.28 PERMIT SET

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BRACED FRAME DETAILS

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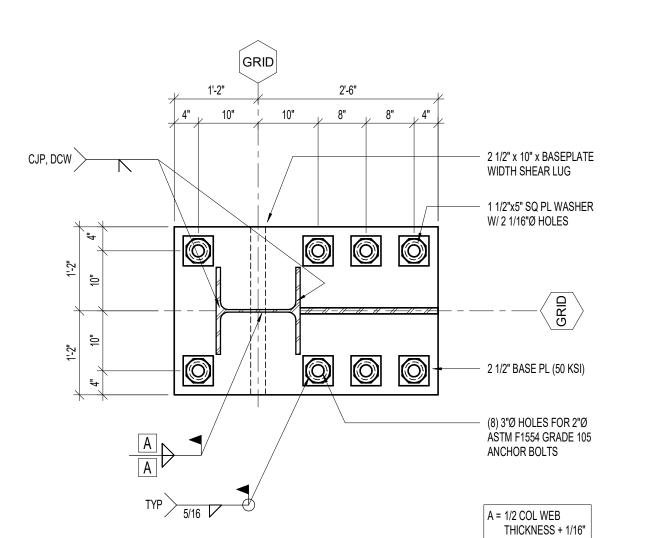
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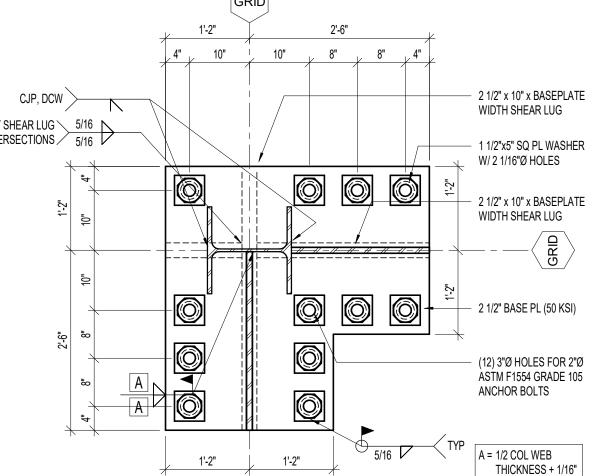
DRAWINGS.

SUPPLIED BY THE ARCHITECT. THEY ARE PROVIDED ON

JDD 22159



2 TYPICAL BRACE FRAME BASE PLATE S-202 NO SCALE:



and the transmitted that the transmitted transmitted that the transmitted transmitted that the transmitted transmi

BRACE FRAME ANCHOR EMBED PLATE AT DOUBLE BRACE S-202 NO SCALE:

(11) BARS EQ SPACED

•

S-202 NO SCALE:

0 0

0 0

TYPICAL BRACE FRAME ANCHOR EMBED PLATE

(11) BARS EQ SPACED

0 0

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Consulting Structural Engineers

(36) #5 'C' BARS IN ORIENTATION SHOWN

STD HOLES HOLES

3/4" EMBED PL (50 KSI)

(42) #5 'C' BARS IN ORIENTATION SHOWN

3/4" EMBED PL (50 KSI)

ANCHORAGE REINF

STD HOLES HOLES

TO MATCH AB'S

TO MATCH AB'S

AT SHEAR LUG 5/16 INTERSECTIONS 5/16 "ELEMENTS EMBEDDED IN CONCRETE IN THIS DETAIL ARE DIFFICULT OR EXPENSIVE TO FIX IF NOT LOCATED CORRECTLY. REPAIRS MAY NOT BE FEASIBLE WITH EPOXY AND MAY REQUIRE DEMOLITION. IT IS RECOMMENDED TO HAVE ALL TRADES INVOLVED IN AND INTERFACING WITH THE CONNECTION OBSERVE AND VERIFY THE LOCATION AND PLACEMENT OF THESE ELEMENTS PRIOR TO POURING CONCRETE.

BRACE FRAME BASE PLATE AT DOUBLE BRACE FRAME S-202 NO SCALE:

ELEMENTS EMBEDDED IN CONCRETE IN THIS DETAIL ARE DIFFICULT

NOT BE FEASIBLE WITH EPOXY AND MAY REQUIRE DEMOLITION. IT IS

VITH THE CONNECTION OBSERVE AND VERIFY THE LOCATION AND

PLACEMENT OF THESE ELEMENTS PRIOR TO POURING CONCRETE.

ECOMMENDED TO HAVE ALL TRADES INVOLVED IN AND INTERFACING

OR EXPENSIVE TO FIX IF NOT LOCATED CORRECTLY. REPAIRS MAY

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STL BASE PL ON 2"

NON-SHRINK GROUT

BLOCKOUT

CONC FTG -

DET (2 / S-202)

PILE CAP REINF

S-202 NO SCALE:

STL BASE PL ON 2"

BLOCKOUT -

CONC FTG —

DET (2 / S-202)

GROUT POCKET

SEE SCHED

NON-SHRINK GROUT

CONC SOG, SEE PLAN -

TYPICAL BRACE TO FOOTING DETAIL

BRACE TO FOOTING DETAIL AT DOUBLE BRACE FRAME COLUMN

SEE SCHED

CONC SOG, SEE PLAN

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BRB BY SUPPLIER

GUSSET AND

ATTACHMENT DESIGN

WHERE TOP MAT REINF

INTERFERES W/ BLOCKOUT,

TERMINATE W/ STD HOOK EA SIDE

"C" BARS AROUND PERIMETER OF

EMBED PL BARS ARE TO EXTEND

COORD PILE HEAD WITH ANCHOR BOLT SETTING. PILE EMBEDMENT MAY INCREASE

AS REQ'D AT THICKENED REGION. PILE HEAD

ELEVATION TO REMAIN BLW ANCHOR BOLTS

FROM TOP MAT OF REINF TO

EMBED PL, SEE (3 / S-202)

BOTT MAT. SEE DET

BRB BY SUPPLIER

ATTACHMENT DESIGN

WHERE TOP MAT REINF

INTERFERES W/ BLOCKOUT,

TERMINATE W/ STD HOOK EA SIDE

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BY BRB SUPPLIER

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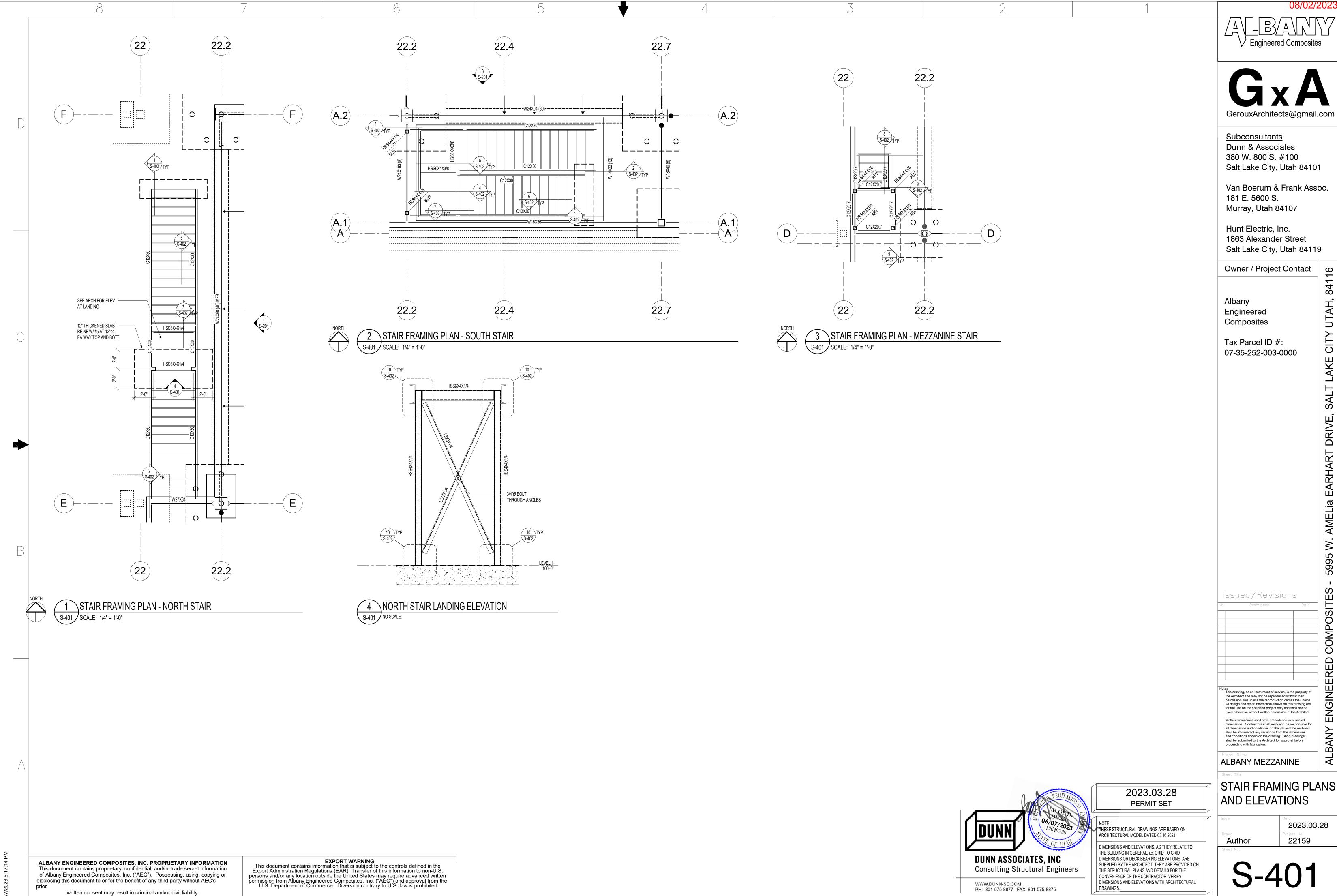
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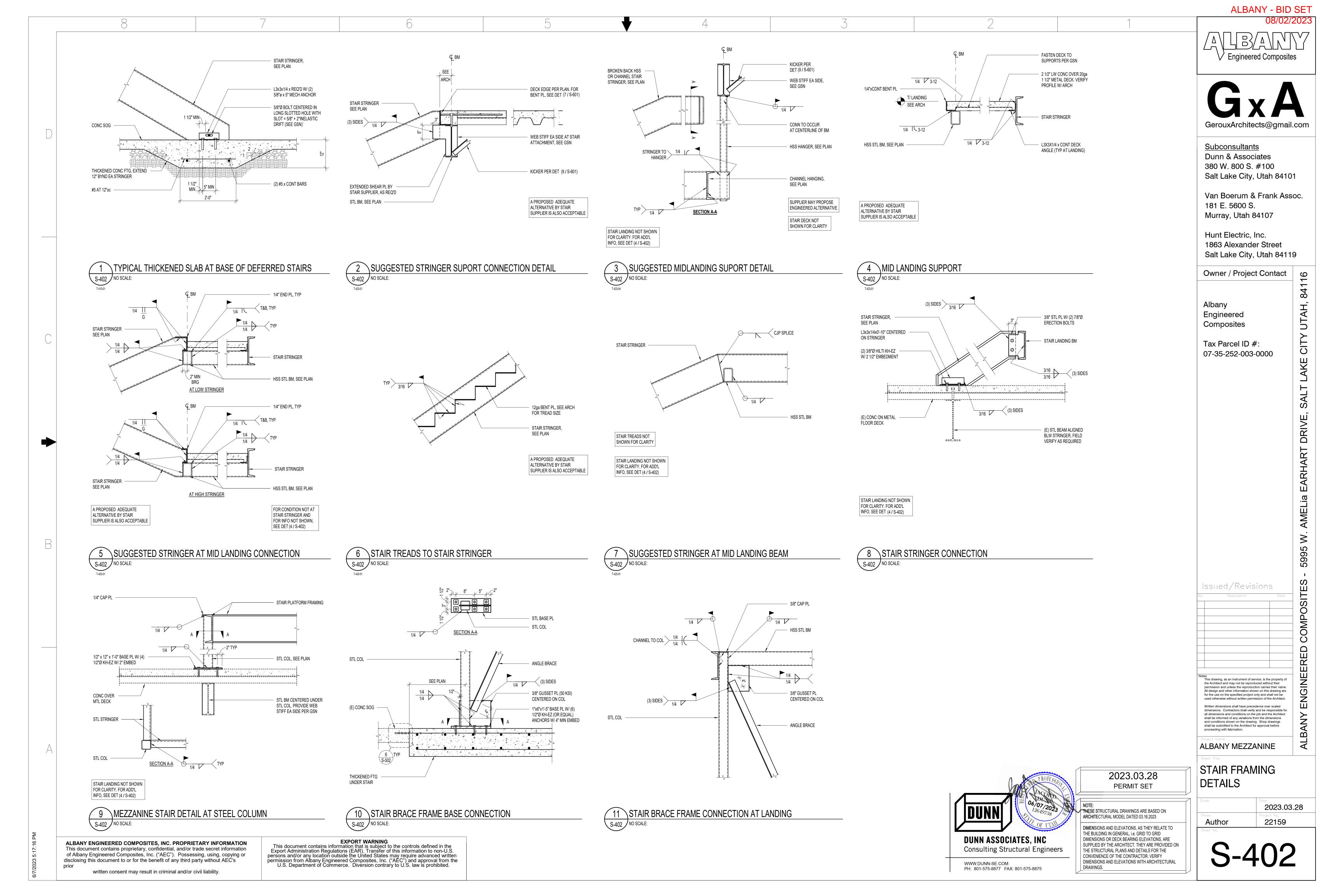
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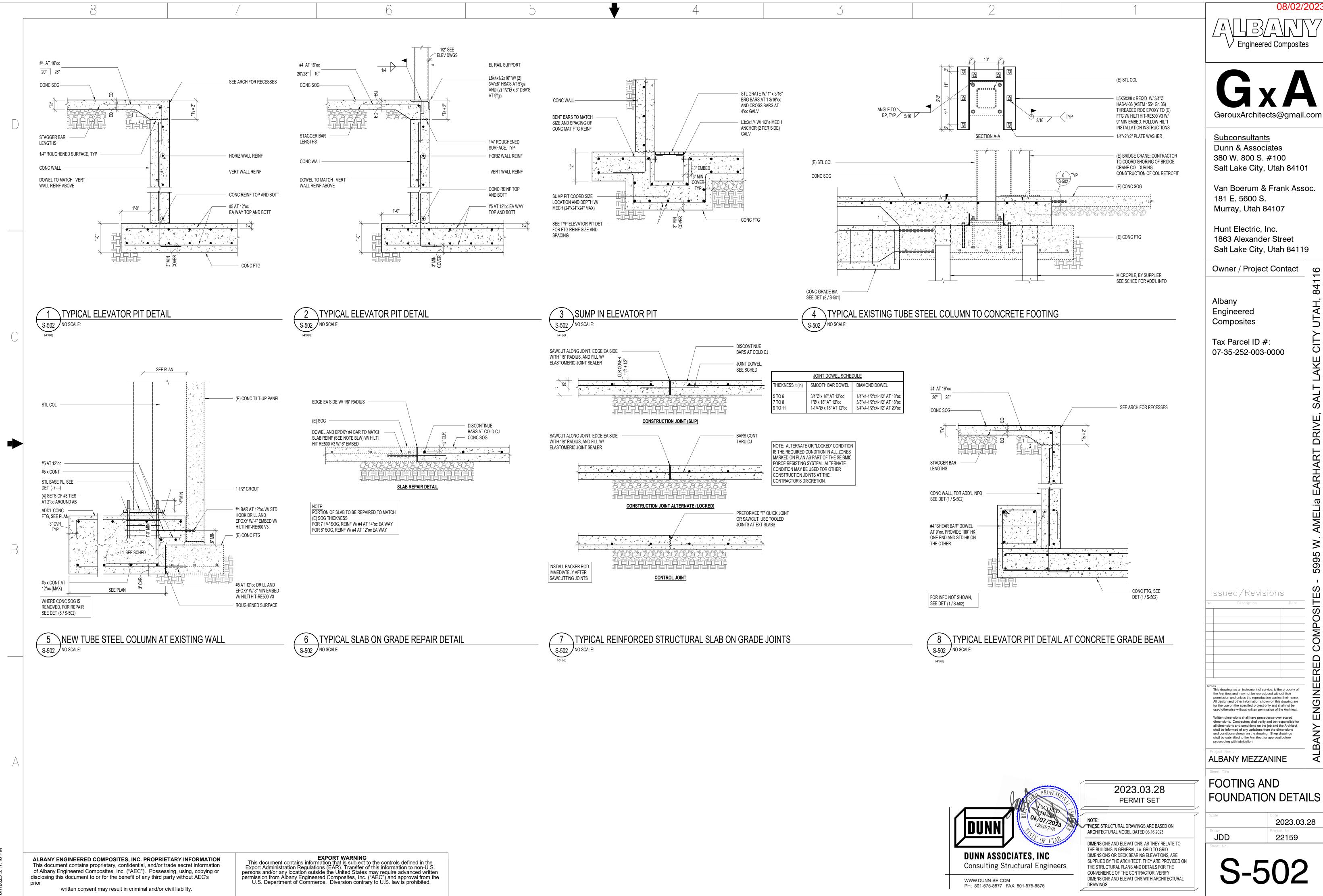
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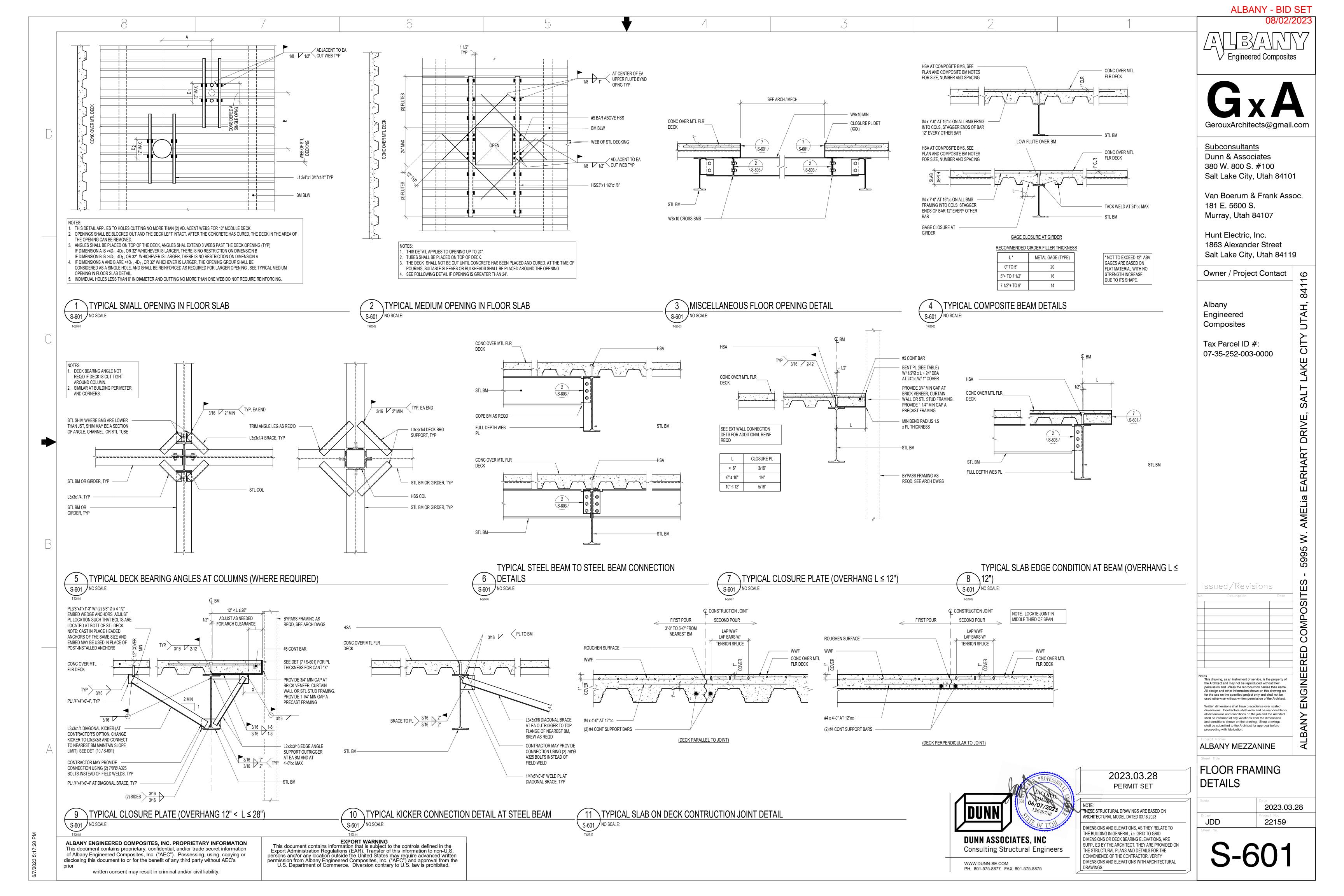


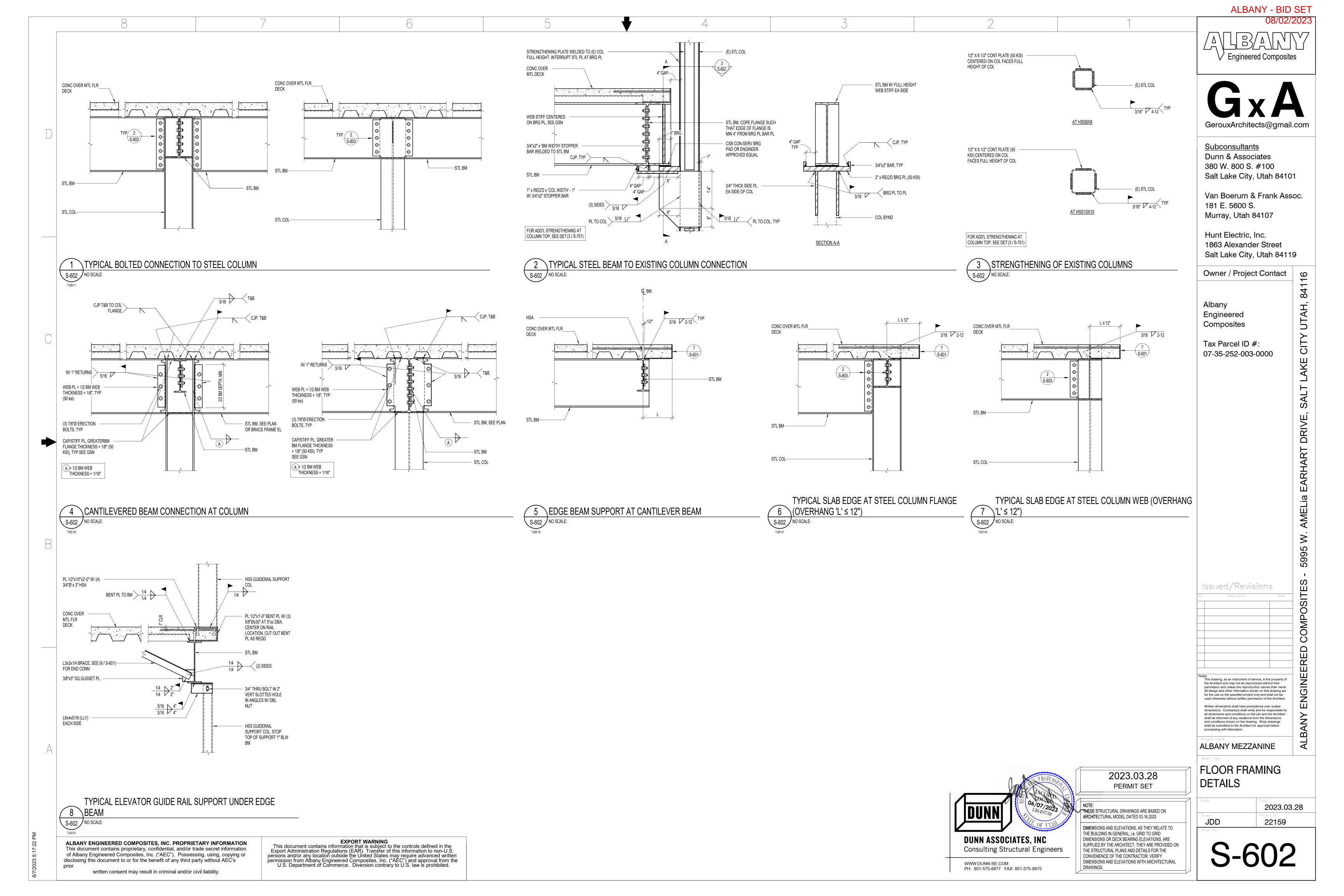
STAIR FRAMING PLANS

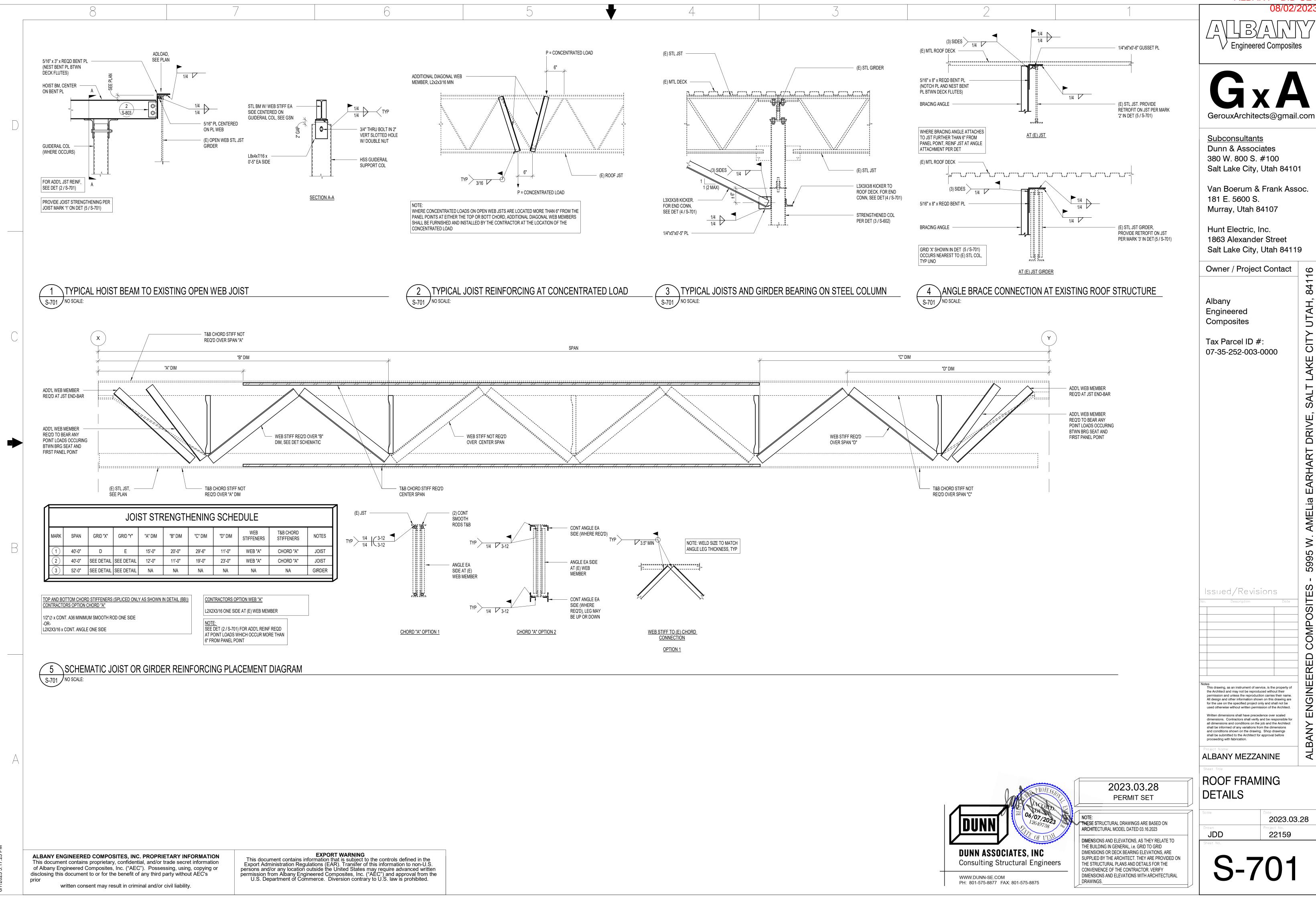




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SECTION

HOOKED BAR DEVELOPMENT LENGTHS, Ldh BAR SIZE | fc = 3000 PSI | fc = 4000 PSI | fc = 4500 PSI | fc = 5000 PSI | fc = 6000 PSI 10" 9" 9" 8" 12" 12" 15" 14" 13" 17" 16" 15" 22" 19" 18" 22" 21" 20" 25" 23" 22" 28" 27" 26" 24" 31"

FACE OF

CONC

STD -HOOK

TYPICAL SECTION

FACE OF CONC -

STANDARD

HOOK

CRITICAL

SECTION

LATERAL LOAD

RESISTING

ELEMENT

<u>OFFSET</u>

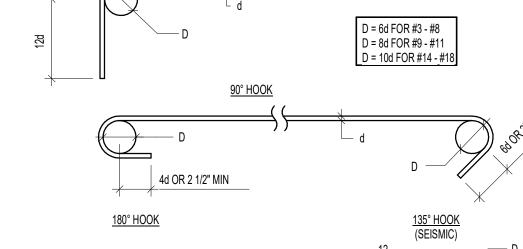
NOTES:

1. FOR GRADE 75 REBAR, MULTIPLY LENGTHS BY 1.25. 2. FOR LIGHTWEIGHT CONCRETE, MULTIPLY LENGTHS BY 1.3.

JOINTS OR SHEAR WALL BOUNDARY ZONE.

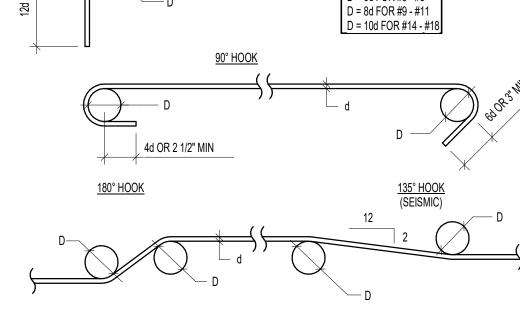
- 3. FOR EPOXY COATED REINFORCEMENT, MULTIPLY LENGTHS BY 1.2.
- 4. FOR HOOKS WITH 2.5" MINIMUM SIDE COVER PERPENDICULAR TO PLANE OF HOOK, MULTIPLY LENGTHS BY 0.7. 5. FOR LATERAL LOAD RESISTING ELEMENTS, CRITICAL SECTIONS SHALL BE

 2" MIN TAKEN AS THE FACE OF TIE / HOOP AT CONFINED CORES OF COLUMN



f'c = 6000 PSI

REGULAR TOP



CONCRETE FOOTING SCHEDULE S-801 NO SCALE:

ANCHORAGE AND HOLD DOWN DETAILS.

TYP FTG REINF

4. SEE GENERAL STRUCTURAL NOTES FOR ALL OTHER REQUIREMENTS.

5. NOT ALL FOOTINGS ARE USED, SEE FOUNDATION PLAN FOR FOOTING MARKS.

9. IN FC FOOTINGS CROSSWISE BAR SHALL BE BELOW THE LENGTHWISE BAR

6. RUN CONTINUOUS BARS IN 'FC' FOOTING THROUGH INTERSECTED 'FS' FOOTINGS.

CONCRETE FOOTING NOTES:

CONCRETE WALL SCHEDULE									
MARK THICKNESS		MARK	THICKNESS		REINFORCING	WALL TYPE	COMMENTS		
IVIZITAL	THORIVEOU	VERTICAL	HORIZONTAL	TOP AND BOTTOM	VV/\CL III L	OOMMENTO			
CW-08	8"	#4 AT 18"oc	#4 AT 12"oc	(1) #5	А				

#4 BARS AT 12"oc

CONCRETE FOOTING SCHEDULE

TYPICAL FOOTING SECTION

1. PLACE ALL FOOTING REINFORCING IN BOTTOM OF FOOTING WITH 3" CLEAR CONCRETE COVER, UNLESS NOTED OTHERWISE

2. TOP REINFORCING, WHERE SPECIFIED, SHALL BE PLACED IN THE TOP OF THE FOOTING WITH 2" MINIMUM CONCRETE COVER.

3. IF FOOTINGS ARE EARTH FORMED, FOOTING WIDTH AND LENGTH SHALL BE 6" WIDER AND LONGER THAN SCHEDULED.

7. EXTEND CONTINUOUS FOOTINGS 1'-0" BEYOND END OF WALL, EXCEPT AT INTERSECTING CORNERS OR UNO ON PLAN.

8. FOOTINGS MAY BE THICKER THAN THE SCHEDULED DEPTH IN AREAS SURROUNDING ANCHOR BOLTS OR HOLD DOWNS, SEE

FS5.0 5'-0" 5'-0" 12" 5 #5 4'-6" EQ 5 #5 4'-6" EQ

REINFORCING CROSSWISE REINFORCING LENGTHWISE

NO SIZE LENGTH SPACING NO SIZE LENGTH SPACING

COMMENTS

REGULAR

THE REINFORCING BARS.

4. TIES AND STIRRUPS SHALL NOT BE SPLICED.

8. DEVELOPMENT LENGTH 'Ld' IS EQUAL TO CLASS 'A' SPLICE.

CENTER, LAP LENGTHS SHALL BE MULTIPLIED BY 1.5.

11. LAP LENGTHS SHALL BE MULTIPLIED BY 1.25 FOR GRADE 75 REBAR.

LARGER BARS AND THE SPLICE LENGTH OF THE SMALLER BAR.

CONCRETE WALL NOTES:

1. SEE GENERAL STRUCTURAL NOTES FOR COVER AND OTHER REQUIREMENTS NOT NOTED IN SCHEDULE. 2. CONCRETE WALLS NOT DESIGNATED ON THE PLANS SHALL BE REINFORCED AS FOLLOWS:

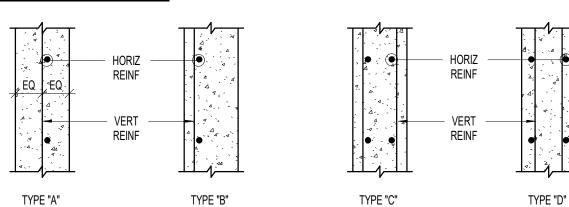
VERTICAL REINFORCING HORIZONTAL REINFORCING #4 BARS AT 18"oc #4 BARS AT 16"oc

#4 BARS AT 18"oc

#5 BARS AT 15"oc #4 BARS AT 16"oc #4 BARS AT 18"oc EA FACE #4 BARS AT 16"oc EA FACE 3. PLACE STEEL IN THE CENTER OF THE WALL (EXCEPT TYPE 'B' AND RETAINING WALLS). WALLS THICKER THAN 10" SHALL HAVE TWO CURTAINS OF REINFORCEMENT (PLACED NEAR EA FACE OF THE WALL), UNLESS NOTED OTHERWISE ON THE

WALL REINFORCEMENT PLACEMENT TYPES:

STRUCTURAL DRAWINGS.



2 CONCRETE REINFORCING BAR LAP SCHEDULES AND DIAGRAMS S-801 NO SCALE:

CONCRETE REINFORCING BAR LAP SPLICE SCHEDULE

REGULAR

CLASS

TOP

REGULAR

CLASS

CLASS

REGULAR

CLASS

TOP

THIS SCHEDULE SHALL BE USED FOR ALL SPLICES, UNLESS NOTED OTHERWISE.

3. CLASS 'B' SPLICES SHALL BE USED FOR ALL SPLICES UNLESS NOTED OTHERWISE.

7. LAP LENGTHS SHALL BE MULTIPLIED BY 1.25 AT SHEARWALL BOUNDARY ELEMENTS.

5. FOR ALL LIGHTWEIGHT CONCRETE, LAP LENGTHS SHALL BE MULTIPLIED BY 1.3.

2. HORIZONTAL BARS ARE CLASSIFIED AS TOP BARS WHERE 12", OR MORE, OF FRESH CONCRETE IS CAST BELOW

6. FOR ALL EPOXY COATED BARS. LAP LENGTHS SHALL BE MULTIPLIED BY 1.5 FOR BARS WITH CLEAR COVER LESS

THAN 3 BAR DIAMETERS OR CLEAR SPACING LESS THAN 6 BAR DIAMETERS, OTHERWISE MULTIPLY BY 1.2.

9. IF REINFORCING HAS CLEAR COVER LESS THAN ONE BAR DIAMETER, LAP LENGTHS SHALL BE MULTIPLIED BY 1.5.

10. IF REINFORCING IS NOT ENCLOSED IN TIES OR STIRRUPS AND IS SPACED TIGHTER THAN 2 BAR DIAMETERS ON

12. WHERE BARS OF DIFFERENT SIZES ARE LAPPED, THE SPLICE LENGTH SHALL BE THE LARGER OF 'Ld' OF THE

TYPE "B"

CONCRETE WALL SCHEDULE

DUNN ASSOCIATES, INC Consulting Structural Engineers WWW.DUNN-SE.COM

PH: 801-575-8877 FAX: 801-575-8875

2023.03.28 PERMIT SET THESE STRUCTURAL DRAWINGS ARE BASED ON ARCHITECTURAL MODEL DATED 03.16.2023 **DIMENSIONS AND ELEVATIONS, AS THEY RELATE TO** THE BUILDING IN GENERAL, i.e. GRID TO GRID DIMENSIONS OR DECK BEARING ELEVATIONS, ARE SUPPLIED BY THE ARCHITECT. THEY ARE PROVIDED ON

DRAWINGS.

SCHEDULES

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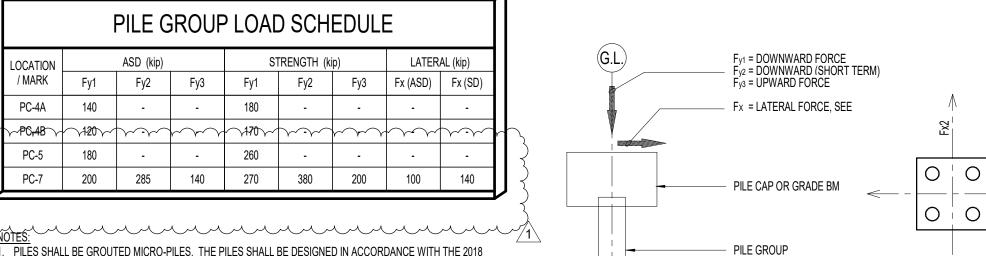
2023.03.28 22159

THE STRUCTURAL PLANS AND DETAILS FOR THE CONVENIENCE OF THE CONTRACTOR. VERIFY DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL

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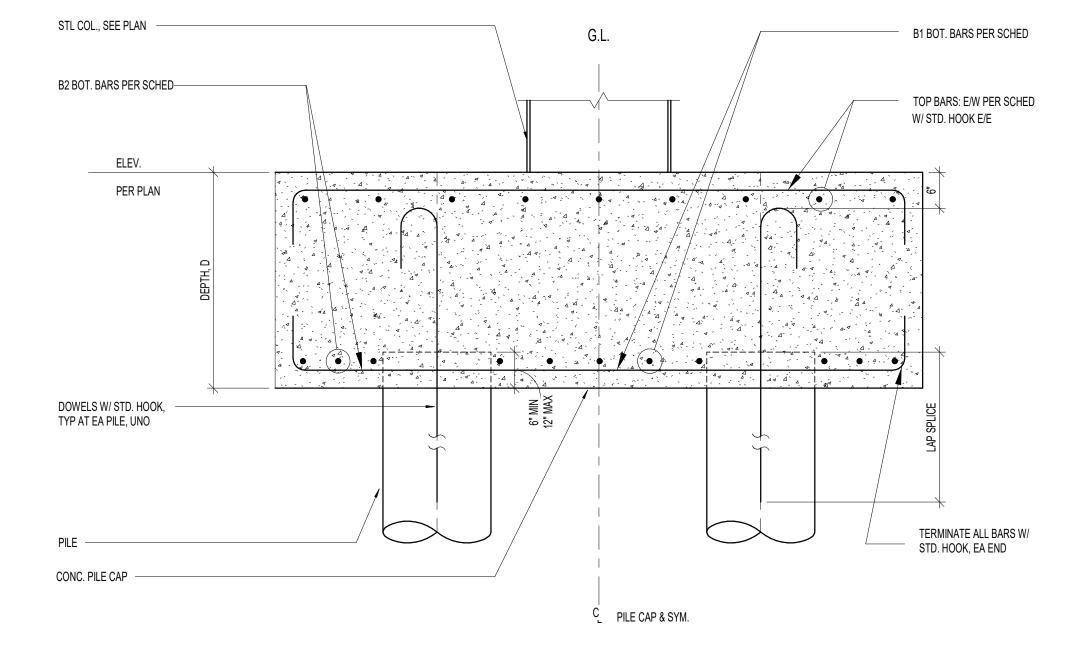


1. PILES SHALL BE GROUTED MICRO-PILES. THE PILES SHALL BE DESIGNED IN ACCORDANCE WITH THE 2018 INTERNATIONAL BUILDING CODE (IBC) BY AN ENGINEER LICENSED IN THE STATE OF UTAH AND RETAINED BY

- THE CONTRACTOR. 2. THE CONTRACTOR SHALL SUBMIT PILE SHOP DRAWINGS AND STRUCTURAL CALCULATIONS STAMPED AND SIGNED BY THE CONTRACTOR'S ENGINEER. SHOP DRAWINGS WILL BE REVIEWED BY THE ARCHITECT, STRUCTURAL ENGINEER, AND GEOTECHNICAL ENGINEER AND ARE SUBJECT TO THE APPROVAL OF THE
- 3. PILES SHALL BE DESIGNED TO PROVIDE ADEQUATE RESISTANCE TO THE APPLIED ALLOWABLE STRESS DESIGN (ASD) LOADS LISTED IN THE TABLE FOR EACH PILE GROUP. REFERENCE PROJECT GEOTECHNICAL
- 4. PILES SHALL BE DESIGNED TO PROVIDE STRENGTH ADEQUATE TO RESIST THE INTERNAL FORCES GENERATED BY THE APPLIED STRENGTH DESIGN LOADS LISTED IN THE TABLE FOR EACH PILE GROUP. THESE FORCES SHALL BE CONSIDERED IN COMBINATION WITH THE LATERAL LOADS (SEE NOTE #5). SEE DETAIL (B3/S802) FOR THE DIRECTION OF THE APPLIED LOAD.
- 5. PILES SHALL BE DESIGNED TO PROVIDE ADEQUATE RESISTANCE AND STRENGTH TO RESIST APPLIED LATERAL LOAD LISTED IN THE TABLE FOR EACH PILE GROUP. THE APPLIED LATERAL LOAD IS REPORTED AT THE ALLOWABLE STRESS DESIGN (ASD) FORCE LEVEL. SEE DETAIL (B3/S802) FOR THE DIRECTION OF THE
- 6. PILES SHALL BE DESIGNED AS PINNED HEAD OR FIXED HEAD AS REQUIRED TO MEET DEFLECTION LIMIT. LATERAL DEFLECTION SHALL BE LIMITED TO 1" UNDER ALLOWABLE STRESS DESIGN LEVEL LOADS.
- 7. THE NUMBER OF PILES SHOWN IN EACH GROUP ON PLAN CAN BE ADJUSTED BY THE CONTRACTOR PROVIDED THAT THE ADEQUACY OF THE MODIFIED DESIGN IS DEMONSTRATED. THE MODIFIED DESIGN SHALL USE ONE OF THE STANDARD CONFIGURATIONS SHOWN AND SHALL MAINTAIN A MINIMUM PILE SPACING OF 3 PILE
- 8. PILE INSTALLATION SHALL BE PERFORMED UNDER THE OBSERVATION OF THE GEOTECHNICAL ENGINEER. 9. PILE DESIGNER TO COORD PILE HEAD DETAILING WITH ANCHOR BOLT SETTING TO AVOID CONFLICTS. PILE EMBEDMENT MAY INCREASE AS REQ'D AT THICKENED REGION AT MOMENT FRAME COLUMN (MFC) PILE CAPS

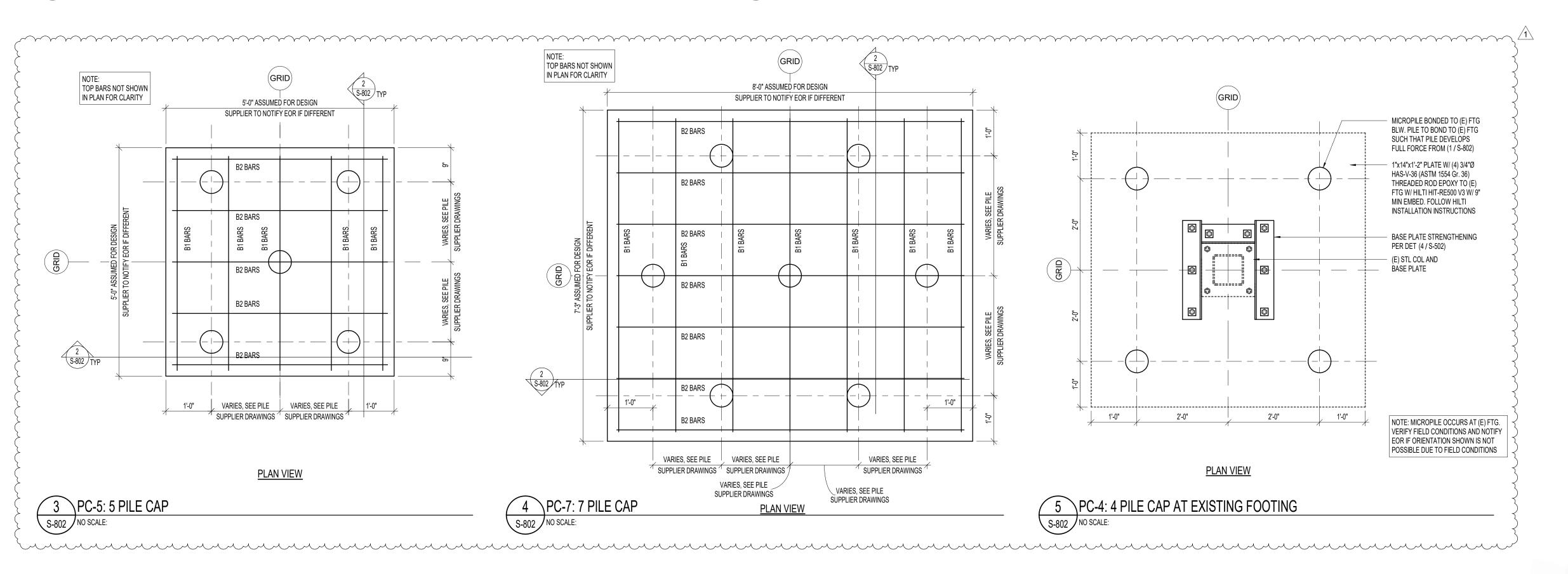
		PILE CAP FOR 6" MICROPILES (ASSUM						SSUMI	ED)	
	F _{y1} = DOWNWARD FORCE F _{y2} = DOWNWARD (SHORT TERM) F _{y3} = UPWARD FORCE	1	MARK	LENGTH	WIDTH (B)	DEPTH (D)		BOT. BARS		DETAIL
	Fx = LATERAL FORCE, SEE		PC-5	DET	DET	2'-6"	(5) #8	(5) #8	(5) #8 EW	(3 / S-802)
		{	PC-7	DET	DET	3'-0"	(7) #8	(7) #8	(7) #8 EW	(4 / S-802)
-	PILE CAP OR GRADE BM		~~~		~~~		~			uuu

ORTHOGONAL TO NORTH



PILE GROUP LOAD SCHEDULE

2 PILE CAP SCHEDULE S-802 NO SCALE:



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WWW.DUNN-SE.COM

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GerouxArchitects@gmail.com

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Van Boerum & Frank Assoc. 181 E. 5600 S. Murray, Utah 84107

Hunt Electric, Inc. 1863 Alexander Street Salt Lake City, Utah 84119

Owner / Project Contact

Albany Engineered Composites

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SCHEDULES

shall be informed of any variations from the dimensions

shall be submitted to the Architect for approval before

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COPE AS REQD ALTERNATE BEAM TO HSS COLUMN CONNECTION HSS16x16x3/8, HSS16x16x5/16 HSS14x14x5/16, HSS12x12x5/16 HSS12x12x1/4, HSS10x10x1/4 Issued/Revisions

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Consulting Structural Engineers

DIMENSIONS AND ELEVATIONS, AS THEY RELATE TO THE BUILDING IN GENERAL, i.e. GRID TO GRID

DIMENSIONS OR DECK BEARING ELEVATIONS, ARE

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(THIS DETAIL MAY BE USED AS AN ALTERNATE AT LOCATIONS WHERE THE WEB

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WEB PL 2 6 **BOLT SPACING** HSS COL

CLIP ANGLES NEAR SIDE AND FAR SIDE

> PLATE THICKNESS DOES NOT EXCEED 1.6 TIMES THE COLUMN WALL THICKNESS.) (THIS DETAIL MAY NOT BE USED AT THE FOLLOWING COLUMN SIZES.

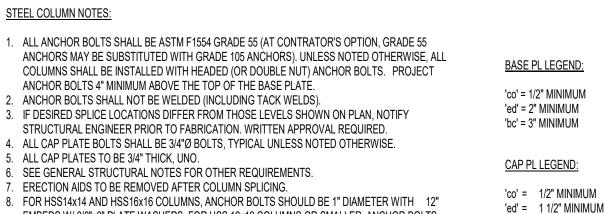
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SCHEDULES

2023.03.28 JDD 22159



5. ALL CAP PLATES TO BE 3/4" THICK, UNO. 6. SEE GENERAL STRUCTURAL NOTES FOR OTHER REQUIREMENTS. 7. ERECTION AIDS TO BE REMOVED AFTER COLUMN SPLICING. 8. FOR HSS14x14 AND HSS16x16 COLUMNS, ANCHOR BOLTS SHOULD BE 1" DIAMETER WITH 12" EMBEDS W/ 3/8"x3" PLATE WASHERS. FOR HSS 12x12 COLUMNS OR SMALLER, ANCHOR BOLTS

SHOULD BE 3/4"Ø WITH 8" EMBEDS WITH 1/4"x2" PLATE WASHERS. FOR HSS10x10 COLUMNS OR SMALLER HSS COLUMNS, ASTM F1554 GRADE 36 RODS MAY BE SUBSTITUTED. 9. OVERSIZED HOLES MAY BE USED IN BASE PLATES PROVIDED THEY DO NOT EXCEED THE FOLLOWING SIZES:

3/4"Ø BOLT 1"Ø BOLT ≤ 1 1/2"Ø 1 1/4" Ø BOLT ≤ 1 7/8"Ø

1 1/2" Ø BOLT ≤ 2 1/4"Ø 10. HOLES IN PLATE WASHERS SHOULD BE 1/16" GREATER THAN BOLT DIMENSION.

11. NON-SHRINK GROUT UNDER BASE PLATES SHALL BE 1 1/2" THICK UNO. 12. COLUMN LOCATIONS SHOWN ON SCHEDULE ARE APPROXIMATE. PLEASE SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS.

13. DO NOT WELD IN WIDE FLANGE "K" ZONES. WELDS ARE NOT REQUIRED AT "K" ZONES. 14. WELDING OF PLATE WASHERS TO BASE PLATES MAY BE OMITTED AT SINGLE STORY COLUMNS AND HSS 8x8 COLUMNS OR SMALLER.

(A) = PLATE WASHER THICKNESS - 1/16" (MAX WELD SIZE 5/16")

(B) = 2" FOR HSS16x16 OTHERWISE 1".

- 1/4"x2" PL WASHER 1/4"x2" PL WASHER - 1/4"x2" PL WASHER - AT COLS GREATER THAN 4", AT COLS GREATER THAN 4", USE (4) OUTER AB'S ONLY USE (4) OUTER AB'S ONLY AT COLS 4" AND SMALLER, AT COLS 4" AND SMALLER, USE (2) CENTER AB ONLY USE (2) CENTER AB ONLY 'bc' = BEAM OR GIRDER GAGE 'w' = BEAM OR GIRDER GAGE + 3" OR BEAM OR GIRDER FLANGE - 3/4"Ø AB'S W/ - 3/4"Ø AB'S W/ - 3/4"Ø AB'S W/ WIDTH + 1" 8" EMBED 8" EMBED 8" EMBED COLUMN DEPTH + 1" WHICHEVER IS GREATER 'H' = BEAM OR GIRDER GAGE + 3" BEAM OR GIRDER FLANGE WIDTH + 1" OR COLUMN WIDTH + 1" WHICHEVER IS GREATER CAP PL SCP-1 CAP PL SCP-2 BASE PL ELEVATION

STEEL COLUMN BASE PLATE TYPES:

STEEL COLUMN SCHEDULE FOR SEISMIC DESIGN CATEGORIES C THRU F S-803 NO SCALE:

A-325	BOLT SCHED	JLE					
MAXIMUM BEAM SIZE IN EACH BEAM	A-325N BOLTS						
DEPTH GROUP	No. PER BEAM	SIZE					
W8	2	7/8"Ø					
W10	2	7/8"Ø					
W12	3	7/8"Ø					
W14	3	7/8"Ø					
W16	4	7/8"Ø					
W18	5	7/8"Ø					
W21	6	7/8"Ø					
W24	6	7/8"Ø					
W27	7	7/8"Ø					
W30	8	7/8"Ø					
W33	9	7/8"Ø					
W36	10	7/8"Ø					
W40	11	7/8"Ø					
W44	12	7/8"Ø					

CLIP ANGLES: L5x3 1/2. THICKNESS SHALL BE EQUAL TO ONE HALF THE BEAM WEB THICKNESS PLUS 1/16" (1/4" MIN). FOR TWO ROWS OF BOLTS OR SKEWED CONNECTIONS, USE BENT PLATES. WHERE COLUMN WIDTH IS SMALLER THAN THE CONNECTING CLIP ANGLES, ANGLE LEGS SHALL BE REDUCED TO MATCH WIDTH OF COLUMN.

BEAM WEB CONNECTION PLATE THICKNESS EQUALS 3/8" MINIMUM THICK FOR W18 BEAMS OR SMALLER 1/2" MINIMUM THICK FOR W21 BEAMS OR LARGER 3/4" MINIMUM THICK FOR BEAMS WITH WEB GREATER THAT 1" THICK FILLET WELDS SHALL BE AS FOLLOWS: 1/4" FOR 3/8" PLATES

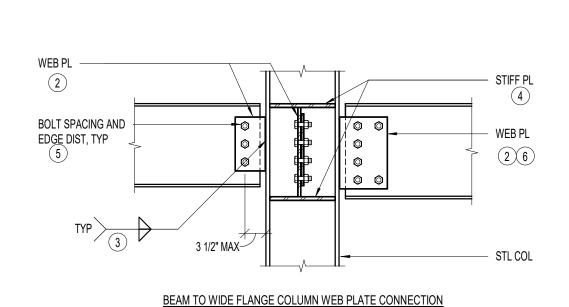
5/16" FOR 1/2" PLATES

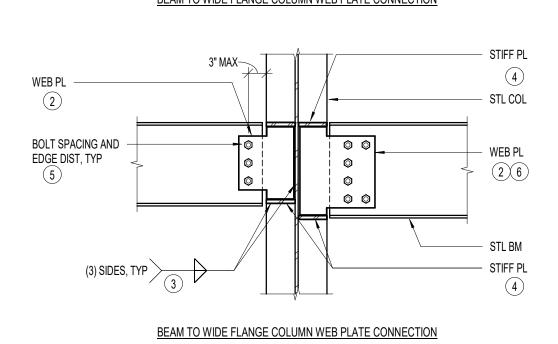
7/16" FOR 3/4" PLATES THICKNESS EQUALS BEAM FLANGE THICKNESS OF BEAM FRAMING INTO COLUMN WEB (3/8" MINIMUM).

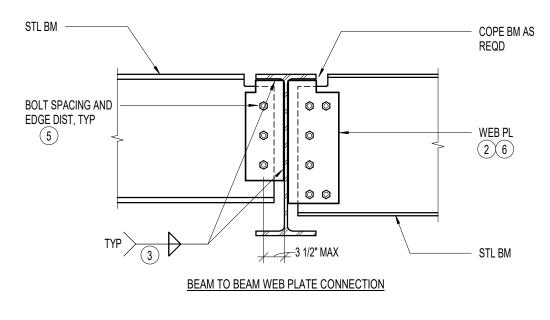
BOLT EDGE DISTANCE SHALL BE 1 1/2" MINIMUM AT ALL EDGES. BOLT SPACING SHALL BE AT 3". BOLT SPACING MAY BE REDUCED TO 3x THE BOLT DIAMETER IF IT IS REQUIRED FOR A SINGLE ROW OF BOLTS. A SINGLE ROW OF BOLTS IS

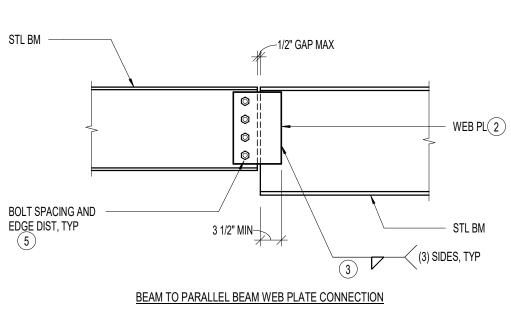
WHEN MORE THAN ONE COLUMN OF BOLTS IS NEEDED, THE FIRST COLUMN SHALL BE COMPLETE WITH THE REMAINDER OF THE BOLTS PLACED IN THE SECOND

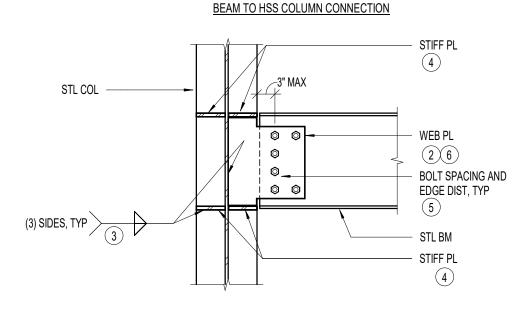
1/2" PLATE THICKNESS + 5/16"











SINGLE SIDED BEAM TO WIDE FLANGE COLUMN WEB PLATE CONNECTION

3" TYP-

CLIP ANGLES NEAR

SIDE AND FAR SIDE

BOLT SPACING

STL COL-

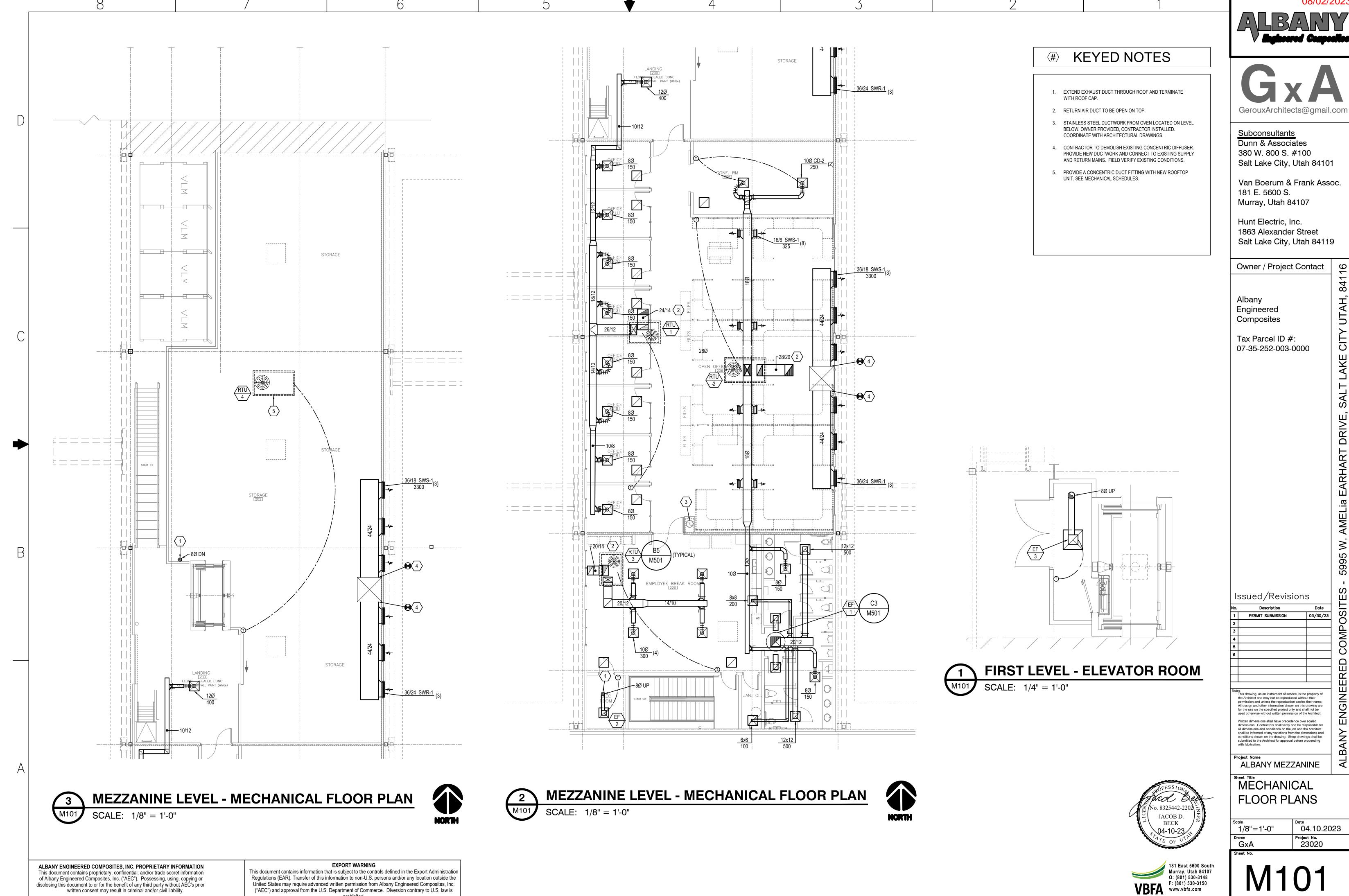


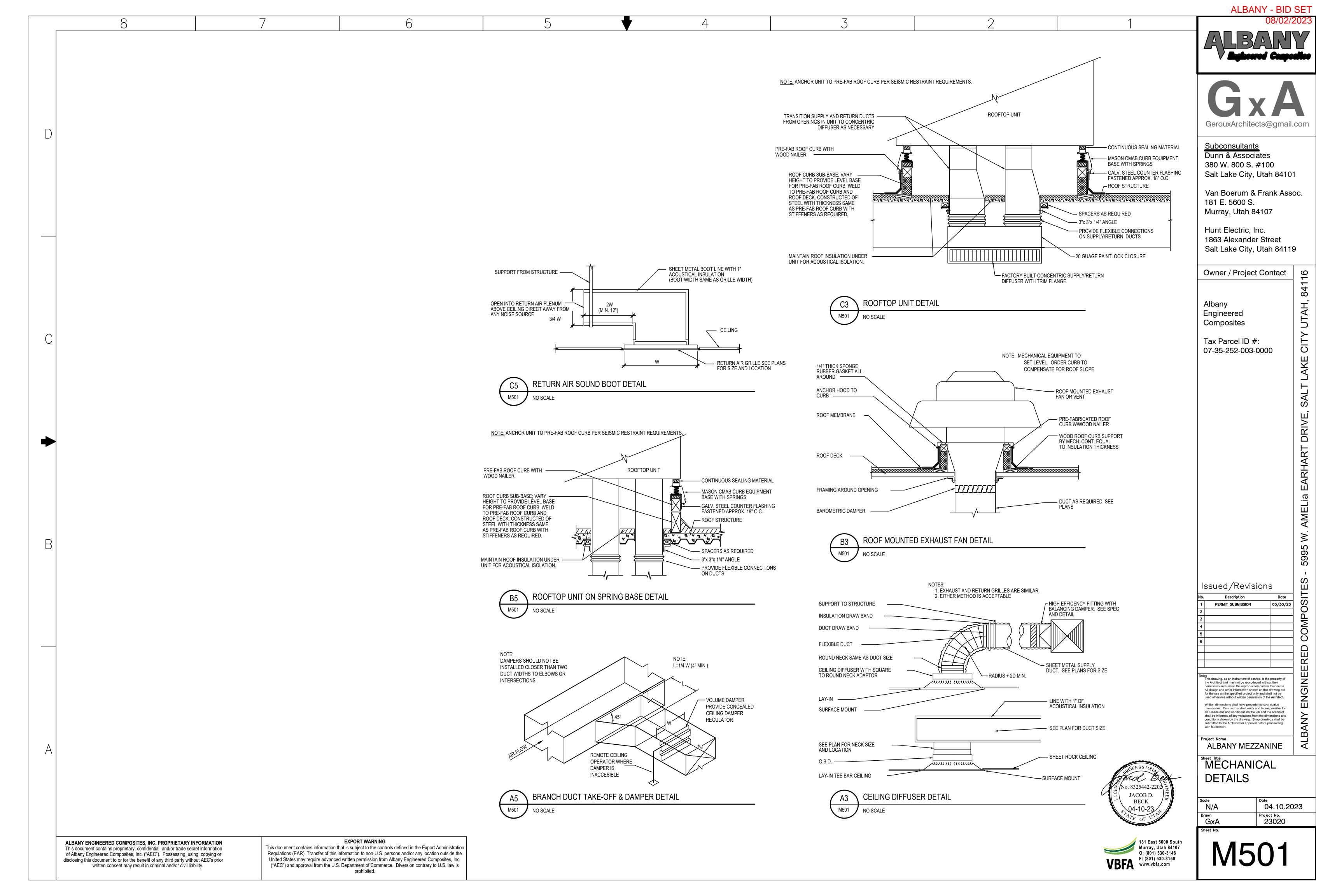
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SYMBOLS & LEGEND





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MECHANICAL

SCHEDULES

04.10.2023 Project No. 23020

181 East 5600 South Murray, Utah 84107 O: (801) 530-3148 F: (801) 530-3150 www.vbfa.com

			GRILLES, REGISTERS	S AND DIFFUSERS
ID	MANUFACTURER	MODEL		DESCRIPTION
10	WARRINGTACTORER	WODEL		MOUNTING-FRAME: SURFACE OR LAY-IN,
			FACE STYLE: SQUARE PLAQUE DIFFUSER FACE SIZE: 24" x 24", 24" x 12" OR 12" x 12" AS	(C/W CEILING TYPE.) PATTERN: 360° RADIAL HORIZONTAL AIR PATTERN
CD-1	EH PRICE	SPD	REQUIRED TO FIT CEILING TILE SPACE AVAILABLE	DAMPER: OPPOSED BLADE
			APPLICATION: ENGINEERED VAV SYSTEMS	MAX NC - 30
			MATERIAL: STEEL	DAMPER: NONE
			FINISH: B12 WHITE POWDERCOAT	REMOVABLE FACE
			FACE STYLE: PLAQUE DIFFUSER	MAX NC - 30
			APPLICATION: VAV SELF MODULATING	MOUNTING-FRAME COORD W/CEILING TYPE
CD-2	EH PRICE	PPD2	FACE SIZE: 24" X 24"	ELECTRONICS: PROVIDE AS NECESSARY TO
			MATERIAL: STEEL BACKPAN	INTERFACE WITH BUILDING CONTROL SYSTEM.
			FINISH: COORDINATE COLOR WITH ARCHITECT	DAMPER: INTEGRAL TO PLAQUE AND VAV DESIGN.
			PATTERN: 4 WAY	PROVIDE: ADAPTERS AS REQUIRED TO INTERFACE WITH DUCT SYSTEM
				PROVIDE: T-STAT; CONTROL WIRING
			DROP DOWN MOUNTED CONCENTRIC DIFFUSER	CENTER RETURN GRILLE. DIFFUSER BOX TO INCLUDE
CD-3	MICROMETL	1818-200A	WITH 4-WAY SIDE SUPPLY,	1600 SUPPLY CFM.
			WITH DOUBLE DEFLECTION BLADES FOR	MAX NC - 21
			1600 SUPPLY CFM.	
SWS-1	EH PRICE	520S	FACE STYLE: DOUBLE DEFLECTION HIGH SIDEWALL SUPPLY REGISTER APPLICATION: CONSTANT VOLUME BLADE ORIENTATION: VERTICAL FRONT WITH REAR HORZONTAL ADJUSTABLE VANES.	FINISH: B12 WHITE POWDERCOAT FRAME: 1.25" BORDER MOUNTING: SURFACE PATTERN: ADJUSTIBLE DAMPER: OPPOSED BLADE
			FRONT BLADES PARALLEL TO SHORT DIMENSION.	MAX NC - 30
			MATERIAL: STEEL	CORE: REMOVABLE
			FACE STYLE: PERFORATED RETURN AIR UNIT	MOUNTING-FRAME: SURFACE OR LAY-IN,
DC 4	FLLDDICE	DDDD	FACE SIZE: 24" x 24", 24" x 12" OR 12" x 12" AS	(C/W CEILING TYPE.)
RG-1	EH PRICE	PDDR	REQUIRED TO FIT CEILING TILE SPACE AVAILABLE.	DAMPER: NONE
			APPLICATION: AIR RETURN MATERIAL: STEEL	MAX NC - 30
			FINISH: B12 WHITE POWDERCOAT	REMOVABLE FACE & CORE
			FACE STYLE: SIDE WALL RETURN AIR GRILLE	FRAME: 1.25 INCH FLAT / BORDER
			ARRANGEMENT: STATIONARY HORIZONTAL	MOUNTING: SURFACE
SWR-1	EH PRICE	530 S	BLADE ORIENTATION: 45 DEG DEFLECTION	PATTERN: PERMANENT 45 DEGREE
			VANES SPACED AT 3/4 INCH CENTERS.	DAMPER: OPPOSED BLADE
			FRONT BLADES PARALLEL TO SHORT DIMENSION. MATERIAL: STEEL	MAX NC - 30
			FINISH: B12 WHITE POWDERCOAT	
			FACE STYLE: CRATE EXHAUST AIR UNIT	MOUNTING-FRAME: SURFACE OR LAY-IN,
EG-1	EH PRICE	80	FACE SIZE: 24" x 24", 24" x 12" OR 12" x 12" AS REQUIRED TO FIT CEILING TILE SPACE AVAILABLE	(C/W CEILING TYPE.)
			APPLICATION: PRESSURIZED AIR	DAMPER: OPPOSED BLADE
		i	MATERIAL: ALUMINUM	MAX NC - 20

			SUPPLY FAN			HEATING SEC	TION				COOLING SECT	ION					ELECTRICA	L		PHYSICAL		
				MIN	EXTERNAL	INPUT	OUTPUT	AMBIENT	ENTERING/		TOTAL	SENSIBLE	AMBIENT	ENTERING	LEAVING					LENGTH /		
	MANUFACTURER		AIRFLOW	OUTSIDE	STATIC	HEATING	HEATING	TEMP.	LEAVING		COOLING	COOLING	TEMP.	AIR TEMP.	AIR TEMP.				SINGLE	WIDTH /		
	AND	AREA	RATE	AIRFLOW	PRESSURE	LOAD	LOAD	DB	AIR TEMP.		LOAD	LOAD	DB	DB/WB	DB/WB		TOTAL	TOTAL	POINT	HEIGHT	WEIGHT	
ID	MODEL NUMBER	SERVED	(CFM)	(CFM)	(IN. WATER)	(MBH)	(MBH)	(°F)	(°F)	MEDIUM	(MBH)	(MBH)	(°F)	(°F)	(°F)	MEDIUM	MCA	MOCP	VOLT/PH/HZ	(IN)	(LBS)	NOTES
RTU-1	TRANE YSC048	PRIVATE OFFICES	1,600	200	0.60	100	78.8	0	55 / 98	NAT GAS	44.8	42.8	95	80 / 62	54 / 53	R-410A	11.5	15	460/3/60	70 / 45 / 37	800	1,2,3,4,5
RTU-2	TRANE YSC102	OPEN OFFICE	3,400	200	0.60	200	131.2	0	55 / 98	NAT GAS	93.9	74.9	95	80 / 62	55 / 52	R-410A	21.4	25	460/3/60	89 / 54 / 47	1,300	1,2,3,4,5
RTU-3	TRANE YSC036	BREAK	1,200	200	0.60	100	78.8	0	55 / 98	NAT GAS	33.8	32.3	95	80 / 62	55 / 52	R-410A	10.1	15	460/3/60	70 / 45 / 37	800	1,2,3,4,5
RTU-4	TRANE YSC048	STORAGE 202	1,600	200	0.60	100	78.8	0	55 / 98	NAT GAS	44.8	42.8	95	80 / 62	54 / 53	R-410A	11.5	15	460/3/60	70 / 45 / 37	800	1,2,3,4,5,6

PACKAGED ROOFTOP UNIT SCHEDULE

1. HEATING INPUT CAPACITY BASED ON SEA LEVEL. ALL OTHER CAPACITIES BASED ON 4500 FEET ELEVATION.

- 2. PACKAGED ROOFTOP UNIT TO COME WITH SPRING VIBRATION ISOLATION CURB, ROOF CURB ADAPTOR, INTEGRADED OUTSIDE AIR ECONOMIZER AND BAROMETRIC RELIEF.
- 3. UNIT TO COME WITH STARTER AND DISCONNECT.
- 4. COLOR AND FINISH TO BE SELECTED BY THE OWNER.
- 5. UNIT TO COME WITH BACNET CARD, CONNECT TO EXISTING BUILDING AUTOMATION SYSTEM. 6. UNIT TO COME WITH FACTORY BUILT CONCENTRIC DIFFUSER. SEE CEILING DIFFUSER SCHEDULE, CD-3

						EXI	HAUST FAN S	CHEDULE							
					AIR		FAN			ELECTRICAL					T
					MAXIMUM									1	
	MANUFACTURER				AIRFLOW	STATIC	OUTLET	FAN	STATIC	MOTOR	MOTOR	MOTOR			
	AND			AIR	RATE	PRESSURE	VELOCITY	SPEED	EFFICIENCY	SIZE	BHP	SPEED			
ID	MODEL NUMBER	LOCATION	TYPE	TYPE	(CFM)	(IN. WATER)	(FPM)	(RPM)	(%)	(HP)	(HP)	(RPM)	VOLT/PH/HZ	CONTROL	NOTES
EF-1	COOK ACEB 150	RESTROOMS	NOTE 2	EXH	1,300	0.35	1,519	867	59%	1/3	0.2	1750	120/1/60	A	1,2
EF-2	COOK GC-340	ELEC ROOM	NOTE 3	EXH	200	0.35	536	2212	24%	1/4	104 W	1750	120/1/60	В	1,2,3
EF-3	COOK GC-340	ELEVATOR ROOM	NOTE 3	EXH	200	0.35	536	2212	24%	1/4	104 W	1750	120/1/60		1,2,3

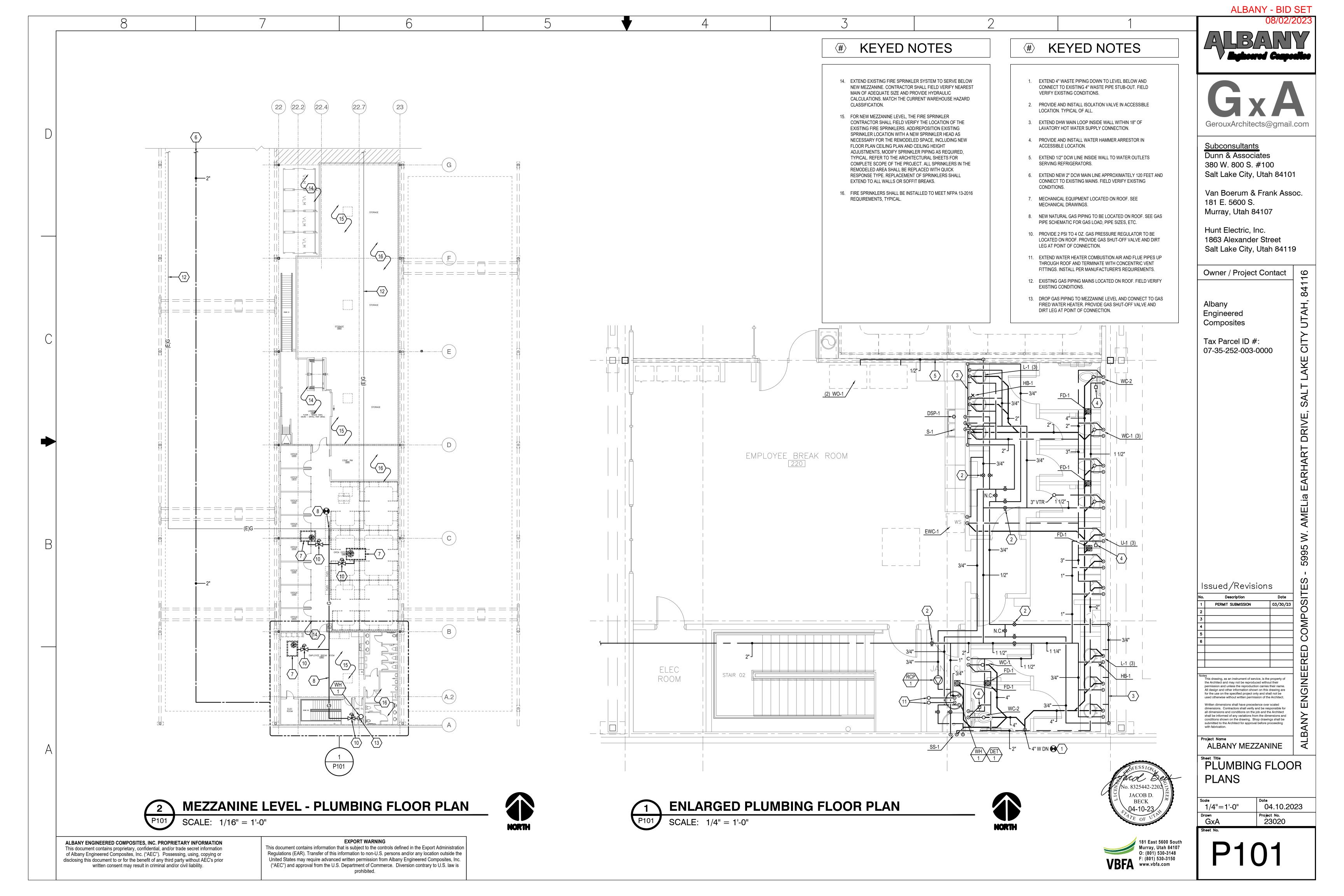
1. CAPACITIES BASED ON 4500 FEET ELEVATION.

- 2. ROOF MOUNTED EXHAUST FAN, COMPLETE WITH 18" PRE-FAB HINGED ROOF CURB, BAROMETRIC BACKDRAFT DAMPER, BIRD SCREEN, INTEGRAL THERMAL OVERLOAD PROTECTION.
- 3. CEILING MOUNTED INLINE FAN. PROVIDE GRAVITY BACKDRAFT DAMPER, INTEGRAL THERMAL OVERLOAD PROTECTION, DISCONNECT.
- A. CONTROL: OCCUPIED/UNOCCUPIED SCHEDULE ATC
- B. THERMOSTAT.

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Tax Parcel ID #: 07-35-252-003-0000

84 UTAH, CITY

Issued/Revisions 03/30/23 PERMIT SUBMISSION

5995

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PLUMBING **DETAILS & SCHEDULES**

04.10.2023 Project No. 23020

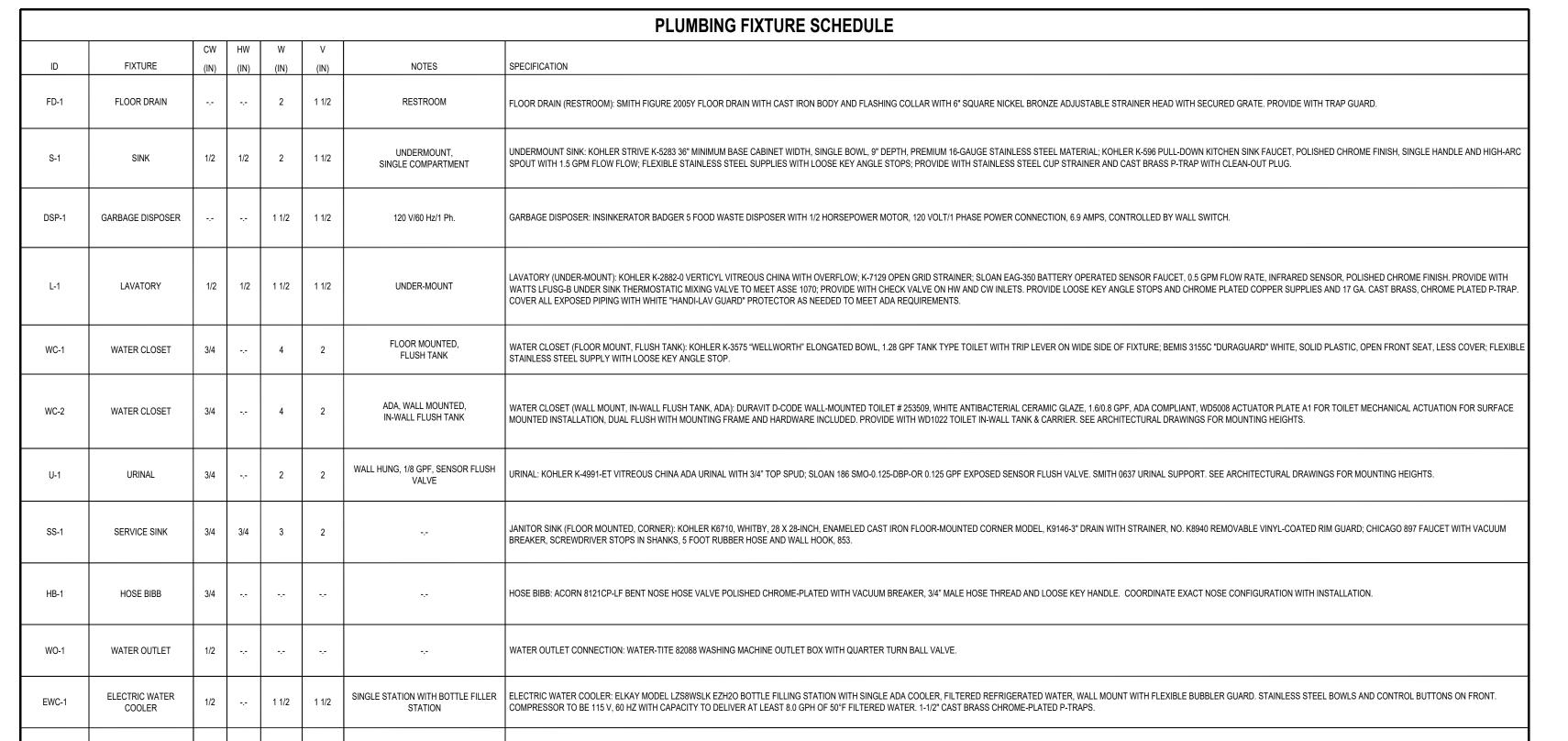
			GA	S FIRED	WATER HEA	TER SO	CHEDULE					
							RECOVERY			ELECTRICAL		
	MANUFACTURER			INPUT			RATE	TANK	HEIGHT/			
	AND			LOAD	EFFICIENCY		@ 90 F	SIZE	DIAMETER			
ID	MODEL NUMBER	LOCATION	SERVICE	(BTU/H)	(%)	TYPE	DELTA T	(GAL)	(IN)	(AMPS)	V/PH	NOTES
WH-1	AO SMITH BTX-80	SEE PLANS	DOMESTIC	76,000	96	GAS	95	50	72 / 22	5	120/1	1,2,3

1. HIGH EFFICIENCY NATURAL GAS FIRED WATER HEATER. 2. PROVIDE WITH CONDENSATE NEUTRALIZATION KIT. 3. PROVIDE WITH DRAIN PAN.

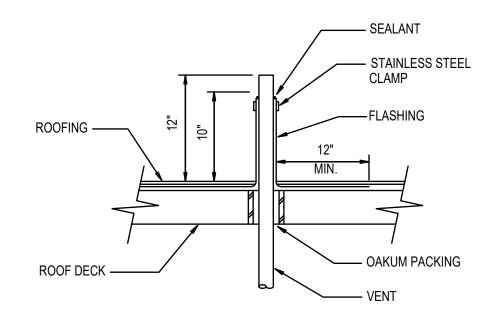
	DOMESTIC PUMP SCHEDULE												
				FLUID			PUMP		ELECTRICAL				
	MANUFACTURER			FLOW		HEAD			MOTOR	MOTOR	MOTOR		1
	AND			RATE	WORKING	LOSS	EFFICIENCY		SIZE	BHP	SPEED		
ID	MODEL NUMBER	LOCATION	TYPE	(GPM)	FLUID	(FT)	(%)	CONSTRUCTION	(HP)	(HP)	(RPM)	VOLT/PH/HZ	NOTES
RCP-1	B&G PL-36	SEE DRAWINGS	IN-LINE	2	WATER	26	N/A	ALL BRONZE	1/6	N/A	3300	115/1/60	-,-

			EXPAN	SION TANK	SCHEDULE					
				FLUID		PHYSICAL				
	MANUFACTURER				MIN. TANK/	TANK	RELIEF	DIA./	NPT	
	AND			WORKING	ACCEPTANCE	SIZE	VALVE	HEIGHT	FITTING	
ID	MODEL NUMBER	LOCATION	TYPE	FLUID	(GAL)	(GAL)	(PSIG)	(IN)	(IN)	NOTES
DET-1	AMTROL ST-12C-DD	SEE DRAWINGS	DIAPHRAGM	WATER	3.2	6.4	150	12/18	3/4	1,2

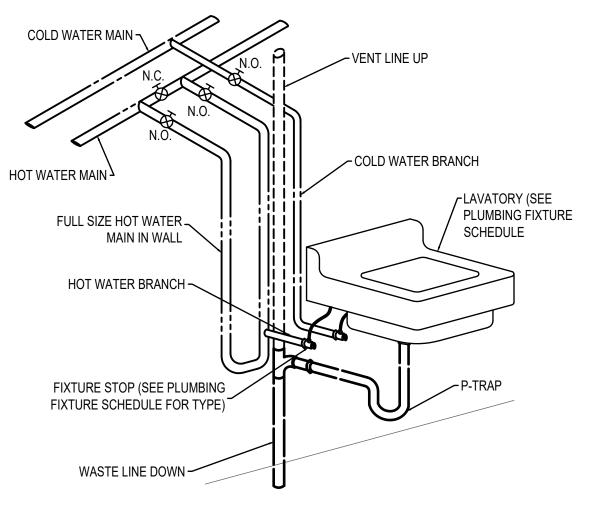
1. DIAPHRAGM: HEAVY DUTY BUTY NSF/ANSI 61. 2. ANTIMICROBIAL POLYPROPYLENE LINER.



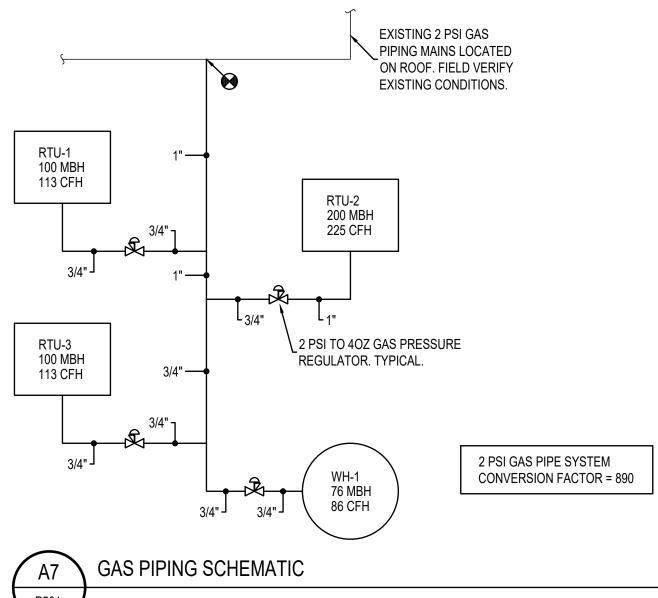
1. ALL UNDER GROUND WASTE AND VENT SHALL BE 2" OR GREATER PER DRAWINGS.



VENT THRU ROOF FLASHING & SLEEVING

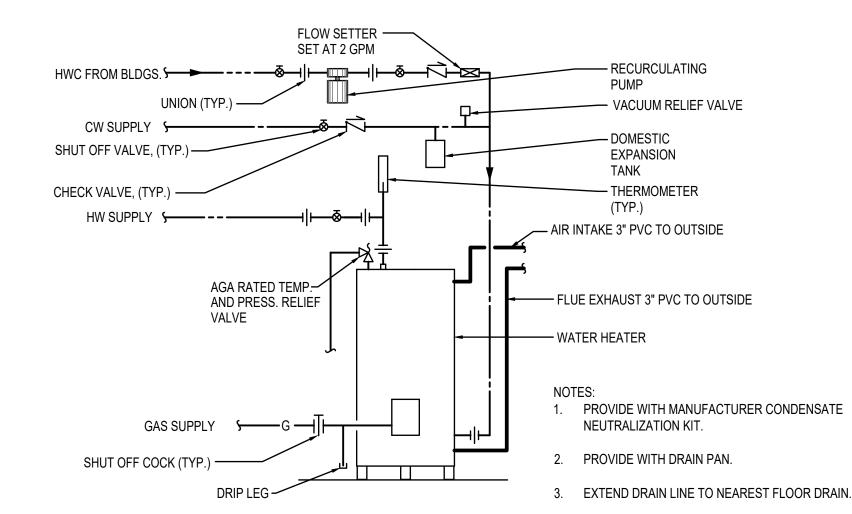


LAVATORY PIPING DETAIL NO SCALE



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GAS FIRED WATER HEATER DETAIL

181 East 5600 South Murray, Utah 84107 O: (801) 530-3148 F: (801) 530-3150 **VBFA** F: (801) 530-315 www.vbfa.com

o. 8325442-2202

JACOB D. BECK

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/ ALEXANDER (2410 SO.) E CITY, UTAH E - 801-975-884

MO.8223678-2202 6

<u>8</u> 44 PROJ. MGR.: DRAWN BY:

ANIN

A

ENGINEER:

BY A LICENSED PROFESSIONAL ENGINEER LICENSED IN UTAH.

DEFERRED SUBMITTAL

FIRE ALARM SHOP DRAWINGS, SUBMITTALS, BATTERY CALCULATIONS AND VOLTAGE DROP CALCULATIONS ARE A DEFERRED SUBMITTAL. THESE ITEMS SHALL BE SUBMITTED TO FIRE MARSHAL AND APPROVED BY FIRE MARSHAL PRIOR TO BEGINNING ANY WORK ON THE FIRE ALARM SYSTEM.

	ELECTRICAL SHEET INDEX						
SHEET	NAME						
E001	NOTES, LEGENDS, SCHEDULES						
E002	POWER SINGLE LINE DIAGRAM - SERVICE B CONTINUES PHASE 2						
E003	ELECTRICAL DETAILS						
E006	ELECTRICAL SCHEDULES						
E007	ELECTRICAL SCHEDULES						
E101	LEVEL 1 MEZZANINE ELECTRICAL POWER PLAN						
E102	LEVEL 2 MEZZANINE ELECTRICAL POWER PLAN						
E201	LEVEL 1 MEZZANINE ELECTRICAL LIGHTING PLAN						
E202	LEVEL 2 MEZZANINE ELECTRICAL LIGHTING PLAN						

L	IGHTING SYMBOLS LEGEND		РО	WER/DATA SYMBOLS LEGEND
SYMBOL	DESCRIPTION		SYMBOL	DESCRIPTION
0	LED LIGHT FIXTURE		\ominus	SIMPLEX RECEPTACLE
	LED LIGHT FIXTURE - EMERGENCY		—	TWIST-LOCK RECEPTACLE
	RECESSED LED DOWN LIGHT		\ominus	DUPLEX RECEPTACLE
	RECESSED LED DOWNLIGHT - EMERGENCY		=	DUPLEX RECEPTACLE - GFCI
	RECESSED LED WALL WASH OR SPOT FIXTURE			DROP DUPLEX RECEPTACLE - GFCI
──	LED STRIP LIGHT		=	HALF-SWITCHED DUPLEX RECEPTACLE
0	LED STRIP LIGHT - EMERGENCY			FLOOR BOX WITH DUPLEX 120V RECEPTACLE
	LED LINEAR LIGHT		₩ 🍑	FLOOR BOX WITH 4-PLEX RECEPTACLE AND VOICE/DATA OUTLET
	LED LINEAR LIGHT - EMERGENCY		\rightarrow	FOURPLEX RECEPTACLE
-	SURFACE OR PENDANT MOUNTED LED LIGHT		 	FOURPLEX RECEPTACLE - GFCI
-	SURFACE OR PENDANT MOUNTED LED LIGHT - EMERGENCY		$lue{egin{array}{c}}$	BLANK FACE - GFCI
\bigcirc	RECESSED LED WAFER LIGHT			DROP FOURPLEX RECEPTACLE - GFCI
	RECESSED LED WAFER LIGHT - EMERGENCY			SPECIAL PURPOSE RECEPTACLE - THREE PHASE
$+$ $\!$	WALL MOUNTED LED LIGHT FIXTURE			SPECIAL PURPOSE RECEPTACLE - SINGLE PHASE
$\not\longmapsto$	WALL MOUNTED LED LIGHT FIXTURE - EMERGENCY			NON-FUSED DISCONNECT SWITCH
	LED TRACK LIGHT HEAD		\square_1	FUSED DISCONNECT SWITCH
	FAN		\boxtimes_1	COMBINATION STARTER/FUSED DISCONNECT
$\overline{\Diamond}$	LED WALL MOUNTED EXIT SIGN - SINGLE SIDED - ARROWS INDICATE DIRECTION		\boxtimes	STARTER
	LED EXIT SIGN - SINGLE SIDED - ARROWS INDICATE DIRECTION			ELECTRICAL PANEL
	LED EXIT SIGN - DOUBLE SIDED			TELEPHONE TERMINAL BOARD W/GROUND BUSS BAR
	LED EXIT SIGN WITH INTEGRAL EMERGENCY LIGHT		DC	DOOR CONTACTOR
0-0	LED EMERGENCY LIGHT WITH INTEGRAL BATTERY		ES	ELECTRIC STRIKE
\$	SINGLE-POLE SWITCH		EPO	EMERGENCY POWER OFF
\$ a	SWITCH - LOWER CASE LETTER INDICATES ZONE		ML	MAGNETIC LOCK
\$	SWITCH - LOW VOLTAGE		РВ	PUSH BUTTON
\$ ₃	SWITCH - 3 WAY		PP	POWER PACK
\$4	SWITCH - 4 WAY		RC	ROOM CONTROLLER
\$ _D	SWITCH - DIMMER		REX	REQUEST TO EXIT
Φ_{C}	OCCUPANCY SENSOR - CEILING MOUNTED		\$ _T	THERMAL SWITCH
Φ_{W}	OCCUPANCY SENSOR - WALL MOUNTED		9	ELECTRIC MOTOR
Φ_{W2}	OCCUPANCY SENSOR - CEILING MOUNTED DUAL CIRCUIT		J	J-BOX
PC	PHOTOCELL		(DV)	J-BOX FOR DATA/VOICE
0	MANUAL OVERRIDE SWITCH		M	METER
			VFD	VARIABLE FREQUENCY DRIVE
	CALLOUTS/NOTES LEGEND		TV	TV OUTLET, REFER TO AV / DATA DRAWINGS FOR CABLE TYPE
SYMBOL	DESCRIPTION			POWER COMMUNICATIONS POLE FOR WORKSTATION FURNITURE
XXX	MECHANICAL EQUIPMENT CALLOUT		\triangleright	VOICE RECEPTACLE
\triangle	REVISION CALLOUT		•	DATA RECEPTACLE
		I		COMBINATION VOICE/DATA RECEPTACLE

ABBREVIATIONS

ABBREV.

AFF

AHJ

CB

CKT

CLG

CORR

CU

DISP

DW

EM

EMT

EWC

E, EX

FA

FACP

FLA

GND

IG

IMC

INS

ISO

KW

LTG

LVL

MLO

OC

RCPT

REQ

RELT

RMC

TYP

UG

DESCRIPTION

AMP OR AMPS

ALUMINUM

CONDUIT

CIRCUIT

CEILING

CORRIDOR

COPPER

DRYER

DISPOSAL

DISHWASHER

EMERGENCY

EXISTING

FIRE ALARM

FULL LOAD AMPS

HORSE POWER

INSULATED

ISOLATED

KILOWATTS

LIGHTING

LEVEL

ISOLATED GROUND

KILO VOLT AMPERES

INTERMEDIATE METAL CONDUIT

LIQUID TIGHT METAL CONDUIT

MINIMUM CIRCUIT AMPS

MAIN CIRCUIT BREAKER

MAIN LUGS ONLY

NOT IN CONTRACT

MICROWAVE

NIGHT LIGHT

ON CENTER(S)

RECEPTACLES

REQUIREMENTS

MEDIA DISTRIBUTION UNIT

OVER CURRENT PROTECTION

REDUCED ENERGY LET THROUGH DEVICE

PHASE FAILURE RELAY

RIGID METAL CONDUIT

ROCKY MOUNTAIN POWER

RIGID NONMETALLIC CONDUIT

SURGE PROTECTION DEVICE

TELEPHONE TERMINAL BOARD

SURGE SUPPRESSION

TAMPER RESISTANT

UNDERGROUND

WEATHERPROOF

TRANSFORMER

WASHER

ELECTRIC METALLIC TUBING

ELECTRIC WATER COOLER

FIRE ALARM CONTROL PANEL

FLEXIBLE METAL CONDUIT

GROUND CONDUCTOR

CIRCUIT BREAKER

ABOVE COUNTER

ABOVE FINISHED FLOOR

AUTHORITY HAVING JURISDICTION

	CALLOUTS/NOTES LEGEND
SYMBOL	DESCRIPTION
XXX	MECHANICAL EQUIPMENT CALLOUT
\triangle	REVISION CALLOUT
X XX-X X	LIGHT FIXTURE CALLOUT, TOP = TYPE, MIDDLE = CKT #, BOTTOM = SWITCH
(xxx)	OWNER PROVIDED EQUIPMENT CALLOUT
\Diamond	KEYED NOTE
X	WIRE CONDUIT - ALUMINUM
X	WIRE CONDUIT - COPPER
XXX	DETAIL CALLOUT
XXX	ELEVATION CALLOUT

SYMBOL	DESCRIPTION
FACP	FIRE ALARM CONTROL PANEL
NAC	NAC PANEL
FSD	FIRE/SMOKE DAMPER
8	SMOKE DETECTOR WITH VISUAL - CEILING MOUNTED

NOTICE: THE DESIGNS SHOWN AND DESCRIBED HEREIN INCLUDING ALL TECHNICAL DRAWINGS, GRAPHICS AND OFFICE PERSONNEL ONLY IN ACCORDANCE WITH THIS NOTICE.

FIRE ALARM SYMBOLS LEGEND

		l 1	
MBOL	DESCRIPTION		Ė
FACP	FIRE ALARM CONTROL PANEL		•
NAC	NAC PANEL		
FSD	FIRE/SMOKE DAMPER		SYME
8	SMOKE DETECTOR WITH VISUAL - CEILING MOUNTED		•-[
\ <u>\delta</u>	SMOKE DETECTOR WITH VISUAL - WALL MOUNTED		
S	SMOKE DETECTOR		
<u>co</u>	COMBINATION SMOKE/CARBON DETECTOR	L	4

PC	WER/DATA SYMBOLS LEGEND
SYMBOL	DESCRIPTION
\ominus	SIMPLEX RECEPTACLE
—	TWIST-LOCK RECEPTACLE
\ominus	DUPLEX RECEPTACLE
-	DUPLEX RECEPTACLE - GFCI
	DROP DUPLEX RECEPTACLE - GFCI
\rightarrow	HALF-SWITCHED DUPLEX RECEPTACLE
	FLOOR BOX WITH DUPLEX 120V RECEPTACLE
₩ ▼	FLOOR BOX WITH 4-PLEX RECEPTACLE AND VOICE/DATA OUTLE
+	FOURPLEX RECEPTACLE
 	FOURPLEX RECEPTACLE - GFCI
lacksquare	BLANK FACE - GFCI
	DROP FOURPLEX RECEPTACLE - GFCI
•	SPECIAL PURPOSE RECEPTACLE - THREE PHASE
\bigcirc	SPECIAL PURPOSE RECEPTACLE - SINGLE PHASE
	NON-FUSED DISCONNECT SWITCH
\square	FUSED DISCONNECT SWITCH
\boxtimes_{h}	COMBINATION STARTER/FUSED DISCONNECT
\boxtimes	STARTER
	ELECTRICAL PANEL
	TELEPHONE TERMINAL BOARD W/GROUND BUSS BAR
DC	DOOR CONTACTOR
ES	ELECTRIC STRIKE
EPO	EMERGENCY POWER OFF
ML	MAGNETIC LOCK
РВ	PUSH BUTTON
PP	POWER PACK
RC	ROOM CONTROLLER
REX	REQUEST TO EXIT
\$ _T	THERMAL SWITCH
0	ELECTRIC MOTOR
J	J-BOX
(DV)	J-BOX FOR DATA/VOICE
M	METER
VFD	VARIABLE FREQUENCY DRIVE
TV	TV OUTLET, REFER TO AV / DATA DRAWINGS FOR CABLE TYPE

	 	DATA RECEPTACLE
	>	COMBINATION VOICE/DATA RECEPTACLE
тсн	TYPE	CEILING MOUNT SECURITY CAMERA ("TYPE" INDICATES TYPE OF CAMERA)
	H_P _{TYPE}	WALL MOUNT SECURITY CAMERA ("TYPE" INDICATES TYPE OF CAMERA)
	CR	CARD READER
	- KP	SECURITY SYSTEM KEYPAD
	-	DOORBELL - EXTERIOR
	DB	DOORBELL - INTERIOR
		ADA PUSHBUTTON
		HOME RUN TO PANELBOARD
	١	CIRCUIT BREAKER

FUSE

SIT	E LIGHTING SYMBOLS LEGEND
MBOL	DESCRIPTION

ELECTRONIC TRIP CIRCUIT BREAKER

SYMBOL	DESCRIPTION
•—	POLE LIGHT
	POLE LIGHT - TWIN HEAD
igoplus	BOLLARD LIGHT

GENERAL NOTES

- REFER TO THE MECHANICAL SHEETS FOR THE EXACT LOCATION OF THE MECHANICAL EQUIPMENT.
- ALL METALLIC CONDUITS, JOINTS, FITTINGS, ETC., IN CONTACT WITH THE GROUNDS SHALL BE SPIRALLY WRAPPED WITH 3M SCOTCHWRAP-51, 20 MIL TAPE (OR APPROVED EQUAL).
- ALL UNDERGROUND CONDUIT SHALL BE BURIED 24" MINIMUM UNDER THE GROUND.
- FLEXIBLE CONDUITS CAN ONLY BE USED FOR SHORT RUNS (6' MAXIMUM).
- NO CONDUITS SHALL RUN IN DUCT WORK.
- ALL DUPLEX OUTLETS AND SWITCHES SHALL BE 20A, 120V SPEC GRADE, HUBBELL AND PASS & SEYMOUR AND LEVITON ARE APPROVED MANUFACTURERS.
- INSTALL EXIT SIGNS ON THE WALL IF POSSIBLE.
- SWITCHBOARDS, PANELBOARDS, AND MOTOR CONTROL CENTERS SHALL BE FIELD MARKED TO WARN QUALIFIED PERSONS OF POTENTIAL ARC FLASH HAZARDS. THE MARKING SHALL BE LOCATED SO AS TO BE CLEARLY VISIBLE TO QUALIFIED PERSONS BEFORE EXAMINATION, ADJUSTMENT, SERVICING, OR MAINTENANCE OF THE EQUIPMENT. (NEC 110-16).
- FOR 20 AMP CIRCUITS, USE NO. 10 THHN CONDUCTORS FOR CONDUCTOR LENGTH OVER 100 FEET, NO. 8 THHN OVER 200 FEET, NO. 6 THHN OVER 300 FEET AND NO. 4 THHN OVER 400 FEET.
- IF CONDUITS ARE TO BE PLACED WITHIN THE PT SLAB, CONDUITS ARE TO BE SPACED NO CLOSER THAN 4 CONDUIT DIAMETERS OR 4" O.C, WHICHEVER IS GREATER. LIMIT CONDUIT OUTER DIAMETER TO ONE FOURTH OF THE SLAB THICKNESS AND PLACE WITHIN THE CENTER THIRD OF SLAB THICKNESS. CONDUIT IS NOT TO BE TIED TO PARALLEL REBAR AND/OR TENDONS, NOR SHOULD REINFORCEMENT BE MOVED, BENT OR CUT TO ACCOMODATE CONDUIT.
- AIC RATINGS OF ALL OVERCURRENT PROTECTIVE DEVICES SHALL BE EQUAL TO OR GREATER THAN THE AIC RATING SHOWN IN THE PLANS.
- SERVICE EQUIPMENT SHALL BE FIELD MARKED WITH CALCULATED MAXIMUM AVAILABLE FAULT CURRENT AND THE DATE IT WAS CALCULATED (NEC 110-24).
- IN OTHER THAN DWELLING UNITS, IN ADDITION TO THE REQUIREMENTS IN 1 10.16(A), A PERMANENT LABEL SHALL BE FIELD OR FACTORY APPLIED TO SERVICE EQUIPMENT RATED 1200 AMPS OR MORE. THE LABEL SHALL MEET THE REQUIREMENTS OF 110.21(B) AND CONTAIN THE FOLLOWING INFORMATION: (1) NOMINAL SYSTEM VOLTAGE.
 - (2) AVAILABLE FAULT CURRENT AT THE SERVICE OVERCURRENT PROTECTIVE DEVICES.
 - (3) THE CLEARING TIME OF SERVICE OVERCURRENT PROTECTIVE DEVICES BASED ON THE AVAILABLE FAULT CURRENT AT THE SERVICE EQUIPMENT.
 - (4) THE DATE THE LABEL WAS APPLIED.

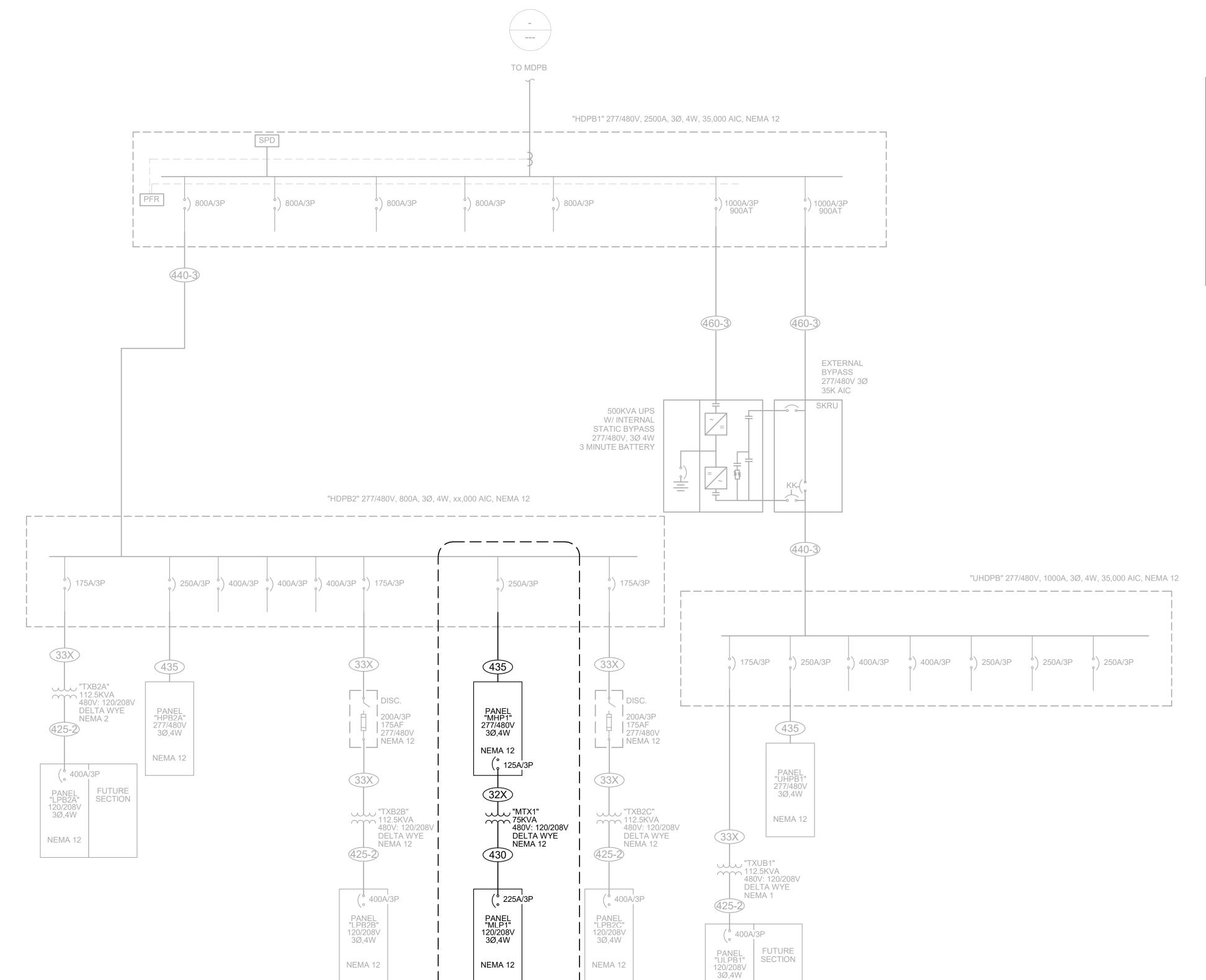
SEISMIC BRACING REQUIREMENTS

HUNT ELECTRIC IS RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF ALL REQUIRED SEISMIC BRACING BY THE 2018 INTERNATIONAL BUILDING CODE SECTION 1613 EARTHQUAKE LOADS PARAGRAPH 1613.1 SCOPE. RESTRAINT MUST BE PROVIDED FOR THE FOLLOWING CONDITIONS UNLESS OTHERWISE EXCLUDED BY CHAPTER 13 OF ASCE 7-10: (1) Ip > 1.0, (2) MEP COMPONENTS > 400 POUNDS AND SUPPORTED BY A FLOOR OR ROOF: (3) MEP COMPONENTS > 20 POUNDS AND SUPPORTED BY A CEILING OR WALL: OR (4) MEP DISTRIBUTION SYSTEMS WEIGHING > 5 PLF.

HUNT ELECTRIC WILL PROVIDE A COMPLETE SUBMITTAL FOR ALL ELECTRICAL EQUIPMENT TO INCLUDE LOCATION OF EACH SEISMIC BRACE, TYPE AND DESIGN OF THE BRACING, AND A DETAIL OF THE SEISMIC BRACING. THE SUBMITTAL SHALL BE ON 36" X 24" SHEETS AND AT A SCALE OF 1/4" = 1'-0" ALONG WITH A COMPLETE SET OF CALCULATIONS.

THE SUBMITTAL WILL CLEARLY INDICATE WHICH ITEMS ARE REQUIRED TO BE BRACED AND THE MINIMUM BRACING REQUIREMENTS (E.G. PER IBC 103.1 AND CHAPTER 13 OF ASCE 7-10). IN ADDITION THE SUBMITTAL SHALL BE PROVIDED





SCOPE FOR ALBANY MEZZANINE

POWER SINGLE LINE DIAGRAM - SERVICE B CONTINUED PHASE 2

SCALE: NTS

NEMA 12

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				ALUMINU	M FEEDER SO	CHEDULE				
		CONDUCTOR		CONDUIT	CONDUCTOR	CONDUCTOR				
TYPE	MAX PROT	AMPS	SETS	SIZE	QTY	SIZE	GND	PARALLEL	COPPER	ALUMINUM
31X		120		1-1/2"	3	1/0	4	N	N	Y
32X	-	135	-	1-1/2"	3	2/0	4	N	N	Y
33X	-	155	-	2"	3	3/0	4	N	N	Y
330-2	-	460	2	3"	3	300	1/0	Y	N	Υ
425-2	400	410	2	3"	4	250	1	Y	N	Y
430	-	230	-	3"	4	300	2	N	N	Y
435	-	250	-	3"	4	350	2	N	N	Y
440-3	800	810	3	3"	4	400	3/0	Y	N	Y
460-3	1000	1020	3	4"	4	600	4/0	Y	N	Y
475-8	3000	3080	8	5"	4	750	600	Y	N	Y
475-11	4000	4235	11	5"	4	750	750	Y	N	Υ

INTERINE, SALT LAKE CITY UTAPE DIAGRAM - SERVICE B CONTINUES ALBANY

5995 W. AMELIA EARH POWER SINGLE LINE I

§ << PROJ. MGR.: DRAWN BY: ENGINEER:

─ B-LINE CHANNEL

B335-2-BOLT SIZE ADJUSTABLE HINGE

ROD STIFFENER

*SEE NOTE -

OR A TRANSVERSE BRACE ONLY IF DESIRED.

SPANS LISTED IN APPENDIX 2 - TABLE 1.

ROD AND BRACING ATTACHMENTS.

TO THE ALL THREAD ROD OR ATTACHED TO THE ALL THREAD ROD ITSELF.

5). LONGITUDINAL BRACES, WHEN NEEDED, MUST BE INSTALLED AT BOTH ENDS OF TRAPEZE.

B-LINE CHANNEL TRANSVERSE BRACE

B335-2-1/2 ADJUSTABLE HINGE

B-LINE CHANNEL-SIZE AS REQUIRED -

TRANSVERSE BRACE

OR ALL THREAD ROD.

LONGITUDINAL BRACES

→ B2400 SERIES PIPE STRAPS

- B2000 SERIRES PIPE STRAPS

B335-2 ADJUSTABLE HINGES FOR LONGITUDINAL BRACES MAY BE ATTACHED ON EITHER SIDE ADJACENT

B335-2 ADJUSTABLE HINGES FOR TRANSVERSE BRACES MAY BE ATTACHED TO THE ALL THREAD ROD.

TWO B335-W ADJUSTABLE HINGES MAY BE ATTACHED TO THE STRUT TRAPEZE USING THE SAME BOLT

IT IS NOT NECESSARY TO INSTALL BOTH TRANSVERSE BRACES AND LONGITUDINAL BRACES ON SAME TRAPEZE SUPPORT. EITHER SET OF BRACES MAY BE REMOVED TO FORM A LONGITUDINAL BRACE ONLY

THE EQUIPMENT SHOWN ON THIS TRAPEZE SUPPORT IS GENERIC IN NATURE. ANY NUMBER OF PIPES,

CONDUITS, DUCTWORK OR CABLE TRAY MAY BE SUPPORTED FOLLOWING THE SYSTEM WEIGHT AND SUPPORT

DETERMINE LENGTH OF TRAPEZE, MAKING SURE SUFFICIENT LENGTH IS ADDED TO ATTACH THE ALL THREAD

TYPICAL TRAPEZE TRANSVERSE AND LONGITUDINAL BRACING DIAGRAM

ALL THREADED ROD

- HEX NUT &

SQUARE WASHER

B-LINE CHANNEL TRANSVERSE BRACE

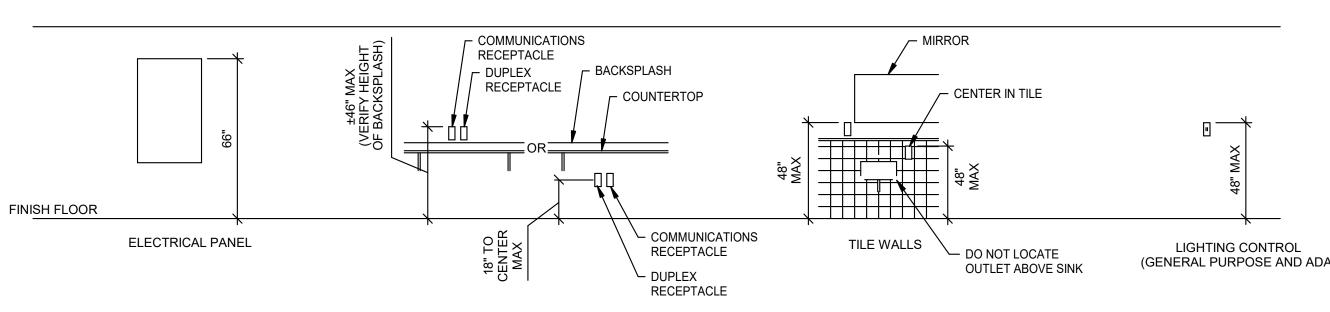
LONGITUDINAL BRACE

- B335-2-1/2 ADJUSTABLE HINGE

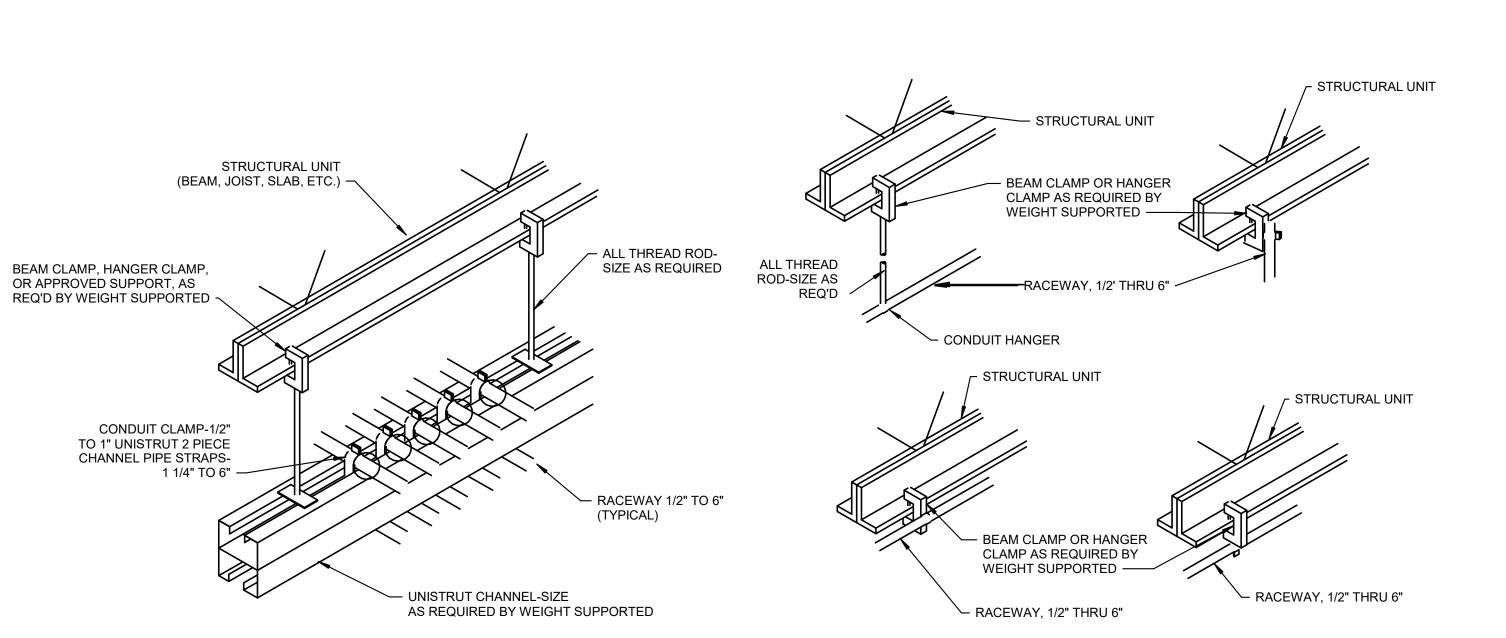
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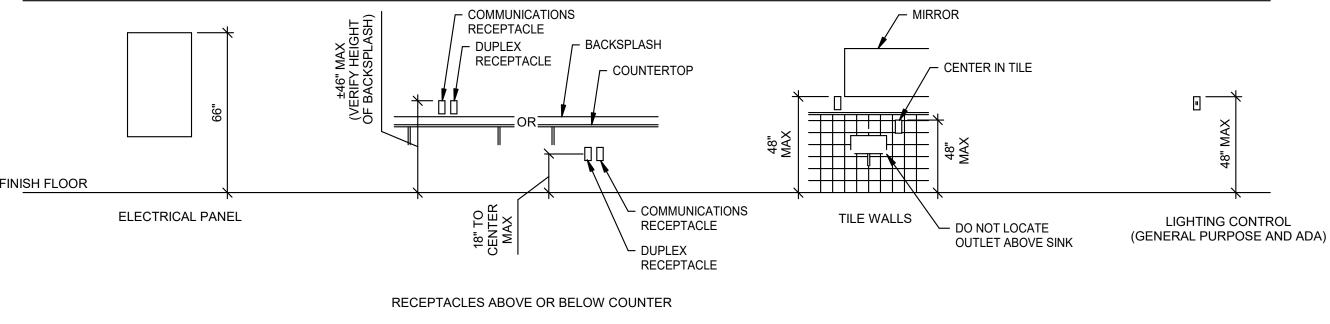


2 TYPICAL MOUNTING HEIGHTS SCALF-NTS SCALE: NTS



TYPICAL CONDUIT RACKING AND SUPPORT DIAGRAMS

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		LIGHTING FIXTURE	SCHEDUL	E - CLEANRO	OOM
TYPE	MANUFACTURER	CATALOG NUMBER	LAMP	TOTAL VA	DESCRIPTION
A1	LITHONIA LIGHTING	2BLT4 40L ADP EZ1 LP835	LED	34 VA	2'X4' RECESSED TROFFER LIGHT
C1	LITHONIA LIGHTING	LDN6 35/10 LO6AR LD MVOLT EZ10	LED	13 VA	6" RECESSED LED DOWNLIGHT
D1	LITHONIA LIGHTING OR EQUAL	CLX L48 5000LM SEF FDL MVOLT GZ10 35K 80CRI WH	LED	35 VA	4' LENSED LED STRIP LIGHT FIXTURE
ELV	TBD	TBD	LED	28 VA	ELEVATOR PIT LIGHT WITH EMERGENCY BATTERY BACKUP
EX1	LITHONIA LIGHTING	LQM S W 3 G 120/277 M6	LED	2 VA	SINGLE SIDED LED EXIT SIGN
G	LITHONIA LIGHTING	WL4 30L EZ1 LP850 MSD7	LED	28 VA	4' WALL BRACKET AND SURFACE MOUNT LED W/ EMERGENCY BATTERY PACE
HB1	GE CURRENT	ABV3 0 90 57 1D NA TQ 42 A D W	LED	158 VA	LED HIGH BAY LIGHT FIXTURE
HB1E	GE CURRENT	ABV3 0 90 57 1D NA TQ 42 A D W EL1	LED	158 VA	LED HIGH BAY LIGHT FIXTURE W/ EMERGENCY BATTERY PACK
P1	LITHONIA LIGHTING	LDN6CYL 35/20 LO6AR LD MVOLT EZ10 ACC DWHG	LED	23 VA	6" CYLINDER LED CEILING PENDANT
P1E	LITHONIA LIGHTING	LDN6CYL 35/20 LO6AR LD MVOLT EZ10 ACC DWHG	LED	23 VA	6" CYLINDER LED CEILING PENDANT W/ EMERGENCY BATTERY PACK
SL8	MARK ARCHITECTURAL LIGHTING	S4LD 8FT CRD 1H35 EZB 277 WHT	LED	104 VA	SLOT 8' LED LINEAR PENDANT
SL8E	MARK ARCHITECTURAL LIGHTING	S4LD 8FT CRD 1H35 EZB 277 WHT	LED	104 VA	SLOT 8' LED LINEAR PENDANT W/ EMERGENCY BATTERY PACK

				ME	CHANICAL	EOUIPME	NT SCH	EDULE CI	EANROOM						
				- · · -											
										FUSED	RK-1		WIRE	GROUND	
	EQUIPMENT						MCA	MOCP/	NON-FUSED	DISC	FUSE		SIZE AND	WIRE	
IDENTIFICATION	NAME	QUANTITY	RATING	PHASE	VOLTAGE	FLA/RLA		MFS	DISC SIZE	SIZE	SIZE	VFD	QTY	SIZE	NOTES
CD-2	CEILING DIFFUSER	1	-	1	120 V	-	-	-	-	-	-	-	(2) #12	(1) #12	1
EF-1	CEILING DIFFUSER	1	1/3	1	120 V	-	-	-	-	-	-	-	(2) #12	(1) #12	1
EF-2	CEILING DIFFUSER	1	1/4	1	120 V	-	-	-	-	-	-	-	(2) #12	(1) #12	1
EF-3	CEILING DIFFUSER	1	-	1	120 V	-	-	-	-	-	-	-	(2) #12	(1) #12	1
ELEV-1	ELEVATOR	1	-	3	480 V	65	-	-	-	90A	-	-	(3) #2	(1) #8	-
RCP-1	RECIRC PUMP	1	1/6 HP	1	120 V	-	-	-	-	-	-	-	(2) #14	(1) #14	-
RTU-1	ROOFTOP UNIT	1	-	3	480 V	-	11.5	15	-	-	-	-	(3) #12	(1) #12	1
RTU-2	ROOFTOP UNIT	1	-	3	480 V	-	21.5	25	-	-	-	-	(3) #12	(1) #12	1
RTU-3	ROOFTOP UNIT	1	-	3	480 V	-	10.1	15	-	-	-	-	(3) #12	(1) #12	1
RTU-4	ROOFTOP UNIT	1	-	3	480 V	-	11.5	15	-	-	-	-	(3) #12	(1) #12	1
WH-1	WATER HEATER	1	-	1	120 V	-	-	-	-	-	-	-	(2) #12	(1) #12	1

- DISCONNECT SWITCH SHALL HAVE BREAK-BEFORE-MAKE CONTACT. TIE TO VFD EMERGENCY STOP CIRCUIT TO STOP VFD BEFORE SWITCH IS PLACED IN THE OPEN POSITION.
- PROVIDE THERMAL OVERLOAD SWITCH FOR DISCONNECTING MEANS. PROVIDE COMBO STARTER/DISCONNECT WITH H.O.A. SWITCH AND (2) N.O. AND (2) N.C. CONTACTS.
- TIE TO 120 VOLT POWER THROUGH FIRE ALARM RELAY. TIE RELAY TO FIRE ALARM CONTROL PANEL FOR CLOSURE OF DAMPER UPON ALARM.
- CHILLER A SINGLE POINT CONNECTION.
- PROVIDE 120V/20A/1P TOGGLE SWITCH DISCONNECT ADJACENT TO UNIT.
 PROVIDE DUCT SMOKE DETECTOR IN RETURN AIR DUCT. TIE AIR HANDLER CONTROLS TO FIRE ALARM SYSTEM FOR SHUT DOWN OF UNIT UPON ALARM.

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- DISCONNECT CONVENIENCE OUTLET PROVIDED WITH UNIT.
- 10. CONTROLLED VIA WALL SWITCH.
- 11. INTEGRAL DISCONNECT. DIRECT CONNECT TO UNIT. 12. RUN POWER TO CU-xx FIRST, THEN FROM CU-xx TO FC-xx. VERIFY WITH SUBMITTALS.
- 13. CORD AND PLUG CONNECTED.
- PROVIDE DUCT DETECTOR.
 VFD PROVIDED BY MECHANICAL INSTALL BY ELECTRICAL.

	PANEL: MLP1 LOCATION: SUPPLY FROM: MTX1 MOUNTTING: SURFACE ENCLOSURE: TYPE 1		VOLTS: 120/208 WYE PHASES: 3 WIRES: 4									A.I.C. RATING: MAINS TYPE: MCB MAINS RATING: 225 A MCB RATING: 225 A SUB-FEED LUGS				
СКТ	CIRCUIT DESCRIPTION	TRIP	POLES		A	ı	3	(POLES		CIRCUIT DESCRIPTION	СКТ			
1	MEZ LEVEL 2 OFFICES 210, 211, 212, 213	20 A	1	1440	800 VA					1		ELEVATOR PIT SUMP PUMP	2			
3	MEZ LEVEL 2 OFFICES 214, 215, 216, 217	20 A	1			1260	180 VA			1	20 A	ELEVATOR PIT RECEPTACLE	4			
5	MEZ LEVEL 2 CONF. ROOM RECEPS	20 A	1					1080	180 VA	1	20 A	ELEVATOR PIT RECEPTACLE	6			
7	MEZ LEVEL 2 BREAKEROOM RECEPS	20 A	1	720 VA	180 VA					2	20 A	MEZ LEVEL 2 WORKSTATION FURNITURE	8			
9	MEZ LEVEL 2 BREAKROOM FRIDGE	20 A	1			800 VA	0 VA						10			
11	MEZ LEVEL 2 BREAKROOM FRIDGE	20 A	1					800 VA	180 VA	2	20 A	MEZ LEVEL 2 WORKSTATION FURNITURE	12			
13	MEZ LEVEL 2 STORAGE CONV. RECEPS	20 A	1	720 VA	0 VA								14			
15	MEZ LEVEL 2 BATHROOM RECEPS	20 A	1			1540	360 VA			1	20 A	MEZ LEVEL 2 WORKSTATION FURNITURE	16			
17	MEZ LEVEL 2 ELECTRIC WATER COOLER	20 A	1					500 VA	360 VA	1	20 A	OPEN OFFICE AREA RECEPS.	18			
19	MEZ LEVEL 2 BREAKROOM MICROWAVE	20 A	1	1800	186 VA					1	20 A	EF-1	20			
21	MEZ LEVEL 2 BREAKROOM MICROWAVE	20 A	1			1800	186 VA			1	20 A	EF-2	22			
23	MEZ LEVEL 2 BREAKROOM MICROWAVE	20 A	1					1800	366 VA	1	20 A	EF-3	24			
25	MEZ LEVEL 2 BREAKROOM MICROWAVE	20 A	1	1800	500 VA					1	20 A	CD-2	26			
27	MEZ LEVEL 2 BREAKROOM MICROWAVE	20 A	1			1800	119 VA			1	20 A	RCP-1	28			
29	MEZ LEVEL 2 BREAKROOM MICROWAVE	20 A	1					1800	180 VA	1	20 A	WH-1	30			
31	MEZ LEVEL 2 BREAKROOM COUNTER RECEPS	20 A	1	540 VA	0 VA					1	20 A	SPARE	32			
33	MEZ LEVEL 2 BREAKROOM VENDING	20 A	1			360 VA	0 VA			1	20 A	SPARE	34			
35	MEZ LEVEL 2 BREAKROOM VENDING	20 A	1					360 VA	0 VA	1	20 A	SPARE	36			
37	MEZ LEVEL 2 GARBAGE DISPOSAL	20 A	1	800 VA	0 VA					1	20 A	SPARE	38			
39	ELEVATOR CAB LIGHTS	20 A	1			0 VA	0 VA			1		SPARE	40			
41	SPARE	20 A	1			0 171	0 171	0 VA	0 VA	1		SPARE	42			
	JI AICE	_	L LOAD:	9486	∟ 6 VA	840	- 5 VΔ		5 VA	-	20 A	JI FIRE	12			
			. AMPS:) A	71		l	A	_						
	CLASSIFICATION		NECTED		DEM	AND FAC	CTOR		ATED DI			PANEL TOTALS				
RECEPT			23140 V	4		71.61%			16570 VA	4		TOTAL CONN. LOAD: 35407.VA				
LIGHTII	NG		0 VA			0.00%			0 VA			TOTAL CONN. LOAD: 25497 VA				
												TOTAL CONN. 71.A				
												TOTAL CONN.: 71 A				
												TOTAL EST. DEMAND: 53 A				
NOTES	:															

	LOCATION: SUPPLY FROM: HDPB2 MOUNTTING: SURFACE ENCLOSURE: TYPE 1				VOLTS: 480 PHASES: 3 WIRES: 4	0/277	WYE		MA	A.I.C. RATING: MAINS TYPE: MCB AINS RATING: 300 A MCB RATING: 125 A		
СКТ	CIRCUIT DESCRIPTION	TRIP	POLES	A	В		С	POLES	TRIP	CIRCUIT DE	SCRIPTION	СКТ
1	MTX1	125 A	3	9486								2
3					8405							4
5							7606					6
7	MEZ LEVEL 2 LIGHTING	20 A	1	728 VA								8
	MEZ LEVEL 2 LIGHTING	20 A	1		1596							10
11	MEZ LEVEL 2 LIGHTING	20 A	1				763 VA					12
13	ELEVATOR PIT LIGHT	20 A	1	28 VA								14
15	ELEVATOR PIT LIGHT	20 A	1		28 VA							16
17	MEZ LEVEL 2 LOBBY LIGHTING	20 A	1				3743					18
19	RTU-1	20 A	3	2549								20
21					2549							22
23							2549					24
25	RTU-2	20 A	3	4764								26
27					4764							28
29							4764					30
	RTU-3	20 A	3	2238								32
33					2238							34
35							2238					36
37	RTU-4	20 A	3	2549								38
39					2549							40
41							2549					42
		TOTA	L LOAD:	22343 VA	22130 V	Ά	24213 VA					
		TOTAL	L AMPS:	81 A	80 A		88 A					
040	N ACCIFICATION	CONI	VICTED	1040 0	SEMAND FACTO	ND.	FOTIMATED D	ATMAND.		DANEL	TOTALS	
ECEPT	CLASSIFICATION ACLE		NECTED 23140 VA		71.61%	/ N	ESTIMATED D 16570 V			PANEL	IOIALS	
IGHTI			4494 VA		125.00%		5618 V			TOTAL CONN. LOAD:	68686 VA	
. 3. 1 1 1			1151 VA		125.00 /0		3010 V/			TOTAL EST. DEMAND:		
										TOTAL CONN.:		
										TOTAL EST. DEMAND:		

ENGINEER:

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1863 W ALEXANDER ST. (2410 SO.) SALT LAKE CITY, UTAH 84119 PHONE - 801-975-8844 FAX 801-975-0509

08/02/2023

Total

Estimated

Demand

Current

164 A

21 A

21 A

NEC DEMAND CALCULATION CLEANROOM

Heating

Demand Heating Demand HVAC Demand

Connected Factor Connected Factor Connected Connected

Motor

Motor

4500 VA 108.33%

HVAC

Total

1500 VA 100.00% 134849 VA 101.07% 136291 VA

7740 VA

7740 VA

Total

Factor

Total

Demand

Demand Estimated

100.00% 7740 VA

100.00% 7740 VA

RECEPTACLE

Demand

Factor

100.00%

100.00%

100.00%

Power

Connected

500 VA

RECEPTACLE

Connected

Panel

Name

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HDPB3 7740 VA

LPB3A 7740 VA

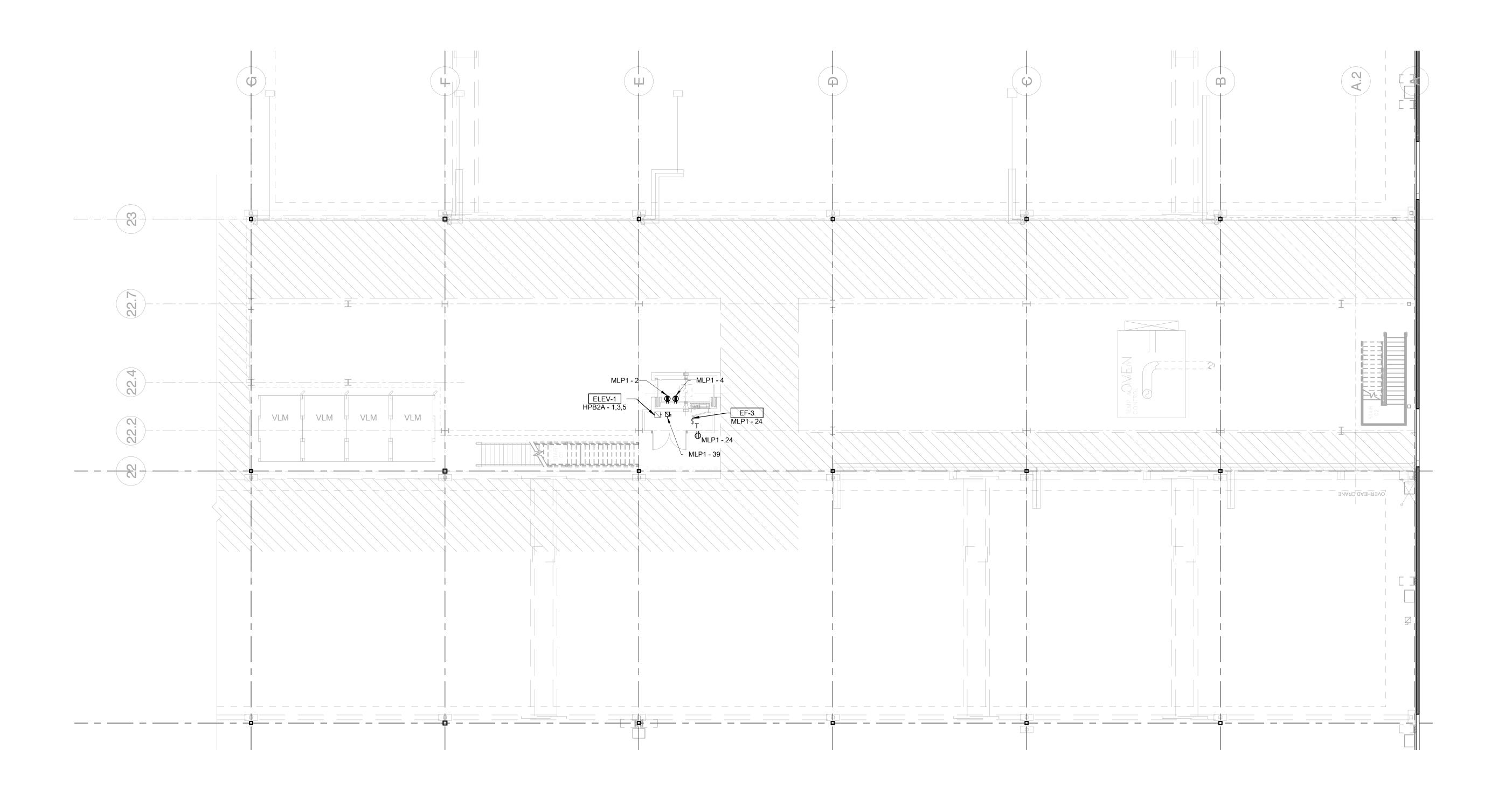
TXB3A 7740 VA

Power

Demand

Factor

100.00%



2 LEVEL 1 MEZZANINE ELECTRICAL POWER PLAN
SCALE: 3/32" = 1'-0"

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KEYED NOTES

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KEYED NOTES

COORDINATE LOCATION OF BREAKROOM MICROWAVES WITH ARCHITECT/OWNER PRIOR TO INSTALLATION.

POWER FOR FUTURE BATTERY POWERED FAUCET.

PROJ. MGR.: DRAWN BY: ENGINEER: ANINE

OVERHEAD CRANE

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VLM # VLM # VLM # VLM

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LEVEL 1 MEZZANINE ELECTRICAL LIGHTING PLAN
SCALE: 3/32" = 1'-0"

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DESIGN-BUILD

08/02/2023

KEYED NOTES

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EXISTING HIGHBAY FIXTURE TO BE SALVAGED AND REUSED FROM DEMOLITION, TIE INTO NEAREST AVAILABLE 277V LIGHTING CIRCUIT ROUTED THROUGH LIGHTING CONTROL PANEL.

1863 W ALEXANDER ST. (2410 SO.) SALT LAKE CITY, UTAH 84119 PHONE - 801-975-8844 FAX 801-975-0509 SERVICES

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