

TRDI OFFICE AND WAREHOUSE

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HEFFNER DESIGN TEAM
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STRUCTURAL ENGINEER
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500 SOUTH 11TH STREET
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P.E.M.B. SUPPLIER & E.O.R.

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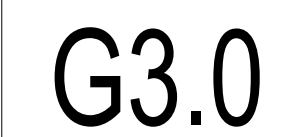
FEBRUARY 16TH, 2024
CONSTRUCTION
DOCUMENTS FOR
BIDDING

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SCALE
DRAWN BY: DUNCAN ARCHITECTS
DATE: 16 FEBRUARY 2024

PROJECT IMAGES

G2.0



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LIFE SAFETY PLAN


LIFE SAFETY PROJECT DATA


<u>EXIT ACCESS TRAVEL DISTANCE:</u> (IBC CHAPTER 10 - TABLE 1017.2)	MAXIMUM ALLOWED: 200 FEET MAXIMUM DISTANCE: 69 FEET
<u>DEAD END TRAVEL DISTANCE:</u> (IFC CHAPTER 11 - TABLE 1104.18)	MAXIMUM ALLOWED: 50 FEET MAXIMUM DISTANCE: N/A
<u>CORRIDOR WIDTH:</u> (IBC CHAPTER 10 - TABLE 1020.2)	MINIMUM ALLOWED: 44 INCHES MINIMUM PROVIDED: 48 INCHES
<u>NUMBER OF EXITS:</u> (IBC CHAPTER 10 - TABLE 1006.2.1)	MINIMUM REQUIRED: 1 (1 TO 500 OCC) EXITS PROVIDED: 2
<u>TOTAL EGRESS WIDTH:</u> (IBC CHAPTER 10 - 1005.3.2)	REQUIRED: 52 OCCUPANTS X 2" = 104" PROVIDED: 32"
<u>OCCUPANCY CLASSIFICATIONS:</u>	GROSS = 2345 GSF / 16 = 16 OCCUPANTS BY ROOM = 60 OCCUPANTS
<u>FIRE SPRINKLERS / ALARM SYSTEM:</u>	NO

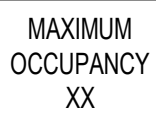
SYMBOL LEGEND

NAME	ROOM NAME
B	OCCUPANCY CLASS
### GSF	AREA (GROSS SQUARE FEET)
## SF	OCCUPANCY LOAD FACTOR
##	OCCUPANCY LOAD



 ACTUAL OCCUPANT LOAD AT EXIT ACCESS OR EXIT


 EXIT OR EXIT ACCESS


 START OF PATH OF TRAVEL


 EVERY SPACE THAT IS AN ASSEMBLY OCCUPANCY SHALL HAVE THE OCCUPANCY LOAD OF THE SPACE POSTED IN A CONSPICUOUS PLACE, NEAR THE MAIN EXIT FROM THE SPACE. POSTED SIGNS SHALL BE OF AN APPROVED LEGIBLE PERMANENT DESIGN AND SHALL BE MAINTAINED BY THE OWNER.

*
 EXIT
 EXIT LIGHT LED FIXTURE (SEE M.E.P. PLANS FOR SPECIFICATIONS)


 FIRE EXTINGUISHER CABINET

INTERIOR FINISHES

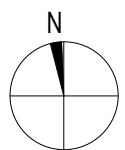
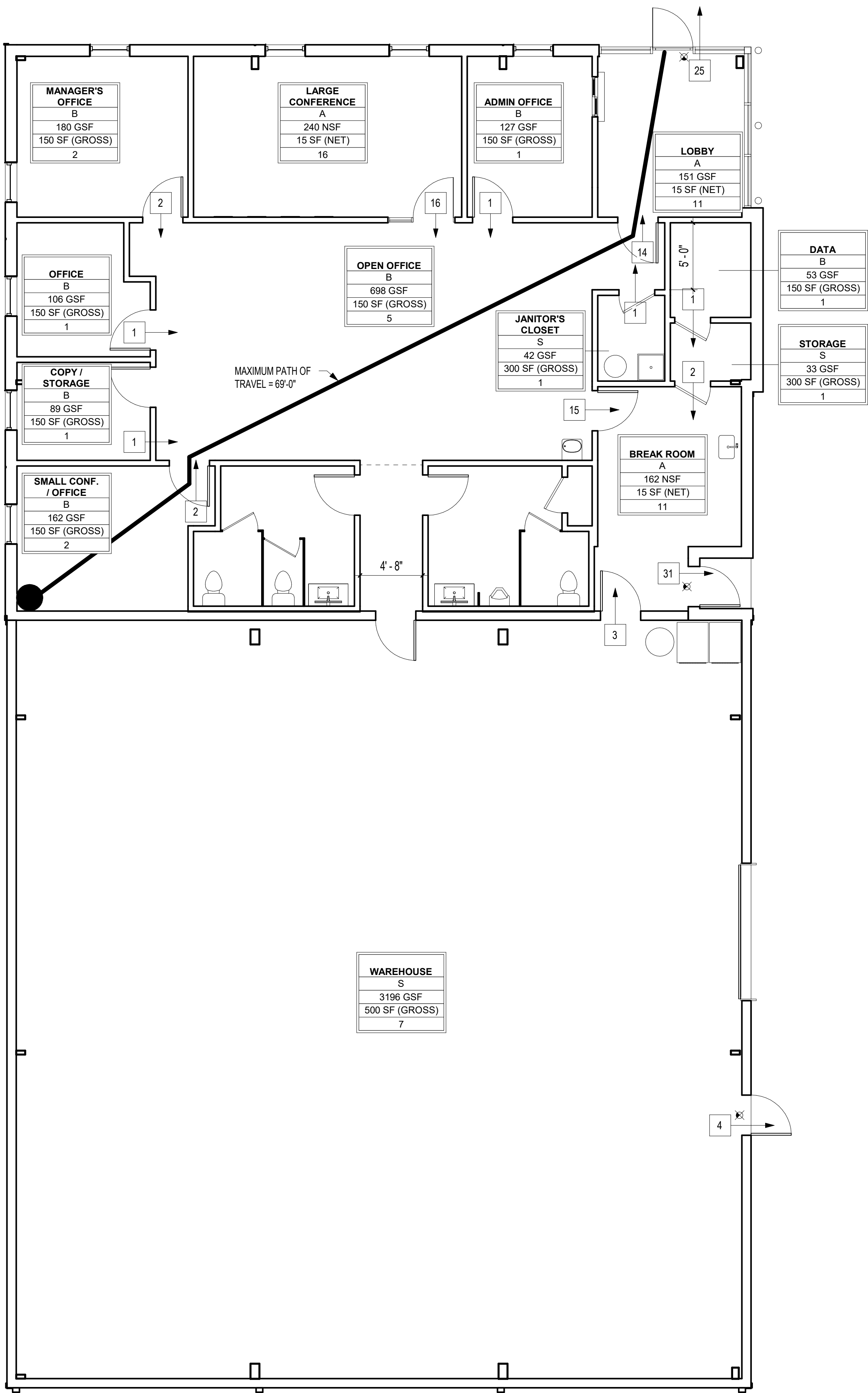
AS PER CHAPTER 18 NFPA 101 LIFE SAFETY CODE REQUIREMENTS, ALL INTERIOR FINISHES IN THE BUILDING SHALL MEET A MINIMUM OF "CLASS A" FOR CEILINGS AND "CLASS B" FOR WALLS CLASSIFICATION REQUIREMENTS IN FULL COMPLIANCE WITH NFPA SECTION 10.2 INTERIOR FINISH CODE REQUIREMENTS - ALL INTERIOR FINISHED SHALL ALSO FULLY COMPLY WITH ALL CODE REQUIREMENTS OF CHAPTER 8 OF THE INTERNATIONAL BUILDING CODE.

NFPA 101 NOTE

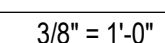
CLASSIFICATION OF HAZARD OF CONTENTS, AS PER NFPA 101, CHAPTER 6, SECTION 6.2.2: "LOW HAZARD"

MINIMUM HEADROOM HEIGHT

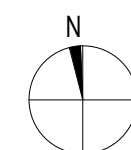
ALL ROOMS AND AREAS IN THE PROPOSED BUILDING MEETS OR EXCEEDS THE MINIMUM INTERIOR HEADROOM HEIGHT OF 90" (+7'-6") A.F.F. AS PER NFPA 101 SECTION 7.1.5

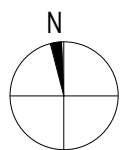


ROOF:	R33 LINEAR SYSTEM WITHOUT THERMAL BLOCKS
WALLS, ABOVE GROUND:	R25 SINGLE LAYER MINERAL FIBER IN CAVITY, THERMAL BLOCK AT GIRT
WALLS, BELOW GROUND:	NOT REQUIRED
FLOORS:	NOT REQUIRED
SLAB-ON-GRADE FLOORS:	NOT REQUIRED



A1.1





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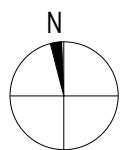
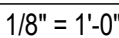
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ROOF PLAN

A1.3



1/4" = 1'-0"

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A2.1

ROOF:	R33 LINEAR SYSTEM WITHOUT THERMAL BLOCKS
WALLS, ABOVE GROUND:	R25 SINGLE LAYER MINERAL FIBER IN CAVITY, THERMAL BLOCK AT GIRT
WALLS, BELOW GROUND:	NOT REQUIRED
FLOORS:	NOT REQUIRED
SLAB-ON-GRADE FLOORS:	NOT REQUIRED



[illegible]

ROOF:	R33 LINEAR SYSTEM WITHOUT THERMAL BLOCKS
WALLS, ABOVE GROUND:	R25 SINGLE LAYER MINERAL FIBER IN CAVITY, THERMAL BLOCK AT GIRT
WALLS, BELOW GROUND:	NOT REQUIRED
FLOORS:	NOT REQUIRED
SLAB-ON-GRADE FLOORS:	NOT REQUIRED

A3.0

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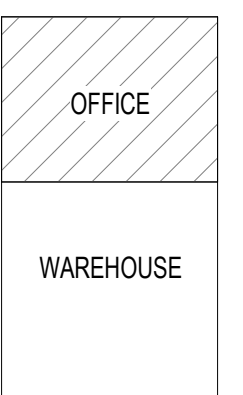
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KEY PLAN



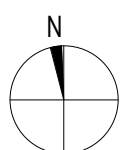
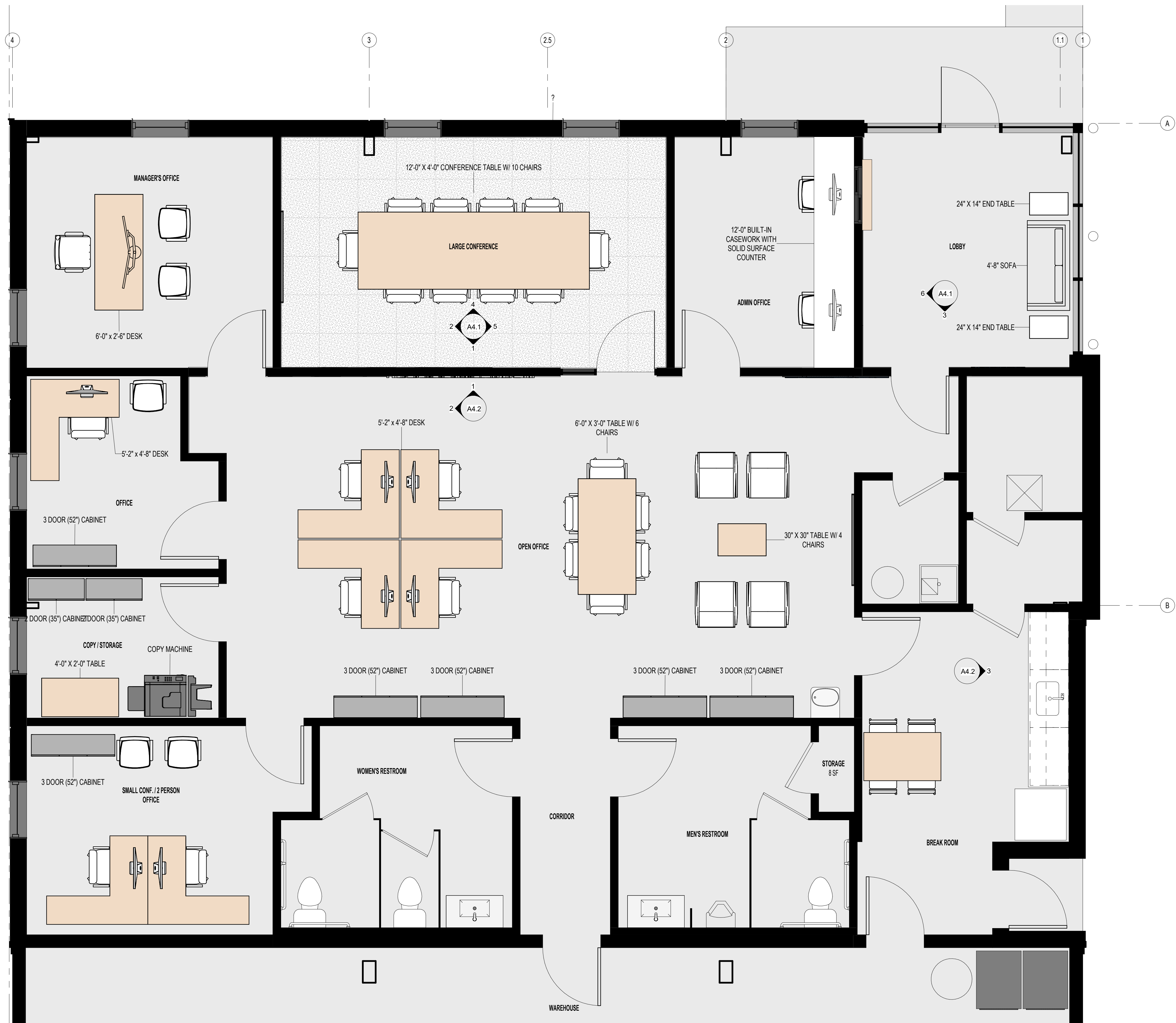
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SCALE 3/8" = 1'-0"
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CONCEPT OFFICE
FURNITURE PLAN

A4.0





NOTE: SEE A6.0 FOR FINISH SCHEDULE

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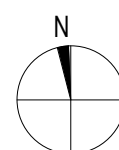
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OFFICE INTERIOR ELEVATIONS

A4.1



BREAK ROOM KITCHEN 3

LAYOUT NOTE:
SEE OVERALL SITE PLAN SHEET G3.0 FOR
DUMPSTER ENCLOSURE ORIENTATION
AND SITE SPECIFIC LAYOUT.

DUMPSTER GATES: PAINTS (PAIR) OF HEAVY-DUTY METAL FULL-LOUVERED GATES WITH HINGES WELDED TO (2) GROUT-FILLED 8" DIA. X 10'-8" LONG STEEL COLUMNS EMBEDDED 30" INTO 22" DIA. X 36" DEEP CONCRETE FOOTING. PROVIDE HANDLES WITH EYE HOLES FOR LOCK (SEE DOOR SCHEDULE FOR GATE SPECS).

— OUTLINE OF CONCRETE
FOUNDATION BELOW (SEE
FOUNDATION SCHEDULE AND
WALL SECTION)

PROTECTIVE BOLLARDS:
CIRCULAR TUBE STEEL
BOLLARDS (DIAMETER SIZE
NOTED) EMBEDDED IN FORM
POURED CONCRETE BASE
PROTECT EQUIPMENT OR
WALLS - GROUT-FILLED.

CONCRETE WALL CAP: FABRICATED
PRE-CAST 3" HIGH DECORATIVE
CONCRETE CAP WITH 1" HIGH SLOPED
PEAK RIDGE

BOND BEAM: INSTALL CONTINUOUS 8" 16" CONCRETE BOND BEAM WITH (2) #5 STEEL REBAR REINFORCEMENT (TYP.)

L-BENT REBAR: TIED INTO HORIZ. —
REINF. 18" MIN EMBED.

WATER SEALANT: APPLIED TO BLOCK WALL.

SPLIT-FACE BLOCK WALL: NOMINAL 4" 8" WIDE X 8" HIGH X 16" LONG CONCRETE "SPLIT-FACE" BLOCK MASONRY UNIT WITH VERTICAL AND HORIZONTAL REINFORCEMENT.

TIE COLUMNS: INDICATES (1) #5 STEEL REBAR IN GROUT-FILLED CELL AT 48" C MAXIMUM. AT ENDS OF WALLS OR WHERE SPECIFIED PLACE DOUBLE FILLED CELL COLUMNS. SEE ENCLOSURE PLANS FOR SPECIFIC COLUMN LOCATIONS (TYP.)

FOOTING: 16" WIDE X 16" DEEP POURED CONCRETE MONOLITHIC FOOTING WITH (1) #5 REBAR AT TOP AND (2) #5 REBAR AT BOTTOM CONTINUOUS. STIRRUPS REQUIRED 36" O.C. MAX. BOTTOM OF FOOTING TO BE A MINIMUM OF 12" BELOW FINISHED GRADE (TYP.)

L-BENT REBAR: TIED INTO
HORIZ. REINF. 18" MIN EMBED.
EXTEND TO T.O. BLOCK WALL

TYP. DUMPSTER WALL SECTION

DUMPSTER ENCLOSURE PLAN

FRONT ELEVATION

SIDE ELEVATION

REAR ELEVATION

SIDE ELEVATION
DUMPSTER ENCLOSURE ELEVATIONS

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DUMPSTER ENLOSURE PLAN, ELEVATIONS, SECTIONS

A4.4

EXTERIOR FINISH GENERAL NOTES	
<p>ADHERED STONE</p> <ol style="list-style-type: none"> FABRICATED CULTURED STONE DECORATIVE VENEER OR CAST BLOCKS OVER MASONRY OR OVER WOOD SHEATHING (WITH APPROVED UNDERLAYMENT). ATTACH TO STRUCTURAL WALLS. INSTALL AS PER MANUFACTURER'S SPEC'S (SELECTION BY OWNER). ADHERED MASONRY VENEER SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF SECTIONS 12.1 AND 12.3 OF TMS 402. WITH COLD-FORMED STEEL STUD BACKING, A 2-INCH BY 2-INCH (51 BY 51 MM) 0.0625-INCH (1.59 MM) ZINC-COATED OR NONMETALLIC COATED WIRE MESH WITH TWO LAYERS OF WATER-RESISTIVE BARRIER IN ACCORDANCE WITH 2018 IBC SECTION 1403.2 SHALL BE APPLIED DIRECTLY TO STEEL STUDS SPACED A NOT MORE THAN 16 INCHES (406 MM) ON CENTER. THE MESH SHALL BE ATTACHED WITH CORROSION-RESISTANT #8 SELF-DRILLING, TAPPING SCREWS AT 4 INCHES (102 MM) ON CENTER, AND AT 8 INCHES (203 MM) ON CENTER INTO TOP AND BOTTOM TRACKS OR WITH EQUIVALENT WIRE TIES. SCREWS SHALL EXTEND THROUGH THE STEEL CONNECTION NOT FEWER THAN THREE EXPOSED THREADS. THERE SHALL BE NOT LESS THAN A 0.1055-INCH (2.68 MM) CORROSION-RESISTANT WIRE, OR APPROVED EQUAL, ATTACHED TO THE STUD WITH NOT SMALLER THAN A #8 SELF-DRILLING, TAPPING SCREW EXTENDING THROUGH THE STEEL FRAMING NOT FEWER THAN THREE EXPOSED THREADS FOR EVERY 2 SQUARE FEET (0.2 M²) OF STONE VENEER. THIS TIE SHALL BE A LOOP HAVING LEGS NOT LESS THAN 15 INCHES (381 MM) IN LENGTH, SO BENT THAT THE TIE WILL LIE IN THE STONE VENEER MORTAR JOINT. THE LAST 2 INCHES (51 MM) OF EACH WIRE LEG SHALL HAVE A RIGHT-ANGLE BEND. ONE-INCH (25 MM) MINIMUM THICKNESS OF CEMENT GROUT SHALL BE PLACED BETWEEN THE BACKING AND THE STONE VENEER. 	<ol style="list-style-type: none"> THE COLD-FORMED STEEL FRAMING MEMBERS SHALL HAVE A MINIMUM BARE STEEL THICKNESS OF 0.0428 INCHES (1.087 MM). PROVIDE WEEP SCREED AT BASE OF ALL EXTERIOR WALLS OR AS REQUIRED BY STONE MANUFACTURER. SCREED TO DIRECT MOISTURE/CONDENSATION OUT OF CAVITY AND AWAY FROM BUILDING. <p>METAL PANEL</p> <ol style="list-style-type: none"> WEEP SCREED: PROVIDE WEEP SCREED AT BASE OF ALL EXTERIOR WALLS OR AS REQUIRED BY METAL MANUFACTURER. SCREED TO DIRECT MOISTURE/CONDENSATION OUT OF CAVITY AND AWAY FROM BUILDING. BATT: INSTALL APPROVED CONTINUOUS BATT INSULATION (R-25 MINIMUM) BETWEEN METAL STUDS. (SEE PROJECT ENERGY CALCULATIONS BY MECHANICAL ENGINEER FOR REQUIREMENTS AND SPECIFICATIONS). WINDOWS: COMMERCIAL-GRADE FIXED-GLASS ALUMINUM WINDOWS (TO MATCH STOREFRONT COLOR AND FINISH APPEARANCE). STOREFRONT: ANODIZED ALUMINUM STOREFRONT GLAZING SYSTEM WITH CLEAR GLAZING - SHIM STOREFRONT FRAME AS REQUIRED AND PROVIDE CONTINUOUS 3/4" BEAD COLORED SEALANT/CAULKING WITH BACKER ROD - TYPICAL AT ALL STOREFRONT WINDOWS AND DOORS (SEE DOOR AND WINDOW SCHEDULES FOR COMPLETE DESCRIPTION). SILL FLASHING: STOREFRONT SILL FLASHING WITH CONTINUOUS SEALANT - PROVIDE ADDITIONAL METAL FLASHING OVER ENTIRE SILL OF ALL WINDOWS. DRIP: CONTINUOUS FABRICATED 26 GAUGE METAL DRIP-EDGE FLASHING ABOVE ALL WINDOW AND DOOR OPENINGS. WALL WATER-PROOFING: INSTALL SELF-SEALING WATER-PROOFING MEMBRANE SHEETS OVER EXTERIOR OF METAL FRAMING.



A5.0

DOOR AND WINDOW NOTES

- CODE COMPLIANCE:** FABRICATION AND INSTALLATION OF ALL NEW DOORS, WINDOWS, AND STOREFRONT TO BE IN FULL COMPLIANCE WITH ALL APPLICABLE SECTIONS OF THE 2018 INTERNATIONAL BUILDING CODE WILL ALL UPDATES AND AMENDMENTS.
- SHOP DRAWINGS:** GENERAL CONTRACTOR SHALL PROVIDE COMPLETE SHOP DRAWINGS OF ALL GLAZING, FENESTRATION, ALUMINUM VENTS, ETC. FOR ARCHITECT AND ENGINEER OF RECORD'S REVIEW AS REQUIRED, AND (3) COPIES FOR SUBMITTAL WITH FINAL SEALED DRAWINGS TO BUILDING DEPARTMENT.
- TEST REPORTS:** CONTRACTOR SHALL SUBMIT TEST REPORTS (IF REQUIRED DUE TO EXCESSIVE WIND LOADS) AND PROVIDE DRAWINGS OF ALL NEW EXTERIOR DOORS, WINDOWS, AND STOREFRONT WITH FULLY-ENGINEERED SHOP DRAWINGS AND ATTACHMENT DETAILS PRIOR TO COMMENCEMENT OF FABRICATION. FINAL SHOP DRAWINGS TO BE SIGNED AND SEALED BY A LOCAL REGISTERED ENGINEER.
- ROUGH OPENINGS:** GENERAL CONTRACTOR SHALL VERIFY ALL REQUIRED ROUGH OPENING SIZES WITH THE SELECTED DOOR MANUFACTURER(S) AND WINDOW MANUFACTURER(S) PRIOR TO START OF CONSTRUCTION, AND ADJUST ALL ROUGH OPENINGS AS INDICATED ON THE CONSTRUCTION DOCUMENTS AS REQUIRED.
- WINDOWS:** ALL NEW WINDOWS AND STOREFRONTS TO BE CONSTRUCTED OF HEAVY-DUTY GAUGE COMMERCIAL GRADE ALUMINUM WITH FACTORY POWDER-COAT PAINT FINISH (COLOR AS PER THE WINDOW SCHEDULE). SECURELY ATTACH ALL WINDOWS AND STOREFRONTS TO WALL OPENINGS AS PER MANUFACTURER'S SPECIFICATIONS. IN COLD CLIMATES, OR BY OWNER'S REQUEST, ALL GLAZING TO BE INSULATED GLASS. PRIOR TO COMMENCEMENT OF SHOP FABRICATION, ALL WINDOW OPENINGS MUST BE FIELD VERIFIED AND MEASURED BY GLAZING SUBCONTRACTOR AND ACCEPTED BY GENERAL CONTRACTOR.
- DOORS:** ALL EXTERIOR DOORS SHALL BE CONSTRUCTED OF MINIMUM 18 GAUGE GALVANIZED COMMERCIAL GRADE STEEL WITH HEAVY-DUTY HOLLOW METAL CONSTRUCTION AND HONEYCOMB INFILL CORE INSULATION. INTERIOR DOOR CONSTRUCTION AND SPECIFICATIONS AS NOTE IN DOOR SCHEDULE.
- FRAMES:** HOLLOW STEEL DOOR FRAMES SHALL BE HEAVY-DUTY 16 GAUGE GALVANIZED COMMERCIAL GRADE STEEL WITH MITERED, WELDED CORNERS ROUNDED TO A SMOOTH, UNIFORM FINISH. WALL ANCHORS APPROPRIATE TO FLOOR AND WALL CONSTRUCTION SHALL BE PROVIDED ON EACH JAMB. ALL FRAMES SHALL BE PREPARED, REINFORCED, DRILLED, AND TAPPED TO RECEIVE SPECIFIED MORTISED IRONMONGERY.
- FIRE DOORS:** ALL FIRE-RATED DOORS SHALL BE "UL" (UNDERWRITERS LABORATORIES) LABEL CERTIFIED AND CONSTRUCTED OF 18 GAUGE GALVANIZED COMMERCIAL GRADE STEEL WITH HEAVY-DUTY HOLLOW METAL CONSTRUCTION AND HONEYCOMB INFILL CORE INSULATED DOOR GLAZING (WHERE APPLICABLE) SHALL BE OF WIRELESS GLASS AND SIZED AS PER CODE.
- LOUVER DOORS:** ALL LOUVERED DOORS SHALL BE CONSTRUCTED OF 18 GAUGE GALVANIZED COMMERCIAL GRADE STEEL WITH HEAVY-DUTY HOLLOW METAL CONSTRUCTION. LOUVERS TO BE OF IMPACT-RESISTANT GALVANIZED STEEL CONSTRUCTION WELDED TO DOOR. LOUVER BLADES SHALL OVERLAP OBSTRUCTING VISION BUT ALLOWING VENTILATION. INSTALL AN INSECT MESH SCREEN ON THE INSIDE FACE OF LOUVERS.
- THRESHOLDS:** ALL DOOR THRESHOLDS SHALL BE FABRICATED OF WATER-RESISTANT ALUMINUM WITH A MAXIMUM HEIGHT OF 1/2" (1.27CM) AND MINIMUM 4" (10CM) DEPTH (AS PER ADA HANDICAP REQUIREMENTS) ABOVE FINISH FLOOR.
- HARDWARE:** EACH DOOR AND FRAME SHALL BE BLANKED, REINFORCED, DRILLED, AND TAPPED READY TO RECEIVE MORTISED, TEMPLATED COMMERCIAL-GRADE HARDWARE. ALL HARDWARE SUPPLIED BY GENERAL CONTRACTOR. ALL SELECTION BY OWNER (UNLESS STATED OTHERWISE).
- HANDICAP COMPLIANCE:** ALL REQUIRED HANDICAP EQUIPMENT AND INSTALLATION ON DOORS AND WINDOWS SHALL BE IN FULL COMPLIANCE WILL ALL ADA AND IBC CODE REQUIREMENTS, AND LOCAL ORDINANCES.
- SAFETY GLAZING:** ALL STOREFRONT AND ANY DOORS WITH GLASS PANELS SHALL HAVE CATEGORY II SAFETY GLAZING AS PER SECTION 2406 OF THE IBC.
- GLAZING SEALANT:** THE ENTIRE GLAZING SYSTEM AND ANY STOREFRONT DOORS SHALL BE WET SEALED WITH COLOR COORDINATED SEALANT, FINGER WIPED, AND CLEANED TO A WORKMAN AND INDUSTRY CLASS I STANDARD. COLOR SELECTION OF SEALANT BY ARCHITECT.
- SKYLIGHTS:** IF REQUIRED BY WIND LOADS, ALL SKYLIGHTS ON ROOF SHALL BE WIND LOAD APPROVED "IMPACT RESISTANT", AND ADHERE TO ALL REQUIREMENTS OF SECTION 2405 OF THE IBC.
- EGRESS:** ALL DOORS AND GATES TO FULLY COMPLY WITH ALL MEANS OF EGRESS REQUIREMENTS IN SECTION 1003.3 OF THE IBC.

WINDOW SCHEDULE							
MARK	WIDTH	HEIGHT	DESCRIPTION	HEAD HEIGHT	SILL TYPE	FINISH	WINDOW REMARKS
A	3' - 0"	6' - 0"	COMMERCIAL-GRADE FIXED-GLASS ALUMINUM WINDOWS	9' - 0"		TO MATCH STOREFRONT	J
B	3' - 0"	4' - 0"	COMMERCIAL-GRADE PASS-THRU ALUMINUM WINDOW WITH TEMPERED GLASS	7' - 0"		BLACK	T

DOOR / WINDOW MARKINGS

<p>A <u>HANDICAP ACCESSIBLE DOOR:</u> DOOR AND INSTALLATION TO BE IN FULL COMPLIANCE WITH ALL APPLICABLE SECTIONS, REQUIREMENTS, AND AMENDMENTS OF THE ICC/ANSI A117.1-2003 (ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES), AND CHAPTER 11 (ACCESSIBILITY) OF THE 2018 INTERNATIONAL BUILDING CODE, AND ALL OTHER LOCAL ORDINANCES AND REGULATIONS.</p> <p>B <u>LOADING DOOR:</u> COMMERCIAL-GRADE ALUMINUM OVERHEAD COILING DOOR. MAKE/ MODEL BY OWNER.</p> <p>C <u>LOUVER VENTS:</u> PROVIDE HEAVY-DUTY SECURITY-TYPE HORIZONTAL METAL LOUVERS WITH INTERIOR METAL BUG SCREEN FOR VENTILATION IN DOOR OR WINDOW PANELS.</p> <p>D <u>THRESHOLDS:</u> INSTALL A.D.A. APPROVED HANDICAP-ACCESSIBLE RAISED ALUMINUM, GRANITE OR MARBLE THRESHOLD AT DOOR OPENING SECURED TO SLAB (1/2" IN MAX HEIGHT). MAKE/ MODEL BY OWNER. COORDINATE WITH FINISH FLOOR THICKNESS.</p> <p>E <u>KICK PLATE:</u> PROVIDE 12" HIGH X 34" WIDE MANUFACTURED STAINLESS STEEL KICK PLATE ON INTERIOR FACE OF DOOR. MAKE/ MODEL BY OWNER.</p> <p>F <u>PEEPHOLE:</u> INSTALL 1-1/2" DIA. SECURITY VIEWER IN CENTER OF DOOR AT 5'-4" ABOVE FINISHED FLOOR. MAKE/ MODEL BY OWNER.'</p> <p>G <u>LOUVERED TRANSOM:</u> INSTALL HORIZONTAL METAL LOUVERS WITH INTERIOR METAL BUG SCREEN TRANSOM ABOVE DOOR. SEE ELEVATIONS.</p> <p>H <u>DOOR CLOSER:</u> INSTALL A.D.A. APPROVED COMMERCIAL-GRADE ADJUSTABLE DOOR CLOSER. MAKE/ MODEL BY OWNER. FINISH: BRUSHED ALUMINUM.</p> <p>I <u>PVC DOOR:</u> WATER-PROOF FLUSH PLASTIC 1-3/4" THICK DOOR CONSTRUCTED OF PVC PANELS WITH PVC FRAME AND WEATHER STRIP SEALED EDGE.</p> <p>J <u>GLASS:</u> U-VALUE AND SHGC SHALL MEET OR EXCEED: DOORS: U-VALUE= .83 MAX. SHGC= .25 MAX. WINDOWS: U-VALUE= .50 MAX. SHGC= .25 MAX.</p>	<p>K <u>HANDLES / DEADBOLTS:</u> PROVIDE ROUNDED-STYLE STOREFRONT-TYPE PULL HANDLES ON EXTERIOR FACE WITH KEYS DEADBOLT AND PUSH BAR ON INTERIOR FACE. MAKE/MODEL PER OWNER.</p> <p>L <u>HANDLE / LOCK SET 1:</u> LEVER-TYPE LOCK SET WITH KEYS DEADBOLT. MAKE/MODEL PER OWNER.</p> <p>M <u>HANDLE / LOCK SET 2:</u> A.D.A. APPROVED LEVER-TYPE LOCK SET WITH LEVER-TYPE INTERIOR LOCK. MAKE/MODEL PER OWNER.</p> <p>N <u>HANDLE / LOCK SET 3:</u> PROVIDE 12 INCH STAINLESS STEEL DOOR HANDLE PULL AND PUSH PLATE</p> <p>O <u>DOOR FLUSH BOLTS:</u> SURFACE FLUSH BOLTS INTO HEAD AND THRESHOLD OF DOOR FRAME WITHIN 1" EMBED. MAKE/MODEL PER OWNER.</p> <p>P <u>DUMPSTER GATES:</u> CUSTOM FABRICATED HEAVY-DUTY METAL FULL-LOUVERED GATES WITH HINGES WELDED TO STEEL BOLLARDS OR ANGLES EMBEDDED INTO CONCRETE COLUMNS - PROVIDE HEAVY-DUTY METAL HANDLES ON EACH. SEE DUMPSTER ENCLOSURE ELEVATIONS. . MAKE/MODEL PER OWNER.</p> <p>Q <u>DROP-RODS:</u> PROVIDE 1-1/2" DIA. 36" LONG STEEL DROP-RODS (WITH LIFT HANDLE) TO SECURE EACH GATE IN THE OPEN AND CLOSED POSITIONS, WITH METAL SLEEVES PLACED INTO ASPHALT PAVING FOR LOCKING RODS IN BOTH POSITIONS. . MAKE/MODEL PER OWNER.</p> <p>R <u>LOW-E GLASS:</u> INSTALL COMMERCIAL-GRADE GLASS WITH LOW-E SOLAR TINTING (INSULATED WHERE INDICATED) . MAKE/MODEL PER OWNER.</p> <p>S <u>GLASS TRANSOM:</u> PROVIDE FIXED GLASS STOREFRONT TRANSOM ABOVE EXTERIOR DOOR. SEE ELEVATIONS.</p> <p>T <u>WINDOW SILL:</u> INSTALL CUSTOM 4" THICK FULL-WINDOW-WIDTH COUNTER - EXTEND 8" BEYOND FACE OF FINISH WALL AND 4" TO EITHER SIDE OF THE WINDOW .</p> <p>U <u>FIRE-RATED:</u> 90-MINUTE FIRE-RATED FLUSH STEEL PREHUNG COMMERCIAL DOOR WITH WELDED FRAME</p>
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[illegible]

DOOR SCHEDULE								
MARK	TYPE	WIDTH	HEIGHT	TYPE / MATERIAL	FRAME	FINISH	DOOR HARDWARE	DOOR/WINDOW REMARKS
01	EXTERIOR	3' - 0"	7' - 0"	STOREFRONT / METAL & GLASS	SILVER ALUM.	SILVER ALUM.	ONE	A,D,H,J,K,M,S
02	EXTERIOR	3' - 0"	6' - 8"	EXTERIOR	P11	P11	TWO	A,D,H,K,M
03	EXTERIOR	3' - 0"	6' - 8"	EXTERIOR	P12	P12	TWO	A,D,H,K,M
04	EXTERIOR	3' - 0"	6' - 8"	EXTERIOR FIRE RATED (90 MIN.)	P9	P9	THREE	A,H,K,M,U
05	EXTERIOR	3' - 0"	6' - 8"	EXTERIOR FIRE RATED (90 MIN.)	P9	P9	THREE	A,H,K,M,U
06	OVERHEAD	10' - 0"	14' - 0"	GARAGE DOOR	P12	P12	ONE	B
10	INTERIOR	3' - 0"	6' - 8"	FLUSH / SOLID CORE WOOD DOOR	P9	P9	FOUR	A,H,L
11	INTERIOR	3' - 0"	6' - 8"	FLUSH / SOLID CORE WOOD DOOR	P9	P10	SEVEN	A,L
12	INTERIOR	3' - 0"	6' - 8"	STOREFRONT / METAL & GLASS	BLACK ALUM.	BLACK ALUM.	ONE	A,D,L
13	INTERIOR	3' - 0"	6' - 8"	FLUSH / SOLID CORE WOOD DOOR	P9	P10	FIVE	A,L
14	INTERIOR	3' - 0"	6' - 8"	FLUSH / SOLID CORE WOOD DOOR	P9	P10	FIVE	A,L
15	INTERIOR	3' - 0"	6' - 8"	FLUSH / SOLID CORE WOOD DOOR	P9	P10	FIVE	A,L
16	INTERIOR	3' - 0"	6' - 8"	FLUSH / SOLID CORE WOOD DOOR	P9	P10	FIVE	A,L
17	INTERIOR	3' - 0"	6' - 8"	FLUSH / SOLID CORE WOOD DOOR	P9	P10	SIX	A,E,H,N
18	INTERIOR	3' - 0"	6' - 8"	FLUSH / SOLID CORE WOOD DOOR	P9	P10	SIX	A,E,H,N
19	INTERIOR	2' - 8"	6' - 8"	FLUSH / SOLID CORE WOOD DOOR	P9	P10	FIVE	L
20	INTERIOR	3' - 0"	6' - 8"	FLUSH / SOLID CORE WOOD DOOR	P9	P10	FIVE	A,L
21	INTERIOR	2' - 8"	6' - 8"	FLUSH / SOLID CORE WOOD DOOR	P9	P10	FIVE	L
22	INTERIOR	2' - 8"	6' - 8"	FLUSH / SOLID CORE WOOD DOOR	P9	P10	FIVE	L
23	INTERIOR	2' - 8"	6' - 8"	FLUSH / SOLID CORE WOOD DOOR	P9	P10	FIVE	L

ROOM FINISH KEY	
FLOOR TYPES	CEILING TYPES
<p>F1 POLISHED CONCRETE FLOOR: GRIND CONCRETE SMOOTH WITH DIAMOND TOOLING. ONCE GROUND, DENSIFY CONCRETE WITH A CHEMICAL DENSIFIER / HARDENER. POLISH TO SMOOTH FINISH WITH MIN. 800 GRID DIAMOND. FINISH WITH LIQUID APPLIED GUARD / SEALER</p> <p>DENSIFIER: LS SEALER, HARDENER & DENSIFIER GUARD / SEALER: LS GUARD AND PROTECTIVE TREATMENT FINISH: GLOSSY</p>	<p>C1 LAY-IN TILES 'A': MINERAL FIBER 5/8" THICK CLASS A (UL) CEILING TILES IN SUSPENDED METAL GRID</p> <p>SIZE: 24" X 24" STYLE: SQUARE EDGE METAL GRID: 15/16" SQ. LAY-IN T-GRID MAKE/MODEL: PER OWNER COLOR: PER OWNER</p>
<p>F2 TILE FLOOR TYPE 'A': COMMERCIAL-GRADE CERAMIC TILE</p> <p>SIZE: 24" X 24" MAKE/MODEL: PER OWNER COLOR: PER OWNER</p>	<p>C2 LAY-IN TILES 'B': MINERAL FIBER 5/8" THICK CLASS A (UL) CEILING TILES IN SUSPENDED METAL GRID</p> <p>SIZE: 24" X 24" STYLE: REVEALED EDGE METAL GRID: 15/16" SQ. LAY-IN T-GRID MAKE/MODEL: PER OWNER COLOR: PER OWNER</p>
<p>F3 TILE FLOOR TYPE 'B': COMMERCIAL-GRADE CERAMIC TILE</p> <p>SIZE: 24" X 24" MAKE/MODEL: PER OWNER COLOR: PER OWNER</p>	<p>C3 GYPSUM WALL BOARD: 5/8" THICK TYPE-X GYPSUM WALL BOARD CEILING OVER METAL OR WOOD FRAMING</p> <p>FINISH: SMOOTH PAINT: P8</p>
<p>F4 VINYL FLOOR TYPE: COMMERCIAL-GRADE LAY-IN VINYL</p> <p>SIZE: PER OWNER MAKE/MODEL: PER OWNER COLOR: PER OWNER</p>	PAINT TYPES
<p>F5 CARPET: COMMERCIAL-GRADE CARPET</p> <p>MAKE/MODEL: PER OWNER COLOR: PER OWNER</p>	<p>P1 PAINT TYPE 'A': SATIN LATEX (2-COATS) MAKE/MODEL: SHERWIN WILLIAMS, PRO-INDUSTRIAL COLOR: BLUE ACCENT WALLS</p>
<p>F6 PAINTED OR STAINED CONCRETE: ROLLED-ON COMMERCIAL-GRADE CONCRETE PAINT OR STAIN</p> <p>MAKE/MODEL: PER OWNER COLOR: PER OWNER</p>	<p>P2 PAINT TYPE 'B': SATIN LATEX (2-COATS) MAKE/MODEL: SHERWIN WILLIAMS, PRO-INDUSTRIAL COLOR: WHITE WALLS</p>
BASE TYPES	<p>P3 PAINT TYPE 'C': SATIN LATEX (2-COATS) MAKE/MODEL: SHERWIN WILLIAMS, PRO-INDUSTRIAL COLOR: GRAY ACCENT WALLS</p>
<p>B1 VINYL BASE: COMMERCIAL-GRADE 6" HIGH 1/8" THICK COLOR INTEGRATED VINYL WALL BASE</p> <p>SHAPE: COVE-TOE MAKE/MODEL: PER OWNER COLOR: BLACK / CHARCOAL</p>	<p>P4 PAINT TYPE 'D': SATIN LATEX (2-COATS) MAKE/MODEL: SHERWIN WILLIAMS, DURATION COLOR: TRDI BLUE 1</p>
<p>B2 VINYL BASE: COMMERCIAL-GRADE 6" HIGH 1/8" THICK COLOR INTEGRATED VINYL WALL BASE</p> <p>SHAPE: COVE-TOE MAKE/MODEL: PER OWNER COLOR: WHITE</p>	<p>P5 PAINT TYPE 'E': SATIN LATEX (2-COATS) MAKE/MODEL: SHERWIN WILLIAMS, DURATION COLOR: TRDI BLUE 2</p>
WALL TYPES	<p>P6 PAINT TYPE 'F': SATIN LATEX (2-COATS) MAKE/MODEL: SHERWIN WILLIAMS, DURATION COLOR: TRDI BLUE 3</p>
<p>W1 GYPSUM WALL BOARD 'A': 5/8" THICK GYPSUM WALL BOARD</p> <p>FINISH: SMOOTH COLOR: PER ROOM SCHEDULE</p>	<p>P7 PAINT TYPE 'G': SATIN LATEX (2-COATS) MAKE/MODEL: SHERWIN WILLIAMS, DURATION COLOR: TRDI BLUE 4</p>
<p>W2 GYPSUM WALL BOARD 'B': 5/8" THICK GYPSUM WALL BOARD</p> <p>FINISH: SMOOTH COLOR: PER ROOM SCHEDULE</p>	<p>P8 PAINT TYPE 'H': FLAT LATEX (2-COATS) MAKE/MODEL: SHERWIN WILLIAMS, CEILING COLOR: HIGH REFLECTIVE WHITE</p>
<p>W3 TILE WAINSCOTING: COMMERCIAL-GRADE 6"X6" STAIN-RESISTANT CERAMIC TILE OVER 5/8" THICK WATER-RESISTANT GYPSUM WALL BOARD FROM FINISHED FLOOR UP 60" W/ 6"X12" CONTRASTING TILE BANDS, TOP & BOTTOM</p> <p>MAKE/MODEL: PER OWNER COLOR/TEXTURE: PER OWNER</p>	<p>P9 PAINT TYPE 'I': SEMI-GLOSS (2-COATS) MAKE/MODEL: SHERWIN WILLIAMS, DOOR AND TRIM ENAMEL COLOR: BLACK OR CHARCOAL DOORS AND DOOR TRIM</p>
<p>W4 TILE WAINSCOTING: COMMERCIAL-GRADE 24"X24" STAIN-RESISTANT CERAMIC TILE OVER 5/8" THICK WATER-RESISTANT GYPSUM WALL BOARD FROM FINISHED FLOOR UP 60" W/ 6"X12" CONTRASTING TILE BANDS, TOP & BOTTOM</p> <p>MAKE/MODEL: PER OWNER COLOR/TEXTURE: PER OWNER</p>	<p>P10 PAINT TYPE 'J': SEMI-GLOSS (2-COATS) MAKE/MODEL: SHERWIN WILLIAMS, DOOR AND TRIM ENAMEL COLOR: WHITE DOORS AND DOOR TRIM</p>
	<p>P11 PAINT TYPE 'K': SEMI-GLOSS (2-COATS) MAKE/MODEL: EXTERIOR METAL COLOR: TO MATCH MT-01</p>
	<p>P12 PAINT TYPE 'L': SEMI-GLOSS (2-COATS) MAKE/MODEL: EXTERIOR METAL COLOR: TO MATCH MT-02</p>

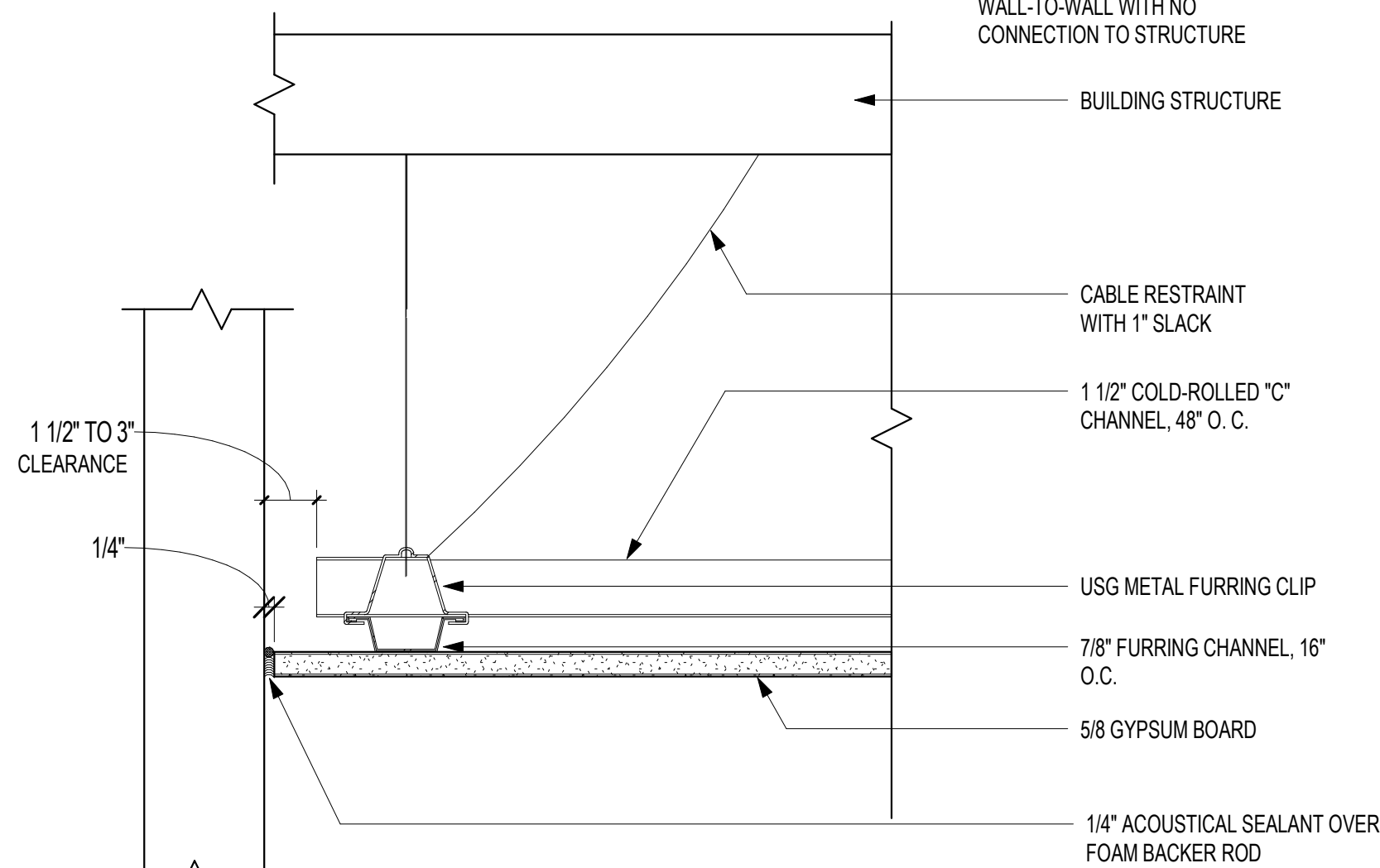
<h1 style="text-align: center;">ROOM FINISH SCHEDULE</h1>								
No.	Room Name	Ceiling Height	Floor Finish	Base	Walls	Paint Type	Ceiling	Area
100	Lobby	13' - 0"	F1	B1	SEE A4.1	P1	C3	135 SF
101	ADMIN OFFICE	12'- 0"	F1	B2	W1	P1	C1	113 SF
102	LARGE CONFERENCE	12'- 8"	F5	B2	SEE A4.1	P1	C1, C3	240 SF
103	MANAGER'S OFFICE	12'- 0"	F1	B2	W1	P1	C1	152 SF
104	OFFICE	12'- 0"	F1	B2	W1	P2	C1	88 SF
105	COPY / STORAGE	12'- 0"	F1	B2	W1	P2	C1	71 SF
106	SMALL CONF. / 2 PERSON OFFICE	12'- 0"	F1	B2	W1	P2	C1	146 SF
107	WOMEN'S RESTROOM	10'- 0"	F1	B2	W3	P2	C1	116 SF
108	MEN'S RESTROOM	10'- 0"	F1	B2	W3	P2	C1	116 SF
109	CORRIDOR	12'- 0"	F1	B2	PT-3	P3	C1	51 SF
110	OPEN OFFICE	12'- 0"	F1	B2	SEE A4.2	P3	C1	608 SF
111	STORAGE	8'- 0"	F1	B2	PT-2	P2	C1	8 SF
112	BREAK ROOM	12'- 0"	F1	B2	PT-2	P2	C1	159 SF
113	JANITOR'S CLOSET	9'- 0"	F1	B2	PT-2	P2	C1	31 SF
114	STORAGE	9'- 0"	F1	B2	PT-2	P2	C1	26 SF
115	DATA	9'- 0"	F1	B2	PT-2	P2	C1	41 SF
116	WAREHOUSE	17'- 3"	F1	N/A	N/A	N/A	N/A	3061 SF 5160 SF

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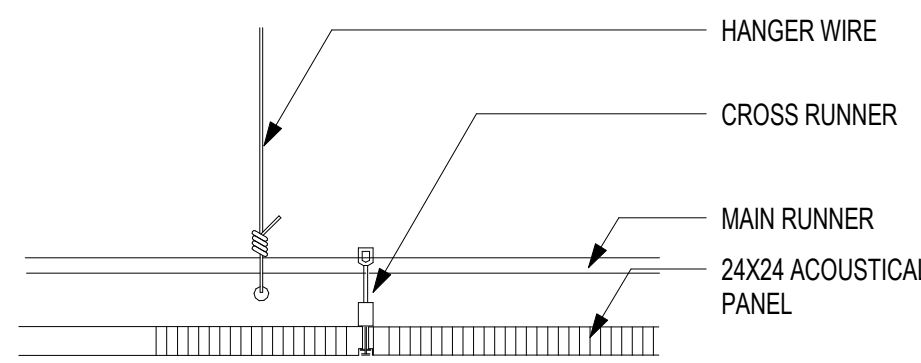
A6.0

ACOUSTICALLY RATED WALLS

1. AT DOUBLE STUD WALLS, DO NOT BRIDGE BETWEEN ROWS OF STUDS EXCEPT AT HEAD AND SILL. USE UL1493.
2. DO NOT LOCATE OUTLET BOXES OPPOSITE ONE ANOTHER IN ACOUSTICALLY RATED PARTITIONS. LOCATE OUTLET BOXES AT LEAST ONE STUD BAY AND 16-INCHES APART. IF LOCATED BACK TO BACK, ADD LAYER OF DRYWALL BETWEEN OUTLET BOXES.
3. SEAL THE OUTLET BOXES WITH PUTTY PADS SUCH AS LOWVYRS OUTLET BOX PADS, AND CAULK THE PERIMETER USING ACOUSTICAL SEALANT.
4. AT ALL ACOUSTICALLY RATED SINGLE-STUD WALLS, USE 25 GA METAL STUDS.
5. ALL ACOUSTICALLY RATED WALLS ACHIEVE A MINIMUM STC RATING OF 50.
6. WALL TYPES "C" AND "R" COMPLY WITH TEST REPORT: "KAISER GYPSUM TEST KG-163".
7. WALL TYPE "A" COMPLIES WITH TEST REPORT: "NATIONAL GYPSUM CO. TEST NGC 3056".
8. PROVIDE A 1/4-INCH CAULKED GAP AT ALL INTERSECTIONS AND PENETRATIONS OF SOUND-RATED PARTITIONS.



CEILING ASSEMBLY C-3 4
3" = 1'-0"



CEILING ASSEMBLY C-1

GENERAL PARTITION NOTES

1. REFER TO PARTITION LEGEND THIS SHEET FOR 'FIRE RATING,' 'CONSTRUCTION TYPE' AND 'STUD SIZE.' SYMBOLS USED TO IDENTIFY PARTITIONS ON THE DRAWINGS.
2. REFER TO PARTITION LEGEND THIS SHEET FOR 'MODIFIERS' WHICH ARE USED TO IDENTIFY ADDITIONAL REQUIREMENTS TO BASIC PARTITION TYPE.
3. ALL METAL STUDS SHALL BE SPACED 16" O.C. U.O.N.
4. ALL FIRE RATED PARTITIONS SHALL BE 5/8" THICK TYPE 'X' GYPSUM BOARD.
5. ALL PARTITIONS IN OCCUPIED SPACES THAT HAVE PLUMBING TO BE INSULATED. STUDS TO BE FILLED WITH BATT INSULATION.
6. PARTITIONS IN OR ADJOINING SPACES WITH CEILING FINISHES AND WITHOUT SPECIAL REQUIREMENTS SHALL EXTEND TO THE GYPSUM BOARD TO 6" MINIMUM ABOVE THE HIGHEST ADJACENT CEILING.
7. ALL ACoustical WALLS TO HAVE ASSEMBLY EXTEND FULL HEIGHT OF SPACE FROM T.O. SLAB TO B.O. DECK SEAL ALL EDGES AS REQUIRED.
8. ALL FIRE-RATED WALLS TO HAVE ASSEMBLY EXTEND FULL HEIGHT OF SPACE FROM T.O. SLAB TO B.O. DECK SEAL ALL EDGES AS REQUIRED.
9. PENETRATIONS IN FIRE-RATED CONSTRUCTION SHALL BE PROTECTED BY AN APPROVED FIRE STOP MATERIAL, IN ACCORDANCE WITH 2018 IBC AND 2018 IFC.
10. MAINTAIN RATING AROUND RECESSED FIXTURES.
11. ALL ELECTRICAL ROOMS WITH TRANSFORMERS AND ALL MECHANICAL ROOMS ADJACENT TO TENANT SPACES TO HAVE SOUND INSULATION APPLIED TO 25% OF GROSS INTERIOR WALL SURFACE. APPLY INSULATION AFTER WALL MOUNTED EQUIPMENT HAS BEEN INSTALLED.
12. PROVIDE CONTINUOUS FIRE RETARDANT TREATED PLYWOOD BACKING AT ALL ELECTRICAL ROOMS AND COORDINATE BACKING LOCATIONS WITH ELECTRICAL PANEL LOCATIONS.
13. WHEN PARTITION RUNS PARALLEL TO ROOF STRUCTURE, SPAN PURLINS WITH 14 GA 6" CONTINUOUS PLATE.
14. WHEN PARTITION RUNS PERPENDICULAR TO ROOF STRUCTURE, GYPSUM BOARD TO EXTEND INTO 'PURLIN AREAS'.
15. AT PARTITIONS SCHEDULED TO RECEIVE CERAMIC TILE FINISH, PROVIDE WATER RESISTANT TYPE GYPSUM WALL BOARD. INSTALLATION OF WATER RESISTANT GYPSUM BOARD OR BACKER BOARD ASSEMBLY SHOULD CONFORM TO REQUIREMENTS FOR FIRE-RESISTANCE RATING INDICATED.
16. PROVIDE ADEQUATE STUD REINFORCING WHERE STUDS ARE TO BE CUT FOR PIPING DISTRIBUTION.
17. CONTRACTOR SHALL COORDINATE ALL ANCHORS INTO THE SLAB, FROM ABOVE & BELOW, WITH ELECTRICAL CONDUITS IN THE SLAB.
18. TILE BACKER BOARD (TB) REQUIRED AT ALL TUB AND SHOWER WALLS. SEE PLANS, ENLARGED BATHROOM PLANS, AND DETAILS FOR LOCATIONS.
19. PROVIDE 2x6 GA STUDS U.O.N.
20. CONTRACTOR TO PROVIDE SPECIFIC REFERENCES IN FIELD FOR INSPECTION AND VERIFICATION FOR ALL FIRE RATED/ SOUND RATED ASSEMBLIES, I.E. GYP CATALOG REFERENCE #, CODE REFERENCE #, AND LARR #, OR ICC #. COMPLETE NOTES FROM THE STANDARDS FOR EACH DETAIL MUST BE PROVIDED W/ IN THE PLAN. 2-HOUR SHAFTS (STAIRS, ELEVATORS, TRASH/ RECYCLING CHUTES, MECH SHAFTS, ETC.), 1-HOUR WALLS BETWEEN UNITS AND ANY OTHER USES, ETC. STC 50 IS ALSO REQUIRED FOR ALL WALLS THAT SEPARATE A UNIT FROM OTHER UNITS AND UNITS FROM ANY OTHER USES SUCH AS SHAFTS, CORRIDORS, LAUNDRY ROOMS, STAIRS, ETC.

DUNCAN
ARCHITECTS

TRDI OFFICE AND WAREHOUSE

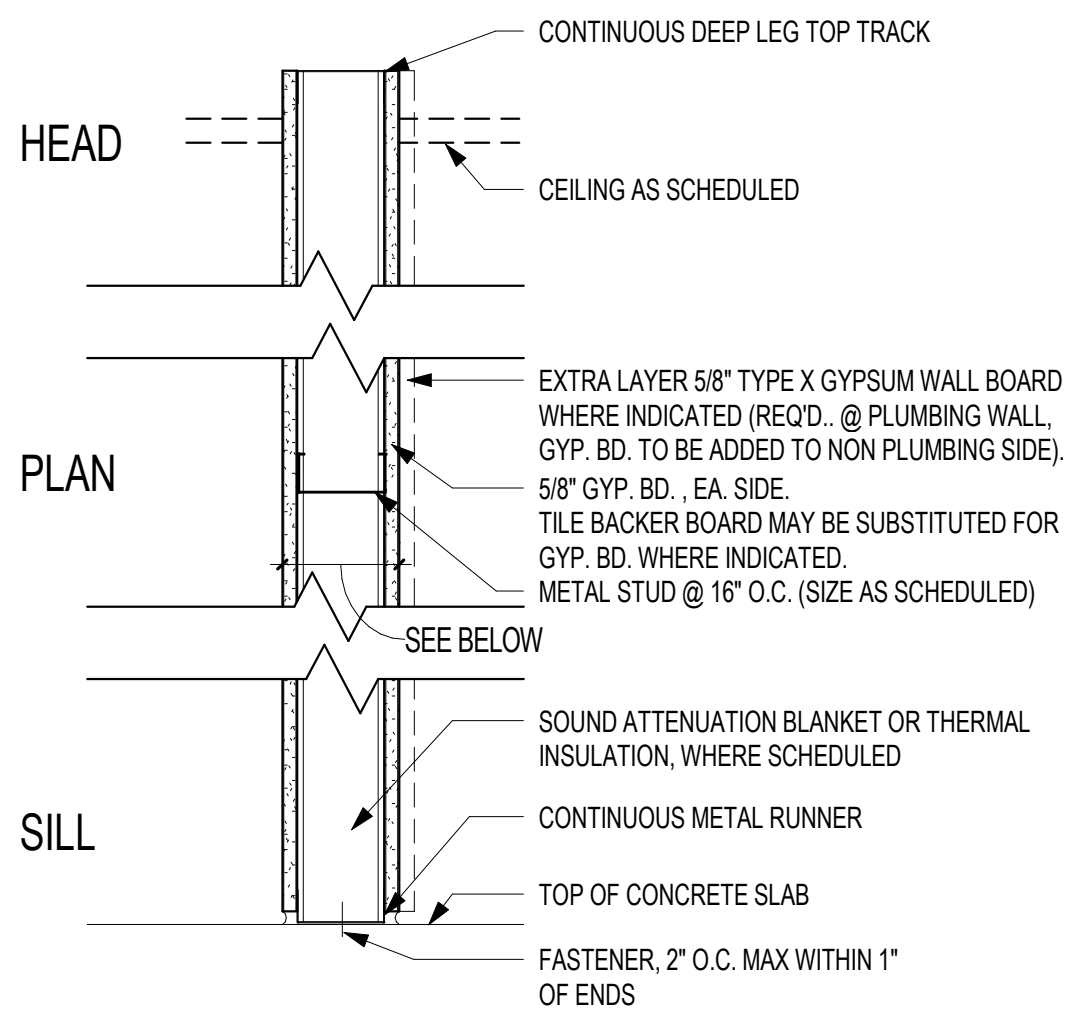
941 W. SHARM DR.
PHARR, TX 78577




<u>OWNER</u>	<u>ARCHITECT</u>
TRDI	DUNCAN ARCHITECTS LLC
425 SOLEDAD, SUITE 800	804 PECAN BLVD, SUITE 113
SAN ANTONIO, TX 78205	McALLEN, TX 78501
210-572-0402	956-443-3755

<u>CIVIL ENGINEER</u>	<u>MEP ENGINEER</u>
RGV STRATA	RO ENGINEERING, PLLC
4900 TEXAN ROAD	2705 E. DAVIS RD.
MISSION, TX 78574	EDINBURG, TX 78540
956-802-7328	(956) 292-3336

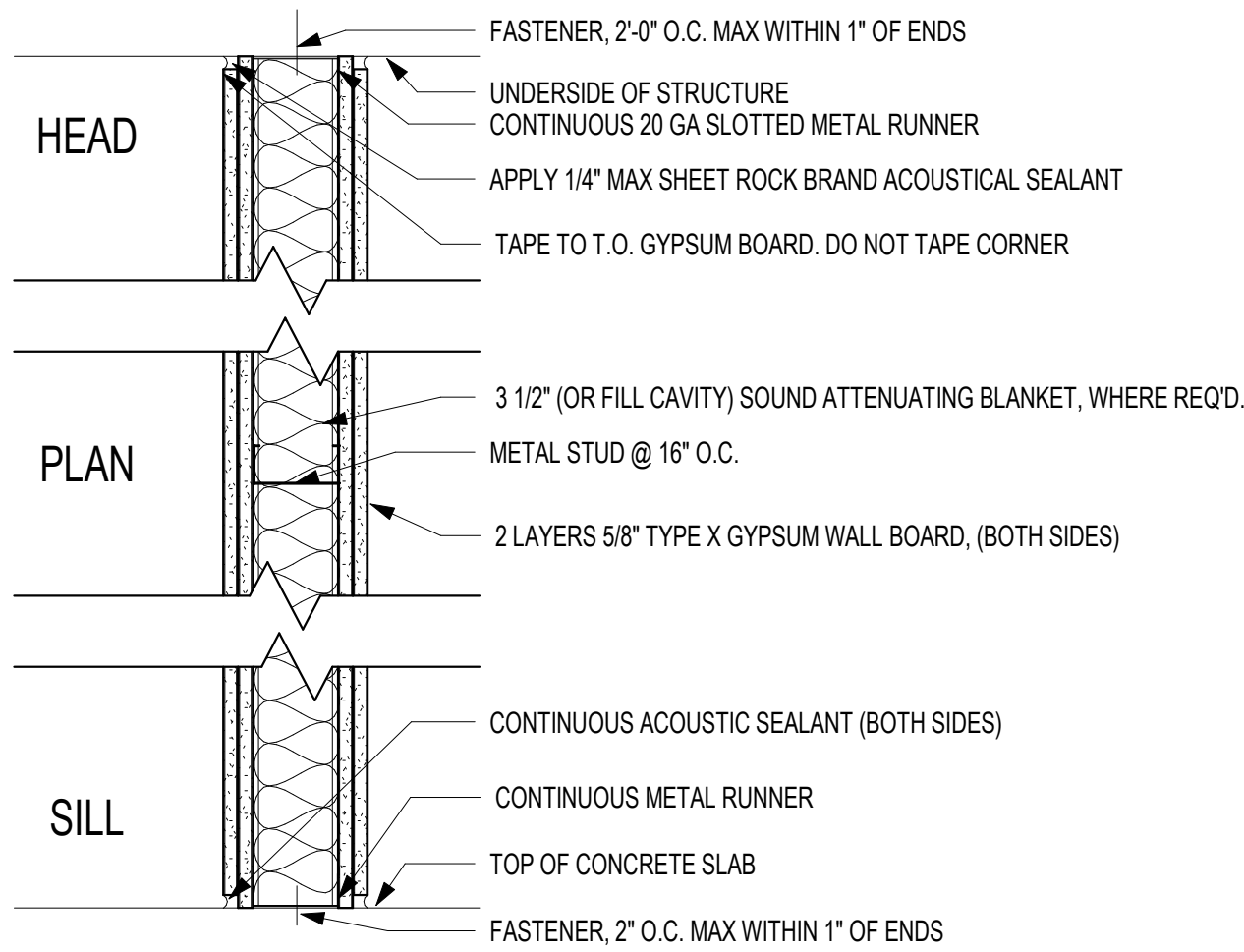
<u>LANDSCAPE ARCHITECT</u>	<u>STRUCTURAL ENGINEER</u>
HEFFNER DESIGN TEAM	ATLAS ENGINEERING
4100 N. 22ND STREET	CONSULTANTS, LLC
McALLEN, TX 78504	500 SOUTH 11TH STREET
956-540-7850	McALLEN, TX 78501
	956-379-3857

P.E.M.B. SUPPLIER & E.O.R.

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WALL TYPE	CHANNEL/ STUD SIZE	OVERALL DIMENSION	RATING	UL DESIGN #	LIMITING HEIGHT	
					25 GA	20 GA
	3 5/8"	4-7/8"	NONE (NON-COMBUSTIBLE)	-	14'-4"	15'-8"
	3 5/8"	5-1/2"	NONE (NON-COMBUSTIBLE)	-	14'-4"	15'-8"
	6"	7-1/4"	NONE (NON-COMBUSTIBLE)	-	19'-9"	23'-2"

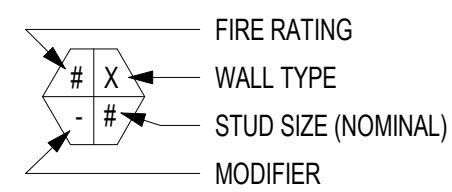
TYPE P-NON COMBUSTIBLE WALL 2



WALL TYPE	CHANNEL/ STUD SIZE	OVERALL DIMENSION	RATING	UL DESIGN #	SOUND ATTENUATION BLANKET	LIMITING HEIGHT	
						25 GA	20 GA
	3-5/8"	6-1/8"	2-HOUR	U411	3-1/2"	14'-4"	N/A
	3-5/8"	6-1/8"	2-HOUR	U411	-	14'-4"	N/A
	3-5/8"	6-1/8"	2-HOUR	U411	3-1/2"	14'-4"	N/A
	6"	8-1/2"	2-HOUR	U411	-	19'-9"	N/A
	6"	8-1/2"	2-HOUR	U411	3-1/2"	19'-9"	N/A

TYPE R-RATED WALL (2 HOUR)

WALL PARTITION LEGEND



FIRE RATING

30 = 30 MINUTES
1 = 60 MINUTES
2 = 120 MINUTES

WALL TYPE

P = NON-COMBUSTIBLE WALL PARTITION
R = FIRE RATED WALL

STUD SIZE

3 = 3 5/8" STUD
6 = 5 5/8" STUD

MODIFIERS

B = FOR ACoustIC RATED WALLS, BATT INSULATION.
(SEMI-RIGID MINERAL FIBER MAT)
C = REPLACE GYPSUM WALL BOARD WITH
CEMENTITIOUS TILE BACKING BOARD AT TILE
D = EXTRA LAYER OF CEMENTITIOUS TILE BACKING
BOARD ADDED TO ASSEMBLY. DO NOT REPLACE GWB.
M = 1 COURSE 8" CMU CURB AT BASE W/ DOWEL AND
REINFORCING. CENTER STUD ON CMU CURB.
N = ADD EXTRA LAYER OF DENSEMENT SHEATHING
ON EXTERIOR SIDE OF WALL
P = FOR ACoustICALLY RATED WALLS - BATT
INSULATION (SEMI-RIGID MINERAL FIBER MAT), REQ'D
ONLY AT STUD CAVITIES WITH PLUMBING PIPE.
T = THERMAL INSULATION (FLEXIBLE GLASS FIBER, R=13)

T = THERMAL INSULATION (FLEXIBLE GLASS FIBER, R=13)

FEBRUARY 16TH, 2024
CONSTRUCTION
DOCUMENTS FOR
BIDDING

NOT FOR REGULATORY APPROVAL,
PERMITTING, OR CONSTRUCTION

SCALE: As indicated
DRAWN BY: DUNCAN ARCHITECTS
DATE: 16 FEBRUARY 2024

PARTITION SCHEDULE

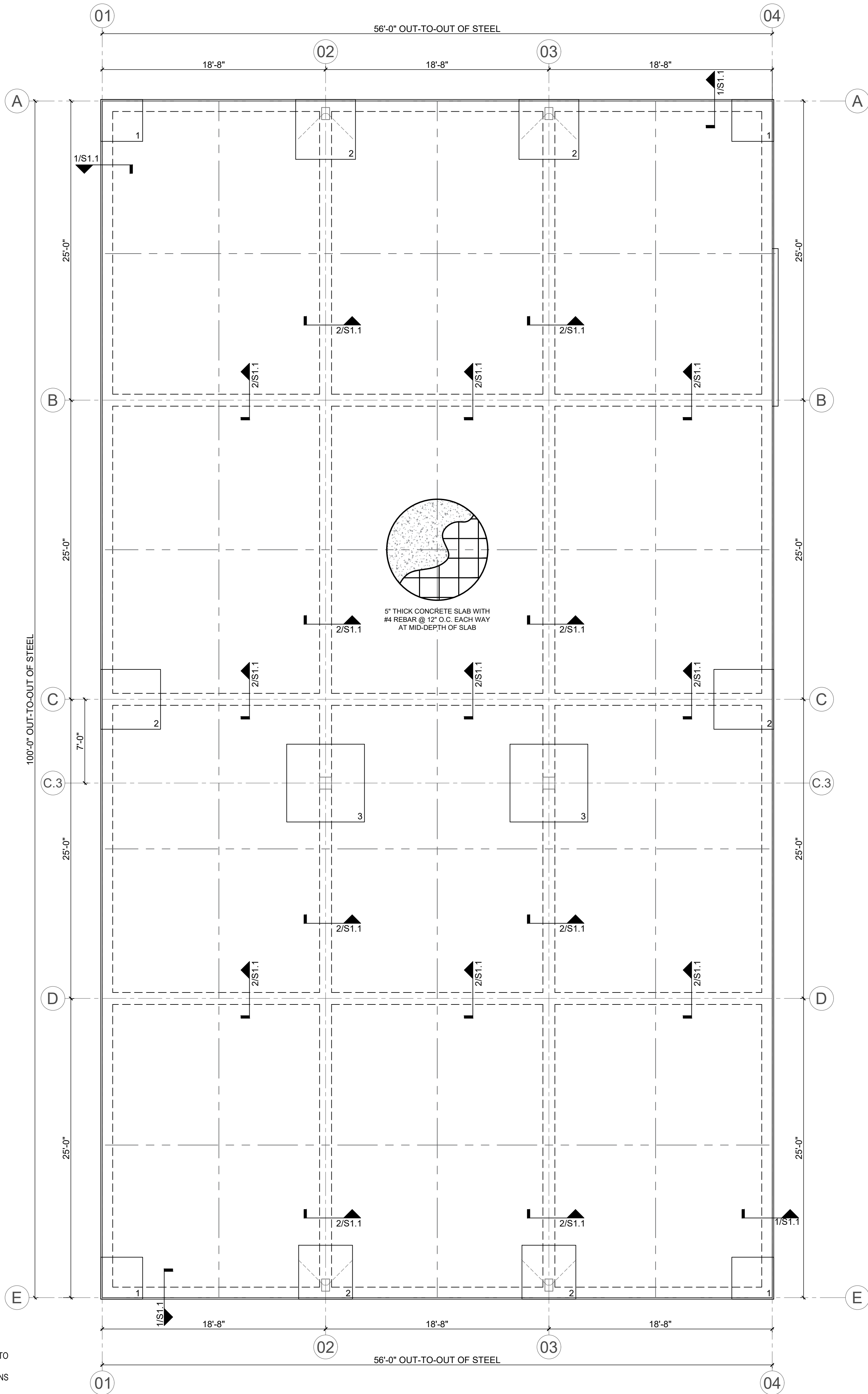
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PLAN NOTES

1. MIN. 5" THICK CONCRETE SLAB w/ #4 BARS @ 12" O.C. MID-DEPTH OF SLAB.
2. MAX 5' SLUMP UPON DELIVERY.
3. MIN. 3000 PSI CONCRETE @ 28 DAYS.
4. CONCRETE SHALL BE CURED FOR AT LEAST 7 DAYS PRIOR TO CONSTRUCTION. NO WALLS SHALL BE ERECTED DURING THAT SPAN.
5. CONTRACTOR TO VERIFY ALL DIMENSIONS WITH ARCHITECTURAL PLANS PRIOR TO FORMING.

FOUNDATION PLAN

SCALE 3/32"=1'



DESIGN CRITERIA

1. DESIGN LOADS, STRUCTURAL ANALYSIS AND PREPARATIONS OF STRUCTURAL MEMBERS ARE BASED ON THE FOLLOWING:

- CODE: 2018 IBC
- WIND DESIGN: ASCE 07 - 16
- ROOF LIVE LOAD: 20 PSF
- ROOF DEAD LOAD: 10 PSF

THE SPECIFICATION PRESENTED ON THESE PLANS ARE PRELIMINARY. ONCE FINAL, SEALED PLANS ARE AVAILABLE FOR THE PROPOSED PAVILION STRUCTURE. A REVIEW OF THE SEALED PLANS MUST BE MADE TO MAKE SURE THAT THESE SPECIFICATIONS ARE IN ACCORDANCE WITH THE THE APPLIED LOADINGS AND DESIGN CRITERIA PRESENTED ON THE SEALED PLANS.

CAST-IN-PLACE CONCRETE

1. VERIFY ALL DIMENSIONS. COORDINATE WITH ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION AND NOTIFY ARCHITECT AND OR ENGINEER OF ANY DISCREPANCIES.
2. ALL CONCRETE SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTED SPECIFICATION, ACI #301 AND ACI #318, LATEST EDITION.
3. THE MINIMUM 28 DAYS CYLINDER STRENGTH SHALL BE AS FOLLOWS:

SYSTEM	STRENGTH AT 28 DAYS	MAXIMUM SLUMP	MAXIMUM AGGREGATE
SLAB-ON-GRADE	3000 PSI	5"	1-1/2"
4. ALL CONDUIT OR PLUMBING LINES IN SLAB SHALL BE PLACED BELOW SLAB REINFORCING. ALL CONDUIT TO BE NO GREATER THAN 1" DIAMETER AND TO BE PLACED IN CENTER OF SLAB. NO PLUMBING LINES GRATER THAN 1" ALLOWED IN THE SLAB.
5. ALL OPENINGS IN SLAB (FOR PIPING, DRAINS, ETC.) SHALL BE SEALED WITH 1/2 SEALANT '2A'(SELF-LEVELING 2-PART POLYURETHANE).
6. THE VAPOR RETARDANT BELOW ALL SLAB AREAS SHALL BE 10 MIL POLYETHYLENE WITH ALL JOINTS LAPPED 12" CONTINUOUS AND SEALED. DROP VAPOR BARRIER DOWN THE SIDES OF ALL BEAM TRENCHES. DO NOT PLACE VAPOR BARRIER ACROSS TRENCH BOTTOM.
7. CURING COMPOUND SHALL BE PLACED WITHIN FOUR (4) HOURS AFTER CONCRETE HAS BEEN PLACED. CONCRETE SHALL BE MAINTAINED ABOVE 50 DEGREES F AND IN A MOIST CONDITION FOR AT LEAST THE FIRST SEVEN (7) DAYS AFTER PLACEMENT.
8. CONCRETE COVER FOR REINFORCING AS INDICATED.
9. ANCHOR BOLTS, DOWELS, INSERTS, ETC. SHALL BE SECURELY TIED IN PLACE PRIOR TO PLACING CONCRETE.
10. REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR ALL MOLDS, GROOVES, REGLETS, ORNAMENTAL CLIPS, PIPES, CONDUITS, INSERTS, ETC. TO BE CAST IN CONCRETE. PROVIDE OVERSIZED SLEEVES FOR PLUMBING AND ELECTRICAL CONDUITS AND PIPES. NO PIPES OR DUCTS SHALL BE PLACED IN CONCRETE, FOOTINGS, OR SLAB UNLESS SPECIFICALLY DETAILED IN THESE PLANS, OR AS DIRECTED BY THE ENGINEER.
11. UTILITIES THAT PROJECT THROUGH SLAB FLOORS SHOULD BE DESIGNED WITH EITHER SOME DEGREE OF FLEXIBILITY OR WITH SLEEVES IN ORDER TO PREVENT DAMAGE TO THE LINES SHOULD VERTICAL MOVEMENT OCCUR.
12. CONCRETE TO BE CURED IN ACCORDANCE WITH ACI RECOMMENDATIONS. PROPOSED METHOD OF CURING TO BE COORDINATED WITH ENGINEER PRIOR TO CONCRETE PLACEMENT.

REINFORCING STEEL

1. ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING BARS, AND ALL ACCESSORIES UNLESS OTHERWISE NOTED, SHALL BE IN ACCORDANCE WITH THE ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE". ACI #315 LATEST EDITION.
2. ALL REINFORCING BARS SHALL BE NEW BILLET STEEL AND SHALL CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS.
3. PROVIDE CORNER BARS TOP AND BOTTOM AT ALL BEAM CORNERS AND DEAD END BEAM INTERSECTIONS. BARS TO EQUAL SIZE AND QUANTITY OF THE NOTED BEAM STEEL. BARS SHALL LAP BEAM REINFORCEMENT 40 BAR DIAMETERS.
4. BARS DETAILED AS CONTINUOUS SHALL BE LAPPED 40 BAR DIAMETERS AT SPLICES.
5. EXTEND THE SLAB REINFORCING STEEL, PERPENDICULAR TO THE BEAM, TO THE TOP OUTSIDE REINFORCING BAR OF PERIMETER BEAMS. START THE SLAB REINFORCING STEEL, PARALLEL TO THE BEAM, NOT MORE THAN 6" FROM THE TOP INSIDE REINFORCING BAR OF PERIMETER BEAMS.
6. PROVIDE #4 "Z" BARS AT 12" ON CENTER WHERE THE SLAB STEPS DOWN MORE THAN 3". THE "Z" BARS AT 12" ON CENTER WHERE THE SLAB STEPS DOWN MORE THAN 3". THE "Z" BARS SHALL LAP THE MAIN SLAB REINFORCING STEEL 40 BAR DIAMETERS.

FOOTING SCHEDULE				
TYPE	DEPTH (FT)	SIZE (FT)	REINFORCEMENT	DETAIL
1	3.0	3.5 x 3.5	#5 @ 6" O.C. E.W. BOT.	4/SD1
2	3.0	4.5 x 4.5	#5 @ 6" O.C. E.W. BOT.	
3	3.0	6.5 x 6.5	#5 @ 6" O.C. E.W. BOT.	

GENERAL NOTES:

1. THE FOLLOWING SPECIFICATIONS ARE AN OUTLINE OF MINIMUM MATERIAL REQUIREMENTS AND THEIR APPLICATION. MANUFACTURER SPECIFICATION AND LOCAL CODE REQUIREMENTS, WHEN IN EXCESS OF MINIMUM SPECIFICATION, SHALL CONTROL. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW AND SUBMIT ALL SHOP DRAWINGS AND REPORT ALL DOCUMENT DISCREPANCIES TO THE STRUCTURAL ENGINEER PRIOR TO FABRICATION OR ERECTION.
2. AT CONSTRUCTION ISSUE, THESE DRAWINGS REPRESENT STRUCTURAL COMPONENTS IN THEIR FINAL AND FINISHED STATE. CONSTRUCTION PROCEDURES, BRACING, METHODS, SAFETY PRECAUTIONS OR MECHANICAL REQUIREMENTS USED TO ERECT THEM ARE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR OR SUBCONTRACTOR DOING THE WORK.

GEOTECHNICAL ENGINEERING REPORT

THESE PLANS AND GENERAL NOTES HAVE BEEN PREPARED WITH THE DESIGN RECOMMENDATIONS PRESENTED IN ATLAS ENGINEERING CONSULTANTS GEOTECHNICAL ENGINEERING REPORT NO. GEO22-041. THE FOLLOWING FOUNDATION DESIGN CRITERIA WAS USED IN THE FOUNDATION DESIGN :

MINIMUM GRADE BEAM WIDTH:	12 INCHES
MINIMUM WIDENED SECTION WIDTH:	24 INCHES
ALLOWABLE SOIL BEARING CAPACITY:	1,500 PSF (CONTINUOUS FOOTING) 1,800 PSF (SPREAD FOOTING)

EXCAVATIONS AND BACKFILL REQUIREMENTS

THE FOLLOWING SITE PREPARATION IS REQUIRED PRIOR TO CONSTRUCTION.

1. IN ORDER TO EXPOSE CLEAN SUBGRADE SOILS, EXCAVATE TO A DEPTH OF AT LEAST 2.5 FEET AND REMOVE ALL VEGETATION AND DELETERIOUS MATERIALS FROM THE SURFACE. THE EXCAVATION SHOULD EXTEND A MINIMUM OF FIVE (5) FEET BEYOND THE PERIMETER OF THE BUILDING. POSITIVE DRAINAGE FROM THE STRUCTURE SHOULD BE PROVIDED.
2. THE EXPOSED SUBGRADE SOILS SHOULD BE COMPACTED TO 98 PERCENT OF THE STANDARD PROCTOR (ASTM D698) FOR A DEPTH OF AT LEAST 8 INCHES BELOW THE EXPOSED SURFACE. THE MOISTURE CONTENT OF THE COMPACTED SUBGRADE SOILS SHOULD BE WITHIN THE RANGE OF OPTIMUM TO 4 PERCENT ABOVE THE OPTIMUM MOISTURE CONTENT.
3. AFTER SUBGRADE PREPARATION AND OBSERVATION HAVE BEEN COMPLETED, A MINIMUM OF 3.0 FEET OF SELECT FILL, MEETING THE SPECIFICATIONS PRESENTED BELOW, SHOULD BE PLACED BACK ON TOP OF THE PREPARED SUBGRADE SOILS. THE SOILS SHOULD BE PLACED IN MAXIMUM 8-INCH LOOSE LIFTS AND COMPACTED TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698.
4. THE MOISTURE CONTENT, AS DETERMINED BY ASTM D698, SHOULD BE MAINTAINED UNTIL CONSTRUCTION IS COMPLETE. EACH LIFT OF COMPACTED FILL SHOULD BE TESTED BY A TESTING LABORATORY PRIOR TO PLACEMENT OF SUBSEQUENT LIFTS.
5. PROPERLY COMPACTED AND TESTED SELECT FILL SHOULD BE USED TO ACCOMMODATE RAISE IN GRADE TO ACHIEVE THE DESIRED FINISHED FLOOR ELEVATION. SELECT FILL SHOULD HAVE A MAXIMUM LIQUID LIMIT OF 40 PERCENT, A PLASTICITY INDEX BETWEEN 7 AND 18 PERCENT AND A MAXIMUM PARTICLE SIZE NOT EXCEEDING 4 INCHES OR ONE-HALF THE LOOSE LIFT THICKNESS, WHICHEVER IS SMALLER.
6. SITE SHALL BE GRADED SO THAT WATER DOES NOT POND WITHIN 10 FEET OF THE PERIMETER FOUNDATION BEAM DURING OR AFTER CONSTRUCTION. THE SLOPE OF THE GROUND SURFACE AWAY FROM THE STRUCTURE SHOULD BE A MINIMUM OF 5% FOR A DISTANCE OF AT LEAST 10 FEET. ELEVATION OF GROUND SURFACE ADJACENT TO THE FOUNDATION SHOULD BE AT LEAST 6 INCHES BELOW FINISH FLOOR.
7. FOUNDATION CONCRETE SHALL NOT BE PLACED ON SELECT FILL SOILS THAT HAVE BEEN DISTURBED BY RAINFALL OR WATER SEEPAGE. IF BEARING SOILS ARE SOFTENED BY WATER INTRUSION, OR BY DESICCATION, THE UNSUITABLE SOILS SHALL BE REMOVED FROM THE FOUNDATION EXCAVATION AND BE REPLACED WITH PROPERLY COMPACTED SELECT FILL PRIOR TO PLACEMENT OF FOUNDATION CONCRETE. ALL SOIL REMOVAL AND REPLACEMENT COSTS, INCLUDING ASSOCIATED COSTS TO REMOVE AND REINSTALL REINFORCEMENT AND VAPOR RETARDER MATERIALS, SHALL BE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR. DEPTH OF SOIL REMOVAL AND RECOMPACTION REQUIREMENTS SHALL BE COORDINATED WITH THE GEOTECHNICAL ENGINEER.

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NOT FOR CONSTRUCTION



PROJECT:

914 WEST SHARM DRIVE
PHARR, TEXAS

PROJECT NO.: ST24-016

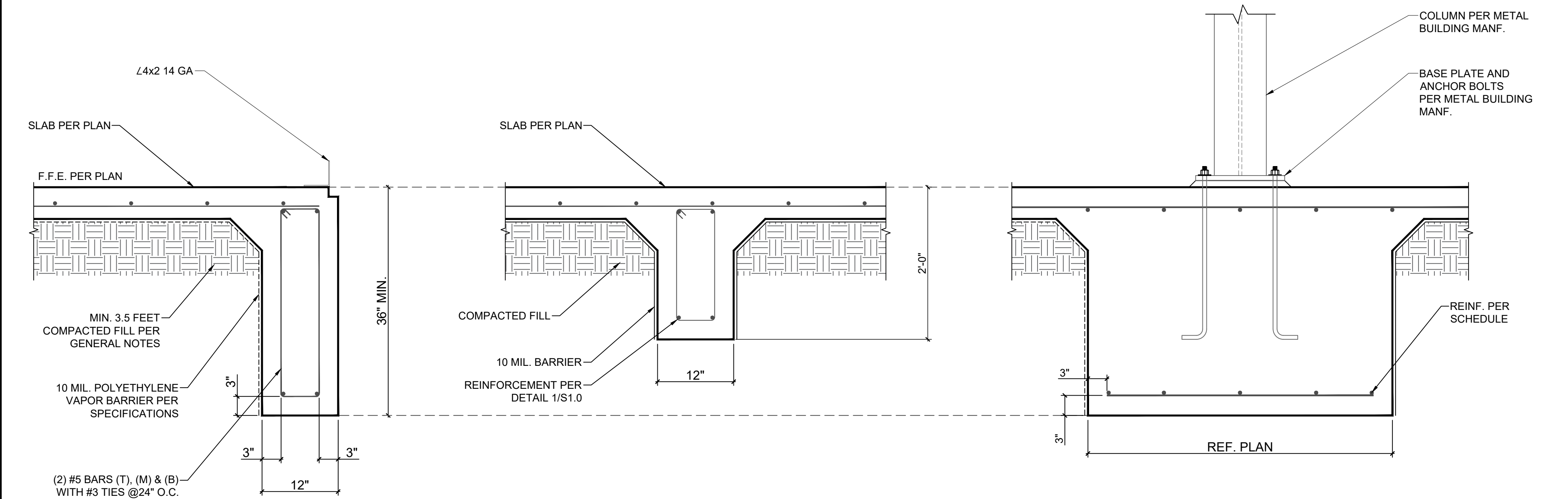
DATE: 02/02/2024

DRAWN BY: X.G.

REVISION:

FOUNDATION PLAN

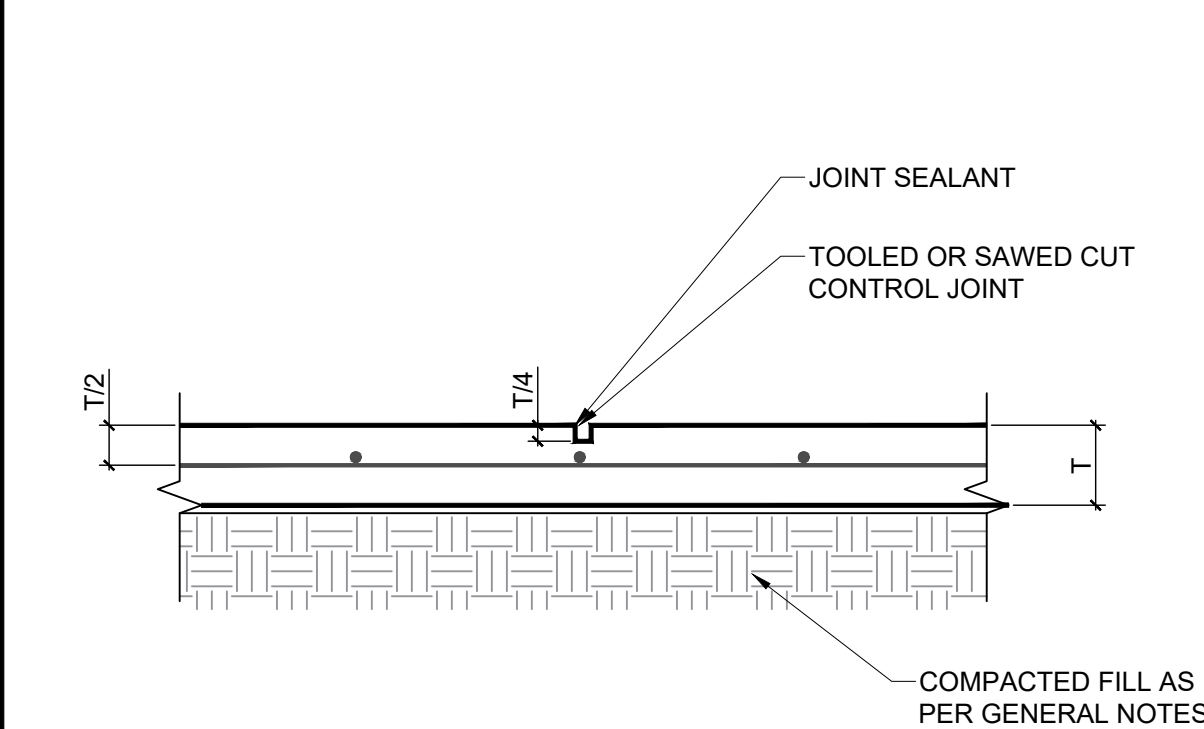
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1. EXTERIOR GRADE BEAM

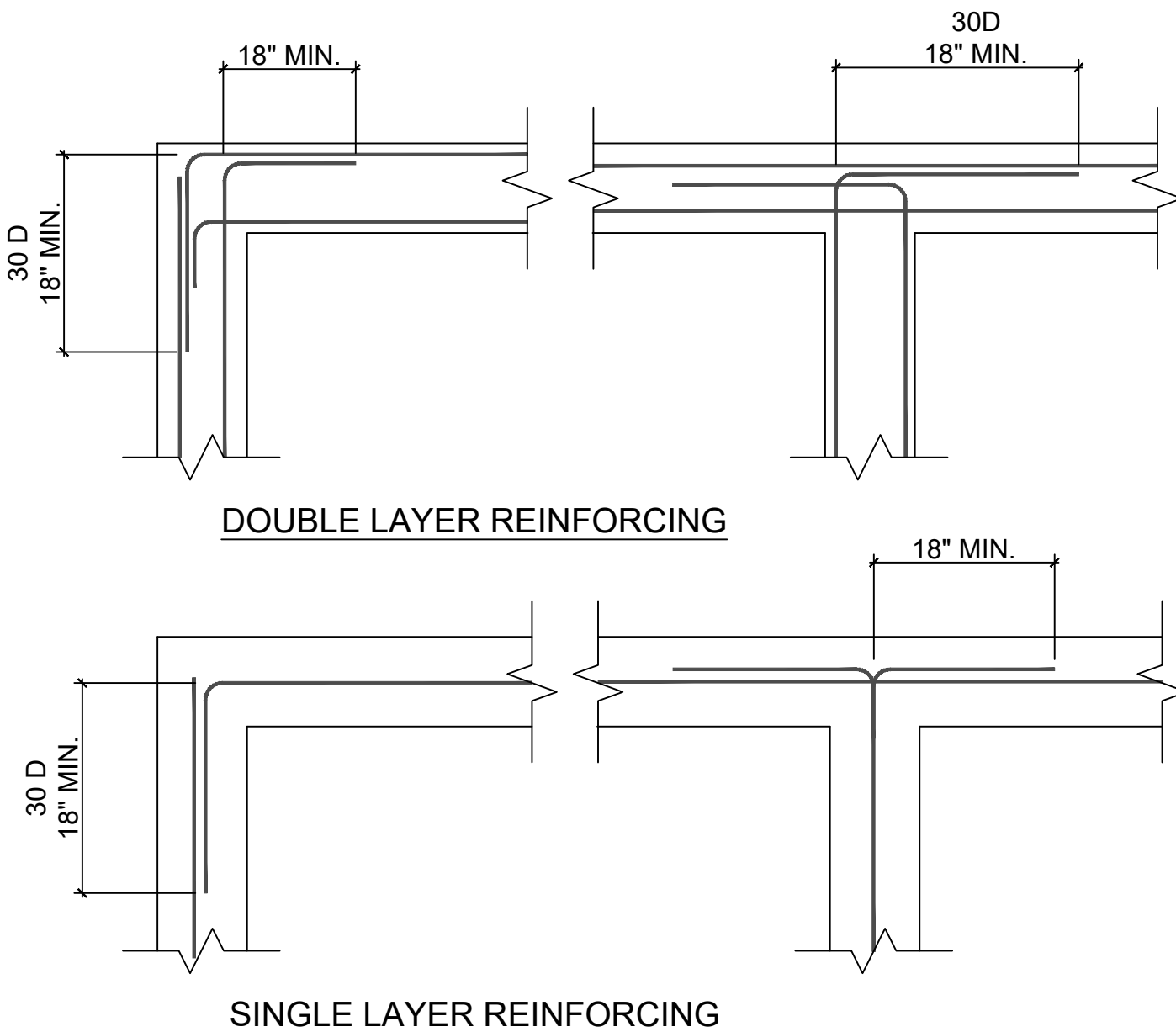
2. INTERIOR GRADE BEAM

4. FOOTING AT COLUMN TYP.

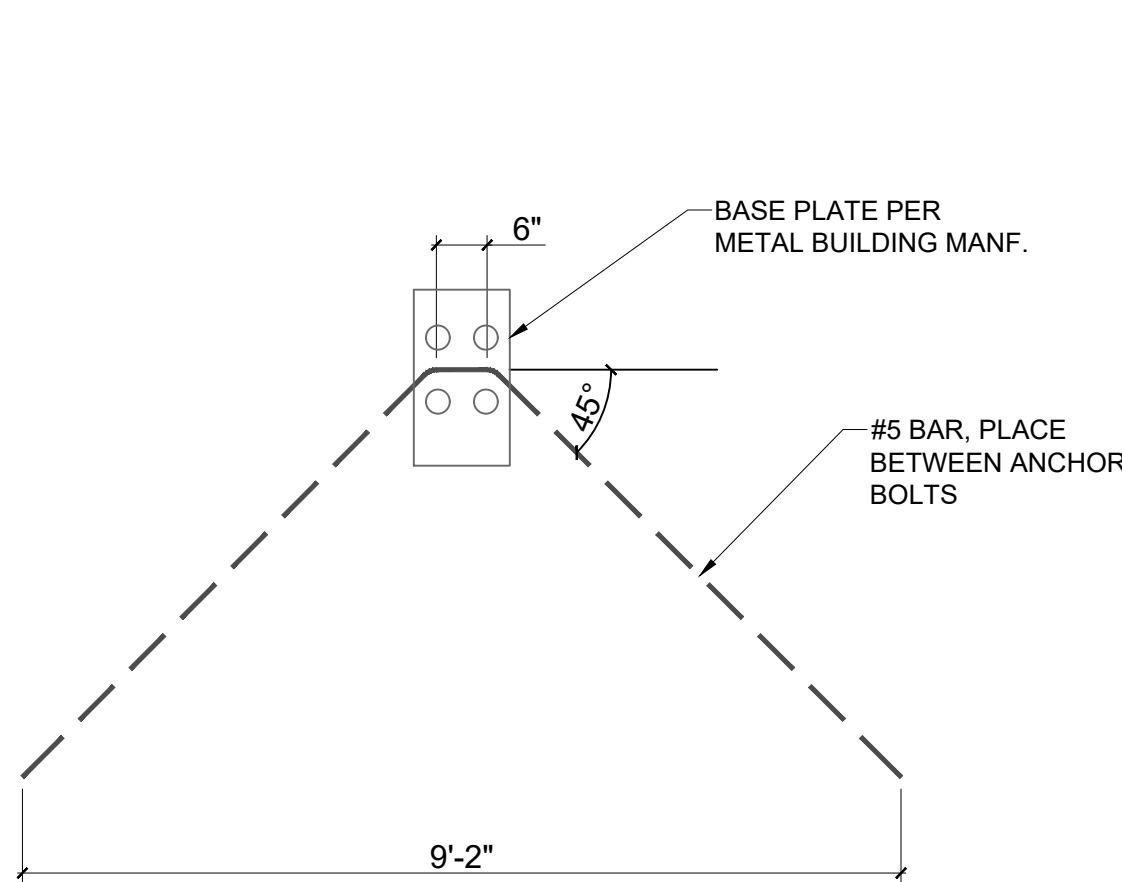


- NOTES
- SPACING SHALL NOT EXCEED 25 FEET.
 - JOINT PATTERN SHOULD BE NEARLY SQUARE..
 - SAW CUT SHALL BE MADE WITHIN 4 HOURS OF PLACEMENT (OR AS SOON AS SLAB SURFACE CAN BE WALKED UPON WITHOUT MARKING).
 - FILL SAW CUT FULL DEPTH WITH "SKQOUR S1" AFTER SLAB IS CURED (28 DAYS MIN.).
 - THIS DETAIL TO BE USED ONLY IN THE ABSENCE OR ARCHITECTURAL INFORMATION FOR CONTRACTION JOINTS.

5. CONTRACTION JOINT



6. REINF. AT CORNERS & INTERSECTIONS



7. REINF. AT FOOTING

STRUCTURAL FIELD OBSERVATIONS

- JOB SITE OBSERVATIONS BY THE PROFESSIONAL ENGINEER OR HIS AUTHORIZED REPRESENTATIVE SHALL CONSIST OF VISUAL OBSERVATION OF MATERIALS, EQUIPMENT OR CONSTRUCTION WORK FOR THE PURPOSE OF ASCERTAINING THAT THE WORK IS IN SUBSTANTIAL CONFORMANCE WITH THE CONTRACT DOCUMENTS AND WITH THE DESIGN INTENT. SUCH OBSERVATIONS SHALL NOT BE RELIED UPON BY OTHERS AS ACCEPTANCE OF THE WORK, NOR SHALL IT BE CONSTRUED TO RELIVE THE CONTRACTOR IN ANY WAY FROM HIS OBLIGATIONS AND RESPONSIBILITIES UNDER THE CONSTRUCTION CONTRACT. SPECIFICALLY BUT WITHOUT LIMITATION, OBSERVATIONS BY THE DESIGN PROFESSIONAL SHALL NOT REQUIRE THE DESIGN PROFESSIONAL TO ASSUME RESPONSIBILITY FOR THE MEANS AND METHODS OF CONSTRUCTION, NOR FOR SAFETY ON THE JOB SITE.
- NOTIFY ENGINEER 24 HOURS IN ADVANCE WHEN A STRUCTURAL OBSERVATION IS REQUIRED. SPECIAL INSPECTIONS INDEPENDENT OF THE CONTRACTOR, THE ARCHITECT, OR THE ENGINEER, SHALL BE PROVIDED BY A SPECIAL INSPECTOR EMPLOYED BY THE OWNER ACCORDING TO CHAPTER 17 OF THE IBC 2012. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS. THE SPECIAL INSPECTOR SHALL SEND WRITTEN REPORTS TO THE OWNER, THE ARCHITECT, THE ENGINEER, AND THE CONTRACTOR. THE REPORTS SHALL INDICATE IF WORK INSPECTED WAS DONE IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THE DISCREPANCIES ARE NOT CORRECTED, THE SPECIAL INSPECTOR SHALL BRING THE DISCREPANCIES TO THE ATTENTION OF THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE PRIOR TO THE COMPLETION OF THAT PHASE OF THE WORK. THE SPECIAL INSPECTION WORK WAS, TO THE BEST OF THEIR KNOWLEDGE, IN OR NOT IN CONFORMANCE WITH THE DRAWINGS, SPECIFICATIONS AND APPLICABLE WORKMANSHIP PROVISIONS OF THE IBC 2012.

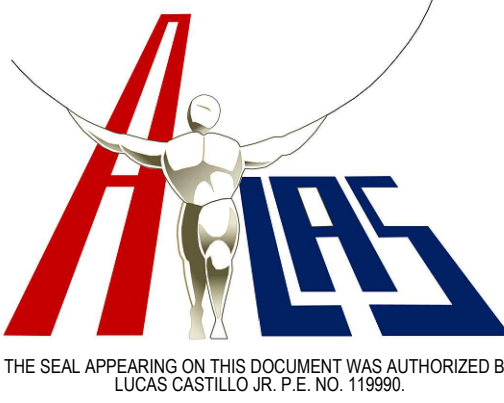
CONTINUOUS OR PERIODIC SPECIAL INSPECTION IS REQUIRED FOR THE FOLLOWING WORK:

TABLE 1704.7			
REQUIRED VERIFICATION AND INSPECTION OF SOILS			
	VERIFICATION AND INSPECTION TASK	CONTINUOUS DURING TASK LISTED	PERIODICALLY DURING TASK LISTED
1.	VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN CAPACITY.	---	X
2.	VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	---	X
3.	PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	---	X
4.	VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF SELECT FILL.	X	---
5.	PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	---	X

TABLE 1704.4			
REQUIRED VERIFICATION & INSPECTION OF CONCRETE CONSTRUCTION			
	VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC
1.	INSPECTION PF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, AND PLACEMENT	---	X
2.	INSPECTION OF REINFORCING STEEL WELDING IN ACCORDANCE WITH TABLE 1704.3, ITEM 5B.		---
3.	INSPECT BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE WHERE ALLOWABLE LOADS HAVE BEE INCREASED OR WHERE STRENGTH DESIGN IS USED.	X	---
4.	INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE.	---	X
5.	VERIFYING USE OF REQUIRED DESIGN MIX.	---	X
6.	AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE	X	---
7.	INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	X	---
8.	INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	---	X
9.	INSPECTION OF PRESTRESSED CONCRETE .		
	A. APPLICATION OF PRESTRESSING FORCES	X	---
	B. GROUTING OF BONDED PRESTRESSING TENDONS IN THE SEISMIC-FORCE-RESISTING SYSTEM.	X	---
10.	ERECTION OF PRECAST CONCRETE MEMBERS.	---	X
11.	VERIFICATION OF 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.	---	X
12.	INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	---	X

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PROJECT:
914 WEST SHARM DRIVE
PHARR, TEXAS

PROJECT NO.: ST24-016
DATE: 02/02/2024
DRAWN BY: X.G.
REVISION:

DETAILS

S1.1

DUCT SYMBOLS

DOUBLE LINE SYMBOL	DESCRIPTION	SINGLE LINE SYMBOL
	DUCT- FIRST NUMBER IS VISIBLE DIMENSION.	
	MITERED ELBOW W/TURNING VANES	
	RADIUS ELBOW W/VANE(S) (1.5=R/D STANDARD)	
	DUCT SECTION, POSITIVE PRESSURE	
	DUCT SECTION, NEGATIVE PRESSURE	
	DUCT & AIRFLOW UP(LEFT) POSITIVE PRESSURE	
	DUCT & AIRFLOW DN(RIGHT) POSITIVE PRESSURE	
	DUCT & AIRFLOW UP(LEFT) NEGATIVE PRESSURE	
	DUCT & AIRFLOW DN(RIGHT) NEG./POS. PRESSURE	
	DUCT & AIRFLOW UP(LEFT) NEG./POS. PRESSURE	
	CHANGE OF ELEVATION=RISE (R), DROP (D)	
	DUCT W/INTERNAL LINING CLEAR INSIDE DIMENSIONS SHOWN	
	ACCESS DOOR=SDE (L), BOTTOM (M), TOP (R)	
	FLEXIBLE CONNECTOR	
	FLEXIBLE DUCT	
	FD- FIRE DAMPER, SD-SMOKE DAMPER, FSD- FIRE/SMOKE DAMPER.	
	MANUAL VOLUME DAMPER-SPECIFIC TYPE, NO LABEL-BUTTERFLY, OBD-OPPOSED BLADED DAMPER, PBD-PARALLEL BLADE DAMPER	
	MOTORIZED DAMPER OR ZONE CONTROL DAMPER	
	BRANCH TAP-W/45 DEG. ENTRY	
	BRANCH TAP-CONICAL SPIN-IN	
	BRANCH TAP-STRAIGHT SPIN-IN	
	TRANSITION	
	EXISTING DUCTWORK TO BE DEMOLISHED	
	EXISTING DUCTWORK TO REMAIN	
	HVAC - EQUIP AS NOTED	
	AIR DEVICE, SUPPLY- CEILING. CLEAR	
	AIR DEVICE TAG SPIN-IN DIMENSION AIRFLOW (CFM)	
	AIR DEVICE, RETURN- CEILING.	
	AIR DEVICE, EXHAUST- CEILING.	
	AIR DEVICE, SUPPLY- SIDEWALL.	
	AIR DEVICE, RETURN/EXHAUST- SIDEWALL.	

ABBREVIATIONS

ABV	ABOVE
AC	ALTERNATING CURRENT / ABOVE CEILING
ACMPR	AIR COMPRESSOR
ACU	AIR CONDITIONING UNIT
AFF	ABOVE FINISHED FLOOR
AFMS	AIR FLOW MEASURING STATION
AHU	AIR HANDLING UNIT
AMB	AMBIENT
AMP	AMPERE
ANSI	"AMERICAN NATIONAL STANDARDS INSTITUTE"
APPROX.	APPROXIMATE
ARI	AMERICAN REFRIGERATION INSTITUTE
ASHRAE	"AMERICAN SOCIETY OF HEATING, REFRIGERATION, and AIR CONDITIONING ENGINEERS"
ASME	"AMERICAN SOCIETY OF MECHANICAL ENGINEERS"
ASPE	"AMERICAN SOCIETY OF PLUMBING ENGINEERS"
ASTM	"AMERICAN SOCIETY FOR TESTING AND MATERIALS"
AVG	AVERAGE
AWWA	"AMERICAN WATER WORKS ASSOCIATION"
B	BOILER
BARO	BAROMETRIC
BAROPR	BAROMETRIC PRESSURE
BF	BELOW FLOOR
BFC	BELOW FINISHED CEILING
BG	BELOW GRADE
BHP	BRAKE HORSEPOWER
BOD	BOTTOM OF DUCT
BOM	BILL OF MATERIAL
BOP	BOTTOM OF PIPE
BTU	BRITISH THERMAL UNIT
C	COOLING COIL
CCL	COUNTERCLOCKWISE
CCW	CONDENSATE DRAIN
CD	CUBIC FEET PER HOUR
CFH	CUBIC FEET PER MINUTE
CFM	CHILLER
CH	CHILLER WATER PUMP
CHP	CHILLED WATER RETURN
CHR	CHILLED WATER SUPPLY
CHS	CLEAR CIRCUIT COOLER
CLR	COMPRESSOR
CMR	CONDENSATE RETURN
CR	COMPUTER ROOM UNIT
CRU	COOLING TOWER
CT	CONDENSING UNIT
CU	CUBIC FEET
CU.FT.	CUBIC INCH
CU.IN.	CONSTANT VOLUME
CV	CARBON DIOXIDE SENSOR
CO2	CONDENSER WATER PUMP
CWP	CONDENSER WATER RETURN
CWR	CONDENSER WATER SUPPLY
CWS	CONDENSER WATER SUPPLY
D	DECIBEL
dB	DRAIN
D	DRY BULB TEMPERATURE
DBT	DIRECT CURRENT
DC	DIRECT DIGITAL CONTROL
DDC	DEGREE
DEG	DENSITY
DENS	DIAMETER
DIA	DIFFERENCE or DELTA
DIFF	DOWN
DN	DOWN
DP	DEW POINT TEMPERATURE
DPT	E
E	E/A
E/A	EACH
EA	ENTERING AIR TEMPERATURE
EAT	ELECTRIC DUCT HEATER
EDH	EXHAUST FAN
EF	EFFICIENCY
EFF	ENTHALPY
ENTH.	EMERGENCY OVERFLOW DRAIN
EOD	EXPANSION TANK
ET	EVAPORATIVE COOLER
EVP	ENTERING WATER TEMPERATURE
EWT	EXPANSION
EXP	F
F	FAHRENHEIT
F	FAN COIL UNIT
FCU	FLOOR
FLR	FLAT ON BOTTOM
FOB	FLAT ON TOP
FOT	FEET PER MINUTE
FPM	FEET PER SECOND
FPS	FAN POWERED TERMINAL UNIT
FPTU	FURNACE
FRN	FEET
FT	FEET OF WATER GAGE
FT.W.G.	FACE VELOCITY
FVEL	G
G	GALLONS
GAL	GALLONS PER HOUR
GPH	GALLONS PER MINUTE
GPM	GRAINS
GR	H
H	HEATING COIL
HCL	HOOD
HD	HEIGHT
HGT	HORSEPOWER
HP	HIGH PRESSURE STEAM
HPS	HOUR
HR	HUMIDIFIER
HUM	HOT WATER PUMP
HWP	HOT WATER RETURN
HWR	HOT WATER SUPPLY
HWS	HERTZ
HZ	I
I	ID
ID	INTAKE HOOD
IH	INCH
IN.	INCHES of WATER GAGE
IN.W.G.	INFRARED HEATER
IRH	J
J	

KHE	KITCHEN HOOD EXHAUST
KW	KILOWATTS
KWH	KILOWATT HOUR
L	L
L-#	LOUVER DESIGNATION
LAT	LEAVING AIR TEMPERATURE
LBS.	POUNDS
LIQ	LIQUID
LPS	LOW PRESSURE STEAM
LWT	LEAVING WATER TEMPERATURE
M	MAKEUP AIR
MA	MAXIMUM
MAX.	THOUSAND BTU/HR.
MBH	MINIMUM CIRCUIT AMPACITY
MCA	THOUSAND CUBIC FEET
MCF	MINIMUM or MINUTES
MIN.	MAXIMUM OVERCURRENT PROTECTION
MOC	MEDIUM PRESSURE STEAM
MPS	"MANUFACTURERS' STANDARDIZATION SOCIETY of the Valves and Fittings Industry, Inc."
MSS	N
N	N/A
N/A	NOT APPLICABLE
NC	NOISE CRITERIA
N.C.	NORMALLY CLOSED
NEBB	NATIONAL ENVIRONMENTAL BALANCING BUREAU
N.I.C.	NOT IN CONTRACT
N.O.	NORMALLY OPEN
N.T.S.	NOT TO SCALE
O	OUTSIDE AIR
O/A	OUTSIDE DIAMETER
OD	OCCUPATIONAL SAFETY and HEALTH ADMINISTRATION
OSHA	OUNCE
OZ	P
P	PRESSURE DIFFERENCE
PD	PHASE
PH	PART PER MILLION
PPM	PRI
PRI	PRESS.
PRESS.	PSI
PSI	"PSI, ABSOLUTE"
"PSI, ABSOLUTE"	"PSI, GAGE"
"PSI, GAGE"	Q
Q	R
R	THERMAL RESISTANCE
R-22	REFRIGERANT-22
R/A	RETURN AIR
RCVR	RECEIVER
RD	ROOF DRAIN
RE: 1/M-xx	"REFER TO DETAIL NO.1, SHEET M-xx"
RECIRC.	RECIRCULATE
RF	RETURN FAN
RH	RELIEF HOOD
RL	REFRIGERANT LIQUID
RPM	REVOLUTIONS PER MINUTE
RPS	REVOLUTIONS PER SECOND
RS	REFRIGERANT SUCTION
RTU	ROOFTOP UNIT
RV	RELIEF VENT
S	S
s	SECOND
SA	SOUND ATTENUATOR
S/A	SUPPLY AIR
SAT	SATURATION
SD	SMOKE DETECTOR
SF	SUPPLY FAN
SG	SPECIFIC GRAVITY
SG	"SHEET METAL and AIR CONDITIONING"
SMACNA	"CONTRACTORS' NATIONAL ASSOCIATION"
SP	STATIC PRESSURE
SPEC.	SPECIFICATION
SQ.FT.	SQUARE FEET
SUCT.	SUCTION
T	TD
TD	TEMPERATURE DIFFERENCE
TEMP	TEMPERATURE
TONS	TONS OF REFRIGERATION
TSTAT	THERMOSTAT
TU	TERMINAL UNIT
U	U
U	HEAT TRANSFER COEFFICIENT
U/C	UNDER COUNTER
UG	UNDERGROUND
UH	UNIT HEATER
U.N.O.	UNLESS NOTED OTHERWISE
UV	UNIT VENTILATOR
V	V
VA	VOLTS
VAC	VOLT AMPERE
VAC	VACUUM
VAV	VARIABLE
VEL.	VARIABLE AIR VOLUME
VEL.	VELOCITY
VENT.	VENTILATION
VERT.	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VOL.	VOLUME
VP	VELOCITY PRESSURE
VTR	VENT THRU ROOF
W	W
W	WITH
W/O	WITHOUT
W	WATTS
WB	WET BULB
WBT	WET BULB TEMPERATURE
WT	WEIGHT
X	Y
Y	YCO
YCO	YARD CLEANOUT
YD	YARD
YR	YEAR
Z	Z
ZN	ZONE

ABBREVIATIONS

GENERAL MECHANICAL NOTES AND SPECIFICATIONS:

GENERAL

- COORDINATE WORK AMONG ALL DISCIPLINES. IT IS NOT THE INTENT OF THESE DOCUMENTS TO DICTATE WHO MUST DO THE WORK. ALL WORK SHOWN IS THE RESPONSIBILITY OF THE (PRIME) CONTRACTOR.
- FIELD VERIFY ALL CONDITIONS AND MEASURE DIMENSIONS WITHIN THE BUILDING PRIOR TO ORDERING EQUIPMENT AND/OR PROCEEDING WITH INSTALLATION.
- ALL EQUIPMENT SHALL BE FACTORY TESTED, AND CONTRACTOR SHALL VERIFY THEIR CONDITION PRIOR TO INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR EQUIPMENT DAMAGED DURING MOVING AND INSTALLATION.
- EQUIPMENT FOUND DEFECTIVE PRIOR TO FINAL ACCEPTANCE SHALL BE REPLACED AT NO COST TO OWNER.
- SUBMISSION OF BID PROPOSAL IS CONSIDERED AN ACKNOWLEDGEMENT THAT CONTRACTOR VISITED SITE, AND VERIFIED ALL EXISTING CONDITIONS, AND INCLUDED ANY MODIFICATIONS TO EXISTING AND NEW WORK REQUIRED FOR INSTALLATION OF A COMPLETE AND OPERATIONAL MECHANICAL SYSTEM.
- COORDINATE WITH OWNER AND ENGINEER FOR ANY DISRUPTION IN UTILITY SERVICES, PARTICULARLY THOSE THAT MIGHT AFFECT OTHER BUILDINGS IN THE CAMPUS.
- CONTRACTOR SHALL NOT PROCEED WITH ANY WORK INVOLVING A CHANGE IN PROJECT SCOPE OR COST WITHOUT FIRST HAVING OBTAINED ENGINEER'S APPROVAL IN WRITING. UNLESS ENGINEER HAS AGREED TO SUCH CHANGE PRIOR TO IT BEING DONE, AND HAS AGREED THAT AN INCREASE IN COST ASSOCIATED WITH SUCH CHANGE IS WARRANTED; CONTRACTOR WILL NOT BE REIMBURSED FOR SUCH CHANGE.
- TESTING, ADJUSTING AND BALANCING (TAB) CONTRACTOR SHALL BE RETAINED BY THE PRIME CONTRACTOR TAB SHALL NOT BE A PART OF THE MECHANICAL CONTRACT.

CODES AND ORDINANCES

- PERFORM ALL WORK PER LATEST VERSION OF INTERNATIONAL MECHANICAL CODE, AND APPLICABLE LOCAL CODES AND ORDINANCES, UNLESS DRAWINGS OR SPECIFICATIONS HAVE MORE STRINGENT REQUIREMENTS.
 - CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS AND FEES ASSOCIATED WITH PROJECT, INCLUDING FEES FOR INSPECTIONS, APPLICATIONS, AND PROVISION OF NEW SERVICES.
 - NOTIFY ENGINEER OF ANY ASPECTS OF DESIGN WHICH ARE THOUGHT TO BE IN NONCOMPLIANCE WITH APPLICABLE CODES.
- COORDINATION
- REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR DETAILS OF CONSTRUCTION, INCLUDING BEAMS, FLOOR AND WALL PENETRATIONS, CHASES, AND REFLECTED CEILING PLANS. VERIFY OPENING SIZES WITH EQUIPMENT FURNISHED.
 - COORDINATE ALL WORK WITH OTHER TRADES; COORDINATE SCHEDULE OF WORK WITH ALL SUB-CONTRACTORS TO ACHIEVE SMOOTH FLOW OF CONSTRUCTION.
 - CONTRACTOR SHALL REVIEW COMPLETE DOCUMENTS PRIOR TO SUBMITTAL OF PROPOSAL TO GAIN COMPLETE UNDERSTANDING OF PROJECT SCOPE, WORK BY OTHERS, AND MECHANICAL WORK ASSOCIATED WITH OTHER DISCIPLINES.
 - ENGINEER/ ARCHITECT MUST BE GIVEN AT LEAST A TEN (10) WORKING DAY NOTICE TO PERFORM ALL TYPES OF INSPECTIONS. COORDINATE WORK SCHEDULE WITH ARCHITECT AND ENGINEER TO PLAN ACCORDINGLY FOR APPROPRIATE INSPECTIONS.

ECONOMIZER.

- FOR SYSTEMS THAT REQUIRE ECONOMIZER, MECHANICAL CONTRACTOR SHALL PROVIDE A CONTROLLER EQUAL TO HONEYWELL JADE ECONOMIZER MODULE W7220. REFER TO ECONOMIZER DETAIL FOR ADDITIONAL INFORMATION.

METAL AND FLEXIBLE DUCTS

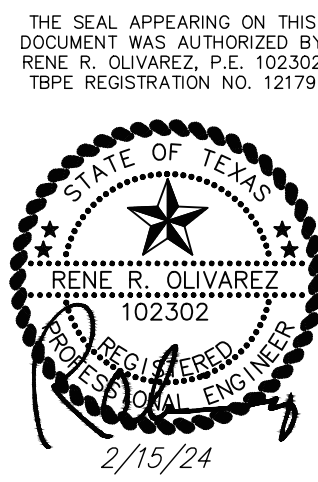
- DRAWINGS ARE DIAGRAMMATIC IN NATURE. FOR CLARITY SAKE, MOST DUCT OFFSETS/RISES/DROPS ARE NOT SHOWN. RECTANGULAR AND ROUND DUCTWORK SHALL BE GALVANIZED STEEL. SIZES SHOWN ARE INSIDE CLEAR DIMENSION.
 - VERIFY BOTTOM OF DUCT ELEVATION AND COORDINATE WITH OTHER TRADES.
 - CONSTRUCT AND LEAKAGE TEST ALL DUCTWORK BASED ON SMACNA REQUIREMENTS. COORDINATE PRESSURE CLASSES WITH EQUIPMENT SCHEDULES.
 - ALL GALVANIZED SHEET METAL DUCT WORK SHALL COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS--METAL and FLEXIBLE".
 - USE 2" GLASS FIBER-REINFORCED FABRIC JOINT AND SEAM TAPE. USE WATER BASED JOINT AND SEAM SEALER. USE FIRE RESISTANT SEALER FOR FILLING OPENINGS AROUND DUCT PENETRATIONS THROUGH WALLS. ACCEPTABLE PRODUCTS ARE DOW CORNING, FIRE STOP FOAM AND FIRE STOP SEALER OR EQUAL.
 - USE SHEET METAL SCREWS OR BLIND RIVETS COMPATIBLE WITH DUCT MATERIALS WHEN SECURING ALL DUCTWORK TO STRUCTURE.
 - FLEXIBLE DUCT MAY BE USED TO CONNECT TO SUPPLY DIFFUSERS. MAXIMUM LENGTH OF FLEXIBLE DUCT LIMITED TO 6 FEET. PROVIDE FLEXMASTER TYPE BM UL 181 CLASS I AIR DUCT OR EQUAL. FLEXIBLE DUCT SHALL HAVE MIN. R-8 INSULATING VALUE.
 - FLEXIBLE DUCT CLAMP SHALL BE OF STAINLESS STEEL BANDS WITH CADMIUM PLATED HEX SCREW TO TIGHTEN BAND WITH WORM GEAR ACTION.
 - PROVIDE TURNING VANES IN ALL SPLITS, TEES AND SWEPT 90 DEGREE ANGLE DUCT FITTINGS. MANUFACTURED TURNING VANES TO BE 1-1/2" WIDE, DOUBLE VANE, CURVED BLADES OF GALVANIZED SHEET STEEL SET ¼" O.C. ACCEPTABLE MANUFACTURER'S ARE DUCTMATE INDUSTRIES, METALARE, WARD INDUSTRIES OR EQUAL.
 - WHERE RECTANGULAR TEE FITTINGS ARE SHOWN, PROVIDE FITTING WITH ADJUSTABLE DIVIDER SHEET AND TURNING VANES.
 - WHERE RECTANGULAR MAIN AND BRANCH CONNECTIONS ARE SHOWN, PROVIDE EXTRACTOR VANES.
 - PROVIDE MANUAL VOLUME CONTROL DAMPERS WHERE SHOWN ON DRAWINGS. DAMPERS TO HAVE NEOPRENE BLADE SEALS AND GALVANIZED STEEL FRAMES, TIE BARS, DAMPER AND BRACKETS. ACCEPTABLE MANUFACTURER'S ARE RUSKIN CO., NAILOR INDUSTRIES, FLEXMASTER OR EQUAL.
 - ABOVE INACCESSIBLE CEILINGS AND WHERE DUCT CONFIGURATION DOES NOT ALLOW FOR INSTALLATION OF DAMPER IN DUCTWORK OR DIFFUSER, PROVIDE REMOTE MANUAL DAMPER BY YOUNG REGULATOR. (BOWDEN CABLE CONTROL SYSTEM). CONTRACTOR MAY PROVIDE OPPOSED BLADE DAMPER THAT IS INTEGRAL TO GRD WITH ENGINEER'S APPROVAL.
- INSULATION
- DUCT WRAP INSULATION SHALL BE MINERAL FIBER INSULATION. ALL SERVICE JACKETING MANUFACTURED FROM KRAFT PAPER, REINFORCING SCRIM, ALUMINUM FOIL AND VINYL FILM. ACCEPTABLE MANUFACTURER'S ARE CERTANTEED, KNAUF OR OWENS-CORNING. INSTALL DUCT WRAP INSULATION PER MANUFACTURER'S INSTRUCTIONS.
 - INTERIOR DUCTWORK TO BE INSULATED WITH DUCT WRAP INSULATION. ALL SUPPLY DUCTS TO HAVE 3" MIN. THICKNESS (R-8) INSULATION AND ALL RETURN AND OUTSIDE AIR DUCTS TO HAVE 2" MIN. INSULATION.

TESTING, ADJUSTING AND BALANCING (TAB)

- TAB TO BE PERFORMED BY AN INDEPENDENT ENTITY, CERTIFIED BY AABC OR NEBB.
- PERFORM TESTING AND BALANCING PROCEDURES PER AABC'S "NATIONAL STANDARDS FOR TOTAL SYSTEM BALANCE" OR NEBB'S "PROCEDURAL STANDARDS FOR TESTING, ADJUSTING, AND BALANCING OF ENVIRONMENTAL SYSTEMS".

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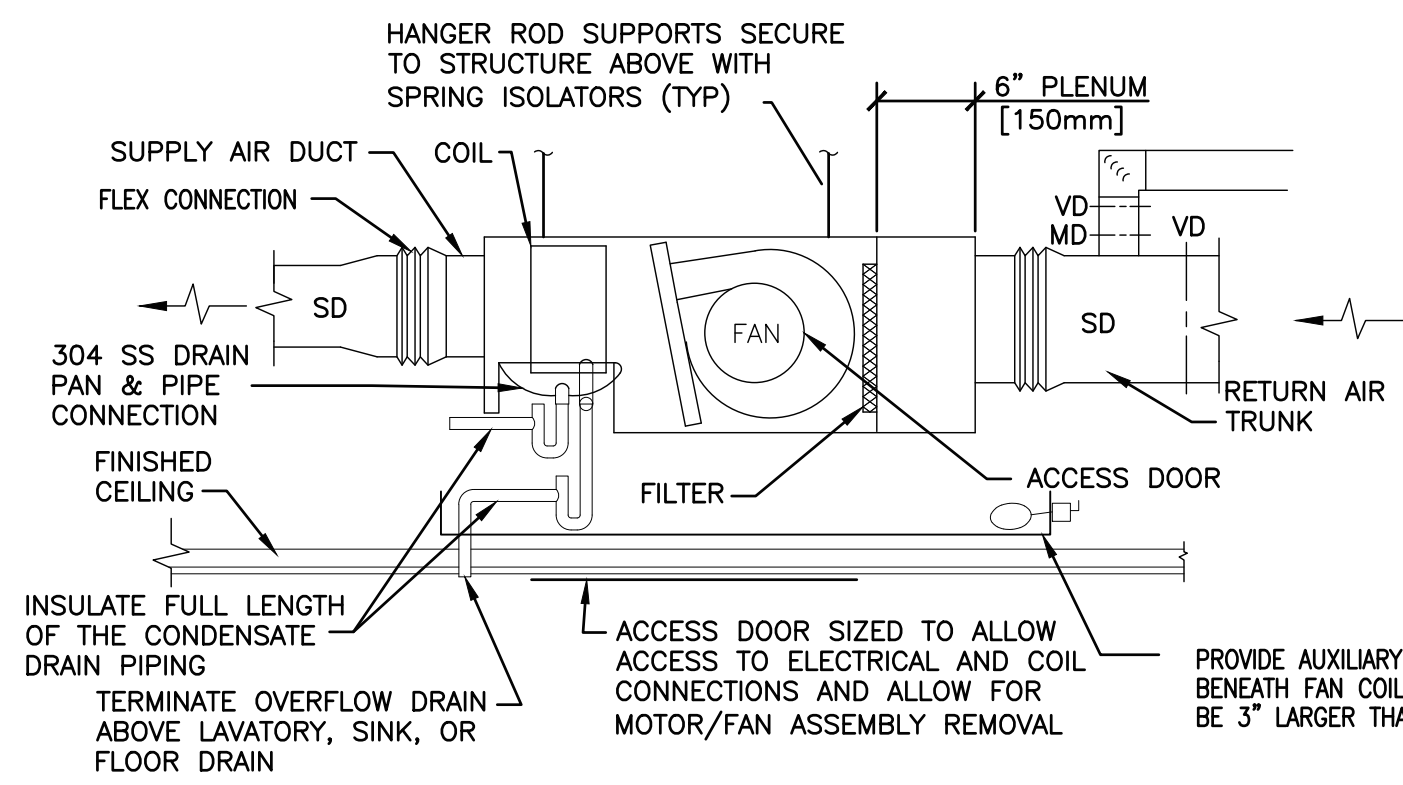
DRAWN BY: H.M.
REVIEWED BY: R.O.
ISSUED DATE: 2/15/24

REVISION / ADDENDA

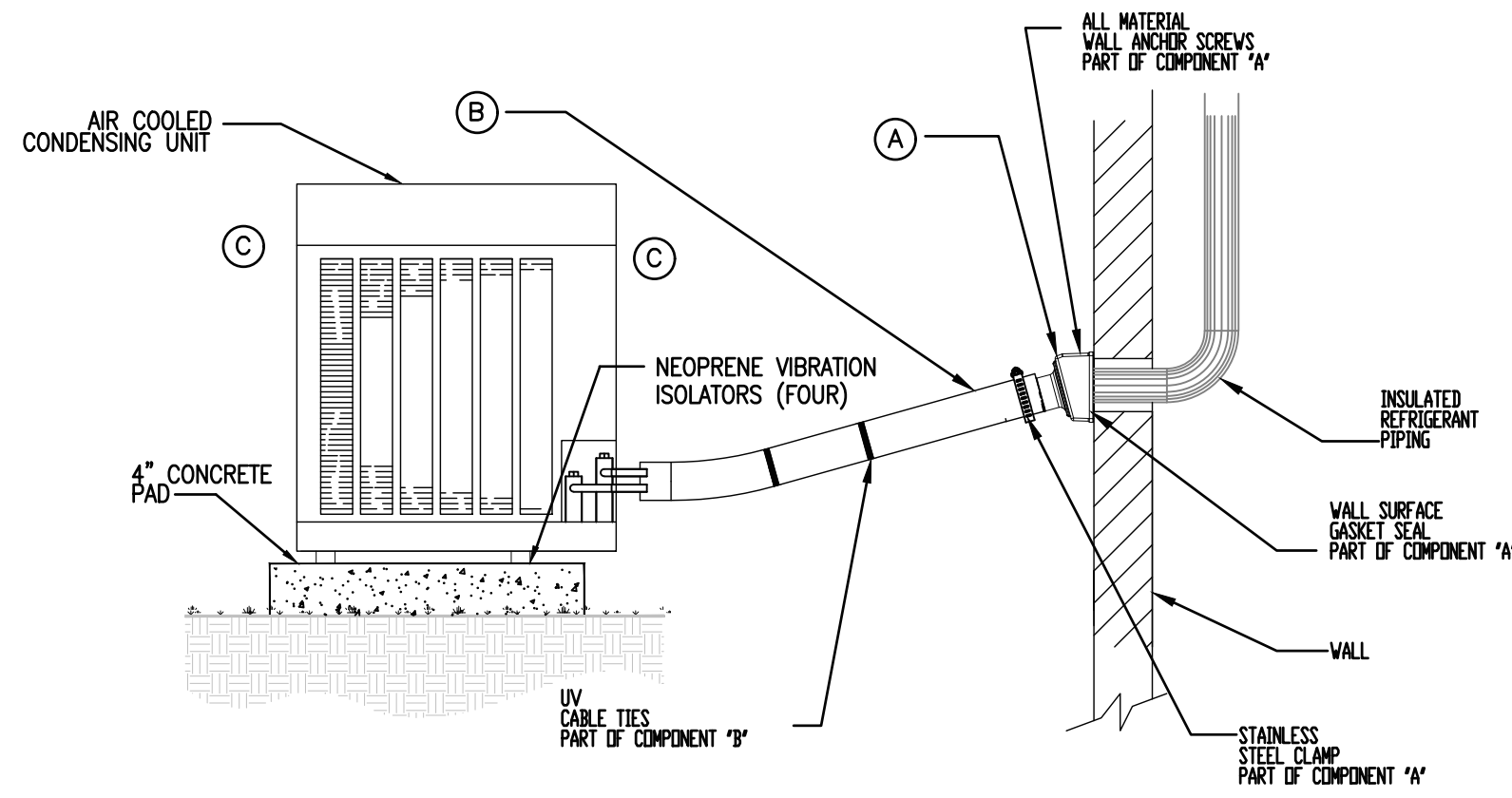
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MECHANICAL SYMBOLS
& ABBREVIATIONS

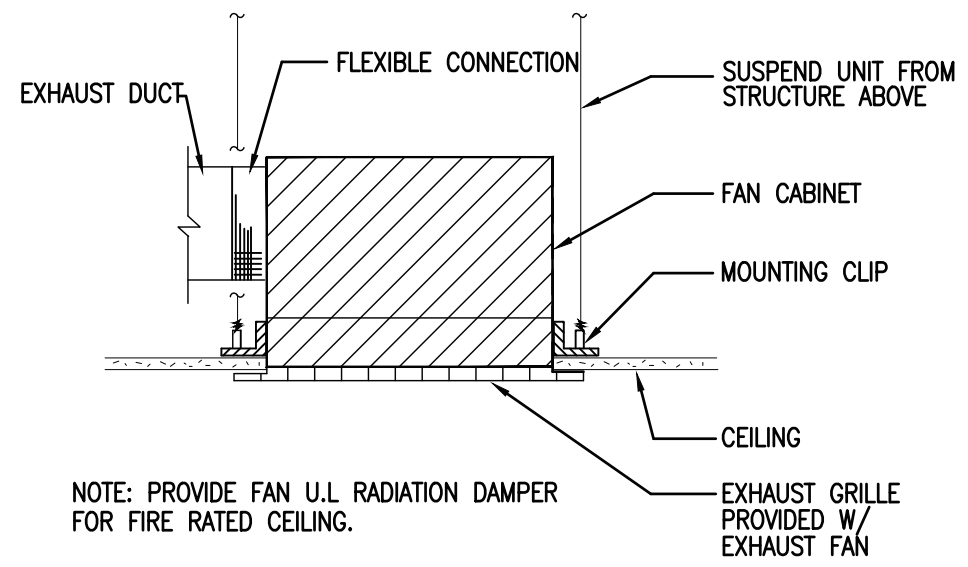
SHEET
M0.0



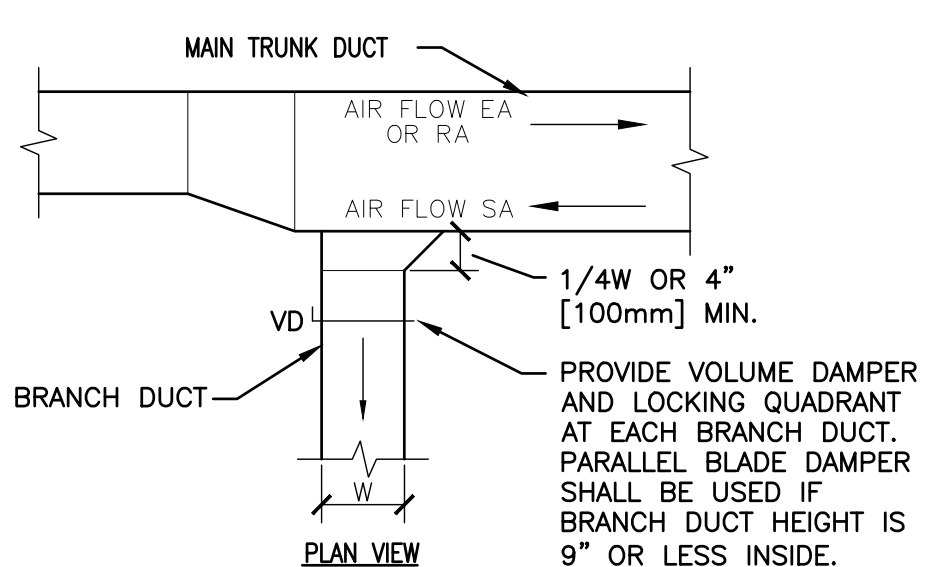
1 FAN COIL UNIT - HORIZONTAL CONCEALED
NTS



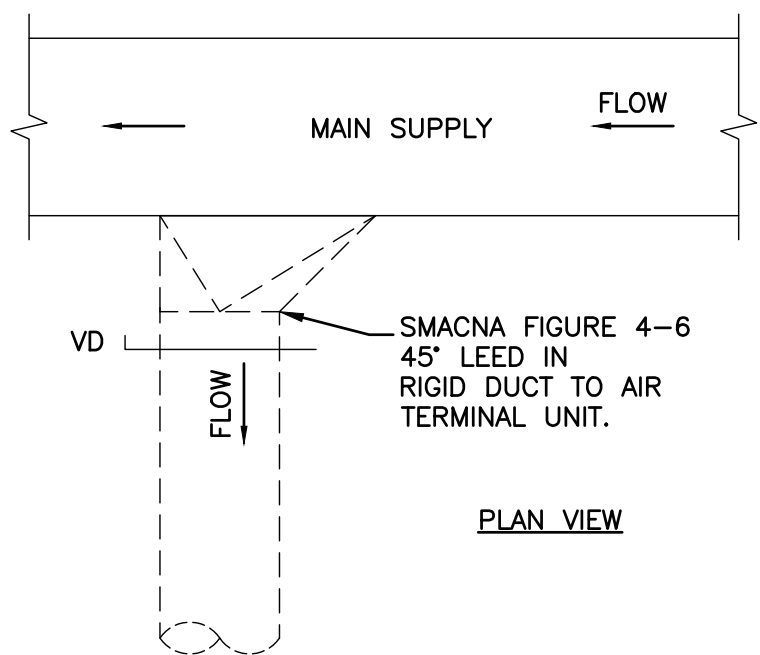
2 CONDENSING UNIT MOUNTING ON GRADE
REFRIGERANT PIPING DIAGRAM
NTS



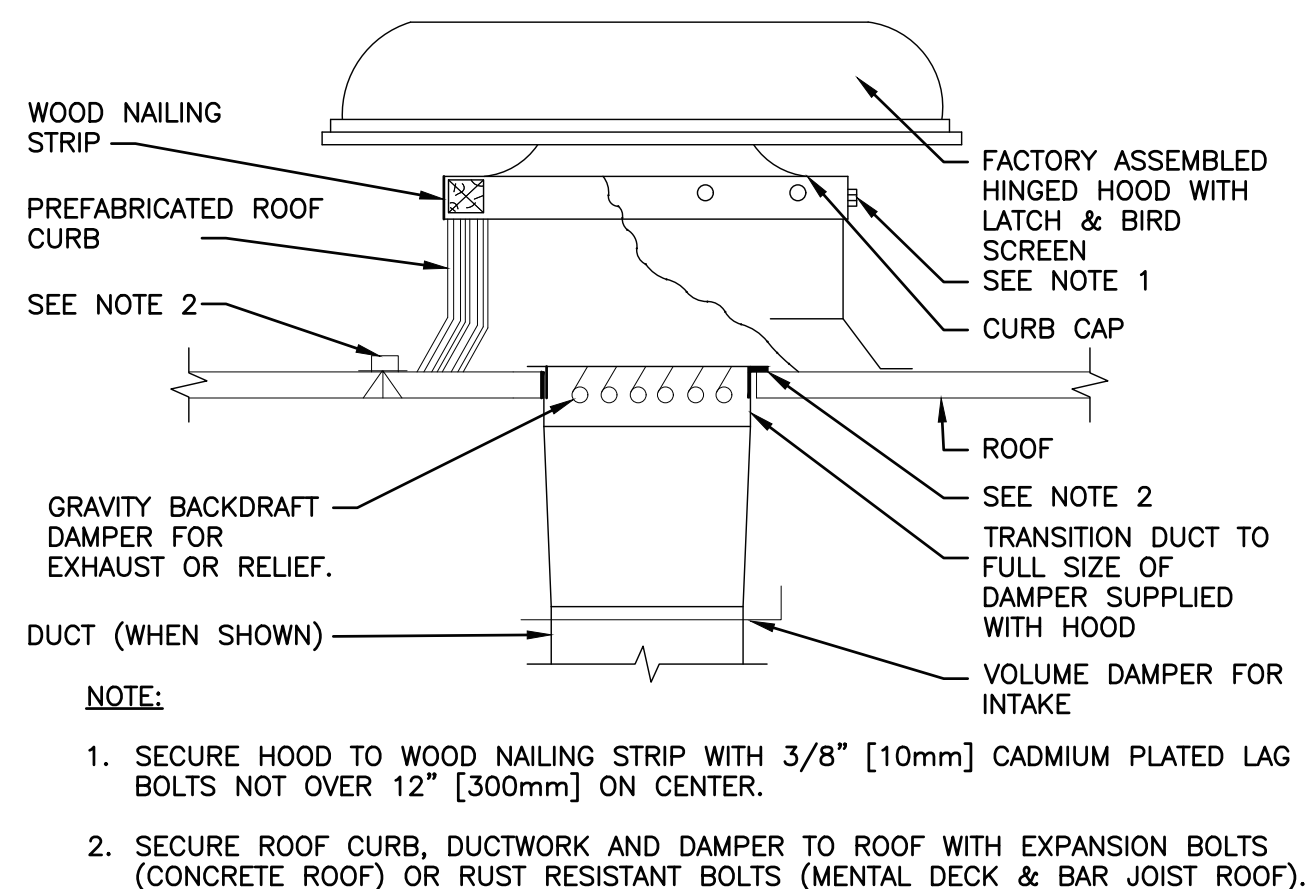
3 CEILING MOUNTED EXHAUST FAN
NTS



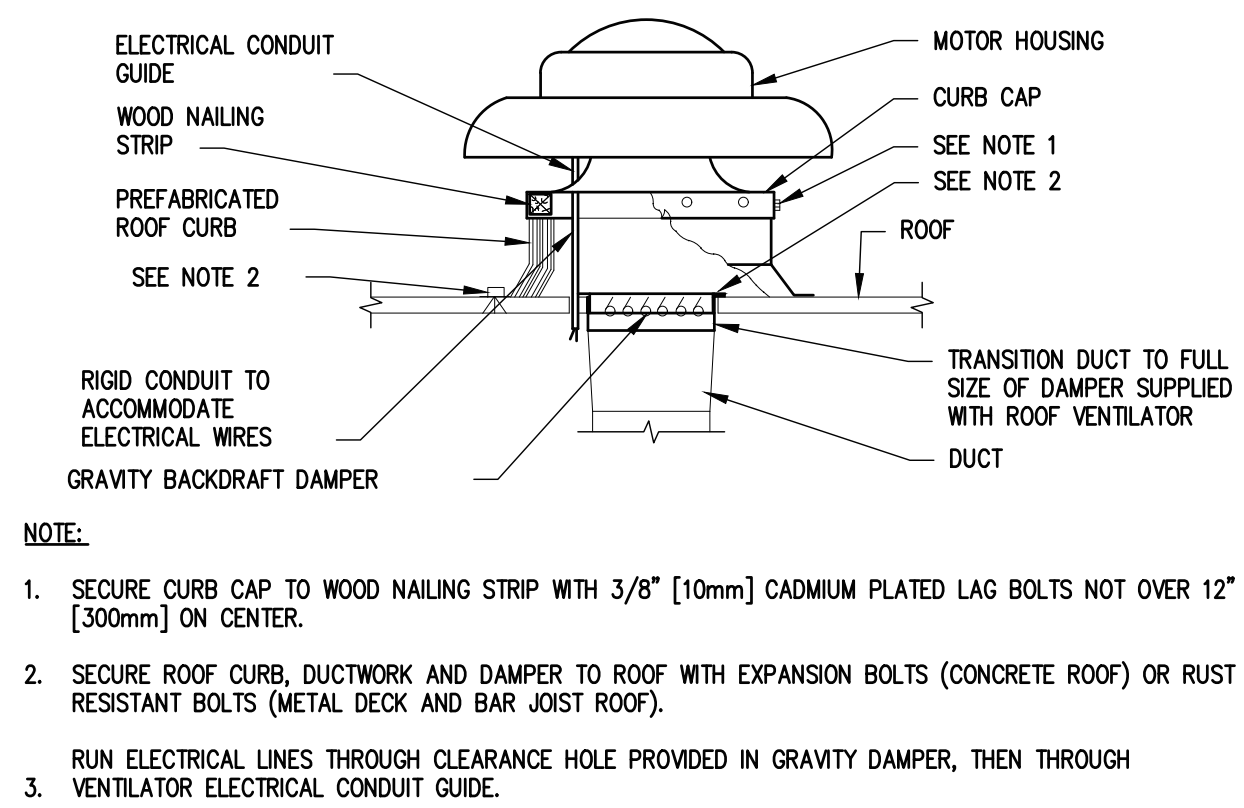
4 BRANCH DUCT TAKE-OFF
PAN VIEW
NTS



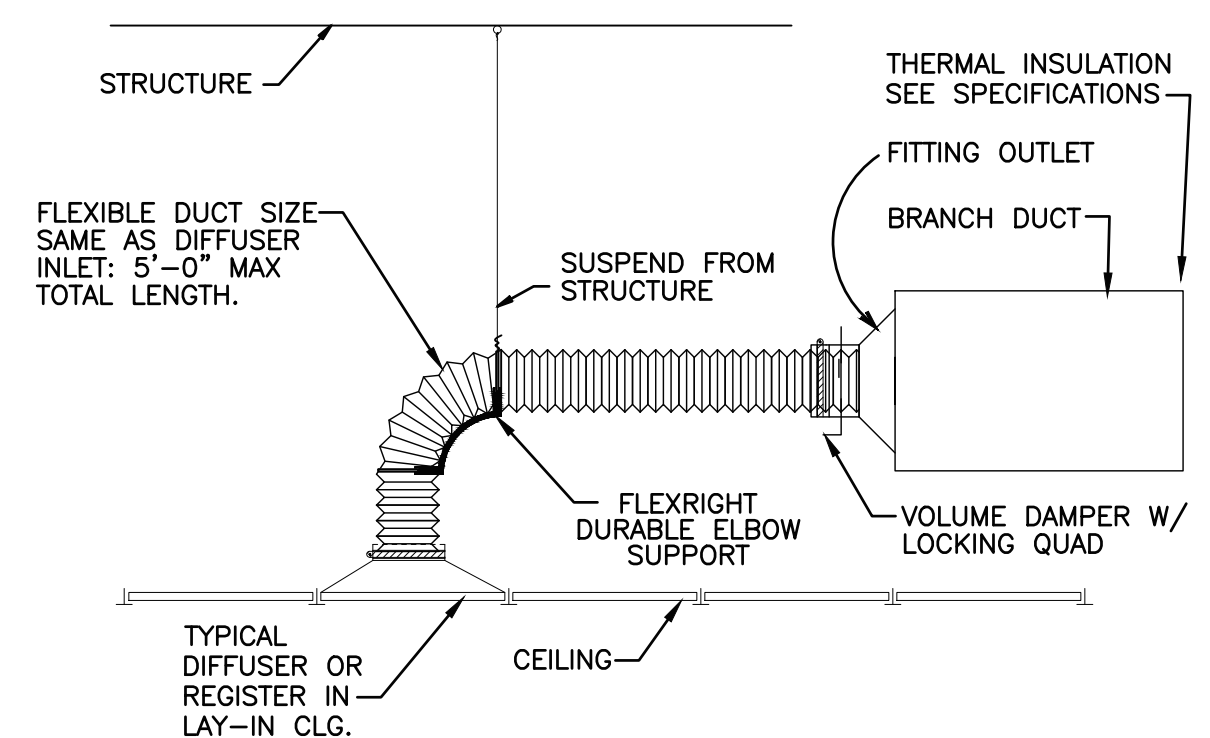
5 ALTERNATE SUPPLY DUCT TAKEOFF -
AIR TERMINAL UNITS
NTS



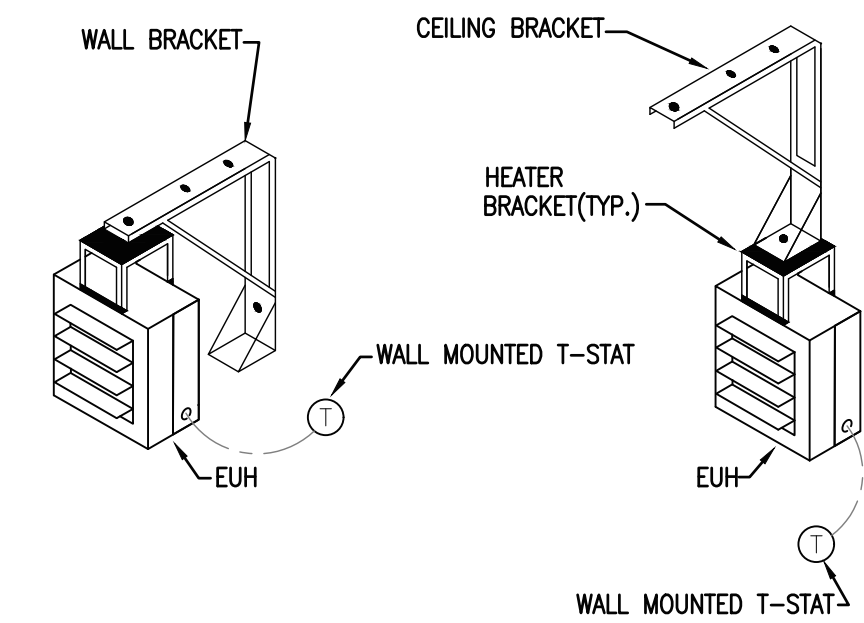
7 INTAKE HOOD
NTS



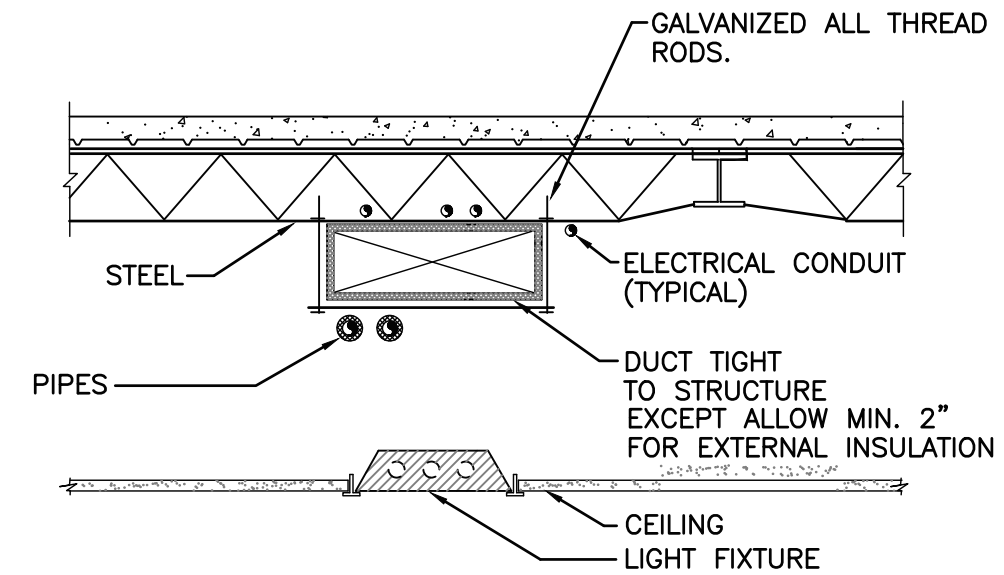
8 POWER ROOF VENTILATOR
NTS



6 FLEXIBLE AIR DUCT CONNECTOR
NTS



9 ELECTRIC UNIT HEATER DETAIL
NTS



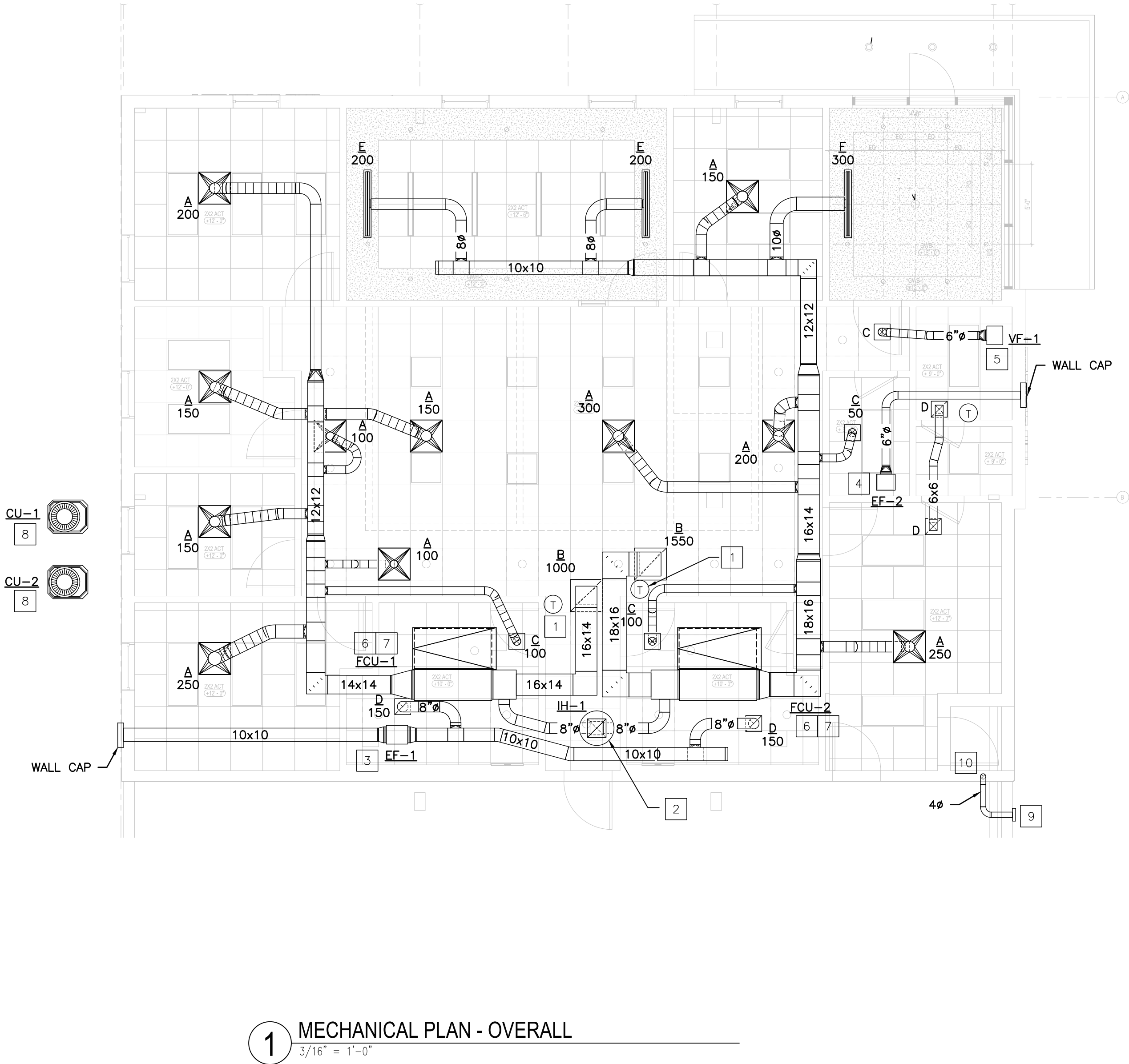
10 RECTANGULAR DUCT INSTALLATION
NTS

GRAVITY HOOD SCHEDULE				
MARK	IH-1	-		
SERVICE	FCU-1	-		
INTAKE/RELIEF	INTAKE	-		
CFM (COMMON/ECONOMIZER)	400	-		
HOOD SIZE (DIAMETER)	12"ø	-		
MIN. THROAT AREA (SQ. FT.)	0.79	-		
THROAT AREA VELOCITY (FPM)	506	-		
MAX. P.D. (IN. W.G.)	0.05	-		
MANUFACTURER	L. COOK	-		
MODEL NO.	12PR	-		
NOTES	1	-		
NOTES: 1. PROVIDE ROOF CURB. 2. PROVIDE BAROMETRIC DAMPER SIMILAR TO RUSKIN CBD6 SET AT 0.05 IN. WG; 0.125" EXTRUDED ALUMINUM FRAME; 0.070" BLADES w/ VINYL EDGE SEALS.				

MECHANICAL FAN SCHEDULE												
TAG	FLOW RATE	STATIC PRESSURE		MOTOR DATA		ELECTRICAL DATA		MAXIMUM LOUDNESS	BASIS OF DESIGN		NOTES	
		EXTERNAL	LOAD	SPEED	MCA	MOCP	VOLTAGE		MANUFACTURER	MODEL OR SERIES		
	CFM	IN WG	HP	RPM	AMPS	AMPS		SONES				
EF-1	300	0.2	-	1500	1.0	15	120	4	L. COOK	GN-422	1-3	
EF-2	75	0.15	-	750	0.4	15	120	.9	L. COOK	GC-128	2-4	
VF-1	75	0.15	-	750	0.4	15	120	.9	L. COOK	GC-128	2,3,5	
NOTES: 1. INTERLOCK WITH LIGHTS IN ROOM 2. PROVIDE FACTORY MOUNTED AND INSTALLED DISCONNECT. 3. PROVIDE ACCESS DOOR TO SERVICE UNIT IF IN HARD CEILING. 4. PROVIDE MOTOR RATED SWITCH. 5. INTERLOCK EXHAUST FAN TO T-STAT AND SET CUT-ON TEMP TO 80F												

MECHANICAL AIR TERMINAL DEVICES SCHEDULE						
TAG	SIZE	DESCRIPTION	CONSTRUCTION	BASIS OF DESIGN		NOTES
			FINISH	MANUFACTURER	MODEL OR SERIES	
A	24X24	LOUVERED FACE SUPPLY AIR DIFFUSER	ALUMINUM	TITUS	TMS-AA	1-5
B	24X24	PERFORATED FACE RETURN AIR GRILLE	ALUMINUM	TITUS	PAR-A	1-5
C	12X12	LOUVERED FACE SUPPLY AIR DIFFUSER	ALUMINUM	TITUS	TMS-AA	1-5
D	12X12	PERFORATED FACE RETURN AIR GRILLE	ALUMINUM	TITUS	PAR-A	1-5
E	4" 8" Inlet	1" SLOT HIGHTHROW PATTERN LINEAR DIFFUSER 2- SLOT	ALUMINUM	TITUS	FL-10	ALL
F	4" 8" Inlet	1.5" SLOT HIGHTHROW PATTERN LINEAR DIFFUSER 2- SLOT	ALUMINUM	TITUS	FL-15	ALL
NOTES: 1. PROVIDE STANDARD WHITE FINISH FOR ALL AIR DEVICES UNLESS NOTED OTHERWISE ON PLAN. 2. PAINT ALL SURFACES VISIBLE THROUGH FACE OF RETURN AIR GRILLES FLAT BLACK. THIS SHALL INCLUDE PIPING, CONDUIT, DUCTWORK, AND STRUCTURAL MEMBERS. 3. PROVIDE FRAME FOR MOUNTING AIR DEVICE IN LAY-IN GRID CEILING UNLESS REFLECTED CEILING PLAN INDICATES HARD CEILING. IN AREAS WITH HARD CEILINGS, PROVIDE FRAMES FOR SURFACE MOUNTING. 4. UNLESS OTHERWISE NOTED, BRANCH DUCTS SERVING AIR DEVICES SHALL BE SAME SIZE AS NECK OF AIR DEVICE. 5. AIR DEVICE SHALL BE OF GALVANIZED FINISH WHEN INSTALLED ON EXPOSED DUCTWORK. 6. COORDINATE SLOT DIFFUSER FRAME/BORDER TYPE AND END BORDER CONFIGURATION WITH CEILING TYPE. FOR ROUND NECK DIFFUSERS: 6" DIA: 0-120 CFM 8" DIA: 125-220 CFM 10" DIA: 225-380 CFM 12" DIA: 385-600 CFM						

MECHANICAL EQUIPMENT (ELECTRIC HEAT) SCHEDULE																		
TAG	FLOW RATE		STATIC PRESSURE		ELECTRICAL DATA		DX COOLING				ELECTRIC HEATING			BASIS OF DESIGN				
	SUPPLY	OA	EXTERNAL	MCA	MOCP	VOLTAGE	SENSIBLE	TOTAL	ENT. AIR TEMP	LEA. AIR TEMP	COIL			MANUFACTURER	MODEL OR SERIES	HP	SEER/EER	WEIGHT (LBS)
	CFM	CFM	IN WG	AMPS	AMPS		MBH	MBH	DB/WB	DB/WB	STAGES	KW	VOLTAGE					
FCU- 1	1200	200	0.6	28	30	208/3Ø	33.9	42.9	80/69	58/56	1	7.2	208/3Ø	TRANE	TEM4A0B42	1/2	15.5 SEER	133
CU- 1	-	-	-	21	35	208/3Ø	-	-	-	-	-	-	-	TRANE	4TTR6042J	-	-	305
FCU- 2	1750	200	0.6	40	45	208/3Ø	39.6	46.8	80/69	58/56	1	7.2	208/3Ø	TRANE	TEM5A0C60	1/2	15.5 SEER	143
CU- 2	-	-	-	30	45	208/3Ø	-	-	-	-	-	-	-	TRANE	4TTR6060J	-	-	306
NOTE: 1. UNIT TO BE PROVIDED WITH ELECTRIC HEAT, FAN, DX COOLING COIL AND FILTER SECTION. 2. PROVIDE CONCRETE PAD AND HAIL GUARD.																		



MECHANICAL GENERAL NOTES:

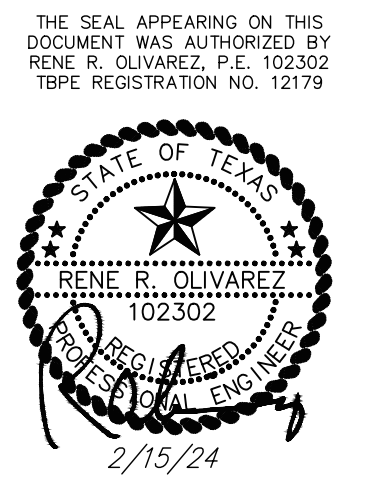
- CONTRACTOR SHALL BALANCE EACH DEVICE WITH THE CFM SHOWN ON PLAN.
- NEW PIPING AND DUCTWORK SHOWN ON PLAN ARE SCHEMATIC ONLY. CONTRACTOR SHALL COORDINATE WITH OTHER TRADES FOR PIPING AND DUCTWORK ROUTING, OFFSET AND RUN PIPING, DUCTWORK INSIDE THE STRUCTURE IF REQUIRED. PROVIDE ANY EXTRA PIPING, DUCTWORK, FITTINGS, INSULATIONS AND OTHER ACCESSORIES IN ORDER TO COMPLETE THE INSTALLATION.
- COORDINATE LOCATIONS AND SIZES OF ROOF OPENINGS WITH OWNER AND STRUCTURE ENGINEERS.
- EQUIPMENT SIZES, DIMENSIONS AND REQUIRED CONNECTIONS SHALL BE VERIFIED WITH THE ACTUAL EQUIPMENT SELECTED VENDOR DRAWINGS BEFORE FABRICATION OF DUCTWORK, PIPING, ETC...
- DUCT SIZES SHOWN ON PLANS ARE CLEAR INSIDE AIR STREAM DIMENSIONS.
- CONTRACTOR SHALL COORDINATE ALL ELECTRICAL REQUIREMENTS FOR ALL HVAC BASED ON ACTUAL EQUIPMENT SELECTED PRIOR TO INSTALLATION.
- CONTRACTOR SHALL COORDINATE EQUIPMENT WEIGHTS AND SUPPORTS BASED ON ACTUAL EQUIPMENT SELECTED.
- ALL EXPOSED DUCTWORK SHALL BE AS SHOWN, DOUBLE-WALL, INSULATED METAL, PRIMED FOR PAINTING, UNLESS OTHERWISE NOTED ON PLAN. ALL CONCEALED DUCTWORK SHALL BE INSULATED DUCT BOARD RECTANGULAR UNLESS ALLOWED IN WRITING BY THE ENGINEER OF RECORD. COORDINATE FINAL FINISH WITH ARCHITECT.
- COORDINATE WITH ALL TRADES FOR MATERIALS IN RATED AND PLENUM SPACES.
- ALL EXHAUST FANS SCHEDULED TO BE AUTOMATICALLY CONTROLLED BY MECHANICAL AIR HANDLERS SHALL BE CONNECTED BY MEANS OF AN AUXILIARY RELAY. PROVIDE AUXILIARY RELAY AS NEEDED.
- ALL SOURCE OF MECHANICAL INTAKE SHALL MAINTAIN 10 LINEAR FEET SEPARATION BETWEEN ANY SOURCE OF EXHAUST. CONTRACTOR IS RESPONSIBLE TO ADJUST DUCT LENGTH AS NEEDED.

KEYED NOTES:

- LOCATION OF DIGITAL THERMOSTAT CONTROL. PROVIDE LOCKABLE COVER.
- PROVIDE ROOF MOUNTED INTAKE HOOD AS SPECIFIED ON SCHEDULE. VERIFY EXACT LOCATION OF STRUCTURAL MEMBERS PRIOR TO INSTALLATION.
- PROVIDE ACCESS PANEL FOR CEILING MOUNTED EXHAUST FAN. INTERCONNECT EXHAUST FAN WITH LIGHTS IN THIS ROOM. REFER TO ELECTRICAL LIGHTING PLAN. FAN SHALL BE SUSPENDED FROM STRUCTURE ABOVE. VERIFY EXACT LOCATION OF STRUCTURAL MEMBERS PRIOR TO INSTALLATION. PROVIDE WALL CAP EQUAL TO LOREN COOK WCR6-ALUM AND INSTALL BOTTOM OF WALL CAP AT SAME HEIGHT AS EXHAUST FAN.
- PROVIDE ACCESS PANEL FOR CEILING MOUNTED EXHAUST FAN. INTERCONNECT EXHAUST FAN WITH DEDICATED MOTOR RATED SWITCH. REFER TO ELECTRICAL LIGHTING PLAN. FAN SHALL BE SUSPENDED FROM STRUCTURE ABOVE. VERIFY EXACT LOCATION OF STRUCTURAL MEMBERS PRIOR TO INSTALLATION. PROVIDE WALL CAP EQUAL TO LOREN COOK WCR6-ALUM AND INSTALL BOTTOM OF WALL CAP AT SAME HEIGHT AS EXHAUST FAN.
- PROVIDE ACCESS PANEL FOR CEILING MOUNTED EXHAUST FAN. INTERCONNECT EXHAUST FAN WITH T-STAT AND SET CUT-ON TEMP TO 80F. REFER TO ELECTRICAL LIGHTING PLAN. FAN SHALL BE SUSPENDED FROM STRUCTURE ABOVE. VERIFY EXACT LOCATION OF STRUCTURAL MEMBERS PRIOR TO INSTALLATION.
- CONTRACTOR TO RUN CONDENSATE DRAIN TO MOP SINK IN JANITOR CLOSET.
- COORDINATE FINAL LOCATION OF FCU'S WITH ARCHITECT AND OWNER. PROVIDE ACCESS PANEL AS REQUIRED, COORDINATE WITH ARCHITECT.
- COORDINATE FINAL LOCATION OF CU'S WITH OWNER AND ARCHITECT.
- PROVIDE DRYER EXHAUST VENT CAP EQUAL TO BROAN 642. COORDINATE EXACT PENETRATION LOCATION WITH ARCHITECT.
- PROVIDE DRYERBOX MODEL 350 OR EQUAL. RUN 4"ø FLEXIBLE THRU BOX AND THEN 4"ø DUCT. COORDINATE EXACT LOCATION WITH ARCHITECT.

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PROJECT #: 2319

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DRAWN BY: H.M.
REVIEWED BY: R.O.

ISSUED DATE: 2/15/24

REVISION / ADDENDA

NO. DATE DESCRIPTION

SHEET TITLE:

MECHANICAL
PLAN

SHEET
M1.0

EXISTING CONDITIONS & COORDINATION/RENOVATION:

- COORDINATE FACILITY SCHEDULES AND PROJECT COMPLETION DATES WITH OWNER. PERFORM WORK IN CLOSE COORDINATION WITH OWNER. MAJORITY OF WORK SHALL BE PERFORMED WHEN SCHOOL IS UNOCCUPIED, SUCH AS WEEKENDS, AFTER HOURS, SPRING AND SUMMER BREAK OR AT OWNER APPROVED TIME.
- COORDINATE WORK AMONG ALL DISCIPLINES. IT IS NOT THE INTENT OF THESE DOCUMENTS TO DICTATE WHO MUST DO THE WORK. ALL WORK SHOWN IS THE RESPONSIBILITY OF THE (PRIME) CONTRACTOR.
- WORK TO BE DONE UNDER ALLOWANCES BECOMES AN INTEGRAL PART OF THE WORK AND THE RESPONSIBILITY OF THE CONTRACTOR ONCE THE ALLOWANCE IS APPROVED.
- COORDINATE WITH OWNER AND ENGINEER FOR ANY DISRUPTION IN UTILITY SERVICES, ESPECIALLY THOSE THAT MIGHT AFFECT OTHER BUILDINGS ON CAMPUS.
- CONTRACTOR SHALL NOT PROCEED WITH ANY WORK INVOLVING A CHANGE IN PROJECT SCOPE OR COST WITHOUT FIRST HAVING OBTAINED ENGINEER'S APPROVAL IN WRITING. UNLESS ENGINEER HAS AGREED TO SUCH CHANGE PRIOR TO IT BEING DONE, AND HAS AGREED THAT AN INCREASE IN COST ASSOCIATED WITH SUCH CHANGE IS WARRANTED; CONTRACTOR WILL NOT BE REIMBURSED FOR SUCH CHANGE.
- OWNER'S EQUIPMENT, MATERIALS, FURNISHINGS, CARPETS, AND INTERIOR SURFACES ARE TO BE PROTECTED FROM DUST ACCUMULATION AND DAMAGE, AND MUST BE THOROUGHLY CLEANED PRIOR TO SUBSTANTIAL COMPLETION. REFER TO SPECIFICATIONS SECTION 26 03 00 EXECUTION REQUIREMENTS FOR FURTHER DETAIL.
- MAINTAIN PROJECT SITE FREE OF WASTE MATERIALS AND DEBRIS, AND CLEAN SITE AT END OF EACH WORK DAY TO GREATEST EXTENT POSSIBLE.
- SUBMISSION OF PROPOSAL IS CONSIDERED AN ACKNOWLEDGEMENT THAT CONTRACTOR VISITED SITE, VERIFIED ALL EXISTING CONDITIONS, AND INCLUDED ANY MODIFICATIONS TO EXISTING AND NEW WORK REQUIRED FOR INSTALLATION OF A COMPLETE AND OPERATIONAL SYSTEM.
- TIME OR MONEY ALLOWANCES WILL NOT BE MADE TO ACCOMMODATE CONDITIONS THAT COULD HAVE BEEN VERIFIED PRIOR TO SUBMITTING PROPOSAL.
- DRAWINGS SHOWING ALL EQUIPMENT LOCATIONS, DUCT AND PIPE SIZES, ELEVATIONS, AND ELECTRICAL INFORMATION HAVE BEEN RECREATED USING DRAWINGS AND SITE SURVEYS. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL SITE CONDITIONS IN ORDER TO MAKE ANY NECESSARY ADJUSTMENTS. PRIOR TO ORDERING MATERIALS OR COMMENCING INSTALLATION, CHANGE ORDERS WILL NOT BE APPROVED FOR DIMENSIONAL VERIFICATIONS REQUIRING MINOR ADJUSTMENTS NEEDED TO COMPLETE INSTALLATION.
- PROVIDE OWNER WITH MINIMUM 10 DAYS ADVANCE NOTICE OF INTENT TO PERFORM ANY WORK WHICH WILL REQUIRE ELECTRICAL SERVICE TO BE SHUT DOWN.
- PRIOR TO DEMOLITION WORK, SUBMIT A DETAILED DEMOLITION AND CONSTRUCTION SCHEDULE TO OWNER AND ENGINEER. DO NOT PROCEED WITH WORK UNTIL PROPOSED SCHEDULE IS APPROVED BY ALL PARTIES. PROVIDE OWNER WITH MINIMUM 10 DAYS ADVANCE NOTICE OF INTENT TO PERFORM ANY WORK WHICH WILL REQUIRE ELECTRICAL SERVICE TO BE SHUT DOWN.
- PROVIDE SHOP DRAWINGS TO COORDINATE EXISTING AND NEW WORK.
- NOTIFY OWNER AND ENGINEER IF ANY MATERIALS SUSPECTED OF CONTAINING ASBESTOS ARE FOUND AND STOP WORK IMMEDIATELY.
- IT IS CONTRACTOR'S RESPONSIBILITY TO REMOVE AND DISPOSE OF ALL ITEMS INDICATED TO BE REMOVED. ONLY EXPRESSLY DESIGNATED ITEMS SHALL BE TURNED OVER TO OWNER.
- OWNER SHALL HAVE FIRST RIGHT OF REFUSAL OF ALL MATERIAL REMOVED. CONTRACTOR SHALL DISPOSE OF ALL MATERIALS WHICH THE OWNER DOES NOT WANT.
- REMOVE ALL EQUIPMENT, MATERIALS, CONTROL DEVICES, BOXES, POWER AND CONTROL WIRING, SAFETY SWITCHES, TUBING, ELECTRICAL CONDUIT, PIPING, SENSORS, ELECTRICAL DISCONNECTS, SUPPORTING DEVICES AND STRUCTURES, AND ALL RELATED AUXILIARY ITEMS ASSOCIATED WITH EQUIPMENT AND MATERIALS WHICH WILL NO LONGER BE USED AFTER THE PROJECT IS COMPLETE.
- CONTRACTOR IS RESPONSIBLE FOR RESTORING ANY DISTURBED SURFACE TO ITS ORIGINAL CONDITION. ANY ROAD, TRAFFIC, OR OTHER PAINTED OR ERECTED SIGNS DAMAGED AS A RESULT OF WORK PERFORMED IN THOSE AREAS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION.
- CUTTING AND PATCHING OF WALLS DAMAGED IN THE REMOVAL OF ITEMS SHALL BE DONE, WHETHER OR NOT DRAWINGS SPECIFICALLY CALL FOR SUCH REPAIRS.
- FIELD-VERIFY EXACT LOCATIONS OF ALL EXISTING AND NEW UTILITIES. PRIOR TO CONDUCTING ANY WORK. COORDINATE WITH OWNERS PERSONNEL AND UTILITY COMPANIES. ALL EXPENSES INCURRED TO REPAIR DAMAGE CAUSED TO KNOWN UTILITIES AS A RESULT OF CONTRACTOR'S WORK SHALL BE BORNE BY THE CONTRACTOR. OWNER WILL NOT BE RESPONSIBLE FOR SUCH COSTS.
- COORDINATE DEMOLITION WORK WITH NEW AND TEMPORARY CONSTRUCTION WITH MINIMAL INTERRUPTION OF POWER, AND OTHER UTILITIES. COORDINATE WITH OWNER AND ENGINEER FOR ANY DISRUPTION IN UTILITY SERVICES, PARTICULARLY THOSE THAT MIGHT AFFECT OCCUPANCY.

EQUIPMENT:

- EQUIPMENT INSPECTION:
 - FIELD VERIFY ALL CONDITIONS AND MEASURE DIMENSIONS WITHIN THE BUILDING PRIOR TO ORDERING EQUIPMENT AND/OR PROCEEDING WITH INSTALLATION.
 - ALL EQUIPMENT SHALL BE FACTORY TESTED, AND CONTRACTOR SHALL VERIFY EQUIPMENT CONDITION PRIOR TO INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR EQUIPMENT DAMAGED DURING MOVING AND INSTALLATION.
 - EQUIPMENT FOUND DEFECTIVE PRIOR TO FINAL ACCEPTANCE SHALL BE REPLACED AT NO COST TO OWNER.
 - COORDINATE CONCRETE HOUSEKEEPING PAD EXTENSIONS AS NEEDED.
- EQUIPMENT ACCESS:
 - EXPOSED GROUNDING CONDUCTORS SHALL BE SUPPORTED BY MECHANICAL MEANS AND PROPERLY PROTECTED FROM DAMAGE. ALL GROUNDING CONDUCTORS SHALL BE SLEEVED THROUGH BUILDING WALLS.
 - INSTALL ALL VALVES CONTROLS, DAMPERS, FANS, ETC. IN ACCESSIBLE LOCATIONS. PROVIDE ADEQUATELY SIZED ACCESS DOORS WHERE REQUIRED.
- EQUIPMENT INSTALLATION:
 - PROVIDE SPRING HANGER TYPE VIBRATION ISOLATORS TO SUPPORT POWERED VIBRATING EQUIPMENT. PROVIDE FLEXIBLE DUCT CONNECTORS.
 - COMPLETELY WEATHERPROOF ALL EQUIPMENT, DUCTS, PIPES AND OTHER DEVICES AND MATERIALS INSTALLED OUTSIDE THE BUILDING, CHILLER YARD AREA, OR OTHERWISE EXPOSED TO WEATHER. AS A MINIMUM, WEATHERPROOFING SHALL INCLUDE, BUT IS NOT LIMITED TO THE FOLLOWING: JACKETING FOR ALL PIPING INSULATION, VALVES AND ACCESSORIES RATED FOR OUTDOOR SERVICE, ELECTRICAL ENCLOSURES NEMA 4X-SS, PROVIDE ELECTRICAL HEAT TRACING FOR UTILITIES SUSCEPTIBLE TO FREEZING.
 - AFIX ID TAGS TO ALL MECHANICAL EQUIPMENT FOR SPECIFICATIONS.
- ELECTRICAL:
 - CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH ELECTRICAL CONTRACTOR REGARDING EQUIPMENT SIZES AND TYPES OF ELECTRICAL INTERFACE EQUIPMENT REQUIRED.
 - DUE TO VARIATIONS IN EQUIPMENT CHARACTERISTICS BY DIFFERENT EQUIPMENT SUPPLIERS, MECHANICAL EQUIPMENT ULTIMATELY PROVIDED MAY DIFFER IN HORSEPOWER OR AMPERAGE REQUIREMENTS FROM THAT SPECIFIED IN THESE DRAWINGS. COORDINATE WITH GENERAL CONTRACTOR PRIOR TO BIDDING, AND PRIOR TO SUBMITTALS AND ORDERING EQUIPMENT, TO ENSURE THAT EQUIPMENT ELECTRICAL REQUIREMENTS ARE CONVEYED TO ELECTRICAL CONTRACTOR. IT IS SOLELY CONTRACTOR'S RESPONSIBILITY TO ENSURE COMPATIBILITY ISSUES ARE COORDINATED.

ELECTRICAL:

- ALL ELECTRICAL WORK SHALL BE UNDER THE MASTER ELECTRICIAN WHO PULLED THE PERMIT AND ITS JOURNEYMAN ELECTRICIANS.
- PERFORM ALL WORK PER ADOPTED N.E.C. AND APPLICABLE STATE STANDARDS, UNLESS DRAWINGS OR SPECIFICATIONS HAVE MORE STRINGENT REQUIREMENTS.
- MINIMUM CIRCUIT SIZE IS 2 #12 AND 1 #12 GROUND IN 3/4" CONDUIT FOR INDIVIDUAL CIRCUITS, 3/4" CONDUIT FOR MULTIPLE CIRCUITS, WITH THE EXCEPTION THAT ANY CIRCUIT LONGER THAN 100 FEET SHALL BE MINIMUM #10 AWG WITH #10 GROUND WIRE. CIRCUIT LONGER THAN 200 FEET SHALL BE MINIMUM #8 AWG WITH #10 GROUND WIRE. MINIMUM ALL CONDUCTORS SHALL BE 75 DEGREE (MINIMUM) COPPER THHN, COLOR CODED AS PER NEC AND LOCAL AMENDMENTS WITH SIZE, TEMPERATURE, AND VOLTAGE PERMANENTLY PRINTED ON THE JACKET. ALL JOINTS SHALL BE MADE UP USING SELF LOCKING, TWIST-ON, COLOR CODED, SQUARE WIRE SPRING GRAB, LONG SKIRT, WIRE CONNECTORS WITH SWEPT WINGS.
- ALL EXISTING ID NAMETAGS AND CIRCUIT IDENTIFICATION MUST BE REVISED TO REFLECT CURRENT CONDITIONS FOR ALL EQUIPMENT WHICH IS NEW, REPLACED, OR DEMOLISHED. REMOVE ID NAMETAGS FOR DEMOLISHED EQUIPMENT. REPLACE EXISTING NAMETAGS WITH NEW FOR REPLACED EQUIPMENT, IF REPLACEMENT EQUIPMENT HAS DIFFERENT NAME. PROVIDE NEW NAMETAGS FOR ALL NEW EQUIPMENT. ALL CIRCUIT BREAKER DIRECTORIES FOR PANELS IN WHICH NEW WORK TAKES PLACE ARE TO BE REPLACED WITH NEW DIRECTORIES WHICH LIST EXISTING CIRCUITS AND NEW. ALL UNUSED CIRCUITS ARE TO BE MARKED AS "SPARE" IN THE DIRECTORIES. DIRECTORIES ARE TO BE COMPUTER GENERATED; NO HAND WRITTEN DIRECTORIES ARE ACCEPTABLE.
- HAND-WRITTEN CIRCUIT BREAKER DIRECTORIES WILL NOT BE ACCEPTED. DIRECTORIES MUST BE COMPUTER GENERATED AND PRINTED TO REFLECT FINAL INSTALLED CONDITIONS.
- MARK ALL J-BOXES WITH INDELEIBLE INK, INDICATING POWER CIRCUITRY INFORMATION. LABEL ALL EQUIPMENT ITEMS PER SPECIFICATIONS.
- ALL EXTERIOR RACEWAYS ABOVE GROUND SHALL BE RIGID GALVANIZED.
- UNDER NO CIRCUMSTANCES SHALL MORE THAN THREE CIRCUITS SHARE THE SAME NEUTRAL, AND SUCH CIRCUITS MUST BE SEPARATE PHASE.
- SINCE ELECTRICAL CHARACTERISTIC OF EQUIPMENT (SUCH AS HORSEPOWER, KW, AMPERAGE, VOLTAGE, ETC.) SUBMITTED MAY DIFFER FROM THOSE SPECIFIED IN DRAWINGS, CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH MECHANICAL AND OTHER CONTRACTORS TO ENSURE COMPATIBILITY BETWEEN ELECTRICAL AND MECHANICAL EQUIPMENT SIZES AND TYPES OF ELECTRICAL INTERFACE EQUIPMENT REQUIRED.
- USE LONG-SWEEPS FOR ALL CHANGES IN DIRECTION ON CONDUIT RUNS.
- ALL INTERIOR RACEWAYS SHALL BE EMT.
- FIELD VERIFY PROJECT SITE EXISTING CONDITIONS AND ELEVATIONS PRIOR TO BEGINNING ANY WORK.
- PHASING AND SEQUENCE OF CONSTRUCTION SHALL BE PER DRAWINGS AND SPECIFICATIONS.
- ALL MATERIALS AND LABOR, WHETHER SPECIFICALLY INDICATED ON PLANS OR NOT, WHICH ARE NECESSARY FOR THE PROPER INSTALLATION AND FUNCTION OF THE SYSTEM SHALL BE FURNISHED BY THIS CONTRACTOR. INCLUDE ALL COSTS OF CHANGES, IF/AS REQUIRED IN BID PROPOSAL.
- ELECTRICAL WIRING SHALL NOT BE SPLICED BELOW GRADE.
- CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS AND FEES ASSOCIATED WITH PROJECT, INCLUDING FEES FOR INSPECTIONS, APPLICATIONS, AND PROVISION OF NEW SERVICES.
- CONTRACTOR WHO WILL ACTUALLY PERFORM WORK MUST APPLY FOR ALL REQUIRED PERMITS.
- NOTIFY ENGINEER OF ANY ASPECTS OF DESIGN WHICH ARE THOUGHT TO BE IN NONCOMPLIANCE WITH APPLICABLE CODES.
- COORDINATE ALL WORK WITH OTHER TRADES; COORDINATE SCHEDULE OF WORK WITH ALL SUB-CONTRACTORS TO ACHIEVE SMOOTH FLOW OF CONSTRUCTION.
- SEAL AROUND ELECTRICAL RACEWAYS AT ALL WALLS AND WALL LOUVER PENETRATIONS WITH FIREPROOF CAULKING. RE: SPECS. PROVIDE FLASHING AROUND PENETRATION, BOTH INSIDE AND OUTSIDE, TO PROVIDE FINISHED LOOK.
- CONTRACTOR SHALL REVIEW COMPLETE DOCUMENTS PRIOR TO SUBMITTAL OF PROPOSAL TO GAIN COMPLETE UNDERSTANDING OF PROJECT SCOPE, WORK BY OTHERS, AND ELECTRICAL WORK ASSOCIATED WITH OTHER DISCIPLINES.
- MAINTAIN MANUFACTURER RECOMMENDED CLEARANCE AROUND ALL EQUIPMENT.
- PLACE ID TAGS TO ALL DIVISION 26 EQUIPMENT.
- CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH MECHANICAL AND PLUMBING CONTRACTOR REGARDING EQUIPMENT SIZES AND TYPES OF ELECTRICAL INTERFACE EQUIPMENT REQUIRED.
- FIELD VERIFY ALL CONDITIONS AND MEASURE DIMENSIONS WITHIN THE BUILDING PRIOR TO ORDERING EQUIPMENT AND/OR PROCEEDING WITH INSTALLATION.
- ALL EQUIPMENT SHALL BE FACTORY TESTED, AND CONTRACTOR SHALL VERIFY THEIR CONDITION PRIOR TO INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR EQUIPMENT DAMAGED DURING MOVING AND INSTALLATION.
- EQUIPMENT FOUND DEFECTIVE PRIOR TO FINAL ACCEPTANCE SHALL BE REPLACED AT NO COST TO OWNER.
- SLEEVE ALL EXTERIOR WALL PENETRATIONS.
- MINIMUM CIRCUIT SIZE IS 2 #12 AND 1 #12 GROUND IN 3/4" CONDUIT. MAXIMUM FIXTURE WHIP LENGTH FROM ANY J-BOX 6 FEET. LIGHTING CIRCUITS JOINTS SHALL BE MADE UP IN OVERHEAD J-BOXES SECURED TO STRUCTURE WITH LIGHTING WHIPS FROM THE J-BOXES. FIXTURES DESIGNED TO BE QUICK-CLIPPED TOGETHER SHALL BE CONNECTED AS PER MANUFACTURER.
- COORDINATE LIGHT LOCATIONS WITH OTHER CEILING ITEMS OR JOIST ITEMS PRIOR TO INSTALLATION. LIGHT LOCATIONS TAKE PRECEDENCE OVER AIR DEVICES.
- PROVIDE SECONDARY SUPPORT WIRES FROM ALL FOUR (4) CORNERS OF THE LIGHTING FIXTURES TO THE STRUCTURE ABOVE.
- ALL GROUNDING SHALL BE INSTALLED IN ACCORDANCE WITH ARTICLE 250 OF THE CURRENT NEC WITH ALL CITY AMENDMENTS.
- THE PERIMETER GROUND LOOP CONDUCTOR SHALL BE MINIMUM 4/0 STRANDED BARE COPPER, BURIED NOT LESS THAN 24 INCHES BELOW GRADE AND 36 INCHES FROM THE BUILDING. IT SHALL BE EXOTHERMICALLY WELDED (CAD) TO COLUMN GROUNDS AND PERIMETER GROUND RODS.
- PERIMETER GROUND RODS SHALL BE MINIMUM 3/4" INCH AND 8 FOOT LONG COPPER OR COPPER CLAD, BURIED VERTICALLY TO A MINIMUM DEPTH OF 8 FOOT 6 INCH BELOW GRADE. DRIVE ALL GROUND RODS INTO EXPOSED EARTH. IF DUE TO CONSTRUCTION, THE EARTH HAS BEEN DISTURBED AT THE GROUND ROD POINT, COMPACT THE LOCATION AND INSTALL GROUND ROD.
- EXPOSED GROUNDING CONDUCTORS SHALL BE SUPPORTED BY MECHANICAL MEANS AND PROPERLY PROTECTED FROM DAMAGE. ALL GROUNDING CONDUCTORS SHALL BE SLEEVED THROUGH BUILDING WALLS.
- BOND THE GROUNDING SYSTEM TO THE WATER PIPE SYSTEM. IF THE WATER PIPING IS SUSPENDED BELOW THE STRUCTURE, BOND THE GROUND TO THE WATER PIPE AT THE GRADE POINT.
- BOND THE GROUND LOOP TO THE BUILDING COLUMN CASINGS. EXOTHERMICALLY WELD THE CONNECTIONS. IF THE COLUMN STEEL DOES NOT PENETRATE THE EARTH MORE THAN 4 FEET, PROVIDE COPPER BONDING JUMPER FROM THE CASING TO THE COLUMN.
- BOND BUILDING GROUND SYSTEM TO ALL BUILDING STEEL, TO INCLUDE BAR JOISTS OFF MASONRY WALLS. MECHANICAL BONDING CLAMPS ARE PERMITTED. ALL CONDUCTORS ON BEAMS SHALL BE SECURED 48" INTERVALS WITH MALLEABLE CABLE STRAPS. SAND AND CLEAN ALL BOLT-ON CONNECTIONS.
- PROVIDE GROUNDING SYSTEM PER NEC 250.32 FOR ALL STANDALONE STRUCTURES.

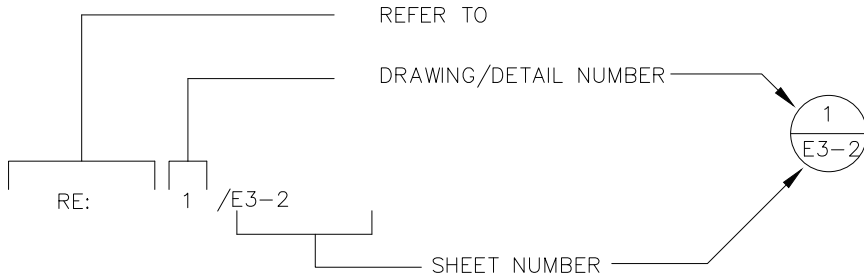
CODES AND ORDINANCES:

- GENERAL:
 - UNLESS DRAWINGS OR SPECIFICATIONS HAVE MORE STRINGENT REQUIREMENTS, PERFORM ALL WORK PER APPLICABLE VERSION OF INTERNATIONAL BUILDING CODES, AND LOCAL CODES AND ORDINANCES.
 - PRIOR TO SUBMITTING PROPOSAL, NOTIFY ENGINEER OF ANY ASPECTS OF DESIGN WHICH ARE THOUGHT TO BE IN NONCOMPLIANCE WITH APPLICABLE CODES.
- PERMITS:
 - CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS AND FEES ASSOCIATED WITH PROJECT, INCLUDING FEES FOR INSPECTIONS, APPLICATIONS, AND PROVISION OF NEW SERVICES.
 - CONTRACTOR WHO WILL ACTUALLY PERFORM WORK MUST APPLY FOR ALL REQUIRED PERMITS.
- APPROVALS AND INSPECTIONS:
 - OBTAIN APPROVAL FROM CITY FIRE DEPARTMENT AND BUILDING AND SAFETY DEPARTMENT PRIOR TO INSTALLATION OF ANY FIRE RELATED ITEMS.
 - COORDINATE PRESSURE TESTS, INSPECTIONS AND APPROVAL FOR ALL SYSTEMS WITH PERMITTING OFFICER, OWNER AND ENGINEER.
 - FOR ALL EQUIPMENT INSTALLED OUTDOORS, PROVIDE WIND RESTRAINTS TO MEET IBC REQUIREMENTS.

ELECTRICAL LEGEND:

LEGEND:			
	EXISTING EQUIP. TO REMAIN		DISCONNECT SWITCH - NON FUSED
	EXISTING EQUIP. TO BE DEMOLISHED		DISCONNECT SWITCH - FUSED
	NEW EQUIPMENT		COMBINATION MOTOR STARTER/DISCONNECT SWITCH
	EXISTING CIRCUIT		SINGLE OR THREE PHASE MOTOR NUMBER INDICATES HORSEPOWER
	NEW CIRCUIT (ABOVE GROUND)		VARIABLE FREQUENCY DRIVE PROVIDED BY DIVISION 15 AND INSTALLED BY DIVISION 16.
	NEW CIRCUIT (UNDERGROUND)		CEILING MOUNTED SPEAKER. "VC" INDICATES VOLUME CONTROL ON SPEAKER
	ELECTRICAL PANEL		AUDIO VISUAL FIRE ALARM HORN-CEILING MOUNTED
	SWITCHBOARD, MAIN DISTRIBUTION PANEL OR MOTOR CONTROL CENTER		DATA WALL OUTLET.
	HOMERUN TO PANEL		FIRE ALARM CONTROL PANEL
	FOURPLEX WALL RECEPTACLE, NEMA 5-20R, 20A, 125V.		AUDIO VISUAL FIRE ALARM HORN +80" AFF
	DUPLEX WALL RECEPTACLE.		8" X 4" LINEAR LED LIGHT FIXTURE.
	JUNCTION BOX (SQUARE)		2' X 4' LED LIGHT FIXTURE.
	INGROUND PULL BOX (SQUARE)		LIGHT POLE WITH LED LIGHT FIXTURE
	POINT OF CONNECTION.		PUSHBUTTON SWITCH WITH TIMER

NOT ALL SYMBOLS SHOWN ON THIS SYMBOL LIST ARE USED IN THE CONTRACT DOCUMENTS.



ABBREVIATIONS:

ABV	AMPERES	MCC	MOTOR CONTROL CENTER
ACC	ABOVE	MD	MOTORIZED DAMPER
ACCU	AIR COOLED CHILLER	MDP	MAIN DISTRIBUTION PANEL
AFC	AIR COOLED CONDENSING UNIT	MFR	MANUFACTURER
AFF	ABOVE FINISHED CEILING	MLO	MAIN LUGS ONLY
AFG	ABOVE FINISHED FLOOR	MSB	MAIN SWITCHBOARD
AHJ	ABOVE FINISHED GRADE	N3R	NEMA 3R ENCLOSURE
AIC	AIR HANDLING UNIT	N4X	NEMA 4X ENCLOSURE
AL	AMPERE INTERRUPT CAPACITY	NEC	NATIONAL ELECTRICAL CODE
AP	ALUMINUM	NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
ATS	ACCESS PANEL, ALARM PANEL	NF	NON-FUSED
AUX	AUTOMATIC TRANSFER SWITCH	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
AWG	AUXILIARY	NFS	NON-FUSED SWITCH
BAS	AMERICAN WIRE GAUGE	NTS	NOT TO SCALE
BKR	BUILDING AUTOMATION SYSTEM	OAU	OUTSIDE AIR UNIT
BLDG.	BREAKER	P	POLE, PUMP
C	BUILDING	PH	PHASE
CLG	CONDUIT	PNL	PANEL
CU	CEILING	POS	POINT OF SALE
dB	COPPER	PP	POWER POLE
DC	DECIBEL	PR	PAIR
DDC	DIRECT CURRENT	PWR	POWER
DIA	DIRECT DIGITAL CONTROL	RA	RETURN AIR
DISC	DIAMETER	RE	REFERENCE, REFER
DP	DISCONNECT	RGS	RIGID GALVANIZED STEEL
DWG	DISTRIBUTION PANEL	RTU	ROOFTOP UNIT
(E)	DRAWING	SECT	SECTION
EMS	EXISTING	SPKR	SPEAKER
EUH	ENERGY MANAGEMENT SYSTEM	SS	STAINLESS STEEL
EWH	ELECTRIC UNIT HEATER	SW	SWITCH
EF	ELECTRIC WATER HEATER	SWBD	SWITCHBOARD
FACP	EXHAUST FAN	TC	TEMPERATURE CONTROL
FCU	FIRE ALARM CONTROL PANEL	TEL	TELEPHONE
GA	FAN COIL UNIT	SA	SUPPLY AIR
GALV	GAUGE	TAB	TEST AND BALANCE
GC	GALVANIZED	TSTAT	THERMOSTAT
GFCI	GENERAL CONTRACTOR	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
HD	GROUND FAULT CIRCUIT INTERRUPTER	TYP	TYPICAL
HP	ELECTRIC HAND DRYER	UG	UNDERGROUND
ID	HORSEPOWER	V	VOLT
IN	INSIDE DIAMETER	VAV	VARIABLE AIR VOLUME
JB	INCH	VFD	VARIABLE FREQUENCY DRIVE
KVA	JUNCTION BOX	WP	WEATHERPROOF
KW	KILOVOLT-- AMPS	XFMR	TRANSFORMER
KWH	KILOWATT		
MCB	KILOWATT-HOUR		
	MAIN CIRCUIT BREAKER		

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MEP ENGINEERING & CONSTRUCTION MANAGEMENT



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RENE R. OLIVAREZ, P.E. 102302
TBPCE REGISTRATION NO. 12179



PROJECT #: 2319

TRDI OFFICE AND
WAREHOUSE

931 W. SHARM DR.
PHARR, TX 78577

DRAWN BY: H.M.
REVIEWED BY: R.O.
ISSUED DATE: 2/15/24

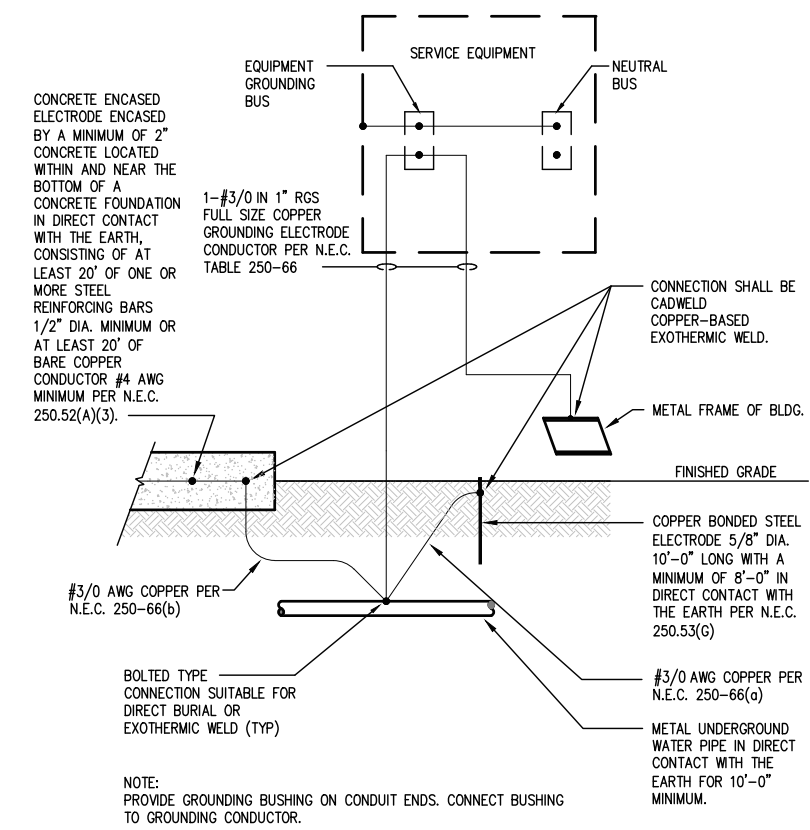
REVISION / ADDENDA

NO. DATE DESCRIPTION

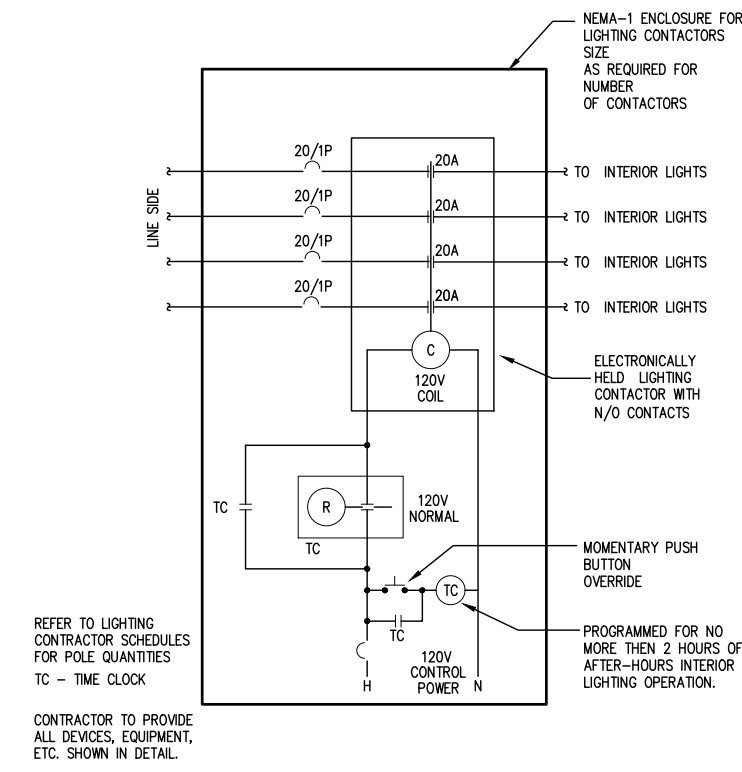
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ELECTRICAL SYMBOLS
& ABBREVIATIONS
AND GENERAL NOTES

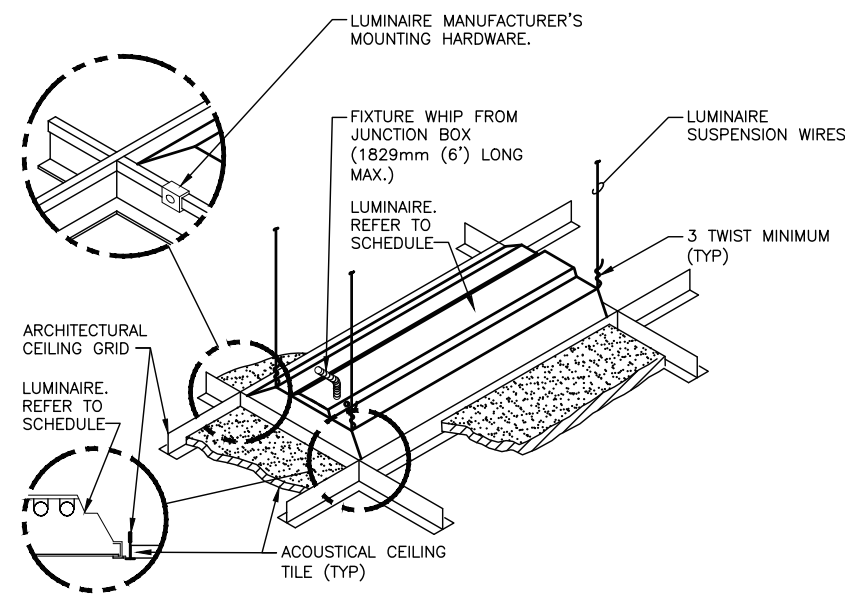
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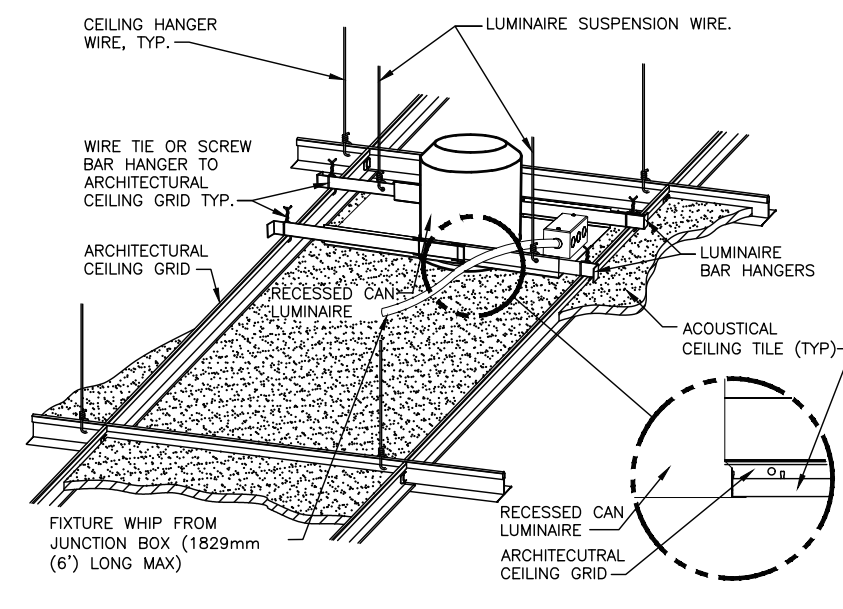
2 GROUNDING ELECTRODE SYSTEM
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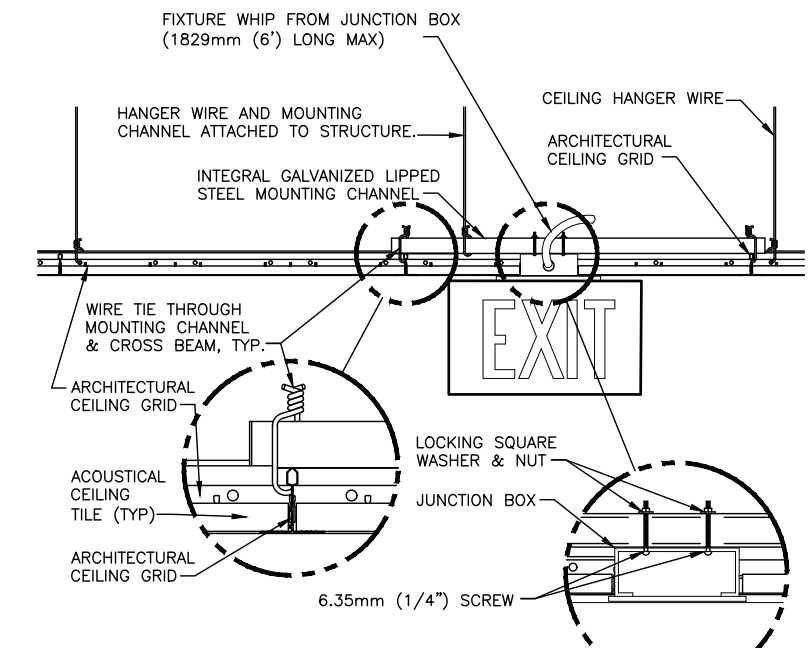
3 INTERIOR LIGHTING CONTACTOR DETAIL
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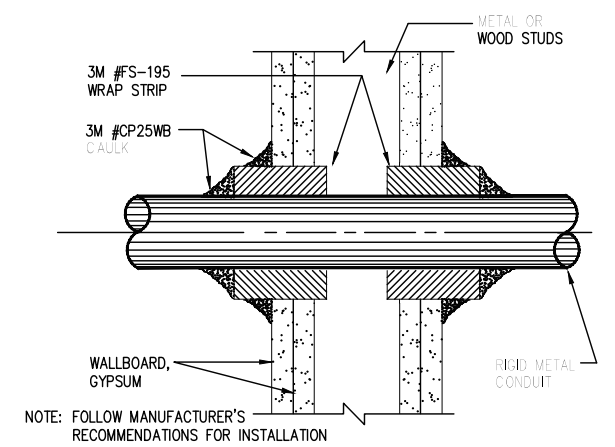
5 LUMINAIRE MOUNTING - LAY-IN CEILING
NTS



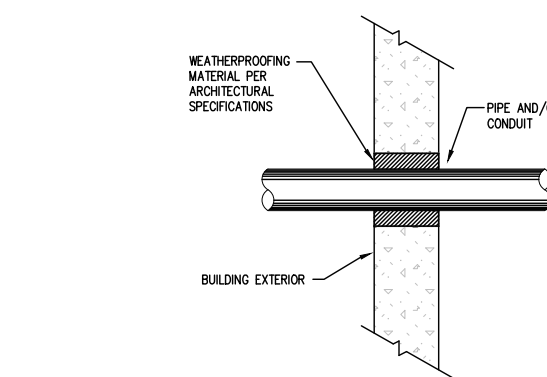
2 DOWNLIGHT MOUNTING - LAY-IN CEILING
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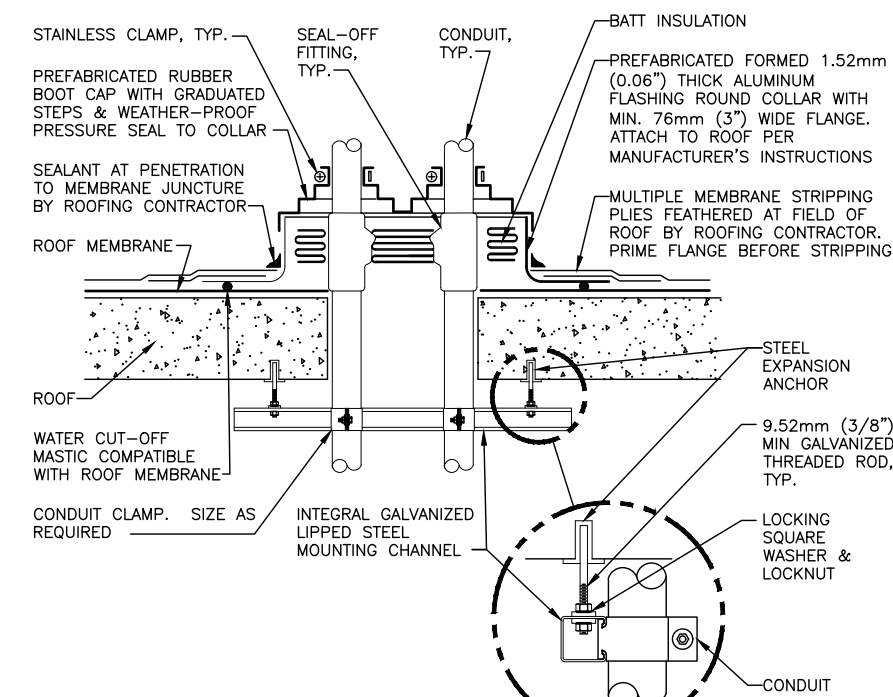
6 EXIT SIGN MOUNTING - LAY-IN CEILING
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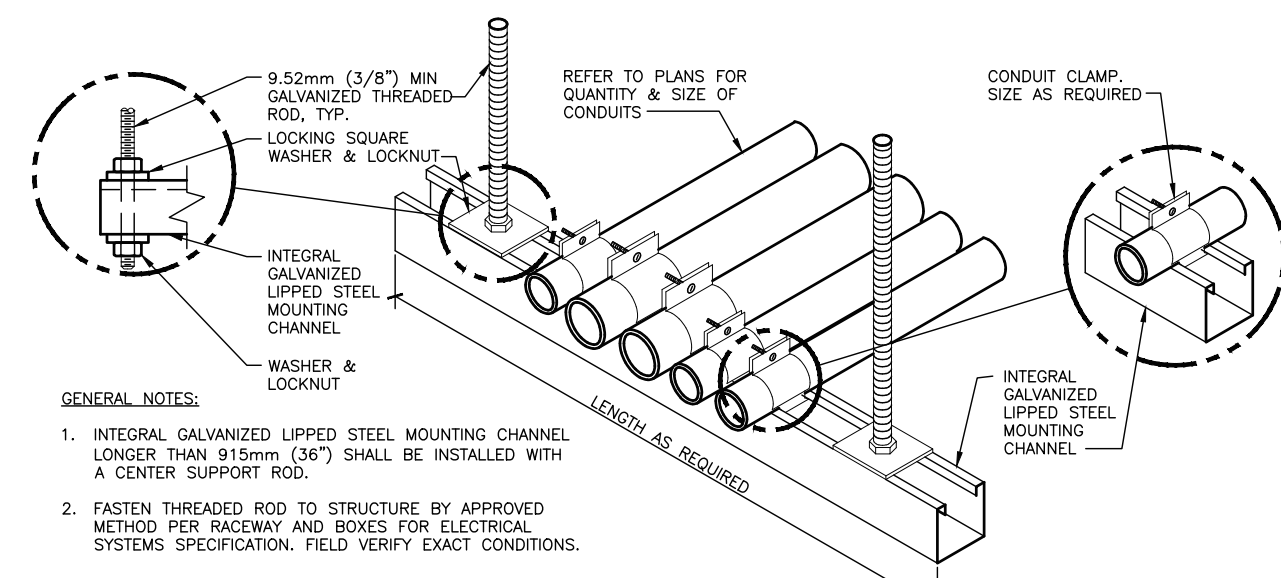
1 1 AND 2 HR. GYPSUM/WALLBOARD PENETRATION DETAIL
NTS



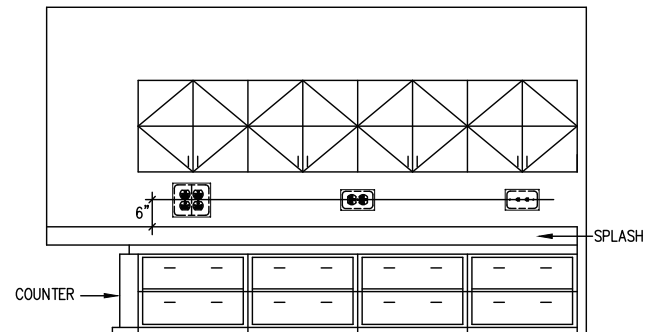
2 PIPE AND/OR CONDUIT PENETRATION
NTS



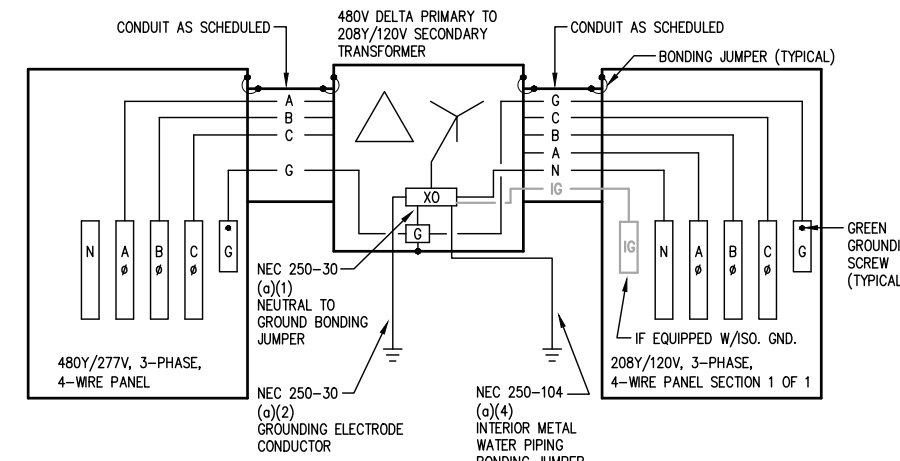
6 CONDUIT ROOF PENETRATION DETAIL
NTS



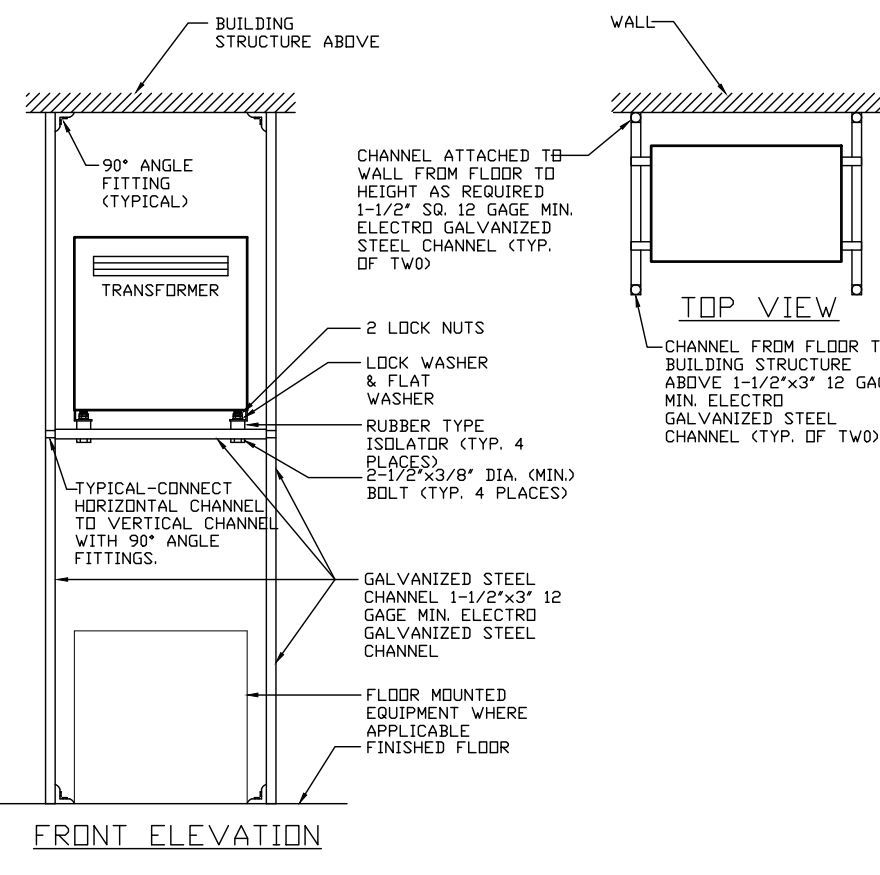
7 CONDUIT TRAPEZE MOUNTING DETAIL
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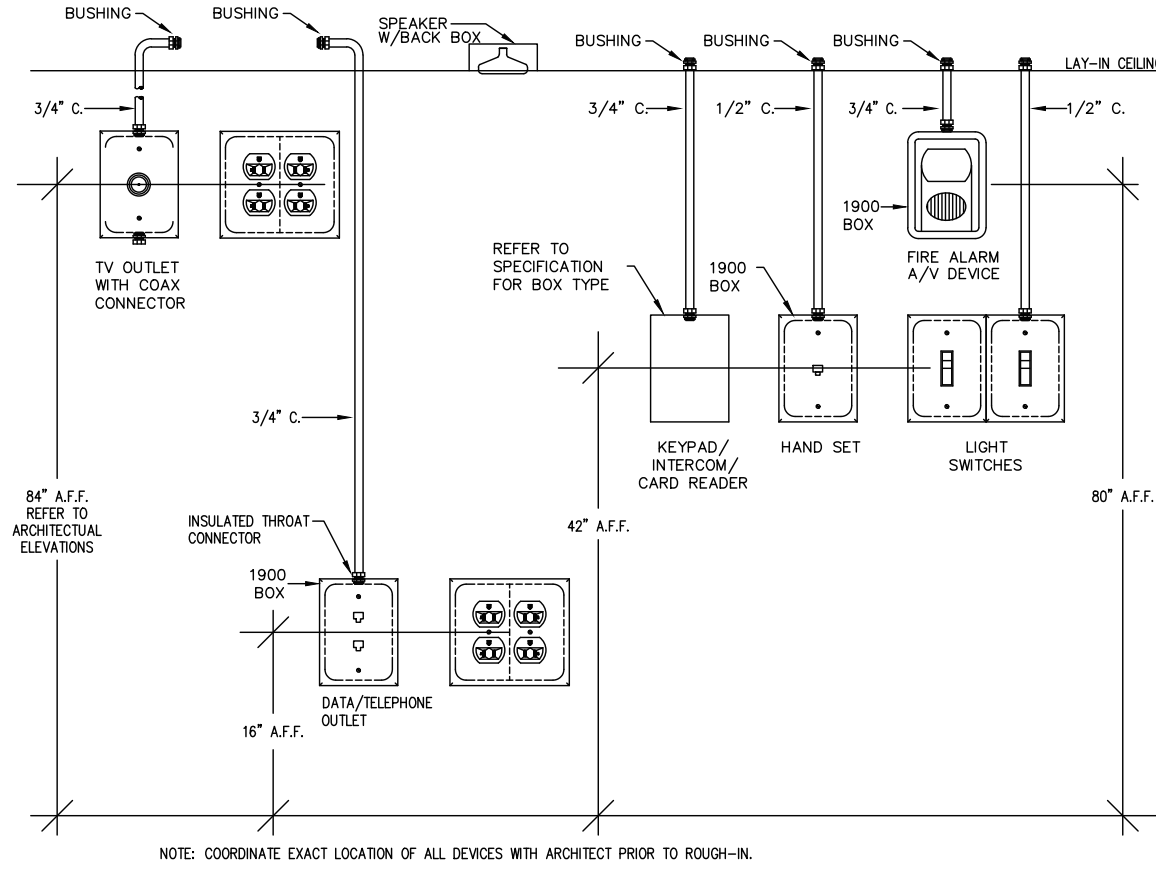
7 TYPICAL COUNTERTOP DEVICE ELEVATION
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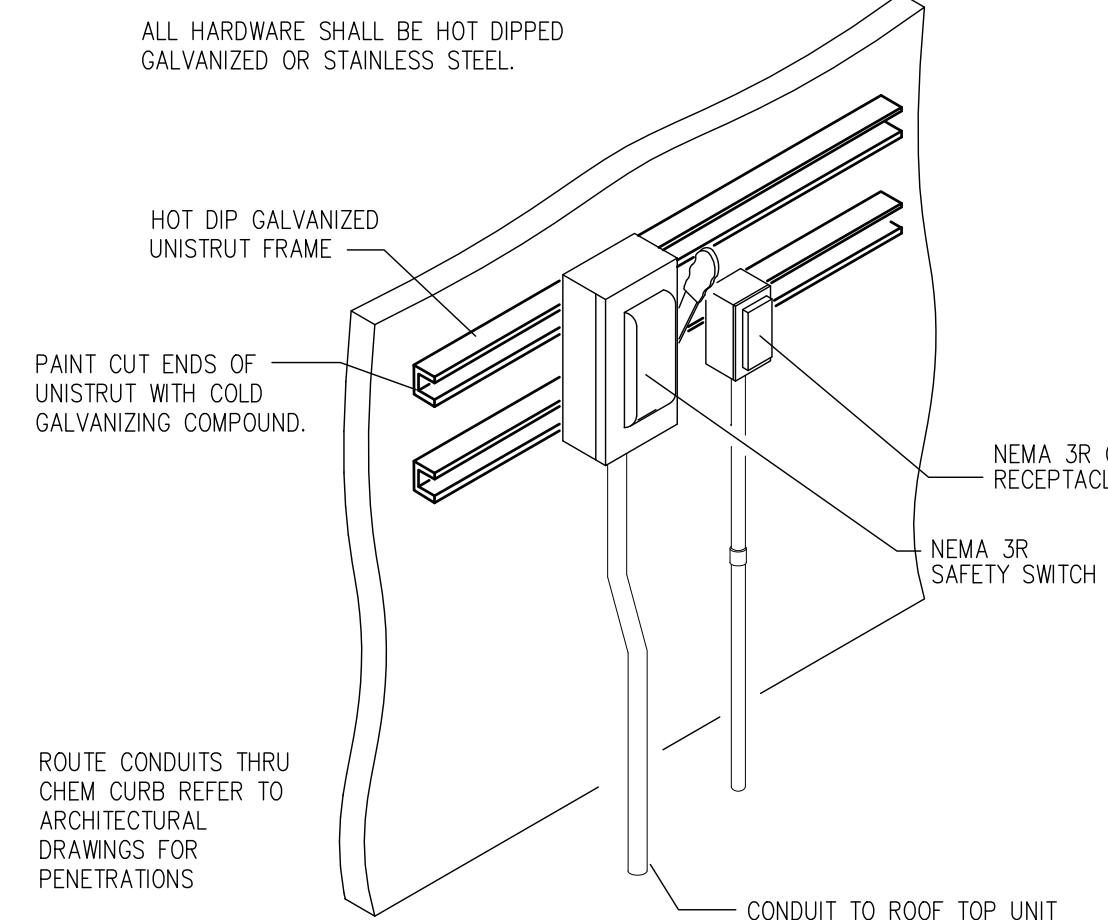
9 TRANSFORMER WIRING DETAIL
NTS



3 STACKED TRANSFORMER RACK MTG. DETAIL
NTS



17 TYPICAL DEVICE ELEVATIONS
NO SCALE



1 EXTERIOR WALL DISCONNECT DETAIL
NTS

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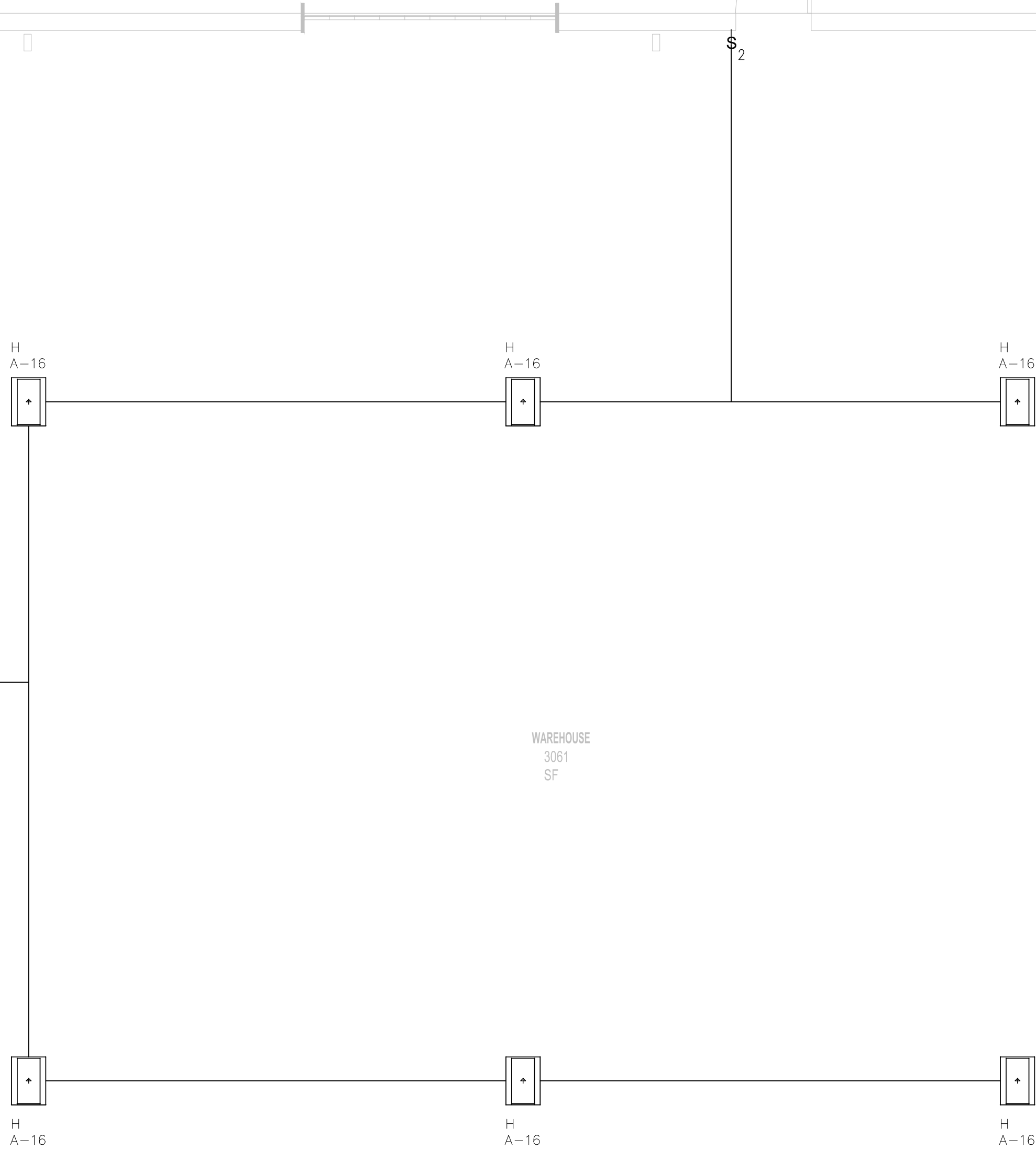
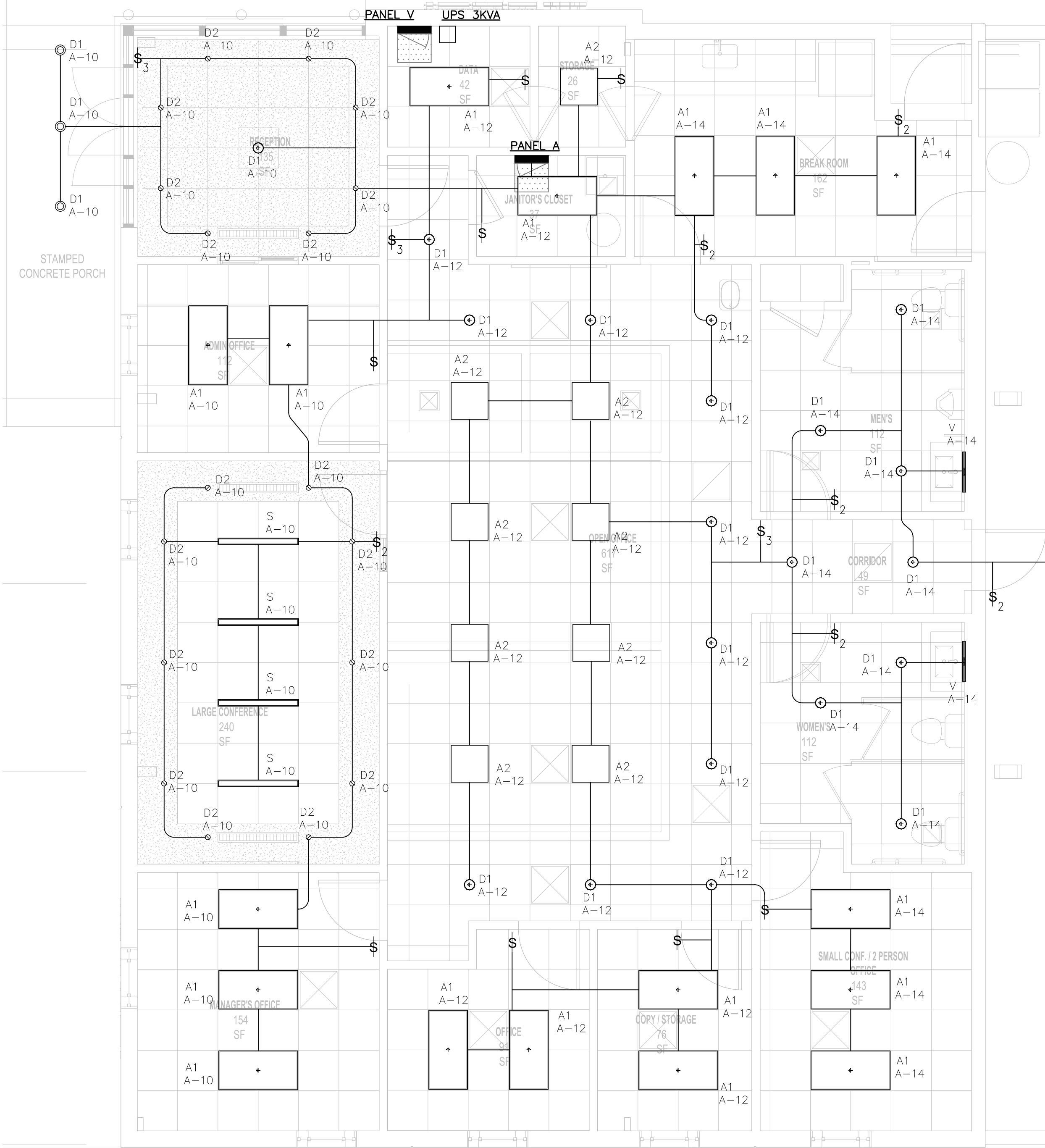
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ELECTRICAL DETAILS
SHEET
E0.1



1 LIGHTING PLAN
1/4" = 1'-0"

LIGHT FIXTURE SCHEDULE								
TYPE	MANUF.	CATALOG No.	MOUNTING	LAMPS		VOLTAGE	INPUT W	REMARKS
				#	TYPE			
A1	SIGNIFY	2FGXG54L840-4-RS-UNV	CEILING		LED	120/277V	40.6W	VERIFY COLOR WITH OWNER. CONNECT TO OCCUPANCY SENSOR.
A2	SIGNIFY	2FGXG48L840-4-RS-UNV	CEILING		LED	120/277V	35.6W	VERIFY COLOR WITH OWNER. CONNECT TO OCCUPANCY SENSOR.
D1	SIGNIFY	6RN/P6RDL10940WCLZ10U	CEILING		LED	120/277V	28.3W	VERIFY COLOR WITH OWNER. CONNECT TO OCCUPANCY SENSOR.
D2	NLSTR	NFLIN-R610/30WW	CEILING		LED	120/277V	24 W	VERIFY COLOR WITH OWNER. CONNECT TO OCCUPANCY SENSOR.
H	SIGNIFY	FBY18L840-UNV-LFA	PENDANT		LED	120/277V	132.6W	VERIFY COLOR WITH OWNER. CONNECT TO OCCUPANCY SENSOR.
S	SIGNIFY	FSS330L840-UNV-DIM	CEILING		LED	120/277V	23.9W	VERIFY COLOR WITH OWNER. CONNECT TO OCCUPANCY SENSOR.
V	BROWNLEE	5020-24-CH-H16-WHA-40K	WALL		LED	120/277V	16.7W	VERIFY COLOR WITH OWNER. CONNECT TO OCCUPANCY SENSOR.

ELECTRICAL KEYED NOTES:

- 1 PROVIDE NEW LIGHTING AS PER LIGHT FIXTURE SCHEDULE AND CONNECT TO CONTROLS AS SHOWN IN ACCORDANCE TO LEGEND.

GENERAL NOTES LIGHTING SHEETS:

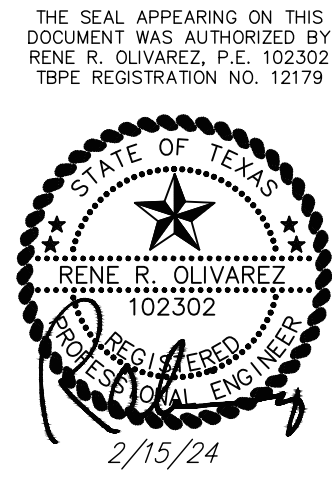
- WHEN LOCATING SYSTEMS NEXT TO DOORS, LOCATE 8 INCHES OFF DOOR JAMB TO CENTER OF DEVICE. WHEN MULTIPLE DEVICES ARE TOGETHER, STACK BUT NO MORE THAN 72 INCHES AFF. COORDINATE SWITCH LOCATIONS IN ROOMS WITH ARCHITECT AND OTHER DEVICES (THERMOSTATS, FIRE ALARM, AND CALL BUTTONS).
- SWITCHES SHALL BE PROVIDED FOR EACH ROOM. SWITCH FIXTURES ACCORDING TO THE FOLLOWING:
A) SWITCH DOWNLIGHTS ABOVE COUNTERS SEPARATE FROM REMAINDER OF ROOM.
B) PROVIDE SEPARATE SWITCHING FOR CORRIDORS INDEPENDENT OF ROOMS.
- MINIMUM CIRCUIT SIZE IS 2-#12 AND 1-#12 GROUND IN 3/4" CONDUIT. MAXIMUM FIXTURE WHIP LENGTH FROM ANY J-BOX 6 FEET. LIGHTING CIRCUITS JOINTS SHALL BE MADE UP IN OVERHEAD J-BOXES SECURED TO STRUCTURE WITH LIGHTING WHIPS FROM THE J-BOXES. FIXTURES DESIGNED TO BE QUICK-CLIPPED TOGETHER SHALL BE CONNECTED AS PER MANUFACTURER.
- COORDINATE LIGHT LOCATIONS WITH OTHER CEILING ITEMS OR JOIST ITEMS PRIOR TO INSTALLATION. LIGHT LOCATIONS TAKE PRECEDENCE OVER AIR DEVICES.
- PROVIDE SECONDARY SUPPORT WIRES FROM ALL FOUR (4) CORNERS OF THE LAY-IN FIXTURES TO THE STRUCTURE ABOVE. DO NOT SUPPORT FIXTURES FROM CEILING GRID WIRE SUPPORTS, PIPING, CONDUIT, SIDE WALLS, OR MECHANICAL EQUIPMENT. CEILING SPECIFICATIONS DO NOT SUPERCEDE THIS REQUIREMENT.
- FIXTURES WITH "E" SUFFIX HAVE BATTERY BACK-UPS.
- FIRESTOP ALL CONDUIT PENETRATIONS IN RATED WALLS. SEE ARCHITECTURAL FOR WALL RATINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO SHEET ROCK AND REPAIR. PROVIDE FIRE RATED SLEEVES IN ALL FLOOR PENETRATIONS.
- CONTRACTOR TO VERIFY FIXTURE VOLTAGE PRIOR TO INSTALLING ANY RELOCATED FIXTURE. COORDINATE WITH RCP FOR FIXTURE LOCATIONS.
- PROVIDE AN EXTRA UNSWITCHED HOT LEG FOR EXIT LIGHTS.
- PROVIDE CONTACTORS ADJACENT TO NEW PANELS WITH EXTERIOR LIGHTING CIRCUITS. THE CONTACTORS SHALL BE 4 POLE FOR CONTROL OF EXTERIOR LIGHTING AS NOTED. PROVIDE 120V FROM NEW PANEL SPARE 20A/1P C.B. ALL EXTERIOR LIGHTS SHALL BE ROUTED THROUGH LIGHTING CONTACTOR FOR PHOTOCELL ON/TIMER OFF OPERATION.
- PROVIDE AN EXTRA UNSWITCHED HOT LEG FOR EXITS LIGHTS, NIGHTLIGHTS AND EMERGENCY LIGHTS. PROVIDE THE EXTRA UNSWITCHED HOT LEG FROM THE LINE SIDE OF THE CONTACTOR TO EACH EXIT AND EMERGENCY LIGHT AS INDICATED ON DRAWINGS. DO NOT ROUTE A SWITCHED (EITHER BY SWITCH OR CONTACTOR) HOT LEG TO EMERGENCY LIGHTS AND BALLASTS AS THIS WILL NOT ALLOW FOR PROPER OPERATION OF THE EMERGENCY/EXIT FIXTURE.
- PROVIDE LUTRON GRAPHIK EYE "GRX-XGLC" LOCKING COVER FOR SWITCHES IN HALLWAYS AND STUDENT RESTROOMS.
- COORDINATE MOUNTING HEIGHT OF LIGHT FIXTURES WITH ARCHITECTURAL ELEVATIONS.

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PROJECT #: 2319

TRDI OFFICE AND
WAREHOUSE

931 W. SHARM DR.
PHARR, TX 78577

DRAWN BY: H.M.
REVIEWED BY: R.O.
ISSUED DATE: 2/15/24

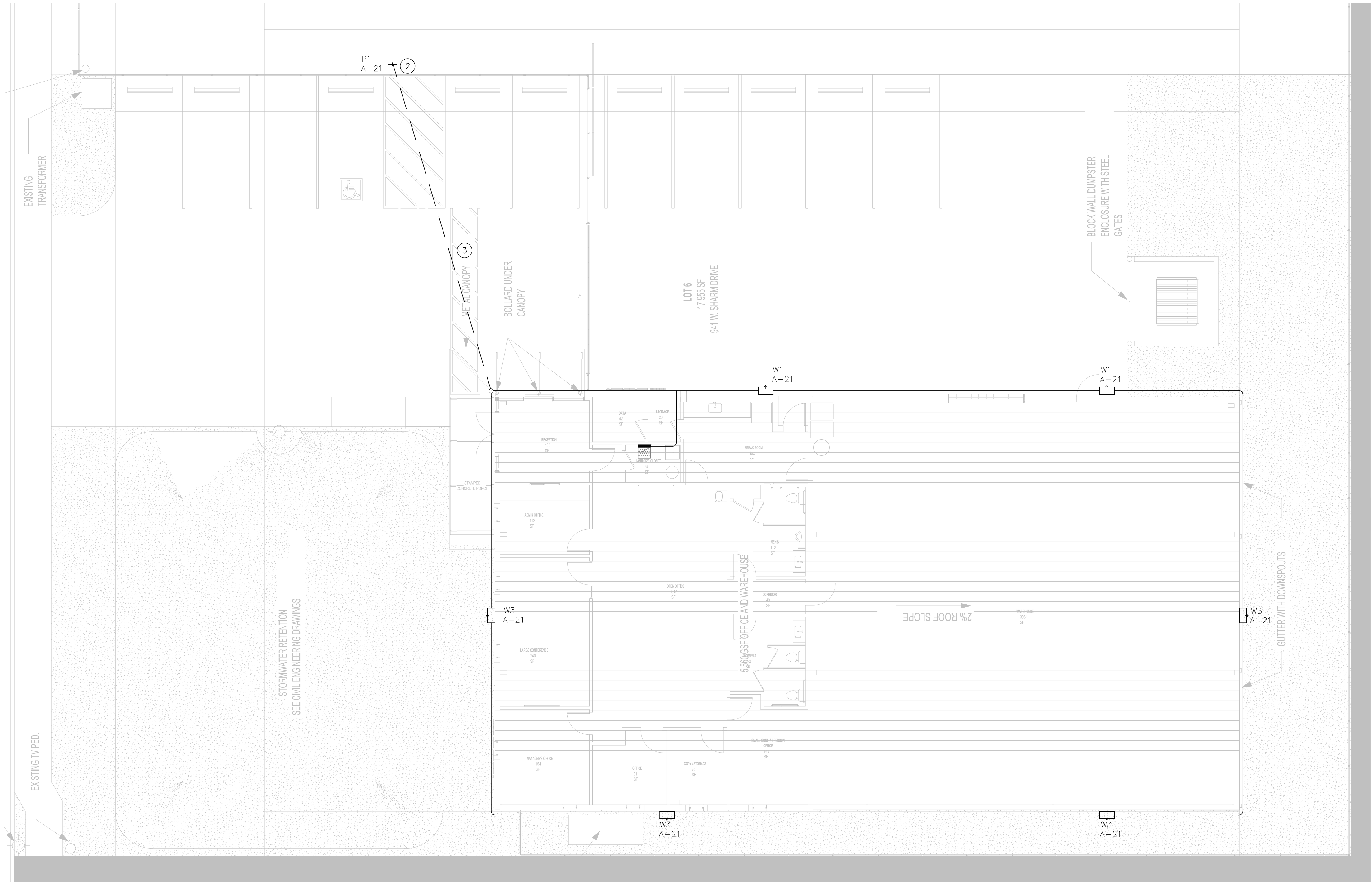
REVISION / ADDENDA

NO. DATE DESCRIPTION

SHEET TITLE:

LIGHTING PLAN

SHEET
E1.0



1 EXTERIOR LIGHTING PLAN
1/8" = 1'-0"

LIGHT FIXTURE SCHEDULE									
TYPE	MANUF.	CATALOG No.	MOUNTING	LAMPS		VOLTAGE	INPUT W	REMARKS	NOTES
				#	TYPE				
P1	SIGNIFY	OPF-S-A04-840-T3M-AR1-UNV-XX	POLE		LED	120/277V	90.68W	VERIFY COLOR WITH OWNER. CONNECT TO OCCUPANCY SENSOR.	1
W1	SIGNIFY	101L-16L-1000-NW-G2-4-XX	WALL		LED	120/277V	54.8W	VERIFY COLOR WITH OWNER. CONNECT TO OCCUPANCY SENSOR.	1
W2	SIGNIFY	GCS-A01-840-T2M-XX	WALL		LED	120/277V	10.2W	VERIFY COLOR WITH OWNER. CONNECT TO OCCUPANCY SENSOR.	1
W3	SIGNIFY	101L-16L-200-NW-G2-2-UNV-XX	WALL		LED	120/277V	12W	VERIFY COLOR WITH OWNER. CONNECT TO OCCUPANCY SENSOR.	1

GENERAL NOTES LIGHTING SHEETS:

- WHEN LOCATING SYSTEMS NEXT TO DOORS, LOCATE 8 INCHES OFF DOOR JAMB TO CENTER OF DEVICE. WHEN MULTIPLE DEVICES ARE TOGETHER, STACK BUT NO MORE THAN 72 INCHES AFF. COORDINATE SWITCH LOCATIONS IN ROOMS WITH ARCHITECT AND OTHER DEVICES (THERMOSTATS, FIRE ALARM, AND CALL BUTTONS).
- SWITCHES SHALL BE PROVIDED FOR EACH ROOM. SWITCH FIXTURES ACCORDING TO THE FOLLOWING:
 - SWITCH DOWNLIGHTS ABOVE COUNTERS SEPARATE FROM REMAINDER OF ROOM.
 - PROVIDE SEPARATE SWITCHING FOR CORRIDORS INDEPENDENT OF ROOMS.
- MINIMUM CIRCUIT SIZE IS 2-#12 AND 1-#12 GROUND IN 3/4" CONDUIT. MAXIMUM FIXTURE WHIP LENGTH FROM ANY J-BOX 6 FEET. LIGHTING CIRCUITS JOINTS SHALL BE MADE UP IN OVERHEAD J-BOXES SECURED TO STRUCTURE WITH LIGHTING WHIPS FROM THE J-BOXES. FIXTURES DESIGNED TO BE QUICK-CLIPPED TOGETHER SHALL BE CONNECTED AS PER MANUFACTURER.
- COORDINATE LIGHT LOCATIONS WITH OTHER CEILING ITEMS OR JOIST ITEMS PRIOR TO INSTALLATION. LIGHT LOCATIONS TAKE PRECEDENCE OVER AIR DEVICES.
- PROVIDE SECONDARY SUPPORT WIRES FROM ALL FOUR (4) CORNERS OF THE LAY-IN FIXTURES TO THE STRUCTURE ABOVE. DO NOT SUPPORT FIXTURES FROM CEILING GRID WIRE SUPPORTS, PIPING, CONDUIT, SIDE WALLS, OR MECHANICAL EQUIPMENT. CEILING SPECIFICATIONS DO NOT SUPERCEDE THIS REQUIREMENT.
- FIXTURES WITH "E" SUFFIX HAVE BATTERY BACK-UPS.
- FIRESTOP ALL CONDUIT PENETRATIONS IN RATED WALLS. SEE ARCHITECTURAL FOR WALL RATINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO SHEET ROCK AND REPAIR. PROVIDE FIRE RATED SLEEVES IN ALL FLOOR PENETRATIONS.
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- PROVIDE AN EXTRA UNSWITCHED HOT LEG FOR EXIT LIGHTS.
- PROVIDE CONTACTORS ADJACENT TO NEW PANELS WITH EXTERIOR LIGHTING CIRCUITS. THE CONTACTORS SHALL BE 4 POLE FOR CONTROL OF EXTERIOR LIGHTING AS NOTED. PROVIDE 120V FROM NEW PANEL SPARE 20A/1P C.B. ALL EXTERIOR LIGHTS SHALL BE ROUTED THROUGH LIGHTING CONTACTOR FOR PHOTOCELL ON/TIMER OFF OPERATION.
- PROVIDE AN EXTRA UNSWITCHED HOT LEG FOR EXITS LIGHTS, NIGHTLIGHTS AND EMERGENCY LIGHTS. PROVIDE THE EXTRA UNSWITCHED HOT LEG FROM THE LINE SIDE OF THE CONTACTOR TO EACH EXIT AND EMERGENCY LIGHT AS INDICATED ON DRAWINGS. DO NOT ROUTE A SWITCHED (EITHER BY SWITCH OR CONTACTOR) HOT LEG TO EMERGENCY LIGHTS AND BALLASTS AS THIS WILL NOT ALLOW FOR PROPER OPERATION OF THE EMERGENCY/EXIT FIXTURE.
- PROVIDE LUTRON GRAFIK EYE "GRX-XGLC" LOOKING COVER FOR SWITCHES IN HALLWAYS AND STUDENT RESTROOMS.
- COORDINATE MOUNTING HEIGHT OF LIGHT FIXTURES WITH ARCHITECTURAL ELEVATIONS.

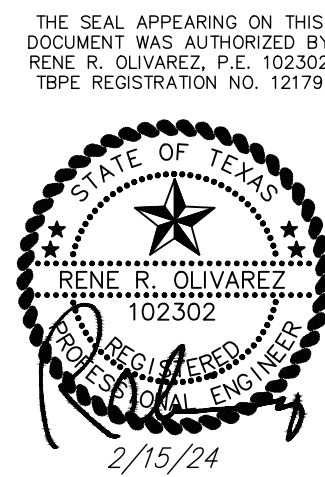
ELECTRICAL KEYED NOTES:

- PROVIDE NEW LIGHTING AS PER LIGHT FIXTURE SCHEDULE AND CONNECT TO CONTROLS AS SHOWN IN ACCORDANCE TO LEGEND.
- COORDINATE EXACT ROUTE WITH OWNER AND ARCHITECT AND MARK UTILITIES PRIOR TO TRENCHING. ROUTE THRU GRASS AREA.
- BORE ELECTRICAL CONDUIT UNDER EXISTING PAVEMENT.

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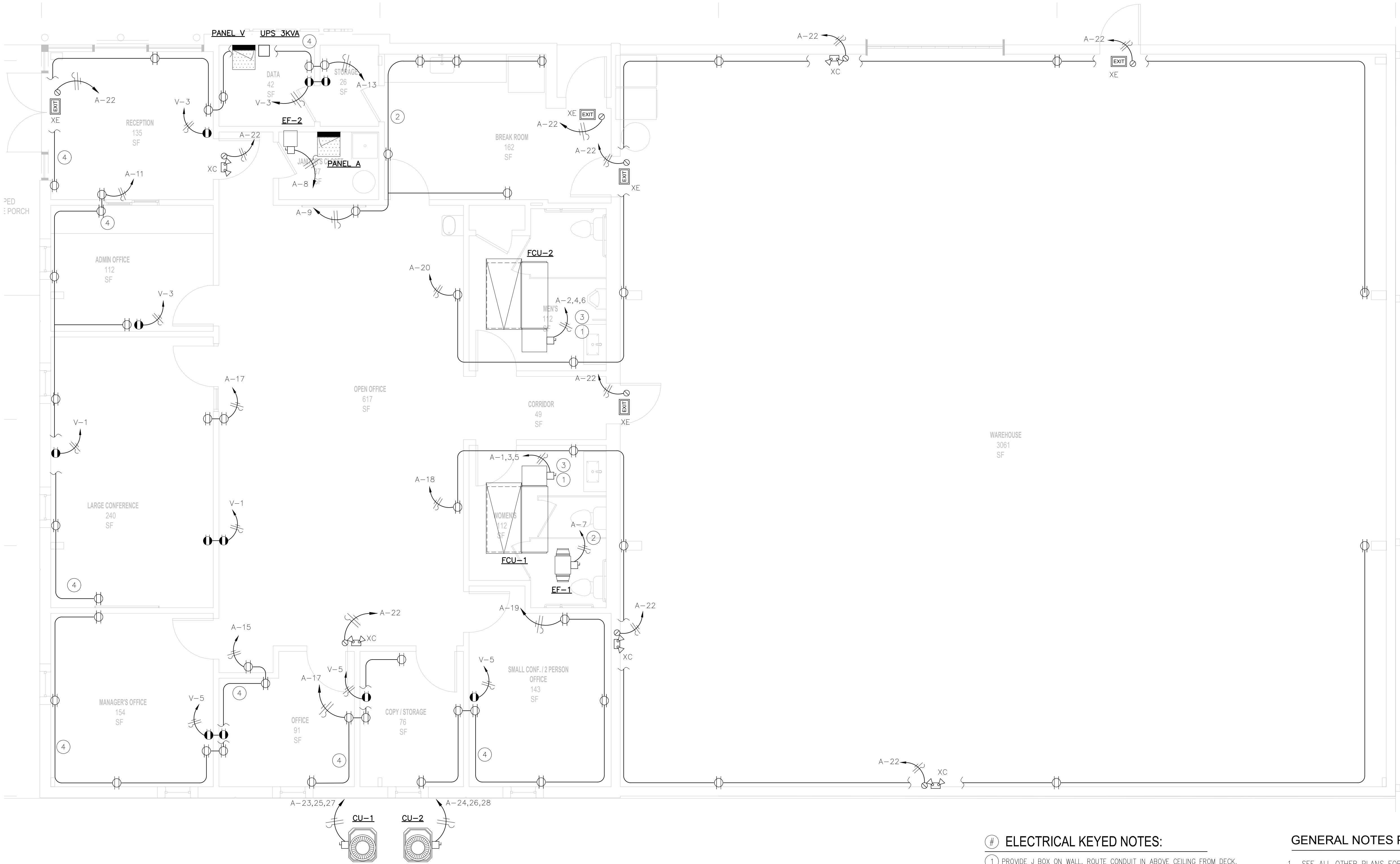
REVISION / ADDENDA

NO. DATE DESCRIPTION

SHEET TITLE:

EXTERIOR
LIGHTING PLAN

SHEET
E1.1



1 POWER PLAN
1/4" = 1'-0"

LIGHT FIXTURE SCHEDULE								
TYPE	MANUF.	CATALOG No.	MOUNTING	LAMPS		VOLTAGE	INPUT W	REMARKS
				#	TYPE			
XC	EELP	XC2RW-LED	WALL		LED	120/27V	3.7W	VERIFY COLOR WITH OWNER. CONNECT TO OCCUPANCY SENSOR.
XE	EELP	XE2RW	WALL		LED	120/27V	3.8W	VERIFY COLOR WITH OWNER. CONNECT TO OCCUPANCY SENSOR.
* PROVIDE EMERGENCY BALLAST W/TEST FOR ALL "E" SUFFIXED FIXTURES.								

ELECTRICAL KEYED NOTES:

- 1 PROVIDE J BOX ON WALL. ROUTE CONDUIT IN ABOVE CEILING FROM DECK. SUSPEND CONDUIT FROM STRUCTURE. COORDINATE EXACT LOCATION WITH ARCHITECT DRAWINGS AND LIGHTS PRIOR TO INSTALLATION.
- 2 INTERLOCK FAN WITH LIGHTS WIRE SHALL BE 2#12,1#12G,1/2"C.
- 3 COORDINATE LOCATION OF NEW EQUIPMENT PRIOR TO ROUGH-IN.
- 4 COORDINATE LOCATION OF TV AND COMPUTERS PRIOR TO ROUGH-IN.

GENERAL NOTES POWER SHEETS:

1. SEE ALL OTHER PLANS FOR ADDITIONAL DEVICES. SOME POWER CIRCUITING MAY BE ON OTHER PLANS. COORDINATE THE LOCATIONS OF DATA/CATV JACKS WITH THE RECEPTACLES. MOUNT ADJACENT TO EACH OTHER.
2. WHEN LOCATING SYSTEMS NEXT TO DOORS, LOCATE 8 INCHES OFF DOOR JAMB TO CENTER OF DEVICE. WHEN MULTIPLE DEVICES ARE TOGETHER, STACK BUT NO MORE THAN 72 INCHES AFF.
3. MINIMUM CIRCUIT SIZE IS 2 #12 AND 1 #12 GROUND IN 1/2" CONDUIT FOR INDIVIDUAL CIRCUITS, 3/4" CONDUIT FOR MULTIPLE CIRCUITS. ALL CONDUCTORS SHALL BE 75 DEGREE (MINIMUM) COPPER THHN, COLOR CODED AS PER NEC AND LOCAL AMENDMENTS WITH SIZE, TEMPERATURE, AND VOLTAGE PERMANENTLY PRINTED ON THE JACKET. ALL JOINTS SHALL BE MADE UP USING SELF LOCKING, TWIST-ON, COLOR CODED, SQUARE WIRE SPRING GRAB, LONG SKIRT, WIRE CONNECTORS WITH SWEPT WINGS.
4. COORDINATE RECEPTACLE LOCATIONS WITH MILLWORK AND COUNTERS. DO NOT LOCATE RECEPTACLES BEHIND DRAWERS OR HIDDEN IN MILLWORK UNLESS SPECIFICALLY DIRECTED BY OWNER/ARCHITECT. REVIEW ARCHITECTURAL ELEVATIONS PRIOR TO RECEPTACLE ROUGH-INS. SEE ARCH. ELEVATIONS IN BREAKROOMS FOR APPLIANCES AND RECEPTACLE MOUNTING LOCATIONS.
5. MOUNT RECEPTACLES 18" AFF, 6" ABOVE BACKSPLASH AT COUNTERS, 48" IN TOILET ROOMS, AT EQUIPMENT ROUGH-IN LOCATIONS FOR APPLIANCES, AND 96" FOR TV'S. PROVIDE GFI RECEPTACLES AT ALL SINKS, EXTERIOR RECEPTACLES, AND UNDERCOUNTER EQUIPMENT.
6. ALL EQUIPMENT SHALL HAVE A LOCAL DISCONNECTING MEANS, EITHER CORDED PLUG AND RECEPTACLE OR SWITCHED DISCONNECT. VERIFY FROM EQUIPMENT SUBMITTED OR RELOCATED IF DIRECT CONNECT OR RECEPTACLE. IF DIRECT CONNECT, PROVIDE SWITCH AS PER NEC. OTHERWISE, PROVIDE RECEPTACLE, CORD PLUG AS REQUIRED BY EQUIPMENT SUBMITTAL.
7. ON CIRCUITS GREATER THAN 20A, FEEDING MULTIPLE PIECES OF EQUIPMENT, PROVIDE FUSED DISCONNECTS (SIZED FOR EQUIPMENT PROTECTING).
8. PROVIDE INDIVIDUAL DISCONNECTS FOR ALL SMOKE FIRE DAMPERS AND VAV'S. NO EXCEPTIONS.
9. FIRESTOP ALL CONDUIT PENETRATIONS IN RATED WALLS. SEE ARCHITECTURAL FOR WALL RATINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO SHEET ROCK AND REPAIR.

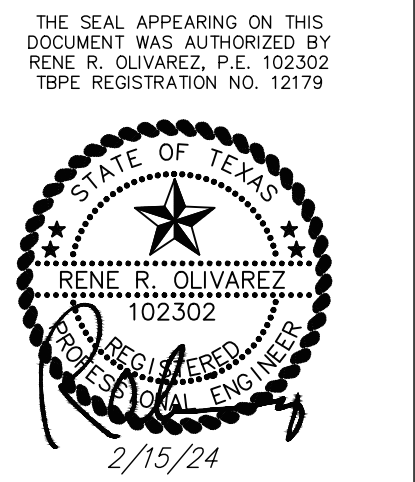
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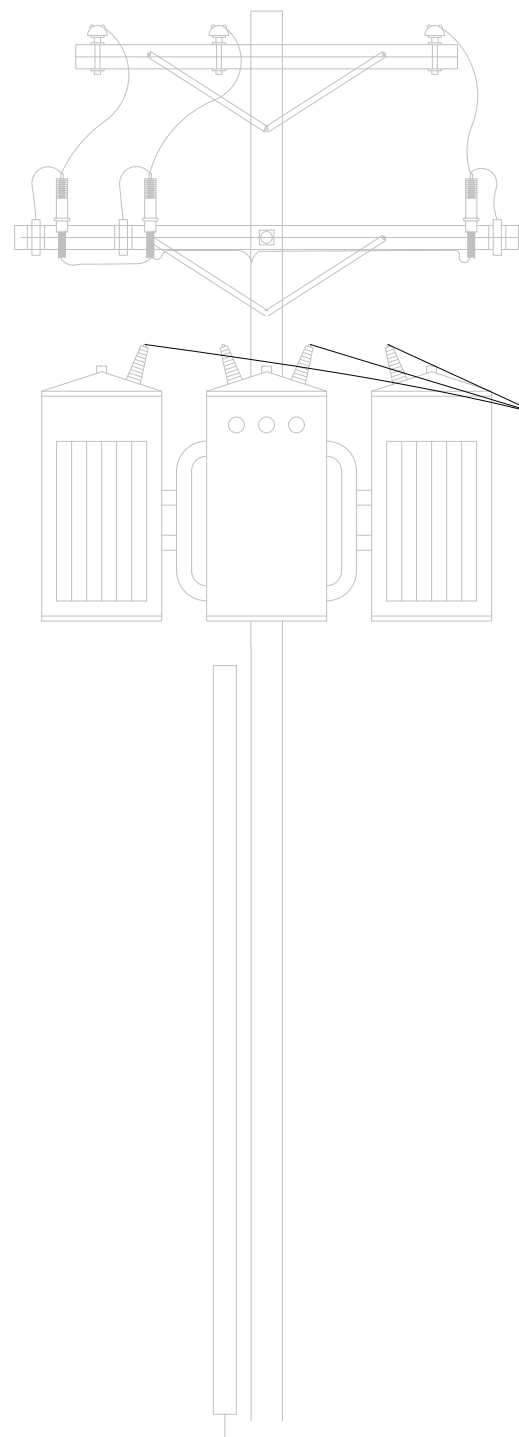
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DRAWN BY: H.M.
REVIEWED BY: R.O.
ISSUED DATE: 2/15/24

REVISION / ADDENDA		
NO.	DATE	DESCRIPTION

SHEET TITLE:
POWER PLAN

SHEET
E2.0



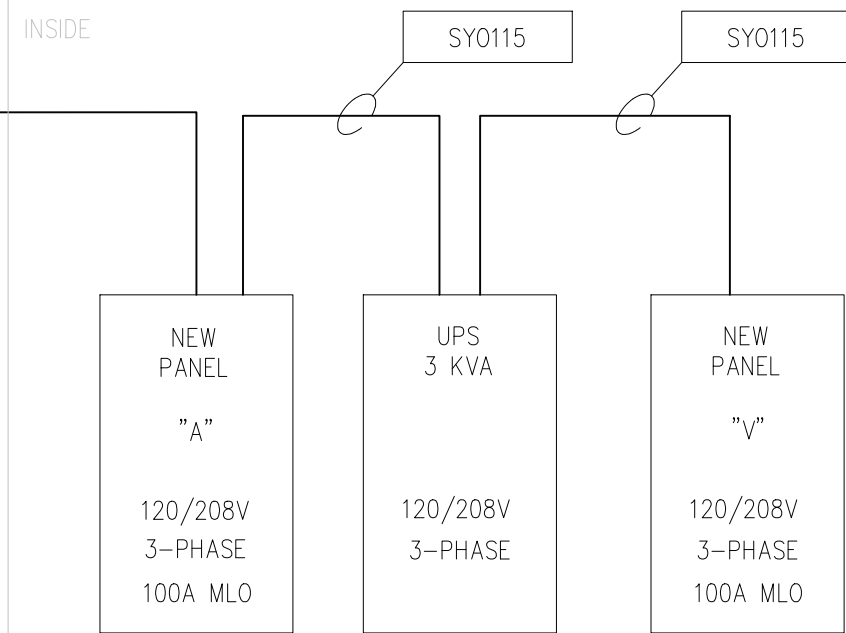
ELECTRICAL SERVICE SCOPE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DELIVERY OF SERVICE TO THE NEW BLDG. COORDINATE ALL REQUIREMENTS AND COSTS AND LABOR W/ LOCAL UTILITY. PRIOR TO BID. ALL COSTS ASSOCIATED W/ THE DELIVERY OF ELECTRICAL SERVICE SHALL BE INCLUDED AS A PART OF THIS CONTRACT. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

1 ONE LINE DIAGRAM
N.T.S.

THHN IN EMT SERVICE FEEDER SCHEDULE		
MARK	CONDUIT	CONDUCTORS
SY0115	1 - 1-1/4" Conduit	4 - #2 and 1 - #6 Ground
SY0150	1 - 2" Conduit	4 - #1/0 and 1 - #6 Ground
SY0200	1 - 2" Conduit	4 - #3/0 and 1 - #4 Ground
SY0230	1 - 2-1/2" Conduit	4 - #4/0 and 1 - #2 Ground
SY0310	1 - 3" Conduit	4 - #350 kcmil and 1 - #2 Ground
SY0400	2 - 2" Conduit	EACH with 4 - 3/0 and 1 - #2 Ground
SY1260	3 - 4" Conduits	EACH with 4 - #600 kcmil and 1 - #4/0 Ground
SY1520	4 - 4" Conduits	EACH with 4 - #500 kcmil and 1 - #4/0 Ground
SY1630	4 - 3-1/2" Conduits	EACH with 8 - #250 kcmil and 1 - #250 kcmil Ground
SY1680	4 - 4" Conduits	EACH with 4 - #600 kcmil and 1 - #250 kcmil Ground
SY2100	5 - 4" Conduits	EACH with 4 - #600 kcmil and 1 - #350 kcmil Ground
SD0115	1 - 1-1/4" Conduit	3 - #2 and 1 - #6 Ground

Notes:
1. Wet location (underground or outdoors) use THHW. Otherwise THHN.
2. Conduit Types; underground - schedule 40 PVC; indoors - EMT; outdoor exposed - IMC.
CPS - riser poles (follow Utility guidelines or minimum schedule 80).
3. Provide transitions to conduit changes prior to different environment (ex. Transition from EMT to IMC prior to penetrating walls to the exterior).
4. Motor Connections shall be flexible metallic conduit
5. All conduit penetrations in rated walls shall be firestopped.
6. See drawings for any special requirements.



NEW PANELBOARD A

VOLTAGE: 120/208 Volt		3 Phase,4-Wire		LOCATION: ROOM								
MCB: 150				MOUNTING: SURFACE								
MLO:		MAIN; NEUTRAL - 100%; EQUIPMENT GROUND		Isc = 22,000A RMS SYS AVAILABLE								
Load (VA)	Description	Type	Wire	CB	CKT #	PH	CKT #	CB	Wire	Type	Description	Load (VA)
2400	FCU-1	C	8	40/3	1	A	2	40/3	8	C	FCU-2	2400
2400	--	C	8	40/3	3	B	4	40/3	8	C	--	2400
2400	--	C	8	40/3	5	C	6	40/3	8	C	--	2400
480	EF-1	F	12	20/1	7	A	8	20/1	12	F	EF-2	480
1080	RECEPTACLE	R	10	20/1	9	B	10	15/1	12	L	LIGHTING	844
1260	RECEPTACLE	R	10	20/1	11	C	12	15/1	12	L	LIGHTING	875
1080	RECEPTACLE	R	10	20/1	13	A	14	15/1	12	L	LIGHTING	503
1260	RECEPTACLE	R	10	20/1	15	B	16	15/1	12	L	LIGHTING	796
1080	RECEPTACLE	R	10	20/1	17	C	18	20/1	10	R	RECEPTACLE	1080
1080	RECEPTACLE	R	10	20/1	19	A	20	20/1	10	R	RECEPTACLE	1080
248	EXTERIOR LIGHTING	L	12	20/1	21	B	22	15/1	12	L	LIGHTING EMER	38
2400	CU-1	C	8	40/3	23	C	24	40/3	8	C	CU-2	2400
2400	--	C	8	40/3	25	A	26	40/3	8	C	--	2400
2400	--	C	8	40/3	27	B	28	40/3	8	C	--	2400
	SPACE				29	C	30				SPACE	
	SPACE				31	A	32				SPACE	
	SPACE				33	B	34				SPACE	
	SPACE				35	C	36				SPACE	
540	PANEL-V	M	2	15/3	37	A	38				SPACE	
720	--	M	2	15/3	39	B	40				SPACE	
720	--	M	2	15/3	41	C	42				SPACE	
23,948	Subtotal										Subtotal	20,096
Load Type		Conn.	Fct.	Diversity						Conn.	Fct.	Diversity
(R) Recept.		9,000	100%	9,000				(L) Lighting		3,304	125%	4,130
(K) Kitchen		0	100%	0				(EL) Ext. Ltg.		0	125%	0
(C) Cooling		28,800	100%	28,800				(E) Elevators		0	100%	0
(H) Heating		0	0%	0				(WH) Water Ht.		0	100%	0
(F) Fans		960	100%	960				(MT) Lrg. Mot.		0	125%	0
(M) Misc.		1,980	100%	1,980				(SP) Sub Panel		0	100%	0

*=FURNISH AND INSTALL CIRCUIT BREAKER AS INDICATED. MATCH AIC RATING.

Total Connected Load =		44,044	VA =	122.3	AMPS	VA CONNECTED TO A PHASE =	14,843
Total Load (Diversified)=		44,870	VA =	124.5	AMPS	VA CONNECTED TO B PHASE =	14,585
						VA CONNECTED TO C PHASE =	14,615

NEW PANELBOARD V

VOLTAGE: 120/208 Volt		3 Phase,4-Wire		LOCATION: ROOM								
MCB: 100										MOUNTING: SURFACE		
MLO:		MAIN; NEUTRAL - 100%; EQUIPMENT GROUND		Isc = 10,000A RMS SYS AVAILABLE								
Load (VA)	Description	Type	Wire	CB	CKT #	PH	CKT #	CB	Wire	Type	Description	Load (VA)
540	RECEPTACLE	R	2	15/3	1	A	2				SPACE	
720	RECEPTACLE	R	2	15/3	3	B	4				SPACE	
720	RECEPTACLE	R	2	15/3	5	C	6				SPACE	
	SPACE				7	A	8				SPACE	
	SPACE				9	B	10				SPACE	
	SPACE				11	C	12				SPACE	
1,980	Subtotal										Subtotal	0
Load Type	Conn.	Fct.	Diversity					Conn.	Fct.	Diversity		
(R) Recept.	1,980	100%	1,980					(L) Lighting	0	125%	0	
(K) Kitchen	0	100%	0					(EL) Ext. Ltg.	0	125%	0	
(C) Cooling	0	0%	0					(E) Elevators	0	100%	0	
(H) Heating	0	0%	0					(WH) Water Ht.	0	100%	0	
(F) Fans	0	100%	0					(MT) Lrg. Mot.	0	125%	0	
(M) Misc.	0	100%	0					(SP) Sub Panel	0	100%	0	

=FURNISH AND INSTALL CIRCUIT BREAKER AS INDICATED. MATCH AIC RATING.

Total Connected Load =		1,980	VA =	5.5	AMPS	VA CONNECTED TO A PHASE =	540
Total Load (Diversified)=		1,980	VA =	5.5	AMPS	VA CONNECTED TO B PHASE =	720
						VA CONNECTED TO C PHASE =	720

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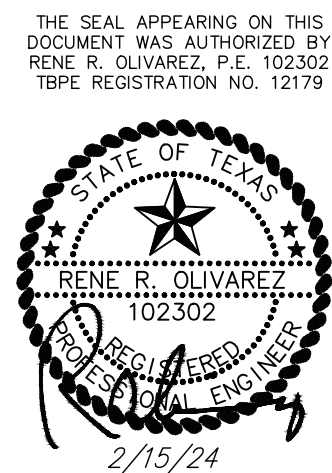
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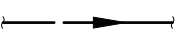
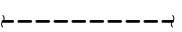


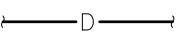

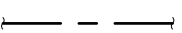
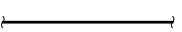

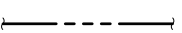
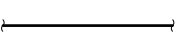










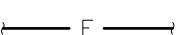
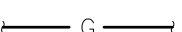



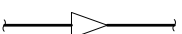
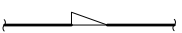
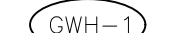

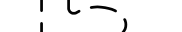







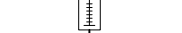





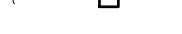

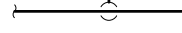
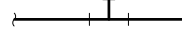
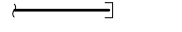
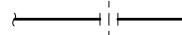

ELECTRICAL ONE
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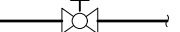



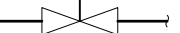

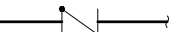
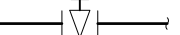

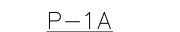







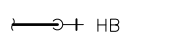

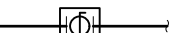
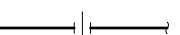

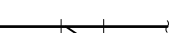
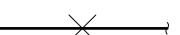



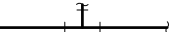


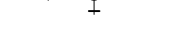



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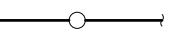
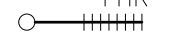
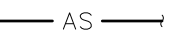


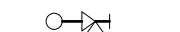


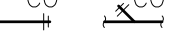
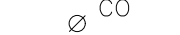
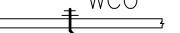


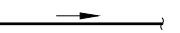


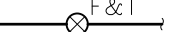
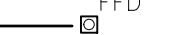




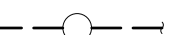
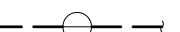
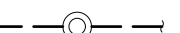


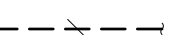




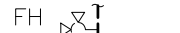



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PLUMBING SYMBOLS AND ABBREVIATIONS

(NOT ALL OF THE SYMBOLS SHOWN MAY BE USED ON THE PROJECT.)

SYMBOL	DESCRIPTION	ABBREVIATION
	STORM DRAIN, RAINWATER DRAIN	SD, RT
	SUBSOIL DRAIN, FOOTING DRAIN	SSD
	GREASE WASTE	GREASE WASTE
	ABOVE GRADE SOIL, WASTE, OR SANITARY SEWER	S, W, SAN, SS
	BELOW GRADE SOIL, WASTE, OR SANITARY SEWER	S, W, SAN, SS
	VENT	V
	ACID WASTE	AW
	ACID VENT	AV
	INDIRECT DRAIN	D
	PUMP DISCHARGE LINE	PD
	COLD WATER	CW
	HOT WATER SUPPLY (120°)	HW
	HOT WATER SUPPLY (140°)	140°
	HOT WATER RETURN (120°)	HWR
	HOT WATER RETURN (140°)	140°R
	TEMPERED HOT WATER (TEMP.°F)	TEMP, HW, TW
	TEMPERED HOT WATER RECIRCULATING (TEMP.°F)	TEMP, HWR, TWR
	(CHILLED) DRINKING WATER SUPPLY	DWS
	(CHILLED) DRINKING WATER RECIRCULATING	DWR
	SOFT WATER	SW
	CONDENSATE DRAIN	CD
	DISTILLED WATER	DI
	DEIONIZED WATER	DE
	PIPING TO BE HEAT TRACED	-
	LAWN SPRINKLER SUPPLY	LS
	FIRE PROTECTION WATER SUPPLY	F
	GAS-LOW-PRESSURE	G
	GAS-MEDIUM-PRESSURE	MG
	GAS-HIGH-PRESSURE	HG
	GAS VENT	GV
	CONCENTRIC REDUCER	-
	ECCENTRIC REDUCER	-
	EQUIPMENT DESIGNATION (GAS WATER HEATER #1)	-
	NEW PLUMBING FIXTURE DESIGNATION	-
	EXISTING PLUMBING FIXTURE TO BE REMOVED	-
	PLUMBING KEYED NOTE	-
	AQUASTAT	-
	TAMPER SWITCH	TS
	FLOW SWITCH	FS
	PRESSURE SWITCH	PS
	WATER HAMMER ARRESTER (PDI DESIGNATION "A")	WHA
	PRESSURE GAUGE WITH GAUGE COCK	PG
	THERMOMETER (SPECIFY TYPE)	-
	AUTOMATIC AIR VENT	AAV
	CIRCUIT SETTER	CS
	VALVE IN RISER (TYPE AS SPECIFIED OR NOTED)	-
	RISER DOWN (ELBOW)	-
	RISER (ELBOW)	-
	AIR CHAMBER	AC
	RISE OR DROP	-
	BRANCH-BOTTOM CONNECTION	-
	BRANCH-SIDE CONNECTION	-
	CAP ON END PIPE	-
	FLOW INDICATOR FOR STATIONARY METER (ORIFICE)	-
	FLOW INDICATOR FOR PORTABLE METER (SPECIFY FLOW RATE)	-

SYMBOL	DESCRIPTION	ABBREVIATION
	OUTSIDE YOLK & STEM GATE VALVE	OSY
	GATE VALVE	GV
	GLOBE VALVE	GLV
	ANGLE VALVE	AV
	BALL VALVE	BV
	BUTTERFLY VALVE	BFV
	GAS COCK, GAS STOP	-
	BALANCING VALVE (SPECIFY TYPE)	BLV
	CHECK VALVE	CV
	PLUG VALVE	PV
	ACCESS PANEL LOCATION	AP
	PLUMBING FIXTURE DESIGNATION	-
	SOLENOID VALVE	-
	MOTOR-OPERATED VALVE (SPECIFY TYPE)	-
	PRESSURE-REDUCING VALVE	PRV
	PRESSURE-RELIEF VALVE	RV
	TEMPERATURE-PRESSURE-RELIEF VALVE	TPV
	REDUCED ZONE BACKFLOW PREVENTER	RZBP
	DOUBLE-CHECK BACKFLOW PREVENTER	DCBP
	HOSE BIBB	HB
	RECESSED-BOX HOSE BIBB OR WALL HYDRANT	WH
	VALVE IN YARD BOX (VALVE TYPE SYMBOL AS REQUIRED FOR VALVE USE)	YB
	UNION (SCREW)	-
	UNION (FLANGED)	-
	STRAINER (SPECIFY TYPE)	-
	PIPE ANCHOR	PA
	PIPE GUIDE	-
	EXPANSION JOINT	EJ
	FLEXIBLE CONNECTOR	FC
	TEE	-
	SIAMESE FIRE DEPARTMENT CONNECTION	-
	FREESTANDING SIAMESE FIRE DEPARTMENT CONNECTION	-
	WALL (SPECIFY NUMBERS AND SIZE OF OUTLETS)	-
	FIRE PUMP / JOCKEY PUMP	-
	TRAP PRIMER	TP
	PROPANE GAS	PG

SYMBOL	DESCRIPTION	ABBREVIATION
	UPRIGHT FIRE SPRINKLER HEAD	-
	FIRE HOSE RACK	FHR
	AUTOMATIC SPRINKLER PIPE	-
	DRY PIPE SPRINKLER	-
	PREACTION SPRINKLER PIPE	-
	FIRE HOSE VALVE	FHV
	FIRE HOSE CABINET (SURFACE-MOUNTED)	FHC
	FIRE HOSE CABINET (RECESSED)	FHC
	CLEANOUT PLUG	CO
	FLOOR CLEANOUT	FCO
	WALL CLEANOUT	WCO
	YARD CLEANOUT OR CLEANOUT TO GRADE	CO
	FLOOR DRAIN WITH P-TRAP	FD
	PITCH DOWN OR UP-IN DIRECTION OF ARROW	-
	FLOW-IN DIRECTION OF ARROW	-
	POINT OF CONNECTION	POC
	STEAM TRAP (ALL TYPES)	-
	FUNNEL FLOOR DRAIN	FDD
	FLOOR SINK (3/4 GRATE)	FS
	FLOOR SINK (1/2 GRATE)	FS
	SOIL/VENT STACK DESIGNATION	-
	REFERENCE: DETAIL NUMBER	-
	REFERENCE: SHEET NUMBER	-
	UPRIGHT SPRINKLER	-
	PENDENT SPRINKLER	-
	UPRIGHT SPRINKLER, NIPPLED UP	-
	PENDENT SPRINKLER, ON DROP NIPPLE	-
	SIDEWALL SPRINKLER	-
	PIPE HANGER	-
	ALARM CHECK VALVE ASSEMBLY	-
	DRY PIPE VALVE ASSEMBLY	-
	DELUGE VALVE ASSEMBLY	-
	PREACTION VALVE ASSEMBLY	-
	EXISTING FIRE HYDRANT	-
	NEW FIRE HYDRANT	-
	WALL HYDRANT, TWO HOSE OUTLETS	-

ABBREVIATIONS	ABBREVIATIONS
A	M
AFF	MAX
AC	MPS
ACU	MTHW
AHU	HG
AHP	MPH
AC	MIN
ALT	N
AMB	NC
ANSI	NO
AWG	NA
AMP	NIC
ANG	NTS
ANGI	NO.
ADP	O
APPROX	OZ
A	OA
ATM	P
AVG	PPM
B	%
BFF	PH
BG	PIPE
BHP	LB
BTU	PSF
C	PSI
°C	PSIA
C TO C	PSIG
CKT	PRES
CCW	Q
FT ³	QT
IN ³	R
CFM	REV
SCFM	RCVR
SCFS	RECIRC
D	REV
DIA	RPM
ID	RPS
OD	S
DIFF	S.
DC	SPEC
-	SO
DYCO	STD
E	SP
EFF	STATIC PRESSURE
ELEV	SUCT
EVAP	SUM
EXP	SPLY
F	SYS
°F	T
FPM	TAB
FPS	TEE
FT	TEMP
FT	TO
FTLB	TSTAT
FCO	THKNS
G	MCM
GA	MCF
GAL	KIP FT
GPH	KIP
STD GPH	TON
GPD	U
GR	UNIT
H	V
HD	VAC
HT	V
HTR	VAR
HGT	VAV
HPS	VEL
HTHW	VENT
HP	VERT
H	V
I	VOL
IPS	VTR
IPS	W
K	WAL
KW	WTR
KWH	W
L	WH
LG	WT
LN	WCO
FT	Y
LIQ	YCO
LPS	YR
	Z
	Z

GENERAL PLUMBING NOTES:

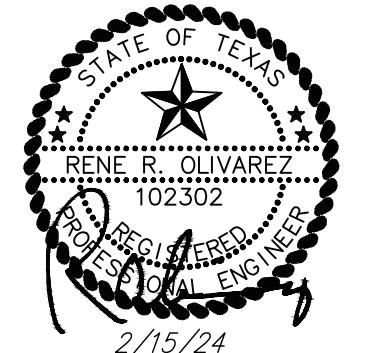
1. ALL WORK SHALL CONFORM TO ALL STATE AND LOCAL CODES, RULES AND REGULATIONS, AND ORDINANCES.
2. PLUMBING PLANS ARE DIAGRAMMATIC ONLY. THEY ARE INTENDED TO INDICATE CAPACITY, SIZE, LOCATION, DIRECTION AND GENERAL ARRANGEMENT. WHERE NOT SPECIFICALLY SHOWN ON PLANS, CONTRACTOR SHALL APPLY PROFESSIONAL STANDARDS SUCH AS THAT OF THE AMERICAN SOCIETY OF PLUMBING ENGINEERS.
3. WORK SHALL INCLUDE ALL LABOR, MATERIALS, PERMITS AND OTHER COSTS AS ARE NECESSARY FOR THE INSTALLATION OF A COMPLETE AND SATISFACTORY OPERATIONAL PLUMBING AND SANITARY SYSTEM. EQUIPMENT SHALL BE INSTALLED IN SUCH A MANNER AS TO MAINTAIN ITS LISTING AND THE MANUFACTURER'S GUARANTEES AND WARRANTIES.
4. THIS CONTRACTOR SHALL COORDINATE WITH THE OTHER TRADES TO INSURE THAT EACH TRADE SHALL HAVE SUFFICIENT SPACE TO INSTALL THEIR EQUIPMENT (DUCTWORK, PIPING, ELECTRICAL, ETC.), ALONG WITH THE PLUMBING WORK.
5. WHERE THE TERM "PROVIDE" IS USED, IT SHALL MEAN "FURNISH AND INSTALL". THE CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL THE OTHER TRADES PRIOR TO THE FABRICATION, PURCHASE AND/OR INSTALLATION OF THE WORK.
6. UNLESS NOTED, ALL MATERIALS SHALL BE NEW, COMPLETE, INCLUDE MANUFACTURER'S WARRANTY, AND BE U.L. APPROVED IF APPLICABLE. ALL WORK SHALL PRESENT A NEAT MECHANICAL APPEARANCE WHEN COMPLETED.
7. FIELD VERIFY ALL DIMENSIONS. CONTRACTOR SHALL VERIFY ELEVATION OF UTILITY CONNECTIONS ON SITE PRIOR TO COMMENCING WORK. FINAL CONNECTION TO SITE UTILITIES SHALL BE BY THE PLUMBING CONTRACTOR.
8. PIPING ROUTED THROUGH FOUNDATIONS SHALL BE SLEEVED AND INSTALLED IN ACCORDANCE WITH THE AMERICAN SOCIETY OF PLUMBING ENGINEERS STANDARDS.
9. PLUMBING SYSTEM INSTALLER SHALL PROVIDE ALL STRUCTURAL MEMBERS, SUPPORT BRACKETS, FLASHINGS, HARDWARE, ETC., REQUIRED TO INSTALL A COMPLETE SYSTEM.
10. DRAIN WASTE AND VENT PIPING SHALL BE PVC SCH. 40 WHEN INSTALLED BELOW GRADE OR UNDER CONCRETE SLABS. DRAIN WASTE AND VENT PIPING INSTALLED ABOVE GRADE SHALL BE PVC SCH. 40.
11. DOMESTIC WATER PIPING SHALL BE TYPE "L" COPPER.
12. PLUMBING CONTRACTOR SHALL CERTIFY ALL WATER PIPING AND SPECIALTIES FREE FROM MICROBIAL CONTAMINATION BY SANITIZING THE PLUMBING SYSTEM BEFORE OCCUPATION OF BUILDING.
13. EXPOSED FIXTURE TRIM SHALL BE CHROME PLATED BRASS. PROVIDE INDIVIDUAL STOPS FOR EACH HOT AND COLD WATER CONNECTION TO FIXTURES.
14. ALL SANITARY PIPING CHANGES OF DIRECTION 45 DEGREES OR MORE SHALL BE ACCOMPLISHED BY USING 45 DEGREE 1/8 BEND ELBOWS UNLESS OTHERWISE NOTED.
15. ALL SANITARY PIPING UNDER SLAB SHALL BE 2" OR LARGER.
16. INSTALL HEAT TRAPS ON ALL WATER HEATERS, WHERE THE SYSTEM IS NOT RECIRCULATED.
17. PROVIDE MAINTENANCE AND/OR OTHER CLEARANCES AT EACH PIECE OF EQUIPMENT AS REQUIRED OR RECOMMENDED BY THE EQUIPMENT MANUFACTURER. COORDINATE WITH GENERAL CONTRACTOR TO PROVIDE ANY ADDITIONAL SPACE REQUIRED FOR SUBMITTED EQUIPMENT.
18. PROVIDE ACCESS DOORS IN INACCESSIBLE FINISHES FOR ALL VALVES TRAP PRIMER, ETC., THAT REQUIRES PERIODIC ADJUSTMENTS OR MAINTENANCE.
19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFEKEEPING OF HIS OWN PROPERTY ON THE JOB SITE. OWNER ASSUMES NO RESPONSIBILITY FOR PROTECTION OF PROPERTY AGAINST FIRE THEFT OR ENVIRONMENTAL CONDITIONS.
20. ALL MODEL NUMBERS INDICATED ARE PROVIDED TO ESTABLISH THE QUALITY LEVEL AND FEATURES REQUIRED. LISTED MANUFACTURERS AND OTHER PRIOR APPROVED EQUALS MAY BE SUBSTITUTED WHEN PROVIDED WITH EQUAL FEATURES, EITHER STANDARD OR AS ACCESSORIES. SUBSTITUTED AIR DEVICES AND PLUMBING FIXTURES MUST BE SIMILAR IN APPEARANCE TO THE ITEMS SPECIFICALLY INDICATED.
21. ALL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER. CLEAN THE SITE DAILY AND REMOVE FROM THE PREMISES ANY DIRT AND DEBRIS CAUSED BY THE WORK INCLUDED IN THIS CONTRACT.
22. PROVIDE 1" ARMAFLEX INSULATION ON ALL HOT AND CIRCULATING WATER PIPING.

2705 E. DAVIS RD.
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PH. 956.513.1849

RO ENGINEERING, PLLC



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY
RENE R. OLIVAREZ, P.E. 102302
TBPCE REGISTRATION NO. 12179



PROJECT #: 2319

TRDI OFFICE AND
WAREHOUSE

931 W. SHARM DR.
PHARR, TX 78577

DRAWN BY: H.M.
REVIEWED BY: R.O.
ISSUED DATE: 2/15/24

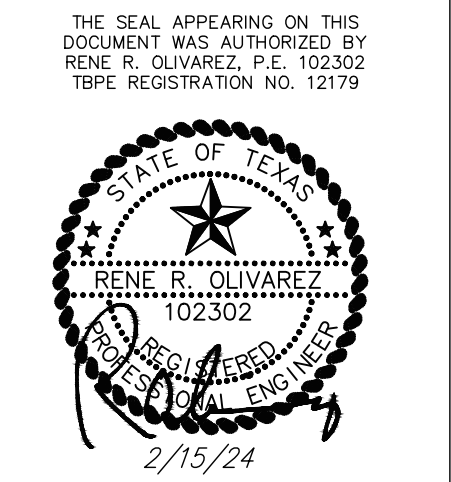
REVISION / ADDENDA

NO. DATE DESCRIPTION

SHEET TITLE:

PLUMBING SYMBOLS &
ABBREVIATIONS

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**PLUMBING
PLAN**

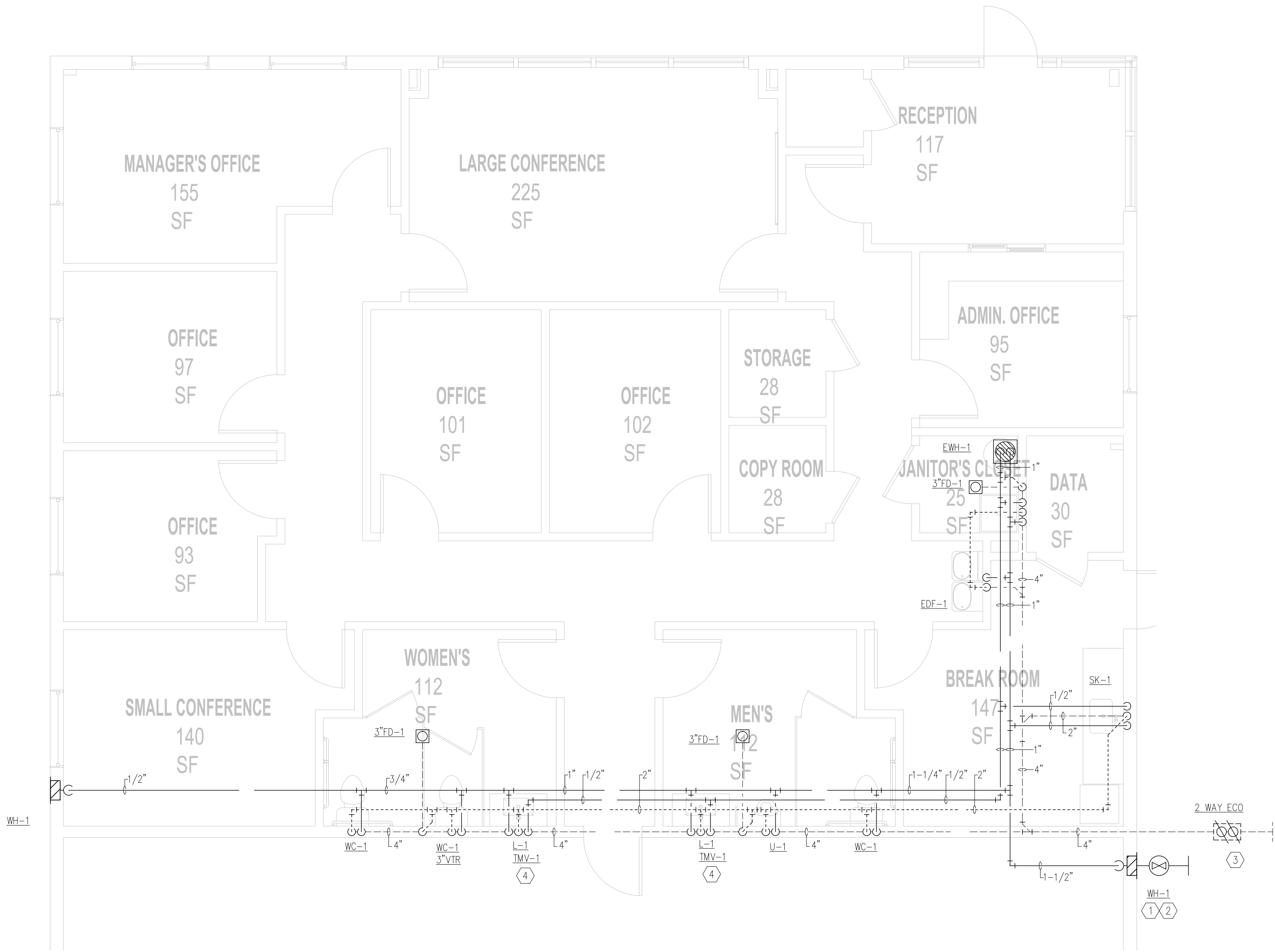
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PLUMBING GENERAL NOTE:

- A. DRAWING IS DIAGRAMMATIC ONLY. CONTRACTOR SHALL COORDINATE EXACT LOCATIONS OF PIPING, DEVICES AND EQUIPMENT WITH BUILDING ELEMENTS AND THE WORK OF OTHER TRADES.
- B. CONTRACTOR TO INSTALL ALL VTR AT A MINIMUM OF 15' AWAY FROM ANY EXISTING AIR INTAKE. FIELD VERIFY EXISTING ROOF EQUIPMENT PRIOR TO PENETRATING THE ROOF.

PLUMBING KEYED NOTES:

- ① REFER TO CIVIL SITE UTILITY PLAN FOR CONTINUATION. CONTRACTOR TO BE RESPONSIBLE FOR COORDINATION, VERIFICATION AND CONNECTION OF ALL UTILITIES TO SITE UTILITY STUB-OUTS.
- ② DOMESTIC WATER SERVICE ENTRY. REFER TO DETAIL 4/P.O.1.
- ③ BALL VALVE ABOVE CEILING. PROVIDE ACCESS PANEL WHERE LOCATED IN AN INACCESSIBLE CEILING. PANEL SHALL BE 12"x12" PAINTED TO MATCH CEILING. PROVIDE MARKING OF VALVE LOCATION ALONG THE CEILING TILE.
- ④ WATER HAMMER ARRESTOR, PROVIDE ACCESS PANEL WHERE LOCATED IN AN INACCESSIBLE WALL/CEILING. PANEL SHALL BE 12"x12" PAINTED TO MATCH WALL/CEILING.
- ⑤ COLD & HOT WATER DROP TO FIXTURES; SIZE AS NOTED. SEE PLUMBING RISER DIAGRAMS FOR CONTINUATION IN WALL OR CHASE. PROVIDE WATER HAMMER ARRESTORS AS INDICATED IN RISER DIAGRAMS. PROVIDE ACCESS PANEL WHERE WHA LOCATED IN INACCESSIBLE WALL OR CEILING.
- ⑥ PROVIDE PROSET SYSTEMS INC. "TRAP GUARD" SEWER GAS EMISSION PROTECTION IN THIS FLOOR DRAIN. DETAIL 2/P.O.1.
- ⑦ PROVIDE TRAP PRIMER. REFER TO DETAIL 5/P.O.1.
- ⑧ VENT THRU ROOF. REFER TO DETAIL 1/P.O.1
- ⑨ RISE 3" SANITARY FOR MECHANICAL EQPMT DRAINAGE. REFER TO MEP2.0 FOR CONTINUATION AND DETAIL 7/P.O.1.



1 PLUMBING PLAN
1/8" = 1'-0"

PLUMBING SCOPE & SPECIFICATION							
THE WORK OF THIS SECTION SHALL INCLUDE, BUT NOT BE LIMITED TO:							
A. A DOMESTIC HOT AND COLD WATER DISTRIBUTION SYSTEM TO SERVE ALL FIXTURES. B. A SANITARY WASTE AND VENT SYSTEM TO SERVE ALL FIXTURES. C. CONNECT TO EXISTING COLD WATER AND SANITARY MANS.							
DRAWINGS ARE DIAGRAMMATIC; CONFIRM DIMENSIONS AND LOCATIONS IN THE FIELD, ADVISE OF MAJOR DISCREPANCIES.							
GUARANTEE LABOR AND MATERIALS FOR ONE YEAR.							
ADHERE TO APPLICABLE LOCAL CODES AND REGULATIONS, WHICH INCLUDE BUT ARE NOT LIMITED TO CITY OF HOUSTON (2000 UNIFORM PLUMBING CODE, WITH AMENDMENTS).							
PRODUCE RECORD DRAWINGS.							
CONTRACTOR SHALL OBTAIN REQUIRED PERMITS AND PAY ALL FEES.							
VALVES							
VALVES SHALL BE MANUFACTURED BY NIBCO, HAMMOND, POWELL, STOCKHAM, WATTS OR EQUIVALENT APPROVED BY THE ENGINEER.							
GATE VALVES SHALL CONFORM TO MSS-SP-80 FOR BRONZE AND MSS-SP-70 FOR IRON, VALVES 2" AND SMALLER SHALL BE NIBCO T-113 OR S-113 OR APPROVED EQUIVALENT.							
BALL VALVES SHALL HAVE CAST BRONZE BODY, BLOWOUT PROOF STEMS, FULL SIZE PORT, 316 STAINLESS STEEL TRIM, TEFLON SEAT AND SEAL AND THRUST WASHERS. VALVES 2" AND SMALLER SHALL BE NIBCO T-585-70-66 OR APPROVED EQUIVALENT.							
UNIONS							
UNIONS IN COPPER OR BRASS LINES SHALL BE BRASS, THREADED PATTERN UNIONS.							
EXCAVATION							
EXCAVATE TRENCHES FOR UNDERGROUND PIPING TO THE REQUIRED DEPTH.							
CUT THE BOTTOM OF THE TRENCH OR EXCAVATION TO UNIFORM GRADE.							
EXCAVATE 6" BELOW GRADE, FILL WITH BEDDING MATERIAL (SAND) AND TAMP WELL.							
LAY OUT ALIGNMENT OF PIPE TRENCHES TO AVOID OBSTRUCTIONS. PROVIDE ASSURANCE THAT PROPOSED LAYOUT OF PIPE WILL NOT INTERFERE WITH BUILDING FOUNDATION BEFORE ANY CUTTING IS BEGUN. SHOULD INTERFERENCE BE FOUND, CONTACT THE ARCHITECT/ENGINEER BEFORE PROCEEDING.							
BACKFILL							
BACKFILL SHALL NOT BE PLACED UNTIL THE WORK HAS BEEN INSPECTED, TESTED AND APPROVED. USE SUITABLE FRIABLE SOILS AS BACKFILL MATERIAL. DO NOT USE PEAT, SILT, MUCK, DEBRIS OR OTHER ORGANIC MATERIALS. DEPOSIT BACKFILL IN UNIFORM LAYERS.							
PLACE BACKFILL MATERIAL IN UNIFORM LAYERS, 8" MAXIMUM LOOSE MEASURE. COMPACT TO NOT LESS THAN 95% OF MAXIMUM SOIL DENSITY AS DETERMINED BY ASTM D698 STANDARD PROCTOR.							
PLUMBING PIPING HANGER SPACING							
MAXIMUM SPACING SHALL BE 10 FOOT.							
CLEANING, TESTING AND ADJUSTING							
THIS CONTRACTOR SHALL FURNISH ALL LABOR, TOOLS, INSTRUCTIONS, AND SUPERVISION REQUIRED FOR THE PERFORMANCE OF ALL TESTS, CLEANING, AND MAKING NECESSARY ADJUSTMENTS TO OPERATION OF ALL FIXTURES AND EQUIPMENT.							
PIPING INSULATION							
ALL COLD WATER PIPING, FITTINGS AND VALVES SHALL BE INSULATED WITH NOMINAL 1/2" WALL THICKNESS IMCOLOCK PIPE INSULATION, OR AN APPROVED EQUAL HAVING FLAME SPREAD RATING OF 25 OR LESS AND A SMOKE DENSITY OF 50 OR LESS WHEN TESTED BY ASTM E-84 METHOD.							
IMCOLOCK PIPE INSULATION MAY BE SLIPPED ONTO THE PIPE PRIOR TO CONNECTION OR APPLIED AFTER THE PIPE IS INSTALLED, AT THE CONTRACTOR'S OPTION. ALL BUTT JOINTS AND WITER JOINTS SHALL BE CLOSED USING IMCOA'S FUSE SEAL JOINING SYSTEM OR FACTORY APPROVED CONTACT ADHESIVE. IMCOLOCK PIPE INSULATION SHALL BE INSTALLED ACCORDING TO THE PROCEDURES OUTLINED BY THE MANUFACTURER.							
FITTING COVER INSULATION SHALL BE FABRICATED AND INSTALLED ACCORDING TO THE MANUFACTURER'S RECOMMENDED PROCEDURES. SWEAT FITTINGS SHALL BE INSULATED WITH MITER CUT PIECES OF IMCOLOCK PIPE INSULATION THE SAME SIZE AS ON ADJACENT PIPING. THREADED FITTINGS SHALL BE INSULATED WITH SLEEVED FITTING COVERS FABRICATED FROM MITER CUT PIECES OF IMCOLOCK PIPE INSULATION ACCORDING TO THE MANUFACTURER'S SLEEVEING SIZE RECOMMENDATIONS AND SHALL BE OVERLAPPED 2" AND SEALED TO THE ADJACENT PIPE INSULATION. ALL VALVES SHALL BE INSULATED WITH CUT PIECES OF IMCOLOCK PIPE INSULATIONS. ALL JOINTS AND MITER CUT PIECES ARE TO BE SEALED USING IMCOA'S FUSE SEAL JOINING SYSTEM OR FACTORY APPROVED CONTACT ADHESIVE.							
SUPPORTING HANGERS SHALL BE DESIGNED TO RESIST COMPRESSION; SUPPORTING DEVICES SUCH AS SHORT WOOD DOWELS OR WOOD BLOCKS SHALL BE USED IN COMBINATION WITH GALVANIZED SHEET METAL HANGER SHIELDS. THE WOOD SUPPORTING DEVICES SHALL BE THE SAME THICKNESS AS THE INSULATION AND SEALED TO THE INSULATION WITH FACTORY APPROVED CONTACT ADHESIVE.							
INSTALL THERMAL INSULATION ON CLEAN, DRY SURFACES AFTER ALL TESTING AND INSPECTION IS COMPLETED. INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THESE SPECIFICATIONS AND WITH MANUFACTURERS INSTRUCTIONS.							

THERMOSTATIC MIXING VALVES							
ITEM NO.	INLET HOT WATER TEMP (°F)	OUTLET MIXED WATER TEMP (°F)	MINIMUM FLOW (GPM)	DESIGN FLOW (GPM)	PRESSURE DROP @ DESIGN FLOW (PSI)	VALVE FINISH	MANUFACTURER / MODEL NO.
TMV-1	120°	110°	0.5	4	5.0	ROUGH BRONZE	SYMMONS THERMIXER 7-225-OK
NOTES: 1. MAKE WATER CONNECTIONS TO THERMOSTATIC MIXING VALVE(S) IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. 2. PROVIDE PIPE INCREASERS AND/OR VALVES AS REQUIRED.							

PLUMBING FIXTURE SPECIFICATION			
TYPE: DESCRIPTION:	WC-1 (T.A.S. COMPLIANT FOR ADULTS) WATER CLOSET, FLOOR MOUNTED 12" ROUGH-IN, WHITE VITREOUS CHINA, 1.28 GALLON PER FLUSH SIPHON JET ACTION, 16-1/2" HIGH ELONGATED CLOSET BOWL WITH CLOSE-COUPLED TANK AND BOLT COVERS. TANK TO BE CONFIGURED WITH TRIP LEVER LOCATED ON LEFT SIDE OR ON RIGHT SIDE IN ORDER TO MEET T.A.S. REQUIREMENT THAT FLUSH CONTROLS BE MOUNTED ON THE WIDE SIDE OF THE TOILET AREA. AMERICAN STANDARD CADET ADA 16-1/2" H ELONGATED TOILET 2235.128US	TYPE: DESCRIPTION:	TMV THERMOSTATIC MIXING VALVE. SCHEDULED ON DRAWINGS.
SEAT:	ELONGATED OPEN FRONT WHITE PLASTIC SEAT WITH SELF-SUSTAINING CHECK HINGES. CHURCH 9500SSC.	TYPE: DESCRIPTION:	WH-1 WALL HYDRANT, CONCEALED BOX TYPE, NON-FREEZE, 3/4" MALE HOSE THREAD OUTLET, SELF-DRAINING WITH ANTI-SIPHON VACUUM BREAKER. CHROME PLATED BRONZE CONSTRUCTION WITH CAST STAINLESS STEEL HYDRANT BOX. LOCKING HINGED COVER. LOOSE TEE OPERATING KEY. MIFAB MHY-20-3.
SUPPLIES:	1/2" I.P.S. X 3/8" O.D.CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTCHEON AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISER. MCGUIRE 2166LK.	ROUGH-IN:	3/4" COLD WATER. INSTALL WITH OUTLET AT 24" A.F.F. OR AS DIRECTED BY ARCHITECT/OWNER.
ROUGH-IN:	4" WASTE, 2" VENT, 1/2" COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.	TYPE: DESCRIPTION:	WCO WALL CLEANOUT. CAST IRON CLEANOUT FERRULE WITH BRONZE RAISED HEAD PLUG AND ROUND STAINLESS STEEL COVER PLATE WITH CENTER SECURING SCREW. MIFAB C1440-RD6. PROVIDE MIFAB C1460 CAST IRON CLEANOUT TEE IN LIEU OF FERRULE AS REQUIRED FOR WALL CONSTRUCTION.
TYPE: DESCRIPTION:	L-1 - TOILET ROOMS (T.A.S. COMPLIANT FOR ADULTS) LAVATORY, WALL HUNG, WHITE VITREOUS CHINA, 20-1/2" X 18-1/4" WITH FRONT OVERFLOW AND CONCEALED ARM SUPPORTS, FAUCET HOLES ON 4" CENTERS. AMERICAN STANDARD "LUCERNE" 0355.012. CHROME PLATED BRASS DECK MOUNTED SINGLE LEVER. LAVATORY FITTING WITH 4-3/4" SPOUT, 4" CENTERS COVER PLATE, CERAMIC MIXING CARTRIDGE, VANDAL RESISTANT 0.5 GPM AERATOR. CHROME PLATED BRASS GRID STRAINER WITH 1-1/4" 17 GAUGE TAILPIECE WITH LOCK NUT. MCGUIRE 155A.	GENERAL NOTES:	ALL LAVATORIES AND SINKS SHALL BE SUPPLIED WITH HOT AND COLD WATER TO FAUCETS AS INDICATED ON PLANS AND FIXTURE SCHEDULE. PROVIDE CHROME PLATED BRASS SUPPLY STOPS WITH LOOSE KEYS AND WALL ESCUTCHEONS. PROVIDE CHROME PLATED FLEXIBLE RISERS OF SIZE REQUIRED TO PROPERLY CONNECT FIXTURES. PROVIDE 17 GAUGE CHROME PLATED CAST BRASS P-TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTCHEON. REFER TO FIXTURE SCHEDULE FOR MINIMUM SIZES OF PLUMBING FIXTURE ROUGH-INS. PROVIDE MOLDED CLOSED CELL ANTI-MICROBIAL VINYL INSULATION KITS AT ALL LAVATORIES AND SINKS REQUIRED TO BE T.A.S. ACCESSIBLE (MCGUIRE OR TRUEBRO). ALL SUCH FIXTURES AND FINAL INSTALLATIONS SHALL COMPLY WITH THE STATE ACCESSIBILITY STANDARDS REQUIREMENTS. INSERT TRAP GUARDS AFTER FINAL RODDING OF DRAINS. INSTALL TRAP GUARD WITH CLEAR SILICONE CAULK FOR GAS-TIGHT SEAL. FOR DRAIN RODDING AFTER INSTALLATION, INSERT SEWER TAPE THROUGH LIGHTLY GREASED 1-1/2" PVC PIPE TO PROTECT TRAP GUARD.
FAUCET:	1-1/4" 17 GAUGE CHROME PLATED HEAVY CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTCHEON PLATE. MCGUIRE 8872.		
STRAINER:	RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 3" X 4-1/2" BASE ANCHORED TO CONCRETE WITH (4) 1/2" BOLTS, ADJUSTABLE SLEEVE, THREADED CONCEALED ARMS, ALIGNMENT BAR, LOCKING DEVICE, AND LEVELING SCREWS. MIFAB MC-41.		
P-TRAP:	2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.		
SUPPLIES:	1/2" I.P.S. X 3/8" O.D.CHROME PLATED LOOSE KEY STOP VALVES WITH ESCUTCHEONS AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS. MCGUIRE 2165LK.		
CARRIER:	RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 3" X 4-1/2" BASE ANCHORED TO CONCRETE WITH (4) 1/2" BOLTS, ADJUSTABLE SLEEVE, UPPER AND LOWER BEARING PLATES WITH THREADED STUDS. MIFAB MC-32.		
ROUGH-IN:	2" WASTE, 2" VENT, 3/4" COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.		
TYPE: DESCRIPTION:	U-1 (T.A.S. COMPLIANT FOR ADULTS) URINAL, WALL HUNG, WHITE VITREOUS CHINA, .5 GALLON PER FLUSH SIPHON JET ACTION, INTEGRAL TRAP. AMERICAN STANDARD "ALBROOK" 6550.005		
FLUSH VALVE: CARRIER:	SLOAN ROYAL G2 8186-0.5 GPF FLUSH VALVE. RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 3" X 4-1/2" BASE ANCHORED TO CONCRETE WITH (4) 1/2" BOLTS, ADJUSTABLE SLEEVE, UPPER AND LOWER BEARING PLATES WITH THREADED STUDS. MIFAB MC-32.		
ROUGH-IN:	2" WASTE, 2" VENT, 3/4" COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.		
TYPE: DESCRIPTION:	SK-1 (T.A.S. COMPLIANT FOR ADULTS) - BREAKROOM SINK, COUNTER MOUNTED, SELF-RIMMING, 18 GAUGE TYPE 304 STAINLESS STEEL, 29" X 18" X 6" DEEP, DOUBLE COMPARTMENT WITH FAUCET DECK. THREE FAUCET HOLES ON 4" CENTERS. ELKAY LR40-2918.		
FAUCET:	CHROME PLATED BRASS DECK MOUNTED FITTING WITH 8" SWING SPOUT AND 4" WRIST BLADE HANDLES ON 8" CENTERS. QUARTER TURN OPERATING CARTRIDGES; VANDAL RESISTANT 2.2 GPM AERATOR. CHICAGO MODEL 1100-317-E3VPJ/KCP.		
STRAINER:	CHROME PLATED BRASS FLAT GRID SINK STRAINER, WITH 1-1/2" OUTLET. MCGUIRE 152LT.		
P-TRAP:	1-1/2" END OUTLET 16" CENTERS 17 GAUGE CONTINUOUS WASTE WITH CAST BRASS TEE AND SLIP NUTS. MCGUIRE 111016GT. 1-1/2" 17 GAUGE CHROME PLATED HEAVY CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTCHEON PLATE. MCGUIRE 8912.		
SUPPLIES:	1/2" I.P.S. X 3/8" O.D. CHROME PLATED LOOSE KEY STOP VALVES WITH ESCUTCHEONS AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS. MCGUIRE 2165LK.		
ACCESSORY:	UNDERSINK PROTECTIVE ENCLOSURE WITH MOUNTING TRACK AND FASTENERS. RIGID HIGH IMPACT, STAIN RESISTANT PVC CONSTRUCTION. TRUEBRO BASIN GUARD MODEL 36 IN WHITE OR BEIGE AS SELECTED BY ARCHITECT/OWNER. CUT IN FIELD AS REQUIRED TO FIT KNEE SPACE OPENING.		
ROUGH-IN:	2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.		
TYPE: DESCRIPTION:	MS-1 MOP SINK BASIN, 24" X 24" X 10" HIGH. WHITE ONE-PIECE HOMOGENEOUS MOLDED STONE CONSTRUCTION. STAINLESS STEEL BUMPER GUARDS, DRAIN BODY, AND REMOVEABLE STAINLESS STEEL COMBINATION DOME STRAINER AND LINT BASKET. PROVIDE STAINLESS STEEL WALL GUARDS IN QUANTITY AS REQUIRED TO PROTECT ADJACENT WALLS. PROVIDE MOP HANGER AND 30" HOSE WITH WALL HANGER. FIAT MSB 2424 WITH E-88-AA, MSG-2424, 889-CC, AND 832-AA.		
FAUCET:	CHROME PLATED BRASS WALL MOUNTED FITTING, VACUUM BREAKER SPOUT WITH PAIL HOOK AND WALL BRACE, FOUR ARM HANDLES ON 8" CENTERS. 3/4" MALE HOSE THREAD OULET. FIAT 830-AA.		
ROUGH-IN:	3" WASTE, 2" VENT, 1/2" HOT AND COLD WATER.		
TYPE: DESCRIPTION:	EDF-1 (T.A.S. COMPLIANT FOR ADULTS) WALL HUNG, BARRIER FREE, SPLIT-LEVEL ELECTRIC DRINK FOUNTAIN, ALL STAINLESS STEEL. SHALL DELIVER 8 GPH OF 50 DEGREE WATER AT 90 DEGREE AMBIENT AND 80 DEGREE INLET WATER. PROVIDE CANE TOUCH APRON IN ALL STAINLESS STEEL ON ALL UNITS MOUNTED WITH A CLEAR KNEE SPACE GREATER THAN 27" HIGH. HALSEY TAYLOR HAC8FSBL-Q WITH APRON 42522.		
P-TRAP:	1-1/4" CHROME PLATED CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTCHEON. MCGUIRE 8872.		
SUPPLIES:	1/2" I.P.S. X 3/8" O.D.CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTCHEON AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISER. MCGUIRE 2165LK.		
CARRIER:	RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 3" X 4-1/2" BASE ANCHORED TO CONCRETE SLAB WITH (4) 1/2" BOLTS. ADJUSTABLE SLEEVE FOR CONNECTION TO HANGER PLATE PROVIDED BY FIXTURE MANUFACTURER. MIFAB MC-33.		
ROUGH-IN:	2" WASTE, 2" VENT, 1/2" COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.		

SHOCK ARRESTORS			
P.D.I. SYMBOL	FIXTURE UNITS	CHAMBER LENGTH	SWEAT CONNECTION
A	1-11	9-5/8"	1/2"
B	12-32	11-3/4"	3/4"
C	33-60	14-11/18"	1"
D	61-113	12-3/8"	1"
E	114-154	15-3/8"	1"
F	155-330	17-3/8"	1"

PIPE MATERIAL LIST	
WATER PIPING	
ABOVE SLAB INSIDE THE BUILDING SHALL BE SEAMLESS ASTM B 88 TYPE L COPPER WATER TUBE WITH WROUGHT COPPER FITTINGS, ANSI B16.22. SOLDER MATERIAL SHALL BE 95.5% LEAD FREE, ASTM B 32. THE USE OF DRILLED-T CONNECTIONS IS NOT PERMITTED.	
CONDENSATE AND INDIRECT DRAIN PIPING SHALL BE	
TYPE M COPPER TUBING UP TO 1" ID, TYPE DWV TUBING AND COPPER FITTINGS FOR 1-1/4" AND LARGER SIZES, AND 95-5 SOLDER JOINTS.	
SANITARY SOIL WASTE AND VENT PIPING SHALL BE	
ABOVE AND BELOW SLAB SHALL BE SCHEDULE 40 DWV POLYVNYL CHLORIDE PIPE AND FITTINGS CONFORMING TO ASTM D-1784-82 WITH SOLVENT WELDED JOINTS. DO NOT USE IN AIR SUPPLY OR RETURN AIR PLENUMS, OR FIRE RATED WALLS, PARTITIONS, OR FLOORS.	


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TBPE REGISTRATION NO. 12179



2/15/24

PROJECT #: 2319

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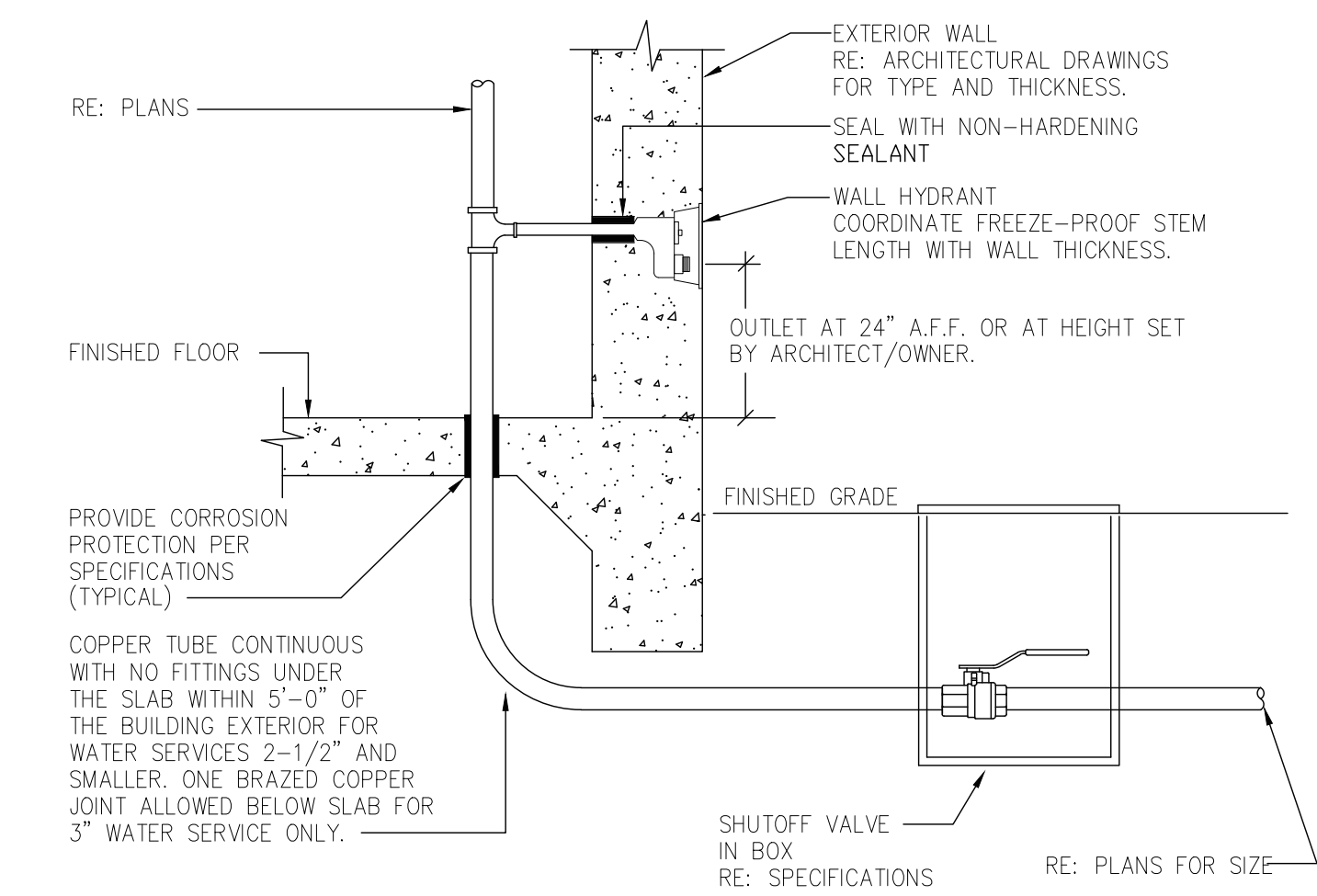
931 W. SHARM DR.
PHARR, TX 78577

DRAWN BY:	H.M.
REVIEWED BY:	R.O.
ISSUED DATE:	2/15/24
REVISION / ADDENDA	
NO.	DATE DESCRIPTION

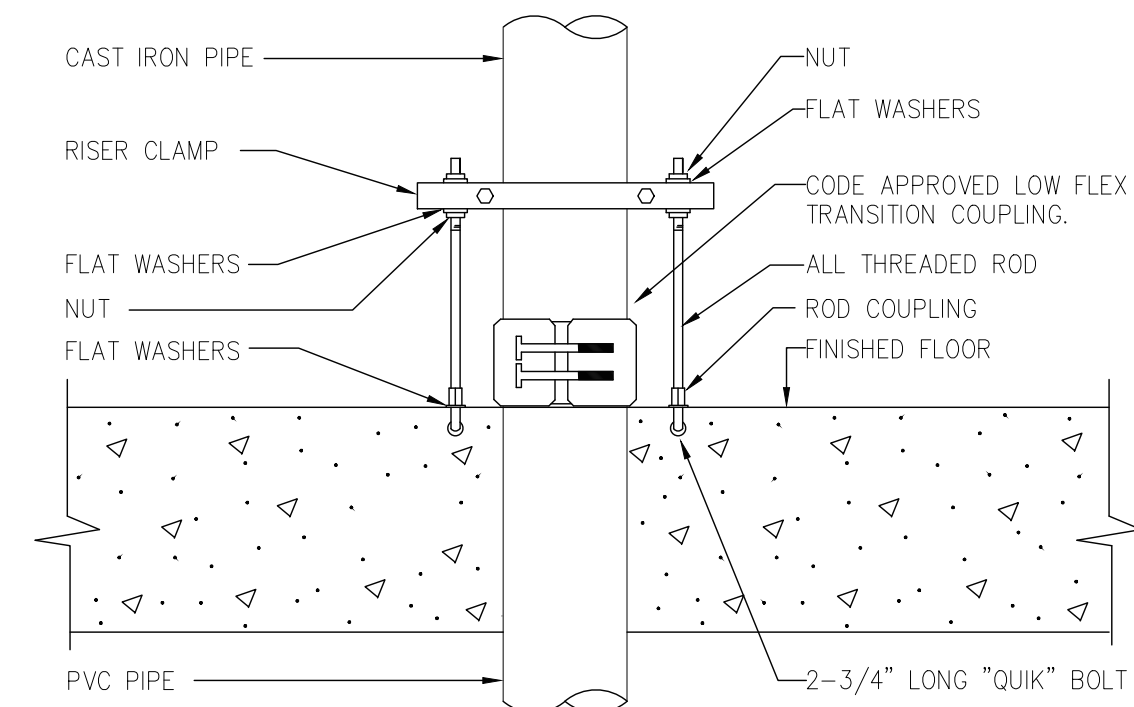
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PLUMBING RISERS & SCHEDULES

SHEET
P2.0

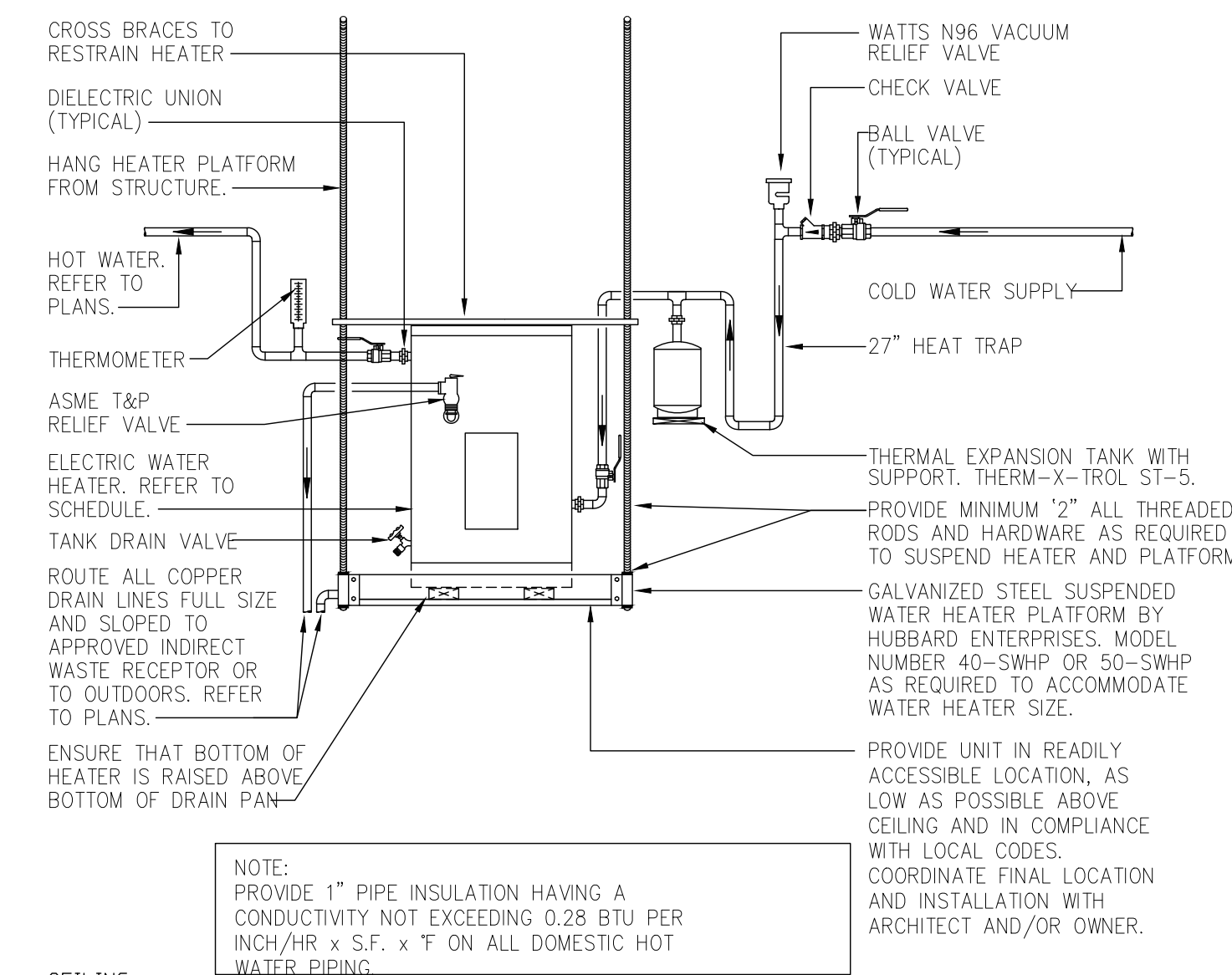


6 DOMESTIC WATER SERVICE ENTRY

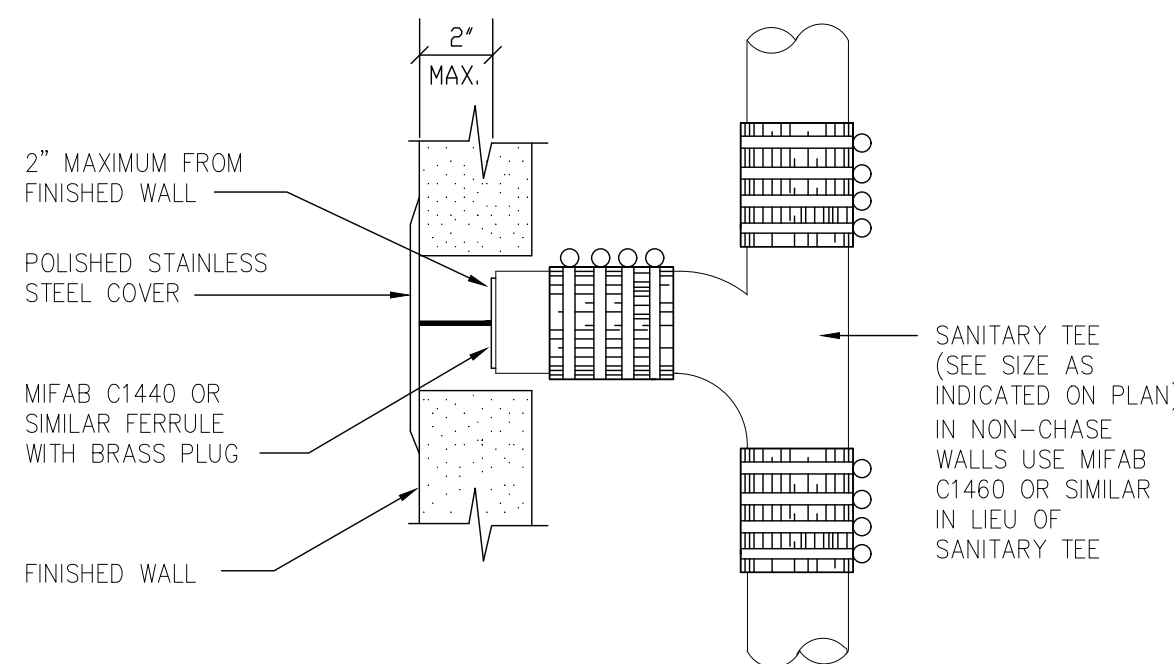


NOTE:
THERE IS TO BE NO EXPOSED PVC ABOVE SLAB.

3 CAST IRON TO PVC PIPE TRANSITION

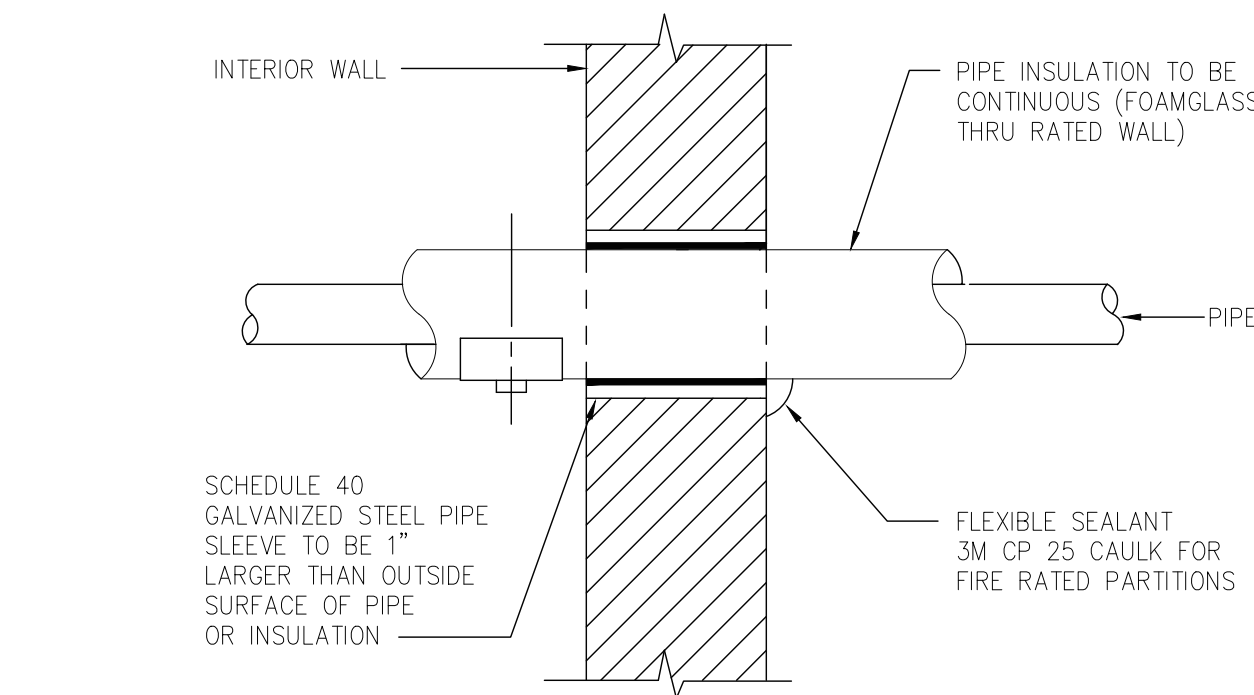


5 ELECTRIC WATER HEATER PIPING

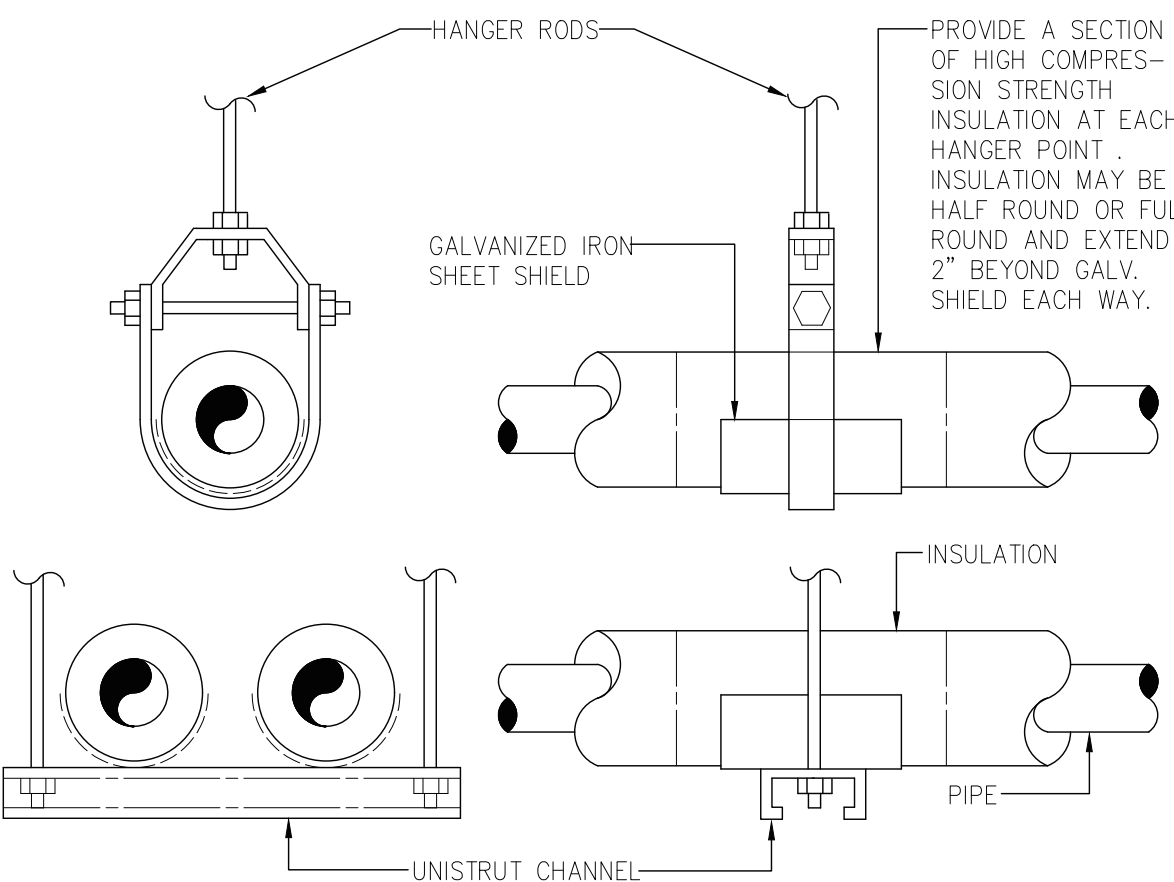


2 WALL CLEANOUT

MINIMUM DIMENSIONS OF GALVANIZED SHEETMETAL PROTECTION SHIELDS AT PIPE HANGERS		
NOMINAL SIZE PIPE	SHIELD LENGTH MIN. (IN.)	GAUGE THICKNESS
1/2" & 3/4"	12	18
1" - 2-1/2"	12	18
3" - 4"	12	18
6"	12	16



4 INTERIOR WALL PENETRATION



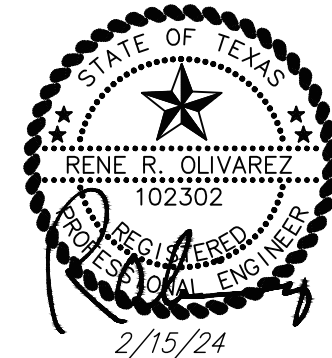
1 HANGER FOR WATER PIPING

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ISSUED DATE: 2/15/24

REVISION / ADDENDA

NO. DATE DESCRIPTION

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PLUMBING DETAILS

SHEET
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