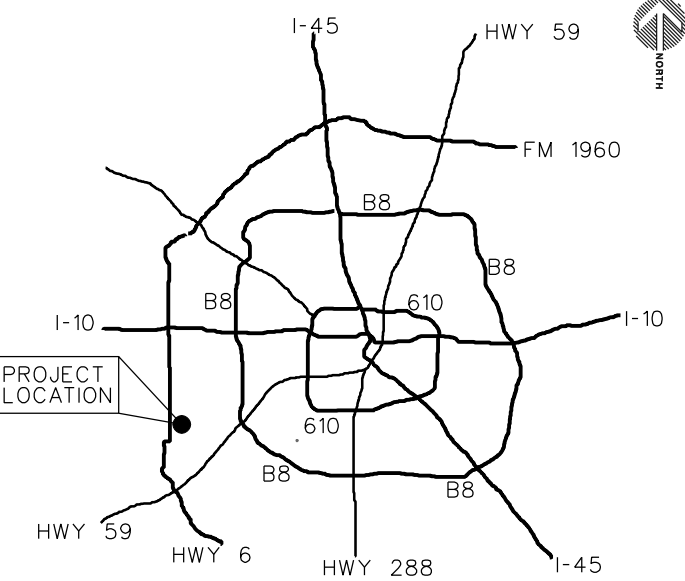




OWNER:

ROYAL GARDEN HOLDINGS LLC
11511 HALEY HOLLOW RD
RICHMOND, TX 77407
281-702-8900

ARCHITECT:

IBA DESIGN, PLLC
M. IMRAN BAIG, AIA
832-858-9533

CIVIL ENGINEER

ABBOUD ENGINEERING LLC
JOSEPH ABBODD, PE.
LEW BRIGGS ROAD
HOUSTON, TX 77047
281-791-0355

MEP ENGINEER

FORWARD MEP
M.M. ALAVI, PE.
832-660-1439

STRUCTURAL ENGINEER

PARAMOUNT ENGINEERING LLC
WASEEM MIRZA, P.E.
10145 LONG POINT RD
HOUSTON, TX 77043
713-636-9977

LANDSCAPE ARCHITECTS

EVERGREEN DESIGN GROUP
BLAKE TOMILLOSO-RHINEHART, RL
800-680-6650 X13

GENERAL CONTRACTOR

COMMERCIAL CONSULTING GROUP
RAZA SYED
5870 HWY 6 N, SUITE 315
HOUSTON, TX 77084
713-302-1115

EFFECTIVE CONSTRUCTION CODE

2021 International Building Code
2021 International Fire Code
2021 International Plumbing Code
2021 International Mechanical Code
2021 International Energy Conservation Code

PROJECT DATA

DEVELOPMENT NAME: IMPERIAL ROYAL GARDEN PLAZA

DEVELOPMENT TYPE: RETAIL / OFFICE PARK

OCCUPANCY CLASSIFICATION: 'M', 'B'

TYPE OF CONSTRUCTION: 'B'

PROPERTY AREA 5.00 ACRES 217,785 SQUARE FEET

35' WIDE DRIVEWAY ON VOSS ROAD

RETAIL BLDG. 15015	11,300 SF	TOTAL	22,600 SF
OFFICE 15019	4,500 SF		
OFFICE 15021	4,500 SF		
OFFICE 15023	4,500 SF		
OFFICE 15027	4,500 SF	TOTAL	22,500 SF
OFFICE 15029	4,500 SF		

TOTAL BUILDING AREA = 45,000 SF. PHASE ONE 20,300 SF

OPEN SPACE PERCENTAGE = 163,055 SF. OPEN SPACE / 217,785 SF. PROPERTY AREA = 0.7486 X 100 = 75%

PARKING ANALYSIS

1 SPACE / 200 SF OF OCCUPANCY PER CITY OF SUGAR LAND LAND USAGE REQUIREMENTS

PARKING REQUIRED = 45,000 / 200 = 226 SPACES

ACCESSIBLE PARKING INCLUDED = 18 SPACES

VEHICULAR PARKING PROVIDED = 226 SPACES 17 BICYCLE SPACES PROVIDED

IBA Design
ARCHITECTURE ♦ CONSULTING ♦ PERMITTING
Email: imran@ibadesignpllc.com
Phone: 832-858-9533

IMPERIAL ROYAL GARDEN PLAZA

15015 15017 VOSS RD.

15019, 15021, 15023, 15027, 15029 VOSS RD

SUGAR LAND, TEXAS, 77498



TITLE SITE PLAN

CLIENT/ARC REVIEW

PERMIT REVIEW 02-11-26

CONSTRUCTION ISSUE

CHECKED BY: M.I.B SHEET: SP001

PROJECT = SP-2025-0003

NOT FOR CONSTRUCTION

NO.	REVISION DESCRIPTION	DATE

VOSS ROAD

100' RIGHT OF WAY

UNINCORPORATED FORT BEND COUNTY
SUGAR LAND CITY LIMITS

IMPERIAL ROYAL GARDEN PLAZA

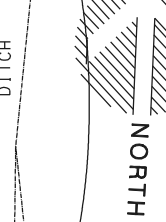
15015, 15017 VOSS RD.
15019, 15021, 15023, 15027, 15029 VOSS RD

SUGAR LAND, TEXAS, 77498

PHASE TWO

1 SITE PLAN
SCALE: 1" = 30'-0"
(ON 36X24 FORMAT)

ALEXANDER HODGE LEAGUE
ABSTRACT NO. 32



DITCH

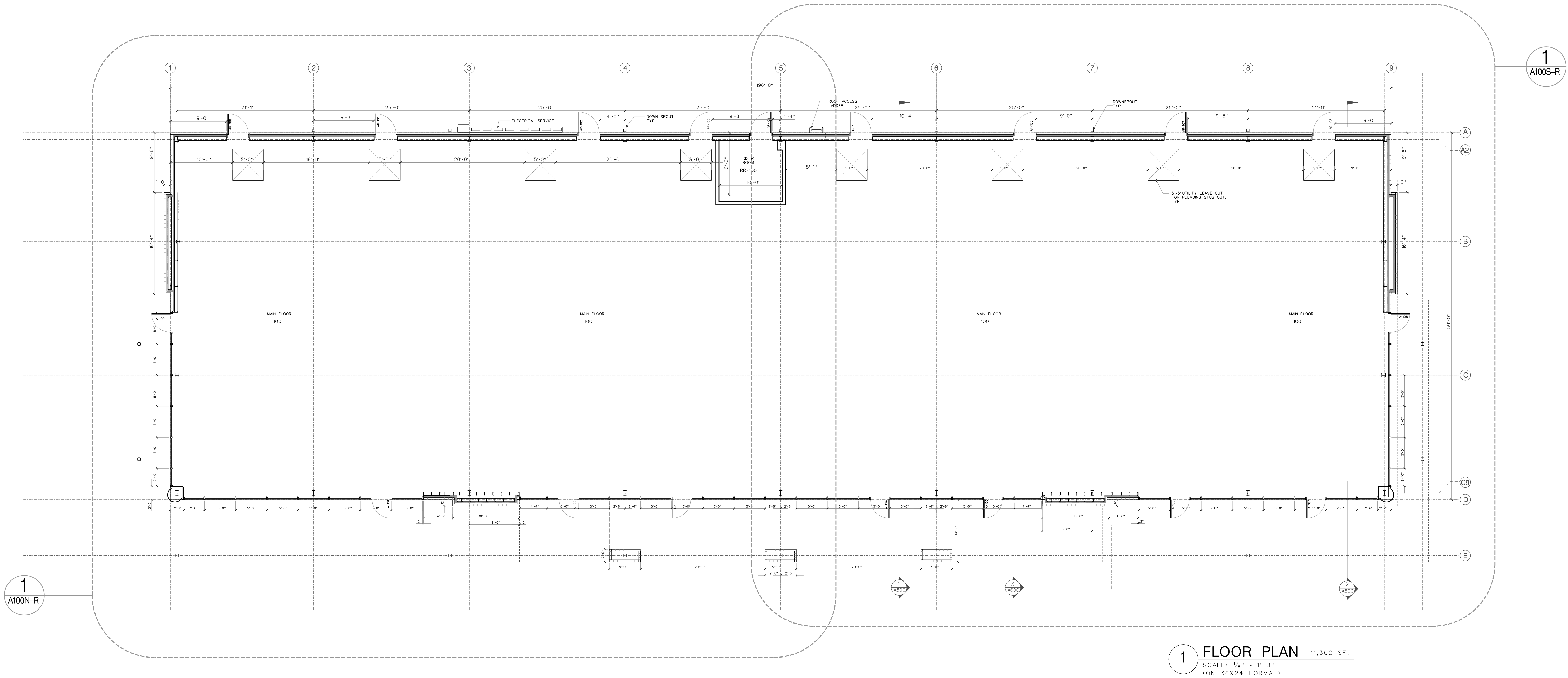
DITCH

DITCH

DITCH

DITCH

DITCH



1 FLOOR PLAN 11,300 SF.
SCALE: 1/8" = 1'-0"
(ON 36X24 FORMAT)

IBA Design
ARCHITECTURE ♦ CONSULTING ♦ PERMITTING

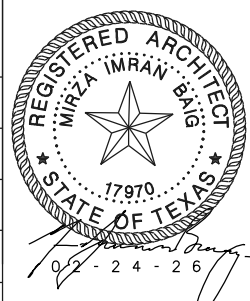
Email: imran@ibadesignpllc.com
Phone: 832-858-9533

**IMPERIAL ROYAL GARDEN
PLAZA**

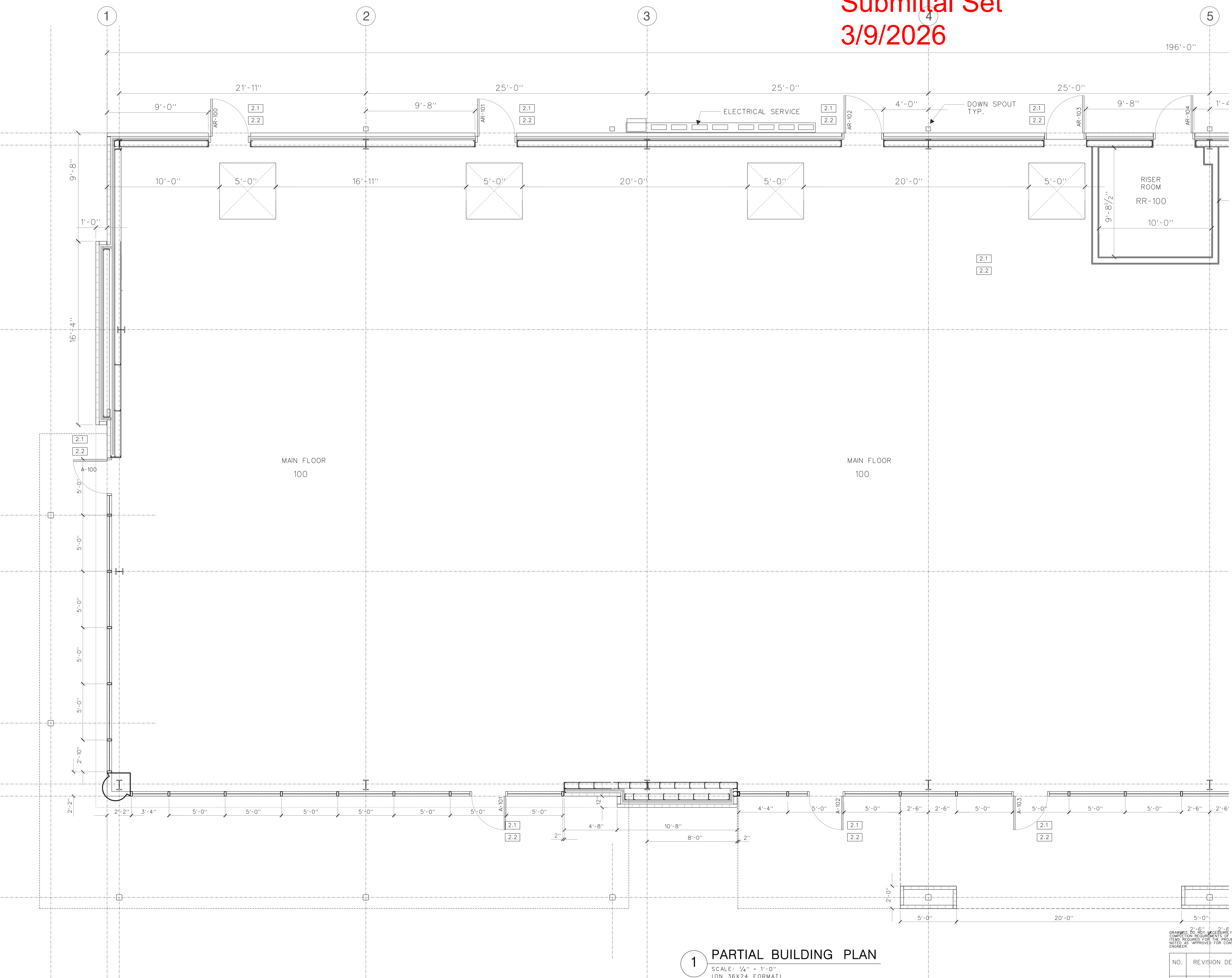
15015 VOSS RD
SUGAR LAND, TEXAS, 77498

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NO.	REVISION	DESCRIPTION	DATE



TITLE	
RETAIL FLOOR PLAN	
CLIENT REVIEW	
PERMIT REVIEW	02-24-26
CONSTRUCTION ISSUE	
CHECKED BY: M.I.B	SHEET: 24-26
PROJECT *	A100-R



NOTES AND SYMBOLS FOR FIRECODE REVIEW

- 2.1 PROVIDE LOCKING DEVICE THAT IS READILY DISTINGUISHABLE AS, LOCKED.
- 2.2 PROVIDE SIGN, POSTED ON EGRESS SIDE OR ON ADJACENT TO THE DOOR STATING: 'THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED'. THIS SIGN SHALL BE IN LETTERS ONE INCH HIGH ON A CONTRASTING BACKGROUND.
- E FIRE EXTINGUISHER
- S TEMPERED (EXTERIOR GLAZING) 1" THICK INSULATED, IN CLEAR ANODIZED 6" WIDE ALUMINUM STOREFRONT
- | | | |
|---------------|------------------------|------------------------------|
| Transmittance | Visible Light | 70% |
| Solar Energy | 34% | |
| U-Value | <1% | |
| Reflectance | Visible Light-Exterior | 8% |
| | Visible Light-Interior | 9% |
| | Solar Energy | 9% |
| NFRC U-Value | Winter | 0.97 Btu/(hr x sqft x 3/4°F) |
| | Summer | 0.88 Btu/(hr x sqft x 3/4°F) |
| | European U-Value | 5.4 |
| | Shading Coefficient | 0.6 |
| | Relative Heat Gain | 133 Btu/(hr x sqft) |
| | Solar Factor (SHGC) | 0.52 |
| | LSG | 1.34 |

- TRAVEL PATH/DISTANCE TO EXIT. (SEE FIRE CODE SHEET)
- ⊗ EXIT LIGHT 10.4W, 120V, AC, 6V DC WITH 90 MINUTE BATTERY BACK-UP SURE-LITES CCX-70-RWHD OR APPROVED EQUAL
- ⏏ EMERGENCY EGRESS LIGHT 14W, 120V, AC, 6V DC WITH 90 MINUTE BATTERY BACK-UP SURE-LITES CC-4-BK OR APPROVED EQUAL POWER SUPPLY FOR EXIT LIGHTS PROVIDED BY THE PREMISES WIRING SYSTEM, IN THE EVENT OF NORMAL POWER FAILURE ILLUMINATION WILL BE AUTOMATICALLY PROVIDED BY BATTERY.
- PROVIDE INSULATION IN ALL PARTITIONS: EXTERIOR AND INTERIOR.
 - IN ALL SPACES WITHOUT CEILING AND OPEN TO UNDERSIDE OF THE ROOF DECK, CONTINUE GYPSUM BOARD TO THE UNDERSIDE OF THE ROOF DECK, FIRE STOP ALL JOINTS AND PENETRATION PER MANUFACTURER'S RECOMMENDATION AND SPECIFIC UL RATING REQUIREMENTS.
 - CONTRACTOR TO PROVIDE TYPE 2A FIRE EXTINGUISHER AT ALL TIMES.
 - CONTRACTOR TO VERIFY FIELD CONDITIONS PRIOR TO COMMENCEMENT OF ANY WORK.
 - CONTRACTOR TO PROVIDE FIRE RATED BLOCKING IN ALL PARTITIONS THAT HAVE EQUIPMENT FASTENED TO THE STUDS.
 - ALL DOORS MUST HAVE A LANDING ON BOTH SIDES, AT THE SAME ELEVATION. EXTERIOR DOOR LANDINGS MAY HAVE A SLOPE OF 1/4"12" MAX. TYP. LANDINGS SHALL HAVE A LENGTH MEASURED IN THE DIRECTION OF TRAVEL OF NOT LESS THAN 44 INCHES. PER SECTIONS 1008.1.4 & 1008.1.6, 2012 IBC, THERE SHALL BE A FLOOR OR LANDING ON EACH SIDE OF A DOOR WITH THE SAME ELEVATION ON BOTH SIDES AND THRESHOLDS SHALL NOT EXCEED 1/2" IN HEIGHT.

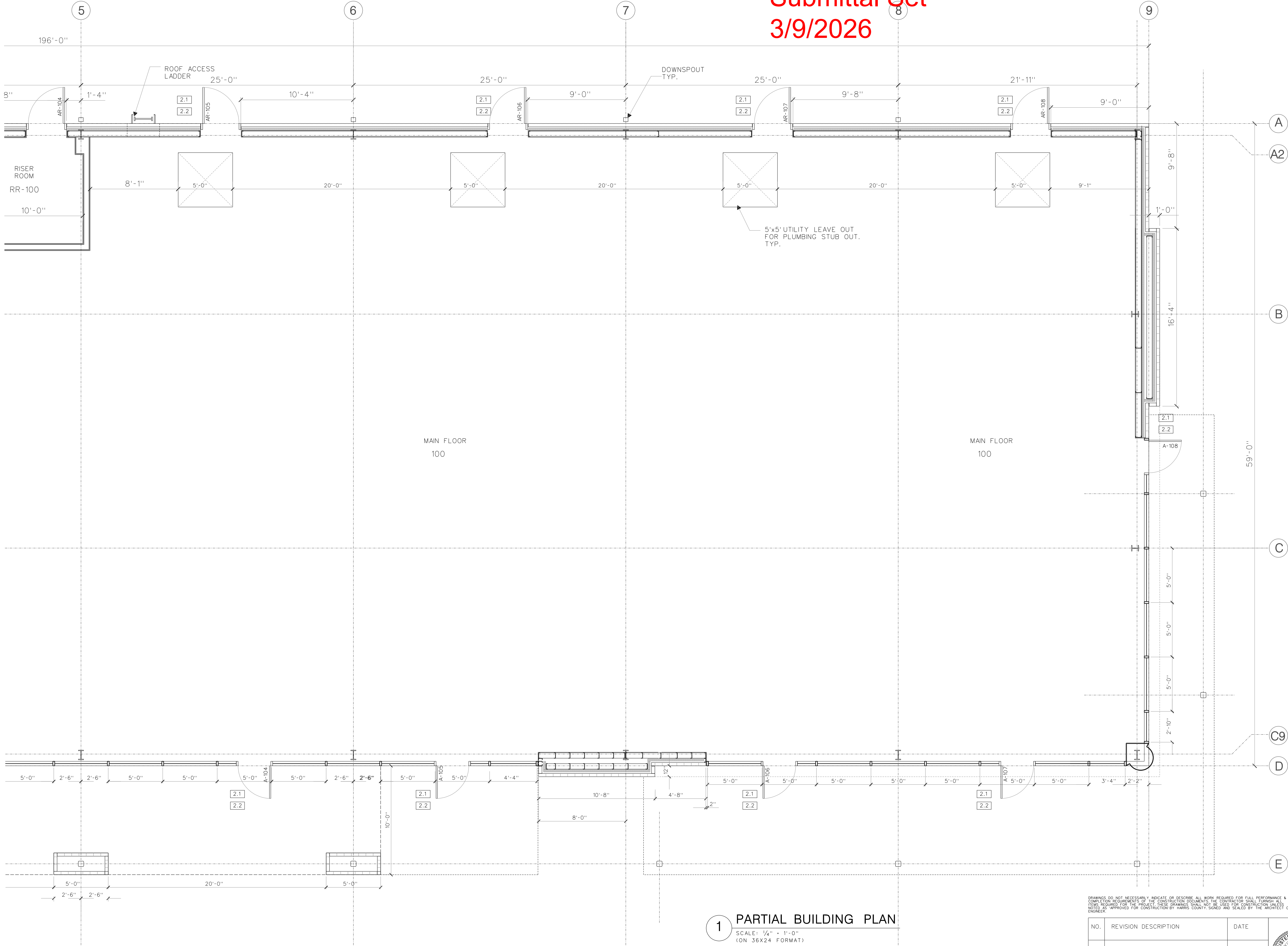
1 PARTIAL BUILDING PLAN
SCALE: 1/4" = 1'-0"
(ON 36X24 FORMAT)

IBA Design
ARCHITECTURE ♦ CONSULTING ♦ PERMITTING
Email: imran@ibadesignpllc.com
Phone: 832-858-9533

IMPERIAL ROYAL GARDEN PLAZA
15015 VOSS RD
SUGAR LAND, TEXAS, 77498

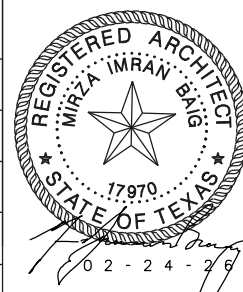
NO.	REVISION DESCRIPTION	DATE	TITLE RETAIL FLOOR PLAN (ENLARGED NORTH)
			CLIENT REVIEW
			PERMIT REVIEW 02-24-26
			CONSTRUCTION ISSUE
	CHECKED BY: M.I.B		SHEET: A100N-R
	PROJECT *		

REGISTERED ARCHITECT
IMRAN IBRAHIM
12870
STATE OF TEXAS
02-24-26



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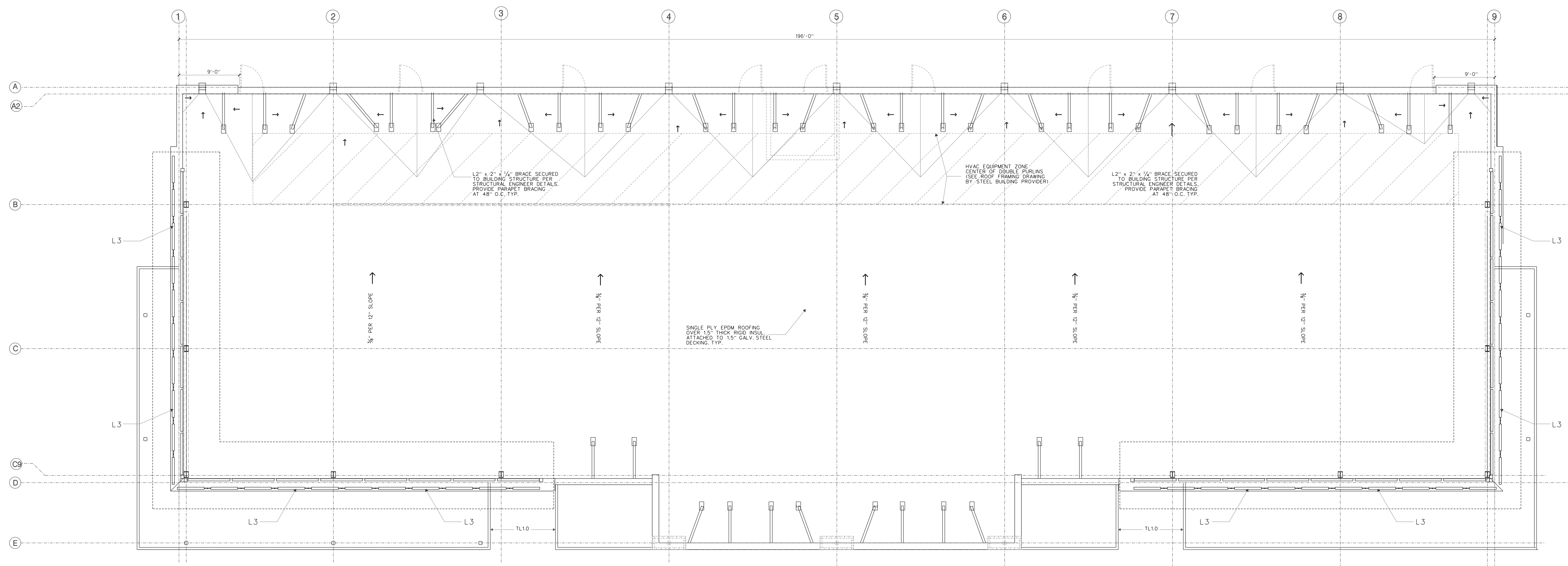
NO.	REVISION	DESCRIPTION	DATE



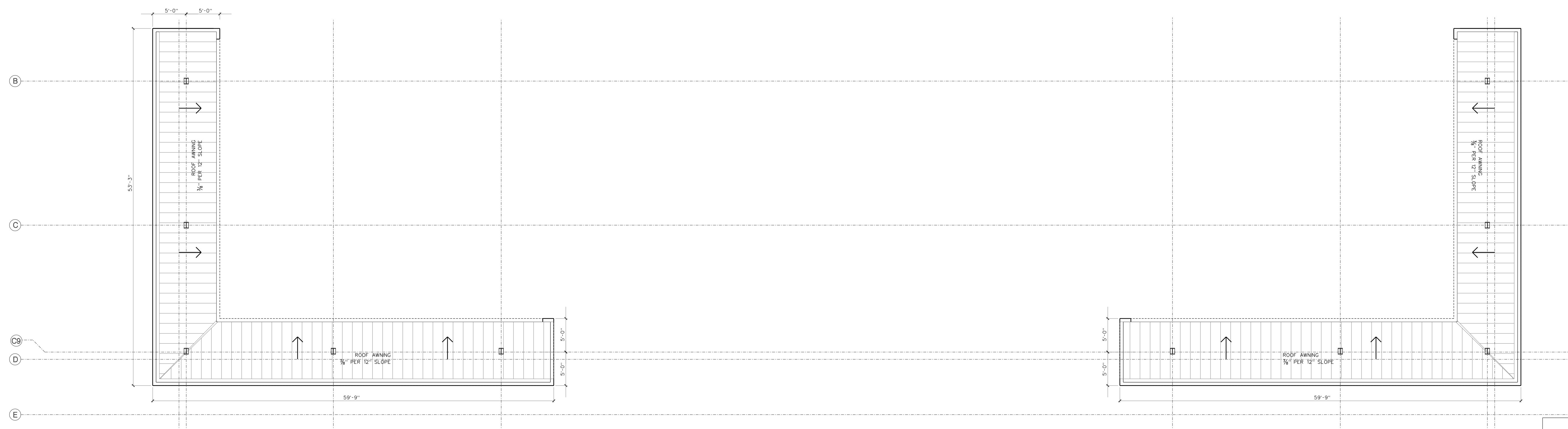
TITLE RETAIL FLOOR PLAN (ENLARGED SOUTH)	
CLIENT REVIEW	
PERMIT REVIEW 02-24-26	
CONSTRUCTION ISSUE	
CHECKED BY: M.I.B	SHEET: A100S-R
PROJECT *	

Submittal Set

3/9/2026



1 BUILDING ROOF PLAN
SCALE: $\frac{1}{8}" = 1'-0"$
(ON 36X24 FORMAT)



3 ROOF AWNING PLAN
SCALE: $\frac{1}{8}" = 1'-0"$
(ON 36X24 FORMAT)

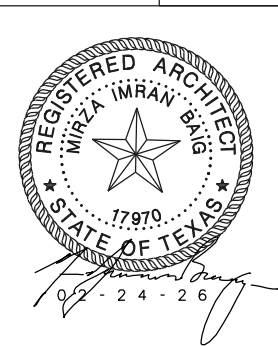
NO.	REVISION DESCRIPTION	DATE



IMPERIAL ROYAL GARDEN
PLAZA

15015 VOSS RD
SUGAR LAND, TEXAS, 77498

TITLE	
RETAIL ROOF PLAN	
CLIENT REVIEW	
PERMIT REVIEW	02-24-26
CONSTRUCTION ISSUE	
CHECKED BY: M.I.B	SHEET:
PROJECT #.	A101-R



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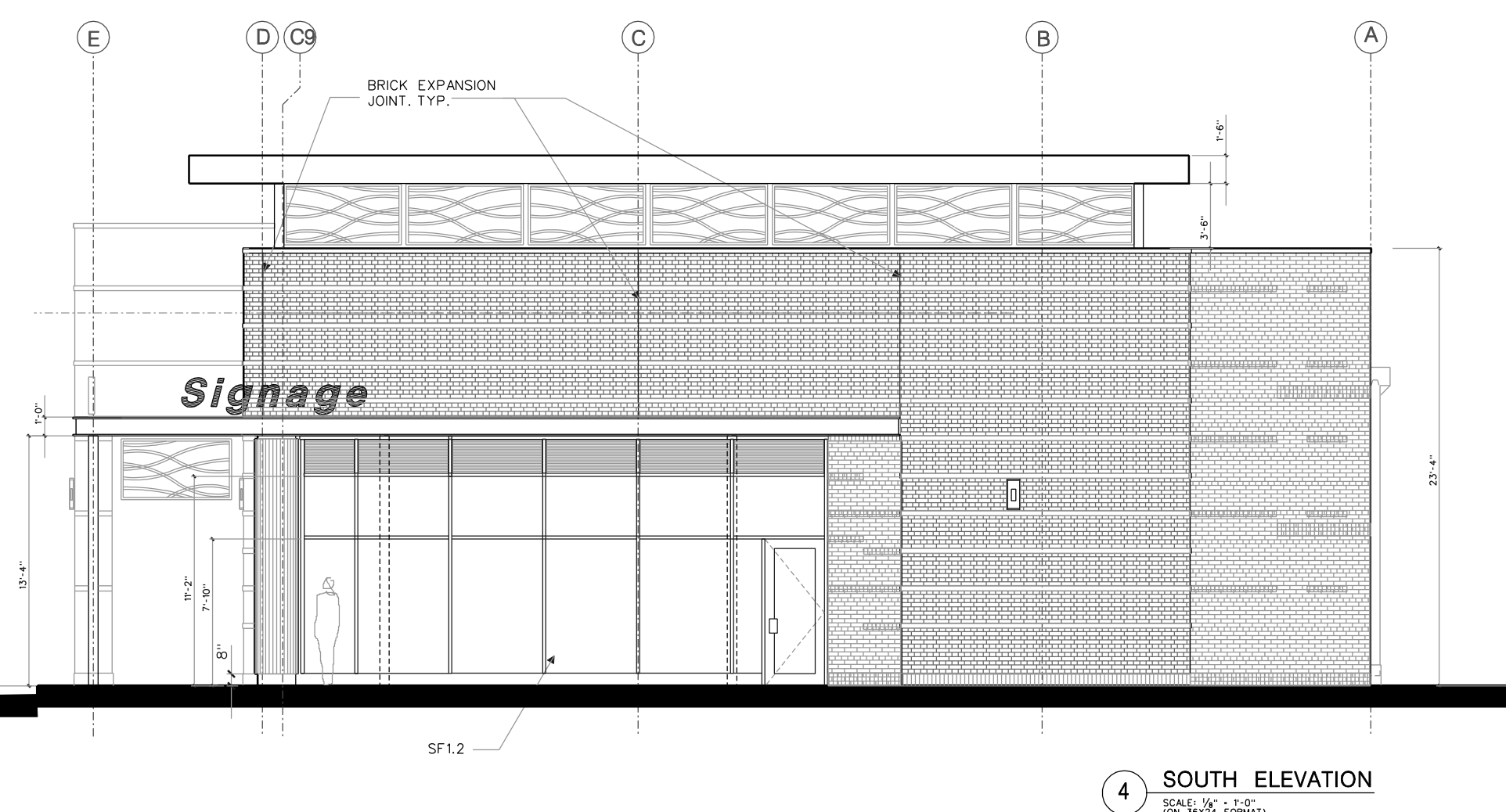
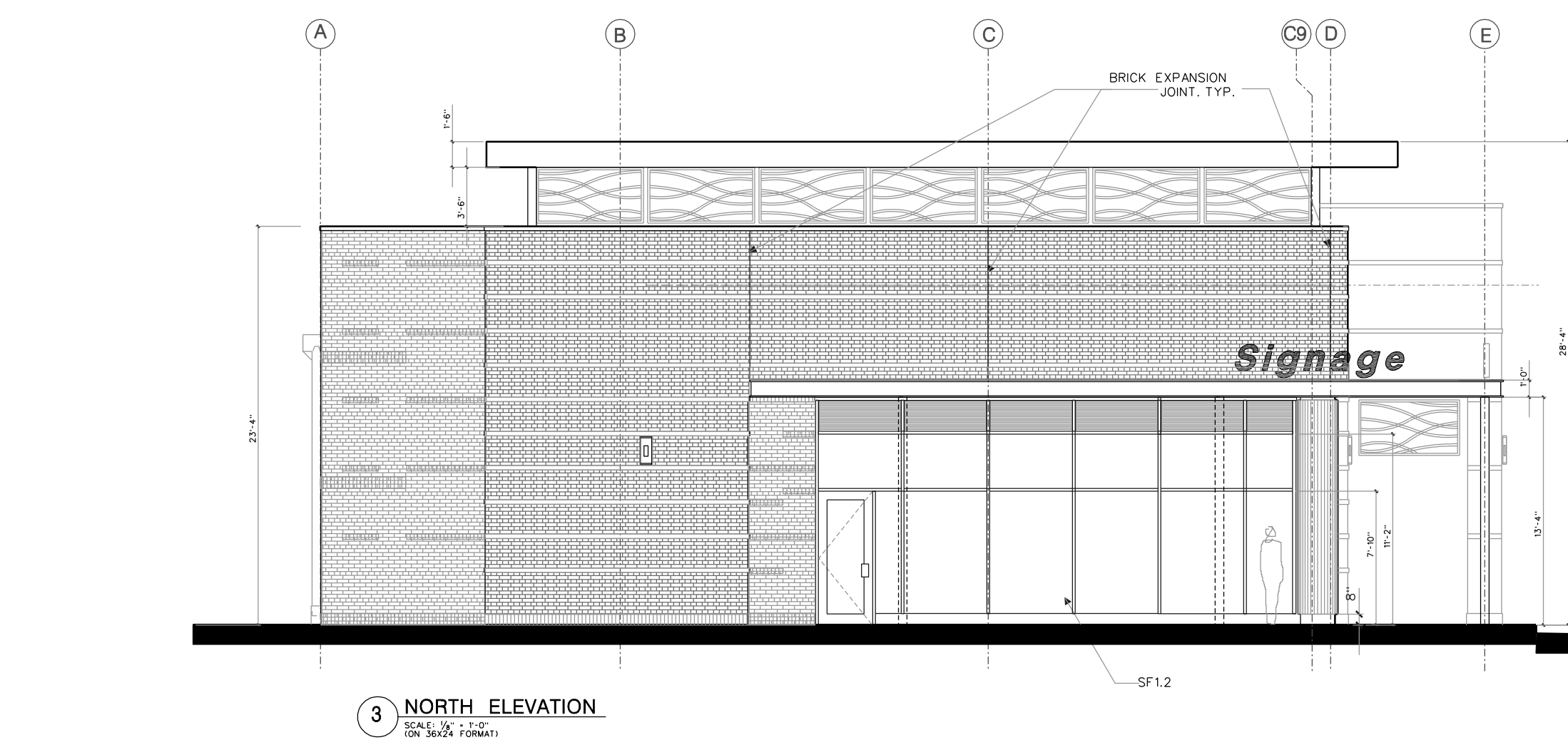
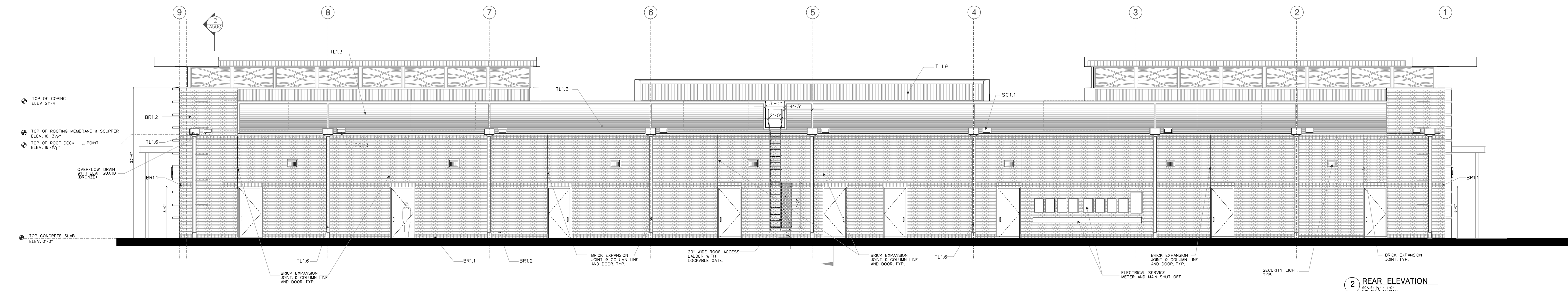
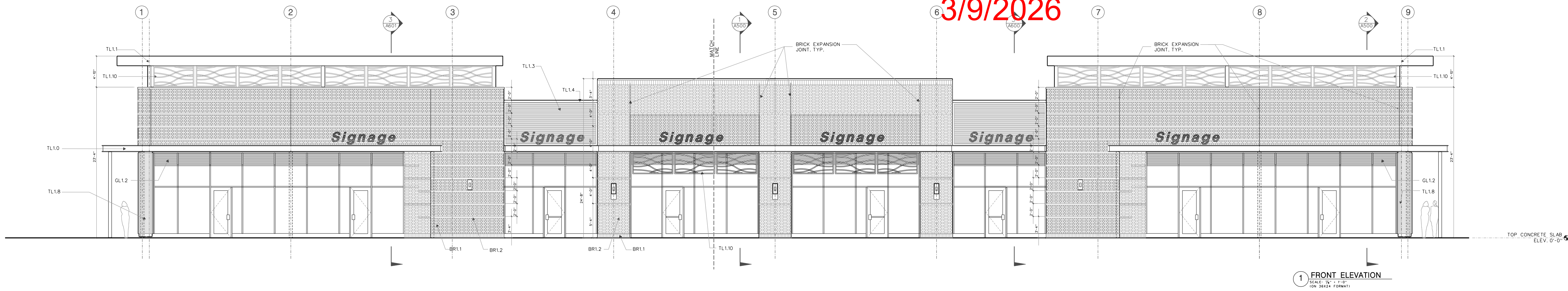
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Architectural floor plan of a building layout. The plan shows a central rectangular area surrounded by a corridor system. Key dimensions and labels include:

- Overall width: 29'-0"
- Overall height: 27'-0"
- Top-left ramp: 9'-0" wide
- Top-right ramp: 9'-0" wide
- Central area: 10'-0" wide, 10'-0" high
- Left corridor: 5'-0" wide
- Right corridor: 5'-0" wide
- Bottom corridor: 5'-0" wide
- Bottom-left ramp: 6'-0" wide
- Bottom-right ramp: 6'-0" wide
- Labels: PV1.1 (FIELD), PV1.2, PV1.3, RAMP

Architectural floor plan of a rectangular building. The plan includes a ramp on the left side and a series of four rectangular structures along the bottom edge, each labeled 'Pv1.3'. The building's perimeter is defined by a thick line, with '2"-3" DIA. RIVER ROCK BEDDING, TYP.' noted on the left and right sides. The top edge features four 'AC PAD' units, each with an 'ELECTL' (electrical) symbol. The bottom edge has a 'CONCRETE SIDEWALK (BROOM FINISHED)' and a 'RAMP' on the far right. Dimensions are provided for various sections: 5'-0" and 7'-6" on the left; 9'-0", 12'-11", 9'-0", 9'-0", 12'-11", 9'-0", 13'-6", and 4'-6" along the bottom; and 1'-6" and 4'-6" on the right. A 'RAMP' is also indicated on the left side. The plan is detailed with grid lines and various annotations for construction and materials.

02-24-26	PROJECT #.	A102
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KEYED ASSEMBLIES

- BR1.1: BRICK TYPE 1 W/ 1/2" DAMPROOFED SHEATHING ON 6" 18 GA METAL STUDS @ 16" O.C. (ACME BRICK - BAHIA BLEND) (USE 6" REINFORCED CMU BACKING AT DUMPSTER AND ELECTRICAL ENCLOSURE WALLS)
- BR1.2: BRICK TYPE 2 W/ 1/2" DAMPROOFED SHEATHING ON 6" 18 GA METAL STUDS @ 16" O.C. (ACME BRICK - GLACIER WHITE) (USE 6" REINFORCED CMU BACKING AT DUMPSTER AND ELECTRICAL ENCLOSURE WALLS)
- BR1.3: BRICK TYPE 3 W/ 1/2" DAMPROOFED SHEATHING ON 6" 18 GA METAL STUDS @ 16" O.C. (ACME BRICK - BURNT PUMPKIN)
- FB1.1: 8" REINFORCED CMU WALL, PERLITE FILL CMU CORES, TYP.
- CS1.1: SLAB ON GRADE, REINFORCED CONC. SLAB OVER MOISTURE BARRIER ON COMPACTED FILL, REFER TO FOUNDATION DRAWINGS.
- PL1.1: 1" THICK PLASTER ON 1/2" DAMPROOFED SHEATHING ON 6" 18 GA METAL STUDS @ 16" O.C. WITH R-19 BATT INSULATION.

KEYED ASSEMBLIES

- PL1.2: 1" THICK PLASTER ON 1/2" DAMPROOFED SHEATHING ON 6" 18 GA METAL STUDS @ 16" O.C. WITH R-19 BATT INSULATION.
- PL1.4: EXTERIOR INSUL. FINISH SYSTEM ON 1/2" DAMPROOFED SHEATHING ON 6" 18 GA METAL STUDS @ 16" O.C. (OW 6385 (DOVER WHITE))
- PL1.9: 15" WIDE x 3/4" DEEP REVEAL, V-SHAPED, TYP.
- TL1.0: 12" WIDE AVADEX RAINING WITH METAL SOFFIT (MATCH BURNISHED SLATE COLOR OF TL1.3)
- TL1.1: PREFINISHED ANTICORROSION COATED METAL COVER OVER VAPOR BARRIER AND EXTERIOR GRADE 3/4" PLYWOOD.
- TL1.2: VERTICAL METAL PANEL WALL, PREFINISHED, SIMILAR TO MBOI 'PBU'
- TL1.3: HORIZONTAL METAL WALL PANEL, SIMILAR TO MBOI MASTERLINE 16" (BRUSHED SLATE)
- TL1.4: PREFINISHED GALV. STEEL COPING (MATCH BURNISHED SLATE COLOR OF TL1.3)
- TL1.5: PREFINISHED GALV. STEEL FASCIA (MATCH BURNISHED SLATE COLOR OF TL1.3)
- TL1.6: PREFINISHED GUTTERS AND DOWNSPOUT, (MATCH BURNISHED SLATE COLOR OF TL1.3)
- TL1.7: FIBER CEMENT EXTERIOR PANEL, (SIMILAR TO NICHHA USA) ILLUMINATION SERIES - AWP 1818

KEYED ASSEMBLIES

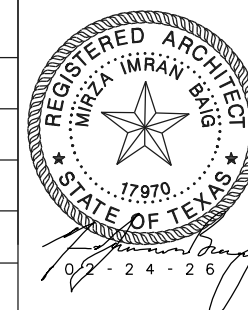
- TL1.8: PAC-CLAD - PAC 1000R FLUSH JOINT COLUMN COVER, 16 GAUGE STAINLESS STEEL
- TL1.9: METAL CLADDING OVER DAMP PROOFED 3/4" OSB, SIMILAR TO MBOI RAIN GUARD (GALVALUME)
- TL1.10: DECORATIVE PRIVACY SCREEN (MATCH BURNISHED SLATE COLOR OF TL1.3)
- TL1.11: ALUMINUM PRIVACY SCREEN PANELING (MATCH BURNISHED SLATE COLOR OF TL1.3)
- ST1.2: STACKED STONE THIN VENEER (CHAPELHILL - BY ELDORADO STONE) - ATTACHED TO 3/4" EXTERIOR GRADE PLYWOOD OR CMU. (PER STONE MANUFACTURER'S INSTALLATION GUIDELINES)
- R1.1: MODIFIED BITUMEN ROOF ON 3/4" PERLITE BOARD ON 2 LAYERS 1-1/2" POLYISOCYANURATE ON 1-1/2" METAL DECK ON SCHED. STRUCTURE.
- R1.2: SPECTRALITE - SILICANE MODIFIED POLYESTER COATED, STANDING SEAM ROOF OVER R-20 INSULATION AND STEEL FRAMING (COOL ROOF) 'SOLAR WHITE', PROVIDE ALL MANUFACTURER RECOMMENDED PENETRATION ACCESSORIES AND DUNNAGE FOR HVAC EQUIPMENT.
- R1.3: PBU PANEL BY MBOI (VERTICALLY INSTALLED) BACK PANEL (COOL ROOF) 'SOLAR WHITE', PROVIDE ALL MANUFACTURER RECOMMENDED

KEYED ASSEMBLIES

- SC1.1: 16"x7" OVERFLOW SCUPPER, TYP. 2" ABOVE ROOFING
- GL1.1: (EXTERIOR GLAZING) 1" INSULATED TEMPERED (EXTERIOR GLAZING) 1" THICK INSULATED, IN CLEAR ANODIZED 6" WIDE ALUMINUM STOREFRONT Transmittance: Visible Light 70% Solar Energy 34% U-Value .62 Reflectance Visible Light-Exterior 8% Visible Light-Interior 9% Solar Energy 9% NFRC U-Value Winter 0.97 Btu/(hr x sqft x 1/4"ft) Summer 0.86 Btu/(hr x sqft x 1/4"ft) European U-Value 5.4 Relative Heat Gain 133 Btu/(hr x sqft) Shading Coefficient 0.6 Solar Factor (SHGC) 0.52 LSG 1.34
- GL1.2: (EXTERIOR GLAZING) 1" INSULATED W/ FRITTED HORIZONTAL PATTERN
- SF1.2: (STOREFRONT) KAWNEER-TIFAB-453UT (MATCH BURNISHED SLATE COLOR OF TL1.3), OR EQUIVALENT AS APPROVED BY ARCHITECT.

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NO.	REVISION DESCRIPTION	DATE



TITLE	RETAIL BUILDING ELEVATIONS
CLIENT REVIEW	
PERMIT REVIEW	02-24-26
CONSTRUCTION ISSUE	
CHECKED BY: M.I.B	SHEET: A200
PROJECT #	



REFER TO A201 FOR KEYED ASSEMBLIES.

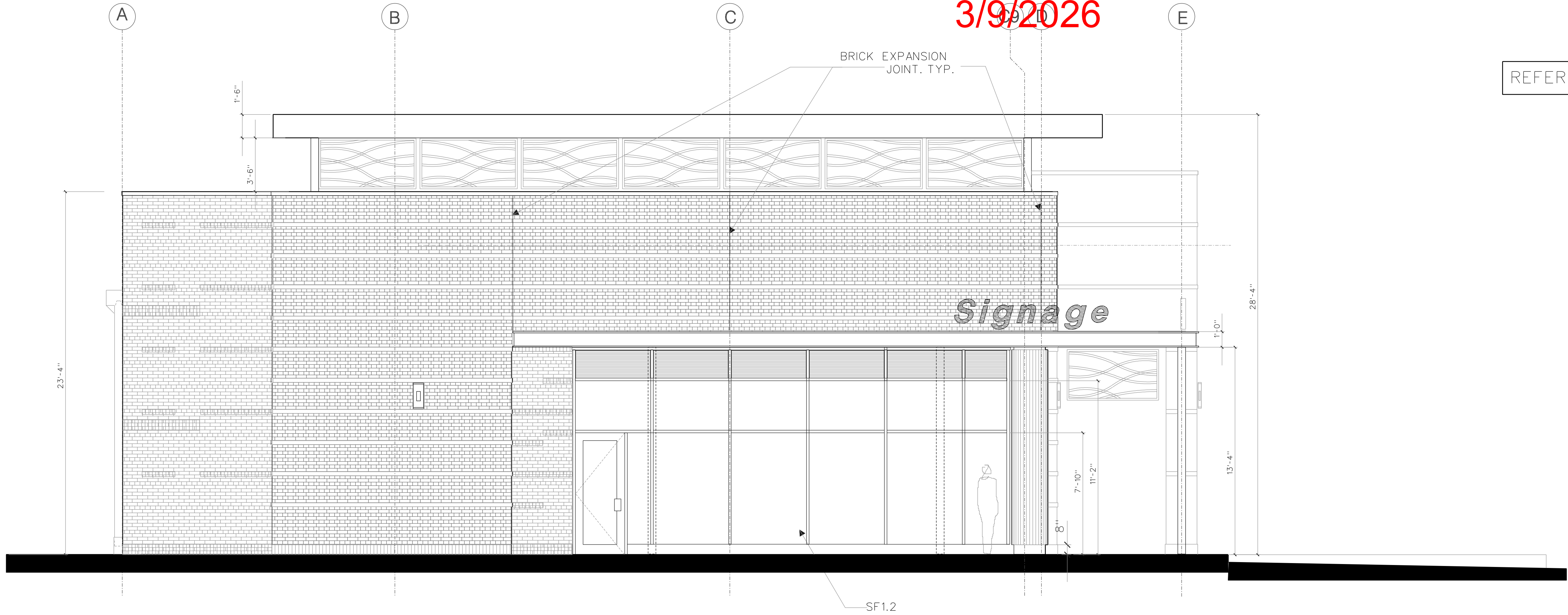
IBA Design
ARCHITECTURE ♦ CONSULTING ♦ PERMITTING
Email: imran@ibadesignpllc.com
Phone: 832-858-9533

NO.	REVISION DESCRIPTION	DATE

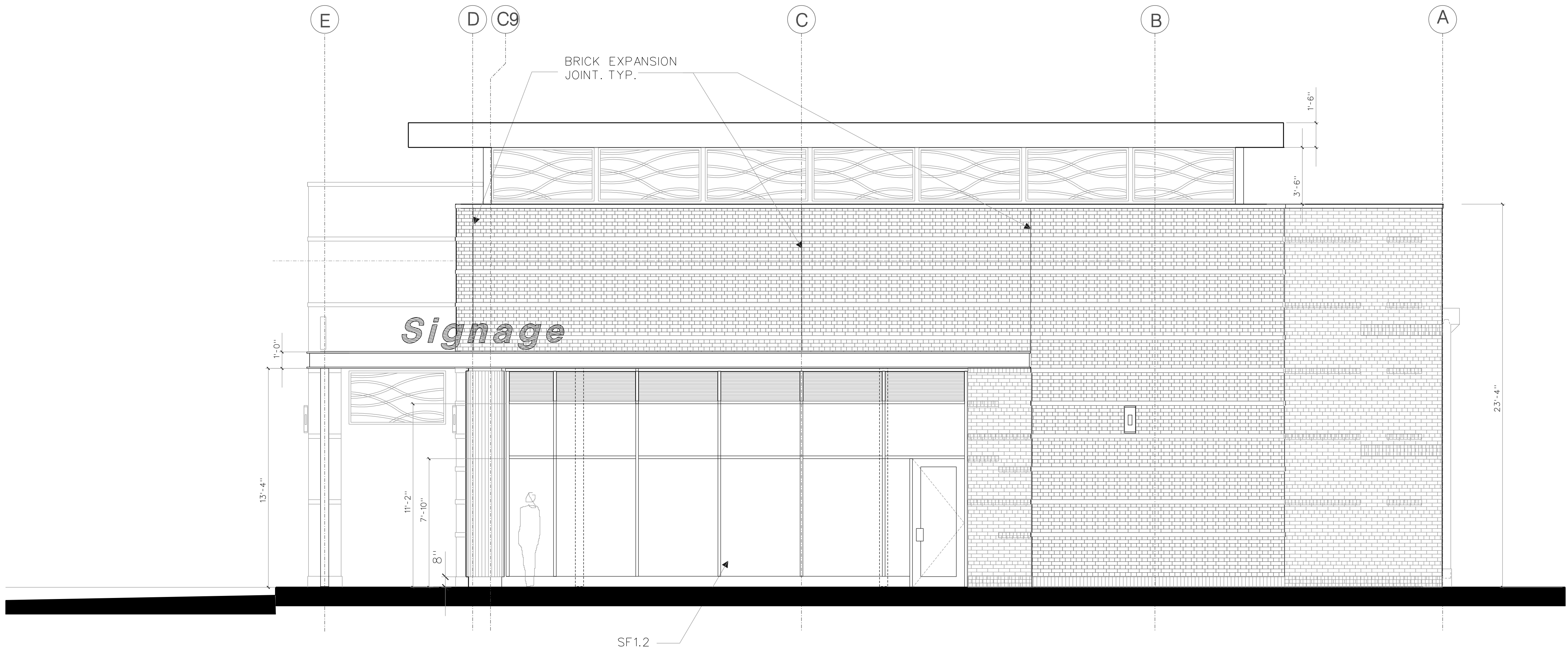
IMPERIAL ROYAL GARDEN PLAZA
15015 VOSS RD
SUGAR LAND, TEXAS, 77498

	TITLE	RETAIL ELEVATION ENLARGED
	CLIENT REVIEW	
	PERMIT REVIEW	02-24-26
	CONSTRUCTION ISSUE	
	CHECKED BY: M.I.B.	SHEET: A201

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3 NORTH
SCALE: 1/8" = 1'-0"
(ON 36X24 FORMAT)



4 SOUTH ELEVATION
SCALE: 1/8" = 1'-0"
(ON 36X24 FORMAT)

IBA Design
ARCHITECTURE ♦ CONSULTING ♦ PERMITTING
Email: imran@ibadesignpllc.com
Phone: 832-858-9533

NO.	REVISION DESCRIPTION	DATE

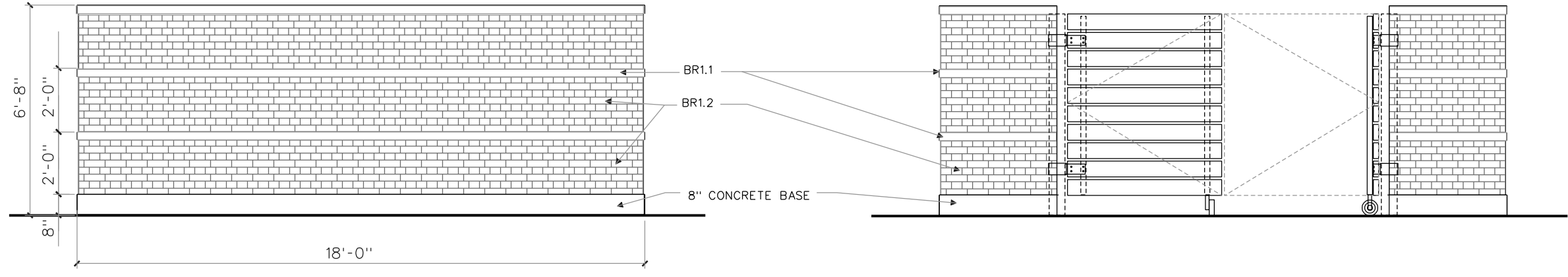
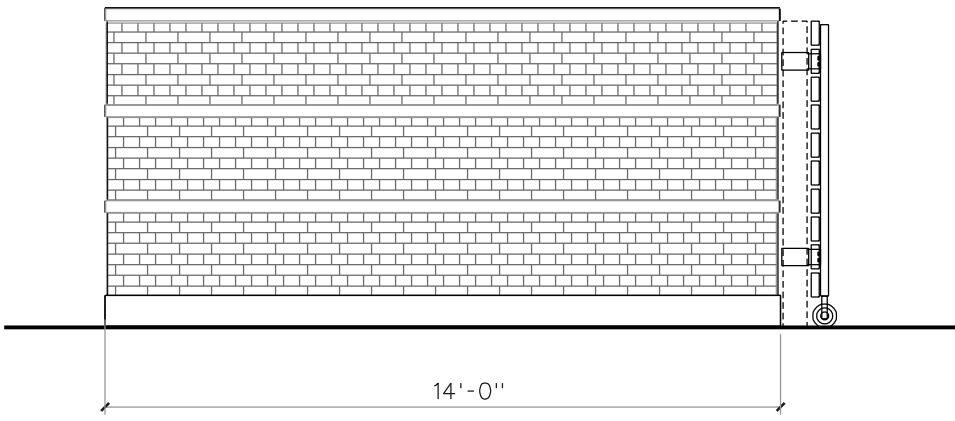
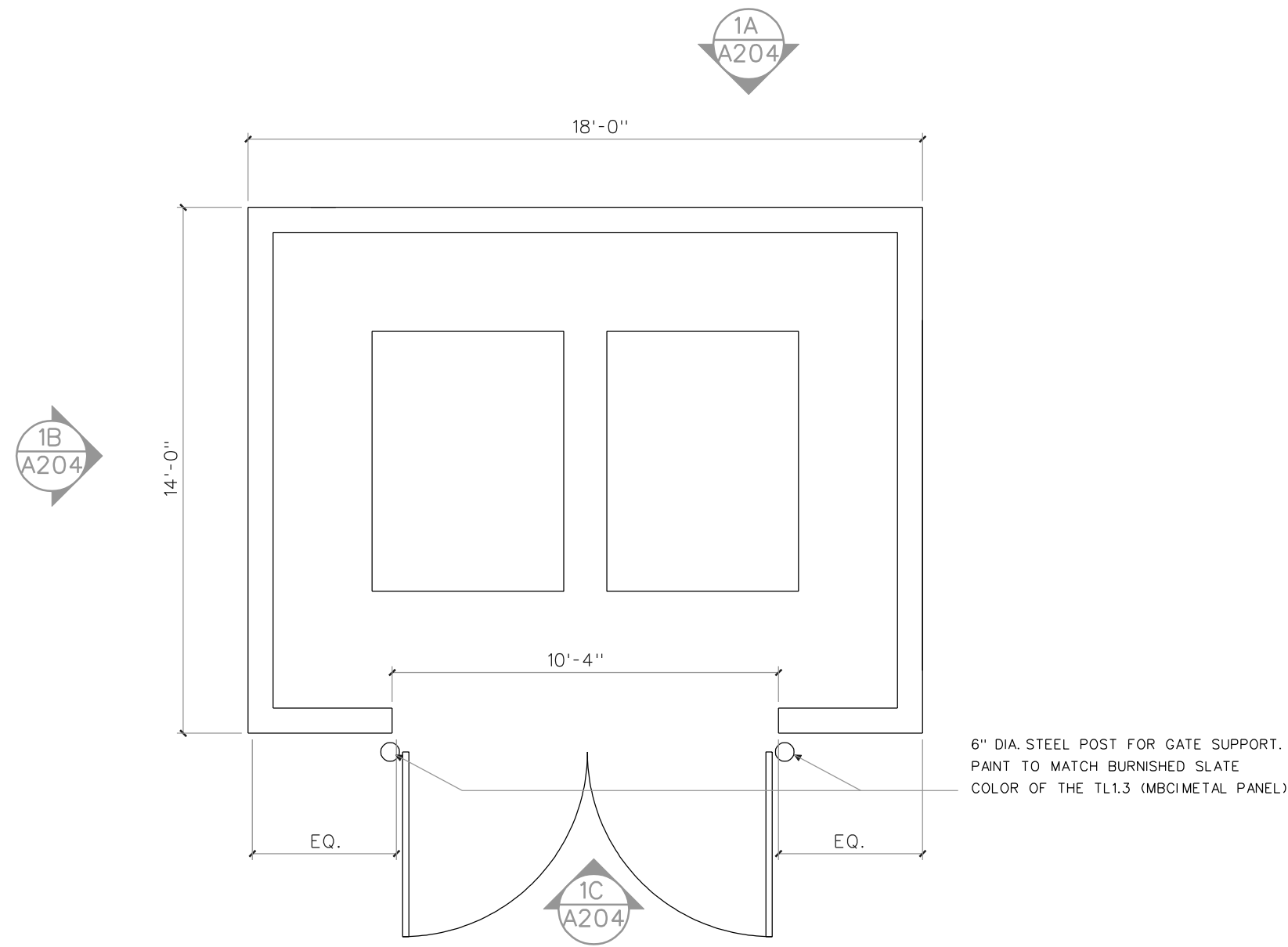
IMPERIAL ROYAL GARDEN
PLAZA
15015 VOSS RD
SUGAR LAND, TEXAS, 77498



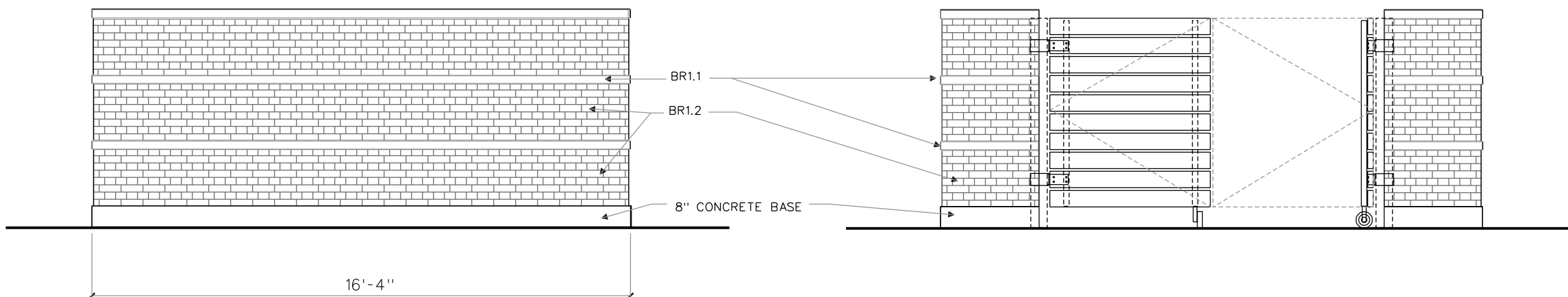
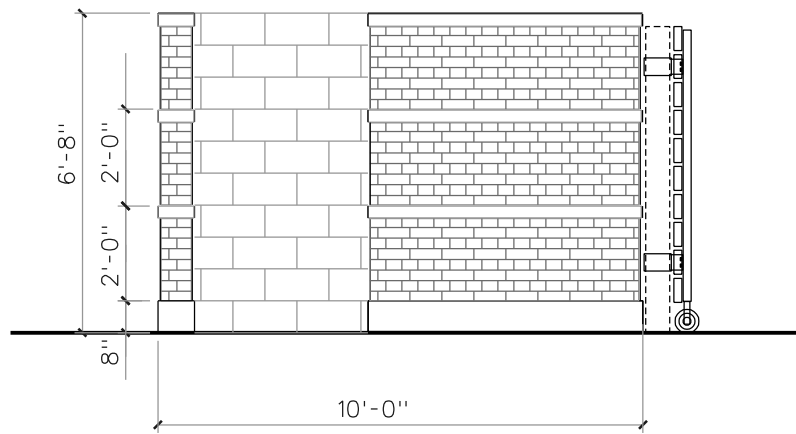
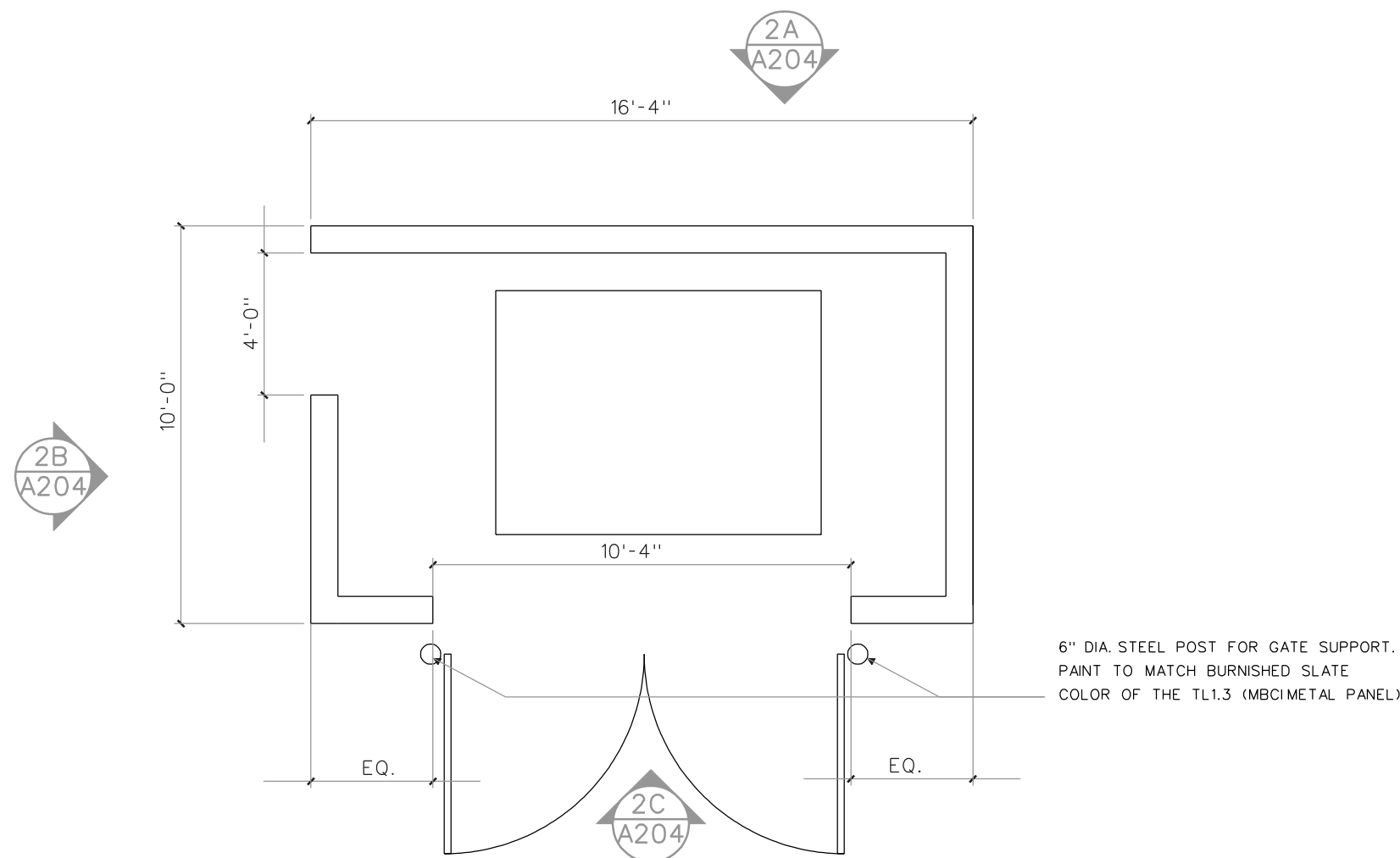
TITLE	RETAIL ELEVATION ENLARGED
CLIENT REVIEW	
PERMIT REVIEW	02-24-26
CONSTRUCTION ISSUE	
CHECKED BY: M.I.B	SHEET: A202
PROJECT	

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1 ELECTRICAL EQUIPMENT ENCLOSURE
SCALE: 1/4" = 1'-0"
(ON 36X24 FORMAT)



2 DUMPSTER ENCLOSURE
SCALE: 1/4" = 1'-0"
(ON 36X24 FORMAT)

REFER TO A201 FOR KEYED ASSEMBLIES.

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Email: imran@ibadesignpllc.com
Phone: 832-858-9533

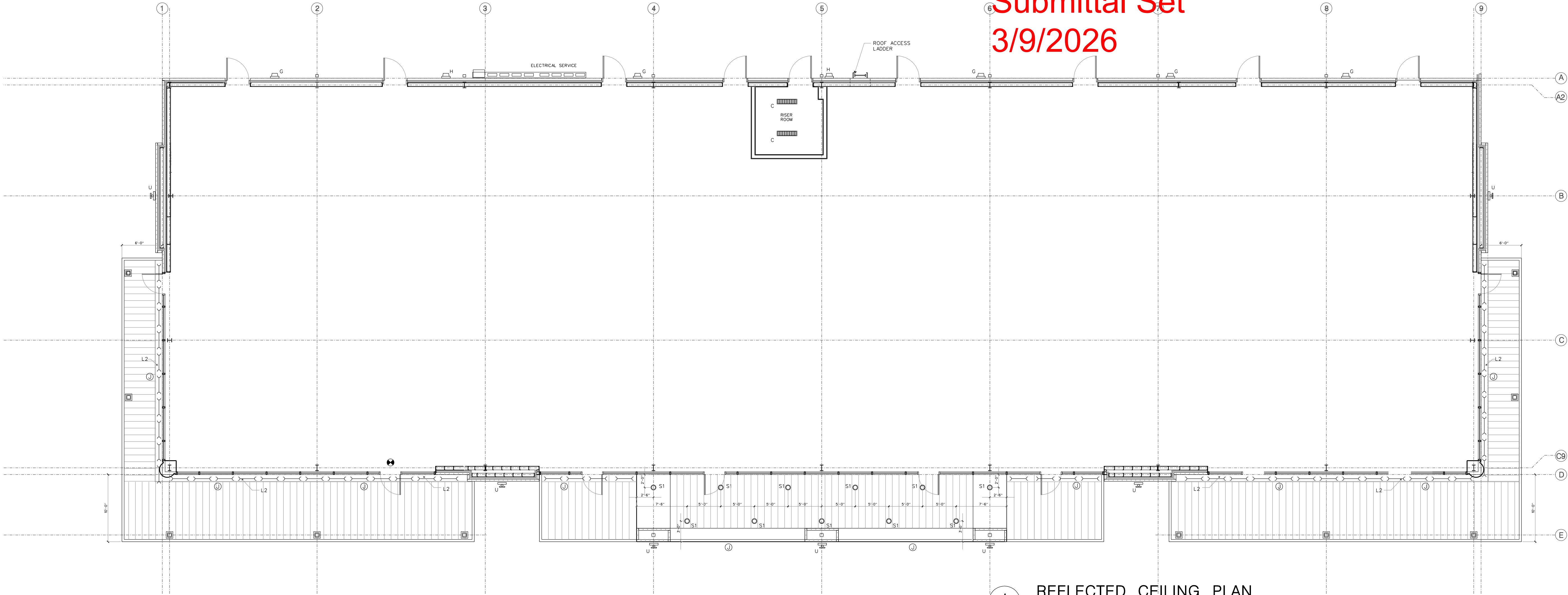
NO.	REVISION DESCRIPTION	DATE

IMPERIAL ROYAL GARDEN
PLAZA
15015, 15019, 15021 VOSS RD
SUGAR LAND, TEXAS, 77498

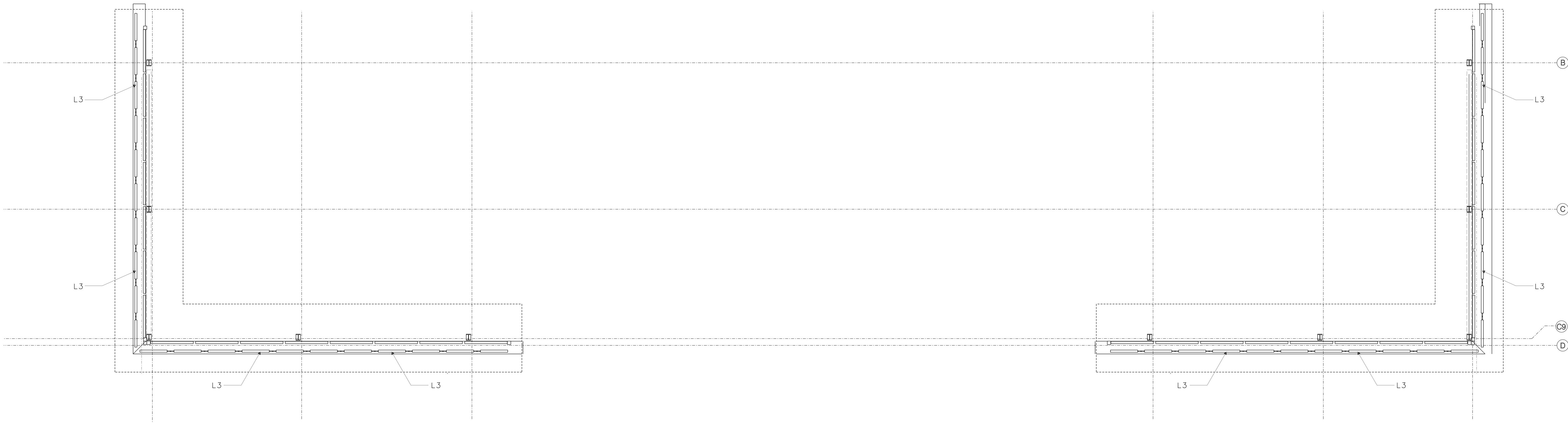


TITLE	MISC. DETAILS
CLIENT REVIEW	
PERMIT REVIEW	03-24-25
CONSTRUCTION ISSUE	
CHECKED BY: M.I.B.	SHEET: A204
PROJECT	

DRAWINGS DO NOT NECESSARILY INDICATE OR DESCRIBE ALL WORK REQUIRED FOR FULL PERFORMANCE & COMPLETION REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL FURNISH ALL ITEMS REQUIRED FOR THE PROJECT. THESE DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION UNLESS NOTED AS APPROVED FOR CONSTRUCTION BY HARRIS COUNTY, SIGNED AND SEALED BY THE ARCHITECT OR ENGINEER.



1 REFLECTED CEILING PLAN
SCALE: 1/8" = 1'-0"
(ON 36X24 FORMAT)



2 LIGHTING AT ROOF PARAPET WITH DECORATIVE GRILLE.
SCALE: 1/8" = 1'-0"
(ON 36X24 FORMAT)

DESIGNATION	SYMBOL	DESCRIPTION	
		STANDARD SMOKE DETECTOR	
	G	GAS OUTLET W/ SHUT OFF VALVE.	
	S	STANDARD LIGHT SWITCH	
	3 W/ 40	THREE WAY LIGHT SWITCH	
		ELECTRIC PAPER TOWEL DISPENSER.	
		CABLE TELEVISION OUTLET	
	Q	110 VOLT DUPLEX OUTLET.	
		110 VOLT DUPLEX OUTLET WITH GFI	
		220 VOLT DUPLEX OUTLET	
		120 VOLT INSTANTANEOUS ELECTRIC WATER HEATER (UNDER SINK MOUNT)	
A		LED LIGHT SURROUND VANITY MIRROR	
B		DECORATIVE CEILING LIGHT FIXTURE.	
C		1 X 4 LED PANEL (WET LOCATION)	3500 LUMENS
D		RECESSED WALL WASHER LIGHT	
E		2 X 2 LED PANEL W/ 90 MINUTE EMERGENCY BACKUP BALLAST	3500 LUMENS
F		2' X 2' LED FIXTURE	

DESIGNATION	SYMBOL	DESCRIPTION	
L3		EXTERIOR FACADE LIGHTING (COLOR KINETICS)	
L2		LED EXTERIOR COVE UPLIGHTING	
L		LED DIMMABLE COVE LIGHTING	
L1		LED EXTERIOR STRIP WALL WASHER LIGHTING (COLOR CHANGEABLE)	
G		LITHONIA SECURITY LIGHT WALL MOUNTED (TWFP)	
H		LITHONIA SECURITY LIGHT WALL MOUNTED - 90 MIN BB (TWFP)	
I		LITHONIA HALF CIRCLE WALL MOUNTED DECORATIVE LIGHT - 90 MIN BB (EWSR)	
J		LITHONIA HALF CYLINDER WALL MTD. DECORATIVE LIGHT (DIMMABLE)	
K			
M		TRACK MOUNTED LIGHT FIXTURE FOR MERCHANDISE DISPLAY	
N		JUNCTION BOX FOR SIGNAGE	
R		LED DECORATIVE HANGING FIXTURE	
U		LED DECORATIVE EXTERIOR SCONCE FIXTURE	

DESIGNATION	SYMBOL	DESCRIPTION	
S		LITHONIA COMPACT RECESSED LED DOWNLIGHT (DIMMABLE)	
S1		LITHONIA COMPACT RECESSED LED DOWNLIGHT (WET LOCATIONS)	
		HVAC SUPPLY AIR DIFFUSER	
		HVAC RETURN AIR GRILLE	
		EXIT LIGHT 10.4W, 120V, AC, 6V, DC WITH 90 MINUTE BATTERY BACK-UP SURE-LITES (CCK-70-TWSS) OR APPROVED EQUAL	
		WATER PROOF 110 V DUPLEX OUTLET WITH GROUND FAULT INTERRUPTER	
Q		24' DIA. HVAC SUSPENDED DIFFUSER	
T		EMERGENCY EGRESS LIGHT 1W, 120V, AC, 6V, DC WITH 90 MINUTE BATTERY BACK-UP SURE-LITES (CC-4-BK) OR APPROVED EQUAL	
P		CHANDELIER	

GENERAL NOTES AND LEGEND

- ALL LIGHT FIXTURES SHALL BE UL LABELED.
- ELECTRICAL TRADES SHALL PROVIDE COMPLETE SUBMITTALS (SHOP DRAWINGS) ON ALL LIGHT FIXTURES, LAMPS, CONTROLS AND ACCESSORIES, ETC.
- ALL LUMINAIRES AND CONTROLS SHALL COMPLY WITH LOCAL ENERGY CODES.

HEIGHT OF CEILING ABOVE MAIN FINISHED FLOOR
X XXX
TYPE OF CEILING

	CLG MOUNTED EXHAUST FAN REGISTER
	THERMOSTAT

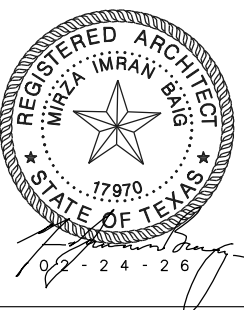


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Phone: 832-858-9533

IMPERIAL ROYAL GARDEN PLAZA

15015 VOSS RD
SUGAR LAND, TEXAS, 77498

NO.	REVISION DESCRIPTION	DATE	TITLE
			REFLECTED CEILING PLAN
			CLIENT REVIEW
			PERMIT REVIEW 02-24-26
			CONSTRUCTION ISSUE
			CHECKED BY: M.I.B SHEET: A300
			PROJECT *



PARTITION NOTES

PARTITION TAG LEGEND

PARTITION TAG

DESIGNATES PARTITION TYPE, LOWER CASE LETTER INDICATES PARTITION WITH INSULATION.

DESIGNATES STUD OPTION, DEPTH AND GAUGE, SEE STUD SCHEDULE BELOW.

PARTITIONS REQUIRED FOR THIS PROJECT ARE INDICATED BY TAG REFERENCES SHOWN ON THE ARCHITECTURAL FLOOR PLANS. UNTAGGED PARTITIONS SHALL BE TYPE 'A3'. THIS PARTITION SCHEDULE MAY CONTAIN A PARTITION TYPE OR STUD OPTION THAT IS NOT REFERENCED FROM THE PLANS. ONLY REFERENCED TYPES ARE REQUIRED.

STUD SCHEDULE

STUD OPTION	STUD DEPTH	MINIMUM GAUGE	HEIGHT LIMIT
1	1 5/8"	25	9'-6"
2	2 1/2"	25	12'-6"
3	3 5/8"	25	16'-0"
4	4 "	25	17'-3"
5	7/8"	25	4'-0"
6	6 "	25	20'-0"

GENERAL NOTES

PARTITION TYPE DRAWINGS ARE NOT TO SCALE.

WALLS AND PARTITIONS ARE INTERIOR NON-BEARING SYSTEMS AND ARE NOT REQUIRED OR INTENDED TO RESIST WIND LOADS OR SUPPORT FLOOR LOADS.

PARTITIONS ARE CONTINUOUS ACROSS DOORWAYS, OPENINGS AND ABUTTING PARTITIONS. A TAG SHOWN IN ONE SEGMENT OF A PARTITION APPLIES TO ALL UNMARKED SEGMENTS THAT ARE IN LINE WITH AND CONTINUOUS WITH THE TAGGED SEGMENT.

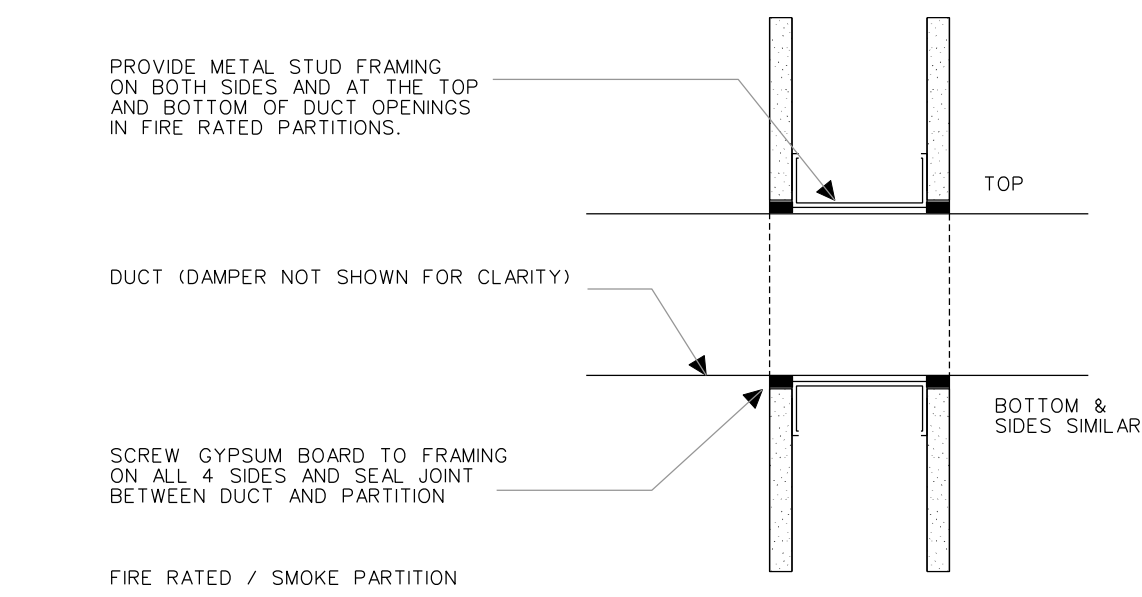
RATED WALLS AND PARTITIONS EXTEND THROUGH THE CEILING TO THE STRUCTURE OR UNDERSIDE OF DECKING ABOVE. PARTITIONS SHALL EXTEND TO THE DECK AND BE PROFILED TO FIT NEATLY AROUND FRAMING MEMBERS WITHIN 1/2" JOINTS TO BE SEALED ALONG THE ENTIRE LENGTH. PORTIONS OF THE PARTITION ABOVE THE CEILING ARE CONTINUOUS, WITHOUT OPENINGS OTHER THAN THOSE REQUIRED FOR PENETRATION OF SERVICES.

WHERE WALLS OR PARTITIONS WITH DISSIMILAR RATINGS INTERSECT, ASSEMBLIES WITH HIGHER RATINGS HAVE PRIORITY. SMOKE PARTITIONS HAVE PRIORITY OVER FIRE PARTITIONS WITH EQUAL RATING. FIRE PARTITIONS HAVE PRIORITY OVER ACOUSTIC RATINGS. CONSTRUCT PARTITION SUCH THAT THE HIGHER RATED ASSEMBLY IS CONTINUOUS THROUGH THE INTERSECTION.

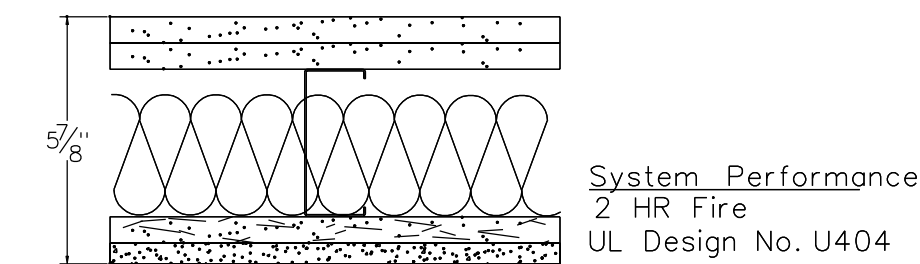
REQUIREMENTS TO LABEL WALLS ABOVE CEILING AND IN CONCEALED SPACES APPLY ONLY TO PROJECTS UNDER STANDARD BUILDING CODE JURISDICTION. IF A PARTITION IS DESIGNATED AS A 'SMOKE' PARTITION, THE WORD 'SMOKE' SHALL BE INCORPORATED INTO THE LABEL. FOR EXAMPLE, '2 HOUR FIRE WALL' BECOMES '2 HOUR SMOKE AND FIRE WALL'.

PROVIDE MOISTURE RESISTANT GYPSUM BOARD AT ALL LOCATIONS TO RECEIVE CERAMIC TILE FINISH. PROVIDE CEMENT BOARD AT ALL SHOWER LOCATIONS. PROVIDE EXTERIOR GRADE GYPSUM BOARD AT ALL EXTERIOR APPLICATIONS AND GARAGES.

ALL WINDOWS AND OTHER ITEMS MOUNTED THROUGH FIRE OR SMOKE RATED WALLS SHALL BE CONSTRUCTED TO MAINTAIN RATING. NOTIFY ARCHITECT IN WRITING IMMEDIATELY IF THERE ARE ANY CONFLICTS. REFER TO LIFE SAFETY PLANS FOR EXTENT OF FIRE AND SMOKE BOUNDARIES.



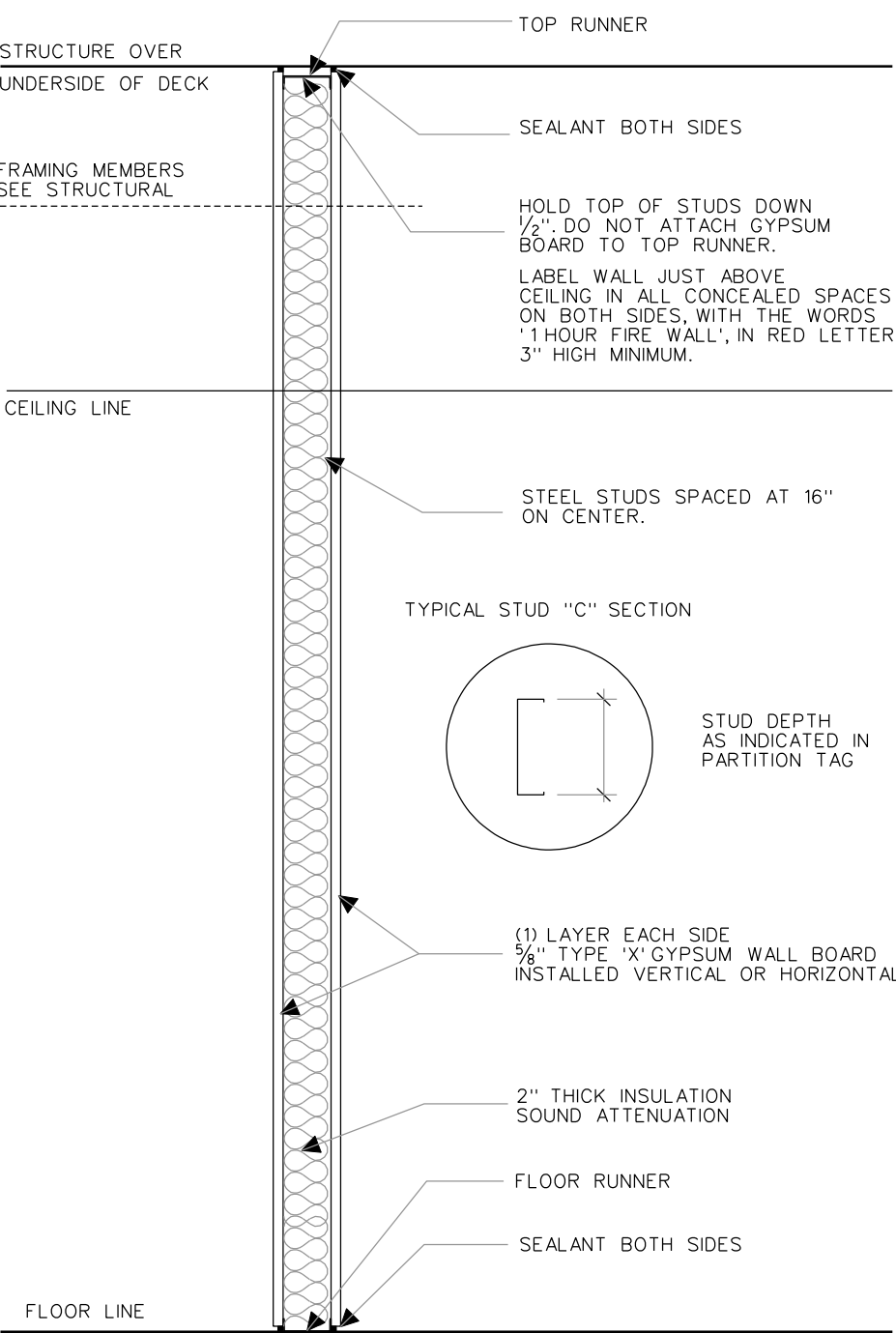
2 DUCT PENETRATION
NOT TO SCALE



System Description

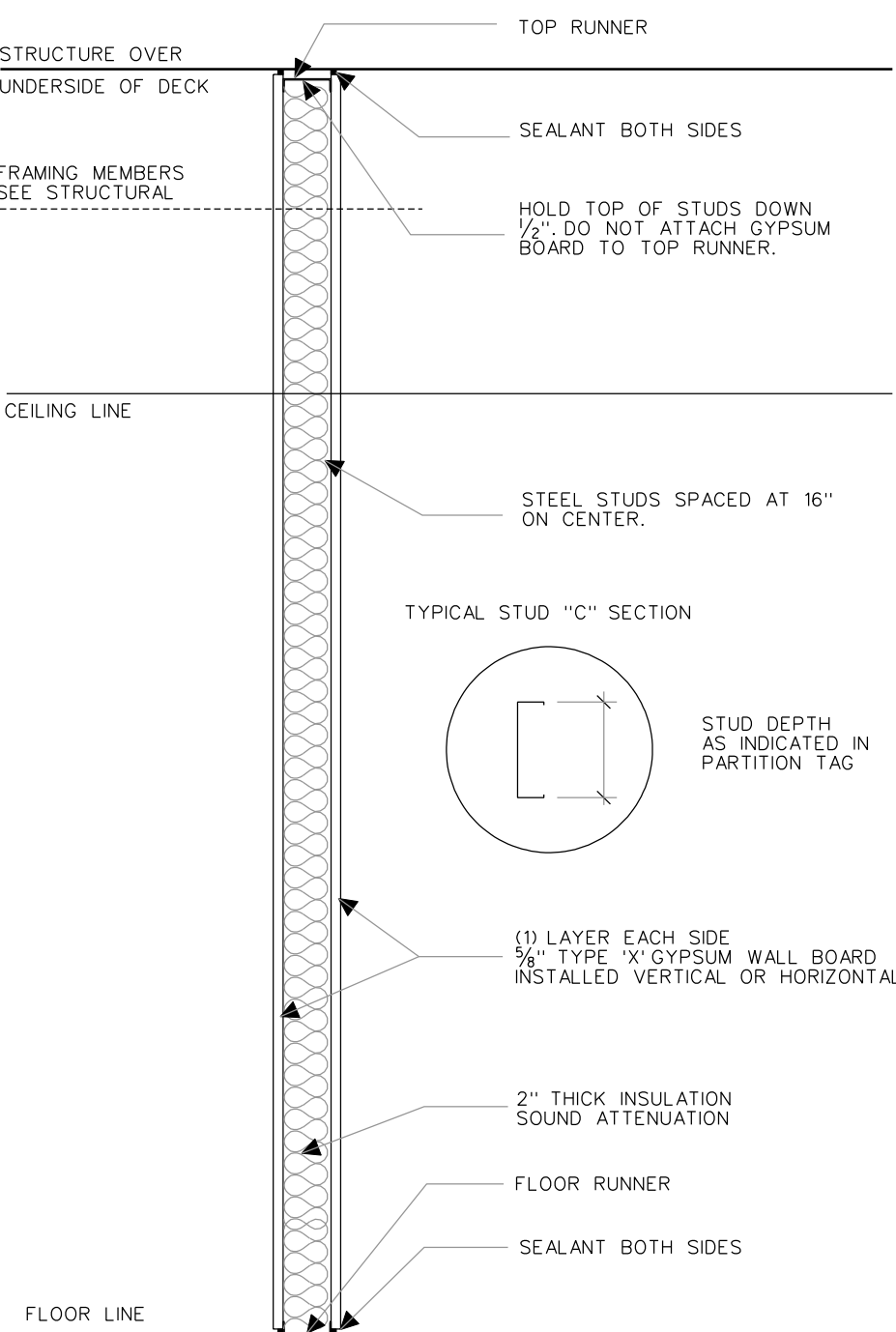
SteelStud Partition (Non-Load Bearing)
Double Layer of 5/8" SHEETROCK Brand Firecode Core Gypsum Panel, IMPERIAL Brand Gypsum Panel, or FIBEROCK Brand Panel
350S162-30 steelstud 16" on center
3" Thermafiber SAFB
5/8"SHEETROCK Brand Firecode Core gypsum panel
1/2"DUROCK Brand Cement Board

3 2-HR PARTITION DETAIL
NOT TO SCALE

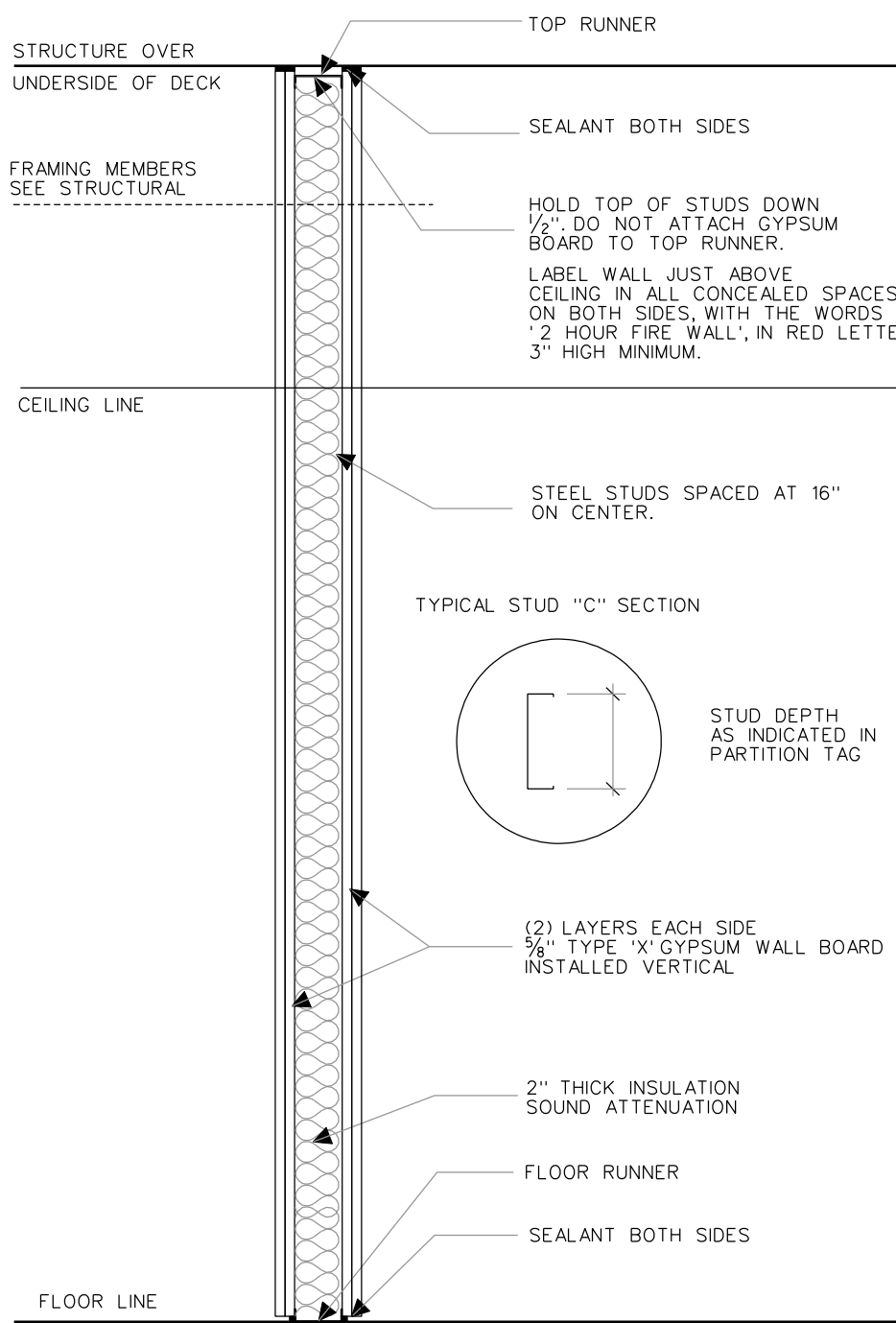


1 HOUR FIRE RATING REQUIRED PER UL DESIGN U465

TYPE A WITHOUT INSULATION
TYPE a INSULATION AS SHOWN

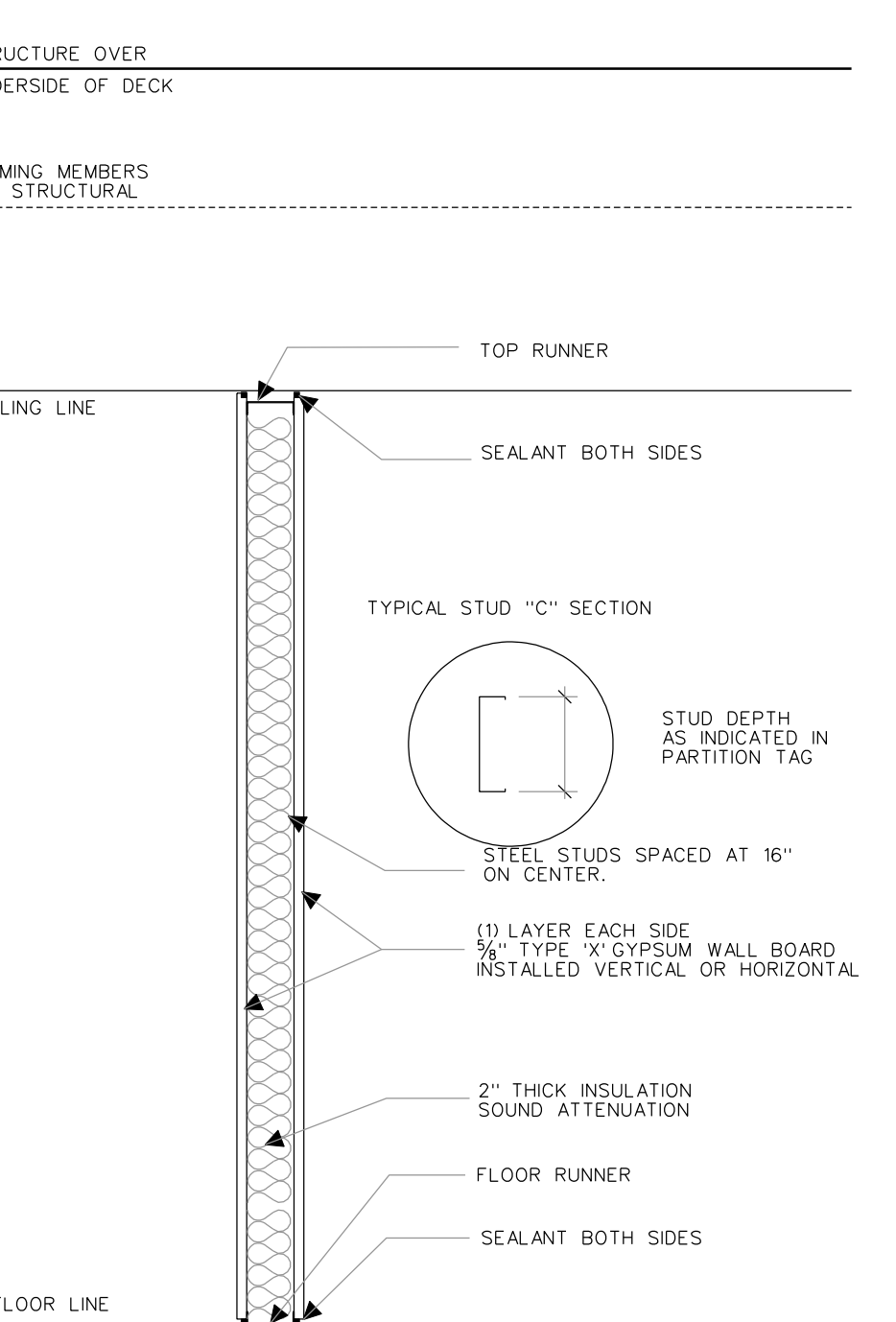


TYPE K WITHOUT INSULATION
TYPE k INSULATION AS SHOWN

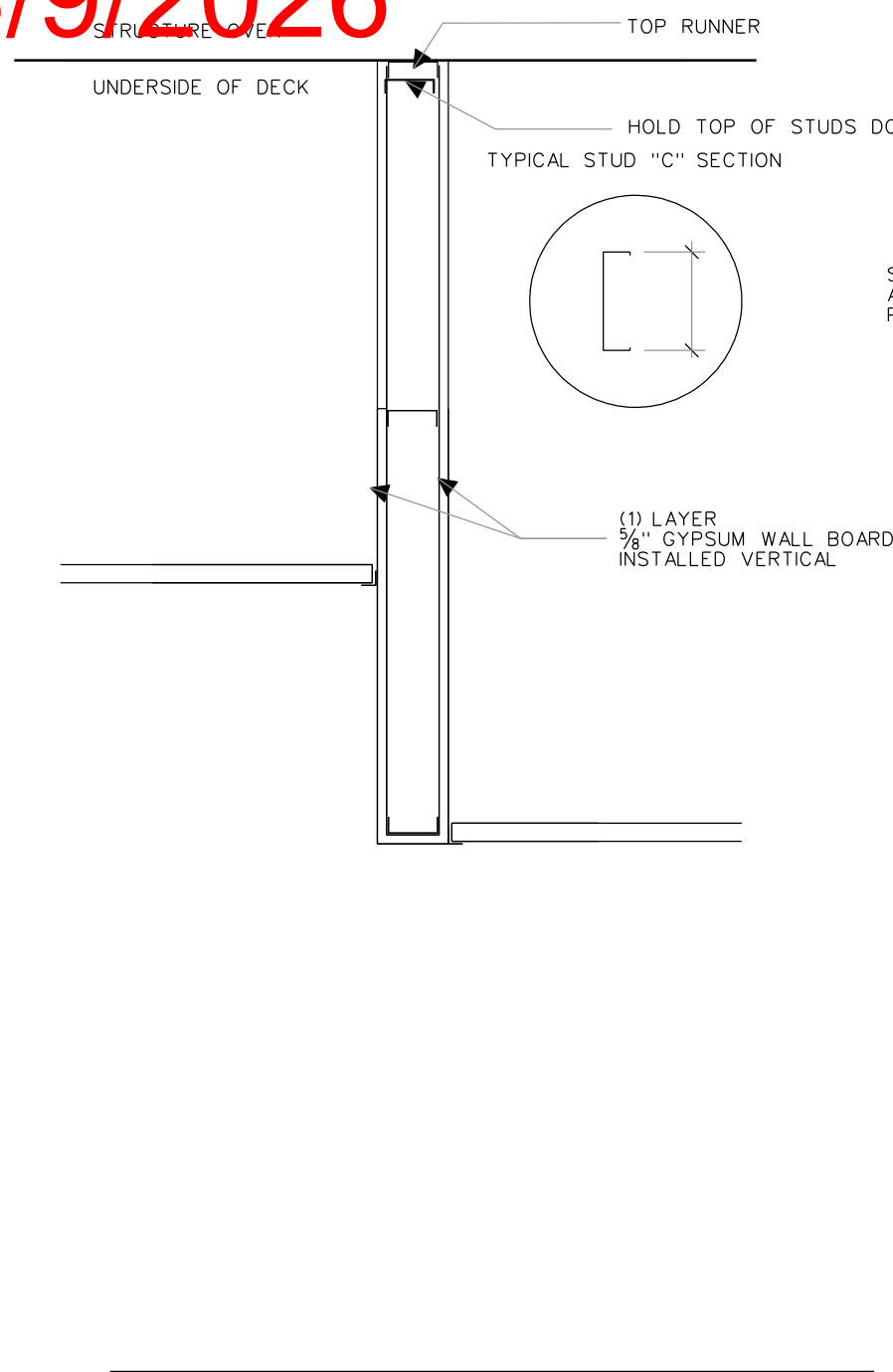


2 HOUR FIRE RATING REQUIRED PER UL DESIGN U411

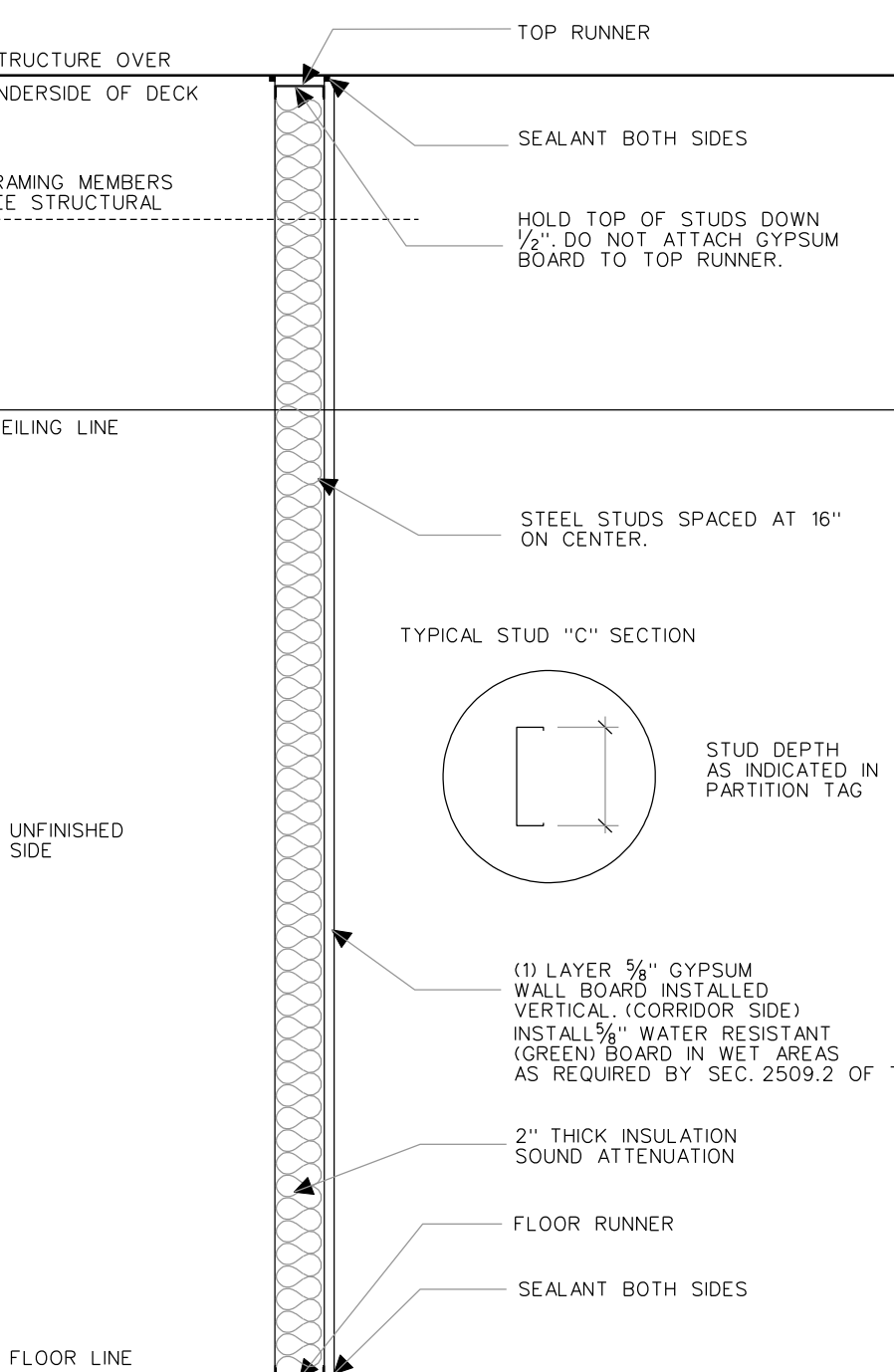
TYPE B WITHOUT INSULATION
TYPE b INSULATION AS SHOWN



TYPE G WITHOUT INSULATION
TYPE g INSULATION AS SHOWN

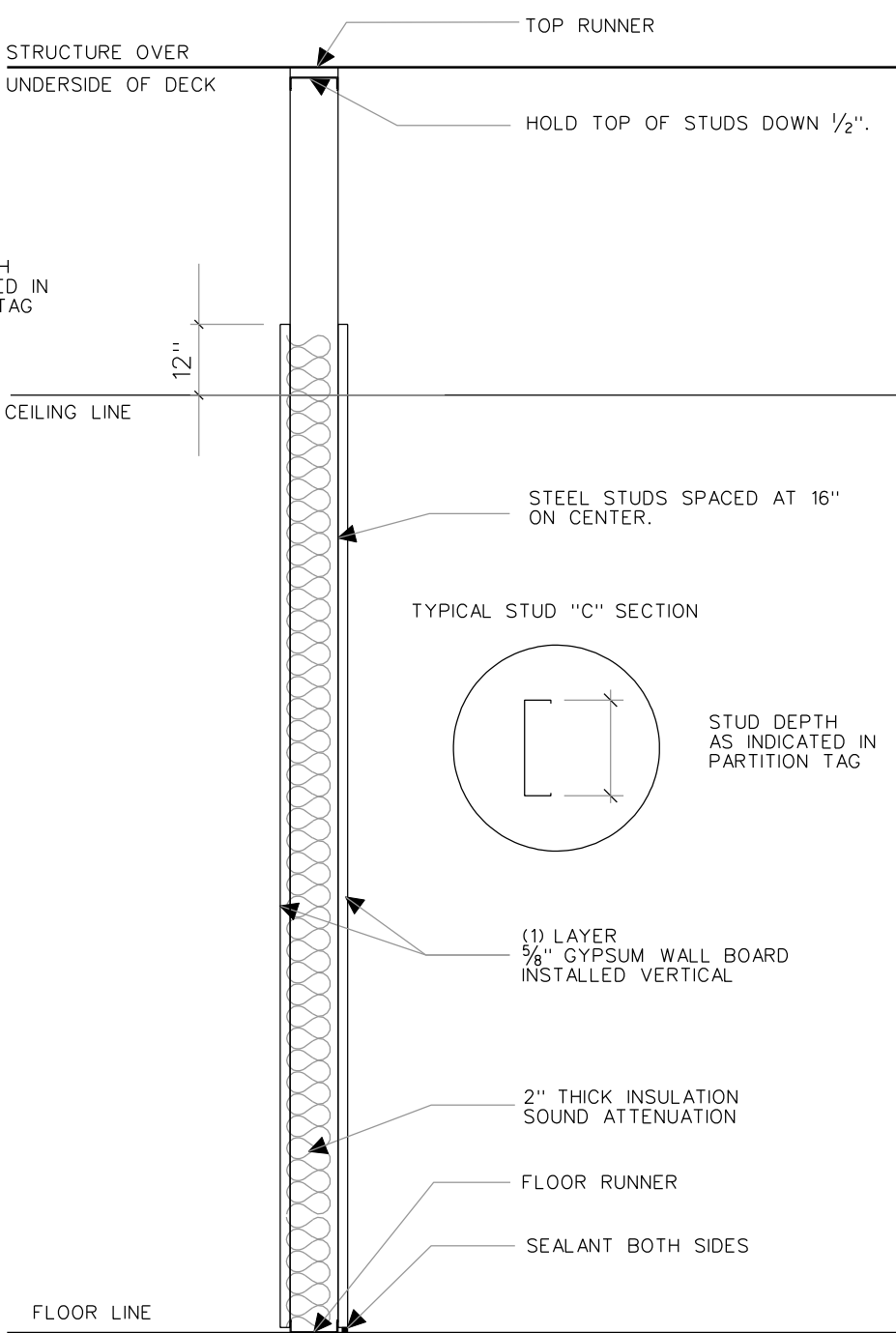


TYPE C FURR DOWN
TYPE c INSULATION AS SHOWN

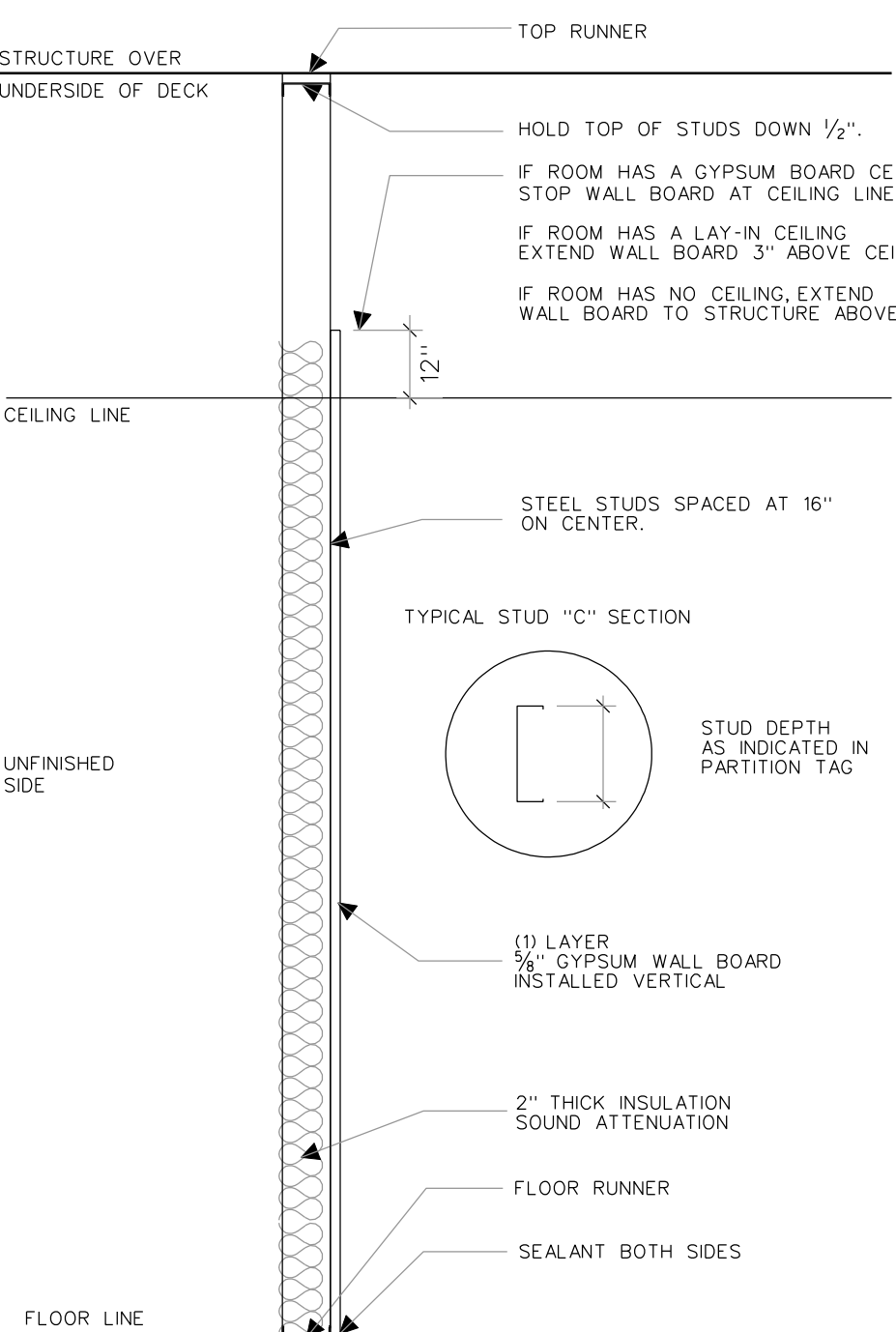


EXTEND GYPSUM BOARD TO STRUCTURE ABOVE

TYPE M WITHOUT INSULATION
TYPE m INSULATION AS SHOWN



TYPE D WITHOUT INSULATION
TYPE d INSULATION AS SHOWN



COORDINATE THE HEIGHT OF GYPSUM WALL BOARD RELATIVE TO THE ROOM CEILING CONDITIONS

TYPE F WITHOUT INSULATION
TYPE f INSULATION AS SHOWN

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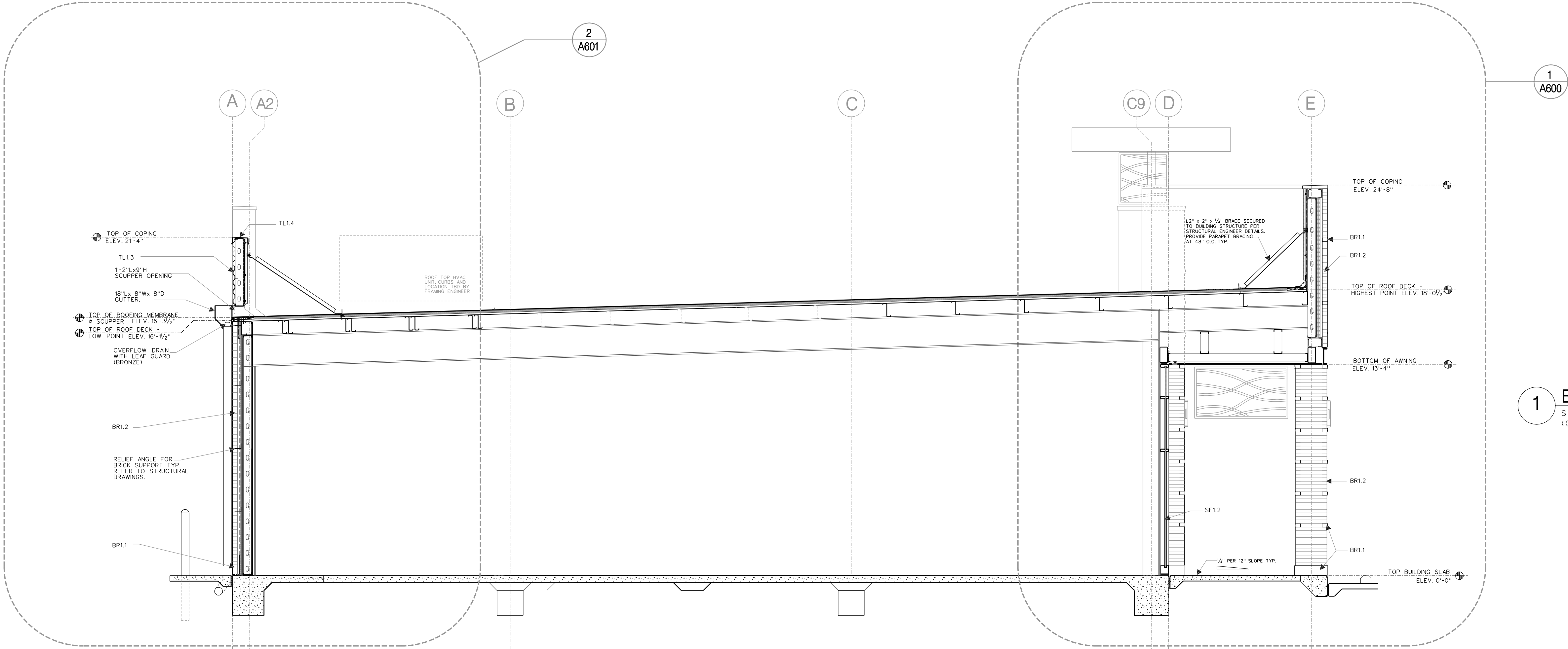
NO.	REVISION DESCRIPTION	DATE	TITLE	
			PARTITION DETAILS	
			CLIENT REVIEW	
			PERMIT REVIEW	02-24-26
			CONSTRUCTION ISSUE	
			CHECKED BY: M.I.B	SHEET: A400
			PROJECT #.	



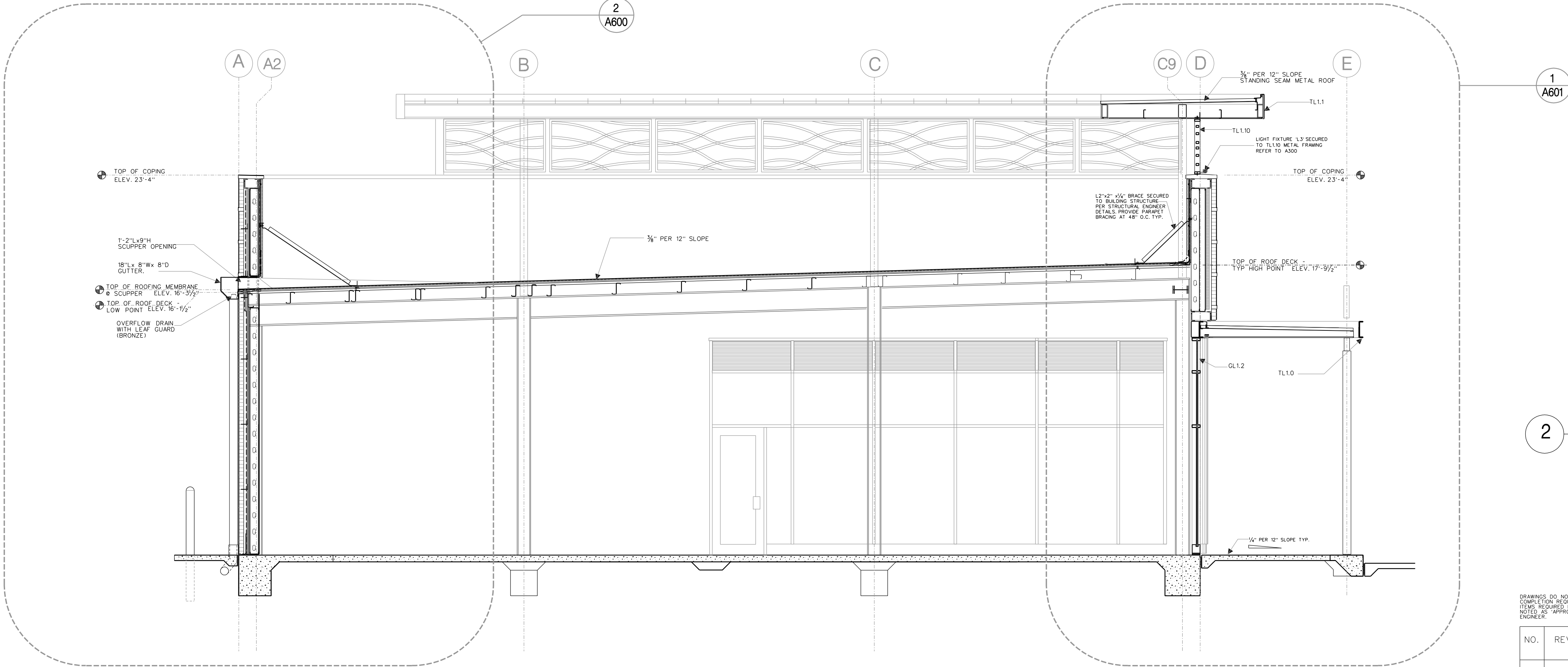
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Phone: 832-858-9633

IMPERIAL ROYAL GARDEN PLAZA

15015 VOSS RD
SUGAR LAND, TEXAS, 77498



1 BUILDING SECTION
SCALE: 1/4" = 1'-0"
(ON 36X24 FORMAT)



2 BUILDING SECTION
SCALE: 1/4" = 1'-0"
(ON 36X24 FORMAT)

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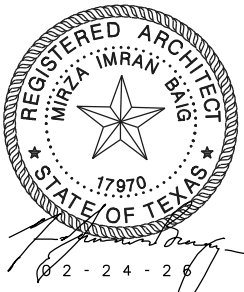
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PLAZA

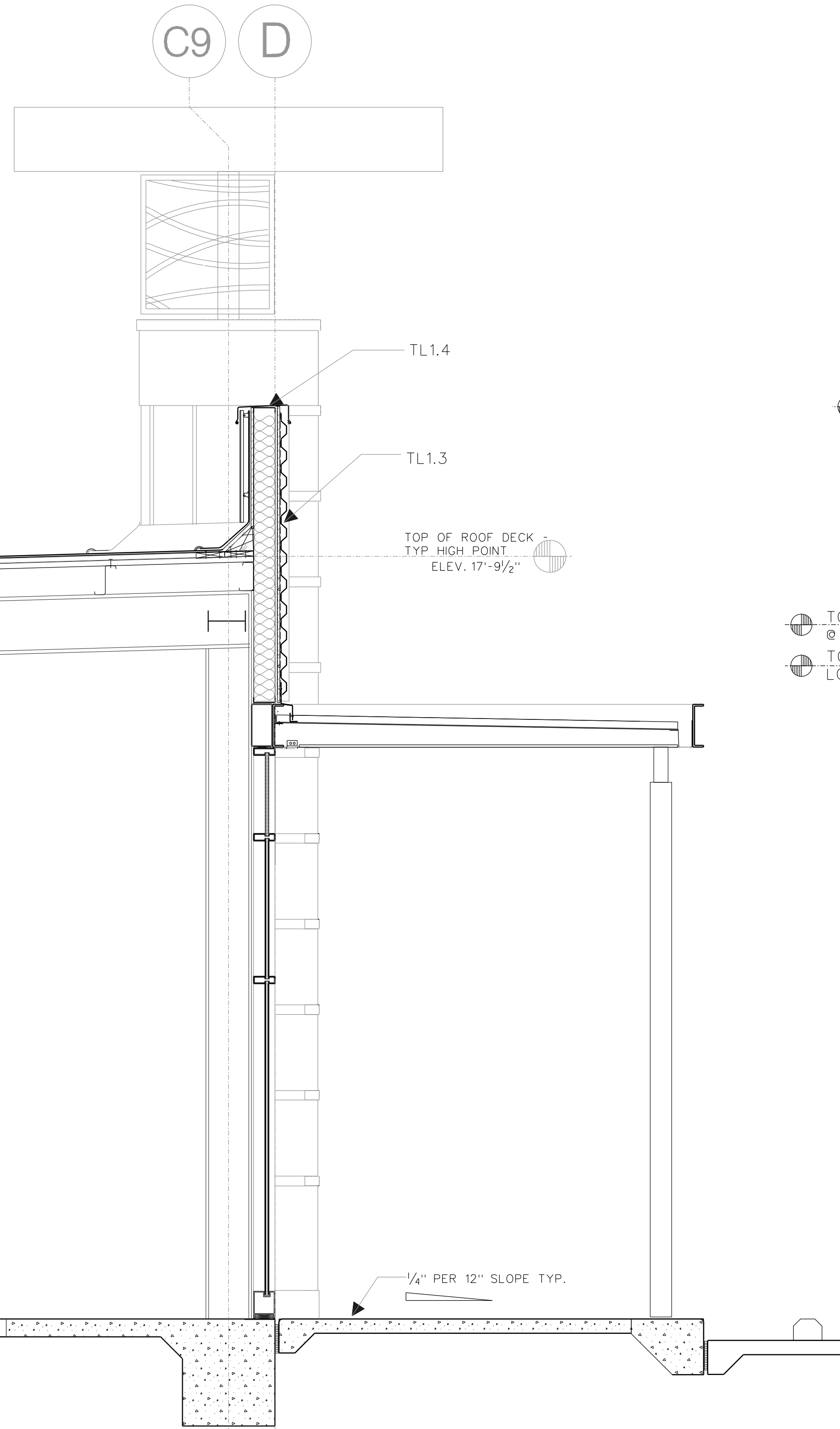
15015 VOSS RD
SUGAR LAND, TEXAS, 77498

DRAWINGS DO NOT NECESSARILY INDICATE OR DESCRIBE ALL WORK REQUIRED FOR FULL PERFORMANCE & COMPLETION OF THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS. THESE DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION UNLESS THEY ARE APPROVED FOR CONSTRUCTION BY HARRIS COUNTY, SIGNED AND SEALED BY THE ARCHITECT OR ENGINEER.

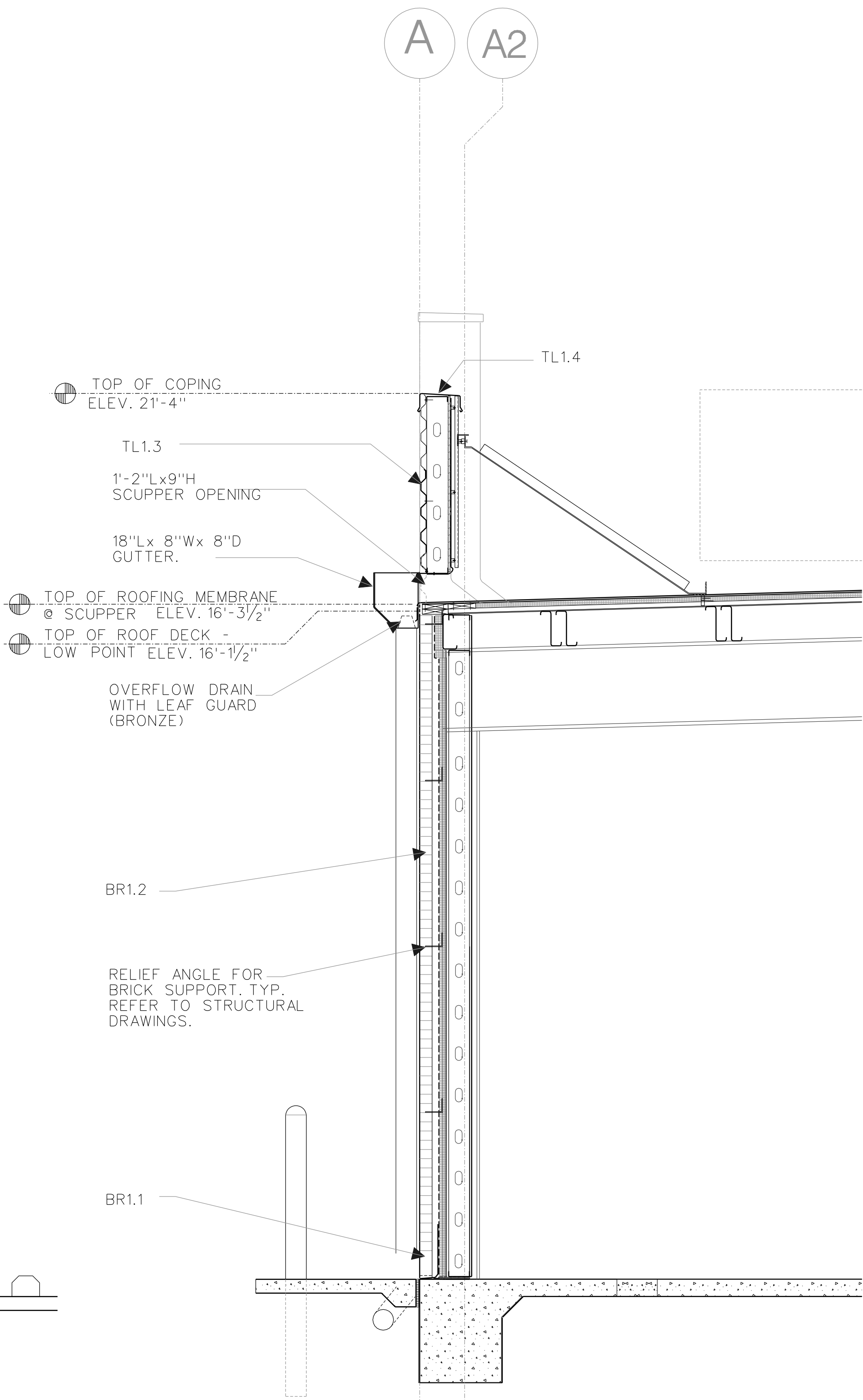
NO.	REVISION DESCRIPTION	DATE



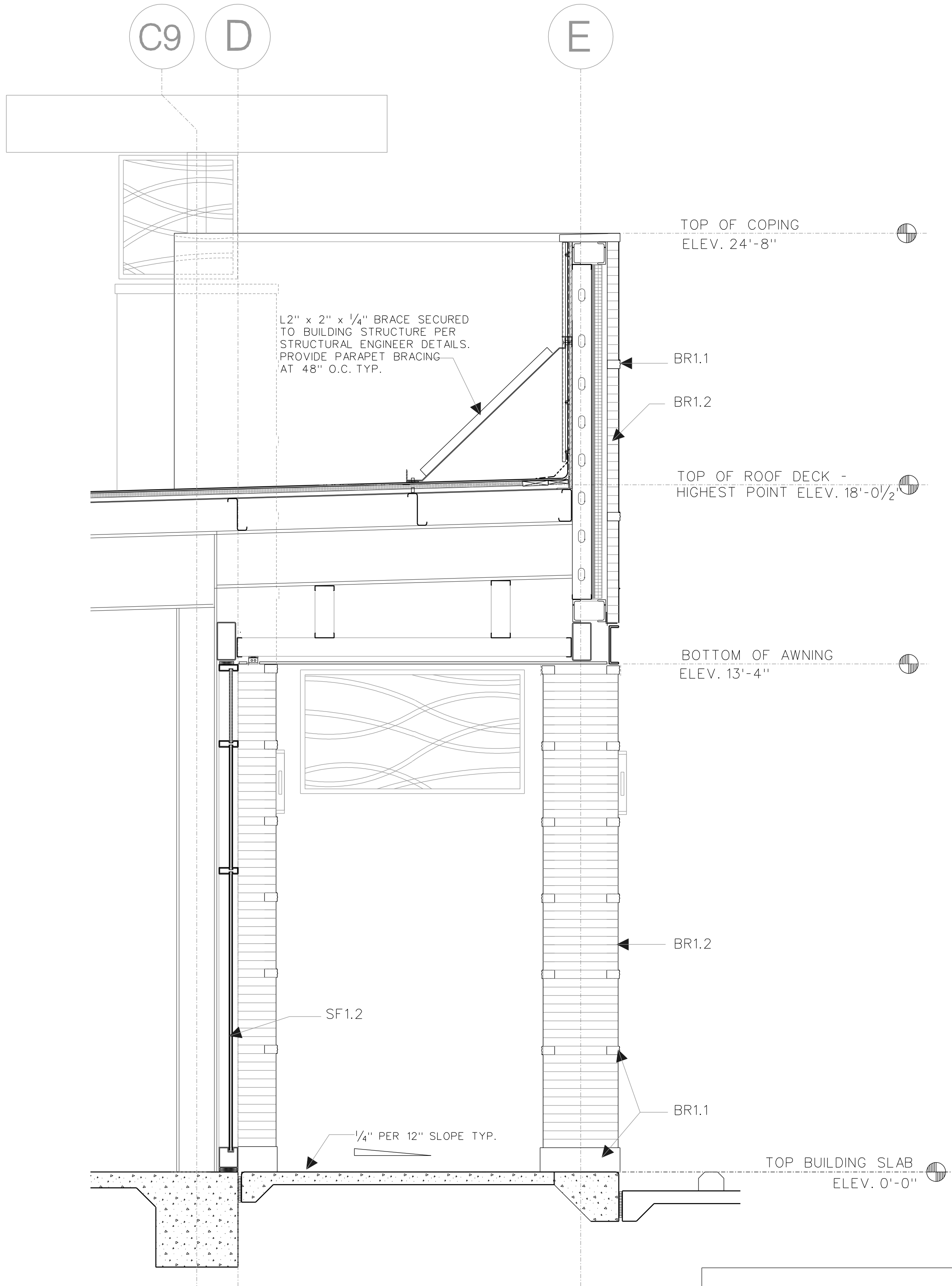
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CLIENT REVIEW	
PERMIT REVIEW 02-24-26	
CONSTRUCTION ISSUE	
CHECKED BY: M.I.B	SHEET: A500
PROJECT *	



3 WALL SECTION
SCALE: 1/2" = 1'-0"
(ON 36X24 FORMAT)



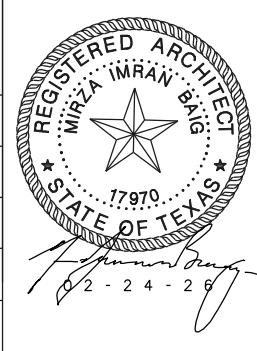
2 WALL SECTION
SCALE: 1/2" = 1'-0"
(ON 36X24 FORMAT)



1 WALL SECTION
SCALE: 1/2" = 1'-0"
(ON 36X24 FORMAT)

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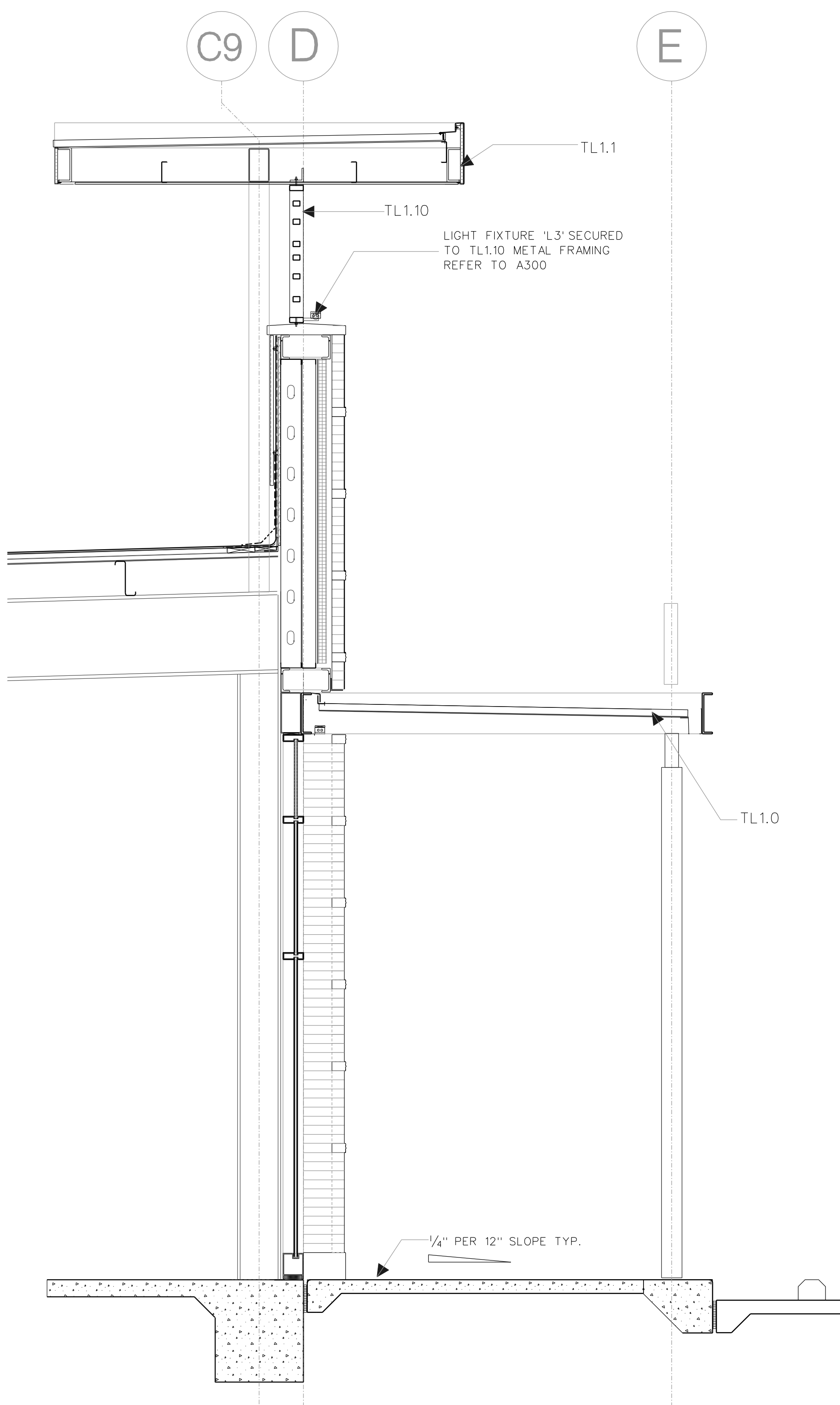
NO.	REVISION	DESCRIPTION	DATE



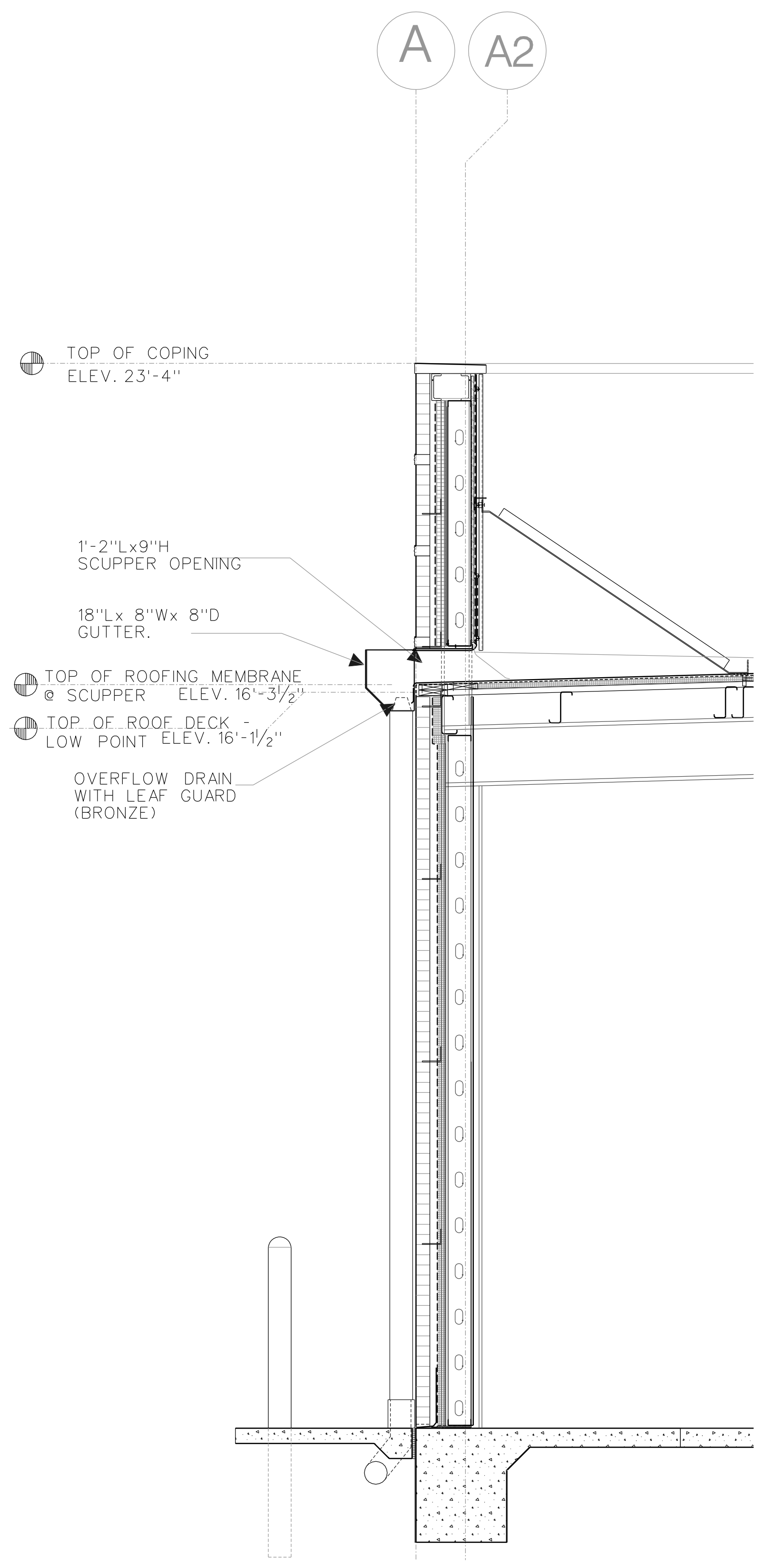
TITLE	
WALL SECTIONS	
CLIENT REVIEW	
PERMIT REVIEW	
CONSTRUCTION ISSUE	
CHECKED BY:	M.I.B.
PROJECT #:	A600

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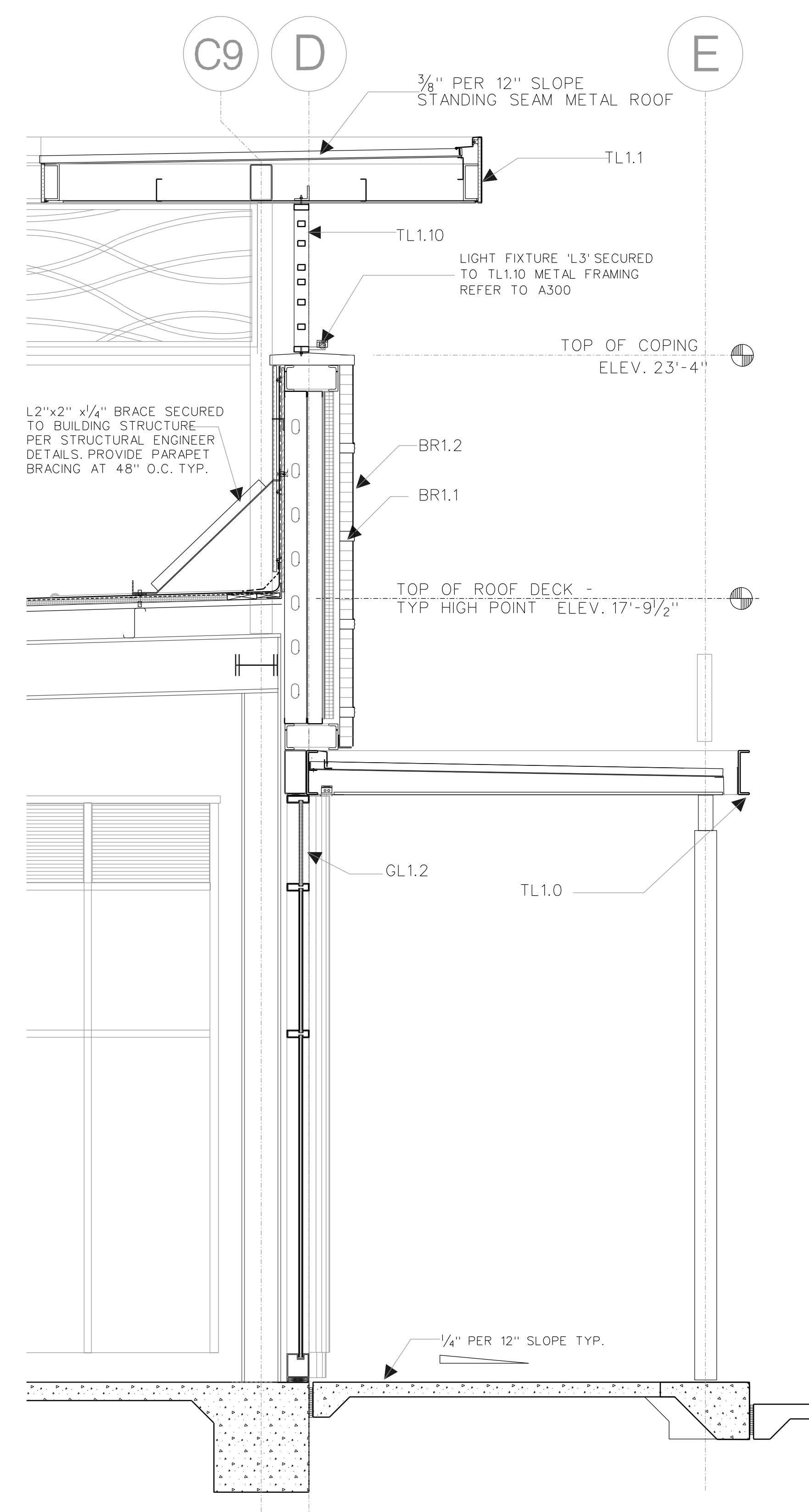
IMPERIAL ROYAL GARDEN
PLAZA
15015 VOSS RD
SUGAR LAND, TEXAS, 77498



3 WALL SECTION
SCALE: 1/2" = 1'-0"
(ON 36X24 FORMAT)



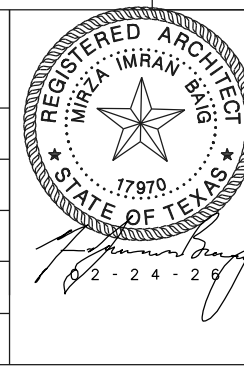
2 WALL SECTION
SCALE: 1/2" = 1'-0"
(ON 36X24 FORMAT)



1 WALL SECTION
SCALE: 1/2" = 1'-0"
(ON 36X24 FORMAT)

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NO.	REVISION	DESCRIPTION	DATE



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IMPERIAL ROYAL GARDEN PLAZA
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TITLE WALL SECTIONS	
CLIENT REVIEW	
PERMIT REVIEW 02-24-26	
CONSTRUCTION ISSUE	
CHECKED BY: M.I.B	SHEET: A601
PROJECT *	

DOORS AND FRAMES GENERAL NOTES

GENERAL NOTES:

DOOR WIDTH IS GIVEN IN INCHES AND APPLIES TO SINGLE DOORS AND BOTH LEAVES OF DOORS IN PAIRS. DOOR PAIRS WITH UNEQUAL LEAVES ARE SHOWN IN THE FORM 2436.

LOCATE DOOR FRAMES WITH THE HINGE JAMB 4" FROM THE CORNER IF THE SPACE, UNLESS SHOWN CENTERED IN THE WALL SPACE OR DIMENSIONED OTHERWISE.

LABELS ARE ASTM CLASSIFICATIONS WITH THE FIRE RATINGS IN MINUTES. FIRE RATINGS OR LABELS REQUIRED FOR DOOR APPLY EQUALLY TO THE FRAME AND HARDWARE.

DETERMINE "PARTITION THICKNESS" FROM THE PARTITION SCHEDULE. ADD ADDITIONAL THICKNESS AS REQUIRED TO ACCOMMODATE LEAD LINING OR OTHER MATERIALS TO BE INCORPORATED IN THE PARTITION. DO NOT INCLUDE FINISHES APPLIED TO THE FACE OF THE PARTITION.

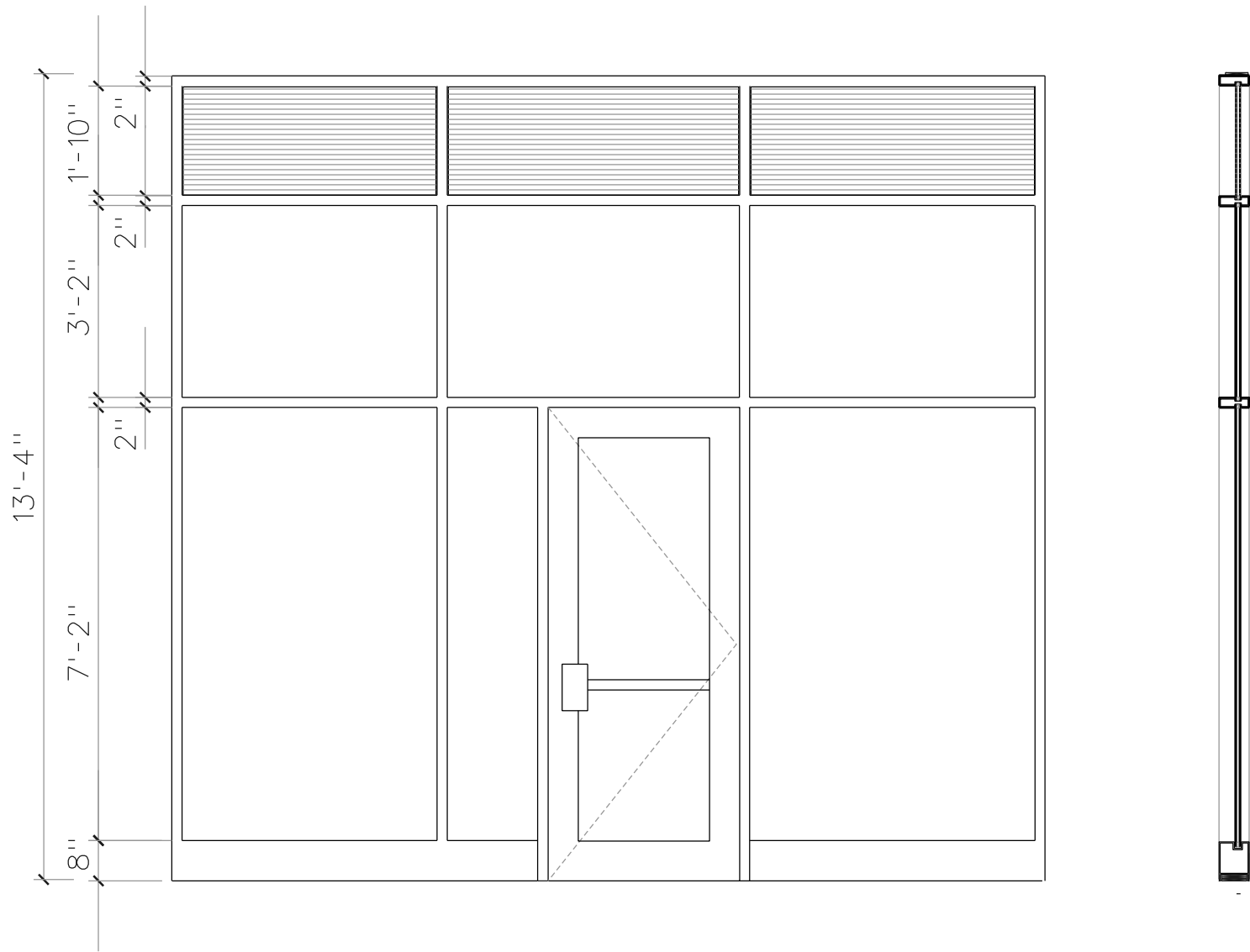
REFER TO DOOR TYPES FOR ABBREVIATIONS USED ON THIS SHEET.

ABBREVIATIONS:

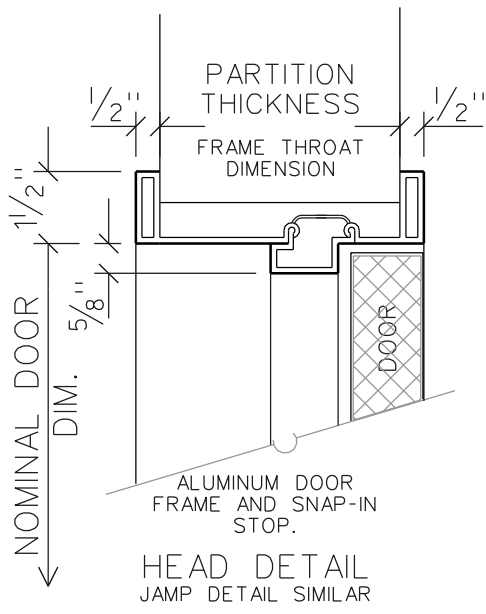
AL =	ALUMINUM	HMG =	HOLLOW METAL GALVANIZED
CO =	CASED OPENING	HC =	HOLLOW CORE
DA =	DOUBLE ACTING	PL =	PLASTIC LAMINATE
DE =	DOUBLE EGRESS	SC =	SOLID CORE
FR =	FIRE RATING, MINUTES	SS =	STAINLESS STEEL
HM =	HOLLOW METAL		

DOOR FRAME TYPE NOTES:

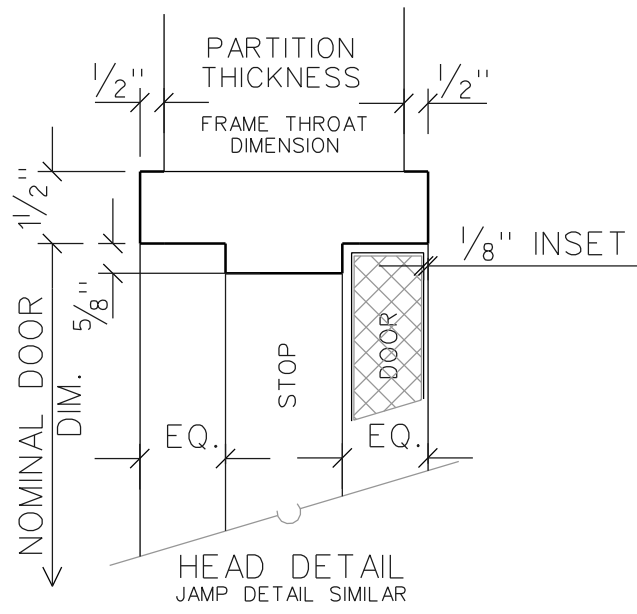
- 01 DIMENSIONS SHOWN ON HM DETAILS AS LETTERS "A", "B" ETC. ARE THE SAME AS CORRESPONDING DIMENSIONS SHOWN ON DOOR FRAME TYPE "A".
- 02 SIZE HM FRAME THROAT DIMENSION $\frac{1}{8}$ " GREATER THAN THE ACTUAL PARTITION THICKNESS. ACTUAL THICKNESS INCLUDES ALL MATERIALS LISTED IN THE PARTITION SCHEDULE PLUS ALL OTHER MATERIALS, E.G. LEAD LINING, THAT ARE TO BE BUILT INTO THE PARTITION. SEE PARTITION SCHEDULE.
- 03 ALUMINUM FRAMES ARE SHOWN AS A PROFILE WITH MINMUM DETAIL TO CONVEY DESIGN INTENT. FRAMES SHALL BE MADE FROM NATURAL ALUMINUM EXTRUSIONS DESIGNED AND DETAILED AS IS REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONAL FRAME.



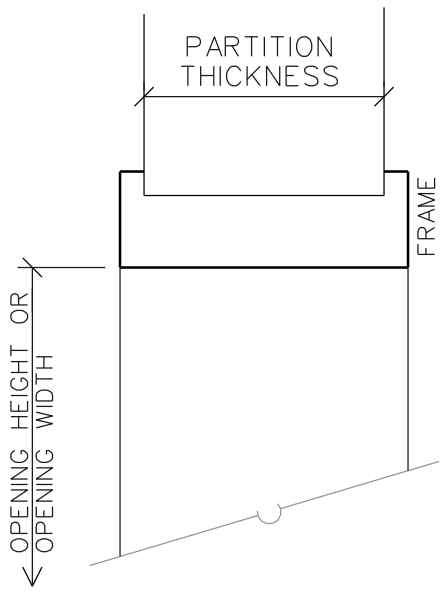
TYPICAL STORE FRONT ELEVATION



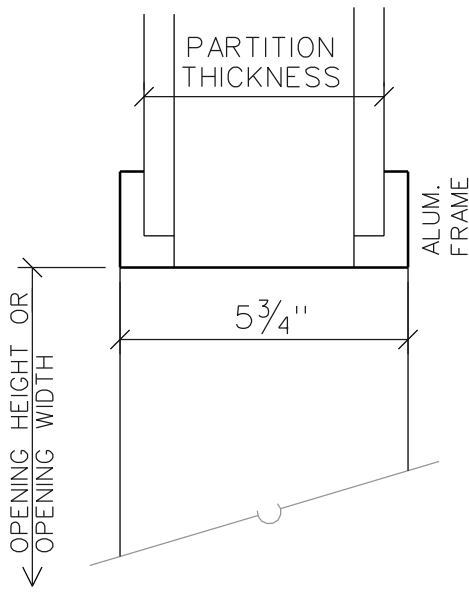
A TYPICAL PREFINISHED ALUM. DOOR FRAME



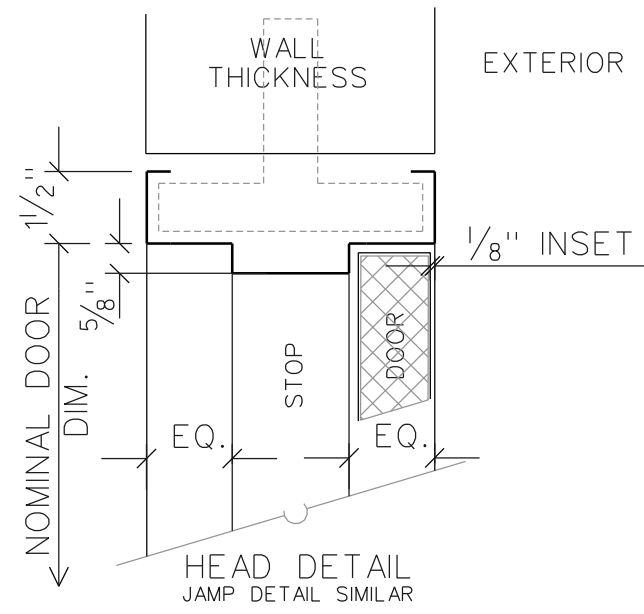
B TYPICAL INTERIOR DOOR FRAME



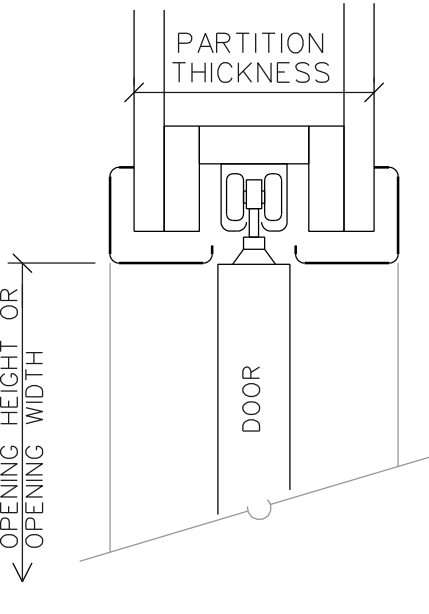
C HOLLOW METAL INTERIOR CASED OPENING



D ALUMINUM INTERIOR CASED OPENING

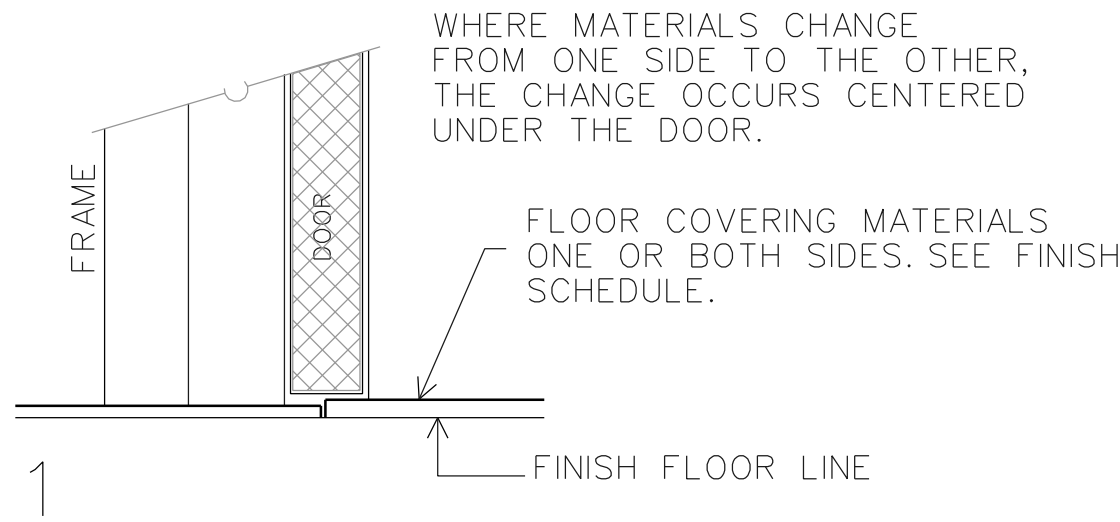


E TYPICAL EXTERIOR DOOR FRAME

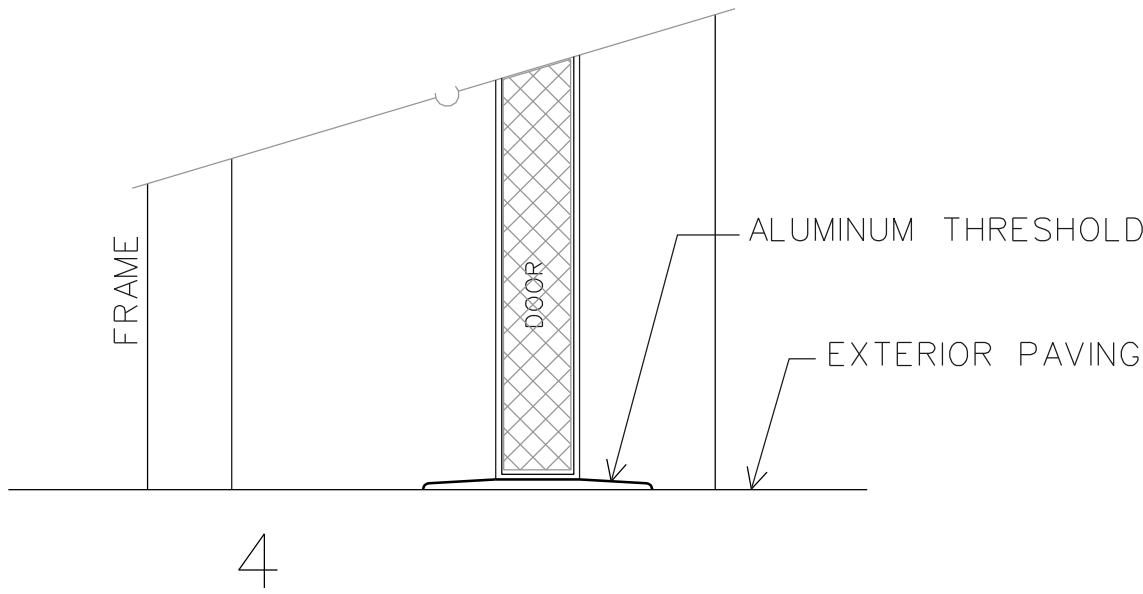
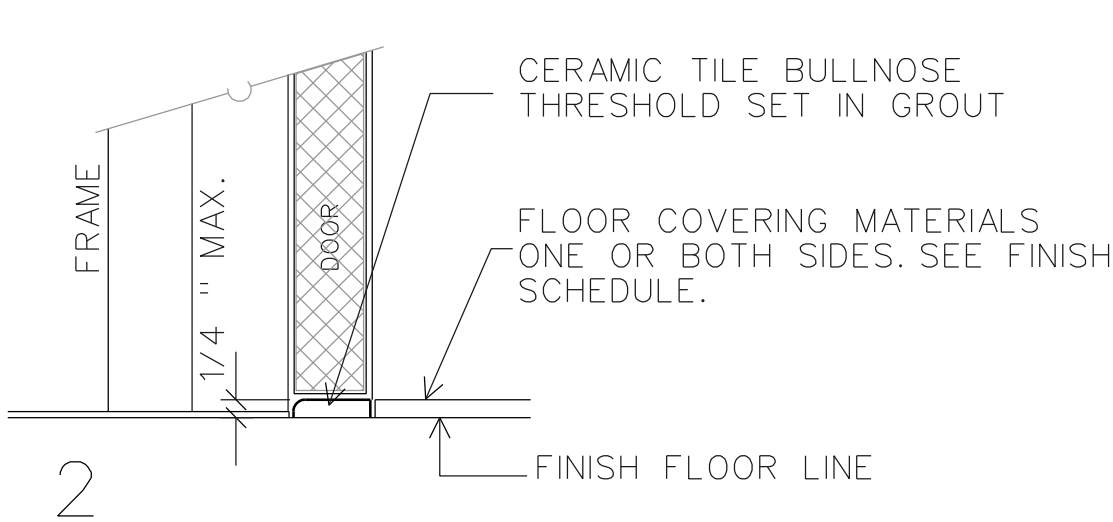


F POCKET DOOR HEADER

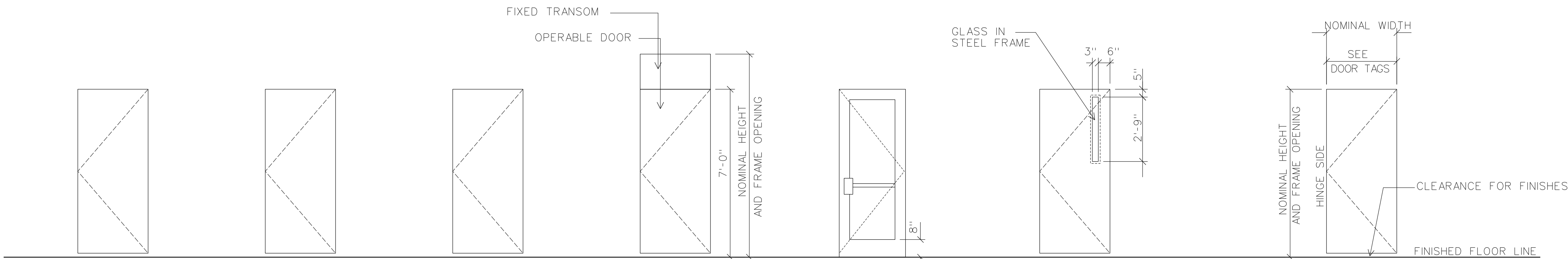
DOOR FRAME TYPES



DOOR SILL TYPES



4



A

B

C

D

E

F

A1 SC PL VENEER BOTH SIDES RATED 20 MIN.

B1 HOLLOW METAL

C1 HOLLOW METAL GALVANIZED

D1 SC PL VENEER BOTH SIDES 1 1/2 HR. 'B' LABEL

E1 NARROW STILE ALUM. AND GLASS DOOR

F1 SC WOOD, PL CLAD 1/4" TEMPERED GLASS

F2 SC WOOD, PL CLAD 1/2 HR, FR, 'B' LABEL 1/4" WIRE GLASS

DOOR TYPE NOTES. TYPICAL UNLESS NOTED OTHERWISE

DOOR TYPES

A2 SC PL VENEER BOTH SIDES 1 1/2 HR. 'B' LABEL

C2 HOLLOW METAL GALVANIZED 1 1/2 HR. 'B' LABEL

C3 HOLLOW METAL GALVANIZED 45 MINUTES RATED



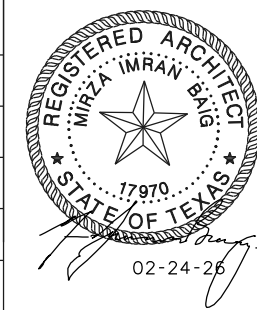
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Phone: 832-858-9533

IMPERIAL ROYAL GARDEN PLAZA

15015 VOSS RD
SUGAR LAND, TEXAS, 77498

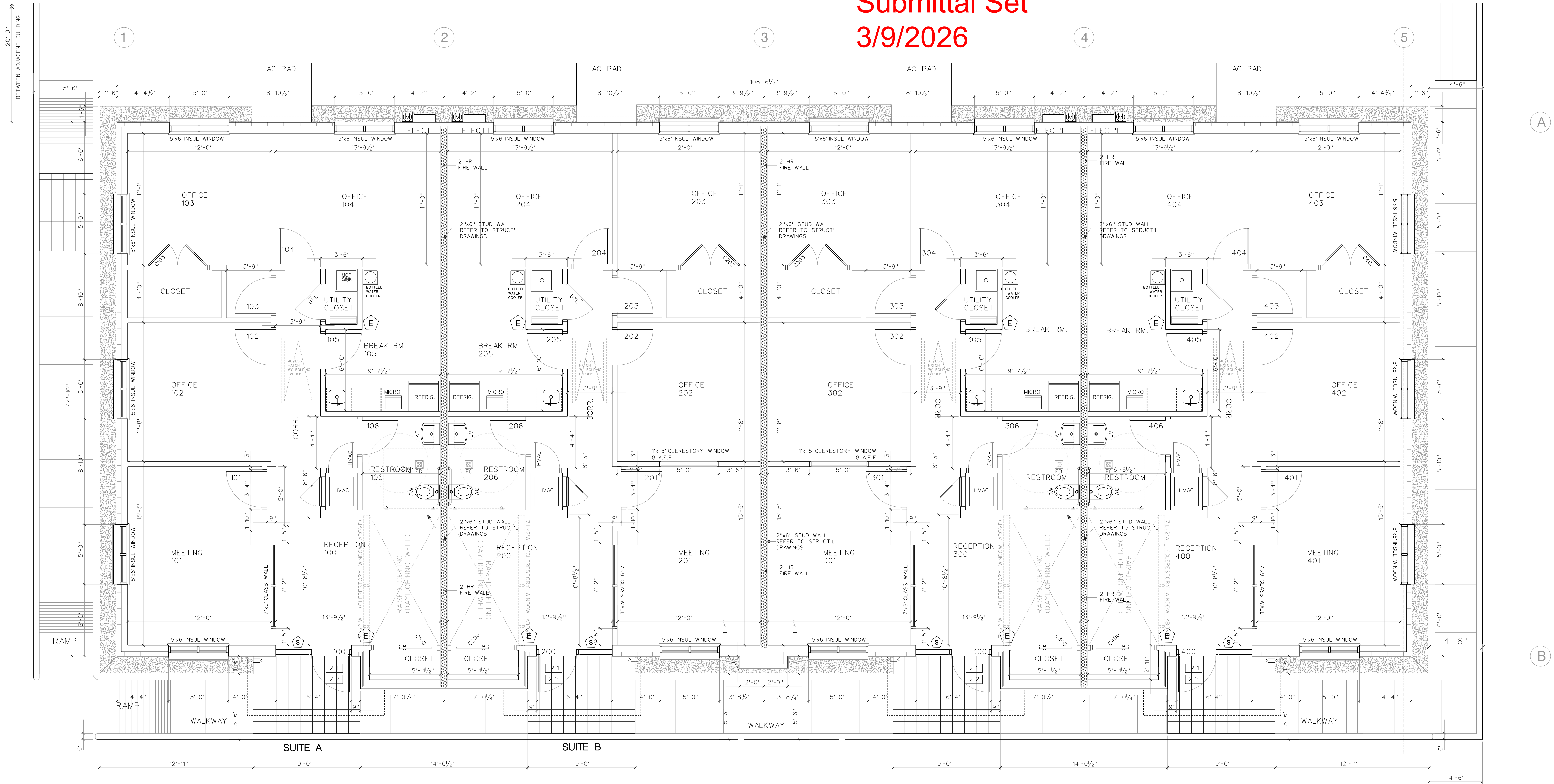
DRAWINGS DO NOT NECESSARILY INDICATE OR DESCRIBE ALL WORK REQUIRED FOR FULL PERFORMANCE & COMPLETION. REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS THE CONTRACTOR SHALL FURNISH ALL ITEMS REQUIRED FOR THE PROJECT. THESE DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION UNLESS NOTED AS APPROVED FOR CONSTRUCTION BY HARRIS COUNTY, SIGNED AND SEALED BY THE ARCHITECT OR ENGINEER.

NO.	REVISION DESCRIPTION	DATE



TITLE DOOR AND WINDOW DETAILS	
CLIENT REVIEW	
PERMIT REVIEW	02-24-26
CONSTRUCTION ISSUE	
CHECKED BY: M.I.B	SHEET: A700
PROJECT *	

Submittal Set
3/9/2026



NOTES AND SYMBOLS FOR FIRECODE REVIEW

- 2.1 PROVIDE LOCKING DEVICE THAT IS READILY DISTINGUISHABLE AS LOCKED.
- 2.2 PROVIDE SIGN, POSTED ON EGRESS SIDE OR ON ADJACENT TO THE DOOR STATING: 'THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED'. THIS SIGN SHALL BE IN LETTERS ONE INCH HIGH ON A CONTRASTING BACKGROUND.
- E FIRE EXTINGUISHER
- S TEMPERED (EXTERIOR GLAZING) 1" THICK INSULATED, IN CLEAR ANODIZED 6" WIDE ALUMINUM STOREFRONT Transmittance Visible Light 70% Solar Energy 34% U-Value <1 Reflectance Visible Light-Exterior 8% Visible Light-Interior 9% Solar Energy 9% NFRC U-Value Winter 0.97 Btu/(hr x sqft x °F) Summer 0.88 Btu/(hr x sqft x °F) European U-Value 5.4 Shading Coefficient 0.6 Relative Heat Gain 133 Btu/(hr x sqft) Solar Factor (SHGC) 0.52 LSG 1.34

- TRAVEL PATH/DISTANCE TO EXIT. (SEE FIRE CODE SHEET)
- EXIT LIGHT 10.4W, 120V, AC, 6V DC WITH 90 MINUTE BATTERY BACK-UP SURE-LITES CCX-70-RWSD OR APPROVED EQUAL

- PROVIDE INSULATION IN ALL PARTITIONS: EXTERIOR AND INTERIOR.
- IN ALL SPACES WITHOUT CEILING AND OPEN TO UNDERSIDE OF THE ROOF DECK, CONTINUE GYPSUM BOARD TO THE UNDERSIDE OF THE ROOF DECK. FIRE STOP ALL JOINTS AND PENETRATIONS PER MANUFACTURER'S RECOMMENDATION AND SPECIFIC UL RATING REQUIREMENTS.
- CONTRACTOR TO PROVIDE TYPE 2A FIRE EXTINGUISHER AT ALL TIMES.
- CONTRACTOR TO VERIFY FIELD CONDITIONS PRIOR TO COMMENCEMENT OF ANY WORK.
- CONTRACTOR TO PROVIDE FIRE RATED BLOCKING IN ALL PARTITIONS THAT HAVE EQUIPMENT FASTENED TO THE STUDS.
- ALL DOORS MUST HAVE A LANDING ON BOTH SIDES AT THE SAME ELEVATION. EXTERIOR DOOR LANDINGS MAY HAVE A SLOPE OF 1/4"=12" MAX. TYP. LANDINGS SHALL HAVE A LENGTH MEASURED IN THE DIRECTION OF TRAVEL OF NOT LESS THAN 44 INCHES PER SECTIONS 1008.1.4 & 1008.1.6, 2012 IBC. THERE SHALL BE A FLOOR OR LANDING ON EACH SIDE OF A DOOR WITH THE SAME ELEVATION ON BOTH SIDES AND THRESHOLDS SHALL NOT EXCEED 1/2" IN HEIGHT.

ALL INTERIOR WALLS ARE 2"x4" STUDS UNLESS NOTED OTHERWISE. (REFERR TO STRUCTURAL DRAWINGS FOR FURTHER DETAILS).

15019 VOSS OFFICE CONDOMINIUM 4500 SF BUILDING

15021 VOSS OFFICE CONDOMINIUM (MIRRORED ALONG COL. LINE '3') 4500 SF BUILDING

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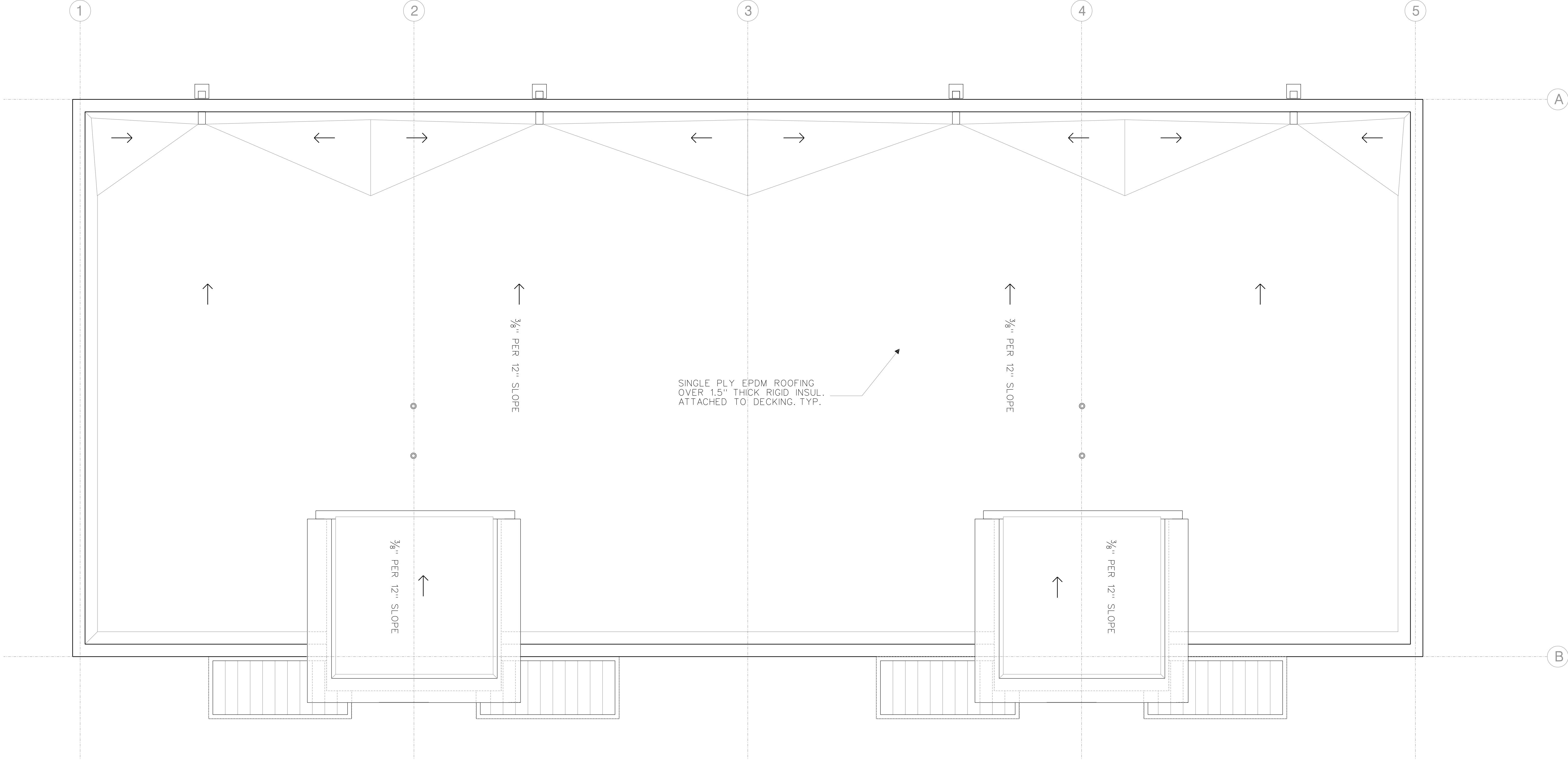
Email: imran@ibadesignpllc.com
Phone: 832-858-9533

IMPERIAL ROYAL GARDEN PLAZA

15019-15021 VOSS RD
SUGAR LAND, TEXAS, 77498



TITLE	OFFICE FLOOR PLAN
CLIENT REVIEW	
PERMIT REVIEW	02-24-26
CONSTRUCTION ISSUE	
CHECKED BY: M.I.B	SHEET: A100-OF C
PROJECT *	



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NO.	REVISION	DESCRIPTION	DATE





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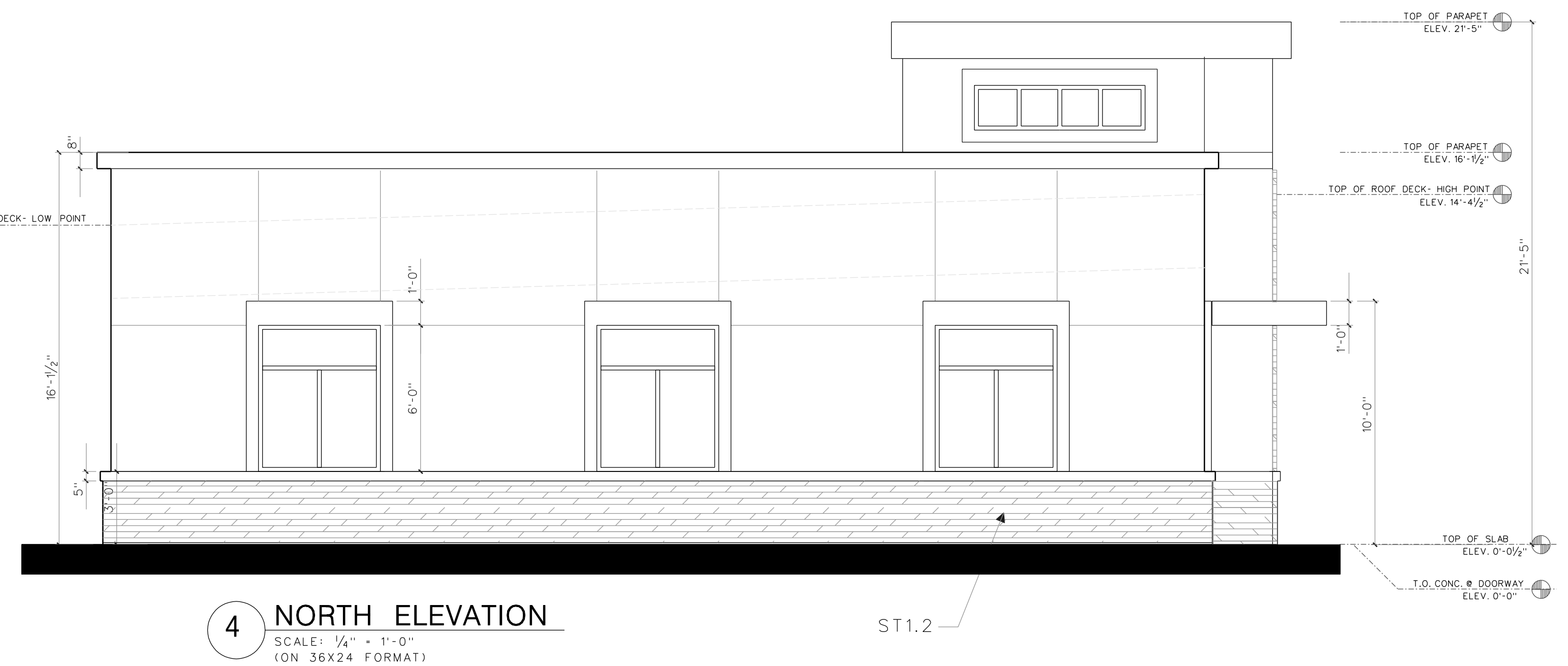
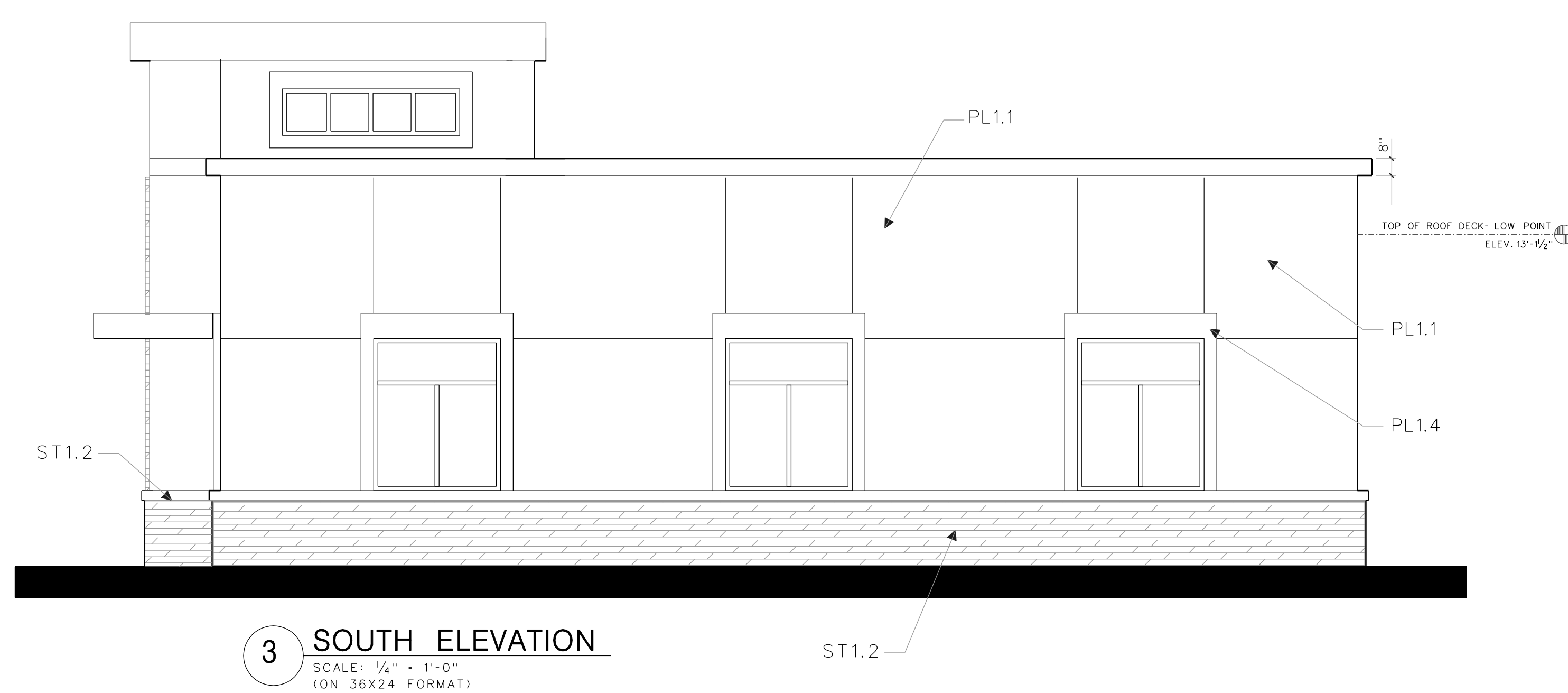
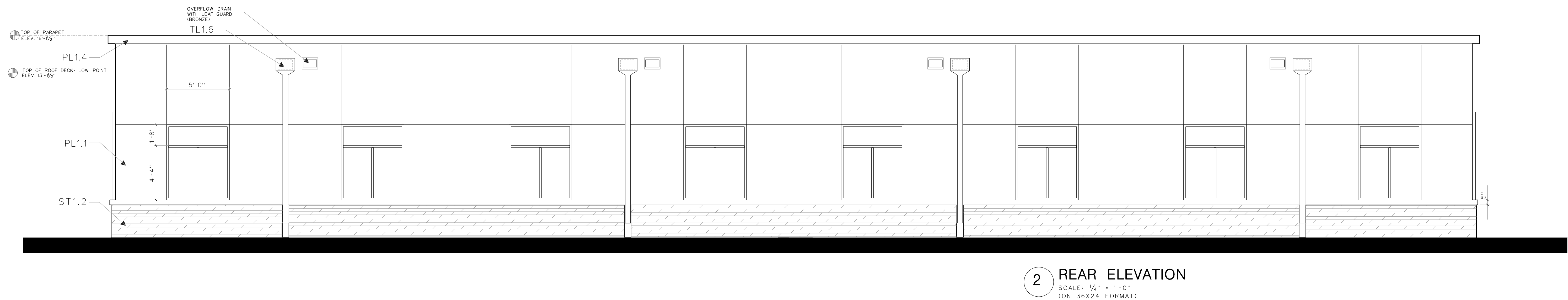
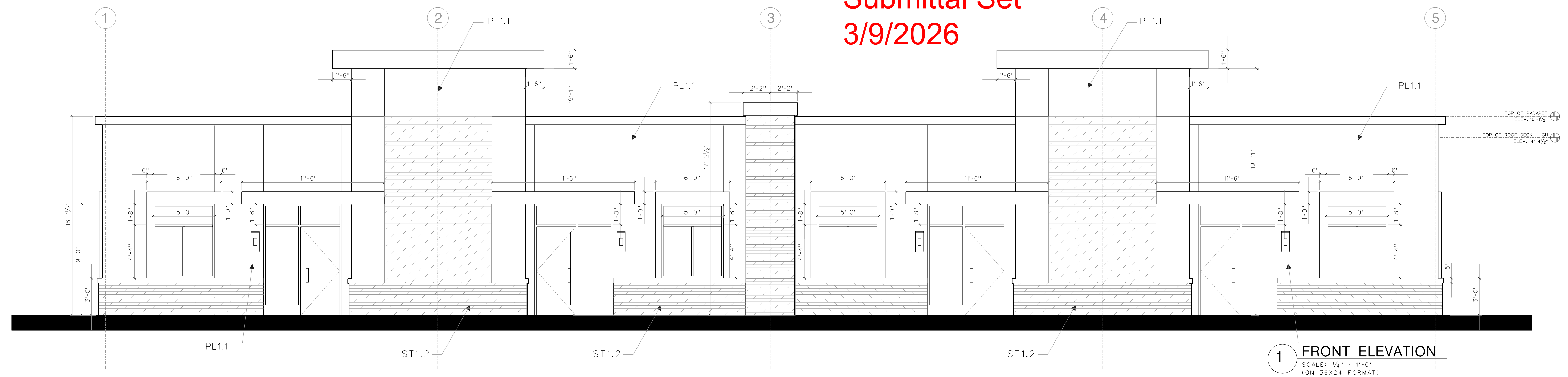
Email: imran@ibadesignpllc.com
Phone: 832-858-9533

IMPERIAL ROYAL GARDEN PLAZA

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SUGAR LAND, TEXAS, 77498

TITLE OFFICE ROOF PLAN	
CLIENT REVIEW	
PERMIT REVIEW 02-24-26	
CONSTRUCTION ISSUE	
CHECKED BY: M.I.B	SHEET: A102-OF-C
PROJECT *	

Submittal Set
3/9/2026



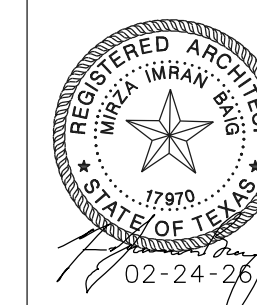
REFER TO A200 FOR KEYED ASSEMBLIES.

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IMPERIAL ROYAL GARDEN
PLAZA
15019-15021 VOSS RD
SUGAR LAND, TEXAS, 77498

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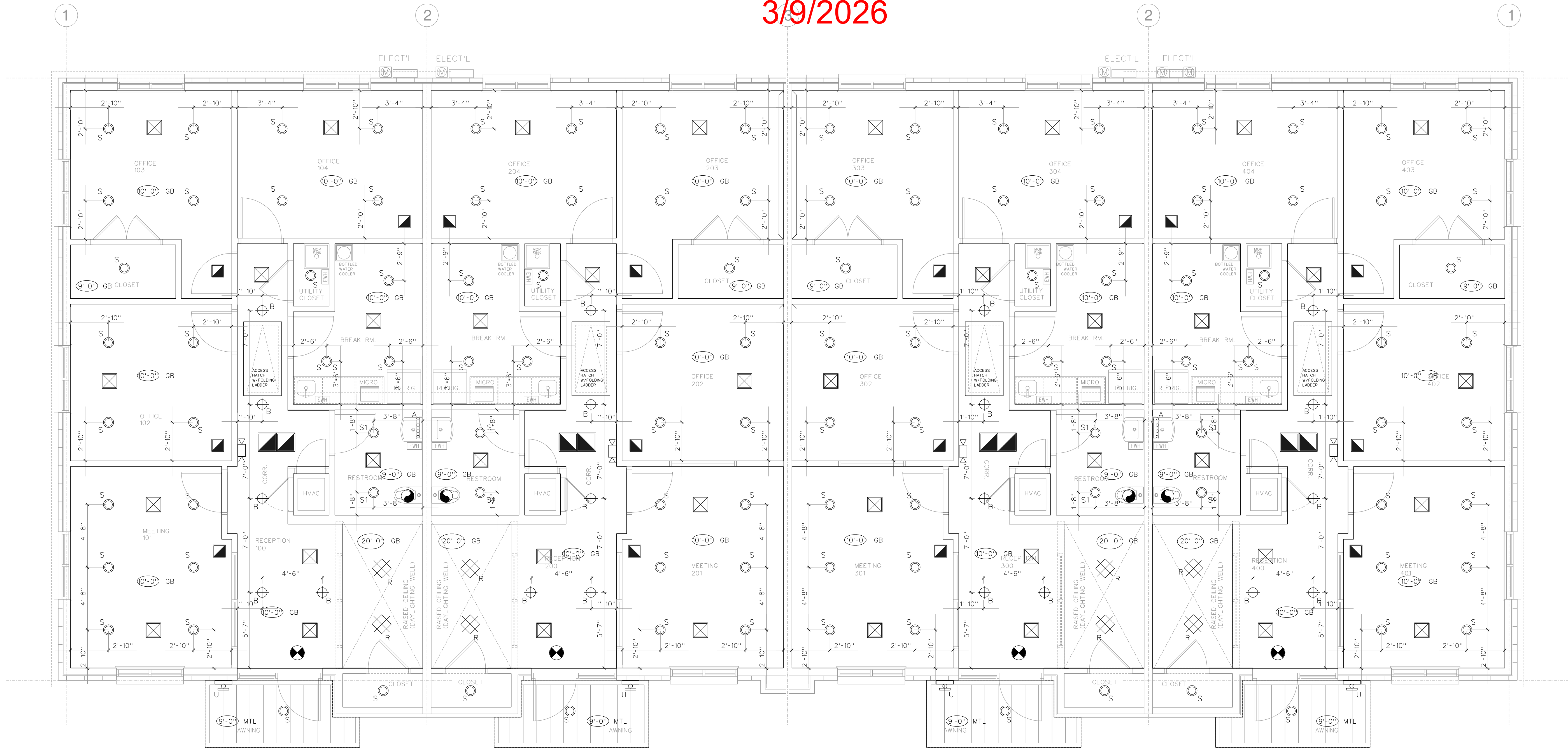
NO.		CHECKED BY: M.I.B
		PROJECT :

TITLE
OFFICE BUILDING ELEVATIONS

CLIENT REVIEW	
PERMIT REVIEW	02-24-26

CONSTRUCTION ISSUE

PROJECT #.	A200-0FC
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15019 VOSS OFFICE CONDOMINIUM 4500 SF BUILDING

15021 VOSS OFFICE CONDOMINIUM (MIRRORED ALONG COL. LINE '3') 4500 SF BUILDING

LEGEND

DESIGNATION	SYMBOL	DESCRIPTION	
		STANDARD SMOKE DETECTOR	
		GAS OUTLET W/ SHUT OFF VALVE.	
		STANDARD LIGHT SWITCH	
		THREE WAY LIGHT SWITCH	
		ELECTRIC PAPER TOWEL DISPENSER.	
		CABLE TELEVISION OUTLET	
		110 VOLT DUPLEX OUTLET.	
		110 VOLT DUPLEX OUTLET WITH GROUND FAULT INTERRUPTER	
		220 VOLT DUPLEX OUTLET	
		120 VOLT INSTANTANEOUS ELECTRIC WATER HEATER (UNDER SINK MOUNT)	
A		LED LIGHT SURROUND VANITY MIRROR	
B		DECORATIVE CEILING LIGHT FIXTURE.	
C		1X4 LED PANEL (WET LOCATION)	3500 LUMENS
D		RECESSED WALL WASHER LIGHT	
E		2 X 2 LED PANEL W/ 90 MINUTE EMERGENCY BACKUP BALLAST	3500 LUMENS
F		2' X 2' LED FIXTURE	

DESIGNATION	SYMBOL	DESCRIPTION
L2		LED EXTERIOR COVE UPLIGHTING
L		LED DIMMABLE COVE LIGHTING
L1		LED EXTERIOR STRIP WALL WASHER LIGHTING. (COLOR CHANGEABLE)
G		LITHONIA SECURITY LIGHT WALL MOUNTED. (ETWP)
H		LITHONIA SECURITY LIGHT WALL MOUNTED - 90 MIN. BB (ETWP)
I		LITHONIA HALF CIRCLE WALL MOUNTED DECORATIVE LIGHT- 90 MIN. BB (ETWP)
J		LITHONIA HALF CYLINDER WALL MTD. DECORATIVE LIGHT (DIMMABLE)
K		EXTERIOR PATIO LIGHTING (SURFACE MOUNTED)
M		TRACK MOUNTED LIGHT FIXTURE FOR MERCHANDISE DISPLAY
N		JUNCTION BOX FOR SIGNAGE
R		LED DECORATIVE HANGING FIXTURE
U		LED DECORATIVE EXTERIOR SCONCE FIXTURE

DESIGNATION	SYMBOL	DESCRIPTION
S		LITHONIA-COMPACT RECESSED LED DOWNLIGHT (DIMMABLE)
S1		LITHONIA-COMPACT RECESSED LED DOWNLIGHT (WET LOCATIONS)
		HVAC SUPPLY AIR DIFFUSER
		HVAC RETURN AIR GRILLE
		EXIT LIGHT- 10.4W, 120V, AC, 6V DC WITH 90 MINUTE BATTERY BACK-UP SURE-LITES CC-4-BK OR APPROVED EQUAL CCX-70-RWSD OR APPROVED EQUAL
Q		WATER PROOF 110 V DUPLEX OUTLET WITH GROUND FAULT INTERRUPTER
		24" DIA. HVAC SUSPENDED DIFFUSER
T		EMERGENCY EGRESS LIGHT 14W, 120V, AC, 6V DC WITH 90 MINUTE BATTERY BACK-UP SURE-LITES CC-4-BK OR APPROVED EQUAL POWER SUPPLY FOR EXIT LIGHTS PROVIDED BY THE PREMISES WIRING SYSTEM, IN THE EVENT OF NORMAL POWER FAILURE, ILLUMINATION WILL BE AUTOMATICALLY PROVIDED BY BATTERY.
P		CHANDELIER

GENERAL NOTES AND LEGEND

- ALL LIGHT FIXTURES SHALL BE UL LABELED.
- ELECTRICAL TRADES SHALL PROVIDE COMPLETE SUBMITTALS (SHOP DRAWINGS) ON ALL LIGHT FIXTURES, LAMPS, CONTROLS AND ACCESSORIES, ETC.
- ALL LUMINAIRES AND CONTROLS SHALL COMPLY WITH LOCAL ENERGY CODES.

—HEIGHT OF CEILING ABOVE MAIN FINISHED FLOOR

X XXX
—TYPE OF CEILING

	CLG. MOUNTED EXHAUST FAN REGISTER
	THERMOSTAT- HONEYWELL. 2-STAGE COOLING.

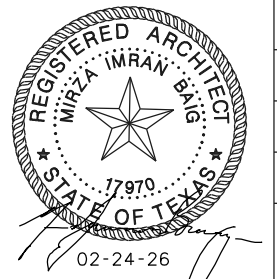
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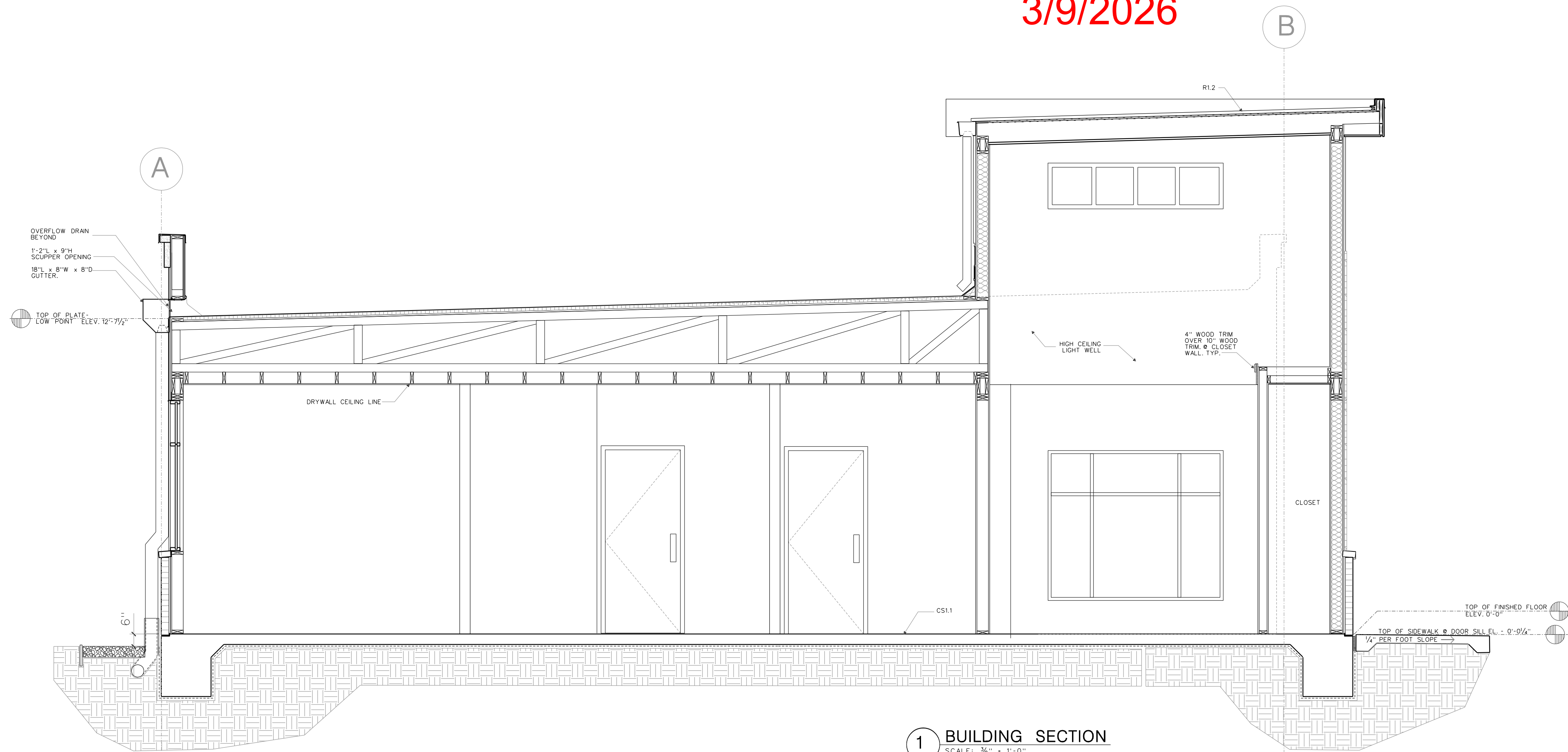
IMPERIAL ROYAL GARDEN PLAZA
15019 & 15021 VOSS RD
SUGAR LAND, TEXAS, 77498

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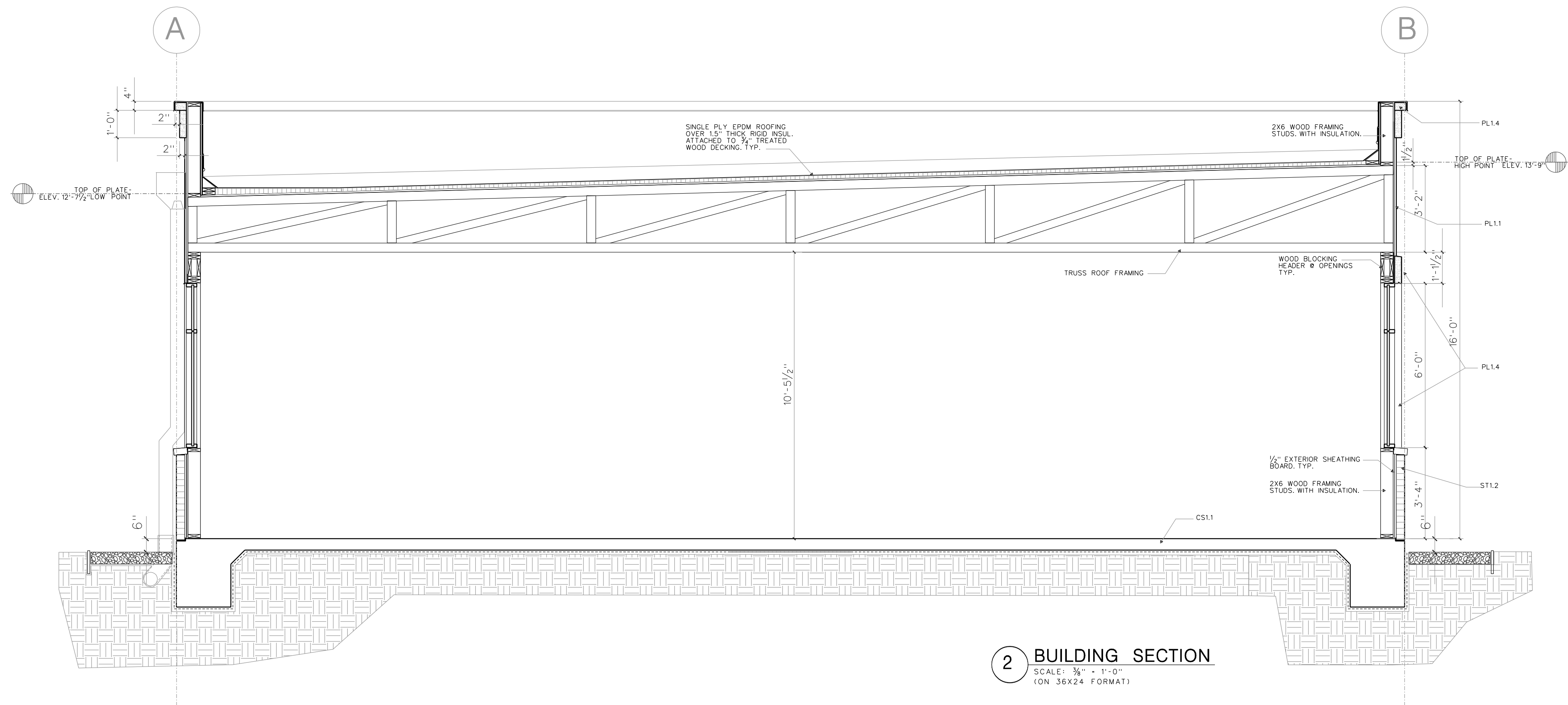
NO.	REVISION DESCRIPTION	DATE

TITLE	REFLECTED CEILING PLAN
CLIENT REVIEW	
PERMIT REVIEW	02-24-26
CONSTRUCTION ISSUE	
CHECKED BY:	SHEET: A300-OF C
PROJECT *	





1 BUILDING SECTION
SCALE: 3/8" = 1'-0"
(ON 36X24 FORMAT)



2 BUILDING SECTION
SCALE: 3/8" = 1'-0"
(ON 36X24 FORMAT)

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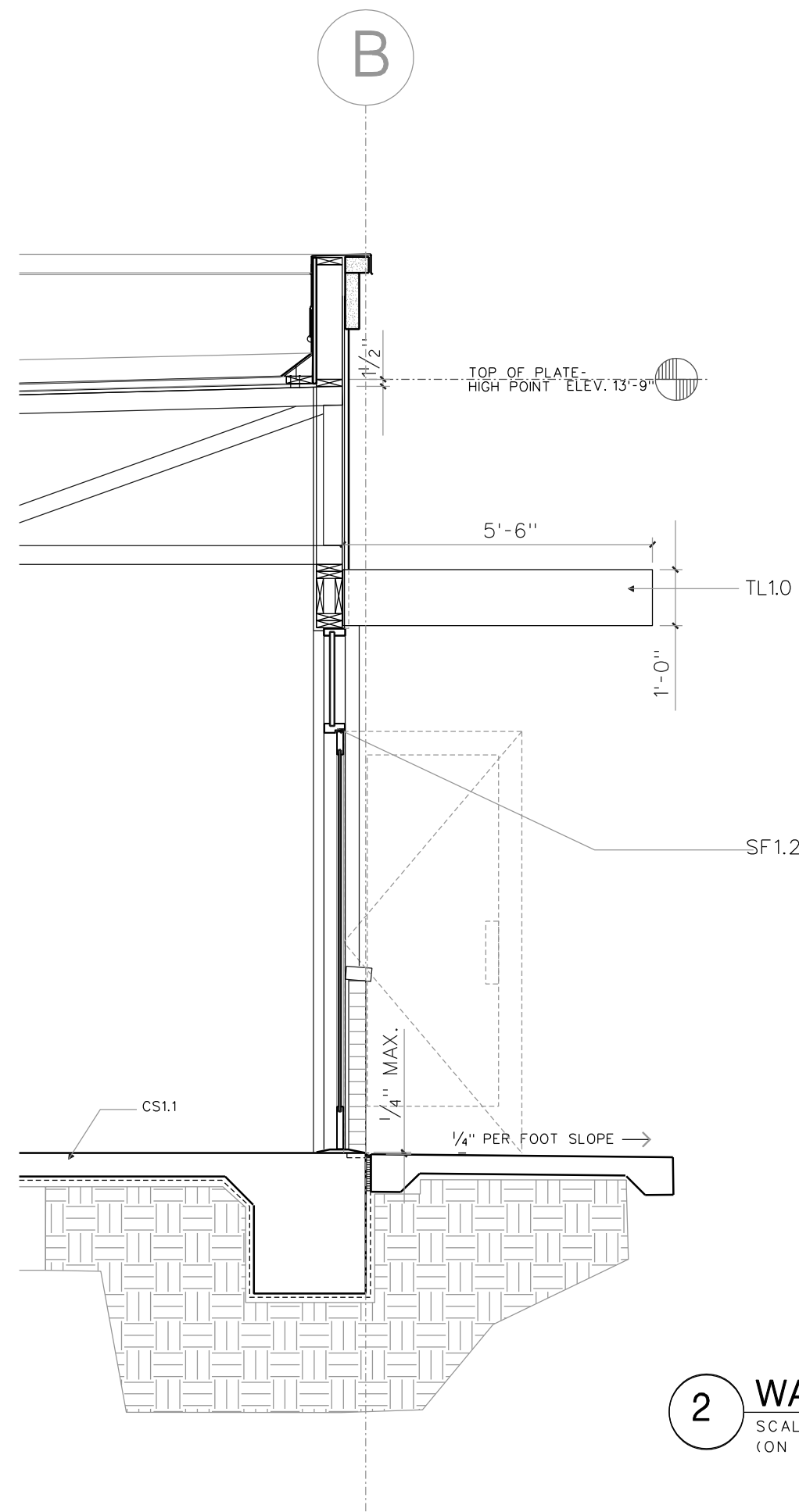
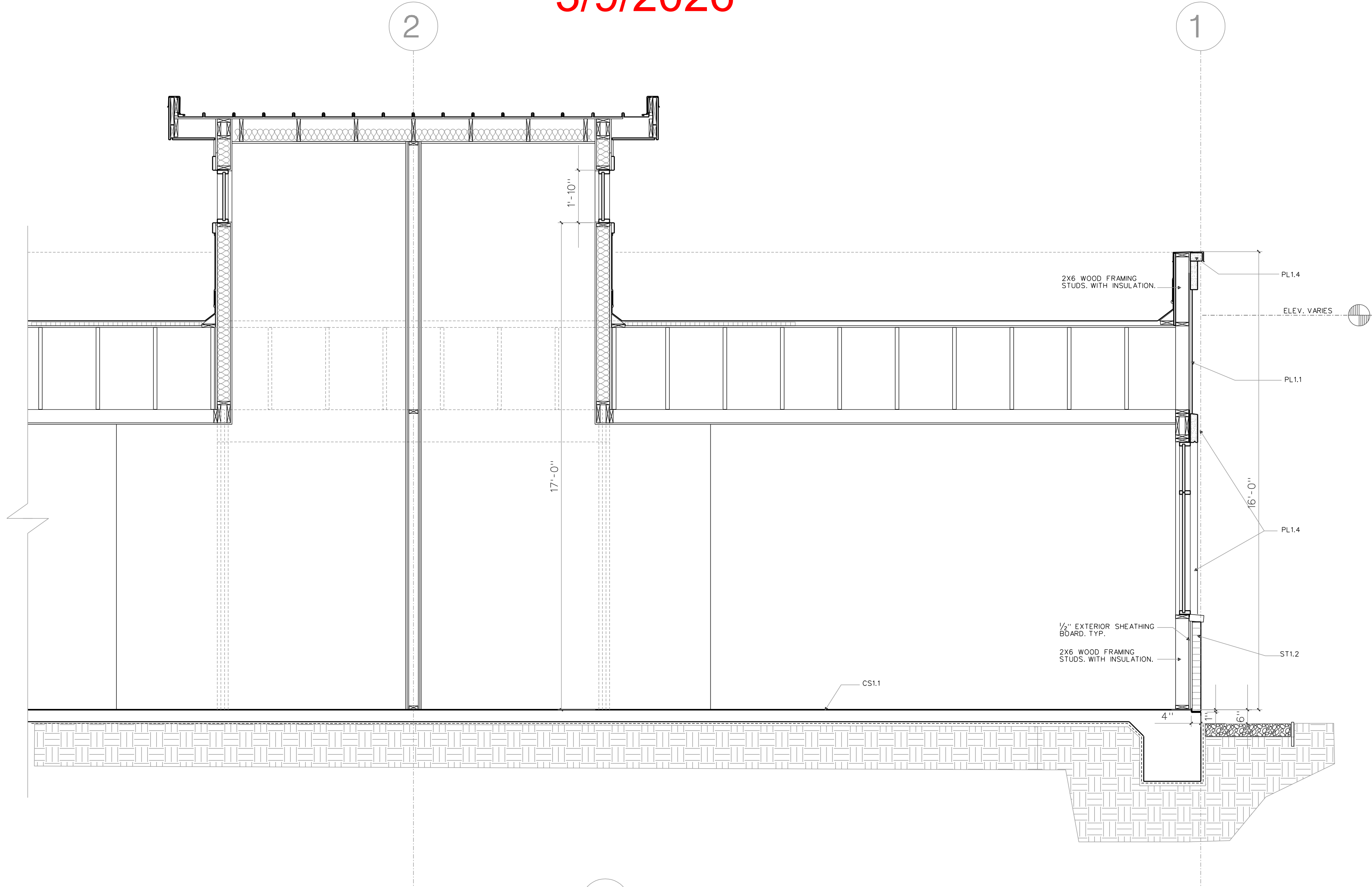


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**IMPERIAL ROYAL
GARDEN PLAZA**

15019-15029 VOSS RD
SUGAR LAND, TEXAS, 77498

TITLE	BUILDING SECTIONS
CLIENT REVIEW	
PERMIT REVIEW	02-24-26
CONSTRUCTION ISSUE	
CHECKED BY: M.I.B	SHEET: A500-OF-C
PROJECT *	



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REVISION	DESCRIPTION	DATE



TITLE BUILDING SECTIONS	
CLIENT REVIEW	02-24-26
CONSTRUCTION ISSUE	
CHECKED BY: M.I.B.	SHEET: A501-OF-C
PROJECT *	

DOORS AND FRAMES GENERAL NOTES

GENERAL NOTES:

DOOR WIDTH IS GIVEN IN INCHES AND APPLIES TO SINGLE DOORS AND BOTH LEAVES OF DOORS IN PAIRS. DOOR PAIRS WITH UNEQUAL LEAVES ARE SHOWN IN THE FORM 2436.

LOCATE DOOR FRAMES WITH THE HINGE JAMB 4" FROM THE CORNER IF THE SPACE, UNLESS SHOWN CENTERED IN THE WALL SPACE OR DIMENSIONED OTHERWISE.

LABELS ARE ASTM CLASSIFICATIONS WITH THE FIRE RATINGS IN MINUTES. FIRE RATINGS OR LABELS REQUIRED FOR DOOR APPLY EQUALLY TO THE FRAME AND HARDWARE.

DETERMINE "PARTITION THICKNESS" FROM THE PARTITION SCHEDULE. ADD ADDITIONAL THICKNESS AS REQUIRED TO ACCOMMODATE LEAD LINING OR OTHER MATERIALS TO BE INCORPORATED IN THE PARTITION. DO NOT INCLUDE FINISHES APPLIED TO THE FACE OF THE PARTITION.

REFER TO DOOR TYPES FOR ABBREVIATIONS USED ON THIS SHEET.

ABBREVIATIONS:

- AL = ALUMINUM

CO = CASSED OPENING

DA = DOUBLE ACTING

DE = DOUBLE EGRESS

FR = FIRE RATING, MINUTES

HM = HOLLOW METAL
- HMG = HOLLOW METAL GALVANIZED

HC = HOLLOW CORE

PL = PLASTIC LAMINATE

SC = SOLID CORE

SS = STAINLESS STEEL

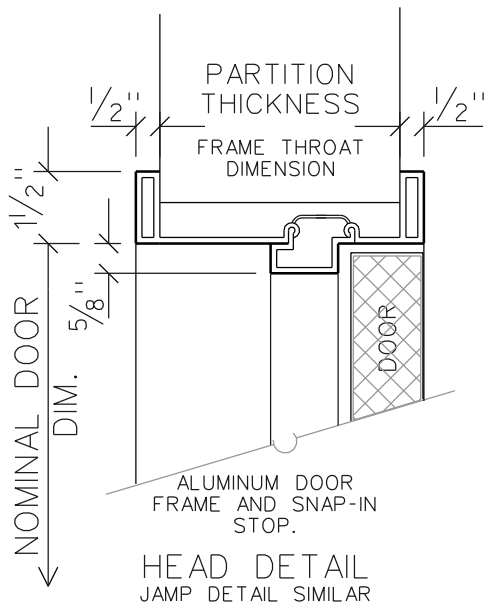
DOOR FRAME TYPE NOTES:

- 01

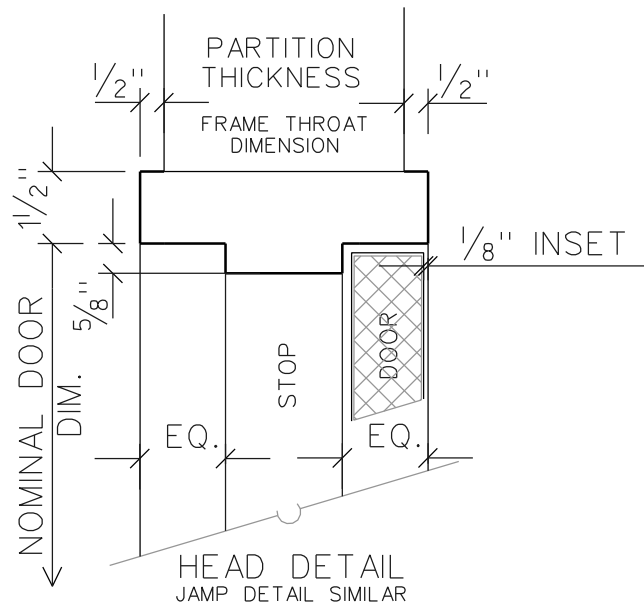
DIMENSIONS SHOWN ON HM DETAILS AS LETTERS "A", "B" ETC. ARE THE SAME AS CORRESPONDING DIMENSIONS SHOWN ON DOOR FRAME TYPE "A".
- 02

SIZE HM FRAME THROAT DIMENSION 1/8" GREATER THAN THE ACTUAL PARTITION THICKNESS. ACTUAL THICKNESS INCLUDES ALL MATERIALS LISTED IN THE PARTITION SCHEDULE PLUS ALL OTHER MATERIALS, E.G. LEAD LINING, THAT ARE TO BE BUILT INTO THE PARTITION. SEE PARTITION SCHEDULE.
- 03

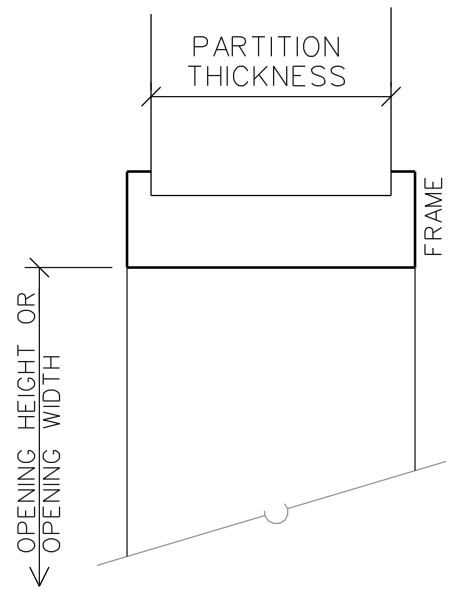
ALUMINUM FRAMES ARE SHOWN AS A PROFILE WITH MINMUM DETAIL TO CONVEY DESIGN INTENT. FRAMES SHALL BE MADE FROM NATURAL ALUMINUM EXTRUSIONS DESIGNED AND DETAILED AS IS REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONAL FRAME.



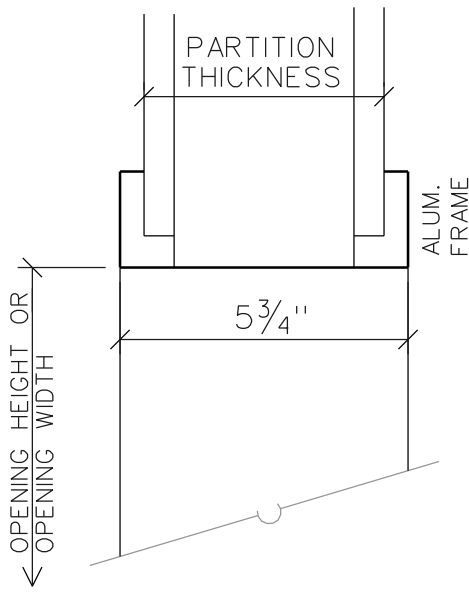
A TYPICAL PREFINISHED ALUM. DOOR FRAME



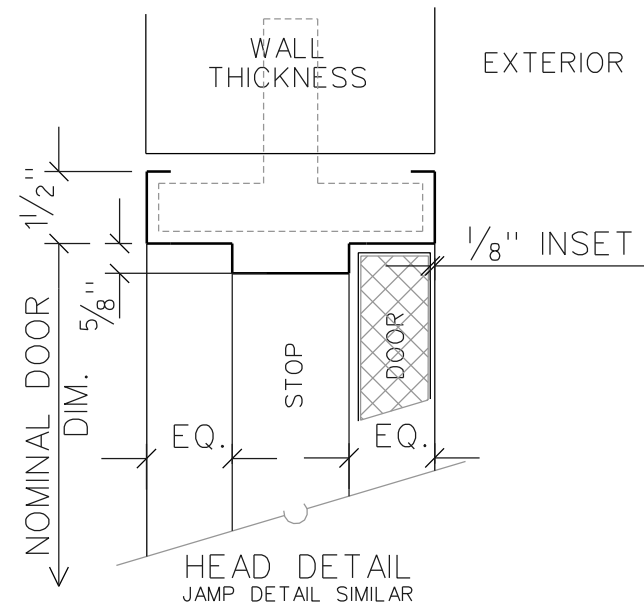
B TYPICAL INTERIOR DOOR FRAME



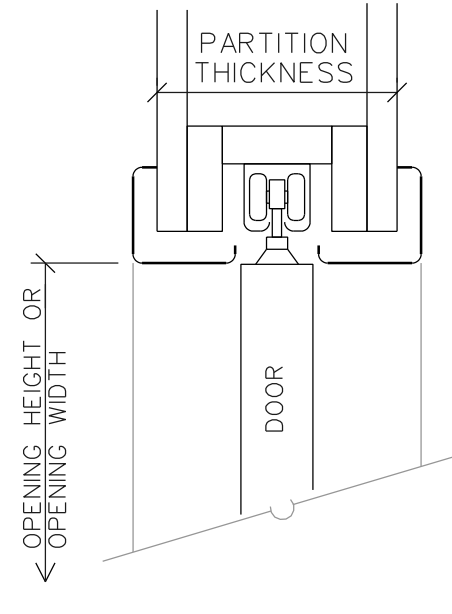
C HOLLOW METAL INTERIOR CASSED OPENING



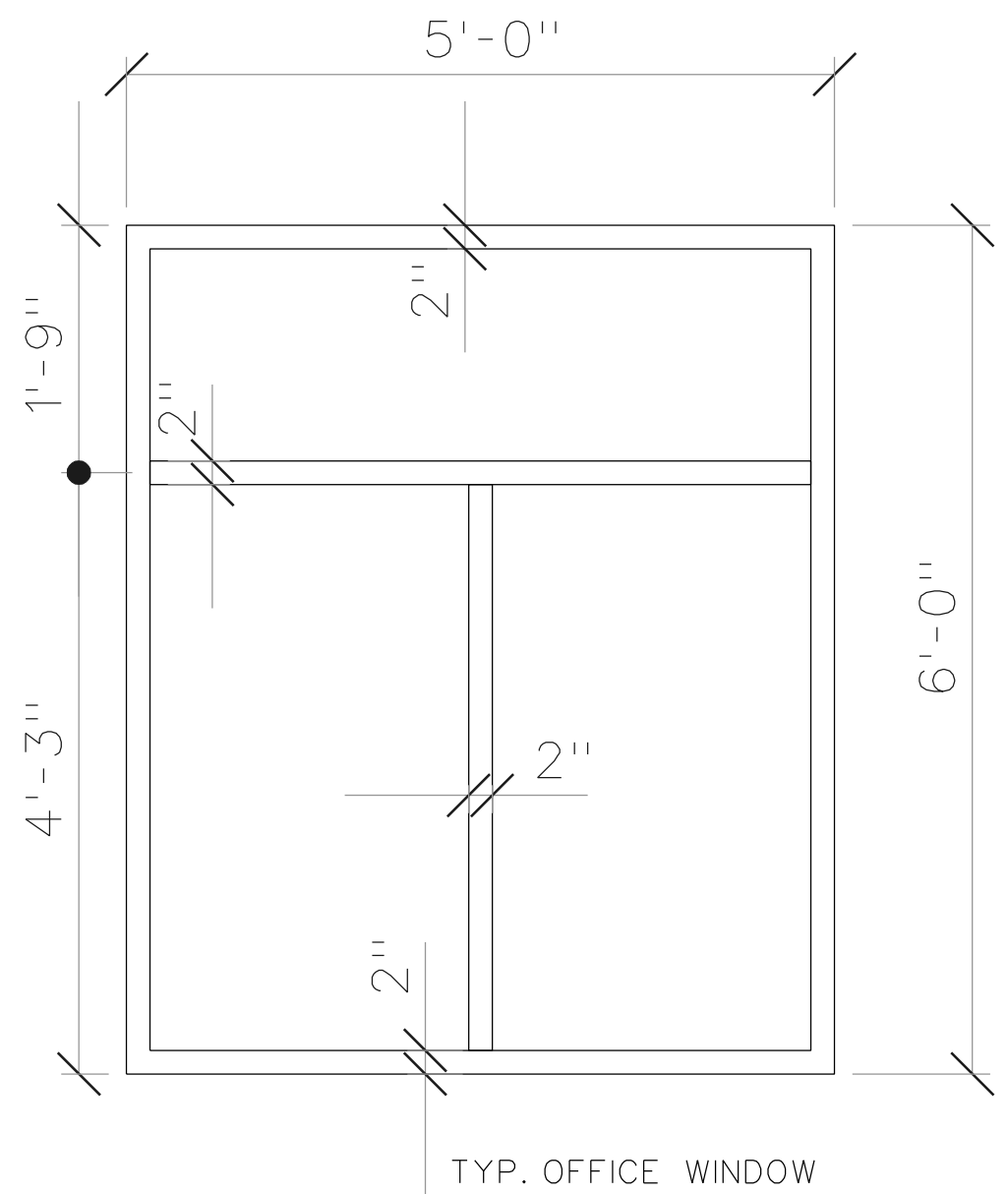
D ALUMINUM INTERIOR CASSED OPENING



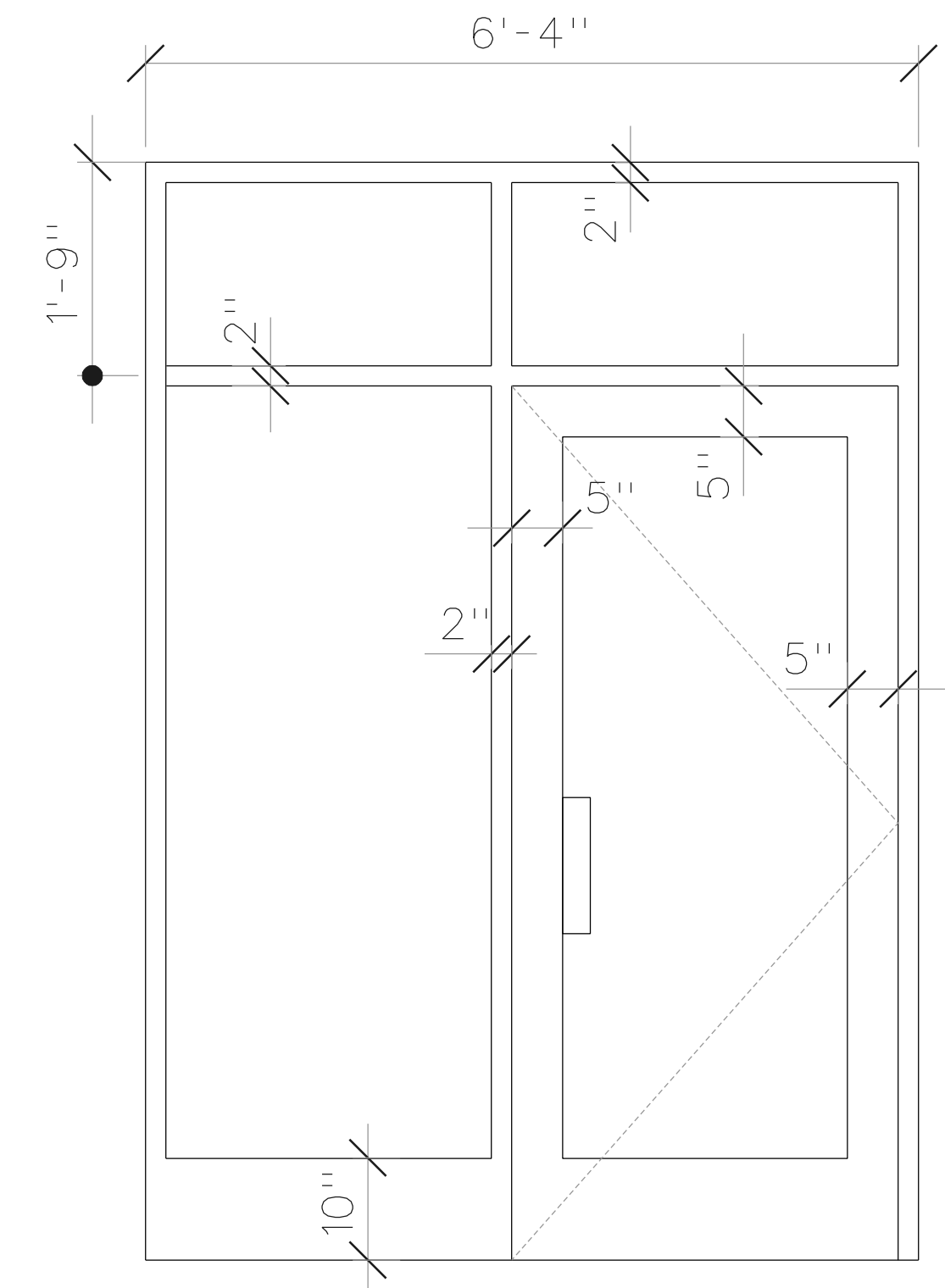
E TYPICAL EXTERIOR DOOR FRAME



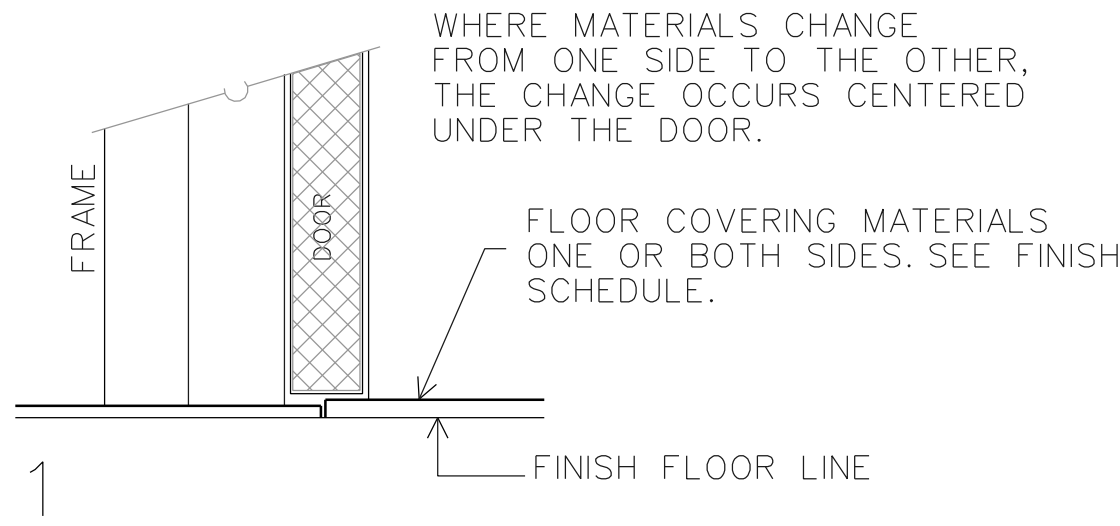
F POCKET DOOR HEADER



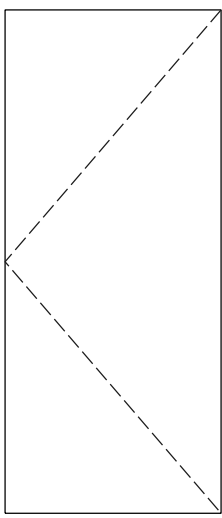
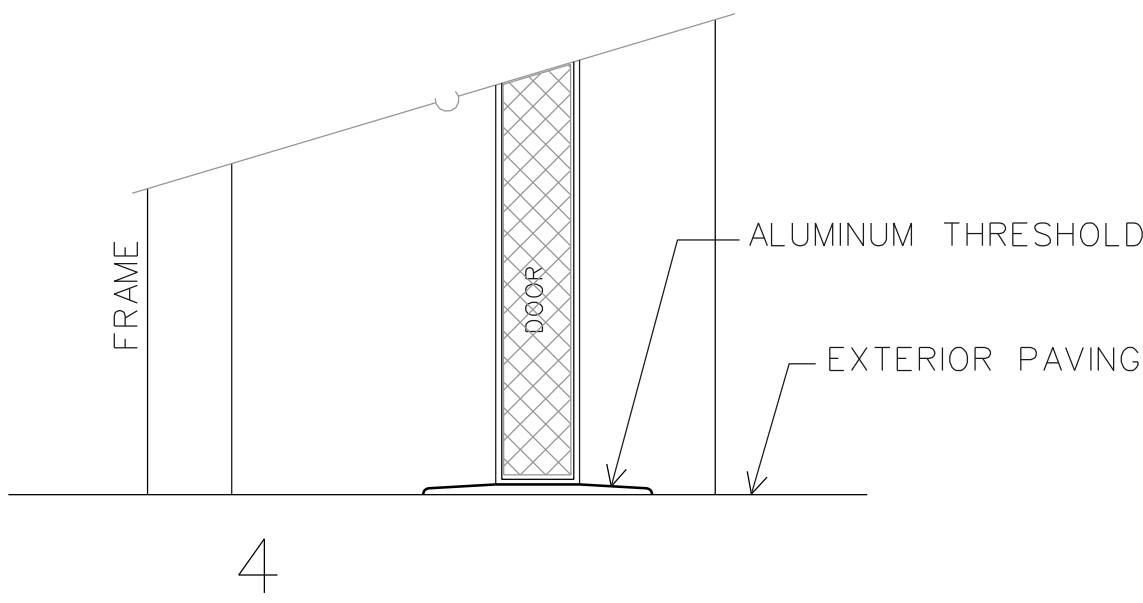
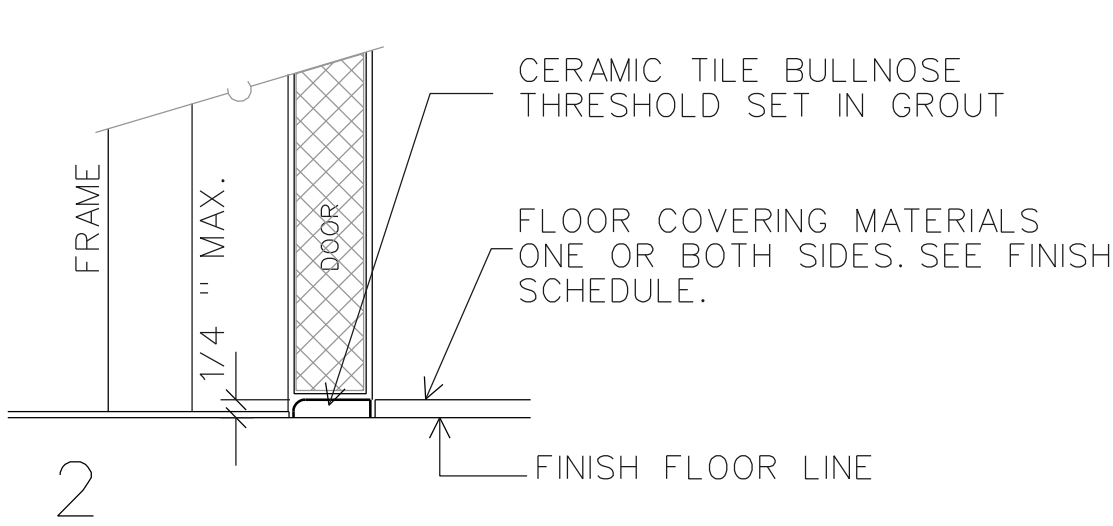
TYP. OFFICE WINDOW



TYP. OFFICE STOREFRONT



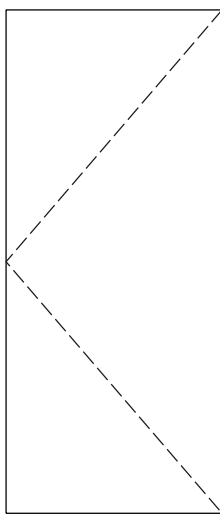
DOOR SILL TYPES



A

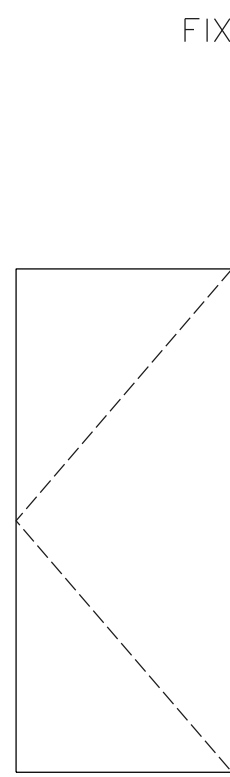
A1 SC PL VENEER BOTH SIDES RATED 20 MIN.

A2 SC PL VENEER BOTH SIDES 1 1/2 HR. 'B' LABEL



B

B1 HOLLOW METAL

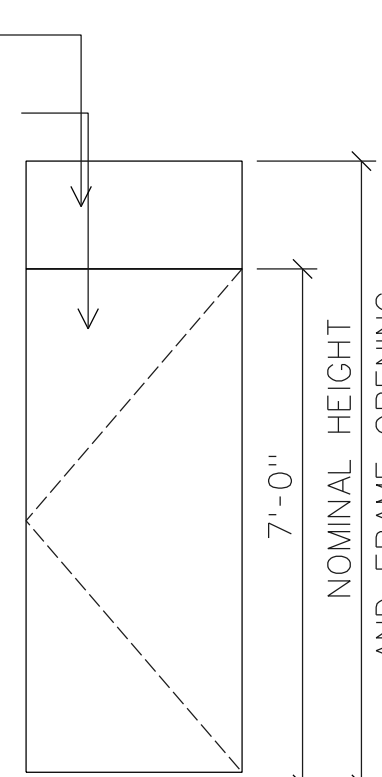


C

C1 HOLLOW METAL GALVANIZED

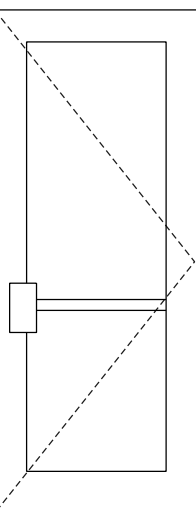
C2 HOLLOW METAL GALVANIZED 1 1/2 HR. 'B' LABEL

C3 HOLLOW METAL GALVANIZED 45 MINUTES RATED



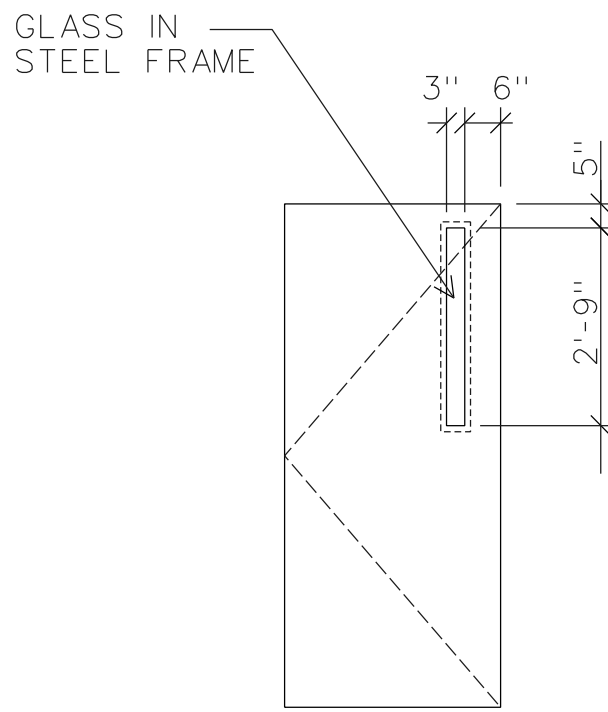
D

D1 SC PL VENEER BOTH SIDES 1 1/2 HR. 'B' LABEL



E

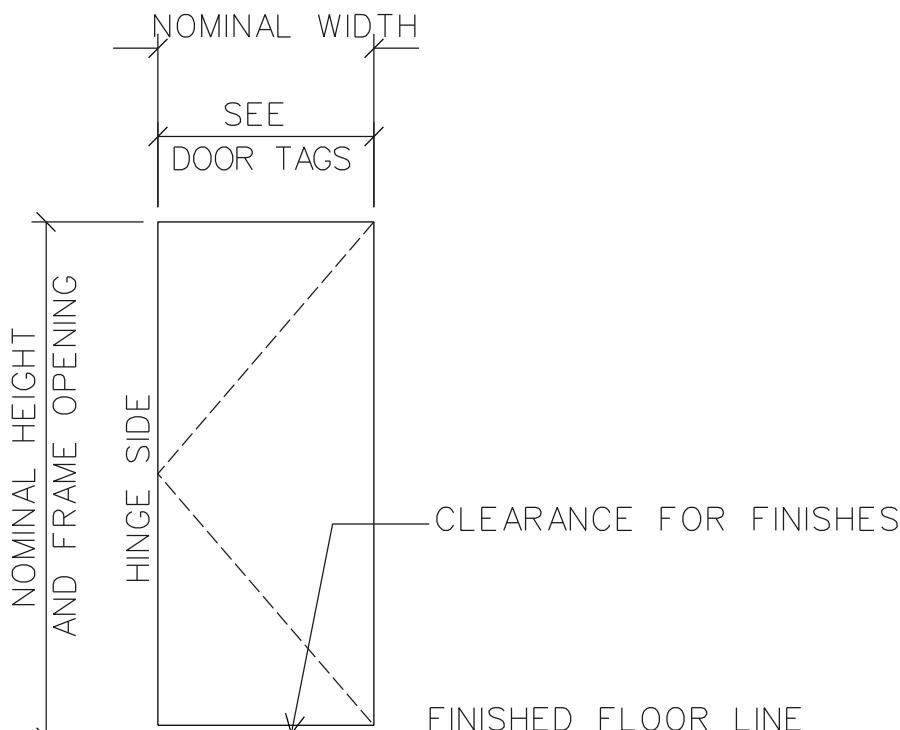
E1 NARROW STILE ALUM. AND GLASS DOOR



F

F1 SC WOOD, PL CLAD 1/4" TEMPERED GLASS

F2 SC WOOD, PL CLAD 1 1/2 HR. FR. 'B' LABEL 1/4" WIRE GLASS



DOOR TYPE NOTES. TYPICAL UNLESS NOTED OTHERWISE

DOOR TYPES



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IMPERIAL ROYAL GARDEN PLAZA

15019, 15021 VOSS RD SUGAR LAND, TEXAS, 77498

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NO.	REVISION DESCRIPTION	DATE	TITLE
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			CLIENT REVIEW
			PERMIT REVIEW 02-24-26
			CONSTRUCTION ISSUE
			CHECKED BY: M.I.B SHEET: A700-OF C
			PROJECT *



FINISH ABBREVIATIONS

AL	4" BRUSHED ALUMINIUM BASE
AT	ACOUSTICAL TILE (ARMSTRONG, ULTIMA BEVELED TEGULAR, 2x2x0.75")
AT-V	ACOUSTICAL TILE (2x2 VINYL FACED) 4x4 IN BREAKROOM
MTL	METAL PANEL
CP	CARPET, 32 OZ, PADDING 40 OZ
CS	CONCRETE SEALED (STAINED)
CONC	FINISHED LEVELED CONCRETE
CT	CERAMIC TILE
ESC	EPOXY SEALED CONCRETE
FRP	SHEET VINYL
GB	FINISHED PAINTED GYP. BOARD
GB-R	PAINTED GYP. BOARD W/ REVEALS
GB-ZR	ZOLATONE FINISH GYP. BOARD W/ REVEALS
MT	MARBLE TILE
PL	PLASTIC LAMINATE (WILSONART LAMINATE)
PT	PAINT
PW	PAINTED WOOD
RB	4" RUBBER BASE
SB	4" STONE BASE
ST	STONE
SS	STAINLESS STEEL
VCT	VINYL COMPOSITION TILE (ARMSTRONG STANDARD EXCELRON)
VWC	VINYL WALL COVERING
WL	WOOD LAMINATE FLOORING, COMMERCIAL GRADE
WLB	WOOD LAMINATE BASE

* PROVIDE MOISTURE RESISTANT GYPSUM BOARD AT ALL LOCATIONS TO RECEIVE CERAMIC TILE FINISH. PROVIDE CEMENT BOARD AT ALL SHOWER LOCATIONS.

FINISH SCHEDULE

ROOM NAME	FLOOR	BASE	WALL	CEILING	CLASS	
RECEPTION	VCT	RB	GB	GB	B	
MEETING	VCT	RB	GB	GB	B	
OFFICE	VCT	RB	GB	GB	B	
CLOSET	VCT	RB	GB	GB	B	
CORRIDOR	VCT	RB	GB	GB	B	
BREAKROOM	VCT	RB	GB	GB	B	
UTILITY RM	CT	CT	CT	GB	B	
RESTROOM	CT	CT	CT	GB	B	
HVAC	CT	RB	GB	GB	B	

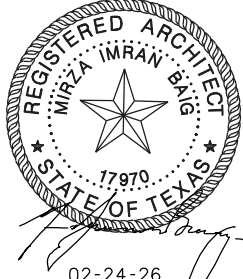
DOOR HARDWARE FUNCTION SCHEDULE

L-1	PASSAGE SET
L-2	PRIVACY SET
L-3	OFFICE LOCKSET
L-4	CLASSROOM LOCKSET
L-5	STOREROOM LOCKSET
L-6	PUSH /PULL W/ DEADLOCK
X-1	EXIT DEVICE(S)
S-1	ALL HARDWARE BY DOOR MANUFACTURER
C	CLOSER SHALL BE PROVIDED ON ALL DOORS WHICH BEAR THE SUFFIX "C" AFTER THE HARDWARE SET NUMBER. SETS WITH SUFFIX "CH" SHALL HAVE CLOSER WITH HOLD-OPEN FEATURE. E.G. A DOOR WITH HARDWARE SET L-3 AND SUFFIX "C" (OR L-3C) WOULD RECEIVE AN OFFICE FUNCTION LOCKSET AND A CLOSER. PROVIDE A CLOSER FOR EACH DOOR LEAF, EXCEPT PAIRS OF DOORS WITH MANUAL FLUSHBOLTS SHALL HAVE A CLOSER ON THE ACTIVE LEAF ONLY.
CH	

DOOR SCHEDULE

DOOR #				WIDTH	HEIGHT	DOOR TYPE	FRAME TYPE	SILL TYPE	HARDWARE		LOCATION
100	200	300	400	3'-0"	7'-0"	E1	A	4	X-1	ACCESSIBLE HARDWARE	RECEPTION
C100	C200	C300	C400	3'-0"	7'-0"	A1		1	L-5	POCKET DOOR	CLOSET
101	201	301	401	3'-0"	7'-0"	A1	B	1	L-3		MEETING
102	202	302	402	3'-0"	7'-0"	A1	B	1	L-3		OFFICE
103	203	303	403	3'-0"	7'-0"	A1	B	1	L-3		OFFICE
C103	C203	C303	C403	2 (2'-6")	7'-0"	A1	B	1	L-5		CLOSET
104	204	304	404	3'-0"	7'-0"	A1	B	1	L-3		OFFICE
UTIL	UTIL	UTIL	UTIL	3'-0"	7'-0"	A1	B	1	L-5		UTILITY RM
105	205	305	405	3'-0"	7'-0"	E1	A	1	L-1		BREAKROOM
106	206	306	406	3'-0"	7'-0"	A1	B	2	L-2		RESTROOM
HVAC	HVAC	HVAC	HVAC	2'-2"	7'-0"	A1	B	1	L-5		HVAC CLOSET

DRAWINGS DO NOT NECESSARILY INDICATE OR DESCRIBE ALL WORK REQUIRED FOR FULL PERFORMANCE & COMPLETION OF THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS. THESE DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION UNLESS NOTED AS APPROVED FOR CONSTRUCTION BY HARRIS COUNTY, SIGNED AND SEALED BY THE ARCHITECT OR ENGINEER.

NO.	REVISION DESCRIPTION	DATE		TITLE	SCHEDULES
				CLIENT REVIEW	
				PERMIT REVIEW	02-24-26
				CONSTRUCTION ISSUE	
				CHECKED BY:	SHEET: A800-OF C
				PROJECT *	

FOUNDATION
PLAN

IMPERIAL ROYAL GARDEN PLAZA

RETAIL-1 & 2
15015 & 15017 VOSS RD
SUGAR LAND, TEXAS, 77498

ISSUE HISTORY

DATE	ISSUED FOR

02/12/2026



PE

BUILDINGS
BRIDGES
INSPECTIONS
MARINE STRUCTURES
CIVIL ENGINEERING &
STRUCTURAL ENGINEERING

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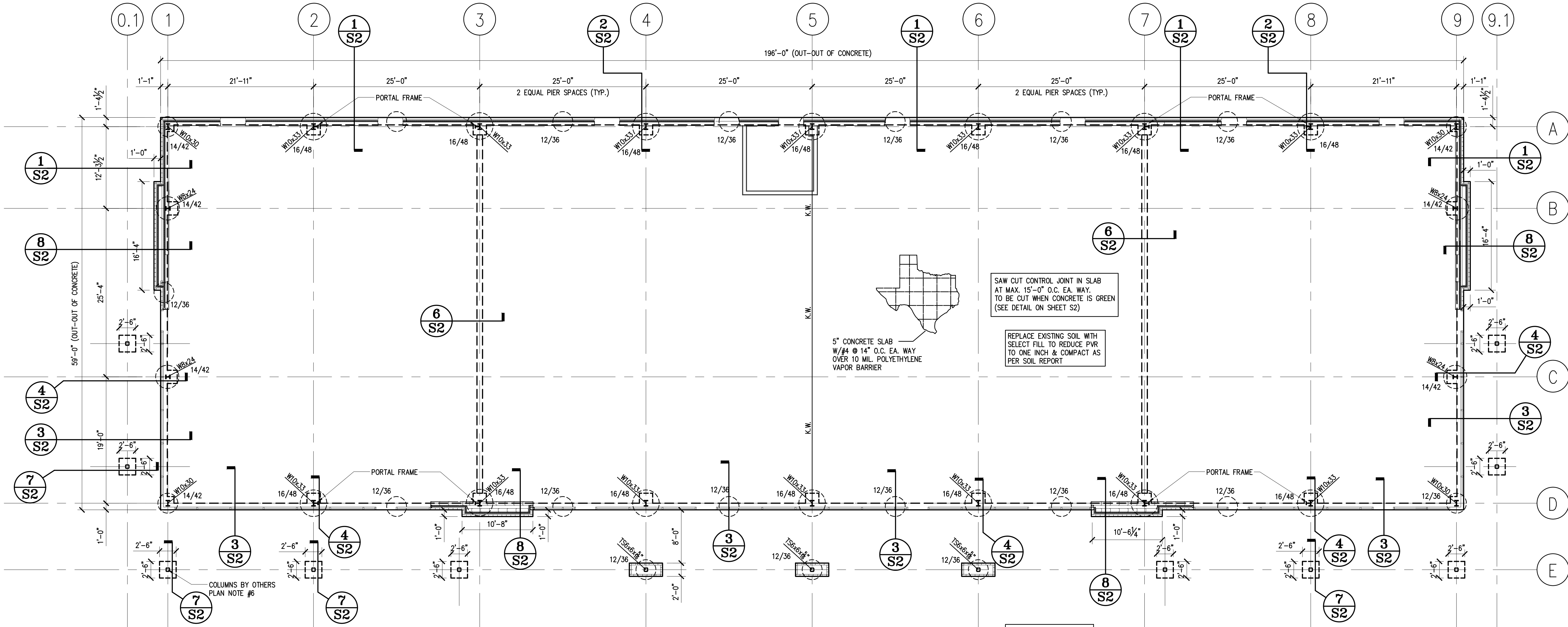
10145 LONG POINT DR.
HOUSTON, TX 77043
TEL : (713) 636-9977
FAX : (713) 888-9872
CEL : (713) 204-1742

TBPE REGISTRATION # F-3394

DRAWN BY: FA CHECKED BY: M.M.

PROJ. NO.: PE24-104

SHEET: S1



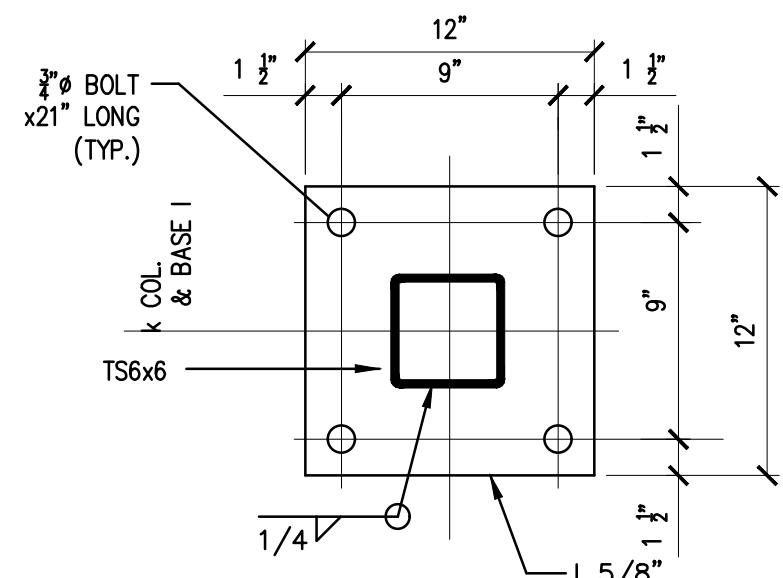
FOUNDATION PLAN

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

PLAN NOTES

- ALL FOOTING ARE AS SHOWN ON PLAN.
- ALL STEEL COLUMNS ARE AS SHOWN ON PLAN.
- REPLACE EXISTING SOIL AS RECOMMENDED BY GEOTECHNICAL REPORT.
- SITE SHOULD BE GRADED TO SHED ALL RAIN WATER AWAY FROM THE STRUCTURE. NO WATER POND ALLOWED AROUND THE BUILDING.
- SOIL REPORT NO EE-2411201-G DATED FEBRUARY 5, 2024 EARTH ENGINEERING, INC. IS A PART OF THE CONSTRUCTION DOCUMENTS. IT IS CONTRACTOR'S RESPONSIBILITY TO REVIEW THIS REPORT FOR SITE PREPARATION AND DRILLED SHAFTS. IN CASE SAND/WATER IS ENCOUNTERED AT SITE, CASING MUST BE USED FOR DRILLED SHAFTS INSTALLATION.
- WHERE COLUMN SIZES ARE NOT SHOWN, COLUMNS ARE BY OTHERS. REFER TO SUPPLIER DRAWINGS FOR COLUMN MEMBER SIZES, ORIENTATIONS & CONNECTIONS.

- C.J. ON PLAN INDICATES CONTROL JOINT, K.W. INDICATES KEY WAY & E.J. INDICATE EXPANSION JOINT.
- CONTRACTOR TO CHECK FOR UNDERGROUND UTILITIES BEFORE DIGGING FOOTINGS.
- CONTRACTOR TO CONTACT GEOTECHNICAL ENGINEER FOR PRESENCE OF ANY TREES AND PROCEDURES FOR REMOVAL OF TREES FROM THE PROJECT SITE.
- REFER TO ARCHITECTURE DRAWINGS FOR TOP OF FINISH FLOOR ELEVATION.
- REFER TO ARCHITECTURE DRAWINGS FOR ALL BRICK LEDGES, SIDEWALK, ELEVATIONS AND RAMP DETAILS.

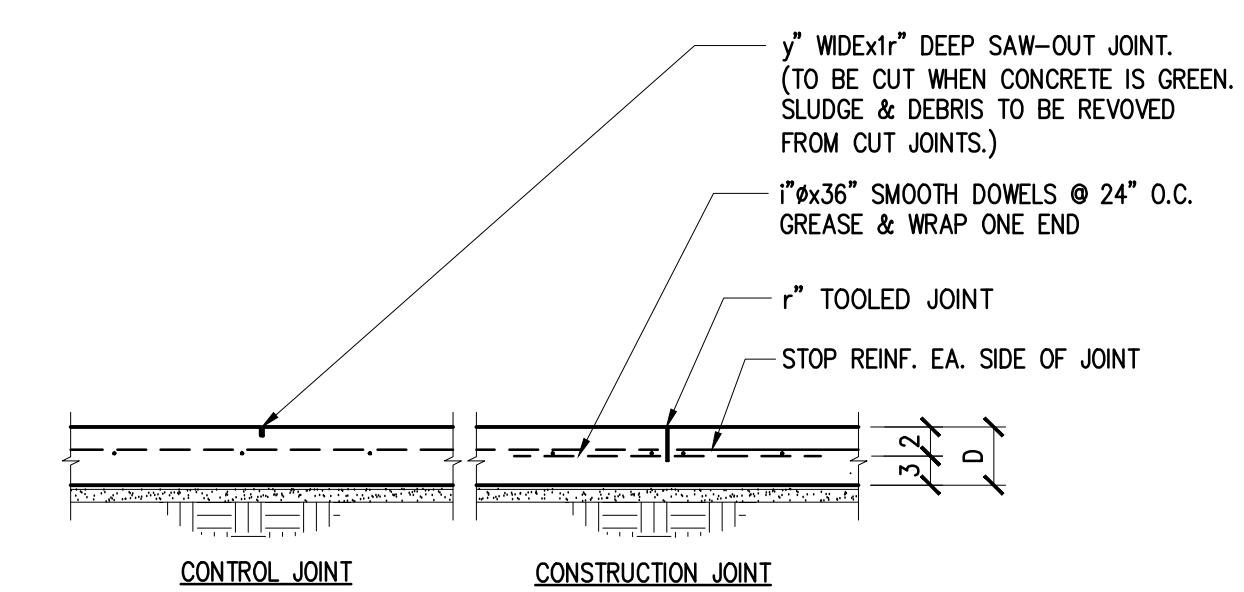


TS6x6 COLUMN BASEPLATE

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

CONTRACTOR TO VERIFY ALL DIMENSIONS, ELEVATIONS, AND COORDINATE DETAILS WITH ARCHITECTURAL DRAWINGS. ALL DIMENSIONS & ELEVATION ON ARCHITECTURAL DRAWINGS SHALL GOVERN. IT IS CONTRACTOR'S RESPONSIBILITY TO REPORT TO ENGINEER ABOUT DISCREPANCY IN DRAWINGS PRIOR TO FABRICATION & BIDDING.

3/9/2026



NOTE:
IF YOU ADD DIRT TO RAISE THE
NATURAL GRADE, PIER DEPTH
WILL CHANGE AND MUST BE
ADJUSTED ACCORDANTLY

EXTEND REINF. MINIMUM 18"
IN GRADE BEAM OR PILASTER



IMPERIAL ROYAL GARDEN PLAZA

RETAIL-1 & 2
15015 & 15017 VOSS RD
SUGAR LAND, TEXAS, 77498

[illegible]

02/12/2026



PE BUILDINGS
BRIDGES
INSPECTIONS
MARINE STRUCTURES
CIVIL ENGINEERING &
STRUCTURAL ENGINEERING

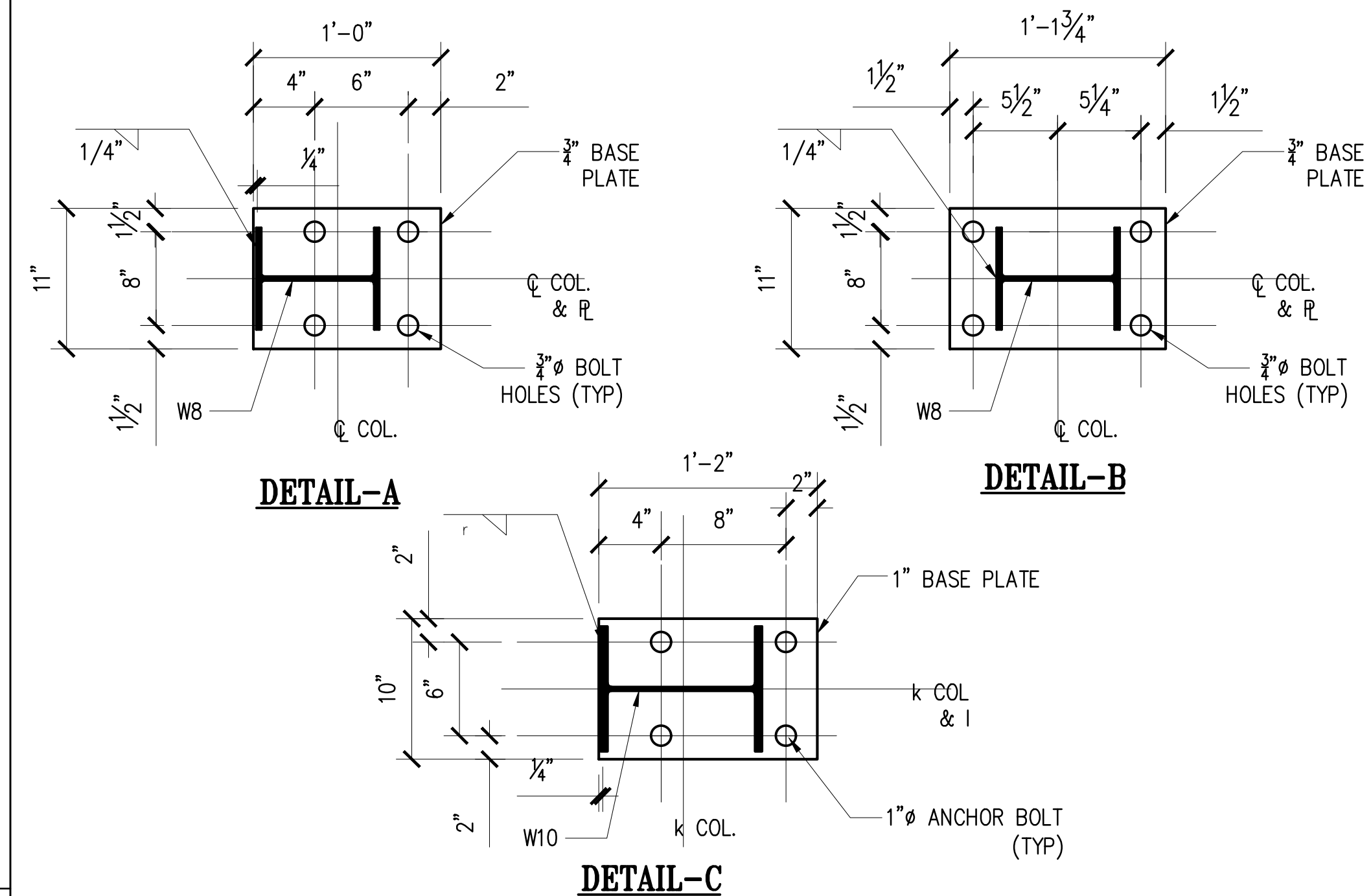
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TBPE REGISTRATION # F-3394

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PROJ. NO.: PE24-104

SHEET: S2



ROOF FRAMING
PLAN

IMPERIAL ROYAL GARDEN PLAZA

RETAIL-1 & 2
15015 & 15017 VOSS RD
SUGAR LAND, TEXAS, 77498

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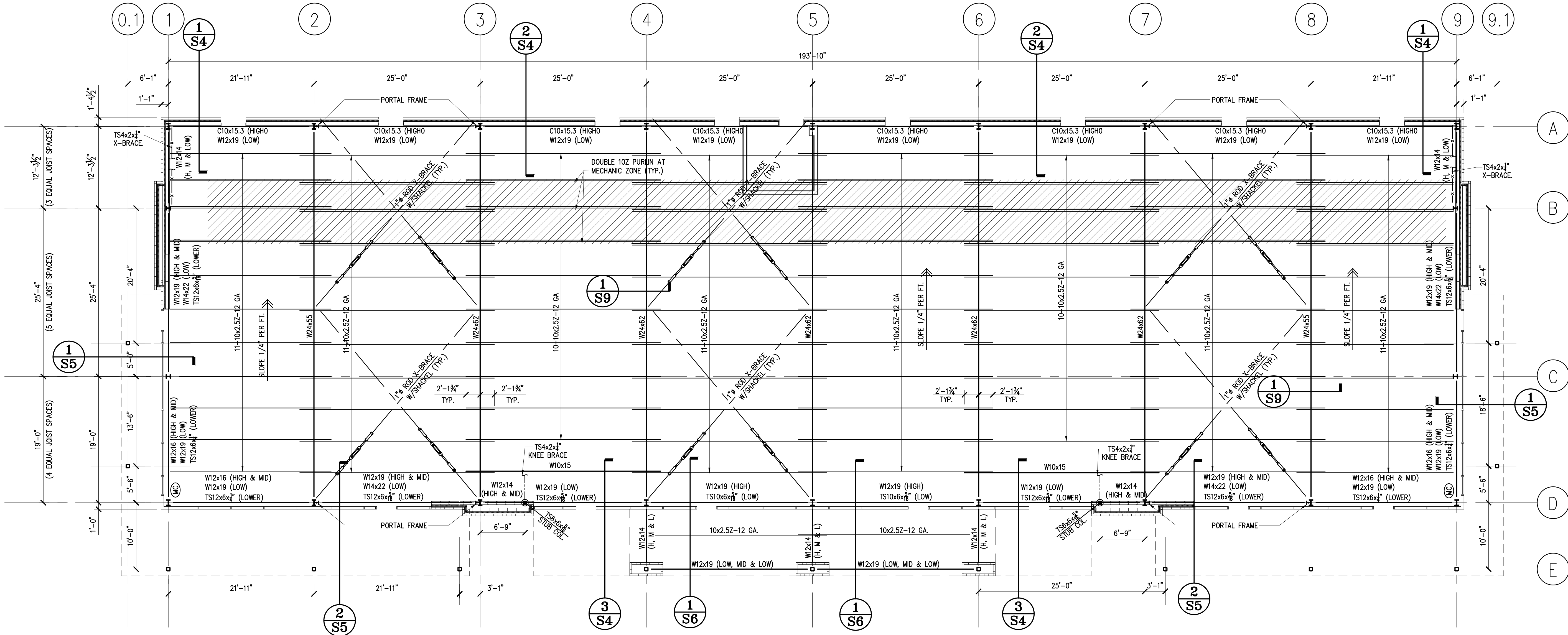
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PROJ. NO.: PE24-104

SHEET: **S3**

CONTRACTOR TO VERIFY ALL DIMENSIONS, ELEVATIONS, AND
COORDINATE DETAILS WITH ARCHITECTURAL DRAWINGS. ALL
DIMENSIONS & ELEVATION ON ARCHITECTURAL DRAWINGS
SHALL GOVERN. IT IS CONTRACTOR'S RESPONSIBILITY TO
REPORT TO ENGINEER ABOUT DISCREPANCY IN DRAWINGS
PRIOR TO FABRICATION & BIDDING.



PLAN NOTES:

1. PROVIDE BRIDGING FOR PURLINS AS REQUIRE.
2. DESIGN PURLIN FOR MAX. NET UPLIFT PRESSURE OF 30 PSF.
3. ALL COLUMNS ARE AS SHOWN ON FOUNDATION PLAN
4. ALL STEEL SHALL BE 50 KSI MATERIAL

LEGENDS

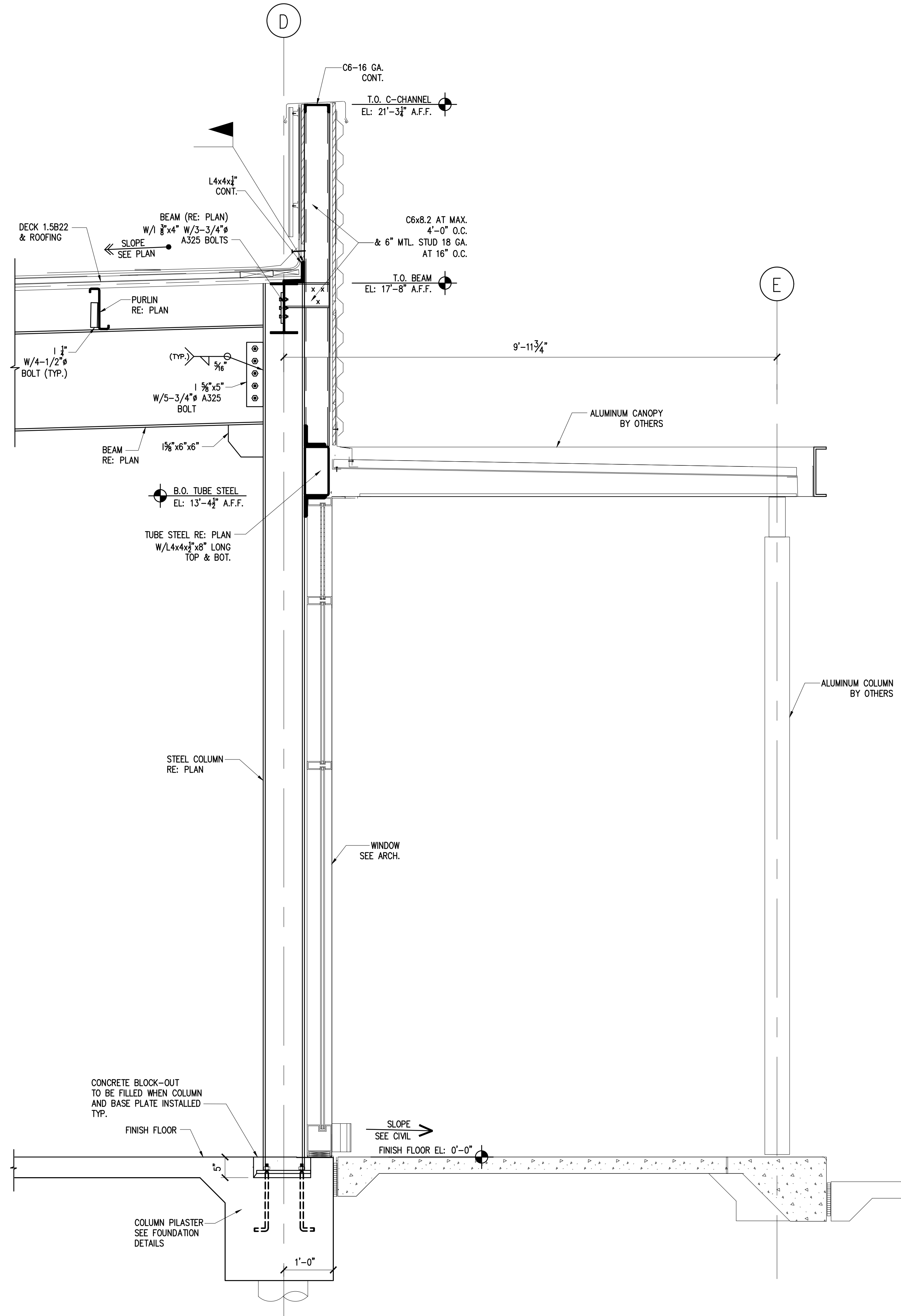
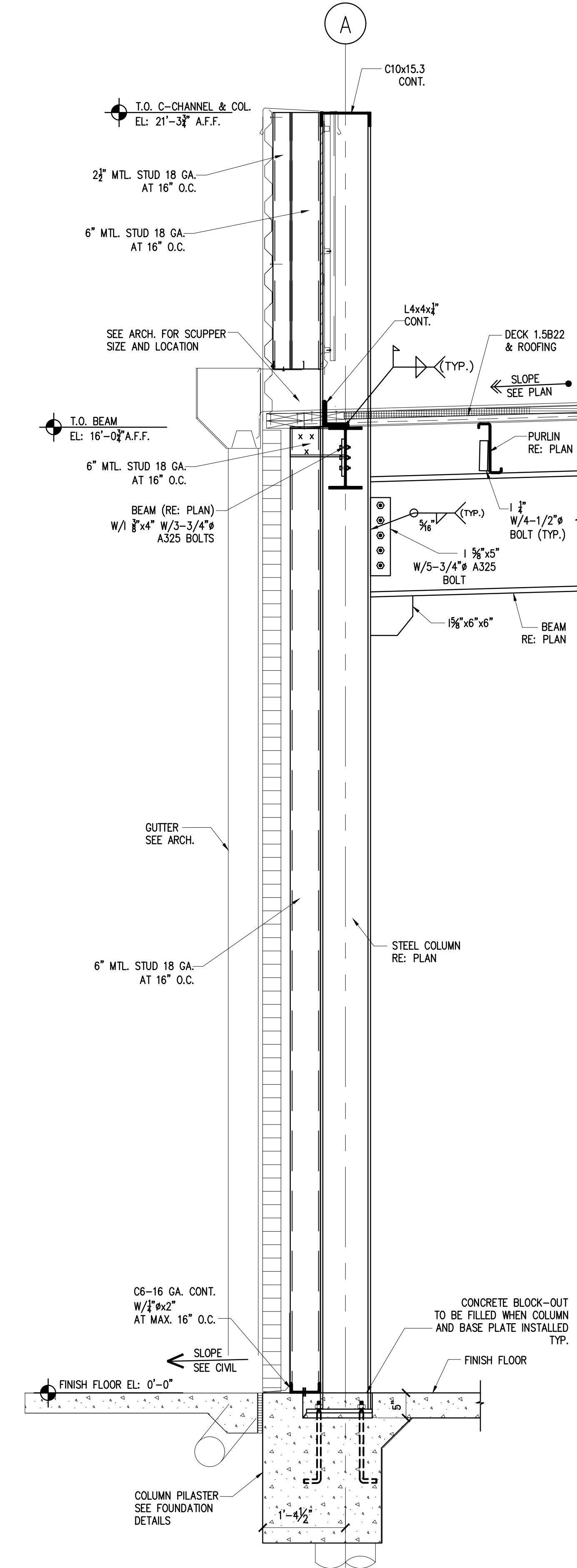
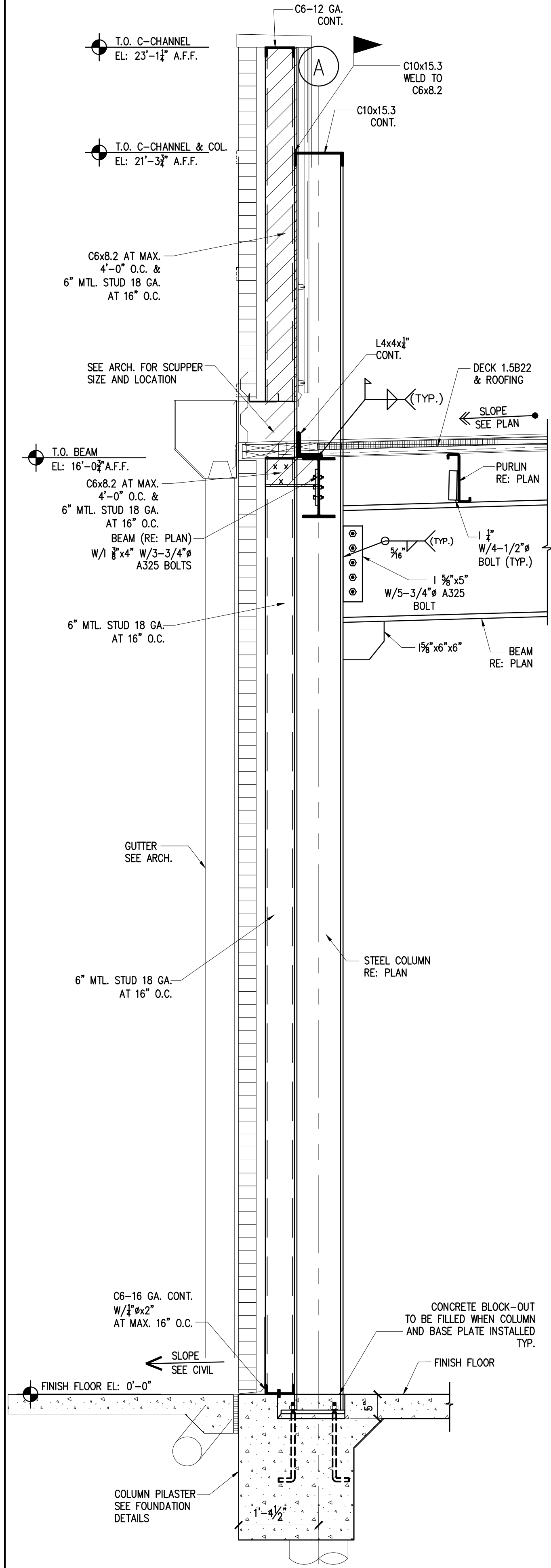
- x — x — X-BRACE
- - - - L2 1/2" x 2 1/2" x 1/2" X-BRACE
- - - - TS4x4 KNEE BRACE
- — — — MOMENT CONNECTION
- MC AREA DESIGNATED FOR MECHANICAL EQUIPMENT ZONE.
MAX ALLOWABLE LOAD IS 50 PSF
- STUB COLUMN ABOVE ROOF

ROOF FRAMING PLAN

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

BEAM CAMBER SCHEDULE

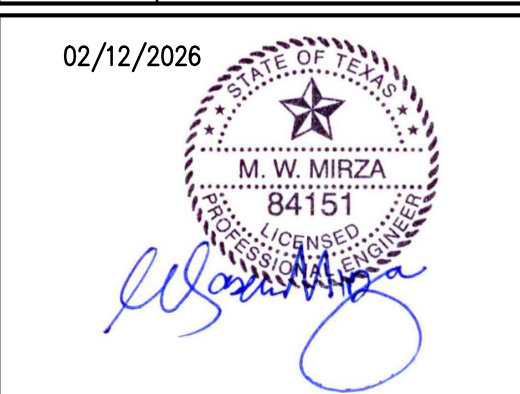
BEAM SIZE	CAMBER (IN)
W24	2 1/2"



WALL SECTIONS
FRAMING

IMPERIAL ROYAL GARDEN PLAZA
RETAIL-1 & 2
15015 & 15017 VOSS RD
SUGAR LAND, TEXAS, 77498

ISSUE HISTORY	
DATE	ISSUED FOR

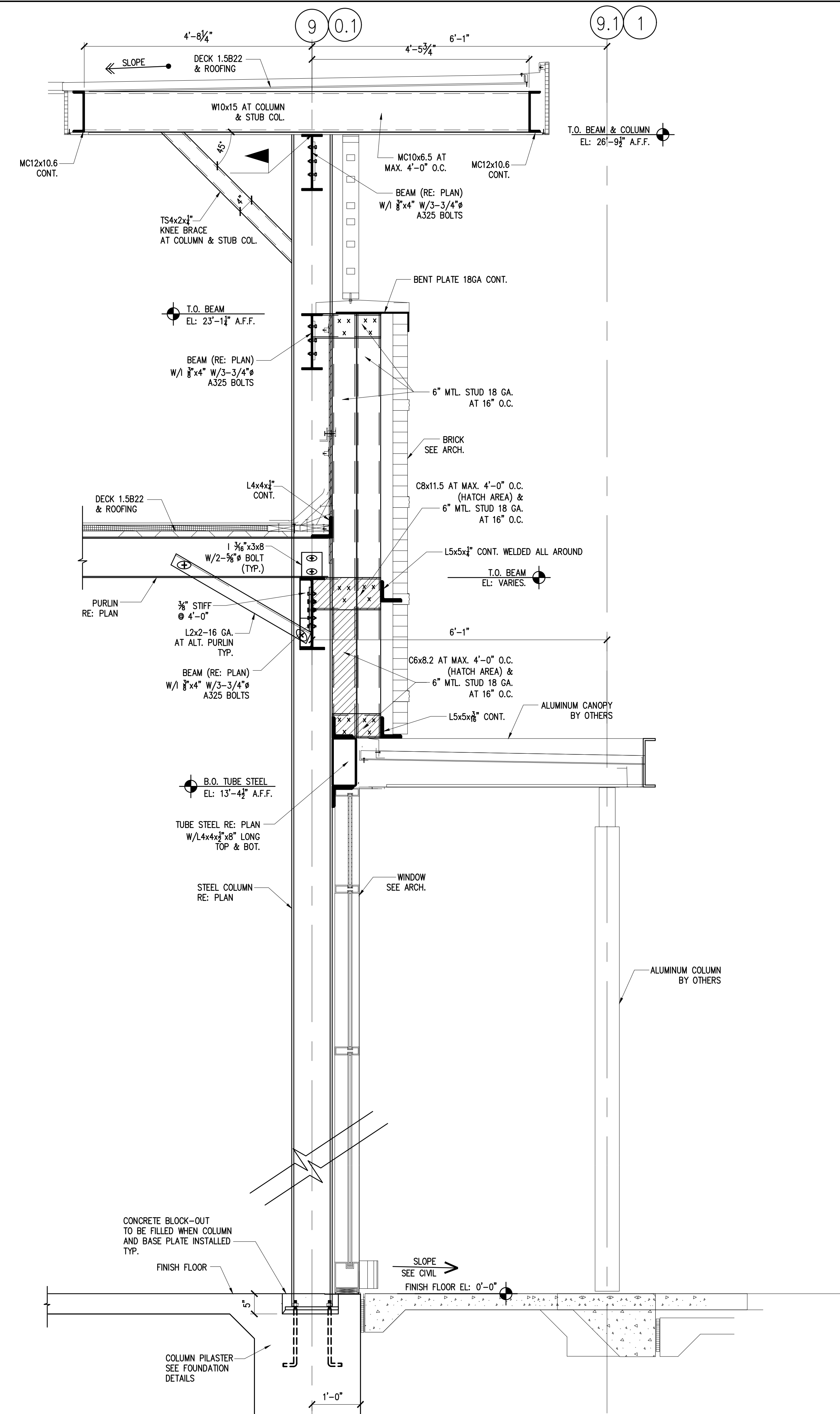


PE BUILDINGS
BRIDGES
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MARINE STRUCTURES
CIVIL ENGINEERING &
STRUCTURAL ENGINEERING

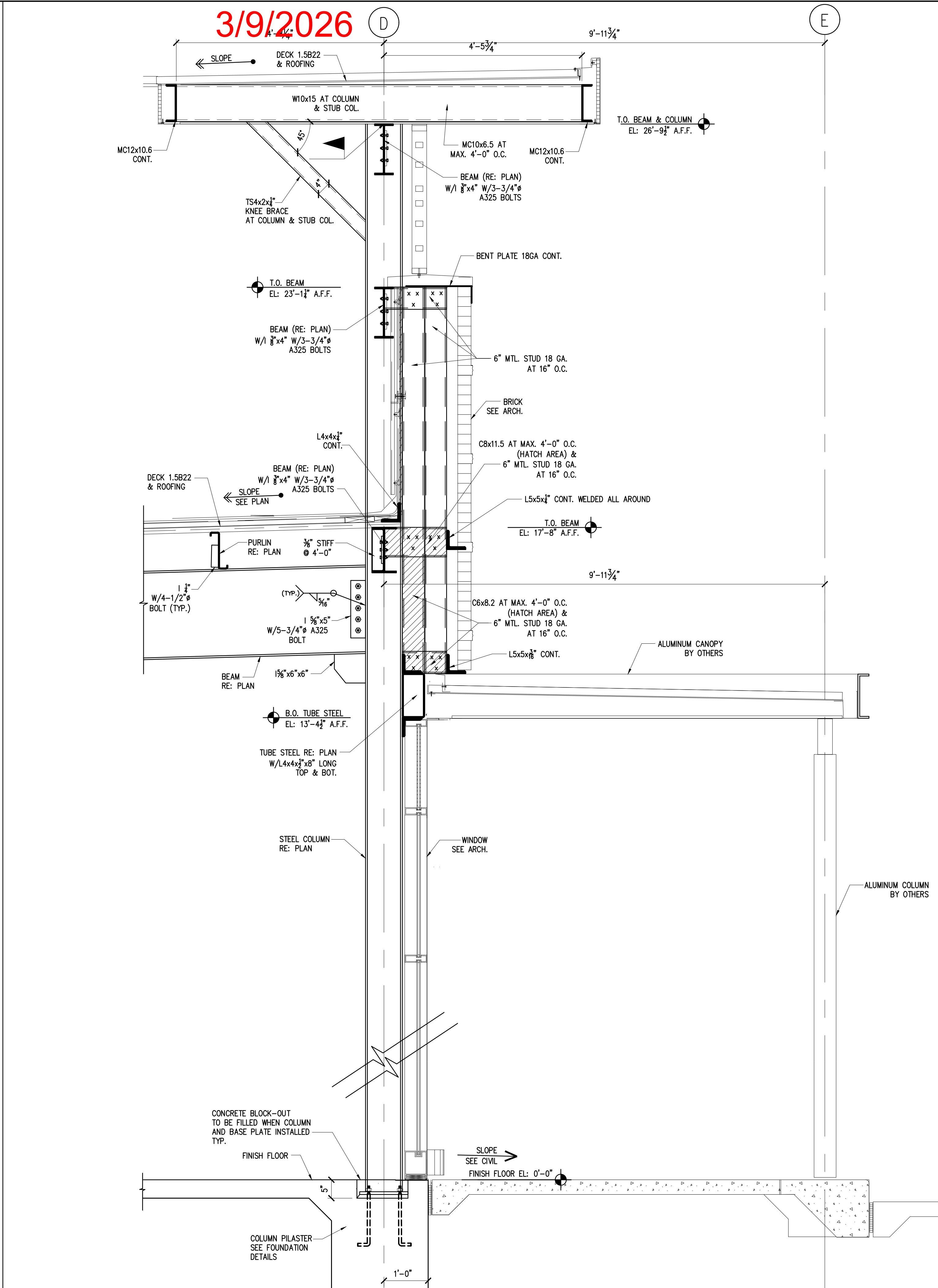
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PROJ. NO.: PE24-104	
SHEET:	S4



1 SECTION: AT SIDE PARAPET WALL



3 SECTION: AT STORE FRONT PARAPET WALL

WALL SECTIONS
FRAMING

IMPERIAL ROYAL GARDEN PLAZA
RETAIL-1 & 2
15015 & 15017 VOSS RD
SUGAR LAND, TEXAS, 77498

ISSUE HISTORY

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PE

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TBPE REGISTRATION # F-3394

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PROJ. NO.: PE24-104

SHEET: S5

3/9/2026

REINFORCED CONCRETE & GENERAL NOTES

DESIGN LOADS (IBC 2021)

1. LIVE LOADS ROOF 20 PSF
 FLOOR 100 PSF
2. ULTIMATE DESIGN WIND SPEED 139 MPH, RISK CATEGORY II.
3. ALL CONCRETE REINFORCING BARS SHALL CONFORM TO ASTM, GRADE 60. NO. 3 BARS MAY CONFORM TO ASTM A615, GRADE 40.
4. CONCRETE SHALL BE REGULAR WEIGHT, SAND AND GRAVEL AGGREGATE, WITH TYPE 1 PORTLAND CEMENT 5 SACK MIX, DESIGNATED MINIMUM COMPRESSIVE STRENGTH (F'c) OF 3000 PSI IN 28 DAYS.
5. ALL MIXING, TRANSPORTING, PLACING AND CURING OF CONCRETE SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE AMERICAN CONCRETE INSTITUTE.
6. CONCRETE COVERING PROTECTION OF THE REINFORCEMENT BARS SHALL BE 3" ALL AROUND. THERE SHALL BE NO HORIZONTAL CONSTRUCTION JOINTS IN GRADE BEAM OTHER THAN CONSTRUCTION JOINTS SHALL BE MADE IN QUARTER SPANS BETWEEN FOOTING WITH VERTICAL BULKHEADS.
7. LAP CONTINUOUS UNSCHEDULED REINFORCING BARS AS FOLLOWS: BOTTOM BARS IN MEMBERS LAPPED AT FOOTING LOCATIONS. TOP BARS SHALL BE LAPPED AT MID-SPAN. LAP SHALL BE 50 BAR DIAMETERS OR PER ACI CODE.
8. GROUT UNDER THE BASE PLATES SHALL BE NON SHRINKING TYPE WITH MINIMUM COMPRESSIVE STRENGTH OF 6,000 PSI IN 28 DAYS.
9. DETAILING AND PLACING OF CONCRETE REINFORCEMENT BARS AND ITS ACCESSORIES SHALL BE IN ACCORDANCE WITH ACI 315, LATEST EDITION.
10. ALL CONFLICT OR OMISSIONS BETWEEN DRAWING, NOTE, SOIL REPORT AND SITE CONDITIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER. FAILURE TO DO SO WILL OBLIGATE THE CONTRACTOR TO ANY JOB EXPENSE ARISING DUE TO ANY ERRORS THAT MAY OCCUR HEREON.

FILL & SUBGRADE PREPARATION

1. THE SITE SHOULD BE STRIPPED TO SUITABLE DEPTH TO REMOVE TOP SOIL, AS PER GEOTECHNICAL REPORT.
2. THE NATURAL SUBGRADE SHOULD BE SCARIFIED TO A MIN. DEPTH OF 6 IN. THE SCARIFIED SOIL SHOULD BE RECOMPACTED TO A MIN. 95% OF THE MAX. DRY DENSITY. THE MOISTURE CONTENT SHALL RANGE 1% TO 3% OF OPTIMUM MOISTURE.
3. SELECT FILL SHOULD CONSIST OF A CLEAN SANDY CLAY WITH LL LESS THAN 35 AND PI BETWEEN 10 & 20.
4. SELECT FILL SHOULD BE PLACED IN 8 IN. LOOSE LIFTS AND COMPACTED TO 95% OF MAX. DRY DENSITY AS PER ASTM D698.
5. A BEDDING LAYER OF LEVELING SAND OF 2" MAY BE PLACED UNDER THE FLOOR SLAB. VAPOR BARRIER OF 10 MIL SHEETING SHOULD BE PLACED OVER SAND.
6. SLAB ON GRADE SHALL BE PLACED ON SELECT FILL. REFER TO SOIL REPORT NO. EE-2411201-G BY EARTH ENGINEERING, INC. DATE: FEBRUARY 05, 2024 FOR STRUCTURAL FILL & SUBGRADE. SUBGRADE AND ADDITIONAL FILL SHALL BE COMPACTED TO A MINIMUM OF NINETY-FIVE PERCENT (95%) OF ITS MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR COMPACTION TEST, BY ASTM D-698 PROCEDURE. COVER THE PREPARED GRADE WITH 6 MIL POLYETHYLENE SHEETING. ADDITIONAL FILL MATERIALS SHALL BE SILTY OR SANDY CLAY HAVING A PLASTICITY INDEX (P.I.) OF 10 TO 20 AND A LIQUID LIMIT OF 28 OR MORE. FILL MATERIALS SHALL BE PLACED IN SIX TO EIGHT INCH LOOSE LIFTS.
7. ALL FOOTINGS ARE TO BEAR ON FIRM AND CLEAN SOIL. THE SOIL BEARING AT ALL FOOTING SHALL BE VERIFIED BY AN ACCEPTED METHOD. THE MINIMUM SOIL BEARING PRESSURE FOR THIS PROJECT IS 3,750 PSF FOR TOTAL AND 2,500 PSF FOR DEAD LOAD PLUS SUSTAINED LIVE LOAD. DRILLED FOOTING SHALL BE POURED IMMEDIATELY AFTER DRILLING.

STRUCTURAL AND MISCELLANEOUS STEEL

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL DIMENSION, ELEVATION AND REVIEW THESE DRAWINGS BEFORE FABRICATION AND ERECTION.
2. ALL STRUCTURAL & MISC. SHAPES SHALL BE ASTM A572 GRADE 50.
3. ALL DETAILING SHALL BE IN CONFORMANCE WITH THE STANDARDS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC).
4. UNLESS NOTED OTHERWISE, PROVIDE FRAMED BEAM CONNECTIONS IN ACCORDANCE WITH PART 4, AISC MANUAL - 3/4" ASTM A-325 BOLTS. DESIGN FOR SHEARS IN TABLES FOR ALLOWABLE LOADS ON BEAMS, PART 2.
5. FIELD CONNECTIONS SHALL BE EQUIVALENT TO STANDARD BOLTED CONNECTIONS USING 3/4" ASTM A-325 BOLTS UNLESS OTHERWISE SHOWN. IF CONNECTION BOLTS ARE IN SINGLE SHEAR, BOLTS SHALL BE PLACED IN VERTICAL ROWS. CONNECTION SHALL BE BOLTED OR WELDED - SEE DETAILS.
6. WELDING SHALL CONFORM TO THE "CODE OF WELDING IN BUILDING CONSTRUCTION" BY THE AMERICAN WELDING SOCIETY, LATEST EDITION. WELDS NOT CALLED OUT ON DRAWINGS SHALL BE 3/16" CONTINUOUS FILLET WELDS. WELDING ELECTRODES SHALL CONFORM TO AWS A5.1 OR A5.5 E70XX.
7. ANCHOR BOLTS SHALL CONFORM TO ASTM A-325 FOR HEADED A.B. AND SHALL BE SET USING RIGID TEMPLATES.
8. PROVIDE ONE COAT OF SHOP PRIMER TO ALL STEEL & GALVANIZE ALL STEEL EXPOSE TO WEATHER.
9. USE G90 FINISH FOR CANOPY DECK & G60 FOR ROOF DECK.

STEEL DECK

1. DESIGN, FABRICATION AND ERECTION OF METAL DECK SHALL BE CONFORMED TO THE STEEL DECK INSTITUTE "CODE OF RECOMMENDED STANDARD PRACTICE AND BASIC DESIGN SPECIFICATION", LATEST EDITION.
2. WELDED MATERIALS AND PROCEDURES SHALL BE MADE TO ENSURE AGAINST BURNING OF HOLES IN THE DECK. WELDS SHALL CONFORM TO THE FOLLOWING PATTERNS USING STANDARD WELDED WASHERS, WHERE REQUIRED, AT SUPPORTING MEMBERS.
 - A. WELD AT EACH SIDE LAP AND TWO EVENLY SPACED AT PANEL SEAMS.
 - B. WELD AT 12" MAX. AT THE PERIMETER.
 - C. #12" TEK FASTENERS AT 1/3 POINTS OF DECK SPAN AT PANEL SEAMS.

USE VULCRAFT METAL DECK 1.5B22 OR APPROVED EQUAL.

CONCRETE MASONRY NOTES

1. ALL CONCRETE MASONRY UNITS SHALL BE ASTM C-90 GRADE N TYPE-1. SAND AND GRAVEL AGGREGATE Fm= 1.600PSI.
2. ALL MORTAR SHALL BE ASTM C-270 TYPE-S MORTAR, CONSISTING OF PORTLAND CEMENT, LIME AND FINE AGGREGATE.
3. PORTLAND CEMENT SHALL CONFORM TO ASTM-C150. AGGREGATE SHALL CONFORM TO ASTM C-144, HYDRATED LIME SHALL CONFORM TO ASTM C-207.
4. NO CALCIUM CHLORIDE OR FLY ASH SHALL BE PERMITTED IN MORTAR MIX.
5. VERTICAL CELLS SHOWN ON PLANS OR IN SECTIONS AS SOLID SHALL HAVE A VERTICAL ALIGNMENT TO MAINTAIN A CLEAR, UNOBSTRUCTED, CONTINUOUS VERTICAL CELL, MEASURING NO LESS THAN 2" x 3".
6. ALL CELLS CONTAINING REINFORCEMENT SHALL BE FILLED SOLIDLY WITH 3,000 PSI GROUT OR CONCRETE. THE MAXIMUM AGGREGATE SIZE FOR GROUTING SHALL BE 3/8".
7. ALL REINFORCING STEEL BARS SHALL BE IN PLACE PRIOR TO GROUTING.
8. ALL SPLICE IN REINFORCEMENT BARS SHALL LAP A MINIMUM OF 30 BAR DIAMETER.
9. PROVIDE VERTICAL EXPANSION JOINT 3/4" WIDE AT MAX. 20'-0" O.C. AS PER INDUSTRY STANDARD.

LIGHT GAUGE METAL FRAMING

1. ALL LIGHT GAUGE METAL FRAMING INCLUDING METAL STUDS, METAL JOISTS, TRACK RUNNERS AND BRIDGING (STRAP OR OTHER) SHALL BE AS MANUFACTURED BY CLARKDIETRICH OR EQUAL. ALL SIZE GAUGES AND SPACES SHALL BE AS PER THE DRAWINGS.
2. PAINTED METAL STUDS SHALL BE PAINTED TO CONFORM TO ASTM A570 GRADE 50. GALVANIZED METAL STUDS SHALL CONFORM TO ASTM A446 GRADE D, 50 KSI YIELD. PAINTED METAL STUDS SHALL BE PAINTED TO CONFORM TO FEDERAL SPECIFICATION TT-P664. FIELD ABRASIONS TO MEMBERS DUE TO CUTTING OR WELDING SHALL BE TOUCHED UP WITH THE SAME GALVANIZED METAL. STUDS SHALL BE FORMED FROM STEEL HAVING A G-60 GALVANIZE COATING. FIELD ABRASIONS TO MEMBERS DUE TO CUTTING OR WELDING SHALL BE REPAIRED WITH COLD GALVANIZING COMPOUND PER MANUFACTURERS SPECIFICATIONS.
3. PROVIDE HORIZONTAL BRIDGING AND PURLIN CONNECTION AS SUGGESTED BY MBMA.
4. PROVIDE 16 GAUGE CONTINUOUS TRACK AT ENDS OF STUDS. STUDS SHALL BE SEATED SQUARELY IN TRACK.
5. UNLESS NOTED OTHERWISE, PROVIDE 2-NO. 12 SCREWS OR 1/8" FILLET WELDS, 2 INCHES LONG FOR STUD TO STUD OR STUD TO TRACK CONNECTIONS.
6. STUD OR TRACK ATTACHMENTS TO STRUCTURAL STEEL SHALL BE ACCOMPLISHED BY FUSION WELDING 1" EACH SIDE OF STUD/TRACK, AT EACH SUPPORT AND CONNECTION.
7. FUSION WELDING OF STUDS SHALL CONFORM TO ASTM E60.
8. WALLS VERTICAL STUD SHALL BE 60CSW16 BY UNIMAST INCORPORATED OR APPROVED EQUAL WITH THE FOLLOWING TYPE, GAGE, AND PHYSICAL PROPERTIES. U.N.O. ON DWGS
WALL STUDS GAGE: 18
MOMENT OF INERTIA: 3.129 IN4/FT
SECTION MODULUS. 1.022 IN3/FT
MINIMUM THICKNESS. 6 IN (NOMINAL)

ABBREVIATIONS

ANGLE	L	MAXIMUM MECHANICAL	MAX. MECH.
APPROXIMATE	APPROX.	MEZZANINE	MEZZ.
ARCHITECT	ARCH.	MINIMUM	MIN.
BACK TO BACK	B-B	MISCELLANEOUS	MISC.
BOTTOM	BOT.	MOMENT CONNECTION	MC
CENTER LINE	C/L	NOT TO SCALE	N.T.S.
CENTER TO CENTER	C-C	NUMBER	NO. OR #
CLEAR OR CLEARANCE	CLR.	ON CENTER	O.C.
COLUMN	COL.	OPPOSITE	OPP.
CONCRETE	CONC.	PLATE	PL.
CONCRETE MASONRY UNIT	CMU	RADIUS	RAD.
CONNECTION	CONN.	REINFORCING	REIN.
CONTINUOUS	CONT.	ROUGH OPENING	R.O.
DEAD LOAD	DL	ROUND	Ø
DIAGONAL	DIAG.	SCHEDULE	SCHED.
DIAMETER	DIA. OR Ø	SECTION	SECT.
DIMENSION	DIM.	SHEET	SHT.
DOWEL	DWL.	SIMILAR	SIM.
DRAWINGS	DWGS	SPACE	SP.
EACH	EA.	SPECIFICATION	SPECS.
EACH FACE	E.F.	STANDARD	STD
EACH WAY	E.W.	STEEL	STL.
ELEVATION	EL.	STIFFENER	STIFF.
ENGINEER	ENGR.	STIRRUPS	STIRR.
EQUAL	EQ.	STRUCTURE	STRUCT
EXISTING	EXIST.	STRUCTURAL	STRUCT'L
FACE TO FACE	F-F	TEMPERATURE	TEMP.
FINISH (ED)	FIN.	THICKNESS	THICK.
FLOOR	FL.	TOP & BOTTOM	T & B
GAGE OR GAUGE	GA.	TOP OF BEAM	T.O.B.
GALVANIZED	GALV.	TOP OF JOISTS	T.O.J.
HOLLOW STEEL SECTIONS	HSS	TOP OF PIER	T.O.P.
INSIDE FACE	I.F.	TOP OF STEEL	T.O.S.
INTERIOR	INT.	TYPICAL	TYP.
JOINT	JT.	UNLESS OTHERWISE NOTED	U.O.N.
KIPS (1000 LBS)	K	VERTICAL	VERT.
LIVE LOAD	LL	WITH	W/
LONG LEG HORIZONTAL	LLH		
LONG LEG VERTICAL	LLV		

WALL SECTIONS
FRAMING &
GENERAL NOTES

IMPERIAL ROYAL GARDEN PLAZA

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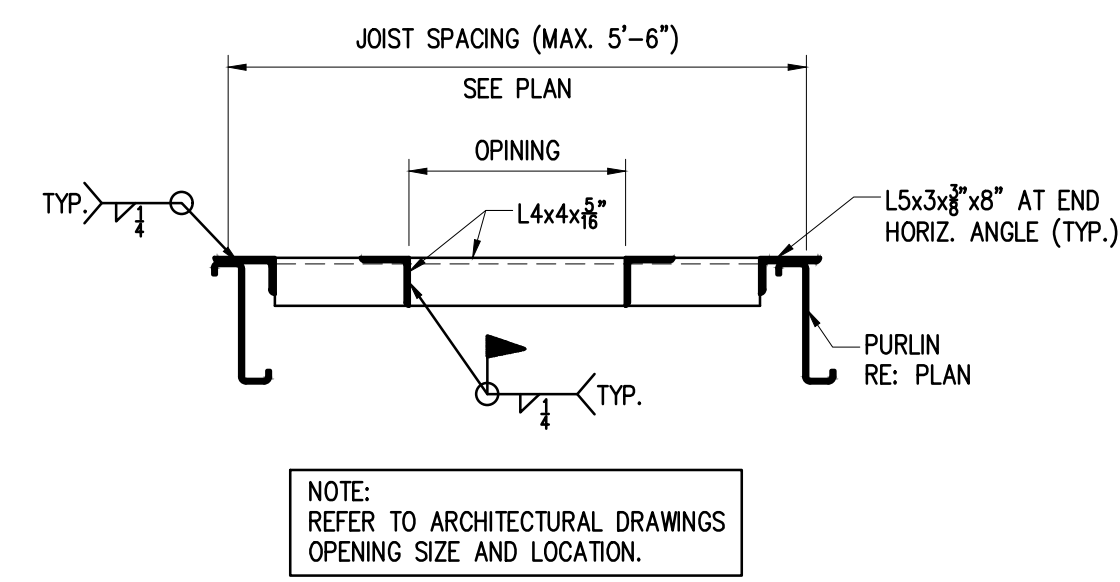
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PROJ. NO.: PE24-104

SHEET: S6

1 SECTION: AT STORE FRONT PARAPET WALL

3/9/2026



(1) DETAIL: TYP. PURLIN TO BEAM ATTACHMENT



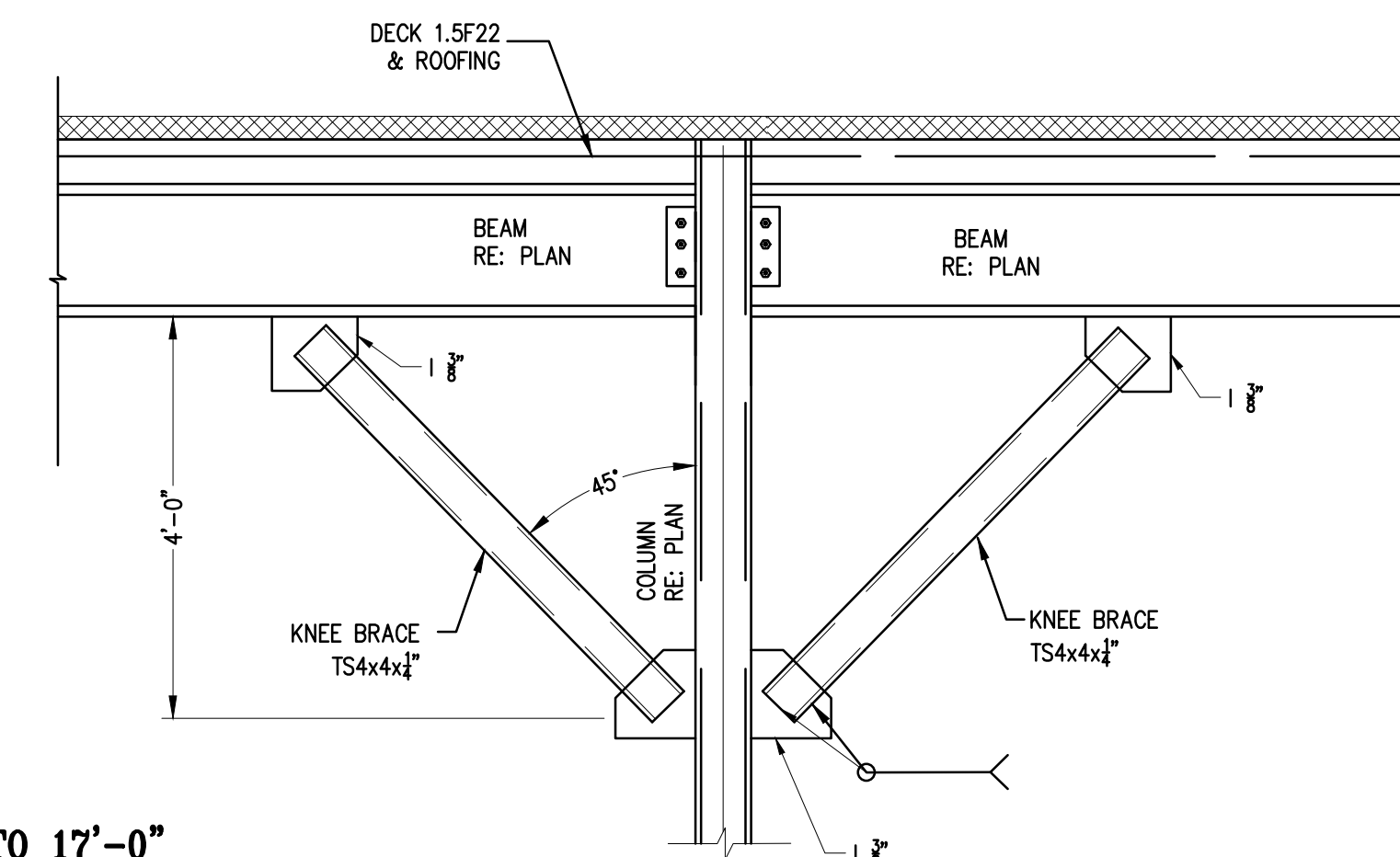
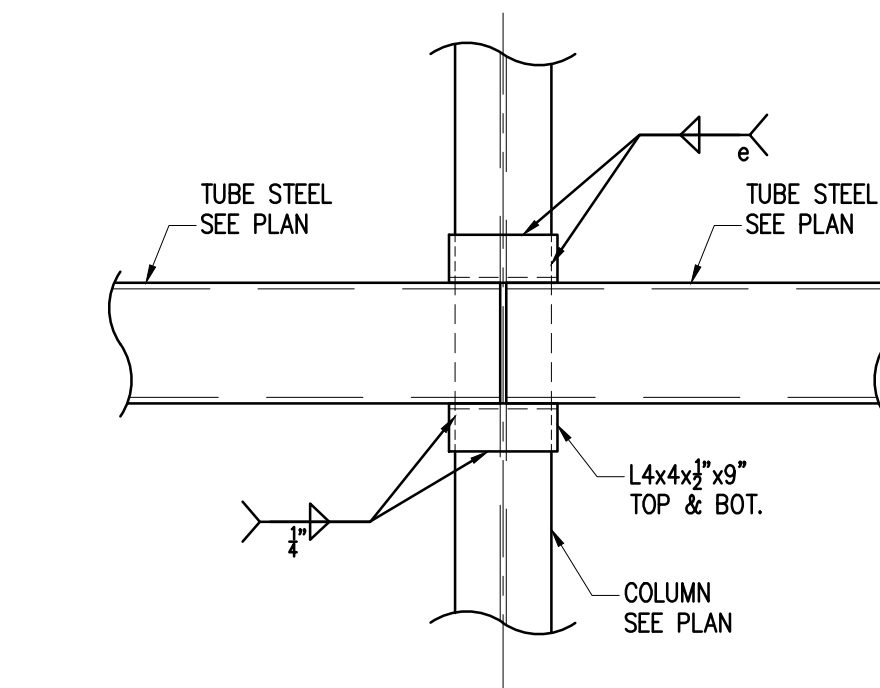
GRADE BEAM REINFORCEMENT SPLICING DETAIL



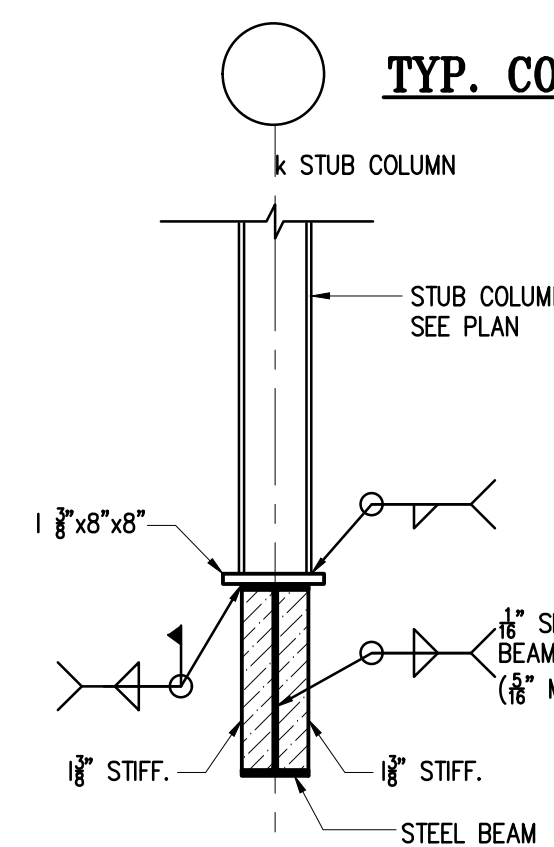
OPENINGS 6'-0" OR SMALLER OPENINGS 6'-0" TO 10'-0"

- NOTES**
1. PROVIDE 8" MIN. BEARING OF LINTEL BEAM @ EACH END.
 2. SHORE LINTELS FOR A MINIMUM OF 14 DAYS AFTER PLACEMENT.
 3. PROVIDE 1 TYPICAL VERT. BAR FULL HEIGHT OF WALL @ EACH JAMB.

TYP. TUBE STEEL TO COLUMN CONNECTION



TYP. COLUMN KNEE BRACE

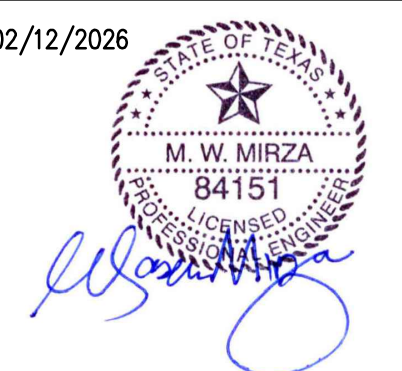


IMPERIAL ROYAL GARDEN PLAZA

RETAIL-1 & 2
15015 & 15017 VOSS RD
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[illegible]

02/12/2026



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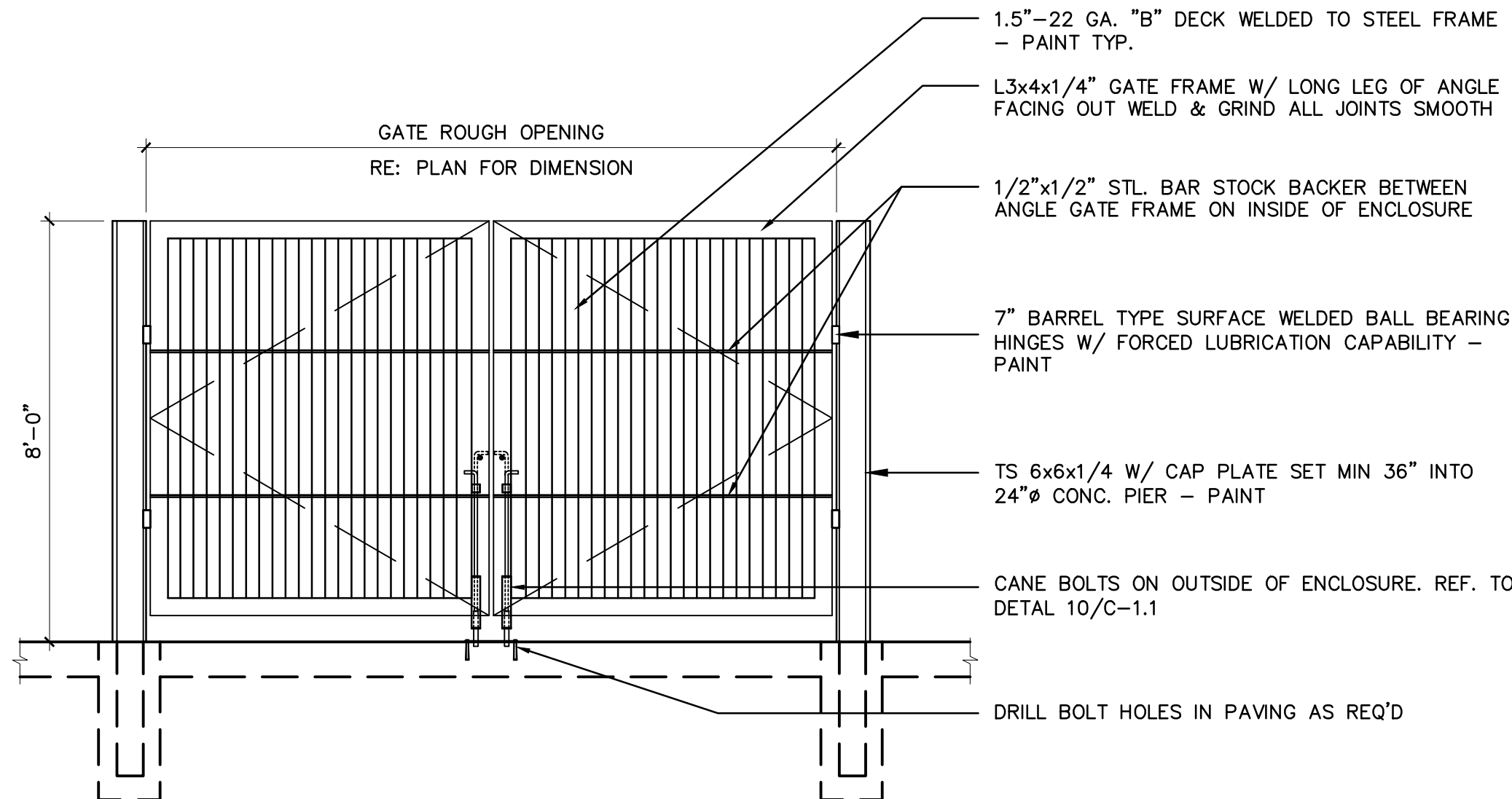
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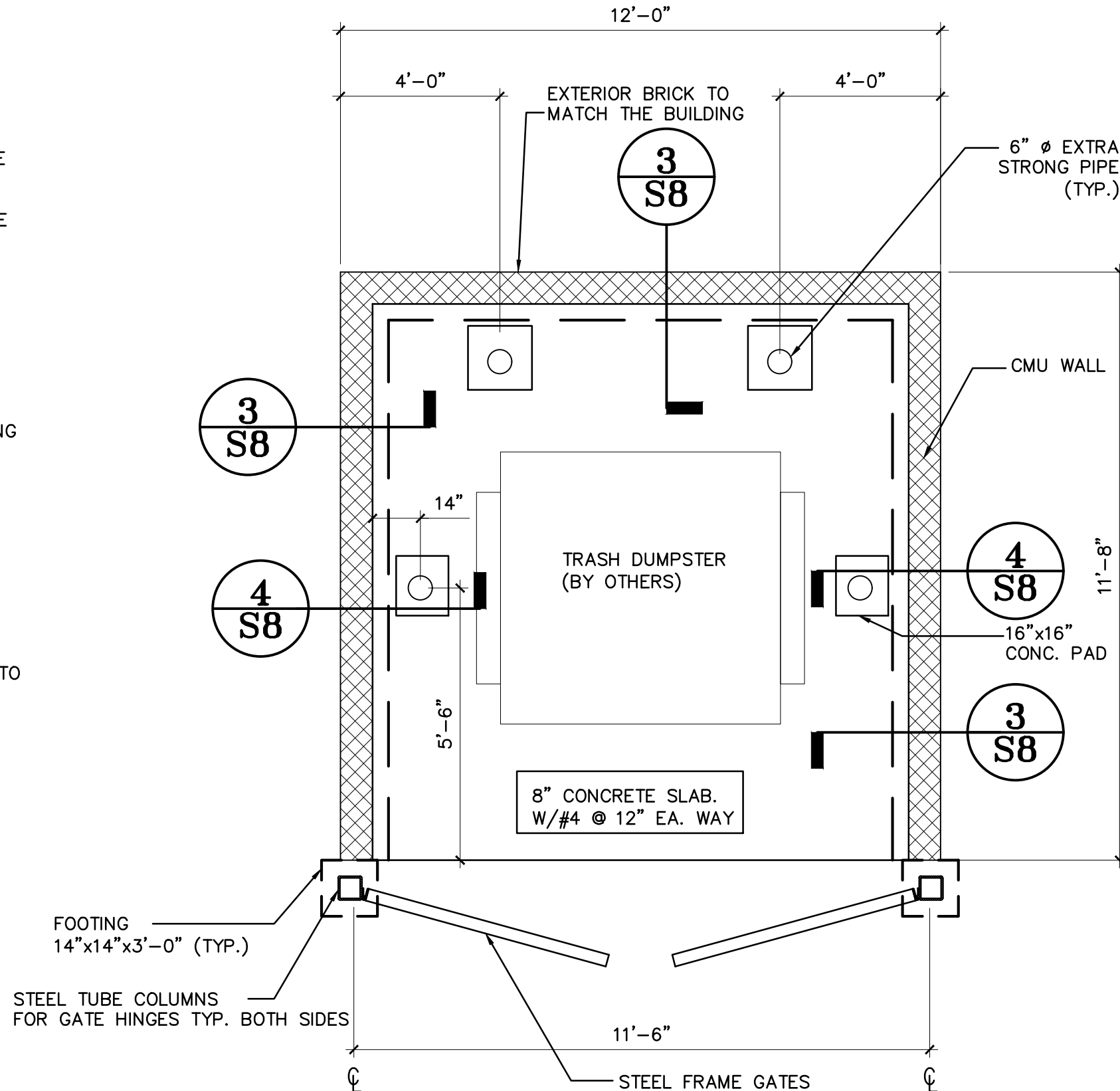
PROJ. NO.: PE24-104

SHEET: S7

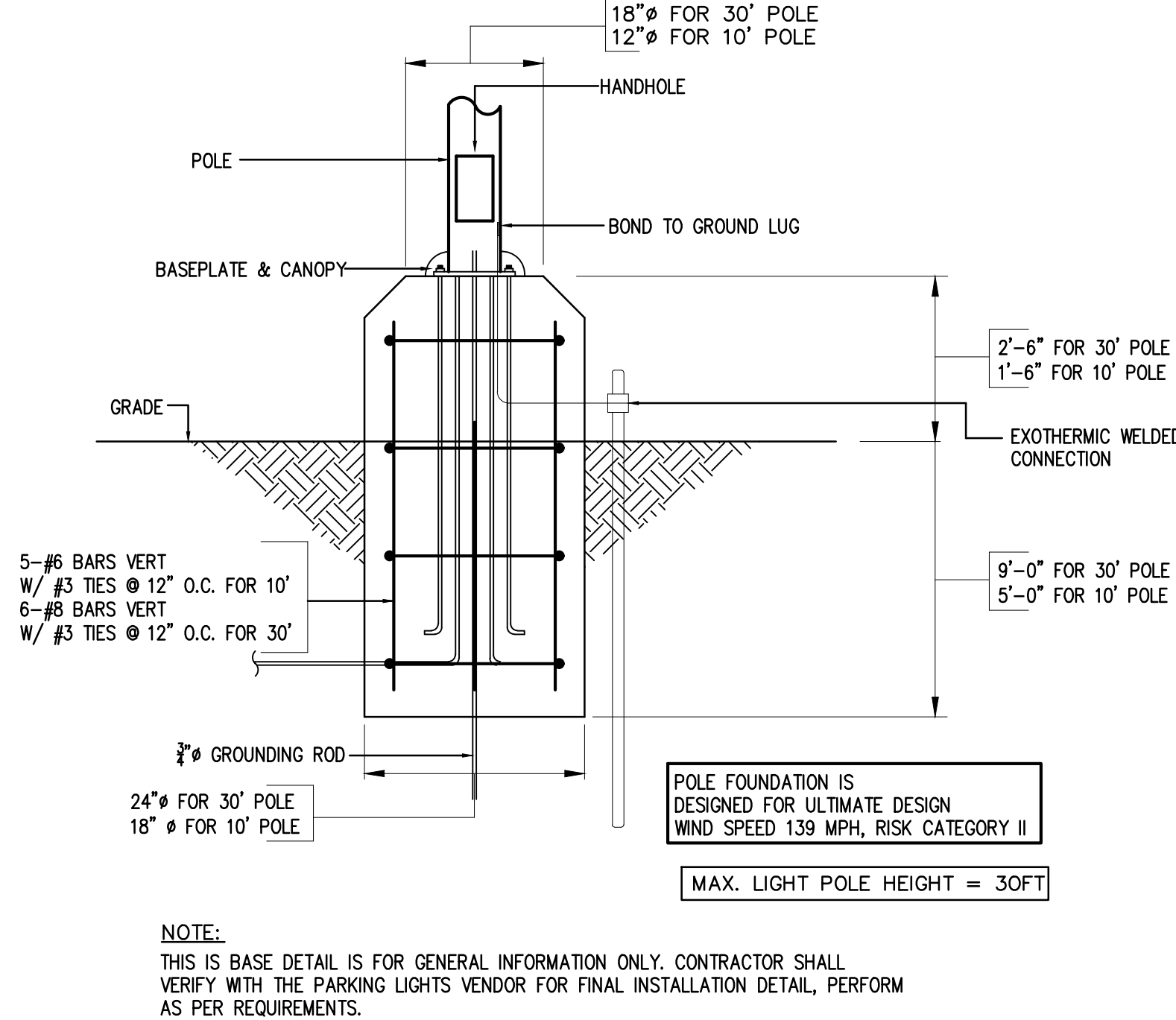


1 TRASH ENCLOSURE GATE ELEVATION

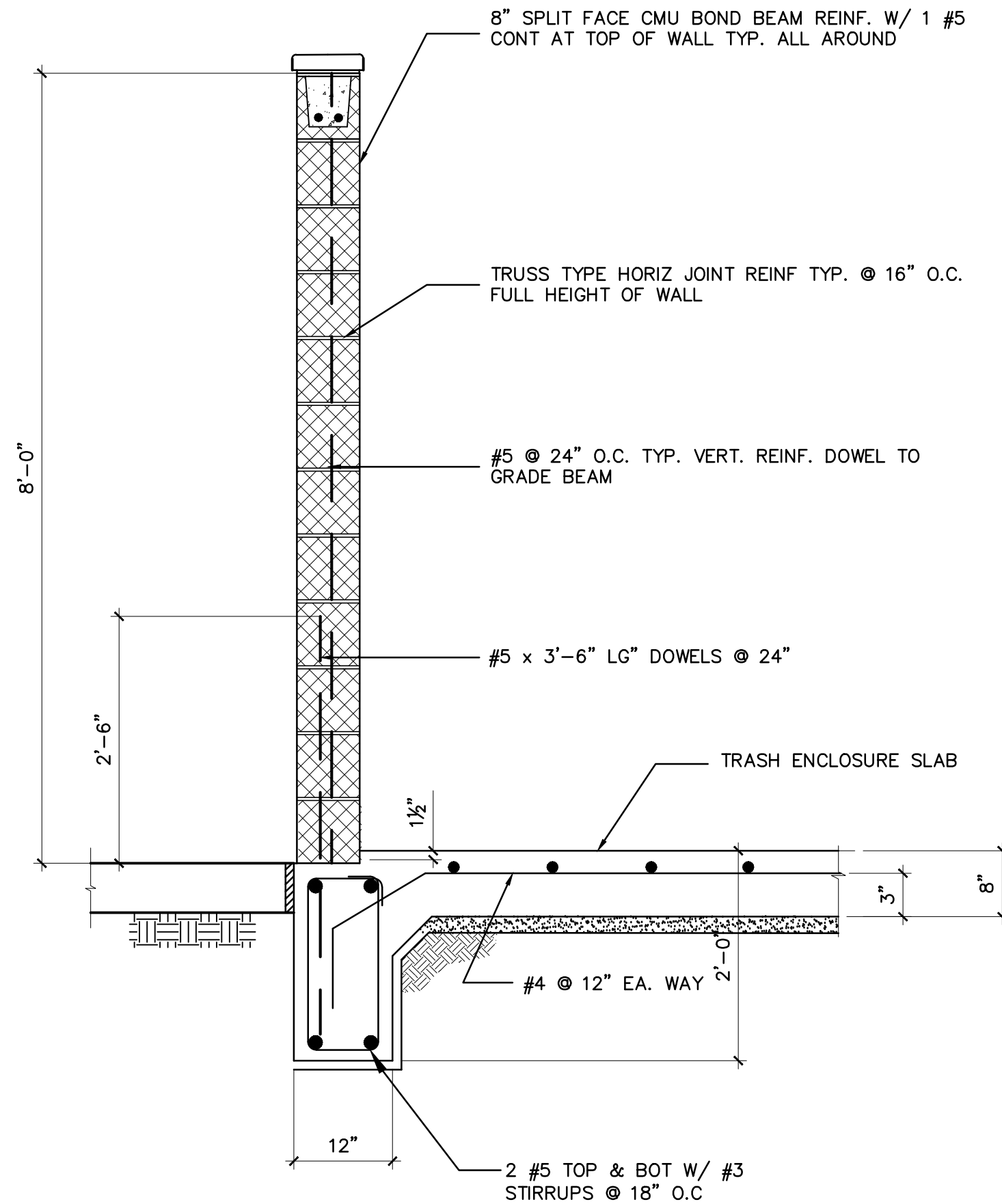
SCALE: $3/8" = 1'-0"$



DUMPSTER ENCLOSURE IS DESIGNED FOR
ULTIMATE DESIGN WIND SPEED 139 MPH, RISK
CATEGORY II AS PER IBC 2021



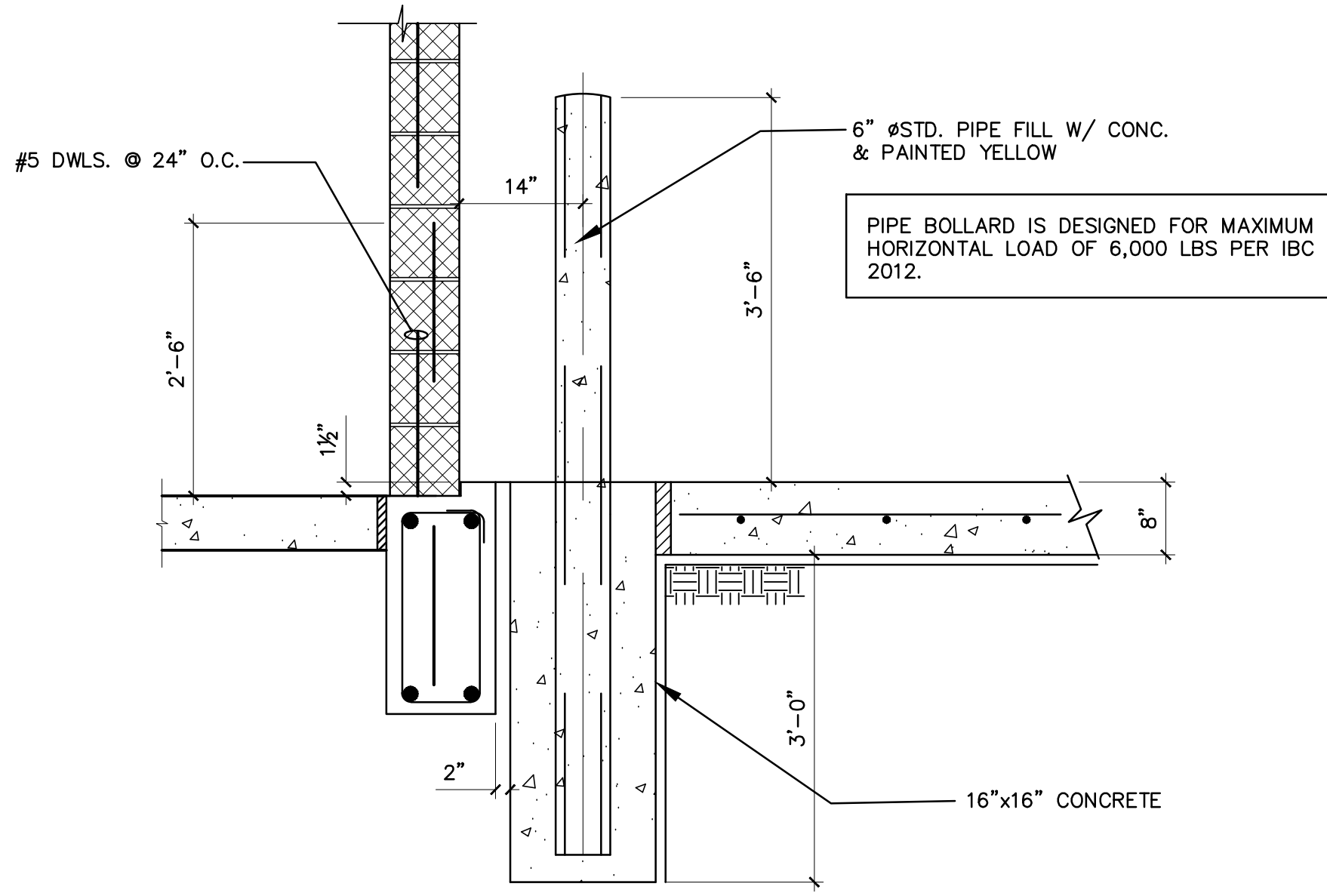
5 SECTION: LIGHT POLE SECTION



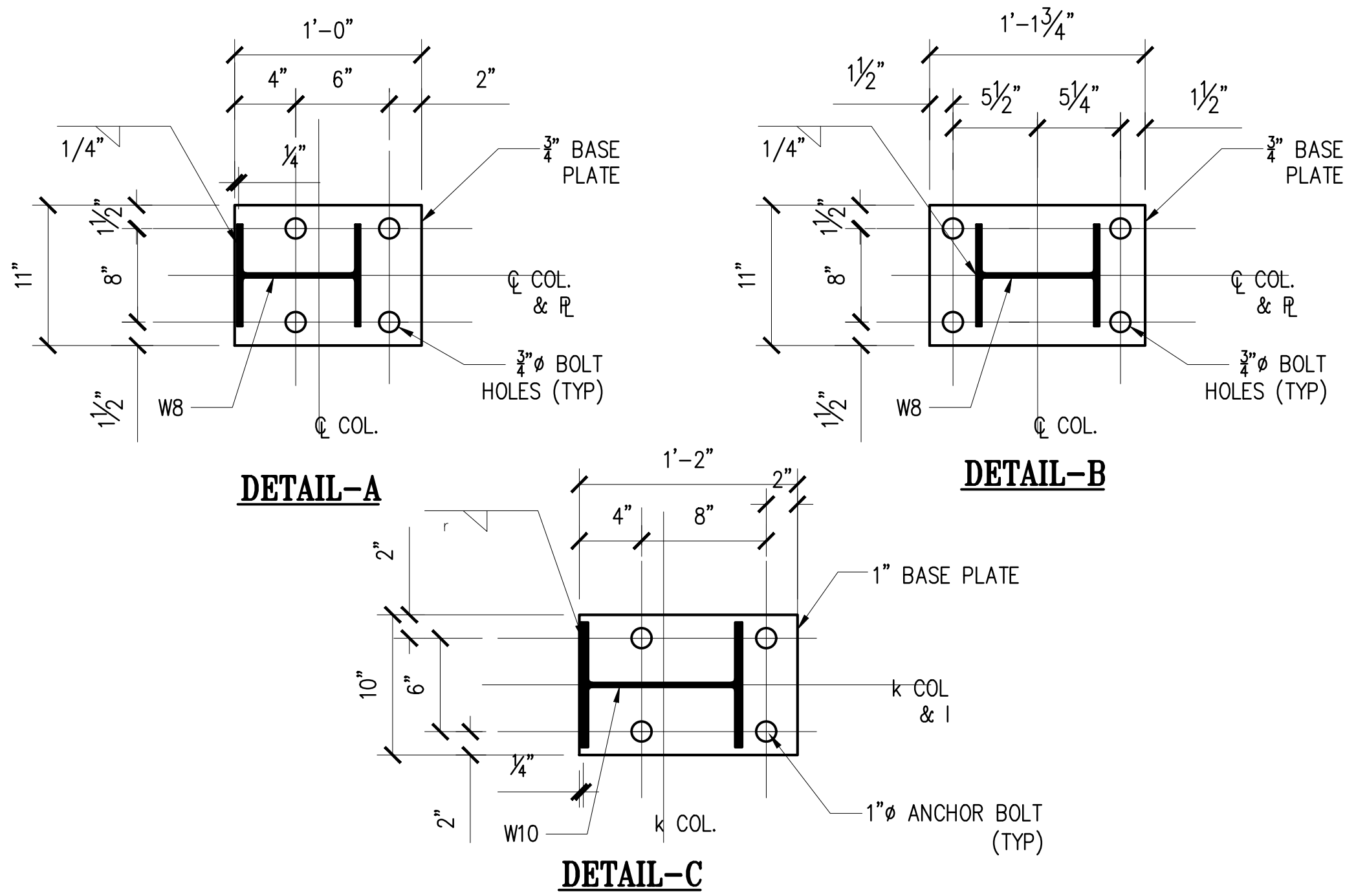
3 TRASH ENCLOSURE WALL/ FOUNDATION
SCALE: $3/4" = 1'-0"$

2 DUMPSTER ENCLOSURE PLAN

SCALE: $3/8" = 1'-0"$



4 SECTION: DUMPSTER
SCALE: 3/4" = 1'-0"



DUMPSTER ENCLOSURE PLAN & DETAIL

IMPERIAL ROYAL GARDEN PLAZA

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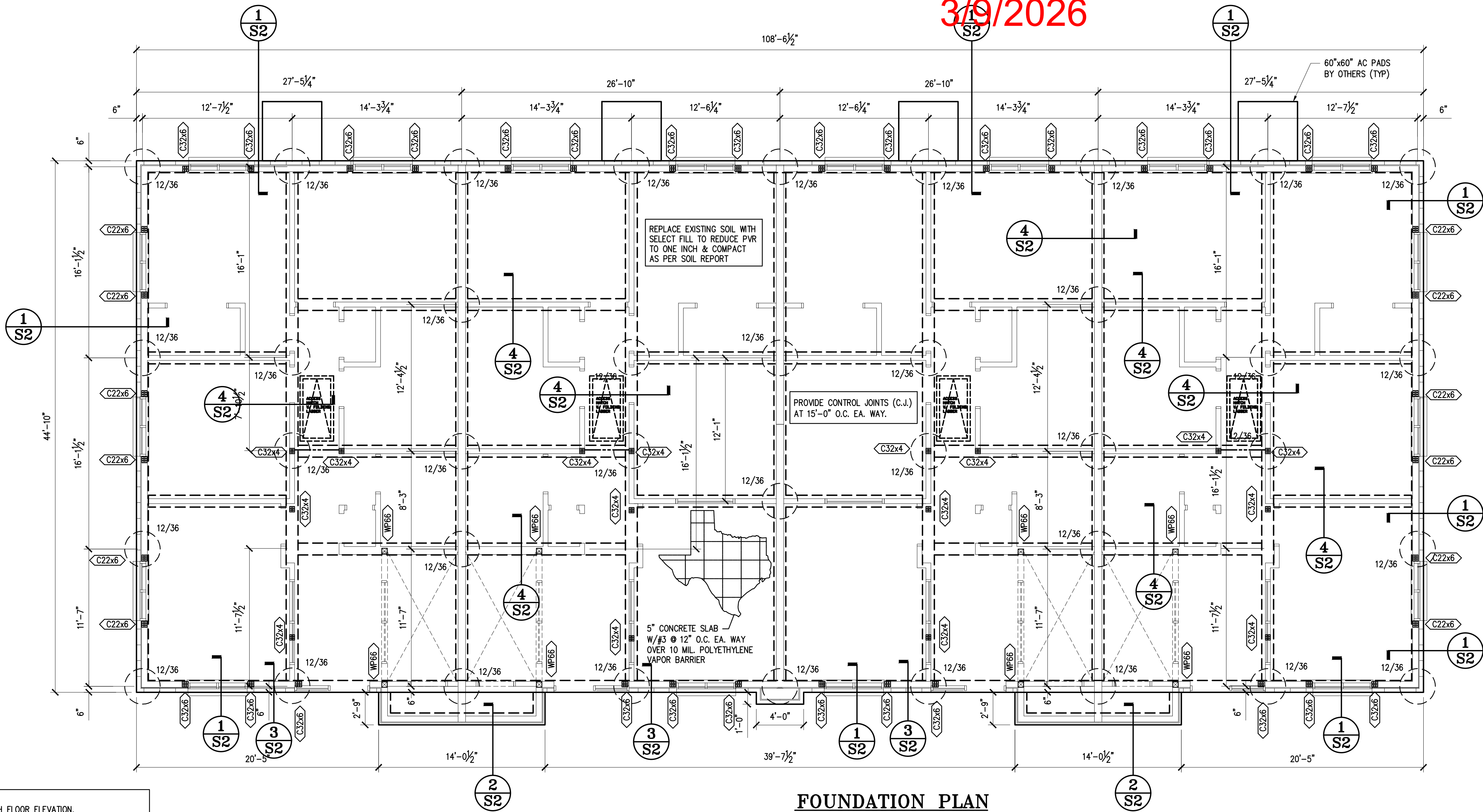
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PROJ. NO.: PE24-104

SHEET: **S8**



FOUNDATION PLAN

SCALE: 3/16"= 1'-0"

- NOTES:
1. REFER TO ARCHITECTURAL DRAWINGS FOR FINISH FLOOR ELEVATION.
 2. REFER TO ARCHITECTURAL DRAWINGS FOR BRICK LEDGE LOCATIONS, DETAILS & SLOPE.
 3. REFER TO ARCHITECTURAL & CIVIL DRAWINGS FOR SIDEWALK DETAILS AND LOCATIONS.

GENERAL NOTES FOR FOUNDATION SYSTEM

1. CONTRACTOR SHALL REVIEW & BECOME THOROUGHLY FAMILIAR W/ THE CONTENTS OF REFERENCED SOILS REPORT, WHICH WILL BE CONSIDERED AN INTEGRAL PART OF THE CONSTRUCTION DOCUMENTS. ANY PROBLEMS ARISING FROM THE CONTRACTOR'S LACK OF FAMILIARITY WITH SOILS REPORT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS & ELEVATIONS W/ ARCHITECTURAL DRAWING BEFORE FABRICATION.

SUBGRADE PREPARATION AND FILL:

1. STRIP AREAS WITHIN BUILDING LINES TO REMOVE ALL VEGETATION, TOP SOIL AND DEBRIS.
2. FOLLOWING STRIPPING, PROOF ROLL EXPOSED SUBGRADE TO IDENTIFY WEAK OR SOFT AREAS. SUCH ZONES SHALL BE REMOVED AND REPLACED WITH SELECT FILL.
3. GRADE AREA TO PREVENT PONDING OF WATER. DO NOT ALLOW EXPOSED SUBGRADE TO DRY.
4. ALL FILL SHALL BE SELECT MATERIALS FOLLOWS:
CLEAN SANDY CLAY, FREE OF ORGANIC MATTER
PLASTICITY INDEX (PI) : 7 TO 20 % LIQUID LIMIT: 28 TO 40 %
5. FILL SHALL BE PLACED IN MAXIMUM LOOSE LIFTS OF 8 INCHES AND COMPACTED TO AT LEAST 95% OF STANDARD PROCTOR (ASTM D698 MAXIMUM DRY DENSITY AT OR 2 PERCENTAGE POINTS ABOVE THE OPTIMUM MOISTURE CONTENT).
6. PROVIDE 1-8" LOOSE LIFTS OF COMPACTED FILL (TOTAL COMPACTED FILL THICKNESS = 6") AND 2" LEVELLING SAND. (NOTE THAT EXISTING GRADE MAY HAVE TO BE CUT TO ACHIEVE THE COMPACTED FILL DEPTH SPECIFIED HEREIN.) REF: GEOTECHNICAL REPORT
7. TESTING: ALL COMPACTED FILL SHALL BE TESTED BY A CERTIFIED TESTING AGENCY AT THE RATE OF ONE TEST PER 1,000 SQUARE FEET OF EACH LIFT.

CONCRETE:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE "ACI STANDARD BUILDING CODE REQUIREMENT FOR STRUCTURAL CONCRETE: (ACI 318)".
2. NORMAL WEIGHT CONCRETE (W = 145 PCF) WITH MINIMUM 28 DAY COMPRESSIVE STRENGTH (f_c) = 3,500 PSI FOR PIERS, SLAB AND BEAMS.
3. CONCRETE SHOULD BE PLACED IN THE FOOTING EXCAVATIONS AS SOON AS POSSIBLE BUT NO LATER THAN THREE HOURS AFTER EXCAVATION TO MINIMIZE THE POSSIBILITY OF CAVING OF DRILLED PIERS.
4. CLEAN TOPS OF PIERS AND BOTTOM OF GRADE BEAM TRENCHES THOROUGHLY PRIOR TO PLACEMENT OF CONCRETE IN THE GRADE BEAMS.
5. SEE ARCHITECTURAL DRAWINGS FOR FLOOR ELEVATIONS, SLOPES AND THE LOCATION OF FLOOR DEPRESSIONS.

IMPORTANT NOTES ON SITE DRAINAGE:

1. SOILS AT THIS SITE CONTAIN CLAYS, AND VARIATIONS IN MOISTURE CONTENTS WILL PRODUCE VOLUMEN CHANGES IN THE SOILS THAT MAY DETRIMENTAL TO THE SATISFACTORY PERFORMANCE OF THE FOUNDATION SYSTEM.
2. SITE DRAINAGE, ESPECIALLY AROUND SLAB EDGES, MUST BE WELL DEVELOPED, SO THAT SURFACE WATER IS POSITIVELY DIRECTED AWAY FROM SLAB EDGES. A MINIMUM OF 5% GRADE SLOPE MUST BE MAINTAINED AT ALL TIMES WITHIN 10 FEET OF ALL SLAB EDGES.
3. LOCALIZED PONDING OF WATER, DUE TO PLANTER BEDS, OR OTHER CAUSES, MUST BE PREVENTED DURING OR AFTER COMPLETION OF CONSTRUCTION, OR LANDSCAPING.
4. BUILDER SHALL ADVISE OWNER OF THESE SITE DRAINAGE REQUIREMENTS.

CODE:

INTERNATIONAL BUILDING CODE: 2021

DESIGN LOADS:

1. ROOF LIVE LOADS	20 PSF		
2. FLOOR LIVE LOADS	(INTERNATIONAL BUILDING CODE-2021)		
EXTERIOR BALCONIES	60 PSF	SLEEPING ROOMS	30 PSF
DECKS	40 PSF	OTHER ROOMS	40 PSF
FIRE ESCAPES	40 PSF	ATTIC W/ STORAGE	20 PSF
STAIRS	40 PSF	ATTIC W/O STORAGE	10 PSF
GUARDRAILS & HANDRAILS	200 LBS *	GARAGE	50 PSF

* A SINGLE CONCENTRATED LOAD APPLIED IN ANY DIRECTION @ ANY POINT ALONG THE TOP.

3. WIND LOADS

ULTIMATE DESIGN WIND SPEED	139 MPH
EXPOSURE: B	RISK CATEGORY II

REINFORCING STEEL:

1. BARS - CONFORM TO ASTM A-615-GRADE 60, DOWELS AND STIRRUPS - GRADE 40.
2. WELDED WIRE FABRIC - CONFORM TO ASTM A-185 OR A-409, FURNISHED IN FLAT SHEETS AND MUST BE SUPPORTED ON CHAIRS SPACED 4'-0" O.C. MAXIMUM EACH WAY.
3. DETAILING - CONFORM TO ACI DETAILING MANUAL, 315.
REINFORCING STEEL COVERAGE:
FOOTINGS 3" BOTTOM AND SIDES
GRADE BEAMS 1 1/2" TOP, 3" BOTTOM, 2" SIDES (3" SIDES IF EARTH FORMED)
SLABS ON GRADE 1 1/4" TOP
WALLS 1 1/2"
4. LAP CONTINUOUS REINFORCING STEEL 36 BAR DIAMETERS.
5. SLAB REINFORCEMENT SHALL BE SUPPORTED ON CHAIRS, @ A 4'-0" MAXIMUM SQUARE GRID.
6. GRADE BEAM BOTTOM REINFORCEMENT SHALL BE SUPPORTED ON CHAIRS @ 6'-0" MAXIMUM SPACING.

NOTES ON PRESSURE-TREATED LUMBER:

1. ALL WOOD MEMBERS IN CONTACT WITH CONCRETE, OR EXPOSED TO WEATHER OR MOISTURE (SUCH AS PORCH & BALCONY FRAMING) SHALL BE PRESSURE-TREATED.
2. CURRENTLY, THE PRODUCT COMMONLY USED FOR PRESSURE TREATMENT IS ALKALINE COPPER QUATERNARY (ACQ). THIS MATERIAL IS EXTREMELY CORROSIVE. ONLY HOT-DIPPED GALVANIZED ANCHOR BOLTS, THRU BOLTS, NAILS, OR OTHER CORROSIVE-RESISTANT FASTENERS, SHALL BE USED WITH ACQ-TREATED LUMBER. FASTENER MANUFACTURER OR SUPPLIER SHALL BE CONSULTED ON THE SUITABILITY OF GALVANIZED FASTENER FOR USE WITH TREATED LUMBER.

PIPING PENETRATIONS:

1. ALL PIPING PENETRATIONS THROUGH EXTERIOR GRADE BEAMS SHALL BE SLEEVED WITH SCHEDULE 40 PIPE.

SOILS REPORT:

1. REFERENCE:
REPORT NO: EE-2411201-G
DATE: FEBRUARY 05, 2024
PREPARED BY: EARTH ENGINEERING, INC.
2. SOIL DATA:
PLASTICITY INDEX (PI) OF SURFICIAL SOILS: 10-18
POTENTIAL VERTICAL RISE (PVR) : MAX. PVR TO BE 1.0 INCHES
3. ALLOWABLE DESIGN BEARING PRESSURES:
TOTAL LOAD (DEAD & LIVE) : 2,500 PSF
DEAD & SUSTAINED LIVE LOAD : 3,750 PSF
4. CONTRACTOR MUST REVIEW SOIL REPORT FOR SITE PREPARATION, EXISTING CONDITION, SELECT FILL AND DRILLED SHAFT INSTALLATION. IN CASE OF DISCREPANCY CONTACT GEOTECH.

FOUNDATION
& DETAILS

IMPERIAL ROYAL GARDEN PLAZA

15019, 15021, 15023, 15027, 15029 VOSS RD
SUGAR LAND, TEXAS, 77498

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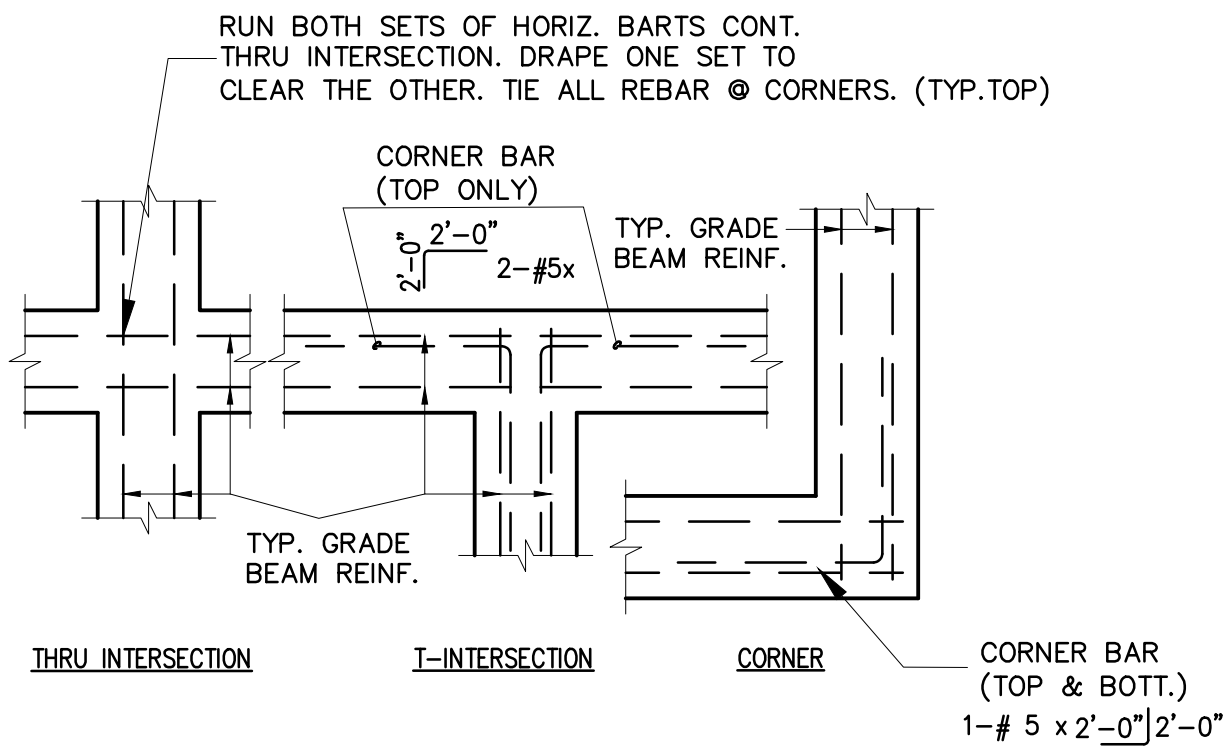
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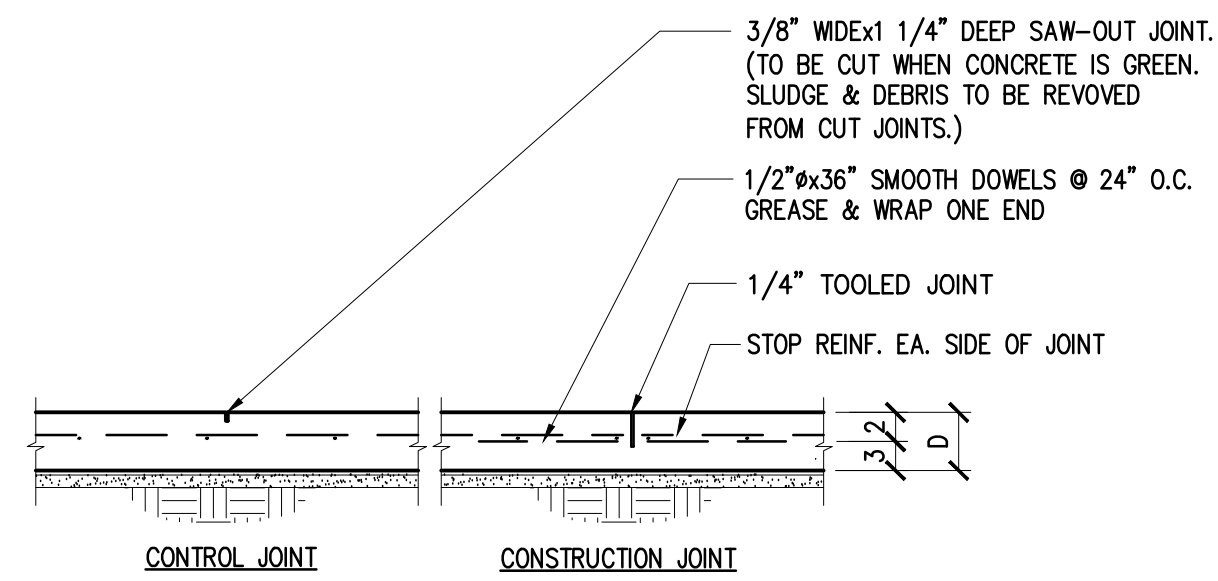
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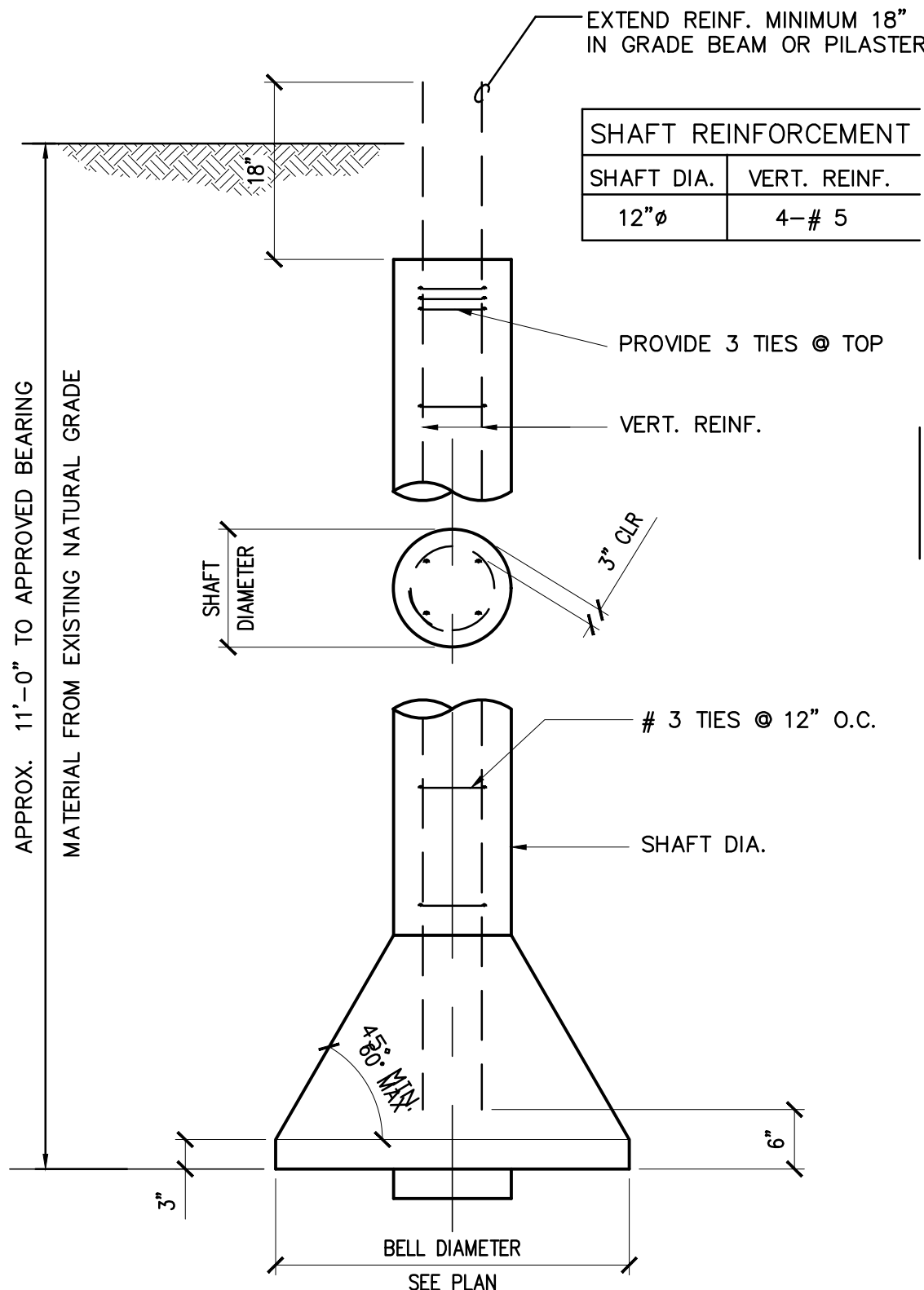
S1



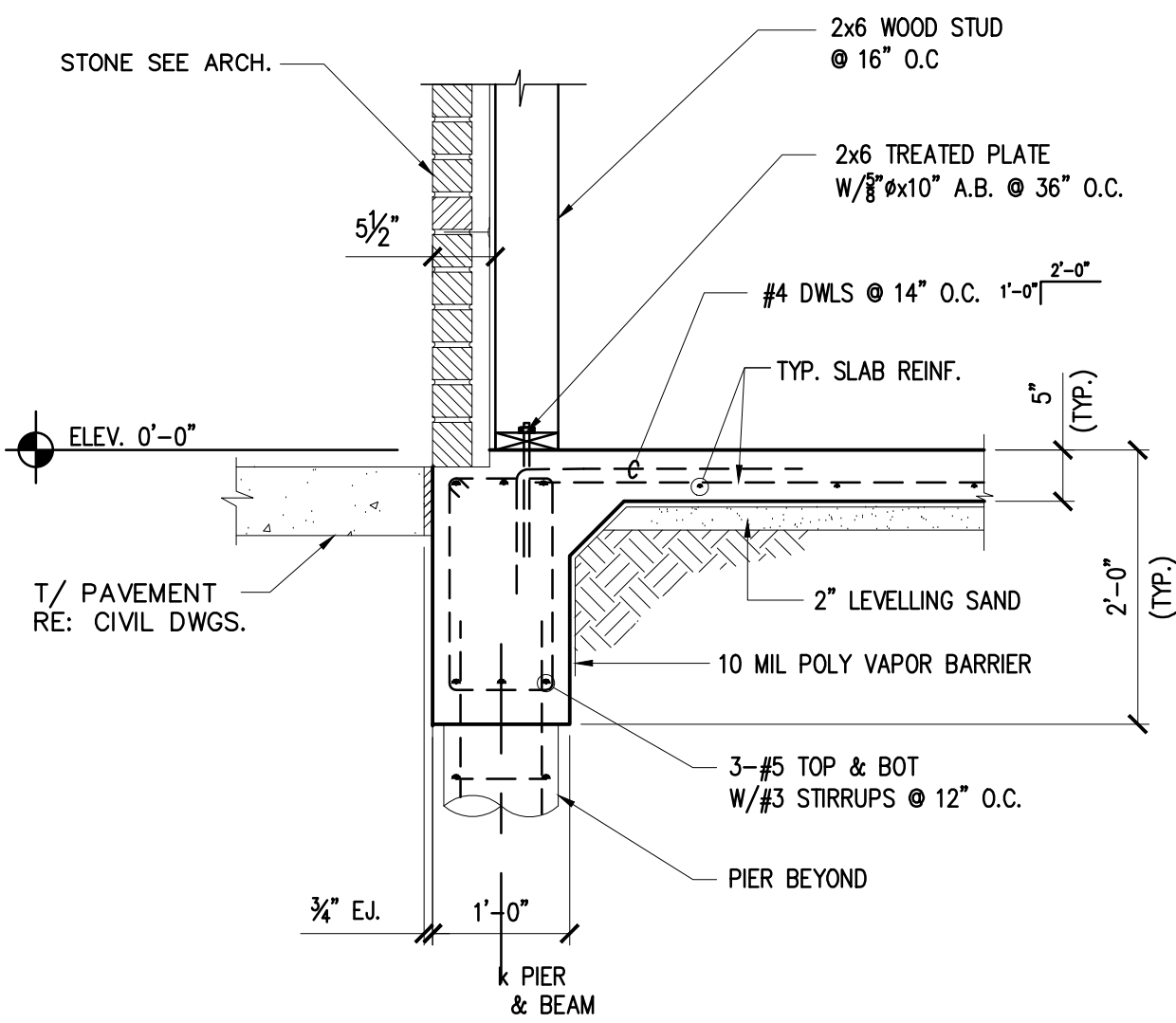
TYPICAL REINFORCEMENT DETAILS
@ GRADE BEAM INTERSECTIONS



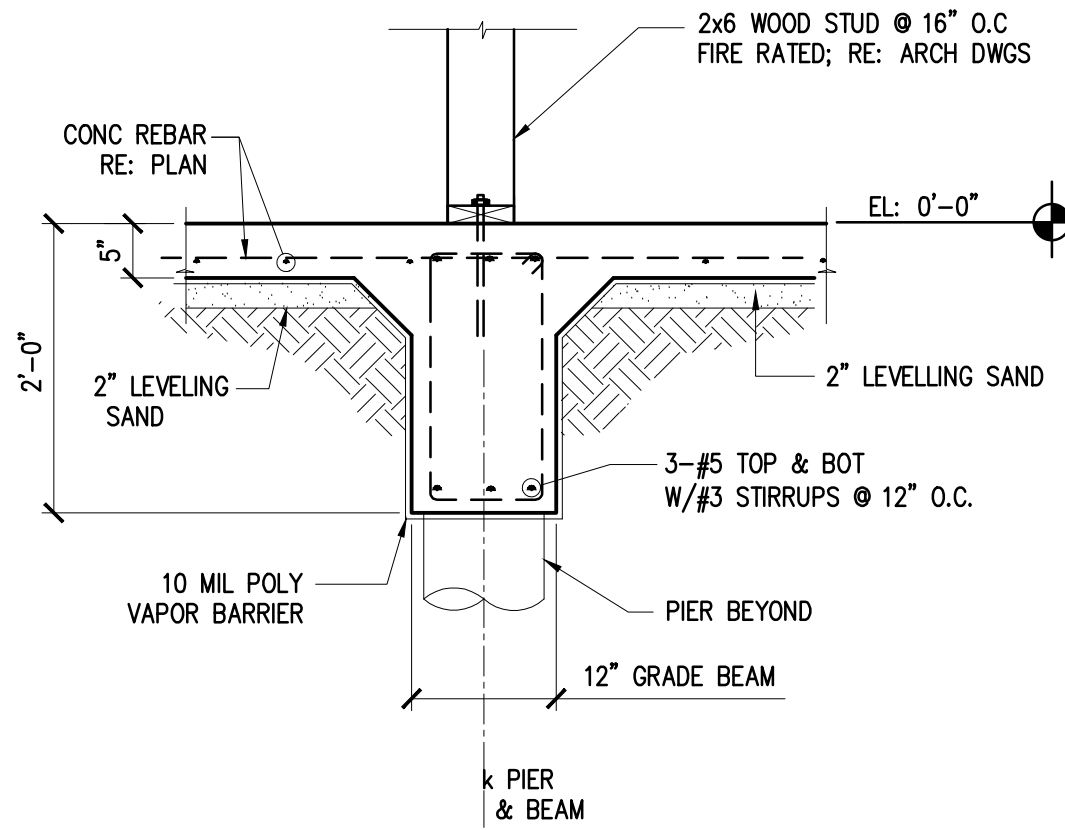
TYPICAL SLAB JOINT DETAILS



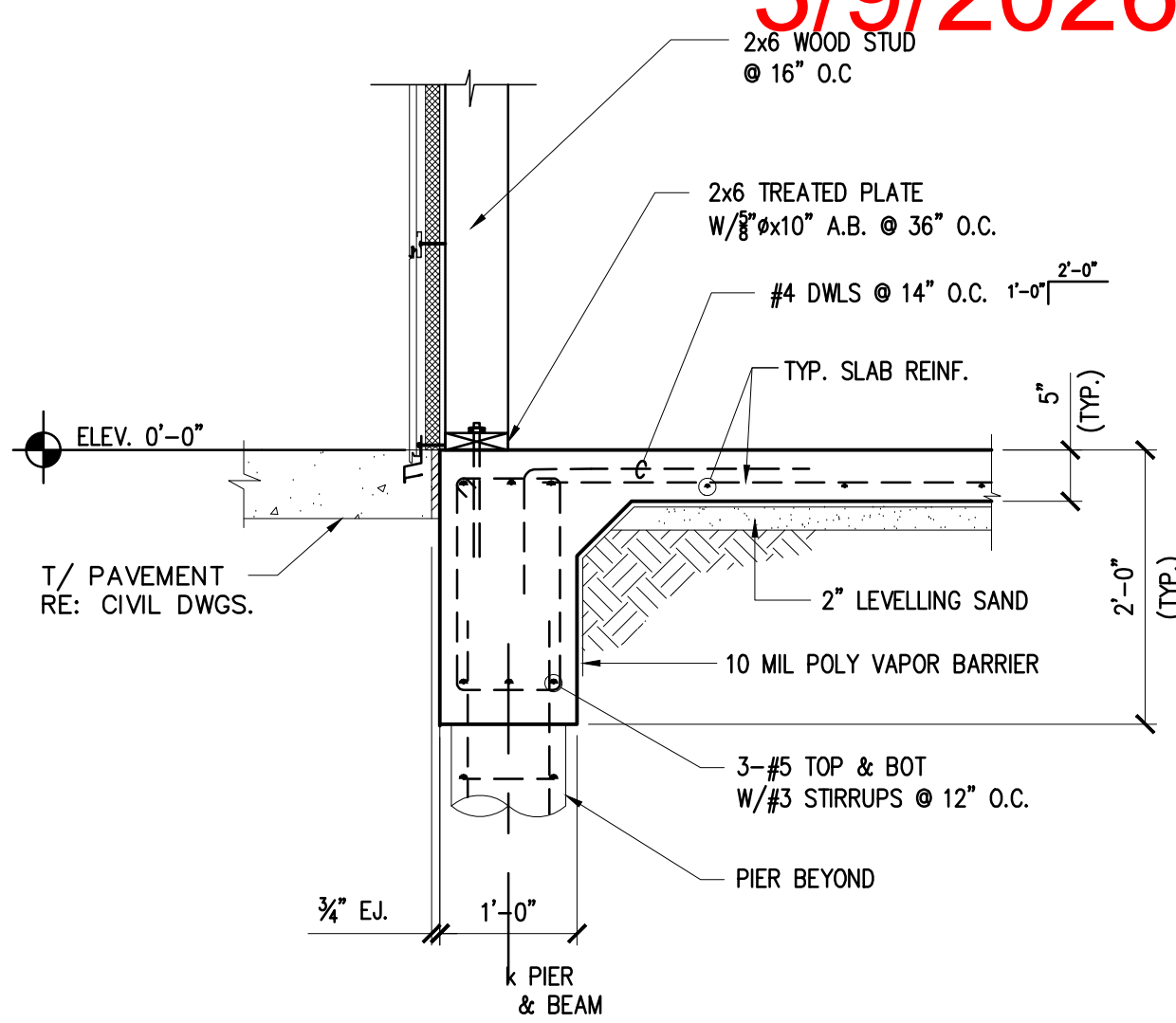
TYPICAL DRILLED PIER DETAIL



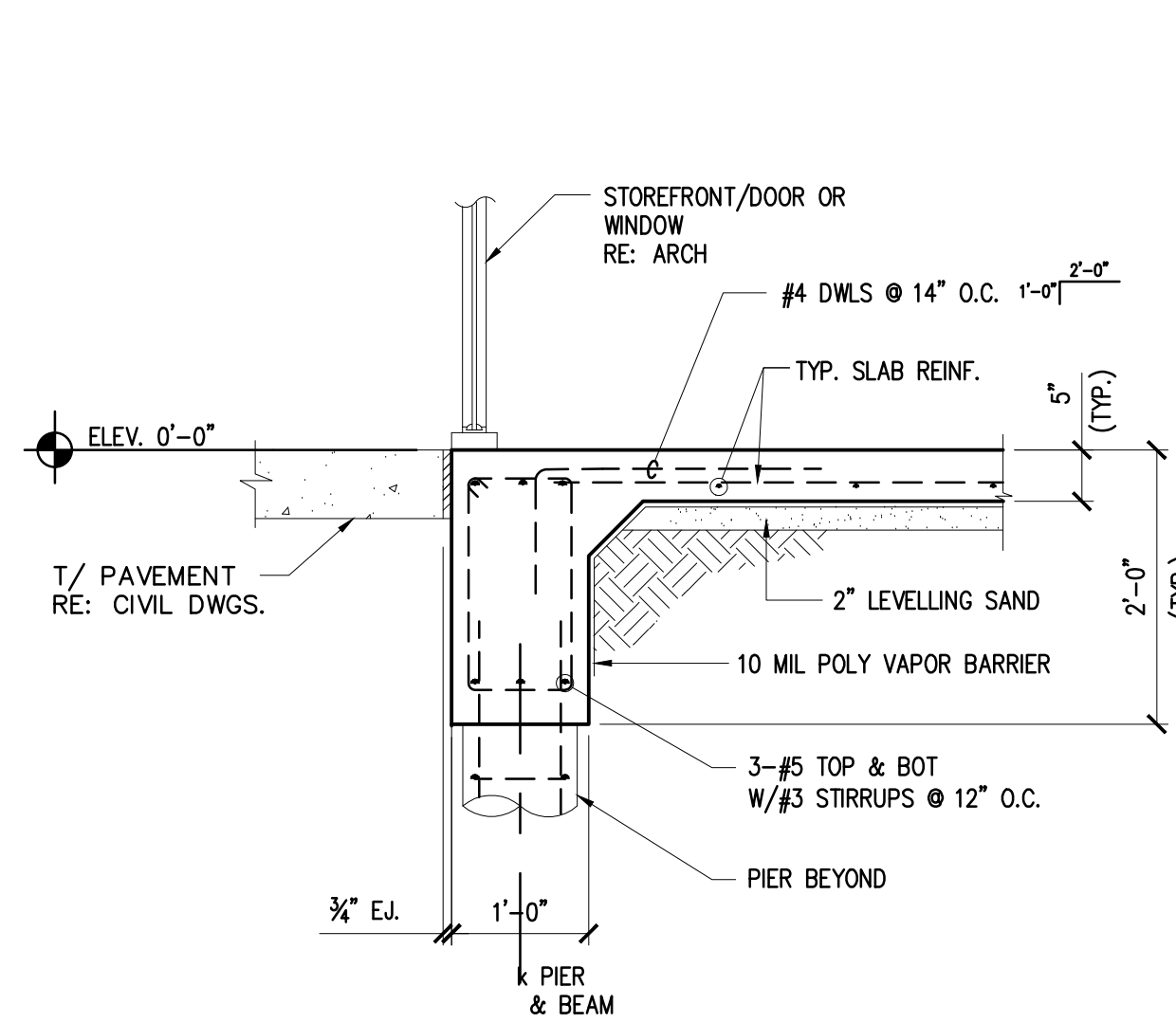
1 SECTION: TYP. GRADE BEAM AT BRICK WALL



4 SECTION: INTERIOR GRADE BEAM



2 SECTION: GRADE BEAM SIDING



3 SECTION: GRADE BEAM AT DOORWAY OR WINDOW

FOUNDATION
SECTIONS &
DETAILS

IMPERIAL ROYAL GARDEN PLAZA

15019, 15021, 15023, 15027, 15029 VOSS RD
SUGAR LAND, TEXAS, 77498

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SHEET: S2

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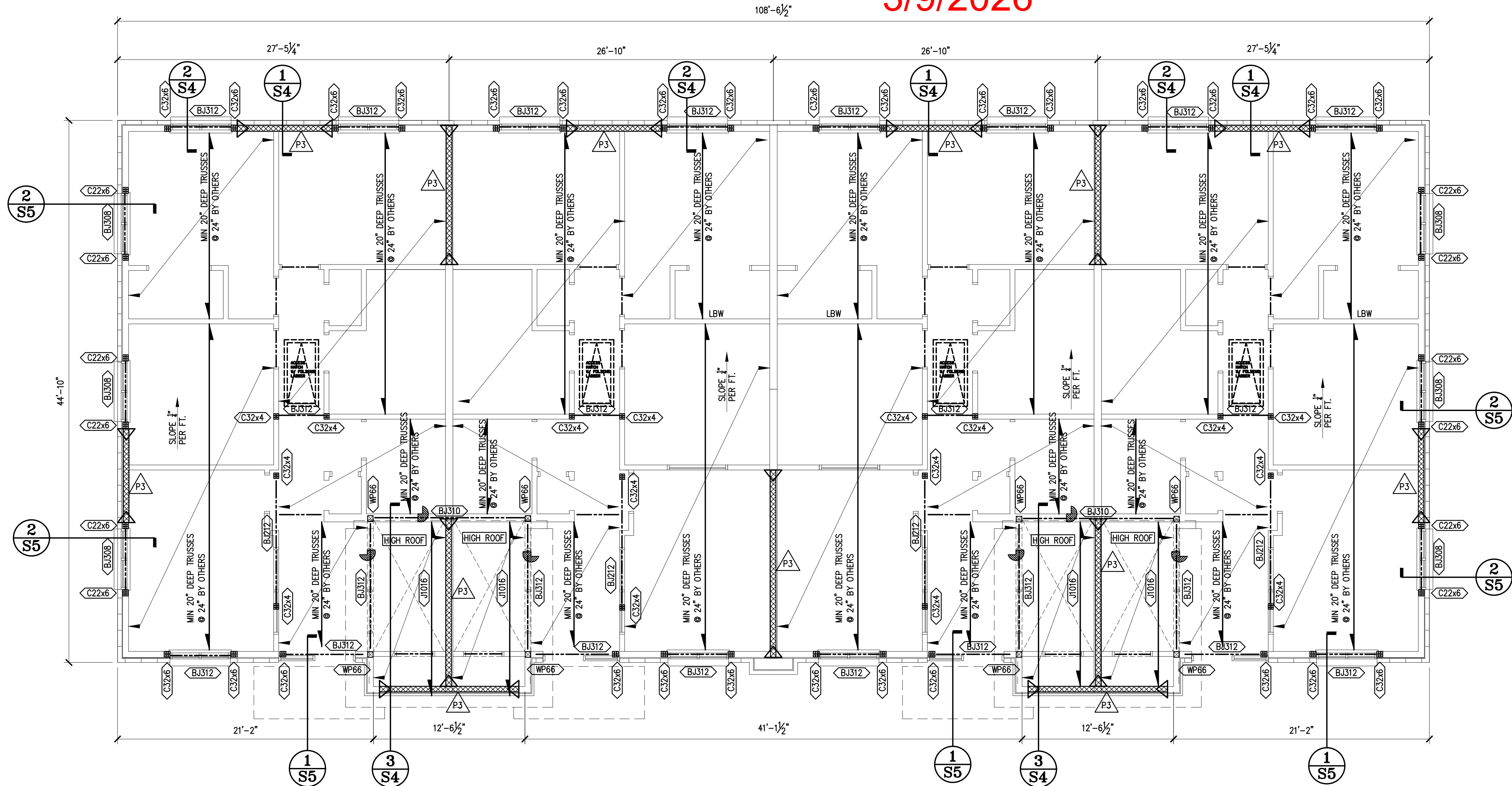
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SHEET:

S3



ROOF FRAMING PLAN

SCALE: 3/16" = 1'-0"

PLAN NOTES:

- ALL JOISTS SHALL BE #2 S.Y.P. (U.O.N.)
- ALL BEAMS & HEADERS SHALL BE #2 S.Y.P. (U.O.N.)
- ALL HEADERS SHALL BE 2-2x8 (U.O.N.)
- ALL WINDOWS & DOOR HEADERS ARE DROP BEAMS (U.O.N.)
- ALL EXTERIOR WALL SHALL BE SHEATHED WITH 1/2" PLYWOOD OR OSB.
- ALL INTERIOR LOAD BEARING WALLS SHALL BE 2x6 OR 2-2x4 AT 16" O.C. (U.O.N.) (PROVIDE SOLID BLOCKING AT EVERY 4'-0")
- ALL EXTERIOR WALLS SHALL BE 2x6 (U.O.N.) (PROVIDE SOLID BLOCKING @ EVERY 4'-0")
- ALL INTERIOR NON-LOAD BEARING WALLS SHALL BE 2x4 @ 16" O.C. (U.O.N.)

PLAN LEGEND

- DESIGNATES LOCATION OF ROOF WALLS BELOW ROOF
- DESIGNATES DIRECTION OF FLOOR TRUSSES OR JOIST IF ACTUAL DIRECTION DIFFERS, ENGINEER SHALL BE NOTIFIED BY TRUSS MANUFACTURER.
DEPTH OF TRUSS = 20" (U.O.N.)
- DESIGNATES CONCENTRATED LOADS IMPOSED ON ROOF TRUSSES BY MECH EQUIPMENT (IN KIPS).
- DESIGNATES SHEAR WALL
- DESIGNATES X-BRACING
- DESIGNATES SHEAR WALL TYPE. RE: SCHEDULE, NOTES, OR SPECIFICATIONS. MAKE ANCHOR FROM FLOOR ABOVE.
- DESIGNATES SHEAR WALL STRAP. USE MSTC40 U.O.N.
- NOT USED.
- DESIGNATES BEAM HANGER, IF NOT IDENTIFIED ON PLAN, USE TYPICAL HANGERS SPECIFIED IN GENERAL NOTES.
- DESIGNATE STEEL OR WOOD COLUMNS.
- DESIGNATE COL. FROM FLR. ABOVE.
- (LBW) LOAD BEARING WALLS FOR TRUSSES

FRAMING LEGEND (NOT ALL MAY APPLY)

JOISTS

J616	2x6 @ 16" O.C.
J816	2x8 @ 16" O.C.
J1016	2x10 @ 16" O.C.
J2016	2-2x10 @ 16" O.C.
J1216	2x12 @ 16" O.C.
J2216	2-2x12 @ 16" O.C.
J1212	2x12 @ 12" O.C.
J2212	2-2x12 @ 12" O.C.

BEAM (BEAM JOIST)

B208	2- 2x8
B308	3- 2x8
B210	2- 2x10
B310	3- 2x10
B212	2- 2x12
B312	3- 2x12

MEMBER DESCRIPTION

DB	DROP BEAM
FB	FLUSH BEAM
CNT	CANTILEVERED JOIST OR BEAM
RSB	ROOF SUPPORTING BEAM
UWA	UNDER WALL ABOVE
UCA	UNDER COLUMN ABOVE
TOP FB	TOP FLUSH BEAM
SBBC	SINGLE BM TO BM CONNECTION RE: DETAIL ON SHEET S5
WBSBC	WD BM TO STL BM CONNECTION RE: DETAIL ON SHEET S5

BEAM 2.OE PARALLAM BEAM (PSL) OR EQUAL

BP309	3 1/2"x9 1/4" PSL
BP311	3 1/2"x11 1/4" PSL
BP312	3 1/2"x11 1/8" PSL
BP314	3 1/2"x14" PSL
BP316	3 1/2"x16" PSL
BP318	3 1/2"x18" PSL

BP509	5 1/4"x9 1/4" PSL
BP511	5 1/4"x11 1/4" PSL
BP512	5 1/4"x11 1/8" PSL
BP514	5 1/4"x14" PSL
BP516	5 1/4"x16" PSL
BP518	5 1/4"x18" PSL

BP709	7"x9 1/4" PSL
BP711	7"x11 1/4" PSL
BP712	7"x11 1/8" PSL
BP714	7"x14" PSL
BP716	7"x16" PSL
BP718	7"x18" PSL

COLUMNS (STEEL COLUMNS)

TS3.5	TS 3"x3 1/2"x7" STEEL TUBE
TS55	TS 5"x5 1/2"x7" STEEL TUBE
TS33	TS 3"x3 1/2"x7" STEEL TUBE

MISCELLANEOUS

BP1	BASE PLATE RE: SHEET S2.4 FOR DETAILS
MC1	MOMENT CONNECTION RE: SHEET S2.4 FOR DETAILS

STEEL BEAM

W1631	W16x31
W1846	W18x46

COLUMNS (WOOD COLUMNS)

C22x4	2-2x4 STUDS
C32x4	3-2x4 STUDS
C42x4	4-2x4 STUDS
C22x6	2-2x6 STUDS
C32x6	3-2x6 STUDS
WP44	4x4 WOOD POST
WP46	4x6 WOOD POST
WP66	6x6 WOOD POST
WP88	8x8 WOOD POST

CONNECTORS

(SIMPSON STRONG-TIE OR EQUAL)

BH1	(HU 212(MAX)) BEAM HANGER
BH2	(HUC 212(MAX)) BEAM HANGER (CONCEALED FLANGE)
BH3	(LGU3.63-SDS) BEAM HANGER
BH4	(MGU5.50-SDS) BEAM HANGER
BH5	(HGU7.25-SDS) BEAM HANGER
BH6	(MGU3.63-SDS) BEAM HANGER
BH7	(HHGU5.50-SDS) BEAM HANGER
BH8	(HHGU7.25-SDS) BEAM HANGER
BH9	(HGLT) BEAM HANGER (OFFSET)
BH10	(HGLT) BEAM HANGER (OFFSET)

STR1	(H6) STWIST STRAP
STR2	(MSTA 24) STRAP

WPC	(PC/EPC) WOOD POST CAP
WPB	(ABU) WOOD POST BASE

WALL

WL26	2X6 WALL
WL28	2X8 WALL

PRESSURE-TREATED LUMBER NOTES:

- ALL WOOD MEMBERS IN CONTACT WITH CONCRETE, OR EXPOSED TO WEATHER OR MOISTURE (SUCH AS PORCH & BALCONY FRAMING) SHALL BE PRESSURE-TREATED.
- CURRENTLY, THE PRODUCT COMMONLY USED FOR PRESSURE TREATMENT IS ALKAUNE COPPER QUATERNARY (ACO). THIS MATERIAL IS EXTREMELY CORROSIVE, ONLY HOT-DIPPED GALVANIZED ANCHOR BOLTS, THRU BOLTS, NAILS, OR OTHER CORROSIVE-RESISTANT FASTENERS, SHALL BE USED WITH ACO-TREATED LUMBER. FASTENER MANUFACTURER OR SUPPLIER SHALL BE CONSULTED ON THE SUITABILITY OF GALVANIZED FASTENER FOR USE WITH TREATED LUMBER.

TEMPORARY&PERMANENTLY BRACING NOTES:

THE FRAMING SYSTEM DETAILED AND SPECIFIED IN THESE DRAWINGS WILL PERFORM ITS INTENDED FUNCTION ONLY WHEN COMPLETE AND ALL ITS COMPONENTS ARE IN PLACE.

UNTIL COMPLETED, THE FRAMING SYSTEM OR PORTIONS THEREOF, MAY BE UNSTABLE OR EVEN UNSAFE UNDER CONSTRUCTION-RELATED LOADS, OR EXTERNAL FORCES (SUCH AS WIND), UNLESS THE SYSTEM IS ADEQUATELY BRACED AND/OR SHORED.

THE INSTALLATION OF SUFFICIENT TEMPORARY & PERMANENT BRACING AND SHORING THROUGHOUT CONSTRUCTION IS THE RESPONSIBILITY OF THE CONTRACTOR AND/OR BUILDER.

GENERAL NOTES: PREFABRICATED WOOD FRAMING:

(THESE NOTES SHALL CONTROL UNLESS NOTED OTHERWISE ON PLANS AND DETAILS.)

- PREFABRICATED WOOD FRAMING MEMBERS INCLUDE WOOD TRUSSES, TRUSS-JOISTS, I-JOISTS OR OTHER SIMILAR PRODUCTS GENERALLY USED IN LIEU OF SOLID WOOD JOISTS.
- DESIGN LOADS:
ROOF LIVE LOAD = 20 PSF
PARAPET WALL LOAD = 65 PSF LATERAL WIND
BALCONY LIVE LOAD = 60 PSF
WALL LOAD = 65 PLF
- TRUSSES MEMBERS SHALL BE DESIGNED AND DETAILED BY MANUFACTURER, UNDER THE SUPERVISION OF A REGISTERED PROFESSIONAL ENGINEER.
- TRUSS MANUFACTURER AND/OR SUPPLIER MAY CHOOSE ENGINEERED LUMBER BEAMS IN LIEU OF TRUSSES UNDER LOAD-BEARING WALLS, OR OTHER LOCATIONS. IN THIS CASE, BEAM DESIGN SHALL BE BY TRUSS MANUFACTURER, WHO SHALL ALSO SPECIFY REQUIRED COLUMNS UNDER THESE BEAMS.
- TEMPORARY AND PERMANENT LATERAL BRACING OF ALL PREFABRICATED WOOD MEMBERS SHALL BE DESIGNED AND DETAILED BY MANUFACTURER.
(NOTE: THIS REQUIREMENT IS PARTICULAR IMPORTANT FOR DEEP TRUSSED MEMBER.)
- KEEP ALL PREFABRICATED WOOD MEMBERS ABSOLUTELY DRY & PROVIDE TEMPORARY SHORING WHERE SHEETROCK & OTHER HEAVY CONSTRUCTION MATERIALS ARE BEING TEMPORARILY STORED.
- ALL FRAMING AT BALCONY SHALL BE PRESSURE TREATED LUMBER.
- TRUSS SUPPLIER TO PROVIDE ALL BRIDGING FOR TRUSSES.

IMPORTANT NOTE ON TEMPORARY & PERMANET BRACING:

THE FRAMING SYSTEM DETAILED AND SPECIFIED IN THESE DRAWINGS WILL PERFORM ITS INTENDED FUNCTION ONLY WHEN COMPLETE AND ALL ITS COMPONENTS ARE IN PLACE.

UNTIL COMPLETED, THE FRAMING SYSTEM OR PORTIONS THEREOF, MAY BE UNSTABLE OR EVEN UNSAFE UNDER CONSTRUCTION-RELATED LOADS, OR EXTERNAL FORCES (SUCH AS WIND), UNLESS THE SYSTEM IS ADEQUATELY BRACED AND/OR SHORED.

THE INSTALLATION OF SUFFICIENT TEMPORARY & PERMANENT BRACING AND SHORING THROUGHOUT CONSTRUCTION IS THE RESPONSIBILITY OF THE CONTRACTOR AND/OR BUILDER.

CONTRACTOR SHALL REVIEW ARCHITECTURAL AND STRUCTURAL DRAWINGS JOINTLY PRIOR TO CONSTRUCTION, TO ENSURE COORDINATION OF ALL PHASES OF CONSTRUCTION DESCRIBED IN THESE DRAWINGS. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF BOTH ARCHITECT AND ENGINEER, PRIOR TO PROCEEDING WITH CONSTRUCTION WORK.

THE FOLLOWING ITEMS, IN PARTICULAR, HAVE TO BE CLOSELY COORDINATED BETWEEN ARCHITECTURAL AND STRUCTURAL DRAWINGS:

- ALL DIMENSIONS;
- SLAB AND FLOOR ELEVATIONS, SLOPES, AND LOCATION AND DIMENSIONS OF ANY RECESSES, INCLUDING THOSE INTENDED FOR SHOWERS, ELEVATORS, FLOORING MATERIALS, ETC.
- CURBS AND VENEER LEDGES;
- CEILING HEIGHTS AND CEILING CONDITIONS;
- ROOF GEOMETRY AND SLOPES.

IT'S THE OWNER'S RESPONSIBILITY TO HIRE A REPUTABLE CONTRACTOR WHO CAN COORDINATE BETWEEN ARCHITECTURAL & STRUCTURAL DRAWINGS FOR ACCURACY

WALL SECTION
FRAMING

IMPERIAL ROYAL GARDEN PLAZA

15019, 15021, 15023, 15027, 15029 VOSS RD
SUGAR LAND, TEXAS, 77498

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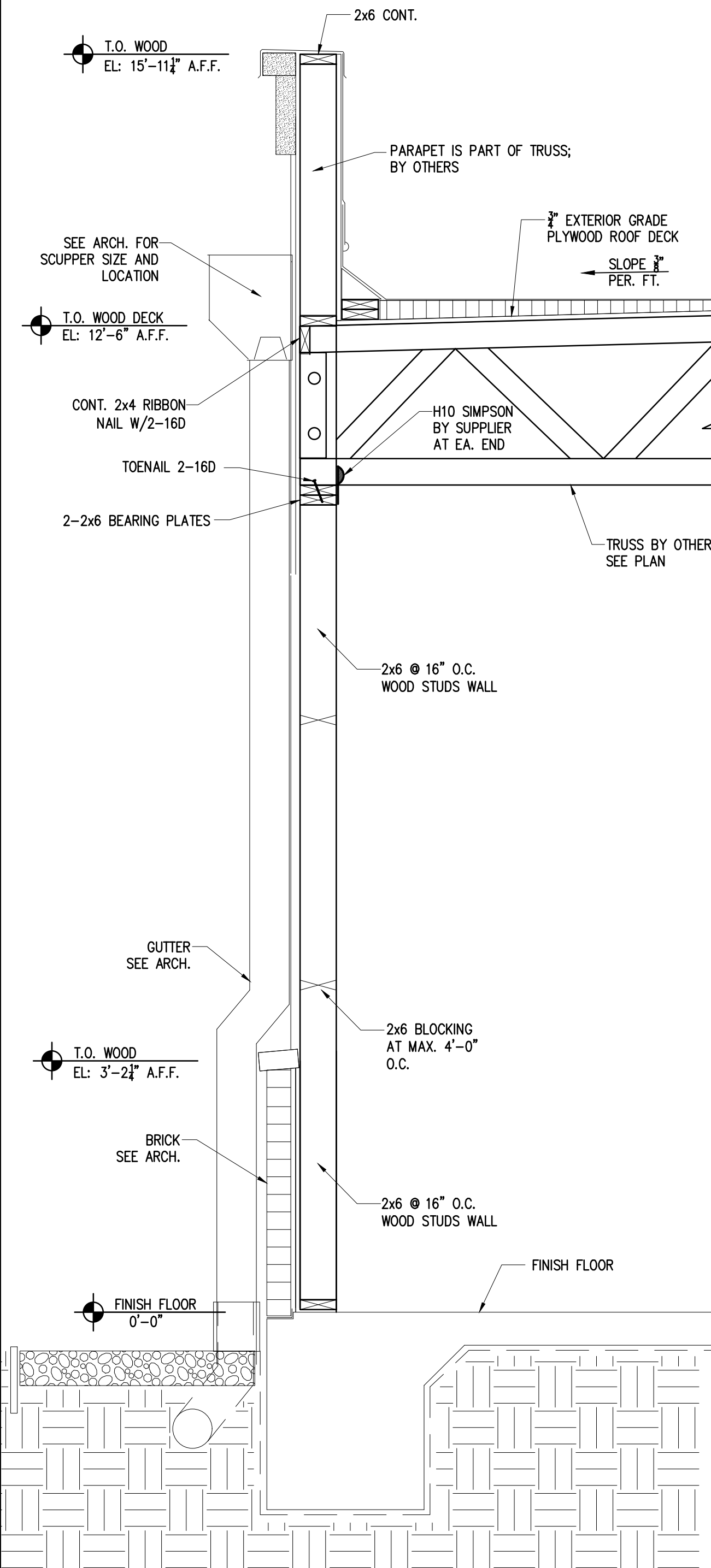
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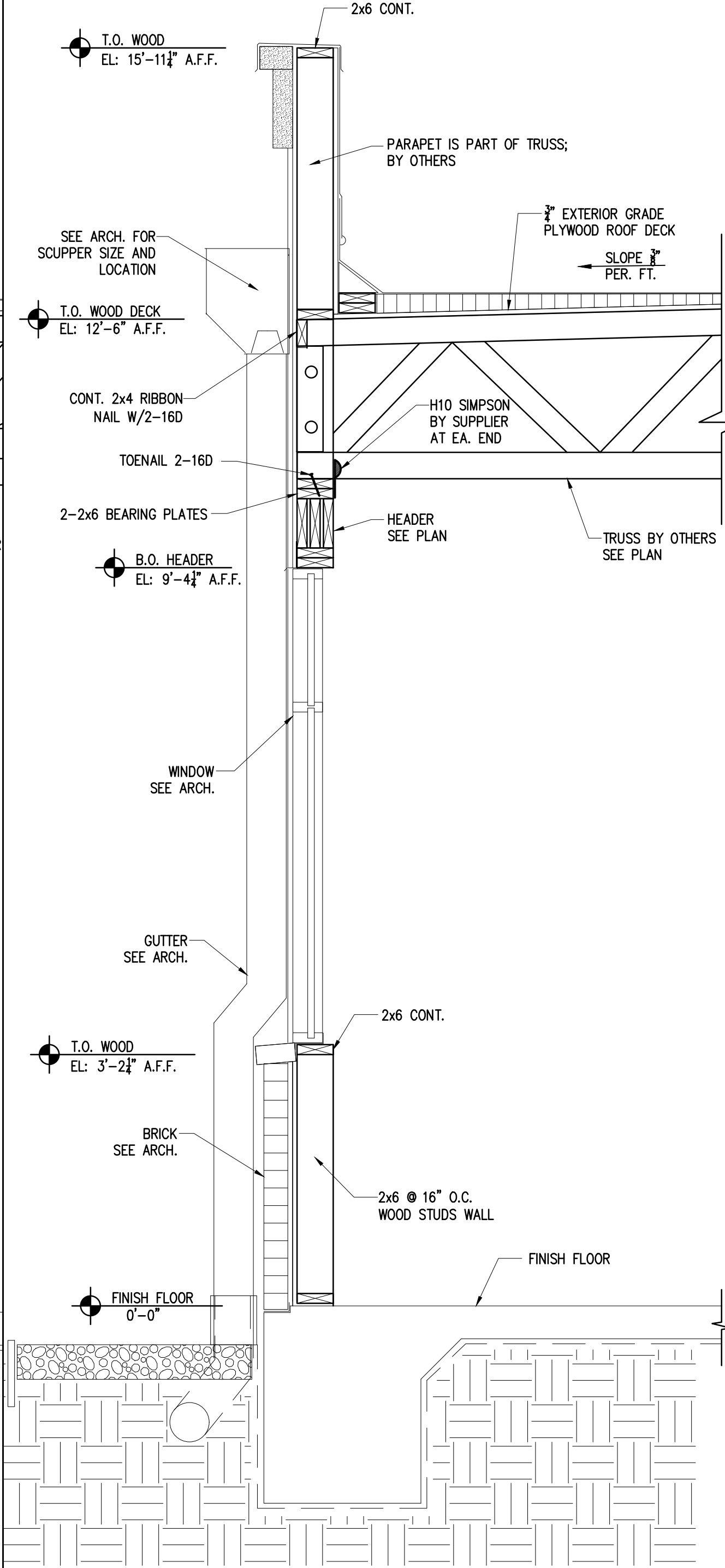
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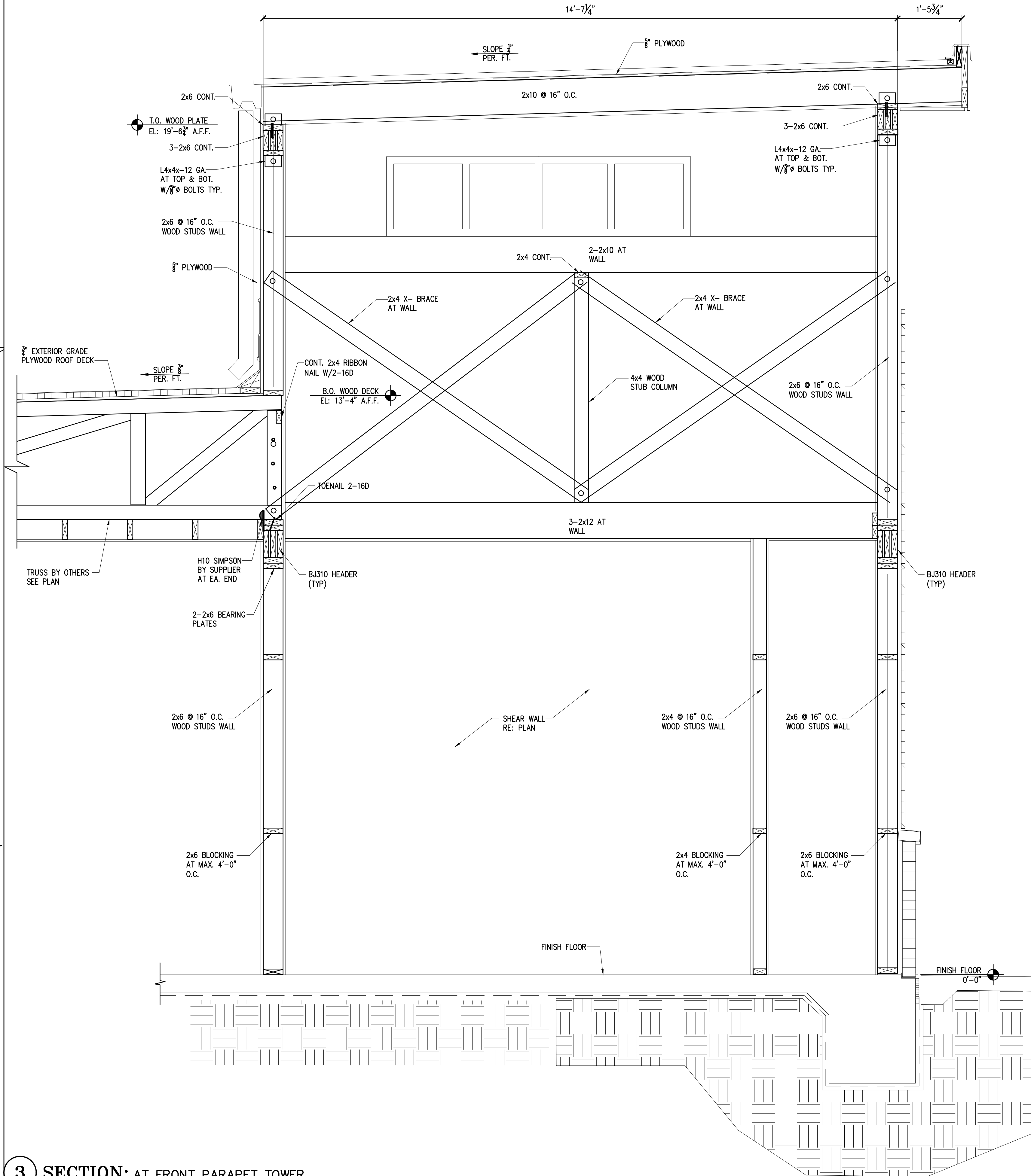
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1 SECTION: AT REAR WOOD STUD WALL



2 SECTION: AT REAR WOOD STUD WALL W/WINDOW



3 SECTION: AT FRONT PARAPET TOWER

WALL SECTION
FRAMING

IMPERIAL ROYAL GARDEN PLAZA
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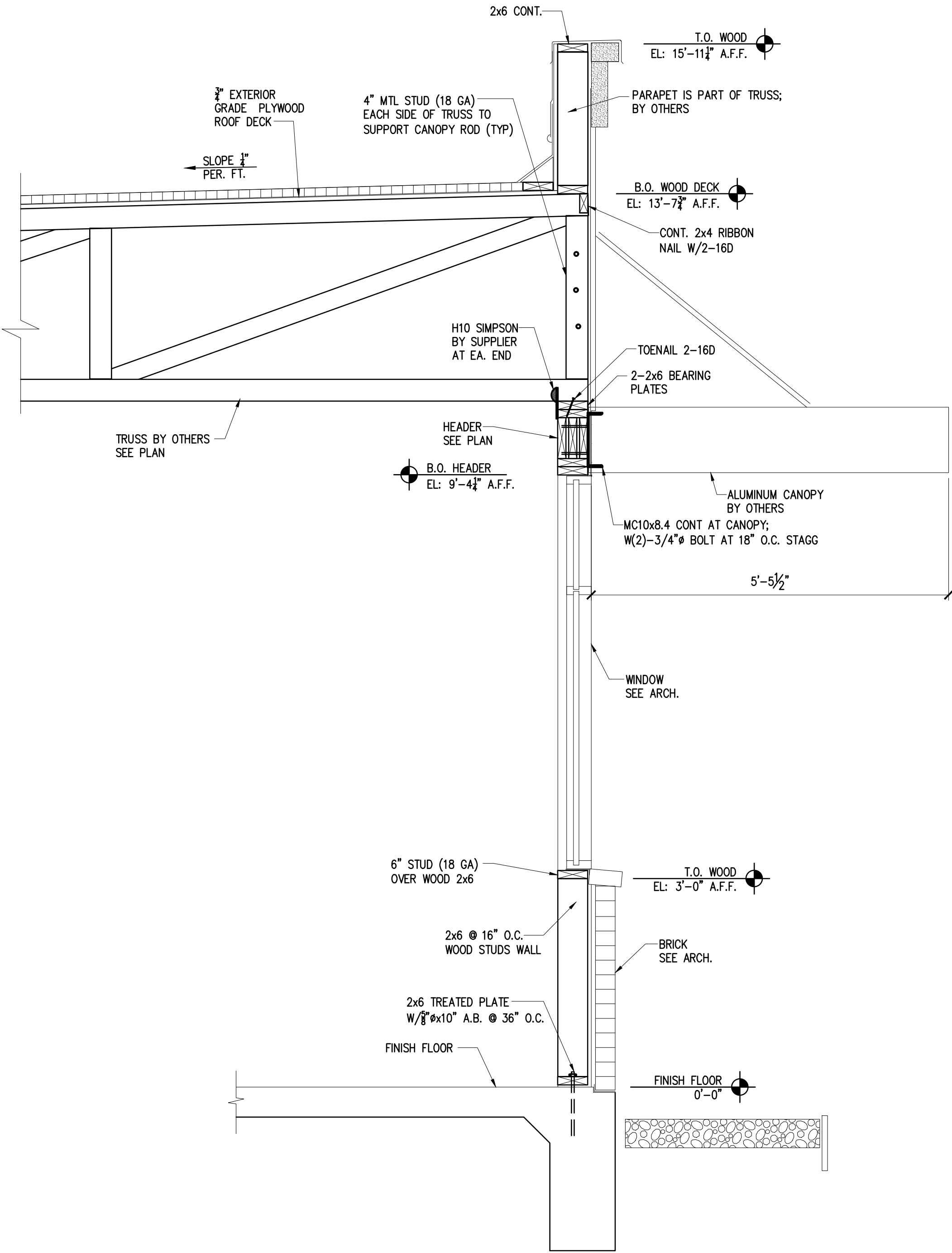
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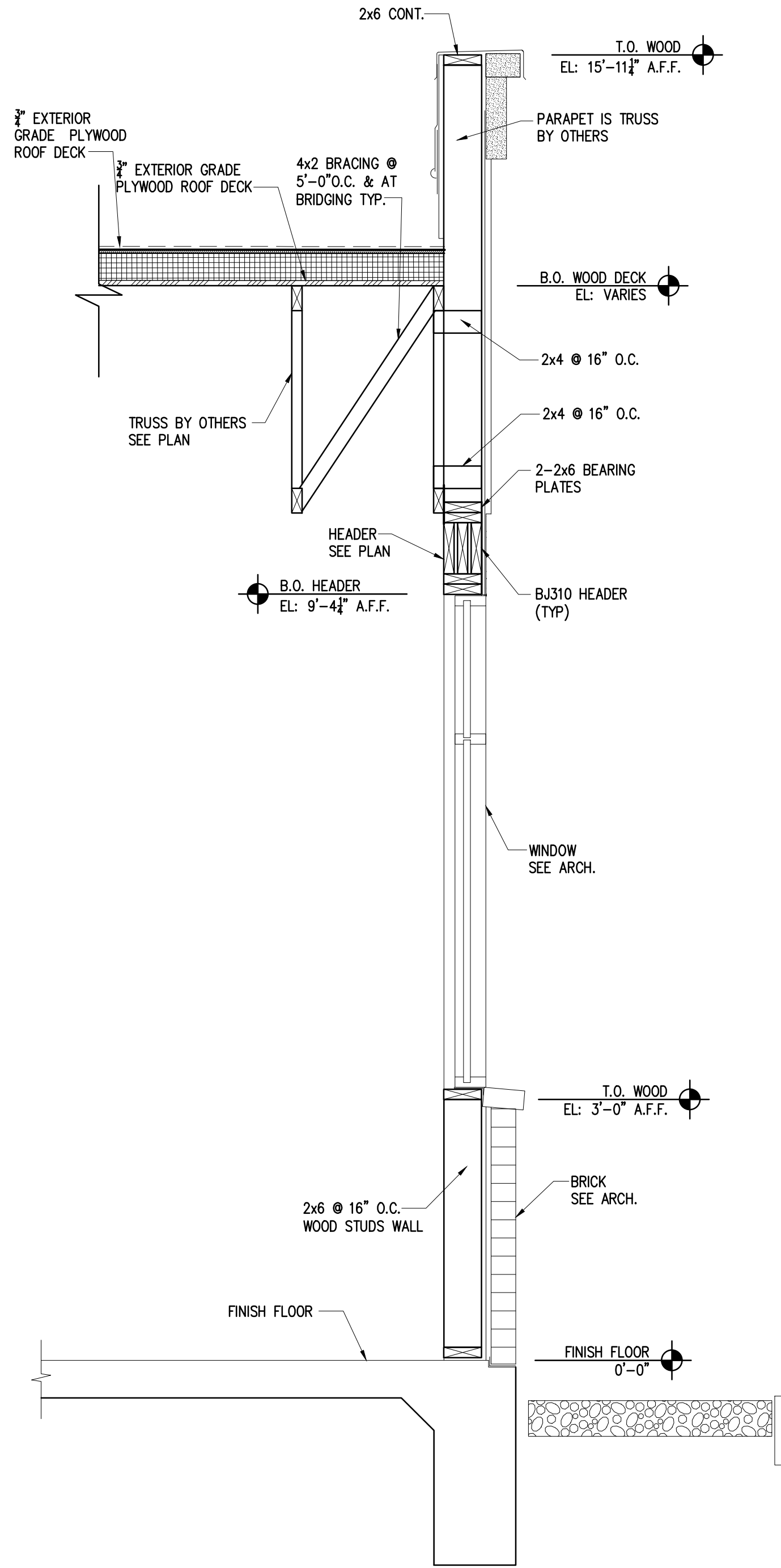
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1 SECTION: AT FRONT PARAPET WALL



2 SECTION: AT SIDE WOOD STUD WALL

GENERAL NOTES FOR WOOD FRAMING

(THESE NOTES SHALL CONTROL UNLESS NOTED OTHERWISE ON PLANS AND DETAILS.)

TIMBER GRADES

ROOF RAFTERS: NO. 3 SOUTHERN YELLOW PINE (SYP) OR EQUAL
CEILING AND FLOOR JOISTS: NO. 2 SOUTHERN YELLOW PINE (SYP) OR EQUAL
BEAMS & HEADERS: NO. 2 SOUTHERN YELLOW PINE (SYP) OR EQUAL
STUDS: STUD GRADE (SYP) OR EQUAL
WOOD POSTS: NO. 2 SYP, SURFACE GREEN.

JOISTS

1. **JOIST BLOCKING**
A) JOISTS SHALL BE Laterally supported at each end and at each support by solid blocking except where the ends of joists are nailed into a header, band or rim joist or to an adjoining stud. Solid blocking shall not be less than two inches in thickness and shall match the depth of the joist.
B) PROVIDE solid blocking under all bearing walls perpendicular to the direction of the joists.
C) PROVIDE double joists under all bearing walls parallel to the direction of the joists.
2. **JOIST BRIDGING**
PROVIDE BRIDGING AT ALL FLOOR JOISTS AT SPACING NOT TO EXCEED 8'-0".
3. **JOIST HOLES AND NOTCHES**
A) NOTCHES IN TOP OR BOTTOM OF JOISTS SHALL NOT EXCEED ONE SIXTH (1/6) THE JOIST DEPTH AND SHALL NOT BE LOCATED WITHIN MIDDLE THIRD OF THE SPAN.
B) HOLES SHALL NOT BE CLOSER THAN 2" TO TOP OR BOTTOM OF JOIST, THE DIAMETER OF ANY HOLE SHALL NOT EXCEED ONE FOURTH (1/4) THE JOIST DEPTH UNLESS APPROVED BY THE ENGINEER.

BEAMS AND HEADERS

1. AT BEAMS MADE UP OF A NUMBER OF 2x JOISTS, EACH JOIST WILL BEAR ON A WALL STUD (I.E. NUMBER OF WALL STUDS SHALL MATCH NUMBER OF JOISTS BEARING ON THESE STUDS). THE CENTERLINE OF THE BEAM SHALL BE THE CENTERLINE OF THE SUPPORTING WALL STUDS.
2. ALL BEAMS MADE UP OF A NUMBER OF 2x JOISTS SHALL BE FASTENED AS FOLLOWS: FOR THE MAXIMUM HORIZONTAL SPACING OF BOLTS:
2-2x12 = 16d NAILS @ 12" TOP & BOTTOM, STAGGER, EA. FACE
3-2x12 (OR MORE) = 20d NAILS @ 12" TOP & BOTTOM, STAGGER, EA. FACE
4-2x12 (OR MORE) = 5/8" @ BOLTS @ 12" TOP & BOTTOM, STAGGER.
BOLTS SHALL BE 5/8" DIA. LOCATED 2" MINIMUM FROM BEAM EDGES AND SHALL BE STAGGERED IN TOP AND BOTTOM ROWS. PROVIDE STANDARD WASHERS @ EACH FACE.
3. ALL DOOR AND WINDOW HEADERS (OR HEADERS AT ANY OTHER OPENING) THAT ARE NOT SPECIFIED ON PLANS SHALL BE AS FOLLOWS:
FLOOR FRAMING: 2-2x12
CEILING FRAMING: 2-2x8
4. MINIMUM BEARING OF ANY BEAM OR HEADER AT A STUD WALL IS 3-1/2"

STUD WALLS

1. STUDS SHALL BE AS FOLLOWS:
2x4 @ 16" AT ALL FLOORS IN ONE- OR TWO- STORY STRUCTURES (U.O.N.)
2-2x4 OR 2x6 @ 16" AT ALL STUD WALLS AT FIRST FLOOR AREAS DIRECTLY BELOW A THIRD FLOOR (U.O.N.)
3-2x4 OR 2-2x6 @ 16" AT ALL STUD WALLS AT FIRST FLOOR AREAS DIRECTLY BELOW A FOURTH FLOOR (U.O.N.)
2. PROVIDE A MINIMUM OF TWO (2) STUDS AT EACH SIDE OF OPENINGS LARGER THAN 4'-0", FULL HEIGHT OF WALL (KING STUDS).
3. MAXIMUM STUD WALL HEIGHT SHALL BE AS FOLLOWS:
2x4 STUDS @ 16" o.c. 10'-0"
2x6 STUDS @ 16" o.c. 13'-0"
2x8 STUDS @ 16" o.c. 16'-0"
4. **BLOCKING & LATERAL BRACING:**
A. PROVIDE BLOCKING AND/OR TEMPORARY CROSS BRACING AS REQUIRED TO ENSURE STUD STRAIGHTNESS ACCORDING TO SPECIFIED TOLERANCES.
B. MAXIMUM TOLERANCE FOR STUD STRAIGHTNESS IN EITHER DIRECTION IS 1/4 INCH PER TEN (10) FEET OF STUD HEIGHT.
C. MINIMUM BLOCKING:
1 ROW FOR STUD HEIGHT UP TO 9'-0";
2 ROWS FOR STUD HEIGHT UP TO 15'-0";
3 ROWS FOR STUD HEIGHT OVER 15'-0".

ROOF DECK:

1. MINIMUM THICKNESS SHALL BE 5/8" THICK. MATERIAL SHALL BE CDX PLYWOOD OR EQUAL.
2. ORIENTED STRAND BOARD (OSB) MAY BE USED IN LIEU OF PLYWOOD.
3. MINIMUM NAILING SHALL BE AS REQUIRED BY THE BUILDING CODE.
4. PLYWOOD CLIPS SHALL BE INSTALLED @ ROOF DECKING TO RESULT IN A 1/8" GAP BETWEEN ALL PANEL EDGES. PROVIDE 1 CLIP PER SPAN (JOIST SPACING). CLIPS SHALL BE SIMPSON PSCAL OR APPROVED EQUAL, TO MATCH CORRESPONDING PLYWOOD THICKNESS.

PLYWOOD FLOOR DECK:

1. PLYWOOD SHALL BE 3/4" THICKNESS AND SHALL BE RATED STURO-I-FLOOR (2-4-1) EXPOSURE 1.
2. LAY PANELS IN A STAGGERED PATTERN.
3. BLOCK ALL EDGES W/ 2-2x4 BLOCKING.
4. GLUE & NAIL TO FRAMING MEMBERS AS FOLLOWS:
A. GLUE SHALL CONFORM TO APA SPECIFICATION AF6-01, APPLIED IN A CONTINUOUS BEAD & IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
B. ALL NAILS SHALL BE 8d RING OR SCREW SHANK. NAIL SPACING SHALL BE 4" O.C. @ PANEL EDGES & 12" O.C. @ INTERMEDIATE SUPPORTS.

CONNECTORS

1. CONNECTORS SHALL BE AS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY, INC., DUBLIN, CA. OR APPROVED EQUAL. NAIL ALL NAIL HOLES.
2. CONNECTORS SHALL BE THE MANUFACTURER-DESIGNATED SIZE FOR FRAMING MEMBERS, AND SHALL BE INSTALLED IN STRICT CONFORMANCE WITH MANUFACTURER'S INSTRUCTIONS.
3. ALL NAIL & BOLT HOLES SHALL BE ENGAGED, WITH MANUFACTURER-DESIGNATED FASTENERS.
4. CONNECTORS SHALL BE INSTALLED AT THE ENDS OF ALL JOISTS & BEAMS FRAMING INTO OTHER (SUPPORTING) MEMBERS (UNLESS OTHERWISE NOTED).
5. THE FOLLOWING CONNECTORS SHALL BE PROVIDED AND SHALL BE CONSIDERED THE MINIMUM:
SAWN-LUMBER JOISTS U SERIES
I-JOISTS IUS SERIES
MULTIPLE-JOIST/BEAMS HUS SERIES
PSL & LVL BEAMS LBV SERIES
LSL (GLU-LAM) BEAMS HGLS SERIES

FASTENERS

1. **BOLTS**
A. USE ASTM A-307 BOLTS, WITH STANDARD WASHERS AT ALL CONTACT SURFACES.
B. PROVIDE d" x 0'-12" LONG ANCHOR BOLTS @ 2'-6" O.C. AT ALL EXTERIOR WALL SILL PLATES, WITH 2" PROJECTION AND 1" THREAD.
C. ALL BOLTS, NUTS, AND WASHERS EXPOSED TO WEATHER SHALL BE GALVANIZED.
D. ALL BOLTS, NUTS, AND WASHERS IN CONTACT W/ TREATED WOOD SHALL BE GALVANIZED.
2. **ADHESIVE ANCHORS**
A. USE HILTI-HIT RE500 ANCHORS, OR APPROVED EQUAL.
B. INSTALL IN STRICT ACCORDANCE W/ MANUFACTURER'S RECOMMENDATIONS.
3. **POWDER-ACTUATED PINS**
A. USE HILTI X-EDNI (0.145" SHANK) OR APPROVED EQUAL.
B. INSTALL IN STRICT ACCORDANCE W/ MANUFACTURER'S RECOMMENDATIONS.

HURRICANE CLIPS:

ALL HURRICANE CLIP AND NAILS IN CONTACT WITH PRESSURE TREATED WOOD MEMBER SHALL BE GALVANIZED.

MISCELLANEOUS:

ALL WOOD IN CONTACT WITH CONCRETE OR MASONRY SHALL BE TREATED LUMBER.

NAILING SCHEDULE (FLOOR & ROOF DECK)

DECK TYPE & THICKNESS	NAIL SIZE	NUMBER OR NAILING PATTERN
PLYWOOD OR PARTICLE BOARD		
1/2" OR LESS	8D COMMON OR EQUAL	6" O.C. @ PANEL EDGES
19/32" THRU 3/4"	8D COMMON OR EQUAL	10" O.C. @ INTERMEDIATE SUPPORTS TYPICAL
7/8" THRU 1" (FLR.)	8D COMMON OR EQUAL	
1 1/8" THRU 1 1/4" (FLR.)	10D COMMON OR EQUAL	

NAILING SCHEDULE (FRAMING MEMBERS)

CONNECTED MEMBERS	NAIL SIZE	NUMBER OR NAILING PATTERN
BRIDGING TO JOIST	8D COMMON	2 TOE NAIL EA. END
SOLE PLATE TO JOIST OR BLOCKING	16D COMMON	@ 16" O.C. FACENAIL.
TOP PLATE TO STUD	16D COMMON	2 END NAIL.
STUD TO SOLE PLATE.	8D COMMON OR 16D COMMON	4 TOE NAIL. 2 END NAIL.
DOUBLE STUDS.	16D COMMON	@ 24" FACE NAIL.
DOUBLED TOP PLATES.	16D COMMON	@ 16" FACE NAIL.
TOP PLATES: LAPS & INTERSECTIONS.	16D COMMON	2 FACE NAIL.
CONTINUOUS HEADER, TWO PIECE.	16D COMMON	@ 16" FACE NAIL ALONG EA. EDGE.
CEILING JOISTS TO PLATE.	8D COMMON	3 TOE NAIL.
CONTINUOUS HEADER TO STUD.	8D COMMON	4 TOE NAIL.
CEILING JOISTS, LAPS OVER PARTITIONS.	16D COMMON	3 FACE NAIL.
CEILING JOISTS TO PARALLEL RAFTERS.	16D COMMON	3 FACE NAIL.
RAFTER TO PLATE.	8D COMMON	3 TOE NAIL.
1" BRACE TO EACH STUD & PLATE.	8D COMMON	2 FACE NAIL.
BUILT UP CORNER STUDS.	16D COMMON	@ 24" FACE NAIL.
CONTINUOUS HEADER, 3 OR MORE PIECE & BUILT UP GIRDERS OR BEAMS.	BOLTS	RE: GEN. NOTES.

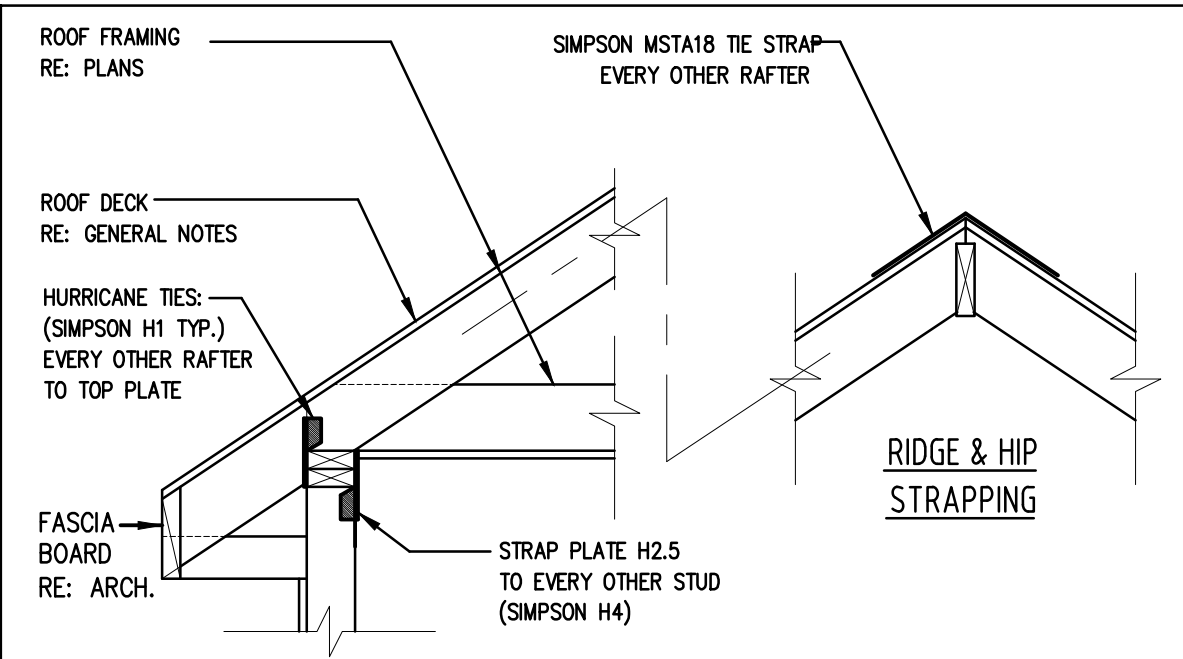
NAILING SCHEDULE (WALL SHEATHING AND SIDING)

SHEATHING TYPE & THICKNESS	FASTENER SIZE & TYPE	NAILING PATTERN
PLYWOOD & PARTICLE BOARD		6" O.C. @ PANEL EDGES
LESS THAN 1/2"	6D COMMON OR EQUAL	12" O.C. @ INTERMEDIATE SUPPORTS
1/2" THRU 3/4"	8D COMMON OR EQUAL	
FIBERBOARD		3" O.C. @ PANEL EDGES
1/2" OR LESS	6D COMMON OR EQUAL	6" O.C. @ INTERMEDIATE SUPPORTS
25/32"	8D COMMON OR EQUAL	
GYPSUM SHEATHING		4" O.C. @ EDGES
1/2" OR 5/8"	12 GA. (4) OR EQUAL	8" O.C. @ INTERMEDIATE SUPPORTS
GYPSUM WALLBOARD		
1/2"	1 3/8" DRYWALL NAILS	7" O.C. @ CEILINGS
5/8"	1 1/2" DRYWALL NAILS	8" O.C. @ WALLS
PANEL SIDING (TO FRAMING)		
1/2" OR LESS	6D COMMON OR EQUAL	1 EACH PANEL
5/8"	8D COMMON OR EQUAL	

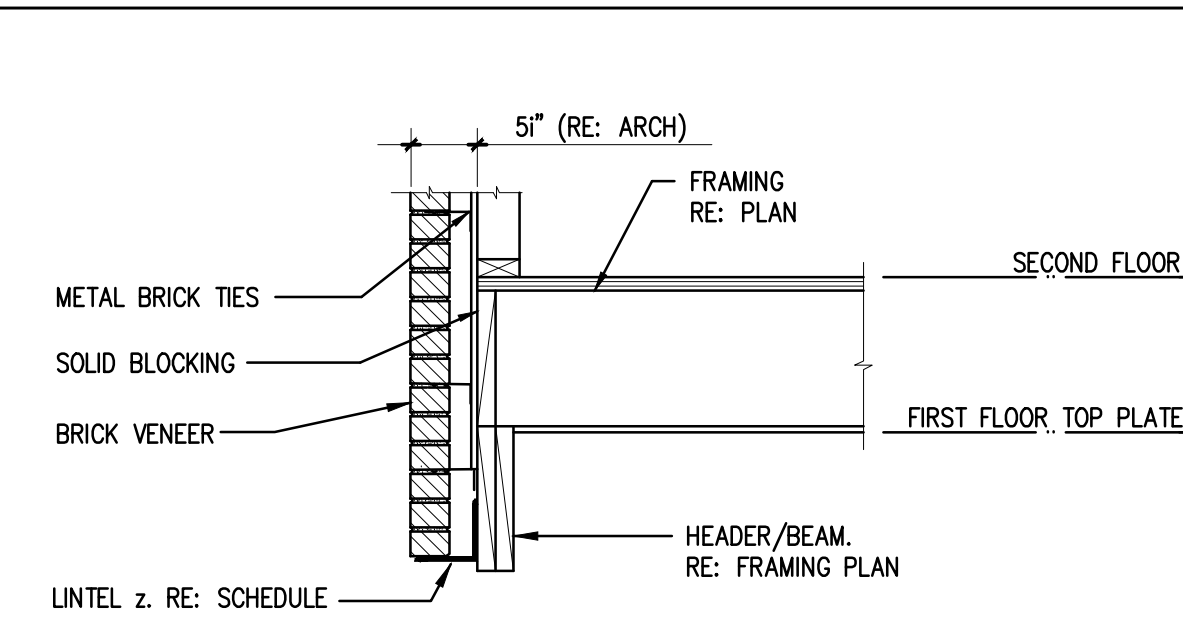
NOTES ON "NAILING--WALL SHEATHING & SIDING"

1. CORROSION-RESISTANT SIDING OR CASING NAILS CONFORMING TO THE REQUIREMENTS OF IBC.
2. CORROSION-RESISTANT ROOFING NAILS WITH 7/16-INCH DIAMETER HEAD AND 1 1/2-INCH IN LENGTH FOR 1/2-INCH SHEATHING AND 1 3/4-INCH LENGTH FOR 25/32-INCH SHEATHING CONFORMING TO THE REQUIREMENTS OF IBC.
3. CORROSION-RESISTANT STAPLES WITH NOMINAL 7/16-INCH CROWN AND 1 1/8-INCH LENGTH FOR 1/2-INCH SHEATHING AND 1 1/2-INCH LENGTH FOR 25/32-INCH SHEATHING CONFORMING TO THE REQUIREMENTS OF IBC.
4. CORROSION-RESISTANT, LARGE HEAD.

TYPICAL NAILING SCHEDULE



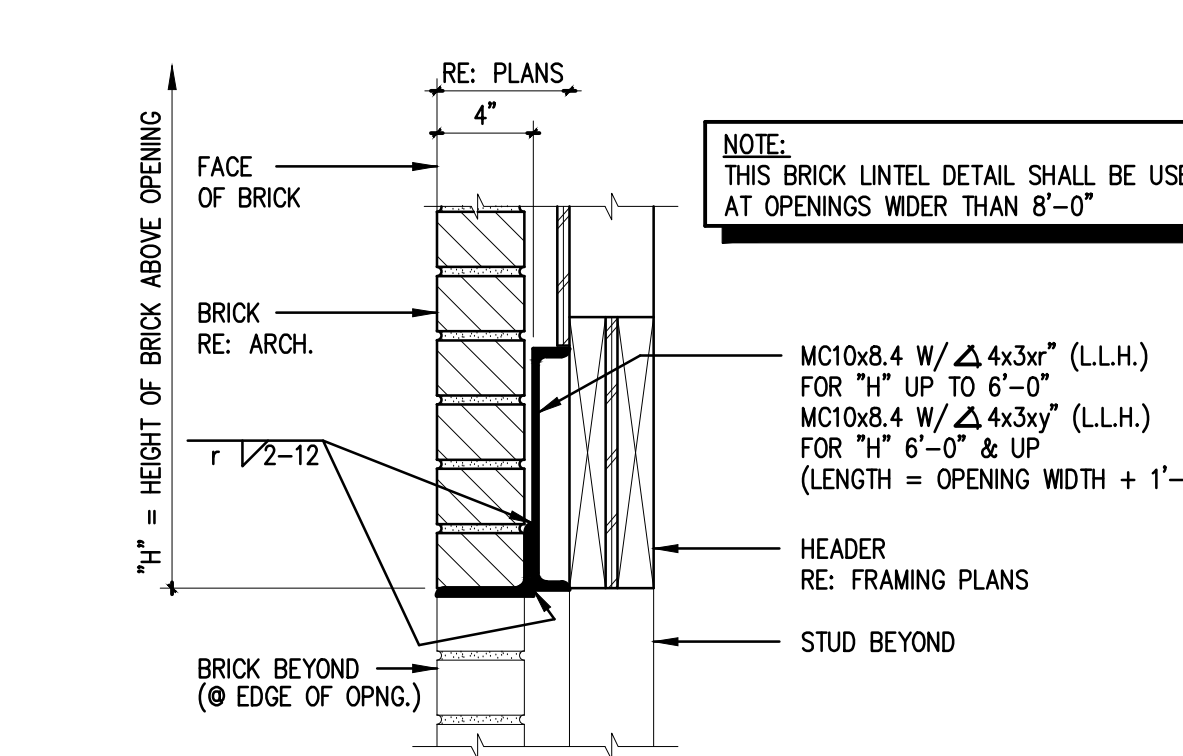
TYPICAL WIND STRAPPING DETAILS (METAL STRAPPING OPTION)



ANGLE & BOLT SCHEDULE		
OPENING WIDTH	BRICK LINTEL z	BOLT SPACING
UNDER 4'	z4x4xr"	1'-6"
4' TO 8'(-)	z5x5xt"	1'-0"

- NOTES:
1. PROVIDE A MINIMUM BEARING OF 6" AT EACH END.
2. AT SPANS LARGER THAN 6'-0", ENSURE THAT BOTTOM EDGE OF HEADER/BREAM IS Laterally supported TO PREVENT ROTATION
3. AT ARCHED OPENINGS LESS THAN 6'-0" CLEAR SPAN, USE ROLLED LINTEL z W/ MIN 8" FLAT BEARING @ EA. END.

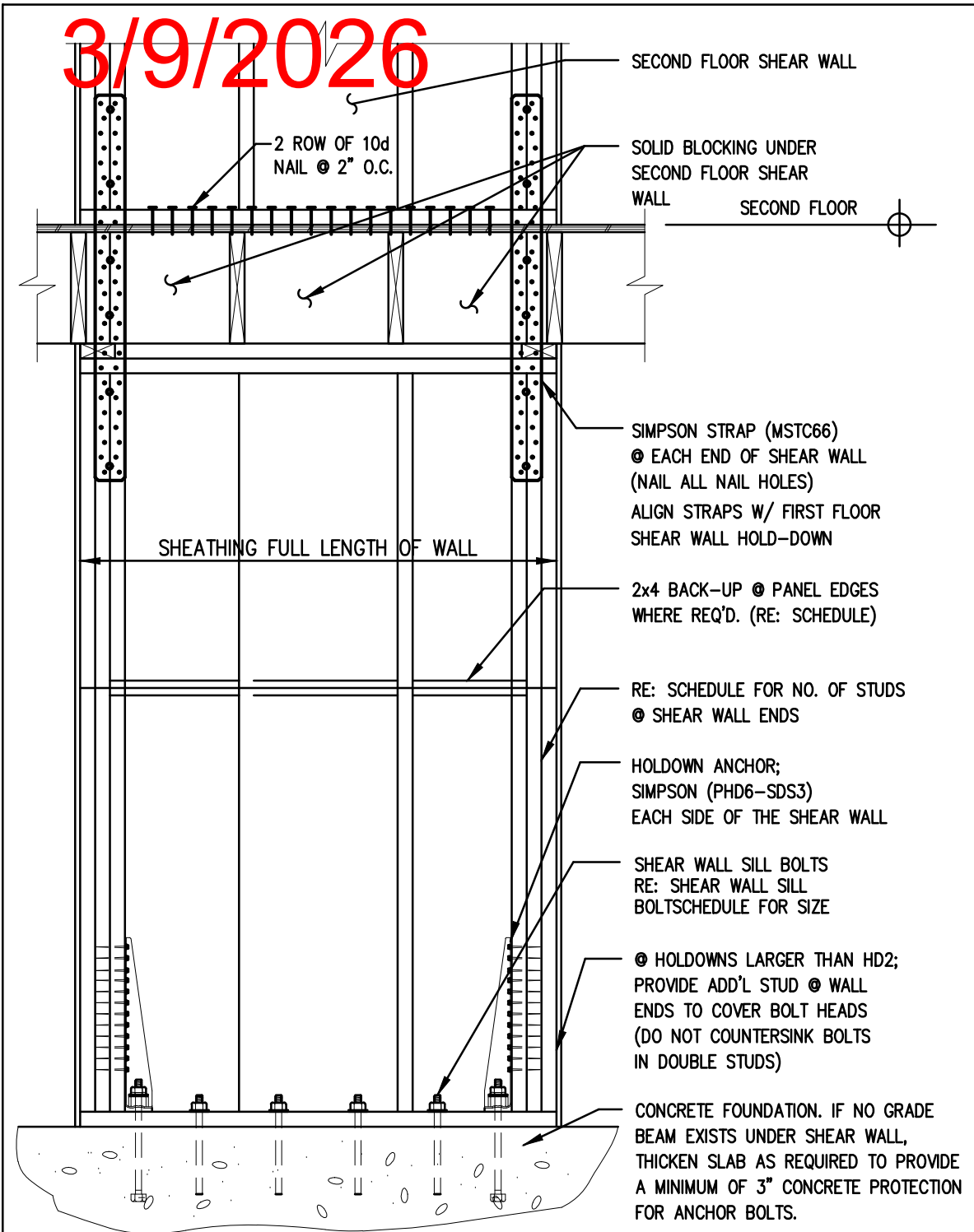
TYPICAL BRICK LINTEL



TYPICAL BRICK LINTEL OVER WIDE OPENING

Submittal Set

3/9/2026



TYPICAL SHEAR WALL DETAILS (W/ 2ND FLOOR STRAPPING OPTION)

SHEAR WALL SCHEDULE						
MARK	SHEATHING MATERIAL	BLOCKING	NAILING PATTERN	STUD POST EACH END	HOLD-DOWN MARK	HOLD-DOWN BOLT
P1	1/2" PLYWOOD/OSB	YES	8D COMMON @ 6"	2-2x4	HDU2-SDS3	5/8"
P2	1/2" PLYWOOD/OSB	YES	8D COMMON @ 3"	2-2x4	HDU2-SDS3	5/8"
P3	1/2" PLYWOOD/OSB	YES	10D COMMON @ 3"	2-2x4	HDU5-SDS3	5/8"
P4	1/2" PLYWOOD/OSB	YES	10D COMMON @ 2"	2-2x4	HDU8-SDS3	7/8"

SHEAR WALL SILL BOLTS SCHEDULE		
MARK	SILL PLATE BOLTING FOR SHEAR WALL	MIN. EMBEDMENT
P1	5/8" @ 2'-0" O.C.	6"
P2	5/8" @ 2'-0" O.C.	6"
P3	5/8" @ 2'-0" O.C.	6"
P4	5/8" @ 1'-6" O.C.	6"

SHEAR WALL NOTES:

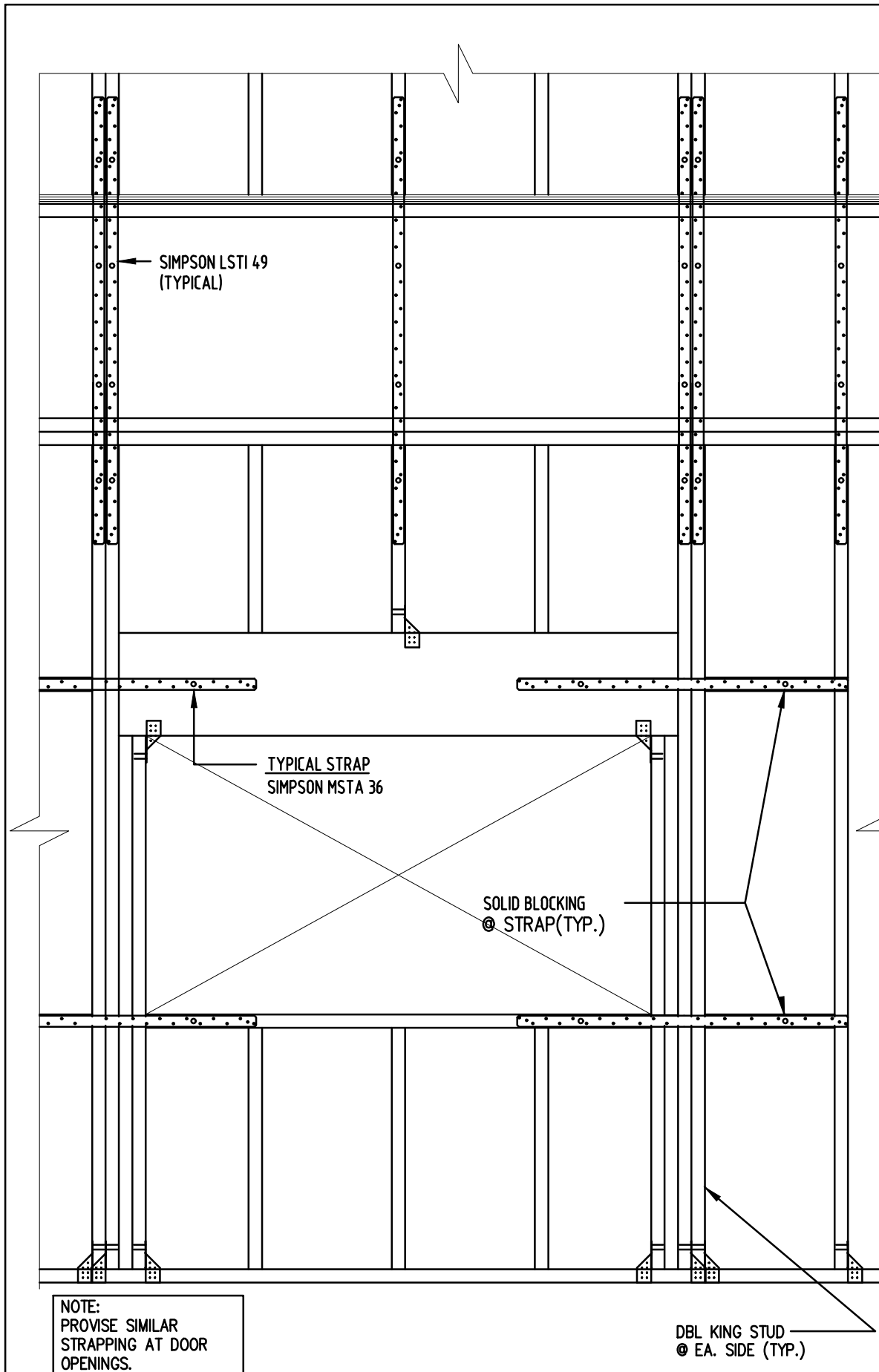
1. WHERE "BLOCKING" IS INDICATED, PROVIDE 2x4 BACK-UP AT ALL GYPBOARD OR PLYWOOD PANEL EDGES
2. NAILING PATTERN APPLIES AT ALL PANEL EDGES. AT INTERMEDIATE SUPPORTS, PROVIDE NAILING @ 12" O.C. USING CORRESPONDING NAIL SIZE.
3. SHEATHING MATERIAL AND NAILING PATTERN APPLY TO ONE SIDE OF SHEAR WALL ONLY.
4. WHERE A SHEAR WALL IS CALLED OUT ON A PLAN, PROVIDE SCHEDULED SHEATHING MATERIAL AND NAILING FOR THE FULL LENGTH OF THAT WALL.
5. PROVIDE SCHEDULED STUDS AT EACH END OF SHEAR WALL OR SEGMENT THEREOF.
6. HOLD-DOWN CONNECTORS:
A) CONNECTORS SHALL BE AS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY, INC., SAN LEANDRO, CA. OR APPROVED EQUAL.
B) THE FOLLOWING SUBSTITUTIONS MAY BE MADE:

HOLD/DOWN MARK	SUBSTITUTION	
	@ SLAB / FOUDATION	@ FLOOR FRAMING
PHD2-SDS 3	HD2A OR STDH10 OR HTT16	HST2 OR MSTC40
PHD5-SDS 3	HD5A OR STDH14 OR HTT22	HST3 OR MSTCS2
PHD6-SDS 3	HD6A OR HTT22	HST3 OR MSTC66

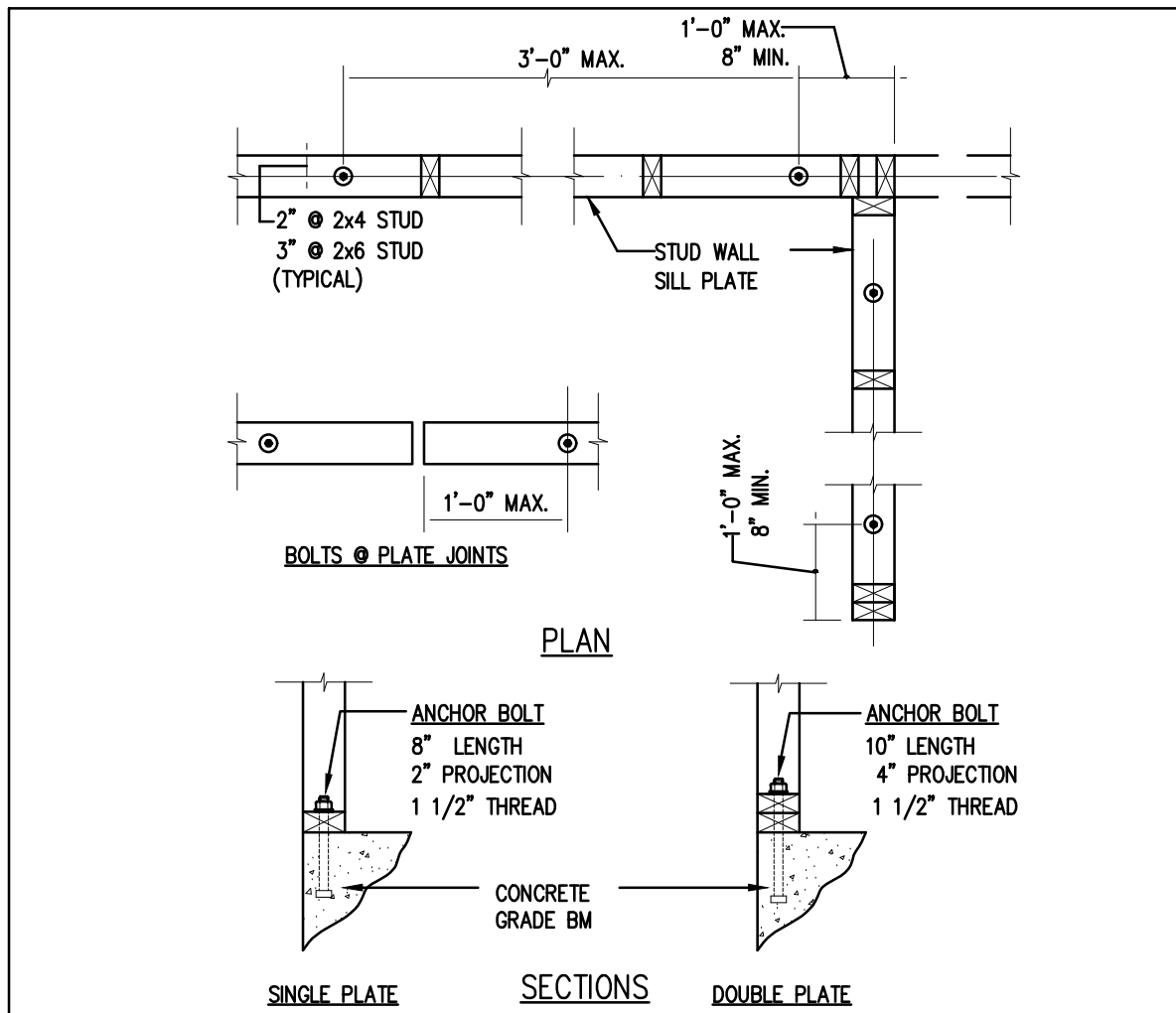
- C) ALL HOLD-DOWNS MUST BE INSTALLED IN STRICT ADHERENCE TO MANUFACTURER'S INSTRUCTIONS, USING BOLT & NAIL NUMBERS, SIZES & LENGTHS AS SPECIFIED BY MANUFACTURER.
7. WHERE PLYWOOD IS SHOWN ON BOTH FACES OF A SHEAR WALL:
A) DOUBLE STUDS OR 3" WIDE STUDS MUST BE USED.
B) STAGGER PLYWOOD JOINTS AT WALL FACES.
C) USE 4x4 WOOD POSTS @ EA. END TO BOLT HOLD-DOWNS.
D) PROVIDE DOUBLE 2x SILL PLATE W/ 1/2" ANCHOR BOLTS @ 24" c. IN ADDITION TO HOLD-DOWN ANCHOR BOLTS.

8. BOLTS SPECIFIED FOR THIS TABLE MUST BE A490 RATED BOLTS

TYPICAL SHEAR WALL DETAILS

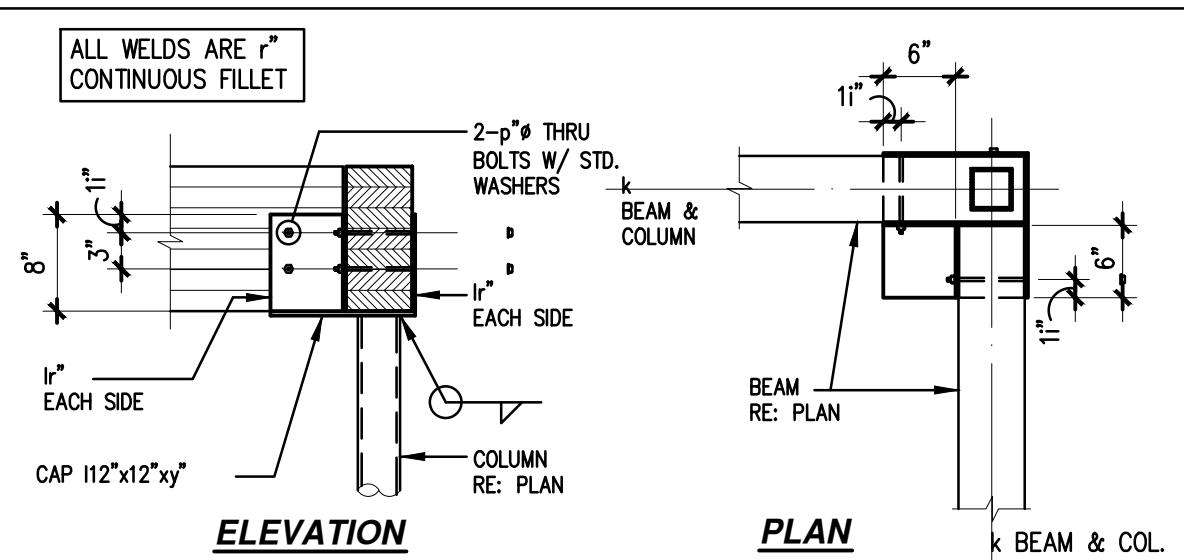


STRAPPING REQUIREMENTS FOR ALL WALL OPENINGS



- IMPORTANT NOTES:**
PRIOR TO CONCRETE PLACEMENT, CONTRACTOR SHALL:
1. PREDETERMINE ANCHOR BOLT LAYOUT CONSISTENT W/ WALL GEOMETRY & THESE DETAILS.
2. PROVIDE CLEAR MARKINGS ON FORM BOARD TO DESIGNATE BOLT LOCATIONS, FOR EASE OF INSTALLATION.
- NOTES:**
1. ALL BOLTS ARE d" x L-BOLT, CONFORMING TO ASTM A-307. PROVIDE 1" DIAMETER STANDARD WASHERS @ ALL BOLTS.
2. STAGGER DOUBLE PLATE JOINTS A MINIMUM OF 2'-0".
3. ALL ANCHOR BOLTS IN CONTACT WITH PRESSURE TREATED WOOD MEMBER SHALL BE GALVANIZED.

TYPICAL SOLE PLATE ANCHOR BOLT DETAILS



TWO WOOD BEAM CONNECTION AT STEEL COLUMN

TYPICAL NOTES AND DETAILS

IMPERIAL ROYAL GARDEN PLAZA

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CONNECTION
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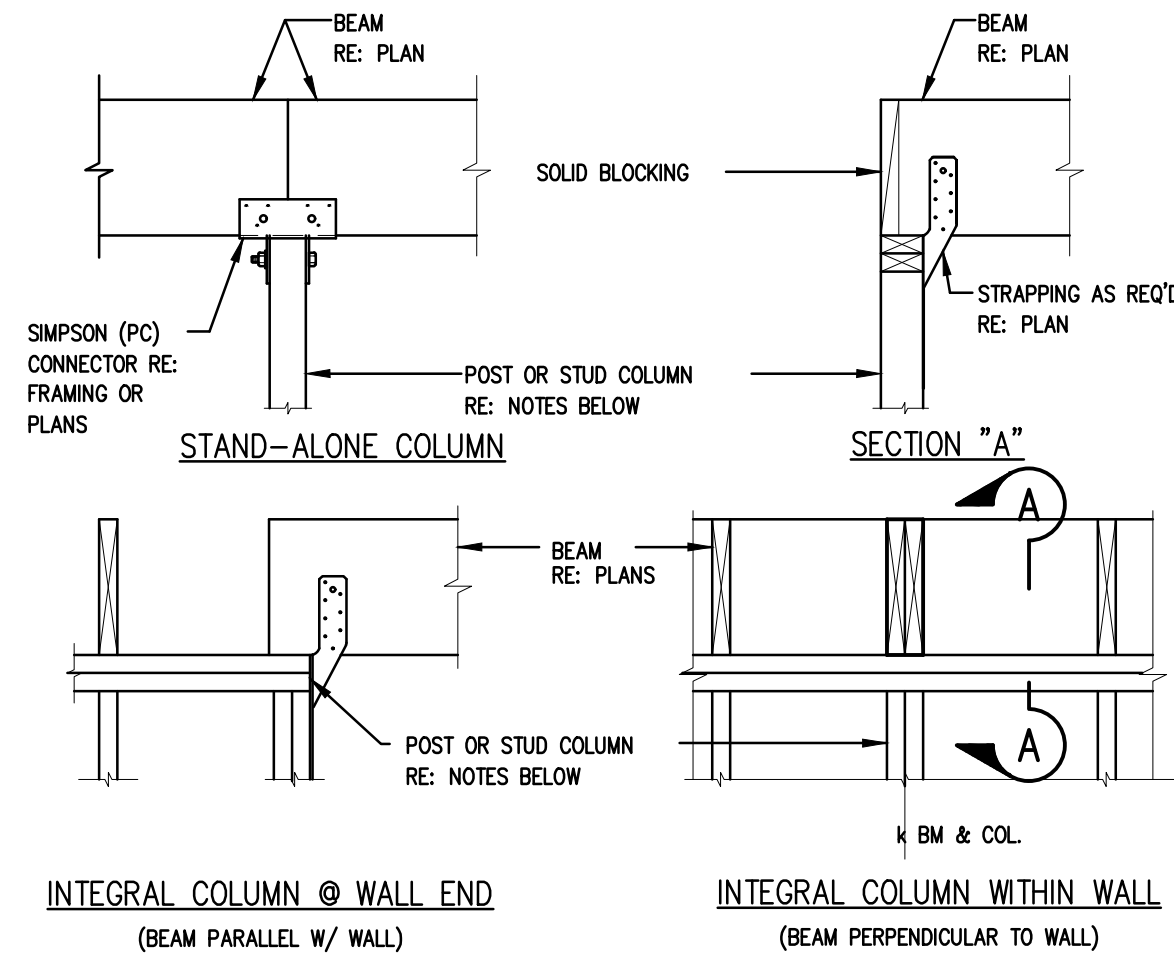
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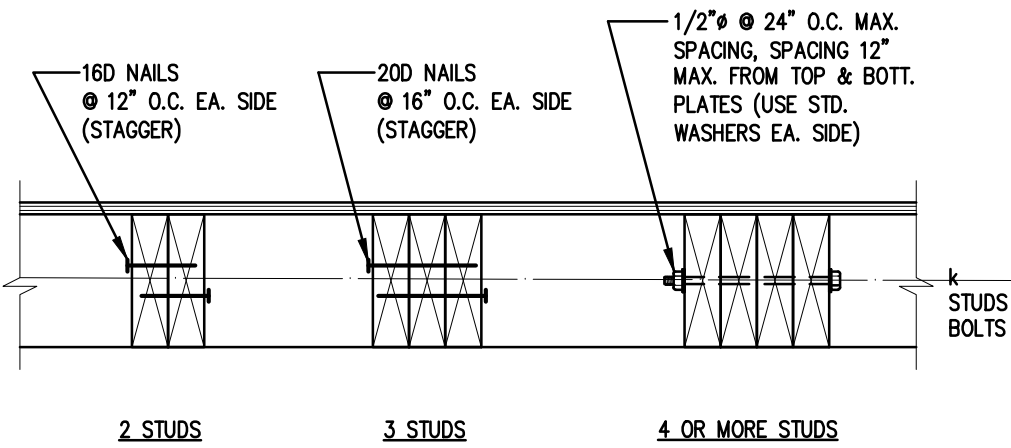
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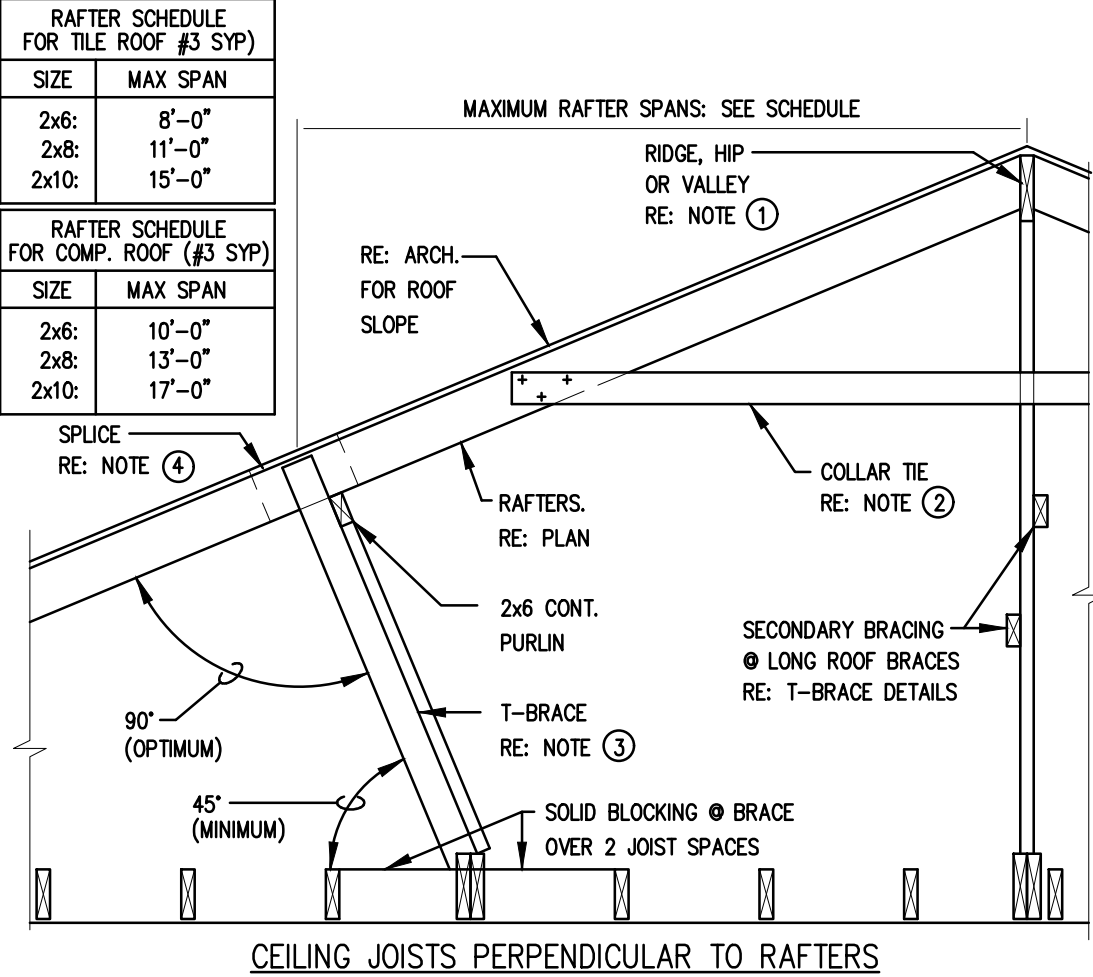
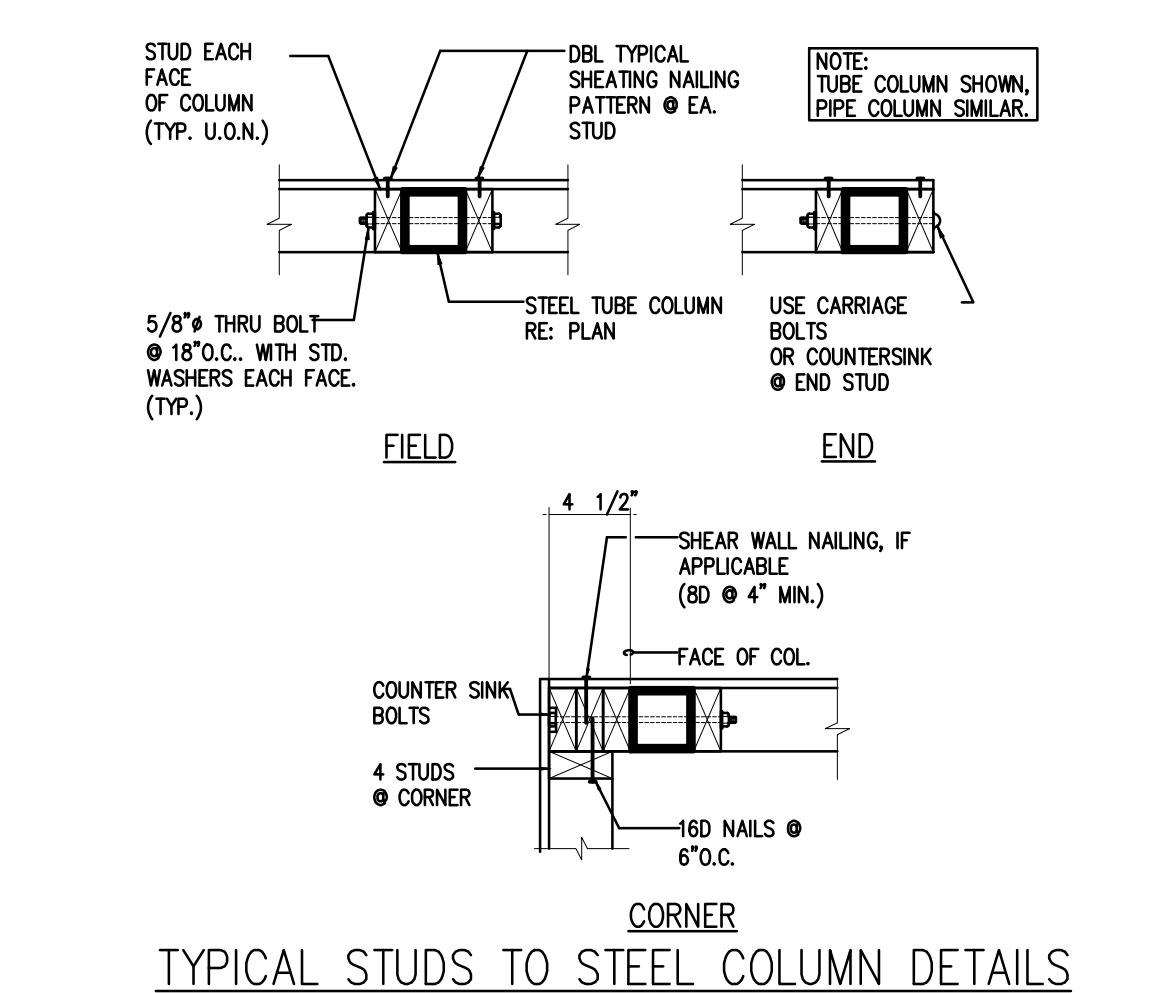
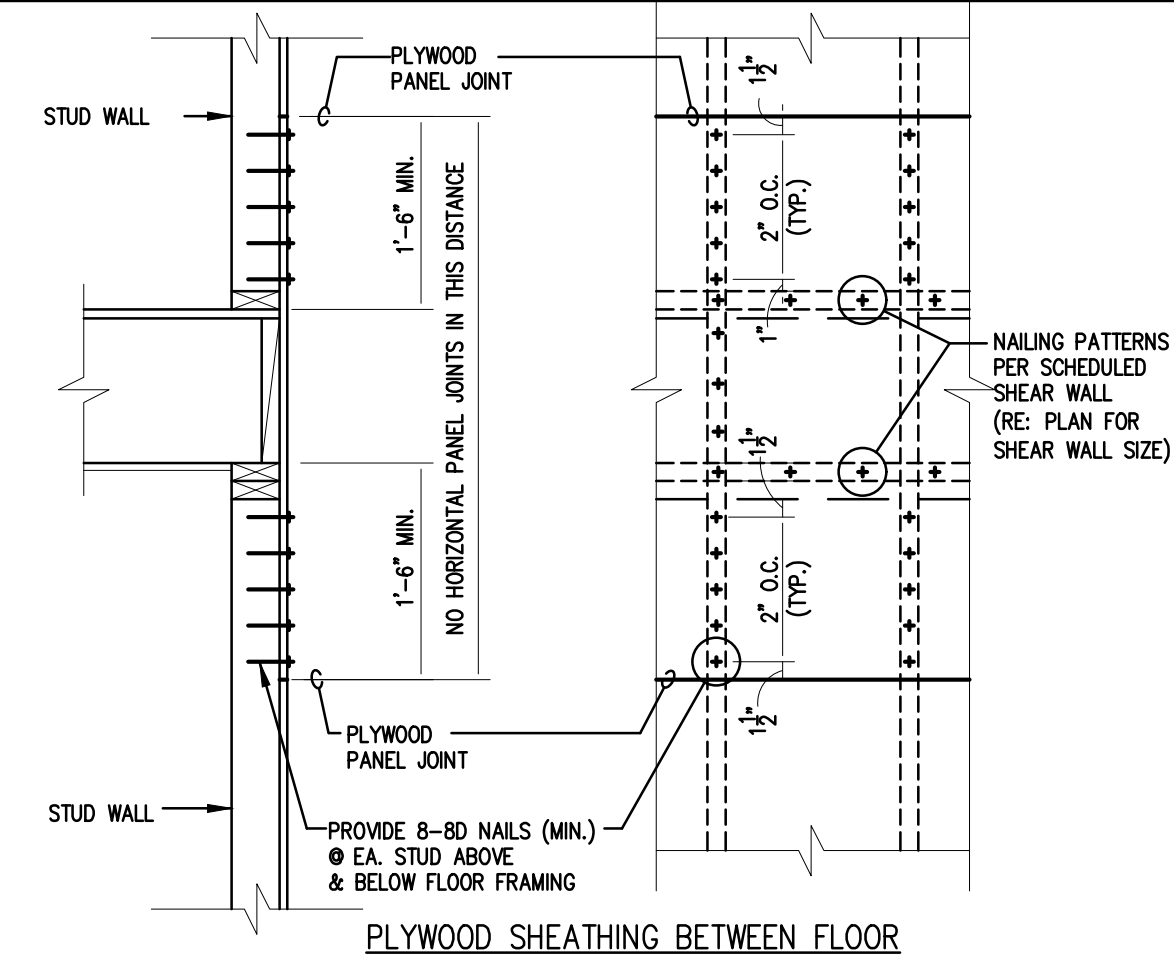


- NOTES:
- ALL BEAMS MADE UP OF MULTIPLE 2x MEMBERS SHALL BE SUPPORTED @ EA. END BY A POST EQUAL IN THICKNESS TO THE BEAM (MIN.) I.E. 2-2x12 BEAM SHALL REQUIRE 2-2x STUD POST (MIN.) SOLID SAWN LUMBER MAY BE SUBSTITUTED FOR BUILT-UP POSTS.
 - PARALLEL STRAND LUMBER (PSL) AND LAMINATED LUMBER (LSL & LVL) BEAMS & HEADERS SHALL BE SUPPORTED AT EACH END AS FOLLOWS:
3 1/2" WIDE MEMBERS UP TO 12' DEPTH.....3-2x STUDS OR 4x6 POST (U.O.N.)
5 1/2" WIDE MEMBERS UP TO 12' DEPTH.....4-2x STUDS OR 4x6 POST (U.O.N.)
7" WIDE MEMBERS UP TO 12' DEPTH.....5-2x STUDS OR 4x6 POST (U.O.N.)
MAX. COLUMN OR POST HEIGHT: 9'-0" RE: PLANS OR CONSULT ENGINEER FOR LARGER HEIGHTS.

TYPICAL WOOD COLUMN DETAILS

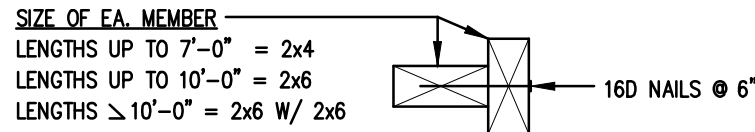


MULTIPLE-STUD COLUMNS DETAILS



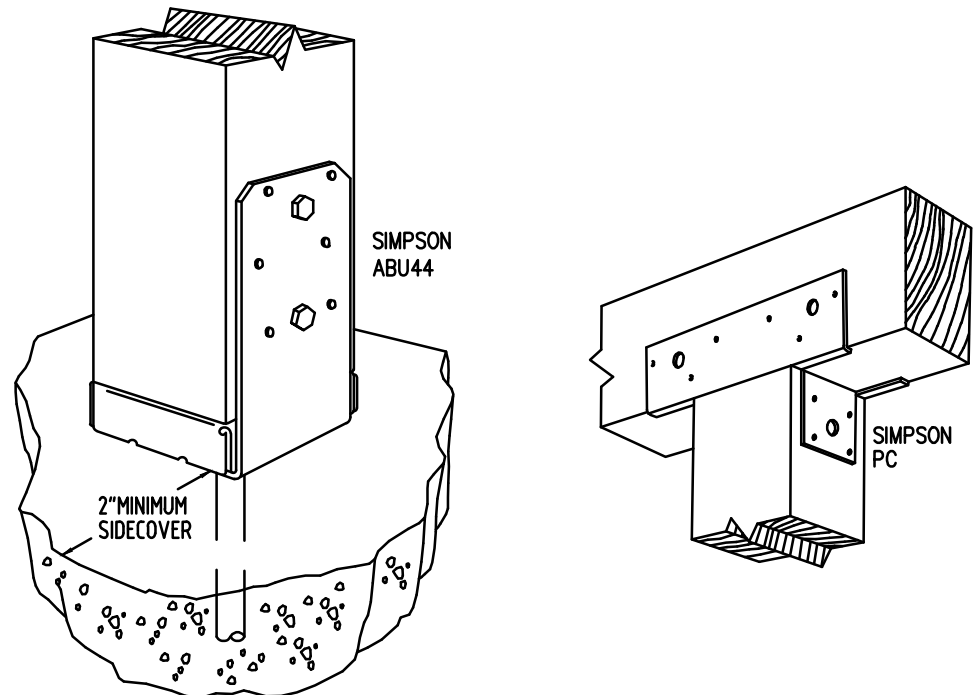
DETAIL KEYED NOTES

- RIDGE BEAM, HIP RAFTER, OR VALLEY RAFTER DEPTH SHALL BE THE LARGER OF THE FOLLOWING:
A. ONE SIZE DEEPER THAN THE LARGEST RAFTER FRAMING INTO IT (2 x LUMBER)
B. DEPTH OF CUT END OF RAFTER.
- COLLAR TIES
2x6; LOCATED @ UPPER ONE THIRD (1/3) OF ROOF @ EVERY OTHER RAFTER
- T-BRACE
A. RE: TYPICAL DETAILS BELOW
B. MAXIMUM SPACING AS FOLLOWS:
4'-0" @ 2x6 CONT. PURLIN
5'-0" @ RIDGE BEAM, HIP OR VALLEY RAFTER
C. BRACE SHALL BEAR ON AN INTERIOR WALL, BEAM OR STRONG-BACK (DOUBLE, 2 SIZES LARGER THAN JOIST) RE: FRAMING PLAN.
- RAFTER & RIDGE SPLICES
A. LOCATE SPLICE OVER A PURLIN, OR PROVIDE ADDITIONAL BRACE @ SPLICE
B. MINIMUM LAP = 12" NAIL W/ 6-16 d NAILS.

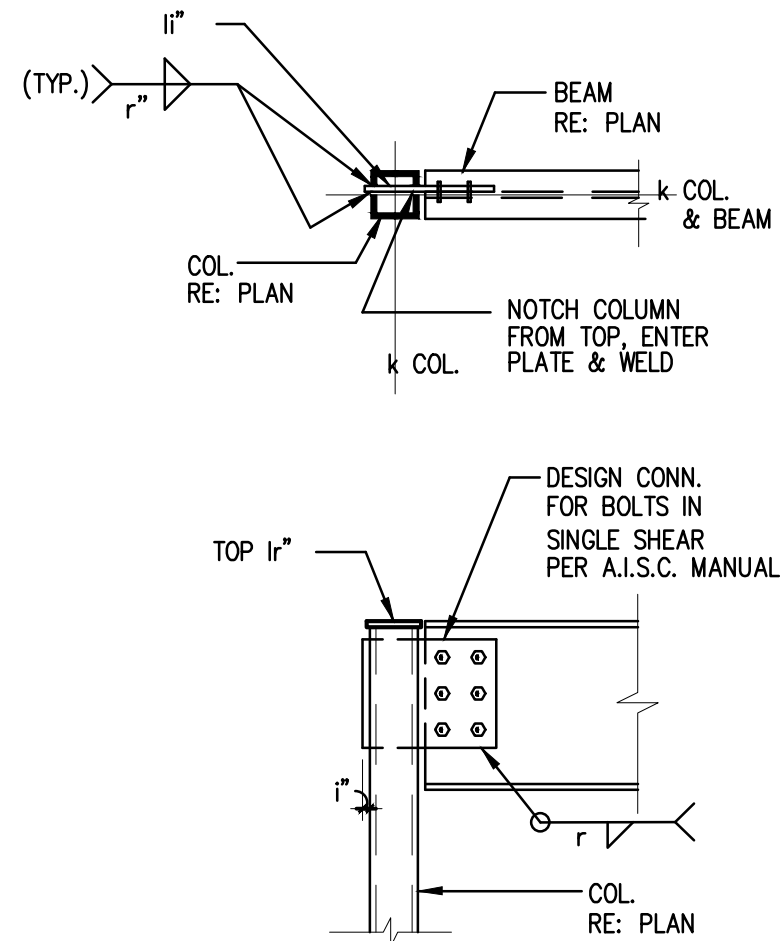


TYPICAL ROOF T-BRACE DETAILS

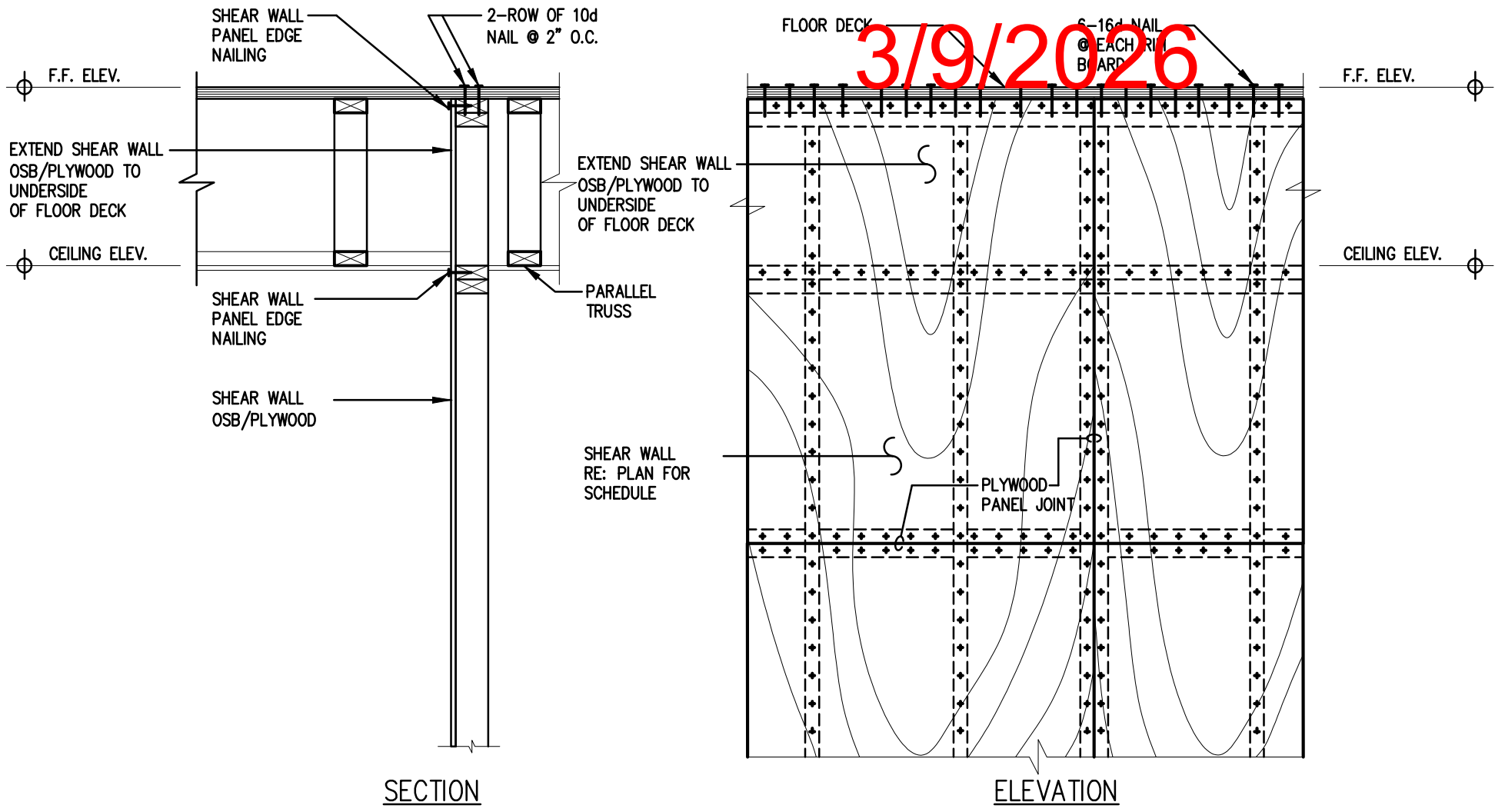
TYPICAL ROOF BRACING DETAILS



WOOD POST BASE (ABU) WOOD POST CAP (PC)
SIMPSON BASE AND POST CAP CONNECTION DETAILS



TYPICAL BEAM TO COLUMN CONNECTION



SECTION: INTERIOR SHEAR WALL CONNECTION DETAIL (TRUSS PARALLEL TO WALL)

GENERAL NOTES: STRUCTURAL AND MISC. STEEL

- CONFORM TO THE FOLLOWING MATERIAL SPECIFICATIONS:
STRUCTURAL & MISC. SHAPES: ASTM A-36
PIPE COLUMNS: ASTM A-53-B
TUBE COLUMNS: ASTM A-500-B
- ALL DETAILING SHALL BE IN CONFORMANCE WITH THE STANDARDS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC).
- UNLESS NOTED OTHERWISE, PROVIDE FRAMED BEAM CONNECTIONS IN ACCORDANCE WITH PART 4, AISC MANUAL - 3/4" ASTM A-307 BOLTS. DESIGN FOR SHEARS IN TABLES FOR ALLOWABLE LOADS ON BEAMS, PART 2.
- FIELD CONNECTIONS SHALL BE EQUIVALENT TO STANDARD BOLTED CONNECTIONS USING 3/4" ASTM A-307 BOLTS UNLESS OTHERWISE SHOWN. IF CONNECTION BOLTS ARE IN SINGLE SHEAR, BOLTS SHALL BE PLACED IN TWO VERTICAL ROWS. CONNECTIONS SHALL BE BOLTED OR WELDED - SEE DETAILS.
- WELDING SHALL CONFORM TO THE "CODE FOR WELDING IN BUILDING CONSTRUCTION" BY THE AMERICAN WELDING SOCIETY, LATEST EDITION. WELDS NOT CALLED OUT ON DRAWINGS SHALL BE 1/4" CONTINUOUS FILLET WELDS. WELDING ELECTRODES SHALL CONFORM TO AWS A5.1 OR A5.5 E70XX.
- ALL WELDING SHALL PERFORMED BY CERTIFIED WELDERS.
- ANCHOR BOLTS SHALL CONFORM TO ASTM A-307 FOR HEADED A.B. AND A-36 FOR UNHEADED AND HOOKED A.B., AND SHALL BE SET USING RIGID TEMPLATES.
- PROVIDE TEMPORARY BRACING & SHORING FOR ALL STEEL FRAMING AS REQ'D TO ENSURE STABILITY DURING CONSTRUCTION.
NOTE: THAT STEEL FRAMING MEMBERS MAY NOT BE STABLE DURING CONSTRUCTION UNTIL PERMANENTLY CONNECTED WITHIN THE OVERALL STRUCTURE.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL DIMENSION, ELEVATION AND REVIEW THESE DRAWINGS BEFORE FABRICATION OR ORDERING MATERIALS.

Submittal Set

3/9/2026

MECHANICAL LEGEND					
AHU	AIR HANDLING UNIT		SUPPLY AIR GRILLE		SECTION VIEW SYMBOL
CU	CONDENSING UNIT		RETURN AIR GRILLE		DETAIL DESIGNATION
EA	EXHAUST AIR		EXHAUST AIR GRILLE		
FCU	FAN COIL UNIT		MOTORIZED CONTROL DAMPER		
FPB	FAN POWERED BOX		BACKDRAFT DAMPER		POWERED EQUIPMENT TAG
GEA	GREASE EXHAUST AIR		THERMOSTAT		
KEF	KITCHEN EXHAUST FAN		SPACE HUMIDISTAT		SHEET KEY NOTES
KSF	KITCHEN SUPPLY FAN		CARBON DIOXIDE SENSOR		POINT OF CONNECTION
MUA	MAKEUP AIR		DUCT MOUNTED SMOKE DETECTOR		POINT OF DISCONNECTION
RA	RETURN AIR		SMOKE DETECTOR RESET SWITCH		
RTU	ROOF TOP UNIT				
SA	SUPPLY AIR				
TEF	TOILET EXHAUST FAN				
VAV	VARIABLE AIR VOLUME BOX				

DESIGN CONDITIONS

LOCATION: SUGAR LAND, TX
CLIMATE ZONE: 2A
DESIGN OUTDOOR AIR CONDITIONS (SUMMER): 95°F DB, 80.5°F WB
DESIGN OUTDOOR AIR CONDITIONS (WINTER): 27°F
DESIGN INDOOR AIR CONDITIONS (YEAR ROUND): 75°F, 50% RH

AC-1 AND HP-1 ARE
UNIQUE TO MAINTAIN
FIRE RISER ROOM
TEMPERATURE
BETWEEN 40°F AND
100°F.

HEAT PUMP / AIR CONDITIONER					ELECTRICAL		
CODE	SERVICE	MANUFACTURER / MODEL	COOLING CAPACITY	HEATING CAPACITY	VOLT	PH	MOCP
HP-1	AC-1	DAIKIN FTXB18B and RXB18B	18 MBTUH	18 MBTUH	208	1	20

GENERAL NOTES:

1. DAIKIN FTXB18B and RXB18B OR EQUIVALENT
2. PROVIDE MANUFACTURER'S RECOMMENDED SERVICE CLEARANCE AROUND CU.
3. PROVIDE REFRIGERANT PIPING SIZED PER MANUFACTURER'S REQUIREMENTS.
4. CAPACITY BASED ON 95°F AMBIENT TEMPERATURE.
5. SEER: 26 MINIMUM
6. REFRIGERANT: 410-A
7. WEIGHT = 31 LBS (INDOOR), 97 LBS (OUTDOOR)

MECHANICAL SPECIFICATIONS:

0. COMMON WORK RESULTS FOR HVAC			
1. STANDARDS:	1.1. COMPLY WITH ALL APPLICABLE CODES, SPECIFICATIONS, LOCAL ORDINANCES, INDUSTRY STANDARDS, UTILITY COMPANY REGULATIONS AND THE APPLICABLE REQUIREMENTS OF THE FOLLOWING NATIONALLY ACCEPTED CODES AND STANDARDS:	1.1.1. UNDERWRITER'S LABORATORIES, INC., UL	1.1.2. AIR MOVING & CONDITIONING ASSOCIATION, AMCA
		1.1.3. AMERICAN STANDARDS INSTITUTE, INC., ASA	1.1.4. AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR-CONDITIONING ENGINEERS, INC., ASHRAE
		1.1.5. AMERICAN SOCIETY OF MECHANICAL ENGINEERS, ASME	1.1.6. AMERICAN SOCIETY OF PLUMBING ENGINEERS, ASPE
		1.1.7. AMERICAN WATER WORKS ASSOCIATION, AWWA	1.1.8. NATIONAL BUREAU OF STANDARDS, NBS
		1.1.9. NATIONAL FIRE PROTECTION ASSOCIATION, NFPA	1.1.10. SHEET METAL & AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION, SMACNA
1.2.	APPLICABLE LOCAL CODES FOR THE HARRIS COUNTY, TEXAS INCLUDE:	1.2.1.	2021 IBC WITH APPROVED CODE AMENDMENTS
1.2.2.	2021 IECC WITH APPROVED CODE AMENDMENTS	1.2.3.	2021 IMC WITH APPROVED CODE AMENDMENTS
1.2.4.	2021 IPC WITH APPROVED CODE AMENDMENTS	1.2.5.	2021 IFGC WITH APPROVED CODE AMENDMENTS
1.2.6.	2023 NEC WITH APPROVED CODE AMENDMENTS	1.2.7.	2021 IFC WITH APPROVED CODE AMENDMENTS
2. INSTALLATION:	2.1. GENERAL: SEQUENCE, COORDINATE, AND INTEGRATE THE VARIOUS ELEMENTS OF MECHANICAL SYSTEMS, MATERIALS, AND EQUIPMENT. COMPLY WITH THE FOLLOWING REQUIREMENTS:	2.1.1.	COORDINATE MECHANICAL, PLUMBING, AND FIRE PROTECTION SYSTEMS, EQUIPMENT, AND MATERIALS INSTALLATION WITH OTHER BUILDING COMPONENTS.
		2.1.2.	VERIFY ALL DIMENSIONS BY FIELD MEASUREMENTS.
		2.1.3.	ARRANGE FOR CHASES, SLOTS, AND OPENINGS IN OTHER BUILDING COMPONENTS DURING PROCESS OF CONSTRUCTION, TO ALLOW FOR MECHANICAL INSTALLATIONS.
2.4.	COORDINATE THE INSTALLATION OF REQUIRED SUPPORTING DEVICES AND SLEEVES TO BE SET IN POURED IN PLACE CONCRETE AND OTHER STRUCTURAL COMPONENTS, AS THEY ARE CONSTRUCTED.	2.4.5.	SEQUENCE, COORDINATE, AND INTEGRATE INSTALLATIONS OF MECHANICAL MATERIALS AND EQUIPMENT FOR EFFICIENT FLOW OF THE WORK. GIVE PARTICULAR ATTENTION TO LARGE EQUIPMENT REQUIRING POSITIONING PRIOR TO CLOSING OF THE BUILDING.
2.1.6.	WHERE MOUNTING HEIGHTS ARE NOT DETAILED OR DIMENSIONED, INSTALL SYSTEMS, MATERIALS AND EQUIPMENT TO PROVIDE THE MAXIMUM HEADROOM POSSIBLE.	2.1.7.	COORDINATE CONNECTION OF MECHANICAL SYSTEMS WITH EXTERIOR, UNDERGROUND AND OVERHEAD UTILITIES AND SERVICES. COMPLY WITH REQUIREMENTS OF GOVERNING REGULATIONS, FRANCHISED SERVICE COMPANIES, AND CONTROLLING AGENCIES. PROVIDE REQUIRED CONNECTION FOR EACH SERVICE.
		2.1.8.	INSTALL SYSTEMS, MATERIALS, AND EQUIPMENT TO CONFORM WITH ARCHITECTURAL ACTION MARKINGS ON SUBMITTAL, INCLUDING COORDINATION DRAWINGS, TO GREATEST EXTENT POSSIBLE. CONFORM TO ARRANGEMENTS INDICATED BY THE CONTRACT DOCUMENTS. RECOGNIZING THAT PORTION OF THE WORK SHOWN ARE SHOWN ONLY IN THE DIAGRAMMING FORM, WHERE COORDINATION REQUIREMENTS CONFLICT WITH INDIVIDUAL SYSTEM REQUIREMENTS, RESOLVE CONFLICTS AND ROUTE PROPOSED SOLUTION TO THE ARCHITECT FOR REVIEW AND APPROVAL.
		2.1.9.	INSTALL SYSTEMS, MATERIALS, AND EQUIPMENT LEVEL AND PLUMB, PARALLEL AND PERPENDICULAR TO OTHER BUILDING SYSTEMS AND BALANCING, WHERE INSTALLED EXPOSED TO FINISHED SPACES.
		2.1.10.	INSTALL MECHANICAL EQUIPMENT TO FACILITATE SERVICING, MAINTENANCE, AND REPAIR OR REPLACEMENT OF EQUIPMENT COMPONENTS. AS MUCH AS PRACTICAL, CONNECT EQUIPMENT FOR EASE OF DISCONNECTING, WITH MINIMUM INTERFERENCE WITH OTHER INSTALLATIONS. EXTEND GREASE FITTINGS TO AN ACCESSIBLE LOCATION AND LEAD TO A COVERED DRAIN.
		2.1.11.	INSTALL ACCESS PANEL OR DOORS WHERE UNITS ARE CONCEALED BEHIND FINISHED SURFACES.
		2.1.12.	INSTALL SYSTEMS, MATERIALS, AND EQUIPMENT GIVING RIGHT OF WAY PRIORITY TO SYSTEMS REQUIRED TO BE INSTALLED AT A SPECIFIC SLOPE.
2.2.	PAINTING	2.2.1.	PROPERLY PREPARE SURFACES TO RECEIVE PAINT. THOROUGHLY CLEAN SURFACES REQUIRING PRIME PAINTING OF RUST, LOOSE SCALE OIL, GREASE AND DIRTY BY THE USE OF WIRE BRUSHES, SOLVENT AND OTHER REQUIRED MEANS. PRIME PREPARED SURFACES AND FINISH WITH TWO COATS OF EXTERIOR OIL BASE PAINT. VERIFY PRIMER AND PAINT ARE RATED FOR APPLICATION.
		2.2.2.	REMOVE SPATTERED PAINT FROM MECHANICAL EQUIPMENT AND REPAIR DAMAGE TO FACTORY PAINTED FINISHES.
2.3.	CONDENSATE PIPING SHALL BE CONSTRUCTED OF COPPER TYPE "L". PIPING SHALL BE INSULATED WITH ELECTROMETRIC INSULATION ABOVE CEILINGS.		
3. TESTING, ADJUSTING, AND BALANCING:	3.1. TESTING, ADJUSTING, AND BALANCING CONTRACTOR FOR THE AIR SIDE	3.1.1.	TESTING, ADJUSTING, AND BALANCING CONTRACTOR SHALL BE SELECTED AND PAID BY THE OWNER, THROUGH A SEPARATE CONTRACT INDICATED IN THE DOCUMENTS. BALANCING CONTRACTOR SHALL REPORT DIRECTLY TO OWNER'S PROJECT MANAGER.
		3.2.	HVAC SYSTEMS ACCEPTANCE TESTING, AND BALANCING DATA GATHERING, ANALYSIS, AND REPORTING WILL NOT BE DONE BY THE CONSTRUCTION MECHANICAL CONTRACTOR.
		3.3.	THE CONSTRUCTION MECHANICAL CONTRACTOR IS TO PROVIDE OPERATIONAL AND ACCESS SUPPORT, I.E. DATA, SCHEDULES, ETC. FOR THE AIRSIDE TAB CONTRACTOR.
3.4.	SYSTEMS SHALL BE COMPLETE AND OPERATIONAL FOR THE TAB CONTRACTOR TO PERFORM HIS WORK ON.	3.5.	PERFORM TESTING AND BALANCING PROCEDURES ON EACH SYSTEM IDENTIFIED, IN ACCORDANCE WITH THE DETAILED PROCEDURES OUTLINES IN THE REFERENCED STANDARDS.
		3.6.	SEAL DUCTS AND PIPING, AND TEST FOR AND REPAIR LEAKS.
		3.7.	MARK EQUIPMENT SETTINGS, INCLUDING DAMPER CONTROL POSITIONS, VALVE INDICATORS, FAN SPEED CONTROL LEVERS, AND SIMILAR CONTROLS AND DEVICES, TO SHOW FINAL SETTINGS. MARK WITH PAINT OR OTHER PERMANENT IDENTIFICATION MATERIALS.
		3.8.	RETEST, ADJUST, AND BALANCE SYSTEMS SUBSEQUENT TO SIGNIFICANT SYSTEM MODIFICATIONS, AND RESUBMIT TEST RESULTS.
		3.9.	TEST AND ADJUST MECHANICAL SYSTEMS FOR SOUND AND VIBRATION IN ACCORDANCE WITH THE DETAILED INSTRUCTIONS OF THE REFERENCED STANDARDS.
		3.10.	RECORD ALL DATA OBTAINED DURING TESTING, ADJUSTING, AND BALANCING, IN ACCORDANCE WITH, AND ON THE FORMS RECOMMENDED BY THE REFERENCED STANDARDS, AND AS APPROVED ON THE SAMPLE REPORT FORMS.
		3.11.	PREPARE REPORT OF RECOMMENDATIONS FOR CORRECTING UNSATISFACTORY MECHANICAL PERFORMANCES WHEN SYSTEM CANNOT BE SUCCESSFULLY BALANCED.
23 31 13 - DUCTWORK		1. SHEET METAL DUCTWORK	1.1. FURNISH AND INSTALL SHEET METAL DUCTWORK, SHEET METAL DUCTWORK HANGERS AND SUPPORTS, FIRE DAMPERS, FLASHING AND ALL NECESSARY ACCESSORIES AS SHOWN ON THE DRAWINGS AND AS SPECIFIED HEREIN.
		1.2.	SMACNA STANDARDS: COMPLY WITH SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA), LATEST EDITION, RECOMMENDATIONS FOR FABRICATION, CONSTRUCTION, DETAILS AND INSTALLATION PROCEDURES, EXCEPT AS OTHERWISE INDICATED ON THE DRAWINGS OR IN THESE SPECIFICATIONS.
		1.3.	ASHRAE STANDARDS: COMPLY WITH AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR CONDITIONING ENGINEERS (ASHRAE) RECOMMENDATIONS, EXCEPT AS OTHERWISE INDICATED ON THE DRAWINGS OR IN THESE SPECIFICATIONS.
2. RECTANGULAR SHEET METAL DUCTWORK		2.1.	DUCT MATERIALS: PROVIDE MATERIALS WHICH ARE FREE FROM VISUAL IMPURITIES, INCLUDING DISCOLORATION, SEAM MARKS, ROLLER MARKS, OIL, CAN MARKS, STAINS, DISCOLORATION AND OTHER IMPERFECTIONS, INCLUDING THOSE WHICH WOULD IMPAIR PAINTING.
2.2.	Gauges, Rectangular Ductwork: Fabricate steel ductwork (galvanized and stainless, if any) from the minimum gauges for sizes up to the corresponding maximum long-side dimensions as indicated in SMACNA Duct Manual "Low Velocity Systems" (latest edition).	2.3.	ALL LONGITUDINAL DUCT SEAMS AND JOINTS SHALL BE SNAP-LOCK AT THE CORNERS AND STANDING LOCKSEAM IN SIDES BETWEEN CORNERS. SEAL ALL LONGITUDINAL AND TRAVERSE JOINTS UPSTREAM OF ALL AIR VALVES WITH HARD-CAST TAPE JOIN SEALANT.
3. FIBER GLASS BOARD DUCTWORK		3.1.	AT CONTRACTOR'S OPTION AND IN ACCORDANCE WITH APPLICABLE CODES, FIBER GLASS DUCTWORK MAY BE SUBSTITUTED FOR METAL DUCTWORK IN THE FOLLOWING CASES:
		3.1.1.	SUPPLY DUCTS
		3.1.2.	RETURN DUCTS
		3.1.3.	EXHAUST DUCTS
		3.2.	DUCT BOARD REQUIREMENTS:
		3.2.1.	MINIMUM PRESSURE RATING 2" W.C. PER UL 181
		3.2.2.	DUCTED TO HAVE ANTI-MICROBIAL COATING SO IT WILL NOT SUPPORT GROWTH OF FUNGI OR BACTERIA RATED TO 5,000 FPM
4. ROUND SHEET METAL DUCTWORK		4.1.	DUCT GAUGES, GIRTH REINFORCING, GIRTH JOINTS, LONGITUDINAL SEAMS, ETC. SHALL BE IN ACCORDANCE WITH THE SMACNA MANUAL. ROUND SHEET METAL SUPPLY AIR DUCTWORK SHALL BE FABRICATED USING CORNERS AND STANDING LOCKSEAM JOINTS. ELBOWS SHALL BE STAMPED OR SEGMENTED AND TEES SHALL BE 45 DEGREES LATERAL TAPS WITH WELDED JOINTS. ADJUSTABLE FITTINGS OR DRAW BAND JOINT CONNECTIONS WILL NOT BE ACCEPTABLE.
5. FLEXIBLE CONNECTION		5.1.	FLEXIBLE CONNECTIONS SHALL BE PROVIDED IN DUCTWORK CONNECTED TO THE INLETS AND/OR OUTLETS OF ALL AIR HANDLING UNITS, FANS, ETC. FLEXIBLE CONNECTION MATERIALS SHALL BE THERMAFLEX OR APPROVED EQUAL. SEWING OR STAPLING OF JOINTS WILL NOT BE PERMITTED. ENDS OF FABRIC MUST BE OVERLAPPED 2" AND GLUED. PROVIDE AT LEAST 1" SLACK AT ALL FLEXIBLE CONNECTIONS.
6. FLEXIBLE DUCTWORK		6.1.	FLEXIBLE DUCT SHALL BE A FACTORY GLASS FIBER INSULATED ASSEMBLY WITH VAPOR BARRIER JACKET AND A MAXIMUM THERMAL CONDUCTANCE OF 0.23 BTU/HR PER SF. FLEXIBLE DUCT SHALL BE CONSTRUCTED OR REINFORCED ALUMINUM FOIL FABRIC MECHANICALLY LOCKED INTO A SPIRAL ALUMINUM FELIX SUITABLE FOR A POSITIVE WORKING PRESSURE OF AT LEAST 6" W.G. IT SHALL REQUIRE NO MORE THAN TWO 90° ELBOWS AND ONE 45° ELBOW. FLEXIBLE DUCT ASSEMBLY SHALL BE FLAME CLASS 1 BY THE UNDERWRITER'S LABORATORY AT A FLAME SPREAD OF NOT OVER 25 AND A SMOKE DEVELOPED RATE OF NOT OVER 50 AND SHALL COMPLY WITH NFPA STANDARD 90A.
		6.2.	FLEXIBLE DUCT CLAMPS SHALL BE STAINLESS STEEL WITH SWIVEL ACTION SCREW. MAXIMUM LENGTH OF FLEXIBLE DUCT SHALL NOT EXCEED 6 FEET INCLUDING ALL BENDS.
		6.3.	THREMAFLEX DUCTWORK OF EQUAL CONSTRUCTION WILL BE ACCEPTABLE.
7. MANUAL DAMPERS		7.1.	ALL DUCT TAPS WILL BE PROVIDED WITH A DAMPER FOR BALANCING.
		7.2.	MANUAL DAMPERS SHALL HAVE A MINIMUM OF 16 GAUGE GALVANIZED STEEL CHANNEL FRAME WITH MOUNTING FLANGES AND AXLES SET IN OIL IMPEGNATED BRONZE BEARINGS. AXLES SHALL BE MINIMUM OF 1/2" IN DIAMETER AND SHALL BE INTERLOCKED WITH BLADES TO POSITIVELY ELIMINATE SUPPAGE.
		7.3.	BLADES SHALL BE MINIMUM OF 16 GAUGE GALVANIZED STEEL. MANUAL DAMPERS SHALL HAVE A MINIMUM OF FOUR BREAKS RUNNING THE ENTIRE LENGTH OF THE DAMPER TO ASSURE RIGIDITY AND TIGHT CLOSE OFF.
		7.4.	BLADES SHALL BE ON CENTER NO GREATER THAN 9" AND NO BLADE SHALL EXCEED 48" IN LENGTH. ALL BLADES SHALL BE INTERCONNECTED TO ACT IN UNISON FOR OPPOSED BLADE OPERATION.
		7.5.	SINGLE BLADE DAMPERS SHALL BE USED FOR DUCTWORK LESS THAN 12" FOR THE LARGER DIMENSION.
			ALL MANUAL DAMPERS OF 12" DIAMETER OR LESS SHALL BE PROVIDED WITH LOCK-IN QUADRANT HANDLES.
8. THERMAL INSULATION DUCTWORK		8.1.	INSULATION FOR SUPPLY AIR DUCTWORK AND OUTSIDE AIR DUCT SHALL BE AS FOLLOWS:
		8.1.1.	CONCEALED ABOVE CEILING SHALL BE 1-1/2" DENSITY FIBER FLEXIBLE WITH KRAFT PAPER VAPOR JACKET WITH MINIMUM R-VALUE OF 6 PER IECC 2015.
		8.2.	INSULATION: ASTM C553; FLEXIBLE, NONCOMBUSTIBLE BLANKET.
		8.2.1.	K VALUE: ASTM C518, 0.25 AT 75 DEGREES F
		8.2.2.	MAXIMUM SERVICE TEMPERATURE: 250° F
		8.2.3.	MAXIMUM MOISTURE ABSORPTION: 0.20 PERCENT BY VOLUME
		8.2.4.	DENSITY: 2.0 LB/CU.FT.
		8.2.5.	THICKNESS: 1-1/2"
8.3. VAPOR BARRIER JACKET		8.3.1.	KRAFT PAPER REINFORCED WITH GLASS FIBER YARN AND BONDED TO ALUMINIZED FILM.
		8.3.2.	MOISTURE VAPOR TRANSMISSION: ASTM E96; 0.02 PERM



FORWARD
MEP

TEXAS ENG. FIRM
REG. NO. F-23046



ARCHITECTURE ♦ CONSULTING ♦ PERMITTING

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IMPERIAL ROYAL GARDEN
PLAZA

15015 VOSS RD
SUGAR LAND, TEXAS, 77498

NO.	REVISION DESCRIPTION	DATE	03-06-2026	TITLE MECHANICAL NOTES	
				CLIENT REVIEW	
				PERMIT REVIEW	
				CONSTRUCTION ISSUE	
				CHECKED BY:	SHEET:
				PROJECT #.--	M100

MECHANICAL GENERAL NOTES:

1. CONTRACTOR SHALL CONFIRM TO ALL LOCAL, STATE, AND APPLICABLE CODES. WORK SHALL BE INSTALLED IN A WORKMAN LIKE FASHION.
2. DUCTWORK SHALL CONFORM TO ALL SMACNA STANDARDS.
3. FLEX DUCT SHALL NOT EXTEND OVER 6'-0".
4. DUCTWORK AND PIPING INSULATION SHALL RUN CONTINUOUSLY THROUGH PENETRATIONS. CONTRACTOR TO PROVIDE NECESSARY SLEEVES AND FLASHING AT WALL PENETRATIONS.
5. CONTRACTOR SHALL MAINTAIN A MINIMUM DISTANCE OF 10'-0" BETWEEN ALL OUTDOOR DUCTS, INTAKES VS. EXHAUST DUCTS AND PLUMBING VENTS.
6. PRIOR TO BID OR BEGINNING CONSTRUCTION, CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THE PROJECT CONDITIONS AND PROJECT DRAWINGS. CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER, PRIOR TO BID, OR ANY DISCREPANCIES BETWEEN PLAN AND FIELD CONDITIONS.
7. LOCATE DIFFUSERS AND GRILLES TO ACCOMMODATE LIGHTING LAYOUT. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF LIGHTS AND DIFFUSERS.
8. CONTRACTOR TO PROVIDE ALL REQUIRED OFFSETS AND FITTINGS REQUIRED TO PROVIDE COMPLETE DESIGN. MECHANICAL DRAWINGS ARE SCHEMATIC IN NATURE. CONTRACTOR TO PROVIDE SHOP DRAWINGS AND AS-BUILTS AS NECESSARY.
9. ALL DUCTWORK AND PIPING SHALL BE PROPERLY SUPPORTED AND SECURED.
10. ALL DAMPERS (BALANCING, FIRE, CONTROL, ETC.) SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS OR CONTRACTOR SHALL PROVIDE A CEILING ACCESS DOOR.
11. DUCT DIMENSIONS SHOWN ON PLAN ARE INTERNAL DIMENSIONS.
12. PROVIDE VOLUME DAMPERS AT BRANCH CONNECTIONS. VOLUME DAMPERS SHALL BE LOCATED AS NEAR AS POSSIBLE TO BRANCH TAKE-OFF AND SHALL BE ACCESSIBLE VIA ACCESS PANEL IN SOLID FINISH CEILING OR VIA REMOTE ACTUATOR. DAMPERS LOCATED ABOVE REMOVABLE CEILING PANELS SHALL BE MANUAL TYPE.
13. PROVIDE VOLUME DAMPERS FOR EACH DIFFUSER. LINEAR DIFFUSERS SHALL BE PROVIDED WITH INTEGRAL VOLUME DAMPER ACCESSIBLE THROUGH THE FACE OF THE SLOT DIFFUSER. CEILING DIFFUSERS INSTALLED IN HARD CEILING SHALL BE PROVIDED WITH REMOTELY CONTROLLED VOLUME DAMPER.
14. CONTRACTOR SHALL FIELD VERIFY EXISTING CHASE LOCATION AND CONFIRM ADEQUATE SPACE TO ROUTE PIPING AND DUCTWORK. NOTIFY ENGINEER OF ANY OBSTRUCTIONS. CONTRACTOR SHALL ROUTE NEW PIPING AND DUCTWORK IN MOST EFFICIENT MANNER WITHIN CHASE.
15. CONTRACTOR SHALL NOTIFY AND COORDINATE WITH OWNER FOR ANY SUBSTITUTIONS OR ENTRY INTO OTHER SPACES TO ROUTE DUCTWORK OR PIPING THAT IS REQUIRED.
16. ALL ROOF MOUNTED AND EXTERIOR EQUIPMENT LOCATIONS SHALL BE APPROVED BY THE LANDLORD PRIOR TO ROUGH IN OR PLACEMENT.
17. RETURN AND OUTDOOR AIR DUCTWORK SHALL BE OF METAL CONSTRUCTION WITH EXTERNAL INSULATION.
18. ALL ROOF MOUNTED AND EXTERIOR EQUIPMENT LOCATIONS SHALL BE APPROVED BY THE LANDLORD PRIOR TO ROUGH IN OR PLACEMENT.
19. CONTRACTOR SHALL VERIFY THAT ALL HVAC COMPONENTS MEET SPACING AND CLEARANCE REQUIREMENTS PER EQUIPMENT MANUFACTURER'S INSTRUCTIONS.
20. THIS DRAWING IS DIAGRAMMATIC AND BASED ON THE BEST AVAILABLE INFORMATION AT THE TIME OF THE DESIGN. THEREFORE, THIS DRAWING MAY NOT REFLECT ACTUAL CONDITIONS. ALL MECHANICAL INDICATIONS INDICATED ON THIS SHEET SHALL BE FIELD VERIFIED PRIOR TO BID AND START OF WORK.

MECHANICAL KEY NOTES:

1. PROVIDE & INSTALL USER ADJUSTABLE, DIGITAL DISPLAY 7-DAY PROGRAMMABLE THERMOSTAT PROVIDED BY MECHANICAL CONTRACTOR. LOCATION OF THERMOSTAT TO BE COORDINATED WITH ARCHITECT PRIOR TO INSTALLATION. MOUNTING HEIGHT TO BE PER ADA REQUIREMENTS. PROVIDE LOCK BOX FOR THERMOSTATS IN PUBLIC PLACES.
2. SUPPLY AIR DUCTWORK IN EXPOSED AREAS SHALL BE INTERNALLY LINED AND PINNED WITH A MINIMUM R-4.2, 1" FIBERGLASS INSULATION WITH VAPOR BARRIER. INSULATION SHALL HAVE MAXIMUM RATINGS OF 24 FLAME SPREAD, 50 SMOKE DEVELOPED. SEE ARCHITECTURAL DRAWINGS FOR DUCT PAINT OR COLOR SPECIFICATION.
3. PROVIDE & INSTALL RTU PER MANUFACTURER'S INSTRUCTIONS. PROVIDE ADEQUATE CLEARANCES FOR ACCESS TO FILTERS, MOTORS, PIPING AND ELECTRICAL CONNECTIONS. PROVIDE MANUFACTURER'S OR FIELD FABRICATED ROOF CURB.
4. ROUTE 3/4" MECHANICAL CONDENSATE TO TAILPIECE OF NEARBY RECEPTACLE APPROVED BY AHJ. CONDENSATE PIPE SHALL BE SLOPED A MINIMUM OF 1/8" PER 1' AND ROUTED TO MINIMIZE TRIP HAZARDS.
5. TOILET EXHAUST FAN TO BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS. EXHAUST FAN TO BE MOUNTED WITHIN CEILING WITH GRILLE AND OPERATED VIA A WALL SWITCH. EXHAUST DUCT TO TERMINATE TO ROOF CAP ABOVE ROOF(WITH BIRD SCREEN AND BACK DRAFT DAMPER).
6. EXHAUST AIR DISCHARGE TO BE A MINIMUM OF 10' AWAY FROM OUTSIDE AIR INTAKES, DOORS, AND USER ADJUSTABLE WINDOWS.
7. OUTSIDE AIR INTAKE SHALL BE A MINIMUM OF 10' AWAY FROM BUILDING EXHAUST.

NOTE: ALL KEYNOTES MAY NOT BE USED ON THIS SHEET.

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IMPERIAL ROYAL GARDEN
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15015 VOSS RD
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**FORWARD
MEP**

TEXAS ENG. FIRM
REG. NO. F-23046

03-06-2026



TITLE
MECHANICAL SITE PLAN

CLIENT REVIEW

PERMIT REVIEW

CONSTRUCTION ISSUE

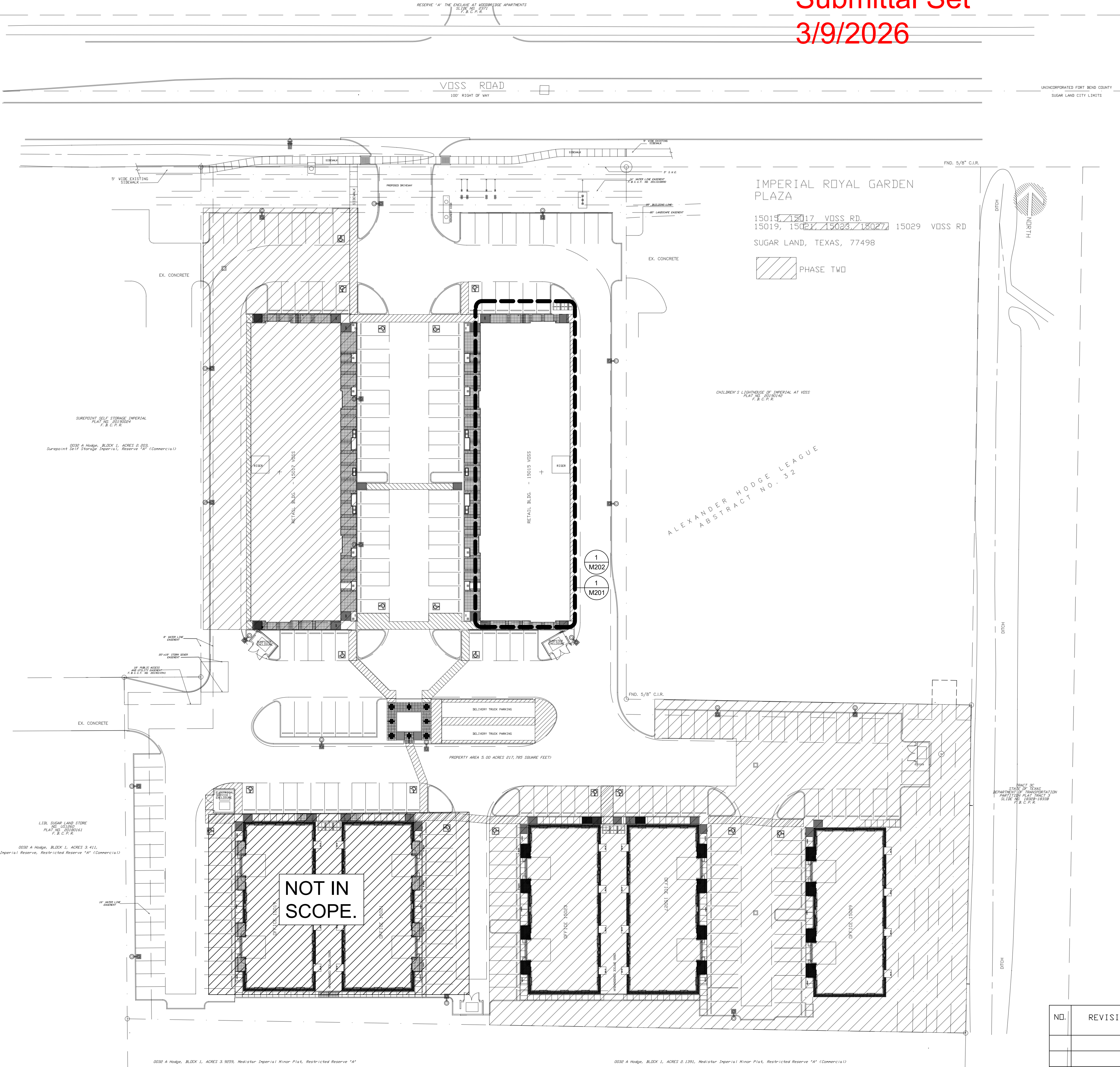
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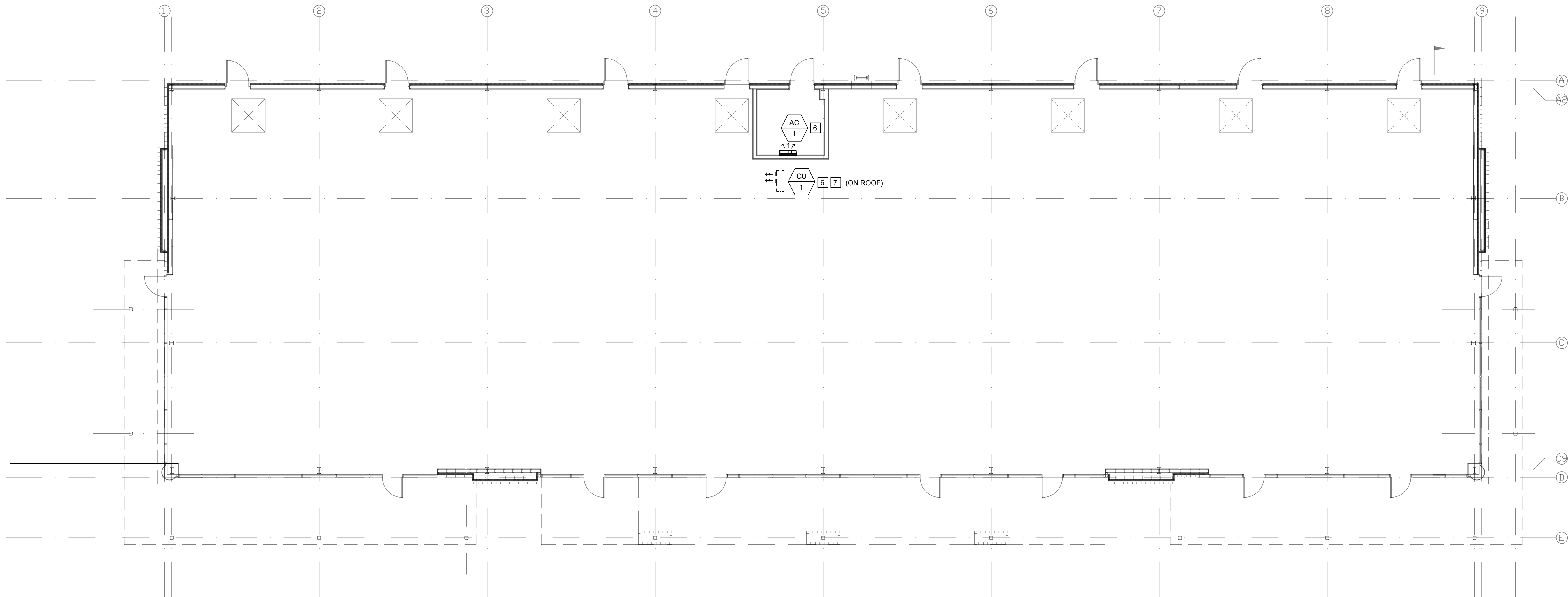
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NO.	REVISION DESCRIPTION	DATE



SITE PLAN - MECHANICAL

1/32" = 1'0" (SHEET SIZE: 36"x24")



1 FLOOR PLAN - MECHANICAL
1/8" = 1'0" (SHEET SIZE: 36"x24")

MECHANICAL GENERAL NOTES:

- CONTRACTOR SHALL CONFIRM TO ALL LOCAL, STATE, AND APPLICABLE CODES. WORK SHALL BE INSTALLED IN A WORKMAN LIKE FASHION.
- DUCTWORK SHALL CONFORM TO ALL SMACNA STANDARDS.
- FLEX DUCT SHALL NOT EXTEND OVER 6'-0".
- DUCTWORK AND PIPING INSULATION SHALL RUN CONTINUOUSLY THROUGH PENETRATIONS. CONTRACTOR TO PROVIDE NECESSARY SLEEVES AND FLASHING AT WALL PENETRATIONS.
- CONTRACTOR SHALL MAINTAIN A MINIMUM DISTANCE OF 10'-0" BETWEEN ALL OUTDOOR DUCTS, INTAKES VS. EXHAUST DUCTS AND PLUMBING VENTS.
- PRIOR TO BID OR BEGINNING CONSTRUCTION, CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THE PROJECT CONDITIONS AND PROJECT DRAWINGS. CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER, PRIOR TO BID, OR ANY DISCREPANCIES BETWEEN PLAN AND FIELD CONDITIONS.
- LOCATE DIFFUSERS AND GRILLES TO ACCOMMODATE LIGHTING LAYOUT. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF LIGHTS AND DIFFUSERS.
- CONTRACTOR TO PROVIDE ALL REQUIRED OFFSETS AND FITTINGS REQUIRED TO PROVIDE COMPLETE DESIGN. MECHANICAL DRAWINGS ARE SCHEMATIC IN NATURE. CONTRACTOR TO PROVIDE SHOP DRAWINGS AND AS-BUILTS AS NECESSARY.
- ALL DUCTWORK AND PIPING SHALL BE PROPERLY SUPPORTED AND SECURED.
- ALL DAMPERS (BALANCING, FIRE, CONTROL, ETC.) SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS OR CONTRACTOR SHALL PROVIDE A CEILING ACCESS DOOR.
- DUCT DIMENSIONS SHOWN ON PLAN ARE INTERNAL DIMENSIONS.
- PROVIDE VOLUME DAMPERS AT BRANCH CONNECTIONS. VOLUME DAMPERS SHALL BE LOCATED AS NEAR AS POSSIBLE TO BRANCH TAKE-OFF AND SHALL BE ACCESSIBLE VIA ACCESS PANEL IN SOLID FINISH CEILING OR VIA REMOTE ACTUATOR. DAMPERS LOCATED ABOVE REMOVABLE CEILING PANELS SHALL BE MANUAL TYPE.
- PROVIDE VOLUME DAMPERS FOR EACH DIFFUSER. LINEAR DIFFUSERS SHALL BE PROVIDED WITH INTEGRAL VOLUME DAMPER ACCESSIBLE THROUGH THE FACE OF THE SLOT DIFFUSER. CEILING DIFFUSERS INSTALLED IN HARD CEILING SHALL BE PROVIDED WITH REMOTELY CONTROLLED VOLUME DAMPER.
- CONTRACTOR SHALL FIELD VERIFY EXISTING CHASE LOCATION AND CONFIRM ADEQUATE SPACE TO ROUTE PIPING AND DUCTWORK. NOTIFY ENGINEER OF ANY OBSTRUCTIONS. CONTRACTOR SHALL ROUTE NEW PIPING AND DUCTWORK IN MOST EFFICIENT MANNER WITHIN CHASE.
- CONTRACTOR SHALL NOTIFY AND COORDINATE WITH OWNER FOR ANY SUBSTITUTIONS OR ENTRY INTO OTHER SPACES TO ROUTE DUCTWORK OR PIPING THAT IS REQUIRED.
- ALL ROOF MOUNTED AND EXTERIOR EQUIPMENT LOCATIONS SHALL BE APPROVED BY THE LANDLORD PRIOR TO ROUGH IN OR PLACEMENT.
- RETURN AND OUTDOOR AIR DUCTWORK SHALL BE OF METAL CONSTRUCTION WITH EXTERNAL INSULATION.
- ALL ROOF MOUNTED AND EXTERIOR EQUIPMENT LOCATIONS SHALL BE APPROVED BY THE LANDLORD PRIOR TO ROUGH IN OR PLACEMENT.
- CONTRACTOR SHALL VERIFY THAT ALL HVAC COMPONENTS MEET SPACING AND CLEARANCE REQUIREMENTS PER EQUIPMENT MANUFACTURER'S INSTRUCTIONS.
- THIS DRAWING IS DIAGRAMMATIC AND BASED ON THE BEST AVAILABLE INFORMATION AT THE TIME OF THE DESIGN. THEREFORE, THIS DRAWING MAY NOT REFLECT ACTUAL CONDITIONS. ALL MECHANICAL INDICATIONS INDICATED ON THIS SHEET SHALL BE FIELD VERIFIED PRIOR TO BID AND START OF WORK.

NOTE: ALL KEYNOTES MAY NOT BE USED ON THIS SHEET.

MECHANICAL KEY NOTES:

- PROVIDE & INSTALL USER ADJUSTABLE, DIGITAL DISPLAY 7-DAY PROGRAMMABLE THERMOSTAT PROVIDED BY MECHANICAL CONTRACTOR. LOCATION OF THERMOSTAT TO BE COORDINATED WITH ARCHITECT PRIOR TO INSTALLATION. MOUNTING HEIGHT TO BE PER ADA REQUIREMENTS. PROVIDE LOCK BOX FOR THERMOSTATS IN PUBLIC PLACES.
- ROUTE 3/4" MECHANICAL CONDENSATE TO NEARBY FLOOR DRAIN. CONDENSATE PIPE SHALL BE SLOPED A MINIMUM OF 1/8" PER 1' AND ROUTED TO MINIMIZE TRIP HAZARDS.
- TOILET EXHAUST FAN TO BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS. EXHAUST FAN TO BE MOUNTED WITHIN CEILING WITH GRILLE AND OPERATED VIA A WALL SWITCH. EXHAUST DUCT TO TERMINATE TO ROOF CAP ABOVE ROOF (WITH BIRD SCREEN AND BACK DRAFT DAMPER).
- EXHAUST AIR DISCHARGE TO BE A MINIMUM OF 10' AWAY FROM OUTSIDE AIR INTAKES, DOORS, AND USER ADJUSTABLE WINDOWS.
- OUTDOOR AIR INTAKE DUCT TO TERMINATE ABOVE ROOF WITH ROOF CAP INCLUDING BIRDSCREEN AND BACKDRAFT DAMPER. OUTDOOR AIR INTAKE SHALL TERMINATE A MINIMUM OF 10' WAY FROM ANY BUILDING EXHAUST.
- ROUTE REFRIGERANT LIQUID AND SUCTION LINE TO/FROM AHU AND CU. PIPE SIZE TO BE DETERMINED BY AHU/CH MANUFACTURER.
- CONDENSING UNIT TO BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS. PROVIDE ADEQUATE CLEARANCE FOR ACCESS AND AIRFLOW. INSTALL CONDENSING UNIT ATOP 4" CONCRETE PAD.



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NO.	REVISION DESCRIPTION	DATE	03-06-2026		TITLE
					MECH FLOOR PLAN
					CLIENT REVIEW
					PERMIT REVIEW
					CONSTRUCTION ISSUE
				CHECKED BY:	SHEET: M201
				PROJECT #:	--

Submittal Set

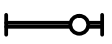
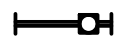
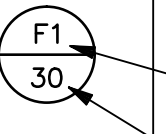
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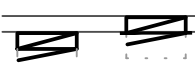
ELECTRICAL LEGEND

NOT ALL SYMBOLS, ABBREV., ETC. ARE NECESSARILY USED ON THIS PROJECT

26 ABBREVIATIONS

GENERAL NOTES

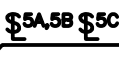
LIGHTING	
SYMBOL	DESCRIPTION
	RECESSED FLUOR. LUMINAIRE (SIZE/SHAPE VARIES)
	SURFACE FLUOR. LUMINAIRE (SIZE/SHAPE VARIES)
	SHADING INDICATES FIXTURE IS CONNECTED TO 90 MINUTES BATTERY BACK-UP INVERTER SYSTEM
 	POINT SOURCE - SURFACE, RECESSED CEILING MTD
	STRIP LIGHT
	UNDER-CABINET LINEAR FLUORESCENT
	PENDANT MOUNTED FIXTURE
	DECORATIVE SCONCE
	POLE MOUNTED LUMINAIRE-- SINGLE OR DUAL HEAD
	"FOOT" INDICATES WALL MOUNTED LUMINAIRE
 	ILLUMINATED EXIT SIGN, SHADED QUADRANT INDICATES FACES, ARROWS AS SHOWN
	LUMINAIRE MARKING CONVENTION LEGEND: LUMINAIRE TYPE IDENTIFICATION. SEE LUMINAIRE SCHEDULE. WATTAGE

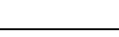
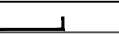
DISTRIBUTION & EQUIPMENT	
SYMBOL	DESCRIPTION
	BRANCH CIRCUIT PANELBOARDS, SURFACE AND RECESS MOUNTED. SOLID = 120/280V, HATCHED = 277/480V, DASHED EQUIP. = FUTURE
	MOTOR CONTROL CENTER W/ CODE CLEARANCES SHOWN, DASHED EQUIP. = FUTURE
	TRANSFORMER WITH CODE CLEARANCES SHOWN
	SWITCH BOARD / SWITCH GUARD WITH CODE CLEARANCES SHOWN
	CONNECTION TO MOTOR PROVIDED BY OTHERS
	DISCONNECT SWITCH, SIZE AS NOTED OR IF NOT SHOWN SIZE PER CONNECTED MOTOR SIZE AND MOTOR DISCONNECT SCHEDULE
	FUSED DISCONNECT SWITCH, SIZE AS NOTED, SIZE FUSE PER MANUFACTURER'S RECOMMENDATIONS
	ENCLOSED CIRCUIT BREAKER DISCONNECT SWITCH, TRIP SIZE AS NOTED.
	DISCONNECT W/ MAGNETIC MOTOR STARTER (CONTROLLER) OR CONTACTOR, SIZE PER LOAD SERVED. NEMA SIZE #1 MINIMUM UNON.
	MAGNETIC MOTOR STARTER (CONTROLLER) OR CONTACTOR, SIZE PER LOAD SERVED. NEMA SIZE #1 MINIMUM UNON.
	DIV. 16 CONNECTION TO EQUIPMENT PROVIDED BY OTHERS. SHADED = ON ALT. POWER SOURCE NOTED
	DIV. 16 CONNECTION TO EQUIPMENT WITH INTEGRAL DISCONNECT THAT IS PROVIDED BY OTHERS. SHADED = ON ALT. POWER SOURCE NOTED
	EQUIPMENT OR TERMINAL ENCLOSURE AS NOTED, SURFACE AND RECESS MOUNTED
	BUILDING GROUND BUS, SEE DETAILS
	BUSWAY RISER
	BUSWAY STAB-IN TYPE CIRCUIT BREAKER OR FUSE DISCONNECT, SIZE AS NOTED.

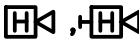
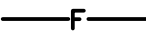
POWER DEVICES	
SYMBOL	DESCRIPTION
	SIMPLEX RECEPTACLE – WALL, CEILING, ON ALT.
	DUPLEX RECEPTACLE – WALL, CEILING, ON ALT.
	DOUBLE DUPLEX RECEPTACLE – WALL, CLG, ON ALT.
	SPECIAL PURPOSE RECEPTACLE –WALL, CEILING ON ALT. POWER; NEMA CONFIGURATION AS NOTED
	RECEPTACLE TYPE SHOWN –WALL –ABOVE COUNTER BACKSPASH. SEE ARCHITECTURAL DRAWINGS.
	SHADED RECEPTABLES NOTED "ON ALT." ABOVE ARE CONNECTED TO ALTERNATE POWER SOURCE (EMERG., STANDBY, UPS, ETC.) PER CIRCUITING INDICATED
	DUPLEX RECEPTACLE – WALL – WITH INTEGRAL GROUND FAULT CIRCUIT INTERRUPTER
	RECEPT. TYPE SHOWN W/ WEATHERPROOF COVER AND INTEGRAL GROUND FAULT CIRCUIT INTERRUPTER
	RECEPT. TYPE SHOWN AT SPECIAL HEIGHT
	RECEPTACLE W/ ISOLATED GROUND AND TRANSIENT SURGE SUPPRESSED.
	WALL MOUNTED ELECTRICAL CONNECTION TO ELECTRIFIED FURNITURE.
	CLOCK HANGER RECEPTACLE
	TELE/POWER POLE, POWER POLE
	TELE/POWER POLE WITH WHIP CONNECTION TO ELECTRIFIED FURNITURE

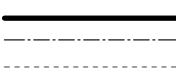
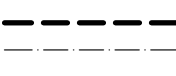
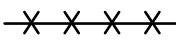
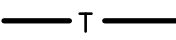
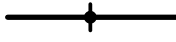
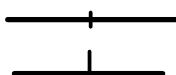
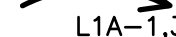
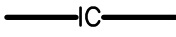
(E)	EXISTING TO REMAIN
(R)	RELOCATED EXISTING FIXTURE
(N)	NEW
ACU	AIR CONDITIONING UNIT
A	ALTERNATING CURRENT
A, AMP	AMPERES
AF	AMPERE (RATED) FUSE OR CB FRAME
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AL	ALUMINUM (ALLOY)
AS	AMPERE (RATED) SWITCH
AT	CIRCUIT BRKR TRIP SETTING (AMPS)
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
B	BELL (FIRE ALARM)
BRKR	CIRCUIT BREAKER
C	CONDUIT (CIRCULAR RACEWAY)
CAB	CABINET
CB	CIRCUIT BREAKER
CFM	CUBIC FEET PER MINUTE
CKT	CIRCUIT
CLG	CEILING
CO	CONDUIT ONLY
CT	CURRENT TRANSFORMER
CU	COPPER
DISC	DISCONNECT
DIA	DIAMETER
DIV	DIVISION
DP	DISTRIBUTION PANEL
DWG	DRAWING
E,EMERG	EMERGENCY
EF	EXHAUST FAN
EMT	ELECTRICAL METALLIC TUBING
EO	ELECTRICALLY OPERATED
EOL	END OF LINE
EWC	ELECTRIC WATER COOLER
EWB	ELECTRIC WATER HEATER
FA	FIRE ALARM
FAA	FIRE ALARM ANNUNCIATOR
FC	FOOT CANDLES
FLA	FULL LOAD AMPERES
FLEX	FLEXIBLE
FO	FIBER OPTIC
FSD	FIRE/SMOKE DAMPER
GEN	GENERATOR
GFI/GFCI	GROUND FAULT CIRCUIT INTERRUPTER
G,GND	GROUND
GRAP	GENERATOR REMOTE ANNUNCIATOR PNL
GRC	GALVANIZED RIGID STEEL CONDUIT
HLO	HANDLE LOCK—ON(OFF)
HP	HORSEPOWER
HPF	HIGH POWER FACTOR
HTR	HEATER
HZ	HERTZ (CYCLES PER SECOND)
IER	INTEGRATED EQUIPMENT (SHORT CIRCUIT) RATING (RMS SYM. AMPS)
IES	ILLUMINATING ENGINEERING SOCIETY
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
K	KEY OPERATED
KCMIL	THOUSAND CIRCULAR MILS
KW	KNOCK OUT
KW	KILOWATTS
KVA	KILOVOLT—AMPERES
LTG	LIGHTING
LCP	LIGHTING CONTROL PANEL
MAX	MAXIMUM
MCA	MINIMUM CIRCUIT AMPERES
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MLO	MAIN LUGS ONLY
MO	MANUAL OPERATOR
MTD	MOUNTED
MTR	MOTOR
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MFR'S ASSOC.
NL	NIGHT LIGHT (UNSWITCHED)
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OC	ON CENTER
OS	OCCUPANCY SENSOR
P	POLE
PB	PUSHBUTTON
PH, Ø	PHASE
PNL	PANEL
PRI	PRIMARY
RNC	RIGID NON—METALLIC CONDUIT (PVC)
RS	RAPID START
RST	REMOTE STATION TRANSMITTER
SEC	SECONDARY
SOL	SOLENOID
SUB	SUBSTATION
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TB	TERMINAL BOARD
TEL	TELEPHONE
TYP	TYPICAL
UL	UNDERWRITERS LAB
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTS
VA	VOLT—AMPERES
VFD	VARIABLE FREQUENCY DRIVE
VL	VERIFY LOCATION AND REQUIREMENT
W	WATT
WP	WEATHERPROOF
XFRM	TRANSFORMER
" , IN	INCHES
' , FT	FEET

[illegible]

SWITCHING CONTROLS	
SYMBOL	DESCRIPTION
S ^a	SINGLE POLE SWITCH (SUPERScript DENOTES SIMILARLY MARKED LUMINAIRES CONTROLLED TOGETHER)
S ₂	TWO POLE SWITCH
S ₃	THREE WAY SWITCH
S ₄	FOUR WAY SWITCH
S _K	KEY OPERATED SWITCH
D	DIMMER SWITCH. NUMBER INDICATES WATTAGE RATING. IF NOT SHOWN THEN EQUAL TO LOAD.
S _{TS}	TIMER SWITCH
	LOW VOLTAGE MOMENTARY CONTACT SWITCH, UPPER CASE LETTER SUPERScript INDICATES CONNECTION TO LOW VOLTAGE RELAY CONTROLLING SIMILARLY MARKED LUMINAIRES.
S _{WP}	WEATHERPROOF SWITCH
S _T	THERMAL OVERLOAD SWITCH
	WALL MOUNTED OCCUPANCY SENSOR/DIMMER COMB
	VACANCY SENSOR SWITCH - WALL MOUNTED (PIR), MANUAL "ON", AUTO "OFF"
	OCCUPANCY SENSOR SWITCH - WALL MOUNTED (PIR)
	360 DEGREE OCCUPANCY SENSOR AND POWER PACK - CEILING MOUNTED. MULTIPLE POWER PACKS (AS INDICATED) SUB-LETTER "r" INDICATES REMOTE SENSOR ONLY. (TYPICAL)
	POWER PACK FOR CONTROLLED RECEPTACLES
	CORRIDOR/AISLE OCCUPANCY SENSOR - CEILING MOUNTED
 	THERMOSTAT - WALL, CEILING. PROVIDED BY DIV. 15, INSTALLED AND WIRED BY DIV. 16
	EMERGENCY POWER OFF, HEAVY-DUTY, OIL-TIGHT RED MUSHROOM-HEAD PUSHBUTTON W/ GUARD.
	LIGHTING CONTROL PANEL AND ASSOCIATED COMPONENTS. PROVIDE 120V OR 277V CONTROL POWER AS REQUIRED OR AS INDICATED.
	

SIGNAL DEVICES	
SYMBOL	DESCRIPTION
	TERMINAL/MOUNTING BOARD, 8" HIGH X WIDTH AS SHOWN, FIRE RATED.
	SIGNAL SYSTEM EQUIPMENT ENCLOSURES AS NOTED—SURFACE, RECESSED MOUNTED
	COMBO TELEPHONE/DATA OUTLET — WALL PROVIDE 3/4" TO ACCESSIBLE CEILING SPACE
	TELEPHONE OUTLET — WALL, W = USE HIGHER MOUNTING HEIGHT PER MOUNTING HT. DETAIL
	DATA OUTLET — WALL
	RF COAX CABLE OUTLET (TV, VCR, ETC.)
	FLUSH FLOOR DEVICE — DEVICE TYPE PER SYMBOLS ABOVE

FIRE ALARM SYSTEM	
SYMBOL	DESCRIPTION
	FIRE ALARM CONTROL PANEL AND ASSOCIATED COMPONENTS. PROVIDE 120V POWER AS REQUIRED, OR AS INDICATED.
	FIRE ALARM SYSTEM ANNUNCIATOR
	FIRE ALARM SYSTEM MANUAL PULL STATION, WALL MOUNTED
	SPEAKER - CEILING, WALL MOUNTED
	STROBE LIGHT, WALL MOUNTED (# = CANDELA RATING)
	COMBINATION SPEAKER/STROBE, WALL MOUNTED (# = CANDELA RATING)
	HORN - CEILING, WALL MOUNTED
	COMBINATION HORN/STROBE, WALL MOUNTED (# = CANDELA RATING)
	SMOKE DETECTOR, DUCT MOUNTED, WITH FULL WIDTH SAMPLING TUBES. PHOTOELECTRIC TYPE UON.
	SMOKE AND CARBON MONOXIDE DETECTORS, CEILING OR PLENUM, WALL MOUNTED. MULTI-SENSOR TYPE UON.
	ELECTROMAGNETIC DOOR HOLDER - WALL, FLOOR MOUNTED. 24VDC AND PROVIDED BY DIV. 8 UON.
	MOTORIZED FIRE/SMOKE DAMPER WITH DUCT DETECTOR
	HEAT DETECTOR, CEILING MOUNTED. RATE OF RISE AND FIXED TEMPERATURE TYPE, UON.
	FIRE ALARM CONDUIT AND WIRING

WIRING	
SYMBOL	DESCRIPTION
	WIRING CONCEALED IN CEILING OR WALL. LINE WEIGHT TOP TO BOTTOM= NEW, EXISTING TO REMAIN, FUTURE
	WIRING CONCEALED IN FLOOR OR UNDER GRADE OR ROUTED IN CEILING SPACE OF FLOOR BELOW. LINE WEIGHT TOP TO BOTTOM= NEW, EXISTING TO REMAIN, FUTURE
	WIRING EXPOSED. LINE WEIGHT TOP TO BOTTOM= NEW, EXISTING TO REMAIN, FUTURE
	EXISTING WIRING TO BE REMOVED
	TELEPHONE/DATA SYSTEM CONDUIT 3/4" U.O.N.
	GROUNDING GRID OR CONDUCTORS
	STROKES INDICATE QUANTITY OF #12 AWG. CONDUCTORS, UON. NOTE: REFER TO BRANCH CIRCUIT WIRING LEGEND.
	GROUNDING CONDUCTOR
	HOT
	NEUTRAL
	HOME RUN WIRING TO INDICATED DESTINATION.
	CONDUIT RUN TURNED UP THROUGH FLOOR OR CEILING. CORE & FIREPROOF AS REQUIRED.
	CONDUIT RUN TURNED DOWN THROUGH FLOOR OR CEILING. CORE & FIREPROOF AS REQUIRED.
	CONDUIT STUBBED OUT AT LOCATION SHOWN. PROVIDE INSULATED BUSHING & PULLROPE.
	TELEPHONE/DATA SLEEVE THROUGH WALL, ABOVE CEILING. EXTEND TO ACCESSIBLE TILE, CLG. BOTH SIDES. TERMINATE WITH BUSHINGS. (1) 1.25" CO UON. COORDINATE LOCATIONS WITH CABLE INSTALLER(S) PRIOR TO ROUGH-IN.
	INTERCOM SYSTEM
	PA SYSTEM
	MASTER/ANTENNA/CABLE TV CONDUIT
	LOW VOLTAGE WIRE
	SECURITY SYSTEM CONDUIT. 1/2" U.O.N.
	JUNCTION BOXES, WALL, CEILING AND FLUSH FLOOR MOUNTED. 4" SQ. BOX MIN., LARGER IF REQUIRED
	PULL BOX, MIN. SIZE PER NEC., UON.
	FLEXIBLE CONDUIT CONNECTION

REFERENCE SYMBOLS	
SYMBOL	DESCRIPTION
	SHEET NOTE REFERENCE
	BRANCH CIRCUIT OR FEEDER NOMINAL AMPACITY & TYPE, REFER TO BRANCH CIRCUIT AND FEEDER SCHEDULES FOR WIRE AND CONDUIT SIZES & QTY.
	REFER TO DETAIL NO. ON DRAWING INDICATED NOT ALL DETAIL REFERENCES ARE SHOWN. ALL DETAILS APPLY TO ALL APPLICABLE SITUATIONS, UNO.
	MECHANICAL EQUIPMENT IDENTIFICATION TAG

BRANCH CIRCUIT WIRING LEGEND

—	1/2" C	3 #12		3/4" C	2 #8 & 1 #10
	1/2" C	4 #12		3/4" C	3 #8 & 1 #10
	3/4" C	5 #12		1" C	4 #8 & 1 #10
	3/4" C	6 #12		1" C	5 #8 & 1 #10
	3/4" C	7 #12		1-1/4" C	6 #8 & 1 #10
	1" C	8 #12		1-1/4" C	7 #8 & 1 #10
	1" C	9 #12		1-1/4" C	8 #8 & 1 #10
 10	1/2" C	3 #10			
 10	3/4" C	4 #10			
 10	3/4" C	5 #10			
 10	3/4" C	6 #10			
 10	1" C	7 #10			
 10	1" C	8 #10			
 10	1" C	9 #10			

NOTE: SYMBOL INCLUDES EQUIPMENT GROUND CONDUCTOR (NOT INDICATED).



TEXAS ENG. FIRM
REG. NO. F-23046

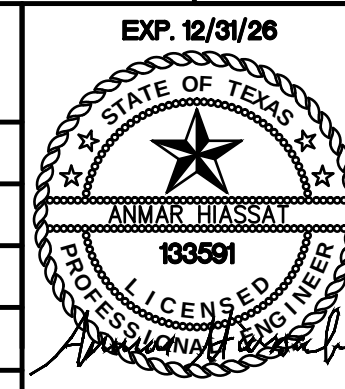


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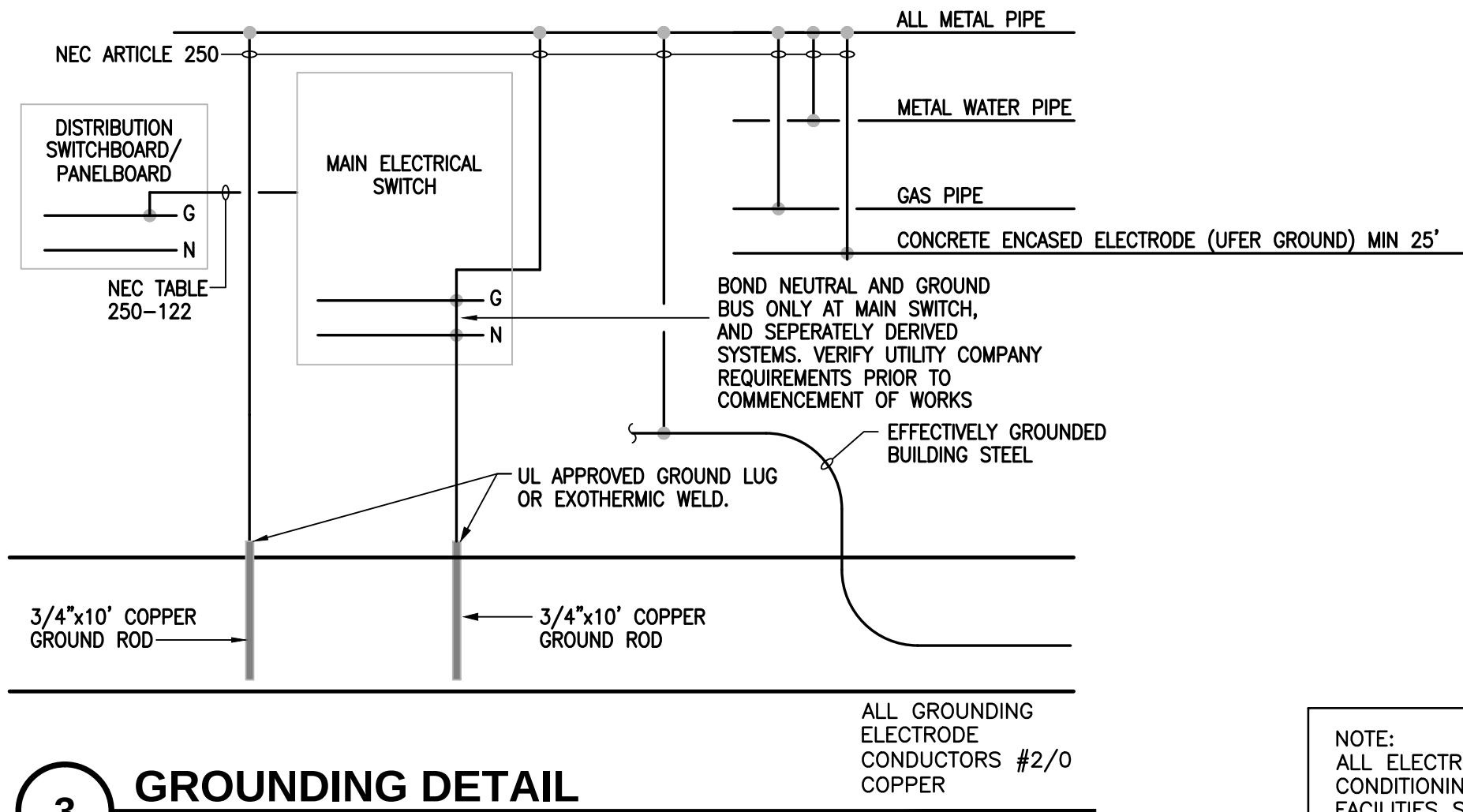
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IMPERIAL ROYAL GARDEN
PLAZA

15015 VOSS RD
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TITLE	
LEAD SHEET	
CLIENT REVIEW	
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CONSTRUCTION ISSUE	
CHECKED BY: PROJECT #.---	SHEET: E0.0



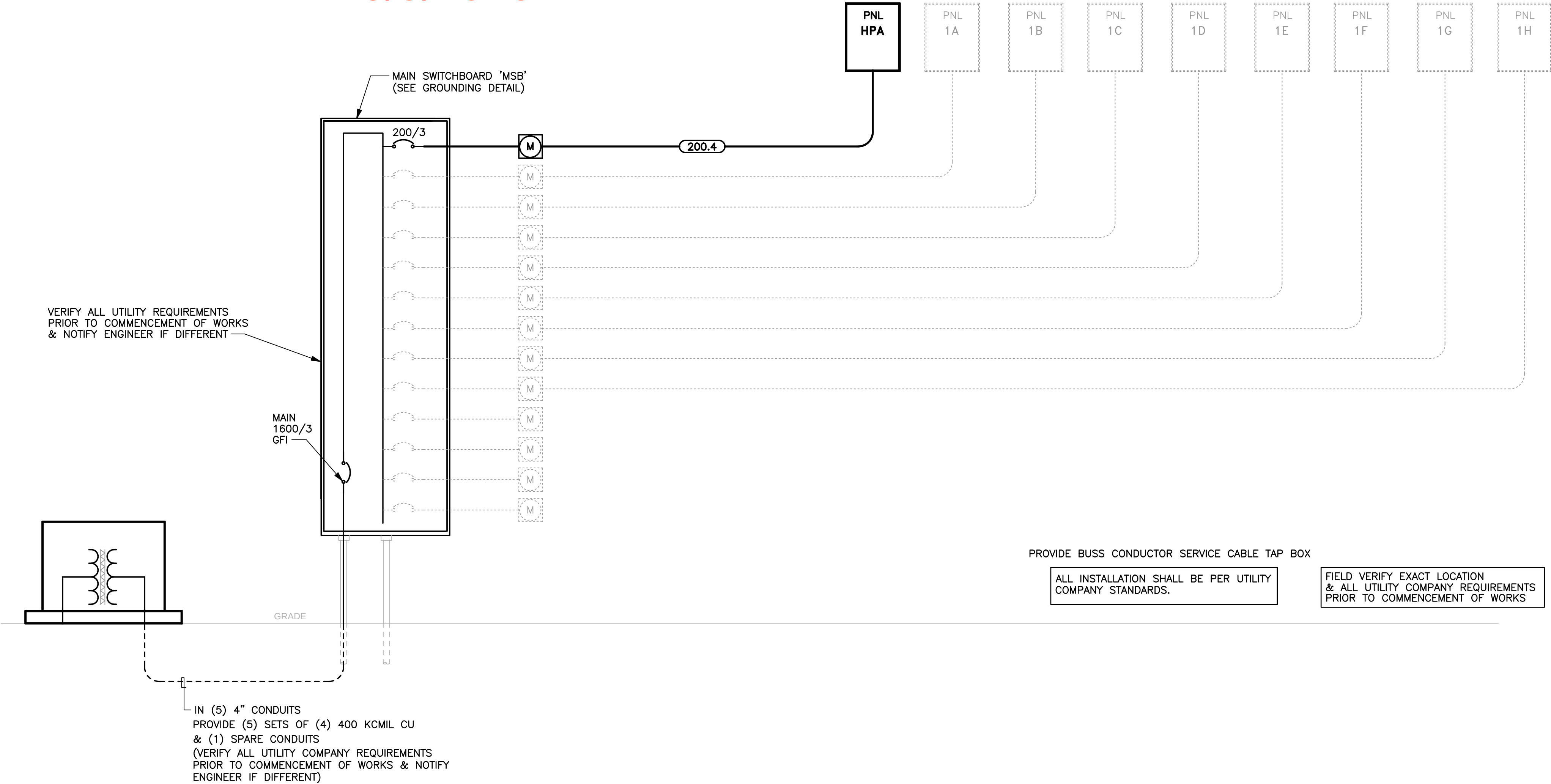
3 GROUNDING DETAIL
SCALE: NONE

BUILDING 'A' LOAD CALCULATION									
TOTAL SF		LOAD	TOTAL SF	VA/SF	CONNECTED	DEMAND	TOTAL LOAD		
BUILDING	11,750 S.F.	LIGHTING	11,750 X	1.25	14.7 KVA	1.00	14.7 KVA		
HOUSE LOADS	65 KVA	RECEPTS	11,750 X	2	23.5 KVA	0.60	14.1 KVA		
		KITCHEN	5,875 X	50	293.8 KVA	0.65	190.9 KVA		
	S.F.	HVAC	11,750 X	12	141.0 KVA	0.85	119.9 KVA		
TOTAL	11,750 S.F.	TOTAL			472.9 KVA		405 KVA		
DEMAND AMPS @ 208V 3PH 4W = 1123									
BUILDING 'B' LOAD CALCULATION									
TOTAL SF		LOAD	TOTAL SF	VA/SF	CONNECTED	DEMAND	TOTAL LOAD		
OFFICE BUILDING	4,932 S.F.	LIGHTING	4,932 X	1.25	6.2 KVA	0.95	5.9 KVA		
HOUSE LOADS	30 KVA	RECEPTS	4,932 X	2	9.9 KVA	0.60	5.9 KVA		
	S.F.	HVAC	4,932 X	12	59.2 KVA	0.85	50.3 KVA		
	S.F.	KITCHEN	2,466 X	50	123.3 KVA	0.65	80.1 KVA		
TOTAL	4,932 S.F.	TOTAL			198.5 KVA		172.2 KVA		
DEMAND AMPS @ 208V 3PH 4W = 478									
BUILDING 'C' LOAD CALCULATION									
TOTAL SF		LOAD	TOTAL SF	VA/SF	CONNECTED	DEMAND	TOTAL LOAD		
OFFICE LOADS	4,932 S.F.	LIGHTING	4,932 X	1.25	6.2 KVA	0.95	5.9 KVA		
HOUSE LOADS	30 KVA	RECEPTS	4,932 X	2	9.9 KVA	0.60	5.9 KVA		
		HVAC	4,932 X	12	59.2 KVA	0.85	50.3 KVA		
		KITCHEN	2,466 X	50	123.3 KVA	0.65	80.1 KVA		
TOTAL	4,932 S.F.	TOTAL			75.2 KVA		172.2 KVA		
DEMAND AMPS @ 208V 3PH 4W = 478									

NOTE:
ALL ELECTRICAL, HEATING, VENTILATING AND AIR CONDITIONING EQUIPMENT AND OTHER SERVICE FACILITIES SHALL BE EITHER PLACED 2 FOOT ABOVE THE BASE FLOOD ELEVATION OR PROTECTED TO PREVENT WATER FROM ENTERING OR ACCUMULATING WITHIN THE SYSTEMS COMPONENT DURING FLOOD CONDITIONS. INSTALLATION OF ELECTRICAL WIRING AND OUTLETS, SWITCHES, JUNCTION BOXES AND PANELS BELOW THE BASE FLOOD ELEVATION AT 100 YEAR OR 500 YEAR FLOOD PLAIN SHALL CONFORM TO THE PROVISIONS OF THE 2023 NATIONAL ELECTRIC CODE FOR SUCH ITEMS THAT ARE IN WET LOCATIONS.

BUS CONDUCTOR SERVICE TAP BOX NOTES:

1. THE SERVICE CABLE TAP BOX SHALL BE LOCKABLE WITH PROVISIONS TO ACCEPT THNUTILITY LOCKS.
2. COVERS SHALL BE FASTENED WITH MACHINE SCREWS OR BOLTS. HINGED COVER SHALL NOT BE PERMITTED.
3. COVERS SHALL HAVE TWO HANDLES FOR REMOVAL.
4. BUSBAR SHALL BE PROTECTED FROM PHYSICAL DAMAGE AND HELD FIRMLY IN PLACE.
5. BUSBARS SHALL BE SIZED TO PHYSICALLY ACCOMMODATE THE MAXIMUM NUMBER OF TENANT SERVICES ANTICIPATED AND PREDRILLED.
6. BUSBARS SHALL BE STEPPED.
7. THE PHASE ARRANGEMENT ON 3-PHASE HORIZONTAL COMMON POWER AND VERTICAL BUSSES SHALL BE A, B, C FROM FRONT TO BACK, TOP TO BOTTOM, OR LEFT TO RIGHT AS VIEWED FROM THE TOP OF THE SERVICE CABLE TAP BOX. THE PHASES SHALL BE PERMINANTLY MARKED.
- 8.THE BOTTOM OF THE CABLE TAP BOX SHALL BE A MINIMUM OF 6 INCHES ABOVE FINISHED GRADE.
9. THE SERVICE CABLE TAP BOX SHALL BE IN COMPLIANCE WITH UTILITY SERVICE STANDARDS.



PROVIDE BUSS CONDUCTOR SERVICE CABLE TAP BOX

ALL INSTALLATION SHALL BE PER UTILITY COMPANY STANDARDS.

FIELD VERIFY EXACT LOCATION & ALL UTILITY COMPANY REQUIREMENTS PRIOR TO COMMENCEMENT OF WORKS

FORWARD
MEP

TEXAS ENG. FIRM
REG. NO. F-23046

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IMPERIAL ROYAL GARDEN
PLAZA

15015 VOSS RD
SUGAR LAND, TEXAS, 77498

NO.	REVISION DESCRIPTION	DATE	EXP. 12/31/26	TITLE
				SINGLE LINE DIAGRAM
				CLIENT REVIEW
				PERMIT REVIEW
				CONSTRUCTION ISSUE
				CHECKED BY: SHEET: E0.1
				PROJECT #.---

Submittal Set
3/9/2026

POLE	C.B.	SERVICE	TOTAL	TYPE	LOAD KVA					TYPE	TOTAL	SERVICE	C.B.	POLE
NO	AMP/P				A	B	C						AMP/P	NO.
1	20/2	SITE LIGHTING	1.25	L	4.55					L	3.3	EV CHARGING STATION	40/2	2
3			1.25	L		4.55				L	3.3	(FUTURE)		4
5	20/2	SITE LIGHTING	1	L			4.3			L	3.3	EV CHARGING STATION	40/2	6
7			1	L	4.3					L	3.3	(FUTURE)		8
9	20/2	SITE LIGHTING	0.5	L		3.8				L	3.3	EV CHARGING STATION	40/2	10
11			0.5	L			3.8			L	3.3	(FUTURE)		12
13	20/1	SIGN	1.8	L	5.1					L	3.3	EV CHARGING STATION	40/2	14
15	20/1	LIGHTED WATER FEATURE	1	L		4.3				L	3.3	(FUTURE)		16
17	20/1	LIGHTING - INTERIOR	0.8	L			4.1			L	3.3	EV CHARGING STATION	40/2	18
19	20/1	LIGHTING - WALL PACK	0.6	L	3.9					L	3.3	(FUTURE)		20
21	20/1	LIGHTING - WALL PACK	0.6	L		3.9				L	3.3	EV CHARGING STATION	40/2	22
23	20/1	LIGHTING - CANOPY	0.3	L			3.6			L	3.3	(FUTURE)		24
25	20/1	LIGHTING - RISER ROOM	0.1	L	0.6					L	0.5	LIGHTING - STAIRS	20/1	26
27	20/1	RECEP - RISER ROOM	0.18	R		1.18			A	1		EXHAUST FAN - ELEV SHAFT	20/1	28
29	20/1	RECEP - GENERAL	0.54	R			0.54							30
31	20/2	HEAT PUMP	0.94	A	0.94									32
33			0.94	A		0.94								20/1 34
35	20/1						0							20/1 36
37	20/1				0									20/1 38
39	20/1					0								20/1 40
41	20/1						0							20/1 42
CONNECTED LOAD PER PHASE					19.39	18.67	16.34							
LOAD SUMMARY					CONN. KVA	DEMAND FACTOR	DEMAND KVA					VOLTS 120/208V, 3PH, 4W		PANEL
TYPE "L": CONTINUOUS LOADS					47.50	125%	59.38					MAIN C.B. MLO		HPA
TYPE "R": RECEPTACLES (FIRST 10KVA)					0.72	100%	0.72					BUS 225 AMP		
TYPE "R": RECEPTACLES (OVER 10KVA)					0.00	50%	0.00					POLES 42		
TYPE "M": MISCELLANEOUS LOADS					0.00	100%	0.00					MOUNTING SURFACE		
TYPE "A": AC LOADS					2.88	100%	2.88					AIC RATING		
TYPE "K": KITCHEN LOADS					0.00	65%	0.00							
LARGEST MOTOR LOAD						25%	0.00			DEMAND AMPS		HIGH LEG CONNECTED AMPS		
TOTAL					54.40		62.98			175		162		

FORWARD
MEP

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REG. NO. F-23046



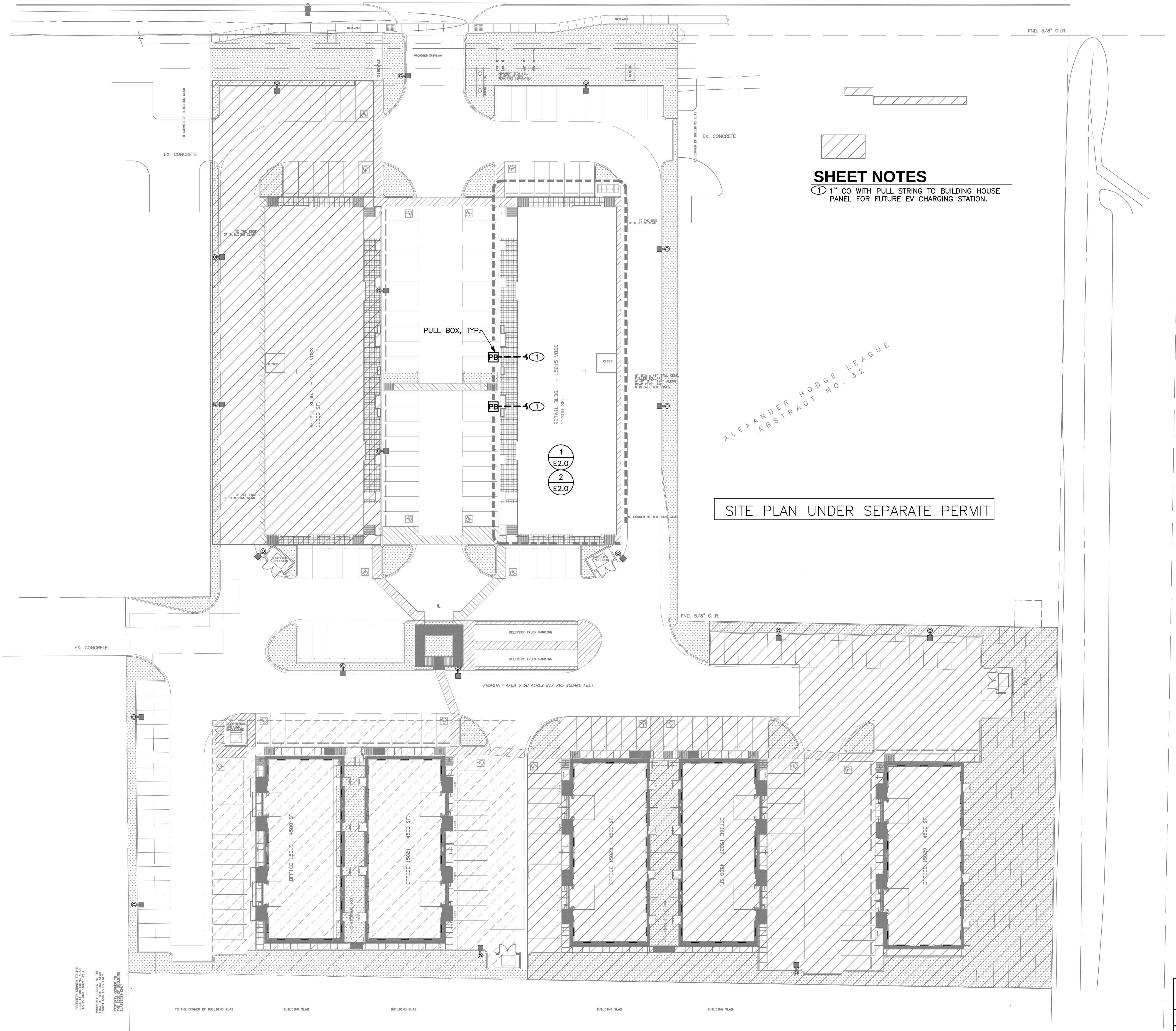
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IMPERIAL ROYAL GARDEN
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NO.	REVISION DESCRIPTION	DATE	EXP. 12/31/26	TITLE
				PANEL SCHEDULES
				CLIENT REVIEW
				PERMIT REVIEW
				CONSTRUCTION ISSUE
				CHECKED BY: PROJECT #.---
			02-23-2026	SHEET: E0.2



SHEET NOTES

- 1 1" CO WITH PULL STRING TO BUILDING HOUSE
PANEL FOR FUTURE EV CHARGING STATION.

ALEXANDER HODGE LEAGUE
ABSTRACT NO. 32

SITE PLAN UNDER SEPARATE PERMIT



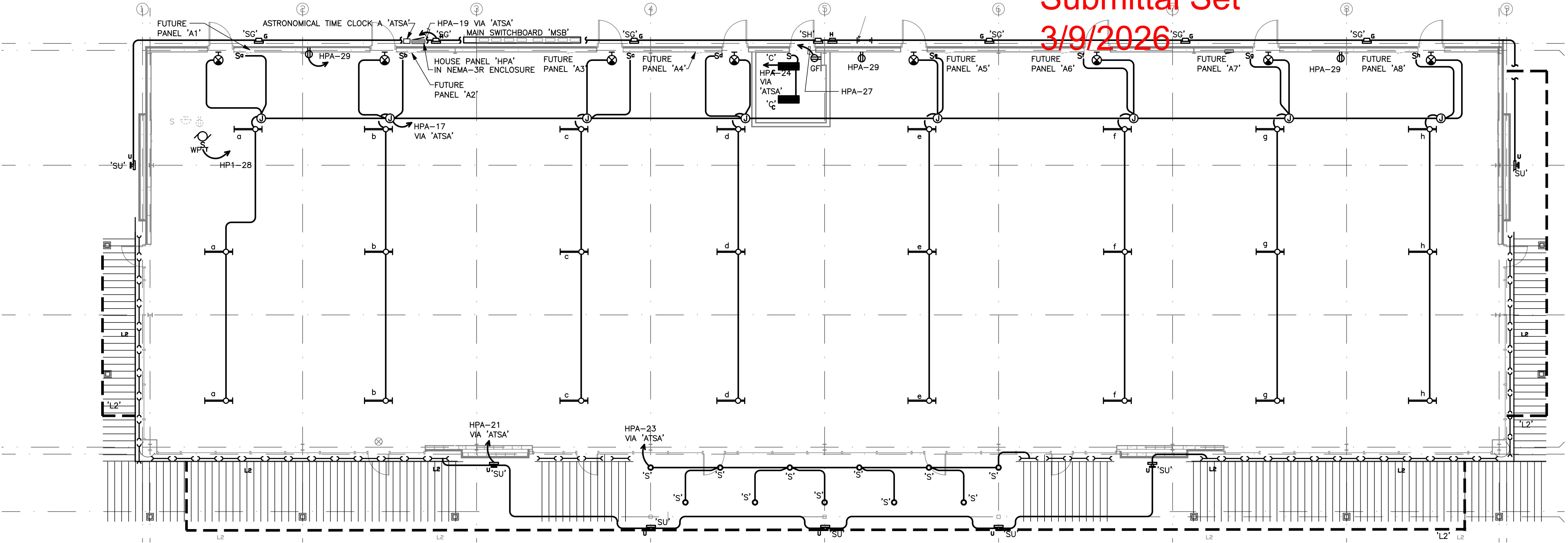
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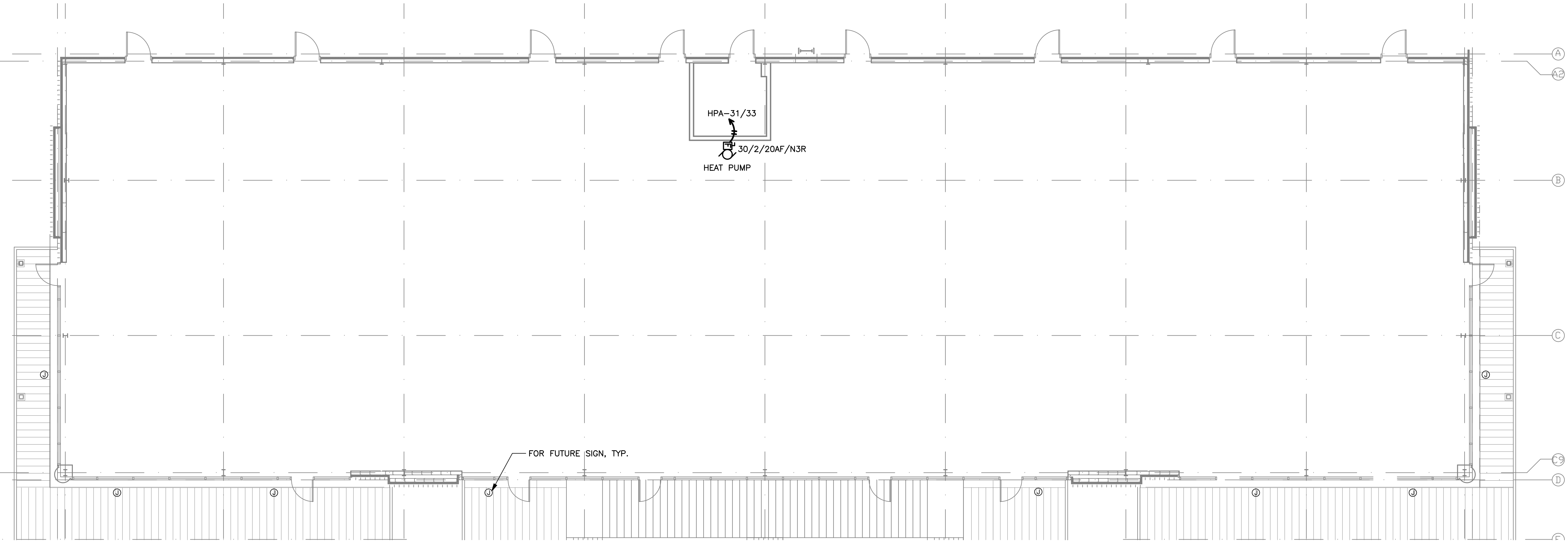
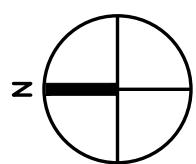
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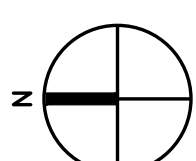
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				ELECTRICAL SITE PLAN
				CLIENT REVIEW
				PERMIT REVIEW
				CONSTRUCTION ISSUE
				CHECKED BY: PROJECT #.
				SHEET: E1.0



1 ELECTRICAL PLAN - BUILDING A
SCALE: 1/8"=1'-0"



2 ROOF PLAN - PATIO - BUILDING A
SCALE: 1/8"=1'-0"

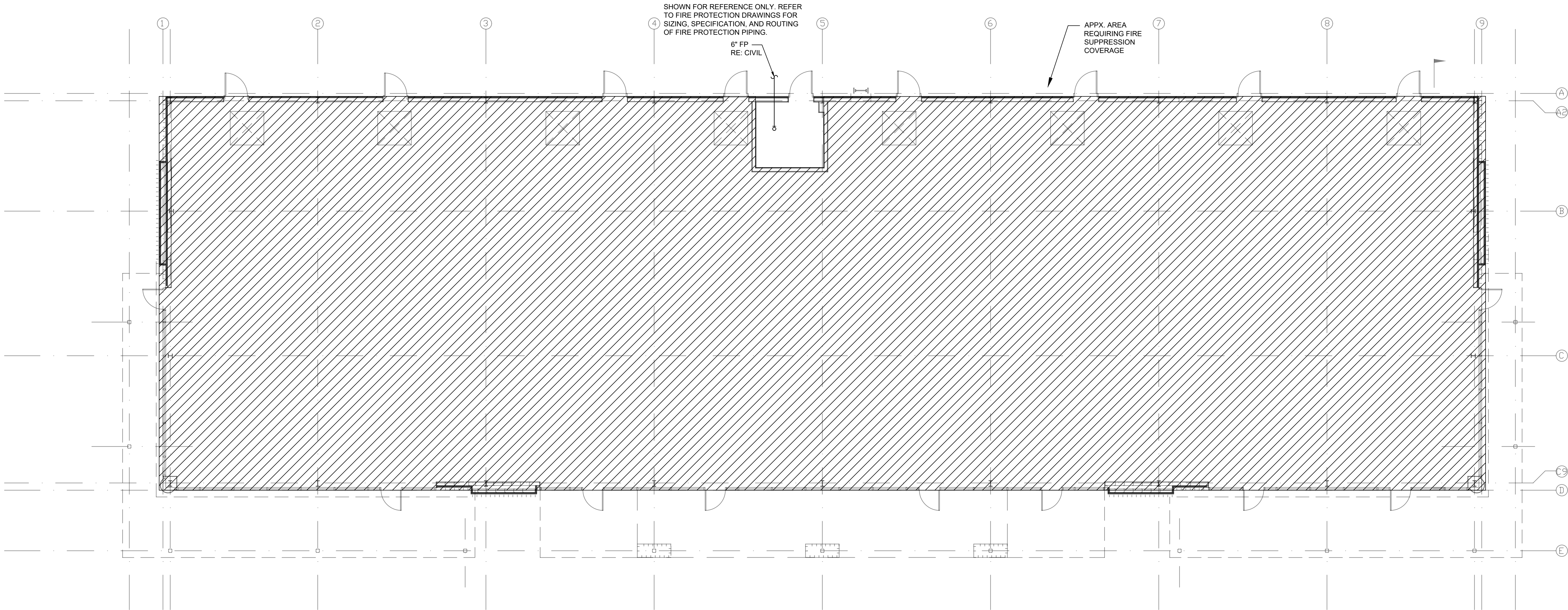


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				ELECTRICAL PLANS - BLDG A
				CLIENT REVIEW
				PERMIT REVIEW
				CONSTRUCTION ISSUE
				CHECKED BY: PROJECT #.
				SHEET: E2.0



1 FIRE PROTECTION FLOOR PLAN
1/8" = 1'0" (SHEET SIZE: 36"x24")

FIRE PROTECTION NOTES

1. HYDRAULIC CALCULATIONS AND FINAL FIRE PUMP SELECTION ARE THE RESPONSIBILITY OF THE TEXAS LICENSED RME (REGISTER MANAGING EMPLOYEE). THE ENTIRE BUILDING, WHETHER HATCHES OR NOT, WILL BE THEIR RESPONSIBILITY. THE NOTED HATCHED AREAS ARE TO BE USED AS A STARTING POINT FOR THE BID AND ARE UNDERSTOOD TO REQUIRE A SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH NFPA 13, AND THE LOCAL CITY/COUNTY REQUIREMENTS. PRIOR TO ANY INSTALLATION OR ROUGH IN, THE PLUMBING CONTRACTOR WILL COORDINATE WITH THE GENERAL CONTRACTOR AND ALL OTHER TRADES INCLUDING, BUT NOT LIMITED TO ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL AND PLUMBING. CLOSE COORDINATION WITH THE ARCHITECT MUST BE MADE IN LOCATIONS WITH EXPOSED CEILINGS. THE CONTRACTOR WILL REVIEW THE SPECIFICATIONS. ALL OTHER REQUIREMENTS MUST BE REVIEWED WITH ALL SECTIONS OF THE SPECIFICATIONS PRIOR TO BID.
2. THE CONTRACTOR IS RESPONSIBLE FOR FULL AND COMPLETE DESIGN AND SYSTEM IN ACCORDANCE WITH ALL LOCAL AND STATE REGULATIONS AND CODES. THE ENGINEER'S CONSTRUCTION DOCUMENTS ARE ONLY TO BE USED AS A GUIDELINE AND FOR THE OVERVIEW OF THE SCOPE OF WORK.
3. AT A MINIMUM, THE NOTED AREAS ARE TO RECEIVE A WET PIPING SYSTEM (OR A DRY PIPE SYSTEM IF INDICATED) WHICH IS IN COMPLIANCE WITH THE HAZARD REQUIREMENTS OF THE CODE.
4. DEVELOP AND SUBMIT FOR REVIEW AND APPROVAL, IN THE FORM OF SHOP DRAWINGS AND CUT SHEETS. ALL CALCULATIONS REQUIRED TO BE REVIEWED BY THE LOCAL AHJ, INSURANCE PROVIDER, AND SPECIFICATIONS.
5. ENTRY DESIGN POINT SHALL BE DESIGNED BY RME.
6. RME SHALL INDICATE BACKFLOW PREVENTER FOR FIRE SUPPRESSION SYSTEM. IF CONDITION ALLOWS, EXISTING BACKFLOW PREVENT MAY BE REUSED.



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NO.	REVISION DESCRIPTION	DATE	03-06-2026		TITLE FIRE PROTECTION PLAN	
					CLIENT REVIEW	
					PERMIT REVIEW	
					CONSTRUCTION ISSUE	
					CHECKED BY:	SHEET: FP101
					PROJECT #:	--

Submittal Set
3/9/2026

22 05 00 - COMMON WORK RESULTS FOR PLUMBING

1. CONTRACTOR SHALL CONFORM TO ALL LOCAL, STATE, AND APPLICABLE CODES. REFER TO CODES AND STANDARDS REFERENCED UNDER MECHANICAL SPECIFICATIONS.
2. THESE DRAWINGS ARE SCHEMATIC IN NATURE AND ARE NOT INTENDED TO SHOW ALL OFFSETS. INSTALL PIPING AS CLOSE AS POSSIBLE TO LOCATION SHOWN. WHERE INTERFERENCES WITH COMPONENTS OF OTHER TRADE'S WORK (STRUCTURAL FOUNDATIONS OR OTHER BUILDING ELEMENTS) REQUIRE ROUTS AND LOCATIONS THAT VARY FROM THOSE SHOWN, THE CONTRACTOR SHALL OBTAIN ENGINEER OF RECORD'S APPROVAL PRIOR TO INSTALLATION. NO ADDITIONAL COST SHALL BE GRANTED FOR THESE CHANGES.
3. EACH CONTRACTOR SHALL VISIT THE SITE AND ASCERTAIN FOR HIMSELF THE CONDITIONS TO BE MET THERE IN IMPLEMENTING HIS WORK AND MAKE DUE PROVISIONS FOR THE SAME. IT IS ASSUMED THAT THE CONTRACTOR HAS VISITED THE PREMISES AND THAT HIS COST ESTIMATE COVERS ALL NECESSARY LABOR AND MATERIALS TO PROPERLY ACCOMPLISH HIS WORK. FAILURE ON THE PART OF THE CONTRACTOR TO COMPLY WITH THIS REQUIREMENT SHALL NOT BE CONSIDERED JUSTIFICATION FOR OMISSIONS OR FAULTY WORK OR FOR THE PAYMENT OF ADDITIONAL COMPENSATION.
4. ALL DRAWINGS AND SPECIFICATIONS (INCLUDING ARCHITECTURAL, MECHANICAL, PLUMBING, ETC.) ARE DEVELOPED TO BE AN INCLUSIVE SET. ANY CONFLICTS WITHIN SHALL BE BROUGHT TO THE DESIGN TEAMS ATTENTION. CONTRACTOR SHALL NOT MAKE ANY CHANGES TO THE DESIGN OR CONTRACT WITHOUT WRITTEN CONSENT FROM THE OWNER.
5. WORK SHALL BE INSTALLED IN A WORKMAN LIKE FASHION. ALL EQUIPMENT AND MATERIALS SHALL BE NEW, FREE OF DEFECTS.
6. MAINTAIN THE CONSTRUCTION PREMISES IN A NEAT AND ORDERLY CONDITION. CONTRACTOR SHALL PROTECT THEIR WORK AGAINST WEATHER, THEFT, AND DAMAGE. ANY WORK DAMAGED BY FAILURE TO PROVIDE PROTECTION REQUIRED SHALL BE REMOVED AND REPLACED WITH NEW WORK AT THE CONTRACTORS EXPENSE.
7. ALL PRODUCTS SHALL COMPLY WITH 25/50 FLAME AND SMOKE HAZARD RATINGS PER ASTM E-84, NFPA 225, AND UL 723.
8. QUALITY CONTROL
- 8.1. INSTALLER, QUALIFIED WITH AT LEAST 5 YEARS OF SUCCESSFUL INSTALLATION EXPERIENCE ON PROJECTS WITH WORK SIMILAR TO THAT REQUIRED FOR THIS PROJECT.
- 8.2. UL COMPLIANCE: PROVIDE COMPONENTS WITH UL LISTING AND LABELING WHEN THERE IS AN APPLICABLE UL CATEGORY.
- 8.3. COMPLY WITH THE MINIMUM STANDARDS PRESCRIBED IN REQUIREMENTS AND RECOMMENDATIONS TO THE LATEST EDITION OF THE FOLLOWING CODES AND STANDARDS: UNDERWRITERS LABORATORIES, INC. STANDARDS, INTERNATIONAL PLUMBING CODE (2021 WITH LOCAL AMENDMENTS), AND OTHER CODES, ORDINANCES, AND LAWS APPLICABLE TO THE PLACE OF WORK.
9. SUBMIT COPIES OF DATA FOR REVIEW AND COMMENT BY OWNER PRIOR TO ORDERING. INCLUDE MANUFACTURER'S STANDARD SUBMITTAL DATA WITH MANUFACTURER'S NAME AND MODEL NUMBERS, COLOR, FINISH, SIZE, AND ALL OPTIONS CLEARLY MARKED.
10. ALL FLOOR DRAIN LOCATIONS ARE DIAGRAMMIC IN NATURE AND FINAL LOCATIONS SHALL BE FIELD VERIFIED WITH ALL OTHER TRADES PRIOR TO ROUGH-ON OR INSTALLATION.
11. SUBSTITUTIONS SHALL BE EVALUATED AND APPROVED BY OWNER AND ENGINEER PRIOR TO EQUIPMENT PURCHASE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE AMONG TRADES. ANY COST DIFFERENCES RESULTING FROM SUBSTITUTIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
12. PENETRATIONS BETWEEN NON-CONDITIONED AND CONDITIONED SPACES SHALL BE SEALED TO ELIMINATE MOISTURE MITIGATION, SUCH AS BETWEEN INSIDE AND OUTSIDE BUILDINGS. NON-CONDITIONED BOILER ROOMS, INTO REFRIGERATORS/FREEZERS, ETC. SEAL ALL PENETRATIONS THROUGH RATED WALLS, FLOORS, AND CEILINGS WITH A UL LISTED ASSEMBLY TO PROVIDE A RATING EQUAL TO OR GREATER THAN THE RATING OF THE WALL, FLOOR, OR CEILING.
13. PLUMBING MATERIAL AND EQUIPMENT: NO MATERIALS, APPARATUS, DEVICES, APPLIANCES, FIXTURES, OR EQUIPMENT SHALL BE SOLD OR INSTALLED IN THE CITY UNLESS THEY ARE IN CONFORMANCE WITH THE PROVISIONS OF THIS CODE, THE LAWS OF THE STATE OF TEXAS AND APPLICABLE RULES AND REGULATIONS ISSUED UNDER THE AUTHORITY OF THAT STATE STATUTES. THE MAKER'S NAME, TRADEMARK, OR OTHER IDENTIFICATION SYMBOL SHALL BE PLACED ON ALL ELECTRICAL MATERIALS, APPARATUS, DEVICES, APPLIANCES, FIXTURES, AND EQUIPMENT USED OR INSTALLED UNDER THE PROVISIONS OF THIS CODE. ALL ELECTRICAL MATERIALS AND EQUIPMENT SHALL BE LISTED AND LABELED FOR THE INTENDED USE AND SHALL BE INCLUDED IN A LIST PUBLISHED BY AN APPROVED AGENCY.

22 10 00 - PLUMBING PIPING SYSTEMS

1. GENERAL PIPING SYSTEMS
- 1.1. ALL PACKAGED EQUIPMENT SHALL BE INDEPENDENTLY THIRD PARTY LABELED AS A SYSTEM FOR ITS INTENDED USE BY A (UL) IN ACCORDANCE WITH OSHA FEDERAL REGULATIONS, AS WELL AS A NFPA PAMPHLET NO. 70, AND THE NATIONAL ELECTRICAL CODE (NEC).
- 1.2. ALL SYSTEMS SHALL BE A COMPLETE AND OPERABLE SYSTEM. PROVIDE THE NECESSARY ADAPTORS, FITTINGS, VALVES, TRAPS, GAUGES, STRAINERS, UNION, ETC. PROVIDE COMPLETE WITH BASES, ISOLATORS, SUPPORTS, AND OTHER REQUIRED ACCESSORIES.
- 1.3. THE CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES FOR REQUIREMENTS OF ALL EQUIPMENT AND DEVICES AS REQUIRED FOR A PROPER FUNCTIONING SYSTEM.
- 1.4. ALL ABOVE GRADE PIPING SHALL BE INSTALLED PARALLEL TO BUILDING WALLS, WITH THE EXCEPTION OF PIPING PURPOSELY SLOPED PER CITY AND CODE REQUIREMENTS
- 1.5. ALL PIPING TO BE INSTALLED WITH A UNIFORM SLOPE TO MITIGATE UN-DRAINABLE LOW POINTS.
- 1.6. DIE-ELECTRIC UNIONS AND COUPLINGS ARE REQUIRED FOR DISSIMILAR METALS SUCH AS CONNECTIONS BETWEEN COPPER AND STEEL OR IRON PIPES.
- 1.7. ROUGH-IN PLUMBING PIPING USING DIMENSIONS SHOWN ON THE ARCHITECTURAL DRAWINGS. LOCATION OF ALL PIPING SHALL ALLOW INSTALLATION OF FIXTURES WITHOUT THE NEED TO FURR-OUT WALLS.
2. DOMESTIC WATER SYSTEM
- 2.1. REFER TO MATERIAL LEGEND
- 2.2. PROVIDE MATERIALS, PRODUCTS, AND FABRICATIONS THAT COMPLY WITH ENVIRONMENTAL PROJECT AGENCY (EPA) REQUIREMENTS AND RECOMMENDATIONS REGARDING LEAD CONTENT AND CONTRIBUTION OF LEAD TO POTABLE WATER, THAT HAVE NO LEAD OR LEAD ALLOYS IN CONTACT WITH POTABLE WATER, AND THAT DO NOT CONTRIBUTE TO OR CAUSE LEAD IN POTABLE WATER.
- 2.3. SOLDER: LEAD FREE, ASTM B32 95-5 TIN-ANTIMONY OR GRADE SN96 TIN-SILVER SOLDER
- 2.4. FLUX: CONTAINING NOT MORE THAN 0.2 PERCENT LEAD, MEETING NSF 61
- 2.5. WATER HAMMER ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH LATEST ASSE AND SHALL BE ACCESSIBLE.
- 2.6. PROVIDE MANUAL SHUT OFF VALVES AT EACH BRANCH LINE OF ALL WATER PIPING. PROVIDE ISOLATION VALVES AT ALL FIXTURES. PROVIDE SCREWED ACCESS PANEL FOR ALL VALVES PLACED BEHIND OR ABOVE HARD CEILINGS AND WALLS. PRIOR TO INSTALLING ABOVE HARD CEILINGS, THE INTENT SHOULD BE TO INSTALL ABOVE LAY-IN CEILINGS.
3. PIPING, INTERIOR TO 5' OUTSIDE
- 3.1. REFER TO MATERIAL LEGEND
- 3.2. IF WROUGHT COPPER AND BRONZE SOLDER-JOINT PRESSURE FITTINGS, ANSI

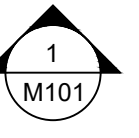
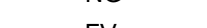
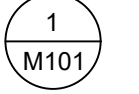
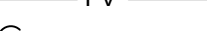
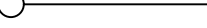
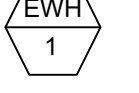
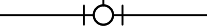
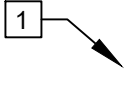
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- 3.3. WHERE INDICATED ON DRAWINGS TO BE BELOW, IN, OR THROUGH SLAB-ON-GRADE: COPPER, COILED WATER TUBE, K OR L, ASTM B88.
- 3.4. PIPE 1.5" OR SMALLER, IN OR UNDER SLABS-ON-FILL: CONTINUOUS, WITHOUT JOINTS OR FITTINGS.
- 3.5. PIPE 2" OR LARGER, IN OR UNDER SLABS-ON-FILL: BRAZED JOINTS
4. SANITARY WEST AND VENT PIPING
- 4.1. REFER TO MATERIAL LEGEND. IF CAST IRON, REFER TO CHAPTER IV OF CISPI "CAST IRON SOIL PIPE AND FITTINGS HANDBOOK"
- 4.2. INSTALL WATER VENT PIPING AT A MINIMUM SLOPE, UNLESS OTHERWISE INDICATED ON THE PLANS.
- 4.3. SANITARY PIPE: 2 PERCENT DOWNWARD IN DIRECTION OF FLOW FOR PIPING 2-1/2" AND SMALLER. 1 PERCENT DOWNWARD IN DIRECTION OF FLOW FOR PIPING 3" TO 6".
- 4.4. VENT PIPE: 1 PERCENT DOWN TOWARDS THE VERTICAL FIXTURE VENT OR TOWARD THE VENT STACK.
- 4.5. VENT THRU ROOF SHALL BE A MINIMUM OF 10'-0" AWAY FROM ANY FRESH AIR INTAKES
- 4.6. PROVIDE CLEANOUTS IN EXCESS OF THOSE SHOWN WHICH ARE REQUIRED BY THE PLUMBING CODE (EVERY 50' MAXIMUM AND EVERY 90 DEGREES TURN)
- 4.7. VERIFY EXACT LOCATION OF EQUIPMENT AND FLOOR SLOPE PRIOR TO INSTALLATION OF FLOOR DRAINS. RELOCATION DUE TO MISPLACEMENT SHALL BE AT CONTRACTOR'S EXPENSE.
5. FOUNDATIONS, HANGERS, AND SUPPORTS
- 5.1. MANUFACTURER'S STANDARDIZATION SOCIETY SP-69 OR FEDERAL SPECIFICATION WWW-H-171D, TYPES AS RECOMMENDED OR REQUIRED. PERFORATED OR PLAIN METAL STRAP AND WIRE ARE NOT ACCEPTABLE.
- 5.2. HANGERS IN CONTACT WITH COPPER PIPE: SAME AS FOR GENERAL PURPOSE, COPPER OR COPPER PLEATED WITH PLASTIC COATING
- 5.3. TRAPEZE PIPE HANGERS: MSS SP-58, TYPE 59, SHOP- OR FIELD-FABRICATED PIPE-SUPPORT ASSEMBLY, MADE FROM STRUCTURAL-CARBON-STEEL SHAPES, WITH MSS SP-58 CARBON STEEL HANGER RODS, NUTS, SADDLES, AND U-BOLTS.
- 5.4. CARBON STEEL PIPE HANGERS AND SUPPORTS:
- 5.4.1. MSS SP-58, TYPES 1 THROUGH 58, FACTORY FABRICATED COMPONENTS
- 5.4.2. GALVANIZED METALLIC COATINGS: PRE-GALVANIZED, HOT-DIP GALVANIZED, OR ELECTRO-GALVANIZED
- 5.4.3. NONMETALLIC COATINGS: PLASTIC COATED OR EPOXY POWDER COATED.
- 5.4.4. PADDED HANGERS: HANGERS WITH FIBERGLASS OR OTHER PIPE INSULATION PAD OR CUSHION TO SUPPORT BEARINGS SURFACE OF PIPING.
- 5.4.5. HANGER RODS: CONTINUOUS-THREAD ROD, NUTS, AND WASHER MADE OF CARBON STEEL.
- 5.5. HANGER AND SUPPORT INSTALLATION:
- 5.5.1. PIPES OF VARIOUS SIZES: SUPPORT TOGETHER AND SPACE TRAPEZES FOR SMALLEST PIPE SIZE, OR INSTALL INTERMEDIATE SUPPORTS FOR SMALLER DIAMETER PIPES AS SPECIFIED FOR INDIVIDUAL PIPE HANGERS.
- 5.5.2. FIELD FABRICATE FROM ASTM A36/A36M CARBON STEEL SHAPES SELECTED FOR LOADS BEING SUPPORTED. WELD STEEL ACCORDING TO AWS D1.1/D1.1M.
- 5.5.3. INSTALL HANGERS AND SUPPORTS TO ALLOW CONTROLLED THERMAL AND SEISMIC MOVEMENT OF PIPING SYSTEMS, TO PERMIT FREEDOM OF MOVEMENT BETWEEN PIPE ANCHORS, AND TO FACILITATE ACTION OF EXPANSION JOINTS, EXPANSION LOOPS, EXPANSION BENDS, AND SIMILAR UNITS.
- 5.5.4. INSTALL LATERAL BRACING WITH PIPE HANGERS AND SUPPORTS TO PREVENT SWAYING.

6. INSULATION - HOT AND COLD PIPE:
- 6.1. FIBERGLASS PIPE INSULATION: JOHNS-MANVILLE MICRO-LOK HEAVY DENSITY PIPE INSULATION WITH ARMSTRONG ARMAFLEX FINISH FOR INDOOR OR OUTDOOR APPLICATION.
- 6.2. UL LISTED FOR FLAME SPREAD 25, SMOKE DEVELOPED 50, FUEL CONTRIBUTED 50
- 6.3. HOT WATER (80°F - 140°F):
- 6.3.1. INSULATION CONDUCTIVITY: 0.21-0.28 (BTU X IN.)/(HR X FT2 X °F)
- 6.3.2. PIPE SIZES SMALLER THAN 1-1/2": 1"
- 6.3.3. PIPE SIZES LARGER THAN 1-1/2": 1-1/2"
- 6.4. COLD WATER (40°F - 60°F):
- 6.4.1. INSULATION CONDUCTIVITY: 0.21-0.27 (BTU X IN.)/(HR X FT2 X °F)
- 6.4.2. PIPE SIZES SMALLER THAN 1-1/2": 1"
- 6.4.3. PIPE SIZES LARGER THAN 1-1/2": 1-1/2"
- 6.5. BUTT INSULATION TOGETHER AND ADHERE IN PLACE WITH MANUFACTURER'S RECOMMENDED CONTACT CEMENT. WHERE POSSIBLE, SLIP TUBING ON WITHOUT SLITTING. WHERE INSULATION TERMINATES, NEATLY BEVEL AND FINISH.
- 6.6. ROOF DRAINS AND INTERIOR DOWNSPOUTS: VERTICAL PIPING, EXCEPT BETWEEN ROOF-DECK DRAIN AND FIRST ELBOW AND WITHIN TWO FEET OF NON-VERTICAL PIPING, NEED NOT BE INSULATED. INSULATE OTHER ROOF DRAIN AND DOWN SPOUT PIPING, AND INSULATE THE ROOF-DECK DRAIN SUMPS WITH SHEET INSULATION. HORIZONTAL PIPING WITHIN CRAWL SPACE NEED NOT BE INSULATED.
- 6.7. WHERE EXPOSED TO VIEW, BENEATH THE BUILDING, OR EXPOSED TO WEATHER:
- 6.7.1. PAINT WITH INSULATION MANUFACTURER'S PAINT FINISH, TINTED S SELECTED BY THE ARCHITECT-ENGINEER, SPECIFICALLY FORMULATED IF EXPOSED TO OUTDOORS
- 6.7.2. PROVIDE 16-GAUGE ALUMINUM OR STAINLESS STEEL COVER WITH MATCHING ALUMINUM OR STAINLESS STEEL BANDS SPACED 18" OVER PIPE AND FITTINGS WHERE EXPOSED TO WEATHER OR EXPOSED TO OCCUPANTS AND WITHIN 7' OF THE FLOOR.

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1. TESTING
- 1.1. ALL CONEALED WORK SHALL REMAIN UNCOVERED UNTIL ALL REQUIRED TESTS HAVE BEEN COMPLETED. NOTE THAT THIS TESTING MAYBE DONE IN PHASED AREAS AS DEEMED NECESSARY BY THE GENERAL CONTRACTOR. THE CONTRACTOR WILL REPAIR ANY DEFECTS WHICH ARE DISCOVERED AS A RESULT OF INSPECTION OR TEST WITH NEW MATERIALS. CAULKING OF SCREWED JOINTS, CRACKS, OR HOLES WILL NOT BE ACCEPTABLE. THE TEST MUST BE REPEATED AFTER REPLACEMENT AND DEFECTS HAVE BEEN ELIMINATED.
- 1.2. POTABLE WATER SHALL BE TESTED BEFORE FIXTURES AND FAUCETS ARE CONNECTED AND/OR BEFORE CONNECTING TO ANY EXISTING PIPING SYSTEM. THE SYSTEM WILL BE FILLED WITH WATER AND PRESSURE TESTED TO 150 PSI FOR A MINIMUM OF ONE HOUR WITHOUT ANY LEAKS OR PRESSURE LOSS.
2. CLEANUP AND PAINTING:
- 2.1. AFTER COMPLETION OF THE WORK, THE PLUMBING CONTRACTOR SHALL REMOVE ALL EXTRA MATERIALS, FITTINGS, PIPE, ETC. WHICH HAVE BEEN BROUGHT TO THE SITE FOR COMPLETION OF THEIR SCOPE OF WORK. ALL DEBRIS CREATED BASED ON THEIR CONSTRUCTION EFFORT SHALL BE REMOVED.
- 2.2. ALL UNINSULATED PIPING AND EQUIPMENT SHALL BE CLEANED OF OIL, GREASE, AND DIRT. ALL SURFACES SHALL BE CLEAN AND FREE OF DIRT AND CORROSION, READY FOR PAINTING BY OTHERS

PLUMBING LEGEND		
	DOMESTIC COLD WATER	(E) EXISTING TO REMAIN
	DOMESTIC HOT WATER	
	DOMESTIC HOT WATER RETURN	
	SANITARY SEWER	
	VENT PIPE	 SECTION VIEW SYMBOL
	NATURAL GAS PIPE	
	FLUE VENT PIPE	 DETAIL DESIGNATION
	ELBOW - TURNED DOWN	
	ELBOW - TURNED UP	
	TEE - TURNED DOWN	
	TEE - TURNED UP	
	BALL VALVE	 POWERED EQUIPMENT TAG
	BACKFLOW PREVENTER	 SHEET KEY NOTES
	WATER METER	
	FLOOR DRAIN	 POINT OF CONNECTION
	FLOOR SINK	
	FLOOR CLEANOUT	 POINT OF DISCONNECTION

PLUMBING MATERIALS

SYSTEM:	MATERIAL:
WATER PIPE, BELOW GRADE	SCH. 80 PVC
WATER PIPE, ABOVE GRADE	PEX
SANITARY SEWER, BELOW GRADE	SCH. 40 PVC
SANITARY SEWER, ABOVE GRADE	SCH. 40 PVC
VENT PIPE, BELOW GRADE	SCH. 40 PVC
VENT PIPE, ABOVE GRADE	SCH. 40 PVC

SPECIALTY PLUMBING FIXTURE SCHEDULE

CODE	FIXTURE	MANUFACTURER / MODEL	DESCRIPTION
WHA	WATER HAMMER ARRESTOR	SIOUX CHEIF 652-A	CONFIRM TO PDI WH-201, ANSI/ASSE 1010; TEMP TO 250°F, MAX 350 PSIG WORKING PRESSURE. INSTALL WHERE SHOWN ON RISER DIAGRAMS.
FCO	FLOOR CLEAN OUT	SIOUX CHEIF 851	PVC BODY, ROUND HEAVY-DUTY CAST IRON TOP, POLYPROPYLENE OR ABS PLUG, ADJUSTABLE TO FINISH SURFACE.
WCO	WALL CLEAN OUT	SIOUX CHIEF 873	THREADED COUNTERSUNK BRONZE CLEANOUT PLUG. PROVIDE DRILLED TAP FOR CENTER SCREW AND STAINLESS STEEL COVER.
HB	HOSE BIBB	ZURN Z1330-C	3/4" SELF-DRAINING WALL HYDRANT WITH VANDAL-RESISTANT INTEGRAL VACUUM BREAKER AND CHROME-PLATED ROUGH BRONZE BOX.
TP	TRAP PRIMER	PPP #PR-500	BRONZE CONSTRUCTION WITH VACUUM PORTS. PROVIDE DISTRIBUTION UNIT AS REQUIRED FOR SUPPLY TO DRAIN. INSTALL VALVE RECESSED IN WALL A MINIMUM OF 12" AFF. PROVIDE ACCESS PANEL. CERTIFIED ASSE 1018.

PROCEDURE FOR SIZING GREASE INTERCEPTORS

ITEM	QTY.	
ASSUMED GREASE LOAD	1	250 GPM
TOTAL CAPACITY		250 GPM
DETERMINE ACTUAL DRAINAGE LOAD, THE FIXTURES ARE NORMALLY FILLED TO ABOUT 75% OF CAPACITY WITH WATER. THE ITEMS BEING WASHED DISPLACE ABOUT 25% OF THE FIXTURE CONTENT, THUS ACTUAL DRAINAGE LOAD = 75% OF FIXTURE CAPACITY.		(250*0.75) = 187.5 GPM
DETERMINE FLOW RATE AND DRAINAGE PERIOD. IN GENERAL, GOOD PRACTICE DICTATES A 7 MINUTE RETENTION TIME.	FOR 7 MINUTE PERIOD	(187.5*7) = 1312.5 GAL
SELECT INTERCEPTOR WHICH CORRESPONDS TO THE FLOW RATE CALCULATED. NOTE: SELECT NEXT LARGER SIZE WHEN FLOW RATE FALLS BETWEEN TWO SIZES LISTED.		1312.5 REQUIRES 3000 GAL OF GREASE TRAP.



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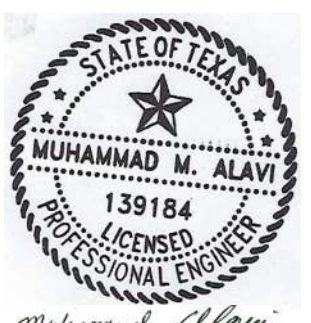


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IMPERIAL ROYAL GARDEN
PLAZA

15015 VOSS RD
SUGAR LAND, TEXAS, 77498

NO.	REVISION DESCRIPTION	DATE	03-06-2026		TITLE
					PLUMBING SCHEDULES
					CLIENT REVIEW
					PERMIT REVIEW
					CONSTRUCTION ISSUE
					CHECKED BY: SHEET: P100
					PROJECT #.--

PLUMBING GENERAL NOTES:

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3. PRIOR TO BID OR CONSTRUCTION, CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THE PROJECT CONDITIONS AND PROJECT DRAWINGS. CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER, PRIOR TO BID, OF ANY DISCREPANCIES BETWEEN PLAN AND FIELD CONDITIONS.
4. CONTRACTOR TO PROVIDE ALL REQUIRED OFFSETS AND FITTINGS REQUIRED TO PROVIDE COMPLETE DESIGN. PLUMBING DRAWINGS ARE SCHEMATIC IN NATURE. CONTRACTOR TO PROVIDE SHOP DRAWINGS AND AS-BUILTS AS NECESSARY.
5. ALL PIPING TO BE PROPERLY SUPPORTED AND SECURED.
6. PIPE DIMENSIONS SHOWN ON PLAN ARE INTERNAL DIMENSIONS.
7. CONTRACTOR SHALL NOTIFY AND COORDINATE WITH OWNER FOR ANY SUBSTITUTIONS OR ENTRY INTO SPACES TO ROUTE DUCTWORK OR PIPING THAT IS REQUIRED.
8. ALL COLD AND HOT WATER PIPING SHALL BE INSULATED. SEE SPECIFICATION FOR INSULATION REQUIREMENTS.
9. ALL HAND SINKS AND LAVATORIES SHALL BE PROVIDED WITH "TMV" THERMOSTATIC MIXING VALVE. RE: PLMB SCHEDULES
10. PROVIDE AND INSTALL 1/4 TURN SHUT OFF VALVE OR INTEGRAL SHUT OFF VALVE AT EACH WATER SUPPLY CONNECTION TO EACH PLUMBING FIXTURE OR EQUIPMENT.
11. ALL WATER TAPS TO PLUMBING FIXTURES SHALL BE DOWNSTREAM OF WATER SUBMETER.
12. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE INSTALLATION OF SODA SLEEVE LINES AND COORDINATION WITH OTHER DISCIPLINES.
13. REFER TO ARCHITECTURAL AND MILLWORK DRAWINGS FOR DETAILS OF COUNTERTOPS, CASEWORK, AND OTHER FIXTURES, SHOWING EXACT LOCATION OF OPENINGS FOR PLUMBING ITEMS BEING INSTALLED. COORDINATE THE GENERAL INSTALLATION WITH THE GENERAL CONTRACTOR.
14. ALL PENETRATIONS IN FIRE RATED WALL ASSEMBLIES SHALL BE SEALED WITH UL LISTED FIRE STOPPING MATERIAL.
15. PLUMBING CONTRACTOR TO ARRANGE AND PAY FOR ALL REQUIRED FEES, PERMITS, AND MISCELLANEOUS COSTS ASSOCIATED WITH THE PLUMBING WORK PER LOCAL PLUMBING CODES.

PLUMBING KEY NOTES:

NOTE: ALL KEYNOES MAY NOT BE USED ON THIS SHEET.

- 1 NEW VTR. COORDINATE ANY ROOF MODIFICATIONS WITH LANDLORD REPRESENTATIVE. VENT LOCATION TO BE A MINIMUM OF 10' AWAY FROM ALL BUILDING INTAKES.
- 2 CONNECT NEW SANITARY SEWER LINE TO EXISTING SANITARY MAIN LINE. CONTRACTOR TO FIELD VERIFY LOCATION, SIZE, AND INVERT ELEVATIONS AND DIRECTIONS PRIOR TO BEGINNING ANY NEW WORK.
- 3 ELECTRICAL EQUIPMENT LOCATION. NO NEW PLUMBING SHALL BE INSTALLED ABOVE OR BELOW THE CEILING AT THIS LOCATION.
- 4 CONNECT TO NEW CW SUPPLY STUB. FIELD VERIFY SIZE, LOCATION, AND CONDITION PRIOR TO ANY WORK.
- 5 ALL HAND WASH SINKS AND LAVATORIES SHALL BE PROVIDED WITH "TMV" THERMOSTATIC MIXING VALVE, WATTS LFUSG-B-M2. INLETS SHALL BE 1/2" & OUTLET SHALL BE 3/8" HW @ 105°F TO FAUCET. SHALL COMPLY WITH ASSE 1070.
- 6 INSTALL DEDICATED WATER METER PER LANDLORD'S SPECIFICATIONS. INSTALL WATER METER WITH MINIMUM UPSTREAM AND DOWNSTREAM STRAIGHT RUNS PER MANUFACTURER'S REQUIREMENTS. WATER METER SHALL BE PROVIDED WITH REMOTE READER BY BACK DOOR.
- 7 CAP PIPING FOR FUTURE USE.
- 8 GRAVITY TRAFFIC RATED GREASE INTERCEPTOR.
- 9 TRAFFIC RATED SAMPLE WELL.
- 10 GREASE TRAP, PRECAST SAMPLE WELL, AND GREASE LINE MUST BE BEDDED IN CEMENT STABILIZED SAND AND INSPECTED BEFORE COVER.
- 11 VENT PIPING UP FROM UNDERGROUND TO CEILING.



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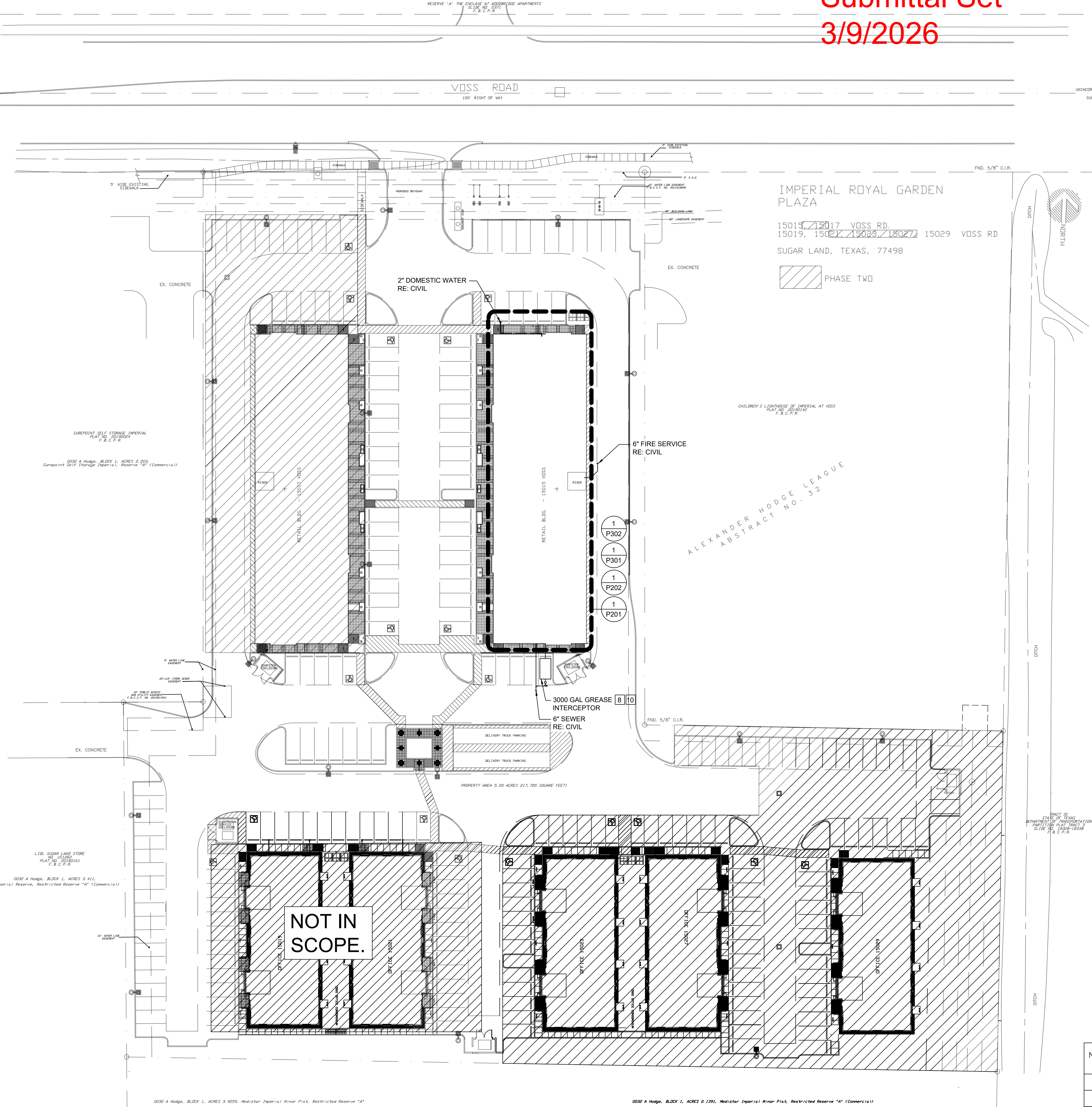
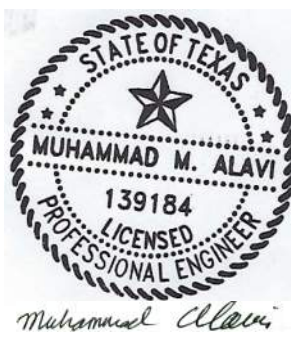
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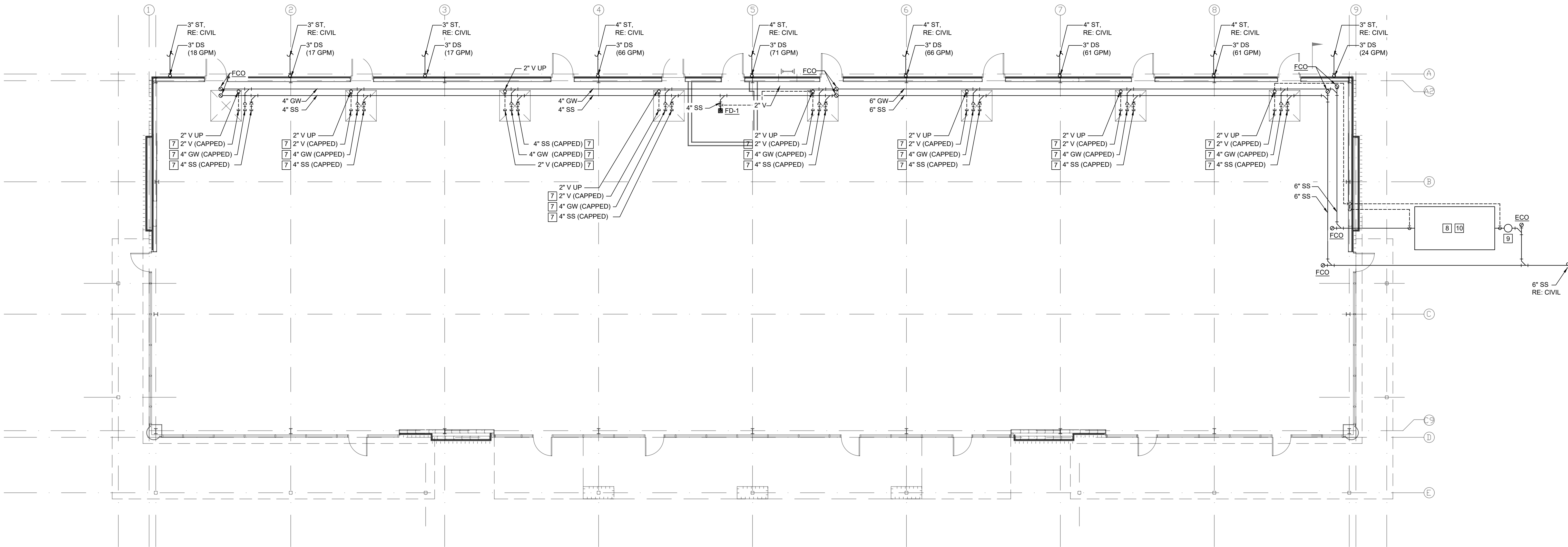
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NO.	REVISION DESCRIPTION	DATE	03-06-2026	TITLE PLUMBING SITE PLAN
				CLIENT REVIEW
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				PROJECT #.--



SITE PLAN - PLUMBING

1
1/32" = 1'0" (SHEET SIZE: 36"x24")



1 RETAIL GROUND SEWER & VENT PLAN - PLUMBING
1/8" = 10' (SHEET SIZE: 36"x24")

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- ALL PENETRATIONS IN FIRE RATED WALL ASSEMBLIES SHALL BE SEALED WITH UL LISTED FIRE STOPPING MATERIAL.
- PLUMBING CONTRACTOR TO ARRANGE AND PAY FOR ALL REQUIRED FEES, PERMITS, AND MISCELLANEOUS COSTS ASSOCIATED WITH THE PLUMBING WORK PER LOCAL PLUMBING CODES.

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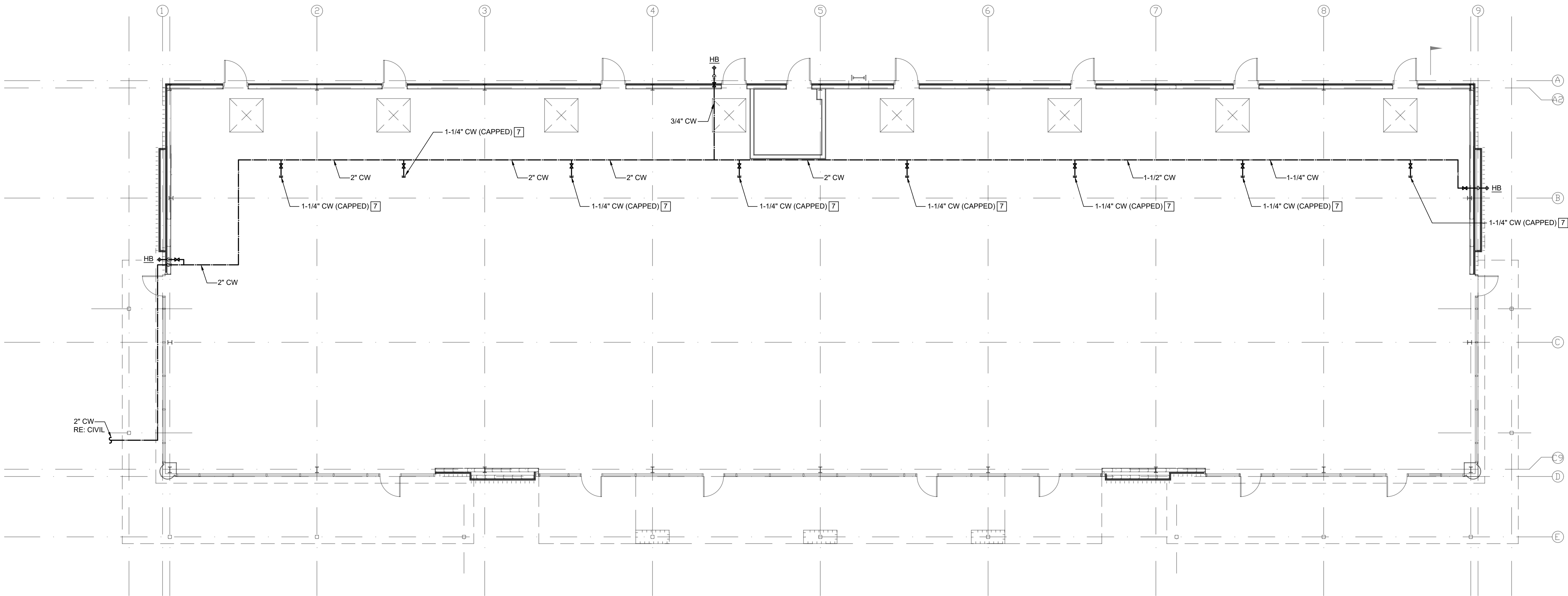


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IMPERIAL ROYAL GARDEN
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NO.	REVISION DESCRIPTION	DATE	03-06-2026	TITLE PLUMBING FLOOR PLAN
				CLIENT REVIEW
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				CHECKED BY: SHEET: P201
				PROJECT #.--



1 RETAIL DOMESTIC WATER FLOOR - PLUMBING
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- CONNECT NEW SANITARY SEWER LINE TO EXISTING SANITARY MAIN LINE. CONTRACTOR TO FIELD VERIFY LOCATION, SIZE, AND INVERT ELEVATIONS AND DIRECTIONS PRIOR TO BEGINNING ANY NEW WORK.
- ELECTRICAL EQUIPMENT LOCATION. NO NEW PLUMBING SHALL BE INSTALLED ABOVE OR BELOW THE CEILING AT THIS LOCATION.
- CONNECT TO NEW CW SUPPLY STUB. FIELD VERIFY SIZE, LOCATION, AND CONDITION PRIOR TO ANY WORK.
- ALL HAND WASH SINKS AND LAVATORIES SHALL BE PROVIDED WITH "TMV" THERMOSTATIC MIXING VALVE. WATTS LFUSG-B-MZ. INLETS SHALL BE 1/2" & OUTLET SHALL BE 3/8" HW @ 105°F TO FAUCET. SHALL COMPLY WITH ASSE 1070.
- INSTALL DEDICATED WATER METER PER LANDLORD'S SPECIFICATIONS. INSTALL WATER METER WITH MINIMUM UPSTREAM AND DOWNSTREAM STRAIGHT RUNS PER MANUFACTURER'S REQUIREMENTS. WATER METER SHALL BE PROVIDED WITH REMOTE READER BY BACK DOOR.
- CAP PIPING FOR FUTURE USE.
- GRAVITY TRAFFIC RATED GREASE INTERCEPTOR.
- TRAFFIC RATED SAMPLE WELL.
- GREASE TRAP. PRECAST SAMPLE WELL, AND GREASE LINE MUST BE BEDDED IN CEMENT STABILIZED SAND AND INSPECTED BEFORE COVER.
- VENT PIPING UP FROM UNDERGROUND TO CEILING.



TEXAS ENG. FIRM
REG. NO. F-23046



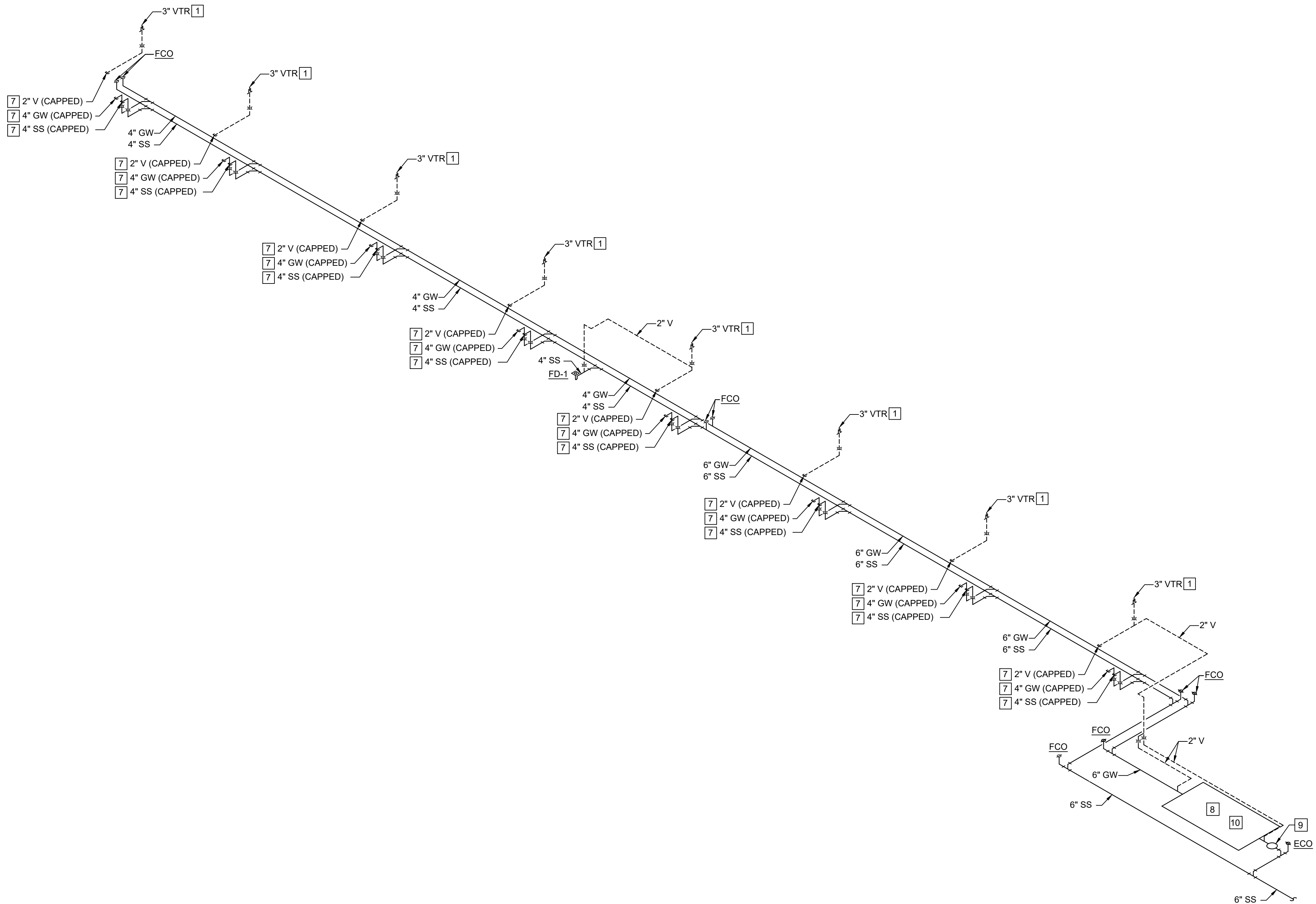
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Phone: 832-858-9533

IMPERIAL ROYAL GARDEN
PLAZA

15015 VOSS RD
SUGAR LAND, TEXAS, 77498

NO.	REVISION DESCRIPTION	DATE	03-06-2026		STATE OF TEXAS MUSHAHAD M. ALAYI 139184 LICENSED PROFESSIONAL ENGINEER Muhammad Alayy		TITLE PLUMBING FLOOR PLAN	
							CLIENT REVIEW	
							PERMIT REVIEW	
							CONSTRUCTION ISSUE	
							CHECKED BY:	SHEET: P301
							PROJECT #:	--



1 RETAIL - SANITARY AND SEWER RISER
NO SCALE

PLUMBING GENERAL NOTES:

- CONTRACTOR SHALL CONFORM TO ALL LOCAL, STATE, AND APPLICABLE CODES. WORK SHALL BE INSTALLED IN A WORKMAN LIKE FASHION.
- PIPING INSULATION SHALL RUN CONTINUOUSLY THROUGH PENETRATIONS. CONTRACTOR TO PROVIDE NECESSARY SLEEVES AND FLASHING AT WALL PENETRATIONS.
- PRIOR TO BID OR CONSTRUCTION, CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THE PROJECT CONDITIONS AND PROJECT DRAWINGS. CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER, PRIOR TO BID, OF ANY DISCREPANCIES BETWEEN PLAN AND FIELD CONDITIONS.
- CONTRACTOR TO PROVIDE ALL REQUIRED OFFSETS AND FITTINGS REQUIRED TO PROVIDE COMPLETE DESIGN. PLUMBING DRAWINGS ARE SCHEMATIC IN NATURE. CONTRACTOR TO PROVIDE SHOP DRAWINGS AND AS-BUILTS AS NECESSARY.
- ALL PIPING TO BE PROPERLY SUPPORTED AND SECURED.
- PIPE DIMENSIONS SHOWN ON PLAN ARE INTERNAL DIMENSIONS.
- CONTRACTOR SHALL NOTIFY AND COORDINATE WITH OWNER FOR ANY SUBSTITUTIONS OR ENTRY INTO SPACES TO ROUTE DUCTWORK OR PIPING THAT IS REQUIRED.
- ALL COLD AND HOT WATER PIPING SHALL BE INSULATED. SEE SPECIFICATION FOR INSULATION REQUIREMENTS.
- ALL HAND SINKS AND LAVATORIES SHALL BE PROVIDED WITH "TMV" THERMOSTATIC MIXING VALVE. RE: PLMB SCHEDULES
- PROVIDE AND INSTALL 1/4 TURN SHUT OFF VALVE OR INTEGRAL SHUT OFF VALVE AT EACH WATER SUPPLY CONNECTION TO EACH PLUMBING FIXTURE OR EQUIPMENT.
- ALL WATER TAPS TO PLUMBING FIXTURES SHALL BE DOWNSTREAM OF WATER SUBMETER.
- THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE INSTALLATION OF SODA SLEEVE LINES AND COORDINATION WITH OTHER DISCIPLINES.
- REFER TO ARCHITECTURAL AND MILLWORK DRAWINGS FOR DETAILS OF COUNTERTOPS, CASEWORK, AND OTHER FIXTURES. SHOWING EXACT LOCATION OF OPENINGS FOR PLUMBING ITEMS BEING INSTALLED. COORDINATE THE COMPLETE INSTALLATION WITH THE GENERAL CONTRACTOR.
- ALL PENETRATIONS IN FIRE RATED WALL ASSEMBLIES SHALL BE SEALED WITH UL LISTED FIRE STOPPING MATERIAL.
- PLUMBING CONTRACTOR TO ARRANGE AND PAY FOR ALL REQUIRED FEES, PERMITS, AND MISCELLANEOUS COSTS ASSOCIATED WITH THE PLUMBING WORK PER LOCAL PLUMBING CODES.

PLUMBING KEY NOTES:

NOTE: ALL KEYNOES MAY NOT BE USED ON THIS SHEET.

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- CONNECT NEW SANITARY SEWER LINE TO EXISTING SANITARY MAIN LINE. CONTRACTOR TO FIELD VERIFY LOCATION, SIZE, AND INVERT ELEVATIONS AND DIRECTIONS PRIOR TO BEGINNING ANY NEW WORK.
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TEXAS ENG. FIRM
REG. NO. F-23046



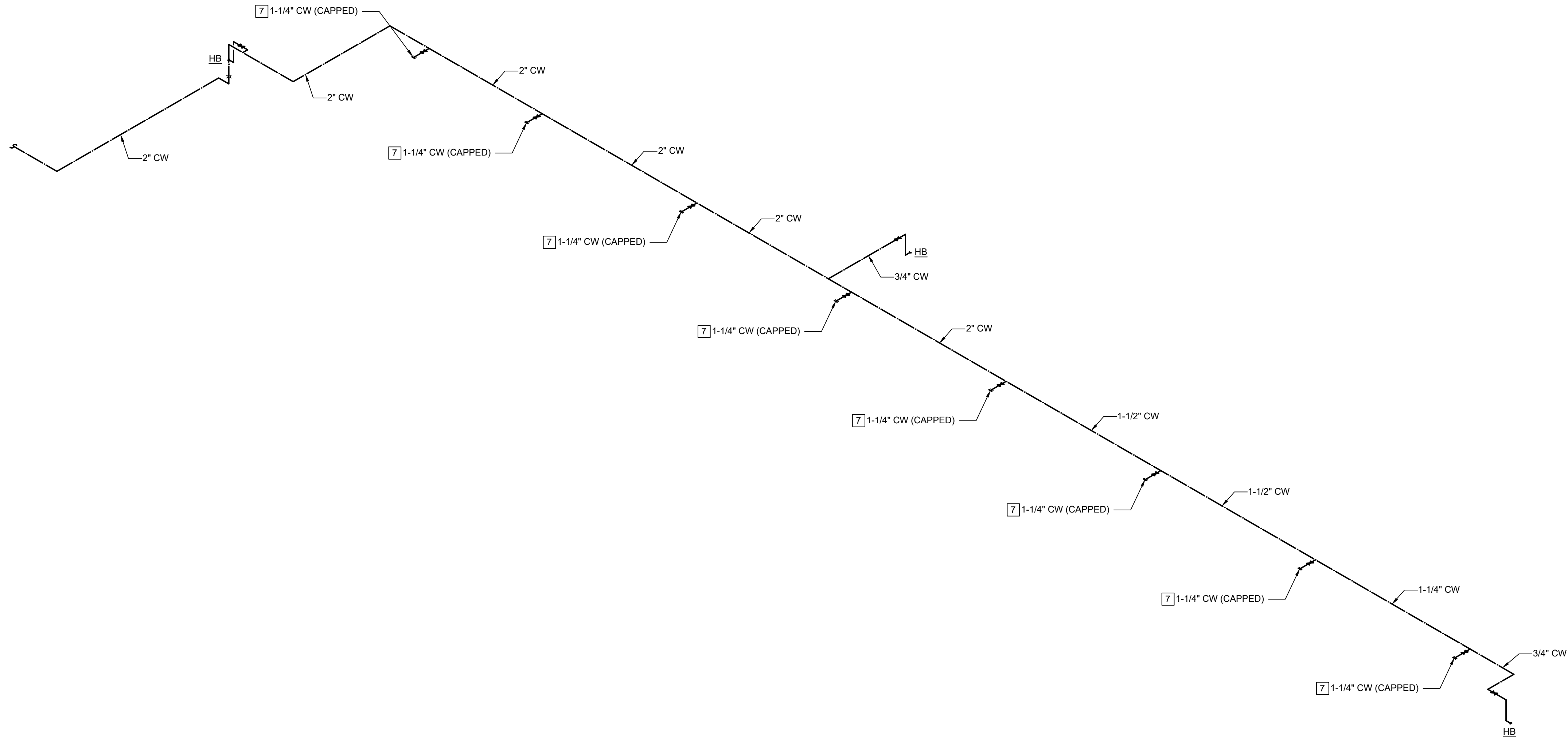
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IMPERIAL ROYAL GARDEN
PLAZA

15015 VOSS RD
SUGAR LAND, TEXAS, 77498

NO.	REVISION DESCRIPTION	DATE	03-06-2026		TITLE
					PLUMBING RISERS
					CLIENT REVIEW
					PERMIT REVIEW
					CONSTRUCTION ISSUE
			CHECKED BY:		SHEET:
			PROJECT #. --		P400



1 RETAIL - DOMESTIC WATER RISER
NO SCALE

PLUMBING GENERAL NOTES:

1. CONTRACTOR SHALL CONFORM TO ALL LOCAL, STATE, AND APPLICABLE CODES. WORK SHALL BE INSTALLED IN A WORKMAN LIKE FASHION.
2. PIPING INSULATION SHALL RUN CONTINUOUSLY THROUGH PENETRATIONS. CONTRACTOR TO PROVIDE NECESSARY SLEEVES AND FLASHING AT WALL PENETRATIONS.
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13. REFER TO ARCHITECTURAL AND MILLWORK DRAWINGS FOR DETAILS OF COUNTERTOPS, CASEWORK, AND OTHER FIXTURES. SHOWING EXACT LOCATION OF OPENINGS FOR PLUMBING ITEMS BEING INSTALLED. COORDINATE THE COMPLETE INSTALLATION WITH THE GENERAL CONTRACTOR.
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- 7 CAP PIPING FOR FUTURE USE.
- 8 GRAVITY TRAFFIC RATED GREASE INTERCEPTOR.
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REG. NO. F-23046



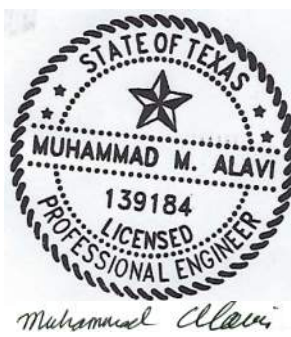
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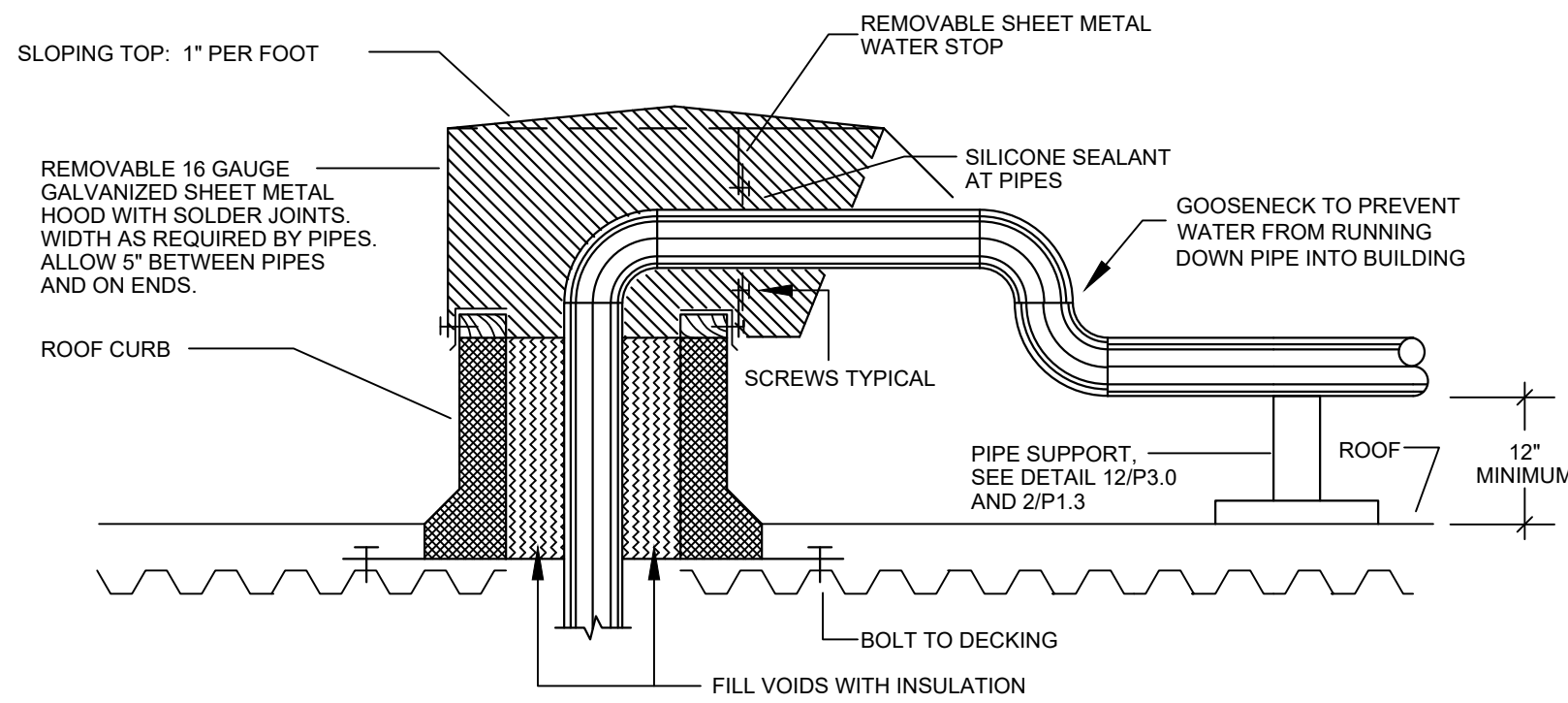
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PLAZA

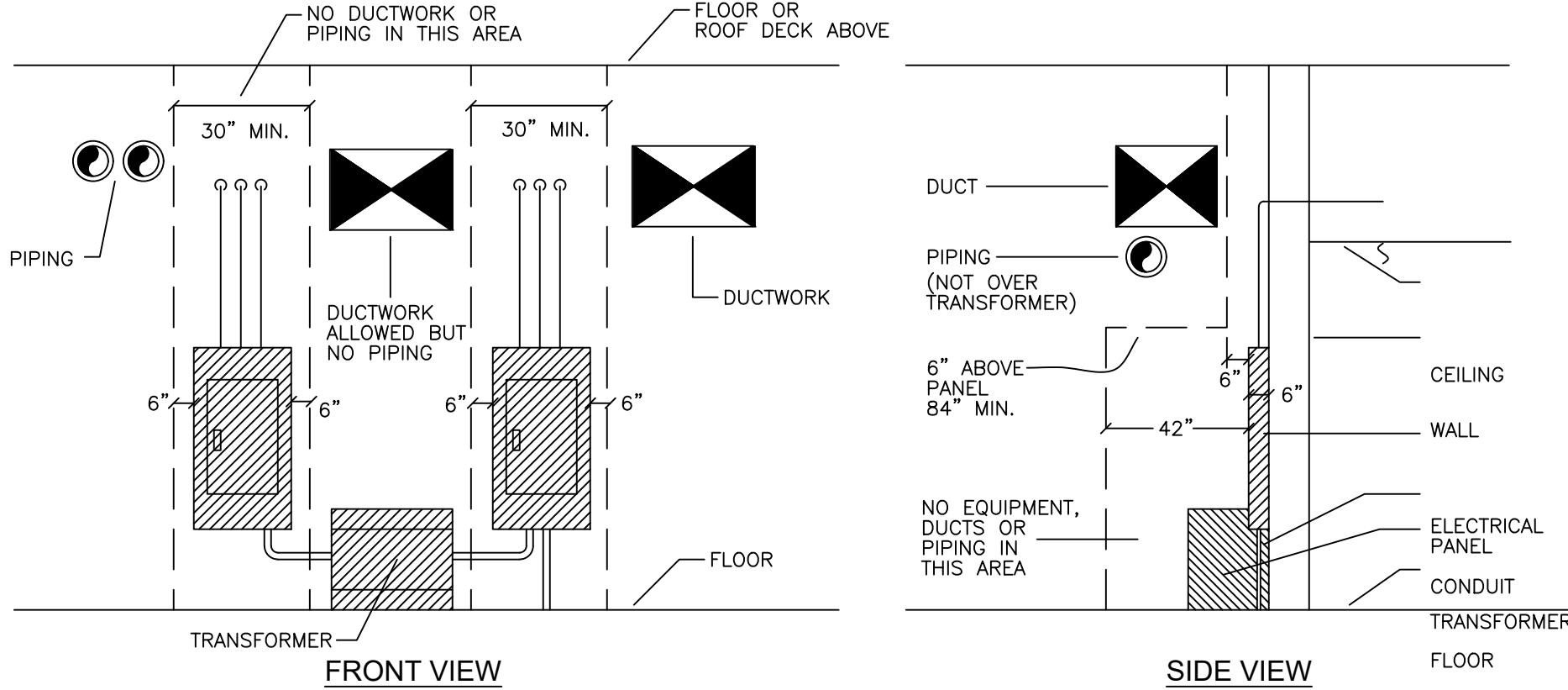
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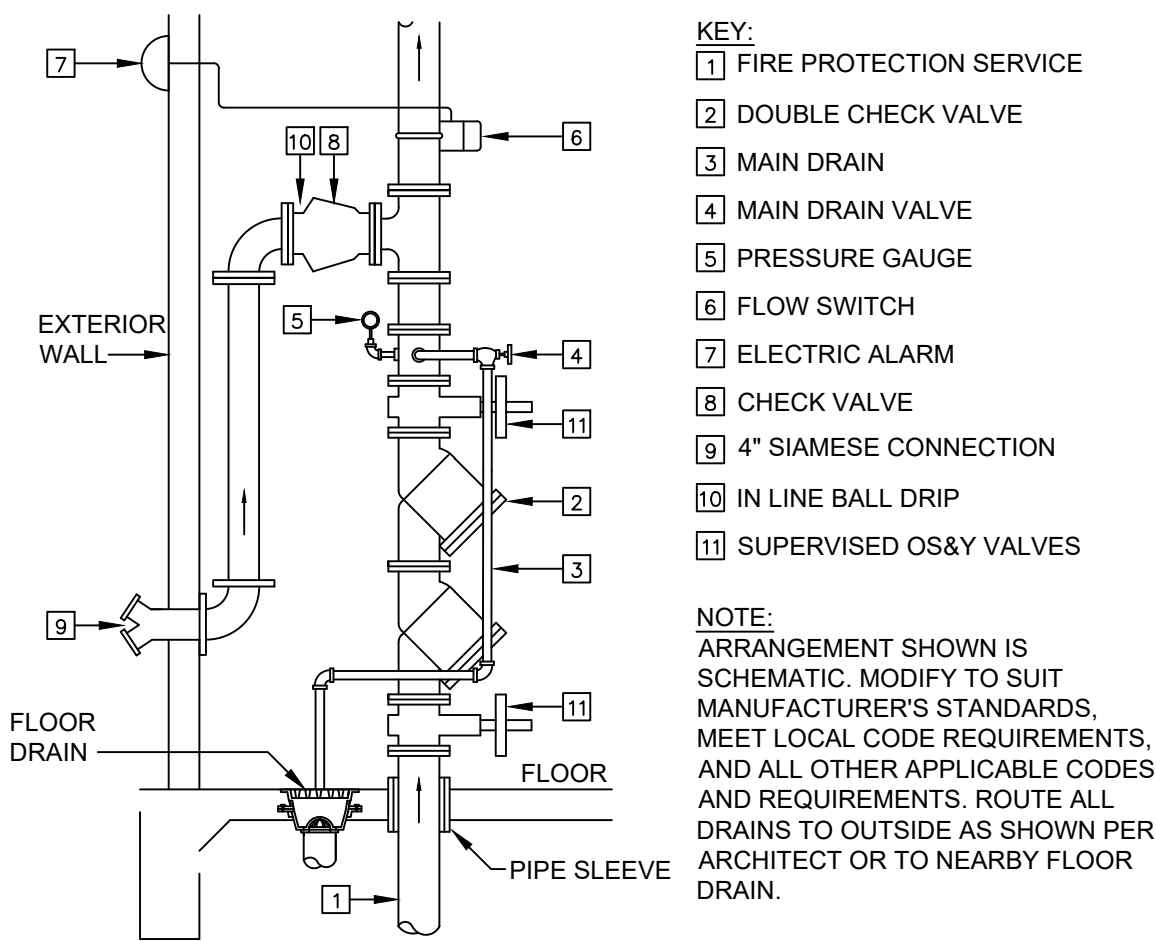




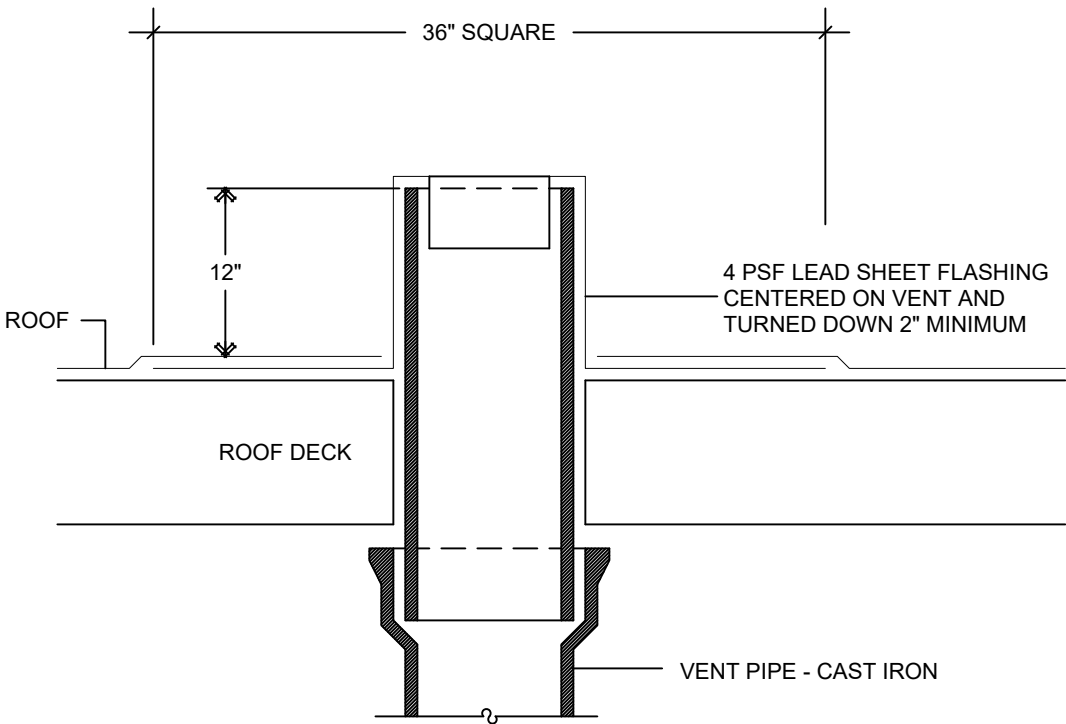
5 ROOF PIPE JACK DETAIL
NO SCALE
NOTE: COORDINATE WITH ARCHITECTURAL DRAWINGS, DETAILS AND SPECIFICATIONS.



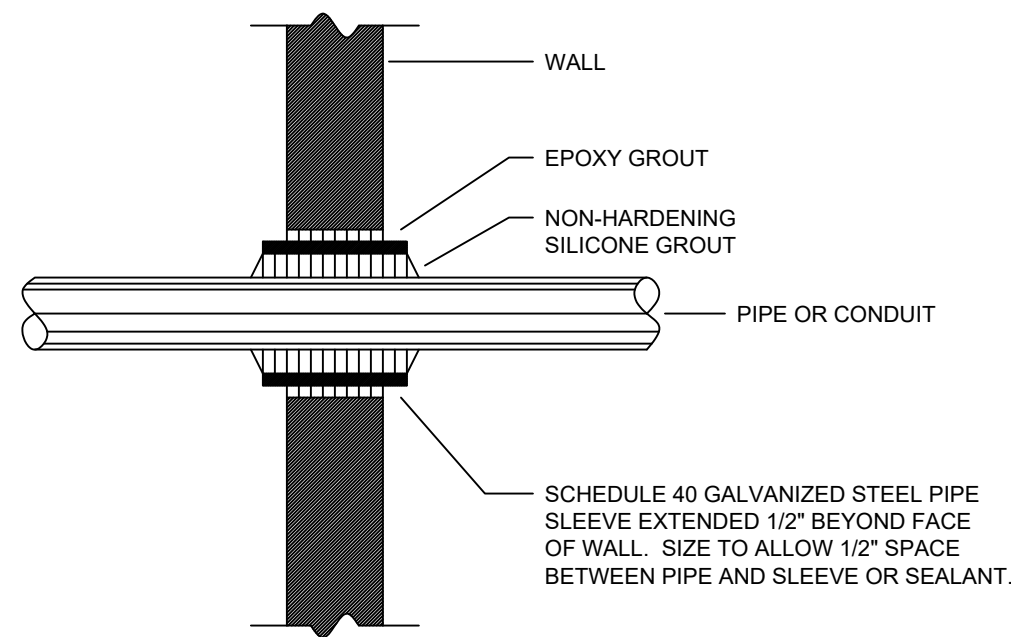
2 MECHANICAL - ELECTRICAL COORDINATION DETAIL
NO SCALE
DO NOT INSTALL ANY PIPING BENEATH CVT BOXES. DO NOT INSTALL ANY PIPING (EXCEPT FIRE SPRINKLER PIPING AND OTHER PIPES SHOWN SPECIFICALLY ON THE PLUMBING FLOOR PLANS) OVER COMPUTER CLASSROOMS, BOOKROOMS, IDF/MDF/SERVER ROOMS OR OTHER ROOMS NOTED ON THE PLUMBING FLOOR PLANS.



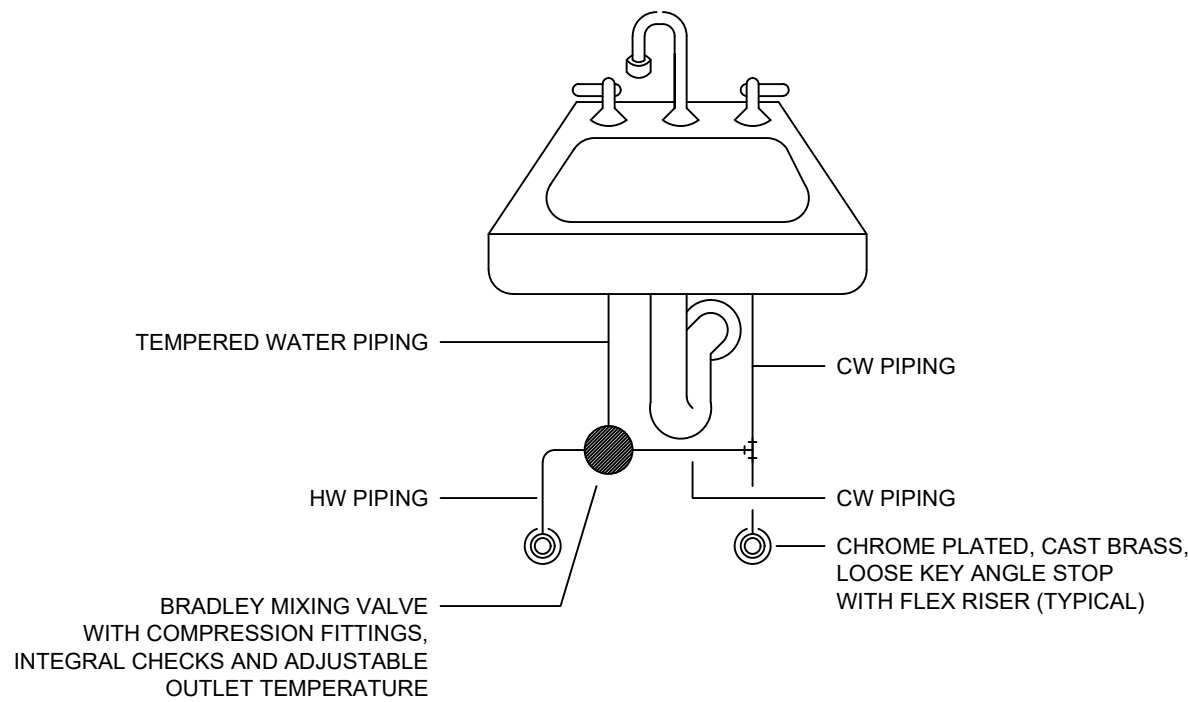
7 FIRE RISER DETAIL
NO SCALE



4 ROOF VENT DETAIL
NO SCALE
COORDINATE WITH ARCHITECTURAL DRAWINGS AND SPECIFICATIONS. LOCATE PLUMBING VENTS THROUGH ROOF NOT NEARER THAN SIX (6) FEET AWAY FROM EDGE OF BUILDING AND TEN (10) FEET AWAY FROM ANY FRESH AIR INTAKES. OFFSET VENT PIPING, AS REQUIRED, IN CEILING SPACE BETWEEN CEILING AND ROOF TO MEET THESE REQUIREMENTS.

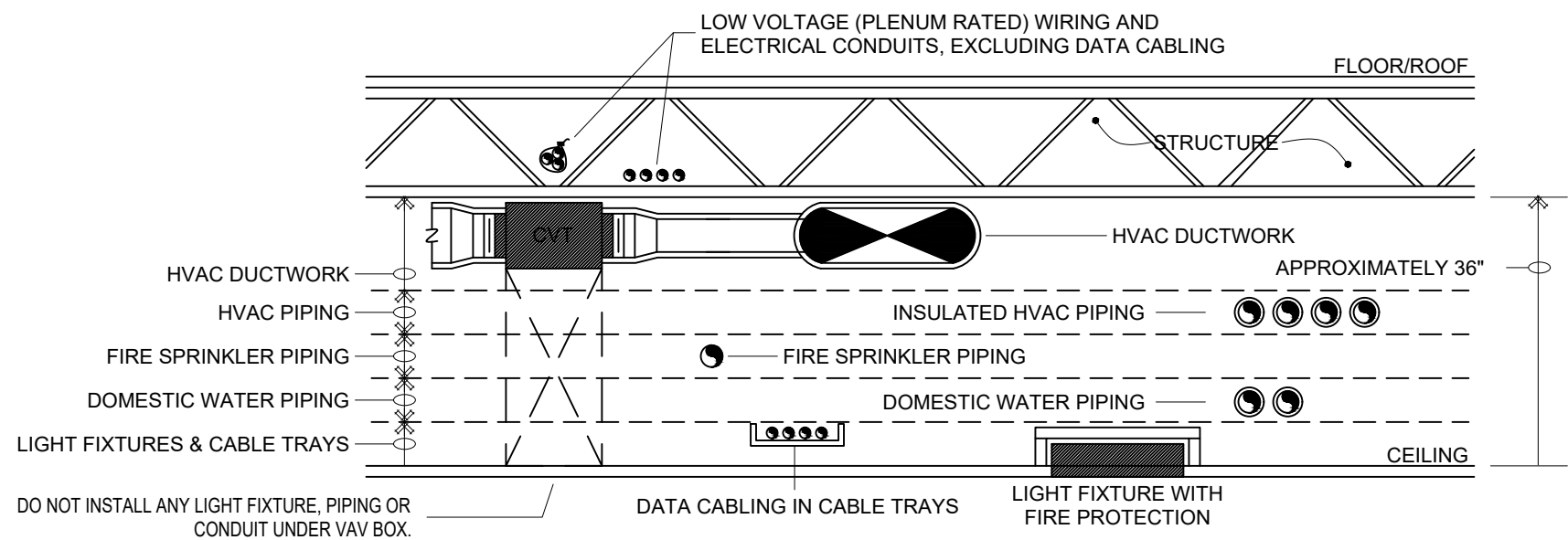


6 WALL PENETRATION DETAIL
NO SCALE
INSTALL 4" THICK CONCRETE CURB AROUND PIPE PENETRATIONS OF MEZZANINE FLOORS.
THIS DETAIL APPLIES TO ALL PIPING THROUGH WALLS OR FLOORS, INCLUDING FIRE SPRINKLER PIPING.



3 KNEESPACE TMV DETAIL
NO SCALE
NOTES
1. THIS DETAIL ONLY APPLIES TO LAVS AND SINKS THAT HAVE HOT WATER WHERE THE FAUCET PROVIDED DOES NOT HAVE A HIGH TEMPERATURE LIMIT. BRADLEY S59-4000A LEAD FREE TMV WITH MOUNTING BRACKET.
2. ALL CW AND HW CONNECTIONS SHALL HAVE COMPRESSION TYPE FITTINGS.
3. TMV SHALL BE INSTALLED IN A EASILY/READILY ACCESSIBLE LOCATION.
4. TMV SHALL BE ASSE 1070 CERTIFIED.

1 PLENUM SPACE PRIORITY DETAIL
NO SCALE
PIPING, CONDUIT AND DUCTWORK SUPPORTS ARE NOT SHOWN ON THIS DETAIL. SUPPORT ALL ENTITIES AS REQUIRED BY THE WRITTEN SPECIFICATIONS.
DO NOT INSTALL ANY PIPE OVER TOP OF ANY ELECTRICAL EQUIPMENT. THIS INCLUDES FIRE SPRINKLER PIPING. NO EXCEPTIONS.
DO NOT INSTALL ANY PIPE OVER TOP OF ANY IDF/MDF/SERVER/NETWORK EQUIPMENT. THIS INCLUDES EQUIPMENT PROVIDED BY OWNER. THIS INCLUDES FIRE SPRINKLER PIPING. NO EXCEPTIONS.



PLENUM PRIORITY NOTES	
ELECTRICAL CONDUIT	INSTALLED WITHIN OPEN WEBS OF JOIST FRAMING. IF FRAMING IS USED FOR SUPPORT OF CONDUIT, A SADDLE SHALL BE REQUIRED FOR ISOLATION AT EACH SUPPORT POINT.
LOW VOLTAGE WIRING (EXCEPT DATA CABLING)	INSTALLED WITHIN OPEN WEBS OF JOIST FRAMING AND RUN PARALLEL OR PERPENDICULAR TO BUILDING WALLS. ALL INDIVIDUAL WIRES SHALL BE BUNDLED TOGETHER WITH PLASTIC TIE STRAPS AT 6 FOOT MAXIMUM INTERVALS AND EACH WIRE SHALL BE IDENTIFICATION TAGGED AT 25 FOOT MAXIMUM INTERVALS.
HVAC DUCTWORK	INSTALLED AS SNUG TO BOTTOM OF STRUCTURE AS POSSIBLE, ALLOWING ONLY ENOUGH SPACE FOR INSULATION WRAP. OFFSET HOT AND COLD MEDIUM PRESSURE DUCTS FOR TAKE-OFFS FOR DOUBLE DUCT VAV BOXES.
HVAC PIPING	INSTALLED IN PLANE DIRECTLY BELOW HVAC DUCTWORK. ALL VALVES AND INSTRUMENTS SHALL BE ACCESSIBLE AND EASILY OPERATED FROM BELOW.
FIRE SPRINKLER PIPING	INSTALLED IN PLANE DIRECTLY BELOW HVAC PIPING.
DOMESTIC WATER PIPING	INSTALLED IN PLANE DIRECTLY ABOVE LIGHT FIXTURES. ALL VALVES AND INSTRUMENTS SHALL BE ACCESSIBLE AND EASILY OPERATED FROM BELOW. BALL VALVES INSTALLED WITH STEM HORIZONTAL SHALL BE USED IN LIEU OF WHEEL HANDLE VALVES OR OTHER TYPES EXCEPT IN SITUATIONS WHERE BALL VALVES ARE NOT APPROPRIATE.
LIGHT FIXTURES	TAKE PRIORITY IN SPECIAL LAYOUT. ALL OTHER SYSTEMS (DOUBLE DUCT UNITS, DUCTWORK, PIPING, CONDUITS, ETC.) SHALL BE ROUTED IN PLENUM SPACE TO AVOID PASSING DIRECTLY (LOW) OVER LIGHTING FIXTURES PREVENTING THEIR INSTALLATION, SERVICING AND/OR REMOVAL.
GRAVITY FED PLUMBING	THIS INCLUDES PLUMBING WASTE/VENT AND ROOF DRAIN SYSTEMS. THESE SYSTEMS TAKE PRIORITY OVER ALL OTHER SYSTEMS BUT MUST BE INSTALLED TAKING OTHER SYSTEMS INTO CONSIDERATION. IN GENERAL, ROOF DRAIN PIPING SHALL START AS HIGH AS POSSIBLE. WASTE/VENT PIPING SHALL BE INSTALLED IN HVAC PIPING SPACE (IF AVAILABLE) IN AREAS WHERE CROSSING DUCTWORK. DO NOT INSTALL WASTE/VENT OR ROOF DRAIN PIPING UNDER DOUBLE DUCT VAV BOXES IF AVOIDABLE.



TEXAS ENG. FIRM
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IMPERIAL ROYAL GARDEN
PLAZA

15015 VOSS RD
SUGAR LAND, TEXAS, 77498

TITLE
PLUMBING DETAILS

CLIENT REVIEW

PERMIT REVIEW

CONSTRUCTION ISSUE

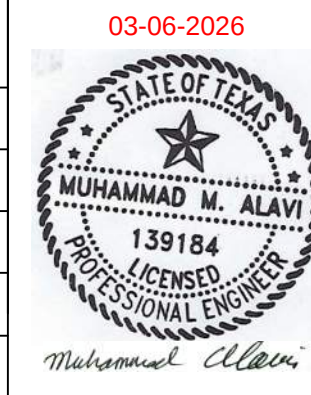
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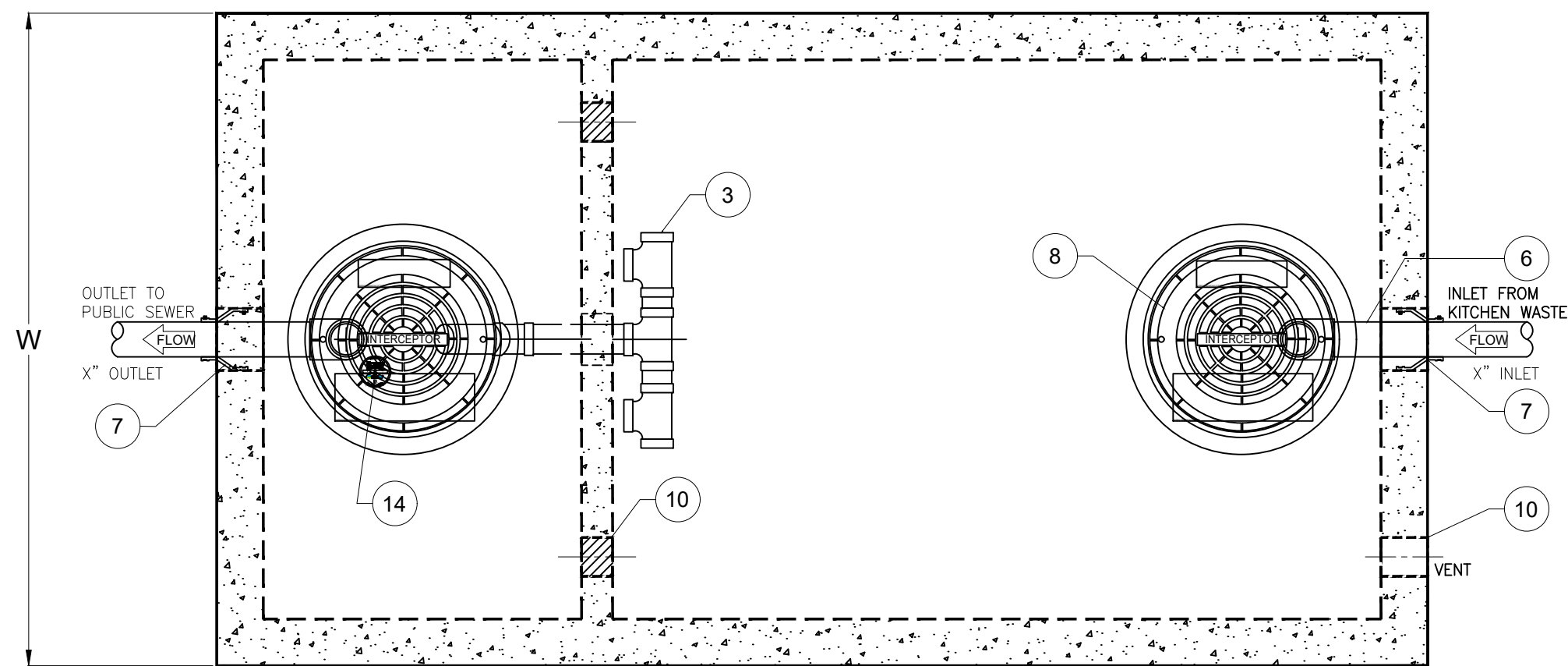
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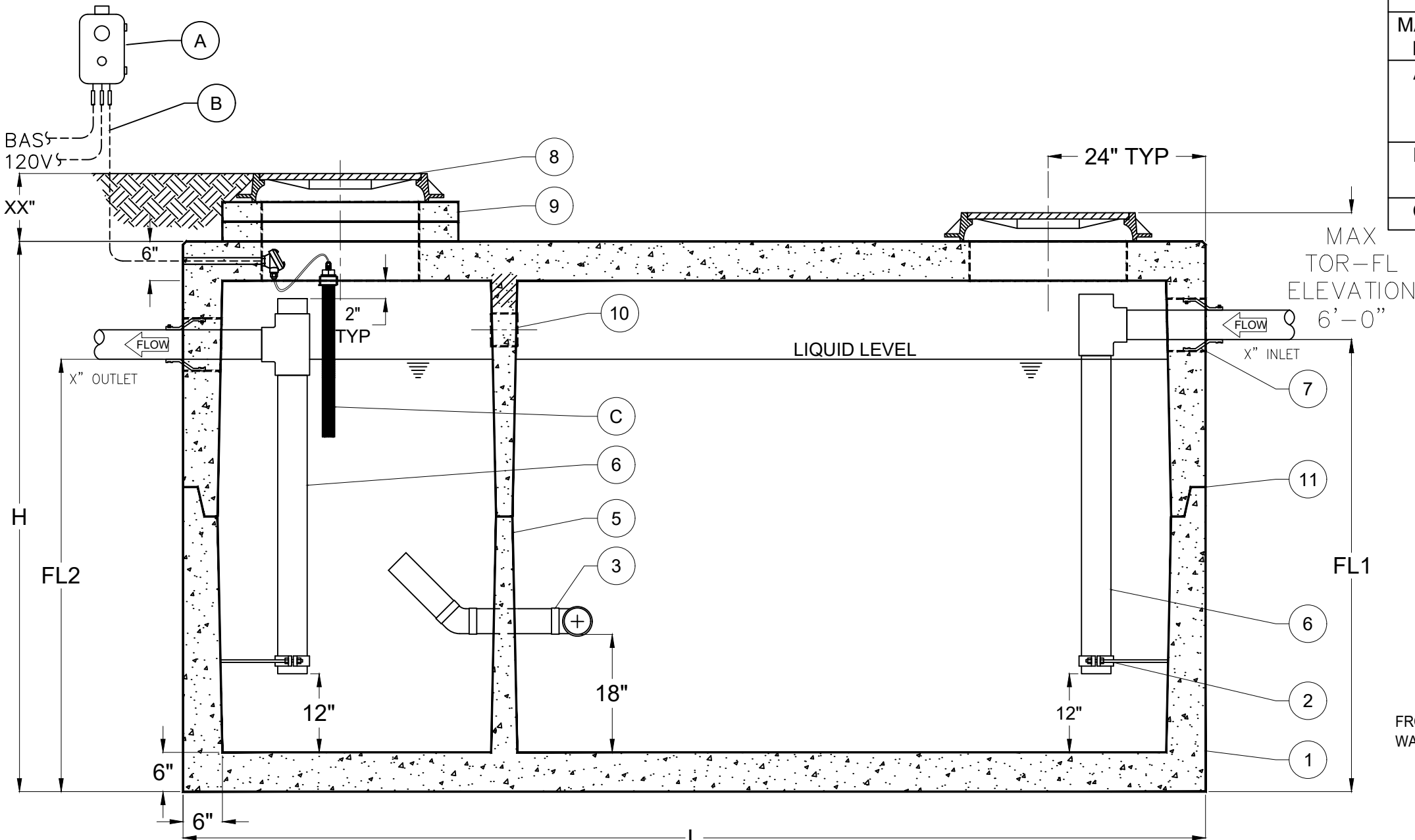
NO.	REVISION DESCRIPTION	DATE





PLAN VIEW

KEYED NOTES		
MAR K	QTY	DESCRIPTION
1	1	PRECAST CONCRETE GREASE INTERCEPTOR
2	2	GALVANIZED RISER SUPPORT
3	1	6" PVC DOUBLE TEE MANIFOLD
4	-	TAPERED WALL
5	1	BAFFLE
6	2	SCH 40 PVC PIPING (PROVIDED LOOSE)
7	2	RESILIENT RUBBER BOOT
8	2	24" CAST IRON RING & COVER
9	-	CONCRETE EXTENSION RINGS AS REQ'D
10	1	4" VENT COUPLING
11	1	JOINT SEALED w/ PLASTIC FLEXIBLE GASKET (RAMNEK)
12	1	NAMEPLATE INDICATING: MFG: ParkUSA.COM 888-611-PARK MODEL: GT-03 DATE MANUFACTURED

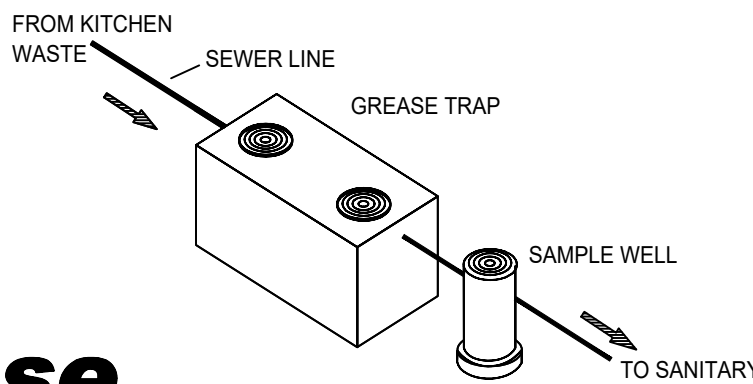


ELEVATION

CONTROL NOTES		
MAR K	QTY	DESCRIPTION
A	1	SERVICE ALERT PANEL, NOTIFIES OF GREASE MAXIMUM CAPACITY w/ AUDIBLE & VISUAL ALARM (NEMA 4X)
B	-	CABLE & CONDUIT ROUTED TO ALARM (BY OTHERS)
C	1	GREASE SENSOR (NEMA 7)



NAMEPLATE



GREASE INTERCEPTOR SCHEDULE							
MODEL NO.	CAPACITY USGal	GREASE CAP. (LBS)	EMPTY WT (LBS)	LENGTH L	WIDTH W	HEIGHT H	INLET FL1
GT-2500	2,500	5,700	27,050	13'-0"	7'-0"	7'-0"	5'-9"
GT-3000	3,000	6,900	33,150	13'-0"	7'-0"	8'-0"	6'-9"
GT-3500	3,500	8,000	38,550	13'-0"	7'-0"	8'-6"	7'-3"
GT-4000	4,000	9,300	38,100	16'-0"	8'-6"	7'-0"	5'-9"
GT-4500	4,500	10,200	41,000	16'-0"	8'-6"	7'-6"	6'-3"
GT-5000	5,000	11,600	41,550	16'-0"	8'-6"	8'-0"	6'-9"
GT-6000	6,000	13,860	44,700	16'-0"	8'-6"	9'-0"	7'-9"

OTHER SIZES ARE AVAILABLE. CONTACT US FOR MORE INFORMATION
* NOT UPC LISTED

SPECIFICATIONS

- CONCRETE: CLASS I/II CONCRETE WITH DESIGN STRENGTH OF 4500 PSI AT 28 DAYS. UNIT IS OF MONOLITHIC CONSTRUCTION AT FLOOR, FIRST STAGE OF WALL AND BAFFLE WITH SECTIONAL RISER TO REQUIRED DEPTH. (MONOLITHIC BAFFLE REQUIRED, SLIDE-IN TYPE NOT ACCEPTABLE).
- REINFORCEMENT: GRADE 60 REINFORCED WITH STEEL REBAR CONFORMING TO ATSM A615 ON REQUIRED CENTERS OR EQUAL.
- C.I. CASTINGS: MANHOLE FRAMES, COVERS OR GRATES ARE MANUFACTURED OF GREY CAST IRON CONFORMING TO ASTM A48-76 CLASS 30. MANHOLE SHALL BE NOMINAL 24 INCH DIAMETER AND BE TRAFFIC DUTY.

ENGINEERING DATA

- THE GREASE INTERCEPTOR IS STRUCTURALLY & HYDRAULICALLY ENGINEERED TO CONFORM TO UPC/IPC AND REGIONAL PLUMBING CODES RECOMMENDED IN MOST CITIES. CONSULT WITH LOCAL AUTHORITIES FOR SPECIFIC APPLICATION REQUIREMENTS.
- SHOP DRAWINGS SHALL INCLUDE COMPLETE STRUCTURAL & BUOYANCY CALCULATIONS CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER UPON REQUEST.
- CONSULT PARKUSA FOR EXACT EXCAVATION DIMENSIONS & SHIPPING INFORMATION.



TYPICAL APPLICATIONS INCLUDE COMMERCIAL AND INDUSTRIAL FOOD SERVICE KITCHENS WHERE EXCESSIVE GREASE MAY INTERFERE WITH THE PROPER DRAINAGE OF THE SEWER SYSTEM. THE GREASE INTERCEPTOR IS GENERALLY BURIED BELOW GRADE FOR GRAVITY FLOW SEWER SYSTEMS. A SAMPLE WELL IS UTILIZED ON THE OUTLET SIDE FOR SAMPLING BY THE LOCAL WATER AUTHORITY.

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GREASE INTERCEPTOR SERIES GT
MODELS 2,500 THRU 6,000 GALLON CAPACITY

PM	PC	DRN	ENG	DWG. NO.	REV.
-	-	-	-	GT-03-WA	A
DATE 03/24					



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MECHANICAL LEGEND			
AHU	AIR HANDLING UNIT	☒	SUPPLY AIR GRILLE
CU	CONDENSING UNIT	☒	RETURN AIR GRILLE
EA	EXHAUST AIR	☒	EXHAUST AIR GRILLE
FCU	FAN COIL UNIT	—[M]	MOTORIZED CONTROL DAMPER
FPB	FAN POWERED BOX	—[B]	BACKDRAFT DAMPER
GEA	GREASE EXHAUST AIR	Ⓣ	THERMOSTAT
KEF	KITCHEN EXHAUST FAN	Ⓜ	SPACE HUMIDISTAT
KSF	KITCHEN SUPPLY FAN	CO2	CARBON DIOXIDE SENSOR
MUA	MAKEUP AIR	Ⓢ	DUCT MOUNTED SMOKE DETECTOR
RA	RETURN AIR	Ⓡ	SMOKE DETECTOR RESET SWITCH
RTU	ROOF TOP UNIT		
SA	SUPPLY AIR		
TEF	TOILET EXHAUST FAN		
VAV	VARIABLE AIR VOLUME BOX		
DESIGN CONDITIONS			
LOCATION: SUGAR LAND, TX CLIMATE ZONE: 2A DESIGN OUTDOOR AIR CONDITIONS (SUMMER): 95°F DB, 80.5°F WB DESIGN OUTDOOR AIR CONDITIONS (WINTER): 27°F DESIGN INDOOR AIR CONDITIONS (YEAR ROUND): 75°F, 50% RH			

23 05 00 - COMMON WORK RESULTS FOR HVAC

1. STANDARDS:
1.1. COMPLY WITH ALL APPLICABLE CODES, SPECIFICATIONS, LOCAL, NATIONAL, AND INTERNATIONAL STANDARDS, UTILITY COMPANIES, REGULATIONS, AND THE APPLICABLE REQUIREMENTS OF THE FOLLOWING NATIONALLY ACCEPTED CODES AND STANDARDS:
1.1.1. UNDERWRITER'S LABORATORIES, INC., UL
1.1.2. AIR MOVING & CONDITIONING ASSOCIATION, AMCA
1.1.3. AMERICAN STANDARDS ASSOCIATION, ASA
1.1.4. AMERICAN SOCIETY OF HEATING, REGRIGERATING, AND AIR-CONDITIONING ENGINEERS, INC., ASHRAE
1.1.5. AMERICAN SOCIETY OF MECHANICAL ENGINEERS, ASME
1.1.6. AMERICAN SOCIETY OF PLUMBING ENGINEERS, ASPE
1.1.7. AMERICAN WATER WORKS ASSOCIATION, AWWA
1.1.8. NATIONAL BUREAU OF STANDARDS, NBS
1.1.9. NATIONAL FIRE PROTECTION ASSOCIATION, NFPA
1.1.10. SHEET METAL & AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION, SMACNA
1.2. APPLICABLE LOCAL CODES FOR THE HARRIS COUNTY, TEXAS INCLUDE:
1.2.1. 2021 IBC WITH APPROVED CODE AMENDMENTS
1.2.2. 2021 IECC WITH APPROVED CODE AMENDMENTS
1.2.3. 2021 IMC WITH APPROVED CODE AMENDMENTS
1.2.4. 2021 IPC WITH APPROVED CODE AMENDMENTS
1.2.5. 2021 IFGC WITH APPROVED CODE AMENDMENTS
1.2.6. 2023 NEC WITH APPROVED CODE AMENDMENTS
1.2.7. 2021 IFC WITH APPROVED CODE AMENDMENTS
2. INSTALLATION:
2.1. GENERAL. SEQUENCE, COORDINATE, AND INTEGRATE THE VARIOUS ELEMENTS OF MECHANICAL SYSTEMS, MATERIALS, AND EQUIPMENT. COMPLY WITH THE FOLLOWING REQUIREMENTS:
2.1.1. COORDINATE MECHANICAL, PLUMBING, AND FIRE PROTECTION SYSTEMS, EQUIPMENT, AND MATERIALS INSTALLATION WITH OTHER BUILDING COMPONENTS.
2.1.2. VERIFY ALL DIMENSIONS BY FIELD MEASUREMENTS.
2.1.3. ARRANGE FOR CHASES, SLOTS, AND OPENINGS IN OTHER BUILDING COMPONENTS DURING PROCESS OF CONSTRUCTION, TO ALLOW FOR MECHANICAL INSTALLATIONS.
2.1.4. COORDINATE THE INSTALLATION OF REQUIRED SUPPORTING DEVICES AND SLEEVES TO BE SET IN POURED IN PLACE CONCRETE AND OTHER STRUCTURAL COMPONENTS, AS THEY ARE CONSTRUCTED.
2.1.5. SEQUENCE, COORDINATE, AND INTEGRATE INSTALLATIONS OF MECHANICAL MATERIALS AND EQUIPMENT FOR EFFICIENT FLOW OF THE WORK. GIVE PARTICULAR ATTENTION TO LARGE EQUIPMENT REQUIRING POSITIONING PRIOR TO CLOSING OF THE BUILDING.
2.1.6. WHERE MOUNTING HEIGHTS ARE NOT DETAILED OR DIMENSIONED, INSTALL SYSTEMS, MATERIALS AND EQUIPMENT TO PROVIDE THE MAXIMUM HEADROOM POSSIBLE.
2.1.7. COORDINATE CONNECTION OF MECHANICAL SYSTEMS WITH EXTERIOR, UNDERGROUND AND OVERHEAD UTILITIES AND SERVICES. COMPLY WITH REQUIREMENTS OF GOVERNING REGULATIONS, FRANCHISED SERVICE COMPANIES, AND CONTROLLING AGENCIES. PROVIDE REQUIRED CONNECTION FOR EACH SERVICE.
2.1.8. INSTALL SYSTEMS, MATERIALS, AND EQUIPMENT TO CONFORM WITH ARCHITECTURAL ACTION MARKINGS ON SUBMITTAL, INCLUDING COORDINATION DRAWINGS, TO GREATEST EXTENT POSSIBLE. CONFORM TO ARRANGEMENTS INDICATED BY THE CONTRACT DOCUMENTS, RECOGNIZING THAT PORTIONS OF THE WORK SHOWN ARE SHOWN ONLY IN THE DIAGRAMMING FORM, WHERE COORDINATION REQUIREMENTS CONFLICT WITH INDIVIDUAL SYSTEM REQUIREMENTS. RESOLVE CONFLICTS AND ROUTE PROPOSED SOLUTION TO THE ARCHITECT FOR REVIEW AND APPROVAL.
2.1.9. INSTALL SYSTEMS, MATERIALS, AND EQUIPMENT LEVEL AND PLUMB, PARALLEL AND PERPENDICULAR TO OTHER BUILDING SYSTEMS AND COMPONENTS, WHERE INSTALLED EXPOSED IN FINISHED SPACES.
2.1.10. INSTALL MECHANICAL EQUIPMENT TO FACILITATE SERVICING, MAINTENANCE, AND REPAIR OR REPLACEMENT OF EQUIPMENT COMPONENTS, AS MUCH AS PRACTICAL. CONNECT EQUIPMENT FOR EASE OF DISCONNECTING, WITH MINIMUM INTERFERENCE WITH OTHER INSTALLATIONS. EXTEND GREASE FITTINGS TO AN ACCESSIBLE LOCATION AND LABEL.
2.1.11. INSTALL ACCESS PANEL OR DOORS WHERE UNITS ARE CONCEALED BEHIND FINISHED SURFACES.
2.1.12. INSTALL SYSTEMS, MATERIALS, AND EQUIPMENT GIVING RIGHT OF WAY PRIORITY TO SYSTEMS REQUIRED TO BE INSTALLED AT A SPECIFIC SLOPE.
2.2. PAINTING
2.2.1. PROPERLY PREPARE SURFACES TO RECEIVE PANT. THOROUGHLY CLEAN SURFACES REQUIRING PRIME PAINTING OF RUST, LOOSE SCALE OIL, GREASE AND DIRTY BY THE USE OF WIRE BRUSHES, SOLVENT AND OTHER REQUIRED MEANS. PRIME PREPARED SURFACES AND FINISH WITH TWO COATS OF EXTERIOR OIL BASE PAINT. VERIFY PRIMER AND PAINT ARE RATED FOR APPLICATION.
2.2.2. REMOVE SPLATTERED PAINT FROM MECHANICAL EQUIPMENT AND REPAIR DAMAGE TO FACTORY PAINTED FINISHES.
2.3. CONDENSATE PIPING SHALL BE CONSTRUCTED OF COPPER TYPE "L". PIPING SHALL BE INSULATED WITH ELECTROMETRIC INSULATION ABOVE CEILINGS.
3. TESTING, ADJUSTING, AND BALANCING:
3.1. TESTING, ADJUSTING AND BALANCING CONTRACTOR FOR THE AIR SIDE HVAC SYSTEMS SHALL BE SELECTED AND PAID BY THE OWNER, THROUGH A SEPARATE CONTRACT INDICATED IN THE DOCUMENTS. BALANCING CONTRACTOR SHALL REPORT DIRECTLY TO OWNERS PROJECT MANAGER. HVAC SYSTEMS ACCEPTANCE TESTING, AND BALANCING DATA GATHERING, ANALYSIS, AND REPORTING WILL NOT BE DONE BY THE CONSTRUCTION MECHANICAL CONTRACTOR.
3.2. THE CONSTRUCTION MECHANICAL CONTRACTOR IS TO PROVIDE OPERATIONAL AND ACCESS SUPPORT, I.E. DATA, SCHEDULES, ETC. FOR THE AIRSIDE TAB CONTRACTOR.
3.3. SYSTEMS SHALL BE COMPLETE AND OPERATIONAL FOR THE TAB CONTRACTOR TO PERFORM HIS WORK ON.
3.4. PERFORM TESTING AND BALANCING PROCEDURES ON EACH SYSTEM IDENTIFIED, IN ACCORDANCE WITH THE DETAILED PROCEDURES OUTLINES IN THE REFERENCED STANDARDS.
3.5. SEAL DUCTS AND PIPING, AND TEST FOR AND REPAIR LEAKS.
3.6. MARK EQUIPMENT SETTINGS, INCLUDING DAMPER CONTROL, POSITIONS, VALVE INDICATORS, FAN SPEED CONTROL LEVERS, AND SIMILAR CONTROLS AND DEVICES, TO SHOW FINAL SETTINGS. MARK WITH PAINT OR OTHER SUITABLE, PERMANENT IDENTIFICATION MATERIALS.
3.7. RETEST, ADJUST, AND BALANCE SYSTEMS SUBSEQUENT TO SIGNIFICANT SYSTEM MODIFICATIONS, AND RESUBMIT TEST RESULTS.
3.8. TEST AND ADJUST MECHANICAL SYSTEMS FOR SOUND AND VIBRATION IN ACCORDANCE WITH THE DETAILED INSTRUCTIONS OF THE REFERENCED STANDARDS.
3.9. RECORD ALL DATA OBTAINED DURING TESTING, ADJUSTING, AND BALANCING IN ACCORDANCE WITH, AND ON THE FORMS RECOMMENDED BY THE REFERENCED STANDARDS, AND AS APPROVED ON THE SAMPLE REPORT FORMS.
3.10. PREPARE REPORT OF RECOMMENDATIONS FOR CORRECTING UNSATISFACTORY MECHANICAL PERFORMANCES WHEN SYSTEM CANNOT BE SUCCESSFULLY BALANCED.
- 23 31 13 - DUCTWORK
1. SHEET METAL DUCTWORK
1.1. FURNISH AND INSTALL SHEET METAL DUCTWORK, SHEET METAL DUCTWORK HANGERS AND SUPPORTS, FIRE DAMPERS, FLASHING AND ALL NECESSARY ACCESSORIES AS SHOWN ON THE DRAWINGS AND AS SPECIFIED HEREIN.
1.2. SMACNA STANDARDS: COMPLY WITH SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA), LATEST EDITION, RECOMMENDATIONS FOR FABRICATION, CONSTRUCTION, DETAILS AND INSTALLATION PROCEDURES, EXCEPT AS OTHERWISE INDICATED ON THE DRAWINGS OR IN THESE SPECIFICATIONS.
1.3. ASHRAE STANDARDS: COMPLY WITH AMERICAN SOCIETY OF HEATING, REFRIGERATION, AND AIR CONDITIONING ENGINEERS (ASHRAE) RECOMMENDATIONS, EXCEPT AS OTHERWISE INDICATED ON THE DRAWINGS OR IN THESE SPECIFICATIONS.
2. RECTANGULAR SHEET METAL DUCTWORK
2.1. DUCTWORK MATERIALS: PROVIDE MATERIALS WHICH ARE FREE FROM VISUAL IMPERFECTIONS, INCLUDING PITTING, SEAM MARKS, ROLLER MARKS, OIL CANNING, STAINS, DISCOLORATION AND OTHER IMPERFECTIONS, INCLUDING THOSE WHICH WOULD IMPAIR PAINTING.
2.2. GAUGES, RECTANGULAR DUCTWORK: FABRICATE STEEL DUCTWORK (GALVANIZED AND STAINLESS, IF ANY) FROM THE MINIMUM GAUGES FOR SIZES UP TO THE CORRESPONDING MAXIMUM LONG-SIDE DIMENSIONS AS INDICATED IN SMACNA DUCT MANUAL "LOW VELOCITY SYSTEMS" (LATEST EDITION).
2.3. ALL LONGITUDINAL DUCT SEAMS AND JOINTS SHALL BE SNAP-LOCK AT THE CORNERS AND STANDING LOCKSEAM IN SIDES BETWEEN CORNERS. SEAL ALL LONGITUDINAL AND TRAVERSE JOINTS UPSTREAM OF ALL AIR VALVES WITH HARD-CAST TAPE JOIN SEALANT.
3. FIBER GLASS BOARD DUCTWORK
3.1. AT CONTRACTOR'S OPTION AND IN ACCORDANCE WITH APPLICABLE CODES, FIBER GLASS DUCTWORK MAY BE SUBSTITUTED FOR METAL DUCTWORK IN THE FOLLOWING CASES:
3.1.1. SUPPLY DUCTS
3.1.2. RETURN DUCTS
3.1.3. EXHAUST DUCTS
3.2. DUCT BOARD REQUIREMENTS:
3.2.1. MINIMUM PRESSURE RATING 2" W.C. PER UL 181
3.2.2. DUCTED TO HAVE ANTI-MICROBIAL COATING SO IT WILL NOT SUPPORT GROWTH OF FUNGUS OR BACTERIA
3.2.3. RATED TO 5,000 FPM
4. ROUND SHEET METAL DUCTWORK
4.1. DUCT GAUGES, GIRTH REINFORCING, GIRTH JOINTS, LONGITUDINAL SEAMS, ETC. SHALL BE IN ACCORDANCE WITH THE SMACNA MANUAL. ROUND SHEET METAL SUPPLY AIR DUCTWORK SHALL BE FABRICATED USING SPIRAL SEAMS ONLY WITH BEADED SLEEVED JOINTS. ELBOWS SHALL BE STAMPED OR SEGMENTED AND TEES SHALL BE 45 DEGREES LATERAL TAPS WITH WELDED JOINTS. ADJUSTABLE FITTINGS OR DRAW BAND JOINT CONNECTIONS WILL NOT BE ACCEPTABLE.

ENVIRONMENTAL FAN SCHEDULE										
CODE	MANUFACTURER / MODEL	SERVICE	TYPE	CFM	ESP (" W.G.)	ELECTRICAL			REMARKS	
						VOLT	PH	HP		
EF 1	GREENHECK SP-A50-90	TOILET ROOM	CEILING MTD.	100	25"	120	60	1/60	A	
EF 2	GREENHECK SP-A50-90	TOILET ROOM	CEILING MTD.	100	25"	120	60	1/60	A	
EF 3	GREENHECK SP-A50-90	TOILET ROOM	CEILING MTD.	100	25"	120	60	1/60	A	
EF 4	GREENHECK SP-A50-90	TOILET ROOM	CEILING MTD.	100	25"	120	60	1/60	A	
GENERAL NOTES: 1. PROVIDE MANUFACTURER'S RECOMMENDED CLEARANCES AROUND ENTIRE UNIT. 2. CFM, SP, AND HP ARE AT JOBSITE ALTITUDE. 3. PROVIDE BACKDRAFT DAMPER FOR UNITS 300 CFM OR LESS. 4. PROVIDE WITH INTERNAL EXHAUST GRILLE (PLASTIC) AND INSTALL WITHIN CEILING. 5. REFER TO SPECIFICATIONS FOR ALTERNATE MANUFACTURERS THAT MAY BID AS AN EQUAL TO THE BASIS OF DESIGN. 6. PROVIDE DISCONNECT SWITCH, DUCT EXTENSION TO EXTERIOR WALL AND EXTERIOR WALL CAP W/ DAMPER. 7. STATIC PRESSURES SHOWN ARE EXTERNAL TO UNIT. MANUFACTURER SHALL ADD DAMPER AND ACCESSORY LOSSES TO THIS VALUE BEFORE SELECTING FAN. REMARKS NOTES: A. FAN SHALL BE POWERED ON/OFF WITH SWITCH. B. FAN SHALL ACTIVATE UPON HIGH TEMPERATURE, 90°F (ADJ.), OR MORE, IN ELEVATOR SHAFT.										

GRILLE, REGISTER, DIFFUSER SCHEDULE					
CODE	MANUFACTURER / MODEL	TYPE SERVICE	TYPE	FACE SIZE	REMARKS
A	TITUS OMNI-AA	SUPPLY	PLAQUE	12"X12"	B
B	TITUS PAR-AA	RETURN	PERFORATED	12"X12"	
GENERAL NOTES: 1. SEE PLANS FOR CFM AND NECK SIZE. 2. MAXIMUM NOISE CRITERIA (NC) SHALL BE 30 UNLESS OTHERWISE NOTED. 3. COLOR TO BE COORDINATED WITH ARCHITECT. 4. MATERIAL IS ALUMINUM UNLESS OTHERWISE NOTED. 5. BALANCING DEVICE SHALL BE AT SPRING TAP FOR ALL GRD'S UNLESS OTHERWISE NOTED. 6. GRD FRAME TO MATCH CEILING TYPE. COORDINATE WITH ARCHITECTURAL RCP. 7. REFER TO SPECIFICATIONS FOR ALTERNATE MANUFACTURERS THAT MAY BID AS AN EQUAL TO THE SCHEDULED BASIS OF DESIGN. 8. PROVIDE REMOTE DAMPER OPERATOR IN AREAS WITH INACCESSIBLE CEILINGS. REMARK NOTES: A. MATERIAL: ALUMINUM B. PROVIDE REMOTE DAMPER OPERATOR IN AREAS WITH INACCESSIBLE CEILINGS.					

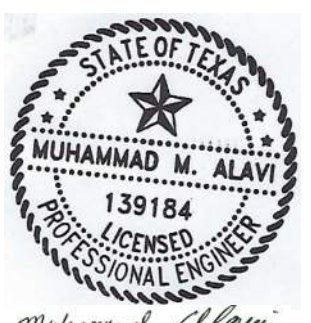
FAN COIL UNIT SCHEDULE																	
CODE	SERVICE	MANUFACTURER / MODEL	OA CFM	COOLING					ELECTRIC HEATING			ELECTRICAL				WEIGHT (LBS.)	REMARKS
				CFM	EAT (DB/WB) (°F)	LAT (DB/WB) (°F)	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	EAT (°F)	LAT (°F)	TOTAL CAPACITY (kW)	VOLT	PH	MCA	MOCP		
AHU 1.1	UNIT 1.1	DAIKIN AMST48BU1 & HKSX05XA	150	1600	77 / 65	57 / 56	48.0	27.2	60	90	5	208	1	32	35	153	
AHU 1.2	UNIT 1.2	DAIKIN AMST48BU1 & HKSX05XA	150	1600	77 / 65	57 / 56	48.0	27.2	60	90	5	208	1	32	35	153	
AHU 1.3	UNIT 1.3	DAIKIN AMST48BU1 & HKSX05XA	150	1600	77 / 65	57 / 56	48.0	27.2	60	90	5	208	1	32	35	153	
AHU 1.4	UNIT 1.4	DAIKIN AMST48BU1 & HKSX05XA	150	1600	77 / 65	57 / 56	48.0	27.2	60	90	5	208	1	32	35	153	
AHU 2.1	UNIT 2.1	DAIKIN AMST48BU1 & HKSX05XA	150	1600	77 / 65	57 / 56	48.0	27.2	60	90	5	208	1	32	35	153	
AHU 2.2	UNIT 2.2	DAIKIN AMST48BU1 & HKSX05XA	150	1600	77 / 65	57 / 56	48.0	27.2	60	90	5	208	1	32	35	153	
AHU 2.3	UNIT 2.3	DAIKIN AMST48BU1 & HKSX05XA	150	1600	77 / 65	57 / 56	48.0	27.2	60	90	5	208	1	32	35	153	
AHU 2.4	UNIT 2.4	DAIKIN AMST48BU1 & HKSX05XA	150	1600	77 / 65	57 / 56	48.0	27.2	60	90	5	208	1	32	35	153	
GENERAL NOTES: 1. REFER TO SPECIFICATIONS FOR EQUIVALENT MANUFACTURERS. 2. PROVIDE AUXILIARY DRAIN PAN WITH FLOAT SWITCH THAT WILL SHUT DOWN FCU IN THE EVENT THAT THE AUXILIARY DRAIN BECOMES RESTRICTED. 3. PROVIDE MANUFACTURER'S RECOMMENDED SERVICE CLEARANCE AROUND FCU. 4. HEATING AND COOLING CAPACITIES ARE AT JOBSITE ALTITUDE. 5. PROVIDE REFRIGERANT PIPING SIZED PER MANUFACTURER'S REQUIREMENTS. 6. REFRIGERANT: R-410A																	

CONDENSING UNIT SCHEDULE									
CODE	SERVICE	MANUFACTURER / MODEL	TOTAL CAPACITY (MBH)	ELECTRICAL			WEIGHT (LBS.)	REMARKS	
				VOLT	PH	MOCP			
CU 1.1	UNIT 1.1	DAIKIN DZ4SEA4830	48	208	3	9	15	295	
CU 1.2	UNIT 1.2	DAIKIN DZ4SEA4830	48	208	3	9	15	295	
CU 1.3	UNIT 1.3	DAIKIN DZ4SEA4830	48	208	3	9	15	295	
CU 1.4	UNIT 1.4	DAIKIN DZ4SEA4830	48	208	3	9	15	295	
CU 2.1	UNIT 2.1	DAIKIN DZ4SEA4830	48	208	3	9	15	295	
CU 2.2	UNIT 2.2	DAIKIN DZ4SEA4830	48	208	3	9	15	295	
CU 2.3	UNIT 2.3	DAIKIN DZ4SEA4830	48	208	3	9	15	295	
CU 2.4	UNIT 2.4	DAIKIN DZ4SEA4830	48	208	3	9	15	295	
GENERAL NOTES: 1. REFER TO SPECIFICATIONS FOR EQUIVALENT MANUFACTURERS. 2. PROVIDE 4" THICK CONCRETE PAD TO MOUNT CONDENSING UNIT. 3. PROVIDE MANUFACTURER'S RECOMMENDED CLEARANCES FOR MAINTENANCE AND AIRFLOW. 4. PROVIDE REFRIGERANT PIPING SIZED PER MANUFACTURER'S REQUIREMENTS. 5. CAPACITY BASED ON 95°F AMBIENT TEMPERATURE. 6. REFRIGERANT: R-410A									

OUTSIDE AIR VENTILATION SCHEDULE - UNIT A						
ROOM	ASSOCIATED AHU	AREA (SF)	VENTILATION / SF (CFM)	OCCUPANCY (# OF PPL)	VENTILATION / PERSON (CFM)	TOTAL OA (CFM)
CONFERENCE ROOM	AHU A	147	0.06	5	5	34
RECEPTION	AHU A	282	0.06	1	5	22
OFFICE 1	AHU A	76	0.06	1	5	10
OFFICE 2	AHU A	86	0.06	1	5	10
OFFICE 3	AHU A	85	0.06	1	5	10
OFFICE 4	AHU A	82	0.06	1	5	10
OFFICE 5	AHU A	91	0.06	1	5	10
BREAKROOM	AHU A	77	0.06	--	5	5
OUTSIDE AIR REQUIRED						111
OUTSIDE AIR PROVIDED						120



TEXAS ENG. FIRM
REG. NO. F-23046

NO.	REVISION DESCRIPTION	DATE	03-06-2026  Muhammad M. Alawi		TITLE MECHANICAL NOTES	
					CLIENT REVIEW	
					PERMIT REVIEW	
					CONSTRUCTION ISSUE	
					CHECKED BY:	SHEET: M100
					PROJECT #:	--

MECHANICAL GENERAL NOTES:

1. CONTRACTOR SHALL CONFIRM TO ALL LOCAL, STATE, AND APPLICABLE CODES. WORK SHALL BE INSTALLED IN A WORKMAN LIKE FASHION.
2. DUCTWORK SHALL CONFORM TO ALL SMACNA STANDARDS.
3. FLEX DUCT SHALL NOT EXTEND OVER 6'-0".
4. DUCTWORK AND PIPING INSULATION SHALL RUN CONTINUOUSLY THROUGH PENETRATIONS. CONTRACTOR TO PROVIDE NECESSARY SLEEVES AND FLASHING AT WALL PENETRATIONS.
5. CONTRACTOR SHALL MAINTAIN A MINIMUM DISTANCE OF 10'-0" BETWEEN ALL OUTDOOR DUCTS, INTAKES VS. EXHAUST DUCTS AND PLUMBING VENTS.
6. PRIOR TO BID OR BEGINNING CONSTRUCTION, CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THE PROJECT CONDITIONS AND PROJECT DRAWINGS. CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER, PRIOR TO BID, OR ANY DISCREPANCIES BETWEEN PLAN AND FIELD CONDITIONS.
7. LOCATE DIFFUSERS AND GRILLES TO ACCOMMODATE LIGHTING LAYOUT. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF LIGHTS AND DIFFUSERS.
8. CONTRACTOR TO PROVIDE ALL REQUIRED OFFSETS AND FITTINGS REQUIRED TO PROVIDE COMPLETE DESIGN. MECHANICAL DRAWINGS ARE SCHEMATIC IN NATURE. CONTRACTOR TO PROVIDE SHOP DRAWINGS AND AS-BUILTS AS NECESSARY.
9. ALL DUCTWORK AND PIPING SHALL BE PROPERLY SUPPORTED AND SECURED.
10. ALL DAMPERS (BALANCING, FIRE, CONTROL, ETC.) SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS OR CONTRACTOR SHALL PROVIDE A CEILING ACCESS DOOR.
11. DUCT DIMENSIONS SHOWN ON PLAN ARE INTERNAL DIMENSIONS.
12. PROVIDE VOLUME DAMPERS AT BRANCH CONNECTIONS. VOLUME DAMPERS SHALL BE LOCATED AS NEAR AS POSSIBLE TO BRANCH TAKE-OFF AND SHALL BE ACCESSIBLE VIA ACCESS PANEL IN SOLID FINISH CEILING OR VIA REMOTE ACTUATOR. DAMPERS LOCATED ABOVE REMOVABLE CEILING PANELS SHALL BE MANUAL TYPE.
13. PROVIDE VOLUME DAMPERS FOR EACH DIFFUSER. LINEAR DIFFUSERS SHALL BE PROVIDED WITH INTEGRAL VOLUME DAMPER ACCESSIBLE THROUGH THE FACE OF THE SLOT DIFFUSER. CEILING DIFFUSERS INSTALLED IN HARD CEILING SHALL BE PROVIDED WITH REMOTELY CONTROLLED VOLUME DAMPER.
14. CONTRACTOR SHALL FIELD VERIFY EXISTING CHASE LOCATION AND CONFIRM ADEQUATE SPACE TO ROUTE PIPING AND DUCTWORK. NOTIFY ENGINEER OF ANY OBSTRUCTIONS. CONTRACTOR SHALL ROUTE NEW PIPING AND DUCTWORK IN MOST EFFICIENT MANNER WITHIN CHASE.
15. CONTRACTOR SHALL NOTIFY AND COORDINATE WITH OWNER FOR ANY SUBSTITUTIONS OR ENTRY INTO OTHER SPACES TO ROUTE DUCTWORK OR PIPING THAT IS REQUIRED.
16. ALL ROOF MOUNTED AND EXTERIOR EQUIPMENT LOCATIONS SHALL BE APPROVED BY THE LANDLORD PRIOR TO ROUGH IN OR PLACEMENT.
17. RETURN AND OUTDOOR AIR DUCTWORK SHALL BE OF METAL CONSTRUCTION WITH EXTERNAL INSULATION.
18. ALL ROOF MOUNTED AND EXTERIOR EQUIPMENT LOCATIONS SHALL BE APPROVED BY THE LANDLORD PRIOR TO ROUGH IN OR PLACEMENT.
19. CONTRACTOR SHALL VERIFY THAT ALL HVAC COMPONENTS MEET SPACING AND CLEARANCE REQUIREMENTS PER EQUIPMENT MANUFACTURER'S INSTRUCTIONS.
20. THIS DRAWING IS DIAGRAMMATIC AND BASED ON THE BEST AVAILABLE INFORMATION AT THE TIME OF THE DESIGN. THEREFORE, THIS DRAWING MAY NOT REFLECT ACTUAL CONDITIONS. ALL MECHANICAL INDICATIONS INDICATED ON THIS SHEET SHALL BE FIELD VERIFIED PRIOR TO BID AND START OF WORK.

MECHANICAL KEY NOTES:

- 1 PROVIDE & INSTALL USER ADJUSTABLE, DIGITAL DISPLAY 7-DAY PROGRAMMABLE THERMOSTAT PROVIDED BY MECHANICAL CONTRACTOR. LOCATION OF THERMOSTAT TO BE COORDINATED WITH ARCHITECT PRIOR TO INSTALLATION. MOUNTING HEIGHT TO BE PER ADA REQUIREMENTS. PROVIDE LOCK BOX FOR THERMOSTATS IN PUBLIC PLACES.
- 2 SUPPLY AIR DUCTWORK IN EXPOSED AREAS SHALL BE INTERNALLY LINED AND PINNED WITH A MINIMUM R-4.2, 1" FIBERGLASS INSULATION WITH VAPOR BARRIER. INSULATION SHALL HAVE MAXIMUM RATINGS OF 24 FLAME SPREAD, 50 SMOKE DEVELOPED. SEE ARCHITECTURAL DRAWINGS FOR DUCT PAINT OR COLOR SPECIFICATION.
- 3 PROVIDE & INSTALL RTU PER MANUFACTURER'S INSTRUCTIONS. PROVIDE ADEQUATE CLEARANCES FOR ACCESS TO FILTERS, MOTORS, PIPING AND ELECTRICAL CONNECTIONS. PROVIDE MANUFACTURER'S OR FIELD FABRICATED ROOF CURB.
- 4 ROUTE 3/4" MECHANICAL CONDENSATE TO TAILPIECE OF NEARBY RECEPTACLE APPROVED BY AHJ. CONDENSATE PIPE SHALL BE SLOPED A MINIMUM OF 1/8" PER 1' AND ROUTED TO MINIMIZE TRIP HAZARDS.
- 5 TOILET EXHAUST FAN TO BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS. EXHAUST FAN TO BE MOUNTED WITHIN CEILING WITH GRILLE AND OPERATED VIA A WALL SWITCH. EXHAUST DUCT TO TERMINATE TO ROOF CAP ABOVE ROOF(WITH BIRD SCREEN AND BACK DRAFT DAMPER).
- 6 EXHAUST AIR DISCHARGE TO BE A MINIMUM OF 10' AWAY FROM OUTSIDE AIR INTAKES, DOORS, AND USER ADJUSTABLE WINDOWS.
- 7 OUTSIDE AIR INTAKE SHALL BE A MINIMUM OF 10' AWAY FROM BUILDING EXHAUST.

NOTE: ALL KEYNOTES MAY NOT BE USED ON THIS SHEET.

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IMPERIAL ROYAL GARDEN
PLAZA

15019 & 15021 VOSS RD
SUGAR LAND, TEXAS, 77498



TEXAS ENG. FIRM
REG. NO. F-23046

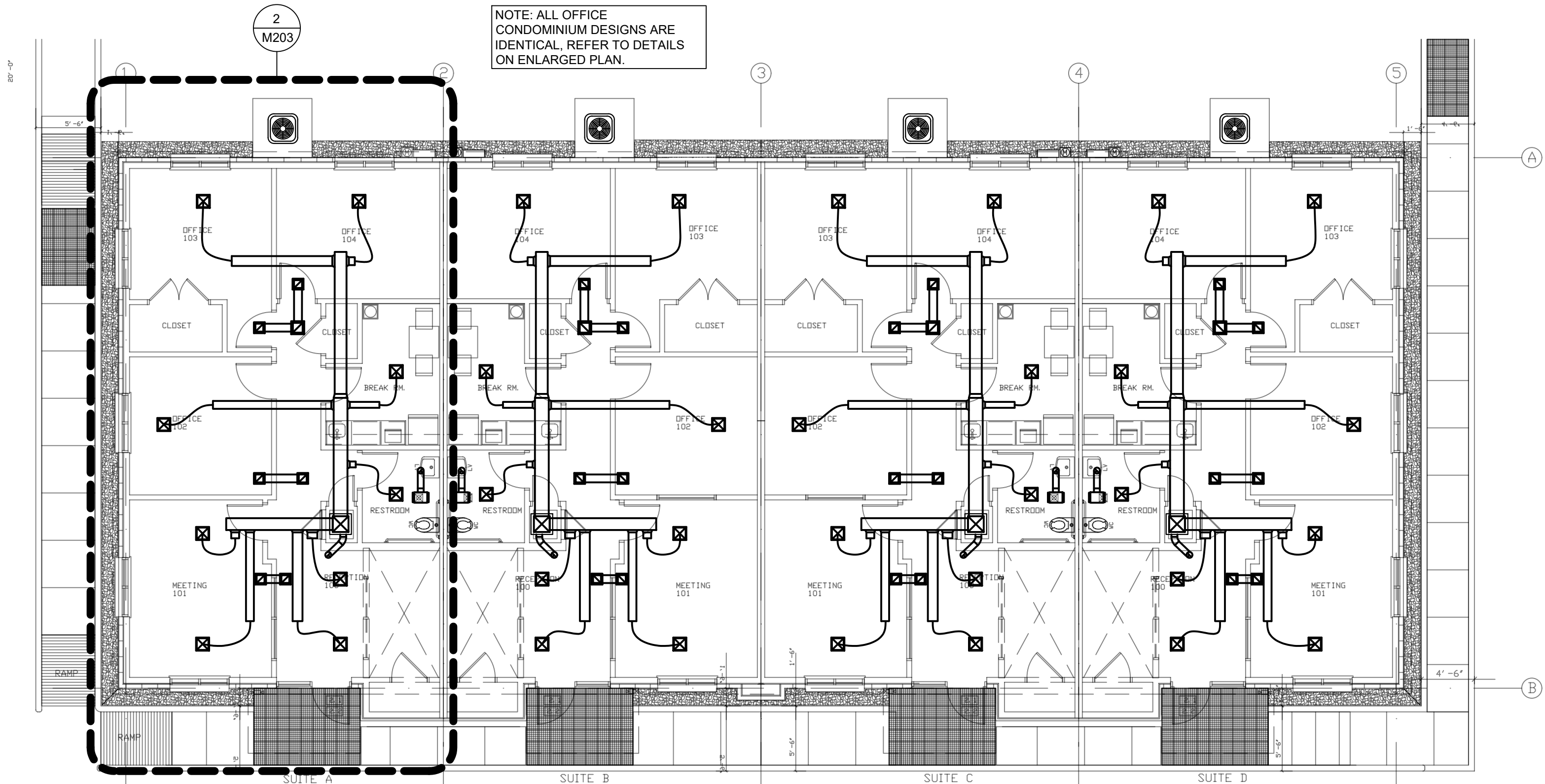
NO.	REVISION DESCRIPTION	DATE	03-06-2026	TITLE MECHANICAL SITE PLAN
				CLIENT REVIEW
				PERMIT REVIEW
				CONSTRUCTION ISSUE
				CHECKED BY: SHEET: M200
				PROJECT #.--

SITE PLAN - MECHANICAL

1/32" = 1'0" (SHEET SIZE: 36"x24")

MECHANICAL GENERAL NOTES:

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2. DUCTWORK SHALL CONFORM TO ALL SMACNA STANDARDS.
3. FLEX DUCT SHALL NOT EXTEND OVER 6'-0".
4. DUCTWORK AND PIPING INSULATION SHALL RUN CONTINUOUSLY THROUGH PENETRATIONS. CONTRACTOR TO PROVIDE NECESSARY SLEEVES AND FLASHING AT WALL PENETRATIONS.
5. CONTRACTOR SHALL MAINTAIN A MINIMUM DISTANCE OF 10'-0" BETWEEN ALL OUTDOOR DUCTS, INTAKES VS. EXHAUST DUCTS AND PLUMBING VENTS.
6. PRIOR TO BID OR BEGINNING CONSTRUCTION, CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THE PROJECT CONDITIONS AND PROJECT DRAWINGS. CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER, PRIOR TO BID, OR ANY DISCREPANCIES BETWEEN PLAN AND FIELD CONDITIONS.
7. LOCATE DIFFUSERS AND GRILLES TO ACCOMMODATE LIGHTING LAYOUT. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF LIGHTS AND DIFFUSERS.
8. CONTRACTOR TO PROVIDE ALL REQUIRED OFFSETS AND FITTINGS REQUIRED TO PROVIDE COMPLETE DESIGN. MECHANICAL DRAWINGS ARE SCHEMATIC IN NATURE. CONTRACTOR TO PROVIDE SHOP DRAWINGS AND AS-BUILTS AS NECESSARY.
9. ALL DUCTWORK AND PIPING SHALL BE PROPERLY SUPPORTED AND SECURED.
10. ALL DAMPERS (BALANCING, FIRE, CONTROL, ETC.) SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS OR CONTRACTOR SHALL PROVIDE A CEILING ACCESS DOOR.
11. DUCT DIMENSIONS SHOWN ON PLAN ARE INTERNAL DIMENSIONS.
12. PROVIDE VOLUME DAMPERS AT BRANCH CONNECTIONS. VOLUME DAMPERS SHALL BE LOCATED AS NEAR AS POSSIBLE TO BRANCH TAKE-OFF AND SHALL BE ACCESSIBLE VIA ACCESS PANEL IN SOLID FINISH CEILING OR VIA REMOTE ACTUATOR. DAMPERS LOCATED ABOVE REMOVABLE CEILING PANELS SHALL BE MANUAL TYPE.
13. PROVIDE VOLUME DAMPERS FOR EACH DIFFUSER. LINEAR DIFFUSERS SHALL BE PROVIDED WITH INTEGRAL VOLUME DAMPER ACCESSIBLE THROUGH THE FACE OF THE SLOT DIFFUSER. CEILING DIFFUSERS INSTALLED IN HARD CEILING SHALL BE PROVIDED WITH REMOTELY CONTROLLED VOLUME DAMPER.
14. CONTRACTOR SHALL FIELD VERIFY EXISTING CHASE LOCATION AND CONFIRM ADEQUATE SPACE TO ROUTE PIPING AND DUCTWORK. NOTIFY ENGINEER OF ANY OBSTRUCTIONS. CONTRACTOR SHALL ROUTE NEW PIPING AND DUCTWORK IN MOST EFFICIENT MANNER WITHIN CHASE.
15. CONTRACTOR SHALL NOTIFY AND COORDINATE WITH OWNER FOR ANY SUBSTITUTIONS OR ENTRY INTO OTHER SPACES TO ROUTE DUCTWORK OR PIPING THAT IS REQUIRED.
16. ALL ROOF MOUNTED AND EXTERIOR EQUIPMENT LOCATIONS SHALL BE APPROVED BY THE LANDLORD PRIOR TO ROUGH IN OR PLACEMENT.
17. RETURN AND OUTDOOR AIR DUCTWORK SHALL BE OF METAL CONSTRUCTION WITH EXTERNAL INSULATION.
18. ALL ROOF MOUNTED AND EXTERIOR EQUIPMENT LOCATIONS SHALL BE APPROVED BY THE LANDLORD PRIOR TO ROUGH IN OR PLACEMENT.
19. CONTRACTOR SHALL VERIFY THAT ALL HVAC COMPONENTS MEET SPACING AND CLEARANCE REQUIREMENTS PER EQUIPMENT MANUFACTURER'S INSTRUCTIONS.
20. THIS DRAWING IS DIAGRAMMATIC AND BASED ON THE BEST AVAILABLE INFORMATION AT THE TIME OF THE DESIGN. THEREFORE, THIS DRAWING MAY NOT REFLECT ACTUAL CONDITIONS. ALL MECHANICAL INDICATIONS INDICATED ON THIS SHEET SHALL BE FIELD VERIFIED PRIOR TO BID AND START OF WORK.



FLOOR PLAN - MECHANICAL

1/8" = 1'0" (SHEET SIZE: 36"x24")

MECHANICAL KEY NOTES:

1. PROVIDE & INSTALL USER ADJUSTABLE, DIGITAL DISPLAY 7-DAY PROGRAMMABLE THERMOSTAT PROVIDED BY MECHANICAL CONTRACTOR. LOCATION OF THERMOSTAT TO BE COORDINATED WITH ARCHITECT PRIOR TO INSTALLATION. MOUNTING HEIGHT TO BE PER ADA REQUIREMENTS. PROVIDE LOCK BOX FOR THERMOSTATS IN PUBLIC PLACES.
2. ROUTE 3/4" MECHANICAL CONDENSATE TO NEARBY FLOOR DRAIN. CONDENSATE PIPE SHALL BE SLOPED A MINIMUM OF 1/8" PER 1' AND ROUTED TO MINIMIZE TRIP HAZARDS.
3. TOILET EXHAUST FAN TO BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS. EXHAUST FAN TO BE MOUNTED WITHIN CEILING WITH GRILLE AND OPERATED VIA A WALL SWITCH. EXHAUST DUCT TO TERMINATE TO ROOF CAP ABOVE ROOF (WITH BIRD SCREEN AND BACK DRAFT DAMPER).
4. EXHAUST AIR DISCHARGE TO BE A MINIMUM OF 10' AWAY FROM OUTSIDE AIR INTAKES, DOORS, AND USER ADJUSTABLE WINDOWS.
5. OUTDOOR AIR INTAKE DUCT TO TERMINATE ABOVE ROOF WITH ROOF CAP INCLUDING BIRDSCREEN AND BACKDRAFT DAMPER. OUTDOOR AIR INTAKE SHALL TERMINATE A MINIMUM OF 10' WAY FROM ANY BUILDING EXHAUST.
6. ROUTE REFRIGERANT LIQUID AND SUCTION LINE TO/FROM AHU AND CU. PIPE SIZE TO BE DETERMINED BY AHU/CH MANUFACTURER.
7. CONDENSING UNIT TO BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS. PROVIDE ADEQUATE CLEARANCE FOR ACCESS AND AIRFLOW. INSTALL CONDENSING UNIT ATOP 4" CONCRETE PAD.

NOTE: ALL KEYNOTES MAY NOT BE USED ON THIS SHEET.

ENLARGED PLAN - MECHANICAL

1/4" = 1'0" (SHEET SIZE: 36"x24")



TEXAS ENG. FIRM
REG. NO. F-23046



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IMPERIAL ROYAL GARDEN
PLAZA

15019 & 15021 VOSS RD
SUGAR LAND, TEXAS, 77498

NO.	REVISION DESCRIPTION	DATE	03-06-2026	TITLE MECH FLOOR PLAN
				CLIENT REVIEW
				PERMIT REVIEW
				CONSTRUCTION ISSUE
				CHECKED BY: SHEET: M202
				PROJECT #.--

Submittal Set

3/9/2026

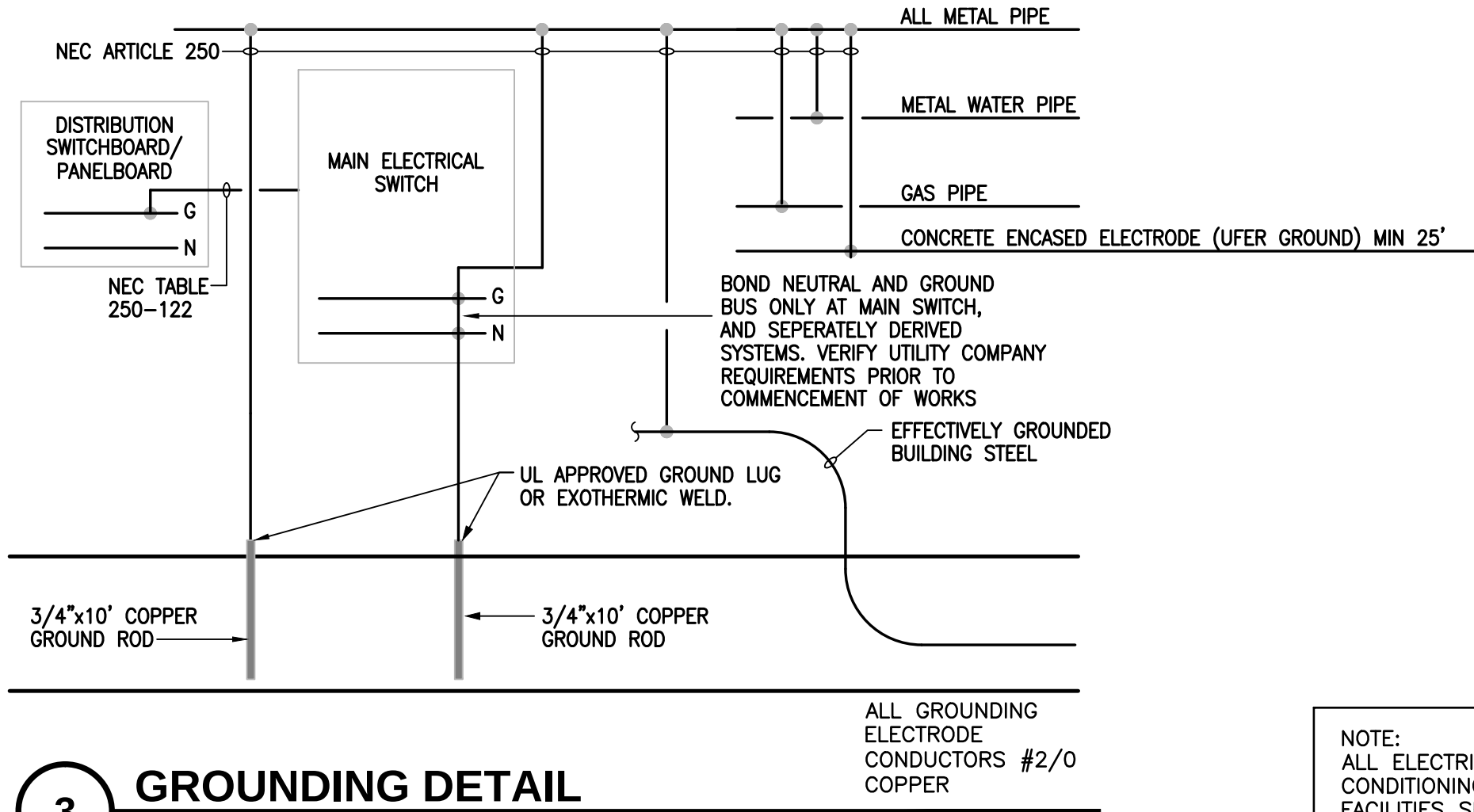
ELECTRICAL LEGEND

NOT ALL SYMBOLS, ABBREV., ETC. ARE NECESSARILY USED ON THIS PROJECT

26 ABBREVIATIONS

GENERAL NOTES

<



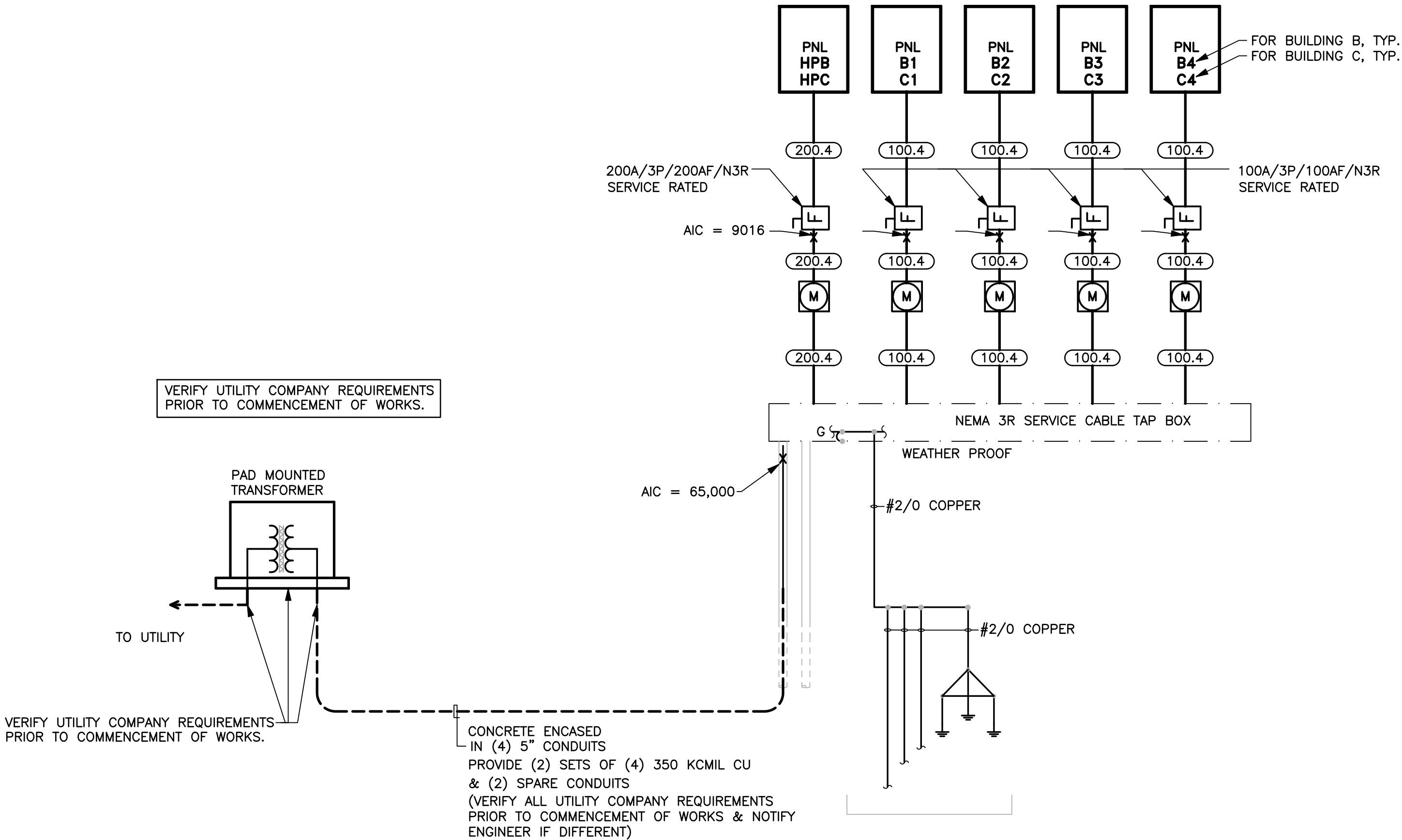
3 GROUNDING DETAIL
SCALE: NONE

DEMAND AMPS @ 208V 3PH 4W = 1123									
BUILDING 'B' LOAD CALCULATION									
TOTAL SF		LOAD	TOTAL SF	VA/SF	CONNECTED	DEMAND	TOTAL LOAD		
OFFICE BUILDING 4,932 S.F.		LIGHTING 4,932 X 1.25	6.2 KVA	0.95	5.9 KVA				
HOUSE LOADS 30 KVA		RECEPTS 4,932 X 2	9.9 KVA	0.60	5.9 KVA				
S.F.		HVAC 4,932 X 12	59.2 KVA	0.85	50.3 KVA				
S.F.		KITCHEN 2,466 X 50	123.3 KVA	0.65	80.1 KVA				
TOTAL 4,932 S.F.		TOTAL		198.5 KVA		172.2 KVA			
DEMAND AMPS @ 208V 3PH 4W = 478									
BUILDING 'C' LOAD CALCULATION									
TOTAL SF		LOAD	TOTAL SF	VA/SF	CONNECTED	DEMAND	TOTAL LOAD		
OFFICE LOADS 4,932 S.F.		LIGHTING 4,932 X 1.25	6.2 KVA	0.95	5.9 KVA				
HOUSE LOADS 30 KVA		RECEPTS 4,932 X 2	9.9 KVA	0.60	5.9 KVA				
S.F.		HVAC 4,932 X 12	59.2 KVA	0.85	50.3 KVA				
S.F.		KITCHEN 2,466 X 50	123.3 KVA	0.65	80.1 KVA				
TOTAL 4,932 S.F.		TOTAL		75.2 KVA		172.2 KVA			
DEMAND AMPS @ 208V 3PH 4W = 478									

NOTE:
ALL ELECTRICAL, HEATING, VENTILATING AND AIR CONDITIONING EQUIPMENT AND OTHER SERVICE FACILITIES SHALL BE EITHER PLACED 2 FOOT ABOVE THE BASE FLOOD ELEVATION OR PROTECTED TO PREVENT WATER FROM ENTERING OR ACCUMULATING WITHIN THE SYSTEMS COMPONENT DURING FLOOD CONDITIONS. INSTALLATION OF ELECTRICAL WIRING AND OUTLETS, SWITCHES, JUNCTION BOXES AND PANELS BELOW THE BASE FLOOD ELEVATION AT 100 YEAR OR 500 YEAR FLOOD PLAIN SHALL CONFORM TO THE PROVISIONS OF THE 2023 NATIONAL ELECTRIC CODE FOR SUCH ITEMS THAT ARE IN WET LOCATIONS.

BUS CONDUCTOR SERVICE TAP BOX NOTES:

1. THE SERVICE CABLE TAP BOX SHALL BE LOCKABLE WITH PROVISIONS TO ACCEPT THNUTILITY LOCKS.
2. COVERS SHALL BE FASTENED WITH MACHINE SCREWS OR BOLTS. HINGED COVER SHALL NOT BE PERMITTED.
3. COVERS SHALL HAVE TWO HANDLES FOR REMOVAL.
4. BUSBAR SHALL BE PROTECTED FROM PHYSICAL DAMAGE AND HELD FIRMLY IN PLACE.
5. BUSBARS SHALL BE SIZED TO PHYSICALLY ACCOMMODATE THE MAXIMUM NUMBER OF TENANT SERVICES ANTICIPATED AND PREDRILLED.
6. BUSBARS SHALL BE STEPPED.
7. THE PHASE ARRANGEMENT ON 3-PHASE HORIZONTAL COMMON POWER AND VERTICAL BUSSES SHALL BE A, B, C FROM FRONT TO BACK, TOP TO BOTTOM, OR LEFT TO RIGHT AS VIEWED FROM THE TOP OF THE SERVICE CABLE TAP BOX. THE PHASES SHALL BE PERMINANTLY MARKED.
- 8.THE BOTTOM OF THE CABLE TAP BOX SHALL BE A MINIMUM OF 6 INCHES ABOVE FINISHED GRADE.
9. THE SERVICE CABLE TAP BOX SHALL BE IN COMPLIANCE WITH UTILITY SERVICE STANDARDS.



1 SINGLE LINE DIAGRAM - BUILDING B (BUILDING C SIMILAR)
SCALE: NONE

FORWARD
MEP

TEXAS ENG. FIRM
REG. NO. F-23046

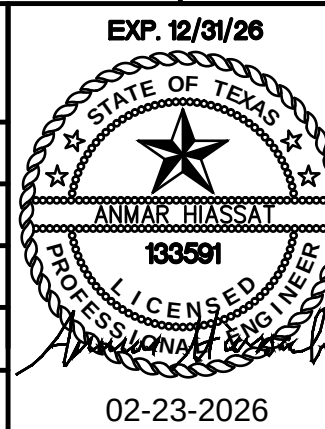
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IMPERIAL ROYAL GARDEN
PLAZA

15019 & 15021 VOSS RD
SUGAR LAND, TEXAS, 77498

NO.	REVISION DESCRIPTION	DATE	EXP. 12/31/26	TITLE
				SINGLE LINE DIAGRAM
				CLIENT REVIEW
				PERMIT REVIEW
				CONSTRUCTION ISSUE
				CHECKED BY: SHEET: E0.1
				PROJECT #.---



Submittal Set
3/9/2026

POLE NO.	C.B. AMP/P	SERVICE	TOTAL	TYPE	LOAD KVA			TYPE	TOTAL	SERVICE	C.B. AMP/P	POLE NO.
					A	B	C					
1	20/1	LIGHTING - GENERAL	0.8	L	1.43			R	0.63	RECEP - OFFICES 101 & 102	20/1	2
3	20/1	RECEP - OFFICE 102 & 103	0.72	R		1.35		R	0.63	RECEP - OFFICES 102 & 103	20/1	4
5	20/1	RECEP - OFFICE 102 & 103	0.72	R			1.53	R	0.81	RECEP - OFFICES 101 & 102	20/1	6
7	20/1	RECEP - RECEPTION	0.18	R	1.38			R	1.2	RECEP - RESTROOM	20/1	8
9	20/1	RECEP - SMALL APPLIANCE	1.5	R		1.86		R	0.96	RECEP - BREAKROOM	20/1	10
11	20/1	MICROWAVE	1.5	R			2.7	R	1.2	COOLER	20/1	12
13	20/1	REFRIGERATOR	1.5	R	2.22			R	0.72	RECEP - OFFICE 104	20/1	14
15	20/1	INSTA HOT 1	1.8	M		5.13		A	3.33	AHU	40/2	16
17	20/2	CONDENSING UNIT	0.94	A			4.27	A	3.33			18
19			0.94	A	0.94							20/1 20
21	20/1	INSTA HOT 2	1.8	M		1.8						20/1 22
23	20/1	INSTA HOT 3	1.8	M			1.8					20/1 24
25	20/1				0							20/1 26
27	20/1					0						20/1 28
29	20/1						0					20/1 30
31	20/1				0							20/1 32
33	20/1					0						20/1 34
35	20/1						0					20/1 36
37	20/1				0							20/1 38
39	20/1					0						20/1 40
41	20/1						0					20/1 42
CONNECTED LOAD PER PHASE					5.97	10.14	10.3					
LOAD SUMMARY					CONN. KVA	DEMAND FACTOR	DEMAND KVA					
TYPE "L": CONTINUOUS LOADS					0.80	125%	1.00	VOLTS: 120/208V, 3PH, 4W				
TYPE "R": RECEPTACLES (FIRST 10KVA)					10.00	100%	10.00	MAIN C.B.: MLO				
TYPE "R": RECEPTACLES (OVER 10KVA)					0.86	50%	0.43	BUS: 225 AMP				
TYPE "M": MISCELLANEOUS LOADS					5.40	100%	5.40	POLES: 42				
TYPE "A": AC LOADS					8.54	100%	8.54	MOUNTING: SURFACE				
TYPE "K": KITCHEN LOADS					0.00	65%	0.00	A/C RATING:				
LARGEST MOTOR LOAD					6.66	25%	1.67	DEMAND AMPS		HIGH LEG CONNECTED AMPS		
TOTAL					26.41		27.04	75		86		

POLE NO.	C.B. AMP/P	SERVICE	TOTAL	TYPE	LOAD KVA			TYPE	TOTAL	SERVICE	C.B. AMP/P	POLE NO.
					A	B	C					
1	20/2	SITE LIGHTING	1.25	L	4.55			L	3.3	EV CHARGING STATION (FUTURE)	40/2	2
3			1.25	L		4.55		L	3.3			4
5	20/1	LIGHTING - EXTERIOR	0.6	L			3.9	L	3.3	EV CHARGING STATION (FUTURE)	40/2	6
7	20/1				3.3			L	3.3			8
9	20/1					3.3		L	3.3	EV CHARGING STATION (FUTURE)	40/2	10
11	20/1						3.3	L	3.3			12
13	20/1				3.3			L	3.3	EV CHARGING STATION (FUTURE)	40/2	14
15	20/1					3.3		L	3.3			16
17	20/1						0					20/1 18
19	20/1				0							20/1 20
21	20/1					0						20/1 22
23	20/1						0					20/1 24
25	20/1				0							20/1 26
27	20/1					0						20/1 28
29	20/1						0					20/1 30
31	20/1				0							20/1 32
33	20/1					0						20/1 34
35	20/1						0					20/1 36
37	20/1				0							20/1 38
39	20/1					0						20/1 40
41	20/1						0					20/1 42
CONNECTED LOAD PER PHASE					11.15	11.15	7.2					
LOAD SUMMARY					CONN. KVA	DEMAND FACTOR	DEMAND KVA					
TYPE "L": CONTINUOUS LOADS					26.20	125%	32.75	VOLTS: 120/208V, 3PH, 4W				
TYPE "R": RECEPTACLES (FIRST 10KVA)					0.00	100%	0.00	MAIN C.B.: MLO				
TYPE "R": RECEPTACLES (OVER 10KVA)					0.00	50%	0.00	BUS: 225 AMP				
TYPE "M": MISCELLANEOUS LOADS					0.00	100%	0.00	POLES: 42				
TYPE "A": AC LOADS					0.00	100%	0.00	MOUNTING: SURFACE				
TYPE "K": KITCHEN LOADS					0.00	65%	0.00	A/C RATING:				
LARGEST MOTOR LOAD						25%	0.00	DEMAND AMPS		HIGH LEG CONNECTED AMPS		
TOTAL					29.50		32.75	91		93		

FORWARD
MEP

TEXAS ENG. FIRM
REG. NO. F-23046

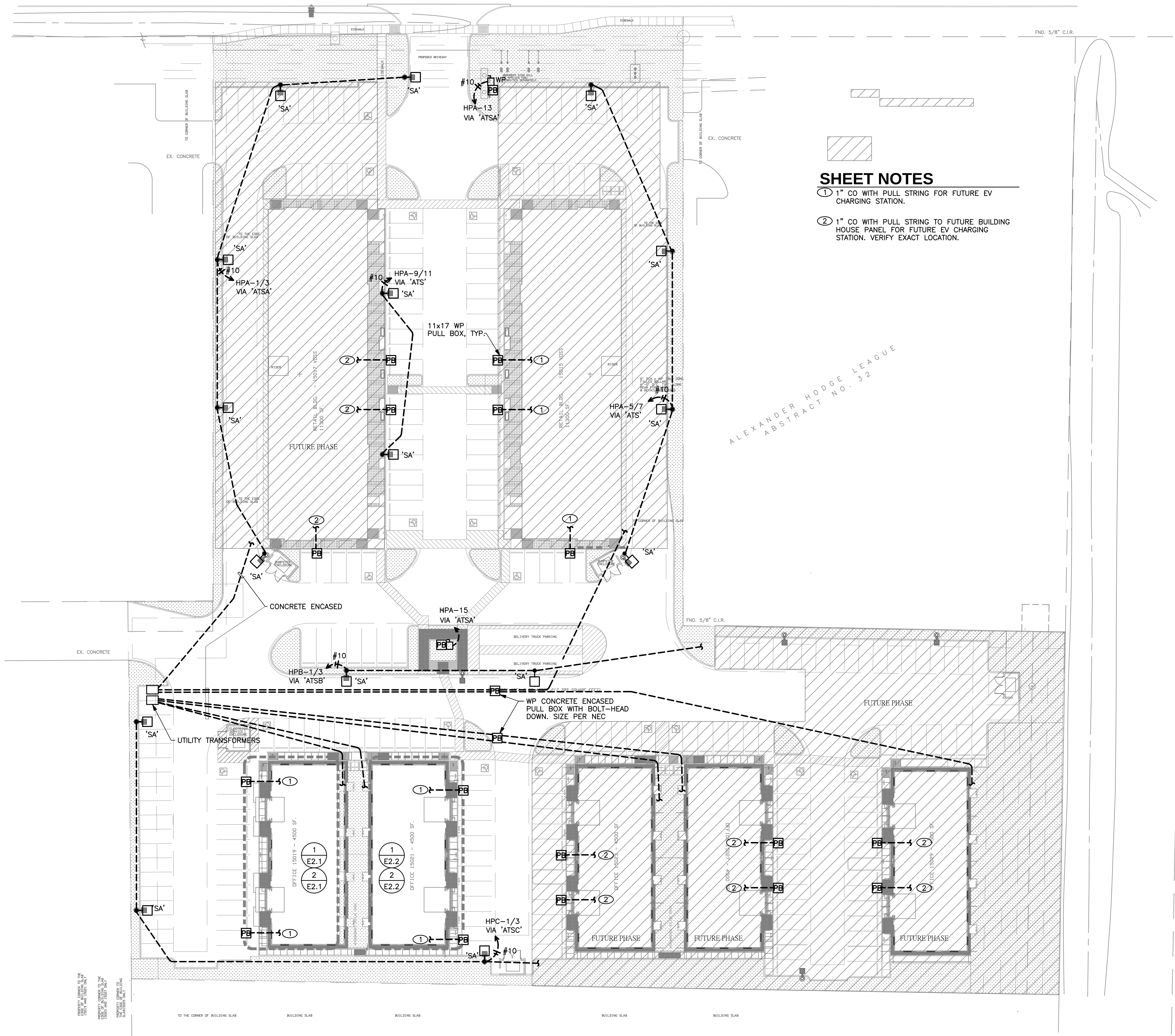
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IMPERIAL ROYAL GARDEN
PLAZA

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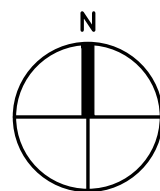
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				PANEL SCHEDULES
				CLIENT REVIEW
				PERMIT REVIEW
				CONSTRUCTION ISSUE
				CHECKED BY: PROJECT #.---
				SHEET: E0.2



SHEET NOTES

- 1" CO WITH PULL STRING FOR FUTURE EV CHARGING STATION.
- 1" CO WITH PULL STRING TO FUTURE BUILDING HOUSE PANEL FOR FUTURE EV CHARGING STATION. VERIFY EXACT LOCATION.

1 ELECTRICAL SITE PLAN
SCALE: 1"=30'-0"

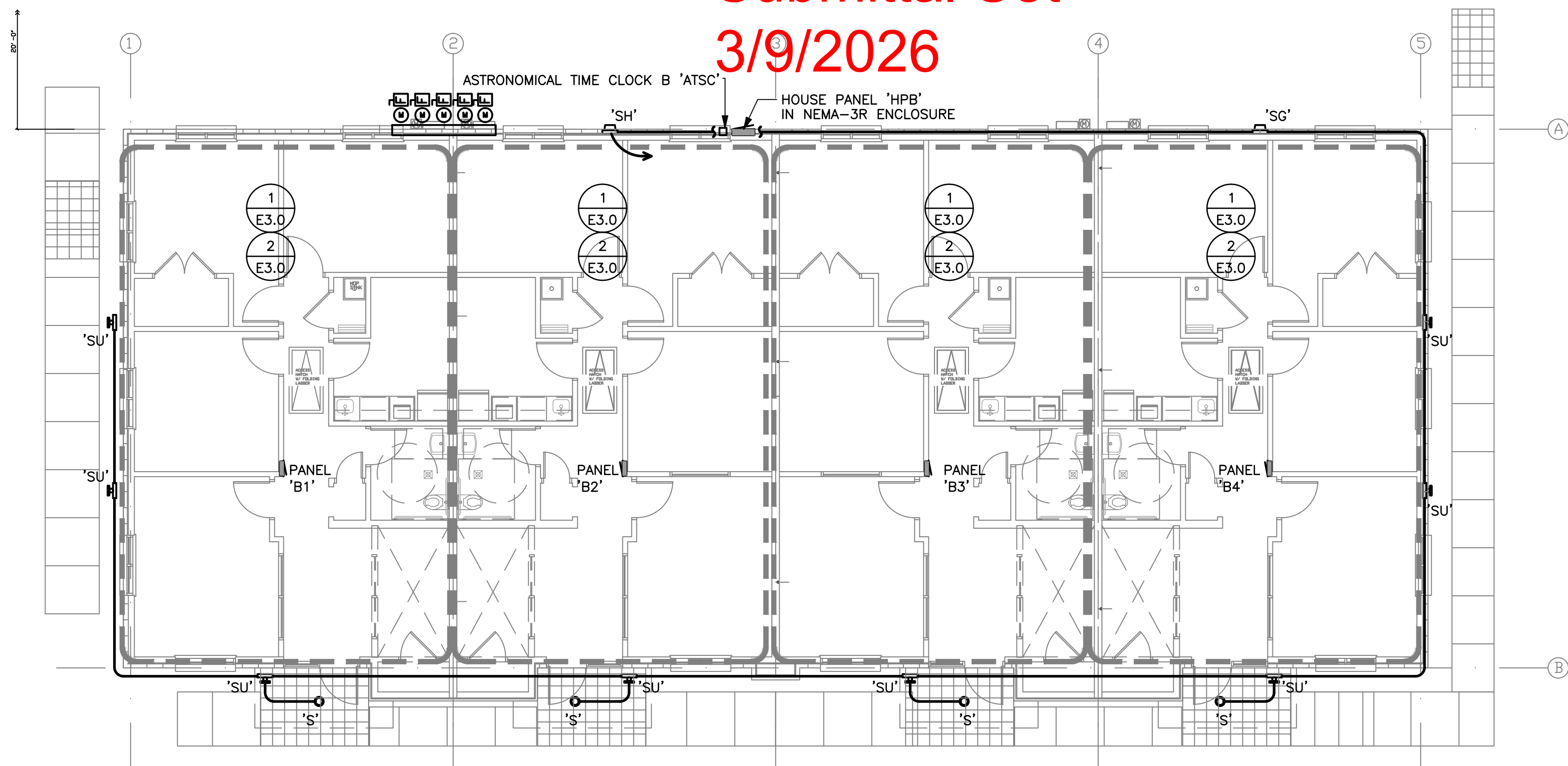


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REG. NO. F-23046

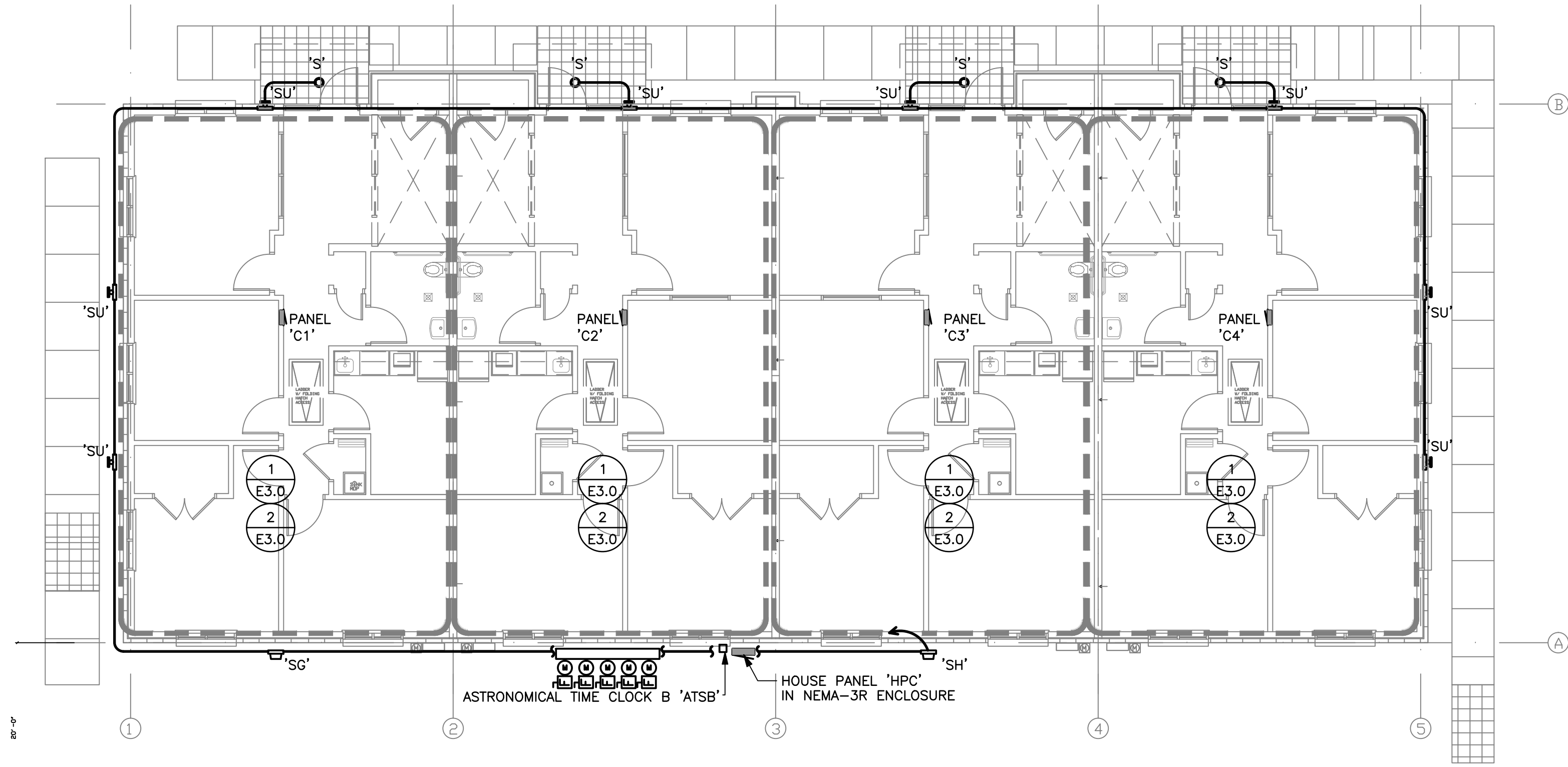
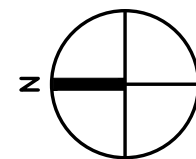
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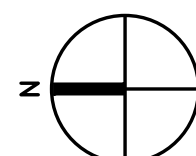
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				ELECTRICAL SITE PLAN
				CLIENT REVIEW
				PERMIT REVIEW
				CONSTRUCTION ISSUE
				CHECKED BY: PROJECT #:
				SHEET: E1.0



1 ELECTRICAL PLAN - BUILDING B
SCALE: 1/8"=1'-0"



1 ELECTRICAL PLAN - BUILDING C
SCALE: 1/8"=1'-0"



FORWARD
MEP

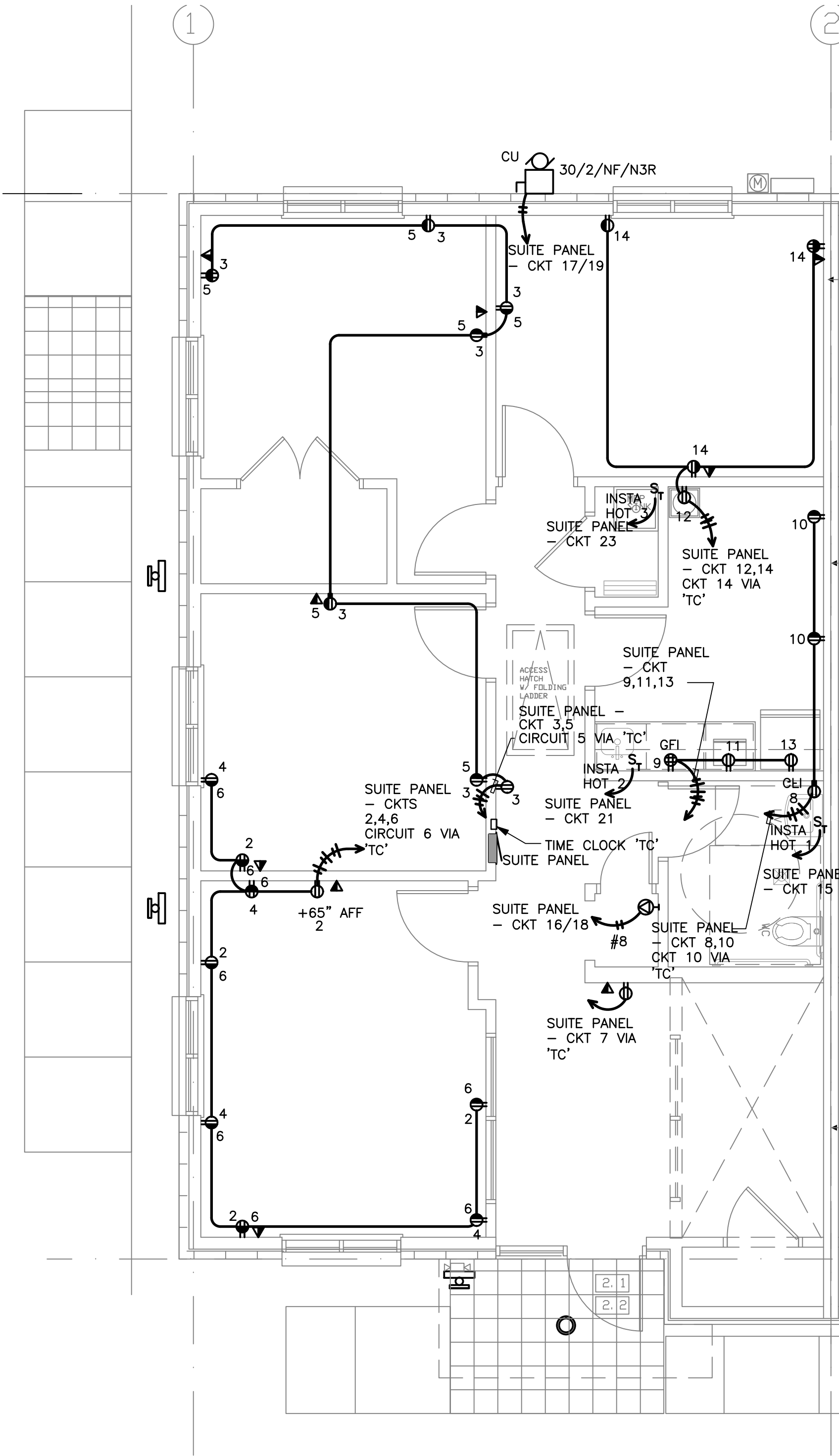
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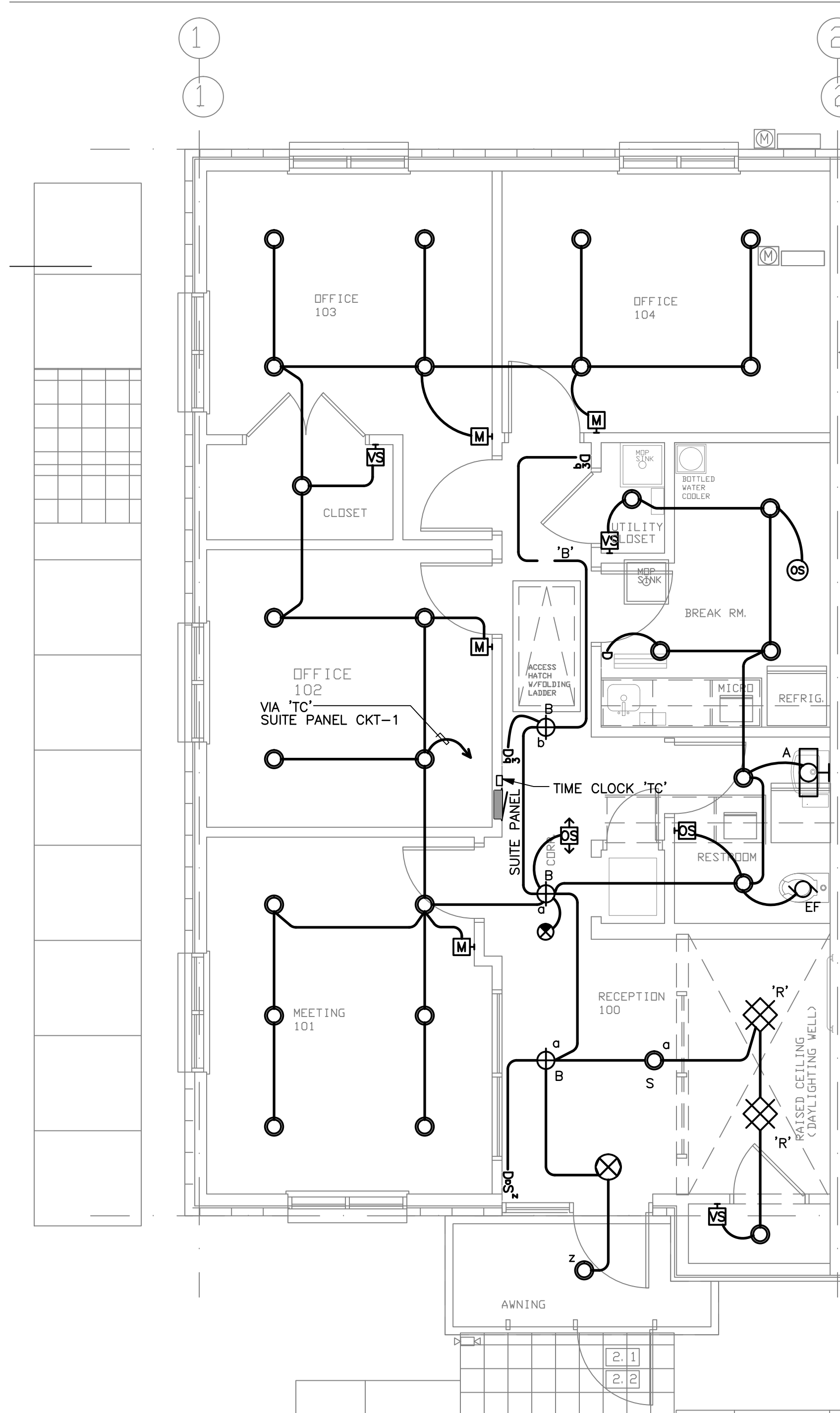
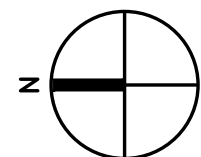
IMPERIAL ROYAL GARDEN
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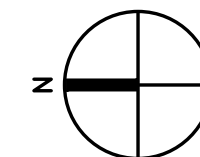
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				ELECTRICAL PLANS - BLDG B & C
				CLIENT REVIEW
				PERMIT REVIEW
				CONSTRUCTION ISSUE
				CHECKED BY: PROJECT #.---
				SHEET: E2.1



2 POWER PLAN - TYPICAL SUITE
SCALE: 1/4"=1'-0"



1 LIGHTING PLAN - TYPICAL SUITE
SCALE: 1/4"=1'-0"



TEXAS ENG. FIRM
REG. NO. F-23046

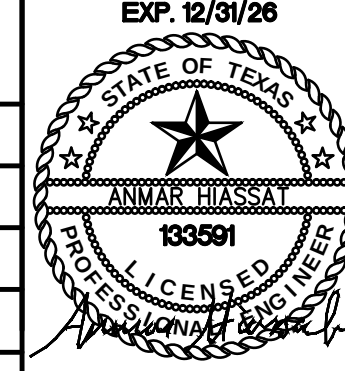
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NO.	REVISION DESCRIPTION	DATE	EXP. 12/31/26	TITLE
				ELECTRICAL PLANS - BLDG B & C
				CLIENT REVIEW
				PERMIT REVIEW
				CONSTRUCTION ISSUE
				CHECKED BY: PROJECT #.---
				SHEET: E3.0



22 05 00 - COMMON WORK RESULTS FOR PLUMBING

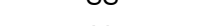
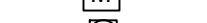
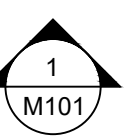
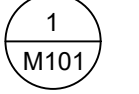
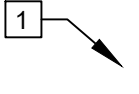
1. CONTRACTOR SHALL CONFORM TO ALL LOCAL, STATE, AND APPLICABLE CODES. REFER TO CODES AND STANDARDS REFERENCED UNDER MECHANICAL SPECIFICATIONS.
2. THESE DRAWINGS ARE SCHEMATIC IN NATURE AND ARE NOT INTENDED TO SHOW ALL OFFSETS. INSTALL PIPING AS CLOSE AS POSSIBLE TO LOCATION SHOWN. WHERE INTERFERENCES WITH COMPONENTS OF OTHER TRADE'S WORK (STRUCTURAL FOUNDATIONS OR OTHER BUILDING ELEMENTS) REQUIRE ROUTS AND LOCATIONS THAT VARY FROM THOSE SHOWN, THE CONTRACTOR SHALL OBTAIN ENGINEER OF RECORD'S APPROVAL PRIOR TO INSTALLATION. NO ADDITIONAL COST SHALL BE GRANTED FOR THESE CHANGES.
3. EACH CONTRACTOR SHALL VISIT THE SITE AND ASCERTAIN FOR HIMSELF THE CONDITIONS TO BE MET THERE IN IMPLEMENTING HIS WORK AND MAKE DUE PROVISIONS FOR THE SAME. IT IS ASSUMED THAT THE CONTRACTOR HAS VISITED THE PREMISES AND THAT HIS COST ESTIMATE COVERS ALL NECESSARY LABOR AND MATERIALS TO PROPERLY ACCOMPLISH HIS WORK. FAILURE ON THE PART OF THE CONTRACTOR TO COMPLY WITH THIS REQUIREMENT SHALL NOT BE CONSIDERED JUSTIFICATION FOR OMISSIONS OR FAULTY WORK OR FOR THE PAYMENT OF ADDITIONAL COMPENSATION.
4. ALL DRAWINGS AND SPECIFICATIONS (INCLUDING ARCHITECTURAL, MECHANICAL, PLUMBING, ETC.) ARE DEVELOPED TO BE AN INCLUSIVE SET. ANY CONFLICTS WITHIN SHALL BE BROUGHT TO THE DESIGN TEAMS ATTENTION. CONTRACTOR SHALL NOT MAKE ANY CHANGES TO THE DESIGN OR CONTRACT WITHOUT WRITTEN CONSENT FROM THE OWNER.
5. WORK SHALL BE INSTALLED IN A WORKMAN LIKE FASHION. ALL EQUIPMENT AND MATERIALS SHALL BE NEW, FREE OF DEFECTS.
6. MAINTAIN THE CONTRUCTION PREMISES IN A NEAT AND ORDERLY CONDITION. CONTRACTOR SHALL PROTECT THEIR WORK AGAINST WEATHER, THEFT, AND DAMAGE. ANY WORK DAMAGED BY FAILURE TO PROVIDE PROTECTION REQUIRED SHALL BE REMOVED AND REPLACED WITH NEW WORK AT THE CONTRACTORS EXPENSE.
7. ALL PRODUCTS SHALL COMPLY WITH 25/50 FLAME AND SMOKE HAZARD RATINGS PER ASTM E-84, NFPA 225, AND UL 723.
8. QUALITY CONTROL
- 8.1. INSTALLER QUALIFIED WITH AT LEAST 5 YEARS OF SUCCESSFUL INSTALLATION EXPERIENCE ON PROJECTS WITH WORK SIMILAR TO THAT REQUIRED FOR THIS PROJECT.
- 8.2. UL COMPLIANCE: PROVIDE COMPONENTS WITH UL LISTING AND LABELING WHEN THERE IS AN APPLICABLE UL CATEGORY.
- 8.3. COMPLY WITH THE MINIMUM STANDARDS PRESCRIBED IN REQUIREMENTS AND RECOMMENDATIONS TO THE LATEST EDITION OF THE FOLLOWING CODES AND STANDARDS: UNDERWRITERS LABORATORIES, INC. STANDARDS, INTERNATIONAL PLUMBING CODE (2021 WITH LOCAL AMENDMENTS), AND OTHER CODES, ORDINANCES, AND LAWS APPLICABLE TO THE PLACE OF WORK.
9. SUBMIT COPIES OF DATA FOR REVIEW AND COMMENT BY OWNER PRIOR TO ORDERING. INCLUDE MANUFACTURER'S STANDARD SUBMITTAL DATA WITH MANUFACTURER'S NAME AND MODEL NUMBERS, COLOR, FINISH, SIZE, AND ALL OPTIONS CLEARLY MARKED.
10. ALL FLOOR DRAIN LOCATIONS ARE DIAGRAMMIC IN NATURE AND FINAL LOCATIONS SHALL BE FIELD VERIFIED WITH ALL OTHER TRADES PRIOR TO ROUGH-ON OR INSTALLATION.
11. SUBSTITUTIONS SHALL BE EVALUATED AND APPROVED BY OWNER AND ENGINEER PRIOR TO EQUIPMENT PURCHASE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE AMONG TRADES. ANY COST DIFFERENCES RESULTING FROM SUBSTITUTIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
12. PENETRATIONS BETWEEN NON-CONDITIONED AND CONDITIONED SPACES SHALL BE SEALED TO ELIMINATE MOISTURE MITIGATION, SUCH AS BETWEEN INSIDE AND OUTSIDE BUILDINGS, NON-CONDITIONED BOILER ROOMS, INTO REFRIGERATORS/FREEZERS, ETC. SEAL ALL PENETRATIONS THROUGH RATED WALLS, FLOORS, AND CEILINGS WITH A UL LISTED ASSEMBLY TO PROVIDE A RATING EQUAL TO OR GREATER THAN THE RATING OF THE WALL, FLOOR, OR CEILING.
13. PLUMBING MATERIAL AND EQUIPMENT: NO MATERIALS, APPARATUS, DEVICES, APPLANCES, FIXTURES, OR EQUIPMENT SHALL BE SOLD OR INSTALLED IN THE CITY UNLESS THEY ARE IN CONFORMANCE WITH THE PROVISIONS OF THIS CODE, THE LAWS OF THE STATE OF TEXAS AND APPLICABLE RULES AND REGULATIONS ISSUED UNDER THE AUTHORITY OF THAT STATE STATUTES. THE MAKER'S NAME, TRADEMARK, OR OTHER IDENTIFICATION SYMBOL SHALL BE PLACED ON ALL ELECTRICAL MATERIALS, APPARATUS, DEVICES, APPLANCES, FIXTURES, AND EQUIPMENT USED OR INSTALLED UNDER THE PROVISIONS OF THIS CODE. ALL ELECTRICAL MATERIALS AND EQUIPMENT SHALL BE LISTED AND LABELED FOR THE INTENDED USE AND SHALL BE INCLUDED IN A LIST PUBLISHED BY AN APPROVED AGENCY.
- 22 10 00 - PLUMBING PIPING SYSTEMS
1. GENERAL PIPING SYSTEMS
- 1.1. ALL PACKAGED EQUIPMENT SHALL BE INDEPENDENTLY THIRD PARTY LABELED AS A SYSTEM FOR ITS INTENDED USE BY A (UL) IN ACCORDANCE WITH OSHA FEDERAL REGULATIONS, AS WELL AS A NFPA PAMPHLET NO. 70, AND THE NATIONAL ELECTRICAL CODE (NEC).
- 1.2. ALL SYSTEMS SHALL BE A COMPLETE AND OPERABLE SYSTEM. PROVIDE THE NECESSARY ADAPTORS, FITTINGS, VALVES, TRAPS, GAUGES, STRAINERS, UNION, ETC. PROVIDE COMPLETE WITH BASES, ISOLATORS, SUPPORTS, AND OTHER REQUIRED ACCESSORIES.
- 1.3. THE CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES FOR REQUIREMENTS OF ALL EQUIPMENT AND DEVICES AS REQUIRED FOR A PROPER FUNCTIONING SYSTEM.
- 1.4. ALL ABOVE GRADE PIPING SHALL BE INSTALLED PARALLEL TO BUILDING WALLS, WITH THE EXCEPTION OF PIPING PURPOSELY SLOPED PER CITY AND CODE REQUIREMENTS
- 1.5. ALL PIPING TO BE INSTALLED WITH A UNIFORM SLOPE TO MITIGATE UN-DRAINABLE LOW POINTS.
- 1.6. DIE-ELECTRIC UNIONS AND COUPLINGS ARE REQUIRED FOR DISSIMILAR METALS SUCH AS CONNECTIONS BETWEEN COPPER AND STEEL OR IRON PIPES.
- 1.7. ROUGH-IN PLUMBING PIPING USING DIMENSIONS SHOWN ON THE ARCHITECTURAL DRAWINGS. LOCATION OF ALL PIPING SHALL ALLOW INSTALLATION OF FIXTURES WITHOUT THE NEED TO FURR-OUT WALLS.
2. DOMESTIC WATER SYSTEM
- 2.1. REFER TO MATERIAL LEGEND
- 2.2. PROVIDE MATERIALS, PRODUCTS, AND FABRICATIONS THAT COMPLY WITH ENVIRONMENTAL PROJECT AGENCY (EPA) REQUIREMENTS AND RECOMMENDATIONS REGARDING LEAD CONTENT AND CONTRIBUTION OF LEAD TO POTABLE WATER, THAT HAVE NO LEAD OR LEAD ALLOYS IN CONTACT WITH POTABLE WATER, AND THAT DO NOT CONTRIBUTE TO OR CAUSE LEAD IN POTABLE WATER.
- 2.3. SOLDER: LEAD FREE, ASTM B32 95-5 TIN-ANTIMONY OR GRADE SN96 TIN-SILVER SOLDER
- 2.4. FLUX: CONTAINING NOT MORE THAN 0.2 PERCENT LEAD, MEETING NSF 61
- 2.5. WATER HAMMER ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH LATEST ASSE AND SHALL BE ACCESSIBLE.
- 2.6. PROVIDE MANUAL SHUT OFF VALVES AT EACH BRANCH LINE OF ALL WATER PIPING. PROVIDE ISOLATION VALVES AT ALL FIXTURES. PROVIDE SCREWED ACCESS PANEL FOR ALL VALVES PLACED BEHIND OR ABOVE HARD CEILINGS AND WALLS. PRIOR TO INSTALLING ABOVE HARD CEILINGS, THE INTENT SHOULD BE TO INSTALL ABOVE LAY-IN CEILINGS.
3. PIPING, INTERIOR TO 5' OUTSIDE
- 3.1. REFER TO MATERIAL LEGEND
- 3.2. IF WROUGHT COPPER AND BRONZE SOLDER-JOINT PRESSURE FITTINGS, ANSI

- B16.22.
- 3.3. WHERE INDICATED ON DRAWINGS TO BE BELOW, IN, OR THROUGH SLAB-ON-GRADE: COPPER, COILED WATER TUBE, K OR L, ASTM B88.
- 3.4. PIPE 1.5" OR SMALLER, IN OR UNDER SLABS-ON-FILL: CONTINUOUS, WITHOUT JOINTS OR FITTINGS.
- 3.5. PIPE 2" OR LARGER, IN OR UNDER SLABS-ON-FILL: BRAZED JOINTS
4. SANITARY WEST AND VENT PIPING
- 4.1. REFER TO MATERIAL LEGEND. IF CAST IRON, REFER TO CHAPTER IV OF CISPI "CAST IRON SOIL PIPE AND FITTINGS HANDBOOK"
- 4.2. INSTALL WATER AND VENT PIPING AT A MINIMUM SLOPE, UNLESS OTHERWISE INDICATED ON THE PLANS.
- 4.3. SANITARY PIPE: 2 PERCENT DOWNWARD IN DIRECTION OF FLOW FOR PIPING 2-1/2" AND SMALLER. 1 PERCENT DOWNWARD IN DIRECTION OF FLOW FOR PIPING 3" TO 6".
- 4.4. VENT PIPE: 1 PERCENT DOWN TOWARDS THE VERTICAL FIXTURE VENT OR TOWARD THE VENT STACK.
- 4.5. VENT THRU ROOF SHALL BE A MINIMUM OF 10'-0" AWAY FROM ANY FRESH AIR INTAKES.
- 4.6. PROVIDE CLEANOUTS IN EXCESS OF THOSE SHOWN WHICH ARE REQUIRED BY THE PLUMBING CODE (EVERY 50' MAXIMUM AND EVERY 90 DEGREES TURN)
- 4.7. VERIFY EXACT LOCATION OF EQUIPMENT AND FLOOR SLOPE PRIOR TO INSTALLATION OF FLOOR DRAINS. RELOCATION DUE TO MISPLACEMENT SHALL BE AT CONTRACTOR'S EXPENSE.
5. FOUNDATIONS, HANGERS, AND SUPPORTS
- 5.1. MANUFACTURER'S STANDARDIZATION SOCIETY SP-69 OR FEDERAL SPECIFICATION WWW-H-171D, TYPES AS RECOMMENDED OR REQUIRED. PERFORATED OR PLAIN METAL STRAP AND WIRE ARE NOT ACCEPTABLE.
- 5.2. HANGERS IN CONTACT WITH COPPER PIPE: SAME AS FOR GENERAL PURPOSE, COPPER OR COPPER PLEATED WITH PLASTIC COATING
- 5.3. TRAPEZE PIPE HANGERS: MSS SP-58, TYPE 59, SHOP- OR FIELD-FABRICATED PIPE-SUPPORT ASSEMBLY, MADE FROM STRUCTURAL-CARBON-STEEL SHAPES, WITH MSS SP-58 CARBON STEEL HANGER RODS, NUTS, SADDLES, AND U-BOLTS.
- 5.4. CARBON STEEL PIPE HANGERS AND SUPPORTS:
- 5.4.1. MSS SP-58, TYPES 1 THROUGH 58, FACTORY FABRICATED COMPONENTS
- 5.4.2. GALVANIZED METALLIC COATINGS: PRE-GALVANIZED, HOT-DIP GALVANIZED, OR ELECTRO-GALVANIZED
- 5.4.3. NONMETALLIC COATINGS: PLASTIC COATED OR EPOXY POWDER COATED.
- 5.4.4. PADDED HANGERS: HANGERS WITH FIBERGLASS OR OTHER PIPE INSULATION PAD OR CUSHION TO SUPPORT BEARINGS SURFACE OF PIPING.
- 5.4.5. HANGER RODS: CONTINUOUS-THREAD ROD, NUTS, AND WASHER MADE OF CARBON STEEL.
- 5.5. HANGER AND SUPPORT INSTALLATION:
- 5.5.1. PIPES OF VARIOUS SIZES: SUPPORT TOGETHER AND SPACE TRAPEZES FOR SMALLEST PIPE SIZE, OR INSTALL INTERMEDIATE SUPPORTS FOR SMALLER DIAMETER PIPES AS SPECIFIED FOR INDIVIDUAL PIPE HANGERS.
- 5.5.2. FIELD FABRICATE FROM ASTM A36/A36M CARBON STEEL SHAPES SELECTED FOR LOADS BEING SUPPORTED. WELD STEEL ACCORDING TO AWS D1.1/D1.1M.
- 5.5.3. INSTALL HANGERS AND SUPPORTS TO ALLOW CONTROLLED THERMAL AND SEISMIC MOVEMENT OF PIPING SYSTEMS, TO PERMIT FREEDOM OF MOVEMENT BETWEEN PIPE ANCHORS, AND TO FACILITATE ACTION OF EXPANSION JOINTS, EXPANSION LOOPS, EXPANSION BENDS, AND SIMILAR UNITS.
- 5.5.4. INSTALL LATERAL BRACING WITH PIPE HANGERS AND SUPPORTS TO PREVENT SWAYING.

6. INSULATION - HOT AND COLD PIPE:
- 6.1. FIBERGLASS PIPE INSULATION: JOHNS-MANVILLE MICRO-LOK HEAVY DENSITY PIPE INSULATION WITH ARMSTRONG ARMAFLEX FINISH FOR INDOOR OR OUTDOOR APPLICATION.
- 6.2. UL LISTED FOR FLAME SPREAD 25, SMOKE DEVELOPED 50, FUEL CONTRIBUTED 50
- 6.3. HOT WATER (80°F - 140°F):
- 6.3.1. INSULATION CONDUCTIVITY: 0.21-0.28 (BTU X IN.)/(HR X FT2 X °F)
- 6.3.2. PIPE SIZES SMALLER THAN 1-1/2": 1"
- 6.3.3. PIPE SIZES LARGER THAN 1-1/2": 1-1/2"
- 6.4. COLD WATER (40°F - 60°F):
- 6.4.1. INSULATION CONDUCTIVITY: 0.21-0.27 (BTU X IN.)/(HR X FT2 X °F)
- 6.4.2. PIPE SIZES SMALLER THAN 1-1/2": 1"
- 6.4.3. PIPE SIZES LARGER THAN 1-1/2": 1-1/2"
- 6.5. BUTT INSULATION TOGETHER AND ADHERE IN PLACE WITH MANUFACTURER'S RECOMMENDED CONTACT CEMENT. WHERE POSSIBLE, SLIP TUBING ON WITHOUT SLITTING. WHERE INSULATION TERMINATES, NEATLY BEVEL AND FINISH.
- 6.6. ROOF DRAINS AND INTERIOR DOWNSPOUTS: VERTICAL PIPING, EXCEPT BETWEEN ROOF-DECK DRAIN AND FIRST ELBOW AND WITHIN TWO FEET OF NON-VERTICAL PIPING, NEED NOT BE INSULATED. INSULATE OTHER ROOF DRAIN AND DOWN SPOUT PIPING, AND INSULATE THE ROOF-DECK DRAIN SUMPS WITH SHEET INSULATION. HORIZONTAL PIPING WITHIN CRAWL SPACE NEED NOT BE INSULATED.
- 6.7. WHERE EXPOSED TO VIEW, BENEATH THE BUILDING, OR EXPOSED TO WEATHER:
- 6.7.1. PAINT WITH INSULATION MANUFACTURER'S PAINT FINISH, TINTED S SELECTED BY THE ARCHITECT-ENGINEER, SPECIFICALLY FORMULATED IF EXPOSED TO OUTDOORS
- 6.7.2. PROVIDE 16-GAUGE ALUMINUM OR STAINLESS STEEL COVER WITH MATCHING ALUMINUM OR STAINLESS STEEL BANDS SPACED 18" OVER PIPE AND FITTINGS WHERE EXPOSED TO WEATHER OR EXPOSED TO OCCUPANTS AND WITHIN 7' OF THE FLOOR.

22 90 00 - PROJECT CLOSEOUT

1. TESTING
- 1.1. ALL CONEALED WORK SHALL REMAIN UNCOVERED UNTIL ALL REQUIRED TESTS HAVE BEEN COMPLETED. NOTE THAT THIS TESTING MAYBE DONE IN PHASED AREAS AS DEEMED NECESSARY BY THE GENERAL CONTRACTOR. THE CONTRACTOR WILL REPAIR ANY DEFECTS WHICH ARE DISCOVERED AS A RESULT OF INSPECTION OR TEST WITH NEW MATERIALS. CAULKING OF SCREWED JOINTS, CRACKS, OR HOLES WILL NOT BE ACCEPTABLE. THE TEST MUST BE REPEATED AFTER REPLACEMENT AND DEFECTS HAVE BEEN ELIMINATED.
- 1.2. POTABLE WATER SHALL BE TESTED BEFORE FIXTURES AND FAUCETS ARE CONNECTED AND/OR BEFORE CONNECTING TO ANY EXISTING PIPING SYSTEM. THE SYSTEM WILL BE FILLED WITH WATER AND PRESSURE TESTED TO 150 PSI FOR A MINIMUM OF ONE HOUR WITHOUT ANY LEAKS OR PRESSURE LOSS.
2. CLEANUP AND PAINTING:
- 2.1. AFTER COMPLETION OF THE WORK, THE PLUMBING CONTRACTOR SHALL REMOVE ALL EXTRA MATERIALS, FITTINGS, PIPE, ETC. WHICH HAVE BEEN BROUGHT TO THE SITE FOR COMPLETION OF THEIR SCOPE OF WORK. ALL DEBRIS CREATED BASED ON THEIR CONSTRUCTION EFFORT SHALL BE REMOVED.
- 2.2. ALL UNINSULATED PIPING AND EQUIPMENT SHALL BE CLEANED OF OIL, GREASE, AND DIRT. ALL SURFACES SHALL BE CLEAN AND FREE OF DIRT AND CORROSION, READY FOR PAINTING BY OTHERS

PLUMBING LEGEND		
	DOMESTIC COLD WATER	(E) EXISTING TO REMAIN
	DOMESTIC HOT WATER	
	DOMESTIC HOT WATER RETURN	
	SANITARY SEWER	
	VENT PIPE	
	NATURAL GAS PIPE	
	FLUE VENT PIPE	
	ELBOW - TURNED DOWN	
	ELBOW - TURNED UP	
	TEE - TURNED DOWN	
	TEE - TURNED UP	
	BALL VALVE	
	BACKFLOW PREVENTER	
	WATER METER	
	FLOOR DRAIN	
	FLOOR SINK	
	FLOOR CLEANOUT	
	SECTION VIEW SYMBOL	
	DETAIL DESIGNATION	
	POWERED EQUIPMENT TAG	
	SHEET KEY NOTES	
	POINT OF CONNECTION	
	POINT OF DISCONNECTION	

PLUMBING MATERIALS

SYSTEM:	MATERIAL:
WATER PIPE, BELOW GRADE	SCH. 80 PVC
WATER PIPE, ABOVE GRADE	PEX
SANITARY SEWER, BELOW GRADE	SCH. 40 PVC
SANITARY SEWER, ABOVE GRADE	SCH. 40 PVC
VENT PIPE, BELOW GRADE	SCH. 40 PVC
VENT PIPE, ABOVE GRADE	SCH. 40 PVC

SPECIALTY PLUMBING FIXTURE SCHEDULE

CODE	FIXTURE	MANUFACTURER / MODEL	DESCRIPTION
WHA	WATER HAMMER ARRESTOR	SIOUX CHEIF 652-A	CONFIRM TO PDI WH-201, ANSI/ASSE 1010; TEMP TO 250°F, MAX 350 PSIG WORKING PRESSURE. INSTALL WHERE SHOWN ON RISER DIAGRAMS.
FCO	FLOOR CLEAN OUT	SIOUX CHEIF 851	PVC BODY, ROUND HEAVY-DUTY CAST IRON TOP, POLYPROPYLENE OR ABS PLUG, ADJUSTABLE TO FINISH SURFACE.
WCO	WALL CLEAN OUT	SIOUX CHIEF 873	THREADED COUNTERSUNK BRONZE CLEANOUT PLUG. PROVIDE DRILLED TAP FOR CENTER SCREW AND STAINLESS STEEL COVER.
HB	HOSE BIBB	ZURN Z1330-C	3/4" SELF-DRAINING WALL HYDRANT WITH VANDAL-RESISTANT INTEGRAL VACUUM BREAKER AND CHROME-PLATED ROUGH BRONZE BOX.
TP	TRAP PRIMER	PPP #PR-500	BRONZE CONSTRUCTION WITH VACUUM PORTS. PROVIDE DISTRIBUTION UNIT AS REQUIRED FOR SUPPLY TO DRAIN. INSTALL VALVE RECESSED IN WALL A MINIMUM OF 12" AFF. PROVIDE ACCESS PANEL. CERTIFIED ASSE 1018.

PLUMBING FIXTURE SCHEDULE

CODE	FIXTURE	MANUFACTURER / MODEL	CW	HW	WASTE	VENT	DESCRIPTION
WC-1	WATER CLOSET	KOHLER K-5172, KOHLER K-4808	1/2"	--	4"	2"	TANK TYPE WATER CLOSET. 1.28 GALLONS PER FLUSH (GPF). ADA COMPLIANT
L-1	LAVATORY	KOHLER K-2032, MOEN 8437	1/2"	1/2"	2"	1-1/2"	WALL MOUNT LAVATORY WITH 3 HOLES. SINGLE HANDLE LAVATORY FAUCET. 1.5 GPM MAX. ADA COMPLIANT. INSTALL WITH TMV IN ACCORDANCE WITH ASSE 1070 OF CRA B125.3 (SUCH AS WATTS #LFUSG-B) TO LIMIT MAXIMUM SUPPLY TEMPERATURE TO 120°F.
S-1	SINK	ELKAY DPC12020102, ELKAY LKHA1041	1/2"	1/2"	2"	1-1/2"	STAINLESS STEEL SELF RIMMING SINGLE BOWL UTILITY SINK. 1.8 GPM PULL DOWN SPRAY WITH FORWARD ONLY LEVER HANDLE. PROVIDE TMV SET TO 110°F FOR HOT WATER CONNECTION.
FD-1	FLOOR DRAIN	JAY R. SMITH #2005-APBP-P	--	--	3"	1-1/2"	PRO-SET "TRAP GUARD" SIZED FOR FLOOR DRAIN. SEDIMENT BUCKET.
MS-1	MOP SINK	ADVANCE TABCO 9-OP-44 T&S B-0665-BSTR	1/2"	1/2"	3"	2"	24"x24"x12" FLOOR-MOUNT MOP SINK WITH STAINLESS STEEL CAP AND 3" CHROME DRAIN. FURNISH WITH CHICAGO FAUCET MODEL NO. 911-IS, MOUNTED 36" AFF TO FAUCET, VACUUM BREAKER AND INTERNAL STOPS. MOUNT VACUUM BREAKER 7'-6" AFF.

TANKLESS TYPE WATER HEATER SCHEDULE

CODE	MANUFACTURER / MODEL	SERVICE	STORAGE CAPACITY	RECOVERY RATE	HEATING CAPACITY	ELECTRICAL			REMARKS
						VOLT	PH	FLA	
WH-1	CHRONOMITE CM-15/120	RESTROOM	--	0.4 GPH @ 31°F	1.80 KW	120	1	15	
WH-2	CHRONOMITE CM-15/120	BREAKROOM	--	0.4 GPH @ 31°F	1.80 KW	120	1	15	
WH-3	CHRONOMITE CM-15/120	MOP SINK	--	0.4 GPH @ 31°F	1.80 KW	120	1	15	
GENERAL NOTES: A. PROVIDE INSULATED COLD WATER INLET AND HOT WATER OUTLET HEAT TRAPS AT WATER HEATER. B. INSTALL UNDERNEATH SINK OR ABOVE MOP SINK.									



TEXAS ENG. FIRM
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IMPERIAL ROYAL GARDEN
PLAZA

15019 & 15021 VOSS RD
SUGAR LAND, TEXAS, 77498

NO.	REVISION DESCRIPTION	DATE	03-06-2026 STATE OF TEXAS MUNICIPALITY OF SUGAR LAND MUNICIPAL ENGINEER 139184 Muhammad M. Alawi	TITLE PLUMBING SCHEDULES	
				CLIENT REVIEW	
				PERMIT REVIEW	
				CONSTRUCTION ISSUE	
				CHECKED BY:	SHEET: P100
				PROJECT #:	--

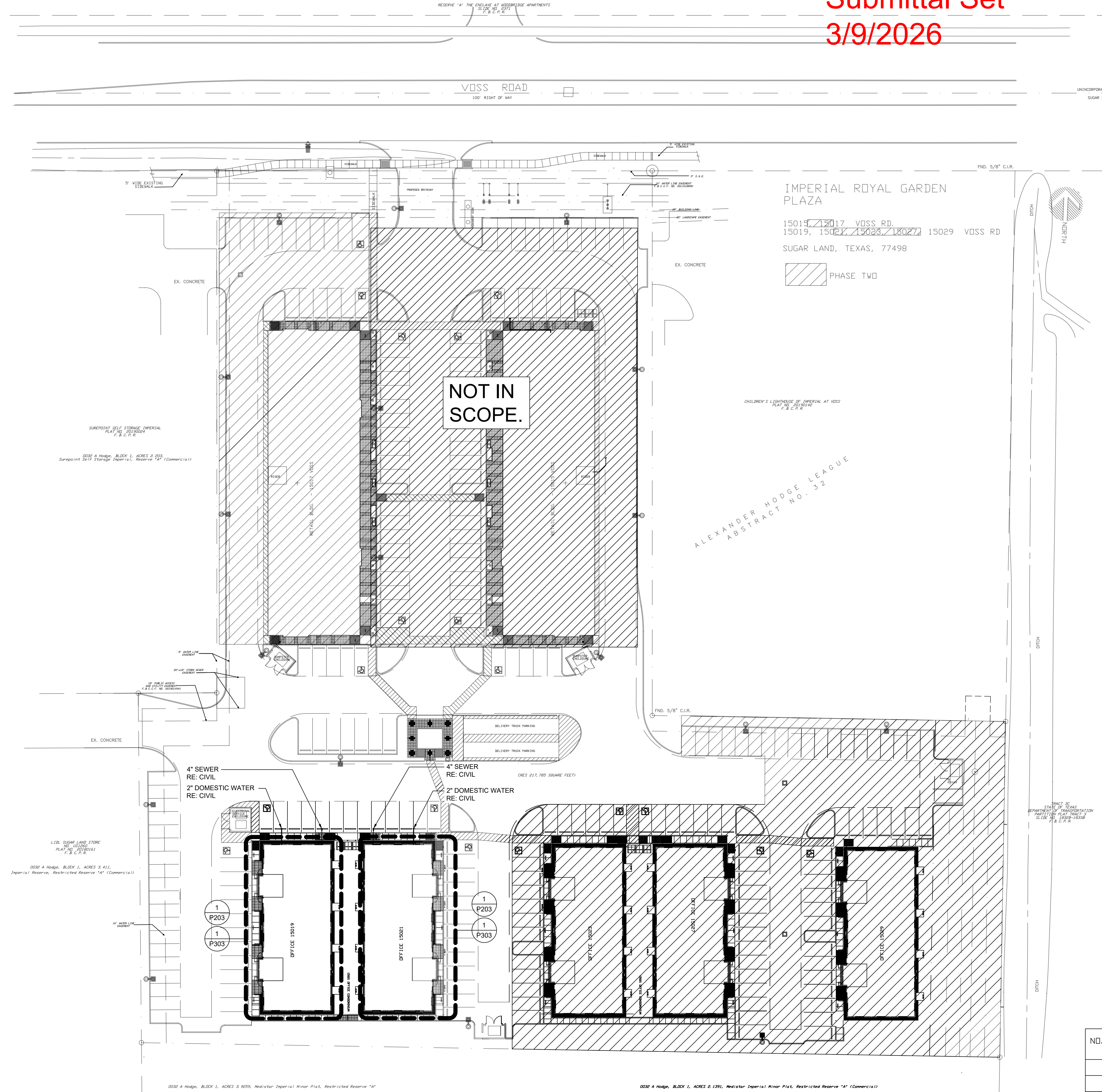
PLUMBING GENERAL NOTES:

1. CONTRACTOR SHALL CONFORM TO ALL LOCAL, STATE, AND APPLICABLE CODES. WORK SHALL BE INSTALLED IN A WORKMAN LIKE FASHION.
2. PIPING INSULATION SHALL RUN CONTINUOUSLY THROUGH PENETRATIONS. CONTRACTOR TO PROVIDE NECESSARY SLEEVES AND FLASHING AT WALL PENETRATIONS.
3. PRIOR TO BID OR CONSTRUCTION, CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THE PROJECT CONDITIONS AND PROJECT DRAWINGS. CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER, PRIOR TO BID, OF ANY DISCREPANCIES BETWEEN PLAN AND FIELD CONDITIONS.
4. CONTRACTOR TO PROVIDE ALL REQUIRED OFFSETS AND FITTINGS REQUIRED TO PROVIDE COMPLETE DESIGN. PLUMBING DRAWINGS ARE SCHEMATIC IN NATURE. CONTRACTOR TO PROVIDE SHOP DRAWINGS AND AS-BUILTS AS NECESSARY.
5. ALL PIPING TO BE PROPERLY SUPPORTED AND SECURED.
6. PIPE DIMENSIONS SHOWN ON PLAN ARE INTERNAL DIMENSIONS.
7. CONTRACTOR SHALL NOTIFY AND COORDINATE WITH OWNER FOR ANY SUBSTITUTIONS OR ENTRY INTO SPACES TO ROUTE DUCTWORK OR PIPING THAT IS REQUIRED.
8. ALL COLD AND HOT WATER PIPING SHALL BE INSULATED. SEE SPECIFICATION FOR INSULATION REQUIREMENTS.
9. ALL HAND SINKS AND LAVATORIES SHALL BE PROVIDED WITH "TMV" THERMOSTATIC MIXING VALVE. RE: PLMB SCHEDULES
10. PROVIDE AND INSTALL 1/4 TURN SHUT OFF VALVE OR INTEGRAL SHUT OFF VALVE AT EACH WATER SUPPLY CONNECTION TO EACH PLUMBING FIXTURE OR EQUIPMENT.
11. ALL WATER TAPS TO PLUMBING FIXTURES SHALL BE DOWNSTREAM OF WATER SUBMETER.
12. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE INSTALLATION OF SODA SLEEVE LINES AND COORDINATION WITH OTHER DISCIPLINES.
13. REFER TO ARCHITECTURAL AND MILLWORK DRAWINGS FOR DETAILS OF COUNTERTOPS, CASEWORK, AND OTHER FIXTURES, SHOWING EXACT LOCATION OF OPENINGS FOR PLUMBING ITEMS BEING INSTALLED. COORDINATE THE COMPLETE INSTALLATION WITH THE GENERAL CONTRACTOR.
14. ALL PENETRATIONS IN FIRE RATED WALL ASSEMBLIES SHALL BE SEALED WITH UL LISTED FIRE STOPPING MATERIAL.
15. PLUMBING CONTRACTOR TO ARRANGE AND PAY FOR ALL REQUIRED FEES, PERMITS, AND MISCELLANEOUS COSTS ASSOCIATED WITH THE PLUMBING WORK PER LOCAL PLUMBING CODES.

PLUMBING KEY NOTES:

NOTE: ALL KEYNOES MAY NOT BE USED ON THIS SHEET.

- 1 NEW VTR. COORDINATE ANY ROOF MODIFICATIONS WITH LANDLORD REPRESENTATIVE. VENT LOCATION TO BE A MINIMUM OF 10' AWAY FROM ALL BUILDING INTAKES.
- 2 CONNECT NEW SANITARY SEWER LINE TO EXISTING SANITARY MAIN LINE. CONTRACTOR TO FIELD VERIFY LOCATION, SIZE, AND INVERT ELEVATIONS AND DIRECTIONS PRIOR TO BEGINNING ANY NEW WORK.
- 3 ELECTRICAL EQUIPMENT LOCATION. NO NEW PLUMBING SHALL BE INSTALLED ABOVE OR BELOW THE CEILING AT THIS LOCATION.
- 4 CONNECT TO NEW CW SUPPLY STUB. FIELD VERIFY SIZE, LOCATION, AND CONDITION PRIOR TO ANY WORK.
- 5 ALL HAND WASH SINKS AND LAVATORIES SHALL BE PROVIDED WITH "TMV" THERMOSTATIC MIXING VALVE, WATTS LFUSG-B-M2. INLETS SHALL BE 1/2" & OUTLET SHALL BE 3/8" HW @ 105°F TO FAUCET. SHALL COMPLY WITH ASSE 1070.
- 6 INSTALL DEDICATED WATER METER PER LANDLORD'S SPECIFICATIONS. INSTALL WATER METER WITH MINIMUM UPSTREAM AND DOWNSTREAM STRAIGHT RUNS PER MANUFACTURER'S REQUIREMENTS. WATER METER SHALL BE PROVIDED WITH REMOTE READER BY BACK DOOR.
- 7 CAP PIPING FOR FUTURE USE.
- 8 GRAVITY TRAFFIC RATED GREASE INTERCEPTOR.
- 9 TRAFFIC RATED SAMPLE WELL.
- 10 GREASE TRAP, PRECAST SAMPLE WELL, AND GREASE LINE MUST BE BEDDED IN CEMENT STABILIZED SAND AND INSPECTED BEFORE COVER.
- 11 VENT PIPING UP FROM UNDERGROUND TO CEILING.



TEXAS ENG. FIRM
REG. NO. F-23046



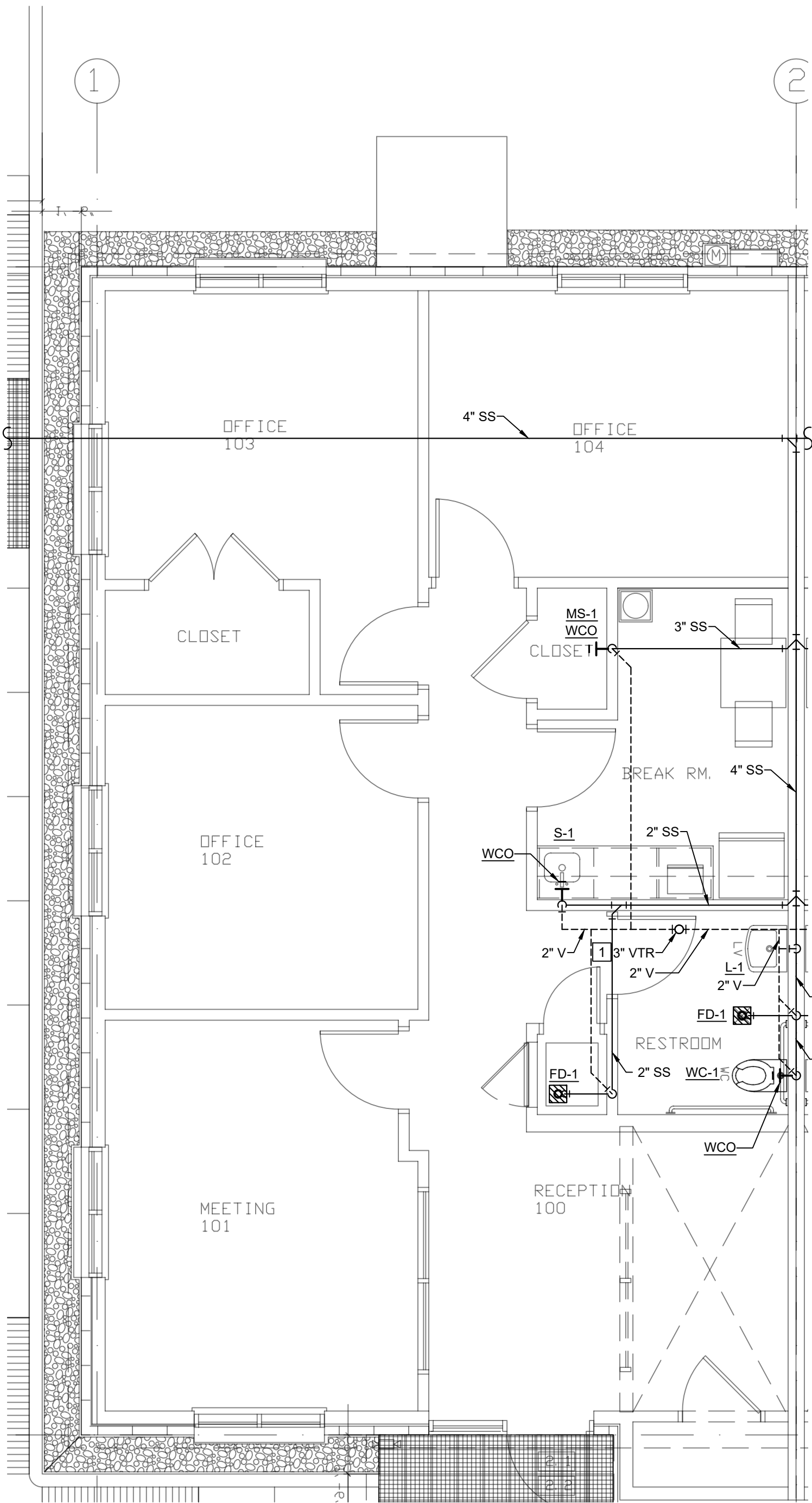
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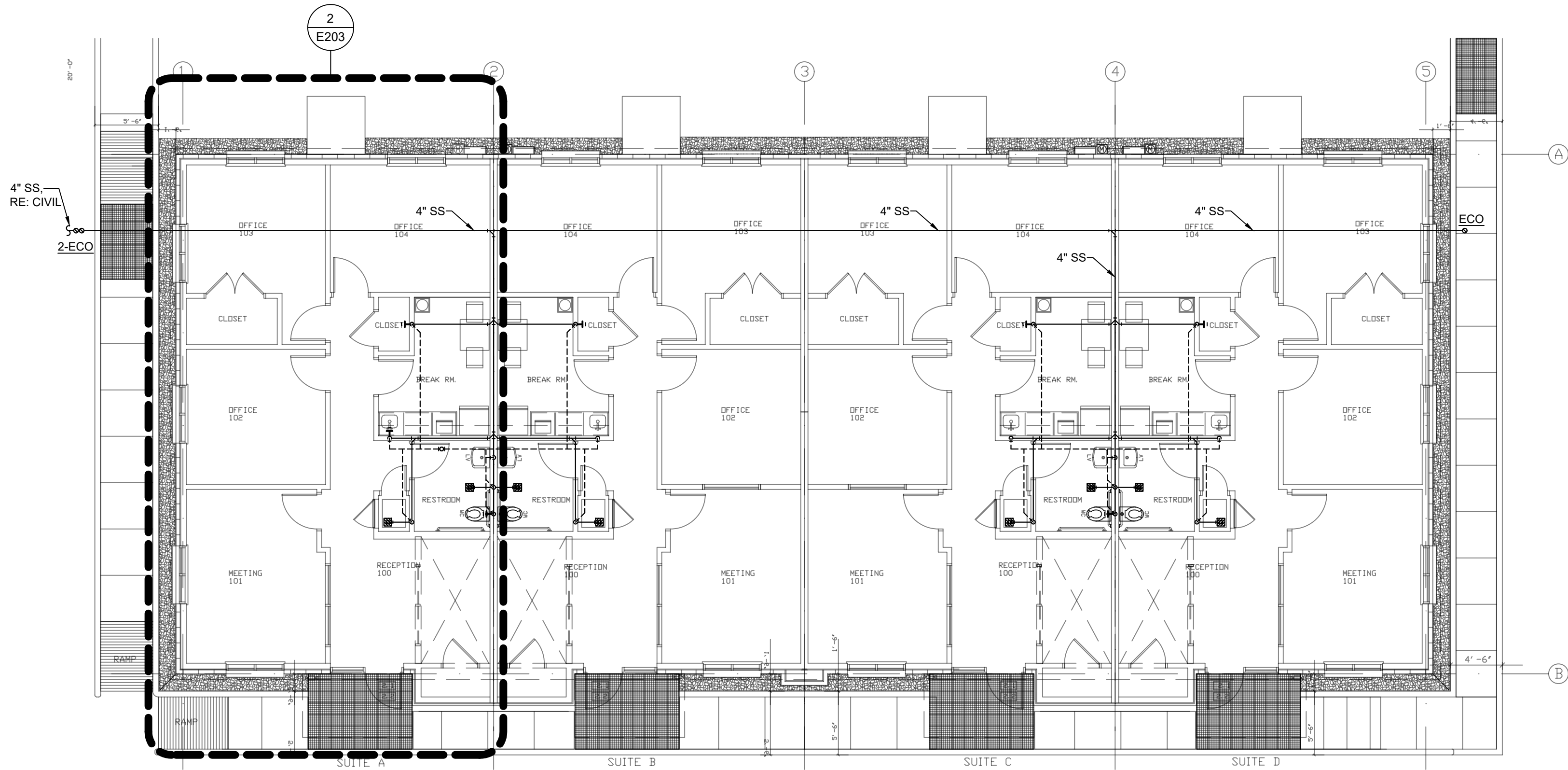
IMPERIAL ROYAL GARDEN
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NO.	REVISION DESCRIPTION	DATE	03-06-2026	TITLE PLUMBING SITE PLAN
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				PERMIT REVIEW
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				CHECKED BY: SHEET: P200
				PROJECT #.--



2 OFFICE ENLARGED PLAN - SEWER & VENT
1/4" = 1'0" (SHEET SIZE: 36"x24")



1 OFFICE FLOOR PLAN - SEWER & VENT
1/8" = 1'0" (SHEET SIZE: 36"x24")

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7. CONTRACTOR SHALL NOTIFY AND COORDINATE WITH OWNER FOR ANY SUBSTITUTIONS OR ENTRY INTO SPACES TO ROUTE DUCTWORK OR PIPING THAT IS REQUIRED.
8. ALL COLD AND HOT WATER PIPING SHALL BE INSULATED. SEE SPECIFICATION FOR INSULATION REQUIREMENTS.
9. ALL HAND SINKS AND LAVATORIES SHALL BE PROVIDED WITH "TMV" THERMOSTATIC MIXING VALVE. RE: PLMB SCHEDULES
10. PROVIDE AND INSTALL 1/4 TURN SHUT OFF VALVE OR INTEGRAL SHUT OFF VALVE AT EACH WATER SUPPLY CONNECTION TO EACH PLUMBING FIXTURE OR EQUIPMENT.
11. ALL WATER TAPS TO PLUMBING FIXTURES SHALL BE DOWNSTREAM OF WATER SUBMETER.
12. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE INSTALLATION OF SODA SLEEVE LINES AND COORDINATION WITH OTHER DISCIPLINES.
13. REFER TO ARCHITECTURAL AND MILLWORK DRAWINGS FOR DETAILS OF COUNTERTOPS, CASEWORK, AND OTHER FIXTURES, SHOWING EXACT LOCATION OF OPENINGS FOR PLUMBING ITEMS BEING INSTALLED. COORDINATE THE COMPLETE INSTALLATION WITH THE GENERAL CONTRACTOR.
14. ALL PENETRATIONS IN FIRE RATED WALL ASSEMBLIES SHALL BE SEALED WITH UL LISTED FIRE STOPPING MATERIAL.
15. PLUMBING CONTRACTOR TO ARRANGE AND PAY FOR ALL REQUIRED FEES, PERMITS, AND MISCELLANEOUS COSTS ASSOCIATED WITH THE PLUMBING WORK PER LOCAL PLUMBING CODES.



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REG. NO. F-23046

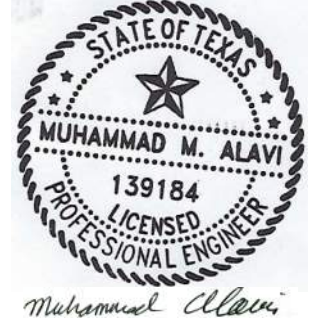


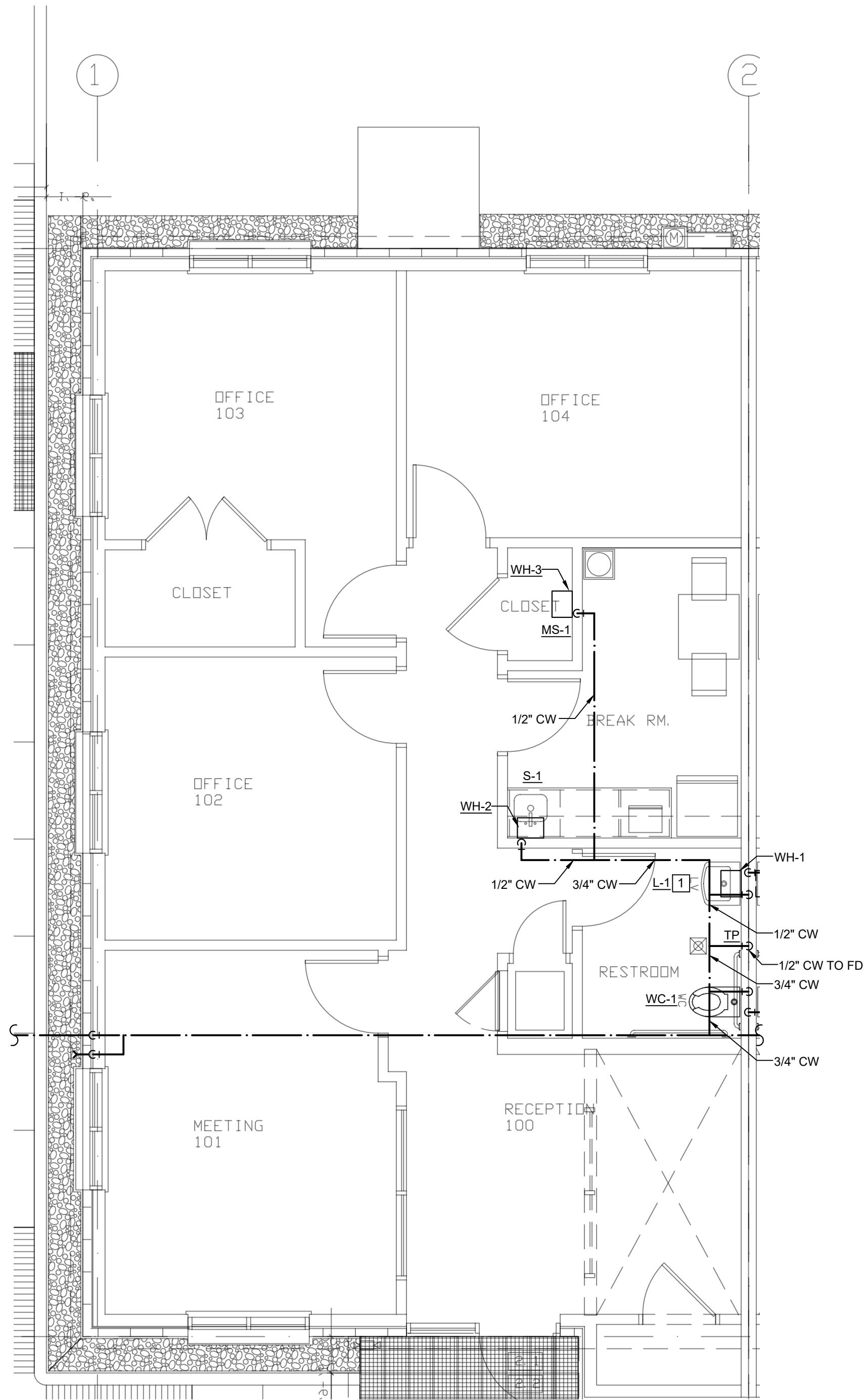
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IMPERIAL ROYAL GARDEN
PLAZA

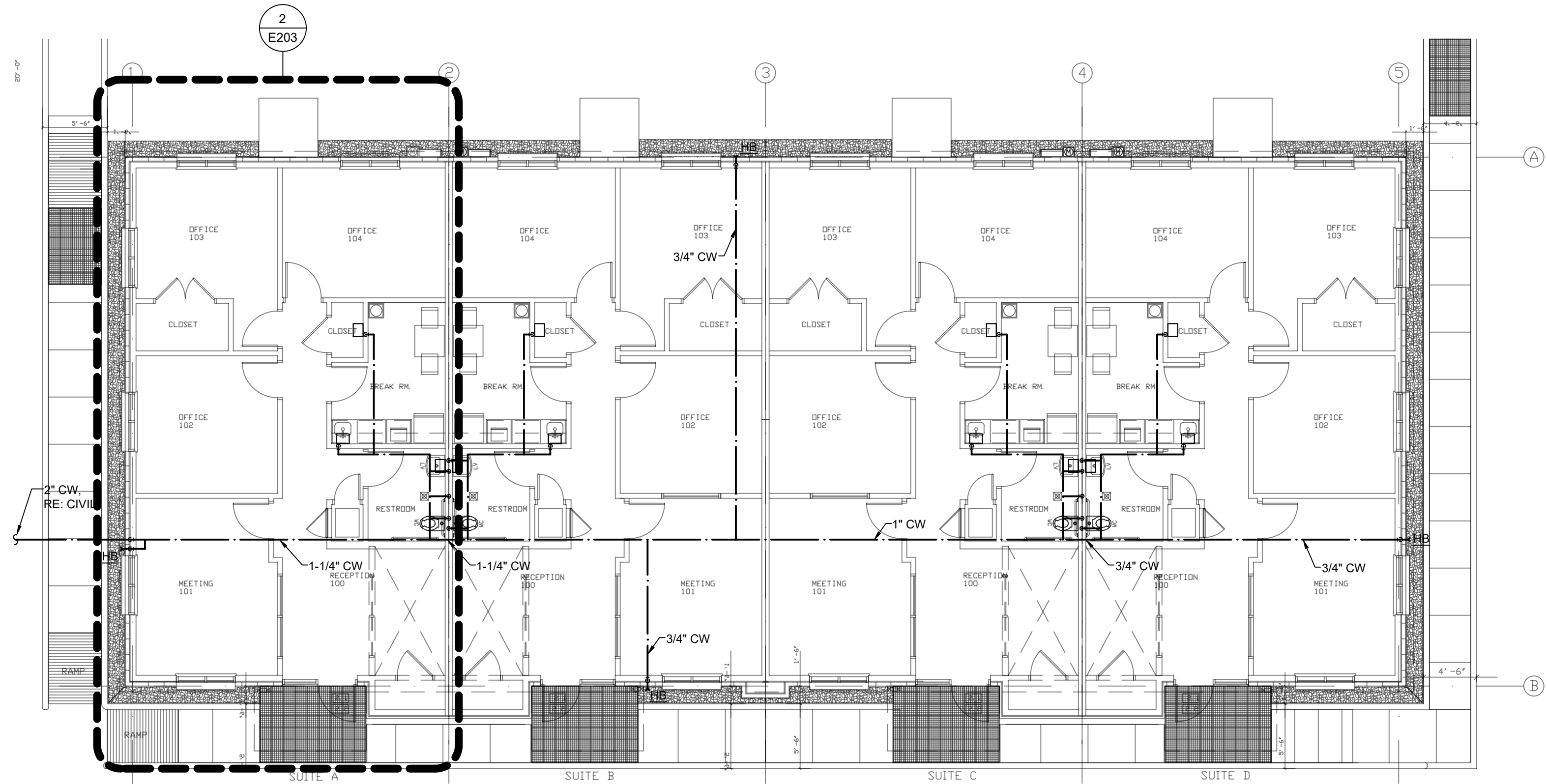
15019 & 15021 VOSS RD
SUGAR LAND, TEXAS, 77498

NO.	REVISION DESCRIPTION	DATE	03-06-2026	TITLE PLUMBING FLOOR PLAN
				CLIENT REVIEW
				PERMIT REVIEW
				CONSTRUCTION ISSUE
				CHECKED BY: SHEET: P201
				PROJECT #.--





2 OFFICE ENLARGED PLAN - DOMESTIC WATER
1/4" = 1'0" (SHEET SIZE: 36"X24")



1 OFFICE FLOOR PLAN - DOMESTIC WATER
1/8" = 1'0" (SHEET SIZE: 36"X24")

- PLUMBING KEY NOTES:** NOTE: ALL KEYNOES MAY NOT BE USED ON THIS SHEET.
- 1 NEW VTR. COORDINATE ANY ROOF MODIFICATIONS WITH LANDLORD REPRESENTATIVE. VENT LOCATION TO BE A MINIMUM OF 10' AWAY FROM ALL BUILDING INTAKES.
 - 2 CONNECT NEW SANITARY SEWER LINE TO EXISTING SANITARY MAIN LINE. CONTRACTOR TO FIELD VERIFY LOCATION, SIZE, AND INVERT ELEVATIONS AND DIRECTIONS PRIOR TO BEGINNING ANY NEW WORK.
 - 3 ELECTRICAL EQUIPMENT LOCATION. NO NEW PLUMBING SHALL BE INSTALLED ABOVE OR BELOW THE CEILING AT THIS LOCATION.
 - 4 CONNECT TO NEW CW SUPPLY STUB. FIELD VERIFY SIZE, LOCATION, AND CONDITION PRIOR TO ANY WORK.
 - 5 ALL HAND WASH SINKS AND LAVATORIES SHALL BE PROVIDED WITH "TMV" THERMOSTATIC MIXING VALVE. WATTS LFUSG-B-M2. INLETS SHALL BE 1/2" & OUTLET SHALL BE 3/8" HW @ 105°F TO FAUCET. SHALL COMPLY WITH ASSE 1070.
 - 6 INSTALL DEDICATED WATER METER PER LANDLORD'S SPECIFICATIONS. INSTALL WATER METER WITH MINIMUM UPSTREAM AND DOWNSTREAM STRAIGHT RUNS PER MANUFACTURER'S REQUIREMENTS. WATER METER SHALL BE PROVIDED WITH REMOTE READER BY BACK DOOR.
 - 7 CAP PIPING FOR FUTURE USE.
 - 8 GRAVITY TRAFFIC RATED GREASE INTERCEPTOR.
 - 9 TRAFFIC RATED SAMPLE WELL.
 - 10 GREASE TRAP, PRECAST SAMPLE WELL, AND GREASE LINE MUST BE BEDDED IN CEMENT STABILIZED SAND AND INSPECTED BEFORE COVER.
 - 11 VENT PIPING UP FROM UNDERGROUND TO CEILING.

PLUMBING GENERAL NOTES:

1. CONTRACTOR SHALL CONFORM TO ALL LOCAL, STATE, AND APPLICABLE CODES. WORK SHALL BE INSTALLED IN A WORKMAN LIKE FASHION.
2. PIPING INSULATION SHALL RUN CONTINUOUSLY THROUGH PENETRATIONS. CONTRACTOR TO PROVIDE NECESSARY SLEEVES AND FLASHING AT WALL PENETRATIONS.
3. PRIOR TO BID OR CONSTRUCTION, CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THE PROJECT CONDITIONS AND PROJECT DRAWINGS. CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER, PRIOR TO BID, OF ANY DISCREPANCIES BETWEEN PLAN AND FIELD CONDITIONS.
4. CONTRACTOR TO PROVIDE ALL REQUIRED OFFSETS AND FITTINGS REQUIRED TO PROVIDE COMPLETE DESIGN. PLUMBING DRAWINGS ARE SCHEMATIC IN NATURE. CONTRACTOR TO PROVIDE SHOP DRAWINGS AND AS-BUILTS AS NECESSARY.
5. ALL PIPING TO BE PROPERLY SUPPORTED AND SECURED.
6. PIPE DIMENSIONS SHOWN ON PLAN ARE INTERNAL DIMENSIONS.
7. CONTRACTOR SHALL NOTIFY AND COORDINATE WITH OWNER FOR ANY SUBSTITUTIONS OR ENTRY INTO SPACES TO ROUTE DUCTWORK OR PIPING THAT IS REQUIRED.
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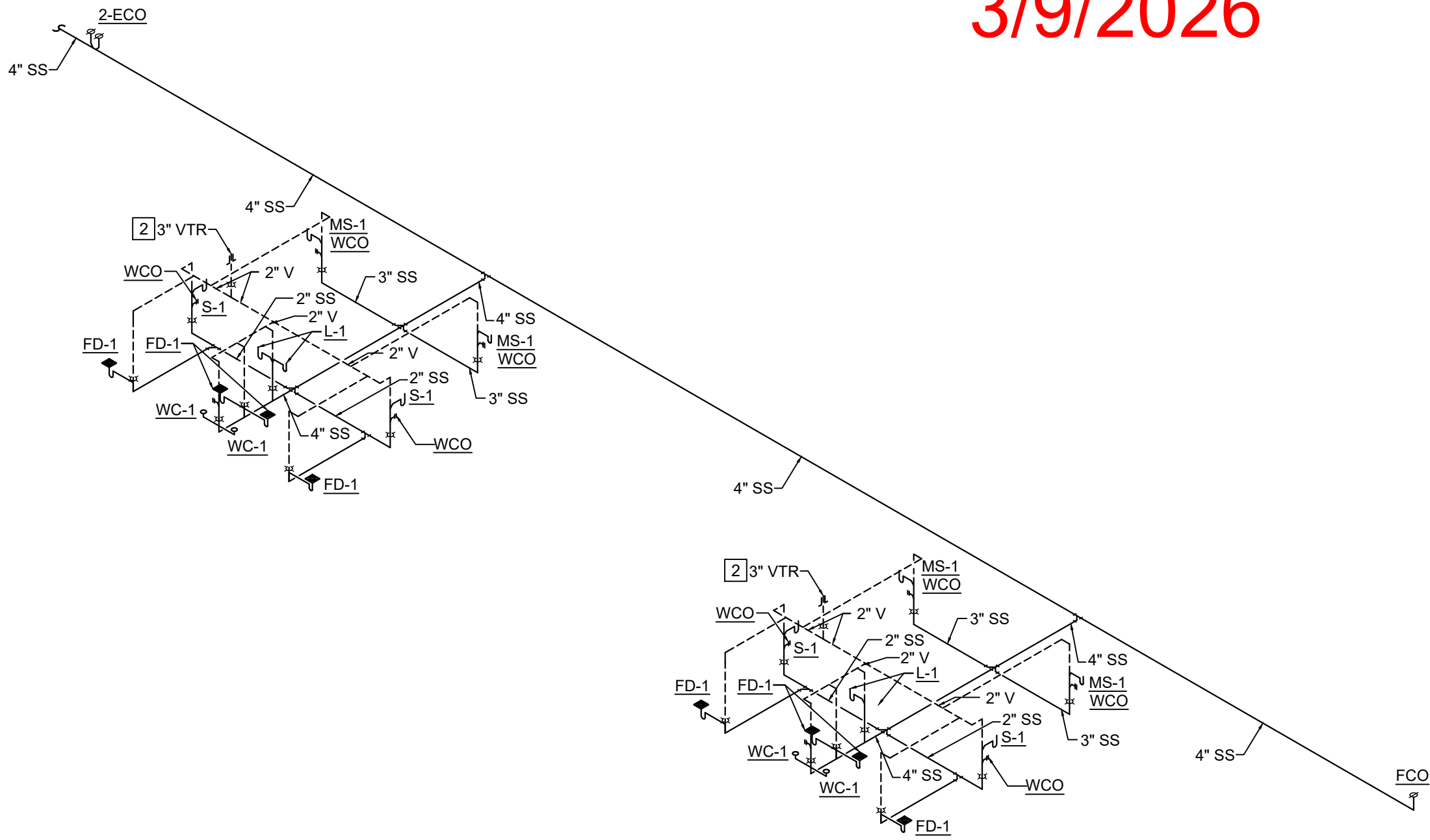


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IMPERIAL ROYAL GARDEN
PLAZA

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NO.	REVISION DESCRIPTION	DATE	03-06-2026	TITLE PLUMBING FLOOR PLAN
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				PROJECT #.--



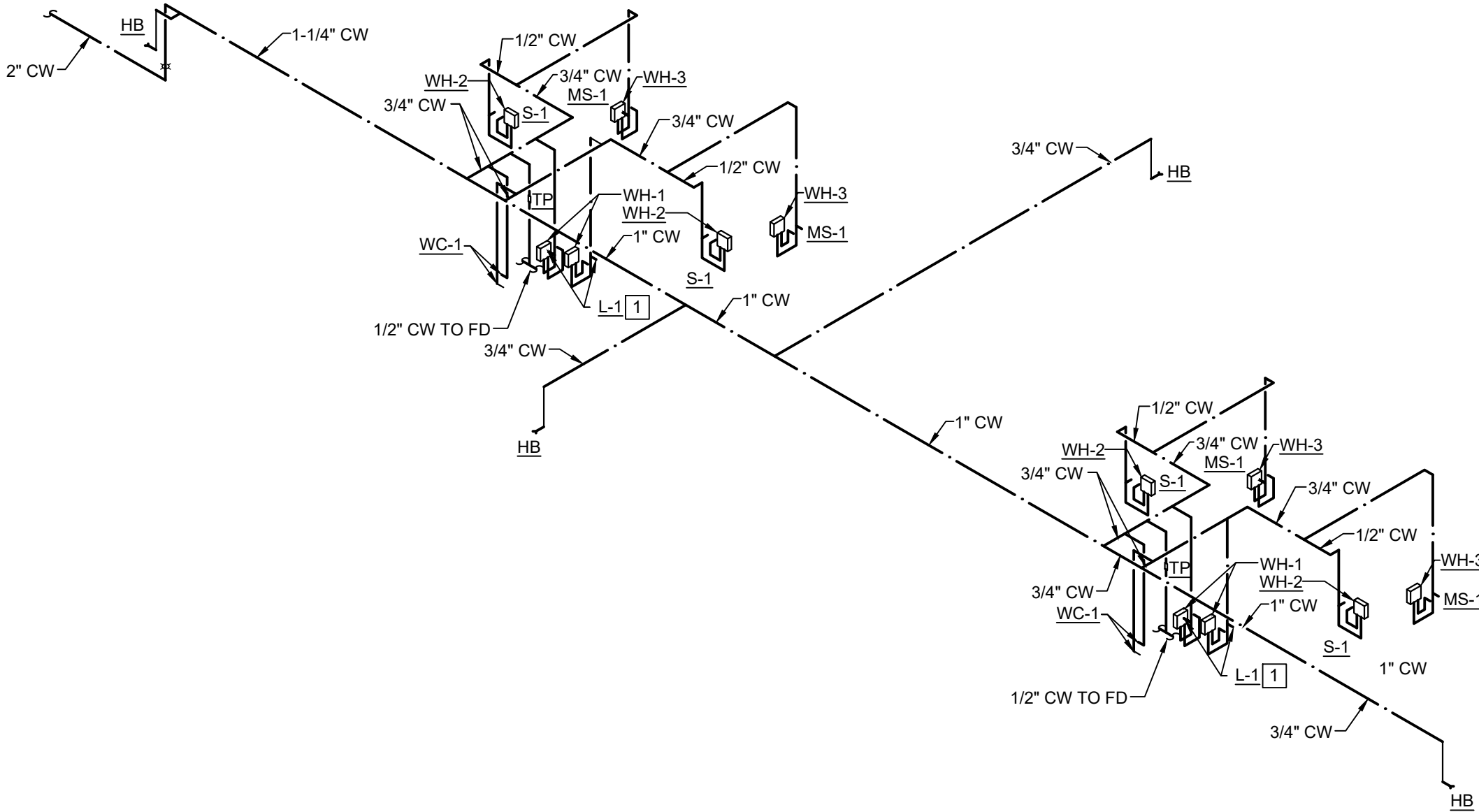
1 OFFICE - SANITARY AND SEWER RISER
NO SCALE

PLUMBING GENERAL NOTES:

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- CONNECT TO NEW CW SUPPLY STUB. FIELD VERIFY SIZE, LOCATION, AND CONDITION PRIOR TO ANY WORK.
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- CAP PIPING FOR FUTURE USE.
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- TRAFFIC RATED SAMPLE WELL.
- GREASE TRAP, PRECAST SAMPLE WELL, AND GREASE LINE MUST BE BEDDED IN CEMENT STABILIZED SAND AND INSPECTED BEFORE COVER.
- VENT PIPING UP FROM UNDERGROUND TO CEILING.



1 OFFICE - DOMESTIC WATER RISER
NO SCALE



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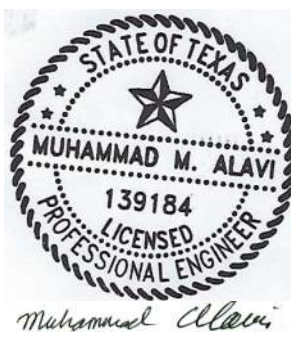
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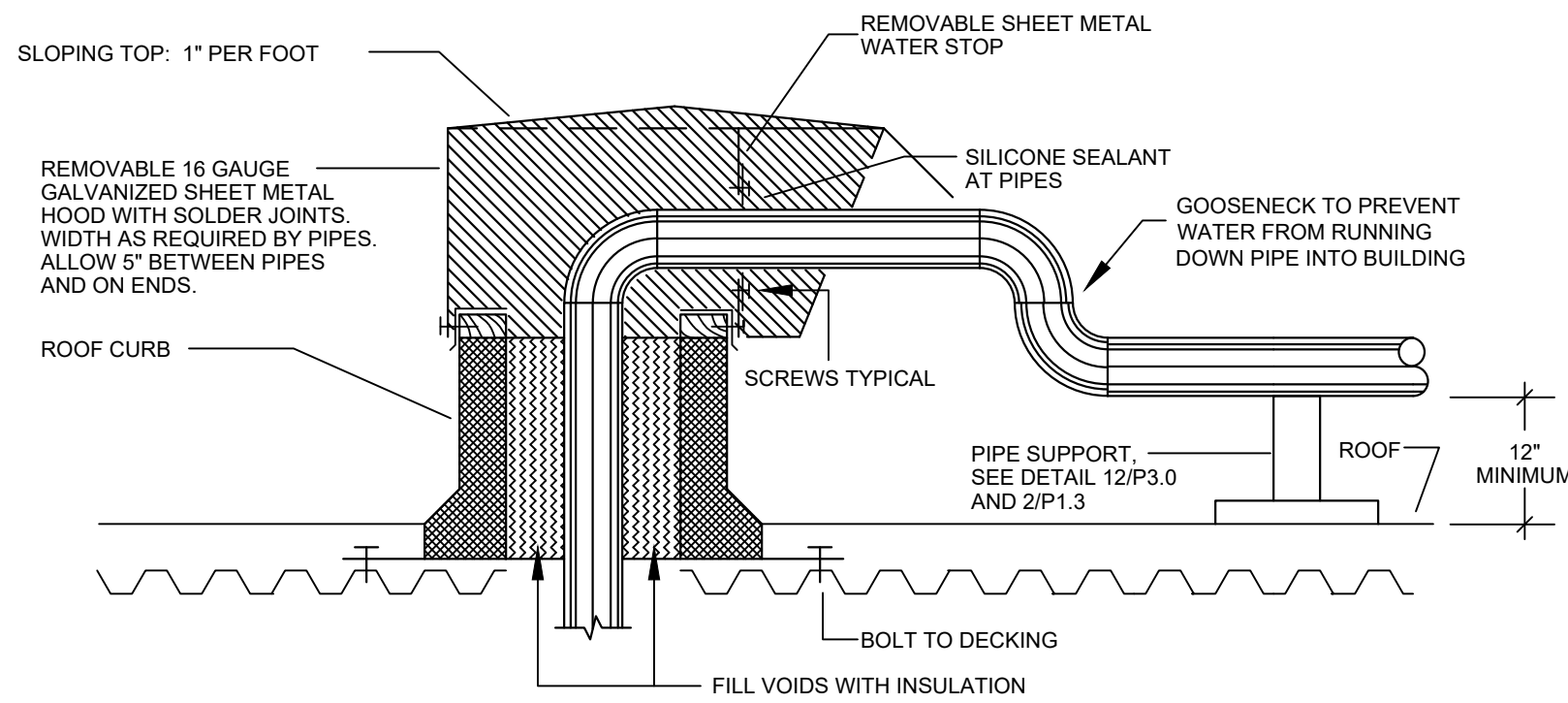
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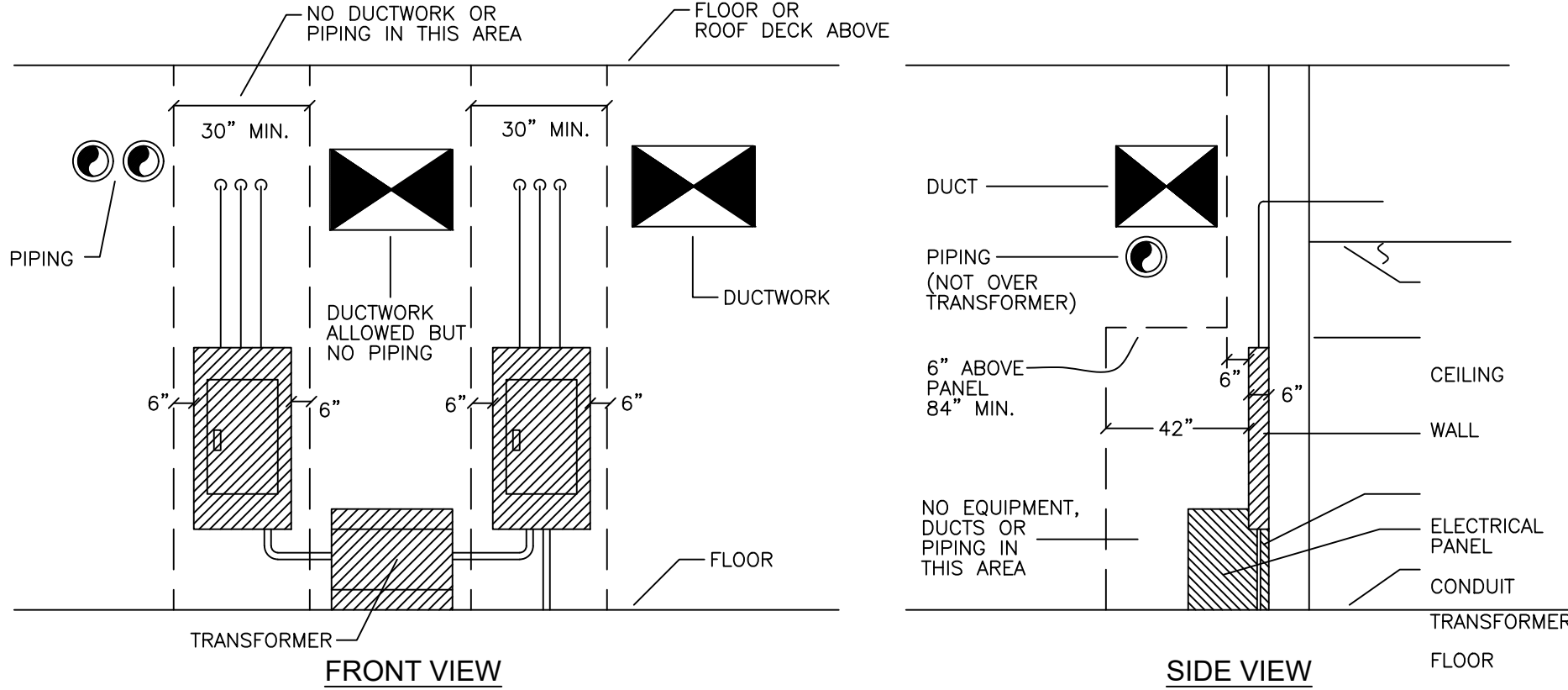
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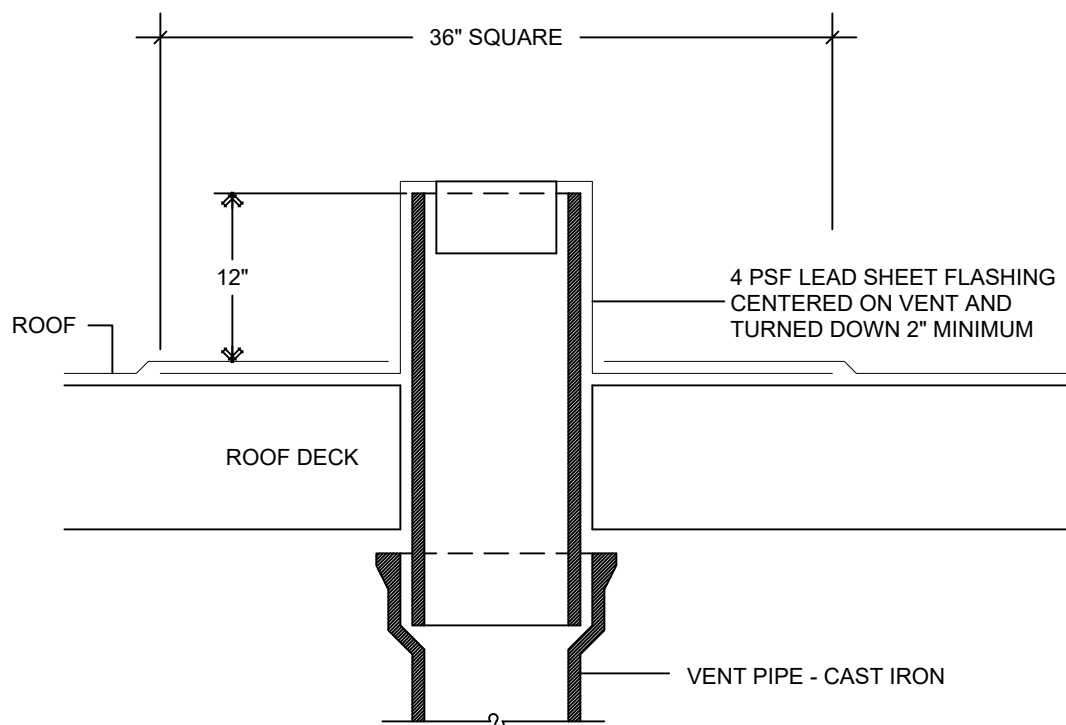




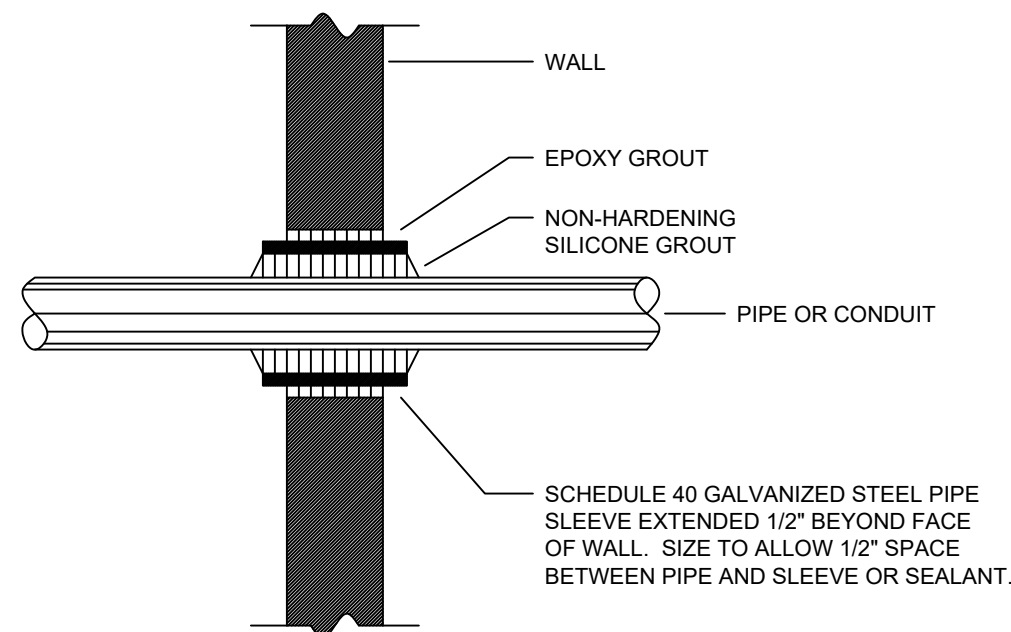
5 ROOF PIPE JACK DETAIL
NO SCALE
NOTE: COORDINATE WITH ARCHITECTURAL DRAWINGS, DETAILS AND SPECIFICATIONS.



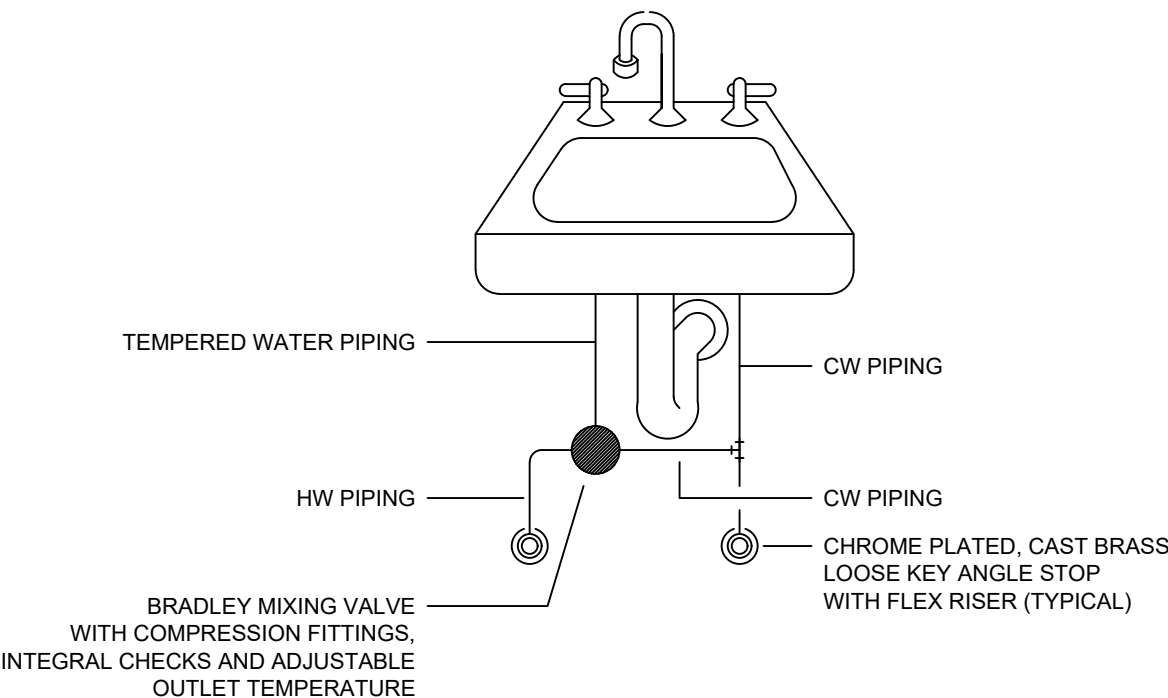
2 MECHANICAL - ELECTRICAL COORDINATION DETAIL
NO SCALE
DO NOT INSTALL ANY PIPING BENEATH CVT BOXES. DO NOT INSTALL ANY PIPING (EXCEPT FIRE SPRINKLER PIPING AND OTHER PIPES SHOWN SPECIFICALLY ON THE PLUMBING FLOOR PLANS) OVER COMPUTER CLASSROOMS, BOOKROOMS, IDF/MDF/SERVER ROOMS OR OTHER ROOMS NOTED ON THE PLUMBING FLOOR PLANS.



4 ROOF VENT DETAIL
NO SCALE
COORDINATE WITH ARCHITECTURAL DRAWINGS AND SPECIFICATIONS. LOCATE PLUMBING VENTS THROUGH ROOF NOT NEARER THAN SIX (6) FEET AWAY FROM EDGE OF BUILDING AND TEN (10) FEET AWAY FROM ANY FRESH AIR INTAKES. OFFSET VENT PIPING, AS REQUIRED, IN CEILING SPACE BETWEEN CEILING AND ROOF TO MEET THESE REQUIREMENTS.

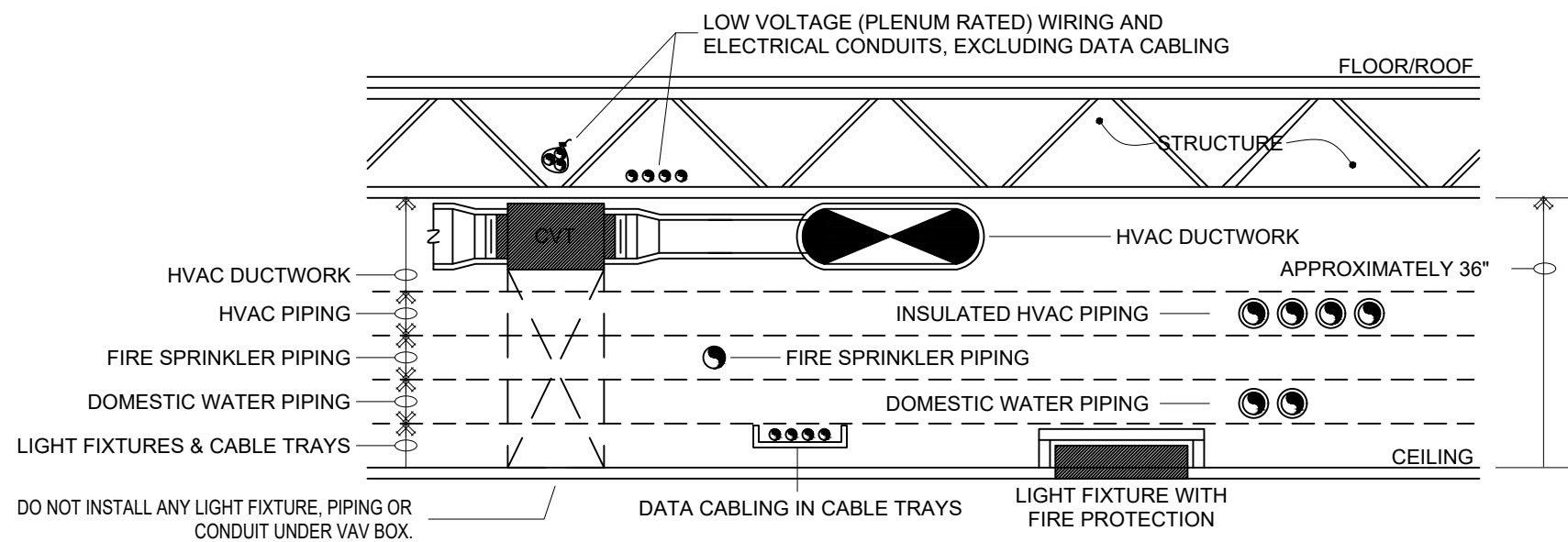


6 WALL PENETRATION DETAIL
NO SCALE
INSTALL 4" THICK CONCRETE CURB AROUND PIPE PENETRATIONS OF MEZZANINE FLOORS.
THIS DETAIL APPLIES TO ALL PIPING THROUGH WALLS OR FLOORS, INCLUDING FIRE SPRINKLER PIPING.



3 KNEESPACE TMV DETAIL
NO SCALE
NOTES
1. THIS DETAIL ONLY APPLIES TO LAVS AND SINKS THAT HAVE HOT WATER WHERE THE FAUCET PROVIDED DOES NOT HAVE A HIGH TEMPERATURE LIMIT. BRADLEY S59-4000A LEAD FREE TMV WITH MOUNTING BRACKET.
2. ALL CW AND HW CONNECTIONS SHALL HAVE COMPRESSION TYPE FITTINGS.
3. TMV SHALL BE INSTALLED IN A EASILY/READILY ACCESSIBLE LOCATION.
4. TMV SHALL BE ASSE 1070 CERTIFIED.

1 PLENUM SPACE PRIORITY DETAIL
NO SCALE
PIPING, CONDUIT AND DUCTWORK SUPPORTS ARE NOT SHOWN ON THIS DETAIL. SUPPORT ALL ENTITIES AS REQUIRED BY THE WRITTEN SPECIFICATIONS.
DO NOT INSTALL ANY PIPE OVER TOP OF ANY ELECTRICAL EQUIPMENT. THIS INCLUDES FIRE SPRINKLER PIPING. NO EXCEPTIONS.
DO NOT INSTALL ANY PIPE OVER TOP OF ANY IDF/MDF/SERVER/NETWORK EQUIPMENT. THIS INCLUDES EQUIPMENT PROVIDED BY OWNER. THIS INCLUDES FIRE SPRINKLER PIPING. NO EXCEPTIONS.



PLENUM PRIORITY NOTES	
ELECTRICAL CONDUIT	INSTALLED WITHIN OPEN WEBS OF JOIST FRAMING. IF FRAMING IS USED FOR SUPPORT OF CONDUIT, A SADDLE SHALL BE REQUIRED FOR ISOLATION AT EACH SUPPORT POINT.
LOW VOLTAGE WIRING (EXCEPT DATA CABLEING)	INSTALLED WITHIN OPEN WEBS OF JOIST FRAMING AND RUN PARALLEL OR PERPENDICULAR TO BUILDING WALLS. ALL INDIVIDUAL WIRES SHALL BE BUNDLED TOGETHER WITH PLASTIC TIE STRAPS AT 6 FOOT MAXIMUM INTERVALS AND EACH WIRE SHALL BE IDENTIFICATION TAGGED AT 25 FOOT MAXIMUM INTERVALS.
HVAC DUCTWORK	INSTALLED AS SNUG TO BOTTOM OF STRUCTURE AS POSSIBLE, ALLOWING ONLY ENOUGH SPACE FOR INSULATION WRAP. OFFSET HOT AND COLD MEDIUM PRESSURE DUCTS FOR TAKE-OFFS FOR DOUBLE DUCT VAV BOXES.
HVAC PIPING	INSTALLED IN PLANE DIRECTLY BELOW HVAC DUCTWORK. ALL VALVES AND INSTRUMENTS SHALL BE ACCESSIBLE AND EASILY OPERATED FROM BELOW.
FIRE SPRINKLER PIPING	INSTALLED IN PLANE DIRECTLY BELOW HVAC PIPING.
DOMESTIC WATER PIPING	INSTALLED IN PLANE DIRECTLY ABOVE LIGHT FIXTURES. ALL VALVES AND INSTRUMENTS SHALL BE ACCESSIBLE AND EASILY OPERATED FROM BELOW. BALL VALVES INSTALLED WITH STEM HORIZONTAL SHALL BE USED IN LIEU OF WHEEL HANDLE VALVES OR OTHER TYPES EXCEPT IN SITUATIONS WHERE BALL VALVES ARE NOT APPROPRIATE.
LIGHT FIXTURES	TAKE PRIORITY IN SPECIAL LAYOUT. ALL OTHER SYSTEMS (DOUBLE DUCT UNITS, DUCTWORK, PIPING, CONDUITS, ETC.) SHALL BE ROUTED IN PLENUM SPACE TO AVOID PASSING DIRECTLY (LOW) OVER LIGHTING FIXTURES PREVENTING THEIR INSTALLATION, SERVICING AND/OR REMOVAL.
GRAVITY FED PLUMBING	THIS INCLUDES PLUMBING WASTE/VENT AND ROOF DRAIN SYSTEMS. THESE SYSTEMS TAKE PRIORITY OVER ALL OTHER SYSTEMS BUT MUST BE INSTALLED TAKING OTHER SYSTEMS INTO CONSIDERATION. IN GENERAL, ROOF DRAIN PIPING SHALL START AS HIGH AS POSSIBLE. WASTE/VENT PIPING SHALL BE INSTALLED IN HVAC PIPING SPACE (IF AVAILABLE) IN AREAS WHERE CROSSING DUCTWORK. DO NOT INSTALL WASTE/VENT OR ROOF DRAIN PIPING UNDER DOUBLE DUCT VAV BOXES IF AVOIDABLE.



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P500

NO.	REVISION DESCRIPTION	DATE

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