

LOT 10 LAKEWOOD BUSINESS PARK

LOT 10 I-470 BUSINESS & TECHNOLOGY CENTER
2601 NE MCBAIN DRIVE
LEE'S SUMMIT, MO 64064

ISSUED FOR:
PERMIT - 09/01/2021



GENERAL NOTES	CONSTRUCTION NOTES	SHEET INDEX	VICINITY MAP																																																																																																																																																			
<p>1. CONTRACTOR SHALL VISIT THE SITE, FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS AND OWNER REVIEW AND UNDERSTAND THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND CONDITIONS PRIOR TO BEGINNING ANY WORK AND SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCY. DO NOT SCALE DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CORRECTIONS AND REPAIRS REQUIRED DUE TO THEIR FAILURE TO DO SO. GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT ALL SUB-CONTRACTORS RECEIVE ALL ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.</p> <p>2. SOLELY AS A CONVENIENCE TO THE OWNER AND CONTRACTOR, THE ARCHITECT MAY INCLUDE DOCUMENTS PREPARED BY CERTAIN CONSULTANTS (OR INCORPORATE THE RECOMMENDATIONS OF SAID CONSULTANTS INTO DOCUMENTS PREPARED BY THE ARCHITECT) WITHIN THE SET OF DOCUMENTS ISSUED BY THE ARCHITECT. IT IS EXPRESSLY UNDERSTOOD, THAT BY SUCH ISSUANCE, THE ARCHITECT ASSUMES NO LIABILITY FOR THE SERVICES OF SAID CONSULTANTS.</p> <p>3. ALL WORK AND MATERIALS SHALL CONFORM TO THE APPLICABLE CODES LISTED IN THE PROJECT CODE SUMMARY.</p> <p>4. UNLESS OTHERWISE INDICATED ON THESE DRAWINGS AND SPECIFICATIONS AS BEING N.I.C. OR EXISTING, ALL ITEMS, MATERIALS, ETC. AND INSTALLATIONS OF THE SAME ARE A PART OF THE CONTRACT DEFINED BY THESE DRAWINGS AND SPECIFICATIONS AND THEIR INTENT.</p> <p>5. CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS AND COMPLY WITH SAFETY REGULATIONS AND RESTRICTIONS AS REQUIRED FOR WORKERS AND PEDESTRIAN PROTECTION DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT. PROVIDE PROTECTION AS REQUIRED TO PREVENT ANY DAMAGE TO EXISTING CONSTRUCTION WITHIN AND ADJACENT TO JOB SITE. WHERE DAMAGE OCCURS, THE CONTRACTOR SHALL REPAIR OR REPLACE DAMAGED AREA AND/OR MATERIAL AS REQUIRED TO THE OWNER'S APPROVAL AT NO ADDITIONAL COST. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND MAY NOT BE LIMITED TO NORMAL WORKING HOURS. PROVIDE SECURITY FENCE AND GATES AS NECESSARY AROUND THE AREA WITHIN THE SCOPE OF WORK.</p> <p>6. IF THERE ARE TRENCHES OR EXCAVATION 5'-0" OR MORE IN DEPTH INTO WHICH A PERSON IS REQUIRED TO DESCEND, CONTRACTOR SHALL OBTAIN NECESSARY PERMIT FROM THE APPROPRIATE LOCAL GOVERNING AGENCY.</p> <p>7. PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, TRANSPORTATION, UTILITIES, OTHER SERVICES AND RELATED TASKS NECESSARY FOR PROPER EXECUTION OF THE CONSTRUCTION REQUIRED BY CONTRACT DOCUMENTS.</p> <p>8. ANY REVISION OR ADDITIONAL WORK REQUIRED BY FIELD CONDITIONS OR LOCAL GOVERNING AUTHORITIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT BEFORE PROCEEDING.</p> <p>9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND PAYING FOR ALL PERMITS, LICENSES, INSPECTIONS AND TESTING INDICATED ON THE PLANS AND BY SPECIFICATIONS OR REQUIRED BY THE SOILS REPORT AND/OR REQUIRED BY ANY GOVERNMENT AGENCY.</p> <p>10. CONTRACTOR SHALL VERIFY THE SIZE AND LOCATION OF ALL UTILITY LINES AND STUBS TO THE BUILDING(S) AS MAY BE INDICATED ON THE PLANS.</p> <p>11. NO ADDITIONAL ROOF OPENING OR ROOF MOUNTED EQUIPMENT IS ALLOWED BEYOND THAT WHICH IS SHOWN ON THESE PLANS WITHOUT WRITTEN CONSENT OF THE ARCHITECT AND STRUCTURAL ENGINEER.</p> <p>12. NO STRUCTURAL MEMBER SHALL BE CUT FOR PIPES, HVAC DUCTS, ETC., UNLESS SPECIFICALLY DETAILED AND/OR APPROVED BY THE ARCHITECT AND STRUCTURAL ENGINEER.</p> <p>13. ALL SHOP WELDING TO BE DONE IN A CERTIFIED LICENSED SHOP. ALL FIELD WELDING SHALL BE DONE ONLY BY CERTIFIED WELDERS UNDER CONTINUOUS INSPECTION WITH CERTIFICATE ISSUED AS REQUIRED BY BUILDING OFFICIAL.</p> <p>14. WHERE LARGER STUDS OR FURRING IS REQUIRED TO COVER DUCTS, PIPING, CONDUIT, ETC., THE LARGER SIZE STUD OR FURRING SHALL EXTEND THE FULL LENGTH OF THE SURFACE WHERE THE FURRING OCCURS.</p> <p>15. NO HAZARDOUS MATERIALS WILL BE STORED AND/OR USED WITHIN THE BUILDING WHICH EXCEED THE QUANTITIES ALLOWED BY CODE.</p> <p>16. INSTALLATION OF ANY BUILDING INSULATION WHICH CONTAINS OR UTILIZES AN OZONE DEPLETING COMPOUND IS PROHIBITED.</p> <p>17. NO BUILDING OR PORTION OF A BUILDING SHALL BE OCCUPIED OR USED FOR STORAGE PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY.</p> <p>18. THE BUILDING AND FACILITIES MUST BE ACCESSIBLE TO AND FUNCTIONAL FOR THE PHYSICALLY DISABLED IN ACCORDANCE WITH AMERICANS WITH DISABILITIES ACT (ADA) AND ALL OTHER STATE/FEDERAL GOVERNING AGENCIES.</p>	<p>1. ALL WORK PERFORMED SHALL BE IN ACCORDANCE WITH THE BUILDING CODE OF THE AUTHORITY HAVING JURISDICTION AND THE RULES AND REGULATIONS OF ALL AGENCIES, DEPARTMENTS AND COMMISSIONS HAVING JURISDICTION. WHERE DISCREPANCIES OCCUR AND/OR WHERE THERE ARE CONFLICTS OR OMISSIONS IN THE DRAWINGS AND APPLICATIONS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IMMEDIATELY AND REFRAIN FROM STARTING AND COMPLETING SUCH WORK, OR DEPENDENT WORK, UNTIL TOLD BY THE ARCHITECT TO PROCEED.</p> <p>2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS IN THE FIELD PRIOR TO COMMENCING WORK, AND SHALL REPORT TO THE ARCHITECT ANY CONDITION OR DISCREPANCY BETWEEN DRAWINGS AND FIELD CONDITIONS REQUIRING MODIFICATIONS BEFORE PROCEEDING WITH THE WORK.</p> <p>3. MINOR DETAILS NOT USUALLY SHOWN OR SPECIFIED, BUT NECESSARY FOR PROPER CONSTRUCTION OF ANY PART OF THE WORK SHALL BE INCLUDED AS IF THEY WERE INDICATED IN THE DRAWINGS.</p> <p>4. REFERENCING OF DRAWINGS IS FOR CONVENIENCE ONLY AND DOES NOT LIMIT APPLICATION OF ANY DRAWING.</p> <p>5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL CONDITIONS AND MATERIALS WITHIN THE PROPOSED CONSTRUCTION AREAS. THE CONTRACTOR SHALL DESIGN AND INSTALL ADEQUATE SHORING AND BRACING FOR ALL STRUCTURAL OR REMOVAL TASKS. THE CONTRACTOR SHALL HAVE SOLE RESPONSIBILITY FOR ANY DAMAGE OR INJURIES CAUSED BY OR DURING THE EXECUTION OF THE WORK.</p> <p>6. NOTES APPEAR ON VARIOUS SHEETS FOR VARIOUS SYSTEMS AND MATERIALS. SHEETS ARE TO BE OWNER REVIEWED AND NOTES ON ANY ONE SHEET ARE TO BE APPLIED TO RELATED SYSTEMS AND MATERIALS DEPICTED ON OTHER DRAWINGS.</p> <p>7. DETAILS NOT SHOWN ARE SIMILAR IN CHARACTER TO THOSE THAT ARE. WHERE SPECIFIC DIMENSIONS, DETAILS, OR DESIGN INTENT CANNOT BE DETERMINED, CONSULT THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.</p> <p>8. THE CONTRACTOR SHALL LAY OUT HIS OWN WORK, AND SHALL PROVIDE ALL DIMENSIONS REQUIRED FOR OTHER TRADES.</p> <p>9. THE CONTRACTOR SHALL DO ALL CUTTING, PATCHING AND REPAIRING AS REQUIRED TO PERFORM ALL OF THE WORK INDICATED ON THE DRAWINGS, AND ALL OTHER WORK THAT MAY BE REQUIRED TO COMPLETE THE JOB.</p> <p>10. GUTTER AND DOWNSPOUT SIZING PER OWNER'S CONTRACTOR.</p>	<table border="1"> <thead> <tr> <th>#</th> <th>SHEET NAME</th> <th>ISSUE FOR PERMIT - 09/01/2021</th> </tr> </thead> <tbody> <tr> <td colspan="3">GENERAL</td> </tr> <tr> <td>G-100</td> <td>COVER SHEET</td> <td>X</td> </tr> <tr> <td colspan="3">CIVIL</td> </tr> <tr> <td>C-001</td> <td>COVER SHEET</td> <td>X</td> </tr> <tr> <td>C-101</td> <td>DEMOLITION PLAN</td> <td>X</td> </tr> <tr> <td>C-121</td> <td>EROSION CONTROL PLAN PHASE 1</td> <td>X</td> </tr> <tr> <td>C-122</td> <td>EROSION CONTROL PLAN PHASE 2</td> <td>X</td> </tr> <tr> <td>C-123</td> <td>EROSION CONTROL PLAN PHASE 3</td> <td>X</td> </tr> <tr> <td>C-131</td> <td>EROSION CONTROL DETAILS</td> <td>X</td> </tr> <tr> <td>C-132</td> <td>EROSION CONTROL DETAILS</td> <td>X</td> </tr> <tr> <td>C-201</td> <td>DIMENSION PLAN</td> <td>X</td> </tr> <tr> <td>C-301</td> <td>GRADING PLAN</td> <td>X</td> </tr> <tr> <td>C-401</td> <td>UTILITY PLAN</td> <td>X</td> </tr> <tr> <td>C-411</td> <td>STORM PROFILES</td> <td>X</td> </tr> <tr> <td>C-421</td> <td>DRAINAGE AREA MAP</td> <td>X</td> </tr> <tr> <td>C-501</td> <td>DETAILS</td> <td>X</td> </tr> <tr> <td colspan="3">LANDSCAPE</td> </tr> <tr> <td>L-100</td> <td>LANDSCAPE PLAN</td> <td></td> </tr> <tr> <td colspan="3">ARCHITECTURAL</td> </tr> <tr> <td>A-001</td> <td>LIFE SAFETY AND CODE SHEET</td> <td>X</td> </tr> <tr> <td>A-002</td> <td>ROOF DRAINAGE PLAN</td> <td>X</td> </tr> <tr> <td>A-100</td> <td>OVERALL MAIN LEVEL FLOOR PLAN</td> <td>X</td> </tr> <tr> <td>A-110</td> <td>MAIN LEVEL FLOOR PLAN - AREA A</td> <td>X</td> </tr> <tr> <td>A-111</td> <td>MAIN LEVEL FLOOR PLAN - AREA B</td> <td>X</td> </tr> <tr> <td>A-130</td> <td>ENLARGED PLANS</td> <td>X</td> </tr> <tr> <td>A-200</td> <td>ROOF PLAN</td> <td>X</td> </tr> <tr> <td>A-301</td> <td>EXTERIOR ELEVATIONS</td> <td>X</td> </tr> <tr> <td>A-400</td> <td>WALL SECTIONS & DETAILS</td> <td>X</td> </tr> <tr> <td colspan="3">STRUCTURAL</td> </tr> <tr> <td>S001</td> <td>STRUCTURAL GENERAL NOTES</td> <td>X</td> </tr> <tr> <td>S100</td> <td>FOUNDATION PLAN</td> <td>X</td> </tr> <tr> <td>S101</td> <td>FOUNDATION PLAN</td> <td>X</td> </tr> <tr> <td colspan="3">MECHANICAL/PLUMBING</td> </tr> <tr> <td>MP001</td> <td>MECHANICAL AND PLUMBING SPECIFICATIONS AND SYMBOLS</td> <td>X</td> </tr> <tr> <td>MP002</td> <td>MECHANICAL AND PLUMBING SCHEDULES AND DETAILS</td> <td>X</td> </tr> <tr> <td colspan="3">MECHANICAL</td> </tr> <tr> <td>M-101</td> <td>MECHANICAL PLAN WEST</td> <td>X</td> </tr> <tr> <td>M-102</td> <td>MECHANICAL PLAN EAST</td> <td>X</td> </tr> <tr> <td colspan="3">PLUMBING</td> </tr> <tr> <td>P-101</td> <td>PLUMBING PLAN WEST</td> <td>X</td> </tr> <tr> <td>P-102</td> <td>PLUMBING PLAN EAST</td> <td>X</td> </tr> <tr> <td colspan="3">ELECTRICAL</td> </tr> <tr> <td>E-001</td> <td>ELECTRICAL SPECIFICATIONS AND SYMBOLS</td> <td>X</td> </tr> <tr> <td>E-101</td> <td>ELECTRICAL PLAN - WEST</td> <td>X</td> </tr> <tr> <td>E-102</td> <td>ELECTRICAL PLAN - EAST</td> <td>X</td> </tr> <tr> <td>E-201</td> <td>ELECTRICAL EQUIPMENT POWER PLAN - WEST</td> <td>X</td> </tr> <tr> <td>E-202</td> <td>ELECTRICAL EQUIPMENT POWER PLAN - EAST</td> <td>X</td> </tr> <tr> <td>E-301</td> <td>ELECTRICAL SCHEDULES AND DIAGRAMS</td> <td>X</td> </tr> </tbody> </table>	#	SHEET NAME	ISSUE FOR PERMIT - 09/01/2021	GENERAL			G-100	COVER SHEET	X	CIVIL			C-001	COVER SHEET	X	C-101	DEMOLITION PLAN	X	C-121	EROSION CONTROL PLAN PHASE 1	X	C-122	EROSION CONTROL PLAN PHASE 2	X	C-123	EROSION CONTROL PLAN PHASE 3	X	C-131	EROSION CONTROL DETAILS	X	C-132	EROSION CONTROL DETAILS	X	C-201	DIMENSION PLAN	X	C-301	GRADING PLAN	X	C-401	UTILITY PLAN	X	C-411	STORM PROFILES	X	C-421	DRAINAGE AREA MAP	X	C-501	DETAILS	X	LANDSCAPE			L-100	LANDSCAPE PLAN		ARCHITECTURAL			A-001	LIFE SAFETY AND CODE SHEET	X	A-002	ROOF DRAINAGE PLAN	X	A-100	OVERALL MAIN LEVEL FLOOR PLAN	X	A-110	MAIN LEVEL FLOOR PLAN - AREA A	X	A-111	MAIN LEVEL FLOOR PLAN - AREA B	X	A-130	ENLARGED PLANS	X	A-200	ROOF PLAN	X	A-301	EXTERIOR ELEVATIONS	X	A-400	WALL SECTIONS & DETAILS	X	STRUCTURAL			S001	STRUCTURAL GENERAL NOTES	X	S100	FOUNDATION PLAN	X	S101	FOUNDATION PLAN	X	MECHANICAL/PLUMBING			MP001	MECHANICAL AND PLUMBING SPECIFICATIONS AND SYMBOLS	X	MP002	MECHANICAL AND PLUMBING SCHEDULES AND DETAILS	X	MECHANICAL			M-101	MECHANICAL PLAN WEST	X	M-102	MECHANICAL PLAN EAST	X	PLUMBING			P-101	PLUMBING PLAN WEST	X	P-102	PLUMBING PLAN EAST	X	ELECTRICAL			E-001	ELECTRICAL SPECIFICATIONS AND SYMBOLS	X	E-101	ELECTRICAL PLAN - WEST	X	E-102	ELECTRICAL PLAN - EAST	X	E-201	ELECTRICAL EQUIPMENT POWER PLAN - WEST	X	E-202	ELECTRICAL EQUIPMENT POWER PLAN - EAST	X	E-301	ELECTRICAL SCHEDULES AND DIAGRAMS	X	
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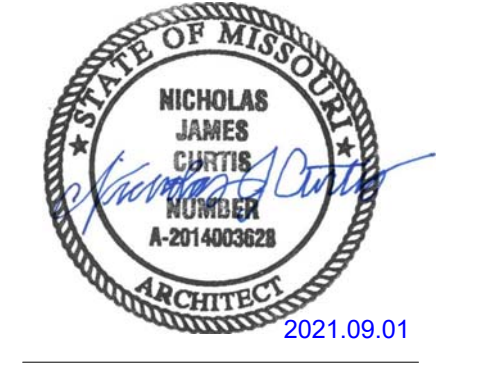
RELEASED FOR CONSTRUCTION
As Noted on Plans Review

POWELL CWM
ARCHITECTURE/ENGINEERING/SURVEYING
3200 S. State Route 297, Bldg. 1, Independence, MO 64027
(816) 373-4800 | powellcwm.com

Certificates of Authority
Architecture: MO 310 / KS 73
Engineering: MO 4 / KS 241
Land Surveying: MO 123 / KS 36

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GRAIN VALLEY, MO 64029
david@safetyministorage.com

LOT 10 LAKEWOOD BUSINESS PARK
LOT 10 I-470 BUSINESS PARK
LEE'S SUMMIT, MO 64064



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REVISIONS	NO.	DATE	DESCRIPTION

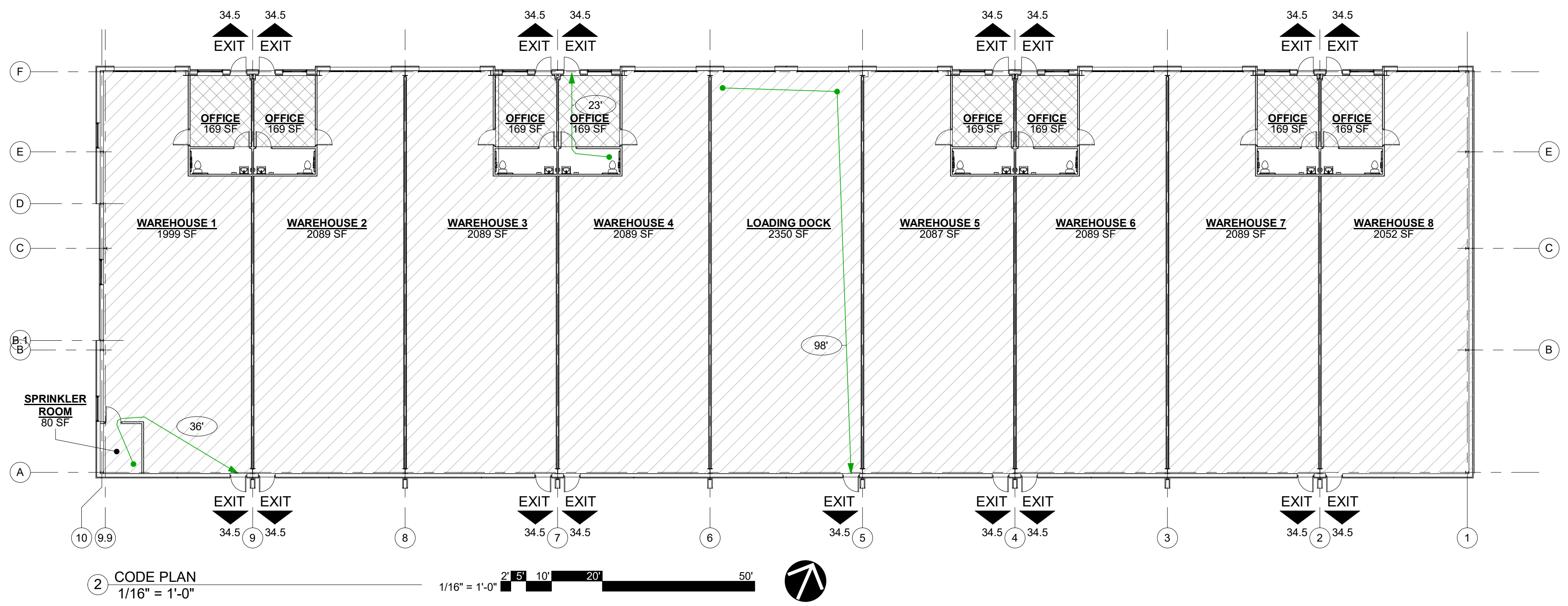
DRAWN BY: NC
CHECKED BY: NC
PROJECT #: 21-1902
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ISSUED FOR: ISSUE FOR PERMIT
COVER SHEET
G-100

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LIFE-SAFETY GENERAL NOTES

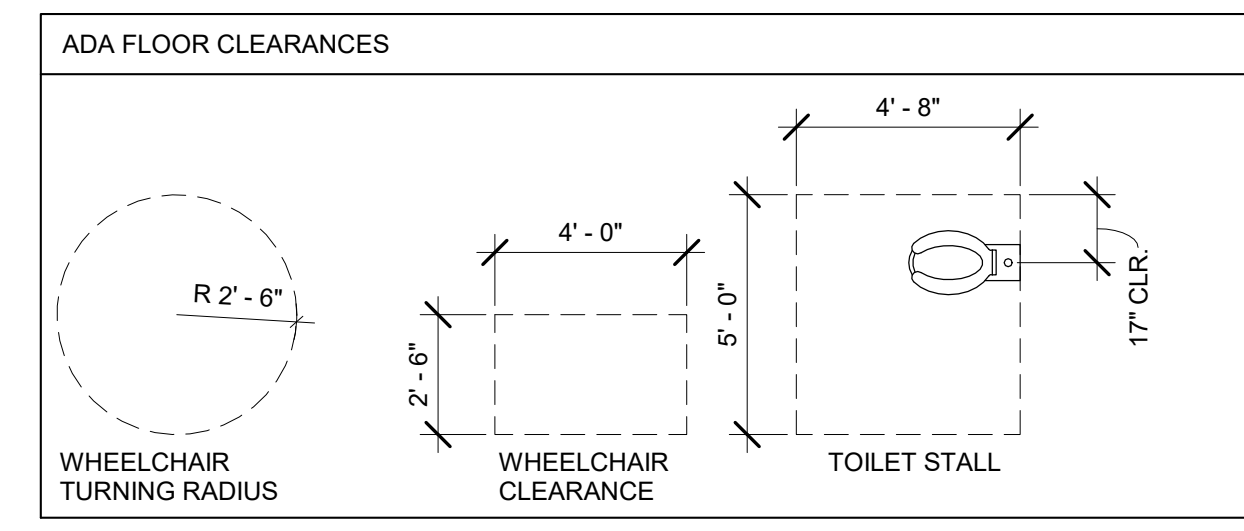
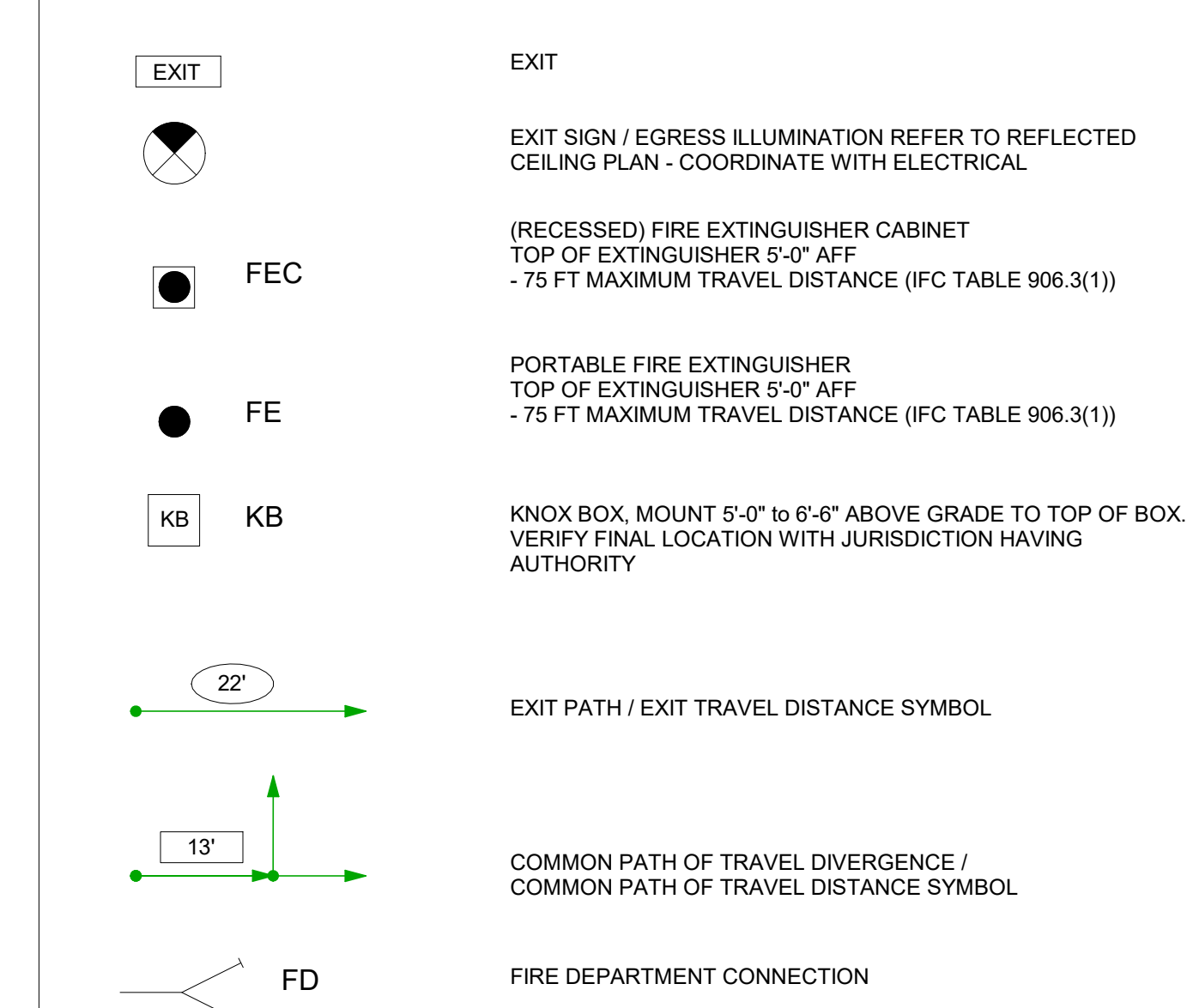
- ALL EXIT DOORS SHALL BE OPERABLE / OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.
- BUILDING ADDRESS NUMBER (BUILDING IDENTIFIER) SHALL BE A MINIMUM 6 INCHES HIGH AND PLAINLY VISIBLE FROM ROADWAY FRONTING THE PROPERTY.
- FIRE EXTINGUISHERS SHALL BE DISTRIBUTED THROUGHOUT THE FACILITY (PER NFPA 101) SO THAT NO GREATER THAN 75 FEET TRAVEL DISTANCE IS REQUIRED TO REACH A UNIT (IFC TABLE 906.3). NO MORE THAN 50 FEET IN GARAGE AREA. MINIMUM SIZE (5 LB)# 5A40BC EXTINGUISHERS SHALL BE SECURELY MOUNTED WITH THE TOP OF THE CANISTER NO HIGHER THAN 42" ABOVE FINISHED FLOOR, WITH STATE FIRE MARSHAL INSPECTION TAG ATTACHED AND SIGNAGE TO INDICATE LOCATION.
- PROVIDE FIRE EXTINGUISHERS IN LOCATIONS AND QUANTITIES AS SHOWN AND AS DIRECTED BY THE FIRE MARSHAL OF THE JURISDICTION HAVING AUTHORITY. PROVIDE EXTINGUISHERS THAT ARE COMPATIBLE WITH THE CHEMICALS IN THE ROOMS.
- FIRE SPRINKLER AND FIRE ALARM SYSTEMS ARE TO BE DESIGN/BUILD BY THE SUBCONTRACTOR. THE SHOP DRAWINGS WILL BE MADE AVAILABLE TO THE CITY FOR REVIEW PRIOR TO INSTALL.
- PROVIDE HAZARDOUS MATERIALS SIGNAGE AS SPECIFIED BY NFPA STANDARD 704.
- SMOKING SHALL BE PROHIBITED AND "NO SMOKING" SIGNS PROVIDED AT:
 - ROOMS WHERE HAZARDOUS MATERIALS ARE STORED OR DISPENSED OR USED IN OPEN SYSTEMS IN AMOUNTS REQUIRING A PERMIT IN ACCORDANCE WITH SECTION 5001.5
 - WITHIN 25 FT OF OUTDOOR STORAGE, DISPENSING OR OPEN USE AREAS.
 - FACILITIES OR AREAS WITHIN FACILITIES THAT HAVE BEEN DESIGNATED AS TOTALLY "NO SMOKING" SHALL HAVE "NO SMOKING" SIGNAGE PLACED AT ALL ENTRANCES TO THE FACILITY OR AREA. DESIGNATED AREAS WITHIN SUCH FACILITIES WHERE SMOKING IS PERMITTED EITHER PERMANENTLY OR TEMPORARILY, SHALL BE INDENTED WITH SIGNS DESIGNATING THAT SMOKING IS PERMITTED IN THESE AREAS ONLY.
 - IN ROOMS OR AREAS WHERE FLAMMABLE OR COMBUSTIBLE HAZARDOUS MATERIALS ARE STORED, DISPENSED OR USED.



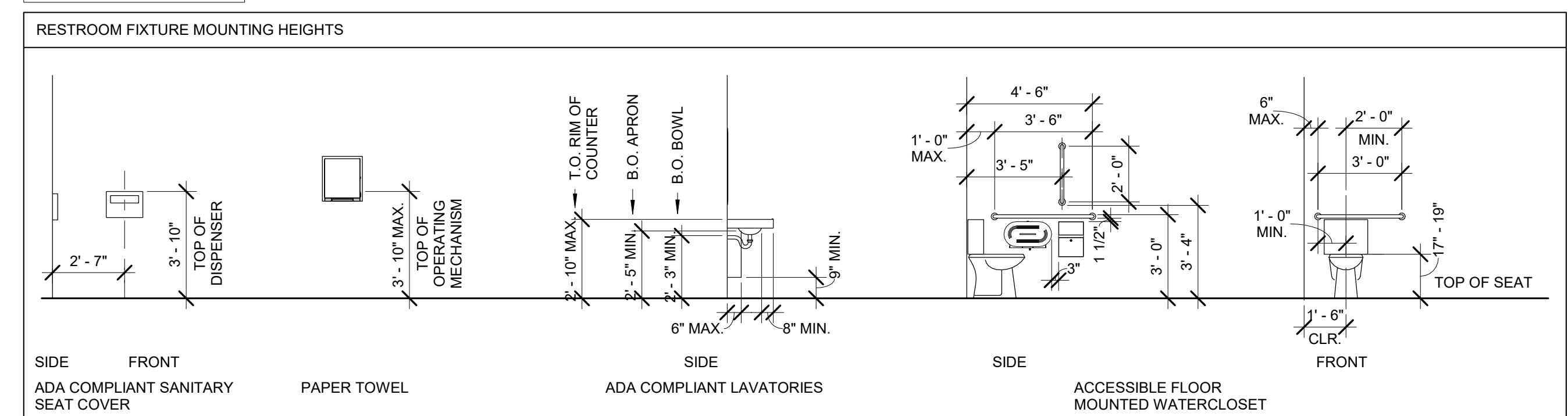
CODE ANALYSIS

APPLICABLE CODES	FIRE RESISTANCE																																														
THE BUILDING SHALL BE IN COMPLIANCE WITH THE FOLLOWING: 2018 INTERNATIONAL BUILDING CODE 2018 INTERNATIONAL PLUMBING CODE 2018 INTERNATIONAL MECHANICAL CODE 2018 INTERNATIONAL FUEL GAS CODE 2018 INTERNATIONAL FIRE CODE 2017 NATIONAL ELECTRICAL CODE ICC/ANSI A117.1-2009, ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES LEE'S SUMMIT, MISSOURI	FIRE RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS - TABLE 601 PRIMARY STRUCTURAL FRAME: 0 HOURS BEARING WALLS EXTERIOR: 0 HOURS BEARING WALLS INTERIOR: 0 HOURS NONBEARING WALLS EXTERIOR: - NONBEARING WALLS INTERIOR: 0 HOURS FLOOR CONSTRUCTION: 0 HOURS ROOF CONSTRUCTION: 0 HOURS FIRE PROTECTION SYSTEMS, SECTION 903.2.10 REQUIRED: YES PROVIDED: YES																																														
OCCUPANCY CLASSIFICATION	MEANS OF EGRESS																																														
MAIN OCCUPANCY (S-2): S-2: STORAGE (LOW-HAZARD STORAGE) SECTION 311.3 ACCESSORY OCCUPANCY (B): B: BUSINESS SECTION 508.2.1 SECTION 304	SUITE TYPE A (WAREHOUSE) SUITE TYPE B (LOADING DOCK)																																														
TYPE OF CONSTRUCTION TYPE OF CONSTRUCTION V-B IBC SECTION 602.5	MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT - TABLE 1004.1.2 STORAGE WAREHOUSE 1 1999 SF / 300 GROSS = 7 OCCUPANTS SPRINKLER ROOM 80 SF / 300 GROSS = 1 OCCUPANTS WAREHOUSE 2 2089 SF / 300 GROSS = 7 OCCUPANTS WAREHOUSE 3 2089 SF / 300 GROSS = 7 OCCUPANTS WAREHOUSE 4 2089 SF / 300 GROSS = 7 OCCUPANTS WAREHOUSE 5 2089 SF / 300 GROSS = 7 OCCUPANTS WAREHOUSE 6 2089 SF / 300 GROSS = 7 OCCUPANTS WAREHOUSE 7 2089 SF / 300 GROSS = 7 OCCUPANTS WAREHOUSE 8 2052 SF / 300 GROSS = 7 OCCUPANTS TOTAL = 64 OCCUPANTS BUSINESS OFFICE 1 169 SF / 150 GROSS = 2 OCCUPANTS OFFICE 2 169 SF / 150 GROSS = 2 OCCUPANTS OFFICE 3 169 SF / 150 GROSS = 2 OCCUPANTS OFFICE 4 169 SF / 150 GROSS = 2 OCCUPANTS OFFICE 5 169 SF / 150 GROSS = 2 OCCUPANTS OFFICE 6 169 SF / 150 GROSS = 2 OCCUPANTS OFFICE 7 169 SF / 150 GROSS = 2 OCCUPANTS OFFICE 8 169 SF / 150 GROSS = 2 OCCUPANTS TOTAL = 16 OCCUPANTS TOTAL OCCUPANTS = 80 OCCUPANTS																																														
ALLOWABLE HEIGHTS MAIN OCCUPANCY (S-2): BUILDING HEIGHT - TABLE 504.3 ALLOWABLE HEIGHT = 60 FT ACTUAL HEIGHT = 22 FT 2 IN BUILDING # OF STORIES - TABLE 504.4 ALLOWABLE HEIGHT = 3 STORY ACTUAL HEIGHT = 1 STORY ACCESSORY OCCUPANCY (B): SHALL BE IN ACCORDANCE WITH THE MAIN OCCUPANCY OF THE BUILDING SECTION 508.2.2	MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT - TABLE 1004.1.2 STORAGE LOADING DOCK 2350 SF / 300 GROSS = 8 OCCUPANTS TOTAL OCCUPANTS = 8 OCCUPANTS MINIMUM REQUIRED EGRESS WIDTH - 1005.1 REQUIRED: 8 OCC. X 0.2" = 1.6" REQUIRED PROVIDED: 1 DOORS @ 34.5" CLEAR = 34.5" PROVIDED TOTAL WIDTH PER SUITE (1) = 34.5" PROVIDED NUMBER OF EXITS, TABLE 1006.2.1: REQUIRED: 1 PROVIDED: 1 EXIT ACCESS TRAVEL DISTANCE - TABLE 1017.2 MAIN OCCUPANCY: REQUIRED: 300 FT PROVIDED: SEE CODE PLAN																																														
ALLOWABLE AREAS ALLOWABLE FLOOR AREA - TABLE 506.2 MAIN OCCUPANCY (S-2): ALLOWABLE AREA = 54,000 SF PER STORY (WITHOUT INCREASES) ACTUAL AREA = 22,677 SF ACCESSORY OCCUPANCY (B): ALLOWABLE AREA = 36,000 SF PER STORY (WITHOUT INCREASES) SHALL NOT OCCUPY MORE THAN 10% OF MAIN OCCUPANCY AREA ACTUAL AREA = 1,344 SF 22,677 x .10 = 2,267 THEREFORE, COMPLIES.	MINIMUM REQUIRED EGRESS WIDTH - 1005.1 MAIN OCCUPANCY (S-2): REQUIRED: 7 OCC. X 0.2" = 1.4" REQUIRED PROVIDED: 1 DOORS @ 34.5" CLEAR = 34.5" PROVIDED ACCESSORY OCCUPANCY (B): REQUIRED: 2 OCC. X 0.2" = 0.4" REQUIRED PROVIDED: 2 DOORS @ 34.5" CLEAR = 69" PROVIDED TOTAL WIDTH PER SUITE (8) = 103.5" PROVIDED COMMON PATH OF EGRESS TRAVEL - TABLE 1006.2.1: REQUIRED: 100 FT PROVIDED: 9 FT 0 IN PER SUITE NUMBER OF EXITS, TABLE 1006.2.1: REQUIRED: 1 PROVIDED: 3 PER SUITE																																														
MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES	<table border="1"> <thead> <tr> <th>B: BUSINESS</th> <th colspan="2">WATER CLOSETS</th> <th colspan="2">LAVATORIES</th> <th colspan="2">DRINKING FOUNTAINS</th> <th colspan="2">OTHER</th> </tr> <tr> <th>7 OCCUPANTS PER SUITE (8)</th> <th>1/25</th> <th>1/40</th> <th>1/100</th> <th>1/100</th> <th>1/100</th> <th>1 SERVICE SINK</th> <th>1 SERVICE SINK</th> <th> </th> </tr> <tr> <th>REQUIRED</th> <th>PROVIDED</th> <th>REQUIRED</th> <th>PROVIDED</th> <th>REQUIRED</th> <th>PROVIDED</th> <th>REQUIRED</th> <th>PROVIDED</th> <th> </th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>X</td> <td>0</td> <td>0</td> </tr> <tr> <td>TOTAL</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>X</td> <td>0</td> <td>0</td> </tr> </tbody> </table>		B: BUSINESS	WATER CLOSETS		LAVATORIES		DRINKING FOUNTAINS		OTHER		7 OCCUPANTS PER SUITE (8)	1/25	1/40	1/100	1/100	1/100	1 SERVICE SINK	1 SERVICE SINK		REQUIRED	PROVIDED	REQUIRED	PROVIDED	REQUIRED	PROVIDED	REQUIRED	PROVIDED		1	1	1	1	1	1	X	0	0	TOTAL	1	1	1	1	1	X	0	0
B: BUSINESS	WATER CLOSETS		LAVATORIES		DRINKING FOUNTAINS		OTHER																																								
7 OCCUPANTS PER SUITE (8)	1/25	1/40	1/100	1/100	1/100	1 SERVICE SINK	1 SERVICE SINK																																								
REQUIRED	PROVIDED	REQUIRED	PROVIDED	REQUIRED	PROVIDED	REQUIRED	PROVIDED																																								
1	1	1	1	1	1	X	0	0																																							
TOTAL	1	1	1	1	1	X	0	0																																							

LIFE SAFETY LEGEND



NOTE: ALL BATHROOM FIXTURES TO BE MOUNTED PER ADA REQUIREMENT.



LOT 10 LAKEWOOD BUSINESS PARK
 LOT 10 I-470 BUSINESS PARK
 LEE'S SUMMIT, MO 64064

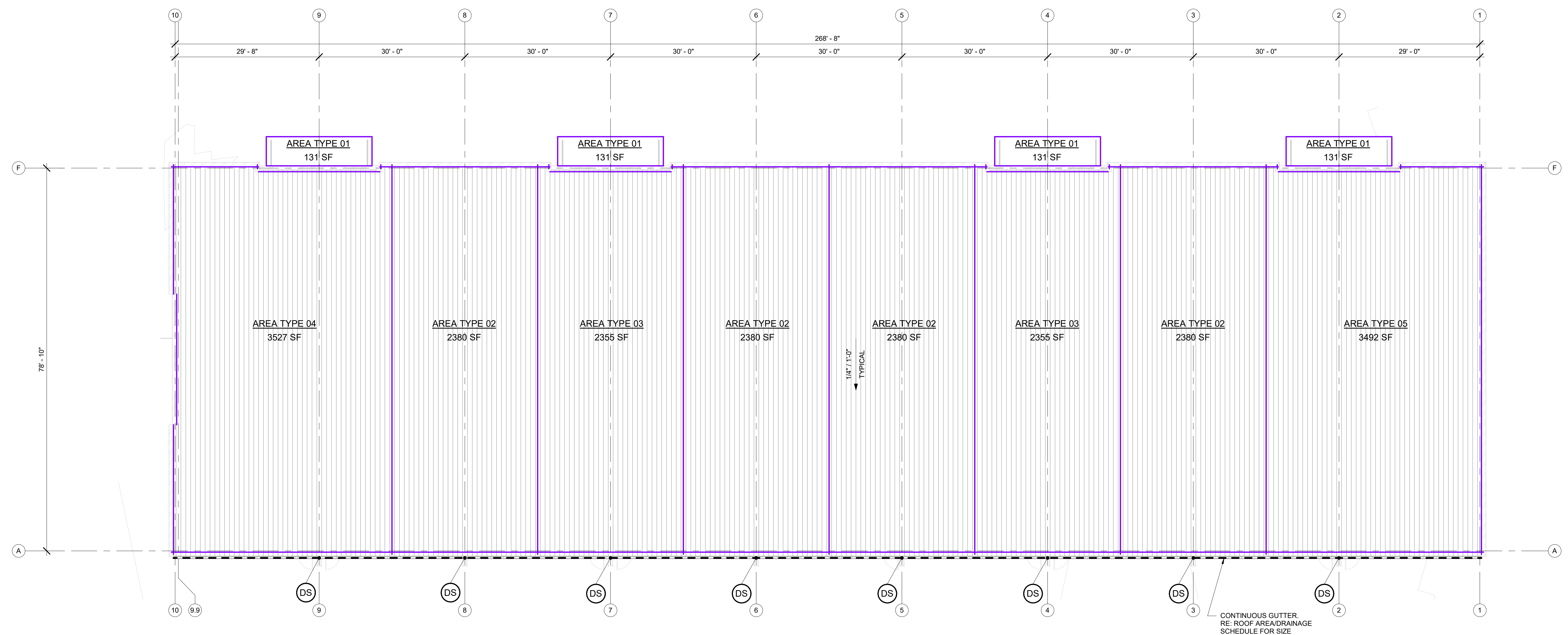


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ROOF DRAINAGE PLAN
 A-002



1 ROOF AREA DRAINAGE PLAN
 3/32" = 1'-0"

3/32" = 1'-0"



ROOF AREA SCHEDULE												
TYPE	Count	SMANCA Table 1-2 Rainfall Data and Drainage Factors	(A) AREA (SF)	SMANCA Table 1-1 Design Areas for Pitched Roofs	(B) Roof Slope Factor	(C) 100 Years - Calculated roof area drained per downspout area sq ft/sq in	(D) Total area of downspout req'd (sq. in.) (D = A*B/C)	(E) Number of Downspouts	(F) Area per Downspout Required (sq in)	Downspout Size	Gutter Size	Comments
AREA TYPE 01	4	MISSOURI: Kansas City	131 SF	3 to level	1	110	1.2	1	1.19	Per Canopy Manufacturer	Per Canopy Manufacturer	
AREA TYPE 02	4	MISSOURI: Kansas City	2,380 SF	3 to level	1	110	21.6	2	10.82	Rectangular Corrugated, Nominal 5" Downspout (3.75x5" = 18.75") Net Area "A" = 16.63 sq in	5"W x 7.5"D	
AREA TYPE 03	2	MISSOURI: Kansas City	2,355 SF	3 to level	1	110	21.4	2	10.70	Rectangular Corrugated, Nominal 5" Downspout (3.75x5" = 18.75") Net Area "A" = 16.63 sq in	5"W x 7.5"D	
AREA TYPE 04	1	MISSOURI: Kansas City	3,527 SF	3 to level	1	110	32.1	2	16.03	Rectangular Corrugated, Nominal 5" Downspout (3.75x5" = 18.75") Net Area "A" = 16.63 sq in	5"W x 7.5"D	
AREA TYPE 05	1	MISSOURI: Kansas City	3,492 SF	3 to level	1	110	31.7	2	15.87	Rectangular Corrugated, Nominal 5" Downspout (3.75x5" = 18.75") Net Area "A" = 16.63 sq in	5"W x 7.5"D	

GENERAL NOTES - ROOF DRAINAGE PLAN

- REFER TO PREENGINEERED METAL BUILDING DRAWINGS FOR ROOF SUPPORT STEEL AND DECKING ELEVATIONS AND INFORMATION.
- ROOF DRAINAGE CALCULATIONS PER 2018 IPC.
- REFER TO BUILDING ELEVATIONS FOR ADDITIONAL DOWNSPOUT INFORMATION.

ROOF DRAINAGE LEGEND

- (DS) DOWNSPOUT, RE: ROOF AREA/DRAINAGE SCHEDULE FOR STYLE AND SIZE.
- GUTTER
- 1/4" / 1'-0" SURFACE SLOPE ARROW
- AREA BOUNDARY



Certificates of Authority
 Architecture: MO 310 / KS 73
 Engineering: MO 4 / KS 241
 Land Surveying: MO 123 / KS 36

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LOT 10 LAKEWOOD BUSINESS PARK
 LOT 10 I-470 BUSINESS PARK
 LEE'S SUMMIT, MO 64064

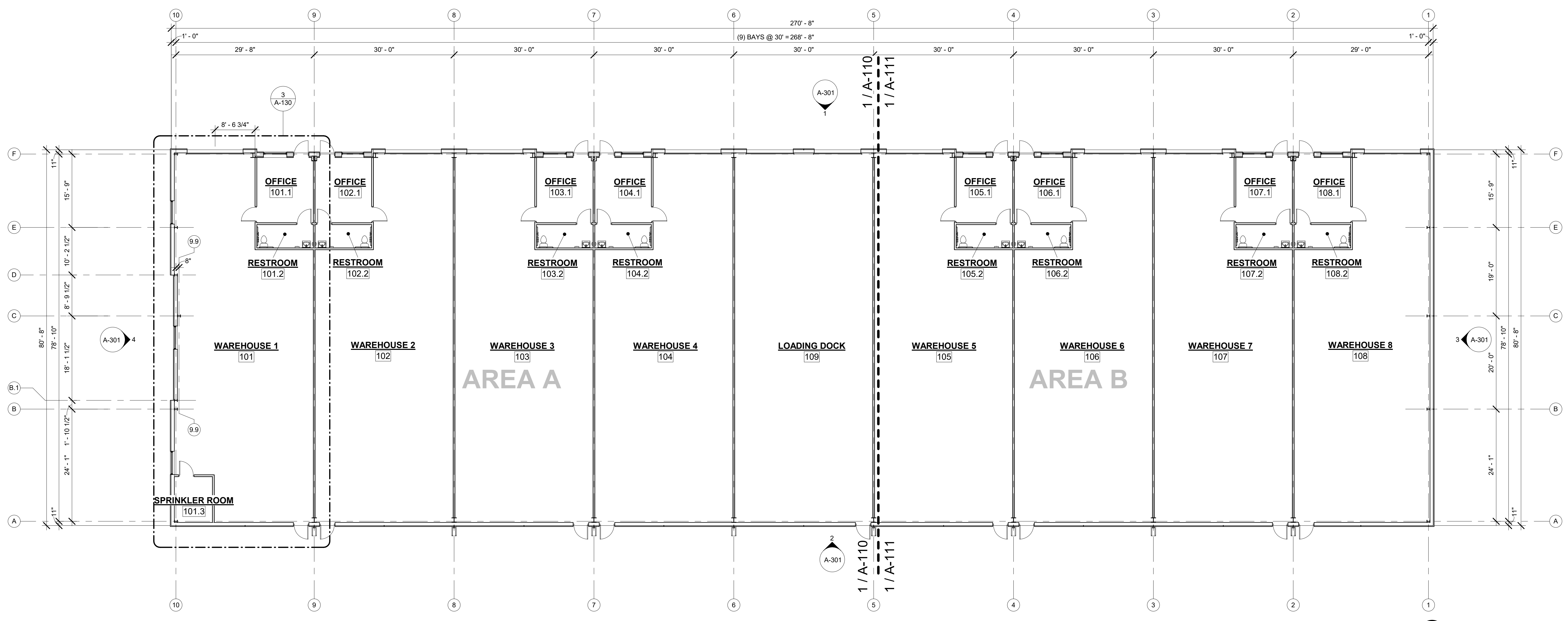


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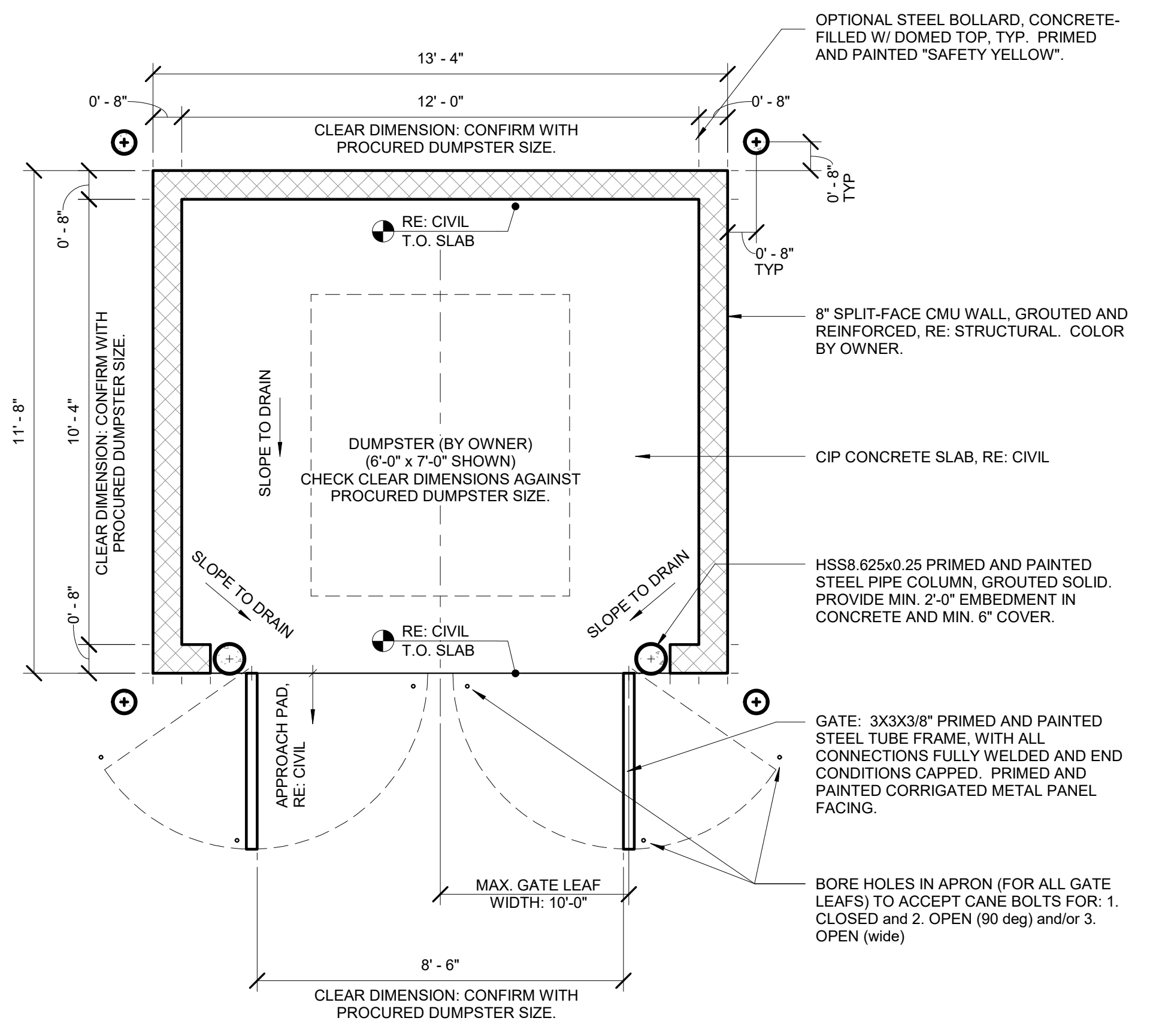
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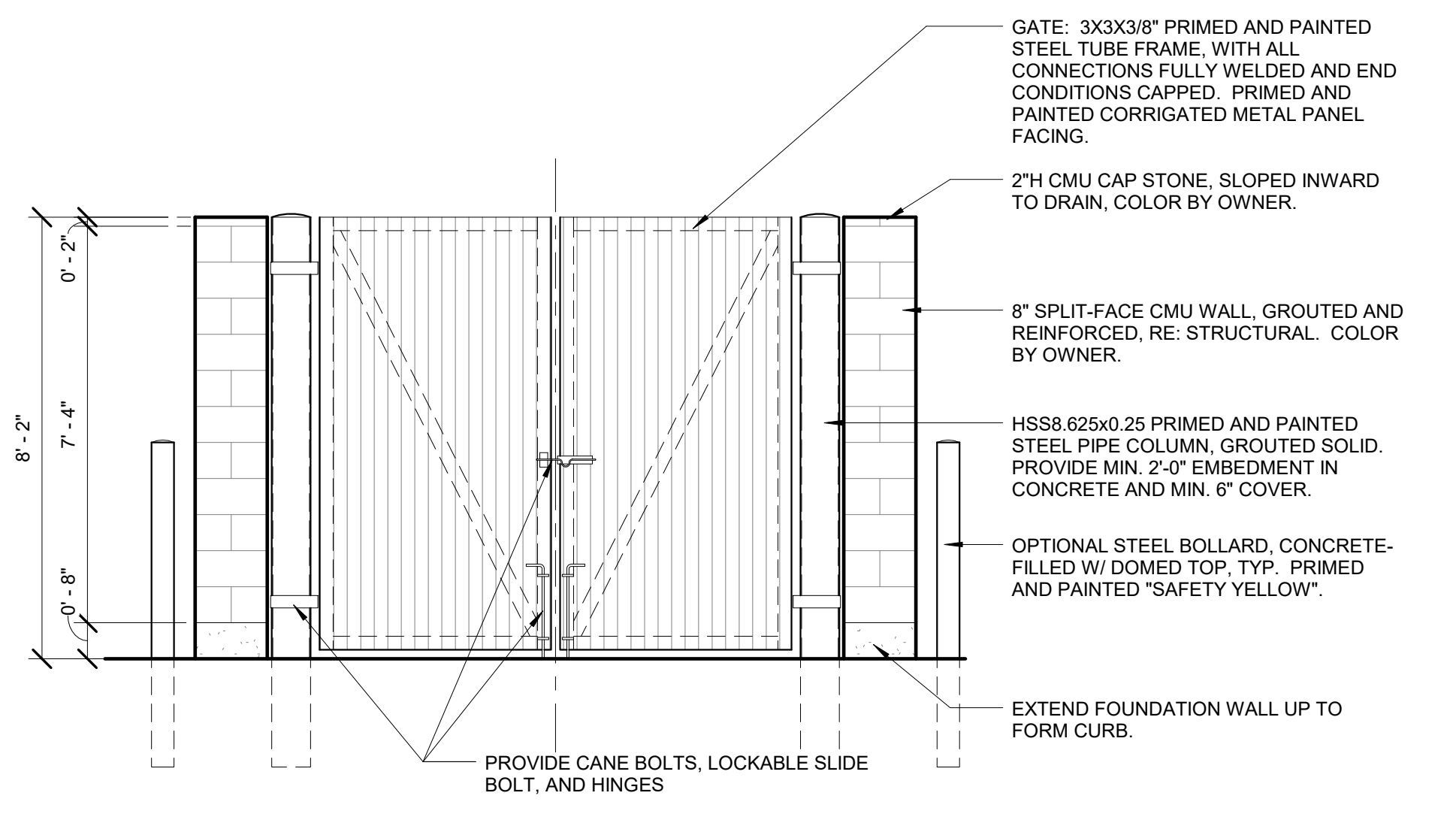
OVERALL MAIN LEVEL FLOOR PLAN



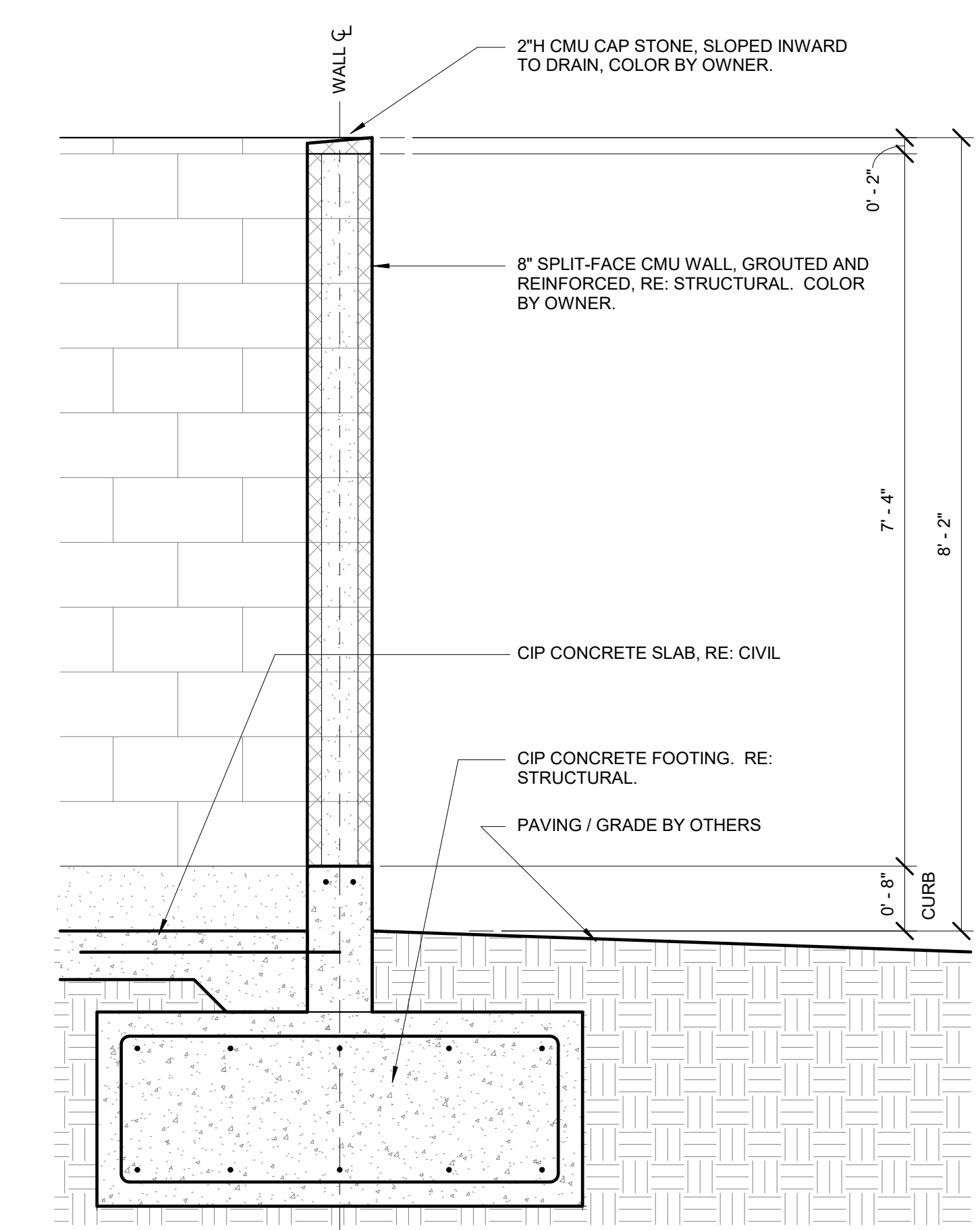
1 MAIN LEVEL FLOOR PLAN
 3/32" = 1'-0"



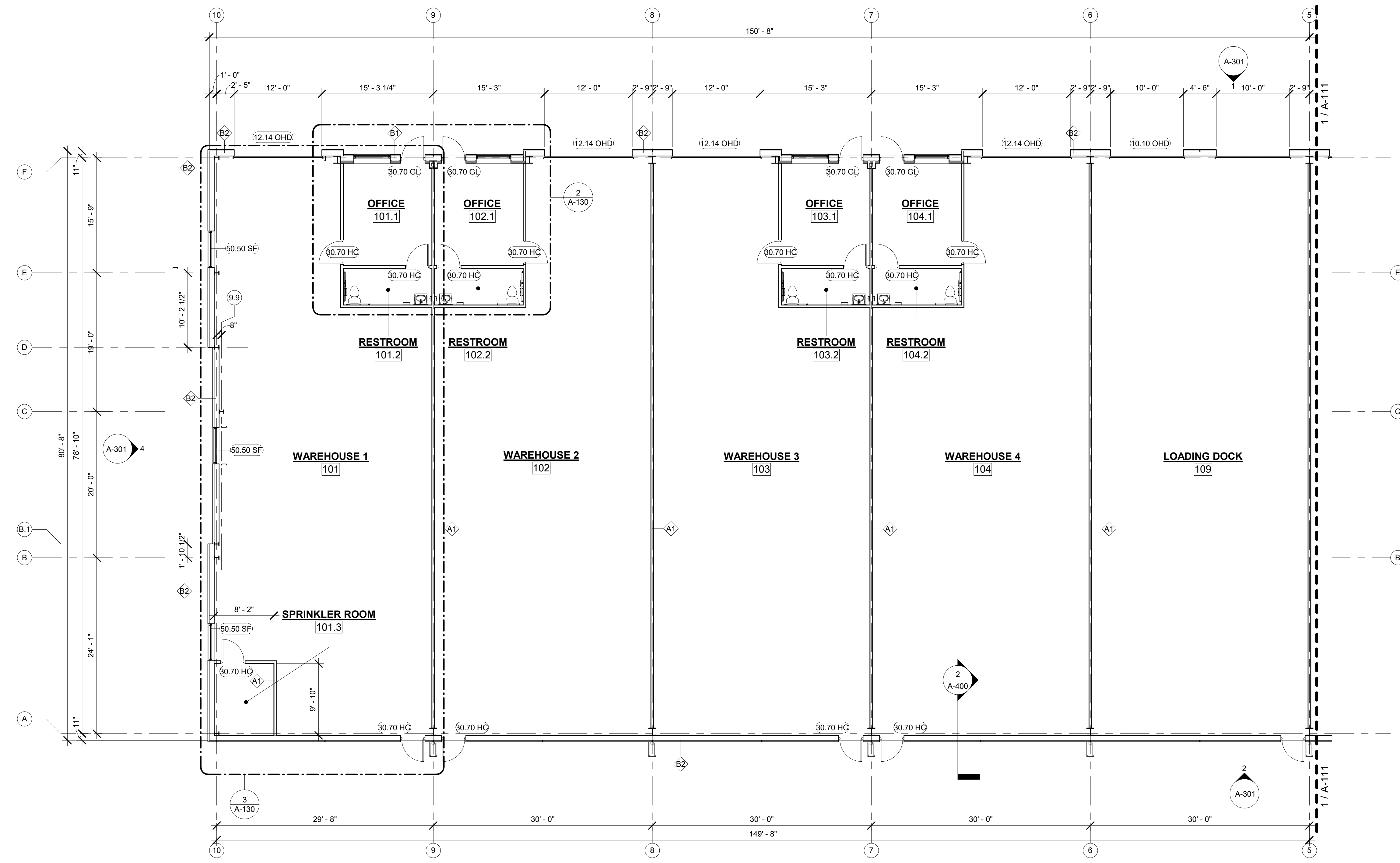
2 ENLARGED PLAN - DUMPSTER ENCLOSURE
 3/8" = 1'-0"



3 FRONT ELEVATION - DUMPSTER ENCLOSURE
 3/8" = 1'-0"



4 WALL SECTION - DUMPSTER ENCLOSURE
 3/4" = 1'-0"



- FLOOR PLAN NOTES**
- ALL EXTERIOR DIMENSIONS ARE TO EXTERIOR OF STEELWOOD FRAMING. REFER TO ELEVATIONS AND SECTIONS FOR EXTERIOR FINISH.
 - ALL LUMBER TO BE #2 GRADE OR BETTER DOUGLAS FIR.
 - ALL WOOD IN CONTACT W/ CONCRETE TO BE WEATHER TREATED.
 - 8" - 0" LINER PANEL TO BE PLACED ON ALL WALLS WITHIN THE INTERIOR OF THE BUILDING. COORDINATE TYPE AND FINISH WITH OWNER.

- LEGEND**
- WALL TYPE
 - DOOR TAG
 - MID = METAL INSULATED DOOR
 - OHD = OVERHEAD DOOR
 - PD = POCKET DOOR
 - SC = SOLID CORE
 - HC = HOLLOW CORE
 - OP = FRAMED OPENING
 - WIDTH (7'-0")
 - HEIGHT (3'-0")
 - WINDOW TAG
 - SF = STOREFRONT
 - WIDTH (7'-0")
 - HEIGHT (3'-0")

- Room Name**
[101] ROOM TAG
- SECTION**
1 SIM A101
- ELEVATION**
1 Ref A101
- CEILING ELEVATION**
MATERIAL 8'-0" A.F.F.

- WALL TYPES**
- A 5/8" GYP. BD.
2x4 WOOD FRAMING, RE: STRCT
INSULATION
 - A1 5/8" GYP. BD.
2x4 WOOD FRAMING, RE: STRCT
INSULATION
5/8" GYP. BD.
 - B1 2" EIFS
SHEATHING
METAL FRAMING PER PEMB PACKAGE
INSULATION
2x4 WOOD FRAMING, RE: STRCT
5/8" GYP. BD.
 - B2 2" EIFS
SHEATHING
METAL FRAMING PER PEMB PACKAGE

1 MAIN LEVEL FLOOR PLAN A
1/8" = 1'-0" 1/8" = 1'-0" 1/8" = 1'-0" 1/8" = 1'-0"

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 Engineering: MO 4 / KS 241
 Land Surveying: MO 123 / KS 36

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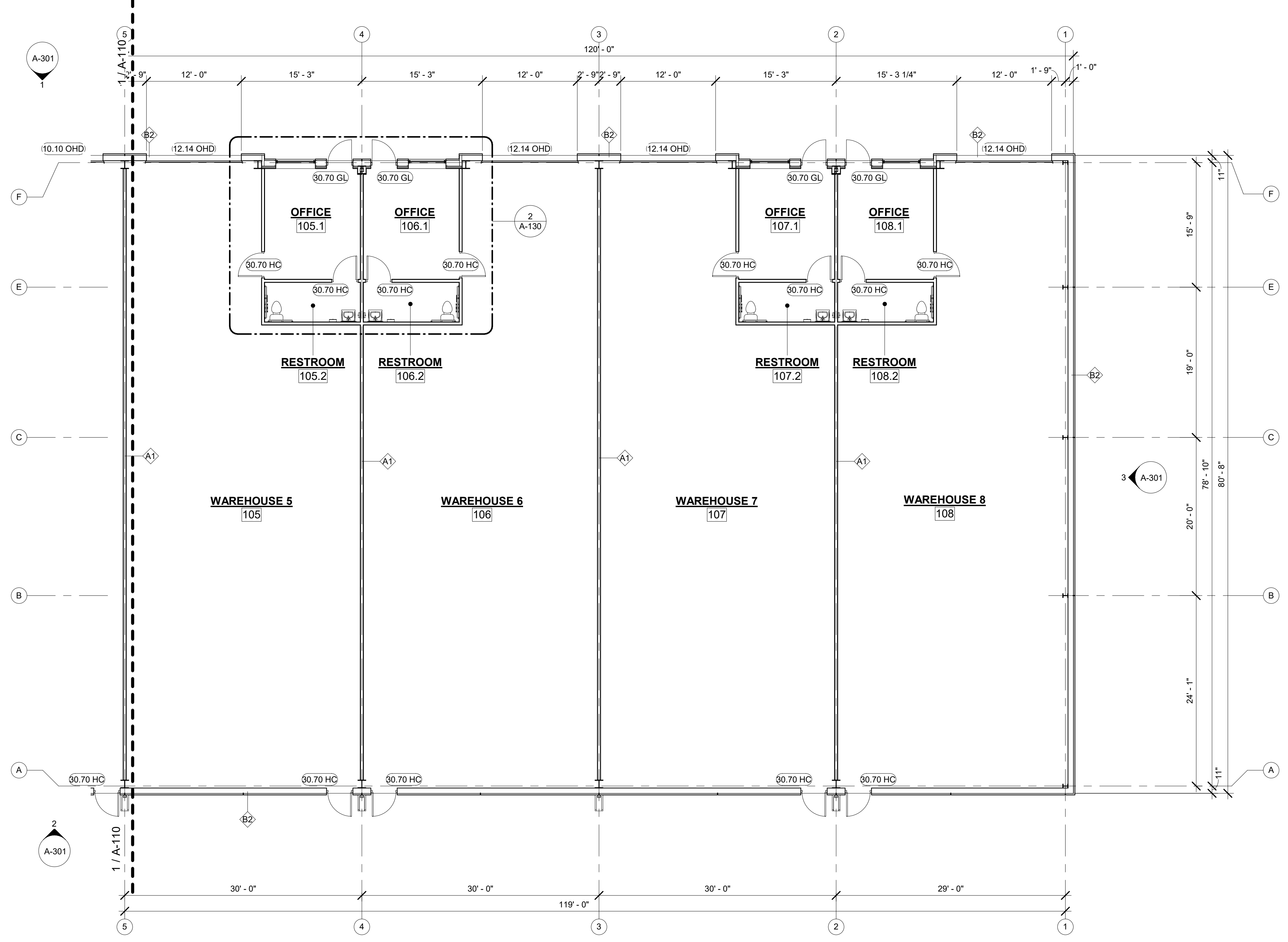
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MAIN LEVEL FLOOR PLAN - AREA B

A-111



1 MAIN LEVEL FLOOR PLAN B
 1/8" = 1'-0"



- FLOOR PLAN NOTES**
- ALL EXTERIOR DIMENSIONS ARE TO EXTERIOR OF STEELWOOD FRAMING. REFER TO ELEVATIONS AND SECTIONS FOR EXTERIOR FINISH.
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- LEGEND**
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 - PD = POCKET DOOR
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 - WIDTH (7'-0")
 - HEIGHT (3'-0")
 - WINDOW TAG
 - SF = STOREFRONT
 - WIDTH (7'-0")
 - HEIGHT (3'-0")

- Room Name**
- ROOM TAG
 - SECTION
 - ELEVATION
 - CEILING ELEVATION

- WALL TYPES**
- 5/8" GYP. BD.
 - 2x4 WOOD FRAMING, RE: STRCT
 - INSULATION
 - 5/8" GYP. BD.
 - 2x4 WOOD FRAMING, RE: STRCT
 - INSULATION
 - 5/8" GYP. BD.
 - 2" EIFS
 - SHEATHING
 - METAL FRAMING PER PEMB PACKAGE
 - INSULATION
 - 2x4 WOOD FRAMING, RE: STRCT
 - 5/8" GYP. BD.
 - 2" EIFS
 - SHEATHING
 - METAL FRAMING PER PEMB PACKAGE

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ENLARGED PLANS

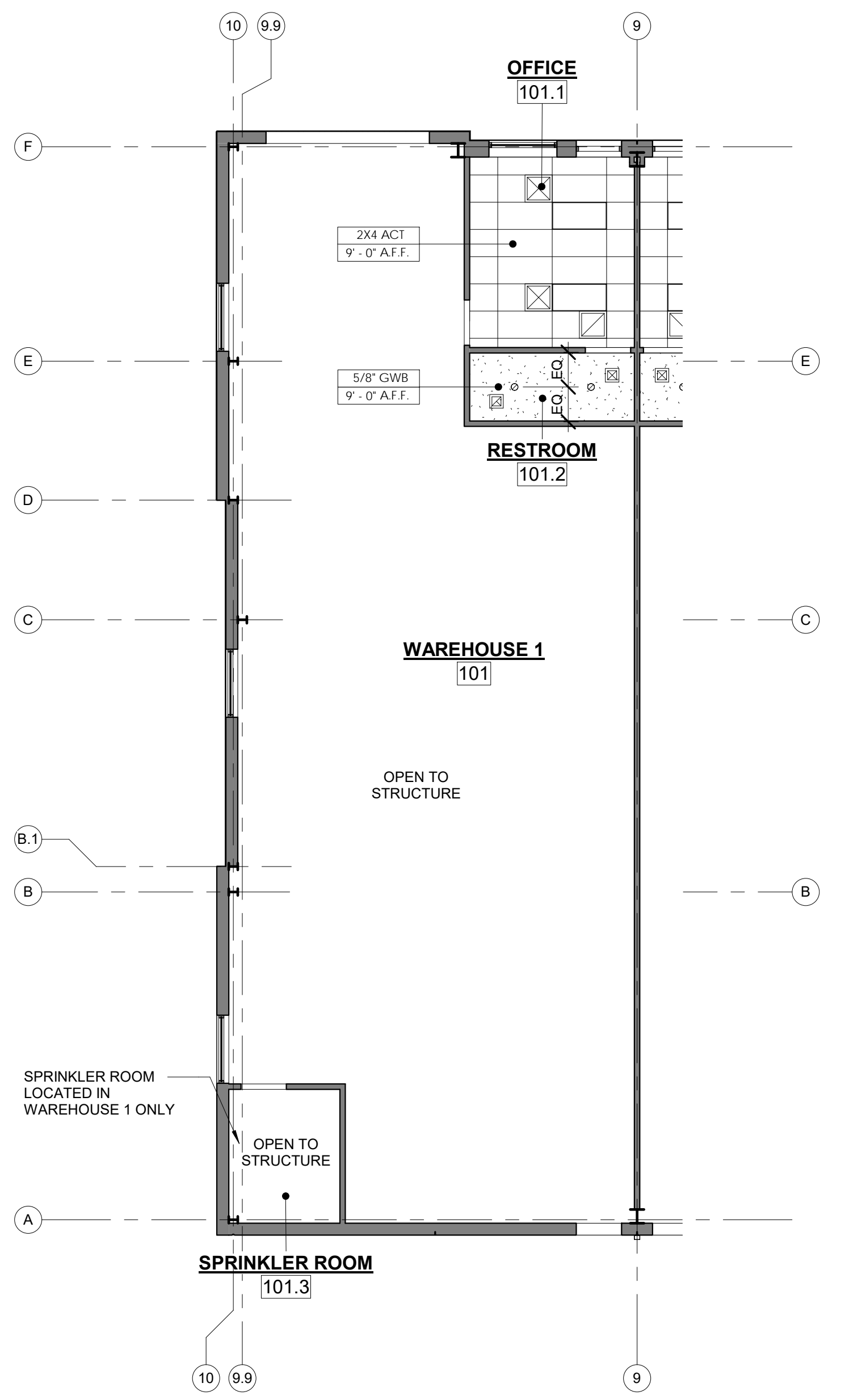
RESTROOM ACCESSORY SCHEDULE		
Type Mark	Description	Count
18" VERTICAL GRAB BAR		8
36" HORIZONTAL GRAB BAR		8
42" HORIZONTAL GRAB BAR		8
LAVATORY	'LUCERNE' Basin with Sealed Overflow, center hole only, 20-1/2" x 18-1/4" x 8-1/8" (521mm x 464mm x 206mm) deep, wall hung, vitreous china, integral back splash, self-draining deck area with contoured back and side splash shields, 'D' shaped bowl, contoured back and side splash shields for concealed arm carrier.	8
MIRROR	Bobrick B-290 2448 Welded Frame Mirror	8
NAPKIN DISPOSAL	Bobrick B-254 Surface Mounted Sanitary Napkin Disposal	8
PAPER TOWEL DISPENSER	Bobrick B-262 Classic Series Surface Mounted Paper Towel Dispenser	8
SEAT COVER DISPENSER	Bobrick B-221 Classic Series Surface Mounted Seat Cover Dispenser	8
SOAP DISPENSER	Bobrick B-2112 Classic Series Surface Mounted Soap Dispenser	8
TOILET PAPER DISPENSER	Bobrick B-2740 Surface Mounted Double Toilet Tissue Dispenser	8
WATER CLOSET	PER PLUMBING	8

GENERAL NOTES - CEILING PLAN

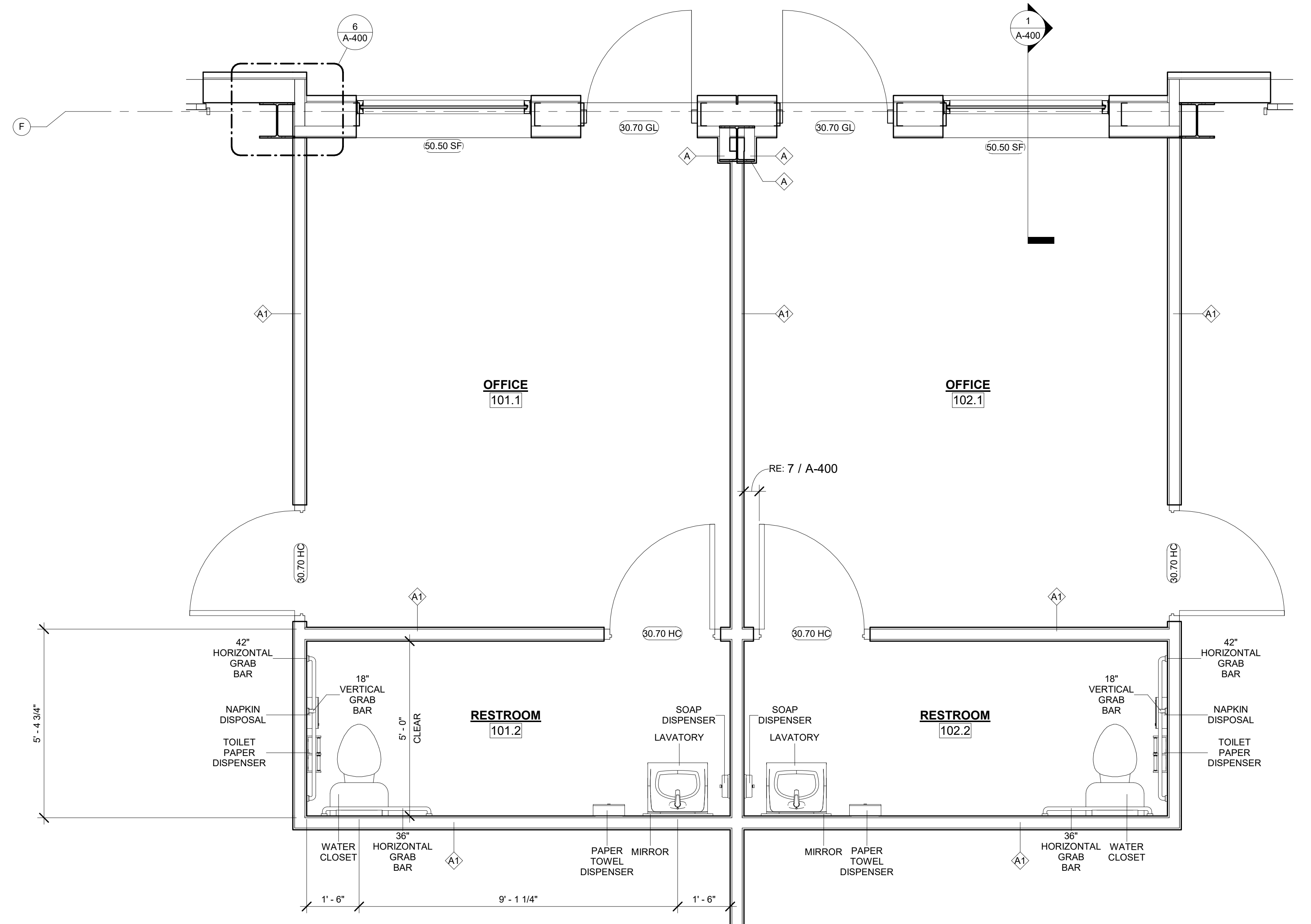
- REFER TO MEP DRAWINGS FOR ALL ADDITIONAL CEILING MOUNTED DEVICES NOT SHOWN ON THIS DRAWING INCLUDING, BUT NOT LIMITED TO LIGHTING, MECHANICAL REGISTERS, SMOKE DETECTORS, MOTION DETECTORS, EXIT SIGNAGE, HEAT DETECTORS, CAMERAS, COMMUNICATION EQUIPMENT, FIRE SPRINKLER HEADS, ETC.
- ALL EXPOSED STRUCTURAL STEEL SHALL BE PAINTED TO MATCH THE ADJACENT WALL COLOR. THIS INCLUDES, BUT IS NOT LIMITED TO STEEL BEAMS, LADDERS, GUARD RAILS, MISC. BRACING, ETC. SEE PEMB PACKAGE.
- CEILING R-VALUES SHALL MAINTAIN R-38. EXTERIOR WALL INSULATION SHALL MAINTAIN R-13 OR BETTER. WALL R-VALUES SHALL BE OF CONSTRUCTION TO EQUAL R-19 TOTAL.

LEGEND - CEILING PLAN

- SMOKE DETECTOR
- SMOKE DETECTOR AND CARBON MONOXIDE DETECTOR
- MECHANICAL RETURN DIFFUSER
- MECHANICAL SUPPLY DIFFUSER
- MECHANICAL EXHAUST DIFFUSER
- LIGHTING FIXTURE - BOX DOWNLIGHT
- LIGHTING FIXTURE - RECESSED CAN



3 ENTRY LEVEL RCP
1/8" = 1'-0"



2 RESTROOM PLAN - TYPICAL
1/2" = 1'-0"

**LOT 10 LAKEWOOD
BUSINESS PARK
LOT 10 I-470 BUSINESS PARK
LEE'S SUMMIT, MO 64064**



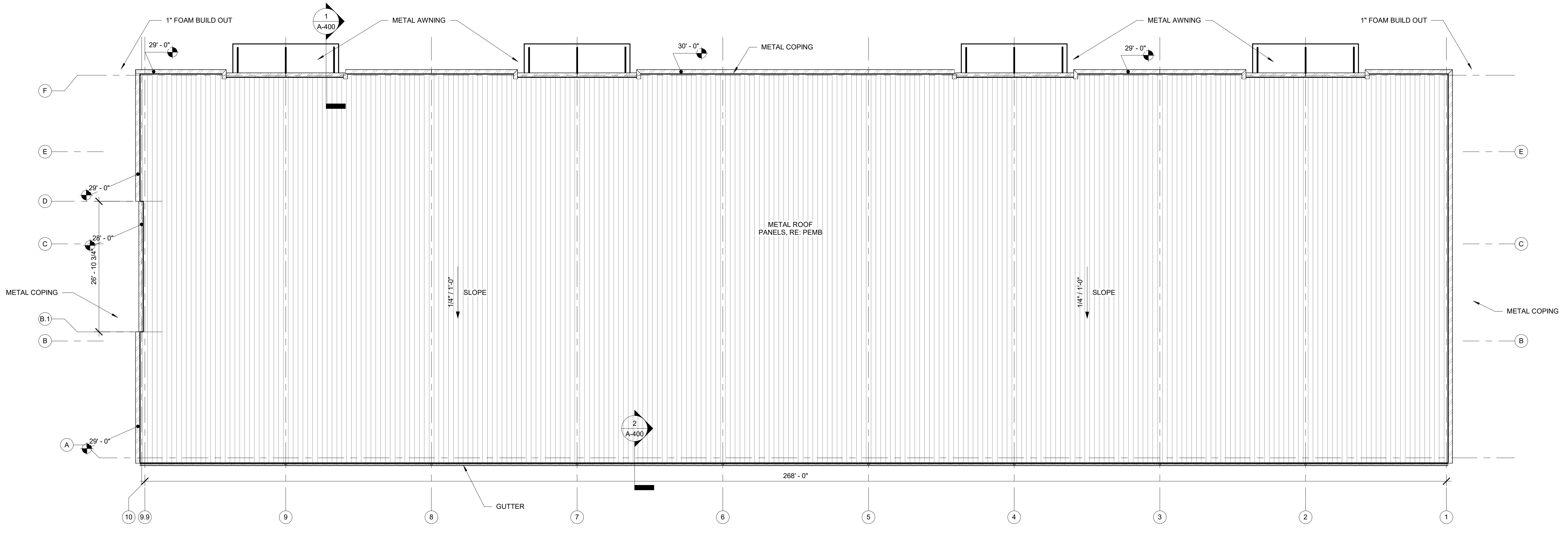
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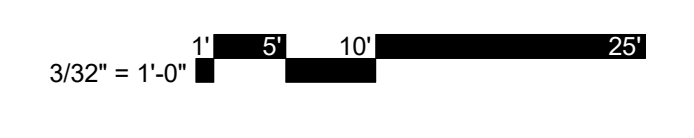
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ROOF PLAN

A-200



1 ROOF PLAN
3/32" = 1'-0"



ROOF GENERAL NOTES

1. DIMENSIONS ARE FROM PEMB PACKAGE AND ARE SHOWN FOR REFERENCE ONLY. PEMB DRAWINGS WILL OVER-RIDE INFO SHOWN IN ARCH PLANS.



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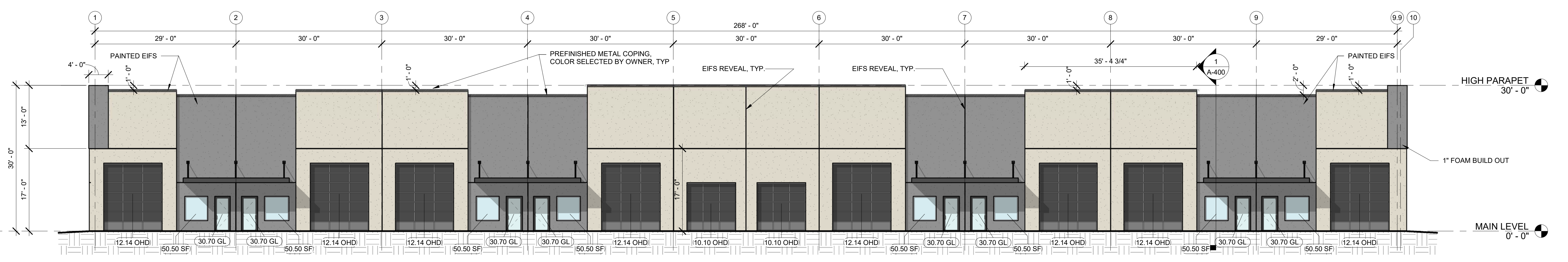
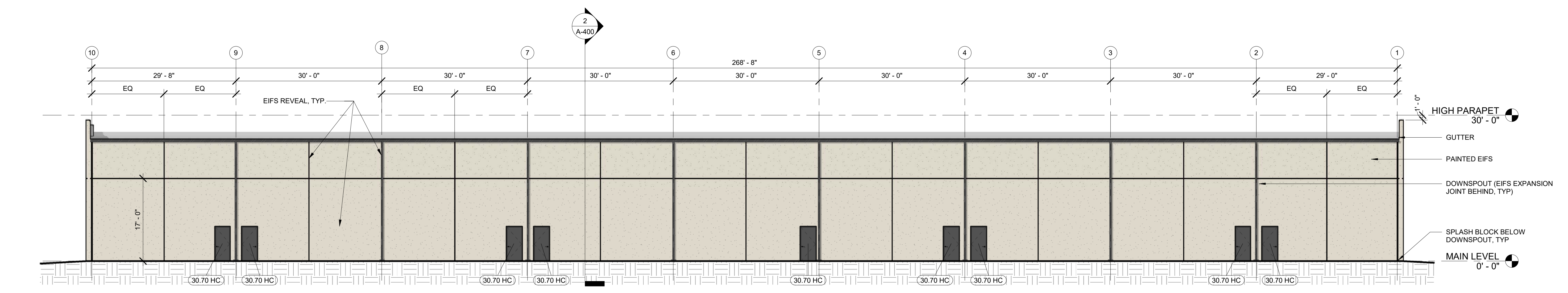
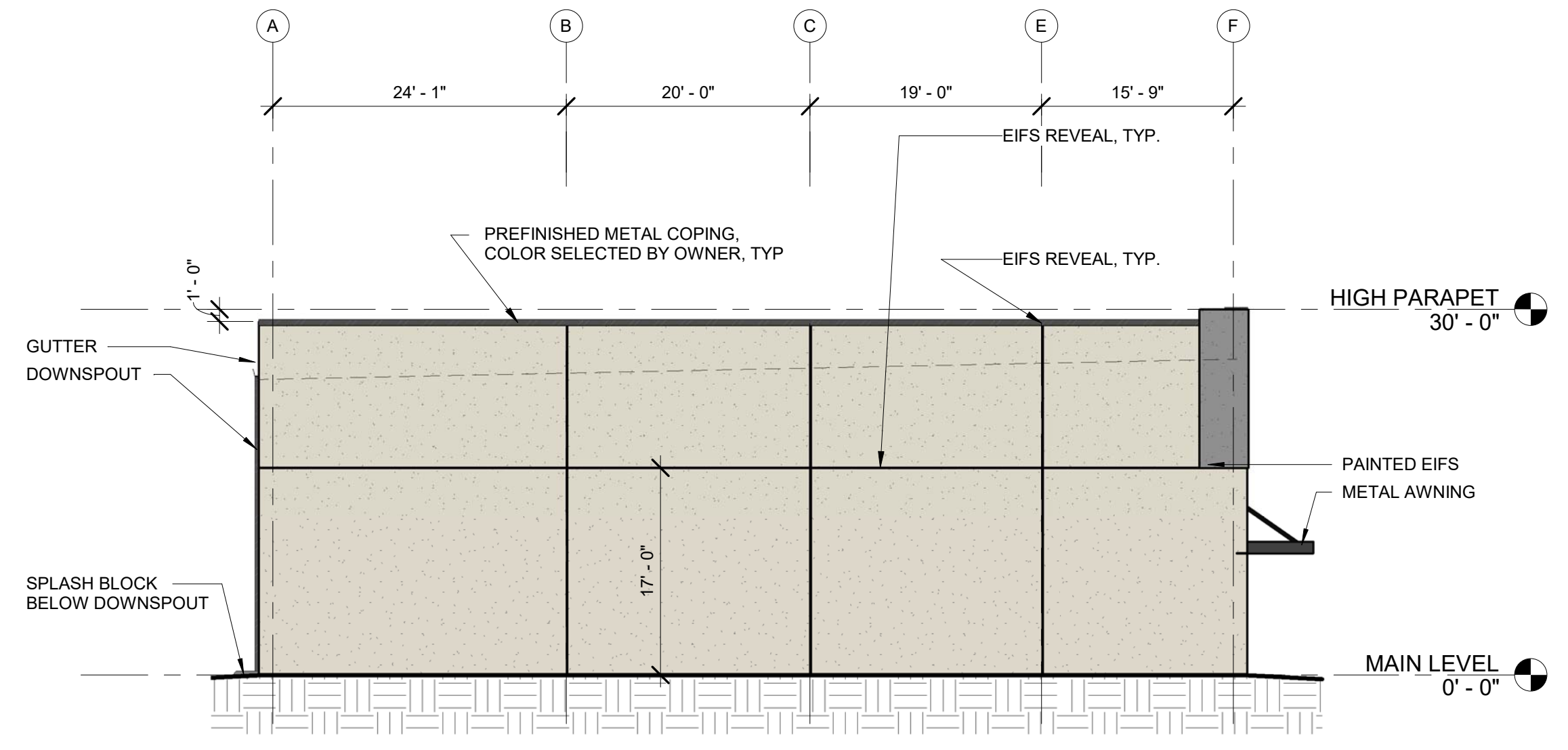
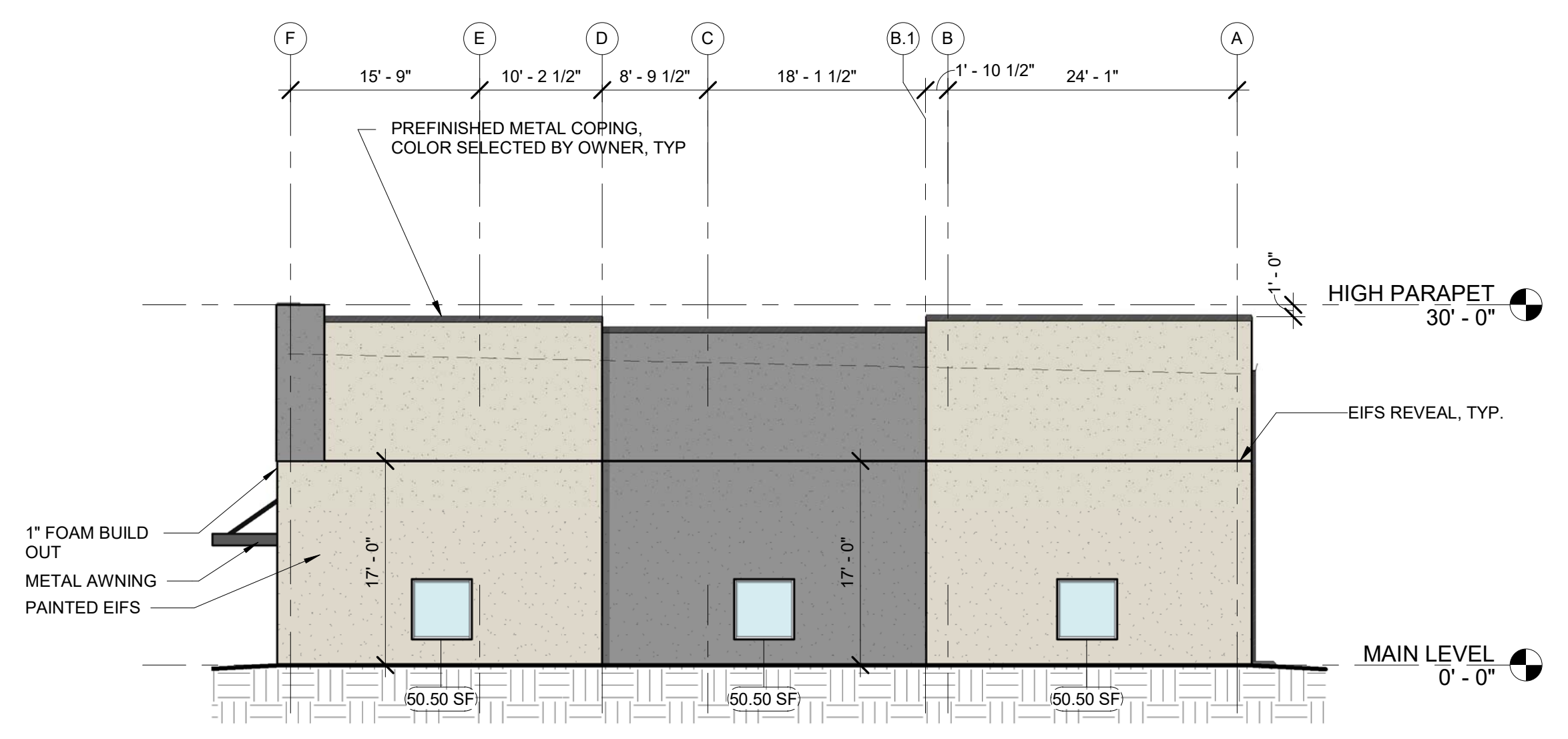
EXTERIOR ELEVATIONS

EXTERIOR ELEVATION GENERAL NOTES

- DIMENSIONS ARE FROM PEMB PACKAGE AND ARE SHOWN FOR REFERENCE ONLY. PEMB DRAWINGS WILL OVER-RIDE INFO SHOWN IN ARCH PLANS.

EXTERIOR MATERIALS LEGEND

- EIFS, PAINTED, COLOR BY OWNER
- EIFS, PAINTED, COLOR BY OWNER
- GLASS - STOREFRONT
- GLASS - OH DOOR
- SHEET METAL, PREFINISHED, COLOR SELECTED BY OWNER.



LOT 10 LAKEWOOD
BUSINESS PARK
LOT 10 I-470 BUSINESS PARK
LEE'S SUMMIT, MO 64064

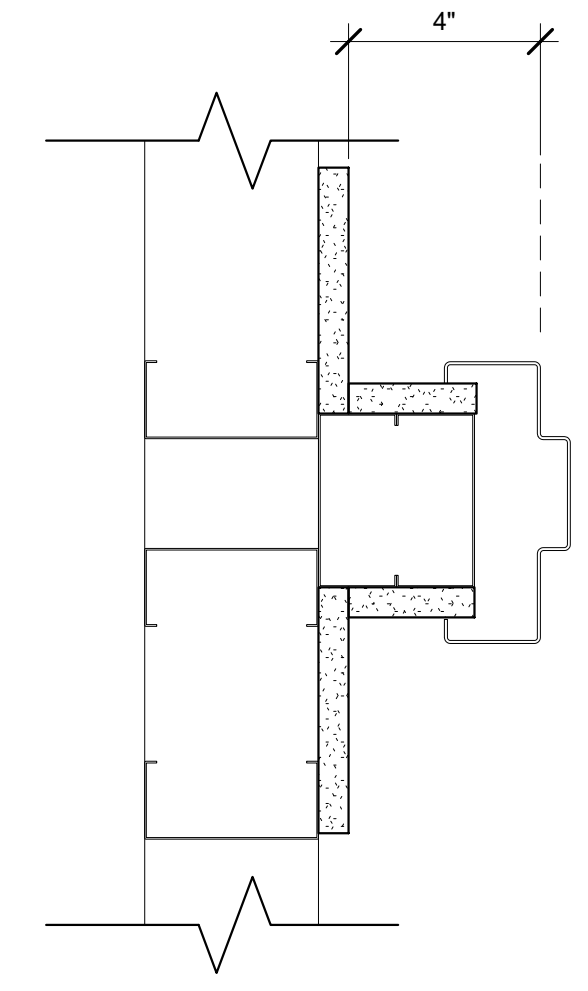


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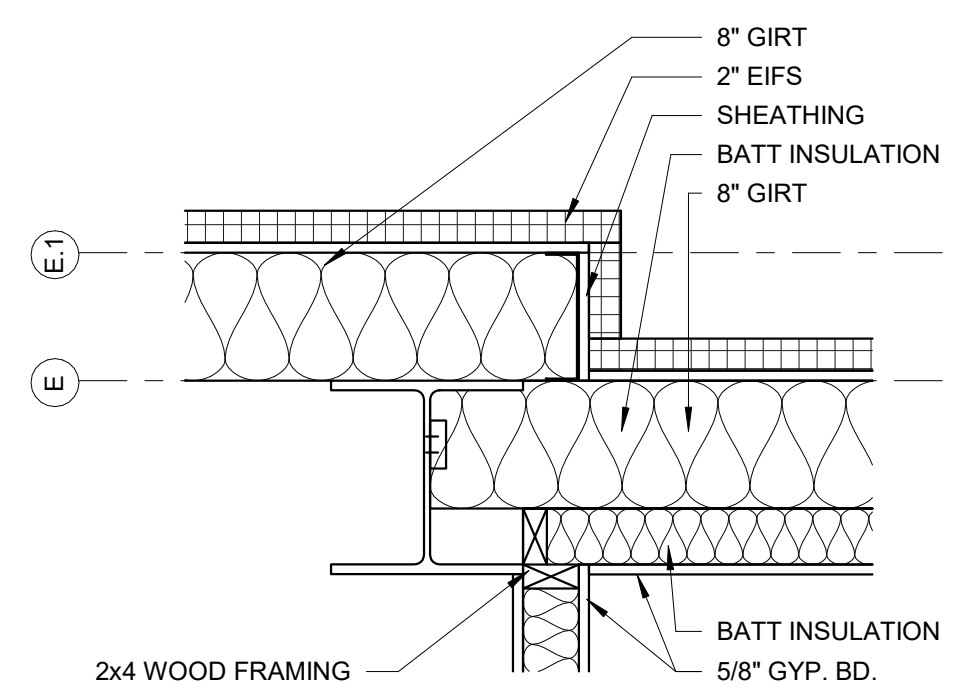
REVISIONS NO.	DATE	DESCRIPTION

DRAWN BY: NC
CHECKED BY: NC
PROJECT #: 21-1902
ISSUE DATE: 2021.09.01
ISSUED FOR:
ISSUE FOR PERMIT

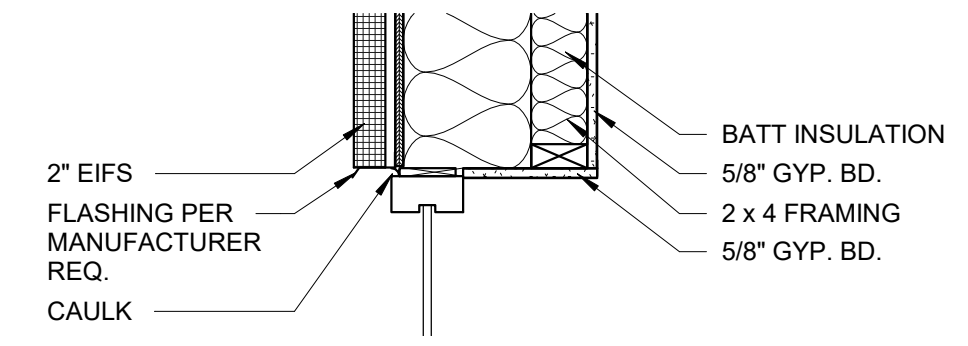
MINIMUM AND STANDARD DIMENSION OF DOOR THRESHOLD TO WALL:
1. UNLESS NOTED OTHERWISE
2. UNLESS OTHERWISE COORDINATED BETWEEN GENERAL CONTRACTOR, METAL STUD CONTRACTOR AND DOOR CONTRACTOR.



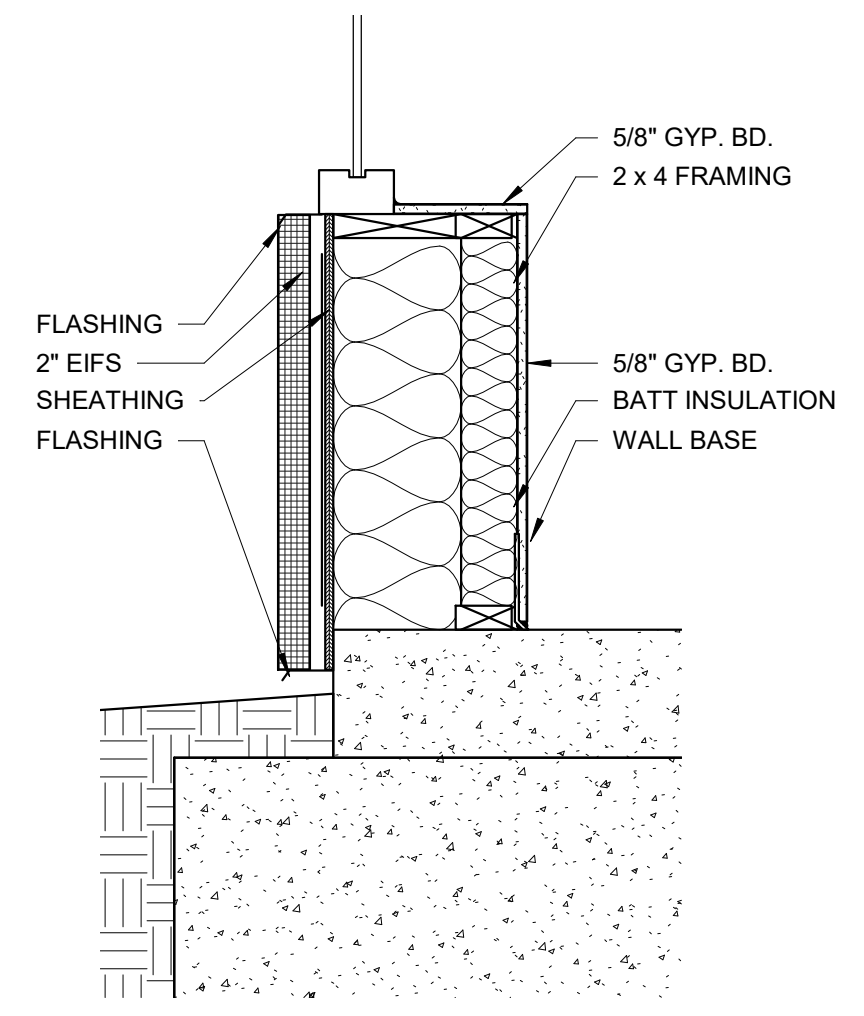
7 08 DOOR JAMB @ CORNER
3" = 1'-0"



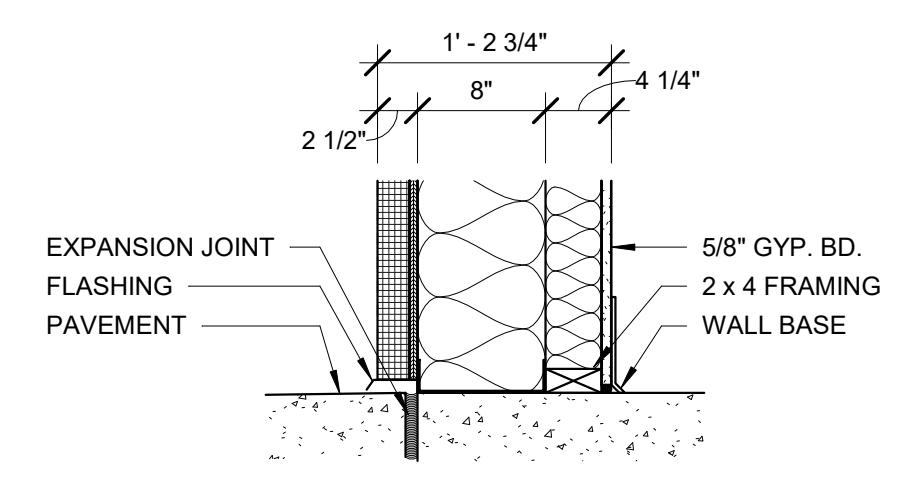
6 WALL OFFSET DETAIL
1" = 1'-0"



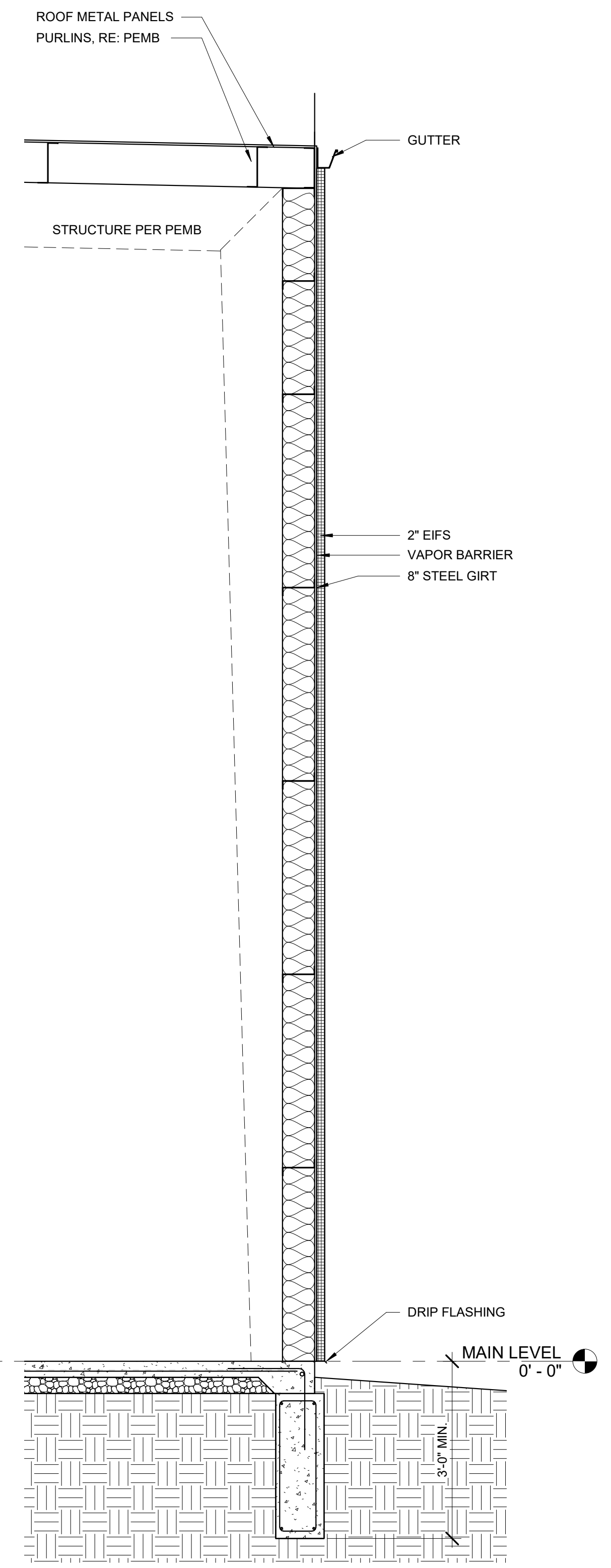
4 WALL SECTION DETAIL
1" = 1'-0"



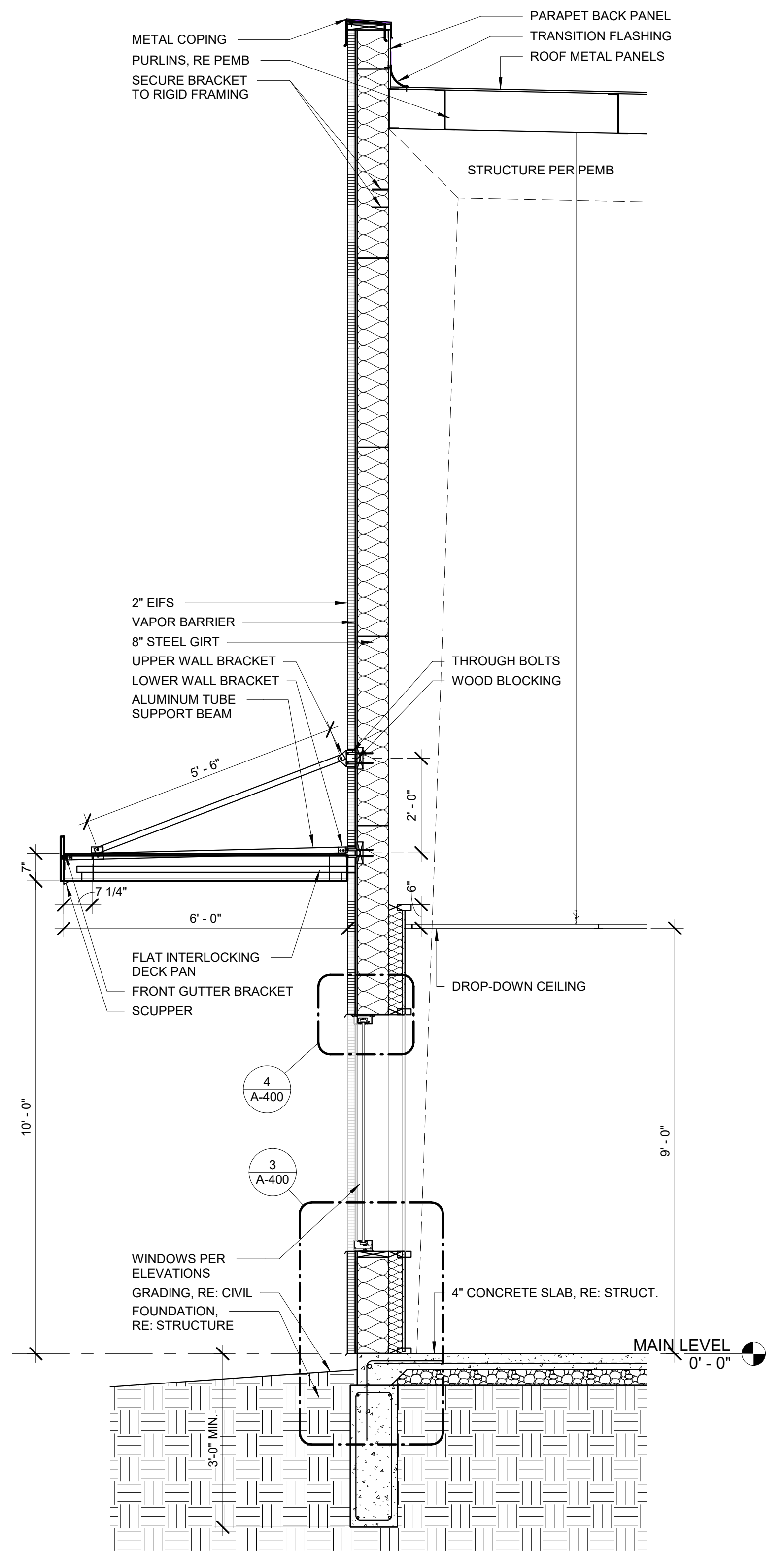
3 WALL SECTION DETAIL
1" = 1'-0"



5 BOTTOM OF WALL AT PAVEMENT
1" = 1'-0"

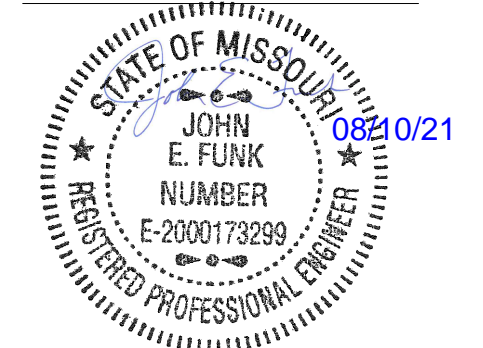


2 WALL SECTION DETAIL
1/2" = 1'-0"



1 WALL SECTION DETAIL
1/2" = 1'-0"

**LOT 10 LAKEWOOD
BUSINESS PARK**
LOT 10 I-470 BUSINESS PARK
LEE'S SUMMIT, MO 64064



REVISIONS NO.	DATE / DESCRIPTION

DRAWN BY: TJS
CHECKED BY: JF
PROJECT #: 21094
ISSUE DATE: 08/09/2021
ISSUED FOR: PERMIT

FOUNDATION PLAN

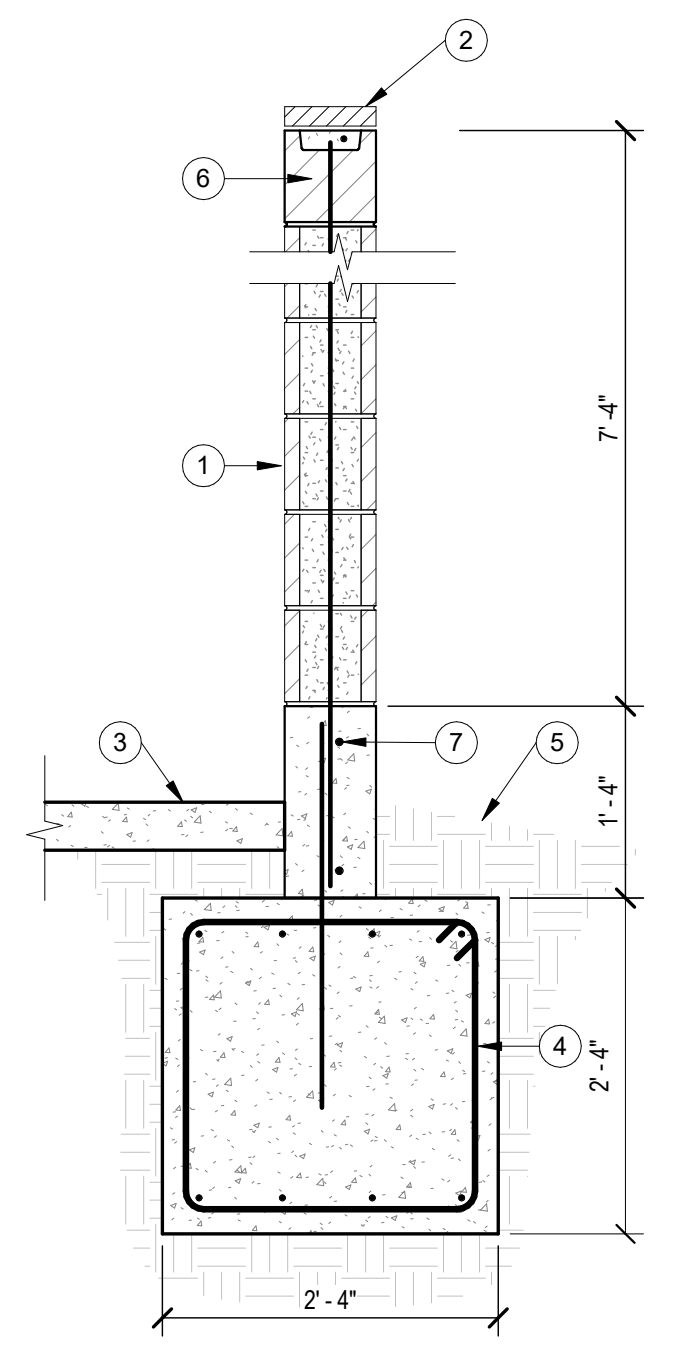
S100

- SHEET NOTES:**
- A. REFERENCE SHEET S00x FOR STRUCTURAL GENERAL NOTES, REVIEW NOTES & DETAILS FOR APPLICABILITY.
 - B. SEE ARCHITECTURAL DRAWING FOR DETAILS & DIMENSIONS NOT SHOWN.
 - C. REFER TO S0xx FOR TYPICAL DETAILS.
 - D. TOP OF SLAB ELEVATION = 100'-0" UNO.
 - E. TOP OF TRENCH FOOTING ELEVATION = 99'-4" UNO. THE BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE 3'-0" MIN BELOW GRADE. DEEPEN FOOTINGS AS REQUIRED. GRADE IS GENERALLY 6" BELOW FINISH FLOOR ELEVATION (COORDINATE WITH CIVIL).
 - F. SPREAD FOOTINGS DENOTED ON PLAN BY "Fxx". REFER TO SCHEDULE ON THIS SHEET FOR SIZE AND REINFORCING.

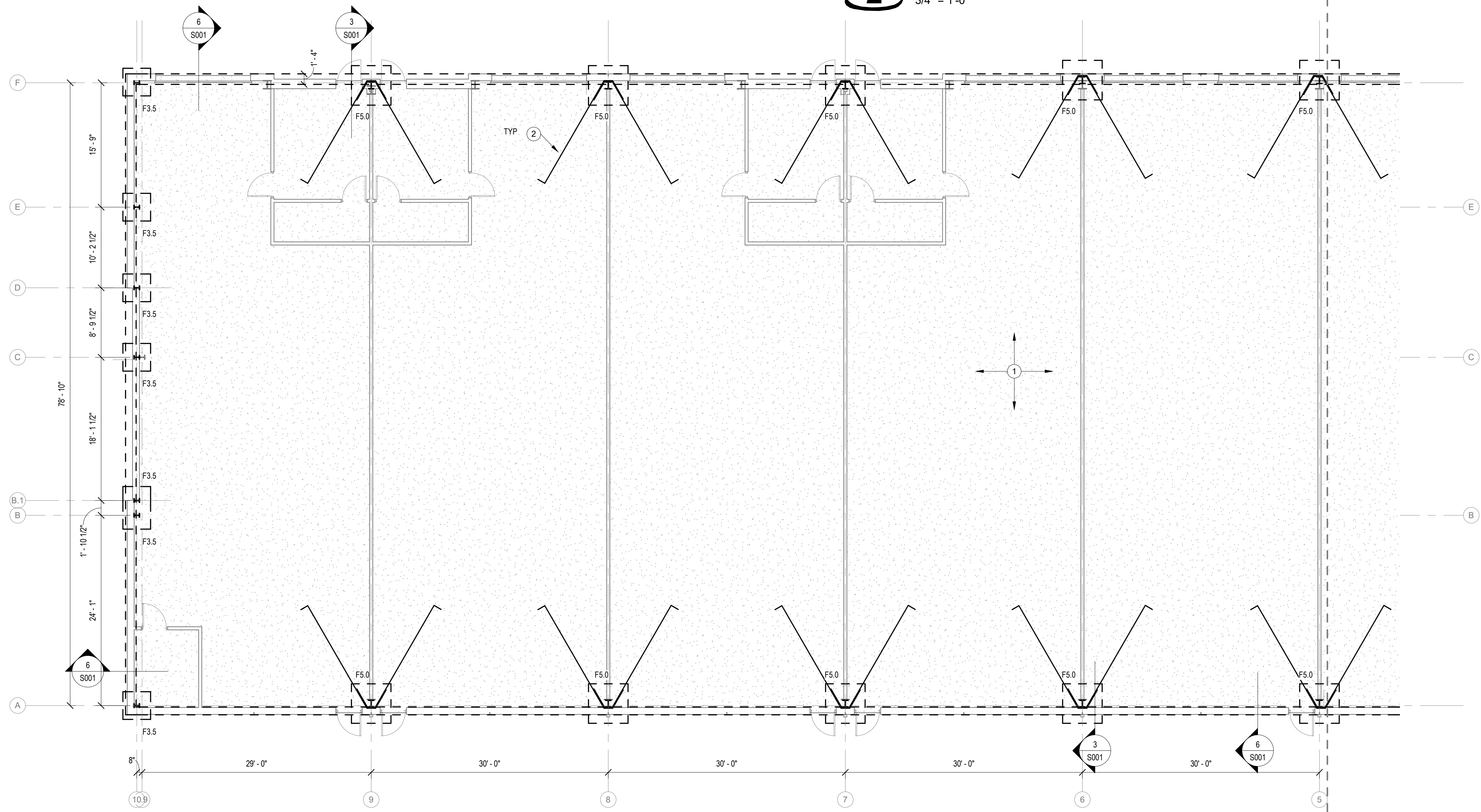
- PLAN NOTES:**
- ① 4" CONCRETE SLAB ON GRADE, RE: GENERAL NOTES FOR REINFORCING, GRANULAR FILL, VAPOR BARRIER AND JOINTING REQUIREMENTS
 - ② PROVIDE #5 HAIR-PIN BARS @ ALL PEMB COLUMNS RE: 5/S001

SCHEDULE - SPREAD FOOTING				
TYPE MARK	LENGTH	WIDTH	THICKNESS	REINF
F3.5	3'-6"	3'-6"	3'-0"	(5) #4 EW TOP & BOT
F5.0	5'-0"	5'-0"	3'-0"	(8) #4 EW TOP & BOT

- DETAIL NOTES:**
- ① 8" CMU WALL, FULLY GROUTED, REINF W/ #4 VERT @ 24" O.C.
 - ② CAP STONE, RE: ARCH
 - ③ CONC SLAB RE: CIVIL
 - ④ CONC FTG W/ (4) #6 TOP & BOT & #3 TIES @ 24" OC
 - ⑤ GRADE RE: CIVIL
 - ⑥ 8" CMU BOND BM W/ (1) #4 CONT
 - ⑦ (2) #4 CONT HOR & #4 @ 24" OC VERT



2 TRASH ENCLOSURE SECTION
3/4" = 1'-0"



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

MECHANICAL AND PLUMBING SPECIFICATIONS

1. GENERAL PROVISIONS:

- PROVIDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE COMPLETE INSTALLATION OF THE PLUMBING AND MECHANICAL SYSTEMS OUTLINED.
- OBTAIN ALL PERMITS, FEES, LICENSES, INSPECTIONS, AND CERTIFICATIONS OF COMPLIANCE OR APPROVAL AS REQUIRED BY AUTHORITIES.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LAWS, CODES AND REGULATIONS OF THE GOVERNMENTAL BODIES HAVING JURISDICTION OVER THE SITE.
- ALL TESTING REQUIRED BY AUTHORITIES SHALL BE CONSIDERED PART OF THIS WORK.
- DURING CONSTRUCTION, ALL FIXTURES, EQUIPMENT, PIPE, DUCT, ETC. SHALL BE COVERED, PLUGGED, OR CAPPED AS REQUIRED TO KEEP CLEAN AND UNDAMAGED. ALL DAMAGED ITEMS SHALL BE RESTORED TO ORIGINAL CONDITION OR REPLACED. ALL PROTECTIVE COVERING SHALL BE REMOVED BEFORE FINAL ACCEPTANCE.
- PROVIDE ALL NECESSARY CUTTING AND PATCHING OF WALLS, FLOORS, CEILINGS, AND ROOFS AS NECESSARY. PATCH AROUND ALL OPENINGS SHALL MATCH ADJACENT AREA. COORDINATE ALL ROOFING WORK WITH OWNER OR RESPONSIBLE PARTY, SO THAT THE EXISTING ROOFING WARRANTY WILL BE MAINTAINED.
- CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIALS AGAINST DEFECT FOR A PERIOD OF ONE YEAR FROM FINAL ACCEPTANCE.
- INSPECTION OF THE SITE: THIS CONTRACTOR SHALL THOROUGHLY ACQUAINT HIMSELF WITH THE MEP DRAWINGS, SPECIFICATIONS, DETAIL, AND THE SITE. THIS CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY SPECIAL OR UNUSUAL PROBLEMS, CONFLICTS, OR OBSTRUCTIONS THAT AFFECT HIS BID.
- FOR THE PURPOSE OF CLEARNESS AND LEGIBILITY, THE MECHANICAL AND PLUMBING DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC AND DO NOT SHOW ALL OFFSETS AND FITTINGS REQUIRED FOR INSTALLATION. DO NOT SCALE DRAWINGS. THE SIZE AND LOCATION OF EQUIPMENT IS SHOWN TO SCALE WHEREVER POSSIBLE. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DATA AS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATION SECTIONS WHERE MECHANICAL WORK INTERFACES WITH OTHER TRADES.
- IN THE EVENT OF A CONFLICT OR INCONSISTENCY BETWEEN ITEMS INDICATED ON THE PLANS OR WITH CODE REQUIREMENTS, THE NOTE OR CODE WHICH PRESCRIBES AND ESTABLISHES THE MORE COMPLETE JOB OR HIGHER STANDARD SHALL PREVAIL.
- INSTALL MATERIALS AND SYSTEMS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND APPROVED SUBMITTALS. INSTALL MATERIALS IN PROPER RELATION WITH ADJACENT CONSTRUCTION AND WITH UNIFORM APPEARANCE FOR EXPOSED WORK. COORDINATE WITH WORK OF OTHER SECTIONS. COMPLY WITH APPLICABLE REGULATIONS AND CODE REQUIREMENTS. PROVIDE PROPER CLEARANCES FOR SERVING.
- INCLUDE ALL BASIC MATERIALS AND CONSTRUCTION METHODS INCLUDING PIPES, PIPE FITTINGS, AND SPECIALTIES AND SUPPORTING DEVICES, VALVES, PIPE AND VALVE IDENTIFICATION, PUMPS, VIBRATION ISOLATION, ETC.
- FURNISH ADEQUATE ACCESS PANELS AND DOORS TO ALLOW FOR FUTURE PIPING ALTERATIONS, REPLACEMENT, AND MAINTENANCE OF PIPING. PROPERLY IDENTIFY ALL ACCESS PANELS AND DOORS.

2. OPERATION AND MAINTENANCE MANUALS:

- DURING THE COURSE OF CONSTRUCTION, COLLECT AND COMPIL OPERATING INSTRUCTIONS, WIRING DIAGRAMS, CATALOG CUTS, LUBRICATION AND PREVENTIVE MAINTENANCE INSTRUCTIONS, PARTS LISTS, ETC. FOR ALL EQUIPMENT FURNISHED UNDER THIS CONTRACT.
- ALL LITERATURE AND INSTRUCTIONS SHIPPED WITH THE EQUIPMENT SHALL BE SAVED FOR INCLUSION IN THE OPERATING AND MAINTENANCE MANUALS.

3. MANUFACTURERS:

- MANUFACTURERS, MODEL NUMBERS, ETC. INDICATED OR SCHEDULED ON THE DRAWINGS SHALL BE INTERPRETED AS HAVING MET AND A STANDARD OF QUALITY AND SHALL NOT BE CONSIDERED AS LIMITING COMPETITION. ARTICLES, FIXTURES, ETC. OF EQUAL QUALITY BY MANUFACTURERS SHALL BE ACCEPTABLE, SUBJECT TO STRUCTURAL AND ELECTRICAL CONSTRAINTS OF THE PROJECT DESIGN.
- THE ELECTRICAL SYSTEM DESIGN IS BASED IN PART ON THE SPECIFIED EQUIPMENT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE ELECTRICAL REQUIREMENTS OF THE EQUIPMENT BEING FURNISHED. ANY CHANGES TO THE ELECTRICAL SYSTEM DUE TO HVAC EQUIPMENT OTHER THAN THE SPECIFIED EQUIPMENT BEING FURNISHED SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.

4. MOTORS:

- PROVIDE THERMAL OVERLOAD PROTECTION FOR EACH MOTOR PROVIDED BY THIS WORK.

5. PLUMBING:

- PROVIDE AN APPROVED WATER HAMMER ARRESTOR FOR EACH PLUMBING FIXTURE SUPPLY AS REQUIRED BY FIXTURE MANUFACTURER.
- ALL EXPOSED PIPE IN FINISHED AREAS SHALL BE CHROME PLATED BRASS PIPE, NO FERROUS PIPE.
- PROVIDE CLEANOUTS AT EACH CHANGE IN DIRECTION AND AT 100 FOOT INTERVALS IN STRAIGHT RUNS.
- PROVIDE ACCESS PANELS FOR ALL CONCEALED VALVES AND TRAPS.
- CLEANOUTS:
 - UNFINISHED FLOOR (FCO): JR SMITH #4240, OR EQUAL.
 - WALL (WCO): JR SMITH #4472, OR EQUAL, 24" ABOVE THE FLOOR.
 - GRADE (GCO): JR SMITH #4256, OR EQUAL, WITH HEAVY DUTY CAST IRON BODY AND COVER.
- ALL SEWER PIPING LOCATED INSIDE THE BUILDING SHALL BE INSTALLED WITH THE FOLLOWING SLOPES.
 - INSTALL 2-1/2" AND SMALLER PIPE AT 1/4" PER FOOT FALL.
 - INSTALL 3" AND LARGER PIPE AT 1/8" PER FOOT FALL.
 - CONDENSATE DRAIN SHALL BE INSTALLED AT 1/8" PER FOOT FALL.
- PROVIDE DIELECTRIC UNIONS WITH APPROPRIATE END CONNECTION TO MATCH THE PIPE SYSTEM IN WHICH INSTALLED (SCREWED, SOLDERED, OR FLANGED). PROVIDE DIELECTRIC UNIONS ON ALL PIPING CONNECTIONS TO HOT WATER HEATERS AND EXPANSION JOINTS.
- ALL SEWER PIPING LOCATED EXTERIOR TO THE BUILDING SHALL BE INSTALLED WITH THE FOLLOWING SLOPES.
 - INSTALL 4" AND SMALLER PIPE AT A MINIMUM OF 2% SLOPE.
 - INSTALL 6" AND LARGER PIPE AT A MINIMUM OF 1% SLOPE.

6. PIPING

- DOMESTIC COLD, HOT, AND HOT WATER RECIRCULATING (ABOVEGROUND).
 - TYPE L HARD DRAWN COPPER TUBING, ASTM B-88 WITH WROUGHT BRONZE SOLDERED FITTINGS.
 - GATE VALVE: CRANE #428 OR EQUAL.
 - BALL VALVE: CRANE #932 OR EQUAL.
- DOMESTIC COLD, HOT, AND HOT WATER RECIRCULATING, 1"-3" (UNDERGROUND).
 - TYPE K HARD OR SOFT DRAWN COPPER TUBING, ASTM B-88 WITH WROUGHT BRONZE SOLDERING FITTINGS.
- SANITARY SEWER AND VENTS (UNDERGROUND, INTERIOR TO BUILDING).
 - POLYVINYL CHLORIDE (PVC) DWV PIPE, SCHEDULE 40, SOLVENT JOINT.
 - SEWER LINES SHALL BE LOCATED IN GENERAL AS SHOWN ON THE DRAWINGS. THE EXACT LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR IN SUCH A MANNER AS TO MAINTAIN PROPER CLEARANCES AND SUFFICIENT SLOPE TO ENSURE DRAINAGE.
 - VENT STACKS SHALL BE EXTENDED FULL SIZE THROUGH THE ROOF AND FLASHED WITH 4 POUND LEAD SHEETS TURNED DOWN INTO THE STACK AT LEAST 2" AND EXTENDED 12" IN ALL DIRECTIONS FROM THE PIPE AT THE ROOF LINE. VENTS THROUGH ROOF SHALL NOT BE LESS THAN 3". PVC PIPING SHALL NOT BE USED FOR VENT PIPING THROUGH THE ROOF. WHERE APPLICABLE FOR ROOFING SYSTEM USED, PROVIDE FLASHING VIA PLEATED EPDM CONE IN LIEU OF LEAD. ALL VENT STACKS IN OR AT OUTSIDE WALLS SHALL BE OFFSET 1'-6" MINIMUM FROM OUTSIDE WALLS BEFORE GOING THROUGH THE ROOF, TO FACILITATE FLASHING.
- CONDENSATE DRAIN AND INDIRECT WASTE (ABOVEGROUND)
 - PVC DWV PIPE, SCHEDULE 40, SOLVENT JOINT.
- NATURAL GAS PIPING:
 - SCHEDULE 40 BLACK STEEL PIPING: 2" AND SMALLER WITH SCREWED JOINTS AND 150 LB. MALLEABLE IRON SCREWED FITTINGS. PIPE 2-1/2" AND LARGER SHALL USE STANDARD WEIGHT BLACK STEEL WELDING FITTINGS WITH WELDED JOINTS.
 - GAS VALVES SHALL BE ROCKWELL 142/143, PLUG VALVE.
 - SUPPORT PIPING AT INTERVALS NOT TO EXCEED THOSE LISTED IN TABLE 415.1 OF THE I.F.G.C.
 - PROVIDE A.G.A. APPROVED SHUT OFF VALVES AND DIRT LEGS AT CONNECTIONS TO ALL EQUIPMENT.
 - EPOXY PAINT ALL EXTERIOR GAS PIPING TO PREVENT CORROSION.
- REFRIGERANT
 - ASTM B 280, TYPE ACR, HARD DRAWN STRAIGHT LENGTHS, AND SOFT-ANNEALED COILS, SEAMLESS COPPER TUBING.
 - WROUGHT COPPER, ANSI B16.22, STREAMLINED PATTERN, FITTINGS. BRAZED JOINTS, AWS A 5.8 CLASSIFICATION BAg-1 (SILVER).
 - TUBING TO BE FACTORY CLEANED, READY FOR INSTALLATION, AND HAVE ENDS CAPPED TO PROTECT CLEANLINES OF PIPE INTERIORS PRIOR TO SHIPPING.
 - SIZE AND INSTALLATION OF PIPING SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- ALL PIPE HANGERS AND SUPPORTS SHALL BE STANDARD PRODUCTS OF GRINNELL, FEE AND MASON, OR ANVIL. HANGER SPACING SHALL BE IN ACCORDANCE WITH MSS-SP-69.
- SLEEVES
 - PROVIDE, SET, AND PROPERLY LOCATE PIPE SLEEVES AS REQUIRED FOR THIS WORK. ALL SLEEVES SHALL BE OF SUFFICIENT SIZE TO PERMIT PIPE MOVEMENT DUE TO EXPANSION AND CONTRACTION AND TO ACCOMMODATE PIPE INSULATION.
 - INTERIOR PARTITIONS: 16 GAUGE GALVANIZED STEEL, PACK BETWEEN PIPE AND SLEEVE WITH FIRE SAFING AND CAULK AT EACH END WITH FIRE RESISTANT SEALANT.

- ROOF: PROSET OR EQUAL, MANUFACTURED PVC SCHEDULE 40 PIPE SLEEVE WITH WATERPROOF SEAL. COORDINATE WITH ROOFING CONTRACTOR AND FLASH AS REQUIRED TO MAINTAIN ROOF WARRANTY.
- PLUMBING VENTS: FLASH ROOF VENT INTO ROOFING SYSTEM AS REQUIRED BY THE ROOFING CONTRACTOR TO MAINTAIN THE EXISTING ROOF WARRANTY. ALL PLUMBING VENT TERMINALS SHALL TERMINATE A MINIMUM OF 12" ABOVE ROOF OR EQUAL TO HEIGHT OF PARAPET, WHICHEVER IS GREATER.

7. INSULATION:

- ALL INSULATIONS AND ACCESSORIES SHALL HAVE A FIRE RATING CLASSIFICATION WITH A FLAME SPREAD RATING OF NOT OVER 25, A FUEL CONTRIBUTION RATING OF NOT OVER 50, AND A SMOKE DEVELOPMENT RATING OF NOT OVER 50, IN ACCORDANCE WITH NFPA.
- PIPE INSULATION (ABOVE GRADE):
 - THE PIPE INSULATION USED SHALL HAVE A THERMAL CONDUCTIVITY OF 0.27 BTU PER IN./HRS-Q-FT-F OR LESS.
 - FIBERGLASS INSULATION WITH FACTORY APPLIED VAPOR BARRIER, ASJ JACKET, FACTORY APPLIED PRESSURE SEALING LONGITUDE LAP JOINT, NO STAPLES, ZESTON PREMOULDED PVC FITTING COVERS. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
 - FLEXIBLE CLOSED CELL ELASTOMERIC THERMAL INSULATION, UNSUIT OR PRESUIT WITH PRESSURE SENSITIVE ADHESIVE SYSTEM FOR CLOSURE AND VAPOR SEALING, EQUAL TO ARMSTRONG AP ARMAFLEX OR ARMAFLEX 2000.
 - FOR NON ORGANIC INSULATION SYSTEMS THE FIRST 8 FEET OF INLET AND OUTLET PIPING BETWEEN THE TANK AND HEAT TRAP (INCLUDING THE HEAT TRAP) MUST BE INSULATED.
- INSULATION SCHEDULE:
 - DOMESTIC COLD WATER: 1/2"
 - DOMESTIC HOT WATER: 1"
 - REFRIGERANT SUCTION: 1-1/2" FOR PIPING UP TO 1-1/2", 2" FOR PIPING 1-1/2" AND LARGER.

8. DUCTWORK INSULATION:

- DUCT COVERING: 3/4 LB/CF, FIBERGLASS BLANKET WITH FACTORY APPLIED VAPOR BARRIER AND FACING. THICKNESS AS SCHEDULED, INSTALLATION IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. DUCT COVERING SHALL BE MINIMUM R-6.
 - SUPPLY AIR DUCT: 2"
 - RETURN AIR DUCT: 2"

9. TESTING, BALANCING AND CLEANING:

- ALL PIPING SHALL BE TESTED FOR LEAKS BEFORE BEING CONCEALED IN WALL CONSTRUCTION OR COVERED WITH INSULATION.
- SEWER AND VENT PIPING SHALL BE HYDROSTATICALLY TESTED WITH NO LESS THAN 10 FEET OF HEAD FOR A PERIOD OF NOT LESS THAN 15 MINUTES, PER THE LOCAL PLUMBING CODE, WITH NO LEAKS.
- DOMESTIC WATER PIPING SHALL BE HYDROSTATICALLY TESTED AT A PRESSURE OF NOT LESS THAN 1-1/2 TIMES THE OPERATING PRESSURE, BUT NOT LESS THAN 60 PSI, FOR A PERIOD OF NOT LESS THAN 2 HOURS, WITH NO LEAKS.
- BEFORE DOMESTIC WATER PIPING IS PLACED IN SERVICE, ALL DOMESTIC WATER DISTRIBUTION SYSTEMS, INCLUDING THOSE FOR COLD WATER AND HOT WATER SYSTEMS, SHALL BE FLUSHED, STERILIZED AND CHLORINATED IN ACCORDANCE WITH THE HEALTH DEPARTMENT REGULATIONS. THE SYSTEMS SHALL BE THOROUGHLY FLUSHED OF ALL DIRT AND FOREIGN MATTER, THEN FILLED WITH WATER TREATED WITH 50 PPM OF CHLORINE. DURING THE FILLING PROCESS, VALVES AND FAUCETS SHALL BE OPENED SEVERAL TIMES TO ASSURE TREATMENT OF THE ENTIRE SYSTEM. THE TREATED WATER SHALL BE LEFT IN THE SYSTEM FOR 24 HOURS AFTER WHICH TIME THE SYSTEM SHALL BE FLUSHED; IF THE RESIDUAL CHLORINE IS NOT LESS THAN 10 PPM, THE FLUSHING SHALL BE REPEATED. AFTER STERILIZATION SAMPLES OF WATER FROM THE SYSTEM SHALL BE APPROVED BY THE BOARD OF HEALTH.
- NATURAL GAS SYSTEMS SHALL BE TESTED WITH COMPRESSED AIR AT A PRESSURE OF NOT LESS THAN 1-1/2 TIMES THE OPERATING PRESSURE, BUT NOT LESS THAN 50 PSIG FOR A PERIOD OF 2 HOURS WITH NO LEAKS.
- THE INSPECTION AUTHORITY HAVING JURISDICTION SHALL BE NOTIFIED AT LEAST 24 HOURS PRIOR TO PERFORMANCE OF ALL TESTS SO THAT THEY TESTS MAY BE WITNESSED IF DEEMED NECESSARY.
- DUCTWORK AND PIPING SHALL BE BALANCED BY QUALIFIED BALANCING PERSONNEL WHO HAVE PREVIOUS EXPERIENCE WITH BALANCING PROCEDURES AND ARE FAMILIAR WITH TESTING AND BALANCING PROCEDURES OF THE ASSOCIATED AIR BALANCE COUNCIL (AABC) OR NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB).
 - BALANCING SHALL INCLUDE THE BALANCING OF THE EQUIPMENT AND AIR DISTRIBUTION SYSTEMS TO PROVIDE DESIGN QUANTITIES INDICATED AND VERIFICATION PERFORMANCE OF ALL EQUIPMENT AND AUTOMATIC CONTROLS.
 - WITH IN 30 DAYS OF THE COMPLETION OF THE TESTING AND BALANCING WORK, SUBMIT THE TEST AND BALANCING REPORT BEARING THE SIGNATURE OF THE TEST AND BALANCE ENGINEER. THE REPORTS SHALL BE CERTIFIED PROOF THAT THE SYSTEMS HAVE BEEN TESTED, ADJUSTED, AND BALANCED IN ACCORDANCE WITH THE REFERENCED STANDARDS; ARE AN ACCURATE REPRESENTATION OF HOW THE SYSTEMS HAVE BEEN INSTALLED AND ARE OPERATING. REPORTS SHALL BE BOUND IN A VINYL BINDER AND THE BINDER LABELLED OR MAY BE AN ELECTRONIC PDF SUBMITTAL.

10. DUCTWORK:

- ALL DUCTWORK UNLESS OTHERWISE INDICATED SHALL BE FABRICATED FROM GALVANIZED SHEET STEEL COMPLYING WITH ASTM A 527, LOCKFORMING QUALITY, WITH G60 ZINC COATING IN ACCORDANCE WITH ASTM A 525, AND MILL PHOSPHATIZED FOR EXPOSED LOCATIONS.
- DUCTWORK METAL GAUGES, REINFORCING, ETC SHALL BE CONSTRUCTED IN ACCORDANCE WITH SMCACNA "HVAC DUCT CONSTRUCTION STANDARDS," LATEST EDITION FOR A 2" WATER GAUGE STATIC PRESSURE.
- ALL FITTINGS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SMCACNA "HVAC DUCT CONSTRUCTION STANDARDS," LATEST EDITION.
- RECTANGULAR DUCT:
 - ELBOWS, UNLESS INDICATED OTHERWISE, SHALL BE CONSTRUCTED WITH CENTERLINE RADIUS OF NOT LESS THAN 1.5 DUCT WIDTH OR SQUARE ELBOWS WITH DOUBLE WALL STREAMLINE ELBOWS.
 - TAKE-OFF FITTINGS: BRANCH DUCT TAKE-OFF FITTINGS FOR SUPPLY AND EXHAUST DIFFUSER/REGISTERS SHALL INCLUDE AN INTEGRAL MANUAL VOLUME DAMPER WITH LOCKING QUADRANT, DAMPER NOT REQUIRED ON RETURN AIR. FOR RECTANGULAR TO ROUND TAKE-OFFS, UTILIZE A "BUCKLEY" MODEL 3300 & 3300D OR EQUAL.
 - RETURN AIR ACOUSTIC ELBOWS AND SOUND BOOTS SHALL BE A SQUARE ELBOW WITH NO TURNING VANES.
 - SLOPES FOR TRANSITIONS OR OTHER CHANGES IN DIMENSIONS SHALL BE A MINIMUM 1 TO 3.
- ROUND AND OVAL SPIRAL SEAM DUCT:
 - PROVIDE RADIUS TYPE FITTINGS FABRICATED OF MULTIPLE SECTIONS WITH MAXIMUM 15 DEGREE CHANGE OF DIRECTION PER SECTION. UNLESS SPECIFICALLY DETAILED OTHERWISE, USE 45 DEGREE LATERALS FOR BRANCH TAKEOFF CONNECTIONS. WHERE 90 DEGREE BRANCHES ARE INDICATED PROVIDE CONICAL TYPE TEES.
 - SLOPES FOR TRANSITIONS OR OTHER CHANGES IN DIMENSIONS SHALL BE MINIMUM 1 TO 3.
 - ROUND LONGITUDINAL SEAM DUCT: USE FOR RIGID METAL DUCT ON LEAVING SIDE OF DUCT IN CONCEALED LOCATIONS FOR EXTENSION TO FLEX FOR DIFFUSERS.
- SEAL ALL CONCEALED DUCTWORK JOINTS WITH NON-HARDENING, NON-MIGRATING MASTIC SEALANT, AS RECOMMENDED FOR SEALING SEAMS AND JOINTS IN DUCTWORK. OIL BASED CAULKING AND GLAZING COMPOUNDS SHALL NOT BE ACCEPTABLE. DUCTS SHALL BE SEALED TO THE CLASS LEVEL LISTED BELOW:

(1) UNCONDITIONED SPACES:	CLASS B	CLASS C	CLASS B
(2) CONDITIONED SPACES (PLENUM):	CLASS C	CLASS C	CLASS B
	SUPPLY 2" WC OR LESS	EXHAUST	RETURN

- DUCT SIZES SHOWN ON THE DRAWINGS ARE SHEET METAL SIZES. INCREASE SHEET METAL SIZES ACCORDINGLY TO ACCOUNT FOR THICKNESS OF DUCT LINER.
- WHETHER SHOWN ON PLANS OR NOT, PROVIDE MANUAL VOLUME DAMPERS IN EACH RUNOUT TO EACH SUPPLY DIFFUSER OR REGISTER. PROVIDE ACCESS PANELS TO DAMPERS LOCATED ABOVE HARD CEILINGS.
- PROVIDE AUXILIARY STEEL AS REQUIRED TO ADEQUATELY SUPPORT DUCTWORK.
- WHERE DUCTS PASS THROUGH FIRE-RATED FLOORS, WALLS, OR PARTITIONS, PROVIDE FIRESTOPPING BETWEEN DUCT AND WALL.
- WHERE DUCTS PASS THROUGH INTERIOR PARTITIONS OR EXTERIOR WALLS, AND ARE EXPOSED TO VIEW, CONCEAL SPACE BETWEEN OPENING AND DUCT OR DUCT INSULATION WITH SHEET METAL FLANGES OF SAME GAUGE AS DUCT. OVERLAP OPENING ON 4 SIDES BY AT LEAST 1-1/2". FASTEN TO DUCT AND WALL.

11. FLEXIBLE DUCT:

- ATCO #086 (R-6), OR EQUAL.
- FACTORY APPLIED INSULATION AND VAPOR BARRIER, 1-1/2" THICK.
- MAXIMUM LENGTH OF 6'-0".

12. FLUES AND ACCESSORIES:

- FLUE FOR GAS FIRED FURNACE SHALL BE AS RECOMMENDED BY THE GAS APPLIANCE MANUFACTURER. FLUES SHALL BE SCHEDULE 40 PVC OR CPVC PER THE MANUFACTURER'S INSTALLATION REQUIREMENTS.
- PROVIDE MANUFACTURERS STANDARD ACCESSORY ITEMS INCLUDING BIRD PROOF TOP, STORM COLLAR,

- ROOF THIMBLE, ETC. AS REQUIRED FOR A COMPLETE INSTALLATION. ROOF THIMBLES THROUGH THE BUILDING ROOF SHALL BE SUITABLE FOR USE WITH THE ROOF PROVIDED.
- FLUES FOR HEATERS SHALL BE DOUBLE WALL TYPE B EQUAL TO METALBESTOS. PROVIDE MANUFACTURER'S STANDARD FITTING AND ACCESSORIES (ROOF THIMBLE, STORM COLLAR, COUNTER FLASHING, ETC.) AS REQUIRED FOR A COMPLETE INSTALLATION.

13. EXHAUST FANS:

- CENTRIFUGAL CEILING EXHAUSTERS SHALL BE ELECTRICALLY POWERED CENTRIFUGAL TYPE FAN SUITABLE FOR MOUNTING IN THE CEILING WITH A PERFORATED OFF-WHITE METAL GRILLE WITH A THUMBSCREW ATTACHMENT FOR EASY ACCESS TO FAN HOUSING. UNIT SHALL CONSIST OF A GALVANIZED STEEL HOUSING LINED WITH ACOUSTICAL INSULATION AND SHALL INCLUDE AN INTEGRAL BACKDRAFT DAMPER ON FAN DISCHARGE. MOTOR SHALL BE A PERMANENT SPLIT-CAPACITOR TYPE MOTOR, PERMANENTLY LUBRICATED WITH THERMAL OVERLOAD PROTECTION. PROVIDE DISCONNECT SWITCH OR OTHER MEANS OF DISCONNECT AT MOTOR IN FAN HOUSING.

14. FURNACE AND CONDENSING UNIT:

- CONDENSING FURNACES:
 - GAS FIRED FURNACE SHALL BE FACTORY ASSEMBLED, PRE-WIRED UNIT CONSISTING OF SHEETMETAL CASING, SUPPLY FAN, GAS FIRED HEAT EXCHANGER, AND CONTROLS. CAPACITY SHALL BE AS SCHEDULED.
 - THE PRIMARY HEAT EXCHANGER SHALL BE ALUMINIZED STEEL CONSTRUCTION WITH A STAINLESS STEEL SECONDARY HEAT EXCHANGER.
 - THE FURNACE SHALL BE OF THE CONDENSING TYPE, UTILIZING A SEALED COMBUSTION CHAMBER. UNIT SHALL INCLUDE FINNED CAST IRON HEAT EXCHANGER, ALUMINIZED STEEL EXHAUST DECOUPLER SECTION AND FINNED STAINLESS STEEL TUBE CONDENSER SECTION.
 - THE UNIT SHALL BE EQUIPPED WITH THE MANUFACTURER'S STANDARD CONTROLS INCLUDING 24V CONTROL TRANSFORMER, AUTOMATIC SPARK IGNITION, AUTOMATIC GAS VALVE TRAIN, HIGH TEMPERATURE LIMIT SWITCH, AND FAN TIMED DELAY RELAY.
 - RETURN AIR INLET ON UNIT SHALL BE PROVIDED WITH 1" THROWAWAY TYPE FILTER AND SLIDE IN FRAME, MOUNTED ON THE UNIT.
 - FAN SHALL BE A DIRECT DRIVE MULTI-SPEED BLOWER, RESILIENTLY MOUNTED IN THE CASING. MOTOR SHALL BE PROVIDED WITH AUTOMATIC THERMAL OVERLOAD PROTECTION.
 - FURNACE SHALL BE AGA APPROVED.
- CONDENSING UNIT SHALL BE FACTORY ASSEMBLED AND TESTED AIR-COOLED CONDENSING UNIT CONSISTING OF COMPRESSOR, CONDENSER COIL, FAN, MOTOR, REFRIGERANT RESERVOIR, OPERATING CONTROLS, ETC. CAPACITY AND ELECTRICAL CHARACTERISTICS SHALL BE AS SCHEDULED.
 - COMPRESSOR: HERMETICALLY SEALED WITH BUILT-IN OVERLOADS AND VIBRATION ISOLATION. COMPRESSOR MOTOR SHALL HAVE THERMAL AND CURRENT SENSITIVE OVERLOAD DEVICES, INTERNAL HIGH PRESSURE PROTECTION, HIGH AND LOW PRESSURE CUTOFF SWITCHES, START CAPACITOR AND RELAY, 2-POLE CONTACTOR, CRANKCASE HEATER, AND TEMPERATURE ACTUATED SWITCH AND TIMER TO PREVENT COMPRESSOR RAPID CYCLE.
 - COIL SHALL BE COPPER TUBING WITH ALUMINUM FINS. COMPLETE WITH LIQUID ACCUMULATOR AND LIQUID SUBCOOLER. UNIT SHALL INCLUDE FILTER DRYER, SIGHT GLASS, COMPRESSOR SERVICE VALVE, LIQUID LINE SERVICE VALVE, AND REFRIGERANT PIPING EXTENDED TO EXTERIOR OF CASING.

15. ELECTRIC WALL HEATERS

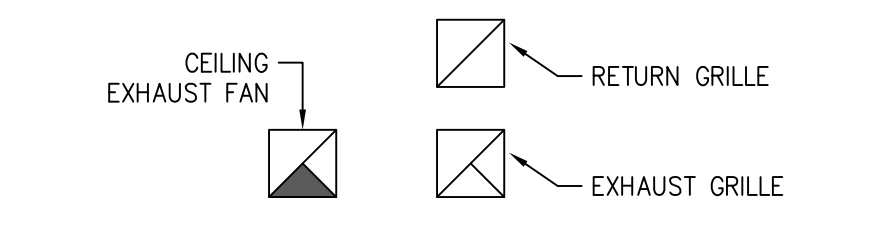
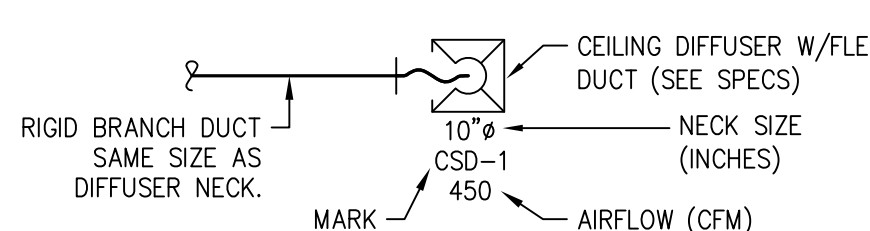
- UNIT SHALL INCLUDE ELECTRIC HEATING ELEMENTS WITH SAFETY AND DISCONNECT DEVICES AS REQUIRED BY NEC, INCLUDING RELAYS, CONTROLLERS AND REQUIRED EQUIPMENT TO FORM A COMPLETE AND FUNCTIONAL HEATER.
- ELEMENTS SHALL BE HEAVY DUTY ALUMINUM-FINNED, COPPER CLAD STEEL SHEATH. PROVIDE AUTOMATIC RESET THERMAL OVER-HEAT PROTECTION. THERMAL PROTECTOR SHALL BE LINEAR TYPE TO SENSE TEMPERATURES THE ENTIRE LENGTH OF HEATING ELEMENT.
- FANS SHALL BE DIRECT DRIVE USING PERMANENT SPLIT CAPACITOR TYPE MOTORS WITH BUILT-IN AUTOMATIC RESET MOTOR OVERLOAD PROTECTION.

M&P SYMBOLS

THIS IS A MASTER LEGEND AND NOT ALL SYMBOLS, ETC, ARE NECESSARILY USED ON THE DRAWINGS.

HVAC EQUIPMENT & DUCTWORK

- SPIN-IN FITTING WITH MANUAL VOLUME DAMPER
- BRANCH DUCT WITH 45° RECTANGLE-ROUND BRANCH FITTING AND MANUAL VOLUME DAMPER
- ELBOW WITH TURNING VANES
- RETURN, EXHAUST, OR OUTSIDE AIR DUCT UP
- RETURN, EXHAUST, OR OUTSIDE AIR DUCT DOWN
- SUPPLY AIR DUCT UP
- SUPPLY AIR DUCT DOWN
- EQUIPMENT WITH FLEXIBLE DUCT CONNECTION
- MANUAL VOLUME DAMPER
- SQUARE TO ROUND TRANSITION
- DUCT TRANSITION
- THERMOSTAT
- DUCT MOUNTED SMOKE DETECTOR



HVAC EQUIPMENT & DUCTWORK

SYMBOL	DESCRIPTION
	SANITARY SEWER (ABOVE GRADE)
	SANITARY SEWER (BELOW GRADE)
	CONDENSATE DRAIN
	VENT PIPING
	G = GAS PIPING LESS THAN 2 PSI
	MPG = GAS PIPING 2 PSI
	COLD WATER PIPING
	HOT WATER PIPING
	RECIRCULATING HOT WATER
	COMPRESSED AIR
	PIPE ELBOW DOWN
	PIPE ELBOW UP
	GATE VALVE
	BACKFLOW PREVENTER
	BALL VALVE
	PLUG VALVE
	FLOOR CLEANOUT (FCO)
	WALL CLEANOUT (WCO)
	FLOOR DRAIN
	FLOOR SINK
	HOSE BIB

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR	MC	MECHANICAL CONTRACTOR
BAS	BUILDING AUTOMATION SYSTEM	MIN	MINUTE
BD	BACKDRAFT	NC	NOISE CRITERIA
CFM	CUBIC FEET PER MINUTE	OA	OUTSIDE AIR
DDC	DIRECT DIGITAL CONTROL	RA	RETURN AIR
DX	DIRECT EXPANSION	SA	SUPPLY AIR
EA	EXHAUST AIR	SD	SMOKE DUCT DETECTOR
(E)	EXISTING	TF	TO FLOOR ABOVE
FFB	FROM FLOOR BELOW	TFB	TO FLOOR BELOW
GPM	GALLONS PER MINUTE	TYP	TYPICAL
IN WC	INCHES OF WATER COLUMN	U.G.	UNDER GROUND
MAX	MAXIMUM	WCO	WALL CLEANOUT
MBH	1000 BTU PER HOUR	W/O	WITHOUT

ANNOTATION

- # PLAN WORK NOTE
- MECHANICAL EQUIPMENT DESIGNATION (CONTRACTOR FURNISHED AND INSTALLED UNLESS NOTED OTHERWISE)
- PLUMBING FIXTURE DESIGNATION
- CONNECTION POINT OF NEW WORK TO EXISTING
- DETAIL REFERENCE UPPER NUMBER INDICATED DETAIL NUMBER LOWER NUMBER INDICATES SHEET NUMBER

RELEASED FOR CONSTRUCTION
As Noted on Plans Review

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REVISIONS
NO. DATE / DESCRIPTION

PROJECT #: 21-049
ISSUE DATE: 06/11/2021
ISSUED FOR: PERMIT

MECHANICAL AND PLUMBING SPECIFICATIONS AND SYMBOLS

MP-001

PLUMBING FIXTURE SCHEDULE	
FD	FLOOR DRAIN: SQUIX CHIEF 842-4PNR, ROUND FLOOR DRAIN, PVC BODY AND CLAMPING COLLAR, ADJUSTABLE 6-1/2" ROUND NICKEL BRONZE STRAINER. PROVIDE WITH PROSET SYSTEMS "TRAP GUARD" INSERT FOR ACTUAL FLOOR DRAIN MODEL AND SIZE PROVIDED.
LAV	WALL-MOUNT LAVATORY: KOHLER K-1997-1-0, SINGLE-HOLE, 14.375"X12.3125" ELLIPTICAL BOWL, MOUNT AT ADA HEIGHT, VITREOUS CHINA, WITH SINGLE LEVER LAVATORY FAUCET (KOHLER K-10215-4). PROVIDE FLEXIBLE SS RISERS WITH CHROME PLATED STOP VALVES, P-TRAP WITH CLEANOUT AND ESCUTCHEONS. INSULATE WITH "HANDI-LAV-GUARD" MODEL 102, OR EQUAL.
WC	FLOOR-MOUNTED ADA WATER CLOSET: KOHLER K-3519-TR, HANDICAP ACCESSIBLE, VITREOUS CHINA, 1.28 GPF, ELONGATED BOWL, FLOOR MOUNTED W/ 17.125" SEAT HEIGHT, WHITE, VITREOUS CHINA TANK AND COVER CONTAINING FLUSHOMETER/TANK WITH BUILT-IN PRESSURE REGULATOR AND BACKFLOW PREVENTER, WHITE OPEN-FRONT SEAT, CHROME STOPS, C.P. FLEXIBLE RISER TUBE, BOLT CAPS, AND ESCUTCHEON.
WH	10 GAL WATER HEATER: AO SMITH EJC-10, 8 GPH RECOVERY AT 90 DEG F RISE, SINGLE ELEMENT, 120V, 1650W
RPZ	REDUCED PRESSURE ZONE BACKFLOW PREVENTER: WATTS LF009, 1-1/2", MEETING ASSE 1013, LEAD FREE CAST BRONZE BODY, QUARTER TURN TESTING COCKS, QUARTER TURN BALL VALVES, AND AIR GAP FITTING.

GAS FURNACE SCHEDULE																			
GENERAL DATA					HEATING				FAN DATA				ELECTRICAL						
TAG	BASIS OF DESIGN MFR/MODEL	FLOW DIRECTION	WEIGHT (LBS)	DIMENSIONS (WxDxH)	OUTSIDE AIR (CFM)	INPUT (BTUH)	OUTPUT (BTUH)	AFUE	VENT	TYPE	HP	CFM	ESP (IN WG)	VOLT	PHASE	HZ	MOC	MCA	NOTES
F-1	LENNOX / EL296UH070XV36B	HORIZONTAL	136	29.25x33x17.5	0	66,000	62,000	96	CONCENTRIC	VARIABLE	1/2	840	0.5	120	1	60	15	7.7	A,B,C,D,E

NOTES:
A. EXTERNAL STATIC PRESSURE LISTED REPRESENTS STATIC PRESSURE REQUIRED FOR DUCTWORK AND DIFFUSERS OUTSIDE THE HVAC UNIT COMPLETELY INDEPENDENT OF ANY PRESSURE DROP THROUGH THE HVAC EQUIPMENT INCLUDING FILTER AND COIL.
B. PROVIDE UNIT WITH 7-DAY PROGRAMMABLE HEAT/COOL/AUTO CHANGEOVER MULTISTAGE THERMOSTAT W/HUMIDITY SENSOR.
C. PROVIDE MANUFACTURER'S CONCENTRIC VENT KIT. SIZE AND INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS WHILE ADHERING TO LENGTH AND FITTING LIMITATIONS.
D. PROVIDE END RETURN FILTER KIT.
E. ADJUST FACTORY DEFAULT SETTINGS TO LIMIT BLOWER SPEED TO 840 CFM.

EXHAUST FAN SCHEDULE													
MARK	AREA SERVED	MANUFACTURER	MODEL	MOUNTING / TYPE	CFM	ESP (IN)	DRIVE	POWER	ELECTRICAL			WEIGHT	NOTES
									VOLTS	PHASE	FLA		
EF-1	RESTROOM	PANASONIC	FV-0511VK2	CEILING / CABINET	110	0.375	DIRECT	9.9 W	120	1	0.1	12	A, B

NOTES:
A. PROVIDE INTERNAL CABINET BACKDRAFT DAMPER, CEILING GRILLE, ALL THREAD RODS AND VIBRATION ISOLATORS.
B. INTERLOCK WITH RESTROOM LIGHTSWITCH.

CONDENSING UNIT SCHEDULE													
GENERAL DATA					ELECTRICAL				COOLING COIL & MISC.				NOTES
TAG	BASIS OF DESIGN MFR/MODEL	LOCATION	WEIGHT (LBS)	DIMENSIONS (WxDxH) (IN.)	NOMINAL CAP. (MBH)	VOLT	PHASE	HZ	MOC	MCA	REFR.	EVAP COIL MODEL #	
CU-1	LENNOX / XC20-024-230	GROUND	243	35.5x39.5x39	24	208	1	60	30	19.1	R410A	CH35-30B-2F	A, B, C

NOTES:
A. PROVIDE TIME DELAY ON COMPRESSOR RE-START KIT, CRANKCASE HEATER, AND COMPRESSOR LOCK-OUT WITH AMBIENT BELOW 35F.
B. MECHANICAL CONTRACTOR SHALL COORDINATE ALL UNIT MOC'S OF ACTUAL INSTALLED EQUIPMENT WITH ELECTRICAL CONTRACTOR.
C. PROVIDE MIN. 4" TALL PRE-MANUFACTURED POLYOLEFIN PAD.

GAS UNIT HEATER SCHEDULE												
MARK	LOCATION	MFR.	MODEL	INPUT (MBH)	OUTPUT (MBH)	EFF (%)	CFM	WEIGHT (LBS)	ELECTRICAL			NOTES
									VOLTS	PH	FLA	
UH-1	WAREHOUSE	LENNOX	LF25-125A	125	103.75	83.5	1950	167.00	115	1	5	A-E

NOTES:
A. PROVIDE WALL MOUNTED THERMOSTAT.
B. PROVIDE 4" TYPE 'B' VENT.
C. DISCONNECT BY ELECTRICAL.
E. PROVIDE NECESSARY MOUNTING BRACKET AND ACCESSORIES FOR VERTICAL MOUNTING.

DIFFUSER, REGISTER AND GRILLE SCHEDULE							
MARK	MANUFACTURER	MODEL	FACE TYPE	MOUNTING TYPE	FACE SIZE (IN.)	MAX NC	NOTES
SUPPLY							
CSD-1	TITUS	OMNI	PLAQUE FACE	LAY-IN	24x24	25	A,B,C
CSD-2	TITUS	TDC	LOUVERED	SURFACE	12.5x12.5	25	A,B,C
RETURN							
CRG-1	TITUS	50F	EGGCRATE	LAY-IN	24x24	25	A,B,C,D

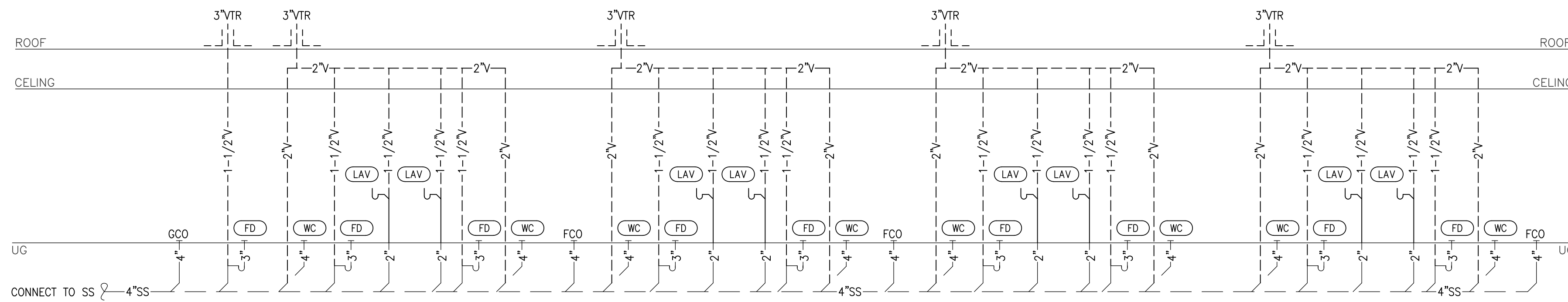
NOTES:
A. NECK SIZE SHOWN ON DRAWINGS.
B. BAKED ENAMEL FINISH, WHITE
C. FRAME TYPE TO MATCH CEILING CONSTRUCTION, COORDINATE WITH ARCHITECTURAL REFLECTED CEILING PLAN.
D. PAINT THE INSIDE OF CANS FLAT BLACK.

FIXTURE BRANCH CONNECTION SCHEDULE				
FIXTURE	COLD WATER	HOT WATER	WASTE	VENT
FLOOR DRAIN	-	-	3"	1 1/2"
LAVATORY / SINK	1/2"	1/2"	1 1/2"	1 1/2"
WATER CLOSET (FLUSH TANK)	1/2"	-	4"	2"

NOTE: PIPE SIZES SHOWN ARE MINIMUM. 2" MIN. UNDERGROUND.

ELECTRIC UNIT HEATER SCHEDULE						
MARK	MANUFACTURER	MODEL	WEIGHT (LBS)	KW	VOLTAGE/PH	REMARKS
EW-1	QMARK	LFK204F	22	3	208/1	1,2

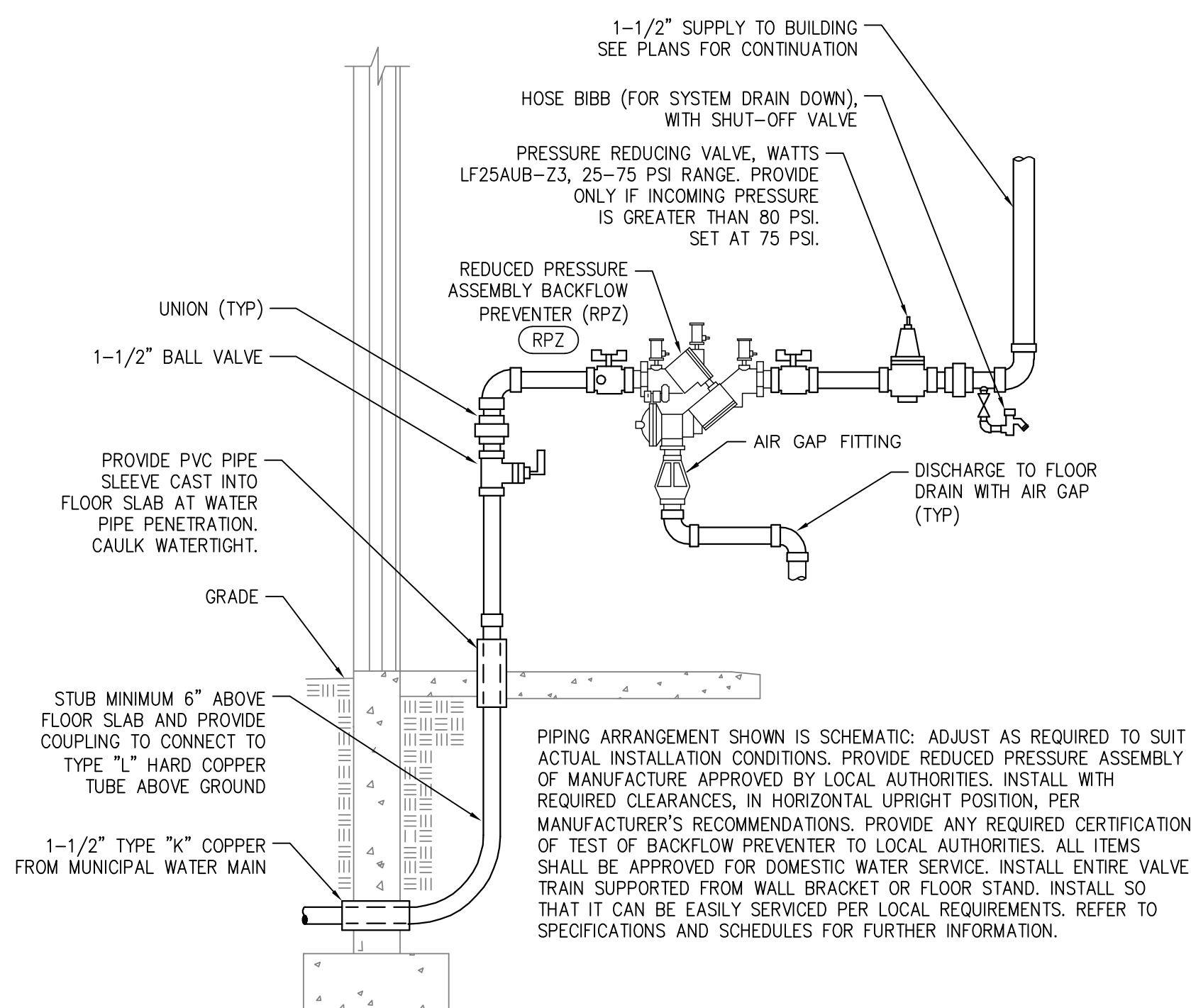
REMARKS:
1. PROVIDE SURFACE MOUNT FRAME.
2. PROVIDE WITH INTEGRAL THERMOSTAT AND DISCONNECT.



WASTE & VENT RISER DIAGRAM

SCALE : NO SCALE

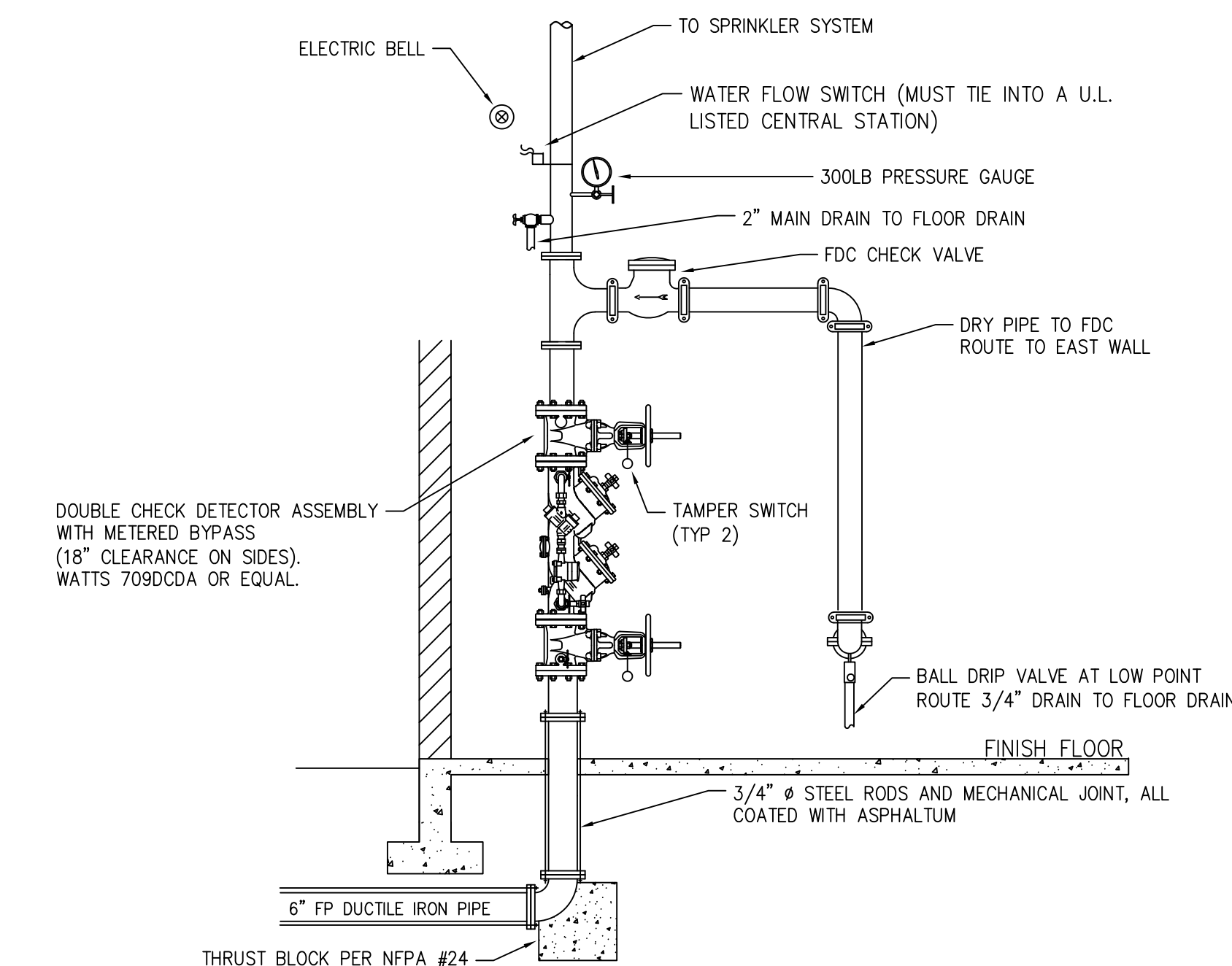
4



DOMESTIC WATER SERVICE ENTRY

SCALE : NO SCALE

3

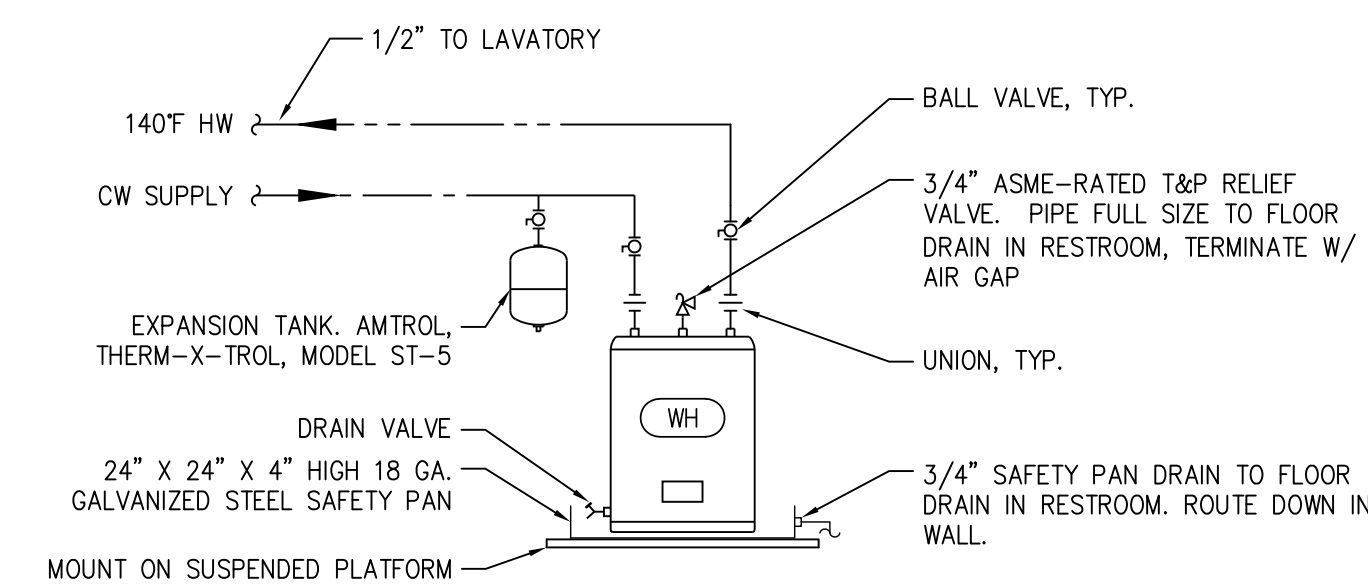


- NOTES:
1) SEE NFPA 13 FOR CONNECTIONS PASSING THROUGH OR UNDER FOUNDATION WALLS.
2) ADEQUATE CLEARANCE SHALL BE PROVIDED AROUND FIRE RISER. DIMENSIONS FROM FACE-OF-PIPE SHALL MEASURE A MINIMUM OF 12" OFF THE BACK WALL, 18" ON EACH SIDE, AND 36" CLEAR IN FRONT. ALL VALVES NO MORE THAN 7'-0" AFF.
3) TAMPER SWITCH OR CHAIN & LOCK REQUIRED FOR CONTROL VALVES.
4) MONITORING SYSTEM: PROVIDE A SYSTEM FOR DETECTION OF FLOW AND SUPERVISION OF VALVES, CAPABLE WITH COMMUNICATING WITH OWNER'S MONITORING COMPANY. PROVIDE ALL WIRING. ROUTE COMMUNICATION CABLE TO TELEPHONE EQUIPMENT FOR CONNECTIONS BY OWNER.
5) DRAWING IS SCHEMATIC. ORIENT VALVE SO THAT 36" CLEAR IS IN FRONT OF HANDWHEEL.
6) HORIZONTAL INSTALLATION ALSO ALLOWED.

FIRE SPINKLER RISER - WET PIPE

SCALE : NO SCALE

2



ELECTRIC WATER HEATER

SCALE : NO SCALE

1

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As Noted on Plans Review
Department Services Department
Summit, Missouri
01/2022

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REVISIONS
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MECHANICAL AND
PLUMBING SCHEDULES
AND DETAILS

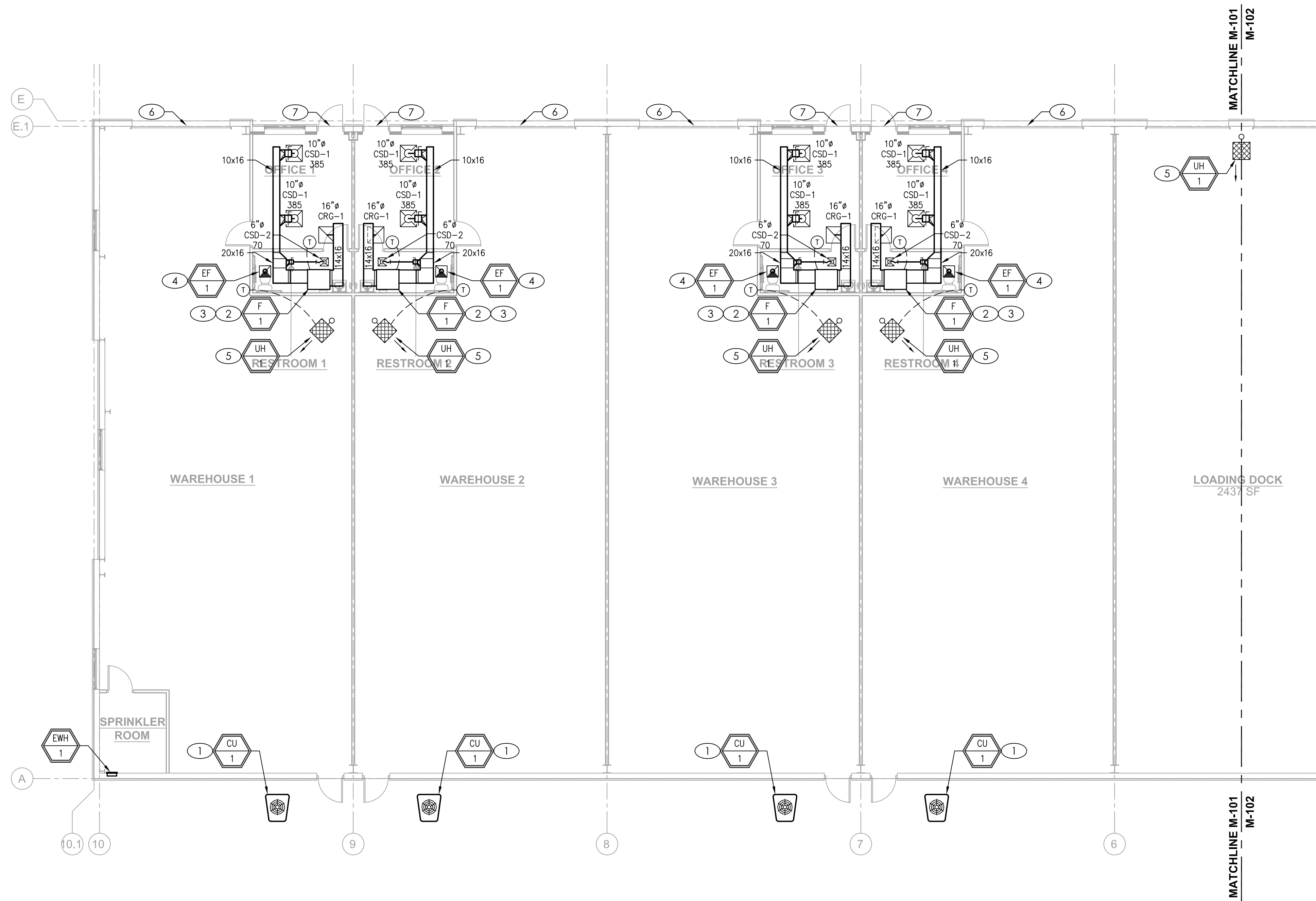
MP-002

GENERAL NOTES

- A. DRAWINGS ARE DIAGRAMMATIC ONLY AND REPRESENT THE GENERAL SCOPE OF WORK. REVIEW THE GENERAL NOTES, SPECIFICATIONS AND PLANS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT, ENGINEER AND/OR OWNER OF CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
- B. COORDINATE INSTALLATION OF MECHANICAL SYSTEMS WITH OTHER TRADES TO ENSURE A NEAT AND ORDERLY INSTALLATION AND AVOID CONFLICTS. INSTALL DUCTWORK AND PIPING AS TIGHT TO STRUCTURE AS POSSIBLE. COORDINATE INSTALLATION OF DUCTWORK AND PIPING TO AVOID CONFLICTS WITH ELECTRICAL PANELS, LIGHTING FIXTURES, ETC. VERIFY DUCT SPACE AVAILABLE ABOVE ALL CEILINGS PRIOR TO ANY FABRICATION OF INSTALLATION.
- C. NEW MECHANICAL EQUIPMENT, DUCTWORK AND PIPING ARE SHOWN AT APPROXIMATE LOCATIONS. FIELD MEASURE FINAL DUCTWORK AND PIPING LOCATIONS PRIOR TO FABRICATION AND MAKE ADJUSTMENTS AS REQUIRED TO FIT THE DUCTWORK AND PIPING WITHIN THE AVAILABLE SPACE. VERIFY THAT FINAL EQUIPMENT LOCATIONS MEET MANUFACTURER'S RECOMMENDATIONS REGARDING SERVICE CLEARANCE AROUND EQUIPMENT.
- D. INSTALL DUCTWORK AND PIPING PARALLEL TO BUILDING COLUMN LINES UNLESS OTHERWISE SHOWN OR NOTED.
- E. OVERHEAD HANGERS AND SUPPORTS FOR EQUIPMENT, DUCTWORK AND PIPING SHALL BE FASTENED TO BUILDING JOISTS OR BEAMS. DO NOT ATTACH HANGERS AND SUPPORTS TO THE ABOVE ROOF.
- F. ALL ROOF AND WALL PENETRATIONS SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR. PROVIDE ALL REQUIRED SLEEVES, FLASHINGS, CURBS, REINFORCED ANGLES, SUPPORTING FRAMES, ETC. UNLESS THEY ARE SPECIFICALLY CALLED OUT TO BE FURNISHED BY OTHERS.

KEYED PLAN NOTES

- 1. CONDENSING UNIT LEVEL AT GRADE ON PREMANUFACTURED PAD. INSTALL PER MANUFACTURER'S INSTRUCTIONS MAINTAINING RECOMMENDED SERVICE CLEARANCES. ROUTE REFRIGERANT LINES THROUGH WALL 18" AFG. WEATHER SEAL REFRIGERANT LINE PENETRATIONS OF BUILDING. PROVIDE ALL NECESSARY VALVES, FILTERS, FITTINGS, ETC. AND MAKE ALL NECESSARY CONNECTIONS TO COOLING COIL.
- 2. MOUNT HORIZONTAL FURNACE AND COIL ABOVE RESTROOM CEILING. TRANSITION DUCTWORK TO UNIT AS REQUIRED. AT RETURN PROVIDE MANUFACTURER'S END RETURN FILTER KIT AND FILTER. ROUTE CONDENSATE DRAINS FROM FURNACE AND COIL TO FLOOR DRAIN BELOW.
- 3. PROVIDE CONCENTRIC VENT FOR FURNACE. INSTALLED PER MANUFACTURER'S WRITTEN INSTRUCTIONS. ADHERE TO SIZE AND LENGTH LIMITATIONS. LOCATE VENT A MINIMUM OF 5'-0" FROM OUTSIDE AIR INTAKE. ROUTE TO ROOF OR WALL. COORDINATE LOCATION WITH GC PRIOR TO INSTALLATION.
- 4. CEILING MOUNT EXHAUST FAN. ROUTE 6" EXHAUST DUCT UP THROUGH ROOF TO ROOF CAP. LOCATE A MINIMUM OF 10'-0" FROM ANY OUTSIDE AIR INTAKE. SEAL ROOF PENETRATION WEATHER TIGHT.
- 5. HANG UNIT HEATER 14' AFF FROM OVERHEAD STRUCTURAL STEEL. PROVIDE TYPE 'B' VENT THROUGH ROOF. INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
- 6. VENTILATION AIR FOR WAREHOUSE IS BY OPERABLE WAREHOUSE DOOR. 12'X14' DOOR PROVIDES 168 SQFT OF OPEN AREA. BY THE 4% RULE PER IMC SECTION 402, MIN REQUIRED VENTILATION AREA IS 0.04*2431 SQFT =97.24 SQFT.
- 7. VENTILATION AIR FOR OFFICE IS BY OPERABLE DOOR. 3'X7' DOOR PROVIDES 21 SQFT OF OPEN AREA. BY THE 4% RULE PER IMC SECTION 402, MIN REQUIRED VENTILATION AREA IS 0.04*171 SQFT=6.8 SQFT.



MECHANICAL PLAN - WEST

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

1



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MECHANICAL PLAN WEST

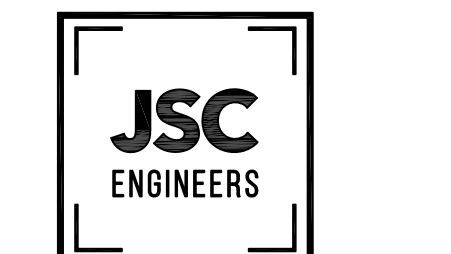
M-101



Certificates of Authority
Architecture: MO 119 / KS 73
Engineering: MO 4 / KS 241
Land Surveying: MO 123 / KS 36

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06-11-2021

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REVISIONS

NO.	DATE	DESCRIPTION

PROJECT #: 21-049
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MECHANICAL PLAN
EAST

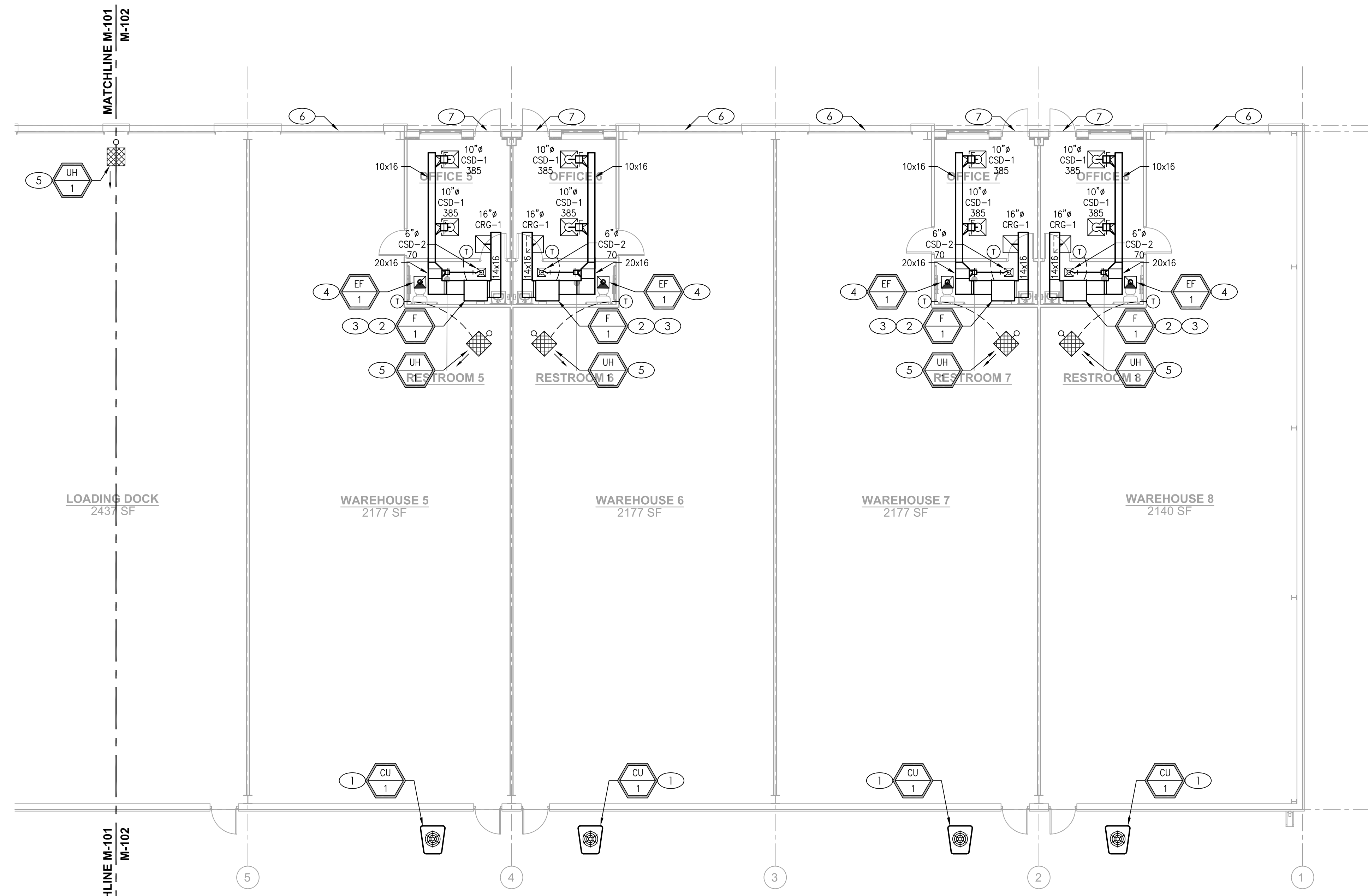
M-102

GENERAL NOTES

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- B. COORDINATE INSTALLATION OF MECHANICAL SYSTEMS WITH OTHER TRADES TO ENSURE A NEAT AND ORDERLY INSTALLATION AND AVOID CONFLICTS. INSTALL DUCTWORK AND PIPING AS TIGHT TO STRUCTURE AS POSSIBLE. COORDINATE INSTALLATION OF DUCTWORK AND PIPING TO AVOID CONFLICTS WITH ELECTRICAL PANELS, LIGHTING FIXTURES, ETC. VERIFY DUCT SPACE AVAILABLE ABOVE ALL CEILINGS PRIOR TO ANY FABRICATION OF INSTALLATION.
- C. NEW MECHANICAL EQUIPMENT, DUCTWORK AND PIPING ARE SHOWN AT APPROXIMATE LOCATIONS. FIELD MEASURE FINAL DUCTWORK AND PIPING LOCATIONS PRIOR TO FABRICATION AND MAKE ADJUSTMENTS AS REQUIRED TO FIT THE DUCTWORK AND PIPING WITHIN THE AVAILABLE SPACE. VERIFY THAT FINAL EQUIPMENT LOCATIONS MEET MANUFACTURER'S RECOMMENDATIONS REGARDING SERVICE CLEARANCE AROUND EQUIPMENT.
- D. INSTALL DUCTWORK AND PIPING PARALLEL TO BUILDING COLUMN LINES UNLESS OTHERWISE SHOWN OR NOTED.
- E. OVERHEAD HANGERS AND SUPPORTS FOR EQUIPMENT, DUCTWORK AND PIPING SHALL BE FASTENED TO BUILDING JOISTS OR BEAMS. DO NOT ATTACH HANGERS AND SUPPORTS TO THE ABOVE ROOF.
- F. ALL ROOF AND WALL PENETRATIONS SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR. PROVIDE ALL REQUIRED SLEEVES, FLASHINGS, CURBS, REINFORCED ANGLES, SUPPORTING FRAMES, ETC. UNLESS THEY ARE SPECIFICALLY CALLED OUT TO BE FURNISHED BY OTHERS.

KEYED PLAN NOTES

- 1. CONDENSING UNIT LEVEL AT GRADE ON PREMANUFACTURED PAD. INSTALL PER MANUFACTURER'S INSTRUCTIONS MAINTAINING RECOMMENDED SERVICE CLEARANCES. ROUTE REFRIGERANT LINES THROUGH WALL 18" AFG. WEATHER SEAL REFRIGERANT LINE PENETRATIONS OF BUILDING. PROVIDE ALL RECOMMENDED VALVES, FILTERS, FITTINGS, ETC. AND MAKE ALL NECESSARY CONNECTIONS TO COOLING COIL.
- 2. MOUNT HORIZONTAL FURNACE AND COIL ABOVE RESTROOM CEILING. TRANSITION DUCTWORK TO UNIT AS REQUIRED. AT RETURN PROVIDE MANUFACTURER'S END RETURN FILTER KIT AND FILTER. ROUTE CONDENSATE DRAINS FROM FURNACE AND COIL TO FLOOR DRAIN BELOW.
- 3. PROVIDE CONCENTRIC VENT FOR FURNACE. INSTALLED PER MANUFACTURER'S WRITTEN INSTRUCTIONS. ADHERE TO SIZE AND LENGTH LIMITATIONS. LOCATE VENT A MINIMUM OF 5'-0" FROM OUTSIDE AIR INTAKE. ROUTE TO ROOF OR WALL. COORDINATE LOCATION WITH GC PRIOR TO INSTALLATION.
- 4. CEILING MOUNT EXHAUST FAN. ROUTE 6" EXHAUST DUCT UP THROUGH ROOF TO ROOF CAP. LOCATE A MINIMUM OF 10'-0" FROM ANY OUTSIDE AIR INTAKE. SEAL ROOF PENETRATION WEATHER TIGHT.
- 5. HANG UNIT HEATER 14' AFF FROM OVERHEAD STRUCTURAL STEEL. PROVIDE TYPE 'B' VENT THROUGH ROOF. INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
- 6. VENTILATION AIR FOR WAREHOUSE IS BY OPERABLE WAREHOUSE DOOR. 12'X14' DOOR PROVIDES 168 SQFT OF OPEN AREA. BY THE 4% RULE PER IMC SECTION 402, MIN REQUIRED VENTILATION AREA IS 0.04*2431 SQFT =97.24 SQFT.
- 7. VENTILATION AIR FOR OFFICE IS BY OPERABLE DOOR. 3'X7' DOOR PROVIDES 21 SQFT OF OPEN AREA. BY THE 4% RULE PER IMC SECTION 402, MIN REQUIRED VENTILATION AREA IS 0.04*171 SQFT=6.8 SQFT.



MECHANICAL PLAN - EAST

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

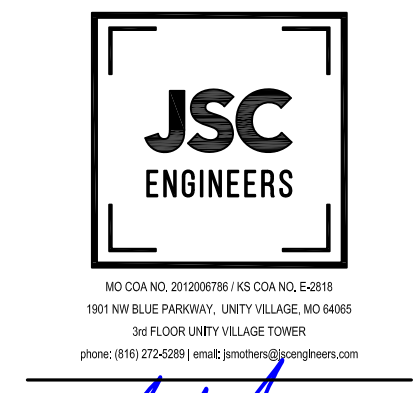
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Certificates of Authority
Architecture: MO 119 / KS 73
Engineering: MO 4 / KS 241
Land Surveying: MO 123 / KS 34

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MEP ENGINEER

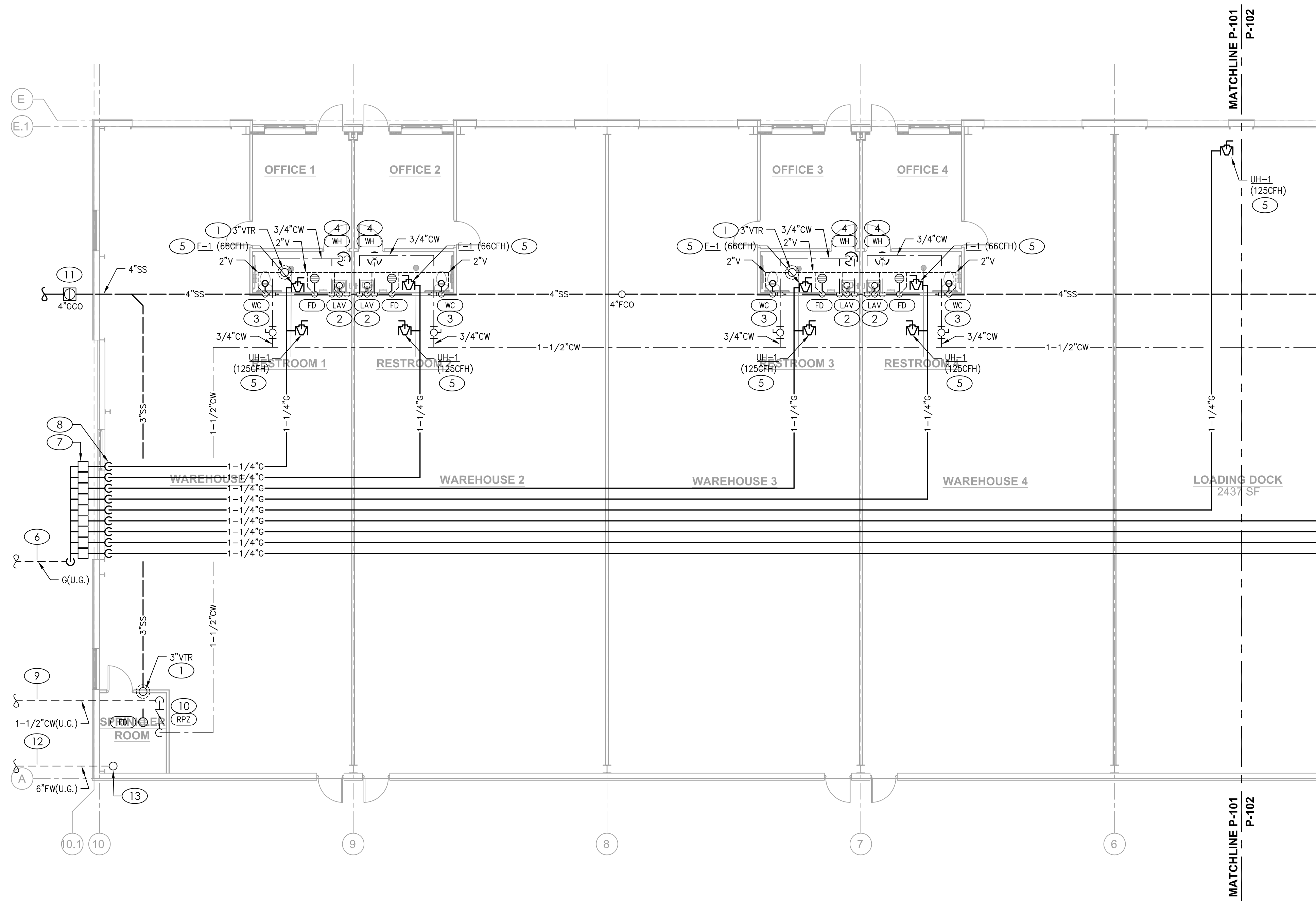


GENERAL NOTES

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- PROVIDE THE ARCHITECT AND OWNER WITH A COPY OF THE INSPECTION REPORTS AND APPROVAL CERTIFICATES FROM LOCAL AND STATE INSPECTIONS.
- REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND MOUNTING HEIGHTS OF PLUMBING FIXTURES.
- EXACT LOCATION AND ELEVATIONS OF ALL EXISTING UTILITIES SHALL BE VERIFIED PRIOR TO ANY INSTALLATION OR CONNECTIONS THEREOF.
- COORDINATE PIPE ROUTING AWAY FROM ELECTRICAL PANELS. DO NOT INSTALL PIPING OVER ELECTRICAL PANELS.
- COORDINATE THE ROOF PENETRATIONS WITH OTHER TRADES. MAINTAIN 10' MINIMUM CLEARANCE FROM ALL AIR INTAKES. MAINTAIN 3' FROM ALL OTHER EQUIPMENT.
- PROVIDE SHIELDED ADAPTOR COUPLINGS FOR CONNECTIONS OF PVC DWV TO CAST IRON SANITARY, WASTE AND VENT PIPE.
- REFER TO PLUMBING FIXTURE SCHEDULE FOR MINIMUM BRANCH WASTE AND VENT PIPE SIZING.

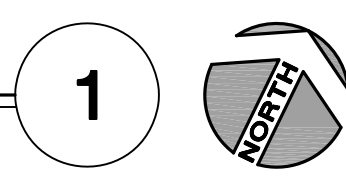
KEYED PLAN NOTES

- (NOT ALL NOTES NECESSARILY USED ON THIS SHEET)
- NEW VENT THROUGH ROOF (VTR). LOCATE VTR A MINIMUM OF 3'-0" FROM EDGE OF ROOF AND MINIMUM 10'-0" FROM ANY OUTSIDE AIR INTAKE. SEAL PENETRATION WEATHER TIGHT. COORDINATE WITH MECHANICAL CONTRACTOR.
 - PROVIDE 1-1/2" V, 2" SS, 1/2" CW AND 1" HW IN WALL TO LAV. PROVIDE THERMOSTATIC MIXING VALVE FOR FIXTURE EQUAL TO LEONARD MODEL 170. SET HW SUPPLY WATER TEMPERATURE TO 110°F.
 - PROVIDE 2" V, 4" SS, AND 1/2" CW IN WALL TO WATER CLOSET.
 - INSTALL WATER HEATER ABOVE CEILING. ROUTE 1/2" CW TO WATER HEATER THEN 1/2" HW FROM WH TO LAVATORY. ROUTE 3/4" T&P RELIEF FROM WATER HEATER TO FLOOR DRAIN WITH AIR GAP. COORDINATE LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO INSTALLATION.
 - PROVIDE SHUT-OFF VALVE AND DIRT LEG PRIOR TO EQUIPMENT CONNECTION. COORDINATE EXACT EQUIPMENT LOCATION WITH MECHANICAL CONTRACTOR.
 - GAS PIPING TO UTILITY MAIN. TOTAL ESTIMATED GAS LOAD FOR BUILDING IS 1,653 CFH. REFER TO CIVIL PLANS FOR CONTINUATION. CONTRACTOR TO COORDINATE WITH GAS UTILITY FOR INSTALLATION.
 - COORDINATE WITH GAS COMPANY FOR INSTALLATION OF METER BANK WITH 9 TENANT METERS. DEMAND FOR EACH METER IS 191 CFH @ 12" W.C.
 - ROUTE GAS PIPING THROUGH EXTERIOR WALL THEN UP ON INTERIOR OF WALL. ROUTE TIGHT TO WALL. CONTINUE ROUTING AS SHOWN AT BOTTOM OF JOIST ELEVATION. SEAL WALL PENETRATION WEATHERTIGHT.
 - 1-1/2" DOMESTIC COLD WATER TO UTILITY SERVICE. CONTRACTOR SHALL WORK WITH THE WATER COMPANY AND FOR THE INSTALLATION OF A NEW WATER MAIN ENTRANCE, INCLUDING TAP, METER, METER PIT, PIPING, ETC. FOR A COMPLETE INSTALLATION. SEE CIVIL PLANS FOR CONTINUATION. MAINTAIN MINIMUM 48" BURY FOR FREEZE PROTECTION.
 - 1-1/2" SHUT-OFF VALVE AND 1-1/2" RPZ BACKFLOW PREVENTER APPROVED FOR DOMESTIC WATER SERVICE. PROVIDE PRESSURE REDUCING VALVE IF SERVICE PRESSURE AT DOMESTIC WATER ENTRY EXCEEDS 75 P.S.I. DOWNSTREAM OF REDUCED PRESSURE BACKFLOW PREVENTER. SEE INSTALLATION DETAIL.
 - 4" SANITARY TO UTILITY SERVICE. REFER TO CIVIL PLANS FOR CONTINUATION. PROVIDE 4" GCO AT EXTERIOR OF BUILDING.
 - 6" FIRE SERVICE TO MAIN. REFER TO CIVIL DRAWINGS FOR CONTINUATION.
 - FIRE RISER. SEE DETAIL ON MP001 FOR GENERAL REQUIREMENTS. COORDINATE WITH FIRE SPRINKLER CONTRACTOR FOR INSTALLATION, SIZING, AND ROUTING OF FIRE DEPARTMENT CONNECTION.



PLUMBING PLAN - WEST

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



REVISIONS NO.	DATE	DESCRIPTION

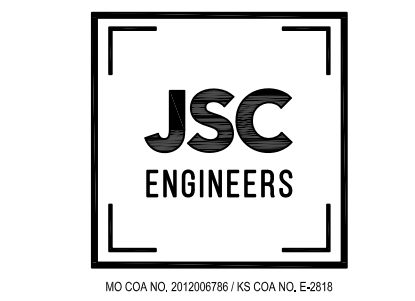
PROJECT #: 21-049
ISSUE DATE: 06/11/2021
ISSUED FOR:
PERMIT

PLUMBING PLAN
WEST

Certificates of Authority
Architecture: MO 119 / KS 73
Engineering: MO 4 / KS 241
Land Surveying: MO 123 / KS 36

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MEP ENGINEER



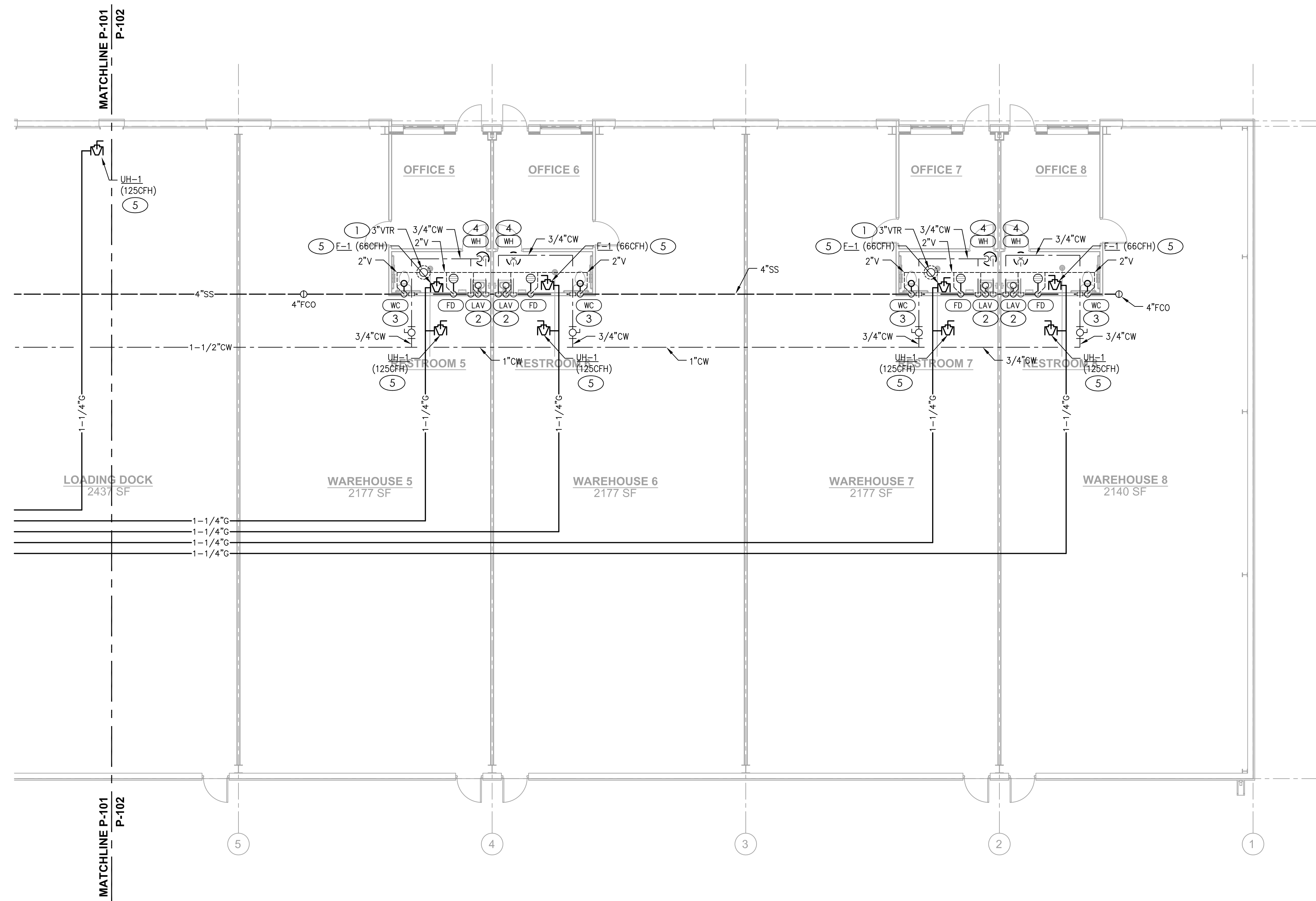
**LOT 10 LAKEWOOD
BUSINESS PARK
LOT 10 1-470 BUSINESS PARK
LEE'S SUMMIT, MO 64064**

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- F. COORDINATE THE ROOF PENETRATIONS WITH OTHER TRADES. MAINTAIN 10' MINIMUM CLEARANCE FROM ALL AIR INTAKES. MAINTAIN 3' FROM ALL OTHER EQUIPMENT.
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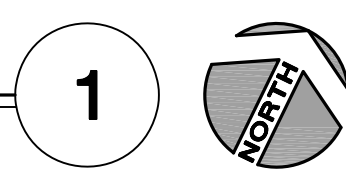
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PLUMBING PLAN - EAST

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



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PLUMBING PLAN
EAST

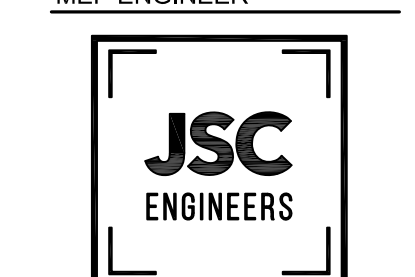
P-102

Certificates of Authority
Architecture: MO 119 / KS 73
Engineering: MO 4 / KS 241
Land Surveying: MO 123 / KS 36

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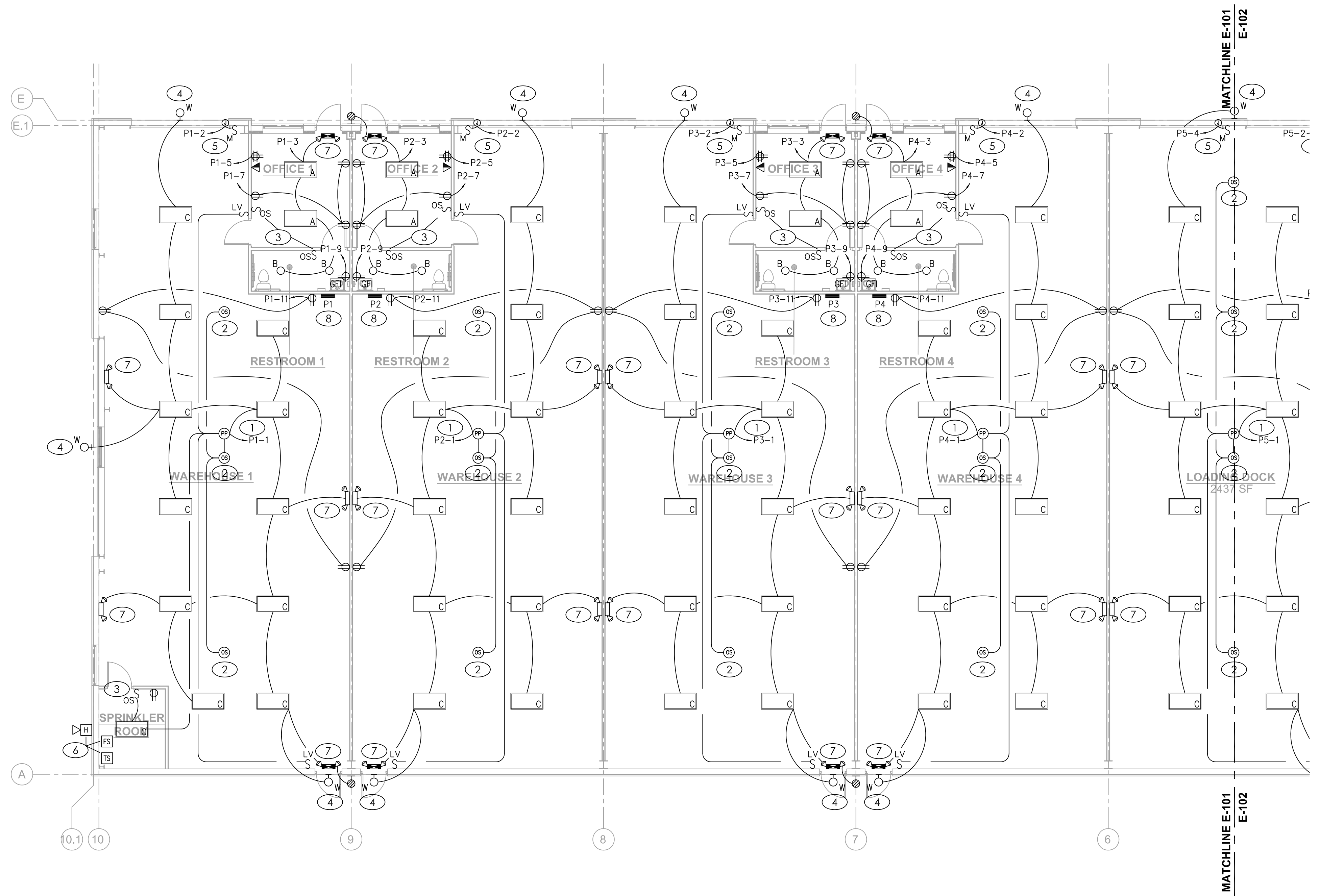


GENERAL NOTES

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- C. ALL ROOF AND WALL PENETRATIONS SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR. PROVIDE ALL REQUIRED SLEEVES, FLASHINGS, CURBS, REINFORCED ANGLES, SUPPORTING FRAMES, ETC. UNLESS THEY ARE SPECIFICALLY CALLED OUT TO BE FURNISHED BY OTHERS.
- D. COORDINATE ALL WORK WITH OTHER TRADES AS REQUIRED TO PROPERLY INSTALL ALL SYSTEMS AS INTENDED, WITHIN THE CONFINES OF THE SPACE AVAILABLE, AND WITHOUT INTERFERENCES.
- E. THIS CONTRACTOR SHALL PERFORM ALL WORK INDICATED AND/OR AS REQUIRED FOR THE PROPER INSTALLATION AND OPERATION OF THE ELECTRICAL SYSTEMS.
- F. ALL WIRING SHALL BE IN APPROVED RACEWAY.
- G. WIRE SIZE SHALL BE MINIMUM #12 AWG, THWN SOLID COPPER UNLESS OTHERWISE NOTED. PROVIDE GROUND WIRE WHERE REQUIRED BY CODE. INCREASE WIRE SIZE TO COMPENSATE FOR VOLTAGE DROP WHERE TOTAL LENGTH OF ANY BRANCH EXCEEDS 100 FEET.
- H. MAXIMUM NUMBER OF UNGROUNDED WIRES IN ANY CONDUIT SHALL BE THREE. ADDITIONAL WIRES ARE ACCEPTABLE IF WIRE SIZE IS INCREASED TO ALLOW FOR DERATING PER CODE. PROVIDE ADDITIONAL WIRES FOR SWITCHING AS REQUIRED.
- I. REFER TO LIGHTING FIXTURE SCHEDULE ON E201 FOR LIGHT FIXTURE TYPES AND REQUIREMENTS.
- J. CONNECT ALL EXIT SIGNS AND EMERGENCY LIGHTING UNITS TO THE INDICATED CIRCUIT WITH A SEPARATE AND UN-SWITCHED CONDUCTOR BYPASSING ALL CONTROLS AND CONTACTORS. REFER TO MANUFACTURER'S WRITTEN INSTRUCTIONS FOR PROPER INSTALLATION AND TESTING.
- K. THE ELECTRICAL SYSTEM DESIGN IS BASED IN PART ON THE SPECIFIED HVAC EQUIPMENT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE EXACT LOCATIONS AND ELECTRICAL REQUIREMENTS OF ALL HVAC EQUIPMENT BEING FURNISHED. ANY CHANGES TO THE ELECTRICAL SYSTEM DUE TO HVAC EQUIPMENT SUBSTITUTIONS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
- L. FIRE ALARM, AUDIO/VIDEO AND SURVEILLANCE SYSTEMS BY OTHERS.
- M. PROVIDE ALL ADDITIONAL EXTRA CONDUCTORS NEEDED FOR UNSWITCHED AND SWITCH LEGS AND TRAVELERS BETWEEN SWITCHES.
- N. REFER TO NATIONAL ACCOUNT LIGHTING FIXTURE SCHEDULE ON SHEET E203 FOR LIGHTING FIXTURE INFORMATION.

KEYED PLAN NOTES

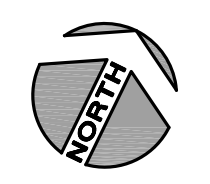
- 1. LIGHTING CONTROLS POWER PACK. SENSORWORX SWX-900 SERIES OR PRE-BID APPROVED EQUAL. PROVIDE AND INSTALL PER MANUFACTURER'S RECOMMENDATIONS AND NEC REQUIREMENTS.
- 2. LIGHTING CONTROLS CEILING MOUNTED OCCUPANCY SENSOR. SENSORWORX SWX-200 SERIES OR PRE-BID APPROVED EQUAL. PROVIDE AND INSTALL PER MANUFACTURER'S RECOMMENDATIONS AND NEC REQUIREMENTS.
- 3. OCCUPANCY SENSING WALL SWITCH. SENSORWORX SWX-100 SERIES OR PRE-BID APPROVED EQUAL. PROVIDE AND INSTALL PER MANUFACTURER'S RECOMMENDATIONS AND NEC REQUIREMENTS.
- 4. PHOTOCELL PROVIDED WITH FIXTURE TO CONTROL ONLY THE ASSOCIATED FIXTURE.
- 5. MAKE CONNECTION TO POWER AND CONTROLS FOR OVERHEAD COILING DOOR PER MANUFACTURER'S RECOMMENDATIONS AND NEC REQUIREMENTS.
- 6. COORDINATE CONNECTION TO SPRINKLER SYSTEM WATERFLOW AND TAMPER SWITCHES AND NOTIFICATION HORN WITH SPRINKLER SYSTEM INSTALLER PRIOR TO CONSTRUCTION. MAKE CONNECTION PER MANUFACTURER'S RECOMMENDATIONS AND NFPA REQUIREMENTS.
- 7. CONNECT EMERGENCY/EXIT LIGHT VIA UNSWITCHED HOT CONDUCTOR.
- 8. NEW 225A FRAME/200A MCB, 208Y/120V, 3Φ, 4W, 42-POLE PANELBOARD. REFER TO SINGLE LINE DIAGRAM AND PANELBOARD SCHEDULES ON SHEET E-201 FOR MORE INFORMATION.



LIGHTING AND POWER PLAN - WEST

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

1



REVISIONS	NO.	DATE	DESCRIPTION

PROJECT #: 21-049
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ELECTRICAL PLAN - WEST

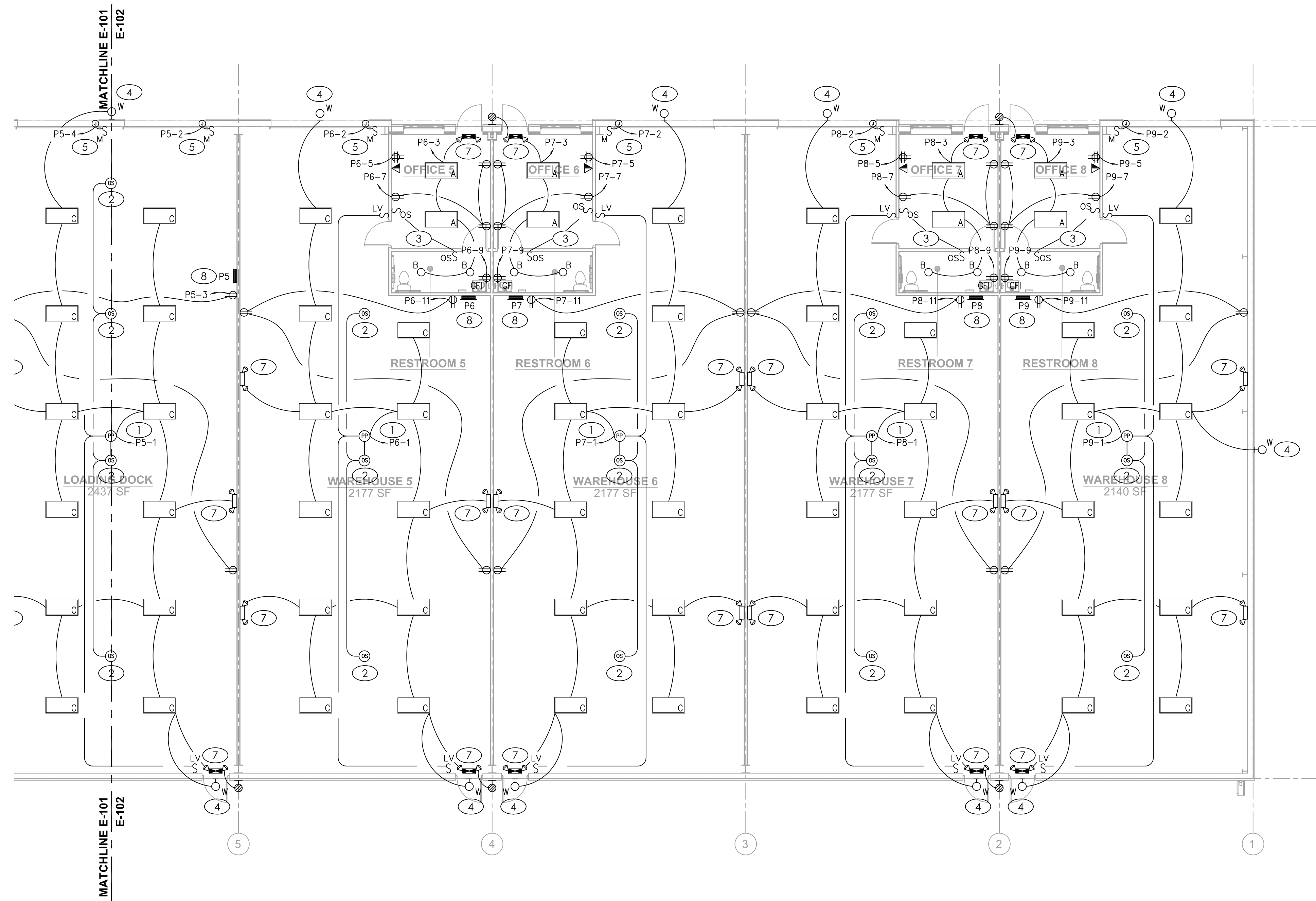
E-101

GENERAL NOTES

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- B. ALL WORK SHALL COMPLY WITH THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE (NFPA 70) AND ALL LOCAL BUILDING CODES AND AMENDMENTS.
- C. ALL ROOF AND WALL PENETRATIONS SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR. PROVIDE ALL REQUIRED SLEEVES, FLASHINGS, CURBS, REINFORCED ANGLES, SUPPORTING FRAMES, ETC. UNLESS THEY ARE SPECIFICALLY CALLED OUT TO BE FURNISHED BY OTHERS.
- D. COORDINATE ALL WORK WITH OTHER TRADES AS REQUIRED TO PROPERLY INSTALL ALL SYSTEMS AS INTENDED, WITHIN THE CONFINES OF THE SPACE AVAILABLE, AND WITHOUT INTERFERENCES.
- E. THIS CONTRACTOR SHALL PERFORM ALL WORK INDICATED AND/OR AS REQUIRED FOR THE PROPER INSTALLATION AND OPERATION OF THE ELECTRICAL SYSTEMS.
- F. ALL WIRING SHALL BE IN APPROVED RACEWAY.
- G. WIRE SIZE SHALL BE MINIMUM #12 AWG, THWN SOLID COPPER UNLESS OTHERWISE NOTED. PROVIDE GROUND WIRE WHERE REQUIRED BY CODE. INCREASE WIRE SIZE TO COMPENSATE FOR VOLTAGE DROP WHERE TOTAL LENGTH OF ANY BRANCH EXCEEDS 100 FEET.
- H. MAXIMUM NUMBER OF UNGROUNDED WIRES IN ANY CONDUIT SHALL BE THREE. ADDITIONAL WIRES ARE ACCEPTABLE IF WIRE SIZE IS INCREASED TO ALLOW FOR DERATING PER CODE. PROVIDE ADDITIONAL WIRES FOR SWITCHING AS REQUIRED.
- I. REFER TO LIGHTING FIXTURE SCHEDULE ON E201 FOR LIGHT FIXTURE TYPES AND REQUIREMENTS.
- J. CONNECT ALL EXIT SIGNS AND EMERGENCY LIGHTING UNITS TO THE INDICATED CIRCUIT WITH A SEPARATE AND UN-SWITCHED CONDUCTOR BYPASSING ALL CONTROLS AND CONTACTORS. REFER TO MANUFACTURER'S WRITTEN INSTRUCTIONS FOR PROPER INSTALLATION AND TESTING.
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- L. FIRE ALARM, AUDIO/VIDEO AND SURVEILLANCE SYSTEMS BY OTHERS.
- M. PROVIDE ALL ADDITIONAL EXTRA CONDUCTORS NEEDED FOR UNSWITCHED AND SWITCH LEGS AND TRAVELERS BETWEEN SWITCHES.
- N. REFER TO NATIONAL ACCOUNT LIGHTING FIXTURE SCHEDULE ON SHEET E203 FOR LIGHTING FIXTURE INFORMATION.

KEYED PLAN NOTES

- 1. LIGHTING CONTROLS POWER PACK. SENSORWORX SWX-900 SERIES OR PRE-BID APPROVED EQUAL. PROVIDE AND INSTALL PER MANUFACTURER'S RECOMMENDATIONS AND NEC REQUIREMENTS.
- 2. LIGHTING CONTROLS CEILING MOUNTED OCCUPANCY SENSOR. SENSORWORX SWX-200 SERIES OR PRE-BID APPROVED EQUAL. PROVIDE AND INSTALL PER MANUFACTURER'S RECOMMENDATIONS AND NEC REQUIREMENTS.
- 3. OCCUPANCY SENSING WALL SWITCH. SENSORWORX SWX-100 SERIES OR PRE-BID APPROVED EQUAL. PROVIDE AND INSTALL PER MANUFACTURER'S RECOMMENDATIONS AND NEC REQUIREMENTS.
- 4. PHOTOCELL PROVIDED WITH FIXTURE TO CONTROL ONLY THE ASSOCIATED FIXTURE.
- 5. MAKE CONNECTION TO POWER AND CONTROLS FOR OVERHEAD COILING DOOR PER MANUFACTURER'S RECOMMENDATIONS AND NEC REQUIREMENTS.
- 6. NOT USED ON THIS SHEET.
- 7. CONNECT EMERGENCY/EXIT LIGHT VIA UNSWITCHED HOT CONDUCTOR.
- 8. NEW 225A FRAME/200A MCB, 208Y/120V, 3Φ, 4W, 42-POLE PANELBOARD. REFER TO SINGLE LINE DIAGRAM AND PANELBOARD SCHEDULES ON SHEET E-201 FOR MORE INFORMATION.



LIGHTING AND POWER PLAN - EAST 1
SCALE : 1/8" = 1'-0"

REVISIONS NO.	DATE	DESCRIPTION

PROJECT #: 21-049
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ELECTRICAL PLAN - EAST

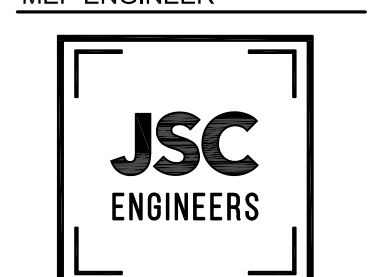


Certificates of Authority
 Architecture: MO 119 / KS 73
 Engineering: MO 4 / KS 241
 Land Surveying: MO 123 / KS 36

CLIENT

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MEP ENGINEER



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 1001 W. BLUE PERRYWAY, SUITE 100, GRAIN VALLEY, MO 64029
 816.373.4800 | powellcm.com

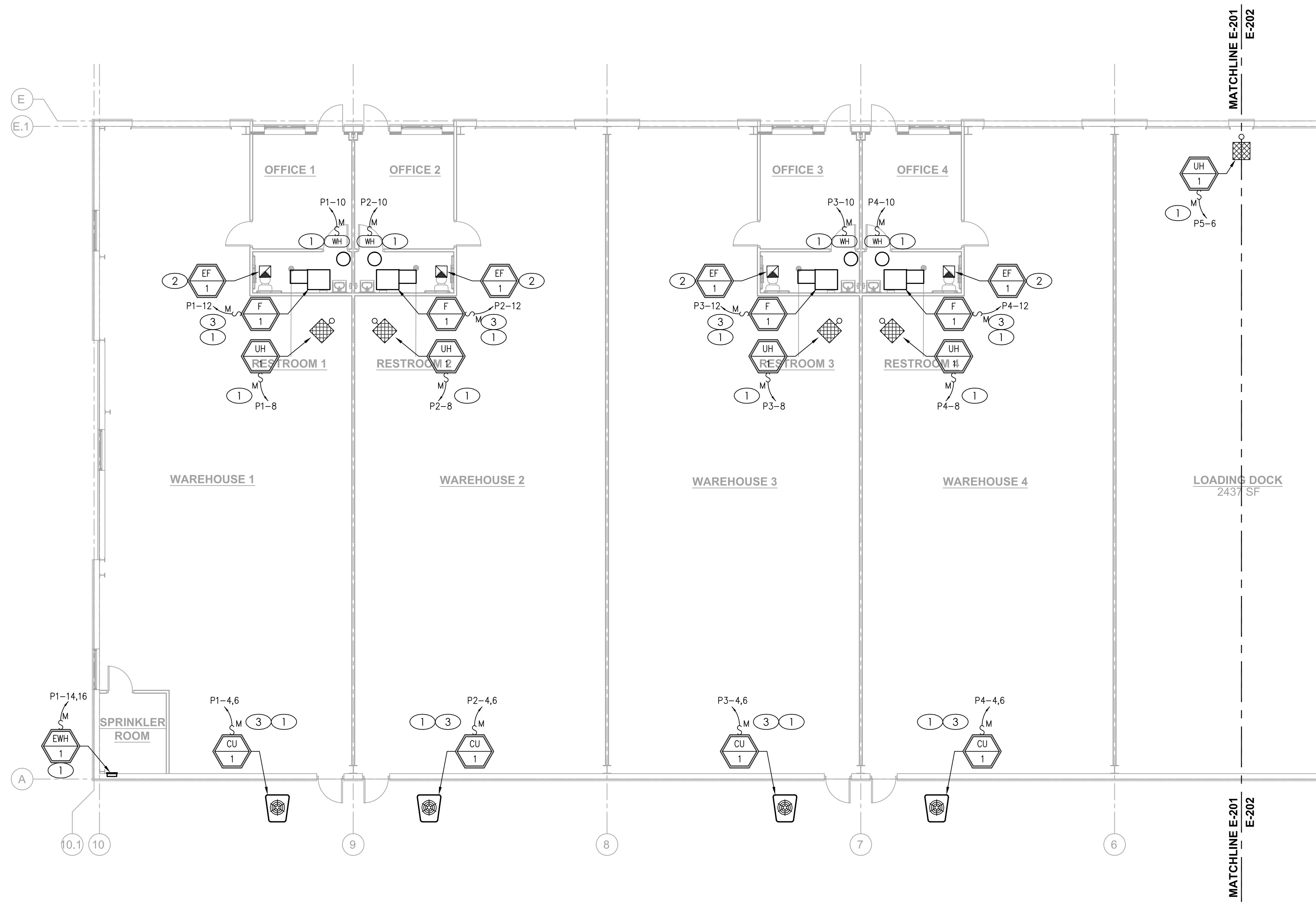


GENERAL NOTES

- A. DRAWINGS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED. REFER TO ARCHITECTURAL PLANS OR FIELD MEASUREMENTS FOR DIMENSIONS.
- B. ALL WORK SHALL COMPLY WITH THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE (NFPA 70) AND ALL LOCAL BUILDING CODES AND AMENDMENTS.
- C. ALL ROOF AND WALL PENETRATIONS SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR. PROVIDE ALL REQUIRED SLEEVES, FLASHINGS, CURBS, REINFORCED ANGLES, SUPPORTING FRAMES, ETC. UNLESS THEY ARE SPECIFICALLY CALLED OUT TO BE FURNISHED BY OTHERS.
- D. COORDINATE ALL WORK WITH OTHER TRADES AS REQUIRED TO PROPERLY INSTALL ALL SYSTEMS AS INTENDED, WITHIN THE CONFINES OF THE SPACE AVAILABLE, AND WITHOUT INTERFERENCES.
- E. THIS CONTRACTOR SHALL PERFORM ALL WORK INDICATED AND/OR AS REQUIRED FOR THE PROPER INSTALLATION AND OPERATION OF THE ELECTRICAL SYSTEMS.
- F. ALL WIRING SHALL BE IN APPROVED RACEWAY.
- G. WIRE SIZE SHALL BE MINIMUM #12 AWG, THWN SOLID COPPER UNLESS OTHERWISE NOTED. PROVIDE GROUND WIRE WHERE REQUIRED BY CODE. INCREASE WIRE SIZE TO COMPENSATE FOR VOLTAGE DROP WHERE TOTAL LENGTH OF ANY BRANCH EXCEEDS 100 FEET.
- H. MAXIMUM NUMBER OF UNGROUNDED WIRES IN ANY CONDUIT SHALL BE THREE. ADDITIONAL WIRES ARE ACCEPTABLE IF WIRE SIZE IS INCREASED TO ALLOW FOR DERATING PER CODE. PROVIDE ADDITIONAL WIRES FOR SWITCHING AS REQUIRED.
- I. REFER TO LIGHTING FIXTURE SCHEDULE ON E201 FOR LIGHT FIXTURE TYPES AND REQUIREMENTS.
- J. CONNECT ALL EXIT SIGNS AND EMERGENCY LIGHTING UNITS TO THE INDICATED CIRCUIT WITH A SEPARATE AND UN-SWITCHED CONDUCTOR BYPASSING ALL CONTROLS AND CONTACTORS. REFER TO MANUFACTURER'S WRITTEN INSTRUCTIONS FOR PROPER INSTALLATION AND TESTING.
- K. THE ELECTRICAL SYSTEM DESIGN IS BASED IN PART ON THE SPECIFIED HVAC EQUIPMENT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE EXACT LOCATIONS AND ELECTRICAL REQUIREMENTS OF ALL HVAC EQUIPMENT BEING FURNISHED. ANY CHANGES TO THE ELECTRICAL SYSTEM DUE TO HVAC EQUIPMENT SUBSTITUTIONS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
- L. FIRE ALARM, AUDIO/VIDEO AND SURVEILLANCE SYSTEMS BY OTHERS.
- M. PROVIDE ALL ADDITIONAL EXTRA CONDUCTORS NEEDED FOR UNSWITCHED AND SWITCH LEGS AND TRAVELERS BETWEEN SWITCHES.
- N. REFER TO NATIONAL ACCOUNT LIGHTING FIXTURE SCHEDULE ON SHEET E203 FOR LIGHTING FIXTURE INFORMATION.

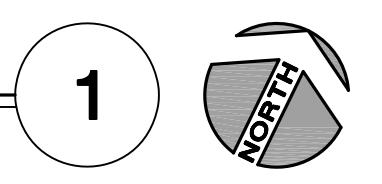
KEYED PLAN NOTES

- 1. MAKE CONNECTION TO DIV 22/23 EQUIPMENT PER MANUFACTURER'S RECOMMENDATION AND NEC REQUIREMENTS. COORDINATE WORK WITH DIVISION 22/23 CONTRACTOR PRIOR TO CONSTRUCTION.
- 2. WIRE SO THAT ON/OFF OPERATION OF EXHAUST FAN COORDINATES WITH LIGHTING IN ROOM.
- 3. MAKE CONNECTION FROM INDOOR TO OUTDOOR UNIT PER MANUFACTURER'S RECOMMENDATIONS. COORDINATE WORK WITH DIVISION 23 CONTRACTOR.



EQUIPMENT POWER PLAN - WEST

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



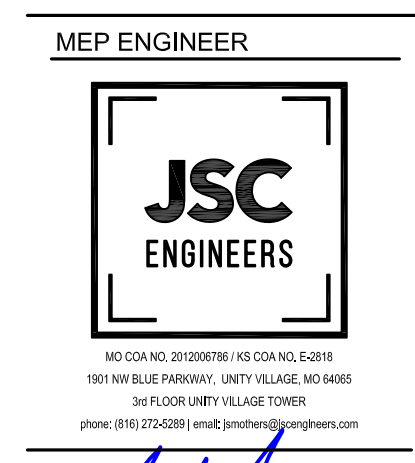
REVISIONS	NO.	DATE	DESCRIPTION

PROJECT #: 21-049
 ISSUE DATE: 06/11/2021
 ISSUED FOR: PERMIT

ELECTRICAL EQUIPMENT
 POWER PLAN - WEST

Certificates of Authority
Architecture: MO 119 / KS 73
Engineering: MO 4 / KS 241
Land Surveying: MO 123 / KS 36

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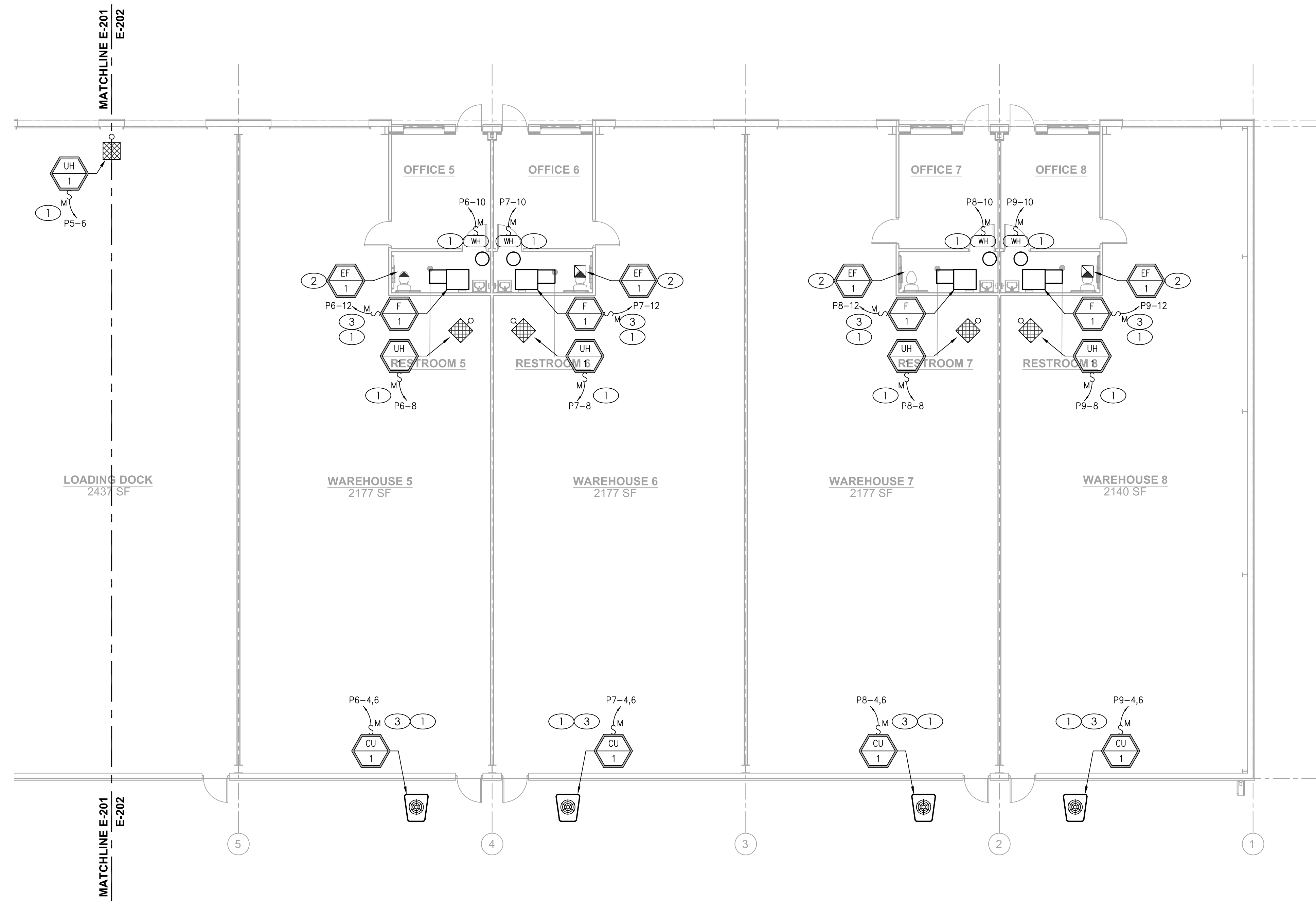
06-11-2021

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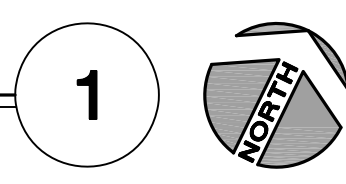
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POWER PLAN - EAST

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



REVISIONS NO.	DATE	DESCRIPTION

PROJECT #: 21-049
ISSUE DATE: 06/11/2021
ISSUED FOR:
PERMIT

ELECTRICAL EQUIPMENT
POWER PLAN - EAST

