

# OREM CITY PUBLIC SAFETY BUILDING INTERIOR REMODEL

95 EAST CENTER ST.

OREM, UTAH

## ARCHITECT WPA ARCHITECTURE

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## MECHANICAL ROYAL ENGINEERING

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## ELECTRICAL ROYAL ENGINEERING

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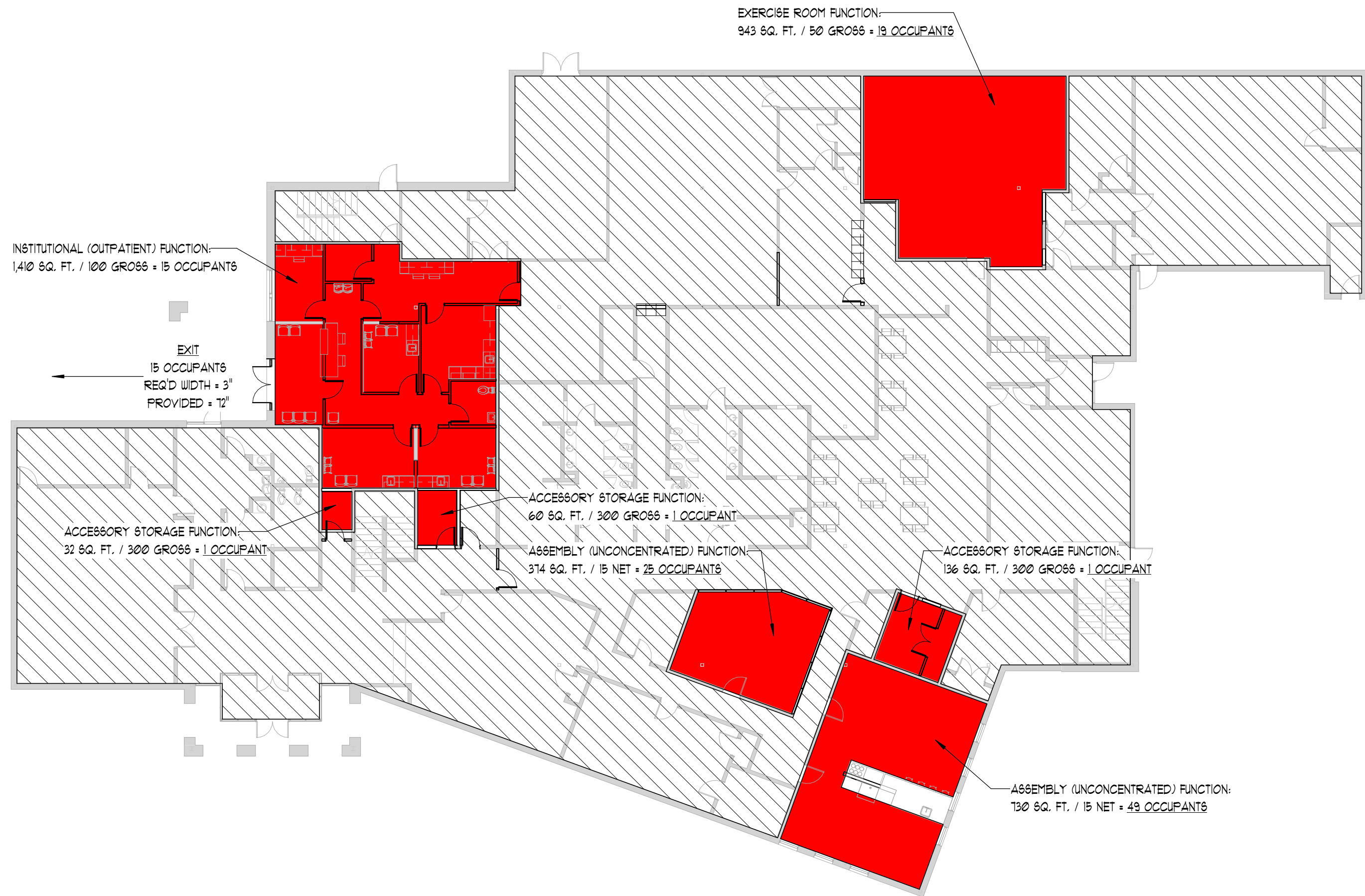
## CODE ANALYSIS

APPLICABLE CODES			
YEAR		YEAR	
INTERNATIONAL BUILDING CODE (IBC)	2021	NATIONAL ELECTRICAL CODE (NEC)	2020
INTERNATIONAL MECHANICAL CODE	2021	INTERNATIONAL EXISTING BUILDING CODE (IEBC)	2021
INTERNATIONAL PLUMBING CODE	2021	ICC/ANSI IIT.1	2017
INTERNATIONAL FIRE CODE (IFC)	2021	AMERICAN'S WITH DISABILITIES ACT	
INTERNATIONAL ENERGY CONSERVATION CODE (IECC)	2021		

- A. OCCUPANCY: B
- CHANGE IN USE: YES NO X MIXED OCCUPANCY: YES NO X
- B. TYPE OF CONSTRUCTION (CIRCLE ONE):
- I I II III IV V V  
A B A B HT A B
- C. SPRINKLERS: YES - EXISTING THROUGHOUT

## GENERAL NOTES

- A. ALL EXIT ACCESS DOORS AND EXITS SHALL BE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT. USE OF MANUAL FLUSH BOLTS, EDGE BOLTS, TOP OR BOTTOM BOLTS, ETC. IS PROHIBITED.
- B. GLAZING IN DOORS OR IN FIXED OR OPERABLE PANELS ADJACENT TO A DOOR WHERE THE NEAREST EXPOSED EDGE IS WITHIN A 24 INCH ARC OF THE DOOR AND WHERE THE BOTTOM EXPOSED EDGE IS LESS THAN 60 INCHES ABOVE THE WALKING SURFACE MUST BE TEMPERED.
- C. TANK TYPE WATER CLOSETS SHALL HAVE A MAXIMUM WATER USE OF 1.6 GALLONS PER FLUSH. SHOWERS SHALL HAVE A MAXIMUM FLOW OF 2.5 GALLONS PER MINUTE.
- D. BURNING OF CONSTRUCTION WASTE MATERIALS IS PROHIBITED AT ALL TIMES.
- E. PROVIDE ONE RECESSED 2-A FIRE EXTINGUISHER FOR EVERY 3,000 SQ. FT. OF FLOOR AREA WITH A MAXIMUM TRAVEL DISTANCE OF 75 FEET TO AN EXTINGUISHER.
- F. STORAGE OF EQUIPMENT, SOILS, CONSTRUCTION MATERIALS ON PUBLIC RIGHT-OF-WAY (STREETS/SIDEWALKS) OR EASEMENT IS EXPRESSLY PROHIBITED.
- G. GENERAL CONTRACTOR TO PROCURE ALL REQUIRED PERMITS FROM AUTHORITY HAVING JURISDICTION, INCLUDING BUT NOT LIMITED TO BUILDING, ENGINEERING, RIGHT OF WAY, AND OTHER PERMITS REQUIRED FOR SUB-CONTRACTOR WORK.
- H. GENERAL CONTRACTOR TO PROVIDE REQUIRED FIRE EXTINGUISHERS TO BE PRESENT DURING CONSTRUCTION.
- I. DIMENSIONS ARE SHOWN TO FACE OF STUD, UNLESS NOTED OTHERWISE.



1 MAIN LEVEL CODE ANALYSIS PLAN  
1/16" = 1'-0"



2021 IBC CODE REQUIREMENTS

2021 INTERNATIONAL EXISTING BUILDING CODE (IEBC)

EXISTING OCCUPANCY CLASSIFICATION: B  
PROPOSED OCCUPANCY CLASSIFICATION: B (SEE SHEET G11)

IEBC SECTION 301

"THE REPAIR, ALTERATION, CHANGE OF OCCUPANCY, ADDITION OR RELOCATION OF ALL EXISTING BUILDINGS SHALL COMPLY WITH SECTION 301.2, 301.3 OR 301.4." FOR THIS PROJECT, THE FOLLOWING SECTIONS WERE USED FOR DETERMINING CODE COMPLIANCE:

- 301.2 REPAIRS (IEBC CHAPTER 4)
- 301.3 ALTERATIONS, ADDITION OR CHANGE OF OCCUPANCY:
  - 301.3.1 PRESCRIPTIVE COMPLIANCE METHOD (IEBC CHAPTER 5)
  - 301.3.2 WORK AREA COMPLIANCE METHOD (IEBC CHAPTERS 6-12)
  - 301.3.3 PERFORMANCE COMPLIANCE METHOD (IEBC CHAPTER 13)
- 301.4 RELOCATED BUILDINGS (IEBC CHAPTER 14)

IEBC SECTION 306 - ACCESSIBILITY FOR EXISTING BUILDINGS

THE FOLLOWING SECTIONS APPLY:

- 306.3 MAINTENANCE AND REPAIR
- 306.4 EXTENT OF APPLICATION
- 306.5 CHANGE OF OCCUPANCY
- 306.6 ADDITIONS
- 306.7 ALTERATIONS
  - 306.7.1 ALTERATIONS AFFECTING AN AREA CONTAINING A PRIMARY FUNCTION
    - 306.7.2 ACCESSIBLE MEANS OF EGRESS
    - 306.7.3 ALTERATION OF TYPE A UNITS
    - 306.7.4 TYPE B UNITS
    - 306.7.5 ENTRANCES
    - 306.7.6 ACCESSIBLE ROUTE
    - 306.7.7 ELEVATORS
    - 306.7.8 PLATFORM LIFTS
    - 306.7.9 STAIRWAYS AND ESCALATORS IN EXISTING BUILDINGS
    - 306.7.10 DETERMINATION OF NUMBER OF UNITS
    - 306.7.11 TOILET ROOMS
    - 306.7.12 BATHING ROOMS
    - 306.7.13 ADDITIONAL TOILET AND BATHING FACILITIES
    - 306.7.14 DRESSING, FITTING AND LOCKER ROOMS
    - 306.7.15 AMUSEMENT RIDES
    - 306.7.16 HISTORIC STRUCTURES

IEBC CHAPTER 6 - CLASSIFICATION OF WORK

THE FOLLOWING CLASSIFICATION(S) APPLIES TO THE WORK:

- 602 ALTERATION - LEVEL 1 (CHAPTER 1) "LEVEL 1 ALTERATIONS INCLUDE THE REMOVAL AND REPLACEMENT OR THE COVERING OF EXISTING MATERIALS, ELEMENTS, EQUIPMENT, OR FIXTURES USING NEW MATERIALS, ELEMENTS, EQUIPMENT, OR FIXTURES THAT SERVE THE SAME PURPOSE."

- 603 ALTERATION - LEVEL 2 (CHAPTER 8) "LEVEL 2 ALTERATIONS INCLUDE THE ADDITION OR ELIMINATION OF ANY DOOR OR WINDOW, THE RECONFIGURATION OR EXTENSION OF ANY SYSTEM OR THE INSTALLATION OF ANY ADDITIONAL EQUIPMENT, AND SHALL APPLY WHEN THE WORK AREA IS EQUAL TO OR LESS THAN 50 PERCENT OF THE BUILDING"

- 604 ALTERATION - LEVEL 3 (CHAPTER 9) "LEVEL 3 ALTERATIONS APPLY WHERE THE WORK AREA EXCEEDS 50 PERCENT OF THE BUILDING AREA."

CALCULATION:

AREA OF LEVEL 2 ALTERATIONS: 3,689 SQ. FT.  
TOTAL BUILDING AREA: 32,134 SQ. FT. (TWO LEVELS)

TOTAL ALTERATIONS AS A PERCENTAGE OF TOTAL BUILDING AREA: 11.18 PERCENT (COMPLIES WITH IEBC SECTION 603 AS A LEVEL 2 ALTERATION ONLY)

- 605 CHANGE OF OCCUPANCY (CHAPTER 10)
- 606 ADDITIONS (CHAPTER 11)
- 607 HISTORIC BUILDINGS (CHAPTER 12)

IEBC CHAPTER 1: ALTERATIONS - LEVEL 1

101.2 "AN EXISTING BUILDING OR PORTION THEREOF SHALL NOT BE ALTERED SUCH THAT THE BUILDING BECOMES LESS SAFE THAN ITS EXISTING CONDITION."

SECTION 102 BUILDING ELEMENTS AND MATERIALS

THE FOLLOWING MATERIALS ARE BEING MODIFIED IN THE WORK AND ARE TO COMPLY WITH THE REFERENCED IBC SECTION:

- 102.1 INTERIOR FINISHES (IBC CHAPTER 8)
- 102.2 INTERIOR FLOOR FINISH (IBC SECTION 804)
- 102.3 INTERIOR TRIM (IBC SECTION 806)
- 102.4 WINDOW OPENING CONTROL DEVICES ON REPLACEMENT WINDOWS
- 102.5 REPLACEMENT WINDOW FOR EMERGENCY ESCAPE AND RESCUE OPENINGS
- 102.6 BARS, GRILLES, COVERS OR SCREENS
- 102.7 MATERIALS AND METHODS (IBC, IECC, IMC, IPC & IFGC)

SECTION 103 FIRE PROTECTION:

103.1 "ALTERATIONS SHALL BE DONE IN A MANNER THAT MAINTAINS THE LEVEL OF FIRE PROTECTION PROVIDED."

SECTION 104 MEANS OF EGRESS:

104.1 "ALTERATIONS SHALL BE DONE IN A MANNER THAT MAINTAINS THE LEVEL OF PROTECTION PROVIDED FOR THE MEANS OF EGRESS."

SECTION 105 REROOFING - (NOT APPLICABLE)

SECTION 106 STRUCTURAL - (NOT APPLICABLE)

SECTION 107 ELECTRICAL - (NOT APPLICABLE)

SECTION 108 ENERGY CONSERVATION - (NOT APPLICABLE):

"LEVEL 1 ALTERATIONS TO EXISTING BUILDINGS OR STRUCTURES DO NOT REQUIRE THE ENTIRE BUILDING OR STRUCTURE TO COMPLY WITH THE ENERGY REQUIREMENTS OF THE IECC OR IRC. THE ALTERATIONS SHALL CONFORM TO THE ENERGY REQUIREMENTS OF THE IECC OR IRC AS THEY RELATE TO THE NEW CONSTRUCTION ONLY."

IEBC CHAPTER 8: ALTERATIONS - LEVEL 2

801.4 "NEW CONSTRUCTION ELEMENTS, COMPONENTS, SYSTEMS, AND SPACES SHALL COMPLY WITH THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE."

SECTION 802 BUILDING ELEMENTS AND MATERIALS

THE FOLLOWING MATERIALS ARE LOCATED WITHIN THE WORK AREA AND ARE TO COMPLY WITH THE REFERENCED IBC SECTION:

- 802.2 VERTICAL OPENINGS
  - 802.2.1 EXISTING VERTICAL OPENINGS - 1-HOUR ENCLOSURE REQUIRED
  - 802.2.2 SUPPLEMENTAL SHAFT AND FLOOR OPENING ENCLOSURE REQUIREMENTS - NOT REQUIRED AS WORK AREA DOES NOT EXCEED 50 PERCENT OF THE FLOOR AREA.
  - 802.2.3 SUPPLEMENTAL STAIRWAY ENCLOSURE REQUIREMENTS - NOT REQUIRED AS WORK AREA DOES NOT EXCEED 50 PERCENT OF THE FLOOR AREA.
- 802.3 SMOKE COMPARTMENTS - NOT AN 'I-2' OCCUPANCY
  - 802.4.1 SUPPLEMENTAL INTERIOR FINISH REQUIREMENTS - NOT REQUIRED AS WORK AREA DOES NOT EXCEED 50 PERCENT OF THE FLOOR AREA.
- 802.5 GUARDS - NOT APPLICABLE FOR THIS PROJECT.
- 802.6 FIRE RESISTANCE RATINGS - WHERE AN AUTOMATIC SPRINKLER SYSTEM IS INSTALLED, THE FIRE RESISTANCE RATING OF BUILDING ELEMENTS AND MATERIALS SHALL BE PERMITTED TO MEET THE REQUIREMENTS OF THE CURRENT BUILDING CODE.
- 804.4 NUMBER OF OF EXITS
  - 804.4.1 MINIMUM NUMBER
  - 804.4.2 MEZZANINES
  - 804.4.3 MAIN ENTRANCE - GROUP A (NOT AN 'A' OCCUPANCY)
- 804.5 EGRESS DOORWAYS
  - 804.5.1 TWO EGRESS DOORWAYS REQUIRED
  - 804.5.2 DOOR SWING
  - 804.5.3 DOOR CLOSING
  - 804.5.4 PANIC AND EXIT FIRE HARDWARE
  - 804.5.5 EMERGENCY POWER SOURCE FOR GROUP 'I-3' (NOT AN 'I' OCCUPANCY)
- 804.6 OPENINGS IN CORRIDOR WALLS
  - 804.6.1 CORRIDOR DOORS
  - 804.6.2 TRANSOMS
  - 804.6.3 OTHER CORRIDOR OPENINGS
  - 804.6.4 SUPPLEMENTAL REQUIREMENTS FOR CORRIDOR OPENINGS
- 804.7 DEAD-END CORRIDORS - SHALL NOT EXCEED 35 FEET EXCEPT WHERE AN AUTOMATIC FIRE ALARM SYSTEM IS INSTALLED THAT ALLOWS 50 FEET.
- 804.8 MEANS-OF-EGRESS LIGHTING
  - 804.8.1 ARTIFICIAL LIGHTING REQUIRED - PROVIDED
  - 804.8.2 SUPPLEMENTAL REQUIREMENTS FOR MEANS-OF-EGRESS LIGHTING
- 804.9 EXIT SIGNS - PROVIDED
- 804.10 HANDRAILS
- 804.11 REFUGE AREAS
- 804.12 GUARDS

SECTION 803 FIRE PROTECTION

THE FOLLOWING COMPONENTS ARE BEING MODIFIED IN THE WORK AND ARE TO COMPLY WITH THE IEBC:

- 803.1.1 CORRIDOR RATINGS - NO RATING REQUIRED PER IBC TABLE 1020.2
- 803.2 AUTOMATIC SPRINKLER SYSTEMS - SYSTEM PROVIDED
- 803.3 STANDPIPES - BUILDING DOES NOT CONTAIN MORE THAN ONE TENANT
- 803.4 FIRE ALARM AND DETECTION - SYSTEM PROVIDED

SECTION 804 MEANS OF EGRESS

THE FOLLOWING COMPONENTS ARE BEING MODIFIED IN THE WORK AND ARE TO COMPLY WITH THE IEBC:

- 804.4 NUMBER OF OF EXITS
  - 804.4.1 MINIMUM NUMBER
  - 804.4.2 MEZZANINES
  - 804.4.3 MAIN ENTRANCE - GROUP A (NOT AN 'A' OCCUPANCY)
- 804.5 EGRESS DOORWAYS
  - 804.5.1 TWO EGRESS DOORWAYS REQUIRED
  - 804.5.2 DOOR SWING
  - 804.5.3 DOOR CLOSING
  - 804.5.4 PANIC AND EXIT FIRE HARDWARE
  - 804.5.5 EMERGENCY POWER SOURCE FOR GROUP 'I-3' (NOT AN 'I' OCCUPANCY)
- 804.6 OPENINGS IN CORRIDOR WALLS
  - 804.6.1 CORRIDOR DOORS
  - 804.6.2 TRANSOMS
  - 804.6.3 OTHER CORRIDOR OPENINGS
  - 804.6.4 SUPPLEMENTAL REQUIREMENTS FOR CORRIDOR OPENINGS

- 804.7 DEAD-END CORRIDORS - SHALL NOT EXCEED 35 FEET EXCEPT WHERE AN AUTOMATIC FIRE ALARM SYSTEM IS INSTALLED THAT ALLOWS 50 FEET.
- 804.8 MEANS-OF-EGRESS LIGHTING
  - 804.8.1 ARTIFICIAL LIGHTING REQUIRED - PROVIDED
  - 804.8.2 SUPPLEMENTAL REQUIREMENTS FOR MEANS-OF-EGRESS LIGHTING

- 804.9 EXIT SIGNS - PROVIDED
- 804.10 HANDRAILS
- 804.11 REFUGE AREAS
- 804.12 GUARDS

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- 805.1 EXISTING STRUCTURAL ELEMENTS CARRYING GRAVITY LOADS
- 805.3 EXISTING STRUCTURAL ELEMENTS RESISTING LATERAL LOADS
- 805.4 VOLUNTARY LATERAL FORCE-RESISTING SYSTEM ALTERATIONS

SECTION 806 ELECTRICAL

- 806.1 NEW INSTALLATIONS - SEE ELECTRICAL DRAWINGS
- 806.2 EXISTING INSTALLATIONS
- 806.3 HEALTH CARE FACILITIES
- 806.4 RESIDENTIAL OCCUPANCIES

SECTION 807 MECHANICAL

- 807.1 RECONFIGURED OR CONVERTED SPACES - SEE MECHANICAL DRAWINGS
- 808.1 ALTERED EXISTING SYSTEMS - SEE MECHANICAL DRAWINGS
- 808.3 LOCAL EXHAUST - SEE MECHANICAL DRAWINGS

SECTION 808 PLUMBING

- 808.1 HEALTH CARE FACILITIES

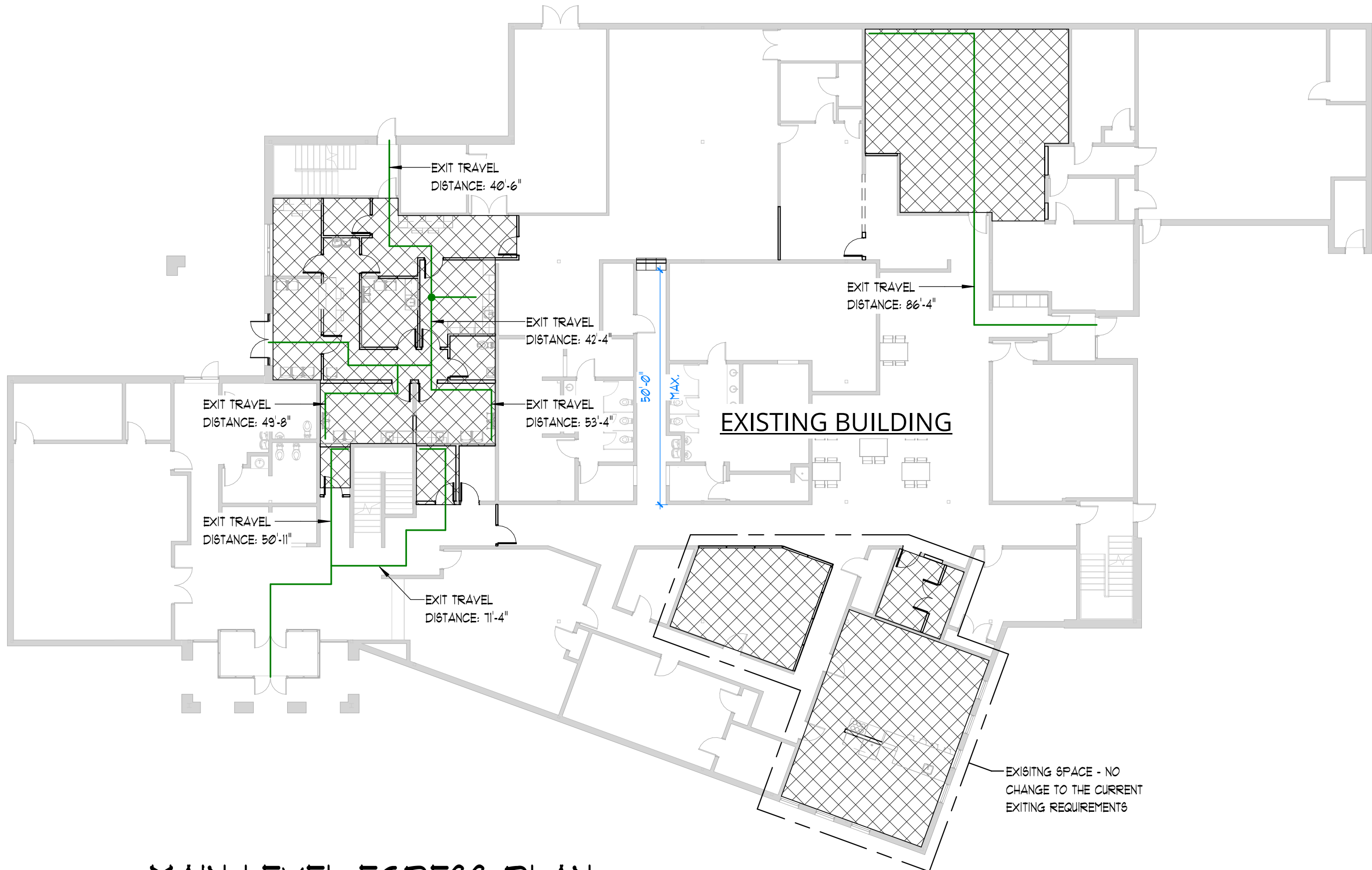
SECTION 809 ENERGY CONSERVATION (NOT APPLICABLE):

"LEVEL 2 ALTERATIONS TO EXISTING BUILDINGS OR STRUCTURES ARE PERMITTED WITHOUT REQUIRING THE ENTIRE BUILDING OR STRUCTURE TO COMPLY WITH THE ENERGY REQUIREMENTS OF THE IECC OR IRC. THE ALTERATIONS SHALL CONFORM TO THE ENERGY REQUIREMENTS OF THE IECC OR IRC AS THEY RELATE TO THE NEW CONSTRUCTION ONLY."

IEBC CHAPTER 10: CHANGE OF OCCUPANCY (NO CHANGE IN OCCUPANCY CLASSIFICATION)

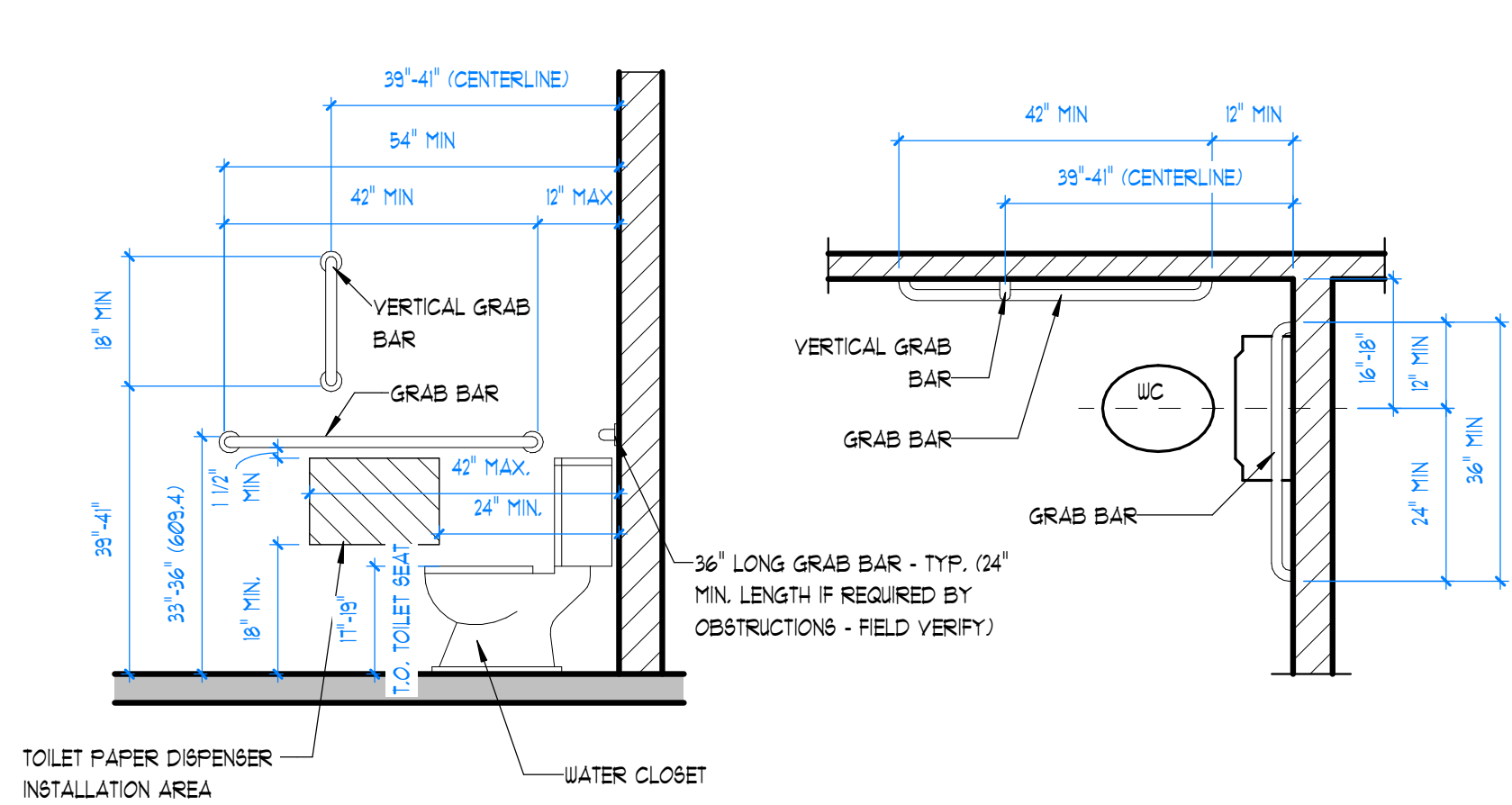
THE FOLLOWING SECTIONS ARE APPLICABLE TO THIS PROJECT:

- 1001.2 CERTIFICATE OF OCCUPANCY
  - 1001.2.1 CHANGE OF USE
  - 1001.2.2 CHANGE OF OCCUPANCY CLASSIFICATION OR GROUP
    - 1001.2.2.1 PARTIAL CHANGE OF OCCUPANCY
- 1002.2 INCIDENTAL USES
- 1002.3 CHANGE OF OCCUPANCY IN HEALTH CARE
- 1002.4 STORAGE
- 1003 BUILDING ELEMENTS AND MATERIALS (SEE IEBC SECTION 101)
- 1004 FIRE PROTECTION
- 1005 MEANS OF EGRESS
- 1006 STRUCTURAL
- 1007 ELECTRICAL
- 1008 MECHANICAL
- 1009 PLUMBING
- 1010 OTHER REQUIREMENTS
- 1011 CHANGE OF OCCUPANCY CLASSIFICATION

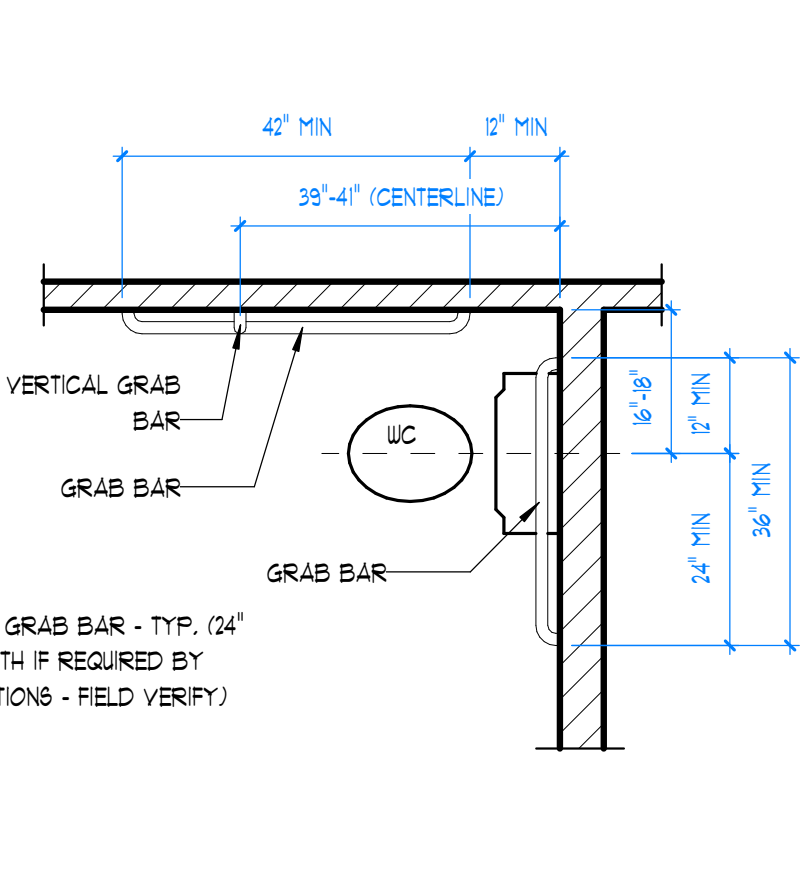


1 MAIN LEVEL EGRESS PLAN  
1/16" = 1'-0"

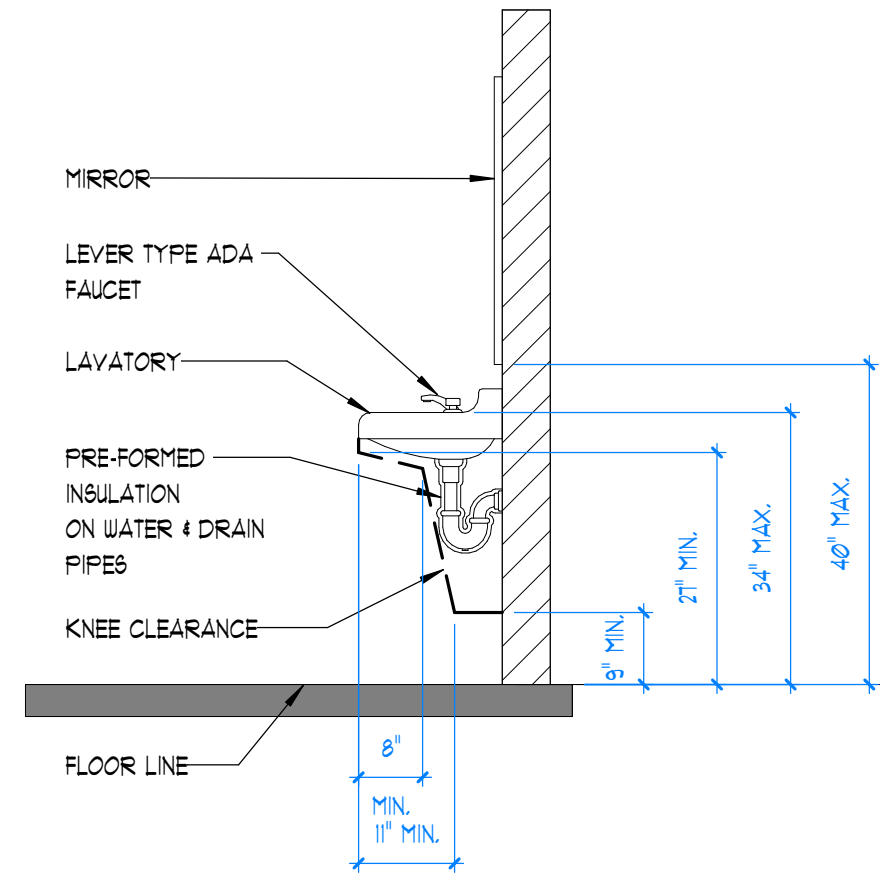




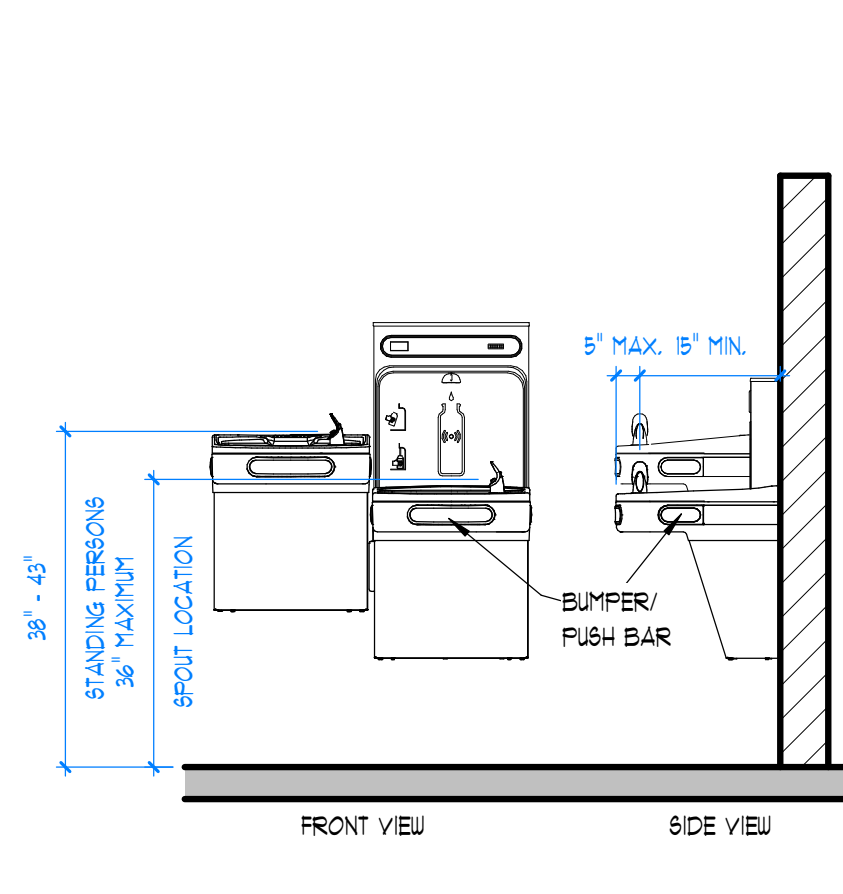
1 ACCESSIBLE TOILET CLEARANCES  
1/2" = 1'-0"



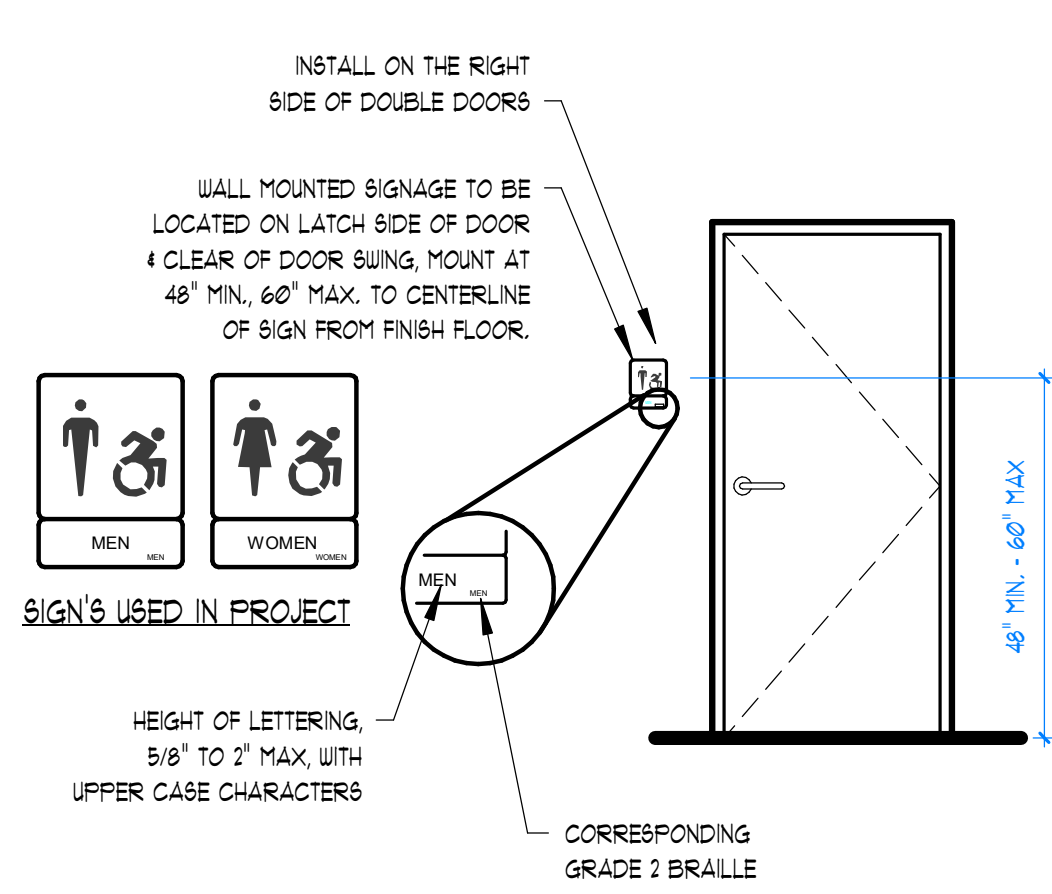
2 ACCESSIBLE VANITY CLEARANCES  
1/2" = 1'-0"



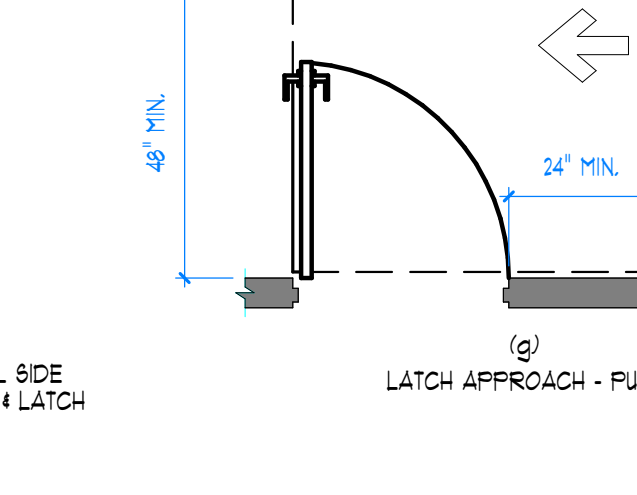
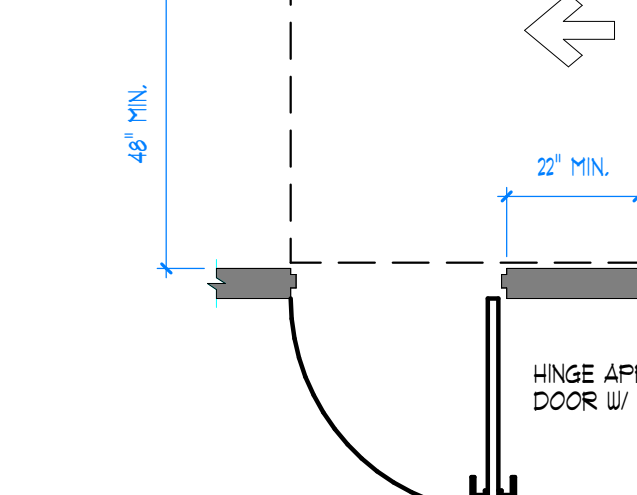
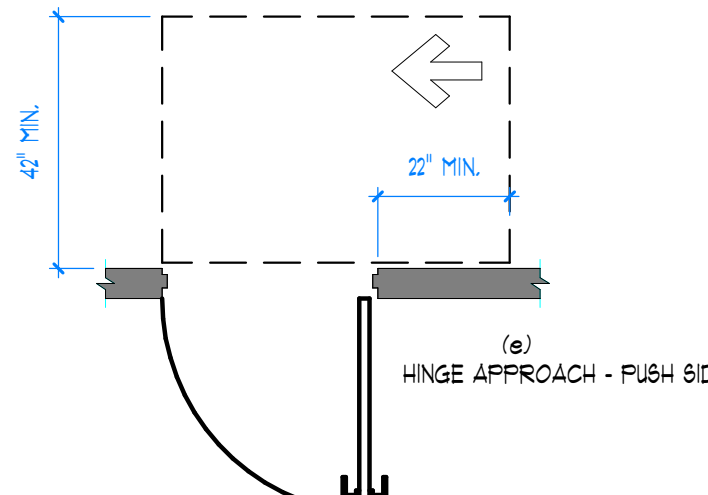
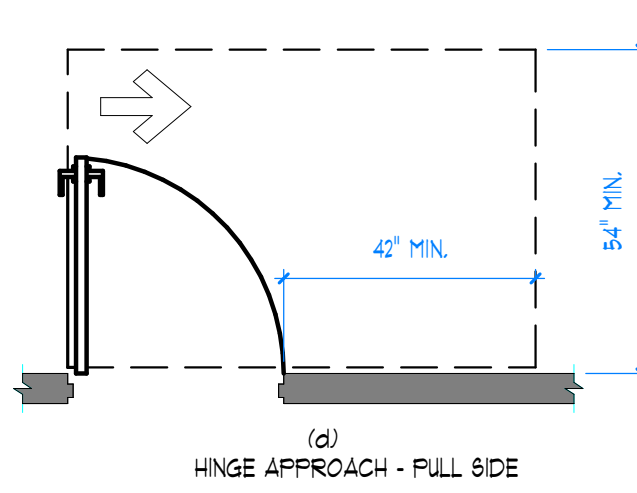
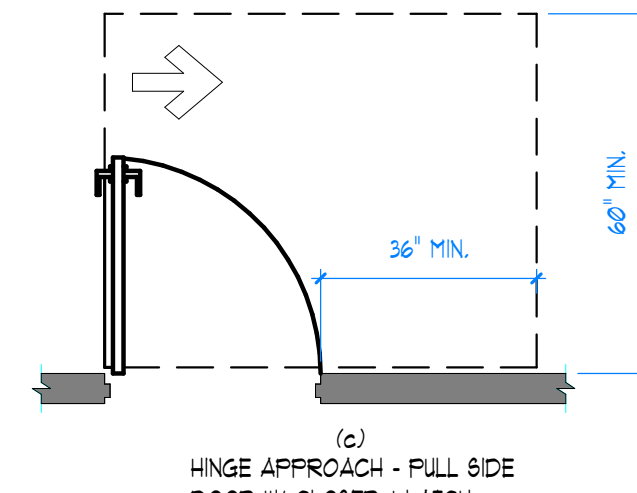
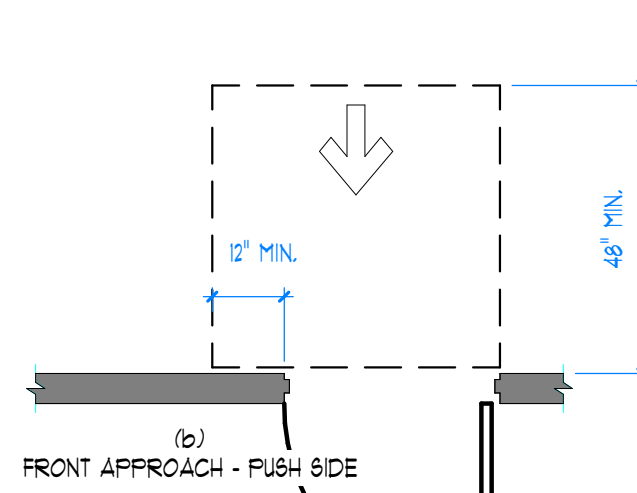
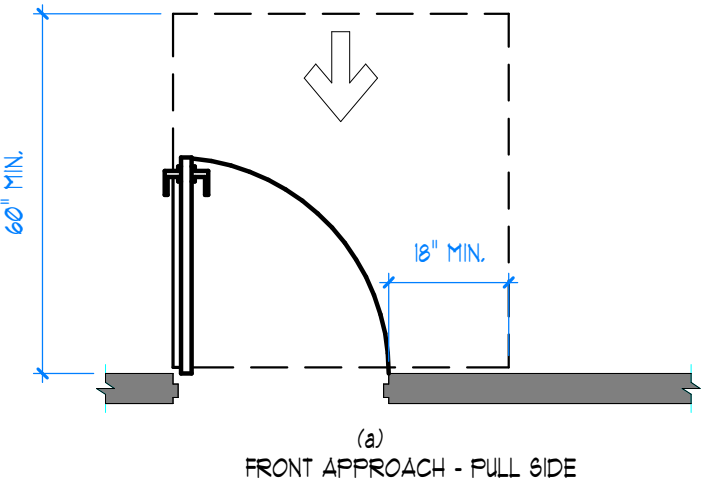
3 ACCESSIBLE DRINKING FOUNTAIN  
1/2" = 1'-0"



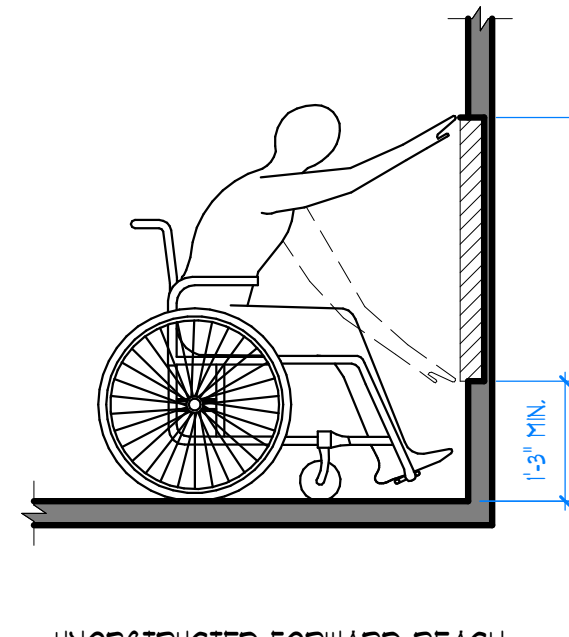
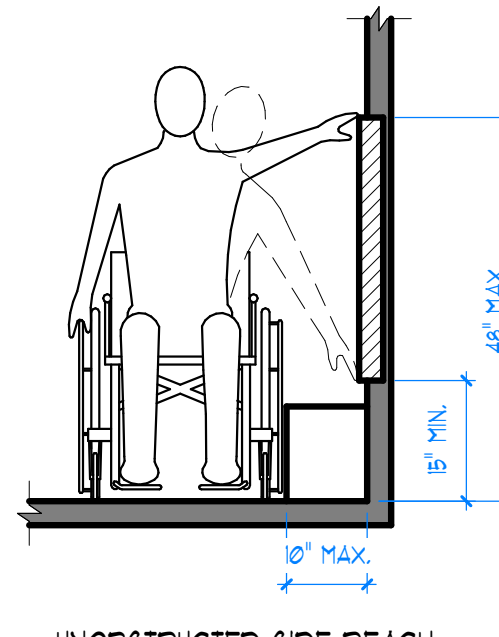
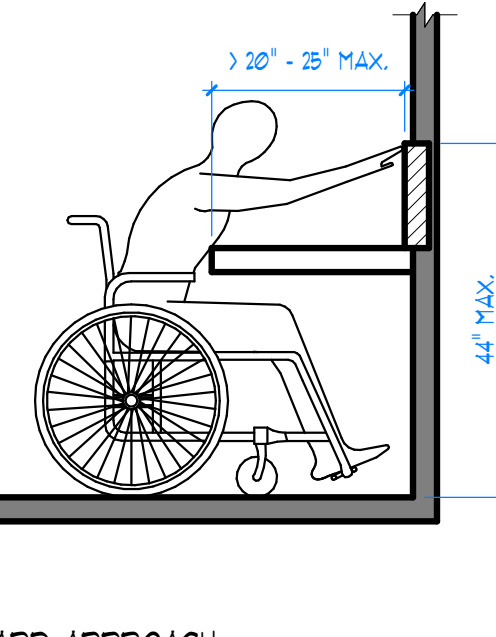
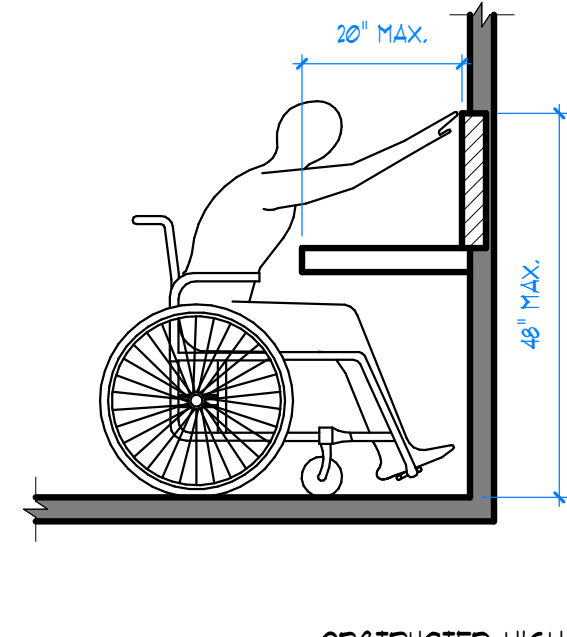
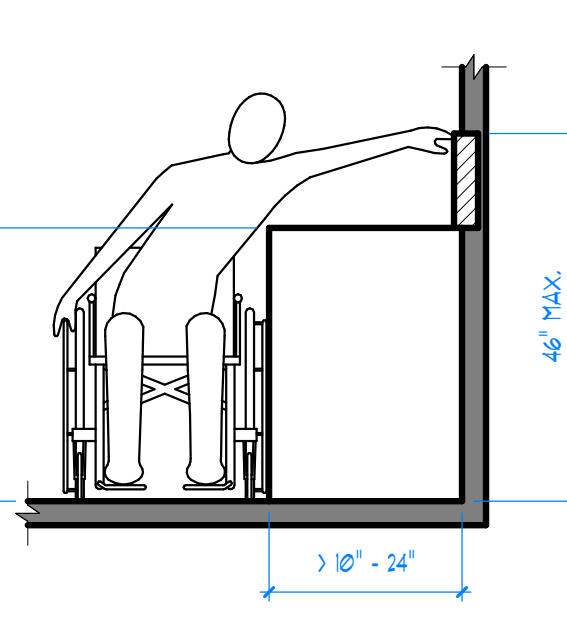
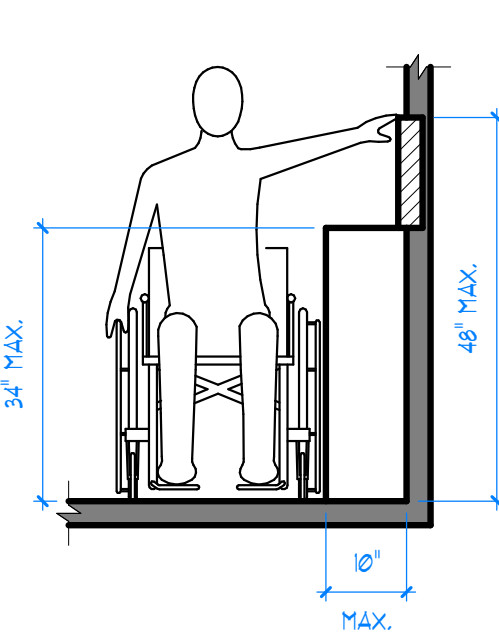
4 SIGN MOUNTING DETAIL  
3/8" = 1'-0"



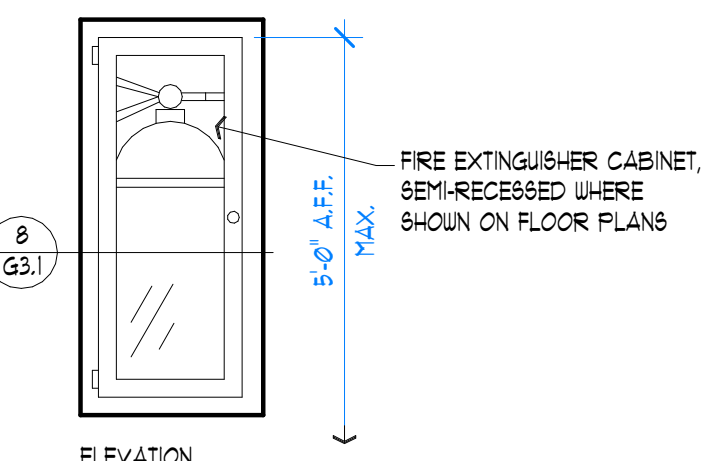
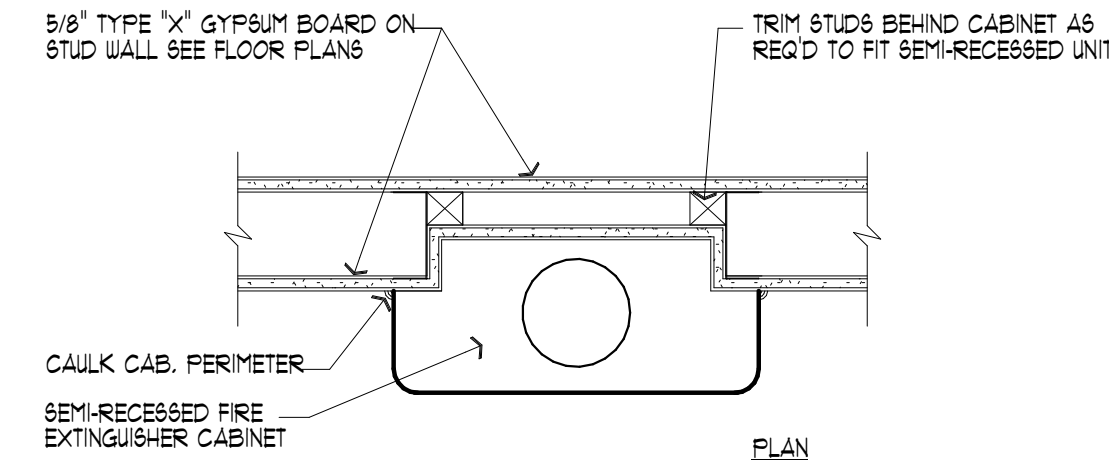
5 ACCESSORY MOUNTING HEIGHTS  
1/2" = 1'-0"



6 ACCESSIBLE DOOR CLEARANCES  
3/8" = 1'-0"



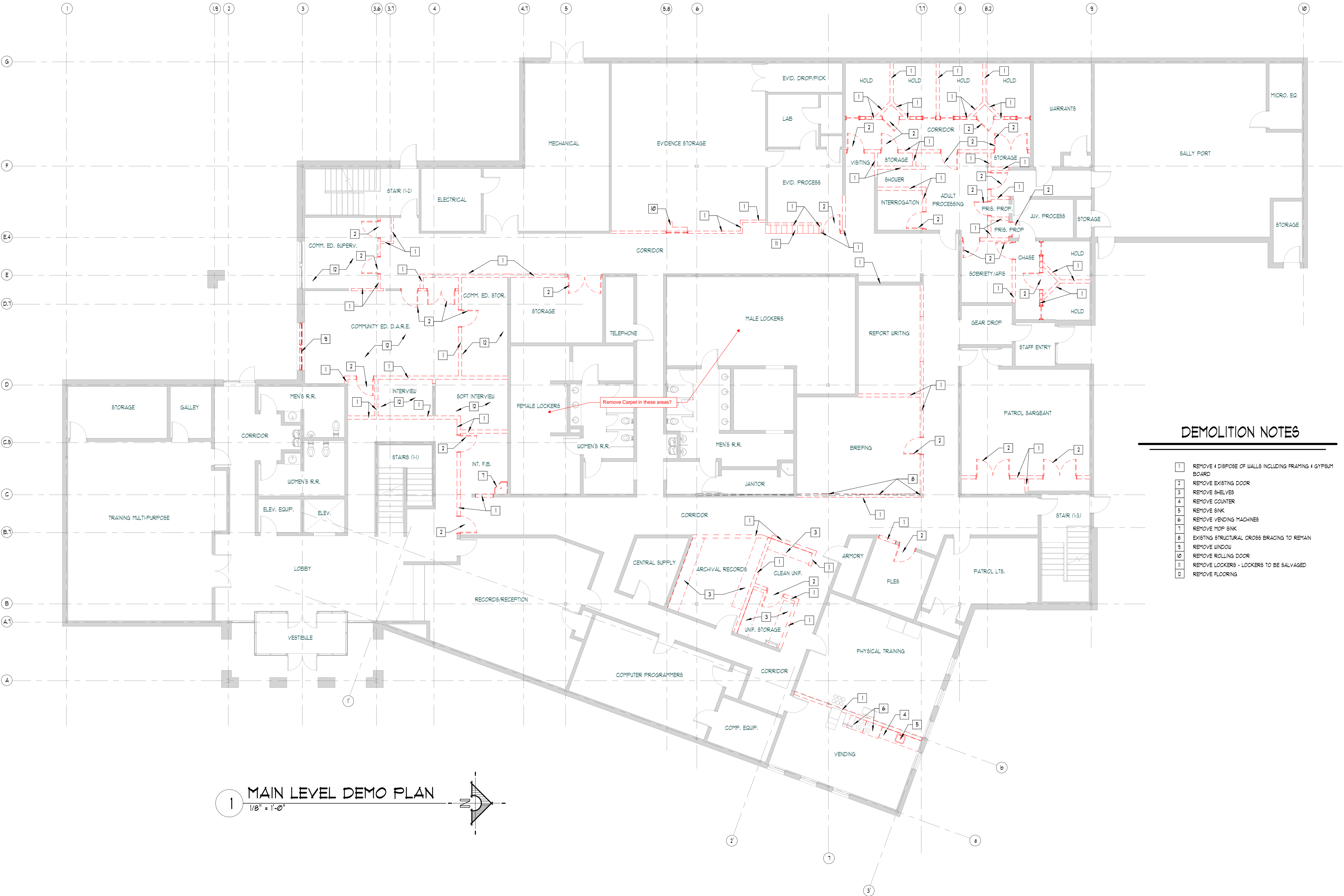
7 RANGE REACH DIAGRAMS  
1/2" = 1'-0"



8 FIRE EXTINGUISHER DETAIL  
1 1/2" = 1'-0"



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1 MAIN LEVEL DEMO PLAN  
1/8" = 1'-0"

DEMOLITION NOTES

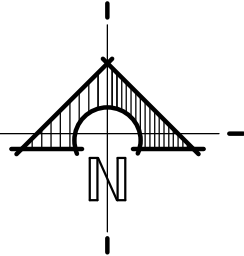
- 1 REMOVE & DISPOSE OF WALLS INCLUDING FRAMING & GYPSUM BOARD
- 2 REMOVE EXISTING DOOR
- 3 REMOVE SHELVES
- 4 REMOVE COUNTER
- 5 REMOVE SINK
- 6 REMOVE VENDING MACHINES
- 7 REMOVE MOP SINK
- 8 EXISTING STRUCTURAL CROSS BRACING TO REMAIN
- 9 REMOVE WINDOW
- 10 REMOVE ROLLING DOOR
- 11 REMOVE LOCKERS - LOCKERS TO BE SALVAGED
- 12 REMOVE FLOORING





1 MAIN LEVEL REMODEL PLAN

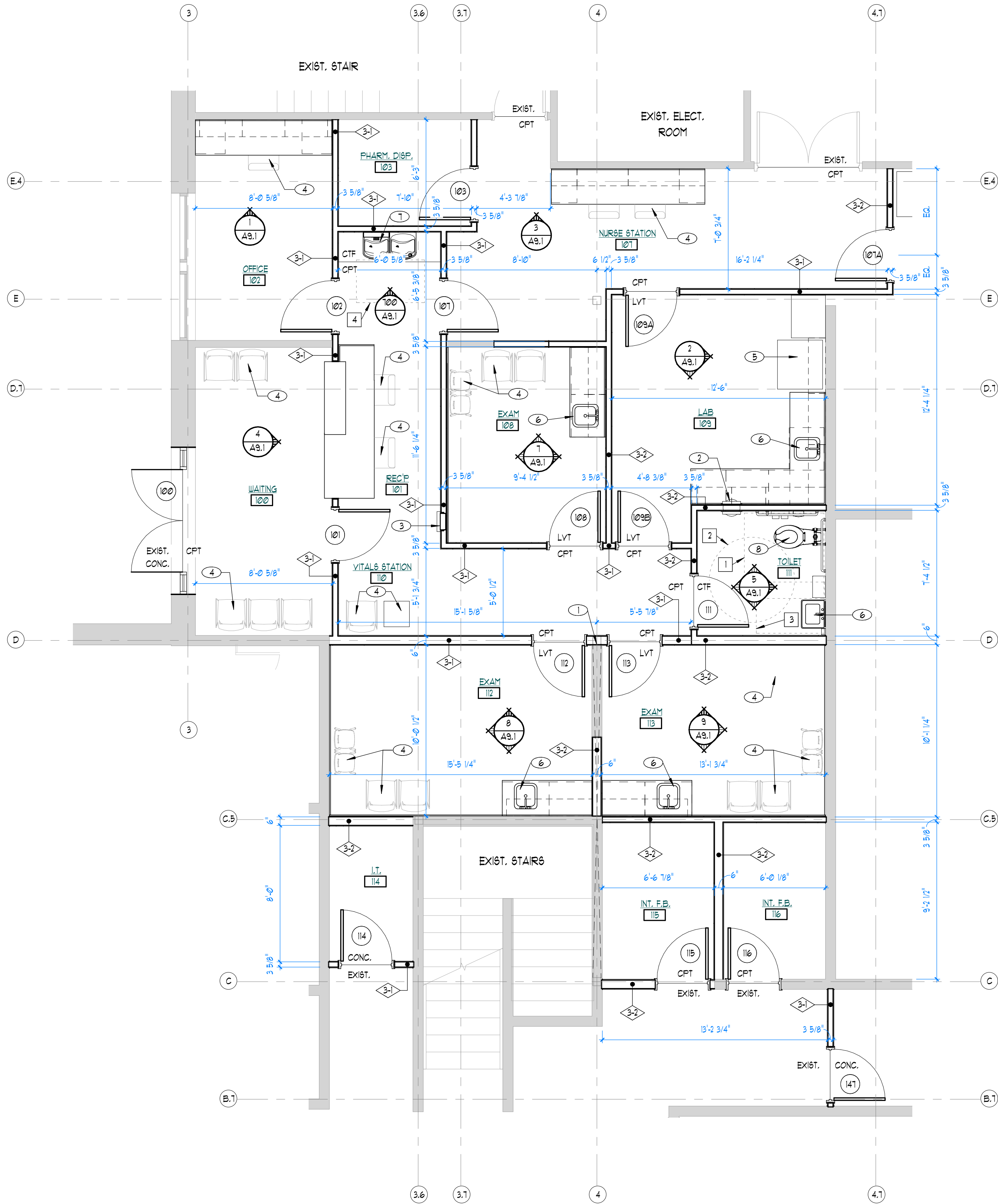
1/8" = 1'-0"



SHEET NOTES

- ◇ TYPICAL REFERENCE FOR CONSTRUCTION TYPE - SEE SHEET A3.1
- TYPICAL REFERENCE FOR DOOR TYPE - SEE SHEET A3.3
- TYPICAL REFERENCE FOR WINDOW TYPE - SEE SHEET A3.3
- ① PATCH & FILL IN WALL WHERE DOOR WAS REMOVED
- ② MILLWORK - SEE INTERIOR ELEVATIONS
- ③ SINK - SEE PLUMBING DUGS
- ④ SODA FOUNTAIN - PROVIDED BY OWNER, INSTALLED BY CONTRACTOR
- ⑤ EXISTING EVIDENCE LOCKERS TO BE RELOCATED TO APPROX. LOCATION SHOWN - COORDINATE WITH OWNER
- ⑥ FRAMED WALL ABOVE LOCKERS, VERIFY w/ LOCKER MANUFACTURE THE HEIGHT OF LOCKERS
- ⑦ EXISTING STRUCTURAL CROSS BRACING TO REMAIN - PAINT WHERE EXPOSED
- ⑧ FURNITURE BY OWNER - NIC
- ⑨ EXISTING ROOF ACCESS LADDER
- ⑩ DRAIN HOLE FOR SODA MACHINE
- ⑪ EXISTING STRUCTURAL CROSS BRACING TO REMAIN
- ⑫ RECESSED FIRE EXTINGUISHER CABINET
- ⑬ VENDING MACHINE - PROVIDED BY OWNER
- ⑭ MICROWAVE - PROVIDED BY OWNER
- ⑮ REFRIGERATOR - PROVIDED BY OWNER
- ⑯ RANGE - PROVIDED BY OWNER
- ⑰ EXISTING ICE MACHINE RELOCATED TO THIS APPROX. LOCATION
- ⑱ MECHANICAL CHASE FOR EXHAUST SYSTEM - SEE MECH. DUGS.





1 ENLARGED CLINIC FLOOR PLAN  
1/4" = 1'-0"

SHEET NOTES

- ◇ TYPICAL REFERENCE FOR CONSTRUCTION TYPE - SEE SHEET A3.1
- TYPICAL REFERENCE FOR DOOR TYPE - SEE SHEET A3.3
- TYPICAL REFERENCE FOR WINDOW TYPE - SEE SHEET A3.3
- 1 EXISTING STRUCTURAL CROSS BRACING TO REMAIN
- 2 PASS THROUGH SPECIMEN CABINET
- 3 RECESSED FIRE EXTINGUISHER CABINET
- 4 FURNITURE BY OWNER - NIC
- 5 REFRIGERATOR - N.I.C.
- 6 SINK - SEE PLUMBING DRAWINGS
- 7 DRINKING FOUNTAIN - SEE PLUMBING DWGS. AND 3/G3.1
- 8 TOILET - SEE PLUMBING DWGS. AND 1/G3.1

FINISH SCHEDULE REFERENCE

RB	RUBBER BASE
CTB	CERAMIC TILE BASE
LVT	LUXURY VINYL TILE
CONC	CONCRETE
CPT	CARPET TILE
CTF	CERAMIC TILE FLOOR
PTDW-I	GYPSUM BOARD TEXTURED AND PAINTED
CTW	CERAMIC TILE WALL
PTDC	PAINTED GYP. BD.
ACT-I	ACOUSTIC CEILING TILE

CLEARANCE LEGEND

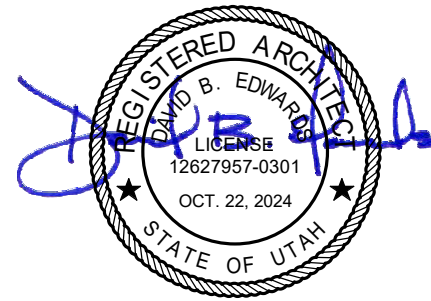
- 1 56" x 60" CLEAR FLOOR SPACE AT WATER CLOSET
- 2 60" DIAMETER CLEAR FLOOR AREA FOR WHEELCHAIR TURNAROUND
- 3 36" x 48" CLEAR FLOOR AREA FOR FORWARD APPROACH AT LAVATORY
- 4 30" x 48" CLEAR FLOOR AREA FOR FORWARD APPROACH AT DRINKING FOUNTAINS

NOTE: SEE SHEET G3.1 FOR ACCESSIBILITY REQUIREMENTS -



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revision information		
no.	date	description

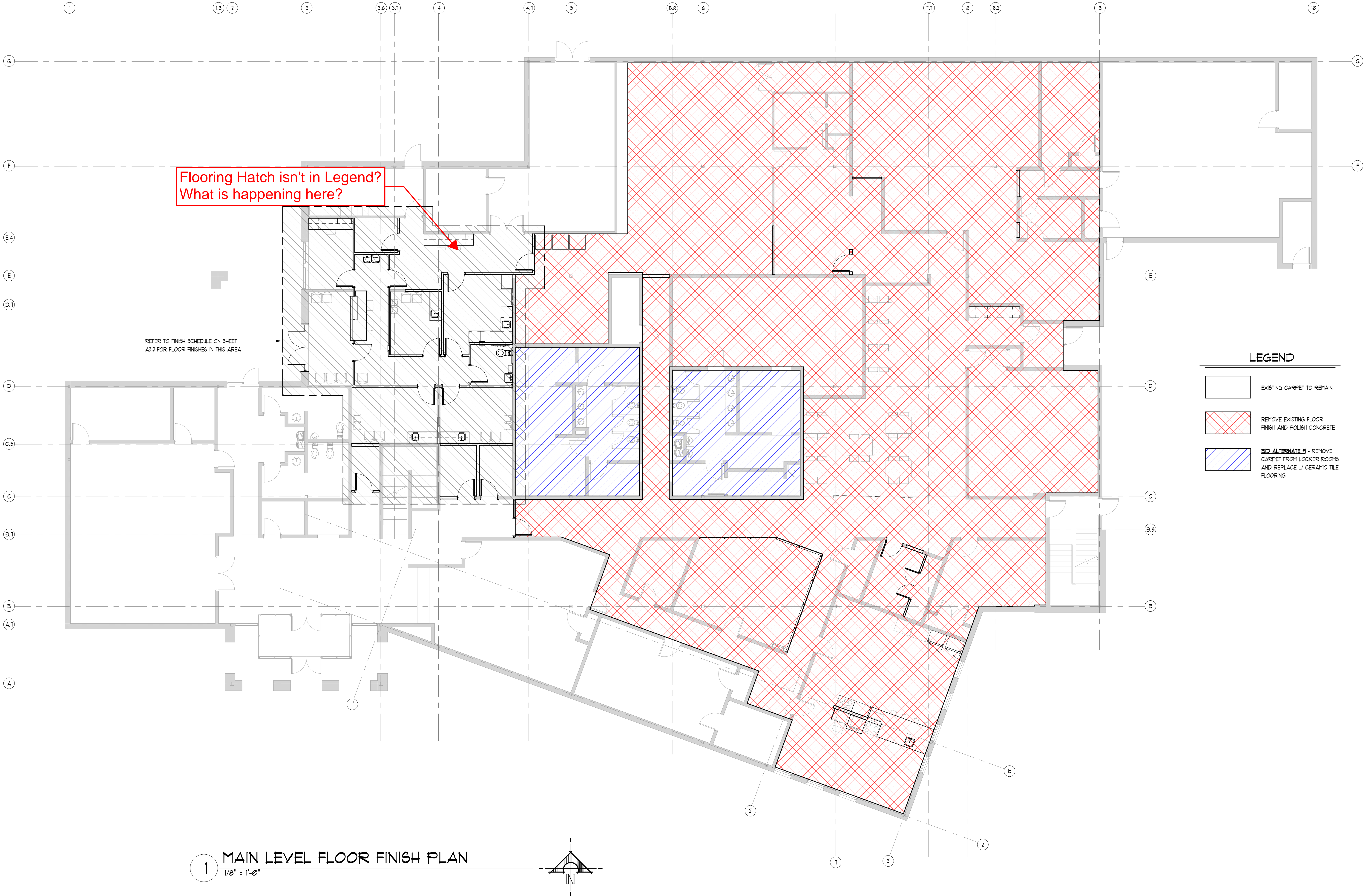
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milestone issue description  
CONTRACTOR BID SET  
latest revision date

latest revision description

ENLARGED CLINIC  
REMODEL PLAN

A2.3

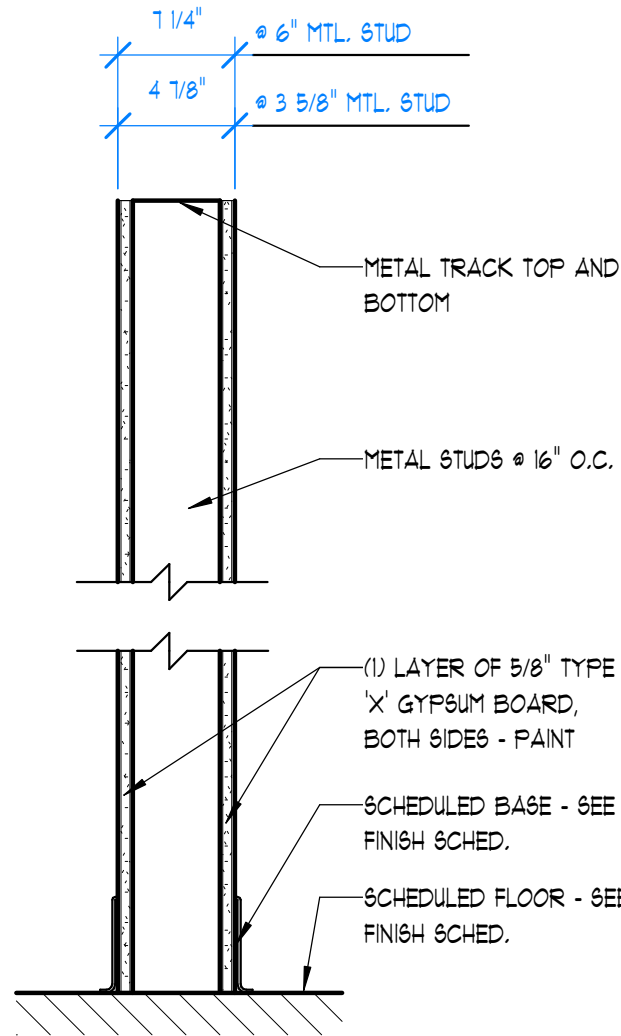




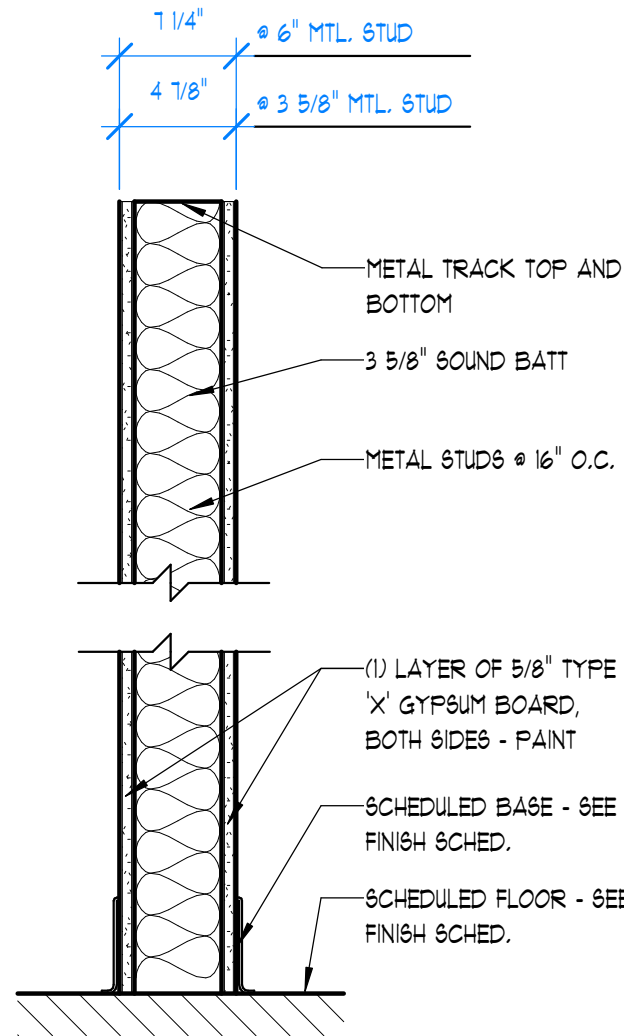
**LEGEND**

	EXISTING CARPET TO REMAIN
	REMOVE EXISTING FLOOR FINISH AND POLISH CONCRETE
	BID ALTERNATE M - REMOVE CARPET FROM LOCKER ROOMS AND REPLACE w/ CERAMIC TILE FLOORING

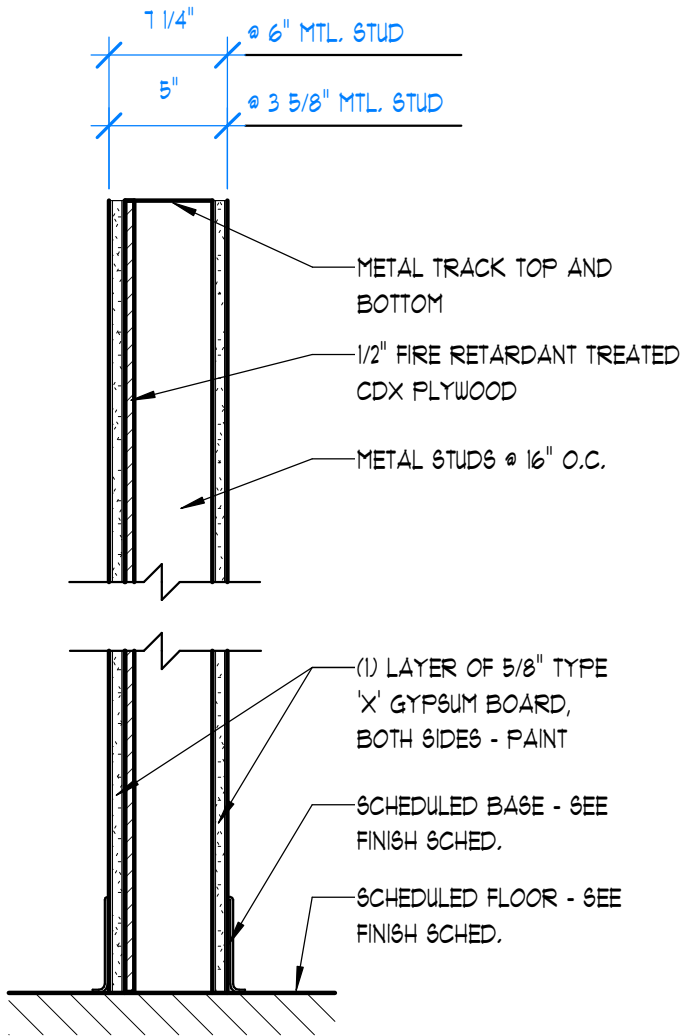




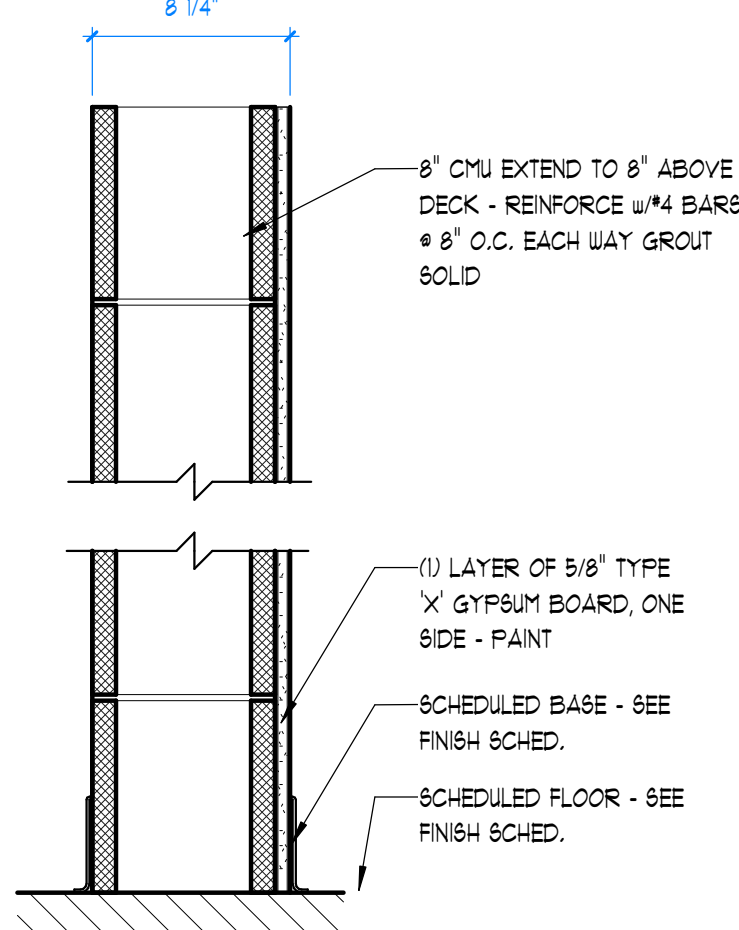
3-1 WALL CONSTRUCTION  
1 1/2" = 1'-0"



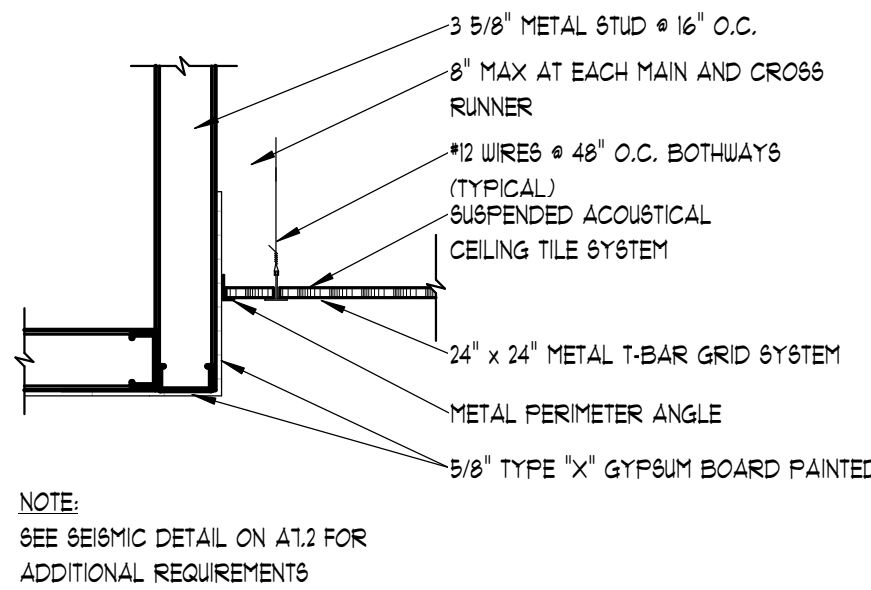
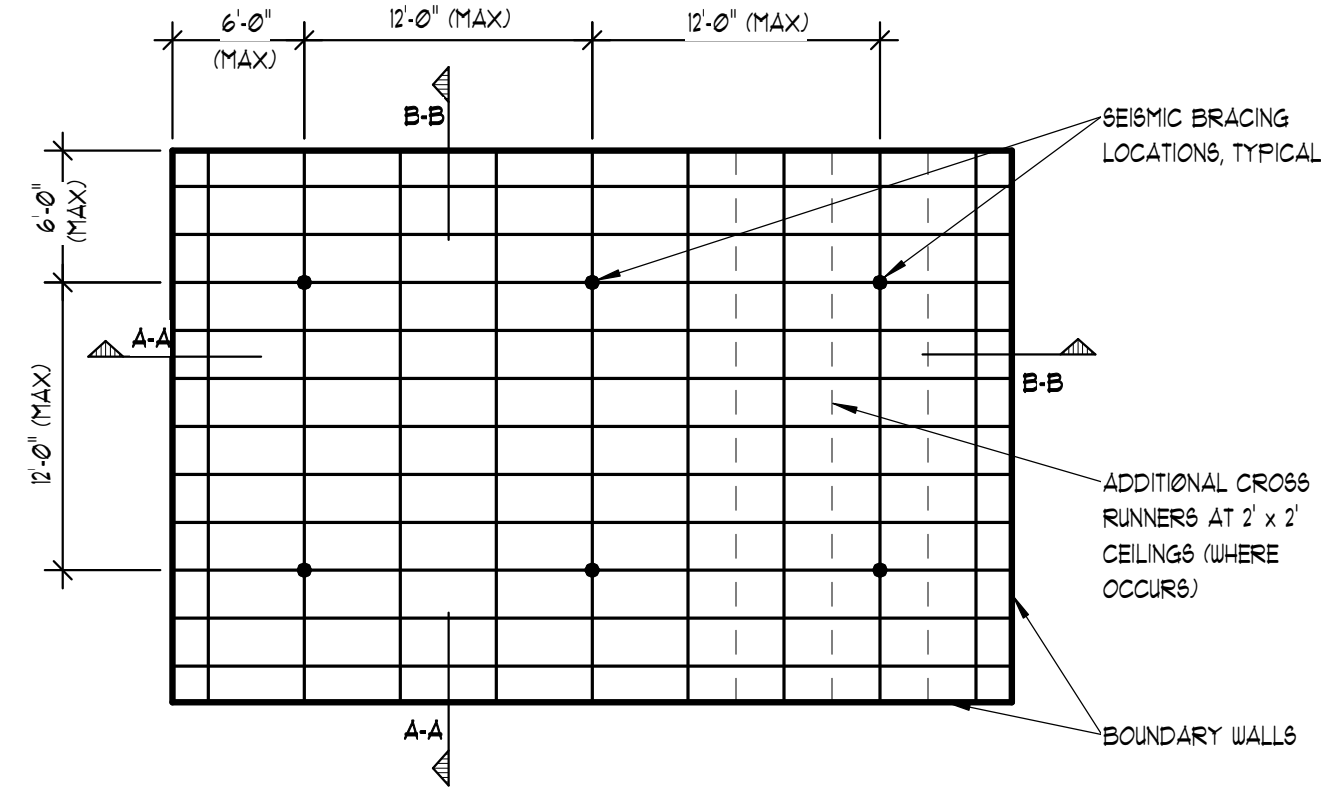
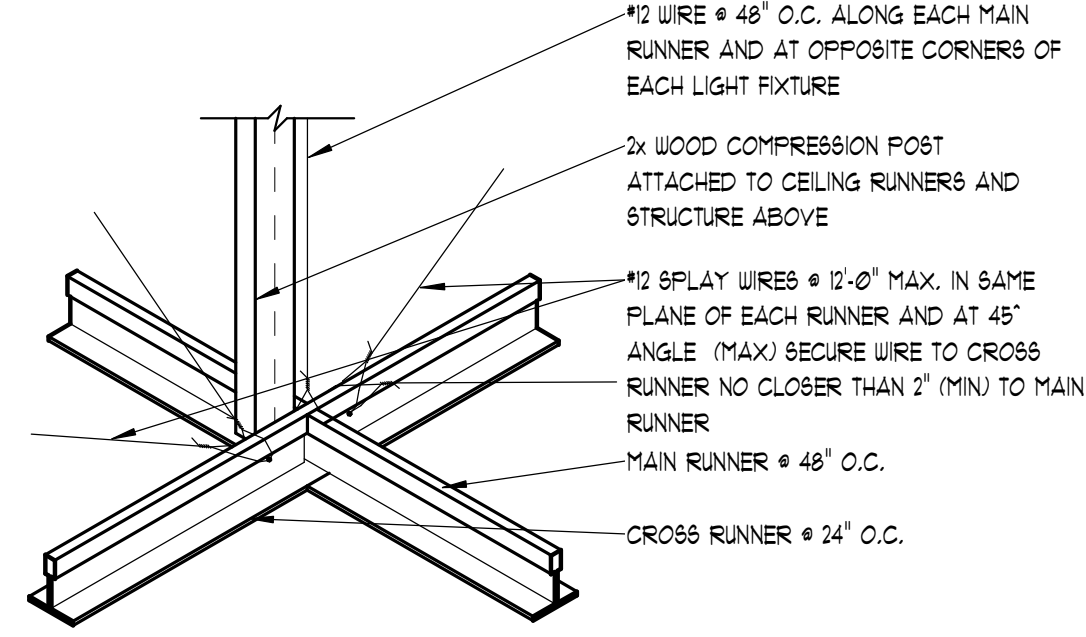
3-2 WALL CONSTRUCTION  
1 1/2" = 1'-0"



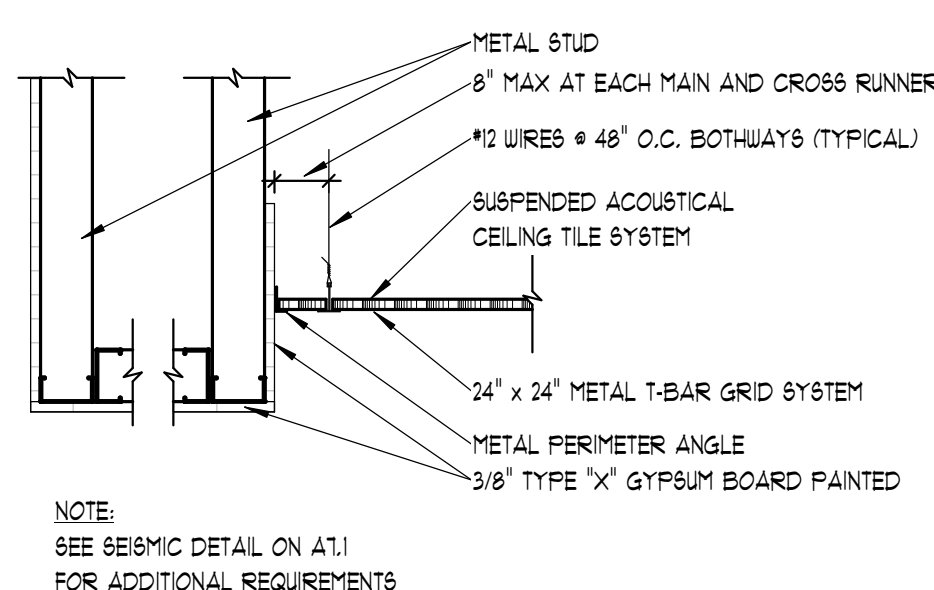
3-3 WALL CONSTRUCTION  
1 1/2" = 1'-0"



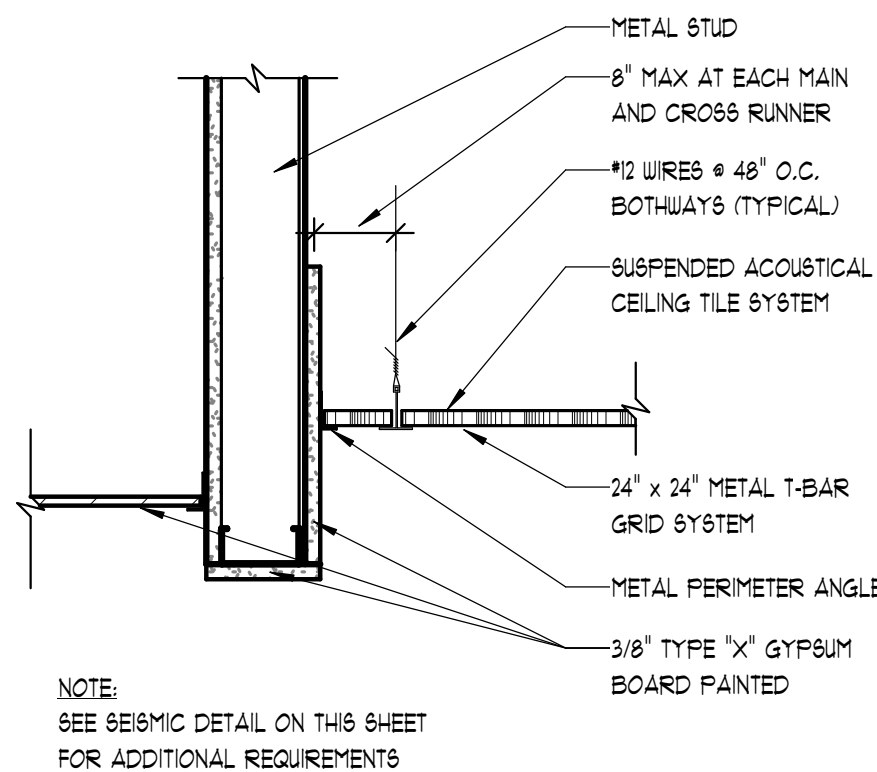
3-4 WALL CONSTRUCTION  
1 1/2" = 1'-0"



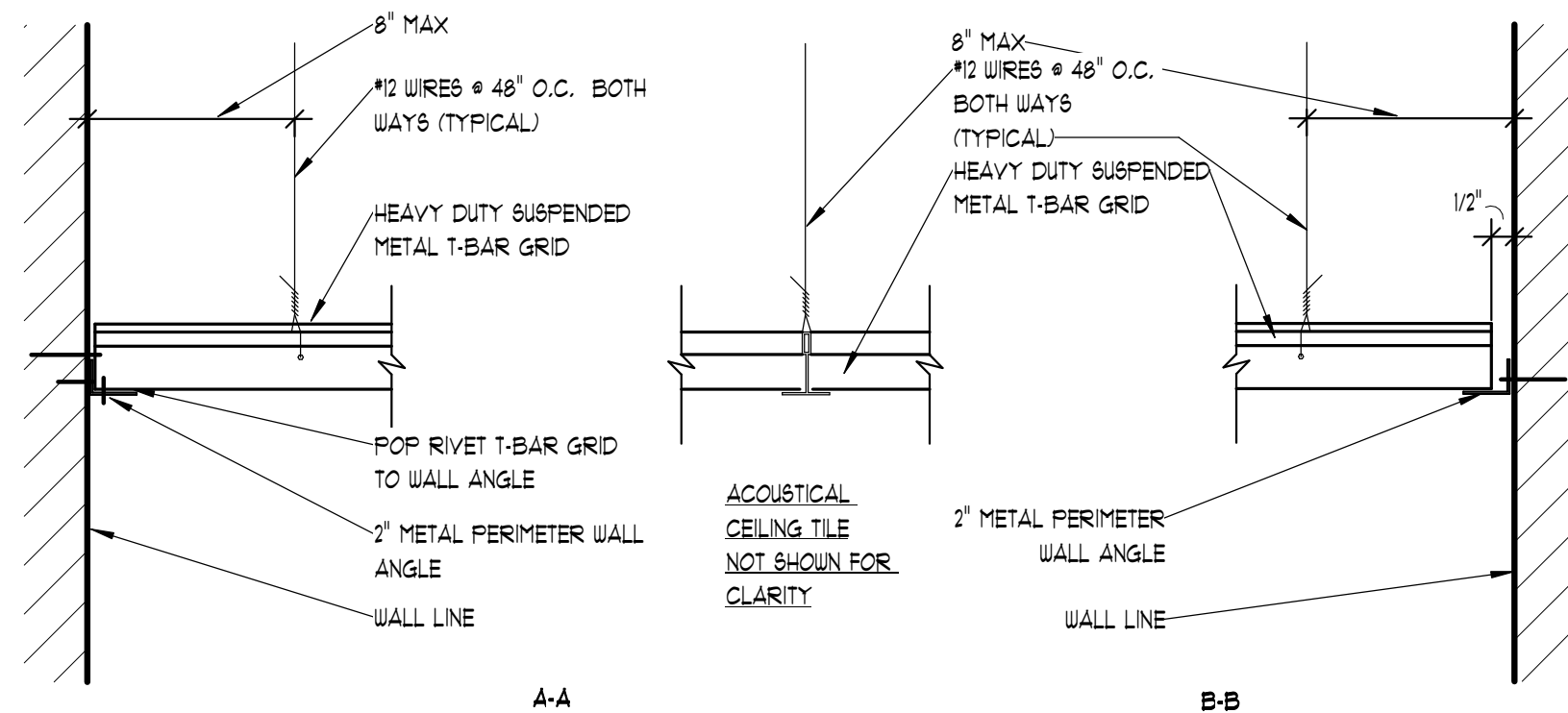
1 CEILING DROP DOWN  
1" = 1'-0"



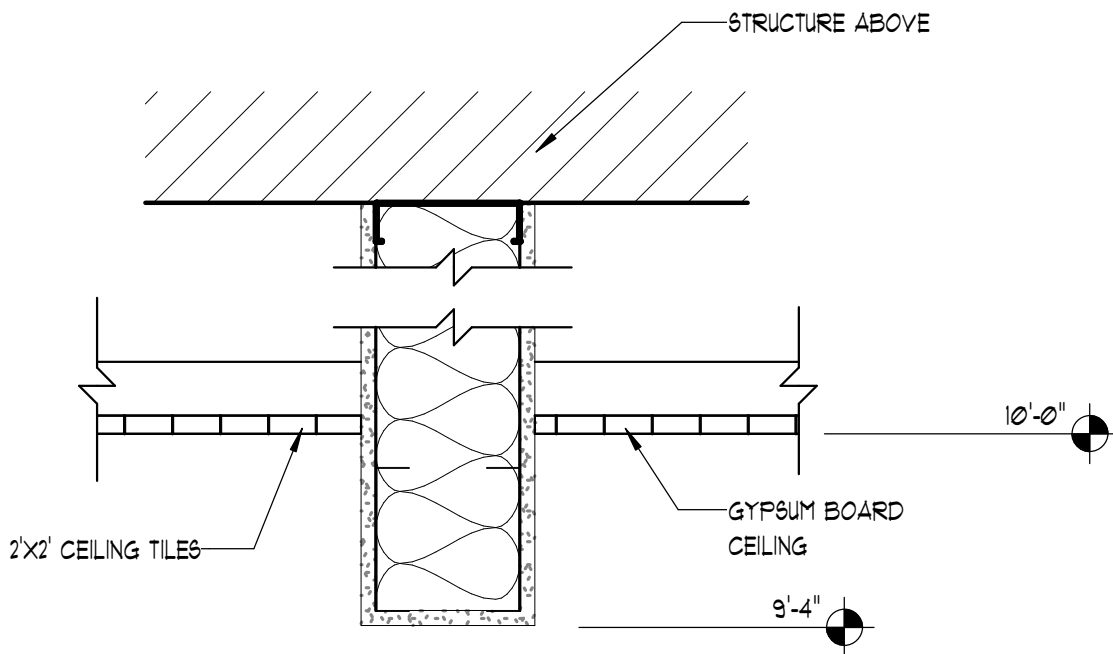
2 CEILING HEADER  
1" = 1'-0"



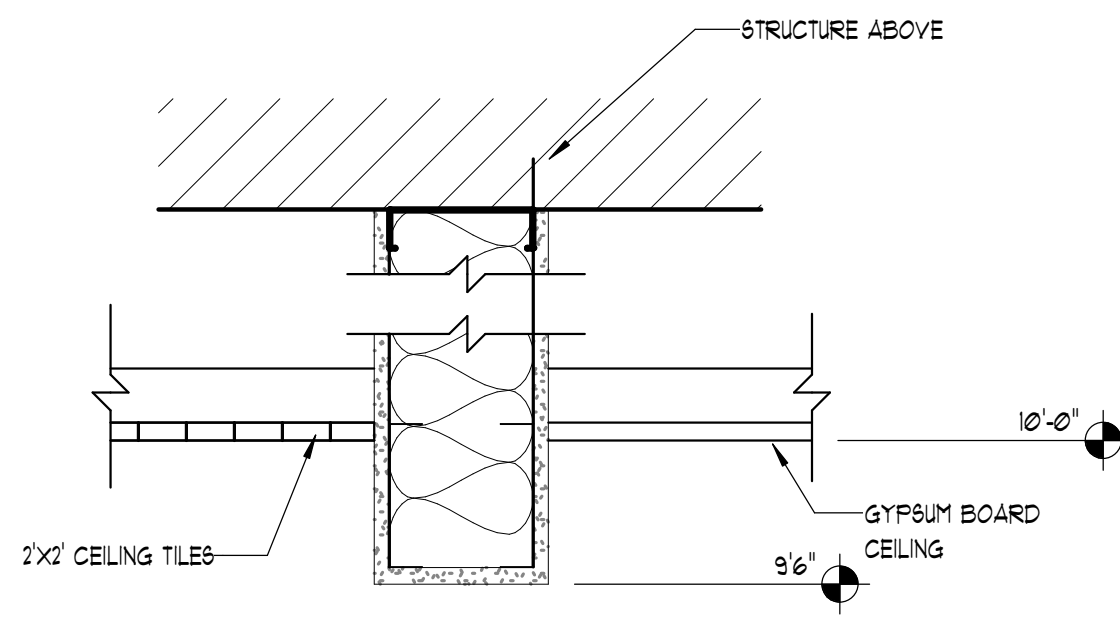
3 CEILING TRANSITION  
1 1/2" = 1'-0"



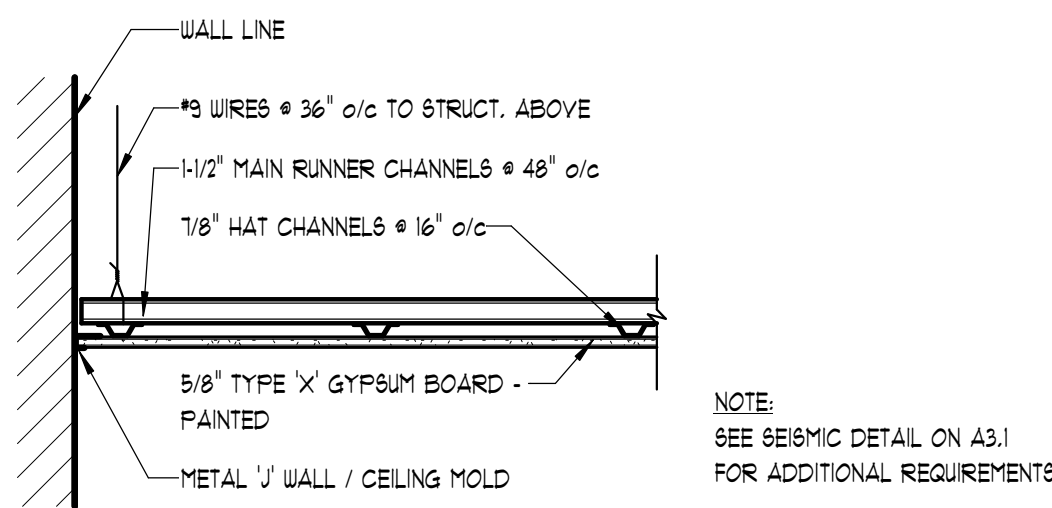
8 SEISMIC DETAIL  
1 1/2" = 1'-0"



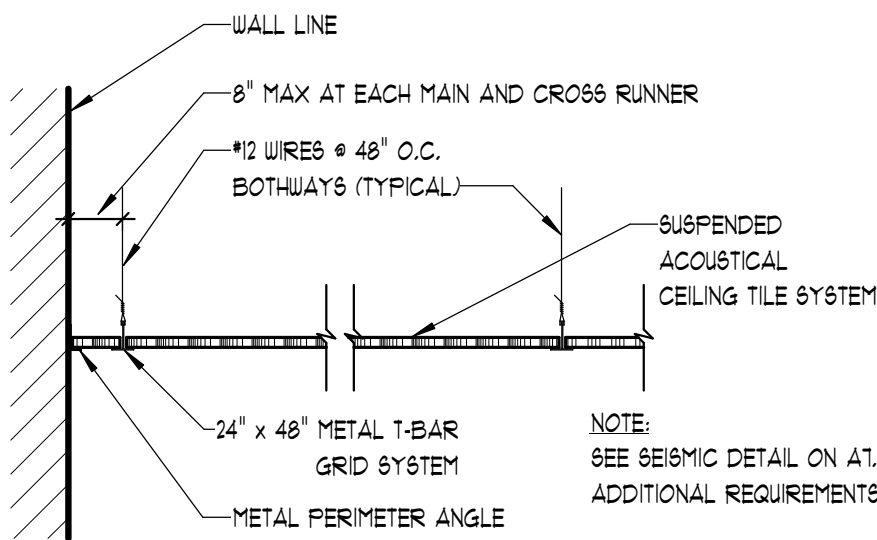
4 CEILING HEADER  
1 1/2" = 1'-0"



5 CEILING HEADER  
1 1/2" = 1'-0"



6 SUSP. GYP. BD. CEILING SYSTEM  
1" = 1'-0"



7 SUSP. LAY-IN CEILING SYSTEM  
1" = 1'-0"

## SEISMIC CEILING NOTES

- SUSPENDED CEILING SHALL BE INSTALLED IN COMPLIANCE WITH 2012 IBC SECTION 808.1.1 AND WITH ASTM C 635/636.
- T-BAR GRID SYSTEM SHALL BE HEAVY-DUTY AND SHALL INCLUDE A 2" PERIMETER WALL ANGLE AS SHOWN ON THE DETAILS.
- CEILING WITH AN AREA EXCEEDING 1,000 SQ. FT. SHALL BE PROVIDED WITH HORIZONTAL RESTRAINT IN COMPLIANCE WITH THE APPLICABLE STANDARDS.
- CEILING AREAS EXCEEDING 2,500 SQ. FT. WILL REQUIRE A SEISMIC SEPARATION JOINT. SEE REFLECTED CEILING PLAN FOR LOCATIONS IF APPLICABLE AND DETAILS.
- EXCEPT WHERE RIGID BRACES ARE USED TO LIMIT LATERAL DEFLECTIONS, SPRINKLER HEADS AND OTHER PENETRATIONS SHALL HAVE A 2" OVERSIZE RING, SLEEVE OR ADAPTOR THROUGH THE CEILING TILE TO ALLOW FOR FREE MOVEMENT OF AT LEAST 1" IN ALL HORIZONTAL DIRECTIONS.
- CHANGES IN CEILING PLANE ELEVATION SHALL BE PROVIDED WITH POSITIVE BRACING. SEE REFLECTED CEILING PLAN AND DETAILS WHERE APPLICABLE.
- CABLE TRAYS AND ELECTRICAL CONDUITS SHALL BE INDEPENDENTLY SUPPORTED AND BRACED INDEPENDENTLY OF THE CEILING.
- THE SUSPENDED CEILING SHALL BE SUBJECT TO SPECIAL INSPECTION REQUIREMENTS OF IBC SECTION 1704.



FINISH LEGEND

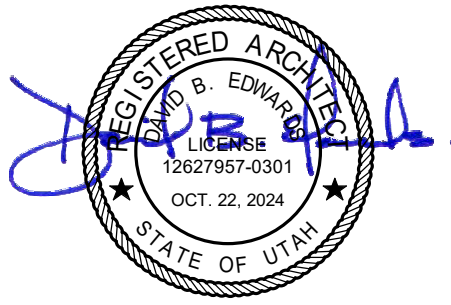
BASE					
MARK	MATERIAL TYPE	MANUFACTURER	# / COLOR	SIZE	NOTES
RB	RUBBER BASE	MATCH EXISTING	MATCH EXISTING	MATCH EXISTING	FIELD VERIFY EXISTING BASE AND MATCH FOR REMODELED AREAS WHERE DESIGNATED
FLOORS					
MARK	MATERIAL TYPE	MANUFACTURER	# / COLOR	SIZE	NOTES
CONC	SEALED CONCRETE	N/A	COLOR: CLEAR	N/A	--
CPT	CARPET TILE	PATCRAFT	COLLECTION   STYLE: ARTFUL & TEXTURED   CHARCOAL COLOR: UMBER 00100	24" x 24"	INSTALL IN QUARTER TURN PATTERN
PTF	PORCELAIN TILE FLOOR	DALTILE	STYLE: CONTINENTAL SLATE COLOR: ENGLISH GREY	12" x 12"	GROUT TBD
LVT	LUXURY VINYL TILE	PATCRAFT	STYLE: TIMBER GROVE II (2 MM) COLOR: SPROUT - V2 0013	6" x 48"	INSTALL IN BRICK PATTERN
WALLS					
MARK	MATERIAL TYPE	MANUFACTURER	# / COLOR	SIZE	NOTES
PTDU-1	TEXTURED AND PAINTED GYP. BOARD	SHERWIN WILLIAMS	COLOR: REPOSE GRAY	N/A	WALL FIELD COLOR
PTDU-2	TEXTURED AND PAINTED GYP. BOARD	SHERWIN WILLIAMS	COLOR: IRON ORE	N/A	TRIM COLOR
CTW	CERAMIC TILE WALL	SELECTED BY OWNER	COLOR: SELECTED BY OWNER	N/A	AS SELECTED BY OWNER
EXIST	EXISTING WALL	N/A	N/A	N/A	EXISTING WALL FINISH TO REMAIN
CEILING					
MARK	MATERIAL TYPE	MANUFACTURER	# / COLOR	SIZE	NOTES
PTDC	PAINTED GYP. BOARD	MATCH EXISTING	MATCH EXISTING	N/A	FIELD VERIFY EXISTING COLOR AND MATCH FOR REMODELED AREAS WHERE DESIGNATED
ACT	ACOUSTIC CEILING TILE	ARMSTRONG	STYLE: CORTESA SQUARE LAY-IN COLOR: WHITE	24" X 24"	NON-REGULAR - FLAT LAY-IN
EXIST	EXISTING CEILING	N/A	N/A	N/A	EXISTING CEILING FINISH TO REMAIN
MILLWORK					
MARK	MATERIAL TYPE	MANUFACTURER	# / COLOR	SIZE	NOTES
PLAM-1	PLASTIC LAMINATE COUNTER	NEVAMAR	COLOR: WHITE ESSENCE (E81001)	N/A	MATTE FINISH
PLAM-2	CABINETS	WILSONART	COLOR: TBD	N/A	--
QC	QUARTZ COUNTER	HANSTONE	COLOR: AURORA SNOW - CL101	N/A	--

FINISH SCHEDULE									
ROOM NUMBER	ROOM NAME	FLOOR FINISH	BASE FINISH	WALL FINISH				CEILING FINISH	COMMENTS
				NORTH	EAST	SOUTH	WEST		
100	WAITING	LVT	RB	PTDU-H	PTDU-H	PTDU-H	PTDU-H	ACT-H	
101	RECP	LVT	RB	PTDU-H	PTDU-H	PTDU-H	PTDU-H	ACT-H	
102	OFFICE	CPT	RB	PTDU-H	PTDU-H	PTDU-H	PTDU-H	ACT-H	
103	PHARM. DISP.	LVT	RB	PTDU-H	PTDU-H	PTDU-H	PTDU-H	ACT-H	
107	NURSE STATION	LVT	RB	PTDU-H	PTDU-H	PTDU-H	PTDU-H	ACT-H	
109	LAB	LVT	RB	PTDU-H	PTDU-H	PTDU-H	PTDU-H	ACT-H	
110	VITALS STATION	LVT	RB	PTDU-H	PTDU-H	PTDU-H	PTDU-H	ACT-H	
111	TOILET	FWT	NONE	CTW/PTDU-H	CTW/PTDU-H	CTW/PTDU-H	CTW/PTDU-H	PTDC	
114	I.T.	CONC.	NONE	PTDU-H	PTDU-H	PTDU-H	PTDU-H	ACT-H	
115	INT. F.B.	CONC.	RB	PTDU-H	PTDU-H	PTDU-H	PTDU-H	ACT-H	
116	INT. F.B.	CONC.	RB	PTDU-H	PTDU-H	PTDU-H	PTDU-H	ACT-H	
120	EVIDENCE STORAGE	CONC.	RB	EXIST.	PTDU-H	EXIST.	EXIST.	PTDC	REMOVE EXIST. FLOOR FINISH
121	EVIDENCE PROCESSING	CONC.	RB	EXIST.	PTDU-H	EXIST.	PTDU-H	ACT	REMOVE EXIST. FLOOR FINISH
121	FITNESS ROOM	CONC.	RB	EXIST.	PTDU-H	EXIST.	PTDU-H	ACT	REMOVE EXIST. FLOOR FINISH
129	JUV. PROCESS	CONC.	RB	EXIST.	EXIST.	EXIST.	PTDU-H	EXIST.	REMOVE EXIST. FLOOR FINISH
132	STORAGE	CONC.	RB	EXIST.	EXIST.	EXIST.	EXIST.	ACT-H	REMOVE EXIST. FLOOR FINISH
134	GEAR DROP	CONC.	RB	PTDU-H	EXIST.	EXIST.	EXIST.	EXIST.	REMOVE EXIST. FLOOR FINISH
147	CORRIDOR	CONC.	RB	PTDU-H	EXIST.	PTDU-H	PTDU-H	EXIST.	REMOVE EXIST. FLOOR FINISH
148	CONFERENCE ROOM	CONC.	RB	PTDU-H	PTDU-H	PTDU-H	PTDU-H	ACT-H	REMOVE EXIST. FLOOR FINISH
149	FILES	CONC.	RB	PTDU-H	PTDU-H	PTDU-H	PTDU-H	PTDC	REMOVE EXIST. FLOOR FINISH
153	CORRIDOR	CONC.	RB	EXIST.	EXIST.	EXIST.	PTDU-H	EXIST.	REMOVE EXIST. FLOOR FINISH
155	BREAK ROOM	CONC.	RB	PTDU-H	PTDU-H	PTDU-H	PTDU-H	ACT-H	REMOVE EXIST. FLOOR FINISH



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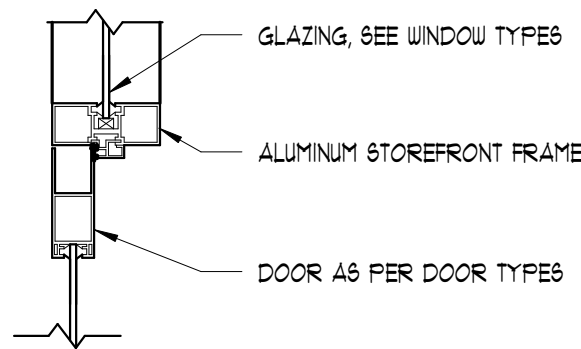
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NOVEMBER 20, 2024  
milestone issue description  
CONTRACTOR BID SET  
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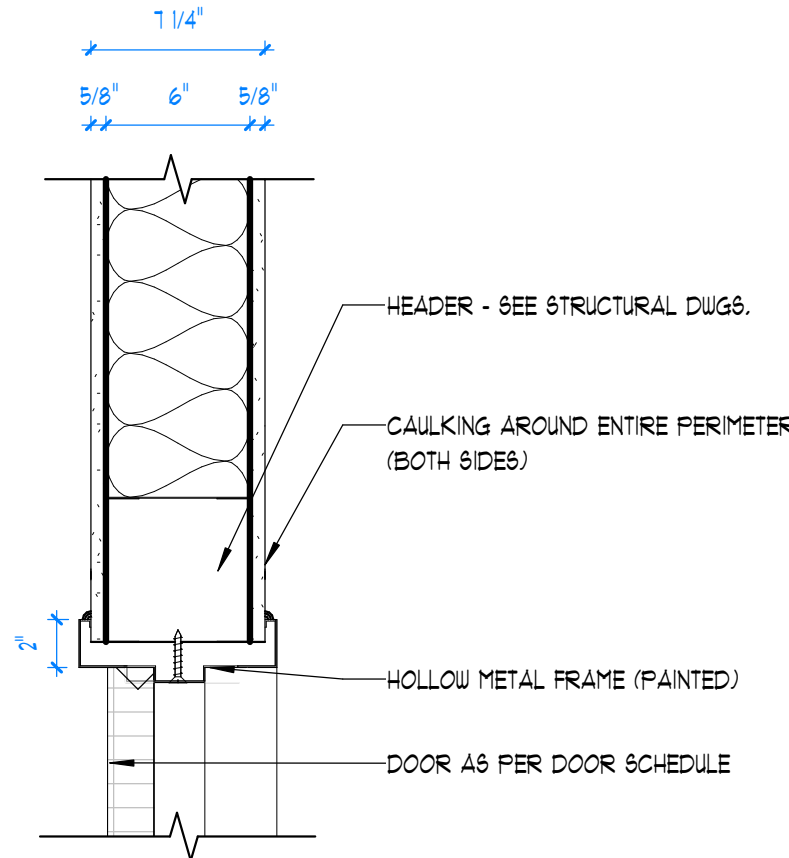
latest revision description

ROOM FINISH SCHEDULE

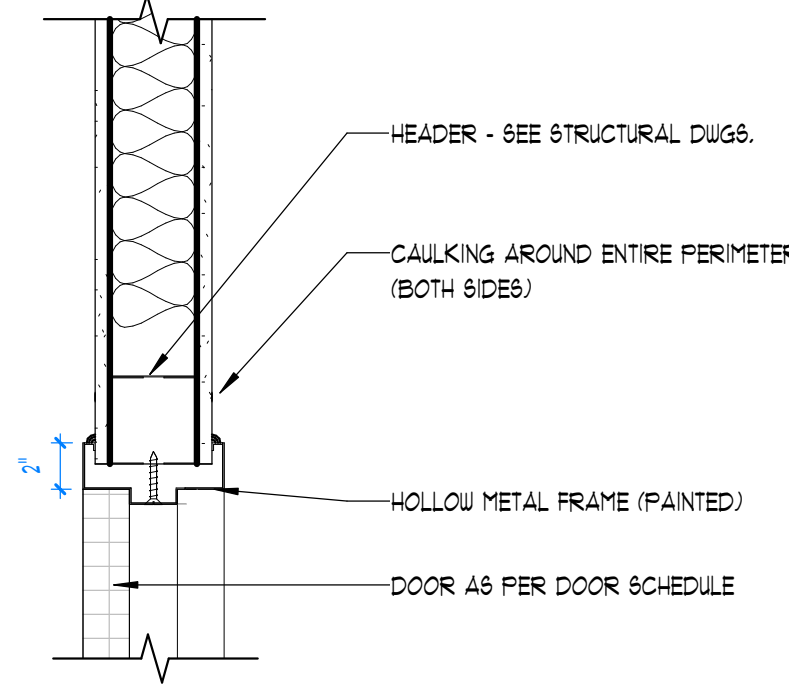




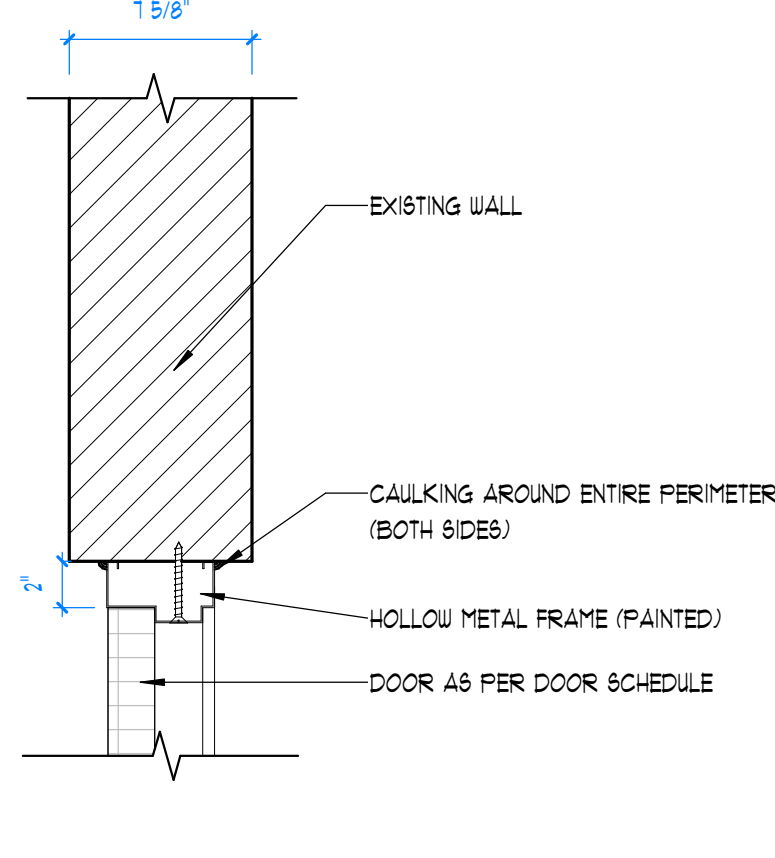
1 DOOR HEAD DETAIL  
1 1/2" x 1'-0"



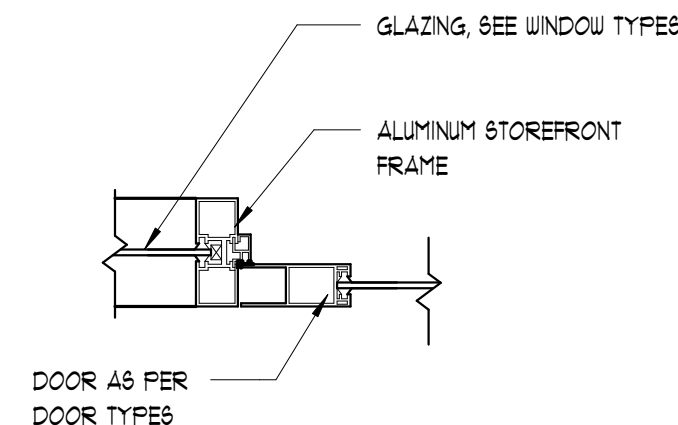
2 DOOR HEAD DETAIL  
1 1/2" x 1'-0"



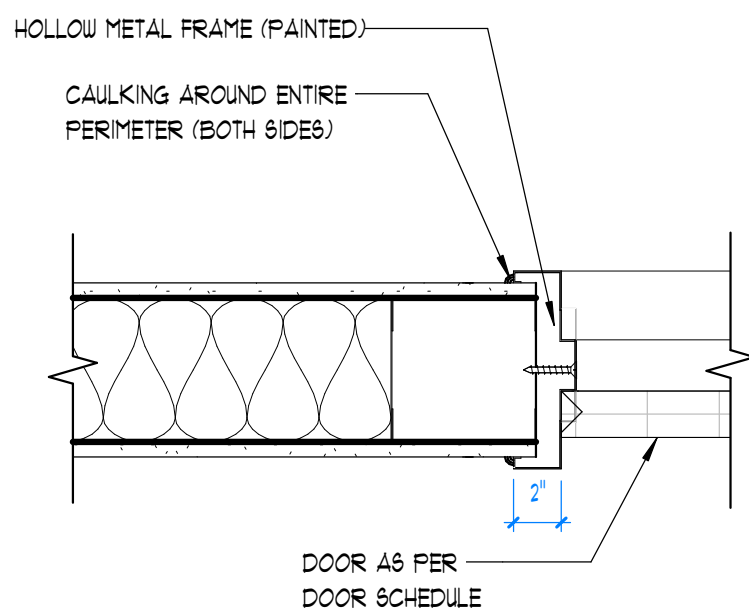
3 DOOR HEAD DETAIL  
1 1/2" x 1'-0"



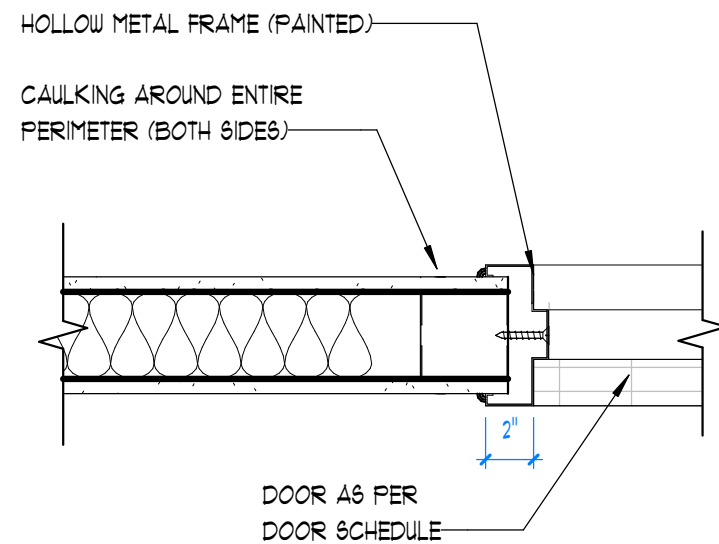
4 DOOR HEAD DETAIL  
1 1/2" x 1'-0"



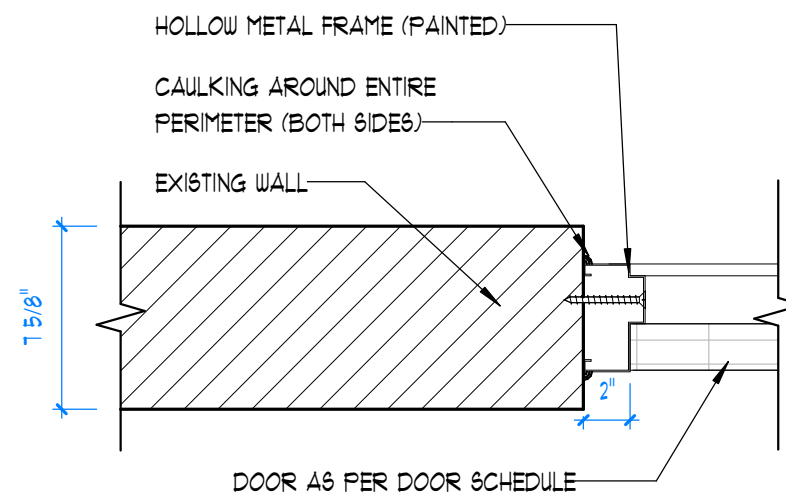
5 DOOR JAMB DETAIL  
1 1/2" x 1'-0"



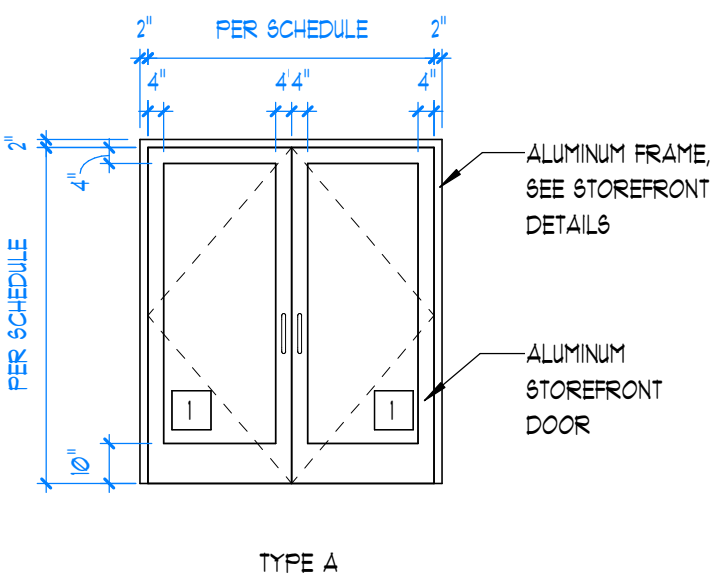
6 DOOR JAMB DETAIL  
1 1/2" x 1'-0"



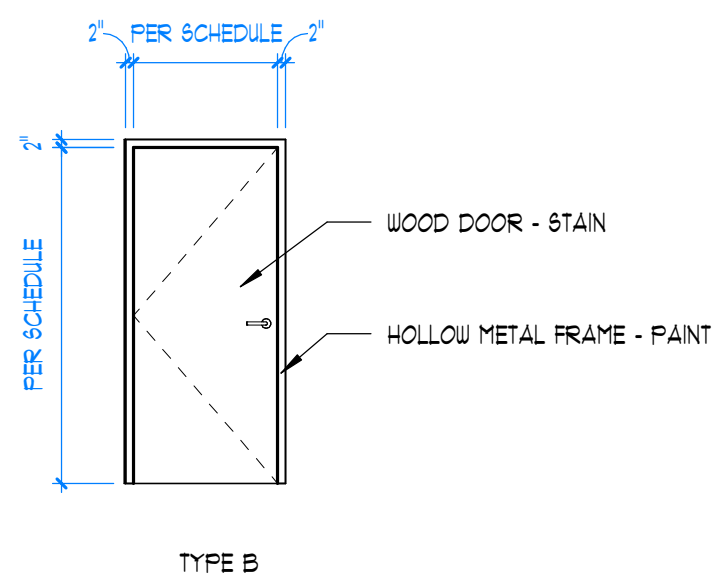
7 DOOR JAMB DETAIL  
1 1/2" x 1'-0"



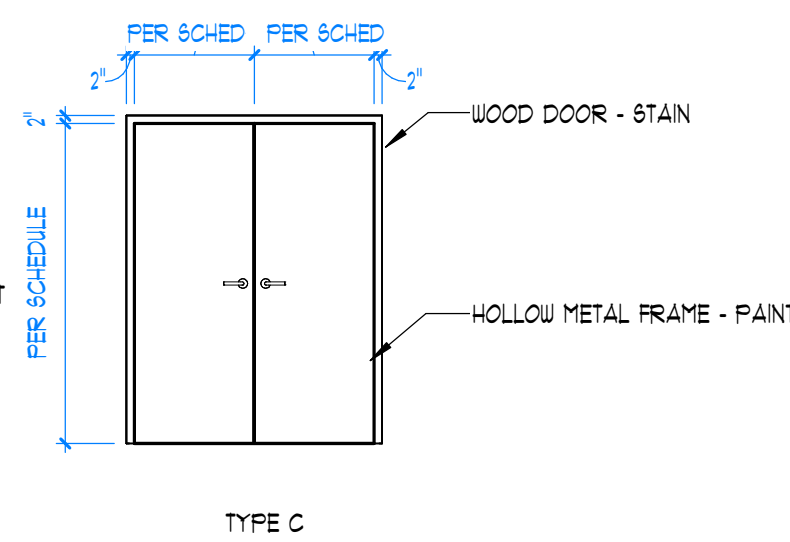
8 DOOR JAMB DETAIL  
1 1/2" x 1'-0"



TYPE A



TYPE B

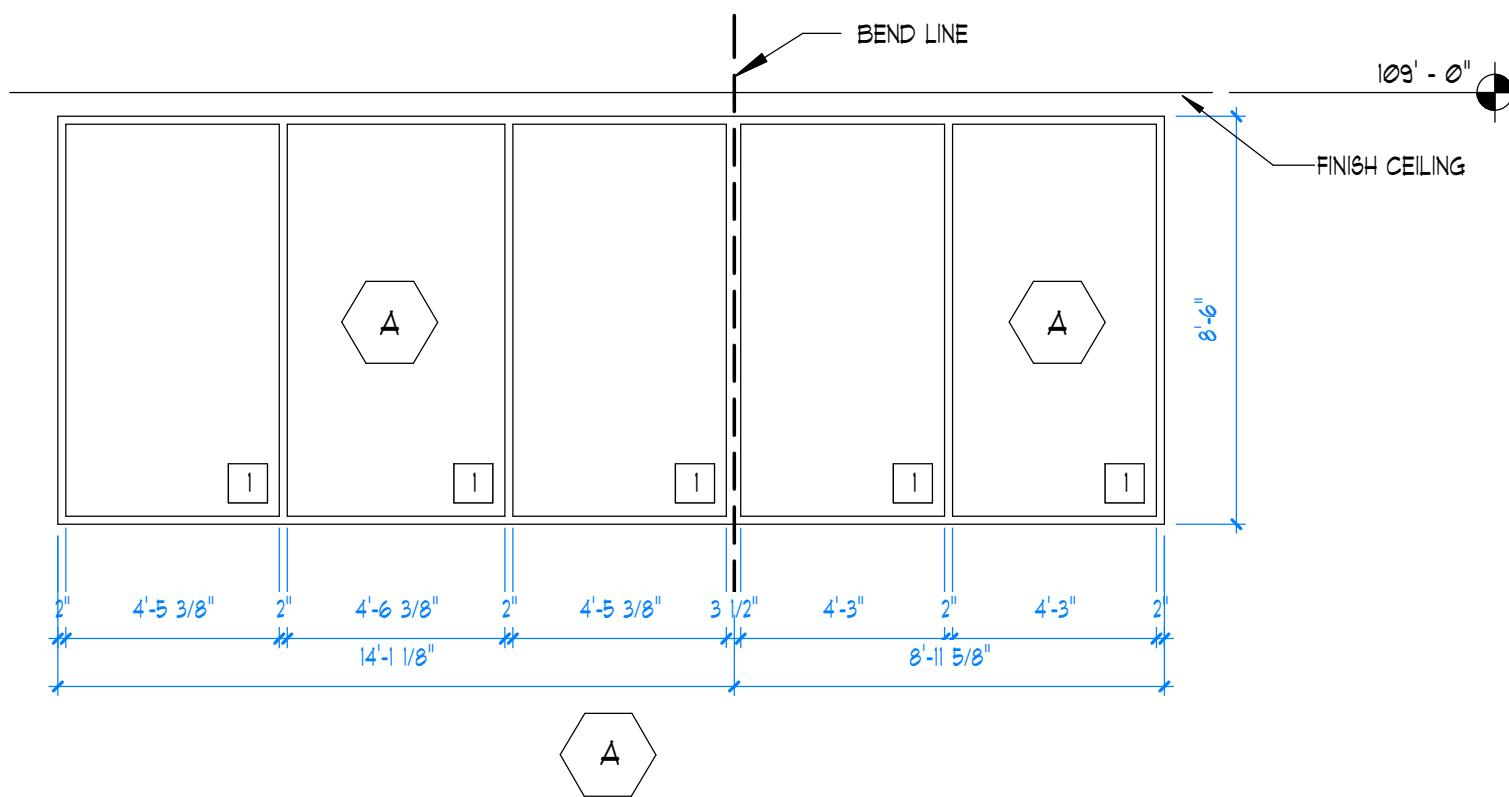


TYPE C

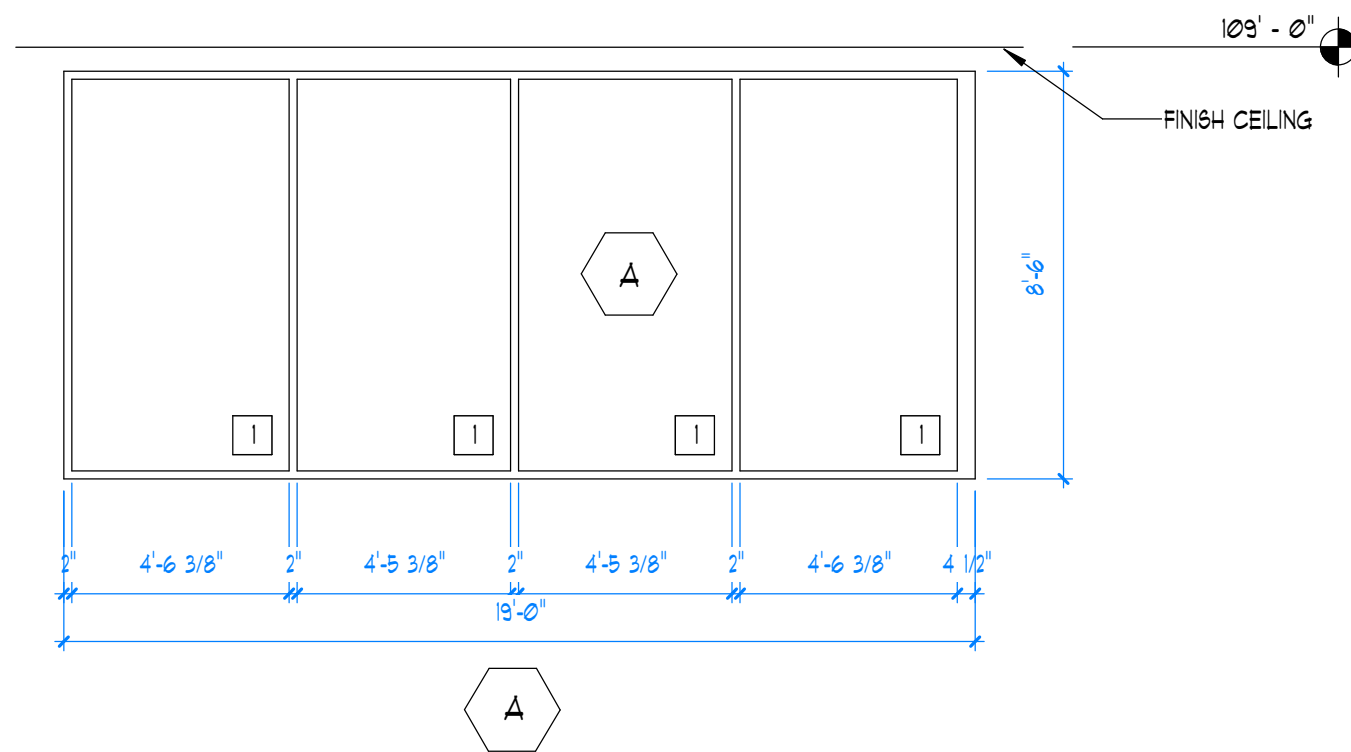
9 DOOR TYPES  
1/4" x 1'-0"

## GLAZING LEGEND

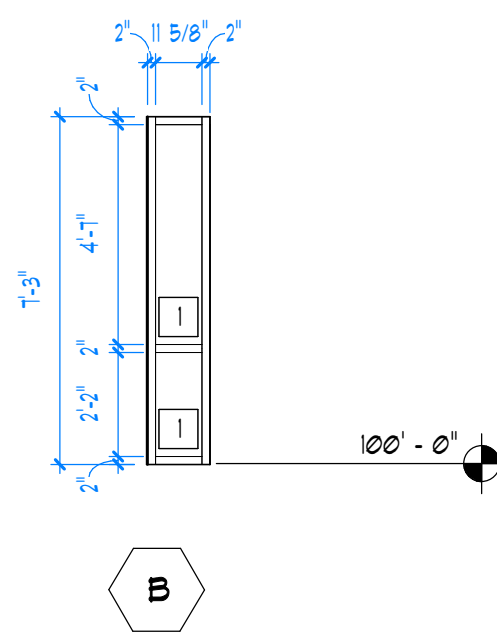
- 1 1" INSULATED, DUAL PANE LOW-E GLAZING 6YS, W/  
FULLY TEMPERED GLASS



A



A



B

10 STOREFRONT WINDOWS  
1/4" x 1'-0"

DR. NUMBER	DRY. NUMBER	DOOR TYPE	ROOM NAME	DOOR SIZE			DETAILS		FIRE RATING	COMMENTS
				WIDTH	HEIGHT	THICK	HEAD	JAMB		
100	100	A	WAITING	6'-0"	7'-1"	2"	1/43.3	5/43.3	01	PROVIDE CARD READER
101	101	B	REC'D	3'-0"	6'-8"	1 3/4"	3/43.3	1/43.3	02	PROVIDE CARD READER
102	102	B	OFFICE	3'-0"	6'-8"	1 3/4"	3/43.3	1/43.3	04	
103	103	B	PHARM. DISP.	3'-0"	6'-8"	1 3/4"	3/43.3	1/43.3	04	
104	104	B	NURSE STATION	3'-0"	6'-8"	1 3/4"	3/43.3	1/43.3	04	
105	105	B	EXAM	3'-0"	6'-8"	1 3/4"	3/43.3	1/43.3	04	
106	106	B	LAB	3'-0"	6'-8"	1 3/4"	3/43.3	1/43.3	04	
107	107	B	LAB	3'-0"	6'-8"	1 3/4"	3/43.3	1/43.3	04	
108	108	B	VITALS STATION	3'-0"	6'-8"	1 3/4"	2/43.3	6/43.3	04	
109	109	B	TOILET	3'-0"	6'-8"	1 3/4"	3/43.3	1/43.3	03	
110	110	B	EXAM	3'-0"	6'-8"	1 3/4"	2/43.3	6/43.3	04	
111	111	B	I.T.	3'-0"	6'-8"	1 3/4"	3/43.3	1/43.3	02	PROVIDE CARD READER
112	112	B	INT. F.B.	3'-0"	6'-8"	1 3/4"	2/43.3	6/43.3	04	
113	113	B	INT. F.B.	3'-0"	6'-8"	1 3/4"	2/43.3	6/43.3	04	
114	114	B	EVIDENCE PROCESSING	3'-0"	6'-8"	1 3/4"	3/43.3	1/43.3	04	
115	115	B	CORRIDOR	3'-0"	6'-8"	1 3/4"	3/43.3	1/43.3	02	PROVIDE CARD READER
116	116	B	FILES	3'-0"	6'-8"	1 3/4"	2/43.3	6/43.3	04	
117	117	C	FILES	5'-0"	6'-8"	1 3/4"	3/43.3	1/43.3	04	

## HARDWARE GROUP #01

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
2	EA CONT. HINGE	112HD EPT	628	IVE
2	EA POWER TRANSFER	EPT10 CON	689	VON
1	EA REMOVABLE MULLION	KR4954 STAB	689	VON
1	EA ELEC PANIC HARDWARE	LXRX-LC-QEL-98-EO-CON 24 VDC	626	VON
1	EA ELEC PANIC HARDWARE	LXRX-LC-QEL-98-NL-OP-110MD-CON 24 VDC	626	VON
1	EA RIM CYL. HOUSING	20-079	626	SCH
1	EA MORTISE CYLINDER	26-094	626	SCH
1	EA FSIC CORE	91-161 EV20 R (FOR MULLION)	626	SCH
1	EA PRIMUS CORE	91-861-XP EV29SL R (FOR DEVICE TRIM)	626	SCH
2	EA LONG DOOR PULL	3264F 36" 20" O	630-316	IVE
2	EA OH STOP	100S ADJ	630	GLY
1	EA SURFACE CLOSER	4040XP EDW62G	689	LCN
1	EA SURF. AUTO OPERATOR	4642 CS WMS 120 VAC (FLUSH CEILING MOUNT)	689	LCN
1	EA PA MOUNTING PLATE	4040XP-18EA (AS REQ'D)	689	LCN
1	EA CUSH SHOCK SUPPORT	4040XP-30 (AS REQ'D)	689	LCN
2	EA ACTUATOR TOUCH	8310-853T	630	LCN
1	EA MULLION SEAL	8780NBK PSA	626	ZER
1	EA WEATHERSTRIPPING	BY ALUMINUM DOORFRAME MANUFACTURER		
2	EA DOOR SWEEP	BY ALUMINUM DOORFRAME MANUFACTURER		
1	EA THRESHOLD	BY ALUMINUM DOORFRAME MANUFACTURER		
2	EA WIRE HARNESS (HINGE TO HARDWARE)	CON-XX (AS REQUIRED)		SCH
1	EA CREDENTIAL READER	BY DIVISION 28		
2	EA DOOR POSITION SWITCH	DPS	626	SEC

HARDWARE IS FOR DOOR WITH WIDE STYLE.  
OPERATIONS:  
DOOR IS NORMALLY LATCHED AND SECURED.  
DOOR MAY BE PROGRAMMED TO REMAIN UNLOCKED ON A SCHEDULE THROUGH ACCESS CONTROL SYSTEM.  
PRESENTING VALID CREDENTIAL TEMPORARILY RETRACTS LATCHBOLT FOR ENTRY WHEN DOOR IS LOCKED.  
EXTERIOR ACTUATOR IS CONTROLLED BY ACCESS CONTROL SYSTEM. INTERIOR ACTUATOR IS ALWAYS ACTIVE.  
DOOR IS MONITORED THROUGH ACCESS CONTROL OR SECURITY SYSTEM.  
DOOR IS SECURED UPON LOSS OF POWER TO THE DEVICE.  
FREE EGRESS AT ALL TIMES.  
POWER COMES FROM ACCESS CONTROL CABINET IN THE IT ROOM.

## HARDWARE GROUP #02

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA HINGE	58B1HW 4.5 X 4.5 NRP	652	IVE
1	EA POWER TRANSFER	EPT10 CON	689	VON
1	EA ELEC PANIC HARDWARE	RX-QEL-98-L-NL-06-CON 24 VDC	626	VON
1	EA RIM CYL. HOUSING	20-079	626	SCH
1	EA PRIMUS CORE	91-861-XP EV29SL R	626	SCH
1	EA SURFACE CLOSER	4040XP CUSH	689	LCN
1	EA KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA GASKETING	188SBK PSA (HEADER & JAMBS)	626	ZER
1	EA WIRE HARNESS (HINGE TO HARDWARE)	CON-XX (AS REQUIRED)		SCH
1	EA CREDENTIAL READER	BY DIVISION 28		
1	EA DOOR POSITION SWITCH	DPS	626	SEC
1	EA LOW VOLTAGE POWER	BY DIVISION 28		

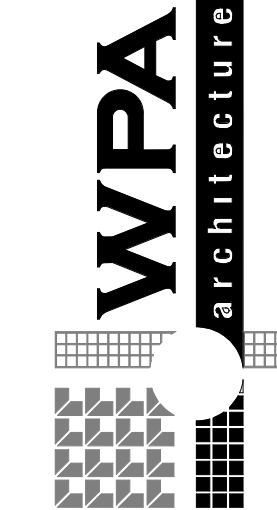
OPERATION:  
DOOR IS NORMALLY LATCHED AND SECURED.  
PRESENTING VALID CREDENTIAL TEMPORARILY RETRACTS LEVER FOR ENTRY.  
DOOR IS MONITORED THROUGH ACCESS CONTROL OR SECURITY SYSTEM.  
DOOR IS SECURED UPON LOSS OF POWER TO THE DEVICE.  
FREE EGRESS AT ALL TIMES.  
POWER COMES FROM ACCESS CONTROL CABINET IN THE IT ROOM.

## HARDWARE GROUP #03

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA HINGE	58B1HW 4.5 X 4.5	652	IVE
1	EA PRIVACY LOCK	L3040 08N L303-363 L283-722	626	SCH
1	EA SURFACE CLOSER	4040XP	689	LCN
1	EA KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA WALL STOP	WS401402CVX	626	IVE
1	EA GASKETING	188SBK PSA (HEADER & JAMBS)	626	ZER

## HARDWARE GROUP #04

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
3	EA HINGE	58B1 4.5 X 4.5 NRP	652	IVE
1	EA PASSAGE SET	AL10S OME	626	SCH
1	EA KICK PLATE	8400 10" X 2" LDW B4E	630	IVE
1	EA WALL STOP	WS407CCV	630	IVE
3	EA SILENCER	SR64	626	IVE



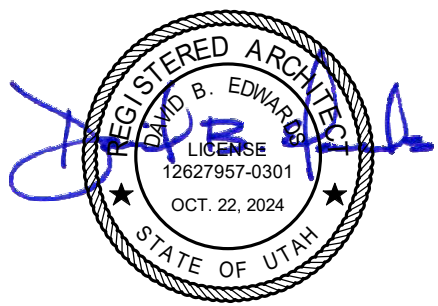
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## OREM CITY PUBLIC SAFETY BUILDING

INTERIOR REMODEL

95 E. Center Street  
Orem, Utah 84057



revision information  
no. date description

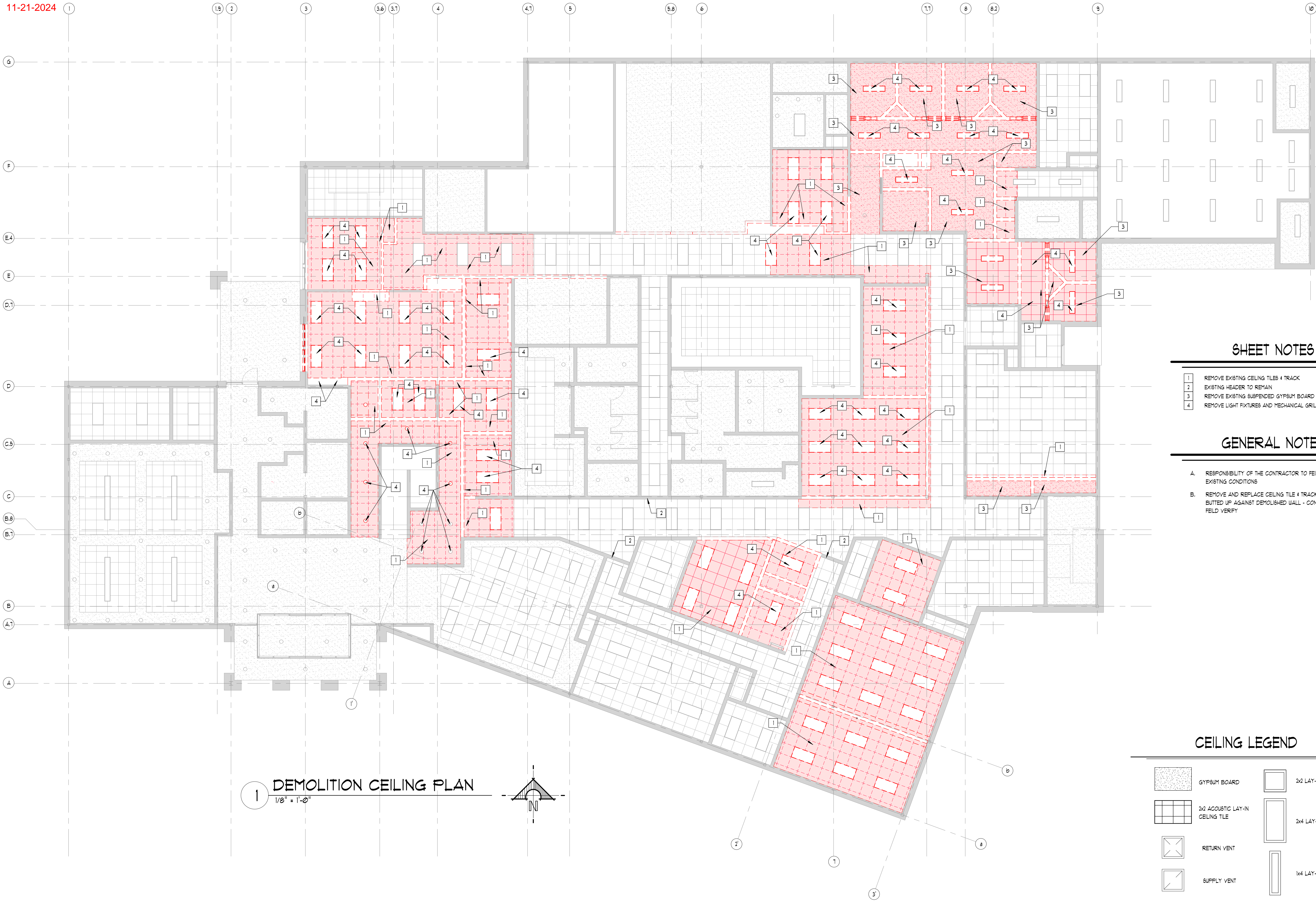
milestone issue date  
NOVEMBER 20, 2024  
milestone issue description  
CONTRACTOR BID SET  
latest revision date

latest revision description

DOOR SCHEDULE &  
DETAILS

# A3.3





### SHEET NOTES

- |   |  |
|---|--|
| 1 | REMOVE EXISTING CEILING TILES & TRACK          |
| 2 | EXISTING HEADER TO REMAIN                      |
| 3 | REMOVE EXISTING SUSPENDED GYPSUM BOARD CEILING |
| 4 | REMOVE LIGHT FIXTURES AND MECHANICAL GRILLS    |

### GENERAL NOTES

- A. RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS
- B. REMOVE AND REPLACE CEILING TILE & TRACK WHERE BUTTED UP AGAINST DEMOLISHED WALL - CONTRACTOR TO FIELD VERIFY

### CEILING LEGEND

- |  |                                  |  |                    |
|--|----------------------------------|--|--------------------|
|  | GYPSUM BOARD                     |  | 2x2 LAY-IN LIGHT   |
|  | 2x2 ACOUSTIC LAY-IN CEILING TILE |  | 2x4 LAY-IN LIGHT   |
|  | RETURN VENT                      |  | 1x4 LAY-IN LIGHT   |
|  | SUPPLY VENT                      |  | RECESSED CAN LIGHT |



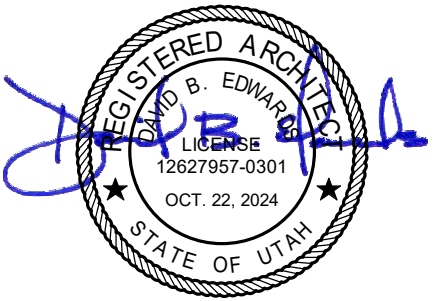
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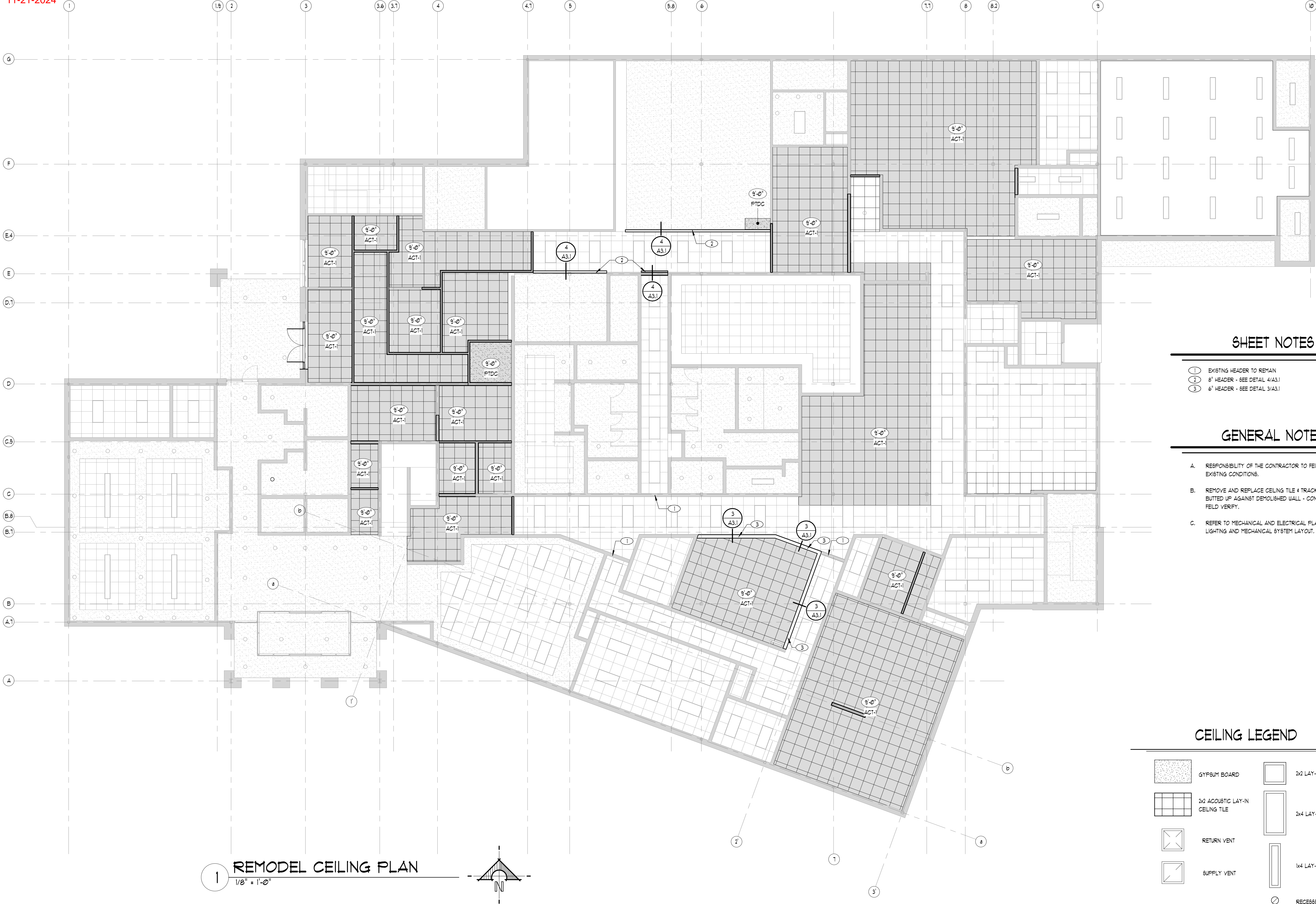
revision information		
no.	date	description

milestone issue date  
NOVEMBER 20, 2024  
milestone issue description  
CONTRACTOR BID SET  
latest revision date  
latest revision description

REFLECTED CEILING  
DEMO PLAN

# A8.1





SHEET NOTES

- 1 EXISTING HEADER TO REMAIN  
2 8" HEADER - SEE DETAIL 4/A3.1  
3 6" HEADER - SEE DETAIL 3/A3.1

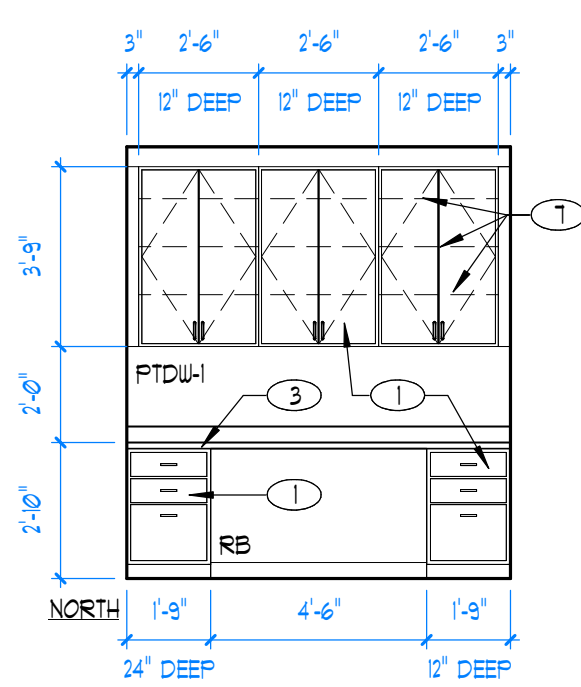
GENERAL NOTES

- A. RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS.  
B. REMOVE AND REPLACE CEILING TILE 4 TRACK WHERE BUTTED UP AGAINST DEMOLISHED WALL - CONTRACTOR TO FIELD VERIFY.  
C. REFER TO MECHANICAL AND ELECTRICAL PLANS FOR LIGHTING AND MECHANICAL SYSTEM LAYOUT.

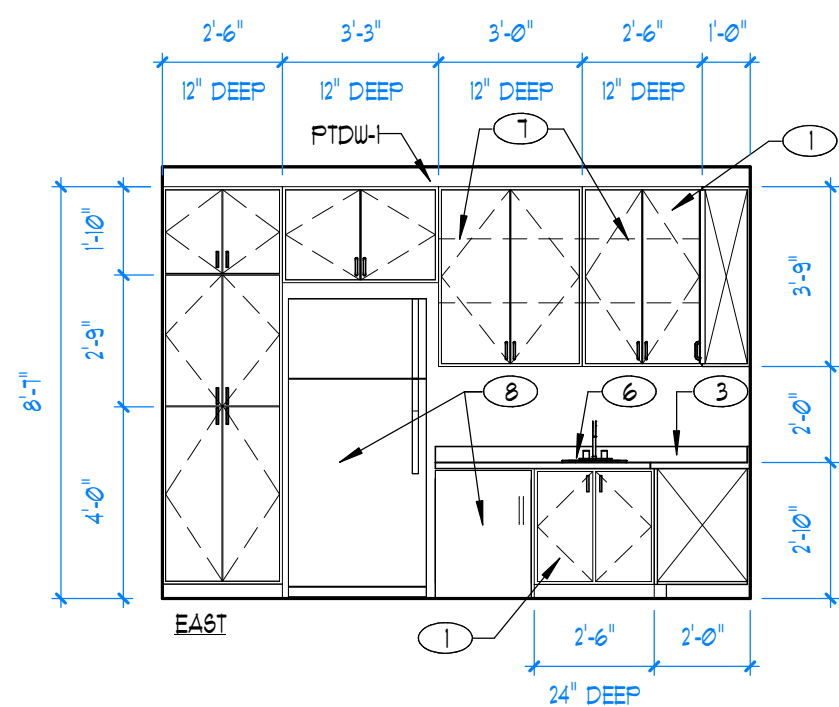
CEILING LEGEND

- GYPSUM BOARD  
2x2 ACOUSTIC LAY-IN CEILING TILE  
RETURN VENT  
SUPPLY VENT  
2x2 LAY-IN LIGHT  
2x4 LAY-IN LIGHT  
1x4 LAY-IN LIGHT  
RECESSED CAN LIGHT

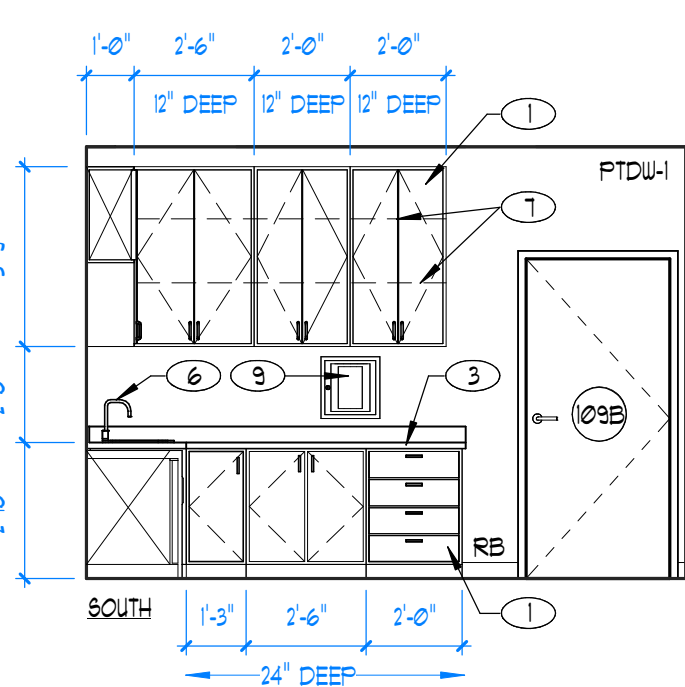




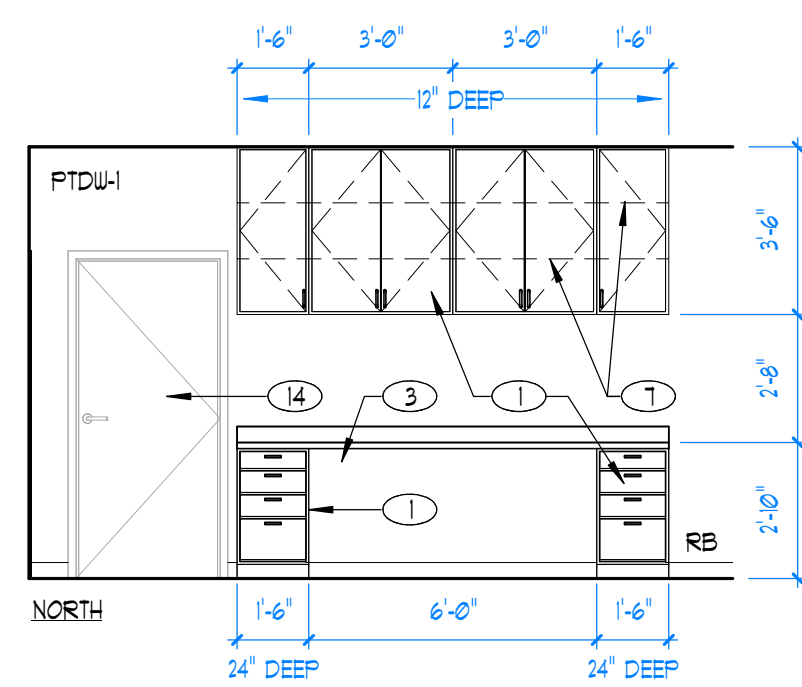
1 OFFICE #102  
1/4" = 1'-0"



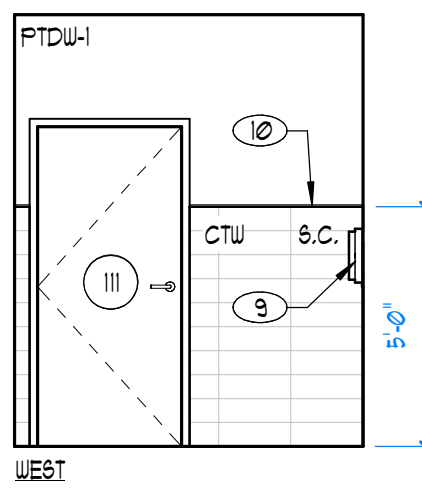
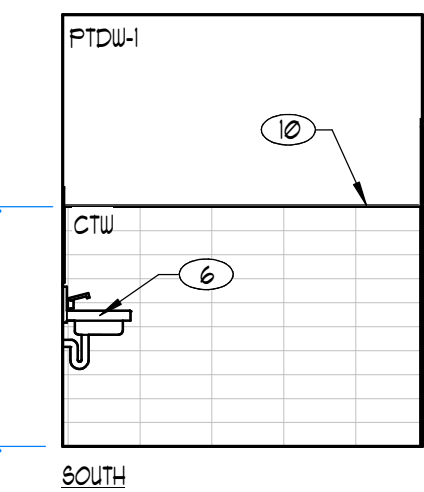
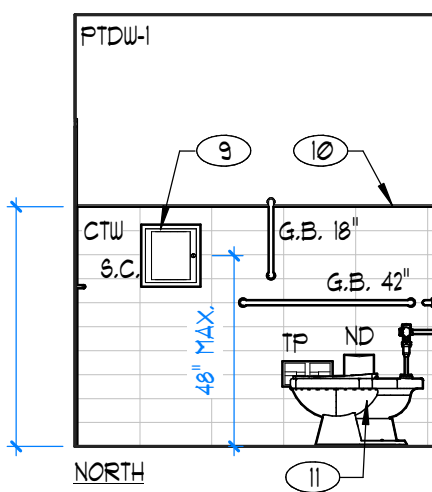
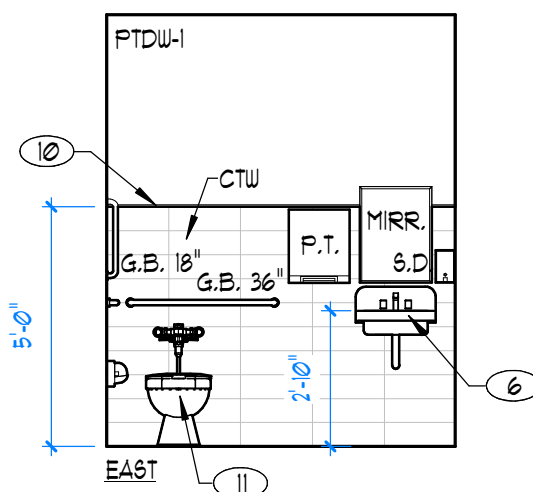
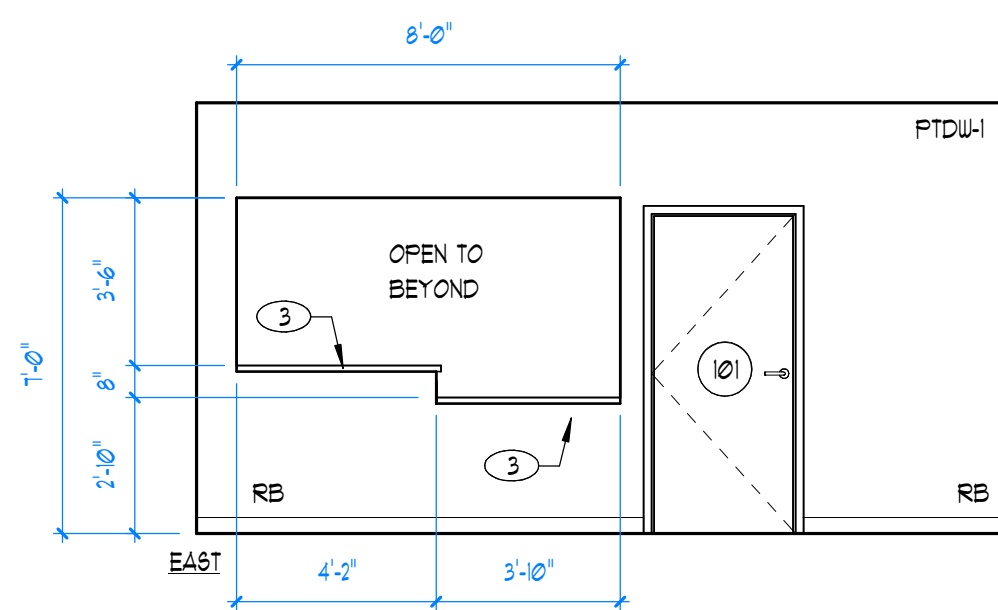
2 LAB #109  
1/4" = 1'-0"



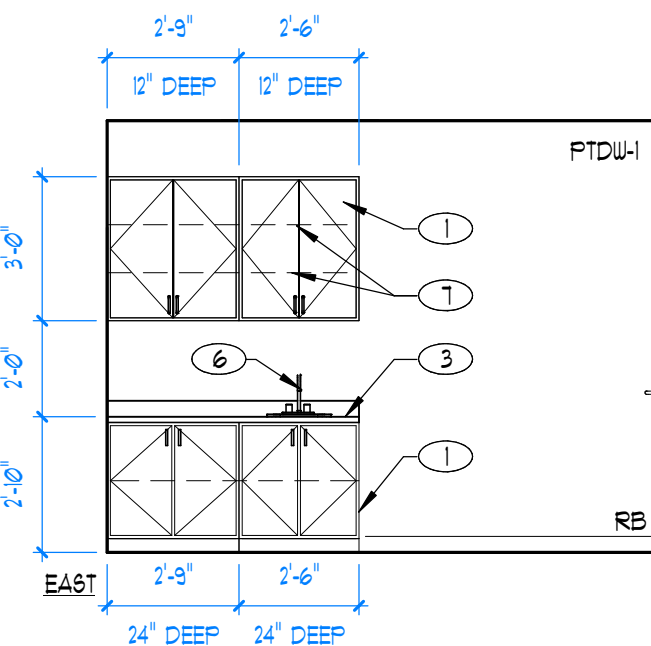
3 NURSE STATION #107  
1/4" = 1'-0"



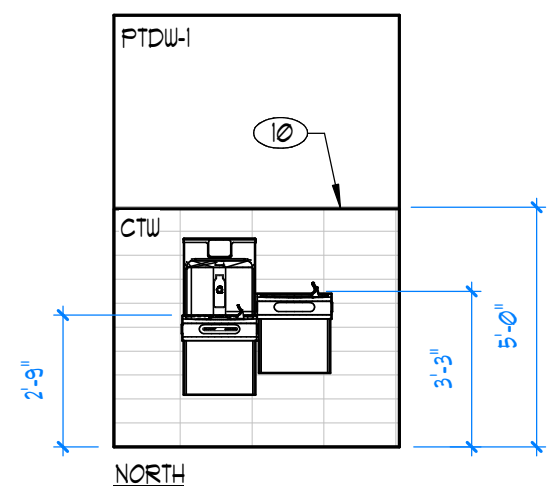
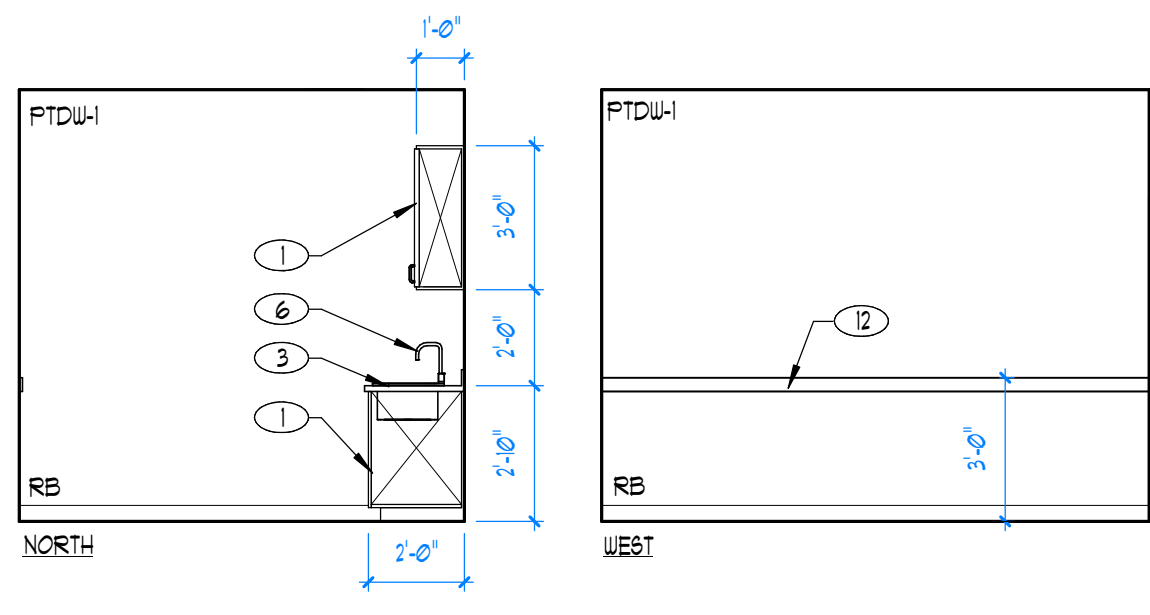
4 WAITING #100  
1/4" = 1'-0"



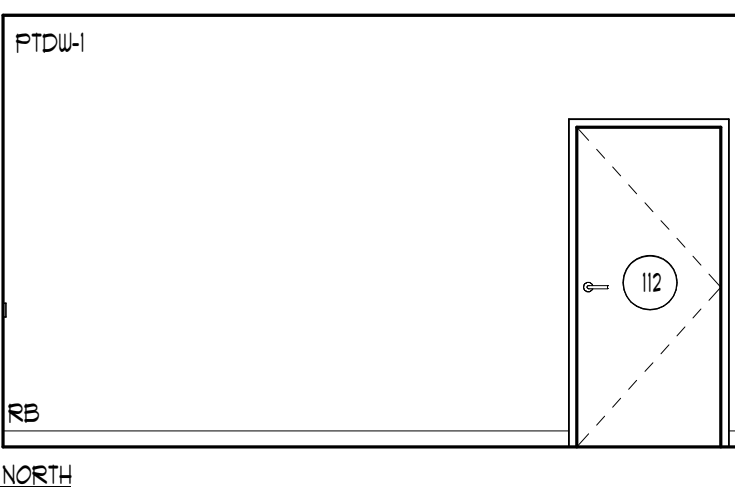
5 TOILET ROOM #111  
1/4" = 1'-0"



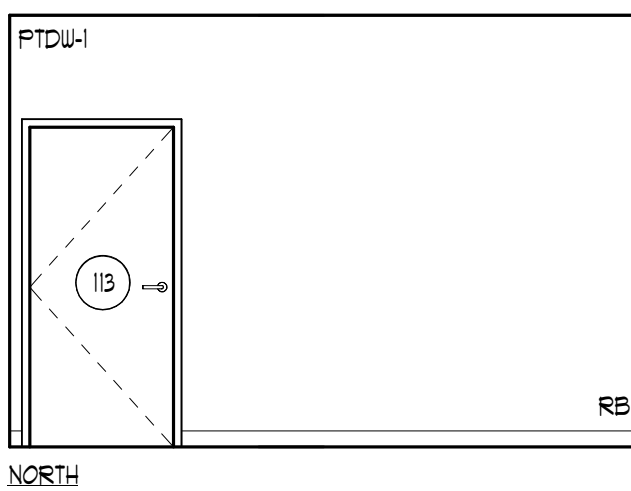
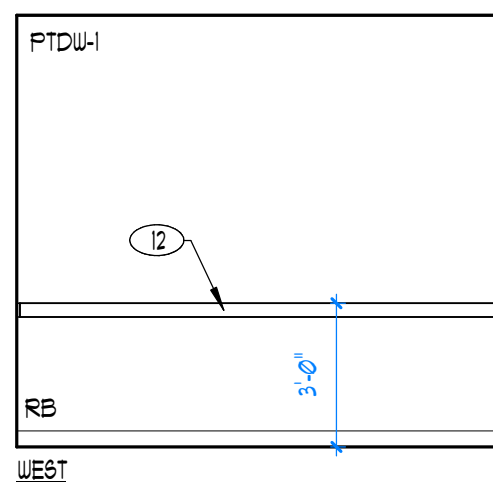
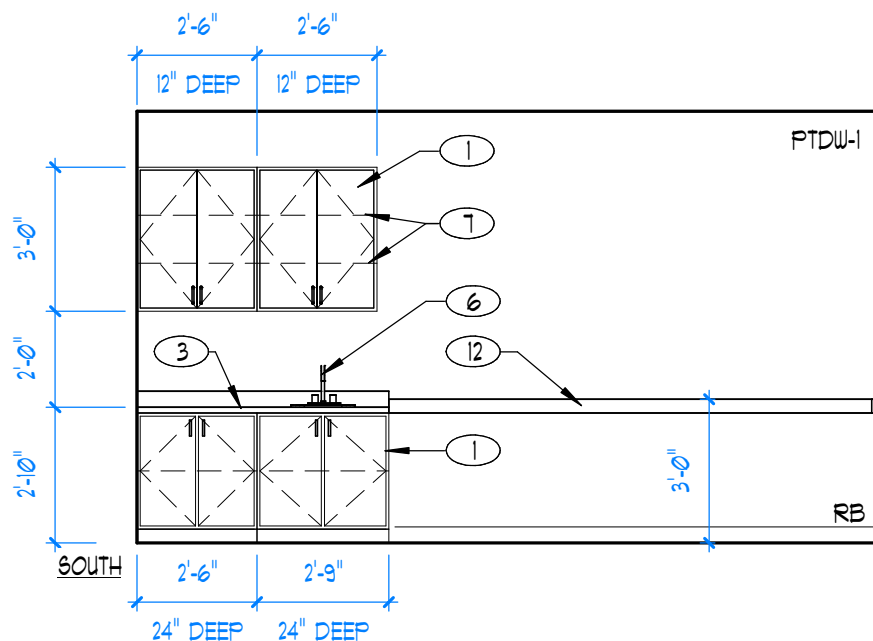
7 EXAM ROOM #108  
1/4" = 1'-0"



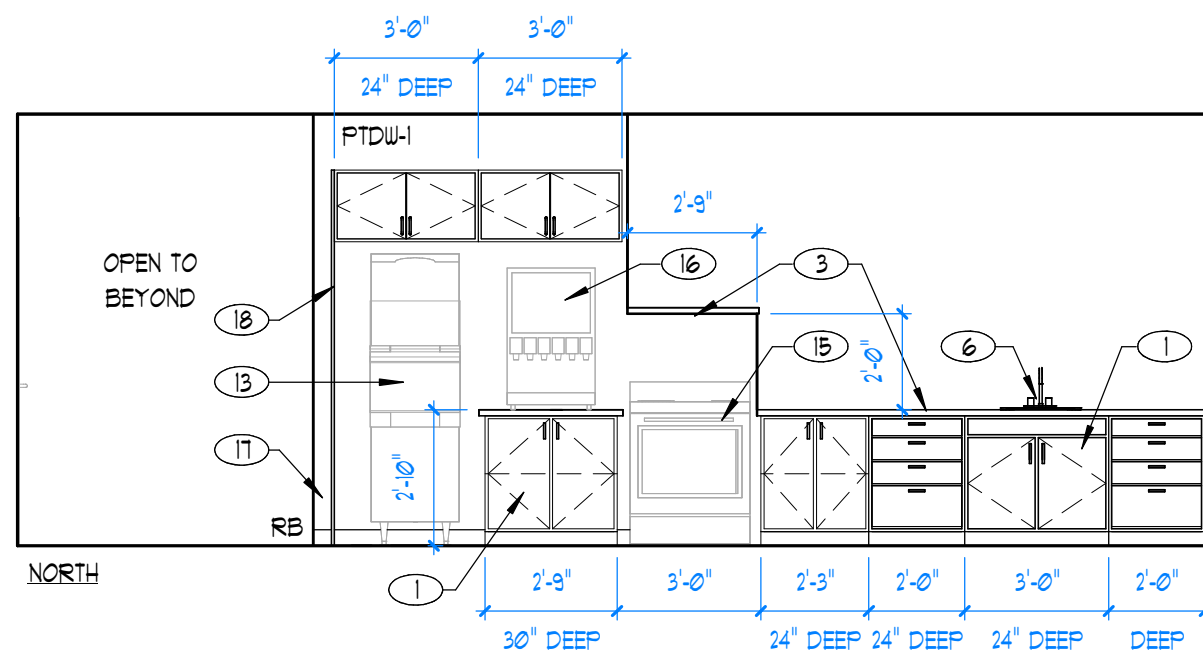
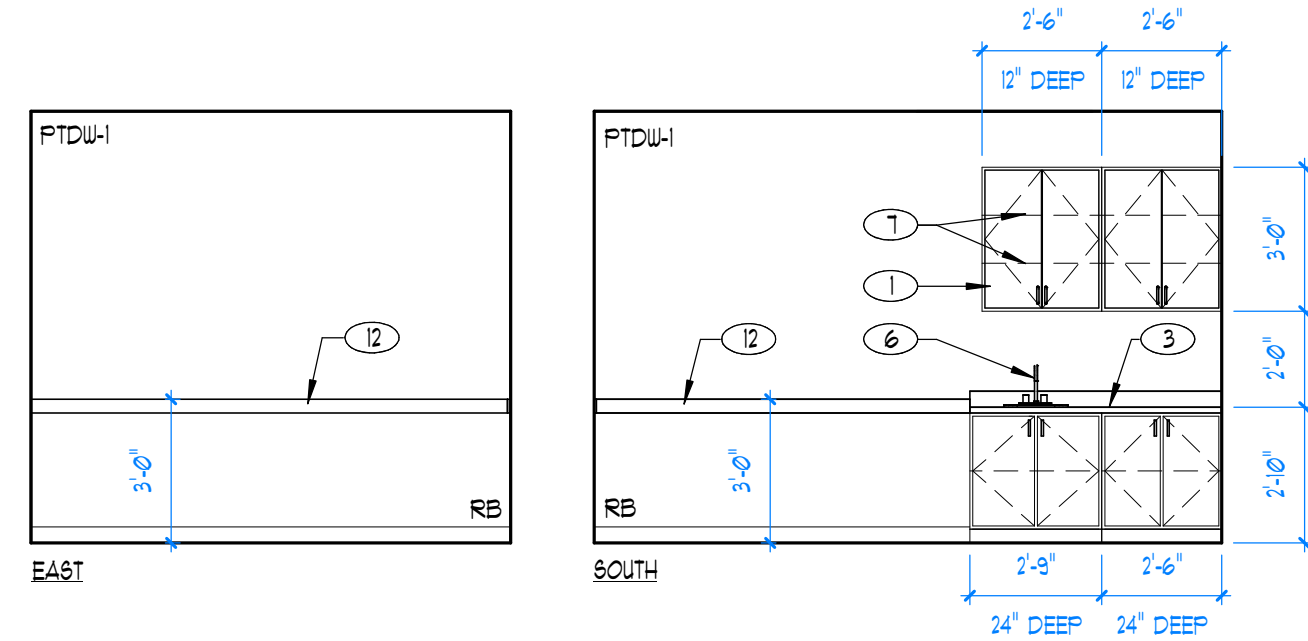
10 DRINKING FOUNTAIN  
1/4" = 1'-0"



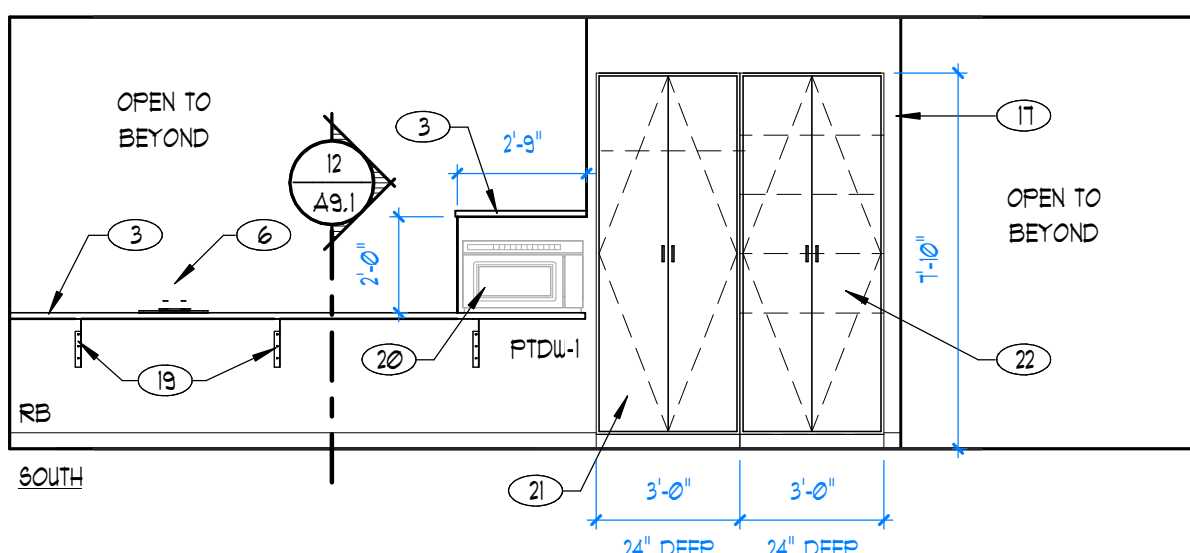
8 EXAM ROOM #112  
1/4" = 1'-0"



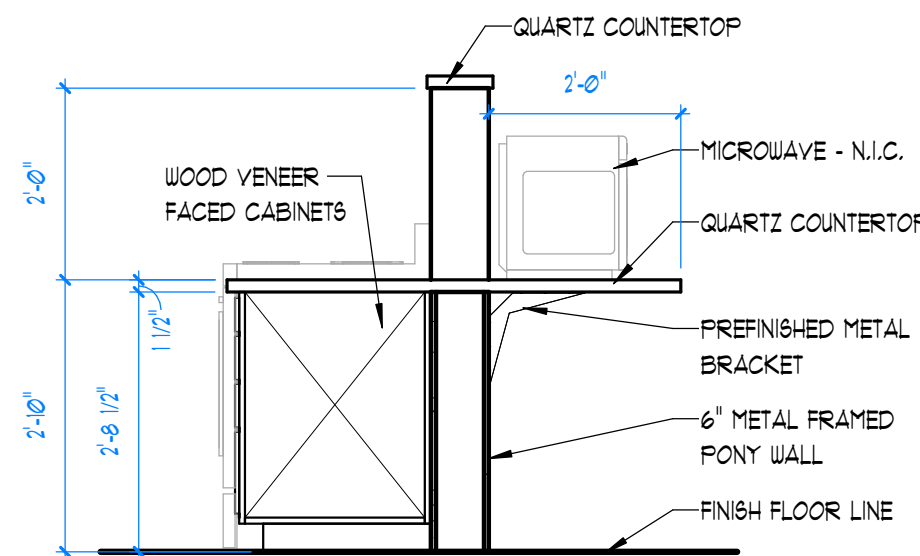
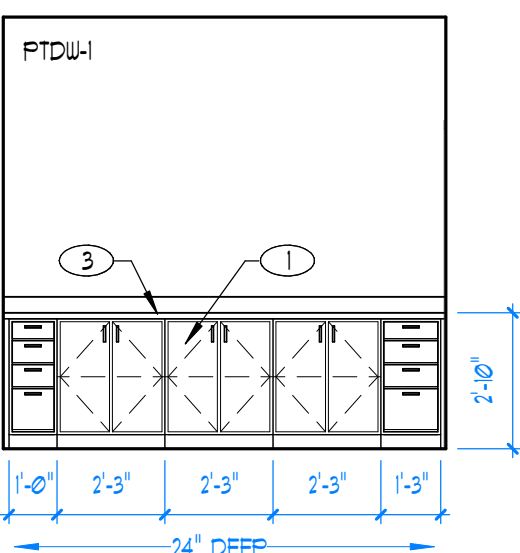
9 EXAM ROOM #113  
1/4" = 1'-0"



10 BREAK ROOM #155  
1/4" = 1'-0"



11 GEAR DROP # 134  
1/4" = 1'-0"



12 BREAK ROOM ISLAND SECTION  
1/2" = 1'-0"

## SHEET NOTES

- WOOD VENEER FACED CABINETS (DOOR AND DRAWER FRONTS). EXPOSED INTERIOR TO BE MELAMINE FINISH, INCLUDING BACK PANEL. PROVIDE 3mm PLASTIC EDGES. PROVIDE FINISHED END PANELS ON ALL EXPOSED ENDS.
- DRINKING FOUNTAIN - SEE PLUMBING DUGS. AND 3/16.1
- 2CM QUARTZ COUNTERTOP AND BACKSPLASH
- DRAIN HOLE FOR BODA MACHINE
- SINK - SEE PLUMBING DRAWINGS
- 3/4" ADJUSTABLE SHELVES WITH MELAMINE FINISH - PROVIDE 3mm PLASTIC EDGES
- REFRIGERATOR - N.I.C.
- PASS THROUGH SPECIMEN CABINET - VERIFY EXACT LOCATION w/ OWNER PRIOR TO INSTALLATION
- STAINLESS STEEL TRIM AT TOP EDGE OF WALL TILE
- WATER CLOSET - SEE PLUMBING DRAWING
- 4" OAK CHAIR RAIL
- EXISTING ICE MACHINE RELOCATED TO THIS APPROX. LOCATION. PROVIDE FLOOR SINK - SEE PLUMBING DUGS.
- EXISTING DOOR TO REMAIN. PROTECT DURING REMODEL WORK
- EXISTING RANGE RELOCATED TO THIS APPROX. LOCATION
- EXISTING BODA DISPENSING MACHINE
- EXTEND WALL TO ENCAPSULATE EXISTING STEEL COLUMN
- WOOD VENEER FACED END PANEL
- PREFINISHED METAL BRACKET TO SUPPORT COUNTER
- MICROWAVE - N.I.C.
- BODA DISPENSER PUMP AND SYRUP RACK CABINET, PROVIDE OPENING IN BACK OF CABINET AND WALL TO PASS SYRUP AND PUMP LINES THROUGH TO BODA DISPENSING MACHINE
- CO2 CANISTERS AND STORAGE CABINET. SECURE CANISTERS TO WALL AS REQ'D.

## ACCESSORY ABBREVIATIONS

MIRR.	18" W x 24" H MIRROR, SEE INT. ELEV.
S.D.	SOAP DISPENSER +48" AFF.
T.P.	TOILET PAPER DISPENSER +48" AFF.
G.B.18	GRAB BAR 18" LONG
G.B.36	GRAB BAR 36" LONG
G.B.42	GRAB BAR 42" LONG
P.T.	PAPER TOWEL DISPENSER
S.C.	PASS THROUGH SPECIMAN CABINET 44" AFF.
N.D.	FEMININE NAPKIN DISPENSOR
MIB	MOP AND BROOM HANGER

## FINISH SCHEDULE REFERENCE

RB	RUBBER BASE
LVT	LUXURY VINYL TILE
CONC	CONCRETE
PTDU-I	GYPSUM BOARD TEXTURED AND PAINTED
CTW	CERAMIC TILE WALL

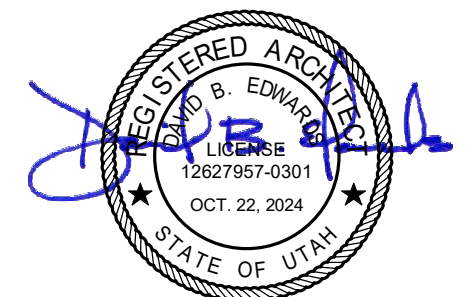


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## OREM CITY PUBLIC SAFETY BUILDING INTERIOR REMODEL

95 E. Center Street  
Orem, Utah 84057



revision information  
no. date description

milestone issue date  
NOVEMBER 20, 2024  
milestone issue description  
CONTRACTOR BID SET  
latest revision date

latest revision description

LARGE SCALE FLOOR  
PLAN & INT. ELEVATIONS

# A9.1



CONTRACTOR BID SET  
NOT FOR CONSTRUCTION  
11-21-2024

COMMISSIONING NOTES:

MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ALL DOCUMENTATION TO THE OWNER AS PER THE LISTED 2021 IECC CODE REFERENCES BELOW:

C408.2.1 A COMMISSIONING PLAN SHALL BE DEVELOPED BY A REGISTERED DESIGN PROFESSIONAL OR APPROVED AGENCY AND SHALL INCLUDE THE FOLLOWING ITEMS:

- A NARRATIVE DESCRIPTION OF THE ACTIVITIES THAT WILL BE ACCOMPLISHED DURING EACH PHASE OF COMMISSIONING, INCLUDING THE PERSONNEL INTENDED TO ACCOMPLISH EACH OF THE ACTIVITIES.
- A LISTING OF THE SPECIFIC EQUIPMENT, APPLIANCES OR SYSTEMS TO BE TESTED AND A DESCRIPTION OF THE TESTS TO BE PERFORMED.
- FUNCTIONS TO BE TESTED, INCLUDING, BUT NOT LIMITED TO CALIBRATIONS AND ECONOMIZER CONTROLS.
- CONDITIONS UNDER WHICH THE TESTS WILL BE PERFORMED. AT A MINIMUM, TESTING SHALL AFFIRM WINTER AND SUMMER DESIGN CONDITIONS AND FULL OUTSIDE AIR CONDITIONS.
- MEASURABLE CRITERIA FOR PERFORMANCE.

C408.2.4 PRELIMINARY COMMISSIONING REPORT. A PRELIMINARY REPORT OF COMMISSIONING TEST PROCEDURES AND RESULTS SHALL BE COMPLETED AND CERTIFIED BY THE REGISTERED DESIGN PROFESSIONAL OR APPROVED AGENCY AND PROVIDED TO THE BUILDING OWNER OR OWNER'S AUTHORIZED AGENT. THE REPORT SHALL BE ORGANIZED WITH MECHANICAL AND SERVICE HOT WATER FINDINGS IN SEPARATE SECTIONS TO ALLOW INDEPENDENT REVIEW. THE REPORT SHALL BE IDENTIFIED AS "PRELIMINARY COMMISSIONING REPORT," SHALL INCLUDE THE COMPLETED COMMISSIONING COMPLIANCE CHECKLIST, FIGURE C408.2.4, AND SHALL IDENTIFY:

- ITEMIZATION OF DEFICIENCIES FOUND DURING TESTING REQUIRED BY THIS SECTION THAT HAVE NOT BEEN CORRECTED AT THE TIME OF REPORT PREPARATION.
- DEFERRED TESTS THAT CANNOT BE PERFORMED AT THE TIME OF REPORT PREPARATION BECAUSE OF CLIMATIC CONDITIONS.
- CLIMATIC CONDITIONS REQUIRED FOR PERFORMANCE OF THE DEFERRED TESTS.
- RESULTS OF FUNCTIONAL PERFORMANCE TESTS.
- FUNCTIONAL PERFORMANCE TEST PROCEDURES USED DURING THE COMMISSIONING PROCESS, INCLUDING MEASURABLE CRITERIA FOR TEST ACCEPTANCE.

C408.2.4.1 ACCEPTANCE OF REPORT. BUILDINGS, OR PORTIONS THEREOF, SHALL NOT BE CONSIDERED AS ACCEPTABLE FOR A FINAL INSPECTION PURSUANT TO SECTION C105.2.6 UNTIL THE CODE OFFICIAL HAS RECEIVED THE PRELIMINARY COMMISSIONING REPORT FROM THE BUILDING OWNER OR OWNER'S AUTHORIZED AGENT.

C408.2.4.2 THE CODE OFFICIAL SHALL BE PERMITTED TO REQUIRE THAT A COPY OF THE PRELIMINARY COMMISSIONING REPORT BE MADE AVAILABLE FOR REVIEW BY THE CODE OFFICIAL.

C408.2.5 DOCUMENTATION REQUIREMENTS. THE CONSTRUCTION DOCUMENTS SHALL SPECIFY THAT THE DOCUMENTS DESCRIBED IN THIS SECTION BE PROVIDED TO THE BUILDING OWNER WITHIN 90 DAYS OF THE RECEIPT OF THE CERTIFICATE OF OCCUPANCY.

DOCUMENTS SHALL INCLUDED BUT ARE NOT LIMITED TO: DRAWINGS, MANUALS, SYSTEM BALANCING REPORT, AND FINAL COMMISSIONING REPORT.

DUCTWORK SEISMIC SUPPORT NOTES:

1. PER ASCE STANDARD 7-22 (OR MOST RECENT VERSION) SEISMIC SUPPORTS ARE NOT REQUIRED FOR THE FOLLOWING CONDITIONS:

- HVAC DUCTS ARE SUSPENDED WITH HANGERS 12" OR LESS IN LENGTH.
- HVAC DUCTS HAVE A CROSS-SECTIONAL AREA OF LESS THAN 6 SQUARE FEET.
- IF INSTANCES OCCUR WHERE HVAC DUCT IS SUSPENDED WITH HANGERS GREATER THAN 12" IN LENGTH AND HVAC DUCT HAS A CROSS-SECTIONAL AREA GREATER THAN 6 SQUARE FEET SYSTEM CONNECTORS AND COMPONENTS SHALL BE COMPATIBLE AND DESIGNED FOR THE APPLICATION THAT THEY ARE USED FOR. SHALL HAVE A MINIMUM OF TWO TRANSVERSE BRACES PER STRAIGHT DUCT RUN WITH A MAXIMUM DISTANCE OF 30' BETWEEN TRANSVERSE BRACES. SHALL HAVE A MINIMUM OF ONE LONGITUDINAL BRACE PER STRAIGHT DUCT RUN WITH A MAXIMUM DISTANCE OF 40' BETWEEN LONGITUDINAL BRACES. BRACING SHALL ONLY OCCUR AT OR NEAR AREAS WHERE SUFFICIENT DUCT STIFFNESS IS PRESENT (AT OR NEAR JOINT CONNECTIONS).

3. FOR SEISMIC BRACING OF MECHANICAL EQUIPMENT AN INDEPENDENT SEISMIC AND VIBRATION CONTROL SUBCONTRACTOR WITH EXPERIENCE, COMPUTING CAPABILITIES, AND MANUFACTURED PRODUCTS SHALL BE FURNISHED BY MECHANICAL CONTRACTOR. INDEPENDENT SEISMIC CONSULTANT SHALL PROVIDE REQUIRED COMPUTATIONS, SHOP DRAWINGS, AND MANUFACTURED PRODUCTS TO MEET THE MINIMUM REQUIREMENTS OF ASCE 7-22 AND INTERNATIONAL BUILDING CODES (LATEST ADOPTED EDITION) FOR THE RESPECTIVE SEISMIC DESIGN FOR SEISMIC ZONE WITH IMPORTANCE FACTOR 1.5. SEISMIC SUBCONTRACTOR SHALL EXERCISE THE QUALITY CONTROL FOR THIS WORK AND SHALL NOT BE LIMITED TO INSTRUCTIONS DIRECTED TO THE MECHANICAL CONTRACTOR. THE SEISMIC SUBCONTRACTOR SHALL CERTIFY IN WRITING THAT THEY HAVE INSPECTED THE INSTALLATION AND THAT ALL ISOLATION ANCHORS AND SEISMIC RESTRAINT MATERIALS ARE INSTALLED CORRECTLY AND FUNCTIONING PROPERLY. CERTIFICATION SHALL BE PROVIDED AFTER ALL CORRECTIVE WORK HAS BEEN COMPLETED.

DESIGN CONTACTS

PROJECT MANAGER	CHRIS FALSLEV
MECHANICAL ENGINEER:	MARK MAKIN
MECHANICAL DESIGNER:	JACE CRUMP

SHEET INDEX

SHEET NUMBER	SHEET TITLE
M0.1	MECHANICAL NOTES AND LEGENDS
M1.1	MAIN LEVEL MECHANICAL PLAN
M5.1	MECHANICAL DETAILS
M5.2	MECHANICAL DETAILS
M6.1	MECHANICAL SCHEDULES

MECHANICAL SYMBOLS

NOTES:

- ALL SYMBOLS MAY NOT BE USED.
- DOTTED SYMBOLS INDICATE EXISTING EQUIPMENT, ETC

SYMBOL	EXPLANATION
ø	ROUND MEASUREMENT
↻	RETURN AIR GRILLE/DUCT
↻	SUPPLY AIR DIFFUSER/DUCT
↻	EXHAUST AIR INTAKE GRILLE
↻	EXHAUST FAN
ⓧ-x	THERMOSTAT/SENSOR
ⓧ-x	SENSOR
ⓧ	MECHANICAL EQUIPMENT SYMBOL
ⓧ	KEYED NOTE REFERENCE
NECK CFM / SIZE CFM TAG	NECK: NECK AND BRANCH DUCT SIZE. CFM: CFM OF DIFFUSER OR GRILLE. TAG: DIFFUSER OR GRILLE CALL-OUT.
=====	SUPPLY AIR DUCTWORK
=====	RETURN AIR DUCTWORK
=====	EXHAUST AIR DUCTWORK
=====	OUTSIDE AIR DUCTWORK
R/D	RADIATION DAMPER
F/S	FIRE/SMOKE DAMPER
└┐	BALANCING DAMPER

SUBMITTALS:

- CONTRACTOR TO ALLOW 10 WORKING DAYS FOR SUBMITTAL TURNAROUND.
  - CONTRACTOR TO PROVIDE SUBMITTALS FOR ALL EQUIPMENT AND MATERIALS IN A SINGLE PACKAGE. PIECEMEAL SUBMITTALS WILL BE RETURNED WITH A NOTE TO REVISE AND RESUBMIT.
  - SUBMITTALS WILL BE CHECKED FOR COMPLIANCE WITH CAPACITY REQUIREMENTS AND ELECTRICAL REQUIREMENTS. CONTRACTOR TO VERIFY THAT WEIGHTS, DIMENSIONS, AND DUCT CONNECTIONS ON SUBMITTED EQUIPMENT IS CONSISTENT WITH SCHEDULED EQUIPMENT PRIOR TO SUBMITTAL. CHANGES IN SCOPE BROUGHT ABOUT BY SUBMITTED EQUIPMENT THAT DOES NOT COMPLY WITH THE WEIGHTS, DIMENSIONS, OR CONNECTION LOCATIONS ON SCHEDULED EQUIPMENT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
14. REFRIGERANT PIPING INSULATION.
- 14.1. INSULATE ALL REFRIGERANT SUCTION PIPING WITH 1/2" THICK FLEXIBLE FOAMED PLASTIC CLOSED CELL PIPE INSULATION.
- 14.2. INSULATION SHALL HAVE A "K" FACTOR OF NOT MORE THAN .26 AT 70°F AND A WATER VAPOR TRANSMISSION RATE OF 0.1 PERM-INCH OR LESS IN CONFORMANCE WITH ASTM C-177 & ASTM C-355 WATER METHOD.
- 14.3. WHEN INSULATION IS EXPOSED TO SUNLIGHT WRAP WITH POLYTAPE WITH ONE THIRD OVERLAP.
- 14.4. INSTALL INSULATION BY SLITTING TUBULAR SECTIONS AND APPLYING OVER PIPING.
- 14.5. PAINT ALL INSULATION AND/OR TAPE EXPOSED TO THE EXTERIOR WITH ULTRAVIOLET RESISTING PAINT.

SITE CONDITIONS

SITE:

CITY: OREM, UT  
ELEVATION: 4,780'

OUTDOOR CONDITIONS:

WINTER: HTG: 3° F  
SUMMER: CLG: 98° F

INDOOR CONDITIONS

WINTER: HTG: 75° F  
SUMMER: CLG: 72° F

IF TEMPERATURES SHOWN DO NOT MATCH CONDITIONS DESIRED FOR THIS PROJECT CONTACT THE ENGINEER OF RECORD.

PROJECT MECHANICAL NOTES:

- MECHANICAL CONTRACTOR TO PROVIDE AND INSTALL A 7-DAY PROGRAMMABLE THERMOSTAT FOR EACH NEW AIR HANDLER UNIT WITH BAS INTERFACE TO MATCH EXISTING BUILDING CONTROLS. VERIFY THERMOSTAT LOCATION WITH OWNER REPRESENTATIVE IN FIELD.
- FIELD VERIFY LOCATION OF ALL EXISTING MECHANICAL UNITS WITH GENERAL CONTRACTOR/OWNER REPRESENTATIVE.
- COORDINATE EXACT LOCATION IN FIELD OF ALL NEW MECHANICAL UNITS WITH GENERAL CONTRACTOR/OWNER REPRESENTATIVE
- PROVIDE AND INSTALL MANUAL CONTROL DAMPERS AT EACH BRANCH TAKE-OFF. EACH SUPPLY AIR GRILLE SHALL BE DOWNSTREAM FROM A CONTROL DAMPER FOR BALANCING AND ADJUSTMENT. SOME INSTALLATIONS MAY REQUIRE OPPOSED BLADE DAMPERS OR CONCEALED DAMPER REGULATORS THAT ARE REMOTELY ADJUSTED.
- MECHANICAL CONTRACTOR TO PROVIDE AND INSTALL SINGLE THICKNESS TURNING VANES AT EACH 90 DEGREE SQUARE DUCT ELBOW ON ALL NEW DUCTING.
- USING CFM NOTED ON PLANS INSTALL GRILLES AND DIFFUSERS WITH MAXIMUM NOISE CRITERIA (NC) OF 25 FOR ALL SPACES.
- DUCTWORK SIZING, ROUTING, AND LOCATION TO BE FIELD VERIFIED AND APPROVED FOR ANY CHANGES TO THE DUCT SIZING AND/OR ROUTING PRIOR TO DUCT FABRICATION AND INSTALLATION. DUCTWORK FABRICATED PRIOR TO FIELD VERIFICATION AND APPROVALS THAT NEEDS TO BE ALTERED WILL BE ALTERED AS NEEDED BY THE CONTRACTOR WITH NO ADDITIONAL COST TO THE OWNER.
- ANY NEW FRESH/OUTSIDE AIR INTAKES SHALL BE 10 FEET MIN. FROM ALL EXHAUST & PLUMBING VENTS.
- NEW RETURN AIR & SUPPLY AIR DUCTWORK IN UNCONDITIONED SPACES SHALL BE INSULATED PER APPLICABLE CODES.
- ALL NEW EQUIPMENT SHALL HAVE A FLEXIBLE CONNECTION FOR THE RETURN AIR & SUPPLY AIR DUCTWORK.
- BALANCE ALL NEW SYSTEMS TO CFM NOTED AT EACH DIFFUSER AND GRILLE BY AN INDEPENDENT BALANCING CONTRACTOR.
- HEATING LOADS COMPLETED USING CHVAC OR OTHER APPROVED CALCULATION METHODS.
- CEILING SPACE AVAILABLE TO MECHANICAL DUCTING AND EQUIPMENT IS LIMITED FOR THIS PROJECT. SEE ARCHITECTURAL CROSS SECTIONS FOR ANTICIPATED AVAILABLE SPACE. SEE ARCHITECTURAL AND STRUCTURAL PLANS FOR LOCATIONS OF STRUCTURAL BEAMS THAT MIGHT CONFLICT WITH THE SHOWN DUCT SIZING. DUCT DIMENSIONS REFLECT THE ANTICIPATED SPACE AVAILABLE BETWEEN THE BOTTOM OF TRUSS AND CEILING FRAMING. DUCTING IN CONFLICT AREAS WILL REQUIRE AN IN FIELD ADJUSTMENT. ONLY ADJUST SHOWN DUCT SIZES IN AREAS THAT CONFLICTS OCCUR. RE-SIZE SHOWN DUCT SIZES IN CONFLICT AREAS ACCORDING TO SHOWN CFM VALUES AND USE A .08 FRICTION LOSS.
- REFRIGERANT PIPING INSULATION.
- 14.1. INSULATE ALL REFRIGERANT SUCTION PIPING WITH 1/2" THICK FLEXIBLE FOAMED PLASTIC CLOSED CELL PIPE INSULATION.
- 14.2. INSULATION SHALL HAVE A "K" FACTOR OF NOT MORE THAN .26 AT 70°F AND A WATER VAPOR TRANSMISSION RATE OF 0.1 PERM-INCH OR LESS IN CONFORMANCE WITH ASTM C-177 & ASTM C-355 WATER METHOD.
- 14.3. WHEN INSULATION IS EXPOSED TO SUNLIGHT WRAP WITH POLYTAPE WITH ONE THIRD OVERLAP.
- 14.4. INSTALL INSULATION BY SLITTING TUBULAR SECTIONS AND APPLYING OVER PIPING.
- 14.5. PAINT ALL INSULATION AND/OR TAPE EXPOSED TO THE EXTERIOR WITH ULTRAVIOLET RESISTING PAINT.
- MECHANICAL CONTRACTOR SHALL CLEAN EXISTING DUCT SYSTEM AND GRILLES CONNECTED TO ALL EXISTING AIR HANDLER(S).
- PROVIDE AND INSTALL NEW FILTERS FOR EXISTING AIR HANDLER(S) AT THE COMPLETION OF THIS PROJECT.
- MECHANICAL CONTRACTOR SHALL TEST THE EXISTING AIR HANDLER(S) FOR PROPER OPERATION. INFORM THE GENERAL CONTRACTOR/OWNER REPRESENTATIVE OF ANY PROBLEMS OR CONCERNS.
- MECHANICAL CONTRACTOR SHALL RELOCATE EXISTING SUPPLY AIR & RETURN AIR DUCTING AND REGISTERS AS REQUIRED TO ACCOMMODATE NEW WALLS AND LIGHTING LAYOUT. EXTEND AND OR MODIFY DUCTWORK AS REQUIRED. COORDINATE WITH GENERAL CONTRACTOR/OWNER REPRESENTATIVE IN FIELD.
- MECHANICAL CONTRACTOR SHALL VISIT THE PROJECT SITE DURING THE BIDDING PROCESS.
- THE CEILING SPACE IN THIS PROJECT IS BEING USED AS A RETURN AIR PLENUM. ALL ITEMS PLACED IN THE CEILING SPACE SHALL BE RATED AND APPROVED FOR USE IN A RETURN AIR PLENUM.

ACCESS PANELS:

BAUCO PLUS II SERIES (NON-RATED ASSEMBLY)  
ACUDOR FW-5015 SERIES (RATED ASSEMBLY)  
(30"x60" MINIMUM ANTICIPATED)

ALL CEILING ACCESS PANELS IN COMMON AREAS BE A CONCEALED/TRIMLESS TYPE WITH NO VISIBLE FASTENERS

ENVELOPE TERMINATIONS (METAL -- PAINT MATCHED):  
ALL EXHAUST TERMINATION CAPS SHALL BE FAMCO FLUSH WALL METAL STYLE OR APPROVED EQUAL. COORDINATE WITH ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION



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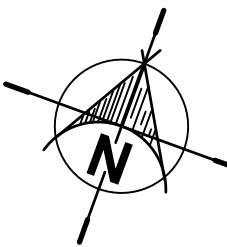
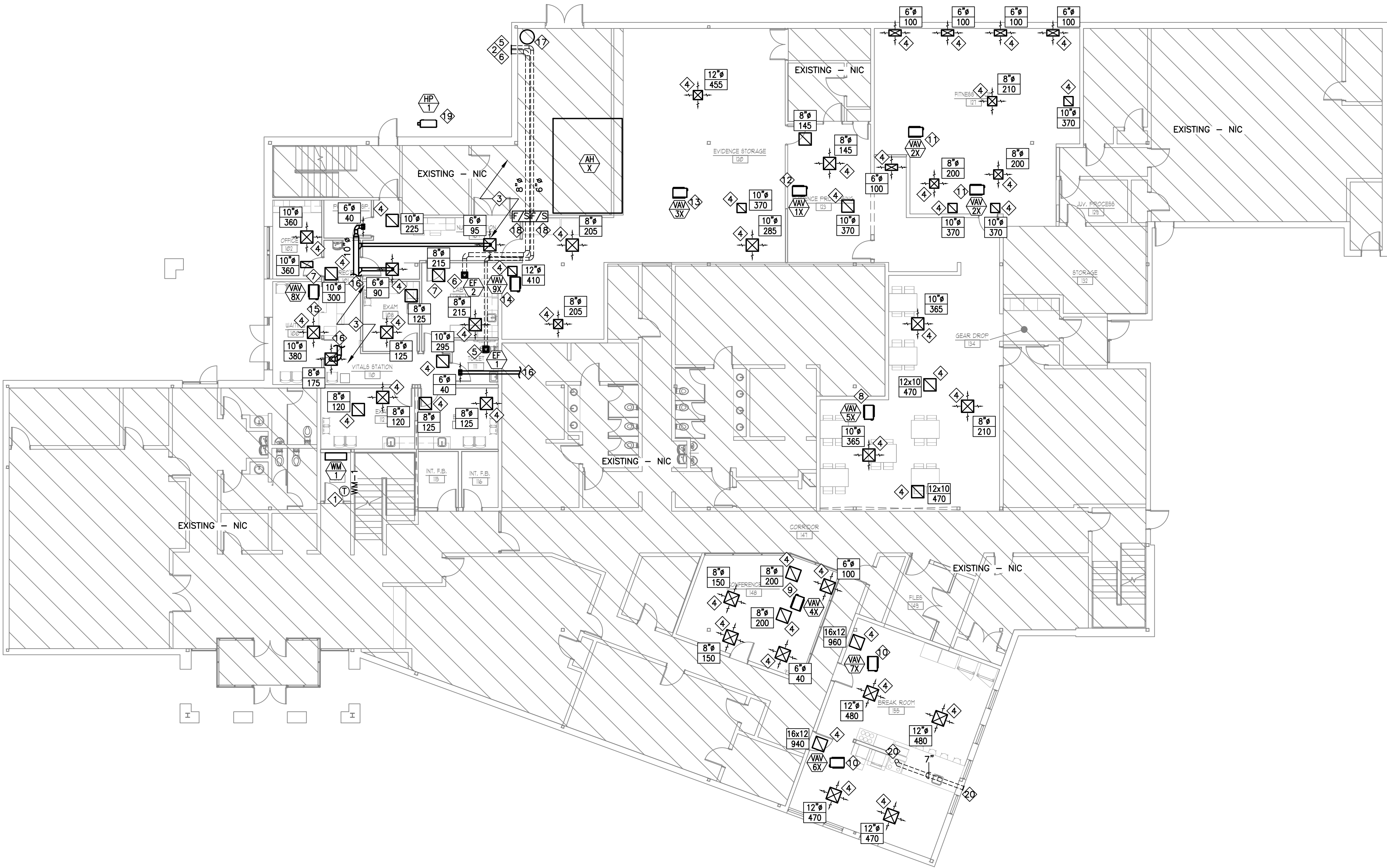
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drawing title  
MECHANICAL NOTES  
AND LEGENDS

M0.1





**MAIN LEVEL MECHANICAL PLAN**  
SCALE: 3/32" = 1'-0"

- MECHANICAL KEYED NOTES:**
- FIELD VERIFY 7-DAY PROGRAMMABLE THERMOSTAT LOCATION WITH OWNERS REPRESENTATIVE. INSTALL THERMOSTAT AT 48" A.F.F. SECURE T-STAT TO WALL TO PREVENT REMOVAL FROM ROOM SERVED.
  - ALL EXHAUST AIR DUCTING SHALL TERMINATE WITH A BACKDRAFT DAMPER AND MANUFACTURER/OWNERS REPRESENTATIVE RECOMMENDED TERMINATION GRILLE AT A MINIMUM OF 3 FEET FROM OPERABLE BUILDING OPENINGS AND 10' FROM MECHANICAL FRESH AIR INTAKES (IMC SECTION 501.3.1 #3).
  - DUCTING HAS BEEN SHOWN TO REFLECT INSTALLATION OF DUCTING TO BE WITHIN AN ARCHITECTURAL SOFFIT/DROP. COORDINATE SOFFIT/DROPS WITH ARCHITECTURAL DRAWINGS FOR FINAL LOCATIONS AND DIMENSIONS.
  - APPROXIMATE LOCATION OF GRILLE(S) TO REMAIN. DUCTING IS BE CLEANED AND REMAIN. REBALANCE GRILLES TO THE CFM LISTED ON PLANS.
  - PROVIDE AND INSTALL 6" ROUND EXHAUST DUCT TO OWNERS REPRESENTATIVE APPROVED EXHAUST VENT TERMINATION. VERIFY LOCATION IN FIELD. ACTUAL DUCT SIZE DETERMINED BY EXHAUST FAN OUTLET. EXHAUST TERMINATION SHALL BE 3' FROM ANY OPERABLE WINDOW/DOOR.
  - PROVIDE AND INSTALL 8" ROUND EXHAUST DUCT TO OWNERS REPRESENTATIVE APPROVED EXHAUST VENT TERMINATION. VERIFY LOCATION IN FIELD. ACTUAL DUCT SIZE DETERMINED BY EXHAUST FAN OUTLET. EXHAUST TERMINATION SHALL BE 3' FROM ANY OPERABLE WINDOW/DOOR.
  - PROVIDE AND INSTALL CEILING RETURN AIR GRILLE AND BOOT FOR PLENUM RETURN. GRILLE SHALL BE SIZED PER CFM NOTED WITH AN NC OF NO GREATER THAN 25. SEE PLENUM AIR BOOT DETAIL FOR MORE INFORMATION.
  - MINIMUM ZONE REQUIREMENT: 28,080 BTU/H OF COOLING AND 50,478 BTU/H OF HEATING. IF MECHANICAL EQUIPMENT IS NOT SUFFICIENT THEN IT IS REQUIRED TO UPSIZE VAV UNITS TO MINIMUM ZONE REQUIREMENT.
  - MINIMUM ZONE REQUIREMENT: 12,360 BTU/H OF COOLING AND 7,058 BTU/H OF HEATING. IF MECHANICAL EQUIPMENT IS NOT SUFFICIENT THEN IT IS REQUIRED TO UPSIZE VAV UNITS TO MINIMUM ZONE REQUIREMENT.
  - MINIMUM ZONE REQUIREMENT: 17,940 BTU/H OF COOLING AND 14,635 BTU/H OF HEATING. IF MECHANICAL EQUIPMENT IS NOT SUFFICIENT THEN IT IS REQUIRED TO UPSIZE VAV UNITS TO MINIMUM ZONE REQUIREMENT.
  - MINIMUM ZONE REQUIREMENT: 16,560 BTU/H OF COOLING AND 6,623 BTU/H OF HEATING. UPSIZE MECHANICAL EQUIPMENT TO MEET THE MINIMUM ZONE REQUIREMENT.
  - MINIMUM ZONE REQUIREMENT: 1,440 BTU/H OF COOLING AND 1,228 BTU/H OF HEATING. IF MECHANICAL EQUIPMENT IS NOT SUFFICIENT THEN IT IS REQUIRED TO UPSIZE VAV UNITS TO MINIMUM ZONE REQUIREMENT.
  - MINIMUM ZONE REQUIREMENT: 7,380 BTU/H OF COOLING AND 9,805 BTU/H OF HEATING. IF MECHANICAL EQUIPMENT IS NOT SUFFICIENT THEN IT IS REQUIRED TO UPSIZE VAV UNITS TO MINIMUM ZONE REQUIREMENT.
  - MINIMUM ZONE REQUIREMENT: 21,780 BTU/H OF COOLING AND 24,901 BTU/H OF HEATING. IF MECHANICAL EQUIPMENT IS NOT SUFFICIENT THEN IT IS REQUIRED TO UPSIZE VAV UNITS TO MINIMUM ZONE REQUIREMENT.
  - MINIMUM ZONE REQUIREMENT: 37,080 BTU/H OF COOLING AND 26,453 BTU/H OF HEATING. UPSIZE MECHANICAL EQUIPMENT TO MEET MINIMUM ZONE REQUIREMENT.
  - MAKE CONNECTION TO EXISTING SUPPLY AIR DUCTING IN THIS APPROXIMATE LOCATION.
  - APPROXIMATE LOCATION OF EXISTING NATURAL GAS WATER HEATER.
  - PROVIDE AND INSTALL FIRE-SMOKE DAMPER AT FIRE BARRIER PENETRATION. INSTALL PER MANUFACTURERS RECOMMENDATIONS.
  - ANTICIPATED LOCATION OF HEAT PUMP UNIT INSTALLED ON WALL BRACKET PER MANUFACTURERS RECOMMENDATIONS AS HIGH AS POSSIBLE (48" BELOW ROOF STRUCTURE MINIMUM ANTICIPATED). VERIFY CLEARANCES WITH MANUFACTURER INSTALLED.
  - PROVIDE AND INSTALL 7" OR 10"x4" KITCHEN HOOD EXHAUST DUCT TO OWNER'S REPRESENTATIVE APPROVED EXHAUST VENT TERMINATION. EXHAUST HOOD DESIGN GUIDE: GE-VVX SERIES (ADA UNITS) AND GE PROFILE SERIES - DUCTED EXHAUST. 300 CFM MAXIMUM EXHAUST AIRFLOW. VERIFY LOCATION AND ROUTING IN FIELD WITH HOOD INSTALLED AND STRUCTURE. ACTUAL DUCT SIZE DETERMINED BY EXHAUST HOOD OUTLET. COORDINATE FINISH WITH OWNER'S REPRESENTATIVE PRIOR TO ORDERING.
- GENERAL SHEET NOTES:**
- ALL DUCTING SHALL BE ROUTED BELOW THE FIRE BARRIER (IN DROPPED CEILING) OR BE CONSTRUCTED OF 26 GAUGE OR THICKER DUCTING PER 2021 IMC 607.6.1 (MUST MEET ALL EXCEPTIONS).

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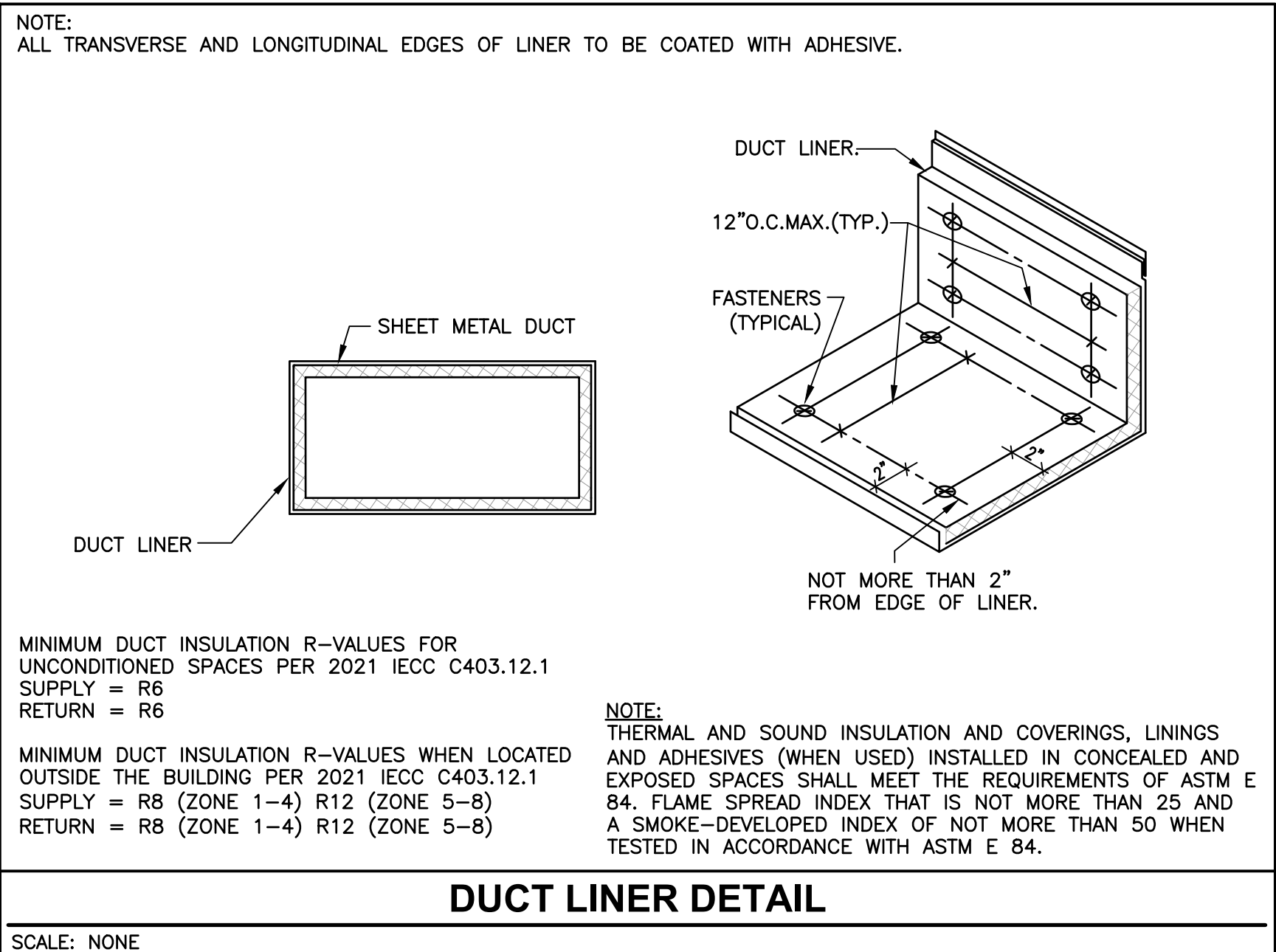
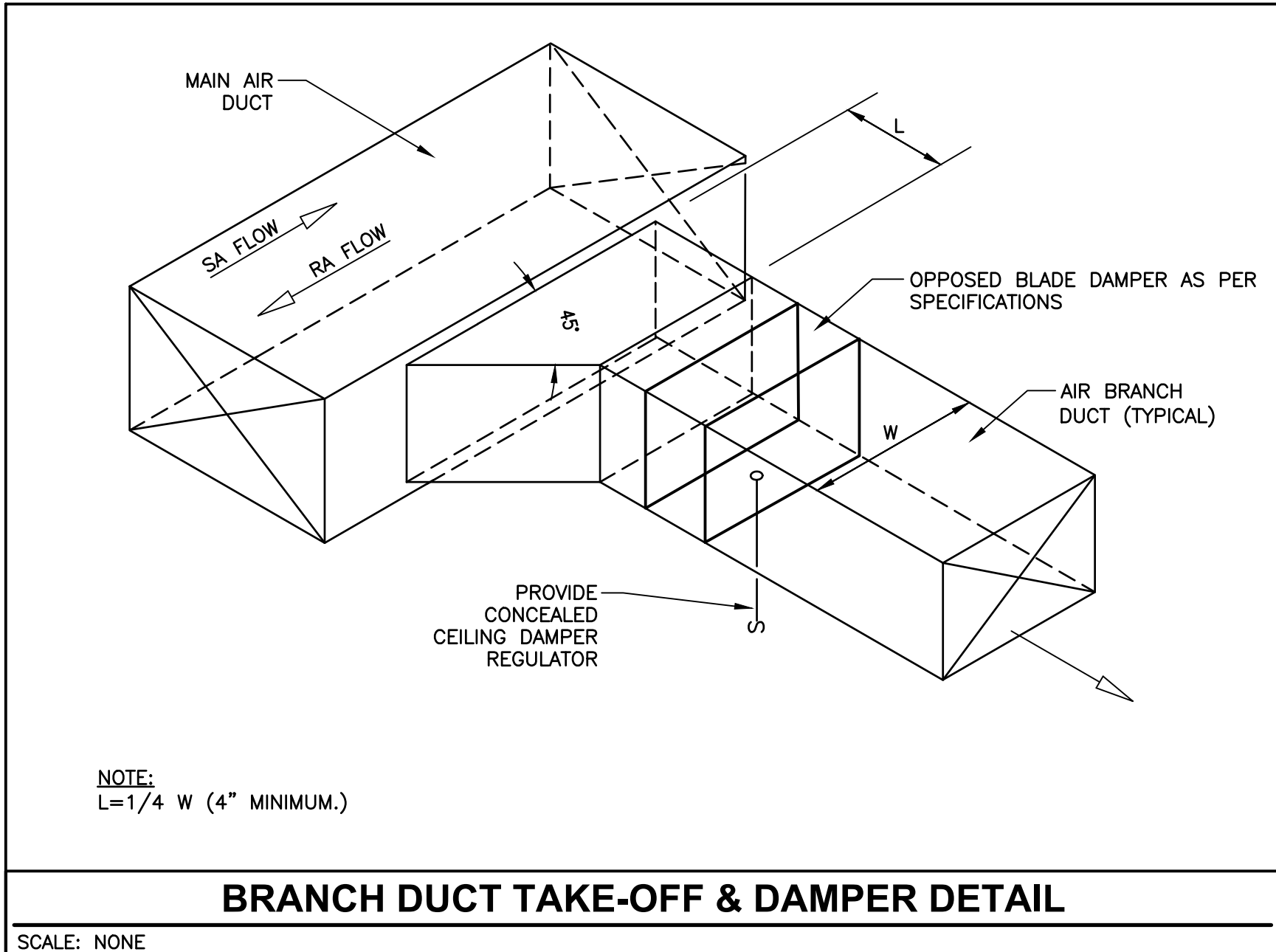
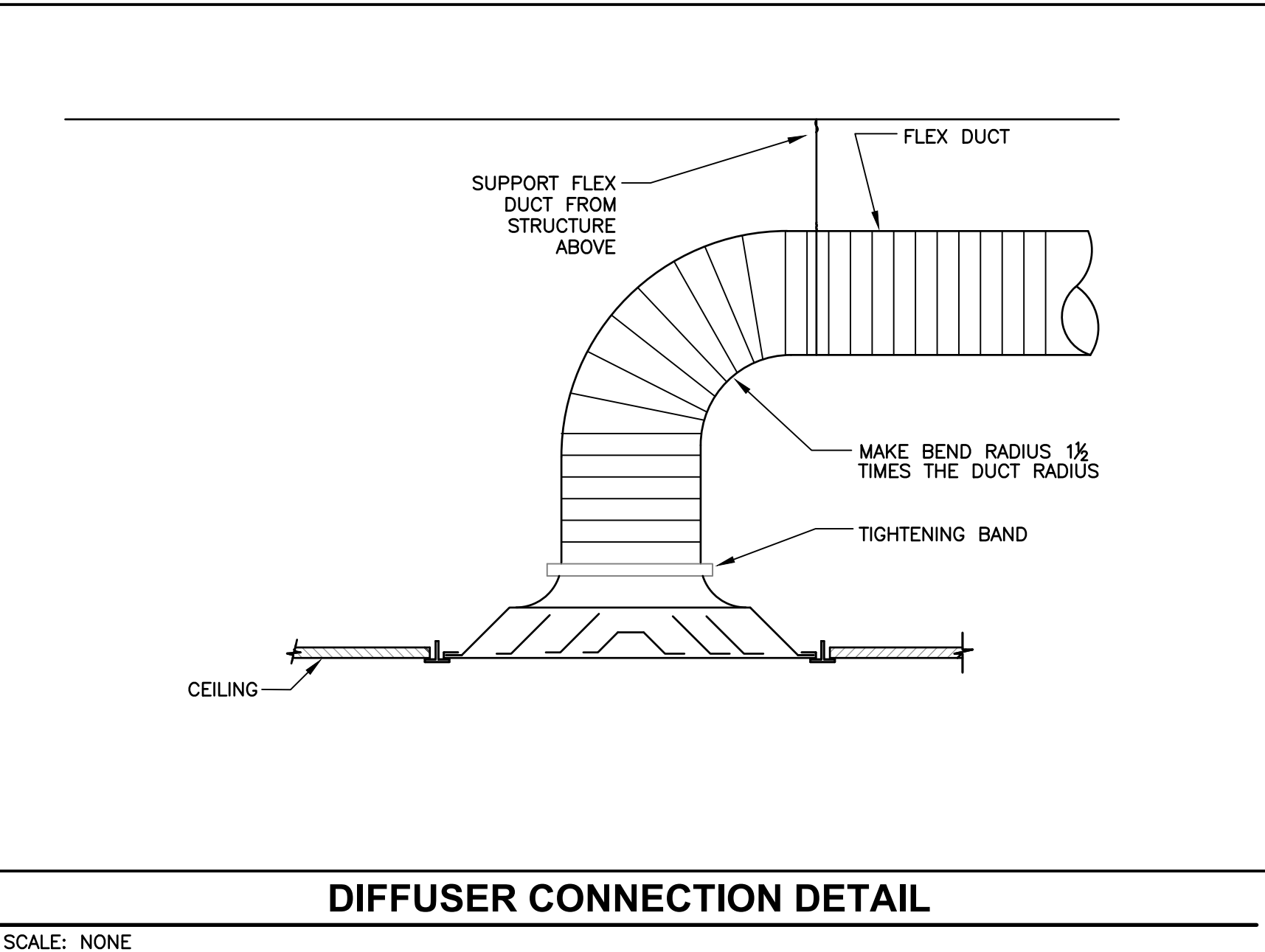
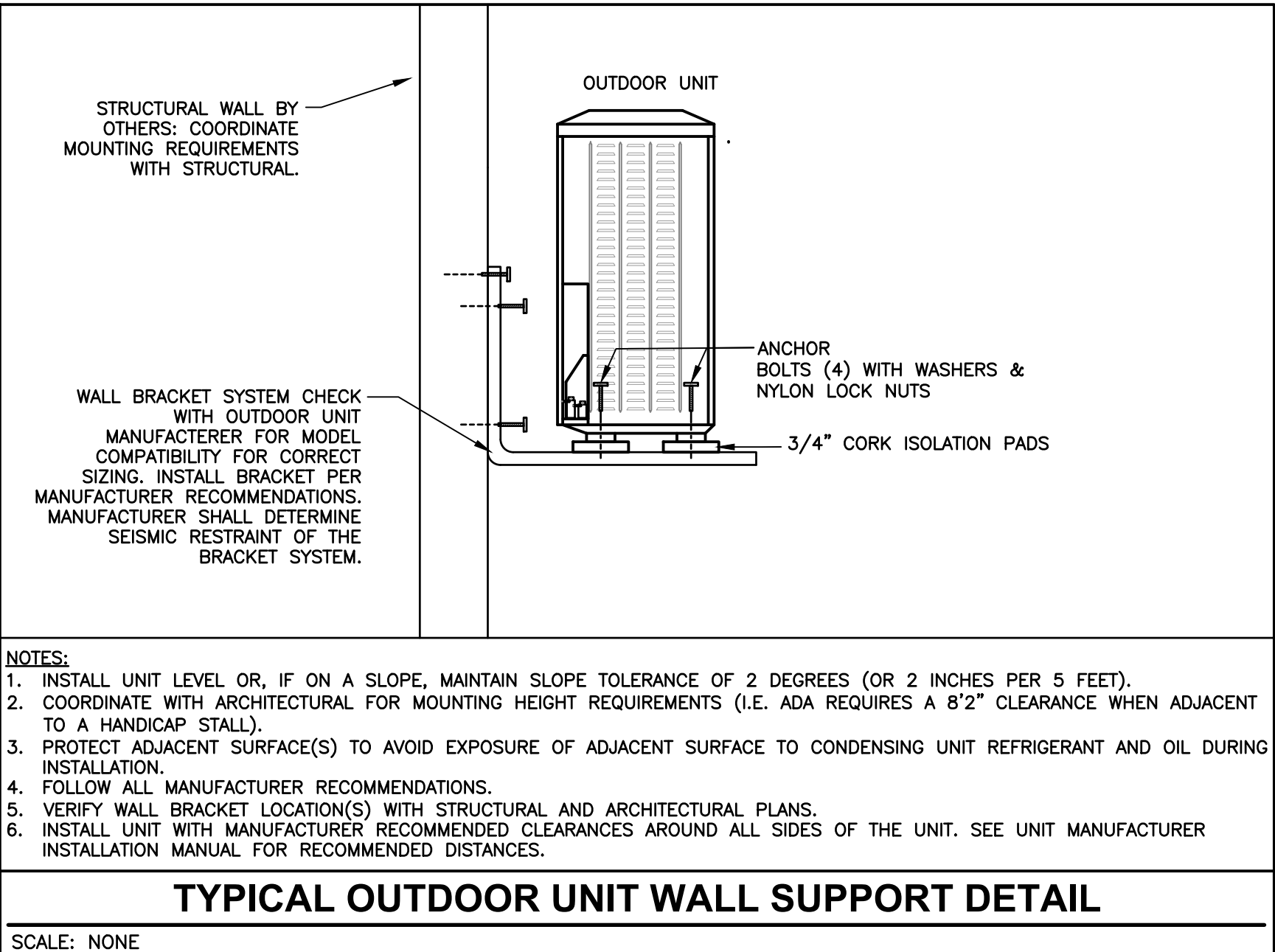
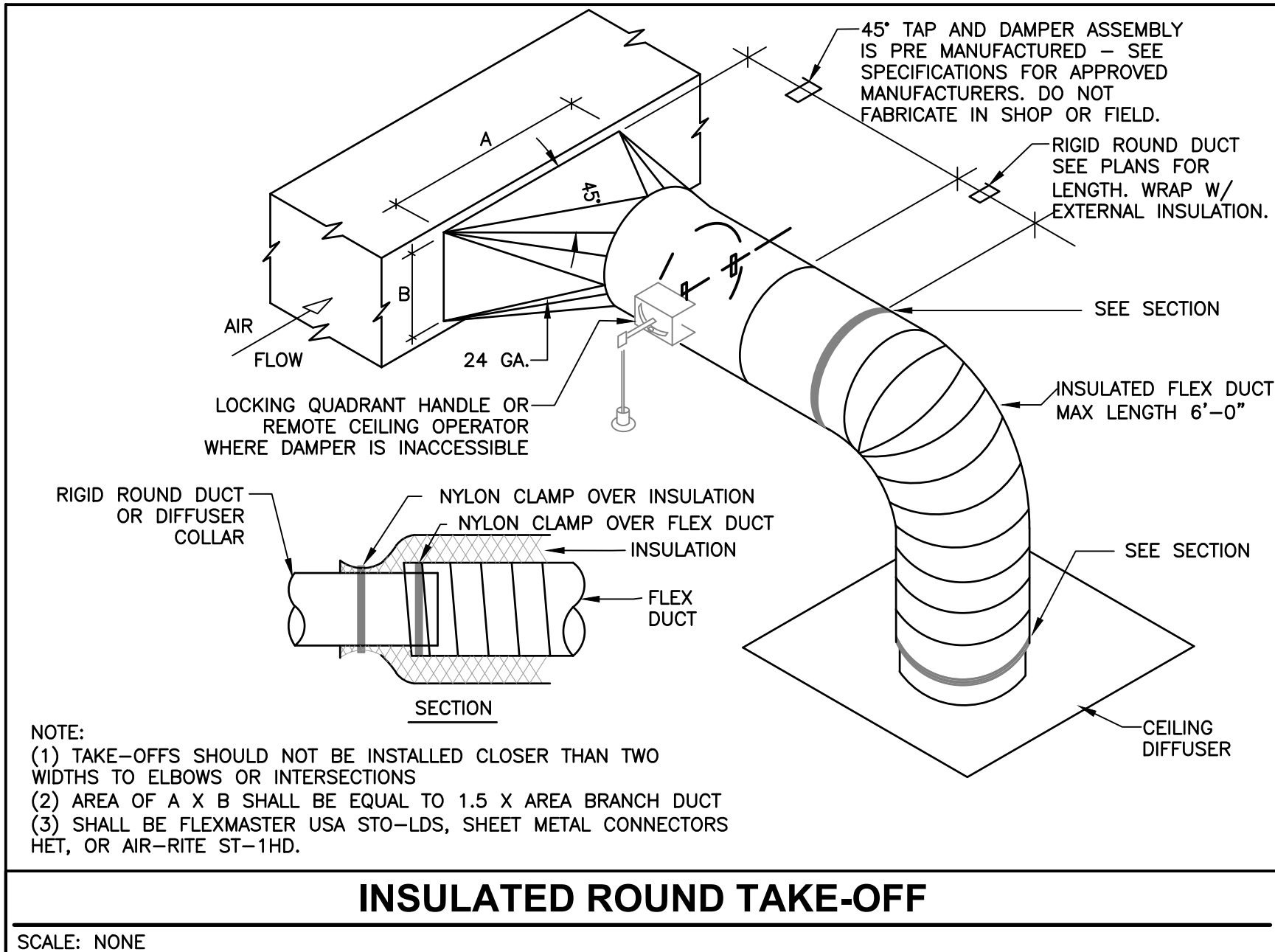
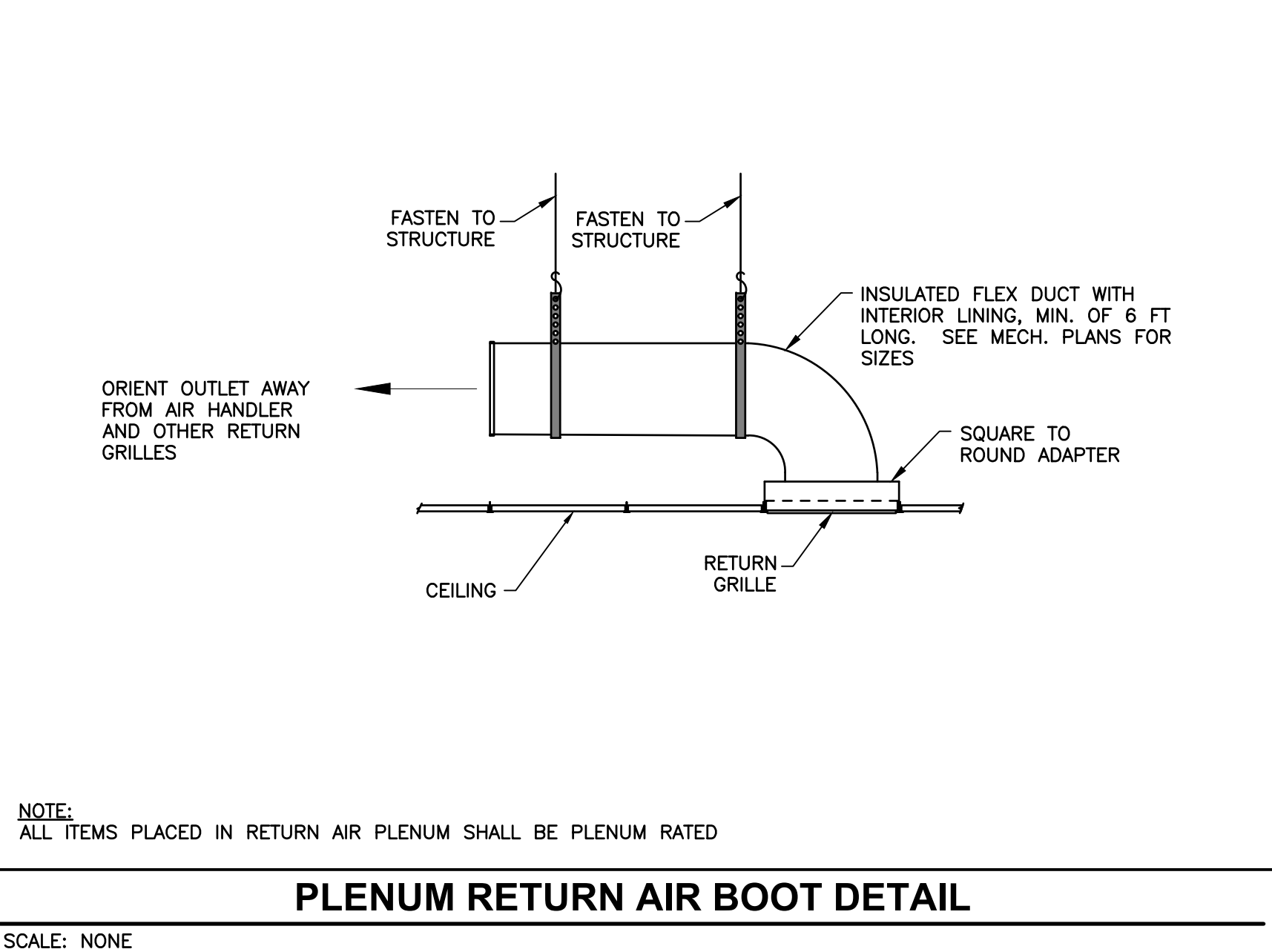
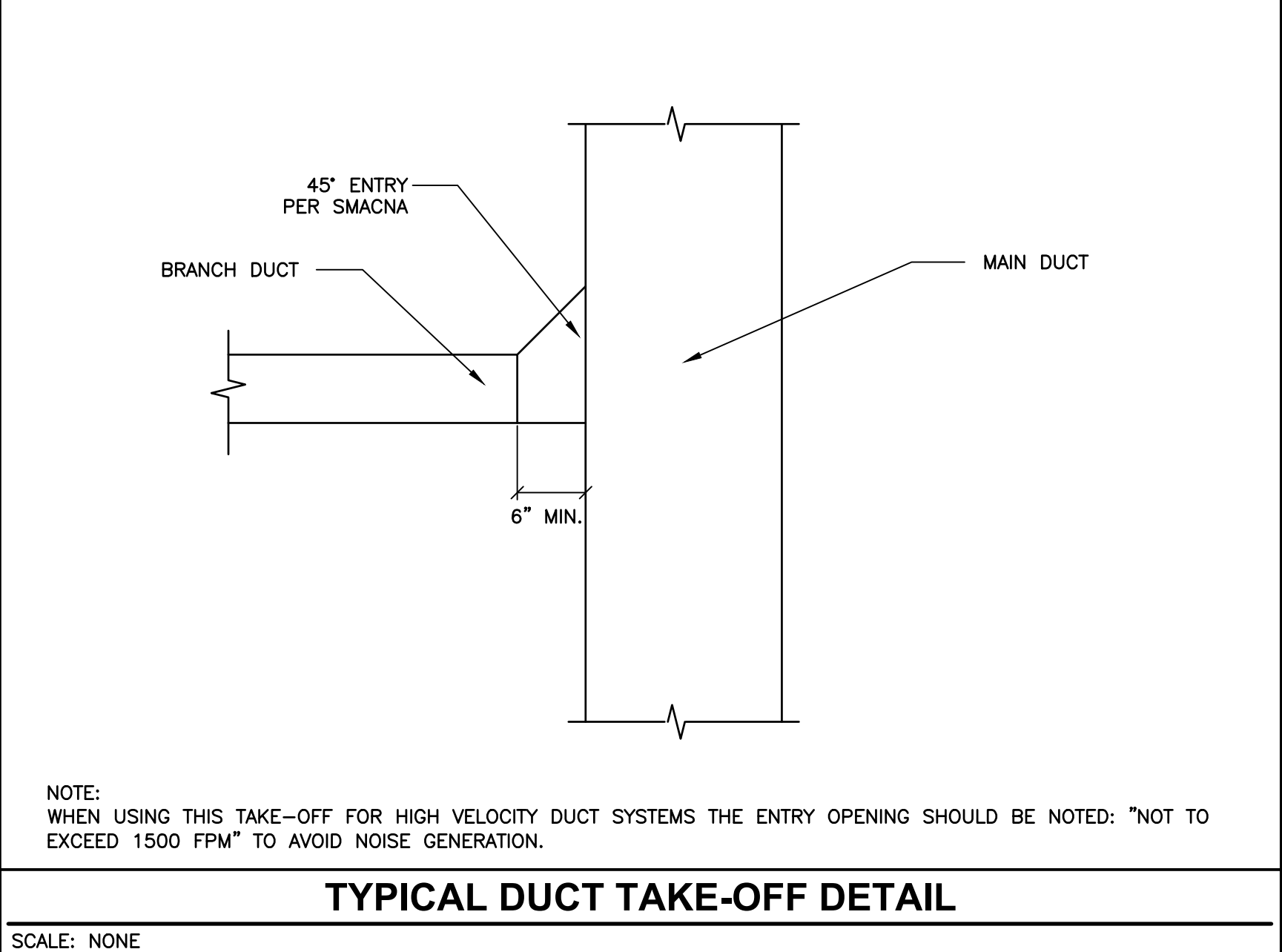
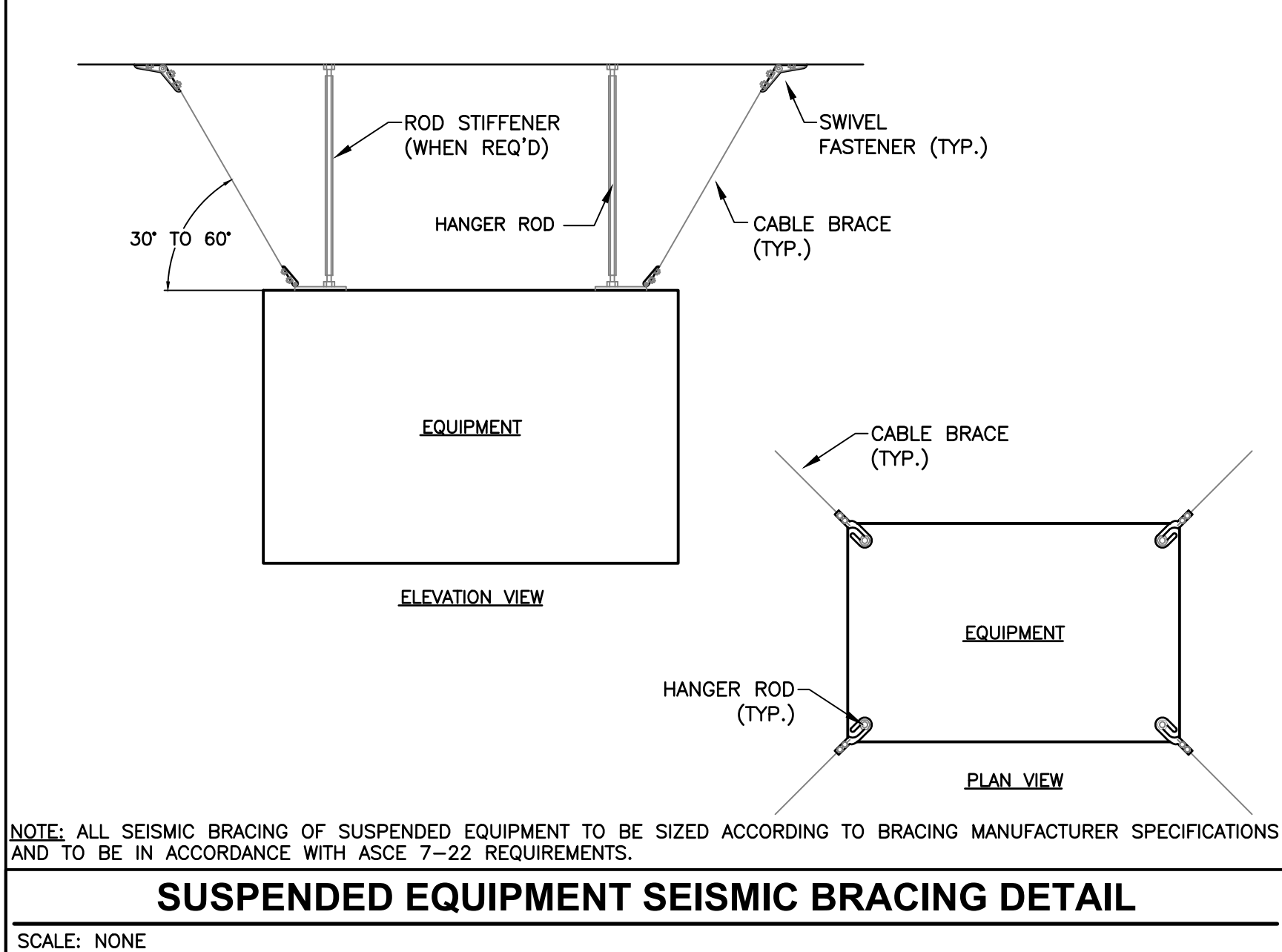
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**MAIN LEVEL  
MECHANICAL PLAN**

**M1.1**





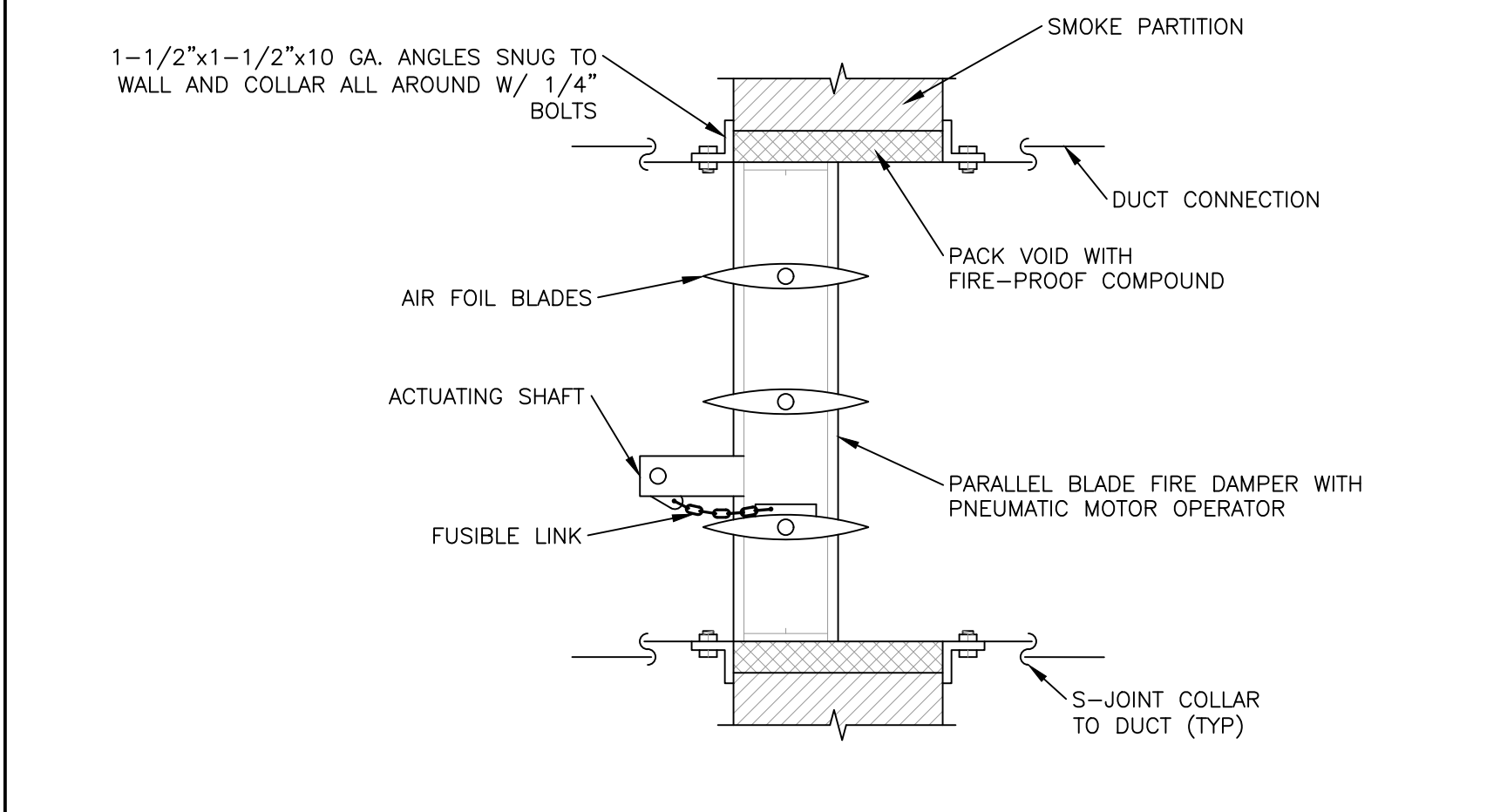
DIMENSION OF LONGEST SIDE, INCHES	SHEET METAL GAGE (ALL FOUR SIDES)	MINIMUM REINFORCING ANGLE SIZE AND MAXIMUM LONGITUDINAL SPACING BETWEEN TRANSVERSE JOINTS &/OR INTERMEDIATE REINFORCING	TRANSVERSE REINFORCING (1)				
			AT JOINTS				REINFORCED BAR SLIP
			MIN. H. IN.	DRIVE SLIP PLAIN S SLIP	HEMMED S SLIP	ALTER'NT BAR SLIP	
UP THRU 12	26	NONE REQUIRED	1	26	26	24	24
13 - 18	24	NONE REQUIRED	1	24	24	24	24
19 - 30	24	1"x1"x1/8" @ 60 IN	1	24	24	24	24
31 - 36	22	1"x1"x1/8" @ 60 IN	1	-	-	22	22

(1) TRANSVERSE REINFORCING SIZE IS DETERMINED BY DIMENSION OF SIDE TO WHICH ANGLE IS APPLIED.  
(2) LONGITUDINAL JOINTS TO BE PITTSBURG OR SNAP LOCK TYPE.  
(3) ALL DUCTING TO BE CONSTRUCTED TO SMACNA INSTALLATION STANDARDS AND SPECIFICATIONS.

**DUCT CONSTRUCTION DETAIL**

SCALE: NONE

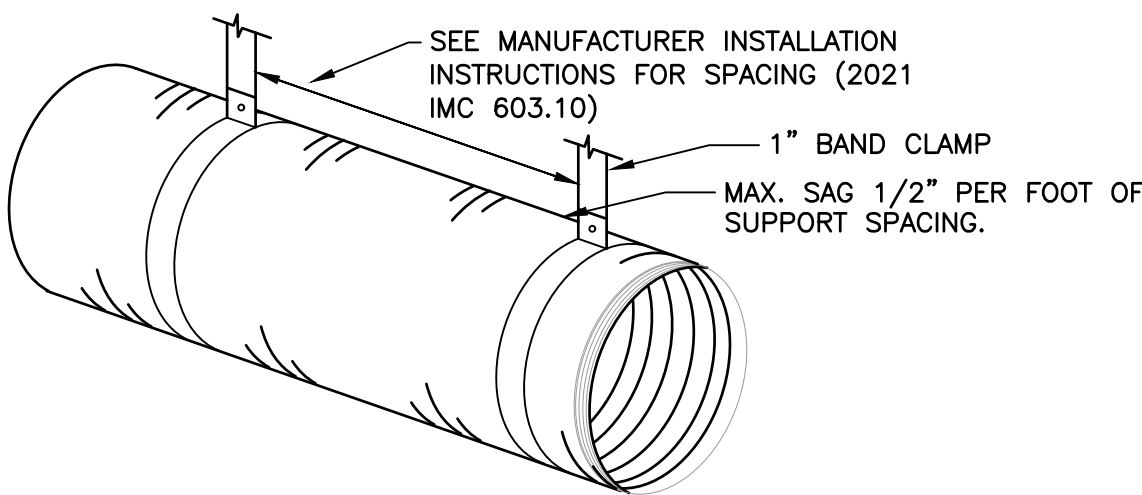




NOTES:  
1. SMOKE DAMPER SHALL BE FURNISHED WITH A 120 V-1PH OPERATOR. A SMOKE DETECTOR SHALL BE FURNISHED FOR EACH DAMPER SO THAT IF SMOKE IS DETECTED IN THE DUCTWORK, THE DAMPER WILL CLOSE. DETECTOR SHALL BE FURNISHED AND INSTALLED BY M.C., WIRED BY E.C. DETEDT. SHALL COMPLY W/NFPA-90A.  
2. DUCTWORK AND DAMPER SHALL EXPAND AT EACH DAMPER FOR 100% FREE AREA.  
3. DAMPER SHALL BE 1-1/2 HOUR RATED.

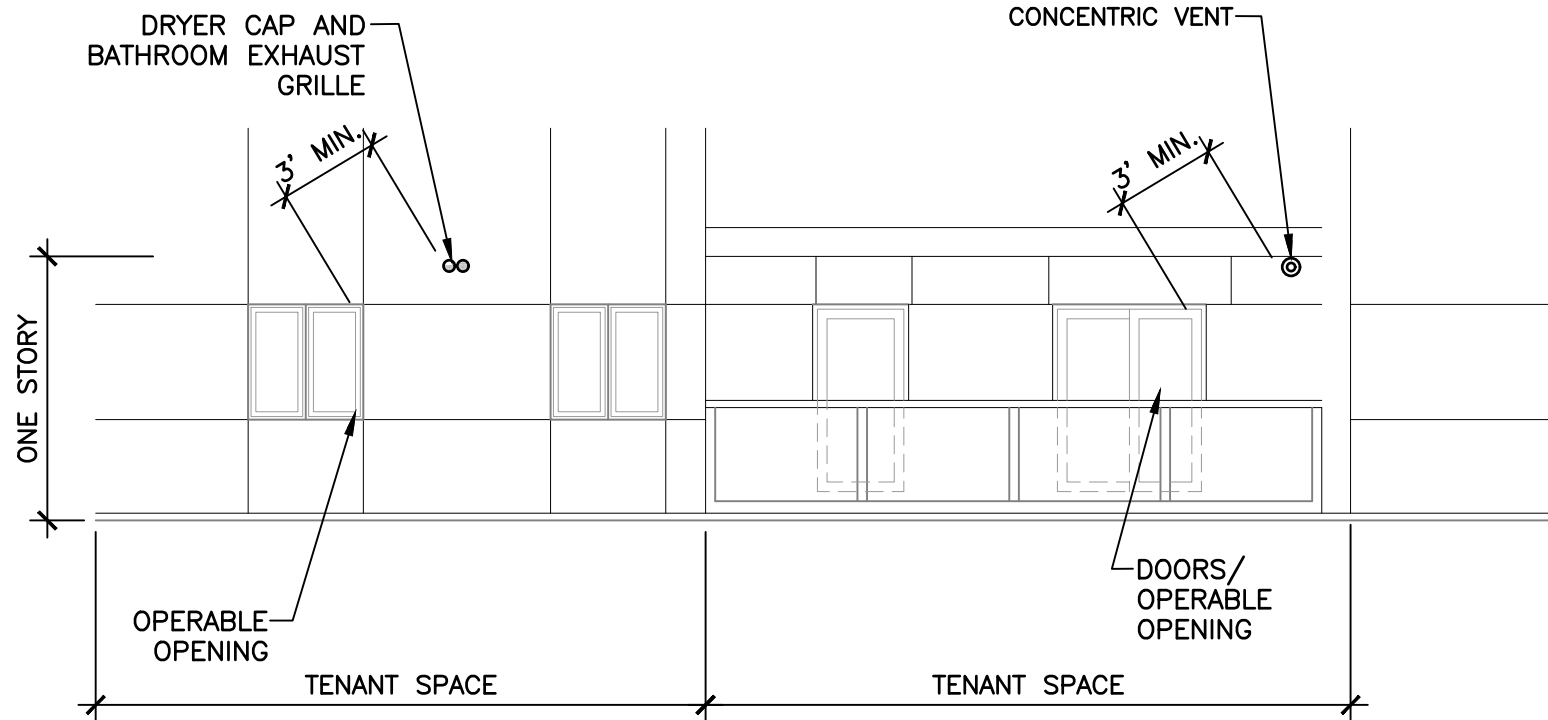
COMBINATION SMOKE/FIRE DAMPER DETAIL

SCALE: NONE



FLEXIBLE DUCT STRAP HANGER DETAIL

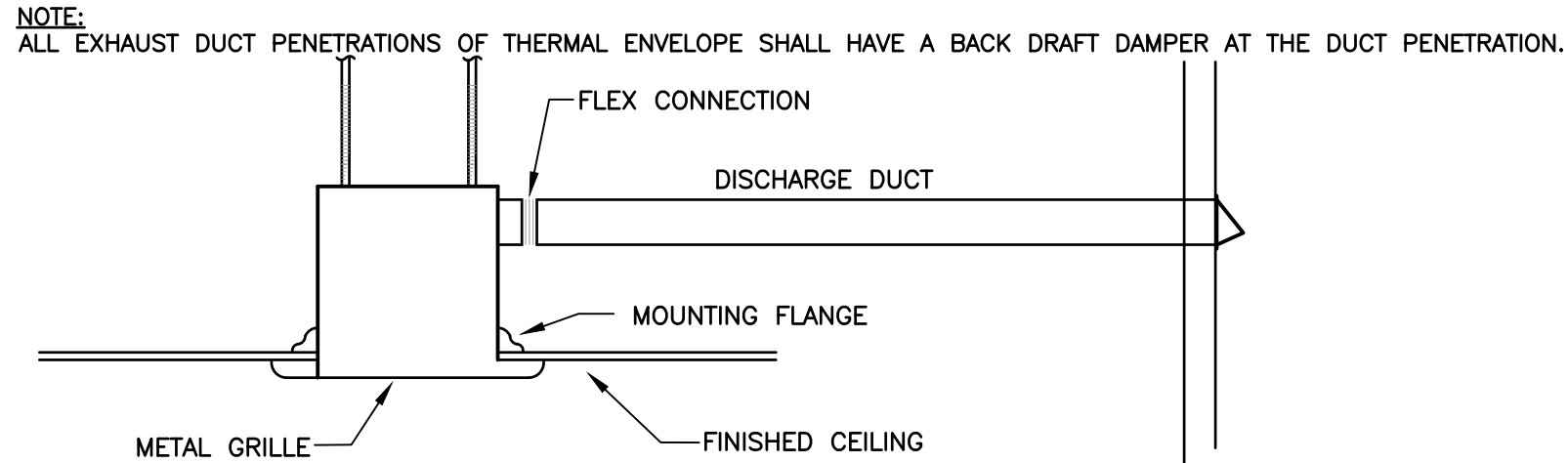
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NOTE: CLOTHES DRYER EXHAUST SHALL BE 3-FEET MINIMUM FROM COMBUSTION AIR INTAKES.

TYPICAL EXHAUST TERMINATION LOCATIONS DETAIL

SCALE: NONE



TYPICAL CEILING MOUNTED EXHAUST FAN

SCALE: NONE



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
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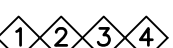







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









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
















EXISTING AIR HANDLER SCHEDULE								
MARK	DESIGN GUIDE	NOMINAL COOLING SUPPLY CFM	ESP (IN)	DELIVERED MINIMUM COOLING AT SITE CONDITIONS (BTU/H)	DELIVERED MINIMUM HEATING AT SITE CONDITIONS (BTU/H)	ELECTRICAL		REMARKS
						VOLT/PH/HZ	RATED LOAD HP	
 1	TRANE MCC SIZE 50	29,360	2.1	611,800	1,083,700	460/3/60	30	SEE NOTES
<div><div>FULL SERVICE AND A COMPONENT CHECK SHALL BE PERFORMED FOR EACH EXISTING AIR HANDLER. IT SHALL BE PERFORMED FOR A MINIMUM OF TWO HOURS (ON SITE) PER UNIT. THIS SHALL INCLUDE BUT IS NOT LIMITED TO:</div><div><div><div>A REFRIGERANT LEAK TEST</div><div>VERIFICATION OF REFRIGERANT CHARGE</div><div>A VISUAL INSPECTION OF COILS</div><div>REPLACEMENT OF ALL BELTS (IF APPLICABLE, LEAVE ONE SPARE OF EACH SIZE)</div><div>REPLACEMENT OF FILTERS</div><div>CHECKING ALL MOTORS AND FANS (INCLUDING THE CONDENSER FAN MOTOR)</div><div>CHECKING ALL CAPACITORS AND CONTACTORS</div><div>CHECKING THE FUNCTIONALITY OF ECONOMIZER (IF APPLICABLE)</div><div>CHECKING THERMOSTAT OPERATION AND CONTROL</div><div>VERIFICATION THAT ENTERING AND LEAVING AIR TEMPERATURE OF ALL STAGES OF COOLING AND HEATING ARE WITHIN SPECIFICATIONS</div><div>CLEANING OF EVAPORATOR COILS BY MANUFACTURER RECOMMENDED PROCEDURE</div><div>CHECKING ALL CONTROLS</div><div>CLEANING THE CONDENSATE PANS/DRAINS</div><div>CHECKING ACCESS AND MAINTENANCE DOOR HINGES AND LATCHES</div><div>VERIFY THAT UNIT IS CAPABLE OF BRINGING IN RESPECTIVE OUTSIDE AIR AMOUNTS INDICATED IN OUTSIDE AIR BALANCING SCHEDULE</div></div></div><div>TESTS SHOULD ONLY BE PERFORMED WHEN OUTSIDE AIR TEMPERATURE IS WITHIN RECOMMENDED RANGE. IT MAY BE NECESSARY TO PERFORM HEATING AND/OR COOLING TESTS ON A DIFFERENT DAY WHEN THE TEMPERATURE IS WITHIN THE ACCEPTABLE RANGE.</div></div>								

EXISTING HORIZONTAL FAN COIL UNIT SCHEDULE											
MARK	AIR FLOW (CFM)	STATIC PRESSURE (IN. W.C.)	EWT	LWT	EAT/LAT	GPM	WATER PRESSURE HEAD LOSS	ROWS	CONTROL VALVE	MAX NC	REMARKS
	275	0.3 MIN.	200°F	160°F	55°F/95°F	--	--	--	--	25	
	435	0.3 MIN.	200°F	160°F	55°F/95°F	--	--	--	--	25	
	575	0.3 MIN.	200°F	160°F	55°F/95°F	--	--	--	--	25	
	615	0.3 MIN.	200°F	160°F	55°F/95°F	--	--	--	--	25	
	855	0.3 MIN.	200°F	160°F	55°F/95°F	--	--	--	--	25	
	940	0.3 MIN.	200°F	160°F	55°F/95°F	--	--	--	--	25	
	960	0.3 MIN.	200°F	160°F	55°F/95°F	--	--	--	--	25	
	1,180	0.3 MIN.	200°F	160°F	55°F/95°F	--	--	--	--	25	
	1,225	0.3 MIN.	200°F	160°F	55°F/95°F	--	--	--	--	25	
<div><div> BASIS OF DESIGN: KRUEGER LMHS. APPROVED MANUFACTURERS: TITUS, PRICE. (SUBJECT TO PROJECT DOCUMENT CONFORMANCE)</div><div><div><div> FULL SERVICE AND A COMPONENT CHECK SHALL BE PERFORMED FOR EACH EXISTING ROOF TOP UNIT. IT SHALL BE PERFORMED FOR A MINIMUM OF TWO HOURS (ON SITE) PER UNIT. THIS SHALL INCLUDE BUT IS NOT LIMITED TO:</div><div><div><div>A PIPING LEAK TEST</div><div>A VISUAL INSPECTION OF COILS</div><div>REPLACEMENT OF ALL BELTS (IF APPLICABLE, LEAVE ONE SPARE OF EACH SIZE)</div><div>REPLACEMENT OF FILTERS</div><div>CHECKING ALL MOTORS AND FANS</div><div>CHECKING ALL CAPACITORS AND CONTACTORS</div><div>CHECKING THERMOSTAT OPERATION AND CONTROL</div><div>VERIFICATION THAT ENTERING AND LEAVING AIR TEMPERATURE OF ALL STAGES OF COOLING AND HEATING ARE WITHIN SPECIFICATIONS</div><div>CLEANING OF COILS BY MANUFACTURER RECOMMENDED PROCEDURE</div><div>CHECKING ALL CONTROLS</div><div>CLEANING THE CONDENSATE PANS/DRAINS</div><div>CHECKING ACCESS AND MAINTENANCE DOOR HINGES AND LATCHES</div><div>VERIFY THAT UNIT IS CAPABLE OF BRINGING IN RESPECTIVE OUTSIDE AIR AMOUNTS INDICATED IN OUTSIDE AIR BALANCING SCHEDULE</div></div></div><div>TESTS SHOULD ONLY BE PERFORMED WHEN OUTSIDE AIR TEMPERATURE IS WITHIN RECOMMENDED RANGE. IT MAY BE NECESSARY TO PERFORM HEATING AND/OR COOLING TESTS ON A DIFFERENT DAY WHEN THE TEMPERATURE IS WITHIN THE ACCEPTABLE RANGE.</div></div></div><div><div> ACOUSTICALLY LINE DUCTING FOR A MINIMUM OF 10' DOWNSTREAM FROM UNIT.</div></div></div>											

CEILING EXHAUST FAN SCHEDULE									
MARK	NOMINAL CFM	TOTAL STATIC PRESSURE IN. W.C.	ELECTRICAL				SOUND RATING SONES	SELECTION BASED ON GREENHECK MODEL	REMARKS
			RATED LOAD WATTS	VOLTS	HERTZ	PHASE			
 1	75	0.25	14.3	115	60	1	0.9	SP-A110	
 2	150	0.25	16.6	115	60	1	2.0	SP-A390 -VG	
<div><div> APPROVED MANUFACTURERS: BROAN, FANTECH, ACME, CARNES, PENN, COOK, BREIDERT, COOLAIR, CAPTIVE AIRE, S&amp;P, GREENHECK, TWIN CITY FAN, DELTA BREEZ, AIR KING. (SUBJECT TO PROJECT DOCUMENT CONFORMANCE)</div><div> CONTROL WITH LIGHTS BY ELECTRICAL CONTRACTOR.</div><div> EXHAUST FAN SHALL HAVE INTEGRAL BACKDRAFT DAMPER.</div><div> WITH METAL GRILLE KIT.</div><div> CONTROL BY ELECTRICAL CONTRACTOR WITH SEPARATE CONTROL SWITCH.</div></div>									

FAN COIL SCHEDULE - INDOOR UNIT									
MARK	DESIGN GUIDE	NOMINAL COOLING SUPPLY CFM	ESP (IN)	DELIVERED MINIMUM COOLING AT SITE CONDITIONS (BTU/H)	DELIVERED MINIMUM HEATING AT SITE CONDITIONS (BTU/H)	ELECTRICAL			REMARKS
						VOLT/PH/HZ	UNIT MCA	UNIT MOCP	
 1	MITSUBISHI PKA-A12 SERIES	385	0.6	12,000	10,600	208/1/60	1.0	15	
<div><div> SITE CONDITIONS ARE 98/62° DB/WB SUMMER, 3°F DB WINTER, AND AN ELEVATION OF 4,250 FEET ABOVE SEA LEVEL.</div><div> APPROVED MANUFACTURERS: CARRIER, TRANE, LENNOX, SAMSUNG, MITSUBISHI, DAIKIN. (SUBJECT TO DOCUMENT CONFORMANCE).</div><div> MECHANICAL CONTRACTOR TO PROVIDE AND INSTALL SYSTEMS FOR COLD WEATHER HEATING PER MANUFACTURER RECOMMENDATIONS.</div><div> SEE HEAT PUMP UNIT SCHEDULE FOR OUTDOOR UNIT INFORMATION.</div><div> ELECTRICAL CONTRACTOR SHALL PROVIDE CONNECTION BETWEEN INDOOR AND OUTDOOR UNIT (INDOOR UNIT POWERED BY OUTDOOR UNIT).</div><div> MECHANICAL CONTRACTOR TO PROVIDE AND INSTALL ALL MANUFACTURER RECOMMENDED MOUNTING HARDWARE.</div><div> MECHANICAL CONTRACTOR TO PROVIDE AND INSTALL CONDENSATE PIPING TO PLUMBING CONTRACTOR PROVIDED WALL BOX.</div><div> MECHANICAL CONTRACTOR TO PROVIDE AND INSTALL PAC-US444CN-1 THERMOSTAT ADAPTER.</div></div>									

SINGLE ZONE HEAT PUMP UNIT SCHEDULE - OUTDOOR UNIT							
MARK	TONNAGE	RATED COOLING CAPACITY (BTU/H)	HEATING CAPACITY @ 5°F (BTU/H)	ELECTRICAL			NOTES
				VOLTAGE	MCA	MOCP	
 1	1	12,000	10,600	208/230V 1-PHASE 60 Hz	11	28	MAX OPERATING WEIGHT: 175 LBS. MINIMUM EFFICIENCY: 21.3 SEER2/10.2 HSPF2 
<div><div> APPROVED MANUFACTURERS: TRANE, CARRIER, DAIKIN, SAMSUNG, FUJITSU, MITSUBISHI, LENNOX. (SUBJECT TO PROJECT DOCUMENT CONFORMANCE).</div><div> INSTALL PER MANUFACTURER RECOMMENDATIONS.</div><div> PROVIDE SNOW STAND AND WIND BAFFLES, AND LOW AMBIENT KIT FOR OPERATION TO 0°F.</div><div> PROVIDE REFRIGERANT PIPING PER MANUFACTURERS RECOMMENDATIONS. DESIGN GUIDE MITSUBISHI SUZ SERIES.</div></div>							

OUTSIDE AIR BALANCING SCHEDULE				
MARK	ZONE / AREA	BALANCE TO CFM	MINIMUM DUCT SIZE	REMARKS
 1X	EVIDENCE STORAGE CLOSET	15	--	VIA EXISTING AIR HANDLER OUTSIDE AIR SYSTEM.
 2X	FITNESS ROOM	125 (X2)	--	VIA EXISTING AIR HANDLER OUTSIDE AIR SYSTEM.
 3X	EVIDENCE STORAGE	90	--	VIA EXISTING AIR HANDLER OUTSIDE AIR SYSTEM.
 4X	CONFERENCE ROOM	110	--	VIA EXISTING AIR HANDLER OUTSIDE AIR SYSTEM.
 5X	SEATING AREA	325	--	VIA EXISTING AIR HANDLER OUTSIDE AIR SYSTEM.
 6X	BREAK ROOM	90	--	VIA EXISTING AIR HANDLER OUTSIDE AIR SYSTEM.
 7X	BREAK ROOM	90	--	VIA EXISTING AIR HANDLER OUTSIDE AIR SYSTEM.
 8X	RECEPTION/EXAM AREA	200	--	VIA EXISTING AIR HANDLER OUTSIDE AIR SYSTEM.
 9X	EVIDENCE STORAGE/EXAM AREA	250	--	VIA EXISTING AIR HANDLER OUTSIDE AIR SYSTEM.



PIPING SEISMIC SUPPORT NOTES:

1. PER ASCE STANDARD 7-22 SEISMIC SUPPORTS ARE NOT REQUIRED FOR THE FOLLOWING CONDITION:
- 1.1. PIPING IS SUPPORTED BY ROD HANGERS 12" OR LESS IN LENGTH FROM THE TOP OF THE PIPE TO THE SUPPORTING STRUCTURE.
- 1.2. HIGH-DEFORMABILITY PIPING IS USED.
2. IF INSTANCES OCCUR WHERE PIPING IS SUSPENDED BY HANGERS GREATER THAN 12" IN LENGTH, SYSTEM CONNECTORS AND COMPONENTS SHALL BE COMPATIBLE AND DESIGNED FOR THE APPLICATION THAT THEY ARE USED FOR. SHALL HAVE A MINIMUM OF TWO TRANSVERSE BRACES PER STRAIGHT PIPING RUN. THE MAXIMUM DISTANCE BETWEEN TRANSVERSE BRACES WILL BE DETERMINED BY PIPE SIZE AND PIPING COMPOSITION. SHALL HAVE A MINIMUM OF ONE LONGITUDINAL BRACE PER STRAIGHT DUCT RUN. IF LENGTH OF PIPING EXCEEDS LONGITUDINAL BRACE SPACING, ADDITIONAL LONGITUDINAL BRACES WILL BE REQUIRED.
3. FOR SEISMIC BRACING OF PLUMBING EQUIPMENT AND PIPING AN INDEPENDENT SEISMIC AND VIBRATION CONTROL SUBCONTRACTOR WITH EXPERIENCE, COMPUTING CAPABILITIES, AND MANUFACTURED PRODUCTS SHALL BE FURNISHED BY PLUMBING CONTRACTOR. INDEPENDENT SEISMIC CONSULTANT SHALL PROVIDE REQUIRED COMPUTATIONS, SHOP DRAWINGS, AND MANUFACTURED PRODUCTS TO MEET THE MINIMUM REQUIREMENTS OF ASCE 7-22 AND INTERNATIONAL BUILDING CODES (LATEST ADOPTED EDITION) FOR THE RESPECTIVE SEISMIC DESIGN FOR SEISMIC ZONE WITH IMPORTANCE FACTOR 1.5. SEISMIC SUBCONTRACTOR SHALL EXERCISE THE QUALITY CONTROL FOR THIS WORK AND SHALL NOT BE LIMITED TO INSTRUCTIONS DIRECTED TO THE PLUMBING CONTRACTOR. THE SEISMIC SUBCONTRACTOR SHALL CERTIFY IN WRITING THAT THEY HAVE INSPECTED THE INSTALLATION AND THAT ALL ISOLATION ANCHORS AND SEISMIC RESTRAINT MATERIALS ARE INSTALLED CORRECTLY AND FUNCTIONING PROPERLY. CERTIFICATION SHALL BE PROVIDED AFTER ALL CORRECTIVE WORK HAS BEEN COMPLETED

SUBMITTAL NOTES:

1. CONTRACTOR TO ALLOW 10 WORKING DAYS FOR SUBMITTAL TURNAROUND.
2. CONTRACTOR TO PROVIDE SUBMITTALS FOR ALL EQUIPMENT AND MATERIALS IN A SINGLE PACKAGE. PIECEMEAL SUBMITTALS WILL BE RETURNED WITH A NOTE TO REVISE AND RESUBMIT.
3. SUBMITTALS WILL BE CHECKED FOR COMPLIANCE WITH CAPACITY REQUIREMENTS AND ELECTRICAL REQUIREMENTS. CONTRACTOR TO VERIFY THAT WEIGHTS, DIMENSIONS, AND DUCT CONNECTIONS ON SUBMITTED EQUIPMENT IS CONSISTENT WITH SCHEDULED EQUIPMENT PRIOR TO SUBMITTAL. CHANGES IN SCOPE BROUGHT ABOUT BY SUBMITTED EQUIPMENT THAT DOES NOT COMPLY WITH THE WEIGHTS, DIMENSIONS, OR CONNECTION LOCATIONS ON SCHEDULED EQUIPMENT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

PLUMBING SYMBOLS

NOTES:  
1. ALL SYMBOLS MAY NOT BE USED.  
2. DOTTED SYMBOLS INDICATE EXISTING EQUIPMENT, ETC

	SANITARY OR WASTE PIPING
	VENT PIPING
	COLD WATER PIPING
	HOT WATER PIPING
	GAS PIPING
	STORM DRAIN PIPING
	ROOF DRAIN PIPING
	OVERFLOW ROOF DRAIN PIPING
	GREASE PIPING
	RECIRCULATION WATER PIPING
	PIPE RISER OR FIXTURE CONNECTION
	WALL HYDRANT/HOSE BIB
	FLOOR DRAIN
	AREA DRAIN
	ROOF DRAIN
	ROUND MEASUREMENT.
	PLUMBING FIXTURE SYMBOL
	MECHANICAL EQUIPMENT SYMBOL
	KEYED NOTE REFERENCE
	PRESSURE REDUCING VALVE STATION
	GATE VALVE & BACKFLOW PREVENTOR

DESIGN CONTACTS

PROJECT MANAGER	CHRIS FALSLEV
MECHANICAL ENGINEER:	MARK MAKIN
PLUMBING DESIGNER:	JACE CRUMP

SHEET INDEX

SHEET NUMBER	SHEET TITLE
P0.1	PLUMBING NOTES AND LEGENDS
P1.1	MAIN LEVEL PLUMBING PLAN
P5.1	PLUMBING DETAILS
P5.2	PLUMBING DETAILS
P6.1	PLUMBING SCHEDULES AND SCHEMATICS

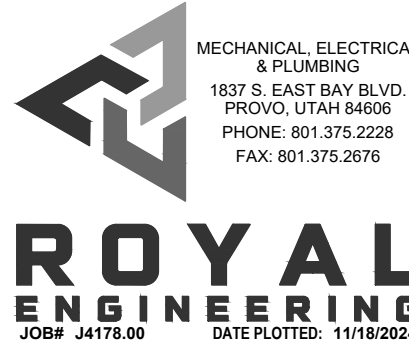
PROJECT PLUMBING NOTES:

1. PIPING SCHEMATIC(S) FOR ADDITIONAL INFORMATION ON WASTE & VENT, GAS AND CULINARY WATER PIPING DIAMETERS.
2. COORDINATE ALL WORK WITH OTHER TRADES AS REQUIRED. CONCEAL ALL PIPING IN FINISHED AREAS.
3. PROVIDE AND INSTALL ALL REQUIRED VALVES IN PIPING SYSTEM. REMOVE OR RELOCATE ANY EXISTING PLUMBING FIXTURES & ASSOCIATED PIPING IN CONFLICT WITH THIS PLUMBING PLAN. COORDINATE ALL REQUIREMENTS WITH OWNER REPRESENTATIVE. EXTEND OR REMOVE & TERMINATE ANY PIPING AS REQUIRED. MAINTAIN FUNCTIONALITY OF ALL DOWN-LINE FIXTURES. RETURN ANY REMOVED FIXTURES & PIPING TO OWNER REPRESENTATIVE OR DISPOSE OF FIXTURES AND PIPING AS DIRECTED BY OWNER REPRESENTATIVE. VERIFY ALL ITEMS WITH OWNER REPRESENTATIVE.
4. MAKE CONNECTION TO EXISTING WATER SUPPLY LINE. FIELD LOCATE AND VERIFY SIZE AND ALL REQUIREMENTS. 2"ø MAIN WATER SUPPLY LINE MINIMUM. VERIFY PROPER FUNCTION OF EXISTING MAIN SHUT-OFF, PRV, ETC. (FIELD VERIFY LOCATION) AND REPAIR/REPLACE AS REQUIRED UNDER DIRECTION OF OWNERS REPRESENTATIVE.
5. MAKE CONNECTION TO EXISTING SEWER LINE. MODIFY SEWER LINE TO ACCOMMODATE NEW PLUMBING FIXTURES. PROVIDE AND INSTALL ALL REQUIRED CLEANOUTS.
6. COORDINATE ALL REQUIRED SAW CUTTING OF EXISTING FLOOR OR SLAB FOR DRAIN PIPING, ETC. WITH GENERAL CONTRACTOR. REPAIR FLOOR OR SLAB AS DIRECTED BY OWNER REPRESENTATIVE. PROVIDE AND INSTALL EPOXY DOWELS AT SLAB TO SLAB JOINTS.
7. INSULATE ALL HOT AND COLD WATER PIPING PER APPLICABLE CODES. ALL EXPOSED HOT AND COLD WATER PIPING SHALL BE INSULATED. INSULATE HOT WATER PIPING THAT IS PLACED IN UN-INSULATED INTERIOR WALLS. EXCEPTION: VERTICAL AND HORIZONTAL COLD WATER PIPING LOCATED INSIDE OF INTERIOR WALLS MAY HAVE THE INSULATION OMITTED.
9. MAKE PROVISIONS FOR A BARRIER-TYPE TRAP SEAL PROTECTION (I.E. TRAP GUARD) WHERE NOTED AND/OR CALLED FOR.
10. PIPING LOCATIONS ARE GRAPHICALLY SHOWN. PLUMBING CONTRACTOR SHALL DETERMINE ACTUAL PIPE ROUTING IN FIELD PER AVAILABLE SPACE AND BUILDING CONSTRUCTION.
11. NOT ALL CLEANOUTS ARE SHOWN. PROVIDE AND INSTALL ALL REQUIRED CLEANOUTS. CLEANOUTS FOR HORIZONTAL DRAINS SHALL BE INSTALLED NO MORE THAN 100' APART. CLEANOUTS SHALL BE INSTALLED AT EACH CHANGE OF DIRECTION GREATER THAN 45°. A CLEAN-OUT SHALL BE PROVIDED AT THE BASE OF EACH WASTE OR SOIL STACK. CLEANOUTS SHALL BE ACCESSIBLE AND THE SAME SIZE AS THE WASTE LINES ON WHICH THEY ARE INSTALLED.
12. COORDINATE WITH OTHER TRADES TO ENSURE AND ALL PLUMBING VENTS ARE A MINIMUM OF 10- FEET FROM ALL FRESH AIR INTAKES.
13. WATER PIPING MATERIAL SHALL MEET THE STANDARDS SET FORTH IN 2021 IPC TABLES 605.3, 605.4 & 605.5.
14. SANITARY WASTE AND VENT PIPING MATERIAL SHALL MEET THE STANDARDS SET FORTH IN 2021 IPC TABLES 702.1, 702.2 AND 702.3 & 702.4.
15. PROVIDE AND INSTALL WATER HAMMER ARRESTORS WHERE QUICK-CLOSING VALVES ARE UTILIZED. THIS INCLUDES BUT IS NOT LIMITED TO: ICE MAKERS AND FLUSH VALVE TOILETS.
16. TRENCHES THAT ARE EXCAVATED BELOW THE INSTALLATION LEVEL OF PIPE (SUCH THAT THE TRENCH BOTTOM DOES NOT FORM THE BED FOR THE PIPE) SHALL BE BACKFILLED TO THE INSTALLATION LEVEL OF THE BOTTOM OF THE PIPE WITH SAND OR FINE GRAVEL PLACED IN LAYERS OF 6 INCHES MAXIMUM DEPTH. THE BACKFILL SHALL BE COMPACTED AFTER EACH PLACEMENT. 2021 IPC 306.2.1.
17. PLUMBING CONTRACTOR SHALL PROVIDE AND INSTALL COLD WATER SHUT-OFF AT EACH MAJOR RISE AND FIXTURE GROUP. COORDINATE LOCATION WITH SITE CONDITIONS AND OWNER REPRESENTATIVE.
18. PLUMBING CONTRACTOR SHALL PROVIDE AND INSTALL WATER TEMPERING DEVICE (SHALL CONFORM TO ASSE 1070) FOR ALL PUBLIC HAND WASH AREAS IN PROJECT. HOT WATER TEMPERATURE SHALL HAVE A MAXIMUM TEMPERATURE OF 110° F. 2021 IPC 607.1.2.
19. PLUMBING CONTRACTOR SHALL INCLUDE PRICING TO INVESTIGATE EXISTING SEWER LINE LOCATIONS AND INVERT ELEVATIONS. GIVE RECOMMENDATIONS TO OWNER FOR MOST ECONOMICAL AND LEAST INTRUSIVE WAY TO CONNECT NEW DRAIN PIPING IN ADDITION TO EXISTING DRAIN PIPING.
20. PLUMBING CONTRACTOR SHALL VISIT THE PROJECT SITE DURING THE BIDDING PROCESS.
21. CONTRACTOR SHALL VERIFY LOCATION, SIZE, AND DEPTH OF ALL UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
22. EXISTING PLUMBING FIXTURES AND ASSOCIATED SYSTEMS TO REMAIN. PLUMBING CONTRACTOR SHALL INCLUDE PRICING TO VERIFY PROPER FUNCTION OF ALL PLUMBING FIXTURES. THIS WILL INCLUDE BUT NOT BE LIMITED TO VERIFYING: COLD WATER CONNECTION & DELIVERY, HOT WATER CONNECTION & DELIVERY, DRAIN LINE CONNECTION & PROPER FUNCTION, HOT WATER HEATER FUNCTION & CONDITION, ETC. FOR FULLY FUNCTIONING PLUMBING FIXTURES & ASSOCIATED PLUMBING SYSTEMS. PLUMBING CONTRACTOR SHALL REPORT FINDINGS & CONCERNS BACK TO GENERAL CONTRACTOR & PROJECT OWNER.
23. THE CEILING SPACE IN THIS PROJECT IS BEING USED AS A RETURN AIR PLENUM. ALL ITEMS PLACED IN THE CEILING SPACE SHALL BE RATED AND APPROVED FOR USE IN A RETURN AIR PLENUM.

PIPING ANTICIPATIONS:

- WATER PIPING = COPPER (I.E. VIEGA PRO PRESS OR SIMILAR).
- SEWER = CAST IRON
- SEWER WITH TEMPERATURES GREATER THAN 120°F = CAST IRON

EXPANSION LOOP SIZING PER MANUFACTURER'S RECOMMENDATIONS VIA LOOPS



OREM CITY  
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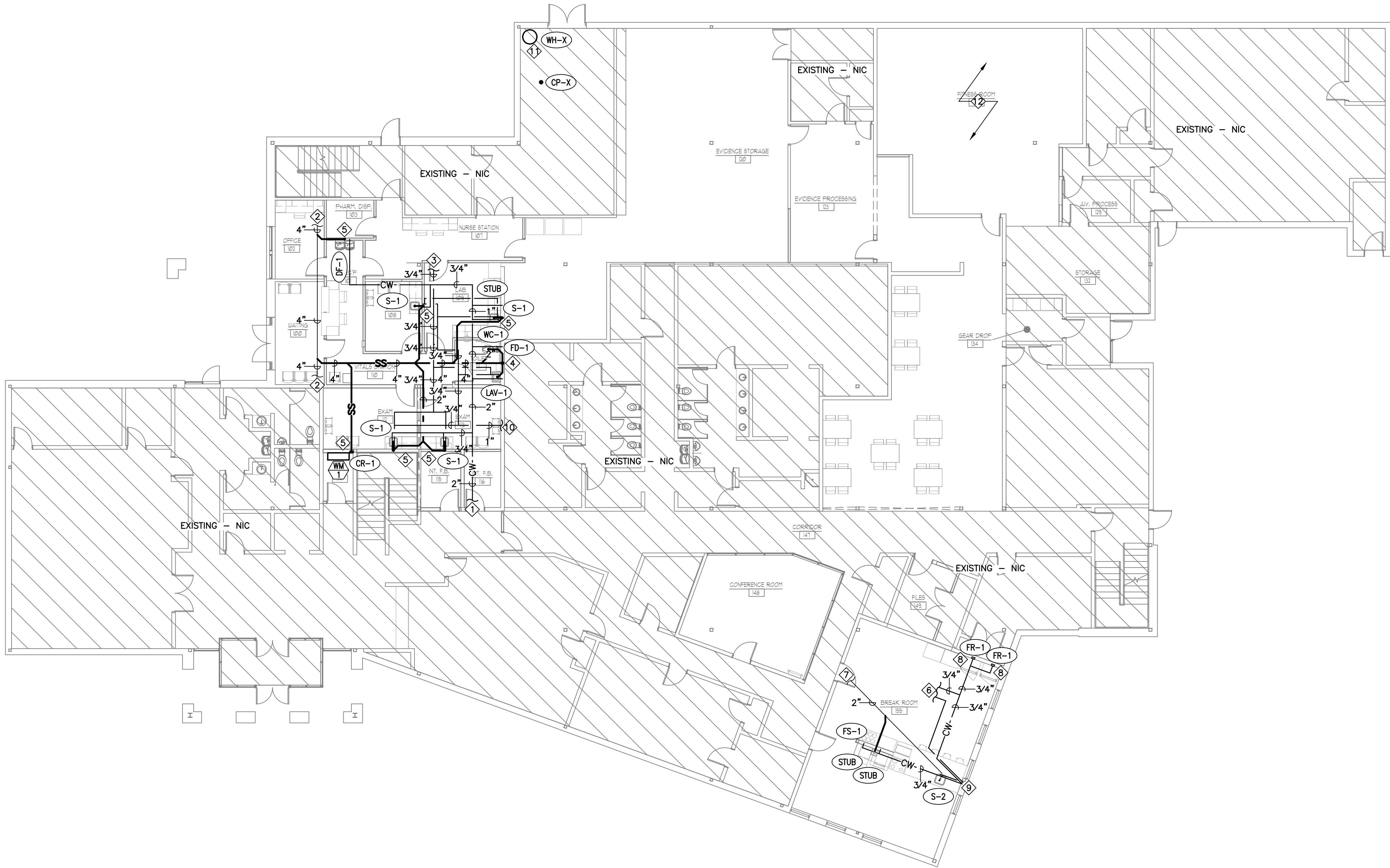
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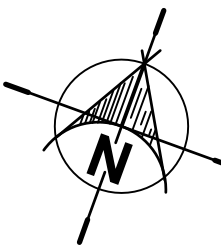
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PLUMBING NOTES  
AND LEGENDS

P0.1





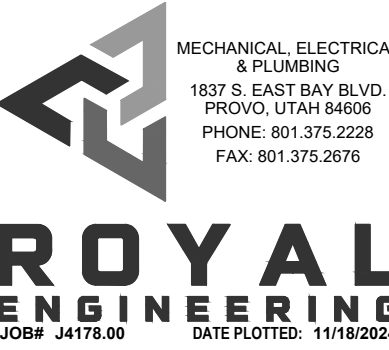
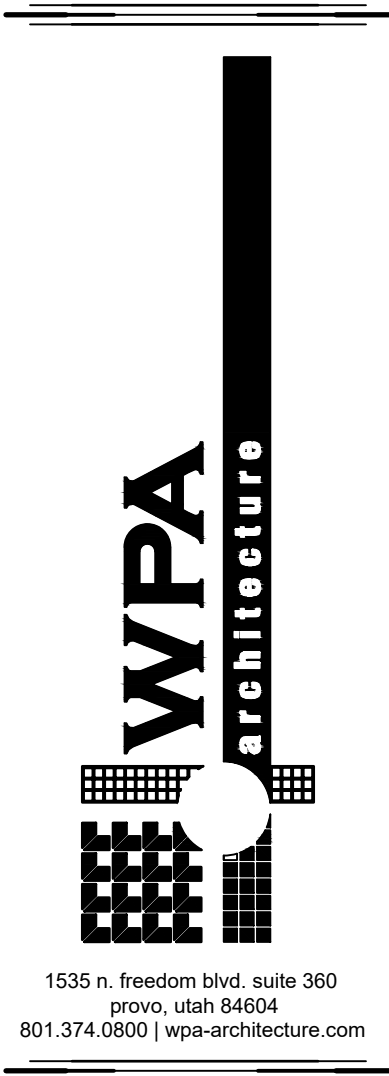
 **MAIN LEVEL PLUMBING PLAN**  
SCALE: 3/32" = 1'-0"

**PLUMBING KEYED NOTES:**

1. MAKE CONNECTION TO EXISTING 2" DOMESTIC CULINARY WATER LINE SERVING THIS AREA. PROVIDE AND INSTALL NEW SHUT-OFF.
2. APPROXIMATE LOCATION OF EXISTING 4" SANITARY SEWER LINE SERVING THIS AREA. MAKE NEW CONNECTIONS WHERE SHOWN ON PLANS.
3. MAKE CONNECTION TO EXISTING 3/4" DOMESTIC RETURN WATER LINE SERVING THIS AREA.
4. PROPOSED LOCATION OF 4" SEWER DROP TO BELOW GRADE. SEE SCHEMATICS FOR MORE INFORMATION.
5. PROPOSED LOCATION OF 2" SEWER DROP TO BELOW GRADE. SEE SCHEMATICS FOR MORE INFORMATION.
6. MAKE CONNECTION TO EXISTING 3/4" DOMESTIC HOT AND DOMESTIC CULINARY WATER LINES SERVING THIS AREA. PROVIDE AND INSTALL NEW SHUT-OFF AND SUPPLY HOSES.
7. APPROXIMATE LOCATION OF EXISTING 2" SANITARY SEWER LINE SERVING THIS AREA. MAKE NEW CONNECTIONS WHERE SHOWN ON PLANS.
8. PROVIDE AND INSTALL BID ALTERNATE FOR FIRE RATED WALL BOX AND FRIDGE WATER CONNECTION. AT OWNERS REPRESENTATIVE OPTION FR-1 CAN BE OMITTED FROM THE PROJECT.
9. PROPOSED LOCATION OF WATER LINE DROP(S) CONCEALED WITHIN WALL TO BE ROUTED HORIZONTALLY TO SINK.
10. MAKE CONNECTION TO EXISTING 1" DOMESTIC HOT WATER LINE SERVING THIS AREA.
11. APPROXIMATE LOCATION OF EXISTING NATURAL GAS WATER HEATER.
12. DEMOLISH EXISTING PLUMBING FIXTURES AND REMOVE OFF SITE. CAP UNUSED PIPING IN THIS AREA WITHIN FLOOR/WALL CAVITY.

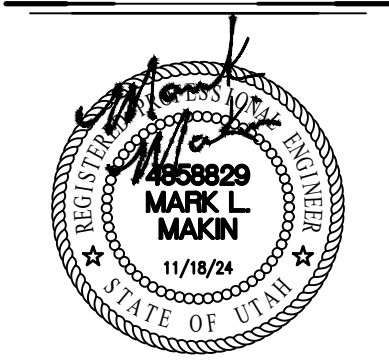
**GENERAL SHEET NOTES:**

1. WATER LINES ARE ANTICIPATED TO BE ROUTED IN THE CEILING SPACE AND DROP TO EACH FIXTURE/FIXTURE GROUP.
2. WATER LINES ARE SHOWN SCHEMATICALLY FOR CLARITY AND SHALL BE ROUTED WITHIN CONCEALED SPACES (I.E. WALLS, DROPS, CHASES, ETC.)
3. PROVIDE AND INSTALL NEW SUPPLY STOPS AND SUPPLY HOSES FOR NEW PLUMBING FIXTURES.



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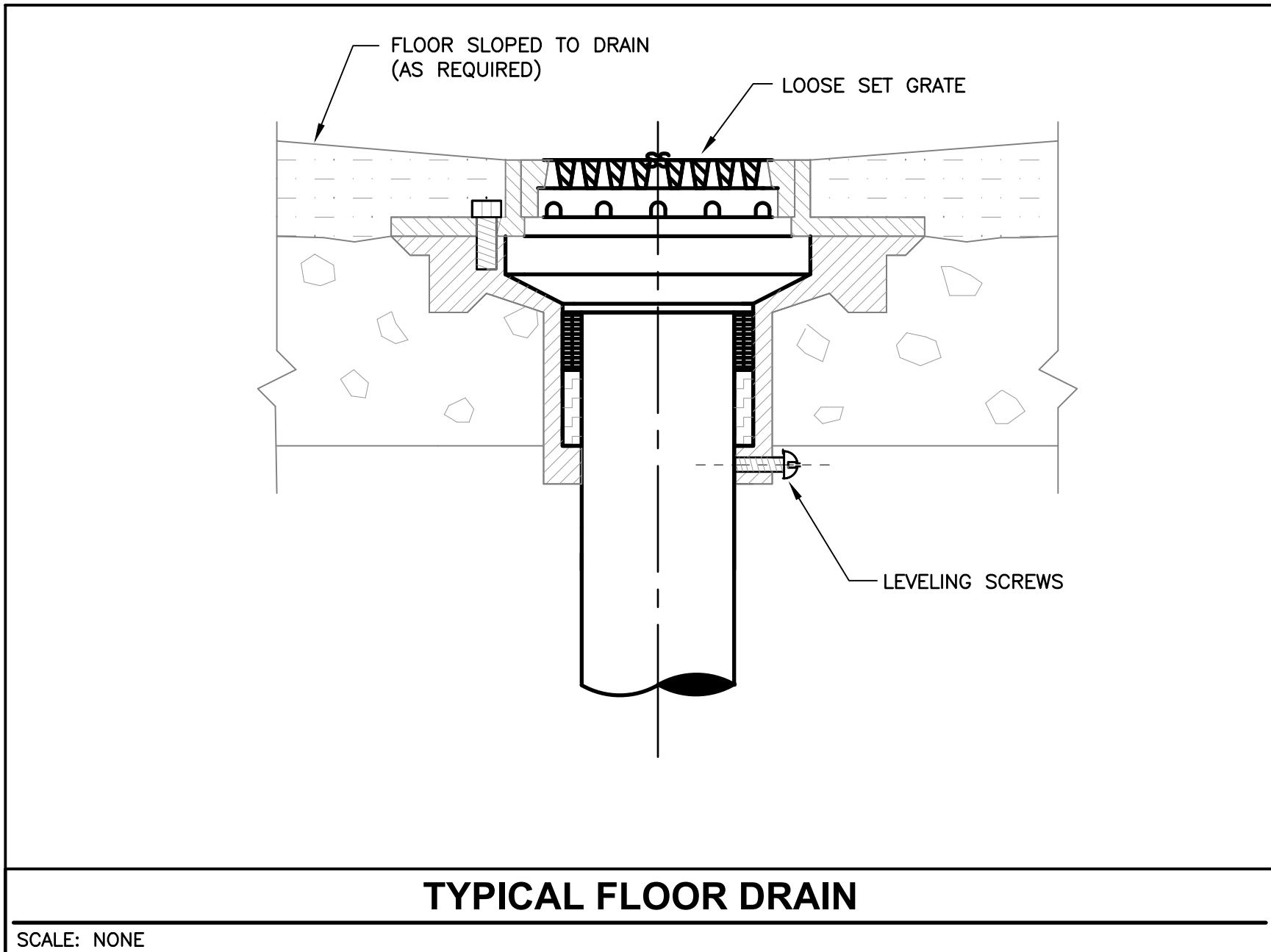
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MAIN LEVEL  
PLUMBING PLAN

**P1.1**



NOT FOR CONSTRUCTION  
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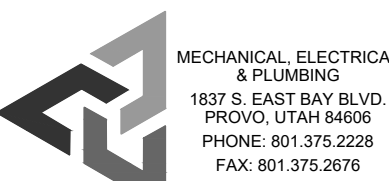


1. INSULATION CONDUCTIVITY NOT TO EXCEED 0.27 BTU PER INCH. WHERE INSULATION IS NOT EQUAL TO 0.27 BTU PER INCH THE INSULATION THICKNESS SHALL BE INCREASE AS DIRECTED IN THE INTERNATIONAL ENERGY CONSERVATION CODE.
2. STEAM SERVICE INCLUDES BOTH STEAM AND CONDENSATE RETURN PIPING.
3. INSULATION THICKNESS FOR RUN-OUT PIPING BETWEEN THE CONTROL VALVE AND HVAC EQUIPMENT MAY BE REDUCED TO 1".
4. COOLING SYSTEMS INCLUDE CHILLED WATER, CHILLED BRINE, REFRIGERANT SUCTION, REFRIGERANT HOT GAS, AND CONDENSER WATER AND HEAT RECOVERY PIPING FALLING WITHIN THE LISTED TEMPERATURE RANGE.
5. INSULATION THICKNESS FOR PIPING LOCATED OUTDOORS OR EXPOSED TO OUTSIDE AIR SHALL BE INCREASED BY 1".
6. WHERE SCHEDULED THICKNESS DIFFERS FROM SPECIFICATIONS THE THICKER DIMENSION SHALL BE USED.

1. INSULATION CONDUCTIVITY NOT TO EXCEED 0.27 BTU PER INCH. WHERE INSULATION IS NOT EQUAL TO 0.27 BTU PER INCH THE INSULATION THICKNESS SHALL BE INCREASE AS DIRECTED IN THE INTERNATIONAL ENERGY CONSERVATION CODE.
2. INSULATION THICKNESS FOR PIPING LOCATED OUTDOORS OR EXPOSED TO OUTSIDE AIR SHALL BE INCREASED BY 1".
3. WHERE SCHEDULED THICKNESS DIFFERS FROM SPECIFICATIONS THE THICKER DIMENSION SHALL BE USED.
4. SERVICE AND DOMESTIC HOT WATER INCLUDES RE-CIRCULATION LOOP PIPING.
5. ROOF DRAIN PIPING INCLUDES DRAIN BOWELS AND OVERFLOW DRAIN PIPING.

NOTE: THERMAL AND SOUND INSULATION AND COVERINGS, LININGS, AND ADHESIVES (WHEN USED) INSTALLED IN CONCEALED AND EXPOSED SPACE SHALL HAVE A FLAME SPREAD INDEX OF 25 OR LESS AND A SMOKE-DEVELOPED INDEX OF 50 OR LESS WHEN TESTING IN ACCORDANCE WITH ASTM E 84.

## PIPING INSULATION DETAIL



## FIRST FLOOR INTERIOR REMODEL

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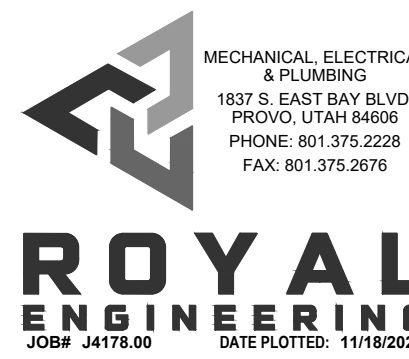
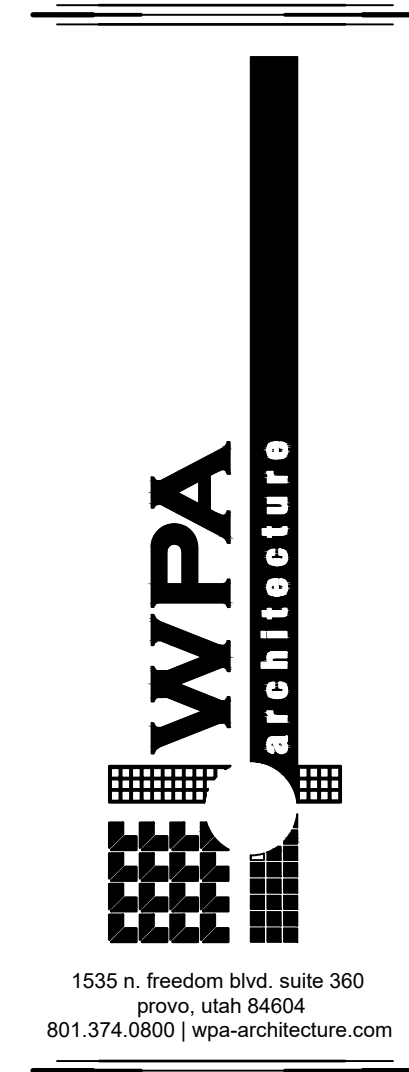
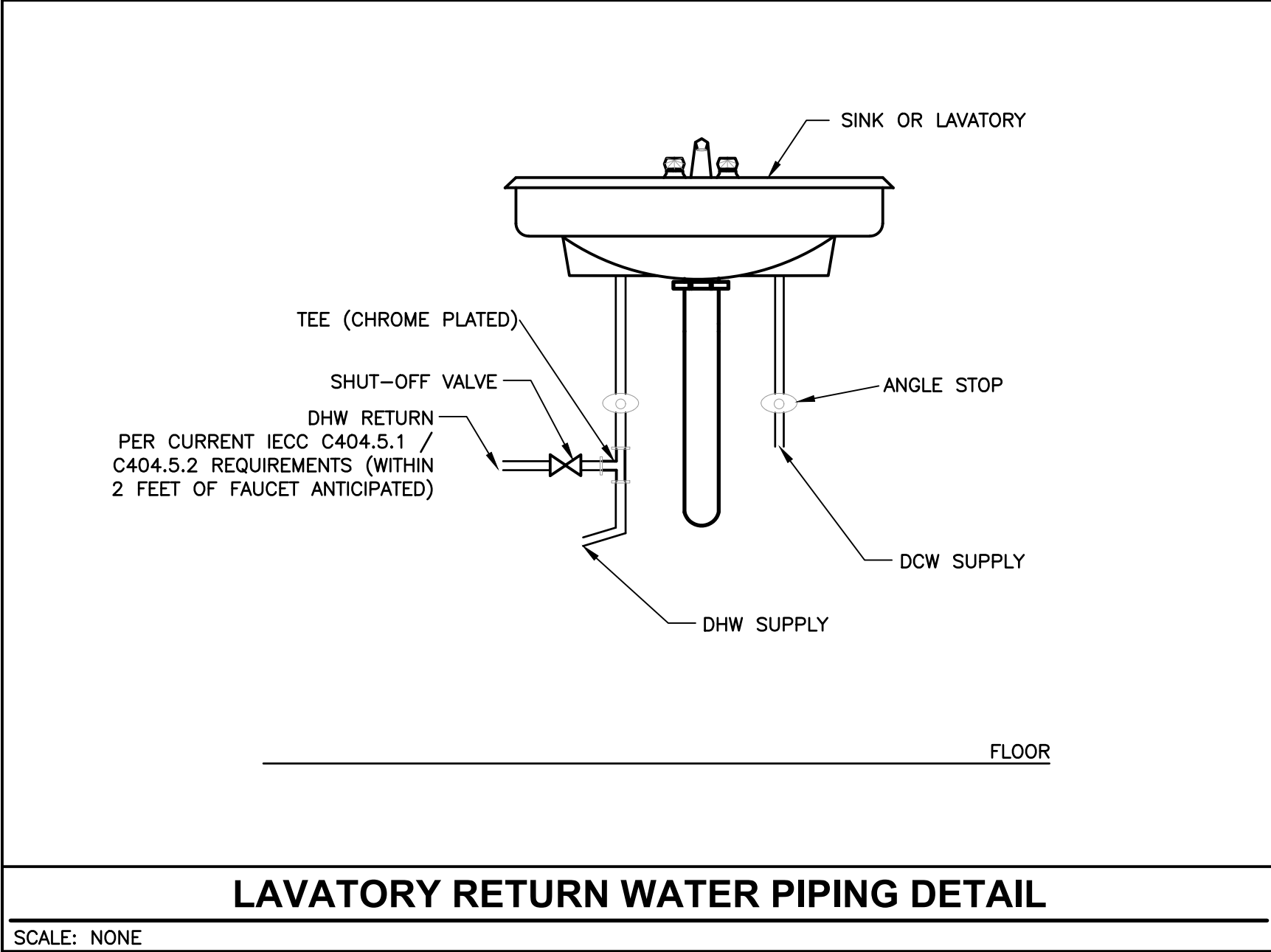
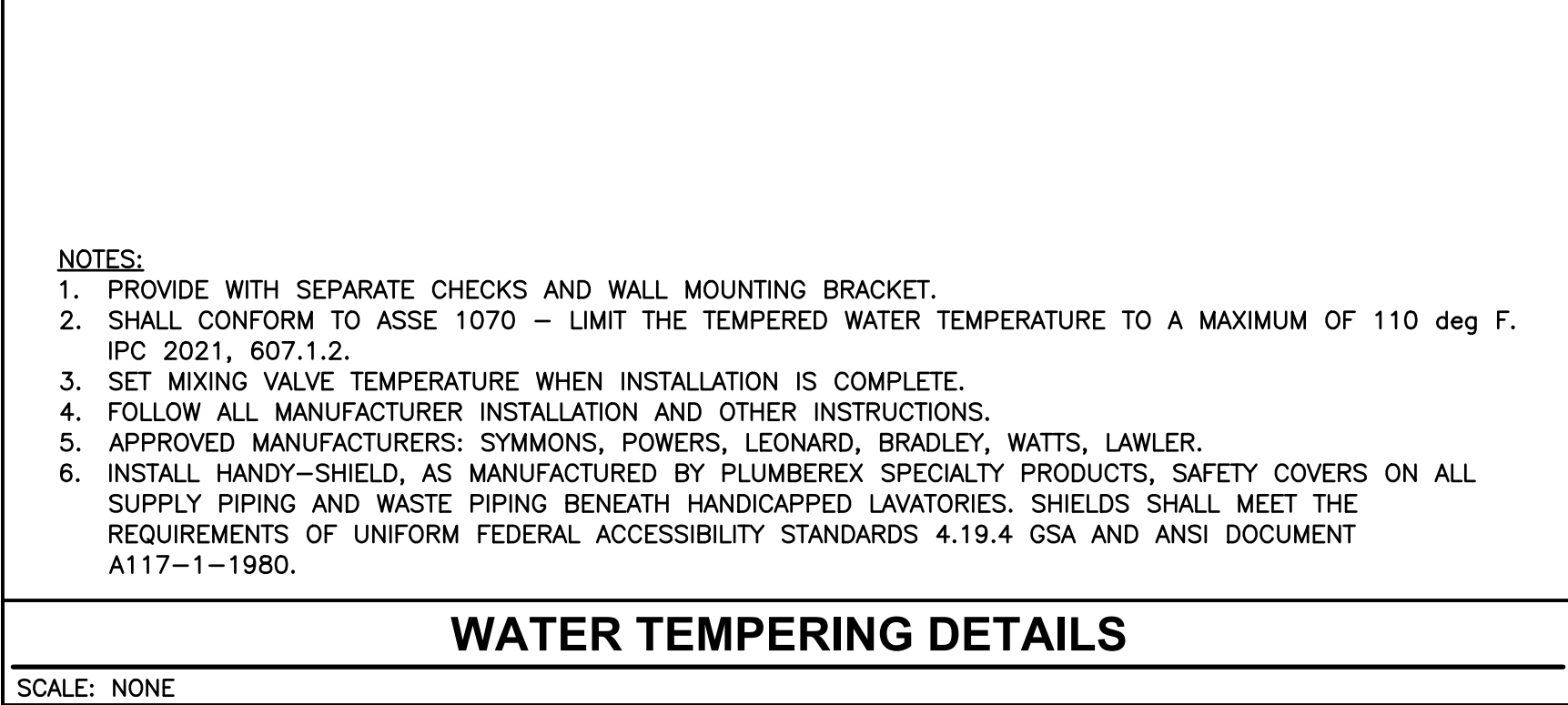
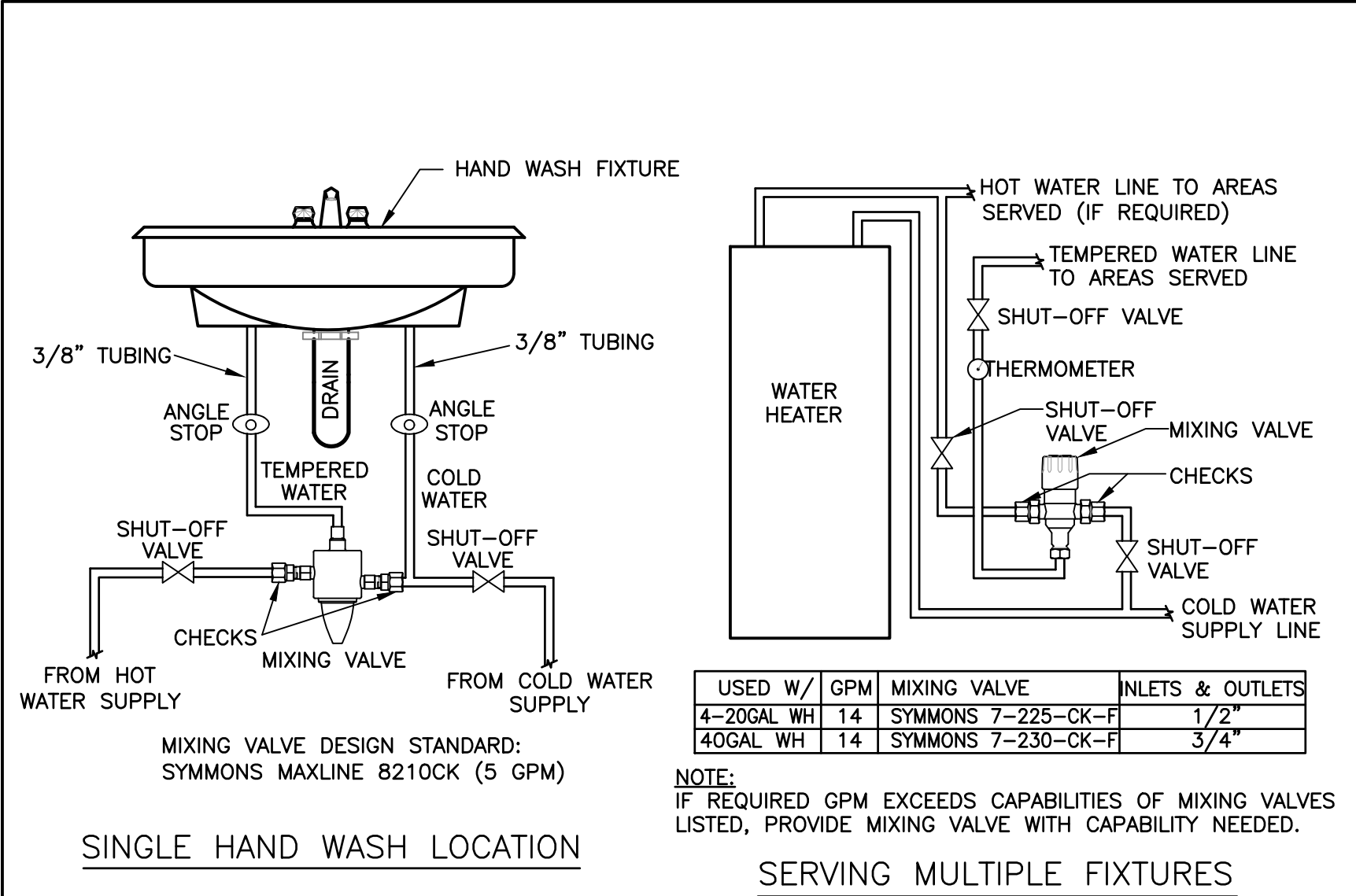
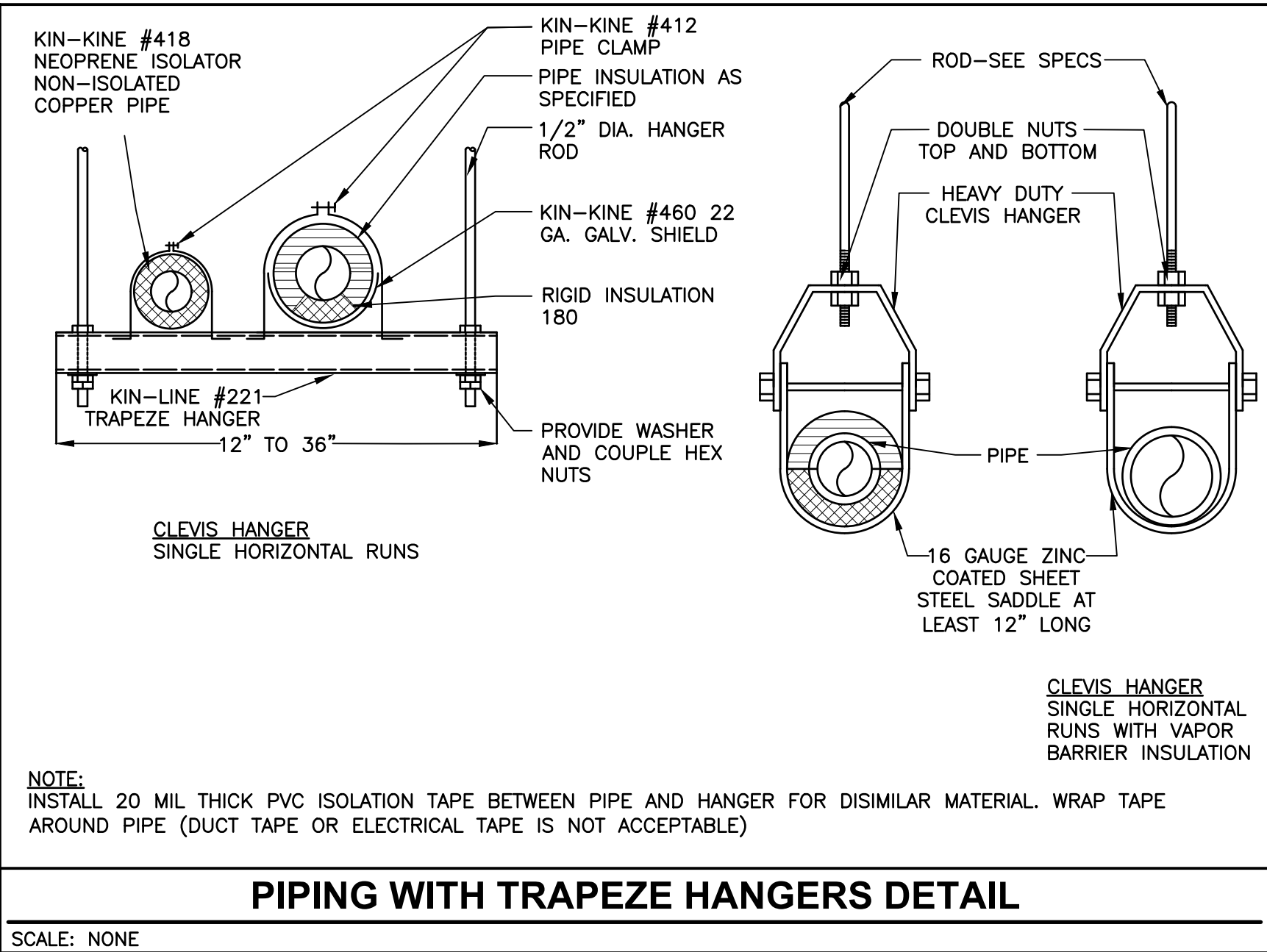
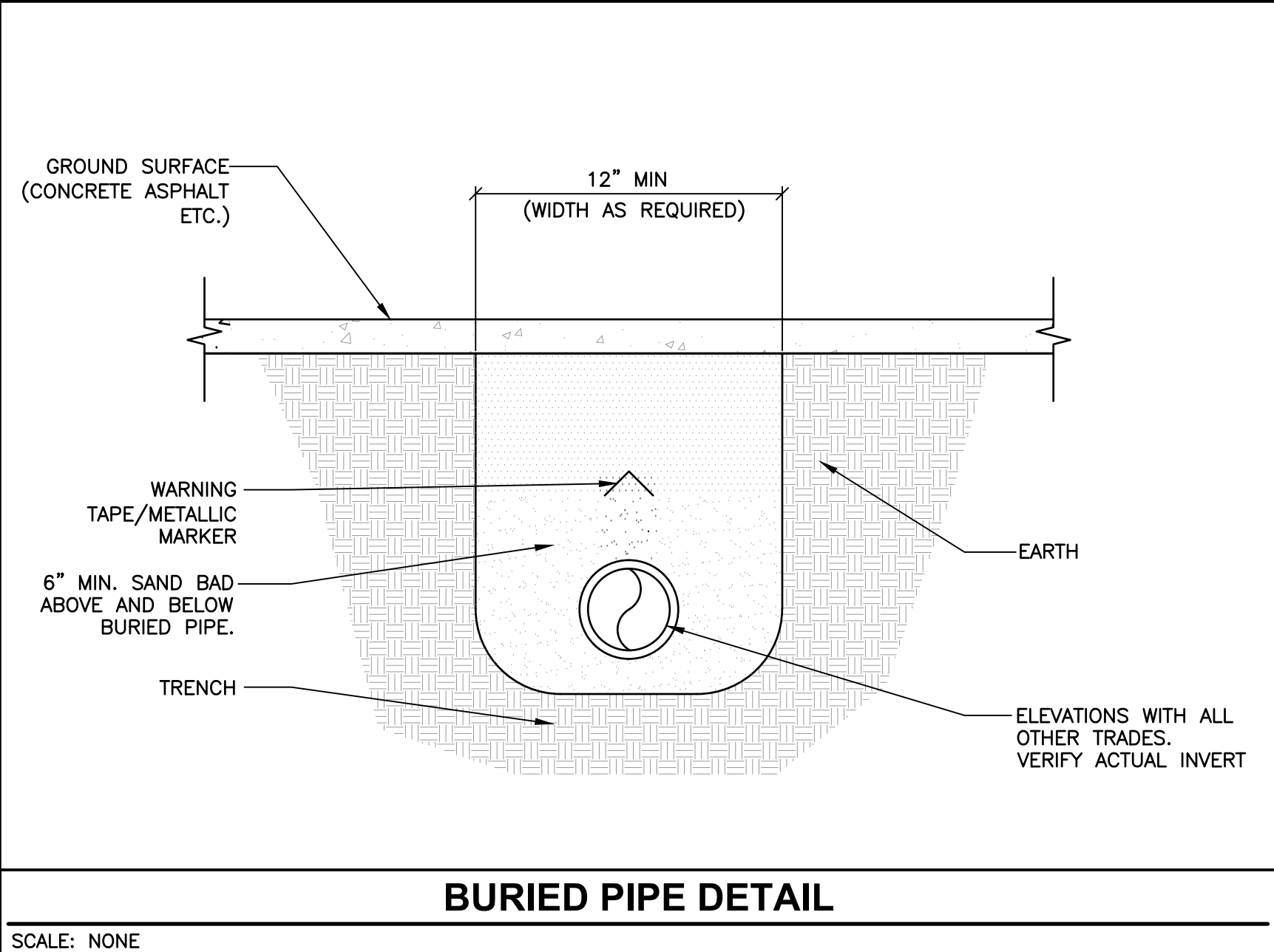
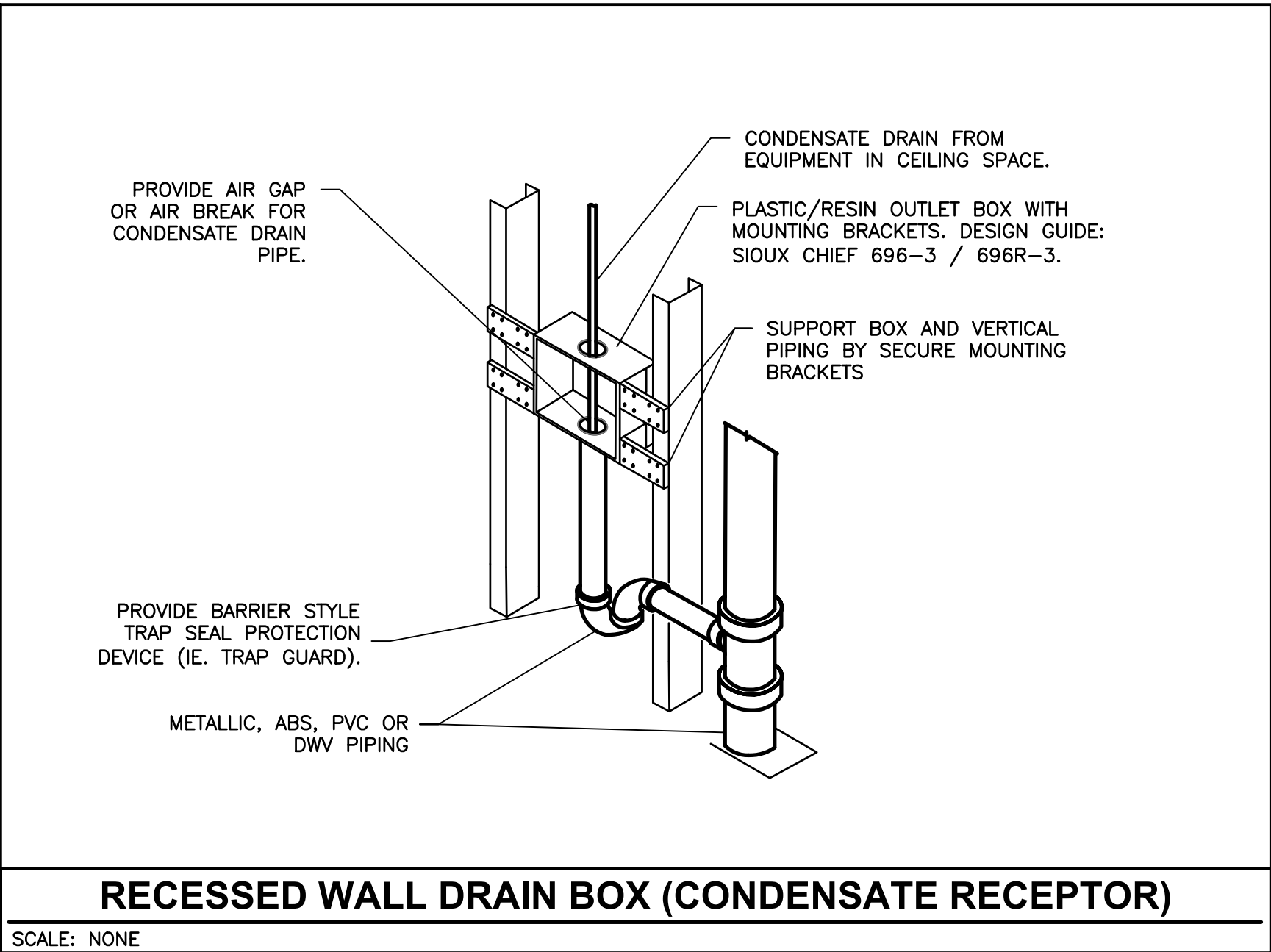
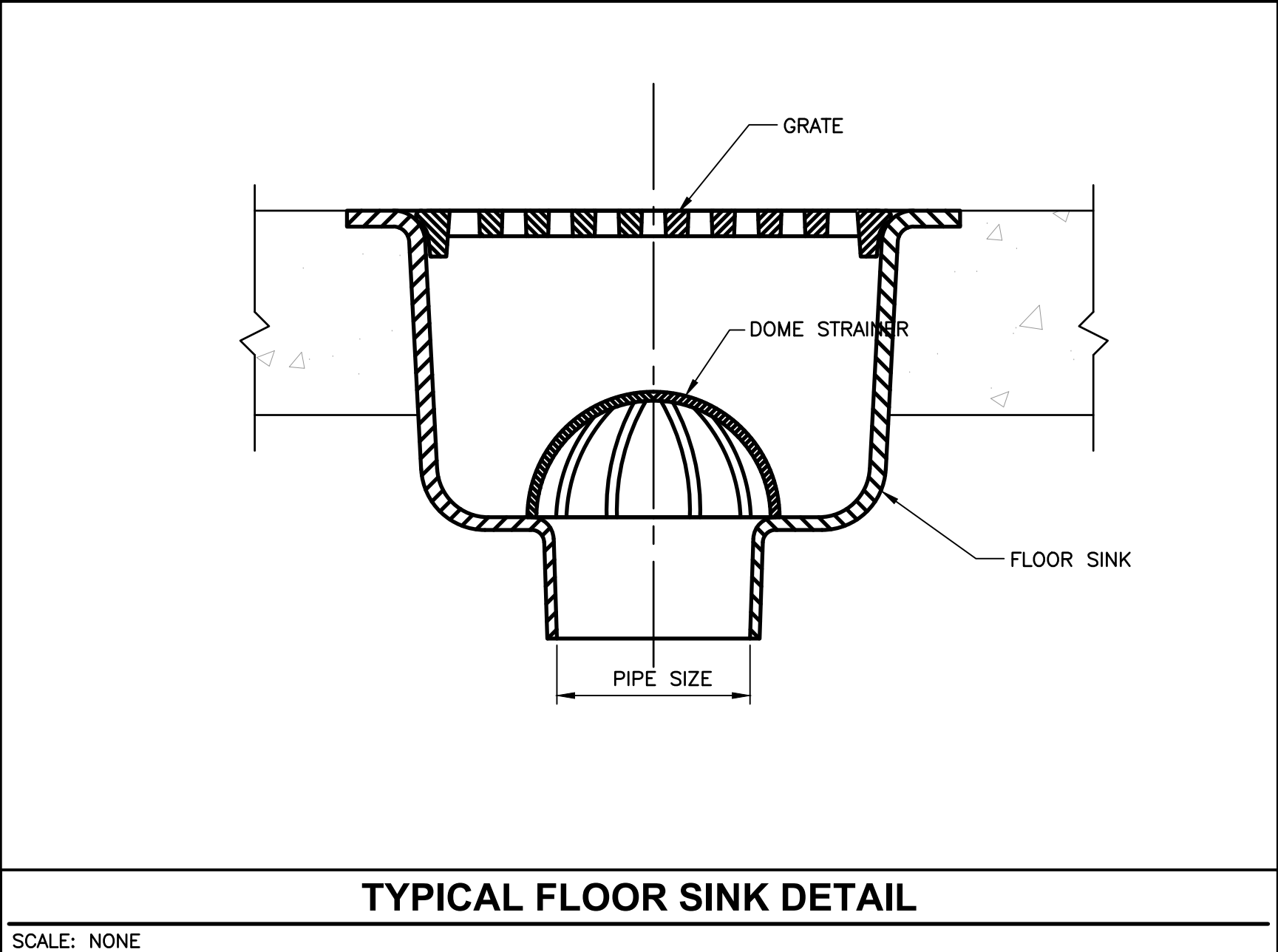
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**PLUMBING DETAILS**

## P5.1

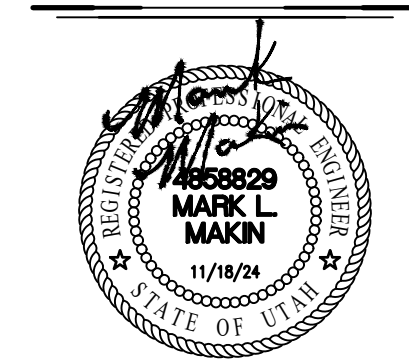




## OREM CITY PUBLIC SAFETY BUILDING

FIRST FLOOR  
INTERIOR REMODEL

95 E. Center Street  
Orem, Utah 84057



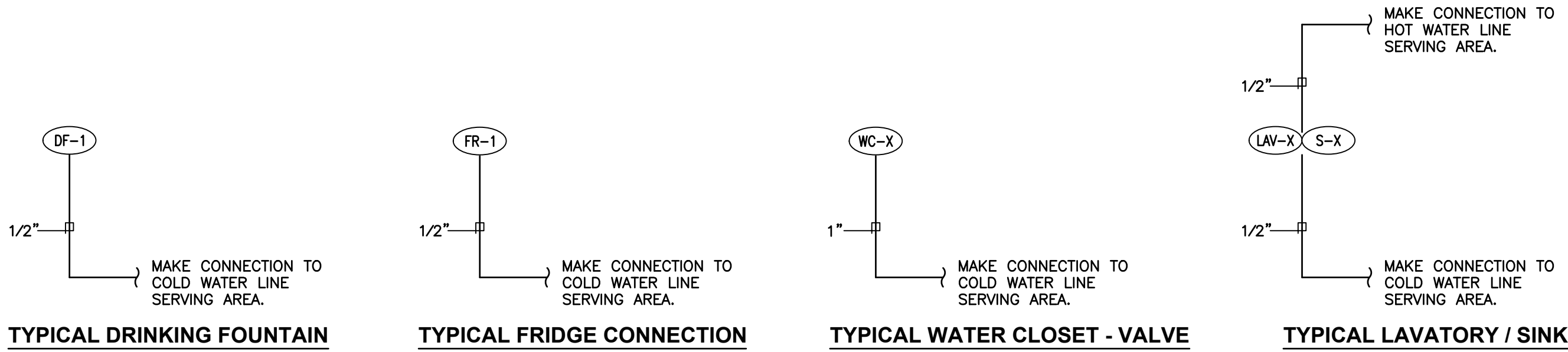
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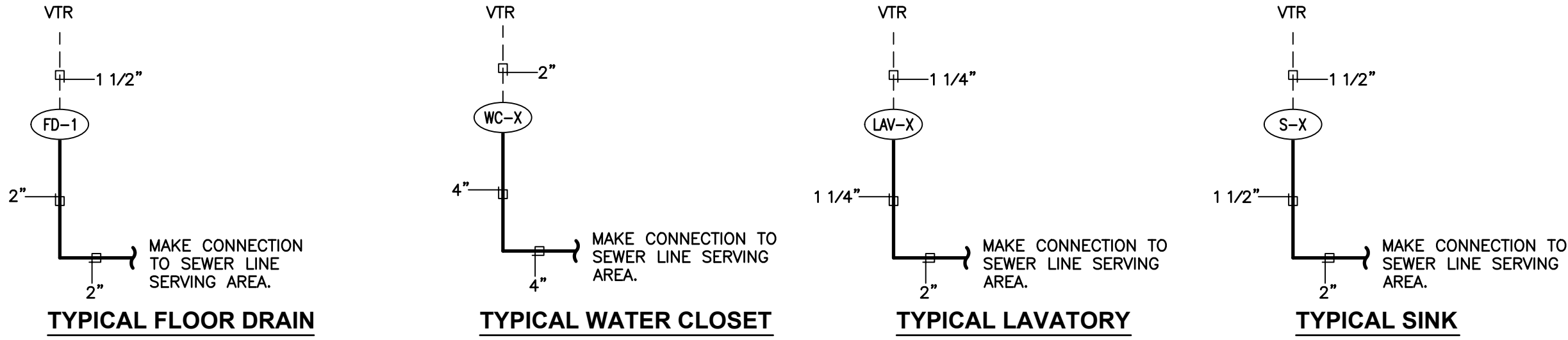
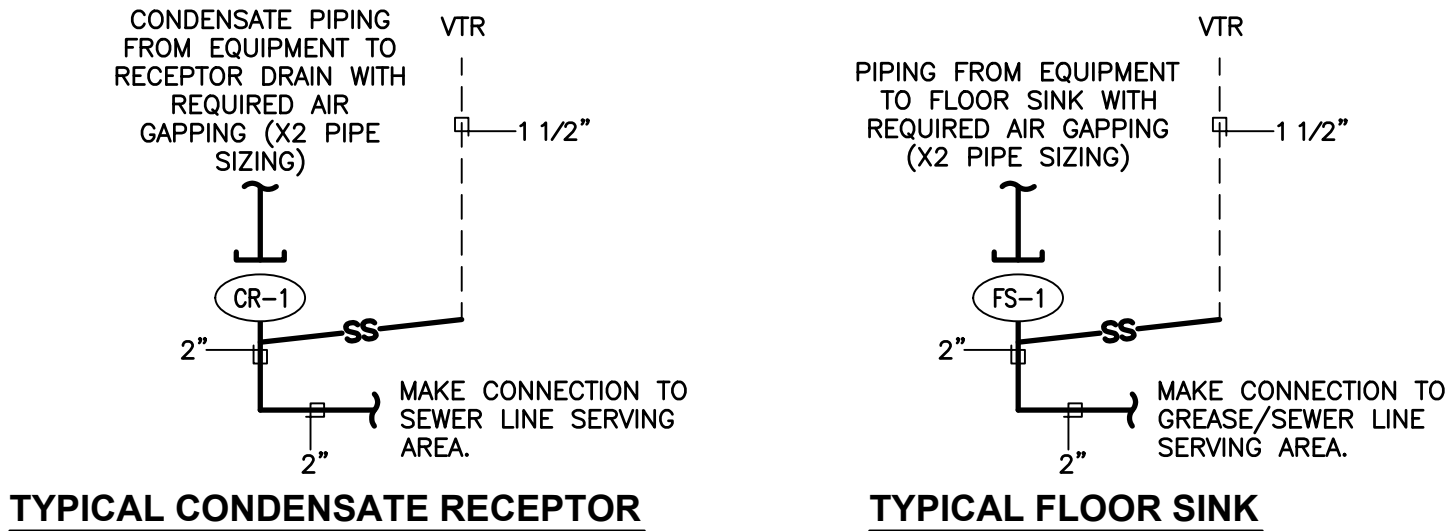
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PLUMBING DETAILS

# P5.2





**WATER PIPING SCHEMATICS**  
SCALE: NONE



**WASTE AND VENT PIPING SCHEMATICS**  
SCALE: NONE

GENERAL NOTE: VENT & CONDENSATE SHALL BE 12"-24" BELOW DECK/ROOF ABOVE TO AVOID CONDENSATION ICING

PLUMBING FIXTURE SCHEDULE						
MARK	FIXTURE	PIPE SIZE				
		TRAP	WASTE	VENT	C.W.	H.W.
CP-X	HOT WATER RE-CIRCULATION PUMP WITH AQUASTAT.	---	---	---	---	3/4"
CR-1	CONDENSATE RECEPTOR	2"	2"	1 1/2"	---	---
DF-1	DRINKING FOUNTAIN-HI/LOW	1 1/2"	1 1/2"	1 1/2"	1/2"	---
FD-1	FLOOR DRAIN	2"	2"	1 1/2"	---	---
LAV-1	LAVATORY-WALL MOUNTED-ADA COMPLIANT	1 1/4"	1 1/4"	1 1/4"	1/2"	1/2"
S-1	SINK-COUNTER MOUNTED-SINGLE BOWL	1 1/2"	1 1/2"	1 1/2"	1/2"	1/2"
S-2	SINK-COUNTER MOUNTED-SINGLE BOWL	1 1/2"	1 1/2"	1 1/2"	1/2"	1/2"
FS-1	FLOOR SINK	2"	2"	1 1/2"	---	---
WC-1	WATER CLOSET-FLOOR MOUNT-FLUSH VALVE-ADA COMPLIANT	INT.	4"	2"	1"	---
WH-X	EXISTING WATER HEATER	---	---	---	1 1/2"	1 1/2"
STUB	WATER CONNECTION	---	---	---	1/2"	---

NOTES:  
1. VERIFY ALL MANUFACTURERS, FINISHES, AND OPTIONS WITH OWNER BEFORE ORDERING ANY PLUMBING FIXTURES.  
2. MINIMUM UNDERGROUND SANITARY SEWER PIPING SIZE SHALL BE 2 INCHES.

ADDITIONAL WATER PIPING CALCULATIONS		
DESIGN CONDITIONS		
	CITY	- OREM, UT
	DEVELOPED PIPE LENGTH	- 350 FEET (VERIFY)
	WATER PRESSURE	- 60 psi MIN. (VERIFY)
	ANTICIPATED ADDITIONAL FIXTURE UNITS	- 21 fu
MINIMUM MAIN DISTRIBUTION LINE SIZE: 2"		
21 FU = APPROXIMATELY 35 GPM		

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OREM CITY  
PUBLIC  
SAFETY  
BUILDING

FIRST FLOOR  
INTERIOR REMODEL

95 E. Center Street  
Orem, Utah 84057

revision information		
no.	date	description

milestone issue date	NOVEMBER 2024
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drawing title

PLUMBING SCHEDULES  
AND SCHEMATICS

P6.1



25. CONSULT ARCHITECT'S REFLECTED CEILING PLANS FOR EXACT LOCATION OF LIGHTING FIXTURES, SMOKE DETECTORS, ETC.

26. ELECTRICAL CONTRACTOR SHALL REVIEW AND COORDINATE WITH ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING AND OTHER DRAWINGS PRIOR TO BID.

27. ELECTRICAL CONTRACTOR SHALL NOTIFY AND COORDINATE WITH THE MECHANICAL CONTRACTOR SUCH THAT NO DUCTS, PIPING, OR EQUIPMENT FOREIGN TO THE OPERATION OF THE ELECTRICAL EQUIPMENT SHALL BE PERMITTED TO BE INSTALLED IN, ENTER, OR PASS THROUGH ELECTRICAL ROOMS OR SPACES OR ABOVE OR BELOW ELECTRICAL EQUIPMENT IN OTHER AREAS.

28. ELECTRICAL CONTRACTOR SHALL MEET WITH THE CEILING AND MECHANICAL CONTRACTORS TO COORDINATE LOCATIONS, CLEARANCES, CEILING TYPES AND ROOM-TO-ROOM REQUIREMENTS OF ALL LIGHTING FIXTURES PRIOR TO DUCT, PIPING, AND CEILING INSTALLATIONS.

29. VERIFY EXACT LOCATION(S) OF ALL EQUIPMENT TO BE FURNISHED BY OTHERS PRIOR TO ROUGH-IN. REFER TO THE MECHANICAL SHEETS FOR THE EXACT LOCATION OF THE MECHANICAL EQUIPMENT.

30. ELECTRICAL CONTRACTOR SHALL VERIFY ALL EQUIPMENT DIMENSIONS AND LOCATIONS BEFORE BEGINNING ROUGH-IN. CONSULT CONTRACT DOCUMENT DRAWINGS AND SHOP DRAWINGS TO VERIFY AND MAINTAIN REQUIRED CLEARANCES.

31. CONTRACTOR SHALL VERIFY ACTUAL ELECTRICAL LOADS FROM NAMEPLATE RATINGS OF EACH PIECE OF EQUIPMENT REQUIRING POWER. BRING ANY DISCREPANCIES TO THE ATTENTION OF THE PROJECT ENGINEER. FINAL CONNECTIONS TO EQUIPMENT SHALL BE MADE AS PER MANUFACTURERS WRITTEN INSTRUCTIONS AND APPROVED WIRING DIAGRAMS AND DETAILS. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PROVIDE ALL MATERIALS AND EQUIPMENT COMPATIBLE WITH EQUIPMENT ACTUALLY SUPPLIED. THE ELECTRICAL CONTRACTOR SHALL VERIFY ALL ELECTRICAL LOADS (VOLTAGE, PHASE, CONNECTION REQUIREMENTS, ETC.) OF EQUIPMENT FURNISHED UNDER OTHER DIVISIONS WITH APPROVED SHOP DRAWINGS PRIOR TO BEGINNING ROUGH-IN.

32. WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER, PER INDUSTRY STANDARD AND TO THE SATISFACTION OF THE ARCHITECT AND ENGINEER.

33. WORK, MATERIALS AND EQUIPMENT SHALL CONFORM TO THE LATEST EDITIONS OF LOCAL, STATE AND NATIONAL CODES, STANDARDS AND ORDINANCES.

34. THE MINIMUM SIZE OF THE CONDUCTORS ARE TO BE #12 AWG THIN COPPER, UNLESS INDICATED OTHERWISE ON THE DRAWINGS. STRAIGHT CONDUCTORS ARE NOT ALLOWED IN THE CONDUCTORS SMALLER THAN #10 AWG.

35. DETAILS ARE SHOWN ON DIFFERENT SHEETS. THE CONTRACTOR SHALL REFER TO THOSE DETAILS WHETHER OR NOT CALLED IN REFERENCE NOTES.

36. ALL JUNCTION BOXES SHALL HAVE MINIMUM DEPTH OF 2-1/8" UNLESS OTHERWISE SPECIFIED. SECURE ALL JUNCTION BOXES AS SHOWN IN THE DETAILS. FURNISH AND INSTALL PROPER PLASTER RINGS.

37. LIGHT SWITCHES INSTALLED ADJACENT TO EACH OTHER, SHALL BE GANGED TOGETHER WITH ONE PIECE COVER PLATE.

38. AT THE END OF THE JOB. PROVIDE BLANK COVER PLATES TO MATCH THE OTHER COVER PLATES FOR ALL JUNCTION BOXES WHERE DEVICES HAVE NOT YET BEEN INSTALLED.

39. ALL MATERIALS USED IN THIS INSTALLATION SHALL BE U.L. APPROVED AND NEW.

40. NO WIRING SHALL RUN IN DUCT WORK.

41. THE ELECTRICAL CONTRACTOR SHALL TERMINATE THE ELECTRICAL CONNECTIONS TO ALL THE EQUIPMENT BY PROVIDING THE NECESSARY MALE/FEMALE CONNECTOR, RECEPTACLE, PLUG, ETC.

42. ALL CEILING MOUNTED MOTION SENSORS SHALL BE A DUAL TECHNOLOGY MOTION SENSOR WITH POWER PACK AS REQUIRED TO PROVIDE SUFFICIENT BOX DEPTH AND HAVE A FIFTEEN MINUTE DELAY SET AT TEN MINUTES TO SENSOR SET TO MANUAL ON. CONTRACTOR TO SUBMIT FLOOR PLAN TO MOTION SENSOR SUPPLIER FOR FACTORY TO LOCATED MOTION SENSOR FOR OPTIMAL PERFORMANCE TO AVOID NUISANCE SHUT OFF OF LIGHTING. MANUFACTURERS LAYOUT PLAN TO BE PART OF SUBMITTAL. PROVIDE SUFFICIENT BOX DEPTH AND CORRECT PIER HING TO ACCOMMODATE ACTUAL RELAY UNIT AND OCCUPANCY SENSOR INSTALLED. PROVIDE PROPER SEPARATION OF 120 VOLT AND CLASS 2 WIRING AS NECESSARY IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE. USE HUBBELL, SENSOR SWITCH, LEVITON OR APPROVED EQUAL.

43. CONTRACTOR SHALL MEASURE STEADY STATE LOAD CURRENTS AT EACH PANEL BOARD FEEDER FOR ALL ALTERED PANEL BOARDS. SHOULD THE DIFFERENCE BETWEEN PHASES EXCEED 20 PERCENT AT ANY PANEL BOARD, REARRANGE CIRCUITS IN PANEL BOARD TO BALANCE THE PHASE LOAD WITHIN 20 PERCENT. TAKE CARE TO MAINTAIN PROPER PHASING FOR MULTI-WIRE BRANCH CIRCUITS. UPDATE DIRECTORIES ACCORDINGLY.

44. CONTRACTOR SHALL PROVIDE MINIMUM OF ONE WEEK NOTICE IN WRITING TO THE OWNER PRIOR TO ANY POWER OUTAGE. OUTAGES SHOULD BE PLANNED AROUND HOLIDAYS OR WEEKENDS. CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FOR ALL POWER OUTAGES PRIOR TO COMMENCING WORK.

45. CONSTRUCTION TO ENSURE THAT ALL AREAS OUTSIDE OF CONSTRUCTION AREA ARE KEPT CLEAN AND CLEAR OF DEBRIS AND OBSTRUCTIONS AT ALL TIMES.

46. GROUND FAULT PROTECTION FOR PERSONNEL SHALL BE PROVIDED FOR ALL TEMPORARY WIRING INSTALLATIONS PER ADOPTED VERSION OF NEC 590.6.

47. EACH DISCONNECTING MEANS SHALL BE LEGIBLY MARKED TO INDICATE ITS PURPOSE. UNLESS LOCATED AND ARRANGED SO THE PURPOSE IS EVIDENT. PER NEC 110.22

ABBREVIATIONS INDEX									
#	NUMBER	DC	DIRECT CURRENT	KW	KILOWATT	PT	POTENTIAL TRANSFORMER		
1	PHASE	DISP	DISPOSAL	LRA	LOCKED ROTOR AMPS	PV	PHOTOVOLTAIIC		
2	SINGLE PHASE	DRY	DRYER	LTG	LIGHTING	PVC	POLYVINYL CHLORIDE		
3	TWO-POLE	DW	DISHWASHER	MATV	MASTER ANTENNA TELEVISION	(R)	RELOCATE		
4	THREE PHASE	DWG	DRAWING	MAX	MAXIMUM	RECQ	RECEPTACLE		
4P	FOUR-POLE	EC	EMPTY CONDUIT	MB	MAIN BUS	REF	REFRIGERATOR		
AC	ALTERNATING CURRENT	EM	EMERGENCY	MCB	MAIN CIRCUIT BREAKER	REQD	REQUIRED		
AFB	ABOVE FINISHED FLOOR	EMG	EMERGENCY GENERATOR	MCM	MOTOR CONTROL CENTER	RMS	ROOT MEAN SQUARE		
AFP	ABOVE FINISHED GRADE	EMT	ELECTRICAL METALLIC TUBING	WCC	1000 CIRCULAR MILLS	RLA	ROOT LOAD AMPS		
AHJ	ARC FAULT PROTECTOR	EPO	EMERGENCY POWER OFF	MH	MANHOLE	SE	SERVICE ENTRANCE		
AIC	AUTHORITY HAVING JURISDICTION	EWC	ELECTRIC WATER COOLER	MC	MICROPHONE	SPD	SURGE PROTECTION DEVICE		
AL	AMP INTERRUPTING CURRENT (SYMMETRICAL)	EMH	ELECTRIC WALL HEATER	MIN	MINIMUM	SPEC	SPECIFICATION		
ALU	ALUMINUM	(C)	EXISTING	MLO	MAIN LUGS ONLY	SPK	SPEAKER		
AMP	AMPS METER	(F)	FUTURE	MNF	MANUFACTURER	SSB	SELECTOR SWITCH		
AMP	AMPERE	FA	FIRE ALARM	MTR	MOUNTING	SW	SWITCH		
ANN	ANNUNCIATOR	FAC	FIRE ALARM CONTROL PANEL	MOTOR	MOTOR	SWB	SWITCHBOARD		
ATS	AUTOMATIC TRANSFER SWITCH	FC	FOOT CANDLE	MW	MICROWAVE	SWGR	SWITCHGEAR		
AUX	AUXILIARY	FLA	FULL LOAD AMPS	(N)	NEW	TTB	TELEPHONE TERMINAL BOARD		
AWG	AMERICAN WIRE GAUGE	FT	FOOT	N/A	NOT APPLICABLE	TBC	TELEPHONE TERMINAL CABINET		
BC	BARE COPPER	FRZ	FREEZER	NC	NORMALLY CLOSED	TV	TELEVISION		
BFG	BELOW FINISH GRADE	FS	FUSED SWITCH	NCS	NATIONAL ELECTRICAL CODE	TPP	TYPE		
C	CONDUIT	GFAF	DUAL FUNCTION GFCI/AFCI CIRCUIT BREAKER	NEMA	NATIONAL MANUFACTURING ASSOCIATION	UG	UNDERGROUND		
CAB	CABINET	GFCI	GROUND FAULT CIRCUIT INTERRUPTER	NFC	NATIONAL FIRE CODE	UNO	UNLESS NOTED OTHERWISE		
CATB	COMMUNITY ANTENNA TELEVISION	GPEP	GROUND-FAULT EQUIPMENT PROTECTION	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION	UPS	UNINTERRUPTIBLE POWER SUPPLY		
CATV	CABLE TELEVISION	GFP	GROUND FAULT PROTECTOR	NFSA	NOT FUSED SWITCH	V	VOLT (KV=KILOVOLT)		
CFI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED	GRD	GALVANIZED RIGID CONDUIT	NIC	NOT IN CONTRACT	V/A/R	VOLT-AMPS/REACTIVE		
CKT	CIRCUIT	GRO	GROUND	NL	NIGHT LIGHT	VM	VOLT METER		
CLC	CEILING	HP	HORSE POWER	NO	NORMALLY OPEN	W	WATTS		
CONTR	CONTRACTOR	HZ	HERTZ	NTS	NOT TO SCALE	W/	WITH		
CO	CONVENIENCE OUTLET	IG	ISOLATED GROUND	OFCI	OWNER FURNISHED CONTRACTOR INSTALLED	WASH	WASHER		
CT	COMPUTER TERMINAL	IMC	INTERMEDIATE METALLIC CONDUIT	OFOW	OWNER FURNISHED OWNER INSTALLED	WH	WATTHOUR		
CR	CURRENT TRANSFORMER	IN	INCH	OS&Y	OUTSIDE SCREW AND YOKE	W/O	WITHOUT		
C/W	COPPER	J-BOX	JUNCTION BOX	PB	PUSH BUTTON	WP	WEATHER PROOF		
C/	CONDUIT WITH	KV	KILOVOLT	PF	POWER FACTOR	XWFR	TRANSFORMER		
(D)	DEMOLISH/DELETE	KVA	KILOVOLT AMPERES	PHR	PHASE FAILURE RELAY	XWFR-SW	TRANSFORMER SWITCH		
DECIBEL	DECIBEL	KVAR	KILOVAR	PNL	PANEL	XP	EXPLOSION PROOF		

NOTE: THIS IS A TYPICAL ABBREVIATION LIST. NOT ALL ABBREVIATIONS MAY BE USED ON THIS PROJECT.

## COMMISSIONING NOTES:

C408.3 LIGHTING SYSTEM FUNCTIONAL TESTING. CONTROLS FOR AUTOMATIC LIGHTING SYSTEMS SHALL COMPLY WITH SECTION C408.3.

C408.3.1 FUNCTIONAL TESTING. TESTING SHALL ENSURE THAT CONTROL HARDWARE AND SOFTWARE ARE CALIBRATED, ADJUSTED, PROGRAMMED AND IN PROPER WORKING CONDITION IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND MANUFACTURER'S INSTALLATION INSTRUCTIONS. THE CONSTRUCTION DOCUMENTS SHALL STATE THE PARTY WHO WILL CONDUCT THE REQUIRED FUNCTIONAL TESTING, WHERE REQUIRED BY THE CODE OFFICIAL, AN APPROVED PARTY INDEPENDENT FROM THE DESIGN OR CONSTRUCTION OF THE PROJECT SHALL BE RESPONSIBLE FOR THE FUNCTIONAL TESTING AND SHALL PROVIDE DOCUMENTATION TO THE CODE OFFICIAL CERTIFYING THAT THE INSTALLED LIGHTING CONTROLS MEET THE PROVISIONS OF SECTION C405, WHERE OCCUPANT SENSORS, TIME SWITCHES, PROGRAMMABLE SCHEDULED CONTROLS, PHOTOSENSORS OR LIGHTING CONTROLS ARE INSTALLED, THE FOLLOWING PROCEDURES SHALL BE PERFORMED:

1. CONFIRM THAT THE PLACEMENT, SENSITIVITY AND TIME-OUT ADJUSTMENTS FOR OCCUPANT SENSORS YIELD ACCEPTABLE PERFORMANCE.
2. CONFIRM THAT THE TIME SWITCHES AND PROGRAMMABLE SCHEDULE CONTROLS ARE PROGRAMMED TO TURN THE LIGHTS OFF.



- ELECTRICAL KEYED NOTES:
- HATCHED AREA OUTSIDE OF SCOPE.
- REMOVE EXISTING ELECTRICAL DEVICE(S) COMPLETE.
- EXISTING ELECTRICAL DEVICE(S) TO REMAIN.



N

DEMOLITION PLAN - POWER  
SCALE: 1/8" = 1'-0"

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ROYAL

ENGINEERING

JOB# 34178.00    DATE PLOTTED: 11/14/2024

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REGISTERED PROFESSIONAL ENGINEER  
13868  
WYATT  
SEAGLES  
11/14/24  
STATE OF UTAH

revision information

no.	date	description
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milestone issue date  
NOVEMBER 2024

milestone issue description  
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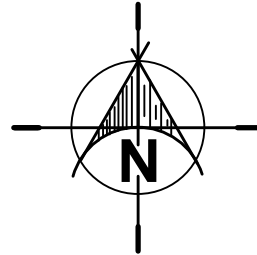
latest revision description

drawing title:  
DEMOLITION PLAN - POWER

ED1.1



- ELECTRICAL KEYED NOTES:
- HATCHED AREA OUTSIDE OF SCOPE.
- REMOVE EXISTING LIGHT FIXTURE COMPLETE.
- REMOVE EXISTING ELECTRICAL DEVICE(S) COMPLETE.
- EXISTING LIGHT FIXTURE TO REMAIN.
- REMOVE AND REINSTALL EXISTING LIGHT FIXTURE IN SAME LOCATION AFTER NEW CEILING IS INSTALLED.



DEMOLITION PLAN - LIGHTING  
SCALE: 1/8" = 1'-0"

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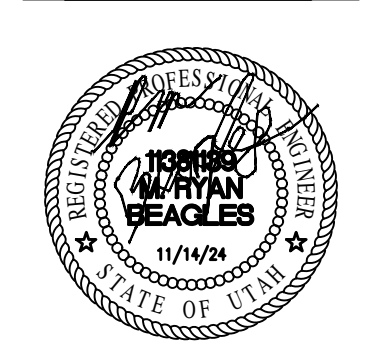
JOB# 14118.00    DATE PLOTTED: 11/14/2024

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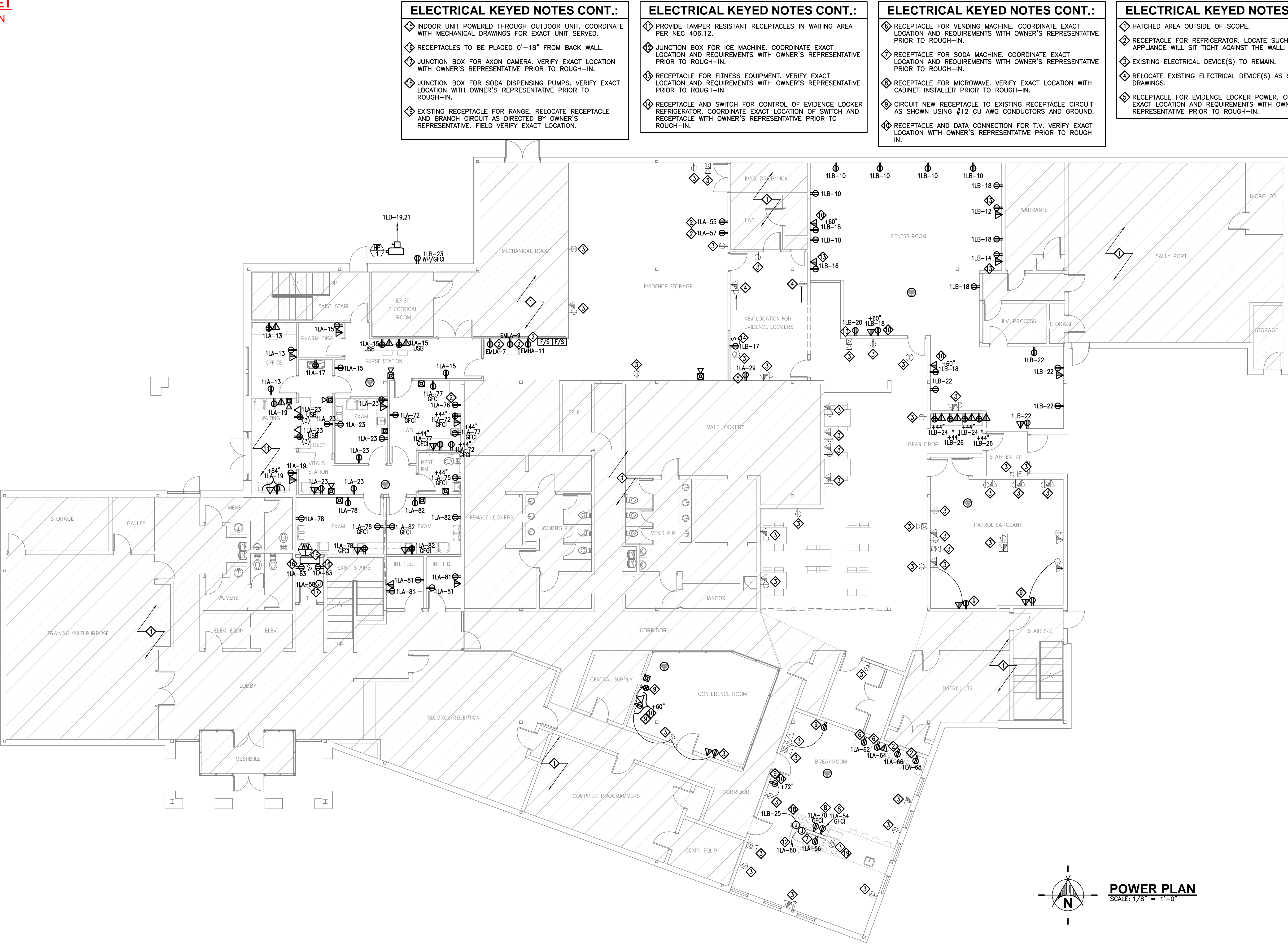
revision information		
no.	date	description

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latest revision date	
latest revision description	

drawing title:  
DEMOLITION PLAN - LIGHTING

ED1.2





ELECTRICAL KEYED NOTES CONT.:

- INDOOR UNIT POWERED THROUGH OUTDOOR UNIT. COORDINATE WITH MECHANICAL DRAWINGS FOR EXACT UNIT SERVED.
- RECEPTACLES TO BE PLACED 0'-18" FROM BACK WALL.
- JUNCTION BOX FOR AXON CAMERA. VERIFY EXACT LOCATION WITH OWNER'S REPRESENTATIVE PRIOR TO ROUGH-IN.
- JUNCTION BOX FOR SODA DISPENSING PUMPS. VERIFY EXACT LOCATION WITH OWNER'S REPRESENTATIVE PRIOR TO ROUGH-IN.
- EXISTING RECEPTACLE FOR RANGE. RELOCATE RECEPTACLE AND BRANCH CIRCUIT AS DIRECTED BY OWNER'S REPRESENTATIVE. FIELD VERIFY EXACT LOCATION.

ELECTRICAL KEYED NOTES CONT.:

- PROVIDE TAMPER RESISTANT RECEPTACLES IN WAITING AREA PER NEC 406.12.
- JUNCTION BOX FOR ICE MACHINE. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH OWNER'S REPRESENTATIVE PRIOR TO ROUGH-IN.
- RECEPTACLE FOR FITNESS EQUIPMENT. VERIFY EXACT LOCATION AND REQUIREMENTS WITH OWNER'S REPRESENTATIVE PRIOR TO ROUGH-IN.
- RECEPTACLE AND SWITCH FOR CONTROL OF EVIDENCE LOCKER REFRIGERATOR. COORDINATE EXACT LOCATION OF SWITCH AND RECEPTACLE WITH OWNER'S REPRESENTATIVE PRIOR TO ROUGH-IN.

ELECTRICAL KEYED NOTES CONT.:

- RECEPTACLE FOR VENDING MACHINE. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH OWNER'S REPRESENTATIVE PRIOR TO ROUGH-IN.
- RECEPTACLE FOR SODA MACHINE. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH OWNER'S REPRESENTATIVE PRIOR TO ROUGH-IN.
- RECEPTACLE FOR MICROWAVE. VERIFY EXACT LOCATION WITH CABINET INSTALLER PRIOR TO ROUGH-IN.
- CIRCUIT NEW RECEPTACLE TO EXISTING RECEPTACLE CIRCUIT AS SHOWN USING #12 CU AWG CONDUCTORS AND GROUND.
- RECEPTACLE AND DATA CONNECTION FOR T.V. VERIFY EXACT LOCATION WITH OWNER'S REPRESENTATIVE PRIOR TO ROUGH IN.

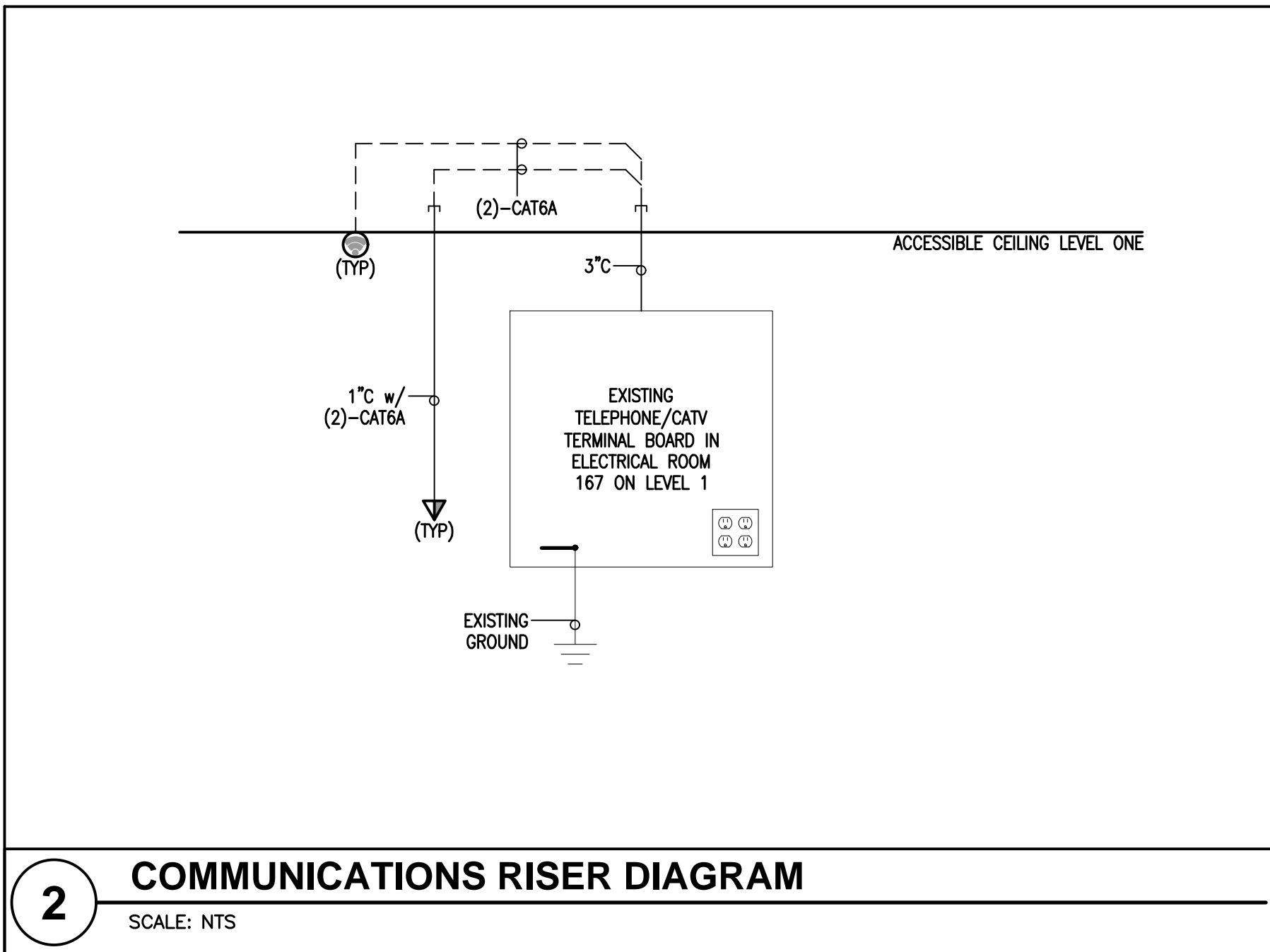
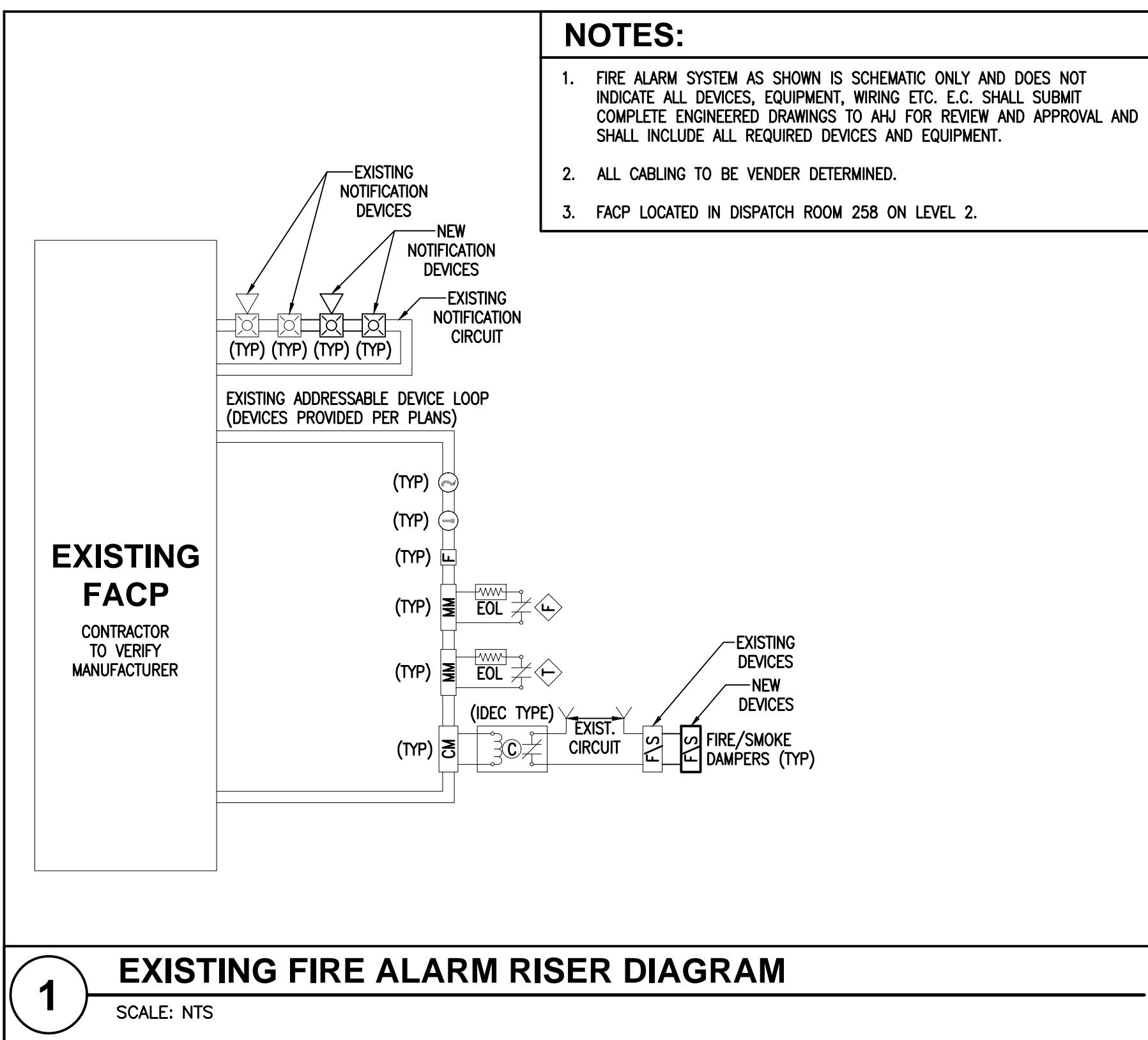
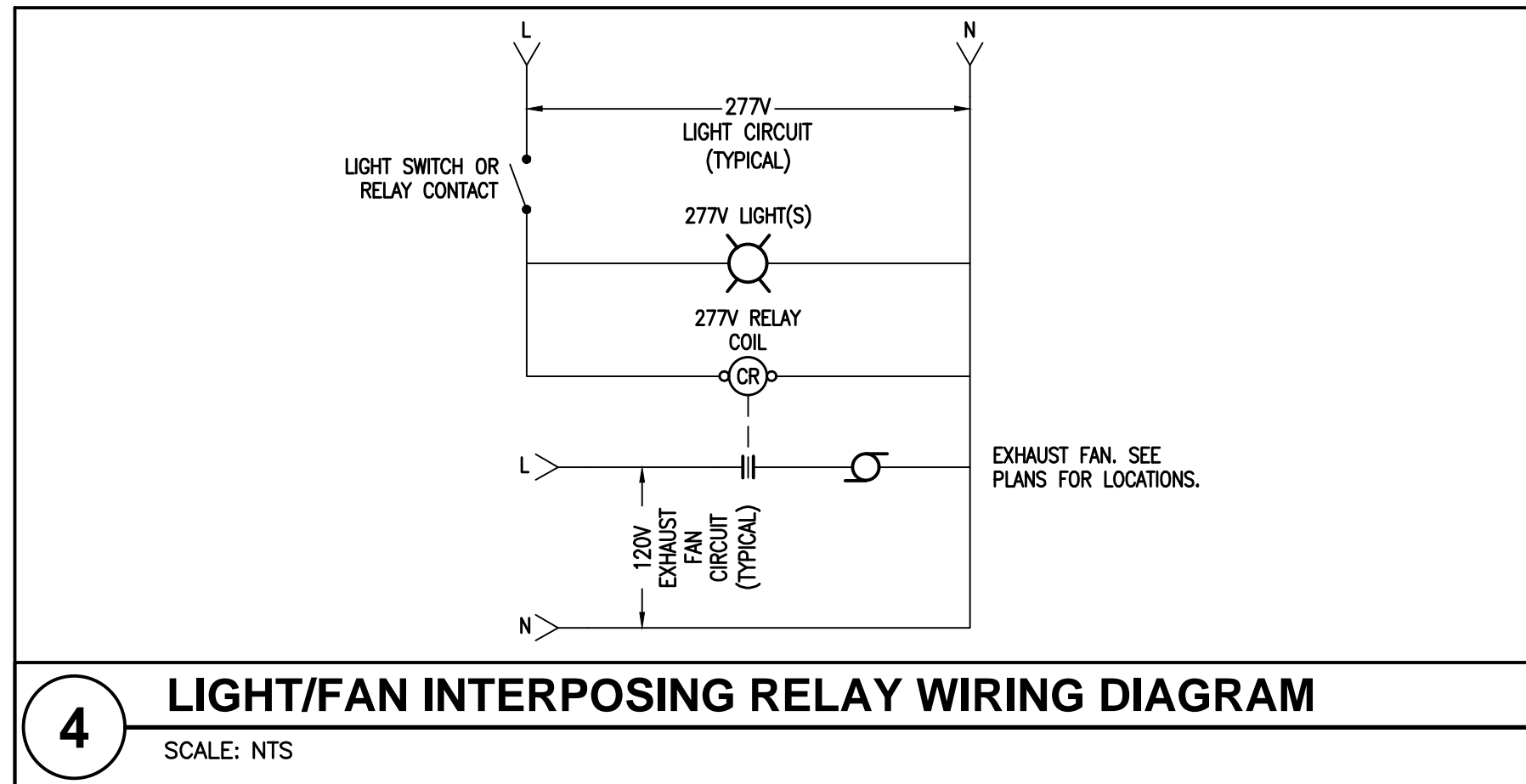
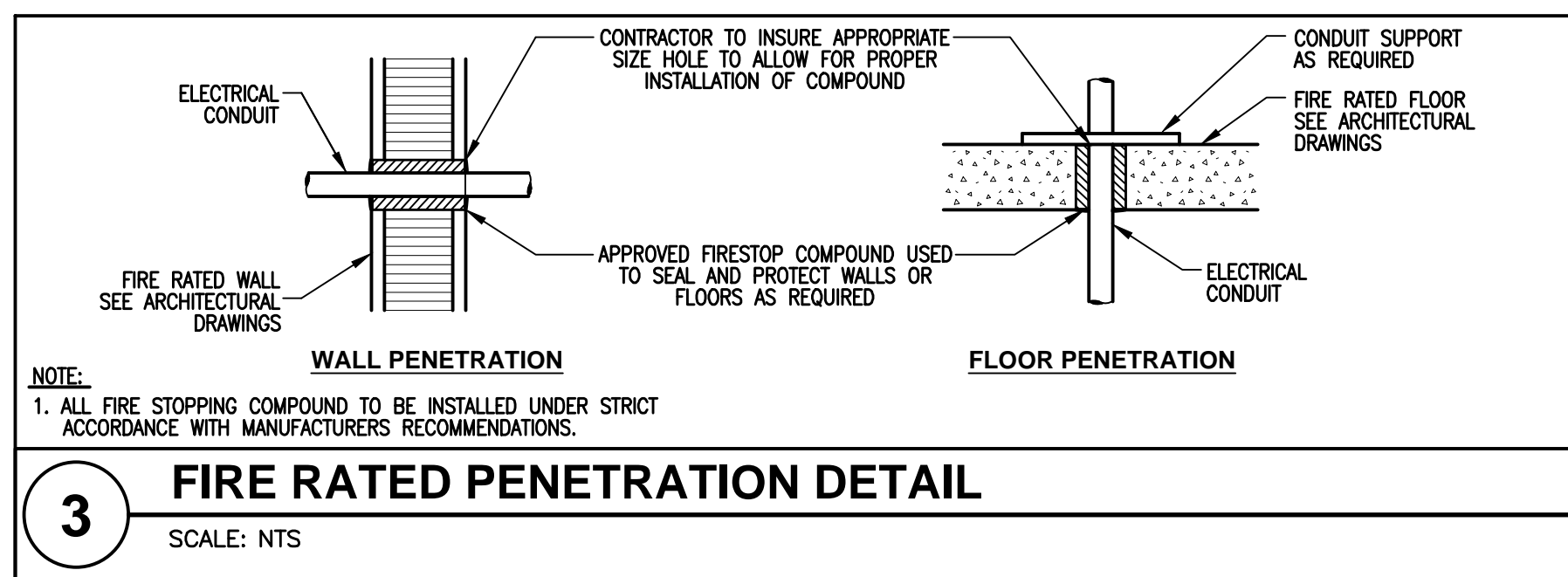
ELECTRICAL KEYED NOTES:

- HATCHED AREA OUTSIDE OF SCOPE.
- RECEPTACLE FOR REFRIGERATOR. LOCATE SUCH THAT THE APPLIANCE WILL SIT TIGHT AGAINST THE WALL.
- EXISTING ELECTRICAL DEVICE(S) TO REMAIN.
- RELOCATE EXISTING ELECTRICAL DEVICE(S) AS SHOWN ON DRAWINGS.
- RECEPTACLE FOR EVIDENCE LOCKER POWER. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH OWNER'S REPRESENTATIVE PRIOR TO ROUGH-IN.



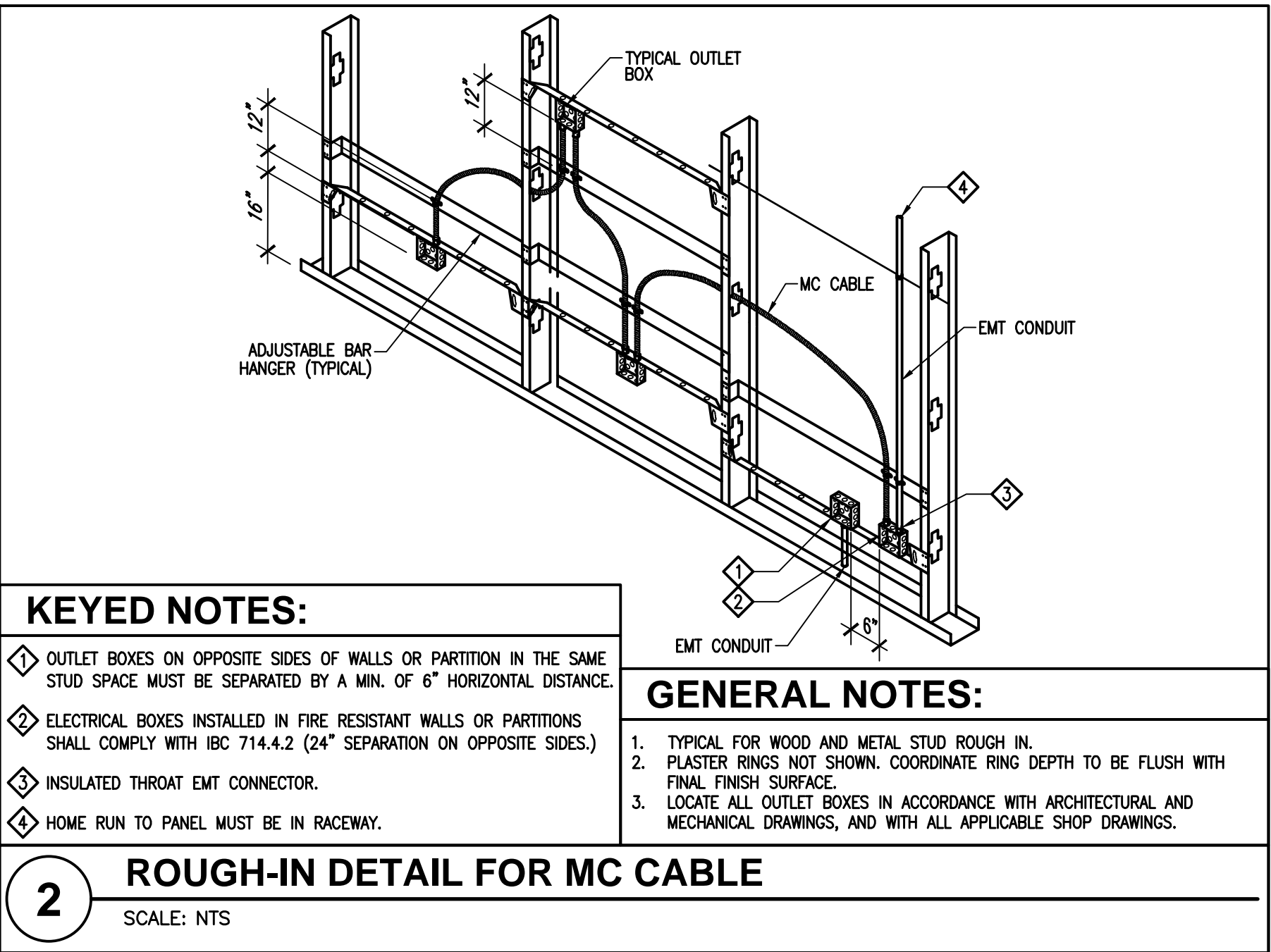
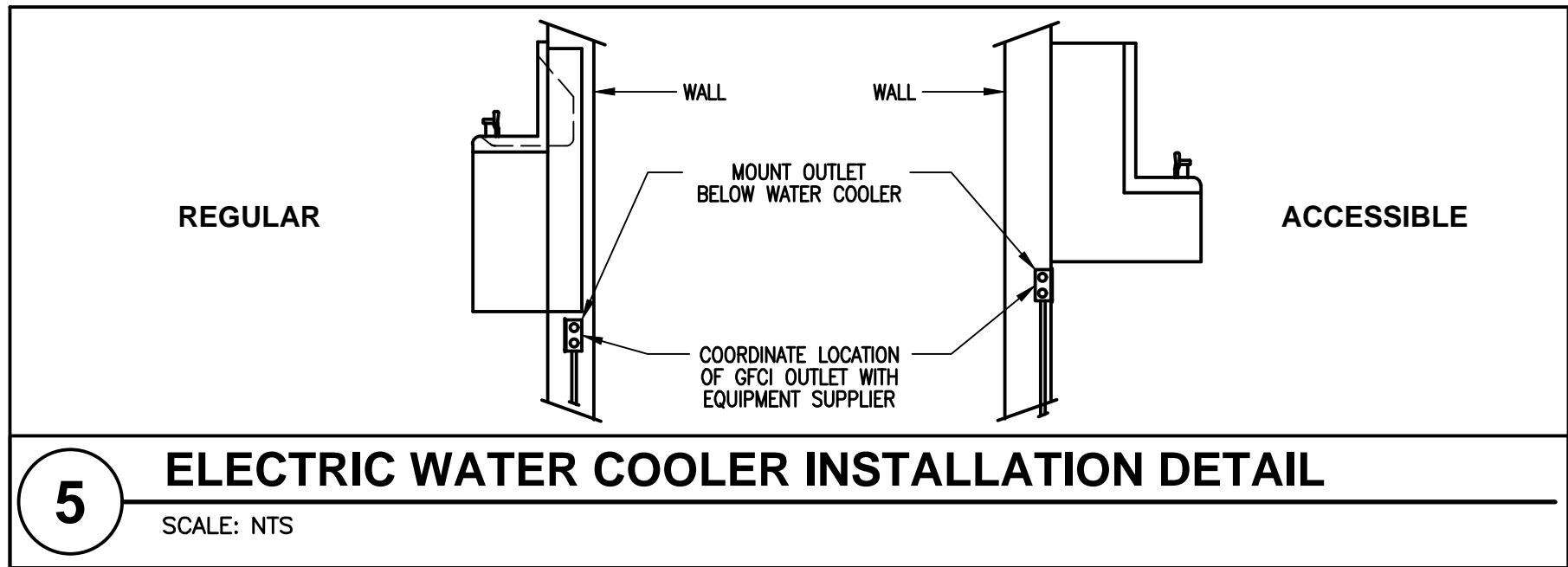








NOT FOR CONSTRUCTION  
11-21-2024





CONTRACTOR BID SET  
NOT FOR CONSTRUCTION  
11-21-2024

PANEL SCHEDULE "EMHA"																																																						
VOLTAGE: 480 Y/277 VOLTS					BUS RATING (AMPS): 225					REMARKS: EXISTING GE PANELBOARD. ELECTRICAL CONTRACTOR TO VERIFY ALL LOADS. BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ENGINEER.																																												
MOUNTING: SURFACE					PHASE: 3					MAIN LUGS ONLY																																												
ENCLOSURE: NEMA 1					WIRE: 4					MINIMUM EQUIPMENT RATING: 25,000 AMPS (RMS-SYM)																																												
CIRCUIT BREAKER															FEEDER					CKT. LOAD					LOAD/PHASE (VA)					CKT. LOAD					FEEDER															CIRCUIT BREAKER				
No.	AMPS	POLE	-	MOD.	CIRCUIT NAME	C	WIRE	GRD	DEMAND FACTOR	WATTS	ØA	ØB	ØC	WATTS	DEMAND FACTOR	GRD	WIRE	C	CIRCUIT NAME	MOD.	-	POLE	AMPS	No.																														
1	20	1	-	EX	EXISTING	¾"	#12	#12	1.00	3,000	6,931			3,931	1.25	#12	#12	¾"	1ST FLOOR EM LIGHTING	EX	-	1	20	2																														
3	20	1	-	EX	EXISTING	¾"	#12	#12	1.00	2,500		5,500		3,000	1.00	#12	#12	¾"	EXISTING	EX	-	1	20	4																														
5	20	1	-	EX	EXISTING	¾"	#12	#12	1.00	2,000			5,000	3,000	1.00	#12	#12	¾"	EXISTING	EX	-	1	20	6																														
7	20	1	-	-	EXISTING	¾"	#12	#12	1.00	2,500	5,500			3,000	1.00	#12	#12	¾"	EXISTING	EX	-	1	20	8																														
9	20	1	-	EX	EXISTING	¾"	#12	#12	1.00	2,500		4,500		2,000	1.00	#12	#12	¾"	EXISTING	EX	-	1	20	10																														
11	20	1	-	EX	EXISTING	¾"	#12	#12	1.00	2,500			4,500	2,000	1.00	#12	#12	¾"	EXISTING	EX	-	1	20	12																														
13	20	1	-	EX	SPARE				1.00		0				1.00				SPARE	EX	-	1	20	14																														
15	20	1	-	EX	SPARE				1.00			0			1.00				SPARE	EX	-	1	20	16																														
17	20	1	-	EX	SPARE				1.00				0		1.00				SPARE	EX	-	1	20	18																														
19	20	1	-	EX	SPARE				1.00		0				1.00				SPARE	EX	-	1	20	20																														
21	20	1	-	EX	SPARE				1.00			0			1.00				SPARE	EX	-	1	20	22																														
23	20	1	-	EX	SPARE				1.00				0		1.00				SPARE	EX	-	1	20	24																														
25	20	1	-	EX	SPARE				1.00		0				1.00				SPARE	EX	-	1	20	26																														
27	20	1	-	EX	SPARE				1.00			0			1.00				SPARE	EX	-	1	20	28																														
29	20	1	-	EX	SPARE				1.00				0		1.00				SPARE	EX	-	1	20	30																														
31	20	1	-	EX	SPARE				1.00		0				1.00				EXISTING	EX	-	3	50	32																														
33	20	1	-	EX	SPARE				1.00			0			1.00				-	-	-	-	-	34																														
35	20	1	-	EX	SPARE				1.00				0		1.00				-	-	-	-	-	36																														
37	20	1	-	EX	SPARE				1.00		0				1.00				EXISTING	EX	-	3	50	38																														
39	20	1	-	EX	SPARE				1.00			0			1.00				-	-	-	-	-	40																														
41	20	1	-	EX	SPARE				1.00				0		1.00				-	-	-	-	-	42																														
NOTES:																																																						
1. ALL INSULATION ON CONDUCTORS TO BE THHN UNLESS NOTED OTHERWISE. INSULATION ON ALL UNDERGROUND EXTERIOR CONDUCTORS SHALL BE THHW.																																																						
2. LOAD DEMANDS CALCULATED AS PER SECTIONS 210 & 220 OF THE NATIONAL ELECTRICAL CODE.																																																						
3. PANEL COVER SHALL BE FIELD MARKED FOR FLASH PROTECTION WITH A PERMANENT LABEL AS REQUIRED BY THE NATIONAL ELECTRICAL CODE SECTION 110. LABEL SHALL READ: "DANGER: POTENTIAL ARC FLASH HAZARD"																																																						
4. PANELBOARD SHALL BE FIELD MARKED WITH THE AVAILABLE FAULT CURRENT PER NEC 408.6.																																																						
5. FIRE ALARM SYSTEMS SHALL HAVE BRANCH CIRCUITS IDENTIFIED BY RED LABELS STATING "FIRE ALARM CIRCUIT" AS REQUIRED BY THE NATIONAL ELECTRICAL CODE ARTICLE 760.418																																																						
6. END-USE METERING CATEGORIES - TOTAL (HVAC) SYSTEM, (INLTG) INTERIOR LIGHTING, (EXLTG) EXTERIOR LIGHTING, (PLUG) LOADS, (PROCESS LOAD, BUILDING OPERATIONS AND OTHER (MISCELLANEOUS LOADS.																																																						
															ØA	ØB	ØC	TOTALS																																				
															12,431	10,000	9,500	31,931	CONNECTED LOAD (VA)																																			
																		38	CONNECTED LOAD (A)																																			
															983	0	0	983	DEMAND FACTOR ADJUSTMENTS (VA)																																			
															13,414	10,000	9,500	32,914	TOTAL LOAD (VA)																																			
															48	36	34		TOTAL LOAD (A)																																			
																		48	MAXIMUM LOAD (A)																																			
															41%	30%	29%		PHASE BALANCE																																			

PANEL SCHEDULE "1HA"																																							
VOLTAGE: 480 Y/ 277 VOLTS					PHASE: 3					BUS RATING (AMPS): 225					REMARKS: EXISTING GE PANELBOARD. ELECTRICAL CONTRACTOR TO VERIFY ALL LOADS. BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ENGINEER.																								
MOUNTING: SURFACE					WIRE: 4					MAIN LUGS ONLY					MINIMUM EQUIPMENT RATING: 25,000 AMPS (RMS-SYM)																								
ENCLOSURE: NEMA 1																																							
CIRCUIT BREAKER					FEEDER					CKT. LOAD					LOAD/PHASE (VA)					CKT. LOAD					FEEDER					CIRCUIT NAME					CIRCUIT BREAKER				
No.	AMPS	POLE	-	MOD.	CIRCUIT NAME					C	WIRE	GRD	DEMAND FACTOR	WATTS	ØA	ØB	ØC	WATTS	DEMAND FACTOR	GRD	WIRE	C	CIRCUIT NAME					MOD.	-	POLE	AMPS	No.							
1	20	1	-	EX	EXISTING					¾"	#12	#12	1.00	2,700	5,700				3,000	1.00	#12	#12	¾"	EXISTING					EX	-	1	20	2						
3	20	1	-	EX	EXISTING					¾"	#12	#12	1.00	2,500			5,500		3,000	1.00	#12	#12	¾"	EXISTING					EX	-	1	20	4						
5	20	1	-	EX	EXISTING					¾"	#12	#12	1.00	2,500				5,200	2,700	1.00	#12	#12	¾"	EXISTING					EX	-	1	20	6						
7	20	1	-	EX	EXISTING					¾"	#12	#12	1.00	3,300			6,800		3,500	1.00	#12	#12	¾"	EXISTING					EX	-	1	20	8						
9	20	1	-	EX	MEDICAL AREA LTG					¾"	#12	#12	1.25	3,945				4,945	1,000	1.00	#12	#12	¾"	EXISTING					EX	-	1	20	10						
11	20	1	-	EX	EXISTING					¾"	#12	#12	1.00	2,500					2,500	1.00				SPARE					EX	-	1	20	12						
13	20	1	-	EX	FITNESS LTG					¾"	#12	#12	1.25	2,408		3,408			1,000	1.00	#12	#12	¾"	EXISTING					EX	-	1	20	14						
15	20	1	-	EX	SPARE												0			1.00				SPARE					EX	-	1	20	16						
17	20	1	-	EX	SPARE									1.00				0		1.00				SPARE					EX	-	1	20	18						
19	20	1	-	EX	SPARE									1.00		0			1.00				SPARE					EX	-	1	20	20							
21	20	1	-	EX	SPARE									1.00			0		1.00				SPARE					EX	-	1	20	22							
23	20	1	-	EX	SPARE									1.00				0	1.00				SPARE					EX	-	1	20	24							
25	20	1	-	EX	SPARE									1.00		0			1.00				SPARE					EX	-	1	20	26							
27	20	1	-	EX	SPARE									1.00			0		1.00				SPARE					EX	-	1	20	28							
29	20	1	-	EX	SPARE									1.00				0	1.00				SPARE					EX	-	1	20	30							
31	20	1	-	EX	SPARE									1.00		0			1.00				SPARE					EX	-	1	20	32							
33	20	1	-	EX	SPARE									1.00			0		1.00				SPARE					EX	-	1	20	34							
35	20	1	-	EX	SPARE									1.00				0	1.00				SPARE					EX	-	1	20	36							
37	20	1	-	EX	SPARE									1.00		0			1.00				SPARE					EX	-	1	20	38							
39	20	1	-	EX	SPARE									1.00			0		1.00				SPARE					EX	-	1	20	40							
41	20	1	-	EX	SPARE									1.00				0	1.00				SPARE					EX	-	1	20	42							

NOTES:

1. ALL INSULATION ON CONDUCTORS TO BE THWN UNLESS NOTED OTHERWISE. INSULATION ON ALL UNDERGROUND EXTERIOR CONDUCTORS SHALL BE THWH.

2. LOAD DEMANDS CALCULATED AS PER SECTIONS 210 & 220 OF THE NATIONAL ELECTRICAL CODE.

3. PANEL COVER SHALL BE FIELD MARKED FOR FLASH PROTECTION WITH A PERMANENT LABEL AS REQUIRED BY THE NATIONAL ELECTRICAL CODE SECTION 110. LABEL SHALL READ: "DANGER. POTENTIAL ARC FLASH HAZARD"

4. FIRE ALARM BOARD SHALL BE FIELD MARKED WITH THE AVAILABLE LABEL CURRENT PER NEC 408.6.

5. FIRE ALARM SYSTEMS SHALL HAVE BRANCH CIRCUITS IDENTIFIED BY RED LABELS STATING "FIRE ALARM CIRCUIT" AS REQUIRED BY THE NATIONAL ELECTRICAL CODE ARTICLE 760.418

6. END-USE METERING CATEGORIES - TOTAL (HVAC) SYSTEM, (MLTG) INTERIOR LIGHTING, (ELXTG) EXTERIOR LIGHTING, (PLUG) LOADS, (PROCESS LOAD, BUILDING OPERATIONS AND OTHER (MISC)CELLANEOUS LOADS.

ØA

ØB

ØC

TOTALS

15,908

10,445

7,700

34,053

602

996

0

1,588

16,510

11,431

7,700

35,641

60

41

28

60

46%

32%

22%

CONNECTED LOAD (VA)

CIRCUIT LOAD (A)

DEMAND FACTOR ADJUSTMENTS (VA)





TOTAL LOAD (VA)

TOTAL LOAD (A)

MAXIMUM LOAD (A)

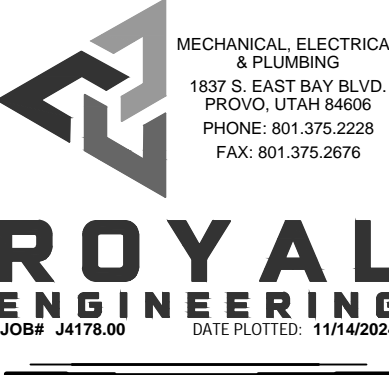
PHASE BALANCE



EQUIPMENT SCHEDULE											
SYMBOL	DESCRIPTION	SERVICE		DISCONNECT		STARTER	LOAD			MOCPI/BRKR	REMARKS
		VOLTS	PHASE	SIZE	FUSE		HP/TON	VA	AMPS		
 1	FAN COIL INDOOR UNIT	208 V	1Ø	2 POLE SWITCH	-	INTEGRAL	-	208	1.0A	15A	POWERED FROM OUTDOOR UNIT
 1	HEAT PUMP OUTDOOR UNIT	208 V	1Ø	30A NEMA 3R	-	INTEGRAL	1 TON	2,288	11.0A	28A	
 1	EXHAUST FAN	120 V	1Ø	INTEGRAL PLUG	-	-	-	14	0.1A	20A	EF CONTROLLED WITH LIGHTING
 2	EXHAUST FAN	120 V	1Ø	INTEGRAL PLUG	-	-	-	17	0.1A	20A	EF CONTROLLED WITH SEPARATE CONTROL SWITCH
NOTES: 1. VERIFY ALL EQUIPMENT LOCATIONS AND CONNECTION REQUIREMENTS (i.e. VOLTAGE, PHASE, FLA, ETC.) WITH MECHANICAL DRAWINGS/SUBMITTALS BEFORE FOR ACTUAL EQUIPMENT INSTALLED. 2. ALL FUSES SHALL BE DUAL ELEMENT TIME DELAY. FINAL BREAKER/FUSE & DISCONNECT SIZE SHALL BE DETERMINED BY MANUFACTURER'S RECOMMENDATION FOR ACTUAL EQUIPMENT INSTALLED. 3. MAXIMUM VALUES INDICATED. 4. DISCONNECTING MEANS NOT REQUIRED FOR EQUIPMENT WITHIN SIGHT (AS DEFINED IN NEC) OF BRANCH PANEL SERVING EQUIPMENT. SEE NEC 422.31 (B). 5. DISCONNECTING MEANS NOT REQUIRED FOR APPLIANCES NOT OVER 300 VA. SEE NEC 422.31 (A).											

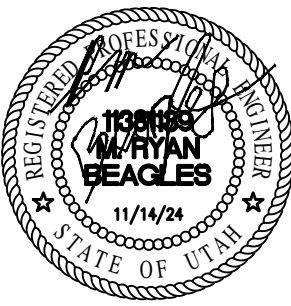
LIGHT FIXTURE SCHEDULE								
FIXTURE NUMBER	FIXTURE MANUFACTURER	FIXTURE CATALOG #	FIXTURE				DESCRIPTION	REMARKS
			TYPE	VOLTS	WATTS	MOUNTING		
F1	OWNER SELECTED CONTRACTOR PROVIDED	OWNER SELECTED CONTRACTOR PROVIDED	LED	277	112	LAY-IN GRID	2X4 LED LAY-IN PARABOLIC LOUVER	FIXTURE TO MATCH EXISTING PARABOLIC LOUVER BUT WITH LED DRIVER INSTEAD OF FLUORESCENT BALLAST. \$200 CONTRACTOR ALLOWANCE.
F1E	OWNER SELECTED CONTRACTOR PROVIDED	OWNER SELECTED CONTRACTOR PROVIDED	LED	277	112	LAY-IN GRID	2X4 LED LAY-IN PARABILIC LOUVER	FIXTURE TO MATCH EXISTING PARABOLIC LOUVERS BUT WITH LED DRIVER INSTEAD OF FLUORESCENT BALLAST. \$200 CONTRACTOR ALLOWANCE. PROVIDE WITH GENERATOR TRANSFER DEVICE.
F2	HALO COMMERCIAL LITHONIA LIGHTOLIER ATLANTIC PRESCOLITE MAXILUME	PD615ED010/PDM6A835/61VC LDN6 35/15 LOGAR LSS MVOLT EZ1 P6RD15N210UVB W/P6RD835VB W/P6RDCC LED6-DLM15-35K-U-6LED10-SS LF6SL-6LFSL15L35K HH6-LED-1500L-DIM10-MVOLT-MD-35K-90/HH6-6501-CL-WH	LED 3500 KELVIN 1500 LUMENS 80 CRI	277	21	RECESSED	LED DOWNLIGHT WITH ALZAK TRIM	
F2E	HALO COMMERCIAL LITHONIA LIGHTOLIER ATLANTIC PRESCOLITE MAXILUME	PD615ED010/PDM6A835/61VC LDN6 35/15 LO6AR LSS MVOLT EZ1 P6RD15N210UVB W/P6RD835VB W/P6RDCC LED6-DLM15-35K-U-6LED10-SS LF6SL-6LFSL15L35K HH6-LED-1500L-DIM10-MVOLT-MD-35K-90/HH6-6501-CL-WH	LED 3500 KELVIN 1500 LUMENS 80 CRI	277	21	RECESSED	LED DOWNLIGHT WITH ALZAK TRIM	PROVIDE WITH GENERATOR TRANSFER DEVICE.
F5	METALUX LITHONIA DAY-BRITE LSI VISIONEERING ORACLE	2BCLED-LD4-28HL-UNV-L835-CD1-U WL2-22L-EZ1-LP835 CSW24-28-35-UNV-DZT-ZO W442-LED-SS-WW-UJE LCAD24-LED-8-35K-020L-UNV 2-OW1B-LED-2000L-DIM10-MVOLT-35K-80	LED 3500 KELVIN 2000 LUMENS 80 CRI	277	31	SURFACE WALL	24" WALL MTD. LED	
EX1	SURELITE LITHONIA CHLORIDE LSI DUAL-LITE MAXILUME	APX7G LOM-S-W-3-G-EL-N ER55L3WG EX-G-U-WB-WH EVEUGWE ELX-603-G-W	INCLUDED	277	1.5	UNIVERSAL	UNIVERSAL MOUNT WITH EXTRA FACE PLATE FOR FIELD CONVERSION 1-2 FACE	NICKEL/CADMIUM BATTERY SINGLE FACE EXIT

PANEL SCHEDULE "EMLA"																															
VOLTAGE: 208 Y/120 VOLTS					BUS RATING (AMPS): 100										REMARKS:																
MOUNTING: SURFACE					PHASE: 3					MAIN LUGS ONLY																					
ENCLOSURE: NEMA 1					WIRE: 4					MINIMUM EQUIPMENT RATING: SEE FAULT CURRENT TABLE																					
CIRCUIT BREAKER										FEEDER		CKT. LOAD		LOAD/PHASE (VA)			CKT. LOAD		FEEDER								CIRCUIT BREAKER				
No.	AMPS	POLE	ENERGY USE <sup>1</sup>	MOD.	CIRCUIT NAME		C	WIRE	GRD	DEMAND FACTOR	WATTS	ØA	ØB	ØC	WATTS	DEMAND FACTOR	GRD	WIRE	C		CIRCUIT NAME		MOD.	ENERGY USE <sup>1</sup>	POLE	AMPS	No.				
1	20	1	-	EX	EXISTING	¾"	#12	#12	1.00	1,500	2,700				1,200	1.00	#12	#12	¾"	EXISTING	EX	-	1	20	2						
3	20	1	-	EX	EXISTING	¾"	#12	#12	1.00	1,500			2,000		500	1.00	#12	#12	¾"	EXISTING	EX	-	1	20	4						
5	20	1	-	EX	SPARE				1.00					500	500	1.00	#12	#12	¾"	EXISTING	EX	-	1	20	6						
7	20	1	-	EX	REFRIGERATOR	¾"	#12	#12	1.00	1,200	1,200				1,000	1.00				SPARE	EX	-	1	20	8						
9	20	1	-	EX	REFRIGERATOR	¾"	#12	#12	1.00	1,200			1,200			1.00				SPARE	EX	-	1	20	10						
11	20	1	-	EX	REFRIGERATOR	¾"	#12	#12	1.00	1,200				1,200		1.00				SPARE	EX	-	1	20	12						
13	20	1	-	EX	SPARE				1.00		0					1.00				SPARE	EX	-	1	20	14						
15	20	1	-	EX	SPARE				1.00				0			1.00				SPARE	EX	-	1	20	16						
17	20	1	-	EX	SPARE				1.00					0		1.00				SPARE	EX	-	1	20	18						
19	20	1	-	EX	SPARE				1.00		0					1.00				SPARE	EX	-	1	20	20						
21	20	1	-	EX	SPARE				1.00				0			1.00				SPARE	EX	-	1	20	22						
23	20	1	-	EX	SPARE				1.00					0		1.00				SPARE	EX	-	1	20	24						
25	20	1	-	EX	SPARE				1.00		0					1.00				SPARE	EX	-	1	20	26						
27	20	1	-	EX	SPARE				1.00				0			1.00				SPARE	EX	-	1	20	28						
29	20	1	-	EX	SPARE				1.00					0		1.00				SPARE	EX	-	1	20	30						
31	20	1	-	EX	SPARE				1.00		0					1.00				SPARE	EX	-	1	20	32						
33	20	1	-	EX	SPARE				1.00				0			1.00				SPARE	EX	-	1	20	34						
35	20	1	-	EX	SPARE				1.00					0		1.00				SPARE	EX	-	1	20	36						
37	20	1	-	EX	SPARE				1.00		0					1.00				SPARE	EX	-	1	20	38						
39	20	1	-	EX	SPARE				1.00				0			1.00				SPARE	EX	-	1	20	40						
41	20	1	-	EX	SPARE				1.00					0		1.00				SPARE	EX	-	1	20	42						
NOTES:																															
1. ALL INSULATION ON CONDUCTORS TO BE THHN UNLESS NOTED OTHERWISE. INSULATION ON ALL UNDERGROUND EXTERIOR CONDUCTORS SHALL BE THHW.																															
2. LOAD DEMANDS CALCULATED AS PER SECTIONS 210 & 220 OF THE NATIONAL ELECTRICAL CODE.																															
3. PANEL COVER SHALL BE FIELD MARKED FOR FLASH PROTECTION WITH A PERMANENT LABEL AS REQUIRED BY THE NATIONAL ELECTRICAL CODE SECTION 110. LABEL SHALL READ: "DANGER: POTENTIAL ARC FLASH HAZARD"																															
4. PANELBOARD SHALL BE FIELD MARKED WITH THE AVAILABLE FAULT CURRENT PER NEC 408.6.																															
5. FIRE ALARM SYSTEMS SHALL HAVE BRANCH CIRCUITS IDENTIFIED BY RED LABELS STATING "FIRE ALARM CIRCUIT" AS REQUIRED BY THE NATIONAL ELECTRICAL CODE ARTICLE 760.41B																															
6. END-USE METERING CATEGORIES - TOTAL (HVAC) SYSTEM, (INTLG) INTERIOR LIGHTING, (EXLTG) EXTERIOR LIGHTING, (PLUG) LOADS, (PROCESS) LOAD, BUILDING OPERATIONS AND OTHER (MISC)ELLANEIOUS LOADS.																															
															ØA	ØB	ØC	TOTALS													
															3,900	3,200	1,700	8,800	CONNECTED LOAD (VA)												
																		24	CONNECTED LOAD (A)												
															0	0	0	0	DEMAND FACTOR ADJUSTMENTS (VA)												
															3,900	3,200	1,700	8,800	TOTAL LOAD (VA)												
															32	27	14		TOTAL LOAD (A)												
																		32	MAXIMUM LOAD (A)												
															44%	36%	19%		PHASE BALANCE												
revision information																															
no. date description																															
drawing title																															
ELECTRICAL SCHEDULES																															



OREM CITY  
PUBLIC  
SAFETY  
BUILDING  
FIRST FLOOR  
INTERIOR REMODEL

95 E. Center Street  
Orem, Utah 84057



revision information  
no. date description

milestone issue date  
NOVEMBER 2024  
milestone issue description  
PERMIT SET  
latest revision date

latest revision description

drawing title  
ELECTRICAL SCHEDULES

E6.2