

ITD D3 TRAINING ADDITION

8150 W CHINDEN BLVD GARDEN CITY, IDAHO

ABBREVIATIONS

C	CENTERLINE	HT	HEIGHT
⊥	PERPENDICULAR	HVAC	HEATING VENTILATING AND AIR CONDITIONING
Ø	DIAMETER	ID.	INSIDE DIAMETER
#	NUMBER	IN.	INCH
(E)	EXISTING	INSUL	INSULATION
(F)	FUTURE	INT.	INTERIOR
(N)	NEW	JANTR	JANITOR
(R)	RELOCATE OR RELOCATED	JT	JOINT
⊕	AT	K.O.	KNOCKOUT
A.B.	AIR CONDITIONING	KT	KITCHEN
A.D.A.A.G.	AMERICANS WITH DISABILITIES ACT	L.F.	LINEAL FEET OR FOOT
A.F.F.	ABOVE FINISH FLOOR	L.P.	LOW POINT
A.O.A.	AIRLINES OPERATION AREA	LAM	LAMINATE
AC	AIR CONDITIONING	LAV	LAVATORY
ABV.	ABOVE	LBS	POUNDS
ACUST.	ACOUSTICAL	M.D.	MASONRY OPENING
ADJ.	ADJUSTABLE	M.H.	MANHOLE
AGG.	AGGREGATE	M.S.	MAXIMUM
ALT.	ALTERNATIVE	MECH	MECHANICAL
ALUM	ALUMINUM	MET	METAL
APPROX.	APPROXIMATE	MFR.	MANUFACTURER
ARCH.	ARCHITECTURAL	MN.	MISCELLANEOUS
AUTO.	AUTOMATIC	MISC.	MISCELLANEOUS
AVE	AVE	MTD	MOUNTED
B.O.	BOTTOM OF	N	NORTH
B.O.C.	BASE OF CURB	N.I.C.	NORTH CONTRACT
BLU	BUILT UP	N.S.	NEAR SIDE
BD.	BOARD	N.T.S.	NOT TO SCALE
BLDG.	BUILDING	NO.	NUMBER
BLK	BLOCK	NOM.	NORMAL
BM	BEAM	O.A.	OVER ALL
BOT.	BOTTOM	O.C.	ON CENTER
G.B.	CATCH BASIN	O.D.	OUTSIDE DIAMETER
C.C.	CENTER TO CENTER	O.H.	OPPOSITE HAND
C.I.P.	CAST IN PLACE	O.T.S.	OPEN TO STRUCTURE
C.M.U.	CONCRETE MASONRY UNIT	OV	OVER
C.O.	CONCRETE OPENING OR CLEAN-OUT	OH	OVERHEAD
C.T.	CERAMIC TILE	OFF	OFFICE
C.W.	COLD WATER	OPNG	OPENING
CAB	CABINET	OPP.	OPPOSITE
CEM	CEMENT	OUNC	OUNCE
CFM	CUBIC FEET/MINUTE	P.LAM	PLASTIC LAMINATE
CLB	CEILING	P.D.	PAPER TOWEL DISPENSER
CLR	CLEAR	P.L.	PROPERTY LINE
CONTRBK	COUNTER/BUNK	PART	PARTICLE
COL	COLUMN	PL	PLATE
CONC	CONCRETE	PLUMB.	PLUMBING
CONT.	CONTINUED	PLYWOOD	PLYWOOD
CORR	CORRIDOR	PRE-ENG.	PRE-ENGINEERED
CW	COORDINATE WITH	PT	POINT
D	DEFORMED BAR ANCHOR	PTSP	PAVEMENT
D.B.A.	DRAINING FOUNTAIN	QT	QUARRY TILE
D.S.	DOWNSPUT	R	RADIUS OR RADIUS
D.S.P.	DRY STANDPIPE	R.D.	ROUGH DRAIN
DI	DIAMETER	R.O.	ROUGH OPENING
DIA.	DIAGONAL	R.W.L.	RAIN WATER LEADER
DN	DIMENSION	RE	REFERENCE (C/W)
DN	DOWN	RENF	REINFORCED
DWG.	DRAWING	REQD.	REQUIRED
E.B.	EXPANSION BOLT	S.C.	SOLID CORE
E.I.F.S.	EXTERIOR INSULATION & FINISHING SYSTEM	S.C.D.	SEAT COVER DISPENSER
E.J.	EXPANSION JOINT	S.D.	SOAP DISPENSER
E.P.	ELECTRICAL PANELBOARD	S.F.	SQUARE FEET OR FOOT
E.W.C.	ELECTRIC WATER COOLER	S.I.D.A.	SECURITY IDENTIFICATION DISPLAY AREA
EA	EACH	S.N.D.	SANITARY NAPKIN DISPENSER
EL	ELEVATION	S.N.R.	SANITARY NAPKIN RECEPTACLE
ELEC.	ELECTRICAL	S.S.	STAINLESS STEEL
ELEV.	ELEVATOR	SCHED.	SCHEDULE
EQ	EQUAL	SECT	SECTION
EQUIP	EQUIPMENT	SHR.	SHOWER
EXH	EXHAUST	SHT.	SHEET
EXP.	EXPANSION	SIM	SIMILAR OR SIMILAR TO
EXT.	EXTERIOR	SPTS.	SPECIFICATIONS
FA	FIRE ALARM	SQ.	SQUARE
F.B.	FLAT BAR	ST.	STREET OR STEEL
F.B.D.	FIRE BRAN	STD.	STANDARD
F.E.	FIRE EXTINGUISHER	STRUC.	STRUCTURAL
F.E.C.	FIRE EXTINGUISHER CABINET	SUSP.	SUSPENDED
F.H.C.	FIRE HOSE CABINET	SYM.	SYMMETRICAL
F.O.	FACE OF	T.G.	TONGUE & GROOVE
F.O.C.	FACE OF CURB/CONCRETE	T.	TREAD
F.O.F.	FACE OF FINISH	T.B.	TOWEL BAR
F.O.M.	FACE OF MASONRY	T.D.	TOP OF DRAIN
F.O.S.	FACE OF STUDS	T.O.	TOP OF
F.O.T.	FACE OF TREAD	T.O.C.	TOP OF CURB/CONCRETE
F.S.	FAR SIDE	T.O.M.	TOP OF MASONRY
FN	FOUNDATION	T.O.P.	TOP OF PARAPET
FL	FLOORING	T.O.S.	TOP OF SLAB
FLASH	FLASHING	T.O.W.	TOP OF WALL
FT.	FOOT OR FEET	T.P.D.	TILE PAPER DISPENSER
FTW.	FIRE TREATED WOOD	TEL	TELEPHONE
FURR.	FURRING	THK.	THICKNESS
G.	GAS	THRES.	THRESHOLD
G.B.	GRIFF BAR	TRK.	TRUCK
GA.	GAUGE OR GAGE	U.B.C.	UNIFORM BUILDING CODE
GALV.	GALVANIZED	U.O.N.	UNLESS OTHERWISE NOTED
GVP	GYPSON	V.C.T.	VENT COMPOSITION TILE
H.	HIGH	V.I.F.	VERIFY IN FIELD
H.A.S.	HEADED ANCHOR STUD	VERT.	VERTICAL
H.A.S.	HEADED CONCRETE ANCHOR	VEST.	VESTIBULE
H.B.	HOSE BIBB	W.	WIDE
H.C.	HANDICAPPED - A.D.A.A.G.	W.B.	WALL BEYOND
H.M.	HOLLOW METAL	W.C.	WATER CLOSET OR WALL COVERING
H.P.	HIGH POINT	W.G.	WIRE GLASS
H.W.	HOT WATER	W.G.	WIRE GLASS
HORIZ.	HORIZONTAL	W.P.	WORK POINT
HR.	HOUR	W.R.	WASTE RECEPTACLE
		W.W.F.	WELDED WIRE FABRIC
		W.	WITH
		WO	WITHOUT
		WD.	WOOD

PROJECT DESCRIPTION

PROJECT INCLUDES THE ADDITION OF A TRAINING ROOM TO AN EXISTING BUILDING USED AS A TRAINING AND TESTING FACILITY FOR MATERIAL TESTING LAB.

WORK CONSISTS OF:

- DEMOLITION OF (1) EXTERIOR DOOR
- RELOCATION OF ELECTRICAL SERVICE AND GAS METER
- ADDITION OF A TRAINING ROOM
- RELOCATION OF (1) SECURITY GATE AND ASSOCIATED FENCE
- ADDITION OF (1) SECURITY GATE AND ASSOCIATED FENCE
- ADDITION OF A SITE EQUIPMENT ENCLOSURE
- ADDITION OF FIRE ALARMS

GENERAL NOTES

- THE APPLICABLE BUILDING CODE IS THE 2018 INTERNATIONAL BUILDING CODE (2018 IBC).
- THE DRAWINGS INDICATE LOCATION, DIMENSIONS, REFERENCE, AND TYPICAL DETAILS OF CONSTRUCTION. THE DRAWINGS DO NOT INDICATE EVERY CONDITION. WORK NOT PARTICULARLY DETAILED SHALL BE OF CONSTRUCTION SIMILAR TO PARTS THAT ARE DETAILED.
- DO NOT SCALE DRAWINGS.
- FIGURED DIMENSIONS TAKE PRECEDENCE OVER SCALED DRAWINGS. WHERE DISCREPANCIES OCCUR, THEY SHALL BE REPORTED TO ARCHITECT FOR RESOLUTION.
- DETAILED DRAWINGS AND LARGER SCALE DRAWINGS TAKE PRECEDENCE OVER SMALLER SCALE DRAWINGS.
- CONCRETE AND BRICK DIMENSIONS ARE GIVEN TO THE FACE OF CONCRETE OR MASONRY AND TO THE FACE OF ROUGH OPENINGS.
- PARTITION DIMENSIONS ARE GIVEN TO THE FACE OF STUD UNLESS OTHERWISE NOTED.
- DOOR OPENING LOCATIONS ARE DIMENSIONED TO ROUGH OPENING OR CENTERLINE OF OPENING.
- WHERE NO MATERIAL NOTES OCCUR, THE GRAPHIC MATERIAL INDICATION SHALL INDICATE MATERIAL TYPES AND ITEMS. SEE SYMBOL AND MATERIALS LIST ON THIS SHEET.
- THE U.S. ENVIRONMENTAL PROTECTION AGENCY MUST BE NOTIFIED 10 WORKING DAYS IN ADVANCE FOR ALL RENOVATIONS THAT DISTURB 260 L.F. / 1660 SQ. FT. / 35 CU. FT. OF ASBESTOS CONTAINING MATERIALS.
- ALL NEW CONSTRUCTION TO COMPLY WITH THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (A.D.A.A.G.), ICC/ANSI A117.1-2010 (2018 IBC SECTION 1101).
- PROVIDE LANDINGS AND FLOOR LEVELS AT DOORS THAT COMPLY WITH THE 2018 IBC SECTION 1003.5.1010.1.6/1010.1.7. UNLESS OTHERWISE INDICATED ALL DRAWINGS, NOTES WHICH DO NOT READ "N.I.C.", "EXISTING", OR "EXISTING TO REMAIN", OR "BY OTHERS" SHALL INDICATE NEW WORK WHICH SHALL BE CONTRACTOR FURNISHED AND CONTRACTOR INSTALLED.
- ALL MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS. THE CONTRACTOR(S) SHALL KEEP ALL AREAS OF CONSTRUCTION CLEAN AND FREE OF DEBRIS. AFTER CONSTRUCTION IS COMPLETE, THE GENERAL CONTRACTOR SHALL PROVIDE FINAL CLEAN UP.
- THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS FOR ACCURACY PRIOR TO COMMENCING WITH THE WORK. ANY DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT.
- PENETRATIONS THROUGH RATED ASSEMBLIES SHALL BE FIRE STOPPED IN ACCORDANCE WITH 2018 IBC SECTION 714.4.1 AND 714.4.1.2. PROVIDE A FIRESTOPPING SYSTEM APPROPRIATE FOR THE WORK BEING PERFORMED. PAINTABLE SEALANT SHALL BE PROVIDED AT ALL EXPOSED AREAS. PROVIDE COPIES OF THE SPECIFIC FIRE-STOP SYSTEMS PROPOSED FOR USE IN THIS PROJECT AT PENETRATIONS OF ONE-HOUR WALLS OR TWO-HOUR SHAFTS AND FLOOR ASSEMBLIES. FOR APPROVAL AND INSPECTION USE BY THE FIRE AND STRUCTURAL INSPECTORS. ASSEMBLIES SHALL SHOW ALL REQUIRED COMPONENTS AND METHOD OF INSTALLATION TO PROVIDE THE REQUIRED FIRE-STOP RATINGS AS SYSTEM BEING PENETRATED.
- THIS SPACE MAY NOT BE OCCUPIED UNTIL IT RECEIVES A CERTIFICATE OF OCCUPANCY AND FIRE DEPARTMENT APPROVAL. CONTRACTOR SHALL NOT CORE DRILL WITHOUT VERIFYING LOCATION OF CONCRETE REINFORCING.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS AND FEES NECESSARY TO EXECUTE THE INTENT OF THESE CONSTRUCTION DOCUMENTS.
- EXIT SIGNAGE SHALL BE EXTERNALLY OR INTERNALLY ILLUMINATED BY THE PREMISES WIRING, STORAGE BATTERIES AND, BE IN COMPLIANCE WITH 2018 IBC SECTION 1013.
- PROVIDE BLOCKING AS REQUIRED FOR ALL AREAS TO RECEIVE MILLWORK AND WALL-ATTACHED ITEMS AS SHOWN IN PLANS.
- ALL EXITS SHALL BE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT. 2018 IBC, SECTION 1010.1.9.
- EXIT WAYS SHALL BE ILLUMINATED. THE POWER SUPPLY FOR EXIT ILLUMINATION SHALL NORMALLY BE PROVIDED BY THE PREMISES WIRING SYSTEM. 2018 IBC SECTION 1008.
- COORDINATE MECHANICAL AND ELECTRICAL REQUIREMENTS, ROUTING, AND FIELD VERIFICATION.
- WHERE NEW CONSTRUCTION JOINS WITH EXISTING CONSTRUCTION, ALIGN FINISHED SURFACE OF NEW CONSTRUCTION WITH EXISTING CONSTRUCTION.
- PROVIDE COPY OF FIRE-RESISTANCE RATING ASSEMBLIES TO THE STRUCTURAL INSPECTOR FOR VERIFICATION OF TESTING LISTING COMPLIANCE AND TO INSPECT ASSEMBLY CONSTRUCTION THEREWITH.
- COORDINATE CONSTRUCTION ACTIVITIES WITH OWNER.
- FIRE SPRINKLER AND ALARM MODIFICATIONS REQUIRE SEPARATE APPLICATION AND PLAN SUBMITTALS PRIOR TO PERFORMING WORK. ALL LIFE-SAFETY FEATURES SHALL BE APPROVED BY THE FIRE AND STRUCTURAL INSPECTORS PRIOR TO OCCUPANCY.
- ALL CONSTRUCTION ADDENDA, CHANGE ORDERS, OR DESIGN CLARIFICATIONS TO THOSE ITEMS REGULATED BY THE CODES MUST BE SUBMITTED TO THE FIELD INSPECTOR FOR REVIEW AND APPROVAL PRIOR TO COMMENCING WITH ANY OF THE PROPOSED WORK RELATED TO THE PROPOSED FIELD CHANGE.
- SUSPENDED CEILING SYSTEMS TO BE INSTALLED IN ACCORDANCE WITH 2018 IBC SECTION 808.1.1.1 AND ASTM C 635 AND ASTM C 636.
- ALL INSULATION MATERIALS SHALL COMPLY WITH 2018 IBC SECTION 720.
- HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERABLE PARTS ON ACCESSIBLE DOORS SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST TO OPERATE. SUCH HARDWARE SHALL BE AT 34" MINIMUM AND 48" MAXIMUM ABOVE THE FLOOR OR GROUND. 2018 IBC SECTION 1010.1.9.
- COMBUSTIBLE MATERIALS SHALL NOT BE USED IN CONCEALED SPACES UNLESS EVIDENCE OF COMPLIANCE WITH 2018 IBC SECTION 717.5 IS PROVIDED TO THE STRUCTURAL INSPECTOR FOR REVIEW AND APPROVAL.
- DECORATIVE MATERIALS AND TRIM SHALL BE RESTRICTED BY COMBUSTIBILITY AND THE FLAME PROPAGATION PERFORMANCE CRITERIA OF NFPA 701. IN ACCORDANCE WITH 2018 IBC SECTION 806. CONTRACTOR SHALL HAVE CERTIFICATE OF COMPLIANCE FOR DECORATIVE MATERIALS AND TRIM, INDICATING COMPLIANCE WITH THIS CODE SECTION AS APPLICABLE TO THIS PROJECT AVAILABLE AT PROJECT SITE.
- CONTRACTOR SHALL HAVE AVAILABLE AT THE JOB SITE EVIDENCE OF CODE COMPLIANCE OF RATING OF WALL AND CEILING FINISH MATERIALS AT CONSTRUCTION SITE FOR REVIEW BY FIRE AND STRUCTURAL FIELD INSPECTORS IN ACCORDANCE WITH 2018 IBC SECTION 803 AND TABLE 803.13.
- ACCESS TO MECHANICAL APPLIANCES INSTALLED IN UNDER-FLOOR AREAS, IN ATTIC SPACES AND ON ROOFS OR ELEVATED STRUCTURES SHALL BE IN ACCORDANCE WITH THE INTERNATIONAL MECHANICAL CODE.
- CONTROLS, OPERATING MECHANISMS AND HARDWARE INTENDED FOR OPERATION BY THE OCCUPANT, INCLUDING SWITCHES THAT CONTROL LIGHTING AND ACCESSIBLE.
- VENTILATION AND EXHAUST SYSTEMS SHALL BE PROVIDED AS REQUIRED BY THE INTERNATIONAL MECHANICAL CODE AND THE INTERNATIONAL FIRE CODE.

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MATERIALS & SYMBOLS

	EARTH		WINDOW TYPE, RE: A82 WINDOW TYPES
	POROUS FILL - GRAVEL		DOOR NUMBER, RE: A82 DOOR SCHEDULE
	SAND FILL		MATERIAL FINISH, RE: I11 FINISH SCHEDULE
	CONCRETE		RELATED SPECIFICATION DIVISION
	CONCRETE MASONRY UNIT (NORMAL WEIGHT)		SHEET NOTE, RE: SHEET NOTES LIST ON CURRENT PAGE
	SINGLE GLAZING		WALL TYPE, RE: A21 FOR WALL TYPES WITH VARIABLE HEIGHT, SEE TOP OF WALL ELEVATION
	INSULATED GLAZING		ACCESSORY/FIXTURE TYPE
	METAL, (LARGE SCALE DRAWING)		REVISION KEY RE: REVISED BOX IN TITLE BLOCK OF CURRENT PAGE
	METAL, (SMALL SCALE DRAWING)		PROPERTY LINE
	FRAMING LUMBER		SWALE/FLOW LINE
	PLYWOOD		BUILDING GRID LINE
	PARTICLE BOARD		STRUCTURE CENTERLINE
	FINISH LUMBER		ELEVATION POINT
	GYPSON BOARD		BUILDING SECTION MARK REF. (SEE DWG. #1 @ SHT. A61)
	ACOUSTIC TILE/PANEL		WALL SECTION MARK REF. (SEE DWG. #1 @ SHT. A61)
	BATT INSULATION		DETAIL REFERENCE (SEE DWG. #1 @ SHT. A61)
	SEMI-RIGID INSULATION		DETAIL SECTION MARK
	RIGID INSULATION		INTERIOR ELEVATIONS SEE DWG. #1 @ SHT. I51
	MOISTURE BARRIER		ROOM NAME ROOM NUMBER
	ASPHALT PAVING		NUMBER OF OCCUPANTS OCCUPANCY FACTOR
			ACCESSORY USE AREA OF ROOM

DRAWING INDEX

GENERAL
 G00 TITLE SHEET
 G11 CODE & COMM CHECK
 G71 ASSEMBLIES

DEMO ARCHITECTURAL
 AS21 DEMO PLAN

CIVIL
 C00 GENERAL INFORMATION SHEET
 C10 SITE DEMOLITION PLAN
 C20 EROSION CONTROL PLAN
 C40 SITE IMPROVEMENT PLAN

LANDSCAPE
 L10 LANDSCAPE PLAN
 L20 LANDSCAPE DETAILS
 L30 LANDSCAPE SPECIFICATIONS

STRUCTURAL
 S0 Foundation Plan
 S1 First Floor Framing Plan
 S2 Second Floor Framing
 S3 Roof Framing

ARCHITECTURAL
 A21 FLOOR PLAN & RCP
 A23 ROOF PLAN
 A51 EXTERIOR ELEVATIONS
 A61 SECTIONS
 A72 EXTERIOR DETAILS
 A73 CEILING DETAILS
 A75 DOOR & WINDOW DETAILS
 A82 DOOR & WINDOW SCHEDULES

INTERIORS
 I11 FLOOR FINISH PLAN
 I51 INTERIOR ELEVATIONS
 I71 DETAILS

PLUMBING
 P11 PLUMBING DEMOLITION FLOOR PLANS
 P21 PLUMBING NEW WORK FLOOR PLANS
 P31 PLUMBING NEW WORK ROOF PLAN
 P40 PLUMBING DETAILS AND SCHEDULE

MECHANICAL
 M00 MECHANICAL COVER SHEET
 M11 MECHANICAL DEMOLITION FLOOR PLANS
 M21 MECHANICAL NEW WORK FLOOR PLANS
 M31 MECHANICAL NEW WORK ROOF PLAN
 M40 MECHANICAL DETAILS
 M50 MECHANICAL DETAILS & SCHEDULES
 M60 MECHANICAL CONTROLS

ELECTRICAL
 E00 ELECTRICAL COVER SHEET
 E01 LIGHTING COMPLIANCE
 E11 ELECTRICAL SITE PLAN
 E21 ELECTRICAL DEMOLITION FLOOR PLANS
 E31 LIGHTING AND MECHANICAL POWER FLOOR PLANS
 E41 POWER AND SPECIAL SYSTEMS FLOOR PLANS
 E51 ELECTRICAL LEVEL 2 AND ROOF PLANS
 E60 ELECTRICAL DETAILS
 E70 ELECTRICAL DETAILS AND SCHEDULES

PROJECT INFORMATION

PROJECT ADDRESS: 8150 W CHINDEN BLVD
 CONSTRUCTION TYPE: TYPE V-B
 OCCUPANCY GROUP: B / A3

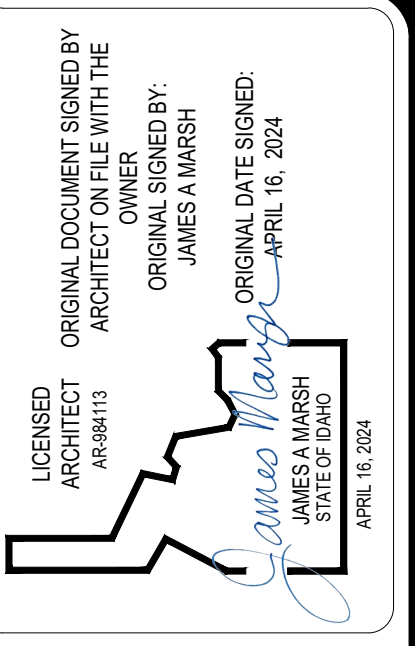
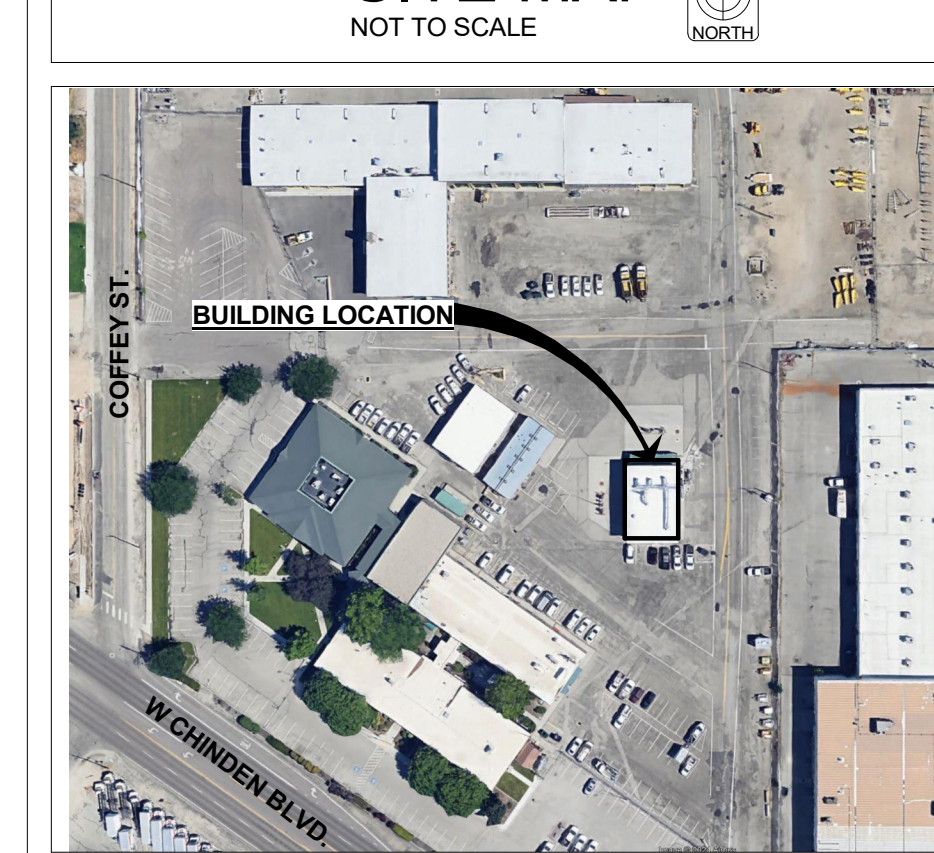
ZONING: UNINCORPORATED AREA OF IMPACT

2018 INTERNATIONAL BUILDING CODE (IBC)
 2018 INTERNATIONAL EXISTING BUILDING CODE (IEBC)
 2018 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)
 2018 UNIFORM PLUMBING CODE (UPC)
 2018 INTERNATIONAL MECHANICAL CODE (IMC)
 2018 INTERNATIONAL FUEL GAS CODE (IFGC)
 2017 NATIONAL ELECTRICAL CODE (NEC)
 2017 IDAHO STATE PLUMBING CODE (ISPC)

ALLOWABLE AREA (PER IBC 2018 SECTIONS 503, SECTION 506, TABLE 506.2 AND SECTION 508.4.2)
 TABULAR AREA (OCCUPANCY/ CONSTRUCTION TYPE):
 B AREA 2,446/9,000 + A3 AREA 1,174/6,000=0.467

SQUARE FOOTAGE:
 TOTAL BUILDING AREA: 3,620 SF

SITE MAP



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CSHQA

PERMIT SET

PROJECT	DATE
24009	04-11-24
DRAWN	CHECKED
JLH	AJL

REVISED

SHEET TITLE

TITLE SHEET

SHEET

G00
 ORIGINAL SHEET SIZE
 24" x 36"

COMcheck Software Version COMcheckWeb
Envelope Compliance Certificate

Project Information

Energy Code: 2018 IECC
Project Title: ITD D3 TRAINING ROOM ADDITION
Location: Garden City, Idaho
Climate Zone: 5b
Project Type: New Construction
Vertical Glazing / Wall Area: 6%

Construction Site: 8150 W CHINDEN BLVD, Garden City, Idaho 83714
Owner/Agent: IDAHO TRANSPORTATION DEPT., 3311 W STATE ST., BOISE, Idaho 83703, 208-334-8600, tony.pirc@itd.idaho.gov
Designer/Contractor: JAMES MARSH ARCHITECT, CSHQA, 200 BROAD ST., BOISE, Idaho 83702, 208-343-4635, james.marsh@csqha.com

Additional Efficiency Package(s)

Credits: 1.0 Required, 1.0 Proposed
High Performance HVAC, 1.0 credit

Building Area	Floor Area
1-Office: Nonresidential	1176

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor _{req}
Roof: Insulation Entirely Above Deck, [Bldg. Use 1 - Office]	1330	---	30.0	0.032	0.032
Floor: Unheated Slab-On-Grade, Vertical 2 ft., [Bldg. Use 1 - Office] (c)	1314	---	10.0	0.540	0.540
NORTH					
Ext. Wall: Wood-Framed, 16in. o.c., [Bldg. Use 1 - Office]	509	20.0	0.0	0.064	0.064
EAST					
Ext. Wall: Wood-Framed, 16in. o.c., [Bldg. Use 1 - Office]	509	20.0	0.0	0.064	0.064
Window: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID Kawneer with solarban 60, SHOC 0.38, PF 0.30, [Bldg. Use 1 - Office] (b)	8	---	---	0.290	0.300
Door: Insulated Metal, Swinging, [Bldg. Use 1 - Office]	24	---	---	0.130	0.370
Door: Glass (over 50% glazing): Metal Frame, Entrance Door, Perf. Specs.: Product ID Kawneer door, SHOC 0.32, PF 0.30, [Bldg. Use 1 - Office] (b)	21	---	---	0.290	0.770
Window: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID Kawneer with solarban 60, SHOC 0.38, PF 0.30, [Bldg. Use 1 - Office] (b)	20	---	---	0.290	0.300
Window: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID Kawneer with solarban 60, SHOC 0.38, PF 0.30, [Bldg. Use 1 - Office] (b)	20	---	---	0.290	0.300
Window: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID Kawneer with solarban 60, SHOC 0.38, PF 0.30, [Bldg. Use 1 - Office] (b)	20	---	---	0.290	0.300
Window: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID Kawneer with solarban 60, SHOC 0.38, PF 0.30, [Bldg. Use 1 - Office] (b)	20	---	---	0.290	0.300
Window: Metal Frame with Thermal Break: Fixed, Perf. Specs.: Product ID Kawneer with solarban 60, SHOC 0.38, PF 0.30, [Bldg. Use 1 - Office] (b)	34	---	---	0.290	0.300

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Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor _{req}
Product ID Kawneer with solarban 60, SHOC 0.38, PF 0.30, [Bldg. Use 1 - Office] (b)					
SOUTH					
Ext. Wall: Wood-Framed, 16in. o.c., [Bldg. Use 1 - Office]	509	20.0	0.0	0.064	0.064
WEST					
Ext. Wall: Wood-Framed, 16in. o.c., [Bldg. Use 1 - Office]	560	20.0	0.0	0.064	0.064

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.
(b) Fenestration product performance must be certified in accordance with NFRC and requires supporting documentation.
(c) Slab-On-Grade proposed and budget U-factors shown in table are F-factors.

Envelope Passes: Design 3% better than code

Envelope Compliance Statement

Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 2018 IECC requirements in COMcheck Version/COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

JORGE HERNANDEZ - AIT II 04/08/2024
Name - Title Signature Date

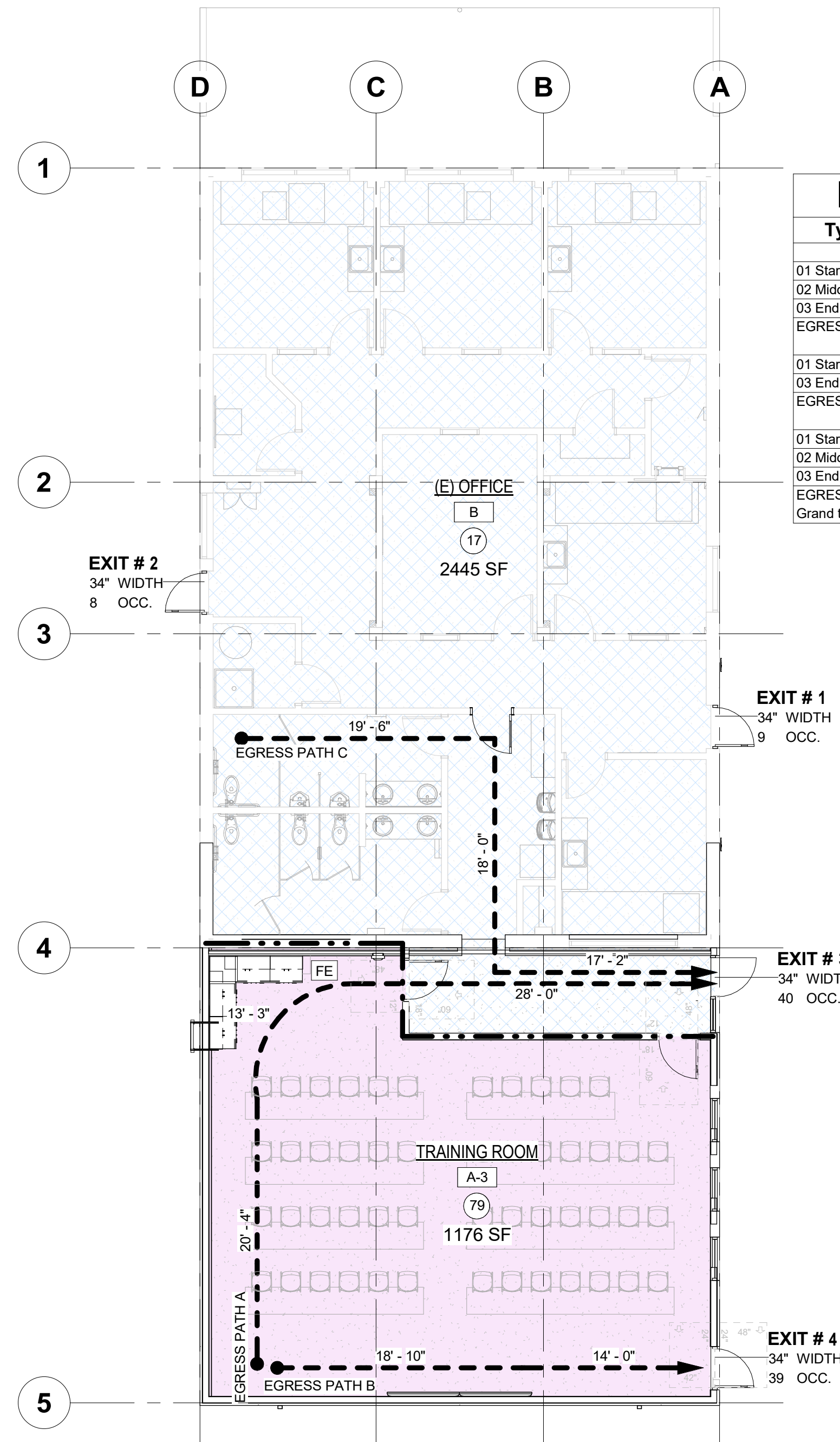
Project Title: ITD D3 TRAINING ROOM ADDITION Report date: 04/08/24
Data Filename: Page 2 of 17

Area Schedule (Occupancy Data)					
Name	Occupancy Type	Area	S.F. Per Person	Number of Occupants	Area - Net/Gross

LEVEL 1					
(E) OFFICE	B	2445 SF	150 SF	17	Gross
TRAINING ROOM	A-3	1176 SF	15 SF	79	Net
		3621 SF		96	

OCCUPANCY TYPE LEGEND

- A-3: Assembly without fixed seats - Unconcentrated (tables and chairs)
- B: Business areas



EGRESS DATA

Type	EXIT ROUTE	DISTANCE
01 Start	EGRESS PATH A	20' - 4"
02 Middle Arc	EGRESS PATH A	13' - 3"
03 End	EGRESS PATH A	28' - 0"
EGRESS PATH A: 3 61' - 7"		
01 Start	EGRESS PATH B	18' - 10"
02 Middle Arc	EGRESS PATH B	14' - 0"
03 End	EGRESS PATH B	32' - 10"
EGRESS PATH B: 2 32' - 10"		
01 Start	EGRESS PATH C	19' - 6"
02 Middle Arc	EGRESS PATH C	18' - 0"
03 End	EGRESS PATH C	17' - 2"
04 End	EGRESS PATH C	54' - 8"
EGRESS PATH C: 3 149' - 0"		
Grand total: 8 149' - 0"		

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

PLUMBING FIXTURES PER 2018 IBC CHAPTER 29 TABLE 2902.1							
OCCUPANCY	OCCUPANT LOAD	MEN'S WATER CLOSET	WOMEN'S WATER CLOSET	MEN'S LAV.	WOMEN'S LAV.	DRINKING FOUNTAINS	SERVICE SINKS
B	17	1	1	1	1		
A-3	79	2	2	1	1		
TOTAL OCCUPANCY	96						
TOTAL FIXTURES REQUIRED		3	3	2	2	1	1
TOTAL FIXTURES PROVIDED		3	3	2	2	2	1

LEGEND

- 2-HOUR RATED FIRE WALL ASSEMBLY
- NON-RATED
- FIRE EXTINGUISHER, RE: 171-4 FOR MOUNTING REQUIREMENTS
- REQUIRED EXIT / EXIT ACCESS DOOR(S)
- MEAN OF EGRESS EXIT ACCESS DOOR(S)
- INDICATES ACCESSORY USE
- OCCUPANT LOAD
- ACTUAL SQUARE FEET

GENERAL NOTES

- CODE REFERENCES ARE THOSE CURRENTLY ADOPTED BY CITY OF GARDEN CITY AND THE STATE OF IDAHO.
- APPLICABLE CODES:
 - 2018 INTERNATIONAL BUILDING CODE
 - 2018 INTERNATIONAL EXISTING BUILDING CODE
 - 2018 INTERNATIONAL ENERGY CONSERVATION CODE
 - 2018 INTERNATIONAL FIRE CODE
 - 2018 INTERNATIONAL MECHANICAL CODE
 - 2017 NATIONAL ELECTRIC CODE
 - 2017 IDAHO STATE PLUMBING CODE
 - NFPA 415
 - NFPA 13
 - ICC/ANSI A117.1-2009
 - ADAAG
- FOR LIGHTING COMPLIANCE INFORMATION, SEE ELECTRICAL DRAWINGS.
- FOR MECHANICAL COMPLIANCE INFORMATION, SEE MECHANICAL DRAWINGS.

CODE DATA:

PER 2018 INTERNATIONAL BUILDING CODE

DESCRIPTION:	EXISTING BUILDING	NEW BUILDING
CONSTRUCTION TYPE:	V-B	V-B
OCCUPANCY:	GROUP B: 17	GROUP A-3: 79
AREA:	1ST FLOOR: 2445 GSF	1ST FLOOR: 1176 GSF
ALLOWABLE AREA:	9,000 SF	6,000 SF
NON-SEPARATED OCCUPANCIES:	PROVIDED PER IBC TABLE 508.4	PROVIDED PER IBC TABLE 508.4
ALLOWABLE STORIES:	11 STORIES PER TABLE 503	3 STORIES PER TABLE 503
ACTUAL STORIES:	1 STORY	1 STORY
ALLOWABLE BUILDING HEIGHT:	40'-0" PER TABLE 504.3	40'-0" PER TABLE 504.3
ACTUAL BUILDING HEIGHT:	20'-1"	17'-8 1/2"
FIRE RESISTANCE RATINGS OF BUILDING ELEMENTS:		
PRIMARY STRUCTURAL FRAME:	0 HOURS PER IBC TABLE 601	0 HOURS PER IBC TABLE 601
BEARING WALLS-EXTERIOR:	0 HOURS PER IBC TABLE 601	0 HOURS PER IBC TABLE 601
> 30' FIRE SEPARATION:	0 HOURS PER IBC TABLE 601	0 HOURS PER IBC TABLE 601
BEARING WALLS-INTERIOR:	0 HOURS PER IBC TABLE 601	0 HOURS PER IBC TABLE 601
NONBEARING WALLS-INTERIOR:	0 HOUR PER IBC TABLE 601	0 HOUR PER IBC TABLE 601
FLOOR CONSTRUCTION:	0 HOURS PER IBC TABLE 601	0 HOURS PER IBC TABLE 601
ROOF CONSTRUCTION:	0 HOUR PER IBC TABLE 601	0 HOUR PER IBC TABLE 601
MINIMUM ROOF CLASS:	CLASS C PER IBC TABLE 1505.1	CLASS C PER IBC TABLE 1505.1
FIRE WALL:	NA	NA
FIRE DOORS AT FIRE WALLS:	NA	NA
PORTABLE FIRE EXTINGUISHERS:	EXISTING TO REMAIN	YES
AUTOMATIC SPRINKLER SYSTEM:	NONE EXISTING	NONE
FIRE ALARM SYSTEM:	EXISTING TO REMAIN	YES
FIRE FLOW REQUIRED:	N/A	1,750 GPM
FIRE FLOW PROVIDED:	N/A	1,672 GPM

ORIGINAL DOCUMENT SIGNED BY ARCHITECT ON FILE WITH THE OWNER JAMES MARSH ARCHITECT APRIL 16, 2024

JAMES A. MARSH, ARCHITECT
200 BROAD STREET
BOISE, IDAHO
PHONE: 208-343-4635 • FAX: 208-343-1658

ITD D3 TRAINING ADDITION
8150 W CHINDEN BLVD
GARDEN CITY, IDAHO

CSHQA
200 BROAD STREET
BOISE, ID 83702
(208) 343-4635 • FAX (208) 343-1658
http://www.csqha.com

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PROJECT 24009	DATE 04-11-24
DRAWN AJL	CHECKED JAM
REVISED	

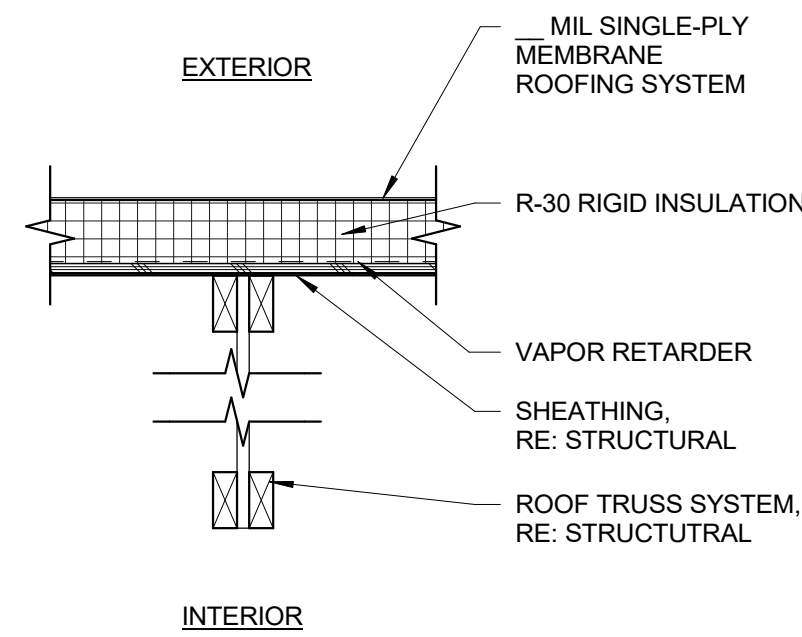
SHEET TITLE
CODE & COMM CHECK

SHEET
G11
ORIGINAL SHEET SIZE 24" x 36"

1 ROOF TYPES

1"= 1'-0"

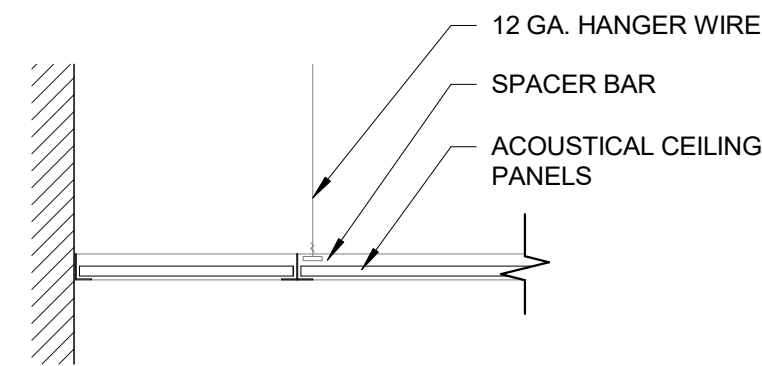
R01 SINGLE-PLY ROOFING ON WOOD DECK - INSULATION



2 CEILING TYPES

1"= 1'-0"

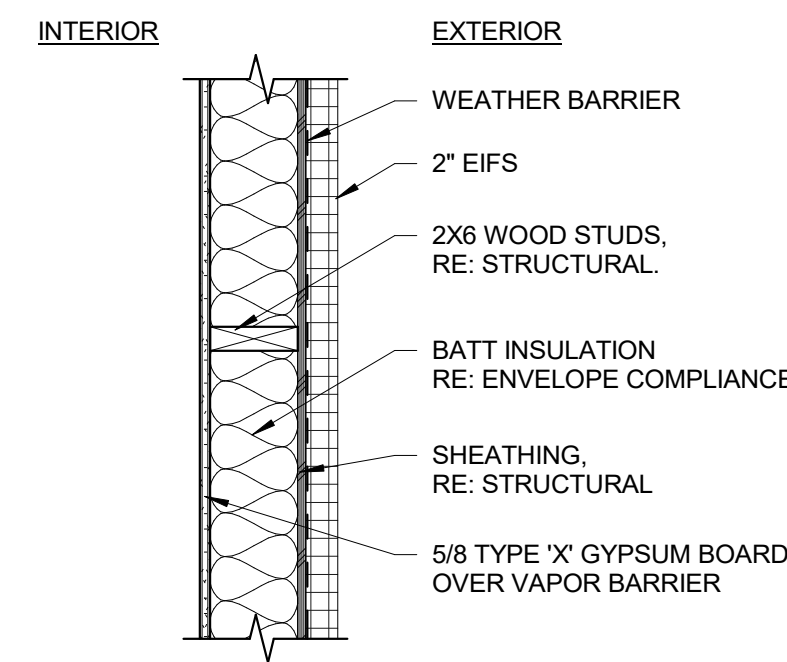
C01 ACOUSTICAL SUSPENDED CEILING PANELS



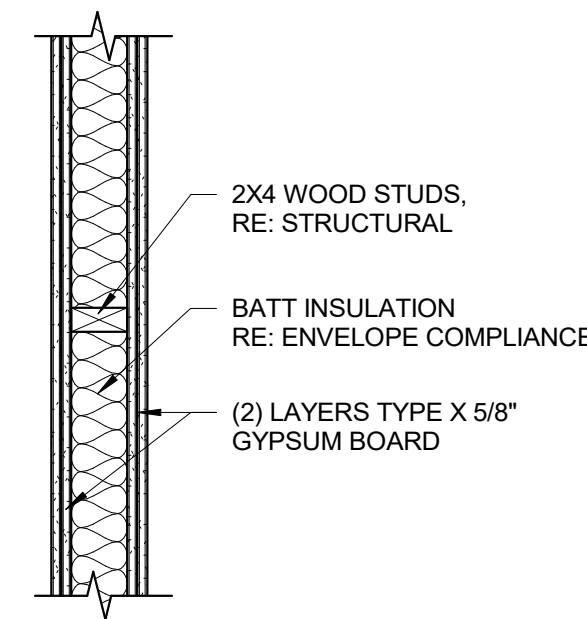
3 WALL TYPES

1"= 1'-0"

W01 EXTERIOR 2X6 WOOD STUD WALL W/ INSULATION - SHEATHING & EIFS (EXT) / 5/8" GYPSUM BOARD (INT)

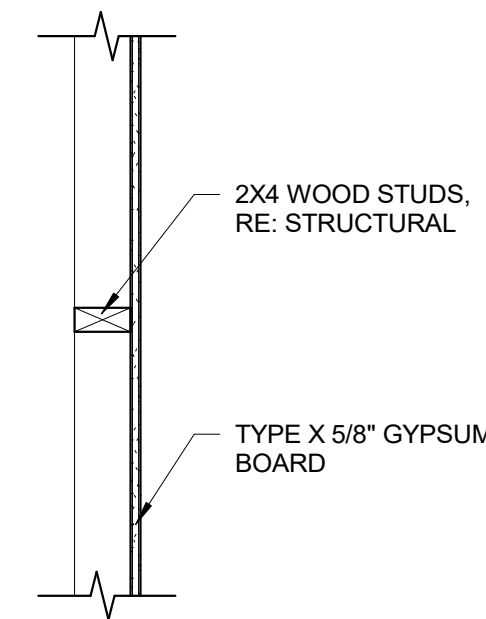


W02 INTERIOR 2X4 STUD WALL W/ INSULATION - (2) LAYERS TYPE X 5/8" GYPSUM BOARD BOTH SIDES

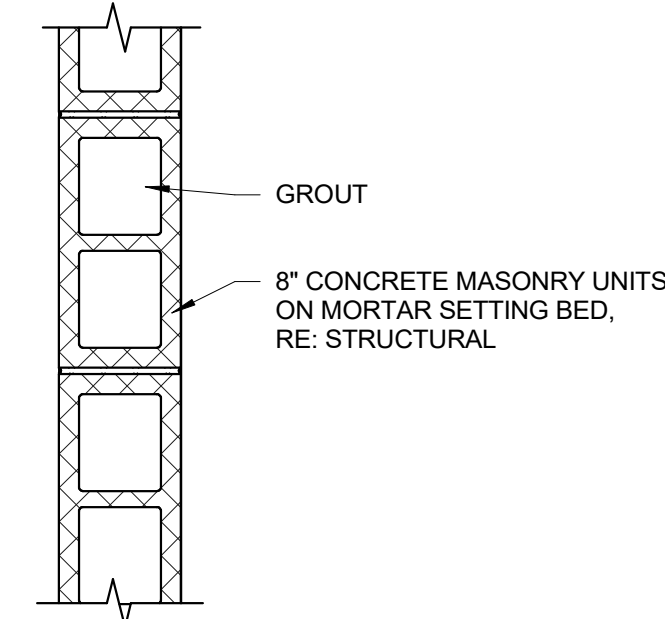


UL U301 - 2-HOUR RATED WALL

W03 INTERIOR 2X4 STUD WALL W/ TYPE X 5/8" GYPSUM BOARD ON ONE SIDE



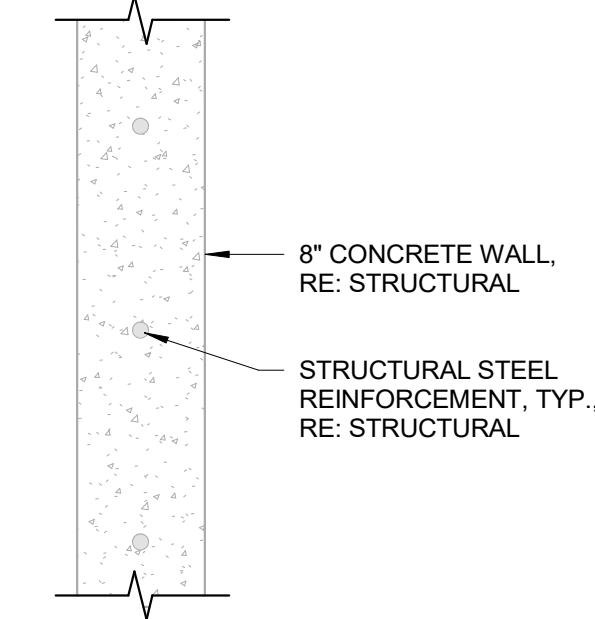
W04 INTERIOR 8" CMU INFILL



4 EXISTING WALL TYPES

1"= 1'-0"

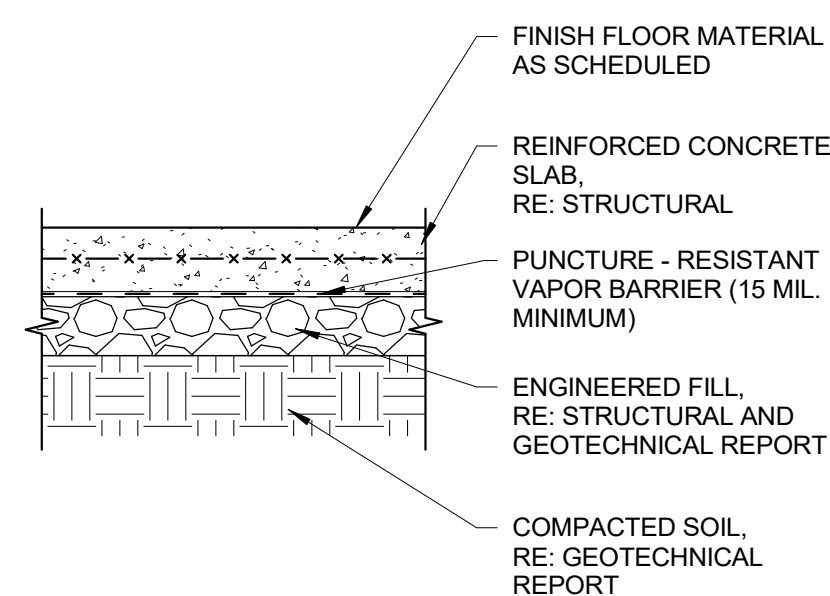
EX04 EXTERIOR 8" CONCRETE WALL



5 FLOOR TYPES

1"= 1'-0"

F01 CONCRETE SLAB ASSEMBLY



LICENSED ARCHITECT ARCHITECT ON FILE WITH THE OWNER ORIGINAL DOCUMENT SIGNED BY ARCHITECT ON FILE WITH THE OWNER ORIGINAL DATE SIGNED: APRIL 16, 2024
 ORIGINAL DATE SIGNED: APRIL 16, 2024
 JAMES A. MARSH ARCHITECT
 APRIL 16, 2024

JAMES A. MARSH, ARCHITECT
 200 BROAD STREET
 BOISE, IDAHO
 PHONE: 208-343-4635 • FAX: 208-343-1658
 http://www.cshqa.com
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PROJECT 24009	DATE 04-11-24
DRAWN JLH	CHECKED AJL
REVISED	

SHEET TITLE
ASSEMBLIES

SHEET
G71
 ORIGINAL SHEET SIZE
 24" x 36"

DRAWING INDEX

C00	GENERAL INFORMATION SHEET
C10	SITE DEMOLITION PLAN
C20	EROSION & SEDIMENT CONTROL PLAN
C40	SITE IMPROVEMENT PLAN

GENERAL NOTES

- A. FOR SPECIFICATIONS CONFORM TO THE CURRENT EDITION OF THE IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ISPC) AND THE IDAHO PLUMBING CODE UNLESS OTHERWISE NOTED.
- B. THE DRAWINGS INDICATE LOCATION, DIMENSIONS, REFERENCE, AND TYPICAL DETAILS OF CONSTRUCTION. THE DRAWINGS DO NOT INDICATE EVERY CONDITION - WORK NOT PARTICULARLY DETAILED SHALL BE OF CONSTRUCTION SIMILAR TO PARTS THAT ARE DETAILED.
- C. ALL LOT DIMENSION, EASEMENTS AND CERTAIN OFF-SITE EASEMENTS ARE TO BE TAKEN FROM THE PLAT.
- D. DO NOT SCALE DRAWINGS.
- E. FIGURED DIMENSIONS TAKE PRECEDENCE OVER SCALED DRAWINGS. WHERE DISCREPANCIES OCCUR, THEY SHALL BE REPORTED TO THE ENGINEER FOR RESOLUTION.
- F. DETAILED DRAWINGS AND LARGER SCALE DRAWINGS TAKE PRECEDENCE OVER SMALLER SCALE DRAWINGS (IE 1"=10' TAKES PRECEDENCE OVER 1"=100').
- G. THE CONTRACTOR(S) SHALL REMOVE ALL OBSTRUCTIONS BOTH ABOVE AND BELOW GROUND, AS REQUIRED FOR THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS. THIS SHALL INCLUDE CLEARING AND GRUBBING WHICH CONSISTS OF CLEARING THE GROUND SURFACE OF ALL TREES, STUMPS, BRUSH, UNDERGROWTH, HEDGES, HEAVY GROWTH OF GRASS OR WEEDS, FENCES, STRUCTURES, DEBRIS, RUBBISH, AND SUCH MATERIAL WHICH, IN THE OPINION OF THE ENGINEER, IS UNSUITABLE FOR THE FOUNDATION OF PAVEMENTS. ALL MATERIAL NOT SUITABLE FOR FUTURE USE ON SITE SHALL BE DISPOSED OF OFF SITE.
- H. THE CONTRACTOR SHALL MAINTAIN ALL DRAINAGE FACILITIES WITHIN THE CONSTRUCTION AREA UNTIL THE DRAINAGE IMPROVEMENTS ARE IN PLACE AND FUNCTIONING.
- I. ALL CONTRACTORS WORKING WITHIN THE PROJECT BOUNDARIES ARE RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE SAFETY LAWS OF ANY JURISDICTIONAL BODY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR BARRICADES, SAFETY DEVICES AND CONTROL OF TRAFFIC WITHIN AND AROUND THE CONSTRUCTION AREA.
- J. ALL AC PAVEMENT SHALL BE CUT TO A NEAT STRAIGHT LINE AND THE EXPOSED EDGE SHALL BE TACKED WITH EMULSION PRIOR TO PAVING.
- K. THE CONTRACTOR(S) SHALL KEEP ALL AREAS OF CONSTRUCTION CLEAN AND FREE OF DEBRIS. AFTER CONSTRUCTION IS COMPLETE, THE GENERAL CONTRACTOR SHALL PROVIDE FINAL CLEAN UP.
- L. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS FOR ACCURACY PRIOR TO COMMENCING WITH THE WORK. ANY DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
- M. THE CONTRACTOR SHALL CALL DIGLINE (208-342-1585) AND HAVE THE LOCATION OF EXISTING UTILITIES MARKED AT LEAST TWO WORKING DAYS PRIOR TO THE BEGINNING OF EXCAVATION. CONTACT OTHER UTILITY OWNERS WHICH DIGLINE DOES NOT MARK, TO HAVE THEM LOCATE THEIR FACILITIES.
- N. WHERE NO MATERIAL NOTES OCCUR, THE GRAPHIC MATERIAL INDICATION SHALL INDICATE MATERIAL TYPES AND ITEMS. SEE LEGEND ON THIS SHEET.
- O. ALL NEW CONSTRUCTION TO COMPLY WITH THE AMERICANS WITH DISABILITIES ACT ACCESSIBLE GUIDELINES (A.D.A.A.G.).
- P. UNLESS OTHERWISE INDICATED ALL DRAWINGS, NOTES WHICH DO NOT READ "NIC", "EXISTING", "EXISTING TO REMAIN", OR "BY OTHERS" SHALL INDICATE NEW WORK WHICH SHALL BE CONTRACTOR FURNISHED AND CONTRACTOR INSTALLED.
- Q. ALL MATERIALS FURNISHED ON OR FOR THE PROJECT MUST MEET THE MINIMUM REQUIREMENTS OF THE APPROVING AGENCIES OR AS SET FORTH HEREIN, WHICHEVER IS MORE RESTRICTIVE. CONTRACTORS MUST FURNISH PROOF THAT ALL MATERIALS INSTALLED ON THIS PROJECT MEET THIS REQUIREMENT IF REQUESTED BY THE AGENCY OR THE ENGINEER.
- R. ALL COSTS OF RETESTING PREVIOUSLY FAILED TESTS SHALL BE BACK CHARGED TO THE CONTRACTOR BY THE OWNER.
- S. ALL COSTS INCURRED IN CORRECTING DEFICIENT WORK SHALL BE TO THE CONTRACTOR. FAILURE TO CORRECT SUCH WORK WILL BE CAUSE FOR A STOP WORK ORDER AND POSSIBLE TERMINATION.
- T. THE CONTRACTOR IS RESPONSIBLE FOR FILING THE STORM WATER POLLUTION PREVENTION PLAN NOTICE OF INTENT (N.O.I.) PRIOR TO ANY CONSTRUCTION.
- U. ALL CONSTRUCTION ADDENDA, CHANGE ORDERS, OR DESIGN CLARIFICATIONS FOR THOSE ITEMS REGULATED BY THE CODES MUST BE SUBMITTED TO THE FIELD INSPECTOR FOR REVIEW AND APPROVAL PRIOR TO COMMENCING WITH ANY OF THE PROPOSED WORK RELATED TO THE FIELD CHANGE.
- V. CONTRACTOR SHALL WORK FROM AND HAVE ON SITE AT ALL TIMES ONLY STAMPED, AGENCY APPROVED, DRAWINGS FOR THIS PROJECT.
- W. IF FIELD GRADE ADJUSTMENTS ARE REQUIRED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER.
- X. MANHOLE LIDS AND DRAINAGE STRUCTURES SHALL BE HS-25 TRAFFIC RATED.
- Y. ANY CHANGE FROM THE PLANS SHALL BE APPROVED BY THE ENGINEER OF RECORD.
- Z. EQUIPMENT AND MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.
- AA. IF A CONFLICT EXISTS BETWEEN THE PLANS, SPECIFICATIONS, OR SOILS REPORT, THE CONTRACTOR SHALL CONTACT THE ARCHITECT/ENGINEER FOR CLARIFICATION PRIOR TO CONSTRUCTION.
- AB. SEE SITE ELECTRICAL PLAN FOR SITE LIGHTING, POWER, AND COMMUNICATION.
- AC. THE CONTRACTOR SHALL SUBMIT A SET OF RECORD DRAWINGS TO THE ENGINEER OF RECORD WITHIN FIVE WORKING DAYS AFTER THE COMPLETION OF WORK. RECORD DRAWINGS SHALL BE IN ACCORDANCE WITH AHW SPECIFICATIONS.
- AD. CONTRACTOR SHALL OBTAIN ALL PERMITS NECESSARY TO COMPLETE HIS WORK.

ABBREVIATIONS

@	AT
AB	AGGREGATE BASE
AC	ASPHALT CONCRETE
ASPH	ASPHALT
AWWA	AMERICAN WATER WORKS ASSOCIATION
BFTG	BOTTOM OF FOOTING
BLDG	BUILDING
BTM	BOTTOM
CL	CENTERLINE
C	CURVE
CB	CATCH BASIN
CB/SB	CATCH BASIN/SEDIMENT BOX
CONC	CONCRETE
CSP	CORRUGATED STEEL PIPE
DEPT	DEPARTMENT
DEQ	DEPARTMENT OF ENVIRONMENTAL QUALITY
DESC	DESCRIPTION
DIA	DIAMETER
E	ELECTRICAL / EAST / EASTING
EG	EXISTING GRADE
ELEV	ELEVATION
ELL	ELBOW
EOP	EDGE OF PAVEMENT
EST	ESTIMATE
EW	EACH WAY
FDC	FIRE DEPARTMENT CONNECTION
FF	FINISH FLOOR ELEVATION
FG	FINISHED GRADE
FH	FIRE HYDRANT
FL	FLOWLINE
FOC	FACE OF CURB
FT	FEET
G	GAS
GALS	GALLONS
GALV	GALVANIZED
GB	GRADE BREAK
GPD	GALLONS PER DAY
GRND	GROUND
GRVL	GRAVEL
GRT	TOP OF GRATE
HDPE	HIGH DENSITY POLYETHYLENE
IE	INVERT ELEVATION
INV	INVERT
L	LENGTH / LINE
LF	LINEAR FEET
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
N	NORTH / NORTHING
NO.	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OWS	OIL WATER SEPARATOR
PC	POINT OF CURVATURE
PCC	PORTLAND CEMENT CONCRETE
PE	POLYETHYLENE
PERF	PERFORATED
PV	POST INDICATOR VALVE
PL	PROPERTY LINE
PRC	POINT OF REVERSE CURVATURE
PS	PRESSURIZED SEWER
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
QUAN	QUANTITY
R	RADIUS
RE:	REFER TO
ROW	RIGHT OF WAY
S	SOUTH
SCH	SCHEDULE
SD	STORM DRAIN
SDCO	STORM DRAIN CLEANOUT
SDMH	STORM DRAIN MANHOLE
SDWK	SIDEWALK
SQ FT	SQUARE FEET
SS	SANITARY SEWER
SSCO	SANITARY SEWER CLEANOUT
SSMH	SANITARY SEWER MANHOLE
T	TELEPHONE
TBC	TOP BACK OF CURB
TC	TOP OF CONCRETE
TD	TRENCH DRAIN
TDH	TOTAL DYNAMIC HEAD
TMC	TOP OF MOUNTABLE CURB
TOC	TOP OF CURB
TOW	TOP OF WALL
TYP	TYPICAL
W	WATER / WEST
W/	WITH
WV	WATER VALVE

LEGEND

	ASPHALT CONCRETE PAVEMENT
	PORTLAND CEMENT CONCRETE
	RIGHT OF WAY LINE
	PROPERTY LINE
	EASEMENT LINE
	FINISH GRADE CONTOUR (MAJOR)
	FINISH GRADE CONTOUR (MINOR)
	EXISTING GRADE CONTOUR (MAJOR)
	FENCE
	BUILDING
	INFLOW CURB AND GUTTER
	OUTFLOW CURB AND GUTTER
	PARKING COUNT
	ACCESSIBLE PARKING SYMBOL
	SIGN
	BIKE RACK
	LUMINAIRE
	ELECTRICAL TRANSFORMER
	STORM WATER LINE
	STORM WATER MANHOLE
	STORM WATER CLEANOUT
	CATCH BASIN
	OIL WATER SEPARATOR
	HEADWALL
	SANITARY SEWER LINE
	SANITARY SEWER MANHOLE
	SANITARY SEWER CLEANOUT
	WATER LINE
	WATER METER
	WATER VALVE
	FIRE HYDRANT
	GAS LINE
	COMMUNICATION LINE
	ELECTRICAL LINE



JEFF T. WARD, P.E.

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SET**

PROJECT 24009	DATE 04-11-24
DRAWN JTW	CHECKED JTW

REVISED

SHEET TITLE

**GENERAL
INFORMATION
SHEET**

SHEET

C00

ORIGINAL SHEET SIZE
24" x 36"



1 SITE DEMOLITION PLAN
 SCALE: 1" = 30'
 0 15 30 60 90 120
 SCALE IN FEET

GENERAL NOTES:

A. SEE SHEET C00 FOR GENERAL NOTES.

DEMOLITION NOTES:

- A. EXISTING SITE INFORMATION AND LOCATION OF EXISTING SITE IMPROVEMENTS WERE PROVIDED BY "ALTA/NSPS LAND TITLE SURVEY, IDAHO TRANSPORTATION DEPARTMENT, DISTRICT 3" PREPARED BY KELLER ASSOCIATES WITH DATE 08/11/2023. THE EXISTING SITE INFORMATION IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS.
- B. THE CONTRACTOR SHALL CALL DIGLINE (1-208-342-1585) AND HAVE THE LOCATION OF EXISTING UTILITIES MARKED AT LEAST TWO WORKING DAYS PRIOR TO THE BEGINNING OF EXCAVATION.
- C. CONTRACTOR SHALL CALL THE UNDERGROUND UTILITY LOCATING SERVICE AND HAVE THEM MARK THE LOCATION OF EXISTING UTILITIES AT LEAST TWO WORKING DAYS PRIOR TO BEGINNING OF WORK.
- D. TYPE AND LOCATION OF EXISTING UTILITIES SHOWN IS BASED ON BEST AVAILABLE INFORMATION. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND LOCATING ALL EXISTING UTILITIES PRIOR TO DEMOLITION AND EXCAVATION. COORDINATE WITH UTILITY COMPANIES AND ARCHITECT/ENGINEER FOR SCHEDULING OF DISCONNECTION AND FOR CAPPING PROCEDURES. COORDINATE ALL DISRUPTIONS WITH UTILITY SERVICES WITH ARCHITECT AND ADJACENT BUSINESSES THREE DAYS PRIOR TO SCHEDULED DISRUPTION.
- E. REMOVE ALL LOOSE SOIL FROM AREAS OF EXCAVATION AND FILL WITH APPROVED BACKFILL.
- F. DURING ALL PHASES OF DEMOLITION AND CONSTRUCTION, PRECAUTION SHALL BE TAKEN NOT TO INCONVENIENCE THE ADJOINING BUSINESSES AS REASONABLY POSSIBLE AND TO MAINTAIN UNINTERRUPTED ACCESS.
- G. DEMOLITION CONTRACTOR SHALL OBTAIN ALL PERMITS NECESSARY TO COMPLETE HIS WORK. IN ADDITION, DEMOLITION CONTRACTOR SHALL OBTAIN ALL CERTIFICATES OF SEVERANCE OF ALL UTILITY SERVICES AS PART OF HIS WORK AND SUBMIT TO THE ARCHITECT/ENGINEER HIS DEMOLITION PROCEDURES AND OPERATIONAL SEQUENCE FOR APPROVAL.
- H. CONTRACTOR SHALL PROVIDE PROPER CONSTRUCTION SIGNAGE/BARRICADES AT ROADWAYS AND APPROACHES IN ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND ACDH REQUIREMENTS.
- I. EXISTING TREES, DEBRIS, STRUCTURES, ASPHALT, CONCRETE, AND DELETERIOUS MATERIAL INCLUDING BUT NOT LIMITED TO CONCRETE FOOTINGS, BASEMENTS, SEPTIC TANKS, AND UNDERGROUND UTILITIES TO BE REMOVED SHALL BE DISPOSED OF OFF-SITE AT THE CONTRACTOR'S EXPENSE. THE DEPRESSIONS LEFT BY REMOVAL SHALL BE BACKFILLED WITH CLEAN ENGINEERED FILL IN LAYERS NOT TO EXCEED 8 INCHES.
- J. THE CONTRACTOR SHALL COMPLETELY REMOVE THE EXISTING PAVED AREAS SPECIFIED. IN ADDITION, CONTRACTOR SHALL REMOVE UNDERGROUND UTILITIES AS IDENTIFIED ON THESE DRAWINGS, IN ACCORDANCE WITH ALL APPLICABLE AUTHORITIES HAVING JURISDICTION AND IN AN ORDERLY MANNER. COORDINATE REMOVAL AND CONSTRUCTION OF UTILITIES TO MAINTAIN UNINTERRUPTED SERVICE TO EXISTING FACILITIES.
- K. PERFORM ASPHALT STREET CUTS AND SURFACE REPAIRS PER ACDH POLICIES AND PROCEDURES. ANY DAMAGED ROADWAY PAVEMENT SHALL BE REPAIRED TO THE SATISFACTION OF ACDH.
- L. THIS PLAN SHOWS GENERAL DEMOLITION WORK TO BE PERFORMED AND DOES NOT RELIEVE THE CONTRACTOR FROM OTHER DEMOLITION WORK REQUIRED TO PRODUCE THE SITE MODIFICATIONS SHOWN ON THE REMAINING CONTRACT DOCUMENTS.
- M. AREAS INDICATED ASPHALT OR CONCRETE REMOVAL SHALL INCLUDE REMOVAL OF THE PAVEMENT SECTION FROM THE ASPHALT SURFACE DOWN TO EXISTING SUBGRADE.
- N. DEMOLITION OF LIGHT POLES, ELECTRICAL CONDUIT AND UNDERGROUND UTILITIES SHALL NOT INTERFERE WITH THE OPERATION OF EXISTING LIGHTING, ELECTRICAL SYSTEM OF UTILITIES WHICH REMAIN. TEMPORARY REROUTING OF LINES MAY BE REQUIRED TO ENSURE CONTINUOUS OPERATION OF THOSE SYSTEMS NOT SCHEDULED FOR DEMOLITION.
- O. ALL PAVEMENT REMOVAL SHALL BE SAWCUT WHERE INDICATED TO FORM A CLEAN EDGE AT THE LINE OF REMOVAL PER ACDH STANDARDS, POLICIES, AND PROCEDURES.
- P. EXISTING UNDERGROUND UTILITIES WITHIN THE LIMITS OF THE BUILDING FOOTPRINT, OR WITHIN 2' OF THE BOTTOM OF EXCAVATION, SHALL BE REMOVED. UTILITIES TO BE DEMOLISHED BEYOND 2' BELOW SUBGRADE SHALL BE REMOVED OR ABANDONED IN PLACE AT THE CONTRACTOR'S OPTION. PIPES, CONDUIT, AND UTILITY LINES 6" OR LARGER SHALL BE GROUTED WITH CONCRETE MORTAR MIX IF ABANDONED IN PLACE.

SHEET NOTES:

- 1. SAWCUT LINE, SHOWN APPROXIMATE.
- 2. EXISTING ASPHALT TO BE REMOVED AS INDICATED BY HATCH PATTERN, COORDINATE WITH PLUMBING, ELECTRICAL, AND COMMUNICATIONS FOR ADDITIONAL CUTS NEEDED FOR UTILITY TRENCHING.
- 3. EXISTING CONCRETE BE REMOVED AS INDICATED BY HATCH PATTERN.
- 4. EXISTING POWER AND COMMUNICATIONS APPURTENANCES TO BE RELOCATED, RE: ELECTRICAL.
- 5. EXISTING GAS METER TO BE RELOCATED, CONTRACTOR TO COORDINATE WITH INTERMOUNTAIN GAS.
- 6. SEE ARCHITECTURAL DRAWINGS FOR DEMOLITION ASSOCIATED WITH BUILDING FEATURES.
- 7. EXISTING STRIPING TO BE OBLITERATED (TYP).
- 8. EXISTING FENCE TO BE REMOVED.
- 9. EXISTING GATE TO BE RELOCATED, RE: C40.



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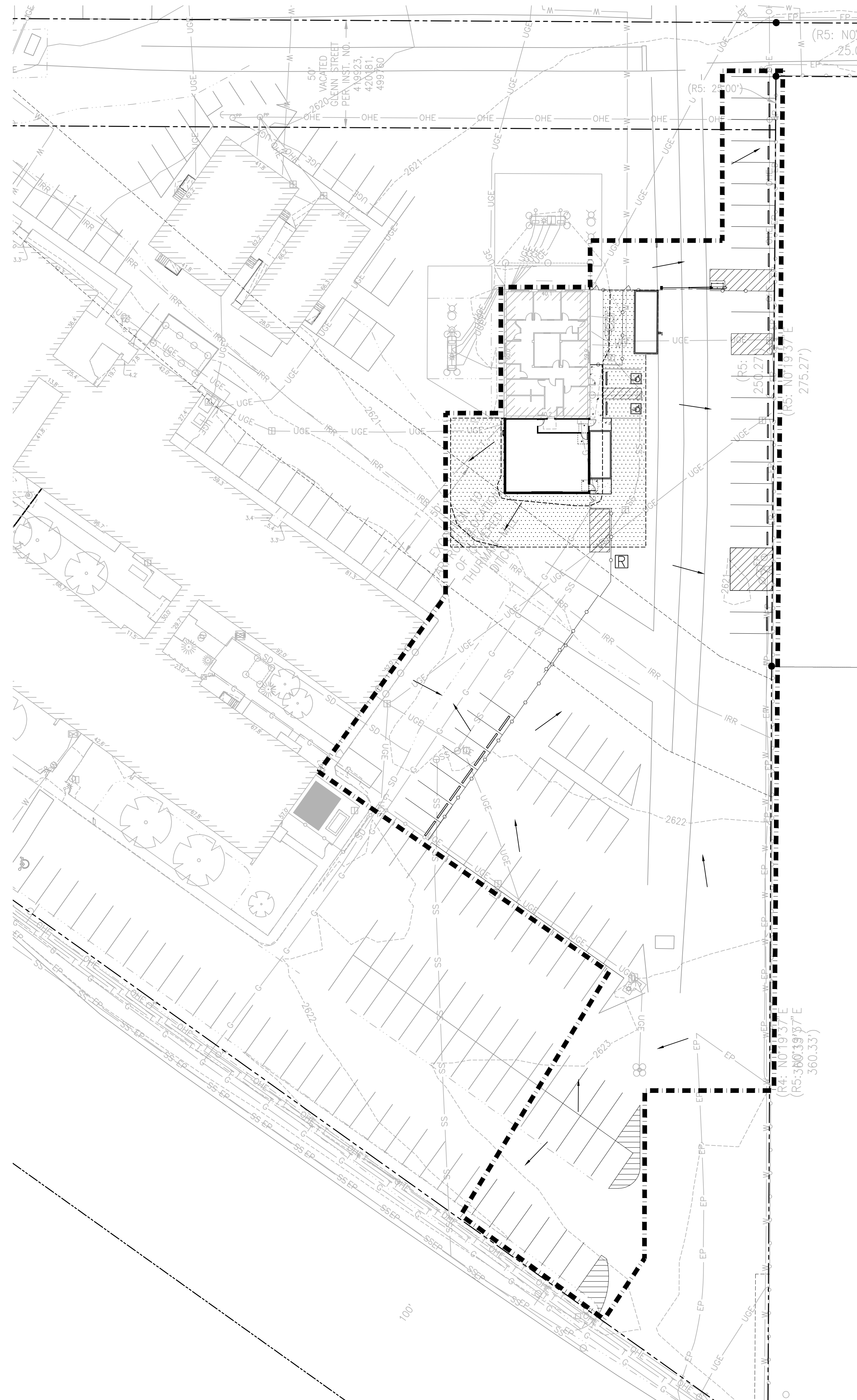
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PROJECT 24009	DATE 04-11-24
DRAWN JTW	CHECKED JTW

SHEET TITLE
SITE DEMOLITION PLAN

SHEET
C10
 ORIGINAL SHEET SIZE
 24" x 36"



1 EROSION & SEDIMENT CONTROL PLAN
 SCALE: 1" = 30'
 SCALE IN FEET

EROSION CONTROL NOTES:

- A. ALL WORK ASSOCIATED WITH STABILIZING THE DISTURBED AREAS SHALL BE IN ACCORDANCE WITH THE CITY OF BOISE CONSTRUCTION SITE EROSION CONTROL & SEDIMENT CONTROL PROGRAM AND FIELD MANUAL.
 - B. CONTRACTOR OR DESIGNATED PERSON SHALL BE RESPONSIBLE FOR PROPER INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL MEASURES, IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.
 - C. THE IMPLEMENTATION OF THESE EROSION AND SEDIMENT CONTROL PLANS AND CONSTRUCTION, MAINTENANCE, REPLACEMENT AND UPGRADING OF THESE EROSION AND SEDIMENT CONTROL PLAN FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED BY THE LOCAL JURISDICTION, AND VEGETATION/LANDSCAPING IS ESTABLISHED. THE DEVELOPER SHALL BE RESPONSIBLE FOR MAINTENANCE AFTER THE PROJECT IS APPROVED.
 - D. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY MARKED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE CLEARING LIMITS SHALL BE PERMITTED. THE MARKINGS SHALL BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
 - E. THE EROSION AND SEDIMENT CONTROL FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO INSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DOES NOT ENTER THE DRAINAGE SYSTEM, ROADWAYS, ADJACENT OPEN WATER SURFACES OR VIOLATE APPLICABLE WATER STANDARDS.
 - F. THE EROSION AND SEDIMENT CONTROL FACILITIES SHOWN ON THIS PLAN ARE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING CONSTRUCTION PERIOD, THESE EROSION AND SEDIMENT CONTROL FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DOES NOT LEAVE THE SITE.
 - G. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATIONS SHALL NOT FLUSH SEDIMENT-LADEN WATER INTO THE DOWNSTREAM SYSTEM.
 - H. STORM DRAIN INLETS, BASINS, AND AREA DRAINS SHALL BE PROTECTED UNTIL PAVEMENT SURFACES ARE COMPLETED AND/OR VEGETATION IS RE-ESTABLISHED.
 - I. PAVEMENT SURFACES AND VEGETATION ARE TO BE PLACED AS RAPIDLY AS POSSIBLE.
 - J. CONCRETE WASHOUT MUST BE CONTAINED IN AN ABOVE GROUND CONTAINER PER IDEQ STORM WATER BMP #49.
- STOCKPILED TOPSOIL NOTES:**
- K. STOCKPILES SHALL BE STABILIZED (WITH PLASTIC COVERING OR OTHER APPROVED DEVICE) DAILY BETWEEN NOVEMBER 1 AND MARCH 31.
 - L. IN ANY SEASON, SEDIMENT LEACHING FROM STOCKPILES MUST BE PREVENTED.
- STORM WATER NOTES:**
- M. OPERATORS ARE RESPONSIBLE TO PREPARE AND FILE A NOTICE OF INTENT (NOI) AS REQUIRED BY THE EPA AND DEVELOP A PROJECT SPECIFIC STORM WATER POLLUTION PREVENTION PLAN (SWPPP).
 - N. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CITY OF BOISE STANDARDS AND THE CITY OF BOISE CONSTRUCTION SITE EROSION AND SEDIMENT CONTROL PROGRAM AND FIELD MANUAL.
 - O. SHOULD THE TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES AS SHOWN ON THIS DRAWING NOT PROVE ADEQUATE TO CONTROL EROSION AND SEDIMENTATION, THE CONTRACTOR SHALL INSTALL ADDITIONAL FACILITIES AS NECESSARY TO PROTECT ADJACENT PROPERTIES, SENSITIVE AREAS, NATURAL WATER COURSES, AND/OR STORM DRAINAGE SYSTEMS.
 - P. THE CONTRACTOR SHALL CALL DIGILINE (1-208-342-1585) AND HAVE THE LOCATION OF EXISTING UTILITIES MARKED A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATIONS.
 - Q. ALL EROSION CONTROL AND STORM WATER FACILITIES SHALL BE REGULARLY INSPECTED AND MAINTAINED BY THE CONTRACTOR DURING CONSTRUCTION.
 - R. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN STREET USE AND OTHER RELATED OR REQUIRED PERMITS PRIOR TO ANY CONSTRUCTION ACTIVITY IN THE MUNICIPALITY'S RIGHT-OF-WAY. IT SHALL ALSO BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL REQUIRED PERMITS PRIOR TO ANY CONSTRUCTION. THE CONTRACTOR SHALL ABIDE BY ALL REQUIREMENTS FOR TRAFFIC CONTROL AND SAFETY WHEN WORKING IN THE ROAD RIGHT-OF-WAY.
 - S. AT NO TIME SHALL MORE THAN ONE-HALF (1/2) FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A PROTECTED CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PROJECT COMPLETION. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT-LADEN WATER INTO THE DOWNSTREAM SYSTEM.

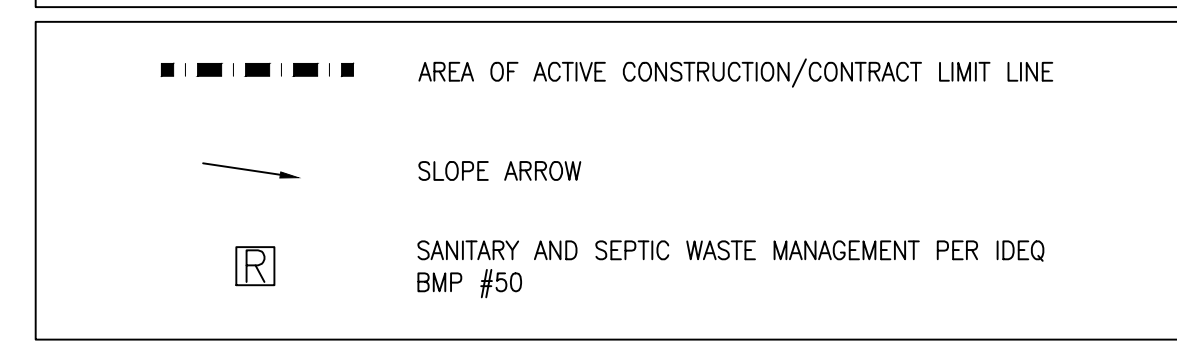
GENERAL NOTES:

- A. CONSTRUCTION PARKING SHALL BE LOCATED ON EXISTING FACILITIES.

① SHEET NOTES:

- 1. DESIGNATED AREA FOR WASHOUTS.

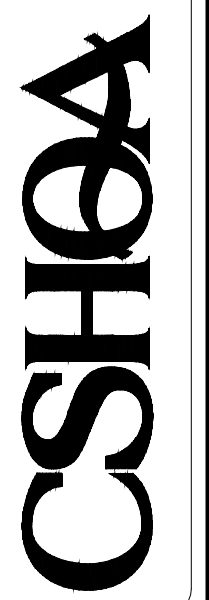
LEGEND



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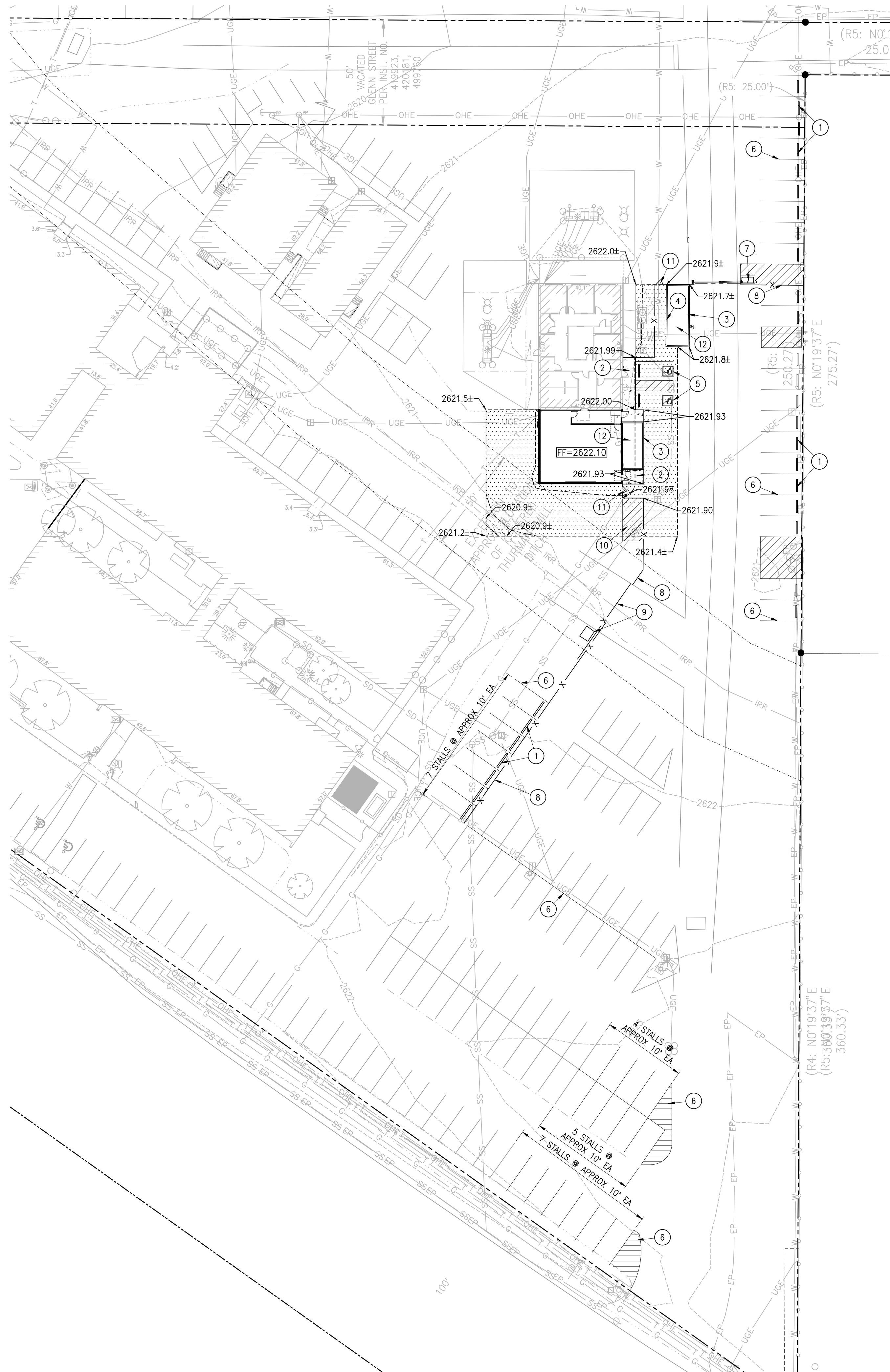
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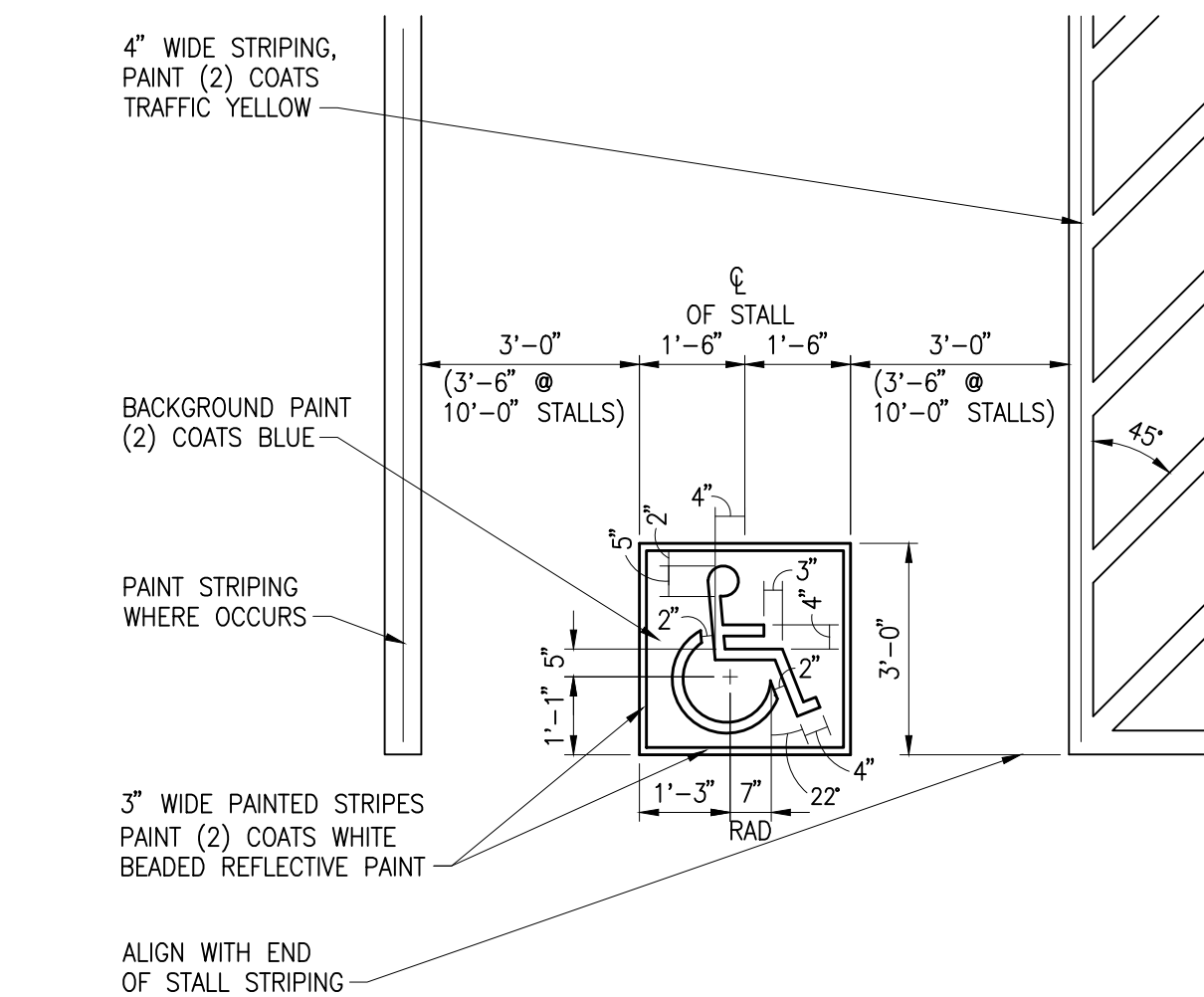
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SHEET TITLE
EROSION & SEDIMENT CONTROL PLAN

SHEET
C20
 ORIGINAL SHEET SIZE
 24" x 36"



1 SITE IMPROVEMENT PLAN
 SCALE: 1" = 30'
 0 15 30 60 90 120
 SCALE IN FEET



2 PAINTED ACCESSIBILITY SYMBOL
 SCALE: NOT TO SCALE

- ### SITE IMPROVEMENT NOTES:
- FOR GENERAL NOTES SEE DRAWING C00.
 - IF FIELD GRADE ADJUSTMENTS ARE REQUIRED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER.
 - THE MAXIMUM CROSS SLOPE OF ANY SIDEWALK OR RAMP SHALL BE 2%.
 - UNLESS ELEVATIONS AND/OR CONTOURS ARE OTHERWISE SHOWN, NEW IMPERVIOUS SURFACE MUST BE PLACED TO ALLOW FOR POSITIVE DRAINAGE TO CURB, GUTTER, AND OTHER RUNOFF COLLECTION DEVICES. SLOPE TO BE MIN. 1.5% AND MAX. 5%, UNLESS OTHERWISE INDICATED OR DIRECTED BY THE ARCHITECT/ENGINEER.
 - PROJECT BENCHMARK INFORMATION COMES FROM THE TOPOGRAPHIC SURVEY.
 - COORDINATE WITH OTHER DISCIPLINES FOR CONDUIT LOCATIONS.
 - UTILITY TRENCHING AND BACKFILLING SHALL BE IN ACCORDANCE WITH THE SOILS REPORT AND LOCAL REQUIREMENTS, AND SHALL COMPLY WITH ALL LOCAL, STATE, AND NATIONAL SAFETY STANDARDS.
 - UTILITY CONSTRUCTION SHALL CONFORM TO PLUMBING CODE AND THE CURRENT EDITION OF THE ISPCW.
 - EXISTING UTILITIES ARE SHOWN APPROXIMATELY AND FOR GENERAL INFORMATION PURPOSES ONLY. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF ALL EXISTING UTILITIES.
 - FINISHED FLOOR ELEVATION TO MATCH EXISTING BUILDING, ACTUAL ELEVATION MAY VARY SLIGHTLY FROM LABEL IN PLAN.

- ### LEGEND:
- MATCH EXISTING PAVEMENT SECTION
 - 2650.31 EDGE OF PAVEMENT/CONCRETE (UNLESS OTHERWISE NOTED)

- ### SHEET NOTES:
- PRECAST CONCRETE WHEEL STOP INSTALLED PER MANUFACTURER'S RECOMMENDATIONS, TYPICAL WHERE SHOWN.
 - 4" CONCRETE SIDEWALK PER ISPCW SD-709.
 - 6" VERTICAL CURB (NO GUTTER) PER ISPCW SD-701A.
 - TBC ON WEST EDGE OF THIS PLANTER TO BE FLUSH WITH PAVEMENT TO ACCEPT RUNOFF, CURB HEIGHT TO TRANSITION TO FULL HEIGHT OVER NORTH AND SOUTH SECTIONS SO EAST EDGE IS CONTINUOUSLY 6" ABOVE ADJACENT PAVEMENT.
 - PAINTED ACCESSIBILITY SYMBOL, RE: C40-2. INSTALL BUILDING MOUNTED ACCESSIBLE PARKING SIGN CENTERED ON STALL, RE: ARCH.
 - 4" WIDE STRIPING W/TWO COATS TRAFFIC RATED WHITE PAINT PER MUTCD STANDARDS, TYPICAL. WHERE HATCHING IS SHOWN SPACING SHALL BE 2' O.C.
 - NEW GATE, SEE BID NOTES ON THIS SHEET.
 - NEW FENCE SEE BID NOTES ON THIS SHEET.
 - NEW LOCATION OF EXISTING GATE AND OPERATOR, SEE BID NOTES ON THIS SHEET.
 - DUMPSTER AREA.
 - NEW CARD CONTROLLED MAN GATE.
 - LANDSCAPED AREA, RE: LANDSCAPE.

- ### BID NOTES
- BASE BID:**
- SHEET NOTE 7: CHAIN LINK 300 VERTICAL PIVOT GATE SYSTEM BY AUTOGATE, INSTALLED PER MANUFACTURERS RECOMMENDATIONS.
- SHEET NOTE 8: 8" CHAIN LINK WITH PRIVACY SLATS AND BARBED WIRE.
- SHEET NOTE 9: NEW LOCATION OF EXISTING GATE. RELOCATE AND UTILIZE EXISTING GATE OPERATOR, EXIT ONLY.
- BID ALTERNATE 1:**
- SHEET NOTE 7: 8" 500 BUCKEYE VERTICAL PIVOT GATE SYSTEM BY AUTOGATE, INSTALLED PER MANUFACTURERS RECOMMENDATIONS.
- SHEET NOTE 8: 8" V2 3 RAIL PRESSED SPEAR FENCING BY FORTRESS BUILDING PRODUCTS, OR APPROVED EQUAL.
- SHEET NOTE 9: 8" V2 3 RAIL PRESSED SPEAR/FLAT BOTTOM DRIVE GATE BY FORTRESS BUILDING PRODUCTS, OR APPROVED EQUAL. RELOCATE AND UTILIZE EXISTING GATE OPERATOR, EXIT ONLY.



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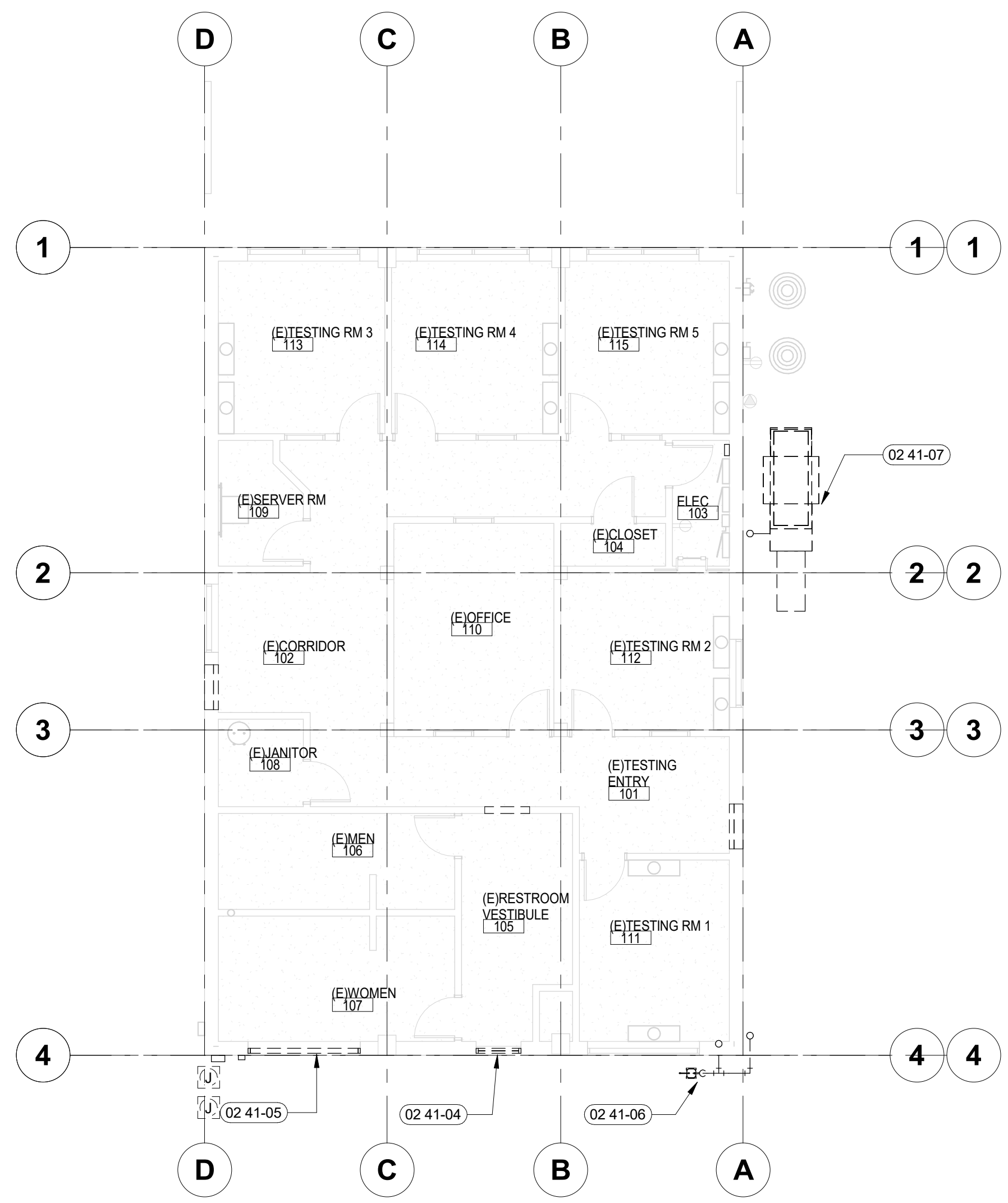
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PROJECT	DATE
24009	04-11-24
DRAWN	CHECKED
JTW	JTW

REVISED

SHEET TITLE
SITE IMPROVEMENT PLAN

SHEET
C40
 ORIGINAL SHEET SIZE
 24" x 36"



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

LEGEND:

SCREENED LINES INDICATE EXISTING ASSEMBLIES/SYSTEMS TO REMAIN AND BE PROTECTED DURING CONSTRUCTION.
 INDICATES ASSEMBLIES/SYSTEMS TO BE DEMOLISHED
 SHEET NOTE, RE: SHEET NOTES LIST ON CURRENT PAGE

GENERAL NOTES:

- A. PROTECT IN PLACE ALL EXISTING ELEMENTS TO REMAIN. PATCH AND REPAIR ALL ITEMS TO MEET NEW CONSTRUCTION.
- B. COORDINATE WITH OWNER ITEMS TO BE SALVAGED AND STORAGE LOCATIONS.
- C. ALL DEMOLISHED MATERIALS ARE TO BE REMOVED FROM THE SITE BY THE CONTRACTOR, UNLESS NOTED OTHERWISE OR DIRECTED BY THE OWNER OR ARCHITECT.
- D. TYPE AND LOCATION OF EXISTING UTILITIES IS BASED ON BEST AVAILABLE INFORMATION. CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY AND LOCATE ALL EXISTING CONDITIONS PRIOR TO DEMOLITION. COORDINATE WITH OWNER FOR SCHEDULING OF DISCONNECTION OF SERVICES.
- E. THIS PLAN SHOWS GENERAL DEMOLITION WORK TO BE PERFORMED AND DOES NOT RELIEVE THE CONTRACTOR FROM OTHER DEMOLITION WORK REQUIRED TO PRODUCE THE BUILDING MODIFICATIONS SHOWN ON THE REMAINING CONTRACT DOCUMENTS.
- F. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE LOCALLY ADOPTED CODES.
- G. PROVIDE A TEMPORARY DUST PARTITION TO PREVENT DUST AND DEBRIS FROM SETTLING ON ADJACENT AREAS NOT UNDER CONSTRUCTION AND AS DIRECTED AND APPROVED BY THE OWNER'S REPRESENTATIVE.
- H. DESIGN IS BASED ON BEST AVAILABLE INFORMATION. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS TO DETERMINE STATUS OF ACTUAL CONDITIONS AS IT RELATES TO THE SCOPE OF WORK SHOWN ON THESE PLANS.

SHEET NOTES:

02 41-04 DEMO AND REMOVE DOOR, FRAME AND ASSOCIATED ITEMS.
 02 41-05 DEMO AND REMOVE WINDOW, FRAME AND ASSOCIATED ITEMS.
 02 41-06 DEMO AND REMOVE GAS METER, RE: PLUMBING FOR EXTENT OF WORK
 02 41-07 DEMO AND REMOVE MECHANICAL UNIT, CW/MECHANICAL DEMO PLAN

PERMIT SET

PROJECT 24009	DATE 04-11-24
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SHEET TITLE
DEMO PLAN

SHEET
AS21
ORIGINAL SHEET SIZE
24" x 36"

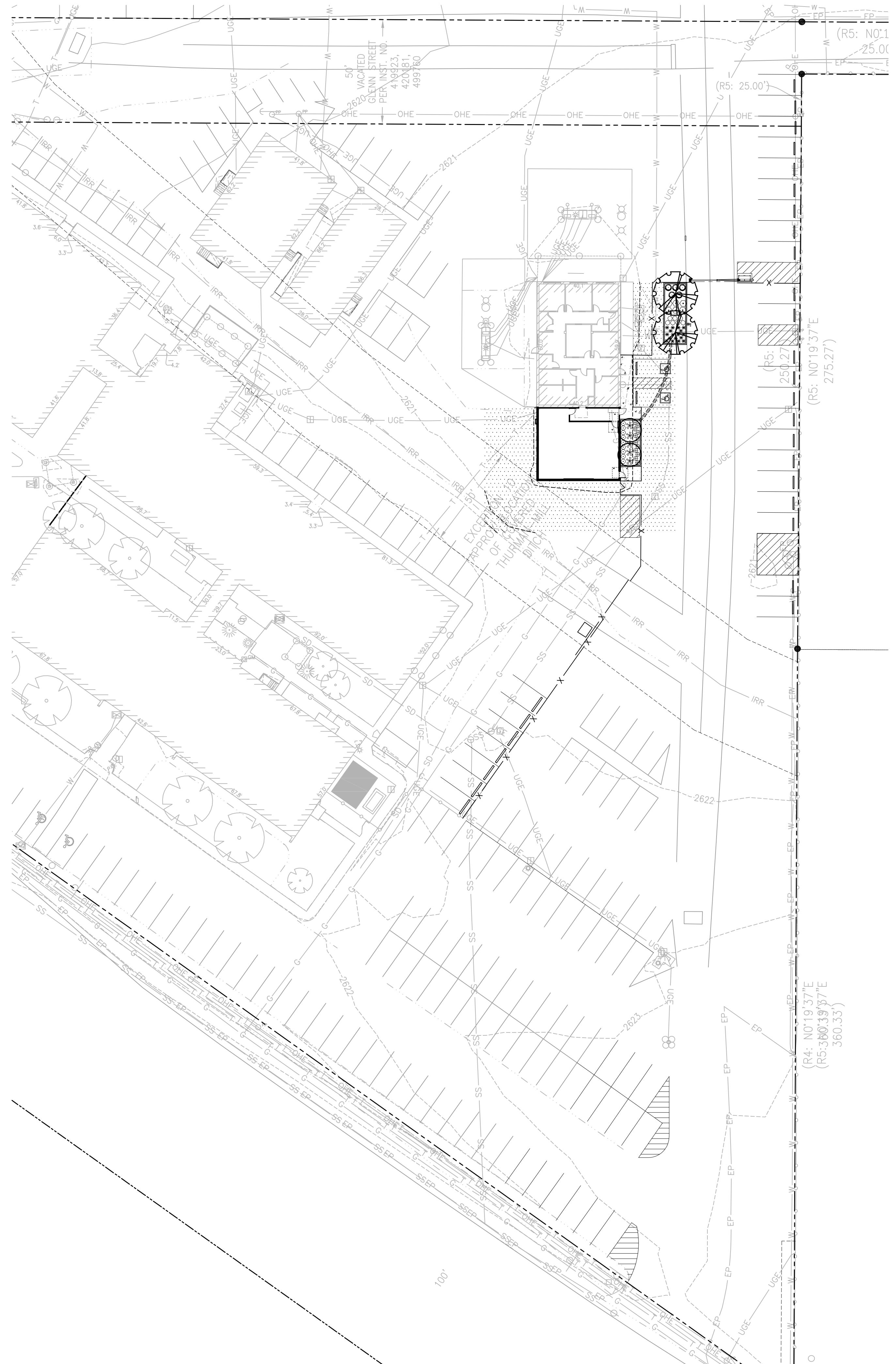
ORIGINAL DOCUMENT SIGNED BY ARCHITECT ON FILE WITH THE OWNER
 ORIGINAL DATE SIGNED: APRIL 16, 2024
 LICENSED ARCHITECT AR-984113
 ONCE SIGNED BY: JAMES A. MARSH
 STATE OF IDAHO
 APRIL 16, 2024

JAMES A. MARSH, ARCHITECT
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 CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY AND LOCATE ALL EXISTING CONDITIONS PRIOR TO DEMOLITION. COORDINATE WITH OWNER FOR SCHEDULING OF DISCONNECTION OF SERVICES.
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IRRIGATION LEGEND

SYMBOL	MANUFACT	MODEL	DESCRIPTION
	RAINBIRD	CONTROL ZONE KIT, FILTER, PRV. XCZ-PRB-100-COM (3-20 GPM)	
	RAINBIRD	XFS SUBSURFACE DRIFLINE	XFS-09-18 DRIFLINE AT 18" SPACING
	RAINBIRD	ESP-LXME LXMPED	IRRIGATION CONTROLLER-WALL MOUNT IN FIRE RISER ROOM. PROVIDE ELECTRICAL POWER TO CONTROLLER.
	BUCKNER	VBM SERIES	ISOLATION VALVE-LINE SIZE
	BUCKNER	VBM SERIES - 3/4"	MANUAL DRAIN VALVE
	WILKINS	MODEL 975XL	REDUCED PRESSURE BACKFLOW PREVENTER & STRONGBOX COVER. INSTALL PER LOCAL CODES AND CONDITIONS.
	PWPIPE (OR EQUAL)	PVC CLASS 200	1.25" MAINLINE
	PWPIPE (OR EQUAL)	PVC CLASS 200	LATERAL PIPE-WATER VELOCITY SHALL NOT EXCEED 5' PER SECOND
	PWPIPE (OR EQUAL)	PVC CLASS 200	4" SLEEVES OR 2 SIZES LARGER THAN PIPE. 2" FOR ELECTRIC VALVE WIRING
	RAINBIRD	33DRC OC VALVE 33 DK VALVE KEY SH-O HOSE SWIVEL	QUICK COUPLING VALVE WITH ASSOCIATED VALVE KEY, AND HOSE SWIVEL

IRRIGATION NOTES

- CONFIRM PSI IS ADEQUATE PRIOR TO COMMENCING WORK. SHOULD THE PSI BE LESS THAN ADEQUATE, NOTIFY THE ARCHITECT IMMEDIATELY. IN THE EVENT PRESSURE DIFFERENCES ARE NOT REPORTED IN WRITING PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY NECESSARY REVISIONS.
- THE CONTRACTOR IS RESPONSIBLE TO FURNISH AND INSTALL A COMPLETE IRRIGATION SYSTEM WHICH PROVIDES ADEQUATE WATER COVERAGE TO ALL LAWN AND PLANTING AREAS AS SHOWN ON THE DRAWINGS. THE WORK SHALL CONSIST OF PROVIDING AND INSTALLING ALL MATERIALS NECESSARY FOR A COMPLETE SYSTEM INCLUDING PIPE, VALVES, FITTINGS, HEADS, AUTOMATIC CONTROLS, AND ALL LABOR. THE CONTRACTOR SHALL FURNISH THE ARCHITECT WITH A SHOP DRAWING SHOWING THE DESIGN LAYOUT, PIPE SIZE, VALVE LOCATIONS, HEAD LOCATIONS, ETC. FOR APPROVAL PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL NOT INSTALL THE SPRINKLER SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT SITE CONDITIONS INHIBIT THE SPRINKLER SYSTEM FROM PERFORMING AS INTENDED. IN THE EVENT THAT THE ARCHITECT IS NOT NOTIFIED IN WRITING THAT SUCH CONDITIONS EXIST, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS AND REPAIR WORK NECESSARY.
- DRAWINGS ARE CONCEPTUAL IN NATURE. ACTUAL PLACEMENT OF SPRAY HEADS, VALVES, LINES, ETC. WILL VARY. ALL PIPING, VALVES, ETC. SHOWN WITHIN PAVED AREAS ARE FOR DESIGN CLARIFICATION ONLY. INSTALL PIPING AND VALVES IN PLANTING AREAS WHERE POSSIBLE, AND LOCATE ELECTRIC CONTROL AND QUICK COUPLING VALVES IN GROUND COVER/SHRUB AREAS, 6" TO 12" AWAY FROM EDGE OF PAVEMENT FOR EASE OF ACCESS. CONTRACTOR IS RESPONSIBLE FOR INSTALLING A WORKING SYSTEM THAT MAINTAINS PROPER COVERAGE, EVEN IF MINOR ADJUSTMENTS ARE NECESSARY. NO IRRIGATION WATER IS TO SPRAY ON BUILDING WALLS, SIGNS, OR SIDEWALKS.
- 4" POP-UPS ARE TO BE USED IN ALL LAWN AREAS. 12" POP-UPS ARE TO BE USED IN ALL PLANTER BEDS. (WHERE APPLICABLE)
- IF CIRCUIT PIPE SIZES ARE NOT SHOWN ON THE DRAWING, THE IRRIGATION CONTRACTOR IS RESPONSIBLE TO SIZE CIRCUIT PIPING. WATER VELOCITY IN ALL PIPES SHALL NOT EXCEED FIVE FEET PER SECOND. MINIMUM PIPE SIZE TO BE 1". POLYETHYLENE PIPE SHALL NOT BE USED.
- CONTRACTOR IS RESPONSIBLE FOR INSTALLING SLEEVES UNDER ALL ROADWAY, PARKING, AND WALKWAY SURFACES. EXTEND 6" MINIMUM BEYOND SURFACE EDGE. IDENTIFY ENDPPOINTS OF SLEEVING. REPORT ALL PROPOSED CHANGES IN SYSTEM DESIGN TO THE ARCHITECT PRIOR TO INSTALLATION.
- ALL IRRIGATION HEADS LOCATED ADJACENT TO ROAD SURFACES NOT PROTECTED BY A VERTICAL CONCRETE CURB SHALL BE PLACED 18" FROM THE EDGE OF THE ROAD SURFACE.
- IRRIGATION CONTRACTOR TO INSTALL MANUAL DRAIN VALVES AT ALL LOW POINTS ON THE MAINLINE.
- USE ADJUSTABLE SPRAY NOZZLES WHERE NECESSARY TO ADJUST SPRAY ARC.
- WHERE APPLICABLE, CONTRACTOR IS RESPONSIBLE TO PROVIDE 120 VOLT POWER AND ALL REQUIRED CIRCUITS FROM THE ELECTRICAL PANEL TO THE IRRIGATION CONTROLLER. SIZE WIRE AND CONDUIT AS REQUIRED.
- CONTRACTOR IS RESPONSIBLE TO REPAIR ALL EXISTING IRRIGATION COMPONENTS DAMAGED AS A RESULT OF NEW CONSTRUCTION, INCLUDING ADJACENT PROPERTIES. RE: CIVIL PLANS, SITE ELECTRICAL PLANS. REPAIR INCLUDES BUT IS NOT LIMITED TO PIPING; VALVES; HEADS; DRIP COMPONENTS; CONTROL WIRES AND EQUIPMENT; AND SLEEVES.
- CONTRACTOR IS RESPONSIBLE TO VERIFY ALL QUANTITIES PROVIDED ON ALL PLANS. IF QUANTITIES LISTED DO NOT CORRELATE WITH WHAT IS SHOWN ON THE PLAN, THE QUANTITIES SHOWN ON THE PLAN SHALL GOVERN. THIS INCLUDES BUT IS NOT LIMITED TO TREE, SHRUB, ROCK, TOPSOIL, MULCH, SEED OR SOD, EDGING, AND DRIP LINE QUANTITIES.

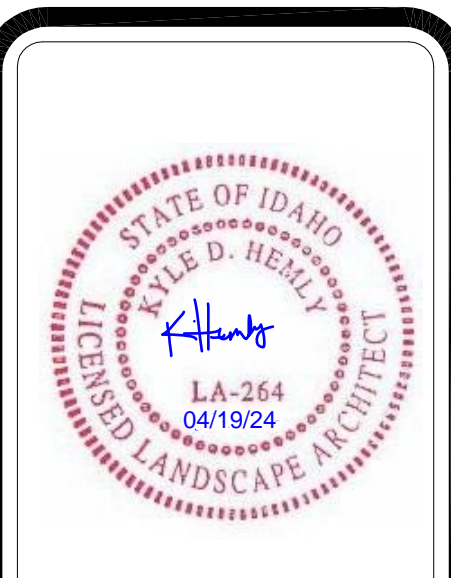
LANDSCAPE LEGEND

SYM	COMMON NAME/BOTANICAL NAME	PLANTING SIZE
TREES		
	Skyline Honeylocust/Gleditsia triacanthos inermis 'Skyline'	2" caliper
	Dwf. White Flowering Pear/Pyrus calleryana 'jazzam'	2" caliper
SHRUBS		
	Feather Reed Grass/Calamagrostis x acutiflora 'Karl Foerster'	1 gallon
	Lavender/Lavendula angustifolia	2 gallon
	Blonde Ambition Blue Grama/Bouteloua gracilis 'Blonde Ambition'	2 gallon
	Black Eyed Susan/Rudbeckia hirta	1 gallon
	Autumn Joy Sedum/Sedum telephium 'Autumn Joy'	1 gallon
	Red Yucca/Hesperaloe parviflora	2 gallon
	Gold Mound Spiraea/Spiraea x bumalda 'Goldmound'	5 gallon

PLANTING NOTES

- IMMEDIATELY AFTER AWARD OF CONTRACT, NOTIFY THE ARCHITECT OF AVAILABILITY OF SPECIFIED PLANT MATERIAL FROM COMMERCIAL NURSERIES. IF A SPECIFIED PLANT IS NOT AVAILABLE, THE ARCHITECT WILL PROVIDE ALTERNATE PLANT MATERIAL SELECTIONS. SUCH CHANGES SHALL NOT ALTER THE ORIGINAL BID PRICE UNLESS A CREDIT IS DUE TO THE OWNER.
- VERIFY LOCATIONS OF ALL EXISTING UNDERGROUND UTILITY SYSTEMS PRIOR TO BEGINNING ANY PHASE OF CONSTRUCTION THAT MAY CAUSE DAMAGE TO SUCH SYSTEMS. CALL 1-800-642-2444 TO LOCATE EXISTING UTILITIES. REPAIR / REPLACE DAMAGED UTILITIES TO THE SATISFACTION OF THE OWNER OR GOVERNING AGENCY, AND AT NO ADDITIONAL COST TO THE OWNER OR INCREASE IN BID AMOUNT.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING ALL PLANTED AREAS. ALL DELETERIOUS MATERIAL SUCH AS ROCK, TRASH, CONSTRUCTION DEBRIS, AGGREGATE BASE MATERIAL, ASPHALT, ETC., SHALL BE REMOVED PRIOR TO ANY FILL OPERATIONS. RIP SUB GRADE AS PER SPECIFICATIONS. FILL ALL PLANTING AREAS WITH CLEAN EARTHEN FILL, AS PER SPECIFICATIONS. SOIL SHALL BE FREE OF HEAVY, STIFF CLAY AND ANY DELETERIOUS MATERIAL OVER ONE INCH IN SIZE. THE TOP SIX INCHES OF FILL MATERIAL SHALL BE TOPSOIL EQUAL TO THAT REQUIRED IN THE SPECIFICATIONS. CLEAN TOPSOIL STRIPPED FROM SITE MAY BE UTILIZED FOR PLANTER OR TOPSOIL FILL IF PRIOR APPROVAL HAS BEEN OBTAINED FROM THE ARCHITECT.
- EXCAVATED PLANT PITS SHALL HAVE POSITIVE DRAINAGE. PLANT PITS (WHEN FULLY FLOODED WITH WATER) SHALL DRAIN WITHIN 1 HOUR OF FILLING. ENSURE THAT ALL PLANT PITS HAVE POSITIVE DRAINAGE.
- PROVIDE REQUIRED SOIL EROSION CONTROL MEASURES THROUGHOUT THE DURATION OF THE CONTRACT PERIOD. SHOULD THERE BE EXISTING SOIL EROSION CONDITIONS THAT REQUIRE MITIGATION, NOTIFY THE ARCHITECT IMMEDIATELY.
- ALL PLANTER BEDS SHALL RECEIVE A 5" DEEP LAYER OF SHREDDED BARK MULCH. WOOD FIBER SHOULD NOT BE DYED ANY COLOR. NO LANDSCAPE FABRIC SHALL BE USED FOR PLANTING BEDS.
- TOPSOIL DEPTHS SHALL BE AS FOLLOWS (WHERE APPLICABLE): LAWN AREAS-6" MIN.; PLANTER BEDS - 12" MIN.; CURB ISLANDS - 18" MIN. TOP SOIL SHALL BE WEED FREE.
- CONTRACTOR IS RESPONSIBLE TO REPAIR ALL LANDSCAPE PLANTING AREAS DAMAGED AS A RESULT OF NEW CONSTRUCTION. RE: CIVIL PLANS, SITE ELECTRICAL PLANS. REPAIR INCLUDES BUT IS NOT LIMITED TO TREES, SHRUBS, GROUNDCOVER AND LAWN; MULCH; TOPSOIL; EDGING; LANDSCAPE FABRIC.
- ALL PLANTING BEDS SHALL BE TREATED WITH A PRE-EMERGENT HERBICIDE. PRE-EMERGENT HERBICIDE SHALL BE APPLIED PER MANUFACTURER'S RECOMMENDATIONS AND SHALL OCCUR AFTER TOPSOIL PLACEMENT AND PRIOR TO INSTALLATION OF PLANT MATERIALS AND MULCH.
- CONTRACTOR IS RESPONSIBLE TO VERIFY ALL QUANTITIES PROVIDED ON ALL PLANS. IF QUANTITIES LISTED DO NOT CORRELATE WITH WHAT IS SHOWN ON THE PLAN, THE QUANTITIES SHOWN ON THE PLAN SHALL GOVERN. THIS INCLUDES BUT IS NOT LIMITED TO TREE, SHRUB, ROCK, TOPSOIL, MULCH, SEED OR SOD, EDGING, AND DRIP LINE QUANTITIES.
- SOIL AMENDMENT: PRIOR TO THE INSTALLATION OF LAWN OR OTHER PLANT MATERIALS IN AREAS THAT HAVE BEEN DISTURBED OR COMPACTED BY CONSTRUCTION ACTIVITY, SOILS SHALL BE AMENDED TO INCREASE SOIL WATER HOLDING CAPACITY. PROPER SOIL AMENDMENT INCLUDES THOROUGHLY LOOSENING SOILS TO A DEPTH OF SIX INCHES; ADDING COMPOST AS A SOIL AMENDMENT AT A RATE OF FOUR CUBIC YARDS PER 1,000 SQUARE FEET OF TOTAL AREA TO BE PLANTED, AND THOROUGHLY INCORPORATING COMPOST TO A DEPTH OF AT LEAST TWO INCHES.

1 LANDSCAPE PLAN
SCALE: 1" = 30'
0 15 30 60 90 120
SCALE IN FEET



KYLE D. HEMLY, LANDSCAPE ARCHITECT
200 BROAD STREET
BOISE, IDAHO
PHONE: 208-343-4638 FAX: 208-343-1658
WWW.CSHQA.COM

ITD D3 TRAINING ADDITION
8150 W CHINDEN BLVD
GARDEN CITY, ID

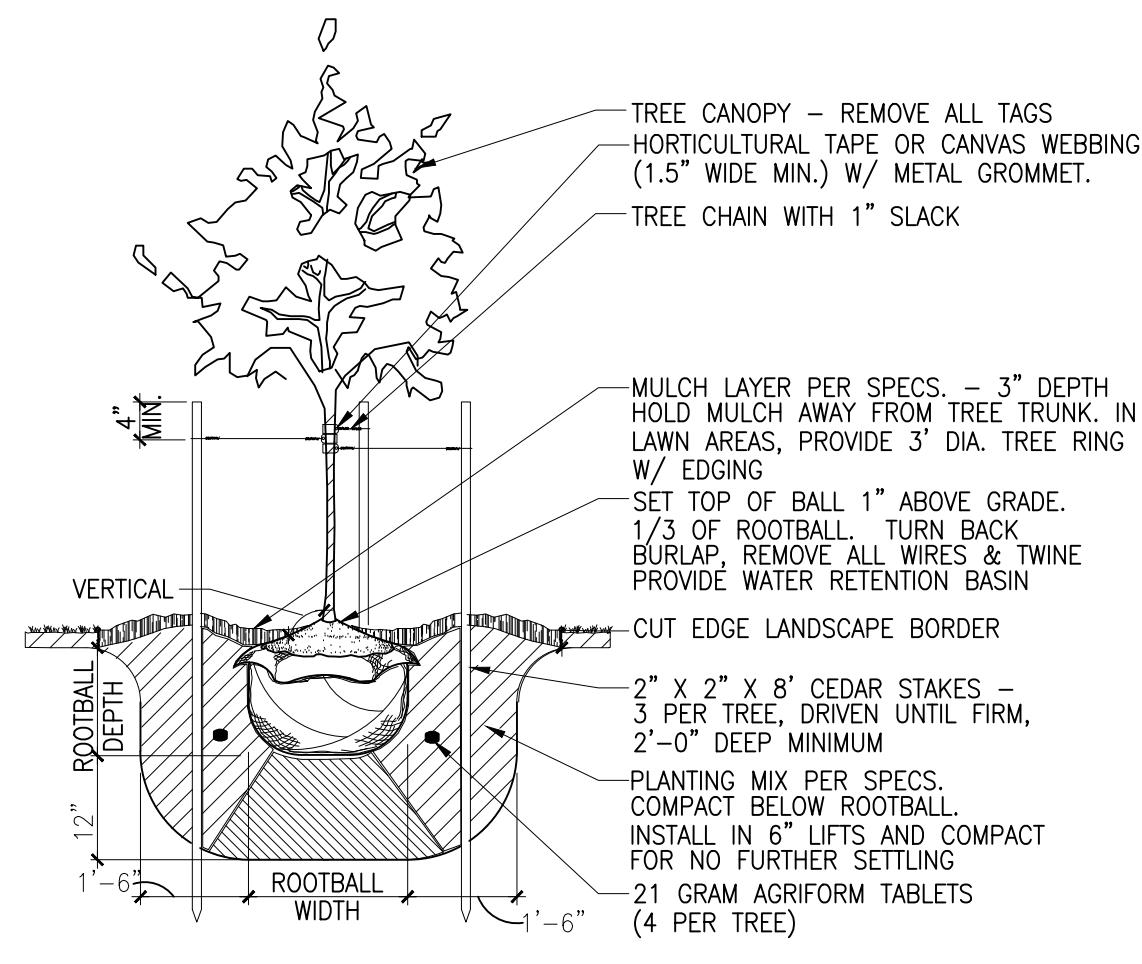
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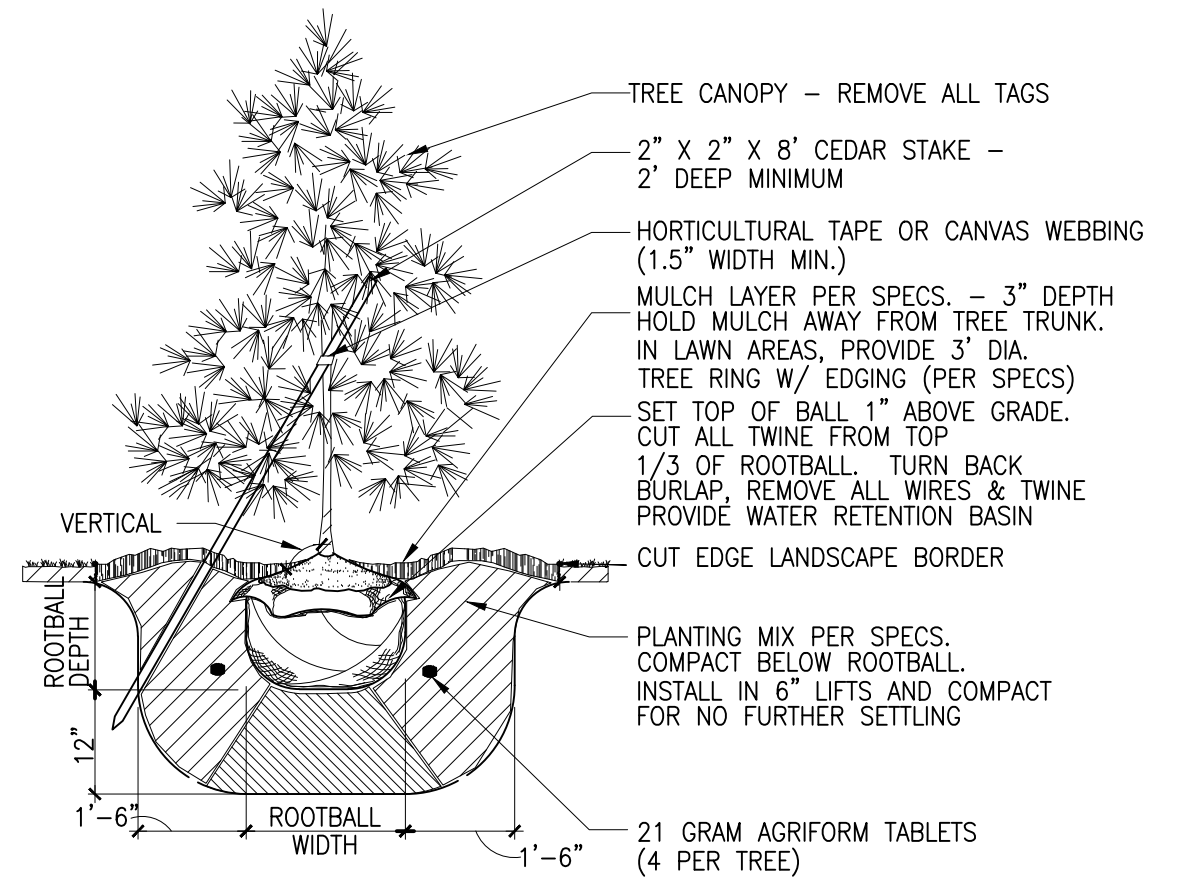
PROJECT 24009	DATE 04-11-24
DRAWN KDH	CHECKED KDH
REVISED	

SHEET TITLE
LANDSCAPE PLAN

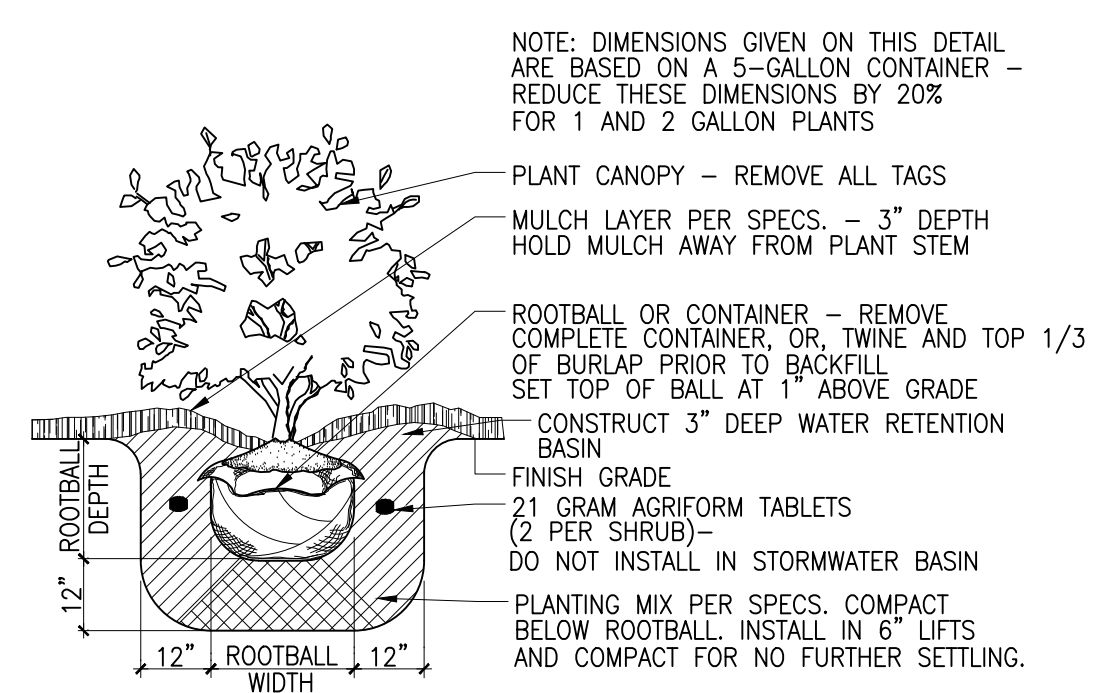
SHEET
L10
ORIGINAL SHEET SIZE
24" x 36"



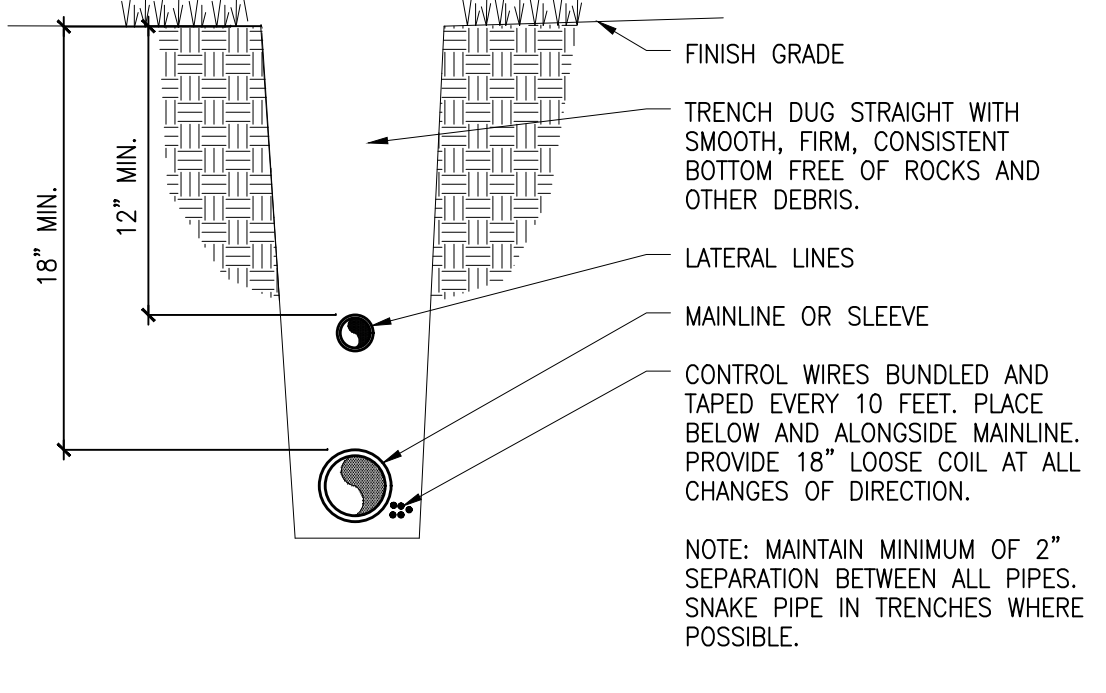
1 DECIDUOUS TREE PLANTING
SCALE: NOT TO SCALE



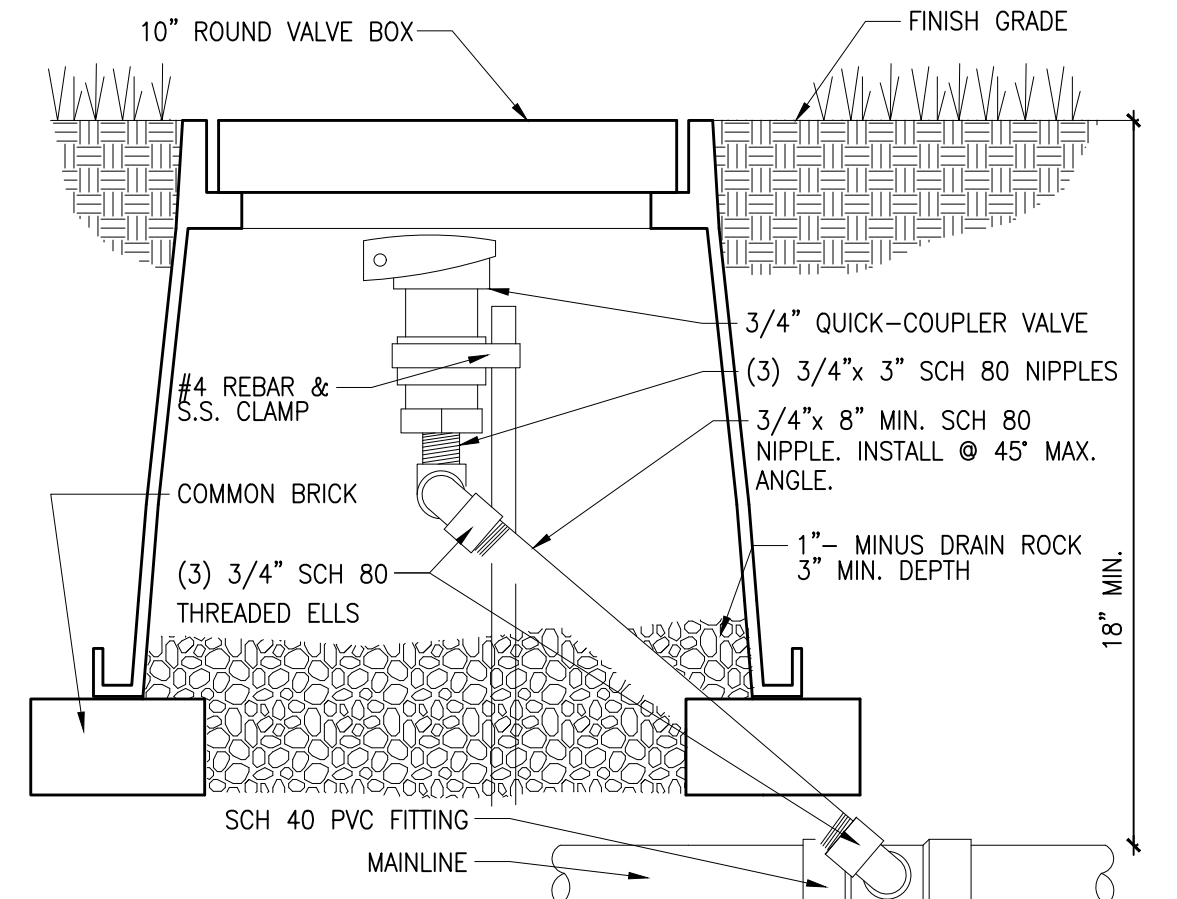
2 CONIFEROUS TREE PLANTING
N.T.S.



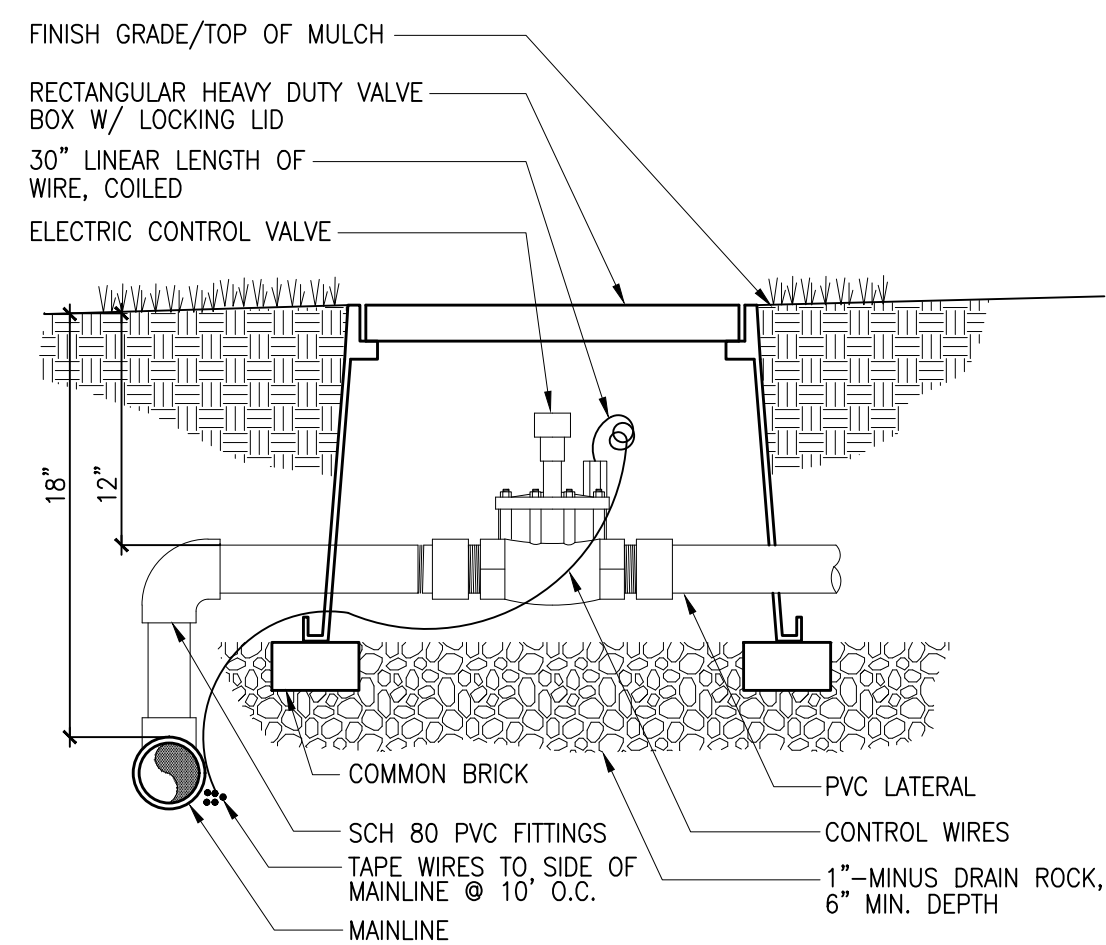
3 SHRUB PLANTING
SCALE: NOT TO SCALE



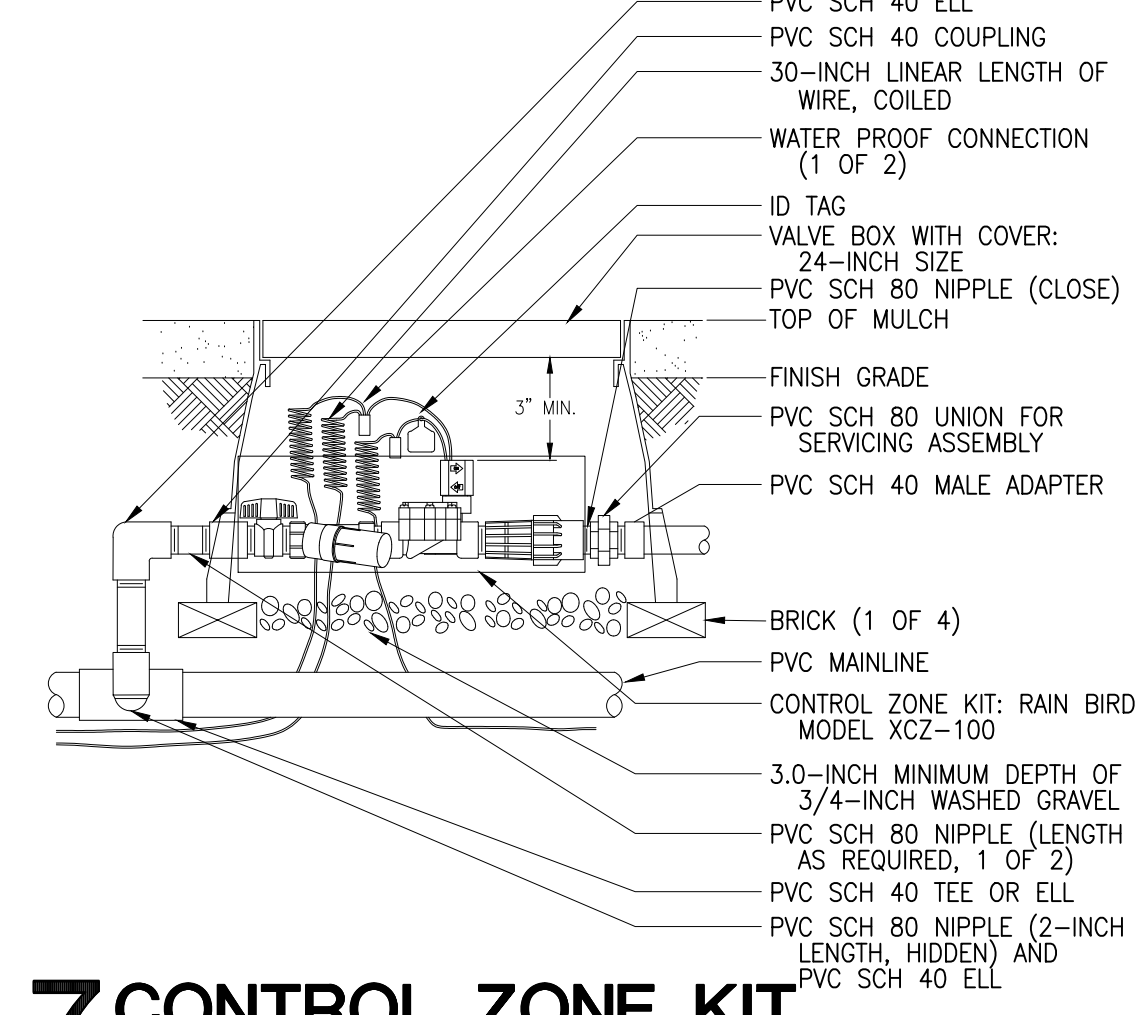
4 TRENCH SECTION
SCALE: NOT TO SCALE



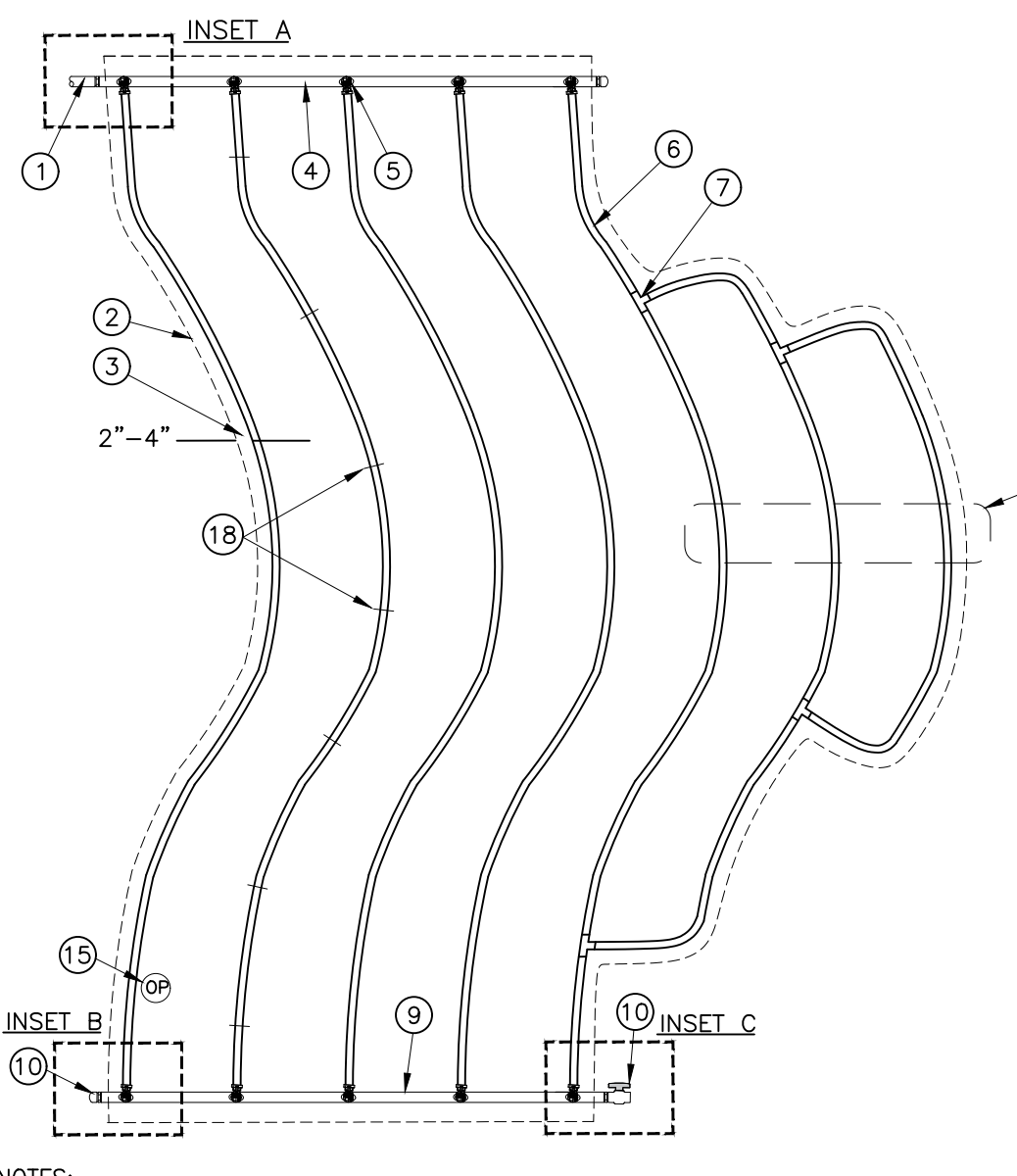
5 QUICK-COUPLER VALVE
SCALE: NOT TO SCALE



6 AUTOMATIC VALVE
SCALE: NOT TO SCALE

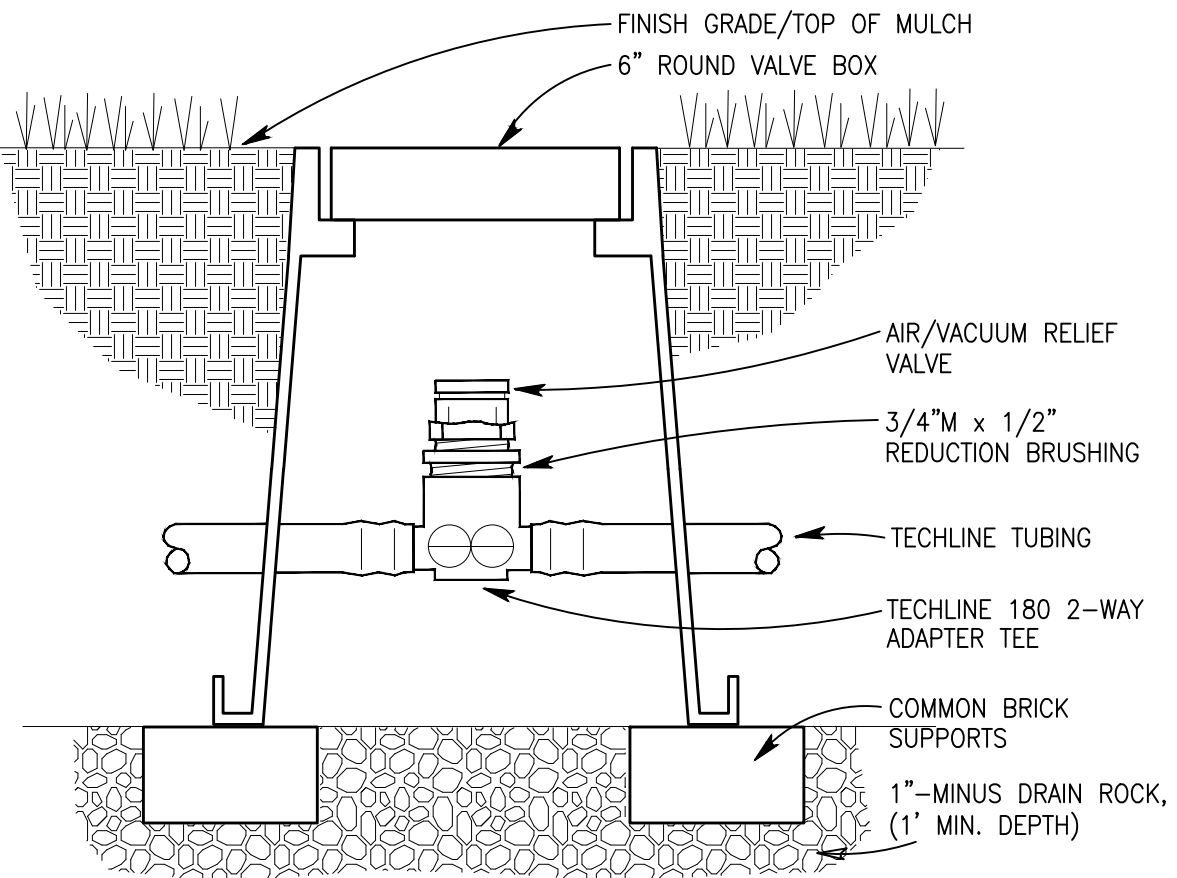
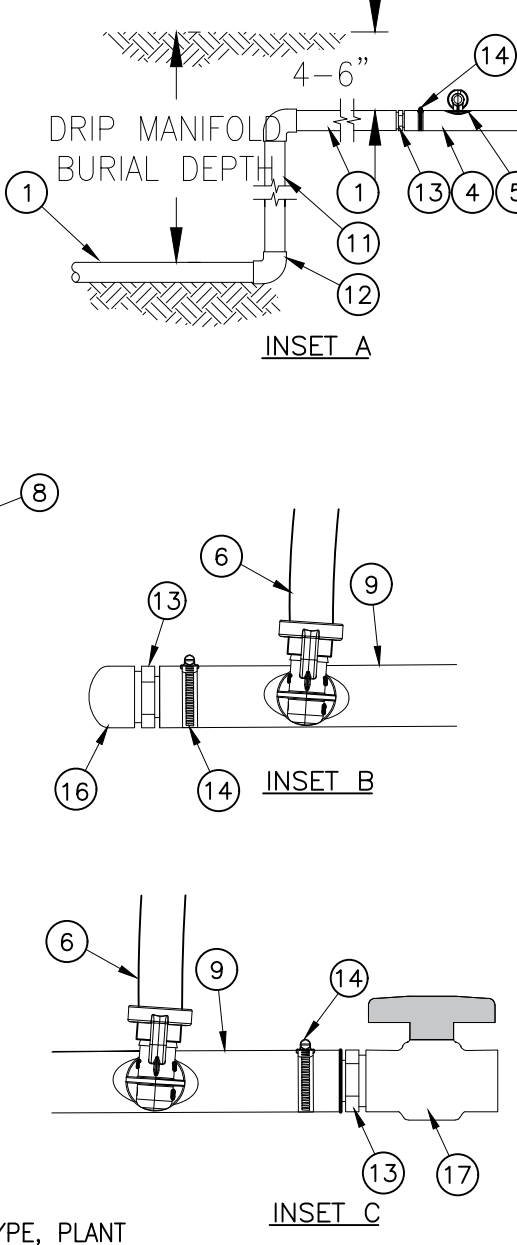


7 CONTROL ZONE KIT
SCALE: NOT TO SCALE

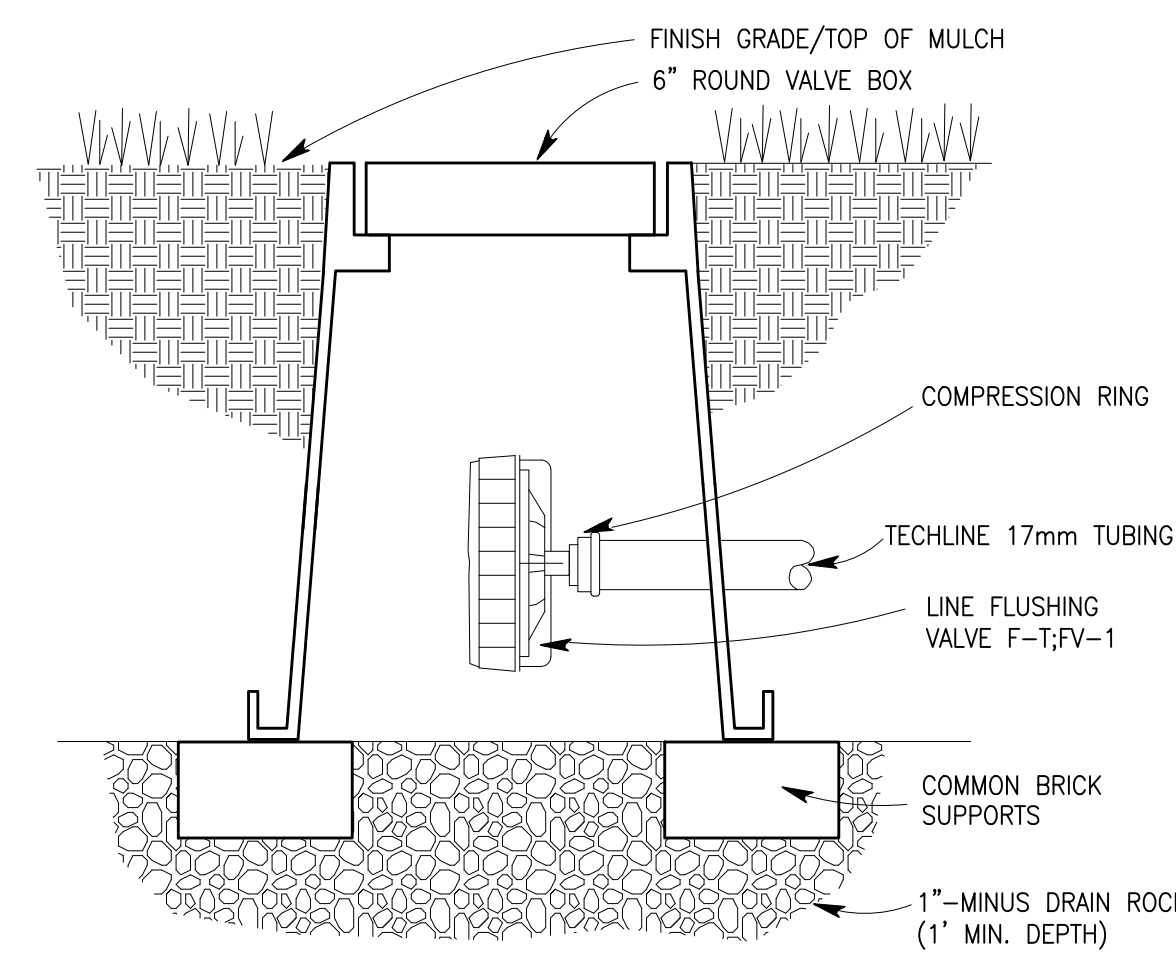


8 XFS SUB-SURFACE DRIPLINE-CURVED EDGE
NOT TO SCALE

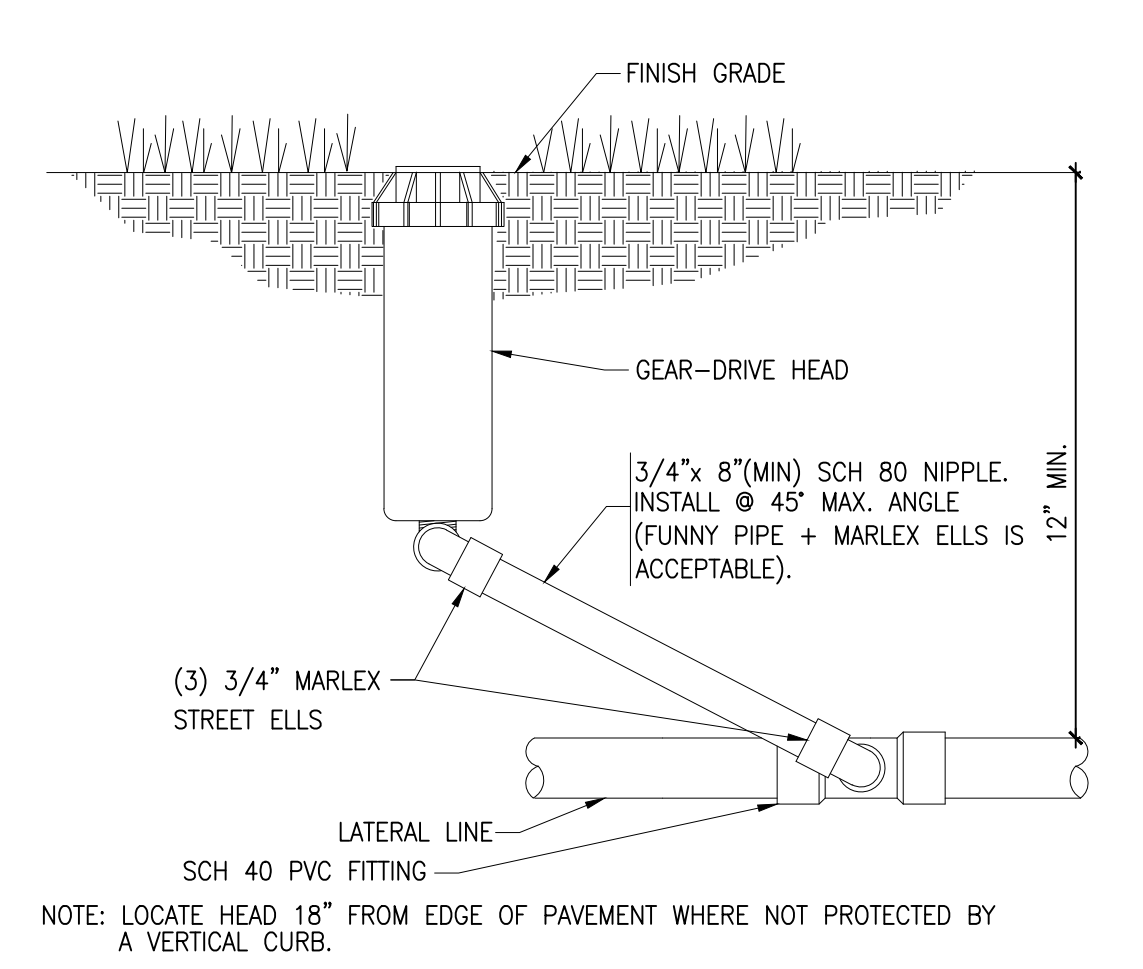
NOTES:
1. DISTANCE BETWEEN LATERAL ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND CHANGES IN ELEVATION. SEE INSTALLATION SPECIFICATIONS ON RAIN BIRD WEB SITE (WWW.RAINBIRD.COM) FOR SUGGESTED SPACING.
2. LENGTH OF LONGEST DRIPLINE LATERAL SHOULD NOT EXCEED THE MAXIMUM SPACING SHOWN IN THE ACCOMPANYING TABLE.
3. PLACE TIE DOWN STAKES EVERY THREE FEET IN SAND, FOUR FEET IN LOAM, AND FIVE FEET IN CLAY.
4. AT FITTINGS WHERE THERE IS A CHANGE OF DIRECTION SUCH AS TEES OR ELBOWS, USE TIE-DOWN STAKES ON EACH LEG OF THE CHANGE OF DIRECTION.



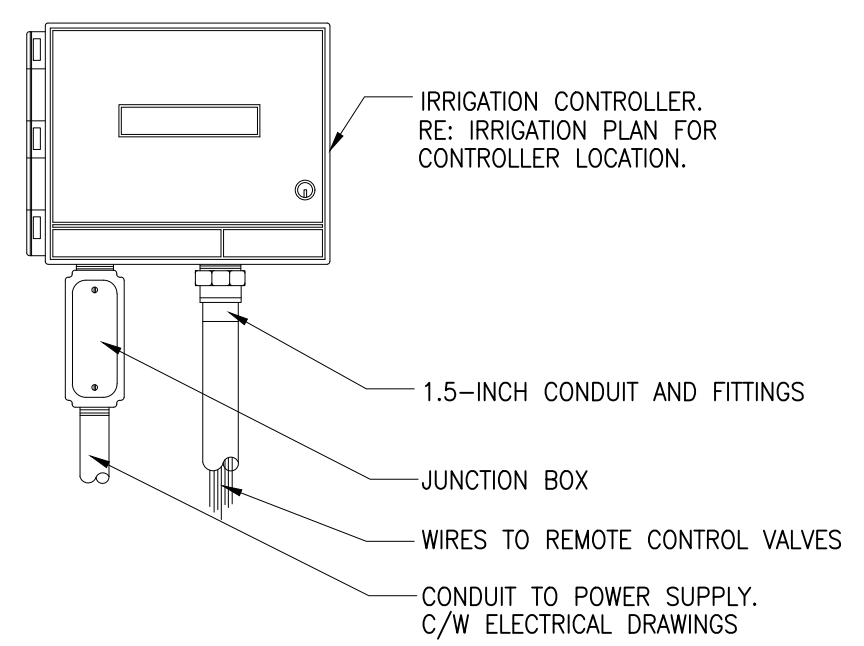
9 AIR/VACUUM RELIEF VALVE
SCALE: NOT TO SCALE



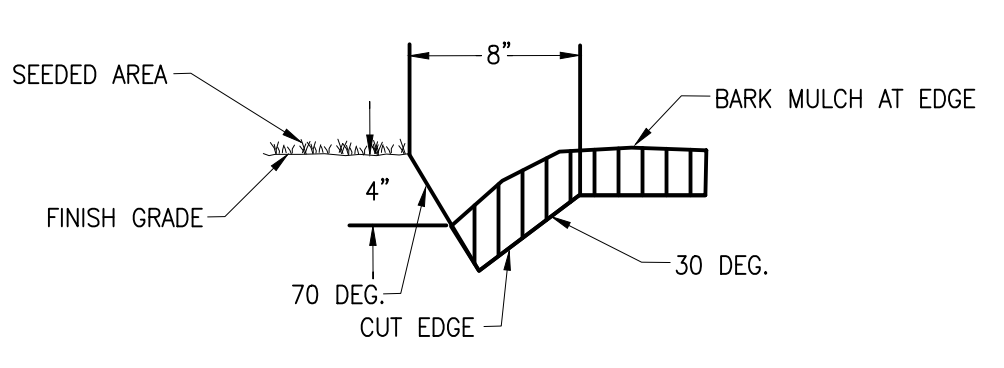
10 LINE FLUSHING VALVE
SCALE: NO SCALE



11 POP-UP GEAR-DRIVE HEAD
NOT TO SCALE



12 CONTROLLER-WALL MOUNT
SCALE: NOT TO SCALE



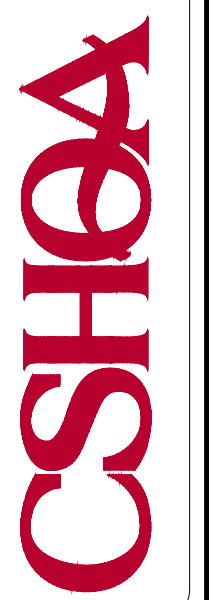
13 CUT EDGE LANDSCAPE EDGE
SCALE: NOT TO SCALE



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GARDEN CITY, ID

200 BROAD STREET
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PERMIT SET

PROJECT 24009	DATE 04-11-24
DRAWN KH	CHECKED KDH

REVISED
LANDSCAPE DETAILS

SHEET TITLE

SHEET

L20

ORIGINAL SHEET SIZE
24" x 36"

SECTION 328400 – PLANTING IRRIGATION

PART 1 – GENERAL

1.1 SUMMARY

A. This Section includes valves, piping, sprinklers, specialties, accessories, controls, and wiring for lawn and landscape irrigation systems.

B. Related Sections: The following Sections contain requirements that relate to this Section:
1. Division 22, Section "Plumbing" for water supply.
2. Division 26, Sections for electrical power materials and installations.

1.2 SYSTEM PERFORMANCE REQUIREMENTS
A. Location of Sprinklers and Devices: Design location is approximate. Make minor adjustments necessary to avoid plantings and obstructions such as signs and light standards.

B. Minimum Water Coverage: Not less than:
1. Turf Areas: 100 percent.
2. Other Planting Areas: 100 percent.
C. Components and Installation: Capable of producing piping systems with the following minimum working pressure ratings except where indicated otherwise.
1. Pressure Piping: 150 psig.
2. Circuit and Drain Piping: 100 psig.

1.3 SUBMITTALS

A. Product data including pressure rating, rated capacity, settings, and electrical data of selected models for the following:

- 1. Water meters.
2. Backflow preventers, including test equipment.
3. Pressure regulators.
4. Valves, including general duty, underground, manual, and automatic control, and quick-coupler types, and valve boxes.
5. Sprinklers, including emitters, drip tubes, and devices.
6. Controls, including controller wiring diagrams.
7. Wiring.
8. Water hammer arresters.
9. Area drains.

B. Wiring diagrams for electrical controllers, valves, and devices.

1.4 QUALITY ASSURANCE

A. Comply with requirements of utility supplying water for prevention of backflow and back-siphonage.
B. Installer Qualifications: Engage an experienced installer who has completed irrigation systems similar in material, design, and extent to that indicated for Project that have resulted in construction with a record of successful in-service performance.

C. Provide underground irrigation system as a complete unit produced by a single acceptable manufacturer, including heads, valves, controls, and accessories.

1.5 PROJECT CONDITIONS

A. Perform site survey, research public utility records, and verify existing utility locations. Verify that irrigation system piping may be installed in compliance with original design and referenced standards.

1.6 SEQUENCING AND SCHEDULING
A. Coordinate irrigation systems work with landscape work specified in Division 32 Section "Landscape Improvements."

PART 2 – PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. As indicated on the drawings.

2.2 PRESSURE PIPE: Comply with following:
A. 3" and smaller, PVC plastic pipe, ASTM D2241, Class 200 PVC, SDR 21 solvent weld pipe.

2.3 PIPE FITTINGS: Comply with following:
A. For PVC plastic pipe, ASTM D 2464 Schedule 80, socket fittings with ASTM D 2564 solvent cement.

2.4 CIRCUIT PIPE (DOWNSTREAM FROM CIRCUIT VALVES): Comply with the following:
A. PVC plastic pipe, ASTM D 2241, Class 200 PVC, SDR21 solvent weld pipe.

2.5 VALVES: Manufacturer's standard, and as follows:
A. Provide cast bronze bodies, unless otherwise indicated.
B. Manual Circuit Valves: Globe valves
C. Key Operated Valves: Manual valves, fitted for key operation.
1. Furnish 2 valve keys, three feet long with tee handles and key end to fit valves.

D. Automatic Circuit Valves: Globe valves operated by low-power solenoid, normally closed, manual flow adjustment.
E. Automatic Drain Valves: Designated to open for drainage when line pressure drops below 3 psi.

2.6 BACKFLOW PREVENTERS: Manufacturer's standard, to suit sprinkler system.
2.7 SPRINKLER HEADS: Manufacturer's standard unit designed to provide uniform coverage over entire area of spray at available water pressure, as follows:

- A. Flush surface: Fixed pattern, with screw-type flow adjustment.
B. Bubbler: Fixed pattern, with screw-type flow adjustment.
C. Shrubbery: Fixed pattern, with screw-type flow adjustment.
D. Pop-Up Spray: Fixed pattern, with screw-type flow adjustment and stainless steel retraction spring.
E. Pop-Up Rotary Spray: Gear drive, full circle and adjustable part circle type.
F. Pop-Up Rotary Impact: Impact drive, full circle and part circle as indicated.
G. Above-Ground Rotary Impact: Impact drive, full circle and part circle as indicated.

2.8 VALVE BOX: Thermoplastic. Size as required for access; maximum of two valves per box.
2.9 VALVE COVER AND FRAME: Thermoplastic snap-top lid with provision for locking.
2.10 AUTOMATIC CONTROL SYSTEM

A. General: Furnish low voltage system manufactured expressly for control of automatic circuit valves of underground irrigation systems. Provide unit of capacity to suit number of circuits as indicated.
B. Exterior Control Enclosure: Manufacturer's standard weatherproof enclosure with locking cover, complying with NEC (National Electric Code).
C. Interior Control Enclosures: Manufacturer's standard with locking cover, complying with NFPA 70. Coordinate location with electrical plans.
D. Transformer: To convert building service voltage to control voltage of 24 volts.
E. Circuit Control: Each circuit variable from approximately 5 to 60 minutes. Include switch for manual or automatic operation of each circuit.
F. Timing Device: Adjustable, 24-hour and 7 or 14-day period.

2.11 DRAINAGE BACKFILL: Cleaned gravel or crushed stone, graded from 3" maximum to 1/2" minimum.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Investigate and determine available water supply water pressure and flow characteristics.

3.2 PREPARATION

A. Set stakes to identify proposed sprinkler locations. Obtain Owner's approval before excavation.

3.3 INSTALLATION

A. General: Unless otherwise indicated, comply with requirements of Uniform Plumbing Code.
B. Connection to Main: As indicated on drawings.

C. Minimum Cover: Provide following minimum cover over top of installed piping:
1. Mainline: 18".
2. Circuit Pipe: 12".
3. Sleeves: 18".

D. Backflow Preventer: Provide union on downstream side.
E. Water Hammer Arrestor: Install on between connection to building main and circuit valves, inside building or in valve box.

F. Circuit Valves: Install in valve box, arranged for easy adjustment and removal.
1. Provide union on downstream side.
2. Adjust automatic control valves to provide flow rate of rated operating pressure required for each sprinkler circuit.

G. Piping: Lay pipe on solid subbase, uniformly sloped without humps or depressions.
1. For circuit piping, slope to drain valve at least 1/2" in 10' of run.
2. At wall penetrations, pack the opening around pipe with non-shrink grout. At exterior face, leave a perimeter slot approximately 1/2" wide by 3/4" deep. Fill this slot with backer rod and an acceptable elastomeric sealant. Repair below grade waterproofing disturbed by this work and make penetration watertight.

3. Install PVC pipe in dry weather when temperature is above 40 degrees F (4 degrees C) before testing, unless otherwise recommended by manufacturer.
H. Sprinkler Heads: Flush circuit lines with full head of water and install heads after hydrostatic test is complete.
1. Install lawn heads at manufacturer's recommended heights.
2. Install shrubbery heads at heights indicated.
3. Locate part-circle heads to maintain a minimum distance of 4" from walls and 2" from other boundaries, unless otherwise indicated.

I. Dielectric Protection: Use dielectric fittings at connection where pipes of dissimilar metal are joined.
3.4 FIELD QUALITY CONTROL

A. Testing: Perform hydrostatic test of piping and valves before backfilling trenches. Piping may be tested in sections to expedite work.
1. Cap and subject the piping system to a static water pressure of 50 psig (345 kPa) above the operating pressure without exceeding pressure rating of piping system materials. Isolate test source and allow to stand for 4 hours. Leaks and loss in test pressure constitute defects that must be repaired.

2. Repair leaks and defects with new materials and reset system or portion thereof until satisfactory results are obtained.
3.5 CLEANING AND ADJUSTING

A. Flush dirt and debris from piping before installing sprinklers and other devices.
B. Adjust automatic control valves to provide flow rate of rated operating pressure required for each sprinkler circuit.
C. Carefully adjust lawn sprinklers so they will be flush with, or not more than 1/2 inch (13 mm) above, finish grade after completion of landscape work.
D. Adjust settings of controllers and automatic control valves.

3.6 DEMONSTRATION

A. Demonstrate to Owner that system meets coverage requirements and that automatic controls function properly.
B. Demonstrate to Owner's maintenance personnel operation of equipment, sprinklers, specialties, and accessories. Review operating and maintenance information.
C. Provide 7 day written notice in advance of demonstration.

SECTION 329300 – PLANTS

PART 1 – GENERAL

1.1 SUMMARY

A. This Section includes the following:

- 1. Trees.
2. Shrubs.
3. Ground covers.
4. Plants.
5. Lawns.
6. Topsoil and soil amendments.

7. Initial maintenance of landscape materials.

B. Related Sections: The following Sections contain requirements that relate to this Section:
1. Division 32 Section "Planting Irrigation".

1.3 SUBMITTALS

A. General: Submit each item in this Article according to the Conditions of the Contract and Division 1 Specification Sections.
B. Product certificates signed by manufacturer certifying that their products comply with specified requirements.
1. Manufacturer's certified analysis for standard products.
2. Analysis for other materials by a recognized laboratory made according to methods established by the Association of Official Analytical Chemists, where applicable.
3. Label data substantiating that plants, trees, shrubs, and planting materials comply with specified requirements.

C. Planting schedule indicating anticipated dates and locations for each type of planting.
1.4 QUALITY ASSURANCE

A. Installer Qualifications: Engage an experienced installer who has completed landscaping work similar in material, design, and extent to that indicated for this Project and with a record of successful landscape establishment.
1. Installer's Field Supervision: Require installer to maintain an experienced full-time supervisor on the Project site during times that landscaping is in progress.

B. Provide quality, size, genus, species, and variety of trees and shrubs indicated, complying with applicable requirements of ANSI Z601 "American Standard for Nursery Stock."
C. Topsoil Analysis: Furnish a soil analysis made by a qualified independent soil testing agency stating percentages of organic matter, inorganic matter (silt, clay, and sand), deleterious material, pH, and mineral and plant – nutrient content of topsoil.

1. Report suitability of topsoil for growth of applicable planting material. State recommended quantities of nitrogen, phosphorus, and potash nutrients and any limestone, aluminum sulfate, or other soil amendments to be added to produce a satisfactory topsoil.
D. Measurements: Measure trees and shrubs according to ANSI Z601 with branches and trunks or cones in their normal position. Do not prune to obtain required sizes. Take caliper measurements 6 inches (150 mm) above ground for trees up to 4-inch (100-mm) caliper size, and 12 inches (300 mm) above ground for larger sizes. Measure main body of tree or shrub for height and spread; do not measure branches or roots tip-to-tip.

E. Preinstallation Conference: General Contractor to conduct conference at project site for planting coordination to verify compliance with requirements of project plans and local jurisdiction responsible for approval of the planting condition.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Packaged Materials: Deliver packaged materials in containers showing weight, analysis, and name of manufacturer. Protect materials from deterioration during delivery and while stored at site.
B. Seed: Deliver seed in original sealed, labeled, and undamaged containers.
C. Trees and Shrubs: Deliver freshly dug trees and shrubs. Do not prune before delivery, except as approved by Owner. Protect bark, branches, and root systems from sun scald, drying, sweating, whipping, and other handling and tying damage. Do not bend or bind live trees or shrubs in such a manner as to destroy natural shape. Provide protective covering during delivery. Do not drop trees and shrubs during delivery.

1. Immediately after digging bare-root stock, pack root system in wet straw, hay, or other suitable material to keep root system moist until planting.
D. Handle balled and burlapped stock by the root ball.
E. Deliver trees, shrubs, ground covers, and plants after preparations for planting have been completed and install immediately. If planting is delayed more than 6 hours after delivery, set planting materials in shade, protect from weather and mechanical damage, and keep roots moist.

1. Heal-in bare-root stock. Soak roots in water for 2 hours if dried out.
2. Set balled stock on ground and cover ball with soil, peat moss, sawdust, or other acceptable material.
3. Do not remove container-grown stock from containers before time of planting.
4. Water root systems of trees and shrubs stored on site with a fine-mist spray. Water as often as necessary to maintain root systems in a moist condition.

1.6 PROJECT CONDITIONS

A. Utilities: Determine location of above grade and underground utilities and perform work in a manner which will avoid damage. Hand excavate, as required. Maintain grade stakes until removal is mutually agreed upon by parties concerned.
B. Excavation: When conditions detrimental to plant growth are encountered, such as rubble fill, adverse drainage conditions, or obstructions, notify Owner before planting.

1.7 COORDINATION AND SCHEDULING

A. Coordinate installation of planting materials during normal planting seasons for each type of plant material required.
1.8 WARRANTY

A. General Warranty: The special warranty specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by the GC under requirements of the Contract Documents.
B. Special Warranty: Warrant the following living planting materials for a period of one year after date of Substantial Completion, against defects including death and unsatisfactory growth, except for defects resulting from lack of adequate maintenance, neglect, or abuse by Owner, abnormal weather conditions unusual for warranty period, or incidents that are beyond GC's control.

1. Trees.
2. Shrubs.
C. Remove and replace dead planting materials immediately unless required to plant in the succeeding planting season.
D. Replace planting materials that are more than 25 percent dead or in an unhealthy condition at end of warranty period.
E. A limit of one replacement of each plant material will be required, except for losses or replacements due to failure to comply with requirements.

1.9 TREE AND SHRUB MAINTENANCE

A. Maintain trees and shrubs by pruning, cultivating, watering, weeding, fertilizing, restoring planting saucers, lightening and repairing stakes and guy supports, and resetting to proper grades or vertical position, as required to establish healthy, viable plantings. Spray as required to keep trees and shrubs free of insects and disease. Restore or replace damaged tree wrappings. Maintain trees and shrubs for the following period:
1. Maintenance Period: 30 days following Substantial Completion.

1.10 LAWN MAINTENANCE

A. Begin maintenance of lawns immediately after each area is planted and continue until acceptable lawn is established, but for not less than the following periods:
1. Sodded Lawns: 30 days after date of Substantial Completion.
B. Maintain and establish lawns by watering, fertilizing, weeding, mowing, trimming, replanting, and other operations. Roll, regrade, and replant bare or eroded areas and remulch to produce a uniformly smooth lawn.
C. Watering: Provide and maintain temporary piping, hoses, and lawn watering equipment to convey water from sources and to keep lawns uniformly moist to a depth of 4 inches (100 mm).

1. Water lawn at the minimum rate of 1 inch (25 mm) per week.
D. Mow lawns as soon as there is enough top growth to cut with mower set at specified height for principal species planted. Repeat mowing as required to maintain specified height without cutting more than 40 percent of the grass height. Remove no more than 40 percent of grass leaf growth in initial or subsequent mowings. Do not delay mowing until grass blades bend over and become matted. Do not mow when grass is wet.
E. Postfertilization: Apply fertilizer to lawn after first mowing and when grass is dry.
1. Use fertilizer that will provide actual nitrogen of at least 1 lb per 1000 sq. ft. (0.5 kg per 100 sq. m) of lawn area.

PART 2 – PRODUCTS

2.1 TREE AND SHRUB MATERIAL

A. Provide trees, shrubs and other plants of size, genus, species, and variety which are appropriate for the geographic area and local conditions of the site, and complying with recommendations and requirements of ANSI Z601 American Standard for Nursery Stock.

B. Provide deciduous trees (sized per plans) with branching, configuration recommended by ANSI Z601 for type and species required. Provide single stem deciduous trees, balled and burlapped (B&B).

C. Provide deciduous shrubs (sized per plans) with not less than the minimum number of cones required by ANSI Z601 for type and height of shrub required. Provide deciduous shrubs, balled and burlapped (B&B).

D. Provide coniferous evergreen trees (sized per plans) and coniferous and broadleaf evergreen shrubs (sized per plans). Creeping or prostrate type conifers shall have a minimum spread of 18". Provide normal quality evergreens with well balanced form complying with requirements for other size relationships to the primary dimension shown. Provide balled and burlapped (B&B) evergreens.

2.2 GRASS MATERIALS

A. Sod: Certified turfgrass sod complying with ASPA specifications for machine-cut thickness, size, strength, moisture content, and mowed height, and free of weeds and undesirable noxious grasses. Provide viable sod of uniform density, color, and texture of the following turfgrass species, strongly rooted, and capable of vigorous growth and development when planted.
1. Species: As indicated on Drawings.

B. Seed: Provide fresh, clean, new-crop grass seed complying with tolerance for purity and germination established by Official Seed Analysis of North America. Provide seed mixture composed of grass species, with a minimum purity of 85%, minimum germination of 75%, and a maximum of 1% weed seed. The seed mixture shall have been tested for germination and purity by acceptable methods within a nine month period prior to delivery.

2.3 GROUND COVER

A. Provide plants established and well rooted in removable containers or integral peat pots.

2.4 MISCELLANEOUS LANDSCAPE MATERIALS

A. Anti-Desiccant: Emulsion type, film-forming agent designed to permit transpiration, but retard excessive loss of moisture from plants. Deliver in manufacturer's fully identified containers and mix in accordance with manufacturer's instructions.
B. Filtration/Separation Fabric: Water permeable filtration fabric of fiberglass or polypropylene fabric.
C. Wrapping: Tree-wrap tape not less than 4 inches wide, designed to prevent borer damage and winter freezing.

D. Stakes and Guyes: Provide stakes and deadmen of sound raw hardwood, treated softwood, or redwood, free of knot holes and other defects. Provide wire ties and gags of 2 strand, twisted, pliable galvanized iron wire, not lighter than 12 ga. With zinc-coated turnbuckles. Provide not less than 1/2 inch diameter rubber or plastic hose, cut to required lengths and of uniform color, material and size to protect tree trunks from damage by wires.

2.5 TOPSOIL

A. Topsoil: ASTM D 5268, pH range of 5.5 to 7, 4 percent organic material minimum, free of stones 1 inch (25 mm) or larger in any dimension, and other extraneous materials harmful to plant growth.
1. Topsoil Source: Reuse surface soil stockpiled on the site. Verify suitability of surface soil to produce topsoil meeting requirements and amend when necessary. Supplement with imported topsoil when quantities are insufficient. Clean topsoil of roots, plants, sods, stones, clay lumps, and other extraneous materials harmful to plant growth.

2. Topsoil Thickness:
a. Sod Grass: 6 inches.
b. Planter Beds: 12 inches.
c. Curb Islands: 18 inches.

2.6 SOIL AMENDMENTS

A. Lime: ASTM C 602, Class 1, agricultural limestone containing a minimum 80 percent calcium carbonate equivalent, with a minimum 99 percent passing a No. 8 (2.36 mm) sieve and a minimum 75 percent passing a No. 60 (250 micrometer) sieve.
B. Peat Humus: Finely divided peat, so completely decomposed and free of fibers that its biological identity is lost. Provide in granular form, free of hard lumps and with pH range suitable for intended use.
C. Mulch: A five (5) pound sample of mulch shall be submitted to Architect prior to delivery to site. Mulch shall be free from deleterious materials and suitable for top dressing of trees, shrubs, or plants.

D. Commercial Fertilizer: Complete fertilizer of neutral character, with some elements derived from organic sources and containing following percentages of available plant nutrients:
1. For trees and shrubs, provide fertilizer with not less than 5 percent total nitrogen, 10 percent available phosphoric acid and 5 percent soluble potash.
2. For lawns, provide fertilizer with percentage of nitrogen required to provide not less than 1 pound actual nitrogen per 1,000 sq. ft. of lawn area and not less than 4 percent phosphoric acid and 2 percent potassium. Provide nitrogen in a form that will be available to lawn during initial period of growth; at least 50 percent of nitrogen to be organic form.



KYLE D. HEMLY, LANDSCAPE ARCHITECT
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PHONE: 208-343-4655 FAX: 208-343-1858

ITD D3 TRAINING ADDITION
8150 W CHINDEN BLVD
GARDEN CITY, ID

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PERMIT SET

Table with 2 columns: PROJECT, DATE. Values: 24009, 04-11-24.

Table with 2 columns: DRAWN, CHECKED. Values: KH, KDH.

REVISED

LANDSCAPE SPECIFICATIONS

SHEET TITLE

SHEET

L30
ORIGINAL SHEET SIZE
24" x 36"

GENERAL NOTES

- A. CONSTRUCTION DOCUMENTS
1. THE CONTRACTOR SHALL REVIEW THE APPROVED CONSTRUCTION DOCUMENTS AND NOTIFY THE ENGINEER OF ANY ERRORS OR DISCREPANCIES PRIOR TO THE START OF CONSTRUCTION.
2. THE CONTRACTOR SHALL REVIEW THE APPROVED CONSTRUCTION DOCUMENTS AND NOTIFY THE ENGINEER OF ANY ERRORS OR DISCREPANCIES PRIOR TO THE START OF CONSTRUCTION.
3. CONTRACTOR IS RESPONSIBLE FOR USING QUALIFIED SUB CONTRACTORS EXPERIENCED IN THIS TYPE OF CONSTRUCTION.
4. THE CONTRACTOR SHALL FURNISH AND MAINTAIN EVERYTHING REQUIRED TO PROVIDE A COMPLETE STRUCTURE AS SHOWN HEREIN. IF THERE IS AN OMISSION ON THE PLANS, SUCH OMISSION SHALL NOT BE CONSTRUED TO MEAN THAT THE CONTRACTOR IS NOT REQUIRED TO FURNISH OR PROVIDE EVERYTHING THAT IS NECESSARY TO COMPLETE TO THE MINIMUM REQUIREMENTS OF THE 2018 INTERNATIONAL BUILDING CODE AND ALL OTHER SPECIFICATIONS, CODES AND STANDARDS NOTED ON THE APPROVED CONSTRUCTION DOCUMENTS.
5. THE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY IF ANY UNIDENTIFIED EXISTING UNDERGROUND UTILITIES ARE DISCOVERED. THE ENGINEER IS NOT RESPONSIBLE FOR THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES WHETHER OR NOT SHOWN ON THE DRAWINGS.
6. THE APPROVED STRUCTURAL DRAWINGS ARE PART OF THE OVERALL CONSTRUCTION DOCUMENT SET AND SHALL BE REFERENCED IN CONJUNCTION WITH OTHER APPROVED CONSTRUCTION DOCUMENTS INCLUDING, BUT NOT LIMITED TO, CIVIL, ARCHITECTURAL, MECHANICAL, ELECTRICAL, DOCUMENTS.
a. SEE ARCHITECTURAL DRAWINGS FOR THE FOLLOWING: HORIZONTAL AND VERTICAL DIMENSIONS NOT SHOWN ON THE STRUCTURAL PLANS; SIZE AND LOCATIONS OF ROOF AND WINDOW OPENINGS, SIZE AND LOCATIONS OF ROOF AND FLOOR OPENINGS, SIZE AND LOCATIONS OF INTERIOR NON-BEARING AND NON STRUCTURAL WALLS, CEILING ASSEMBLIES; WALL, FLOOR AND ROOF FINISHES; AND HANDRAILS.
b. SEE MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR THE FOLLOWING: SIZE AND LOCATION OF PIPES, SLEEVES, AND DUCT PENETRATIONS, EQUIPMENT SIZES AND LOCATION, EQUIPMENT CURBS AND MOUNTING BRACKETS OR ANCHORS.
7. THE STRUCTURAL DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT ARE NOT LIMITED TO, BRACING AND/OR SHORING FOR LOADS DUE TO CONSTRUCTION AND EQUIPMENT. THE CONTRACTOR'S OWN EXPENSE SHALL ENGAGE PROPERLY QUALIFIED PERSONS TO DESIGN BRACING, SHORING, ETC. OBSERVATION VISITS TO THE SITE BY THE ENGINEER SHALL NOT INCLUDE OBSERVATION OF THE ABOVE NOTED ITEMS.
8. UNDER NO CIRCUMSTANCES CAN STRUCTURAL COMPONENTS BE SUBSTITUTED, OMITTED, SPLICED, OR ALTERED FROM THE APPROVED SET OF CONSTRUCTION DOCUMENTS WITHOUT WRITTEN APPROVAL FROM THE ENGINEER.
B. DIMENSIONS AND NOTATIONS:
1. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS. DO NOT SCALE DRAWINGS.
2. FOR ANY MISSING DIMENSIONS REFER TO THE ARCHITECTURAL DRAWINGS OR THE DRAWINGS OF APPLICABLE TRADE.
3. ABBREVIATIONS USED ON THE APPROVED CONSTRUCTION DOCUMENTS SHALL BE CONSIDERED TYPICAL ABBREVIATIONS FOR THE INDUSTRY. THE CONTRACTOR SHALL BE RESPONSIBLE TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY ABBREVIATIONS THAT ARE UNKNOWN TO THE CONTRACTOR.
C. TYPICAL NOTES AND DETAILS:
1. SPECIFIC NOTES AND DETAILS SHALL TAKE PRECEDENCE OVER STANDARD TYPICAL NOTES AND DETAILS.
2. STANDARD TYPICAL NOTES AND DETAILS ARE TO BE USED WHEN REFERRED TO OR WHEN NO OTHER MORE RESTRICTIVE OR DIFFERENT DETAILS ARE SHOWN ON THE DRAWINGS.
3. WORK NOT PARTICULARLY SHOWN OR SPECIFIED SHALL BE THE SAME AS SIMILAR PARTS THAT ARE SHOWN OR SPECIFIED.
D. SHOP DRAWINGS:
1. SHOP DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER IN A TIMELY FASHION PRIOR TO FABRICATION AND CONSTRUCTION. UNLESS OTHERWISE STATED, A MINIMUM OF 5 WORKING DAYS AFTER RECEIPT OF SHOP DRAWINGS SHALL BE CONSIDERED AN ACCEPTABLE TIME PERIOD FOR THE STRUCTURAL ENGINEER REVIEW PROCESS.
2. A MINIMUM OF (2) HARD COPY SETS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW. THE STRUCTURAL ENGINEER WILL MAINTAIN (1) SET FOR REFERENCE PURPOSES. THE CONTRACTOR SHALL MAINTAIN (1) SET AT THE JOB SITE DURING THE DURATION OF CONSTRUCTION.
3. CONTRACTOR SHALL REVIEW AND STAMP SHOP DRAWINGS PRIOR TO SUBMISSION TO THE STRUCTURAL ENGINEER. CONTRACTOR SHALL REVIEW FOR COMPLETENESS AND COMPLIANCE WITH CONTRACT DOCUMENTS.
4. SHOP DRAWINGS ARE NOT A PART OF THE CONSTRUCTION DOCUMENTS. THE STRUCTURAL ENGINEER REVIEW DOES NOT GIVE PERMISSION TO DEVIATE FROM THE APPROVED CONSTRUCTION DOCUMENTS. WHERE THE SHOP DRAWINGS AND THE CONSTRUCTION DOCUMENTS DIFFER, THE MORE STRICT OF THE TWO SHALL GOVERN UNLESS WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER PERMITS OTHERWISE.
E. INSPECTIONS, SPECIAL INSPECTIONS, AND SITE VISITS (STRUCTURAL OBSERVATIONS):
1. INSPECTIONS BY THE BUILDING OFFICIAL ARE REQUIRED FOR CONSTRUCTION WORK FOR WHICH A PERMIT IS REQUIRED PER SECTION 110 OF THE IBC. CONTRACTOR IS REQUIRED TO COORDINATE AND SCHEDULE ALL REQUIRED INSPECTIONS WITH THE BUILDING OFFICIAL. INSPECTIONS PRESUMING TO GIVE AUTHORITY TO VIOLATE OR CANCEL PROVISIONS OF THE IBC OR OF OTHER ORDINANCES OF THE JURISDICTION SHALL NOT BE VALID.
2. SPECIAL INSPECTIONS ARE IN ADDITION TO, AND DO NOT REPLACE, THE INSPECTIONS BY THE BUILDING OFFICIAL PER CHAPTER 17 OF THE IBC. SPECIAL INSPECTIONS SHALL BE PERFORMED BY A QUALIFIED PERSON TO INSPECT AS REQUIRED ON THESE DOCUMENTS THE MATERIALS, INSTALLATION, FABRICATION, ERECTION OR PLACEMENT OF COMPONENTS AND CONNECTIONS REQUIRING SPECIAL EXPERTISE TO ENSURE COMPLIANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.
3. SITE VISITS OR STRUCTURAL OBSERVATIONS BY THE STRUCTURAL ENGINEER DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY OF INSPECTIONS OR SPECIAL INSPECTIONS PER SECTION 110 AND CHAPTER 17 OF THE IBC. SITE VISITS ARE NOT CONTINUOUS OR DETAILED. SITE VISITS DO NOT VALIDATE CONTRACTORS PERFORMANCE, MEANS, OR METHODS. SITE VISITS ARE FOR VISUAL OBSERVATION FOR GENERAL CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS.
F. CODE REQUIREMENTS:
1. ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE FOLLOWING CODES:
a. 2018 INTERNATIONAL BUILDING CODE (IBC)
b. ANY OTHER REGULATING AGENCIES WHICH MAY HAVE AUTHORITY OVER ANY PORTION OF THE WORK, INCLUDING THE STATE OF IDAHO
c. SPECIFICATIONS, CODES AND STANDARDS NOTED SHALL BE OF THE LATEST APPROVED ISSUE, INCLUDING SUPPLEMENTS, UNLESS NOTED OTHERWISE.
d. CONTRACTOR SHALL BE PROPERLY REGISTERED IN THE STATE OF IDAHO PER IDAHO STATE LAW.
e. ALL STRUCTURAL MATERIAL MUST HAVE CURRENT ICC-ES REPORTS AVAILABLE UPON REQUEST TO PROVE CODE APPROVAL & INDUSTRY TOLERANCES.

DESIGN CRITERIA

- A. 2018 INTERNATIONAL BUILDING CODE (IBC)
1. RISK CATEGORY: II
2. NATURE OF OCCUPANCY: ASSEMBLY
B. DESIGN LOADS:
1. LIVE LOAD = 25 PSF (SNOW)
2. FLOOR- LIVE LOADS:
a. ASSEMBLY = 100 PSF
C. IBC SEISMIC DESIGN:
1. SEISMIC DESIGN CATEGORY: C
2. IMPORTANCE FACTOR IE = 1.0
3. SOIL SITE CLASS: D
4. SEISMIC COEFFICIENTS:
• Sps = 0.33
• Sst = 0.18
• Si = 0.1
• Ti = 6s
5. RESPONSE MODIFICATION: R= 2.0
• SEISMIC FORCE RESISTING SYSTEM: SIMPLE DIAPHRAGM
6. DESIGN BASE SHEAR:
Vs = 0.165W
7. ANALYSIS PROCEDURE: EQUIV. LATERAL FORCE
D. IBC WIND LOAD:
1. BASIC DESIGN WIND SPEED = 102 MPH
2. EXPOSURE = B
3. ANALYSIS METHOD = ENVELOPE
4. DESIGN BASE PRESSURE:
P = 16 PSF

FOUNDATIONS

- A. MAXIMUM ALLOWABLE FOUNDATION SOIL BEARING PRESSURE:
1. 1500 PSF (DEAD + LIVE LOAD)
2. 2000 PSF (GRAVITY + LATERAL LOAD)
B. THE BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE 24 INCHES MINIMUM BELOW ADJACENT FINISHED GRADE.
C. THE INTERIOR FOOTINGS SHALL BE 12 INCHES MINIMUM BELOW FINISH FLOOR, U.N.O.
D. STRUCTURAL BACKFILL SHALL BE COMPACTED TO 95 PERCENT OF THE MAXIMUM DENSITY AS DETERMINED BY ASTM D1557. BRACE WALLS AND PIERS AS REQUIRED DURING BACKFILLING OPERATIONS.
E. DEFINITIONS:
1. STRUCTURAL WALLS - ANY LOAD BEARING WALL, SHEAR WALL, AND ANY WALL THAT REQUIRES A FOOTING.

CONCRETE

- A. REFERENCE STANDARDS:
1. ALL CONCRETE WORK SHALL CONFORM TO THE LATEST EDITION OF ACI 301
2. ALL CONCRETE SHALL BE NORMAL WEIGHT CONCRETE
3. CONCRETE MIX DESIGN SHALL BE ESTABLISHED IN ACCORDANCE WITH CHAPTER 5 OF ACI 318
4. USE LATEST EDITION OF ACI 306R WHEN CONCRETING DURING COLD WEATHER
B. SUBMITTALS:
1. SUPPLY PRODUCT DATA FOR PROPRIETARY MATERIALS AND ITEMS, INCLUDING REINFORCEMENT AND FORMING ACCESSORIES, ADMIXTURES, PATCHING COMPOUNDS, JOINT SYSTEMS, CURING COMPOUNDS AND OTHERS.
2. SHOP DRAWINGS FOR REINFORCEMENT DETAILING, FABRICATING, FOR BENDING, AND PLACING OF CONCRETE REINFORCEMENT SHALL COMPLY WITH ACI 315, MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES. BAR SCHEDULES, STIRRUP SPACING, BENT BAR DIAGRAMS, AND ARRANGEMENT OF CONCRETE REINFORCEMENT SHALL BE SHOWN. INCLUDE SPECIAL REINFORCING REQUIRED FOR OPENINGS THROUGH CONCRETE STRUCTURES.
C. FORMWORK AND FINISHES:
1. FORMWORK: DESIGN, ERECT, SUPPORT, BRACE AND MAINTAIN FORMWORK TO SUPPORT VERTICAL, LATERAL, STATIC AND DYNAMIC LOADS THAT MIGHT BE APPLIED UNTIL STRUCTURE CAN SUPPORT SUCH LOADS.
2. FINAL SLAB SURFACES SHALL RECEIVE A MACHINED STEEL TROWEL FINISH.
3. ANY PROJECTING CORNERS OF COLUMNS, BEAMS, WALLS, PEDESTALS, ETC SHALL BE FORMED WITH A 3/4 INCH CHAMFER.
4. DRY PACK, OR USE NON-SHRINK GROUT, UNDER BASE PLATES, BEARING PLATES, OR SILL PLATES AS REQUIRED FOR A LEVEL AND UNIFORM BEARING SURFACE. MINIMUM GROUT STRENGTH SHALL BE Fc = 7000 PSI, U.N.O.
5. SEPARATE SLABS-ON-GRADE FROM VERTICAL SURFACES WITH JOINT FILLER.
D. MIX DESIGN, STRENGTH, AND ADMIXTURES:
1. 28-DAY COMPRESSIVE STRENGTHS (fc):
a. FOUNDATION STEM WALLS = 3500 PSI
b. FOOTINGS = 3500 PSI
c. INTERIOR SLABS-ON-GRADE = 4000 PSI
2. CEMENT II OR III PER ASTM C-150
3. MAXIMUM SLUMP:
a. PRIOR TO ADDITION OF WATER-REDUCING ADMIXTURE = 4"
b. WITH ADDITION OF WATER-REDUCING ADMIXTURE= 10"
4. MAXIMUM SIZE COARS AGGREGATE: 3/4 INCHES (PER ASTM C-33)
5. APPROVED ADMIXTURES:
a. FLYASH PER ASTM C-618
b. AIR ENTRAINING PER ASTM C-260
c. WATER REDUCING PER ASTM C-494
E. REINFORCEMENT:
1. REINFORCEMENT FOR CONCRETE:
a. ALL REINFORCING SHALL BE SUPPORTED IN FORMS SPACED WITH NECESSARY ACCESSORIES AND SHALL BE SECURELY WIRED TOGETHER IN ACCORDANCE WITH THE LATEST EDITION OF THE CRSI "MANUAL OF STANDARD PRACTICE"
b. DEFORMED BARS - ASTM A615, GRADE 60
c. WELDED WIRE REINFORCEMENT (WWR):
• SMOOTH WIRE - ASTM A185
• DEFORMED WIRE - ASTM A497
• USE FLAT MATS ONLY. NO ROLLED WWR IS PERMITTED.
2. MINIMUM REINFORCEMENT LAP = 40 BAR DIAMETERS
3. MINIMUM WWR LAP = GRID SPACING PLUS 2 INCHES
4. MINIMUM CONCRETE COVER OVER REINFORCEMENT:
a. CONCRETE CAST AGAINST EARTH = 3"
b. CONCRETE EXPOSED TO EARTH OR WEATHER = 1 1/2"
c. CONCRETE NOT EXPOSED TO EARTH OR WEATHER = 3/4"
5. SLAB-ON-GRADE REINFORCEMENT SHALL BE PLACED AT THE MID-DEPTH OF THE SLAB.
F. COORDINATION:
1. COORDINATE ALL UNDER-SLAB MATERIAL SUCH AS VAPOR BARRIER, INSULATION, AND SUB-BASE WITH ARCHITECTURAL CONSTRUCTION DOCUMENTS.
2. COORDINATE CONCRETE SURFACE FINISHING WITH ARCHITECTURAL FINISH MATERIALS.
3. REPAIR OR REPLACE DEFECTIVE CONCRETE AS DIRECTED BY THE ARCHITECT, ENGINEER, OR TESTING AGENCY.
4. COORDINATE ALL JOINT SPACING, LAYOUT, FILLER AND SEALANTS.
5. COORDINATE WITH ARCHITECTURAL ANY FINISH SURFACES THAT REQUIRE MOCK-UPS AND ACCEPTANCE PRIOR TO CONSTRUCTION.
6. COORDINATE WITH REQUIRED INSPECTORS, SPECIAL INSPECTORS, AND STRUCTURAL OBSERVERS FOR FIELD QUALITY CONTROL ITEMS AND SCHEDULE NOTIFICATIONS IN A TIMELY FASHION.
G. DEFINITIONS:
1. PERFORMANCE DESIGN - A SET OF INSTRUCTIONS THAT OUTLINES THE FUNCTIONAL REQUIREMENTS FOR HARDENED CONCRETE DEPENDING ON THE APPLICATION. PERFORMANCE DESIGN DOES NOT INCLUDE REQUIREMENTS FOR MEANS AND METHODS AND DOES NOT PROVIDE LIMITATIONS ON THE INGREDIENTS OR PROPORTIONS OF THE CONCRETE MIXTURE. SUBMITTALS FOR PERFORMANCE DESIGN WOULD NOT BE A DETAILS LIST OF MIXTURE INGREDIENTS BUT RATHER A CERTIFICATION THAT THE MIX WILL MEET THE SPECIFICATION REQUIREMENTS, INCLUDING PRE-QUALIFICATION TEST RESULTS.
2. DURABILITY DESIGN - DURABILITY IS THE ABILITY OF CONCRETE TO RESIST WEATHERING ACTION, CHEMICAL ATTACK, AND ABRASION WHILE MAINTAINING ITS DESIRED ENGINEERING PROPERTIES.
3. STRENGTH DESIGN- BASED ON THE ULTIMATE COMPRESSIVE STRENGTH OF THE CONCRETE NEEDED TO RESIST THE CALCULATED DESIGN LOADS. ANY ADDITIONAL STRENGTH THAT MAY BE PRESENT DUE TO STEEL REINFORCING IS NOT PERMITTED TO BE INCLUDED IN THE CONCRETE STRENGTH DESIGN.

WOOD

- A. REFERENCE STANDARDS AND GOVERNING AGENCIES:
1. NDS FOR WOOD CONSTRUCTION
2. APA PANEL DESIGN SPECIFICATION
3. AWPA UT - USE CATEGORY SYSTEM: USER SPECIFICATION FOR TREATED WOOD
4. TRF 1 NATIONAL DESIGN STANDARD FOR METAL PLATE CONNECTED WOOD TRUSS CONSTRUCTION
5. WWPA - WESTERN WOOD PRODUCTS ASSOCIATION
B. SUBMITTALS:
1. ENGINEERED WOOD PRODUCTS:
a. ANY ALTERNATE PROPRIETARY FRAMING SYSTEM(S) SHALL BE OF THE SAME DEPTH AND LOAD CARRYING CAPACITY AS THE TRUS-JOIST SYSTEM(S) SHOWN ON THE DRAWINGS. ICC REPORTS FOR THE ALTERNATE PROPRIETARY FRAMING SYSTEM(S) SHALL BE SUBMITTED SHOWING TESTING APPROVAL AND MATERIAL STRENGTH EQUIVALENCY
b. SUBMITTED ENGINEERED WOOD PRODUCTS CALCULATIONS SHALL BE STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF IDAHO.
2. FABRICATED WOOD TRUSSES:
a. ALL ROOF TRUSSES SHALL BE DESIGNED, STAMPED, AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF IDAHO
b. TRUSS MANUFACTURER SHALL PROVIDE PROOF OF APPROVED THIRD PARTY INSPECTION AS REQUIRED BY THE 2018 IBC, SECTION 1704.2.5.
c. SUBMIT SHOP DRAWINGS OF PRE MANUFACTURED WOOD TRUSS LAYOUT FOR REVIEW BY THE ENGINEER PRIOR TO FABRICATION. TRUSS DESIGN DRAWINGS AND CALCULATIONS SHALL CONFORM TO THE REQUIREMENTS FROM SECTION 2303.4 OF THE IBC.
C. CARPENTRY
1. WOOD FRAMING MEMBERS SHALL HAVE THE FOLLOWING GRADES, OR BETTER, UNLESS NOTED OTHERWISE (U.N.O.):
a. BLOCKING: DOUGLAS FIR LARCH NO. 2, OR BETTER
b. BRIDGING: DOUGLAS FIR LARCH NO. 2, OR BETTER
c. STUD FRAMING: DOUGLAS FIR LARCH NO. 2, OR BETTER
d. BEAMS/HEADERS/JOISTS: DOUGLAS FIR LARCH NO. 2, OR BETTER
e. BUILT-UP COLUMNS: DOUGLAS FIR LARCH NO. 2, OR BETTER
f. SOLID COLUMNS: DOUGLAS FIR LARCH NO. 1, OR BETTER
g. TOP AND BOTTOM PLATES: DOUGLAS FIR LARCH NO. 2, OR BETTER
2. MAXIMUM MOISTURE CONTENT OF ALL LUMBER AT THE TIME OF CLOSURE SHALL BE 19%.
3. SPLICING OF WOOD MEMBERS, UNLESS SHOWN ON THE DRAWINGS, IS PROHIBITED WITHOUT WRITTEN APPROVAL OF THE PROJECT ENGINEER.
4. HOLES MAY BE DRILLED IN JOIST/BEAM IF SPECIFICALLY INDICATED ON THESE DRAWINGS. ANY OTHER HOLES OR NOTCHES ARE NOT ALLOWED.
5. ALL WOOD IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE TREATED OR REDWOOD.
D. ENGINEERED OR COMPOSITE WOOD PRODUCTS
1. ENGINEERED WOOD PRODUCTS SHALL BE TRUS-JOIST PRODUCTS OR APPROVED EQUAL.
2. ALL ENGINEERED WOOD PRODUCTS SHALL BE DESIGNED FOR THE LOADS SPECIFIED AND SHALL CONFORM TO THE LATEST SPECIFICATIONS.
3. ALL ENGINEERED WOOD PRODUCTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATION.
4. SPLICING OF ENGINEERED WOOD MEMBERS, UNLESS SHOWN ON THE DRAWINGS, IS PROHIBITED WITHOUT WRITTEN APPROVAL OF THE PROJECT ENGINEER.
E. MANUFACTURED OR FABRICATED WOOD TRUSSES
1. ALL TRUSS LOADING SHALL SATISFY DEAD AND LIVE LOADS SHOW UNDER DESIGN LOADS IN THE DESIGN CRITERIA, ABOVE.
2. MEMBER PROPERTIES, NO EXCEPTIONS OR SUBSTITUTIONS WITHOUT A WRITTEN REQUEST PRIOR TO FABRICATION.
a. CHORDS: DOUGLAS FIR LARCH NO. 2, OR BETTER
b. WEBS: DOUGLAS FIR LARCH NO. 2, OR BETTER, OR STUD GRADE
c. UTILITY, CONSTRUCTION, OR #3 GRADE WOOD IS NOT ACCEPTABLE FOR ANY TRUSS MEMBER
3. EACH TRUSS SHALL BE MARKED WITH THE FOLLOWING INFORMATION:
a. MANUFACTURER'S IDENTIFICATION
b. DESIGN LOAD(S)
c. TRUSS SPACING AND CONFIGURATION.
4. ALL TRUSS BLOCKING PANELS SHALL BE DESIGNED AND PROVIDED BY THE TRUSS MANUFACTURER AND CONSTRUCTED WITH APPROVED PLATES.
5. TRUSS PROFILES SHOWN ARE REPRESENTATIONS OF POSSIBLE CONFIGURATIONS OF WEB LOCATIONS, MEMBER SIZES, AND NUMBER OF PLAYS.
6. TRUSS MANUFACTURER SHALL VERIFY ALL TRUSS DIMENSIONS, ACCOUNTING FOR TOLERANCES, CONNECTIONS AND SPLICE REQUIREMENTS.
7. TRUSS ORIENTATION DIRECTLY IMPACTS THE STRUCTURAL INTEGRITY OF THE FOUNDATION, AND WALL SYSTEM DESIGNS. ANY MODIFICATIONS TO THE TRUSS ORIENTATION MUST BE MADE IN WRITING AND SUBMITTED TO THE CONTRACTOR, AND ENGINEER PRIOR TO THE CONSTRUCTION OF THE ABOVE SYSTEMS.
8. THE TRUSS MANUFACTURER IS RESPONSIBLE FOR COORDINATION BETWEEN STRUCTURAL, ARCHITECTURAL, AND MECHANICAL LAYOUT REQUIREMENTS PRIOR TO FABRICATION.
F. PANEL SHEATHING:
1. STRUCTURAL WOOD SHEATHING AS SPECIFIED ON THESE DRAWINGS AT ROOF/FLOOR DIAPHRAGMS, SHEAR WALLS, AND BUILT-UP BLOCKING LOCATIONS SHALL BE STAMPED WITH THE SPECIFIED APA RATING.
2. STRUCTURAL WOOD SHEATHING MAY BE EITHER PLYWOOD OR ORIENTED STRAND BOARD (OSB) AS LONG AS THE PANEL MEETS OR EXCEEDS THE CRITERIA LISTED BELOW.
G. ACCESSORIES AND FASTENERS:
1. ALL WOOD CONNECTORS SHALL BE SIMPSON STRONG-TIE OR APPROVED EQUAL AND INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
a. POST TO CONCRETE CONNECTIONS SHALL BE SIMPSON 'AB' POST BASES, U.N.O.
b. POST TO BEAM CONNECTIONS SHALL BE SIMPSON 'LPCZ' POST CAPS, U.N.O.
c. SAWN LUMBER JOIST HANGERS SHALL BE SIMPSON 'LJ' HANGERS, U.N.O.
d. JOIST HANGERS SHALL BE SIMPSON 'ITS' HANGERS, U.N.O.
2. NAILING SHALL BE IN ACCORDANCE WITH THE 2018 IBC TABLE 2304.10.2, UNLESS NOTED OTHERWISE.
3. NAILS SHALL BE COMMON WIRE NAILS (EXCEPT 16d NAILS MAY BE BOX WIRE NAILS).
4. METAL FINISH MATERIAL:
a. HIGH HUMIDITY AND PRESERVATIVE TREATED WOOD LOCATIONS: HOT DIPPED GALVANIZED STEEL PER ASTM A 153.
b. INTERIOR AND DRY LOCATIONS: STANDARD PAINTED OR ZINC GALVANIZED COATING.
H. TRUSSES:
1. SUBMIT SHOP DRAWINGS SHOWING FULL DIMENSIONS FOR EACH MEMBER AND LAYOUTS OF THE ENTIRE HEAVY TIMBER TRUSSES. SHOW DETAILS OF TRUSS CONNECTIONS, CONNECTORS AND OTHER ACCESSORIES. INDICATE SPECIES AND GRADE OF TIMBER.
2. FABRICATE CONNECTIONS CONSIDERING STRICT QUALITY STANDARDS ESTABLISHED BY THE TIMBER FRAME'S GUILD OF NORTH AMERICA, INCLUDING TFEC 1.7 UNLESS SPECIFICALLY DETAILED OTHERWISE. ALL CONNECTIONS SHALL BE DETAILED AND CONSTRUCTED ACCORDING TO THESE DRAWINGS UNLESS SPECIFICALLY APPROVED BY THE ENGINEER OF RECORD. CONNECTIONS SHALL BE DESIGNED TO MINIMIZE VISIBLE JOINT SEPARATION DUE TO SHRINKAGE.
3. THE GENERAL CONTRACTOR SHALL FULLY COORDINATE THE SITE CONDITIONS, WORK, SCHEDULE, ERECTION PLATFORM, AND ALL OTHER ITEMS PERTINENT TO THE TIMBER FRAME ERECTION PROCESS.
I. DEFINITIONS:
1. APA RATED SHEATHING: A COMMON TRADE NAME THAT APPLIES TO A GRADE OR PANEL FOR USE AS SUBFLOORING, WALL SHEATHING, AND ROOF SHEATHING. PANELS ARE MADE WITH RESIN ADHESIVES THAT PROVIDE A MOISTURE RESISTANT BOND AND ARE DESIGNATED AS: EXPOSURE 1. PANELS CAN BE MANUFACTURED AS EITHER: PLYWOOD OR OSB.
2. APA STRUCTURAL 1 RATED SHEATHING: A SPECIAL SHEATHING GRADE DESIGNED FOR USE WHERE SHEAR AND/OR CROSS PANEL STRENGTH PROPERTIES ARE OF MAXIMUM IMPORTANCE. PANELS ARE MADE WITH RESIN ADHESIVES THAT PROVIDE A MOISTURE RESISTANT BOND AND ARE DESIGNATED AS: EXPOSURE 1. PANELS CAN BE MANUFACTURED AS EITHER: PLYWOOD OR OSB.

STRUCTURAL OBSERVATIONS

- A. STRUCTURAL OBSERVATION IS THE VISUAL OBSERVATION OF THE STRUCTURAL SYSTEMS BY A REGISTERED DESIGN PROFESSIONAL FOR GENERAL CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS.
B. THE STRUCTURAL OBSERVER SHALL BE EITHER THE ENGINEER OF RECORD OR A REGISTERED DESIGN PROFESSIONAL APPROVED BY THE ENGINEER OF RECORD.
C. THE REGISTERED DESIGN PROFESSIONAL RESPONSIBLE FOR STRUCTURAL OBSERVATION, THE CONTRACTOR, AND APPROPRIATE SUBCONTRACTORS SHALL HOLD A PRE-CONSTRUCTION MEETING TO REVIEW THE DETAILS OF THE STRUCTURAL SYSTEMS TO BE STRUCTURALLY OBSERVED.
D. THE REGISTERED DESIGN PROFESSIONAL RESPONSIBLE FOR STRUCTURAL OBSERVATION SHALL SUBMIT SEPARATE WRITTEN OBSERVATION REPORTS FOR EACH REQUIRED SIGNIFICANT CONSTRUCTION STAGE TO BE OBSERVED. THIS WRITTEN REPORT, INCLUDING ANY OBSERVED DEFICIENCIES, SHALL BE SUBMITTED TO THE ENGINEER OF RECORD, THE OWNER'S REPRESENTATIVE, THE CONTRACTOR, AND THE BUILDING OFFICIAL.

SPECIAL INSPECTION

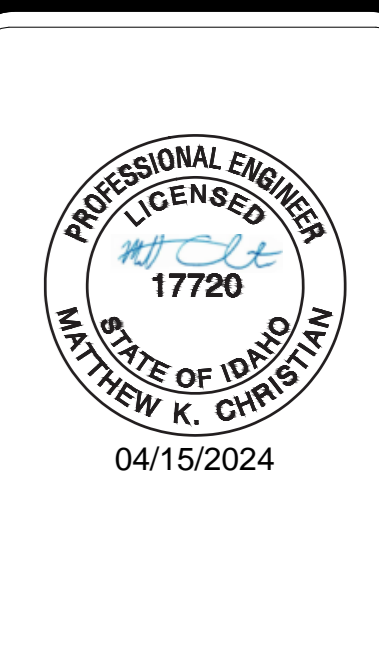
- A. SPECIAL INSPECTION AS HEREIN REQUIRED OF THE FOLLOWING MATERIALS, INSTALLATION, FABRICATION, ERECTION OR PLACEMENT OF COMPONENTS AND CONNECTIONS REQUIRING SPECIAL EXPERTISE TO ENSURE COMPLIANCE WITH APPROVED CONSTRUCTION DOCUMENTS AND REFERENCED STANDARDS.
B. STRUCTURAL OBSERVATION OF THE STRUCTURAL SYSTEM BY THE ENGINEER OF RECORD DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR THE SPECIAL INSPECTION REQUIRED BY SECTION 110, 1704, OR OTHER SECTIONS OF THE INTERNATIONAL BUILDING CODE.
C. THE SPECIAL INSPECTION STATEMENT ON THIS SHEET LISTS THE ITEMS THAT REQUIRE SPECIAL INSPECTION AND VERIFICATION, THE CODE SECTION-REFERENCE FOR ADDITIONAL INFORMATION, AND THE REQUIRED FREQUENCY OF INSPECTION.

SPECIAL INSPECTION PROGRAM

- A. THE OWNER SHALL EMPLOY AN APPROVED AGENCY FOR SPECIAL INSPECTION SERVICES TO PERFORM SPECIAL INSPECTIONS IN ACCORDANCE WITH CHAPTER 17 OF THE IBC.
B. AN APPROVED AGENCY SHALL BE AN ESTABLISHED AND RECOGNIZED AGENCY REGULARLY ENGAGED IN CONDUCTING TESTS OR FURNISHING INSPECTION SERVICES.
C. A SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL SHOW COMPETENCE TO THE SATISFACTION OF THE BUILDING OFFICIAL FOR THE INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION. A SPECIAL INSPECTOR SHALL ALSO DEMONSTRATE A THOROUGH WORKING KNOWLEDGE OF CHAPTER 17 OF THE IBC AS SUMMARIZED BELOW. IF THERE IS ANY OMISSION ON THE SUMMARIZED LIST BELOW, SUCH OMISSION SHALL NOT BE CONSTRUED TO MEAN THAT THE SPECIAL INSPECTOR IS NOT REQUIRED TO INSPECT EVERYTHING THAT IS NECESSARY TO MEET THE MINIMUM REQUIREMENTS OF THE IBC.
D. SPECIAL INSPECTORS SHALL KEEP RECORDS OF INSPECTIONS. THE SPECIAL INSPECTOR SHALL SUBMIT INSPECTION REPORTS TO THE BUILDING OFFICIAL AND THE ENGINEER FOR REVIEW IN A TIMELY FASHION.
E. SPECIAL INSPECTION REPORTS SHALL INDICATE THAT WORK INSPECTED WAS DONE IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THE DISCREPANCIES ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE BUILDING OFFICIAL AND THE ENGINEER.

ABBREVIATIONS

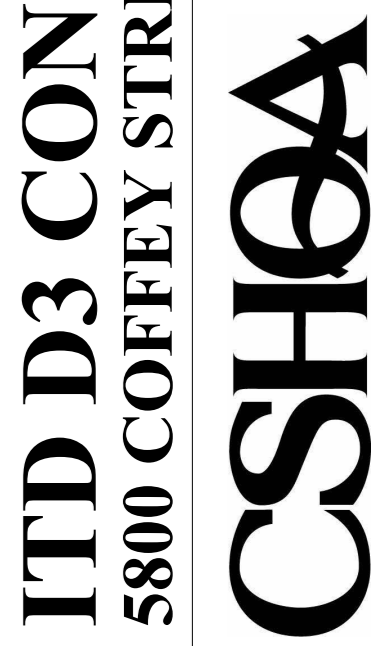
Table with 4 columns: Abbreviation, Full Name, and Description. Includes terms like MANUF (MANUFACTURER), ADDL (ADDITIONAL), APPROX (APPROXIMATE), BOT (BOTTOM BEARING BUILDING BEAM), BRG (BRIDGE), CL (CHANNEL), C/J (CONTROL JOINT), CLG (CENTER LINE CEILING), CMU (CONCRETE MASONRY UNIT), COM (COMMON), CONC (CONCRETE), COND (CONDITION), CONN (CONNECTION), COORD (COORDINATE), DET (DEPTH), DET (DETAIL), D-F-L (DOUGLAS FIR-LARCH), DIAG (DIAGONAL), DIAM (DIAMETER), DIM (DIMENSION), DWG (DRAWING), EXIST (EXISTING), EACH (EACH), EXPAN (EXPANSION BOLTTANCHOR), E.J. (EXPANSION JOINT), ELEV (ELEVATION), E.N. (EDGE NAIL), EQ (EQUAL EQUIPMENT), FDN (FOUNDATION), FIN (FINISH), FLR (FLOOR), FRMG (FRAMING), FTG (FOOTING), (F.V.) (FIELD VERIFY), GA (GAUGE), GALV (GALVANIZE), GLB (GLULAM BEAM), GYP (GYPSUM WALL BOARD), H.A.S. (HEADER ANCHOR STUD), H.D. (HOLD DOWN), HDR (HEADER), HORIZ (HORIZONTAL), IN (INCHES), (L) (LENGTH), LB (POUND), LLH (LONG LEG HORIZONTAL), LLV (LONG LEG VERTICAL), LVL (LAMINATED VENEER LUMBER), MANUF (MANUFACTURER), MAX (MAXIMUM), M.B. (MACHINE BOLT), MECH (MECHANICAL), MIN (MINIMUM), MISC (MISCELLANEOUS), NO (NUMBER), N.T.S. (NOT TO SCALE), O.C. (ON CENTER), O.H. (OPPOSITE HAND), OFBS (OPENING), OPP (OPPOSITE), OSB (ORIENTED STRAND BOARD), OWSJ (OPEN WEB STEEL JOIST), PEMB (PRE-ENGINEERED METAL BUILDING), PERP (PERPENDICULAR), PL (PLATE), PLY (PLYWOOD), PSL (PARALLEL SQUARE LUMBER), P.S. (POUNDS PER SQUARE INCH), P.T. (PRESSURE TREATED), REF (REFERENCE), REINF (REINFORCEMENT), REQS (REQUIREMENTS), REV (REVISION), RTU (ROOF TOP UNIT), SCHED (SCHEDULE), SHTG (SHEATHING), SIM (SIMILAR), SK (SKETCH), SPECS (SPECIFICATIONS), SS (STAINLESS STEEL), STAG (STAGGERED), STD (STANDARD), STRUCT (STRUCTURAL), T.A.S. (THREADED ANCHOR STUD), T&G (TONGUE AND GROOVE), T&B (TOP AND BOTTOM), THRU (THROUGH), TJI (TRUSS JOIST T-JOIST), T.O. (TOP OF), TRANSV (TRANSVERSE), TYP (TYPICAL), UNO (UNLESS NOTED OTHERWISE), V.I.F. (VERIFY IN FIELD), VERT (VERTICAL), (W) (WIDTH), WF (WIDE FLANGE), WD (WOOD), WP (WORK POINT), WT (WEIGHT), WWF (WELDED WIRE FABRIC), WWR (WELDED WIRE REINFORCEMENT)



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Table with 2 columns: Field and Value. PROJECT: 1047.24, DATE: 03/29/24, DRAWN: NK, CHECKED: MC

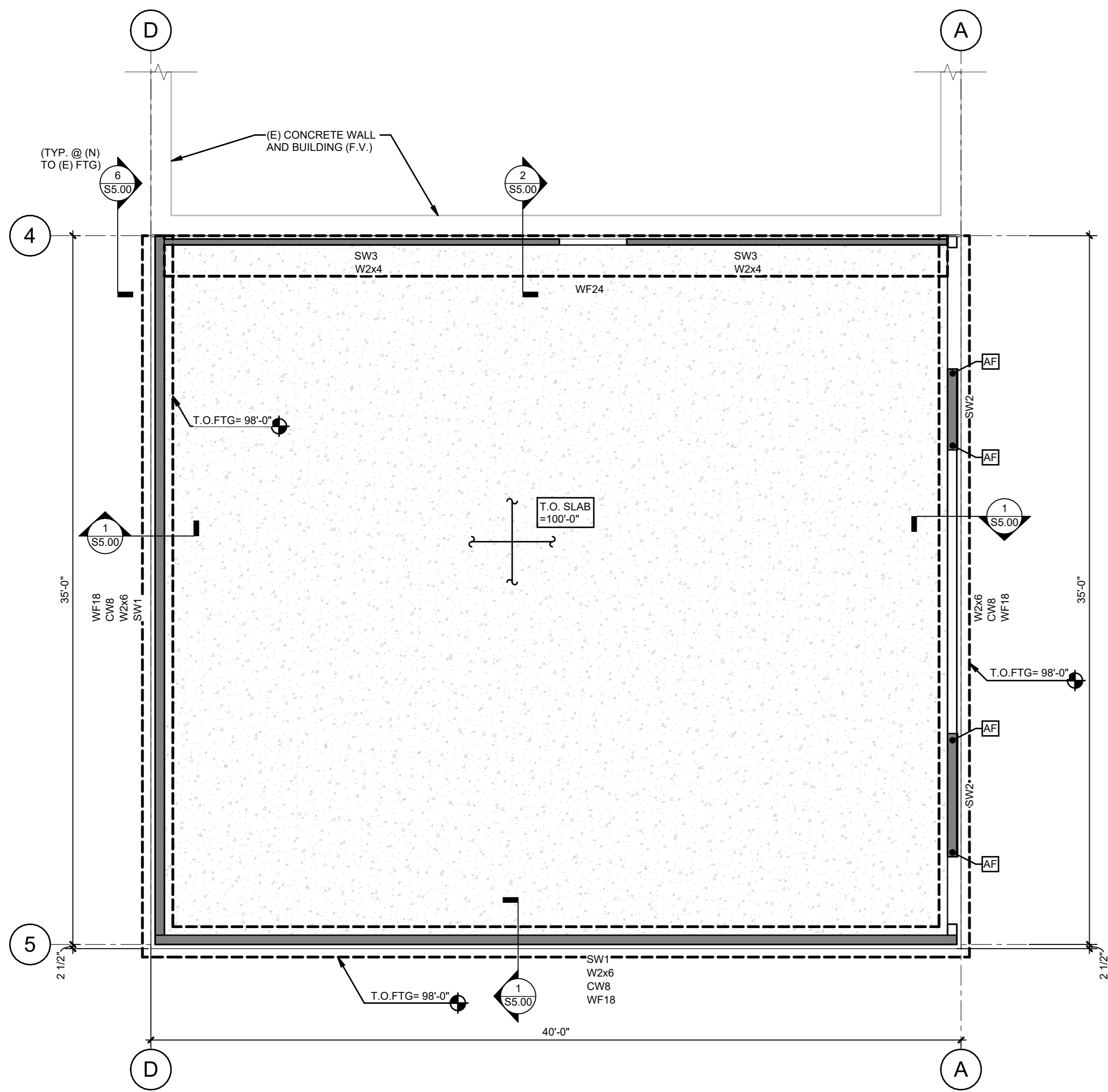
REVISED

SHEET TITLE
STRUCTURAL NOTES

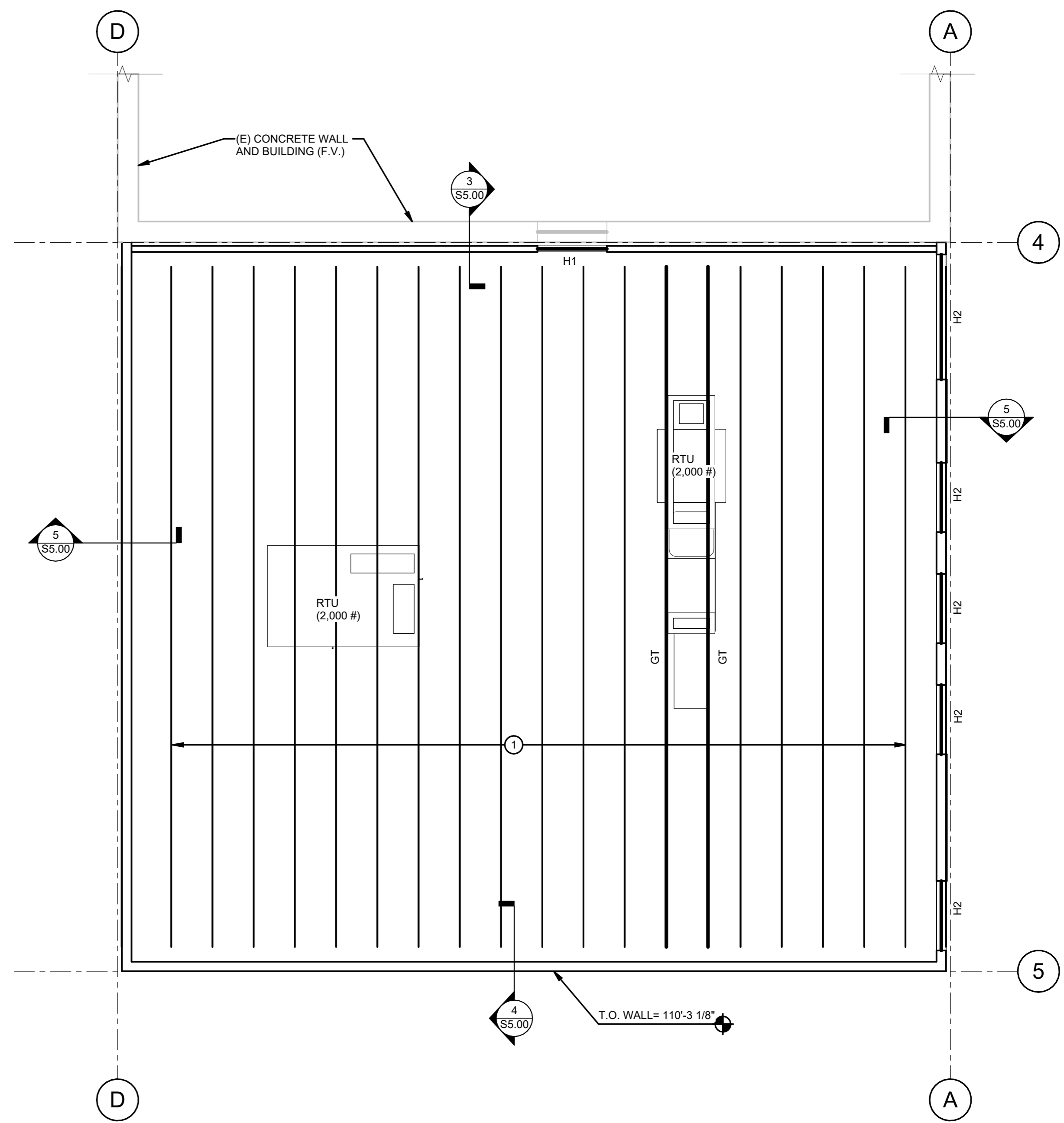
SHEET

\$1.00 ORIGINAL SHEET SIZE 24" x 36"

SHEET INDEX table with columns: SHEET NUMBER, SHEET NAME, REVISION NUMBER, REVISION DESCRIPTION. Rows include \$1.00 STRUCTURAL NOTES, \$2.00 FOUNDATION, SHEAR, AND ROOF PLAN, \$3.00 TYP CONCRETE DETAILS, \$4.00 WOOD SHEAR WALL DETAILS, \$4.01 TYP WOOD FRAMING DETAILS, \$5.00 STRUCTURAL DETAILS



1 FOUNDATION PLAN
SCALE: 1/4" = 1'-0"



2 ROOF FRAMING PLAN
SCALE: 1/4" = 1'-0"

- FOUNDATION AND SHEAR WALL NOTES**
- FOR GENERAL NOTES, SEE SHEET S1.0
 - ALL DIMENSIONS AND ELEVATIONS ON THE STRUCTURAL PLANS SHALL BE VERIFIED BY THE CONTRACTOR WITH THE LATEST ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER IMMEDIATELY.
 - IF PROVIDED, SEE GEOTECHNICAL REPORTS FOR UNDERSLAB AND FOOTING REQUIREMENTS.
 - (E) = EXISTING STRUCTURAL MEMBER
 - (N) = NEW STRUCTURAL MEMBER
 - (F.V.) = FIELD VERIFY EXISTING CONDITION
 - T.O. SLAB = TOP OF CONCRETE SLAB ELEVATION
 - T.O. FTG = TOP OF FOOTING ELEVATION
 - FOR EXTERIOR WALLS NOT LABELED, USE SHEAR WALL TYPE 1 PER SHEAR WALL SCHEDULE.
 - TYPICAL DETAILING FOR CONCRETE STEM WALL AND FOUNDATION PER SHEET S3.00. SEE FOLLOWING REQUIREMENTS:
 - RIENF. LAP LENGTH SCHEDULE PER DETAIL: 1/S3.00
 - STANDARD REINF. DETAILING PER DETAIL: 2/S3.00
 - STEM WALL CORNER REINF. PER DETAIL: 3/S3.00
 - FOOTING CORNER REINF. PER DETAIL: 4/S3.00
 - UTILITY PENETRATIONS AT FOUNDATION PER DETAIL: 5/S3.00
 - TYPICAL DETAILING FOR CONCRETE SLAB PER SHEET S3.00. SEE FOLLOWING REQUIREMENTS:
 - SLAB CONTROL JOINTS PER DETAIL: 6/S3.00
 - PROVIDE ADDITIONAL REINF. AT ALL SLAB RE-ENTRANT CORNERS PER DETAIL: 7/S3.00
 - UTILITIES IN OR BELOW SLAB PER DETAIL: 8/S3.00
 - OPENINGS IN SLAB PER DETAIL: 9/S3.00
 - TYPICAL DETAILING FOR SHEAR WALLS PER THE FOLLOWING REQUIREMENTS.
 - SHEAR WALL DETAILING PER DETAIL: 1/S4.00
 - FOUNDATION HOLDDOWN PER DETAIL: 3/S4.00
 - SEE DETAIL 6/S5.00 FOR NEW TO EXISTING FOUNDATION CONNECTION.

- FOUNDATION LEGEND**
- WF# INDICATES CONCRETE CONTINUOUS WALL FOOTING, FOR SIZE AND REINF, SEE SCHEDULE BELOW.
 - CW# INDICATES CONCRETE WALL, FOR SIZE AND REINF SEE DETAIL: 3/S3.00
 - WW# INDICATES WOOD WALL STUD FRAMING, SEE SCHEDULE AND DETAIL: 1/S4.01
 - SW# INDICATES WOOD SHEAR WALL TYPE, SEE SCHEDULE AND DETAIL: 1/S4.00
 - AF# INDICATES FOUNDATION HOLDDOWN, SEE SCHEDULE AND DETAIL: 3/S4.00
 - INDICATES 4" CONCRETE SLAB W/ #3 REBAR AT 18" O.C. EA WAY (OR 4x4 2.9W x 2.9W WWR) OVER 10 MIL VAPOR BARRIER OVER 4" COMPACTED 3/4" MINUS GRAVEL.
 - INDICATES CONCRETE SLAB CONTROL JOINT. LOCATIONS TO BE COORDINATED BY CONTRACTOR PER DETAIL: 6/S3.00

CONTINUOUS FOOTING SCHEDULE

MARK	SIZE		REINFORCING	
	WIDTH	DEPTH	TOP	BOTTOM
WF18	18"	8"	NA	(2) #4 (L)
WF24	24"	8"	NA	(2) #4 (L) & #3 'U' BARS @ 18" O.C. (T)

CONCRETE WALL SCHEDULE

MARK	WIDTH	REINFORCING	
		VERTICAL	HORIZONTAL
CW8	8"	#4 @ 18" O.C. (CENTERED)	#4 @ 12" O.C. (CENTERED)

WOOD STUD WALL SCHEDULE

MARK	TYPE	SPACING
W2x4	(1) 2x4 DF-L #2	16" O.C.
W2x6	(1) 2x6 DF-L #2	16" O.C.

- FRAMING PLAN NOTES**
- FOR GENERAL NOTES, SEE SHEET S1.0
 - ALL DIMENSIONS AND ELEVATIONS ON THE STRUCTURAL PLANS SHALL BE VERIFIED BY THE CONTRACTOR WITH THE LATEST ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER IMMEDIATELY.
 - ATTACH NON-BEARING INTERIOR WALLS PER DETAIL: 4/S4.01
 - T.O. WALL = TOP OF WALL ELEVATION.
 - (E) = EXISTING STRUCTURAL MEMBER
 - (N) = NEW STRUCTURAL MEMBER
 - (F.V.) = FIELD VERIFY EXISTING CONDITION
 - ROOF SHEATHING:** 7/16" APA-RATED SHEATHING WITH 10d NAILS AT 8" O.C. EDGE NAILING AND 12" O.C. FIELD NAILING. STAGGER PANEL JOINTS PER DETAIL: 7/S4.01
 - TYPICAL DETAILING FOR WOOD FRAMING PER SHEET S4.0. SEE FOLLOWING REQUIREMENTS:
 - TYPICAL SHEAR WALL DETAILING PER DETAIL: 1/S4.00
 - TYPICAL WALL FRAMING PER DETAIL: 1/S4.01
 - WALL TOP PLATE SPLICE PER DETAIL: 2/S4.01
 - RTU = MECHANICAL ROOF TOP UNIT WITH WEIGHT LISTED ON PLAN. CONFIRM UNIT WEIGHT AND LOCATION W/ MECHANICAL PLAN.

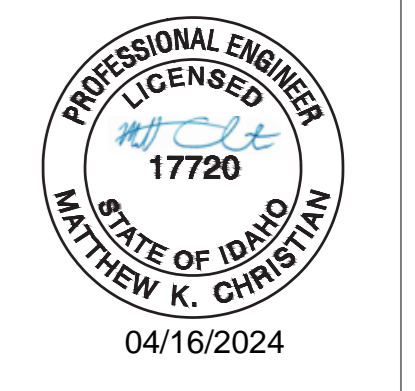
- FRAMING LEGEND**
- H# INDICATES WOOD HEADER, SEE SCHEDULE BELOW AND DETAIL: 1/S4.01
 - # INDICATES FRAMING MEMBER, SEE SCHEDULE BELOW.
 - GT INDICATES PRE-MANUFACTURED GIRDER TRUSS. SUPPORT GIRDER TRUSS ENDS WITH (3) 2x WALL STUDS. MATCH WALL STUD DEPTH TO WALL, CONNECT EACH PLY W/ 16d @ 12" O.C. (STAGGERED)

WOOD HEADER SCHEDULE

MARK	TYPE	TRIM STUD(S)	KING STUD(S)
H1	(2) 2x6 DF-L #2	(1) 2x	(1) 2x
H2	(3) 2x6 DF-L #2	(1) 2x	(2) 2x

FRAMING SCHEDULE

MARK	TYPE
1	PRE-MANUFACTURED WOOD ROOF TRUSSES @ 24" O.C. WHERE PARAPET OCCURS. MANUF. TO DESIGN PARAPET INTEGRAL WITH TRUSS. DESIGN PARAPET FOR WIND PRESSURE = 75 PSF (ULT)



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1047.24	03/29/24
DRAWN	CHECKED
NK	Checker

REVISED

FOUNDATION, SHEAR, AND ROOF PLAN

SHEET
S2.00
ORIGINAL SHEET SIZE
24" x 36"

f _c = 3000 PSI			f _c = 4000-4500 PSI			f _c = 5000 PSI		
BAR SIZE	TOP BARS	OTHER BARS	BAR SIZE	TOP BARS	OTHER BARS	BAR SIZE	TOP BARS	OTHER BARS
#3	22"	17"	#3	19"	15"	#3	17"	13"
#4	29"	22"	#4	25"	19"	#4	23"	17"
#5	36"	28"	#5	31"	24"	#5	28"	22"
#6	43"	33"	#6	37"	29"	#6	34"	26"
#7	50"	38"	#7	44"	34"	#7	40"	31"
#8	57"	43"	#8	51"	39"	#8	47"	36"
#9	64"	48"	#9	58"	44"	#9	54"	41"
#10	71"	53"	#10	65"	49"	#10	61"	46"
#11	78"	58"	#11	72"	54"	#11	68"	51"

FOR GRADE 60, UNCOATED BARS, NORMAL WEIGHT CONCRETE MINIMUM STRAIGHT DEVELOPMENT LENGTH FOR BARS IN TENSION (L_d)

f _c = 3000 PSI		f _c = 4000-5000 PSI	
BAR SIZE	ALL BARS	BAR SIZE	ALL BARS
#3	6"	#3	6"
#4	8"	#4	7"
#5	10"	#5	9"
#6	12"	#6	10"
#7	14"	#7	12"
#8	16"	#8	14"
#9	18"	#9	15"
#10	20"	#10	17"
#11	22"	#11	19"

MINIMUM EMBEDMENT LENGTHS FOR STANDARD HOOKS (L_{eh})

f _c = 3000-5000 PSI	
BAR SIZE	ALL BARS
#3	12"
#4	15"
#5	19"
#6	23"
#7	27"
#8	30"
#9	34"
#10	39"
#11	43"

MINIMUM LAP SPlice LENGTHS FOR BARS IN COMPRESSION (L_{ec})

f _c = 3000 PSI			f _c = 4000-4500 PSI			f _c = 5000 PSI		
BAR SIZE	TOP BARS	OTHER BARS	BAR SIZE	TOP BARS	OTHER BARS	BAR SIZE	TOP BARS	OTHER BARS
#3	28"	22"	#3	25"	19"	#3	22"	17"
#4	38"	29"	#4	33"	25"	#4	29"	23"
#5	47"	36"	#5	41"	31"	#5	38"	28"
#6	56"	43"	#6	49"	37"	#6	44"	34"
#7	65"	50"	#7	58"	44"	#7	53"	41"
#8	74"	57"	#8	67"	51"	#8	62"	48"
#9	83"	64"	#9	76"	58"	#9	71"	55"
#10	92"	71"	#10	85"	65"	#10	80"	62"
#11	101"	78"	#11	92"	72"	#11	87"	69"

MINIMUM CLASS "B" LAP SPlice LENGTHS FOR BARS IN TENSION (L_s)

f _c = 3000 PSI		f _c = 4000-5000 PSI	
BAR SIZE	ALL BARS	BAR SIZE	ALL BARS
#3	9"	#3	8"
#4	11"	#4	10"
#5	14"	#5	12"
#6	17"	#6	15"
#7	20"	#7	17"
#8	22"	#8	19"
#9	25"	#9	22"
#10	28"	#10	25"
#11	31"	#11	27"

MINIMUM STRAIGHT DEVELOPMENT LENGTH FOR BARS IN COMPRESSION (L_{sc})

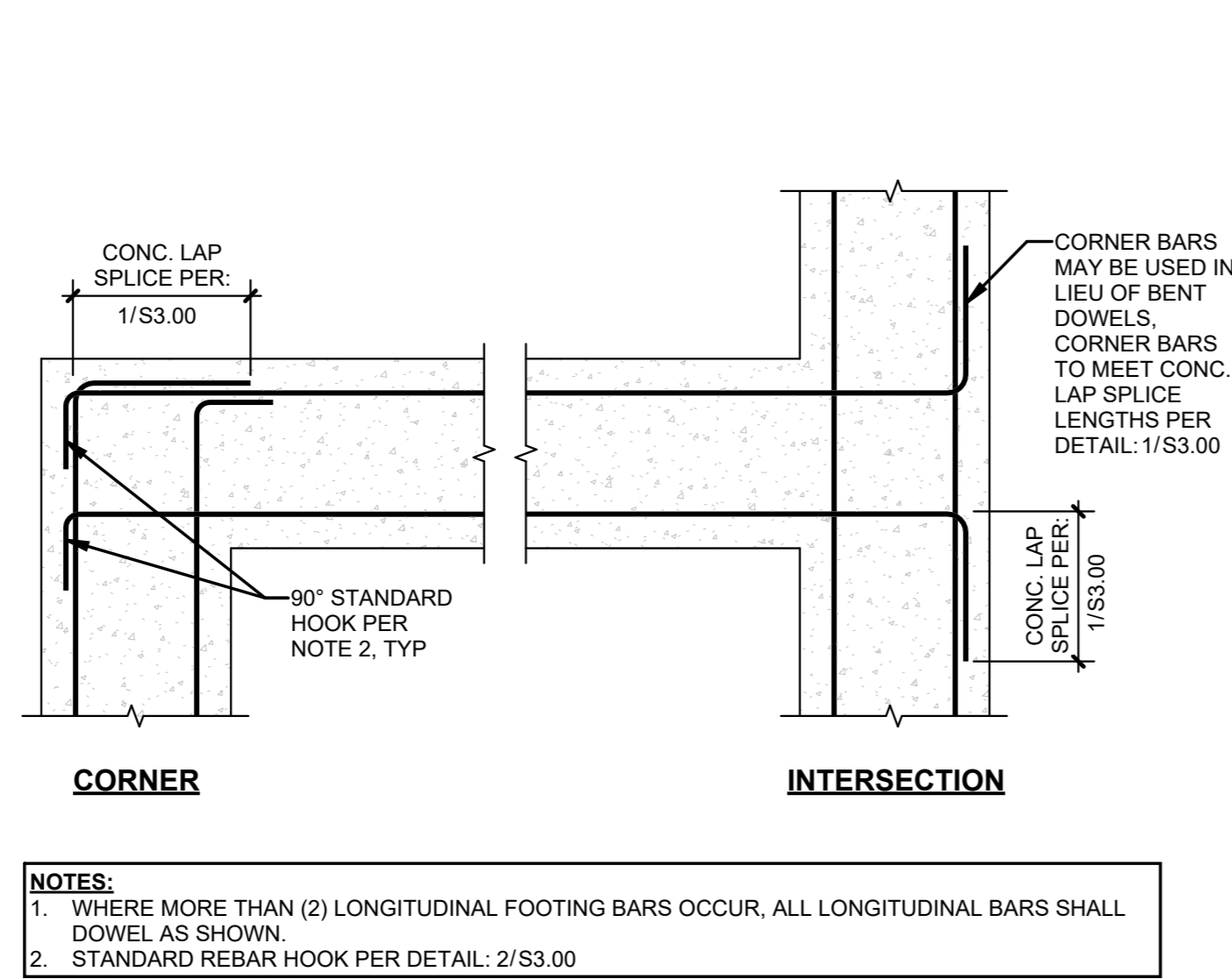
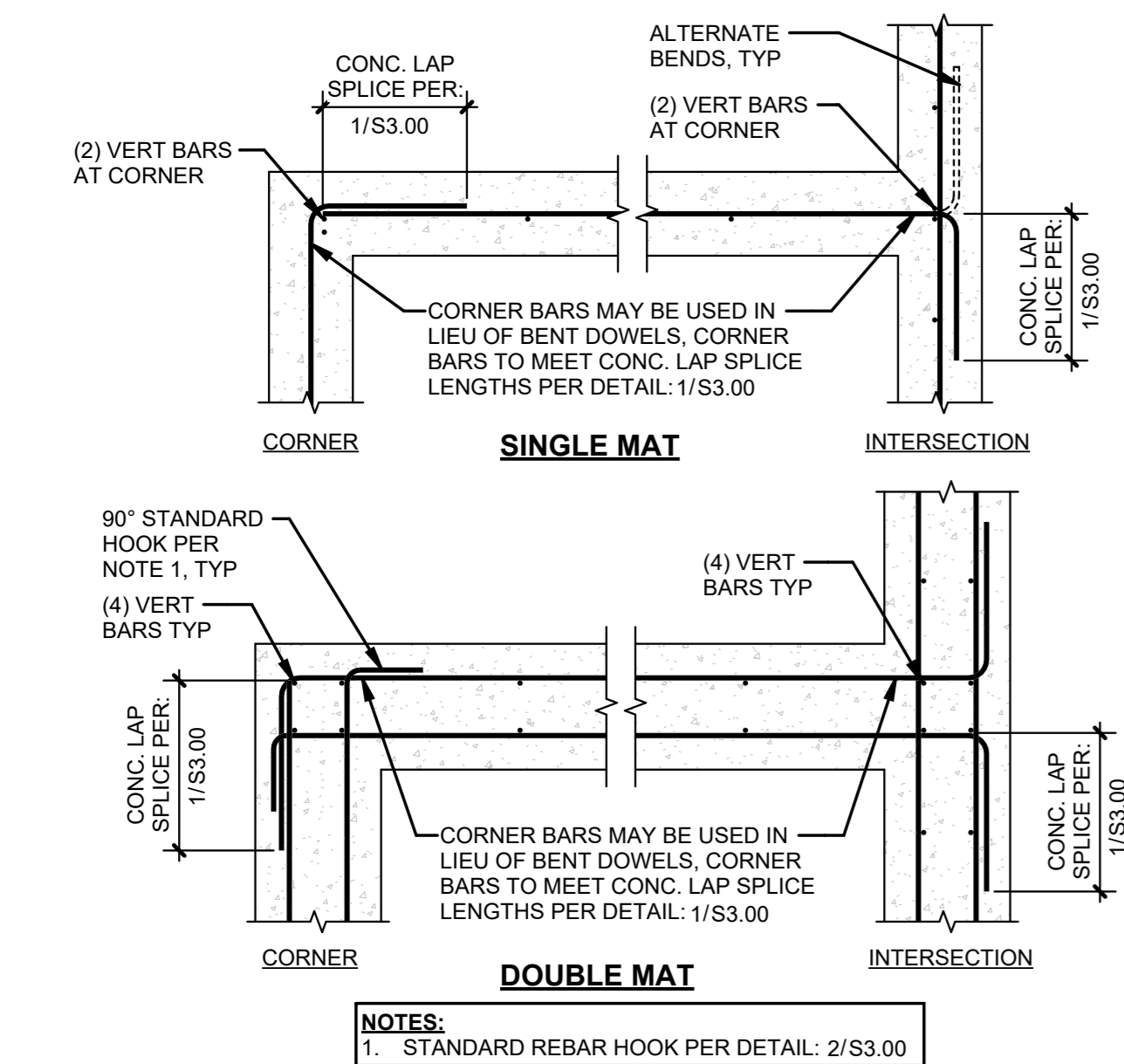
NOTES:
 1. "TOP BARS" ARE HORIZ BARS WITH MORE THAN 12" DEPTH OF CONCRETE CAST BELOW THEM.
 2. IF CLEAR CONCRETE COVER IS NOT GREATER THAN THE DIAMETER OF THE BAR OR THE CENTER TO CENTER SPACING IS NOT GREATER THAN 2 BAR DIAMETERS, THEN VALUES SHALL BE INCREASED BY A FACTOR OF 1.5.
 3. END COVER FOR HOOKS MUST BE EQUAL TO OR GREATER THAN 2". SIDE COVER MUST BE EQUAL TO OR GREATER THAN 2 1/2".
 4. CLASS B - MORE THAN HALF OF THE BARS ARE SPLICED WITHIN A REQUIRED LAP LENGTH.
 5. CLASS A - LAP SPLICES MAY BE USED WHERE LESS THAN HALF OF THE BARS ARE SPLICED WITHIN A REQUIRED LAP LENGTH BY DIVIDING THE CLASS B LENGTH BY A FACTOR OF 1.3.

1 REINFORCEMENT SPlice AND DEVELOPMENT LENGTH SCHEDULE

SCALE: NTS

2 REBAR BENDS

SCALE: NTS

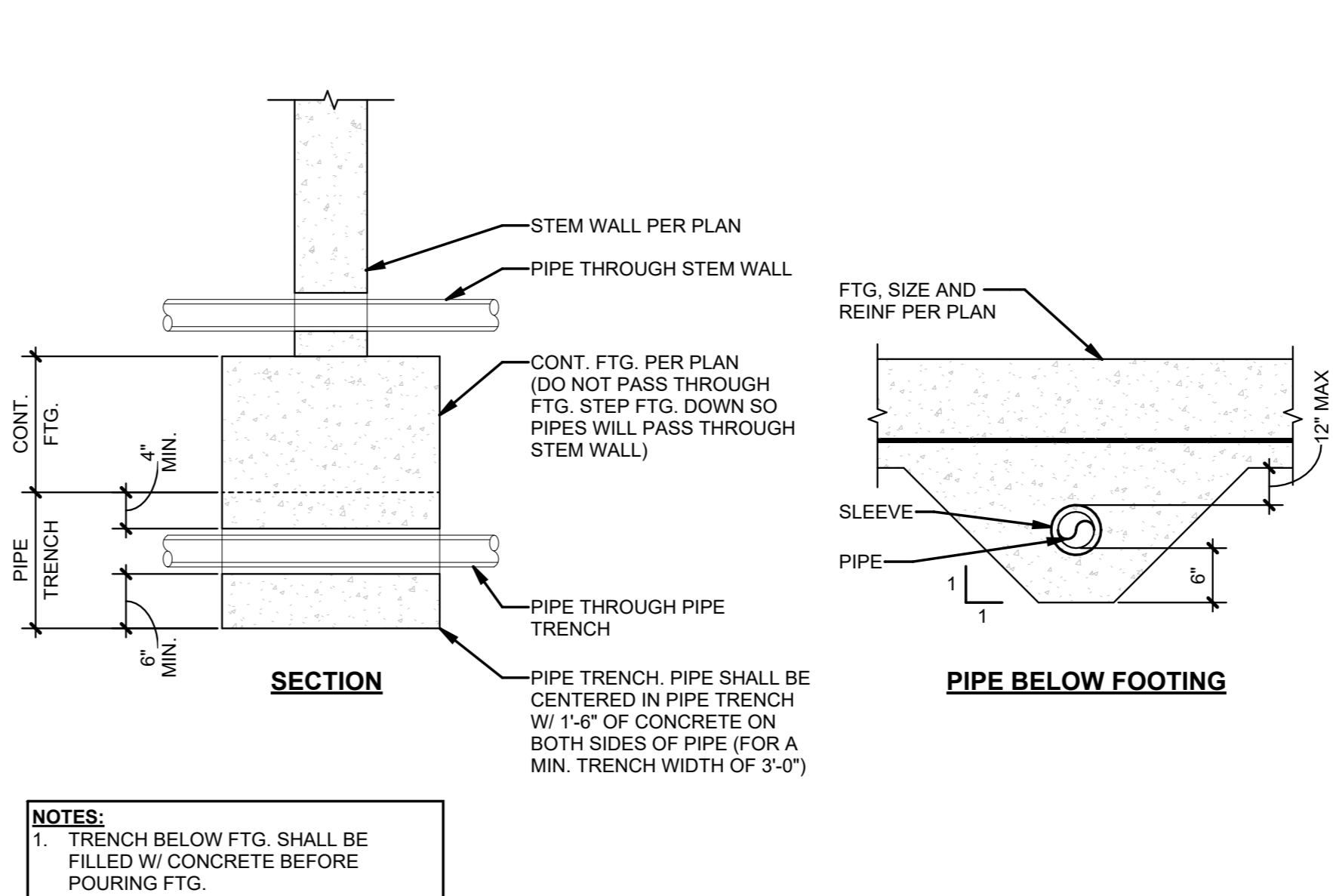


3 REINFORCING AT WALL INTERSECTIONS

SCALE: NTS

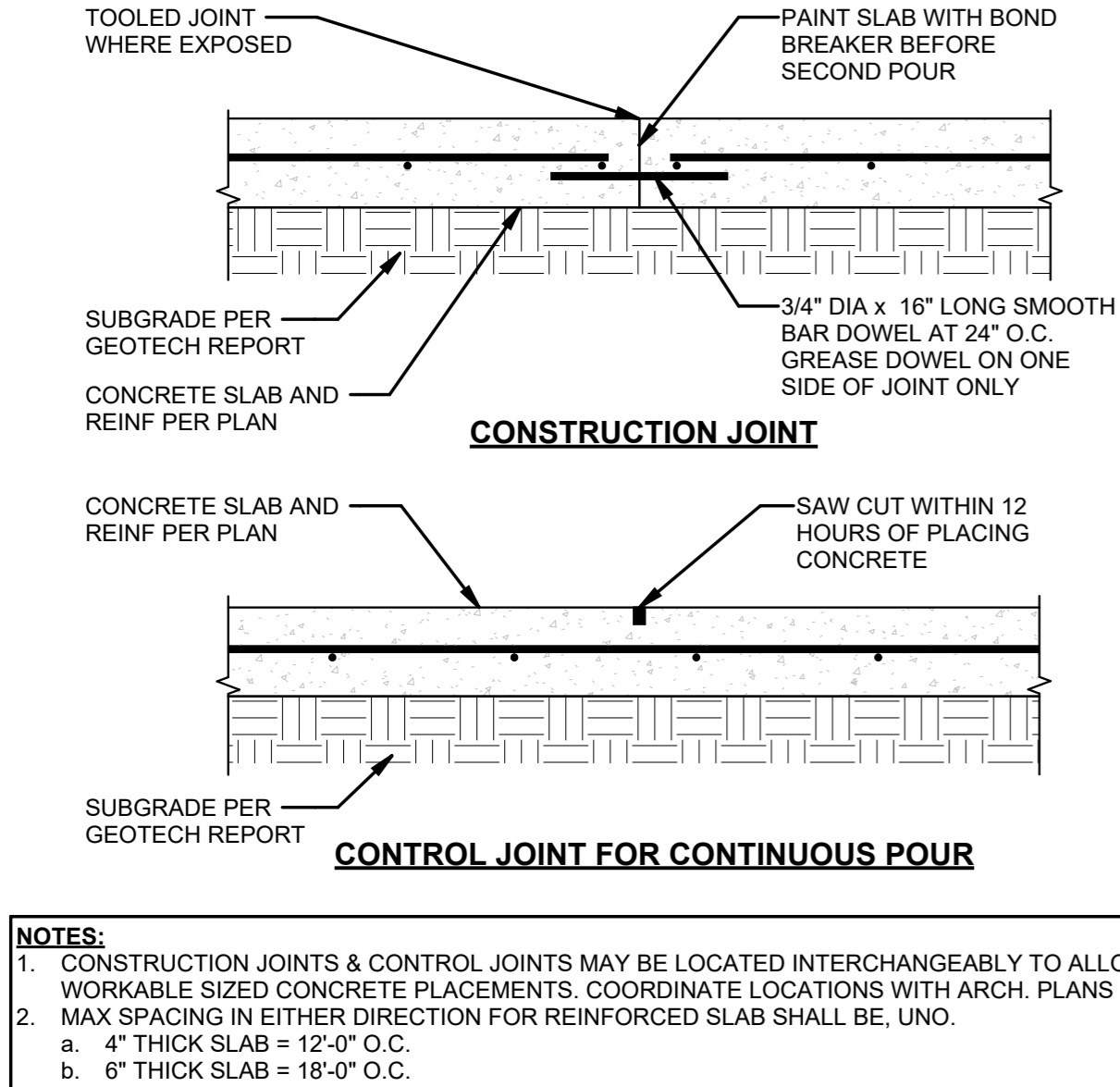
4 REINFORCING AT FOOTING INTERSECTIONS

SCALE: NTS



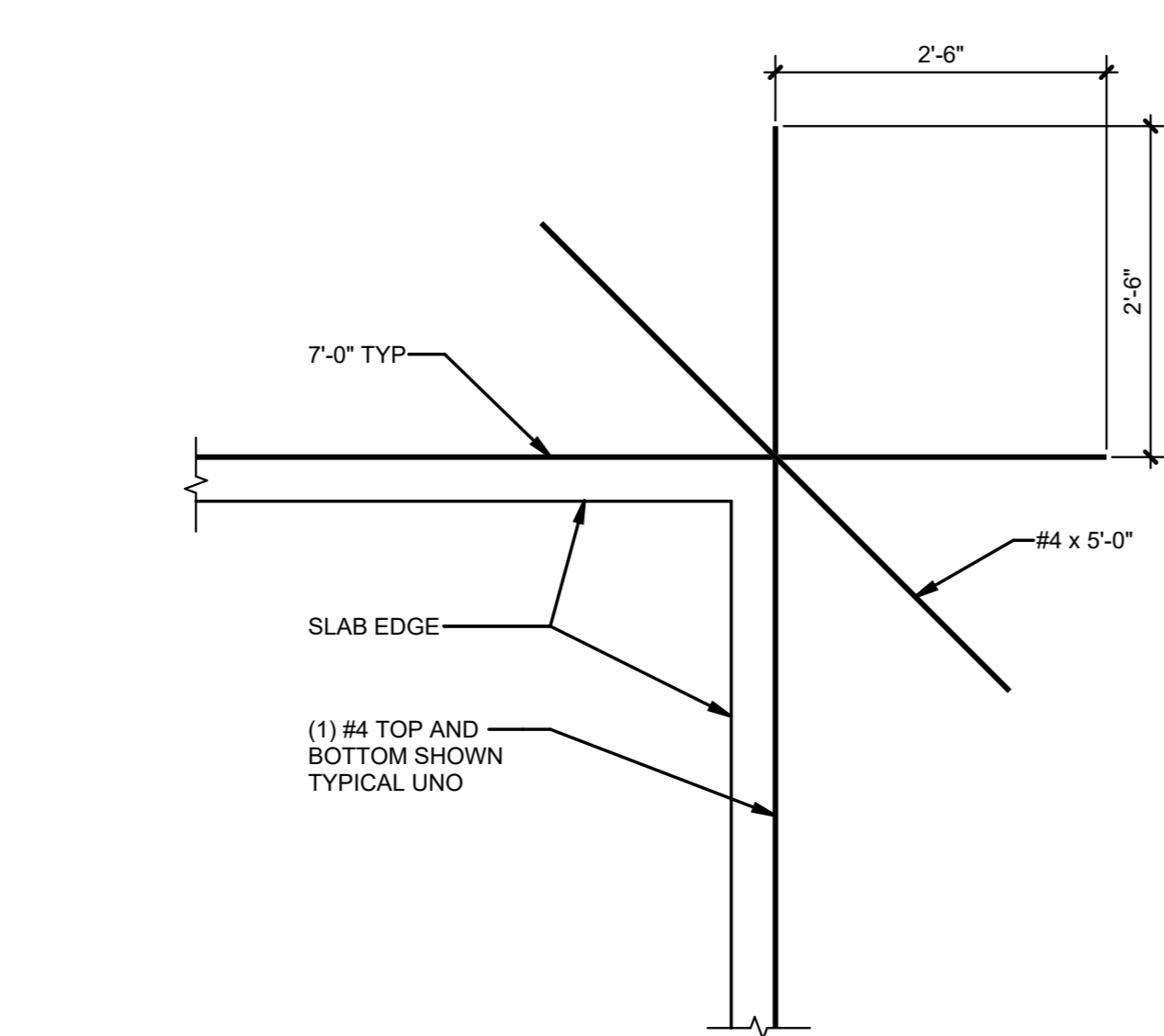
5 PIPE AND TRENCH LOCATIONS FOR FOUNDATIONS

SCALE: NTS



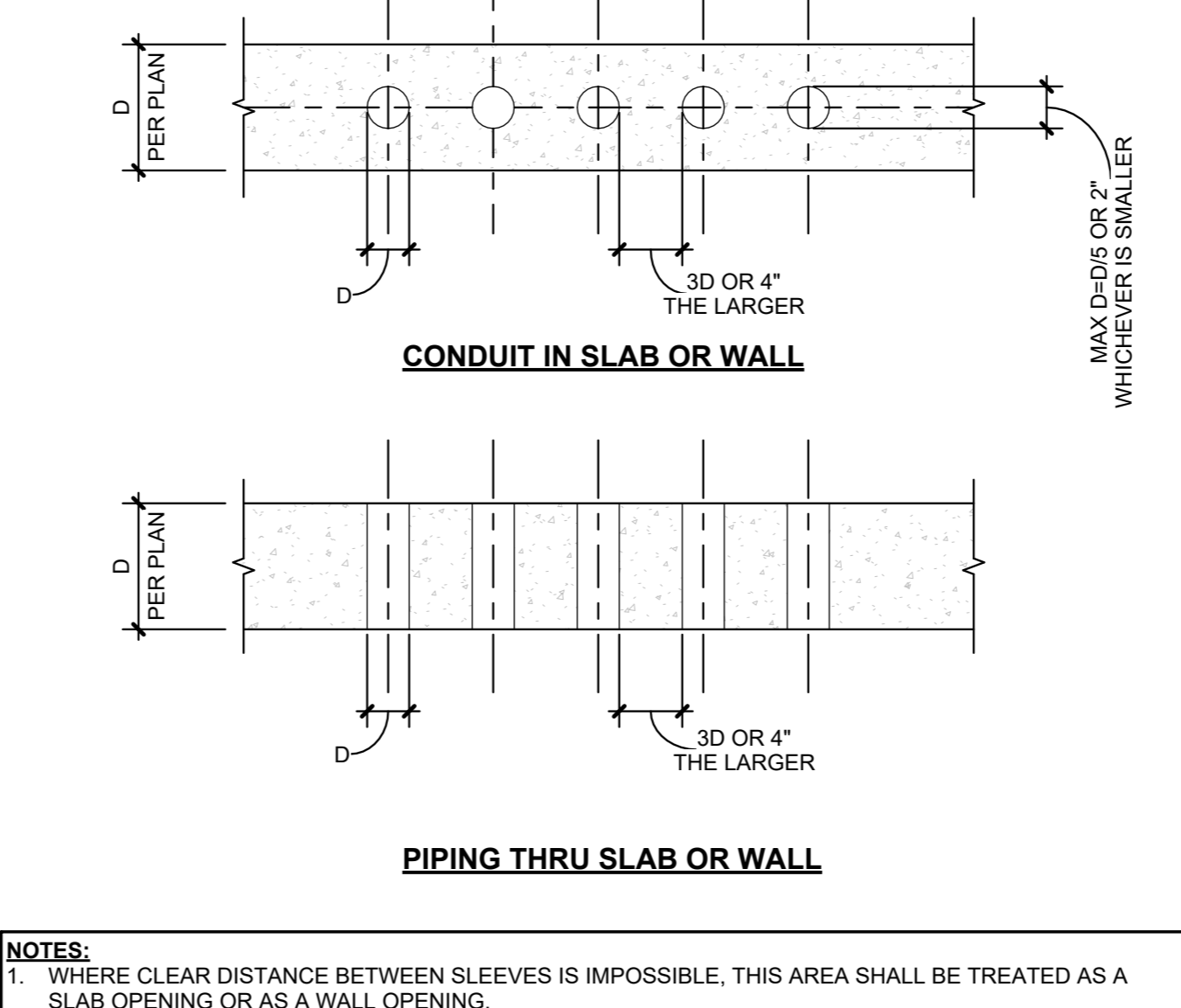
6 CONTROL AND CONSTRUCTION JOINT

SCALE: NTS



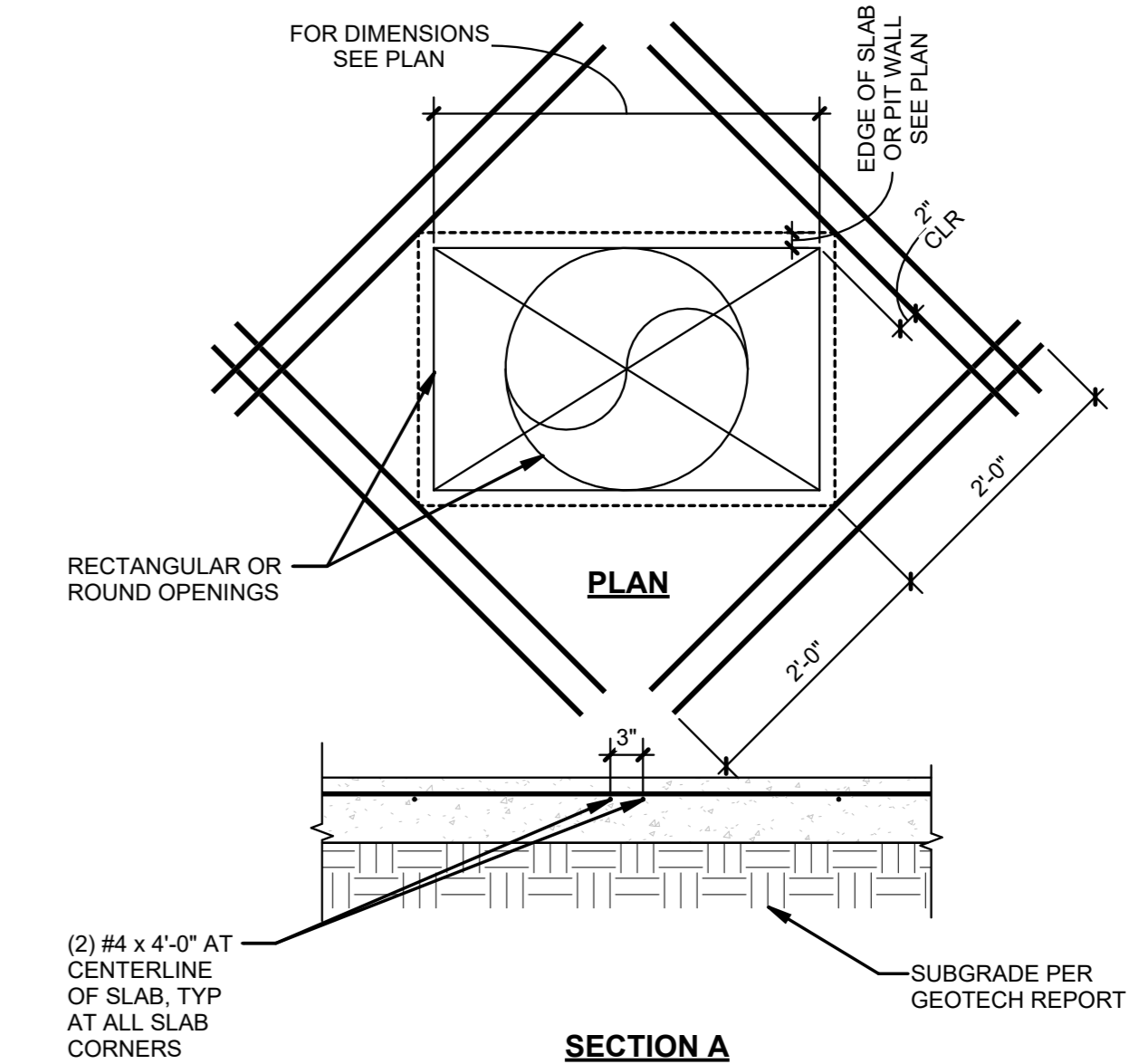
7 TRIM BARS AT RE-ENTRANT CORNERS

SCALE: NTS



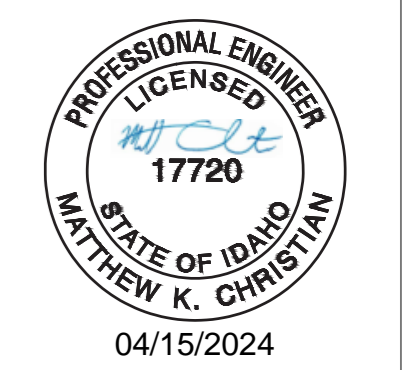
8 PIPING CONDUIT IN OR THROUGH WALL OR SLAB

SCALE: NTS



9 OPENINGS IN SLAB ON GRADE

SCALE: NTS



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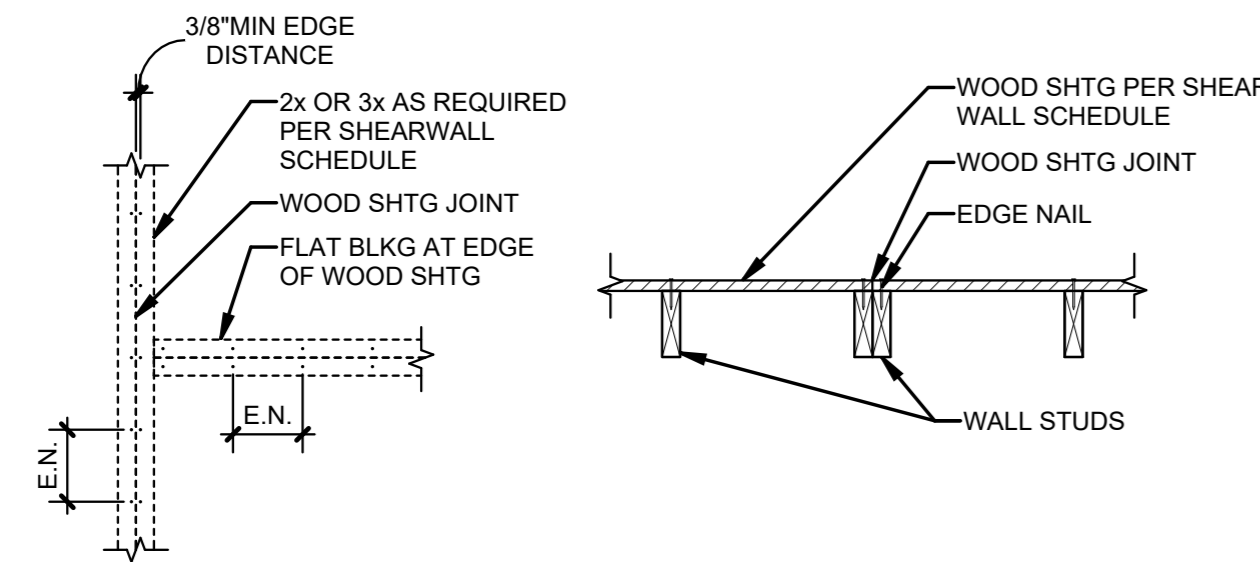
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Author	Checker

SHEET TITLE
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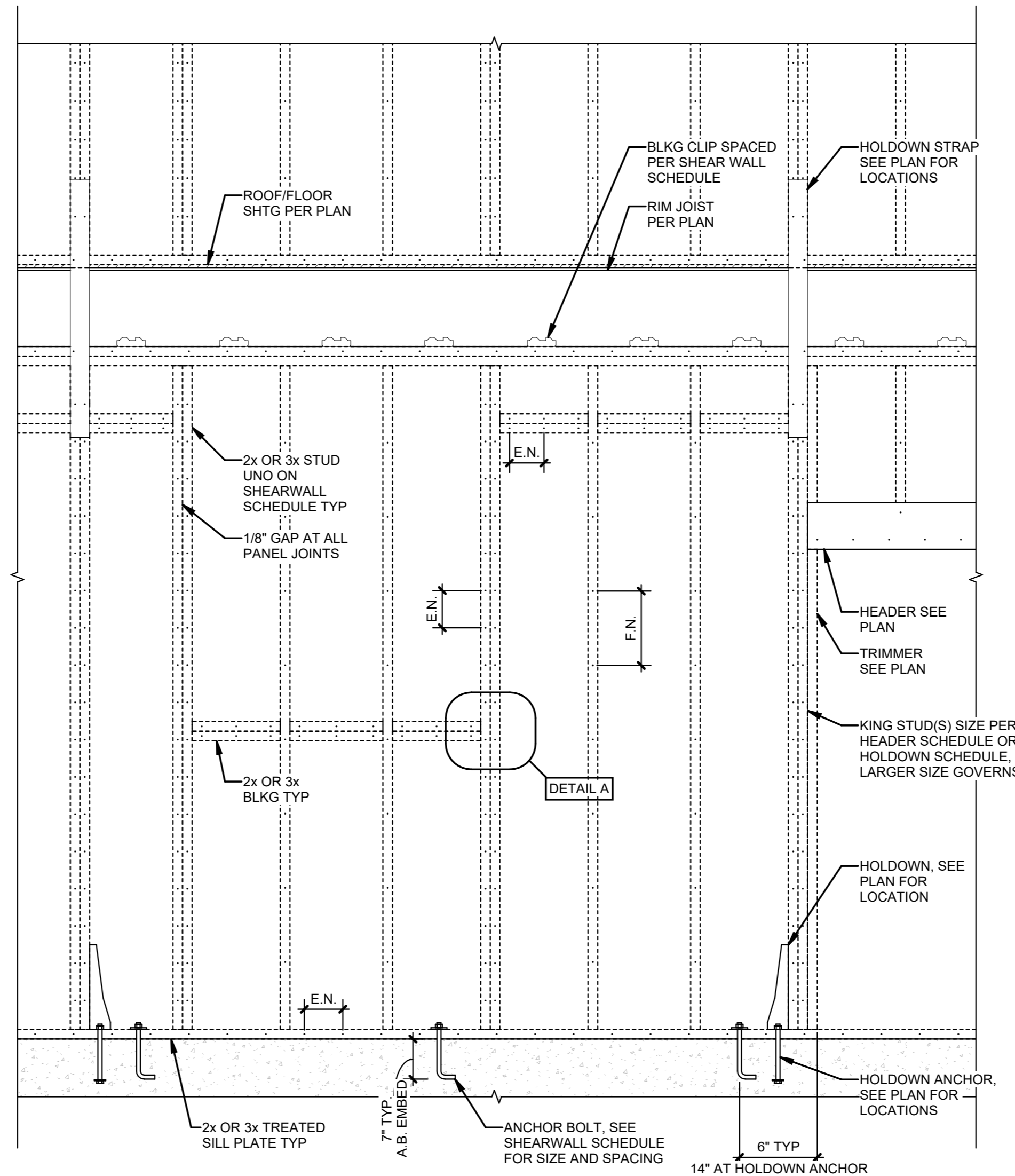
SHEET
S3.00
 ORIGINAL SHEET SIZE
 24" x 36"

WOOD SHEAR WALL SCHEDULE							
MARK	SHEATHING TYPE	PANEL EDGE NAILING	PANEL FIELD NAILING	PANEL EDGE MEMBERS	BOTTOM PLATE ATTACHMENT		BLKG CLIP
					SILL PLATE	FOUNDATION	
SW1	7/16" APA (1) SIDE	8d AT 6" O.C.	8d AT 12" O.C.	2x	16d AT 6" O.C.	5/8" ANCHOR BOLTS AT 48" O.C.	A35 OR LTP4 AT 24" O.C.
SW2	7/16" APA (1) SIDE	8d AT 4" O.C.	8d AT 12" O.C.	2x	16d AT 4" O.C.	5/8" ANCHOR BOLTS AT 32" O.C.	A35 OR LTP4 AT 18" O.C.
SW3	5/8" GYPSUM WALL BOARD	6d COOLER AT 7" O.C.	6d COOLER AT 7" O.C.	2x	16d AT 6" O.C.	5/8" ANCHOR BOLTS AT 48" O.C.	A35 OR LTP4 AT 24" O.C.

- NOTES:**
- INDIVIDUAL PIECES OF WOOD STRUCTURAL PANEL SHALL NOT BE LESS THAN 2'-0" IN LEAST DIMENSION OR 8 SQ FT IN AREA.
 - RE-TIGHTEN HOLDOWN BOLTS BEFORE CLOSING IN WALL FRAMING.
 - FOR ADDITIONAL INFORMATION SEE
 - PROVIDE SHEATHING ON ENTIRE EXTERIOR SURFACE OF ALL STUD WALLS, UNO IN ARCH DRAWINGS. THE SHEATHING THICKNESS SHALL BE AS REQUIRED TO MAINTAIN A COMMON WALL PLANE, 7/16" MINIMUM. PROVIDE FURRING OR BACKING AT ALL INTERIOR WOOD STUD WALL SURFACES WHICH ARE ONLY PARTIALLY SHEATHED WITH WOOD SHEATHING. THE FURRING OR BACKING SHALL BE OF THICKNESS TO MAINTAIN A COMMON WALL PLANE. COORDINATE AND ADJUST HEADER, JAMB, AND SILL DETAILS AS REQUIRED FOR PROPER OVERALL WALL THICKNESS.
 - UNO ON SHEARWALL SCHEDULE, PROVIDE THE MINIMUM NAIL SIZE AND SPACING OF 8d NAILS AT 6" O.C. AT PANEL EDGES, AT SILL AND SOLE PLATES, AND 12" O.C. AT INTERMEDIATE SUPPORTS.
 - PROVIDE 1/4"x3"x3" PLATE WASHERS AT ALL SILL PLATE ANCHOR BOLTS. EACH SHEARWALL LENGTH SHALL HAVE A MINIMUM OF (2) BOLTS.
 - PROVIDE A 1/8" GAP BETWEEN PANELS AT ALL PANEL EDGE JOINTS.
 - INSTALL SHEATHING EITHER HORIZONTALLY OR VERTICALLY FOR THE ENTIRE LENGTH OF THE SHEAR WALL PER PLAN, WHERE STUDS ARE SPACED AT 24" O.C. SHEATHING MUST BE INSTALLED PERPENDICULAR TO THE WALL STUDS.
 - 8d NAILS SHALL BE 0.131" DIA x 2-1/2" COMMON OR 0.113" DIA x 2-1/2" GALVANIZED BOX. GALVANIZED NAILS SHALL BE HOT DIPPED OR TUMBLED.
 - "E.N." INDICATES EDGE NAILING AT SHEAR WALLS
 - "F.N." INDICATES FIELD NAILING AT SHEAR WALLS.

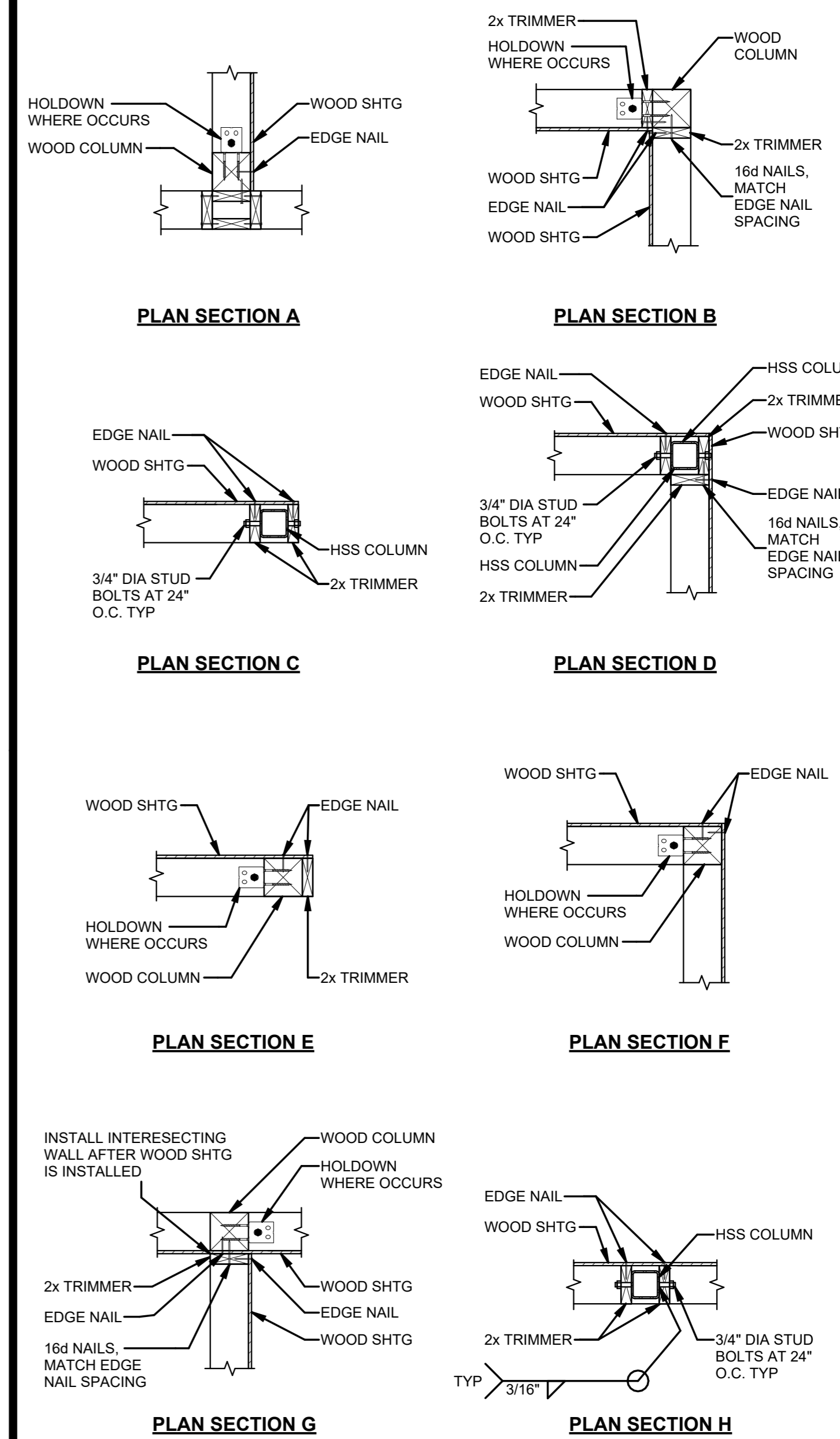


WOOD SHTG NAILING AT JOINT
PLAN VIEW WOOD SHTG ON ONE SIDE
DETAIL A



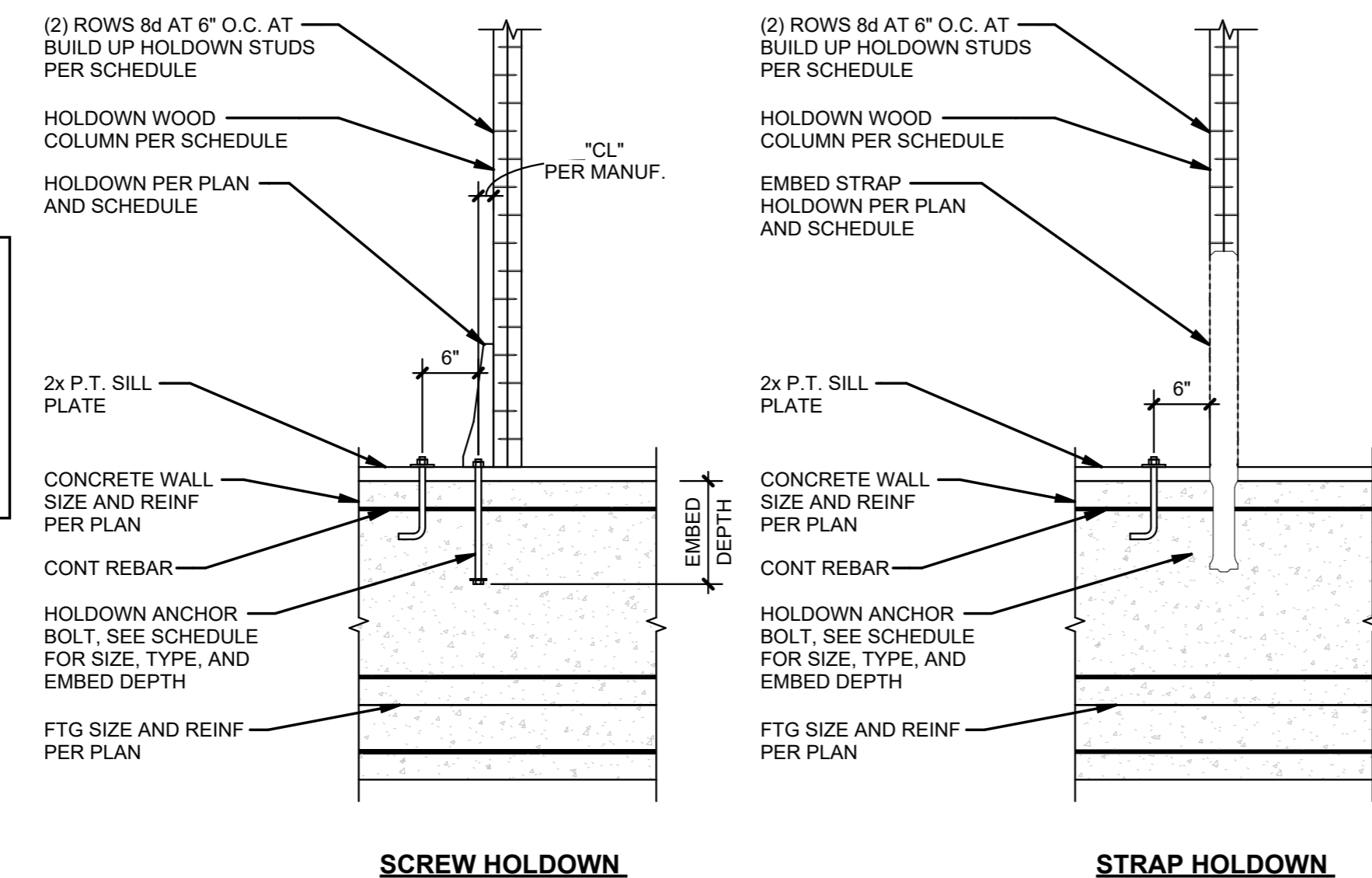
1 WOOD SHEAR WALL ELEVATION
SCALE: NTS

2 SHEAR WALL POST DETAILS
SCALE: NTS

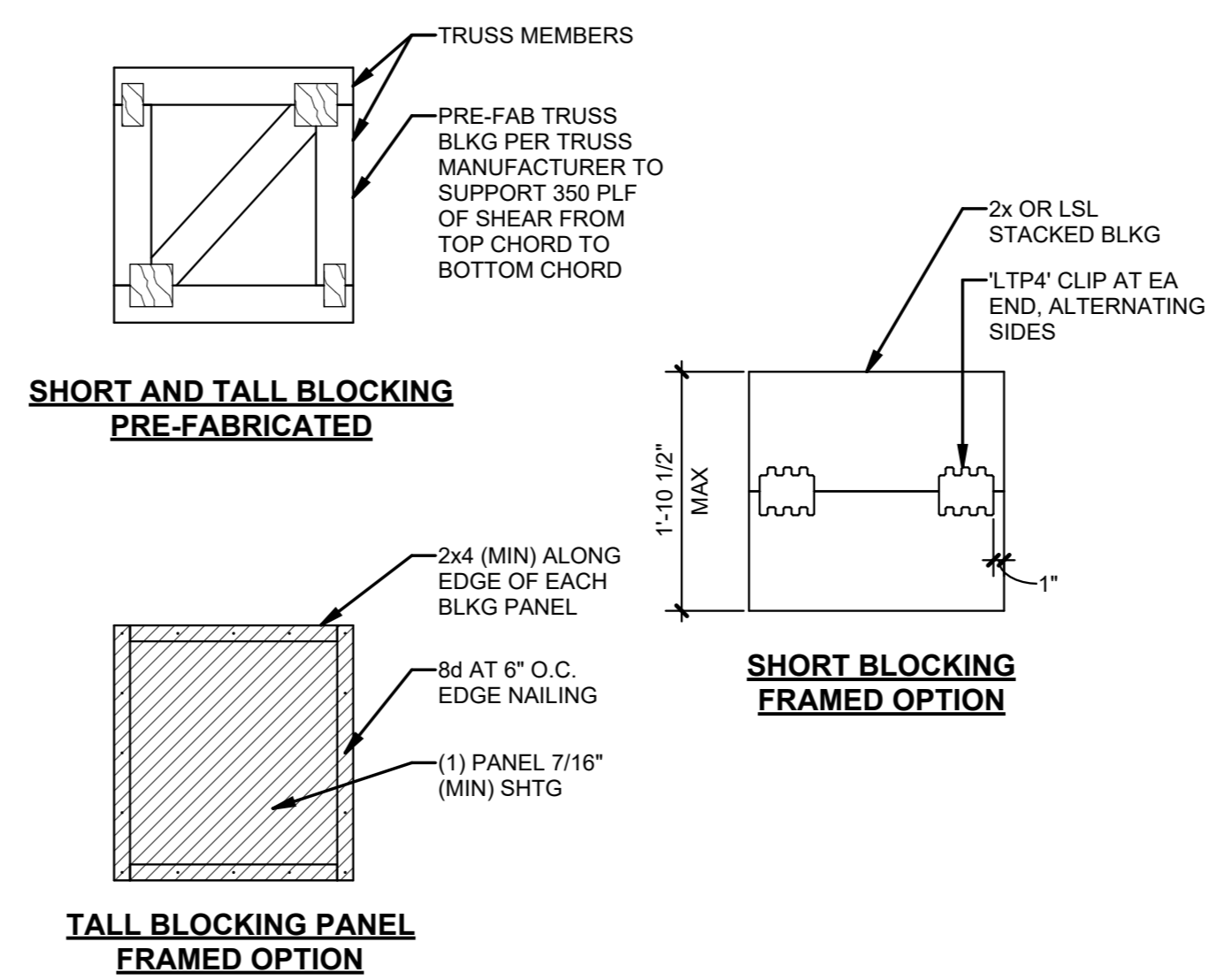


FOUNDATION HOLDOWN SCHEDULE				
MARK	TYPE	STUD NAILS/SCREWS	STUD/POST	ANCHOR BOLT
AF	STHD14	(30) 10d	(2) 2x	NA
AF (ALT)	HDU4-SDS2.5	(10) 1/4 x 2 1/2 SDS	(2) 2x	SB5/8x24 w/ 18" CONC. EMBED

- NOTES:**
- HOLDOWNS SHALL BE SIMPSON OR EQUAL WITH ICC APPROVAL. ALL SUBSTITUTES SHALL BE REVIEWED BY THE ENGINEER OF RECORD BEFORE INSTALLATION.
 - COMPARE HOLDOWN STUD/POST (PER HOLDOWN SCHEDULE) TO KING STUD(S) (PER HEADER SCHEDULE). LARGER SIZE GOVERNS. CONTRACTOR TO COORDINATE ANCHOR BOLT PLACEMENT.
 - DEEPEN FOUNDATION AND STEM WALL AT FOOTING WHERE REQUIRED.
 - CONTRACTOR'S OPTION TO USE STRAP HOLDOWN OR SCREW HOLDOWN PER SCHEDULE.
 - STRAP HOLDOWN MUST BE INSTALLED WITH SIMPSON "SM1" BRACKETS, TYP.
 - STRAP HOLDOWN MAY BE BENT HORIZONTAL THEN VERTICAL, ONE TIME ONLY.
 - ANCHOR BOLT EMBED IS MINIMUM CONCRETE STEM WALL EMBED U.N.O.



3 HOLDOWN AT FOUNDATION
SCALE: NTS



4 TRUSS BLOCKING OPTIONS
SCALE: NTS



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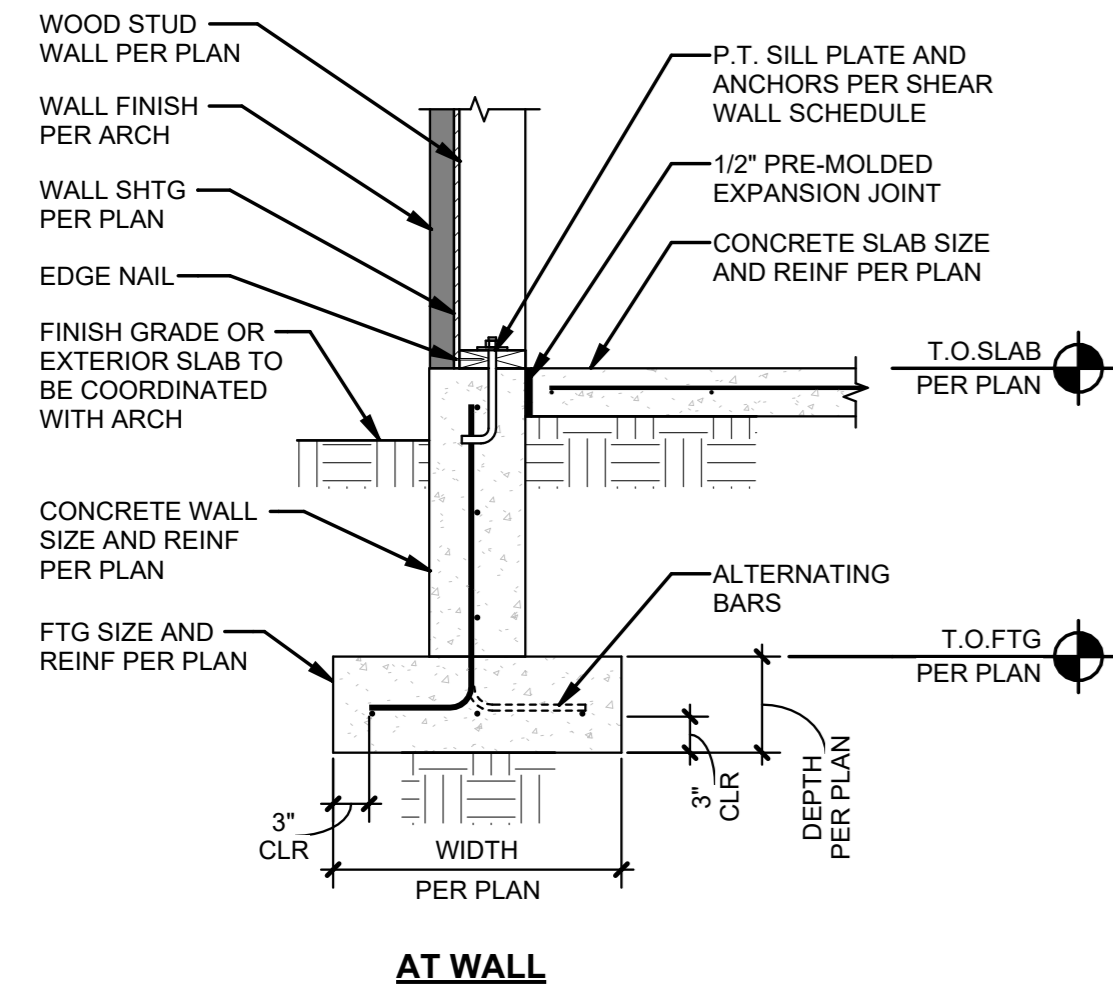
PERMIT SET

PROJECT 1047.24	DATE 03/29/24
DRAWN Author	CHECKED Checker

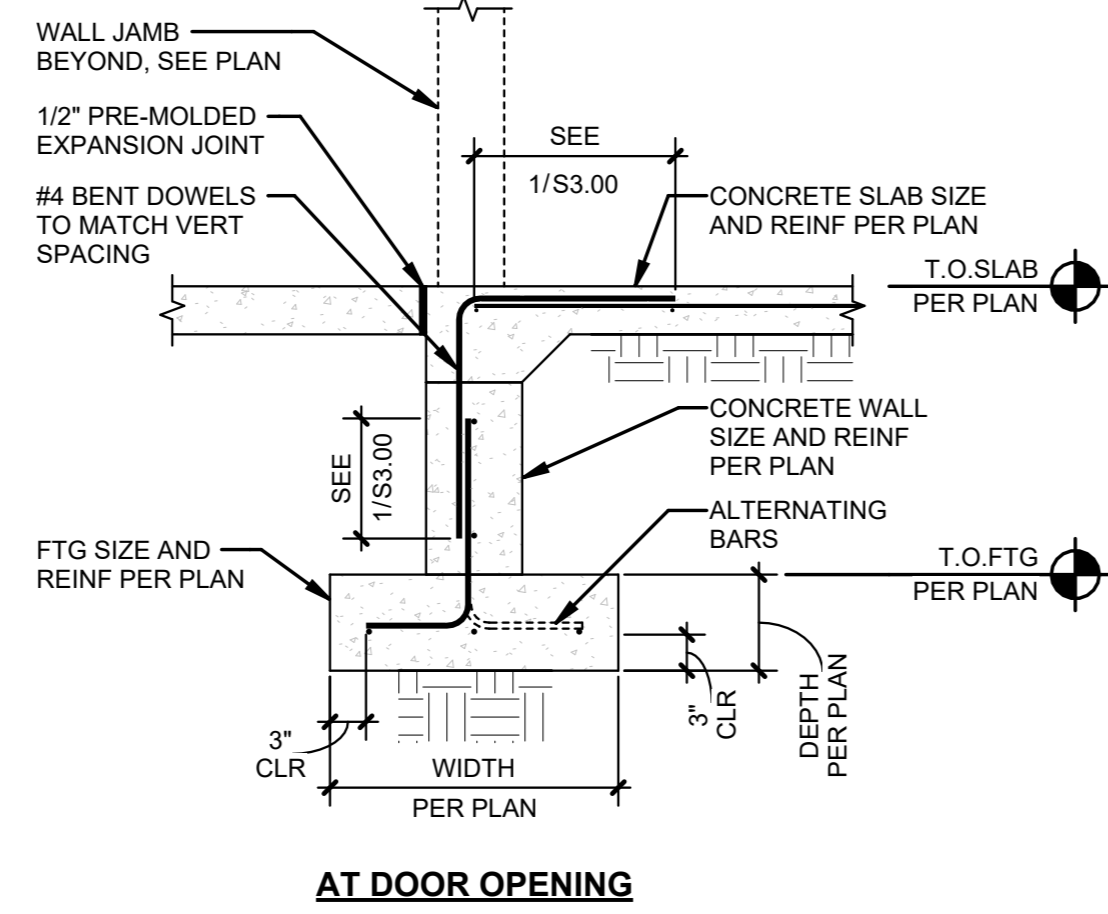
SHEET TITLE
WOOD SHEAR WALL DETAILS

SHEET

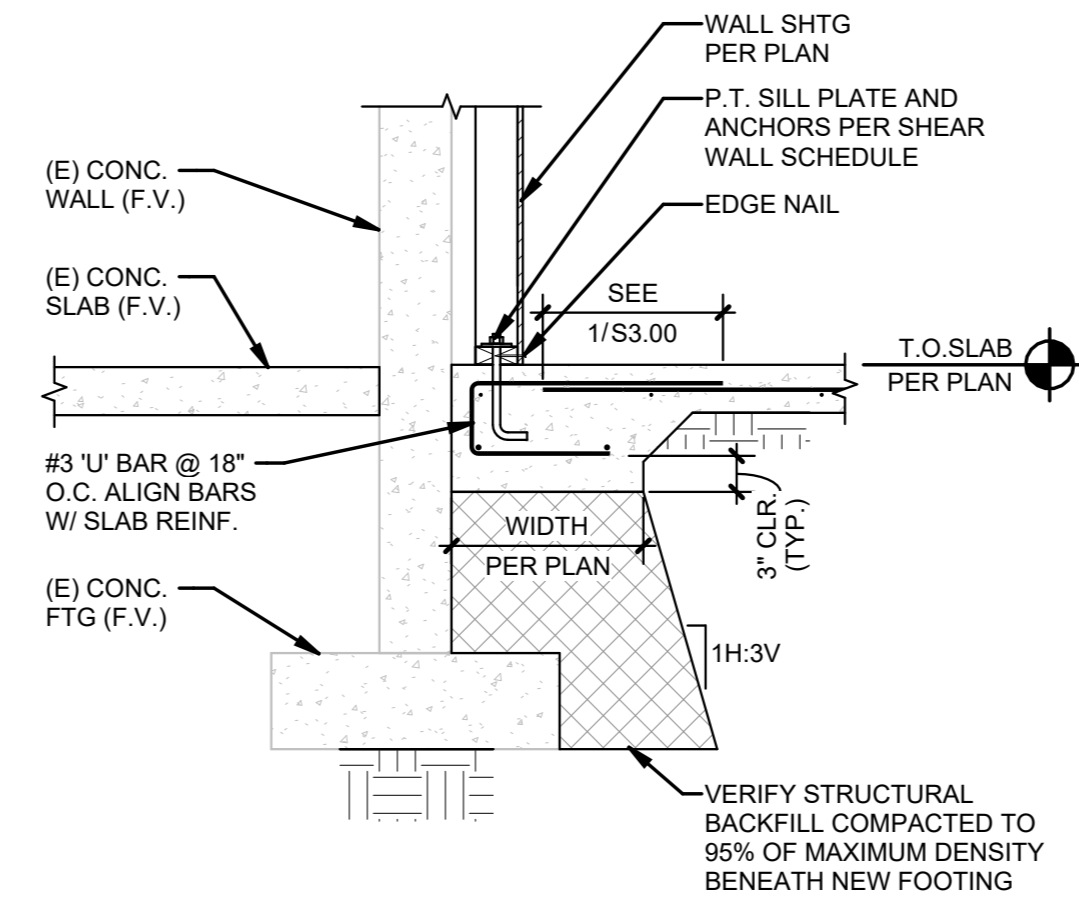
\$4.00
ORIGINAL SHEET SIZE
24" x 36"



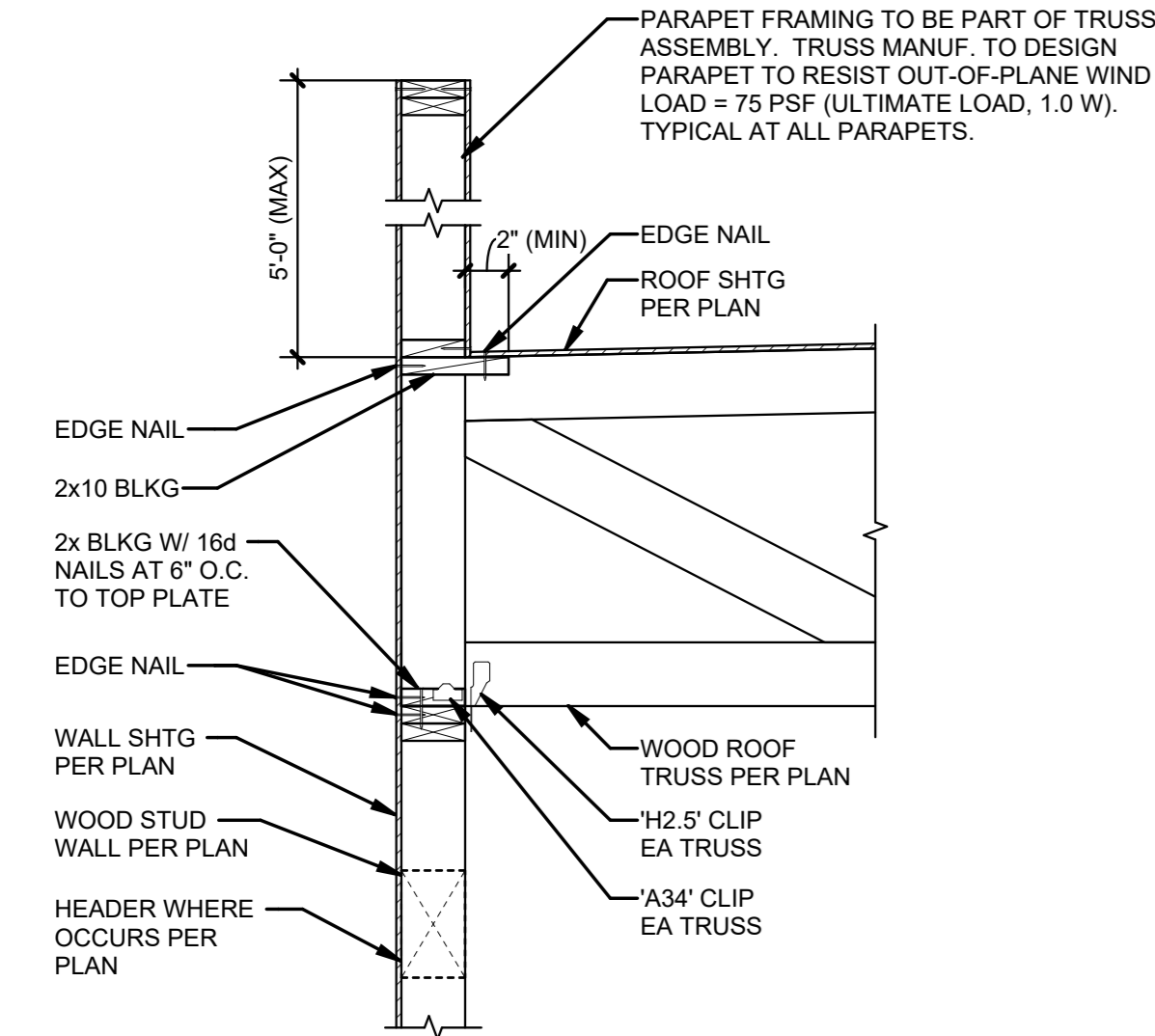
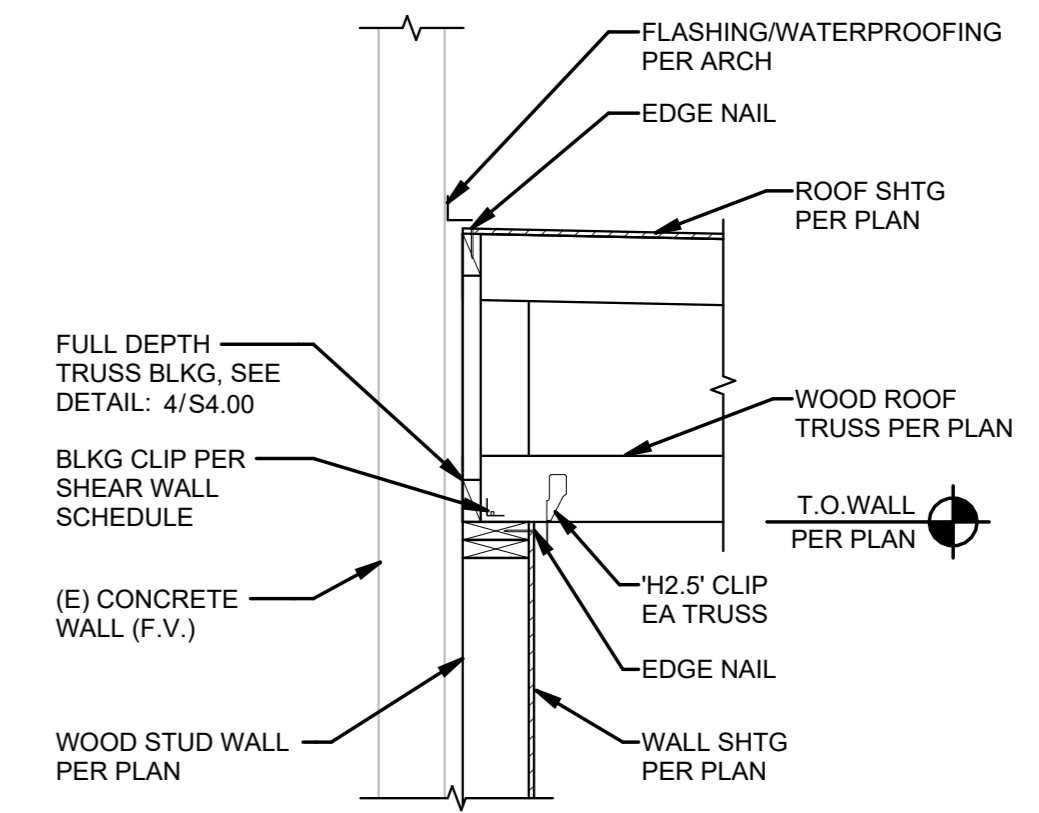
1 FOOTING AT EXTERIOR WOOD WALL
SCALE: NTS



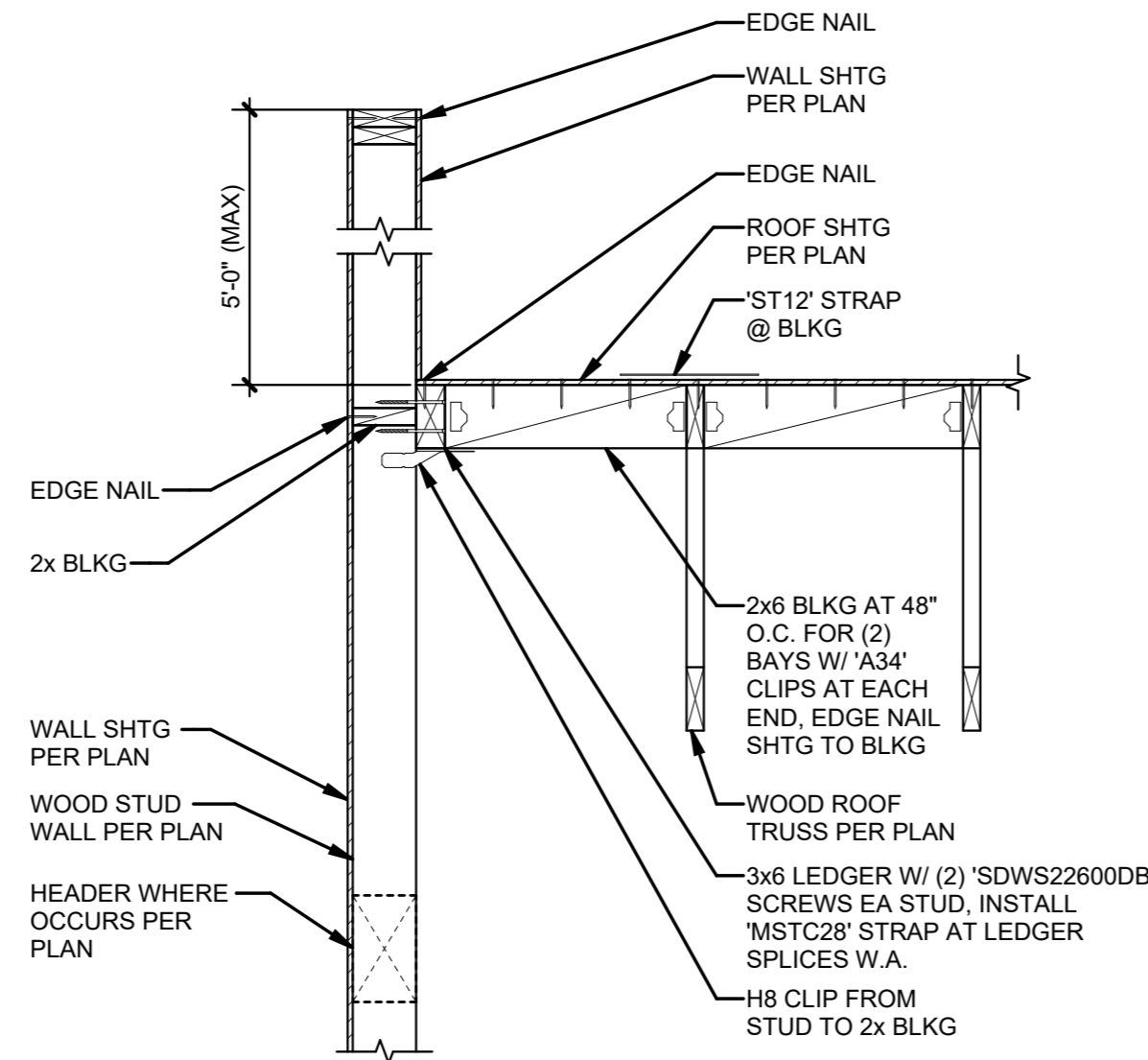
2 FOOTING AT EXISTING WALL
SCALE: NTS



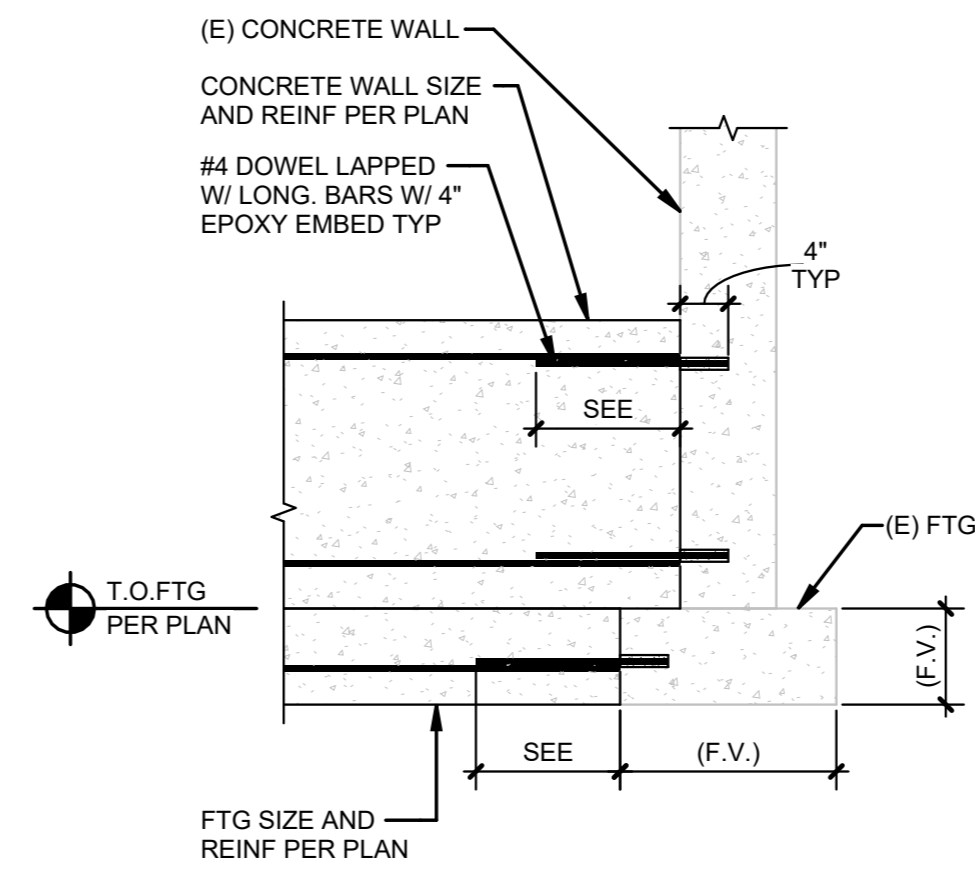
3 TRUSS AT BEARING WALL
SCALE: NTS



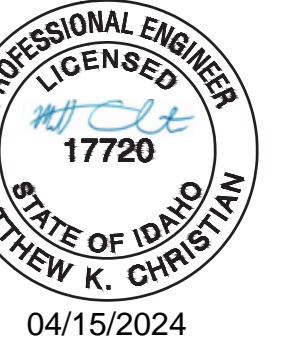
4 TRUSS AT EXTERIOR WALL
SCALE: NTS



5 PARAPET AT EXTERIOR WALL
SCALE: NTS



6 NEW TO EXISTING FOOTING
SCALE: NTS



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PROJECT 1047.24	DATE 03/29/24
DRAWN Author	CHECKED Checker

REVISED

SHEET TITLE
**STRUCTURAL
DETAILS**

SHEET

\$5.00
ORIGINAL SHEET SIZE
24" x 36"

###-## SHEET NOTES:

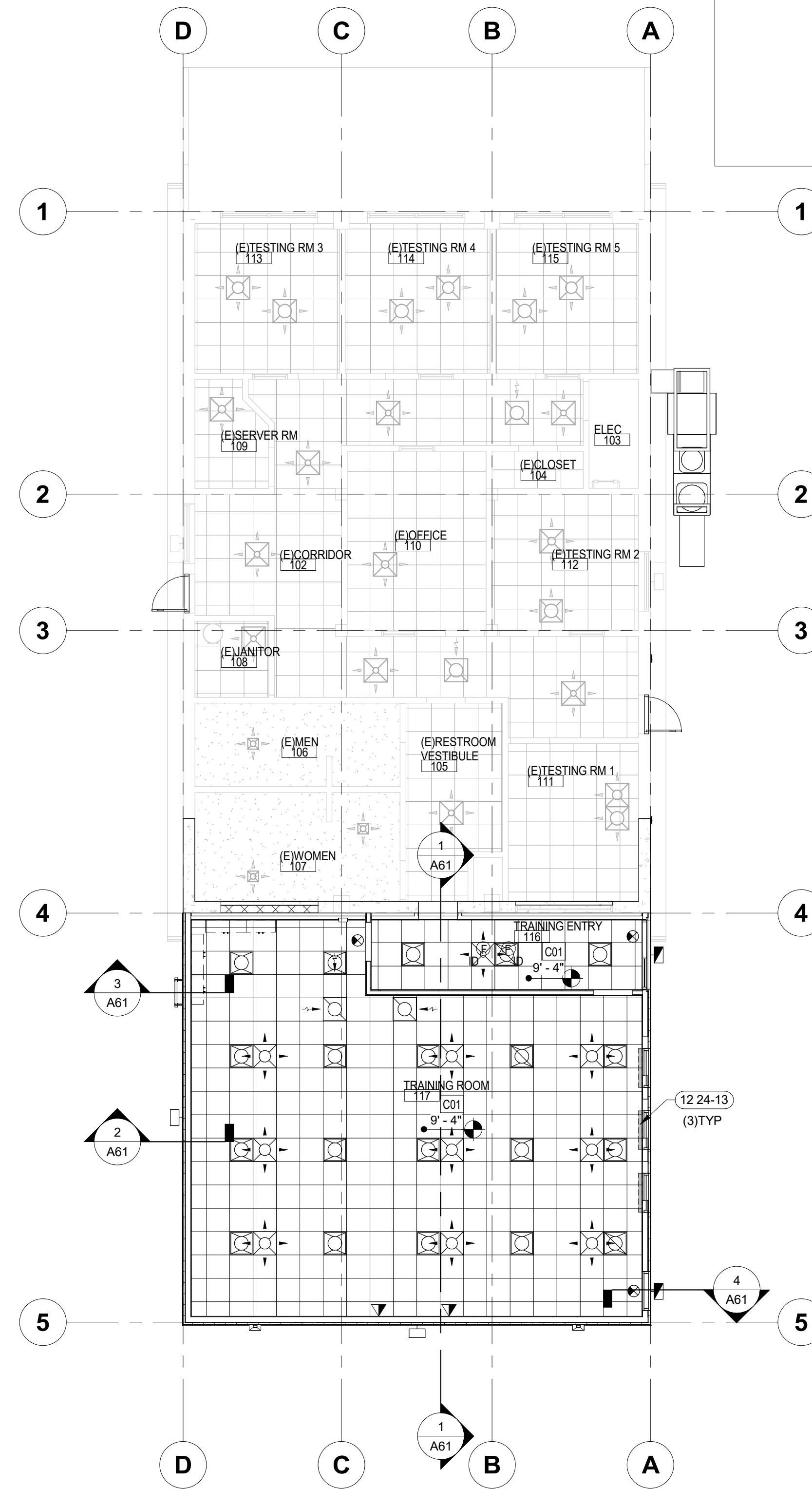
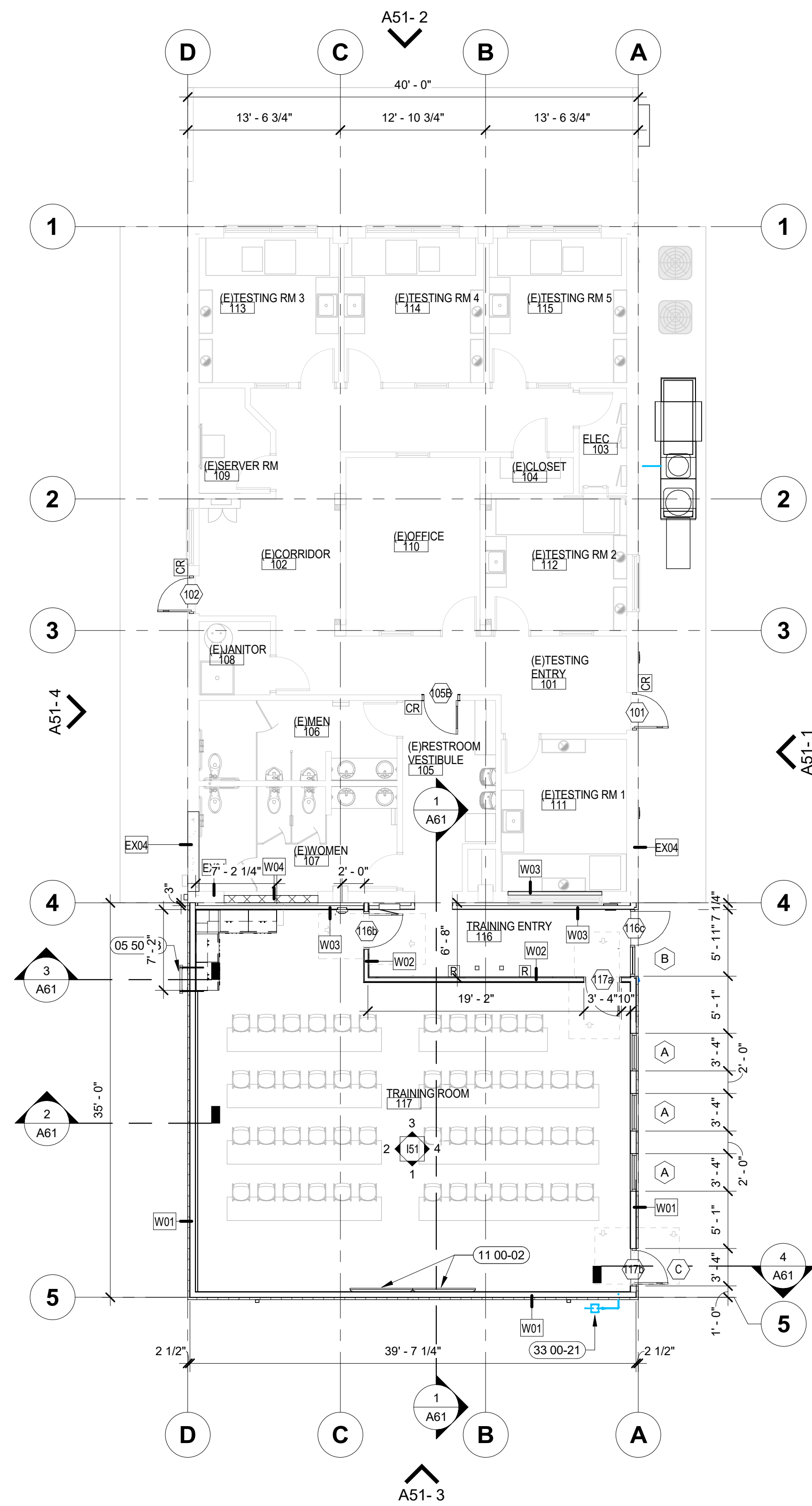
05 50-13 LADDER TO ROOF, RE/A72-B.
 11 00-02 WALL MOUNTED TELEVISION, OFCI.
 12 24-13 ROLLER WINDOW SHADES
 33 00-21 GAS LINEMETER, CW/ CIVIL DRAWINGS

LEGEND:

	SCREENED LINES INDICATE EXISTING ASSEMBLIES/SYSTEMS TO REMAIN AND BE PROTECTED DURING CONSTRUCTION.
	INDICATES ASSEMBLIES/SYSTEMS TO BE CONSTRUCTED
	DOOR NUMBER
	WINDOW TYPE
	WALL TYPE FOR WALL TYPES WITH VARIABLE HEIGHT, SEE TOP OF WALL ELEVATION
	SHEET NOTE, RE: SHEET NOTES LIST ON CURRENT PAGE
	INTERIOR ELEVATIONS
	MATERIAL DESIGNATION, RE: FINISH SCHEDULE I&I
	INDICATES FINISH CEILING OR SOFFIT HEIGHT ABOVE DATUM, FINISH FLOOR.
	GYPSUM BOARD
	2' X 2' SUSPENDED ACOUSTICAL CEILING PANEL SYSTEM RE: G71 & A73
ELECTRICAL, CW/ ELECTRICAL	
	2' X 2' LAY-IN
	EMERGENCY 2' X 2' LAY-IN
	RECESSED CAN FIXTURE
	PENDANT FIXTURE
	PENDANT WALL WASH FIXTURE
	CEILING ACCESS PANEL
	EMERGENCY FIXTURE
	EXIT SIGN (TWO ARROWS)
	EXIT SIGN (ONE ARROW)
MECHANICAL, CW/ MECHANICAL	
	SUPPLY REGISTER
	RETURN AIR GRILLE
	EXHAUST

GENERAL NOTES:

- FINISH FLOOR ELEVATION (100.00) IS FOR REFERENCE ONLY. SEE CIVIL SET FOR ACTUAL FLOOR ELEVATION.
- ALL WALL DIMENSIONS ARE TO FACE OF STUD AND/OR NOMINAL FACE OF MASONRY.
- PROVIDE BLOCKING WHERE REQUIRED FOR FIXTURE INSTALLATION. COORDINATE WITH FIXTURE INSTALLER FOR MOUNTING HEIGHTS.
- BRACE WALLS THAT DO NOT EXTEND TO STRUCTURE WITH 3/8" METAL STUD DIAGONAL BRACE AT 48" O.C., ANCHOR TO BOTTOM FLUTE OF ROOF DECKING AND AT TOP TRACK OF PARTITION WALL. BRACES TO BE CONCEALED WHENEVER POSSIBLE.
- THE HINGE SIDE OF ALL DOOR FRAMES SHALL BE MOUNTED 4" FROM ADJACENT PERPENDICULAR WALL UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL PROVIDE BLOCKING OR BACKING FOR ALL WALL MOUNTED AND RECESSED ACCESSORIES AND EQUIPMENT. ASSURE THAT ALL REQUIRED BACKING IS INSTALLED IN WALLS PRIOR TO INSTALLING DRYWALL. THIS INCLUDES BACKING FOR WALL-MOUNTED DOORSTOPS.
- THE HINGE SIDE OF ALL DOOR FRAMES SHALL BE MOUNTED 4" MIN. FROM ADJACENT PERPENDICULAR WALL U.N.O.
- CONTRACTOR SHALL FIELD MEASURE ALL AREAS TO RECEIVE MILLWORK PRIOR TO FABRICATION OF MILLWORK.
- VERIFY ALL PLUMBING FIXTURES WITH PLUMBING DRAWINGS.



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

2 REFLECTED CEILING PLAN
1/8" = 1'-0"

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 ONCE SIGNED BY ARCHITECT ON FILE WITH THE OWNER
 JAMES A. MARSH ARCHITECT
 APRIL 16, 2024

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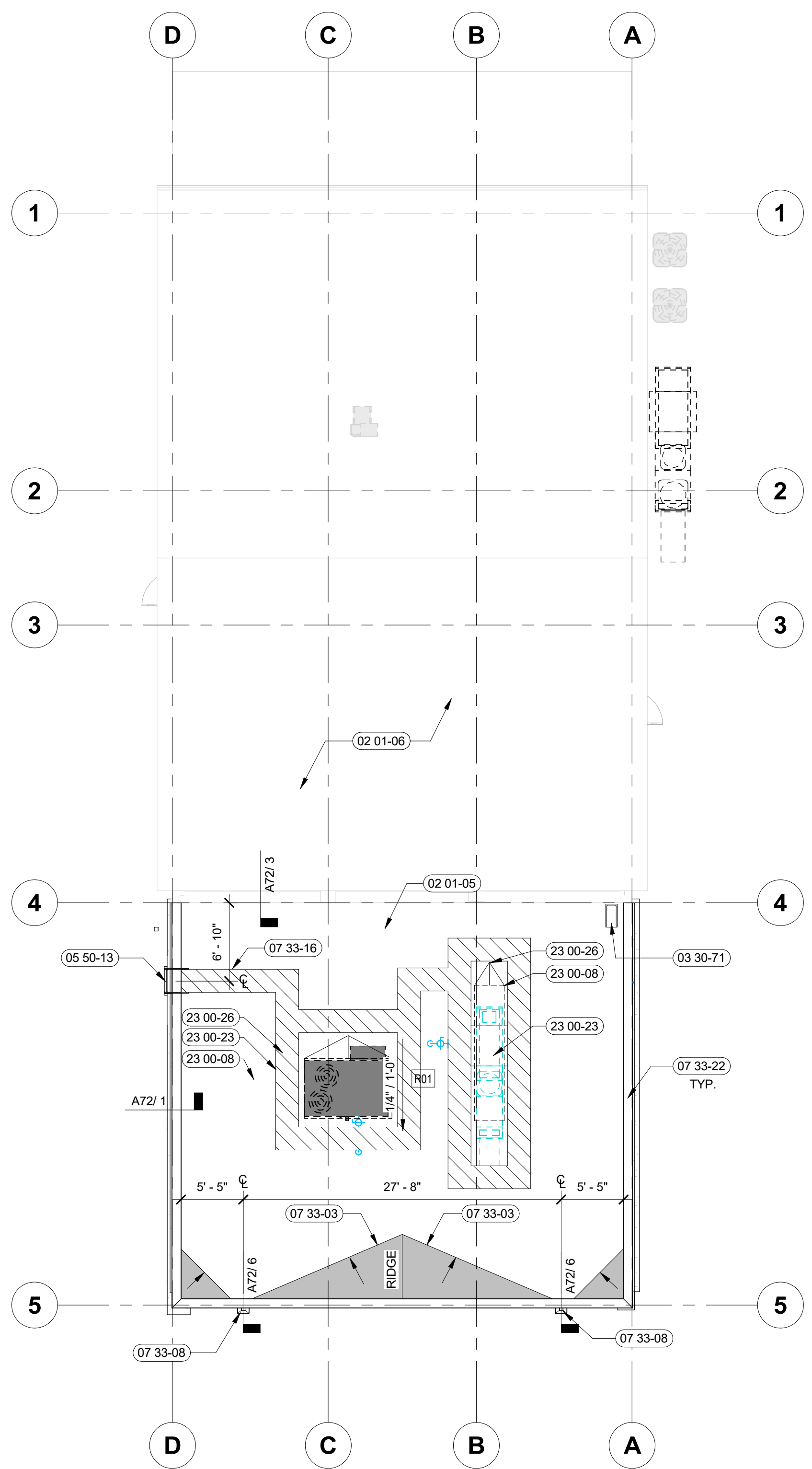
PERMIT SET

PROJECT 24009	DATE 04-11-24
DRAWN JLH	CHECKED AJL
REVISED	

SHEET TITLE
FLOOR PLAN & RCP

SHEET
A21
 ORIGINAL SHEET SIZE
 24" x 36"

4/17/2024 7:48:30 AM



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

LEGEND:

- SCREENED LINES INDICATE EXISTING ASSEMBLIES/SYSTEMS TO REMAIN AND BE PROTECTED DURING CONSTRUCTION.
- INDICATES ASSEMBLIES/SYSTEMS TO BE CONSTRUCTED
- ROOF SLOPE
- SHEET NOTE, RE: SHEET NOTES LIST ON CURRENT PAGE

GENERAL NOTES:

- A. CONTRACTOR TO VERIFY & COORDINATE DUCT LAYOUT WITH CURB AND ROOF PENETRATION LOCATIONS, REFER ALSO TO REFRIGERATION DRAWINGS FOR REFRIGERATION PIPING REQUIREMENTS AND COORDINATION.
- B. SEE STRUCTURAL FRAMING PLAN FOR ROOF DECK HEIGHTS TO ESTABLISH ROOF SLOPES AND ROOF MEMBER LOCATIONS.
- C. MAINTAIN ALL ROOF PENETRATIONS 3'-0" OR GREATER FROM FLOW LINES
- D. PREFABRICATED CURBS (FOR ROOF TOP MECHANICAL & REFRIGERATION EQUIPMENT SHALL BE INSTALLED BY GENERAL CONTRACTOR AND SET LEVEL.
- E. ALL DIMENSIONS ARE FOR GENERAL ARRANGEMENT & LOCATION ONLY. ACTUAL REQUIREMENTS & DIMENSIONS SHOULD BE VERIFIED AND COORDINATED WITH EQUIPMENT, SHOP DRAWING SUBMITTALS AND STRUCTURAL FRAMING.
- F. ALL PLANES OF ROOF SHALL SLOPE MIN. 1/4 "L.F. TO DRAINS OR GUTTER, C/W STRUCTURAL DRAWINGS
- G. NO PLUMBING VENTS OR EXHAUST UNITS WITHIN 10'-0" OF INTAKE OR 10'-0" OF EXTERIOR WALL.
- H. FABRICATE SHEET METAL CURB CAPS TO ALLOW FOR THICKNESS OF ROOFING PLY EXTENDING UP CURB FACE
- I. SCUPPER SILLS AND OVERFLOW DRAIN RIMS SHALL BE 2" ABOVE PRIMARY ROOF DRAIN RIMS. COORDINATE AND VERIFY INSTALLATIONS.
- J. COORDINATE ROOF CURBS WITH HVAC EQUIPMENT.
- K. PROVIDE 1/2" WIDE GAP IN 2 x PARAPET NAILER AT ROOF CONTROL JOINT.
- L. ALL ROOF OPENINGS GREATER THAN 12"x12" SHALL BE FRAMED WITH STEEL ANGLES, RE: STRUCTURAL DRAWINGS.

SHEET NOTES:

- 02 01-05 EXISTING TO GUTTER TO BE PROTECTED DURING CONSTRUCTION.
- 02 01-06 EXISTING ROOF TO BE PROTECTED DURING CONSTRUCTION.
- 03 30-71 CONCRETE SPLASH BLOCK, RE: A72-12.
- 05 50-13 LADDER TO ROOF, RE: A72-8.
- 07 33-03 POLYISOCYANURATE ROOF CRICKET. SLOPE TO BE 1/4" PER FOOT MIN.
- 07 33-08 SCUPPER W/ DOWNSPOUT, COLOR TO MATCH EXISTING GUTTER SYSTEM.
- 07 33-16 HEAVY DUTY ROOF WALKING PADS
- 07 33-22 PARAPET COPING, WRAP ROOF MEMBRANE UP AND OVER PARAPET FRAMING, RE: A51 FOR FINISH.
- 23 00-08 MECH. EQUIPMENT CURB, RE: A72-2.
- 23 00-23 MECHANICAL ROOFTOP UNITS, C/W MECHANICAL DRAWINGS.
- 23 00-26 POLYISOCYANURATE ROOFTOP CRICKET, SLOPE 1/4" PER FT. MIN.

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 ORIGINAL DATE SIGNED: APRIL 16, 2024
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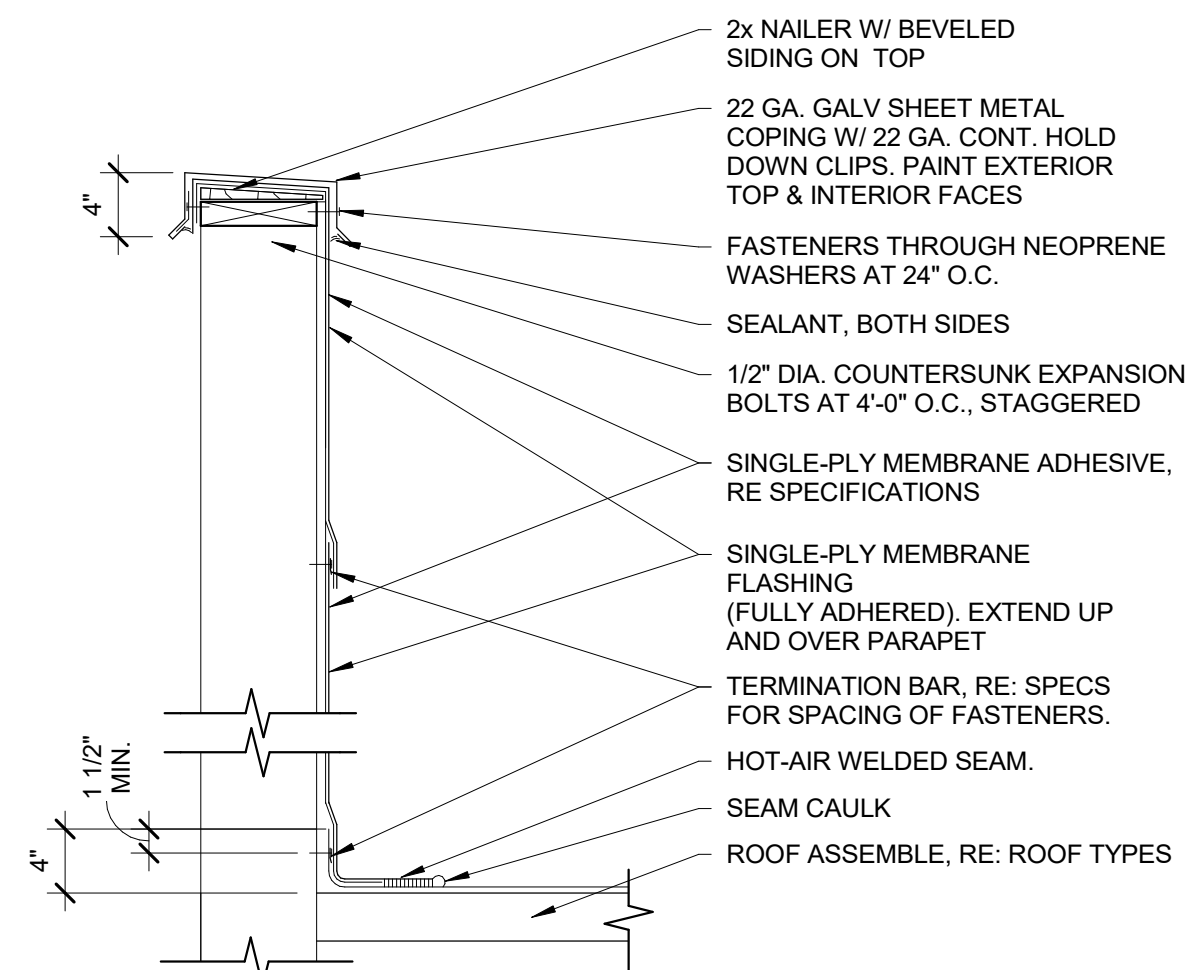
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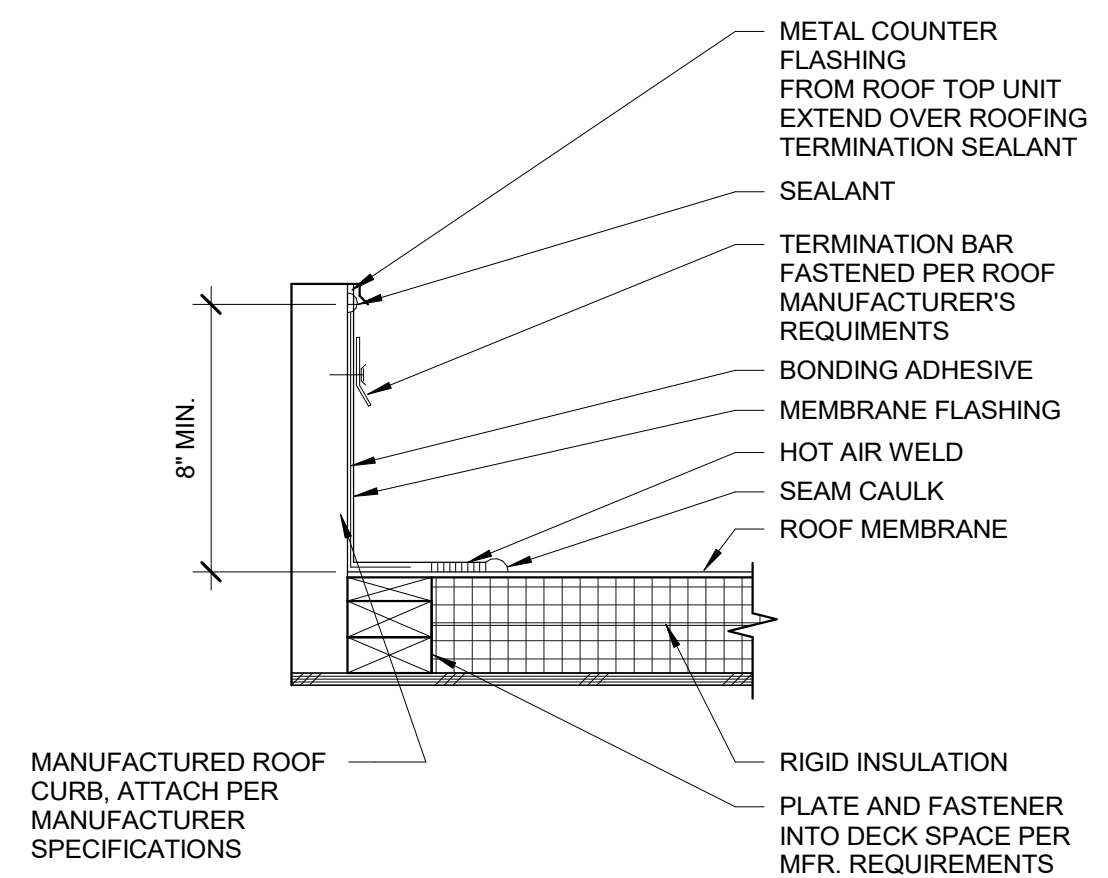
REVISED

SHEET TITLE
ROOF PLAN

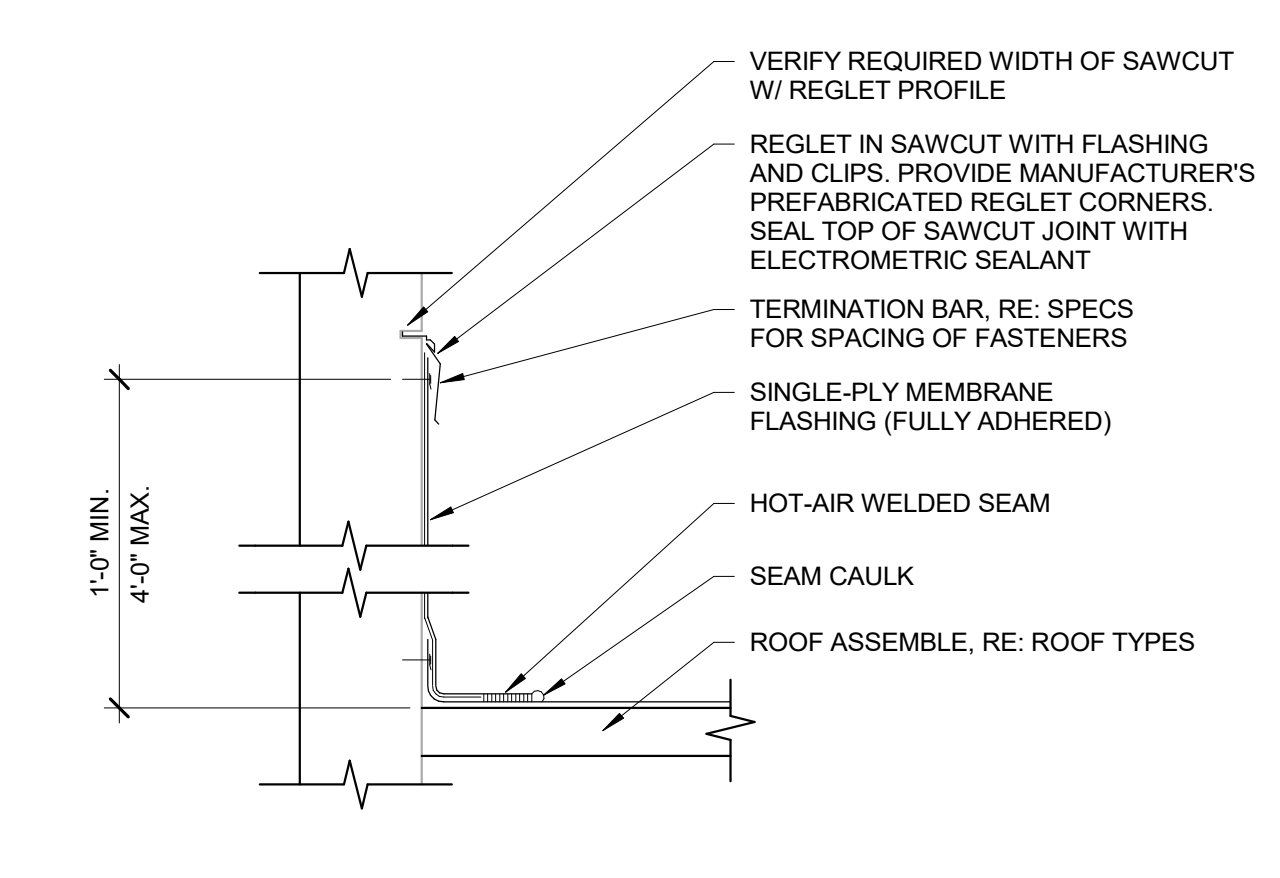
SHEET
A23
ORIGINAL SHEET SIZE
24" x 36"



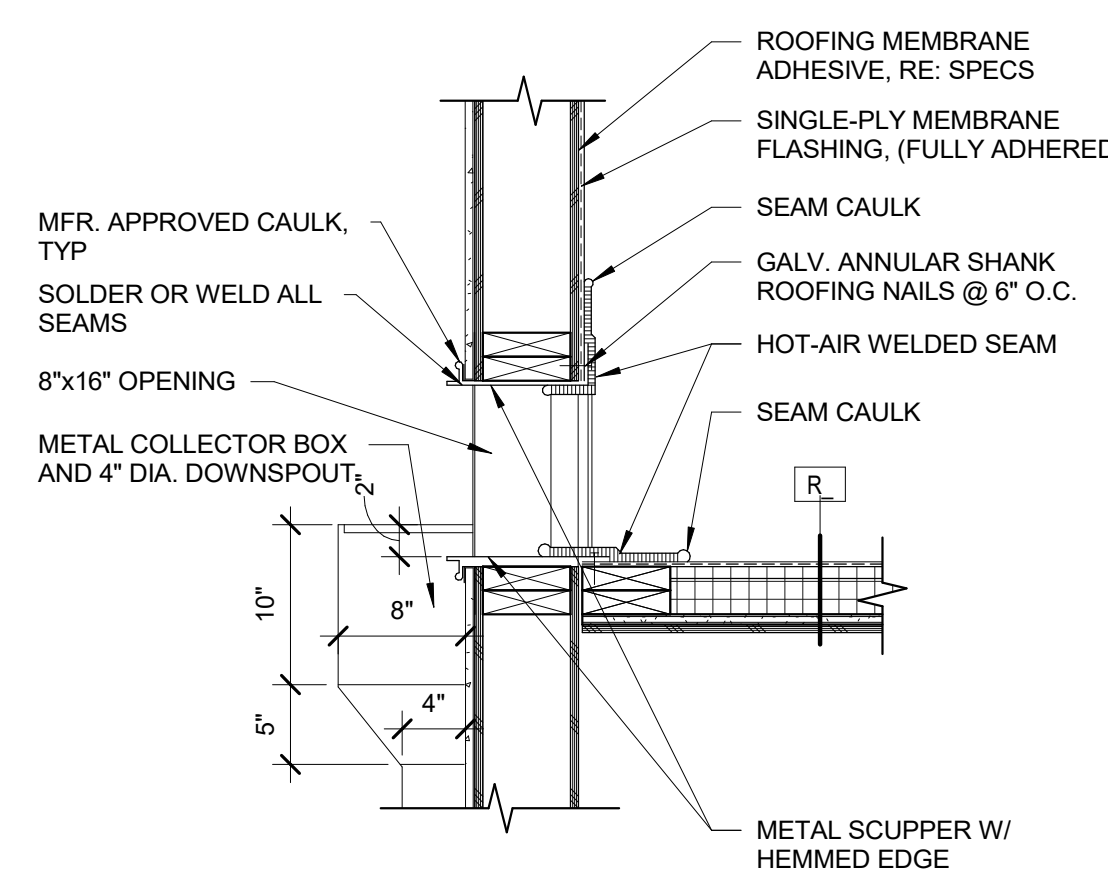
1 PARAPET DETAIL
1" = 1'-0"



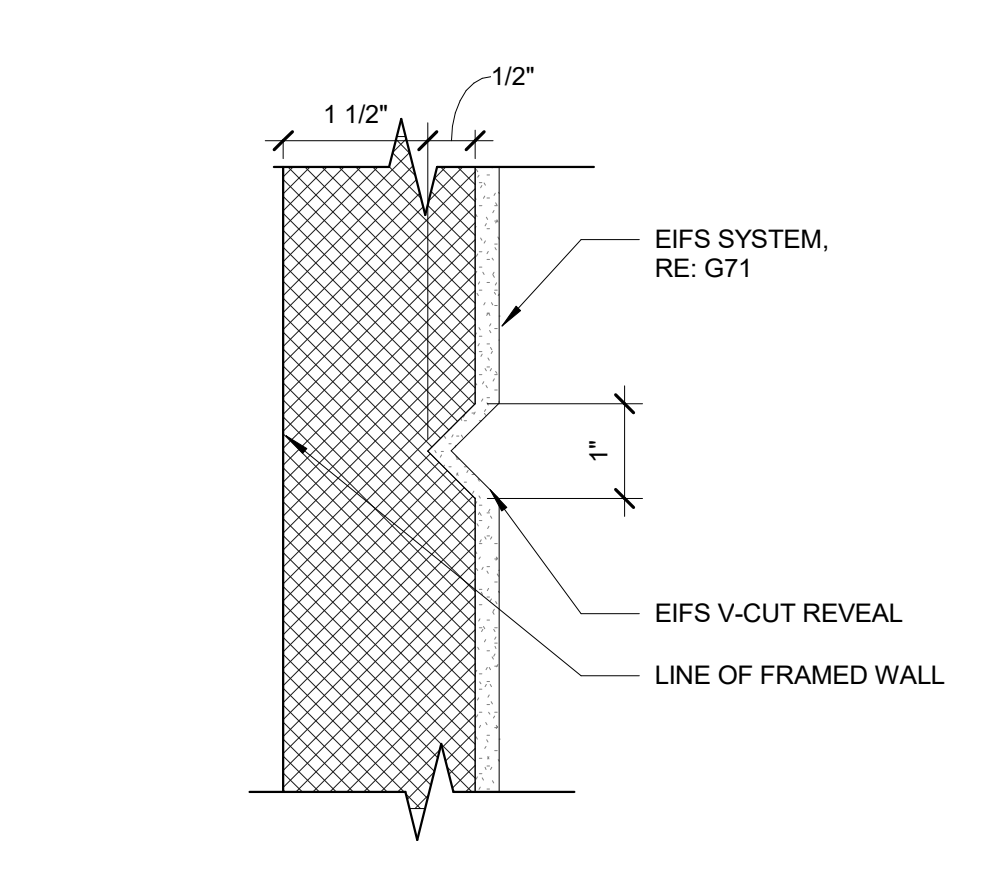
2 ROOF CURB FLASHING - WD
1 1/2" = 1'-0"



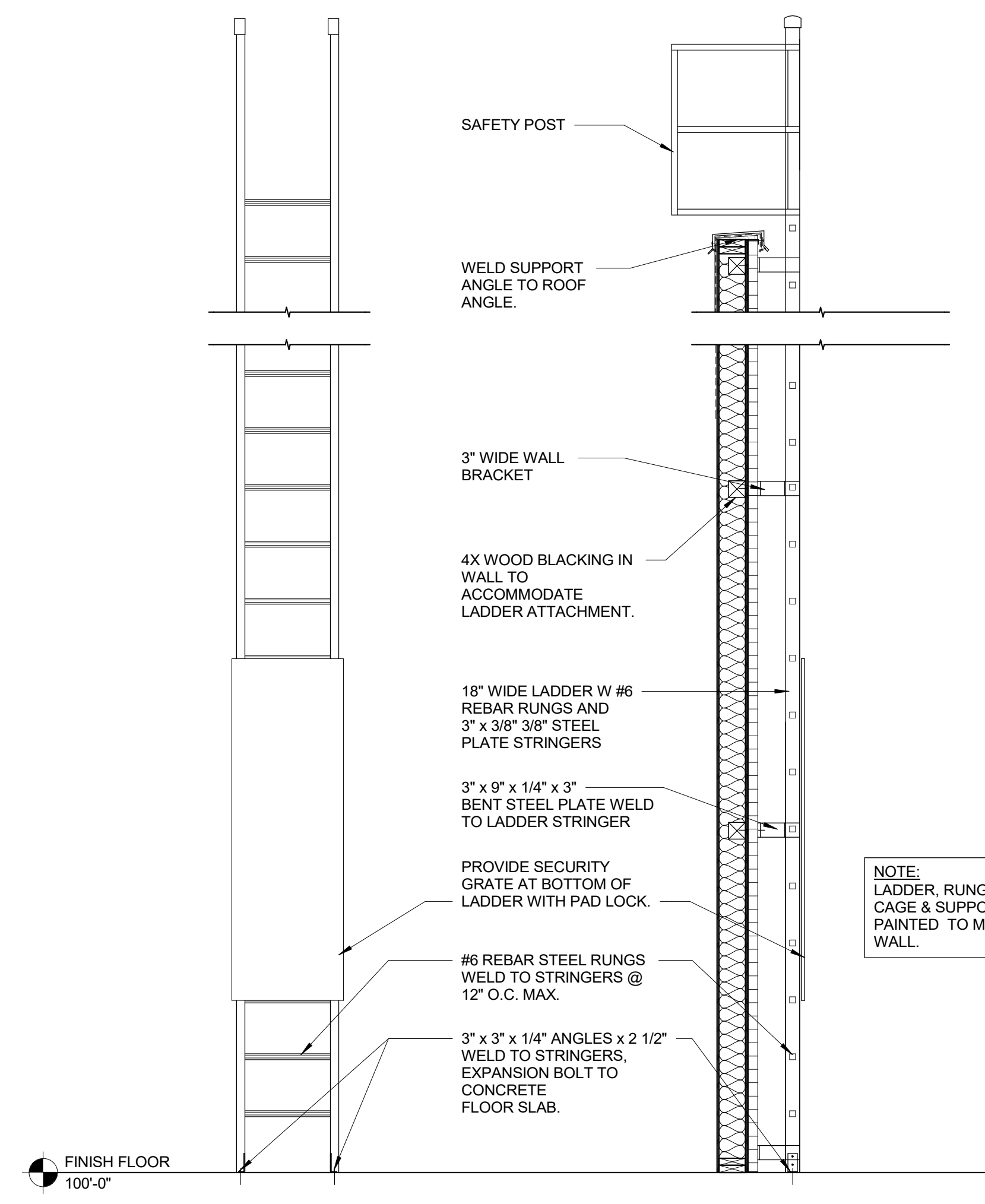
3 REGLET - SAW CUT
1" = 1'-0"



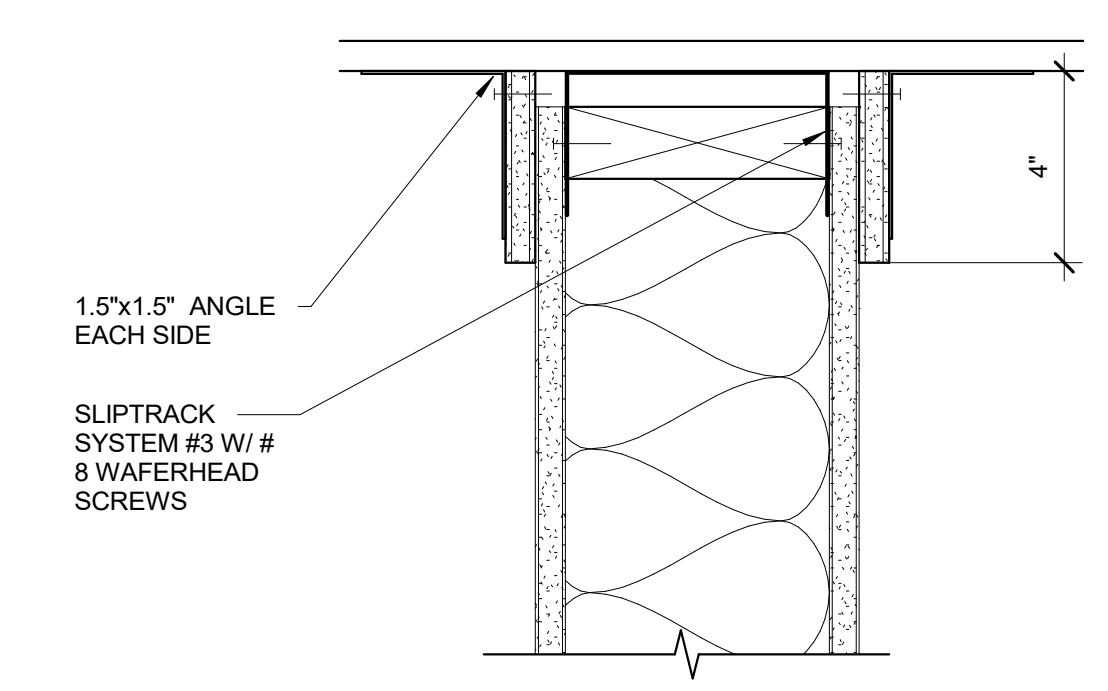
6 SCUPPER W/ DOWNSPOUT - WD
1" = 1'-0"



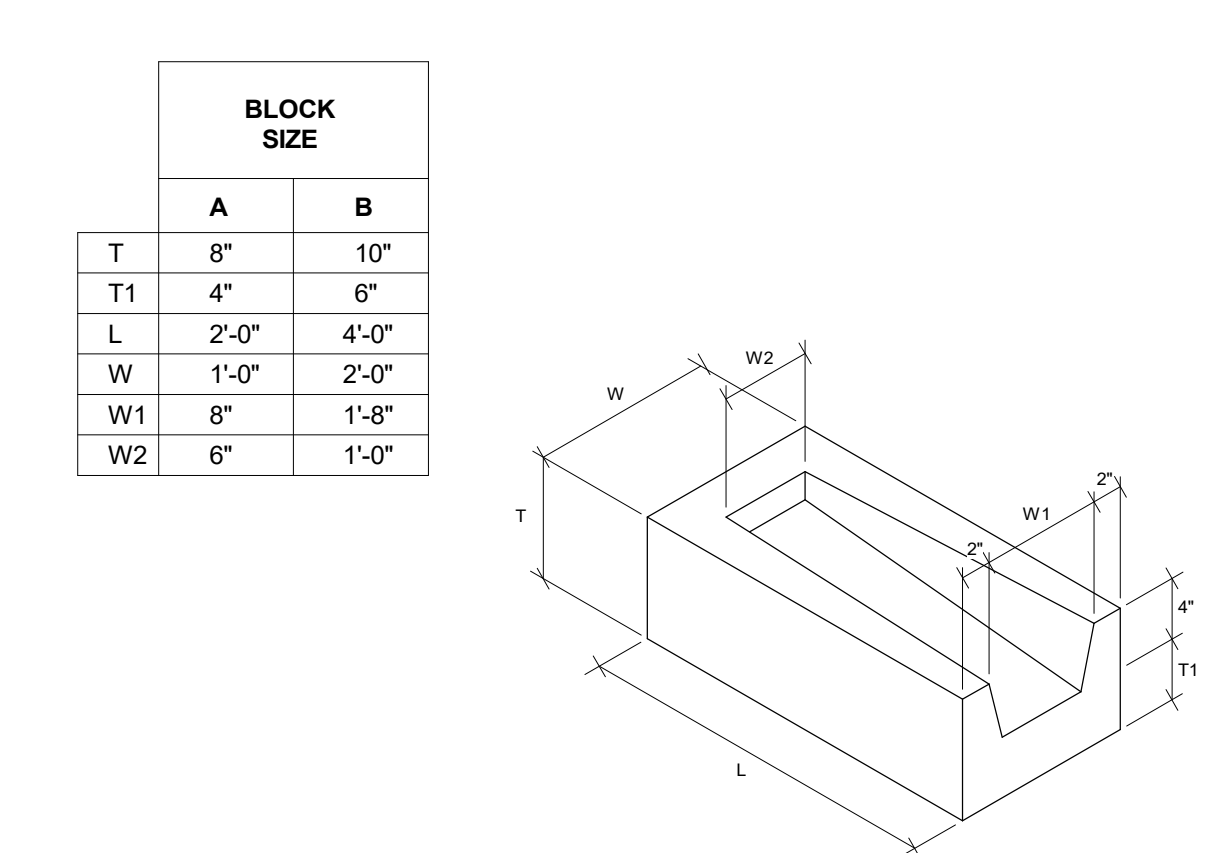
7 EIFS REVEAL
6" = 1'-0"



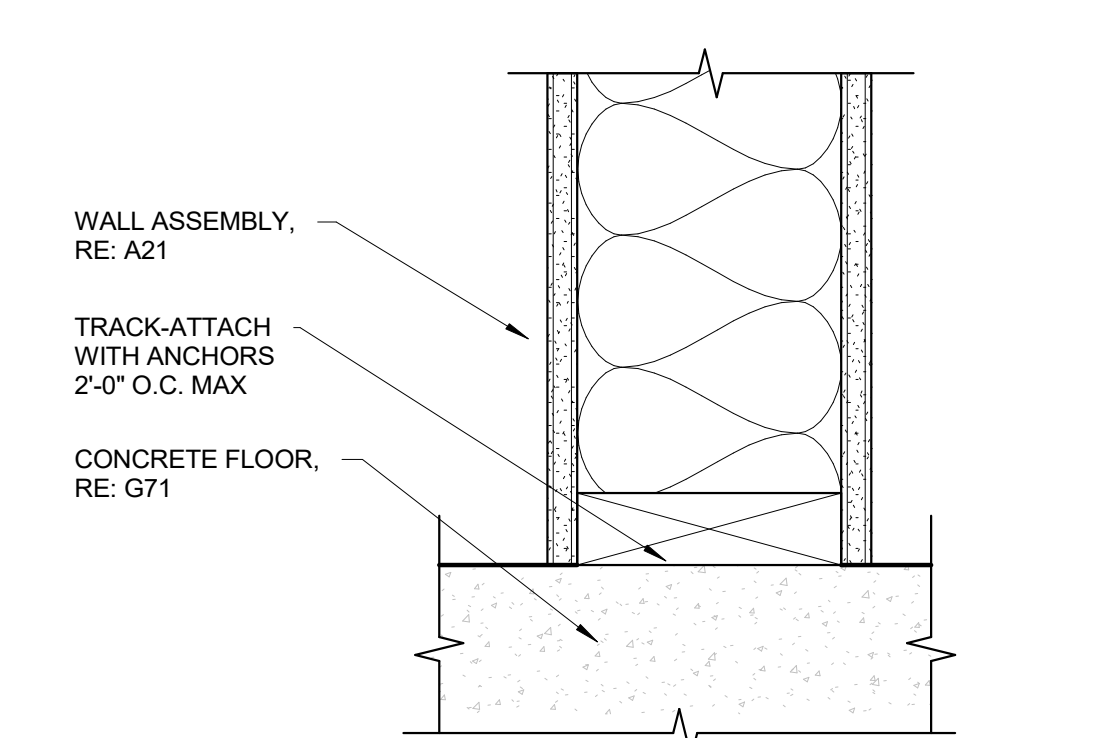
8 ROOF LADDER ELEVATION
1/2" = 1'-0"



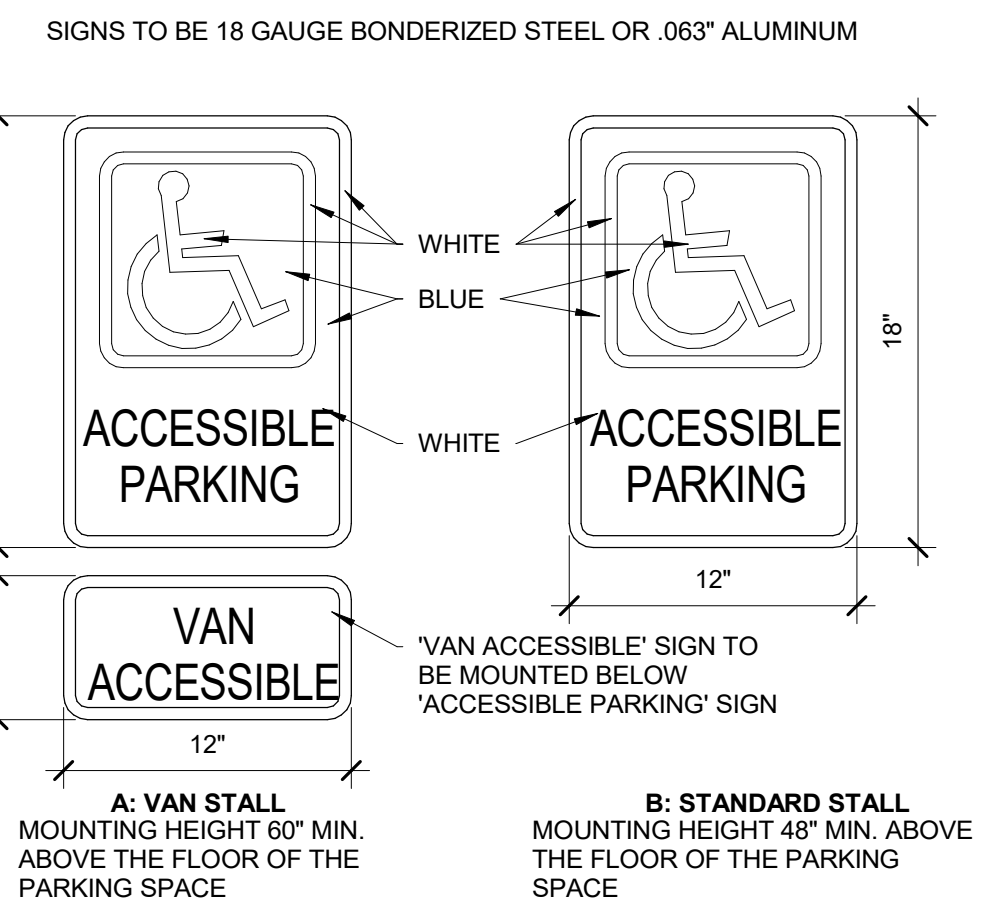
11 PARTITION TO STRUCTURE
3" = 1'-0"



12 SPLASH BLOCK
1 1/2" = 1'-0"



16 PARTITION TO FLOOR
3" = 1'-0"



17 ACCESSIBLE PARKING SIGNS
1 1/2" = 1'-0"

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 STATE OF IDAHO
 APRIL 16, 2024

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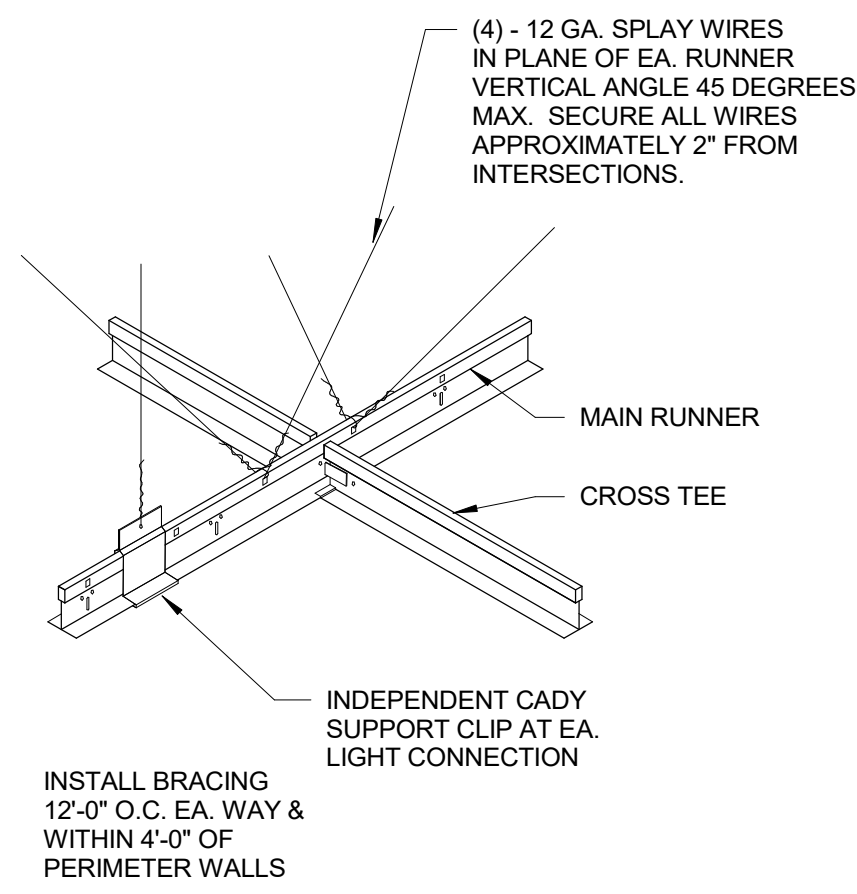
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DRAWN	CHECKED
JLH	AJL
REVISED	

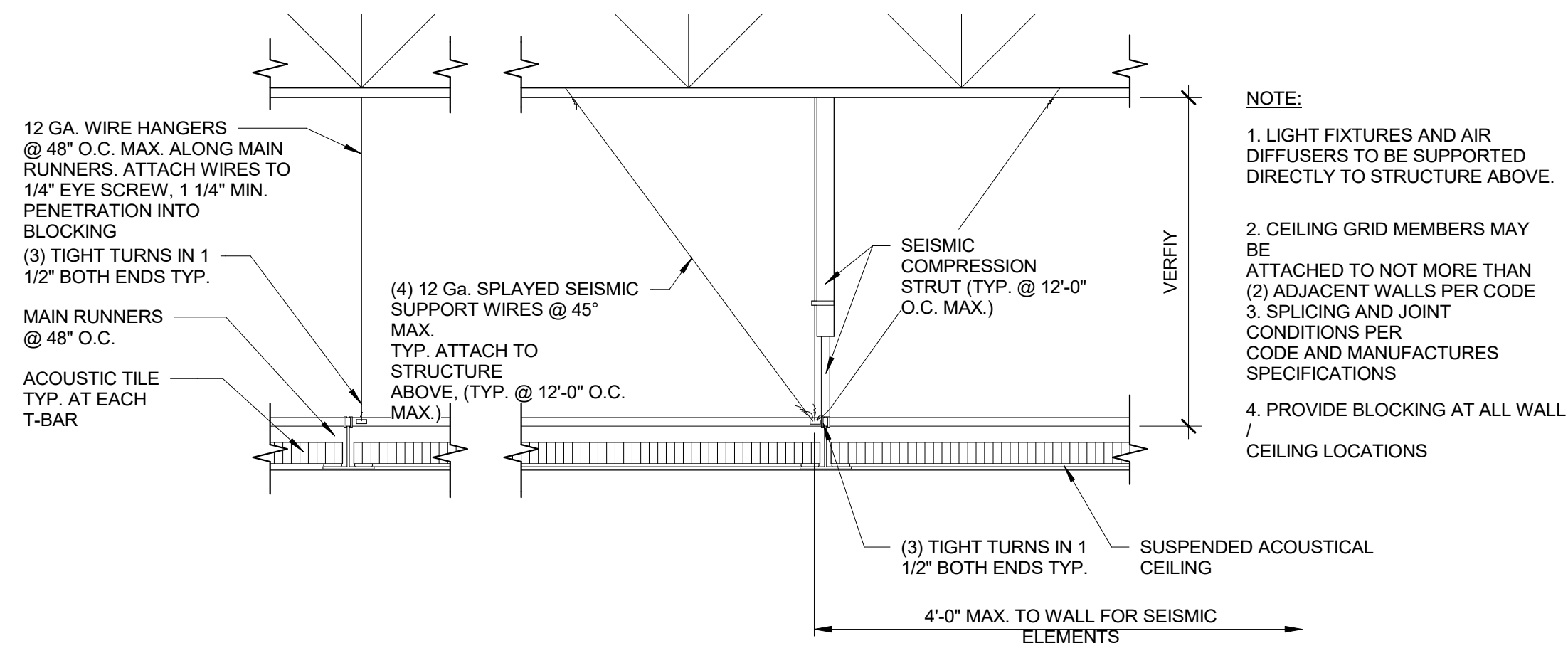
SHEET TITLE
EXTERIOR DETAILS

SHEET
A72
 ORIGINAL SHEET SIZE
 24" x 36"



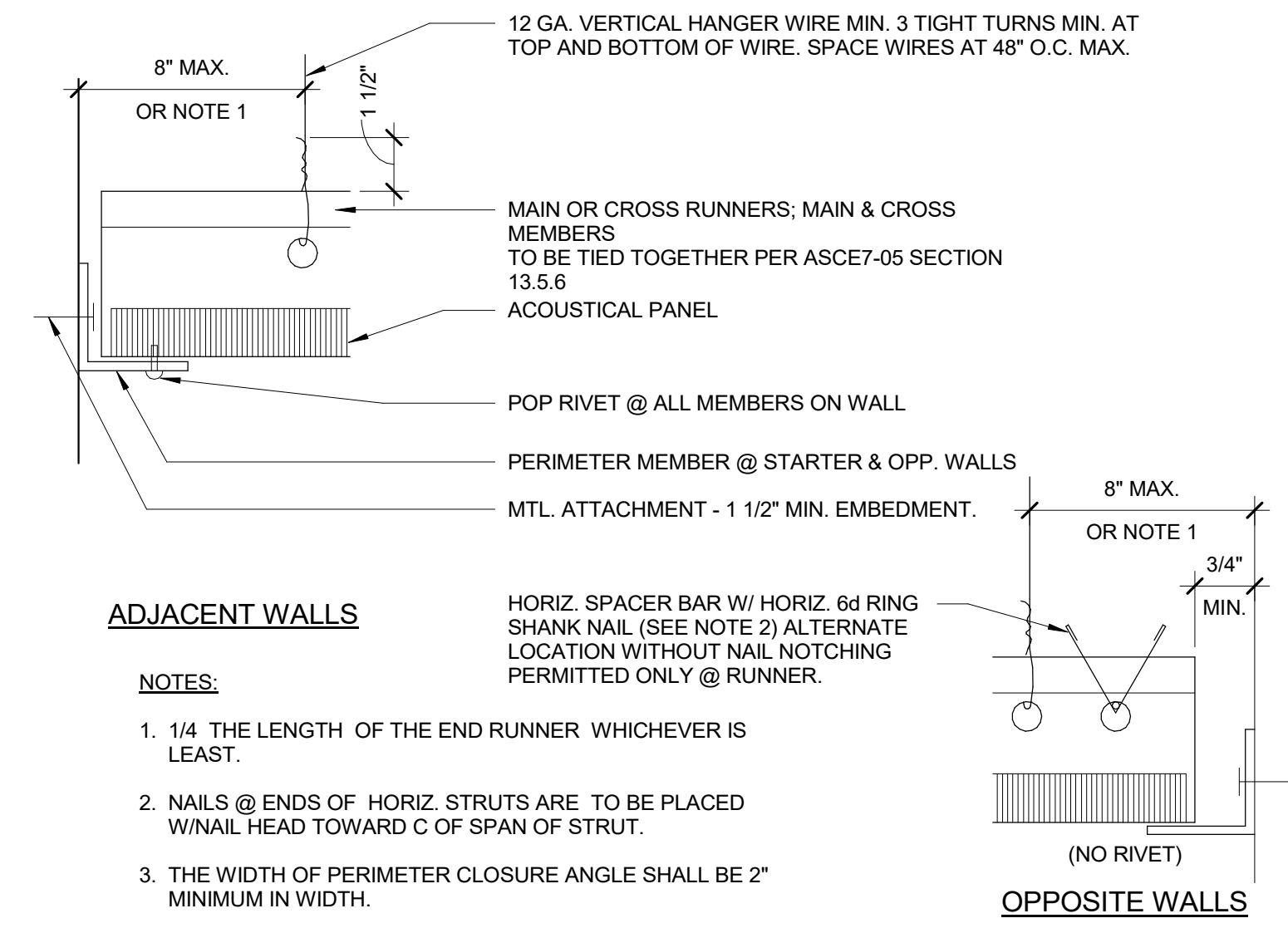
1 SUSPENDED CEILING SYSTEM

1 1/2" = 1'-0"



2 SUSPENDED ACOUSTICAL CEILING

1/2" = 1'-0"



3 CEILING PERIMETER

6" = 1'-0"

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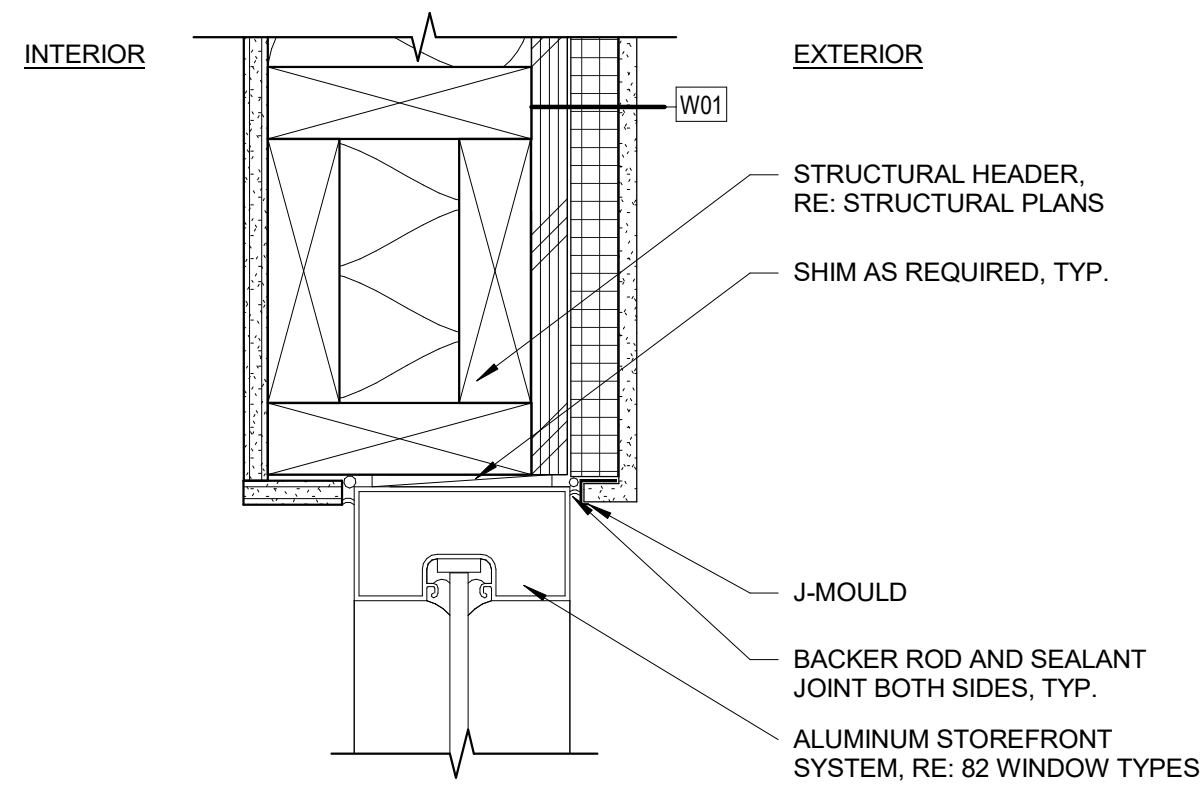
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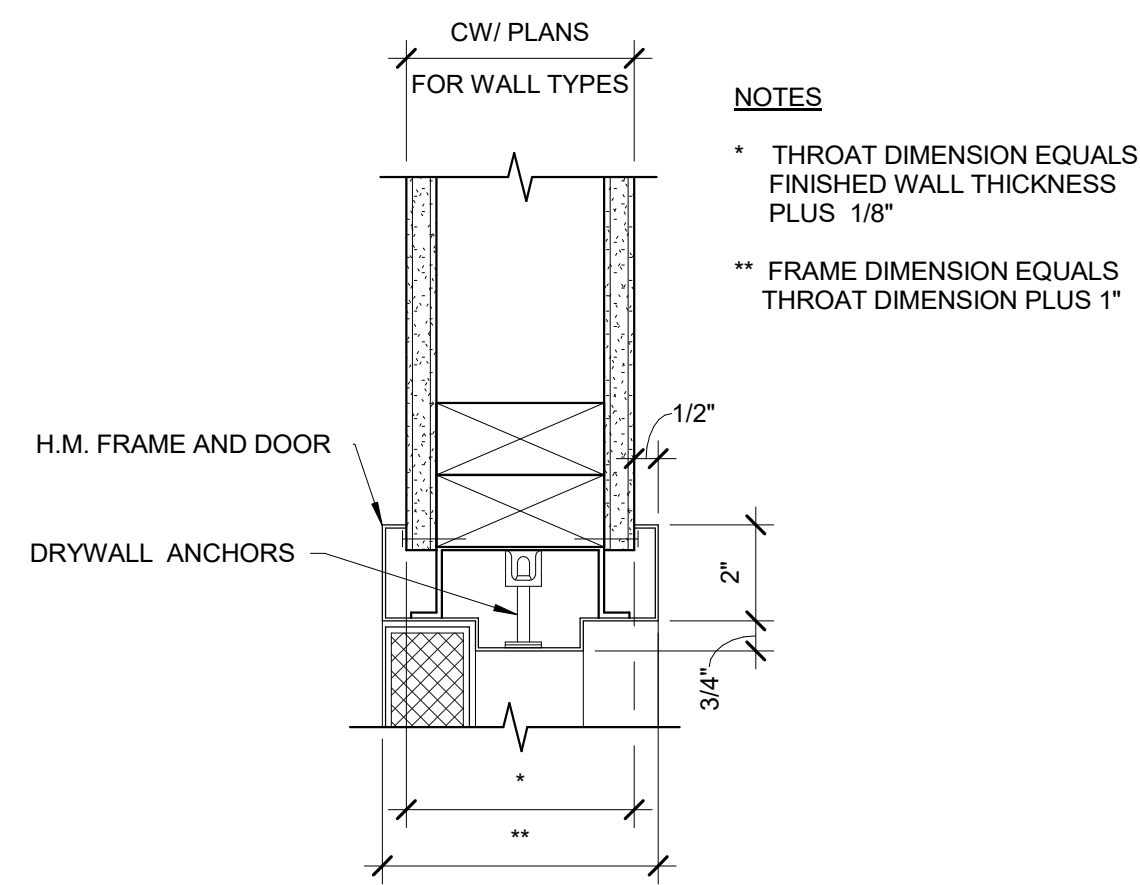
REVISED

SHEET TITLE
CEILING DETAILS

SHEET
A73
 ORIGINAL SHEET SIZE
 24" x 36"



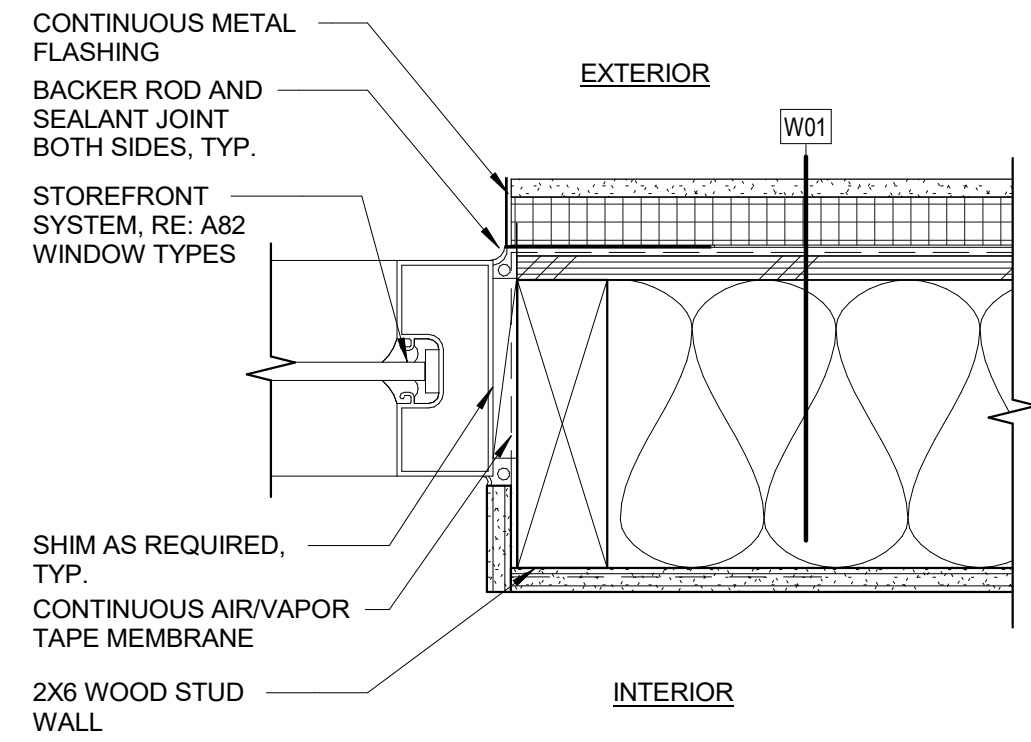
1 ALUM EXT (HEAD) - SCO/WD
3" = 1'-0"



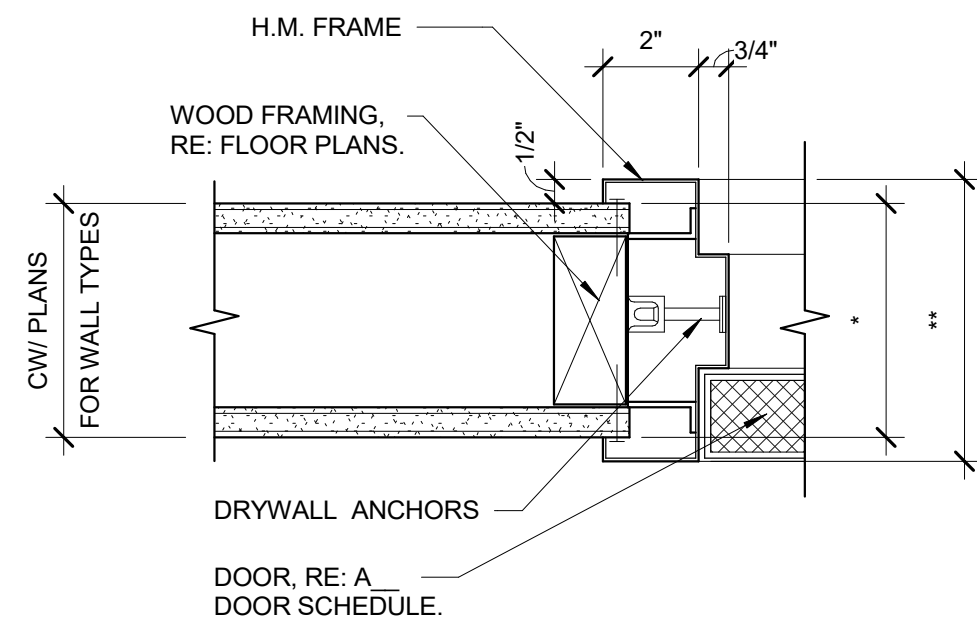
2 HM DR FRAME INT (HEAD) - WD
3" = 1'-0"

NOTES

- * THROAT DIMENSION EQUALS FINISHED WALL THICKNESS PLUS 1/8"
- ** FRAME DIMENSION EQUALS THROAT DIMENSION PLUS 1"



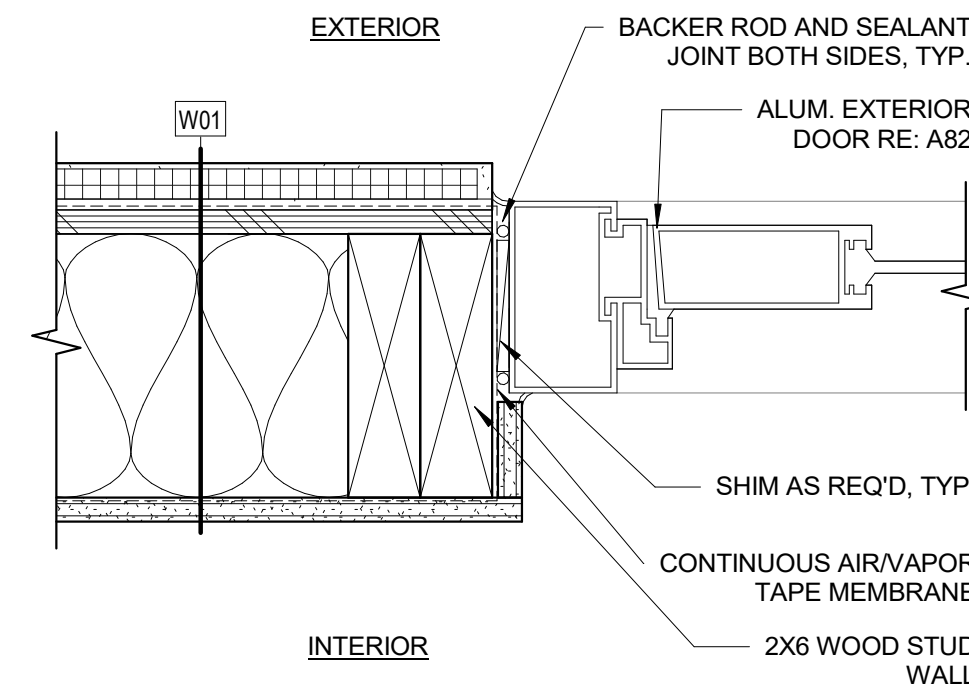
3 ALUM EXT (JAMB) - SCO/WD
3" = 1'-0"



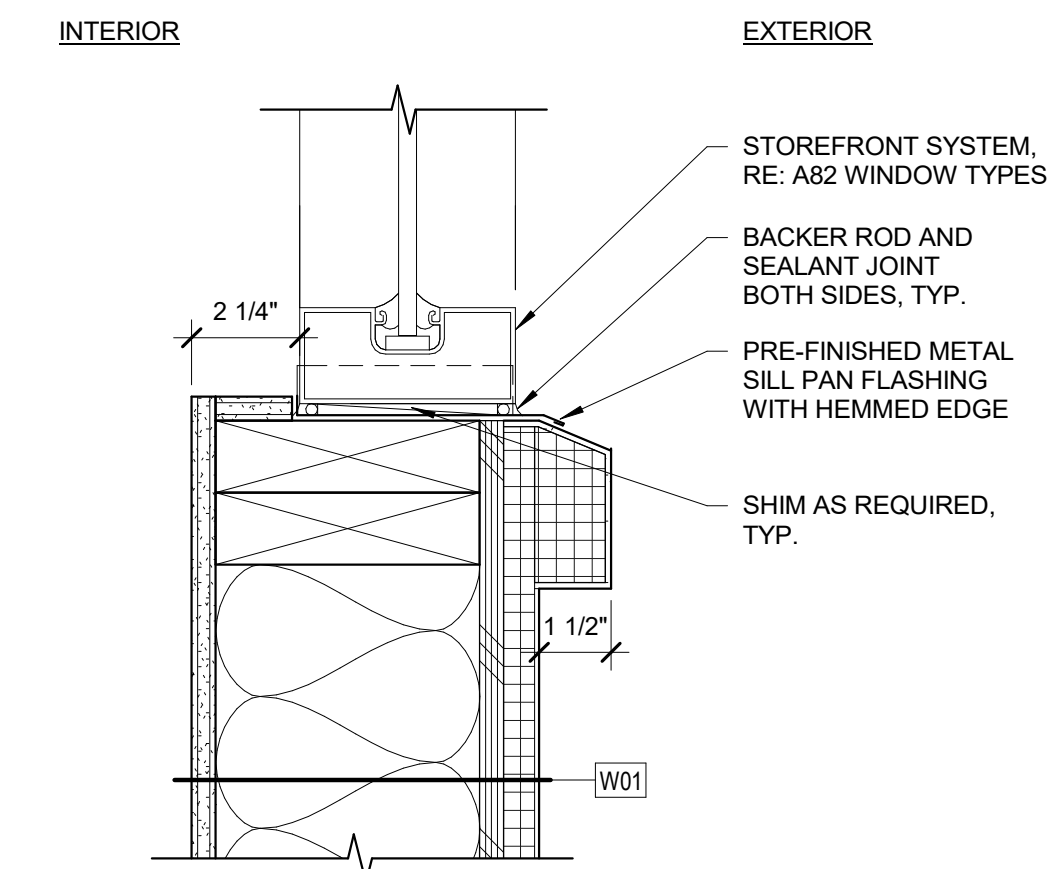
4 HM DR FRAME INT (JAMB) - WD
3" = 1'-0"

NOTES

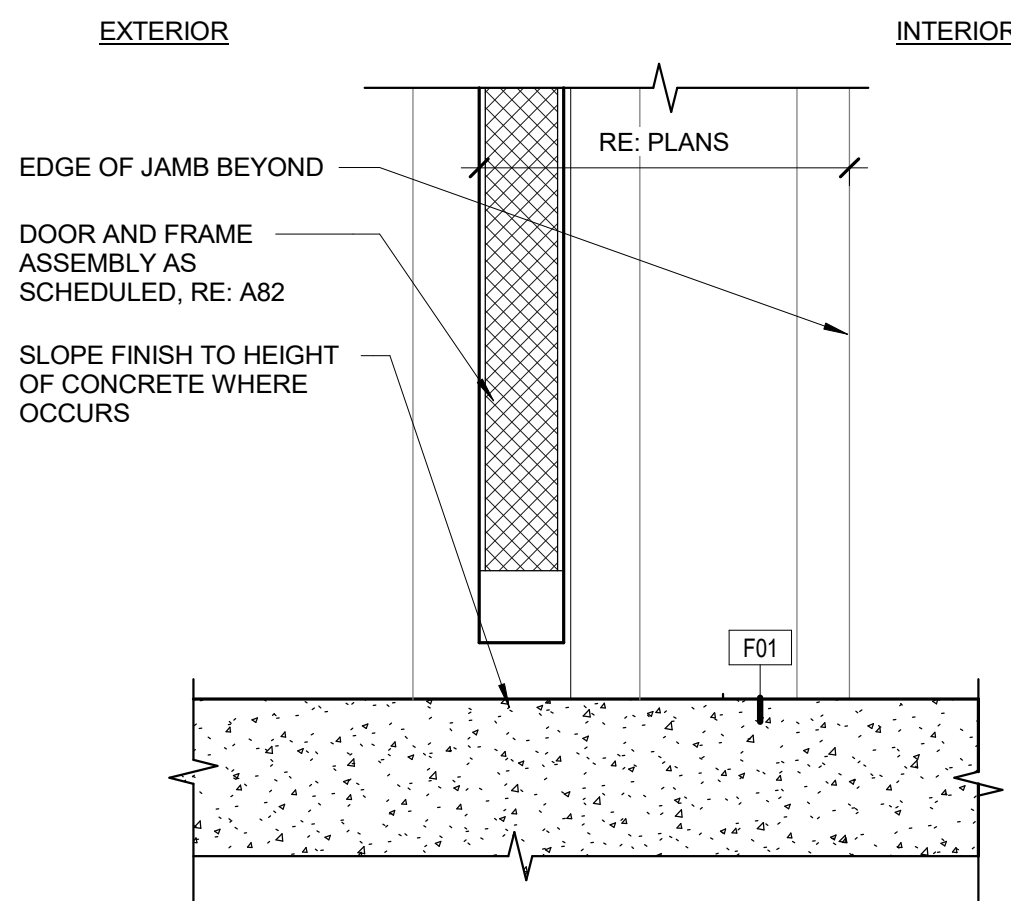
- * THROAT DIMENSION EQUALS FINISHED WALL THICKNESS PLUS 1/8"
- ** FRAME DIMENSION EQUALS THROAT DIMENSION PLUS 1"



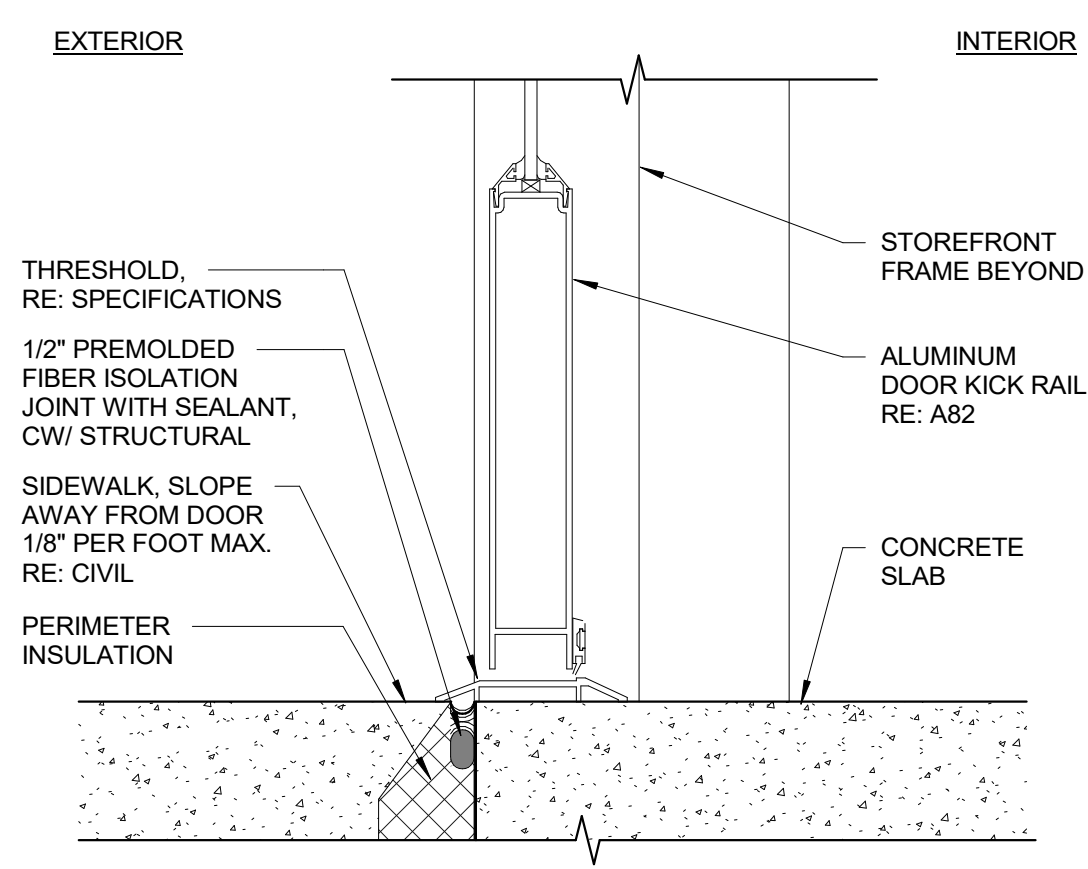
5 ALUM DOOR EXT (JAMB) - STC/WD
3" = 1'-0"



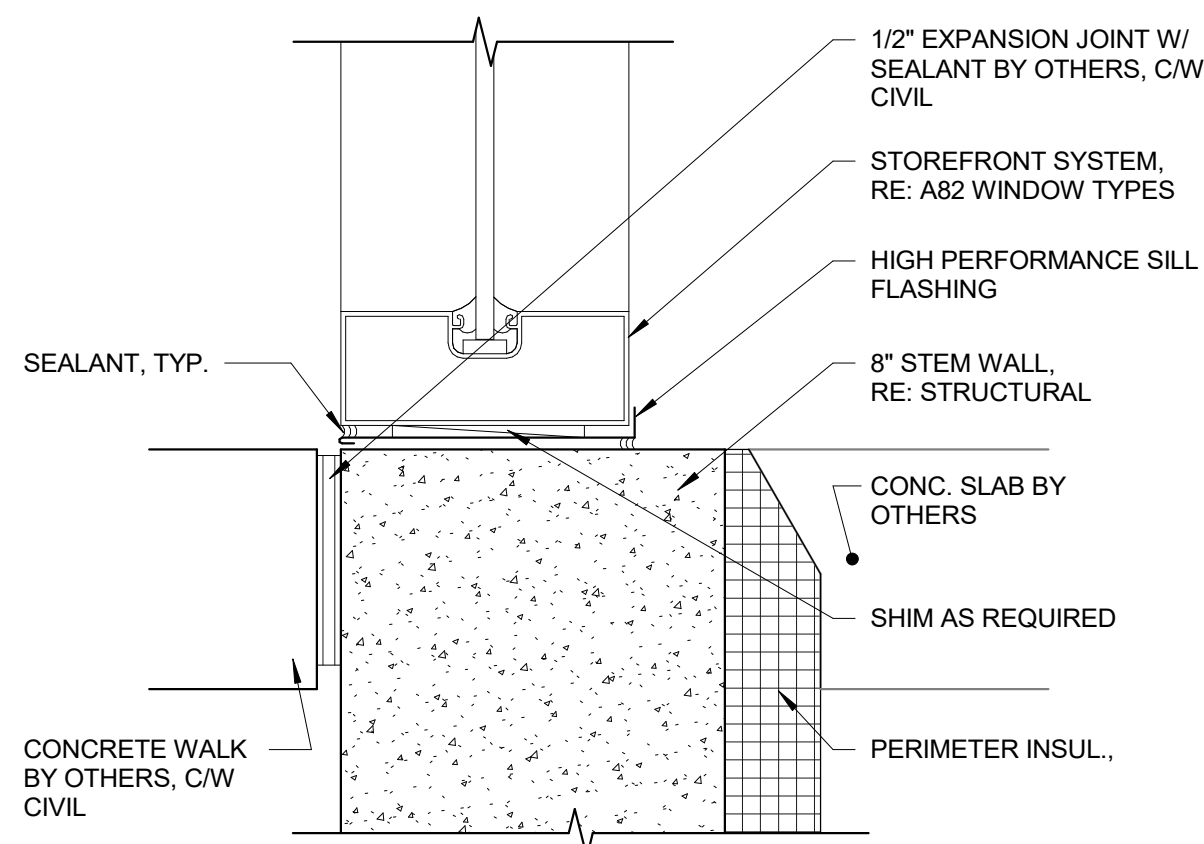
6 ALUM EXT (SILL) - SCO/WD
3" = 1'-0"



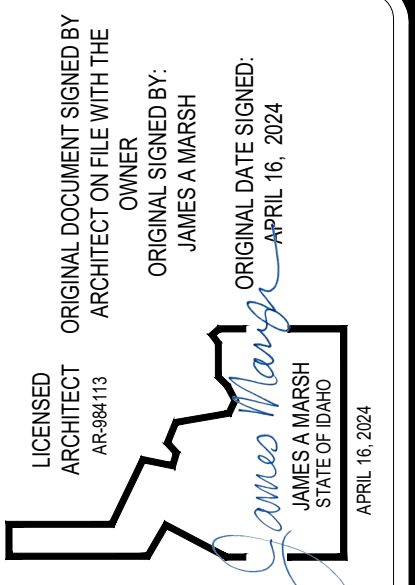
7 HM INTERIOR DOOR SILL
3" = 1'-0"



8 STOREFRONT DOOR (SILL)
3" = 1'-0"



9 ALUM EXT (SILL) AT SLAB
3" = 1'-0"



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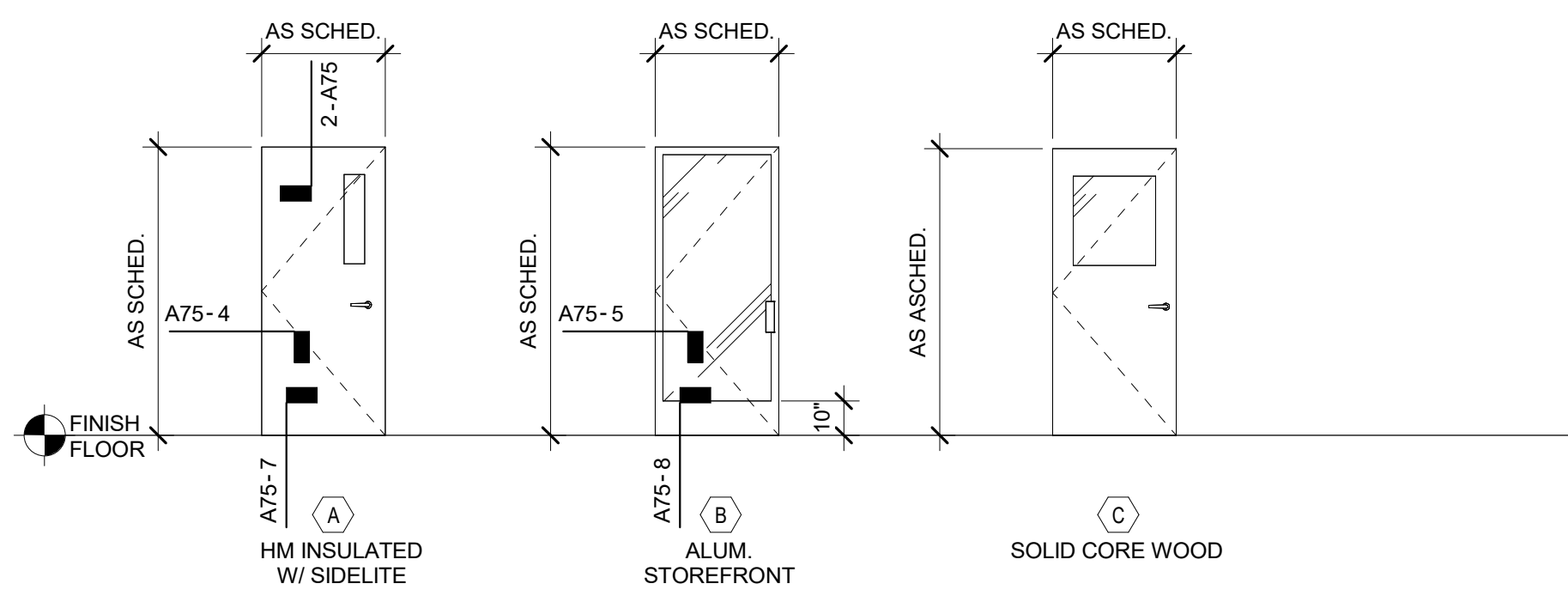
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DRAWN JLH	CHECKED AJL
REVISED	

SHEET **DOOR & WINDOW DETAILS**

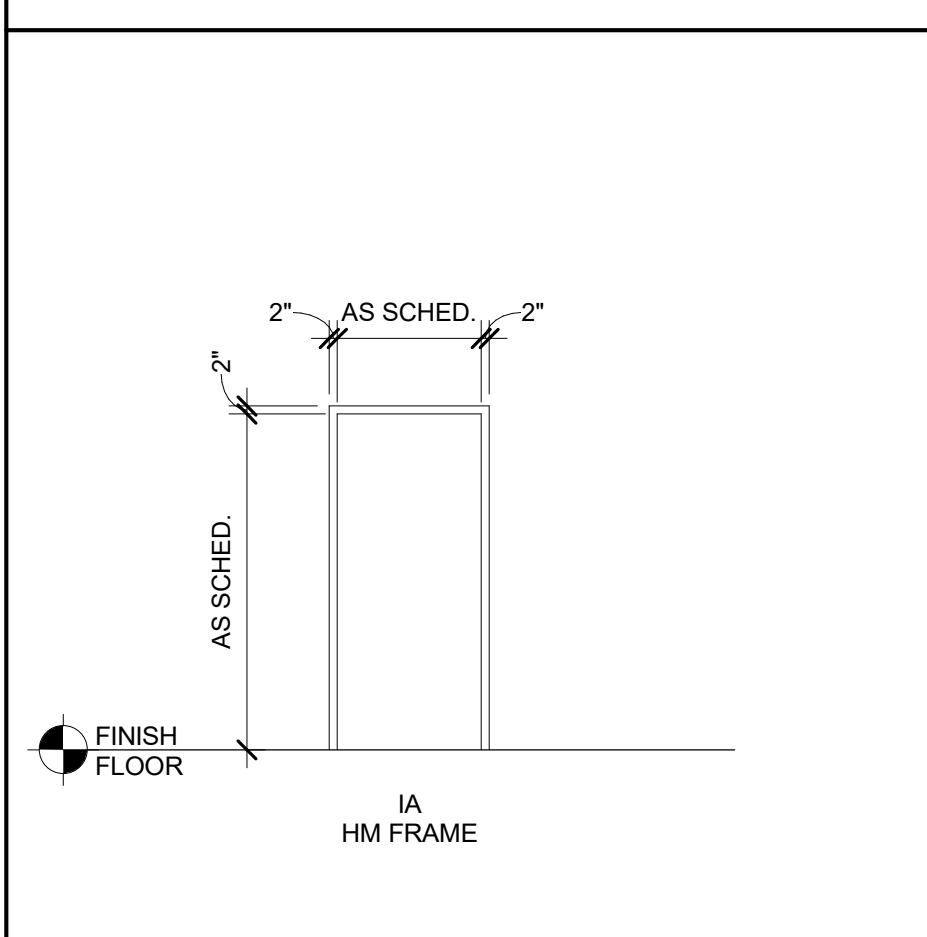
SHEET **A75**
ORIGINAL SHEET SIZE 24" x 36"

1 DOOR TYPES

1. NO PAINT ON ALUMINUM OR FACTORY FINISHED SURFACES UNLESS NOTED OTHERWISE.
2. PAINT HM DOOR AND FRAME TO MATCH ADJACENT WALL COLOR OR AS INDICATED.
3. PROVIDE 1" SGU AT EXTERIOR DOORS.
4. ** INDICATED TEMPERED GLASS.



2 INTERIOR FRAME TYPES



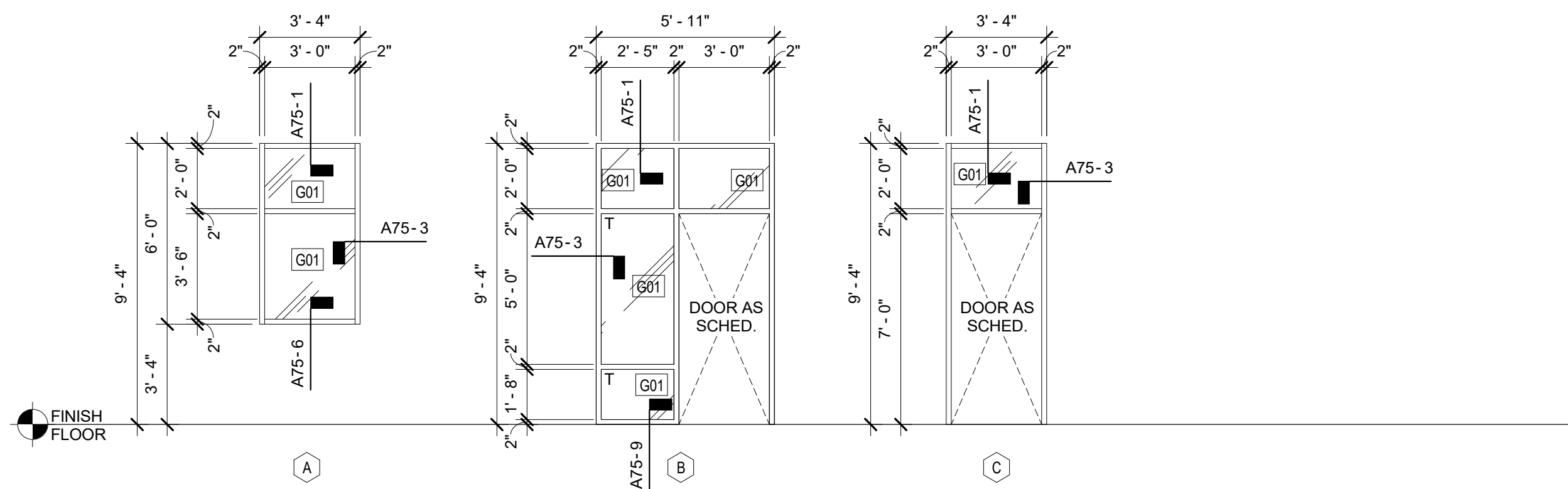
3 DOOR SCHEDULE

RE: SPECIFICATION SECTION 087110 "DOOR HARDWARE"

DOOR#	TYPE	DOOR			FRAME			FIRE RATING	ROOM NUMBER	ROOM NAME	COMMENTS	HARDWARE SET
		WIDTH	HEIGHT	MATERIAL	TYPE	MATERIAL	FINISH					
101	C	3'-0"	7'-0"	ALUM	S.F. C	ALUM	SEE COMMENTS		101	(E)TESTING ENTRY	FINISH TO BE SELECTED BY ARCHITECT	1
102	C	3'-0"	7'-0"	ALUM	S.F. C	ALUM	SEE COMMENTS		102	(E)CORRIDOR	FINISH TO BE SELECTED BY ARCHITECT	1
105B	C	3'-0"	7'-0"	HM	IA	HM	SEE COMMENTS		105	(E)RESTROOM VESTIBULE	FACTORY FINISH TO MATCH P1	1
116b	A	3'-0"	7'-0"	HM	IA	HM	SEE COMMENTS	90 MIN.	116	TRAINING ENTRY	FACTORY FINISH TO MATCH P1	2
116c	B	3'-0"	7'-0"	ALUM	S.F. B	ALUM	SEE COMMENTS		116	TRAINING ENTRY	FINISH TO BE SELECTED BY ARCHITECT	1
117a	A	3'-0"	7'-0"	HM	IA	HM	SEE COMMENTS	90 MIN.	117	TRAINING ROOM	FACTORY FINISH TO MATCH P1	2
117b	C	3'-0"	7'-0 3/32"	ALUM	S.F. C	ALUM	SEE COMMENTS		117	TRAINING ROOM	FINISH TO BE SELECTED BY ARCHITECT	1

4 WINDOW TYPES

1/4"= 1'-0"



HG DOOR HARDWARE GROUP

RE: SPECIFICATION SECTION 087110 "DOOR HARDWARE"
RE: DOOR SCHEDULE

HARDWARE SET NO. 1: ALUMINUM ENTRY

- HINGES - PER STOREFRONT MANUFACTURER
- KEY CYLINDER (1) CONSTRUCTION CORE
- EXIT INDICATOR (1) ADAMS RITE #4089
- PUSH/ PULL (1) ROCKWELL
- CLOSER (1) LCN 1460 OR EQUAL, TOP JAMB MOUNTED
- SILENCER (1) HAGAR 307D
- PANIC (1) VON DUPIN ELECTRONIC CONTROLLED (OR EQUAL) RE: DOOR SCHEDULE
- KEYPAD/RF (1) KEYPAD OR RF UNIT. CW/ OWNER TO REQUIREMENTS

HARDWARE SET NO. 2: PRIVACY

- HINGES (3) HAGAR 1279 41/2 X 41/2
- LOCKSET (1) SCHLAGE ND40S, FINISH 619, ATHENS (OR EQUAL)
- CLOSER (1) LCN 1460 OR EQUAL, TOP JAMB MOUNTED
- STOP (1) HAGAR 230 WALL STOP OR 241 W DOME STOP

DOOR GENERAL NOTES:

1. VERIFY ROUGH OPENING IN FIELD.
2. INSTALL DOORS AND FRAMES PER MANUFACTURER'S REQUIREMENTS.
3. ALL EXITS SHALL BE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.
4. FOR HARDWARE SETS, RE: SPECIFICATIONS, DIVISION 087100 DOOR HARDWARE.

WINDOW GENERAL NOTES:

- A. ALL MATERIALS TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
- B. ROUGH OPENINGS INCLUDE SHIM SPACE WITH SEALANT JOINT ON ALL SIDES.
- C. DIMENSIONS REFLECT DESIGN INTENT. GENERAL CONTRACTOR IS RESPONSIBLE FOR FIELD MEASUREMENT OF ALL ROUGH OPENINGS PRIOR TO INSTALLATION OF WINDOWS.
- D. RE: FLOOR PLAN AND EXTERIOR ELEVATIONS FOR WINDOW LOCATIONS.

MATERIAL LEGEND:

- MATERIAL
- GL GLASS
 - MFR. MANUFACTURER
 - WD WOOD
 - ALUM ALUMINUM
 - SS GALVANIZED METAL
 - STL STEEL

GLAZING LEGEND:

GLASS DESIGNATION

- G01 1" INSULATED GLASS, LOW-E, TEMPERED SAFETY GLASS, GRAY TINTED.
- T TEMPERED SAFETY GLASS, GRAY TINTED.

SHEET NOTES:

ORIGINAL DOCUMENT SIGNED BY ARCHITECT ON FILE WITH THE OWNER. ORIGINAL DATE SIGNED: APRIL 16, 2024. LICENSED ARCHITECT ARCHITECT ID: AR-988113 BOISE, IDAHO. PHONE: 208-343-4635 • FAX: 208-343-1658. JAMES A. MAISH ARCHITECT STATE OF IDAHO. APRIL 16, 2024.

JAMES A. MAISH, ARCHITECT
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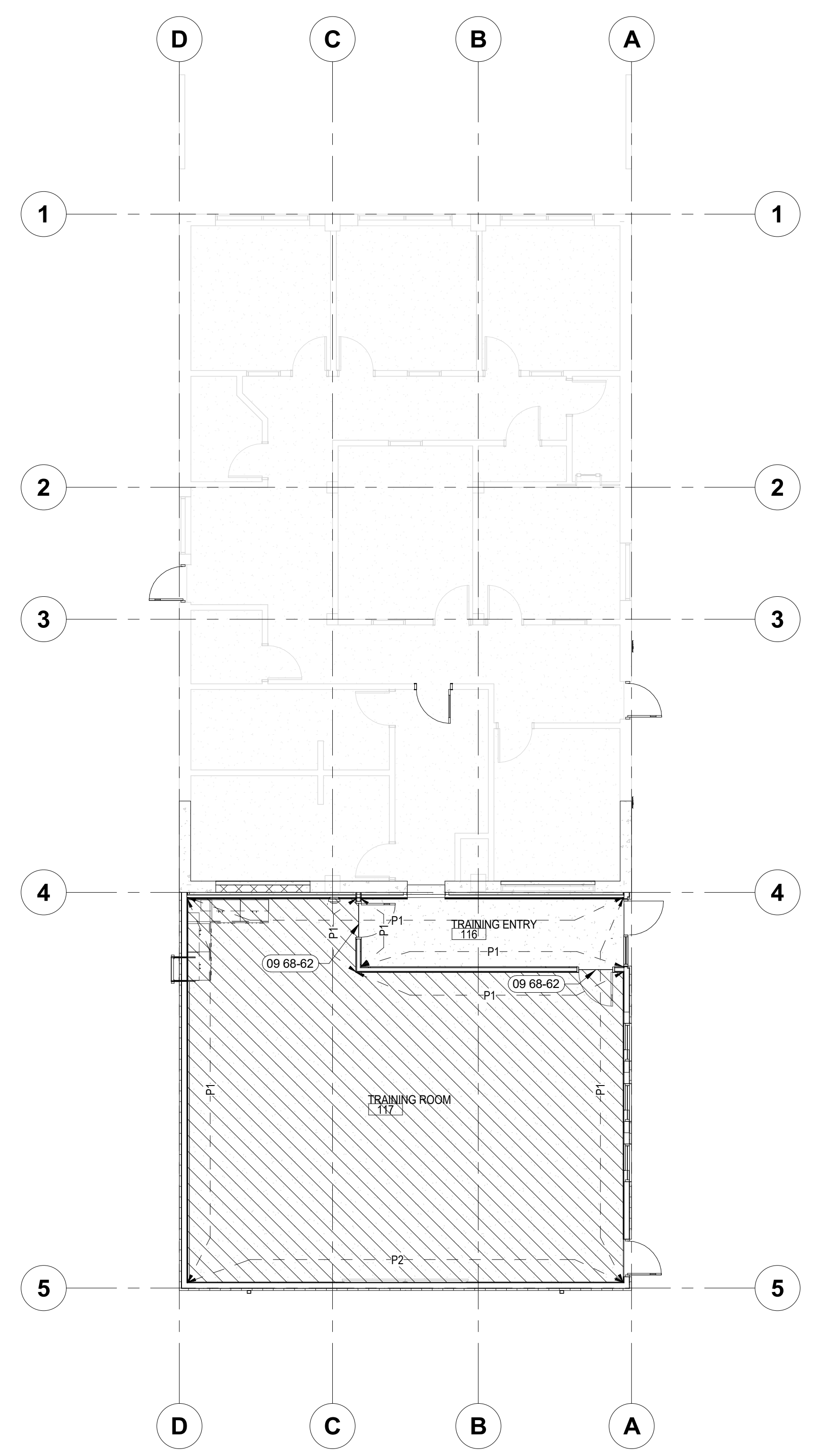
PROJECT 24009 DATE 04-11-24
DRAWN JLH CHECKED AJL

REVISED

SHEET DOOR & WINDOW SCHEDULES

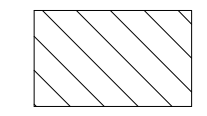



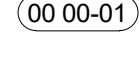
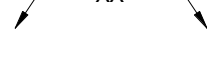

SHEET

A82 ORIGINAL SHEET SIZE 24" x 36"



1 FLOOR FINISH PLAN - LEVEL 1
 1/8" = 1'-0"

LEGEND:

-  CARPET TILE SYSTEM, MANNINGTON COMMERCIAL, SCRIPT MODULAR SOROUGH 15217
 INSTALLATION - HORIZONTAL BRICK ASHLAR
 RE: FLOORING AND WALL BASE SCHEDULE I81
-  NATURAL CONCRETE FLOORING,
 RE: FLOORING AND WALL BASE SCHEDULE I81
-  FLOORING DESIGNATION,
 RE: FLOORING & WALL BASE SCHEDULE I81
-  WALL BASE DESIGNATION,
 RE: FLOORING & WALL BASE SCHEDULE I81
-  SHEET NOTE, RE: SHEET NOTES LIST ON CURRENT PAGE
-  WALL FINISH/BASE DESIGNATION, RE: FINISH SCHEDULE I81
-  WOOD GRAIN DESIGNATION, RE: FINISH SCHEDULE I81

GENERAL NOTES:

- A. DIMENSION IS NOT SHOWN ON INTERIOR SHEETS UNLESS INTERIOR SPECIFIC. REFER ARCHITECTURAL DRAWINGS FOR DIMENSIONS.
- B. FIELD VERIFY ALL DIMENSIONS PRIOR TO FABRICATION / ORDERING.
- C. ALL TRANSITION IN FLOORING ARE TO OCCUR DIRECTLY BENEATH DOORS U.N.O.
- D. ALL GYPSUM BOARD APPLICATIONS SHALL BE SANDED, TAPED AND MUDDERED AS NECESSARY.
- E. PROVIDE A MAXIMUM OF 1/2" OFFSET AT ALL THRESHOLDS AND AT ANY CHANGES OF FLOORING MATERIAL, ICC/ANSI A117.1 SECTION 303.
- F. ALL HOLLOW METAL DOOR FRAMES TO BE PAINTED (P_).
- G. ALL MATERIALS ARE TO BE INSTALLED PER MANUFACTURERS INSTRUCTIONS USING APPROPRIATE ADHESIVE.
- H. SMOOTH FLOOR SUBSTRATE SURFACES. SAND OR GRIND SUBFLOORS TO REMOVE IRREGULARITIES. FILL LOW SPOTS. CONTROL OR CONSTRUCTION JOINTS AND OTHER DEFECTS AS REQUIRED TO PROVIDE UNIFORM SUBSTRATE FOR FLOOR FINISHES.
- I. FINISHES NOT REQUIRED ON WALL AREA CONCEALED BY PERMANENT FIXTURES.
- J. FINISHES SHALL EXTEND A MINIMUM OF 6" BEHIND FIXTURE.
- K. PAINT ALL INTERIOR GYPSUM BOARD CEILINGS AND SOFFITS.
- L. NO ITEM TO BE INSTALLED ON FINISH WALL MATERIALS WITHOUT PROJECT MANAGER AND OWNER'S APPROVAL.
- M. ALL EXPOSED VENTS, ACCESS PANELS AND SIMILAR ITEMS TO BE PAINTED TO MATCH THE WALL OR CEILING SURFACES THAT THEY ARE ON.
- N. REFER TO ENLARGED PLANS, ELEVATIONS, FINISH SCHEDULES FOR ADDITIONAL FINISH INFORMATION.
- O. EXTEND RUBBER BASE A MINIMUM OF 6", MAXIMUM OF 12" BEHIND FIXTURES.

SHEET NOTES:

09 68-62 CARPET (CPT) TO SEALED CONCRETE (SC) TRANSITIONS. PROVIDE FLOOR TRANSITION. RE: I71-3 FOR TRANSITION DETAIL.

ORIGINAL DOCUMENT SIGNED BY ARCHITECT ON FILE WITH THE OWNER
 ONCE SIGNED BY ARCHITECT ON FILE WITH THE OWNER
 ORIGINAL DATE SIGNED: APRIL 16, 2024
 JAMES A. MARSH ARCHITECT
 APRIL 16, 2024

JAMES A. MARSH, ARCHITECT
 200 BROAD STREET
 BOISE, IDAHO
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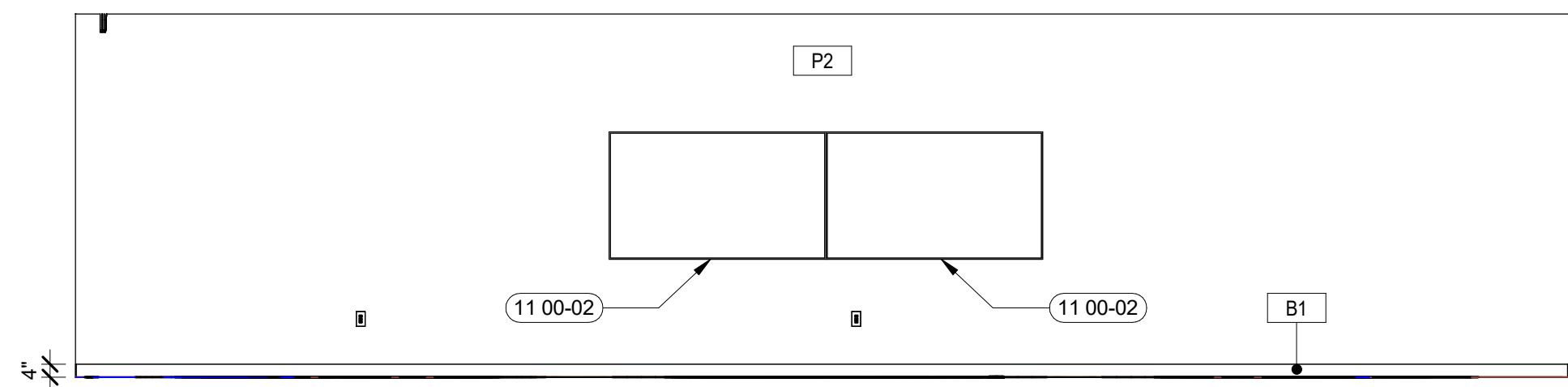
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PROJECT 24009	DATE 04-11-24
DRAWN JLH	CHECKED AJL

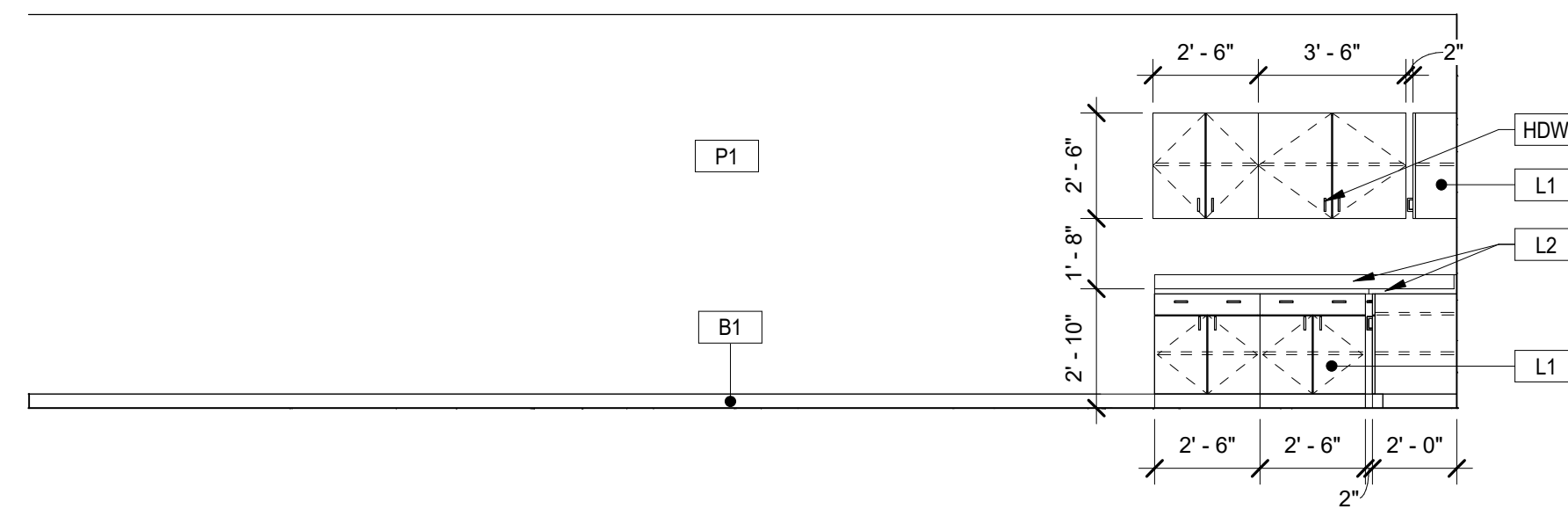
REVISED

SHEET TITLE
FLOOR FINISH PLAN

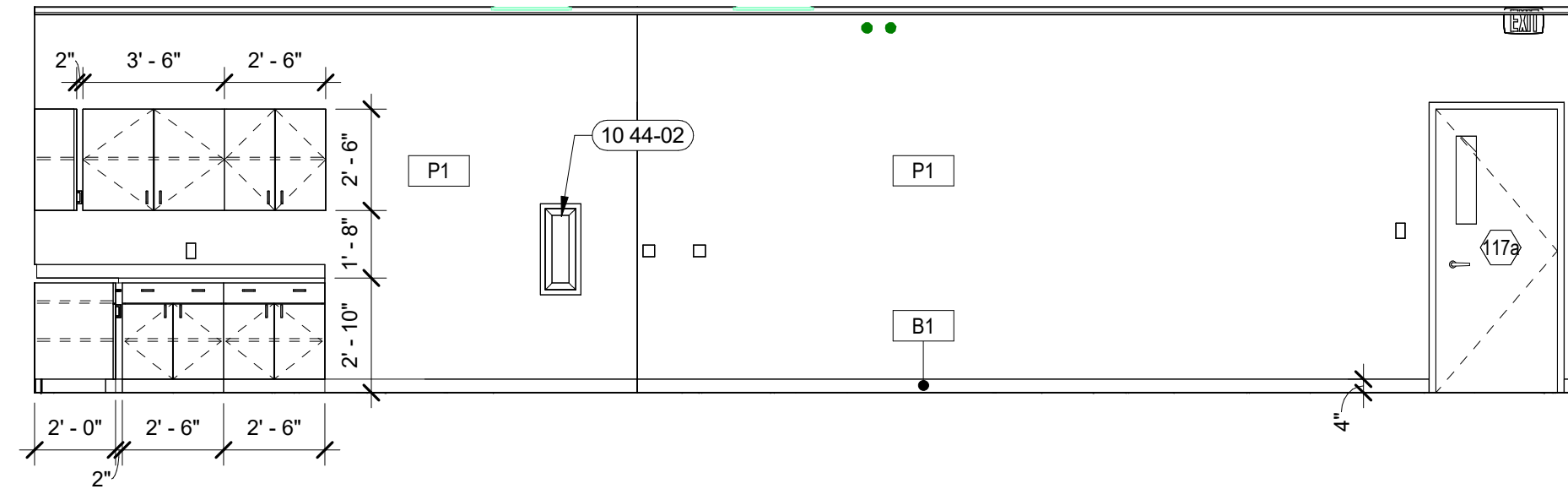
SHEET
111
 ORIGINAL SHEET SIZE
 24" x 36"



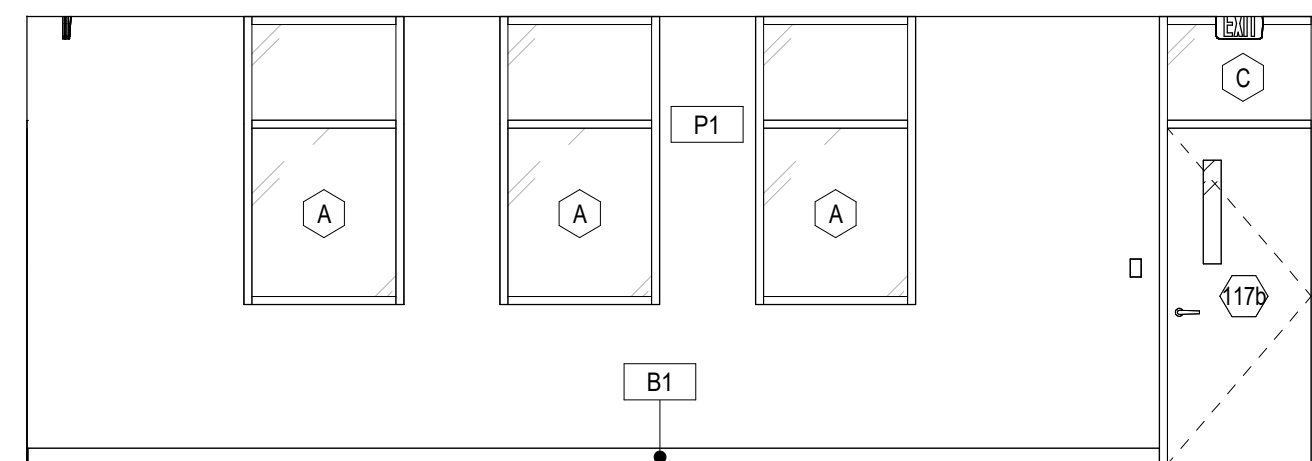
1 117 - SOUTH
1/4" = 1'-0"



2 117 - WEST
1/4" = 1'-0"



3 117 - NORTH
1/4" = 1'-0"



4 117 - EAST
1/4" = 1'-0"

LEGEND:

- SCREENED LINES INDICATE EXISTING ASSEMBLIES/SYSTEMS TO REMAIN AND BE PROTECTED DURING CONSTRUCTION.
- INDICATES ASSEMBLIES/SYSTEMS TO BE CONSTRUCTED
- 00 00-01 SHEET NOTE, RE: SHEET NOTES LIST ON CURRENT PAGE
- X-# MATERIAL DESIGNATION, RE: FINISH SCHEDULE I81
- XX WALL FINISH/BASE DESIGNATION, RE: FINISH SCHEDULE I81
- WOOD GRAIN DESIGNATION, RE: FINISH SCHEDULE I81

ARCHITECTURAL

FLOORING

- F1 - EXPOSED SEALED CONCRETE WITH SMOOTH TROWEL FINISH
- F2 - CARPET TILE: MANNINGTON COMMERCIAL, SCRIPT MODULAR BOROUG 15217, INSTALLATION - HORIZONTAL BRICK ASHLAR

WALL BASE

- B1 - JOHNSONITE, 4" RUBBER BASE #48 GREY WG

PAINT

- P1 - SHERWIN WILLIAMS #SW 7050 - USEFUL GREY
- P2 - SHERWIN WILLIAMS #SW 6965 - HYPER BLUE
- P3 - SHERWIN WILLIAMS #9088 - UTAUPEIA
- P4 - SHERWIN WILLIAMS #7750 - OLYMPIC RANGE

LAMINATE / WALL FINISHES

- L1 - WILSONART, PORTICO TEAK #8210K-28
- L2 - WILSONART, ORGANIC COTTON #4945-38
- HDW - 4" WIRE PULL

GENERAL NOTES:

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- N. REFER TO ENLARGED PLANS, ELEVATIONS, FINISH SCHEDULES FOR ADDITIONAL FINISH INFORMATION.
- O. EXTEND RUBBER BASE A MINIMUM OF 6", MAXIMUM OF 12" BEHIND FIXTURES.

SHEET NOTES:

- 10 44-02 FIRE EXTINGUISHER IN RECESSED CABINET, (MINIMUM 2A-10BC), RE: I71-4.
- 11 00-02 WALL MOUNTED TELEVISION, OFCI.

ORIGINAL DOCUMENT SIGNED BY ARCHITECT ON FILE WITH THE OWNER
 ORIGINAL DATE SIGNED: APRIL 16, 2024
 LICENSED ARCHITECT AR#1113
 OWNER: CSHQA
 DESIGNED BY: JAMES A. MARSH
 DRAWN BY: JAMES A. MARSH
 CHECKED BY: JAMES A. MARSH
 STATE OF IDAHO
 APRIL 16, 2024

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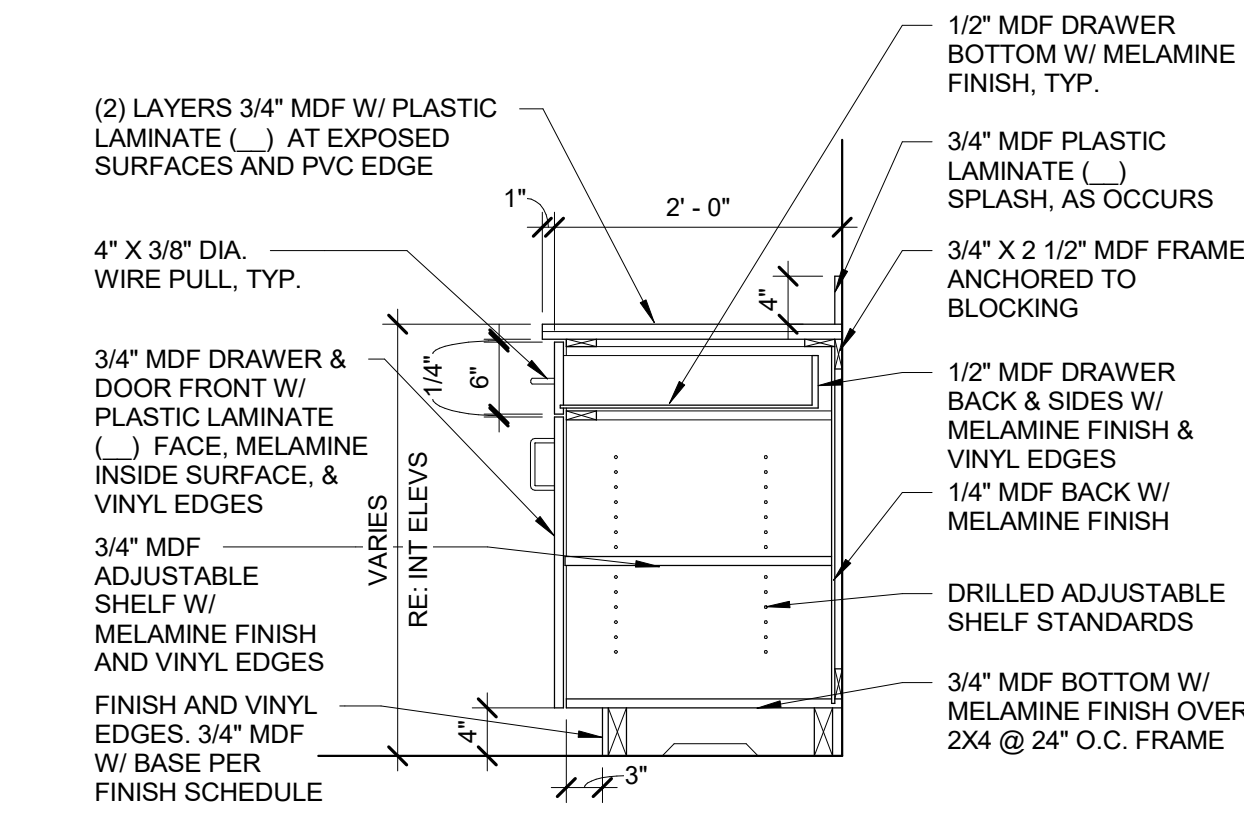
PROJECT 24009	DATE 04-11-24
DRAWN JLH	CHECKED AJL

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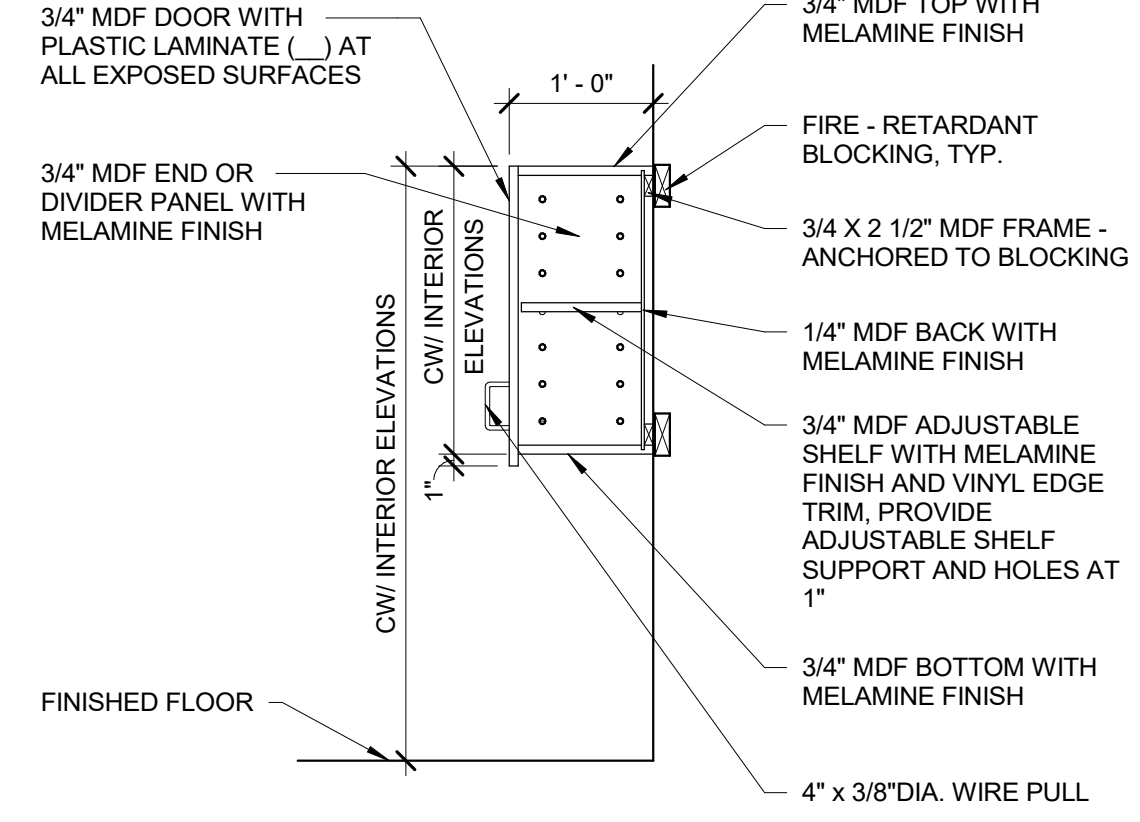
SHEET TITLE
INTERIOR ELEVATIONS

SHEET

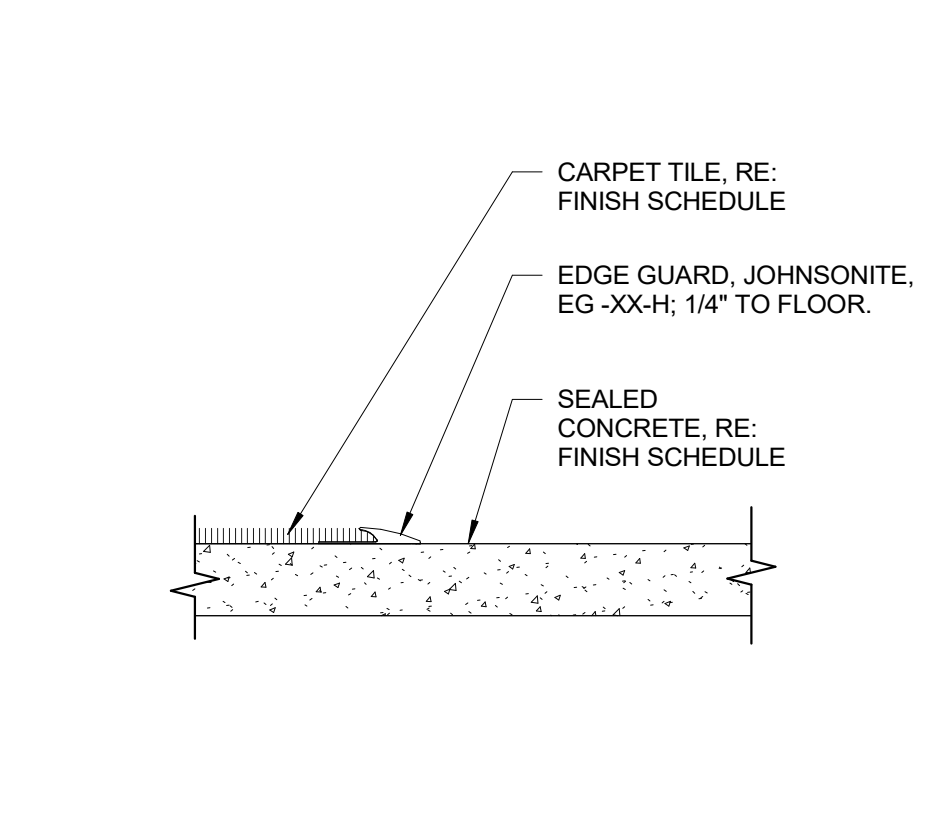
151
 ORIGINAL SHEET SIZE
 24" x 36"



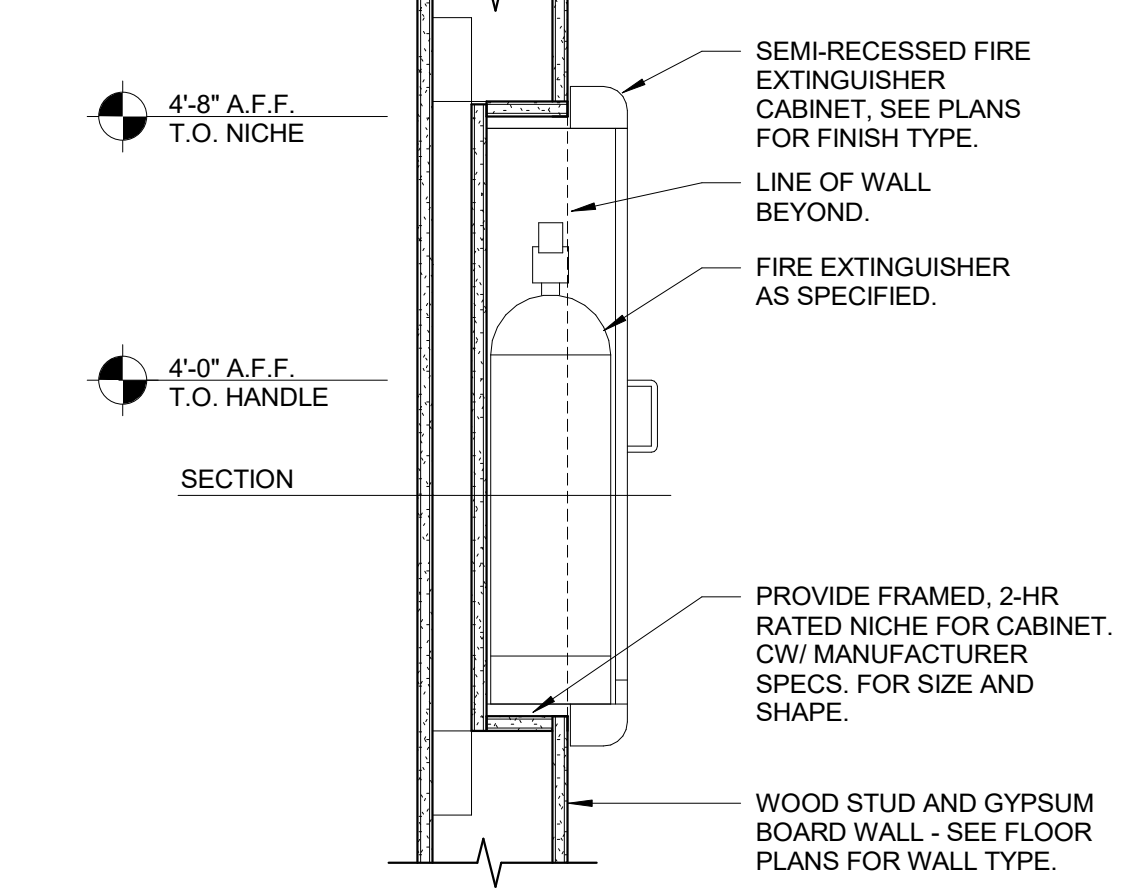
1 BASE CABINET wBACKSPLASH - 2 DRAWERS/ DOOR
3/4" = 1'-0"



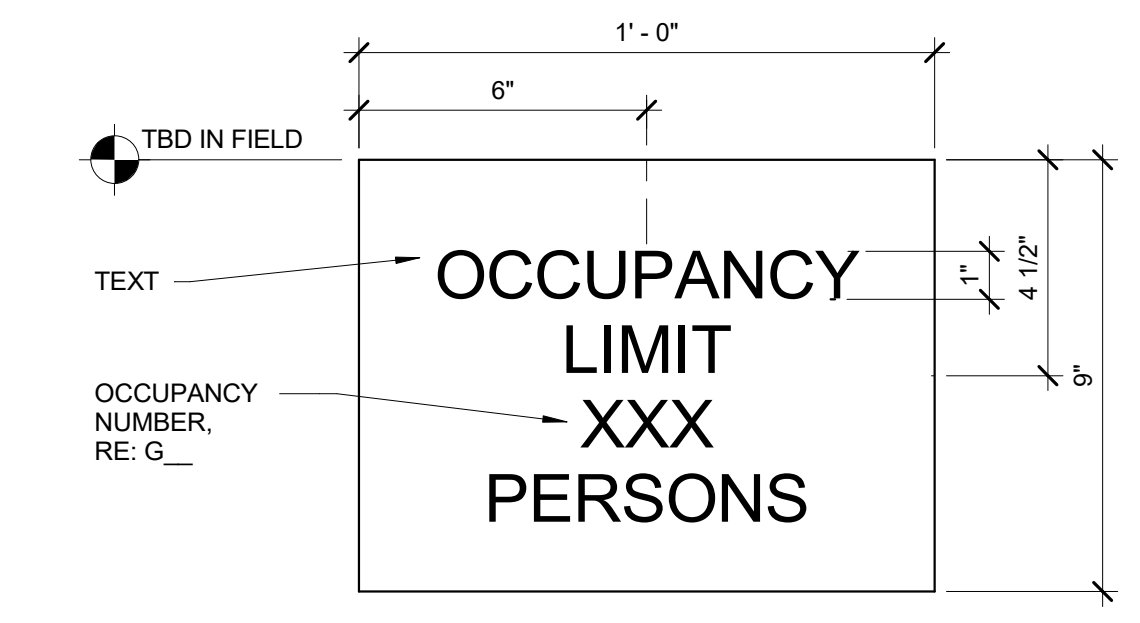
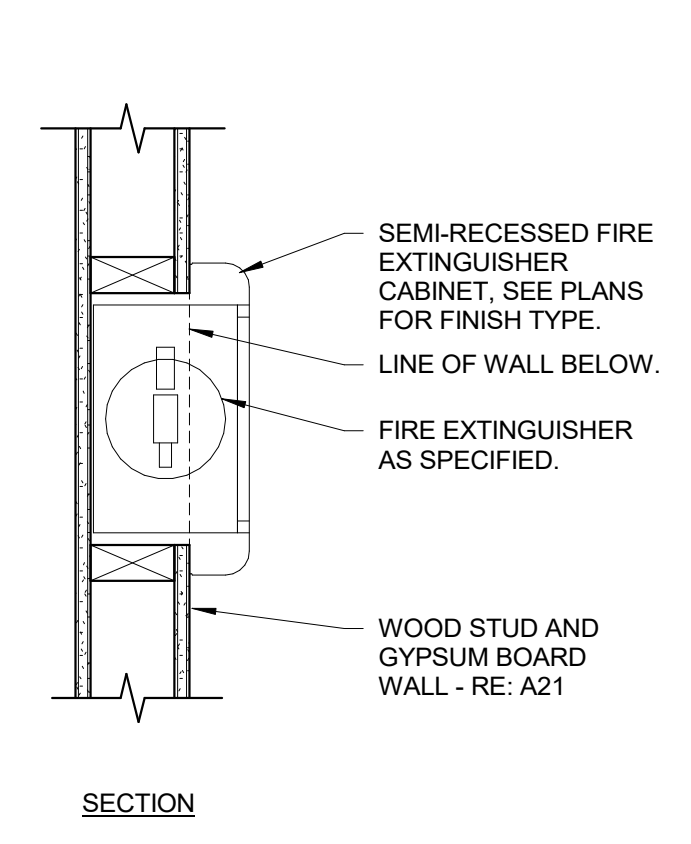
2 UPPER CABINET
3/4" = 1'-0"



3 CPT TO SC FLOORING (EDGE GUARD)
3" = 1'-0"



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



6 OCCUPANCY LIMIT
3" = 1'-0"

NOTE: SIGNS TO BE PROVIDED UNDER SIGNAGE CONTRACT

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 LICENSED ARCHITECT AR-984113
 JAMES A. MARSH
 STATE OF IDAHO
 ORIGINAL DATE SIGNED: APRIL 16, 2024

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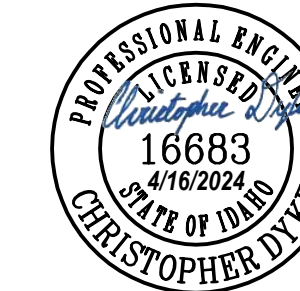
PROJECT 24009	DATE 04-11-24
DRAWN JLH	CHECKED AJL
REVISED	

SHEET TITLE
DETAILS

SHEET
171
 ORIGINAL SHEET SIZE
 24" x 36"

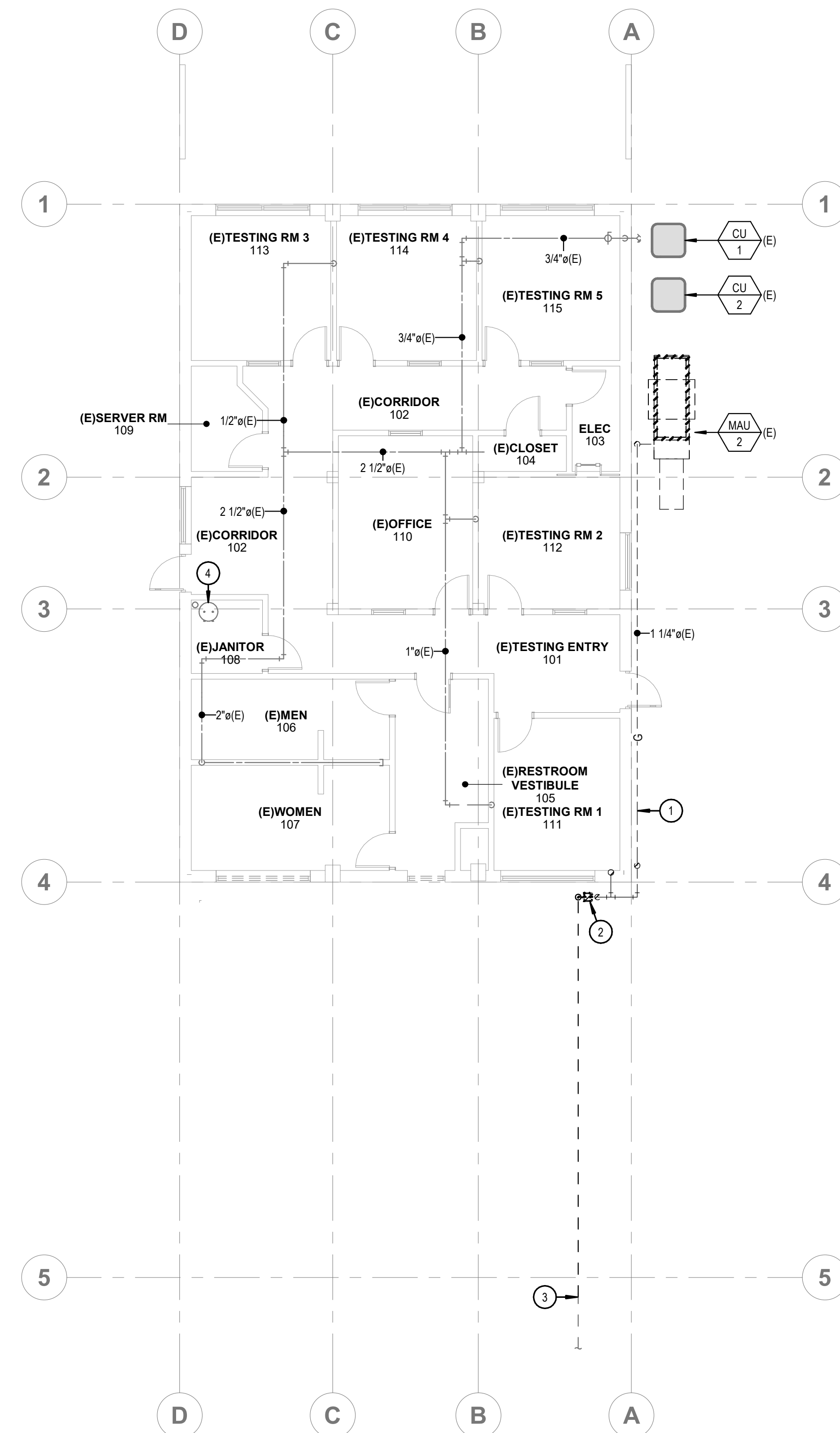


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208.384.0585
645 West 25th Street
Idaho Falls, ID 83402
208.523.2862
www.musgrovepa.com
Project No. 24-078

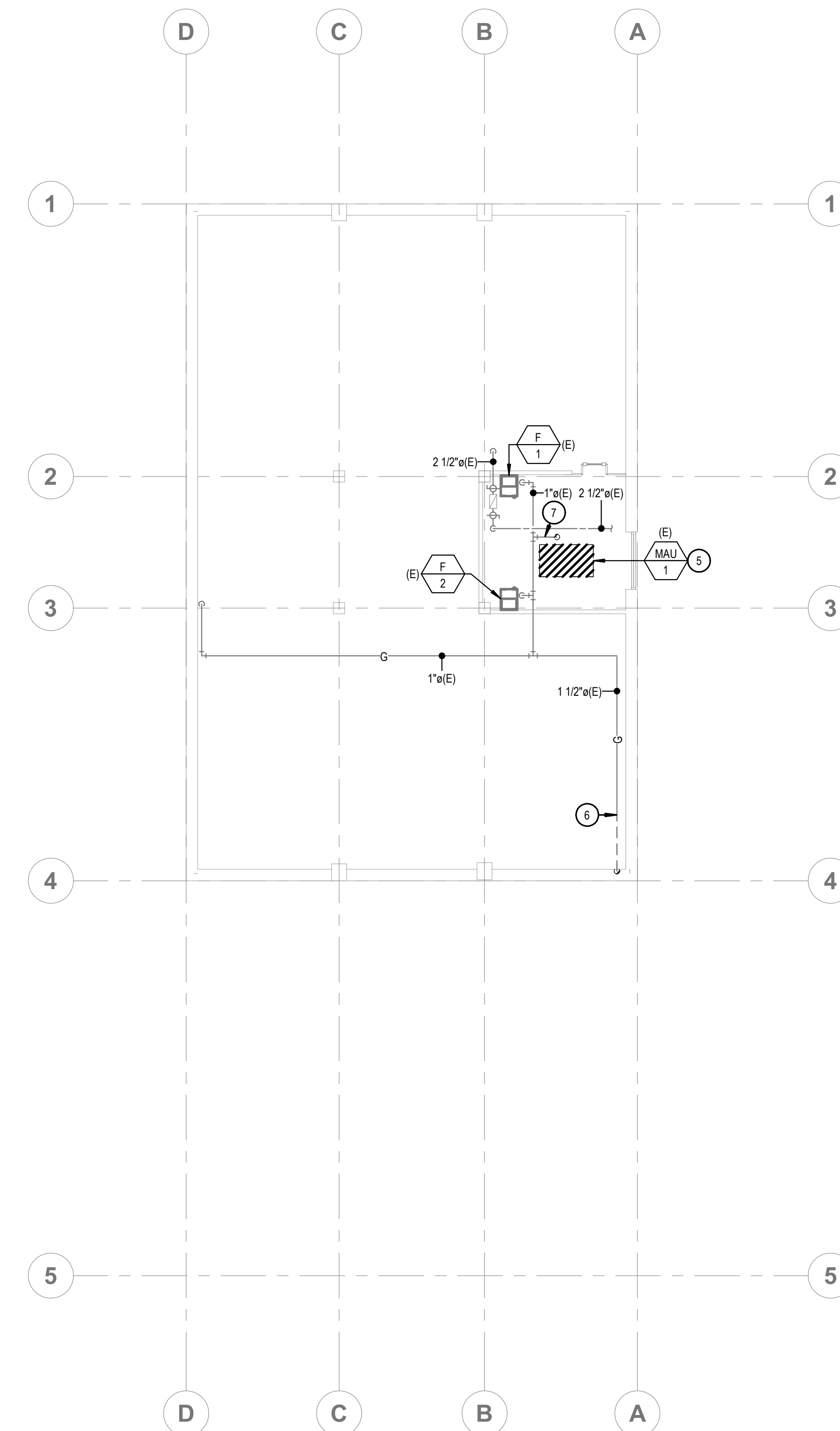


KEYED NOTES:

- 1. DISCONNECT AND REMOVE EXISTING GAS LINE AT INDICATED LOCATION. SEE NEW WORK FOR CONTINUATION.
- 2. DISCONNECT AND REMOVE EXISTING GAS METER AND PIPING BACK TO INDICATED POINTS.
- 3. REMOVE UNDERGROUND GAS PIPING BACK TO INDICATED LOCATION. SEE NEW WORK FOR CONTINUATION.
- 4. EXISTING WATER HEATER AND GAS CONNECTION TO REMAIN.
- 5. DISCONNECT AND REMOVE GAS CONNECTION TO DEMOLISHED MAKEUP AIR UNIT.
- 6. DISCONNECT AND REMOVE EXISTING GAS LINE AT INDICATED LOCATION IN CEILING SPACE. SEE NEW WORK FOR CONTINUATION.
- 7. DISCONNECT AND REMOVE EXISTING GAS LINE BACK TO CEILING AND CAP.



1 PLUMBING DEMOLITION FLOOR PLAN - LEVEL 1
1/8" = 1'-0"



2 PLUMBING DEMOLITION FLOOR PLAN - LEVEL 2
1/8" = 1'-0"

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CSHOA

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PROJECT 24009	DATE 04-11-24
DRAWN CD	CHECKED TN

REVISED

SHEET TITLE
PLUMBING DEMOLITION FLOOR PLANS

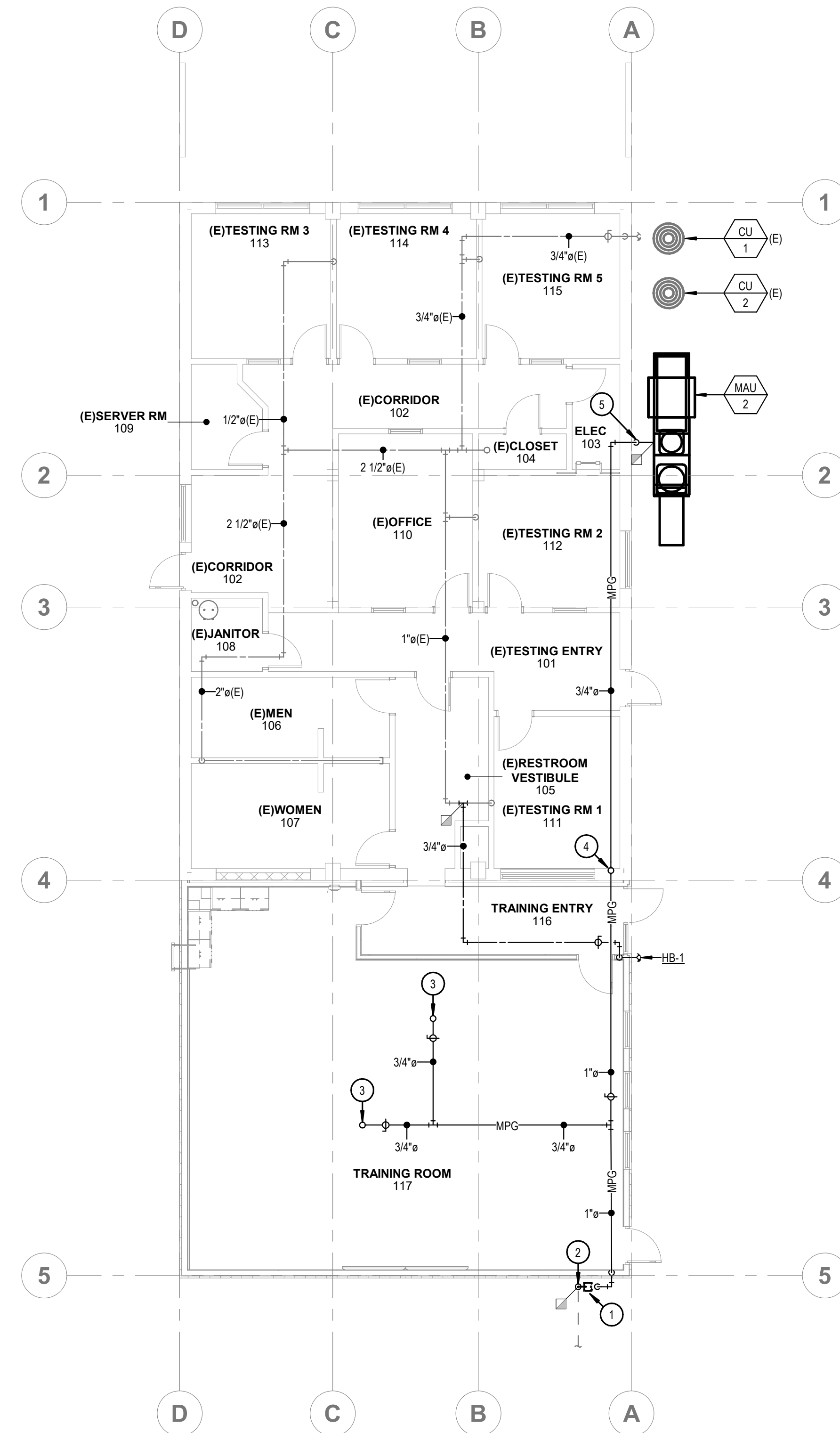
SHEET

P11
ORIGINAL SHEET SIZE
24" x 36"

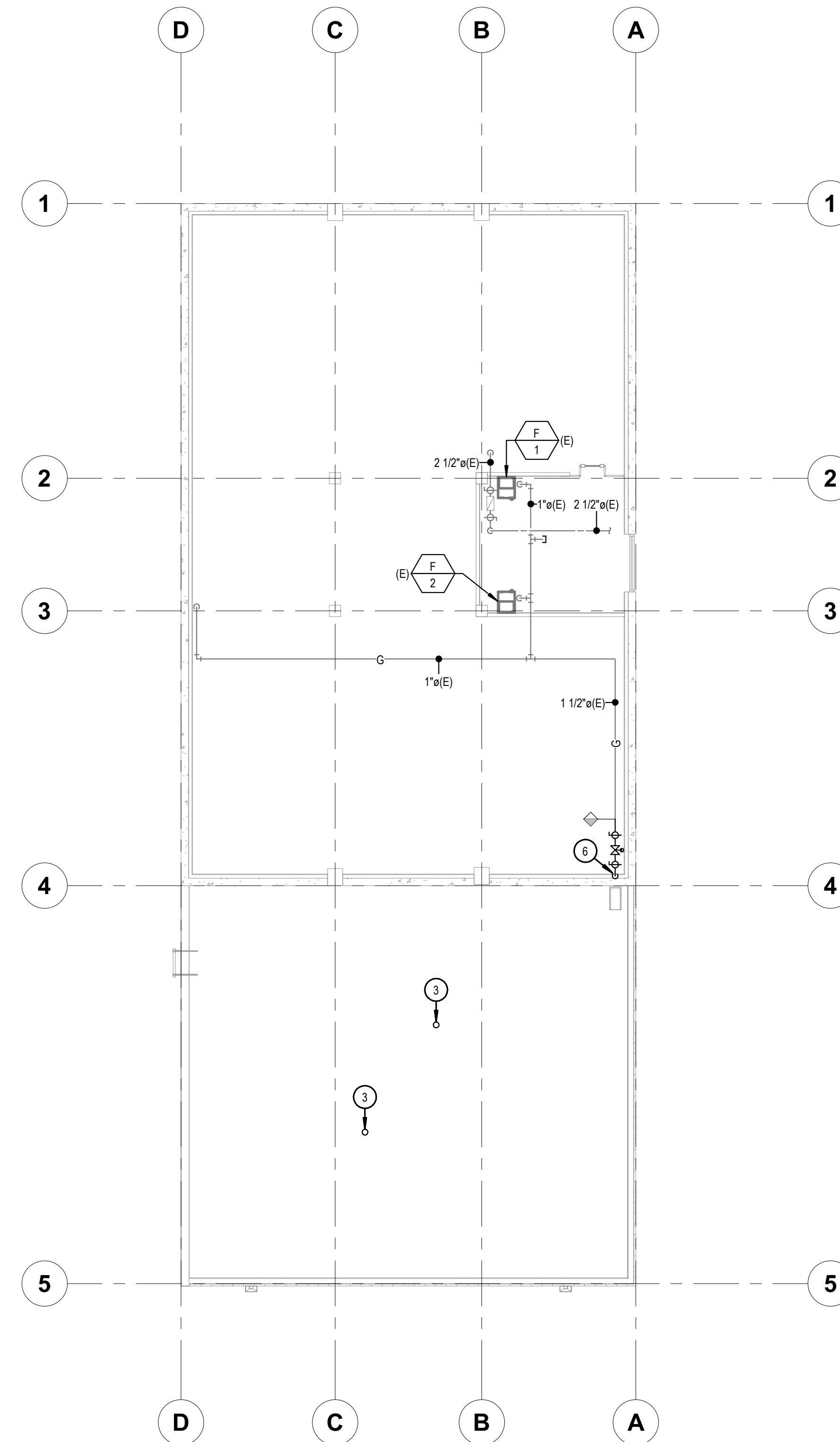


KEYED NOTES:

- ① SYMBOL USED FOR CALLOUT
- EXISTING GAS SERVICE TO BE EXTENDED TO NEW METER. GAS METER FURNISHED AND INSTALLED BY INTERMOUNTAIN GAS COMPANY. PROVIDE A SLEEVE AND SEALANT AROUND GAS PIPE PENETRATION THROUGH EXTERIOR WALL. PAINT ALL GAS PIPING OUTSIDE THE BUILDING GREY PER THE SPECIFICATIONS. (CAPACITY = 860 MBH, DELIVERY PRESSURE AT 2-PSI)
 - EXTEND EXISTING UNDERGROUND GAS LINE TO NEW METER.
 - ROUTE NEW 3/4" MPG LINE UP TO ROOF. SEE ROOF PLAN FOR CONTINUATION.
 - ROUTE NEW 1" MPG LINE UP TO CEILING. SEE LEVEL 2 FOR CONTINUATION.
 - ROUND 3/4" MPG LINE DOWN EXTERIOR WALL AND CONNECT TO EXISTING MAKEUP AIR UNIT. PROVIDE A SLEEVE AND SEALANT AROUND GAS PIPE PENETRATION THROUGH EXTERIOR WALL. PROVIDE WITH MANUAL SHUTOFF AND GAS REGULATOR (2-PSI TO 7" W.C.) PER DETAILS.
 - ROUTE NEW 1" MPG LINE UP FROM BELOW. SEE LEVEL 1 PLAN FOR CONTINUATION. CONNECT TO EXISTING 1-1/2" LOW PRESSURE GAS LINE WITH NEW 2-PSI TO 7" W.C. REGULATOR.



1 PLUMBING NEW WORK FLOOR PLAN - LEVEL 1
1/8" = 1'-0"



2 PLUMBING NEW WORK FLOOR PLAN - LEVEL 2
1/8" = 1'-0"

ITD D3 TRAINING ADDITION
8150 W CHINDEN BLVD GARDEN CITY, IDAHO
CSHOA

200 BROAD STREET
BOISE, IDAHO
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PROJECT 24009	DATE 04-11-24
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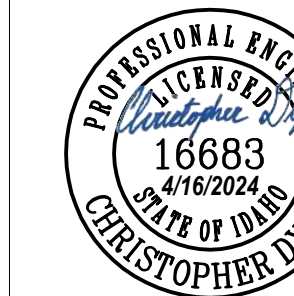
SHEET TITLE
PLUMBING NEW WORK FLOOR PLANS

SHEET

P21
ORIGINAL SHEET SIZE
24" x 36"

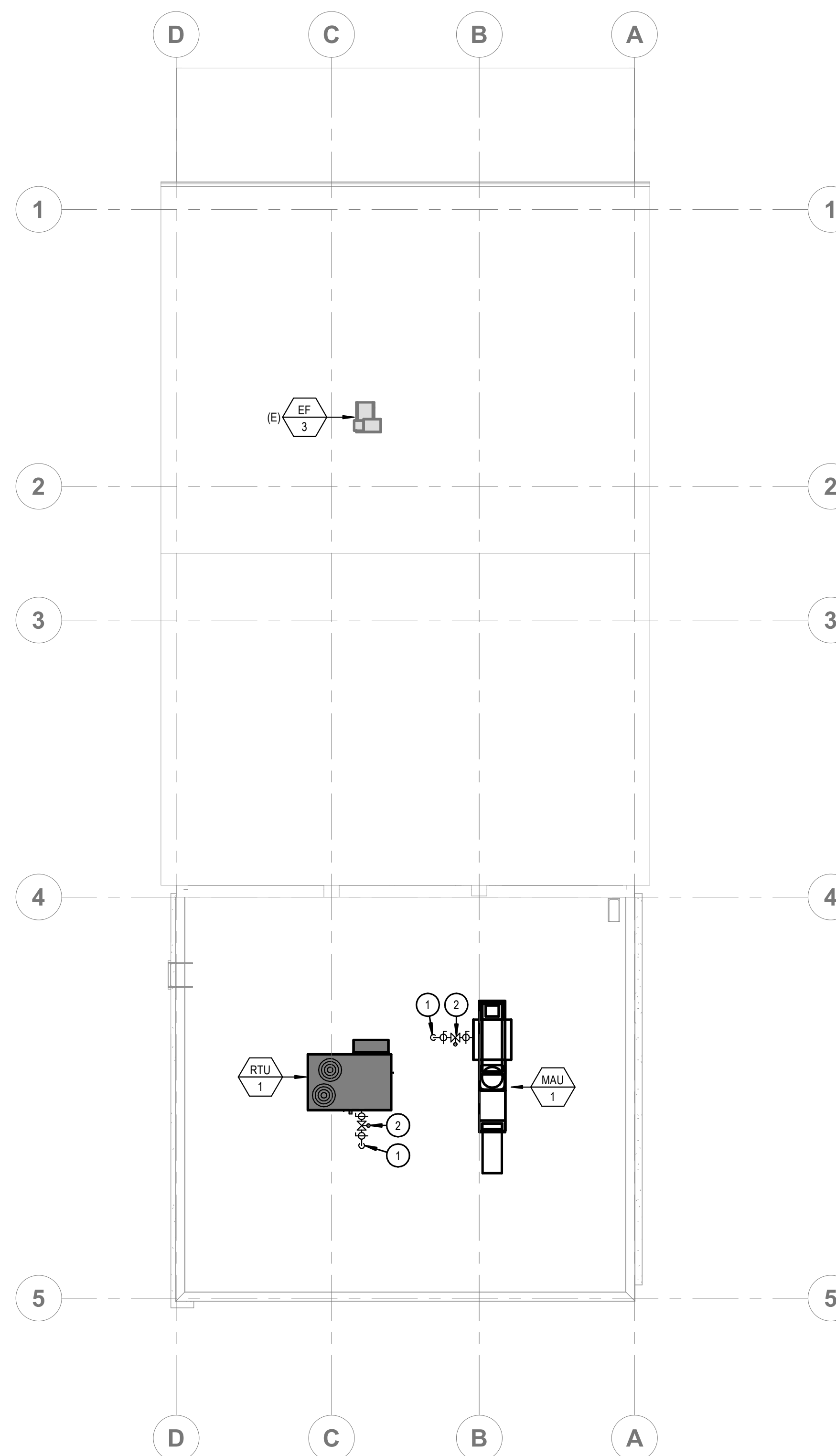


MUSGROVE
ENGINEERING, P.A.
234 S. Whisperwood Way
Boise, ID 83709
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645 West 25th Street
Idaho Falls, ID 83402
208.523.2362
www.musgrovepa.com
Project No. 24-078



KEYED NOTES:

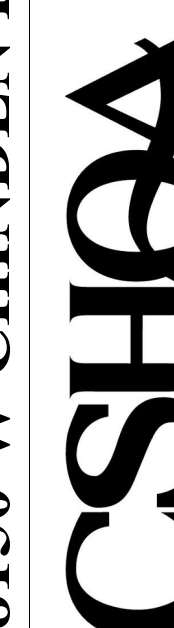
- Ⓢ SYMBOL USED FOR CALLOUT
- 3/4" MPG LINE UP FROM BELOW. SEE LEVEL 1 PLAN FOR CONTINUATION.
 - GAS PRESSURE REGULATOR (2-PSI TO 7" W.C.). INSTALL PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. SEE GAS PRESSURE REGULATOR DETAIL FOR ADDITIONAL REQUIREMENTS.



2 PLUMBING NEW WORK ROOF PLAN
1/8" = 1'-0"

ITD D3 TRAINING ADDITION
8150 W CHINDEN BLVD GARDEN CITY, IDAHO

200 BROAD STREET
BOISE, ID 83702
(208) 343-4635 • FAX (208) 343-1658
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PROJECT 24009	DATE 04-11-24
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SHEET TITLE
**PLUMBING NEW
WORK ROOF PLAN**

SHEET

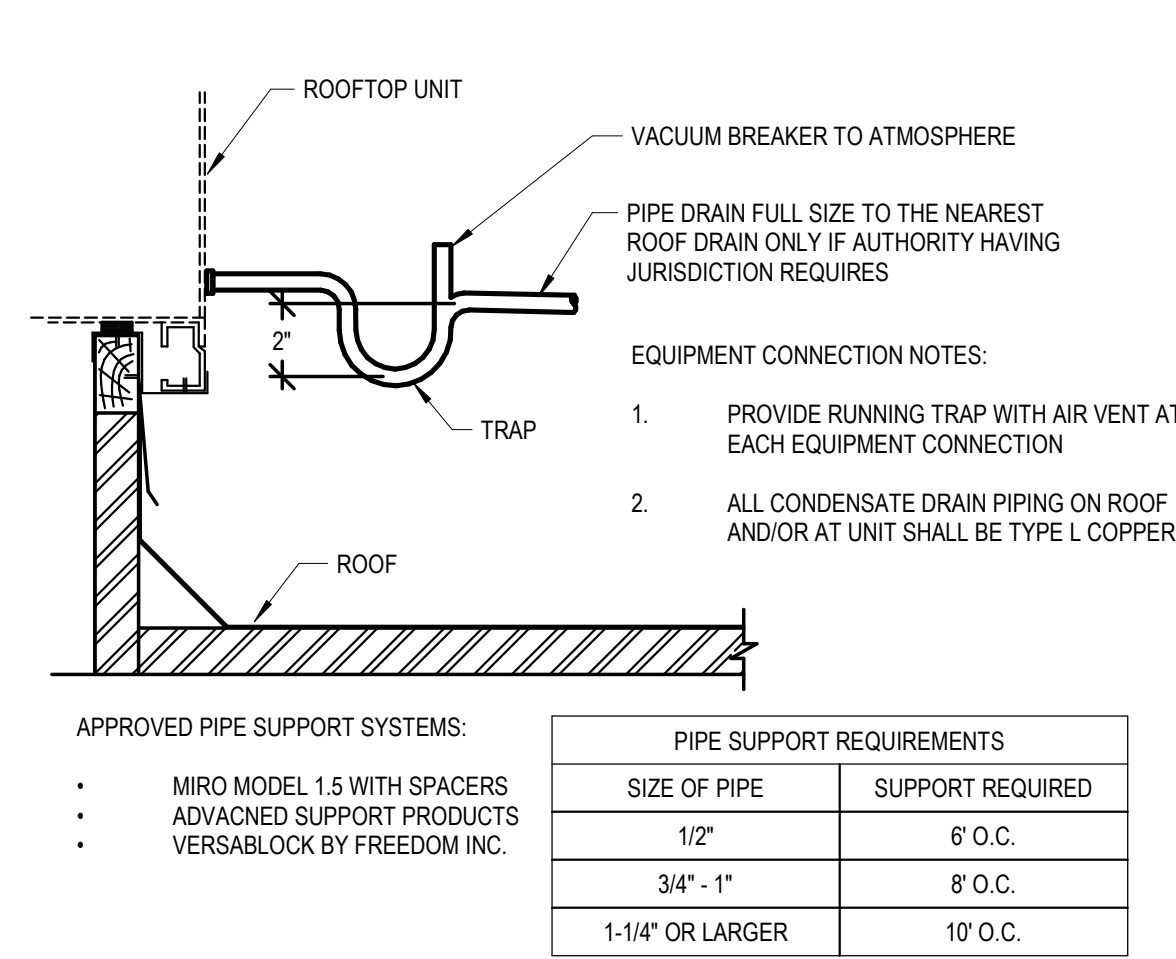
P31
ORIGINAL SHEET SIZE
24" x 36"

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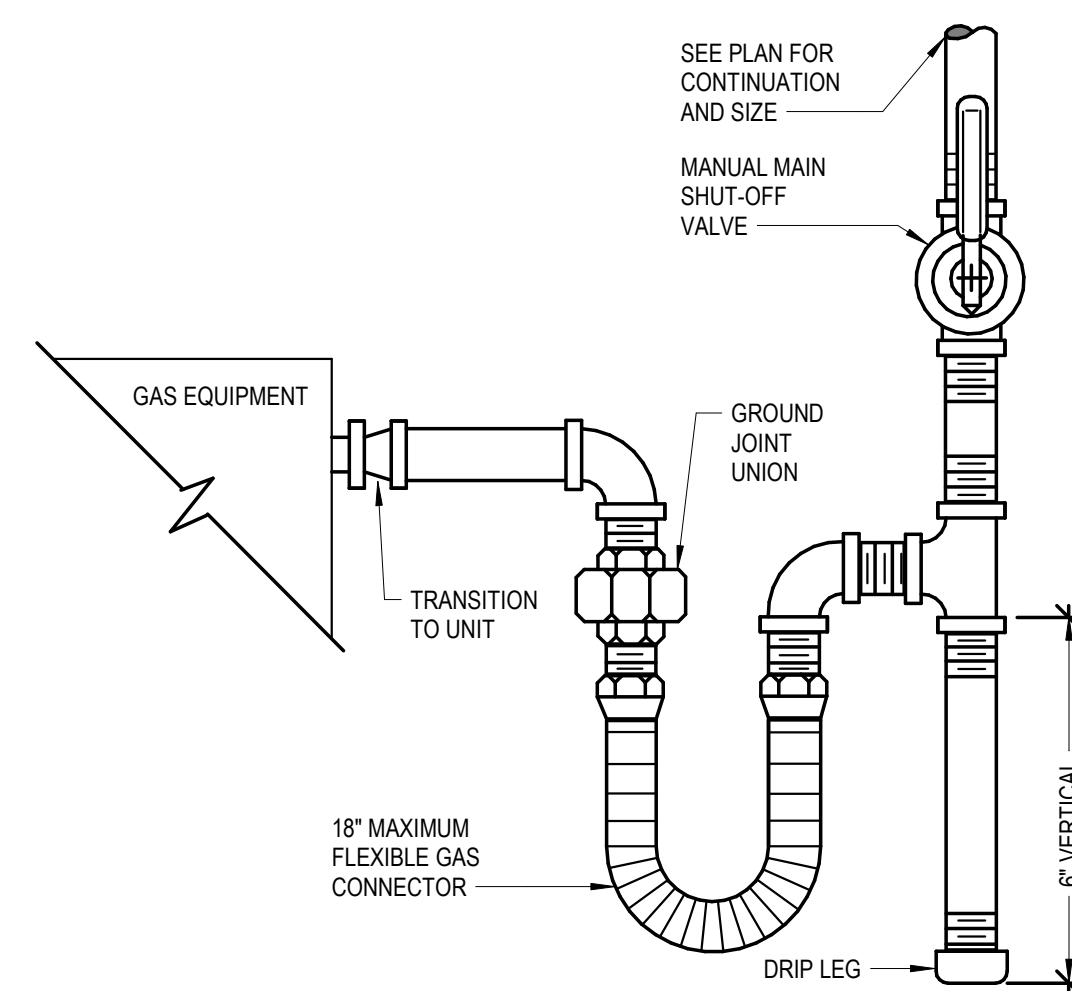


PLUMBING FIXTURE SCHEDULE							
SYMBOL	FIXTURE DESCRIPTION	CONNECTION SIZE					MANUFACTURER / MODEL NUMBER / DESCRIPTION / ADDITIONAL COMMENTS
		WASTE	VENT	TRAP	CW	HW	
HB-1	HOSE BIBB (EXTERIOR) (NON-FREEZE)	--	--	--	3/4	--	WOODFORD MODEL 67 - EXPOSED STYLE WITH MODEL 50HA BACKFLOW PREVENTER, 3/4" INLET, AND CHROME PLATED. PROVIDE WITH TEE KEY AND INSTALL AT 18" ABOVE FINISH GRADE.
NOTES:							
1. SEE SPECIFICATIONS FOR ALTERNATE APPROVED MANUFACTURERS.							

GAS SIZING CHART			
SYMBOL	INPUT (MBH)	RUNOUT SIZE (2-PSI) (INCHES)	EQUIPMENT CONNECTION SIZES (7" WC) (INCHES)
WH-1 (EXISTING)	120	--	1"
F-1 (EXISTING)	100	--	1"
F-2 (EXISTING)	60	--	1"
MAU-1 (NEW)	106.5	3/4"	3/4"
MAU-2 (EXISTING)	315	3/4"	1-1/4"
RTU-1 (NEW)	158.4	3/4"	3/4"
TOTAL	859.4	EQUIVALENT LENGTH = 100 FT PRESSURE = 2 PSI MAIN SIZE = 1 1/2"	



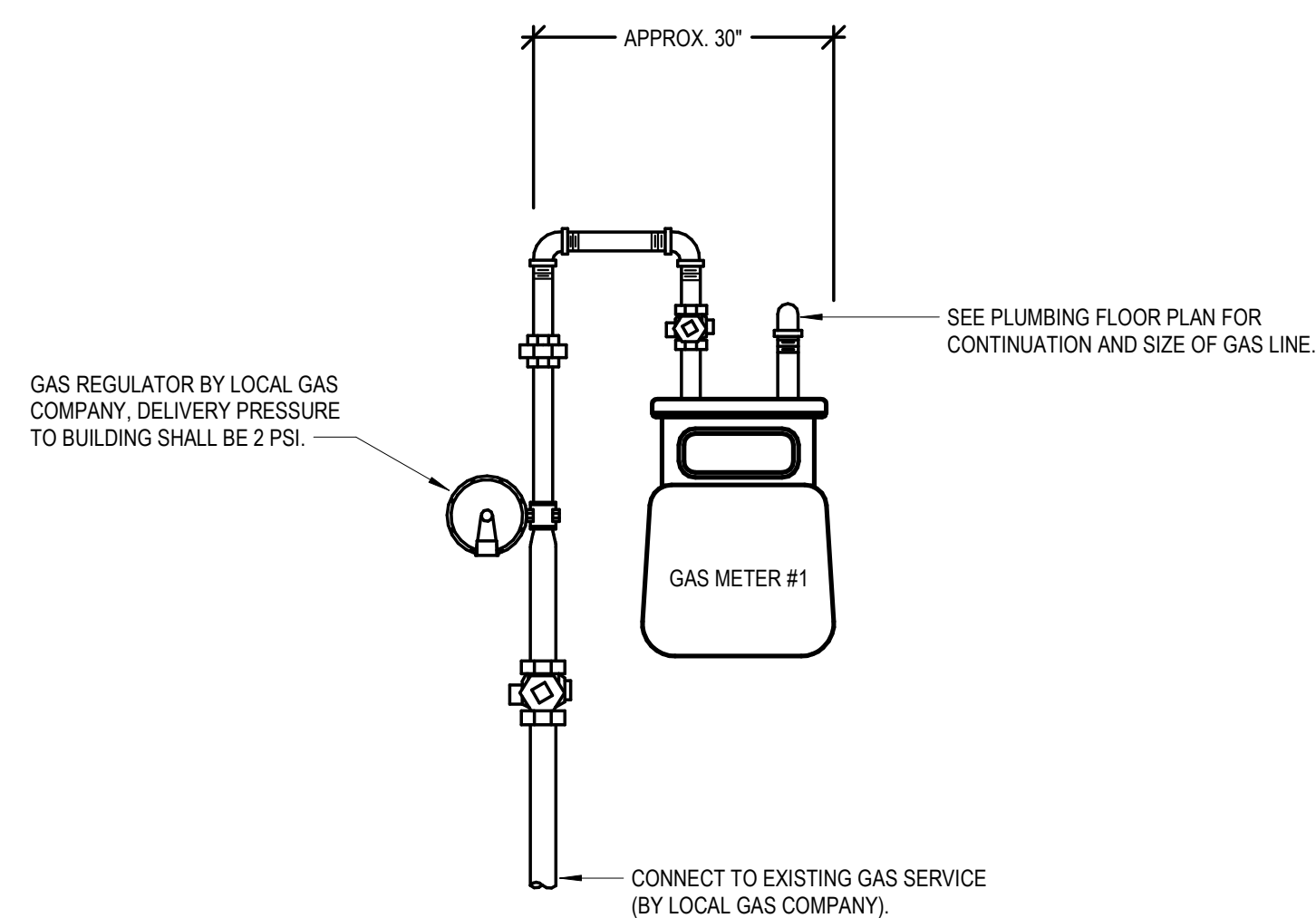
① CONDENSATE DRAIN DETAIL - ROOFTOP UNIT
NTS



② GAS EQUIPMENT CONNECTION DETAIL
NTS

MINIMUM CLEARANCE DISTANCE TO GAS METER OR REGULATOR VENT:

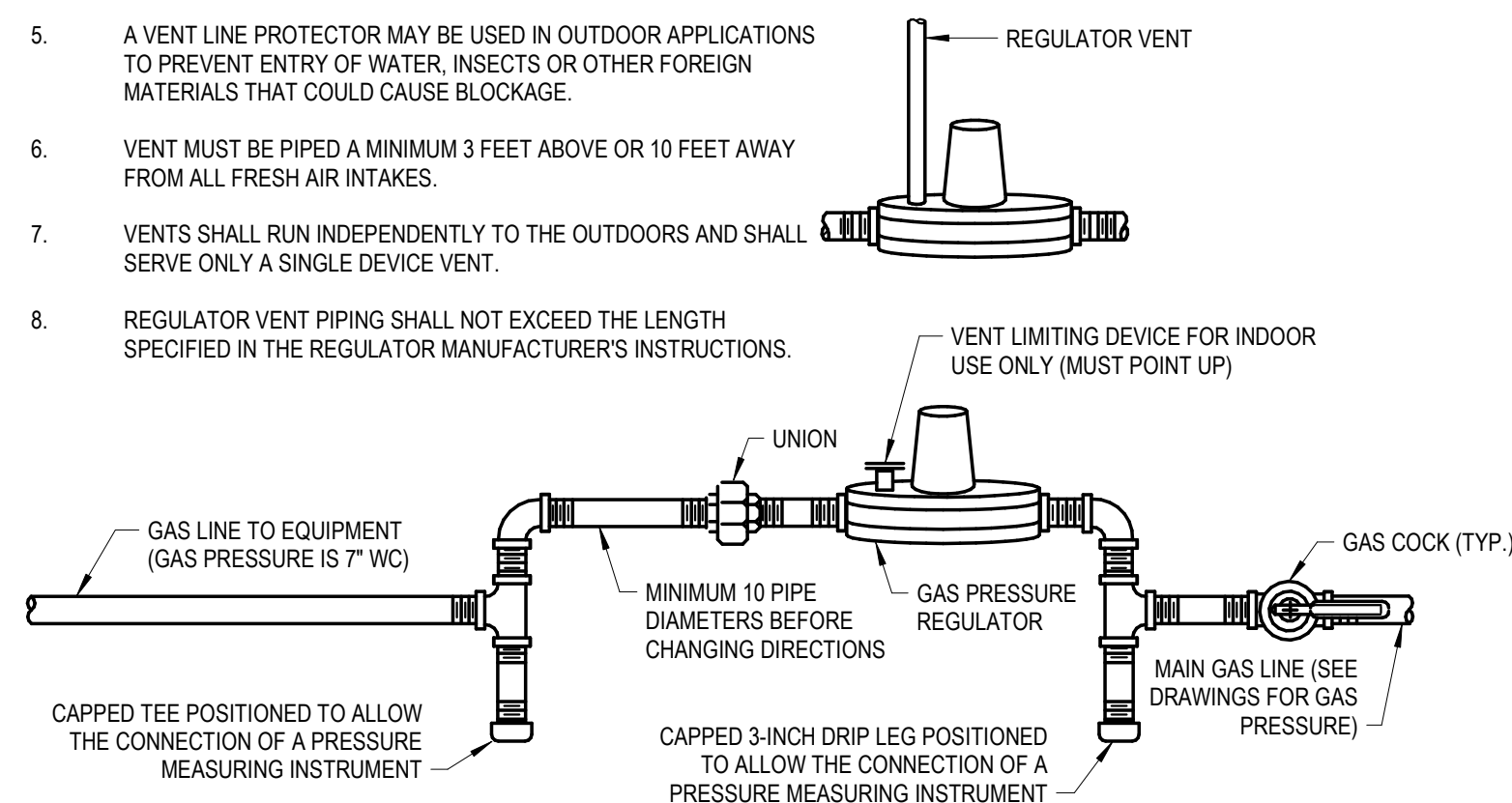
- 10-FEET TO WINDOW MOUNTED WALL FAN
- 10-FEET TO WINDOW OR WALL MOUNTED AIR CONDITIONER.
- 10-FEET TO MECHANICAL SYSTEM INTAKE.
- 3-FEET TO HEATING APPLIANCE AIR INTAKE OR EXHAUST OPENING.
- 3-FEET TO CLOTHES DRYER INTAKE OR EXHAUST VENT OPENING.
- 3-FEET TO BATHROOM FAN VENT OPENING.
- 3-FEET CLEAR IN FRONT OF METER
- 3-FEET TO ELECTRICAL GENERATOR OR ELECTRICAL TRANSFORMER
- 3-FEET TO ELECTRICAL METERS, ELECTRICAL PANELS AND OTHER SOURCES OF IGNITION.
- 3-FEET TO AIR CONDITIONER OR HEAT PUMP (PAD MOUNTED).
- 3-FEET TO OPEN FLAME BARBEQUE OR OTHER OPEN FLAME DEVICE.
- 2-FEET TO TELEPHONE, CABLE OR OTHER COMMUNICATIONS CONNECTION BOX OR TERMINAL.
- 2-FEET TO WATER SPOUT (HOSE BIBB).
- 2-FEET ON EITHER SIDE OF METER TO LANDSCAPE FEATURES LIKE SHRUBS OR FENCES.
- 12-INCHES TO ELECTRICAL GROUND ROD.
- 12-INCHES TO ANY OUTSIDE BUILDING CORNER.



③ GAS METER BANK PIPING DETAIL
NTS

VENTING NOTES:

- VENT REGULATORS PER MANUFACTURER'S AND LOCAL GAS COMPANY'S REQUIREMENTS.
- DO NOT REDUCE THE VENT PIPE SIZE FROM THE REGULATOR.
- TO LIMIT THE CONSEQUENCES OF RAIN, SNOW OR DEBRIS GETTING INTO THE VENT, ALWAYS TURN THE OUTLET OF THE VENT DOWN AND ABOVE POTENTIAL WATER OR SNOW LINES.
- PROVIDE A BUG SCREEN ON THE VENT OUTLET TO DETER INSECTS FROM NESTING IN THE LINE. NEVER PAINT OVER THE BUG SCREEN.
- A VENT LINE PROTECTOR MAY BE USED IN OUTDOOR APPLICATIONS TO PREVENT ENTRY OF WATER, INSECTS OR OTHER FOREIGN MATERIALS THAT COULD CAUSE BLOCKAGE.
- VENT MUST BE PIPED A MINIMUM 3 FEET ABOVE OR 10 FEET AWAY FROM ALL FRESH AIR INTAKES.
- VENTS SHALL RUN INDEPENDENTLY TO THE OUTDOORS AND SHALL SERVE ONLY A SINGLE DEVICE VENT.
- REGULATOR VENT PIPING SHALL NOT EXCEED THE LENGTH SPECIFIED IN THE REGULATOR MANUFACTURER'S INSTRUCTIONS.



④ GAS PRESSURE REGULATOR DETAIL
NTS

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8150 W CHINDEN BLVD GARDEN CITY, IDAHO
CSHOA

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PROJECT 24009	DATE 04-11-24
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SHEET TITLE
PLUMBING DETAILS AND SCHEDULE

SHEET

P40
ORIGINAL SHEET SIZE
24" x 36"

200 BROAD STREET
BOISE, IDAHO
PHONE: 208-343-4635 • FAX: 208-343-1658

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MECHANICAL ABBREVIATIONS			
A/C or AC	AIR CONDITIONING	KW	KILOWATT
AFF	ABOVE FINISHED FLOOR	KWH	KILOWATT HOUR
AHU	AIR HANDLING UNIT		
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATION, AND AIR CONDITIONING ENGINEERS	LAT	LEAVING AIR TEMPERATURE
		LAV	LAVATORY
BTU	BRITISH THERMAL UNITS	LEED	LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN
BTUH	BTUS PER HOUR	LWT	LEAVING WATER TEMPERATURE
		MAX	MAXIMUM
CA	COMBUSTION AIR	MCA	MINIMUM CIRCUIT AMPS
CC	COOLING COIL	MOC	MAXIMUM OVERCURRENT PROTECTION
CFM	AIR FLOW RATE (CUBIC FEET PER MINUTE)	MIN	MINIMUM
CHWR	CHILLED WATER RETURN	NC	NOISE CRITERIA
CHWS	CHILLED WATER SUPPLY	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
CLG	CEILING	NTS	NOT TO SCALE
CW	COLD WATER	OSA	OUTSIDE AIR
DEG or °	DEGREE	PD	PRESSURE DROP
DIA or Ø	DIAMETER	PH or Ø	PHASE
DB	DRY BULB	PRV	PRESSURE REDUCING VALVE
EA	EXHAUST AIR	RA	RETURN AIR
EAT	ENTERING AIR TEMPERATURE	RPM	REVOLUTIONS PER MINUTE
EER	ENERGY EFFICIENCY RATIO	RTU	ROOFTOP UNIT
ESP	EXTERNAL STATIC PRESSURE	SA	SUPPLY AIR
EWT	ENTERING WATER TEMPERATURE	SEER	SEASONAL ENERGY EFFICIENCY RATIO
		SFD	COMBINATION SMOKE/FIRE DAMPER
FCO	FLOOR CLEANOUT	SP	STATIC PRESSURE
FD	FIRE DAMPER	SYM	SYMBOL
FLA	FULL LOAD AMPS		
FLR	FLOOR		
FFM	FEET PER MINUTE		
FT	FEET		
GA	GAUGE	T & P	TEMPERATURE AND PRESSURE
GCO	GRADE CLEANOUT	TEMP	TEMPERATURE
GPM	WATER FLOW RATE (GALLONS PER MINUTE)	TYP	TYPICAL
HC	HEATING COIL	UMC	UNIFORM MECHANICAL CODE
HP	HORSE POWER	UPC	UNIFORM PLUMBING CODE
HVAC	HEATING, VENTILATING, AIR CONDITIONING	URL	URINAL
HW	HOT WATER	VTR	VENT THROUGH ROOF
HWR	HOT WATER RETURN	V	VOLTS
HWS	HOT WATER SUPPLY		
IBC	INTERNATIONAL BUILDING CODE	WI	WITH
IECC	INTERNATIONAL ENERGY CONSERVATION CODE	WB	WET-BULB
IFC	INTERNATIONAL FIRE CODE	WC	WATER CLOSET
IFGC	INTERNATIONAL FUEL GAS CODE	WCO	WALL CLEANOUT
IMC	INTERNATIONAL MECHANICAL CODE	WH	WATER HEATER
IPC	INTERNATIONAL PLUMBING CODE		

NOTE: THIS IS A STANDARD LIST OF COMMONLY USED MECHANICAL ABBREVIATIONS. SOME OF THE ABBREVIATIONS SHOWN ABOVE MAY NOT BE USED IN THIS DRAWING PACKAGE.

MECHANICAL GENERAL NOTES

- ALL MECHANICAL EQUIPMENT AND SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE INTERNATIONAL MECHANICAL CODE (IMC) LATEST EDITION, AND ALL APPLICABLE LOCAL AND STATE CODES.
- ALL PLUMBING EQUIPMENT AND SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST ADOPTED PLUMBING CODE, AND ALL LOCAL AND STATE CODES.
- ALL MECHANICAL AND PLUMBING EQUIPMENT SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.
- MECHANICAL CONTRACTORS SHALL RECEIVE PRIOR APPROVAL FROM THE STRUCTURAL ENGINEER BEFORE MAKING CUTS THROUGH ANY STRUCTURAL MEMBER.
- MECHANICAL CONTRACTORS SHALL COORDINATE INSTALLATION WITH CONSTRUCTION SUPERVISOR AND WITH ALL OTHER TRADES TO AVOID CONFLICTS.
- THE MECHANICAL CONTRACTORS SHALL VERIFY MOTOR VOLTAGES WITH THE ELECTRICAL DRAWINGS PRIOR TO ORDERING MOTORIZED EQUIPMENT AND CONTROLS.
- SEE MECHANICAL SCHEDULE SHEET FOR SCHEDULED CAPACITIES OF ALL MECHANICAL EQUIPMENT AND MATERIALS SPECIFIED.
- DOMESTIC WATER SERVICE IS PROVIDED WITH AN APPROVED BACKFLOW PREVENTER ASSEMBLY.
- THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR ALL BACKFLOW DEVICES TO BE INSPECTED BY A CERTIFIED BACKFLOW TECHNICIAN BEFORE THE USE OF THE BUILDING POTABLE WATER SYSTEM.
- ALL MECHANICAL EQUIPMENT TO BE PROPOSED MUST BE ON THE APPROVED LIST PRIOR TO SUBMITTALS. ALL APPROVED MANUFACTURERS MUST BE CAPABLE OF MEETING THE REQUIREMENTS OF THE SPECIFIED EQUIPMENT.
- RUNOUT AND HOOKUP SIZES TO INDIVIDUAL PLUMBING FIXTURES CAN BE FOUND ON THE PLUMBING FIXTURE SCHEDULE.
- PROVIDE REMOTE CEILING ACCESS BALANCE DAMPERS WITH CONCEALED CHROME PLATE COVERS FOR BALANCE DAMPERS LOCATED ABOVE HARD CEILINGS.
- PAINT VTR'S, FLUES, EXHAUST CAPS, AND OTHER MECHANICAL ITEMS ON THE ROOF TO MATCH THE ROOF COLOR.
- INSULATED FLEXIBLE DUCTWORK--IN LENGTHS OF 6'-0" OR LESS--MAY BE USED FOR RUNOUTS TO AIR TERMINALS.
- MAINTAIN MINIMUM 10'-0" DISTANCE BETWEEN ALL FRESH AIR INTAKES AND EXHAUST OR GAS FLUE DISCHARGES.
- LOCATE ACCESS HATCHES SO AS TO PROVIDE OPTIMUM SERVICEABILITY TO EQUIPMENT AND/OR VALVING. SEE ARCHITECTURAL SPECIFICATION FOR TYPE AND COLOR. COORDINATE LOCATION WITH ARCHITECTURAL, STRUCTURAL, AND LIGHTING.
- WHENEVER THERE IS A DISCREPANCY BETWEEN THE RUNOUT PIPE OR DUCT SIZE SHOWN ON THE PLANS AND THAT SHOWN IN THE SCHEDULE, ALWAYS USE THE LARGER OF THE TWO PIPE OR DUCT SIZES.
- THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR VERIFICATION OF EXISTING JOB CONDITIONS PRIOR TO BID. NO ADDITIONAL COST SHALL BE AWARDED TO THE SUCCESSFUL CONTRACTOR (OR THEIR SUBCONTRACTORS) AFTER BIDS HAVE BEEN SUBMITTED AND CONTRACTS AWARDED FOR FAILURE TO VERIFY EXISTING FIELD CONDITIONS. DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR ALTERNATIVE METHODS OF INSTALLATION PRIOR TO THE BIDDING OF THIS PROJECT.
- UNLESS OTHERWISE NOTED, ALL EXISTING MECHANICAL EQUIPMENT, PIPING, ETC., TO BE REMOVED SHALL BE DISPOSED OF BY THE CONTRACTOR UNDER THIS CONTRACT. THE OWNER SHALL RETAIN THE RIGHT TO KEEP ANY REMOVED ITEMS.
- ALL DOMESTIC HOT AND COLD WATER LINES IN THE AREA OF WORK WHICH ARE NO LONGER IN USE DUE TO THIS PROJECT SHALL BE REMOVED BACK TO THE MAINS AND CAPPED. NO DEAD LEGS ALLOWED.
- HOLES IN EXISTING WALLS OR FLOORS SHALL BE PATCHED TO MATCH EXISTING WHERE PIPING, DUCTWORK, ETC., WERE REMOVED OR ADDED DURING THIS PROJECT.
- DAMAGE TO THE EXISTING FACILITY DURING THE CONSTRUCTION OF THIS PROJECT SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER.

MECHANICAL AND PLUMBING DRAWINGS LEGEND

	FLEXIBLE DUCTWORK		THREE WAY CONTROL VALVE
	DUCTWORK		TWO WAY CONTROL VALVE
	DUCTWORK BREAK		PRESSURE REDUCING VALVE
	DUCTWORK OR PIPING RISE		GATE VALVE
	CONCENTRIC SQUARE TO ROUND TRANSITION		REDUCER
	MOTORIZED DAMPER		GLOBE VALVE
	MANUAL VOLUME DAMPER		BALL VALVE
	SPIN-IN FITTING W/ AIR EXTRACTOR AND HAND DAMPER		BUTTERFLY VALVE
	HIGH EFFICIENCY FITTING W/ HAND DAMPER		BALANCE VALVE
	SWITCH		CHECK VALVE
	THERMOSTAT		FLOOR CLEANOUT
	HUMIDISTAT		WALL CLEANOUT
	TEMPERATURE SENSOR		GRADE CLEANOUT
	CARBON DIOXIDE SENSOR		WATER HAMMER ARRESTOR
	CARBON MONOXIDE SENSOR		FLOOR DRAIN
	NITROUS OXIDE SENSOR		FLOOR SINK
	DUCT SMOKE DETECTOR		GAS PRESSURE REGULATOR W/ GAS COCK
	COMBINATION SMOKE/FIRE DAMPER		PRESSURE RELIEF VALVE
	FIRE DAMPER		VENT-THROUGH-ROOF
	SMOKE DAMPER		VENT
	EQUIPMENT CALLOUT		SOIL, WASTE, OR SANITARY SEWER
	TURNING VANES		ACID WASTE LINE
	INTAKE OR EXHAUST		ACID VENT LINE
	DIRECTION OF AIRFLOW		STORM DRAIN
	SUPPLY DIFFUSER		ROOF DRAIN LINE
	RETURN GRILLE		OVERFLOW DRAIN LINE
	EXHAUST GRILLE		CONDENSATE DRAIN LINE
	FLOOR GRILLE		DOMESTIC COLD WATER (CW)
	CEILING EXHAUST FAN		DOMESTIC HOT WATER (HW)
	TEMPERATURE GAUGE		DOMESTIC HOT WATER RETURN (HWR)
	PRESSURE GAUGE (LIQUID FILLED W/ ISOLATION VALVE)		TEMPERED WATER (TW)
	TEMPERATURE SENSOR (DUCT OR PIPING)		MEDIUM PRESSURE NATURAL GAS
	FLOW SWITCH		LOW PRESSURE NATURAL GAS
	STAINLESS STEEL BRAIDED FLEX CONNECTION		FIRE SPRINKLER LINE
	ELASTOMETRIC FLEX CONNECTOR		GEOTHERMAL WATER SUPPLY
	SUCCION DIFFUSER		GEOTHERMAL WATER RETURN
	Y TYPE STRAINER (1-1/2" OR LARGER PROVIDED W/ BLOW DOWN VALVE)		CHILLED WATER SUPPLY
	FLOW DIRECTION		CHILLED WATER RETURN
	DEMOLITION / EQUIPMENT TO BE REMOVED		CONDENSER WATER SUPPLY
	NEW TO EXISTING CONNECTION POINT		CONDENSER WATER RETURN
	EXISTING		HEATING WATER SUPPLY
	FUTURE		HEATING WATER RETURN
	NEW		LIQUID REFRIGERANT LINE
	REDUCED PRESSURE BACKFLOW PREVENTER		SUCTION REFRIGERANT LINE
	DOUBLE CHECK BACKFLOW PREVENTER		SLOPE PIPE IN DIRECTION OF ARROW
	UNION		PIPE ANCHOR
	AIR VENT		PIPE GUIDE
	TRIPLE DUTY VALVE		CAP

NOTE: THIS IS A LIST OF COMMONLY USED MECHANICAL AND PLUMBING SYMBOLS. SOME OF THE SYMBOLS SHOWN ABOVE MAY NOT BE USED IN THIS DRAWING PACKAGE.

ENERGY CODE COMPLIANCE

- COMPLIANCE WITH THE LATEST ADOPTED EDITION OF THE INTERNATIONAL ENERGY CONSERVATION CODE IS REQUIRED FOR THIS PROJECT. THESE NOTES COVER MANDATORY REQUIREMENTS OF THE CODE. ADDITIONAL REQUIREMENTS ARE NOTED ON THE DRAWINGS AND IN THE SPECIFICATIONS.
- MINIMUM REQUIREMENTS FOR SUPPLY AND RETURN DUCTWORK INSULATION:
 - R-6: DUCTS LOCATED IN UNCONDITIONED SPACES (SPACE NEITHER HEATED NOR COOLED SUCH AS ABOVE CEILING SPACES, WALL SPACES, DUCT CHASES, SOFFITS, ATTOS, CRAWL SPACES, UNHEATED BASEMENTS, AND UNHEATED GARAGES).
 - R-12: DUCTS LOCATED OUTSIDE OF THE BUILDINGS INSULATION ENVELOPE (SUCH AS ABOVE THE ATTIC INSULATION).
- CONTRACTOR SHALL VERIFY WITH THE MANUFACTURER, THE R-VALUES OF THE ACTUAL INSULATION USED. R-VALUES SHALL BE INSTALLED VALUES.
- WHERE DUCTS USED FOR COOLING ARE EXTERNALLY INSULATED, THE INSULATION SHALL BE COVERED WITH A VAPOR RETARDER HAVING A MAXIMUM PERMEANCE OF 0.05 PERM OR ALUMINUM FOIL HAVING A MINIMUM THICKNESS OF 2 MILS. INSULATION HAVING A PERMEANCE OF 0.05 PERMS OR LESS SHALL NOT BE REQUIRED TO BE COVERED. ALL JOINTS AND SEAMS SHALL BE SEALED TO MAINTAIN THE CONTINUITY OF THE VAPOR RETARDER.
- ALL DUCT JOINTS, SEAMS, AND CONNECTIONS SHALL BE FASTENED AND SEALED WITH WELDS, GASKETS, ADHESIVES, MASTIC-PLUS-EMBEDDED-FABRIC SYSTEMS, OR TAPES. TAPES AND MASTICS SHALL BE LISTED AND LABELED PER UL181A OR UL181B. DUCT TAPE IS NOT PERMITTED AS A SEALANT ON ANY METAL DUCTS. DUCT CONNECTIONS TO FLANGES OR EQUIPMENT SHALL BE SEALED AND MECHANICALLY FASTENED.
- MINIMUM REQUIREMENTS (THICKNESS) FOR PIPING INSULATION: REFER TO PROJECT SPECIFICATIONS.
- DOMESTIC HOT WATER PIPING SYSTEMS SHALL BE INSULATED WITH 1" INSULATION HAVING A CONDUCTIVITY NOT EXCEEDING 0.27 BTU-INCH/HOUR-FT²-F.
- DOMESTIC WATER HEATERS WHICH ARE NOT PROVIDED WITH INTEGRAL HEAT TRAPS AND SERVE NONCIRCULATING SYSTEMS SHALL BE PROVIDED WITH HEAT TRAPS ON THE SUPPLY AND DISCHARGE PIPING AT THE WATER HEATER.
- DOMESTIC HOT WATER SYSTEMS WITH RECIRCULATION PUMPS OR ELECTRIC HEAT TRACE SHALL BE CONTROLLED WITH 7-DAY TIME CLOCKS.
- AN OPERATING AND MAINTENANCE MANUAL SHALL BE PROVIDED PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY. THE O&M MANUAL SHALL CONTAIN THE FOLLOWING INFORMATION AS A MINIMUM:
 - EQUIPMENT CAPACITY (INPUT & OUTPUT).
 - EQUIPMENT OPERATING AND MAINTENANCE INSTRUCTIONS.
 - CONTROL SYSTEM MAINTENANCE AND CALIBRATION INFORMATION, INCLUDING WIRING DIAGRAMS, SCHEMATICS, AND CONTROL SEQUENCES.
 - CONTROL SYSTEM SETPOINTS SHALL BE SHOWN ON CONTROL DRAWINGS, AT CONTROL DEVICES, OR IN PROGRAMMING COMMENT ON DDC SYSTEMS.
 - A COMPLETE WRITTEN NARRATIVE ON HOW EACH MECHANICAL SYSTEM IS INTENDED TO OPERATE.

COMCHECK COMPLIANCE

COMcheck Software Version COMcheckWeb
Mechanical Compliance Certificate

Project Information

Energy Code: 2018 IECC
 Project Title: ITD D3 Training Room Addition
 Location: Boise, Idaho
 Climate Zone: 5b
 Project Type: Addition

Construction Site: _____ Owner/Agent: _____ Designer/Contractor: _____

Mechanical Systems List
Quantity System Type & Description

1 RTU-1 (Single Zone):
 Heating: 1 each - Central Furnace, Gas, Capacity = 159 kBtu/h
 Proposed Efficiency = 90.00% Et, Required Efficiency: 90.00% Et or 80% AFUE
 Cooling: 1 each - Single Package DX Unit, Capacity = 89 kBtu/h, Air-Cooled Condenser, Air Economizer
 Proposed Efficiency = 11.20 IER, Required Efficiency = 11.00 IER
 Proposed Part Load Efficiency = 15.00 IER, Required Part Load Efficiency = 12.60 IER
 Fan System: FAN SYSTEM 2 -- Compliance (Brake HP and fan efficiency method) : Passes

Fans:
 FAN 1 Supply, Constant Volume, 3000 CFM, 1.5 motor nameplate hp, 1.0 design brake hp (1.0 max. BHP), 90.0 fan efficiency grade, 90.0 total fan efficiency, fan exception: Single fan <= 5HP
 Pressure Drop Credits:
 Fully ducted return and/or exhaust air systems, 0.3631 credit

1 MAU-1 (Single Zone):
 Heating: 1 each - Central Furnace, Gas, Capacity = 106 kBtu/h
 Proposed Efficiency = 80.00% Et, Required Efficiency: 80.00% Et or 80% AFUE
 Cooling: 1 each - Single Package DX Unit, Capacity = 28 kBtu/h, Air-Cooled Condenser, Unknown Economizer
 Proposed Efficiency = 14.00 SEER, Required Efficiency = 14.00 SEER
 Proposed Part Load Efficiency = 0.00, Required Part Load Efficiency = 0.00
 Fan System: FAN SYSTEM 1 -- Compliance (Motor nameplate HP and fan efficiency method) : Passes

Fans:
 FAN 2 Supply, Constant Volume, 1300 CFM, 0.8 motor nameplate hp, 90.0 fan efficiency grade, 90.0 total fan efficiency, 90.0 design fan efficiency, fan exception: Single fan <= 5HP

1 MAU-2 (Single Zone):
 Heating: 1 each - Central Furnace, Gas, Capacity = 315 kBtu/h
 Proposed Efficiency = 80.00% Et, Required Efficiency: 80.00% Et
 Cooling: 1 each - Single Package DX Unit, Capacity = 93 kBtu/h, Air-Cooled Condenser, Air Economizer
 Proposed Efficiency = 14.00 SEER, Required Efficiency = 11.00 IER
 Proposed Part Load Efficiency = 13.00 IER, Required Part Load Efficiency = 12.60 IER
 Fan System: FAN SYSTEM 1 -- Compliance (Motor nameplate HP and fan efficiency method) : Passes

Fans:
 FAN 2 Supply, Constant Volume, 1300 CFM, 0.8 motor nameplate hp, 90.0 fan efficiency grade, 90.0 total fan efficiency, 90.0 design fan efficiency, fan exception: Single fan <= 5HP

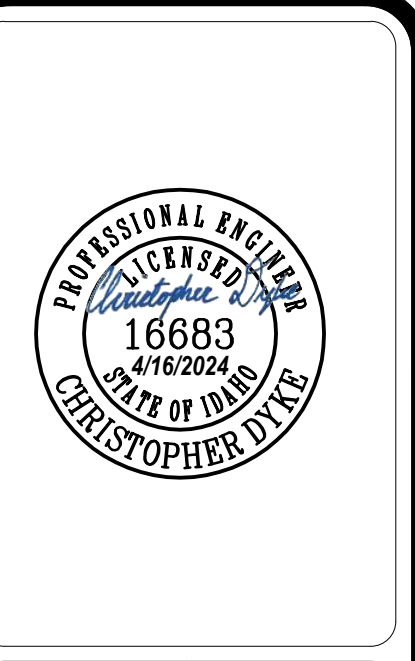
Mechanical Compliance Statement
 Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2018 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Chris Dyke, PE
 Name - Title: _____ Signature: _____ Date: 4/3/2024

Project Title: ITD D3 Training Room Addition Report date: 04/03/24
 Data filename: _____ Page: 4 of 13



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 Project No. 24-078



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PROJECT	DATE
24009	04-11-24
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CD	TN

REVISED

SHEET TITLE
MECHANICAL COVER SHEET

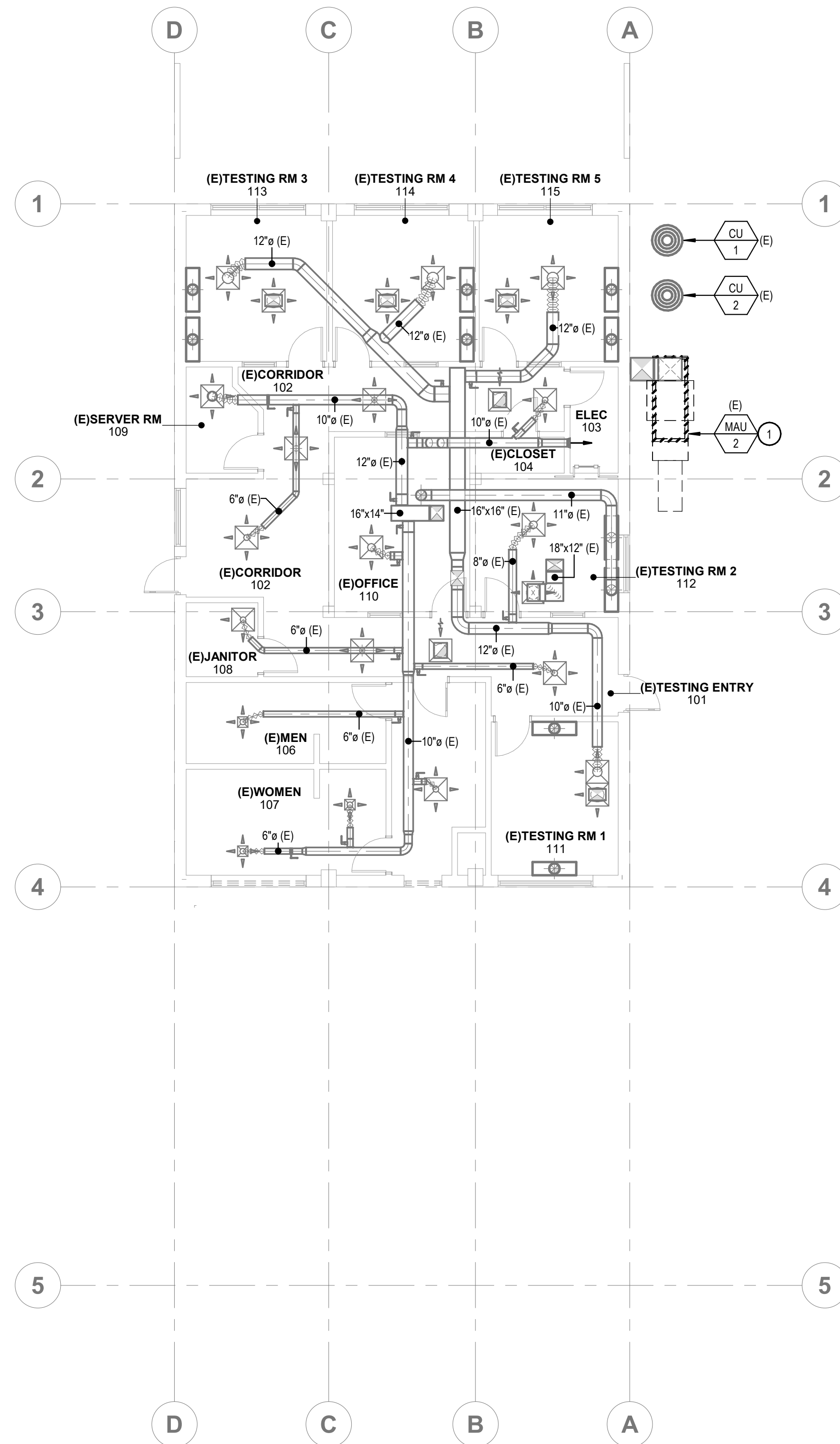
SHEET

M00
 ORIGINAL SHEET SIZE
 24" x 36"

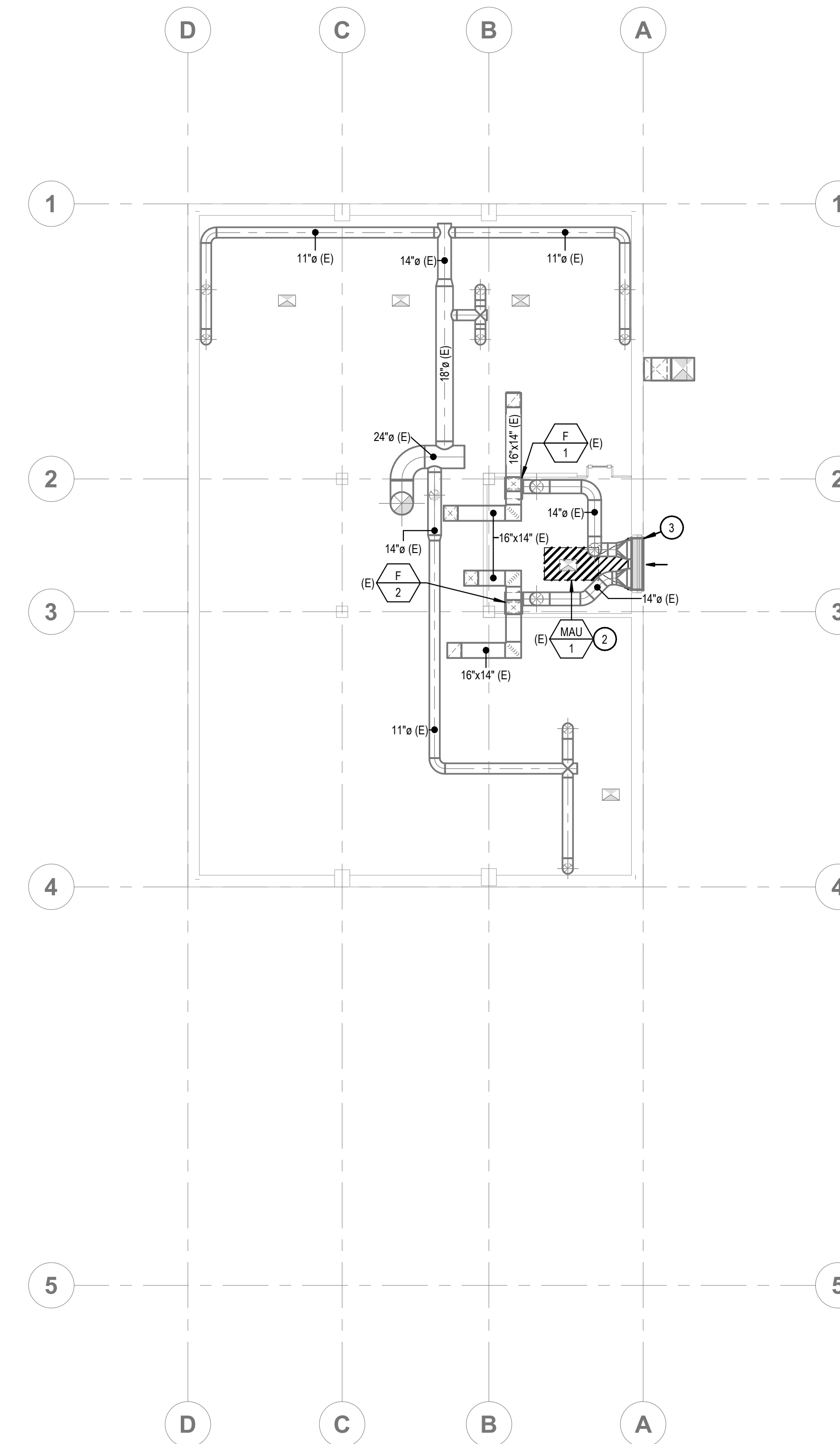


KEYED NOTES:

- 1. EXISTING MAKEUP AIR UNIT SHALL BE RETROFITTED WITH A COOLING COIL. SEE NEW PLANS FOR WORK REQUIRED.
- 2. DISCONNECT AND REMOVE EXISTING MAKEUP AIR UNIT. EXISTING DUCTWORK THROUGH FLOOR TO REMAIN. SEE NEW WORK FOR CONTINUATION.
- 3. DISCONNECT AND REMOVE DUCTWORK ASSOCIATED WITH LOWER LOUVER. SEE NEW WORK FOR CONTINUATION.



1 MECHANICAL DEMOLITION FLOOR PLAN - LEVEL 1
 1/8" = 1'-0"



2 MECHANICAL DEMOLITION FLOOR PLAN - LEVEL 2
 1/8" = 1'-0"

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DRAWN CD	CHECKED TN

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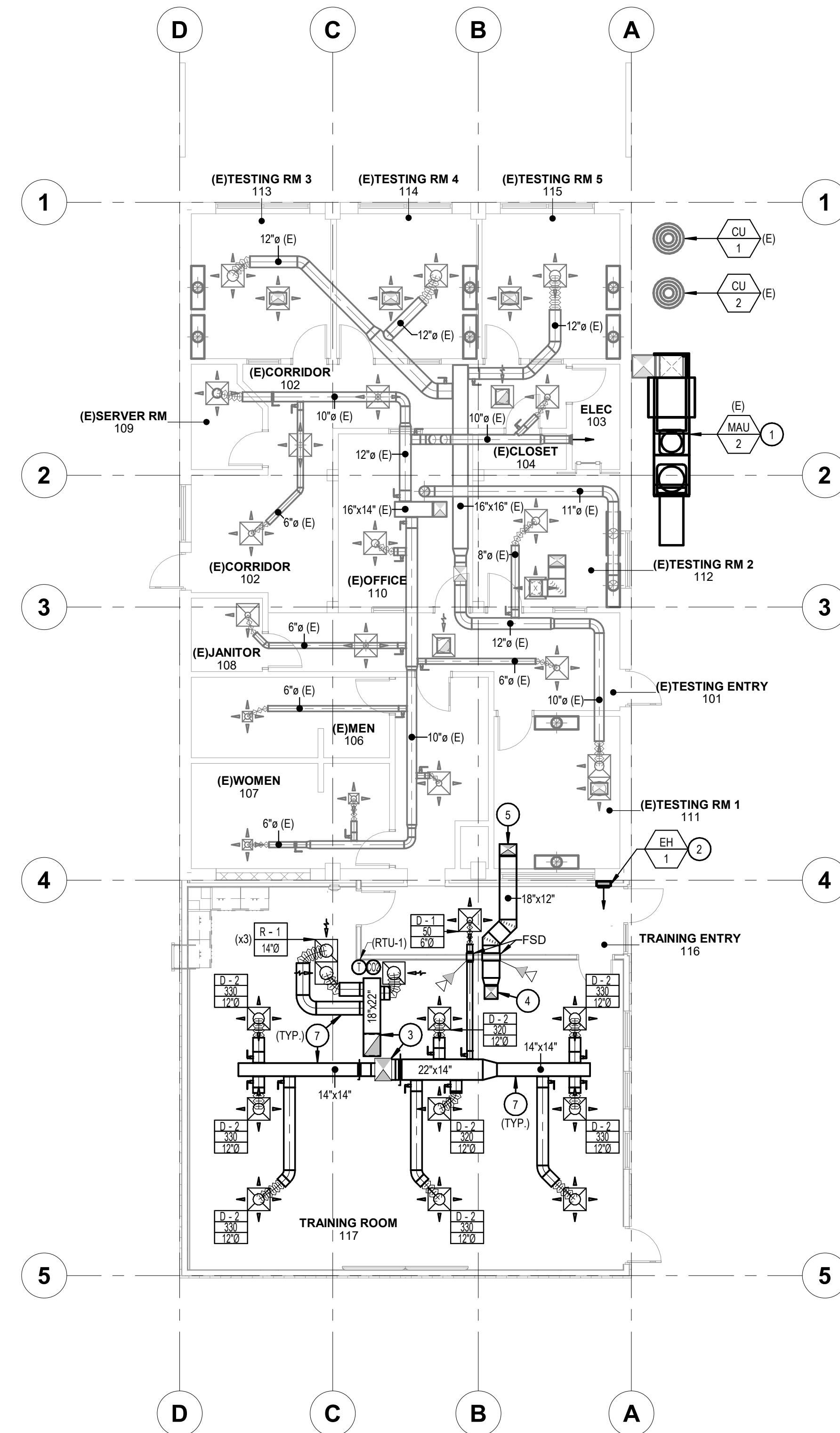
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MECHANICAL DEMOLITION FLOOR PLANS

SHEET
M11
 ORIGINAL SHEET SIZE
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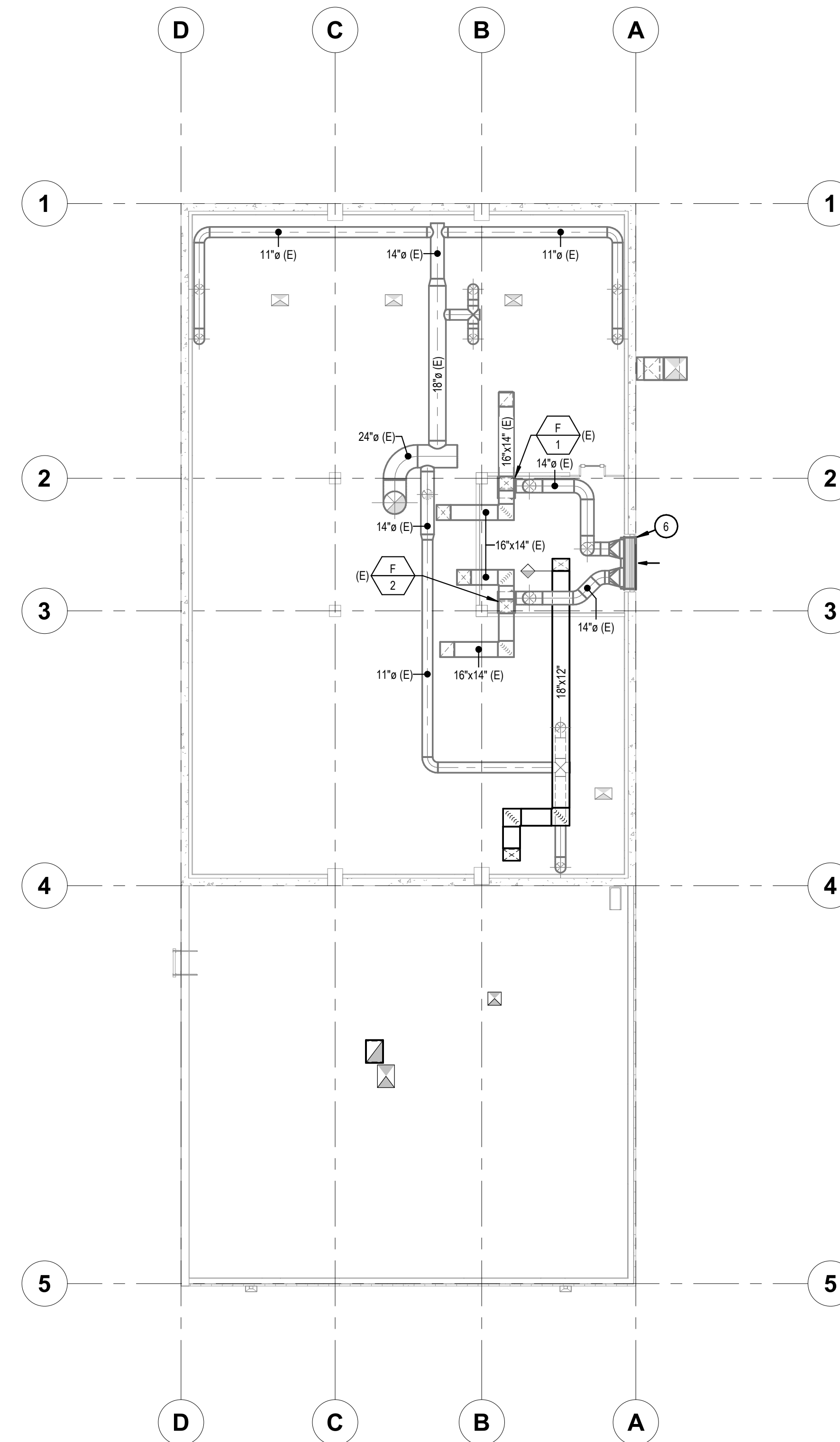


KEYED NOTES:

- 1. RETROFIT EXISTING MAKEUP AIR UNIT WITH COOLING COIL. CONTRACTOR SHALL MODIFYING AND EXTEND THE EXISTING CONCRETE CURB AS REQUIRED TO ACCOMMODATE NEW COOLING SECTION.
- 2. MOUNT ELECTRIC HEATER 12" A.F.F.
- 3. ROUTE SUPPLY AND RETURN DUCTS UP THROUGH ROOF CURB, TRANSITION TO UNIT, AND CONNECT WITH FLEXIBLE CONNECTORS. PROVIDE TURNING VANES IN ELBOWS AND INTERNALLY INSULATE FIRST 15'-0" FROM ROOFTOP UNIT. COORDINATE DUCT DROP LOCATIONS WITH ROOF JOIST MANUFACTURER. SEE ROOF PLAN FOR CONTINUATION.
- 4. ROUTE SUPPLY DUCTS UP THROUGH ROOF CURB, TRANSITION TO UNIT, AND CONNECT WITH FLEXIBLE CONNECTORS. PROVIDE TURNING VANES IN ELBOWS AND INTERNALLY INSULATE FIRST 15'-0" FROM ROOFTOP UNIT. SEE ROOF PLAN FOR CONTINUATION.
- 5. ROUTE SUPPLY DUCT UP. SEE LEVEL 2 PLAN FOR CONTINUATION.
- 6. INSULATE AND COVER EXISTING LOWER LOUVER THAT PREVIOUSLY PROVIDED FRESH AIR FOR THE MEZZANINE MOUNTED MAKEUP AIR UNIT.
- 7. ROUTE DUCTWORK THROUGH CEILING JOISTS. COORDINATE JOIST LOCATIONS AND WEBBING WITH JOIST MANUFACTURER PRIOR TO INSTALLATION. (TYPICAL)



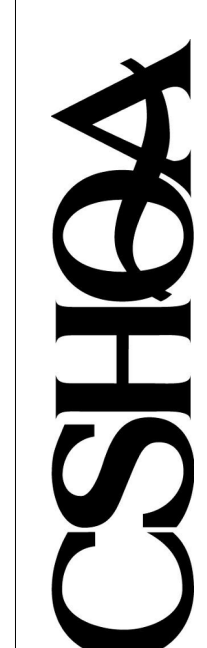
1 MECHANICAL NEW WORK FLOOR PLAN - LEVEL 1
1/8" = 1'-0"



2 MECHANICAL NEW WORK FLOOR PLAN - LEVEL 2
1/8" = 1'-0"

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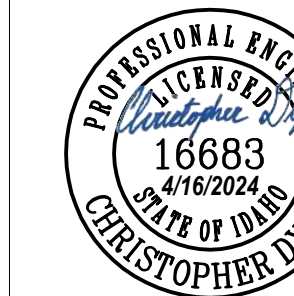
SHEET TITLE
MECHANICAL NEW WORK FLOOR PLANS

SHEET

M21
ORIGINAL SHEET SIZE
24" x 36"



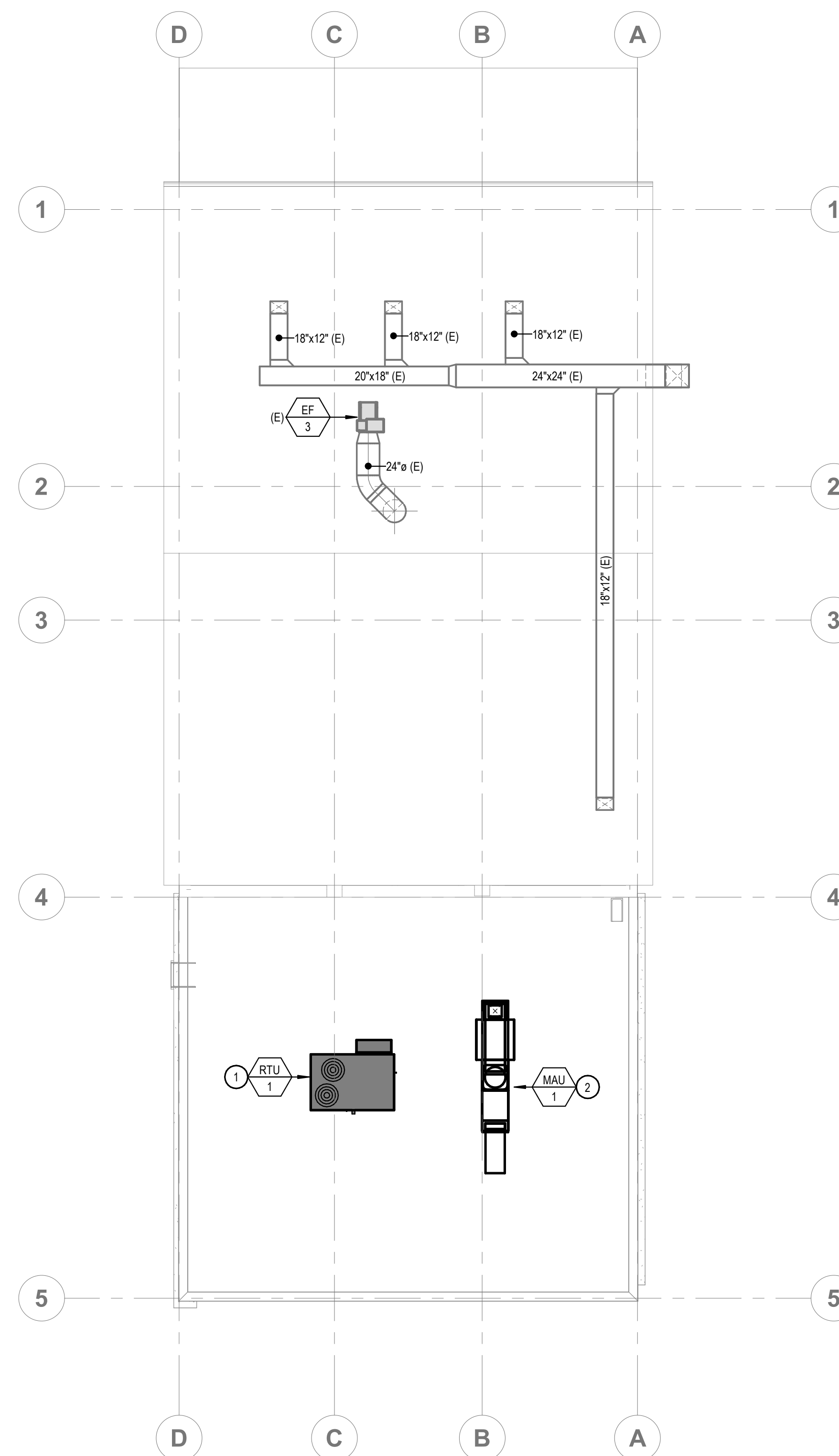
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645 West 25th Street
Idaho Falls, ID 83402
208.523.2862
www.musgrovepa.com
Project No. 24-078



KEYED NOTES:

① SYMBOL USED FOR CALLOUT

1. NEW PACKAGED ROOFTOP UNIT. SEE CURB MOUNTED SPRING RAIL
DETAIL FOR INSTALLATION REQUIREMENTS. KEEP UNIT 10'-0" FROM
THE EDGE OF THE ROOF.
2. NEW MAKEUP AIR UNIT. KEEP UNIT 10'-0" FROM THE EDGE OF THE
ROOF.



MECHANICAL NEW WORK ROOF PLAN
1/8" = 1'-0"

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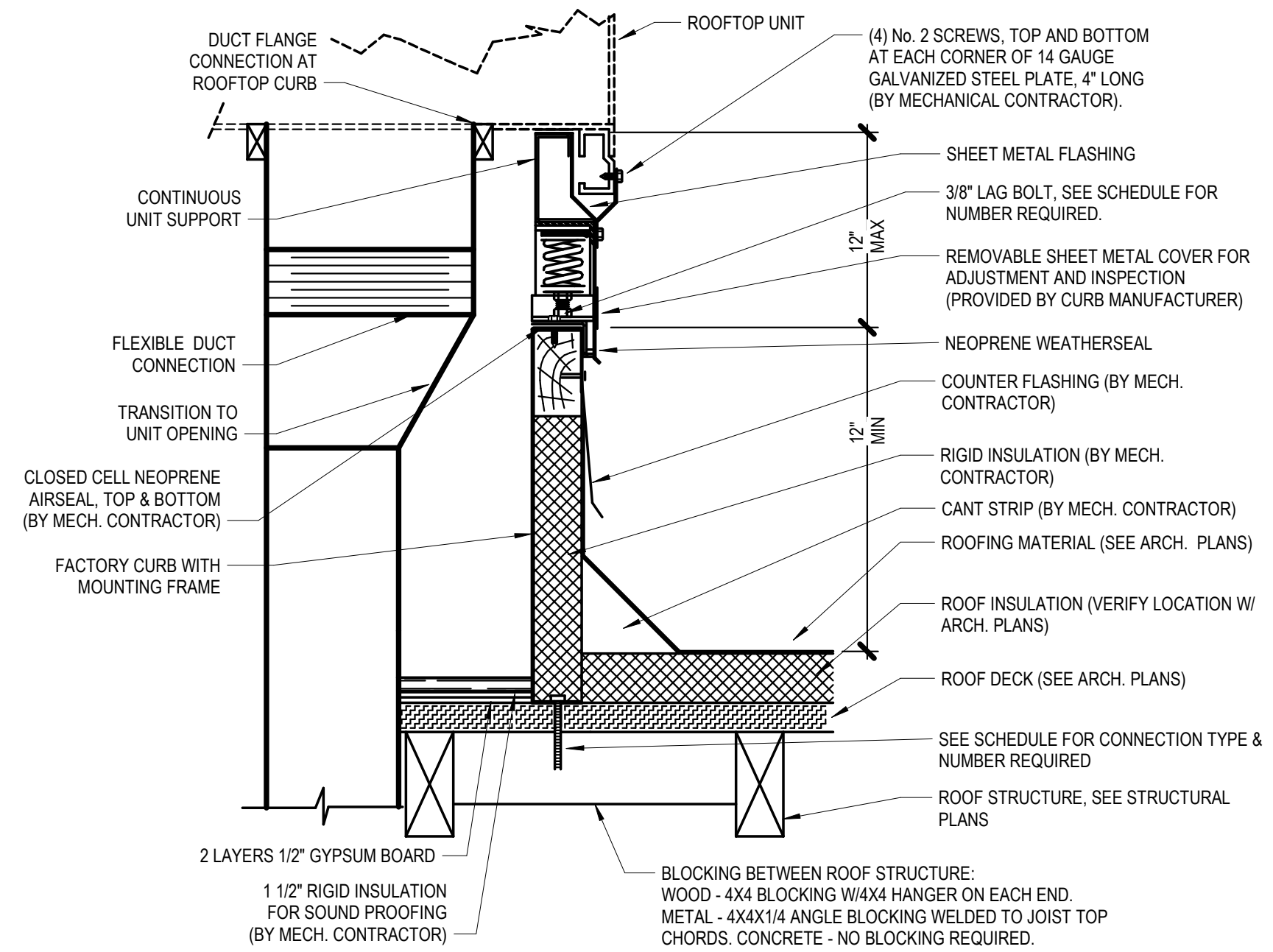
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**MECHANICAL NEW
WORK ROOF PLAN**

SHEET

M31

ORIGINAL SHEET SIZE
24" x 36"

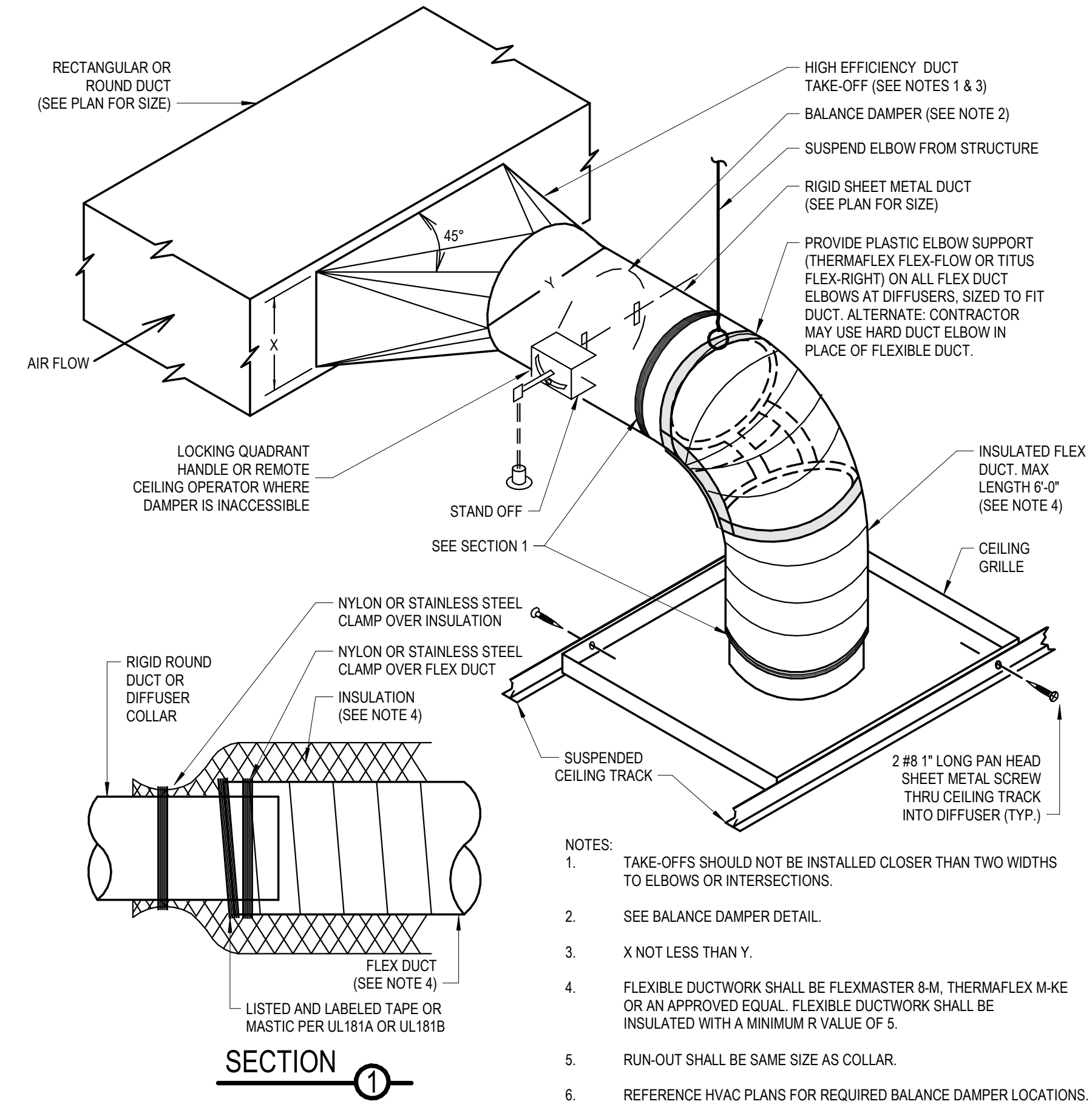
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NOMINAL ROOFTOP UNIT CAPACITY	MAX. WEIGHTS	TOTAL LATERAL FORCE (Fp)	NO. & TYPE OF CONNECTION (EQUALLY SPACED)		
			ROOF STRUCTURE TYPE		
			METAL	WOOD	CONCRETE
7-8 TONS	1050 LBS	1135 LBS	(6) 1/2" LAG BOLT	(6) 1/2" LAG BOLT	(6) 3/8" EXPANSION BOLT
10-12 TONS	1300 LBS	1405 LBS	(8) 1/2" LAG BOLT	(8) 1/2" LAG BOLT	(8) 3/8" EXPANSION BOLT
15-18 TONS	2500 LBS	2700 LBS	(14) 1/2" LAG BOLT	(14) 1/2" LAG BOLT	(14) 3/8" EXPANSION BOLT
20-25 TONS	2800 LBS	3025 LBS	(16) 1/2" LAG BOLT	(16) 1/2" LAG BOLT	(16) 3/8" EXPANSION BOLT

COMPLIES WITH THE INTERNATIONAL BUILDING CODE
 MANUFACTURER SHALL PROVIDE CALCULATIONS FOR THE CURB MOUNTED SPRING RAIL SHOWING COMPLIANCE WITH THE INTERNATIONAL BUILDING CODE (LATEST ADOPTED EDITION).

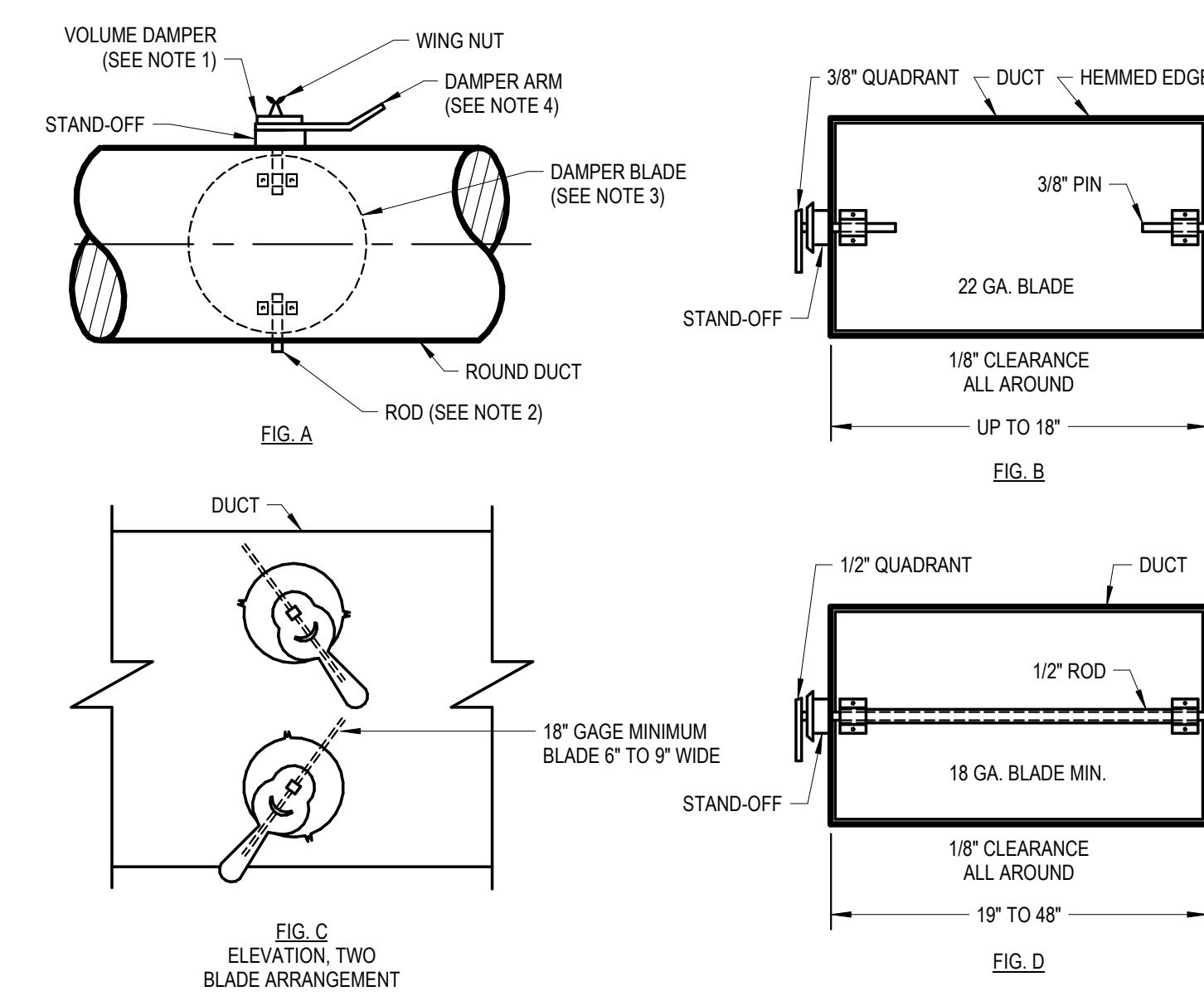
1 ROOFTOP UNIT - CURB MOUNTED SPRING RAIL DETAIL
NTS



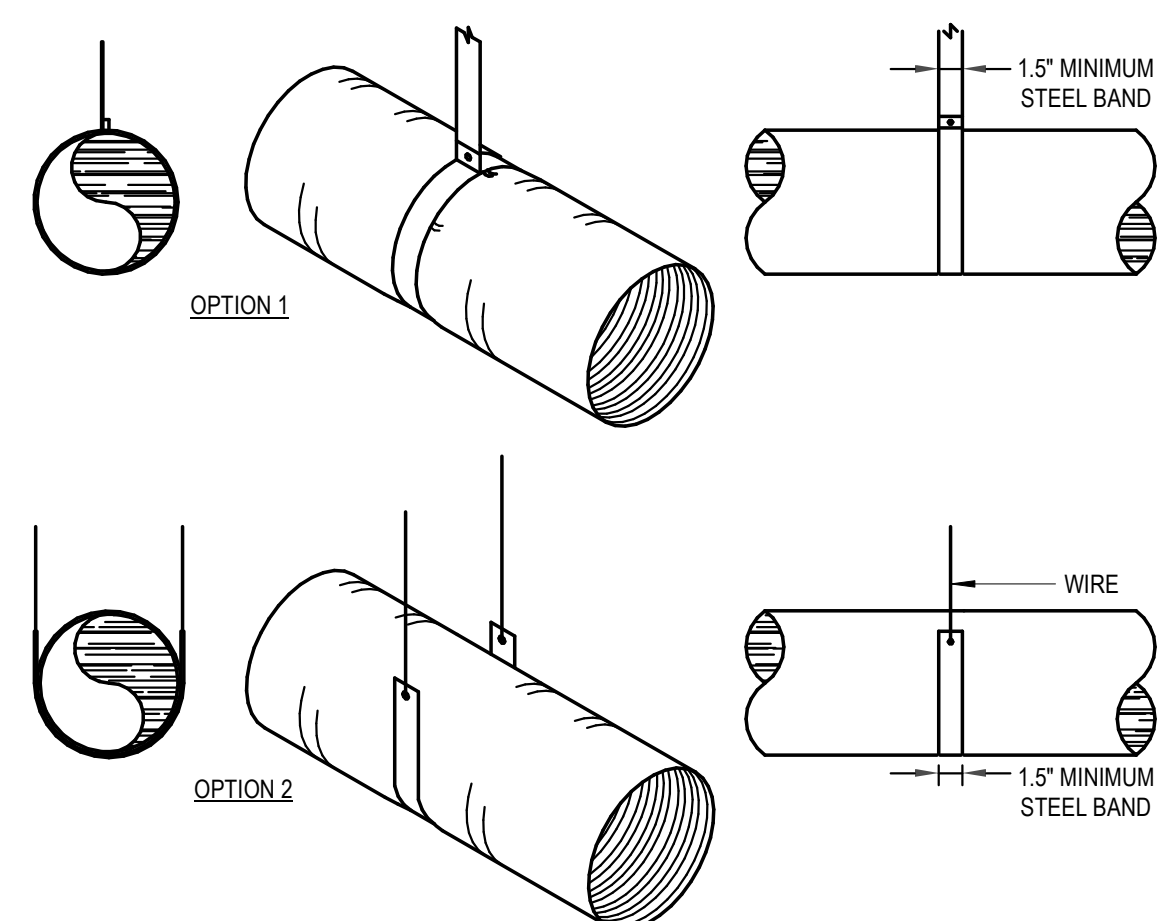
- NOTES:
- TAKE-OFFS SHOULD NOT BE INSTALLED CLOSER THAN TWO WIDTHS TO ELBOWS OR INTERSECTIONS.
 - SEE BALANCE DAMPER DETAIL.
 - X NOT LESS THAN Y.
 - FLEXIBLE DUCTWORK SHALL BE FLEXMASTER 8-M, THERMAFLEX M-KE OR AN APPROVED EQUAL. FLEXIBLE DUCTWORK SHALL BE INSULATED WITH A MINIMUM R-VALUE OF 5.
 - RUN-OUT SHALL BE SAME SIZE AS COLLAR.
 - REFERENCE HVAC PLANS FOR REQUIRED BALANCE DAMPER LOCATIONS.

2 DUCT TAKEOFF DETAIL - HIGH EFFICIENT NTS

- NOTES:
- FOR TAKE-OFFS LARGER THAN 12" DIAMETER, USE A FACTORY MANUFACTURED DAMPER. LOUVERS & DAMPERS, INC. MODEL CD-600 WITH A LOCKING HAND QUADRANT OR EQUAL.
 - ROD CONTINUOUS ON 2" W.G. CLASS AND ON ALL DAMPERS OVER 12" DIAMETER.
 - BLADE 22 GAGE MIN., BUT NOT LESS THAN TWO GAGES MORE THAN THE DUCT GAGE.
 - PROVIDE REMOTE CEILING OPERATOR WHERE DAMPER IS INACCESSIBLE.
 - FOR DUCTS OVER 12" HIGH USE MULTIPLE BLADE DAMPERS (SEE FIG. C).
 - ALTERNATE MANUFACTURERS INCLUDE: AMERICAN WARMING, SAFE-AIR/DOWCO, J&J, LOUVERS & DAMPERS, RUSKIN, NAILOR, ARROW UNITED, POTTORFF, & CESCO.
 - PROVIDE STAND-OFF FOR DAMPER ARMS LOCATED W/EXTERNAL INSULATION.

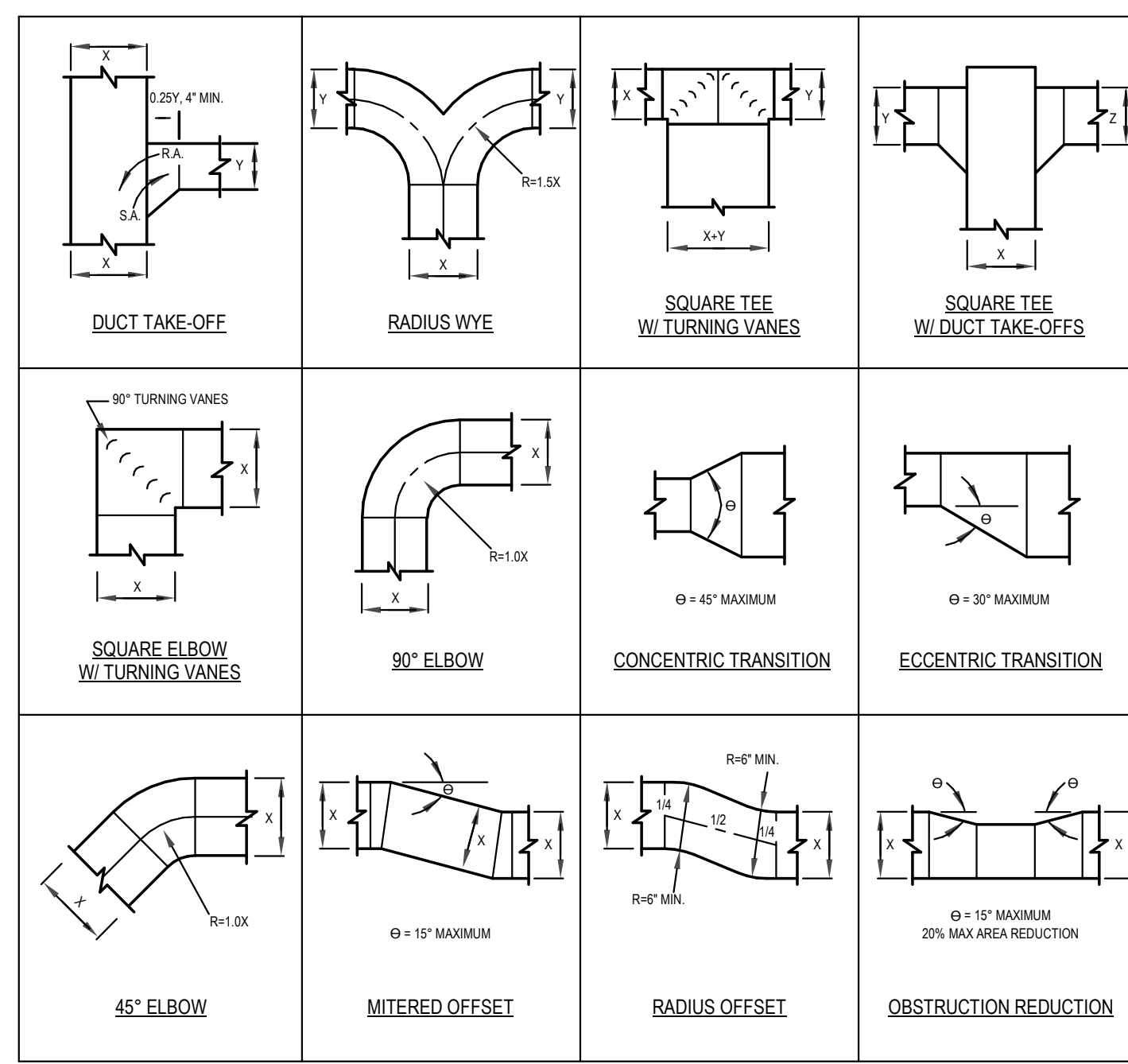


3 BALANCE DAMPER DETAIL NTS



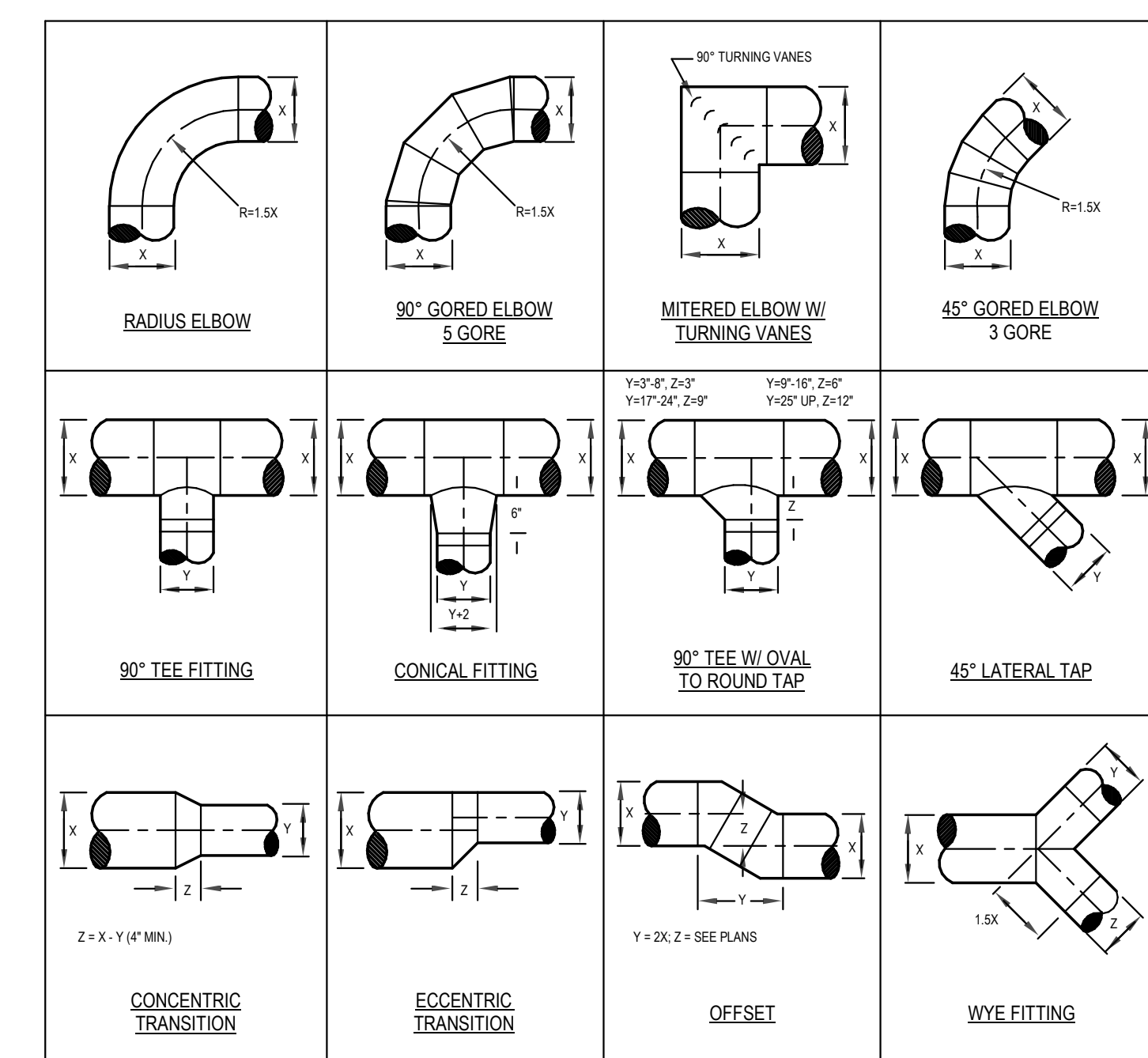
- NOTES:
- SUPPORT SYSTEM SHALL NOT DAMAGE, CRIMP, OR INHIBIT DUCT FREE AREA IN ANY WAY.
 - FLEXIBLE DUCT MUST NOT EXCEED 6'-0" FROM CONNECTION TO TERMINATION.
 - MAXIMUM LENGTH BETWEEN SUPPORTS MUST NOT EXCEED 3'-0" ON CENTER.
 - ATTACH BANDS OR WIRES TO SUPPORT STRUCTURE ABOVE.
 - FLEXIBLE DUCTWORK SHALL BE FLEXMASTER 1-M OR APPROVED EQUAL.
 - FLEXIBLE DUCTWORK SHALL BE INSULATED WITH A MINIMUM R-VALUE OF 6.0.
 - FLEXIBLE DUCTWORK IS FOR INDOOR USE ONLY. DO NOT INSTALL OR STORE PRODUCT WHERE EXPOSURE TO DIRECT SUNLIGHT CAN OCCUR. PROLONGED EXPOSURE TO SUNLIGHT MAY CAUSE DETERIORATION OF VAPOR BARRIER.
 - TERMINAL DEVICES SHALL BE SUPPORTED INDEPENDENTLY OF THE FLEXIBLE DUCTWORK.
 - REPAIR TURN OR DAMAGED VAPOR BARRIER/JACKET WITH DUCT TAPE LISTED AND LABELED TO UL 181B. IF INTERNAL CORE IS PENETRATED, REPLACE FLEXIBLE DUCTWORK.
 - AVOID BENDING DUCT ACROSS SHARP CORNERS OR INCIDENTAL CONTACT WITH METAL FIXTURES, PIPES, OR CONDUITS.
 - FLEXIBLE DUCTWORK SHALL NOT BE INSTALLED WITHIN 4 INCHES OF HOT EQUIPMENT (FURNACES, BOILERS, STEAM PIPES, ETC.) THAT IS ABOVE 250°F.
 - FLEXIBLE DUCTWORK SHALL NOT BE INSTALLED IN CONCRETE, BURIED BELOW GRADE, OR IN CONTACT WITH THE GROUND.
 - DO NOT INSTALL FLEXIBLE DUCTWORK IN EXPOSED CEILING AREA.

4 FLEXIBLE DUCT SUPPORT DETAIL NTS



- NOTE:
- ALL DUCTWORK TRANSITIONS SHALL BE CONSTRUCTED AND INSTALLED TO SMACNA SPECIFICATIONS AND THE ABOVE NOTED STANDARDS. ANY DEVIATIONS SHALL BE COORDINATED WITH THE ENGINEER.

5 RECTANGULAR DUCT FITTING DETAILS NTS



- NOTE:
- ALL DUCTWORK TRANSITIONS SHALL BE CONSTRUCTED AND INSTALLED TO SMACNA SPECIFICATIONS, AND THE ABOVE NOTED STANDARDS. ANY DEVIATIONS SHALL BE COORDINATED WITH THE ENGINEER.

6 ROUND DUCT FITTING DETAILS NTS

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PROJECT 24009	DATE 04-11-24
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SHEET TITLE
MECHANICAL DETAILS

SHEET
M40
ORIGINAL SHEET SIZE
24" x 36"

GAS FIRED MAKE-UP AIR UNIT SCHEDULE

SYMBOL	AREA SERVED	TYPE	SUPPLY FAN				ELECTRICAL		TEMP RISE (°F)	COOLING CAPACITY 98.7°OSA, 63°EWB			GAS HEATING			WEIGHT (LBS)	MANUFACTURER AND MODEL	REMARKS
			CFM	ESP	HP	RPM	V/Ø	MCA		STAGES	TOTAL MBH	SENS. MBH	INPUT MBH	OUTPUT MBH	BURNER EFF.			
MAU-1	TESTING ROOM 112	OUTDOOR, DIRECT GAS FIRED, ROOF MOUNTED	1,300	0.6	0.75	1,700	208/3	18.6	80.0	2	28.7	28.7	106.5	98.0	92%	1,200	CAPTIVEAIRE A1-D.250-15D-MPU	1, 3, 4, 5, 6, 7
MAU-2	LAB SPACES	OUTDOOR, DIRECT GAS FIRED, GRADE MOUNTED	4,700	(E)	5.0	(E)	208/3	19.4	62.0	2	93.8	93.8	315.0	283.0	90%	1,800	CAPTIVEAIRE A2-D.500-20D	2, 7

REMARKS:

- NEW MAKEUP AIR UNIT.
- EXISTING MAKEUP AIR UNIT RETROFITTED WITH NEW COOLING COIL. NEW COOLING COIL INCLUDES A 2-CIRCUIT MODULAR SYSTEM (3-TON & 5-TON CONDENSING UNITS).
- APPROVED ALTERNATE MANUFACTURERS: STERLING, HASTINGS, REZNOR, AND TRANE.
- PROVIDE UNIT WITH E-3 (409) STAINLESS STEEL HEAT EXCHANGER, FREEZE/STAT, FAN SPEED CONTROLLER, DIRECT DRIVE EC MOTOR WITH FACTORY MOUNTED VFD, FILTER RACK AND FILTERS, INSULATED DOWNTURN PLENUM CABINET, 2-POSITION DISCHARGE DAMPER, 100% OSA SCREENED INLET AIR HOOD, AND FULL CURB.
- PROVIDE UNIT WITH TOTALLY ENCLOSED, PREMIUM EFFICIENCY MOTORS AND MOTOR STARTERS.
- PROVIDE UNIT WITH ELECTRONIC MODULATION WITH DUCTSTAT.
- SEE CONTROL DRAWINGS FOR SEQUENCE OF OPERATION.

PACKAGED AIR CONDITIONING SCHEDULE

SYMBOL	AREA SERVED	NOM. TONS	SUPPLY FAN				COOLING CAPACITY 95°OSA, 80°EDB, 62°EWB				GAS HEATING CAPACITY		RTU ELECTRICAL			ELECTRICAL POWER EXHAUST			OSA CFM	MIN. IEER	OPER. WEIGHT (LBS)	MANUFACTURER AND MODEL	REMARKS
			CFM	ESP	BRAKE HP	DRIVE	STAGES	TOTAL MBH	SENS. MBH	INPUT MBH	OUTPUT MBH	MCA	MOC/P	V/Ø	STATIC	MCA	MOC/P	V/Ø					
RTU-1	TRAINING ROOM 117	8.5	3,000	0.6	1.03	DIRECT ECM	2	89.0	73.4	105.6 / 158.4	88.2 / 130.2	41	50	208/3	0.5	11.9	21.4	208/3	475	15.0	2,000	CARRIER 48FCM09 HIGH EFFICIENCY	1, 2, 3, 4, 5, 6, 7

REMARKS:

- APPROVED ALTERNATE MANUFACTURERS: TRANE, LENNOX, DAIKIN, AND YORK.
- PROVIDE UNIT WITH SEVEN-DAY PROGRAMMABLE AUTO-CHANGEOVER WITH 5 DEGREE DEADBAND, ADAPTIVE INTELLIGENT AUTOMATIC START/CONTROL, 3 STAGE HEAT, 2 STAGE COOLING THERMOSTAT HONEYWELL VISIONPRO MODEL TH8321R1001 WITH ECONOMIZER FAULT DETECTION. THERMOSTAT SHALL BE POWERED BY A 24VAC WIRE CONNECTION.
- PROVIDE UNIT WITH MANUFACTURER'S 14" ROOF CURB, MICROMETL WELDED SPRING ISOLATION CURB (SEE DETAIL FOR SEISMIC RESTRAINTS). SEE ROOFTOP UNIT DETAIL FOR MIN. PROVIDE WITH 2" PLEATED MERV 8 FILTER AND FILTER RACK WITH 4 EXTRA SETS. PROVIDE AND FIELD INSTALL HAIL GUARDS, FLUE EXTENDER, HIGH ALTITUDE KIT, THRU-THE-BOTTOM OF CURB ELECTRICAL CONNECTION KIT.
- MAXIMUM "A-WEIGHTED" SUPPLY AIR SOUND RATINGS FOR UNITS 2-18 TONS = 95 DB @ 125 HZ, 90 DB @ 250 HZ, PER ARI STANDARDS 270 & 370.
- PROVIDE WITH MODULATING - MICROMETL GEAR DRIVEN INTEGRATED DRY BULB ECONOMIZER WITH BELIMO LOGIC ACTUATORS AND AUX END SWITCH, MICROMETL MODULATING POWER EXHAUST WITH VARIABLE SPEED MOTOR CONTROLLER (100% RELIEF) WIRING HARNESS AND JADE CONTROLLER (USE JADE ONLY FOR STANDALONE TSTAT), PRESSURE SENSOR SET TO .02 POSITIVE PRESSURE. ELECTRICAL CONTRACTOR TO PROVIDE THE POWER CONNECTION BETWEEN RTU AND THE POWER EXHAUST AND PROVIDE FUSED DISCONNECT AS REQUIRED.
- PROVIDE UNIT WITH CARRIER WALL MOUNTED CO2 SENSOR. OUTSIDE AIR SHALL HAVE A MINIMUM SETPOINT OF ZERO AND THE DAMPER SHALL MODULATE OPEN AS REQUIRED TO SATISFY THE CO2 SENSOR. THE OSA CFM LISTED IN THIS SCHEDULE SHALL BE THE MAXIMUM OSA DAMPER MODE (IF NOT IN ECONOMIZER MODE). THE OUTSIDE AIR DAMPER SHALL CLOSE DURING THE UNOCCUPIED MODE.
- PROVIDE A WATER LEVEL MONITOR IN THE PRIMARY DRAIN PAN INTERLOCKED WITH UNIT FOR UNIT SHUT-DOWN ON DETECTION OF WATER WHEN THE PRIMARY DRAIN IS PLUGGED.

ELECTRIC HEATER SCHEDULE

SYMBOL	AREA SERVED	UNIT TYPE	FAN			ELECTRICAL				MANUFACTURER AND MODEL	REMARKS
			CFM	RPM	HP	KW	STEPS	V/Ø	AMPS		
EH-1	TRAINING ENTRY 116	SURFACE MOUNTED	245	1400	1/8	2	1	208/1	9.6	MARKEL MODEL 3420 SERIES	1, 2, 3

REMARKS:

- APPROVED ALTERNATE MANUFACTURERS: BRASCH, QMARK, INDECO, OUELLET, AND CHROMALOX.
- MOUNT BOTTOM OF HEATER 12" ABOVE FINISH FLOOR.
- PROVIDE UNIT WITH AN INTEGRAL THERMOSTAT. THERMOSTAT SHALL BE COVERED WITH A TAMPER-PROOF ACCESS COVER.

DIFFUSER SCHEDULE

SYMBOL	NOMINAL SIZE	NECK / RUNOUT SIZE	CFM RANGE	REMARKS
D-1 CFM 6'Ø	6X6	6"Ø	0 - 90	1, 2, 3, 4, 5, 6, 7, 8
D-4 CFM 12'Ø	15X15	12"Ø	300 - 500	1, 2, 3, 4, 5, 6, 7

REMARKS:

- ALTERNATE MANUFACTURERS: ANEMOSTAT, J&J REGISTER, NAILOR, METAL-AIRE, TUTTLE & BAILEY, KRUEGER, PRICE, AND UNITED ENERTECH.
- SIZES BASED ON TITUS MODEL TDC SERIES.
- SIZES BASED ON A MAXIMUM NC LEVEL OF 25.
- ALL DIFFUSERS LOCATED IN LAY-IN CEILING AREAS SHALL BE BORDER TYPE 3 AND BE MOUNTED IN MANUFACTURER PROVIDED 24"x24" PANELS. ALL DIFFUSERS LOCATED IN HARD CEILING AREAS SHALL BE BORDER TYPE 6 (BEVELED) SURFACE MOUNTED. SEE ARCHITECTURAL PLANS FOR LOCATIONS OF VARIOUS CEILING TYPES.
- SEE HVAC FLOOR PLANS FOR DIRECTIONAL THROW REQUIREMENTS FOR EACH DIFFUSER.
- WHENEVER THERE IS A DISCREPANCY BETWEEN THE RUNOUT DUCT SIZE SHOWN ON THE PLANS AND THAT SHOWN IN THE SCHEDULE, ALWAYS USE THE LARGER OF THE TWO DUCT SIZES.
- COLOR TO BE SELECTED BY ARCHITECT.

RETURN & EXHAUST GRILLE SCHEDULE

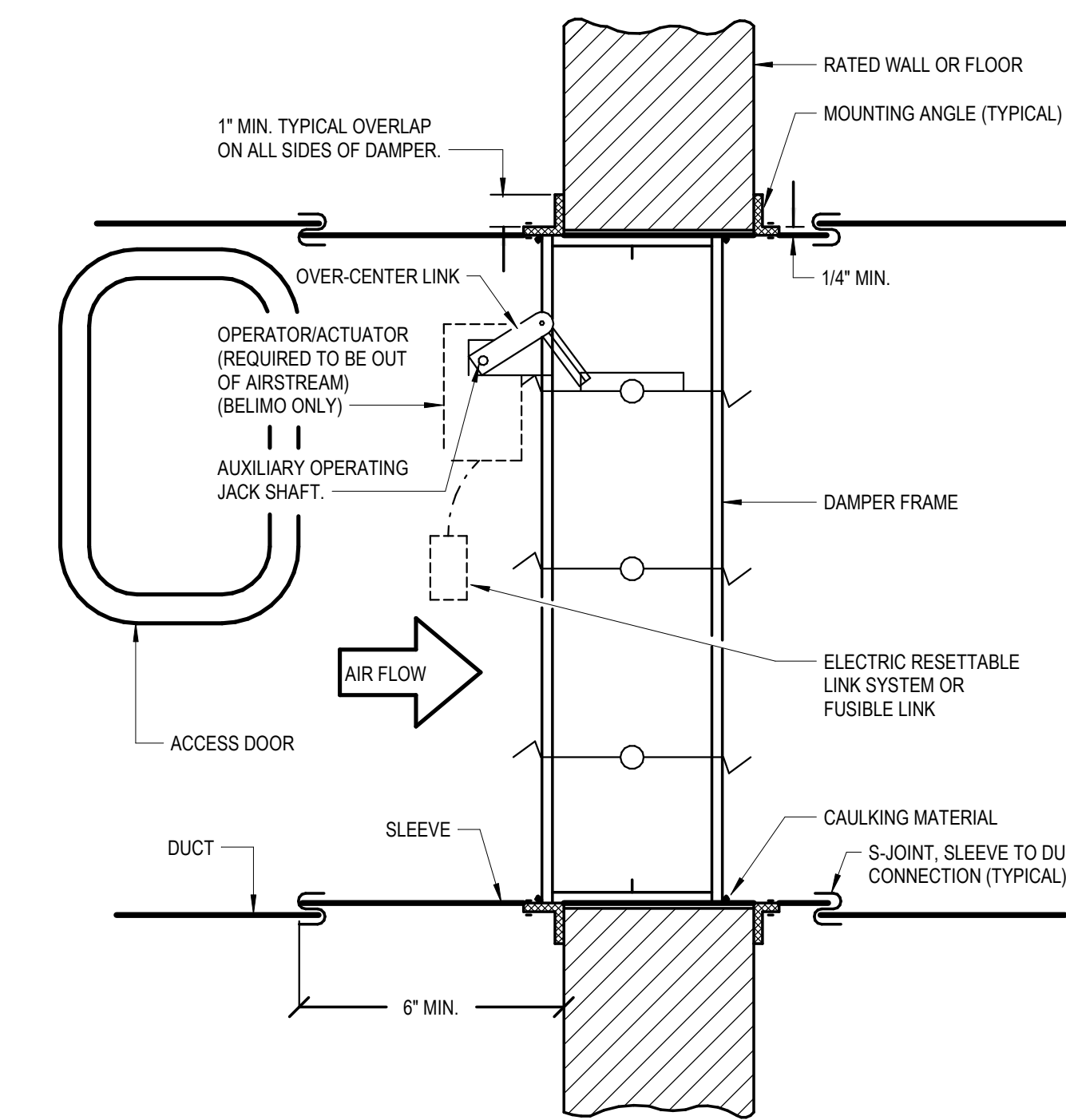
SYMBOL	NOMINAL SIZE	NECK / RUNOUT SIZE	CFM RANGE	REMARKS
R-1 14"Ø	22X22	14"Ø	0-1,000	1, 2, 3, 4, 5, 6

REMARKS:

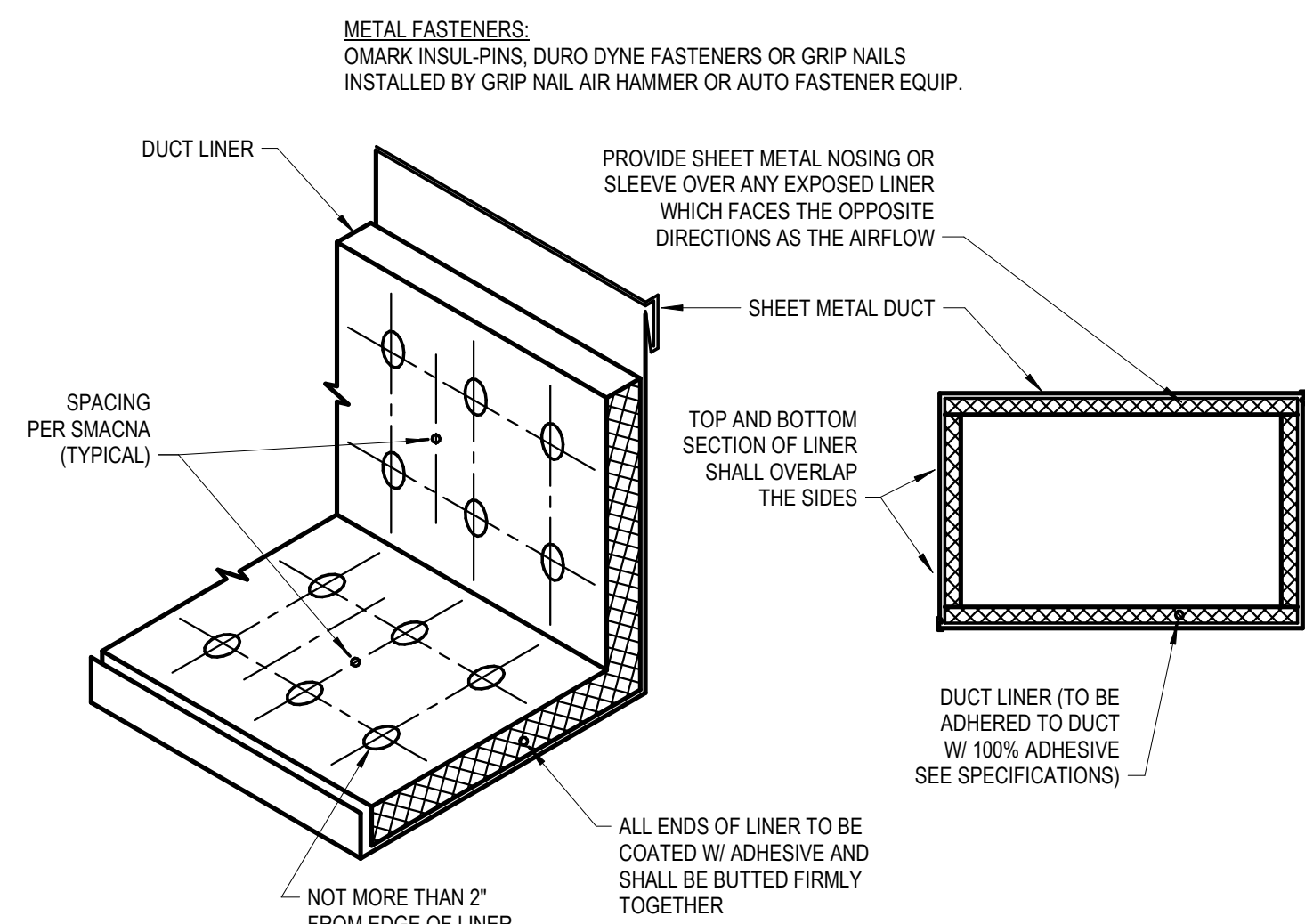
- ALTERNATE MANUFACTURERS: ANEMOSTAT, CARNES, PRICE, NAILOR, METAL-AIRE, TUTTLE & BAILEY, KRUEGER, J&J REGISTER, AND UNITED ENERTECH.
- SIZES BASED ON TITUS MODEL 50F, ALUMINUM EGGCRATE RETURN GRILLE, 1/2" x 1/2" x 1" SPACING (SINGLE CORE). PROVIDE SQUARE TO ROUND TRANSITION (WHERE ROUND RUN-OUT INDICATED).
- SIZES BASED ON A MAXIMUM NC LEVEL OF 25.
- ALL GRILLES LOCATED IN LAY-IN CEILING AREAS SHALL HAVE BORDER #3, UNLESS OTHERWISE INDICATED. ALL GRILLES LOCATED IN HARD CEILING AREAS SHALL HAVE BORDER #1, UNLESS OTHERWISE INDICATED. REFER TO ARCHITECTURAL PLANS FOR LOCATIONS OF VARIOUS CEILING TYPES. SHEET METAL DUCTWORK VISIBLE BEHIND GRILLE SHALL BE PAINTED FLAT BLACK.
- WHENEVER THERE IS A DISCREPANCY BETWEEN THE RUNOUT DUCT SIZE SHOWN ON THE PLANS AND THAT SHOWN IN THE SCHEDULE, ALWAYS USE THE LARGER OF THE TWO DUCT SIZES.
- COLOR TO BE SELECTED BY ARCHITECT.

- NOTES:**
- COMBINATION FIRE AND SMOKE DAMPER SHALL BE MINIMUM UL CLASSIFIED (UL555/UL555S) CLASS II, 250° F.
 - SMOKE DETECTORS SHALL BE SPECIFIED FOR PROPER LISTING AND PROVIDED BY ELECTRICAL DIVISION. WIRING AND FINAL CONNECTION TO COMBINATION FIRE AND SMOKE DAMPER SHALL BE BY ELECTRICAL CONTRACTOR.
 - EACH COMBINATION FIRE AND SMOKE DAMPER SHALL CLOSE BY ACTUATION OF A SMOKE DETECTOR. THE SMOKE DETECTOR LOCATION HAS BEEN SHOWN ON THE MECHANICAL OR ELECTRICAL DRAWINGS IN ACCORDANCE WITH THE FIRE CODE AND ONE OF THE FOLLOWING APPLICABLE METHODS AS PRESCRIBED BY THE INTERNATIONAL MECHANICAL CODE (IMC):
 - IF THE COMBINATION FIRE AND SMOKE DAMPER IS INSTALLED WITHIN A DUCT, SMOKE DETECTOR SHALL BE INSTALLED IN THE DUCT WITHIN 5 FEET OF THE DAMPER WITH NO AIR OUTLETS OR INLETS BETWEEN THE DETECTOR AND THE DAMPER. THE DETECTOR SHALL BE LISTED FOR THE AIR VELOCITY, TEMPERATURE, AND HUMIDITY ANTICIPATED AT THE POINT WHERE IT IS INSTALLED. DUCT SMOKE DETECTORS SHALL BE INSTALLED BY MECHANICAL CONTRACTOR FOR DUCTWORK SMALLER THAN 12"x12" OR 12"Ø. MECHANICAL CONTRACTOR SHALL PROVIDE A MINIMUM 12"x12" OR 12"Ø SECTION OF DUCTWORK FOR INSTALLATION OF IN-DUCT SMOKE DETECTOR. COORDINATE EXACT REQUIREMENTS WITH ELECTRICAL CONTRACTOR. RE: ELECTRICAL DRAWINGS FOR SMOKE DETECTOR LOCATIONS.
 - IF THE COMBINATION FIRE AND SMOKE DAMPER IS INSTALLED WITHIN AN UNDUCTED OPENING IN A WALL, A SPOT-TYPE DETECTOR LISTED FOR RELEASING SERVICE SHALL BE INSTALLED WITHIN 5 FEET HORIZONTALLY OF THE DAMPER. SMOKE DETECTORS SHALL BE INSTALLED BY ELECTRICAL CONTRACTOR. RE: ELECTRICAL DRAWINGS FOR SMOKE DETECTOR LOCATIONS.
 - IF THE COMBINATION FIRE AND SMOKE DAMPER IS INSTALLED IN A CORRIDOR WALL, THE DAMPER MAY BE CONTROLLED BY A SMOKE DETECTION SYSTEM INSTALLED IN THE CORRIDOR. SMOKE DETECTORS SHALL BE INSTALLED BY ELECTRICAL CONTRACTOR. RE: ELECTRICAL DRAWINGS FOR SMOKE DETECTOR LOCATIONS.
 - WHEN A TOTAL-COVERAGE SMOKE-DETECTION SYSTEM IS PROVIDED WITHIN ALL AREAS SERVED BY AN HVAC SYSTEM, COMBINATION FIRE AND SMOKE DAMPERS MAY BE CONTROLLED BY THE SMOKE-DETECTION SYSTEM. SMOKE DETECTORS SHALL BE INSTALLED BY ELECTRICAL CONTRACTOR. RE: ELECTRICAL DRAWINGS FOR SMOKE DETECTOR LOCATIONS.

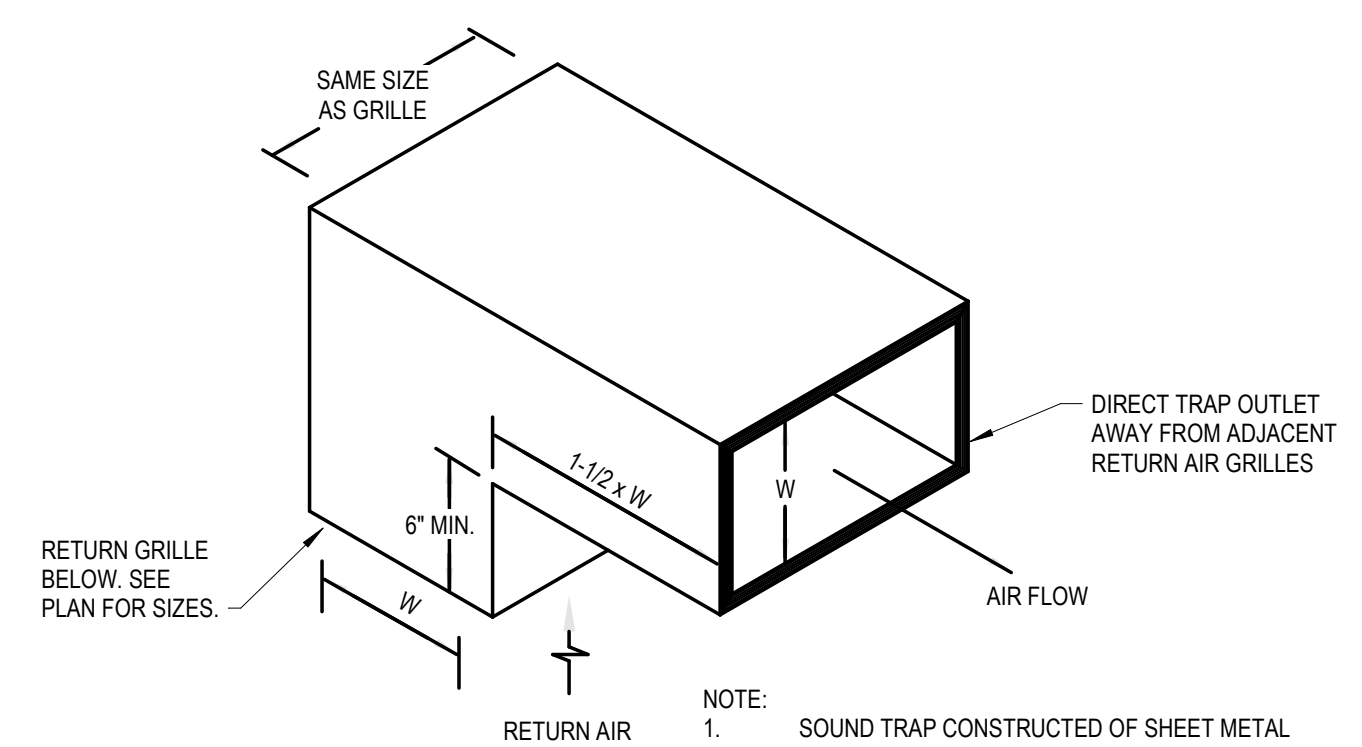
- SMOKE DAMPERS SHALL BE PROVIDED WITH END SWITCH FOR REMOTE LED.
- SMOKE DETECTORS SHALL BE CONNECTED TO THE BUILDING FIRE ALARM SYSTEM BY ELECTRICAL CONTRACTOR.
- COMBINATION FIRE AND SMOKE DAMPER SHALL BE INSTALLED WITH APPROVED MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- APPROVED MANUFACTURER'S SHALL INCLUDE: RUSKIN, NAILOR, PREFECO, CESCO, AIR BALANCE, SAFE-AIR/DOWCO, OR APPROVED EQUAL. BELIMO OPERATORS/ACTUATORS ONLY.



1 COMBINATION FIRE AND SMOKE DAMPER DETAIL NTS



2 DUCT LINER DETAIL NTS



3 SOUND TRAP DETAIL NTS

- NOTE:**
- SOUND TRAP CONSTRUCTED OF SHEET METAL LINED W/ 1" THICK FIBERGLASS ACOUSTICAL INSULATION, OR RIGID FIBERGLASS DUCTBOARD
 - SEE RETURN GRILLE SCHEDULE FOR RETURN GRILLE DIMENSIONS.



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PROJECT 24009	DATE 04-11-24
DRAWN CD	CHECKED TN

REVISED

SHEET TITLE
**MECHANICAL
DETAILS &
SCHEDULES**

SHEET

M50

ORIGINAL SHEET SIZE
24" x 36"

GENERAL :
 THE LAB VENTILATION SYSTEM SHALL CONSIST OF AN EXISTING ROOF MOUNTED UTILITY EXHAUST FAN, AN EXISTING INDOOR WALL SWITCH, AN EXISTING MAKEUP AIR UNIT, AND A NEW MAKEUP AIR UNIT. THE EXISTING EXHAUST FAN (EF-3) INCLUDES A MOTORIZED DAMPER AND A VFD. THE EXISTING MAKEUP AIR UNIT (MAU2) INCLUDES AN EXISTING VARIABLE SPEED SUPPLY FAN WITH A VFD, EXISTING OUTSIDE AIR DAMPER, EXISTING GAS FIRED BURNER, AND A NEW DX COOLING COIL. THE NEW MAKEUP AIR UNIT (MAU1) INCLUDES A VARIABLE SPEED SUPPLY FAN WITH A VFD, OUTSIDE AIR DAMPER, GAS FIRED BURNER, AND A DX COOLING COIL. THE MECHANICAL CONTRACTOR SHALL MODIFY THE EXISTING CONTROLS TO INCLUDE THE NEW MAKEUP AIR UNIT AND COOLING FOR THE EXISTING MAKEUP AIR UNIT.

THE EXISTING MAKEUP AIR UNITS (MAU1 & MAU2) AND THE EXISTING EXHAUST FAN (EF-3) ARE CURRENTLY CONTROLLED BY AN EXISTING WALL SWITCH. THE INTENT OF THIS PROJECT IS TO REPLACE AND RELOCATE MAU1 ALONG WITH ADDING COOLING, AND ADDING COOLING TO MAU2. THE EXISTING CONTROL SYSTEM SHALL BE MODIFIED TO INCLUDE CONTROL OF THE NEW COOLING SYSTEMS. THE FOLLOWING IS AN OUTLINE OF HOW THE SYSTEM SHOULD OPERATE. THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR A COMPLETE AND OPERATIONAL SYSTEM.

WALL SWITCH ENABLED MODE :
 WHEN THE EXISTING WALL SWITCH IS ENABLED THE FOLLOWING SEQUENCE SHALL OCCUR:

1. SEND AN ENABLE COMMAND TO THE EXISTING EXHAUST FAN (EF-3).
 - a. OPEN THE MOTORIZED DAMPER.
2. SEND AN ENABLE COMMAND TO THE NEW MAKEUP AIR UNIT (MAU1).
 - a. OPEN THE OUTSIDE AIR DAMPER.
3. SEND AN ENABLE COMMAND TO THE EXISTING MAKEUP AIR UNIT (MAU2).
 - a. OPEN THE OUTSIDE AIR DAMPER.

WALL SWITCH DISABLED MODE :
 WHEN THE EXISTING WALL SWITCH IS DISABLED THE FOLLOWING SEQUENCE SHALL OCCUR:

1. SEND AN DISABLE COMMAND TO THE NEW MAKEUP AIR UNIT (MAU1).
 - a. CLOSE THE OUTSIDE AIR DAMPER.
2. SEND AN DISABLE COMMAND TO THE EXISTING MAKEUP AIR UNIT (MAU2).
 - a. CLOSE THE OUTSIDE AIR DAMPER.
3. SEND AN DISABLE COMMAND TO THE EXISTING EXHAUST FAN (EF-3).
 - a. CLOSE THE MOTORIZED DAMPER.

COOLING MODE OF OPERATION (DX COOLING) :
 THE DX COOLING MODE OF OPERATION SHALL BE ENABLED WHENEVER THE FOLLOWING CONDITION EXISTS:

1. THE DISCHARGE AIR TEMPERATURE INCREASES ABOVE THE DISCHARGE AIR TEMPERATURE COOLING SET POINT.

WHEN THE ABOVE CONDITION IS MET THE UNIT CONTROLLER SHALL SEQUENCE THE FOLLOWING:

1. SEND AN ENABLE COMMAND TO THE DX COOLING SYSTEM (COMPRESSORS / CONDENSER FANS) FOR THE NEW MAKEUP AIR UNIT (MAU1).
 - a. THE UNIT'S CONTROLLER SHALL STAGE THE COMPRESSORS TO MAINTAIN THE DISCHARGE AIR TEMPERATURE COOLING SET POINT.

2. SEND AN ENABLE COMMAND TO THE NEW DX COOLING SYSTEM (COMPRESSORS / CONDENSER FANS) FOR THE EXISTING MAKEUP AIR UNIT (MAU2).

- a. THE UNIT'S CONTROLLER SHALL STAGE THE COMPRESSORS TO MAINTAIN THE DISCHARGE AIR TEMPERATURE COOLING SET POINT.

THE COOLING MODE OF OPERATION SHALL BE DISABLED WHENEVER THE FOLLOWING CONDITION EXISTS:

1. THE DISCHARGE AIR TEMPERATURE DECREASES BELOW THE DISCHARGE AIR TEMPERATURE COOLING SET POINT.

WHEN THE ABOVE CONDITION IS MET THE UNIT CONTROLLER SHALL SEQUENCE THE FOLLOWING:

1. SEND A DISABLE COMMAND TO THE DX COOLING SYSTEM (COMPRESSORS / CONDENSER FANS) FOR THE NEW MAKEUP AIR UNIT (MAU1).
2. SEND A DISABLE COMMAND TO THE NEW DX COOLING SYSTEM (COMPRESSORS / CONDENSER FANS) FOR THE EXISTING MAKEUP AIR UNIT (MAU2).

HEATING MODE OF OPERATION :
 THE HEATING MODE OF OPERATION SHALL BE ENABLED WHENEVER THE FOLLOWING CONDITION EXISTS:

1. THE DISCHARGE AIR TEMPERATURE DECREASES BELOW THE DISCHARGE AIR TEMPERATURE HEATING SET POINT.

WHEN THE ABOVE CONDITION IS MET THE UNIT CONTROLLER SHALL SEQUENCE THE FOLLOWING:

1. SEND AN ENABLE COMMAND TO THE HEATING SYSTEM FOR THE NEW MAKEUP AIR UNIT (MAU1).
 - a. THE UNIT'S CONTROLLER SHALL MODULATE THE GAS VALVE TO MAINTAIN THE DISCHARGE AIR TEMPERATURE HEATING SET POINT.
2. SEND AN ENABLE COMMAND TO THE HEATING SYSTEM FOR THE EXISTING MAKEUP AIR UNIT (MAU2).
 - a. THE UNIT'S CONTROLLER SHALL MODULATE THE GAS VALVE TO MAINTAIN THE DISCHARGE AIR TEMPERATURE HEATING SET POINT.

THE HEATING MODE OF OPERATION SHALL BE DISABLED WHENEVER THE FOLLOWING CONDITION EXISTS:

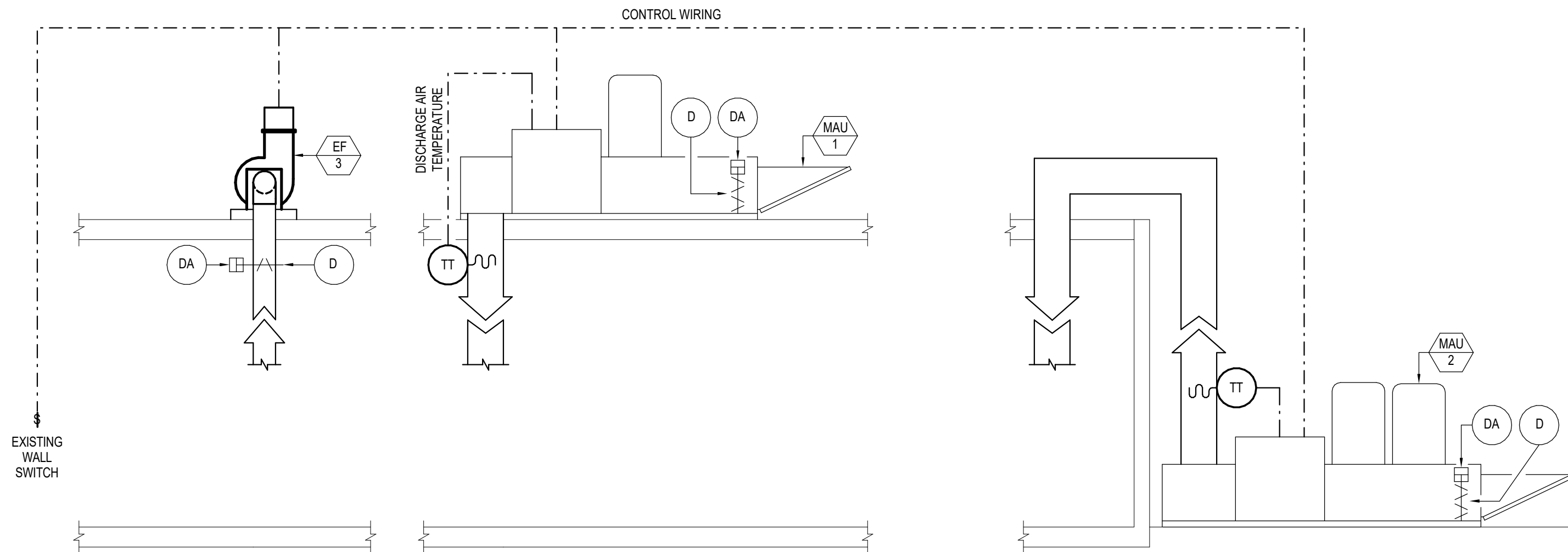
1. THE DISCHARGE AIR TEMPERATURE INCREASES ABOVE THE DISCHARGE AIR TEMPERATURE HEATING SET POINT.

WHEN THE ABOVE CONDITION IS MET THE UNIT CONTROLLER SHALL SEQUENCE THE FOLLOWING:

1. SEND A DISABLE COMMAND TO THE HEATING SYSTEM FOR THE NEW MAKEUP AIR UNIT (MAU1).
2. SEND A DISABLE COMMAND TO THE HEATING SYSTEM FOR THE EXISTING MAKEUP AIR UNIT (MAU2).

THE DISCHARGE AIR TEMPERATURE COOLING SET POINT SHALL BE 75°F (ADJUSTABLE).
 THE DISCHARGE AIR TEMPERATURE HEATING SET POINT SHALL BE 65°F (ADJUSTABLE).

SAFETIES
 BOTH MAKEUP AIR UNITS SHALL INCLUDE FREEZE STATS TO PROTECT THE BUILDING FROM FREEZING.



LAB VENTILATION SYSTEM (CONSTANT VOLUME) CONTROL SYSTEM SCHEMATIC

(MAU-1, MAU-2, & EF-3)

LAB VENTILATION SYSTEM (CONSTANT VOLUME) CONTROL SEQUENCE OF OPERATION

(MAU-1, MAU-2, & EF-3)

GENERAL :
 THE PACKAGED ROOFTOP UNIT W/ CONSTANT VOLUME (CV) AND DEMAND CONTROL VENTILATION SHALL CONSIST OF AN OUTSIDE AIR INTAKE W/ MODULATING DAMPERS, A RETURN AIR INTAKE W/ MODULATING DAMPERS, AN EXHAUST FAN W/ A VFD, A SUPPLY FAN, A GAS-FIRED HEAT EXCHANGER, A DX COOLING COIL, A SPACE TEMPERATURE SENSOR, A CARBON DIOXIDE SENSOR, AND A PRESSURE SENSOR. THE MECHANICAL CONTRACTOR SHALL PROVIDE A NEW CONTROL PACKAGE DEDICATED TO THE COMPLETE OPERATION OF THE UNIT.

THE SUPPLY FAN SHALL START AND STOP ON THE MASTER WEEKLY AND HOLIDAY SCHEDULE SET AT THE THERMOSTAT.

THE TEMPERATURE SENSOR SHALL SIGNAL THE UNIT CONTROLLER ITS TEMPERATURE AND THE TEMPERATURE OF THE HEATING AND COOLING SET POINTS.

THE CARBON DIOXIDE SENSOR SHALL SIGNAL THE UNIT CONTROLLER THE SPACE CO₂ LEVEL.

THE UNIT CONTROLLER SHALL BE CAPABLE OF BEING MANUALLY RESET TO THE OCCUPIED MODE FOR A 2-HOUR TIME PERIOD (ADJUSTABLE) UPON A SIGNAL FROM AN OVERRIDE BUTTON LOCATED ON THE TEMPERATURE SENSOR.

MORNING WARM-UP / COOL-DOWN :
 MORNING WARM-UP SHALL BE CONTROLLED BY AN OPTIMUM START PROVIDED BY THE UNIT CONTROLLER THAT AIDS IN THE REDUCTION OF ENERGY COSTS DURING A BUILDING'S TRANSITION FROM UNOCCUPIED TO OCCUPIED MODE. THIS SCENARIO IS ACCOMPLISHED BY TURNING ON THE PRE-HEATING / PRE-COOLING AS LATE AS POSSIBLE TO REACH COMFORT LEVELS PRIOR TO OCCUPANCY.

THE UNIT CONTROLLER OPTIMUM START MODE SHALL CONTINUOUSLY MONITOR, CALCULATE AND ADJUST THE FOLLOWING VARIABLES IN ORDER TO DETERMINE THE OPTIMAL START TIMES:

1. OUTSIDE AIR TEMPERATURE.
2. RATE OF WARM-UP AFTER EQUIPMENT START-UP.
3. TEMPERATURE DIFFERENCE BETWEEN THE ZONE TEMPERATURE AND THE HEATING / COOLING SET POINTS.
4. AMOUNT OF TIME REQUIRED TO RAISE OR LOWER THE ZONE TEMPERATURE 1°F.
5. THE OUTSIDE AIR DAMPER SHALL REMAIN CLOSED DURING THE WARM-UP MODE.

OCCUPIED MODE :
 WHEN THE UNIT IS SCHEDULED INTO THE OCCUPIED MODE THE UNIT CONTROLLER SHALL SEQUENCE THE FOLLOWING:

1. SEND AN ENABLE COMMAND TO THE OUTSIDE AIR / RETURN AIR DAMPERS.
 - a. THE DAMPERS SHALL MODULATE TO PROVIDE THE MINIMUM AMOUNT OF OUTSIDE AIRFLOW (AS INDICATED IN THE ROOFTOP UNIT SCHEDULE).
2. SEND AN ENABLE COMMAND TO THE SUPPLY FAN.

THE OCCUPIED MODE SPACE TEMPERATURE COOLING SET POINT SHALL BE SET AT 75°F (ADJUSTABLE).
 THE OCCUPIED MODE SPACE TEMPERATURE HEATING SET POINT SHALL BE SET AT 70°F (ADJUSTABLE).

UNOCCUPIED MODE :
 WHEN THE UNIT IS SCHEDULED INTO THE UNOCCUPIED MODE, THE UNIT CONTROLLER SHALL SEQUENCE THE FOLLOWING:

1. SEND A DISABLE COMMAND TO THE OUTSIDE AIR / RETURN AIR DAMPERS.
 - a. THE DAMPERS SHALL MODULATE TO PROVIDE 100% RETURN AIR.
2. SEND A DISABLE COMMAND TO THE SUPPLY FAN.

THE SUPPLY FAN SHALL CYCLE W/ THE HEATING AND COOLING MODES OF OPERATION TO MAINTAIN THE UNOCCUPIED SPACE TEMPERATURE SET POINTS.

THE UNOCCUPIED MODE SPACE TEMPERATURE COOLING SET POINT SHALL BE SET AT 85°F (ADJUSTABLE).
 THE UNOCCUPIED MODE SPACE TEMPERATURE HEATING SET POINT SHALL BE SET AT 55°F (ADJUSTABLE).

COOLING MODE OF OPERATION (DRY BULB ECONOMIZER) :
 THE DRY BULB ECONOMIZER COOLING MODE OF OPERATION SHALL BE ENABLED WHENEVER BOTH OF THE FOLLOWING CONDITIONS EXIST:

1. THE SPACE TEMPERATURE INCREASES ABOVE THE SPACE TEMPERATURE COOLING SET POINT.
2. THE OUTSIDE AIR TEMPERATURE IS BELOW THE RETURN AIR TEMPERATURE.

WHEN THE ABOVE CONDITIONS ARE MET THE UNIT CONTROLLER SHALL SEQUENCE THE FOLLOWING:

1. SEND AN ENABLE COMMAND TO THE OUTSIDE AIR / RETURN AIR DAMPERS.
 - a. THE DAMPERS SHALL MODULATE UP TO 100% OUTSIDE AIR TO MAINTAIN THE SPACE TEMPERATURE COOLING SET POINT.

COOLING MODE OF OPERATION (DX COOLING) :
 THE DX COOLING MODE OF OPERATION SHALL BE ENABLED WHENEVER BOTH THE FOLLOWING CONDITIONS EXIST:

1. THE SPACE TEMPERATURE INCREASES ABOVE THE SPACE TEMPERATURE COOLING SET POINT.
2. THE OUTSIDE AIR / RETURN AIR DAMPERS ARE POSITIONED AT EITHER THEIR MINIMUM OR MAXIMUM OUTSIDE AIR SETTINGS.

WHEN THE ABOVE CONDITIONS ARE MET THE UNIT CONTROLLER SHALL SEQUENCE THE FOLLOWING:

1. SEND AN ENABLE COMMAND TO THE DX COOLING SYSTEM (COMPRESSORS / CONDENSER FANS).
 - a. THE UNIT'S CONTROLLER SHALL STAGE THE COMPRESSORS TO MAINTAIN THE SPACE TEMPERATURE COOLING SET POINT.

THE COOLING MODE OF OPERATION SHALL BE DISABLED WHENEVER THE FOLLOWING CONDITION EXISTS:

1. THE SPACE TEMPERATURE DECREASES BELOW THE SPACE TEMPERATURE COOLING SET POINT.

WHEN THE ABOVE CONDITION IS MET THE UNIT CONTROLLER SHALL SEQUENCE THE FOLLOWING:

1. SEND A DISABLE COMMAND TO THE DX COOLING SYSTEM (COMPRESSORS / CONDENSER FANS).

HEATING MODE OF OPERATION :
 THE HEATING MODE OF OPERATION SHALL BE ENABLED WHENEVER THE FOLLOWING CONDITIONS EXIST:

1. THE SPACE TEMPERATURE DECREASES BELOW THE SPACE TEMPERATURE HEATING SET POINT.

WHEN THE ABOVE CONDITION IS MET THE UNIT CONTROLLER SHALL SEQUENCE THE FOLLOWING:

1. SEND AN ENABLE COMMAND TO GAS-FIRED HEATING SYSTEM.
 - a. THE UNIT CONTROLLER SHALL STAGE THE HEATING SYSTEM TO MAINTAIN THE SPACE TEMPERATURE HEATING SET POINT.

THE SPACE TEMPERATURE HEATING MODE OF OPERATION SHALL BE DISABLED WHENEVER THE FOLLOWING CONDITION EXISTS:

1. THE SPACE TEMPERATURE INCREASES ABOVE THE SPACE TEMPERATURE HEATING SET POINT.

WHEN THE ABOVE CONDITION IS MET THE UNIT CONTROLLER SHALL SEQUENCE THE FOLLOWING:

1. SEND A DISABLE COMMAND TO THE GAS-FIRED HEATING SYSTEM.
2. ALLOW THE UNIT TO ENTER BACK INTO THE OCCUPIED / UNOCCUPIED MODE OF OPERATION.

INDOOR AIR QUALITY (IAQ) OPERATION :
 WHENEVER THE ROOFTOP UNIT IS IN THE OCCUPIED MODE AND THE SUPPLY FAN IS ON, THE UNIT CONTROLLER SHALL CONTINUOUSLY CALCULATE THE MINIMUM DAMPER POSITION NECESSARY TO MAINTAIN THE SPACE CO₂ SET POINT. AS THE CO₂ LEVEL INCREASES ABOVE THE SET POINT, THE ROUTINE SHALL INCREASE THE OUTSIDE AIR REQUIREMENT AND AS THE CO₂ LEVEL FALLS BELOW THE SET POINT, THE ROUTINE SHALL DECREASE THE CALCULATED VALUE. THE MINIMUM AND MAXIMUM OUTSIDE AIR DAMPER POSITIONS SHALL BE EQUAL TO THE OUTSIDE AIRFLOWS LISTED IN THE ROOFTOP UNIT SCHEDULE.

THE SPACE CO₂ SET POINT SHALL BE SET AT 1100 PPM (ADJUSTABLE).

EXHAUST SYSTEM :
 THE EXHAUST SYSTEM SHALL BE ENABLED WHENEVER THE FOLLOWING CONDITIONS EXIST:

1. THE SUPPLY FAN IS ENABLED.
2. THE SPACE STATIC PRESSURE INCREASES TO THE DIFFERENTIAL PRESSURE SET POINT OF (POSITIVE) +0.01" W.G. (ADJUSTABLE).

WHEN THE ABOVE CONDITIONS ARE MET THE UNIT CONTROLLER SHALL ENABLE THE FOLLOWING:

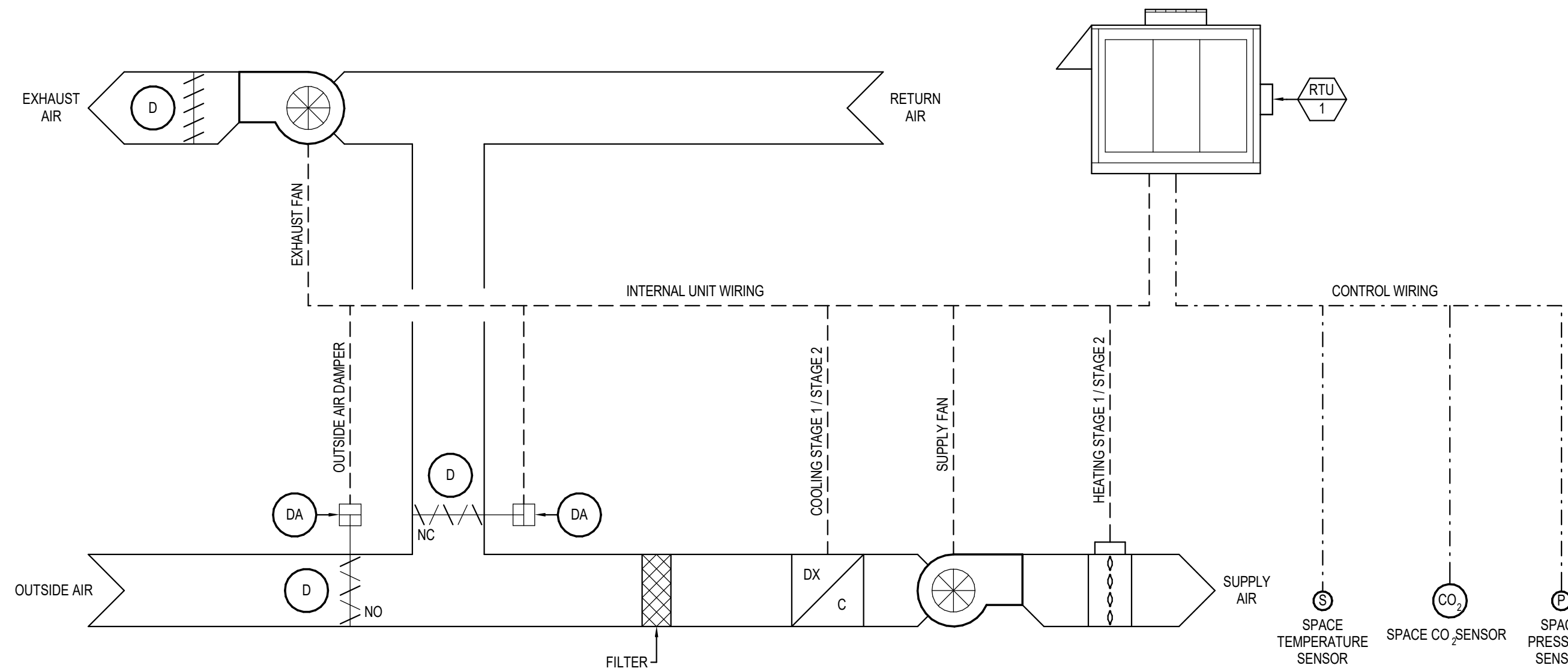
1. SEND AN ENABLE COMMAND TO THE EXHAUST FAN.
 - c. THE UNIT CONTROLLER SHALL MODULATE THE VFD TO MAINTAIN THE SPACE STATIC PRESSURE SET POINT.

THE EXHAUST SYSTEM SHALL BE DISABLED WHENEVER ONE OF THE FOLLOWING CONDITIONS EXISTS:

1. THE SUPPLY FAN IS OFF.
2. THE SPACE PRESSURE DECREASES TO (NEGATIVE) -0.01" W.G. (ADJUSTABLE).

WHEN ONE OF THE ABOVE CONDITIONS IS MET, THE UNIT CONTROLLER SHALL ENABLE THE FOLLOWING:

1. SEND A DISABLE COMMAND TO THE EXHAUST FAN.

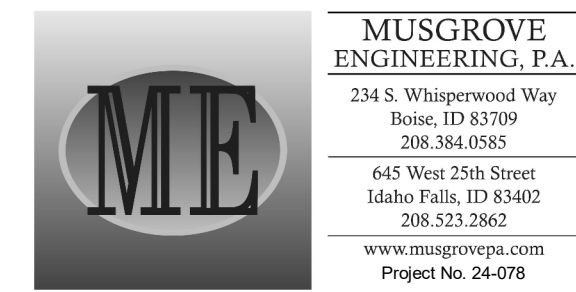


PACKAGED ROOFTOP UNIT W/ CONSTANT VOLUME (CV) W/ DEMAND CONTROLLED VENTILATION CONTROL SYSTEM SCHEMATIC

(RTU-1)

PACKAGED ROOFTOP UNIT W/ CONSTANT VOLUME (CV) W/ DEMAND CONTROLLED VENTILATION CONTROL SEQUENCE OF OPERATION

(RTU-1)

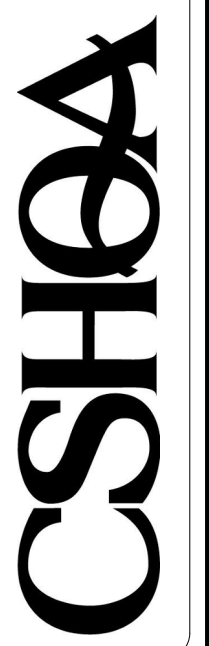


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CD	TN

REVISED

SHEET TITLE
MECHANICAL CONTROLS

SHEET

M60
 ORIGINAL SHEET SIZE
 24" x 36"

ELECTRICAL LEGEND - LIGHTING

REFERENCE FIXTURE SCHEDULE FOR MOUNTING TYPE, MOUNTING HEIGHT, AND FIXTURE TYPE	
	DOUBLE FACE EXIT SIGN, CEILING MOUNTED, PROVIDE UNSWITCHED CONDUCTOR
	WALL MOUNTED DOUBLE FACE EXIT SIGN PROVIDE UNSWITCHED CONDUCTOR. MOUNT AT +8'-0" UNO.
	SINGLE FACE EXIT SIGN, CEILING MOUNTED PROVIDE UNSWITCHED CONDUCTOR.
	WALL MOUNTED SINGLE FACE EXIT SIGN PROVIDE UNSWITCHED CONDUCTOR. MOUNT AT +8'-0" UNO.
	ARROW INDICATES DIRECTION TO BE SHOWN ON SIGN.
	1'X1' LIGHT FIXTURE.
	1'X1' LIGHT FIXTURE. PROVIDE EMERGENCY BATTERY BACKUP CONNECTED TO AN UNSWITCHED CONDUCTOR.
	TRACK LIGHT
	1'X4' LIGHT FIXTURE.
	1'X4' LIGHT FIXTURE. PROVIDE EMERGENCY BATTERY BACKUP CONNECTED TO AN UNSWITCHED CONDUCTOR.
	2'X4' LIGHT FIXTURE.
	2'X4' LIGHT FIXTURE. PROVIDE EMERGENCY BATTERY BACKUP CONNECTED TO AN UNSWITCHED CONDUCTOR.
	2'X2' LIGHT FIXTURE.
	2'X2' LIGHT FIXTURE. PROVIDE EMERGENCY BATTERY BACKUP CONNECTED TO AN UNSWITCHED CONDUCTOR.
	DIRECT/INDIRECT LIGHT FIXTURE. SEE SCHEDULE FOR LENGTH.
	DIRECT/INDIRECT LIGHT FIXTURE. SEE SCHEDULE FOR LENGTH. PROVIDE EMERGENCY BATTERY BACKUP CONNECTED TO AN UNSWITCHED CONDUCTOR
	STRIP LIGHT FIXTURE. SEE SCHEDULE FOR LENGTH.
	STRIP LIGHT FIXTURE. SEE SCHEDULE FOR LENGTH. PROVIDE EMERGENCY BATTERY BACKUP CONNECTED TO AN UNSWITCHED CONDUCTOR
	WALL MOUNTED LIGHT FIXTURE.
	WALL MOUNTED LIGHT FIXTURE. PROVIDE EMERGENCY BATTERY BACKUP CONNECTED TO AN UNSWITCHED CONDUCTOR.
	RECESSED LIGHT FIXTURE
	RECESSED LIGHT FIXTURE. PROVIDE EMERGENCY BATTERY BACKUP CONNECTED TO AN UNSWITCHED CONDUCTOR.
	ROUND LIGHT FIXTURE
	ROUND EMERGENCY LIGHT FIXTURE. PROVIDE EMERGENCY BATTERY BACKUP CONNECTED TO AN UNSWITCHED CONDUCTOR.
	WALL MOUNTED LIGHT FIXTURE.
	WALL MOUNTED EMERGENCY LIGHT FIXTURE. PROVIDE EMERGENCY BATTERY BACKUP CONNECTED TO AN UNSWITCHED CONDUCTOR.
	POLE LIGHT 1 HEAD WITH POLE
	TIME CLOCK
	PHOTO CONTROL CELL LOCATED 12" ABOVE ROOF FACING NORTH.
	OCCUPANCY SENSOR. PROVIDE RELAYS AND POWER PACKS AS REQUIRED.
	LED DRIVER
	EMERGENCY EGRESS LIGHTING WITH OUT FIXTURE HEADS. CONNECT TO AN UNSWITCHED CONDUCTOR.
	EMERGENCY EGRESS LIGHTING. CONNECT TO AN UNSWITCHED CONDUCTOR.
	WALL MOUNTED SINGLE FACE EXIT SIGN WITH EMERGENCY EGRESS LIGHTING. PROVIDE UNSWITCHED CONDUCTOR. MOUNT AT +8'-0" UNO.
	CEILING MOUNTED SINGLE FACE EXIT SIGN WITH EMERGENCY EGRESS LIGHTING. PROVIDE UNSWITCHED CONDUCTOR.
	CEILING MOUNTED DOUBLE FACE EXIT SIGN WITH EMERGENCY EGRESS LIGHTING. PROVIDE UNSWITCHED CONDUCTOR.
	xxx INDICATES FIXTURE TYPE. REFER TO FIXTURE SCHEDULE.
	EXTERIOR WALL PACK
	EMERGENCY EXTERIOR WALL PACK. PROVIDE EMERGENCY BATTERY BACKUP CONNECTED TO AN UNSWITCHED CONDUCTOR

DEVICES

	SWITCH, TYPE AS INDICATED. +46" AFF
	2 DOUBLE POLE
	3 3-WAY
	4 4-WAY
	K KEYS
	P PILOT LIGHT
	D DIMMER
	HP HORSEPOWER RATED
	TO THERMAL OVERLOAD
	LV LOW VOLTAGE
	OS OCCUPANCY SENSOR
	OR LOW VOLTAGE, MOMENTARY OVERRIDE
	VS VACANCY SENSOR
	a SUPERSCRIPT INDICATES LIGHTS TO BE SWITCHED TOGETHER
	SS DUAL LEVEL SWITCHING, INSIDE AND OUTSIDE LAMPS OF FIXTURE TO BE SWITCHED SEPARATELY.
	SSs DUAL LEVEL SWITCHING WITH OCCUPANCY SENSOR, INSIDE AND OUTSIDE LAMPS OF FIXTURE TO BE SWITCHED SEPARATELY.
	SSs OCCUPANCY SENSOR WITH MANUAL DIMMING, SET FOR 50% AUTOMATIC ON, AUTOMATIC OFF, WITH MANUAL DIMMING.
	φ SINGLE CONVENIENCE OUTLET, +18" AFF UNO
	φ FLOOR MOUNT SINGLE CONVENIENCE OUTLET
	φ DUPLEX CONVENIENCE OUTLET, +18" AFF UNO
	φ FLOOR MOUNT DUPLEX CONVENIENCE OUTLET
	φ EMERGENCY DUPLEX CONVENIENCE OUTLET, +18" AFF UNO
	φ SWITCHED DUPLEX CONVENIENCE OUTLET, +18" AFF UNO
	φ FLOOR MOUNTED SWITCHED DUPLEX CONVENIENCE OUTLET
	φ USB DUPLEX CONVENIENCE OUTLET, +18" AFF UNO
	φ USB FOURPLEX CONVENIENCE OUTLET, +18" AFF UNO
	φ FOURPLEX CONVENIENCE OUTLET, +18" AFF UNO
	φ FLOOR MOUNT FOURPLEX CONVENIENCE OUTLET
	CONNECTION POINT TO EQUIPMENT SPECIFIED, ELECTRICAL CONTRACTOR TO SUPPLY RACEWAY AND CONDUCTORS AND MAKE FINAL CONNECTION TO EQUIPMENT UNDER THIS SECTION UNO
	FLOOR MOUNTED CONNECTION POINT, SEE NOTE ABOVE FOR REQUIREMENTS
	FLOOR MOUNTED JUNCTION BOX
	JUNCTION BOX
	HC WALL MOUNTED PUSH BUTTON, MOUNT AT SWITCH HEIGHT UNO
	HC WALL MOUNTED PUSH BUTTON, MOUNT AT SWITCH HEIGHT UNO
	M MOTOR STARTER/CONTACTOR, SIZE/POLES NEMA 1 UNO AS INDICATED
	M DISCOMBINATION STARTER AND DISCONNECT, SIZE/POLES, STARTER SIZE AS INDICATED, NEMA 1 UNO
	F FUSED DISCONNECT SWITCH, SIZE/POLES, FUSE SIZES AS INDICATED, NEMA 1 UNO
	NF NON-FUSED DISCONNECT SIZE/ POLES AS INDICATED, NEMA 1 UNO
	T THERMOSTAT, +46" AFF PROVIDE CONDUIT, J-BOX, CONDUCTORS AS REQUIRED TO CONTROL ASSOCIATED UNITS. UNO COORDINATE WITH DIVISION 15.
	H HUMIDISTAT, +46" AFF PROVIDE CONDUIT, J-BOX, CONDUCTORS AS REQUIRED TO CONTROL ASSOCIATED UNITS.
	PP POWER POLE - DUAL CHANNEL
	REB RECESSED ENTERTAINMENT BOX
	T TRANSFORMER
	PB PANELBOARD, SEE SCHEDULE FOR TYPE.
	EC EQUIPMENT CABINET, SURFACE MOUNTED
	EC EQUIPMENT CABINET FLUSH MOUNTED
	SR SURFACE MULTI-OUTLET RACEWAY
	M MECHANICAL EQUIPMENT CALL OUT

ONE LINE

	DELTA WYE TRANSFORMER UNO
	PANEL BOARD, SEE SCHEDULE FOR TYPE AND SIZE
	##A #P CIRCUIT BREAKER, SIZE AND POLES INDICATED
	##A #P FUSE, SIZE AND TYPE INDICATED, PROVIDE FUSE FOR EACH POLE
	##A #P INTERRUPTER SWITCH, SIZE AND POLES INDICATED
	##A #P FUSED SWITCH, SIZE/POLES AND FUSE SIZE INDICATED
	##A #P DRAW OUT CIRCUIT BREAKER, SIZE AND POLES INDICATED
	125A 3P INDIVIDUAL BREAKER WITH SHUNT TRIP, SIZE AND POLES INDICATED. NEMA 1 UNO
	125A 3P INDIVIDUAL BREAKER, SIZE AND POLES INDICATED. NEMA 1 UNO
	GFP GROUND FAULT PROTECTION
	TVSS TRANSIENT VOLTAGE SURGE SUPPRESSION
	LSB ADJUSTABLE BREAKER SETTINGS (PER SPECIFICATIONS): L'-LONG TIME S'-SHORT TIME I'-INSTANTANEOUS G'-GROUND FAULT R'-ENERGY REDUCING MAINTENANCE SWITCH W/STATUS INDICATOR
	GROUND
	ST SHUNT TRIP COIL
	M MOTOR
	100A 3P DISCONNECT SWITCH, SIZE AND POLES INDICATED. NEMA 1 UNO
	OVERHEAD SERVICE DROP
	GENERATOR SET, MAIN BREAKER SIZE INDICATED
	AUTOMATIC TRANSFER SWITCH (ATS)
	METER AND BASE
	NEUTRAL
	DT DRY TYPE TRANSFORMER
	PAD MOUNT TRANSFORMER

ELECTRICAL GENERAL NOTES

- THESE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC IN NATURE; THEREFORE, THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL ELECTRICAL EQUIPMENT AND DEVICE LOCATIONS WITH ARCHITECTURAL, MECHANICAL, AND PLUMBING DIVISIONS PRIOR TO ROUGH-IN. REFER TO AND COORDINATE WITH ARCHITECTURAL, MECHANICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL WORK THAT IS REQUIRED BY THE ELECTRICAL CONTRACTOR.
- ALL CONDUIT AND JUNCTION BOXES ARE TO BE CONCEALED UNLESS LOCATED WITHIN DEDICATED ELECTRICAL OR MECHANICAL ROOMS. USE OF SURFACE MOUNTED RACEWAYS IN ALL OTHER SPACES MUST BE APPROVED BY THE ARCHITECT FOR EACH LOCATION. WHERE SURFACE RACEWAYS ARE APPROVED, UTILIZE WIREMOLD, OR APPROVED EQUAL. SURFACE MOUNTED RACEWAYS PAINTED TO MATCH SURROUNDING WALLS.
- REFER TO ARCHITECTURAL ELEVATIONS FOR OUTLET HEIGHTS WHERE THE SPECIFIC OUTLET HEIGHT IS NOT INDICATED. REFER TO THE ELECTRICAL LEGEND FOR THE DEFAULT OUTLET HEIGHT WHEN NOT INDICATED ON ELEVATIONS OR ON AT THE DEVICES.
- PROVIDE PULL-LINE IN ALL EMPTY CONDUITS.
- TERMINATE ALL LOW-VOLTAGE CONDUITS WITH INSULATED THROAT BUSHING.
- MECHANICAL EQUIPMENT INDICATED IS SHOWN IN AN APPROXIMATE LOCATION. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
- INSTALL PLENUM RATED FIRE ALARM CONDUCTORS FROM ALL FIRE ALARM DEVICES INDICATED TO THE FIRE ALARM CONTROL PANEL OR NAC EXTENDER PANEL(S) AS REQUIRED. STUD 3/4" CONDUIT FROM DEVICE TO VOID ABOVE CEILING. PROVIDE NAC EXTENDER PANELS (QUANTITY AS REQUIRED) IN LOCATIONS INDICATED AND CIRCUITING AS REQUIRED FOR A COMPLETE INSTALLATION. CIRCUIT THE FIRE ALARM NOTIFICATION AND INITIATION DEVICES PER THE ELECTRICAL SPECIFICATIONS. FURNISH AND INSTALL ALL APPURTENANCES AND PROGRAMMING REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. REFER TO ELECTRICAL FIRE ALARM SPECIFICATIONS FOR SYSTEM REQUIREMENTS AND SUBMITTAL PROCEDURES.
- CONTRACTOR SHALL COORDINATE WITH AN UNDERGROUND LOCATING SERVICE PRIOR TO COMMENCING WORK. SEE CIVIL DRAWINGS FOR ADDITIONAL SITE INFORMATION. COORDINATE WITH OTHER SITE DISCIPLINES. SITE LIGHTING AND UTILITY EQUIPMENT SHOWN IN APPROXIMATE LOCATION. COORDINATE EXACT LOCATION WITH CIVIL DRAWINGS. PROPERTY LINES, AND UTILITY COMPANIES PRIOR TO ROUGH-IN. REFER TO POLE BASE DETAIL FOR SITE LIGHTING POLE BASE REQUIREMENTS. ROUTE CONDUITS IN COMMON TRENCH WHERE POSSIBLE REFER TO TRENCHING DETAIL.
- THE ELECTRICAL DEMOLITION DRAWING(S) PROVIDED ARE INTENDED TO ASSIST THE ELECTRICAL CONTRACTOR IN ESTABLISHING AREAS REQUIRING DISCONNECTION, REMOVAL, OR RELOCATION OF ELECTRICAL EQUIPMENT, OUTLETS, WIRING, DEVICES, FIXTURES, ETC. AND MAY NOT INDICATE ALL DEVICES OR THE FULL EXTENT OF DEMOLITION AND RECONNECTION WHICH MAY BE REQUIRED. THE ELECTRICAL CONTRACTOR SHALL VISIT THE JOB SITE AND THOROUGHLY EXAMINE ALL REQUIRED DEMOLITION WORK AND INCLUDE ALL LABOR AND INCIDENTALS THAT WILL BE NECESSARY TO PERFORM DEMOLITION RECONNECTION AND TEMPORARY POWER CONNECTIONS IN THE BID.
- ALL ELECTRICAL DEVICES AND WALLS INDICATED ON THE ELECTRICAL DEMOLITION DRAWING(S) ARE TO REMAIN UNLESS OTHERWISE NOTED.

COMMUNICATIONS

-
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-
-
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NOTE: THIS IS A STANDARD LIST OF COMMONLY USED ELECTRICAL SYMBOLS. SOME OF THE SYMBOLS SHOWN MAY NOT HAVE BEEN USED IN THIS DRAWING PACKAGE.

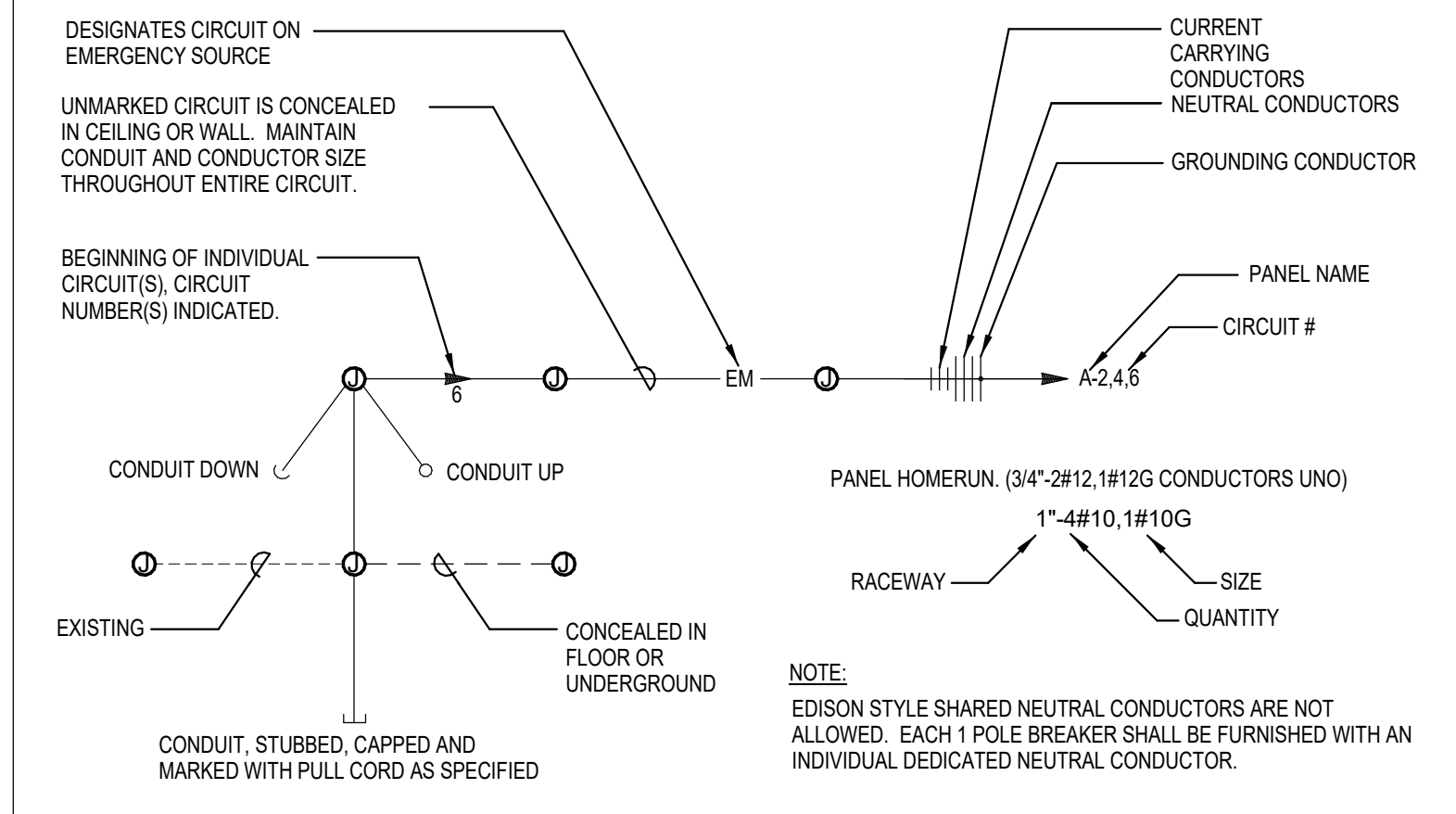
ELECTRICAL SHEET INDEX

SHEET NUMBER	SHEET NAME
E00	ELECTRICAL COVER SHEET
E01	LIGHTING COMPLIANCE
E11	ELECTRICAL SITE PLAN
E21	ELECTRICAL DEMOLITION FLOOR PLANS
E31	LIGHTING AND MECHANICAL POWER FLOOR PLANS
E41	POWER AND SPECIAL SYSTEMS FLOOR PLANS
E51	ELECTRICAL LEVEL 2 AND ROOF PLANS
E60	ELECTRICAL DETAILS
E70	ELECTRICAL DETAILS AND SCHEDULES

ELECTRICAL ABBREVIATIONS

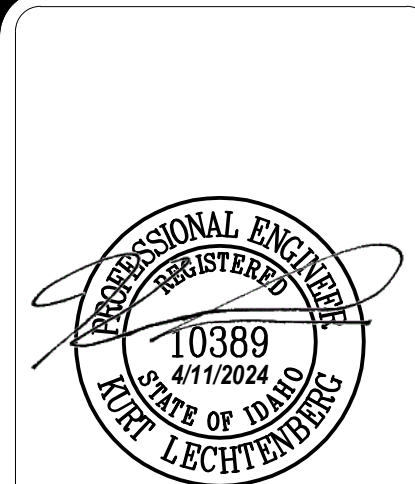
A	AMPERES
AC	6" ABOVE BACKSPLASH
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AF	AMP FRAME
AIC	AMPS INTERRUPTING CAPACITY
AT	AMP TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BD	BOTTOM OF DECK
BS	BOTTOM OF STRUCTURE
C	CEILING MOUNTED
CD	CONDUIT
CB	CIRCUIT BREAKER
CF	COMPACT FLUORESCENT
CKT	CIRCUIT
CO	CONDUIT ONLY, PROVIDE PULL-LINE
CT	CURRENT TRANSFORMER
CTL	CONTROL
DC	DIRECT CURRENT
DI	DEMOLITION
DEMO	DEMOLITION
DET	DETAIL
DTT	DOUBLE TWIN TUBE
E	EMERGENCY
(E)	EXISTING
EC	ELECTRICAL CONTRACTOR
EL	EMERGENCY LIGHT
F	FUSE
(F)	FUTURE
FACP	FIRE ALARM CONTROL PANEL
G/ND	GROUND
GFI	GROUND FAULT CIRCUIT INTERRUPTER
GFI	GROUND FAULT INTERRUPTER
HH	HAND HOLE
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTO
HPS	HIGH PRESSURE SODIUM
HVAC	HEATING, VENTILATION, & AIR CONDITIONING
IG	ISOLATED GROUND
IPCO	IDaho POWER COMPANY
J-BOX	JUNCTION BOX
KA	KILOAMP
KVA	KILO VOLT-AMP
KW	KILOWATT
KWH	KILOWATT HOUR
LCP	LIGHTING CONTROL PANEL
MB	MAIN BREAKER
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MDP	MAIN DISTRIBUTION PANEL
MLO	MAIN LOSS ONLY
MMC	MODULAR METERING CENTER
MH	METAL HALIDE
MSB	MAIN SWITCH BOARD
MTG	MOUNTING
N	NEUTRAL
(N)	NEW
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OH	OVERHEAD
OS	OCCUPANCY SENSOR
P	POLES
PC	PHOTO-CONTROL
PVC	POLYVINYL CHLORIDE
PWR	POWER
RE:	REFERENCE
REC	RECEPTACLE
(R)	RELOCATED
SF	SQUARE FEET
TBD	TO BE DETERMINED
TDR	TIME DELAY RELAY
TK	TOE KICK
TR	TAMPER RESISTANT
TSP	TWISTED SHIELDED PAIR
TRT	TRIPLE TUBE
TTB	TELEPHONE TERMINAL BOARD
(TYP)	TYPICAL
UC	UNDERCABINET
UG	UNDERGROUND
U.N.O.	UNLESS NOTED OTHERWISE
V	VOLT
VA	VOLT-AMPERE
W	WATT
WG	WIRE GUARD
WP	WEATHER PROOF/NEMA 3R
PROVIDE/ PROVIDE BY INSTALLED/ INSTALL	PROVIDE AND INSTALL / PROVIDED AND INSTALLED BY / PROVIDE AND INSTALL
NOTE:	THIS IS A STANDARD LIST OF COMMONLY USED ELECTRICAL ABBREVIATIONS. SOME OF THE ABBREVIATIONS SHOWN ABOVE MAY NOT BE USED IN THIS DRAWING PACKAGE.

CIRCUITING SYMBOLS



FIRE ALARM

	FIRE/SMOKE DAMPER
	LED INDICATOR LIGHT, CEILING MOUNTED UNO
	LED INDICATOR LIGHT WITH TEST SWITCH, CEILING MOUNTED UNO
	DUCT-MOUNTED SMOKE DETECTOR
	RELAY



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Project No. 24-078

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PERMIT SET

PROJECT	DATE
24009	04-11-24
DRAWN	CHECKED
AN	KL

REVISED

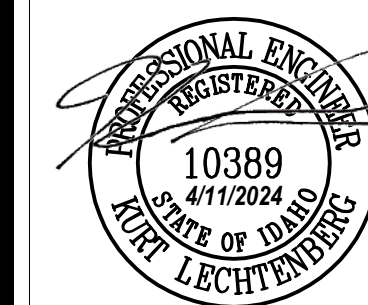
SHEET TITLE
ELECTRICAL COVER SHEET

SHEET

E00
ORIGINAL SHEET SIZE
24" x 36"



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 Project No. 24-078



COMcheck Software Version 4.1.5.5
Interior Lighting Compliance Certificate

Project Information

Energy Code: 2018 IECC
 Project Title: ITD Training Addition
 Project Type: Addition

Construction Site: 8150 W Chinden Blvd, Garden City, ID
 Owner/Agent: CSHQA, 200 Broad St, Boise, ID 83702, (208) 343-4635
 Designer/Contractor: Musgrove Engineering, 234 S Whisperwood Way, Boise, ID 83709, 208-384-0585

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft ²)	C Allowed Watts / ft ²	D Allowed Watts (B X C)
1-Office	1294	0.79	1022
Total Allowed Watts =			1022

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Watt.	E (C X D)
1-Office LED 1: Other:	1	20	26	520
Total Proposed Watts =				520

Interior Lighting PASSES: Design 49% better than code

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Angelo Neglia - Electrical Designer
 Name - Title: Angelo Neglia Signature: Angelo Neglia Date: 04/11/2024

Project Title: ITD Training Addition Report date: 04/11/24
 Data filename: P:\Files\2024\24078\CALCS\ELECC\24078 Electrical_Compliance.cck Page 1 of 8



COMcheck Software Version 4.1.5.5
Exterior Lighting Compliance Certificate

Project Information

Energy Code: 2018 IECC
 Project Title: ITD Training Addition
 Project Type: Addition
 Exterior Lighting Zone: 2 (Neighborhood business district (LZ2))

Construction Site: 8150 W Chinden Blvd, Garden City, ID
 Owner/Agent: CSHQA, 200 Broad St, Boise, ID 83702, (208) 343-4635
 Designer/Contractor: Musgrove Engineering, 234 S Whisperwood Way, Boise, ID 83709, 208-384-0585

Allowed Exterior Lighting Power

A Area/Surface Category	B Quantity	C Allowed Watts / Unit	D Tradable Wattage	E Allowed Watts (B X C)
Parking area	14400 ft ²	0.04	Yes	576
Walkway < 10 feet wide	117 ft of	0.5	Yes	58
Pedestrian and vehicular entrances and exits	6 ft of door	14	Yes	84
Total Tradable Watts (a) =				718
Total Allowed Watts =				718
Total Allowed Supplemental Watts (b) =				400

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.
 (b) A supplemental allowance equal to 400 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Proposed Exterior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Watt.	E (C X D)
Parking area (14400 ft ²): Tradable Wattage LED 1: PL1: Other:	1	2	111	222
Walkway < 10 feet wide (117 ft of walkway length): Tradable Wattage LED 2: WP1: Other:	1	2	11	22
Pedestrian and vehicular entrances and exits (6 ft of door width): Tradable Wattage LED 2: WP1: Other:	1	2	11	22
Total Tradable Proposed Watts =				266

Exterior Lighting PASSES: Design 76% better than code

Exterior Lighting Compliance Statement

Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Angelo Neglia - Electrical Designer
 Name - Title: Angelo Neglia Signature: Angelo Neglia Date: 04/11/2024

Project Title: ITD Training Addition Report date: 04/11/24
 Data filename: P:\Files\2024\24078\CALCS\ELECC\24078 Electrical_Compliance.cck Page 2 of 8

ENERGY CODE COMMISSIONING COMPLIANCE NOTES

SECTION 408 SYSTEM COMMISSIONING

IT SHALL BE THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL BELOW NOTED DOCUMENTS WITHIN 90 DAYS OF CERTIFICATE OF OCCUPANCY:

- A. AS-BUILT DRAWINGS- DRAWINGS SHALL INCLUDE THE LOCATION AND PERFORMANCE DATA OF ALL PIECES OF MECHANICAL EQUIPMENT.
- B. OPERATING AND MAINTENANCE MANUALS- MANUALS SHALL INCLUDE THE FOLLOWING:
 1. SUBMITTAL DATA ON ALL PIECES OF EQUIPMENT REQUIRING MAINTENANCE.
 2. MANUFACTURER'S OPERATIONS AND MAINTENANCE DATA ON ALL PIECES OF EQUIPMENT. ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY IDENTIFIED.
 3. NAME AND ADDRESS AND PHONE NUMBER OF AT LEAST ONE (1) SERVICE PROVIDER.
 4. LIGHTING CONTROL SYSTEMS MAINTENANCE AND CALIBRATION INFORMATION INCLUDING WIRING DIAGRAMS, EQUIPMENT AND SYSTEM SCHEMATICS, AND CONTROL SEQUENCES OF OPERATIONS. DESIRED OR FIELD DETERMINED SETPOINTS SHALL BE PERMANENTLY RECORDED ON CONTROL DRAWINGS AT ALL CONTROL DEVICES, OR FOR DIGITAL CONTROL SYSTEMS, IN THE SYSTEM PROGRAMMING INSTRUCTIONS.
 5. A NARRATIVE ON HOW EACH LIGHTING SYSTEM IS INTENDED TO OPERATE, INCLUDING RECOMMENDED SETPOINTS.
- C. LIGHTING SYSTEM FUNCTIONAL TESTING REQUIREMENTS

FUNCTIONAL TESTING - ALL AUTOMATIC LIGHTING CONTROL SYSTEM SHALL BE FULLY TESTED TO ENSURE THE CONTROL HARDWARE AND SOFTWARE ARE CALIBRATED, ADJUSTED, PROGRAMMED, AND IN PROPER WORKING CONDITION IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND MANUFACTURER'S INSTALLATION INSTRUCTIONS.

WHERE OCCUPANT SENSORS, TIME SWITCHES, PROGRAMMABLE CONTROLS, PHOTOSENSORS OR DAYLIGHTING 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.
 3. CONFIRM THAT THE PLACEMENT AND SENSITIVITY ADJUSTMENTS FOR PHOTOSENSOR CONTROLS REDUCE ELECTRIC LIGHT BASED ON THE AMOUNT OF USABLE DAYLIGHT IN THE SPACE AS SPECIFIED.
- D. FINAL LIGHTING SYSTEM FUNCTIONAL REPORT: A REPORT OF TEST PROCEDURES AND RESULTS IDENTIFIED AS THE "FINAL LIGHTING CONTROL REPORT" SHALL BE DELIVERED TO THE BUILDING OWNER. THE REPORT SHALL INCLUDE THE FOLLOWING:
 1. LIST OF FUNCTIONAL TESTS USED DURING THE COMMISSIONING PROCESS ON EACH PIECE OF EQUIPMENT.
 2. RESULTS OF ALL FUNCTIONAL TESTS ON ALL PIECES OF EQUIPMENT.
 3. LIST OF DEFICIENCIES FOUND AND CORRESPONDING CORRECTIVE MEASURES EITHER IMPLEMENTED OR PROPOSED ON EACH PIECE OF EQUIPMENT.
 4. LIST OF EQUIPMENT NOT ABLE TO BE FUNCTIONALLY TESTED DUE TO CURRENT CLIMATE CONDITIONS. THESE PIECES OF EQUIPMENT WILL FUNCTIONALLY TESTED ONCE CLIMATE CHANGES ALLOW.

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PROJECT 24009	DATE 04-11-24
DRAWN AN	CHECKED KL

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SHEET TITLE

LIGHTING COMPLIANCE

SHEET

E01

ORIGINAL SHEET SIZE
24" x 36"

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KEYED NOTES:

- # SYMBOL USED FOR CALLOUT
- 1. APPROXIMATE LOCATION OF EXISTING IDAHO POWER POLE AND EXISTING OVERHEAD 240/120V, 3-PHASE HIGH-LEG DELTA TRANSFORMER SHOWN FOR REFERENCE. RE: ONE-LINE DIAGRAMS.
- 2. APPROXIMATE LOCATION OF EXISTING IDAHO POWER POLE WITH METER. COORDINATE REMOVAL WITH IDAHO POWER AND PROJECT PHASING. RE: ONE-LINE DIAGRAMS
- 3. APPROXIMATE ROUTE OF EXISTING UNDERGROUND SECONDARY BETWEEN THE EXISTING METER AND EXISTING PANEL 'A'. REMOVE CONDUIT AND CONDUCTORS BACK TO SOURCE. COORDINATE REMOVAL WITH IDAHO POWER AND PROJECT PHASING. RE: ONE-LINE DIAGRAM.
- 4. NEW PAD MOUNTED TRANSFORMER, PAD AND METER BY IDAHO POWER. RE: ONE-LINE DIAGRAM.
- 5. UNDERGROUND SECONDARY. RE: ONE-LINE DIAGRAM
- 6. APPROXIMATE LOCATION OF EXISTING GATE CONTROLLER. EXISTING GATE, GATE CONTROLLER, AND DETECTION LOOP TO BE REMOVED AND RELOCATED TO NEW FENCE LINE LOCATION. REFER TO CIVIL SITE DEMOLITION PLAN AND SITE IMPROVEMENT PLAN. REMOVE POWERDATA CONDUIT AND CONDUCTORS BACK TO NEW FENCE LINE AND RE-ROUTE TO SOURCE.
- 7. APPROXIMATE LOCATION OF EXISTING GATE CARD READER AND PEDESTAL TO BE REMOVED. REMOVE BASE, PEDESTAL/CARD READER AND RETURN TO OWNER. REMOVE CONDUCTORS BACK TO SOURCE OR NEAREST UPSTREAM DEVICE THAT IS TO REMAIN. REMOVE CONDUIT BACK TO NEW FENCE LINE, EXTEND TO NEW LOCATION AND STUB TO 12" ABOVE GRADE AND CAP/LABEL OPPOSITE TERMINATION END LOCATION FOR FUTURE USE.
- 8. APPROXIMATE LOCATION OF RELOCATED GATE OPERATOR. REFER TO CIVIL SITE IMPROVEMENT PLAN. GATE TO BE CONFIGURED WITH DETECTION LOOP FOR EXIT ONLY AND INSTALLED BY GATE HARDWARE CONTRACTOR. COORDINATE INSTALLATION REQUIREMENTS WITH GATE INSTALLER PRIOR TO ROUGH-IN.
- 9. APPROXIMATE LOCATION OF EXISTING PARKING LIGHT AND POLE TO REMAIN.
- 10. CONNECTION FOR NEW PIVOT GATE OPERATOR. REFER TO CIVIL SITE IMPROVEMENT PLAN. GATE TO BE CONFIGURED WITH DETECTION LOOP FOR EXIT AND CARD READER WITH DETECTION LOOP FOR ENTRANCE. COORDINATE INSTALLATION REQUIREMENTS WITH GATE INSTALLER PRIOR TO ROUGH-IN.
- 11. PROVIDE 3/4" CONDUIT TO IN-GRADE JUNCTION BOX FOR LOOP SENSOR WIRING. COORDINATE LOCATION OF IN-GRADE JUNCTION BOX WITH GATE INSTALLER PRIOR TO ROUGH-IN. PROVIDE ALL CONDUIT AND JUNCTION BOXES FOR A COMPLETE INSTALLATION.
- 12. DETECTION LOOP SENSOR AREA. COORDINATE INSTALLATION WITH GATE INSTALLER AND PROVIDE ALL HARDWARE TO MAKE CONNECTIONS TO GATE OPERATOR FOR A COMPLETE SYSTEM.
- 13. <varies>
- 14. PROVIDE JUNCTION BOX FOR CARD READER MOUNTED ON WEATHER HOOD MOUNTED ON POLE. COORDINATE INSTALLATION WITH GATE INSTALLER AND POLE PROVIDER.
- 15. PROVIDE 3/4" CONDUIT FOR LOW VOLTAGE ACCESS CONTROL WIRING FROM CARD READER/PEDESTAL AND ROUTE TO DATA ROOM LOCATED IN SERVER ROOM 109. COORDINATE INSTALLATION WITH GATE INSTALLER AND PROVIDE ALL HARDWARE AND LOW VOLTAGE CABLING FOR A COMPLETE SYSTEM.
- 16. JUNCTION BOX FOR MAIN GATE ACCESS CONTROLS CONTROLS. COORDINATE INSTALLATION WITH MAIN GATE INSTALLER AND PROVIDE ALL HARDWARE AND LOW VOLTAGE CABLING FOR A COMPLETE SYSTEM.
- 17. REFER TO SPECIAL SYSTEMS PLAN FOR RELOCATION OF EXISTING FIBER/DATA.



1 ELECTRICAL SITE PLAN
 1" = 20'-0"

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PROJECT 24009	DATE 04-11-24
DRAWN Author	CHECKED Checker

REVISED

SHEET TITLE
ELECTRICAL SITE PLAN

SHEET
E11
 ORIGINAL SHEET SIZE
 24" x 36"

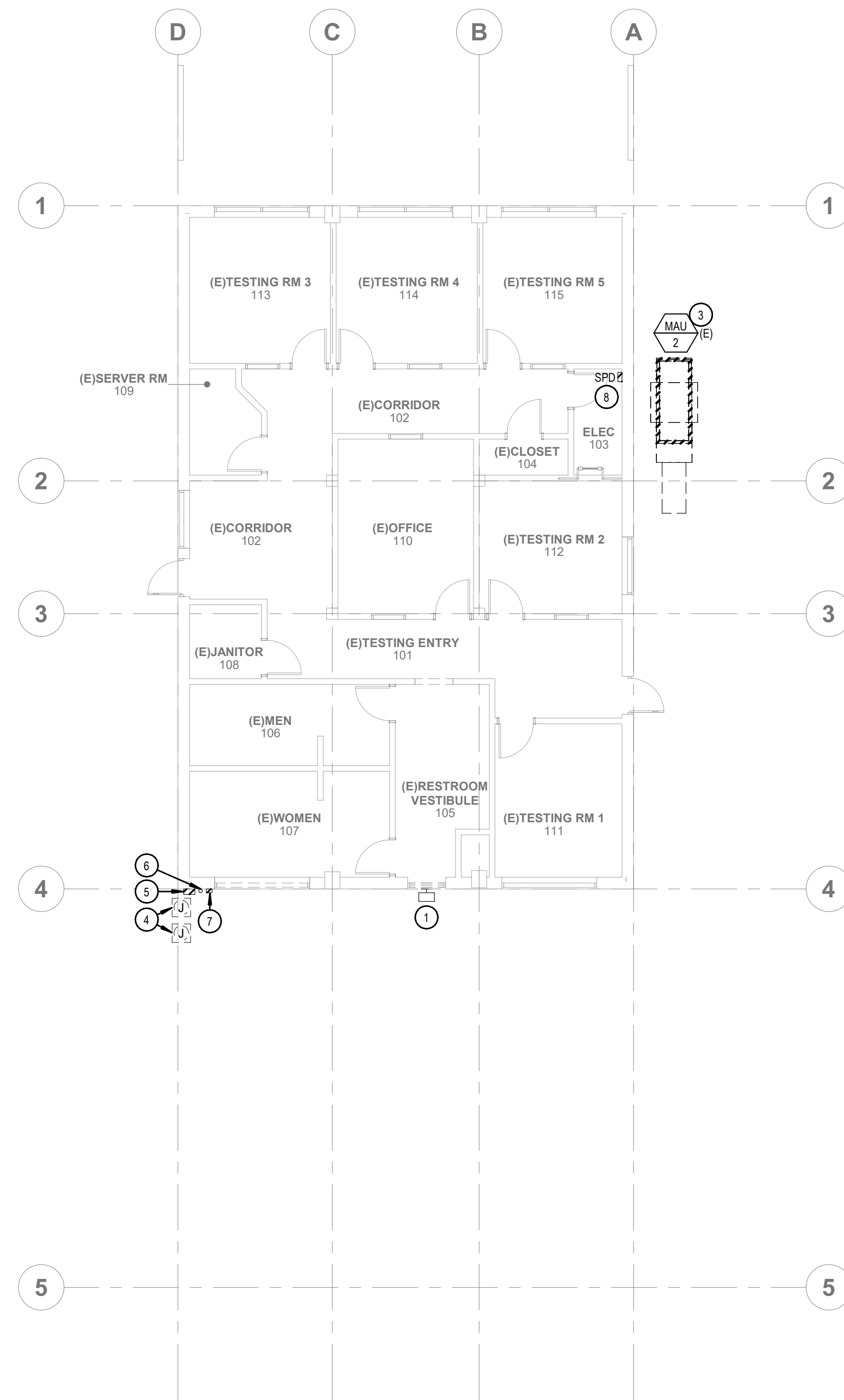


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Project No. 24-078

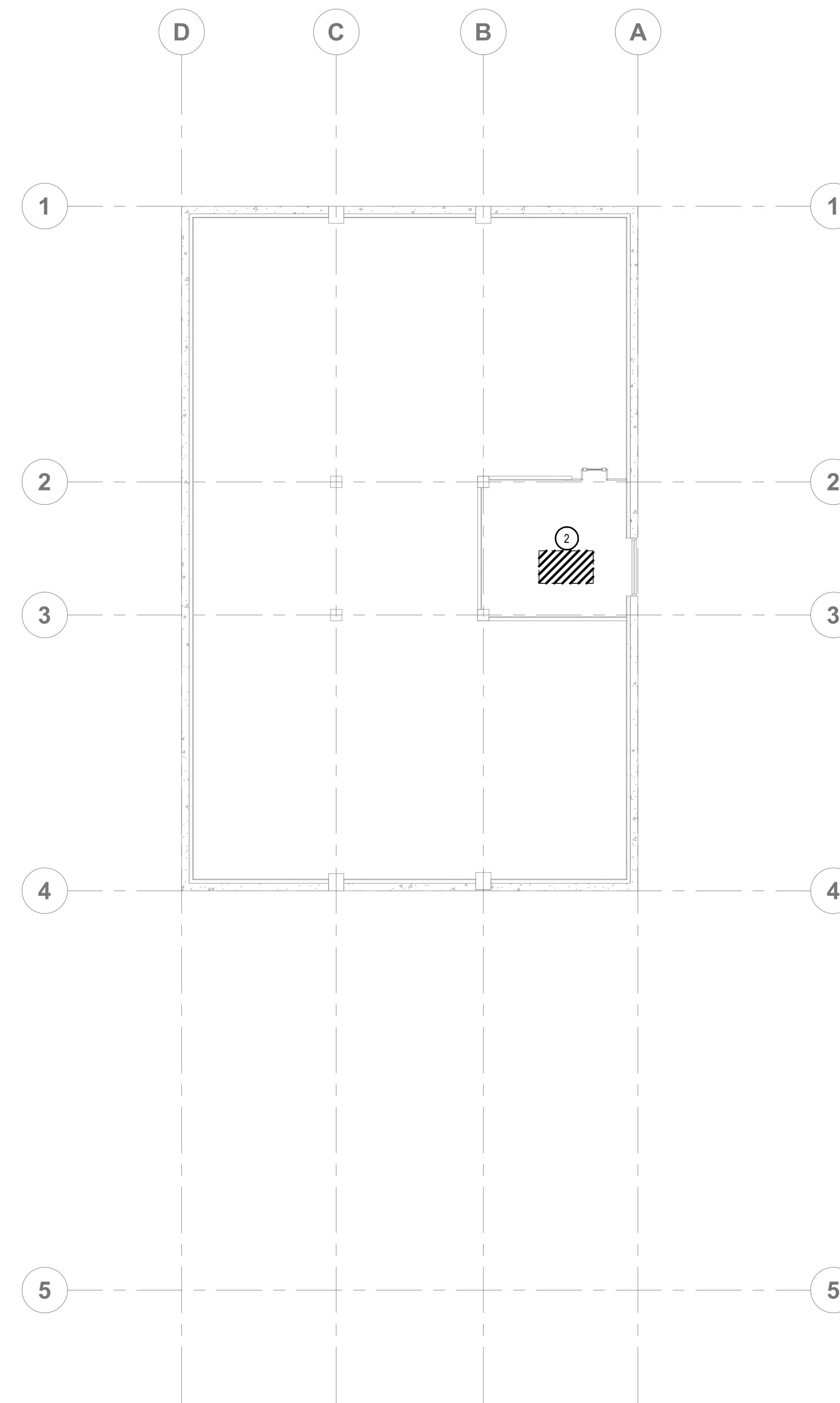


KEYED NOTES:

- # SYMBOL USED FOR CALLOUT
- 1. EXISTING LIGHT FIXTURE TO BE REMOVED. REMOVE ALL CONDUIT, CONDUCTORS, AND JUNCTION BOXES BACK TO SOURCE OR NEAREST UPSTREAM DEVICE THAT IS TO REMAIN. MAINTAIN CONTINUITY TO ALL DOWNSTREAM DEVICES THAT ARE TO REMAIN.
- 2. EXISTING MECHANICAL EQUIPMENT TO BE REMOVED. REMOVE ALL CONDUIT, CONDUCTORS, AND JUNCTION BOXES BACK TO SOURCE OR NEAREST UPSTREAM DEVICE THAT IS TO REMAIN. MAINTAIN CONTINUITY TO ALL DOWNSTREAM DEVICES THAT ARE TO REMAIN.
- 3. EXISTING MECHANICAL EQUIPMENT TO BE RETROFITTED WITH ADDITIONAL COOLING COIL. REMOVE ANY CONDUIT AND CONDUCTORS AS REQUIRED TO FACILITATE INTERCONNECT WITH NEW COOLING COIL AND MAINTAIN CONTINUITY TO ALL DOWNSTREAM CONNECTIONS THAT ARE TO REMAIN.
- 4. EXISTING IN-GRADE JUNCTION BOXES FOR FIBER/DATA TO BE REMOVED AND REPLACED WITH NEW IN-GRADE JUNCTION BOX AT NEW LOCATION TO FACILITATE BUILDING ADDITION. RETAIN EXISTING CABLING TO BE RE-FEED TO DATA RACK. RE: SPECIAL SYSTEM PLAN.
- 5. EXISTING WALL MOUNTED PULL BOX FOR FIBER/DATA TO BE REMOVED AND RELOCATED ON EXISTING BUILDING TO FACILITATE BUILDING ADDITION. RETAIN EXISTING CABLING TO BE RE-FEED TO DATA RACK. RE: SPECIAL SYSTEMS PLAN.
- 6. EXISTING CONDUIT FOR FIBER/DATA TO BE REMOVED AND RELOCATED AT NEW LOCATION TO FACILITATE BUILDING ADDITION. COORDINATE REMOVAL AND RELOCATION WITH UTILITY SERVICE. RETAIN EXISTING CABLING TO BE RE-FEED AT NEW LOCATION. RE: SPECIAL SYSTEMS PLAN.
- 7. EXISTING TELEPHONE RISER BOX TO BE REMOVED AND REPLACED WITH APPROPRIATE CONDUIT AND/OR TELEPHONE PULL BOX IN NEW LOCATION TO FACILITATE BUILDING ADDITION. COORDINATE REMOVAL AND RELOCATION WITH UTILITY SERVICE. RETAIN EXISTING CABLING TO BE RE-FEED AT NEW LOCATION. RE: SPECIAL SYSTEMS PLAN.
- 8. EXISTING SURGE PROTECTION 'SPD' FOR EXISTING PANEL 'A' TO BE REMOVED. REMOVE ALL CONDUIT, CONDUCTORS, AND JUNCTION BOXES BACK TO SOURCE. REMOVE EXISTING BREAKERS AND REPLACE WITH 120VOLT, 1-PHASE, 20AMP SPARE BREAKERS.



1 ELECTRICAL DEMOLITION FLOOR PLAN - LEVEL 1
1/8" = 1'-0"



2 ELECTRICAL DEMOLITION FLOOR PLAN - LEVEL 2
1/8" = 1'-0"

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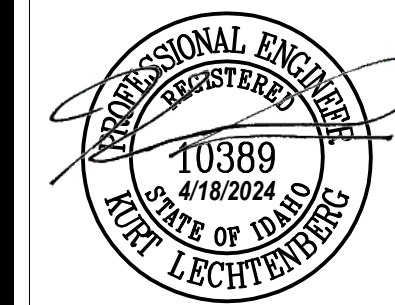
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SHEET TITLE
ELECTRICAL DEMOLITION FLOOR PLANS

SHEET
E21
ORIGINAL SHEET SIZE
24" x 36"

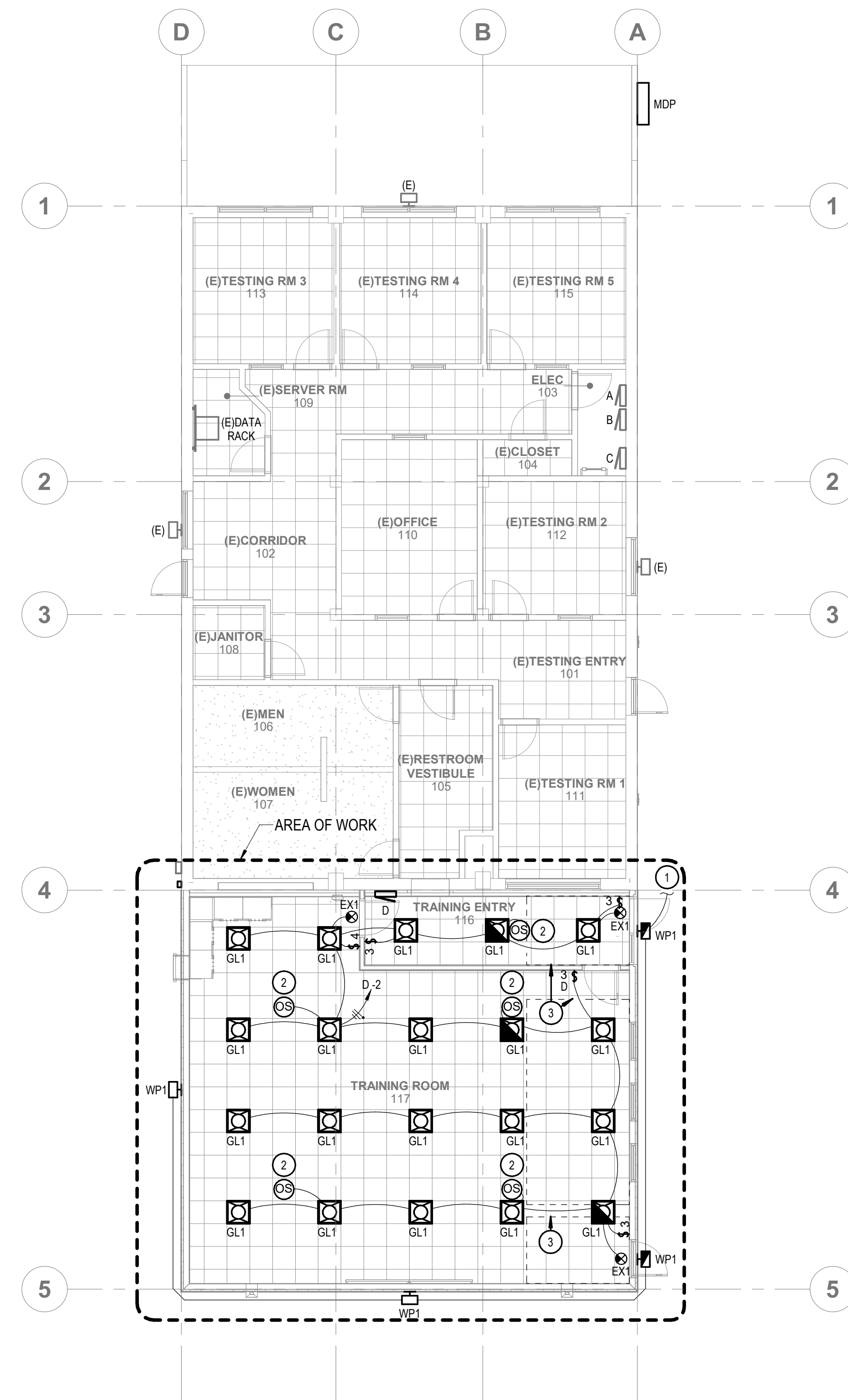


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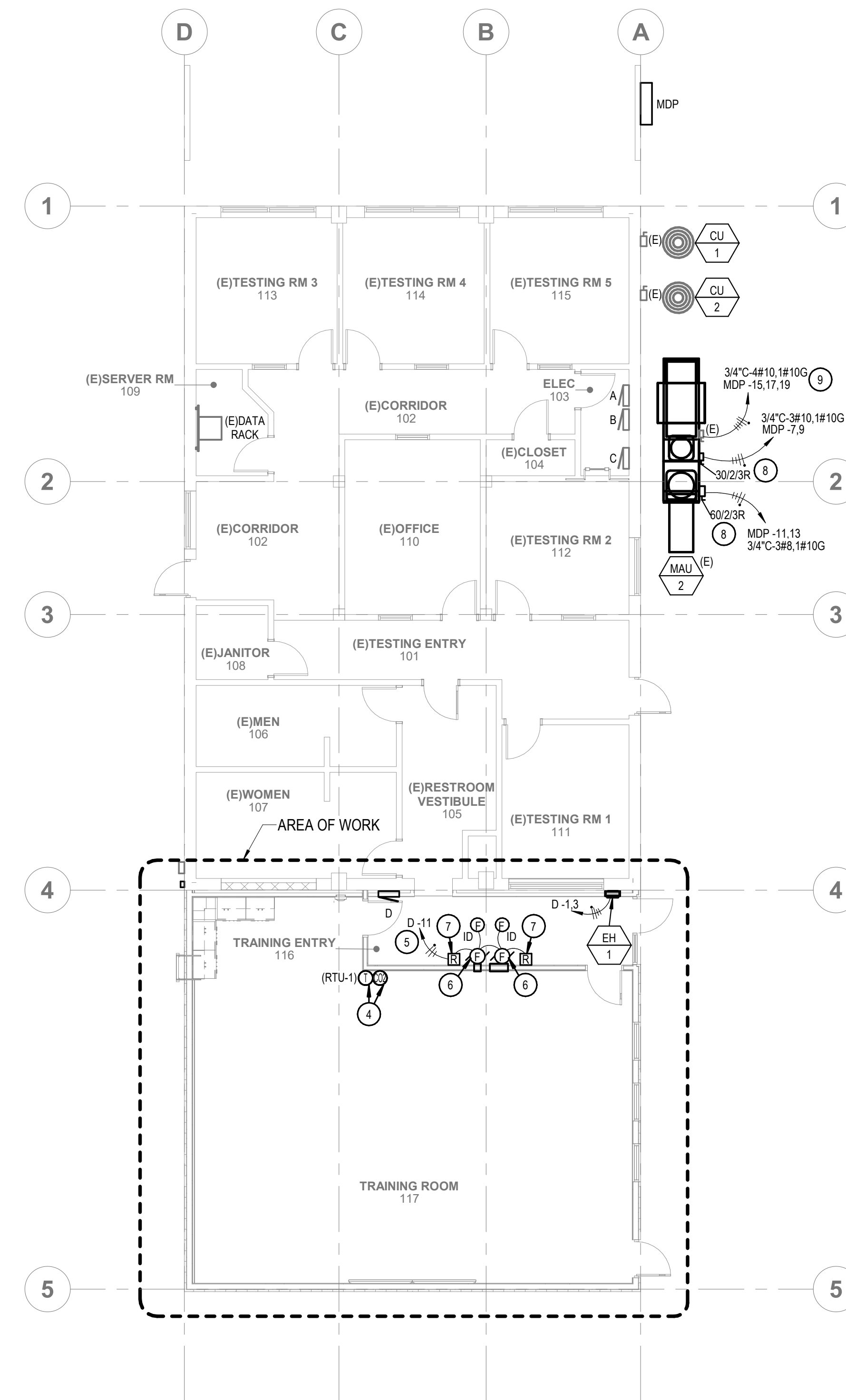


KEYED NOTES:

- # SYMBOL USED FOR CALLOUT
- 1. EXTEND CONDUIT AND CONDUCTORS FROM EXISTING EXTERIOR LIGHTING CIRCUIT TO NEW LIGHTING FIXTURES. PROVIDE UNSWITCHED LEG FOR EMERGENCY FIXTURES.
- 2. NON-DIGITAL DUAL TECHNOLOGY OCCUPANCY SENSOR. CONNECT SUCH THAT DETECTION OF OCCUPANCY BY ANY SENSOR IN THE ROOM WILL ACTIVATE ALL LIGHTING IN THE ROOM AND TURN OFF THE LIGHTING AFTER 20 MINUTES OF NO OCCUPANCY DETECTION. LOCATE SENSORS PER MANUFACTURER'S RECOMMENDATION TO ENSURE MOTION IS DETECTED WITHIN 2FT OF ENTERING ROOM. PROVIDE AND INSTALL ALL POWER PACKS AND RELAYS AS REQUIRED.
- 3. DAYLIGHT ZONE PERIMETER PER 2018 IECC. SHOWN FOR REFERENCE.
- 4. 1/2" CONDUIT TO CORRESPONDING MECHANICAL UNIT, BOX, CONDUIT, AND CONDUCTORS TO BE PROVIDED BY ELECTRICAL CONTRACTOR. LEAVE 12" SLACK AT BOX AND MECHANICAL UNIT. MECHANICAL CONTRACTOR TO MAKE FINAL CONNECTIONS. COORDINATE BOX SIZE AND QUANTITY OF CONDUCTOR(S) WITH MECHANICAL CONTRACTOR. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR.
- 5. PROVIDE RED-HANDLED, LOCKOUT TYPE CIRCUIT BREAKER IN PANEL AT POSITION INDICATED.
- 6. PROVIDE CONNECTION TO SMOKE FIRE DAMPER. PROVIDE IN-DUCT DETECTOR AND RELAY AS REQUIRED. COORDINATE IN-DUCT DETECTOR INSTALLATION WITH MECHANICAL CONTRACTOR.
- 7. MULTI-VOLTAGE CONTROL RELAY PROVIDED FOR FIRE / SMOKE DAMPER CONTROL. INSTALLING CONTRACTOR SHALL FIELD VERIFY EXACT MOUNTING, CIRCUITING AND PROGRAMMING REQUIREMENTS. FIELD VERIFY EXACT LOCATION, QUANTITY AND ALL LOCATIONS WITH MECHANICAL CONTRACTOR PRIOR TO INSTALLATION.
- 8. FIELD COORDINATE DISCONNECT AND MECHANICAL UNIT LOCATION WITH MECHANICAL CONTRACTOR TO MAINTAIN ALL REQUIRED CLEARANCES.
- 9. RE-FEED EXISTING MECHANICAL UNIT FROM THE NEW PANEL INDICATED.



1 LIGHTING FLOOR PLAN - LEVEL 1
1/8" = 1'-0"



2 MECHANICAL POWER FLOOR PLAN - LEVEL 1
1/8" = 1'-0"

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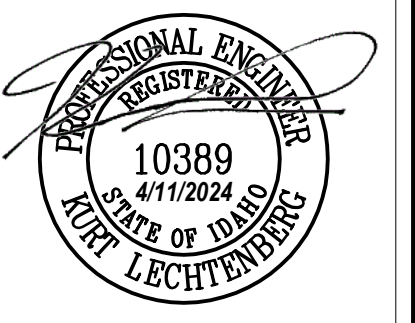
PROJECT 24009	DATE 04-11-24
DRAWN Author	CHECKED Checker

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SHEET TITLE
LIGHTING AND MECHANICAL POWER FLOOR PLANS

SHEET

E31
ORIGINAL SHEET SIZE
24" x 36"



KEYED NOTES:

- # SYMBOL USED FOR CALLOUT
- 1. RECEPTACLE FOR TV. COORDINATE HEIGHT AND LOCATION WITH OWNER PRIOR TO ROUGH-IN.
- 2. STUB 3/4" CONDUIT TO ABOVE ACCESSIBLE CEILING. PROVIDE DATA CABLING QUANTITY AS INDICATED, AND ROUTE TO EXISTING DATA RACK LOCATED IN SERVER ROOM 109.
- 3. JUNCTION BOX FOR TV. COORDINATE HEIGHT AND LOCATION WITH OWNER PRIOR TO ROUGH-IN. STUB 1-1/4" CONDUIT TO ABOVE ACCESSIBLE CEILING.
- 4. STUB 2" CONDUIT TO ABOVE ACCESSIBLE CEILING.
- 5. PROVIDE 12"x18" IN-GRADE JUNCTION BOX WITH TRAFFIC RATED LID FOR EXISTING FIBER/DATA. REROUTE EXISTING UNDERGROUND CONDUIT AS REQUIRED TO FACILITATE NEW BOX LOCATION TO NEW LOCATION TO ACCOMMODATE BUILDING ADDITION. ROUTE UNDERGROUND CONDUIT/CABLING TO RELOCATED WALL MOUNTED PULL BOX AND/OR CONDUIT ON EXISTING BUILDING.
- 6. RELOCATED EXISTING FIBER/DATA PULL BOX. MOVE PULL BOX TO NEW LOCATION AND MOVE, INTERCEPT, AND EXTEND ANY INTERIOR JUNCTION BOXES AND/OR CONDUIT AS REQUIRED. RE-FEED FIBER/DATA TO EXISTING LOCATION AT DATA RACK LOCATED IN SERVER ROOM 109.
- 7. RELOCATE EXISTING DATA CONDUIT. INTERCEPT AND EXTEND CONDUIT TO NEW LOCATION AND MOVE, INTERCEPT, AND EXTEND ANY INTERIOR JUNCTION BOXES AND/OR CONDUIT AS REQUIRED. RE-FEED DATA TO EXISTING LOCATION.
- 8. NEW EXTERIOR RATED NEM3R WALL MOUNTED PULL BOX FOR EXISTING PHONE CABLING. INTERCEPT AND EXTEND EXISTING UNDERGROUND TELEPHONE CABLING THROUGH NEW WALL MOUNTED PULL BOX LOCATION AND RE-FEED TO EXISTING LOCATION. PROVIDE IN-GRADE JUNCTION BOXES AND UNDERGROUND CONDUIT AS REQUIRED. COORDINATE REMOVAL AND RELOCATION WITH UTILITY SERVICE.
- 9. PROVIDE JUNCTION BOX ABOVE THE ACCESSIBLE CEILING FOR DOOR ACCESS CONTROLS POWER. PROVIDE BOXES AND CONDUIT FOR FUTURE SECURITY CONDUCTORS. VERIFY ALL REQUIREMENTS WITH DOOR SECURITY EQUIPMENT PROVIDER PRIOR TO ROUGH-IN. RE: ACCESS CONTROLS DETAIL.
- 10. PROVIDE JUNCTION BOX FOR OWNER PROVIDED CARD READER AT 46" AFG. PROVIDE 3/4" CONDUIT FROM BOX TO ABOVE NEAREST ACCESSIBLE CEILING. ACCESS CONTROL CABLING TO BE FURNISHED AND INSTALLED BY ACCESS CONTROLS CONTRACTOR. RE: ACCESS CONTROL DETAIL.
- 11. MOUNT NEW DISTRIBUTION PANEL ON THE EXTERIOR OF THE EXISTING STORAGE AREA WALL. PROVIDE BRACING AS REQUIRED. ROUTE CONDUITS OVER-HEAD FROM THE DISTRIBUTION PANEL TO THE NEW AND EXISTING PANELS AND EQUIPMENT. RE: NEW ONE-LINE DIAGRAM.

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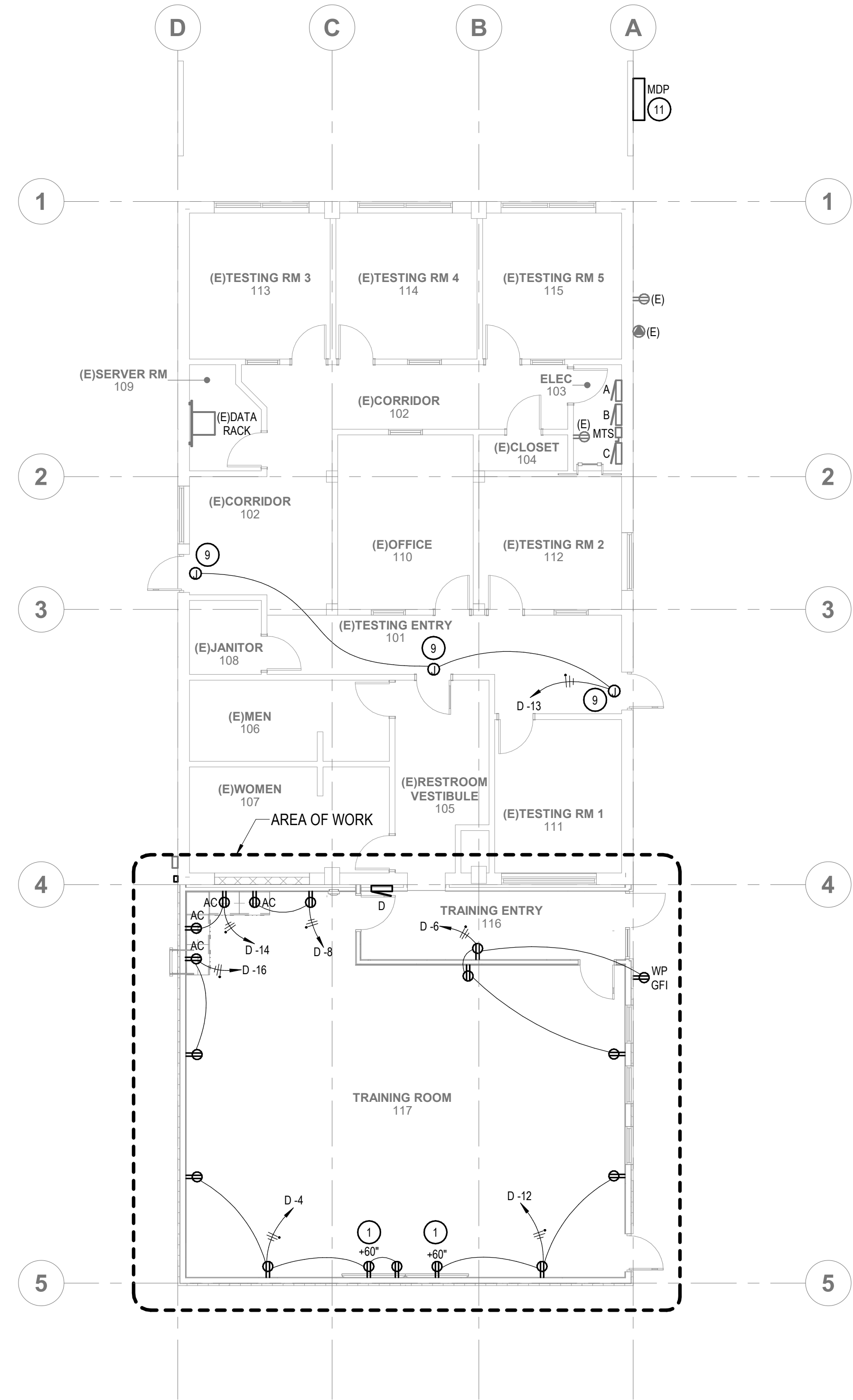
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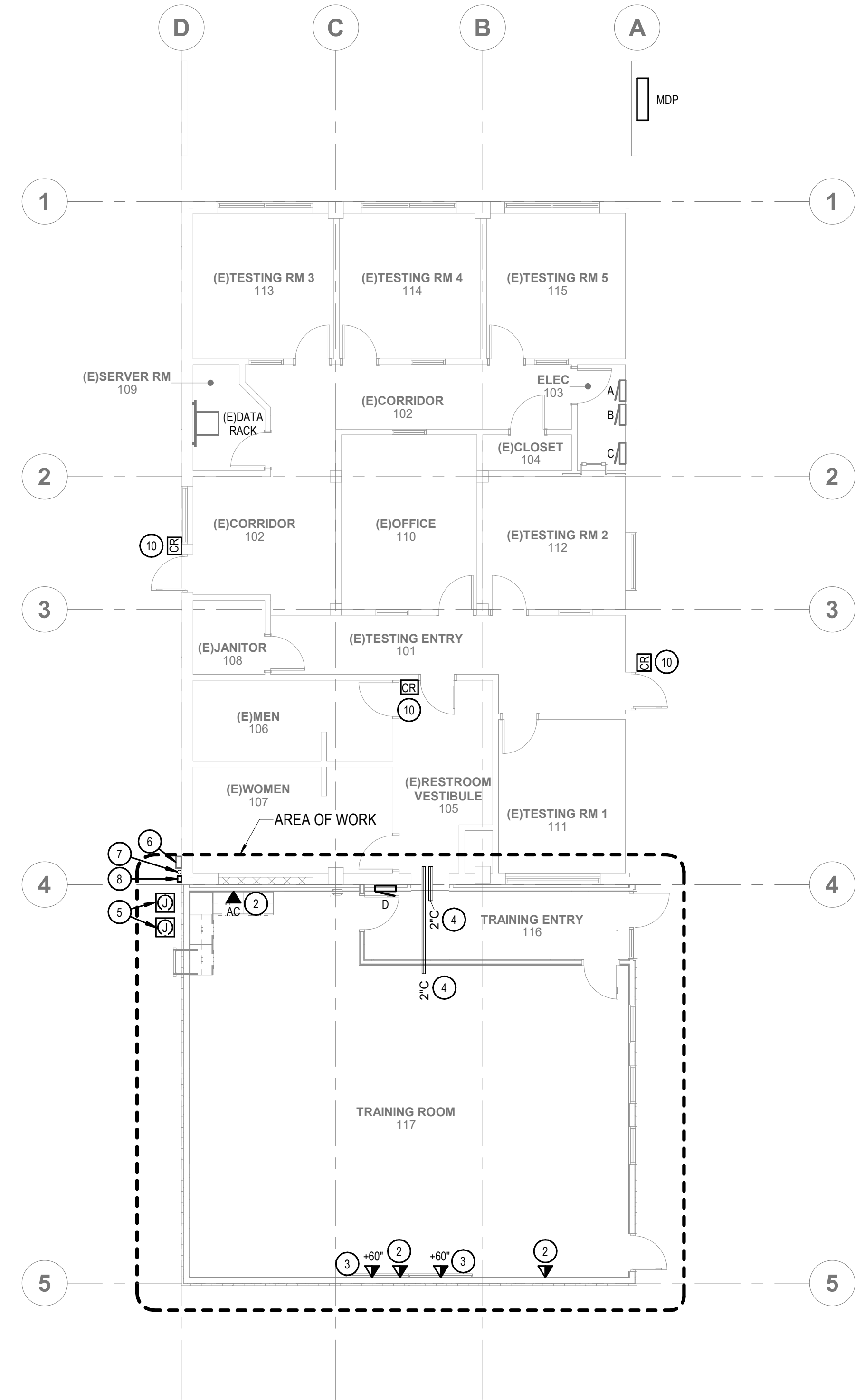
SHEET TITLE
POWER AND SPECIAL SYSTEMS FLOOR PLANS

SHEET

E41
ORIGINAL SHEET SIZE
24" x 36"



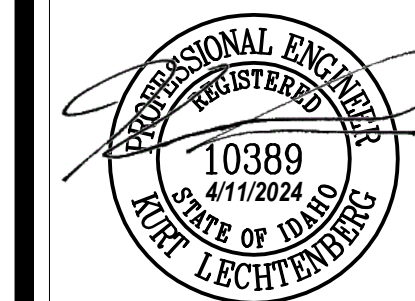
1 MECHANICAL NEW WORK FLOOR PLAN - LEVEL 1
1/8" = 1'-0"



2 SPECIAL SYSTEMS FLOOR PLAN - LEVEL 1
1/8" = 1'-0"

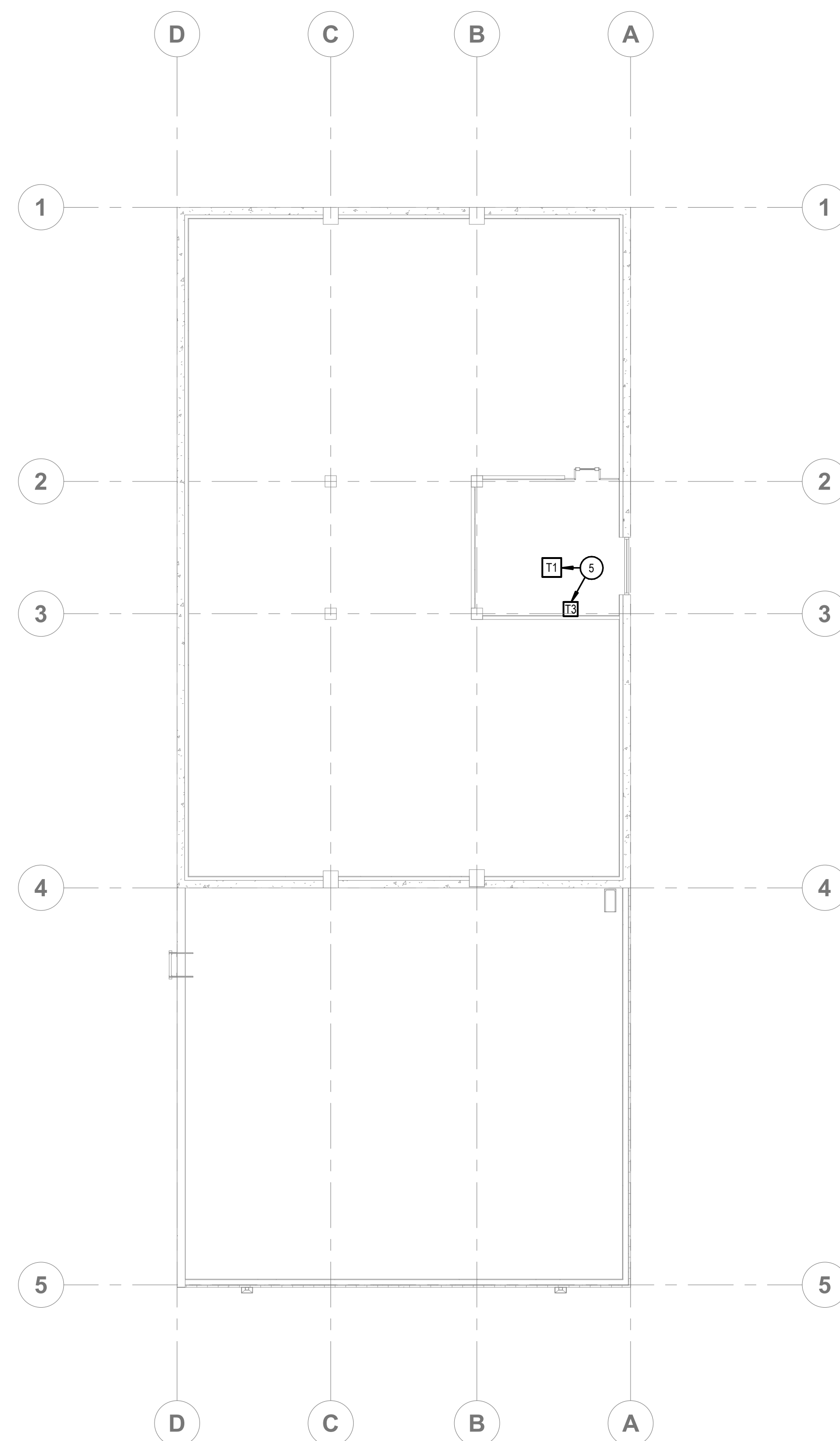


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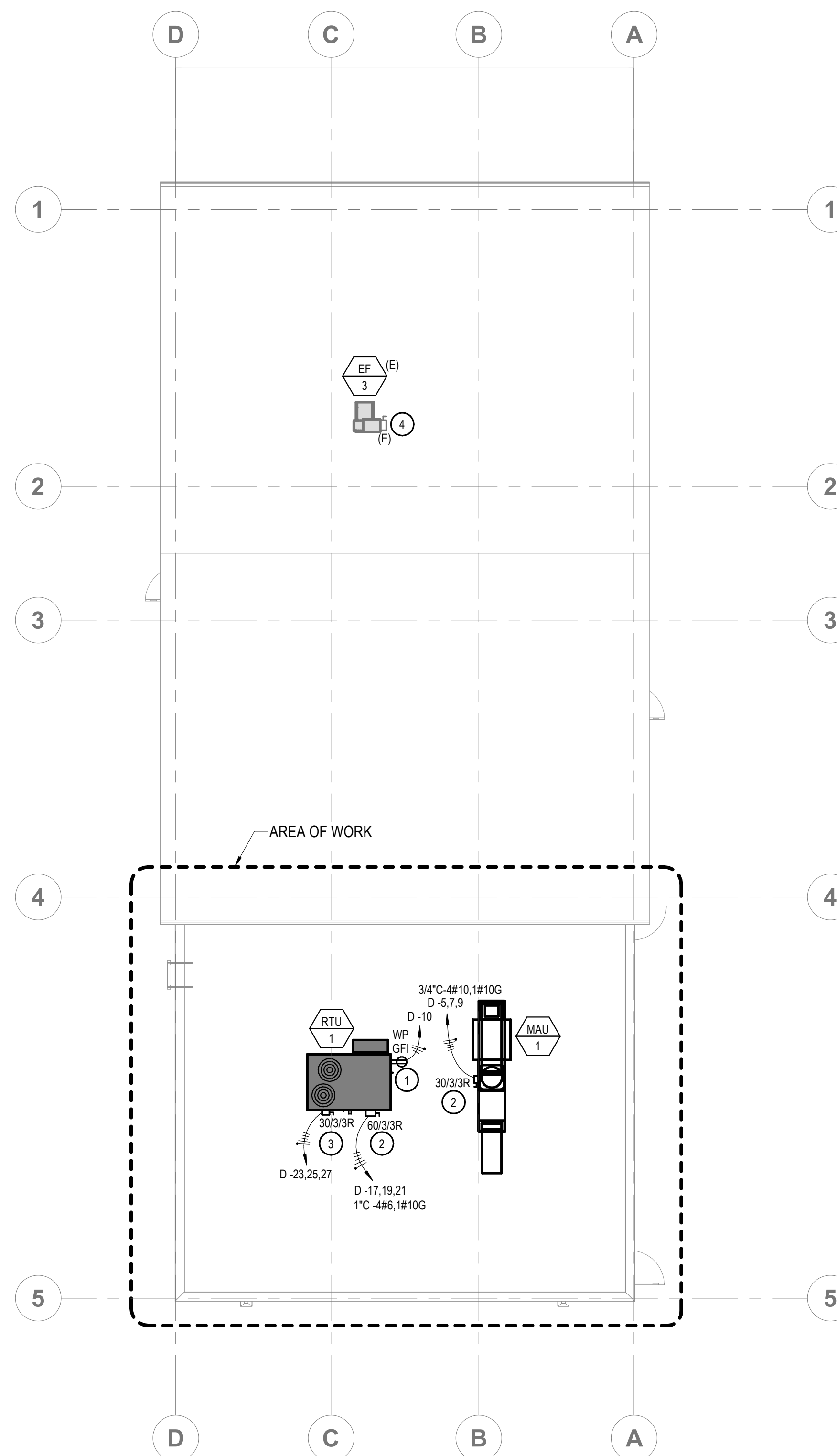


KEYED NOTES:

- # SYMBOL USED FOR CALLOUT
- 1. MOUNT RECEPTACLE ON RIGID CONDUIT 12" ABOVE ROOF DECK OR ON MECHANICAL UNIT WHERE APPLICABLE.
- 2. FIELD COORDINATE DISCONNECT AND MECHANICAL UNIT LOCATION WITH MECHANICAL CONTRACTOR TO MAINTAIN ALL REQUIRED CLEARANCES.
- 3. DISCONNECT AS INDICATED FOR SEPARATE POWERED EXHAUST CONNECTION. COORDINATE LOCATION AND MOUNTING WITH MECHANICAL CONTRACTOR TO MAINTAIN ALL REQUIRED CLEARANCES. LABEL DISCONNECT AS "POWERED EXHAUST DISCONNECT".
- 4. EXISTING DISCONNECT FOR EXHAUST FAN 'EF-3' FED FROM EXISTING VFD LOCATED IN ELECTRICAL ROOM 103. REFER TO ONE-LINE DIAGRAMS TO RE-FEED 240VOLT, 3-PHASE CIRCUIT FOR 'EF-3'.
- 5. TRANSFORMERS AND THE ASSOCIATED DISCONNECTS LOCATED ON MEZZANINE. COORDINATE LOCATION AND MOUNTING WITH ON-SITE CONDITIONS AND AVAILABLE SPACE. RE-NEW ONE-LINE DIAGRAM



1 POWER FLOOR PLAN - LEVEL 2
1/8" = 1'-0"



2 ELECTRICAL ROOF PLAN
1/8" = 1'-0"

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SHEET TITLE
ELECTRICAL LEVEL 2 AND ROOF PLANS

SHEET

E51

ORIGINAL SHEET SIZE
24" x 36"



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SHEET TITLE
ELECTRICAL DETAILS

SHEET

E60
 ORIGINAL SHEET SIZE
 24" x 36"

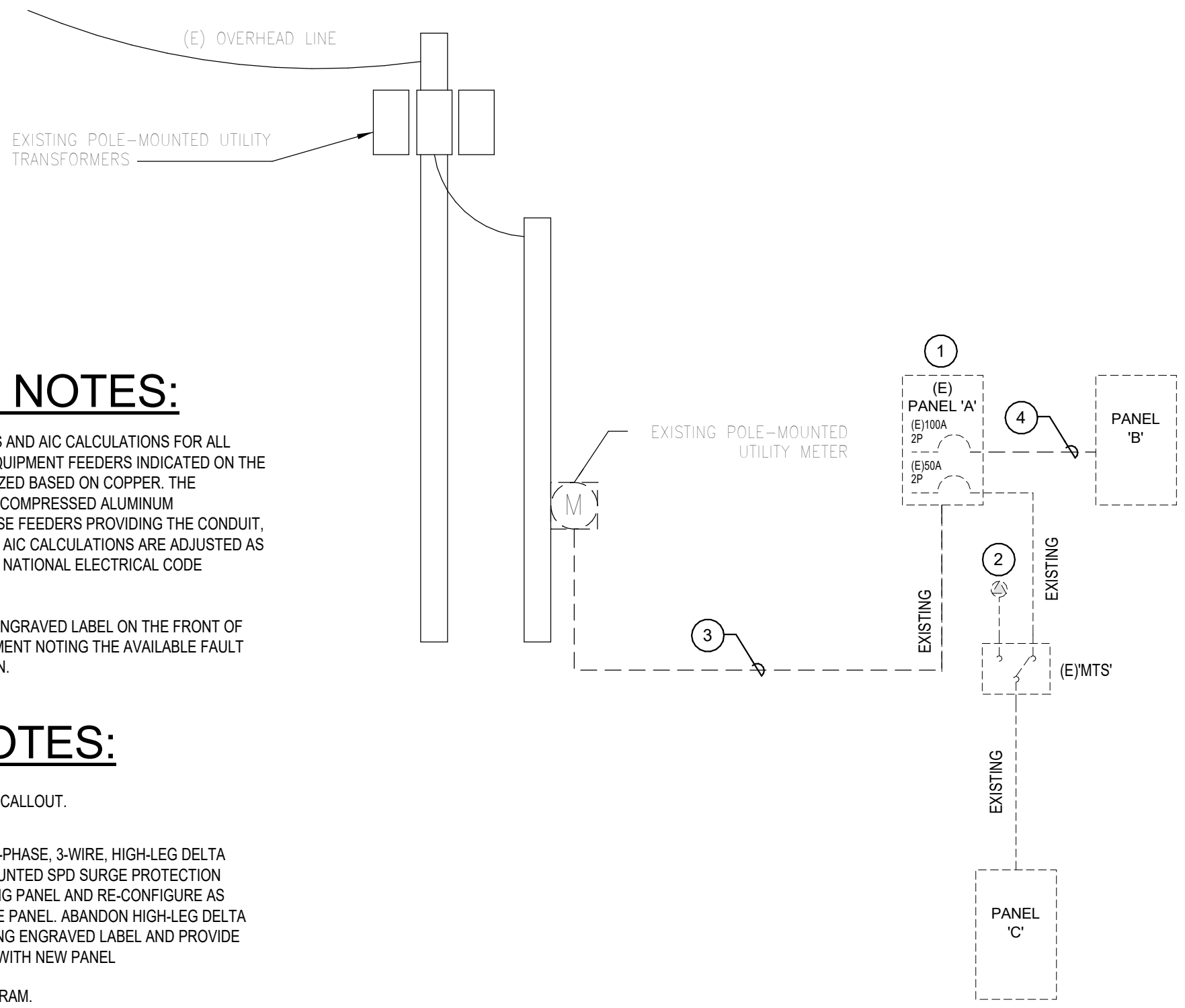
GENERAL NOTES:

- CONDUIT, CONDUCTORS AND AIC CALCULATIONS FOR ALL SERVICE, PANEL AND EQUIPMENT FEEDERS INDICATED ON THE ONE-LINE HAVE BEEN SIZED BASED ON COPPER. THE CONTRACTOR MAY USE COMPRESSED ALUMINUM CONDUCTORS FOR THESE FEEDERS PROVIDING THE CONDUIT, CONDUCTOR SIZES AND AIC CALCULATIONS ARE ADJUSTED AS REQUIRED TO MEET ALL NATIONAL ELECTRICAL CODE REQUIREMENTS.
- FURNISH AND INSTALL ENGRAVED LABEL ON THE FRONT OF ALL ELECTRICAL EQUIPMENT NOTING THE AVAILABLE FAULT CURRENT VALUE SHOWN.

KEYED NOTES:

- # SYMBOL USED FOR NOTE CALLOUT.
- EXISTING 240/120VOLT, 3-PHASE, 3-WIRE, HIGH-LEG DELTA PANEL 'A' AND WALL MOUNTED SPD SURGE PROTECTION DEVICE. RE-USE EXISTING PANEL AND RE-CONFIGURE AS 120/240, 1-PHASE, 3-WIRE PANEL. ABANDON HIGH-LEG DELTA PHASE. REMOVE EXISTING ENGRAVED LABEL AND PROVIDE NEW ENGRAVED LABEL WITH NEW PANEL CONFIGURATION.
 RE: NEW ONE-LINE DIAGRAM.
 - EXISTING 50A, 240/120, 1PH, NEMA 3R GENERATOR RECEPTACLE LOCATED ON EXTERIOR OF BUILDING.
 - REMOVE METER, METER BASE, AND UNDERGROUND SERVICE TO EXISTING PANEL 'A'. COORDINATE REMOVAL WITH IDAHO POWER. AND PROJECT PHASING PRIOR TO BEGINNING WORK. REMOVE ALL CONDUIT, CONDUCTORS, AND JUNCTION BOXES BACK TO SOURCE.
 - REMOVE ALL EXISTING CONDUIT, CONDUCTORS AND JUNCTION BOXES BACK TO SOURCE. REMOVE EXISTING 3-POLE BREAKER AND REPLACE WITH 120VOLT, 20AMP SPARES.

1 DEMOLITION ONE-LINE DIAGRAM
 NTS



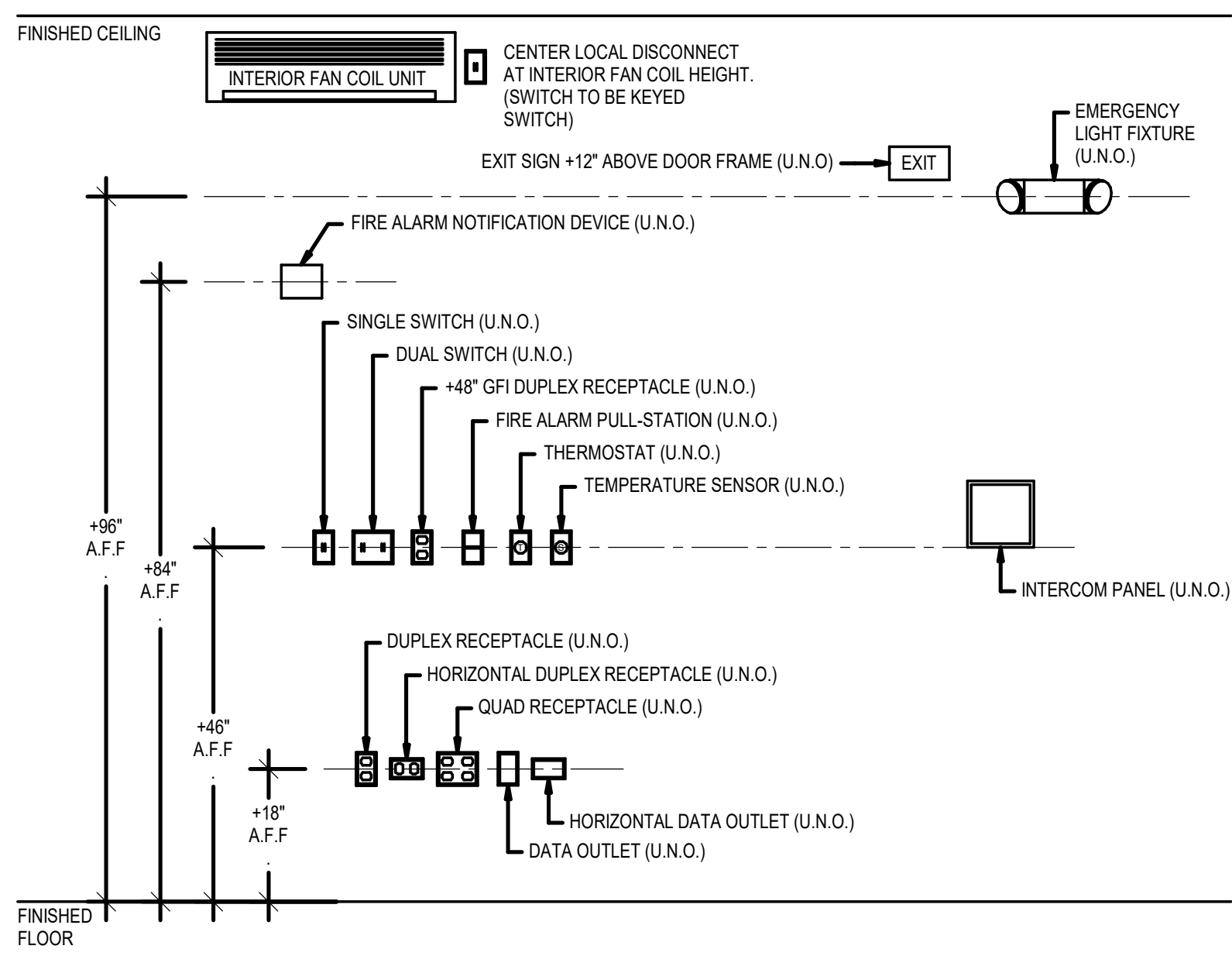
GENERAL NOTES:

- CONDUIT, CONDUCTORS AND AIC CALCULATIONS FOR ALL SERVICE, PANEL AND EQUIPMENT FEEDERS INDICATED ON THE ONE-LINE HAVE BEEN SIZED BASED ON COPPER. THE CONTRACTOR MAY USE COMPRESSED ALUMINUM CONDUCTORS FOR THESE FEEDERS PROVIDING THE CONDUIT, CONDUCTOR SIZES AND AIC CALCULATIONS ARE ADJUSTED AS REQUIRED TO MEET ALL NATIONAL ELECTRICAL CODE REQUIREMENTS.
- FURNISH AND INSTALL ENGRAVED LABEL ON THE FRONT OF ALL ELECTRICAL EQUIPMENT NOTING THE AVAILABLE FAULT CURRENT VALUE SHOWN.

KEYED NOTES:

- # SYMBOL USED FOR NOTE CALLOUT.
- NEW 800A, 208Y/120VOLT, 3-PHASE, 4-WIRE, NEMA 3R PANEL BOARD CONSTRUCTION WITH SURGE PROTECTION INTEGRAL.
 - EXISTING 120/240 VOLT, 3-PHASE HIGH-LEG DELTA PANEL TO BE RE-CONFIGURED FOR 120/240 VOLT, 1-PHASE, 3-WIRE PANEL. HIGH-LEG DELTA PHASE TO BE ABANDONED. BREAK EXISTING NEUTRAL BONDING. PROVIDE NEW-ENGRAVED LABEL WITH NEW PANEL CONFIGURATION.
 - NEW 208VOLT 1-PHASE TO 240/120 VOLT, 1-PHASE, 3-WIRE TRANSFORMER TO BACK FEED THE EXISTING 240/120 VOLT PANELS 'A' AND 'C' (VIA MANUAL TRANSFER SWITCH 'M').
 - REPLACE ENGRAVED LABELING ON PANEL 'B' TO INDICATED 120/208, 1-PHASE, 3-WIRE
 - EXISTING 50A, 240/120, 1PH, NEMA 3R GENERATOR RECEPTACLE LOCATED ON EXTERIOR OF BUILDING.
 - EXTEND TO EXISTING BUILDING GROUNDING SYSTEM.
 - INTERCEPT THE EXISTING CONDUCTORS SERVING THE EXISTING EXHAUST FAN AND RE-ROUTE TO PANEL 'MDP' VIA THE NEW TRANSFORMER.
 - PROVIDE NEW FUSED DISCONNECT ADJACENT TO THE NEW TRANSFORMER.
 - REFER TO PANEL SCHEDULE FOR ADDITIONAL BREAKERS

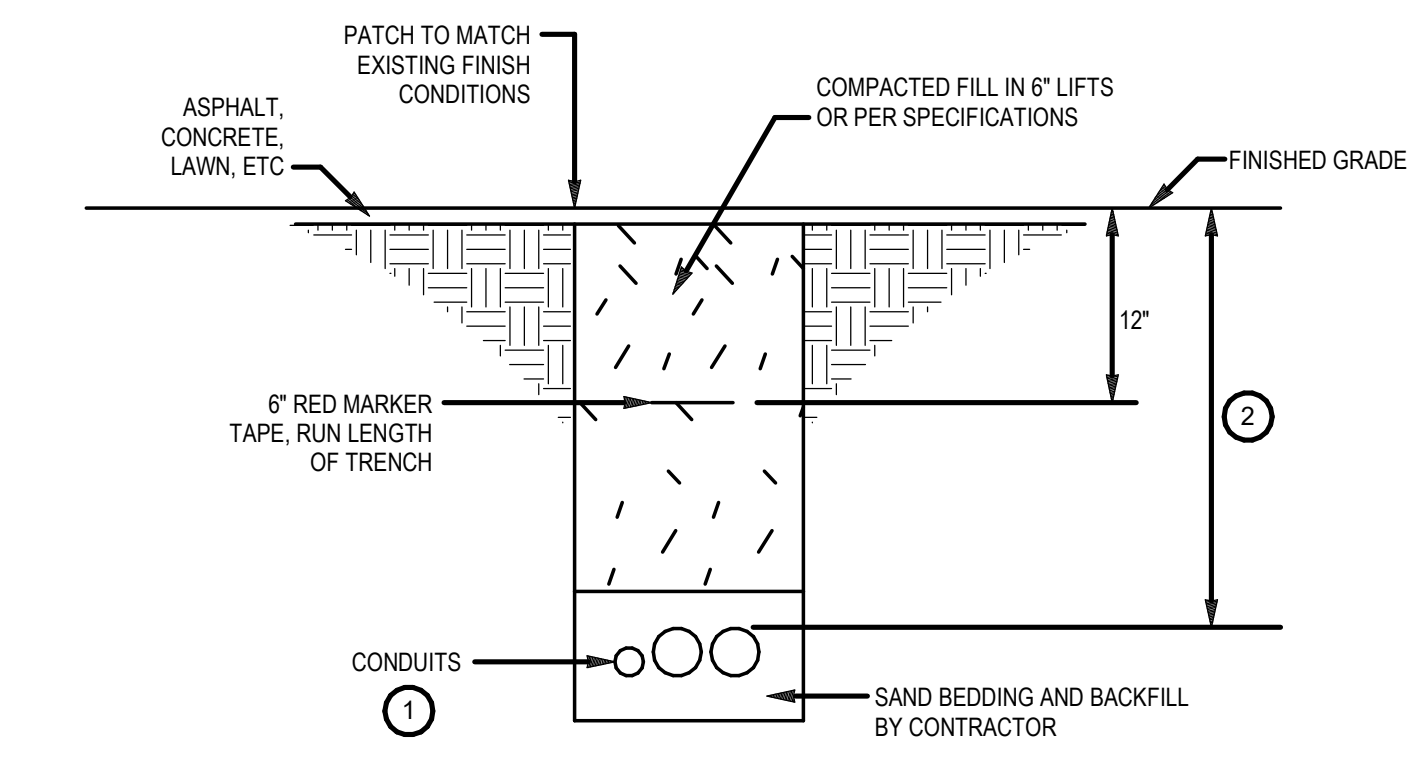
2 NEW ONE-LINE DIAGRAM
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DETAIL GENERAL NOTES:

- PROVIDE FRAMING AS REQUIRED.

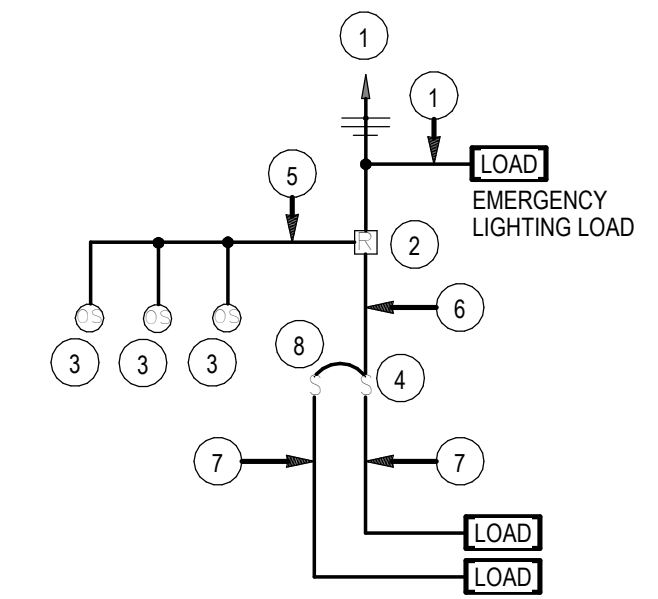
5 STANDARD MOUNTING HEIGHTS
 NTS



DETAIL NOTES:

- # SYMBOL USED FOR NOTE CALLOUT.
- IF MULTIPLE CONDUITS SHARE TRENCH, PROVIDE SPACING BETWEEN CONDUITS. PROVIDE ZIP TIES, AND TIE ALL CONDUITS TOGETHER TO ENSURE STABILITY.
 - BURIAL DEPTH TO BE VERIFIED WITH UTILITIES AND AUTHORITY HAVING JURISDICTION: ELECTRICAL FEEDERS, COMMUNICATIONS: 24" MINIMUM
 UNDERGROUND SECONDARY: 30" MINIMUM
 UNDERGROUND PRIMARY: 42" MINIMUM

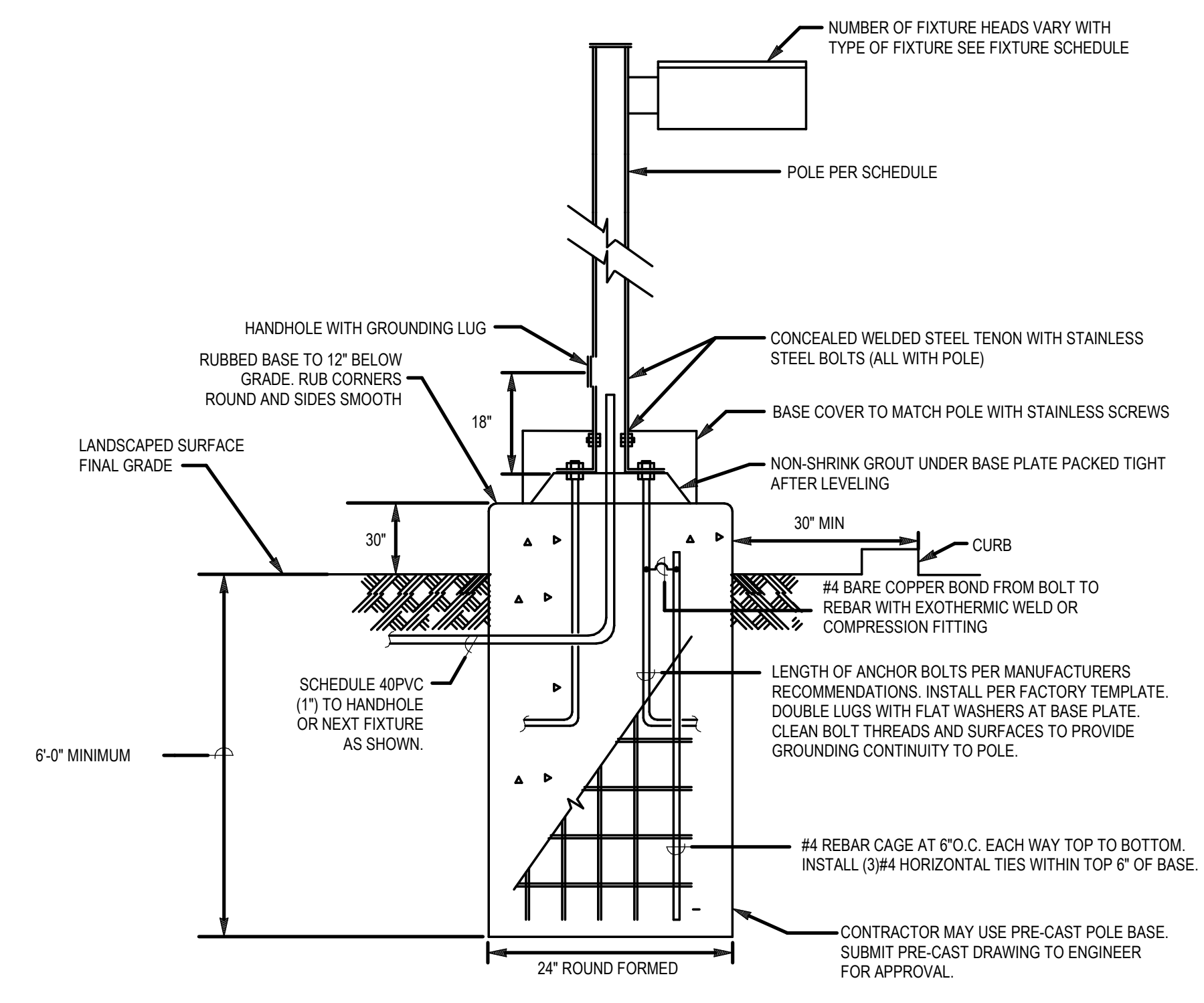
3 SITE TRENCHING DETAIL
 NTS



DETAIL NOTES:

- UNSWITCHED LINE VOLTAGE POWER FEED FROM LOCAL PANEL.
- POWER/RELAY PACK RATED FOR UP TO 3 SENSORS AND 15A LINE VOLTAGE SWITCHING. PROVIDE QUANTITY AS REQUIRED FOR A COMPLETE INSTALLATION.
- LOW VOLTAGE OCCUPANCY SENSOR, UP TO 3 PER POWER PACK. PROVIDE WITH ISOLATED NOING AUXILIARY CONTACTS FOR HVAC INTERLOCK. QUANTITY AS INDICATED ON PLANS. LOCATION PER THE MANUFACTURERS RECOMMENDATIONS.
- WALL MOUNTED LINE VOLTAGE SNAP SWITCH(ES). QUANTITY AND LOCATION AS INDICATED ON PLANS.
- LOW VOLTAGE POWER AND CONTROL CONDUCTORS AS REQUIRED FOR A COMPLETE INSTALLATION.
- LINE VOLTAGE SWITCHED LEG FROM RELAY PACK TO LOCAL WALL SWITCHES.
- LINE VOLTAGE SWITCHED LEG FROM SWITCHES TO LIGHTING LOAD.
- SECOND SWITCH FOR DUAL LEVEL LIGHTING WHERE INDICATED ON PLANS.

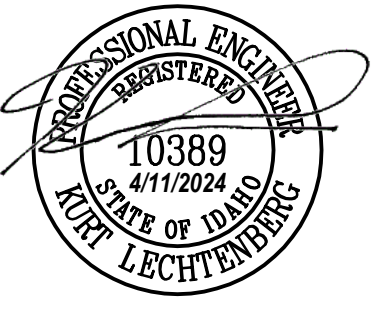
6 OCCUPANCY SENSORS DETAIL
 NTS



DETAIL NOTES:

- INCREASE THE SPECIFIED HEIGHT OF THE POLE BY 2'-0" TO ENSURE UNIFORM FIXTURE MOUNTAIN HEIGHT WHERE THE 6" BASE IS USED.
- PROTECTED AREA IMPLIES THE POLE IS INSTALLED AT LEAST 30' FROM PARKING OR DRIVE AREAS.

4 SITE LIGHTING POLE BASE DETAIL
 NTS



LIGHTING FIXTURE SCHEDULE									
TYPE MARK	DESCRIPTION	MOUNTING	WATTAGE	LAMP	MANUFACTURER	MODEL	OR EQUAL BY	NOTES	
EX1	THERMOPLASTIC EXIT SIGN WITH SELF DIAGNOSTICS, GREEN LETTERING, AND BATTERY PACK	CEILING MOUNTED	0.7	LED	LITHONIA	LQM-S-W-3-G-MVOLT-ELN-SD	SURE-LITE / COMPASS		1
GL1	2X2, VOLUMETRIC RECESSED LIGHTING	CEILING GRID	26	LED, 3300 LUMENS, 4000K	LITHONIA	ZBLT2-33L-ADP-GZ1-LP840 (PROVIDE WITH 'EL14L' OPTION FOR EMERGENCY FIXTURES)	LIGHTOLIER/METAL UX/H.E. WILLIAMS		1
PL1	EXTERIOR POLE LIGHT WITH TYPE 3 DISTRIBUTION AND BI-LEVEL MOTION/AMBIENT SENSOR	POLE MOUNTED +20'-0" AFF	111	LED, 15,657 LUMENS, 3000K	LITHONIA	RSX2 LED-P2-30K-R3-MVOLT-SPA-NLTAIR2 PIRH-DOBXD (POLE.SSS-20-4C-DM19AS-DOBXD)	COOPER / HUBBELL		1
WP1	EXTERIOR LED WALL PACK WITH PHOTOCCELL	WALL MOUNTED; +11'-0" UNO	11	LED, 1500 LUMENS, 4000K	LITHONIA	WST LED-P1-40K-VF-120-PE-DOBXD (PROVIDE WITH 'E7WC' OPTION FOR EMERGENCY FIXTURES)	COOPER / HUBBELL		1

LIGHTING FIXTURE SCHEDULE NOTES

1 SUBSTITUTIONS WILL BE ALLOWED IF SUBMITTED PRIOR TO BID DATE BY THE GREATER OF 7 BUSINESS DAYS OR THE TIME PERIOD SPECIFIED BY DIVISION 1 SPECIFICATIONS, AND IF DEEMED EQUAL BY THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING SUBSTITUTED FIXTURES MEET OR EXCEED THE SPECIFICATIONS OF THE FIXTURES SPECIFIED.

Branch Panel: A

Location: ELEC 103
Supply From: MBR
Mounting: RECESSED
Enclosure: Type 1

Volts: 120/240 Delta High-Leg
Phases: 3
Wires: 4

A.I.C. Rating: EXISTING
Mains Type: MBR
Mains Rating: 225 A
MCB Rating: 225 A

Notes:
 EXISTING 120/240VOLT, 3-PHASE HIGH-LEG DELTA PANEL TO BE RE-USED AND RE-CONFIGURED FOR 120/240VOLT, 1-PHASE, 3-WIRE. RE:ONE-LINE DIAGRAMS.
 1)HIGH-LEG DELTA PHASE TO BE ABANDONED; 2)DEMO AND RE-FEED FROM 'MDP'.RE:ONE-LINE DIAGRAMS

CKT	Circuit Description	CKT Note	Trip	Poles	A	B	C	Poles	Trip	CKT Note	Circuit Description	CKT
1	BLANK - NOT USABLE	1	--	1				1	--	1	BLANK - NOT USABLE	2
3	IGNITION OVEN-TESTING RM5	30 A	2		2760 VA	4800 VA	2760 VA	4800 VA			PANEL 'C'	6
7	BLANK - NOT USABLE	1	--	1				1	--	1	BLANK - NOT USABLE	10
9	REC-TESTING RM5 COUNTER	20 A	1				180 VA	0 VA	2	20 A	MAU-1, MEZZANINE	12
11	REC-TESTING RM4	20 A	1		720 VA	0 VA						14
15	BLANK - NOT USABLE	1	--	1				1	--	1	BLANK - NOT USABLE	16
17	IGNITION OVEN-TESTING RM4	30 A	2		2760 VA	3360 VA	2760 VA	3360 VA	2	50 A	CONDENSING	18
19	(D)JEF-3, ROOF (VIA VFD)	2	30 A	3		0 VA			1	--	1 BLANK - NOT USABLE	22
21	CONDENSING UNIT-MSC SPACES				0 VA	2040 VA	0 VA	2040 VA	2	35 A	CONDENSING UNIT-MSC SPACES	24
23	BLANK - NOT USABLE	1	20 A	1		0 VA			1	--	1 BLANK - NOT USABLE	28
25	IGNITION OVEN-TESTING RM3	30 A	2		2760 VA	0 VA	2760 VA	0 VA	3	30 A	SPD (PANEL A)	30
27	BLANK - NOT USABLE	1	--	1					--	--		32
29	REC-TESTING RM3 COUNTER	20 A	1				180 VA	0 VA	2	100 A	(D)PANEL 'B'	36
31	(D)MAU-2, EXTERIOR	2	20 A	3	0 VA	0 VA			--	--		38
33	BLANK - NOT USABLE	1	--	1					1	--	1 BLANK - NOT USABLE	40
35	WATER HEATER, RECIRC. PUMP	20 A	1				0 VA	600 VA	1	20 A		42
37					19200 VA	0 VA	19440 VA					
39					160 A	0 A	162 A					
41												

Legend:

Branch Panel: D

Location: TRN. ENTRY 116
Supply From: MDP
Mounting: RECESSED
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 10,000
Mains Type: MLO
Mains Rating: 200 A
MCB Rating:

Notes:
 1)GFCI FOR PERSONAL PROTECTION (5mA); 2)GFEP FOR EQUIPMENT PROTECTION (30mA); 3)RED HANDLE, LOCKABLE BREAKER

CKT	Circuit Description	CKT Note	Trip	Poles	A	B	C	Poles	Trip	CKT Note	Circuit Description	CKT
1	EH-1, TRAINING ENTRY 116	20 A	2		1000 VA	522 VA					LTS-TRAINING RM 117	2
3	MAU-1, ROOF	20 A	3				1000 VA	720 VA			REC-TRAINING RM 117	4
5	BLANK - NOT USABLE	1	--	1			2232 VA	360 VA			REC-TRAINING ENTRY 116	6
7	SMOKE FIRE DAMPERS	3	20 A	1							REC-TRAINING RM 117	8
9	ACCESS CONTROLS POWER	20 A	1		1080 VA	360 VA					REC-TRAINING RM 117	10
11	GATE OPERATOR (EXIT ONLY)	20 A	1			0 VA	360 VA				REC-TRAINING RM 117	12
13	RTU-1, ROOF	50 A	3				4920 VA	0 VA	1	20 A	Spare	14
15	RTU-1, ROOF (POWER EXHAUST)	20 A	3		4920 VA	0 VA	4920 VA	0 VA	1	20 A	Spare	16
17	BLANK - NOT USABLE	1	--	1			1440 VA	0 VA	1	20 A	Spare	18
19	BLANK - NOT USABLE	1	--	1			1440 VA	0 VA	1	20 A	Spare	20
21	BLANK - NOT USABLE	1	--	1			0 VA	0 VA	1	20 A	Spare	22
23	BLANK - NOT USABLE	1	--	1			0 VA	0 VA	1	20 A	Spare	24
25	BLANK - NOT USABLE	1	--	1			0 VA	0 VA	1	20 A	Spare	26
27	BLANK - NOT USABLE	1	--	1			0 VA	0 VA	1	20 A	Spare	28
29	BLANK - NOT USABLE	1	--	1			0 VA	0 VA	1	20 A	Spare	30
31	BLANK - NOT USABLE	1	--	1			0 VA	0 VA	1	20 A	Spare	32
33	BLANK - NOT USABLE	1	--	1			0 VA	0 VA	1	20 A	Spare	34
35	BLANK - NOT USABLE	1	--	1			0 VA	0 VA	1	20 A	Spare	36
37	BLANK - NOT USABLE	1	--	1			0 VA	0 VA	1	20 A	Spare	38
39	BLANK - NOT USABLE	1	--	1			0 VA	0 VA	1	20 A	Spare	40
41	BLANK - NOT USABLE	1	--	1			0 VA	0 VA	1	20 A	Spare	42
					11729 VA	10669 VA	9852 VA					
					99 A	90 A	82 A					

Legend:

Branch Panel: MDP

Location: EXTERIOR
Supply From: SURFACE
Mounting: SURFACE
Enclosure: Type 3R

Volts: 120/208 Wye
Phases: 3
Wires: 4

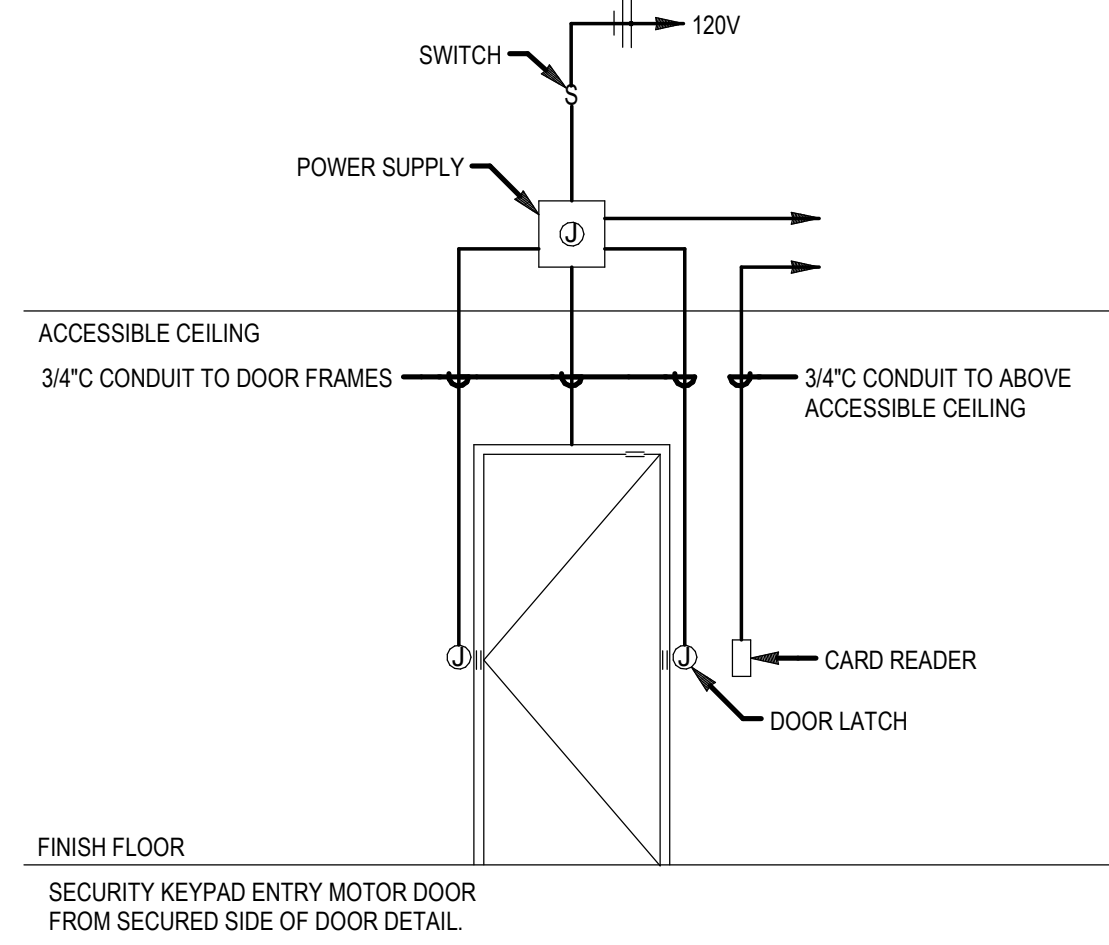
A.I.C. Rating: 22,000
Mains Type: MBR
Mains Rating: 600 A
MCB Rating: 600 A

Notes:
 SERVICE ENTRANCE RATED

CKT	Circuit Description	CKT Note	Trip	Poles	A	B	C	Poles	Trip	CKT Note	Circuit Description	CKT
1	(N) PANEL 'D'	200 A	3		11729 VA	0 VA					Spare	2
3	CONDENSER 1 (MAU-2)	30 A	2		1883 VA	19200 VA						4
5	CONDENSER 2 (MAU-2)	40 A	2		2850 VA	10740 VA						6
7	(E) MAU-2	20 A	3		2328 VA	188 VA					LTS-EXTERIOR POLE	8
9	EF-3, ROOF (VIA T3, MEZZANINE)	40 A	3		1920 VA	0 VA					PIVOT GATE OPERATOR	10
11	BLANK - NOT USABLE	1	--	1			1920 VA	0 VA	1	20 A	Spare	12
13	BLANK - NOT USABLE	1	--	1			1920 VA	0 VA	1	20 A	Spare	14
15	BLANK - NOT USABLE	1	--	1			0 VA	0 VA	1	20 A	Spare	16
17	BLANK - NOT USABLE	1	--	1			0 VA	0 VA	1	20 A	Spare	18
19	BLANK - NOT USABLE	1	--	1			0 VA	0 VA	1	20 A	Spare	20
21	BLANK - NOT USABLE	1	--	1			0 VA	0 VA	1	20 A	Spare	22
23	BLANK - NOT USABLE	1	--	1			0 VA	0 VA	1	20 A	Spare	24
25	BLANK - NOT USABLE	1	--	1			0 VA	0 VA	1	20 A	Spare	26
27	BLANK - NOT USABLE	1	--	1			0 VA	0 VA	1	20 A	Spare	28
29	BLANK - NOT USABLE	1	--	1			0 VA	0 VA	1	20 A	Spare	30
31	BLANK - NOT USABLE	1	--	1			0 VA	0 VA	1	20 A	Spare	32
33	BLANK - NOT USABLE	1	--	1			0 VA	0 VA	1	20 A	Spare	34
35	BLANK - NOT USABLE	1	--	1			0 VA	0 VA	1	20 A	Spare	36
37	BLANK - NOT USABLE	1	--	1			0 VA	0 VA	1	20 A	Spare	38
39	BLANK - NOT USABLE	1	--	1			0 VA	0 VA	1	20 A	Spare	40
41	BLANK - NOT USABLE	1	--	1			0 VA	0 VA	1	20 A	Spare	42
					50638 VA	36415 VA	24630 VA					
					437 A	319 A	205 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
HVAC	49599 VA	100.00%	49599 VA	
Lighting	710 VA	100.00%	710 VA	Total Conn. Load: 111681 VA
Other	0 VA	0.00%	0 VA	Total Est. Demand: 111681 VA
Power	1080 VA	100.00%	1080 VA	Total Conn. Current: 310 A
Receptacle	3240 VA	100.00%	3240 VA	Total Est. Demand Current: 310 A



DETAIL GENERAL NOTES:

1. COORDINATE LOCATION AND CONNECTION REQUIREMENTS FOR ACCESS CONTROLS WITH ACCESS CONTROLS CONTRACTOR PRIOR TO ROUGH-IN

1 ACCESS CONTROLS DETAIL

NTS

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PROJECT 24009	DATE 04-11-24
DRAWN Author	CHECKED Checker

REVISED

SHEET TITLE
ELECTRICAL DETAILS AND SCHEDULES

SHEET

E70
 ORIGINAL SHEET SIZE
 24" x 36"