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CONSTRUCTION DOCUMENTS

WILLCOX UNIFIED SCHOOL DISTRICT
WILLCOX HIGH SCHOOL REMODEL

swaim

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REGISTERED ARCHITECT
CERTIFICATE NO.
23459
MARK E.
BOLLARD
DATE SIGNED 04/07/25
ARIZONA U.S.A.

job
2404.03

date
04.07.2025

revisions	

WILLCOX MIDDLE & HIGH SCHOOL
240 N. BISBEE AVE.
WILLCOX, ARIZONA 85643
HIGH SCHOOL REMODEL

cover sheet

g1.0



1 location map
g1.0 1" = 1/4" MILE



applicable codes

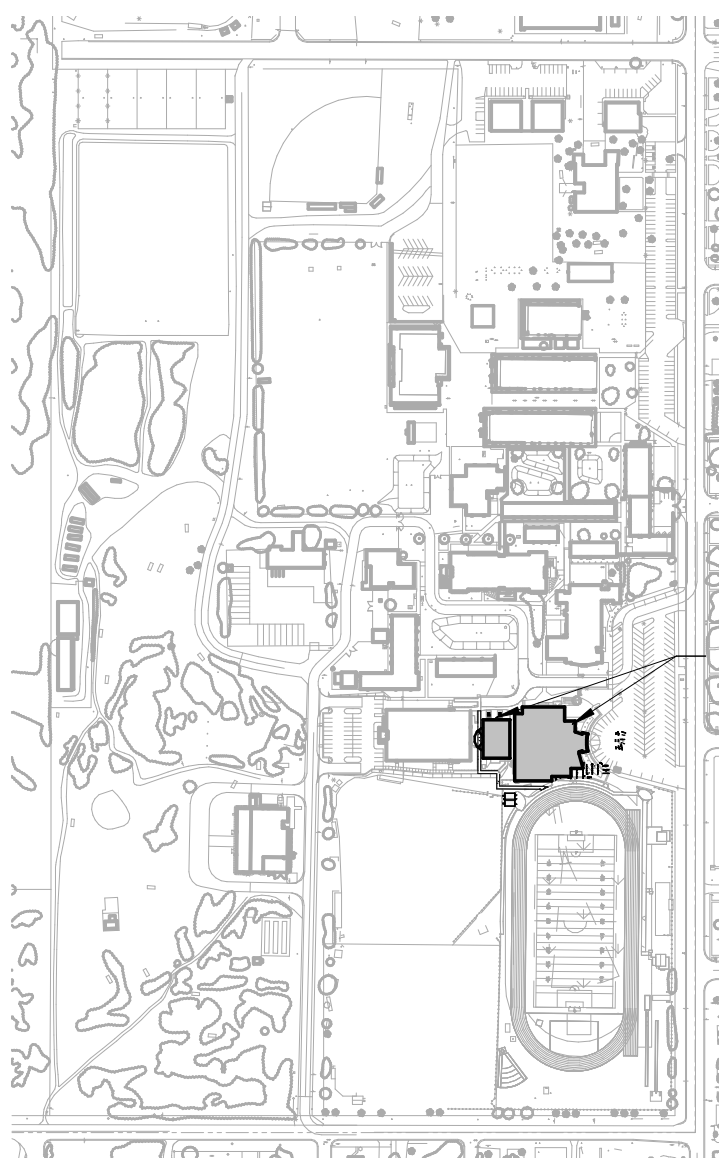
2018 INTERNATIONAL BUILDING CODES W/ LOCAL AMENDMENTS
2018 INTERNATIONAL BUILDING CODE
2017 NATIONAL ELECTRICAL CODE
2018 INTERNATIONAL ENERGY CONSERVATION CODE
2018 INTERNATIONAL EXISTING BUILDING CODE
2018 INTERNATIONAL FUEL GAS CODE
2018 INTERNATIONAL MECHANICAL CODE
2018 INTERNATIONAL PLUMBING CODE
2018 INTERNATIONAL RESIDENTIAL CODE
2018 INTERNATIONAL FIRE CODE
CITY OF TUCSON/PIMA COUNTY OUTDOOR LIGHTING CODE

deferred submittals

A. PRE-ENGINEERED METAL BUILDING FABRICATION AND ERECTION DRAWINGS

bid alternates

A. FIELD RESTROOM BUILDING
B. WRESTLING ROOM IMPROVEMENTS AND ADDITION



2 site plan
g1.0 1" = 400'-0"



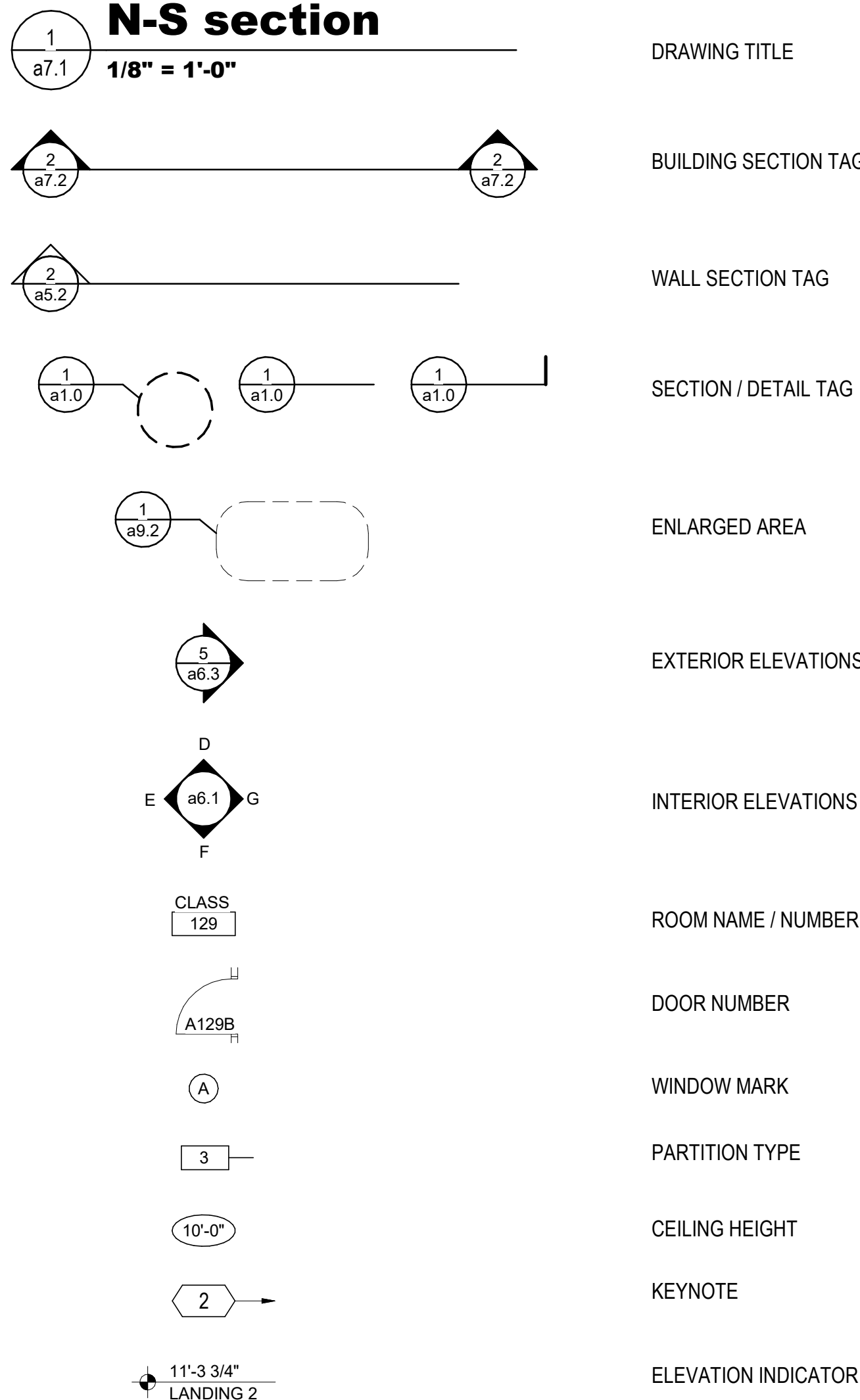
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a9.10	accessibility details		

abbreviations

&	AND	EQUIP	EQUIPMENT	OD	OUTSIDE DIAMETER	TYP	TYPICAL
@	AT	EXH	EXHAUST	OD	OVERFLOW DRAIN	UNFIN	UNFINISHED
AB	ANCHOR BOLT	EXST	EXISTING	OFCl	OWNER FURNISHED, CONTRACTOR INSTALLED	UNO	UNLESS NOTED OTHERWISE
ABC	AGGREGATE BASE COURSE	EXP	EXPANSION	OFF	OFFICE	UON	UNLESS OTHERWISE NOTED
ABI	ADDITIVE BID ITEM	EXT	EXTERIOR	OFOI	OWNER FURNISHED, OWNER INSTALLED	URNL	URNAL
AC	AIR CONDITIONING	FA	FIRE ALARM	OH	OVERHEAD	VAC	VENTILATION AND AIR CONDITIONING
ACC	ACCESSIBLE	FB	FACE BRICK	OPNG	OPENING	VAR	VARIES
ACoust	ACOUSTICAL	FD	FLOOR DRAIN	OPP	OPPOSITE	VCT	VINYL COMPOSITION TILE
ACT	ACOUSTIC CEILING TILE	FD	FLOOR DRAIN OR FIRE DEPARTMENT	ORD	OVERFLOW ROOF DRAIN	VERT	VERTICAL
AD	AREA DRAIN	FDC	FIRE DEPARTMENT CONNECTION	P	PAINT	VEST	VESTIBULE
ADJ	ADJUSTABLE	FE	FIRE EXTINGUISHER	PAV	PAVING	VIF	VERIFY IN FIELD
AFF	ABOVE FINISHED FLOOR	FEC	FIRE EXTINGUISHER CABINET	PBD	PARTICLE BOARD	VP	VISION PANEL
AFG	ABOVE FINISHED GRADE	FF&E	FURNITURE, FIXTURES AND EQUIPMENT	PC	PRECAST	VR	VAPOR RETARDER
AGGR	AGGREGATE	FFB	FLUSH FLOOR BOX	PDF	POWER DRIVEN FASTENER	VT	VINYL TILE
ALT	ALTERNATE	FFEL	FINISH FLOOR ELEVATION	PERF	PERFORATED	WVC	VINYL WALL COVERING
ALUM	ALUMINUM	FH	FLAT HEAD	PERIM	PERIMETER	W	WIDE/WEST
ANOD	ANODIZED	FHC	FIRE HOSE CABINET	PERP	PERPENDICULAR	W/	WITH
AP	ACCESS PANEL	FIN	FINISH	PL	PLATE	W/O	WITHOUT
APC	ACOUSTICAL PANEL CEILING	FIXT	FIXTURE	PLAM	PLASTIC LAMINATE	WC	WATER CLOSET
APPROX	APPROXIMATE	FLASH	FLASHING	PLAS	PLASTER	WD	WOOD
ARCH	ARCHITECTURAL	FLR	FLOOR	PLBG	PLUMBING	WIN	WINDOW
ASPH	ASPHALT	FLUOR	FLUORESCENT	PLF	POUNDS PER LINEAR FOOT	WM	WIRE MESH
ATTN	ATTENTION	FND	FOUNDATION	PLYWD	PLYWOOD	WP	WATERPROOF/WATERPRO OFING
AUTO	AUTOMATIC	FO	FACE OF	PNL	PANEL	WPM	WATERPROOF MEMBRANE
AV	AUDIOVISUAL	FP	FIRE PROTECTION	PNT	PAINT OR PAINTED	WS	WEATHER-STRIPPING
BD	BOARD	FPG	FIREPROOFING	POL	POLISHED	WSCOT	WAINSCOT
BET	BUILDING ENTRANCE TERMINAL	FR	FIRE RESISTANT	PR	PAIR	WT	WEIGHT
BFF	BELOW FINISHED FLOOR	FRC	FIBER REINFORCED CONCRETE	PREFAB	PREFABRICATED	WV	WATER VALVE
BIT	BITUMINOUS	FRT	FIRE RETARDANT TREATED	PSF	POUNDS PER SQUARE FOOT	WWF	WELDED WIRE FABRIC
BL	BASELINE	FT	FEET/FOOT	PT	POINT	WWW	WELDED WIRE MESH
BLDG	BUILDING	FTG	FOOTING	PTD	PRESSED TREATED		
BLK	BLOCK	FURN	FURNITURE	PTN	PARTITION		
BLKG	BLOCKING	FURR	FURRING	PVC	POLYVINYL CHLORIDE		
BM	BEAM, BENCHMARK	FWC	FABRIC WALL COVERING	QT	QUARRY TILE		
BO	BOTTOM OF	FWP	FABRIC WRAPPED PANEL	QTY	QUANTITY		
BOS	BOTTOM OF STEEL	GA	GAUGE	R	RADIUS/RISER		
BOT	BOTTOM	GALV	GALVANIZED	RA	RETURN AIR		
BRG	BEARING	GB	GRAB BAR	RAD	RADIUS		
BRK	BRICK	GC	GENERAL CONTRACT(OR)	RB	RESILIENT BASE		
BRKT	BRAKET	GEN	GENERAL	RBR	RUBBER		
BSMNT	BASEMENT	GFRG	GLASS FIBER REINFORCED CONCRETE	RCP	REFLECTED CEILING PLAN		
BUR	BUILT-UP ROOFING	GL	GLASS	RD	ROOF DRAIN		
C	CONDUIT	GLAZ	GLAZING	REC	RECESSED		
CA	COMPRESSED AIR	GRAN	GRANULAR	RECPT	RECEPTACLE		
CAB	CABINET	GRD	GROUND	REF	REFERENCE		
CAT	CATEGORY	GRFG	GLASS FIBER REINFORCED GYPSUM	REFR	REFRIGERATOR		
CB	CATCH BASIN	GSM	GALVANIZED SHEET METAL	REG	REGISTER		
CB	CEMENT BOARD	GV	GAS VALVE	REINF	REINFORCED		
CBU	CEMENTITIOUS BACKER UNIT	GWB	GYPSUM WALL BOARD	REINFC	REINFORCING		
CC	CENTER TO CENTER	GYP	GYPSUM	REL	RELOCATE		
CCTV	CLOSED CIRCUIT TELEVISION	H	HIGH/HEIGHT	REM	REMOVABLE		
CEM	CEMENT	HB	HOSE BIB	REOOM	RECOMMENDED		
CER	CERAMIC	HB	HOSE BIBB	REQD	REQUIRED/REQUIRED		
CG	CORNER GUARD	HC	HANDICAPPED	RESIL	RESILIENT		
CH	CHILLER	HDWD	HARDWOOD	REV	REVISION/REVISED		
CJ	CAST IRON	HDWR	HARDWARE	RM	ROOM		
CIP	CAST-IN-PLACE	HGT	HEIGHT	RO	ROUGH OPENING		
CJ	CONTROL JOINT	HM	HOLLOW METAL	RTD	RATED		
CL	CENTERLINE	HNDRL	HANDRAIL	RTG	RATING		
CLG	CEILING	HO	HOLD OPEN	RWL	RAIN WATER LEADER		
CLKG	CAULKING	HORIZ	HORIZONTAL	S	SOUTH		
CLR	CLEAR	HR	HOUR	SA	SUPPLY AIR		
CNTR	COUNTER	HRC	HOSE REEL CABINET	SAF	SELF ADHERED FLASHING		
CO	CLEANOUT	HTG	HEATING	SC	SOLID CORE		
COL	COLUMN	HVAC	HEATING VENTILATION AND AIR CONDITIONING	SCHED	SCHEDULE		
CONC	CONCRETE	HW	HOT WATER	SD	STORM DRAIN		
COND	CONDITION	ID	INSIDE DIAMETER	SECT	SECTION		
CONN	CONNECTION	IN	INCH/INCHES	SF	SQUARE FEET/FOOT		
CONST	CONSTRUCTION	INCAND	INCANDESCENT	SH	SPRINKLER HEAD		
CONT	CONTINUOUS	INCL	INCLUDED/INCLUDING	SHR	SHOWER		
CONTR	CONTRACTOR	INFO	INFORMATION	SHT	SHEET		
COORD	COORDINATE	INSUL	INSULATION	SIM	SIMILAR		
CORR	CORRIDOR	INSUL	INSULATED OR INSULATION	SM	SHEET METAL		
CPT	CARPET	INT	INTERIOR	SM	SURFACE MOUNTED		
CT	CERAMIC TILE	INTERM	INTERMEDIATE	SP	STANDPIPE		
CTR	CENTER	INV	INVERT	SPEC	SPECIFICATION		
CTSK	COUNTERSUNK	JAN	JANITOR	SPEC	SPECIFIED OR SPECIFICATION		
CW	COLD WATER	JC	JANITOR'S CLOSET	SPK	SPRINKLER OR SPEAKER		
D	DEEP, DEPTH	JST	JOIST	SPKR	SPEAKER		
DBL	DOUBLE	JT	JOINT	SQ	SQUARE		
DEG	DEGREE	KIT	KITCHEN	SS	STAINLESS STEEL		
DEMO	DEMOLISH OR DEMOLITION	KO	KNOCK OUT	SSK	SERVICE SINK		
DEMO	DEMOLITION	LAM	LAMINATE	STA	STATION		
DEPT	DEPARTMENT	LAV	LAVATORY	STC	SOUND TRANSMISSION COEFFICIENT		
DF	DRINKING FOUNTAIN	LB	POUNDS	STL	STEEL		
DIA	DIAMETER	LLH	LONG LEG HORIZONTAL	STOR	STORAGE		
DIFF	DIFFUSER	LLV	LONG LEG VERTICAL	STRG	STRINGER		
DIM	DIMENSION	LT	LIGHT	STRUCT	STRUCTURAL		
DIMS	DIMENSIONS	MAS	MASONRY	STRUCT	STRUCTURE OR STRUCTURAL		
DISP	DISPENSER	MAX	MAXIMUM	SUBCAT	SUBCATEGORY		
DIV	DIVISION	MECH	MECHANICAL	SUSP	SUSPENDED		
DMPF	DAMP PROOFING	MED	MEDIUM	SYM	SYMMETRICAL		
DN	DOWN	MEMBR	MEMBRANE	SYS	SYSTEM		
DO	DOOR OPENING	MFR	MANUFACTURER	T	TREAD		
DR	DOOR	MH	MAN HOLE	T&B	TOP AND BOTTOM		
DRN	DRAIN	MIN	MINIMUM	T&G	TONGUE AND GROOVE		
DS	DOWNSPOUT	MISC	MISCELLANEOUS	TB	TOWEL BAR		
DS	DOWN SPOUT	MO	MASONRY OPENING	TEL	TELEPHONE/TELECOM		
DTL	DETAIL	MR	MOISTURE RESISTANT	TELE	TELEPHONE		
DW	DISHWASHER	MTD	MOUNTED	TEMP	TEMPERATURE		
DWG	DRAWING	MTG	MOUNTING	TEMP	TEMPORARY		
DWR	DRAWER	MTL	METAL	THK	THICKNESS		
CMU	CONCRETE MASONRY UNIT	MULL	MULLION	THRU	THROUGH		
E	EAST	N	NORTH	TKBD	TACK BOARD		
EA	EACH	NA	NOT APPLICABLE	TLT	TOILET		
EB	EXPANSION BOLT	NC	NOISE CRITERIA	TMPD	TEMPERED		
EJ	EXPANSION JOINT	NIC	NOT IN CONTRACT	TO	TOP OF		
EL	ELEVATION	NO	NUMBER	TOB	TOP OF BEAM		
ELEC	ELECTRICAL	NOM	NOMINAL	TOC	TOP OF CONCRETE		
ELEV	ELEVATOR	NON	NON COMBUSTIBLE	TOS	TOP OF STEEL		
EMER	EMERGENCY	COMB		TS	TUBE STEEL		
ENCL	ENCLOSURE	NTS	NOT TO SCALE	TV	TELEVISION		
ENG	ENGINEER	OA	OUTSIDE AIR				
EP	ELECTRICAL PANEL	OC	ON CENTER				
EPDM	ETHYLENE PROPYLENE						
EQ	EQUAL						

symbols legend



general project notes

- A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXISTENCE AND LOCATION OF ALL UNDERGROUND OR CONCEALED UTILITIES IN ADVANCE OF ANY CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE TO HIRE A PRIVATE UTILITY LOCATING SERVICE TO LOCATE ALL UNDERGROUND UTILITIES ON OR NEAR THE PROJECT SITE.
- B. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ANY OR ALL EXISTING CONDITIONS PRIOR TO THE START OF CONSTRUCTION. ANY UTILITIES FOUND TO BE IN THE WAY OF THE NEW CONSTRUCTION SHALL BE REMOVED, RELOCATED OR REPLACED AS DIRECTED. REFER TO PLUMBING, ELECTRICAL, MECHANICAL AND/OR CIVIL PLANS FOR SPECIFIC REQUIREMENTS.
- C. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REMOVE ALL ABANDONED (RETIRED) UTILITIES THAT INTERFERE WITH THE CONSTRUCTION PROJECT. THE CONTRACTORS AND LOCAL UTILITY AND TRAFFIC CREWS SHALL COORDINATE WORK SCHEDULES SO AS TO PREVENT ANY CONFLICTING WORK CONDITIONS.
- D. CONTRACTOR SHALL REPAIR ANY AND ALL UTILITIES DAMAGED DURING THE COURSE OF CONSTRUCTION IN ACCORDANCE WITH LOCAL SPECIFICATIONS, AT NO ADDITIONAL COST.
- E. CONTRACTOR TO NOTIFY "BLUE STAKE" @ 1-800-782-5348, AT LEAST 48-HOURS IN ADVANCE OF ANY EXCAVATION. UTILITY LOCATIONS SHALL BE COORDINATED WITH THE ARCHITECT.
- F. ALL ITEMS REMOVED SHALL BE TEMPORARILY STORED IN A LOCATION APPROVED BY THE OWNER, AND THE OWNER SHALL REVIEW ALL ITEMS PRIOR TO ANY DISPOSAL. ANY ITEM WHICH IS DEEMED SALVAGEABLE SHALL REMAIN THE OWNER'S PROPERTY, AND WILL BE REMOVED TO STORAGE FACILITIES DESIGNATED BY THE OWNER FOR FUTURE USE. IF THE OWNER DEEMS AN ITEM AS NON-SALVAGEABLE, THE CONTRACTOR SHALL DISPOSE OF IT.
- G. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ANY DEBRIS RESULTING FROM THE DEMOLITION AND CONSTRUCTION. AT NO TIME SHALL ANY OF THIS MATERIAL OBSTRUCT THE NORMAL OPERATION.
- H. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ANY OR ALL EXCESS EXCAVATION AND CONSTRUCTION RELATED DEBRIS, AT THE END OF EACH WORK DAY.
- I. THE CONTRACTOR IS ADVISED THAT DAMAGE TO ANY PORTION OF THIS PROJECT'S BUILDING(S) & SURROUNDING AREA AS A RESULT OF THIS PROJECT IS TO BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- J. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSPECT THE JOB SITE TO FAMILIARIZE HER/HIM SELF WITH ALL THE EXISTING CONDITIONS THAT COULD AFFECT THE INSTALLATION OF ANY WORK SET FORTH IN THESE PLANS.
- K. THE JOB SITE, AT THE COMPLETION OF CONSTRUCTION, SHALL BE CLEANED OF ANY DEBRIS OR SPOILS RESULTING FROM THE CONSTRUCTION.
- L. THE CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY ALL EXISTING RECORDED DIMENSIONS INDICATED AND ALL EXISTING CONDITIONS THAT IMPACT NEW CONSTRUCTION.
- M. THE CONTRACTOR SHALL ESTABLISH ALL QUANTITIES BASED ON ACTUAL CONDITIONS. THESE DRAWINGS ARE NOT TO BE SCALED.
- N. BLOCK WALLS ARE DIMENSIONED TO FACE OF BLOCK. DIMENSIONS ARE NOMINAL THICKNESS. BLOCK WALL OPENINGS ARE DIMENSIONED TO ROUGH OPENING.
- O. METAL STUD PARTITIONS ARE DIMENSIONED TO FACE OF STUD. ALL ROUGH OPENINGS ARE LOCATED 4" TO NEAREST ADJACENT WALL UNLESS DIMENSIONED OTHERWISE.
- P. COMPLY WITH ALL APPLICABLE CODES, RULES AND REGULATIONS. OBTAIN AND PAY FOR ALL PERMITS AND LICENSES REQUIRED.
- Q. REFER TO BUILDING CODE ANALYSIS SHEETS FOR ADDITIONAL CODE REQUIREMENTS.
- R. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AT LEAST 72 HOURS IN ADVANCE OF ANY CONSTRUCTION THAT REQUIRES SPECIAL/REQUIRED INSPECTION(S).
- S. REFERENCE ALL ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL SHEETS FOR SCOPE OF WORK & COORDINATION.
- T. ALL MATERIALS REQUIRED SHALL BE OF A GRADE AND QUALITY CONSISTENT WITH THE INTENDED USE AS SPECIFIED & APPROVED BY THE ARCHITECT.
- U. ALL EQUIPMENT OR MATERIALS NOT SHOWN OR SPECIFIED ON THE PLANS OR IN THE SPECIFICATIONS, BUT ARE REQUIRED TO COMPLETE THE INSTALLATION, SHALL BE SUPPLIED BY THE CONTRACTOR AS PART OF THE CONTRACT WORK.
- V. FIRE AND SMOKE SEAL ALL PENETRATIONS AROUND PIPE/CONDUIT AT ALL FLOOR, WALL, DECK & ROOF PENETRATIONS.
- W. ALL PENETRATIONS THROUGH FIRE RESISTIVE FLOORS OR WALLS SHALL BE PROTECTED BY MATERIALS AND INSTALLATION DETAILS THAT CONFORM TO THE UNDERWRITER LABORATORIES LISTING FOR THROUGH PENETRATION FIRE STOP SYSTEMS. THE CONTRACTOR SHALL SUBMIT MANUFACTURERS SHOP DRAWINGS AND DATA SHEETS FOR ALL PENETRATIONS
- X. UNLESS OTHERWISE NOTED ALL BLOCKING OR BACKING MATERIAL SHALL BE SOLID WOOD FOR ALL WALL MOUNTED ITEMS.
- Y. INSTALL A CONTINUOUS BEAD OF SEALANT AT ALL GAPS/SEAMS BETWEEN IMMOVABLE EQUIPMENT AND WALLS.
- Z. ALL SURFACES SHALL BE PAINTED OR FINISHED PER SPECIFICATION. REFER TO PLANS, ROOM FINISH SCHEDULE, BUILDING/WALL SECTIONS, DETAILS AND SPECIFICATIONS FOR ADDITIONAL PAINTING & FINISH REQUIREMENTS.
- AA. ALL TERMINATIONS OF CARPET, TILE, OR VCT TO ANOTHER FLOOR MATERIAL SHALL HAVE TRANSITION OR REDUCER STRIPS.
- BB. ALL INTERIOR FINISHES SHALL CONFORM TO THE REQUIREMENTS OF CHAPTER 8 OF THE 2018 INTERNATIONAL BUILDING CODE.
- CC. PROVIDE AN ESCUTCHEON AT EACH PIPE PENETRATION @ FLOOR AND/OR WALL SURFACES, TYPICAL.
- DD. ALL CORES INTO WALLS AND SLABS SHALL BE PRIOR APPROVED BY THE ARCHITECT AND STRUCTURAL ENGINEER.
- EE. INSTALL GYPSUM BOARD CONTROL JOINTS AT ALL LOCATIONS INDICATED OR IF NOT INDICATED AS ACCORDING TO THE REQUIREMENTS THAT ARE ESTABLISHED IN THE SPECIFICATIONS.
- FF. FIRE LANES SHALL BE MAINTAINED IN A CONDITION TO ENSURE ACCESS TO ALL BUILDINGS DURING CONSTRUCTION.
- GG. ALL NEW ROOFING SYSTEMS TO HAVE A CLASS "A" FIRE RATING.
- HH. SMOKING IS PROHIBITED ON CAMPUS.

swaim

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job

2404.03

date

04.07.2025

revisions

WILLCOX MIDDLE & HIGH SCHOOL
240 N. BISBEE AVE.
WILLCOX, ARIZONA 85643
HIGH SCHOOL REMODEL

abbreviations and
symbols

g1.1



2018 IBC code analysis

GENERAL

OCCUPANCY: E, AUXILLARY GYM AND LOCKER ROOM, ASSOCIATED WITH AN E OCCUPANCY PER 303.1.3

AREA SEPARATION: NONE EXISTING.

OCCUPANCY SEPARATION (TABLE 508.4): NONE.

TYPE OF CONSTRUCTION(TABLE 503): TYPE IIB, NON-SPRINKLERED.

ALLOWABLE FLOOR AREA (TABLE 506.2): 9,500 @ E

ALLOWABLE HEIGHT (TABLE 504.3): 55', TWO STORIES.

ALLOWABLE STORIES (TABLE 504.4): TWO STOREY.

BUILDING ELEMENTS (TABLE 601): 0 HRS.

FIRE RATING AT EXTERIOR WALLS (TABLE 602): > 10<30 FOR GROUP A-3; NO RATING REQUIRED.

ALLOWABLE FLOOR AREA INCREASE (SECTION 506)

NOT USED

ACTUAL GROSS BUILDING AREA

BUILDING:	19,241 TOTAL SF (CONSTRUCTED IN 1958)
LOCKER ROOM REMODEL:	1,075 SF
LOBBY RESTROOMS:	361 SF
LOCKERS:	833 SF
WEIGHT ROOM:	2,221 SF




OCCUPANT LOAD (TABLE 1004.5)

		<u>TOTAL OCCUPANCY</u>	
LOCKER ROOM REMODEL:	1075 / 50	= 21.5	~ 22
LOBBY RESTROOMS:	534 / 5	= 106.8	~ 107
LOCKERS:	833 / 50	= 16.7	~ 17
<u>WEIGHT ROOM:</u>	<u>2221 / 50</u>	<u>= 44.4</u>	<u>~ 44</u>
			190

EXIT WIDTH REQUIREMENT (PER SECTION 1005)

EGRESS: # OF OCCUPANTS x .2" PER OCCUPANT = REQUIRED WIDTH REFER TO
LEGEND AND NOTATIONS AT FLOOR PLANS ON THIS SHEET FOR NUMBER OF
OCCUPANTS EXITING, AND REQUIRED/PROVIDED WIDTHS

occupancy legend

- | | |
|---|---|
|  | OCCUPANT LOAD |
|  | EXITING DIRECTION |
|  | EXITING LOAD AND DIRECTION |
| 5" R | EXIT WIDTH REQUIRED |
| 72" P | EXIT WIDTH PROVIDED |
| PH | PANIC HARDWARE PROVIDE AT BOTH PAIRS OF DOORS |
| FC | F.E.C. OR WALL MOUNTED FIRE EXTINGUISHER |

job

2404.03

date

04.07.2025

revisions

WILLCOX MIDDLE & HIGH SCHOOL

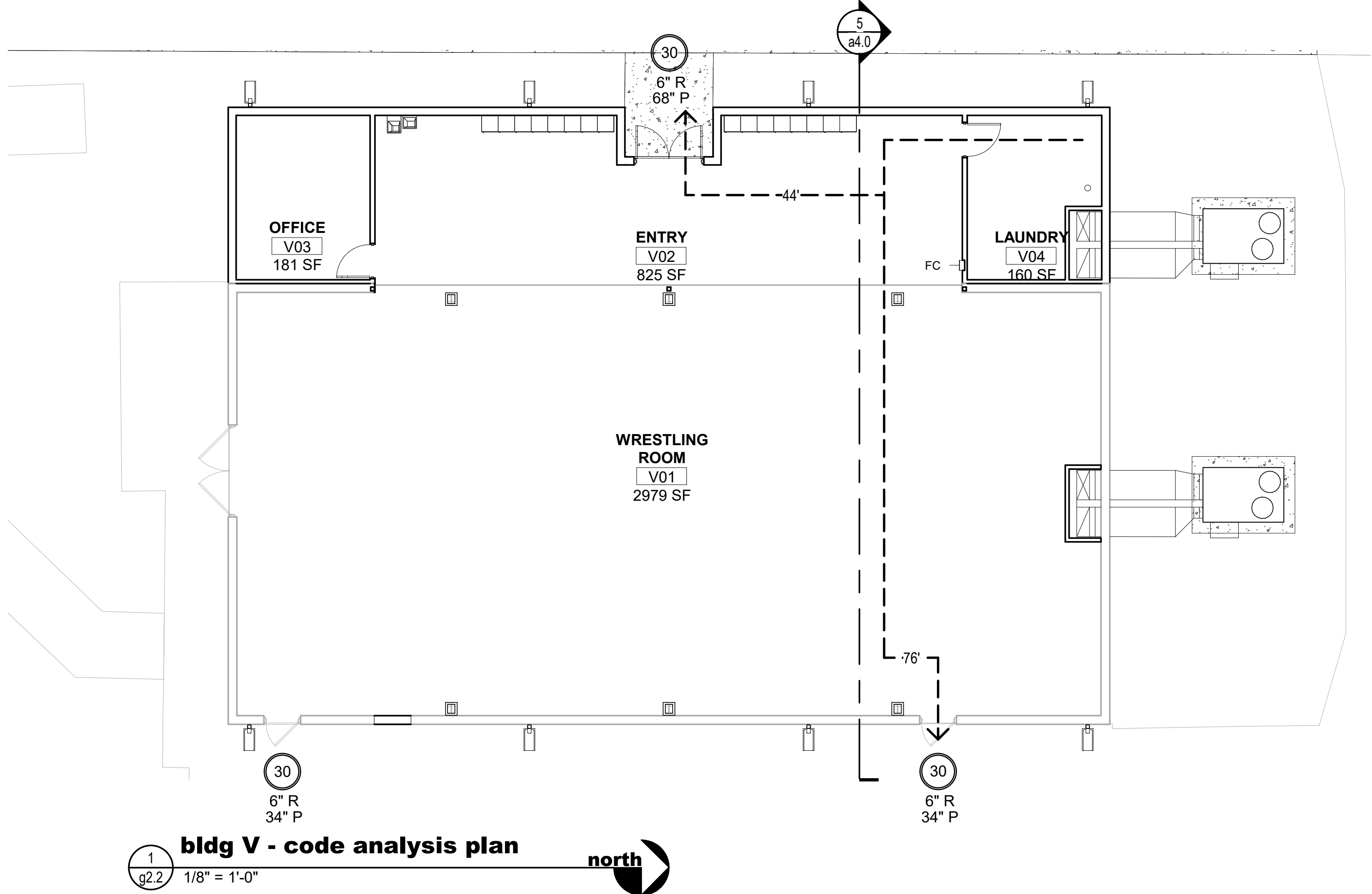
240 N. BISBEE AVE.

WILLCOX, ARIZONA 85643

HIGH SCHOOL REMODEL

bldg W - code analysis

g2.0



2018 IBC code analysis

GENERAL

OCCUPANCY: E

AREA SEPARATION: NONE EXISTING.

OCCUPANCY SEPARATION (TABLE 508.4): NONE REQUIRED.

TYPE OF CONSTRUCTION (TABLE 503): TYPE IIB, NON-SPRINKLERED.

ALLOWABLE FLOOR AREA (TABLE 506.2): 9,500 S.F. @ E.

ALLOWABLE HEIGHT (TABLE 504.3): 55', TWO STOREY.

ALLOWABLE STORIES (TABLE 504.4): TWO STOREY. EXISTING BUILDING - ONE STOREY, 15'-0" HIGH

BUILDING ELEMENTS (TABLE 601): 0 HRS.

FIRE RATING AT EXTERIOR WALLS (TABLE 602): > 10<30 FOR GROUP E; NO RATING REQUIRED.

ALLOWABLE FLOOR AREA INCREASE (SECTION 506)

NOT USED

ACTUAL GROSS BUILDING AREA

EXISTING BUILDING:	3,200 SF (9,500 SF. ALLOWABLE)
ADDITION:	1,280 SF
	4,480

OCCUPANT LOAD (TABLE 1004.5)

	TOTAL OCCUPANCY
BUILDING:	4480 / 50 = 89.6 ~ 90

EXIT WIDTH REQUIREMENT (PER SECTION 1005)

EGRESS: # OF OCCUPANTS x .2" PER OCCUPANT = REQUIRED WIDTH REFER TO LEGEND AND NOTATIONS AT FLOOR PLANS ON THIS SHEET FOR NUMBER OF OCCUPANTS EXITING, AND REQUIRED/PROVIDED WIDTHS

occupancy legend

- (X) OCCUPANT LOAD
- EXITING DIRECTION
- (30) EXITING LOAD AND DIRECTION
- 5" R EXIT WIDTH REQUIRED
- 72" P EXIT WIDTH PROVIDED
- PH PANIC HARDWARE PROVIDE AT BOTH PAIRS OF DOORS
- FC F.E.C. OR WALL MOUNTED FIRE EXTINGUISHER

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REGISTERED ARCHITECT
CERTIFICATE NO.
23459
MARK E.
BOLLARD
DATE SIGNED 04/07/25
ARIZONA U.S.A.

job

2404.03

date

04.07.2025

revisions				

WILLCOX MIDDLE & HIGH SCHOOL

240 N. BISBEE AVE.

WILLCOX, ARIZONA 85643

HIGH SCHOOL REMODEL

bldg V - code analysis

g2.2



job
2404.02

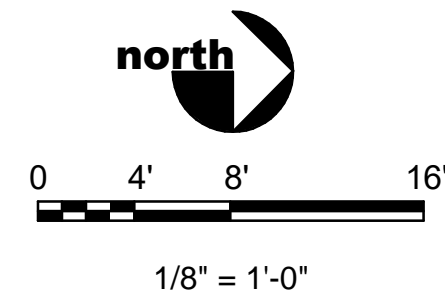
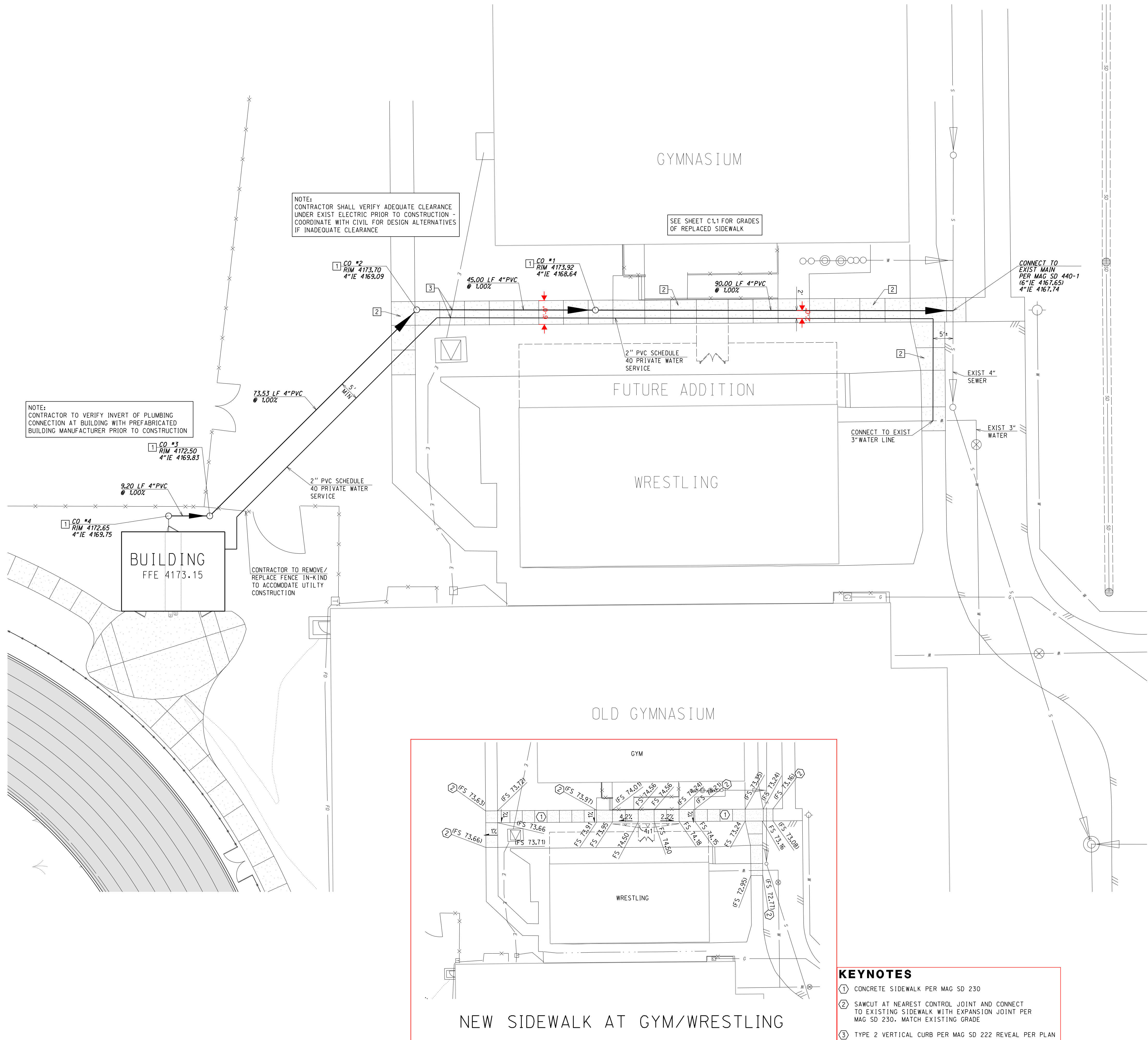
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10.25.2024

revisions


WILLCOX MIDDLE AND HIGH SCHOOL
TRACK AND FIELD REPLACEMENT
240 N. BISBEE AVE.
WILLCOX, ARIZONA 85643

private utility plan - for reference

C1.5

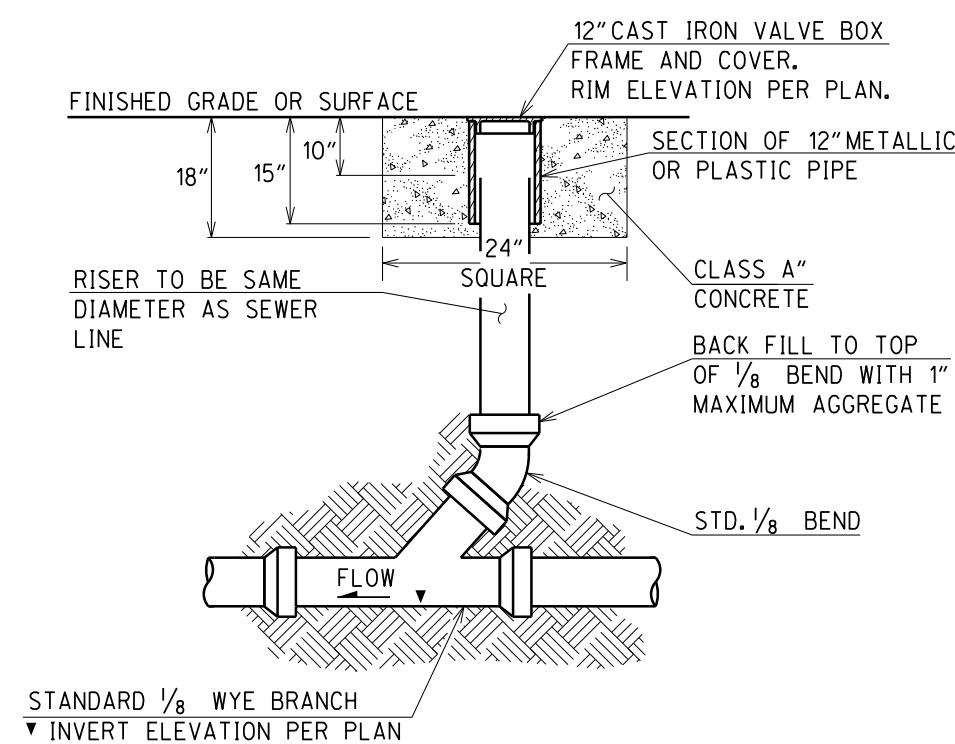


KEYNOTES

- SEWER CLEANOUT PER DETAIL 
- SAWCUT REMOVE AND REPLACE EXIST SIDEWALK PER SD 230
- MAINTAIN 1' MIN VERTICAL SEPARATION BETWEEN EXIST AND PROPOSED UTILITIES

NOTE:
CONTRACTOR SHALL VERIFY DEPTH OF EXISTING SEWER FOR ADEQUATE FALL PRIOR TO CONSTRUCTION- COORDINATE WITH CIVIL FOR DESIGN ALTERNATIVES IF INADEQUATE DEPTH

NOTE:
1' MINIMUM VERTICAL CLEARANCE REQUIRED BETWEEN BOTTOM OF WATER SERVICE TO TOP OF SEWER SERVICE WHEN IN JOINT TRENCH, 5' MIN HORIZONTAL SEPARATION REQUIRED WHEN CLEARANCE CANNOT BE ATTAINED

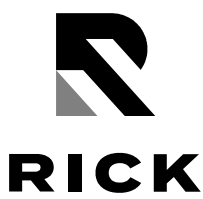


NOTE:
IN PAVED AREAS, USE TRAFFIC RATED BOX AND INTERLOCKING RING AND COVER PER DEETER FOUNDRY INC #1810 OR EQUIVALENT.

A SEWER CLEANOUT
DTL: SWRC001 NO SCALE

KEYNOTES

- CONCRETE SIDEWALK PER MAG SD 230
- SAWCUT AT NEAREST CONTROL JOINT AND CONNECT TO EXISTING SIDEWALK WITH EXPANSION JOINT PER MAG SD 230. MATCH EXISTING GRADE
- TYPE 2 VERTICAL CURB PER MAG SD 222 REVEAL PER PLAN



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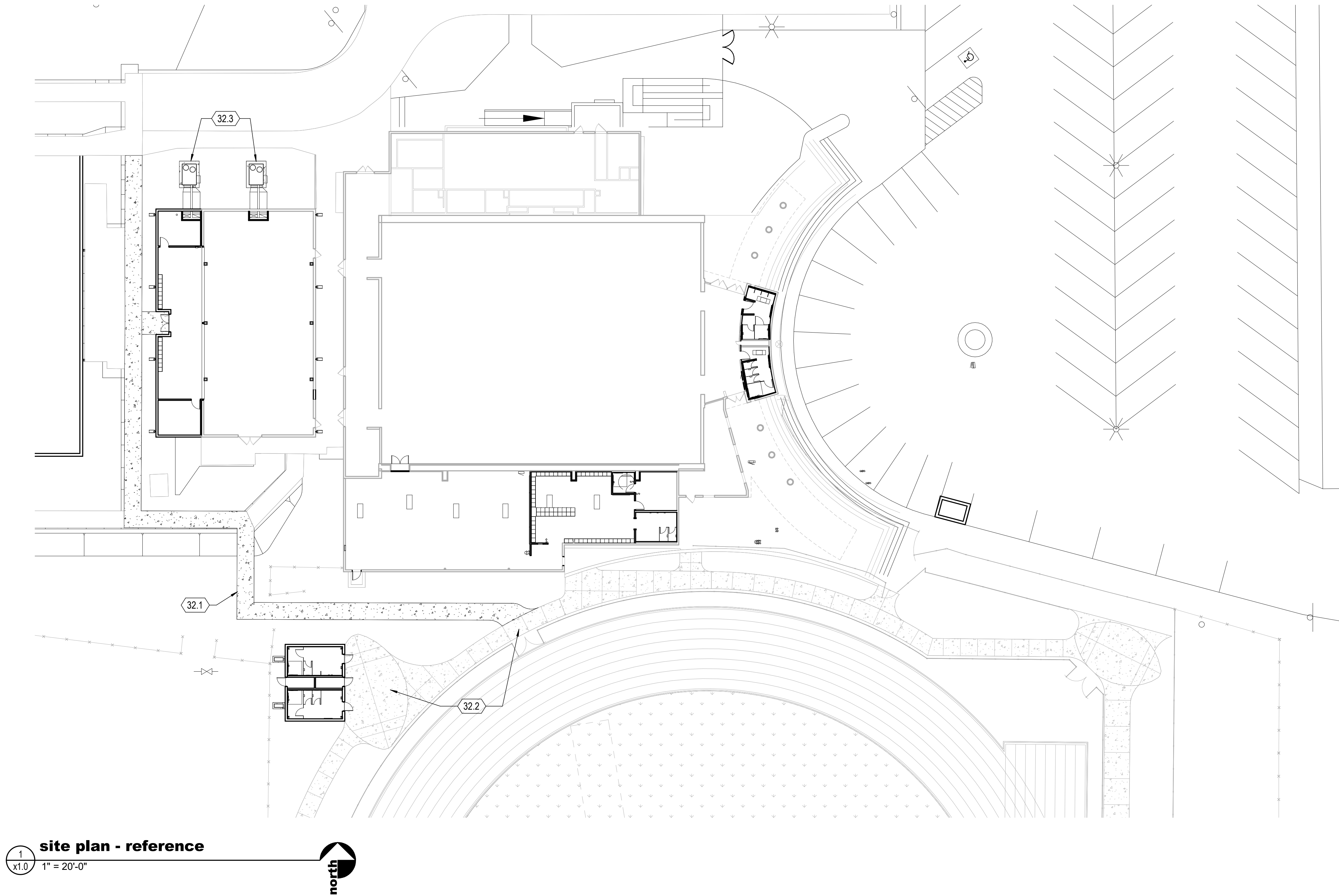
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TUCSON, AZ 85712

01-NOV-2024

1101

J-5539

SAN DIEGO ORANGE RIVERSIDE SACRAMENTO SAN LUIS OBISPO
SANTA CLARITA PHOENIX TUCSON LAS VEGAS DENVER



1
x1.0
site plan - reference
1" = 20'-0"

general notes

1. COORDINATE WITH CIVIL.

keynotes

- 32.1 NEW 4" CONCRETE SIDEWALK ON 4" COMPACTED A.B.
32.2 EXISTING CONCRETE.
32.3 GRADE AREA AND INSTALL A 10" THICK HOUSEKEEPING PAD FOR HVAC UNITS. REINFORCE WITH #4'S @ 16" O.C. E.W.

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WILLCOX MIDDLE & HIGH SCHOOL

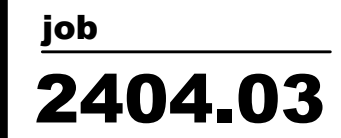
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HIGH SCHOOL REMODEL

site plan

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GENERAL:

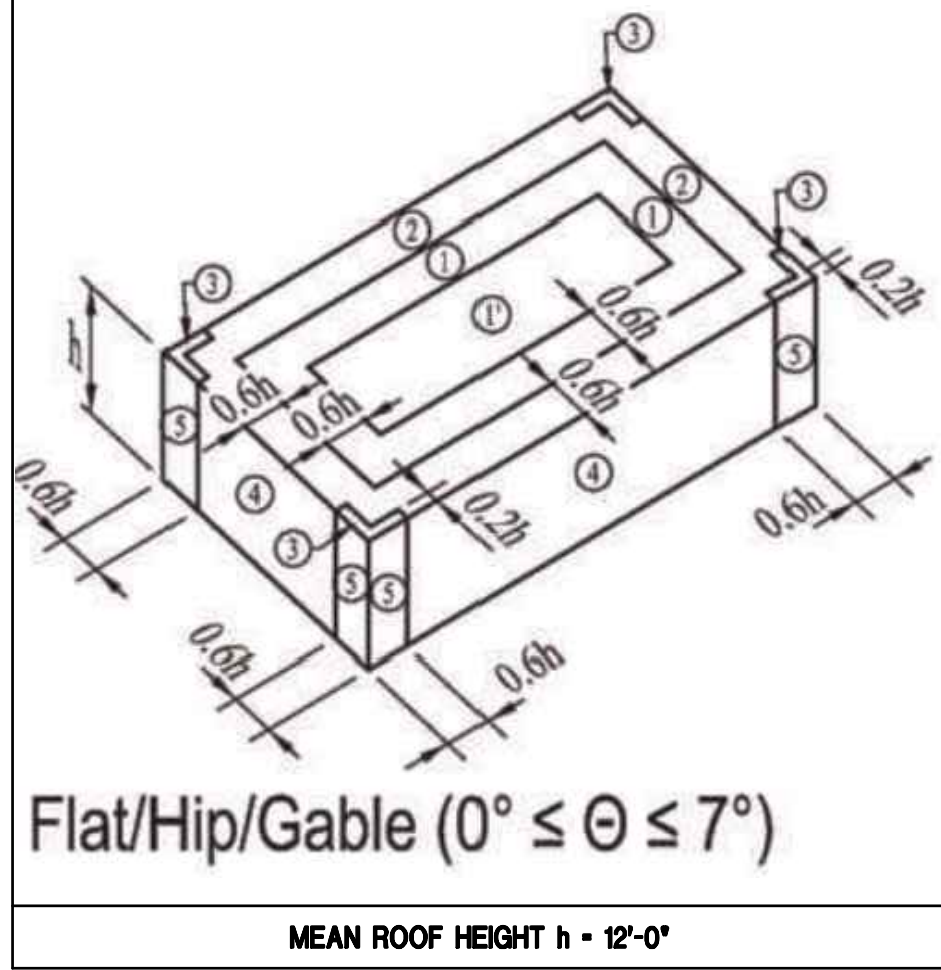
18. DESIGN LOADS:
- | | |
|----------------------------|------------------------|
| <u>DEAD LOAD:</u> | |
| FLAT ROOF | = 18 PSF |
| <u>LIVE LOAD:</u> | |
| ROOF | = 20 PSF |
| <u>SNOW LOAD:</u> | |
| GROUND SNOW LOAD | P _g = 0 PSF |
| <u>ROOF RAIN LOAD:</u> | |
| RAIN INTENSITY (15 MIN/HR) | (i) = 2.44 (IN/HR) |

WIND LOAD:

WIND SPEED	120
EXPOSURE	C
BUILDING CATEGORY / RISK CATEGORY	II
Kd	0.85 FOR MWFRS
Kd	0.85 FOR C&C
INTERNAL PRESSURE COEFFICIENTS (FULLY ENCLOSED)	+0.18/-0.18
BUILDING V (WRESTLING):	
WIND BASE SHEAR N/S	= 3,500 LBS
WIND BASE SHEAR E/W	= 15,800 LBS
RESTROOM (PEMB):	
BASE SHEAR: PER PEMB DRAWINGS	

COMPONENTS AND GLADDING WIND PRESSURES				
ZONE	EFFECTIVE WIND AREA			
	10 SF	20 SF	50 SF	100 SF
1	-50.0	-46.6	-42.2	-39.0
1'	-28.7	-28.7	-28.7	-28.7
2	-65.9	-61.6	-56.0	-51.8
3	-89.8	-81.3	-70.1	-61.6
4	-34.0	-32.5	-30.7	-29.3
5	-42.0	-39.2	-35.5	-32.5
Parapet	-92.2	-89.4	-80.7	-75.0

LOADS ARE UNFACTORED AND DO NOT INCLUDE ROOF DEAD LOAD



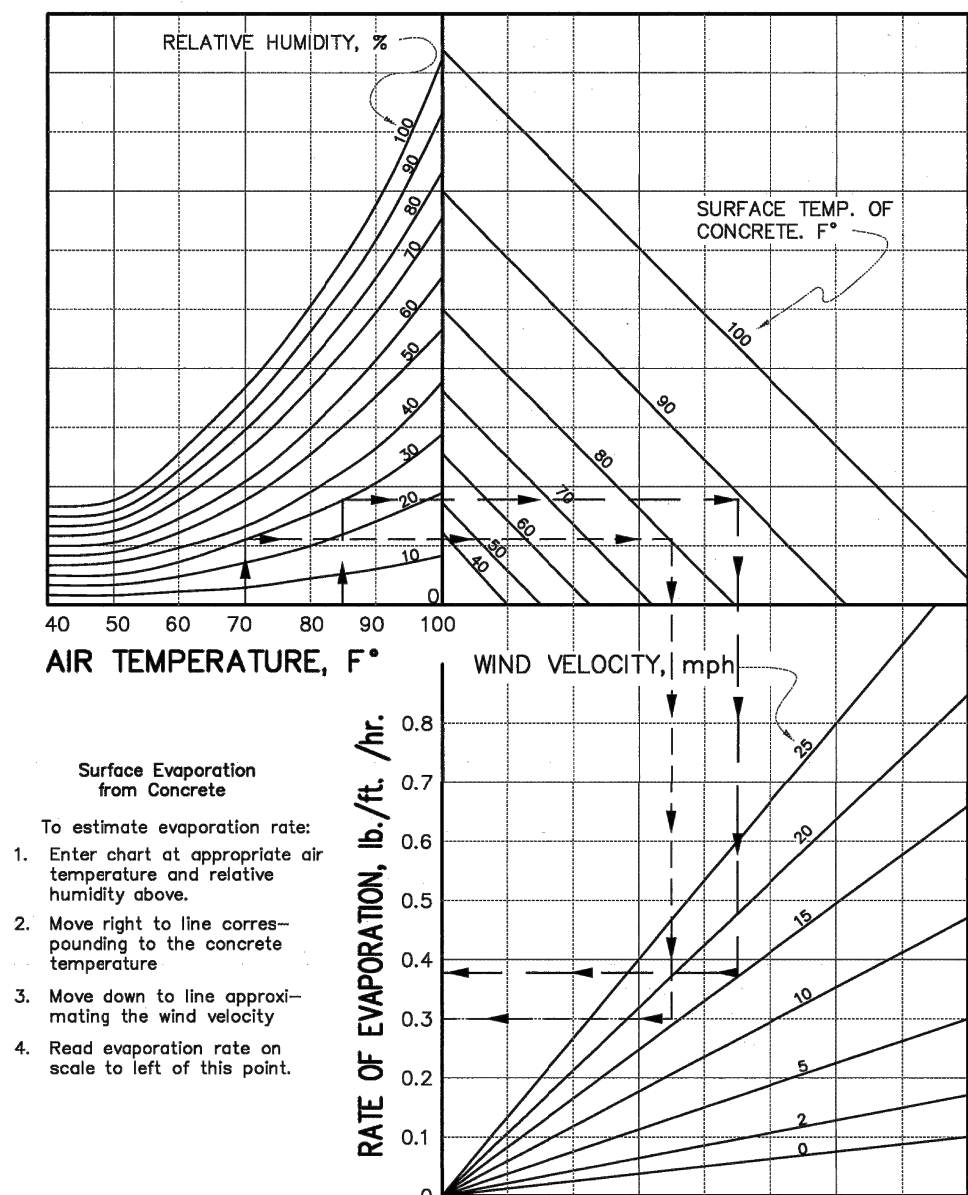
<u>SEISMIC LOAD:</u>	
RISK CATEGORY	II
Ie	1.0
SITE CLASS	D
Ss	0.248
S1	0.074
SDs	0.265
SD1	0.118
SEISMIC DESIGN CATEGORY	B
RESPONSE MODIFICATION FACTORS:	
LIGHT FRAME (COLD-FORM STEEL) WALLS SHEATHED WITH WOOD STRUCTURAL PANELS RATED FOR SHEAR RESISTANCE OR STEEL SHEETS	R = 6.5
SEISMIC RESPONSE COEFFICIENT	Cs = 0.043
BUILDING V (WRESTLING):	
SEISMIC BASE SHEAR N/S	= 2,500 LBS
SEISMIC BASE SHEAR E/W	= 1,500 LBS
RESTROOM (PEMB):	
BASE SHEAR: PER PEMB DRAWINGS	

ANALYSIS PROCEDURE USED: EQUIVALENT LATERAL FORCE PROCEDURE

CAST-IN-PLACE CONCRETE:

1. FOUNDATION DESIGN BASED ON SOILS REPORT #29-224101-2 BY WESTERN TECHNOLOGIES DATED SEPTEMBER 9TH, 2024. DESIGN SOIL BEARING PRESSURE = 2,000 PSF AT 1'-6" BELOW LOWEST ADJACENT FINISHED GRADE. SPREAD FOOTINGS SHALL BEAR ON FIRM UNDISTURBED SOIL ENGINEERED FILL PER THE SOILS REPORT AND TYPICAL EARTHWORK DETAIL. FOR BOTTOM OR TOP OF FOOTING ELEVATIONS, COORDINATE WITH FOUNDATION DETAILS, PLANS, ACTUAL FIELD CONDITIONS AND GRADE.
2. ALL CONSTRUCTION SHALL COMPLY WITH THE RECOMMENDATIONS OF THE SOILS REPORT. THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR ANY GEOTECHNICAL ASPECTS OF THIS PROJECT.
3. THE OWNER SHALL EMPLOY A REGISTERED SOILS ENGINEER TO PERFORM NECESSARY TESTING AND INSPECTIONS FOR QUALITY CONTROL AND TO ENSURE THAT THE REQUIREMENTS OF THE SOILS REPORT ARE COMPLIED WITH. TEST REPORTS SHALL BE SUBMITTED DIRECTLY TO THE ARCHITECT AND ENGINEER FROM THE SOILS ENGINEER, WITH COPY TO CONTRACTOR. INCLUDE THE FOLLOWING INFORMATION IN THE REPORTS:
 - TEST REPORT ON BORROW MATERIALS
 - VERIFICATION OF EACH FOOTING SUB GRADE
 - FIELD DENSITY TEST REPORTS
 - ONE OPTIMUM MOISTURE
 - MAXIMUM DENSITY CURVE FOR EACH TYPE OF SOIL ENCOUNTERED.
4. FILLED EXCAVATIONS OR BURIED STRUCTURES SUCH AS CESSPOOLS, CISTERNS, EXISTING FOUNDATIONS, ETC., OR ANY UNUSUAL SOILS CONDITIONS ENCOUNTERED DURING SITE CLEARING OR EXCAVATION SHALL BE BROUGHT TO THE ATTENTION OF THE SOILS ENGINEER IMMEDIATELY.
5. ABANDONED FOOTINGS, NEW OR EXISTING UTILITIES, ETC., THAT INTERFERE WITH NEW CONSTRUCTION SHALL BE REROUTED OR REMOVED AS COORDINATED WITH THE ARCHITECT AND AS DIRECTED BY THE SOILS ENGINEER.
6. SLOPE ALL EXTERIOR FINISHED GRADES AWAY FROM THE BUILDING TO ENSURE NO PONDING OF WATER OCCURS AROUND BUILDINGS. CONTRACTOR SHALL PROVIDE FOR PROPER DE-WATERING OF EXCAVATIONS FROM SURFACE WATER, GROUND WATER, GROUND WATER, SEEPAGE, ETC.
7. DO NOT PLACE ANY BACKFILL BEHIND WALLS BEFORE CONCRETE OR MASONRY HAS ATTAINED FULL DESIGN STRENGTH. CONTRACTOR SHALL BRACE OR PROTECT ALL WALLS, INCLUDING PIT WALLS BELOW GRADE FROM EARTH PRESSURE LOADS AND OVERTURNING, UNTIL THE STRUCTURE IS COMPLETELY IN PLACE AND HAS ATTAINED FULL STRENGTH. CONTRACTOR SHALL PROVIDE FOR DESIGN, PERMITS AND INSTALLATION OF ALL BRACING. USE HAND TAMPING ONLY ON SOIL WHEN COMPACTING WITHIN 8'-0" OR HALF THE WALL HEIGHT.
8. CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF ALL SHORING, CRIBBING, SHEATHING, SHEET PILING, ETC. AS REQUIRED TO SAFELY RETAIN EXCAVATIONS, EARTH BERMS AND TRENCHES DURING CONSTRUCTION.
9. PROVIDE SLEEVES FOR UTILITY OPENINGS IN CONCRETE BEFORE PLACING CONCRETE. DO NOT CUT ANY CONFLICTING REINFORCING, CORING OR CUTTING CONCRETE IS NOT PERMITTED EXCEPT AS SHOWN. NOTIFY THE ARCHITECT IN ADVANCE OF CONDITIONS NOT SHOWN ON THE DRAWINGS. NO PIPES, CONDUITS, DUCT, ETC. SHALL BE PLACED IN CONCRETE COLUMNS, OR FOOTINGS UNLESS SPECIFICALLY DETAILED.
9. CONDUIT IN STRUCTURAL CONCRETE SLABS SHALL BE RIGID STEEL CONDUIT OR FLEXIBLE PLASTIC CONDUIT ONLY (ALUMINUM CONDUIT IS NOT ALLOWED). CONDUIT WITH A MAXIMUM OUTSIDE DIAMETER OF 1/6 TIMES THE SLAB THICKNESS MAY BE EMBEDDED IN ONE LAYER AT THE MID-DEPTH OF SLABS. MINIMUM CLEAR DISTANCE BETWEEN PARALLEL CONDUITS SHALL BE 3 TIMES CONDUIT DIAMETER. COMBINED DIAMETERS OF CONDUIT THAT CROSS EACH OTHER SHALL BE 1/6 TIMES THE SLAB THICKNESS. CONDUIT SHALL BE FIRMLY CHAIRED AND TIED TO PREVENT DISPLACEMENT DURING CONCRETE PLACEMENT. PLACE #3 BARS AT 12" O.C. AS ADDITIONAL REINFORCING ABOVE AND BELOW, PERPENDICULAR TO CONDUIT. THE ADDITIONAL REINFORCING SHALL EXTEND 1'-0" PAST THE CONDUIT ON ALL SIDES. CONDUIT PLACED IN CONCRETE TOPPING OVER METAL DECKING SHALL RUN INSIDE THE METAL DECK FLUTES ONLY.
10. NO CONSTRUCTION JOINTS OTHER THAN THOSE SHOWN ON THE DRAWINGS SHALL BE INSTALLED WITHOUT APPROVAL OF THE STRUCTURAL ENGINEER.
11. PROVIDE 3/4" CHAMFER AT ALL EXPOSED CORNERS, U.N.O.
12. CONCRETE SHALL NOT BE ALLOWED TO FREE FALL MORE THAN 10'-0" AND SHALL BE CHANNCELED TO AVOID STRIKING THE REINFORCING STEEL OR THE SIDES OF THE SHAFT.
13. CONCRETE FOOTINGS AND PADS MAY BE POURED AGAINST NEAT EXCAVATIONS PROVIDED THE REQUIRED CONCRETE COVERAGE FOR REINFORCING IS MAINTAINED. CONCRETE WALLS AND COLUMNS SHALL BE DOWELED FROM SUPPORTS WITH BARS OF THE SAME SIZE AND SPACING. SEE "REINFORCING STEEL" FOR LAP REQUIREMENTS.
14. OPENINGS, POCKETS, BLOCKOUTS, ETC. SHALL NOT BE PLACED IN CONCRETE SLABS, DECKS, BEAMS, JOISTS, COLUMNS, WALLS ETC. UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS. NOTIFY THE STRUCTURAL ENGINEER OF RECORD WHEN DRAWINGS PREPARED BY OTHERS SHOW OPENINGS, POCKETS, BLOCKOUTS, ETC. THAT ARE NOT SHOWN ON THE STRUCTURAL DRAWINGS. DO NOT PROCEED UNTIL DIRECTED BY THE ENGINEER OF RECORD IN WRITING.
15. PROVIDE 1/2" PREFORMED JOINT FILLER WHERE EXTERIOR SLABS ABUT VERTICAL SURFACES, TYPICAL U.N.O. COORDINATE WITH ARCHITECT.
16. MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED, EXCEPT THAT SLABS ON GRADE NEED BE VIBRATED ONLY AROUND EMBEDDED ITEMS, THICKENED AREAS, ADJACENT TO PENETRATIONS, AND UNDERFLOOR DUCTS, ETC. CAST CLOSURE POUR AROUND COLUMNS AFTER COLUMN DEAD LOAD IS APPLIED.

SURFACE WATER EVAPORATION



1. CONCRETE SLABS-ON-GRADE SHALL CONFORM TO THE CRITERIA SET FORTH IN THE "CAST-IN-PLACE CONCRETE" SECTION OF THESE CONSTRUCTION DOCUMENTS AND THE RECOMMENDATIONS BELOW. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE DESIGN OF A CONCRETE MIX TO MEET THE PERFORMANCE REQUIREMENTS SET FORTH BY THIS SECTION, AND TO COORDINATE WITH THE ARCHITECT AND THE OWNER REGARDING THE FOLLOWING RECOMMENDATIONS. THESE RECOMMENDATIONS ARE INTENDED TO HELP MINIMIZE THE PRESENCE OF UNSIGHTLY SHRINKAGE CRACKS THAT CAN OCCUR IN CONCRETE SLABS-ON-GRADE.
2. RECOMMENDATIONS FOR SLABS-ON-GRADE:

1. CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" AND ACI 318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", AND IBC CHAPTER 19.
 2. CONCRETE SHALL BE READY MIXED CONCRETE IN ACCORDANCE WITH ASTM C94. MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE AS NOTED IN THE CONCRETE REQUIREMENTS SCHEDULE BELOW.

CONCRETE REQUIREMENTS SCHEDULE					
USAGE	COMPRESSIVE STRENGTH AT 28 DAYS U.N.O.	AIR ENTRAINMENT	WATER/CEMENT RATIO (MAX.)	MAX. AGGREGATE SIZE	MAX. SLUMP (3)
INTERIOR SLAB—ON—GRADE (1)	3,000 PSI (2)	NO	0.50	1"	4"
CONCRETE FOOTING	3,000 PSI (2)	NO	0.61	1"	5"
NOTES:	(1) SEE SHEET S1.0 FOR SPECIAL REQUIREMENTS REGARDING SLABS ON GRADE. (2) DESIGNED FOR 2500 PSI U.N.O. BUT SPECIFIED AS 3000 PSI FOR DURABILITY PURPOSES. (3) SLUMP INDICATED IS PRIOR TO ADDING SUPER-PLASTICIZING ADMIXTURE (8" MAX SLUMP AFTER ADMIXTURE IS ADDED).				

 3. CEMENT SHALL CONFORM TO ASTM C150, TYPE I/II/V. AGGREGATE PER ASTM C33. LIGHTWEIGHT AGGREGATE (WHEN SPECIFIED) PER ASTM C330. DO NOT TAMP SLABS (USE ROLLER BUG, VIBRATING SCREED OR BULL FLOAT ONLY). PROVIDE AIR—ENTRAINING ADMIXTURE AT ALL EXPOSED CONCRETE EXPOSED TO FREEZE—THAW CYCLES AT A RATE ADEQUATE TO PROVIDE 5.0% AIR AT POINT OF PLACEMENT, TESTED IN ACCORDANCE WITH ASTM C233.
 4. CONCRETE CONTAINING SUPERPLASTICIZING ADMIXTURE SHALL HAVE FIELD—VERIFIED 3" MAXIMUM SLUMP PRIOR TO ADDING ADMIXTURE AND 8" MAXIMUM SLUMP AT PLACEMENT. MIX DESIGNS SHALL BE DESIGNED BY THE CONCRETE PRODUCTION FACILITY IN ACCORDANCE WITH ACI 301 AND APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONSIDER THE USE OF SUPERPLASTICIZER WHERE CONGESTION OF REBAR IS LIKELY TO CAUSE ROCK POCKETS OR VOIDS. THE CEMENT FOR THE MIX SHALL BE TYPE I/II/V. THE RATE OF PLACING SUCH CONCRETE SHALL BE REDUCED OR THE FORM STRENGTH SHALL BE INCREASED TO SAFELY RESIST INCREASED PRESSURE AGAINST THE FORMS. DO NOT USE WITH COLORED CONCRETE.
 5. FIBER MESH REINFORCEMENT IN SLABS ON GRADE (WHEN USED) SHALL CONFORM TO ASTM C 1116, TYPE II, SYNTHETIC FIBERS OF 100 PERCENT VIRGIN POLYPROPYLENE FIBRILLATED FIBERS CONTAINING NO REPROCESSSED OLEFIN MATERIALS; 70 KSI. PROVIDE MINIMUM OF 1.5 POUNDS OF FIBERS PER CUBIC YARD OF CONCRETE USED.
 6. CONCRETE SHALL BE FREE OF CHLORIDE.
 7. FLY ASH ADDITIVES (WHEN USED) SHALL CONFORM TO ASTM C618, CLASS F. FLY ASH SHALL NOT REPLACE MORE THAN 22% OF CEMENT BY WEIGHT.
 19. QUALITY ASSURANCE: CONCRETE COMPRESSIVE STRENGTH AND SLUMP SHALL BE TESTED PER ASTM C31, C39 AND C172 AND IN ACCORDANCE WITH IBC SECTION 1905. FOR EACH CLASS OF CONCRETE USED PROVIDE 4 CYLINDERS PER TEST FOR EACH DAY'S CONCRETE PLACEMENT NOR LESS THAN ONE TEST FOR EACH 150 CUBIC YARDS OF CONCRETE, NOR LESS THAN ONE FOR EACH 5,000 SQUARE FEET OF SURFACE AREA FOR SLABS OR WALLS (NOTE: ALL CONCRETE EXCEPT CURBS AND SIDEWALKS SHALL BE TESTED). TEST ONE CYLINDER AT 7 DAYS AND TWO AT 28 DAYS, WITH ONE HELD. TESTING SHALL BE DONE BY A QUALIFIED TESTING LABORATORY. (FOR SLABS—ON—GRADE, THE TESTING AGENCY SHALL OBSERVE ALL PLACEMENT PROCEDURES AND DOCUMENT IF ANY ADDITIONAL WATER IS ADDED TO THE MIX ON SITE.)
 20. HOT AND COLD WEATHER CONCRETING:
 - HOT WEATHER CONCRETING: WHEN THE TEMPERATURE RISES ABOVE 80° F AND ESPECIALLY WHEN THE RELATIVE HUMIDITY FALLS BELOW 25, THE CONTRACTOR SHALL FOLLOW HOT WEATHER CONCRETING IN ACCORDANCE WITH ACI 305. CONTRACTOR SHALL BE PREPARED TO USE FOG SPRAY OR OTHER PRECAUTIONS ACCEPTABLE TO ARCHITECT WHEN RATE OF EVAPORATION EQUALS OR EXCEEDS 0.2 POUNDS PER SQUARE FOOT PER HOUR. REFER TO SURFACE WATER EVAPORATION CHART TO ESTIMATE RATE OF SURFACE UNDER EVAPORATION.
 - COLD WEATHER CONCRETING: ADEQUATE EQUIPMENT SHALL BE PROVIDED FOR HEATING CONCRETE MATERIALS AND PROTECTING CONCRETE DURING FREEZING OR NEAR FREEZING WEATHER. ALL CONCRETE MATERIALS AND ALL REINFORCEMENT FORMS, FILLERS AND GROUND WITH WHICH THE CONCRETE IS TO COME IN CONTACT, SHALL BE FREE FROM FROST. FROZEN MATERIAL OR MATERIALS CONTAINING ICE SHALL NOT BE USED. COLD WEATHER CONDITIONS WILL BE DONE IN ACCORDANCE WITH ACI 306.
 21. PLAIN THREADED BARS SHALL BE ASTM A36 OR A307, GRADE A. ANCHOR RODS (ANCHOR BOLTS) SHALL BE ASTM F1554 GRADE 36 ($F_y = 36$ KSI). BOLTS, ANCHOR RODS, EXPANSION BOLTS, ETC., SHALL BE INSTALLED WITH STEEL WASHERS AND TIGHTENED NUTS.
 22. PROVIDE PNA 1/4" DIAMOND DOWELS OR EQUIVALENT AT 18" O.C. AT ALL ENTRY SLABS.
 23. CRACKING IS INHERENT TO THE MATERIAL PROPERTIES OF CONCRETE CONSTRUCTION (INCLUDING POST—TENSIONED CONCRETE STRUCTURES). WHILE EVERY EFFORT HAS BEEN MADE TO MINIMIZE THE EFFECTS OF UNSIGHTLY CRACKING, THE PRESENCE OF CRACKS ARE NORMAL AND UNAVOIDABLE. THE DESIGN OF THE CONCRETE STRUCTURAL ITEMS HAVE BEEN ANALYZED USING A "CRACKED SECTION". THE PRESENCE OF TYPICAL CRACKING SHOULD NOT BE CONSIDERED DETRIMENTAL TO THE STRUCTURE. CRACKS LARGER THAN 5 MM SHALL FILLED AND SEALED WITH AN APPROVED CRACK FILLER. THE GENERAL CONTRACTOR SHALL CARRY AN ALLOWANCE IN THE CONSTRUCTION BUDGET FOR SEALING SUCH CRACKS. IN SOME CASES, CRACKS DO NOT APPEAR UNTIL WELL AFTER CONSTRUCTION HAS BEEN COMPLETED. IN WHICH CASE IT IS THE RESPONSIBILITY OF THE OWNER TO MAINTAIN THE STRUCTURE PROPERLY OVER THE LIFE OF THE STRUCTURE. CONCRETE CRACKS, SHOULD THEY OCCUR AFTER THE BUILDING HAS BEEN OCCUPIED SHALL BE ELEVATED AND THEN FILLED AND SEALED TO PREVENT PREMATURE DETERIORATION OF THE STRUCTURE.

CONCRETE REQUIREMENTS SCHEDULE					
USAGE	COMPRESSIVE STRENGTH AT 28 DAYS U.N.O.	AIR ENTRAINMENT	WATER/CEMENT RATIO (MAX.)	MAX. AGGREGATE SIZE	MAX. SLUMP (3)
INTERIOR SLAB—ON—GRADE (1)	3,000 PSI (2)	NO	0.50	1"	4"
CONCRETE FOOTING	3,000 PSI (2)	NO	0.61	1"	5"
<u>NOTES:</u>	(1) SEE SHEET S1.0 FOR SPECIAL REQUIREMENTS REGARDING SLABS ON GROUND. (2) DESIGNED FOR 2500 PSI U.N.O. BUT SPECIFIED AS 3000 PSI FOR DURABILITY PURPOSES. (3) SLUMP INDICATED IS PRIOR TO ADDING SUPER—PLASTICIZING ADMIXTURE (8" MAX SLUMP AFTER ADMIXTURE IS ADDED).				

S1.0	GENERAL STRUCTURAL NOTES
S1.1	GENERAL STRUCTURAL NOTES
S1.2	GENERAL STRUCTURAL NOTES
S1.3	SPECIAL INSPECTION REQUIREMENTS
S1.4	TYPICAL DETAILS
S2.0	FOUNDATION PLAN
S3.0	ROOF FRAMING PLAN
S4.0	FOUNDATION DETAILS
S5.0	FRAMING DETAILS

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240 N. BISBEE AVE.
WILLCOX, ARIZONA 85643
HIGH SCHOOL REMODEL

general structural notes

s1.0

GENERAL STRUCTURAL NOTES

SLABS-ON-GRADE:

- 2) PLACEMENT:
- c) IT IS HIGHLY RECOMMENDED THAT SLABS-ON-GRADE BE PLACED WITH A VIBRATORY SCREED USING A LASER LEVEL TO ACCOMPLISH A FLAT/LEVEL FINISH AS REQUIRED BY THE ARCHITECT AND THE RECOMMENDATIONS OF THIS SECTION. AFTER A MINIMUM OF 28 DAYS AFTER THE SLAB-ON-GRADE IS PLACED ALL JOINTS SHALL BE INSPECTED/MEASURED FOR SLAB CURL, AND ANY JOINTS NOT MEETING REQUIREMENTS SHALL BE GROUND FLAT, PRIOR TO ACCEPTANCE OF SLAB BY THE ARCHITECT. (NOTE: THE COST FOR GRINDING SHALL BE CARRIED AS AN ALLOWANCE BY THE GENERAL CONTRACTOR WITH THE GRINDING BEING PERFORMED UNDER THE DIRECTION OF THE SUBCONTRACTOR).
- b) WHERE APPLICABLE, COORDINATE WITH THE ARCHITECT FOR SPECIFICATIONS AND LOCATIONS WHERE A FLOOR HARDER IS TO BE USED.
- c) DO NOT TAMP SLABS (USE ROLLER BUG, VIBRATING SCREED OR BULL FLOAT ONLY).
- d) PROVIDE AIR-ENTRAINING ADMIXTURE WHERE INDICATED IN CONCRETE REQUIREMENTS SCHEDULE, TESTED IN ACCORDANCE WITH ASTM C233.
- 3) CURING:
- c) CURE SLABS-ON-GRADE FOR A MINIMUM OF 7 DAYS AFTER PLACEMENT IN ACCORDANCE WITH ACI 301, ACI 318, ACI 360 AND ACI 302.1 PROCEDURES IN ORDER TO MINIMIZE SHRINKAGE CRACKING. IT IS HIGHLY RECOMMENDED TO USE MOIST CURING (BURLAP), MOISTURE-RETAINING COVER CURING, OR COMBINATIONS THEREOF IN ORDER TO REDUCE/CONTROL RAPID SHRINKAGE OF THE SLAB CONCRETE.
3. RECOMMENDATIONS FOR SLAB-ON-GRADE TOLERANCES:
- SLABS-ON-GRADE SHALL CONFORM TO ALL SPECIFICATIONS AND TOLERANCES IN SECTION 4.8 OF ACI 117. THE SLAB-ON-GRADE SHALL MEET THE MINIMUM VALUES OF SPECIFIED FOR OVERALL FLATNESS (SOFF) AND FOR SPECIFIED OVERALL LEVELNESS (SOFL) STATED IN THE TABLE BELOW. (COORDINATE WITH ARCHITECT IF MORE STRINGENT REQUIREMENTS APPLY.) THE VALUES OF (SOFF) AND (SOFL) SHALL BE MEASURED IN ACCORDANCE WITH ASTM E1155.

FLOOR SURFACE CLASSIFICATION	SOFF	SOFL
MODERATELY FLAT: CARPETED AREAS IN COMMERCIAL OFFICE BUILDINGS OR LIGHTLY TRAFFICKED OFFICE/INDUSTRIAL BUILDINGS, MUNICIPAL BUILDINGS, CHURCHES, AND SCHOOLS	25	20

4. RECOMMENDATIONS FOR MOISTURE RESISTANCE AT SLABS-ON-GRADE:
- A. AT MOISTURE SENSITIVE FLOORING, TO HELP RESIST BELOW-SLAB MOISTURE MIGRATING THRU THE SLAB, THE CONCRETE MIX SHALL INCLUDE A WATER-REPELLENT ADMIXTURE SUCH AS RHEOMIX 235 BY MASTER BUILDERS, DARAPEL BY GRACE PRODUCTS, OR EQUIVALENT WITH DOSAGE PER MANUFACTURERS RECOMMENDATIONS.
- B. IN ADDITION TO WATER-REPELLENT ADMIXTURES, THE USE OF A VAPOR RETARDERS IS DESIRABLE FOR ANY SLAB-ON-GRADE WHERE THE FLOOR WILL BE COVERED WITH MOISTURE SENSITIVE FLOORING OR WHEN THE SLAB WILL BE IN CONTACT WITH MOISTURE SENSITIVE EQUIPMENT OR PRODUCTS. IF REQUIRED BY THE ARCHITECT, OWNER, OR FLOORING SUPPLIER/MANUFACTURER A VAPOR RETARDER SHALL BE USED, THE VAPOR RETARDER SHALL COMPLY WITH THE CRITERIA OUTLINED IN THE VAPOR RETARDER SECTION OF THE GENERAL NOTES.

POST INSTALLED ANCHORS:

1. EPOXY USED IN CONCRETE AND MASONRY (ANCHOR BOLTS, REBAR DOWELS, ETC) SHALL BE HILTI HIT-RE 500 V3 EPOXY ADHESIVE. INSTALLED PER ICC REPORT # ESR-3814 OR SIMPSON SET 36 EPOXY ADHESIVE PER ICC ESR-4057.
2. SCREW ANCHORS USED IN CONCRETE AND CONCRETE MASONRY (CMU) SHALL BE TITEN HD BY SIMPSON INSTALLED IN ACCORDANCE WITH ICC REPORT # ESR-1056 OR TAPCON BY REDHEAD INSTALLED IN ACCORDANCE WITH ICC REPORT # ESR-1671. SCREW IN ANCHORS SHALL BE INSTALLED IN COMPLIANCE WITH THE TABLE BELOW.

CHARACTERISTIC	SYMBOL	UNITS	SCREW ANCHOR NOMINAL ANCHOR DIAMETER (INCH)				
			1/4	3/8	1/2	5/8	3/4
INSTALLATION INFORMATION							
NORMAL DIAMETER	<i>d</i>	in.	1/4	3/8	1/2	5/8	3/4
DRILL BIT DIAMETER	<i>dci</i>	in.	1/4	3/8	1/2	5/8	3/4
MINIMUM BASEPLATE CLEARANCE HOLE DIAMETER	<i>dc</i>	in.	3/8	1/2	5/8	3/4	7/8
MAXIMUM INSTALLATION TORQUE	<i>T_{inst.max}</i>	ft-lbf	24	50	65	100	150
MAXIMUM IMPACT WRENCH TORQUE RATING	<i>T_{impact,max}</i>	ft-lbf	125	150	340	340	385

3. CONTRACTOR MAY SUBSTITUTE SCREW ANCHORS OR EPOXY OF EQUAL VALUE IN THE SPECIFIED MATERIAL WITH A CURRENT ICC REPORT WHEN APPROVED IN WRITING BY THE ENGINEER PRIOR TO CONSTRUCTION.
4. USE OF SCREW ANCHORS OR EPOXY SHALL BE ONLY WHERE SPECIFICALLY DETAILED OR NOTED, OR WHEN DIRECTED IN WRITING BY THE ENGINEER.
5. SPECIAL INSPECTION IS REQUIRED FOR BOTH SCREW ANCHORS AND EPOXY ANCHORAGE PER SPECIAL INSPECTION TABLE.

REINFORCING STEEL:

1. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60 (Fy = 60 KSI) DEFORMED BARS FOR ALL BARS #4 AND LARGER. ASTM A615, GRADE 40 (Fy = 40 KSI) DEFORMED BARS FOR ALL BARS #3 AND SMALLER U.N.O., EXCEPT #2 BARS SHALL BE SMOOTH. REINFORCING TO BE WELDED SHALL CONFORM TO ASTM A706, GRADE 60 (Fy = 60 KSI) LOW ALLOY DEFORMED BARS. WELDING OF REINFORCING SHALL BE ACCORDING TO AWS D1.4. NO TACK WELDING OF REINFORCING BARS ALLOWED.
2. ALL REINFORCING STEEL SHALL BE DETAILED, FABRICATED AND PLACED IN CONFORMANCE WITH THE CURRENT EDITIONS OF ACI 318 AND THE CRSI "MANUAL OF STANDARD PRACTICE FOR REINFORCED CONCRETE CONSTRUCTION", AND AS MODIFIED BY THE DRAWINGS. ALL REINFORCING BAR BENDS SHALL BE MADE COLD.
3. WELDED WIRE FABRIC SHALL BE PER ASTM A185, WIRE PER ASTM A82.
4. ALL REINFORCING STEEL SHALL BE ACCURATELY PLACED AND SUPPORTED BY GALVANIZED METAL OR PLASTIC CHAIRS, SPACERS OR HANGERS. PROVIDE THE FOLLOWING MINIMUM CLEAR CONCRETE COVERAGE:

CONDITION/LOCATION		SIZE	MINIMUM CLEAR CONCRETE COVERAGE
CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH		ALL	3"
EXPOSED TO EARTH OR WEATHER WITH FORMED SURFACES		#6 AND LARGER	2"
		#5 AND SMALLER	1 1/2"
NOT EXPOSED TO EARTH OR WEATHER, OR IN CONSTANT CONTACT WITH THE GROUND	SLABS & WALLS	ALL	3/4"
	BEAMS & COLUMNS *	ALL	1 1/2"
* DISTANCE IS TO TIES, STIRRUPS, AND SPIRALS. ALL OTHERS PER CURRENT EDITION OF ACI 318			

5. UNLESS NOTED OTHERWISE, LAP SPLICES IN CONCRETE SHALL BE PER THE TYPICAL DETAILS AND/OR PER THE CURRENT EDITION OF ACI 318. STAGGER ALTERNATE SPLICES A MINIMUM OF ONE LAP LENGTH. ALL SPLICE LOCATIONS ARE SUBJECT TO APPROVAL AND SHALL BE MADE ONLY WHERE INDICATED ON THE DRAWINGS. EXTEND ALL HORIZONTAL REINFORCING CONTINUOUS AROUND CORNERS AND INTERSECTIONS OR PROVIDE BENT CORNER BARS TO MATCH AND LAP WITH HORIZONTAL BARS AT CORNERS AND INTERSECTIONS OF FOOTINGS AND WALLS.
6. REINFORCING BAR SPACING GIVEN ARE MAXIMUM ON CENTERS. DOWEL ALL VERTICAL REINFORCING TO FOUNDATION. SKEW HOOKS AS REQUIRED FOR CONCRETE COVER. SECURELY TIE ALL BARS IN POSITION BEFORE PLACING CONCRETE. CONCRETE COLUMN DOWEL EMBEDMENT SHALL BE A STANDARD COMPRESSION DOWEL EMBEDMENT LENGTH PER THE TYPICAL DETAILS AND/OR THE CURRENT EDITION OF ACI 318. DOWELS BETWEEN FOOTINGS AND WALLS OR COLUMNS SHALL BE THE SAME GRADE, SIZE, SPACING AND NUMBER AS THE VERTICAL REINFORCING ABOVE.
7. SPLICED (LAPPED) BARS SHALL BE PLACED AT THE SAME EFFECTIVE DEPTH UNLESS NOTED OTHERWISE. REINFORCING BARS NOTED "CONTINUOUS" OR WITH LENGTH NOT SHOWN SHALL BE FULLY CONTINUOUS AND SPLICED ONLY AS SHOWN, OR WHERE APPROVED BY THE ENGINEER.
8. REINFORCING BAR HOOKS SHALL BE STANDARD ACI HOOKS UNLESS NOTED OTHERWISE.
9. WHERE REINFORCING IS SHOWN CONTINUOUS THROUGH CONSTRUCTION JOINTS, BD-SAE DOWEL BAR SPLICE DEVICES AS MANUFACTURED BY RICHMOND SCREW ANCHOR CO. (OR APPROVED EQUAL) MAY BE USED. SIZES AND TYPES SHALL BE SELECTED TO DEVELOP THE FULL TENSION STRENGTH OF THE BAR PER ICC RESEARCH RECOMMENDATION.

STRUCTURAL STEEL:

1. THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS AND STRUCTURES SHALL BE IN ACCORDANCE WITH AISC 360. WHERE REQUIRED, THE SEISMIC DESIGN OF STEEL STRUCTURES SHALL BE IN ACCORDANCE WITH THE ADDITIONAL PROVISIONS OF SECTION 2205.2, AND APPLICABLE PROVISIONS OF AWS "STRUCTURAL WELDING CODE".
2. STRUCTURAL MISCELLANEOUS SHAPES AND PLATES SHALL BE ASTM A36 (Fy = 36 KSI). STRUCTURAL WIDE FLANGE SHAPES ("W SECTIONS") SHALL BE ASTM A992 GRADE 50 (Fy = 50 KSI) HOLLOW STRUCTURAL SECTIONS (STRUCTURAL TUBE SHAPES; TS OR HSS) SHALL BE ASTM A500, GRADE B (Fy = 46 KSI). STEEL PIPE SHALL BE ASTM A501 (Fy = 36 KSI) OR ASTM A53, TYPES E OR S, GRADE B (Fy = 35 KSI). ALL PLATES IN MOMENT CONNECTIONS, BRACED FRAMES, AND/OR WHERE NOTED OTHERWISE SHALL BE Fy = 50 KSI MINIMUM.
3. BOLTS SHALL BE ASTM A307 UNLESS NOTED OTHERWISE AS A325N - COORDINATE WITH PLANS AND DETAILS. ALL HIGH-STRENGTH BOLTS (A325N) SHALL BE TIGHTENED TO THE SNUG-TIGHT CONDITION AS DEFINED BY AISC UNLESS NOTED OTHERWISE. FOR ALL MOMENT CONNECTIONS AND BRACED FRAMES, USE SLIP CRITICAL (SC) CONNECTIONS WITH HIGH STRENGTH BOLTS AND PROVIDE SPECIAL INSPECTION FOR PROPER BOLT TENSION.
4. PLAIN THREADED BARS SHALL BE ASTM A36 OR A307, GRADE A.
5. ANCHOR RODS (ANCHOR BOLTS) SHALL BE ASTM F1554 GRADE 36 (Fy = 36 KSI). ALL ANCHOR BOLTS IN CONCRETE OR CMU SHALL BE TIED IN PLACE PRIOR TO ANY REQUIRED INSPECTION.
6. BOLTS, ANCHOR RODS, EXPANSION BOLTS, ETC., SHALL BE INSTALLED WITH STEEL WASHERS AND TIGHTENED NUTS. STEEL WASHERS SHALL MEET THE REQUIREMENTS OF ASTM F436. HEAVY-HEX NUTS MEETING THE REQUIREMENTS OF ASTM A563.
7. BOLT HOLES CAN BE OVERSIZED BY A MAXIMUM OF 1/16" FOR ALL APPLICATIONS NOT INCLUDING BASE PLATES. BOLT HOLES IN BASE PLATES MAY BE OVERSIZED PER TABLE 14-2 OF AISC 360.
8. STEEL WASHERS FOR BASE PLATE APPLICATIONS SHALL MEET THE MINIMUM SIZE AND THICKNESS SHOWN IN TABLE 14-2 OF AISC 360.
9. BEAMS, COLUMNS AND BRACES SHALL NOT BE SPLICED UNLESS SPECIFICALLY DETAILED ON THE DRAWINGS, OR WITH PRIOR WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER.

STRUCTURAL STEEL:

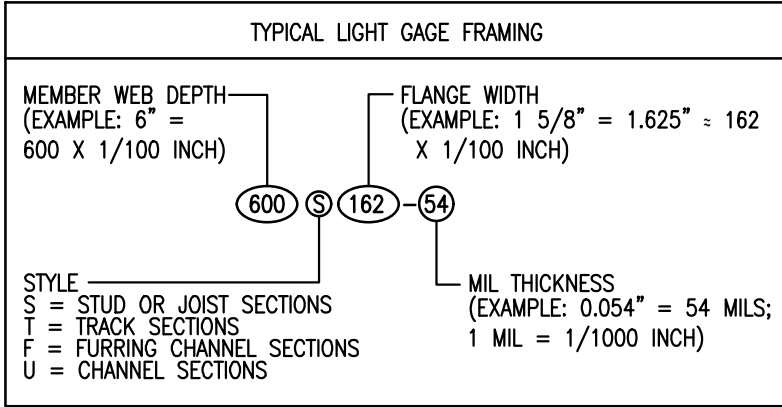
10. WELDING ELECTRODES SHALL CONFORM TO AWS D1.1, GRADE E70XX. E90 SERIES ELECTRODES SHALL BE USED FOR ASTM A706 REINFORCING BARS. ALL WELDING SHALL BE DONE BY WELDERS HOLDING VALID CERTIFICATES ISSUED BY AN ACCEPTED TESTING AGENCY AND HAVING CURRENT EXPERIENCE IN TYPE OF WELDS SHOWN ON THE DRAWINGS OR NOTES. ALL WELDING PER AMERICAN WELDING SOCIETY STANDARDS. ALL WELDS ON DRAWINGS ARE SHOWN AS SHOP WELDS. CONTRACTOR MAY SHOP WELD OR FIELD WELD AT THEIR DISCRETION. SHOP WELDS OR FIELD WELDS SHALL BE SHOWN ON SHOP DRAWINGS. ALL WELDS REQUIRE SPECIAL INSPECTIONS AND SHALL BE TESTED AND CERTIFIED BY AN INDEPENDENT TESTING LABORATORY.
11. COMPLETE JOINT PENETRATION GROOVE WELDING PROCEDURES.
- A. REMOVE BACKING BARS OF TOP AND BOTTOM FLANGE OF BEAM AFTER FULL PENETRATION WELD HAS BEEN COMPLETED. THE WELD END TO BE GROUND TO A SMOOTH CONTOUR AND INSPECT FOR ANY DEFECTS. ALL WELDS TO START AND FINISH ON RUN-OFF TABS, PER AWS D1.1
- B. BACK-GOUGE THE FULL PENETRATION WELD AND TOP OFF WITH 3/8" FILLET WELD.
- C. USE WELD METAL WITH CHARPY V-NOTCH TOUGHNESS OF 20 FT-LBS AT 0 DEGREES F. SUBMIT THE PROJECT WELDING PROCEDURE SPEC'S (WPS) TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL.
- D. WELDING SHALL COMPLY WITH AWS D1.1 (CURRENT EDITION).
- E. ALL WELDS SHALL BE PRE QUALIFIED AND ALL WELDERS AND INSPECTORS SHALL BE INSTRUCTED IN THE WPS AND SHALL RETAIN A COPY.
- F. WPS, AS A MINIMUM, SHALL STATE THE WELD POSITION, ELECTRODE TYPE AND SIZE, TRAVEL SPEED, ELECTRODE STICK-OUT, VOLTAGE AND AMPERAGE WITH ACCEPTABLE LIMITS, BEAD SIZE, WELD SEQUENCE, STRESS RELIEVING, AND OTHER RELEVANT DATA.
- G. WELDERS SHALL BE QUALIFIED FOR THE WORK THEY ARE DOING WITH A CURRENT CERTIFICATION ACCORDING TO CHAPTER 5, PART C.
- H. ALL FIELD WELDING TO BE CONTINUOUSLY INSPECTED BY AWS, QC-1 CERTIFIED WELDING INSPECTOR EMPLOYED BY THE OWNER. TECHNICIAN PERFORMING THE UT OR MT TESTS SHALL BE A CERTIFIED TECHNICIAN.
- I. TO REDUCE THE LONGITUDINAL STRESSES DUE TO WELDING, IT IS RECOMMENDED TO START THE WELDING PROCESS IN THE MOST CENTRAL BEAM IN THE FRAME AND PROGRESS TOWARDS THE EXTERIOR COLUMNS.
- J. NOTE THE MOMENT FRAME WELDING SEQUENCE SHALL BE AS FOLLOWS: ONE END OF EACH BEAM SHALL BE ALLOWED TO COOL BEFORE WELDING THE OTHER END. BOLTS SHALL BE TIGHTENED 24 HOURS AFTER WELDING OF FLANGES. SHEAR TABS ARE TO BE WELDED IN ADDITION TO BEING BOLTED AFTER BOLTS ARE TENSIONED AND FLANGES ARE WELDED.
- K. WELD "DAMS" OR END DAMS" SHALL NOT BE USED.
- L. ALL COMPLETE AND PARTIAL JOINT PENETRATION WELDS SHALL HAVE ULTRASONIC TESTING (UT) AS PERFORMED BY A CERTIFIED TESTING INSPECTION LABORATORY. WELD BACKING REMOVAL AREAS AND FILLER WELDS ON CONTINUITY PLATES SHALL BE SUBJECT TO MAGNETIC PARTIAL EXAMINATION (MT).
12. DRYPACK FOR COLUMN BASE PLATES AND BEARING PLATES SHALL BE FIVE STR GROUT OR AN EQUAL NONMETALLIC SHRINKAGE-RESISTANT GROUT WITH MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 5000 PSI. DRYPACK MUST BE PLACED BEFORE ANY FLOOR OR ROOF DECK IS INSTALLED.
13. PROVIDE FABRICATOR'S STANDARD RUST-INHIBITING PRIMER SHOP PAINT FOR ALL STEEL SURFACES THAT WOULD BE EXPOSED TO WEATHER AT ITS FINAL INSTALLATION (TOUCH UP WELDS, DAMAGED AREAS, ETC. AS REQUIRED). SURFACES PERMANENTLY PROTECTED FROM THE WEATHER, ENCASED IN CONCRETE, OR TO RECEIVE SPRAY-APPLIED FIREPROOFING SHALL NOT BE SHOP PAINTED.
14. IF NOT NOTED OR REFERENCED OTHERWISE ON THE DRAWINGS/DETAILS, PROVIDE 1/8" WELDED CAP PLATES AT ALL EXTERIOR EXPOSED ENDS FOR TUBES AND PIPES.

COLD-FORMED STEEL FRAMING:

1. ALL COLD-FORMED STEEL FRAMING SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND IN ACCORDANCE WITH THE CURRENT EDITION OF THE "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS" BY THE AMERICAN IRON AND STEEL INSTITUTE (AISI).
2. PROVIDE ALL ACCESSORIES INCLUDING BUT NOT LIMITED TO, TRACKS, CLIPS, WEB STIFFENERS, ANCHORS, FASTENING DEVICES, RESILIENT CLIPS, AND OTHER ACCESSORIES REQUIRED FOR A COMPLETE AND PROPER INSTALLATION, AND AS RECOMMENDED BY THE MANUFACTURER FOR THE STEEL MEMBERS USED.
3. PAINTED 12, 14 AND 16 GAGE STUDS AND JOISTS, AND DIAGONAL TENSION STRAPS SHALL CONFORM TO ASTM A1008, GRADE 50, WITH A MINIMUM YIELD STRENGTH OF 50,000 PSI.
4. PAINTED 18 AND 20 GAGE STUDS, TRACK AND JOISTS, AND ALL PAINTED TRACK, BRIDGING AND ACCESSORIES SHALL CONFORM TO ASTM A1003, GRADE C, WITH A MINIMUM YIELD STRENGTH OF 33,000 PSI.
5. GALVANIZED 12, 14 AND 16 GAGE STUDS AND JOISTS SHALL CONFORM TO ASTM A653, GRADE D, WITH A MINIMUM YIELD STRENGTH OF 50,000 PSI.
6. GALVANIZED 18 AND 20 GAGE STUDS AND JOISTS AND ALL GALVANIZED TRACK, BRIDGING AND ACCESSORIES SHALL CONFORM TO ASTM A653, WITH A MINIMUM YIELD STRENGTH OF 33,000 PSI.
7. STUDS, JOISTS AND ACCESSORIES SHALL BE PRIMED WITH RUST-INHIBITIVE PAINT MEETING THE PERFORMANCE REQUIREMENTS OF TT-P-636C. STEEL SHALL BE GALVANIZED PER ASTM A525, G60 AT LOCATIONS EXPOSED TO WEATHER AND WHEREVER NOTED ON THE DRAWINGS.
8. STUDS OR JOISTS SHALL NOT BE SPLICED WITHOUT PRIOR APPROVAL OF STRUCTURAL ENGINEER.
9. STEEL STUD CONSTRUCTION FOR NON-BEARING CURTAIN WALL SYSTEMS SHALL HAVE VERTICAL SLIP CONNECTIONS AS DETAILED AND SHOWN ON THE SHOP DRAWINGS. DO NOT ATTACH THE STUDS TO THE STRUCTURE IN ANY WAY THAT WOULD PREVENT THE FRAMING FROM DEFLECTING UNDER SUPERIMPOSED LOADS. THE VERTICAL SIDE CLIPS SHALL HAVE A RATED CAPACITY (BY THE MANUFACTURER) OF 200 LBS LATERAL LOAD RESISTANCE.

COLD-FORMED STEEL FRAMING:

10. UNLESS NOTED OTHERWISE, AT STEEL STUD BEARING SYSTEMS PROVIDE DOUBLE STUDS AT ALL JAMBS, CORNERS, INTERSECTIONS, BEAM BEARINGS AND JOIST BEARINGS. DOUBLE UP JOISTS BELOW PARTITIONS AND AROUND ALL FLOOR AND ROOF OPENINGS WHICH INTERRUPT ONE OR MORE MEMBERS UNLESS NOTED OTHERWISE. BEARING STEEL STUD WALLS SHALL BE BRACED WITH TEMPORARY OR PERMANENT SHEATHING PRIOR TO APPLICATION OF FLOOR OR ROOF DEAD LOADS.
11. BRACING/BRIDGING SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS WITH THE FOLLOWING MINIMUM REQUIREMENTS:
- A. NON-LOAD BEARING WALLS
1. LATERAL BRACING SHALL BE PROVIDED BY USE OF FULL GYPSUM BOARD ON SHEATHING ON EACH FACE OF STUDS, FULL HEIGHT. IF WALLS ARE NOT FULLY SHEATHED, COORDINATE WITH ENGINEER PRIOR TO CONSTRUCTION FOR ALL BRACING.
2. PROVISIONS FOR STRUCTURE VERTICAL MOVEMENT SHALL BE PROVIDED WHERE INDICATED ON THE DRAWINGS.
- B. AXIAL LOAD BEARING
1. TRACKS SHALL BE ANCHORED TO THE SUPPORTING STRUCTURE AS SHOWN ON DRAWINGS
2. COMPLETE, UNIFORM AND LEVEL BEARING SUPPORT SHALL BE PROVIDED FOR THE BOTTOM TRACK.
3. LATERAL BRACING SHALL BE PROVIDED BY USE OF FULL GYPSUM BOARD ON SHEATHING ON EACH FACE OF STUDS, FULL HEIGHT. IF WALLS ARE NOT FULLY SHEATHED, COORDINATE WITH ENGINEER PRIOR TO CONSTRUCTION FOR ALL BRACING.
4. DIAGONALLY BRACED STUD SHEAR WALLS, AS INDICATED ON THE DRAWINGS, SHALL BE PROVIDED AT LOCATIONS DESIGNATED AS "SHEAR WALLS" FOR FRAME STABILITY AND LATERAL LOAD RESISTANCE.
5. PROVIDE CONTINUOUS BRIDGING AS DETAILED AT 4'-0" MAX. AT ROOF LINES, CEILING LINES AND AT FLOOR LINES AS REQUIRED.
- C. C. JOISTS
1. UNIFORM AND LEVEL JOIST BEARING SHALL BE PROVIDED AT FOUNDATION WALLS BY MEANS OF SHIMS AND/OR NON-SETTING GROUT.
2. JOISTS SHALL BE LOCATED DIRECTLY OVER BEARING STUDS OR A LOAD DISTRIBUTION MEMBER SHALL BE PROVIDED AT THE TOP OF THE BEARING WALL.
3. WEB STIFFENERS SHALL BE PROVIDED AT REACTION POINTS AND/OR POINTS OF CONCENTRATED LOADS WHERE INDICATED ON THE DRAWINGS.
4. JOIST BRIDGING SHALL BE PROVIDED WHERE INDICATED ON THE DRAWINGS, (BUT NOT LESS THAN 8'-0" MAXIMUM O.C.)
5. ADDITIONAL JOIST SHALL BE PROVIDED UNDER PARALLEL PARTITIONS WHEN THE PARTITION LENGTH EXCEEDS ONE-HALF THE JOIST SPAN, ALSO AROUND ALL FLOOR AND ROOF OPENINGS, WHICH INTERRUPT ONE OR MORE SPANNING MEMBERS UNLESS NOTED OTHERWISE.
12. GAGE AND SPACING OF STEEL STUD WALLS SHALL BE PER PLANS AND/OR DETAILS. BOTTOM TRACK ANCHORS SHALL BE PER DETAILS BUT PLACED NOT TO EXCEED 4'-0" O.C. UNLESS NOTED OTHERWISE. ANCHORS SHALL BE PLACED WITHIN 8" OF ALL JAMBS, CORNERS, INTERSECTIONS AND WALL ENDS. ALL BOTTOM TRACKS SHALL HAVE A MINIMUM OF 2 ANCHORS.
13. FASTENING OF COMPONENTS SHALL BE WITH SELF-DRILLING SCREWS OR WELDING. SCREWS OR WELDS SHALL BE OF SUFFICIENT SIZE TO INSURE THE STRENGTH OF THE CONNECTION. ALL WELDS OF GALVANIZED STEEL SHALL BE TOUCHED UP WITH A ZINC-RICH PAINT. ALL WELDS OF CARBON SHEET METAL SHALL BE TOUCHED UP WITH PAINT. WIRE TYING OF COMPONENTS SHALL NOT BE PERMITTED.
14. ALL WELDING SHALL BE PERFORMED BY WELDERS EXPERIENCED IN LIGHT GAGE STEEL FRAMING WORK. WELDING MAY ONLY BE USED ON 20 GAGE AND THICKER MEMBERS.
15. COLD-FORMED MEMBERS SHALL COMPLY WITH THE PROPERTIES OF THE STEEL STUD MANUFACTURERS ASSOCIATION (SSMA):



ROUGH CARPENTRY AND WOOD STRUCTURAL PANELS:

1. WOOD FRAMING SHALL CONFORM TO CURRENT IBC, ANSI/AWC, AND NDS REQUIREMENTS.
2. FRAMING LUMBER SHALL COMPLY WITH THE MOST CURRENT EDITION OF THE NATIONAL DESIGN SPECIFICATION (NDS). ALL SAWN LUMBER SHALL BE STAMPED WITH THE GRADE MARK OF A LUMBER GRADING AGENCY CERTIFIED BY THE AMERICAN LUMBER STANDARDS COMMITTEE. WOOD FRAMING SHALL CONFORM TO THE FOLLOWING "LUMBER TABLE" U.N.O.

LUMBER TABLE		
MEMBER	SPECIES	GRADE
2X PLATES, STRIPPING, MISC CONCEALED FRAMING, BLKG, & FIRE STOPPING	DOUGLAS FIR-LARCH	NO.2
SILLS ON CONCRETE OR MASONRY	PRESSURE TREATED AT DOUGLAS FIR-LARCH	NO.2
2X AND 3X LUMBER	DOUGLAS FIR-LARCH	NO.2
TIMBER 4X4 AND LARGER	DOUGLAS FIR-LARCH	NO.1

ROUGH CARPENTRY AND WOOD STRUCTURAL PANELS:

3. ALL PLYWOOD SHALL CONFORM TO CURRENT PRODUCT STANDARD PS1, OR APA PRP-108 AND HAVE AN EXTERIOR OR EXPOSURE 1 DURABILITY CLASSIFICATION, AND SHALL BEAR THE STAMP OF AN ICC APPROVED TESTING AGENCY. LAY UP SHEETS WITH LONG DIMENSION PERPENDICULAR TO SUPPORTS AND STAGGER JOINTS. ON ROOFS WHERE PLYWOOD IS LAID UP WITH THE LONG DIMENSION PARALLEL TO SUPPORTS, USE A MINIMUM OF 5-PLY PLYWOOD. AT ROOFS, USE PLYCLIPS OR BLOCKING PER IBC SECTION 2304 AT MIDSPAN OF UNSUPPORTED EDGES. ALL PLYWOOD SHALL BE OF THE FOLLOWING MINIMUM THICKNESS, SPAN/INDEX RATIO, AND SHALL BE NAILED PER DIAPHRAGM NAILING SCHEDULE ON SHEET S3.0.
4. APA RATED SHEATHING (ORIENTED STRAND BOARD) CONFORMING TO NER-108 AND CURRENT PRODUCT STANDARD (PS2), AND WITH THE SAME EXPOSURE DURABILITY CLASSIFICATION, NOMINAL THICKNESS, AND SPAN/INDEX RATIO MAY BE SUBSTITUTED FOR PLYWOOD UNLESS NOT ALLOWED DUE TO ROOFING REQUIREMENTS; FIRE RATING; ARCHITECTURAL SPECIFICATIONS, ETC.
5. ALL NAILS SHALL BE GALVANIZED COMMON WIRE NAILS PER ASTM F1667 UNLESS OTHERWISE NOTED (NOTE: BOX NAILS, SINKERS, OR OTHER NAILS ARE NOT ACCEPTABLE, SINCE THEY DO NOT PROVIDE THE REQUIRED CAPACITY BY CODE AND SHALL NOT BE USED). SEE "WOOD FASTENER TYPES SCHEDULE" FOR MINIMUM FASTENER DIMENSIONS. NAILS IN CONTACT WITH FIRE RETARDANT TREATED OR PRESSURE TREATED WOOD SHALL BE HOT-DIP GALVANIZED (ASTM A153) OR STAINLESS STEEL (TYPE 304 OR 316), WHEN REQUIRED TO PREVENT SPLITTING, PRE-DRILL FOR NAILS.

WOOD FASTENER TYPES SCHEDULE		
TYPE	DIAMETER	LENGTH
16d COMMON	0.162"	3 1/2"
12d COMMON	0.148"	3 1/4"
10d COMMON	0.148"	3"
8d COMMON	0.131"	2 1/2"
#10 SCREW	0.161"	SEE DETAILS
#12 SCREW	0.216"	SEE DETAILS
SDS SCREW	0.25"	VARIES 1 1/2"-8"
NOTE: "SD" AND "SDS" SCREWS ARE MANUFACTURED BY SIMPSON STRONG-TIE.		

6. BOLTS SHALL BE INSTALLED IN HOLES A MINIMUM OF 1/32" AND A MAXIMUM OF 1/16" LARGER THAN THE BOLT SHANK DIAMETER. A STANDARD CUT WASHER, METAL PLATE OR STRAP SHALL BE USED BETWEEN THE HEAD AND WOOD, AND NUT AND WOOD FOR ALL BOLTS. BOLTS AND LAG SCREWS SHALL CONFORM TO ASTM A307 AND ANSI/ASME STANDARD B18.2.1-1981, AND SHALL BE GALVANIZED. BOLTS AND LAG SCREWS IN CONTACT WITH FIRE RETARDANT TREATED OR PRESSURE TREATED WOOD SHALL BE HOT-DIP GALVANIZED (ASTM A153) OR STAINLESS STEEL (TYPE 304 OR 316).
7. ALL BOLTS SHALL BE RETIGHTENED IMMEDIATELY PRIOR TO CLOSING IN FRAMING.
8. USE WOOD SCREWS COMPLYING WITH ANSI STANDARD B18.6.1, INSTALLED PER NDS.
9. LAG BOLTS SHALL COMPLY WITH ANSI STANDARD B18.2.1, INSTALL USING PILOT HOLES (LEAD HOLES) AND REQUIREMENTS PER NDS.
10. DO NOT NOTCH, DRILL OR SPLICE JOISTS, BEAMS, POSTS, OR LOAD BEARING STRUCTURAL STUDS WITHOUT PRIOR APPROVAL OF STRUCTURAL ENGINEER.
11. JOIST HANGERS AND OTHER MISCELLANEOUS FRAMING ANCHORS SHALL BE AS MANUFACTURED BY THE SIMPSON STRONG-TIE COMPANY OR EQUAL. BY OTHER MANUFACTURER WITH CURRENT ICC OR CABO APPROVAL. MULTIPLE, SKEWED AND/OR SLOPED HANGERS SHALL BE SUPPLIED BY THE CONTRACTOR WHERE NECESSARY. ALL NAIL HOLES IN JOIST HANGERS AND MISCELLANEOUS FRAMING ANCHORS SHALL BE FILLED WITH NAILS OF THE LARGEST SIZE SHOWN IN THE MANUFACTURER'S LATEST CATALOG. ALL BOLTS USED IN CONNECTIONS SHALL BE INSTALLED WITH STEEL WASHERS AND TIGHTENED NUTS.
12. SIZE AND SPACING OF WOOD STUD WALLS SHALL BE PER PLANS AND/OR DETAILS. PROVIDE 2X BLOCKING AT 5'-0" O.C. MAXIMUM AT ALL BEARING WALLS. SILL PLATE ANCHOR BOLTS SHALL BE HOT-DIPPED ZINC COATED GALVANIZED STEEL, MINIMUM 1/2" DIAMETER WITH PLACEMENT NOT TO EXCEED 4'-0" O.C. UNLESS NOTED OTHERWISE. ANCHOR BOLTS SHALL BE PLACED 4" TO 8" OF ALL JAMBS, CORNERS, INTERSECTIONS AND WALL ENDS. ALL BOTTOM PLATES SHALL HAVE A MINIMUM OF 2 ANCHOR BOLTS. ALL BOTTOM PLATES OR SILLS ON CONCRETE SLABS ON GRADE AND ON CONCRETE OR MASONRY FOUNDATIONS, SHALL BE PRESSURE TREATED WOOD STAMPED BY AN APPROVED AGENCY.
13. PRESERVATIVE TREATMENT. WOOD MATERIALS REQUIRED TO BE "TREATED WOOD" IN ACCORDANCE WITH IBC SECTION 2304.11. PROTECTION AGAINST DECAY AND TERMITES SHALL CONFORM TO THE APPROPRIATE STANDARDS OF THE AMERICAN WOOD-PRESERVERS ASSOCIATION (AWPA) FOR SAWN LUMBER, GLUED LAMINATED TIMBER, ROUND POLES, WOOD PILES AND MARINE PILES. FOLLOW AMERICAN LUMBER STANDARDS COMMITTEE (ALSC) QUALITY ASSURANCE PROCEDURES. PRODUCTS SHALL BEAR THE APPROPRIATE MARK. FIRE RETARDANT TREATED LUMBER SHALL AFFORD THE FIRE-RESISTANCE RATING REQUIRED IN CHAPTER 6 OF THE IBC. ANCHOR BOLTS, ANCHOR RODS, AND OTHER FASTENERS, FOR THE PRESERVATIVE-TREATED AND FIRE-RETARDANT TREATED WOOD SHALL BE HOT-DIPPED ZINC COATED STEEL OR STAINLESS STEEL.
14. WOOD-BASED PANEL PRODUCTS EXPAND AND CONTRACT SLIGHTLY AS A NATURAL RESPONSE TO CHANGE IN PANEL MOISTURE CONTENT. TO PROVIDE FOR IN-PLANE DIMENSIONAL CHANGES, PANELS SHOULD BE INSTALLED WITH A 1/8" SPACING AT ALL PANEL END AND EDGE JOINTS. A STANDARD 100 BOX NAILS MAY BE USED TO CHECK PANEL EDGE AND PANEL END SPACING.

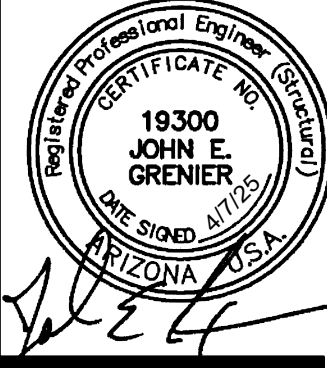
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GEI JOB# 25008



revisions	

PRE-ENGINEERED METAL BUILDINGS:

1. PREFABRICATED METAL BUILDING DESIGN AND CONSTRUCTION SHALL CONFORM TO THE CURRENT APPLICABLE STANDARDS AND SPECIFICATIONS OF THE METAL BUILDING MANUFACTURERS ASSOCIATION (MBMA) AND THE IBC, AISC, AND AISI AS APPLICABLE. THE DIMENSIONAL TOLERANCES OUTLINED IN THE AWS CODE UNDER WORKMANSHIP AND THE TOLERANCES APPLICABLE TO ROLL FORM STEEL UNDER THE AISC "STANDARD MILL PRACTICE" SECTION SHALL BE REQUIRED IN THE FABRICATION OF THE STEEL BUILDING FRAMES.
2. THE PRE-ENGINEERED METAL BUILDING MANUFACTURER (PEMBM) SHALL HAVE AT LEAST 3 YEARS EXPERIENCE IN FABRICATION OF PREFABRICATED METAL BUILDINGS. THE ERECTOR SHALL BE LICENSED BY THE MANUFACTURER AND HAVE AT LEAST 3 YEARS EXPERIENCE IN THE ERECTION OF PREFABRICATED METAL BUILDINGS.
3. THE BUILDING "RIGID" FRAMES SHALL BE DESIGNED TO LIMIT THE LATERAL DEFLECTION TO THE LIMITS INDICATED IN NOTE 14. THE PURLINS AND BUILDING FRAMES SHALL BE DESIGNED TO LIMIT VERTICAL DEFLECTIONS TO THE LIMITS STATED IN NOTE 14.
4. WHERE CMU OR CONCRETE WALLS OR OTHER STRUCTURES CONTACT OR LIMIT THE MOVEMENT OF THE PRE-ENGINEERED METAL BUILDING, THE PEMBM SHALL ENSURE THAT DEFORMATIONAL COMPATIBILITY, PER THE REFERENCED BUILDING CODE, IS MAINTAINED.
5. A COMPLETE DESIGN ANALYSIS, SHOWING ALL CALCULATIONS FOR THE RIGID FRAMES, GIRTS, PURLINS, AND X-BRACING FOR LATERAL LOADS AND LAYOUT OF ANCHOR BOLTS AND OTHER EMBEDDED ITEMS, SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AND ARCHITECT FOR APPROVAL WITH THE SHOP DRAWINGS. SHOP DRAWINGS SHALL INCLUDE DETAILS OF ALL MAIN MEMBERS, TYPICAL CONNECTIONS (SHOWING BOLT HOLES AND WELDS), AND ERECTION DRAWINGS. THE CALCULATIONS AND SHOP DRAWINGS MUST BEAR THE SEAL OF A REGISTERED PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE IN WHICH THE PROJECT IS LOCATED. APPLY A SUPERIMPOSED DEAD LOAD PER DESIGN LOADS.
6. THE LATERAL LOAD RESISTING SYSTEM IS THE COMPLETE RESPONSIBILITY OF THE PEMBM AND SHALL INCLUDE X-BRACING AND PORTAL FRAMES AS REQUIRED TO ACCOMMODATE THE BUILDING PLANS. BUILDING FRAMES TO BE RIGID FRAMES WITH PINNED BASED COLUMNS. INTERIOR AND SIDEWALL COLUMNS TO HAVE STRAIGHT PROFILE WITH MAXIMUM DEPTH AS SHOWN ON THE ARCHITECTURAL DRAWINGS.
7. THE BUILDING SHALL BE DESIGNED TO SUPPORT ALL MECHANICAL EQUIPMENT INCLUDING HEATERS, SPRINKLERS, EXHAUST SYSTEMS, SERVICE EQUIPMENT, AIR HANDLERS, DUCTWORK, PIPING AND ALL OTHER SUCH DEVICES. ADDITIONAL GIRTS OR PURLINS SHALL BE SUPPLIED AS REQUIRED IN CONVENIENT LOCATIONS FOR ATTACHMENT OF ALL MECHANICAL EQUIPMENT. COORDINATE WITH MECHANICAL AND ELECTRICAL DRAWINGS FOR OPENINGS IN WALLS, ROOF AND SUPPORT OF ROOF TOP EQUIPMENT.
8. COMBINATION DESIGN LOADS CONDITIONS SHALL COMPLY WITH IBC REQUIREMENTS. PROVIDE Z-PURLINS WITH LIGHT GAUGE STRAP BRIDGING FOR PURLIN STRESS REVERSAL DURING WIND UPLIFT LOADING. (SUPERIMPOSED DEAD LOAD SHALL NOT BE APPLIED FOR THIS LOAD CASE).
9. ALL COLUMN REACTIONS AND ANCHOR BOLT LAYOUT SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO FOUNDATION EXCAVATION AND SUBMITTAL OF REINFORCING STEEL SHOP DRAWINGS.
10. ROOF AND WALL SHEETING SHALL BE MINIMUM 26 GAGE AS DESIGNED AND SPECIFIED BY THE PEMB MANUFACTURER.
11. FRAMING MEMBERS SHOWN ON THE STRUCTURAL DRAWINGS ARE SCHEMATIC AND ARE TO INDICATE THE DESIGN INTENT ONLY. SEE METAL BUILDING MANUFACTURER'S APPROVED DRAWINGS FOR FRAMING AND CONNECTION DETAILS.
12. THE FOUNDATION DRAWINGS AND DETAILS ARE FOR THE ASSUMED PREFABRICATED METAL BUILDING COLUMN REACTIONS AS SHOWN ON THE DRAWINGS. THE GENERAL CONTRACTOR SHALL VERIFY THE ACTUAL LOADS AND FOUNDATION DETAILS FOR THE BUILDING SYSTEM SELECTED WITH THE METAL BUILDING MANUFACTURER. IF VARIATIONS OCCUR, THE CONTRACTOR SHALL PROVIDE FOR THE REQUIRED REDESIGN AND SUBMIT FINAL FOUNDATION PLANS, DETAILS AND DESIGN CALCULATIONS SEALED BY A CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE OF THE LOCAL JURISDICTION PRIOR TO CONSTRUCTION.
13. ANCHOR BOLT DIAMETERS AND LOCATIONS SHALL BE AS DESIGNED AND SPECIFIED BY THE PEMBM. ANCHOR BOLT EMBEDMENT SHALL BE AS SPECIFIED ON THE STRUCTURAL DRAWINGS.

SHOP DRAWINGS AND PRODUCT DATA SUBMITTALS:


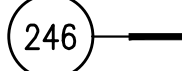
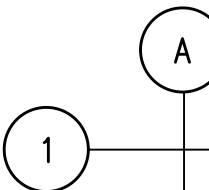
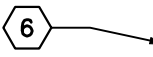


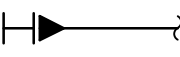

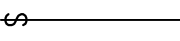
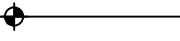
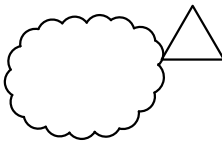
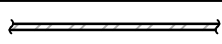
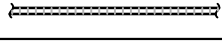

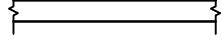
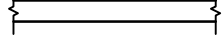

1. SHOP DRAWINGS AND DATA SUBMITTALS SHALL BE SUBMITTED FOR THE FOLLOWING STRUCTURAL ITEMS IN ADDITION TO ANY ITEMS REQUIRED BY THE DEFERRED SUBMITTALS.

CONCRETE	ITEM	SUBMITTAL
	GENERAL	<ul style="list-style-type: none">● MIX DESIGN● PRODUCT DATA
	REINFORCING	<ul style="list-style-type: none">● SHOP DRAWINGS
	FINISHING	<ul style="list-style-type: none">● SUBMIT SURFACE FINISHING PLAN TO ARCHITECT
	CURING	<ul style="list-style-type: none">● STATEMENT OF CURING PROCEDURES
STEEL	ITEM	SUBMITTAL
	STRUCTURAL STEEL	<ul style="list-style-type: none">● SHOP DRAWINGS● MILL TEST REPORTS
	STEEL DECK	<ul style="list-style-type: none">● PRODUCT DATA● SHOP DRAWINGS
	WELDING	<ul style="list-style-type: none">● WELDERS CERTIFICATES FOR ALL WELD TYPES ON JOB
	BOLTING	<ul style="list-style-type: none">● N/A
	COLD FORMED STEEL FRAMING	<ul style="list-style-type: none">● PRODUCT DATA● CERTIFICATIONS

2. THE GENERAL CONTRACTOR SHALL REVIEW AND STAMP ALL SHOP DRAWINGS AND PRODUCT DATA FOR CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS PRIOR TO SUBMITTAL. ANY SHOP DRAWINGS OR PRODUCT DATA NOT REVIEWED AND STAMPED BY THE GENERAL CONTRACTOR WILL BE RETURNED WITHOUT REVIEW. THE CONTRACTOR SHALL CLOUD OR FLAG ALL ITEMS NOT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. VERIFY ALL DIMENSIONS WITH ARCHITECT.
3. ANY CHANGES, SUBSTITUTIONS, OR DEVIATIONS FROM THE ORIGINAL CONTRACT DRAWINGS SHALL BE CLOUDED BY THE MANUFACTURER OR FABRICATOR. ANY CHANGES, SUBSTITUTIONS, OR DEVIATIONS WHICH ARE NOT CLOUDED OR FLAGGED BY SUBMITTING PARTIES, SHALL NOT BE CONSIDERED ALLOWED AFTER THE ENGINEER'S REVIEW, UNLESS NOTED ACCORDINGLY BY THE STRUCTURAL ENGINEER.
4. THE STRUCTURAL ENGINEER RESERVES THE RIGHT TO MAKE CHANGES, OR ALLOW OR NOT ALLOW ANY CHANGES TO THE ORIGINAL CONTRACT DRAWINGS AT ANY TIME BEFORE OR AFTER SHOP DRAWING REVIEW.
5. THE SHOP DRAWINGS DO NOT REPLACE THE ORIGINAL CONTRACT DRAWINGS. ITEMS OMITTED OR SHOWN INCORRECTLY AND WHICH ARE NOT NOTED AS ALLOWED BY THE STRUCTURAL ENGINEER OR ARCHITECT ARE NOT TO BE CONSIDERED CHANGES TO THE ORIGINAL CONTRACT DRAWINGS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ITEMS OMITTED OR SHOWN INCORRECTLY ARE CONSTRUCTED IN ACCORDANCE WITH THE ORIGINAL CONTRACT DRAWINGS.
6. ALL ENGINEERING DESIGNS AND LAYOUTS PERFORMED BY OTHERS SHALL BE SEALED BY A CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE OF THE LOCAL JURISDICTION. THE ADEQUACY OF ENGINEERING DESIGNS AND LAYOUT PERFORMED BY OTHERS IS THE RESPONSIBILITY OF THE SPECIALTY ENGINEER AND SUBMITTING PARTY.
7. THE ENGINEERS REVIEW IS INTENDED ONLY AS AN AID TO THE CONTRACTOR IN OBTAINING CORRECT SHOP DRAWINGS. RESPONSIBILITY FOR CORRECTNESS AND COMPLETENESS RESTS SOLELY WITH THE CONTRACTOR.
8. SHOP DRAWINGS WILL BE RETURNED FOR RESUBMITTAL IF MAJOR ERRORS ARE FOUND DURING REVIEW.
9. ALLOW A MINIMUM OF FIVE WORKING DAYS FOR REVIEW OF SHOP DRAWINGS BY THE STRUCTURAL ENGINEER OF RECORD.

DEFERRED SUBMITTALS:

1. DEFERRED SUBMITTALS ARE DEFINED AS THOSE PORTIONS OF THE DESIGN THAT ARE NOT SUBMITTED AT THE TIME OF THE PERMIT APPLICATION AND WHICH ARE TO BE SUBMITTED TO THE BUILDING OFFICIAL WITHIN A SPECIFIED PERIOD. DEFERRED SUBMITTALS SHALL BE PER 2018 IBC SECTION 107.3.4.1.
2. SUBMITTED DOCUMENTS FOR ALL DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ARCHITECT OR ENGINEER OF RECORD A MINIMUM OF 30 DAYS PRIOR TO FABRICATION. THE DOCUMENTS SHALL BE REVIEWED FOR GENERAL CONFORMANCE WITH THE DRAWINGS. A COPY OF THE DEFERRED SUBMITTAL DOCUMENTS SHALL BE SUBMITTED TO THE BUILDING OFFICIAL WITH A NOTATION INDICATING THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED BY THE ENGINEER OF RECORD. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.
3. DEFERRED SUBMITTAL ITEMS REQUIRED FOR THIS PROJECT INCLUDE THE FOLLOWING:
 - PRE-ENGINEERED METAL BUILDING FABRICATION AND ERECTION DRAWINGS

STRUCTURAL LEGEND			
(THIS LEGEND IS FOR REFERENCE, ALL SYMBOLS, MATERIALS AND ABBREVIATIONS SHOWN ON THIS LEGEND MAY OR MAY NOT APPLY TO THIS SPECIFIC JOB)			
SYMBOL	DESCRIPTION	LOCATION	
	TYPICAL DETAIL – MAY OR MAY NOT BE CUT ON PLANS, BUT SHALL APPLY UNLESS NOTED OTHERWISE.	SEE S1 SERIES SHEETS FOR TYPICAL DETAILS	
	DETAIL CUT SHOWN ON PLAN	SEE S4 SERIES SHEETS FOR FOUNDATION DETAILS SEE S5 SERIES SHEETS FOR FRAMING DETAILS	
	REFERENCE GRIDLINES	FOUNDATION AND FRAMING PLANS	
	PLAN NOTE	SEE PLAN NOTES ON EACH PLAN SHEET	
	OPENING IN FLOOR OR ROOF	WHERE SHOWN ON PLANS	
	SHEAR WALL HOLDOWN (IF APPLICABLE)	SEE FOUNDATION PLANS AND SHEAR WALL SCHEDULE	
	MOMENT CONNECTION (IF APPLICABLE)	SEE FRAMING PLANS	
	SLAB STEP/DEPRESSION	WHERE SHOWN ON PLANS	
	STEP IN FOOTING	WHERE SHOWN ON PLANS	
	ELEVATION MARK	WHERE SHOWN ON DETAILS	
	REVISION	WHERE SHOWN ON PLANS	
NOTE: 100 SERIES DETAILS ARE GENERALLY FOUNDATION RELATED DETAILS; 200 AND ABOVE SERIES DETAILS ARE GENERALLY FRAMING RELATED DETAILS. DETAIL NUMBERS MAY OR MAY NOT BE CONTINUOUS (COORDINATE WITH PLANS, TYPICAL).			
MATERIALS			
SYMBOL	DESCRIPTION		
	STEEL		
	PLYWOOD/O.S.B.		
	EXISTING WALL, FOOTING, ETC.		
	PEMB WALL SYSTEM		
	STEEL STUD WALL U.N.O.		
	STEEL STUD SHEAR WALL U.N.O.		
PLAN ABBREVIATIONS			
C1	COLUMN DESIGNATION	<table><tr><td>C1</td></tr></table>	C1
C1			
F1	FOOTING DESIGNATION	<table><tr><td>F1</td></tr></table>	F1
F1			
SW1	SHEAR WALL DESIGNATION		
L1	LEDGER DESIGNATION		

STRUCTURAL ABBREVIATIONS			
A.B. ABC A.CI A.F.F. AISC AISC ALT APA APPROX ASTM AWS Ø	ANCHOR BOLT AGGREGATE BASE COURSE AMERICAN CONCRETE INSTITUTE ABOVE FINISHED FLOOR AMERICAN INSTITUTE OF STEEL CONSTRUCTION AMERICAN INSTITUTE OF TIMBER CONSTRUCTION ALTERNATE / ALTERNATING AMERICAN PLYWOOD ASSOCIATION APPROXIMATE ARCHITECTURAL AMERICAN SOCIETY FOR TESTING AND MATERIALS AMERICAN WELDING SOCIETY AT (MEASUREMENT)	HK H.S.A.	HOOK HEADED STUD ANCHOR
B.F.F. B.L. BLDG BLKG BM B.N. B.O. BOTT BRG BTWN	BELOW FINISH FLOOR BUILDING LINE BUILDING BLOCKING BEAM BOUNDARY NAILING BOTTOM OF BOTTOM BEARING BETWEEN	IBC ICBO I.D. IN INT	INTERNATIONAL BUILDING CODE INTERNATIONAL COUNCIL OF BUILDING OFFICIALS INSIDE DIAMETER INCH INTERIOR
C C/C CABO C.I.P. CF CFS CJ C.L. or C CLR CLSM CMU COL CONT CRSI CTR CTJ CY	CHANNEL SECTION CENTER TO CENTER COUNCIL OF AMERICAN BUILDING OFFICIALS CAST IN PLACE CUBIC FOOT COLD FORMED STEEL CONSTRUCTION JOINT CENTER LINE CLEAR CONTROLLED LOW STRENGTH MATERIAL CONCRETE MASONRY UNIT COLUMN CONTINUOUS CONCRETE REINFORCING STEEL INSTITUTE CONTROL JOINT CENTER CUBIC YARD	K KSF KSI	KIP(S) (1000 POUNDS) KIP(S) PER SQUARE FOOT KIP(S) PER SQUARE INCH
d D DBL D.F. DIA or Ø DL DN DTL DWG(S)	PENNY (nails) DEPTH (DIMENSION) DOUBLE DOUGLAS FIR-LARCH DIAMETER DEAD LOAD DOWN DETAIL DRAWING(S)	L LL LLH LLV LSH LSV	LENGTH (DIMENSION) OR ANGLE SECTION LIVE LOAD POUNDS LONG LEG HORIZONTAL LONG LEG VERTICAL LONG SIDE HORIZONTAL LONG SIDE VERTICAL
EA E.F. E.J. EL ELEC E.N. ENG E.O.S. EQ EQUIP E.W. EXP EXST	EACH EACH FACE EXPANSION JOINT ELEVATION ELECTRICAL EDGE NAILING ENGINEER EDGE OF SLAB EQUAL EQUIPMENT EACH WAY EXPANSION EXISTING	MCJ MAT'L MAX MECH MFR(S) MIN MISC	MASONRY CONTROL JOINT MATERIAL MAXIMUM MECHANICAL MANUFACTURER(S) MINIMUM MISCELLANEOUS
FDN F.F.E. F.G. F.O. F.P. FRWG FT FTG	FOUNDATION FINISHED FLOOR ELEVATION FINISH GRADE FACE OF FULL PENETRATION (WELD) FRAMING FOOT / FEET FOOTING	N/A N.I.C. N.T.S.	NOT APPLICABLE NOT IN CONTRACT NOT TO SCALE
GA GALV GLB G.S.N. GYP	GAGE GALVANIZED GLUED-LAMINATED BEAM GENERAL STRUCTURAL NOTES GYPSUM	O.C. O.D. O.F. OPP	ON CENTER OUTSIDE DIAMETER OUTSIDE FACE OPPOSITE
HTor HGT	HEIGHT	PCF PCI PL or P PLF PCF PLF PREFAB PRE-ENG PSF PSI P.T. PT P.V.C.	POUNDS PER CUBIC FOOT PRESTRESSED CONCRETE INSTITUTE PLATE POUNDS PER LINEAR FOOT POUNDS PER CUBIC FOOT POUNDS PER LINEAR FOOT PREFABRICATED PRE-ENGINEERED POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH POST-TENSION POINT POST-TENSIONING INSTITUTE POLYVINYL CHLORIDE (PIPE)
		REF REINF REQD RS	REFERENCE REINFORCING STEEL REQUIRED ROUGH SAWN
		SIM SLH SLV STD STL SYM SQ	SIMILAR SHORT LEG HORIZONTAL SHORT LEG VERTICAL STANDARD STEEL SYMMETRICAL SQUARE
		T&B T&G THK TL T.O... TYP	TOP AND BOTTOM TONGUE AND GROOVE THICKNESS TOTAL LOAD TOP OF (OBJECT USE) TYPICAL
		U.N.O.	UNLESS NOTED OTHERWISE
		V.I.F.	VERIFY IN FIELD
		W W.P. W.W.F. W/ W/O WT	WIDTH (DIMENSION) OR WIDE FLANGE SECTION WORKING POINT WELDED WIRE FABRIC WITH WITHOUT WEIGHT

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SPECIAL INSPECTION REQUIREMENTS

STATEMENT OF SPECIAL INSPECTIONS:

1. AS REQUIRED BY IBC SECTION 1704.2.3, THIS STATEMENT OF STRUCTURAL SPECIAL INSPECTIONS ADDRESSES THE MINIMUM REQUIREMENTS FOR SPECIAL INSPECTIONS. REFER TO ARCHITECTURAL, MECHANICAL AND OTHER DISCIPLINE DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL NON-STRUCTURAL TRADES THAT MAY ALSO HAVE SPECIAL INSPECTION REQUIREMENTS.
2. REQUIRED VERIFICATION AND SPECIAL INSPECTIONS FOR THIS PROJECT ARE AS FOLLOWS :

SPECIAL INSPECTION REQUIREMENTS		
INSPECTION TYPE:	INSPECTIONS (Y/N):	TESTING (Y/N):
SOILS (IBC 1705.6) <div>- ENGINEERED FILL PLACEMENT</div> <div>- FOUNDATION EXCAVATIONS</div>	Y Y	Y Y
STRUCTURAL STEEL (IBC 1705.2.1) <div>- WELDING</div>	Y	N
POST-INSTALLED ANCHORS (IBC 1705.1.1) <div>- EPOXY ANCHORS</div> <div>- EXPANSION ANCHORS</div> <div>- SCREW ANCHORS</div>	Y Y Y	N N N

3. THE ATTACHED TABLES OF REQUIRED SPECIAL INSPECTIONS AND TESTS SUMMARIZE THE SPECIAL INSPECTION AND TESTS REQUIRED FOR THE CATEGORIES LISTED ABOVE. SPECIAL INSPECTORS SHALL REFER TO THE APPROVED PLANS, SPECIFICATIONS, AND IBC CHAPTER 17 FOR DETAILED INSPECTION AND TESTING REQUIREMENTS. ANY ADDITIONAL TESTS AND INSPECTIONS REQUIRED BY THE APPROVED PLANS AND SPECIFICATIONS BEYOND THE IBC TABLES SHALL ALSO BE PERFORMED.
4. THE SPECIAL INSPECTOR SHALL BE EMPLOYED OR RETAINED BY AN APPROVED AGENCY, QUALIFIED PER SECTION 1704.2.1, AND BE APPROVED BY THE LOCAL BUILDING OFFICIAL PER SECTION 1703, FOR THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.
5. IN ACCORDANCE WITH SECTION 1704.2.4 THE APPROVED AGENCY SHALL SUBMIT THE SPECIAL INSPECTION REPORTS TO THE BUILDING OFFICIAL WITH COPIES SENT TO ARCHITECT OF RECORD AND THE ENGINEER OF RECORD. THE REPORTS SHALL BE SIGNED AND SEALED BY THE APPROVED AGENCY'S REGISTERED CIVIL OR STRUCTURAL ENGINEER IN THE STATE OF THE LOCAL JURISDICTION.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A MINIMUM OF 24 HOURS NOTICE TO THE SPECIAL INSPECTOR AND THE TESTING LABORATORY PRIOR TO BEGINNING ANY WORK FOR WHICH SPECIAL INSPECTION OR TESTING IS REQUIRED.
7. THE SPECIAL INSPECTOR IS NOT AUTHORIZED TO STOP OR DELAY ANY WORK. IF THE CONTRACTOR ELECTS TO CONTINUE WITH A CERTAIN ASPECT OF WORK AFTER BEING NOTIFIED BY THE SPECIAL INSPECTOR THAT SUCH WORK IS UNACCEPTABLE, THE CONTRACTOR DOES SO AT THEIR OWN RESPONSIBILITY, AND RISKS CORRECTING THE WORK AT A LATER TIME.
8. THE SPECIAL INSPECTOR IS NOT INSPECTING FOR OSHA COMPLIANCE AND TEMPORARY CONSTRUCTION, SUCH AS BRACING, OR ANY SAFETY RELATED ITEMS. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADEQUATE FACILITIES FOR THE STRUCTURAL INSPECTOR, TO ALLOW THE INSPECTOR TO PERFORM THEIR WORK SAFELY, AND EFFICIENTLY.
9. DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR:
- A. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK REQUIRED TO BE SPECIAL INSPECTED FOR CONFORMANCE WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS.
- B. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN, IF UNCORRECTED, TO THE ENGINEER OR ARCHITECT OF RECORD AND THE BUILDING OFFICIAL.
- C. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, AND TO THE ENGINEER AND ARCHITECT OF RECORD WITHIN 30 DAYS OF INSPECTION.
- D. UPON COMPLETION OF THE ASSIGNED WORK, THE APPROVED AGENCY'S SPECIAL INSPECTOR SHALL COMPLETE AND SIGN A FINAL REPORT CERTIFYING THAT TO THE BEST OF THE INSPECTOR'S KNOWLEDGE, THE WORK IS IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS, AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE CODE.
10. SPECIAL INSPECTION IS NOT A SUBSTITUTE FOR INSPECTION BY THE BUILDING OFFICIAL'S INSPECTOR. ALL WORK REQUIRING SPECIAL INSPECTION WHICH IS INSTALLED OR COVERED WITHOUT APPROVAL OF THE BUILDING OFFICIAL'S INSPECTOR IS SUBJECT TO REMOVAL.

REQUIRED SPECIAL INSPECTION AND TESTS OF STEEL CONSTRUCTION (IN ACCORDANCE WITH AISC 360)			
TYPE	QC	QA	REFERENCED STANDARD
INSPECTION TASKS PRIOR TO WELDING			
1. WELDING PROCEDURE SPECIFICATIONS (WPSS) AVAILABLE	P	P	AWS D1.1
2. MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	P	P	AWS D1.1
3. MATERIAL IDENTIFICATION (TYPE/GRADE)	O	O	AWS D1.1
4. FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY)			
A. JOINT PREPARATION, DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL), CLEANLINESS (CONDITION OF STEEL SURFACES), TACKING (TACK WELD QUALITY AND LOCATION), BACKING TYPE AND FIT (IF APPLICABLE)	O	O	AWS D1.1
5. CONFIGURATION AND FINISH OF ACCESS HOLES	O	O	AWS D1.1
6. FIT-UP OF FILLET WELDS			
A. DIMENSIONS (ALIGNMENT, GAPS AT ROOT), CLEANLINESS (CONDITION OF STEEL SURFACES), TACKING (TACK WELD QUALITY AND	O	O	AWS D1.1
7. CHECK WELDING EQUIPMENT	O	-	AWS D1.1
INSPECTION TASKS DURING WELDING			
1. USE OF QUALIFIED WELDERS	O	O	AWS D1.1
2. CONTROL AND HANDLING OF WELDING CONSUMABLES			
A. PACKING EXPOSURE CONTROL	O	O	AWS D1.1
3. NO WELDING OVER CRACKED TACK WELDS	O	O	AWS D1.1
4. ENVIRONMENTAL CONDITIONS			
A. WIND SPEED WITHIN LIMITS, PRECIPITATION AND TEMPERATURE	O	O	AWS D1.1
5. WPS FOLLOWED			
A. SETTINGS ON WELDING EQUIPMENT, TRAVEL SPEED, SELECTED WELDING MATERIALS, SHIELDING GAS TYPE/FLOW RATE, PREHEAT APPLIED, INTERPASS TEMPERATURE MAINTAINED (MIN/MAX), PROPER POSITION (F, V, H, OH)	O	O	AWS D1.1
6. WELDING TECHNIQUES			
A. INTERPASS AND FINAL CLEANING, EACH PASS WITHIN PROFILE LIMITATIONS, EACH PASS MEETS QUALITY	O	O	AWS D1.1
INSPECTION TASKS AFTER WELDING			
1. WELD CLEANING	O	O	AWS D1.1
2. SIZE, LENGTH, AND LOCATIONS OF WELDS	P	P	AWS D1.1
3. WELDS MEET VSUAL ACCEPTANCE CRITERIA			
A. CRACK PROHIBITION, WELD/BASE-METAL FUSION, ORATER CROSS SECTION, WELD PROFILES, WELD SIZE, UNDERCUT,	P	P	AWS D1.1
4. ARC STRIKES	P	P	AWS D1.1
5. K-AREA	P	P	AWS D1.1
6. BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	P	P	AWS D1.1
7. REPAIR ACTIVITIES	P	P	AWS D1.1
8. DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	P	P	AWS D1.1
INSPECTION TASKS PRIOR TO BOLTING			
1. MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	O	P	
2. FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	O	O	
3. PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE)	O	O	
4. PROPER FASTENING PROCEDURE SELECTED FOR JOINT DETAIL	O	O	
5. CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS	O	O	
6. PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	P	O	
7. PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS	O	O	
INSPECTION TASKS DURING BOLTING			
1. FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED	O	O	
2. JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION	O	O	
3. FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING	O	O	
4. FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES	O	O	
INSPECTION TASKS AFTER BOLTING			
1. DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	P	P	
O - OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS.			
P - PERFORM THESE TASKS FOR EACH WELDED JOINT OR MEMBER, EACH BOLTED CONNECTION, OR EACH STEEL ELEMENT.			

IBC TABLE 1705.1.1 : REQUIRED SPECIAL INSPECTION OF POST-INSTALLED ANCHORS

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION
1. EPOXY INSTALLATIONS:		
A. ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.	X	-
B. ANCHORS NOT DEFINED IN NOTE A.	-	X
2. CONCRETE SCREW ANCHORS	-	X
CONTINUOUS SPECIAL INSPECTION: THE INSPECTOR MUST BE ON THE JOB SITE CONTINUOUSLY DURING ANCHOR INSTALLATION TO VERIFY ANCHOR TYPE, ADHESIVE IDENTIFICATION AND EXPIRATION DATE, ANCHOR DIMENSIONS, CONCRETE TYPE, CONCRETE COMPRESSIVE STRENGTH, HOLE DRILLING METHOD, HOLE DIMENSIONS, HOLE CLEANING PROCEDURES, ANCHOR SPACING, EDGE DISTANCE, CONCRETE THICKNESS, ANCHOR EMBEDMENT, TIGHTENING TORQUE AND ADHERENCE TO MANUFACTURER ESR REPORT.		
PERIODIC SPECIAL INSPECTION: THE INSPECTOR MUST MAKE PERIODIC INSPECTIONS DURING ANCHOR INSTALLATION TO VERIFY ANCHOR TYPE, ADHESIVE IDENTIFICATION AND EXPIRATION DATE, ANCHOR DIMENSIONS, CONCRETE TYPE, CONCRETE COMPRESSIVE STRENGTH, HOLE DRILLING METHOD, HOLE DIMENSIONS, HOLE CLEANING PROCEDURES, ANCHOR SPACING, EDGE DISTANCE, CONCRETE THICKNESS, ANCHOR EMBEDMENT, TIGHTENING TORQUE AND ADHERENCE TO MANUFACTURER ESR REPORT. INSPECTOR SHALL INSPECT A MINIMUM OF 25% OF ALL INSTALLATIONS.		

IBC TABLE 1705.6: REQUIRED SPECIAL INSPECTIONS AND TESTS OF SOILS

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	-	X
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	-	X
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	-	X
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COM- PACTION OF COMPACTED FILL.	X	-
5. PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	-	X

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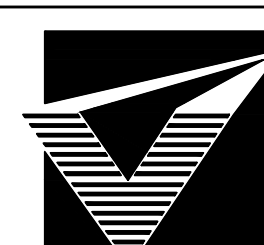
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special inspection
requirements

s1.3



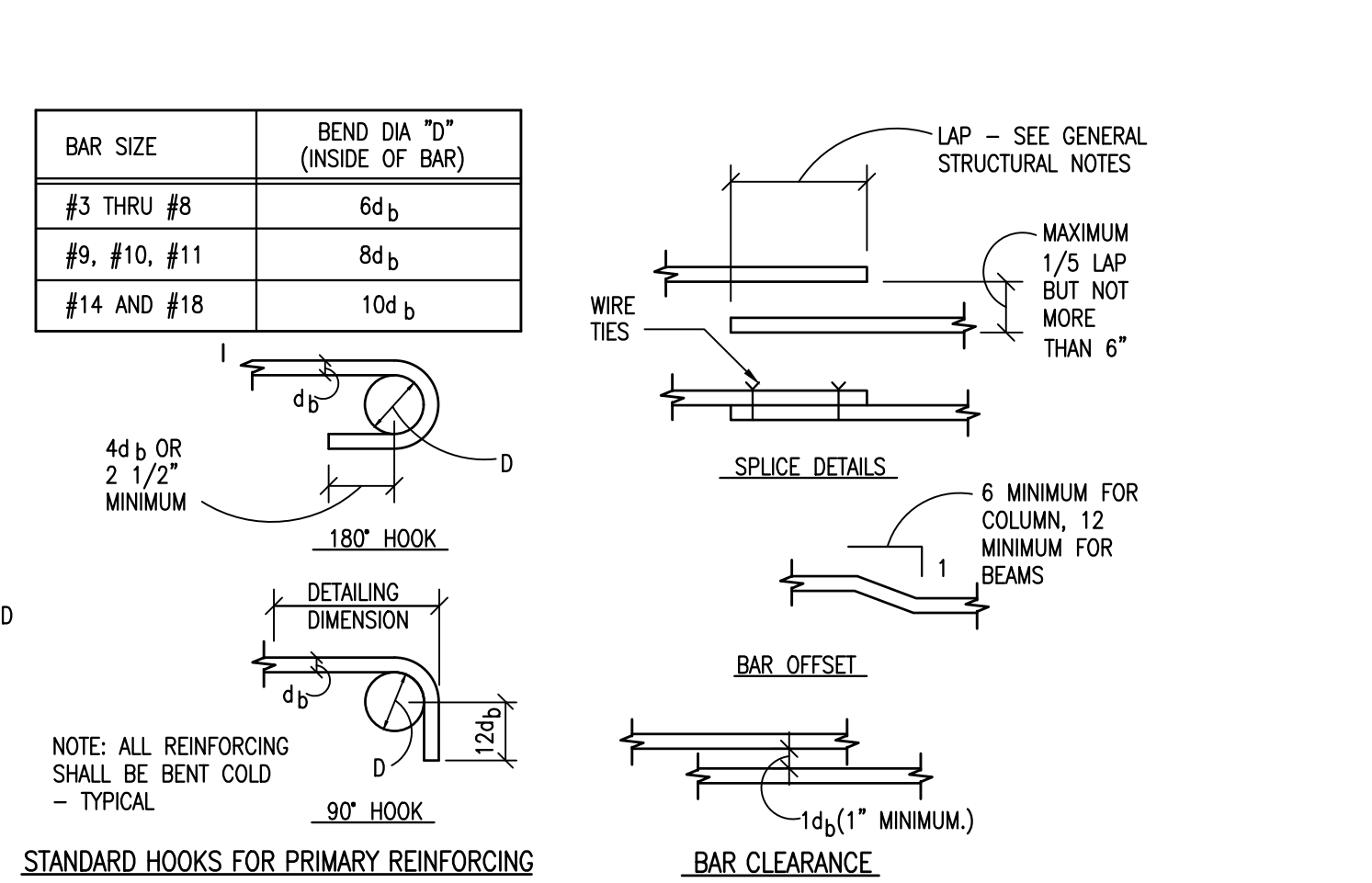
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GEI JOB# 25008



LAP SPLICE - 3000psi CONCRETE
UNCOATED BARS - LAP CLASS "B" - SPLICES LISTED IN INCHES
ALL SPLICES SHALL BE LAP CLASS "B"

BAR SIZE	BAR SIZE SOFT METRIC	CONCRETE COVER = 0.75 in.		CONCRETE COVER = 1.00 in.		CONCRETE COVER = 1.50 in.		CONCRETE COVER = 2.00 in.	
		TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER
#3	#10	17	16	17	16	17	16	17	16
#4	#13	28	22	23	17	23	17	23	17
#5	#16	41	32	33	26	28	22	28	22
#6	#19	56	43	46	35	34	26	34	26
#7	#22	90	69	74	57	55	43	49	38
#8	#25	111	86	93	72	70	54	56	43
#9	#29	135	104	113	87	86	66	69	53
#10	#32	162	125	137	106	105	81	85	66
#11	#36	190	146	162	125	125	97	102	79

NOTES:
 1. SPLICES IN TOP TRACKS SHALL BE LOCATED AT CENTERLINE OF STUDS ONLY. (STUDS NOT SHOWN)
 2. STAGGER SPLICES 8'-0" MINIMUM
 3. SCREWS SHALL BE FLAT PAN HEAD OR PANCAKE HEAD SELF DRILLING SCREWS AT ALL LOCATIONS RECEIVING DRYWALL. HEX HEAD SCREWS ARE ALLOWED AT OTHER LOCATIONS.

10 TYPICAL BRIDGING ATTACHMENT TO STEEL STUDS
 TYPICAL DETAIL

11 TYPICAL SPLICE IN TOP TRACKS AND LEDGER TRACKS
 TYPICAL DETAIL

STEEL STUDS - COORDINATE

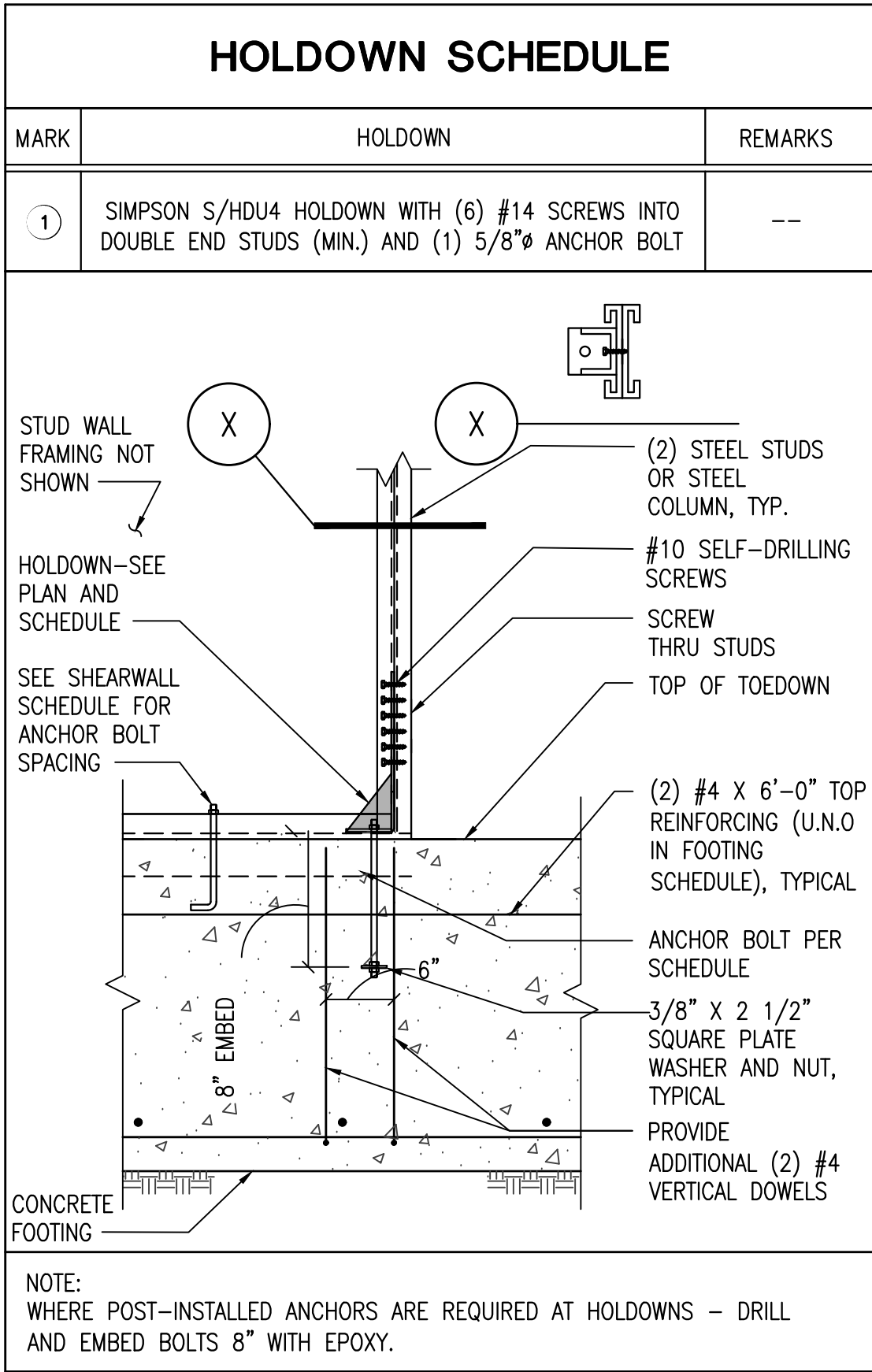
The diagram consists of two technical drawings, labeled 13 and 14, showing details for non-bearing interior partition walls.

Detail 13: NON-BEARING INTERIOR PARTITION WALL ANCHORAGE TO CONCRETE SLAB
 This drawing shows a cross-section of a wall anchorage. A vertical wall section is shown with a horizontal line indicating the top of the wall. Below this line, a horizontal section is labeled "CONCRETE SLAB". A vertical line, representing a fastener, passes through the wall and is anchored into the concrete slab. The fastener is labeled "X 1 1/4\" LONG POWDER ACTUATED FASTENERS AT 24\" O.C. U.N.O.". The wall is shown with a hatched pattern on the left side, indicating a concrete slab.

Detail 14: TYPICAL CONNECTION OF NON-BEARING PARTITIONS TO FLOOR OR ROOF FRAMING
 This drawing shows a cross-section of a wall connection to floor or roof framing. A vertical wall section is shown with a horizontal line indicating the top of the wall. Below this line, a horizontal section is labeled "JOIST OR BOTTOM CHORD OF TRUSS". The wall is anchored into the joist or truss chord. The fastener is labeled "SIMPSON STC TRUSS CLIP". The wall is shown with a hatched pattern on the left side, indicating a concrete slab. The connection is labeled "PERPENDICULAR TO FRAMING". The wall is also labeled "2 X 4 BLOCKING AT 48\" O.C. WITH (2) 16d NAILS EACH END". The wall is shown with a hatched pattern on the right side, indicating a concrete slab. The wall is also labeled "CONTINUOUS TRACK" and "STEEL STUD WALL". The connection is labeled "PARALLEL TO FRAMING".

FOOTING SCHEDULE				
<p>FOR CONSTRUCTION ABOVE FOOTINGS, SEE DETAILS</p> <p>FOOTING REINFORCING (REINFORCING IS AT BOTTOM OF FOOTING U.N.O.)</p>				
MARK	DIMENSIONS		FOOTING REINFORCING	REMARKS
	"W"	"T"		
F1	1'-4" X CONT.	12"	(2) #4 CONTINUOUS TOP AND BOTTOM	SEE DETAIL 110
F2	1'-6" X CONT.	12"	(2) #5 CONTINUOUS	SEE DETAIL 104
F3	3'-0" SQUARE	12"	(3) #5 EACH WAY	SEE DETAIL 106
F4	4'-0" SQUARE	16"	(4) #5 EACH WAY TOP AND BOTTOM	SEE DETAIL 102
F5	4'-0" SQUARE	12"	(4) #5 EACH WAY	SEE DETAIL 105

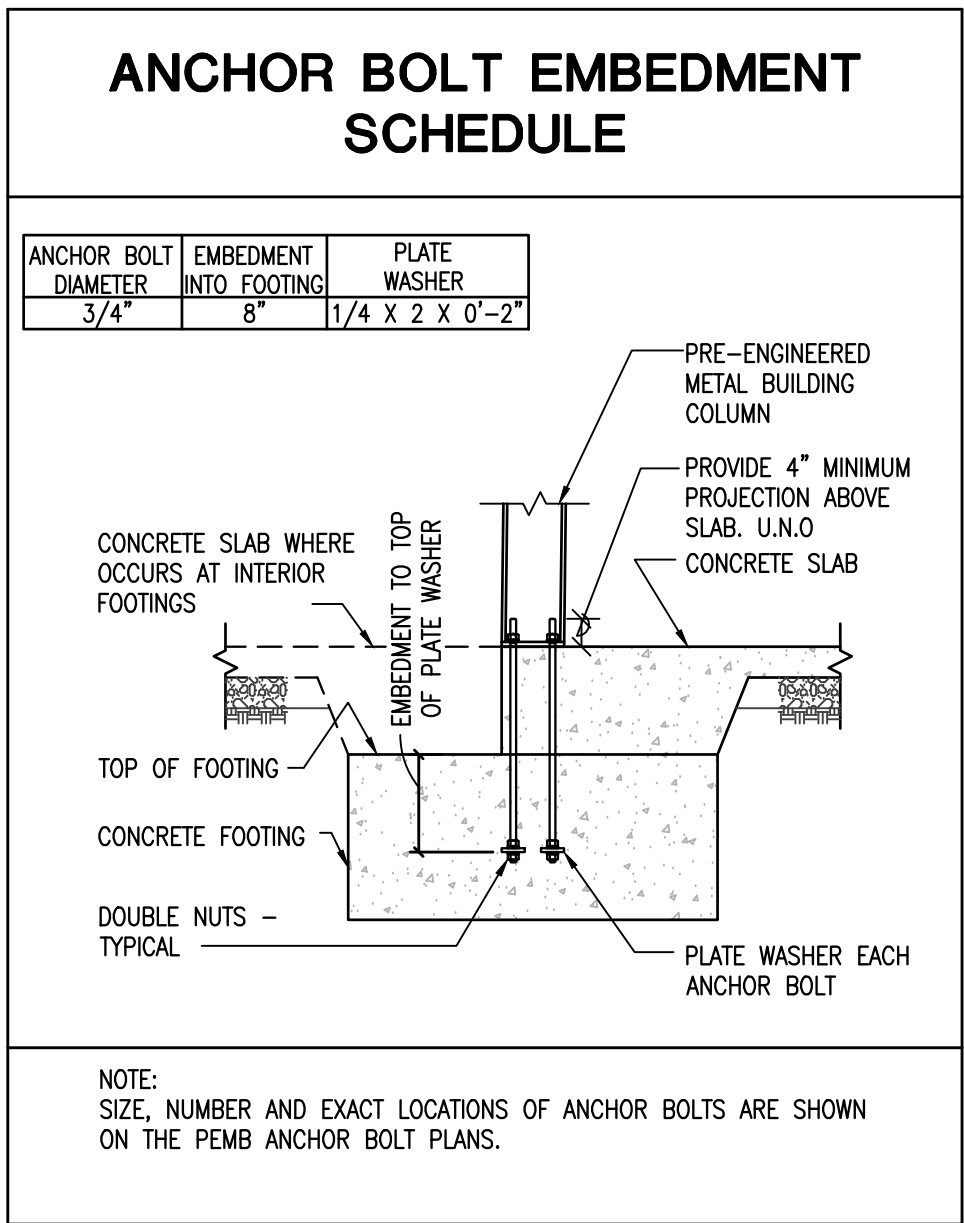
COLUMN SCHEDULE				
MARK	SIZE	BASE CONNECTION	REMARKS	
C1	HSS 5 X 5 X 3/16	BASE PLATE 1/2 X 12 X 1'-0" WITH (4) 3/4" ANCHOR RODS	EMBED ANCHOR RODS 8" MIN	
C2	HSS 8 X 3 X 3/16	BASE PLATE 1/2 X 7 X 0'-8" WITH (2) 1/2" X 4" TITEN HD SCREW ANCHORS	SEE DETAIL 112	



SHEAR WALL SCHEDULE					
MARK	SHEATHING MATERIAL	EDGE SCREWS	FIELD SCREWS	SILL ANCHORAGE	REMARKS
SW1	15/32" OSB SHEATHING	#8 AT 6" O.C.	#8 AT 12" O.C.	1/2" Ø ANCHOR RODS AT 32" O.C.	---

NOTES:

- ALL PLYWOOD PANEL EDGES SHALL BE BLOCKED PER DETAIL 112.
- PROVIDE DOUBLE STUDS AT END OF ALL SHEAR WALLS.
- SEE TYPICAL STEEL STUD SHEAR WALL DETAIL 112.



RIGID FRAME COLUMN REACTIONS

RIGID FRAME COLUMN REACTIONS (RESTROOM)

FRAME LINE	MAX DOWN FORCE, V (KIPS)	H (KIPS)	LOAD COMBINATION	MAX UPLIFT FORCE, V (0.6D + 0.6W) (KIPS)	H (KIPS)	LOAD COMBINATION
A & B	9.6	0.0	DL + LL	1.6	-2.2	0.6 DL + 0.6 WL

NOTES:

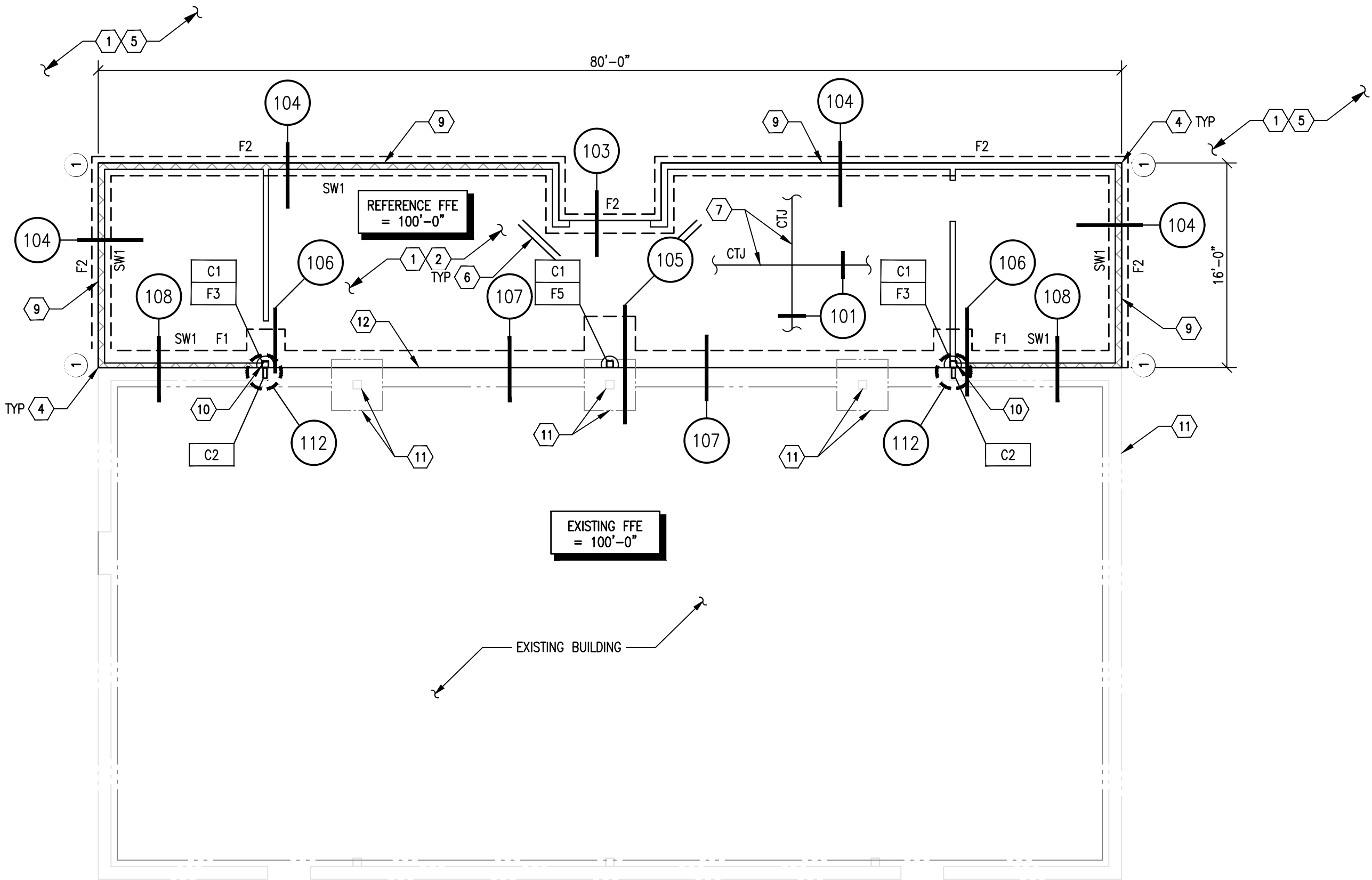
- SEE GENERAL STRUCTURAL NOTES FOR DESIGN CRITERIA.
- NEGATIVE SIGN INDICATES REACTION DIRECTION OPPOSITE TO DIRECTION SHOWN ON DIAGRAM.
- REACTIONS SHOWN ARE TO BE VERIFIED WITH PEMB DRAWINGS.

PORTAL FRAME REACTIONS

GRID LOCATION	REACTIONS (KIPS)		FRAME TYPE
	H	V	
1 & 2	2.5	3.9	PORTAL FRAME

NOTES:

- ENVELOPE REACTIONS SHOWN ARE TO BE VERIFIED WITH PEMB DRAWINGS.



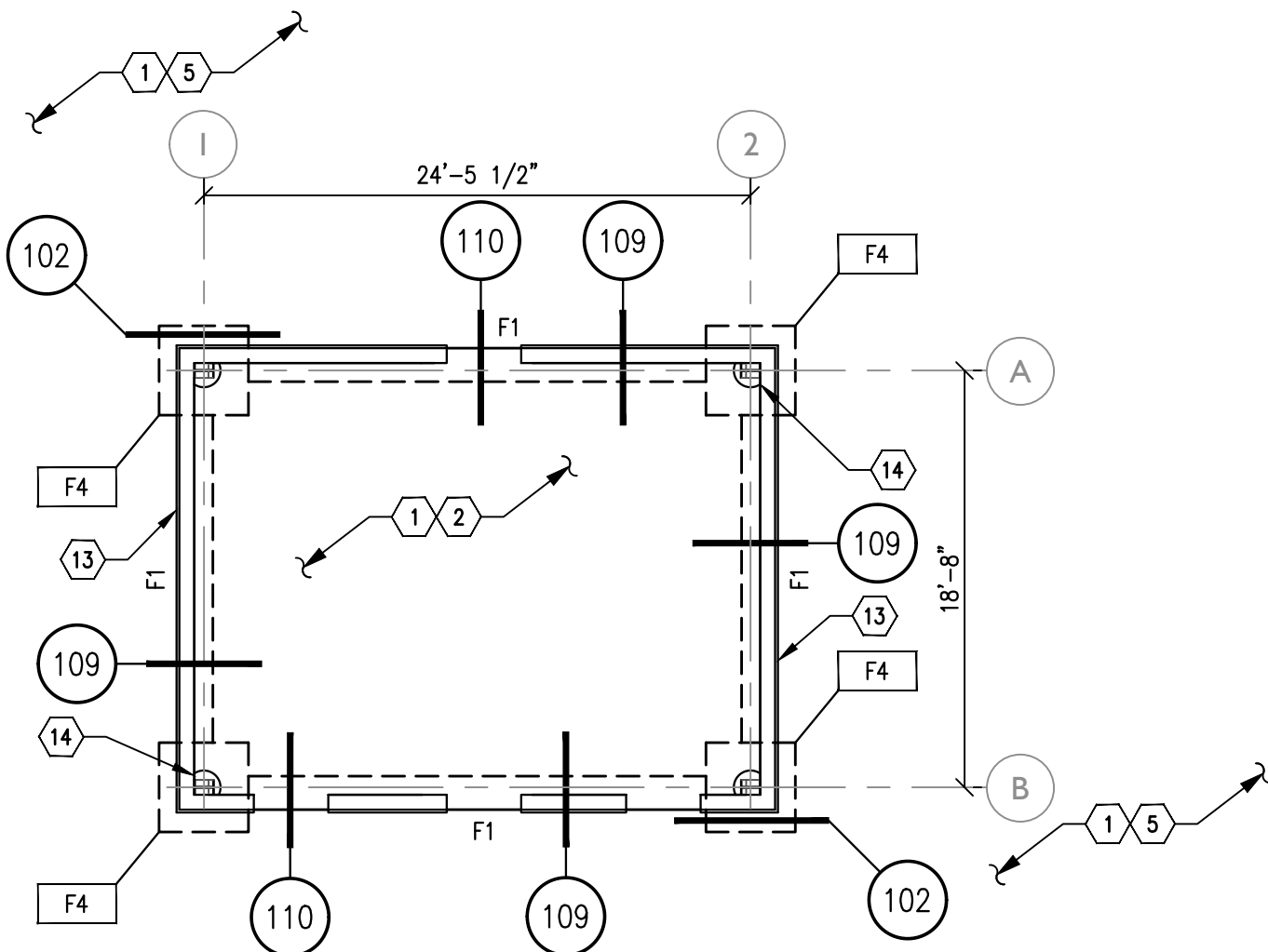
**BLDG V - (WRESTLING)
FOUNDATION PLAN**

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



RESTROOM - FOUNDATION PLAN

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



**SEE PEMB DRAWINGS
FOR ANCHOR BOLT
SIZES, LAYOUT AND
ALL DIMENSIONS**

GENERAL FOUNDATION NOTES

- SEE SHEET S1.0 FOR STRUCTURAL NOTES (MATERIALS, REQUIREMENTS, ETC.).
- VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION.
- UNLESS SPECIFICALLY NOTED OTHERWISE BOTTOMS OF ALL FOUNDATIONS SHALL BE COORDINATED WITH TYPICAL EARTHWORK DETAILS.
- COORDINATE AND VERIFY ALL FINISH FLOOR ELEVATIONS, FINISH GRADES, TOP OF FOOTINGS, ETC. WITH ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION.
- SEE ARCHITECTURAL DRAWINGS FOR EXTENTS AND LOCATION OF EXTERIOR SLABS, SLAB JOINTS ETC., - TYPICAL.
- PROVIDE CONSTRUCTION JOINTS IN FOOTINGS IN ACCORDANCE WITH TYPICAL DETAILS.
- SEE ARCHITECTURAL DRAWINGS FOR THE FOLLOWING:
 - SIZE AND LOCATION OF ALL DOOR AND WINDOW OPENINGS.
 - SIZE AND LOCATION OF ALL INTERIOR AND EXTERIOR NON-BEARING PARTITIONS.
 - SIZE AND LOCATION OF ALL CONCRETE CURBS; FLOOR AND ROOF DRAINS, SLOPES AND DEPRESSED AREAS; CHANGES IN LEVEL; CHAMFERS, CORNER FORMERS, GROOVES, BLOCKOUTS AND INSERTS; PAVING SITE WORK CURBS AND WALLS.
 - DIMENSIONS NOT SHOWN ON STRUCTURAL DRAWINGS.
 - SIZE AND LOCATION OF OPENINGS THRU ROOF.
- SEE MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR THE FOLLOWING:
 - WALL AND SLAB OPENINGS FOR MECHANICAL PIPE RUNS, TRENCHES, FLOOR DRAINS, ROOF DRAINS, SUMPS, ETC.
 - WALL AND SLAB OPENINGS FOR ELECTRICAL CONDUIT RUNS, BOXES, JUNCTION BOXES IN WALLS, COLUMNS, SLABS, ETC.
 - SLEEVES, SLEEVE CLUSTERS AND BLOCKOUTS; AND CONCRETE INSERTS FOR EQUIPMENT AND FIXTURES.
 - SIZE AND LOCATION OF MACHINE TRANSFORMER, SWITCH GEAR AND EQUIPMENT CURBS, BASES AND PADS, AND ANCHOR BOLTS FOR ANCHORED ITEMS.
- COORDINATE WITH MECHANICAL AND ARCHITECTURAL DRAWINGS, AS WELL AS SUB - CONTRACTORS/SUPPLIERS FOR ALL MECHANICAL UNITS AND FLOOR/ROOF OPENINGS (VERIFY EXACT LOCATIONS AND WEIGHT OF UNITS SHOWN ON PLANS AND FOR ADDITIONAL UNITS THAT MAY NOT BE SHOWN).
- PROVIDE 1/2" CLEAR FROM BOTTOM OF ROOF FRAMING TO TOP OF NON-BEARING WALLS. COORDINATE WITH ARCHITECTURAL DRAWINGS. FOR VERTICAL SLIP CONNECTIONS, SEE TYPICAL STRUCTURAL DETAILS - TYPICAL.

FOUNDATION PLAN NOTES

- SEE TYPICAL DETAIL AND STRUCTURAL NOTES FOR EARTHWORK REQUIREMENTS.
- 4" CONCRETE SLAB OVER BASE COURSE PER SOILS REPORT.
- PROVIDE 1/2" PREFORMED JOINT FILLER AT ALL LOCATIONS WHERE EXTERIOR SLABS ABUT THE BUILDING. AT ALL DOORS/OPENINGS PROVIDE PNA 1/4" DIAMOND DOWELS (OR EQUIVALENT) AT 18" O.C. TO PREVENT TRIPPING HAZARD (EXTEND 3'-0" EACH SIDE OF OPENINGS).
- ALL HORIZONTAL REINFORCING IN FOOTINGS, STEM WALLS AND WALLS SHALL BE CONTINUOUS AROUND ALL CORNERS AND INTERSECTIONS PER TYPICAL DETAILS.
- SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS AND LIMITS OF SITE WORK, SIDEWALKS, FINISH, SLOPES, CURBS, SITE WALLS, ETC.
- (2) #4 X 4'-0" CENTERED IN SLAB AT 6" O.C. - TYPICAL AT RE-ENTRANT CORNERS AND DISCONTINUOUS SLAB JOINTS.
- CTJ - INDICATES SLAB CONTROL JOINT. CONTRACTOR SHALL PROVIDE CONTROL JOINTS AT 10'-0" O.C. MAXIMUM.
- XXXX - INDICATES SHEARWALL PER SCHEDULE.
- ALL EXTERIOR AND BEARING WALLS SHALL BE 6" X 20 GAGE (600S162-33) STEEL STUDS AT 16" O.C.
- ATTACH END STUDS TO STEEL COLUMN WITH HILTI X-U SHOTPINS AT 12" O.C. FULL HEIGHT.
- EXISTING P.E.M.B. COLUMN AND FOOTING TO REMAIN - SEE DETAIL 111 FOR STRENGTHENING.
- DOWEL NEW FOOTING INTO (E) FOOTING WITH (2) #5 X 1'-8" DOWELS SET INTO 3/4" Ø X 8" HOLES WITH NON-SHRINK GROUT. SET AT MID-DEPTH OF FOOTING.
- PEMB PORTAL FRAME IN BAYS INDICATED - COORDINATE WITH PEMB DRAWINGS.
- SEE DETAIL 102 FOR REINFORCING AT ANCHOR BOLTS.



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date
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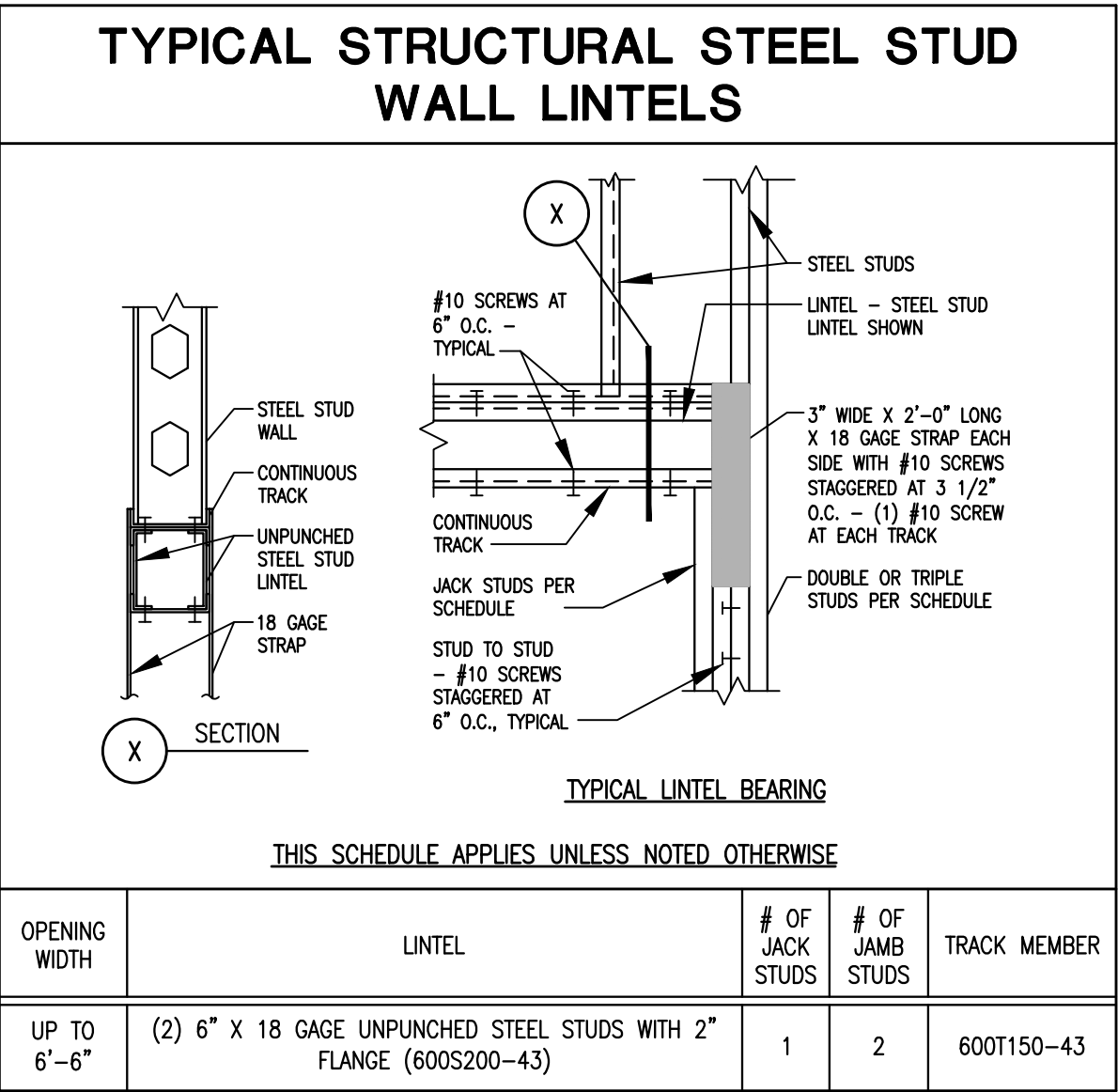
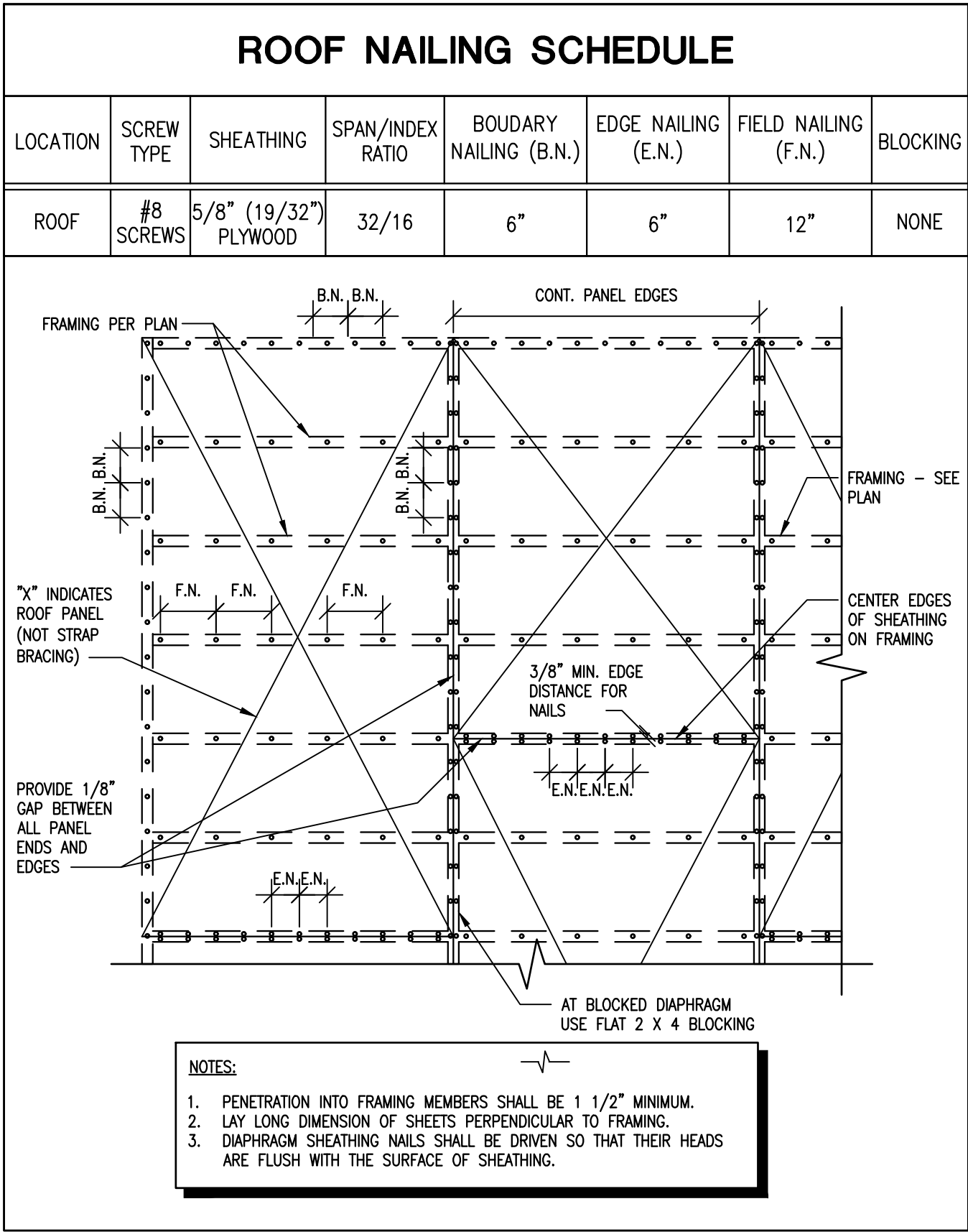
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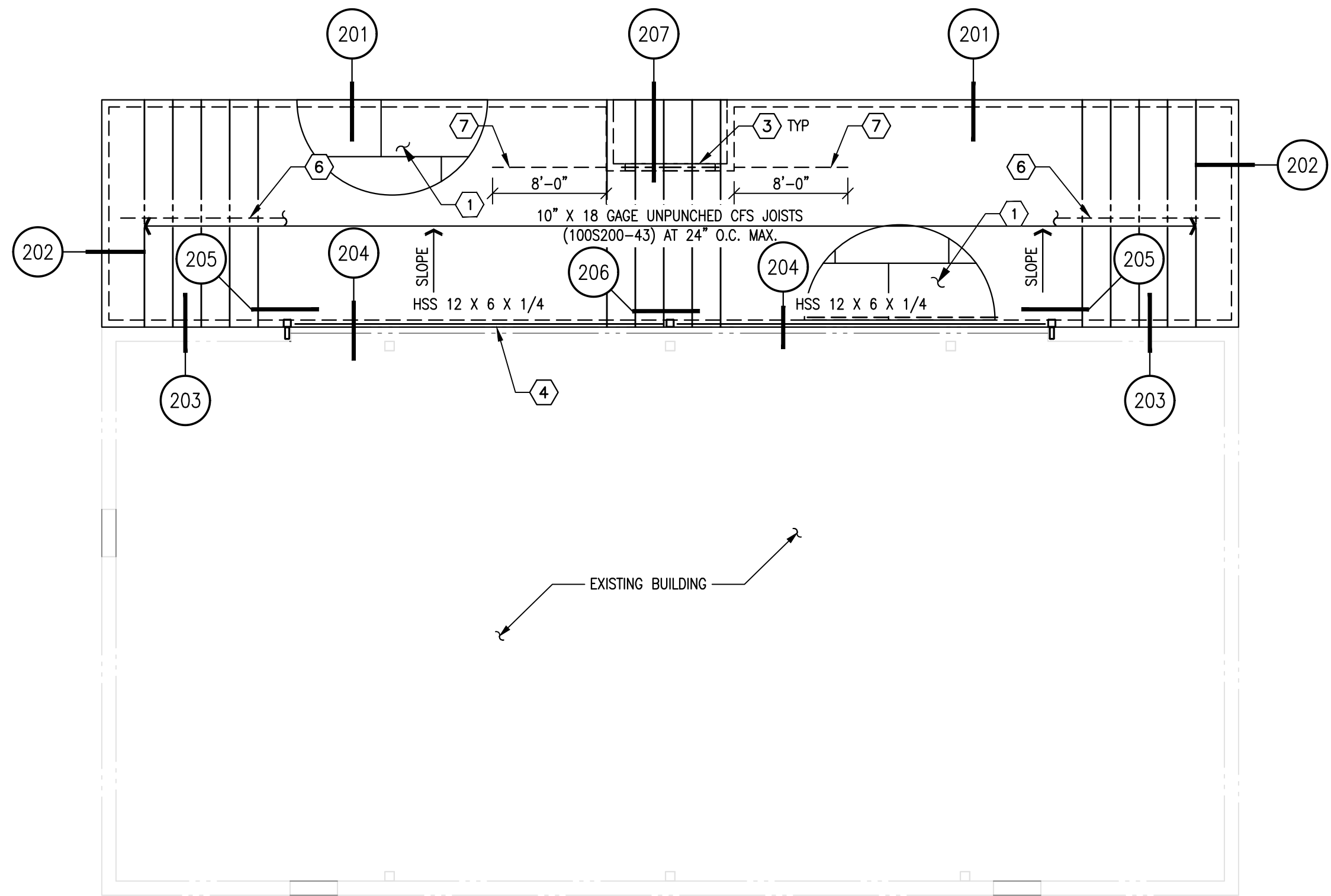


GENERAL ROOF FRAMING NOTES

- SEE SHEET S1.0 FOR STRUCTURAL NOTES (MATERIALS, REQUIREMENTS, ETC.).
- COORDINATE AND VERIFY ALL VERTICAL DIMENSIONS (TOL, TOP, TOM, ETC.) WITH ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION.
- COORDINATE WITH MECHANICAL AND ARCHITECTURAL DRAWINGS, AS WELL AS SUB - CONTRACTORS/SUPPLIERS FOR ALL MECHANICAL UNITS AND FLOOR/ROOF OPENINGS (VERIFY EXACT LOCATIONS AND WEIGHT OF UNITS SHOWN ON PLANS AND FOR ADDITIONAL UNITS THAT MAY NOT BE SHOWN).
- PROVIDE 1/2" CLEAR FROM BOTTOM OF ROOF FRAMING TO TOP OF NON-BEARING WALLS. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR VERTICAL SLIP CONNECTIONS. SEE TYPICAL STRUCTURAL DETAILS - TYPICAL.
- SEE ARCHITECTURAL DRAWINGS FOR THE FOLLOWING:
 - SIZE AND LOCATION OF ALL DOOR AND WINDOW OPENINGS.
 - SIZE AND LOCATION OF ALL INTERIOR AND EXTERIOR NON-BEARING PARTITIONS.
 - SIZE AND LOCATION OF ALL CONCRETE CURBS; FLOOR AND ROOF DRAINS, SLOPES AND DEPRESSIONED AREAS; CHANGES IN LEVEL; CHAMFERS, CORNER FORMERS, GROOVES; BLOCKOUTS AND INSERTS; PAVING SITE WORK CURBS AND WALLS.
- SEE MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR THE FOLLOWING:
 - WALL AND SLAB OPENINGS FOR MECHANICAL PIPE RUNS, TRENCHES, FLOOR DRAINS, ROOF DRAINS, SUMPS, ETC.
 - WALL AND SLAB OPENINGS FOR ELECTRICAL CONDUIT RUNS, BOXES, JUNCTION BOXES IN WALLS, COLUMNS, SLABS, ETC.
 - SLEEVES, SLEEVE CLUSTERS AND BLOCKOUTS; AND CONCRETE INSERTS FOR EQUIPMENT AND FIXTURES.
 - SIZE AND LOCATION OF MACHINE TRANSFORMER, SWITCH GEAR AND EQUIPMENT CURBS, BASES AND PADS, AND ANCHOR BOLTS FOR ANCHORED ITEMS.

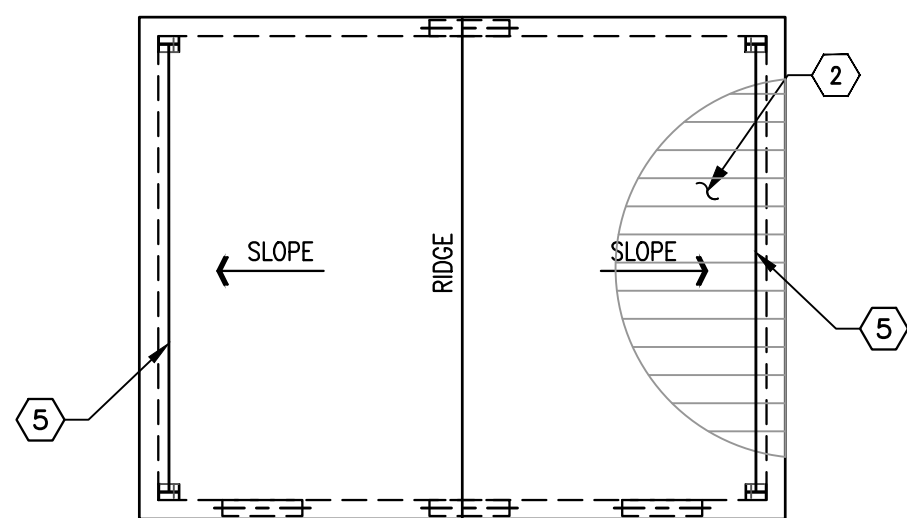
ROOF FRAMING PLAN NOTES

- 5/8" PLYWOOD SHEATHING - TYPICAL AT ROOFS. FOR LAYUP AND ATTACHMENT, SEE STRUCTURAL NOTES AND TYPICAL DETAILS.
- PEMB METAL ROOF PANEL PER PEMB MANUFACTURER. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR PROFILE AND DETAILS.
- INDICATES TYPICAL STEEL STUD HEADER PER SCHEDULE.
- EDGE OF EXISTING ROOF.
- PEMB PORTAL FRAME - SEE PEMB DRAWINGS.
- CONTINUOUS ROWS OF SIMPSON LTB TENSION BRIDGING AT MIDSPAN.
- PROVIDE FULL DEPTH 20 GAGE JOIST BLOCKING BETWEEN EACH JOIST AND CONTINUOUS SIMPSON CS14 STRAP FULL LENGTH FOR DISTANCE INDICATED. INSTALL STRAP ON TOP OF ROOF SHEATHING.



BLDG V - (WRESTLING)
ROOF FRAMING PLAN

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



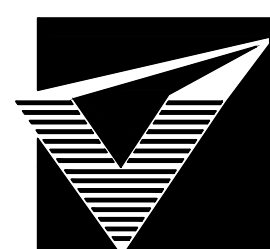
RESTROOM - ROOF FRAMING PLAN

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



PEMB DESIGN CRITERIA:

- ROOF LIVE LOAD = 20 PSF (REDUCIBLE).
- SUPERIMPOSED (COLLATERAL) DEAD LOAD = 5 PSF
- WIND LOAD = RISK CATEGORY III; BASIC WIND SPEED 120 MPH (3 SEC GUST); EXPOSURE C
- SEISMIC - RISK CATEGORY II $I_e = 1.0$; SITE CLASSIFICATION D; SEISMIC DESIGN CATEGORY B; R = PER THE PEMB MANUFACTURER'S DESIGN.
- DEFLECTION CRITERIA $H/240$.



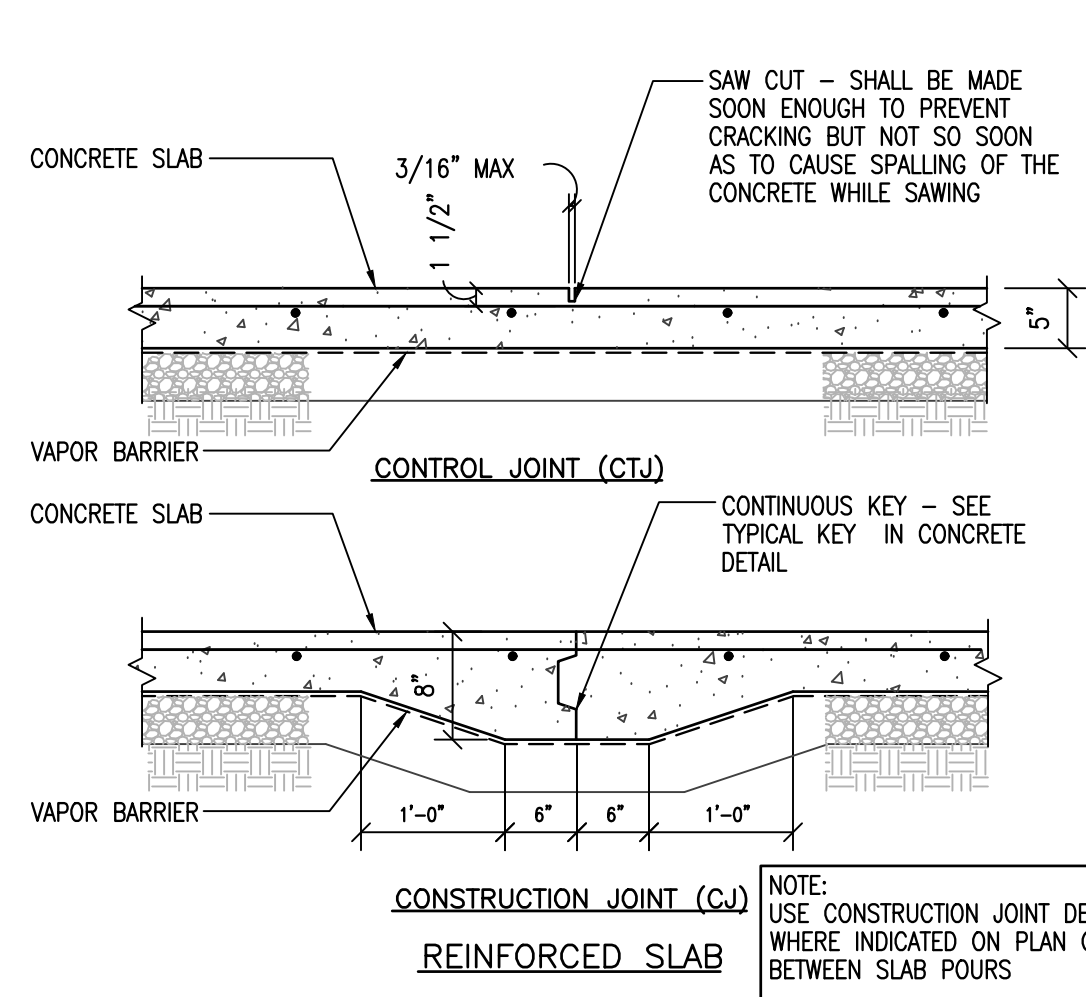
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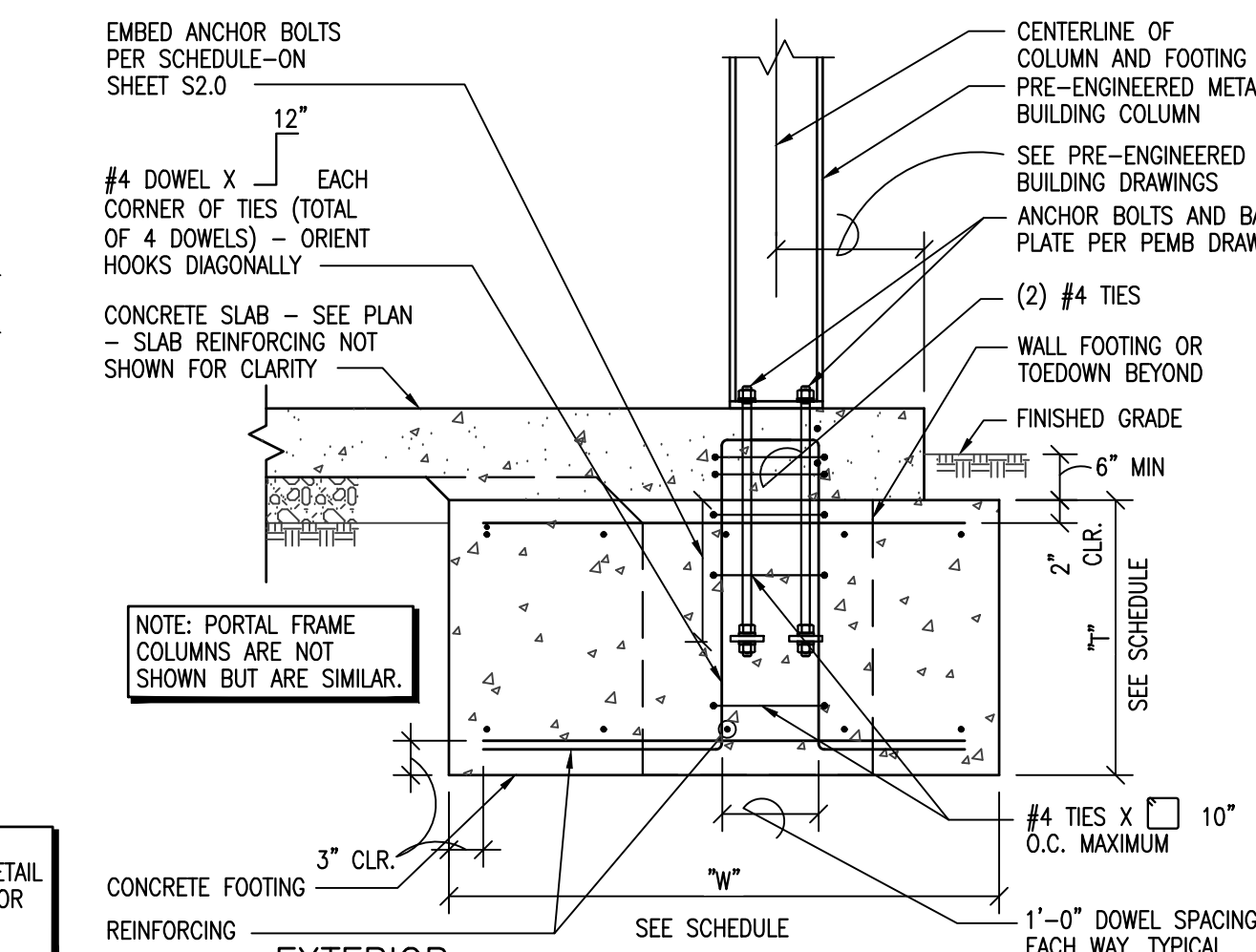
GEI JOB# 25008

6300 E. EL DORADO PLAZA, SUITE A120, TUCSON, ARIZONA 85715
TEL: (520) 326-7082 FAX: (520) 326-7508

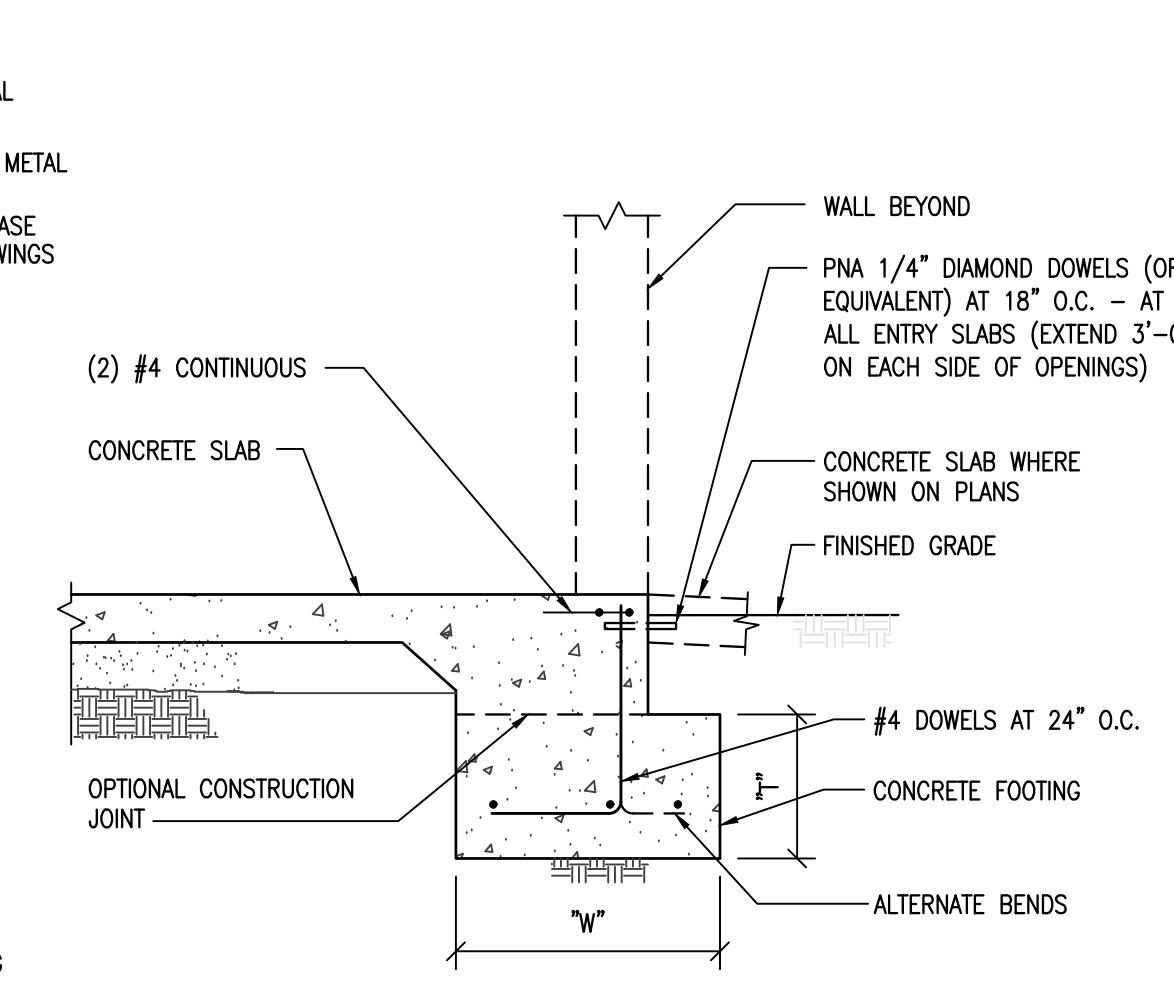
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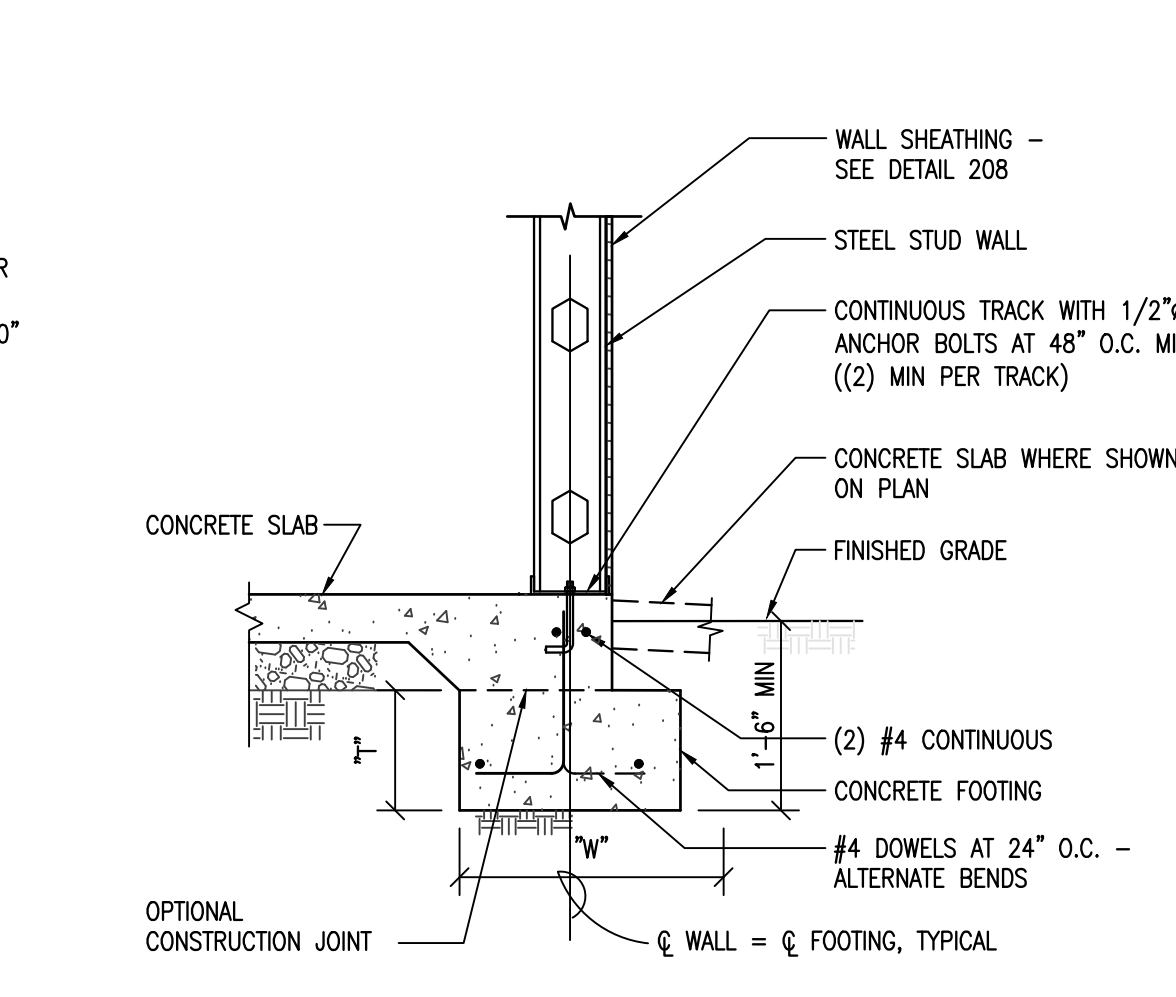
101 TYPICAL CONCRETE SLAB JOINTS



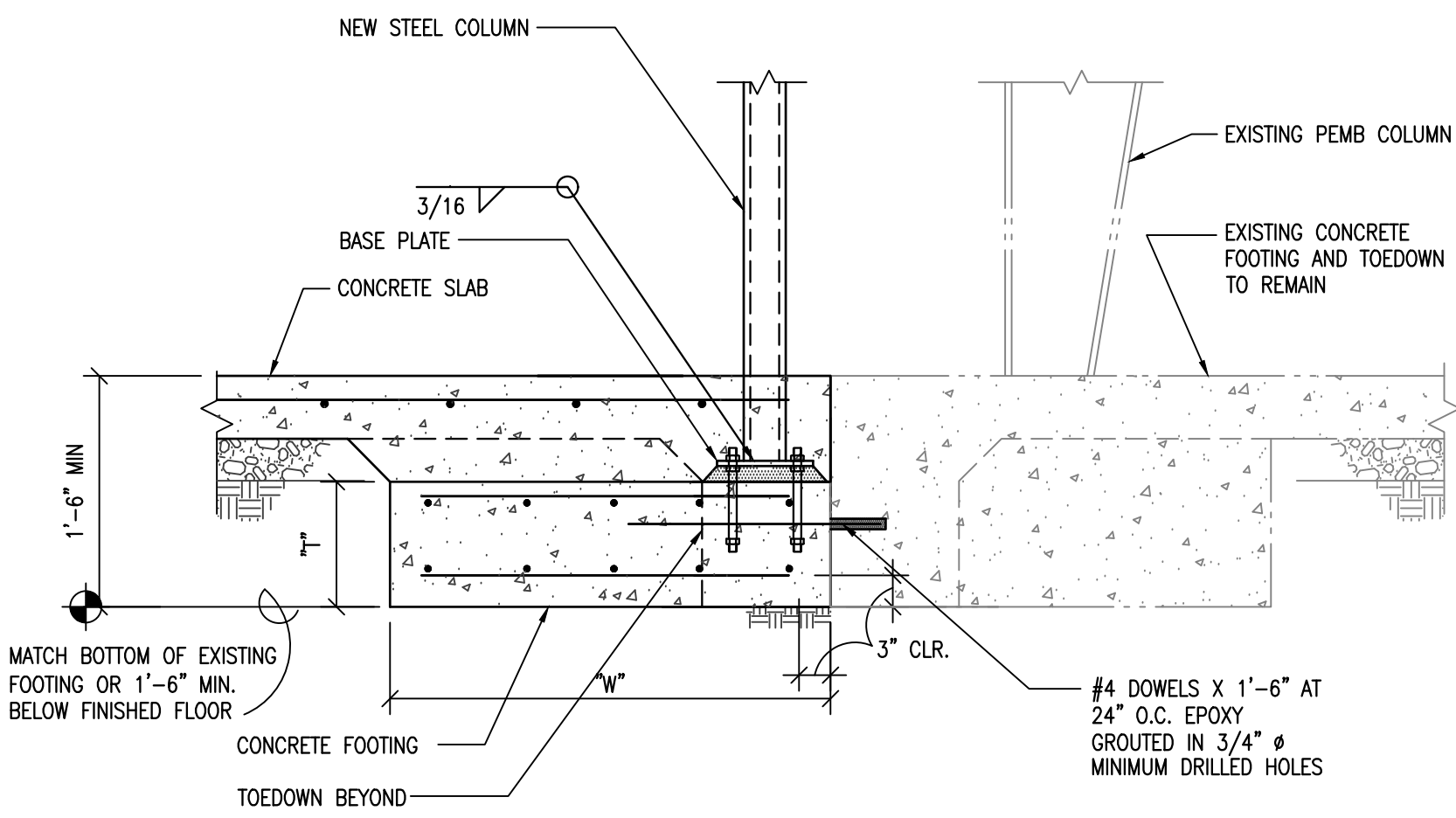
102 EXTERIOR PRE-ENGINEERED BUILDING COLUMN FOOTING



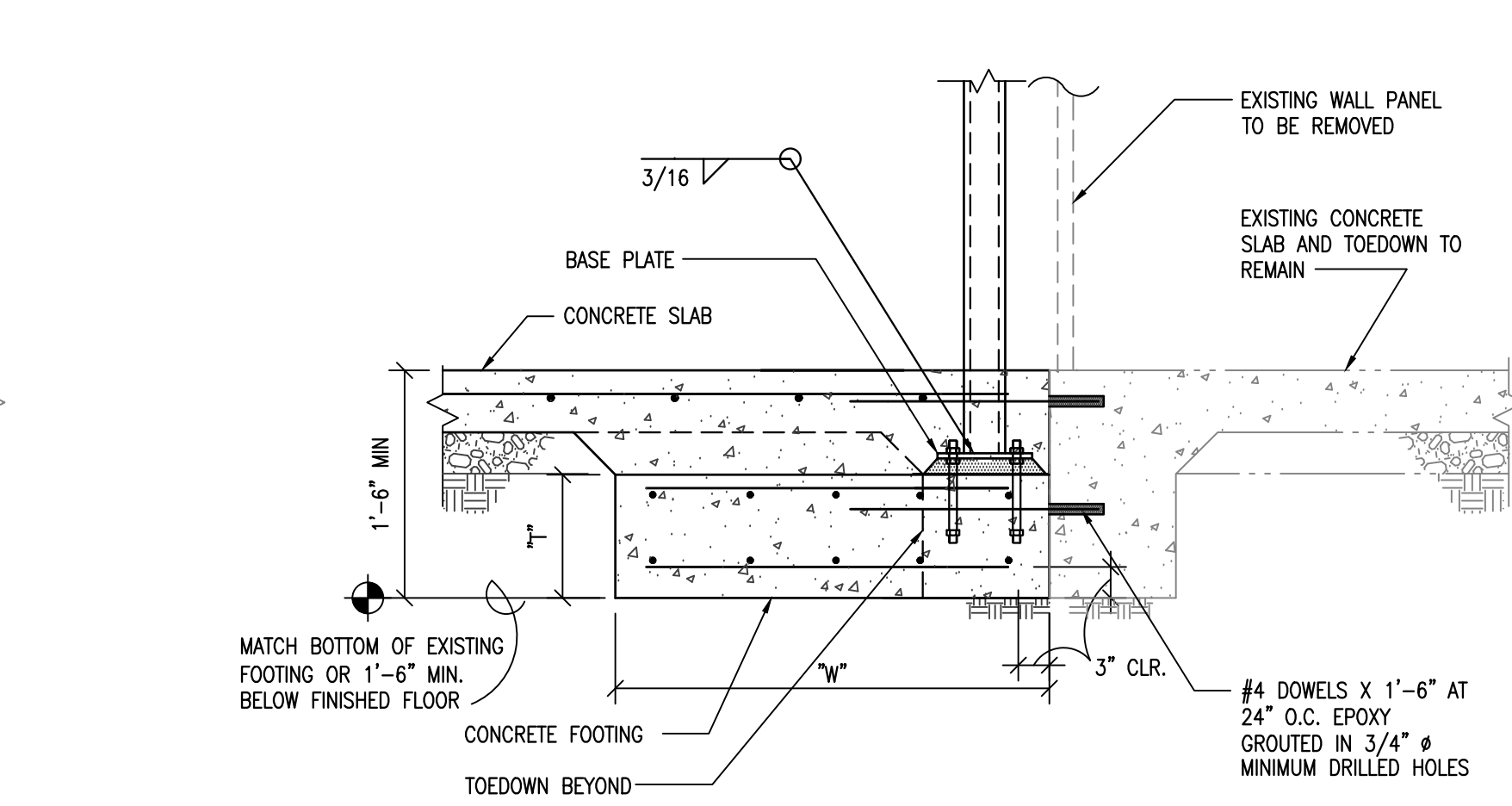
103 EXTERIOR STUD WALL FOOTING AT OPENING



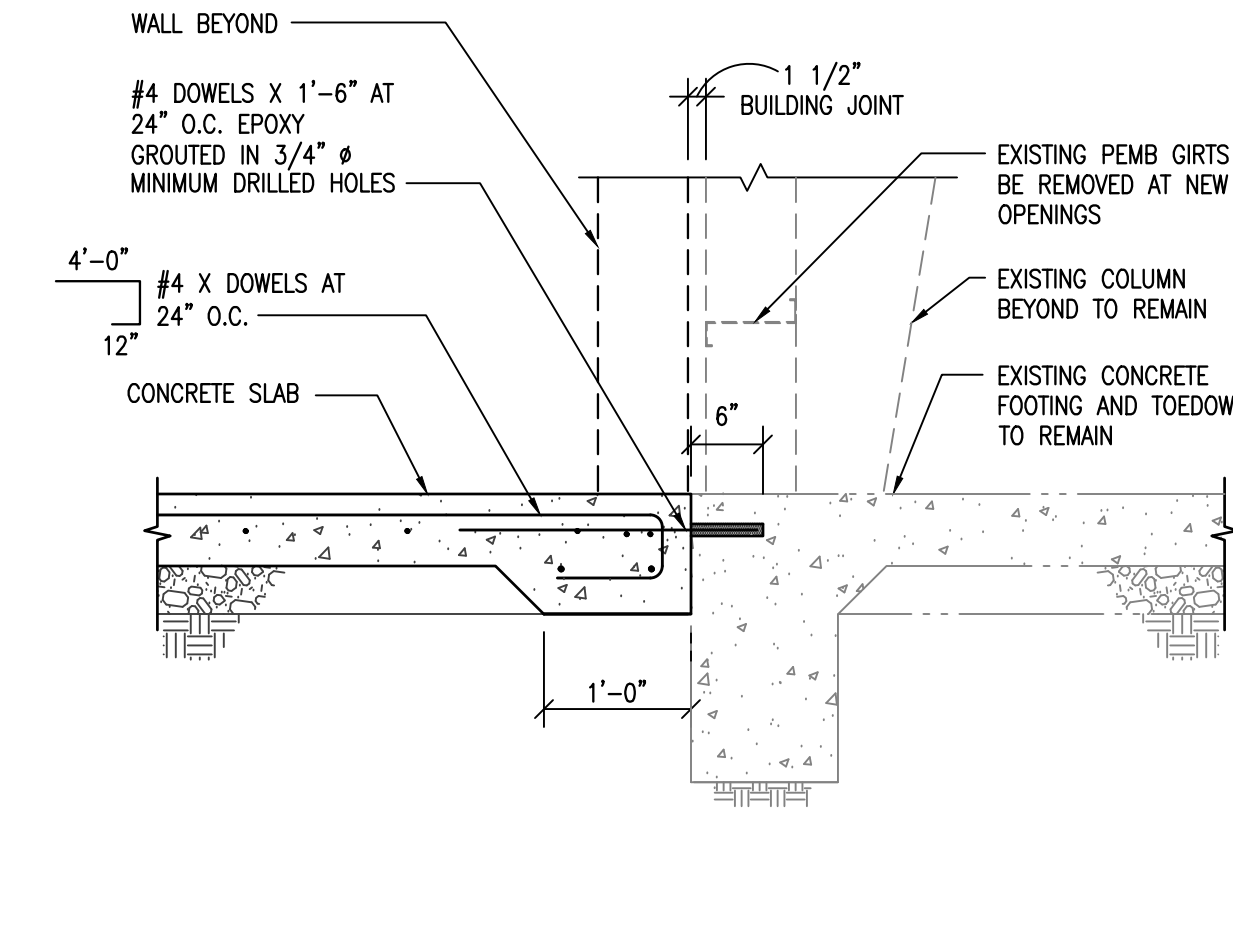
104 EXTERIOR STEEL STUD WALL FOOTING



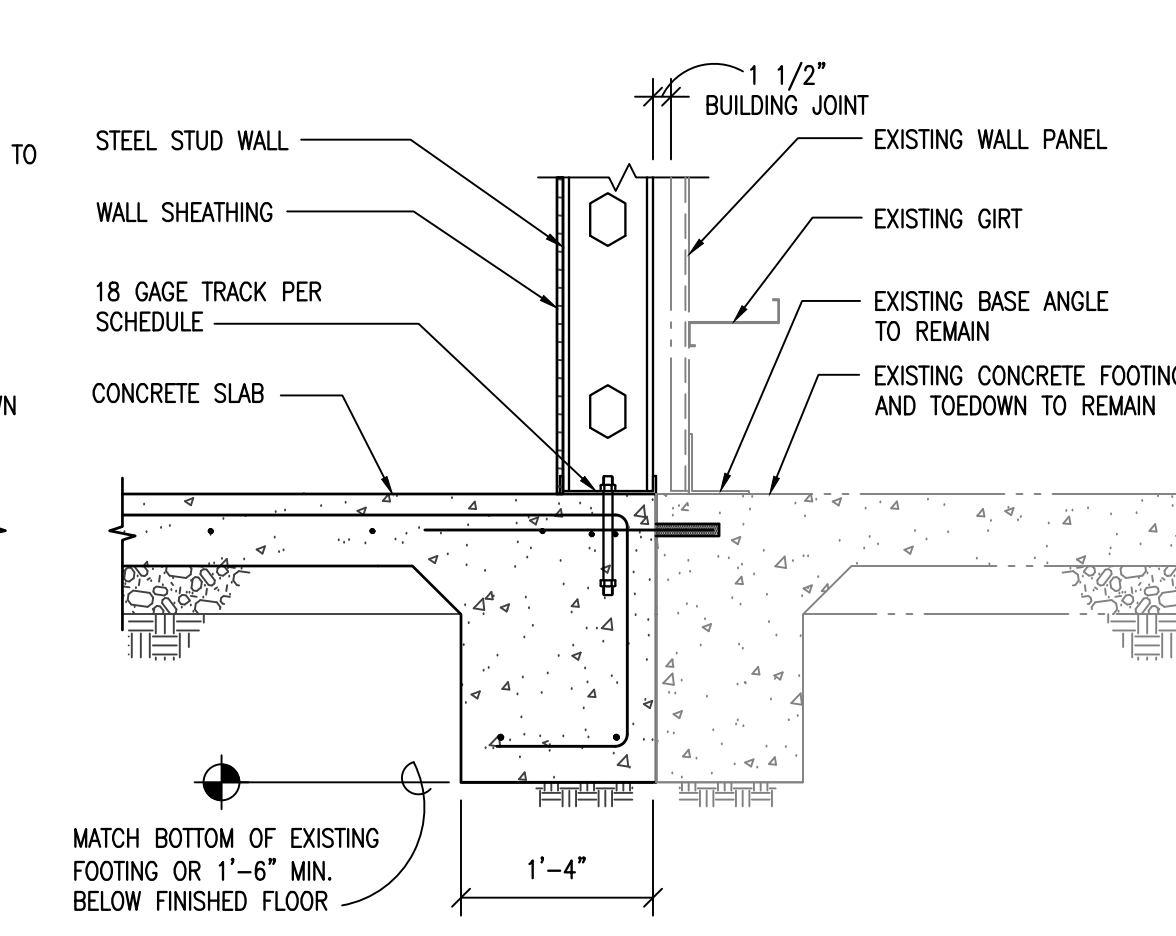
105 NEW COLUMN AT EXISTING P.E.M.B. COLUMN



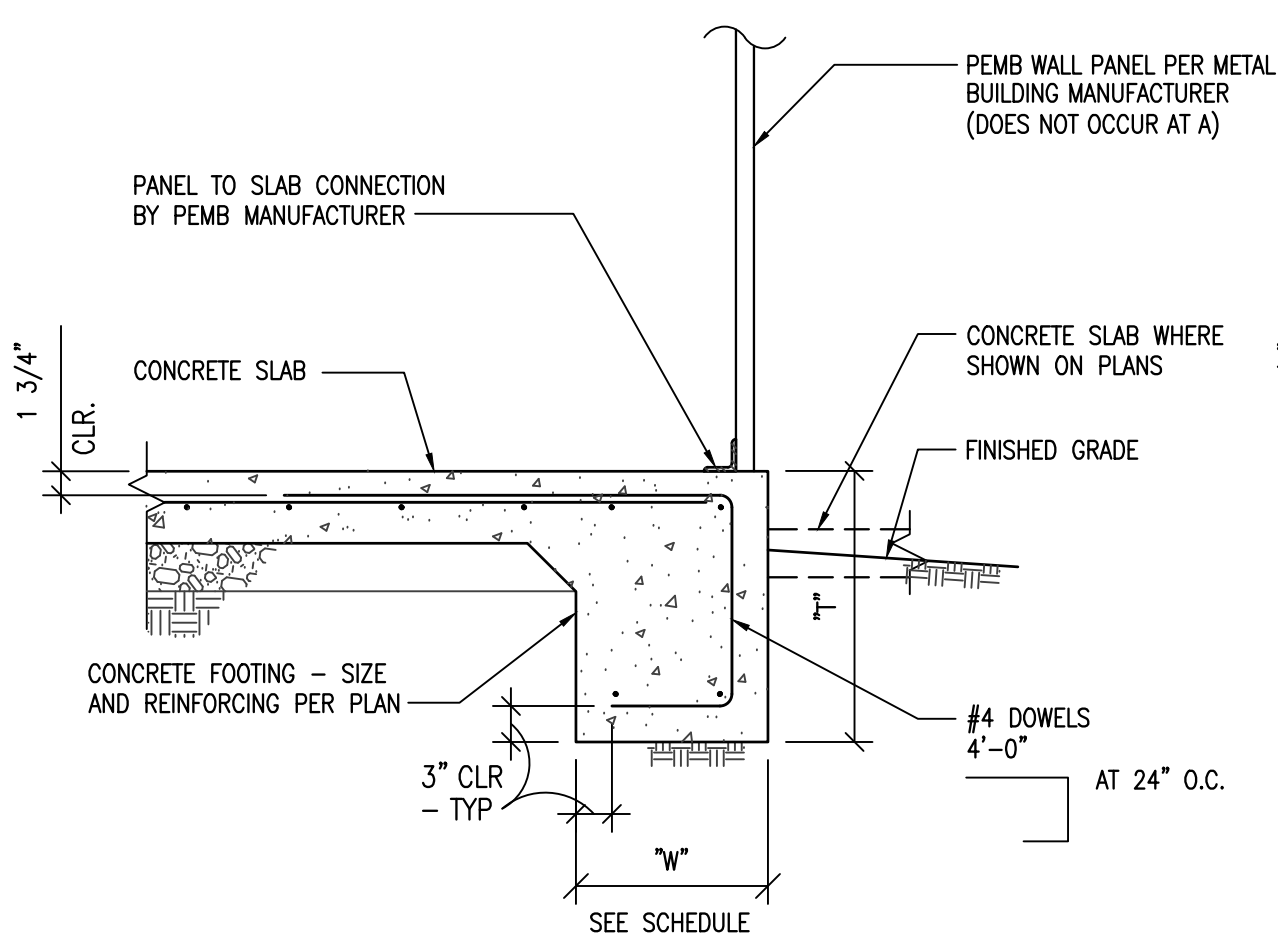
106 INTERIOR STEEL COLUMN FOOTING



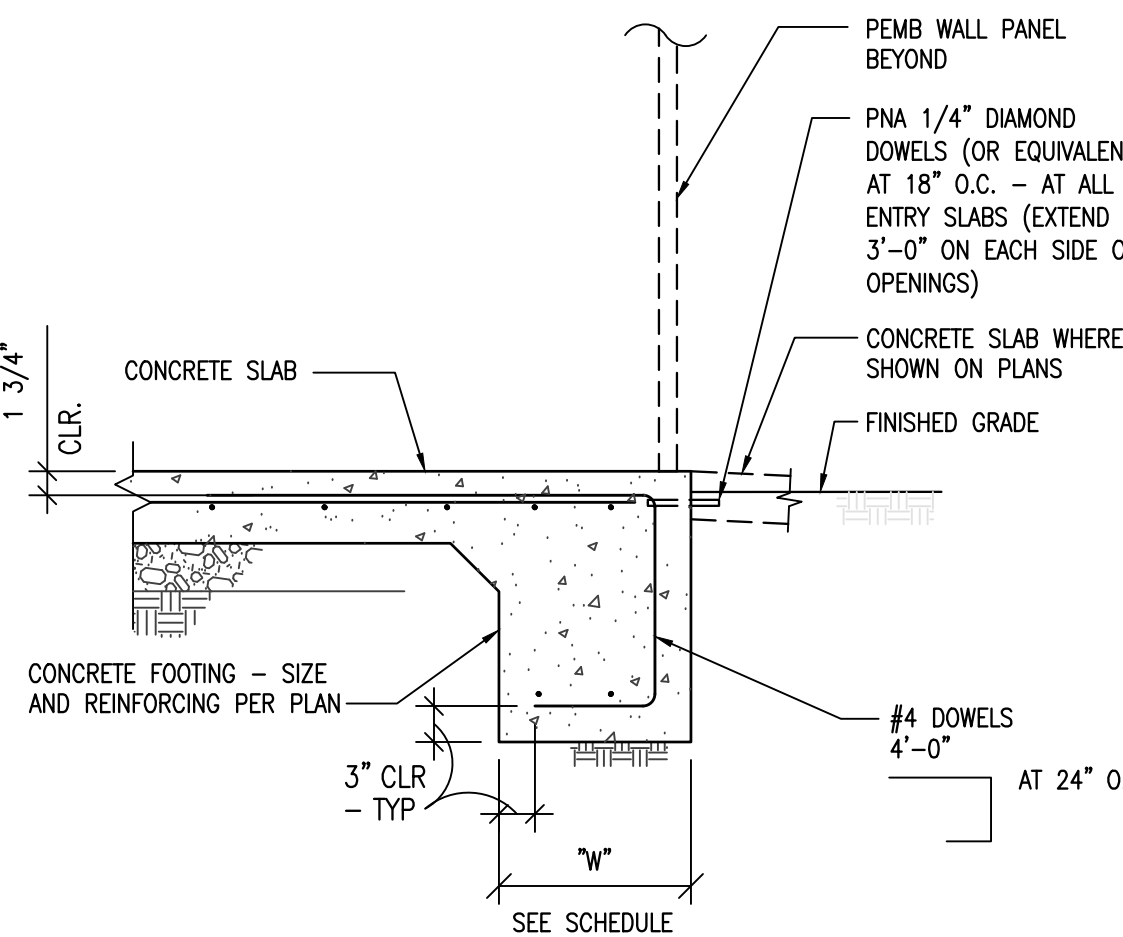
107 NEW OPENING AT EXISTING P.E.M.B.



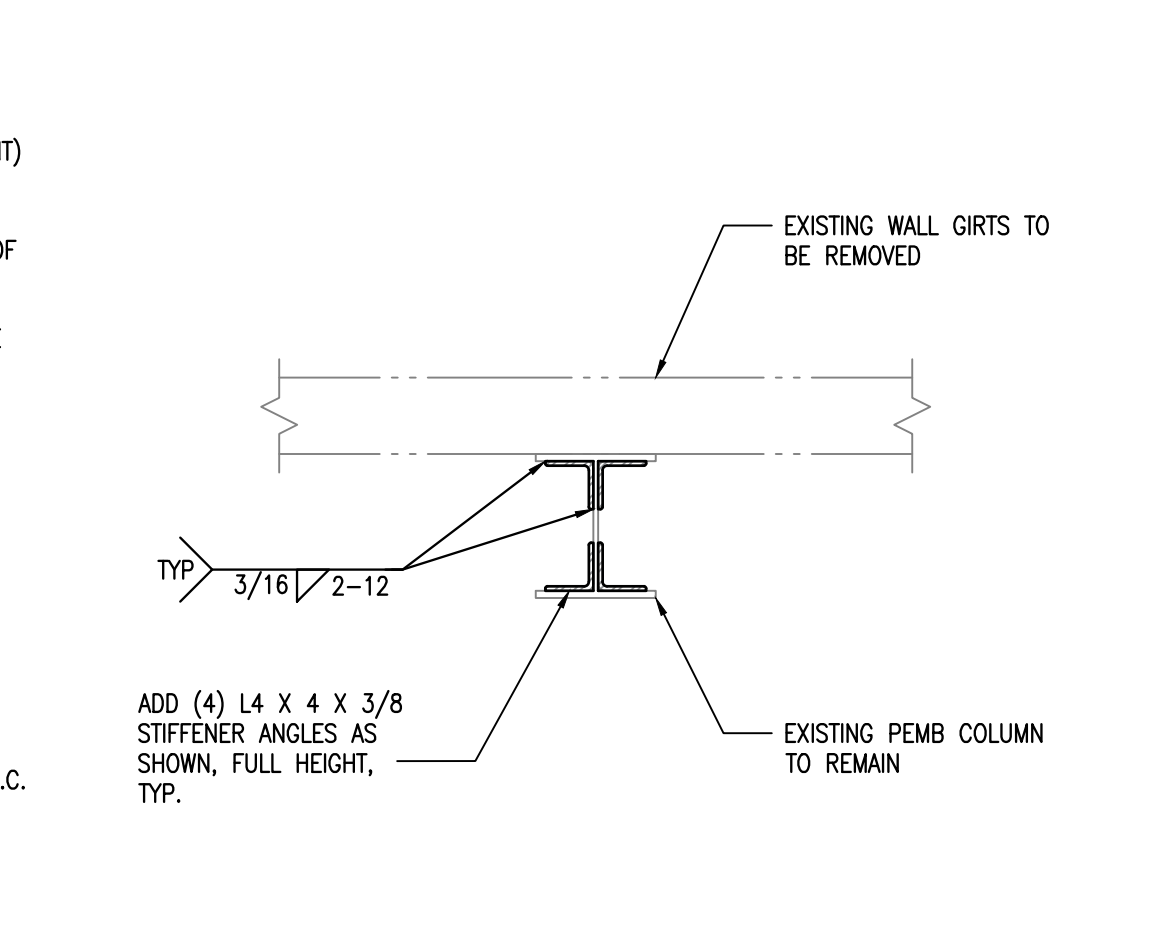
108 NEW WALL AT EXISTING PEMB



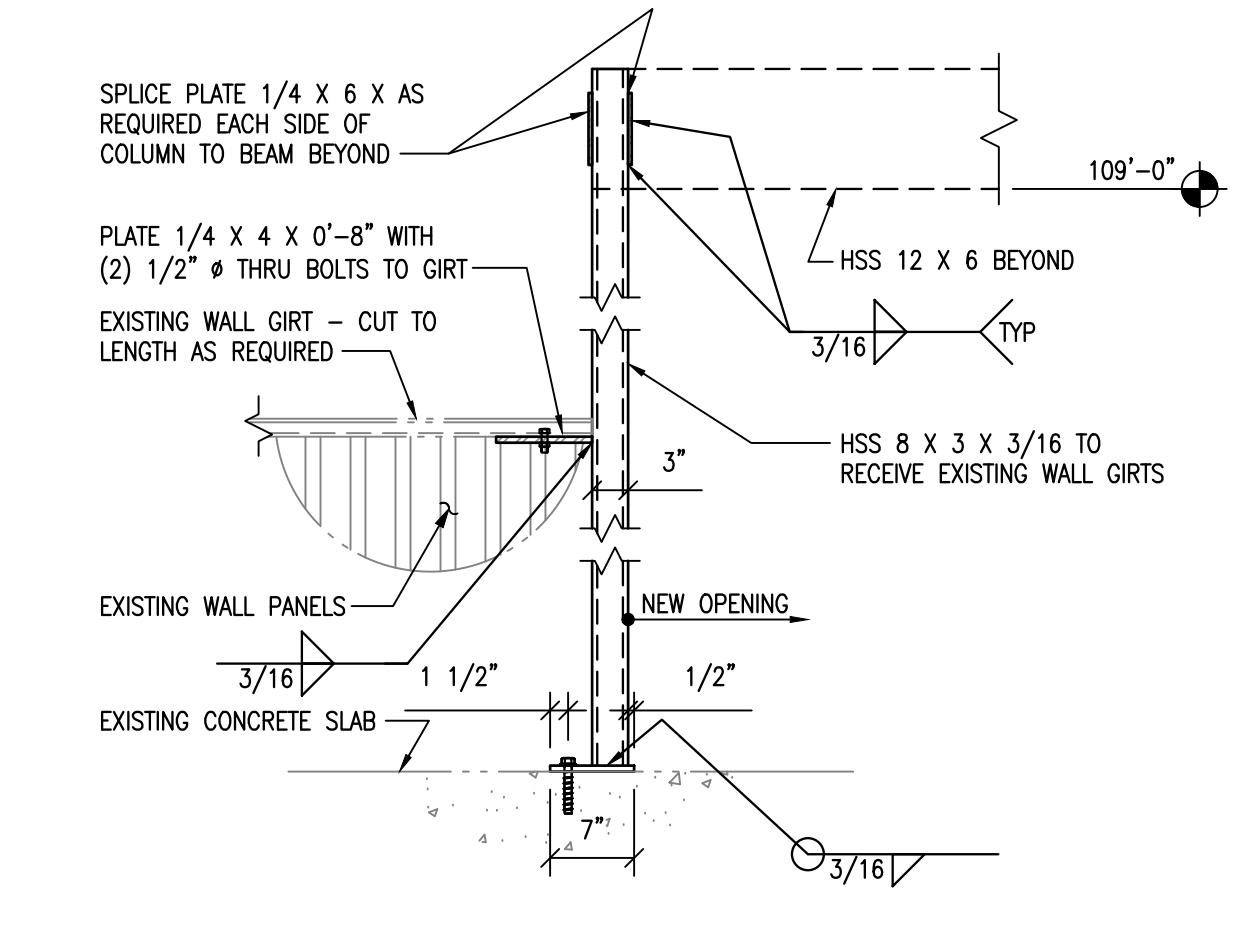
109 P.E.M.B. CONCRETE SLAB TOEDOWN



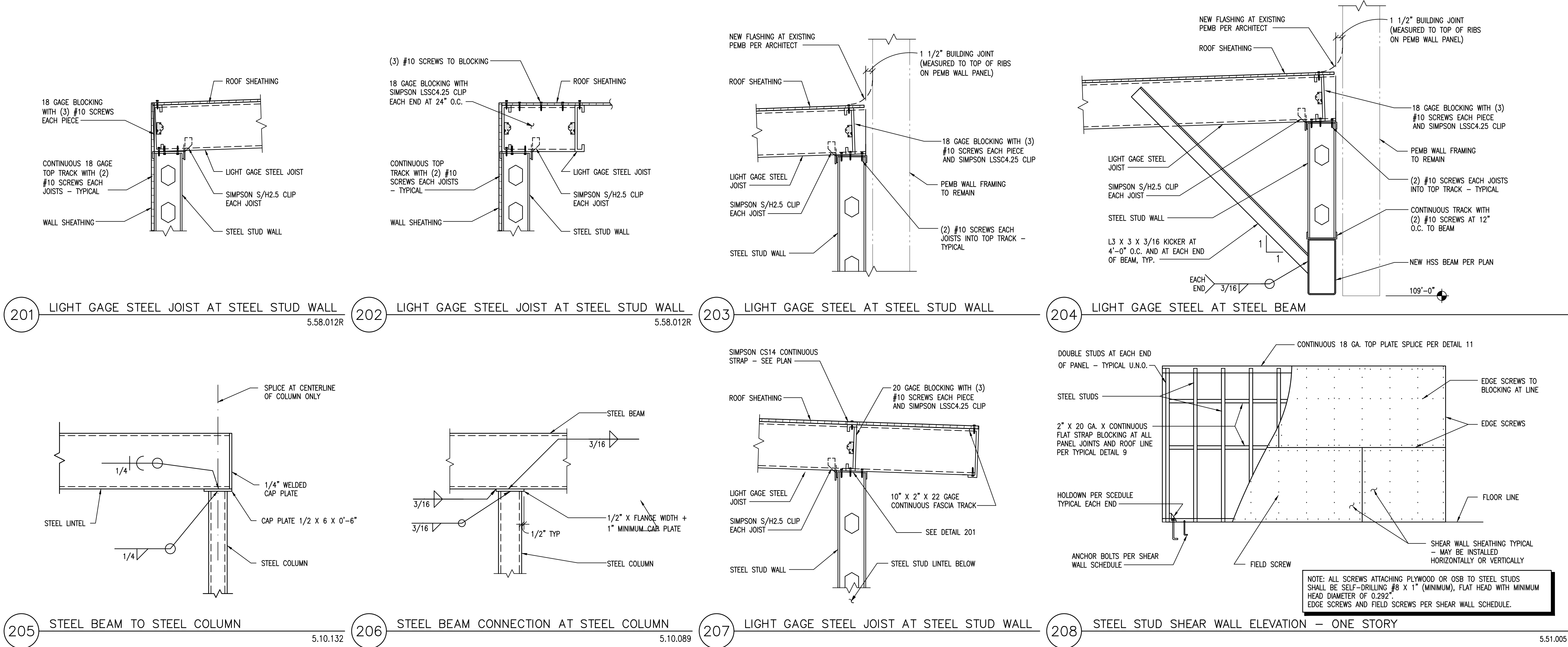
110 EXTERIOR STUD WALL FOOTING AT OPENING

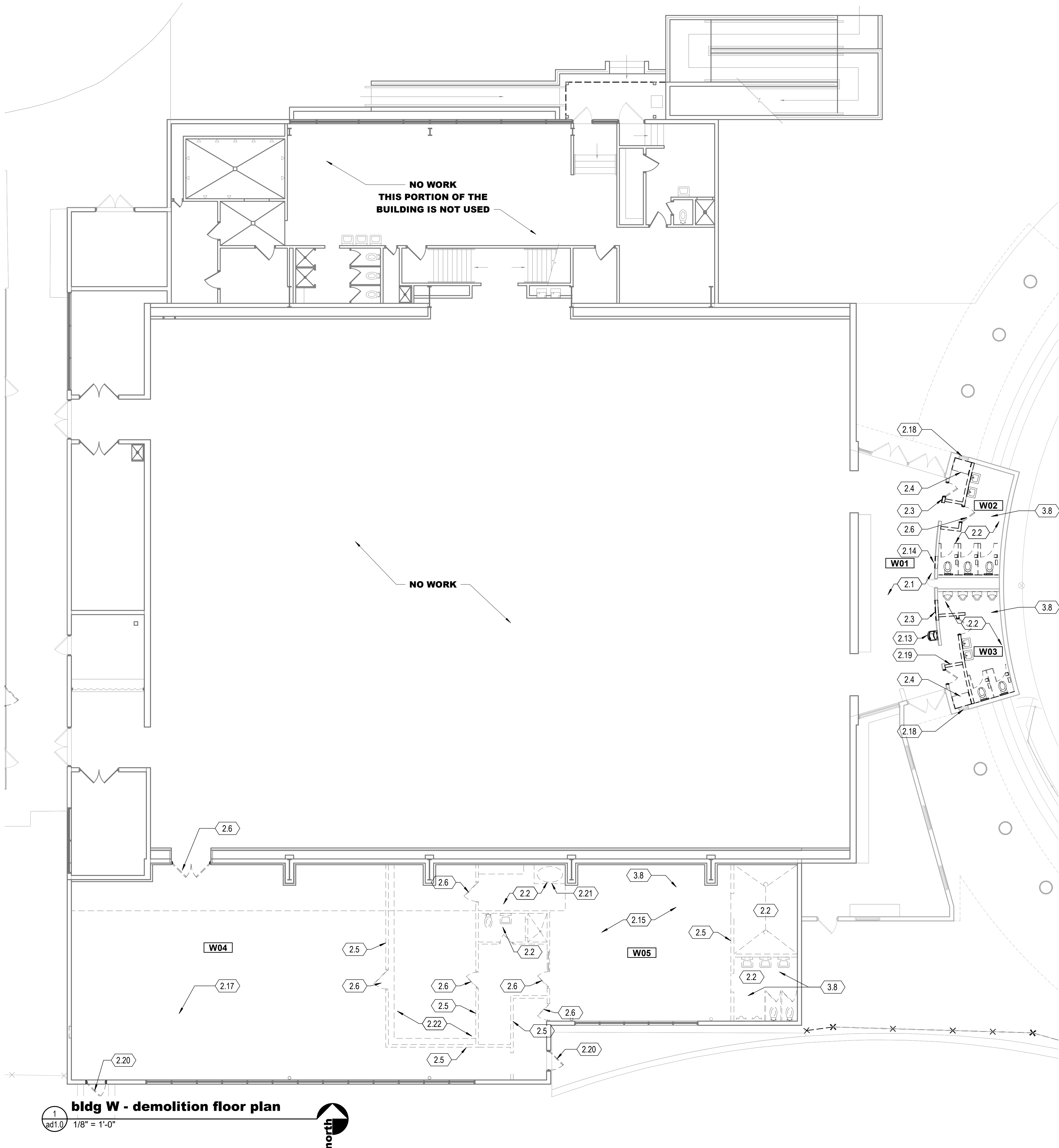


111 PLAN VIEW - STIFFENER ANGLES AT EXISTING PEMB COLUMN



112 NEW GIRT SUPPORT COLUMN





general notes

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- REFER TO PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL COORDINATION AS REQUIRED.
- ALL HOLES & DEPRESSED AREAS IN THE SLAB SHALL BE FILLED WITH CEMENT BASED ARDEX.
- OWNER WILL REMOVE ALL WEIGHTS AND EQUIPMENT FROM THE WORK AREAS.

keynotes

- REMOVE ALL FLOORING AND BASE. PREPARE FOR NEW FLOORING.
- REMOVE ALL FLOORING, WALLS, PLUMBING FIXTURES AND PARTITIONS AS REQUIRED TO REMODEL RESTROOMS.
- REMOVE WALL AS REQUIRED TO INSTALL NEW DOORWAY.
- REMOVE COUNTERTOPS/ CABINETS.
- REMOVE PARTITION, FULL HEIGHT.
- REMOVE DOOR AND FRAME.
- REMOVE & REPLACE DRINKING FOUNTAIN.
- STAND PIPE TO REMAIN.
- REMOVE LOCKERS & REINSTALL.
- REMOVE THICK RUBBER FLOORING & SALVAGE TO OWNER.
- REMOVE PLYWOOD & PLEXIGLASS. INFILL WITH 3 5/8" METAL STUDS. FILL WITH BATT INSULATION. EXTERIOR. 5/8" GLASS MATT GWB & EIFS TOPCOAT. 5/8" GWB ON INTERIOR.
- REMOVE ELECTRICAL PANEL.
- REPLACE HM DOOR. RE-USE FRAME.
- REMOVE CERAMIC TILE IN THIS AREA.
- REMOVE BUILT IN STORAGE CAGES.
- REMOVE AND REPLACE CONCRETE SLAB TO PER FORM NEW PLUMBING WORK. COMPACT SUBGRADE AND POUR 4" THICK INFILL. PROVIDE #4 X12" EPOXY SET DOWELS AT SPLICE. SPACE AT 32" O.C.

demolition plan legend

DOTTED/ DASHED LINE DENOTES ITEM TO BE REMOVED

DEFINITIONS

- REMOVE:** DETACH ITEMS FROM EXISTING CONSTRUCTION AND LEGALLY DISPOSE OF THEM OFF-SITE, UNLESS INDICATED TO BE SALVAGED OR REINSTALLED.
- REMOVE AND SALVAGE:** CAREFULLY DETACH FROM EXISTING CONSTRUCTION, IN A MANNER TO PREVENT DAMAGE. CLEAN AND DELIVER TO OWNER READ FRO USE.
- REMOVE AND REINSTALL:** CAREFULLY DETACH FROM EXISTING CONSTRUCTION, PREPARE FOR REUSE, CLEAN, SAFELY STORE, AND INSTALL WHERE INDICATED.
- EXISTING TO REMAIN:** EXISTING ITEMS OF CONSTRUCTION THAT ARE NOT TO BE PERMANENTLY REMOVED AND THAT ARE NOT OTHERWISE INDICATED TO BE REMOVED, SALVAGED, OR REINSTALLED. PROTECT AGAINST DAMAGE DURING DEMOLITION.

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TUCSON, ARIZONA 85710
(520) 326-3700
www.swaimaia.com

REGISTERED ARCHITECT
CERTIFICATE NO.
23459
MARK E.
BOLLARD
DATE SIGNED 04/07/25
ARIZONA U.S.A.

job
2404.03

date
04.07.2025

revisions

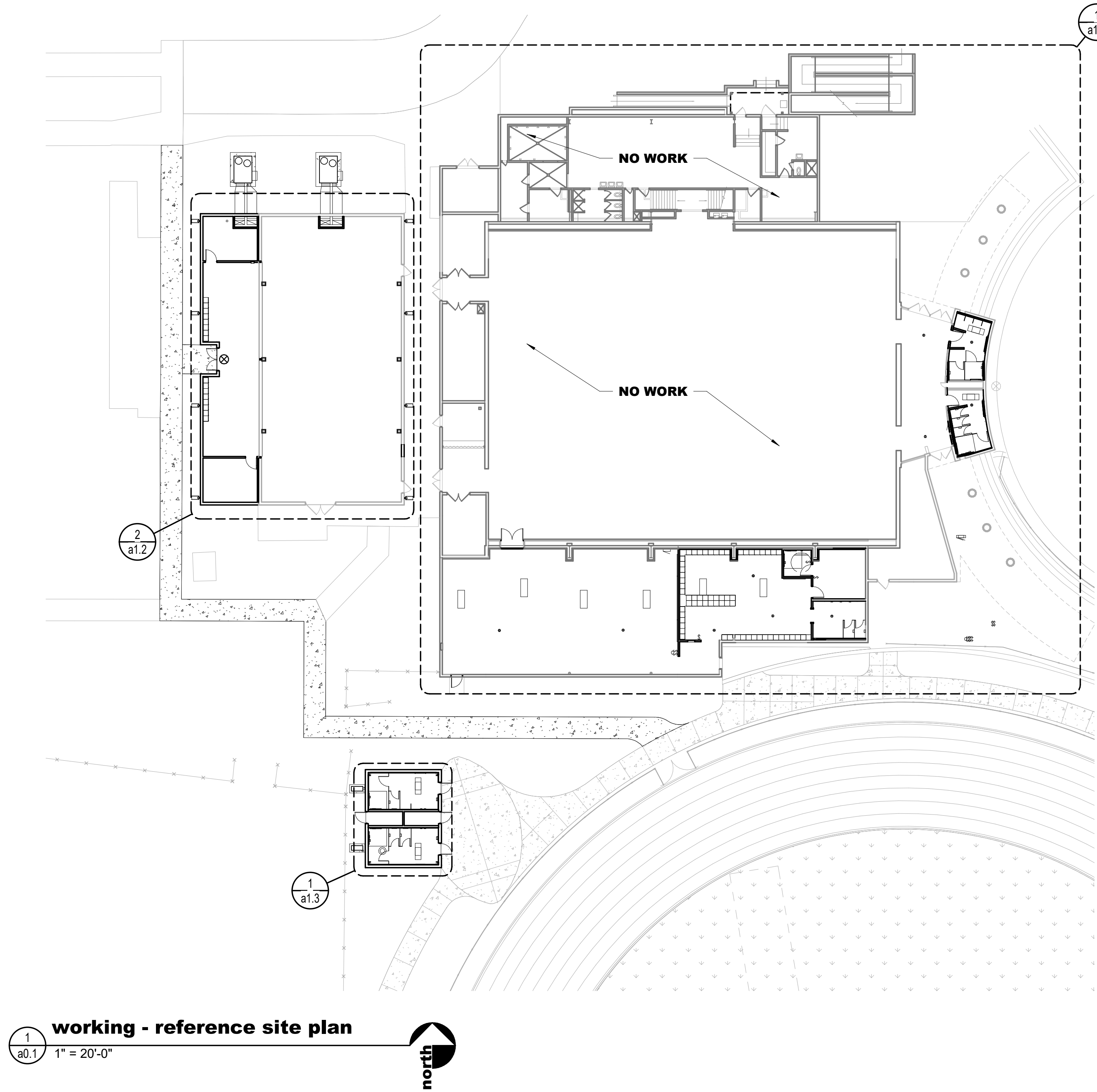
WILLCOX MIDDLE & HIGH SCHOOL
240 N. BISBEE AVE.
WILLCOX, ARIZONA 85643
HIGH SCHOOL REMODEL

**bldg W floor plan -
demolition**

ad1.0



ad2.0



general notes

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- REFER TO PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS FOR ALL APPLICABLE CODES FOR REQUIRED CLEARANCES OF EQUIPMENT.
- SEE SHEET a8.0 FOR WINDOW AND DOOR TYPES.
- SEE SHEET a9.0 FOR WALL TYPES.

keynotes

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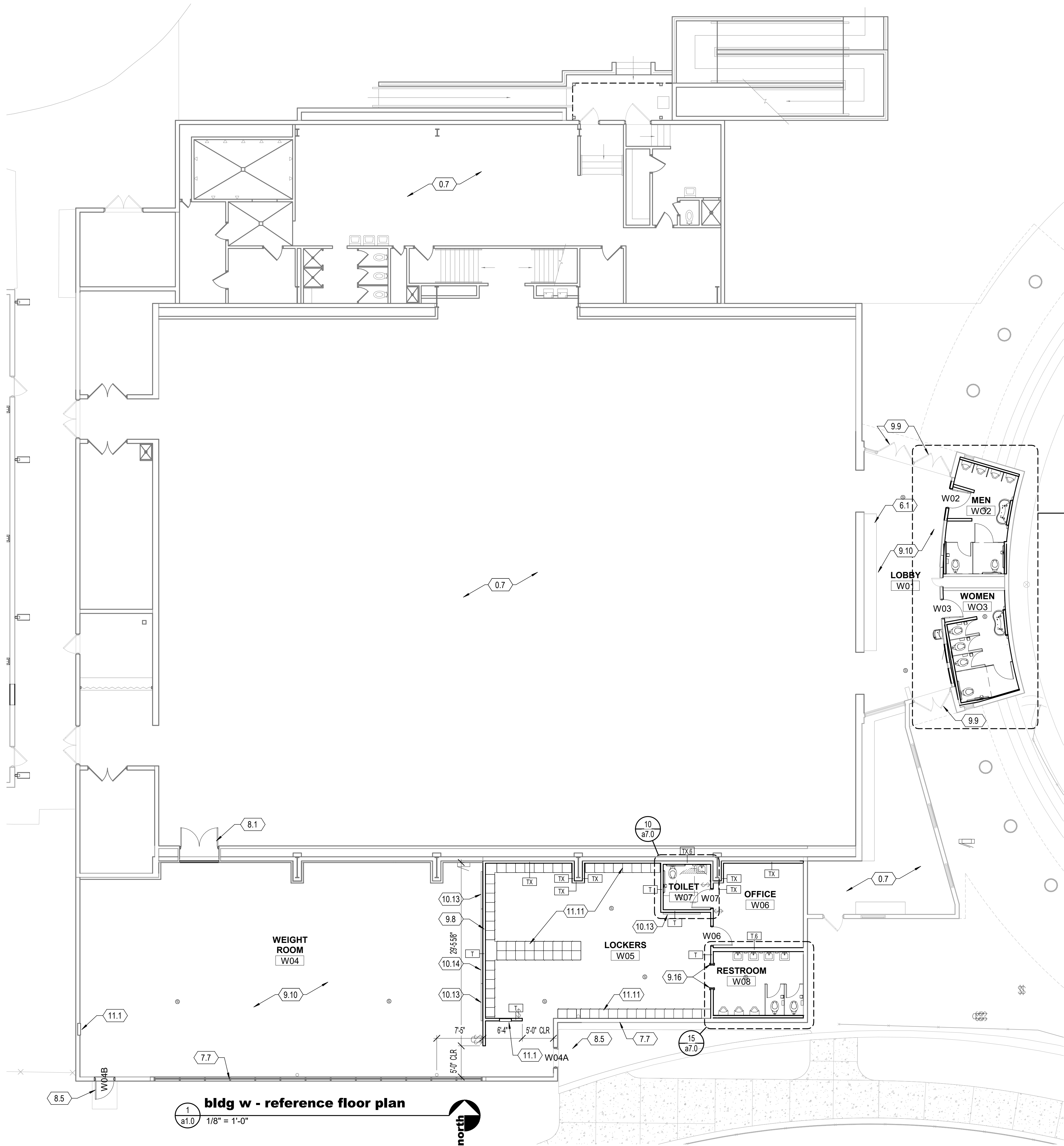
revisions

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WILLCOX MIDDLE & HIGH SCHOOL
240 N. BISBEE AVE.
WILLCOX, ARIZONA 85643
HIGH SCHOOL REMODEL

**reference architectural
floor plan**

a0.1



general notes

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- SEE SHEET a9.0 FOR WALL TYPES.

keynotes

- NO WORK IN THIS AREA.
- EXISTING DISPLAY CASE. LIGHTLY SAND AND REFINISH.
- REMOVE OLAND AND CRACKED GLASS PUTTY AND INSTALL NEW. PREPARE STEEL SASH AND PAINT THE ENTIRE WINDOW SYSTEM.
- DOOR AND FRAME, REFER TO DOOR SCHEDULE.
- NEW DOOR IN EXISTING FRAME, REFER TO DOOR SCHEDULE.
- NEW PARTITION, SEE WALL TYPES.
- PAINT HM DOOR AND FRAME, BOTH SIDES.
- REPAINT ALL SURFACES, WALLS, EXPOSED BEAMS, COLUMNS AND WINDOW FRAMES.
- 84" STAINLESS STEEL CORNER GUARD.
- TACKBOARD, 6' W X 4'H.
- WHITE MARKER BOARD, 12'W X 4'H.
- SURFACE MOUNTED FIRE EXTINGUISHER AND CABINET.
- INSTALL EXISTING LOCKERS.

floor plan sheet legend

CLASS	ROOM NAME / NUMBER	SEE SHEET SERIES "X"
129		
A129B	DOOR NUMBER	SEE SHEET SERIES "X"
A	WINDOW MARK	SEE SHEET SERIES "X"
3	PARTITION TYPE	SEE SHEET SERIES "X"

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date

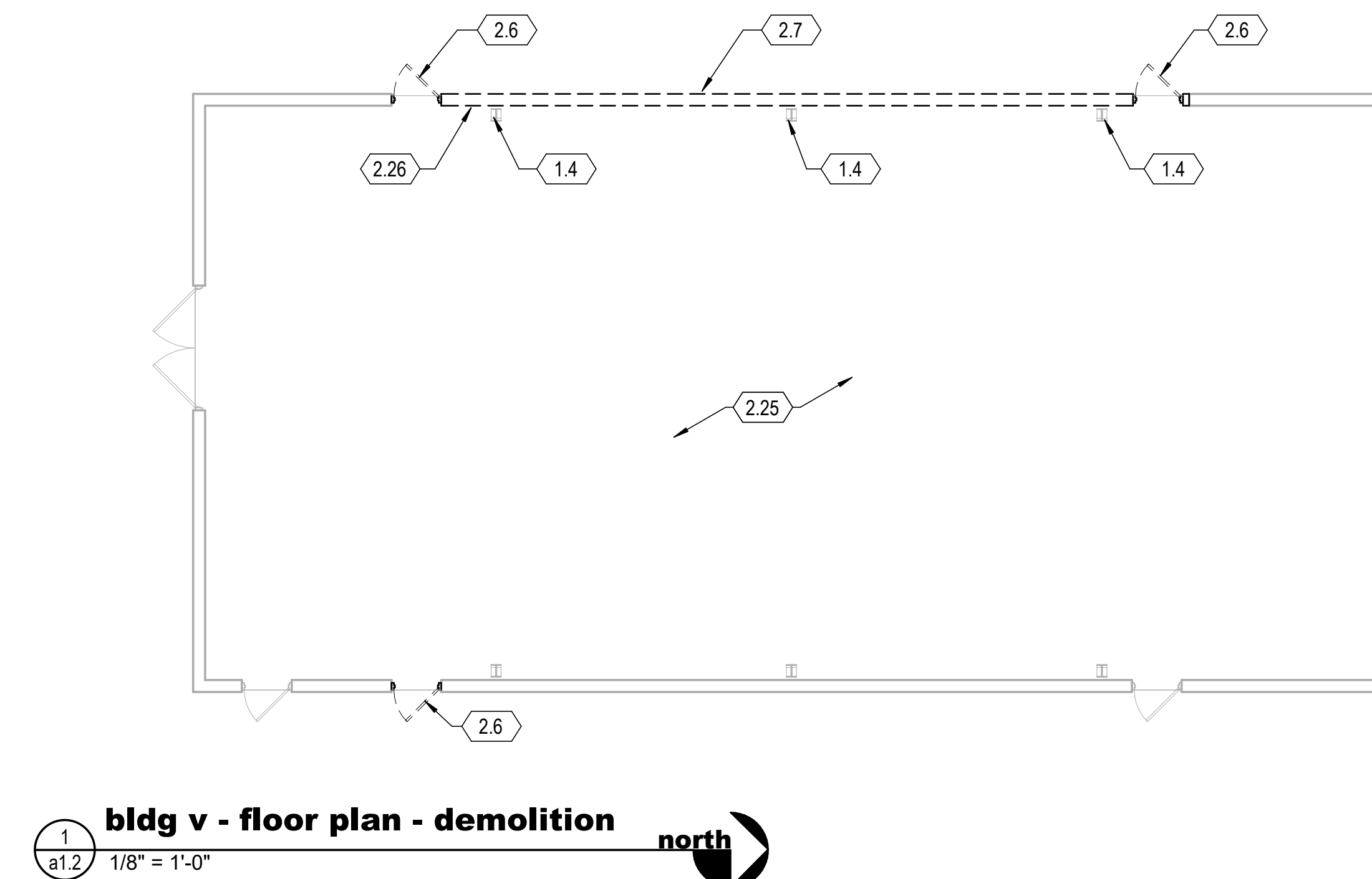
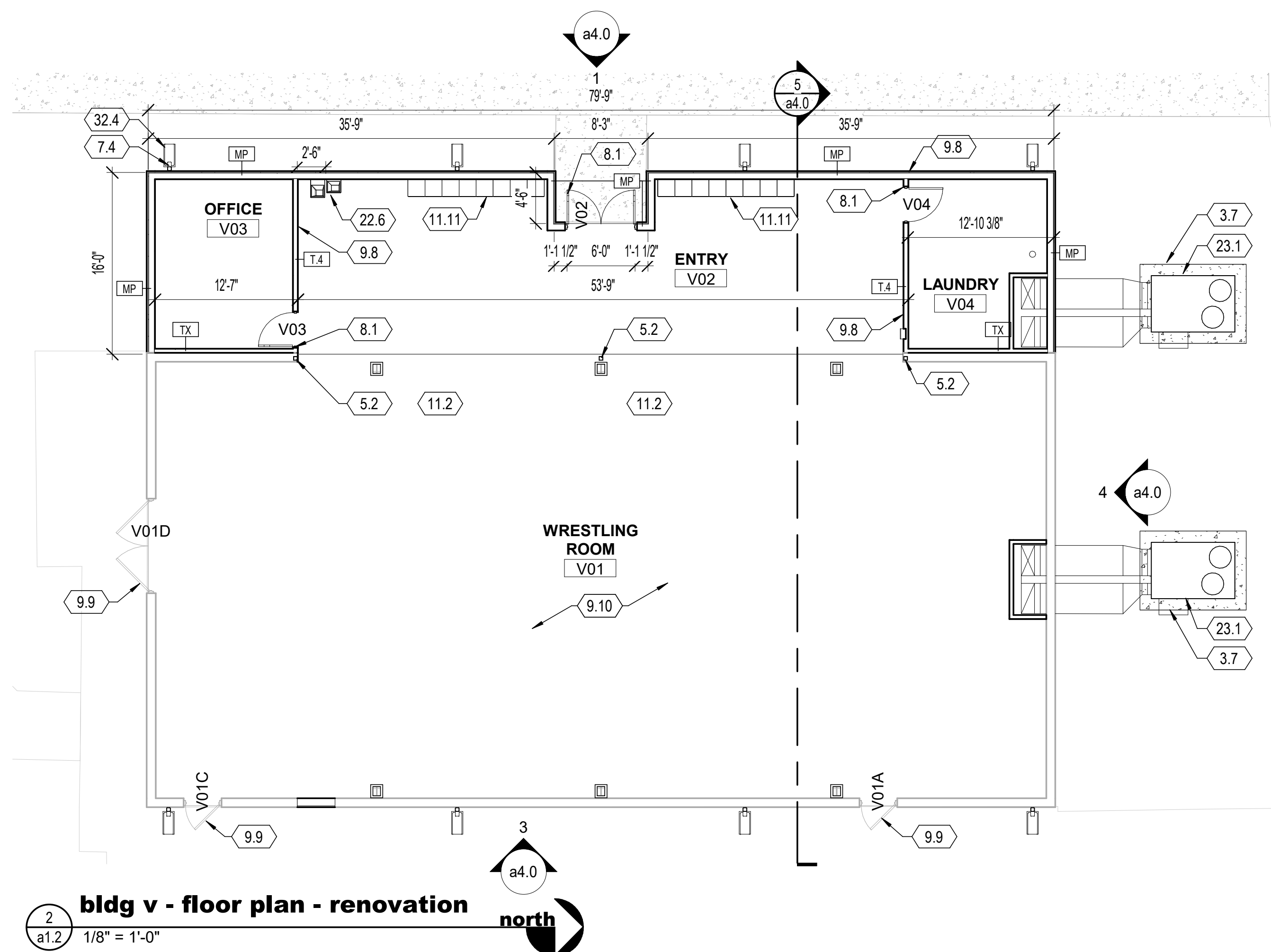
04.07.2025

revisions

WILLCOX MIDDLE & HIGH SCHOOL
240 N. BISBEE AVE.
WILLCOX, ARIZONA 85643
HIGH SCHOOL REMODEL

bldg W floor plan -
renovation

a1.0





general notes

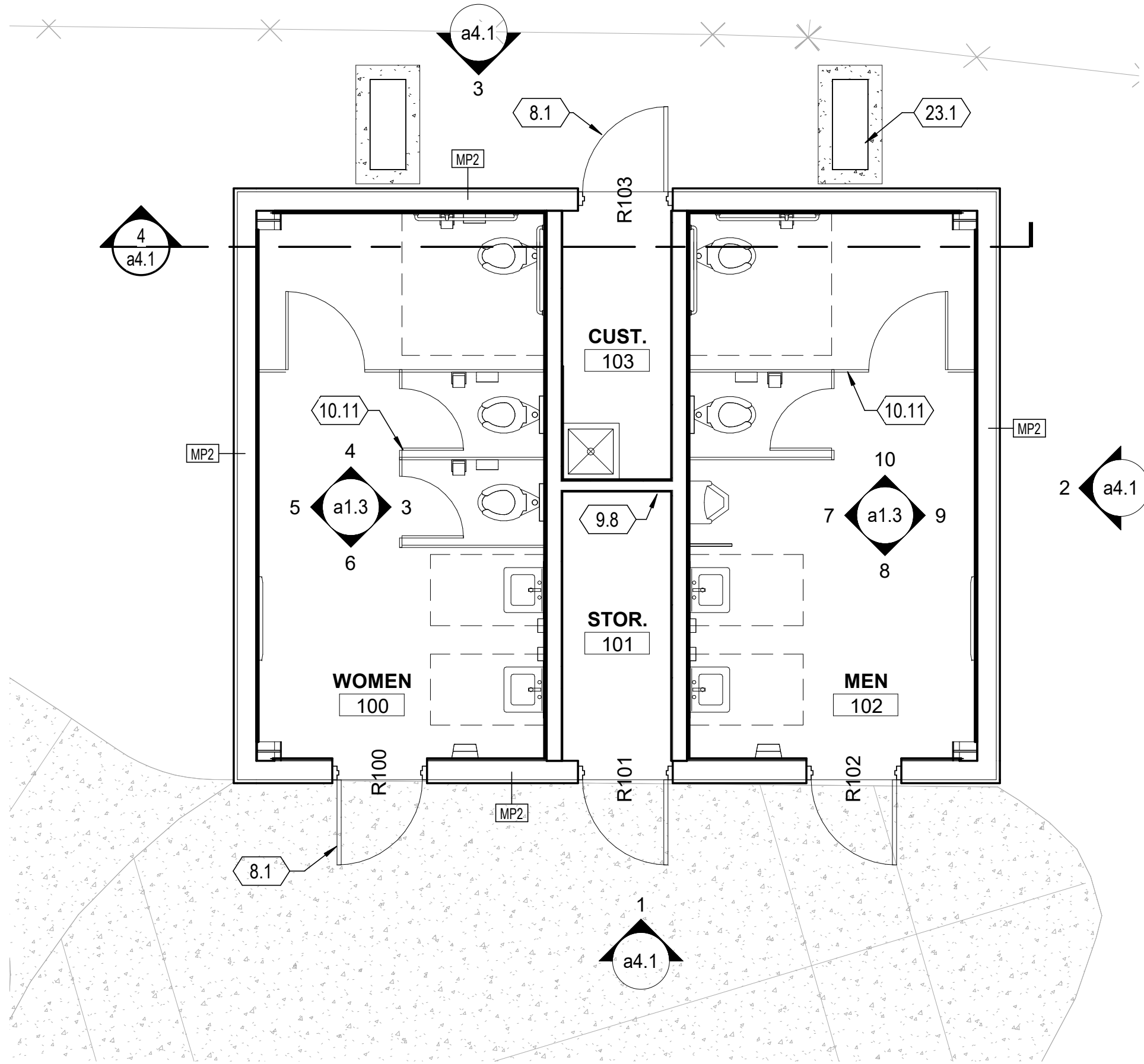
1. DO NOT SCALE DRAWINGS. COORDINATE ALL WORK BETWEEN ARCHITECTURAL, STRUCTURAL, CIVIL, MECHANICAL, PLUMBING, COMMUNICATIONS AND ELECTRICAL DRAWINGS. CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO THE IMPLEMENTATION OF WORK.
2. REFER TO PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS FOR ALL APPLICABLE CODES FOR REQUIRED CLEARANCES OF EQUIPMENT.
3. SEE SHEET a8.0 FOR WINDOW AND DOOR TYPES.
4. SEE SHEET a9.0 FOR WALL TYPES.

keynotes

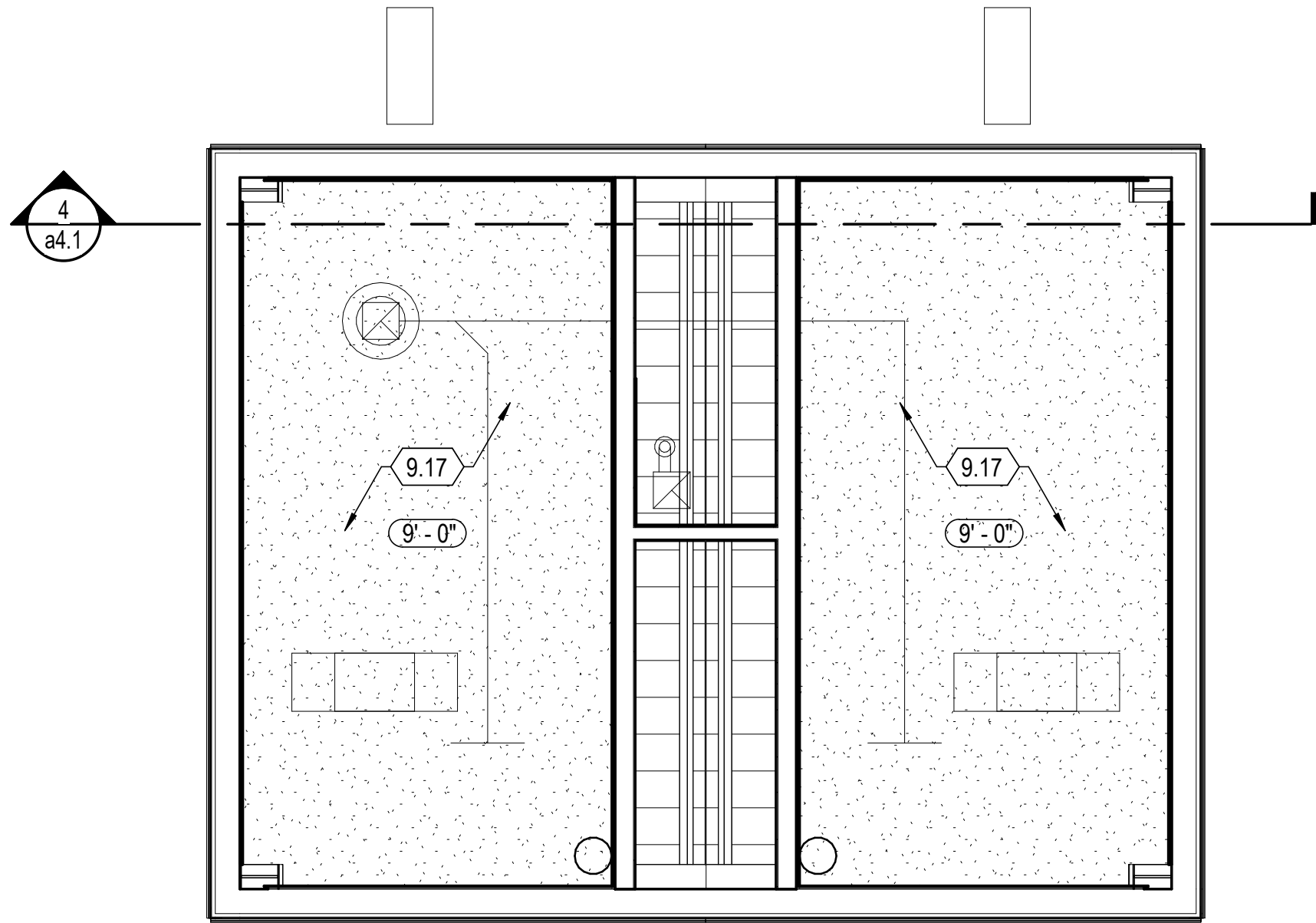
- 1.4 EXISTING COLUMNS TO REMAIN.
- 2.6 REMOVE DOOR AND FRAME.
- 2.7 REMOVE METAL BUILDING METAL PANEL, INSULATION AND PURLINS AS REQUIRED TO OPEN UP THE WALL. COLUMNS TO REMAIN.
- 2.25 ROLL AND REMOVE MATTS TO PERFORM WORK.
- 2.26 REMOVE AND REINSTALL DISPLAY CABINETS AS DIRECTED.
- 3.7 16" THICK CONCRETE PAD FOR HVAC UNIT. REINFORCE WITH #4'S AT 16" O.C.
- 5.2 STEEL COLUMN, REFER TO STRUCTURAL. PRIME AND PAINT (WHERE EXPOSED).
- 7.4 NEW PREFINISHED GUTTER & DOWNSPOUTS.
- 8.1 DOOR AND FRAME, REFER TO DOOR SCHEDULE.
- 9.8 NEW PARTITION, SEE WALL TYPES.
- 9.9 PAINT HM DOOR AND FRAME, BOTH SIDES.
- 11.11 INSTALL EXISTING LOCKERS.
- 22.6 DRINKING FOUNTAIN, REFER TO PLUMBING.
- 23.1 MECHANICAL EQUIPMENT, REFER TO MECHANICAL.
- 32.4 CONCRETE SPLASHBLOCK.

floor plan sheet legend

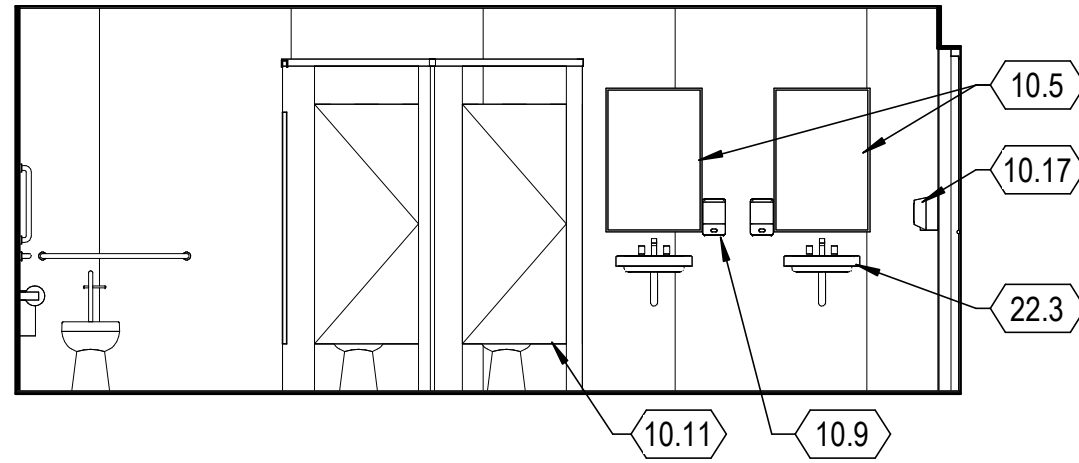
<div>CLASS</div> <div>129</div>	ROOM NAME / NUMBER	SEE SHEET SERIES "X"
	DOOR NUMBER	SEE SHEET SERIES "X"
	WINDOW MARK	SEE SHEET SERIES "X"
<div>3</div>	PARTITION TYPE	SEE SHEET SERIES "X"



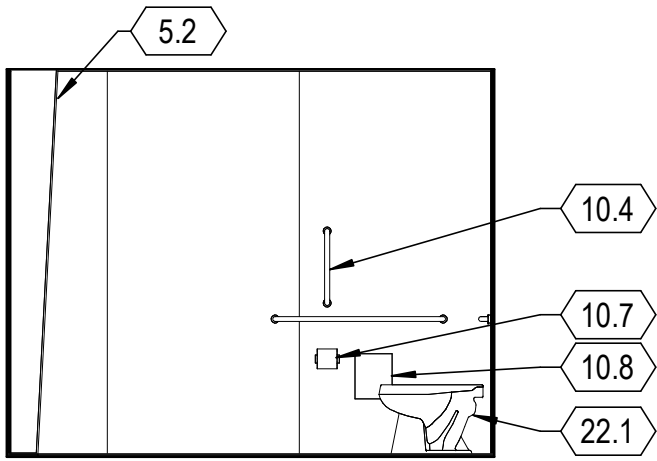
1
a1.3
restroom floor plan
1/4" = 1'-0" north



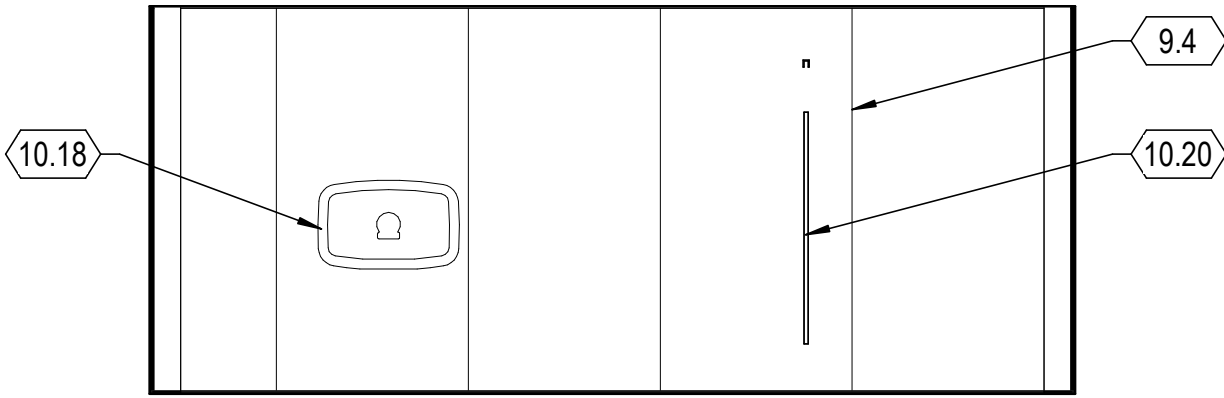
2
a1.3
restroom rcp
1/4" = 1'-0" north



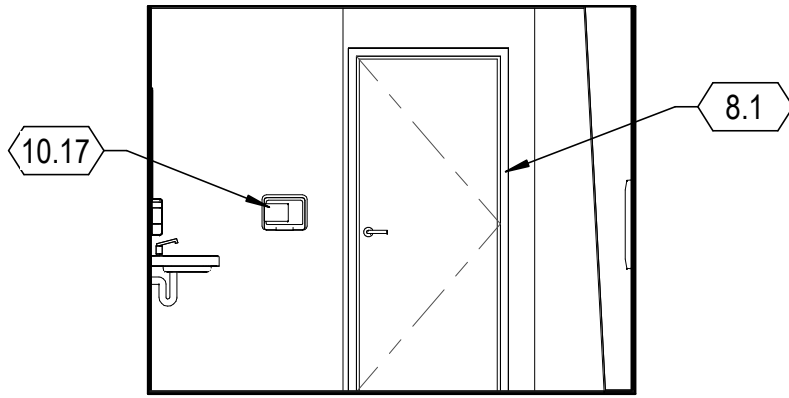
3
a1.3
women front
1/4" = 1'-0"



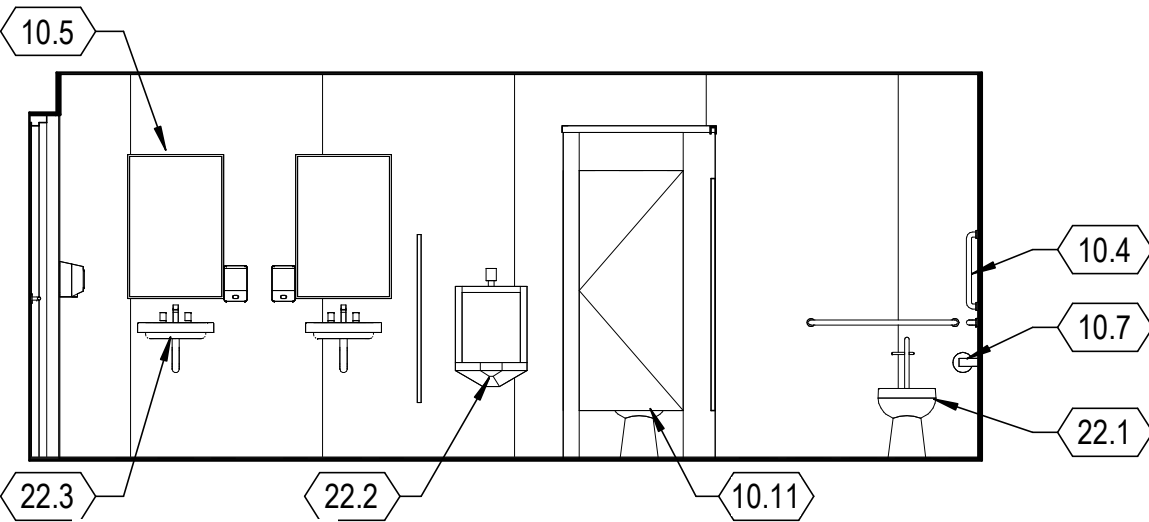
4
a1.3
women left
1/4" = 1'-0"



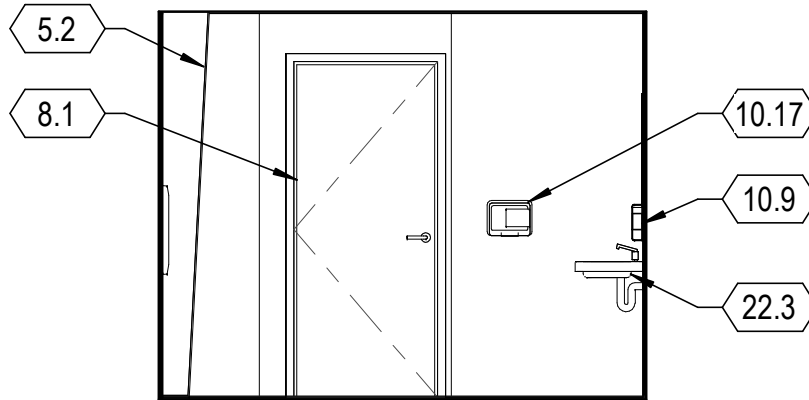
5
a1.3
women rear
1/4" = 1'-0"



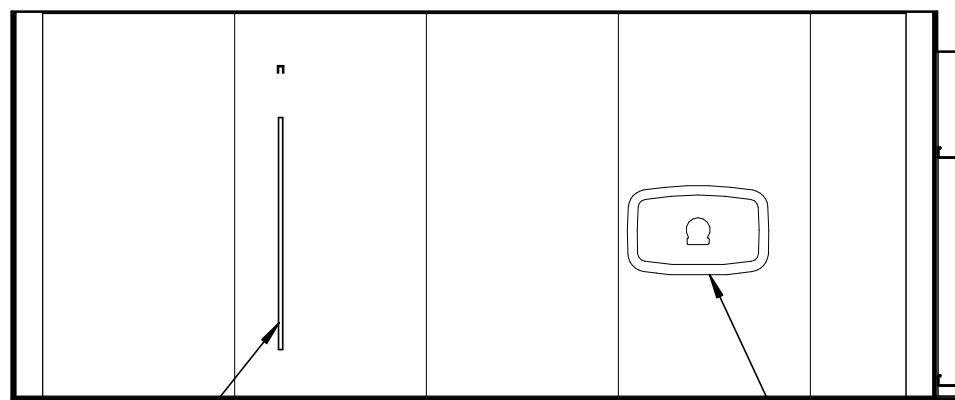
6
a1.3
women right
1/4" = 1'-0"



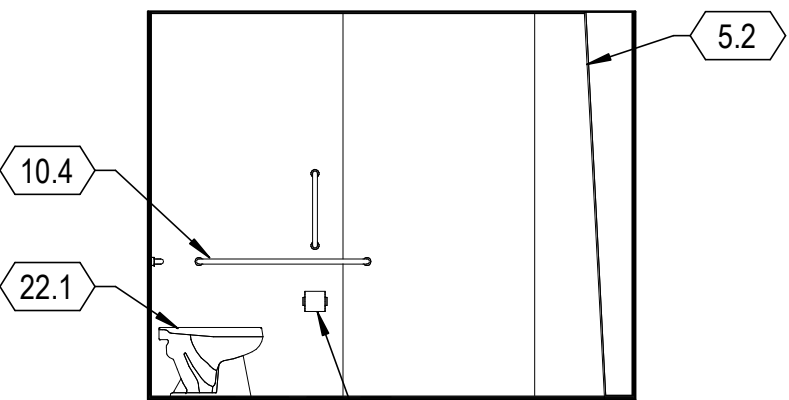
7
a1.3
men front
1/4" = 1'-0"



8
a1.3
men left
1/4" = 1'-0"



9
a1.3
men rear
1/4" = 1'-0"



10
a1.3
men right
1/4" = 1'-0"

general notes

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- SEE SHEET a8.0 FOR WINDOW AND DOOR TYPES.
- SEE SHEET a9.0 FOR WALL TYPES.
- SEE DOOR SCHEDULE FOR DOOR RATINGS.
- DIMENSIONS ARE TO CENTER LINE OF DEVICE OR FINISH FACE OF MATERIAL.
- REFER TO SHEET a9.9 FOR TYPICAL MOUNTING HEIGHTS.
- DASHED LINES WITHIN RESTROOM FLOOR PLAN INDICATE ADA REQUIRED CLEARANCES FOR TURNING AND FIXTURES.
- PROVIDE BLOCKING FOR ALL WALL MOUNTED ITEMS.

keynotes

- STEEL COLUMN, REFER TO STRUCTURAL. PRIME AND PAINT (WHERE EXPOSED).
- DOOR AND FRAME, REFER TO DOOR SCHEDULE.
- FIBER REINFORCED PANEL.
- NEW PARTITION, SEE WALL TYPES.
- 5/8" GWB ON 6" STUDS AT 16" O.C. TEXTURE AND PAINT.
- GRAB BARS PER STANDARD DETAILS.
- MIRROR, 24"W X 36"H.
- TOILET PAPER DISPENSER.
- SANITARY NAPKIN DISPOSAL.
- SOAP DISPENSER.
- TOILET PARTITION - TYP.
- ELECTRIC HAND DRYER.
- WALL MOUNTED CHANGING TABLE.
- 2MM PVC PANELS. CAULK AT FLOOR.
- TOILET, REFER TO PLUMBING.
- URINAL, REFER TO PLUMBING.
- SINK, REFER TO PLUMBING.
- MECHANICAL EQUIPMENT, REFER TO MECHANICAL.

floor plan sheet legend

CLASS	ROOM NAME / NUMBER	SEE SHEET SERIES "X"
129		
A129B	DOOR NUMBER	SEE SHEET SERIES "X"
A	WINDOW MARK	SEE SHEET SERIES "X"
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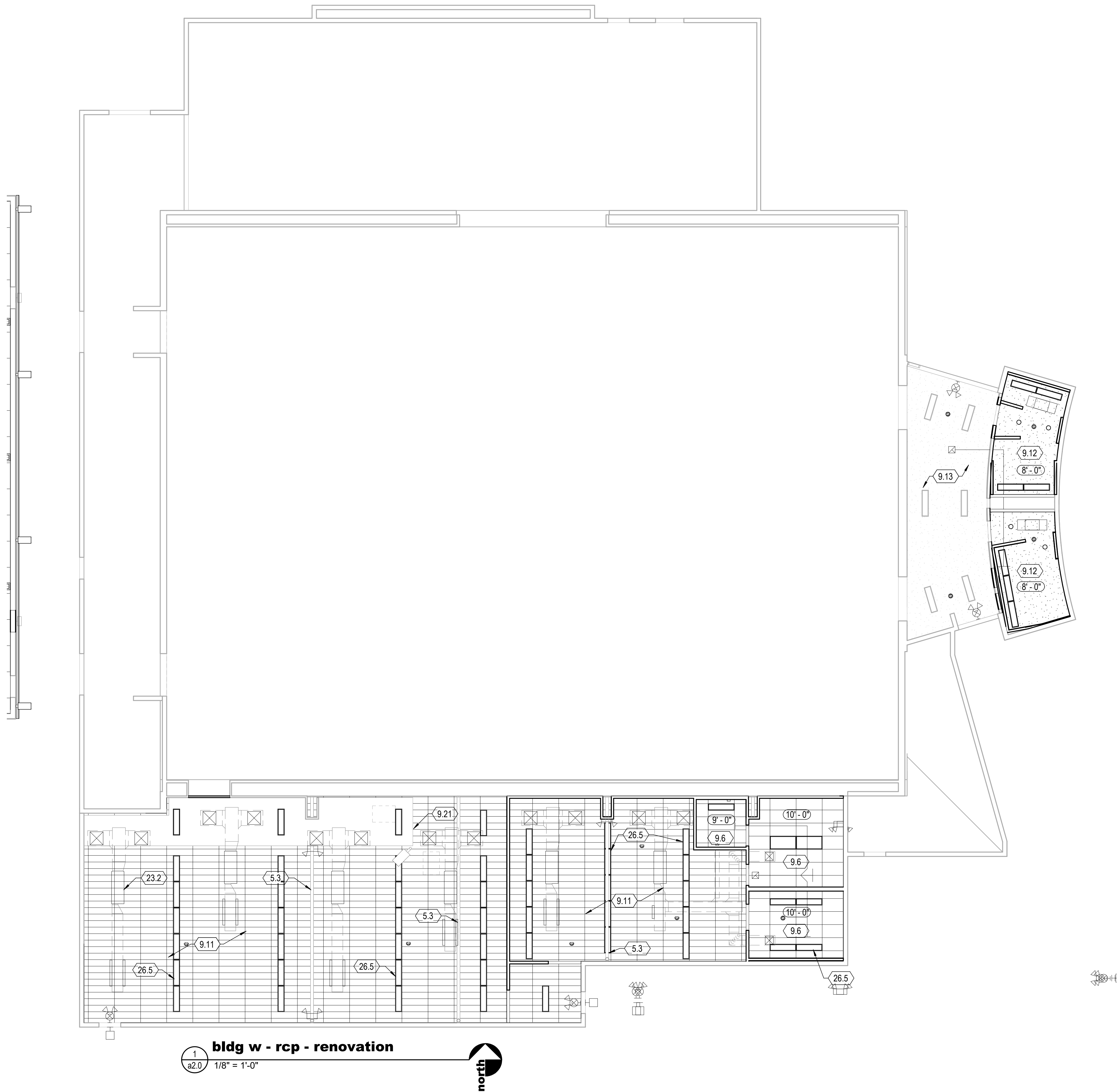
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revisions

WILLCOX MIDDLE & HIGH SCHOOL
240 N. BISBEE AVE.
WILLCOX, ARIZONA 85643
HIGH SCHOOL REMODEL

restroom plans, building
& wall sections and
elevations

a1.3



general notes

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- REFER TO PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS FOR ALL APPLICABLE CODES FOR REQUIRED CLEARANCES OF EQUIPMENT.

keynotes

- | | |
|------|---|
| 5.3 | STEEL BEAM, PRIME & PAINT. |
| 9.6 | SUSPENDED ACOUSTICAL TILE CEILING. |
| 9.11 | PAINT EXPOSED CEILING GRID AND BEAMS. INSTALL NEW CEILING TILES. BUT TILE ENDS. |
| 9.12 | 5/8" GWB ON BOTTOM OF EXISTING JOIST. TEXTURE AND PAINT. |
| 9.13 | REPAIR THE CEILING AND PAINT. PAINT EXPOSED CONDUIT WHERE POSSIBLE. |
| 9.21 | INSTALL FRAMING AND 5/8" GWB TO FINISH THE END OF THE SOFFIT. |
| 23.2 | DUCTWORK, REFER TO MECHANICAL. PAINT ALL EXPOSED DUCTWORK. |
| 26.5 | LIGHT FIXTURE, REFER TO ELECTRICAL. |

general notes

- | | |
|--|---|
| | 2' x 4' SUSPENDED CEILING GRID ASSEMBLY |
| | 2' x 2' SUSPENDED CEILING GRID ASSEMBLY |
| | 2' x 4' LIGHT FIXTURE |
| | WALL SCONCE |
| | RECESSED CAN LAMP |
| | EXIT SIGN |
| | HIGH BAY LIGHT FIXTURE |
| | EMERGENCY LIGHTING |
| | MECHANICAL SUPPLY REGISTER |
| | MECHANICAL RETURN REGISTER |
| | MECHANICAL EXHAUST REGISTER |
| | GYPSUM WALLBOARD SOFFIT / CEILING |
| | ROOF HATCH |

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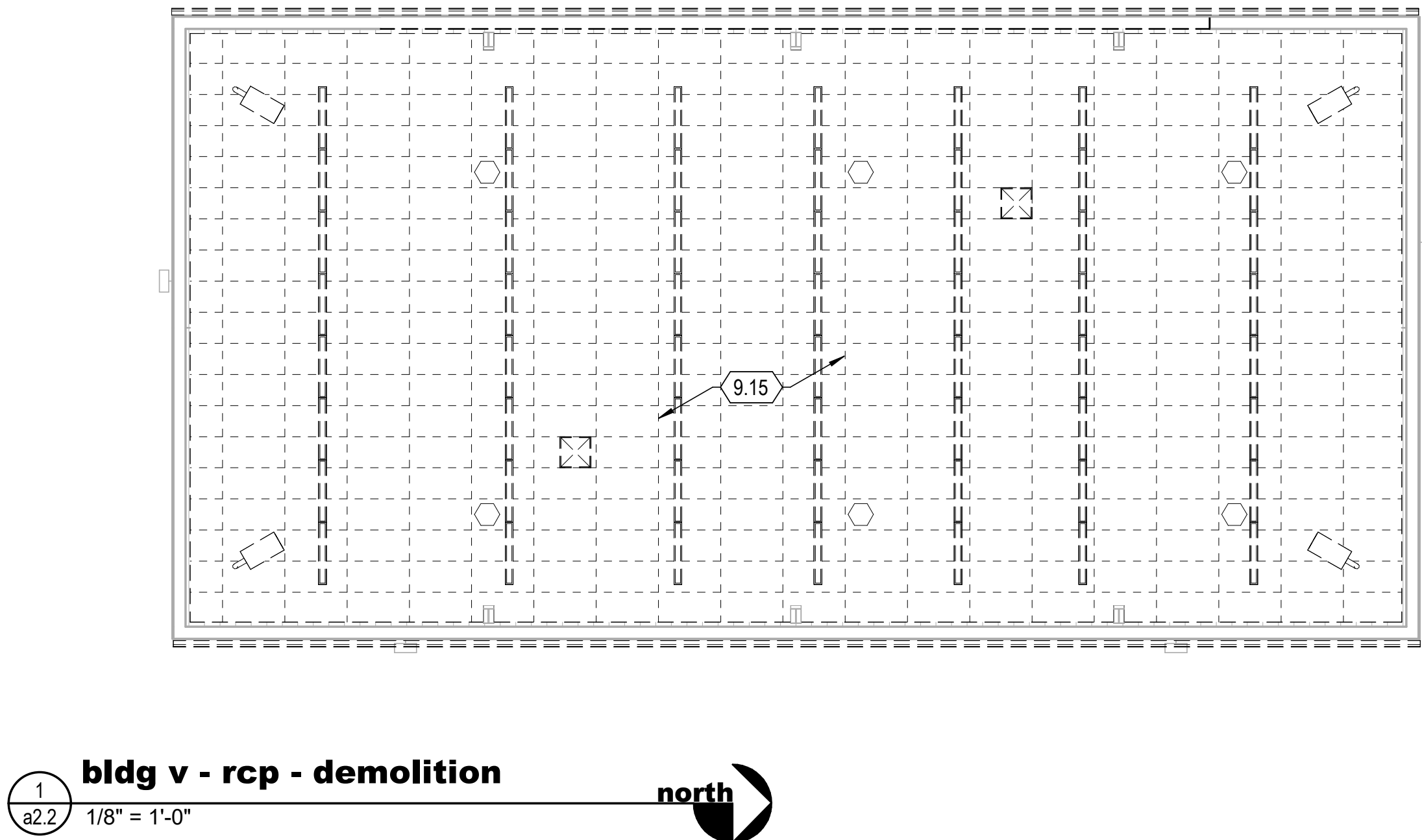
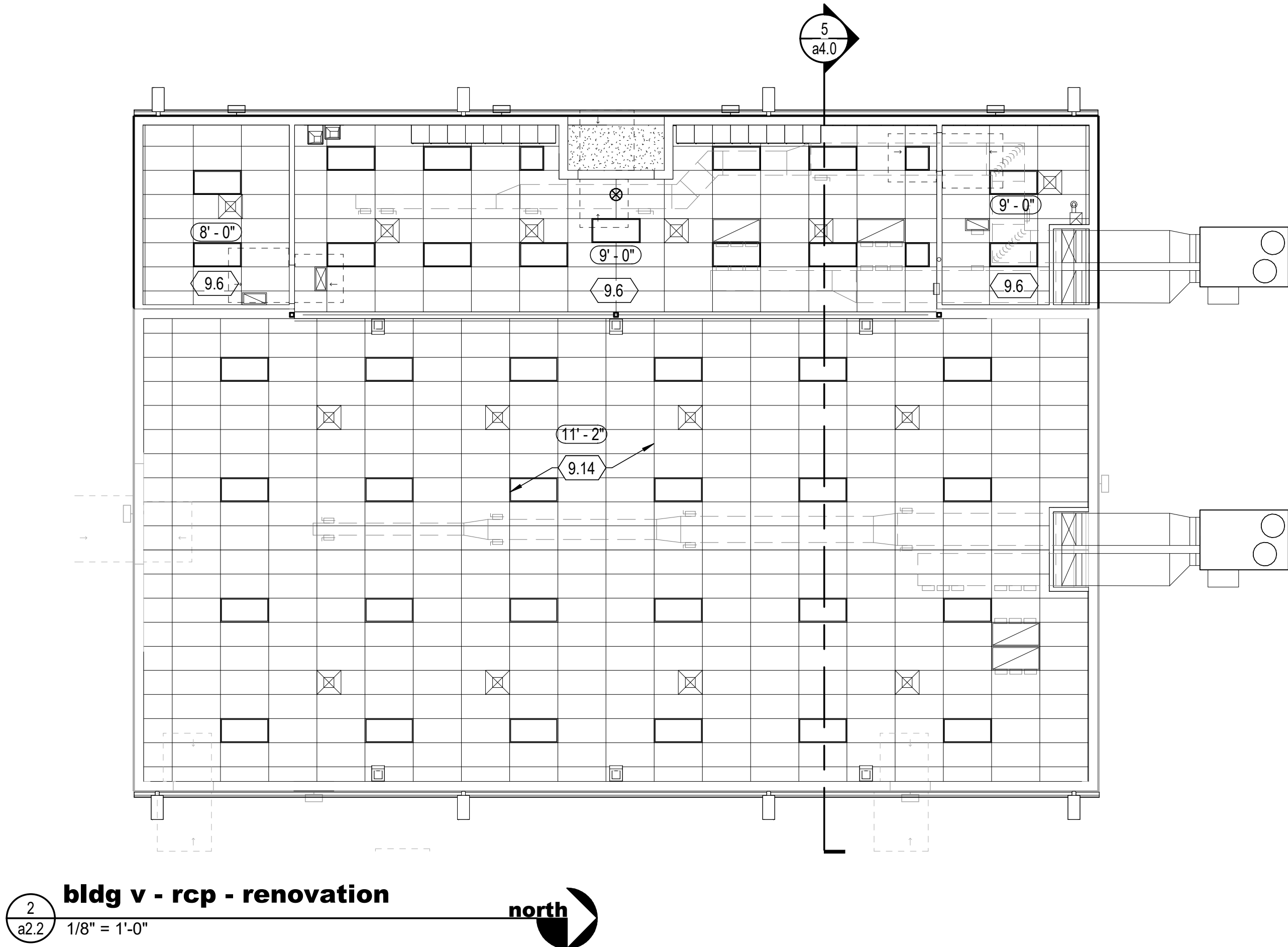
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04.07.2025

revisions

WILLCOX MIDDLE & HIGH SCHOOL
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HIGH SCHOOL REMODEL

bldg W reflected ceiling
plan - renovation

a2.0



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keynotes

- 9.6 SUSPENDED ACOUSTICAL TILE CEILING.
- 9.14 PAINT EXISTING GRID AND INSTALL NEW ACOUSTICAL TILES.
- 9.15 REMOVE LIGHTS AND CEILING TILES. SAVE SPECIAL SYSTEMS.

general notes

- 2' x 4' SUSPENDED CEILING GRID ASSEMBLY
- 2' x 2' SUSPENDED CEILING GRID ASSEMBLY
- 2' x 4' LIGHT FIXTURE
- WALL SCONCE
- RECESSED CAN LAMP
- EXIT SIGN
- HIGH BAY LIGHT FIXTURE
- EMERGENCY LIGHTING
- MECHANICAL SUPPLY REGISTER
- MECHANICAL RETURN REGISTER
- MECHANICAL EXHAUST REGISTER
- GYPSUM WALLBOARD SOFFIT / CEILING
- ROOF HATCH

swaim
ASSOCIATES LTD
ARCHITECTS AIA

7350 EAST SPEEDWAY 210
TUCSON, ARIZONA 85710
(520) 326-3700
www.swaimaia.com

REGISTERED ARCHITECT
CERTIFICATE NO.
23459
MARK E.
BOLLARD
DATE SIGNED 04/07/25
ARIZONA U.S.A.

job
2404.03

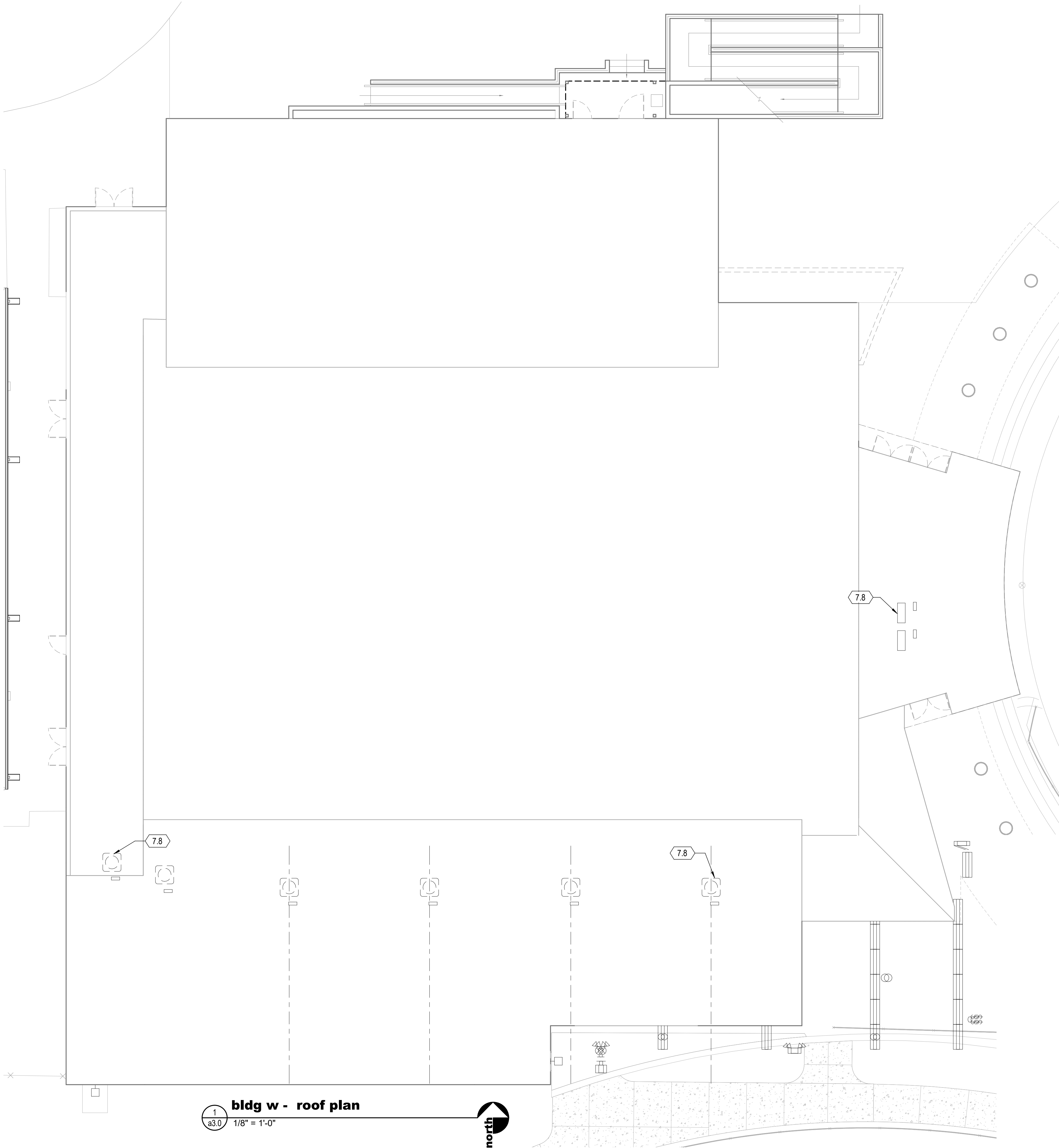
date
04.07.2025

revisions

WILLCOX MIDDLE & HIGH SCHOOL
240 N. BISBEE AVE.
WILLCOX, ARIZONA 85643
HIGH SCHOOL REMODEL

**bldg V reflected ceiling
plan - demolition &
renovation**

a2.2



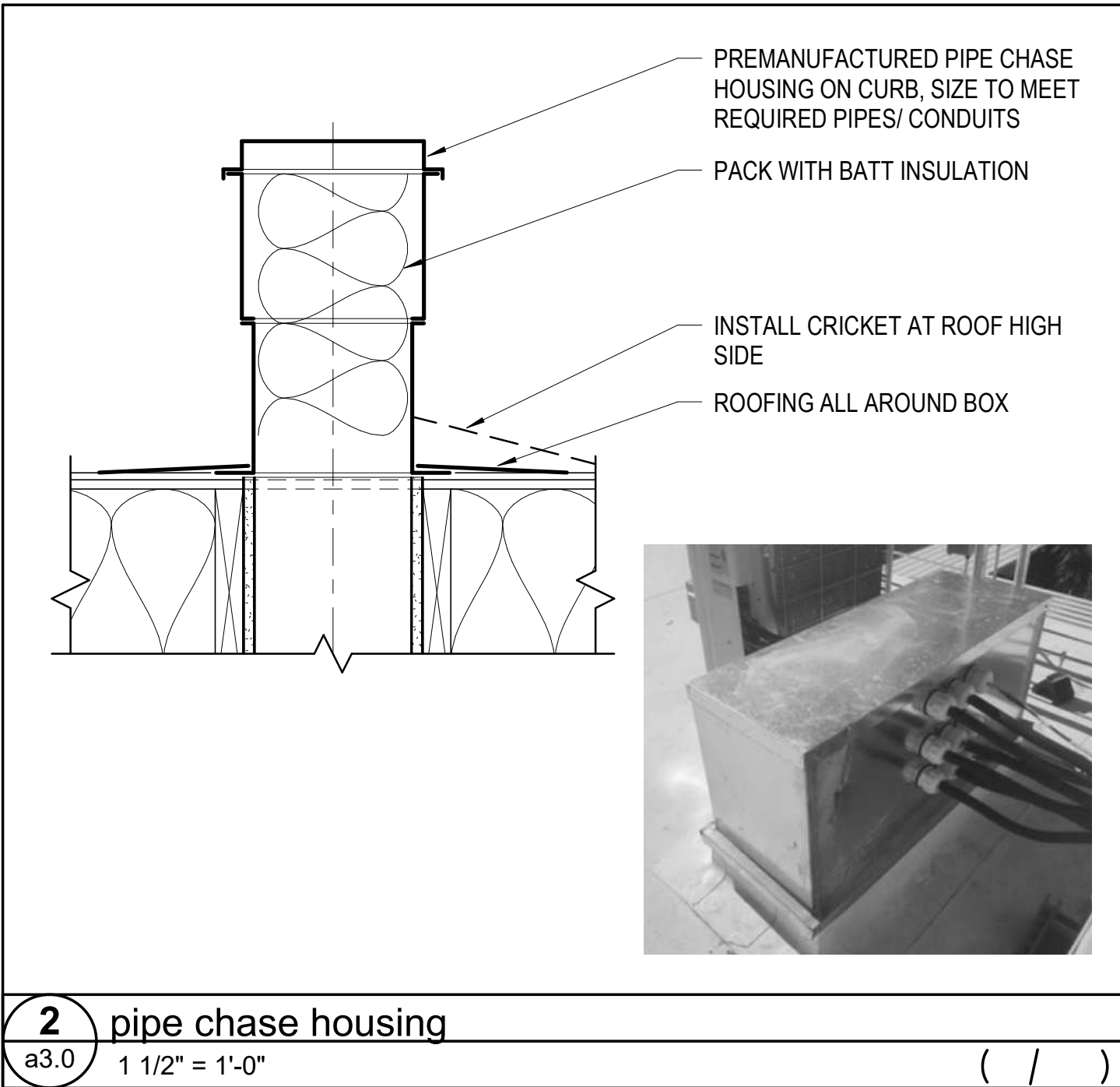
1
a3.0 bldg w - roof plan
1/8" = 1'-0"

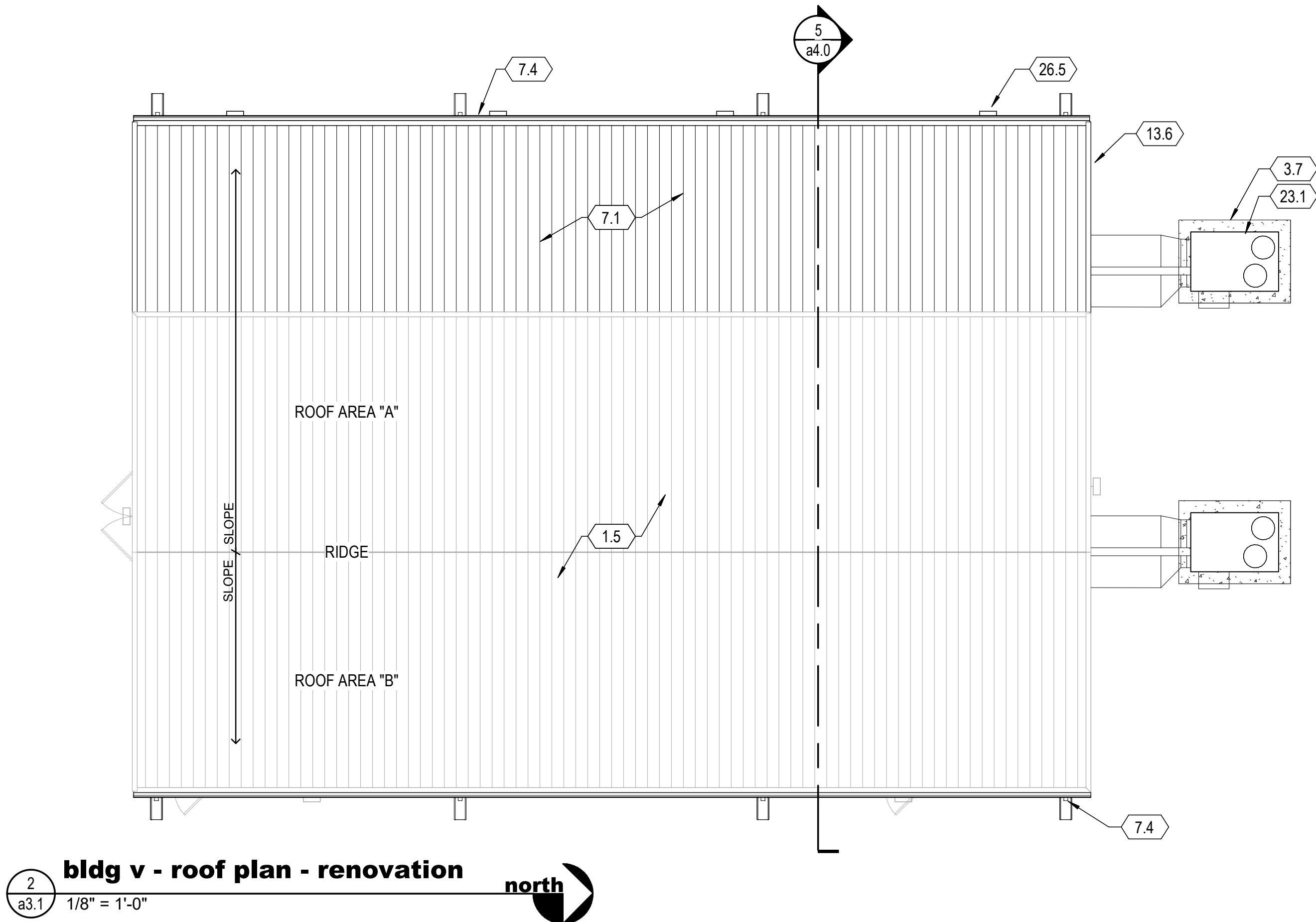
general notes

- DO NOT SCALE DRAWINGS. COORDINATE ALL WORK BETWEEN ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, COMMUNICATIONS AND ELECTRICAL DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO THE IMPLEMENTATION OF WORK.
- REFER TO PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS FOR ALL APPLICABLE CODES FOR REQUIRED CLEARANCES OF EQUIPMENT.
- SEE MECHANICAL, PLUMBING AND ELECTRICAL FOR ALL PENETRATIONS THROUGH ROOFS. REFER TO TYPICAL DETAILS.
- ROOF HEIGHTS SHOWN ARE TOP ROOF UNO.

keynotes

- 7.8 CONDENSING UNIT ON CURB. CENTER OVER EXISTING BEAMS. REPAIR TPO ROOF 4'-0" AROUND CURB. REFRIGERANT PENETRATION PER DETAIL 2/a3.0.





general notes

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- SEE MECHANICAL, PLUMBING AND ELECTRICAL FOR ALL PENETRATIONS THROUGH ROOFS. REFER TO TYPICAL DETAILS.
- ROOF HEIGHTS SHOWN ARE TOP ROOF UNO.

keynotes

- EXISTING ROOF.
- 16" THICK CONCRETE PAD FOR HVAC UNIT. REINFORCE WITH #4'S AT 16" O.C.
- METAL ROOFING ON MODIFIED BIT UNDERLAYMENT ON PLYWOOD SHEATHING ON METAL C JOISTS. INSTALL R-38 BATT INSULATION.
- NEW PREFINISHED GUTTER & DOWNSPOUTS.
- PREFINISHED METAL TRIM AT EAVES AND RAKES.
- MECHANICAL EQUIPMENT, REFER TO MECHANICAL.
- LIGHT FIXTURE, REFER TO ELECTRICAL.

2018 IPC (TABLE 1106.3 & 1108.3) BASED UPON 3" RAINFALL RATE PER HOUR										
ROOF	ROOF AREA				PRIMARY ROOF DRAIN				SECONDARY (EMERGENCY) OVERFLOW	
	ROOF AREA	VERTICAL WALL AREA	TOTAL AREA	GPM (TOTAL AREA X .03)	SIZE OF ROOF GUTTER @ 1/8" FT		SIZE OF VERTICAL LEADER		SIZE OF SCUPPER (2" WATER HEAD MAX)	
					REQUIRED	PROVIDED	REQUIRED	PROVIDED	REQUIRED	PROVIDED
A	2897 SF	120 SF	2957 SF	89	6"	6"	3"x4"	4" sq. (x4)	N/A	N/A
B	1613 SF	0 SF	1613 SF	48	5"	6"	2"x3"	4" sq. (x4)	N/A	N/A

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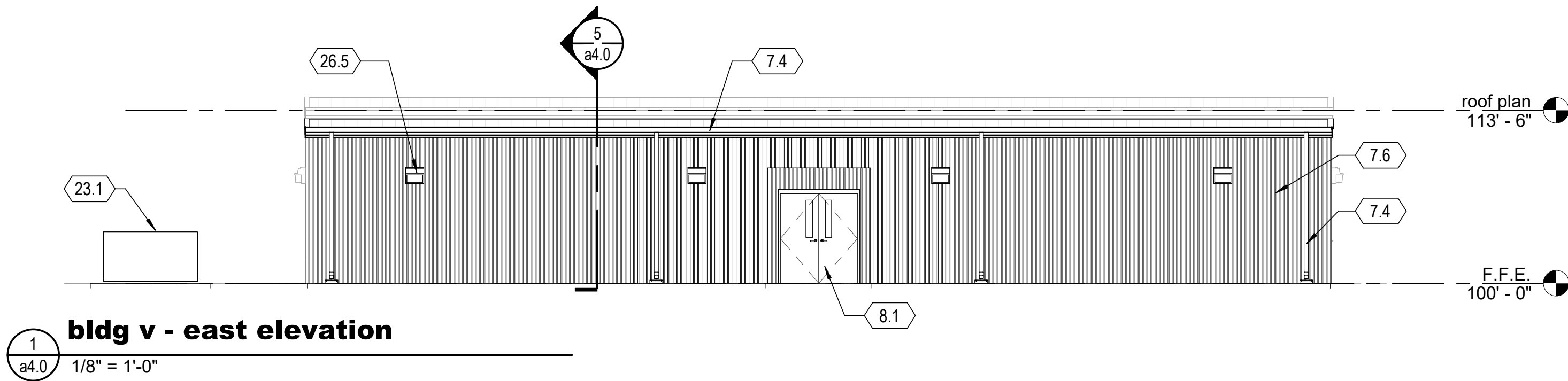
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WILLCOX MIDDLE & HIGH SCHOOL

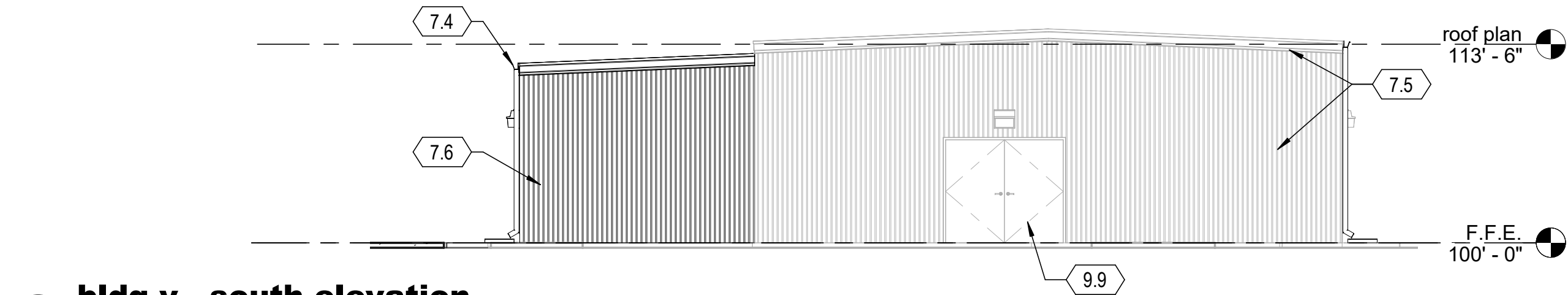
240 N. BISBEE AVE.
WILLCOX, ARIZONA 85643
HIGH SCHOOL REMODEL

bldg V roof plan

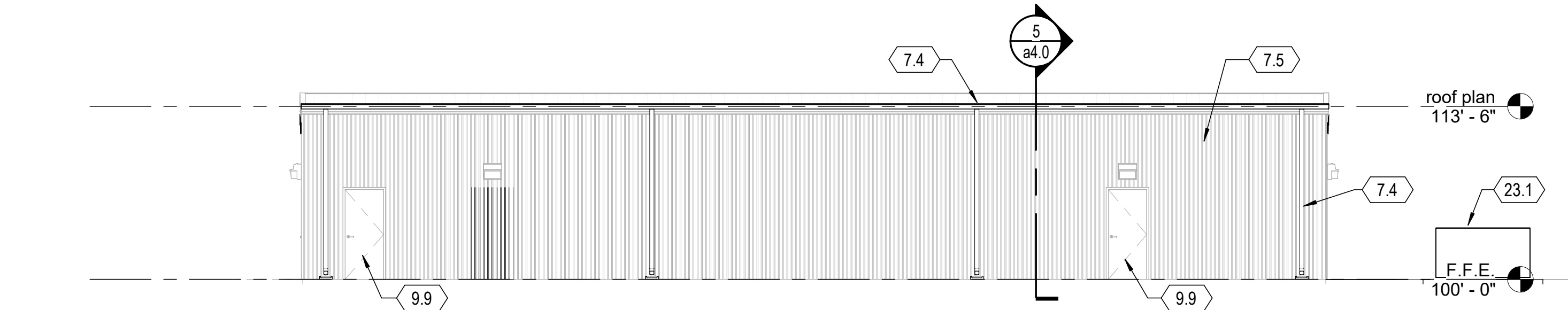
a3.1



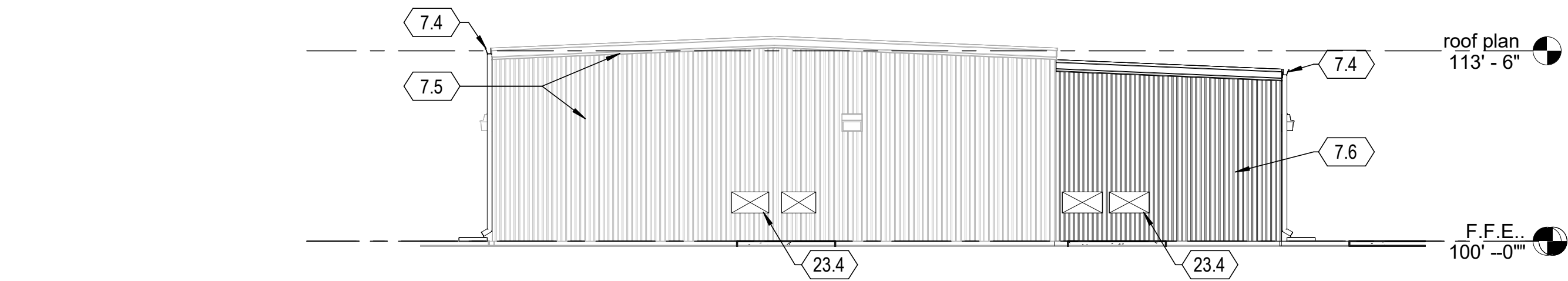
1
a4.0
bldg v - east elevation
1/8" = 1'-0"



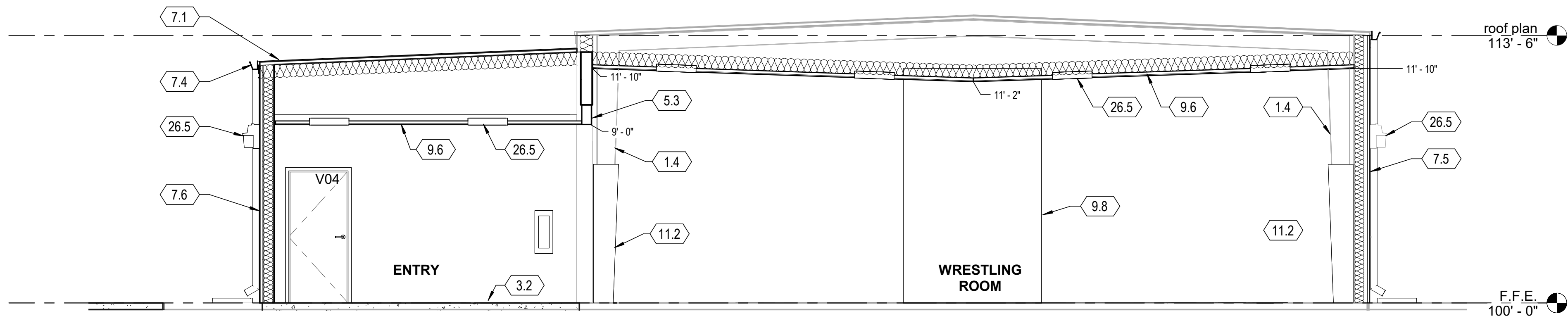
2
a4.0
bldg v - south elevation
1/8" = 1'-0"



3
a4.0
bldg v - west elevation
1/8" = 1'-0"



4
a4.0
bldg v - north elevation
1/8" = 1'-0"



5
a4.0
building section (looking north)
1/4" = 1'-0"

general notes

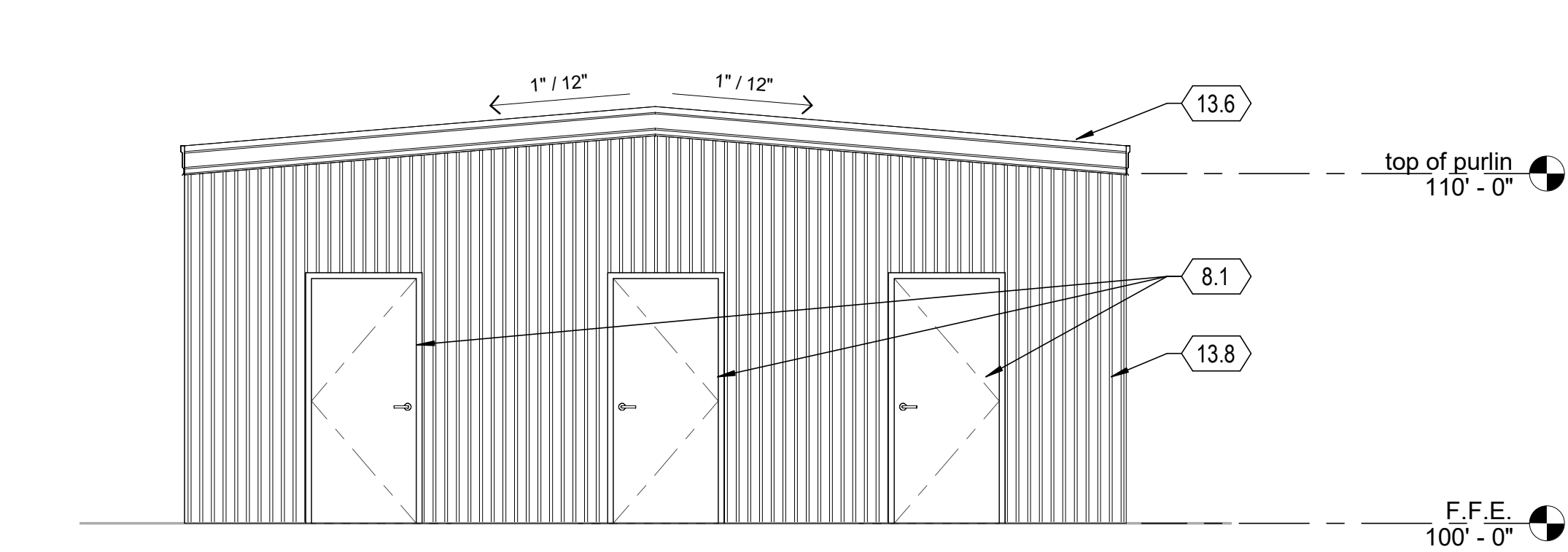
- DO NOT SCALE DRAWINGS. COORDINATE ALL WORK BETWEEN ARCHITECTURAL, STRUCTURAL, CIVIL, MECHANICAL, PLUMBING, COMMUNICATIONS AND ELECTRICAL DRAWINGS. CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO IMPLEMENTATION OF WORK.
- REFER TO PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS AND ALL APPLICABLE CODES FOR REQUIRED CLEARANCES OF EQUIPMENT.
- LOCATE CONTROL JOINTS AND EXPANSION JOINTS PER STRUCTURAL AND MANUFACTURERS REQUIREMENTS. VERIFY ALL JOINTS NOT SHOWN WITH ARCHITECT PRIOR TO INSTALLATION.
- SMOOTH CMU SHALL BE USED AT ALL LIGHT FIXTURES, ELECTRICAL OUTLETS, BUTTONS, SWITCHES AND GATE ATTACHMENT POINTS.
- PREP, PRIME AND PAINT ALL EXPOSED STEEL STRUCTURE, DECK AND SIDING.
- SEE SHEET a8.0 FOR WINDOW TYPES.

keynotes

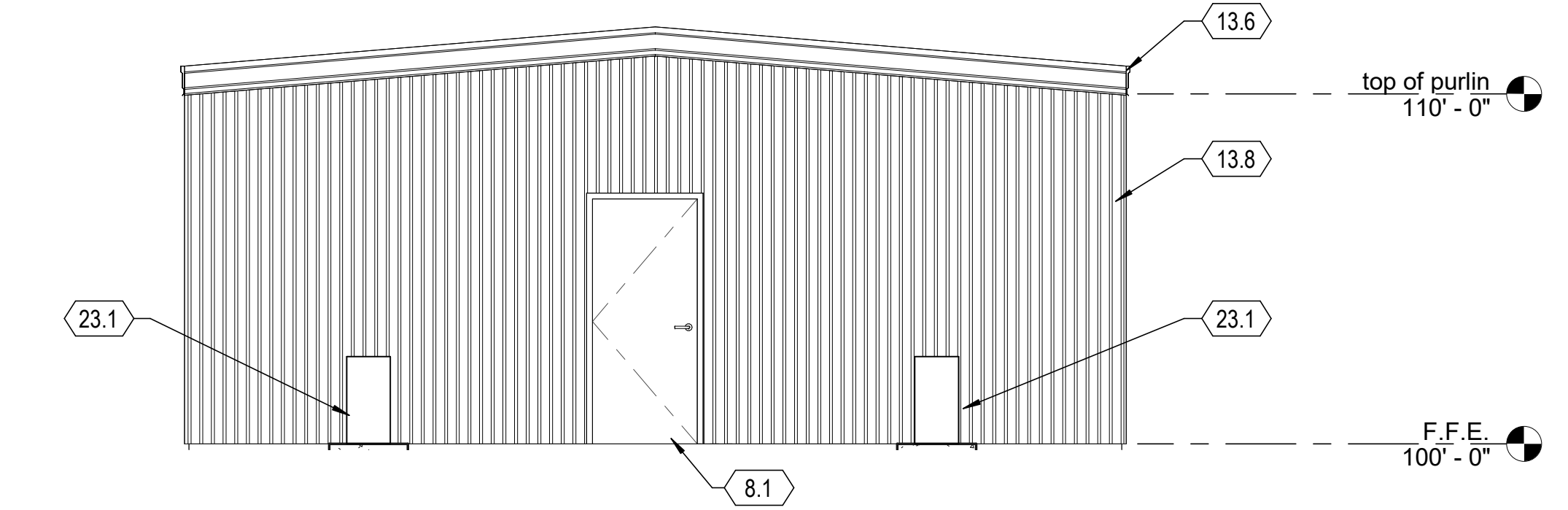
- EXISTING COLUMNS TO REMAIN.
- CONCRETE SLAB ON VAPOR BARRIER ON COMPACTED AGGREGATE BASE. SEE STRUCTURAL.
- STEEL BEAM, PRIME & PAINT.
- METAL ROOFING ON MODIFIED BIT UNDERLAYMENT ON PLYWOOD SHEATHING ON METAL C JOISTS. INSTALL R-38 BATT INSULATION.
- NEW PREFINISHED GUTTER & DOWNSPOUTS.
- REMOVE EXISTING SIDING AND INSTALL ALL NEW TRIM AT CORNERS AND AT EAVES / GUTTERS.
- METAL PANELS OVER FLUID APPLIED BARRIER ON 5/8" GLASS MATT GWB ON 6" METAL STUDS. 6" BATTS AND 5/8" GWB ON INTERIOR.
- DOOR AND FRAME, REFER TO DOOR SCHEDULE.
- SUSPENDED ACOUSTICAL TILE CEILING.
- NEW PARTITION, SEE WALL TYPES.
- PAINT HM DOOR AND FRAME, BOTH SIDES.
- NEW COLUMN PADS. 7'-0" HIGH.
- MECHANICAL EQUIPMENT, REFER TO MECHANICAL.
- OPENING FOR NEW HVAC DUCTWORK, COORDINATE LOCATION.
- LIGHT FIXTURE, REFER TO ELECTRICAL.



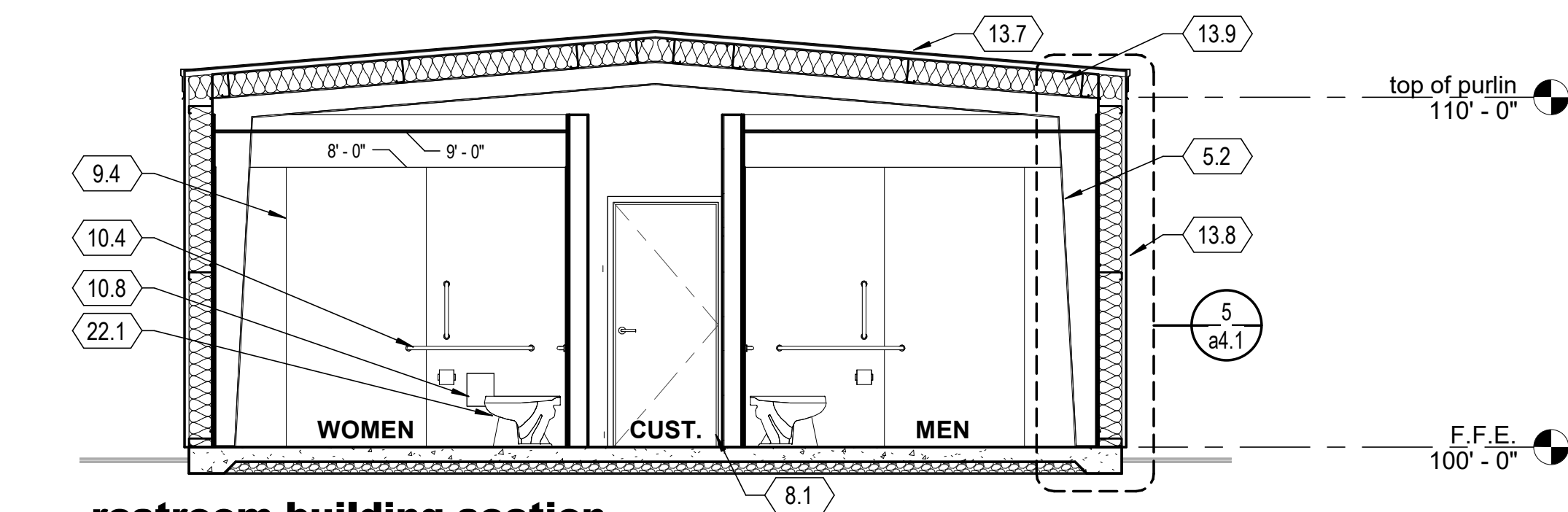
revisions



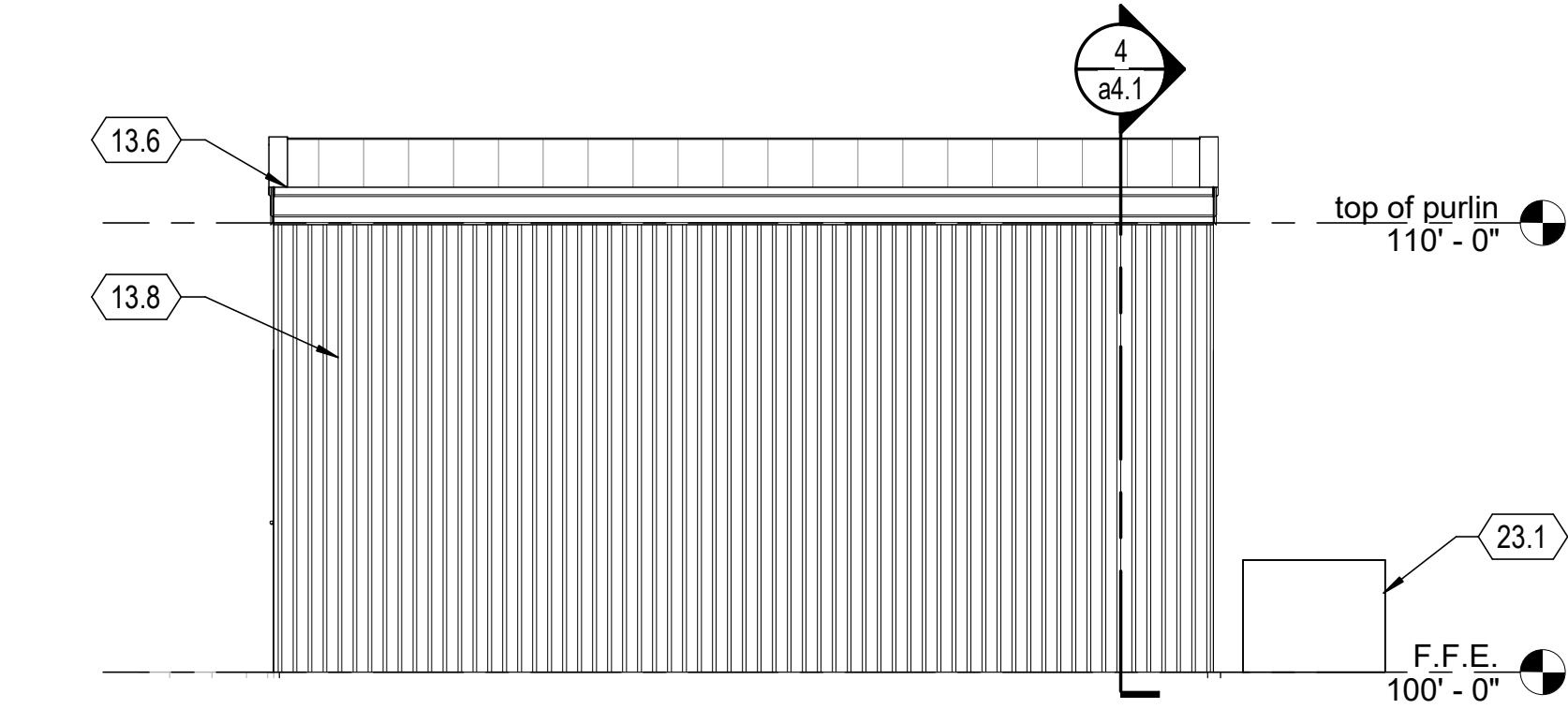
1
a4.1
restroom front elevation
1/4" = 1'-0"



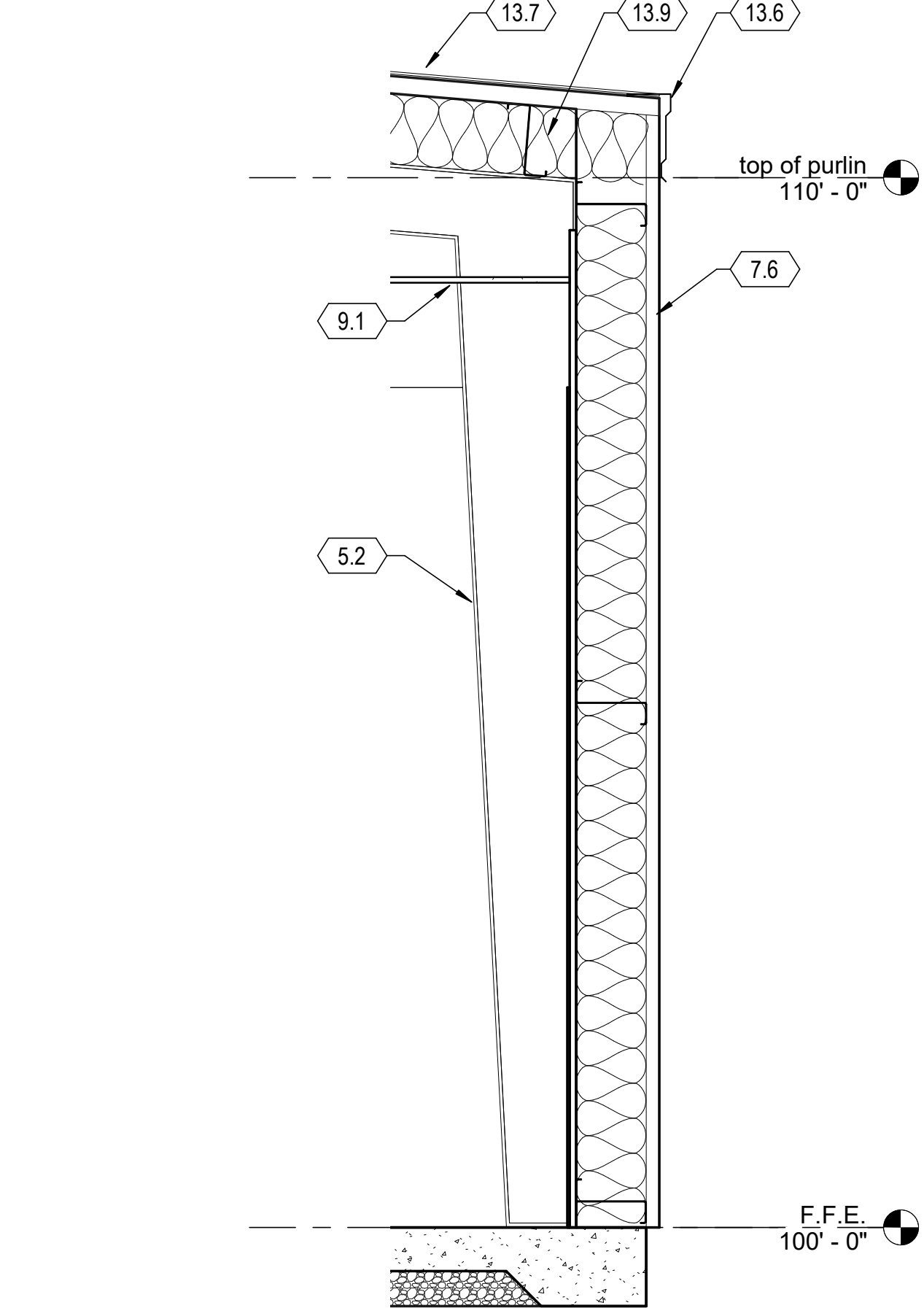
3
a4.1
restroom rear elevation
1/4" = 1'-0"



4
a4.1
restroom building section
1/4" = 1'-0"



2
a4.1
restroom left elevation (right sim)
1/4" = 1'-0"



5
a4.1
restroom wall section
3/4" = 1'-0"

general notes

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- SMOOTH CMU SHALL BE USED AT ALL LIGHT FIXTURES, ELECTRICAL OUTLETS, BUTTONS, SWITCHES AND GATE ATTACHMENT POINTS.
- PREP, PRIME AND PAINT ALL EXPOSED STEEL STRUCTURE, DECK AND SIDING.
- SEE SHEET a8.0 FOR WINDOW TYPES.

keynotes

- | | |
|------|--|
| 5.2 | STEEL COLUMN, REFER TO STRUCTURAL. PRIME AND PAINT (WHERE EXPOSED). |
| 7.6 | METAL PANELS OVER FLUID APPLIED BARRIER ON 5/8" GLASS MATT GWB ON 6" METAL STUDS. 6" BATTS AND 5/8" GWB ON INTERIOR. |
| 8.1 | DOOR AND FRAME, REFER TO DOOR SCHEDULE. |
| 9.1 | 5/8" GWB CEILING ON METAL FRAMING, TYPICAL. |
| 9.4 | FIBER REINFORCED PANEL. |
| 10.4 | GRAB BARS PER STANDARD DETAILS. |
| 10.8 | SANITARY NAPKIN DISPOSAL. |
| 13.6 | PREFINISHED METAL TRIM AT EAVES AND RAKES. |
| 13.7 | PREFINISHED STANDING SEAM METAL ROOF PANELS. |
| 13.8 | PREFINISHED METAL WALL PANEL OVER METAL GIRTS WITH R-19 BATT INSULATION WITH WMP 50 FACING. |
| 13.9 | R-38 BATT INSULATION AT ROOF DECK WITH VR FACING. |
| 22.1 | TOILET, REFER TO PLUMBING. |
| 23.1 | MECHANICAL EQUIPMENT, REFER TO MECHANICAL. |

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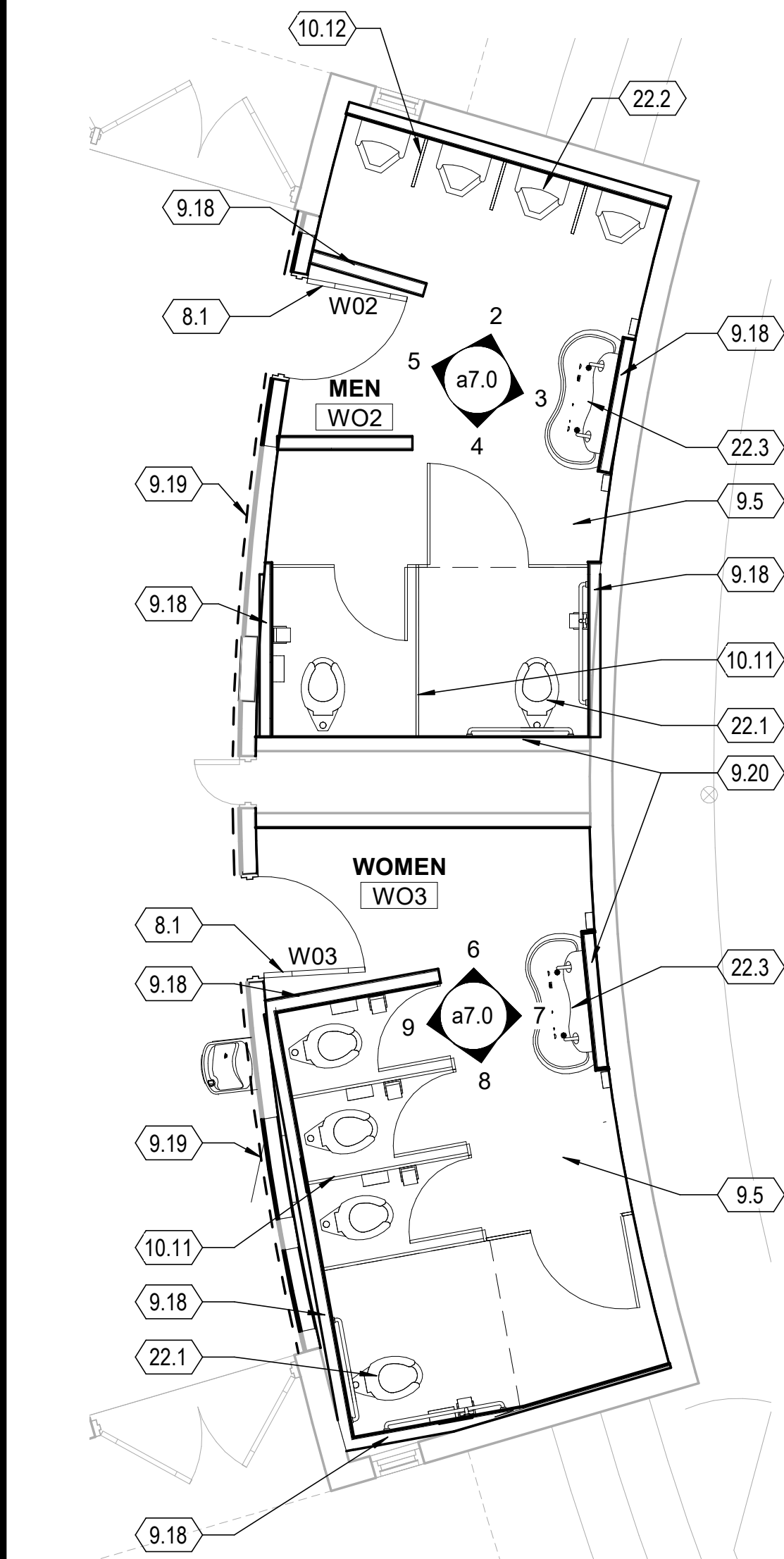
date
04.07.2025

revisions	

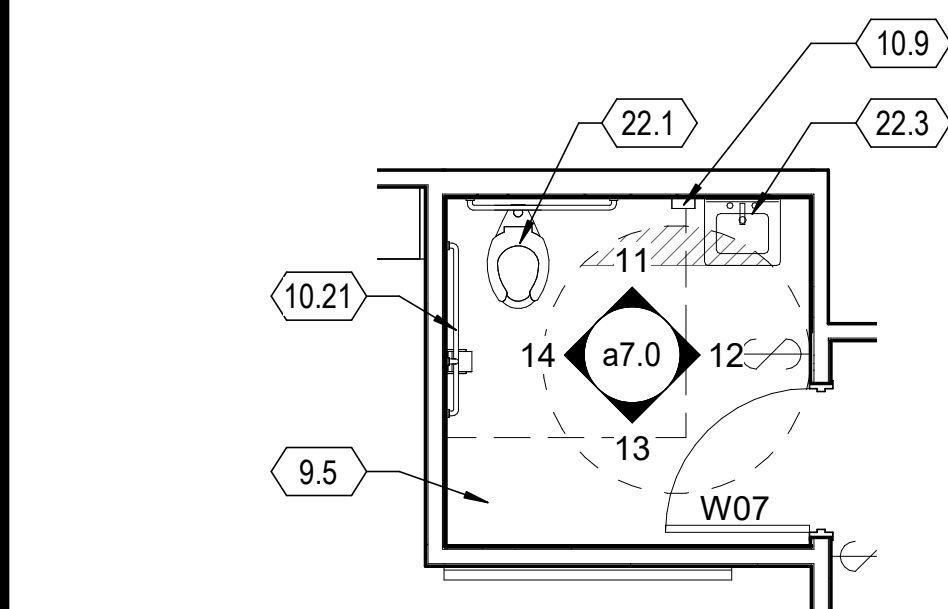
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240 N. BISBEE AVE.
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HIGH SCHOOL REMODEL

**restroom bldg -
elevations & building
section**

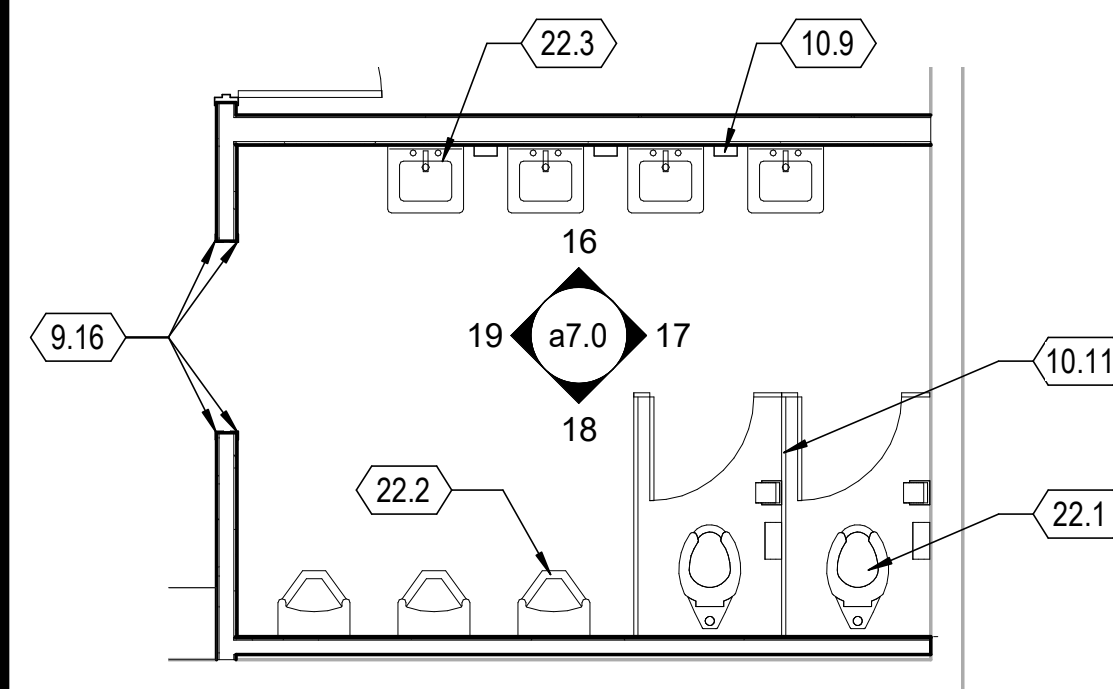
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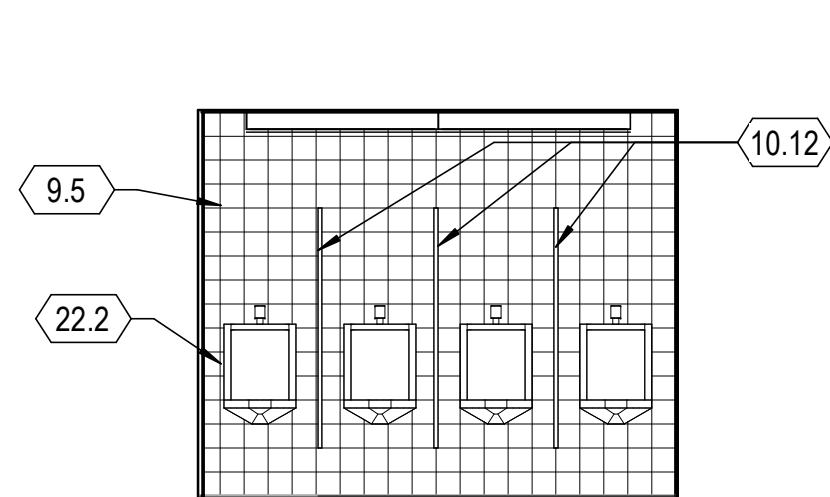
1 enlarged plan - men & women - W02 & W03
a7.0 1/4" = 1'-0"



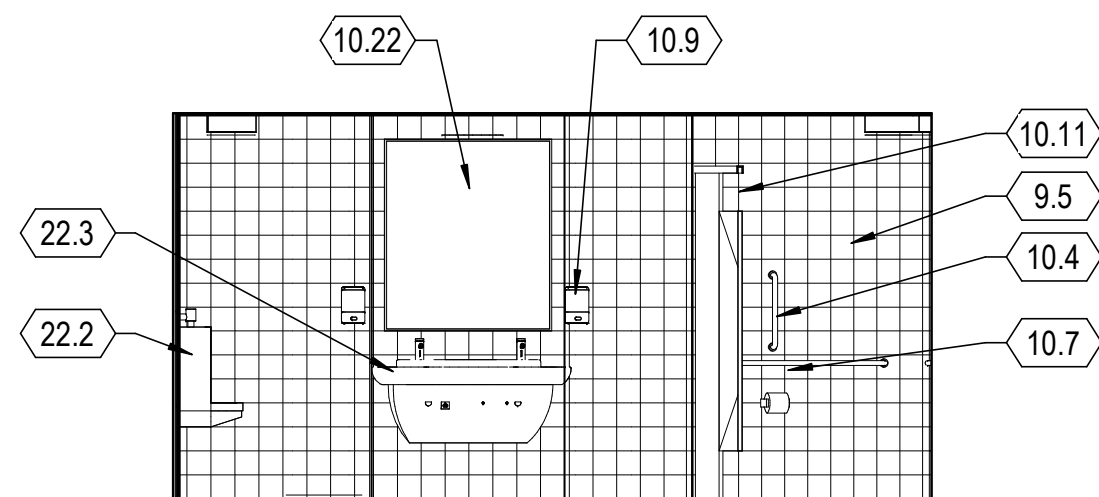
10 enlarged plan - toilet W07
a7.0 1/4" = 1'-0"



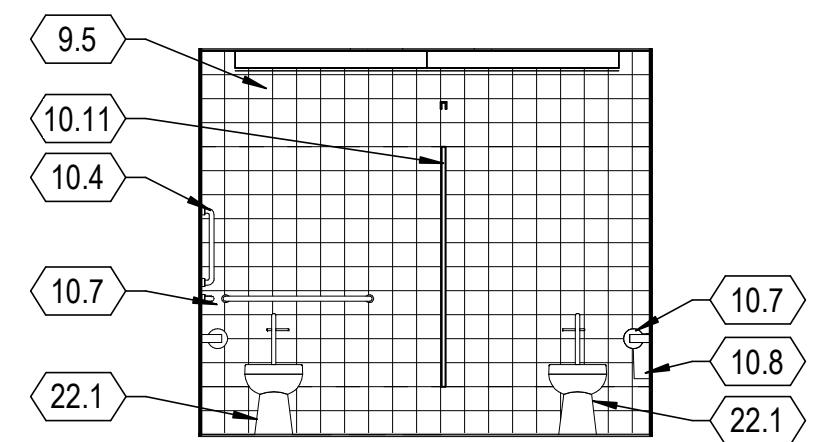
15 enlarged plan - restroom - W08
a7.0 1/4" = 1'-0"



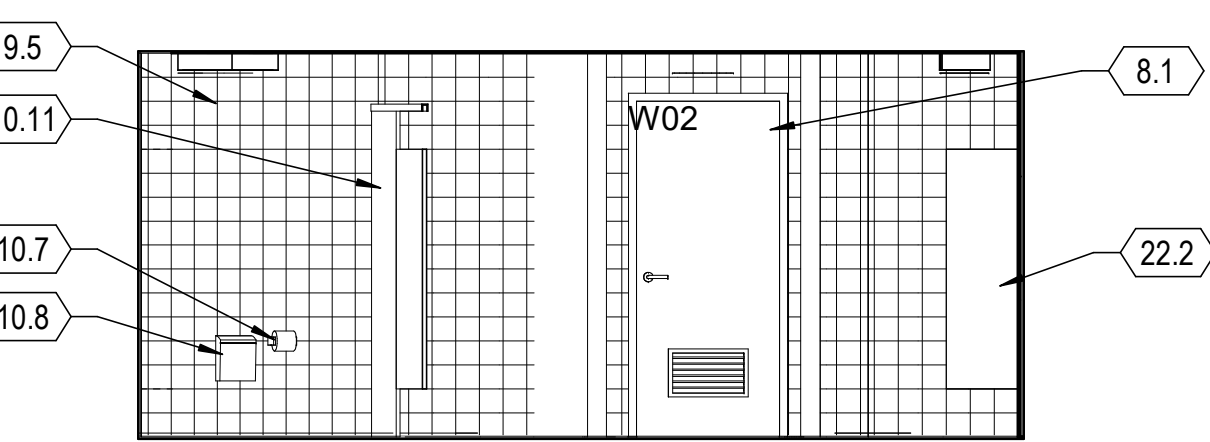
2 W 02 - north
a7.0 1/4" = 1'-0"



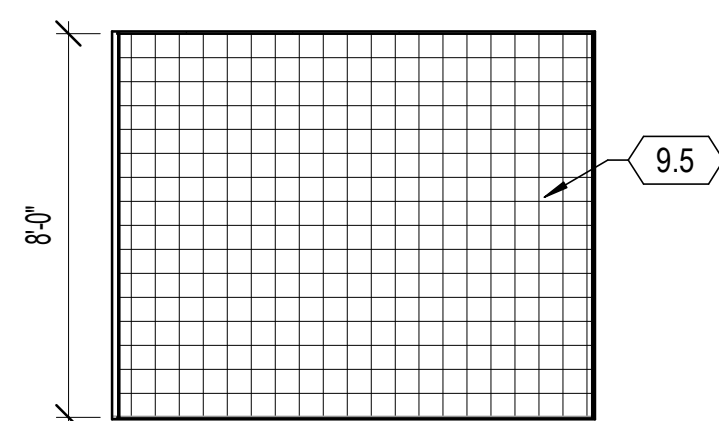
3 W 02 - east
a7.0 1/4" = 1'-0"



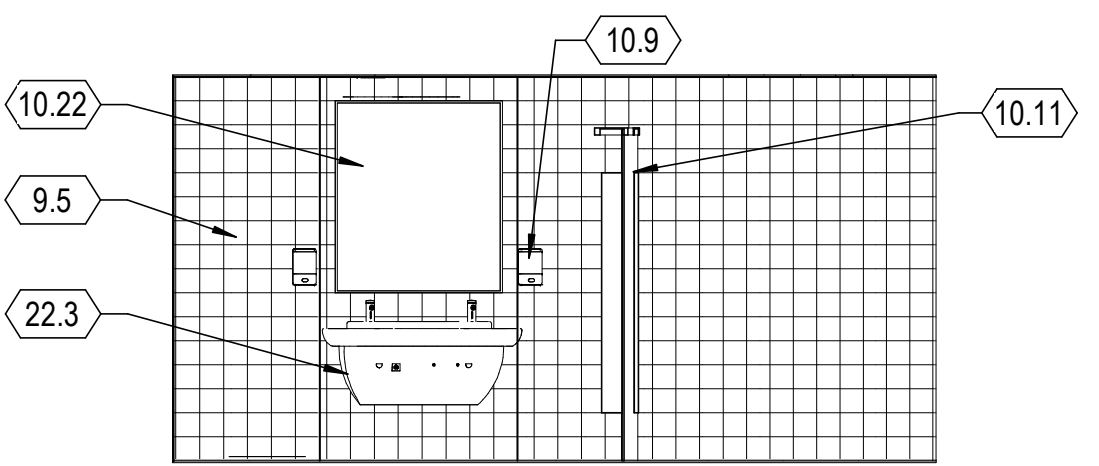
4 W 02 - south
a7.0 1/4" = 1'-0"



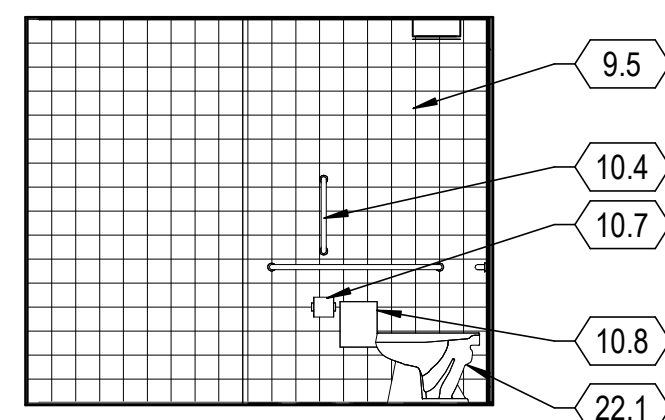
5 W 02 - west
a7.0 1/4" = 1'-0"



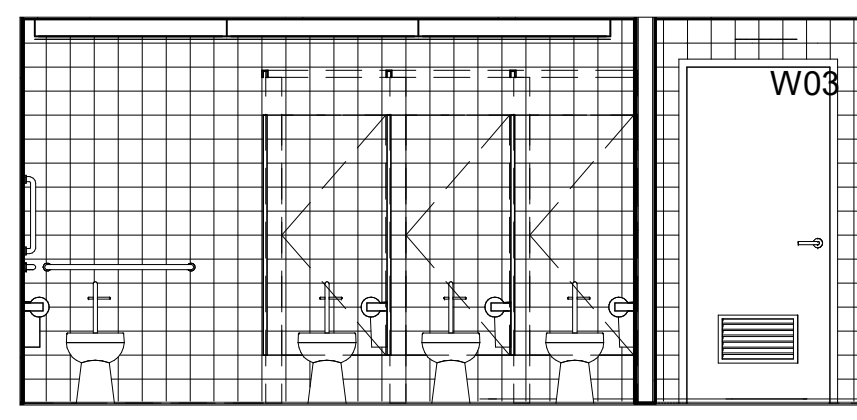
6 W 03 - north
a7.0 1/4" = 1'-0"



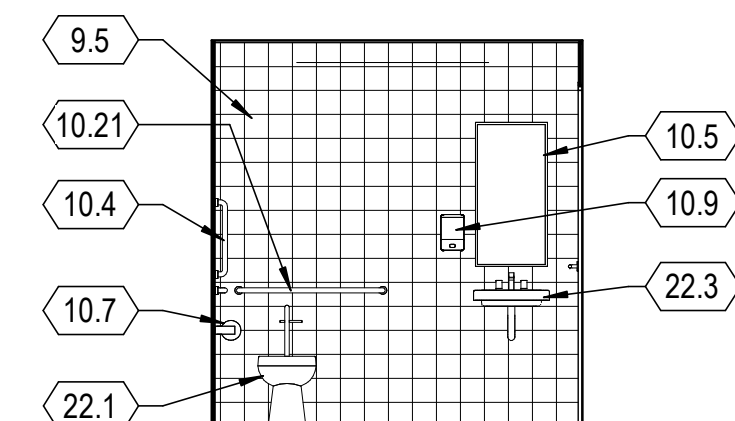
7 W 03 - east
a7.0 1/4" = 1'-0"



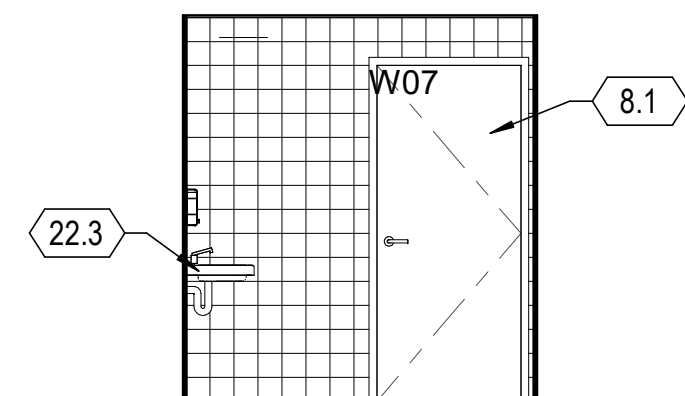
8 W 03 - south
a7.0 1/4" = 1'-0"



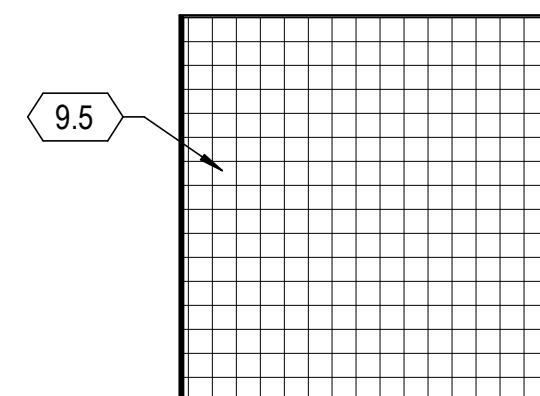
9 W 03 - west
a7.0 1/4" = 1'-0"



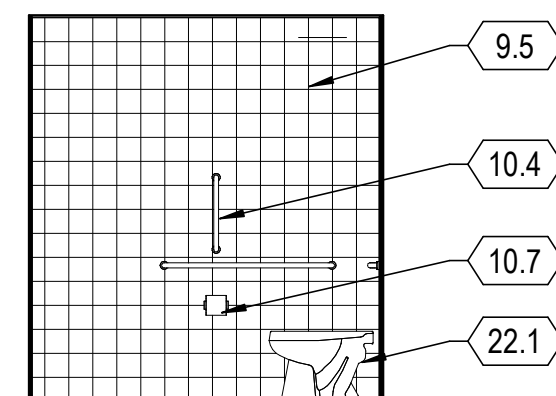
11 W07 - north
a7.0 1/4" = 1'-0"



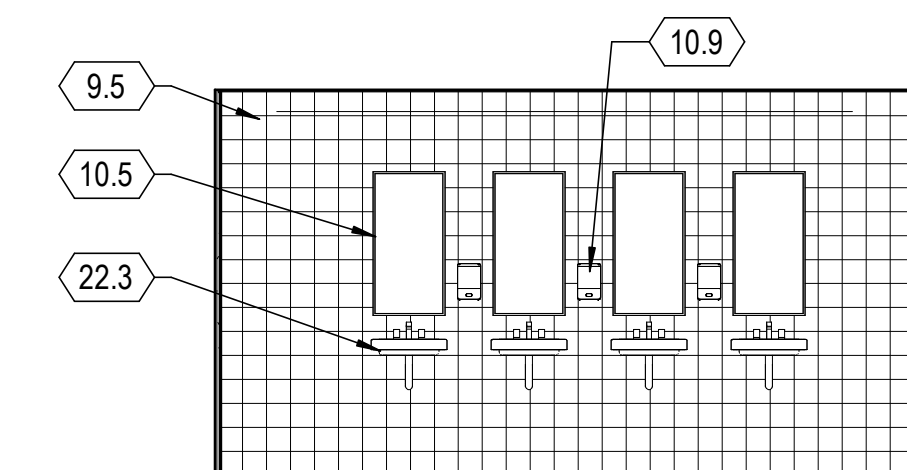
12 W07 - east
a7.0 1/4" = 1'-0"



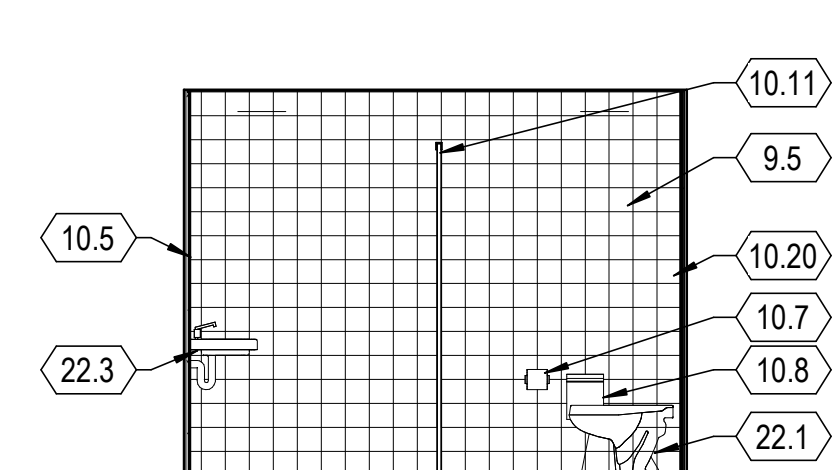
13 W07 - south
a7.0 1/4" = 1'-0"



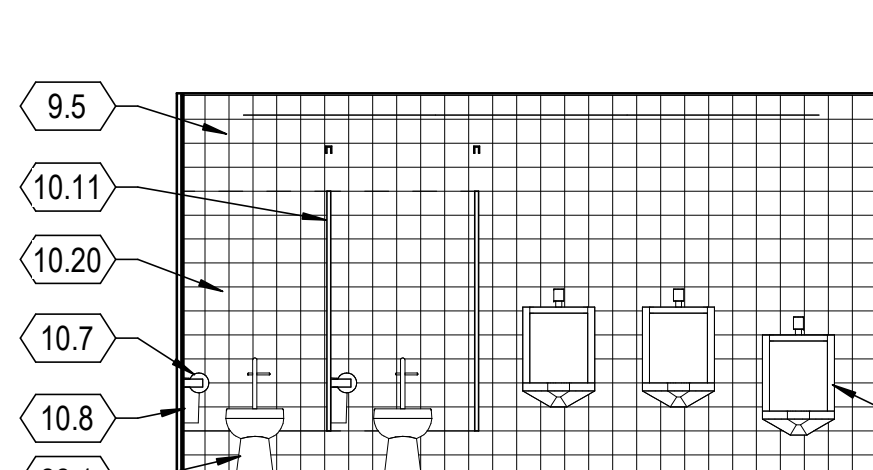
14 W07 - west
a7.0 1/4" = 1'-0"



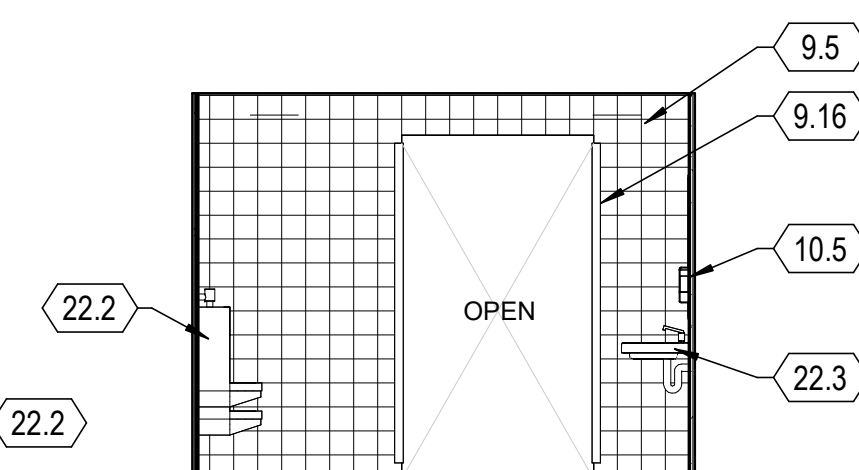
16 W08 - north
a7.0 1/4" = 1'-0"



17 W08 - east
a7.0 1/4" = 1'-0"



18 W08 - south
a7.0 1/4" = 1'-0"



19 W08 - west
a7.0 1/4" = 1'-0"

general notes

- DIMENSIONS ARE TO CENTER LINE OF DEVICE OR FINISH FACE OF MATERIAL.
- REFER TO SHEET g1.2 FOR TYPICAL MOUNTING HEIGHTS.
- DASHED LINES WITHIN RESTROOM FLOOR PLAN INDICATE ADA REQUIRED CLEARANCES FOR TURNING AND FIXTURES.
- PROVIDE BLOCKING FOR ALL WALL MOUNTED ITEMS.

keynotes

- DOOR AND FRAME, REFER TO DOOR SCHEDULE.
- CERAMIC TILE FINISH.
- 84" STAINLESS STEEL CORNER GUARD.
- ADD 2X4'S AS REQUIRED TO SQUARE UP WALLS, ADD WALLS AND FILL GAPS. INSTALL 5/8" GLASS MATT GWB AND TILE.
- REMOVE WOOD PANELING/ SHEATHING. FILL STUD CAVITY WITH BATT INSULATION AND INSTALL 5/8" IMPACT RESISTANT GWB. TEXTURE AND PAINT.
- REMOVE EXISTING GWB/ PLASTER TO PERFORM PIPING WORK. REPLACE WITH GLASS MATT GWB.
- GRAB BARS PER STANDARD DETAILS.
- MIRROR. 24"W X 36"H.
- TOILET PAPER DISPENSER.
- SANITARY NAPKIN DISPOSAL.
- SOAP DISPENSER.
- TOILET PARTITION - TYP.
- URINAL PARTITION - TYP. WITH END POST. FLOOR TO CEILING.
- 2MM PVC PANELS. CAULK AT FLOOR.
- GRAB BAR. SEE STANDARD DETAILS.
- MIRROR. 42" W X 48"H.
- TOILET, REFER TO PLUMBING.
- URINAL, REFER TO PLUMBING.
- SINK, REFER TO PLUMBING.

toilet accessories

CONTRACTOR FURNISHED AND INSTALLED

- GRAB BARS
- MIRRORS
- TOILET & URINAL PARTITIONS
- NAPKIN DISPOSAL UNIT (WOMEN'S)

OWNER FURNISHED, CONTRACTOR INSTALLED

- TOILET PAPER DISPENSER
- PAPER TOWEL DISPENSER
- SOAP DISPENSER
- TRASH CAN

job

2404.03

date

04.07.2025

revisions

DOOR SCHEDULE														
NUMBER	DOOR						FRAME		DETAIL		HARDWARE	RATING	SIGNAGE	COMMENTS
	WIDTH	HEIGHT	PAIR	THICKNESS	MATERIAL	TYPE	MATERIAL	TYPE	HEAD	JAMB				
R100	3' - 0"	7' - 0"		1 3/4"	HM	F	HM	01	-	1/a8.0	06	-	WOMEN	2, 5
R101	3' - 0"	7' - 0"		1 3/4"	HM	F	HM	01	-	1/a8.0	02	-	STORAGE	2, 5
R102	3' - 0"	7' - 0"		1 3/4"	HM	F	HM	01	-	1/a8.0	06	-	MEN	2, 5
R103	3' - 0"	7' - 0"		1 3/4"	HM	F	HM	01	-	1/a8.0	02	-	CUSTODIAN	2, 5
V01A	3' - 0"	7' - 0"		1 3/4"	HM	F	ETR	ETR	-	-	04	-		4, 5
V01C	3' - 0"	7' - 0"		1 3/4"	HM	F	ETR	ETR	-	-	03	-		4, 5
V01D	8' - 0"	7' - 0"	X	1 3/4"	HM	F	ETR	ETR	-	-	03	-		4, 5
V02	6' - 0"	7' - 0"	X	1 3/4"	HM	N	HM	01	4/a8.0	5/a8.0	04	-	WRESTLING ROOM	2, 5
V03	3' - 0"	7' - 0"		1 3/4"	HM	N	HM	01	2/a8.0	3/a8.0	01	-	OFFICE	2, 5
V04	3' - 0"	6' - 8"		1 3/4"	HM	F	HM	01	2/a8.0	3/a8.0	02	-	STORAGE	2, 5
W02	3' - 0"	7' - 0"		1 3/4"	HM	L	HM		2/a8.0	3/a8.0	06	-	MEN	2, 5
W03	3' - 0"	7' - 0"		1 3/4"	HM	L	HM		2/a8.0	3/a8.0	06	-	WOMEN	2, 5
W04A	3' - 0"	7' - 0"		1 3/4"	HM	F	ETR	ETR	-	-	03	-		4, 5
W04B	3' - 0"	7' - 0"		1 3/4"	HM	F	ETR	ETR	-	-	03	-		4, 5
W04C	6' - 0"	7' - 0"	X	1 3/4"	HM	F	ETR	ETR	-	-	04	-		4, 5
W06	3' - 0"	7' - 0"		1 3/4"	HM	F	HM	01	2/a8.0	3/a8.0	01	-	OFFICE	2, 5
W07	3' - 0"	7' - 0"		1 3/4"	HM	F	HM	01	2/a8.0	3/a8.0	05	-	RESTROOM	2, 5

door schedule abbreviations

AL	ALUMINUM
G1	1" INSULATED GLAZING
G2	1/4" GLAZING
HM	HOLLOW METAL
P	PAINT
SCWD	SOLID CORE WOOD
T	TEMPERED

door schedule comments

- ALL FRAMES IN MASONRY WALLS TO BE GROUTED SOLID.
- ROOM SIGNAGE - SEE DETAILS. PROVIDE AT ALL DOORS U.N.O.
- PROVIDE TEMPERED GLASS WITHIN 24" OF EACH SIDE OF DOORS AND WITHIN 18" OF FINISHED FLOOR IN COMPLIANCE WITH IBC 2406.4
- NEW DOOR IN EXISTING HM FRAM. MATCH HINGE AND STRIKE PREP.
- PRIME AND PAINT DOOR AND FRAME.

door types abbreviations

F	FLUSH
FG	FULL GLASS
G	HALF GLASS
K	STEEL ROLL-UP ELECTRIC
L	LOUVERED (TOP OR BOTTOM)
LL	LOUVERED (TOP AND BOTTOM)
N	NARROW LITE

Note: All trim is to be installed BEFORE blanket insulation is applied to walls.

Note: Panel position is shown with panel rib and Opening on 1'-0" module. Location of Rib may vary depending on the Opening Width and location. Field measure before cutting panel and Trim

1 EMP2 wall type - HM door jamb

a8.0 3" = 1'-0" (/)

2 T wall type - HM door head

a8.0 3" = 1'-0" (/)

4 EMP wall type - HM door head

a8.0 3" = 1'-0" (/)

5 EMP wall type - HM door jamb

a8.0 3" = 1'-0" (/)

6 signage at door

a8.0 3/4" = 1'-0" (/)

door types

frame types

01

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CERTIFICATE NO.
23459
MARK E.
BOLLARD
DATE SIGNED 04/07/25
ARIZONA U.S.A.

job
2404.03

date
04.07.2025

revisions

WILLCOX MIDDLE & HIGH SCHOOL
240 N. BISBEE AVE.
WILLCOX, ARIZONA 85643
HIGH SCHOOL REMODEL

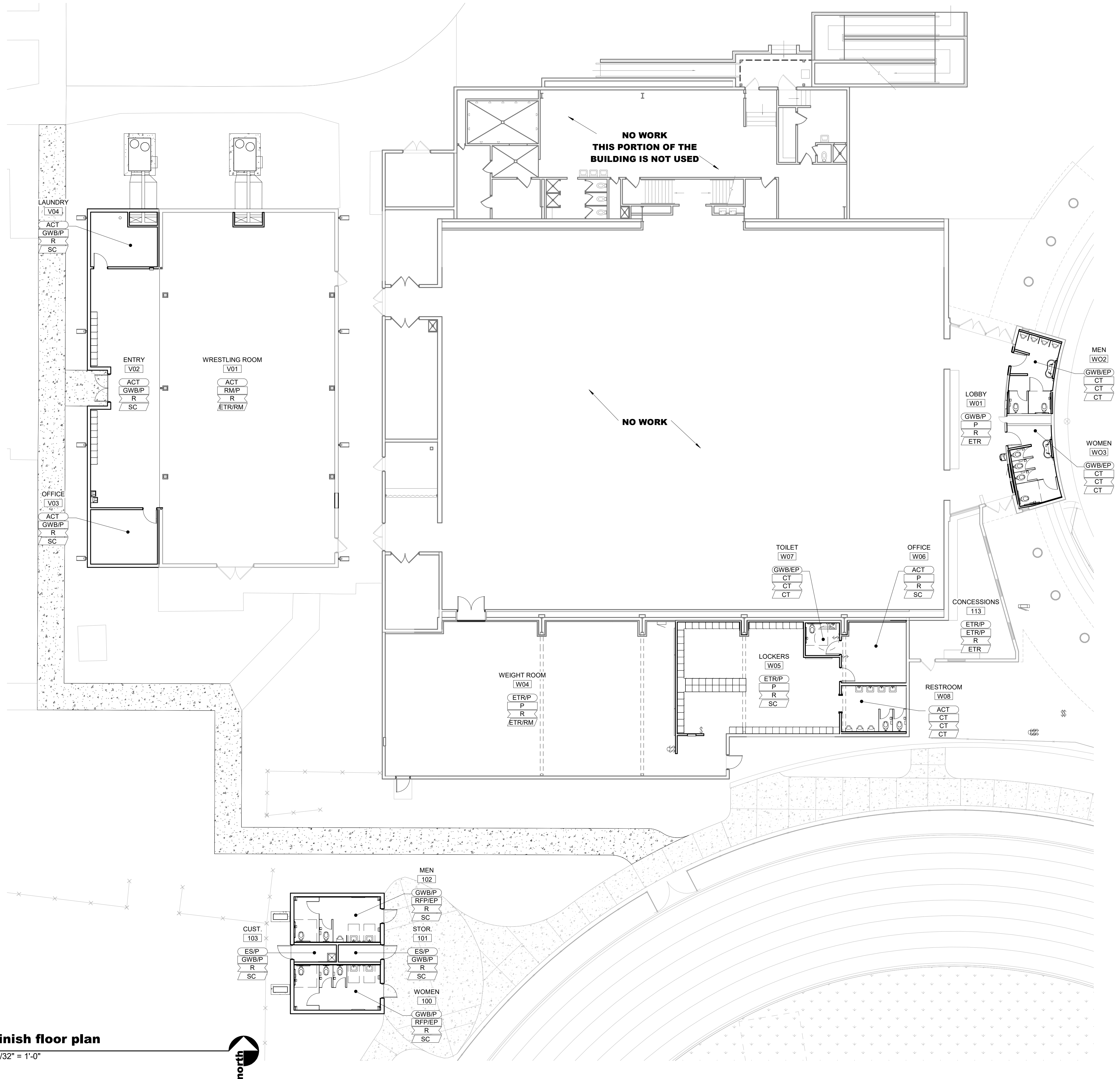
door schedule and
frame types

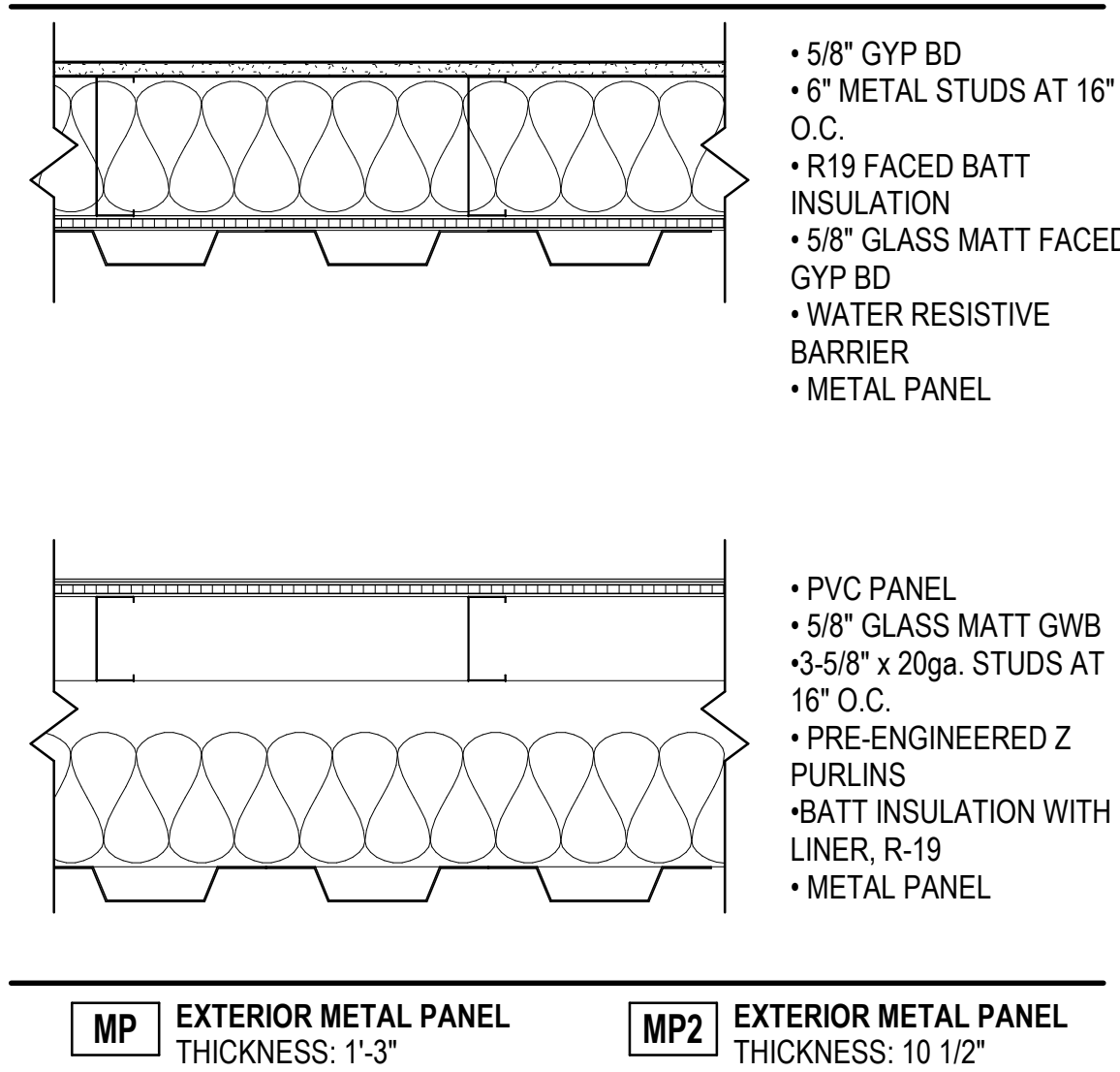
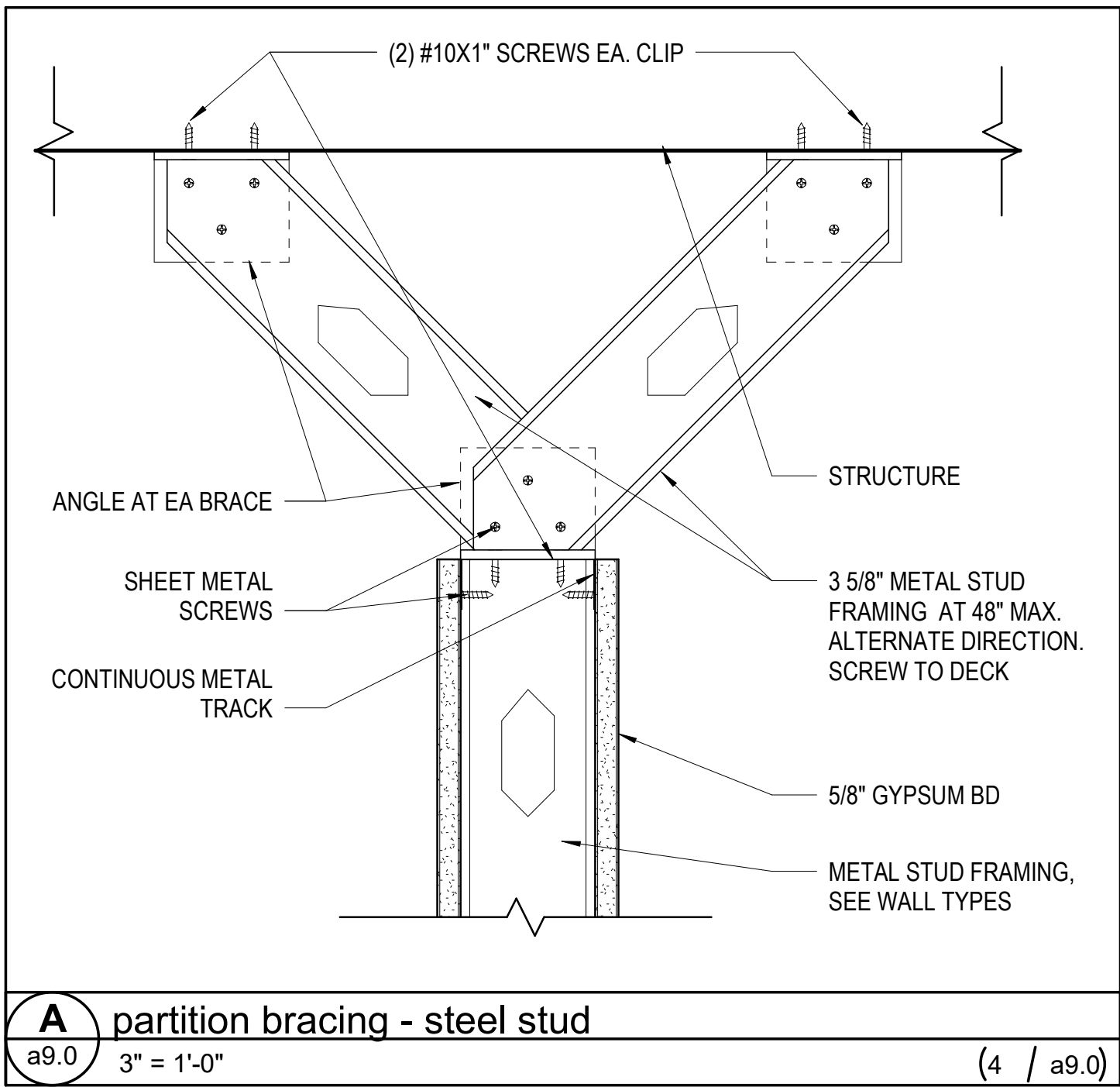
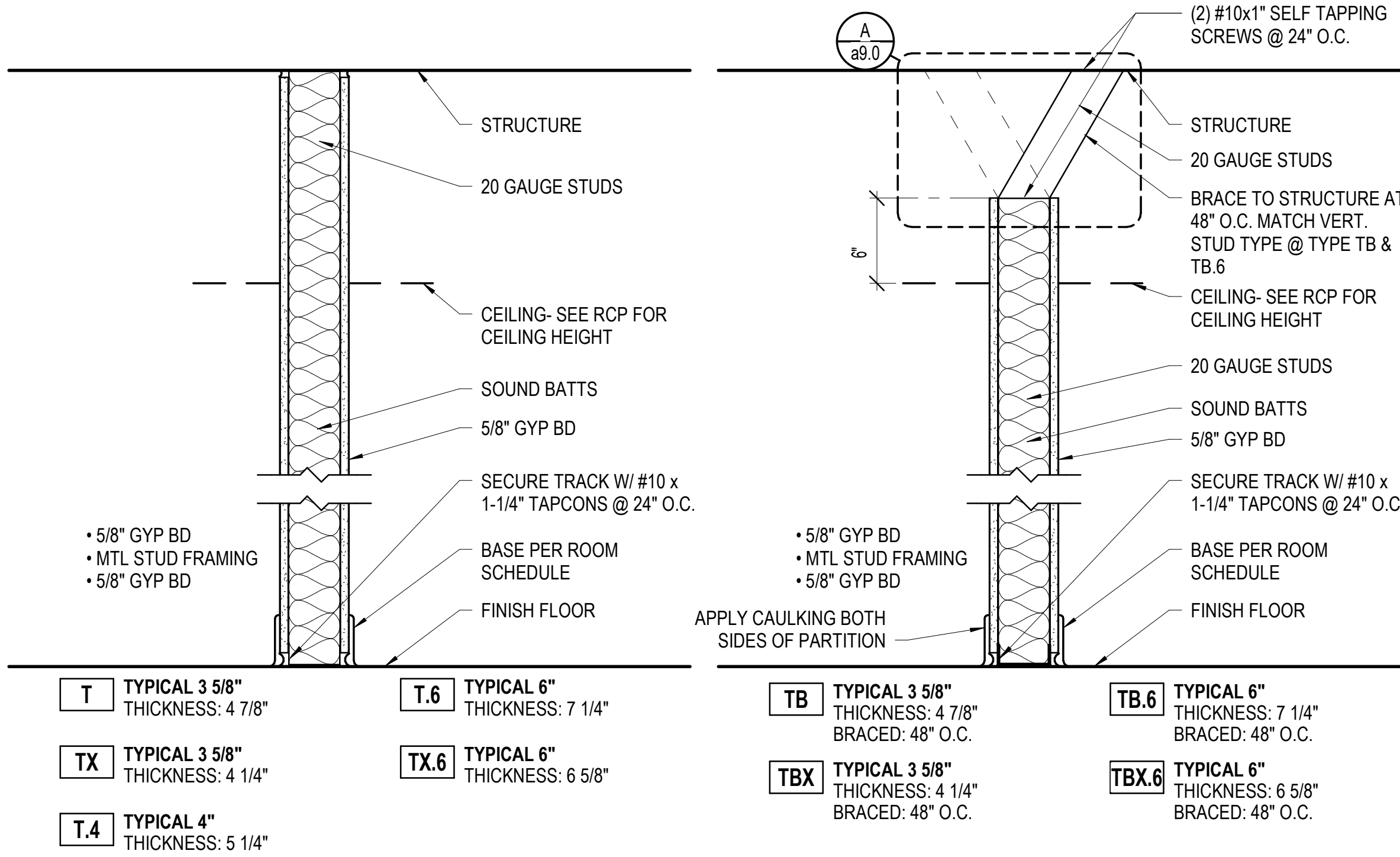
a8.0

1
a8.1

finish floor plan

3/32" = 1'-0"





general notes

- STAGGER GYPSUM BOARD JOINTS FROM ONE SIDE OF THE WALL TO THE OTHER. ALLOW A 1/4" GAP ALONG ALL WALL PERIMETER EDGES, (@ FLOOR, CEILING & SIDES) AND COMPLETELY SEAL 1/4" GAP WITH ACOUSTIC SEALANT OR NON-HARDENING FLEXIBLE CAULK.
- DO NOT 'SHORT-CIRCUIT' RESILIENT CHANNEL SUBSURFACE SUSPENSION MATERIALS WITH FASTENERS THRU DRYWALL AND INTO STUD. DO NOT 'SHORT-CIRCUIT' DRYWALL SHEET ISOLATION FROM STUDS AT SILL, HEAD OR SIDE JOINTS. MAINTAIN REQUIRED DRYWALL SHEET ISOLATION FROM STUD AT ALL POSSIBLE POINTS OF DRYWALL SHEET TO STUD CONTACT.
- LIMIT NECESSARY WALL PENETRATIONS TO NO MORE THAN ONE PER STUD CAVITY. SEPARATE WALL PENETRATIONS AS FAR AS POSSIBLE FROM EACH OTHER. MAINTAIN A MINIMUM OF 24" SEPARATION FROM PENETRATIONS ON ONE SIDE OF A WALL TO PENETRATIONS ON THE OPPOSITE SIDE OF THE WALL.
- SEAL ALL PENETRATIONS & OPENINGS IN JUNCTION BOXES & OUTLETS WITH ACOUSTICAL SEALANT AND/OR PUTTY PADS.
- PROVIDE EXTERIOR TYPE WEATHER-SEAL PADS UNDER ELECTRICAL OUTLET COVERS ON ALL ELECTRICAL OUTLETS ON BOTH SIDES OF SOUND RATED WALL.
- FIBERGLASS BATTING TO BE EVENLY DISTRIBUTED THROUGHOUT WALL CAVITY, AVOID CLUMPING OR EMPTY AREAS IN WALL CAVITY.
- SEAL ALL PENETRATIONS - DUCTWORK, CONDUIT, PIPING ETC. BOTH SIDES OF WALL, WITH FLEXIBLE CAULK.
- METAL FRAMING LISTED IS BASED ON PRODUCTS BY CLARK DIETRICH.
- FULL HEIGHT PARTITIONS EXTEND TO BOTTOM OF T.J.'S. SEE DETAIL ON SHEET A9.1.
- TYPICAL EXTERIOR WALLS ARE 6" METAL FRAMING. REFER TO WALL SECTIONS AND STRUCTURAL DRAWINGS FOR GAUGE AND SPACING.
- CONTRACTOR SHALL CONSULT MANUFACTURER'S LIMITING HEIGHT TABLES AND SHALL ADJUST GAUGE AS NECESSARY TO BE IN CONFORMANCE.
- ALL PLUMBING PENETRATIONS SHALL BE SEALED AT THE GWB, BOTH SIDES OF PARTITION.

WALL STUD DESIGNATION

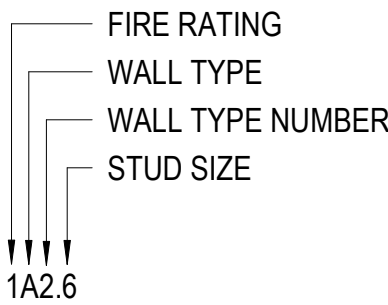
13'-0"	16'-0"	20'-0"
326S125-27 @ 16" O.C.	326S125-33 @ 16" O.C.	326S125-54 @ 12" O.C.
600S125-27 @ 16" O.C.	600S125-27 @ 16" O.C.	600S125-27 @ 16" O.C.
800S125-43 @ 16" O.C.	800S125-43 @ 16" O.C.	800S125-43 @ 16" O.C.
1000S162-43 @ 16" O.C.	1000S162-43 @ 16" O.C.	1000S162-43 @ 16" O.C.

- INTERIOR PARTITION STUD FRAMING STUD DESIGNATION AND SPACING: GYP BD. BOTH SIDES FULL HEIGHT
- ALL BRACING TO BE 362S162 @ 4'-0" O.C.

WALL SCHEDULE ABBREVIATIONS

1	1 HOUR RATED ASSEMBLY
2	2 HOUR RATED ASSEMBLY
.6	STUD SIZE
A	ACOUSTIC
B	BARRIER/ BRACED
CH	CHASE
E	EXTERIOR
F	FURRING
H	HIGH IMPACT
P	PARTITION
PC	PLUMBING CHASE
S	SHAFT
SR	SMOKE RESISTANT
T	TYPICAL
V	VAPOR BARRIER
X	ONE-SIDED FINISH

partition type legend



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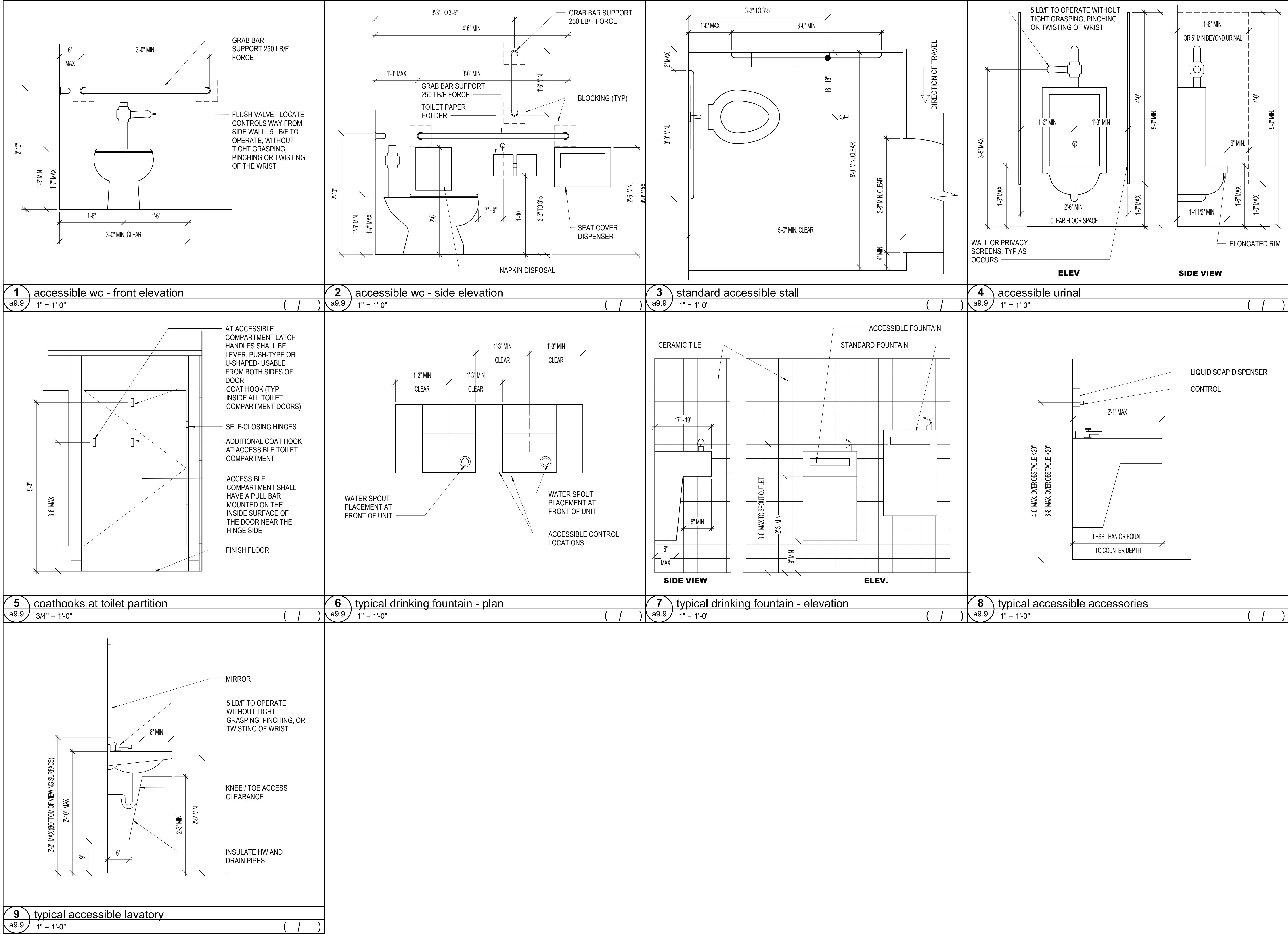
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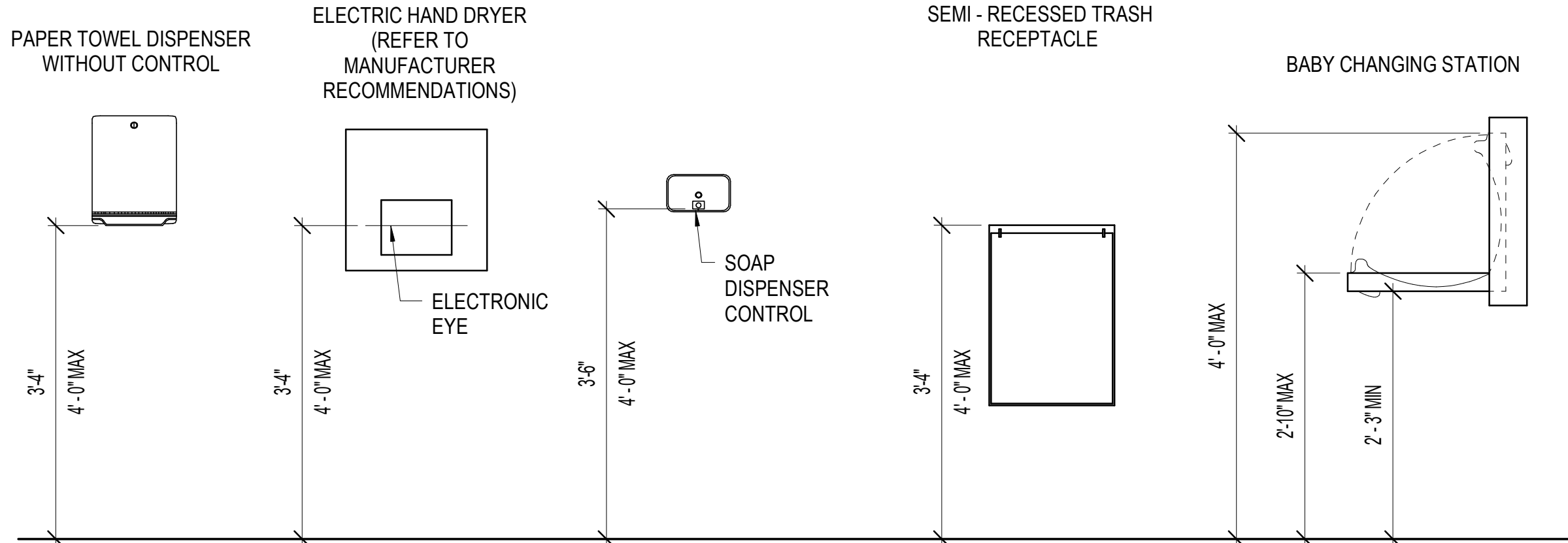
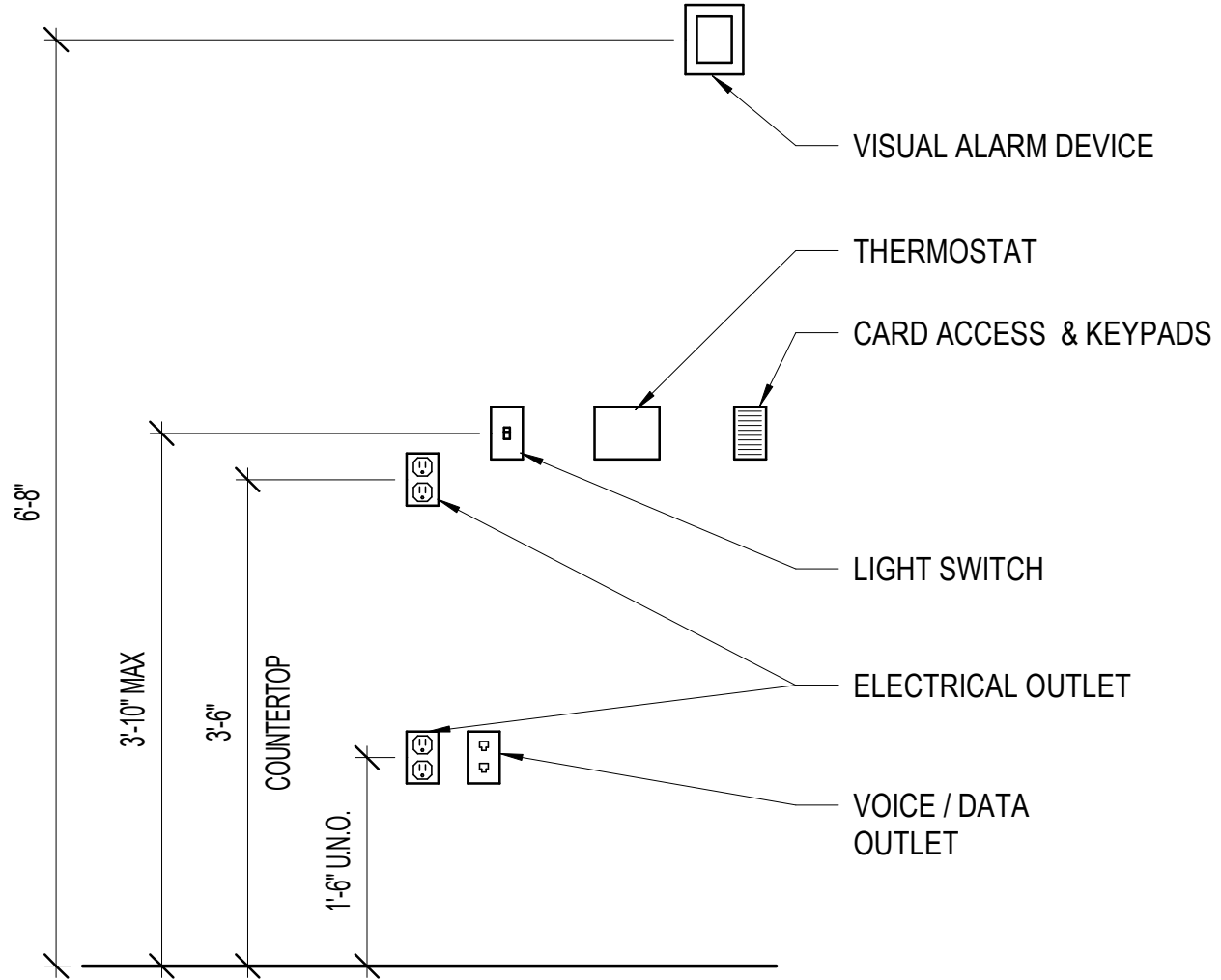
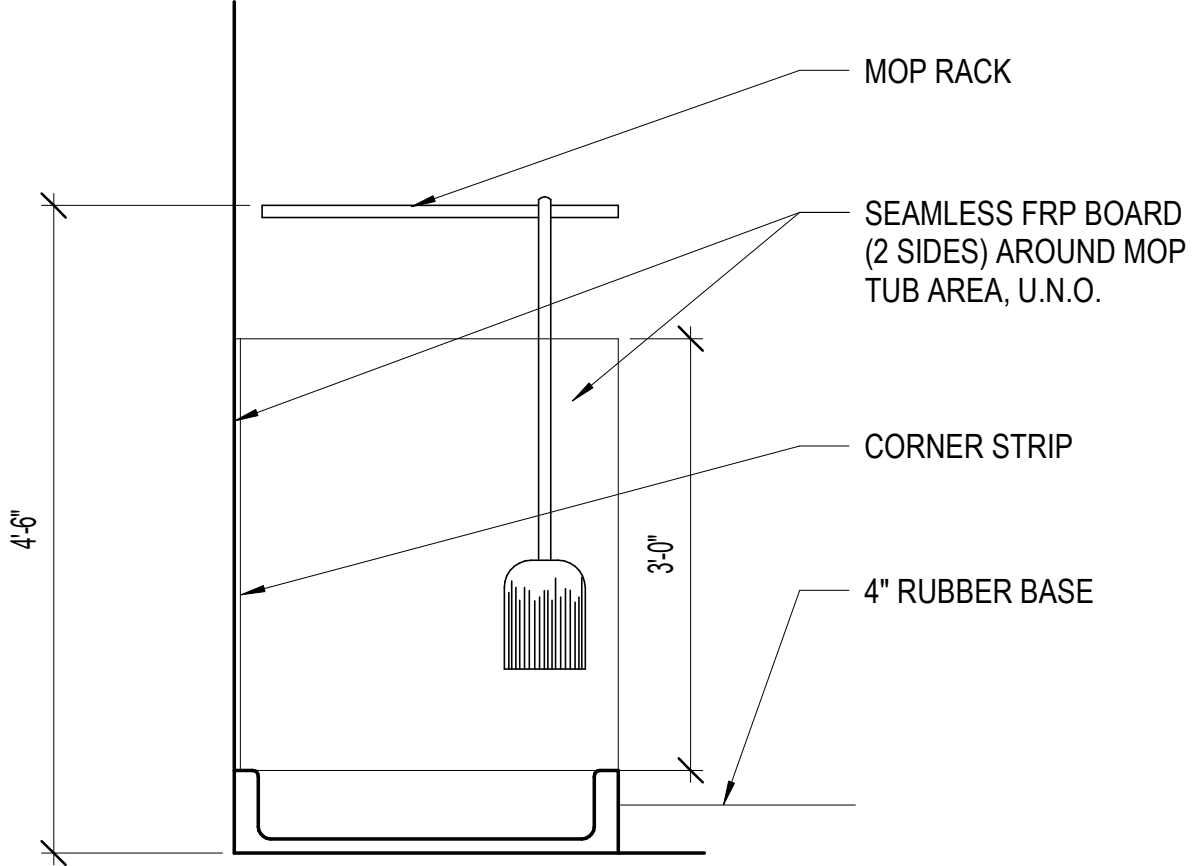
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HIGH SCHOOL REMODEL

wall types

a9.0



 <p>NOTE: 1. OPERABLE PARTS SHALL BE PLACED BETWEEN 48 INCHES MAXIMUM AND 15 INCHES MINIMUM ABOVE THE FINISH FLOOR OR GROUND. PREFERRED MOUNTING HEIGHTS ARE LISTED ABOVE. 2. ALL ACCESSORIES ARE TO HAVE A 4" MAX. PROJECTION UNLESS OVER FIXED ACCESSORY WITH BOTTOM < 27" A.F.F.</p>		 <p>NOTE: 1. OPERABLE PARTS SHALL BE PLACED BETWEEN 48 INCHES MAXIMUM AND 15 INCHES MINIMUM ABOVE THE FINISH FLOOR OR GROUND. PREFERRED MOUNTING HEIGHTS ARE LISTED ABOVE.</p>			
1 accessible restroom accessories	3 electrical devices	4 typical mop rack			
a9.10 3/4" = 1'-0"	a9.10 3/4" = 1'-0"	a9.10 3/4" = 1'-0"			

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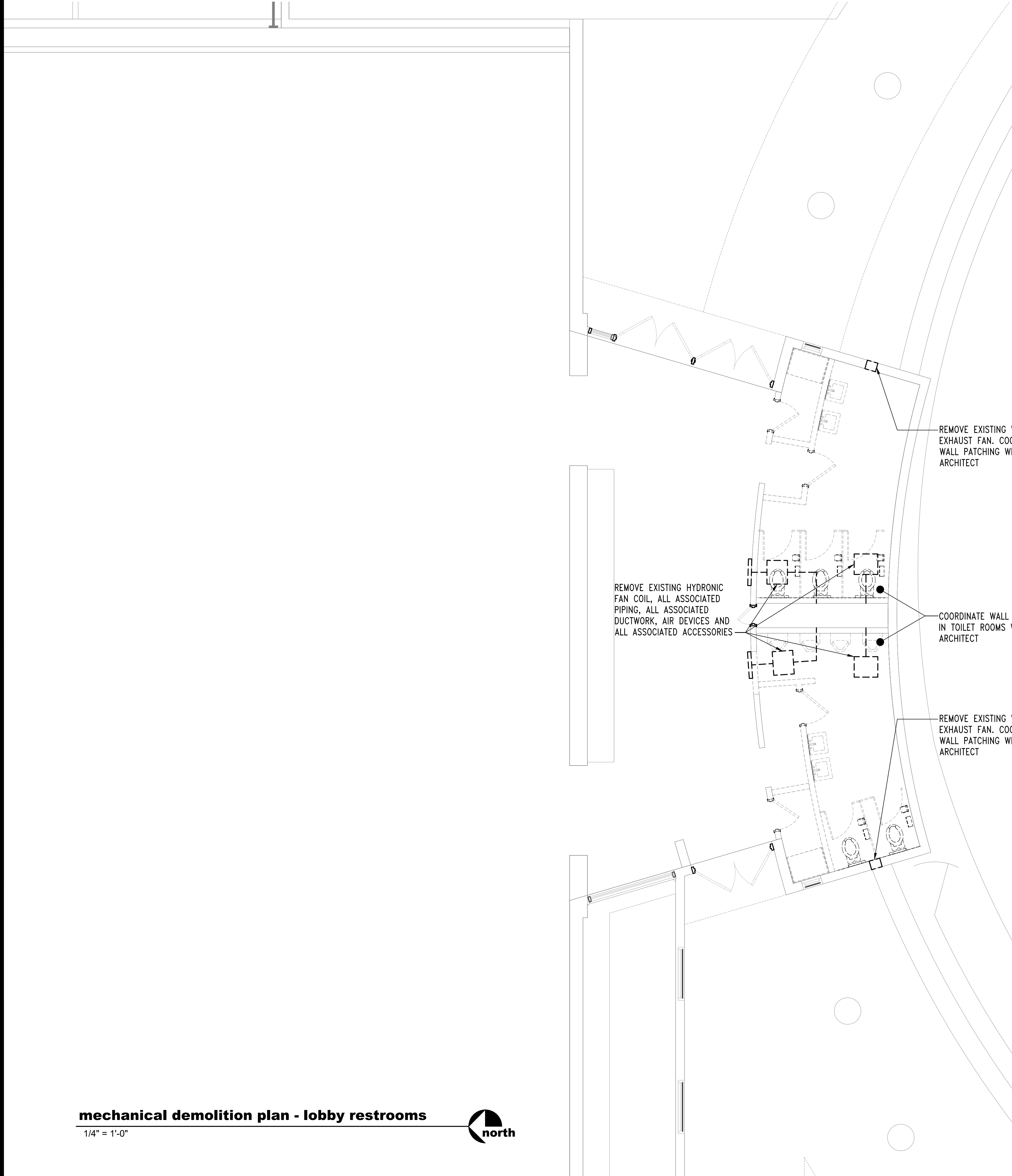
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accessibility details

a9.10

WILLCOX MIDDLE & HIGH SCHOOL

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WILLCOX, ARIZONA 85643
HIGH SCHOOL REMODEL



mechanical demolition plan - lobby restrooms

1/4" = 1'-0"



MECHANICAL GENERAL NOTES

1. COORDINATE ALL MECHANICAL WORK WITH ALL OTHER TRADES. VERIFY ALL EXISTING CONDITIONS BEFORE THE START OF WORK.
2. PROVIDE ALL REQUIRED DEMOLITION OF EXISTING MECHANICAL EQUIPMENT, MATERIALS AND OTHER ITEMS WHICH ARE NOT TO BE REUSED IN NEW DESIGN. ALL ITEMS WHICH THE OWNER DOES NOT WISH TO SALVAGE SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE.
3. TRANSITION ALL SUPPLY AND RETURN DUCTWORK FROM PACKAGED ROOFTOP EQUIPMENT TO DUCT THROUGH ROOF (DTR) AND DUCT THROUGH WALL (DTW) SIZE. COORDINATE EXACT LOCATIONS WITH ROOF AND WALL STRUCTURAL SYSTEM. VERIFY ADEQUACY OF STRUCTURE TO SUPPORT MECHANICAL EQUIPMENT WITH ARCHITECT PRIOR TO INSTALLATION.
4. LINE ALL RECTANGULAR AIR CONDITIONING DUCTWORK WITH 1" THICK DUCT LINER PER SPECIFICATIONS. ALL RECTANGULAR AIR CONDITIONING DUCTWORK EXPOSED TO THE WEATHER SHALL BE LINED WITH 2" THICK DUCT LINER PER SPECIFICATIONS. ALL EVAPORATIVE COOLING DUCTWORK AND ROUND AIR CONDITIONING DUCTWORK NOT INTERNALLY LINED SHALL BE EXTERNALLY WRAPPED WITH INSULATION AS PER SPECIFICATIONS.
5. ALL DUCT ELBOWS SHALL BE MITERED WITH SINGLE THICKNESS TURNING VANES UNLESS INSTRUCTED OTHERWISE ON DRAWINGS. PROVIDE 45 DEGREE ENTRY FITTINGS AT BRANCH DUCT CONNECTIONS TO DUCT MAINS. FLEXIBLE DUCTS SHALL BE INSTALLED TO MAINTAIN FULL CROSS-SECTIONAL FREE AREA. PROVIDE RIGID SHEET METAL ELBOWS OR LINED PLENUM BOXES AT AIR DEVICES WHEN REQUIRED.
6. COORDINATE EXACT LOCATION OF ALL AIR DEVICES WITH ARCHITECTURAL REFLECTED CEILING PLAN.
7. ROUTE ALL CONDENSATE DRAIN LINES AS INDICATED ON DRAWINGS. PROVIDE MINIMUM SLOPE OF 1/8" PER 1'-0". SEE PLUMBING DRAWINGS.
8. SUPPORT HEAT PUMP CONDENSING UNITS ON PLATFORM. EXACT LOCATION SHALL INSURE ADEQUATE CLEARANCE FOR SERVICING AND FOR AIR CIRCULATION.
9. ROUTE REFRIGERANT PIPING BETWEEN FAN COIL UNIT AND HEAT PUMP CONDENSING UNIT CONCEALED IN FINISHED SPACES. SEAL ALL ROOF OR WALL PENETRATIONS WEATHERTIGHT. PROVIDE PVC PIPE SLEEVE FOR UNDERGROUND REFRIGERANT PIPING. REFRIGERANT PIPING SIZES SHALL BE FOR MANUFACTURER'S INSTALLATION INSTRUCTIONS (BASED ON THE ACTUAL LOCATIONS AND ELEVATIONS OF EQUIPMENT).
10. SUSPEND FAN COIL UNIT FROM STRUCTURE WITH THREADED RODS AS REQUIRED. PROVIDE MASON INDUSTRIES TYPE 30N VIBRATION ISOLATORS OR EQUIVALENT. METHOD OF CONNECTION TO BUILDING STRUCTURE SHALL BE SUBMITTED TO AND APPROVED BY STRUCTURAL ENGINEER.
11. ROUTE DUCTS FROM TOILET EXHAUST FANS TO ROOF CAPS. CONCEAL DUCTWORK. ROOF CAPS SHALL BE FLASHED WEATHERTIGHT. OFFSET EXHAUST DISCHARGE AS REQUIRED INSURING A MINIMUM 10'-0" CLEARANCE FROM ALL OUTSIDE AIR INTAKES.
12. ALL LOW VOLTAGE CONTROL WIRING AND ITS INSTALLATION TO BE BY MECHANICAL CONTRACTOR. INSTALL PER ELECTRICAL SPECIFICATIONS. MOUNTING HEIGHT OF THERMOSTATS SHALL BE PER ADA REQUIREMENTS.
13. PROVIDE SMOKE DETECTOR IN RETURN AIR SYSTEM(S) MOVING MORE THAN 2000 CFM AS INDICATED ON DRAWINGS. RETURN AIR PLENUMS MOVING MORE THAN 2000 CFM REQUIRE A RETURN DUCT SMOKE DETECTOR AT EACH UNIT. SMOKE DETECTORS SHALL DISENGAGE FAN(S) WHEN ACTIVATED. SMOKE DETECTORS INSTALLED IN THE RETURN AIR DUCT(S) MUST BE LOCATED AHEAD OF ANY OUTSIDE AIR INLET.
14. PROVIDE 3/4" WAFFLE STYLE VIBRATION ISOLATORS EQUAL TO MASON INDUSTRIES "SUPER W" AT ALL ROOF MOUNTED, MOTOR DRIVEN EQUIPMENT.
16. MECHANICAL CONTRACTOR SHALL REVIEW ALL ELECTRICAL DRAWINGS BEFORE PURCHASING EQUIPMENT TO INSURE THAT PROPER ELECTRICAL SERVICE IS TO BE PROVIDED FOR ALL NEW EQUIPMENT.
17. CLOTHES DRYER EXHAUST DUCT SHALL BE 4" NOMINAL IN DIAMETER. THE MAXIMUM LENGTH OF THE EXHAUST DUCT SHALL BE 35 EQUIVALENT FEET FROM THE CONNECTION TO THE TRANSITION DUCT FROM THE DRYER TO THE OUTLET TERMINAL. REFER TO TABLE 504.8.4.1 OF THE 2018 INTERNATIONAL MECHANICAL CODE FOR EQUIVALENT LENGTHS OF DUCT FITTINGS.



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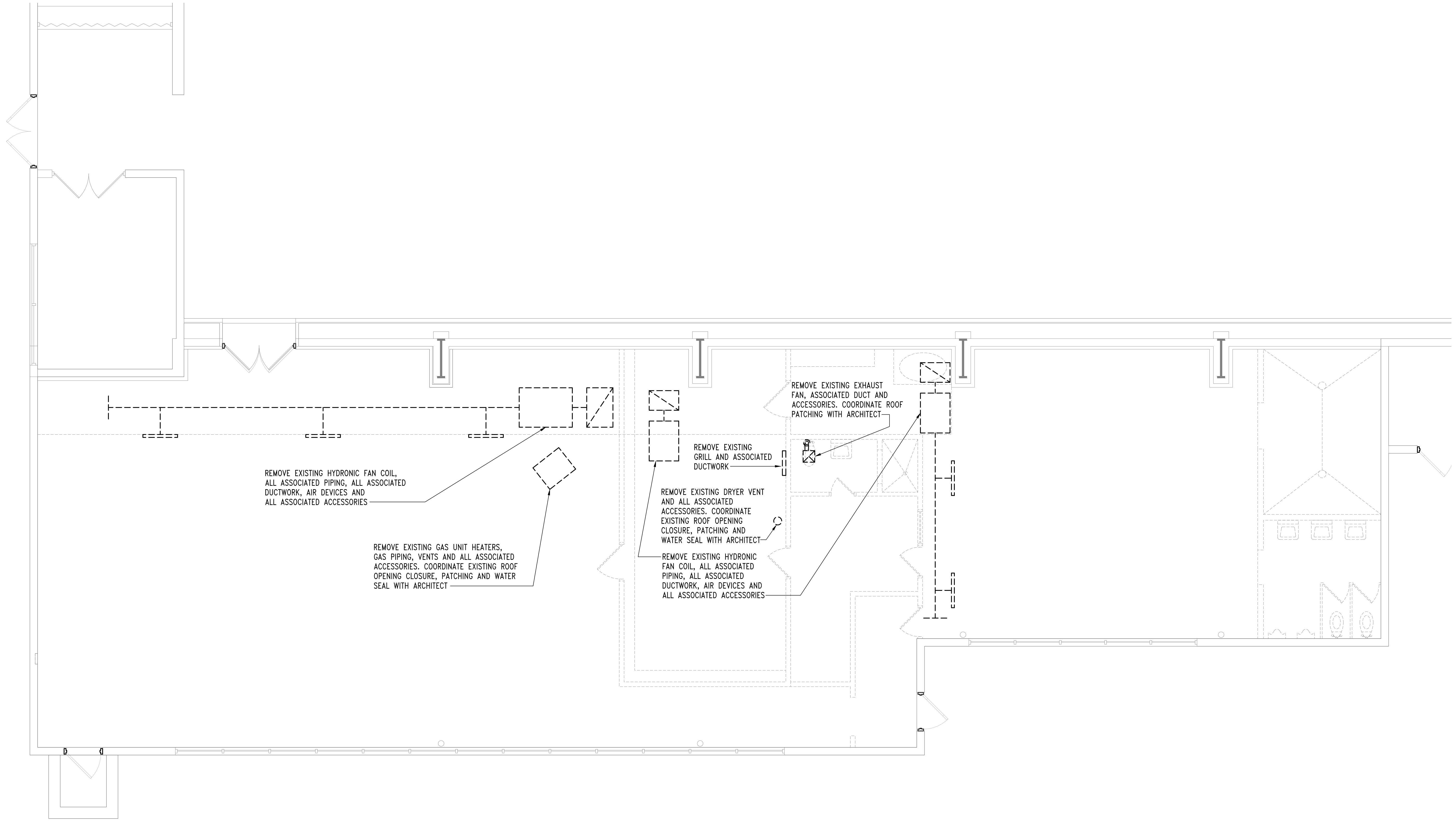
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240 N. BISBEE AVE.
WILLCOX, ARIZONA 85643
HIGH SCHOOL REMODEL

mechanical demolition
lobby restrooms

m1.0



mechanical demolition plan - weight and locker rms

1/4" = 1'-0"



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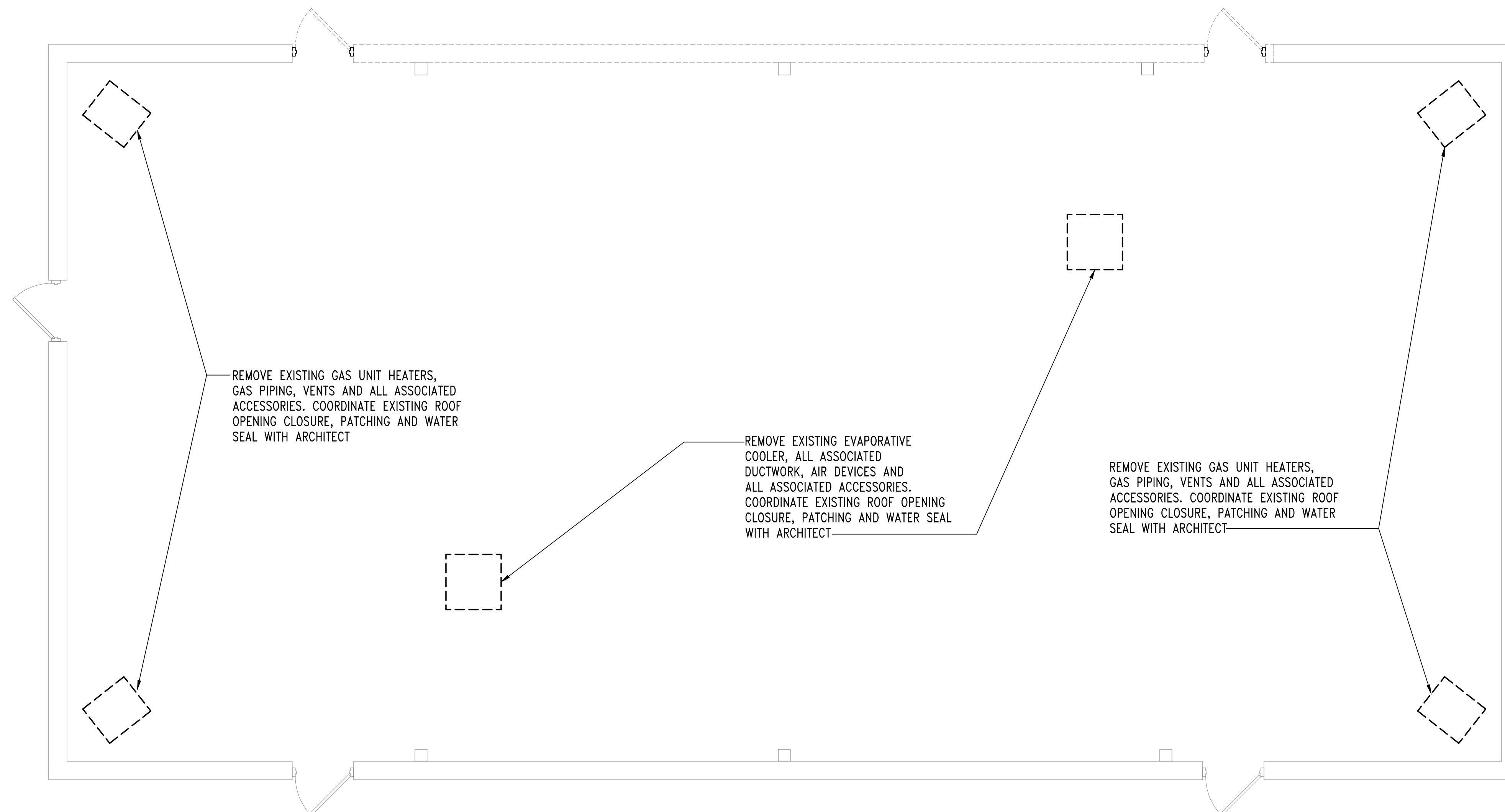
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HIGH SCHOOL REMODEL

mechanical demolition
weight and locker rooms

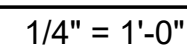
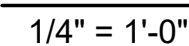
m1.1



1/4" = 1'-0"

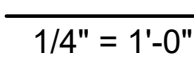


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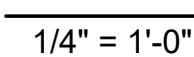
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Project #: 25118

OUTDOOR AIR CALCULATION													
BUILDING UNIT	ROOM NUM.	ROOM NAME	ZONE FLOOR AREA, Az (SQ.FT.)	CODE	OCCUPANCY CATEGORY, Ra, Rp	ZONE POPULATION Pz	ZONE AIR DISTRIBUTION EFFECTIVENESS, Ez	ZONE SUPPLY AIR FLOW Vpz (CFM)	SYSTEM POPULATION Ps	OUTDOOR AIR INTAKE Vol (CFM)	UNIT (WC OR URINAL) UNIT	REQUIRED EXHAUST VENTILATION (CFM)	NOTES
	W02	MENS RESTROOM	170	87	TOILETS – CONTINUOUS	0.0		250			6	300	
	W03	WOMENS RESTROOM	165	87	TOILETS – CONTINUOUS	0.0		250			4	200	
			335			0.0	CSCR	500	0	0		500	
	W04	WEIGHT ROOM	2,285	72	HEALTH CLUB/ WEIGHT ROOMS	22.9		8,000				0	
	W05	MEN LOCKERS	835	83	LOCKER/DRESSING ROOMS	0.0		3,170				209	
	W06	OFFICE	190	37	OFFICE SPACE	1.0		580				0	
	W07	MEN TOILET	55	87	TOILETS – CONTINUOUS	0.0		50			1	50	
	W08	MEN RESTROOM	155	87	TOILETS – CONTINUOUS	0.0		200			5	250	
			3,520			23.8	CSCR	12,000	24	637		509	
	V01	WRESTLING RM	2,900	72	HEALTH CLUB/ WEIGHT ROOMS	29.0		2,400				0	
	V02	ENTRY	875	35	ENTRY LOBBIES	8.8		1,650				0	
	V03	OFFICE	175	37	OFFICE SPACE	0.9		300				0	
	V04	LAUNDRY STORAGE	175	36	STORAGE ROOMS	0.4		450				0	
			4,125			39.0	CSCR	4,800	39	1,109		0	

MINI-SPLIT CONDENSING UNIT SCHEDULE	
MARK	MHPCU-1,2,3,4
MATCHING FAN COIL	MFC-1,2,3,4
SEASONAL ENERGY EFFICIENCY RATIO 2	21
REFRIGERANT TYPE	R410A
MINIMUM TOTAL COOLING CAPACITY (MBH)	18.0
COOLING AMBIENT TEMPERATURE (DEG. F)	110
HEATING AMBIENT TEMPERATURE (DEG. F)	28
VOLTS/PHASE/HZ	208/1/60
UNIT MCA	16.0
UNIT MOCP	25.0
WEIGHT (LBS)	125
REFERENCE	CARRIER 38MARBQ18
NOTES	1 THRU 6
1. SCHEDULED CAPACITY SHALL BE FOR 4160 FT ELEVATION. 2. CAPACITY OF UNIT SHALL BE AS SCHEDULED TO PROVIDE REQUIRED CAPACITY FOR ALL CONNECTED INDOOR UNITS. 3. UNIT SHALL HAVE SINGLE POINT POWER CONNECTION. UNIT DISCONNECT MEANS TO BE PROVIDED BY ELECTRICAL. 4. PROVIDE ALL NECESSARY CONTROLS TO PREVENT COMPRESSOR RAPID RECYCLING AND ALL FEATURES STANDARD TO THE UNIT SCHEDULED. 5. PROVIDE ADDITIONAL REFRIGERANT AS REQUIRED BY MANUFACTURER’S LITERATURE FOR SUM TOTAL OF ALL LINE SETS ON SYSTEM. 6. CAPACITIES SCHEDULED AT SPECIFIED CONDITIONS.	

MINI-SPLIT FAN COIL UNIT SCHEDULE	
MARK	MFC-1,2,3,4
MATCHING CONDENSING UNIT MARK	MHPCU-1,2,3,4
TYPE	CEILING
MINIMUM TOTAL COOLING CAPACITY (MBH)	18.0
MINIMUM SENSIBLE COOLING CAPACITY (MBH)	15.3
ENTERING AIR CONDITIONS (DB/WB)	75/63
TOTAL SUPPLY AIR (CFM)	400
VOLTS/PHASE/HZ	208/1/60
UNIT MCA	-
UNIT FLA	0.36
OPERATING WEIGHT (LBS.)	50
REFERENCE	CARRIER 40MCCAQ18
NOTES	1 THRU 7
1. SCHEDULE CAPACITY SHALL BE AT 4160 CONDITIONS. 2. PROVIDE ALL NECESSARY INTERCONNECTING PIPING (& REFRIGERANT ACCESSORIES) & CONTROL WIRING BETWEEN FAN COIL UNIT, BC CONTROLLER & MATCHING CONDENSING UNIT. 3. INDOOR UNIT IS POWERED BY THE OUTDOOR UNIT. 4. PROVIDE INTEGRAL FILTER & WALL MOUNTED PROGRAMMABLE THERMOSTAT. 5. REFRIGERANT PIPING SHALL BE SIZED PER MANUFACTURER’S RECOMMENDATIONS FOR LONG LENGTH APPLICATIONS. 6. MANUFACTURER SHALL PROVIDE ALL NECESSARY DEVICES,VALVES, ETC. AS REQUIRED FOR THIS APPLICATION. 7. PROVIDE INTEGRAL CONDENSATE PUMP	

AIR CONDITIONING UNIT SCHEDULE (PACKAGED ROOFTOP) – WRESTLING BLDG.	
MARK	AC-1,2
NOMINAL TONNAGE	6
MINIMUM TOTAL COOLING CAPACITY (MBH)	59.7
MINIMUM SENSIBLE COOLING CAPACITY (MBH)	51.7
MINIMUM NUMBER COOLING STAGES	2
COOLING AMBIENT TEMPERATURE (DEG. F)	110
ENTERING AIR TEMPERATURE (DEG/DB/WB)	82/64
MINIMUM ENERGY EFFICIENCY RATIO SEER	16
TYPE OF HEATING	NATURAL GAS
MINIMUM HEATING CAPACITY (MBH)	52.8
HEATING AMBIENT TEMPERATURE (DEG F)	70
MAXIMUM NATURAL GAS INPUT (CFH)	125
MINIMUM NUMBER HEATING STAGES	1
ENTERING AIR TEMPERATURE (DEG DB)	26
SUPPLY AIR (CFM)	2400
OUTSIDE AIR (CFM)	500
EXT. STATIC PRESSURE ("w.g.)	0.5
DRIVE TYPE	BELT
MAXIMUM OPERATING WEIGHT (LBS)	1000
VOLTS/PHASE/HZ	208/3/60
UNIT FLA	32.2
UNIT MCA	36
UNIT MOCP	45
REFERENCE	CARRIER 48GCEM07
NOTES	1 THRU 15
1. CAPACITY SCHEDULED SHALL BE FOR 4170 FT. ELEVATION. 2. SCHEDULED CAPACITY IS ACTUAL CAPACITY. 3. PROVIDE LOW VOLTAGE CONTROL POWER TRANSFORMER. 4. PROVIDE SINGLE POINT POWER CONNECTION. 5. PROVIDE NECESSARY CONTROLS TO PREVENT COMPRESSOR RAPID RECYCLING. 6. PROVIDE LOW AMBIENT CONTROL TO 30 DEG. F. 7. PROVIDE 14" FACTORY ROOF CURB INSTALLED ON CONCRETE PAD. LEVEL UNIT AS REQUIRED. 8. PROVIDE 2" PLEATED DISPOSABLE FILTERS. SEE SPECIFICATIONS. 9. PROVIDE 5 YEAR COMPRESSOR WARRANTY. 10. PROVIDE CONDENSER COIL HAIL GUARD. 11. PROVIDE UNPOWERED CONVENIENCE OUTLET. COORDINATE WITH ELECTRICAL. 12. PROVIDE 25 PERCENT MANUAL OUTDOOR AIR DAMPER, BAROMETRIC DAMPER AND HOOD W/BIRDSCREEN . 13. PROVIDE THERMOSTAT CLEAR LOCK BOX. 14. PROVIDE 7-DAY PROGRAMMABLE THERMOSTAT SIMILAR TO HONEYWELL MODEL VISION PRO TH8320R WITH OPTIMIZE START-UP, AUTO-CHANGEOVER, NIGHT SET-BACK, OVER-RIDE CONTROL AND CAPABILITY TO UTILIZE REMOTE WIRELESS TEMP SENSORS MODEL C7189R. INDOOR FAN TO BE SET FOR CONTINUOUS RUNNING DURING OCCUPIED HOURS. 15. PROVIDE NON-FUSED DISCONNECT	

AIR DEVICE SCHEDULE							
MARK	A	B	C	D	E	F	G
SERVICE	SUPPLY	SUPPLY	RETURN	RETURN	TRANSFER	EXHAUST	INTAKE
MATERIAL	ALUM	STEEL	STEEL	STEEL	ALUM	ALUM	STEEL
FINISH	WHITE	WHITE	WHITE	WHITE	WHITE	WHITE	WHITE
PATTERN	DOUBLE	4-WAY	SINGLE	SINGLE	EGGCRATE	SINGLE	SINGLE
	DEFLECT		DEFLECTION	DEFLECTION		DEFLECTION	DEFLECTION
REFERNCE	KRUEGER	KRUEGER	KRUEGER	KRUEGER	KRUEGER	KRUEGER	KRUEGER
	5880V	6204	S80H	S80H	EGC5	580H	S80H
NOTES	1,2	1,2,3,4	1,2	2	2	1,2	2
1. PROVIDE OPPOSED BLADE DAMPER. 2. PROVIDE FRAME STYLE SUITABLE FOR CEILING OR WALL SPECIFIED ON ARCH. DRAWINGS. 3. CEILING DIFFUSER SHALL BE PERFORATED TYPE. 4. PROVIDE SQUARE TO ROUND ADAPTORS WHEN REQUIRED.							



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mechanical schedules

FAN COIL UNIT SCHEDULE – WEIGHT BUILDING	
MARK	FC–1 thru 6
MATCHING CONDENSING UNIT MARK	HPCU–1 thru 6
TYPE	HORIZONTAL
MINIMUM TOTAL COOLING CAPACITY (MBH)	50.0
MINIMUM SENSIBLE COOLING CAPACITY (MBH)	46.3
ENTERING AIR TEMPERATURE (DEG. DB/WB)	79/63
MINIMUM HEATING CAPACITY (MBH)	38.1
ENTERING AIR TEMPERATURE (DEG. DB)	70
TOTAL SUPPLY AIR (CFM)	2000
OUTSIDE AIR (CFM)	200
EXTERNAL STATIC PRESSURE ("w.g.)	0.5
DRIVE TYPE	BELT
VOLTS/PHASE/HZ	208/1/60
HEATER TYPE	ELECTRIC HEAT
HEATER KW (@208/1)	15 (11.3)
HEATER VOLTS/PHASE/HZ	208/1/60
FAN MOTOR HP.	3/4
TOTAL FLA	17.8
TOTAL MCA	22.3
TOTAL MOCP	25.0
MINIMUM FILTER AREA(SQ.FT.)	3.3
MAXIMUM OPERATING WIEGHT (LBS.)	225
REFERENCE	CARRIER FJ5ANXD60
NOTES	1 THRU 6
1. SCHEDULE CAPACITY SHALL BE FOR 4160 FT. ELEVATION. 2. PROVIDE ALL NECESSARY INTERCONNECTING PIPING (& REFRIGERANT ACCESSORIES) ,CONTROL WIRING BETWEEN FAN COIL UNIT. MATCHING CONDENSING UNIT, EXPANSION VALVE KIT AND HEAT PUMP KIT,FIELD INSTALLED. (IF APPLICABLE) 3. UNIT SHALL BE SUITABLE FOR REVERSE CYCLE HEAT PUMP OPERATION. 4. FAN COIL UNIT SHALL HAVE SINGLE POINT POWER CONNECTION. 5. PROVIDE EZ TRAP MODEL EZT OVERFLOW SWITCH MOUNT PER MANUFACTURERS INSTRUCTIONS IN THE OVERFLOW CONNECTION. WIRE TO THERMOSTAT RED(POWER) WIRE TO SHUT DOWN INDOOR OUTDOOR UNIT IF WATER IS DETECTED. 6. PROVIDE 7–DAY PROGRAMMABLE THERMOSTAT SIMILAR TO HONEYWELL MODEL VISION PRO TH832OR WITH OPTIMIZE START–UP, AUTO–CHANGEOVER, NIGHT SET–BACK, OVER–RIDE CONTROL AND CAPABILITY TO UTILIZE REMOTE WIRELESS TEMP SENSORS MODEL C7189R. INDOOR FAN TO BE SET FOR CONTINUOUS RUNNING DURING OCCUPIED HOURS.	

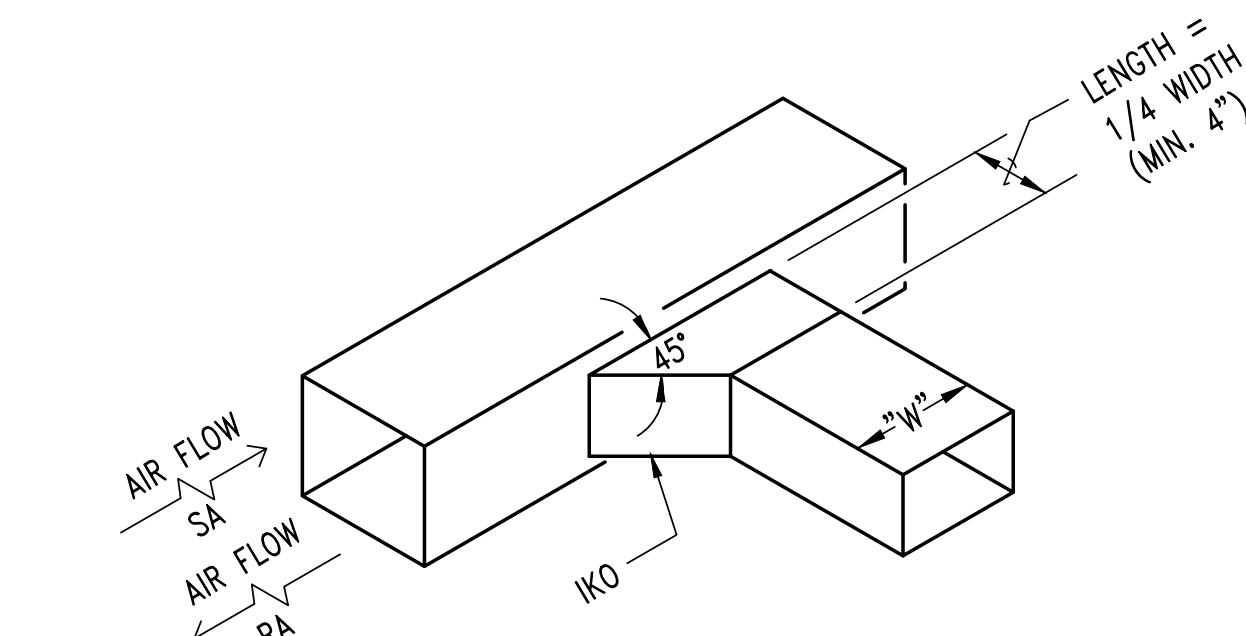
EXHAUST FAN SCHEDULE				
MARK	EF–1,2	EF–3	EF–4	EF–5
TYPE	CEILING	ROOF	CEILING	ROOF
WHEEL TYPE	F.C	B.I.	F.C	B.I.
AIR FLOW (CFM)	200	600	50	650
E.S.P. ("w.g.)	0.25	0.25	0.25	0.5
DRIVE TYPE	DIRECT	DIRECT	DIRECT	DIRECT
MAXIMUM FAN SPEED (RPM)	884	975	675	1017
MAXIMUM SONES	2.2	4.1	1.5	4.5
MOTOR HP	1.42(AMPS)	1/6	0.29(AMPS)	1/6
VOLTS/PHASE/HZ	115/1/60	115/1/60	115/1/60	115/1/60
MAXIMUM OPERATING WEIGHT (LBS.)	15	65	15	65
REFERENCE	GREENHECK SP–A390	GREENHECK G–100–B	GREENHECK SP–B70	GREENHECK G–100–B
NOTES	1,2,3,4,6,7	1 THRU 6	1,2,3,4,8,9	1 THRU 6
1. SCHEDULE CAPACITY SHALL BE FOR 4160 FT. ELEVATION. 2. FAN PERFORMANCE SHALL BE AMCA CERTIFIED. 3. FAN MOTOR SHALL BE ELECTRONICALLY COMMUTATED (EC) TYPE WITH SPEED CONTROLLER. 4. PROVIDE DISCONNECT SWITCH. 5. PROVIDE FACTORY SUPPLIED ROOFCURB, BIRDSCREEN & BACKDRAFT DAMPER. 6. PROVIDE 7–DAY PROGRAMMABLE TIMECLOCK, COORDINATE WITH ELECTRICAL. SCHEDULE TO OPERATE DURING OCCUPIED HOURS. 7. PROVIDE BACKDRAFT DAMPER, ROOF CAP(EQUAL TO GRSF–10) AND BIRDSCREEN 8. PROVIDE ON/OFF SWITCH 9. PROVIDE BACKDRAFT DAMPER, ROOF CAP(EQUAL TO RFC–7) AND BIRDSCREEN				

HP CONDENSING UNIT SCHEDULE – WEIGHT BUILDING	
MARK	HPCU–1 thru 6
MATCHING FAN COIL UNIT MARK	FC–1 thru 6
TONNAGE	5.0
COOLING AMBIENT TEMPERATURE (DEG. DB)	110
HEATING AMBIENT TEMPERATURE (DEG. DB)	28
MINIMUM ENERGY EFFICIENCY RATIO	16(SEER2)
UNIT FULL LOAD AMPS	25.2
MCA	31.1
MOCP	50.0
VOLTS/PHASE/HZ	208/1/60
MAXIMUM OPERATING WEIGHT (LBS.)	300
REFERENCE	CARRIER 27SPA660
NOTES	1 thru 4
1. CAPACITY OF UNIT SHALL BE AS SCHEDULED FOR MATCHING FAN COIL UNIT. 2. PROVIDE SINGLE CIRCUIT TWO–STAGE W/LOW AMBIENT CONTROLS 3. PROVIDE ALL FEATURES STANDARD TO THE UNIT SCHEDULED. IN ADDITION, PROVIDE LOW VOLTAGE POWER TRANSFORMER, PROGRAMMABLE T'STAT, FAN RELAY, LIQUID LINE FILTER DRIER, EXPANSION VALVE (IF REQUIRED TO MEET SCHEDULED CAPACITY), ANTI–RECYCLING CONTROL (TO PREVENT RAPID COMPRESSOR RECYCLING), START RELAY/CAPACITOR KIT (FOR EASY STARTING) & LOW AMBIENT CONTROL KIT. 4. REFER TO MANUFACTURER'S MAXIMUM ALLOWABLE REFRIGERANT LINE SET EQUIVALENT LENGTH.	

INTAKE AIR HOOD SCHEDULE	
MARK	IH–1,2
SERVICE	INTAKE
AIRFLOW (CFM)	370
MAX PRESSURE DROP (IN W.G.)	0.05
THROAT SIZE (IN)	10
HOOD SIZE (IN)	21
REFERENCE	GREENHECK GRSR–10
NOTES	1,2
1. PROVIDE FACTORY BIRDSCREEN AT HOOD OPENING. 2. PROVIDE FACTORY ROOFCURB.	



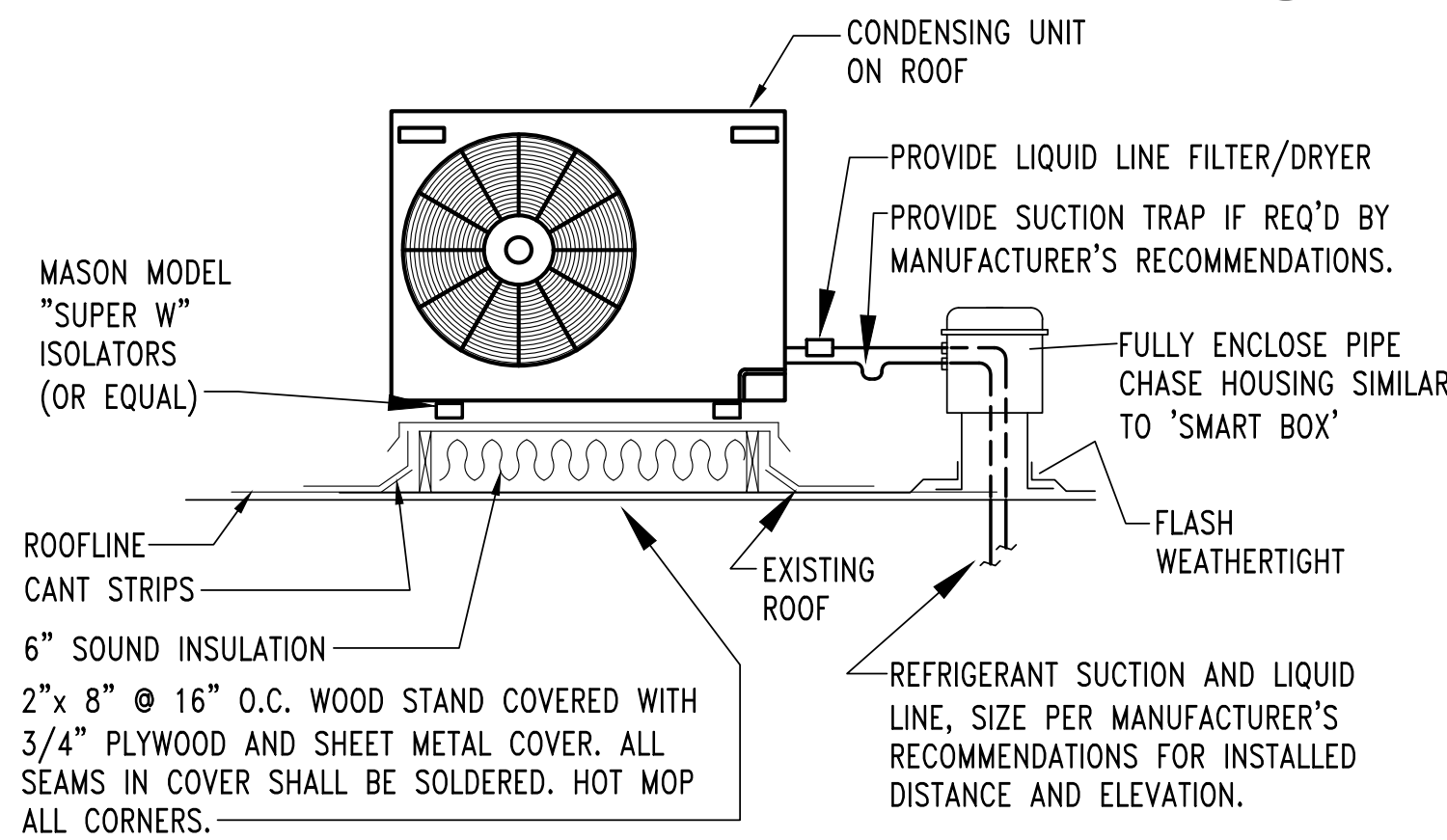
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520/327-7611
520/327-0432
Project #: 25118



DUCT TAKE-OFF DETAIL

NO SCALE

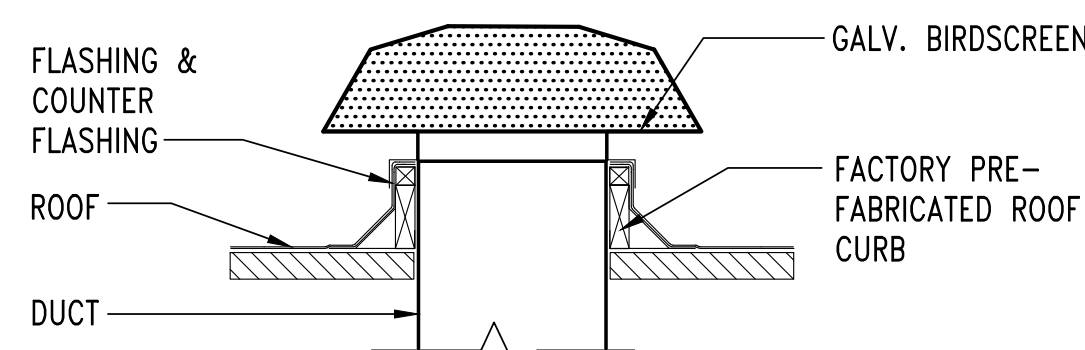
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CONDENSING UNIT PLATFORM DETAIL

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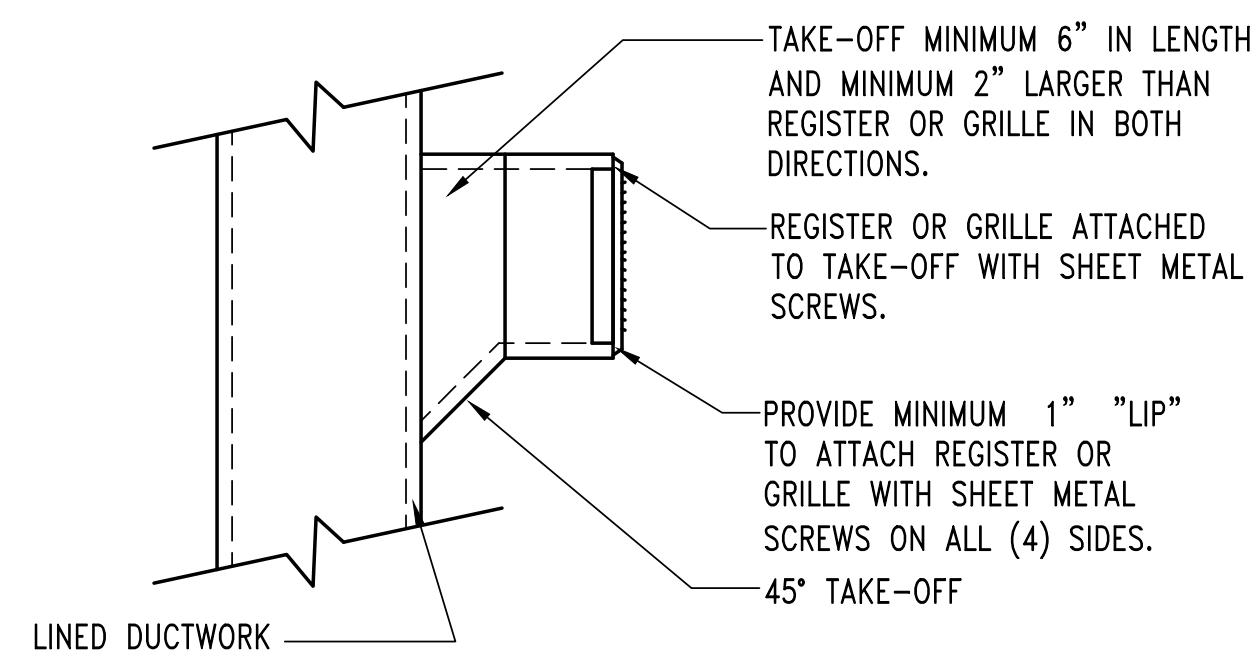
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ROOF MOUNTED INTAKE HOOD DETAIL

NO SCALE

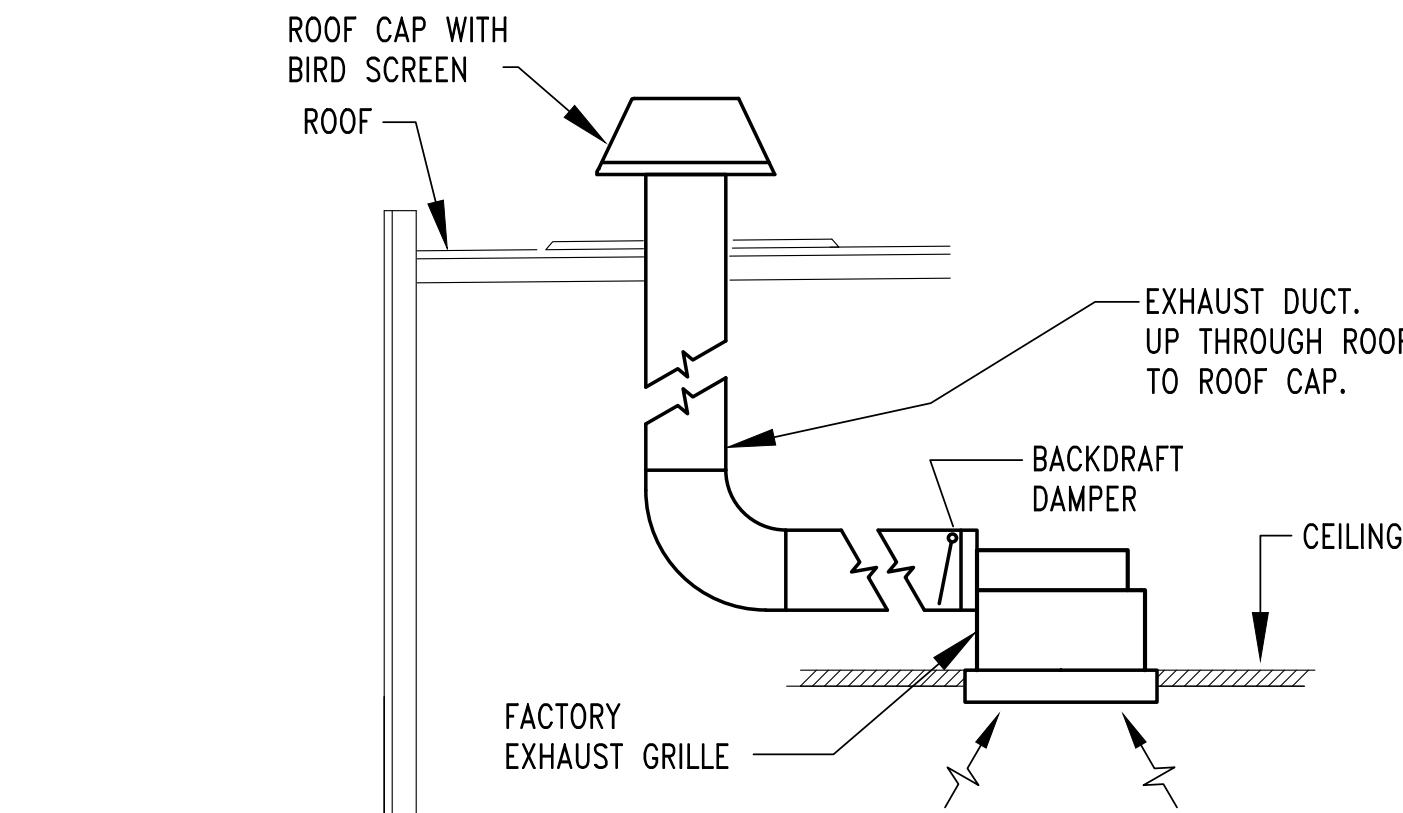
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REGISTER OR GRILLE TAKE-OFF DETAIL

NO SCALE

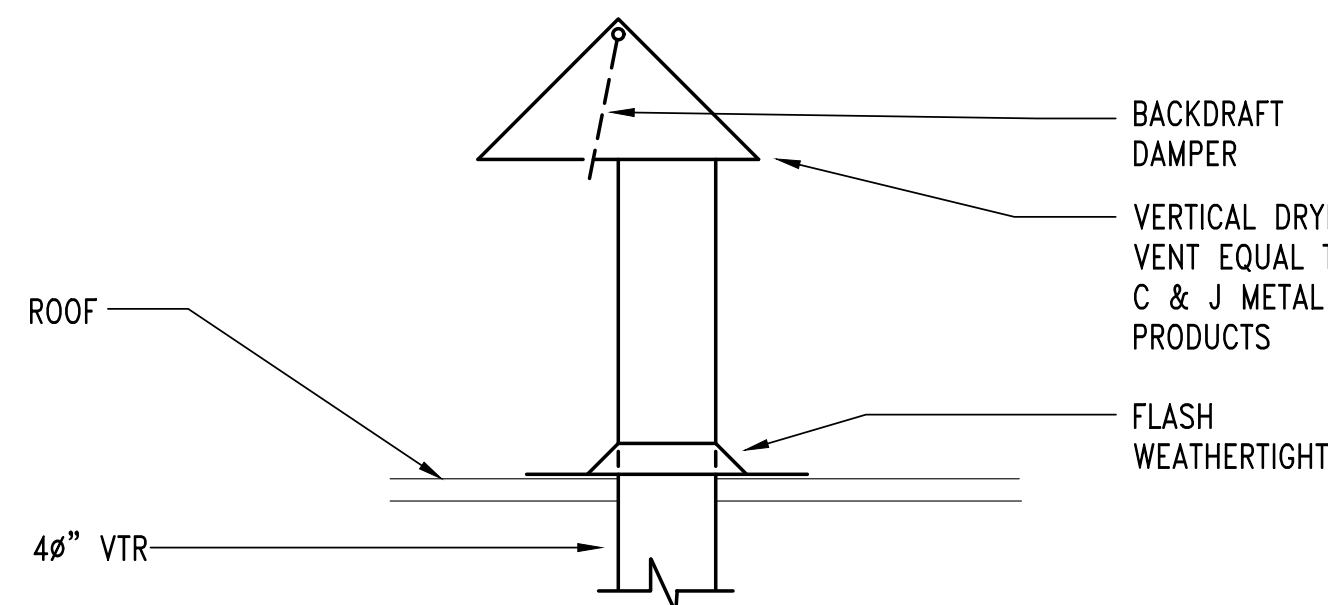
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CEILING MOUNTED EXHAUST FAN(ROOF CAP)

NO SCALE

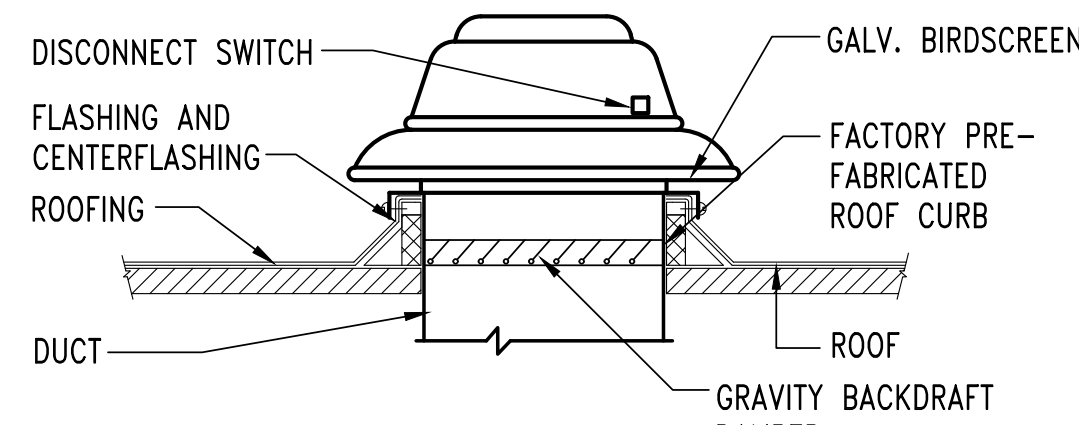
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DRYER VENT THRU ROOF DETAIL

NO SCALE

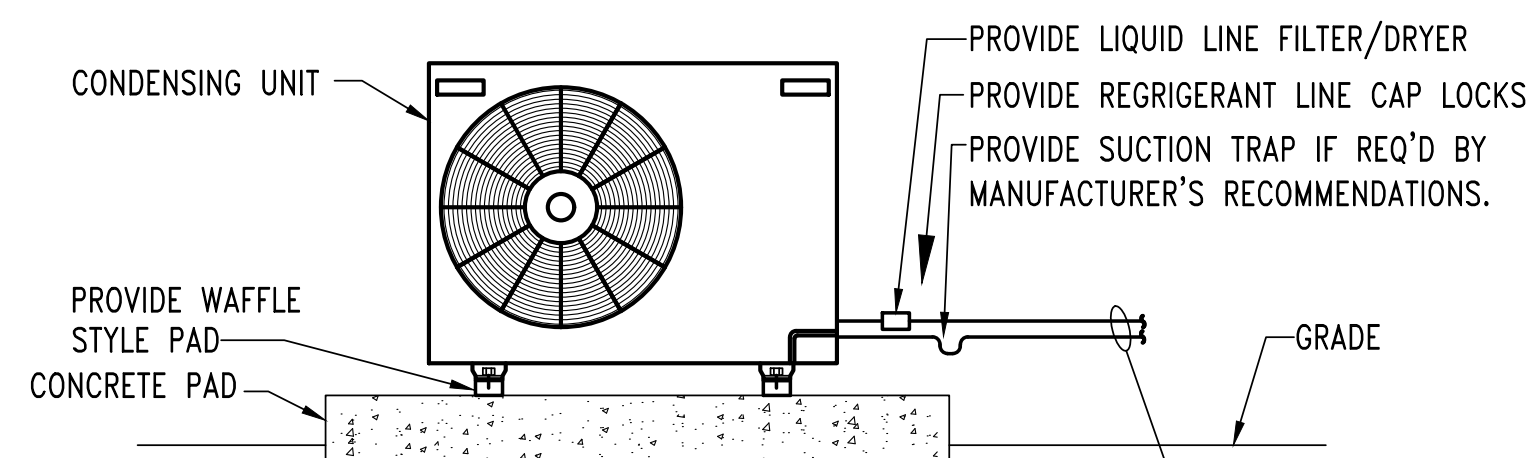
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ROOF MOUNTED EXHAUST FAN DETAIL

NO SCALE

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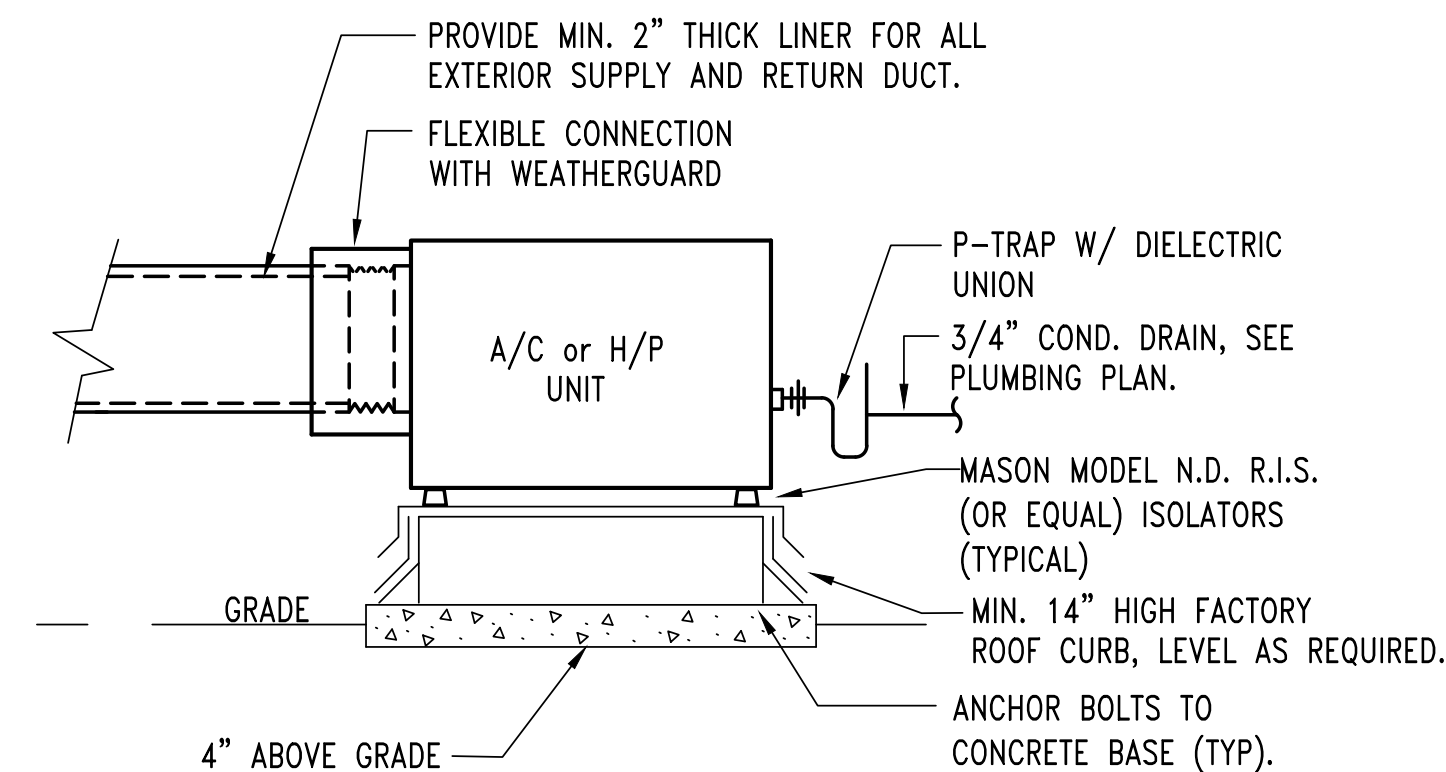
NOTE:

1. INSULATE SUCTION AND LIQUID LINES PER SPECS.
 2. PROVIDE 2-COATS OF MANUFACTURER'S INSULATION COATING FOR ALL EXTERIOR PIPING.
- REFRIGERANT SUCTION AND LIQUID LINE, SIZE PER MANUFACTURER'S RECOMMENDATIONS FOR INSTALLED DISTANCE AND ELEVATION.

CONDENSING UNIT PAD DETAIL

NO SCALE

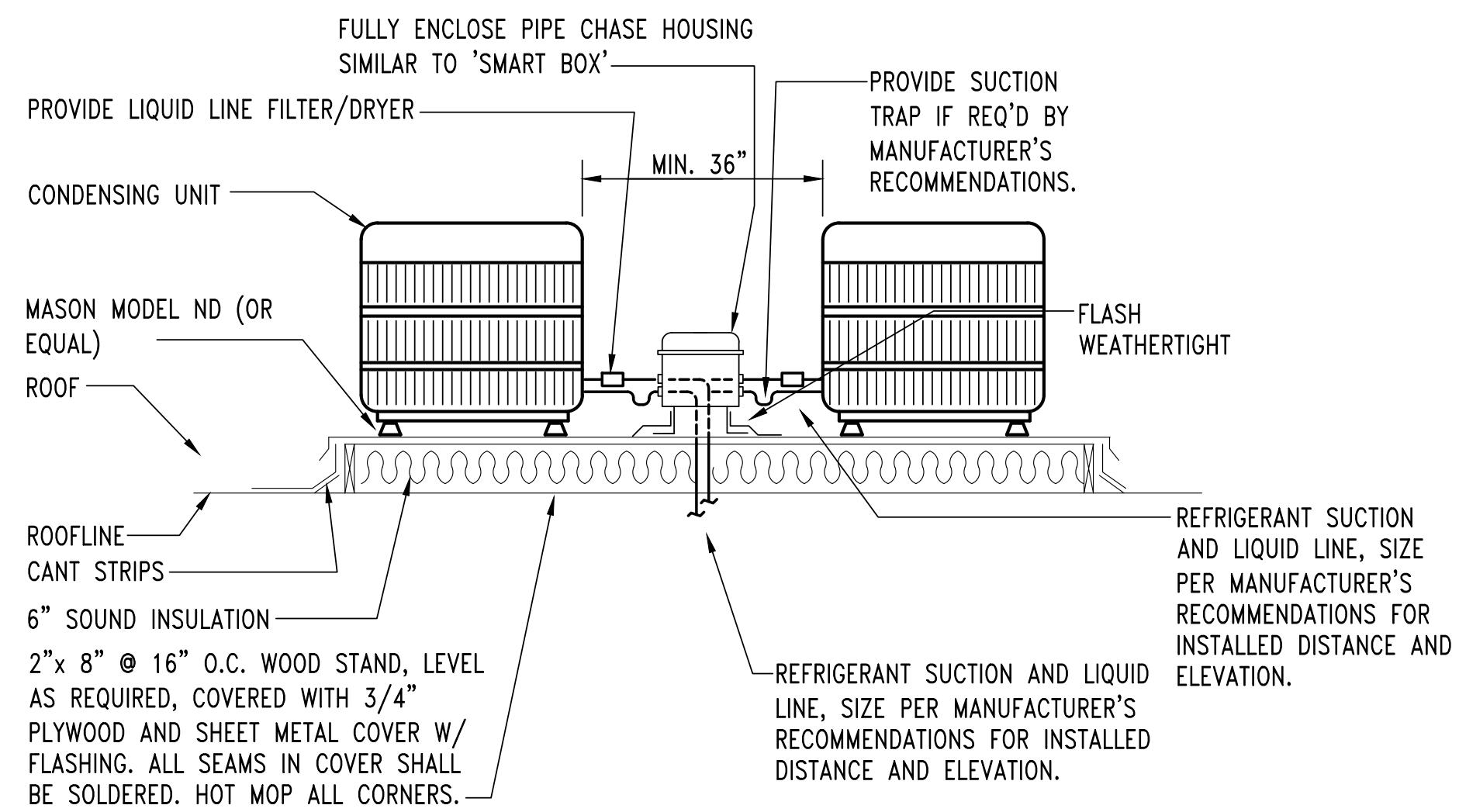
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A/C OR H/P UNIT SCHEMATIC

NO SCALE

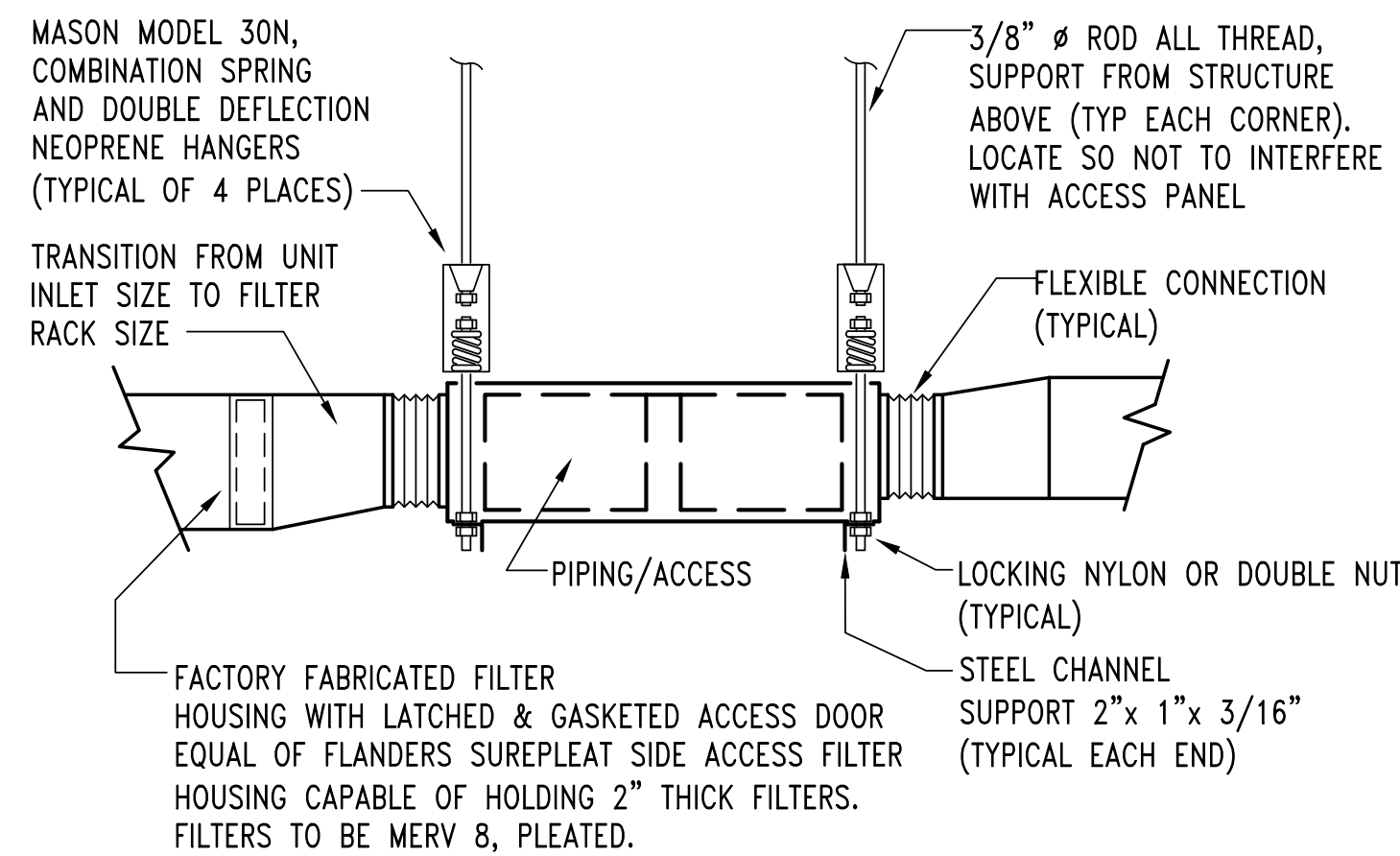
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CONDENSING UNIT SUPPORT DETAIL

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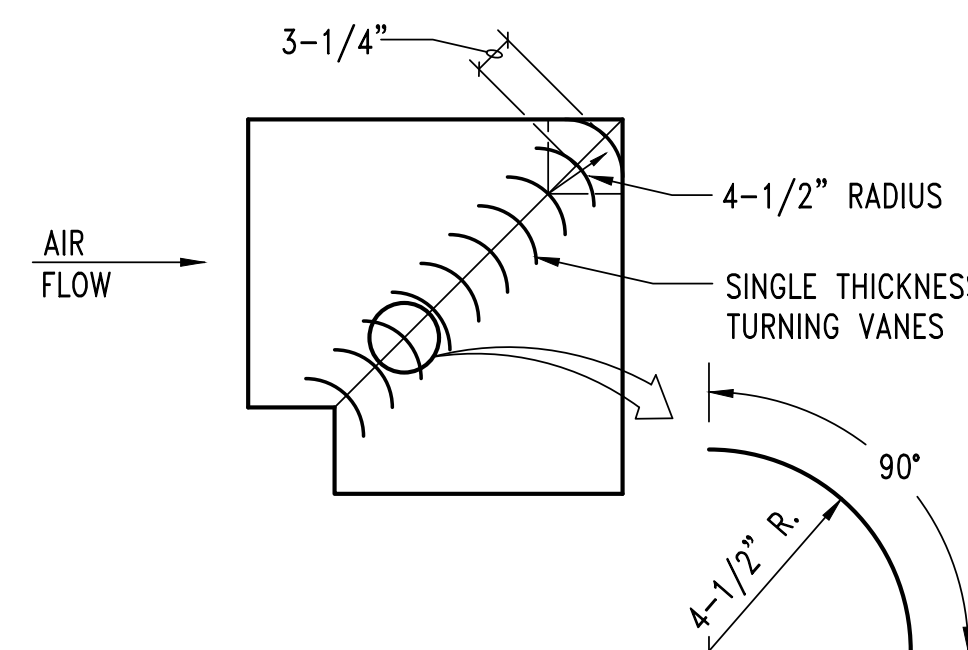
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FAN COIL SUPPORT DETAIL

NO SCALE

3
m4.0



MITER ELBOW W/TURNING VANES DETAIL

NO SCALE

4
m4.0



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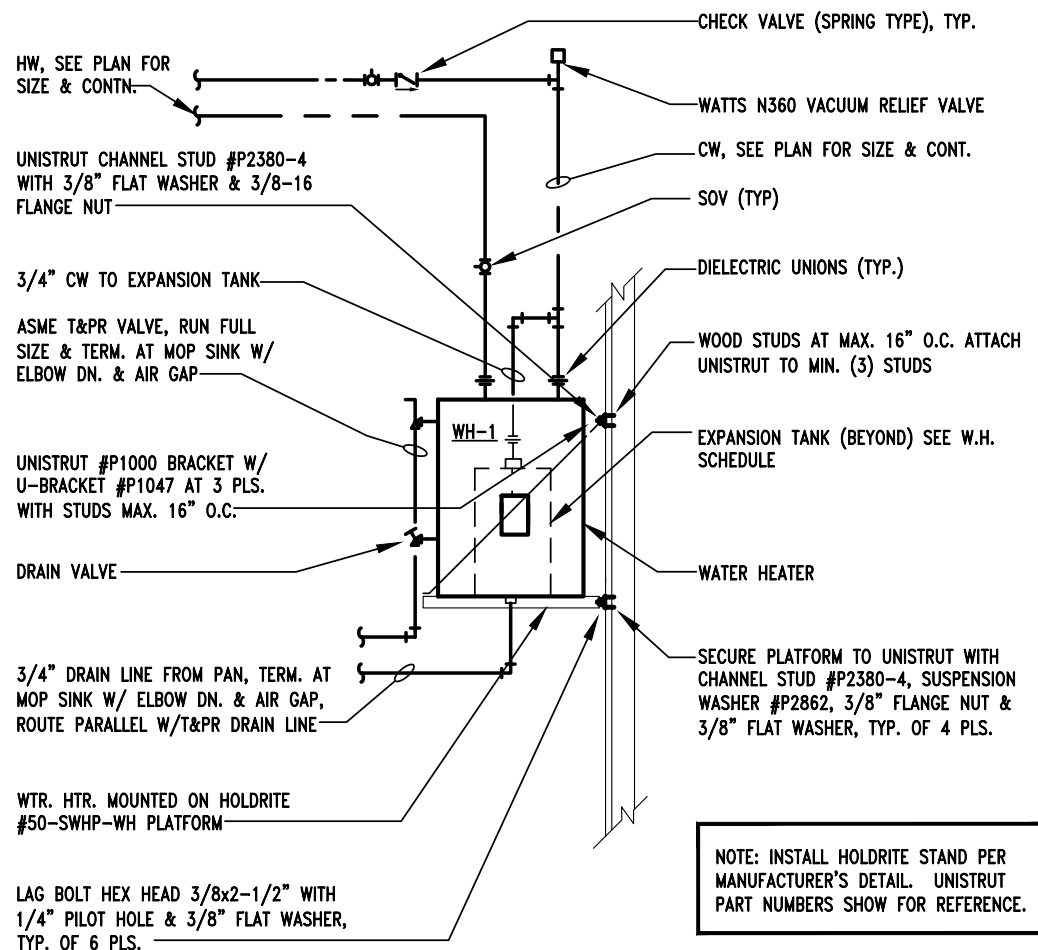
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PLUMBING GENERAL NOTES

- COORDINATE ALL WORK WITH ALL OTHER TRADES. EXACT ROUTING OF ALL PIPING SHALL BE CAREFULLY COORDINATED WITH ALL STRUCTURAL CONDITIONS.
- CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS INCLUDING PIPING LOCATIONS, SIZES, INVERTS AND DIRECTION OF FLOW BEFORE THE START OF WORK.
- PROVIDE REQUIRED DEMOLITION OF EXISTING PLUMBING EQUIPMENT, FIXTURES, MATERIALS AND OTHER ITEMS WHICH ARE NOT TO BE REUSED IN NEW DESIGN. ALL ITEMS WHICH THE OWNER DOES NOT WISH TO SALVAGE SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE.
- ALL PLUMBING FIXTURES AND EQUIPMENT IDENTIFIED BY A "P" NUMBER SHALL BE FURNISHED AND INSTALLED BY THIS CONTRACTOR, UNLESS NOTED OTHERWISE. SEE PLUMBING SCHEDULES.
- OFFSET ALL PLUMBING VENTS AS REQUIRED INSURING MINIMUM 10'-0" CLEARANCE FROM ALL OUTSIDE AIR INTAKES.
- CONTRACTOR SHALL PROVIDE ALL TRENCHING AND BACKFILL FOR HIGH PRESSURE GAS LINES TO THE BUILDING. COORDINATE MINIMUM BURY DEPTH, TRENCHING, PVC SLEEVING SIZE AND LOCATION, NON-CONDUCTIVE UNDERGROUND WARNING TAPE AND BACKFILL AS REQUIRED. SLEEVES SHALL BE STAMPED AS NATURAL GAS SLEEVING AND SHALL BE INSTALLED W/ SEALED ENDS AND SOLVENT JOINTS. COORDINATE ALL REQUIREMENTS WITH SOUTHWEST GAS.
- PROVIDE ACCESS DOORS WHERE SHUT-OFF VALVE OR OTHER DEVICES ARE CONCEALED IN A HARD CEILING. SEE SPECIFICATIONS. COORDINATE WITH ARCHITECT.
- ALL SEWER AND RAINWATER PIPING SHALL BE SLOPED AT A MINIMUM OF 1/4" PER FOOT UNLESS NOTED OTHERWISE.
- ALL HOT WATER SUPPLY PIPING TO BE INSTALLED IN ACCORDANCE WITH IECC C404.5.

PLUMBING SYMBOLS AND LEGEND

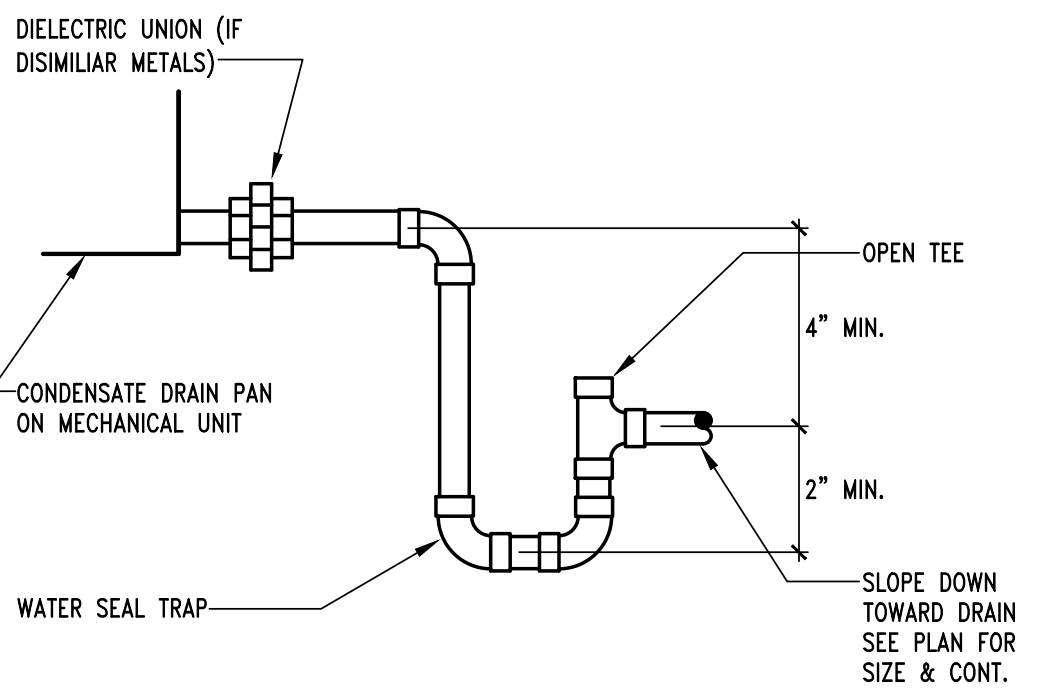
---	E	EXISTING CONSTRUCTION TO REMAIN, SHOWN IN LIGHTWEIGHT PEN
---	S	SOIL OR WASTE LINE
---	V	VENT LINE
---	CW	COLD WATER LINE
---	HW	HOT WATER LINE
---	HWR	HOT WATER RETURN LINE
---	CD	CONDENSATE LINE
---	G	NATURAL GAS LINE
---	GW	GREASE WASTE
---	OH	OVERHEAD
---	TDL	TOTAL DEVELOPED LENGTH
---	TYP	TYPICAL
---	U.N.O.	UNLESS NOTED OTHERWISE
---	UG	UNDERGROUND
---	VTR	VENT THRU ROOF
---	W/	WITH
---	WCO	WALL CLEAN OUT
---	FCO	FLOOR CLEAN OUT
---	SOV	SHUT OFF VALVE (BALL VALVE)
---	SOV	SHUT OFF VALVE (GATE VALVE)
---	PRV	PRESSURE REDUCING VALVE
---	CH	CHECK VALVE
---	UNION	UNION
---	T&PR	TEMPERATURE & PRESSURE RELIEF
---	H.B.	HOSE BIBB



WATER HEATER DETAIL

NO SCALE

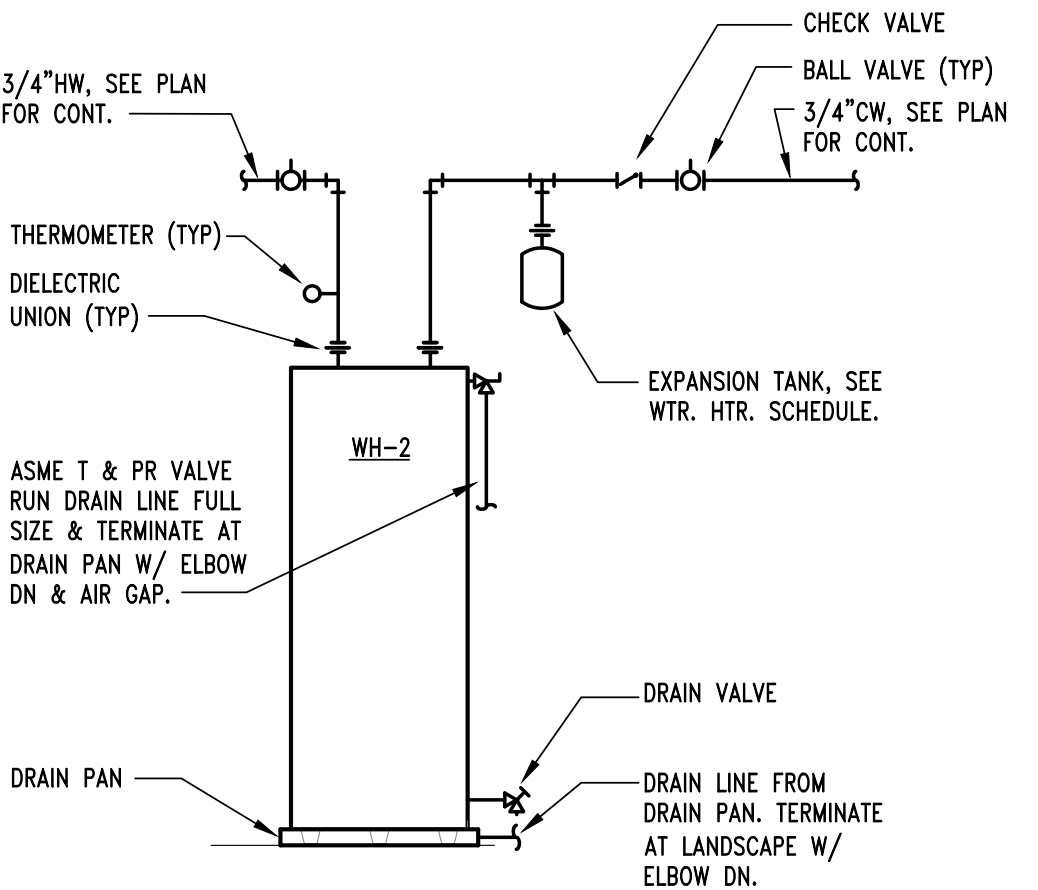
1
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CONDENSATE TRAP DETAIL

NO SCALE

2
p1.0



WATER HEATER DETAIL

NO SCALE

3
p1.0

PLUMBING FIXTURE SCHEDULE			QTY	WASTE FIXTURE UNITS		WATER FIXTURE UNITS		CONNECTION SIZES (INCHES) **				
MARK	FIXTURE	DESCRIPTION		FU	TOTAL	FU	TOTAL	WASTE	VENT	HOT	COLD	
P1	WATER CLOSET	KOHLER "WELLCOMME ULTRA" #K-96053, 1.6 GAL./FLUSH MAXIMUM, VITREOUS CHINA, FLOOR MOUNTED, FLUSH VALVE WATER CLOSET. PROVIDE SLOAN #111 FLUSH VALVE, CHURCH #9500SSC SELF-SUSTAINING CHECK HINGES, OPEN FRONT SEAT.	9	4	36	10	90	4	2	-	1 1/4	
P1A	WATER CLOSET (ADA)	KOHLER "HIGHCLIFF ULTRA" #K-96057, 1.6 GAL./FLUSH MAXIMUM, VITREOUS CHINA, FLOOR MOUNTED, FLUSH VALVE WATER CLOSET W/ADA COMPLIANT HIGH BOWL. PROVIDE SLOAN #111 FLUSH VALVE, CHURCH #9500SSC SELF-SUSTAINING CHECK HINGES, OPEN FRONT SEAT	5	4	20	10	50	4	2	-	1 1/4	
P2	URINAL (ADA)	KOHLER "BARDON" #K-4991-ET, WATERSAVER VITREOUS CHINA WALL HUNG WASHOUT URINAL. PROVIDE 1.0 GAL./FLUSH, "SLOAN ROYAL" #186-1 FLUSH VALVE AND J.R. SMITH #636 FLOOR MOUNTED URINAL CARRIER W/17" RIM HEIGHT WHERE REQUIRED FOR ADA COMPLIANCE	8	2	16	5	40	2	1 1/2	-	1	
P3	LAVATORY (ADA)	KOHLER "KINGSTON" #K-2005, VIT. CHINA WALL HUNG LAVATORY. PROVIDE "CHICAGO" #802-VE2805-665CP FAUCET & #155WC OFFSET DRAIN, CAST BRASS "P" TRAP MCGUIRE CHROME PLATED LOOSE KEY ANGLE STOPS & SUPPLIES, FLOOR MOUNTED FIXTURE CARRIER & WASTE & STOP INSULATION EQUAL TO MCGUIRE PROWRAP. PROVIDE ASSE 1070 CERTIFIED THERMOSTATIC MIXING VALVE EQUAL OF WATTS MODEL # LFUSG-B W/ 3/8" FITTINGS.	9	1	9	1	9	2	1 1/2	1/2	1/2	
P3B	LAVATORY (ADA)	SLOAN "SLOANSTONE" #EW-42000 SOLID SURFACE 2-STATION LAVATORY W/ INTEGRAL SLOAN OPTIMA SENSOR FAUCETS (0.5 GPM, 0.25 GALS. MAX PER CYCLE) & #155WC OFFSET DRAIN, CAST BRASS "P" TRAP MCGUIRE CHROME PLATED LOOSE KEY ANGLE STOPS & SUPPLIES, FLOOR MOUNTED FIXTURE CARRIER & WASTE & STOP INSULATION EQUAL TO MCGUIRE PROWRAP. PROVIDE ASSE 1070 CERTIFIED THERMOSTATIC MIXING VALVE EQUAL OF WATTS MODEL # LFUSG-B W/ 3/8" FITTINGS.	2	2	4	2	4	2	1 1/2	1/2	1/2	
P4	1-STATION WATER COOLER	ELKAY #LZS8WSAP SINGLE STATION ADA WATER COOLER W/ BOTTLE FILLER 8 GPH CAPACITY OF 50 DEG. WATER AT 90 DEG. AMBIENT TEMPERATURE 5.0 FLA, 120/1/60. PROVIDE "P" TRAP, MCGUIRE CHROME PLATED LOOSE KEY ANGLE STOP & SUPPLY, & FLOOR MOUNTED FIXTURE CARRIER.	1	0.5	0.5	0.5	0.5	2	1 1/2	-	1/2	
P4B	2-STATION WATER COOLER	ELKAY #LZSTL8WSAP DUAL STATION ADA WATER COOLER W/ BOTTLE FILLER 8 GPH CAPACITY OF 50 DEG. WATER AT 90 DEG. AMBIENT TEMPERATURE 5.0 FLA, 120/1/60. PROVIDE "P" TRAP, MCGUIRE CHROME PLATED LOOSE KEY ANGLE STOP & SUPPLY, & FLOOR MOUNTED FIXTURE CARRIER.	1	0.5	0.5	0.5	0.5	2	1 1/2	-	1/2	
P5	MOP SINK	FIAT #MSB-2424 MOP SERVICE BASIN (24 X 24), #231 WHITEDRIFT. PROVIDE "FIAT" CHROME PLATED SERVICE FAUCET #830-AA WITH VACUUM BREAKER, HOSE AND HOSE BRACKET #832-AA, MOP HANGER #889-CC AND VINYL BUMPER GUARD #E-77-AA.	1	3	3	3	3	3	2	3/4	3/4	
P6	WASHER WALL BOX	WATER TITE #W2700 HA WASHING MACHINE OUTLET BOX WITH WASTE CONNECTION, (2) BRASS QUARTER TURN VALVES WITH HOSE END AND INTEGRAL WATER HAMMER ARRESTERS.	1	3	3	4	4	2	2	3/4	3/4	
FD	FLOOR DRAIN	J.R. SMITH #2005-BP, COATED CAST IRON BODY AND ADJUSTABLE 5" SQUARE NIKALLOY STRAINER W/ TRAP PRIMER CONNECTION.	1	2	2	-	-	2	1 1/2	-	-	
HB	HOSE BIBB	WOODFORD #B24P-3/4 BRASS HOSE BIBB W/VACUUM BREAKER & REMOVABLE LOOSE KEY HANDLE IN CLOSABLE WALL BOX	3	-	-	2.5,	1	4.5	-	-	-	3/4
TOTAL FIXTURE UNITS					94		205.5					

WATER HEATER SCHEDULE		
MARK	WH-1	WH-2
ENTERING WATER TEMPERATURE (°F)	50	30
LEAVING WATER TEMPERATURE (°F)	120	120
RECOVERY RATE (GPH)	23	23
STORAGE VOLUME (GAL)	20	20
ENERGY SOURCE	ELECTRIC	ELECTRIC
ELEMENTS (KW)	4.5	4.5
TOTAL ELECTRICAL INPUT (KW)	4.5	4.5
VOLTS/PHASE/HZ	240/1/60	208/1/60
REFERENCE	BRADFORD WHITE LE120L3-3	BRADFORD WHITE LE330S3-3
EXPANSION TANK	AMTROL	AMTROL
REFERENCE	ST-5C	ST-5C
RELIEF VALVE SETTING (PSIG)	150	150
NOTES	1 THRU 6	1 THRU 5
1. WATER HEATER SHALL BE UL LISTED. 2. RECOVERY RATE SCHEDULED IS FOR SEA LEVEL. 3. HEATING ELEMENTS ARE NON-SIMULTANEOUS. 4. PROVIDE HEAT TRAP FITTINGS AT COLD & HOT WATER CONNECTIONS EQUAL TO "WATTS". 6. WATER HEATER SHALL BE "LOW BOY" TYPE FOR MOUNTING ABOVE MOP SINK.		

PRESSURE LOSS CALCULATIONS		
SYSTEM TYPE		
FLUSH VALVE		
TOTAL FIXTURE DEMAND	206.0	F.U.
TOTAL GPM DEMAND	92.0	GPM
ASSUMED PRESSURE AVAILABLE AT PROPERTY LINE	55.0	PSI
SITE PRESSURE LOSS		
A. EXISTING WATER METER	3.0	PSI
B. EXISTING R.P.B.P.	12.0	PSI
C. EXISTING PIPE TO BUILDING	3.0	PSI
TOTAL SITE PRESSURE LOSSES	18.0	PSI
BUILDING PRESSURE LOSS		
A. PRESSURE REQUIRED AT LAST FIXTURE	25.0	PSI
B. LIFT AT 6 FT	2.6	PSI
TOTAL BUILDING PRESSURE LOSSES	27.6	PSI
TOTAL PRESSURE LOSSES (SITE AND BUILDING)	45.6	PSI
TOTAL ALLOWABLE PRESSURE DROP FOR PIPE LOSSES: (AVAILABLE PRESSURE AT PROPERTY LINE-TOTAL PRESSURE LOSS)	9.4	PSI
EQUIVALENT FEET CALCULATION (BUILDING)		
A. TOTAL MEASURED LENGTH OF PIPE TO FURTHEST FIXTURE	200	FT
B. ADD 50% FOR FITTINGS AND VALVES	100	FT
TOTAL EQUIVALENT FEET	300	FT
ALLOWABLE AVERAGE PRESSURE DROP PER 100 FT.		
9.4 PSI X 100 =	3.1	PSI/100FT.
300 EQUIV. FT.		



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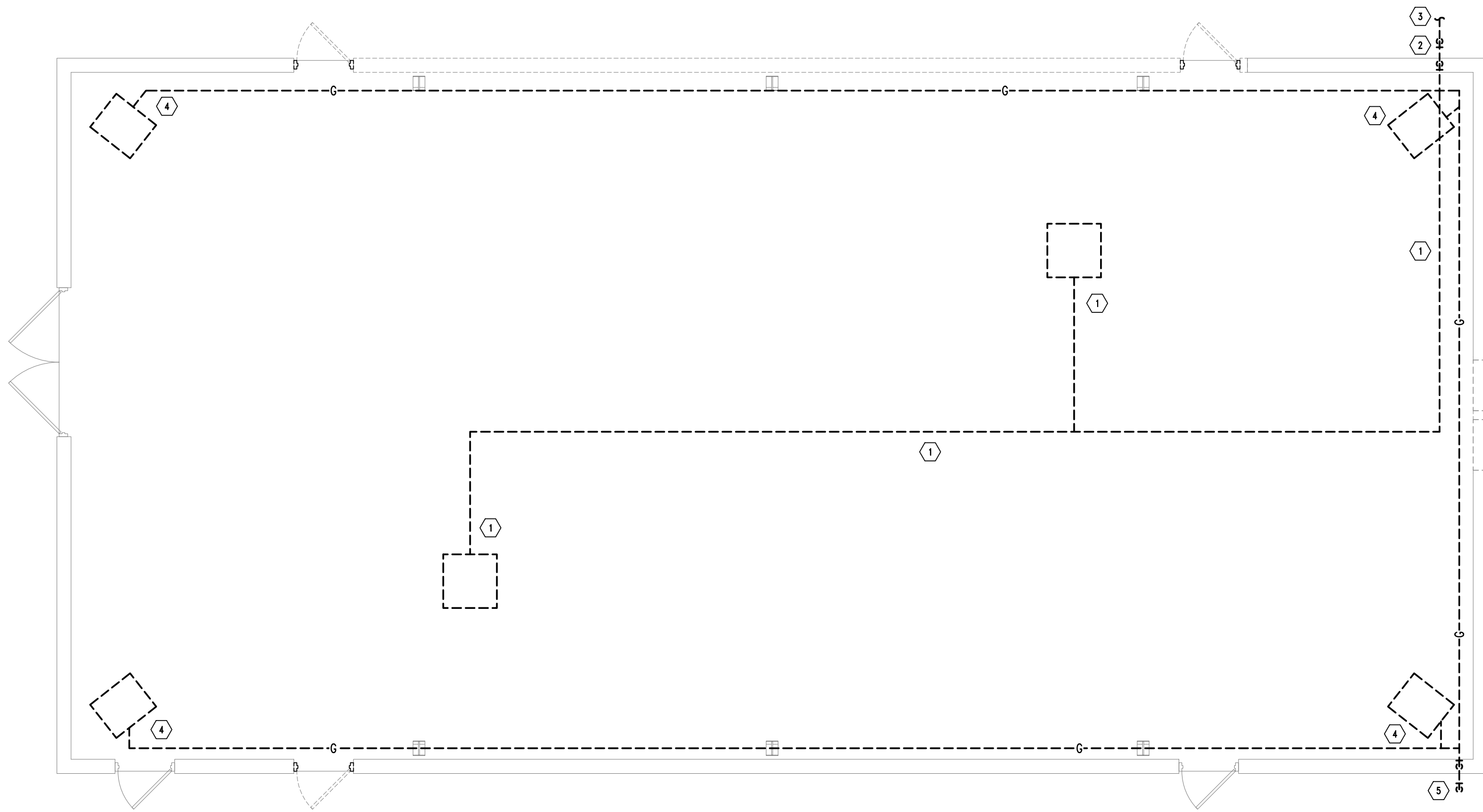
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revisions	
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WILLCOX, ARIZONA 85643
HIGH SCHOOL REMODEL

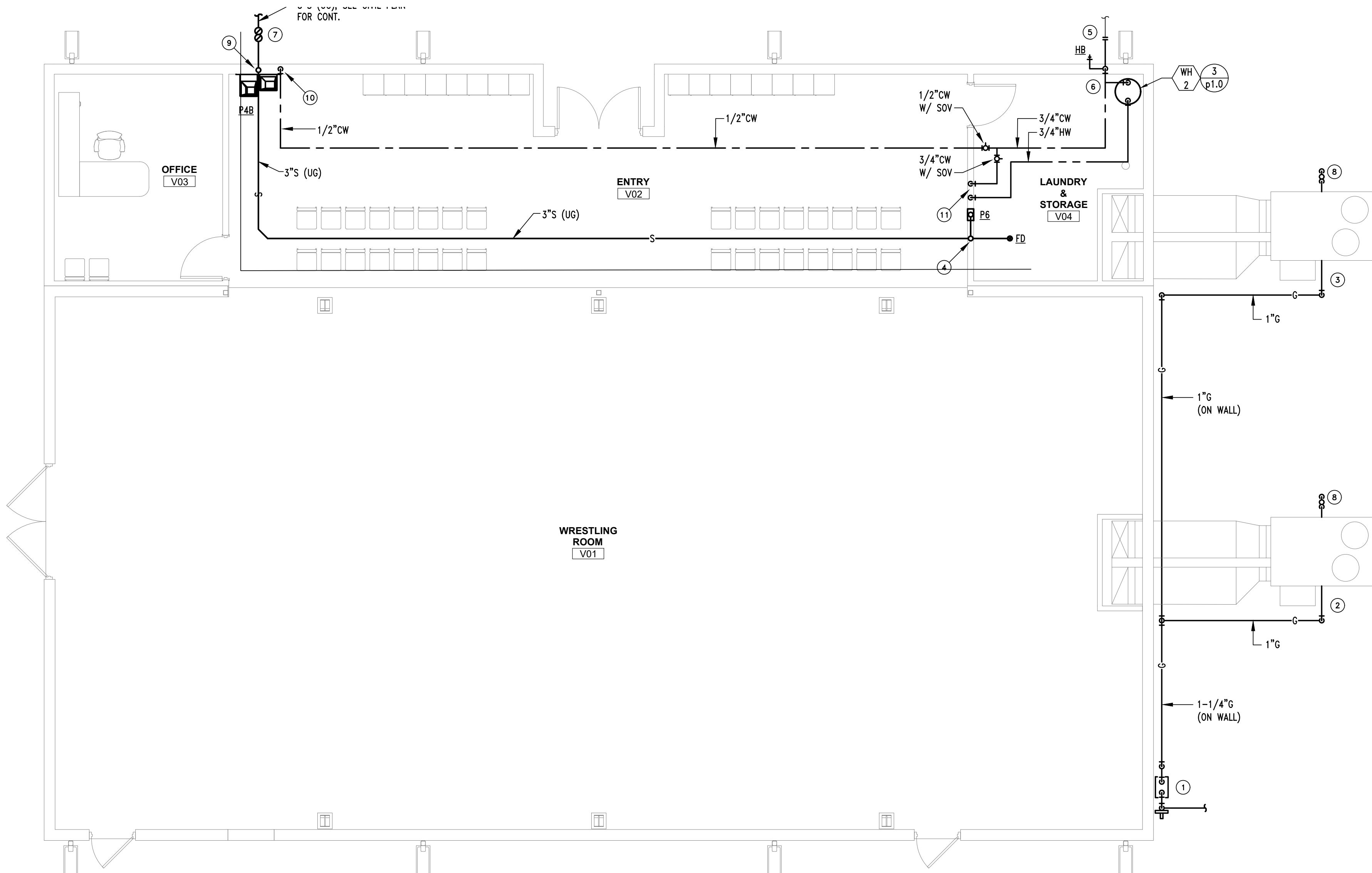
plumbing schedules,
notes, & details

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wrestling - plumbing demolition plan

3/16" = 1'-0"



wrestling - plumbing new work plan

3/16" = 1'-0"



PLUMBING DEMOLITION KEYNOTES

1. REMOVE ALL EXISTING CW PIPING FROM EVAP COOLERS BACK TO UG MAIN AS SHOWN. SEE NEW WORK PLAN FOR NEW CONNECTION.
2. REMOVE EXISTING HOSE BIBB.
3. REMOVE EXISTING UG CW MAIN AS REQUIRED TO CLEAR THE FOOTPRINT OF THE NEW BUILDING ADDITION. SEE NEW WORK PLAN FOR NEW CONNECTION.
4. REMOVE ALL EXISTING GAS PIPING FROM DEMOLISHED UNIT HEATERS BACK TO MAIN.
5. REMOVE EXISTING UNDERGROUND GAS PIPING FROM BUILDING TO METER. CAP AT REGULATOR. SEE NEW WORK PLAN FOR NEW GAS METER.

PLUMBING KEYNOTES

1. NEW GAS METER W/ REGULATOR SET FOR 7"WC. HPG TO METER BY SW GAS. PROVIDE REQUIRED TRENCHING, SLEEVE, TRACE WIRE, AND BACKFILL. COORDINATE WITH SOUTHWEST GAS. 250 CFH @ 88 LF.
2. 1"G TO AC UNIT W/ SOV, DIRT LEG, & UNION OR MAX. 18" FLEX CONNECTION. 125 CFH @ 68 LF.
3. 1"G TO AC UNIT W/ SOV, DIRT LEG, & UNION OR MAX. 18" FLEX CONNECTION. 125 CFH @ 88 LF.
4. 3"S W/ 2" TRAP ARM TO FLOOR DRAIN, THEN UP IN WALL W/ 2" TRAP ARM TO WALL BOX. 3"WCO @ 60" AFF, & 2"V UP TO 2"VTR.
5. CONNECT NEW 3/4" CW TO EXISTING CW PIPING UG. FIELD VERIFY EXACT LOCATION OF EXISTING UG CW PIPING. NEW CONNECTION TO BE MADE OUTSIDE THE FOOTPRINT OF THE NEW BUILDING.
6. 3/4" CW UP FROM UG TO OH W/ SOV @ 48" AFF. PROVIDE 3/4" CW BRANCH TO HB W/ SOV.
7. 2-WAY 3"GCO. MIN. 48" BFF.
8. 3/4" CD FROM AC UNIT W/ UNION, OPEN TEE & TRAP. TERMINATE AT LANDSCAPE W/ ELBOW DN.
9. 2"S UP FROM UG TO WATER COOLER W/ 2"WCO & 2"V UP TO 2"VTR.
10. 1/2" CW DN IN WALL TO WATER COOLER.
11. 3/4" CW & 3/4" HW DN IN WALL TO WASHER BOX.



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01.31.2025

revisions

WILLCOX MIDDLE & HIGH SCHOOL

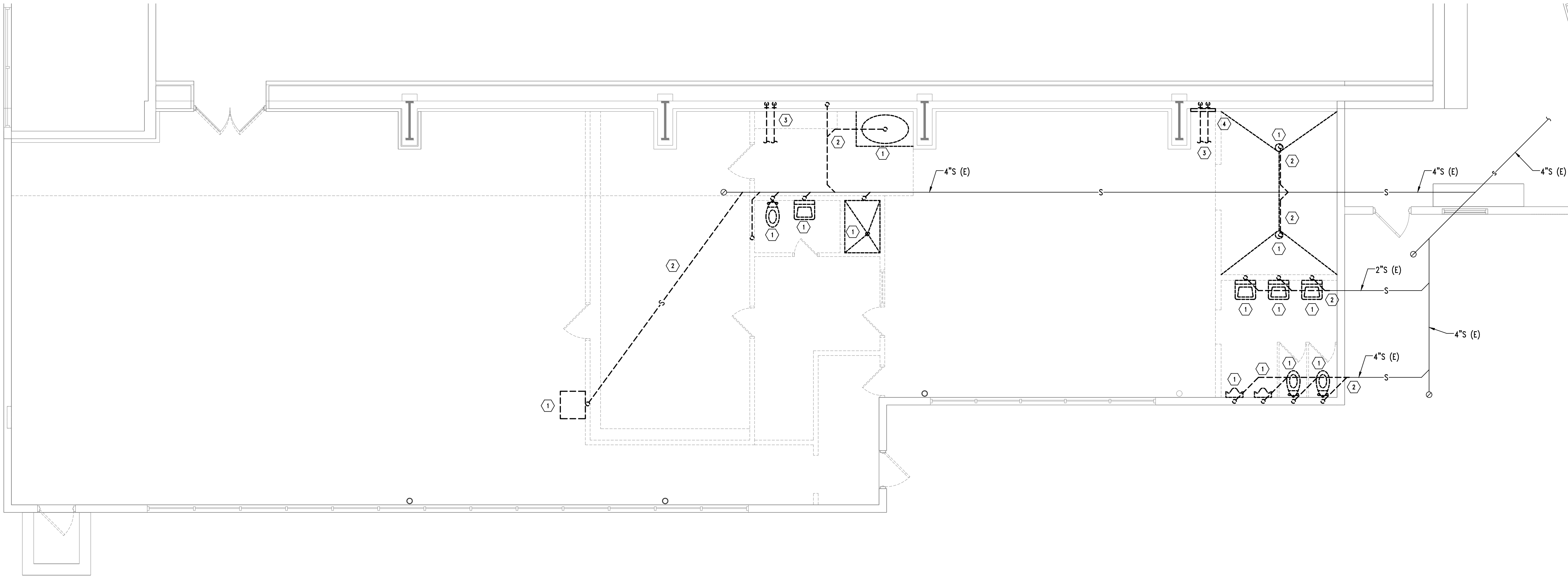
240 N. BISBEE AVE.

WILLCOX, ARIZONA 85643

HIGH SCHOOL REMODEL

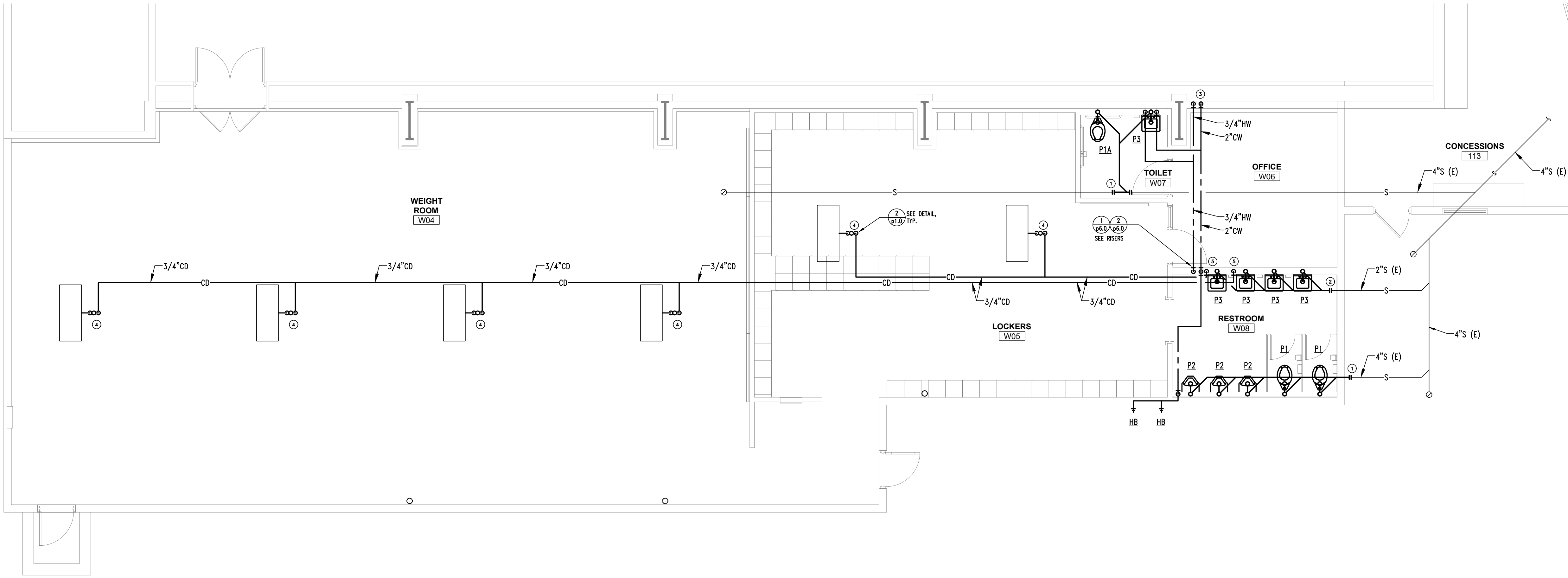
plumbing plans
wrestling room

p2.0



weight / locker room - plumbing demolition plan

3/16" = 1'-0"



weight / locker room - plumbing new work plan

3/16" = 1'-0"



PLUMBING DEMOLITION KEYNOTES

1. REMOVE EXISTING PLUMBING FIXTURE AND ALL ASSOCIATED CW, HW, S, & V PIPING.
2. REMOVE EXISTING S PIPING BACK AS SHOWN. SEE NEW WORK PLAN FOR NEW CONNECTION.
3. REMOVE ALL EXISTING CW & HW PIPING BACK TO UG MAINS. SEE NEW WORK PLAN FOR NEW CONNECTIONS.
4. REMOVE EXISTING HW TEMPERING VALVE.

PLUMBING KEYNOTES

1. CONNECT NEW 4"S TO EXISTING 4"S (UG).
2. CONNECT NEW 2"S TO EXISTING 2"S (UG).
3. CONNECT NEW 2"CW & 3/4"HW TO EXISTING CW & HW UG MAINS. ROUTE UP IN WALL TO OH W/ SOVS & ACCESS PANEL.
4. 3/4"CD FROM MECHANICAL UNIT W/ UNION, OPEN TEE, & TRAP.
5. 3/4"CD DN IN WALL. TERMINATE AT LAV TAILPIECE.



KC MECHANICAL ENGINEERING, L.L.C.

5447 East Fifth Street # 112
Tucson, Arizona 85711
Designers Mech: MG Plumb: NJH
520/327-7611
520/327-0432
Project #: 25118

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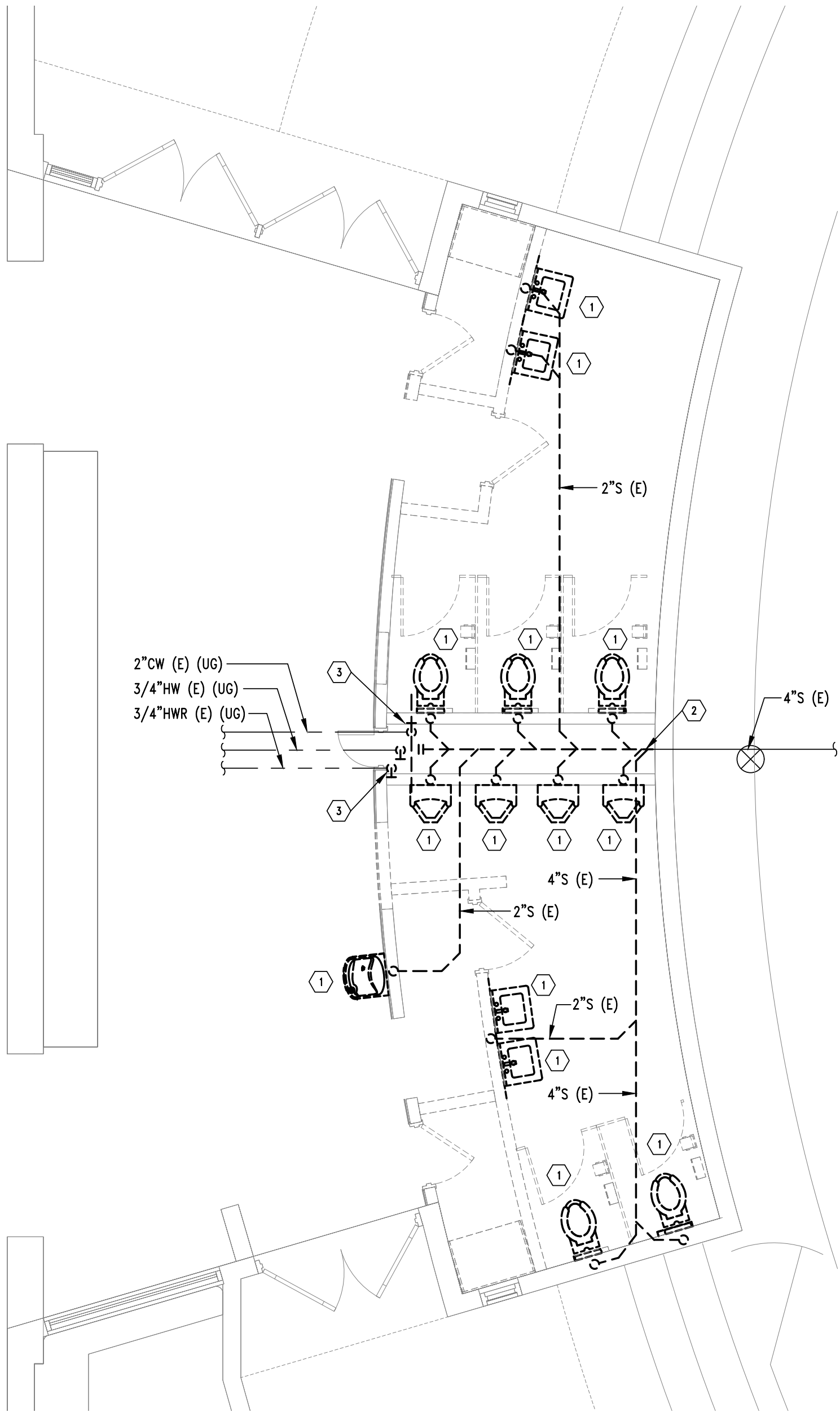
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WILLCOX MIDDLE & HIGH SCHOOL
240 N. BISBEE AVE.
WILLCOX, ARIZONA 85643
HIGH SCHOOL REMODEL

plumbing plans
weight / locker room

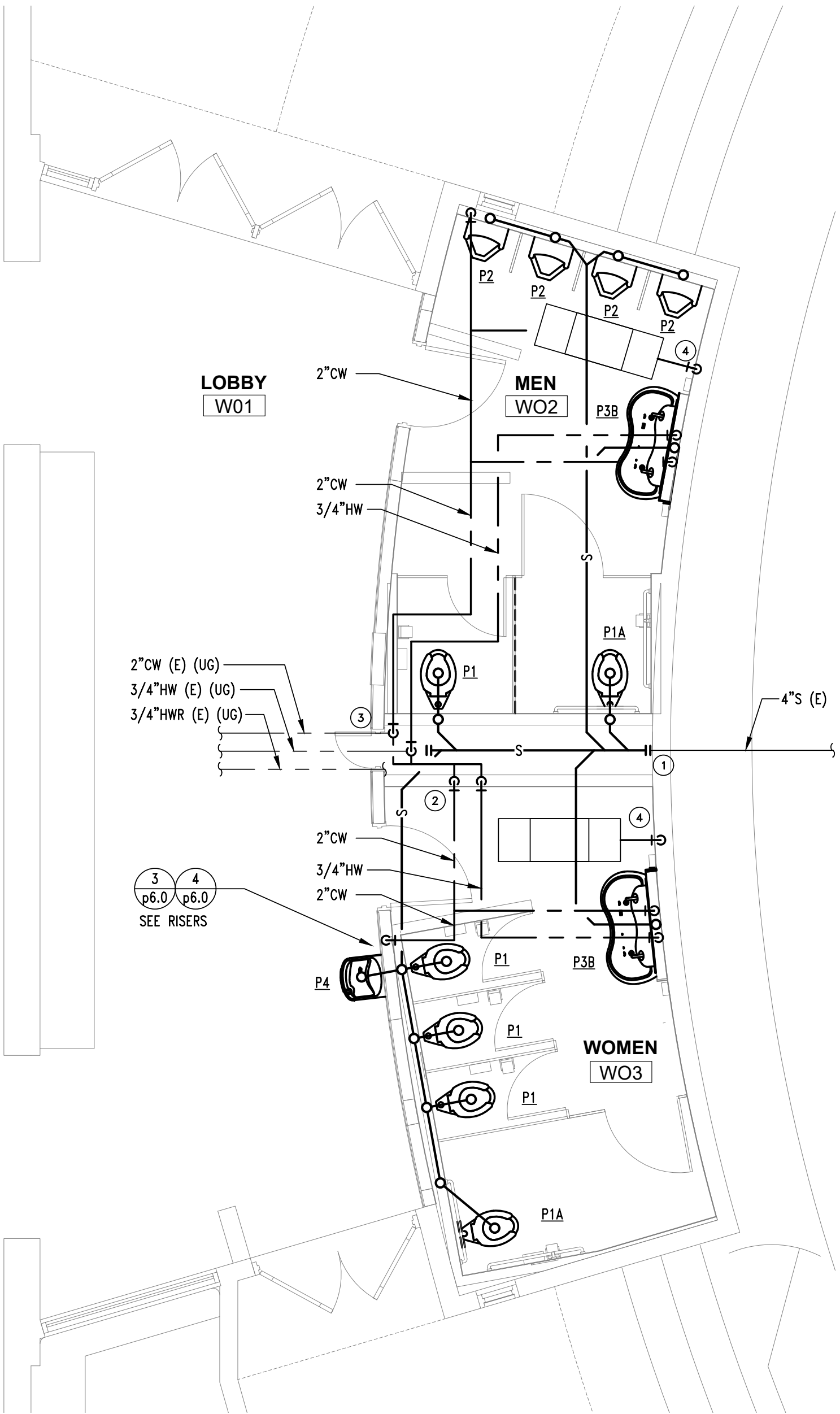
p3.0



lobby restrooms - plumbing demolition plan

1/4" = 1'-0"

north



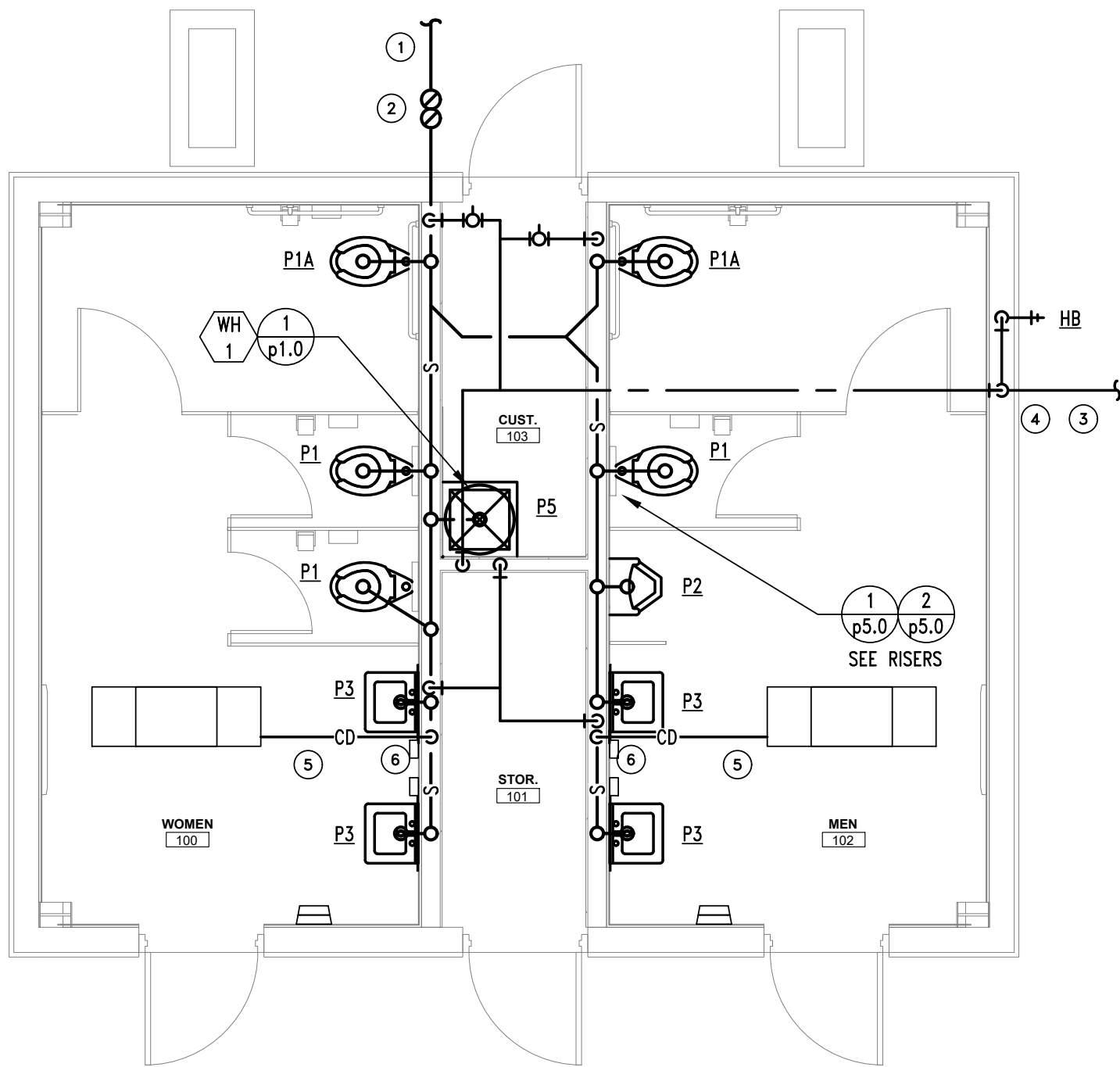
lobby restrooms - plumbing new work plan

1/4" = 1'-0"

north

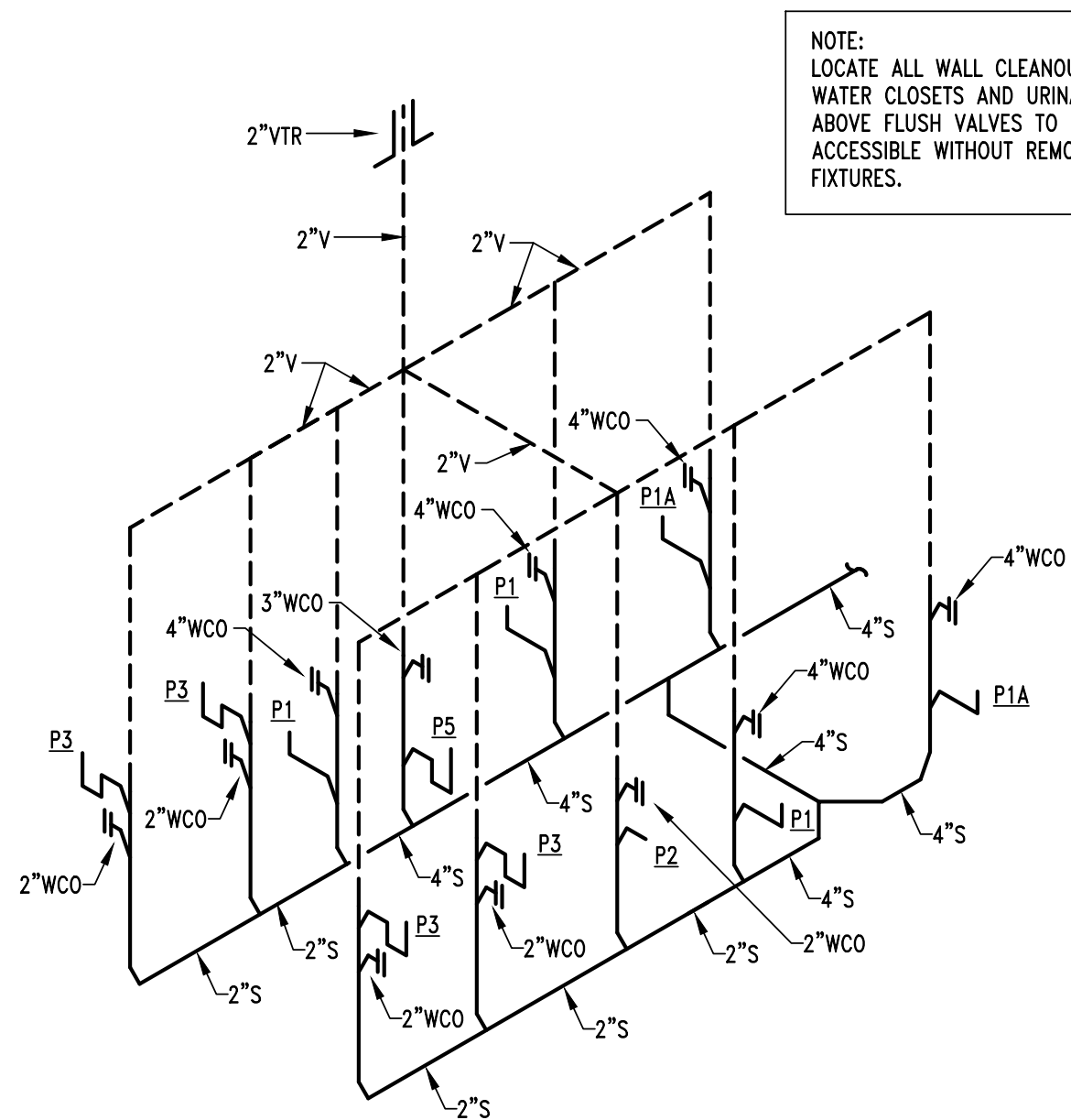
- # PLUMBING DEMOLITION KEYNOTES
1. REMOVE EXISTING PLUMBING FIXTURE AND ALL ASSOCIATED CW, HW, S, & V PIPING.
 2. REMOVE EXISTING 4"S PIPING BACK AS SHOWN. SEE NEW WORK PLAN FOR NEW CONNECTION.
 3. REMOVE ALL EXISTING CW & HW PIPING BACK TO UG MAINS. SEE NEW WORK PLAN FOR NEW CONNECTIONS.

- # PLUMBING KEYNOTES
1. CONNECT NEW 4"S TO EXISTING 4"S.
 2. CONNECT NEW 2"CW & 3/4"HV W/ SOVS TO EXISTING CW & HW IN PLUMBING CHASE. ROUTE UP TO OH.
 3. CONNECT NEW 2"CW & 3/4"HV W/ SOVS TO EXISTING CW & HW IN PLUMBING CHASE. ROUTE UP TO OH W/ 1-1/2"CW TO WATER CLOSETS.
 4. 3/4"CD FROM FAN COIL W/ UNION. ROUTE DN IN WALL & TERMINATE @ LAV TAILPIECE.



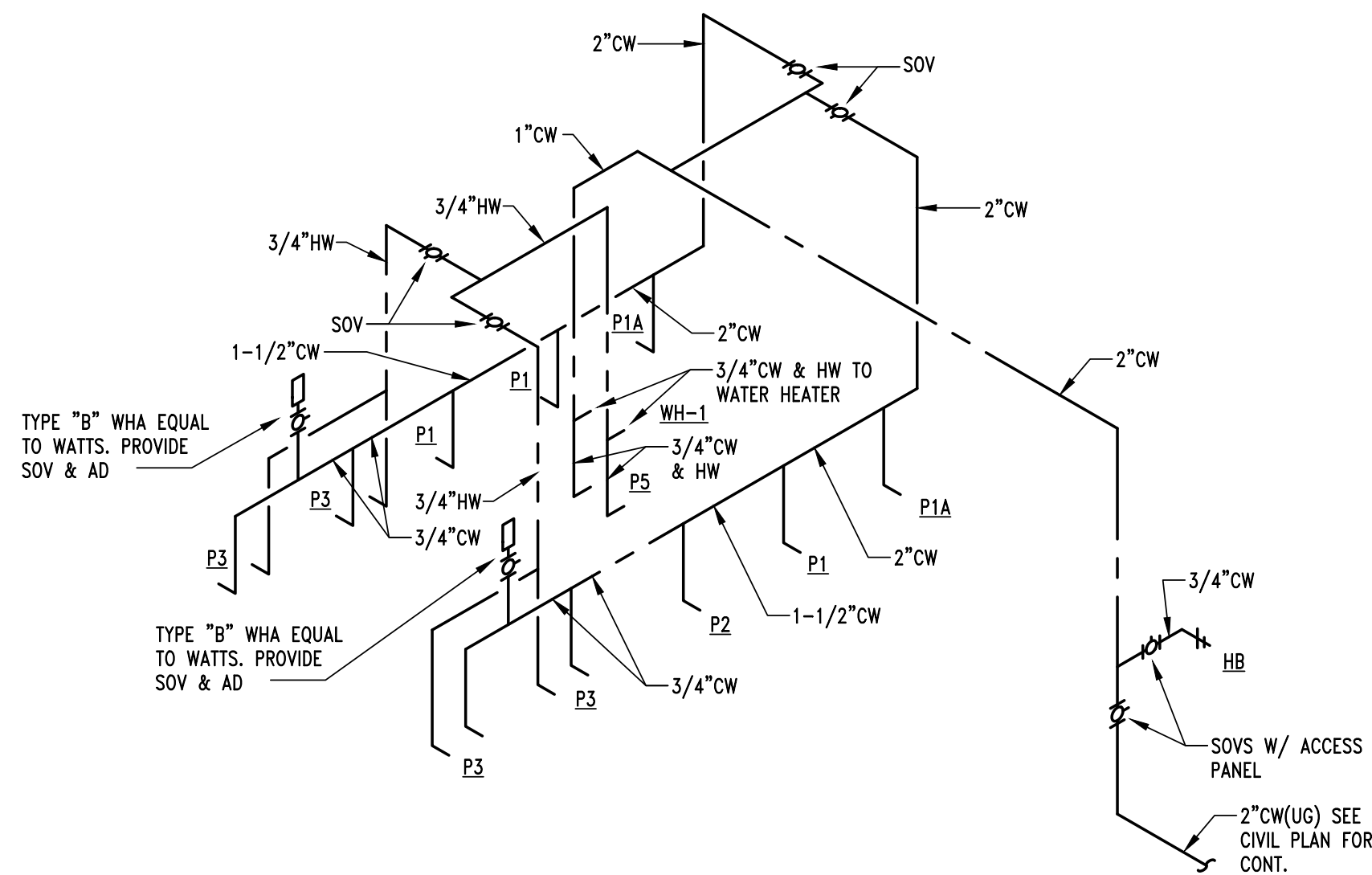
new restroom building - plumbing new work plan

1/4" = 1'-0"



SOIL & VENT RISER
NO SCALE

2
p5.0



CW & HW RISER
NO SCALE

1
p5.0

PLUMBING KEYNOTES

1. 4"S (UG) SEE CIVIL PLAN FOR CONT.
2. 2-WAY 4"GCC, MIN. 32"BF
3. 2"CW (UG), SEE CIVIL PLAN FOR CONT.
4. 2"CW UP IN WALL FROM UG. PROVIDE SOV W/ ACCESS PANEL.
5. 3/4"CD FROM MECHANICAL UNIT W/ UNION.
6. 3/4"CD DN IN WALL. TERMINATE AT LAV TAILPIECE.

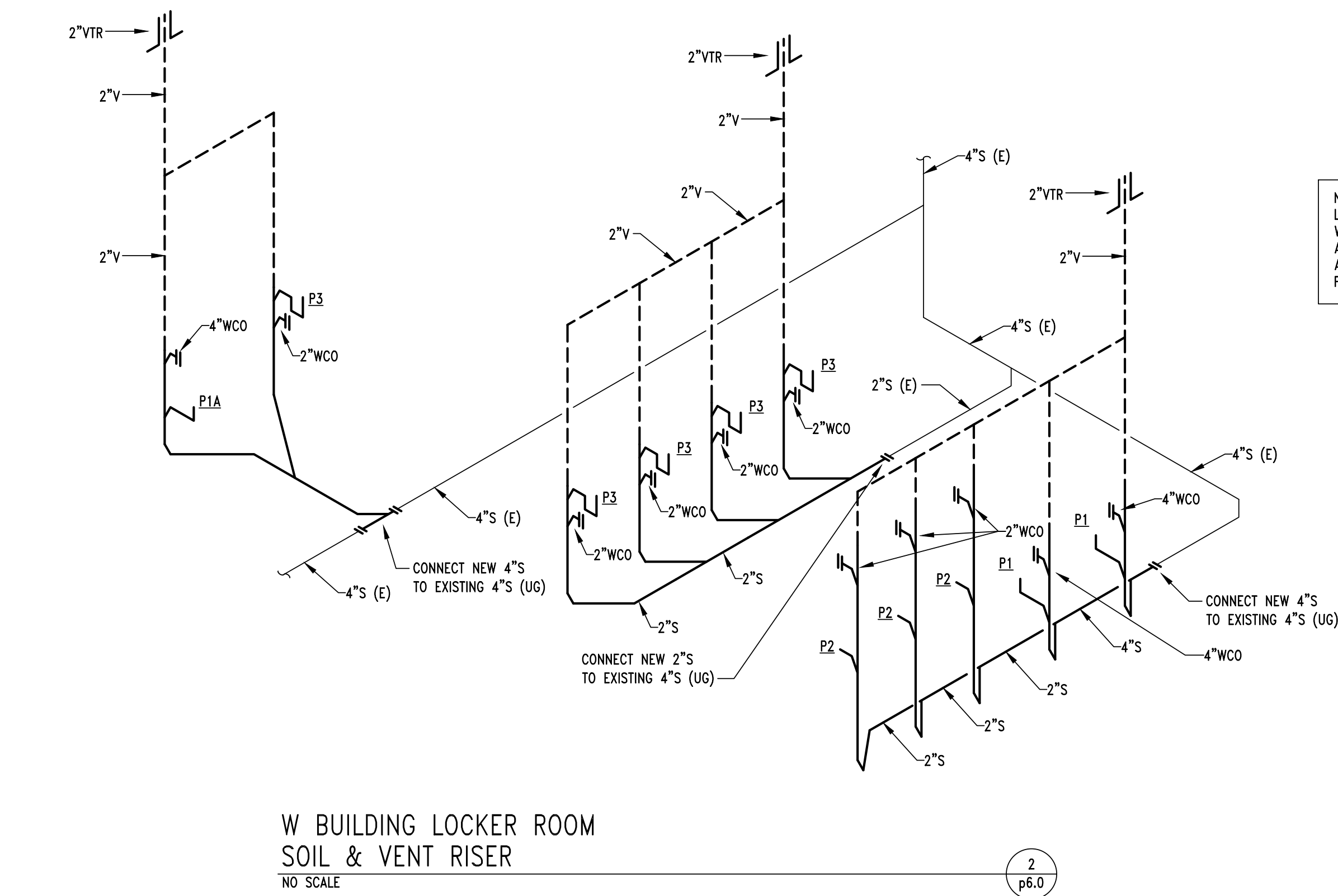


KC MECHANICAL
ENGINEERING, L.L.C.

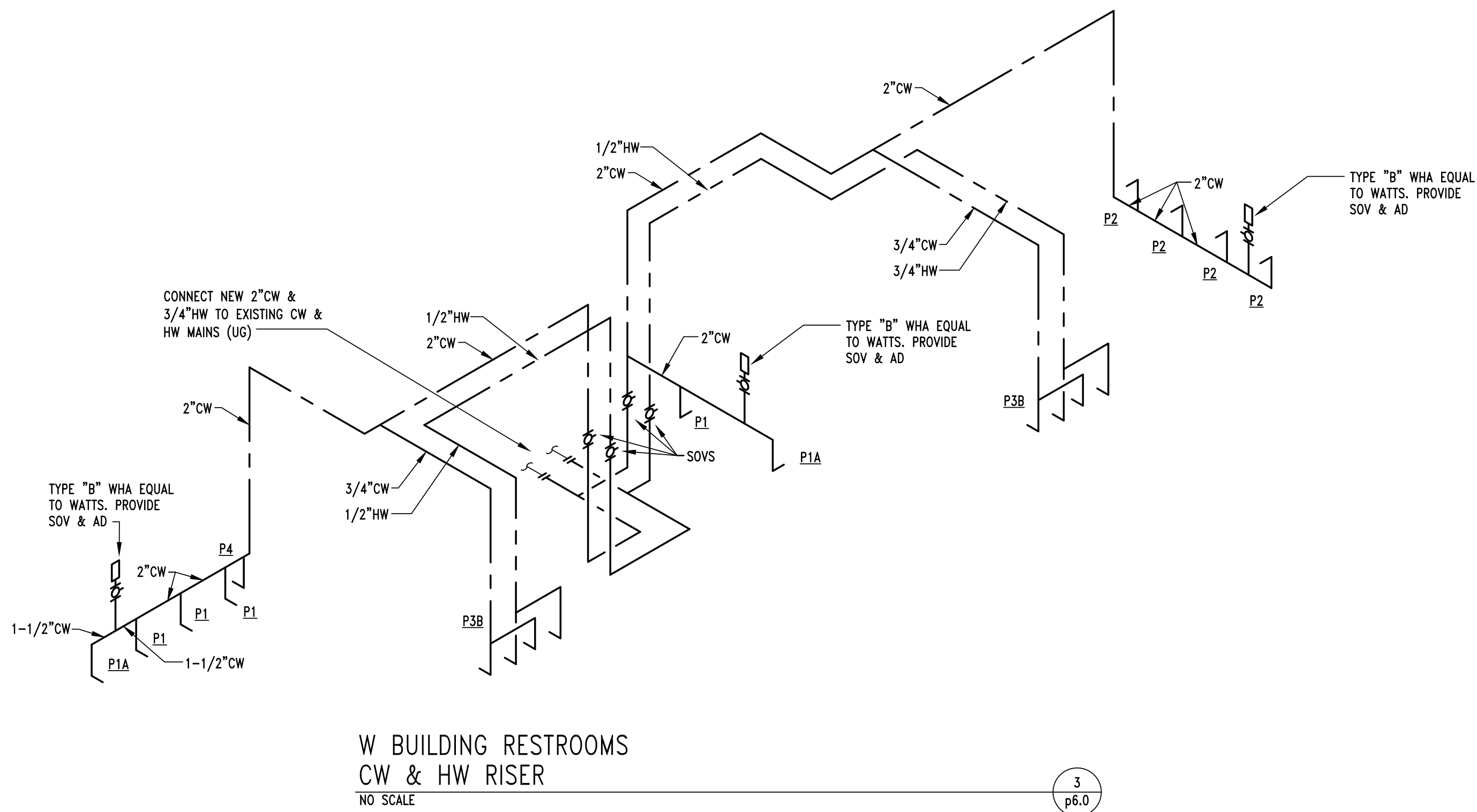
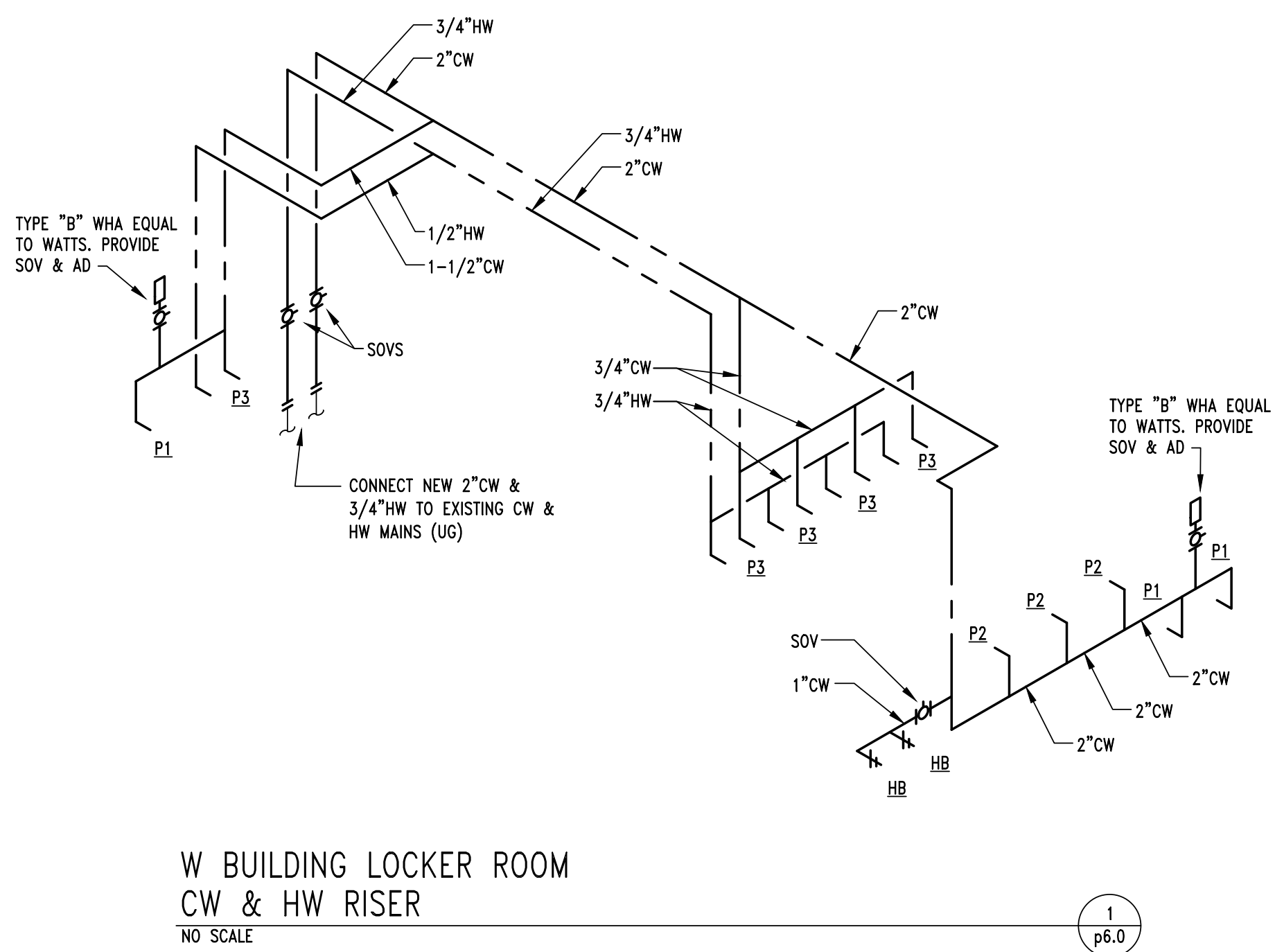
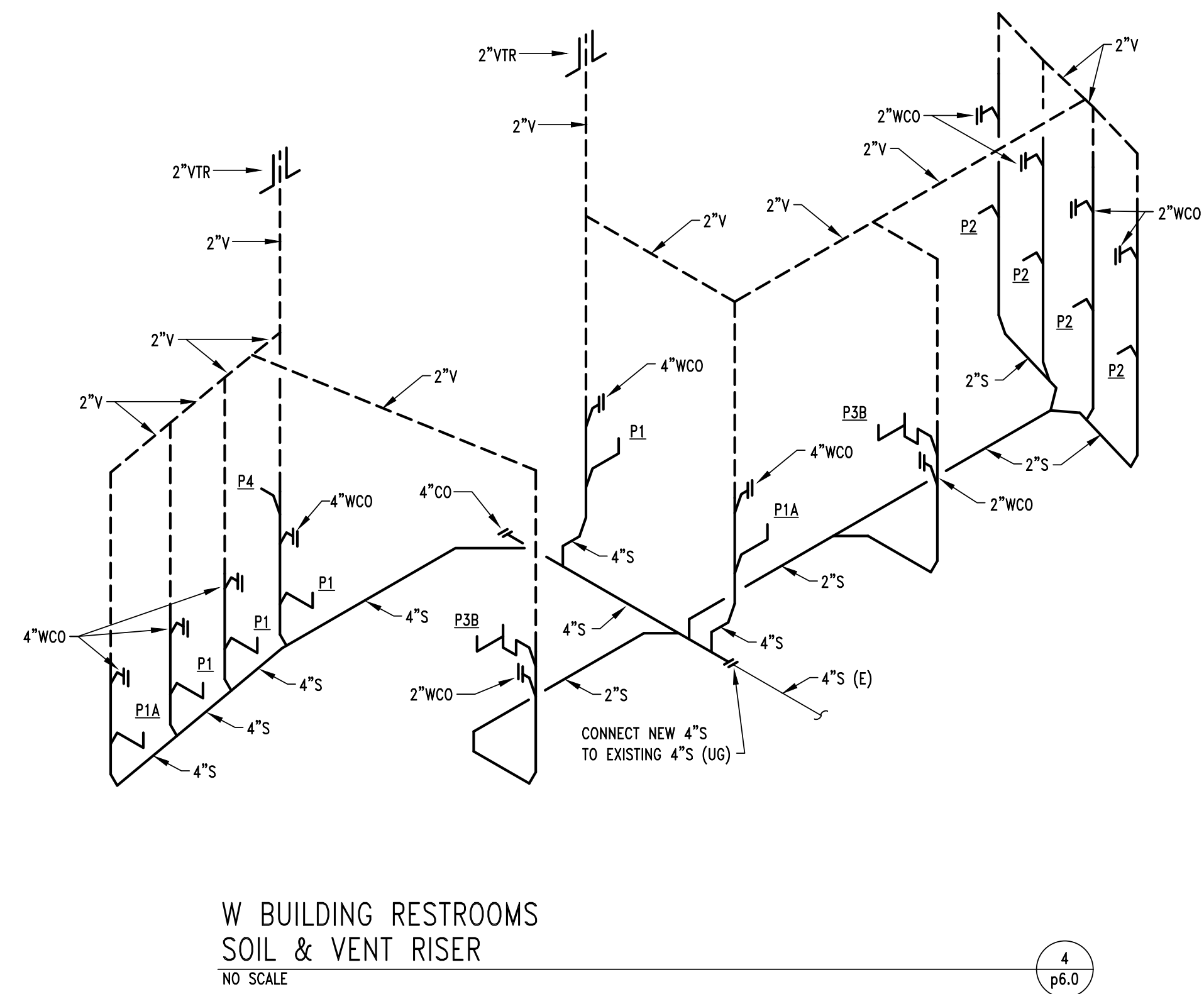
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Tucson, Arizona 85711
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NOTE:
LOCATE ALL WALL CLEANOUTS FOR
WATER CLOSETS AND URINALS
ABOVE FLUSH VALVES TO BE
ACCESSIBLE WITHOUT REMOVING
FIXTURES.



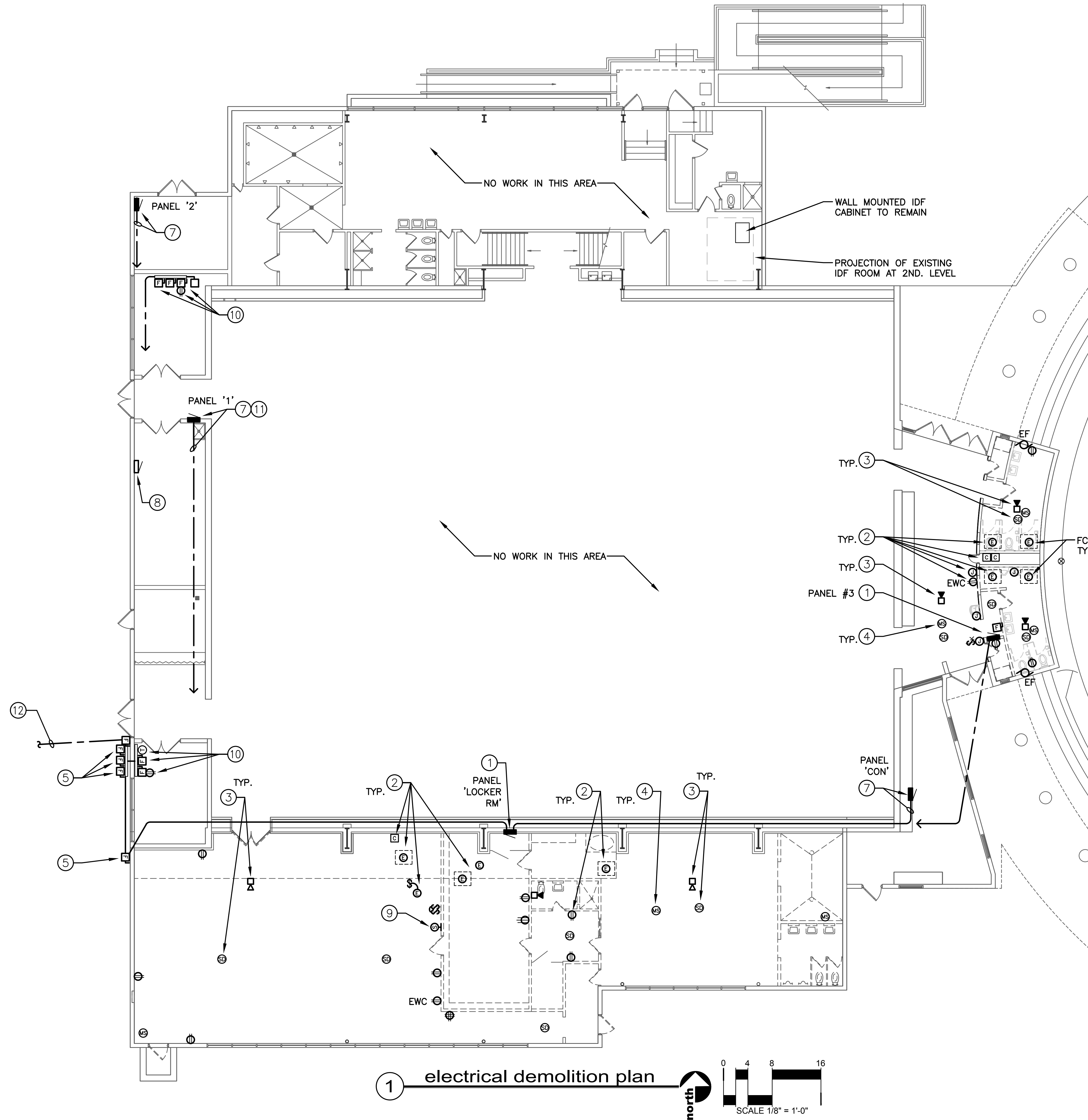
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ELECTRICAL WORK NOTES	ABBREVIATIONS	ELECTRICAL SYMBOL LEGEND									
<div>1. THE WORK COVERED ON THESE DRAWINGS SHALL INCLUDE THE FURNISHING OF ALL LABOR, MATERIALS, TRANSPORTATION, TOOLS, APPLIANCES, FEES, AND PERMITS REQUIRED FOR THE INSTALLATION OF A COMPLETE AND OPERATING ELECTRICAL SYSTEM. DRAWINGS ARE DIAGRAMMATIC IN NATURE AND ARE NOT INTENDED TO SHOW EVERY DETAIL.</div> <div>2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THIS PHASE OF THE WORK WITH ALL EXISTING CONDITIONS AND WITH ALL OTHER TRADES AND DESIGN DRAWINGS. SCHEDULE ALL OUTAGES AND CUTOVERS AS DIRECTED BY THE OWNER. COORDINATE ALL WORK SCHEDULES WITH THE OWNER.</div> <div>3. ALL WORK SHALL COMPLY WITH THE APPLICABLE RULES OF THE 2017 NATIONAL ELECTRICAL CODE (N.E.C.), OSHA, LOCAL ORDINANCES, AND UTILITY COMPANY REQUIREMENTS.</div> <div>4. ALL MATERIALS SHALL BE NEW AND BEAR THE U.L. SEAL. ALL CABLE SHALL BE STRANDED CU., TYPE THHN OR XHHW WITH INTEGRAL COLOR INSULATION, U.N.O.</div> <div>5. INCLUDE ALL COSTS AND RESPONSIBILITY FOR SURVEYING, LAYOUT AND LEGAL DESCRIPTIONS; EXCAVATION, COMPACTION AND BACKFILL; CONCRETE AND ASPHALT CUTTING, BREAKOUT AND PATCHING; LOCATION AND PROTECTION OF ALL EXISTING PUBLIC AND PRIVATE UTILITIES; REMOVAL AND PROPER DISPOSAL OF ALL DEBRIS AND SURPLUS MATERIAL; BARRICADES AND OTHER REQUIRED SAFETY EQUIPMENT; TEMPORARY POWER AND LIGHTING THAT MAY BE REQUIRED TO EFFECT CONSTRUCTION ACTIVITIES; LANDSCAPING REPAIRS AND ALL APPURTENANCES AND INCIDENTALS THAT MAY BE REQUIRED. THE CONTRACTOR SHALL BE LIABLE FOR REPAIRS TO ALL EXISTING UNDERGROUND UTILITIES THAT ARE DAMAGED IN THE COURSE OF THE WORK.</div> <div>6. THE CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS PRIOR TO SUBMITTAL OF BID.</div> <div>7. UNDERGROUND CONDUIT SYSTEMS SHALL BE PROVIDED WITH A MINIMUM 24 INCHES OF COVER FROM FINAL GRADES. VERIFY FINAL GRADE WITH CIVIL ENGINEER. ALL CONDUIT SHALL BE EMT, IMC, OR PVC SCH. 40. NO PVC SHALL PROTRUDE ABOVE GRADE. EMT FITTINGS SHALL BE STEEL, COMPRESSION, INSULATED THROAT.</div> <div>8. LABEL ALL PHASE AND NEUTRAL CONDUCTORS WITH PANEL AND CIRCUIT NUMBERS IN EVERY PULLBOX, HANDHOLE, AND LIGHT FIXTURE.</div> <div>9. VERIFY EXACT LOCATIONS AND MOUNTING HEIGHTS OF ALL OUTLETS AND LIGHT FIXTURES PRIOR TO ROUGH IN. CAREFULLY REVIEW ARCHITECTURAL, FURNITURE AND MILLWORK DRAWINGS, BUILDING ELEVATIONS, AND REFLECTED CEILING PLANS TO AVOID CONFLICTS. WHERE MILLWORK OCCURS, LOCATE ASSOCIATED OUTLETS WITHIN KNEE SPACES UNLESS NOTED OTHERWISE.</div> <div>10. VERIFY ELECTRICAL RATINGS AND LOCATIONS OF HVAC EQUIPMENT AND CONFIRM ALL REQUIRED CLEARANCES WITH DIVISION 23 CONTRACTOR PRIOR TO START OF WORK. COMPLETELY CONNECT ALL EQUIPMENT FOR A COMPLETE FUNCTIONAL INSTALLATION.</div> <div>11. LOCATE ALL ELECTRICAL DEVICES/FIXTURES IN CEILINGS ACCORDING TO THE ARCHITECTURAL REFLECTED CEILING PLANS INCLUDING LOCATION/PLACEMENT DETAILS.</div> <div>12. DEVICES MOUNTED IN THE WALLS SHALL ALIGN VERTICALLY WITH ANY OTHER ELECTRICAL DEVICE WITHIN 2' HORIZONTALLY ON SAME WALL AND SHALL ALIGN HORIZONTALLY WHENEVER POSSIBLE.</div> <div>13. ALL RACEWAYS SHALL BE CONCEALED WHEREVER POSSIBLE. ALL EXPOSED RACEWAYS, FITTINGS, EQUIPMENT AND SUPPORTS SHALL BE PAINTED AS DIRECTED IN ACCORDANCE WITH THE SPECIFICATIONS. VERIFY THE PROJECT SPECIFIC REQUIREMENTS (ACCESSIBLE VERSUS INACCESSIBLE CEILINGS AND WALLS, ETC.) FOR SURFACE OR CONCEALED WIRING METHODS AT EACH SITE PRIOR TO BID AND MAKE SUCH ACCOMMODATIONS IN THE BID.</div> <div>14. ALL 120V RECEPTACLES ON ROOFS, IN FLOOR BOXES, JANITOR CLOSETS, RESTROOMS, AT EWC'S OR WHEREVER WITHIN 6 FEET OF SINKS SHALL BE GFCI TYPE.</div> <div>15. ALL RECEPTACLES SHALL HAVE NEC COMPLIANT TAMPER PROOF FEATURE.</div> <div>16. ALL EXTERIOR RECEPTACLES SHALL HAVE NEC COMPLIANT HEAVY DUTY TAMPER PROOF AND WEATHER RESISTANT GFCI FEATURE.</div> <div>17. PROVIDE NEUTRAL CONDUCTOR TO ALL WALL MOUNTED SWITCH BOXES. CONNECT TO SENSOR, WHERE OCCURRING.</div> <div>18. ALL WALLBOX SENSORS SHALL BE SET SUCH THAT THE PUSH BUTTON NEED NOT BE TOUCHED TO TURN LIGHTS ON WHEN A ROOM IS ENTERED AFTER THE SENSOR HAS TURNED THE LIGHTS OFF. LIGHTS SHALL AUTOMATICALLY TURN ON UPON OCCUPANCY IF THE LIGHTS WERE AUTOMATICALLY TURNED OFF DUE TO VACANCY.</div> <div>19. TRACE ALL EXISTING CIRCUITS TO REMAIN IN AREAS OF WORK AND LABEL WIRING WITH CIRCUIT NUMBER TAGS AT WIRING DEVICES, J-BOXES, AND SERVING CIRCUIT BREAKER.</div> <div>20. TAG ALL NEW WIRING WITH CIRCUIT NUMBERS AT WIRING DEVICES AND SERVING CIRCUIT BREAKERS.</div> <div>21. UPDATE ALL NEW AND EXISTING PANEL DIRECTORIES TO REFLECT AS-BUILT CONDITIONS.</div> <div>22. FLASH SLEEVE AND SEAL ALL WALL AND ROOF PENETRATIONS SOUND AND WEATHER PROOF. PROVIDE ESCUTCHEON TRIM RINGS AND PLATES.</div> <div>23. ALL EXPOSED CONDUIT AND BOXES SHALL BE PAINTED TO MATCH SURFACE TO WHICH THEY ARE ATTACHED.</div> <div>24. ALL WIRING SHALL BE THWN/THHN COPPER IN EMT CONDUIT.</div> <div>25. ALL EMT CONDUIT FITTINGS SHALL BE STEEL, COMPRESSION, INSULATED THROAT.</div>	<div><div>A.F.F.</div><div>ABOVE FINISHED FLOOR</div></div> <div><div>A.F.G.</div><div>ABOVE FINISHED GRADE</div></div> <div><div>AL.</div><div>ALUMINUM</div></div> <div><div>CASS</div><div>CARD ACCESS SECURITY SYSTEM</div></div> <div><div>C.I.P.</div><div>COMPLETE IN PLACE</div></div> <div><div>CTRL</div><div>CONTROLS, CONTROLLER</div></div> <div><div>CU.</div><div>COPPER</div></div> <div><div>DPST</div><div>DOUBLE POLE SINGLE THROW</div></div> <div><div>DPS</div><div>DOOR POSITION SWITCH</div></div> <div><div>EF, EX</div><div>EXHAUST FAN</div></div> <div><div>EL</div><div>EVENING LIGHT</div></div> <div><div>EM</div><div>EMERGENCY</div></div> <div><div>EWC</div><div>ELECTRIC WATER COOLER</div></div> <div><div>EXIST.</div><div>EXISTING</div></div> <div><div>EXT.</div><div>EXTERIOR</div></div> <div><div>F.A.</div><div>FIRE ALARM</div></div> <div><div>GFCI</div><div>GROUND FAULT CIRCUIT INTERRUPTER PROTECTED</div></div> <div><div>GRD</div><div>GROUND</div></div> <div><div>IDF</div><div>INTERMEDIATE DISTRIBUTION FRAME</div></div> <div><div>LTFS</div><div>LIQUID TIGHT FLEXIBLE STEEL CONDUIT</div></div> <div><div>LT., LTG.</div><div>LIGHT, LIGHTING</div></div> <div><div>MDF</div><div>MAIN DISTRIBUTION FRAME</div></div> <div><div>MOC</div><div>MAXIMUM OVERCURRENT PROTECTION</div></div> <div><div>NEC</div><div>NATIONAL ELECTRICAL CODE</div></div> <div><div>N.I.C.</div><div>NOT IN CONTRACT</div></div> <div><div>NL</div><div>NIGHT LIGHT</div></div> <div><div>OF</div><div>OWNER FURNISHED, CONTRACTOR INSTALLED</div></div> <div><div>OFI</div><div>OWNER FURNISHED, OWNER INSTALLED</div></div> <div><div>REC.</div><div>RECEPTACLE</div></div> <div><div>SPD</div><div>SURGE PROTECTION DEVICE</div></div> <div><div>SPST</div><div>SINGLE POLE SINGLE THROW</div></div> <div><div>TYP.</div><div>TYPICAL</div></div> <div><div>U.N.O.</div><div>UNLESS NOTED OTHERWISE</div></div> <div><div>UPS</div><div>UNINTERRUPTIBLE POWER SUPPLY</div></div> <div><div>WAP</div><div>WIRELESS ACCESS POINT</div></div> <div><div>WP</div><div>WEATHERPROOF</div></div> <div><div>XFMR</div><div>TRANSFORMER</div></div> <tr><th colspan="2">ELECTRICAL SHEET INDEX</th></tr> <tr><td><div>e0.1</div><div>e1</div><div>e2</div><div>e3</div><div>es1.0</div><div>e1.1</div><div>e1.1b</div><div>e1.2</div><div>e1.3</div><div>e2.1</div><div>e3.1</div><div>e4.0</div><div>e5.0</div><div>e5.1</div><div>e6.0</div><div>e7.0</div><div>e7.1</div></td><td><div>ELECTRICAL SYMBOL LEGEND AND NOTES</div><div>BUILDING W ELECTRICAL DEMOLITION PLAN</div><div>BUILDING W LIGHTING DEMOLITION PLAN</div><div>BUILDING V ELECTRICAL DEMOLITION PLAN</div><div>ELECTRICAL SITE PLANS</div><div>BUILDING W POWER PLAN</div><div>BUILDING W HVAC POWER PLAN</div><div>BUILDING V ELECTRICAL PLANS</div><div>RESTROOM ELECTRICAL PLANS</div><div>BUILDING W SPECIAL SYSTEMS PLAN</div><div>BUILDING W LIGHTING PLAN</div><div>ONE LINE DIAGRAMS</div><div>PANEL SCHEDULES</div><div>PANEL SCHEDULES</div><div>LIGHT FIXTURE SCHEDULE AND NOTES</div><div>ELECTRICAL DETAILS</div><div>ELECTRICAL DETAILS</div></td></tr> <tr><td colspan="2"></td><td><div><div><div></div></div><div>RACEWAY CONCEALED IN WALL OR CEILING, (2) #12, (1) #12 GRD. IN 1/2" C. U.N.O.</div></div><div><div><div></div></div><div>RACEWAY CONCEALED IN FLOOR, UNDER FLOOR, OR UNDERGROUND. 2# 12, 1 #12 GRD. IN 3/4" C. U.N.O.</div></div><div><div><div><div>##</div><div>HA-1,3</div></div></div><div>3/4"C. MINIMUM HOMERUN TO PANEL "HA". CIRCUITS 1 AND 3. NUMBER OF HASH MARKS INDICATE NUMBER OF CONDUCTORS, NOT INCLUDING GROUND CONDUCTOR, IN RACEWAY. REFER TO PANEL SCHEDULES FOR RACEWAY AND CONDUCTOR SIZES</div></div><div><div><div></div></div><div>GROUND, SIZED ACCORDING TO CODE, U.N.O.</div></div><div><div><div></div></div><div>FLEXIBLE STEEL CONDUIT. REFER TO SPECIFICATIONS FOR TYPES.</div></div><div><div><div></div></div><div>LIGHT FIXTURE DESIGNATION, REFER TO LIGHT FIXTURE SCHEDULE.</div></div><div><div><div></div></div><div>CEILING SURFACE OR RECESSED MOUNTED LIGHT FIXTURE AND OUTLET.</div></div><div><div><div></div></div><div>WALL SURFACE OR RECESSED MOUNTED LIGHT FIXTURE AND OUTLET.</div></div><div><div><div></div></div><div>LED OR FLUORESCENT FIXTURE AND OUTLET.</div></div><div><div><div></div></div><div>STRIP LED OR FLUORESCENT FIXTURE AND OUTLET.</div></div><div><div><div></div></div><div>NIGHT LIGHT LIGHTING FIXTURE</div></div><div><div><div></div></div><div>COMBO EXIT LIGHT AND EMERGENCY LIGHT FIXTURE AND OUTLET. PROVIDE FACES AND DIRECTIONAL ARROWS AS REQUIRED. BACK MOUNT TO WALL WHEREVER POSSIBLE.</div></div><div><div><div></div></div><div>EMERGENCY LIGHT FIXTURE AND OUTLET.</div></div><div><div><div></div></div><div>TRANSFORMER, AS NOTED</div></div><div><div><div></div></div><div>PANELBOARD, REFER TO PANEL SCHEDULE.</div></div><div><div><div></div></div><div>ELECTRICAL SERVICE ENTRANCE EQUIPMENT, REFER TO ONE LINE DIAGRAM</div></div><div><div><div></div></div><div>JUNCTION BOX</div></div><div><div><div></div></div><div>ELECTRICAL CONNECTION</div></div><div><div><div></div></div><div>MOTOR OUTLET AND MOTOR CONNECTION</div></div><div><div><div></div></div><div>DISCONNECT SWITCH, FUSED, SIZE TO SUIT LOAD, ENCLOSURE TO SUIT LOCATION.</div></div><div><div><div></div></div><div>WALL MOUNTED NEC TAMPER RESISTANT DUPLEX CONVENIENCE RECEPTACLE AT +18" A.F.F., U.N.O. WHERE NOTED "WP", PROVIDE NEC TAMPER RESISTANT, WEATHER RESISTANT GFCI TYPE AT +18" WITH DEEP LOCKABLE WEATHERPROOF COVER, WET LOCATION LISTED WHILE IN USE. WP RECEPTACLES ON ROOF NEED NOT HAVE LOCKABLE COVER. LOCKABLE COVERS SHALL HAVE HASP FOR OWNER FURNISHED PADLOCK. WHERE NOTED "EWC", PROVIDE RECEPTACLE, LOCATED PER EWC INSTALLATION DRAWINGS.</div></div><div><div><div></div></div><div>WALL MOUNTED TAMPER RESISTANT GFCI DUPLEX CONVENIENCE RECEPTACLE AT +6" ABOVE BACKSPLASH AT COUNTERTOP U.N.O. REFER TO ARCH. ELEVATIONS FOR EXACT LOCATIONS.</div></div><div><div><div></div></div><div>SPECIAL WALL MOUNTED RECEPTACLE, AS NOTED, AT +18" A.F.F., U.N.O. VERIFY NEMA CONFIGURATION. ALL DRYER RECEPTACLES SHALL BE FOUR-PRONG WITH BRANCH CIRCUITRY CONSISTING OF TWO #10 PHASE CONDUCTORS, ONE #10 NEUTRAL AND ONE #10 GROUNDING CONDUCTOR.</div></div><div><div><div></div></div><div>ANALOG DUAL TECHNOLOGY PIR AND MICROPHONIC PRESENCE SENSOR FOR CONTROL OF LIGHTING, MINIMUM 1,000 SQ. FT. COVERAGE PATTERN PER SENSOR. PROVIDE COMPLETE IN PLACE. EXACT LOCATION AND COVERAGE PATTERN PER MANUFACTURER. SUBMIT PROJECT SPECIFIC LAYOUT DRAWINGS FOR APPROVAL PRIOR TO START OF WORK. PROVIDE HIGHBAY SENSORS WHERE SHOWN, MINIMUM 2,000 SQ. FT. COVERAGE AREA.</div></div><div><div><div></div></div><div>ANALOG PUSHBUTTON ON/OFF DUAL TECHNOLOGY WALL BOX OCCUPANCY SENSOR +48" A.F.F. WITH NEUTRAL WIRE CONNECTION.</div></div><div><div><div></div></div><div>SPST, DIGITAL PUSHBUTTON WALL BOX TIMER SWITCH. VOLTAGE AND RATING TO SUIT ASSOCIATED LOADS.</div></div><div><div><div></div></div><div>MOTOR RATED SWITCH, AS NOTED.</div></div><div><div><div></div></div><div>FIRE ALARM PULL STATION AT + 48" A.F.F., U.N.O. PROVIDE INTEGRALLY ALARMED POLYCARBONATE VANDAL SHIELD.</div></div><div><div><div></div></div><div>FIRE ALARM HORN/STROBE VOICE EVACUATION DEVICE AT + 80" A.F.F., U.N.O.</div></div><div><div><div></div></div><div>FIRE ALARM ADJUSTABLE VOLUME HORN/STROBE VOICE EVACUATION DEVICE AT 80" A.F.F., U.N.O.</div></div><div><div><div></div></div><div>FIRE ALARM AREA SMOKE DETECTOR, CEILING MOUNTED.</div></div><div><div><div></div></div><div>FIRE ALARM AREA SMOKE DETECTOR, HVAC DUCT MOUNTED.</div></div><div><div><div></div></div><div>CEILING OR WALL MOUNTED PAGING/BELL.</div></div><div><div><div></div></div><div>DUPLEX TELECOMMUNICATIONS OUTLET IN 4-11/16" BOX AT +18" A.F.F., U.N.O. (2) DATA CABLES TO NEAREST IDF. (1) BUSHED 1"C. FROM OUTLET TO CEILING SPACE. ALL TELECOM CABLING AND JACKS ARE BY OWNERS VENDOR.</div></div><div><div><div></div></div><div>CEILING MOUNTED WIRELESS ACCESS POINT WITH (2) DATA CABLES TO NEAREST IDF. 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THIS SHEET ONLY

1. REMOVE EXISTING PANEL AND ASSOCIATED WIRE/CONDUIT. REMOVE FEEDER BACK TO EXTERIOR WIREWAY SOURCE. MAINTAIN EXISTING CONDUIT FOR POSSIBLE USE IN NEW CONSTRUCTION PHASE.
2. REMOVE RECEPTACLES, JUNCTION BOXES AND HVAC POWER CONNECTIONS. REMOVE ASSOCIATED WIRE/CONDUIT/WIRE-MOLD BACK TO SOURCE. MAINTAIN EXISTING CIRCUITRY PASSING THRU DEMOLITION AREA FEEDING OTHER AREAS AND DEVICES TO REMAIN.
3. SALVAGE EXISTING FIRE ALARM (FA) DEVICES, AND ASSOCIATED WIRE/CONDUIT. MAINTAIN EXISTING FA LOOP PASSING THRU DEMOLITION AREA FEEDING OTHER AREAS AND DEVICES TO REMAIN. FIRE ALARM SYSTEM SHALL REMAIN IN FUNCTION DURING CONSTRUCTION.
4. SALVAGE EXISTING LOW VOLTAGE SECURITY SYSTEM DEVICES, REMOVE ALL ASSOCIATED WIRE/CONDUIT.
5. REMOVE EXISTING 400A-120/208V-3Ø-4W MAIN FUSED SWITCH, GUTTER, ASSOCIATED DISCONNECTS AND WIRE/CONDUIT. EXISTING MAIN SERVICE CONDUCTORS TO REMAIN. REFER TO DEMOLITION ONE LINE DIAGRAM.
6. REMOVE EXISTING TELECOM OUTLETS, REMOVE ALL ASSOCIATED WIRE/CONDUIT BACK TO SOURCE. MAINTAIN EXISTING WIRING PASSING THRU DEMOLITION AREA FEEDING OTHER AREAS TO REMAIN.
7. REPLACE EXISTING PANEL, REMOVE EXISTING FEEDER, KEEP EXISTING CONDUIT FOR POSSIBLE NEW PHASE USE. MAINTAIN EXISTING BRANCH CIRCUITS FOR CONNECTION TO NEW PANEL. TRACE AND ID EXISTING CIRCUITS TO REMAIN. COORDINATE WITH OWNER EXISTING CIRCUITS TO REMAIN.
8. EXISTING FIRE ALARM PANEL TO REMAIN.
9. EXISTING SPEAKER TO REMAIN. MAINTAIN EXISTING WIRING.
10. REMOVE EXISTING GUTTER WITH DISCONNECTS, HEATERS, AND TIMER. COORDINATE EXISTING LOADS TO REMAIN WITH OWNER AND CONNECT TO NEW PANEL VIA NEW BREAKER.
11. REMOVE RECESSED DEVICES AND KEEP EXTERIOR PANEL CABINET TO ALLOW INSTALLATION OF NEW PANEL/LOAD CENTER INTERIOR INSIDE OF EXISTING CABINET.
12. REMOVE EXISTING BLDG. "V" PANEL FEEDER, ABANDON OR REUSE EXISTING CONDUIT AS NEED.



**Job**

2404.03

late

04.07.2025

Revisions

WILCOX MIDDLE & HIGH SCHOOL
240 N. DIXIE AVE

240 N. BISBEE AVE.

WILLCOX, ARIZONA 85643

HIGH SCHOOL REMODEL

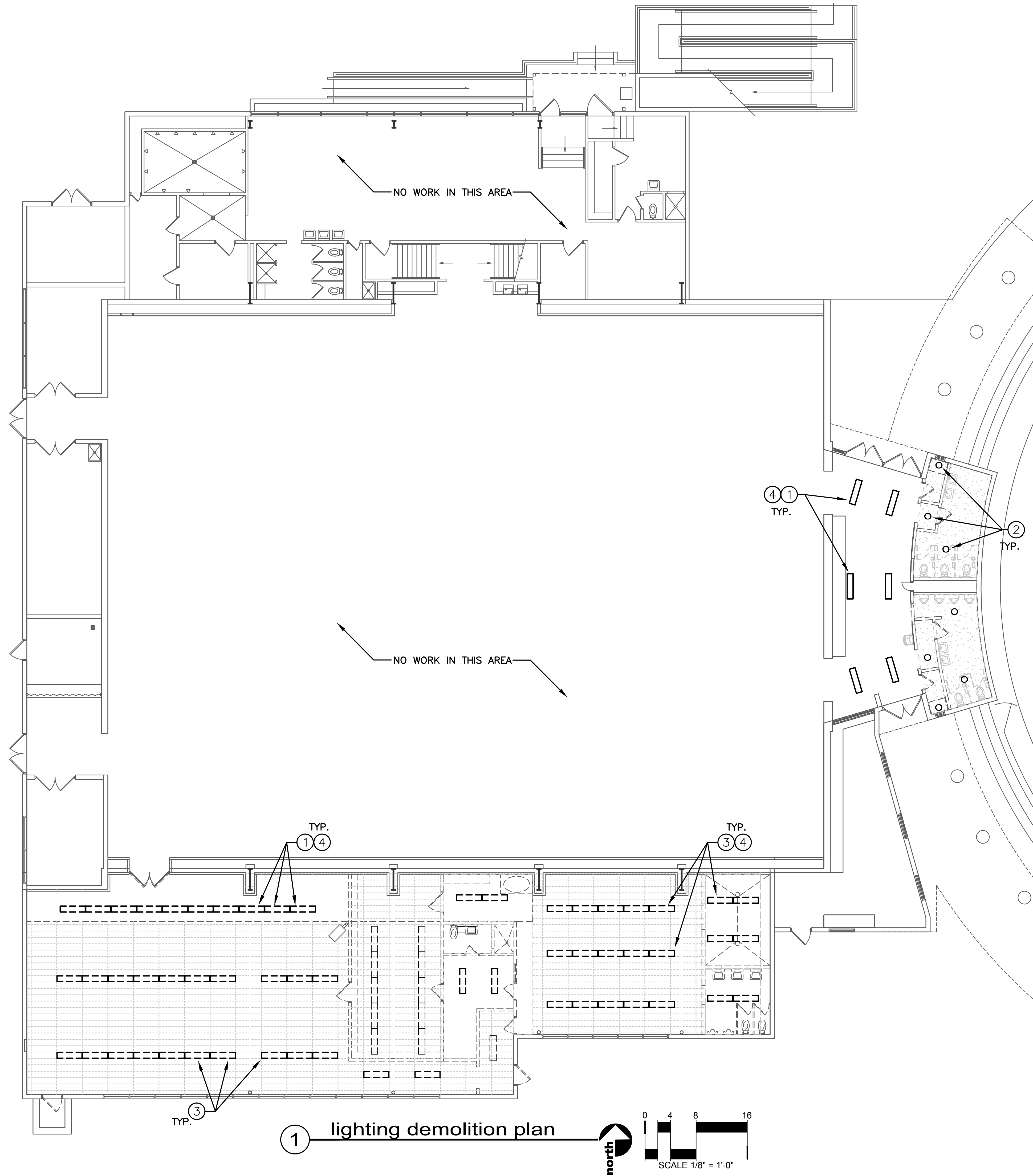
building W floor plan - lighting demolition

ED2

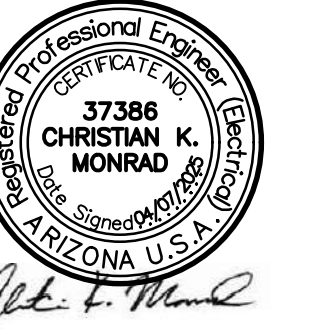
○ ELECTRICAL KEYNOTES

THIS SHEET ONLY

1. REMOVE EXISTING SURFACE FLUORESCENT LIGHT FIXTURE, REMOVE ALL ASSOCIATED LIGHT SWITCHES, CONTROLS, AND WIRE/CONDUIT BACK TO SOURCE.
2. REMOVE EXISTING FLUORESCENT DOWNLIGHT FIXTURE, REMOVE ALL ASSOCIATED LIGHT SWITCHES, CONTROLS, AND WIRE/CONDUIT BACK TO SOURCE.
3. REMOVE EXISTING RECESSED FLUORESCENT LIGHT FIXTURE, REMOVE ALL ASSOCIATED LIGHT SWITCHES, CONTROLS, AND WIRE/CONDUIT BACK TO SOURCE.
4. MAINTAIN EXISTING LIGHTING CIRCUITY AT ADJACENT AREAS TO REMAIN.
- 5.



LOCKOUT - TAGOUT - TESTOUT
 **MONRAD**
 ENGINEERING INC.
 CONSULTING ELECTRICAL ENGINEERS
 1926 East Ft. Lowell Road, Suite 200
 Tucson, Arizona 85719-2391
 (520) 884-0045 M25004

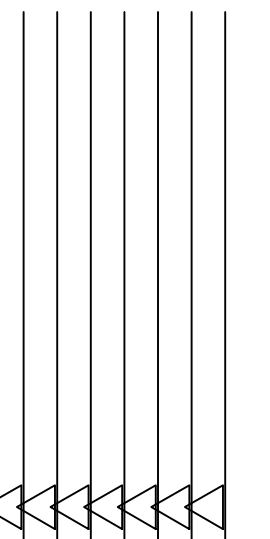
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2404.03

late

04.07.2025

Revisions



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240 N. BISBEE AVE.
TUCSON, ARIZONA 85743

WILLCOX, ARIZONA 85643

HIGH SCHOOL REMODEL

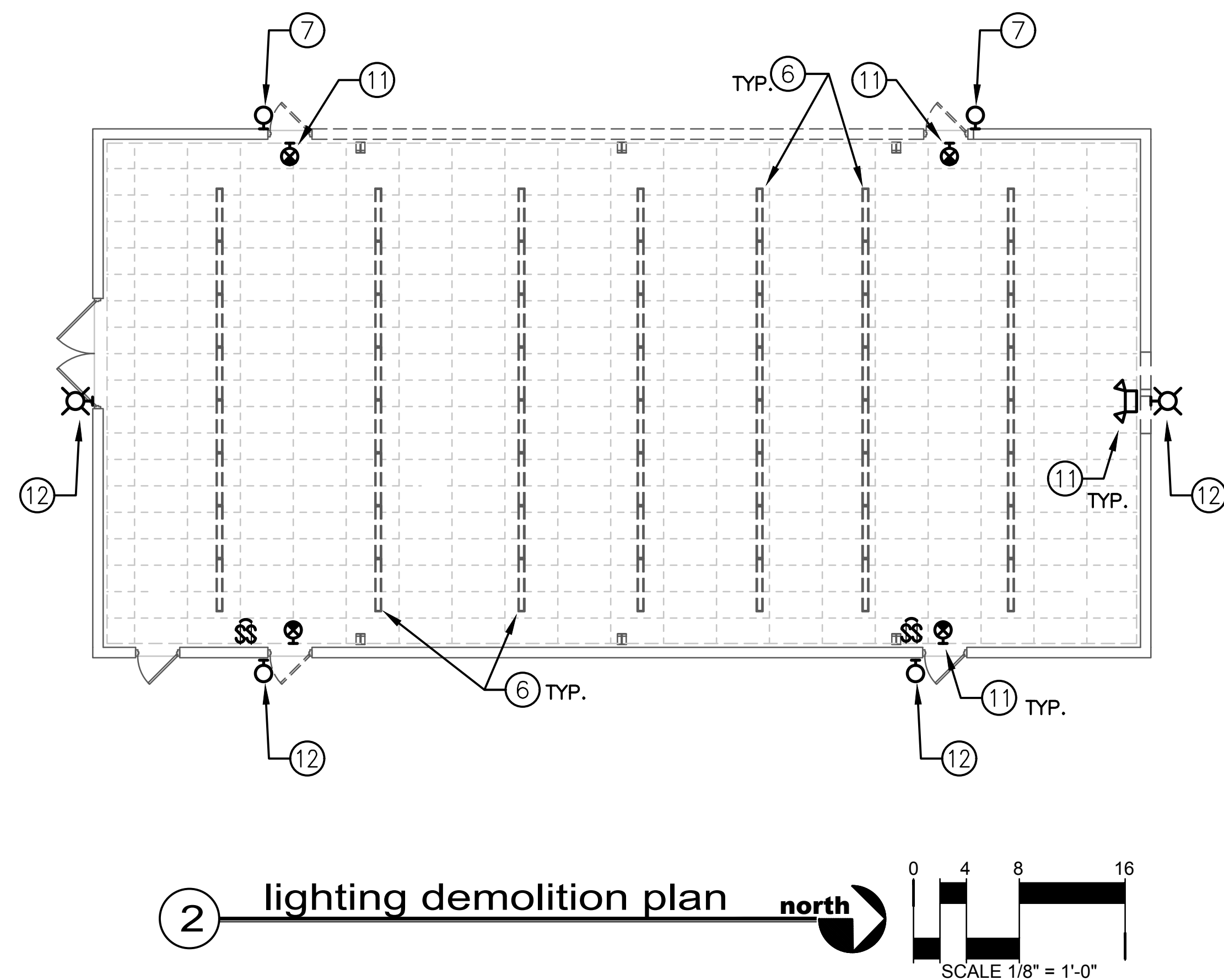
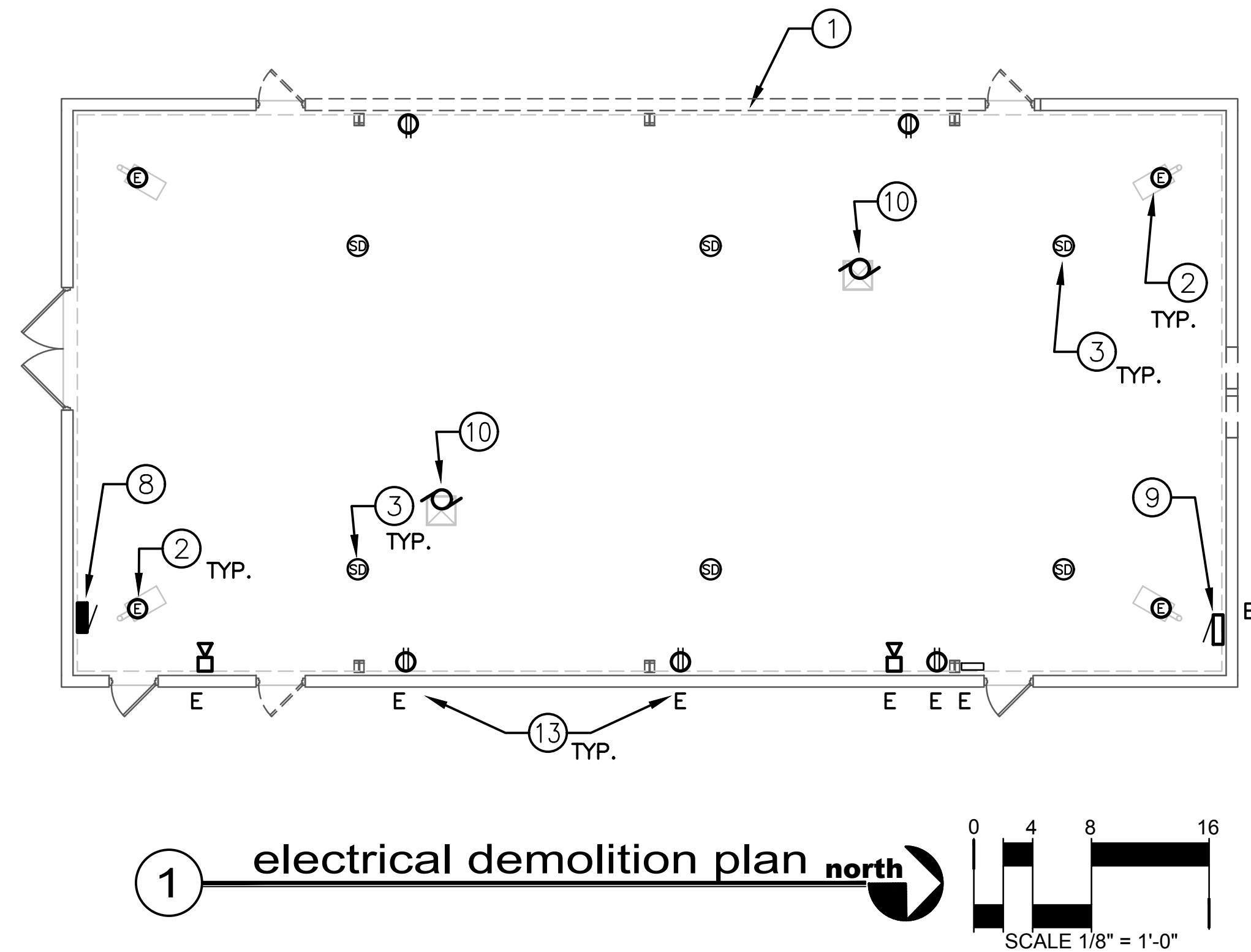
building V floor plan -
electrical demolition

ED3

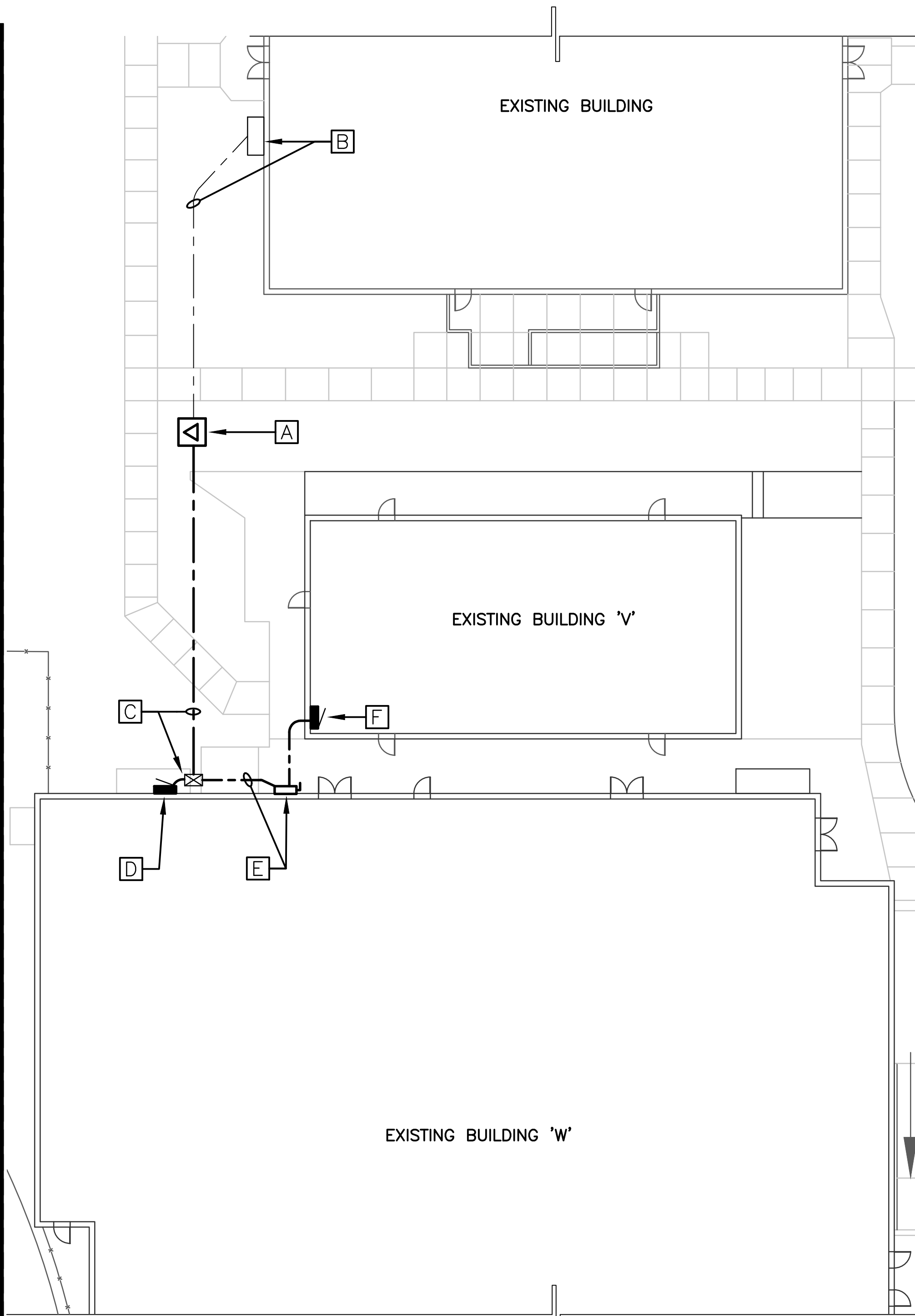
○ ELECTRICAL KEYNOTES

THIS SHEET ONLY

1. REMOVE EXISTING RECEPTACLES AND RECESSED CONDUITS FROM DEMOLISHED WALL, REMOVE ALL ASSOCIATED WIRE/CONDUIT TO LAST JUNCTION BOX. MAINTAIN EXISTING CIRCUITRY PASSING THRU DEMOLITION AREA FEEDING AREAS AND DEVICES TO REMAIN.
2. REMOVE HEATER CONNECTIONS AND WIRE/CONDUIT BACK TO SOURCE.
3. REMOVE EXISTING FIRE ALARM (FA) DEVICES, REMOVE ALL ASSOCIATED WIRE/CONDUIT BACK TO SOURCE. MAINTAIN EXISTING FA LOOP PASSING THRU DEMOLITION AREA FEEDING OTHER AREAS AND DEVICES TO REMAIN. FIRE ALARM SYSTEM SHALL REMAIN IN FUNCTION DURING CONSTRUCTION. SALVAGE EXISTING FA DEVICES FTO OWNER.
4. REMOVE EXISTING LOW VOLTAGE SECURITY DEVICES, REMOVE ALL ASSOCIATED WIRE/CONDUIT BACK TO SOURCE. SALVAGE EXISTING DEVICES FOR NEW CONSTRUCTION PHASE USE.
5. REMOVE EXISTING TELECOM OUTLETS, REMOVE ALL ASSOCIATED WIRE/CONDUIT BACK TO SOURCE. MAINTAIN EXISTING WIRING PASSING THRU DEMOLITION AREA FEEDING OTHER AREAS TO REMAIN.
6. REMOVE EXISTING SURFACE FLUORESCENT LIGHT FIXTURE, REMOVE ALL ASSOCIATED LIGHT SWITCHES, CONTROLS, AND WIRE/CONDUIT BACK TO SOURCE.
7. REMOVE EXISTING WALL MOUNTED LIGHT FIXTURE. REMOVE EXISTING WIRE/CONDUIT FROM WEST WALL.
8. REPLACE EXISTING PANEL PER PANEL SCHEDULE AND ONE LINE DIAGRAM. TRACE AND ID ALL EXISTING LOADS, COORDINATE WITH OWNER EXISTING LOADS TO REMAIN AND TO BE RECONNECTED VIA NEW BREAKER IN NEW PANEL.
9. EXISTING TELECOM CABINET TO REMAIN.
10. REMOVE CONNECTION TO EXISTING EVAPORATIVE COOLERS, REMOVE ASSOCIATED WIRE/CONDUITS AND CONTROLS.
11. REMOVE EXISTING EXIT AND EMERGENCY LIGHTS.
12. REMOVE EXISTING EXTERIOR LIGHT FIXTURES, MAINTAIN CONCEALED CONDUIT, MAINTAIN EXISTING EXTERIOR LGT. CONTROL. REMOVE SURFACE CONDUIT.
13. MAINTAIN FUNCTION AND CONTINUITY OF EXISTING WALL MOUNTED DEVICES.



R:\projects\25\25004 Willcox HS\Willcox HS ES1.dwg, 4/7/2025 9:01:07 AM, Monrad_svelasco

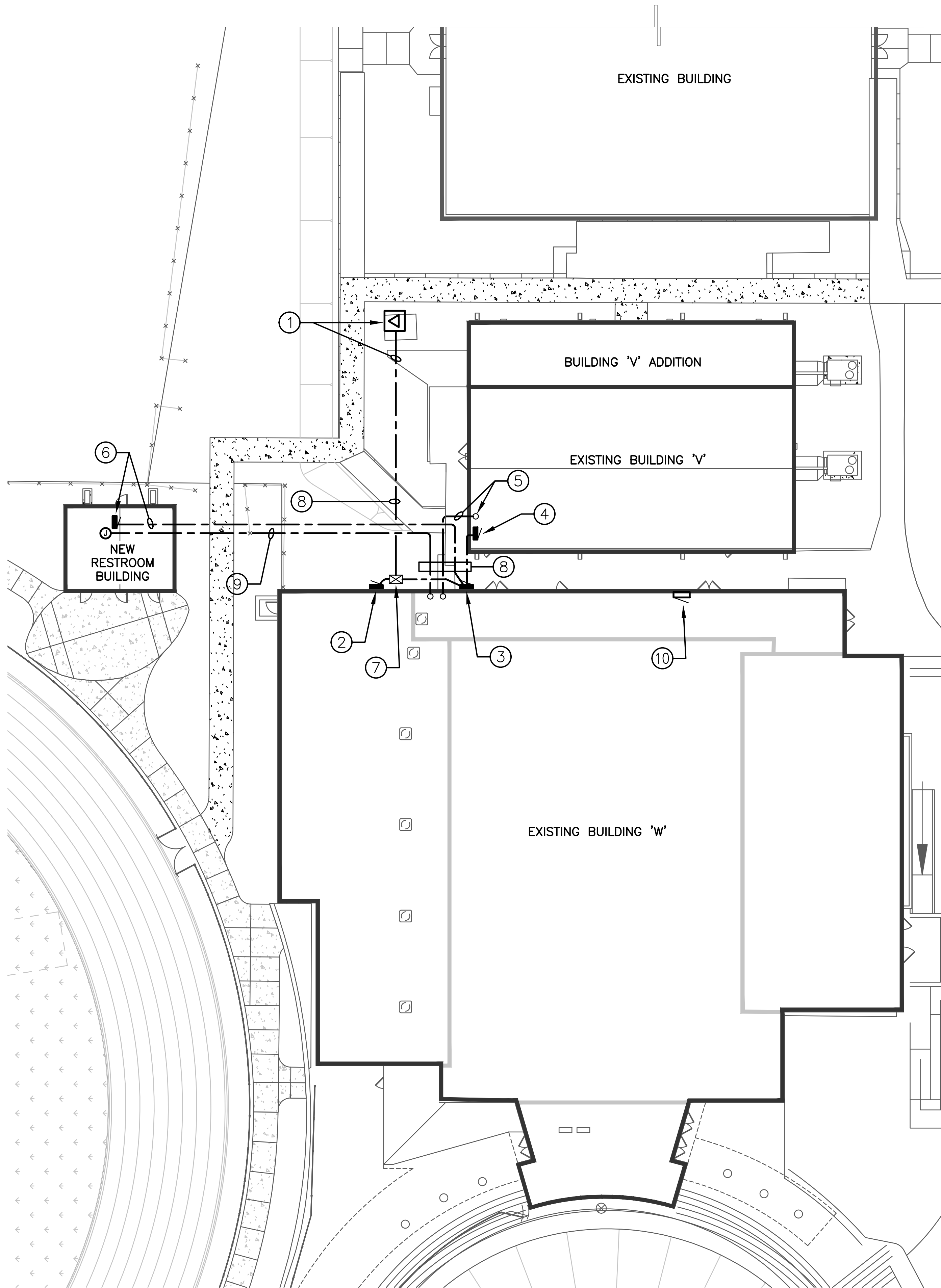


2 electrical demolition - partial site plan

☐ ELECTRICAL DEMOLITION KEYNOTES

THIS SHEET ONLY

- EXISTING POWER COMPANY TRANSFORMER TO REMAIN. POWER CO. TO REVIEW AND/OR REVISE EXISTING KVA CAPACITY WITH NEW LOAD PER THIS PROJECT.
- EXISTING 'NEW GYM' 800A-120/208V-3Ø-4W DISTRIBUTION PANEL AND SERVICE CONDUCTORS TO REMAIN.
- EXISTING U.G. SERVICE CONDUCTORS AND UTILITY SPLICE BOX WITH WP MULTI-TAP CONNECTOR.
- 400A-120/208V-3Ø-4W SPORTS LIGHTING PANEL NOT IN THIS CONTRACT.
- REMOVE EXISTING 400A DISCONNECT, GUTTER, AND SERVICE CONDUCTORS PER ONE LINE DIAGRAM.
- REMOVE EXISTING 60A PANEL, AND FEEDER PER ONE LINE DIAGRAM.



1 electrical - partial site plan

☐ ELECTRICAL KEYNOTES

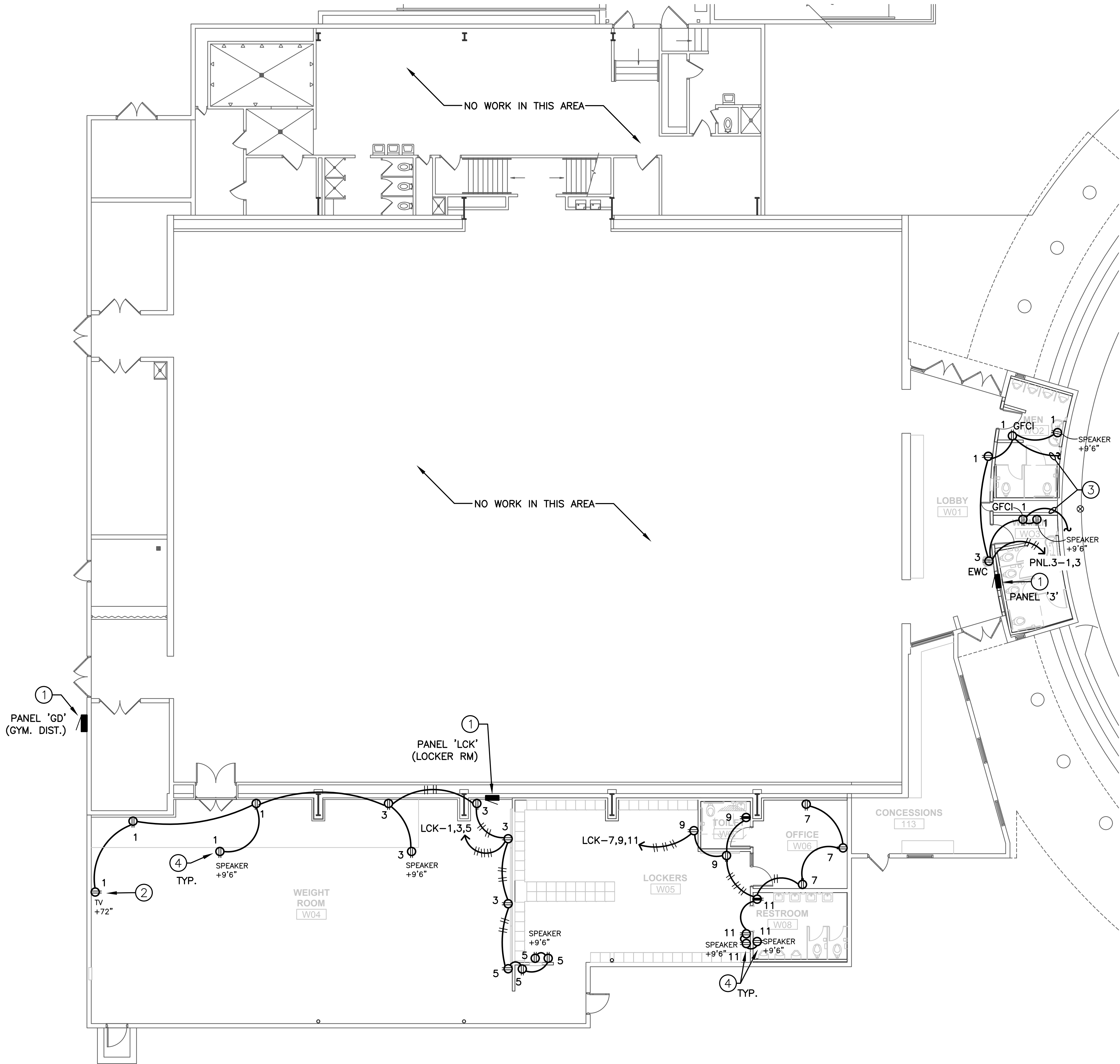
THIS SHEET ONLY

- EXISTING POWER COMPANY TRANSFORMER TO REMAIN. POWER CO. TO REVISE EXISTING KVA CAPACITY WITH NEW LOAD PER THIS PROJECT. ADD NEW SET OF SERVICE CONDUCTORS PER ONE LINE DIAGRAM.
- EXISTING SPORTS LIGHTING PANEL TO REMAIN, COORDINATE SERVICE CONDUCTORS TO REMAIN.
- NEW 600A-120/208V-3Ø-4W PANEL PER ONE LINE DIAGRAM AND PANEL SCHEDULE.
- NEW 200A-120/208V-3Ø-4W BLDG. 'V' PANEL AND NEW FEEDER PER PER ONE LINE DIAGRAM AND PANEL SCHEDULE.
- PROVIDE (2) 2"Ø. FOR FUTURE SPECIAL SYSTEMS FROM BLDG. 'W' TO BLDG. 'V'.
- NEW 100A-120/208V-3Ø-4W RESTROOM BLDG. PANEL AND NEW FEEDER PER PER ONE LINE DIAGRAM AND PANEL SCHEDULE.
- EXISTING UTILITY CO. SERVICE CONDUCTORS SPLICE BOX PER ONE LINE DIAGRAM.
- SAW CUT, PATCH, AND RESTORE CONCRETE WALKWAYS FOR NEW UNDERGROUND CONDUIT WORK.
- FIRE ALARM U.G. 2"Ø.
- EXISTING FIRE ALARM PANEL.

EXTERIOR WORK NOTES:

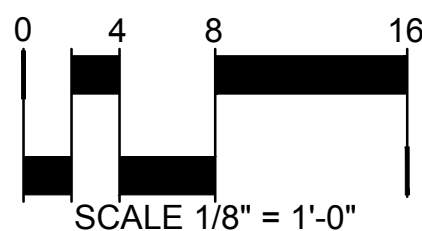
- ALL CONDUIT SHALL BE CONCEALED IN BUILDING WHEREVER POSSIBLE.
- ALL PENETRATIONS THROUGH EXTERIOR WALL AND ROOFS SHALL BE SLEEVED, FLASHED AND SEALED WATERPROOF. PROVIDE ESCUTCHEON PLATES WHERE WALL PENETRATIONS ARE EXPOSED.
- INSTALL WP/UV PROOF ID LABEL AT ALL PANELS AND DISCONNECT SWITCHES TO INDICATE PANEL NUMBER AND AS-BUILT CIRCUITRY/SOURCES.
- ALL CONDUCTORS INSTALLED AT EXTERIOR AND/OR ABOVE ROOF SHALL BE XHHW-2 TYPE.

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1

electrical power plan



ELECTRICAL KEYNOTES

THIS SHEET ONLY

1. NEW PANEL PER ONE LINE DIAGRAM AND PANEL SCHEDULE.
2. INSTALL SURFACE RECEPTACLE PER ARCH. DETAIL FOR MONITOR PLACEMENT.
3. UP TO FAN COIL CONDENSATE PUMP RECEPTACLE.
4. PROVIDE NEW 120V CONNECTION TO NEW SPEAKER.

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WILLCOX MIDDLE & HIGH SCHOOL

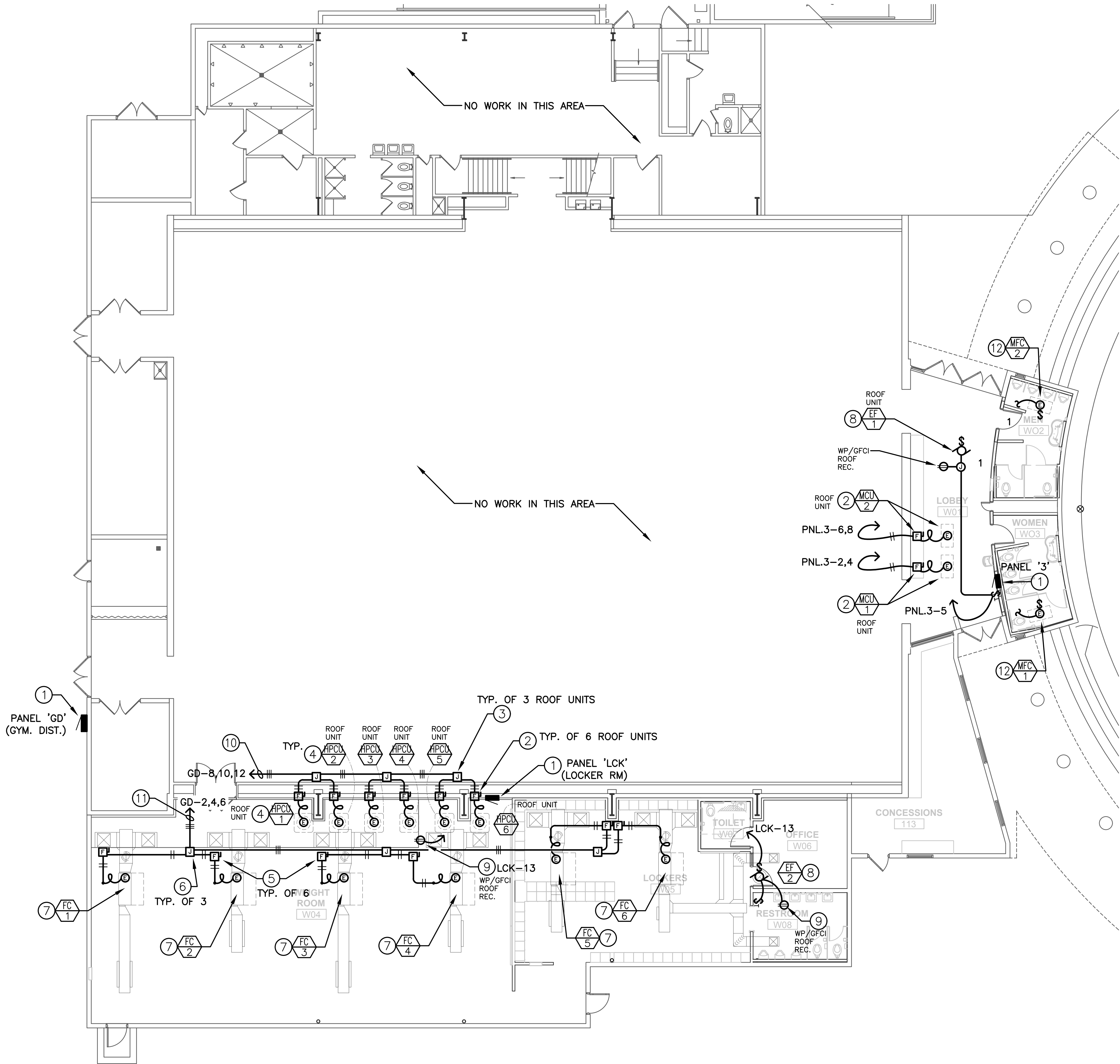
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HIGH SCHOOL REMODEL

building W floor plan -
electrical power

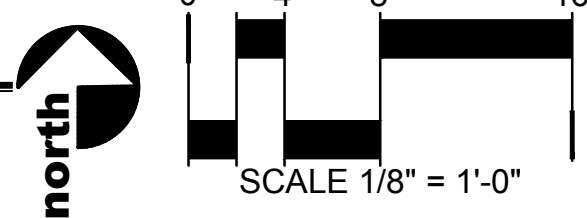
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1 hvac electrical power plan



ELECTRICAL KEYNOTES

THIS SHEET ONLY

1. NEW PANEL PER ONE LINE DIAGRAM AND PANEL SCHEDULE.
2. PROVIDE HEAVY DUTY WEATHERPROOF FUSED SAFETY DISCONNECT SWITCH AT ROOF HVAC UNIT. CONTRACTOR SHALL PROVIDE INDEPENDENT MEANS OF SUPPORT FOR SWITCHES, SWITCHES SHALL NOT BE MOUNTED DIRECTLY ON THE HVAC EQUIPMENT. COORDINATE FINAL LOCATIONS AND ROOF PENETRATIONS WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN. PROVIDE 1/2" C. ADJACENT TO FEEDERS CONDUIT FOR THERMOSTAT/HVAC CONTROL WIRING. VERIFY ACTUAL THERMOSTAT PLACEMENT WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN. PROVIDE FUSES PER MANUFACTURER'S REQUIREMENTS. REFER TO TYPICAL DETAIL 7/E7.1.
3. PROVIDE NEW 18"x18"x6" NEMA 3R JUNCTION BOX WITH POWER DISTRIBUTION BLOCK PER DETAIL 9/E7.1.
4. ROOF CONDENSING UNIT (CU) PER MECHANICAL SCHEDULE.
5. SIMILAR TO 2 BUT NEMA 1 TYPE FOR INTERIOR UNIT.
6. SIMILAR TO 3 BUT NEMA 1 TYPE FOR INTERIOR UNIT.
7. FAN COIL (FC) UNIT PER MECHANICAL SCHEDULE.
8. PROVIDE CONNECTION TO ROOF TOP EXHAUST FAN PER DETAIL/DIAGRAM 4/E7.1. PROVIDE INTERMATIC ET2125C TIMER CONTROL ADJACENT TO PANEL FOR ALL EXHAUST FANS TIME-OF-DAY SWITCHING PER MECHANICAL SCHEDULES.
9. ROOF RACK MOUNTED WP/GFCI RECEPTACLE.
10. ROOF TOP TAP FEEDER PER ONE LINE DIAGRAM. AC UNIT CONNECTION PER TAP FEEDER SCHEDULE ON SHEET E5.1. REFER TO TYPICAL ROOF INSTALLATION DETAILS #6, #7 AND #9 ON SHEET E7.1. COORDINATE FINAL AC ROOF UNITS LOCATIONS WITH MECHANICAL.
11. SAME AS KEY NOTE 10 BUT INTERIOR SYSTEM.
12. INTERIOR FC FEED FROM EXTERIOR/ROOF UNIT. PROVIDE 120V RECEPTACLE CONNECTION TO MINI-CONDESTATE PUMP FROM RECEPTACLE BELOW.

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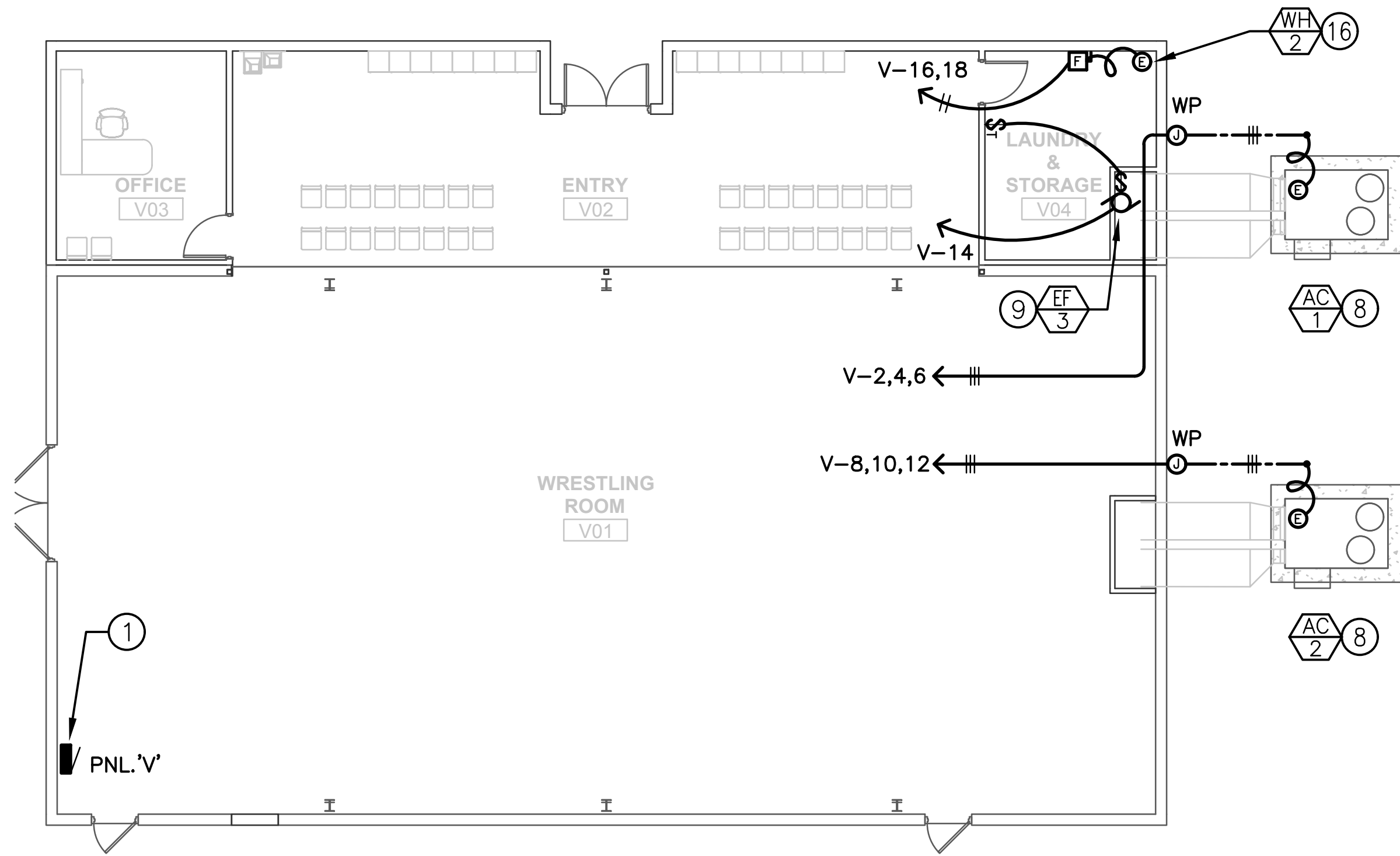
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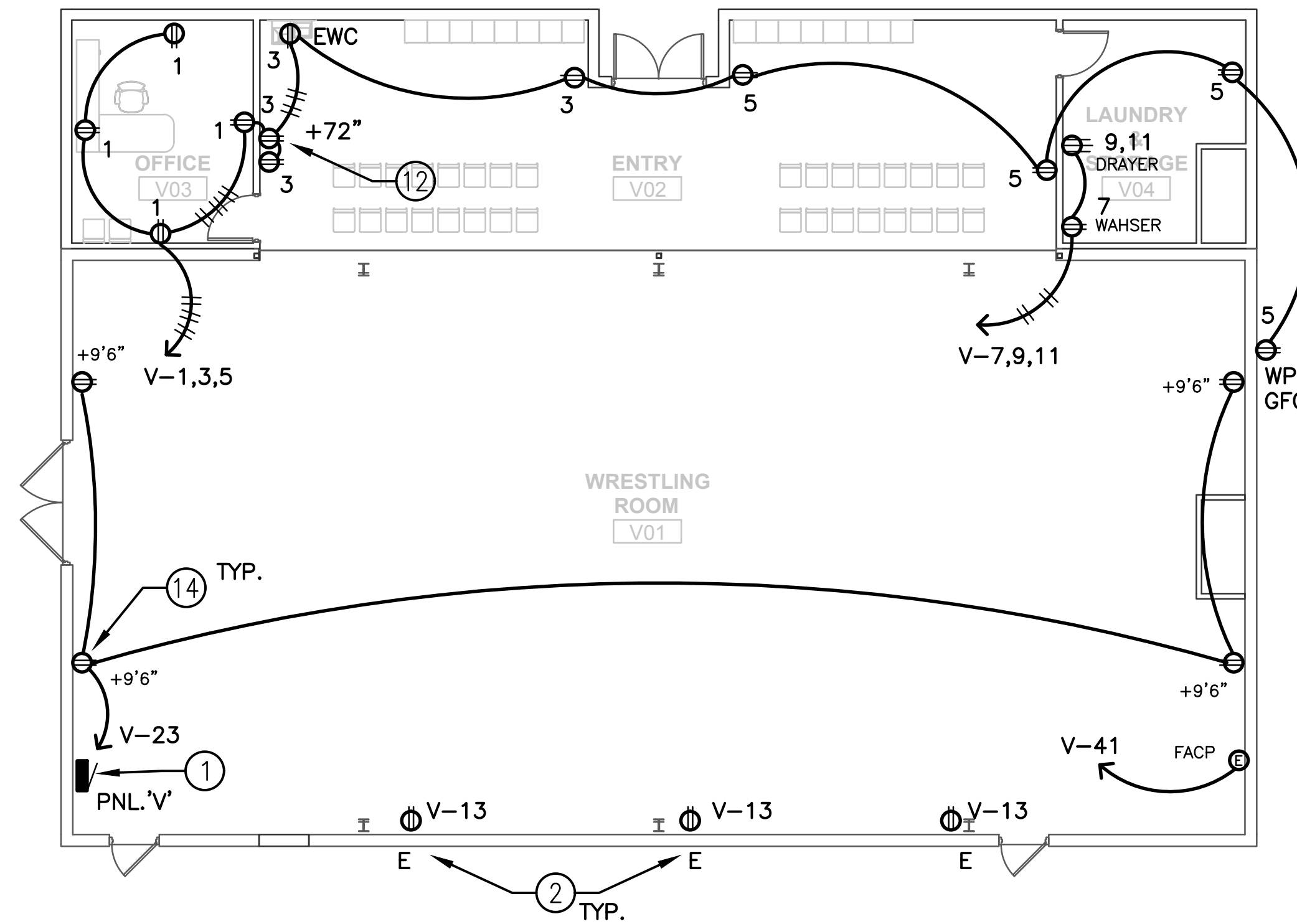
building W floor plan -
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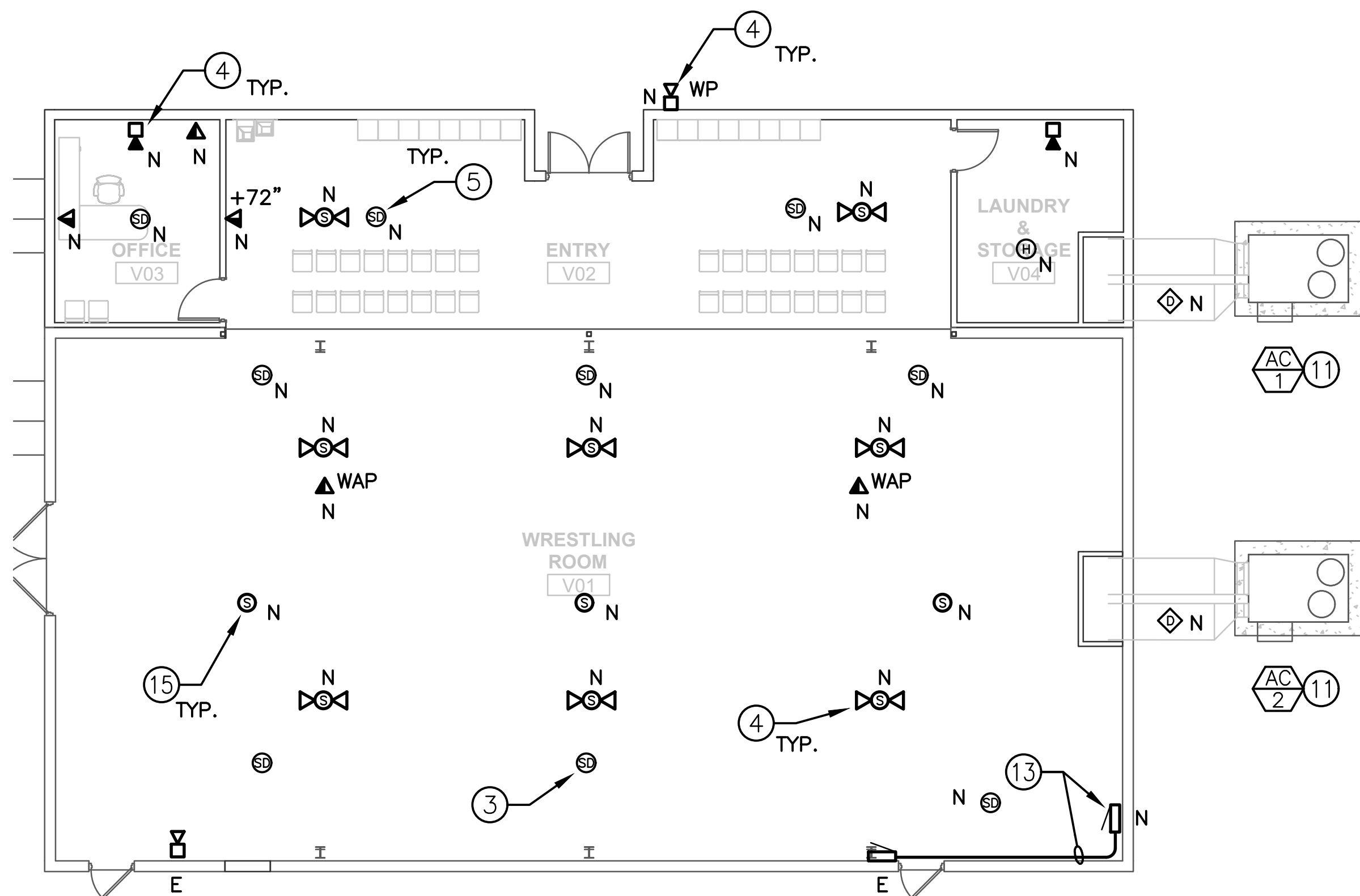
E1.1B



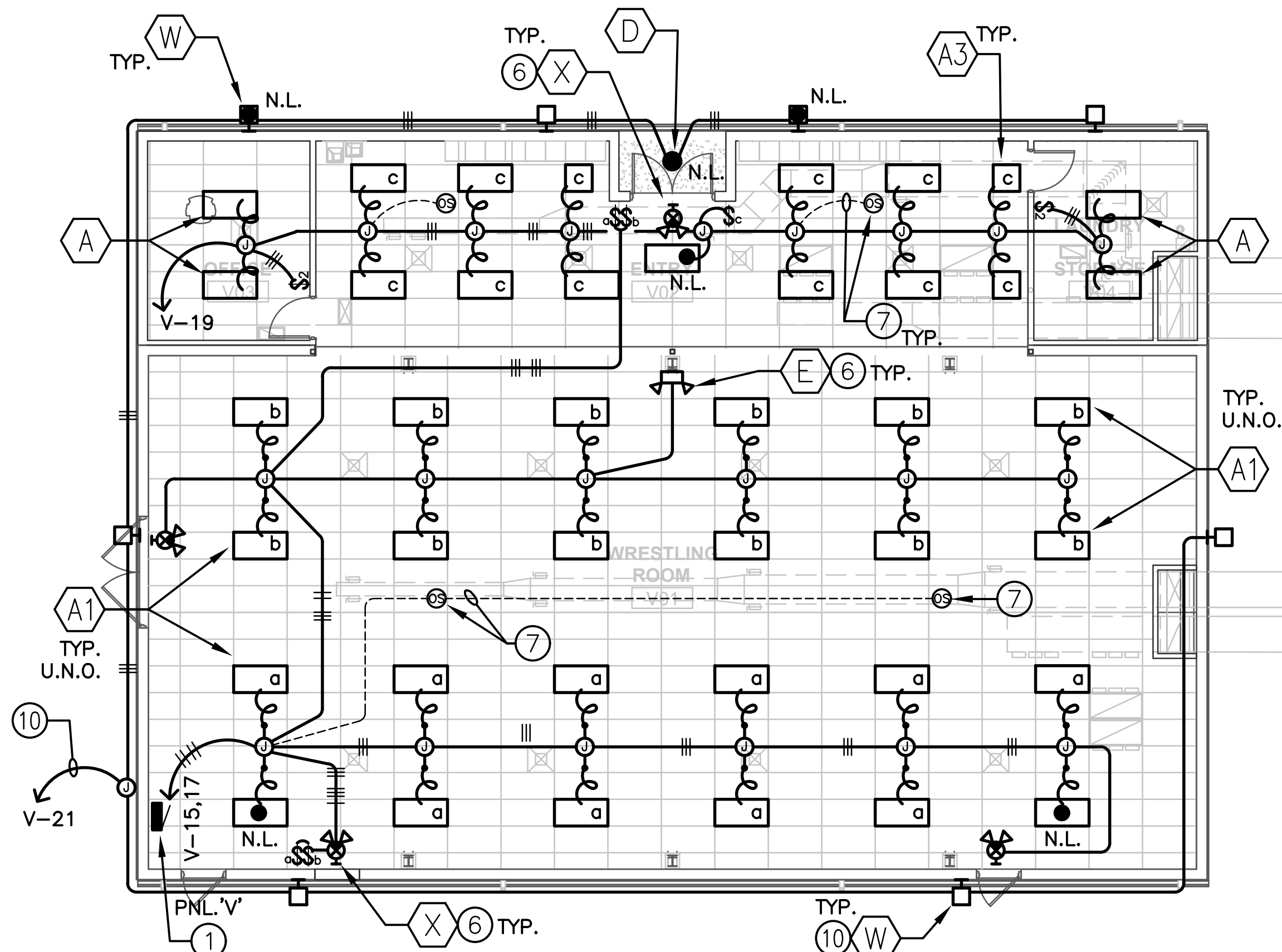
2 new hvac power plan north
SCALE 1/8" = 1'-0"



1 new power plan north
SCALE 1/8" = 1'-0"



4 new special system plan north
SCALE 1/8" = 1'-0"



3 new lighting plan north
SCALE 1/8" = 1'-0"

ELECTRICAL KEYNOTES

- THIS SHEET ONLY
1. NEW PANEL PER ONE LINE DIAGRAM AND PANEL SCHEDULE.
 2. EXISTING RECEPTACLES TO REMAIN, RECONNECT TO NEW CIRCUIT AS INDICATED.
 3. INSTALL FA SMOKE DETECTION DEVICES MADE AVAILABLE THROUGH DEMOLITION. EXTEND EXISTING FA LOOP.
 4. NEW FA SPEAKER/STROBE DEVICES, CONNECT TO NEW FA LOOP.
 5. CONNECT EXISTING FIRE ALARM LOOP TO NEW FIRE ALARM DEVICES.
 6. PROVIDE UNSWITCHED CIRCUITY TO NEW EXIT/EMERGENCY LIGHT.
 7. CEILING PRESENCE SENSOR AND PROPOSED LV WIRING TO CONTROL INTERIOR LIGHTING.
 8. AC UNIT WITH INTEGRAL SAFETY DISCONNECT SWITCH. COORDINATE FINAL LOCATIONS AND WALL PENETRATIONS WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN. PROVIDE 1/2" C. ADJACENT TO FEEDERS CONDUIT FOR THERMOSTAT/HVAC CONTROL WIRING. VERIFY ACTUAL THERMOSTAT PLACEMENT WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN. REFER TO TYPICAL DETAIL 8/E7.1.
 9. PROVIDE CONNECTION TO CEILING FRACTIONAL MOTOR EXHAUST FAN PER DETAIL/DIAGRAM 4/E7.1. PROVIDE INTERMATIC ET2125C TIMER CONTROL FOR ALL EXHAUST FANS TIME-OF-DAY SWITCHING PER MECHANICAL SCHEDULES.
 10. CONNECT NEW EXTERIOR LIGHT FIXTURES AND CONNECT/EXTEND EXISTING EXTERIOR LGT. CIRCUIT. PROVIDE NEW ASTRONOMIC TIMER SWITCH, INTERMATIC ST01C ADJACENT TO PANEL.
 11. PROVIDE FA LOOP CONNECTION TO NEW DUCT SMOKE DETECTORS.
 12. (3) GANG RECESSED TV POWER AND DATA WALL BOX, LOCATE PER ARCH. DETAILS.
 13. PROVIDE NEW FIRE ALARM PANEL. PROVIDE CONNECTION TO VOICE EVACUATION EXISTING GYM FA NETWORK LOOP.
 14. RECEPTACLES FOR OWNER PROVIDED BLUE TOOTH SPEAKERS.
 15. PROVIDE NEW PAGING/BELL SPEAKER AND WIRING TO MATCH EXISTING SYSTEM, CONNECT TO EXISTING CABLING IN VICINITY.
 16. PROVIDE NEMA 1, 30A/208V-1Ø FUSE DISCONNECT FOR WATER HEATER.

FIRE ALARM NOTES:
ALL HVAC UNITS SUPPLYING 2000 CFM OR MORE SHALL HAVE A FIRE ALARM DUCT SMOKE DETECTOR THAT ANNUNCITES ACTIVATION. VERIFY EXISTING UNITS AND RE-CONNECT TO EXISTING F.A. LOOP AND/OR PROVIDE NEW F.A. DUCT SMOKE DETECTOR AND CONNECT TO EXISTING F.A. LOOP. UPDATE ALL SYSTEM PROGRAMMING TO ACCOMMODATE NEW DEVICES AND CONTROLS. EXISTING FIRE ALARM SYSTEM SHALL BE IN OPERATION DURING CONSTRUCTION. COORDINATE ALL REQUIREMENTS. PROVIDE AS-BUILT DRAWINGS FOR RECORD.

**Job**

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**240 N. BISBEE AVE.
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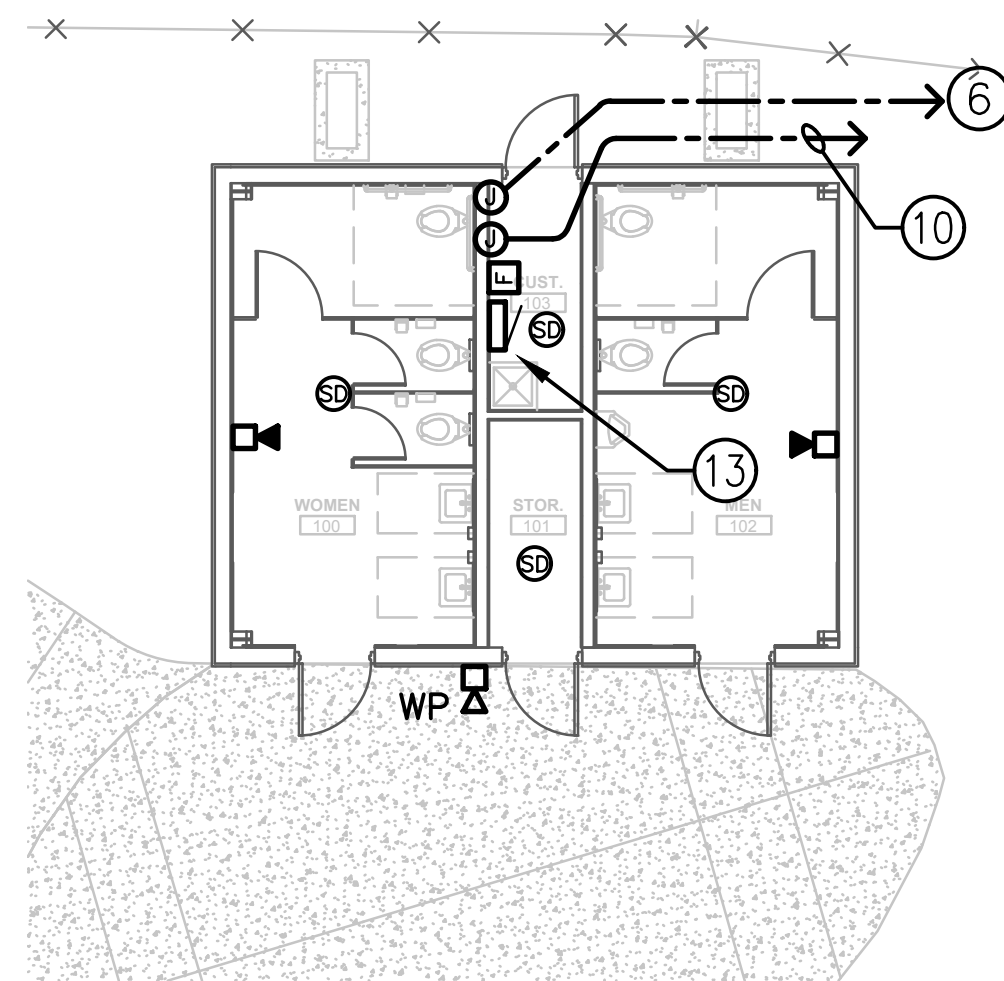
**restroom floor plan -
new electrical plans**

E1.3

○ ELECTRICAL KEYNOTES

THIS SHEET ONLY

1. NEW PANEL PER ONE LINE DIAGRAM AND PANEL SCHEDULE. COORDINATE NEC WORKING CLEARANCES.
2. PROVIDE CEILING PRESENCE SENSOR WITH WIRE GUARD TO CONTROL INTERIOR LIGHTING.
3. PROVIDE INTERMATIC ST01C ASTRONOMIC TIME CLOCK FOR EXTERIOR LIGHTING CONTROL.
4. HOMERUN TO PANEL VIA ASTRONOMIC TIMER.
5. BATHROOM PANEL U.G. FEEDER PER ONE LINE DIAGRAM.
6. 2" C. WITH OF FOR FIRE ALARM PANEL NETWORKING.
7. PROVIDE NEW CIRCUIT TO 4.5KW WATER HEATER.
8. PROVIDE HEAVY DUTY WEATHERPROOF FUSED SAFETY DISCONNECT SWITCH TO HVAC UNIT. CONTRACTOR SHALL PROVIDE INDEPENDENT MEANS OF SUPPORT FOR SWITCHES, SWITCHES SHALL NOT BE MOUNTED DIRECTLY ON THE HVAC EQUIPMENT. COORDINATE FINAL LOCATIONS AND WALL PENETRATIONS WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN. PROVIDE 1/2" C. ADJACENT TO FEEDERS CONDUIT FOR THERMOSTAT/HVAC CONTROL WIRING. VERIFY ACTUAL THERMOSTAT PLACEMENT WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN. PROVIDE FUSES PER MANUFACTURER'S REQUIREMENTS. REFER TO TYPICAL DETAIL 8/E7.1.
9. PROVIDE CIRCUIT TO EXHAUST FAN VIA ASTRONOMIC TIMER INTERMATIC ST01 OR SIMILAR. LOCATE TIMER ADJACENT TO ELECTRICAL PANEL.
10. 1-1/2" C HOME RUN TO EXISTING BUILDING FOR FUTURE SECURITY SYSTEM.
11. INDOOR UNIT SHALL BE POWERED BY OUTDOOR UNIT.
12. HAND DRYER PER ARCH. PLANS.
13. NEW FACP SUB-PANEL TO MATCH EXISTING SYSTEM.

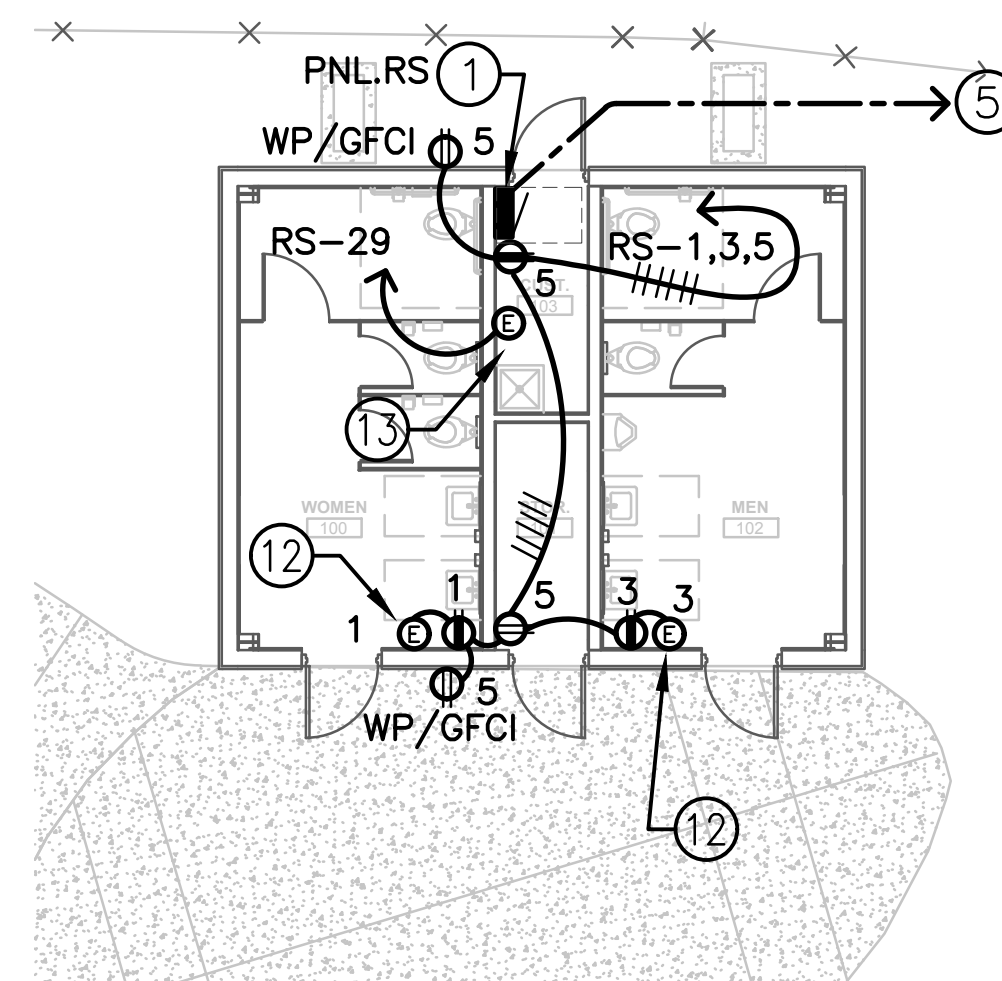


3 special system plan

north

0 4 8 16

SCALE 1/8" = 1'-0"

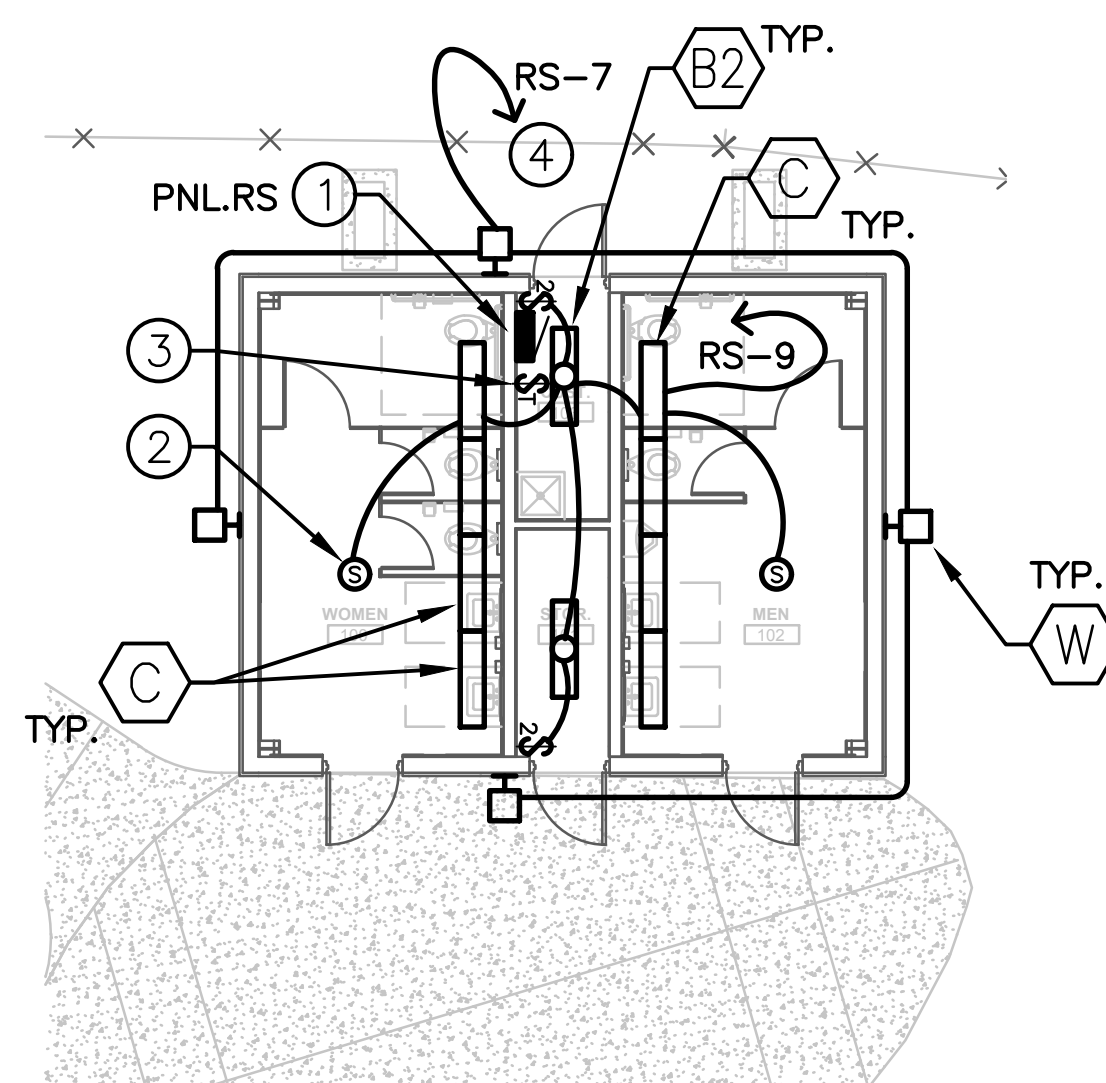


1 power plant

north

0 4 8 16

SCALE 1/8" = 1'-0"

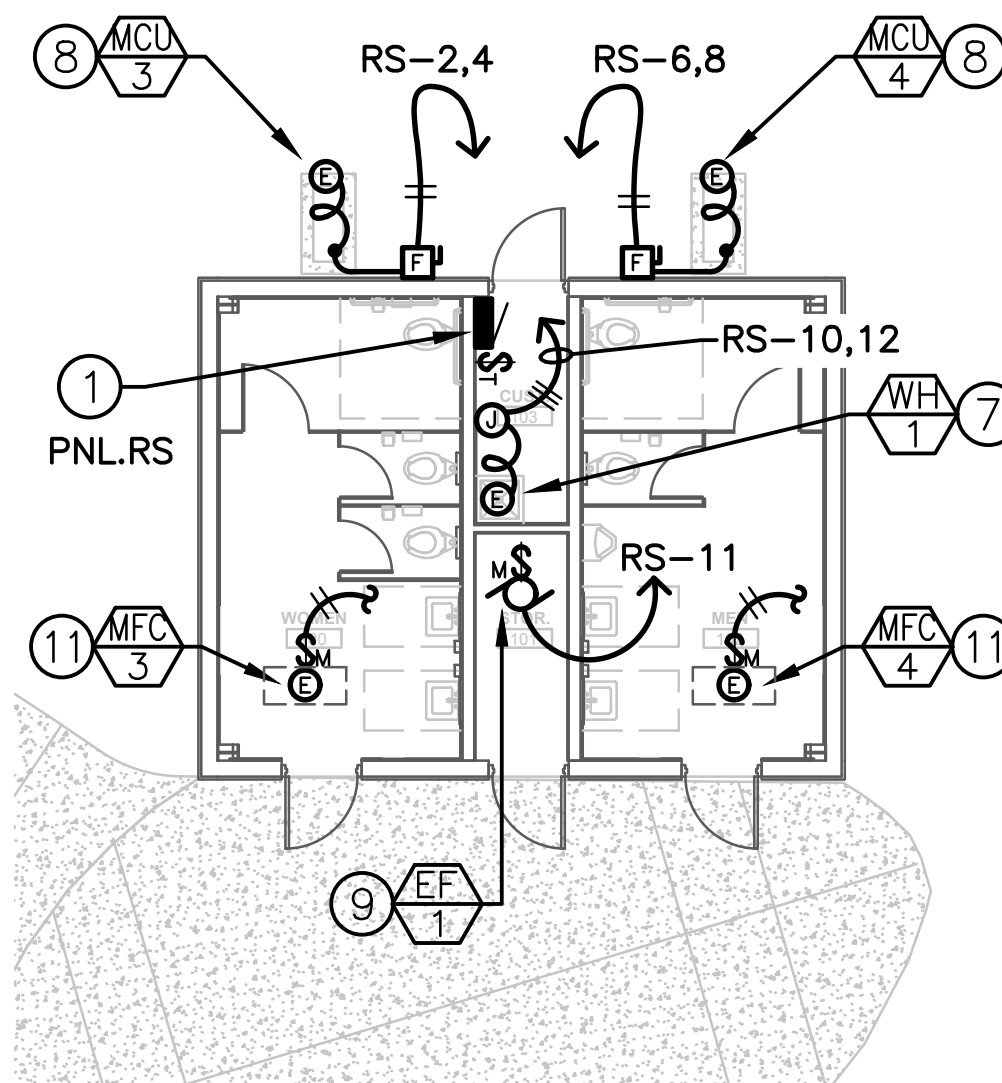


4 lighting plan

north

0 4 8 16

SCALE 1/8" = 1'-0"



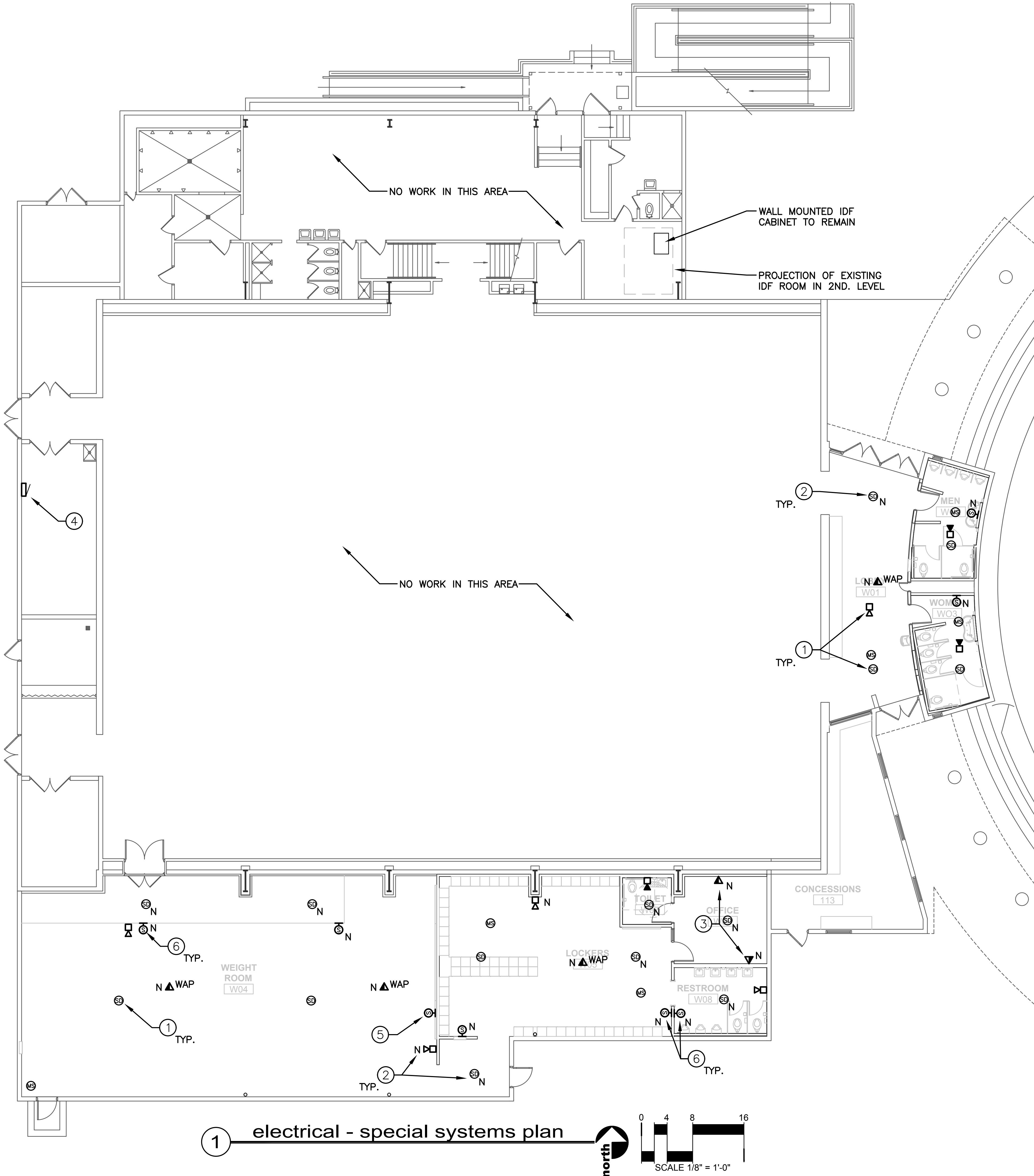
2 hvac power plan

north

0 4 8 16

SCALE 1/8" = 1'-0"

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ELECTRICAL KEYNOTES

- THIS SHEET ONLY
1. RE-INSTALL FIRE ALARM (FA) DEVICES MADE AVAILABLE THROUGH DEMOLITION. EXTEND EXISTING FA LOOP.
 2. INSTALL NEW FA DEVICES AND CONNECT TO EXISTING FA LOOP.
 3. NEW TELE/DATA OUTLET, PROVIDE NEW HOMERUN TO IDF ROOM.
 4. EXISTING FIRE ALARM PANEL TO REMAIN.
 5. REINSTALL EXISTING SPAKEAR MADE AVAILABLE THROUGH DEMOLITION.
 6. PROVIDE NEW PAGING/BELL SPEAKER AND WIRING TO MATCH EXISTING SYSTEM, CONNECT TO EXISTING CABLING IN VECINITY.

FIRE ALAR SYSTEM NOTES

- A. ALL DEVICES SHALL BE ADDRESSABLE. THE SYSTEM SHALL BE NFPA 72 "D,6,Z," COMPLIANT.
- B. ALL LINE VOLTAGE AND LOW VOLTAGE CIRCUITS SHALL BE PROVIDED WITH SPD PER N.E.C. WITHOUT EXCEPTION.
- C. ALL "SUPPLY" AND "RETURN" LOOP CONDUITS SHALL BE SEPARATED BY A MINIMUM OF SIX LINEAR FEET OR A ONE HOUR FIRE RATED STRUCTURE.
- D. ALARM AND SIGNAL LOOP CONDUCTORS MAY BE ROUTED IN COMMON CONDUITS, 3/4" C. MINIMUM, 40% FILL MAXIMUM. PROVIDE PULLBOXES PER SPECIFICATIONS.
- E. VERIFY ALL CONDUCTOR QUANTITIES, TYPES, AND SIZES WITH EQUIPMENT SUPPLIER AND INSTALL PER APPROVED SHOP DRAWING SUBMITTALS. ALL WIRING SHALL BE IN CONDUIT SYSTEMS.
- F. REFER TO FLOOR PLANS FOR LOCATIONS AND QUANTITIES OF ALL DEVICES. COORDINATE EXACT LOCATIONS AND MOUNTING HEIGHTS WITH ARCHITECTURAL DRAWINGS.
- G. PROVIDE SEPARATED CONTROLS FOR VISUAL AND AUDIBLE ALARMS. SYNCHRONIZE VISUAL ALARMS WHERE MORE THAN ONE DEVICE MAY BE VISIBLE FROM ANY GIVEN LOCATION. PROVIDE REMOTE SIGNAL CIRCUIT AMP AND/OR POWER SUPPLIES AS NEEDED.
- H. PROVIDE A #14 SOLID GREEN GROUND WIRE IN EACH CONDUIT.
- I. ALL UNDERGROUND CABLING SHALL BE WESTPENN AQUASEAL WITH SPD AT EACH END.
- J. PROVIDE ALL NEW DEVICES, CABLING, EQUIPMENT, SOFTWARE, AND PROGRAMMING NECESSARY TO INTEGRATE ALL WORK UNDER THIS PROJECT INTO THE EXISTING CAMPUS ALARM SYSTEM.

GENERAL FIRE ALARM NOTES:
ALL HVAC UNITS SUPPLYING 2000 CFM OR MORE SHALL HAVE A FIRE ALARM DUCT SMOKE DETECTOR THAT ANNUNCIATES ACTIVATION. VERIFY EXISTING UNITS AND RE-CONNECT TO EXISTING F.A. LOOP AND/OR PROVIDE NEW F.A. DUCT SMOKE DETECTOR AND CONNECT TO EXISTING F.A. LOOP. UPDATE ALL SYSTEM PROGRAMMING TO ACCOMMODATE NEW DEVICES AND CONTROLS. EXISTING FIRE ALARM SYSTEM SHALL BE IN OPERATION DURING CONSTRUCTION. COORDINATE ALL REQUIREMENTS. PROVIDE AS-BUILT DRAWINGS FOR RECORD.

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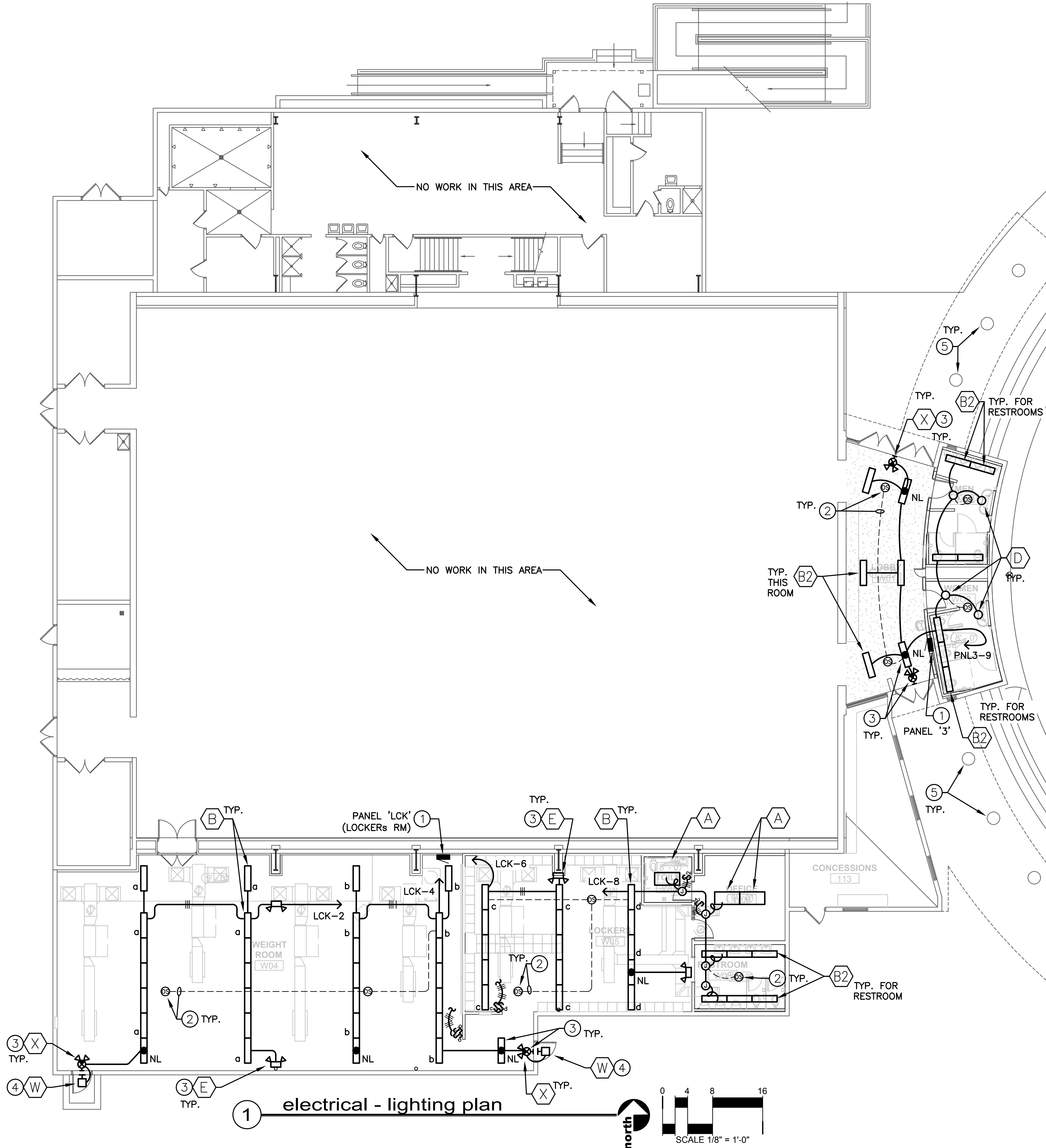
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HIGH SCHOOL REMODEL

**building W floor plan -
electrical special systems**

E2.1

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- ELECTRICAL KEYNOTES** THIS SHEET ONLY
1. NEW PANEL PER PANEL SCHEDULE.
 2. CEILING MOUNTED PRESENCE SENSOR AND PROPOSED LOW VOLTAGE WIRING. CONCEAL WIRE/CONDUIT IN BLDG.
 3. PROVIDE UNSWITCHED WIRE FOR EXIT/EMERGENCY LIGHTS AND NIGHT LIGHTS (NL) LIGHT FIXTURES.
 4. PROVIDE 'W' LIGHT FIXTURE WITH INTEGRATED PHOTOCELL. EXTEND UNSWITCHED WIRE TO PHOTOCELL CONTROLLED EGRESS EMERGENCY LIGHT FIXTURE.
 5. EXISTING BUILDING EGRESS LIGHT FIXTURES TO REMAIN.

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building W floor plan -
lighting

E3.1

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SHORT CIRCUIT CONSIDERATIONS

$I_{s.c.} = 55,600A$ (POWER CO. AVAILABLE FAULT CURRENT

FOR 600A TO 2000A SERVICE)

$$f = (1.732)(100)(55,600)/(18,756)(2)(208) = 1.2342$$

$$M = 1/1+1.2342 = 0.4475$$

$$I_{s.c. \text{ sym RMS}} = (55,600)(0.4475) = 24,481A \text{ AT PANEL 'GYM'}$$

$$f = (1.732)(80)(24,481)/(12,844)(1)(208) = 1.269$$

$$M = 1/1+1.269 = 0.44$$

$$I_{s.c. \text{ sym RMS}} = (24,481)(0.44) = 10,789A \text{ AT 200A PNL (@80FT)}$$

$$f = (1.732)(100)(24,481)/(5,907)(1)(208) = 3.451$$

$$M = 1/1+3.451 = 0.2246$$

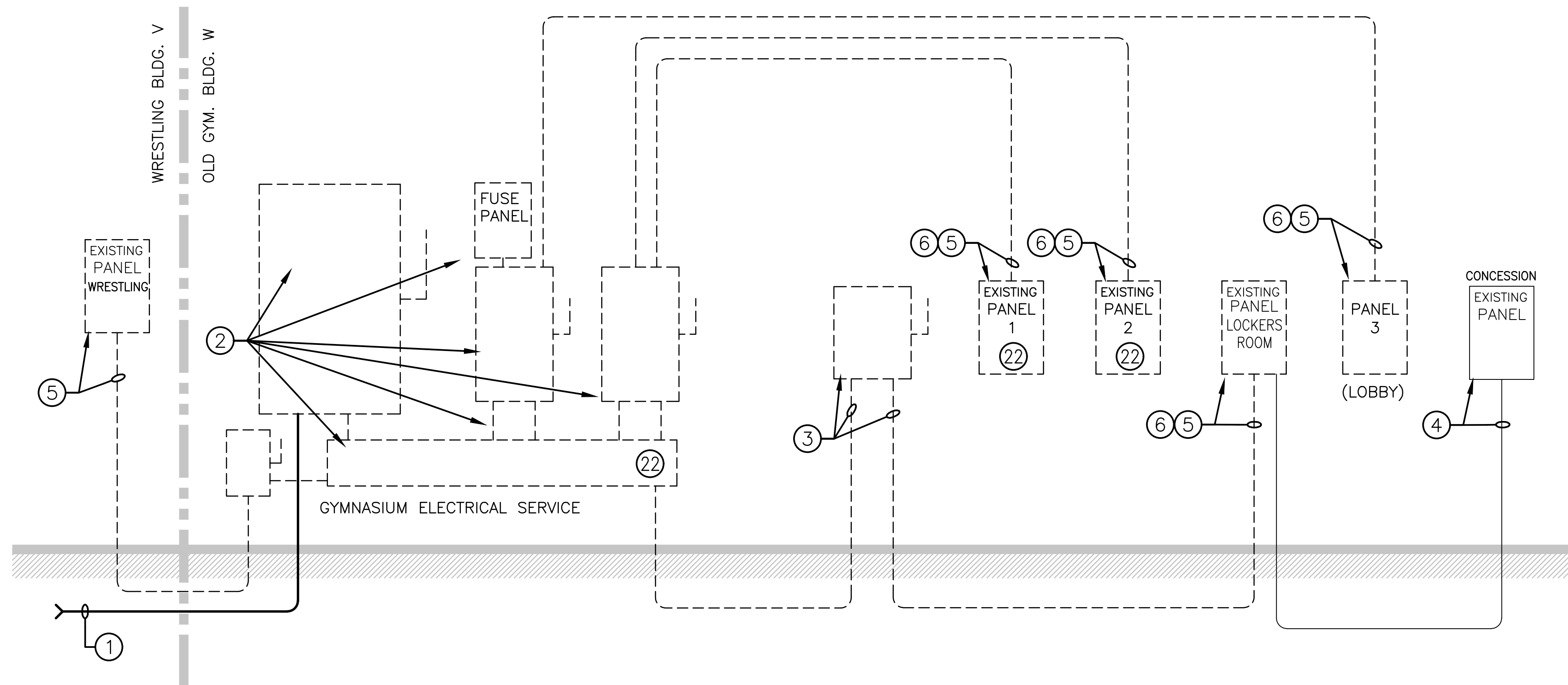
$$I_{s.c. \text{ sym RMS}} = (24,481)(0.2246) = 5,489A$$

AT 100A PNL (@100FT)

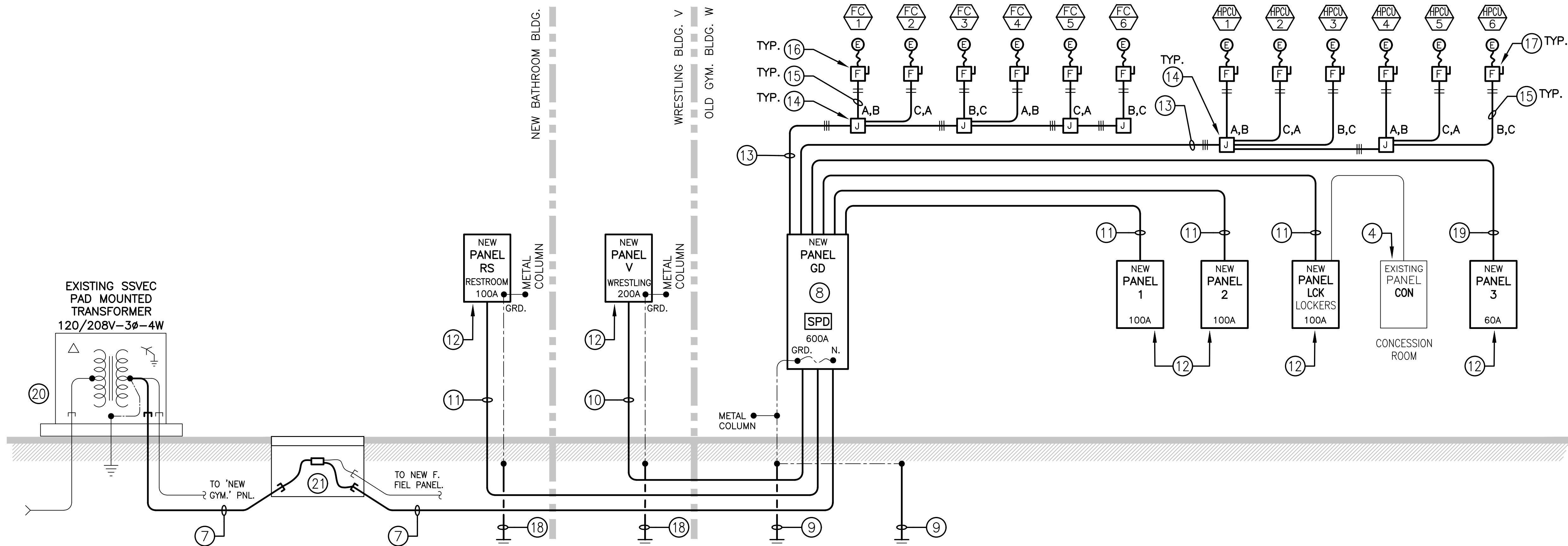
LOAD CONSIDERATIONS

TOTAL LOAD AT NEW PANEL 'GD' IS 180KVA OR 500A AT 120/208V-3 ϕ -4W PER PANEL SCHEDULE.

NEW 600A-120/208V-3 ϕ -4W PANEL AND SERVICE CONDUCTORS ARE ADEQUATE FOR THIS PROJECT.



1 demolition one line diagram



2 new one line diagram

ELECTRICAL KEYNOTES

THIS SHEET ONLY

- EXISTING 400A-120/208V-3 ϕ -4W SERVICE CONDUCTORS TO REMAIN.
- REMOVE 400A DISCONNECT SWITCH, GUTTER, FUSED DISCONNECTS, AND ASSOCIATED WIRE/CONDUIT.
- REMOVE DISCONNECT SWITCH, AND ASSOCIATED WIRE/CONDUIT.
- EXISTING PANEL AND ASSOCIATED WIRE CONDUIT TO REMAIN. RECONNECT TO NEW SOURCE PER PANELS SCHEDULE.
- REMOVE EXISTING PANEL, REMOVE EXISTING FEEDER BACK TO SOURCE.
- EXISTING CONDUIT TO REMAIN AS PRACTICAL FOR NEW FEEDER INSTALLATION AS CONTRACTOR OPTION.
- EXTEND/CONNECT EXISTING 400A SERVICE CONDUCTORS MADE AVAILABLE THROUGH DEMOLITION TO NEW PANEL. ADD SECOND PARALLEL SET FOR 600A RATING: + (4) 350KCMIL AL IN 3" C., COORDINATE WITH POWER CO. (SSVEC), MATCH EXISTING SERVICE CONDUCTOR SIZE/TYPE.
- PROVIDE NEW 600A-120/208V-3 ϕ -4W PANEL PER PANEL SCHEDULE.
- PROVIDE NEW (2) 3/4"X10ft COPPERCLAD STEEL GROUND RODS 10ft APART. PROVIDE #1/0 CU BOND FROM GROUND RODS TO PNL. GRD. LUG, METALLIC PIPING SYSTEM, AND BUILDING METALLIC STRUCTURE.
- PROVIDE NEW FEEDER: (4) #3/0 CU, (1) #6 CU GRD. IN 2" C.
- PROVIDE NEW FEEDER: (4) #2 CU, (1) #8 CU GRD. IN 1-1/2" C.
- PROVIDE NEW PANEL PER PANEL SCHEDULE.
- TAP FEEDER: (3) #4 CU, (1) #10 CU GRD. 1-1/4" C. PROVIDE ENTIRE LENGTH FEEDER.
- 18"x18"x6" PDB DISTRIBUTION BLOCK JUNCTION BOX PER DETAIL 6b/E7.1. LOCATE JUNCTION BOXES IN ACCESSIBLE CEILING SPACES. USE NEMA 3R FOR EXTERIOR CONDITION.
- HVAC EQUIPMENT FEEDER: (2) #10 CU, (1) #10 CU GRD. IN 3/4" C.
- NEMA 1, 30A-1 ϕ -3W FUSED DISCONNECT SWITCH, LOCATE IN ACCESSIBLE CEILING SPACE. PROVIDE FUSES PER MANUFACTURER'S REQUIREMENTS.
- NEMA 3R, 60A-1 ϕ -3W FUSED DISCONNECT SWITCH. PROVIDE FUSES PER MANUFACTURER'S REQUIREMENTS.
- PROVIDE NEW (1) 3/4"X10ft COPPERCLAD STEEL GROUND ROD. PROVIDE #2 CU BOND FROM GROUND ROD TO PNL. GRD. LUG AND BUILDING METALLIC STRUCTURE.
- PROVIDE NEW FEEDER: (4) #4 CU, (1) #10 CU GRD. IN 1-1/4" C.
- EXISTING SSVEC PAD MOUNTED TRANSFORMER 120/208V-3 ϕ -4W, PRIMARY CIRCUIT AND NEW GYMNASIUM SERVICE CONDUCTORS TO REMAIN.
- EXISTING SSVEC PULL BOX WITH WP TAP CONNECTORS TO REMAIN. ADD NEW PARALLEL PHASE PER KEYNOTE 7. LOCATE AND PROTECT EXISTING FOOTBALL FIELD PANEL SERVICE CONDUCTORS TO REMAIN. COORDINATE ALL WORK WITH SSVEC.
- TRACE AND ID EXISTING GUTTER, DISCONNECTS AND OTHERS LOADS TO REMAIN. COORDINATE ACCESS AND OUTAGES WITH OWNER. EXISTING LOADS TO REMAIN SHALL BE RECONNECTED TO NEW PANEL VIA NEW BREAKER.

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240 N. BISBEE AVE.

WILLCOX, ARIZONA 85643

HIGH SCHOOL REMODEL

one line diagrams

E4.0

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panel schedules

E5.0

NEW PANEL TO REPLACE EXISTING

PANEL NAME: 1		120/208		VOLTS, 3 PHASE, 4 WIRE						
TYPE: LOAD CENTER		22,000		MINIMUM A.I.C. RATING						
100 A BUS, 100A. MAIN BREAKER		MOUNTING:		<input checked="" type="checkbox"/> FLUSH						
LOCATION: BLDG. V				<input type="checkbox"/> SURFACE						
ENCLOSURE: NEMA 1										
	SERVES	BREAKER AMP P	WIRE	COND	LOAD (IN kVA) A B C	COND	WIRE	P AMP	BREAKER	SERVES
	GYM. LIGHTING	20 1	**	**	1.0 1.0			1 20		GYM. LIGHTING
	GYM. LIGHTING	20 1	**	**	1.0 1.0			1 20		GYM. LIGHTING
	GYM. LIGHTING	20 1	**	**	1.0 1.0			1 20		GYM. LIGHTING
	GYM. LIGHTING	20 1	**	**	1.0 1.0			1 20		GYM. LIGHTING
	GYM. LIGHTING	20 1	**	**	1.0 1.0			1 20		GYM. LIGHTING
	EXISTING LOAD	20 1	**	**	0.8 0.2			3 XX		BLEACHERS
	EXISTING LOAD	20 1	**	**	0.8 0.2			-		BLEACHERS
	EXISTING LOAD	20 1	**	**	0.8 0.2			-		BLEACHERS
	EXISTING LOAD	20 1	**	**	0.8 0.6			1 20		EXISTING LOAD
	EXISTING LOAD	20 1	**	**	0.8 0.6			1 20		EXISTING LOAD
	EXISTING LOAD	20 1	**	**	0.8 0.6			1 20		EXISTING LOAD
	EXISTING LOAD	20 1	**	**	0.8 0.6			1 20		EXISTING LOAD
	EXISTING LOAD	20 1	**	**	0.8 0.6			1 20		EXISTING LOAD
	SPARE	20 1						1 20		SPARE
	SPARE	20 1						1 20		SPARE
	SPARE	20 1						1 20		SPARE
	SPARE	20 1						1 20		SPARE
	SPARE	20 1						3 -		100KA SPD
	SPARE	20 1						-		
*** CONTINUOUS LOAD X 1.25					5.0	5.0	5.0	REMARKS:		
NON-CONTINUOUS LOAD X 1.0					3.8	3.8	3.8	PROVIDE INTEGRAL 100KA SPD		
								PROVIDE DOOR-IN-DOOR TYPE		
DEMAND KVA/PHASE					8.8	8.8	8.8	CONNECTED LOAD:		
DEMAND AMPS/PHASE					73	73	73	DEMAND LOAD:		
								23.4 kVA		
								26.4 kVA		
** INDICATE: RECONNECT EXISTING CIRCUIT WIRING/CONDUIT TO NEW BREAKER PANEL.										

** INDICATE: RECONNECT EXISTING CIRCUIT WIRING/CONDUIT TO NEW BREAKER PANEL.

NEW PANEL

PANEL NAME: RS

120/208

VOLTS, 3 PHASE, 4 WIRE

TYPE: LOAD CENTER

10,000 MINIMUM A.I.C. RATING

100 A BUS, 100A. MAIN BREAKER

MOUNTING: ☐ FLUSH

LOCATION: FIELD RESTROOMS BLDG.

☒ SURFACE

ENCLOSURE: NEMA 1

SERVES	BREAKER			COND	LOAD (IN KVA)			COND	WIRE	BREAKER		SERVES	
	AMP	P	WIRE		A	B	C			P	AMP		
RECEPTACLES	20	1	12	3/4"	1.0	1.9		3/4"	10	2	30	MHPCU 3	2
RECEPTACLES	20	1	12	-		1.0	1.9					-	4
RECEPTACLES	20	1	12	-			0.8	1.9	3/4"	10	2	30	MHPCU 4
EXTERIOR LIGHTING	20	1	12	1/2"	0.2	1.9						-	6
LIGHTING	20	1	12	1/2"		0.5	2.3		3/4"	10	2	30	WH-1
EF-1	20	1	12	1/2"			0.2	2.3					10
SPARE	20	1								1	20	SPACE	14
SPARE	20	1								1	20	SPACE	16
SPARE	20	1								1	20	SPACE	18
SPARE	20	1								1	20	SPACE	20
SPARE	20	1								1	20	SPACE	22
SPARE	20	1								1	20	SPACE	24
SPARE	20	1								3	-	100KA SPD	26
FACP	20	1	12	1/2"			0.2				-		28
													30
			</										

LD DENOTES: PROVIDE LOCK DEVICE AT BREAKER.

NEW PANEL

PANEL NAME: 3				120/208				VOLTS, 3 PHASE, 4 WIRE									
TYPE: LOAD CENTER				10,000				MINIMUM A.I.C. RATING									
60 A BUS, 60A. MAIN BREAKER				MOUNTING:				<input checked="" type="checkbox"/> FLUSH									
LOCATION: LOBBY BLDG. W								<input type="checkbox"/> SURFACE									
ENCLOSURE: NEMA 1																	
SERVES		BREAKER		LOAD (IN KVA)						BREAKER		SERVES					
		AMP	P	WIRE	COND	A		B		C		COND	WIRE	P	AMP		
RECEPTACLES		20	1	12	3/4"	0.6 1.9						3/4"	10	2	25	MHPCU-1	2
EWC		20	1	12	-			0.6 1.9					10				4
EF-1 AND ROOF REC.		20	1	12	-					0.3 1.9		3/4"	10	2	25	MHPCU-2	4
SPARE						1.9							10				6
LIGHTING		20	1	12	1/2"			1.0						1	20	SPACE	10
EXISTING LOAD		20	1	**	**					0.6				1	20	SPACE	12
EXISTING LOAD		20	1	**	**	0.2								1	20	SPACE	14
EXISTING LOAD		20	1	**	**			0.6						1	20	SPACE	16
EXISTING LOAD		20	1	**	**					0.6				1	20	SPACE	18
SPARE		20	1											-	-		20
SPARE		20	1											3	-	100KA SPD	22
SPARE		20	1											-	-		24

** INDICATE: RECONNECT EXISTING CIRCUIT WIRING/CONDUIT TO NEW BREAKER PANEL.

NEW PANEL

PANEL NAME: LCK				120/208		VOLTS, 3 PHASE, 4 WIRE									
TYPE: DOOR-IN-DOOR				22,000 MINIMUM A.I.C. RATING											
100 A BUS, 100A. MAIN BREAKER				MOUNTING: <input type="checkbox"/> FLUSH											
LOCATION: BLDG. W				<input checked="" type="checkbox"/> SURFACE											
ENCLOSURE: NEMA 1															
		BREAKER		LOAD (IN KVA)				BREAKER							
SERVES		AMP	P	WIRE	COND	A	B	C	COND	WIRE	P	AMP	SERVES		
RECEPTACLES		20	1	10	3/4"	0.6	1.4		1/2"	12	1	20	LIGHTING	2	
RECEPTACLES		20	1	10	-		0.8	1.4		1/2"	12	1	20	LIGHTING	4
RECEPTACLES		20	1	10	-			0.6	1.0	1/2"	12	1	20	LIGHTING	6
RECEPTACLES		20	1	10	3/4"	0.6	1.0			1/2"	12	1	20	LIGHTING	8
RECEPTACLES		20	1	10	-		0.6				1	20	SPARE	10	
RECEPTACLES		20	1	10	-			0.6			1	20	SPARE	12	
ROOF REC. + EF-2		20	1	12	1/2"	0.6					1	20	SPARE	14	
SPARE		20	1								1	20	SPARE	16	
SPARE		20	1								1	20	SPARE	18	
SPARE		20	1								1	20	SPARE	20	
SPARE		20	1								1	20	SPARE	22	
SPARE		20	1								1	20	SPARE	24	
CONCESSION PNL.		80	3	***	***	5.0								26	
-		-	-	***	***		5.0			3	-		100KA SPD	28	
-		-	-	***	***			5.0		-	-			30	
*** CONTINUOUS LOAD X 1.25						3.0	1.8	1.3	REMARKS:						
NON-CONTINUOUS LOAD X 1.0						6.8	6.4	6.2	PROVIDE INTEGRAL 100KA SPD						
									PROVIDE DOOR-IN-DOOR TYPE						
DEMAND KVA/PHASE						9.8	8.2	7.5	CONNECTED LOAD:						
DEMAND AMPS/PHASE						82	68	62	DEMAND LOAD:						
									24.2 kVA						
									25.4 kVA						
*** INDICATE: REFER TO ONE LINE DIAGRAM FOR WIRE/CONDUIT.															
E INDICATE: ESTIMATED LOAD															

*** INDICATE: REFER TO ONE LINE DIAGRAM FOR WIRE/CONDUIT.

E INDICATE: ESTIMATED LOAD

NEW PANEL

PANEL NAME: V				120/208		VOLTS, 3 PHASE, 4 WIRE					
TYPE: DOOR-IN-DOOR				22,000 MINIMUM A.I.C. RATING							
200 A BUS, 200A. MAIN BREAKER				MOUNTING: <input type="checkbox"/> FLUSH							
LOCATION: BLDG. V				<input checked="" type="checkbox"/> SURFACE							
ENCLOSURE: NEMA 1											
	SERVES	BREAKER		LOAD (IN kVA)			COND	WIRE		BREAKER	SERVES
		AMP	P	WIRE	COND	A	B	C		P	AMP
	RECEPTACLES	20	1	10	3/4"	0.8	3.9		6		2
	RECEPTACLES	20	1	10	-		1.0	3.9	1/1/4"	6	3
	RECEPTACLES	20	1	10	-			0.8	3.9	6	8
	WASHER	20	1	10	3/4"	1.0	3.9		6		6
	DRYER	30	2	10	-		2.0	3.9	1/1/4"	6	3
	-	-	-	10	-			2.0	3.9	6	45
1	EXISTING REC.	20	1	12	1/2"	0.6	0.5		1/2"	12	1
5	LIGHTING	20	1	12	1/2"		0.6	2.3	3/4"	10	20
5	LIGHTING	20	1	12	1/2"	0.6		0.6	2.3	10	30
5	LIGHTING	20	1	12	1/2"		0.5			1	20
1	EXTERIOR LIGHTING	20	1	12	1/2"					1	20
3	REC. SPEAKERS	20	1	12	1/2"			0.4		1	20
5	SPARE	20	1							1	20
7	SPARE	20	1							1	20
9	SPARE	20	1							1	20
1	SPARE	20	1							1	20
3	SPARE	20	1							1	20
5	SPARE	20	1							1	20
7	SPARE	20	1							1	20
9	SPARE	20	1							1	20
1	FACP	20	1	12	1/2"			0.2		3	-
*** CONTINUOUS LOAD X 1.25						0.8	1.4	0.8	REMARKS:		
NON-CONTINUOUS LOAD X 1.0						10.7	13.1	13.5	PROVIDE INTEGRAL 100KA SPD		
									PROVIDE DOOR-IN-DOOR TYPE		
DEMAND KVA/PHASE						11.5	14.4	14.2	CONNECTED LOAD: 39.5 kVA		
DEMAND AMPS/PHASE						96	120	118	DEMAND LOAD: 40.1 kVA		
LD DENOTES: PROVIDE LOCK DEVICE AT BREAKER.											



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date
04.07.2025

revisions				

WILLCOX MIDDLE & HIGH SCHOOL
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WILLCOX, ARIZONA 85643
HIGH SCHOOL REMODEL

panel schedules

EXTERIOR TAP FEEDER LOAD SUMMARY										
SERVES	LOAD (IN kVA)			AC UNIT		AC DISCONNECT				
	A	B	C	COND	WIRE					
HPCU-1	1.5			3/4"	8	60A/2P/240V-NEMA 3R				
		1.5			8					
HPCU-2			1.5	3/4"	8	60A/2P/240V-NEMA 3R				
	1.5				8					
HPCU-3		1.5		3/4"	8	60A/2P/240V-NEMA 3R				
			1.5		8					
HPCU-4	1.5			3/4"	8	60A/2P/240V-NEMA 3R				
		1.5			8					
HPCU-5			1.5	3/4"	8	60A/2P/240V-NEMA 3R				
	1.5				8					
HPCU-6		1.5		3/4"	8	60A/2P/240V-NEMA 3R				
			1.5		8					
**** CONT. LOAD X 1.25	0.0	0.0	0.0	REMARKS COMPLY WITH NEC TAP RULE						
NON-CONT. LOAD X 1.0	6.0	6.0	6.0							
DEMAND KVA/PHASE	6.0	6.0	6.0							18.1 kVA
DEMAND AMPS/PHASE	50	50	50							18.1 kVA
PROVIDE FUSES PER MANUFACTURER REQUIREMENTS.										

INTERIOR TAP FEEDER LOAD SUMMARY							
SERVES	LOAD (IN KVA)			AC UNIT		AC DISCONNECT	
	A	B	C	COND	WIRE		
FC-1	1.1			3/4"	10	30A/2P/240V-NEMA1	
FC-2	1.1	1.1		3/4"	10	30A/2P/240V-NEMA1	
			1.1		10	30A/2P/240V-NEMA1	
FC-3		1.1		3/4"	10	30A/2P/240V-NEMA1	
FC-4	1.1		1.1	3/4"	10	30A/2P/240V-NEMA1	
					10	30A/2P/240V-NEMA1	
FC-5		1.1		3/4"	10	30A/2P/240V-NEMA1	
FC-6	1.1		1.1	3/4"	10	30A/2P/240V-NEMA1	
			1.1		10	30A/2P/240V-NEMA1	
**** CONT. LOAD X 1.25	0.0	0.0	0.0	REMARKS COMPLY WITH NEC			
NON-CONT. LOAD X 1.0	4.3	4.3	4.3	TAP RULE			
DEMAND KVA/PHASE	4.3	4.3	4.3	13.0 kVA			
DEMAND AMPS/PHASE	36	36	36	13.0 kVA			
PROVIDE FUSES PER MANUFACTURER REQUIREMENTS.							

NEW PANEL TO REPLACE EXISTING																	
PANEL NAME: 2					120/208		VOLTS, 3 PHASE, 4 WIRE										
TYPE: LOAD CENTER					22,000 MINIMUM A.I.C. RATING												
100 A BUS, 100A. MAIN BREAKER					MOUNTING:					<input checked="" type="checkbox"/> FLUSH							
LOCATION: BLDG. V										<input type="checkbox"/> SURFACE							
ENCLOSURE: NEMA 1																	
	SERVES	BREAKER			WIRE	COND	LOAD (IN kVA)			COND	BREAKER			SERVES			
		AMP	P				A	B	C		WIRE	P	AMP				
1	LGT+FAN GIRLS RM	20	1	**	**		1.2	1.0		**	**	1	20	LGT.CUSTODIAN	2		
3	LGT.STAIR AREA	20	1	**	**			1.2	1.0	**	**	1	20	CUSTODIAN	4		
5	LGT.GIRLS PE	20	1	**	**					1.2	1.0	**	**	1	LGT.REC.BOYS PE	6	
7	GIRLS PE	20	1	**	**		1.0	1.0		**	**	1	20	EM LGT. BOYS PE	8		
9	REC.GIRLS PE	20	1	**	**			1.0	1.0	**	**	1	20	LGT. BOYS PE	10		
11	SPLIT UNIT BOYS	30	2	**	**				1.0	1.0	**	**	1	20	TIME CLOCK NL	12	
13	COACH	-	-	-	-		1.0	0.8		**	**	1	20	-	-	14	
15	SPLIT UNIT GIRLS	30	2	**	**			1.0	0.4	**	**	1	20	-	-	16	
17	COACH	-	-	-	-				1.0	0.4	**	**	1	20	BOILER CTL.	18	
19	SWAMP COOLERS	20	1	**	**		0.8	0.6		**	**	1	20	BOILER PUMPS	20		
21	-	20	1	**	**			0.8	0.6	**	**	1	20	BOILER PUMPS	22		
23	LGT.BOYS PE	20	1	**	**				0.8	0.6	**	**	1	20	RESTRM. BOYS PE	24	
25	SPARE	20	1									1	20	SPACE	26		
27	SPARE	20	1									1	20	SPACE	28		
29	SPARE	20	1									1	20	SPACE	30		
31	SPARE	20	1									1	20	SPACE	32		
33	SPARE	20	1									1	20	SPACE	34		
35	SPARE	20	1									1	20	SPACE	36		
37	SPARE	20	1									-	-	-	-	38	
39	SPARE	20	1									3	-	100KA SPD	-	40	
41	SPARE	20	1									-	-	-	-	42	
**** CONTINUOUS LOAD X 1.25							4.0	2.8	3.8	REMARKS: PROVIDE INTEGRAL 100KA SPD PROVIDE DOOR-IN-DOOR TYPE							
NON-CONTINUOUS LOAD X 1.0							4.2	4.8	4.0								
DEMAND KVA/PHASE							8.2	7.6	7.8	CONNECTED LOAD:							21.4 kVA
DEMAND AMPS/PHASE							68	63	65	DEMAND LOAD:							23.5 kVA
** INDICATE: RECONNECT EXISTING CIRCUIT WIRING/CONDUIT TO NEW BREAKER PANEL. ASSUMED LOAD.																	

PANEL SCHEDULE KEY:		
-	-	TAP FEEDERS
-	-	2

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04.07.2025

revisions

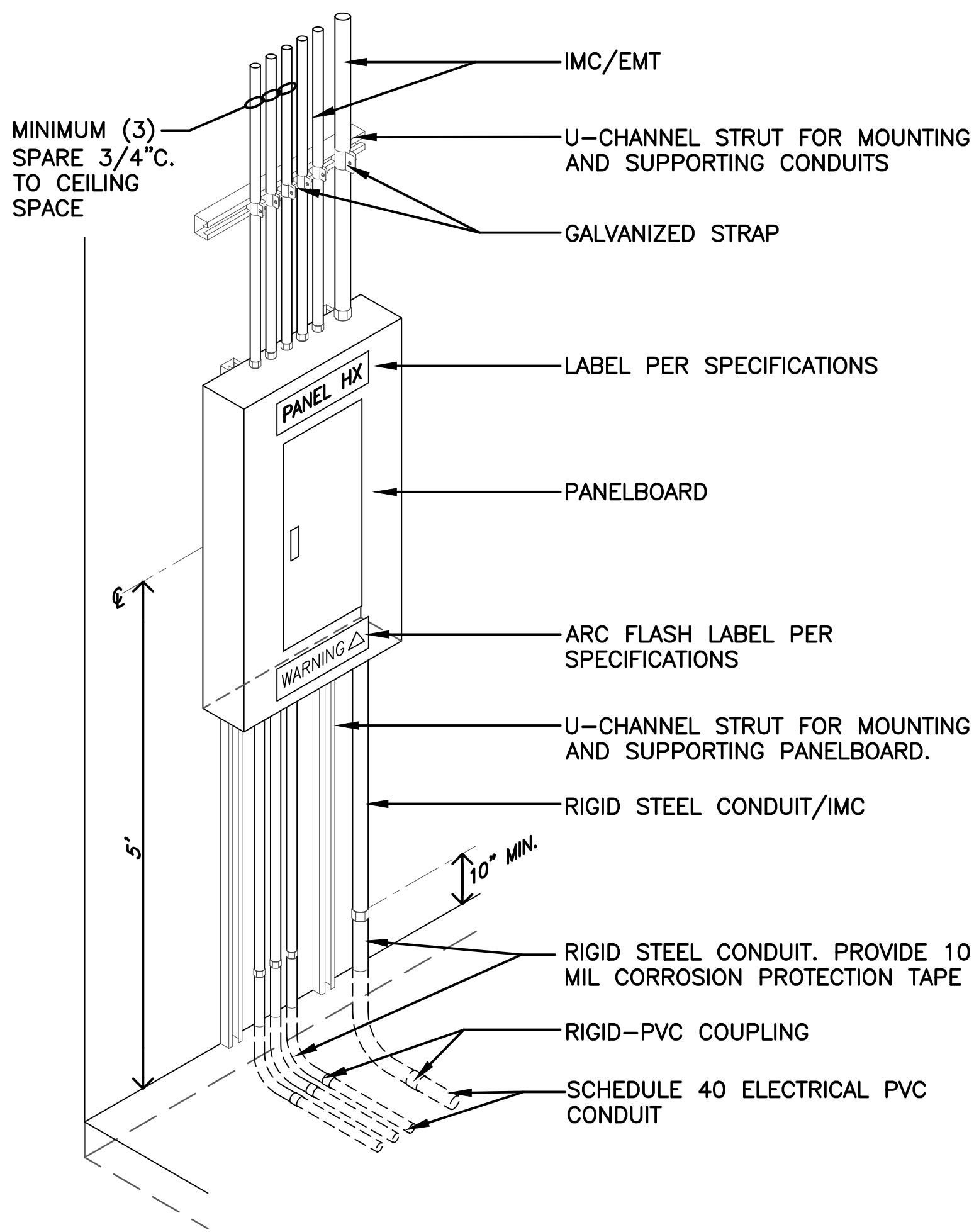
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WILLCOX MIDDLE & HIGH SCHOOL
240 N. BISBEE AVE.
WILLCOX, ARIZONA 85643
HIGH SCHOOL REMODEL

light fixture schedule
and notes

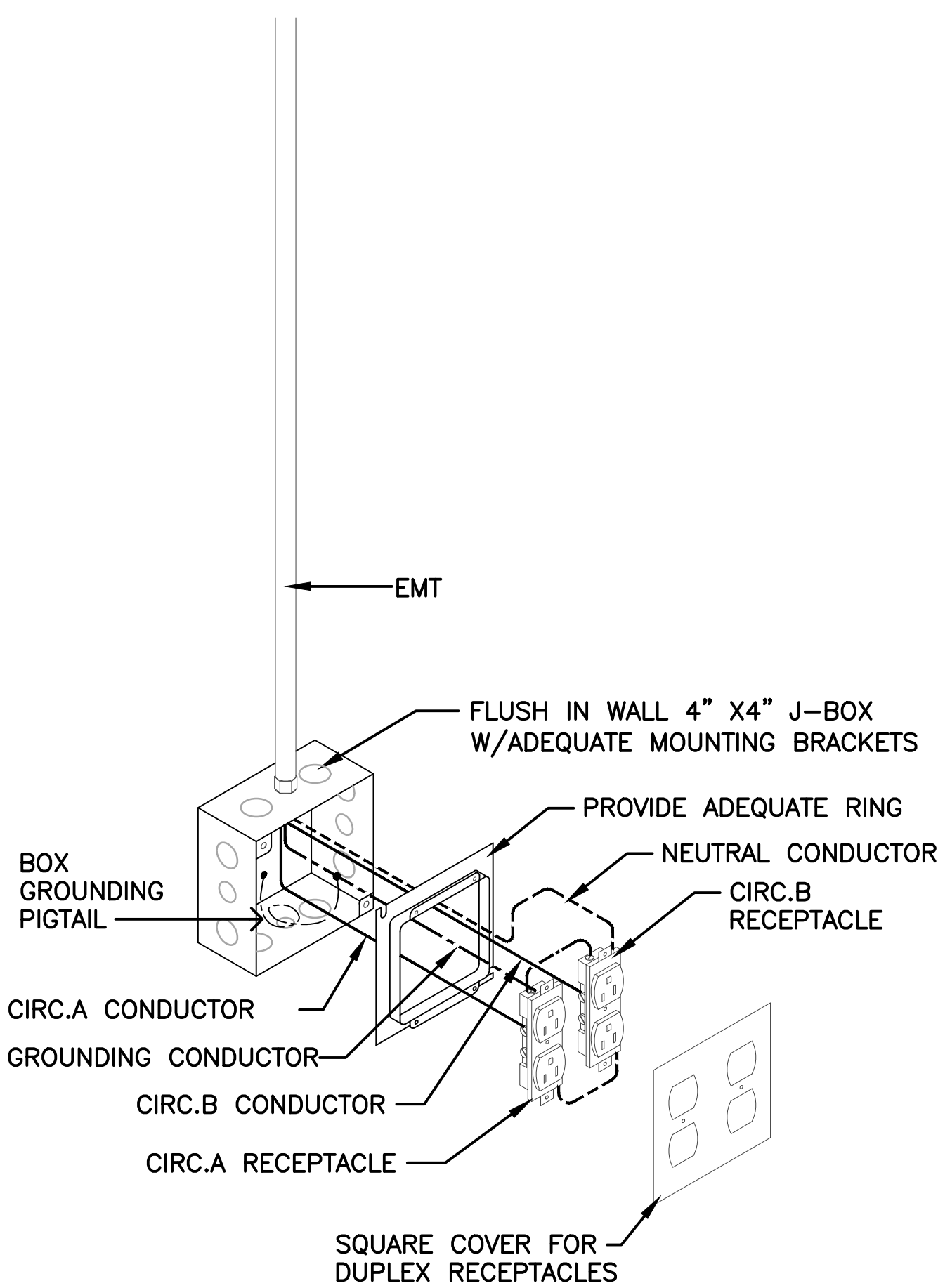
LIGHTING FIXTURE SCHEDULE			
TYPE	DESCRIPTION	WATTS	BASIS OF DESIGN MANUFACTURER
A	2'x4' RECESSED LED LUMINAIRE. 5,000 LUMEN PACKAGE, 80 CRI, 3500K, FLAT SATIN WHITE LENS, 0-10V DIMMABLE POWER SUPPLY, 120-277 M-VOLT, L70/60,000 HOURS. ANALOG CONTROLS.	40	LITHONIA CPX SERIES OR APPROVED EQUAL
A1	2'x4' RECESSED HIGH ABUSE TROFFER, GRID MOUNTING, 80 CRI, 10,000 LUMENS, 3500K, 0-10V ANALOG DIMMING, ACRYLIC FROSTED LENS WITH .125" CLEAR LEXAN LENS.	40	LITHONIA VRTL SERIES OR APPROVED EQUAL
A2	NOT USED.		
A3	SIMILAR TO A1, EXCEPT 2'x2' WITH 5,000 LUMENS.	36	LITHONIA VRTL SERIES OR APPROVED EQUAL
B	8"x4' SURFACE MOUNTED CONTINUOUS ROW WHERE SHOWN LED LUMINAIRE. 10,000 LUMEN PACKAGE, 80 CRI, .156" PEARLESCENT LEXAN LENS, 3500K, 0-10V DIMMABLE POWER SUPPLY, 120-277 M-VOLT, L70/60,000 HOURS. ANALOG CONTROLS.	90	KENAL MLH48 SERIES
B2	8"x4' SURFACE MOUNTED CONTINUOUS ROW WHERE SHOWN LED LUMINAIRE. 7,000 LUMEN PACKAGE, 80 CRI, .156" PEARLESCENT LEXAN LENS, 3500K, 0-10V DIMMABLE POWER SUPPLY, 120-277 M-VOLT, L70/60,000 HOURS. ANALOG CONTROLS.	67	KENAL MLH48 SERIES
C	12"x4FT LONG RECESSED HIGH ABUSE LINEAR LED, STATIC WHITE, 3500K, 80 CRI, FLANGED FOR HARD CEILING MOUNTING, FLUSH ACRYLIC WITH .125" CLEAR LEXAN LENS. COORDINATE FLANGED CEILING TRIM OPTION WITH DRYWALLER PRIOR TO ORDER.	40/4'	LITHONIA VRTL SERIES OR APPROVED EQUAL
D	7" DIAMETER SURFACE MOUNTED ROUND FLAT PANEL, DAMP LOCATION LISTING, 3500K, 1000 LUMENS, WHITE FINISH, OUTLET BOX MOUNTING		JUNO JSF SERIES OR APPROVED EQUAL
E	TWIN HEAD EMERGENCY EGRESS LIGHT, SELF DIAGNOSTICS, 1100 LUMENS, LTP BATTERY, WHITE FINISH, LOW PROFILE OPTICS.	4	LITHONIA ELMGL SERIES
W	3000K WET LOCATION EXTERIOR WALL MOUNT, FULLY SHIELD, 6"x6"x2" DEEP HOUSING, 1600 LUMENS, DARK BRONZE FINISH	13	LITHONIA WPXO SERIES
X	COMBINATION EMERGENCY LIGHT/EXIT LIGHT, TWIN HEADS, RED LETTERS, TOP OR BACK MOUNTING, NUMBER OF FACES AND LETTERS AS SHOWN, SELF DIAGNOSTICS.	4	LITHONIA LHQM SERIES.
LIGHT FIXTURE NOTES			
<div>1. REFER TO ARCHITECTURAL ELEVATIONS AND REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF LIGHT FIXTURES. PROVIDE METAL FRAMING CHANNEL AS NECESSARY TO SPAN BUILDING MEMBERS FOR LUMINAIRE/PENDANT/CHAIN SUPPORT. ALL PENDANTS SHALL HAVE SWIVEL BALL HANGERS.</div> <div>2. THE CONTRACTOR SHALL AIM AND ADJUST ALL LIGHTING FIXTURES TO THE SATISFACTION OF THE ARCHITECT PRIOR TO PROJECT CLOSE OUT.</div> <div>3. VERIFY CEILING TYPES PRIOR TO ORDERING OF LIGHT FIXTURES. PROVIDE LIGHT FIXTURES AND MOUNTING MEANS COMPATIBLE WITH CEILING SYSTEMS AND/OR STRUCTURAL ELEMENTS.</div> <div>4. ALL 0-10V DIMMING SHALL BE ANALOG WITH ANALOG DIMMERS AND SENSORS, WHERE OCCURRING. ALL DIMMERS AND SENSORS SHALL BE RATED FOR 0-10V SINKING AND LINE VOLTAGE CURRENT LOADS FOR RESPECTIVE SWITCHING ZONES. IF REQUIRED TO ACCOMMODATE 0-10V SINKING OR CURRENT LOADS FOR CERTAIN SWITCHING GROUPS, PROVIDE ANALOG POWER PACKS TO ACHIEVE INDICATED SWITCHING REQUIREMENTS.</div> <div>5. PROVIDE CONDUCTORS IN FLEX TAILS AND SWITCH LEGS AS NECESSARY FOR FUNCTIONAL SWITCHING/LIGHTING SYSTEMS INDICATED.</div> <div>6. ALL EXTERIOR LIGHT FIXTURES SHALL BE UL WET LOCATION LISTED.</div> <div>7. LIGHTING AND LIGHTING CONTROL SYSTEMS INCLUDED IN THE CONTRACT DOCUMENTS COMPLY WITH THE MODEL ENERGY CODE/ASHRAE 90.1 REQUIREMENTS AND THE COCHISE COUNTY OUTDOOR LIGHTING CODE.</div> <div>8. ALL LIGHT FIXTURES, AND PENDANT, PAINT FINISHES SHALL BE AS SELECTED BY THE ARCHITECT DURING POST-BID SUBMITTAL REVIEW.</div> <div>9. THE DRIVERS FOR ALL LED DOWNLIGHTS SHALL FACE INTO THE APERTURE AS A FACTORY INSTALLED FEATURE TO AID IN MAINTENANCE.</div> <div>10. WHERE PRODUCTS OF LITHONIA ARE SPECIFIED, EQUIVALENT PRODUCTS OF HL1, COOPER, OR SIGNIFY LIGHTING SHALL BE ACCEPTABLE SUBJECT TO COMPLIANCE WITH ALL PROJECT SPECIFIC REQUIREMENTS.</div> <div>11. PROVIDE TWO TOOLS TO THE OWNER FOR EACH TYPE OF SPECIALTY FASTENER UTILIZED ON THIS PROJECT.</div> <div>12. ALL LUMINAIRES OF ALL TYPES SHALL HAVE MODULAR PARALLEL LINE AND NEUTRAL POWER SUPPLY/BALLAST DISCONNECT PLUGS, FACTORY INSTALLED.</div> <div>13. ALL TROFFERS TO HAVE MINIMUM L70 @ 60,000 HOURS.</div>			

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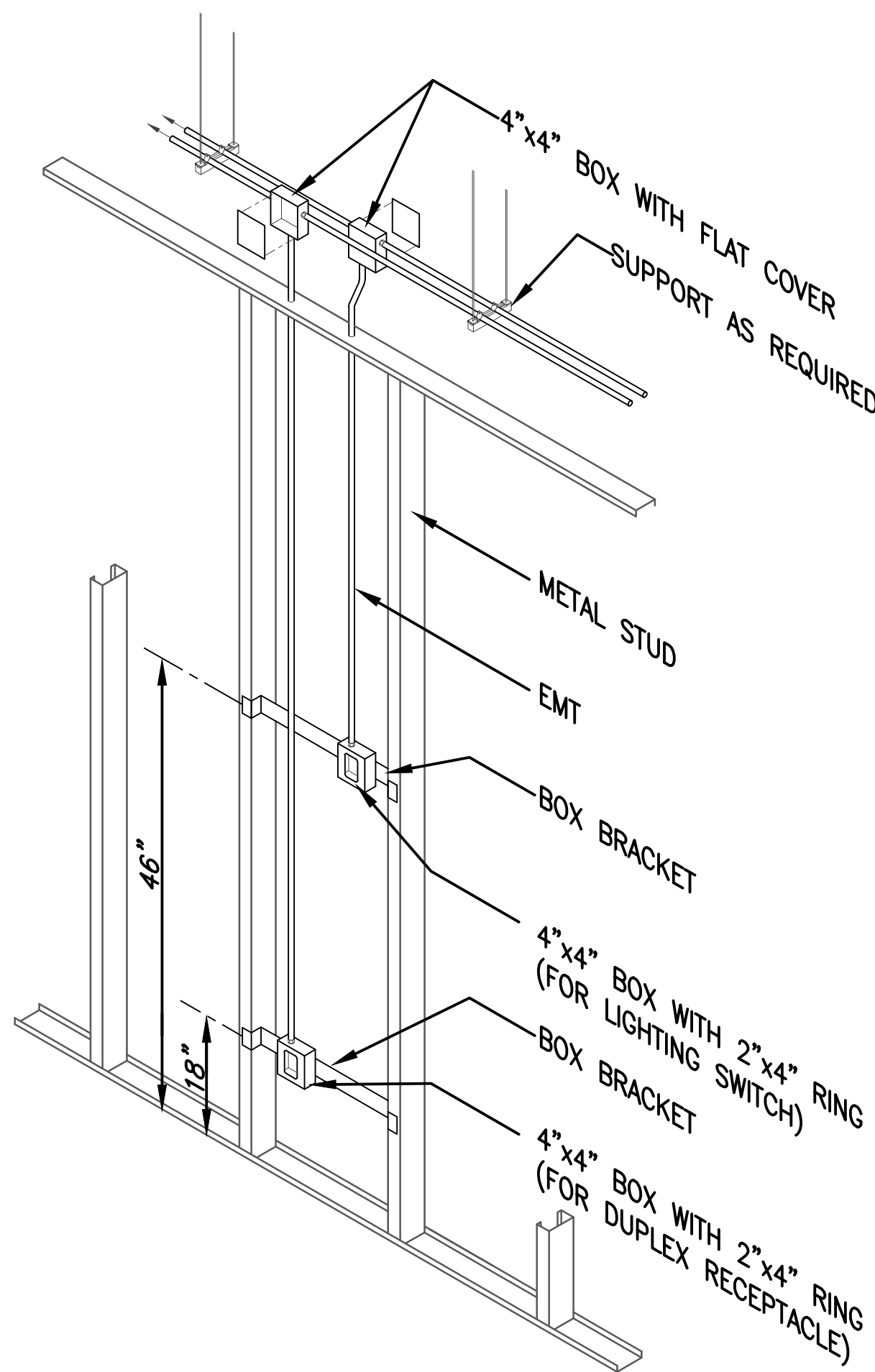
E7.0 DETAIL 1 - PANELBOARD INSTALLATION DETAIL

N.T.S.



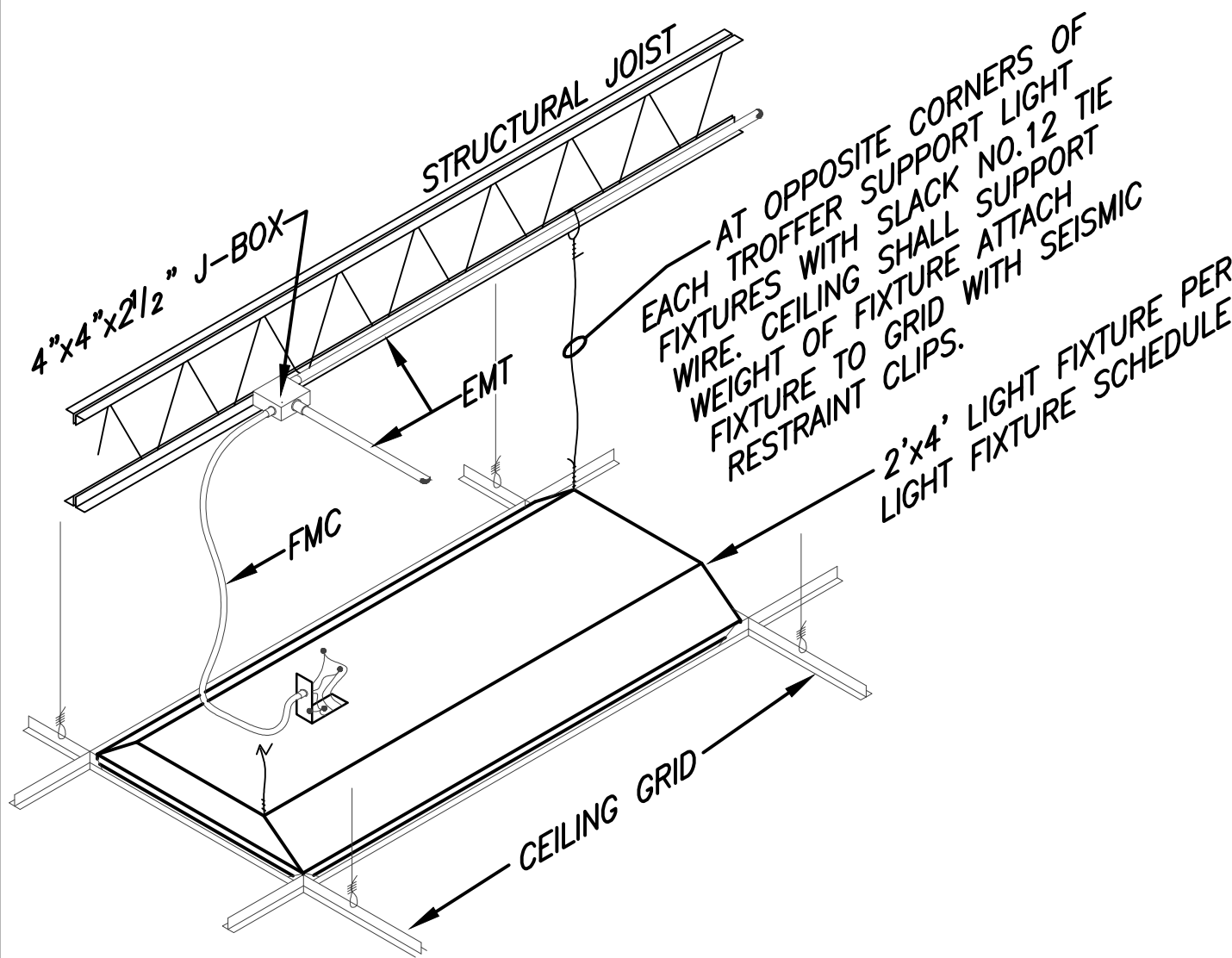
E7.0 DETAIL 2 - QUAD RECEPTACLE INSTALLATION DETAIL

N.T.S.



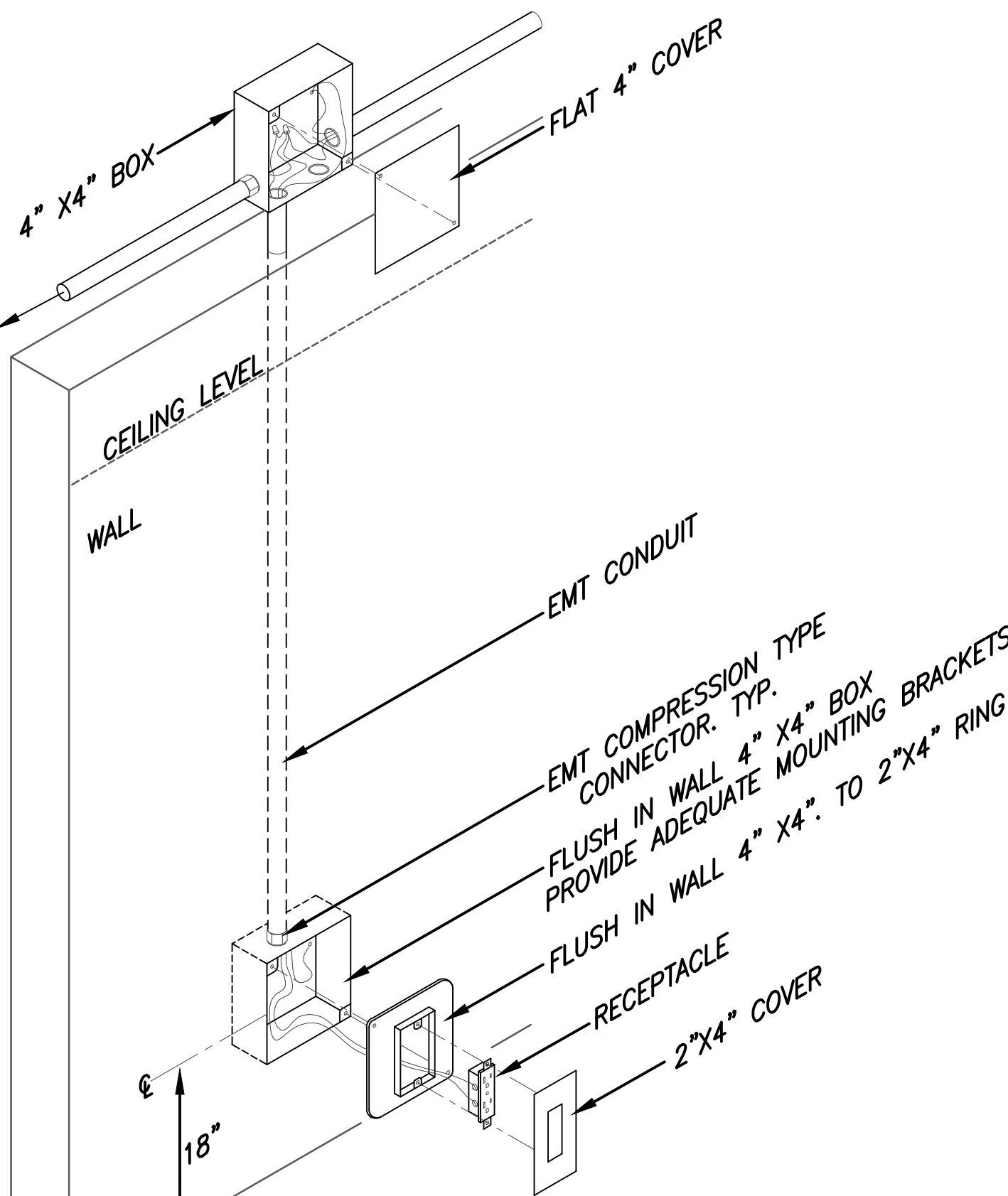
E7.0 DETAIL 3 - FLUSH IN WALL BOX INSTALLATION

N.T.S.



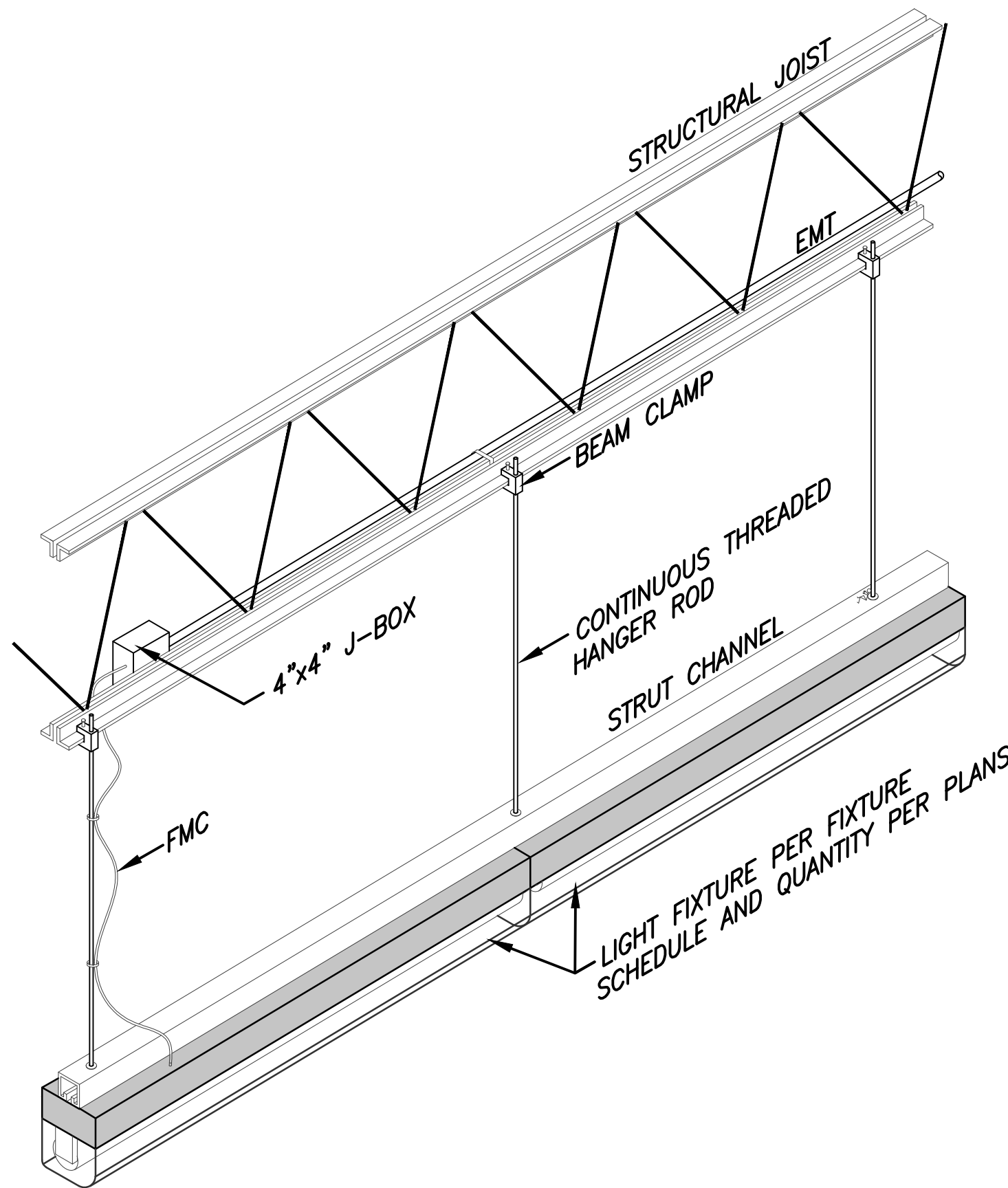
E7.0 DETAIL 4 - RECESSED 2'X4' LIGHT FIXTURE INST. DETAIL

N.T.S.



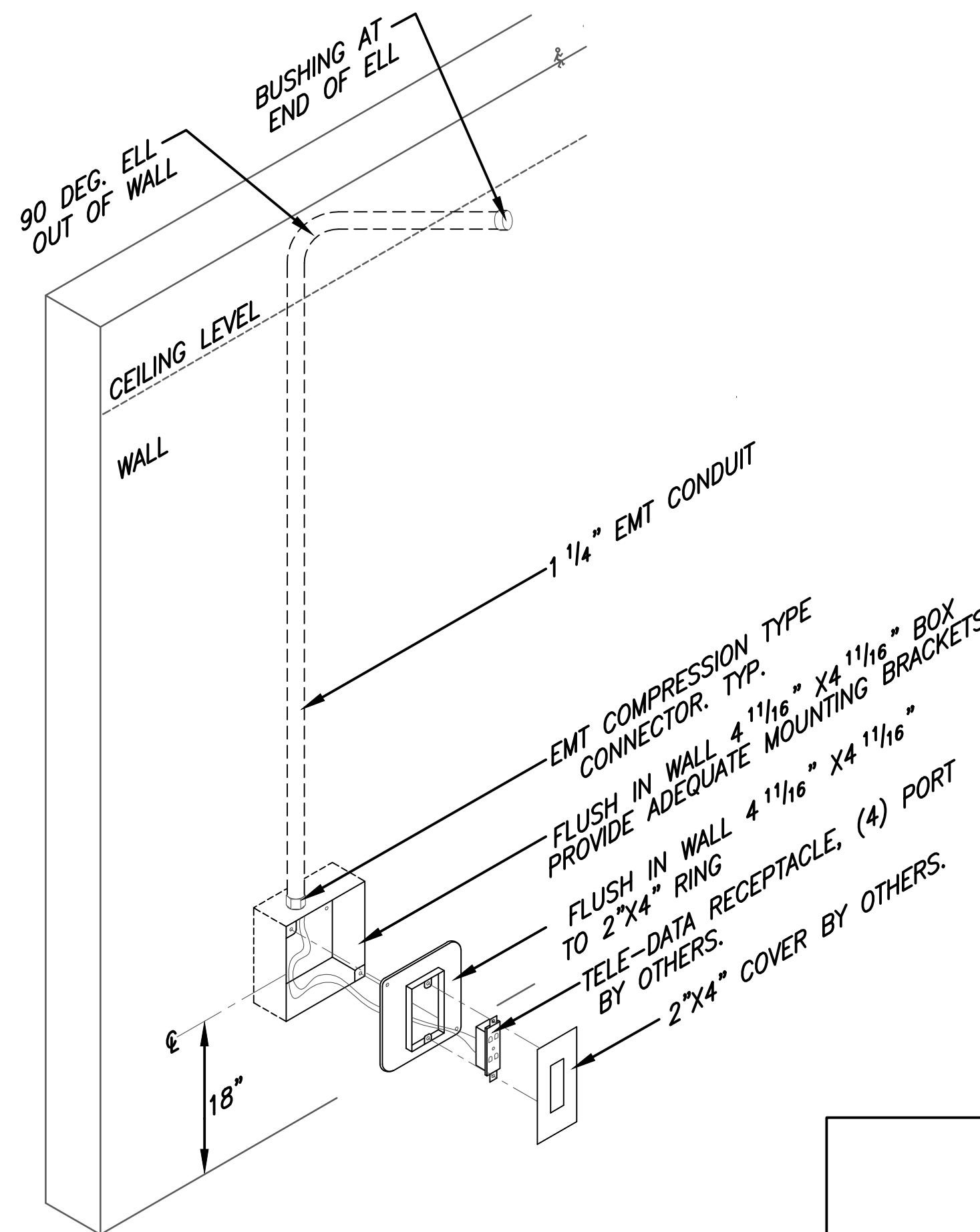
E7.0 DETAIL 5 - RECEPTACLE INST. DETAIL

N.T.S.



E7.0 DETAIL 6 - LINEAR SUSPENDED LIGHT FIXTURE INSTALLATION DETAIL

N.T.S.



E7.0 DETAIL 7 - DATA JACK INSTALLATION DETAIL

N.T.S.

