

347 SOUTH FERGUSON, SUITE 3
BOZEMAN, MONTANA 59718
406.404.1588

PROJECT NO.: 22057.01

FIRE PROTECTION ENGINEER
MORRISON-MAIERLE
2880 TECHNOLOGY BLVD.
BOZEMAN MT. 59718

MECHANICAL ENGINEER
MORRISON-MAIERLE
2880 TECHNOLOGY BLVD.
BOZEMAN MT. 59718

ELECTRICAL ENGINEER
MORRISON-MAIERLE
2880 TECHNOLOGY BLVD.
BOZEMAN MT. 59718

MONTANA STATE UNIVERSITY BRICK BREEDEN FIELDHOUSE LOCKER ROOM 116 RENOVATION

1 BOBCAT CIR.
BOZEMAN MT 59717
CLIENT PROJECT NO.: 21-0028



CONSTRUCTION DOCUMENTS
ISSUE DATE: 3-7-2023

ARCHITECTURAL ABBREVIATIONS

& AND	F.E.C. FIRE EXTINGUISHER CABINET	OFOI OWNER FURNISHED, OWNER INSTALLED
< ANGLE	FIN FINISH	OH OVERHEAD
@ AT	FF FACTORY FINISH(ED)	OPG OPENING
CL CENTERLINE	FLUOR FLUORESCENT	OPP OPPOSITE
o DEGREE	F.O.B FACE OF BLOCK	
# NUMBER	F.O.F FACE OF FINISH	
	F.O.S FACE OF STUD	
ABV ABOVE	F.O. FACE OF (Conc. etc.)	PARA PARALLEL
AC ASPHALTIC CONCRETE	F.R.P. FIBER REINFORCED PANEL	PART PARTITION
ACP ACOUSTICAL CEILING PANEL	FRPF FIREPROOFING	PERF PERFORATED
ACT ACOUSTICAL CEILING TILE	FRT FIRE-RETARDENT TREATED	PERM PERMANENT
ACOUS ACOUSTICAL	FT FOOT OR FEET	PERP PERPENDICULAR
ADD ADDITION	FTG FOOTING	P.I.C PRECAST INSULATED CONCRETE
AFF ABOVE FINISH FLOOR	FURR FURRING	PL PLATE
AHU AIR HANDLING UNIT	FUT FUTURE	P.LAM PLASTIC LAMINATE
ALT ALTERNATE		PLAST PLASTER
ALUM ALUMINUM	GA GAUGE	PLYWD PLYWOOD
APPROX APPROXIMATE	GAL GALLON	PR PAIR
ARCH ARCHITECTURAL	GALV GALVANIZED	PREFAB PREFABRICATED
ASPH ASPHALT	G.B. GRAB BAR	PRMA PROTECTED MEMBRANE ROOF
AVG AVERAGE	G.I. GALVANIZED IRON	ASSEMBLY ASSEMBLY
	GL GLASS	PROJ PROJECT
BD BOARD	GT GLASS TYPE	PT POINT AND PAINT
BLDG BUILDING	GWB GYPSUM WALL BOARD	P.T. PRESERVATIVE TREATED
BLKG BLOCKING	GYM GYMNASIUM	PTD PAPER TOWEL DISPENSER
BLW BELOW	GYP. GYPSUM	PVC POLYVINYL CHLORIDE
BM BENCH MARK		
B.O. BOTTOM OF	H.B. HOSE BIB	R RISER OR RADIUS
B.S. BOTH SIDES	H.C. HOLLOW CORE	R.D. ROOF DRAIN
BTU BRITISH THERMAL UNIT	HDWD HARDWOOD	REF REFERENCE
BUR BUILT-UP ROOF	HDWR HARDWARE	REFR REFRIGERATOR
	H.M. HOLLOW METAL	REINF REINFORCING
	H.M.F. HOLLOW METAL FRAME	REQ REQUIRED
	HORIZ HORIZONTAL	R.H. RIGHT HAND
	H.P. HIGH POINT	R.L. RAIN LEADER
	HR HOUR	RM ROOM
	HT HEIGHT	R.O. ROUGH OPENING
	HW HOT WATER	R.O.W. RIGHT OF WAY
	HWY HIGHWAY	RTU ROOF TOP UNIT
	I.D. INSIDE DIAMETER	S SOUTH
	(") OR IN INCHES	SAN SANITARY
		S.C. SOLID CORE
	IHM INSULATED HOLLOW METAL	SCHED. SCHEDULE
	INSUL INSULATION	SE SOUTH EAST
	INT INTERIOR	SECT SECTION
	JAN JANITOR	SHEATH SHEATHING
	JT JOINT	SHT SHEET
		SIM SIMILAR
	KIT KITCHEN	SND SANITARY NAPKIN DISPENSER
		SPEC SPECIFICATIONS
	LAB LABORATORY	SQ SQUARE
	LAM LAMINATE OR LAMINATED	S.S. SANITARY SEWER
	LAV LAVATORY	S.ST STAINLESS STEEL
	LB POUND	STOR STORAGE
	LF LEFT HAND	STRUCT STRUCTURAL
	LL LIVE LOAD	ST. S STORM SEWER
	L.O.W LIMITS OF WORK	SUSP SUSPENDED
	L.P. LOW POINT	SV SHEET VINYL
		SW SOUTH WEST
	MAT'L MATERIAL	SYM SYMMETRICAL
	MAX MAXIMUM	
	MECH MECHANICAL	TB TACKBOARD
	MET OR MTL METAL	TBHM THERMALLY-BROKEN HOLLOW METAL
	MFR MANUFACTURER	TEL TELEPHONE
	MH MANHOLE	TEMP TEMPORARY
	MIN MINIMUM OR MINUTE	TERR TERRAZO
	MISC. MISCELLANEOUS	T&G TOUNGE AND GROOVE
	M.O. MASONRY OPENING	T.O. TOP OF (eg. concrete)
	MSU MONTANA STATE UNIVERSITY	T.O.S TOP OF STEEL
	MULL MULLION	TV TELEVISION
		TYP TYPICAL
	N NORTH	UL UNDERWRITERS LABRATORY
	NE NORTH EAST	UNFIN UNFINISHED
	NIC NOT IN CONTRACT	UNFO UNLESS NOTED OTHERWISE
	NO NUMBER	
	NOM NOMINAL	VCT VINYL COMPOSITION TILE
	NTS NOT TO SCALE	VERT VERTICAL
	NW NORTH WEST	VEST VESTIBULE
		VR VAPOR RETARDER
	O OVER	VTR VENT THROUGH ROOF
	O.C. ON CENTER	
	O.D. OUTSIDE DIAMETER	W WEST
	OFD OVERFLOW DRAIN	W/ WITH
	OFF OFFICE	W/O WITH OUT
	OFCI OWNER FURNISHED, CONTRACTOR INSTALLED	WP WATER PROOF
		WT WEIGHT

PROJECT DESCRIPTION

MONTANA STATE UNIVERSITY'S EXISTING BRICK BREEDEN FIELDHOUSE LOCKER ROOM IS BEING REPROGRAMMED TO HOUSE THE MEN'S AND WOMEN'S BASKETBALL TEAMS. THE EXISTING, UNOCCUPIED, LOCKER ROOM 116 WILL BE SPLIT INTO TWO SEPARATE LOCKER ROOMS. THE LOCKER ROOMS WILL HAVE 16 LOCKERS FOR THE MEN'S TEAM AND 17 LOCKERS FOR THE WOMEN. A TEAM LOUNGE SPACE AND A SEPARATE GAME REVIEW AREA WILL ALSO BE PROVIDED FOR EACH TEAM. DATA AND POWER WILL BE PROVIDED THROUGHOUT THE ROOMS. RENOVATION OF EXISTING RESTROOM AND SHOWER PLUMBING SYSTEMS, FIXTURES, FOR THE WOMEN'S LOCKER ROOM AND AN ACCESS THROUGH ROOM 115 TO EXISTING SHOWER ROOM 112A-B FOR THE RENOVATED MEN'S LOCKER ROOM. WALL AND CEILING FINISHES WILL BE REFRESHED AND NEW LOCKERS INSTALLED. EXISTING MECHANICAL, HEAT, VENTILATION AND ELECTRICAL SERVICE COMPONENTS ARE TO BE MODIFIED AND UPGRADED AS NEEDED FOR THE LAYOUT OF THE RENOVATION.

CONSTRUCTION SHALL BE PHASED WORK, CONTRACTOR TO COORDINATE WITH MONTANA STATE FOR ACCESS TO CONSTRUCTION AREAS.

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MECHANICAL

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 P02 PLUMBING SCHEDULES
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 P11 PLUMBING FLOOR PLAN

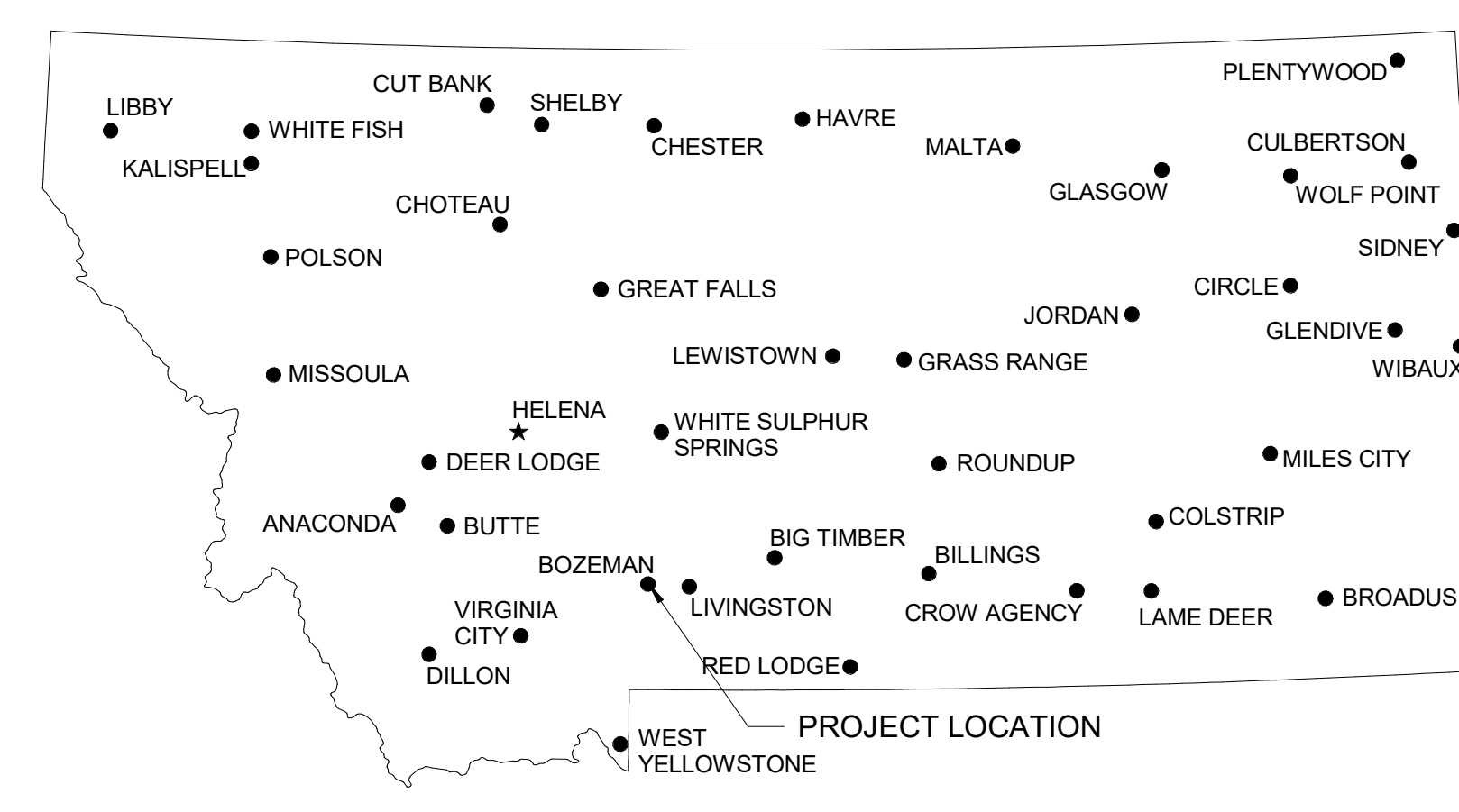
ELECTRICAL

E01 ELECTRICAL SYMBOLS AND ABBREVIATIONS
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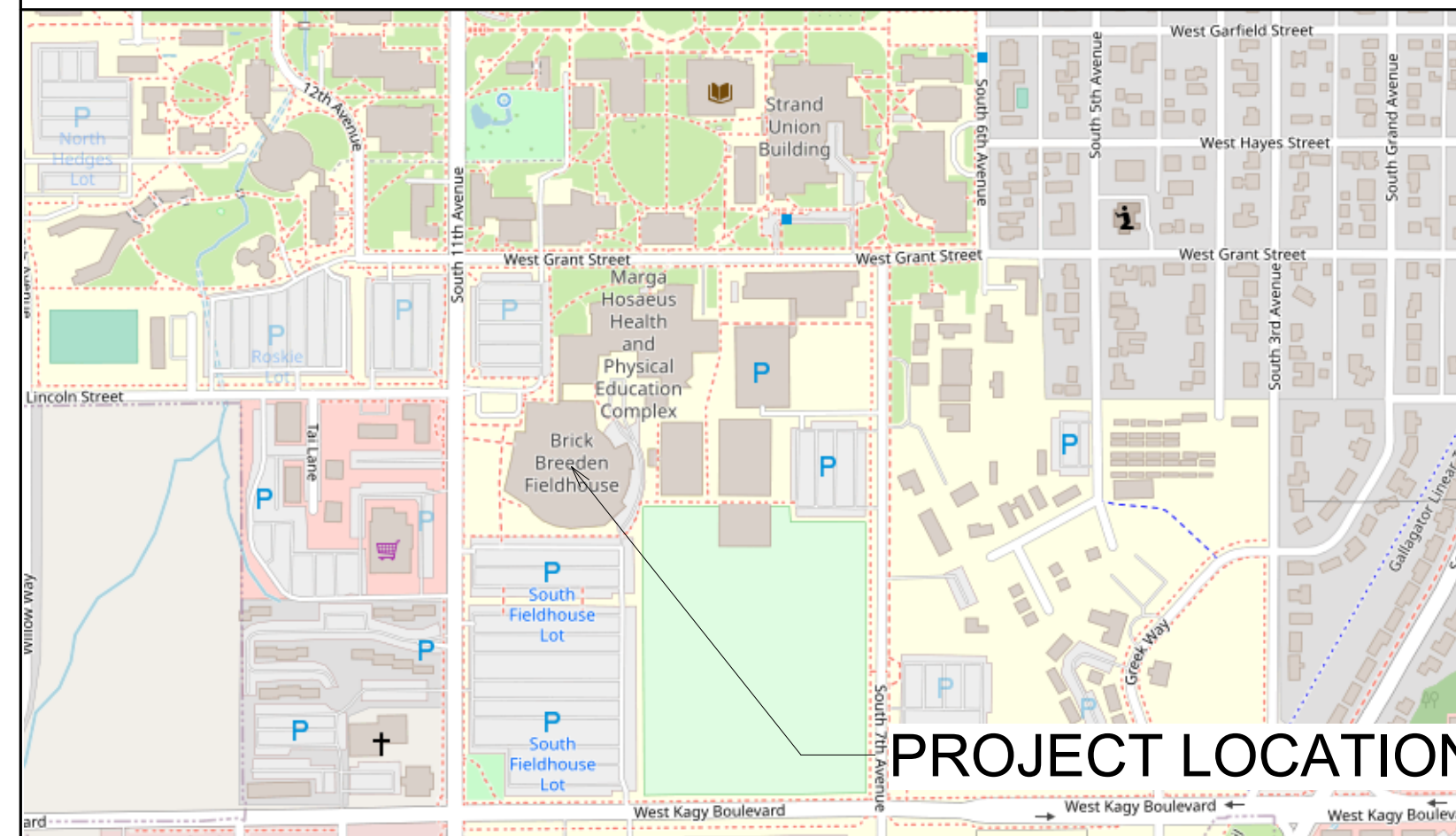
FIRE PROTECTION

F01 FIRE PROTECTION COVER SHEET
 F02 FIRE PROTECTION DETAILS
 F10 FIRE PROTECTION FLOOR PLAN

STATE MAP



VICINITY MAP



GENERAL PROJECT NOTES

- ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE PROVISIONS OF THE BUILDING CODES OUTLINED ON THE LIFE SAFETY PLAN, AND ALL OTHER STATE AND LOCAL CODES, INCLUDING ALL AMENDMENTS.
- ALL WORK SHALL CONFORM TO THE AMERICAN DISABILITIES ACT (A.D.A.) ACCESSIBILITY GUIDELINES FOR BUILDING AND FACILITIES (A.D.D.A.G.) AND A.N.S.I. 117.1 UNLESS NOTED OTHERWISE. WHERE CONFLICTING REQUIREMENTS OCCUR THE MOST
- ALL DIMENSIONS ARE TO FACE OF STUD, FACE OF CONCRETE, FACE OF C.M.U., TO CENTERLINE OF STRUCTURAL COLUMN, OR TO STRUCTURAL GRID-LINE UNLESS NOTED OTHERWISE.
- DIMENSIONS NOTED AS 'CLEAR' (OR CLR.) SHALL BE TO FINISHED FACE.
- DO NOT SCALE THE DRAWINGS TO OBTAIN CONSTRUCTION DIMENSIONS.
- EXCEPT AS SPECIFICALLY PERMITTED BY THE APPLICABLE BUILDING CODE, EGRESS DOORS SHALL BE READILY OPENABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE EFFORT.

ARCHITECTURAL DRAWING CONVENTIONS

<p>BUILDING NORTH</p>	<p>ALPHA GRIDS RUN VERTICALLY GRID LINE NUMERIC GRIDS RUN HORIZONTALLY</p>	<p>REFER TO SHEET NOTES</p>	<p>SECTION NO. SHEET NUMBER DISCIPLINE</p> <p>A=ARCHITECTURAL D=DEMOLITION (ARCHITECTURAL) E=ELECTRICAL H=HAZMAT G=GENERAL L=LANDSCAPE M=MECHANICAL S=STRUCTURAL</p>	<p>DETAIL NO. SHEET NO. DISCIPLINE</p>	<p>ELEVATION NO. SHEET NUMBER DISCIPLINE</p>	<p>PARTITION ASSEMBLY REFER TO PARTITION TYPES</p>	<p>EQUIPMENT KEY</p>	
<p>REVISION NUMBER REVISION CLOUD</p>	<p>DOOR # BY ROOM 101-1</p>	<p>DEMOLITION</p>	<p>VERT. CONTROL POINT</p>	<p>WINDOW TYPE REFER TO WINDOW TYPES</p>	<p>ROOM NAME ROOM NO. 101</p>	<p>ELEVATION NO. SHEET NUMBER DISCIPLINE</p>	<p>SHADED SIDE OF THE MATCHLINE IS THE SIDE UNDER CONSIDERATION</p>	
NORTH ARROW	GRID LINES	SHEET NOTE TAG	BLDG./WALL SECT.	DISCIPLINE	DETAIL	EXTERIOR ELEVATION	PARTITION TYPE	EQUIPMENT TAG
REVISIONS	DOOR NUMBER	DEMOLITION	VERT. CONTROL POINT	WINDOW TYPE	ROOM TAG	INTERIOR ELEVATION	MATCHLINE	

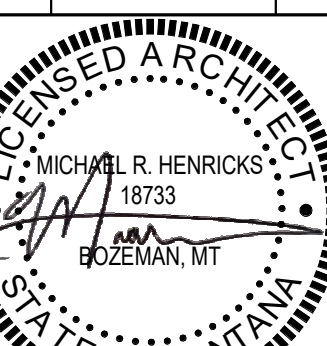


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CONSTRUCTION DOCUMENTS
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 FIELDHOUSE LOCKER
 ROOM 116 RENOVATION**
 MONTANA STATE UNIVERSITY

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REV.	DESCRIPTION	DATE
1	Revision 1	Date 1



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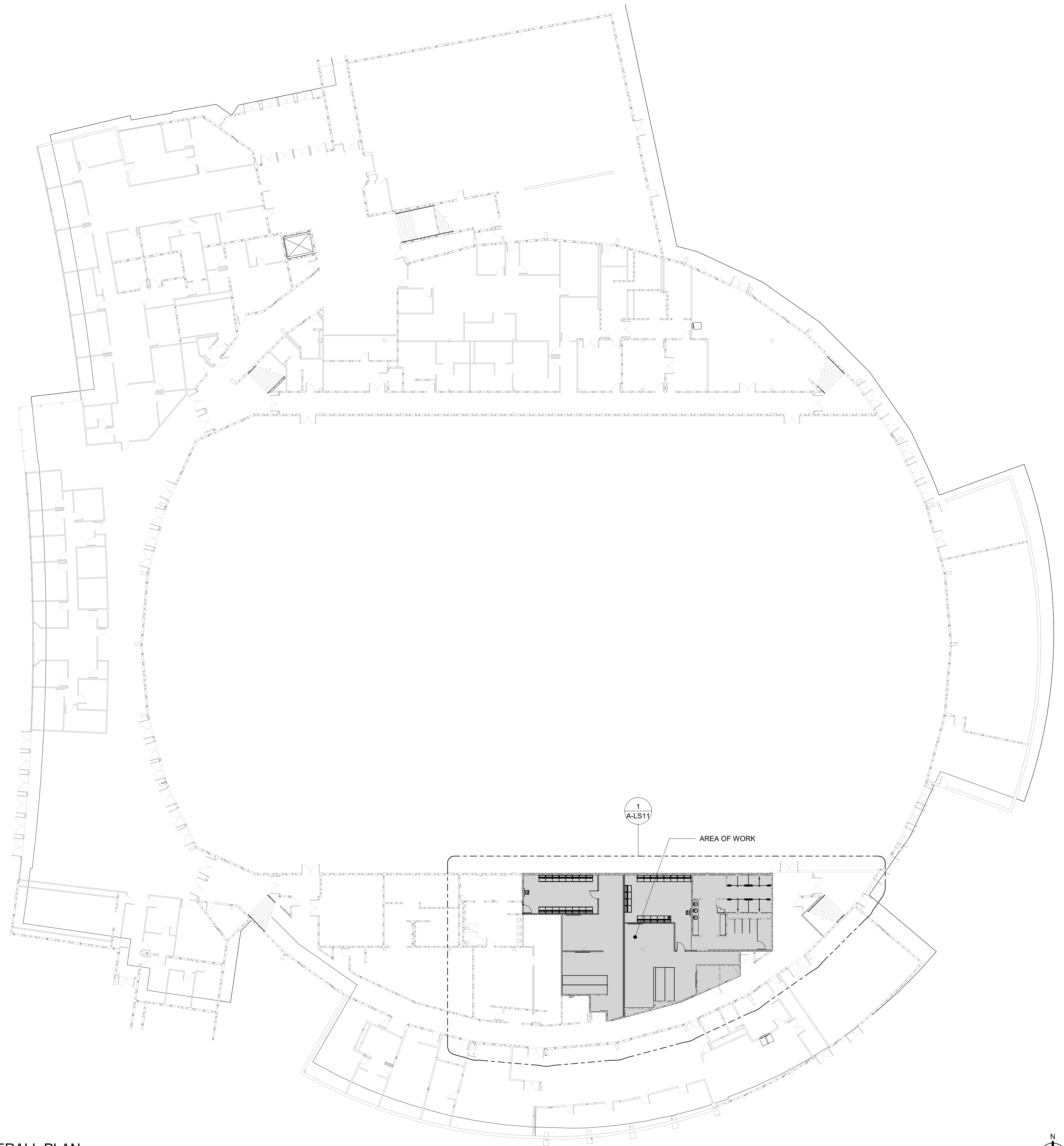
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SHEET TITLE
 GENERAL NOTES,
 MAP AND SHEET
 INDEX

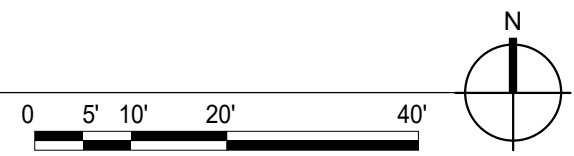
SHEET

A-G10

DATE
3-7-2023



1 OVERALL PLAN
1" = 20'-0"



CONSTRUCTION DOCUMENTS



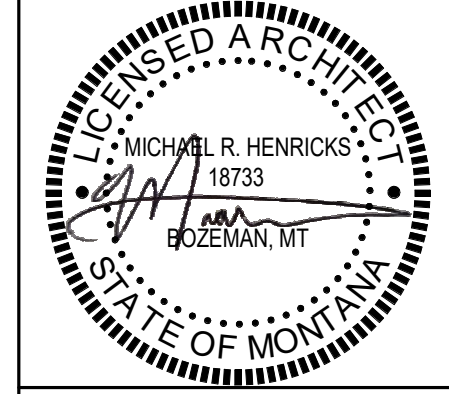
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**SHEET TITLE
OVERALL PLAN**

**SHEET
A-LS10**

DATE
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BUILDING CODE INFORMATION

LEVEL 2 ALTERATION PER IEBC 2021

LEVEL 2 ALTERATIONS INCLUDE THE ADDITION OR ELIMINATION OF ANY DOOR OR WINDOW, THE RECONFIGURATION OR EXTENSION OF ANY SYSTEM, OR THE INSTALLATION OF ANY ADDITIONAL EQUIPMENT, AND SHALL APPLY WHERE THE WORK AREA IS EQUAL TO OR LESS THAN 50 PERCENT OF THE BUILDING AREA.

EXISTING BUILDING CONSTRUCTION TYPE IIB

AREA OF WORK IS 3,500 SF WITHIN EXISTING 71,000 SF FIELDHOUSE FACILITY

OCCUPANCY OF SPACES PER IBC 2021, TABLE 1004.5
 ASSEMBLY WITHOUT FIXED SEATS - UNCONCENTRATED - 15 NET
 EDUCATIONAL - SHOPS AND OTHER VOCATIONAL ROOM AREAS - 50 NET
 LOCKER ROOMS - 50 GROSS

EXISTING EXITING LOADING ON SOUTHEAST EXTERIOR DOOR: 464 PER PPA #96-0060 DATED JUNE 1997
 EXISTING OCCUPANCY OF LOCKER ROOMS 112, 112A, 113 AND 116 = 118 OCC
 PROPOSED OCCUPANCY OF LOCKER ROOM 116 SUITE = 75 OCC
 TOTAL OCCUPANCY OF LOCKER ROOMS 112, 112A, 113 AND 116 = 96 OCC




TABLES 1006.2.1 SPACES WITH ONE EXIT - E, A AND B OCCUPANCY = 49 OCCUPANTS

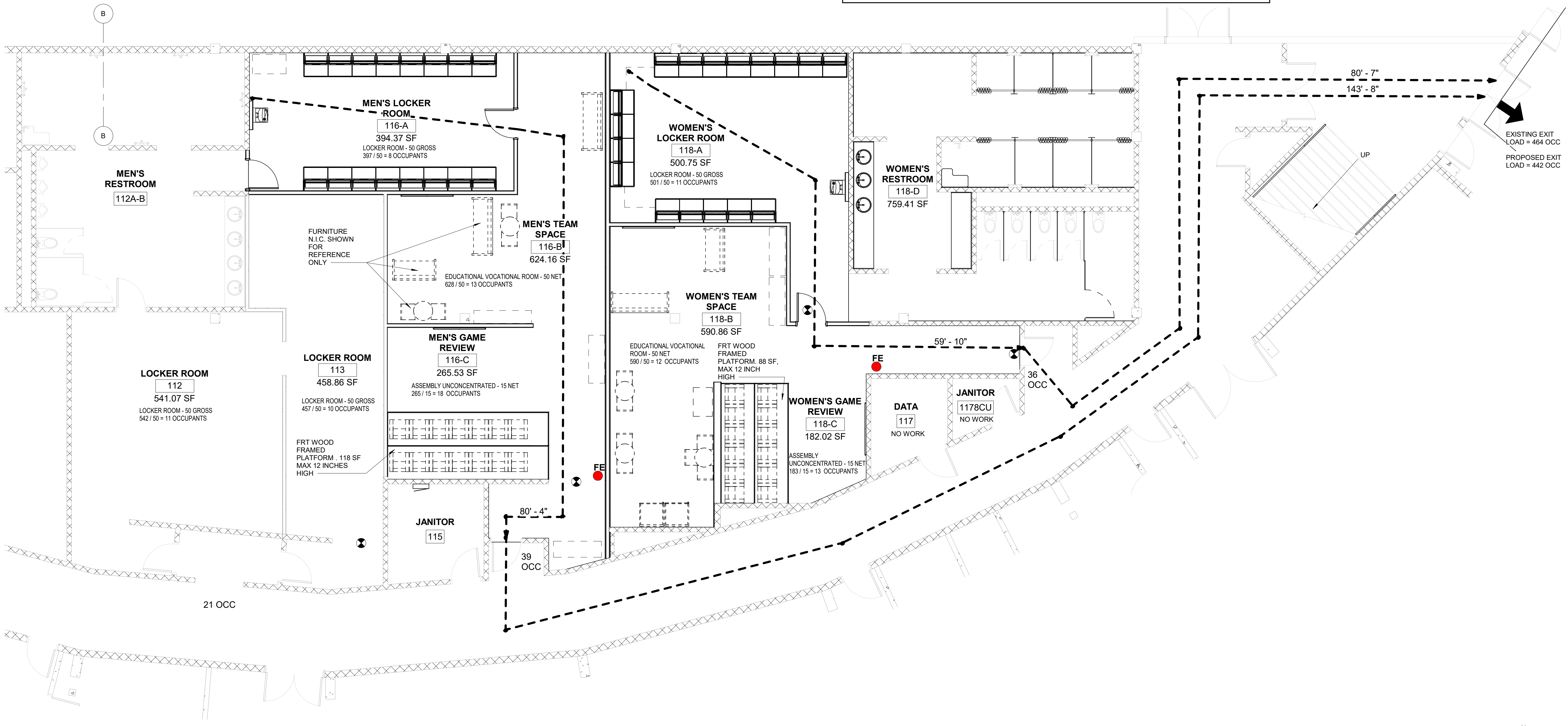
COMMON PATH OF EGRESS: B OCCUPANCY=100FT
 1017.2 EXIT ACCESS TRAVEL DISTANCE FOR B OCCUPANCY WITH SPRINKLER SYSTEM = 300 FT

GAME REVIEW PLATFORM
 2021 IBC 603.1 ALLOWABLE MATERIALS
 COMBUSTIBLE MATERIALS SHALL BE PERMITTED IN BUILDINGS OF TYPE I OR II CONSTRUCTION INTENDING OLLWOING APPLICATIONS AND IN ACCORDANCE WITH SECTIONS 603.1.1 THROUGH 603.1.3
 ITEM 12 - STAGES AND PLATFORMS CONSTRUCTED IN ACCORDANCE WITH SECTIONS 410.2 AND 410.3 RESPECTIVLY.

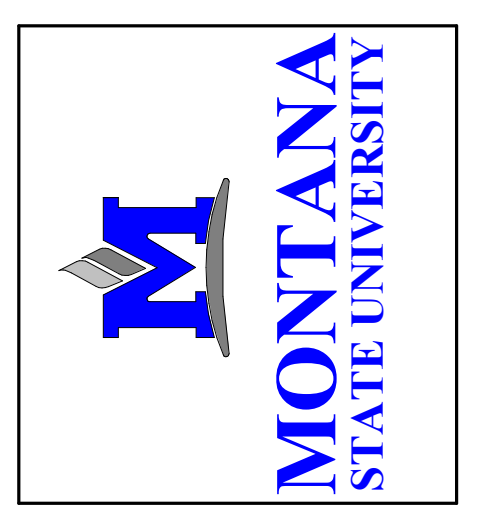
2021 IBC 410.3 PLATFORM CONSTRUCTION
 PERMANENT PLATFORMS ARE PERMITTED TO BE CONSTRUCTED OF FIRE-RETARDANT-TREATED WOOD FOR TYPES I, II, AND IV CONSTRUCTION WHERE THE PLATFORMS ARE NOT MORE THAN 30 INCHES ABOVE THE MAIN FLOOR, AND NOT MORE THAN ONE-THIRD OF THE ROOM FLOOR AREA AND NOT MORE THAN 3000 SF IN AREA.

LIFE SAFETY PLAN LEGEND

-  EXIT SIGN LOCATION
-  FIRE EXTINGUISHER
UL-RATED: 2A-10B:C
-  EXIT DISCHARGE



1 LOCKER ROOM 116 LIFE SAFETY PLAN
 3/16" = 1'-0"



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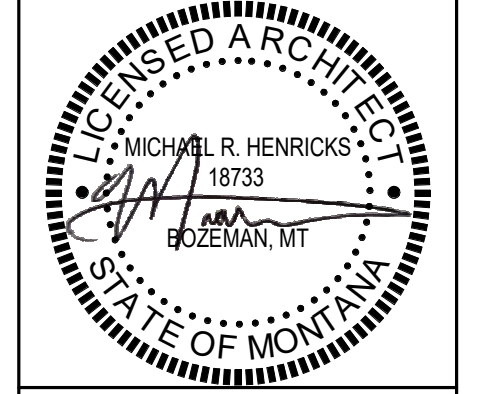
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**SHEET TITLE
 LIFE SAFETY PLAN**

SHEET
A-LS11

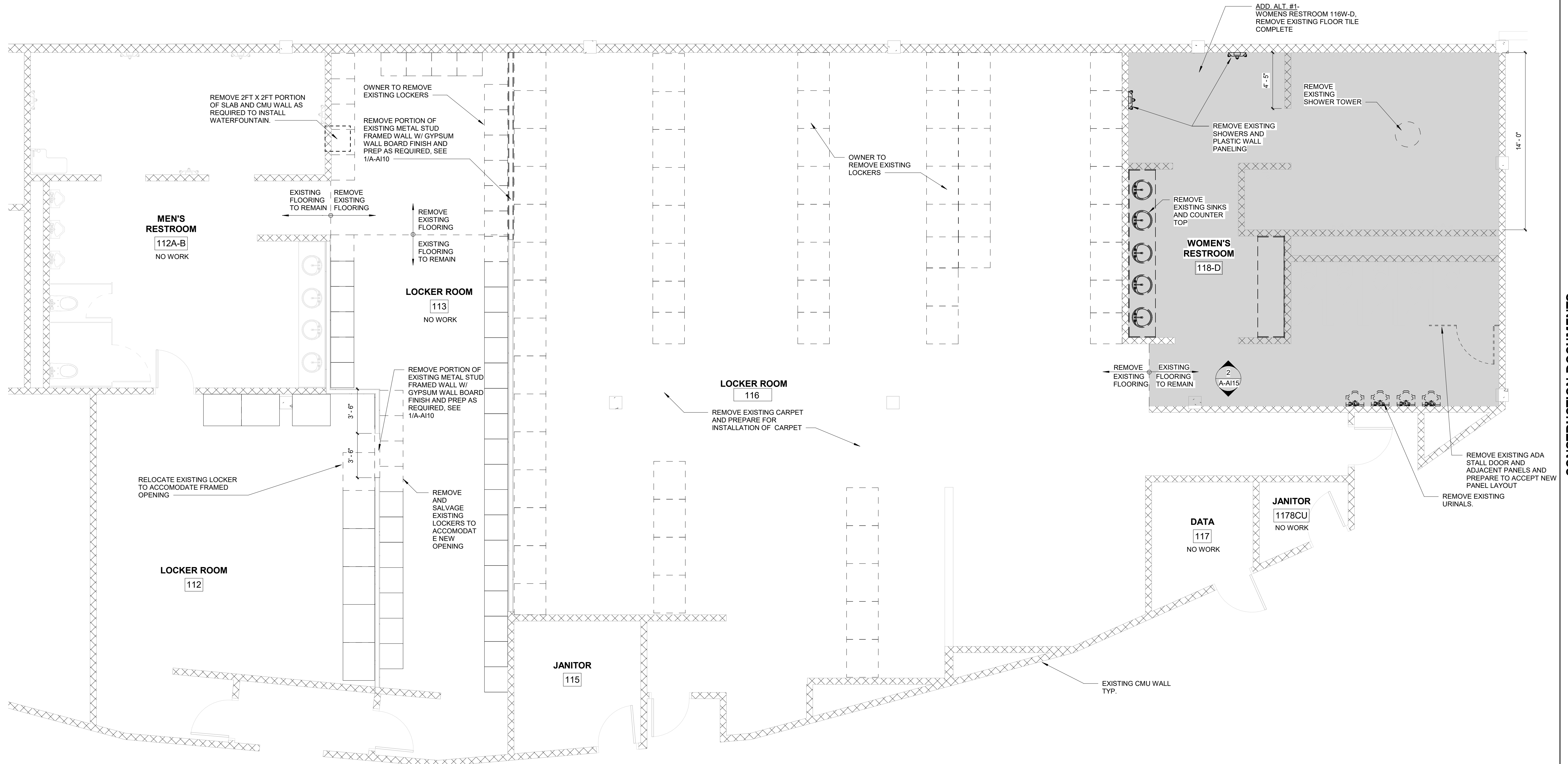
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CONSTRUCTION DOCUMENTS

GENERAL DEMOLITION NOTES

1. REMOVE EXISTING CARPET AND PREPARE FLOOR FOR NEW FLOORING PER SCHEDULE IN LOCKER ROOM 116
2. REMOVE EXISTING LOCKERS IN LOCKER ROOM 116 COMPLETE
3. REMOVE EXISTING WALL GRAPHICS AND PREPARE WALLS FOR FINISHES AS SCHEDULED IN LOCKER ROOM 116

NOTE:
FOR LIGHTING DEMOLITION SEE SHEET ED11



1 LOCKER ROOM 116 DEMOLITION FLOOR PLAN
1/4" = 1'-0"



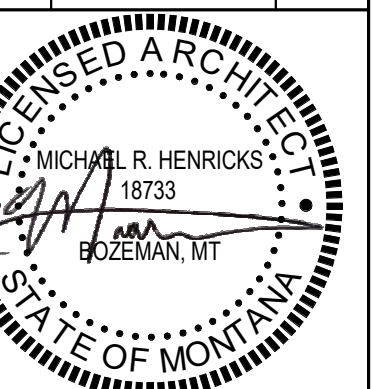
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SHEET TITLE
DEMOLITION PLAN

SHEET

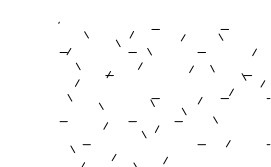
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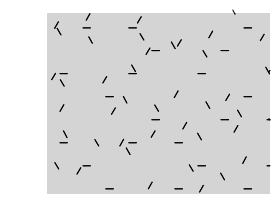
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CONSTRUCTION DOCUMENTS

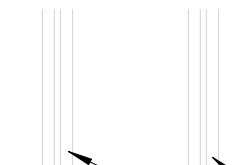
DEMOLITION CEILING PLAN LEGEND



EXISTING GYPSUM WALL BOARD CEILING TO REMAIN



GYPSUM WALL BOARD CEILING TO BE DEMOLISHED

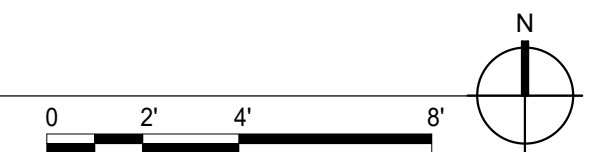


EXISTING PRECAST CONCRETE CEILING

BOTTOM OF 'T' + 10' 8"
TOP OF 'T' + 11' 8"



1 LOCKER ROOM 116 REFLECTED CEILING PLAN DEMOLITION
1/4" = 1'-0"



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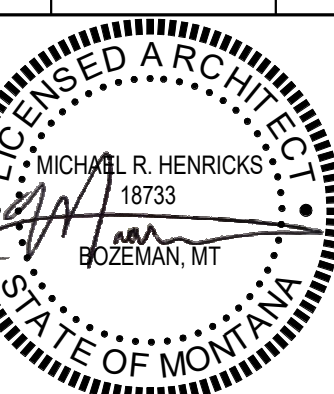
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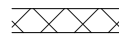
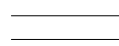
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REFLECTED CEILING
PLAN DEMOLITION**

SHEET
A-D11

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WALL LEGEND

-  EXISTING CMU WALL
-  METAL STUD FRAMED WALL W/ GYPSUM WALL BOARD



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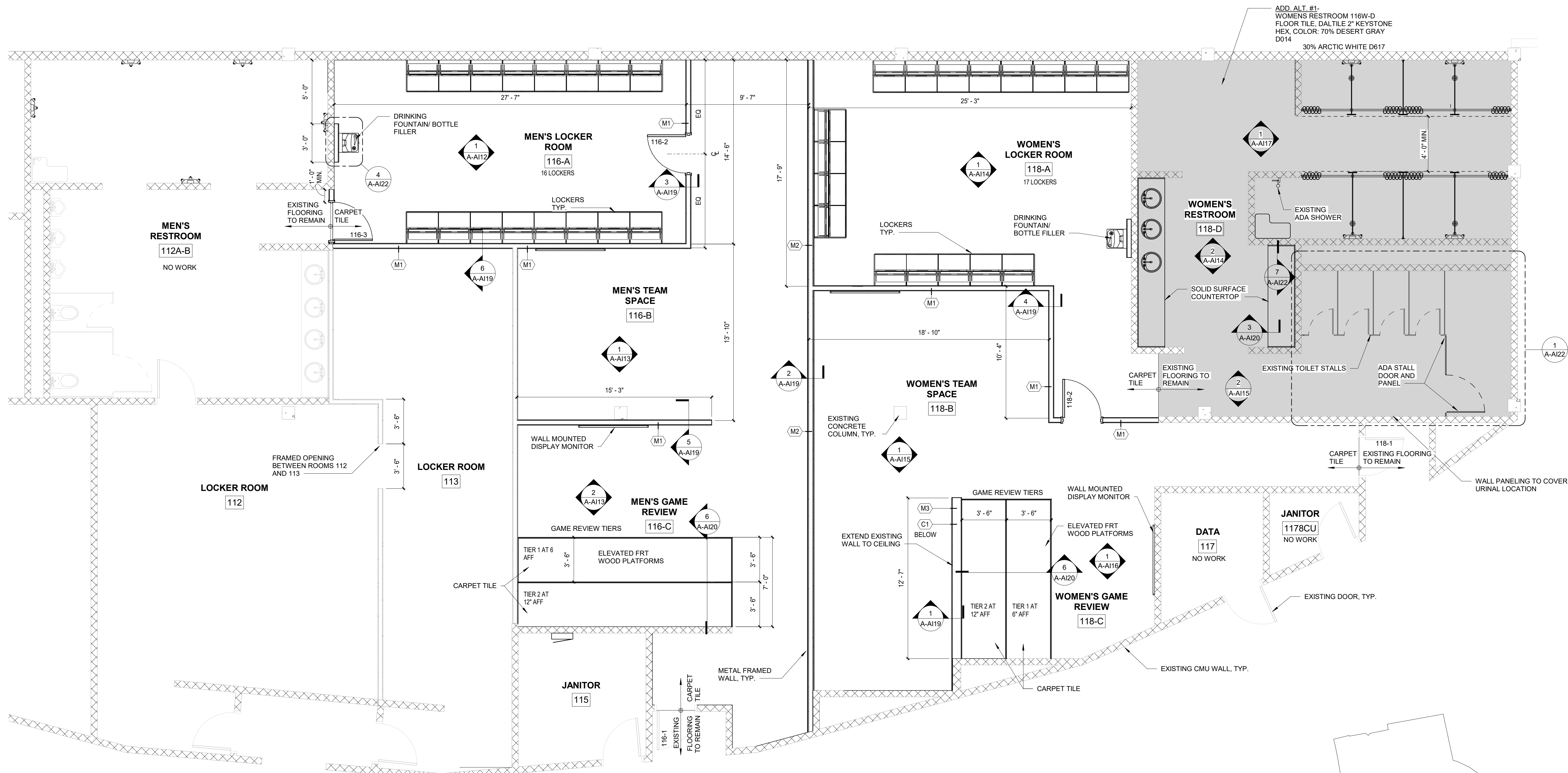
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FLOOR PLAN**

SHEET

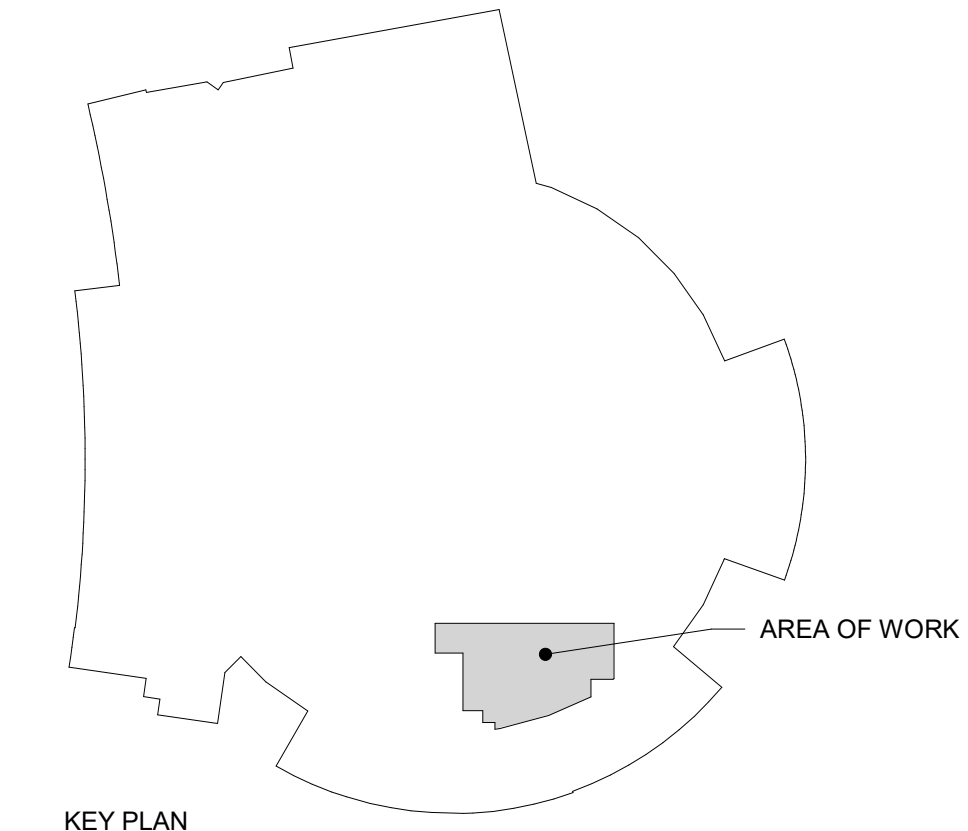
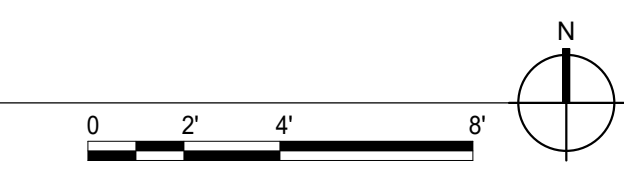
A-AI10

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CONSTRUCTION DOCUMENTS



1 LOCKER ROOM 116 FLOOR PLAN
1/4" = 1'-0"



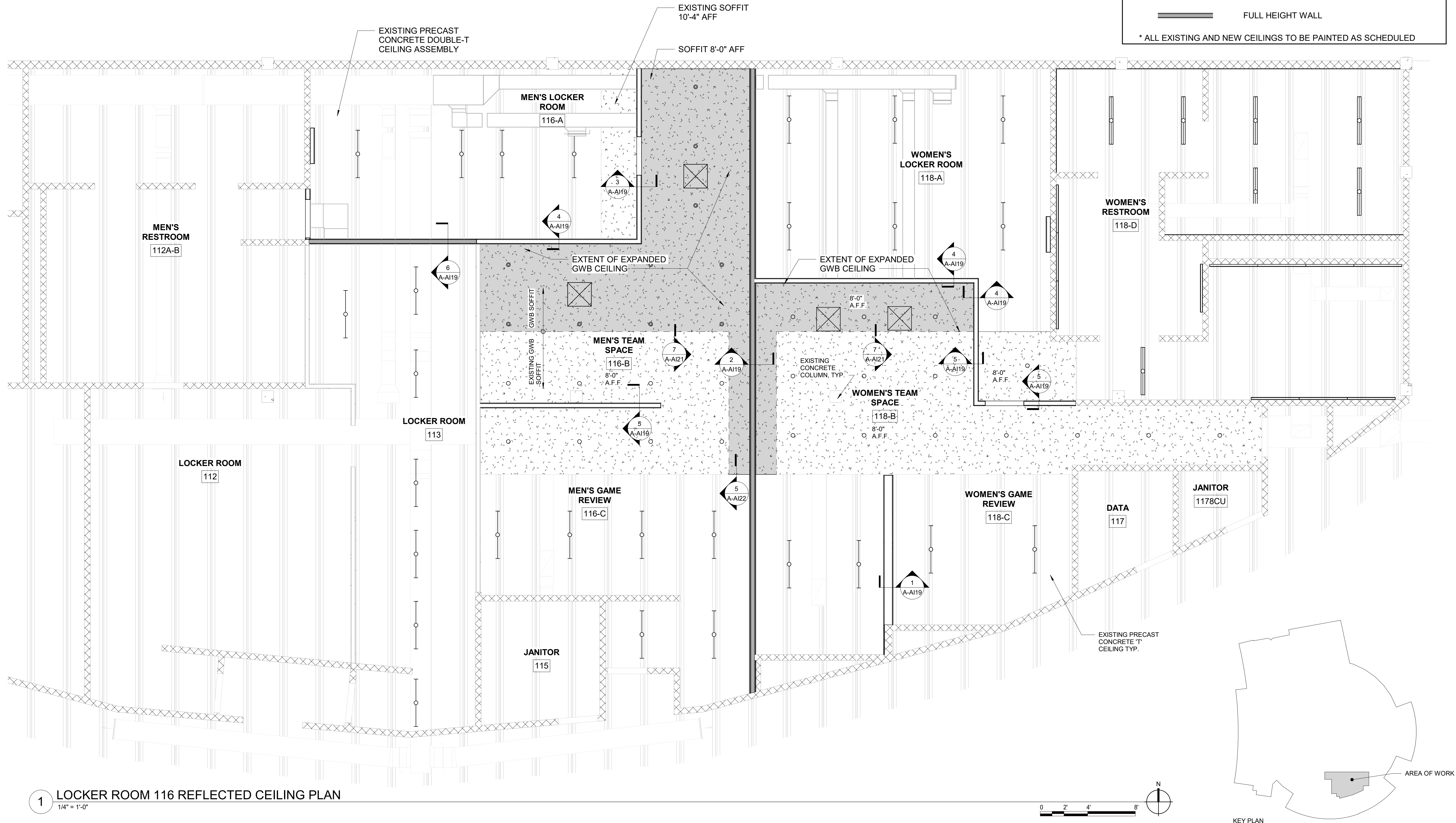
LIGHTING LEGEND

- LED STRIP OR INDUSTRIAL, SURFACE OR CHAIN MOUNTED
- LED STRIP OR INDUSTRIAL, SURFACE OR CHAIN MOUNTED
- RECESSED DOWNLIGHT
- 24" X 24" CEILING DIFFUSER

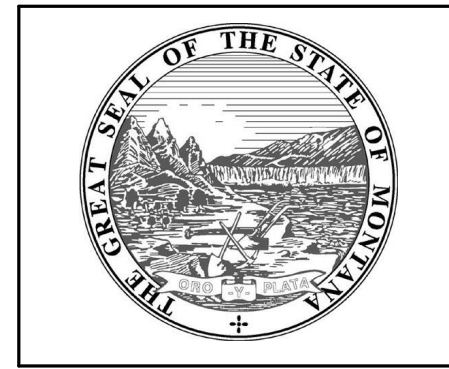
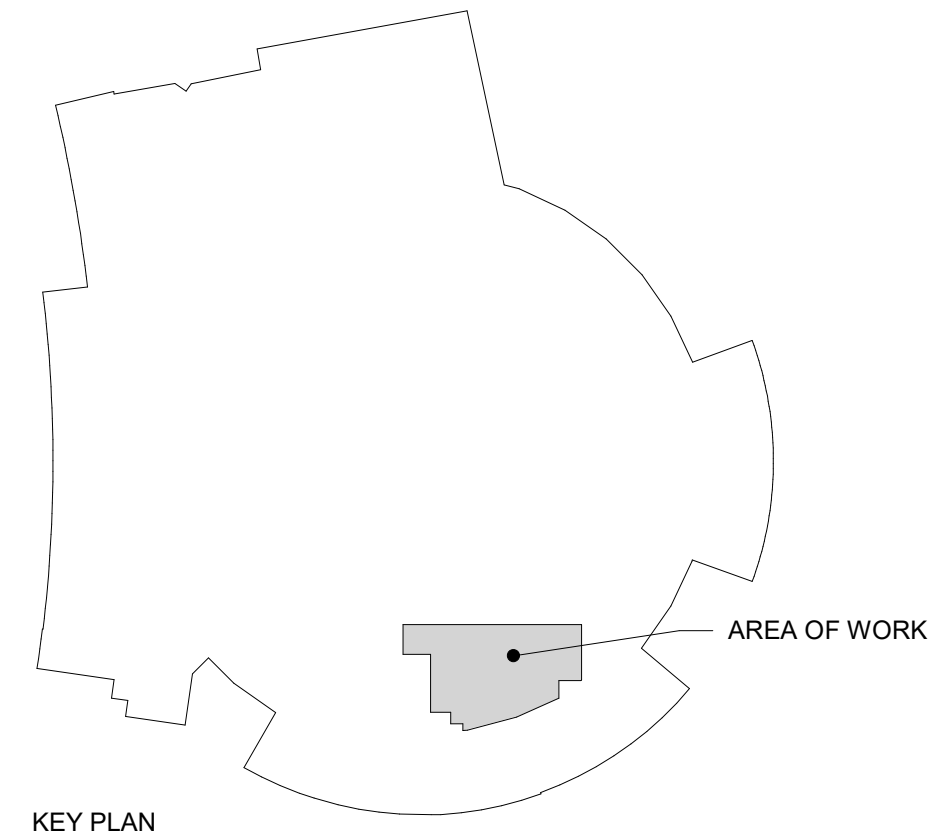
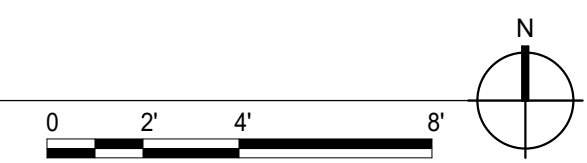
REFLECTED CEILING PLAN LEGEND

- EXISTING GYPSUM WALL BOARD CEILING
- GYPSUM WALL BOARD CEILING
- EXISTING PRECAST CONCRETE CEILING
- BOTTOM OF 'T' + 10' 8"
- TOP OF 'T' + 11' 8"
- FULL HEIGHT WALL

* ALL EXISTING AND NEW CEILINGS TO BE PAINTED AS SCHEDULED



1 LOCKER ROOM 116 REFLECTED CEILING PLAN
1/4" = 1'-0"



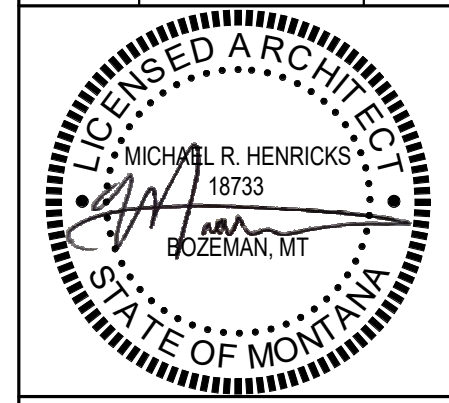
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CONSTRUCTION DOCUMENTS
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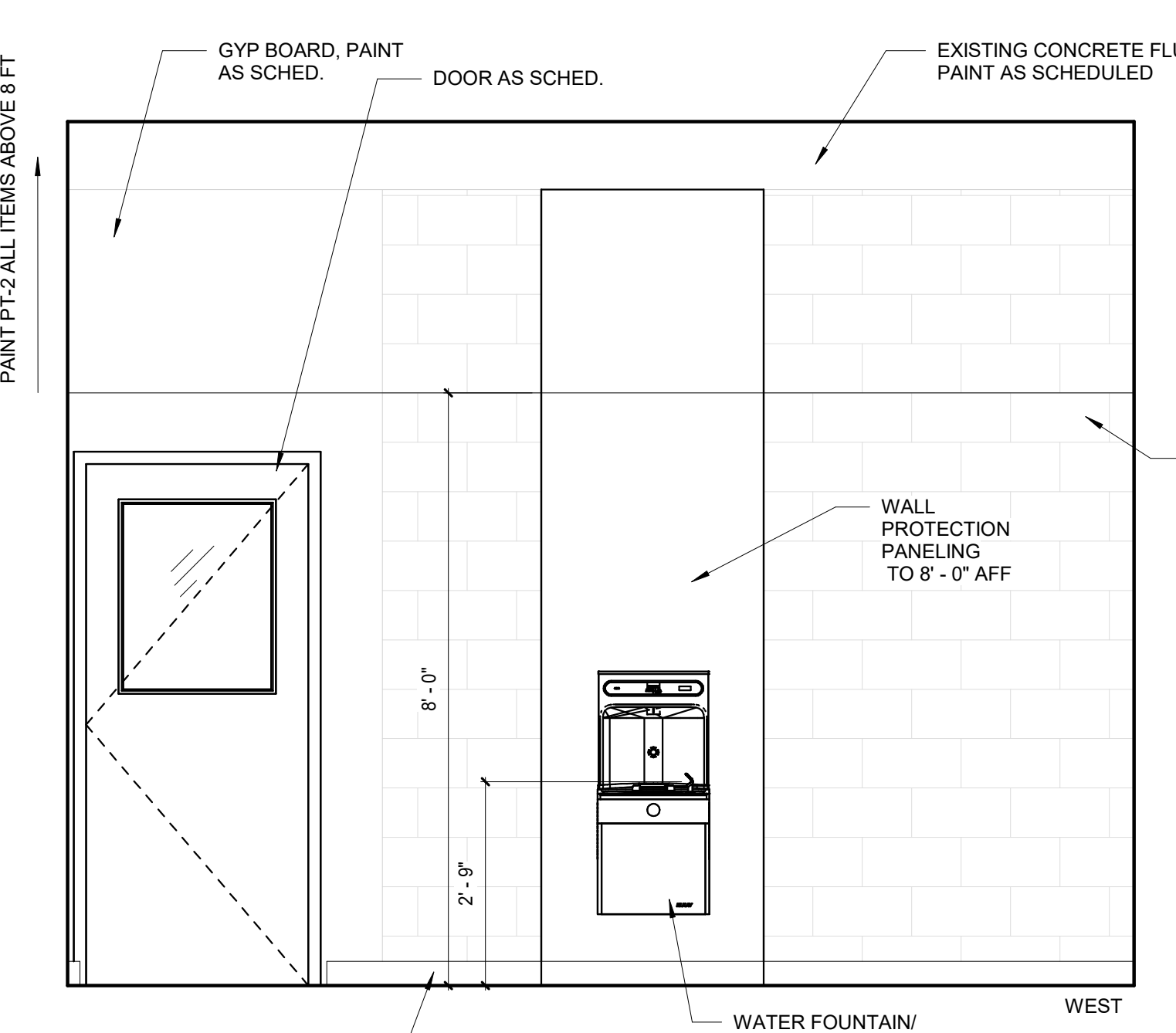
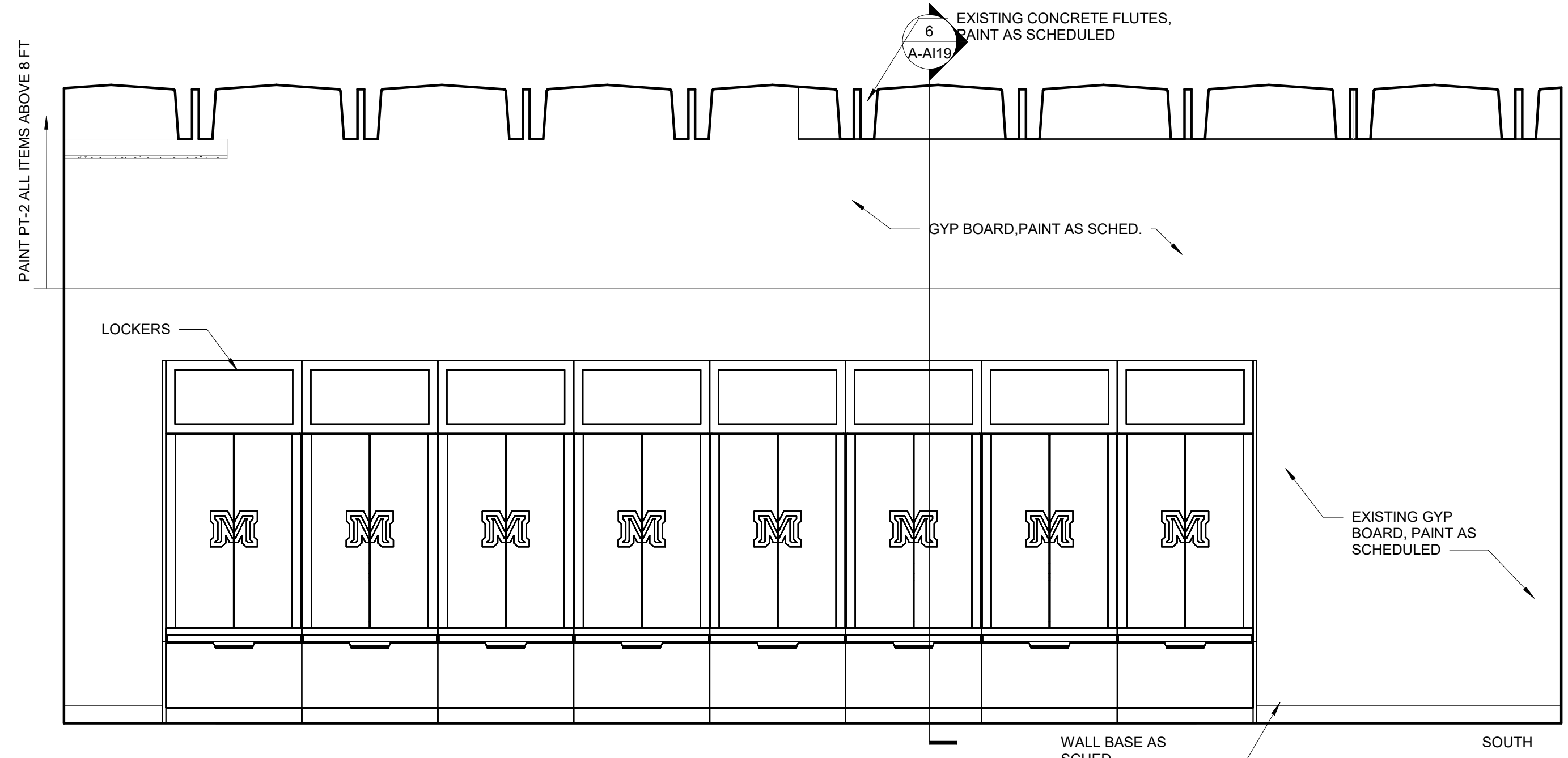
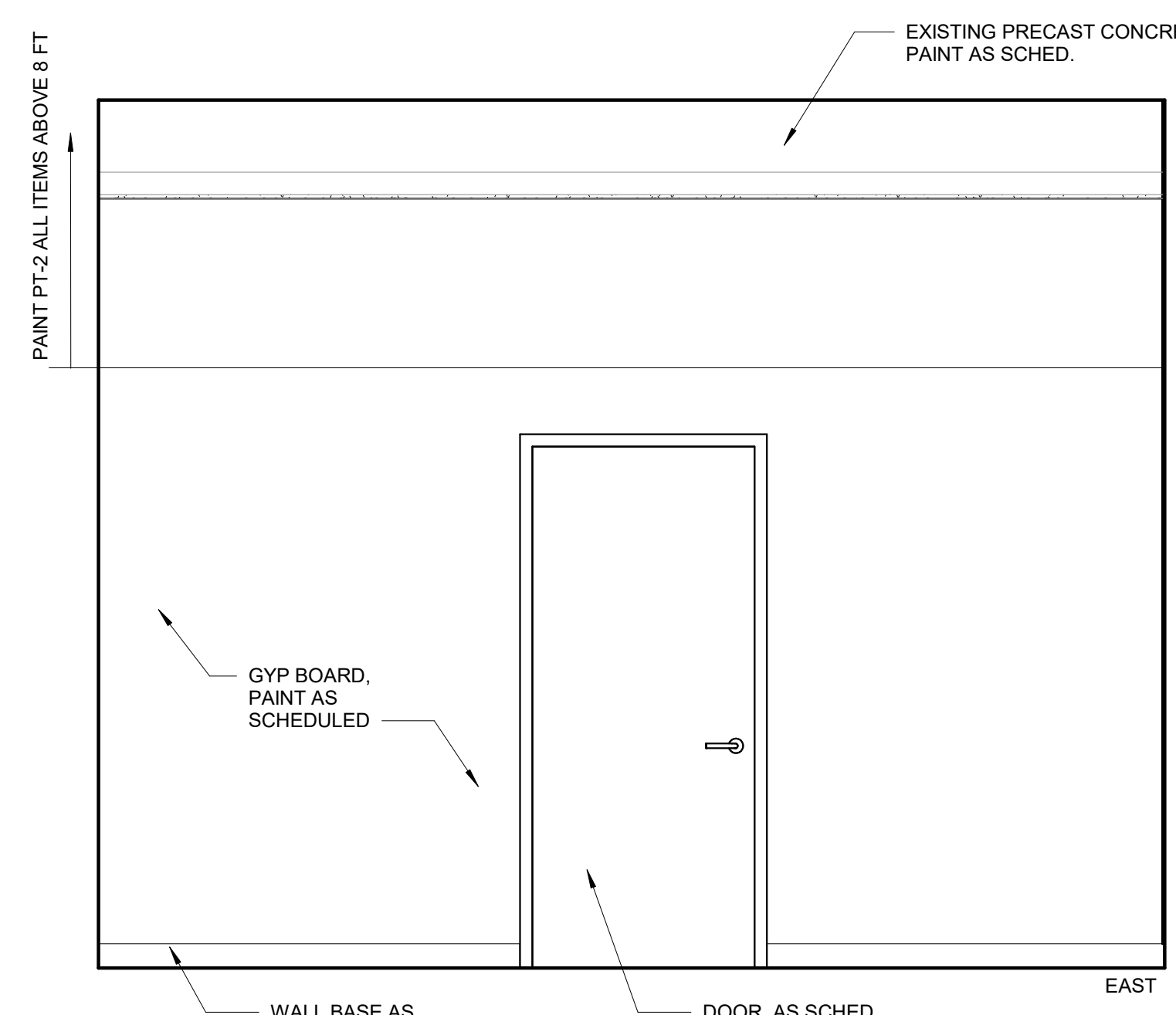
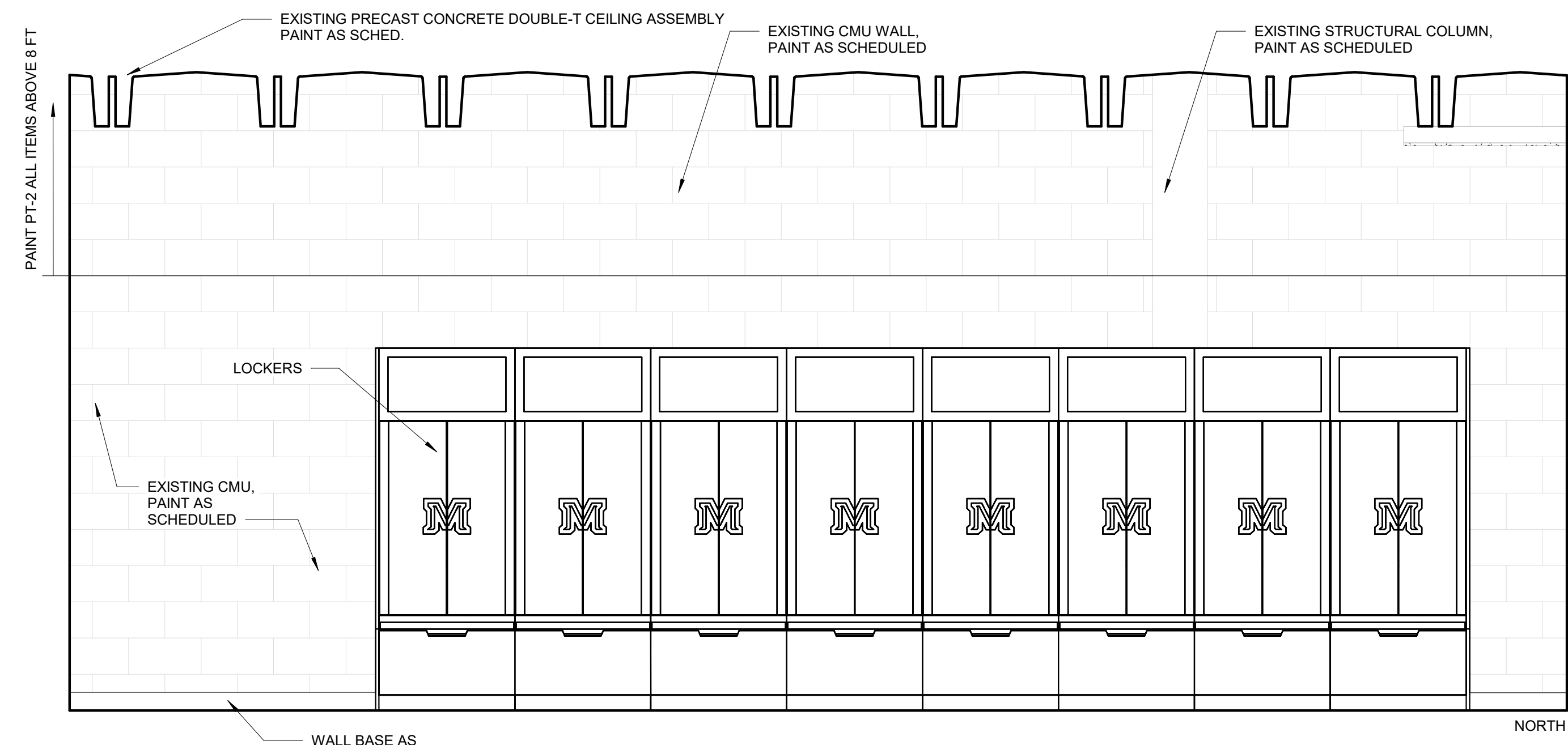
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SHEET TITLE
REFLECTED CEILING
PLAN

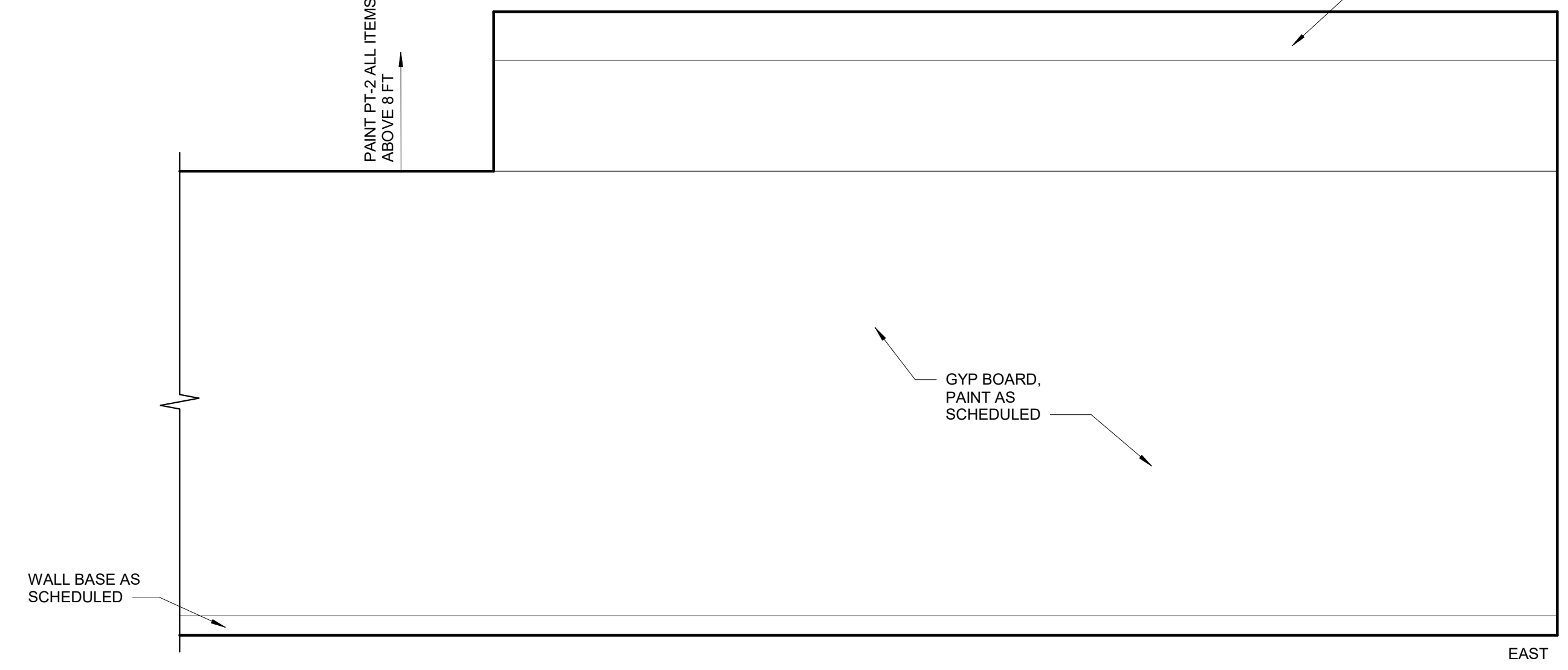
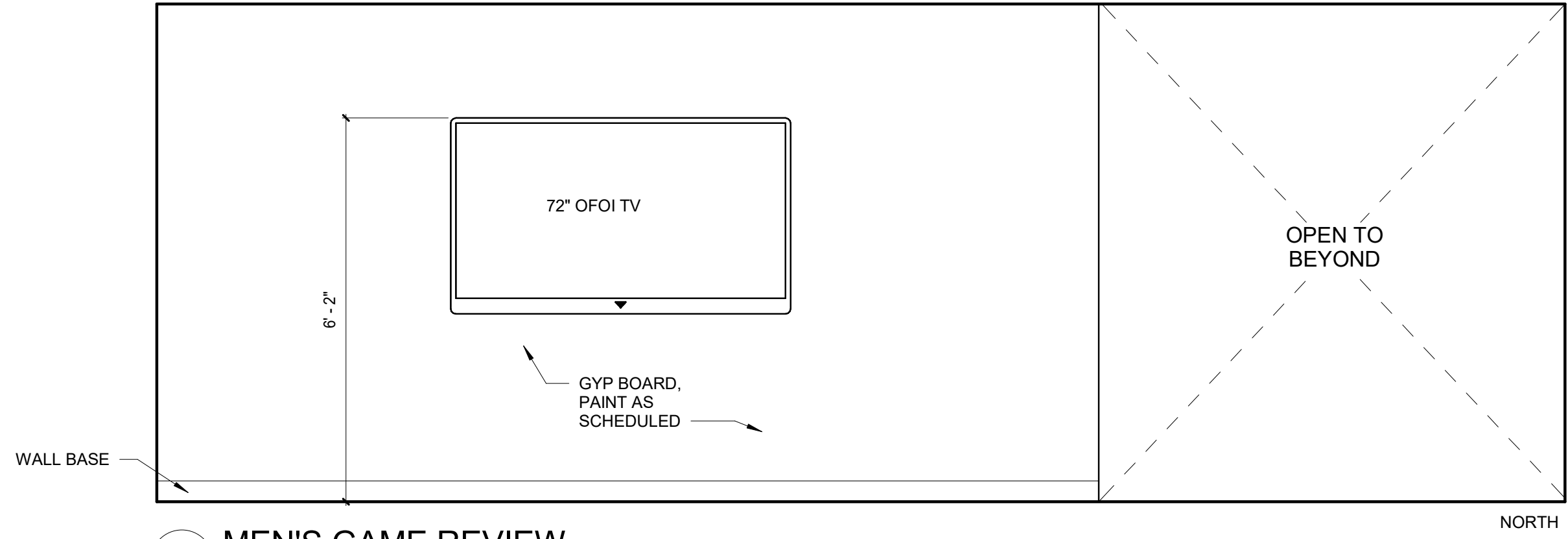
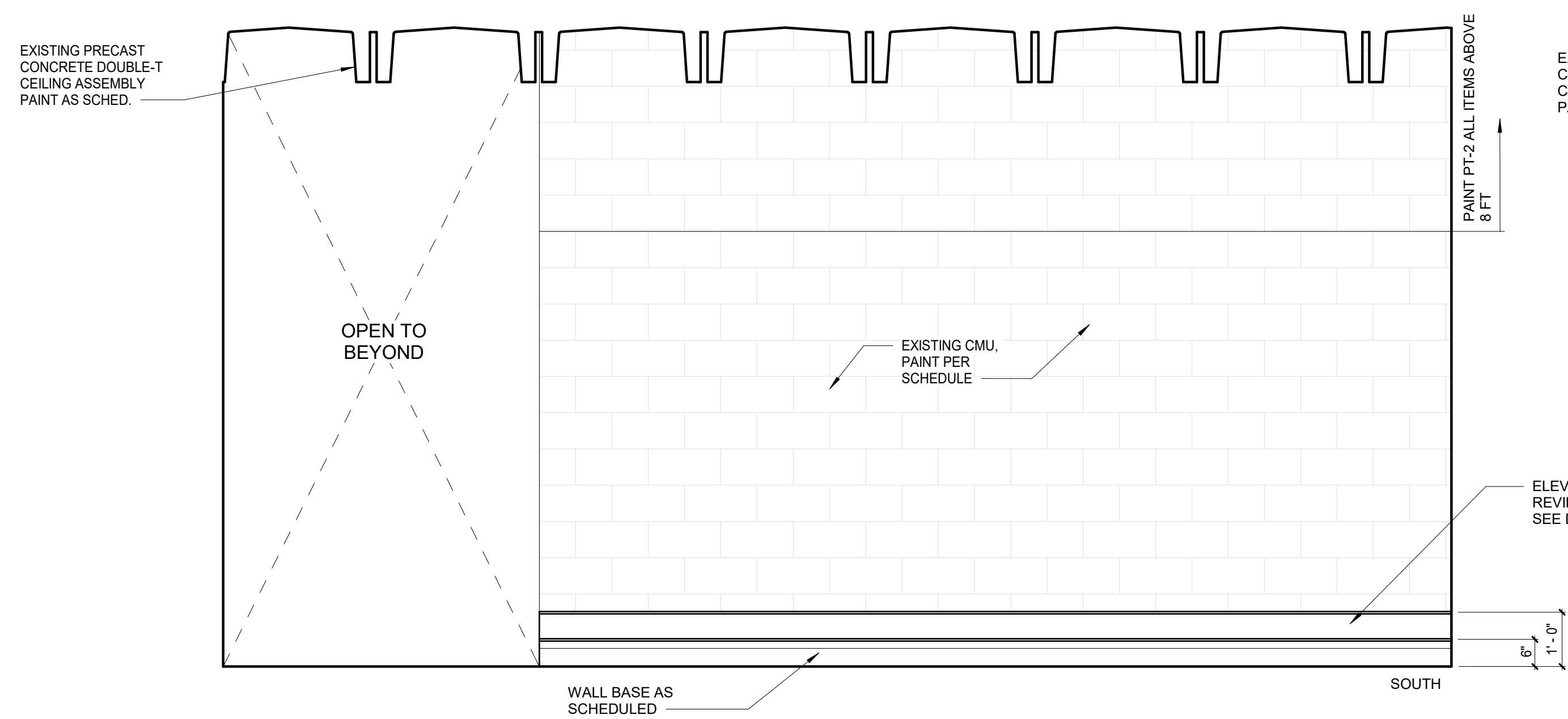
SHEET
A-AI11

DATE
3-7-2023

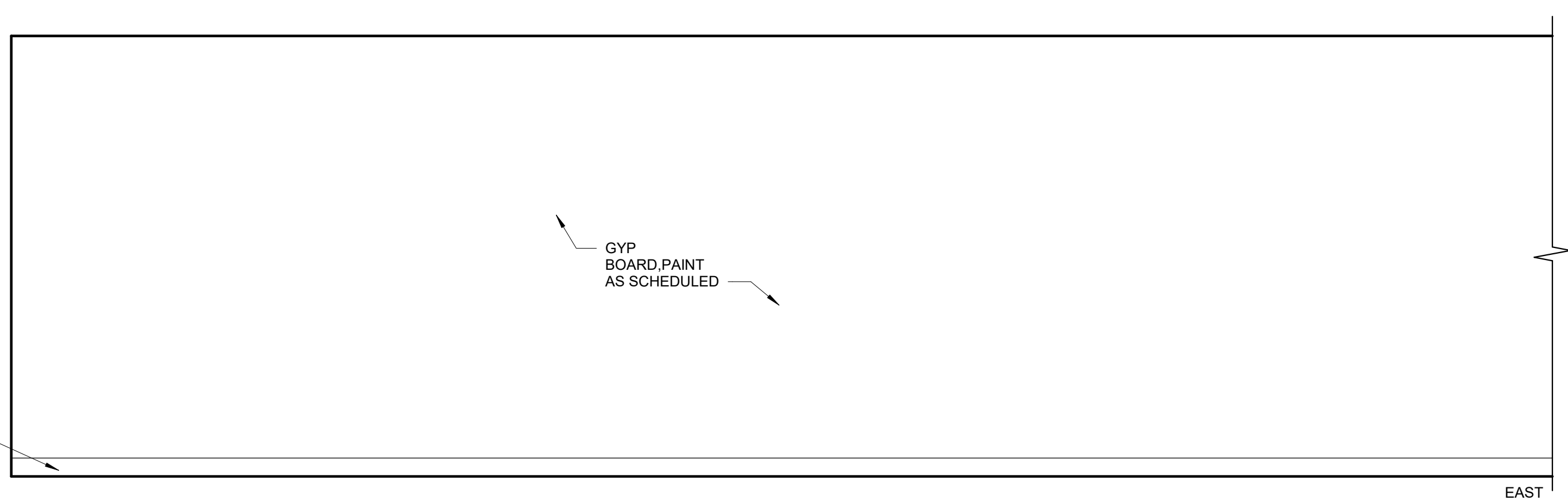
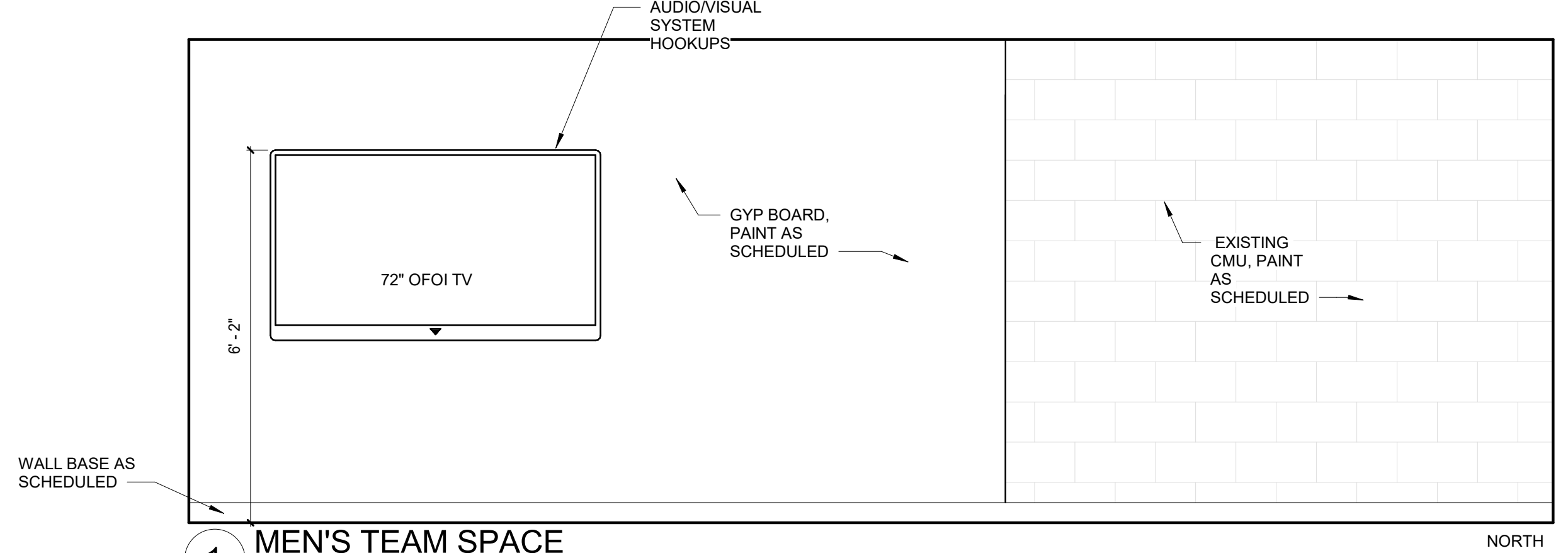
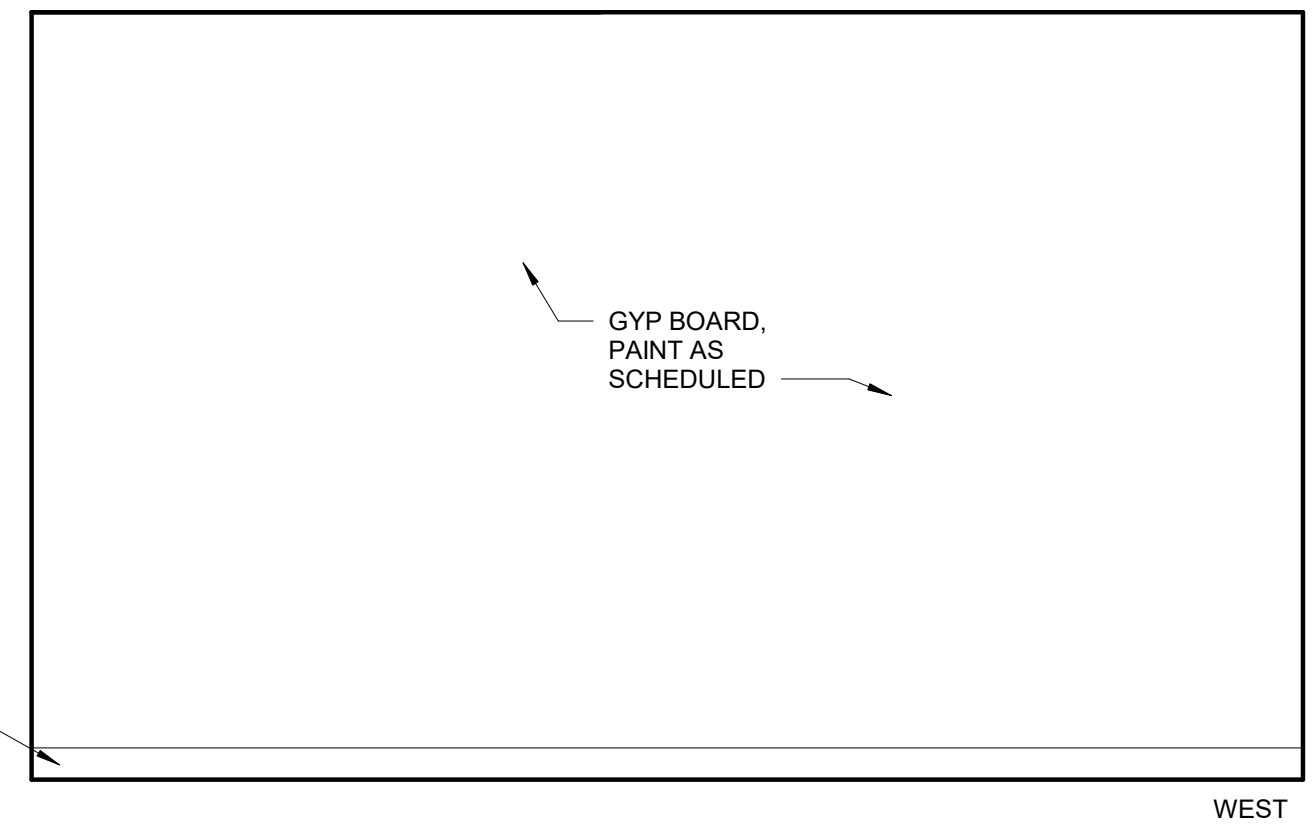
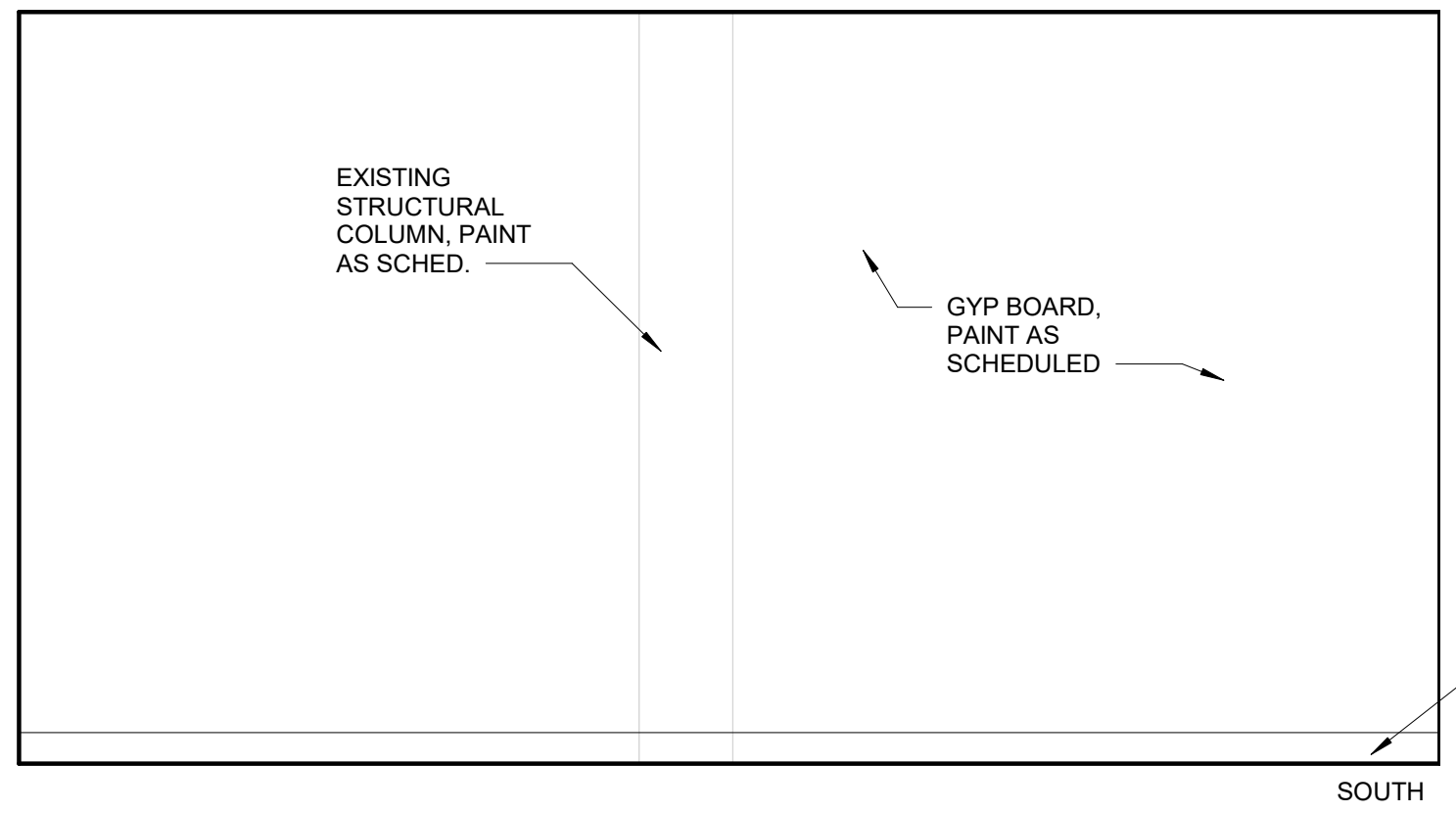
CONSTRUCTION DOCUMENTS



1 MEN'S LOCKER ROOM
 1/2" = 1'-0"



2 MEN'S GAME REVIEW
1/2" = 1'-0"



1 MEN'S TEAM SPACE
1/2" = 1'-0"



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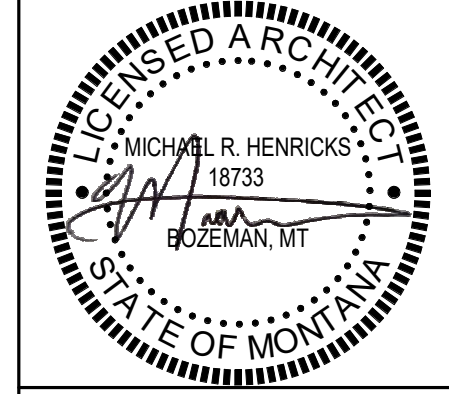
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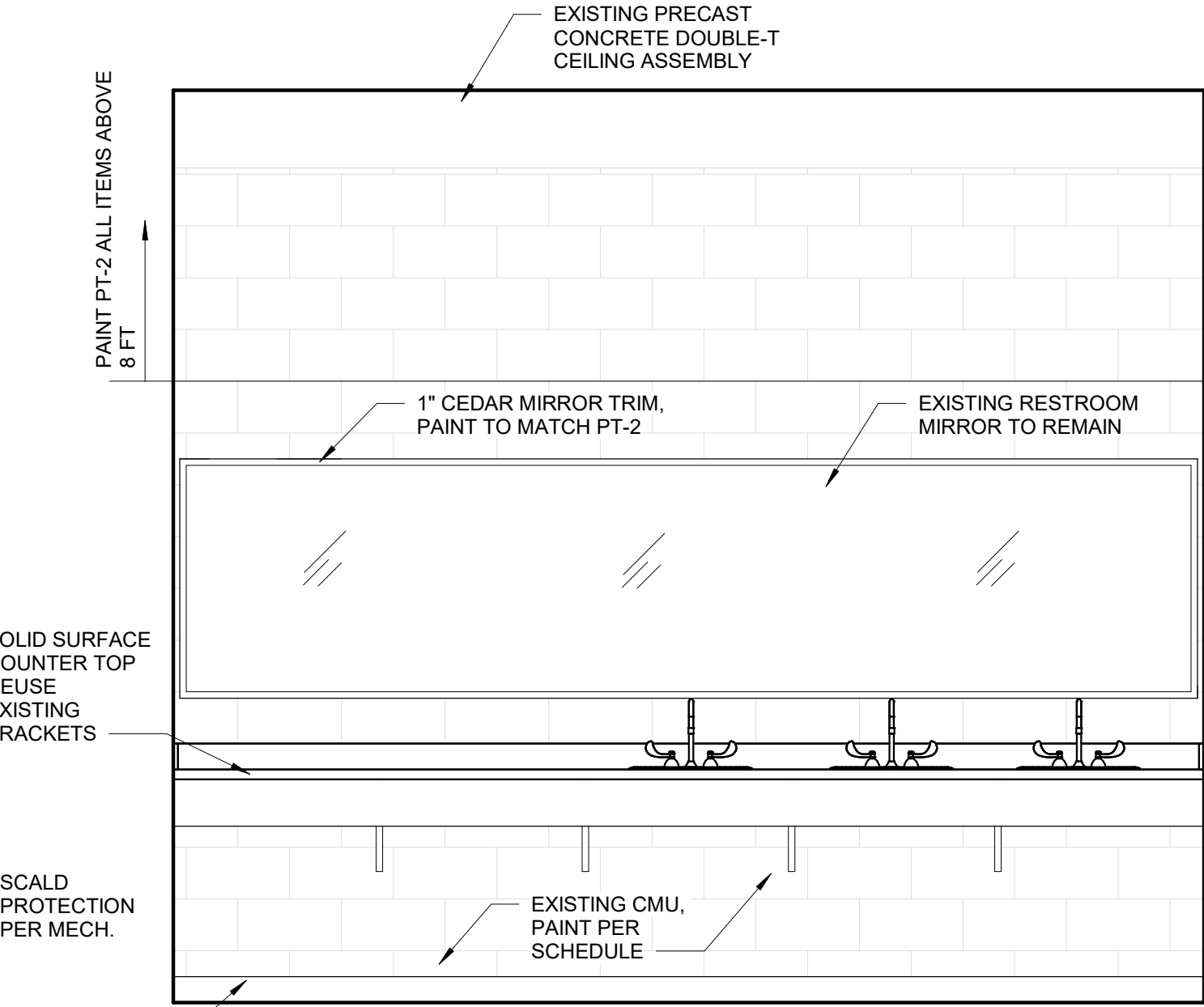
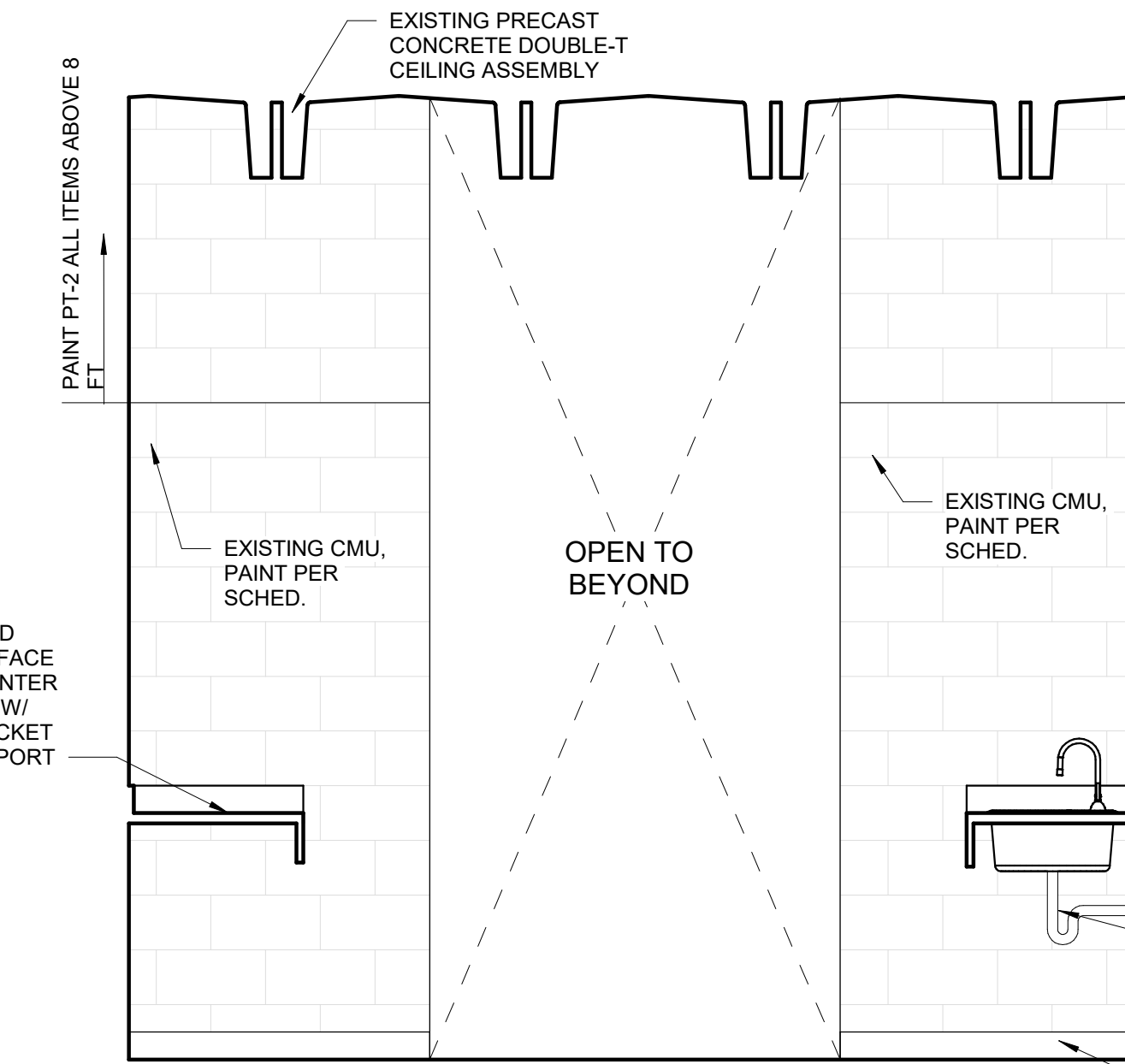
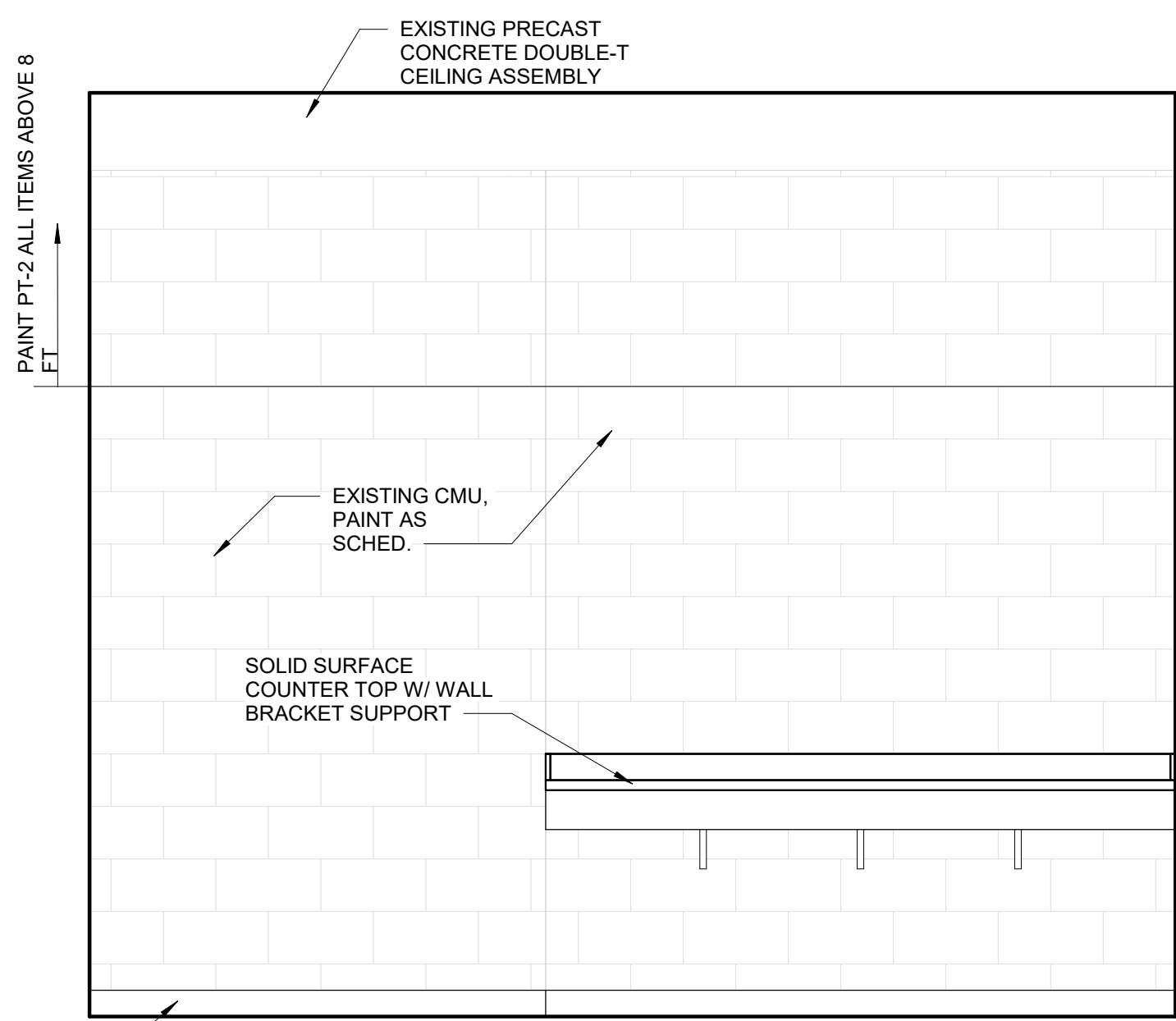
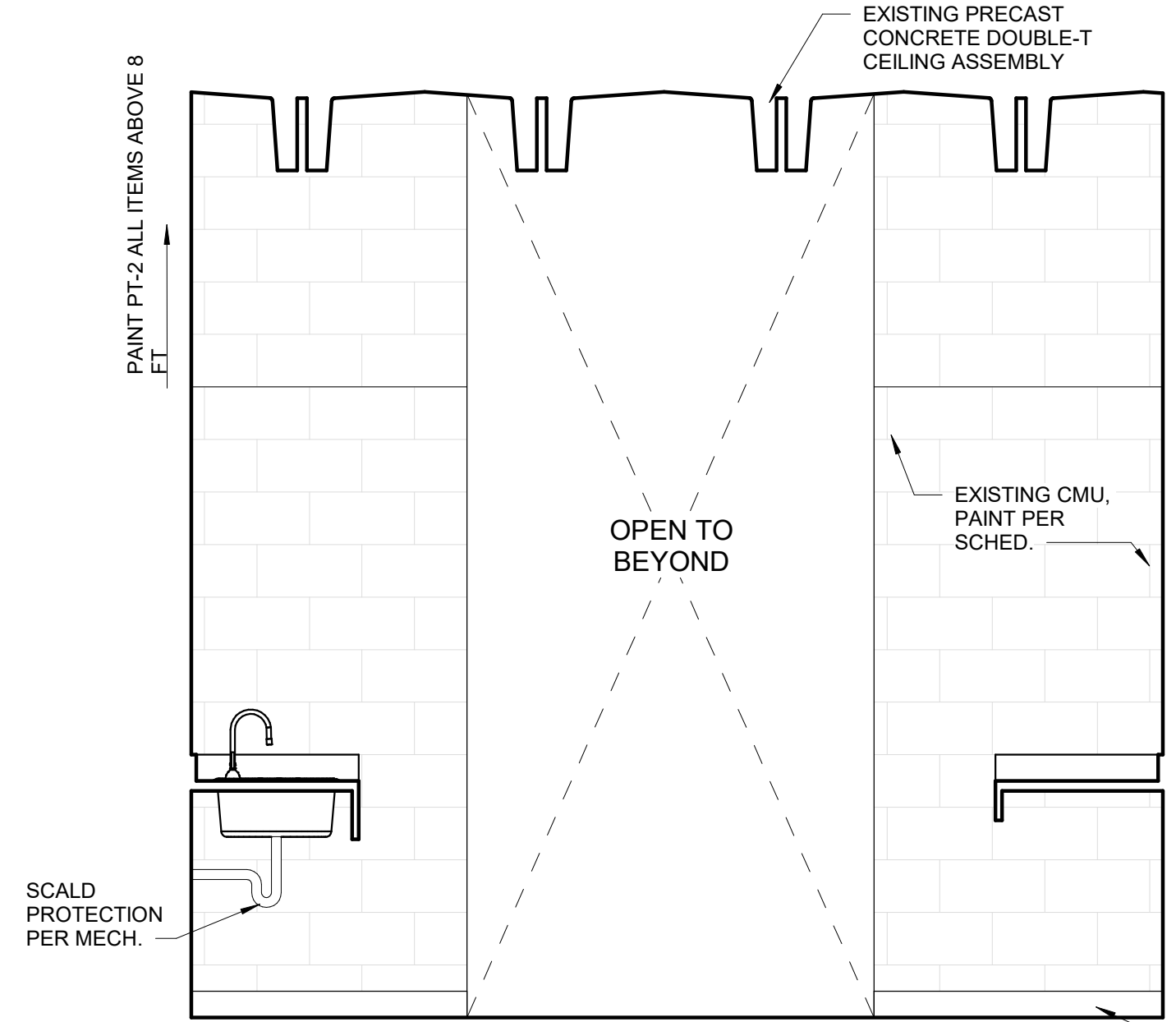
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AAI#21062.01

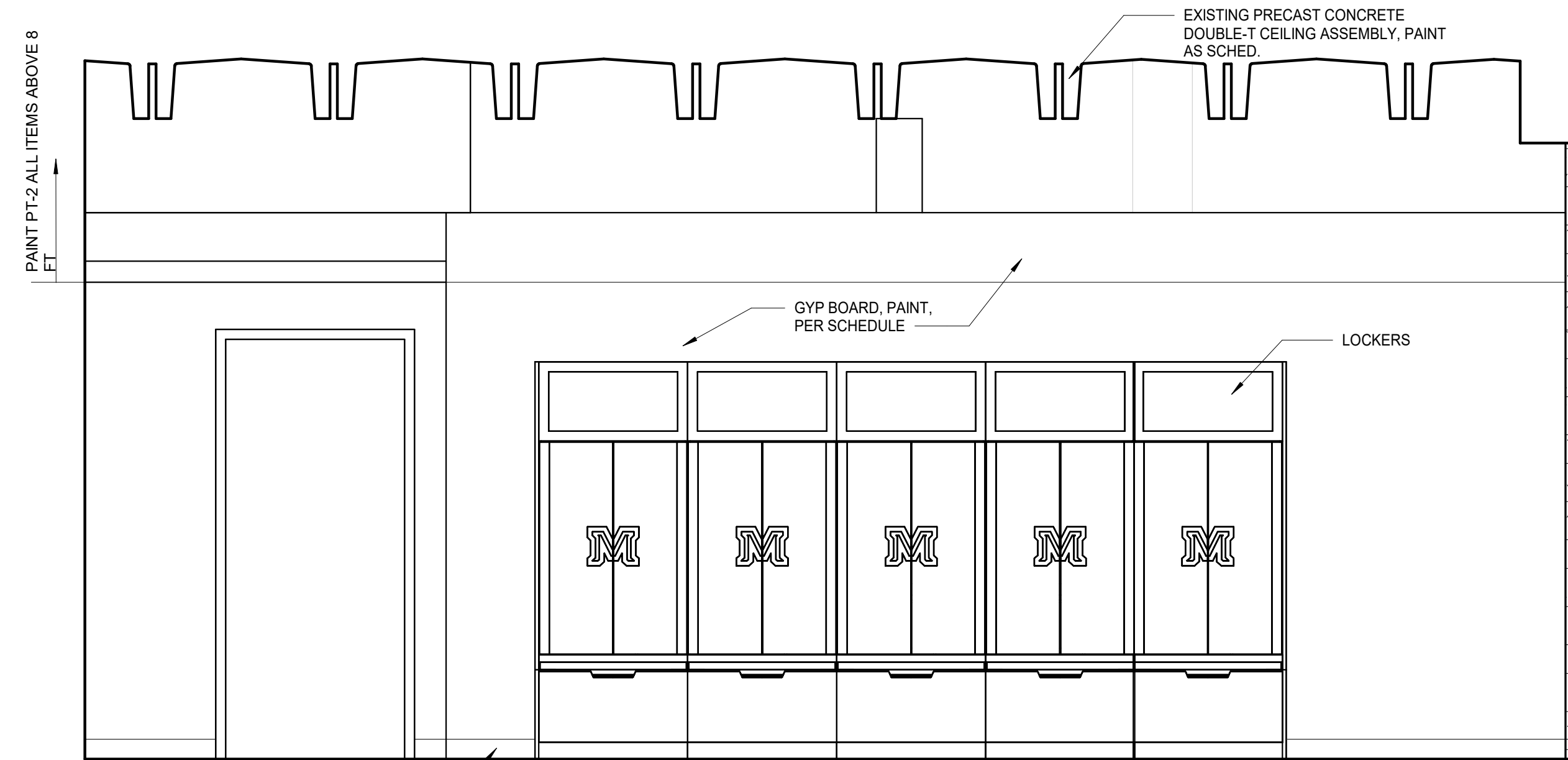
**SHEET TITLE
INTERIOR
ELEVATIONS**

**SHEET
A-AI13**

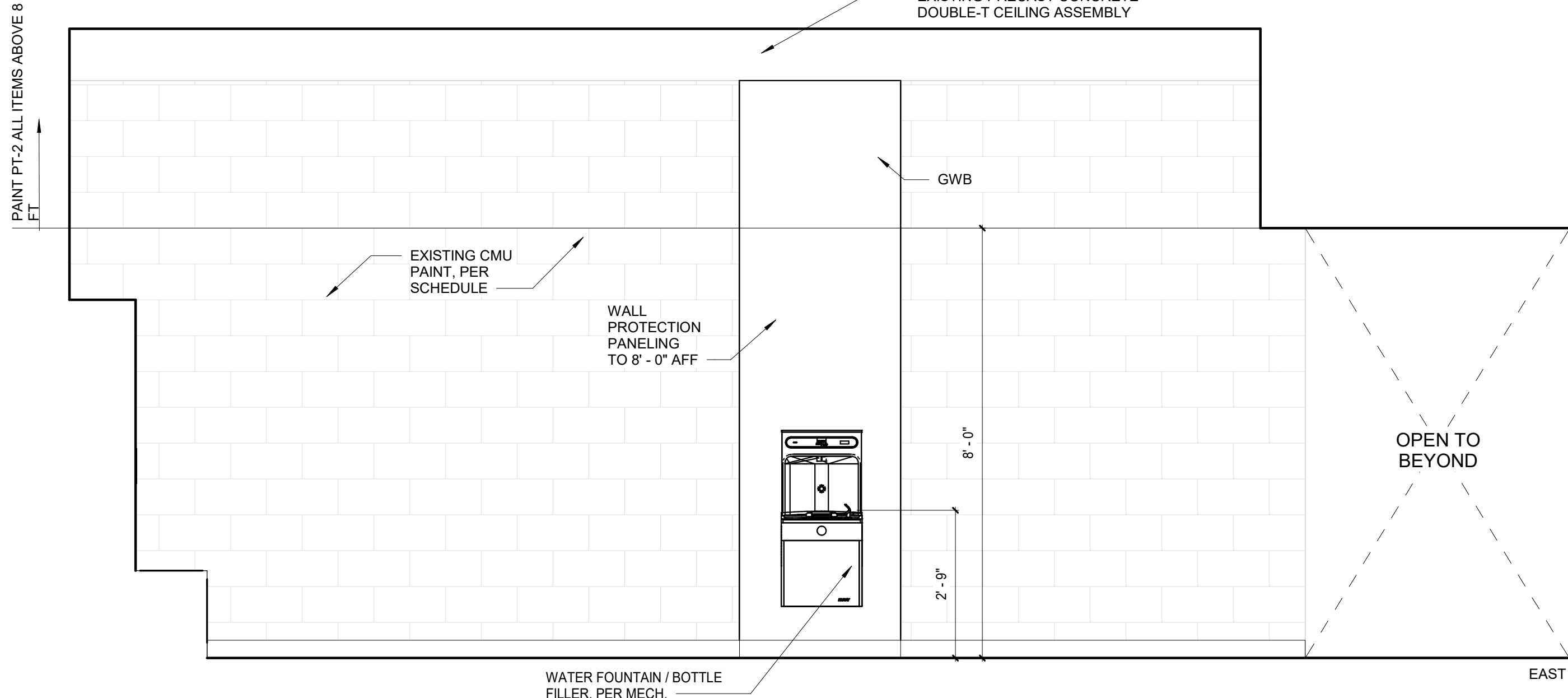
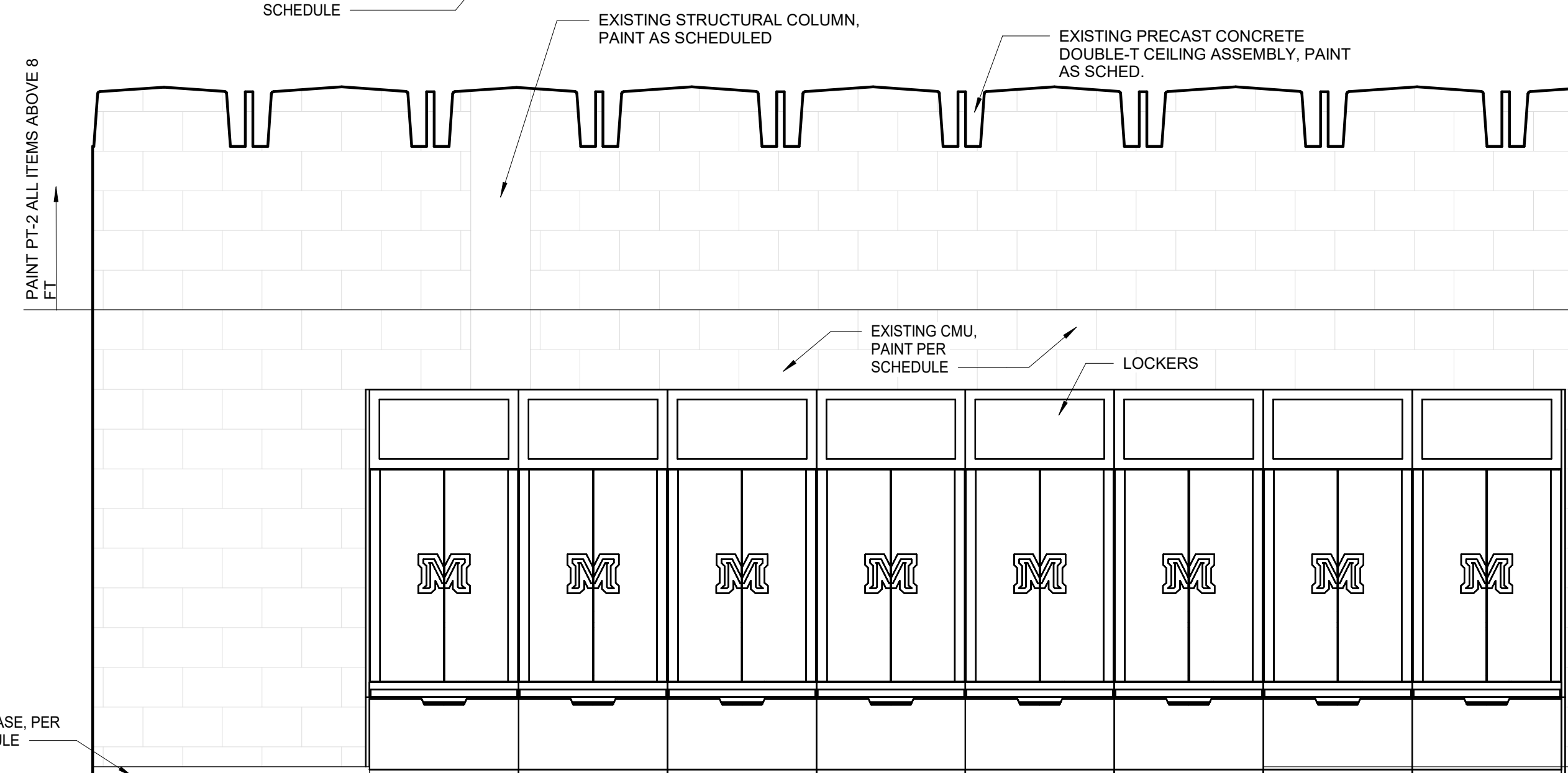
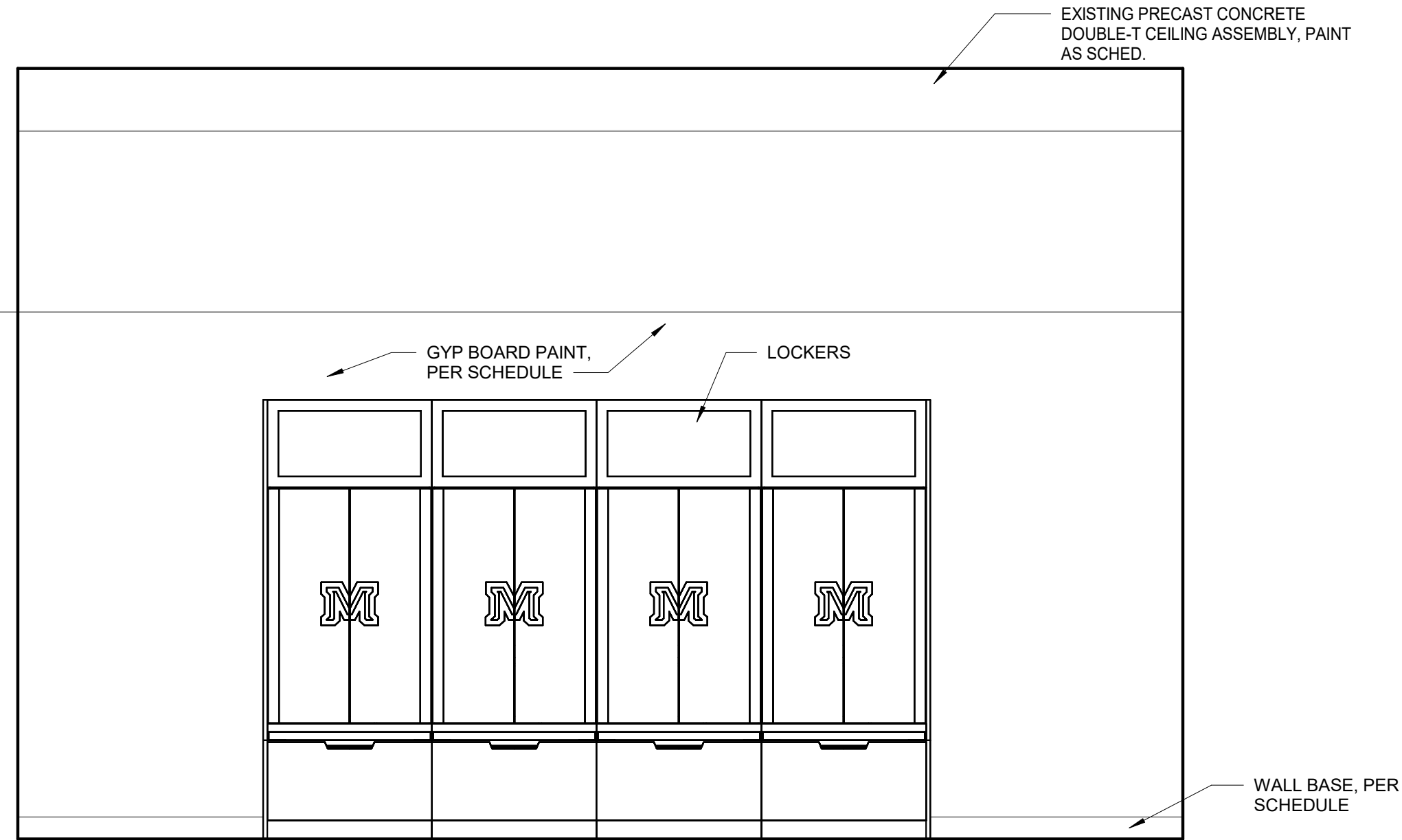
DATE
3-7-2023



2 WOMENS RESTROOM
1/2" = 1'-0"



5
A-A122



1 WOMEN'S LOCKERS
1/2" = 1'-0"

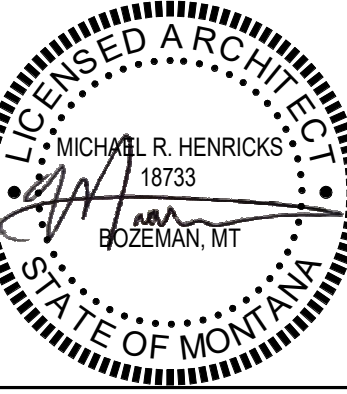


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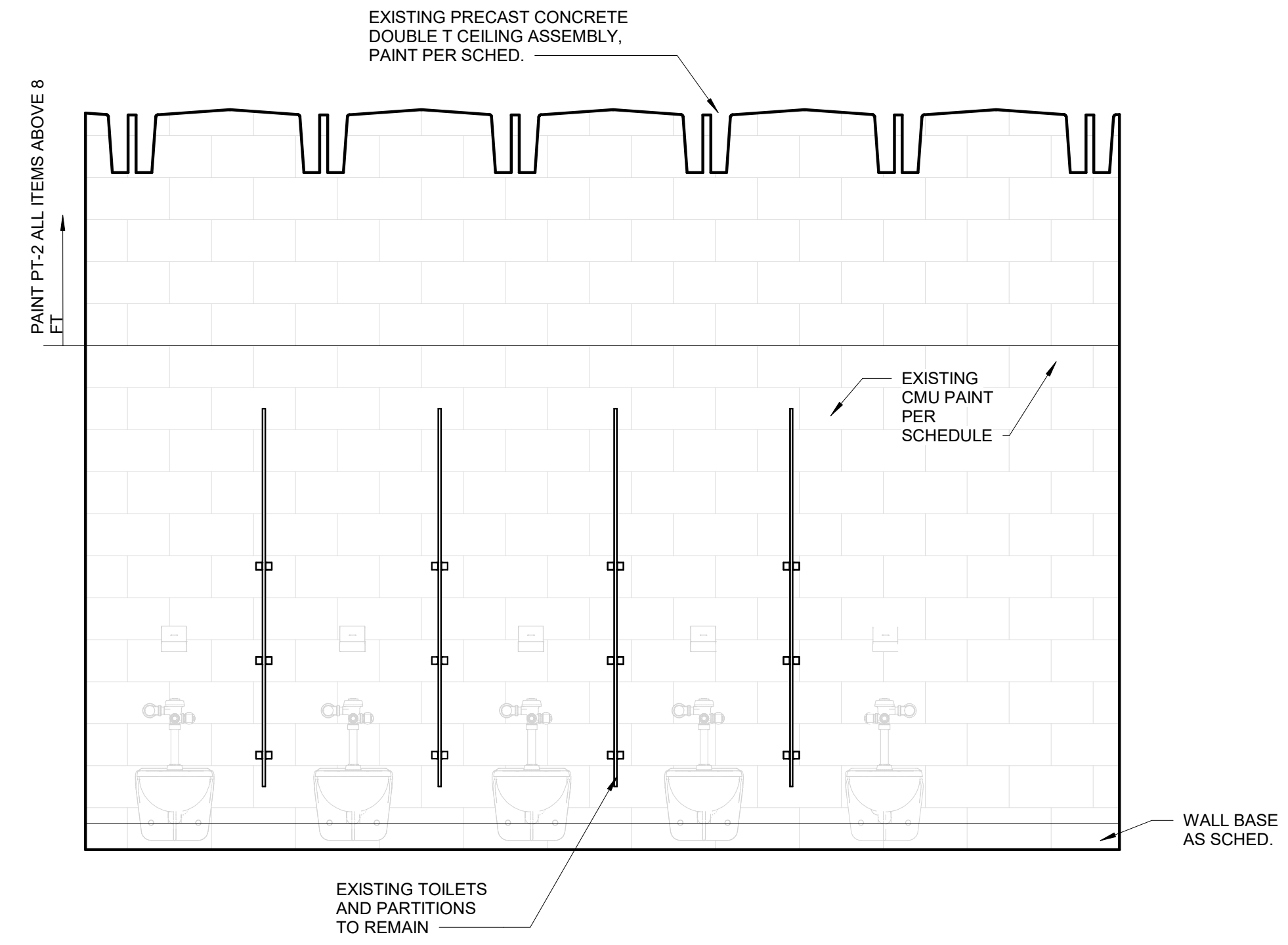
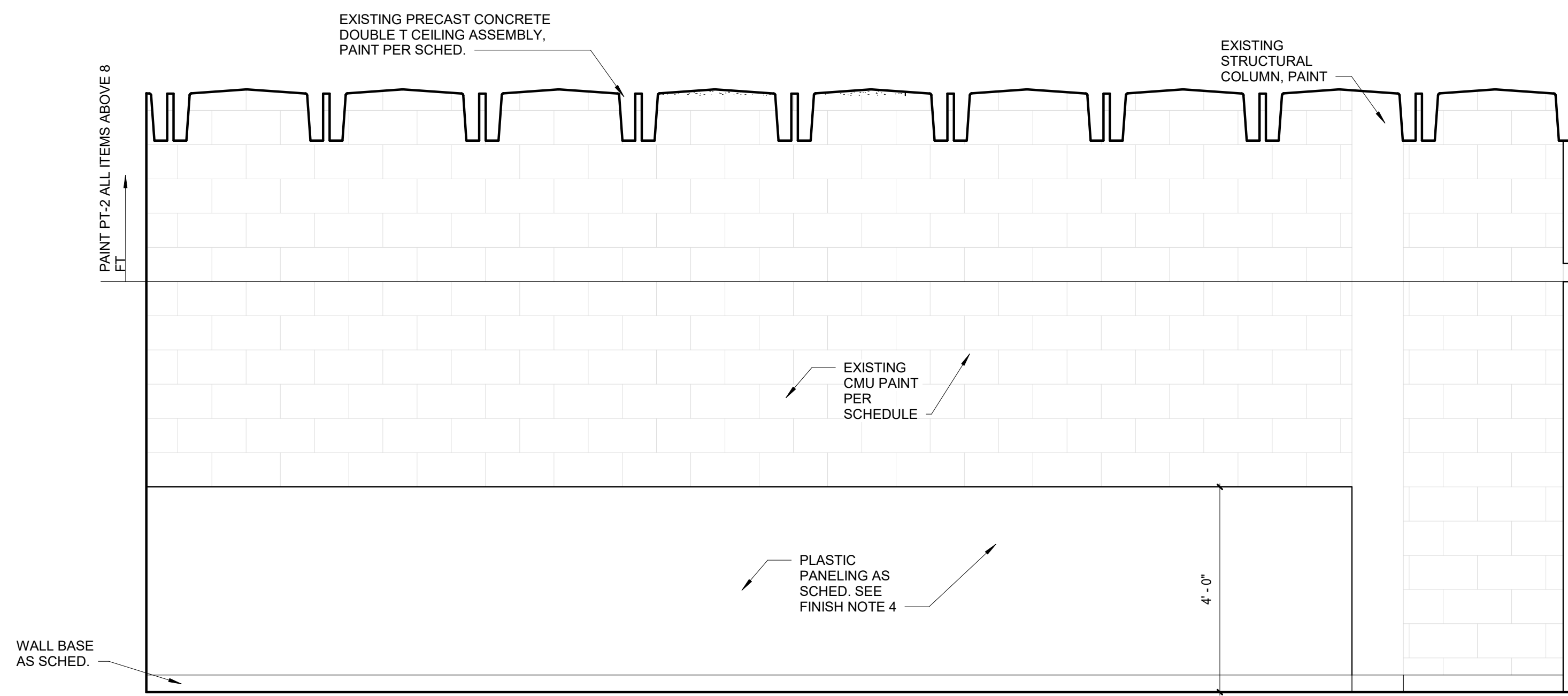
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SHEET TITLE
INTERIOR
ELEVATIONS

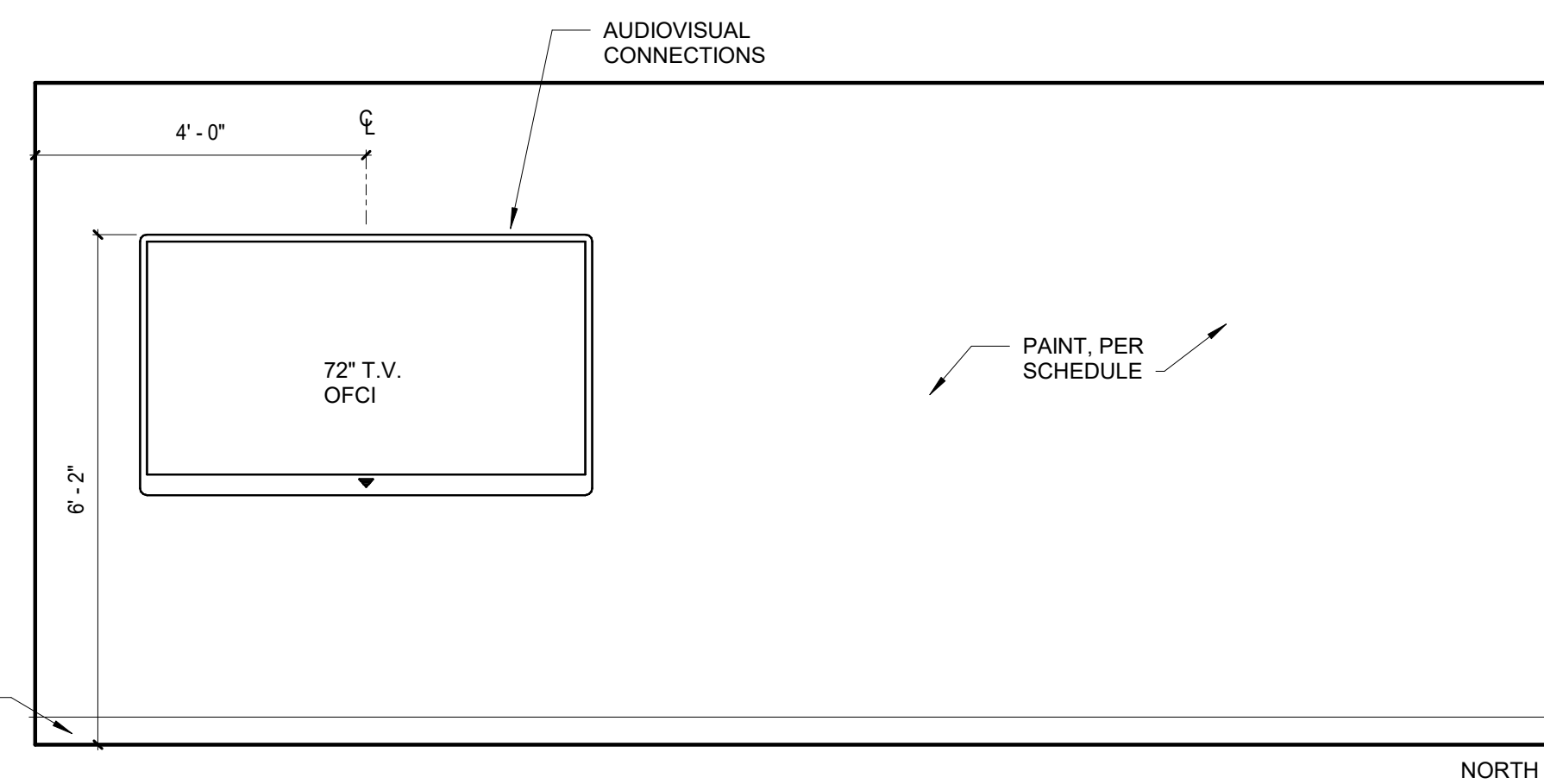
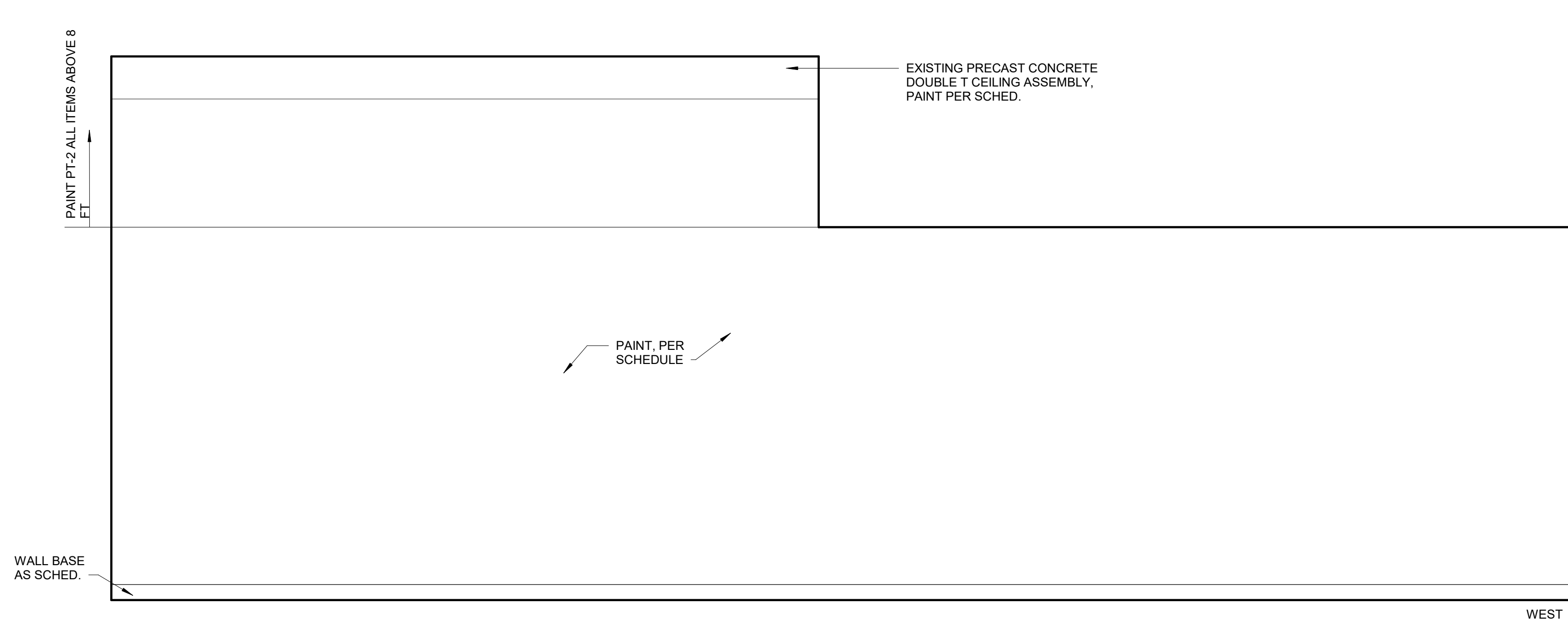
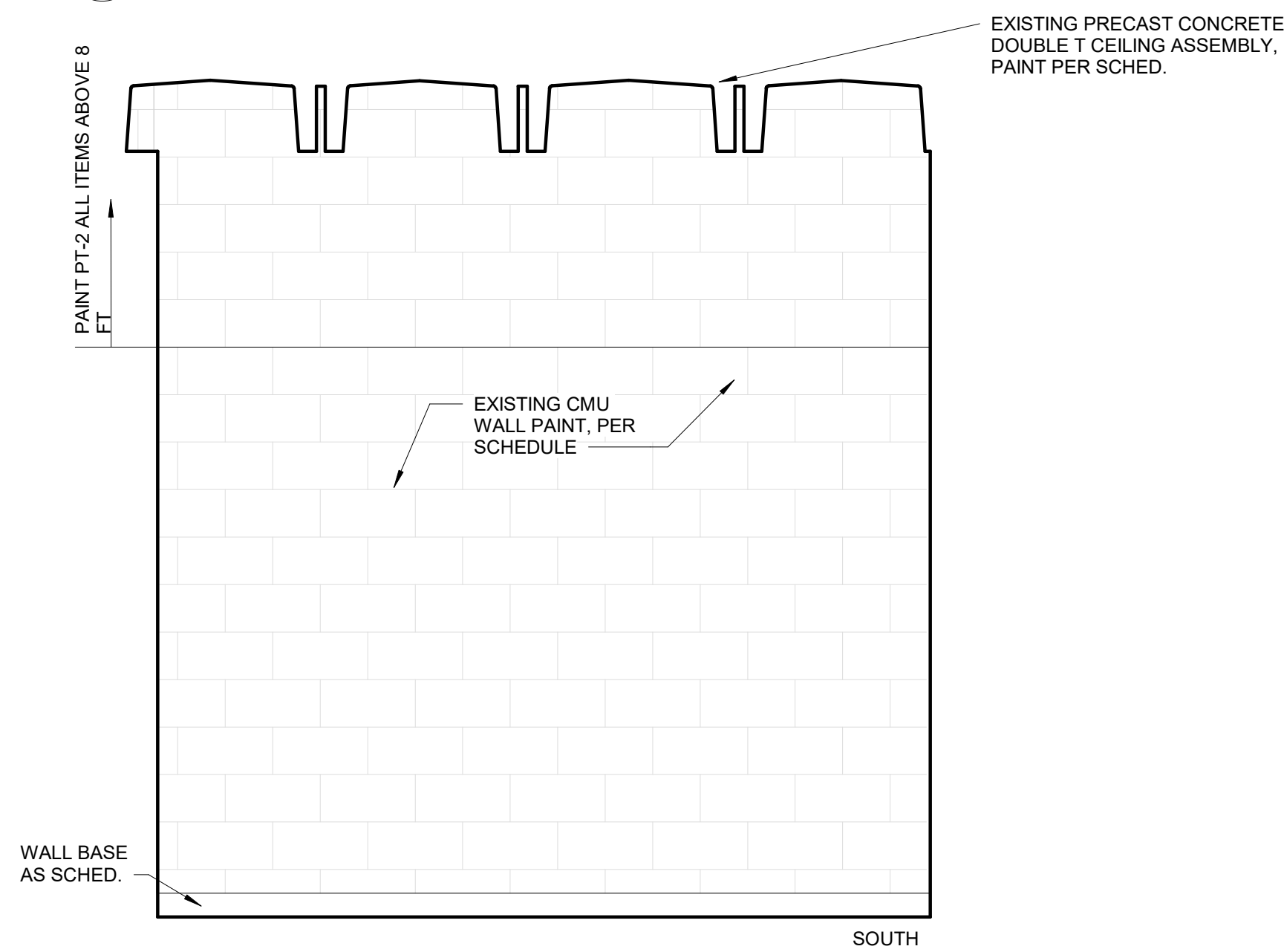
SHEET
A-A114

DATE
3-7-2023

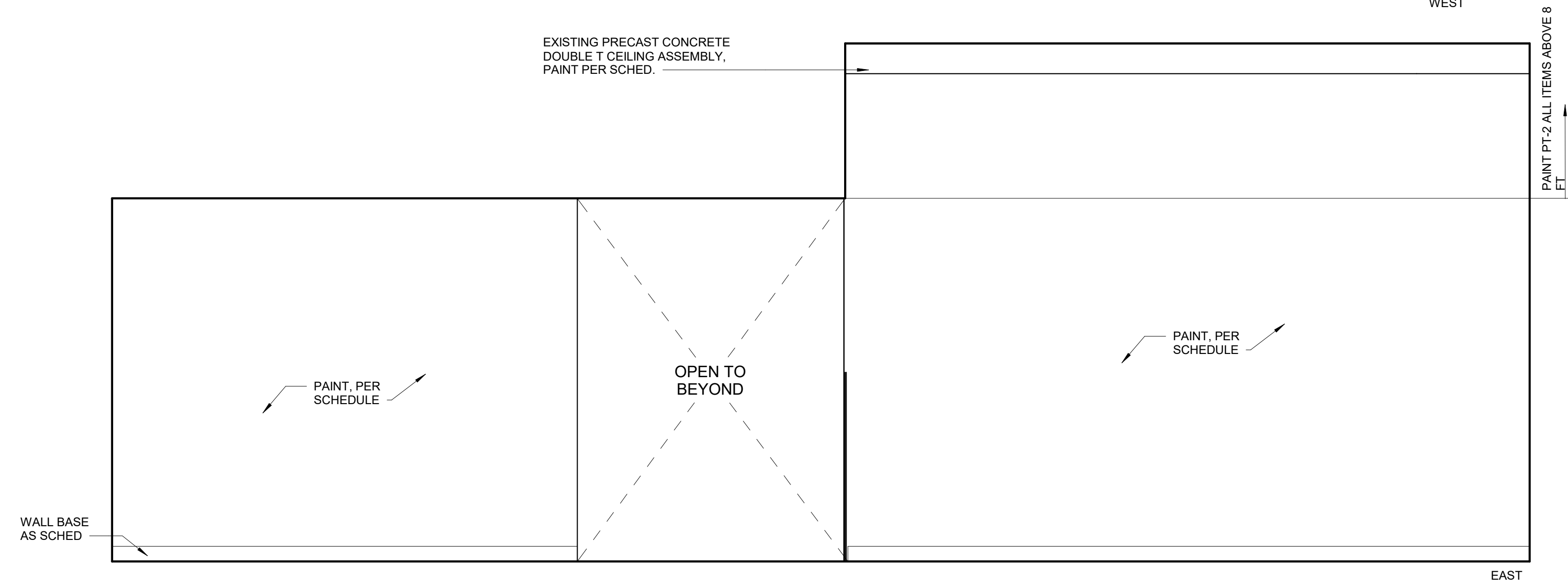
CONSTRUCTION DOCUMENTS



2 WOMENS TOILET ROOM
1/2" = 1'-0"



1 WOMEN'S TEAM SPACE N
1/2" = 1'-0"



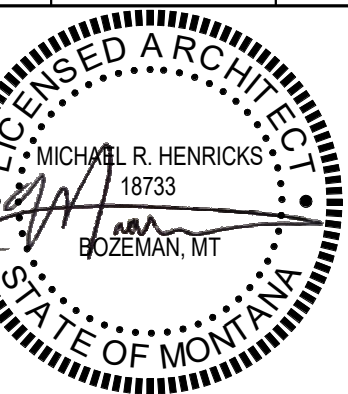
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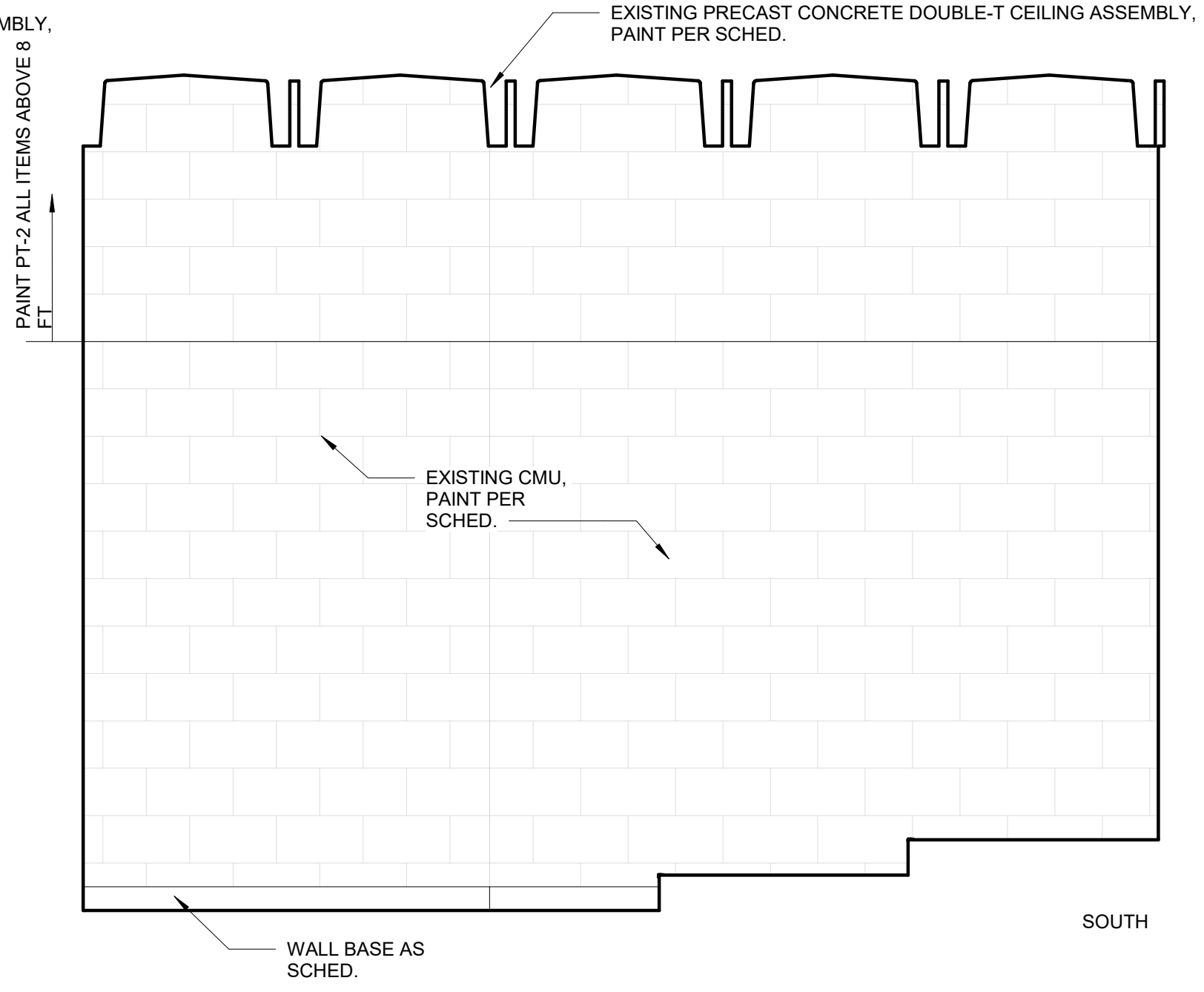
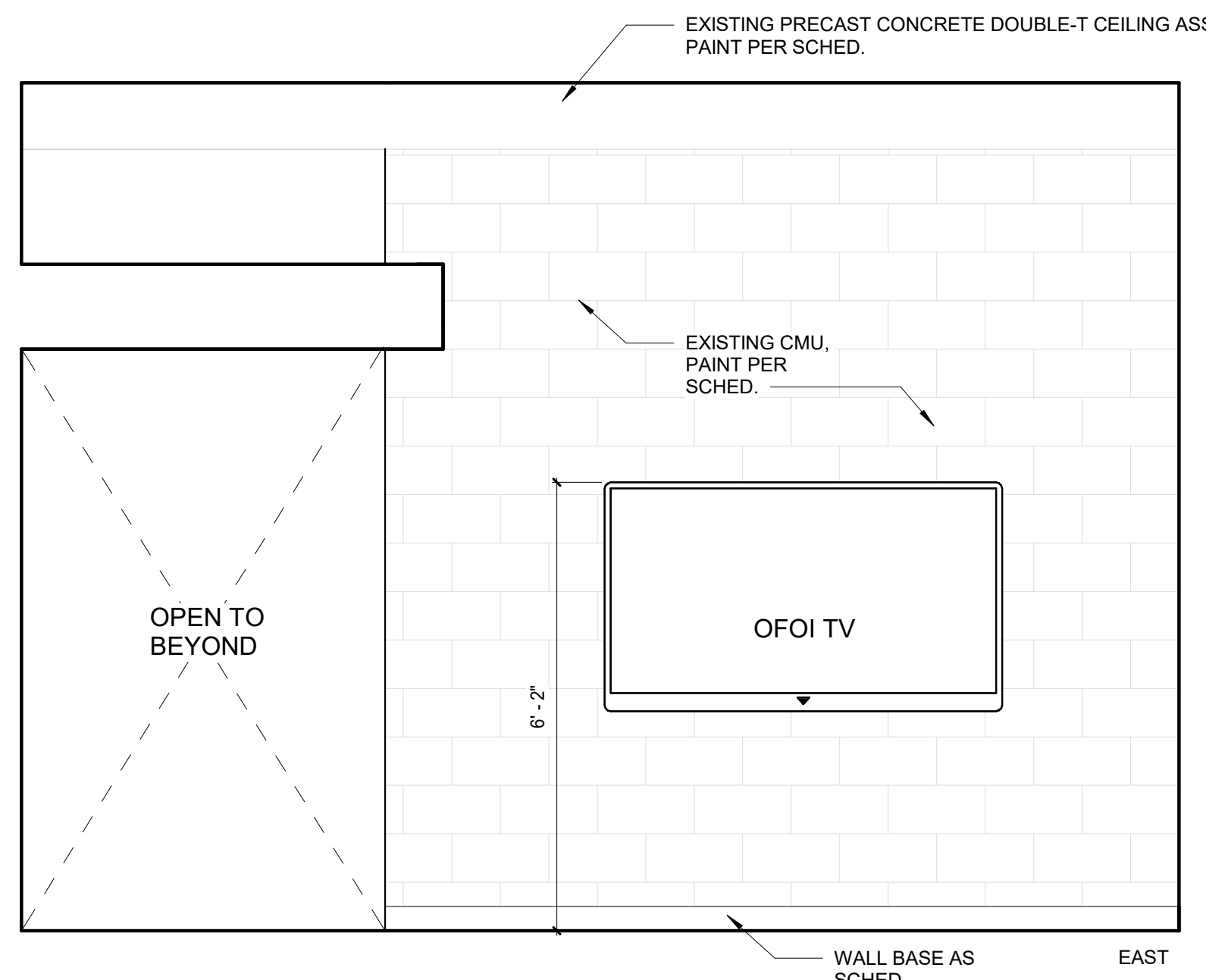
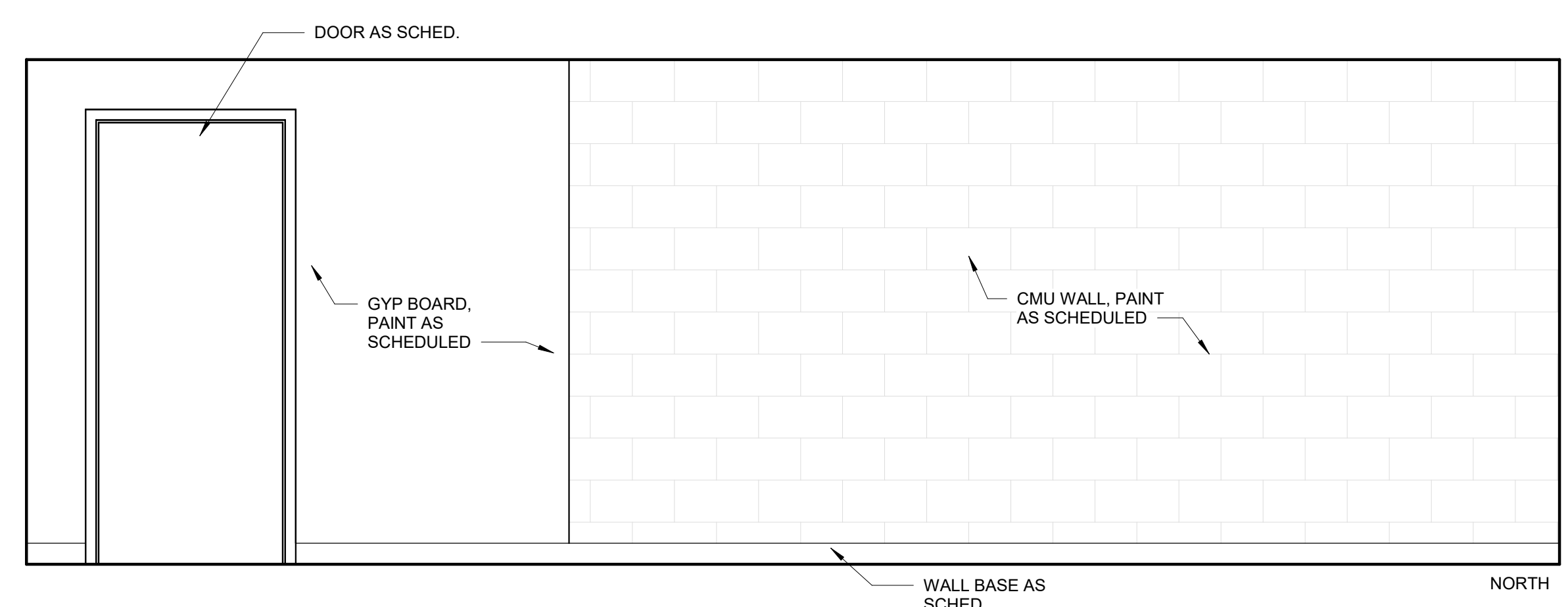
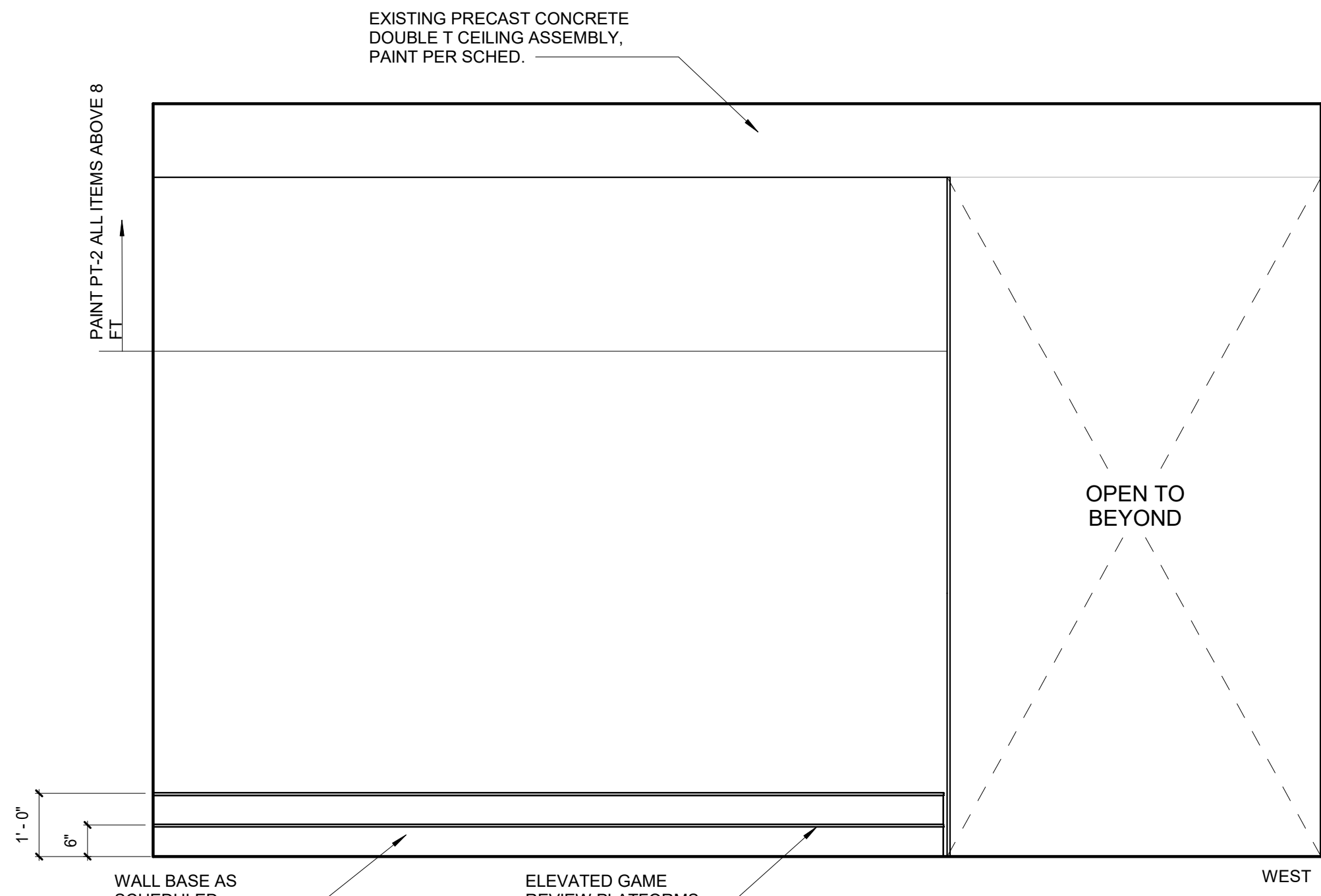
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**SHEET TITLE
INTERIOR
ELEVATIONS**

**SHEET
A-AI15**

DATE
3-7-2023

CONSTRUCTION DOCUMENTS

CONSTRUCTION DOCUMENTS

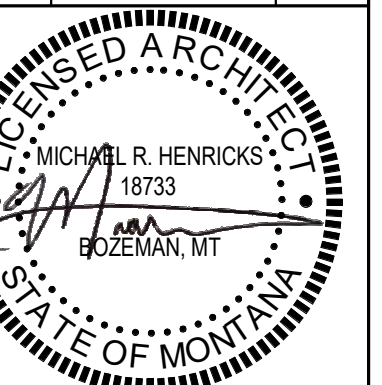


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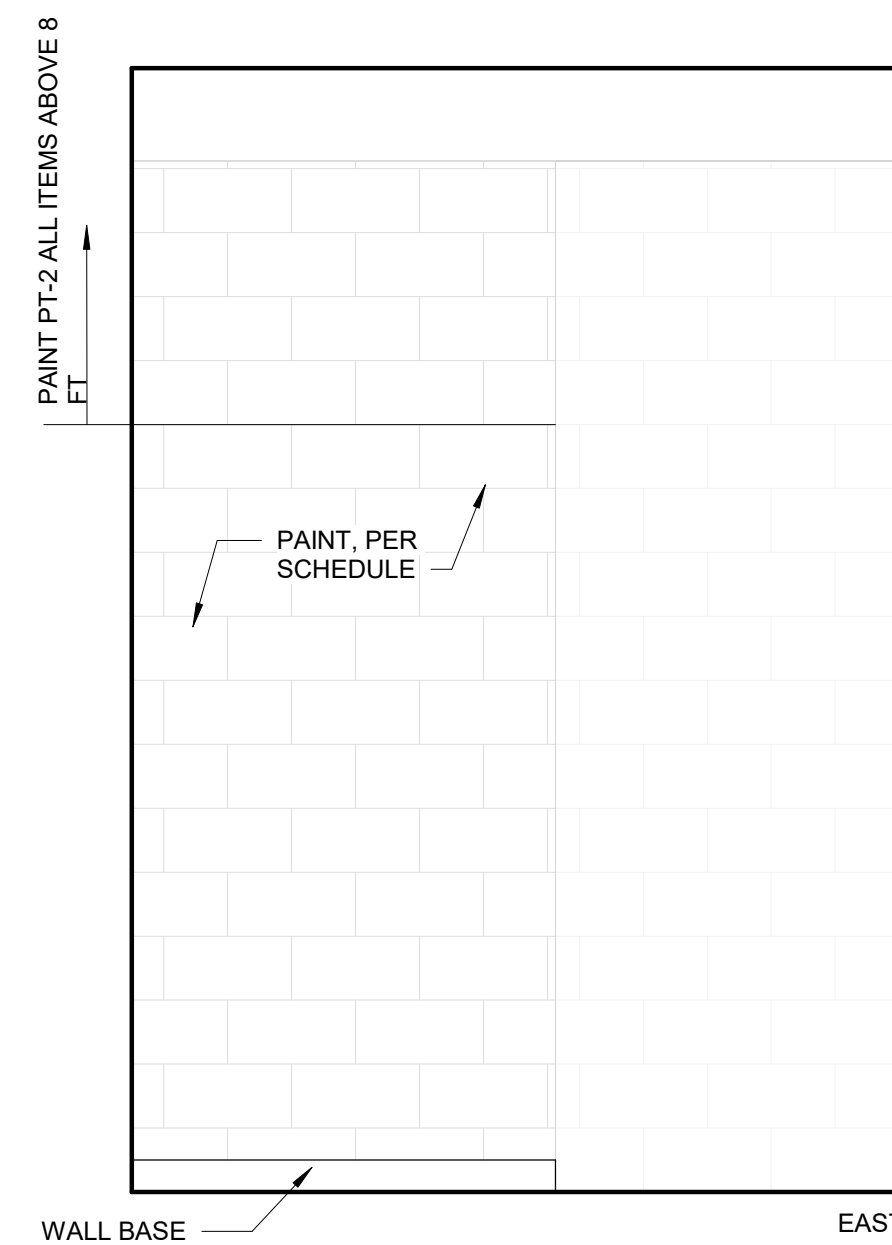
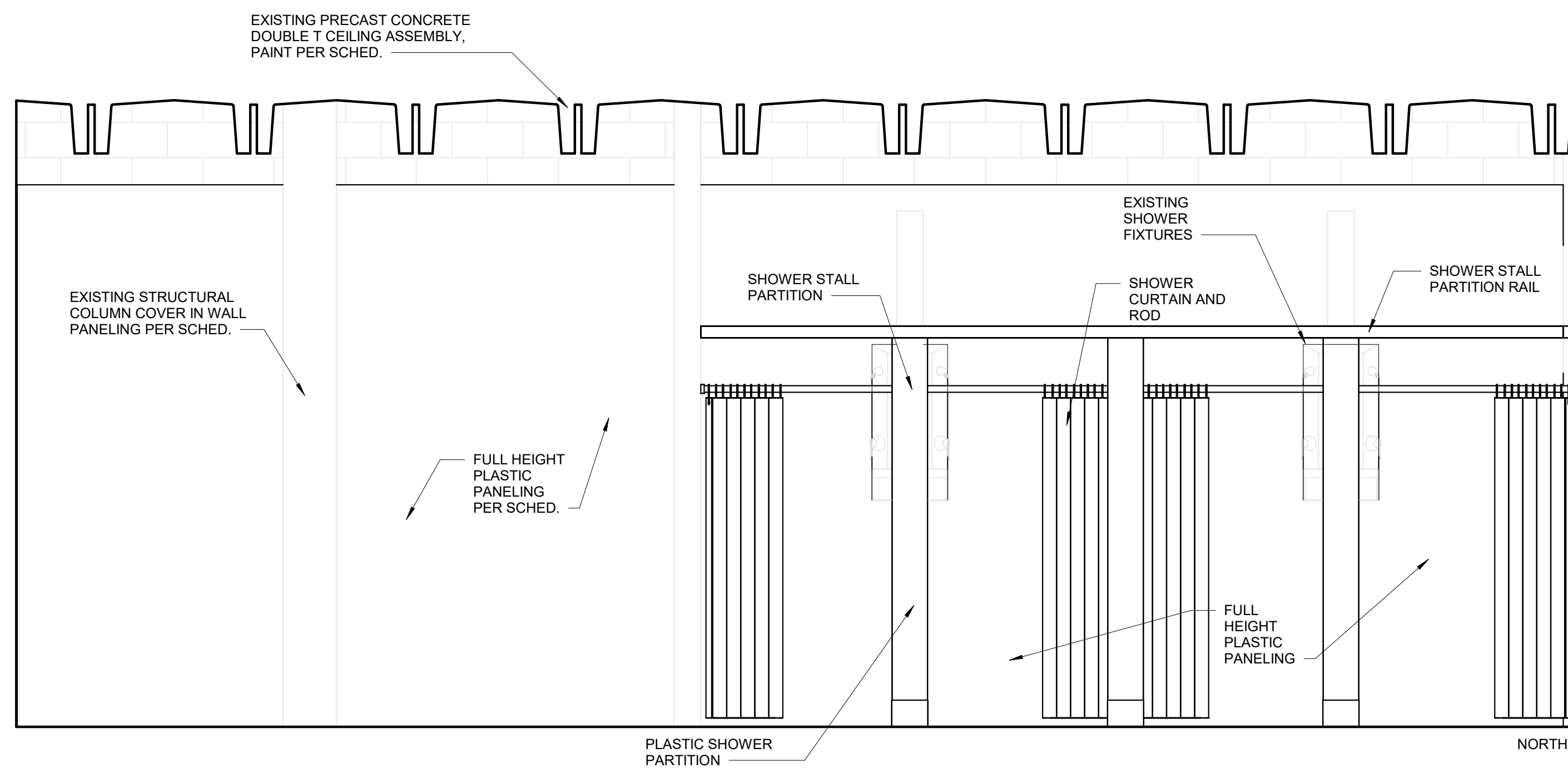
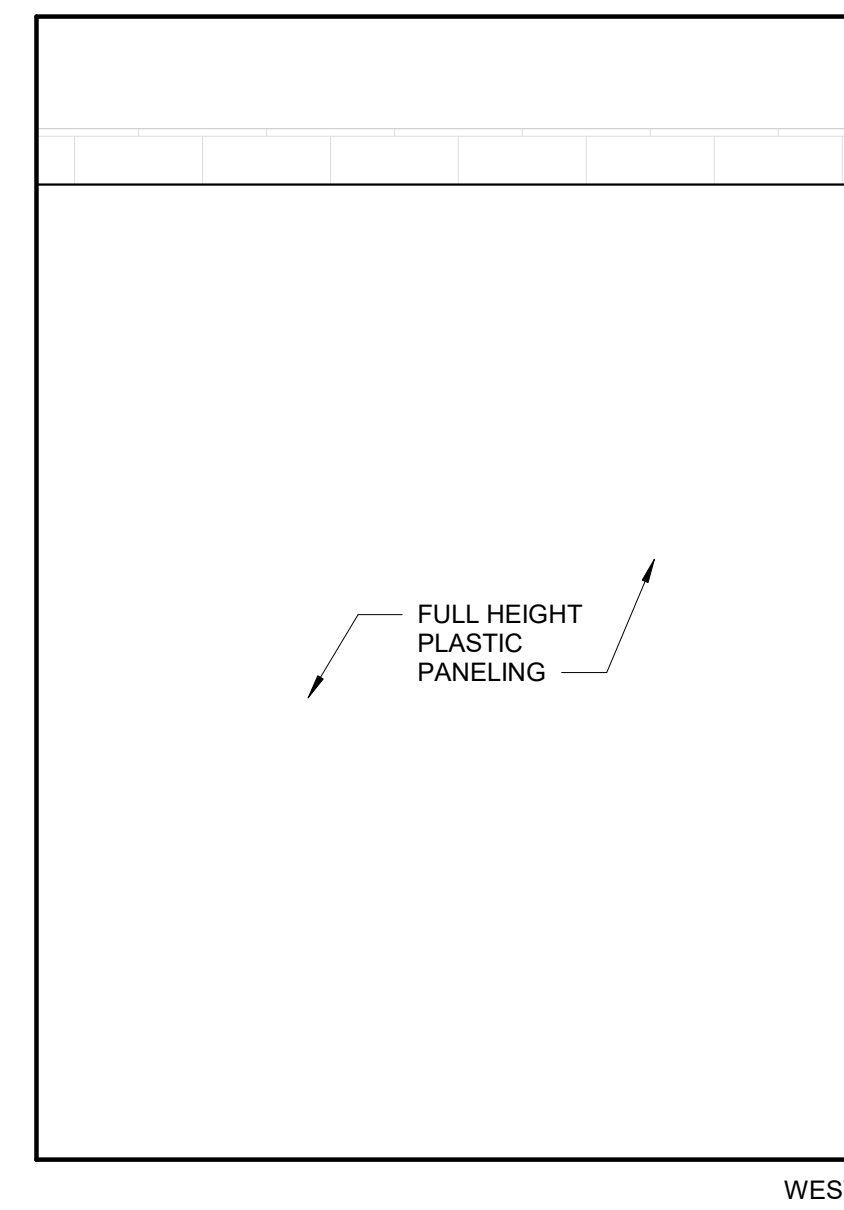
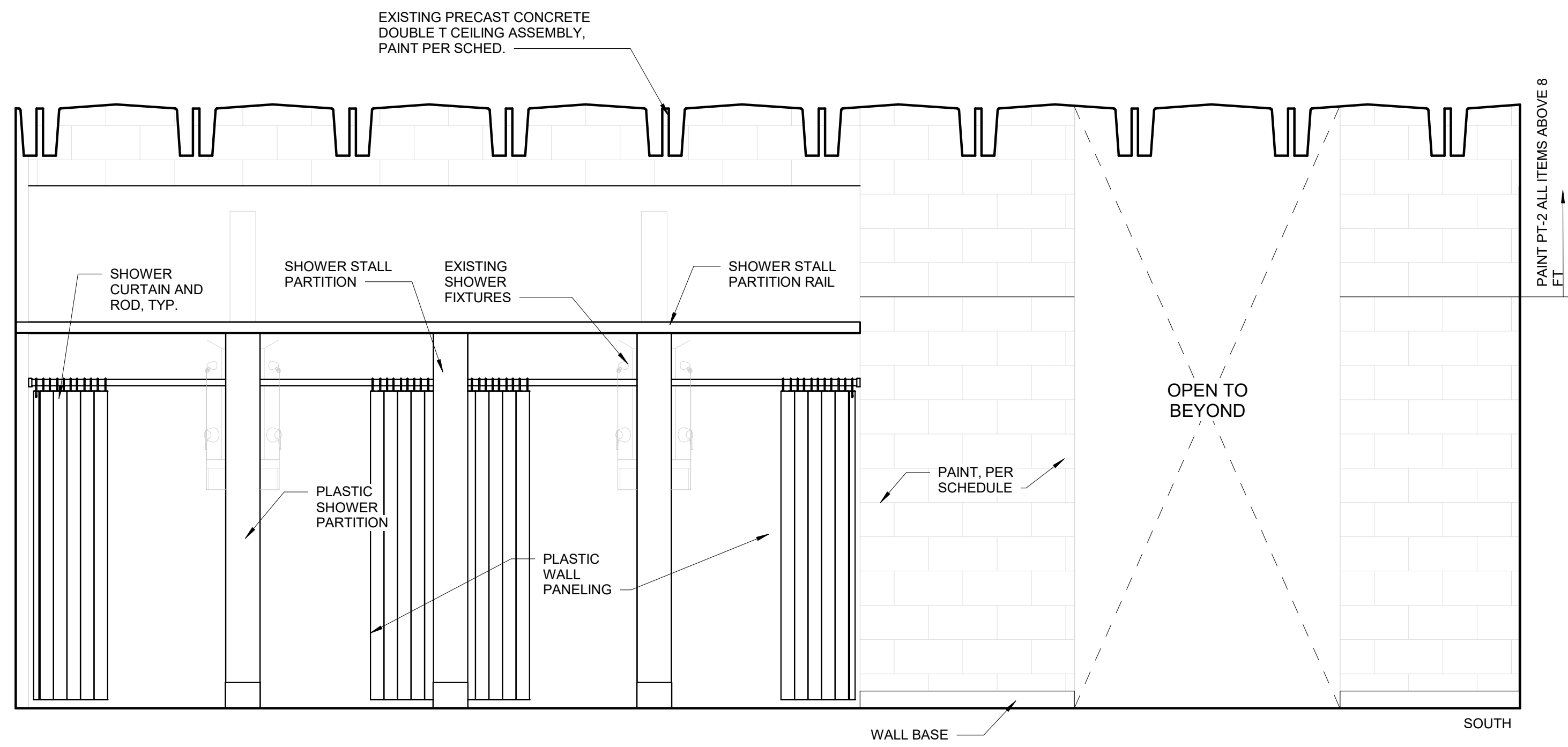
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**SHEET TITLE
INTERIOR
ELEVATIONS**

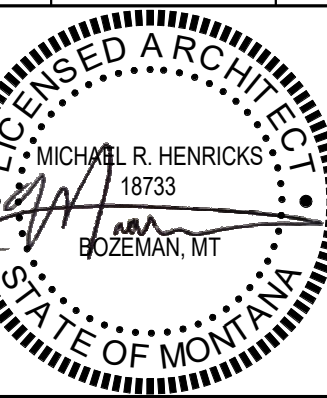
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A-A17**

DATE
3-7-2023

CONSTRUCTION DOCUMENTS



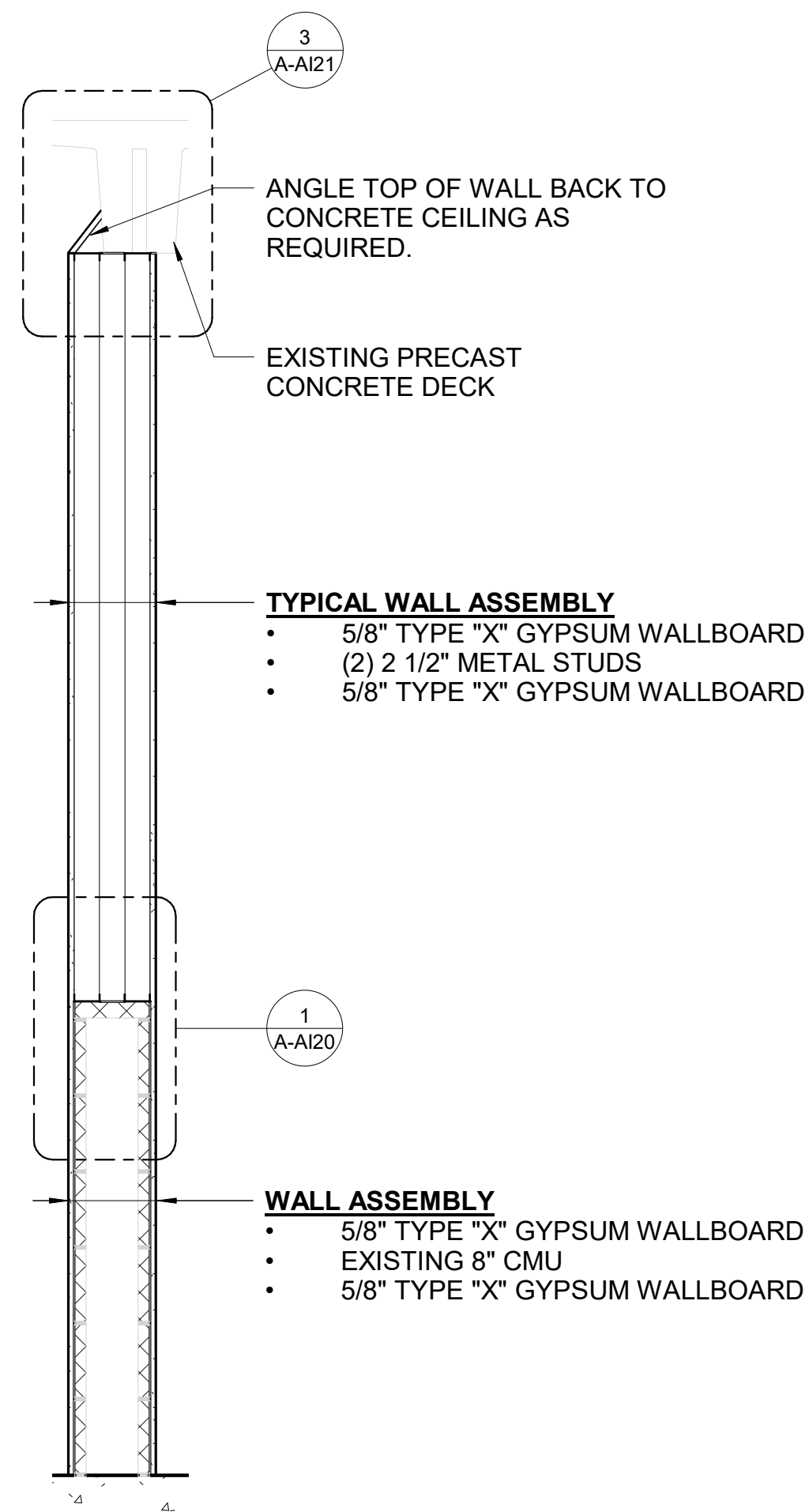
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REV.	DESCRIPTION	DATE



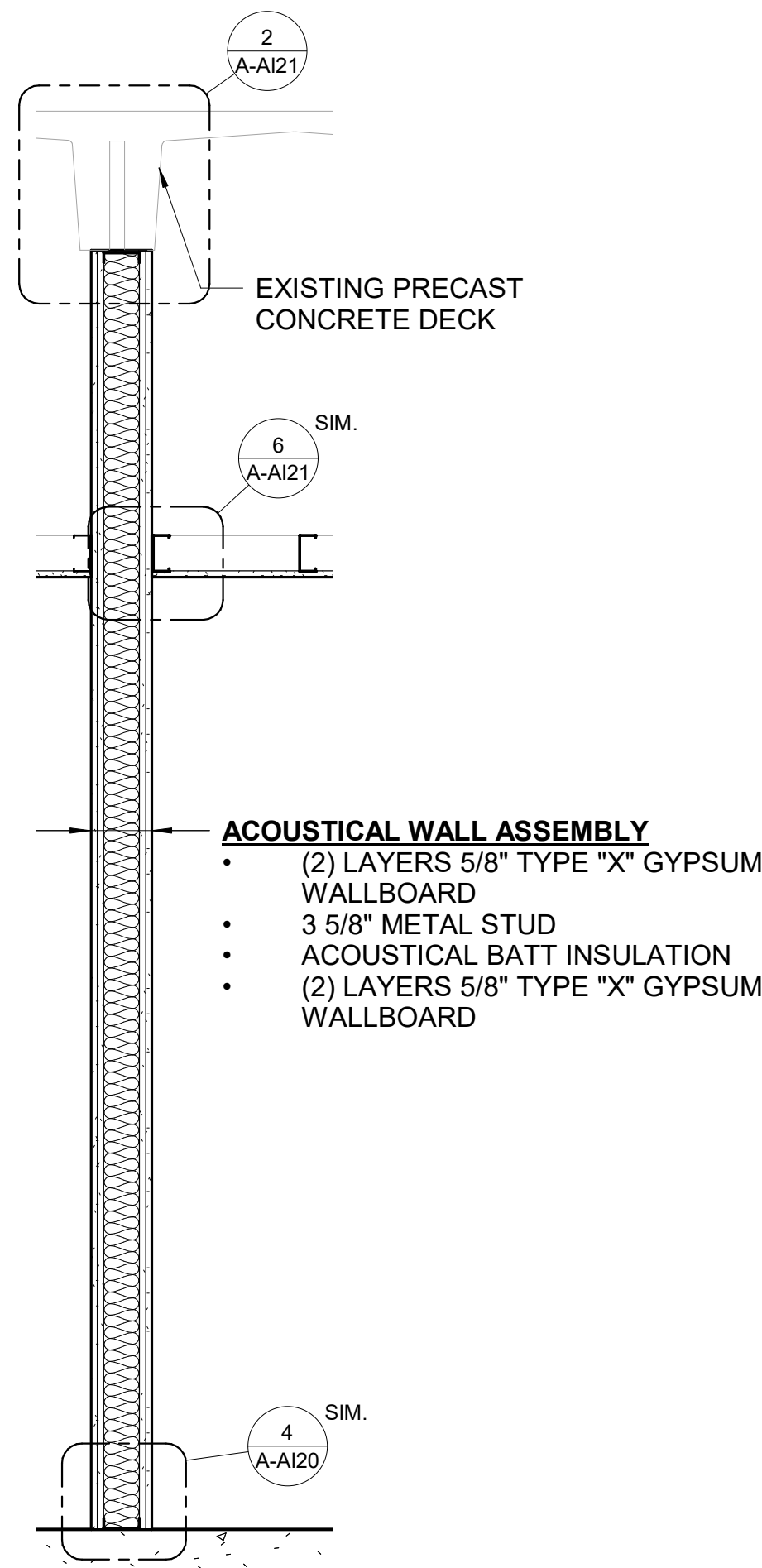
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**SHEET TITLE
 WALL SECTIONS**

**SHEET
 A-AI19**

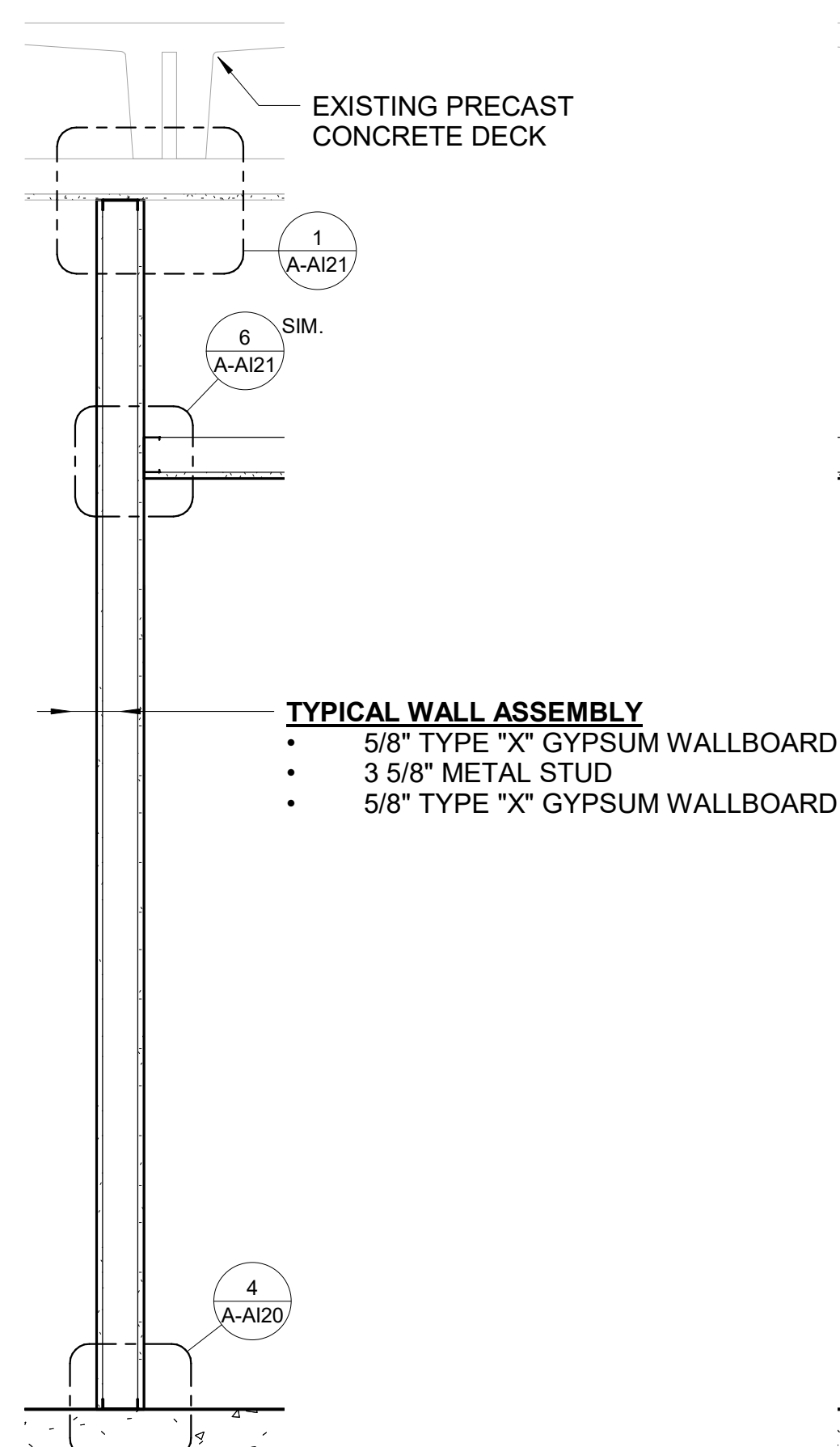
DATE
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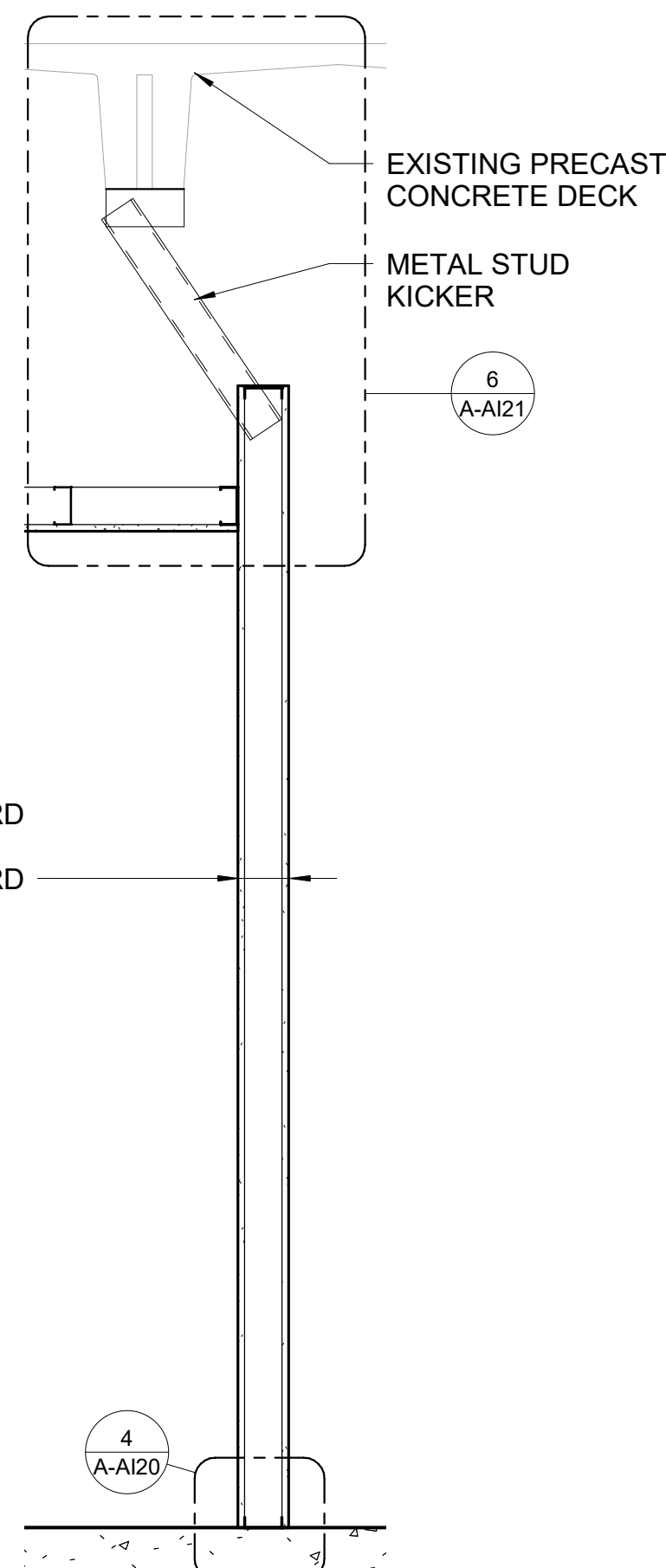
1 WALL SECTION
 3/4" = 1'-0"



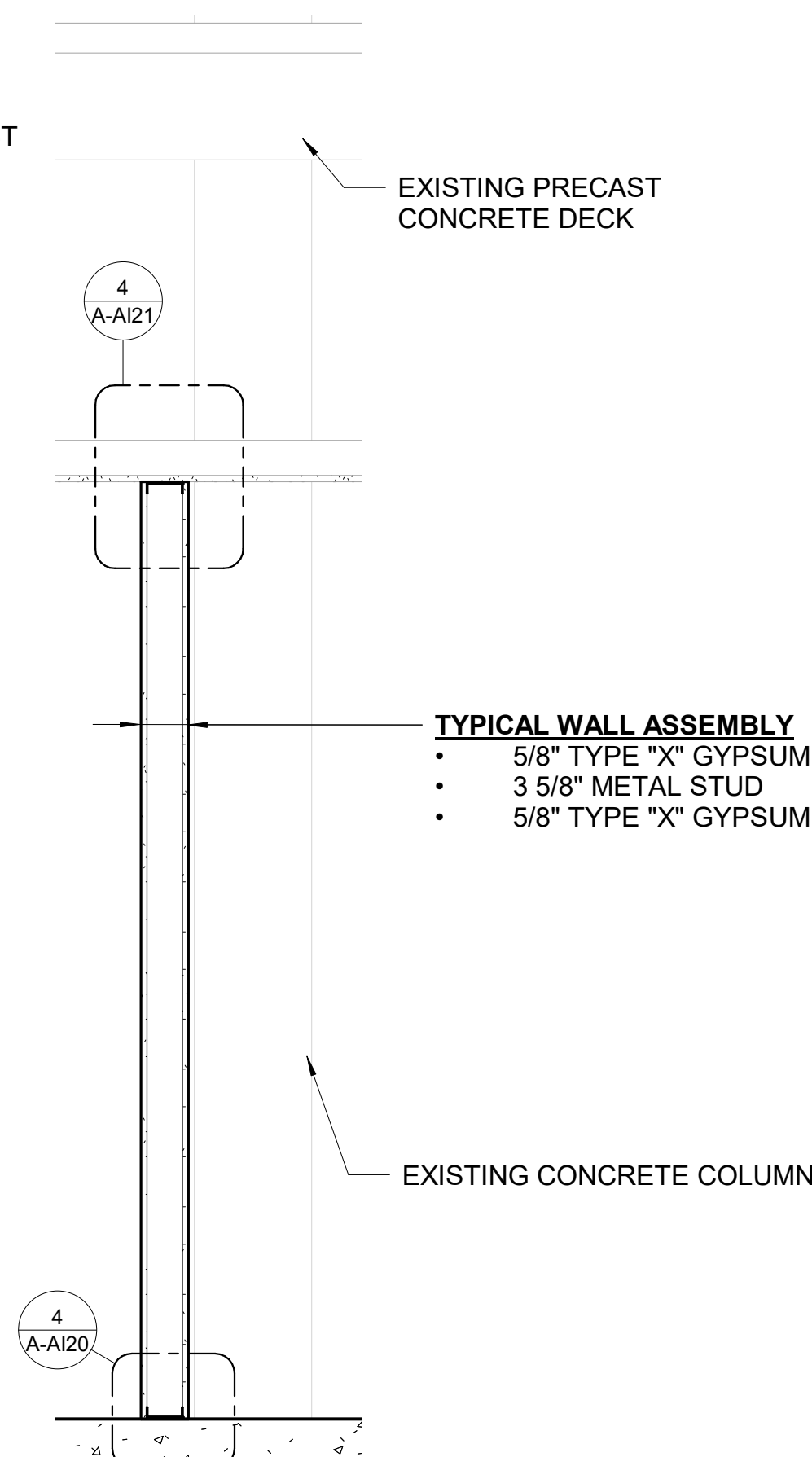
2 WALL SECTION 2
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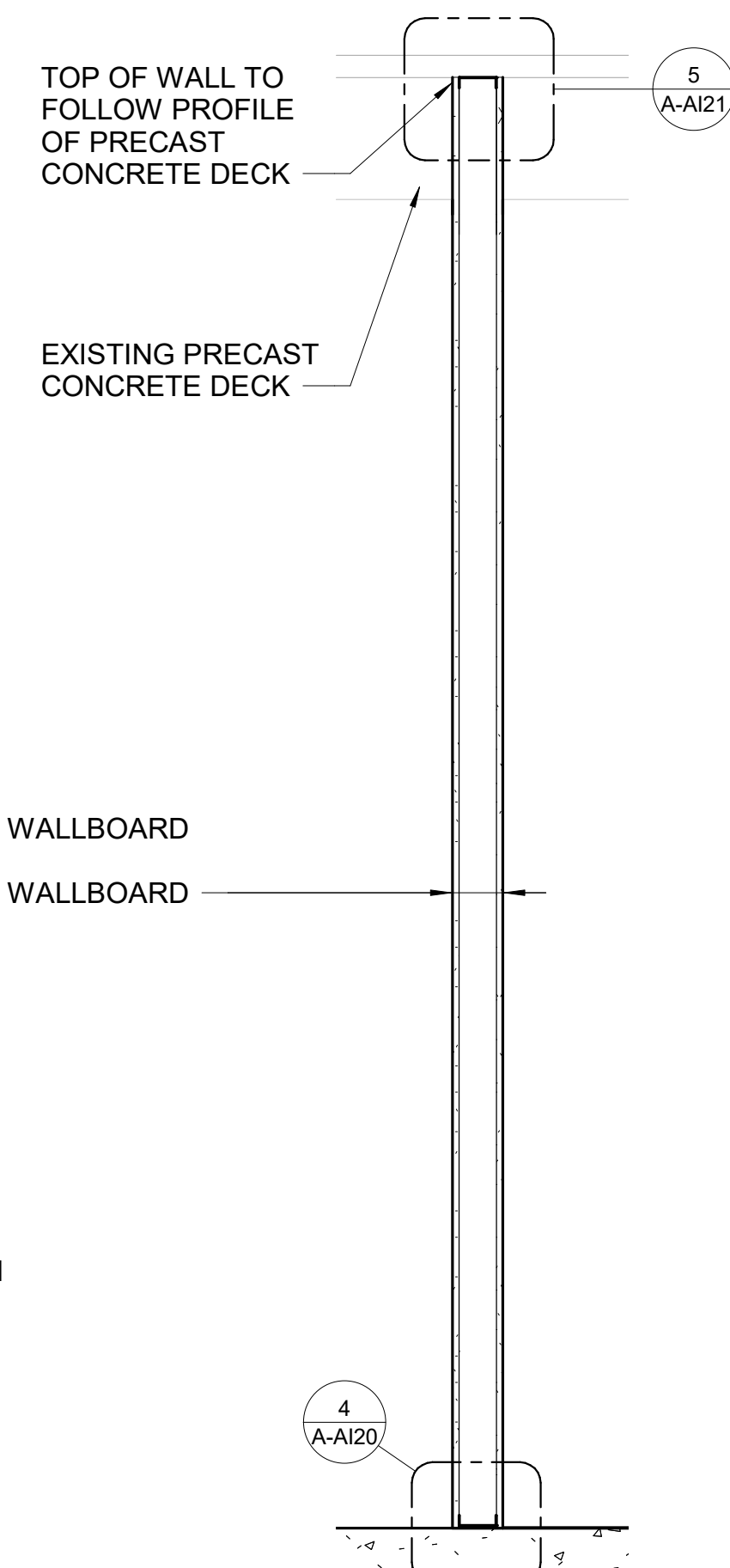
3 WALL SECTION 3
 3/4" = 1'-0"



4 WALL SOFFIT CONNECTION
 3/4" = 1'-0"

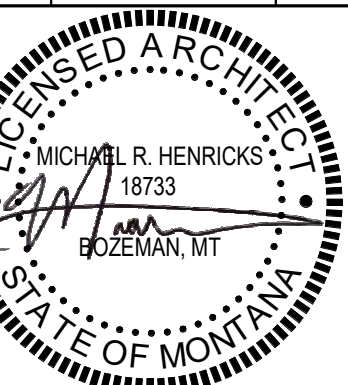


5 WALL SECTION
 3/4" = 1'-0"



6 WALL SECTION
 3/4" = 1'-0"

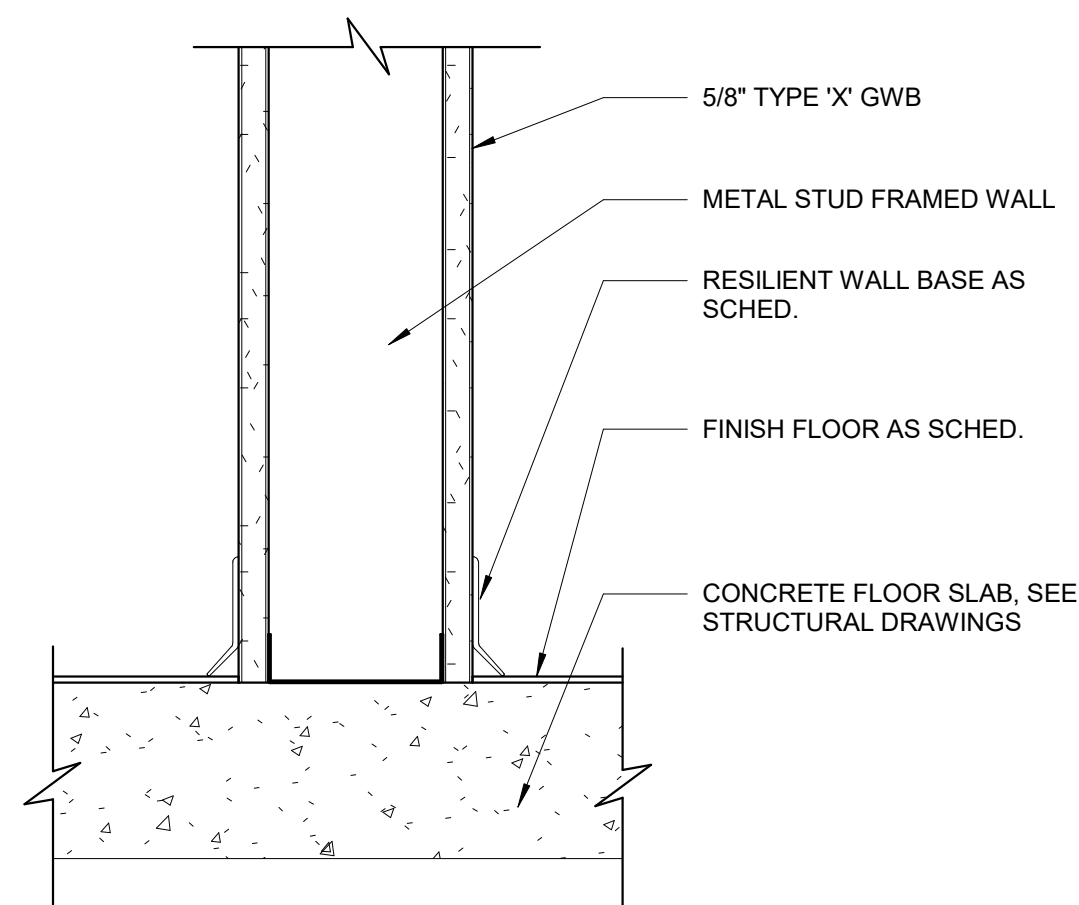
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REV.	DESCRIPTION	DATE



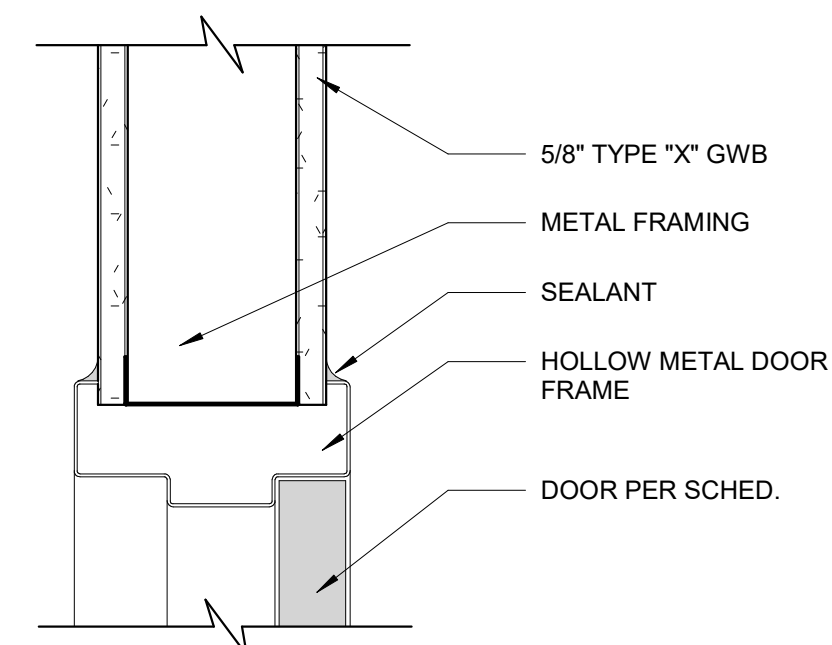
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**SHEET TITLE
DETAILS**

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A-AI20**

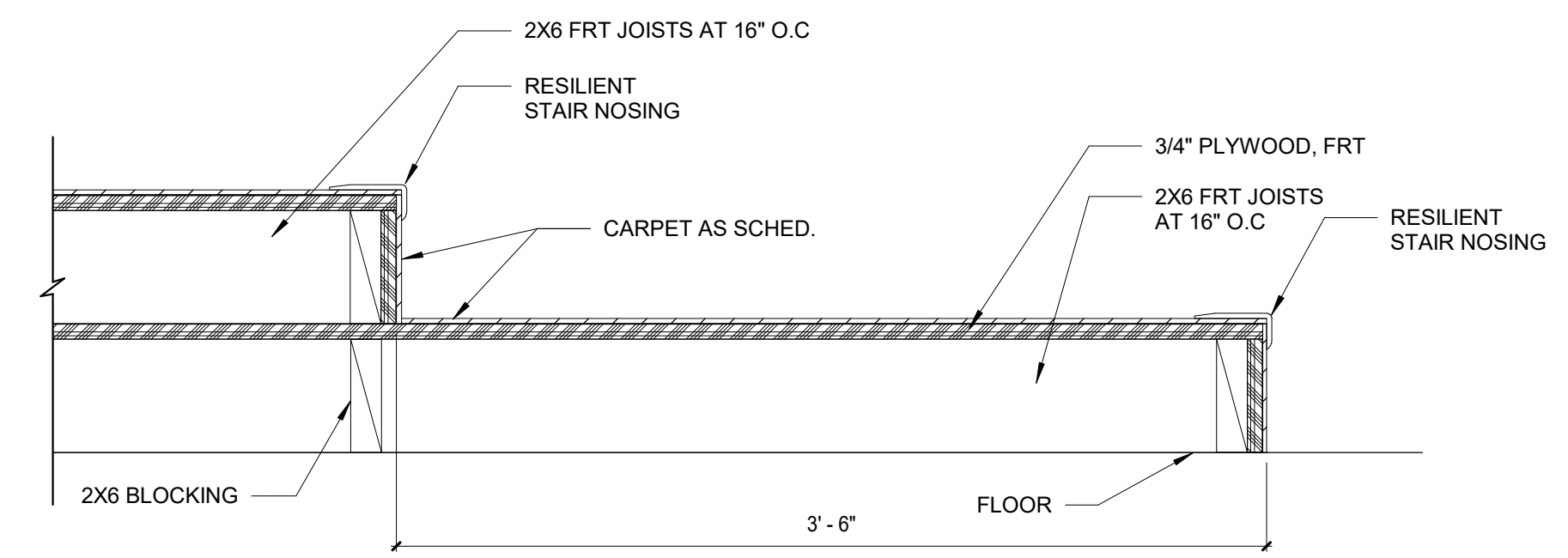
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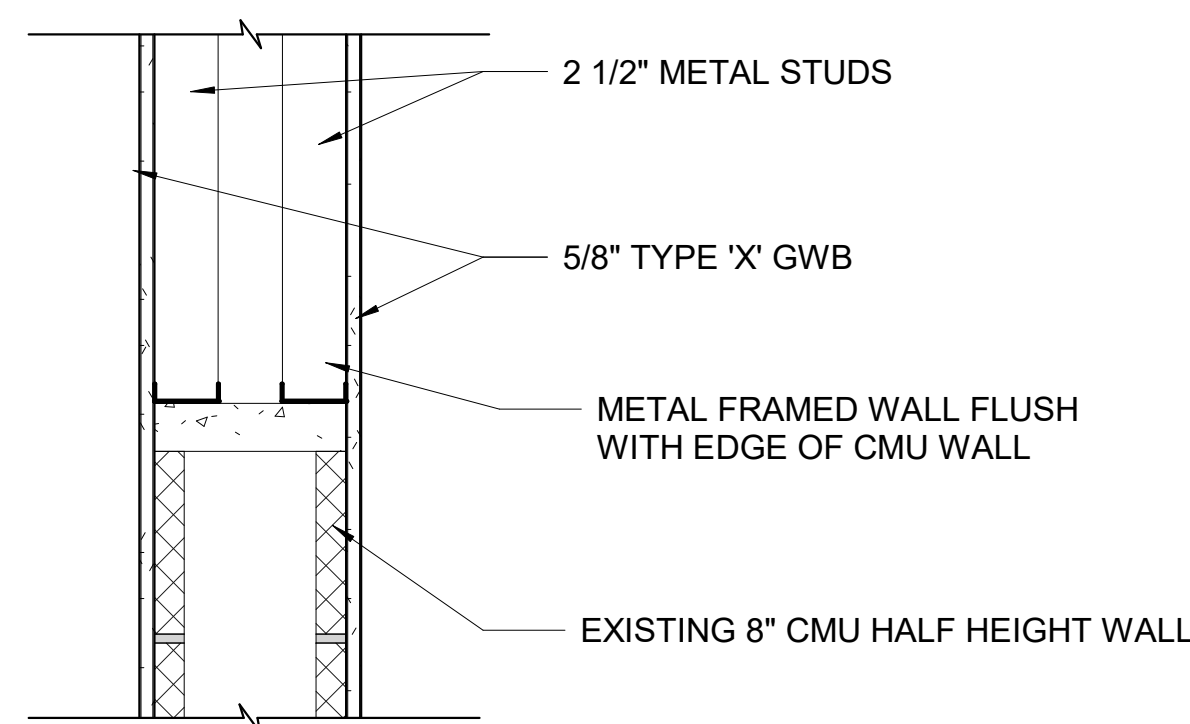
4 TYPICAL WALL BASE DETAIL
3" = 1'-0"



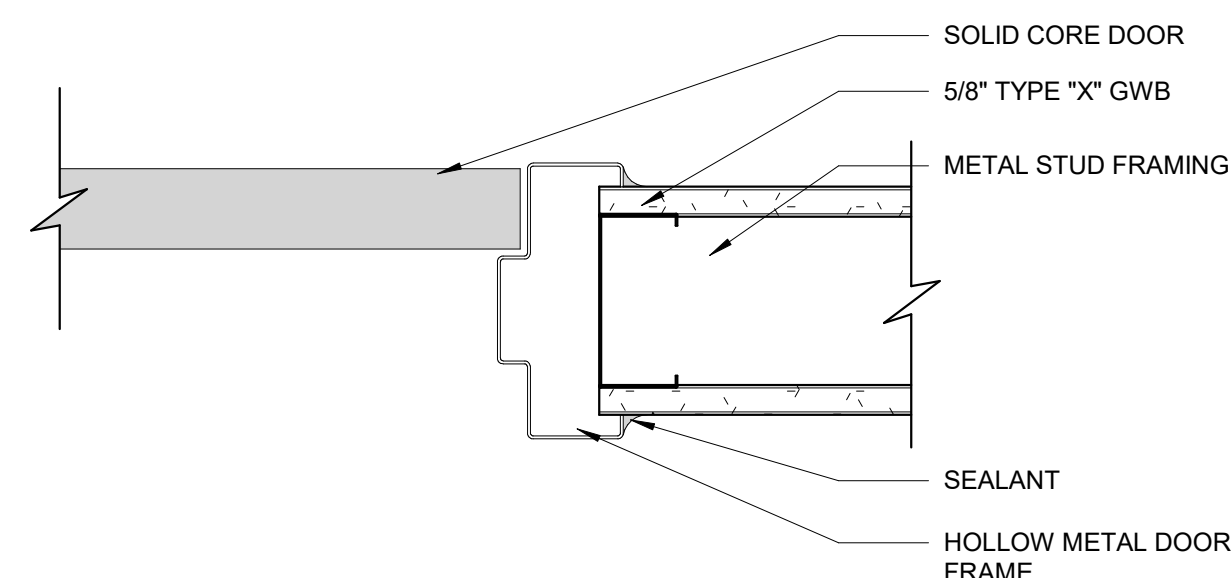
5 INTERIOR DOOR HEAD
3" = 1'-0"



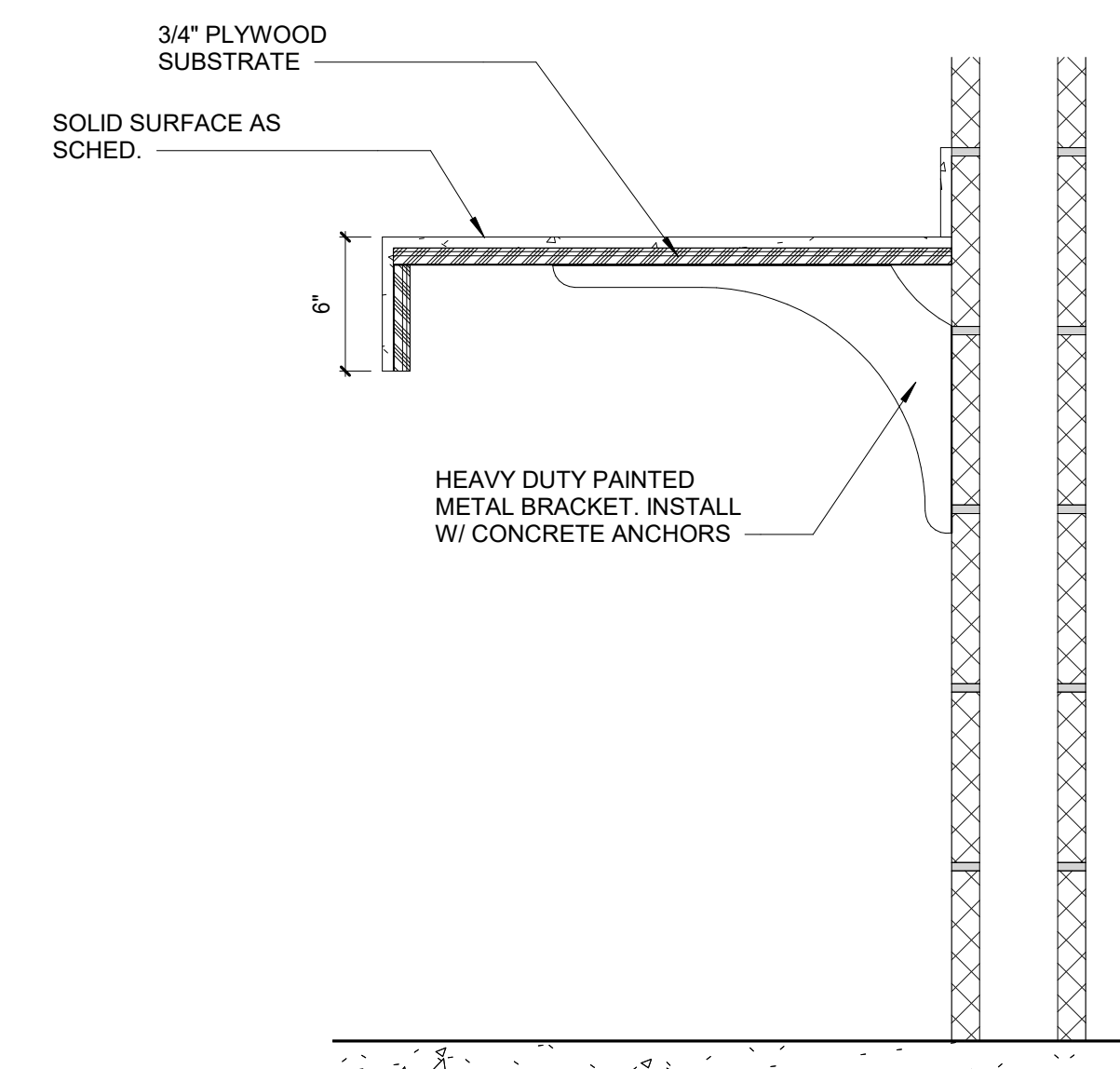
6 GAME REVIEW TIER DETAIL
1 1/2" = 1'-0"



1 CMU/GWB CONNCECTION
1 1/2" = 1'-0"



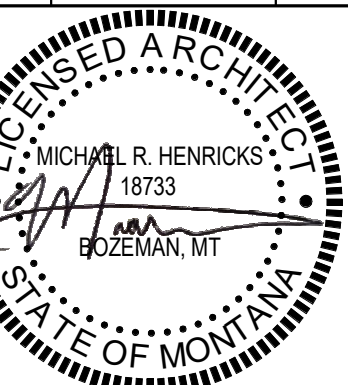
2 INTERIOR DOOR JAMB
3" = 1'-0"



3 COUNTERTOP DETAIL
1 1/2" = 1'-0"

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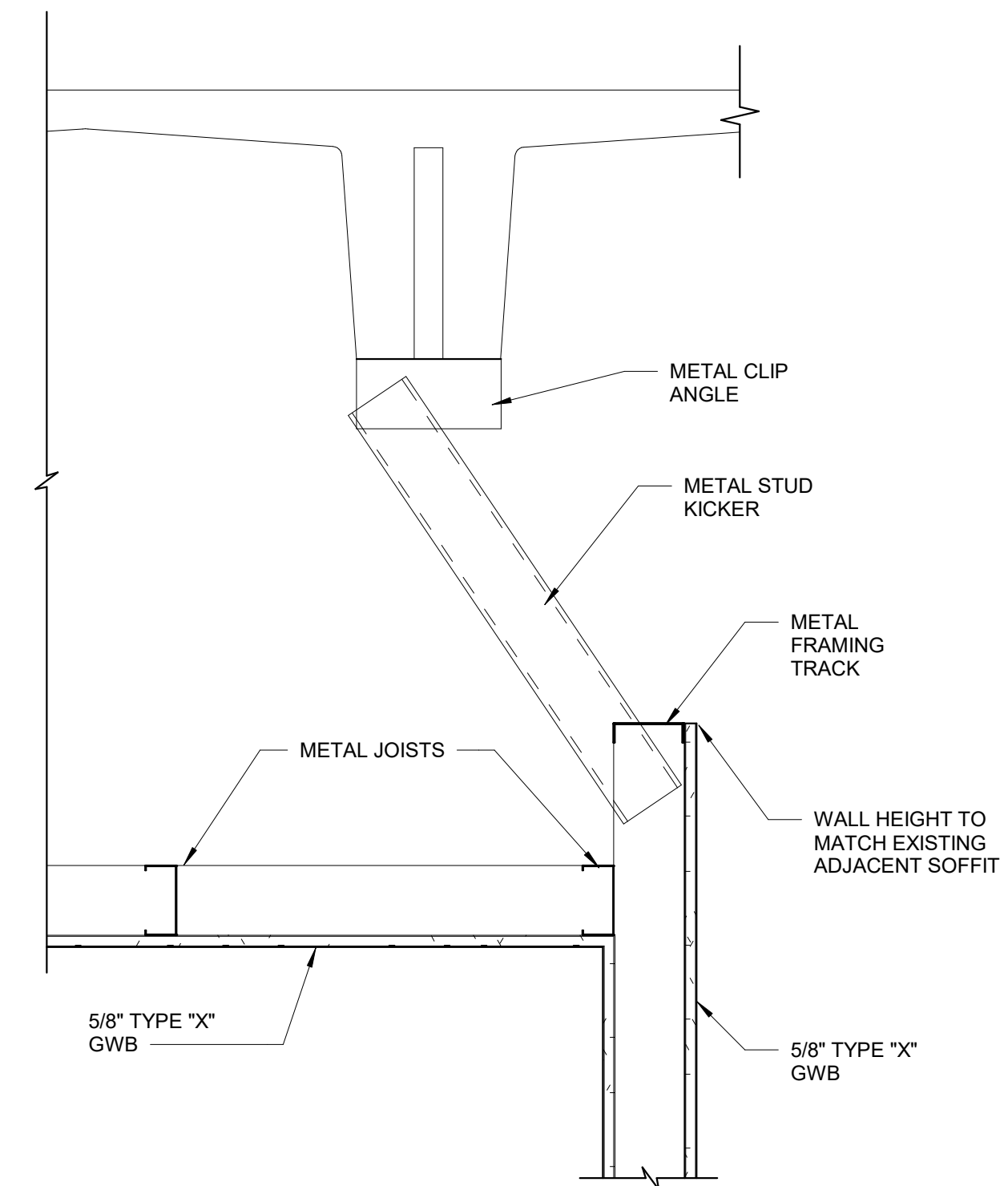


PPA#22057.01
A/E#
AAI#21062.01
**SHEET TITLE
DETAILS**

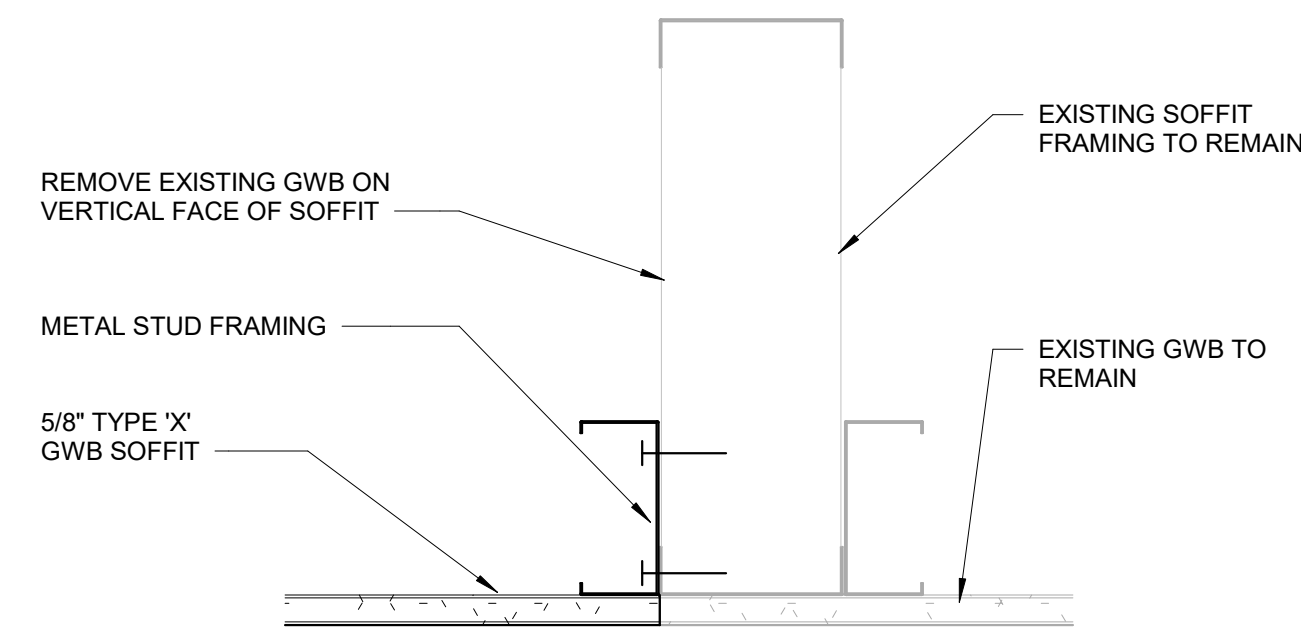
**SHEET
A-AI21**

DATE
3-7-2023

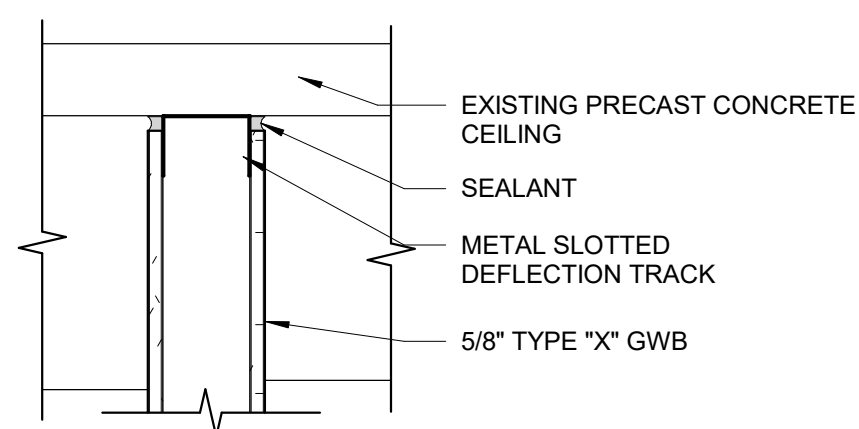
CONSTRUCTION DOCUMENTS



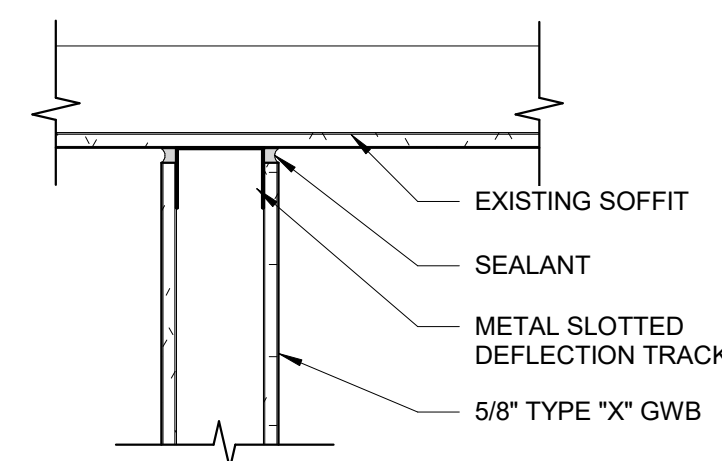
6 CEILING TO WALL DETAIL
1 1/2" = 1'-0"



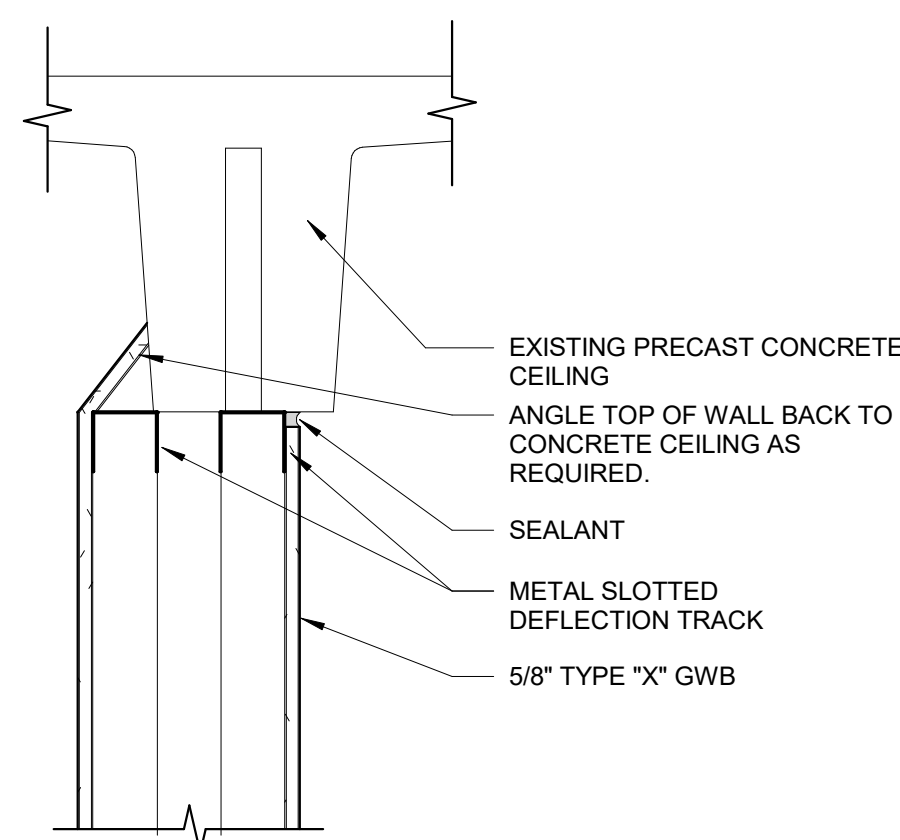
7 SOFFIT DETAIL
3" = 1'-0"



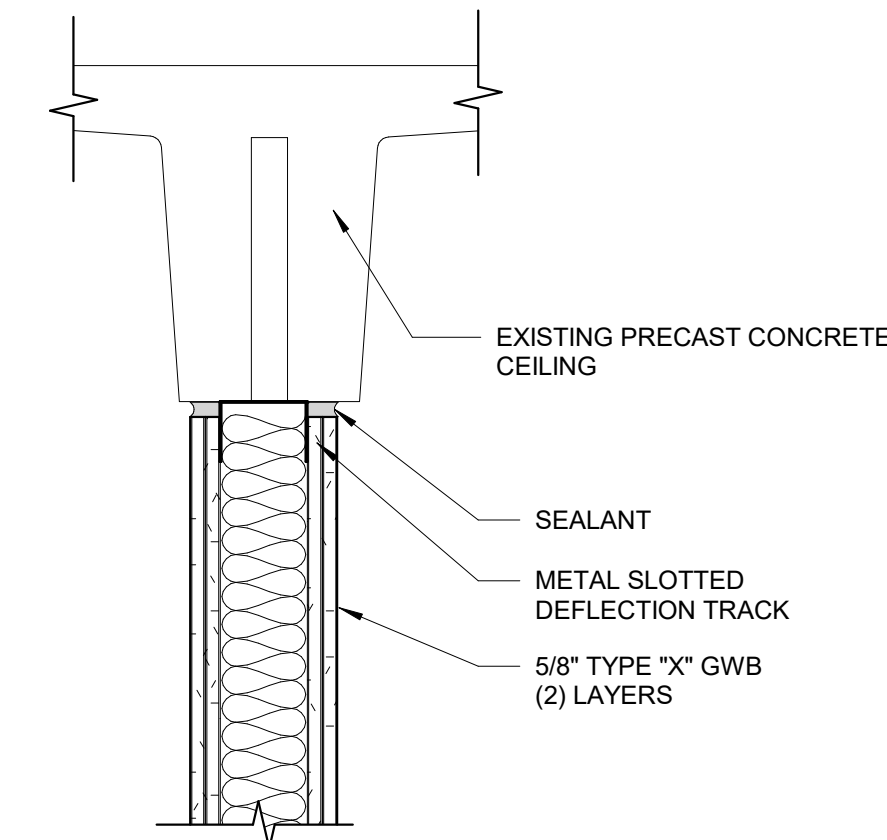
5 WALL TO EXISTING SOFFIT
1 1/2" = 1'-0"



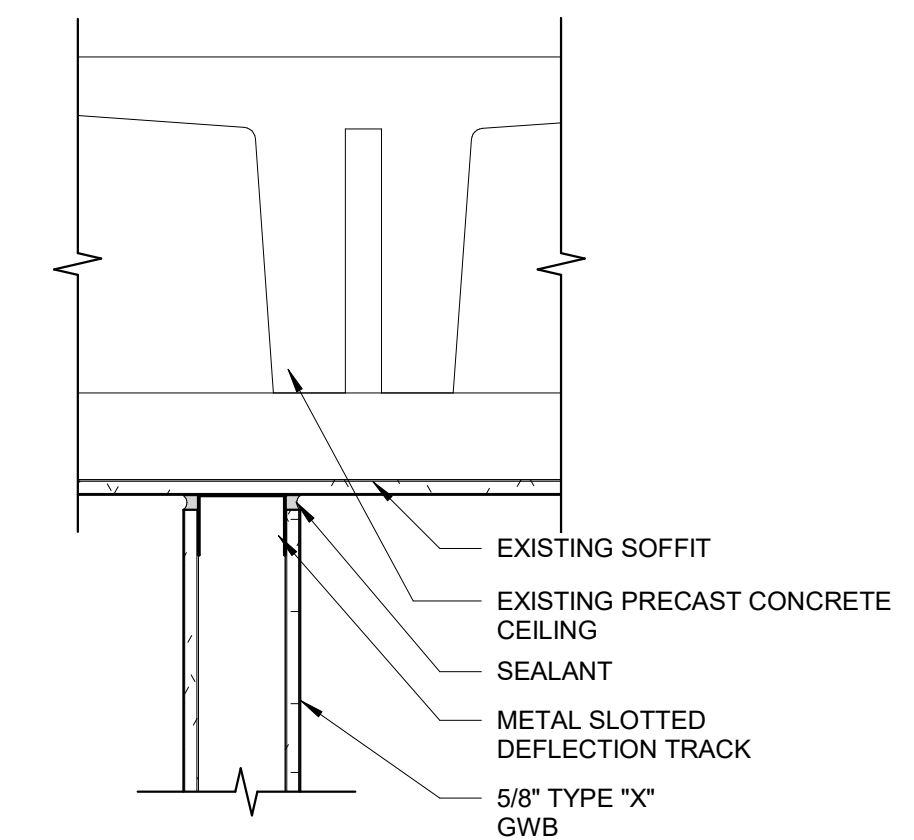
4 WALL TO EXISTING SOFFIT
1 1/2" = 1'-0"



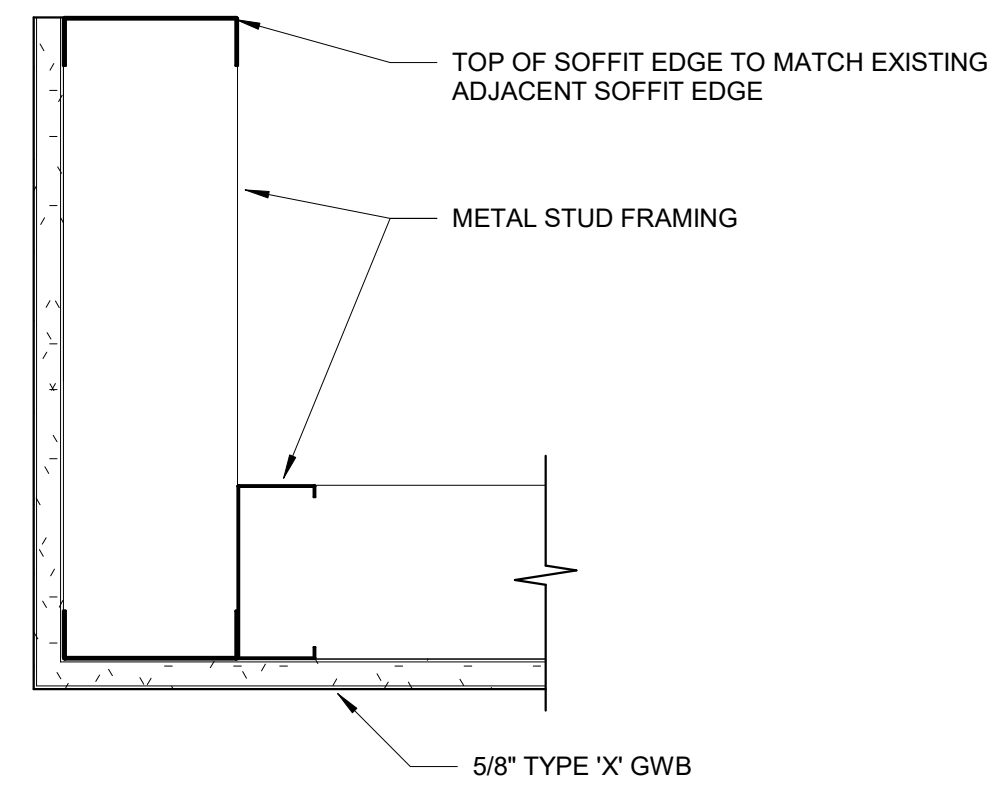
3 WALL TO EXISTING CEILING
1 1/2" = 1'-0"



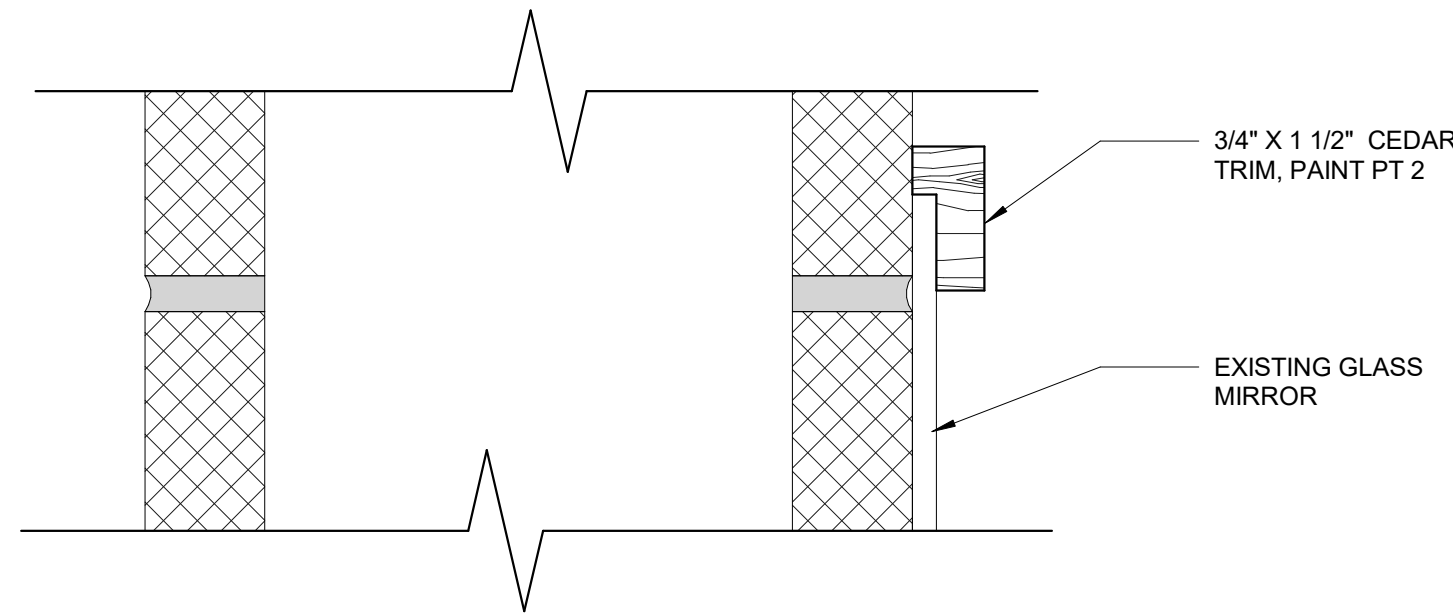
2 WALL TO EXISTING CEILING
1 1/2" = 1'-0"



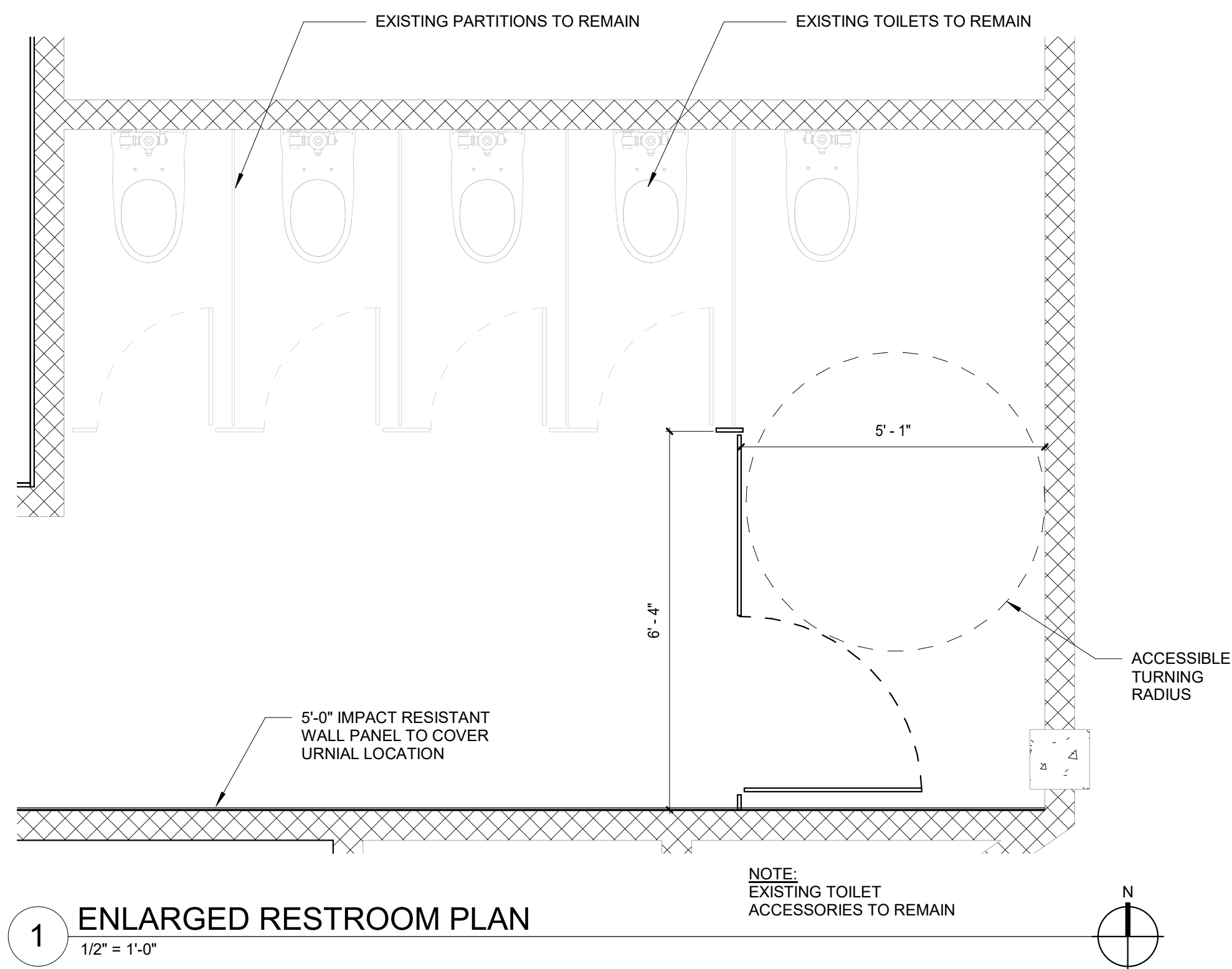
1 WALL TO EXISTING SOFFIT
1 1/2" = 1'-0"



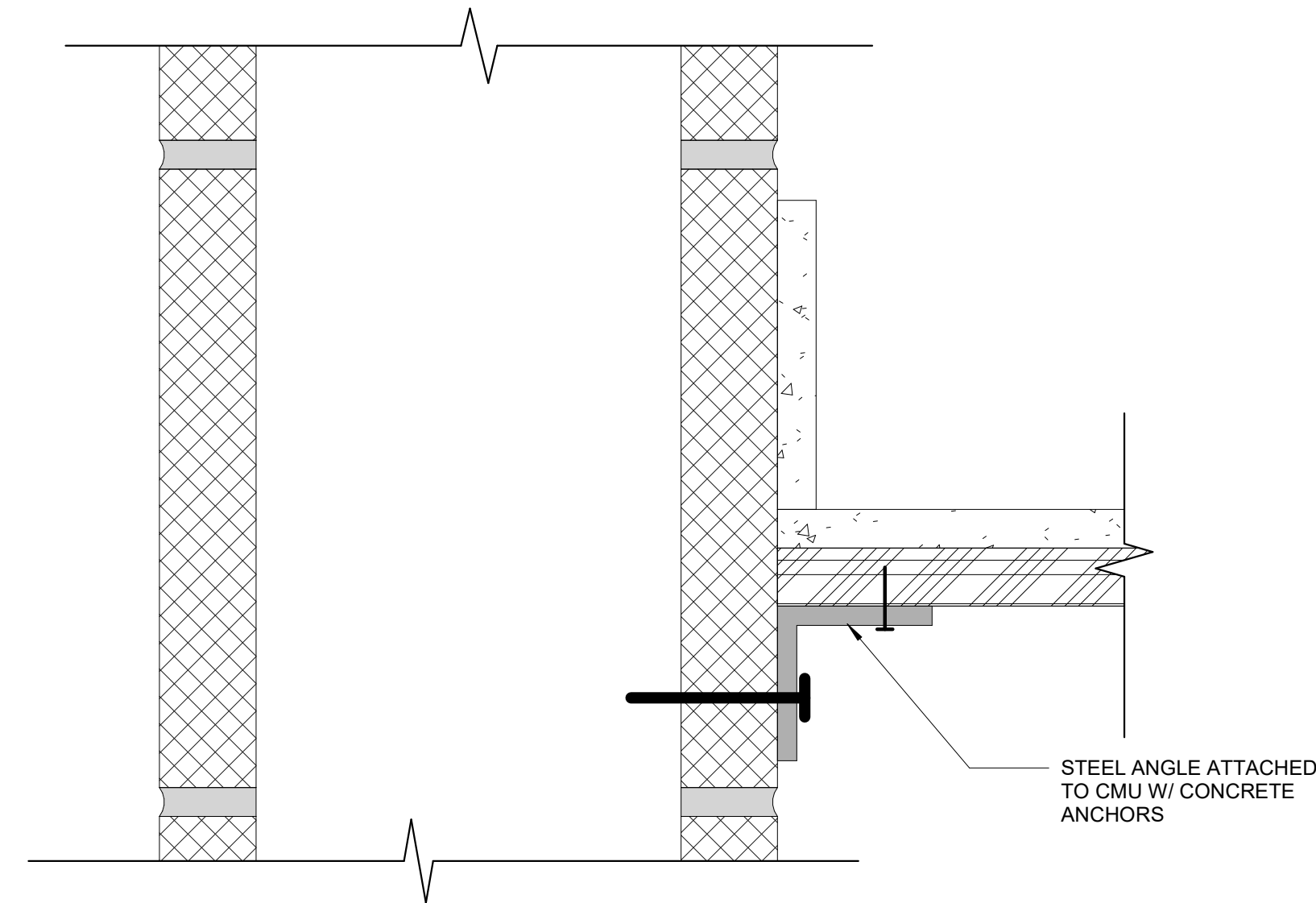
5 EDGE OF SOFFIT
3" = 1'-0"



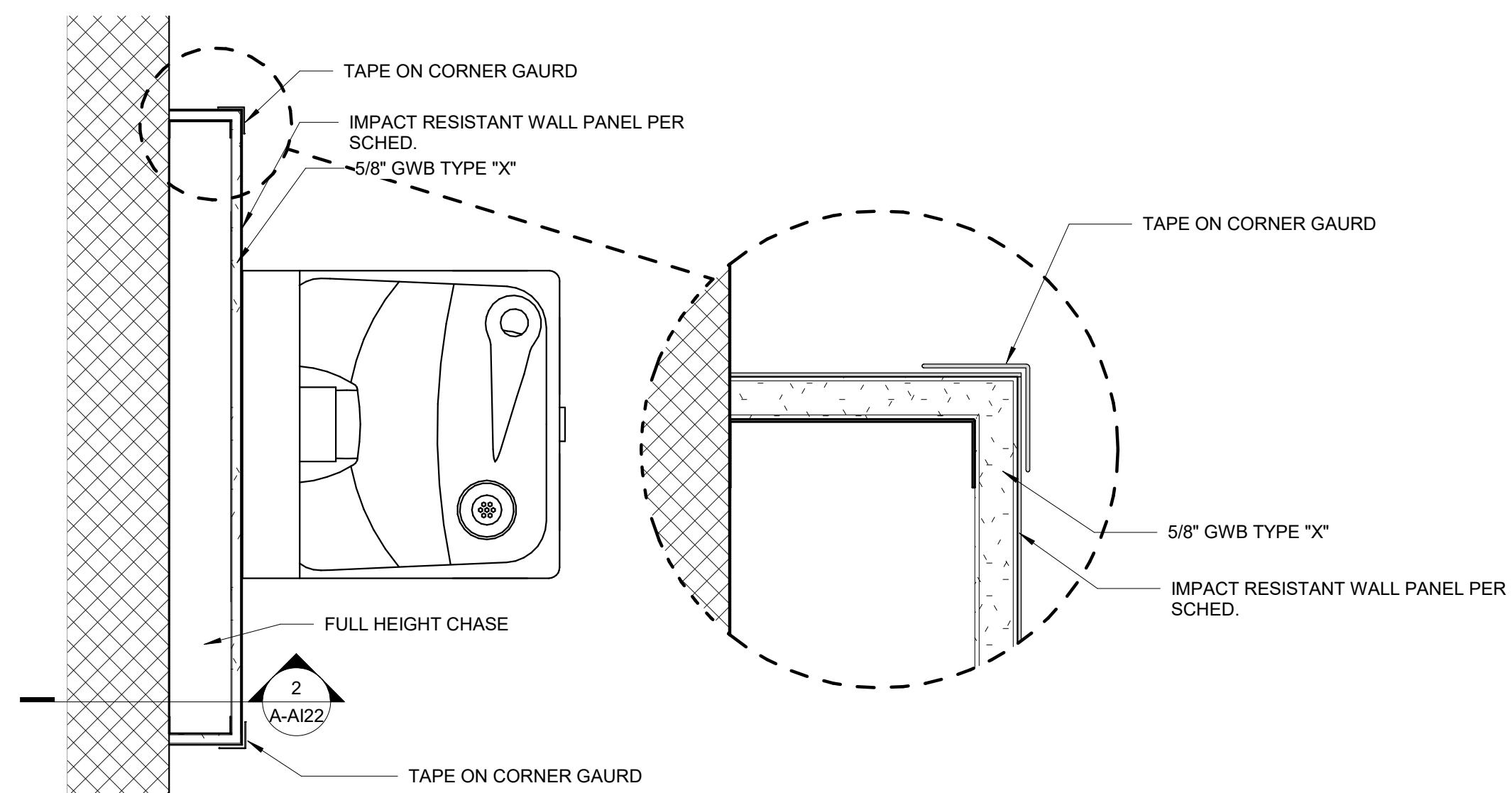
3 MIRROR TRIM DETAIL
6" = 1'-0"



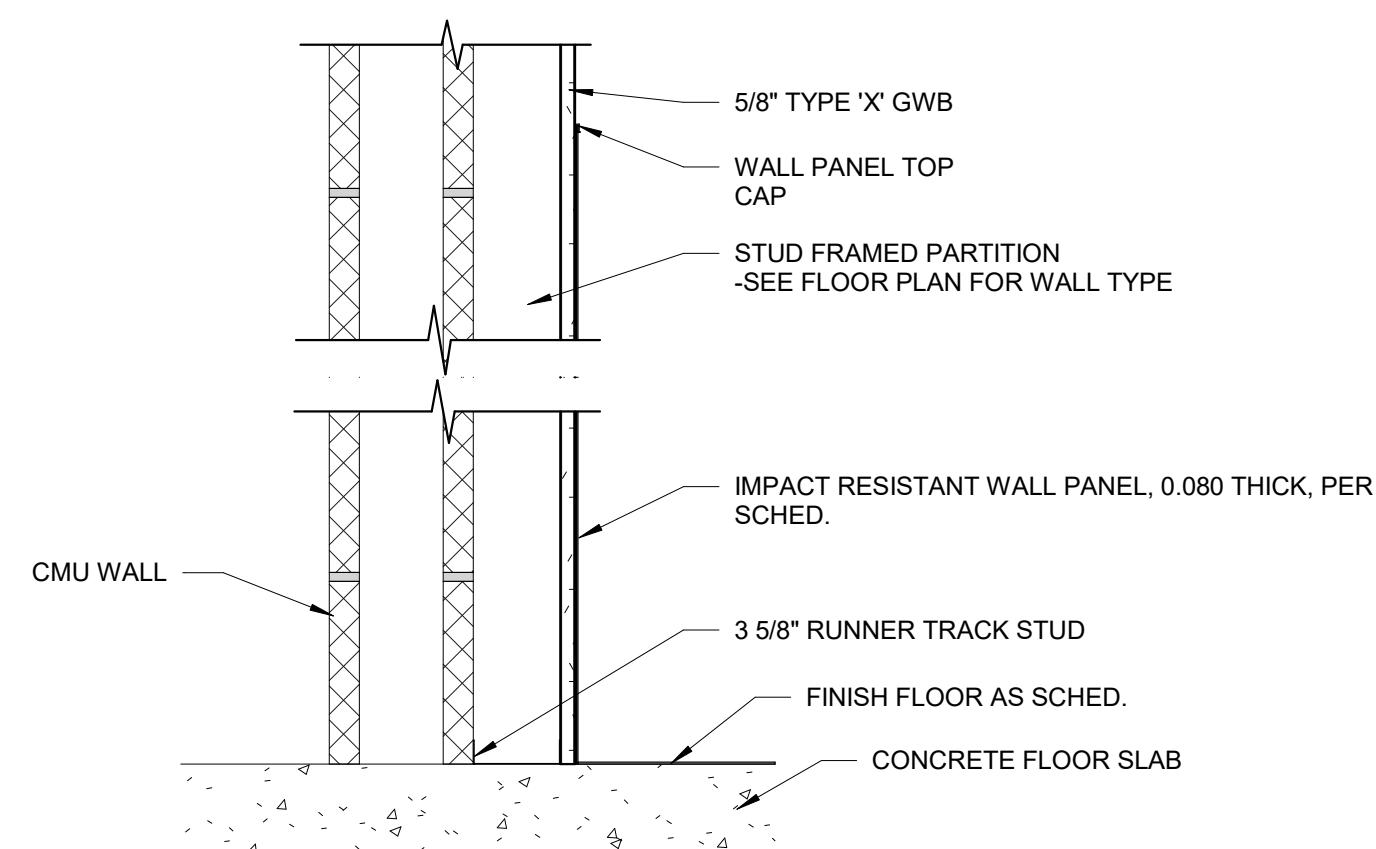
1 ENLARGED RESTROOM PLAN
1/2" = 1'-0"



7 COUNTERTOP LEDGER DETAIL
6" = 1'-0"



4 FURRED WALL @ WATER FOUNTAIN
1 1/2" = 1'-0"



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

CONSTRUCTION DOCUMENTS



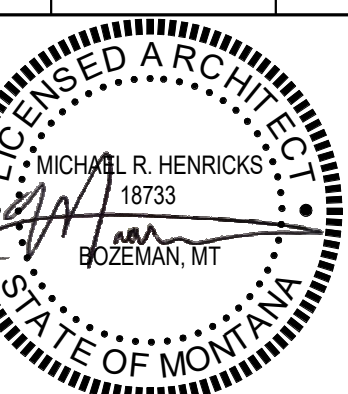
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REV.	DESCRIPTION	DATE



PPA#22057.01
A/E#
AAI#21062.01
SHEET TITLE
DETAILS &
ENLARGED PLANS

SHEET
A-AI22

DATE
3-7-2023

ABBREVIATIONS

ACC	AIR COOLED CONDENSER	ID	INSIDE DIAMETER
ACU	AIR CONDITIONING UNIT	IFB	INTEGRAL FACE & BYPASS
AD	ACCESS DOOR	IGV	INLET GUIDE VANES
ADJ	ADJUSTABLE	IPS	IRON PIPE SIZE
AF	AIR FAN	IU	INDUCTION UNIT
AFF	ABOVE FINISHED FLOOR	KW	KILOWATTS
AFG	ABOVE FINISHED GRADE	KWH	KILOWATT HOUR
AFR	ABOVE FINISHED ROOF		
AFS	AIR FLOW STATION	LAT	LEAVING AIR TEMPERATURE (°F)
AHU	AIR HANDLING UNIT	LF	LINEAR FEET
AP	ACCESS PANEL	LWT	LEAVING WATER TEMPERATURE (°F)
ATC	AUTOMATIC TEMPERATURE CONTROL		
ATM	ATMOSPHERE	M	MOTOR OPERATED
AWG	AMERICAN WIRE GAUGE	MAU	MAKEUP AIR UNIT
		MB	MIXING BOX
B	BOILER	MBH	1000 BTU/HR
BB	BASEBOARD	MC	MECHANICAL CONTRACTOR
BC	BACKWARD CURVED	MFR	MANUFACTURER
BD	BACKDRAFT DAMPER	MS	MINI-SPLIT
BF	BOILER FEED		
BHP	BRAKE HORSEPOWER	NC	NOISE CRITERIA
BI	BACKWARD INCLINED	NC	NORMALLY CLOSED
BMS	BUILDING MANAGEMENT SYSTEM	NIC	NOT IN CONTRACT
BOD	BOTTOM OF DUCT	NO	NORMALLY OPEN
BOJ	BOTTOM OF JOIST	NPS	NOMINAL PIPE SIZE
BOS	BOTTOM OF STEEL		
BTU	BRITISH THERMAL UNIT	OA	OUTSIDE AIR
		OAD	OUTSIDE AIR DAMPER
C	COMMON	OBD	OPPOSED BLADE DAMPER
CAV	CONSTANT AIR VOLUME		
CC	COOLING COIL	P	PUMP
CCW	COUNTER CLOCKWISE	PC	PLUMBING CONTRACTOR
CFM	CUBIC FEET PER MINUTE	PD	PRESSURE DROP
CH	CHILLER	PH	PHASE
C&I	CONTROLS & INSTRUMENTATION	PHC	PREHEAT COIL
CLG	CEILING LIGHT	PPM	PART PER MILLION
CMU	CONCRETE MASONRY UNIT	PROP	PROPELLER
CND	CONDENSATE	PRV	PRESSURE REDUCING VALVE
CONT	CONTINUATION	PSIA	PSI, ABSOLUTE
CORR	CORRIDOR	PSIG	PSI, GAUGE
CT	COOLING TOWER	QTY	QUANTITY
CU	CONDENSING UNIT		
CH	CABINET HEATER	R	REGISTER
CV	CONTROL VALVE	RA	RETURN AIR
CVS	CONTROL VALVE STATION	RD	RADIAL DAMPER
CW	CLOCKWISE	RF	RETURN/RELIEF AIR FAN
		RH	RELATIVE HUMIDITY
dB	DECIBEL	RHC	REHEAT COIL
DB	DRY BULB TEMPERATURE (°F)	SA	SUPPLY AIR
DDC	DIRECT DIGITAL CONTROL	SAF	SUPPLY AIR FAN
DH	DUCT HEATER	SC	SENSIBLE COOLER
DP	DEW POINT TEMPERATURE (°F)	SCFM	CFM, STANDARD CONDITIONS
DX	DIRECT EXPANSION	SD	SMOKE DETECTOR
		SEER	SEASONAL ENERGY EFFICIENCY RATIO
E	EXHAUST	SENS	SENSIBLE
EA	EXHAUST AIR	SP	STATIC PRESSURE
EAT	ENTERING AIR TEMPERATURE (°F)	SPS	STATIC PRESSURE SENSOR
EC	ELECTRICAL CONTRACTOR	SS	STAINLESS STEEL
EDR	EQUIVALENT DIRECT RADIATION	T	THERMOSTAT
EER	ENERGY EFFICIENCY RATIO	TA	TRANSFER AIR
EF	EXHAUST FAN	TCC	TEMPERATURE CONTROL CONTRACTOR
EFF	EFFICIENCY	TCP	TEMPERATURE CONTROL PANEL
ELEV	ELEVATION	TG	TRANSFER GRILL
ERV	ENERGY RECOVERY VENTILATOR	TOD	TOP OF DUCT
ESP	EXTERNAL STATIC PRESSURE	TOP	TOP OF PIPE
ET	EXPANSION TANK	TOS	TOP OF STEEL
EWT	ENTERING WATER TEMPERATURE (°F)	TSP	TOTAL STATIC PRESSURE
		TYP	TYPICAL
F&T	FLOAT & THERMOSTATIC	UH	UNIT HEATER
FA	FACE AREA	UNC	UNDERCUT
FC	FORWARD CURVED	UV	UNIT VENTILATOR
FC	FAN COIL	VA	VOLT-AMPERE
FP	FIRE PROTECTION	VAV	VARIABLE AIR VOLUME
FPM	FEET PER MINUTE	VD	VOLUME DAMPER
FT	FEET	VEL	VELOCITY
		VFD	VARIABLE FREQUENCY DRIVE
GA	GAUGE OR GAGE	VRF	VARIABLE REFRIGERANT FLOW
GC	GENERAL CONTRACTOR		
GEN	GENERATOR	WB	WET BULB TEMPERATURE (°F)
GH	GRAVITY HOOD	WC	WATER COLUMN
GPD	GALLONS PER DAY	WG	WATER GAUGE
GPH	GALLONS PER HOUR	WSHP	WATER SOURCE HEAT PUMP
GPM	GALLONS PER MINUTE	ΔT	TEMPERATURE DIFFERENCE (°F)
H	HUMIDIFIER		
HC	HEATING COIL		
HG	MERCURY		
HOA	HAND-OFF-AUTOMATIC		
HP	HORSEPOWER		
HR	HOUR		
HX	HEAT EXCHANGER		

MECHANICAL LEGEND

ANNOTATION SYMBOLS

	3D VIEW NUMBER
	DETAIL NUMBER
	SHEET NUMBER
	SECTION NUMBER
	AIR DEVICE MARK AND CFM
	AIR DEVICE MARK AND CFM - PROVIDE OPPOSED BLADE DAMPER
	AIR DEVICE MARK AND CFM - PROVIDE RADIAL DAMPER
	MECHANICAL EQUIPMENT MARK
	EXISTING MECHANICAL EQUIPMENT
	DEMOLISHED MECHANICAL EQUIPMENT
	POINT OF NEW CONNECTION
	POINT OF DISCONNECTION

HVAC CONTROL SYMBOLS

	THERMOSTAT
	ZONED THERMOSTAT
	ZONED THERMOSTAT - MASTER
	THERMOSTAT W/ LOCKABLE COVER
	WALL SWITCH
	HUMIDISTAT
	ROOM TEMPERATURE SENSOR
	ADJUSTABLE ROOM TEMPERATURE SENSOR
	COMBO ROOM TEMPERATURE & CO2 SENSOR
	ADJUSTABLE COMBO ROOM TEMP & CO2 SENSOR
	ROOM HUMIDITY SENSOR
	ROOM CO2 SENSOR
	BUILDING PRESSURE SENSOR
	STATIC PRESSURE SENSOR
	DIFFERENTIAL PRESSURE SENSOR
	CARBON MONOXIDE / NITRIC OXIDE SENSOR

HVAC DUCTWORK

	RECTANGULAR DUCT WIDTH x DEPTH
	ROUND DUCT DIAMETER
	OVAL DUCT WIDTH/DEPTH
	FLEXIBLE DUCT DIAMETER
	FLOOR/CEILING SUPPLY DIFFUSER
	FLOOR/CEILING RETURN GRILLE
	FLOOR/CEILING EXHAUST GRILLE
	SIDEWALL SUPPLY DIFFUSER
	SIDEWALL RETURN/EXHAUST GRILLE

NOTE: THIS IS A STANDARD LEGEND. NOT ALL PIPE TYPES AND SYMBOLS ARE NECESSARILY UTILIZED IN THE DRAWINGS.

HVAC DUCTWORK (CONT.)

	SUPPLY DUCT (SECTION VIEW)
	RETURN DUCT (SECTION VIEW)
	EXHAUST DUCT (SECTION VIEW)
	OUTDOOR AIR DUCT (SECTION VIEW)
	DUCT UP (PLAN VIEW)
	DUCT DOWN (PLAN VIEW)
	INCLINED RISE - IN DIRECTION OF AIRFLOW
	INCLINED DROP - IN DIRECTION OF AIRFLOW
	INTERNAL DUCT LINING
	ELBOW WITH TURNING VANES
	RADIUS ELBOW
	MANUAL VOLUME DAMPER
	REMOTE VOLUME DAMPER
	BACKDRAFT DAMPER
	ZONE DAMPER
	BYPASS DAMPER
	MOTORIZED DAMPER
	FIRE DAMPER
	FIRE/SMOKE DAMPER
	SMOKE DAMPER

GENERAL

	(E) NAME	EXISTING PIPE TO REMAIN
	(D) NAME	EXISTING PIPE TO BE DEMOLISHED
	NAME	NEW PIPING
		DIRECTION OF FLOW

HVAC PIPING

	HWS	HEATING WATER SUPPLY
	HWR	HEATING WATER RETURN
	CWS	CHILLED WATER SUPPLY
	CWR	CHILLED WATER RETURN
	CTS	COOLING TOWER SUPPLY
	CTR	COOLING TOWER RETURN
	HPWS	HEAT PUMP WATER SUPPLY
	HPWR	HEAT PUMP WATER RETURN
	HPS	HIGH PRESSURE STEAM
	MPS	MEDIUM PRESSURE STEAM
	LPS	LOW PRESSURE STEAM
	CND	STEAM CONDENSATE RETURN
	ATV	ATMOSPHERIC VENT
	REF	REFRIGERANT (LIQUID AND SUCTION)

PIPE FITTINGS

	ELBOW
	PIPE BREAK
	PIPE UP
	PIPE DOWN
	CHANGE IN ELEVATION OF PIPE
	SIDE CONNECTION OR TEE FITTING
	TOP CONNECTION
	BOTTOM CONNECTION
	UNION
	FLANGE
	CAPPED OUTLET
	BLIND FLANGE

VALVES

	COMBINATION Y-STRAINER & SHUTOFF VALVE
	COMBINATION AUTOFLOW & SHUTOFF VALVE
	MANUAL BALANCING VALVE
	AUTOFLOW VALVE
	ISOLATION VALVE - SEE SPECIFICATIONS FOR TYPE
	3-WAY VALVE
	BUTTERFLY VALVE
	HOSE END DRAIN
	STRAINER
	MANUAL BALANCING VALVE
	AUTOFLOW VALVE
	CHECK VALVE
	BACKFLOW PREVENTER
	PRESSURE REDUCING VALVE
	TEMPERATURE AND PRESSURE RELIEF VALVE
	SOLENOID VALVE
	2-WAY TEMPERATURE CONTROL VALVE
	3-WAY TEMPERATURE CONTROL VALVE

PIPING SPECIALTIES

	AUTOMATIC AIR VENT
	MANUAL AIR VENT - 1/4" BALL VALVE WITH 12" SOFT COPPER TUBE
	PRESSURE / TEMPERATURE PORT
	DDC TEMPERATURE SENSOR
	DDC PRESSURE SENSOR
	PIPE WELL - EMPTY
	FLOW SWITCH
	PRESSURE SWITCH
	PRESSURE GAUGE
	PRESSURE GAUGE & COCK
	TEMPERATURE GAUGE
	SCHEMATIC PUMP
	FLEXIBLE CONNECTOR
	PIPE GUIDES
	ANCHOR
	THERMAL EXPANSION LOOP

MECH. GENERAL NOTES

INSTALLATION:
 A. NEW PIPING, DUCTWORK AND EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH THE CURRENTLY ADOPTED INTERNATIONAL MECHANICAL AND INTERNATIONAL BUILDING CODES.
 B. EQUIPMENT SHALL BE INSTALLED LEVEL, PLUMB, AND FIRMLY ANCHORED IN LOCATIONS INDICATED ON PLAN. OBSERVE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND RECOGNIZED INDUSTRY PRACTICES TO ENSURE THAT PRODUCTS SERVE THEIR INTENDED FUNCTION.
 C. INSTALL EQUIPMENT, DUCTWORK, AND PIPING SO AS TO MAINTAIN CODE REQUIRED CLEARANCES FOR ELECTRICAL AND TELECOMMUNICATION EQUIPMENT.
 D. ELEMENTS PENETRATING BUILDING COMPONENTS (ROOF ASSEMBLIES, WALL ASSEMBLIES, ETC.) SHALL BE SEALED WEATHER AND WATER TIGHT. COORDINATE PENETRATIONS WITH GENERAL CONTRACTOR TO PATCH TO THE SATISFACTION OF THE ARCHITECT OR ENGINEER.
 E. PER IECC 2021 EQUIPMENT MANUFACTURED AFTER 1/1/2023 SHALL MEET MINIMUM SEER2 RATINGS.

COORDINATION:
 A. IT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO FIELD COORDINATE THE LOCATION OF EQUIPMENT, ROUTING OF DUCTWORK, AND ROUTING OF PIPING WITH OTHER TRADES.
 B. IT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO REVIEW THE DRAWINGS OF OTHER DISCIPLINES AND PROVIDE THE NECESSARY LABOR AND MATERIALS REQUIRED FOR A COMPLETE INSTALLATION.
 C. COORDINATE THE INSTALLATION OF GRILLES, REGISTERS AND DIFFUSERS WITH THE ARCHITECTURAL REFLECTED CEILING PLANS, THE ELECTRICAL LIGHTING PLANS, AND IF RELEVANT, THE TELECOMMUNICATION AND FIRE SPRINKLER PLANS.

ELECTRICAL COORDINATION:
 A. SEE THE MEP COORDINATION SCHEDULE FOR ELECTRICAL INFORMATION. COORDINATE WITH OTHER TRADES TO ENSURE THAT ELECTRICAL DISCONNECTS, MOTOR STARTERS, VARIABLE FREQUENCY DRIVES, CONTROLS, AND ELECTRICAL ACCESSORIES ARE FURNISHED AND/OR INSTALLED BY THE APPROPRIATE TRADE.

FREEZE PROTECTION:
 A. THE MECHANICAL CONTRACTOR SHALL FILL THE HYDRONIC SYSTEMS WITH THE FOLLOWING SOLUTION:
 a. HEATING HOT WATER SYSTEM: 0% PROPYLENE GLYCOL & 100% DISTILLED WATER - GLYCOL SHALL INCLUDE CORROSION INHIBITORS.
 B. HEATING HOT WATER SYSTEMS WITH BOILERS THAT HAVE ALUMINUM HEAT EXCHANGERS SHALL USE HERCULES CRYO-TEK 100 / AL PROPYLENE GLYCOL OR APPROVED EQUAL PRODUCT.
 C. SEE SPECIFICATION SECTION 232113 FOR ADDITIONAL CHEMICAL TREATMENT REQUIREMENTS.

SITE ELEVATION:
 A. EQUIPMENT SHALL BE SELECTED FOR THE PROJECT ELEVATION OF 4,900'.

MECHANICAL SHEET INDEX

NUMBER	SHEET NAME
M01	MECHANICAL GENERAL NOTES
M02	MECHANICAL SCHEDULES & DETAILS
MD10	MECHANICAL DEMOLITION PLAN
M10	MECHANICAL FLOOR PLAN

100% CONSTRUCTION DOCUMENTS

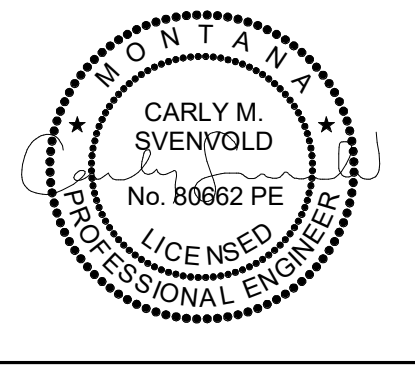


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REVIEWED BY:	CMS	
REV.	DESCRIPTION	DATE



PPA#21-0028
 MMI#6161.007
 AAI#21062.01
 SHEET TITLE
 MECHANICAL
 GENERAL NOTES

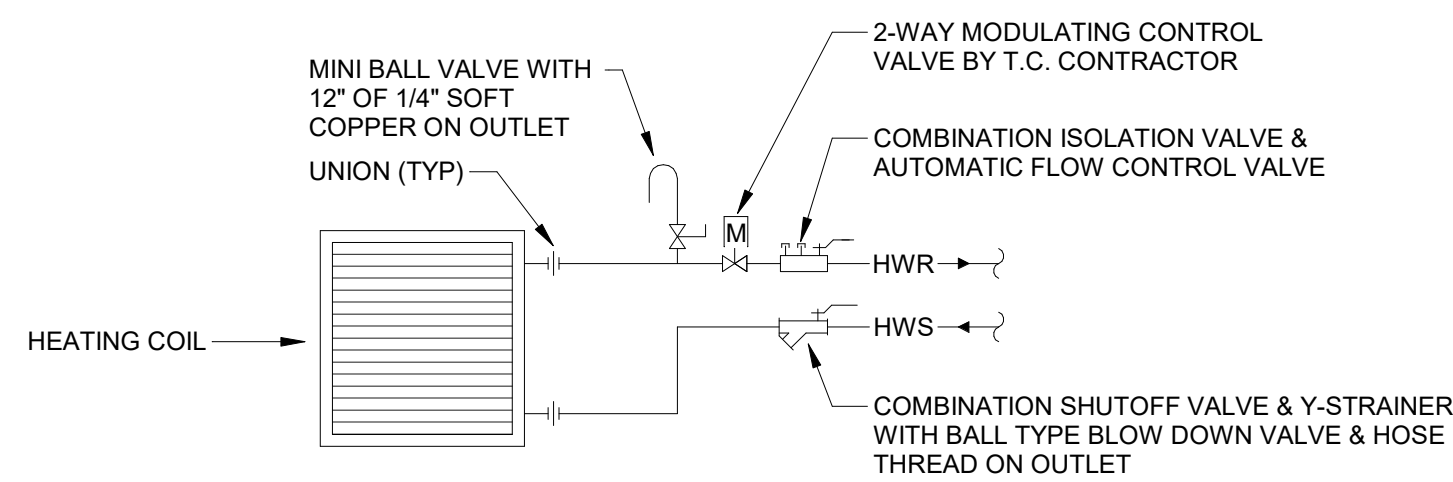
SHEET
M01
 DATE
03-08-23

GRILLE, REGISTER AND DIFFUSER SCHEDULE													
MARK	MFGR	MODEL	DESCRIPTION	FUNCTION	MAX CFM	NC AT MAX CFM	THROW AT MAX CFM (FT)	PRESSURE DROP AT MAX CFM (in. W.C.)	NECK SIZE (W"xH")	DAMPER TYPE	MATERIAL	FINISH	REMARKS
S-1	PRICE	520	18" x 12" DOUBLE DEFLECTION DUCT MOUNTED GRILLE	SUPPLY	500	-	21	0.04	18" x 12"	MANUAL	STEEL	BY ARCH	SEE NOTES
S-2	PRICE	SCD	24" x 24" SQUARE CEILING DIFFUSER	SUPPLY	400	21	11	0.04	10"ø	MANUAL	STEEL	BY ARCH	SEE NOTES
T-1	PRICE	510Z	24" x 16" 0" DEFLECTION WALL MOUNT GRILLE	TRANSFER	700	-	-	0.01	24" x 16"	NONE	STEEL	BY ARCH	SEE NTOES

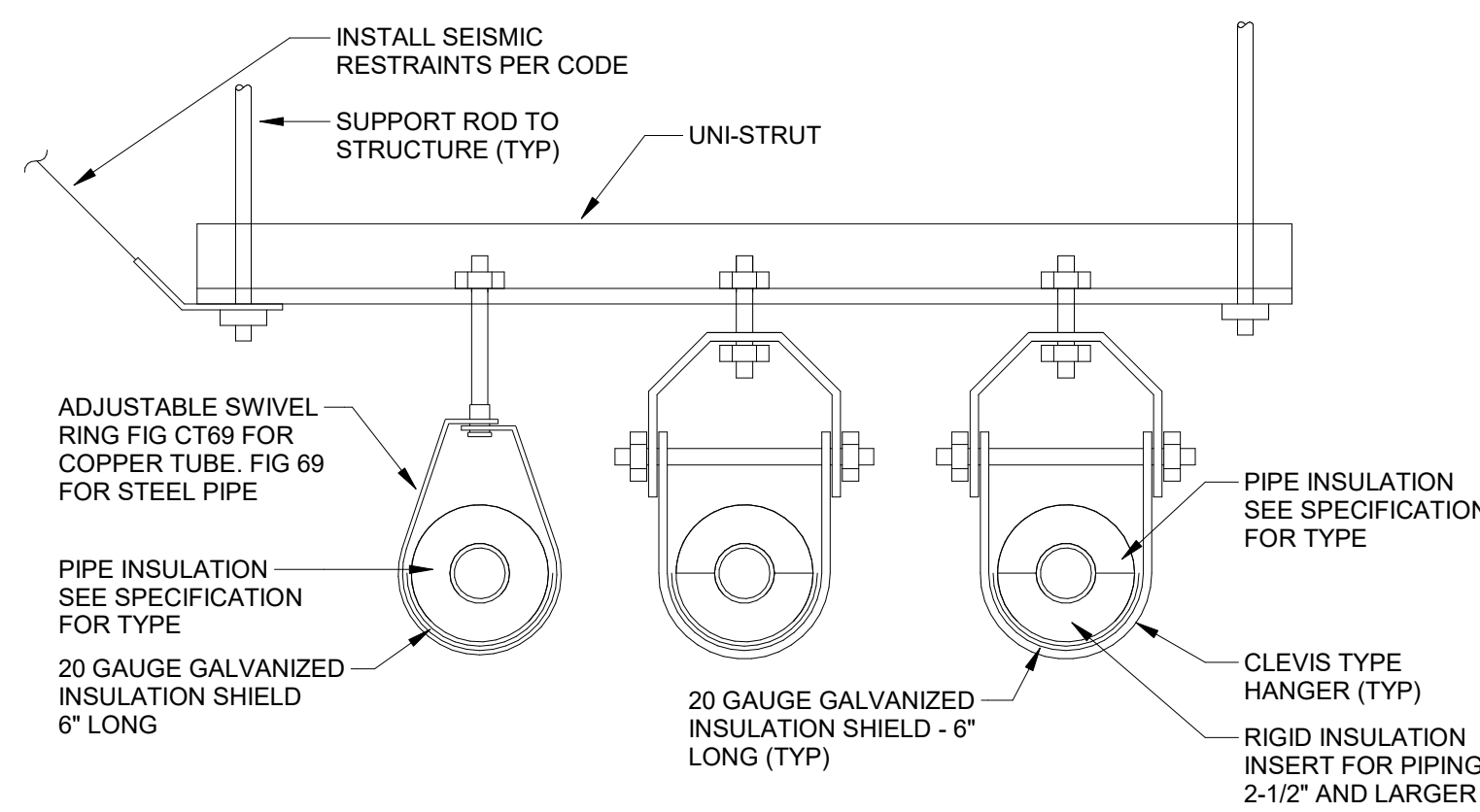
NOTES: PROVIDE MANUAL BALANCING DAMPER AT LOCATIONS WHERE A SPECIFIED AIR VOLUME IS REQUIRED I.E. FOR SUPPLY AND EXHAUST ONLY. COORDINATE FRAME AND MOUNTING TYPE WITH CEILING TYPES. SEE ARCHITECTURAL PLANS FOR CEILING TYPES. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ALL FITTINGS AND ACCESSORIES REQUIRED FOR A COMPLETE INSTALLATION. SCHEDULES N.C. VALUES ARE VALID FOR SCHEDULE AIR FLOW ONLY AND REPRESENT A MAXIMUM ACCEPTABLE N.C. VALUE. SUBSTITUTED EQUIPMENT SHALL HAVE N.C. VALUE EQUAL TO OR BELOW THE SCHEDULES N.C. AT THE AIR FLOW LISTED ON THE PLANS.

HOT WATER COIL SCHEDULE														
MARK	MFGR	MODEL#	CAPACITY (MBH)	AIRFLOW (CFM)	FACE VELOCITY (FT/MIN)	AIR PRESSURE DROP (in. W.C.)	ROWS / FPI	FLUID	EWT / LWT	GPM	WPD (FT)	EAT / LAT	DUCT SIZE (W"xH")	REMARKS
RH-13A	TEMTRON	5WC-10-15x15x2-6AL	39.3	1200	768	0.19	2 / 6	100% WATER	180 / 160	4.00	1.1	60 / 95	14" x 14"	SEE NOTES
RH-13B	TEMTRON	5WC-20-15x15x2-6AL	38.1	1140	730	0.17	2 / 6	100% WATER	180 / 160	3.00	3.9	60 / 95	14" x 14"	SEE NOTES

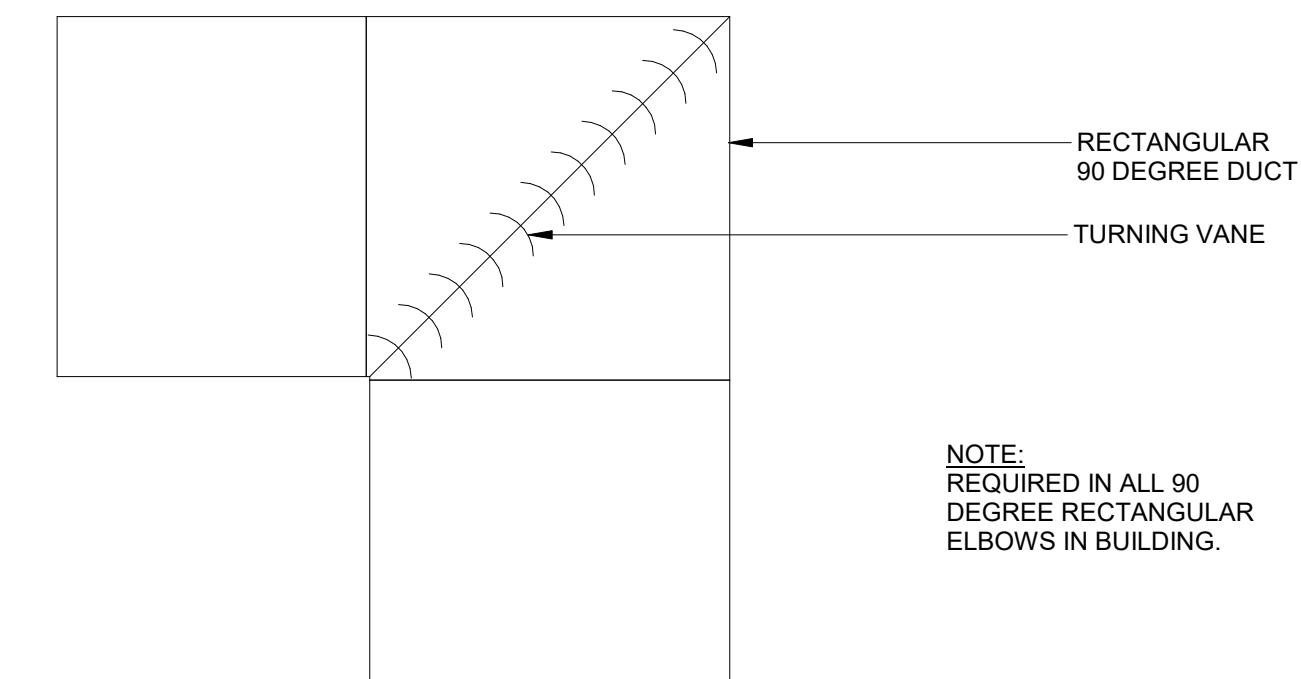
NOTES: COIL SELECTED AT PROJECT ELEVATION.



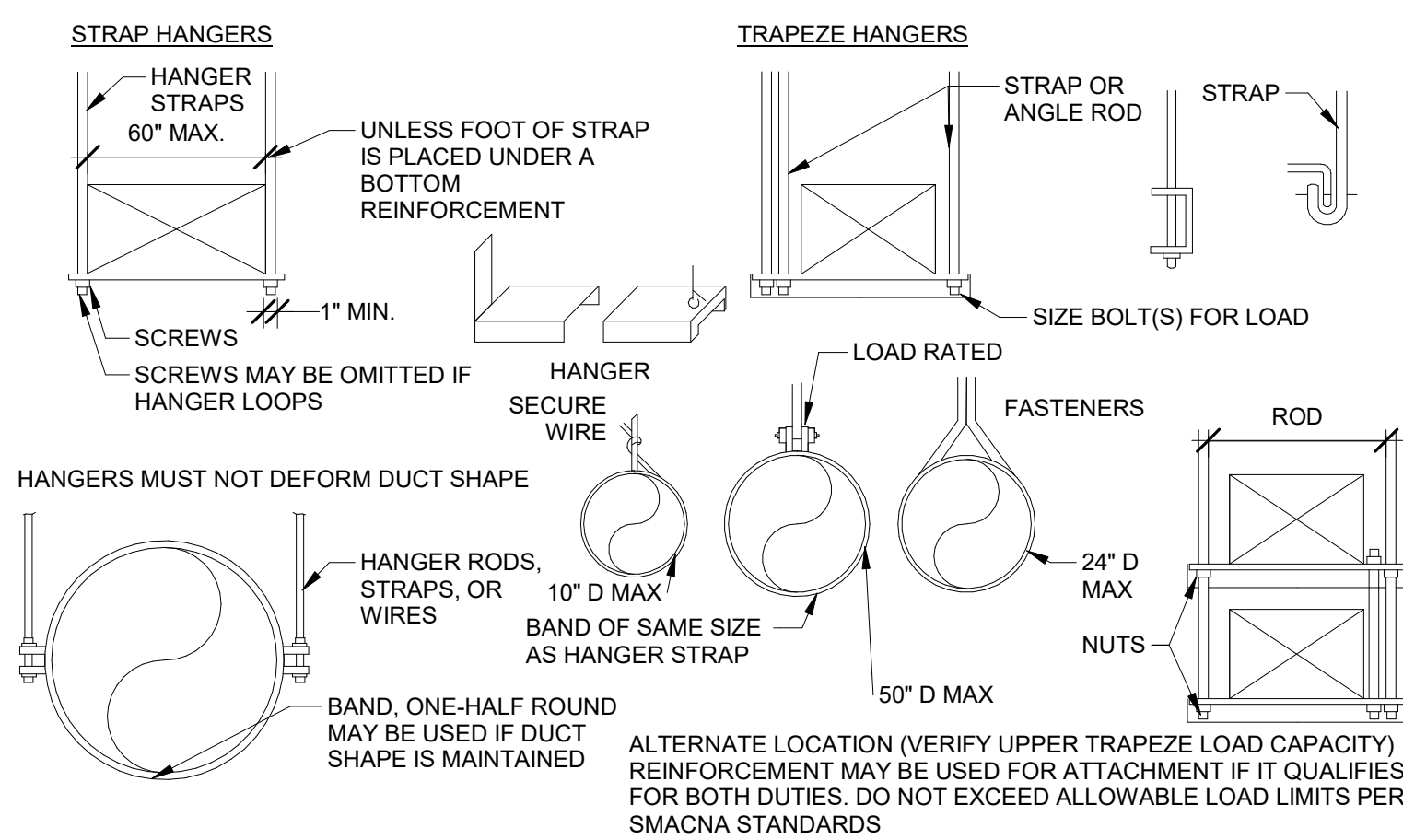
1 HOT WATER COIL PIPING DETAIL
N.T.S.



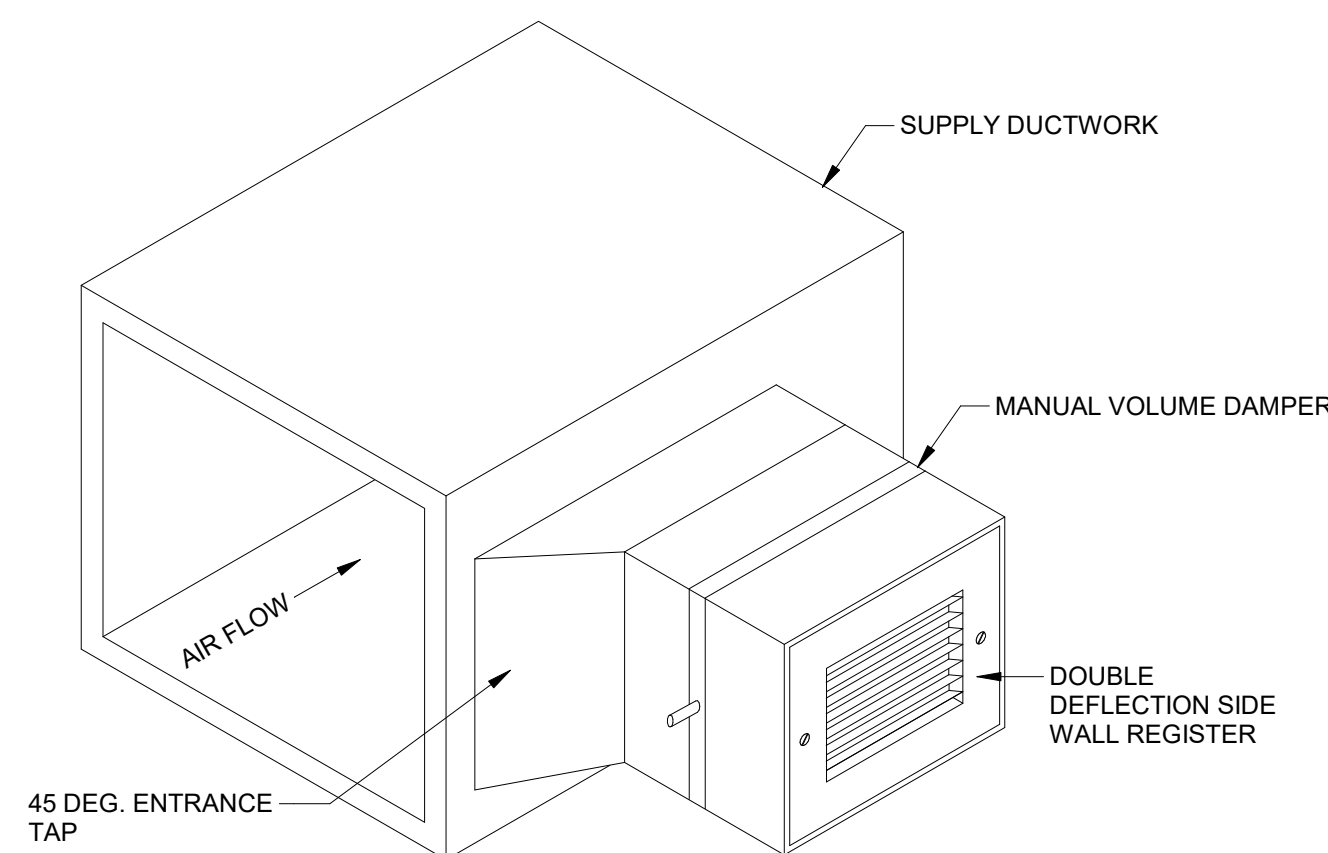
2 PIPE HANGER DETAIL
N.T.S.



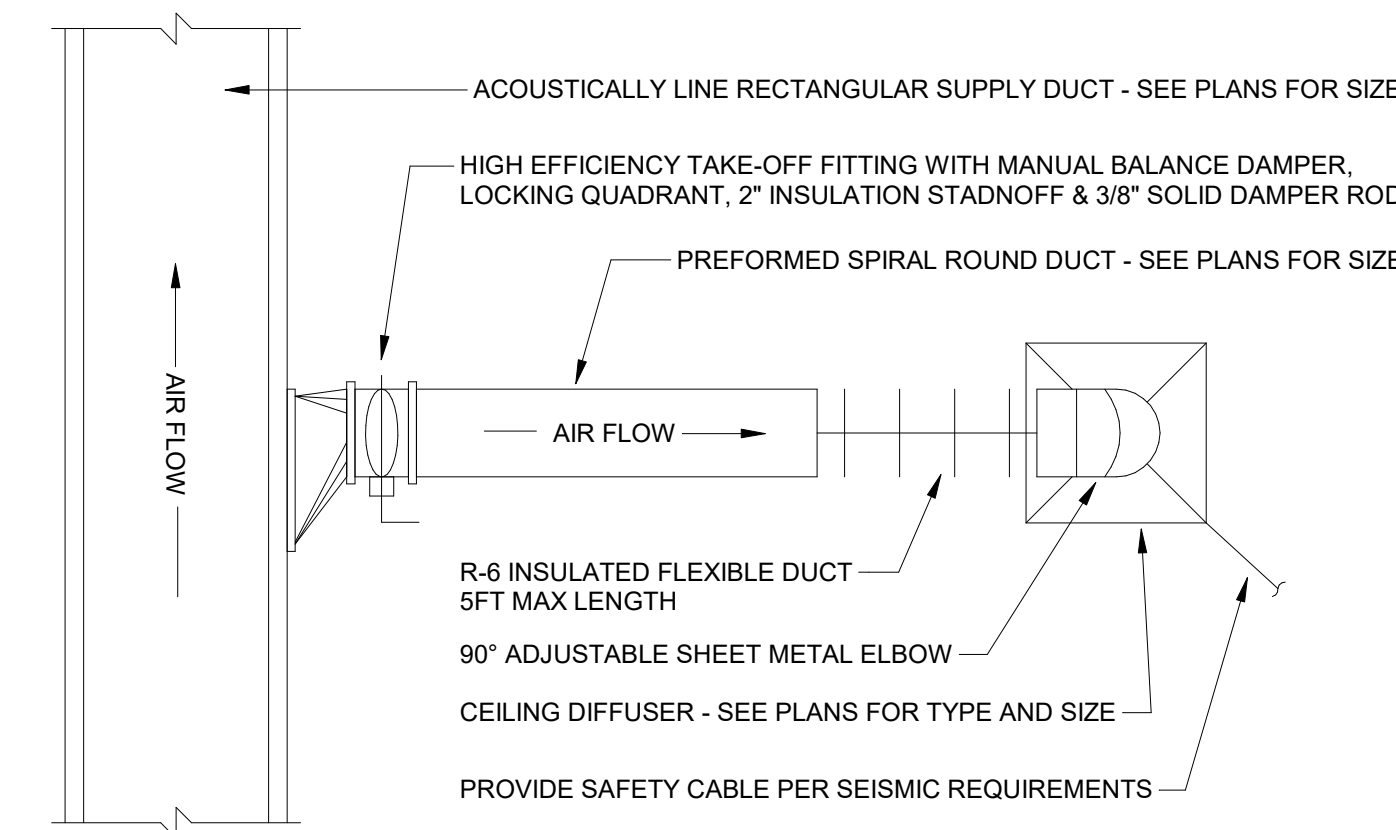
3 RECTANGULAR DUCT TURNING VANE DETAIL
N.T.S.



4 DUCT SUPPORT DETAIL
N.T.S.



5 RECTANGULAR DUCT MOUNTED GRILLE DETAIL
N.T.S.



6 CEILING SUPPLY DIFFUSER DETAIL
N.T.S.



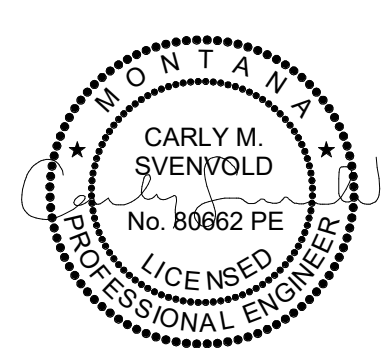
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SHEET TITLE
MECHANICAL
SCHEDULES &
DETAILS
SHEET
M02
DATE
03-08-23

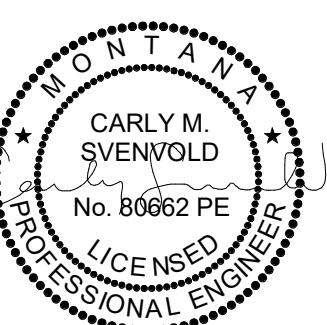


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PPA#21-0028
MMI#6161.007
AAI#21062.01
SHEET TITLE
MECHANICAL
DEMOLITION PLAN

SHEET
MD10

DATE
03-08-23

EXISTING EQUIPMENT NOTE

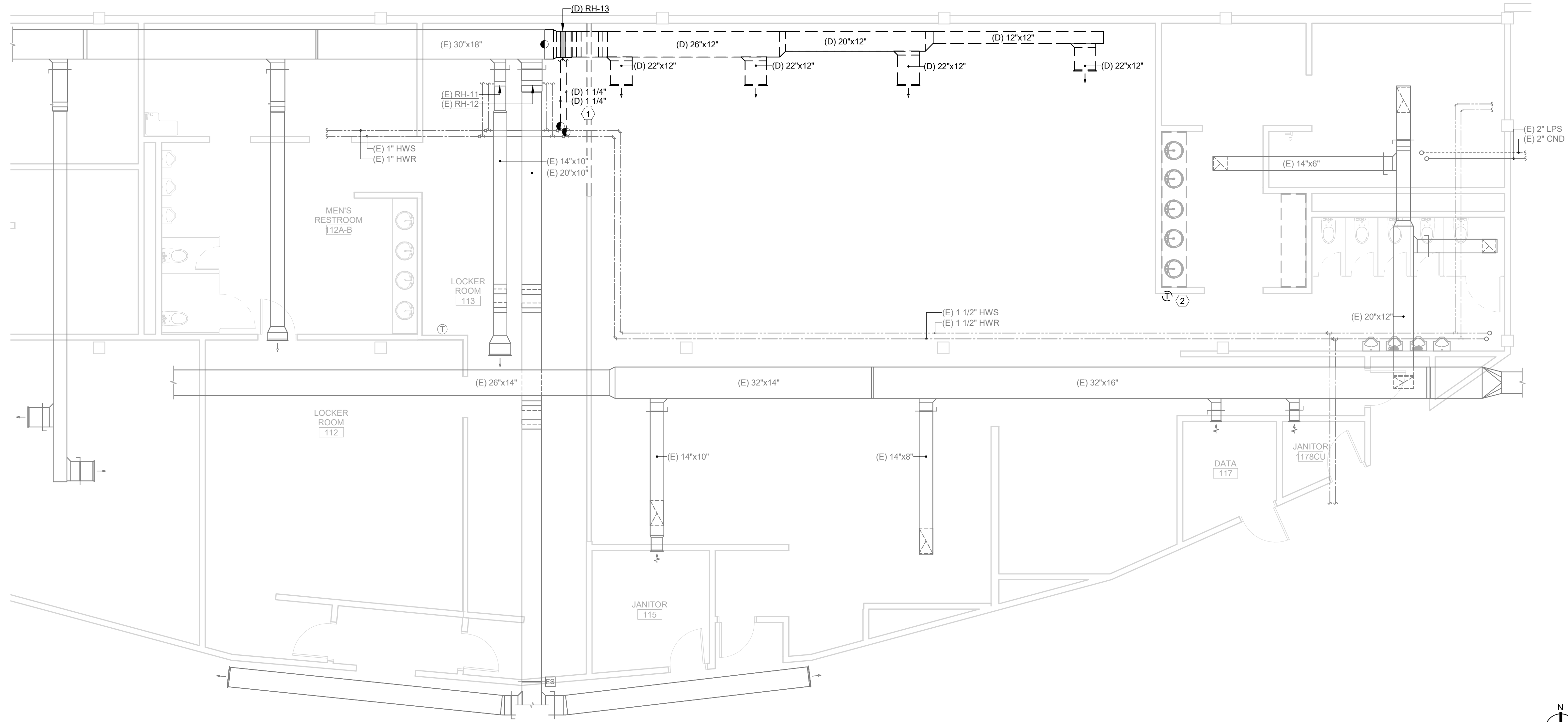
EXISTING EQUIPMENT AND SYSTEMS BEING MODIFIED AND REUSED MUST BE TESTED BY THE CONTRACTOR FOR ANY DEFICIENCIES AND REPORTED TO THE ENGINEER AND OWNER PRIOR TO REMOVING EQUIPMENT OR SYSTEM COMPONENTS FROM ORIGINAL LOCATION. ONCE REMOVED, EXISTING EQUIPMENT SLATED FOR REUSE MUST BE STORED IN A PROTECTED LOCATION FREE FROM DUST AND DEBRIS. EXISTING EQUIPMENT SHALL BE INSTALLED IN THE NEW LOCATION SHOWN ON DRAWINGS AND RESTORED TO THE CONDITION AND OPERATION AS TESTED PRIOR TO REMOVAL OF EQUIPMENT. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE START-UP OF ANY EXISTING EQUIPMENT.

MECHANICAL DEMO NOTES

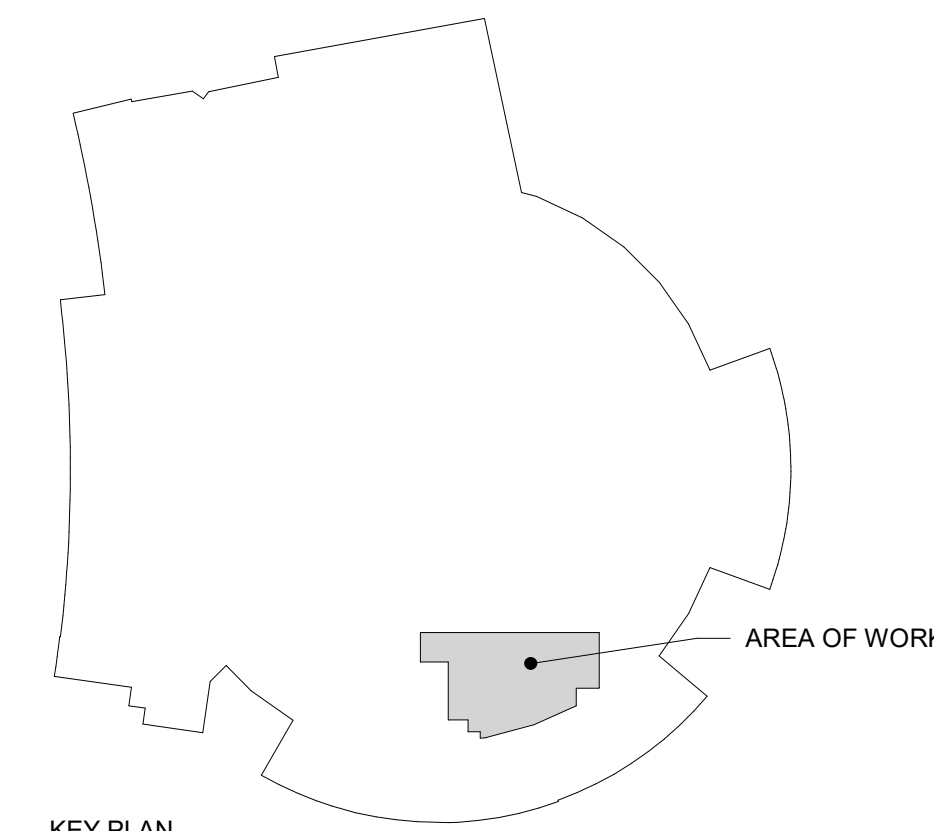
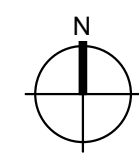
- A. LOCATIONS AND DIMENSIONS OF EXISTING FACILITIES IDENTIFIED ON THIS DRAWING ARE APPROXIMATE AND REPRESENT THE BEST AVAILABLE INFORMATION BASED ON A COMBINATION OF FIELD INVESTIGATIONS AND VARIOUS DESIGN AND RECORD DRAWINGS AVAILABLE AT THE TIME OF THE DESIGN. FIELD VERIFY LOCATIONS AND DIMENSIONS PRIOR TO AND DURING PERFORMANCE OF THE WORK. PROVIDE DEMOLITION WORK NECESSARY TO COMPLETE THE SCOPE OUTLINED IN THE CONSTRUCTION DOCUMENTS.
- B. EXISTING MECHANICAL EQUIPMENT, DUCTWORK, AND PIPING SHOWN AS DARK AND DASHED SHALL BE DEMOLISHED. EXISTING MECHANICAL EQUIPMENT, DUCTWORK, AND PIPING SHOWN LIGHT SHALL REMAIN UNCHANGED.
- C. THE MECHANICAL CONTRACTOR SHALL COORDINATE SALVAGE OF REMOVED EQUIPMENT IN GOOD CONDITION WITH THE OWNER. THE MECHANICAL CONTRACTOR SHALL DISPOSE OF UNWANTED EQUIPMENT.
- D. COORDINATE UTILITY OUTAGES WITH THE GENERAL CONTRACTOR THROUGHOUT THE DURATION OF CONSTRUCTION. NOTIFICATION MUST BE GIVEN TO THE OWNER AT LEAST A WEEK PRIOR TO ANY PLANNED OUTAGES.
- E. COORDINATE WITH THE GENERAL CONTRACTOR TO PATCH AND REPAIR ROOF, WALL, CEILING, OR FLOOR PENETRATIONS ASSOCIATED WITH THE DEMOLITION OF THE EXISTING MECHANICAL SYSTEMS.

KEY NOTES:

- 1. DEMOLISH HYDRONIC PIPING BACK TO EXISTING ISOLATION VALVES. PRESERVE VALVES FOR RECONNECTION.
- 2. DEMOLISH THERMOSTAT AND ASSOCIATED CONTROL WIRING. CONTROL WORK TO BE ACCOMPLISHED BY EXISTING CONTROL VENDOR (MECHANICAL TECHNOLOGY INCORPORATED) PER OWNER REQUEST.



1 LEVEL 1 MECHANICAL DEMOLITION PLAN
3/16" = 1'-0"



100% CONSTRUCTION DOCUMENTS

EXISTING SYSTEM NOTE

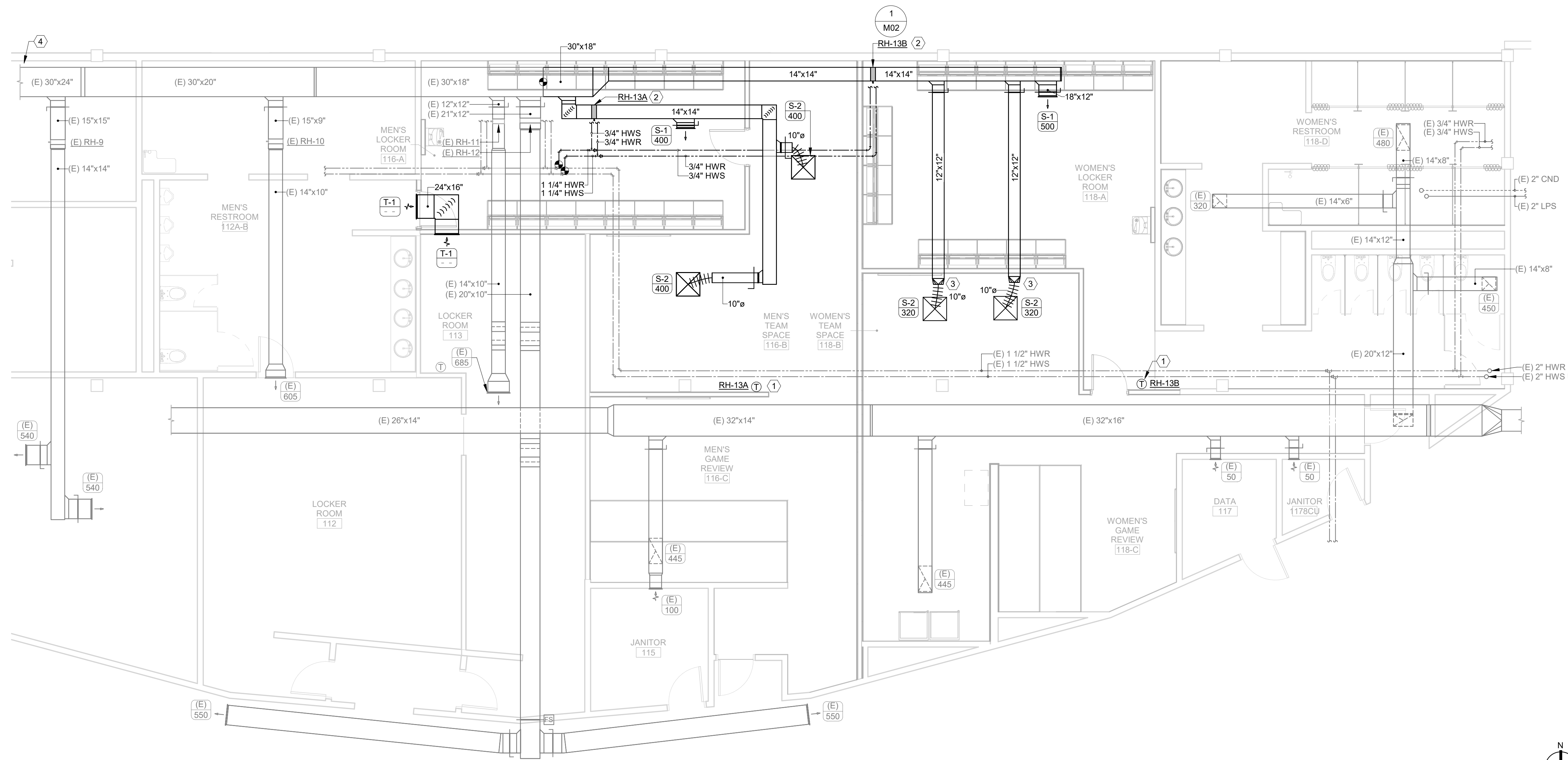
EXISTING SYSTEMS BEING MODIFIED AND REUSED MUST BE TESTED BY THE CONTRACTOR FOR ANY DEFICIENCIES AND REPORTED TO THE ENGINEER AND OWNER PRIOR TO REMOVING COMPONENTS FROM ORIGINAL LOCATION. EXISTING SYSTEM SHALL BE MODIFIED AS SHOWN AND RESTORED TO THE CONDITION AND OPERATION AS TESTED PRIOR TO REMOVAL OF COMPONENTS.

MECHANICAL PLAN NOTES

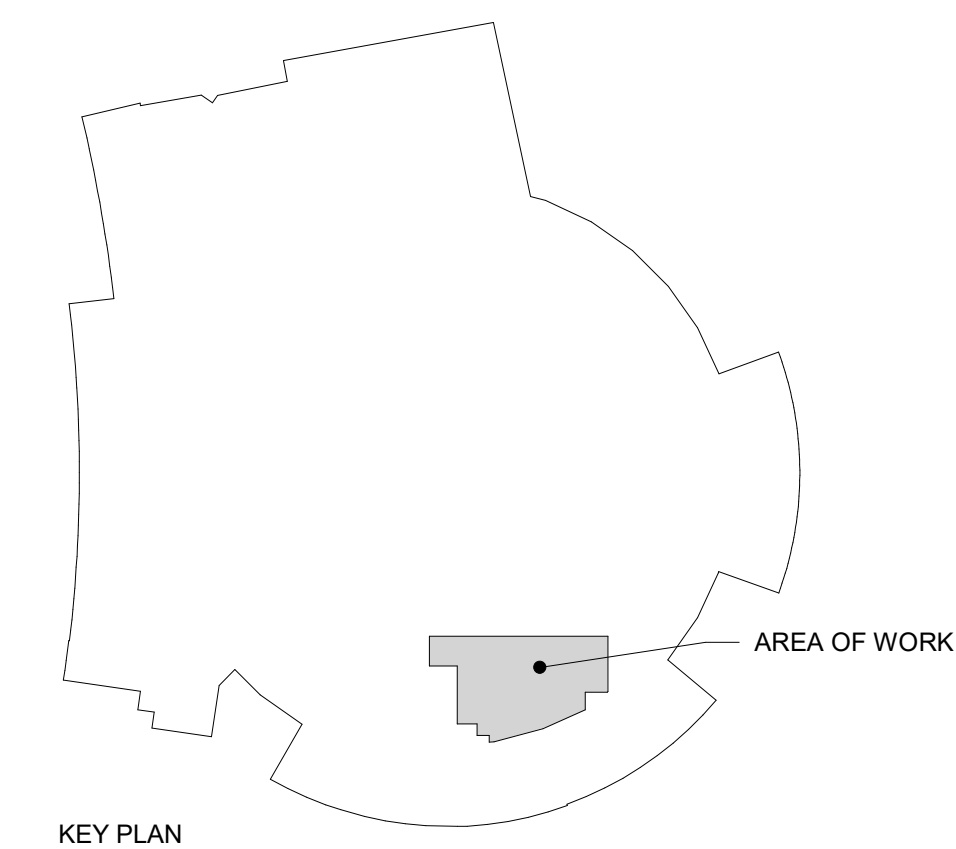
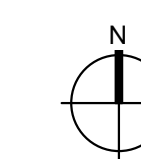
- VERIFY THE LOCATION OF THERMOSTATS AND SENSORS WITH THE ARCHITECT AND ENGINEER PRIOR TO INSTALLATION. INSTALL THERMOSTATS 48" ABOVE FINISHED FLOOR PER ADA REQUIREMENTS.
- PROVIDE AND INSTALL SEISMIC BRACING FOR EQUIPMENT, DUCTWORK AND PIPING PER THE REQUIREMENTS OF THE CURRENTLY ADOPTED INTERNATIONAL BUILDING CODE.
- FLEXIBLE DUCTWORK BETWEEN BRANCH DUCTS AND GRILLES, REGISTERS, OR DIFFUSERS SHALL BE LIMITED TO 5 FT. FLEXIBLE DUCT SHALL NOT BE USED IN PLACE OF ELBOWS.
- PROVIDE AND INSTALL FIRE, SMOKE, OR COMBINATION FIRE/SMOKE DAMPERS WHERE DUCTWORK PASSES THROUGH RATED ASSEMBLIES. ASSOCIATED DUCT DETECTORS SHALL BE ADDRESSABLE. SMOKE DAMPERS AND COMBINATION SMOKE/FIRE DAMPERS SHALL INCLUDE A KEYPED REMOTE TEST SWITCH LOCATED IN AN ACCESSIBLE LOCATION. FIELD COORDINATE THE LOCATION OF TEST SWITCHES WITH THE ARCHITECT AND ENGINEER PRIOR TO INSTALLATION.
- SEAL DUCT AND PIPE PENETRATIONS THROUGH FIRE RATED ASSEMBLIES WITH A UL-APPROVED FIRE STOP SYSTEM.
- PROVIDE ACCESS DOORS TO ALLOW SERVICE AND INSPECTION OF EQUIPMENT, VALVES, DAMPERS AND DEVICES INSTALLED ABOVE NON-REMOVABLE CEILINGS. COORDINATE SUCH INSTALLATIONS WITH THE ARCHITECT AND ENGINEER.
- PIPING SHALL BE IDENTIFIED WITH PIPE LABELS MARKED AT A MAXIMUM OF EVERY 25 FT. VALVES SHALL BE IDENTIFIED WITH BRASS OR ALUMINUM VALVE TAGS.
- PROVIDE AND INSTALL PIPE GUIDES, EXPANSION JOINTS, AND HANGERS PER MANUFACTURER'S RECOMMENDATIONS.
- PIPING WALL PENETRATIONS SHALL BE FINISHED WITH A CHROME ESCUTCHEON PLATE.
- MINIMUM TERMINAL DEVICE BRANCH PIPE SIZE IS 3/4" UNLESS OTHERWISE NOTED.
- PROVIDE HIGH POINT AIR VENTS, LOW POINT DRAINS (WITH CAPPED HOSE CONNECTIONS), AND SLOPE PIPING AS NECESSARY TO ALLOW FOR COMPLETE DRAINAGE OF THE HYDRONIC SYSTEMS.
- EXPOSED DUCTWORK TO BE HOT DIPPED GALVANIZED STEEL AND PAINTED PER ARCHITECTURAL. CONTRACTOR TO CLEAN AND DRY DUCTWORK PRIOR TO PAINTING.

KEY NOTES:

- TIE NEW THERMOSTAT INTO EXISTING BAS. CONTROL WORK TO BE ACCOMPLISHED BY EXISTING CONTROL VENDOR (MECHANICAL TECHNOLOGY INCORPORATED) PER OWNER REQUEST.
- INSTALL 12"x12" DUCT ACCESS DOOR IMMEDIATELY UPSTREAM OF REHEAT COIL.
- COORDINATE DUCT ROUTING WITH (E) PIPE IN THIS AREA.
- TOTAL SYSTEM SUPPLY AIR NOTED AS 5810 CFM ON AS-BUILT DOCUMENTS. REFER TO EXISTING SYSTEM NOTE FOR RE-BALANCING OF SYSTEM.



1 LEVEL 1 MECHANICAL PLAN
3/16" = 1'-0"



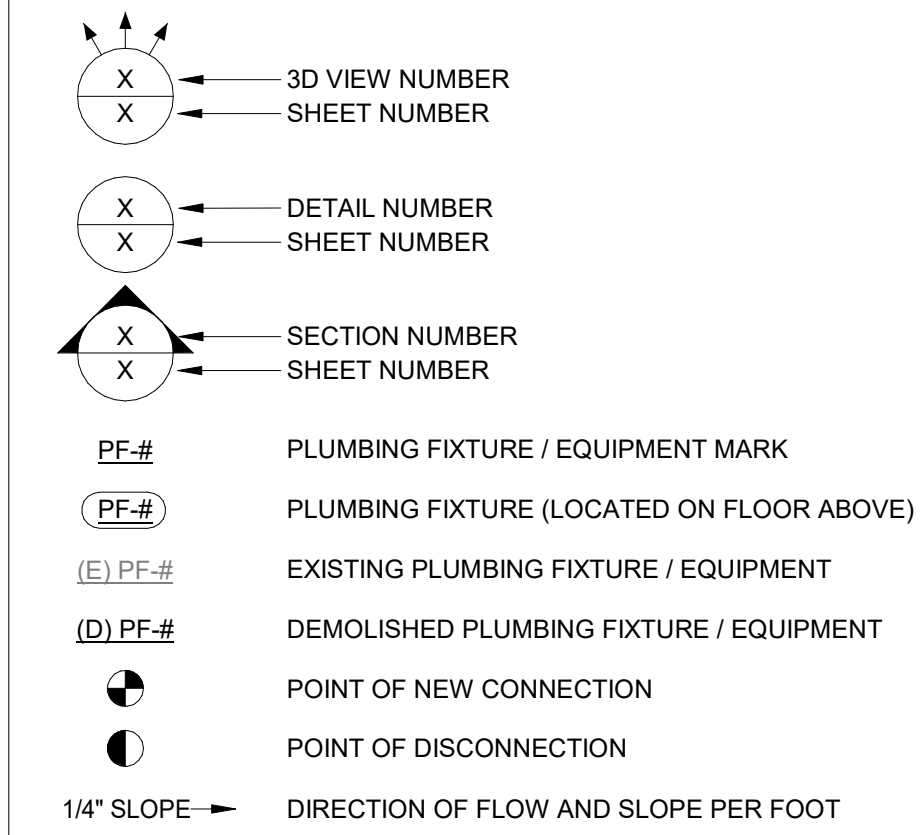
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ABBREVIATIONS

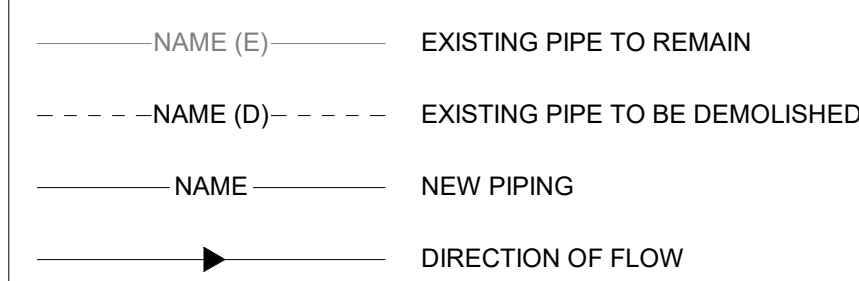
ACC	AIR COOLED CONDENSER	ID	INSIDE DIAMETER
ACU	AIR CONDITIONING UNIT	IFB	INTEGRAL FACE & BYPASS
AD	ACCESS DOOR	IGV	INLET GUIDE VANES
ADJ	ADJUSTABLE	IPS	IRON PIPE SIZE
AF	AIR FOIL	IU	INDUCTION UNIT
AFB	ABOVE FINISHED FLOOR	KW	KILOWATTS
AFS	ABOVE FINISHED GRADE	KWH	KILOWATT HOUR
AFR	ABOVE FINISHED ROOF	LAT	LEAVING AIR TEMPERATURE (°F)
AFS	AIR FLOW STATION	LF	LINEAR FEET
AHU	AIR HANDLING UNIT	LWT	LEAVING WATER TEMPERATURE (°F)
AP	ACCESS PANEL	M	MOTOR OPERATED
ATC	AUTOMATIC TEMPERATURE CONTROL	MAU	MAKEUP AIR UNIT
ATM	ATMOSPHERE	MB	MIXING BOX
AWG	AMERICAN WIRE GAUGE	MBH	1000 BTU/HR
B	BOILER	MC	MECHANICAL CONTRACTOR
BB	BASEBOARD	MFR	MANUFACTURER
BC	BACKWARD CURVED	MS	MINI-SPLIT
BD	BACKDRAFT DAMPER	NC	NOISE CRITERIA
BF	BOILER FEED	NC	NORMALLY CLOSED
BHP	BRAKE HORSEPOWER	NC	NOT IN CONTRACT
BI	BACKWARD INCLINED	NO	NORMALLY OPEN
BMS	BUILDING MANAGEMENT SYSTEM	NPS	NOMINAL PIPE SIZE
BOD	BOTTOM OF DUCT	OA	OUTSIDE AIR
BOJ	BOTTOM OF JOIST	OAD	OUTSIDE AIR DAMPER
BOS	BOTTOM OF STEEL	OBD	OPPOSED BLADE DAMPER
BTU	BRITISH THERMAL UNIT	P	PUMP
C	COMMON	PC	PLUMBING CONTRACTOR
CAV	CONSTANT AIR VOLUME	PD	PRESSURE DROP
CC	COOLING COIL	PH	PHASE
CCW	COUNTER CLOCKWISE	PHC	PREHEAT COIL
CFM	CUBIC FEET PER MINUTE	PPM	PART PER MILLION
CH	CHILLER	PROP	PROPELLER
C&I	CONTROLS & INSTRUMENTATION	PRV	PRESSURE REDUCING VALVE
CLG	CEILING	PSIA	PSI, ABSOLUTE
CMU	CONCRETE MASONRY UNIT	PSIG	PSI, GAUGE
CND	CONDENSATE	QTY	QUANTITY
CONT	CONTINUATION	R	REGISTER
CORR	CORRIDOR	RA	RETURN AIR
CT	COOLING TOWER	RD	RADIAL DAMPER
CU	CONDENSING UNIT	RF	RETURN/RELIEF AIR FAN
CH	CABINET HEATER	RH	RELATIVE HUMIDITY
CV	CONTROL VALVE	RHC	REHEAT COIL
CVS	CONTROL VALVE STATION	SA	SUPPLY AIR
CW	CLOCKWISE	SAF	SUPPLY AIR FAN
dB	DECIBEL	SC	SENSIBLE COOLER
DB	DRY BULB TEMPERATURE (°F)	SCFM	CFM, STANDARD CONDITIONS
DDC	DIRECT DIGITAL CONTROL	SD	SMOKE DETECTOR
DH	DUCT HEATER	SEER	SEASONAL ENERGY EFFICIENCY RATIO
DP	DEW POINT TEMPERATURE (°F)	SENS	SENSIBLE
DX	DIRECT EXPANSION	SP	STATIC PRESSURE
E	EXHAUST	SPS	STATIC PRESSURE SENSOR
EA	EXHAUST AIR	SS	STAINLESS STEEL
EAT	ENTERING AIR TEMPERATURE (°F)	T	THERMOSTAT
EC	ELECTRICAL CONTRACTOR	TA	TRANSFER AIR
EDR	EQUIVALENT DIRECT RADIATION	TCC	TEMPERATURE CONTROL CONTRACTOR
EER	ENERGY EFFICIENCY RATIO	TCP	TEMPERATURE CONTROL PANEL
EF	EXHAUST FAN	TG	TRANSFER GRILL
EFF	EFFICIENCY	TOD	TOP OF DUCT
ELEV	ELEVATION	TOP	TOP OF PIPE
ERV	ENERGY RECOVERY VENTILATOR	TOS	TOP OF STEEL
ESP	EXTERNAL STATIC PRESSURE	TSP	TOTAL STATIC PRESSURE
ET	EXPANSION TANK	TYP	TYPICAL
EWT	ENTERING WATER TEMPERATURE (°F)	UH	UNIT HEATER
F&T	FLOAT & THERMOSTATIC	UNC	UNDERCUT
FA	FACE AREA	UV	UNIT VENTILATOR
FC	FORWARD CURVED	VA	VOLT-AMPERE
FC	FAN COIL	VAV	VARIABLE AIR VOLUME
FP	FIRE PROTECTION	VD	VOLUME DAMPER
PPM	FEET PER MINUTE	VEL	VELOCITY
FT	FEET	VFD	VARIABLE FREQUENCY DRIVE
GA	GAUGE OR GAGE	VRF	VARIABLE REFRIGERANT FLOW
GC	GENERAL CONTRACTOR	WB	WET BULB TEMPERATURE (°F)
GEN	GENERATOR	WC	WATER COLUMN
GH	GRAVITY HOOD	WG	WATER GAUGE
GPD	GALLONS PER DAY	WSHP	WATER SOURCE HEAT PUMP
GPH	GALLONS PER HOUR	ΔT	TEMPERATURE DIFFERENCE (°F)
GPM	GALLONS PER MINUTE		
H	HUMIDIFIER		
HC	HEATING COIL		
HG	MERCURY		
HOA	HAND-OFF-AUTOMATIC		
HP	HORSEPOWER		
HR	HOUR		
HX	HEAT EXCHANGER		

PLUMBING LEGEND

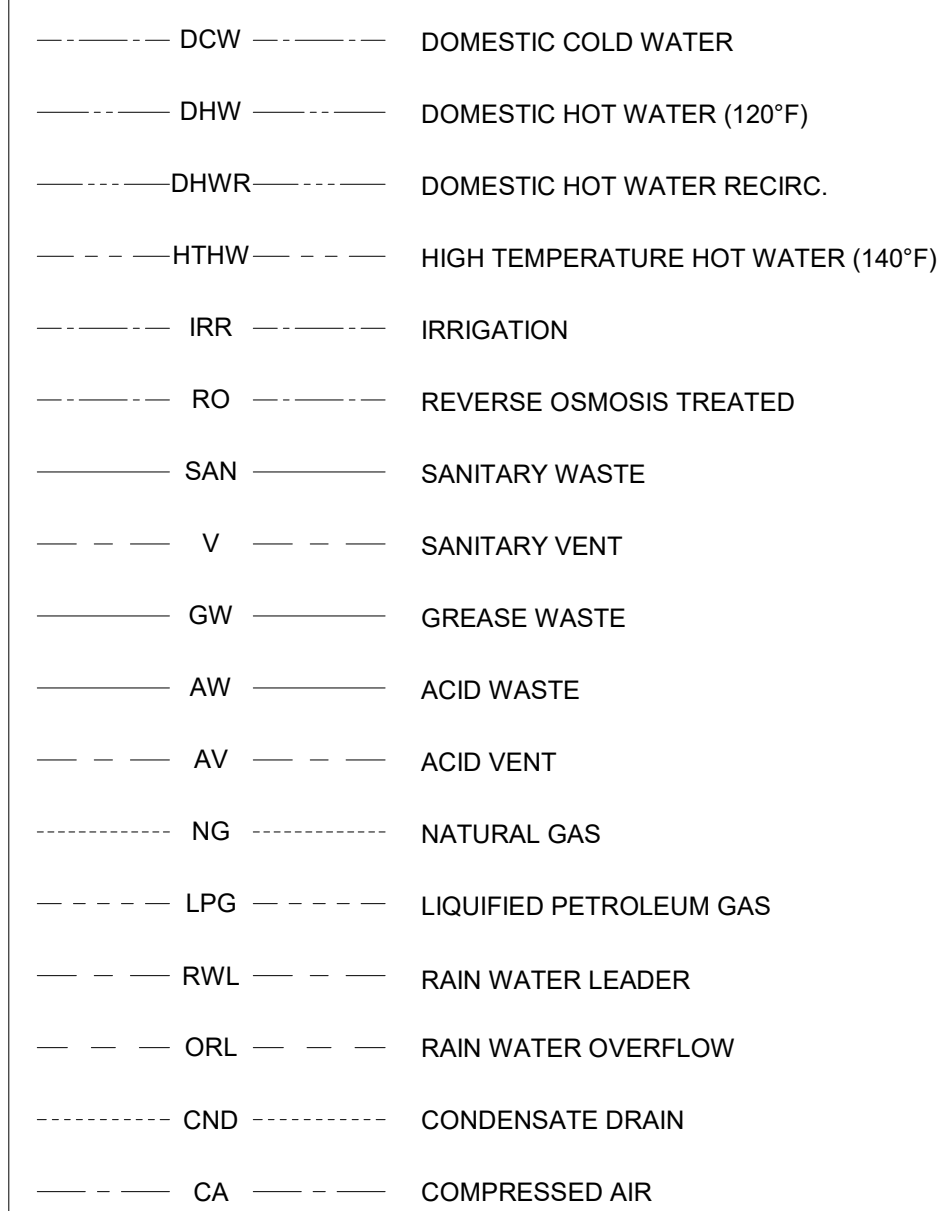
ANNOTATION SYMBOLS



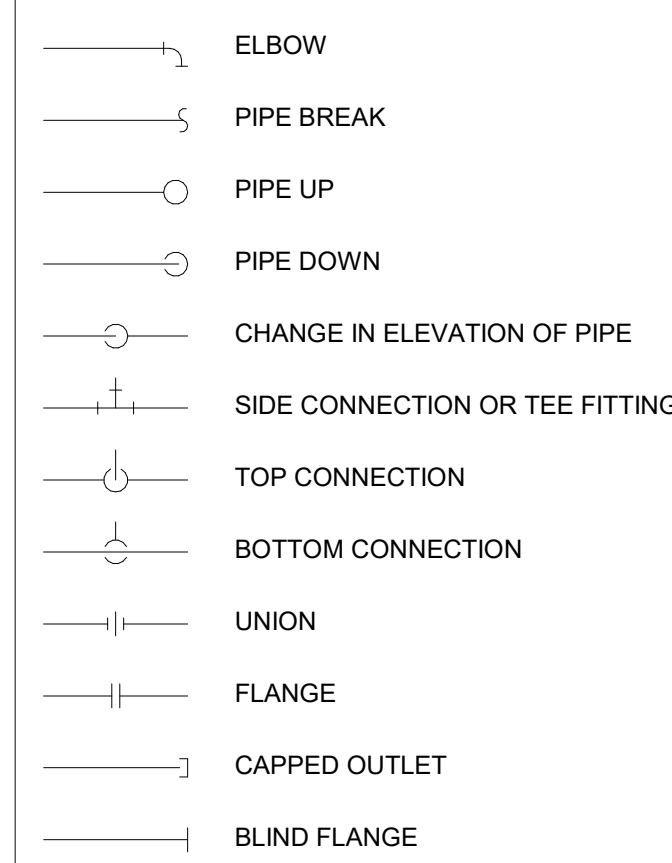
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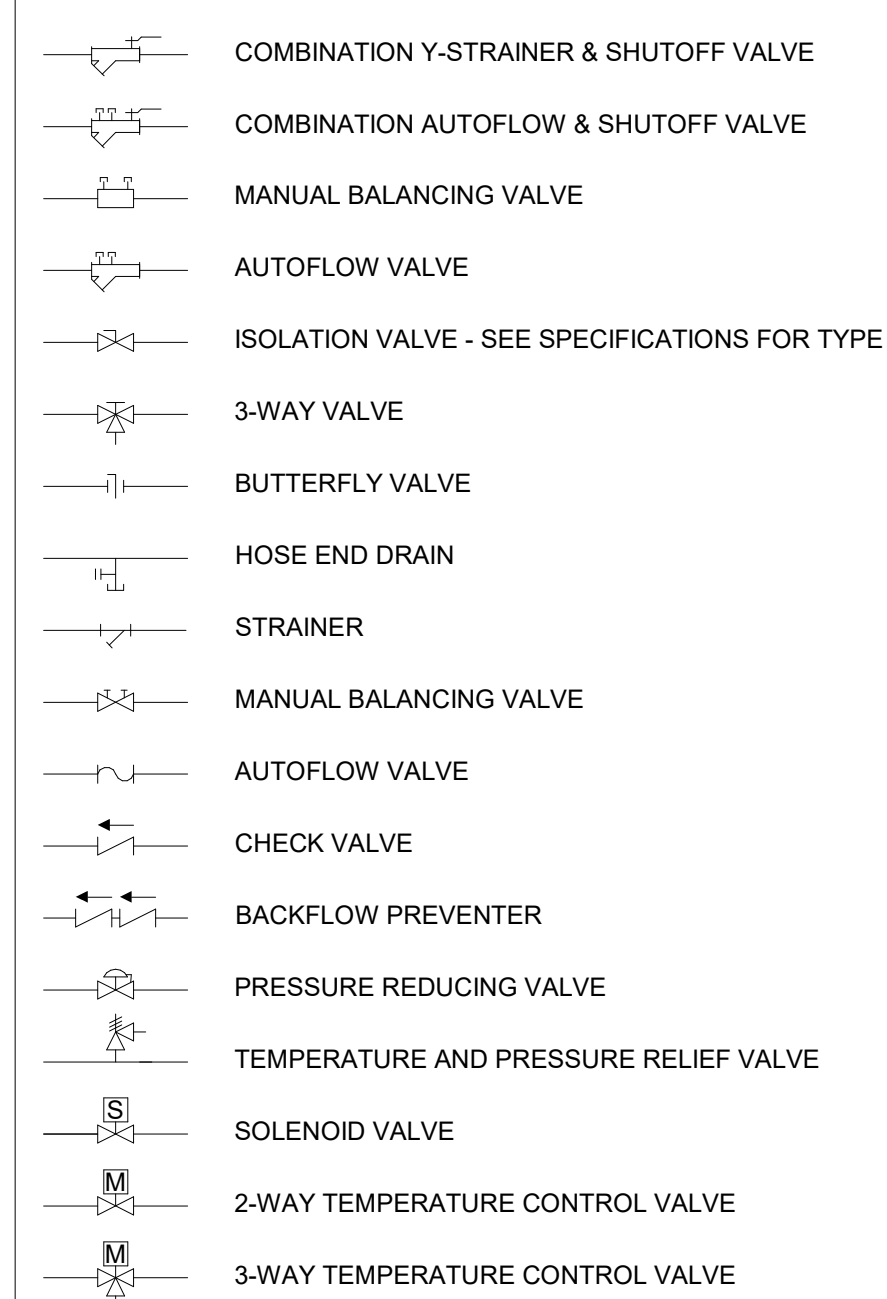
PLUMBING



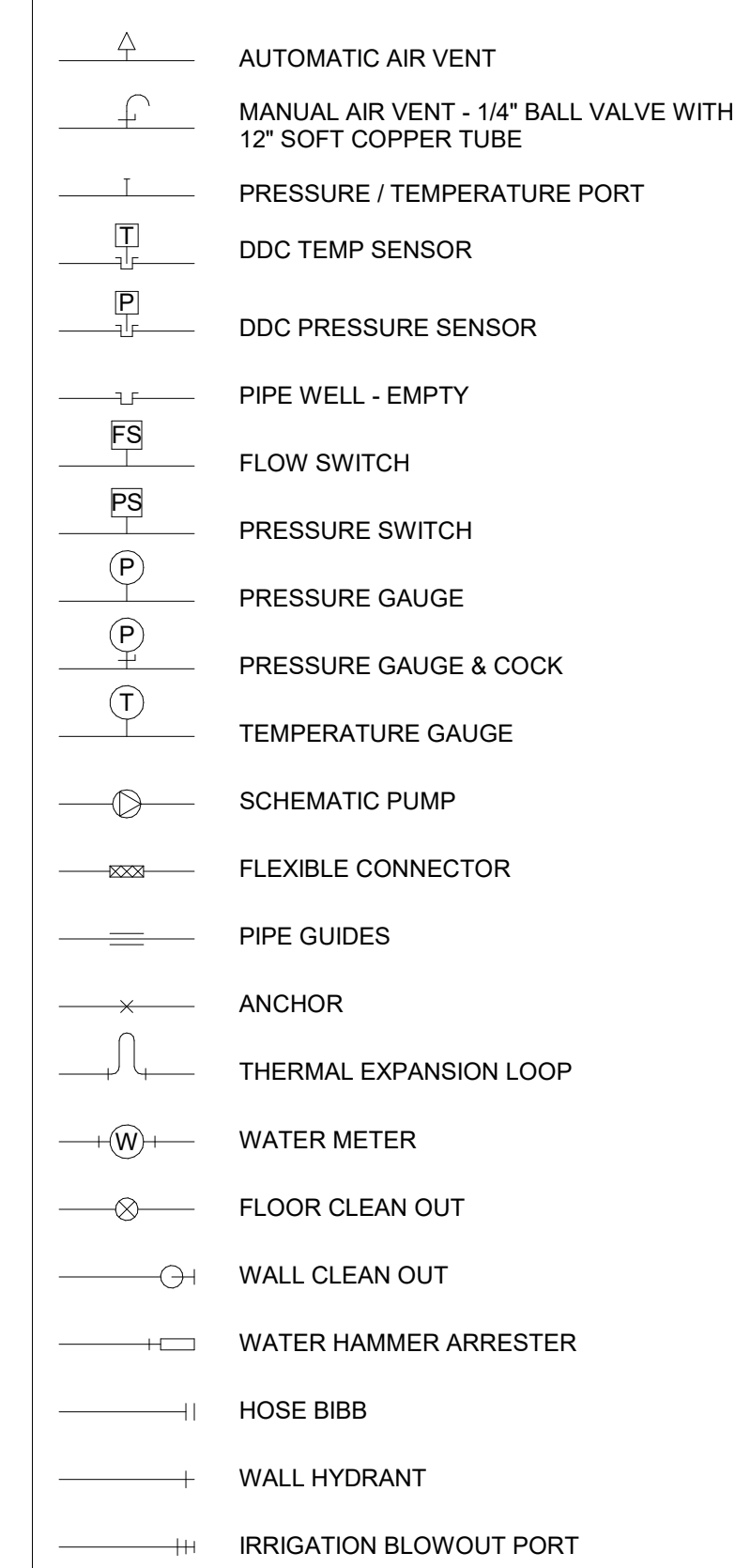
PIPE FITTINGS



VALVES



PIPING SPECIALTIES



NOTE: THIS IS A STANDARD LEGEND. NOT ALL PIPE TYPES AND SYMBOLS ARE NECESSARILY UTILIZED IN THE DRAWINGS.

PLUMBING GENERAL NOTES

- INSTALLATION:**
- NEW PIPING AND EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH THE CURRENTLY ADOPTED UNIFORM PLUMBING AND INTERNATIONAL BUILDING CODES.
 - EQUIPMENT SHALL BE INSTALLED LEVEL, PLUMB, AND FIRMLY ANCHORED IN LOCATIONS INDICATED. OBSERVE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND RECOGNIZED INDUSTRY PRACTICES TO ENSURE THAT PRODUCTS SERVE THEIR INTENDED FUNCTION.
 - DRAWINGS ARE DIAGRAMMATIC IN NATURE. THE PURPOSE OF THESE PLANS IS TO INDICATE THE INTENDED SIZES, APPROXIMATE LOCATION AND ROUTING OF MAJOR COMPONENTS. ACTUAL CONDITIONS AND LOCATIONS SHALL BE FIELD VERIFIED AND ADJUSTED IF NECESSARY.
 - PROVIDE AND INSTALL SEISMIC BRACING FOR EQUIPMENT AND PIPING PER THE REQUIREMENTS OF THE CURRENTLY ADOPTED INTERNATIONAL BUILDING CODE.
 - ELEMENTS PENETRATING BUILDING COMPONENTS (ROOF ASSEMBLIES, WALL ASSEMBLIES, ETC.) SHALL BE SEALED WEATHER AND WATER TIGHT. COORDINATE PENETRATIONS WITH GENERAL CONTRACTOR TO PATCH TO THE SATISFACTION OF THE ARCHITECT OR ENGINEER.
 - MATERIAL THAT IS IN CONTACT WITH POTABLE DOMESTIC WATER SHALL BE NSF CERTIFIED LEAD FREE.
- COORDINATION:**
- IT SHALL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO FIELD COORDINATE THE LOCATION OF EQUIPMENT AND ROUTING OF PIPING WITH OTHER TRADES.
 - IT SHALL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO REVIEW THE DRAWINGS OF OTHER DISCIPLINES AND PROVIDE LABOR AND MATERIALS REQUIRED FOR A COMPLETE INSTALLATION.
- ELECTRICAL COORDINATION:**
- SEE THE MEP COORDINATION SCHEDULE FOR ELECTRICAL INFORMATION. COORDINATE WITH OTHER TRADES TO ENSURE THAT ELECTRICAL DISCONNECTS, MOTOR STARTERS, VARIABLE FREQUENCY DRIVES, CONTROLS, AND ELECTRICAL ACCESSORIES ARE FURNISHED AND/OR INSTALLED BY THE APPROPRIATE TRADE.
- SITE ELEVATION:**
- EQUIPMENT SHALL BE SELECTED FOR THE PROJECT ELEVATION OF 4,900'.

PLUMBING SHEET INDEX

NUMBER	SHEET NAME
P02	PLUMBING SCHEDULES
P01	PLUMBING LEGEND AND NOTES
PD10	PLUMBING DEMOLITION PLAN
P10	PLUMBING UNDERFLOOR PLAN
P11	PLUMBING FLOOR PLAN

100% CONSTRUCTION DOCUMENTS

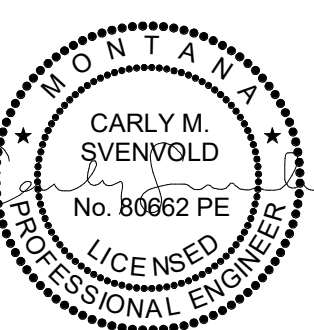


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BRICK BREEDEN
FIELDHOUSE LOCKER
ROOM RENOVATION



DRAWN BY:	LAG	
REVIEWED BY:	CMS	
REV.	DESCRIPTION	DATE



PPA#21-0028

MMI#6161.007

AAI#21062.01

SHEET TITLE
PLUMBING LEGEND
AND NOTES

SHEET
P01

DATE
03-08-23

PLUMBING FIXTURE SCHEDULE

MARK	ADA	DESCRIPTION	MFGR	MODEL #	MATERIAL & FINISH	TRIM			ROUGH-IN SIZE					REMARKS
						ITEM	MFGR	MODEL	RU/ORL	WASTE	VENT	COLD	HOT	
DF-1	Y	SINGLE HEIGHT W/ BOTTLE FILL	HALSEY TAYLOR	HTHB-HAC8SS-NF	STAINLESS STEEL	N / A	N / A	N / A	--	1-1/2"	1-1/2"	1/2"	--	PROVIDE COMPLETE WITH QUARTER TURN ISOLATION VALVE IN ACCESSIBLE LOCATION. COORDINATE ADA MOUNTING HEIGHT WITH ARCHITECTURAL.
LAV-1	Y	COUNTER MOUNT DROP-IN LAVATORY	KOHLER	"PENNINGTON" K-2196	VITREOUS CHINA	CHROME SENSOR-OPERATED FAUCET	MOEN	CA8302	--	1-1/2"	1-1/2"	1/2"	1/2"	PROVIDE COMPLETE WITH KOHLER # K-7131-A OFFSET DRAIN, TRUEBRO LAV GUARD COVERS, QUARTER TURN STOP VALVE, CHROME PLATED TUBULAR BRASS P-TRAP AND WATTS 1170 MIXING VALVE, BATTERY OPERATED.

NOTES: PROVIDE ALL FIXTURES WITH APPROPRIATE COMMERCIAL GRADE SUPPORTS/CARRIERS, P-TRAPS, STOP VALVES, BRAIDED FLEXIBLE SUPPLIES, UNDER FIXTURE PIPING INSULATION AND HAMMER ARRESTORS.

MEP COORDINATION SCHEDULE

MARK	DESCRIPTION	ELECTRICAL DATA		CONTROL		NOTES	DISCONNECT / STARTER		DISCONNECT				FEEDER	
		LOAD	VOLT-PHASE	TYPE	DIV		TYPE	DIV	SIZE (NEMA)	SWITCH (AMPS)	FUSE (AMPS)	ENCLOSURE (NEMA)	COPPER WIRE (AWG)	CONDUIT (INCHES)
DF-1	DRINKING FOUNTAIN	6 FLA	120 / 1	INT	22 / 22		RCPT	26 / 26	-	-	-	-	#12	3/4"

CONTROL TYPE:

BAS BUILDING AUTOMATION SYSTEM
 CO CARBON MONOXIDE DETECTOR
 CONT CONTINUOUS OPERATION
 EF INTERLOCK WITH EXHAUST FAN
 HCP HOOD CONTROL PANEL
 INT INTEGRAL
 L LIGHT SWITCH
 MS MANUAL SWITCH
 OS OCCUPANCY SENSOR
 PS PRESSURE SWITCH
 T THERMOSTAT
 TC TIME CLOCK
 UC UNIT CONTROLLER
 VE VEHICLE EXHAUST DETECTION SYSTEM
 N/A NOT APPLICABLE

DISCONNECT/STARTER TYPE:

CB PANELBOARD CIRCUIT BREAKER WITHIN SIGHT OF EQUIPMENT
 CSFD COMBINATION STARTER/DISCONNECT - HOA
 FD FUSED DISCONNECT
 FSTAT FUSTAT
 FW FACTORY-WIRED SINGLE POINT CONNECTION
 MOCPP MOTOR OVER-CURRENT PROTECTION
 MSS MANUAL STARTER SWITCH WITH THERMAL OVERLOADS (1-, 2- OR 3-POLE AS REQUIRED)
 NFD NON-FUSED DISCONNECT
 RCPT 20A DUPLEX RECEPTACLE (GFCI PROTECTED AS REQUIRED), CORD AND PLUG
 RVSS REDUCED VOLTAGE SOLID-STATE
 VFD VARIABLE FREQUENCY DRIVE - HOA
 N/A NOT APPLICABLE

DIVISION OF RESPONSIBILITIES:

22/22 FURNISHED AND INSTALLED BY DIV. 22, WIRED BY DIV. 22
 22/26 FURNISHED AND INSTALLED BY DIV. 22, WIRED BY DIV. 26
 23/23 FURNISHED AND INSTALLED BY DIV. 23, WIRED BY DIV. 23
 23/26 FURNISHED AND INSTALLED BY DIV. 23, WIRED BY DIV. 26
 26/26 FURNISHED AND INSTALLED BY DIV. 26, WIRED BY DIV. 26

GENERAL NOTES:

A. CONTROL WIRING SHALL BE CONCEALED WITHIN WALL CONSTRUCTION, ABOVE CEILING, OR RUN IN CONDUIT. EXPOSED CONTROL WIRING IS UNACCEPTABLE.

B. UNLESS SPECIFICALLY NOTED, ALL FEEDERS SHALL INCLUDE A FULL SIZE NEUTRAL. IT IS THE CONTRACT RESPONSIBILITY TO VERIFY WITH THE MANUFACTURER OF THE ACTUAL EQUIPMENT BEING SUPPLIED WHETHER A NEUTRAL IS REQUIRED PRIOR TO ROUGH-IN.



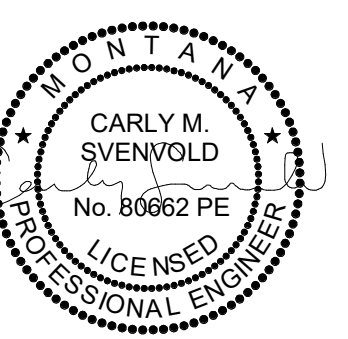
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 FIELDHOUSE LOCKER
 ROOM RENOVATION**

100% CONSTRUCTION DOCUMENTS

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REVIEWED BY: CMS		
REV.	DESCRIPTION	DATE



PPA#21-0028
 MMI#6161.007
 AAI#21062.01
**SHEET TITLE
 PLUMBING
 SCHEDULES**

SHEET
P02

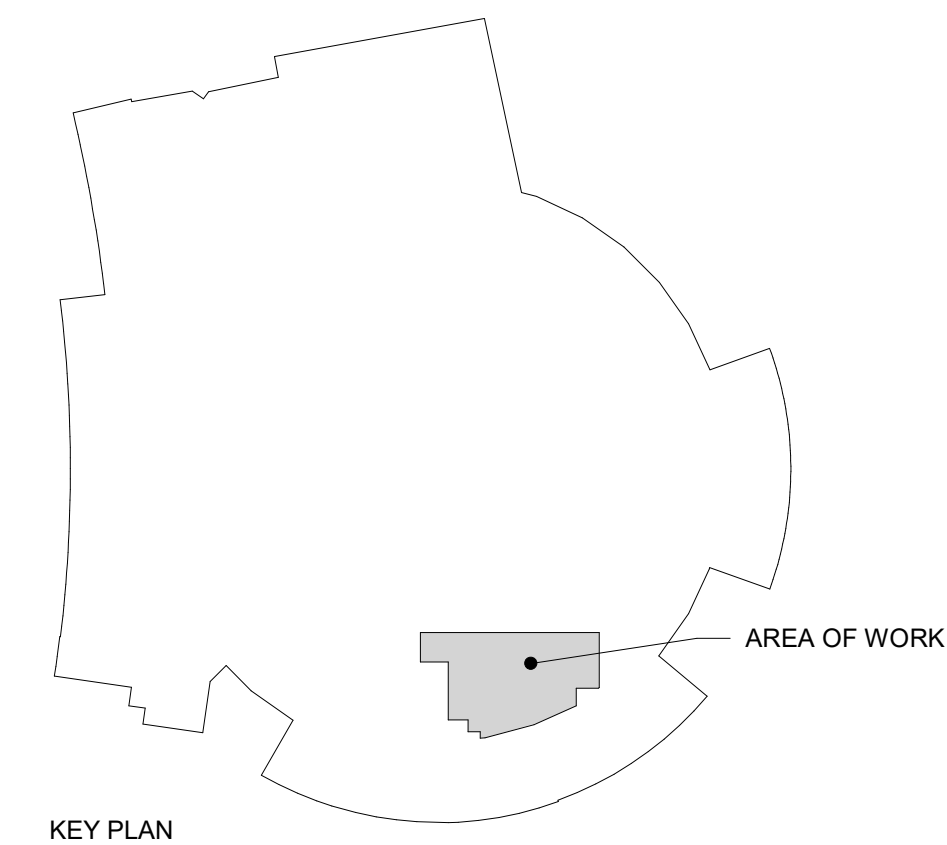
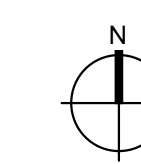
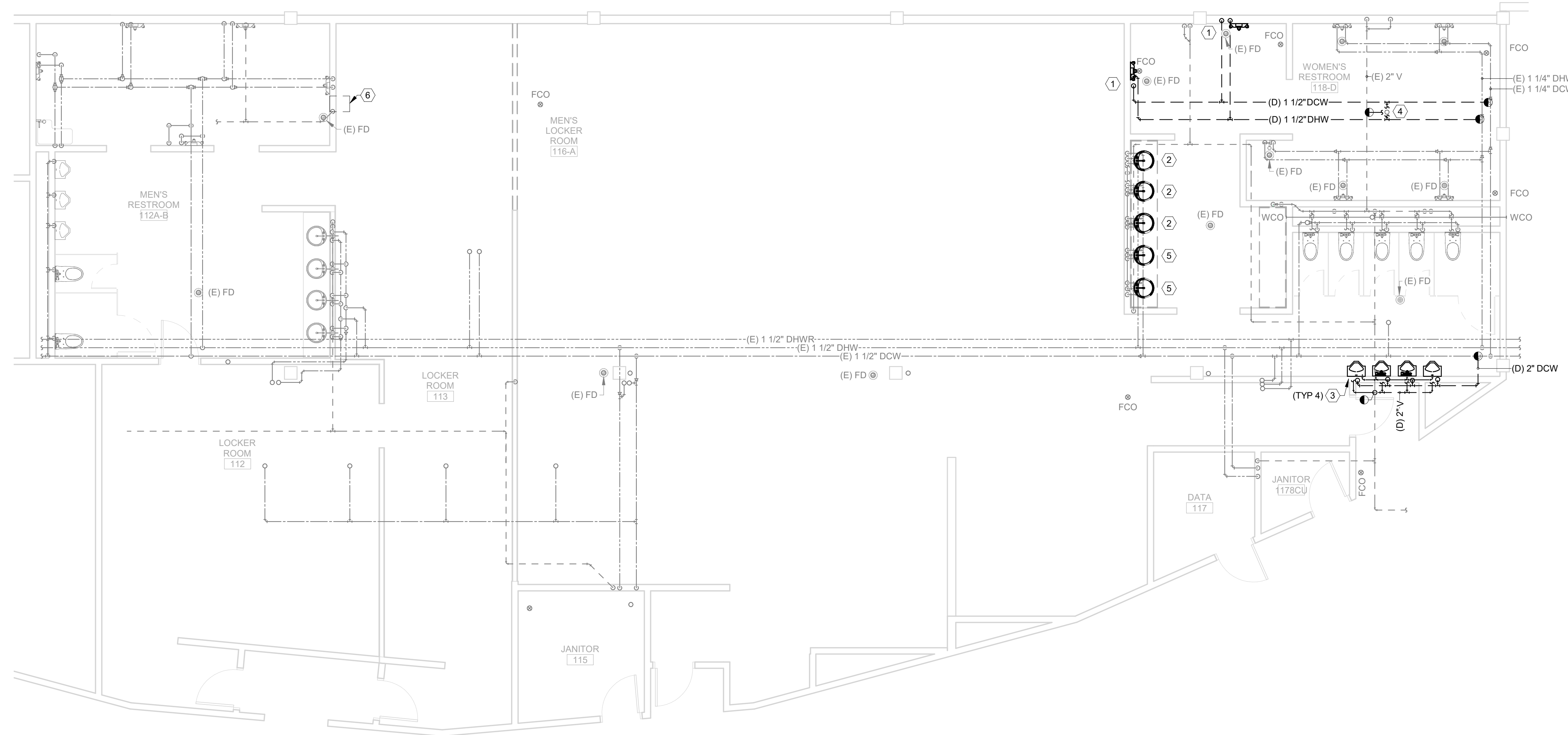
DATE
03-08-23

PLUMBING DEMO NOTES

- A. LOCATIONS AND DIMENSIONS OF EXISTING FACILITIES IDENTIFIED ON THIS DRAWING ARE APPROXIMATE AND REPRESENT THE BEST AVAILABLE INFORMATION BASED ON A COMBINATION OF FIELD INVESTIGATIONS AND VARIOUS DESIGN AND RECORD DRAWINGS AVAILABLE AT THE TIME OF DESIGN. FIELD VERIFY LOCATIONS AND DIMENSIONS PRIOR TO ORDERING EQUIPMENT AND DURING PERFORMANCE OF THE WORK. PROVIDE DEMOLITION WORK, NECESSARY FITTINGS, TRANSITIONS, AND OTHER COMPONENTS AS REQUIRED FOR A COMPLETE AND FUNCTIONAL INSTALLATION OF NEW SYSTEMS AT NO ADDITIONAL COST TO THE OWNER.
- B. EXISTING PLUMBING EQUIPMENT, FIXTURES, AND PIPING SHOWN AS DARK AND DASHED SHALL BE DEMOLISHED. EXISTING PLUMBING EQUIPMENT, FIXTURES, AND PIPING SHOWN LIGHT SHALL REMAIN UNCHANGED.
- C. THE PLUMBING CONTRACTOR SHALL COORDINATE SALVAGE OF REMOVED EQUIPMENT IN GOOD CONDITION WITH THE OWNER. THE PLUMBING CONTRACTOR SHALL DISPOSE OF UNWANTED EQUIPMENT.
- D. COORDINATE WITH GENERAL CONTRACTOR TO PATCH AND REPAIR ROOF AND WALL ASSEMBLIES ASSOCIATED WITH PLUMBING DEMOLITION.
- E. CONCRETE SLAB CUTTING REGIONS SHOWN ON DRAWINGS ARE APPROXIMATE AND MUST BE FIELD COORDINATED PRIOR TO THE CUTTING OF THE SLAB.
- F. PROTECT EXISTING BUILDING ELEMENTS DURING DEMOLITION WORK. COORDINATE WITH OTHER TRADES TO ENSURE NO EXISTING EQUIPMENT/PIPING TO REMAIN IS DAMAGED DURING THE DEMOLITION WORK.

KEY NOTES:

- 1. DEMOLISH SHOWER FIXTURE AND ASSOCIATED PIPING BACK TO MAINS AND CAP. PATCH WALL TO MATCH EXISTING. COORDINATE WITH ARCH. FLOOR DRAIN TO REMAIN.
- 2. DEMOLISH LAVATORY FIXTURE. PRESERVE ASSOCIATED PIPING FOR RECONNECTION.
- 3. DEMOLISH URINAL FIXTURE. DISCONNECT ASSOCIATED PIPING FROM MAINS AND DEMOLISH TO EXTENT POSSIBLE. CAP MAINS AND ANY ABANDONED PIPING. COORDINATE WITH ARCH FOR WALL PATCHING REQUIREMENTS IN THIS AREA.
- 4. DEMOLISH ISLAND SHOWER FIXTURE AND ASSOCIATED PIPING BACK TO MAINS AND CAP. PATCH FLOOR TO MATCH EXISTING. COORDINATE WITH ARCH.
- 5. DEMOLISH LAVATORY FIXTURE. DISCONNECT ASSOCIATED PIPING FROM MAINS AND DEMOLISH TO EXTENT POSSIBLE. CAP MAINS AND ANY ABANDONED PIPING. COORDINATE PATCHING REQUIREMENTS WITH ARCH.
- 6. SAW CUT SLAB FOR FUTURE WORK. COORDINATE PATCHING REQUIREMENTS WITH ARCH.



1 LEVEL 1 PLUMBING DEMOLITION PLAN
3/16" = 1'-0"

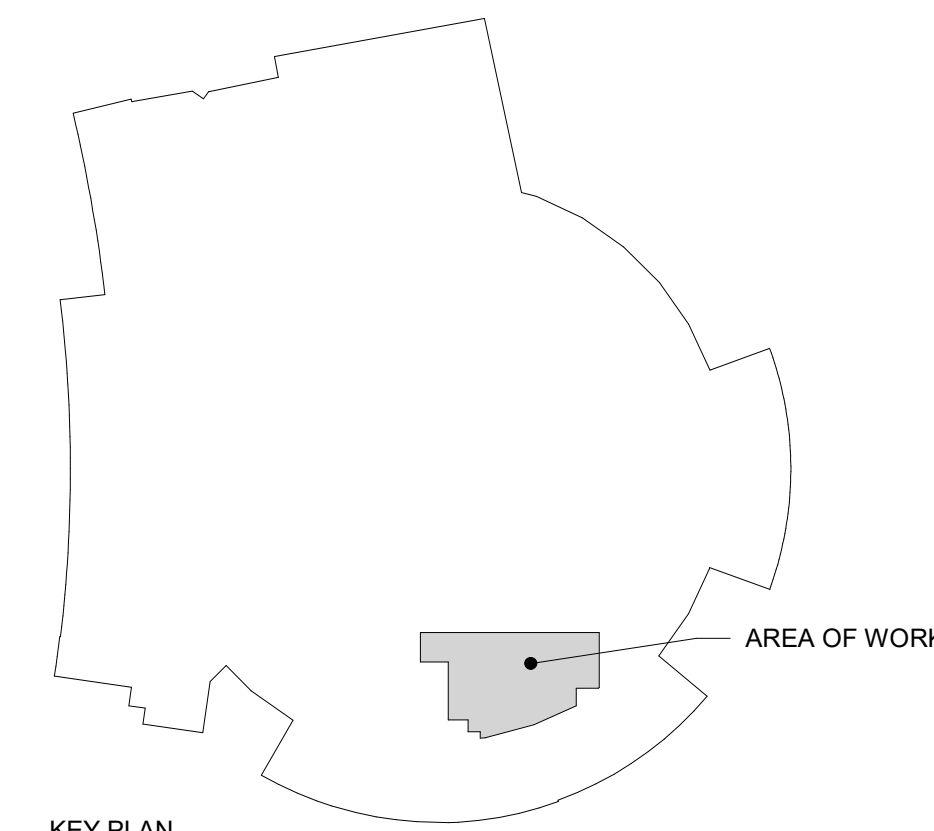
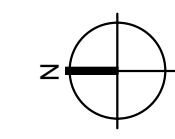
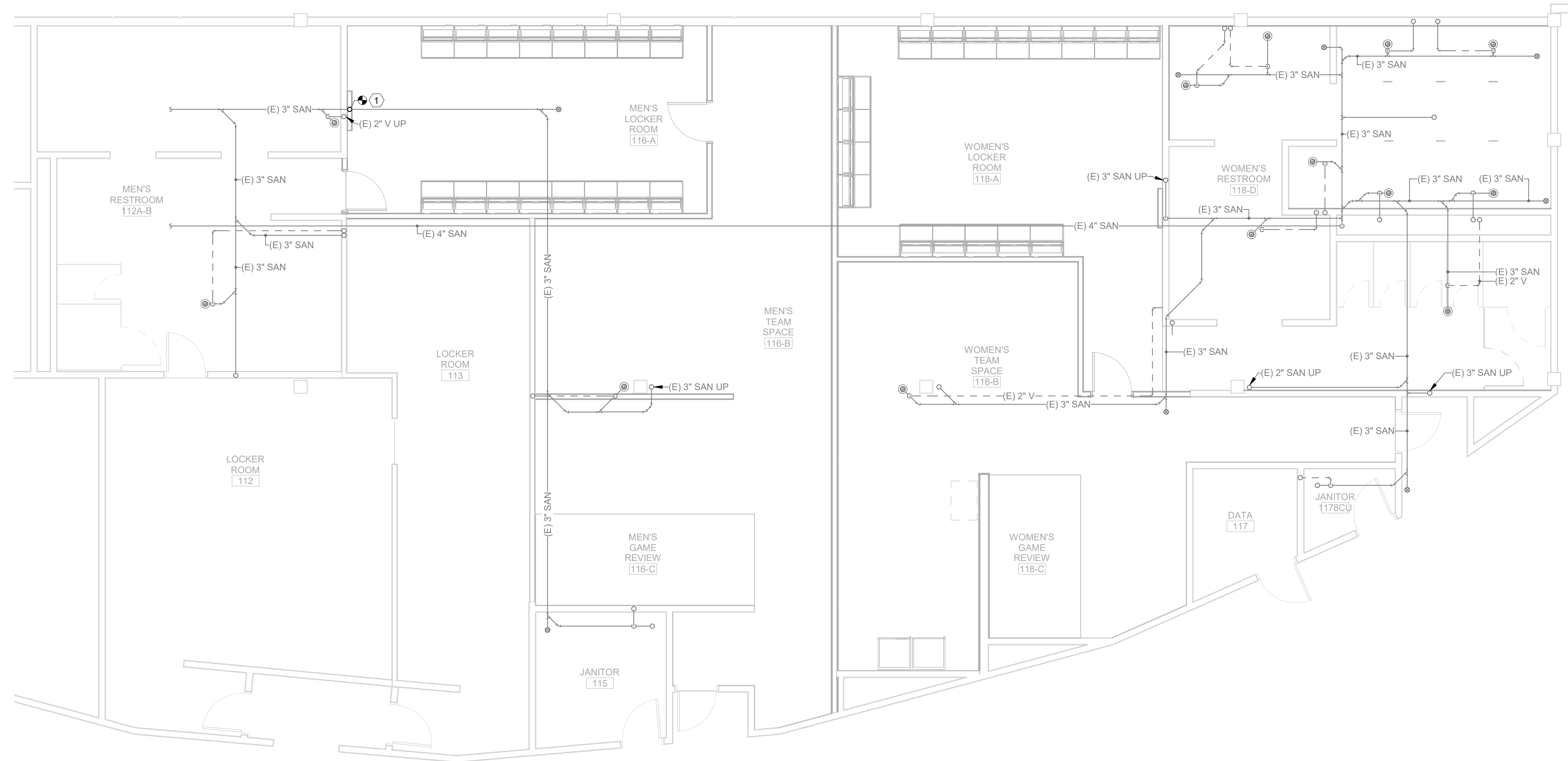
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PLUMBING PLAN NOTES

- A. PROVIDE ACCESS DOORS TO ALLOW SERVICE AND INSPECTION OF EQUIPMENT, VALVES, AND OTHER DEVICES INSTALLED ABOVE NON-REMOVABLE CEILINGS. COORDINATE SUCH INSTALLATIONS WITH ARCHITECT AND ENGINEER.
- B. PROVIDE TRAP SEALS FOR FLOOR DRAINS AND FLOOR SINKS.
- C. PROVIDE TRAP PRIMERS FOR FLOOR DRAINS AND FLOOR SINKS. LOCATE TRAP PRIMERS IN A VALVE BOX AS INDICATED ON PLAN.
- D. INSTALL ACCESSIBLE PLUMBING FIXTURES IN COMPLIANCE WITH ADA REQUIREMENTS. INSULATE EXPOSED PIPING BELOW ADA ACCESSIBLE FIXTURES.
- E. INSTALL FLOOR DRAIN STRAINERS AND CLEANOUT COVERS FLUSH AND LEVEL WITH FINISHED FLOOR.
- F. PIPING SHALL BE IDENTIFIED WITH PIPE LABELS MARKED AT A MAXIMUM OF EVERY 25 FT. VALVES SHALL BE IDENTIFIED WITH BRASS OR ALUMINUM VALVE TAGS.
- G. PROVIDE AND INSTALL PIPE GUIDES, EXPANSION JOINTS, AND HANGERS PER MANUFACTURER'S RECOMMENDATIONS.
- H. PIPING WALL PENETRATIONS SHALL BE FINISHED WITH A CHROME ESCUTCHEON PLATE.
- I. NO FITTINGS OR PIPING CONNECTIONS SHALL BE INSTALLED UNDERSLAB.
- J. GAS PIPING IS TO BE WELDED IN CONCEALED SPACES.
- K. REFER TO THE PLUMBING FIXTURE SCHEDULE FOR PIPE SIZES TO INDIVIDUAL FIXTURES.
- L. COORDINATE CONCRETE PENETRATIONS WITH STRUCTURAL DRAWINGS TO VERIFY HOW AND WHERE CONCRETE CAN BE CUT.
- M. EXPOSED PIPING SHALL BE PAINTED PER ARCHITECTURAL OR PROVIDED WITH A PVC COATED JACKET IN THE COLOR OF THE ARCHITECT'S CHOOSING. CONTRACTOR TO CLEAN AND DRY PIPING PRIOR TO PAINTING.
- N. SANITARY SEWER, RAINWATER, AND OTHER DRAIN PIPING SHALL BE INSTALLED AT A MINIMUM 1/4" PER FOOT (2%) SLOPE IN DIRECTION OF FLOW, UNLESS OTHERWISE INDICATED ON THE DRAWINGS.

KEY NOTES:

- 1. 1-1/2" SAN UP TO DF-1



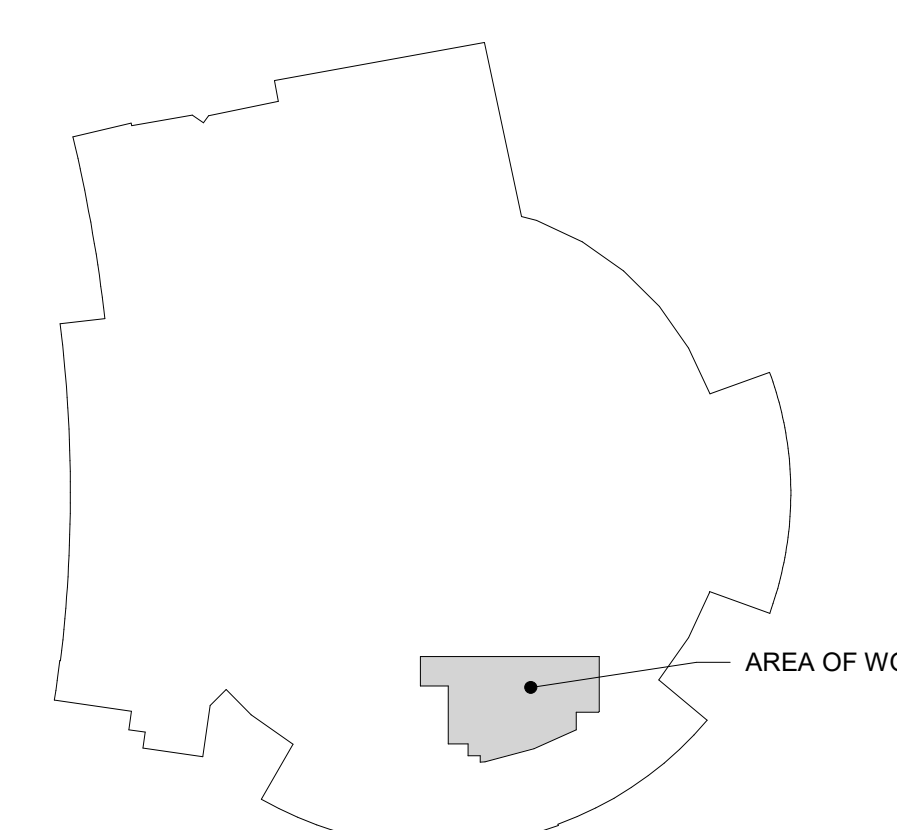
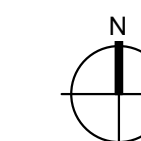
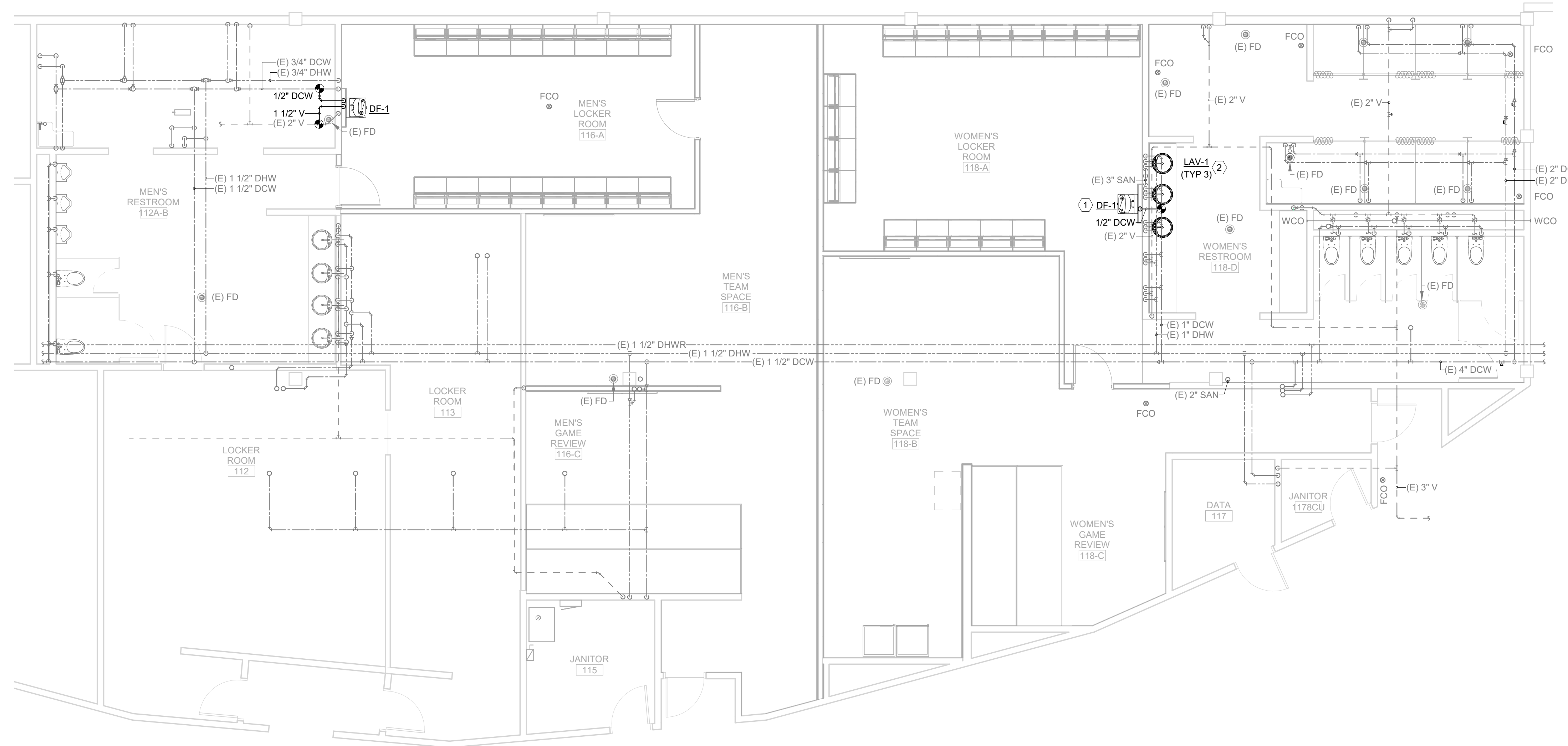
1 LEVEL 1 PLUMBING UNDERFLOOR PLAN
3/16" = 1'-0"

PLUMBING PLAN NOTES

- A. PROVIDE ACCESS DOORS TO ALLOW SERVICE AND INSPECTION OF EQUIPMENT, VALVES, AND OTHER DEVICES INSTALLED ABOVE NON-REMOVABLE CEILINGS. COORDINATE SUCH INSTALLATIONS WITH ARCHITECT AND ENGINEER.
- B. PROVIDE TRAP SEALS FOR FLOOR DRAINS AND FLOOR SINKS.
- C. PROVIDE TRAP PRIMERS FOR FLOOR DRAINS AND FLOOR SINKS. LOCATE TRAP PRIMERS IN A VALVE BOX AS INDICATED ON PLAN.
- D. INSTALL ACCESSIBLE PLUMBING FIXTURES IN COMPLIANCE WITH ADA REQUIREMENTS. INSULATE EXPOSED PIPING BELOW ADA ACCESSIBLE FIXTURES.
- E. INSTALL FLOOR DRAIN STRAINERS AND CLEANOUT COVERS FLUSH AND LEVEL WITH FINISHED FLOOR.
- F. PIPING SHALL BE IDENTIFIED WITH PIPE LABELS MARKED AT A MAXIMUM OF EVERY 25 FT. VALVES SHALL BE IDENTIFIED WITH BRASS OR ALUMINUM VALVE TAGS.
- G. PROVIDE AND INSTALL PIPE GUIDES, EXPANSION JOINTS, AND HANGERS PER MANUFACTURER'S RECOMMENDATIONS.
- H. PIPING WALL PENETRATIONS SHALL BE FINISHED WITH A CHROME ESCUTCHEON PLATE.
- I. NO FITTINGS OR PIPING CONNECTIONS SHALL BE INSTALLED UNDERSLAB.
- J. GAS PIPING IS TO BE WELDED IN CONCEALED SPACES.
- K. REFER TO THE PLUMBING FIXTURE SCHEDULE FOR PIPE SIZES TO INDIVIDUAL FIXTURES.
- L. COORDINATE CONCRETE PENETRATIONS WITH STRUCTURAL DRAWINGS TO VERIFY HOW AND WHERE CONCRETE CAN BE CUT.
- M. EXPOSED PIPING SHALL BE PAINTED PER ARCHITECTURAL OR PROVIDED WITH A PVC COATED JACKET IN THE COLOR OF THE ARCHITECT'S CHOOSING. CONTRACTOR TO CLEAN AND DRY PIPING PRIOR TO PAINTING.
- N. SANITARY SEWER, RAINWATER, AND OTHER DRAIN PIPING SHALL BE INSTALLED AT A MINIMUM 1/4" PER FOOT (2%) SLOPE IN DIRECTION OF FLOW, UNLESS OTHERWISE INDICATED ON THE DRAWINGS.

KEY NOTES:

- 1. CONNECT 1-1/2" SAN FROM DF-1 TO (E) ABOVE GROUND SAN SERVING LAVATORY GROUP. CONNECT 1-1/2" V TO VENT MAIN SERVING LAVATORY GROUP AT A MINIMUM OF 6" ABOVE THE FLOOD RIM OF THE HIGHEST LAVATORY FIXTURE.
- 2. RECONNECT EXISTING PLUMBING TO FIXTURE.



KEY PLAN

1 LEVEL 1 PLUMBING PLAN
3/16" = 1'-0"

ELECTRICAL ABBREVIATIONS LEGEND

Table with 4 columns: Abbreviation, Description, Abbreviation, Description. Includes terms like AMP, AC, AFC, AF, AFCI, AFCC, AFF, AFG, AHU, AL, AS, ATS, BAS, BKR, BOF, C, CB, CCT, CCTV, CKT, CLG, C.O., COD, CNTRL, CU, (D), DISC, DIST, DPDT, DWG, EA, EC, EF, ELEC, EMT, EQUIP, EX, EXIST, FA, FAA, FACP, FD, FLR, FO, FSD, FVNR, GEC, GFCI, GFI, GFP, GND, GRC, HID, HOA, HP, HPS, HTR, HVAC, HZ, J-BOX, KVA, KW, LCP, LPW, LTG, LM, LV, MAG, MAN, MAX, MC, MCA, MCC, MDP, MECH, MEP, MH, MIN, MSS, N, NC, NEC, NEMA, NFD, NIC, NO, #, OAE, OC, OCCPD, OEH, P, PB, PC, PH, PNL, PVC, PWR, (R), RCPT, RECEPT, RGS, RM, RVNR, RVR, SP, SPD, SPEC, SPST, SSSP, SW, SWGB, SWGR, TB, TC, TD, TEL, TR, TSP, TTB, TYP, UH, UNO, V, VLT-AMPERES, VFD, WAO, W/P, W/O, XFMR, Y, Δ, ∅.

ELECTRICAL LIGHTING FIXTURE LEGEND

Table with 2 columns: Symbol, Description. Includes symbols for recessed LED, recessed emergency LED, surface LED, surface emergency LED, surface wall mount LED, LED strip, emergency LED strip, pole mounted fixture, lighted bollard, pendant fixture, exit sign, combination exit sign, dual head emergency egress battery pack, wall mounted sconce, surface downlight, surface emergency downlight, recessed can downlight, recessed can emergency downlight, recessed can wall washer, track lighting.

ELECTRICAL LIGHTING CONTROL LEGEND

Table with 2 columns: Standard Lighting Controls, Digital Lighting Controls. Includes symbols for toggle switch, photocell, occupancy sensor, room controllers, dimming switches, and low voltage devices.

ELECTRICAL ONE-LINE LEGEND

Table with 2 columns: Symbol, Description. Includes symbols for CT and customer power meter, motor, utility electric meter, surge protection device, lightning arrester, stress relief cone, power factor correction capacitor, equipment toggle disconnect switch, contactor, transformer, automatic transfer switch, variable frequency drive, fixed mount LV breaker, fused switch, generator, wall mounted breaker, thermal overload element, disconnect switch, fused disconnect switch, combination motor starter, switchboard or panelboard, and transformer connections.

ELECTRICAL POWER LEGEND

Table with 2 columns: Symbol, Description. Includes symbols for panel and circuit designation, panelboard or load center, special purpose receptacle, simplex receptacle, duplex receptacle, quadruplex receptacle, above counter receptacle, floor box with duplex receptacles, 4-gang floor box, fire rated floor box, fire rated poke-through floor box, flush round single service floor box, tombstone pedestal floor box, junction box, drop-down receptacle, surface mounted plugstrip, surface mounted raceway, raceway concealed, raceway below floor, raceway stub-out, and grounding bus.

ELECTRICAL LOW VOLTAGE LEGEND

Table with 2 columns: Fire Alarm System, Telephone/Data System. Includes symbols for sprinkler pressure switch, flow switch, tamper switch, heat detector, smoke detector, duct smoke detector, single-station smoke detector, carbon monoxide detector, door holder, manual station, strobe, horn/strobe, and speaker strobe.

ABBREVIATIONS AND SYMBOLS GENERAL NOTES

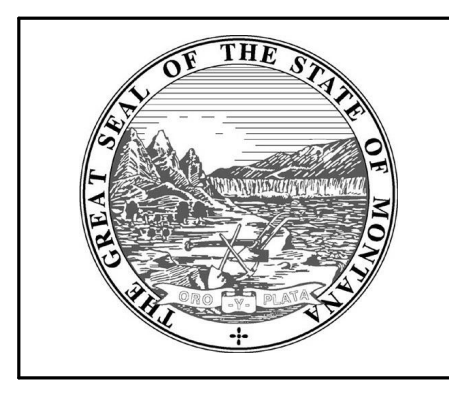
- A. THE ABBREVIATIONS ON THIS SHEET COMPRISE A STANDARD LIST; NOT ALL ABBREVIATIONS APPEAR ON THIS PROJECT.
B. THE SYMBOLS ON THIS SHEET COMPRISE A STANDARD LIST; NOT ALL SYMBOLS APPEAR ON THIS PROJECT.
C. ALL MOUNTING HEIGHTS ARE TO CENTER OF DEVICE ABOVE FINISHED FLOOR, UNLESS NOTED OTHERWISE. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OTHER CONTRACTORS, MAKING ADJUSTMENTS AS REQUIRED TO AVOID INTERFERENCE WITH EQUIPMENT SUCH AS BASEBOARD FIN-TUBE, CABINET UNIT HEATERS, ETC. ARCHITECT/ENGINEER SHALL BE NOTIFIED OF ALL SUCH HEIGHT ADJUSTMENTS. MOUNTING HEIGHTS INDICATED ON ARCHITECTURAL WALL ELEVATIONS OR AS NOTED SPECIFICALLY ON THE DRAWINGS OR IN THE SPECIFICATIONS SHALL TAKE PRECEDENCE OVER MOUNTING HEIGHTS LISTED.

ELECTRICAL PROJECT GENERAL NOTES

- A. PRIOR TO BID CONTRACTOR SHALL VISIT THE SITE. NOT ALL WORK REQUIRED TO COMPLETE THE PROJECT IS SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL BECOME THOROUGHLY FAMILIAR WITH ALL THE WORK REQUIRED TO COMPLETE THE PROJECT IN ADDITION TO THE LOCAL CONDITIONS AND INCLUDE SAID WORK IN THE BID.
B. GENERAL WORK PRACTICES FOR ELECTRICAL CONSTRUCTION SHALL BE IN ACCORDANCE WITH NECA 1, "STANDARD PRACTICES FOR GOOD WORKMANSHIP IN ELECTRICAL CONTRACTING." THIS PUBLICATION IS AVAILABLE FROM NECA BY TELEPHONE AT 301-657-3110 OR ON-LINE AT WWW.NECANET.ORG.
C. IT IS THE CONTRACTORS RESPONSIBILITY TO COORDINATE WITH MECHANICAL FOR PLENUM SPACES AND PROVIDE PLENUM RATED CABLES WHERE REQUIRED FOR LIGHTING CONTROL, DATA, FIRE ALARM AND ALL OTHER L.V. SYSTEMS NOT INSTALLED IN CONDUIT. VERIFY CONDUIT REQUIREMENTS ON DRAWINGS AND SPECIFICATIONS.
D. FIRE-RESISTANCE: PROVIDE A MINIMUM HORIZONTAL DISTANCE OF 24" BETWEEN OUTLET BOXES LOCATED ON OPPOSITE SIDES OF FIRE-RESISTANCE RATED WALLS. WHERE THIS IS NOT POSSIBLE INSTALL UL LISTED PUTTY PADS ON ALL OUTLET BOXES NOT MEETING THE 24" SEPARATION. PROVIDE A UL LISTED THROUGH-PENETRATION FIRESTOP FOR PENETRATIONS OF FIRE-RESISTANCE RATED ASSEMBLIES.
E. CONDUCTORS ARE SIZED PER THE 75 DEGREE C RATING COLUMN OF NEC TABLE 310.16. IF THE TERMINAL USED FOR A TERMINATION OF A PARTICULAR CONDUCTOR IS NOT MARKED, OR THE TERMINAL IS MARKED FOR 60 DEGREE C CONDUCTORS, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO EITHER ADJUST THE AMPACITY OF THE CONDUCTOR TO MATCH THE 60 DEGREE COLUMN OF TABLE 310.16, OR REPLACE THE TERMINAL WITH ONE RATED FOR AT LEAST 75 DEGREES C.
F. BASED ON ACTUAL HOMERUN LENGTHS REQUIRED IN THE FIELD, THE CONTRACTOR SHALL CALCULATE AND INCREASE THE WIRE SIZES AS REQUIRED TO LIMIT BRANCH CIRCUIT VOLTAGE DROP TO 3%. FOR 20A BRANCH CIRCUITS THE MINIMUM CONDUCTOR SIZES SHALL BE AS FOLLOWS: #10 AWG CU FOR RUNS BETWEEN 100 AND 200 LINEAR FEET, #8 AWG CU FOR RUNS BETWEEN 200 AND 325 LINEAR FEET, AND AS CALCULATED BY THE CONTRACTOR FOR CIRCUITS EXTENDING BEYOND 325 LINEAR FEET. IN ALL CASES WHERE WIRE SIZES INCREASE, THE CONTRACTOR SHALL PROVIDE LARGER CONDUITS AS REQUIRED.
G. PROVIDE A DEDICATED NEUTRAL CONDUCTOR FOR EACH 120V BRANCH CIRCUIT.

ELECTRICAL PROJECT DEMO NOTES

- A. DURING DEMOLITION, THE CONTRACTOR SHALL NOTE ALL EXISTING RACEWAY (BOTH SURFACE AND CONCEALED) TO THE EXTENT POSSIBLE. THESE RACEWAYS SHALL BE REUSED TO THE GREATEST EXTENT POSSIBLE TO INSURE A CLEAN FINISHED PRODUCT. WHERE PRACTICAL, AND ALLOWED PER CODE, FISHING THROUGH WALLS WITH MC CABLE IS PREFERRED TO SURFACE-MOUNTED CONDUIT.
B. CONTRACTOR SHALL REMOVE, TRANSPORT, AND LEGALLY DISPOSE OF LAMPS AND BALLASTS OFF-SITE. IT IS ASSUMED THAT THE BALLASTS DO NOT CONTAIN PCBs. THE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY IF IT IS SUSPECTED THAT BALLASTS CONTAIN PCBs.
C. ALL POWER INTERRUPTIONS SHALL BE COORDINATED WITH OWNER. ANY DISRUPTION OF WORKERS IN THE SPACE SHALL BE KEPT TO A MINIMUM AND BE COORDINATED WITH THE OWNER PRIOR TO WORK COMMENCING IN THAT SPACE.
D. CONTRACTOR SHALL EXTEND UNSWITCHED HOT LEG FROM EXISTING EMERGENCY FIXTURE LOCATION TO NEW EMERGENCY FIXTURES, AS NEEDED. SEE DEMO PLANS FOR AN APPROXIMATION OF EXISTING EMERGENCY FIXTURE LOCATIONS. FIELD VERIFY EXACT LOCATION PRIOR TO BID.
E. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ANY EXISTING CONDUIT OR FEEDER CIRCUITS THAT ARE INTENDED TO REMAIN THAT ARE SAW-CUT, OR OTHERWISE DAMAGED, AS PART OF THE DEMOLITION PROCESS. PROVISION FOR THIS WORK SHALL INCLUDE, BUT NOT BE LIMITED TO: ALL NECESSARY CONDUIT AND CONDUCTORS, MOUNTING ACCESSORIES AND LABOR, TO RESTORE THE SYSTEM TO ITS INTENDED FUNCTION.
F. ELECTRICAL DRAWINGS SHOWING EXISTING BUILDING CONDITIONS, SUCH AS DEMOLITION DRAWINGS, EXISTING PANEL SCHEDULES, ETC. ARE BASED ON RECORD DRAWINGS AND SITE VISITS. IF ACTUAL EXISTING CONDITIONS DIFFER FROM THOSE SHOWN ON DRAWINGS, PLEASE NOTIFY ENGINEER.

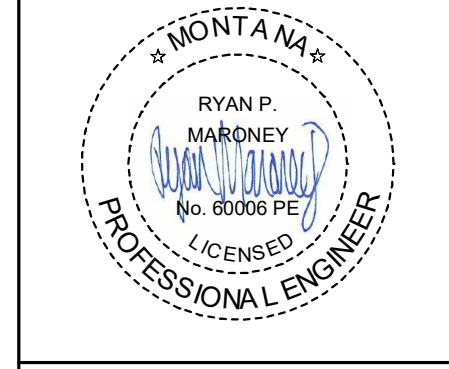


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BRICK BREEDEN
FIELDHOUSE LOCKER
ROOM RENOVATION



Table with 2 columns: REV, DESCRIPTION. Includes fields for DRAWN BY (JLG), REVIEWED BY (RPM), and DATE.



PPA#21-0028
MMI#6161.007

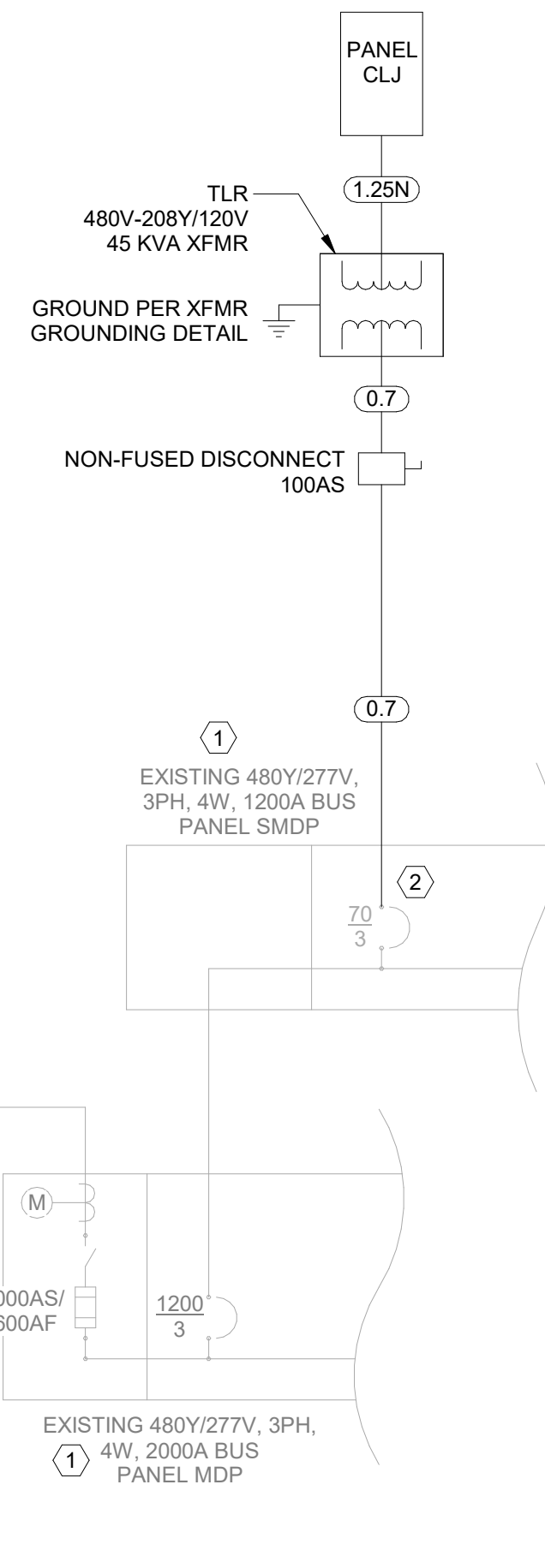
AAI#21062.01

SHEET TITLE
SYMBOLS AND
ABBREVIATIONS

SHEET
E01

DATE
03-08-23

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FEEDER SCHEDULE - COPPER

SCHEDULE IS BASED ON 75 DEGREE C. COPPER CONDUCTORS IN NEC 310.60 TABLE.

FEEDER NUMBER KEY:
 A = ALUMINUM CONDUCTORS
 N = INCLUDES NEUTRAL CONDUCTOR
 S = SINGLE PHASE

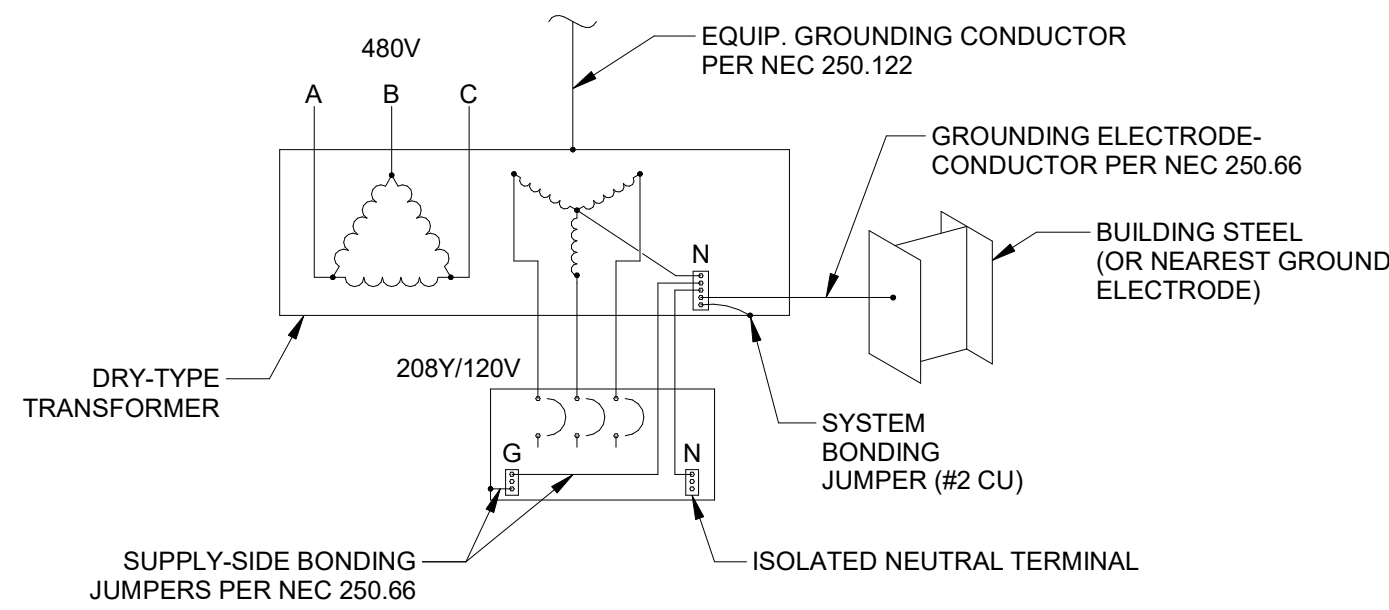
NOTE: GROUNDING CONDUCTOR IS SIZED ACCORDING TO NEC 250.122 TABLE, UNLESS FEEDER NUMBER IS FOLLOWED BY AN ASTERISK (*) INDICATING THAT THE GROUNDING CONDUCTOR IS SIZED ACCORDING TO NEC 250.66 TABLE.

FEEDER NUMBER	AMPS	WIRE QTY PER CONDUIT	SETS IN PARALLEL	75 DEG COPPER			
				CONDUIT	PHASE QTY AND AWG	NEUTRAL AWG	GROUND AWG
0.7	70	3W	1	1-1/4"	3#3	-	1#8
1.25N	125	4W	1	2"	3#1	1#1	1#6

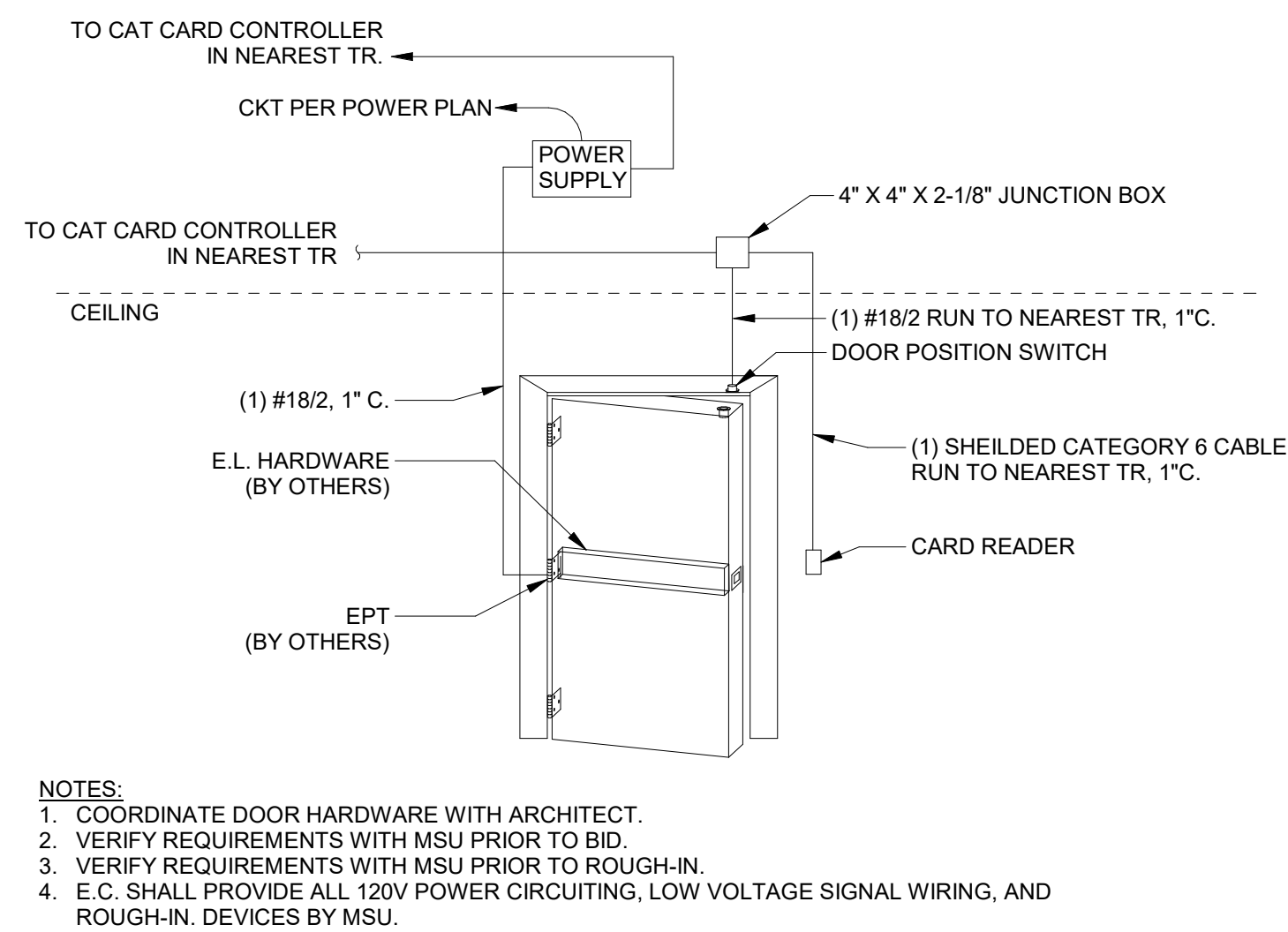
KEY NOTES:

- EXISTING SWITCHBOARDS MDP & SMDP LOCATED IN MECH ROOM ON NORTHWEST SIDE OF FIELD HOUSE. SEE OVERALL REFERENCE PLAN FOR LOCATION.
- UTILIZE EXISTING 70A SPARE BREAKER.

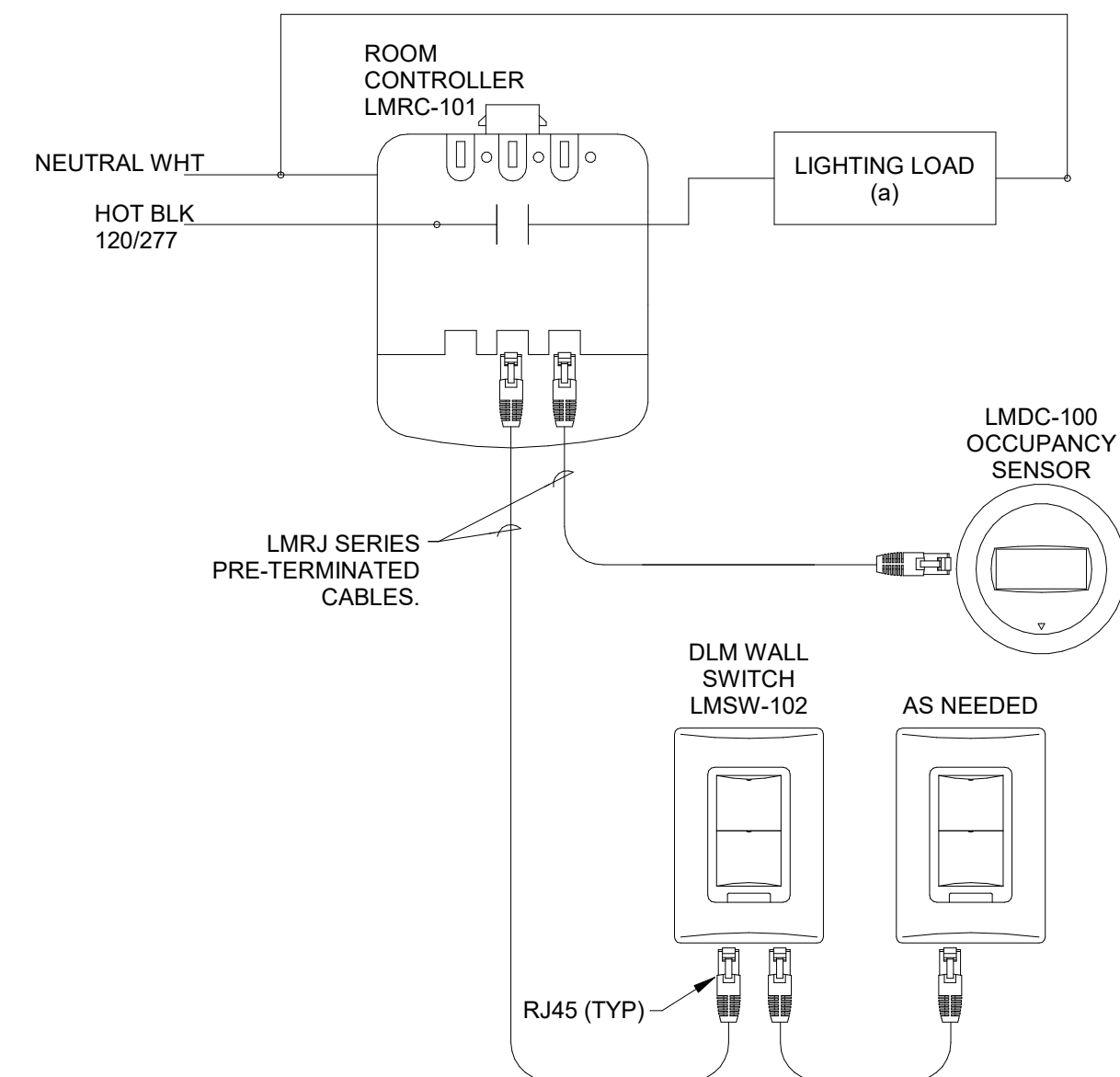
1 ONE LINE DIAGRAM
N.T.S.



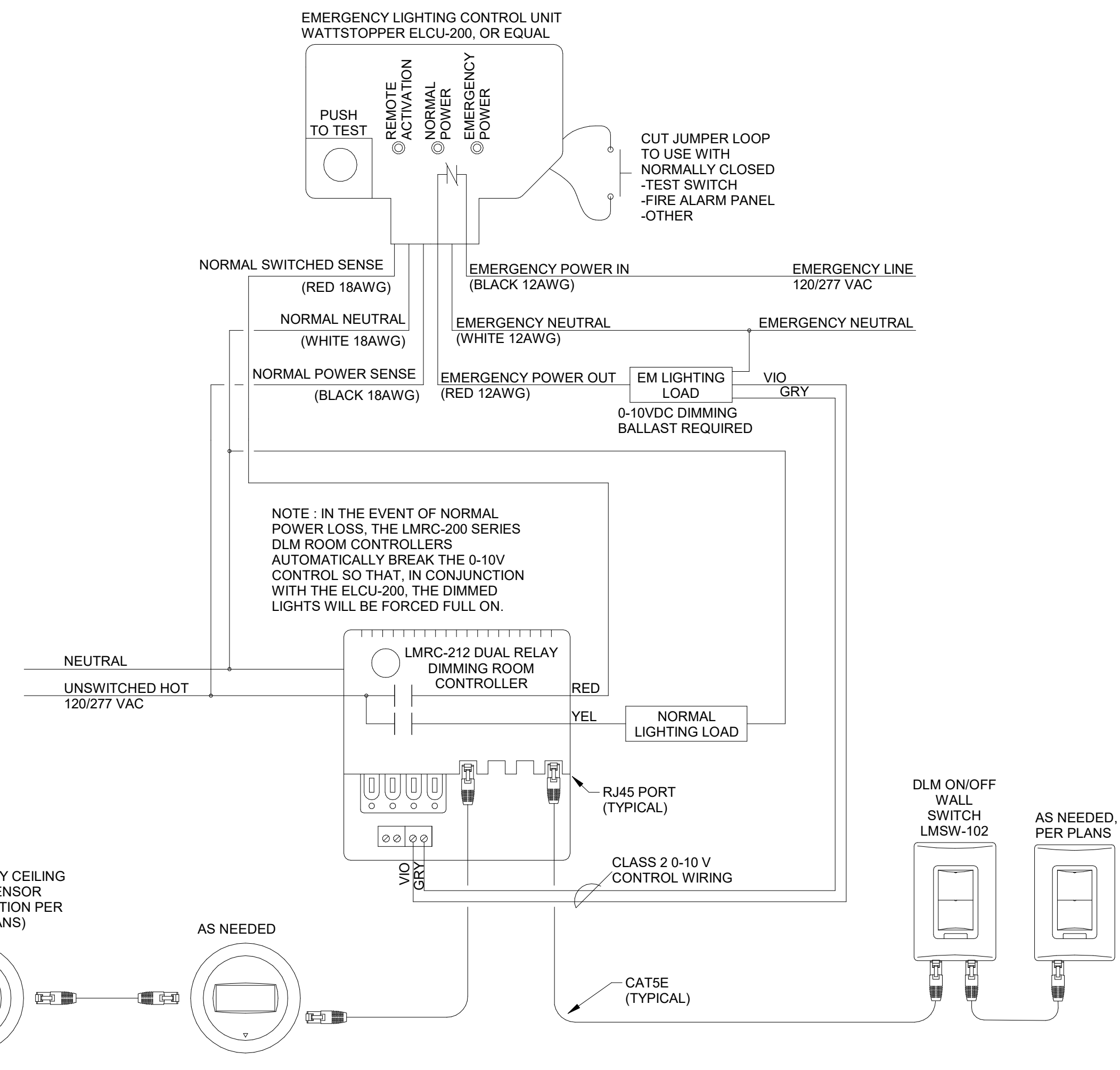
3 TRANSFORMER GROUNDING RISER DIAGRAM
N.T.S.



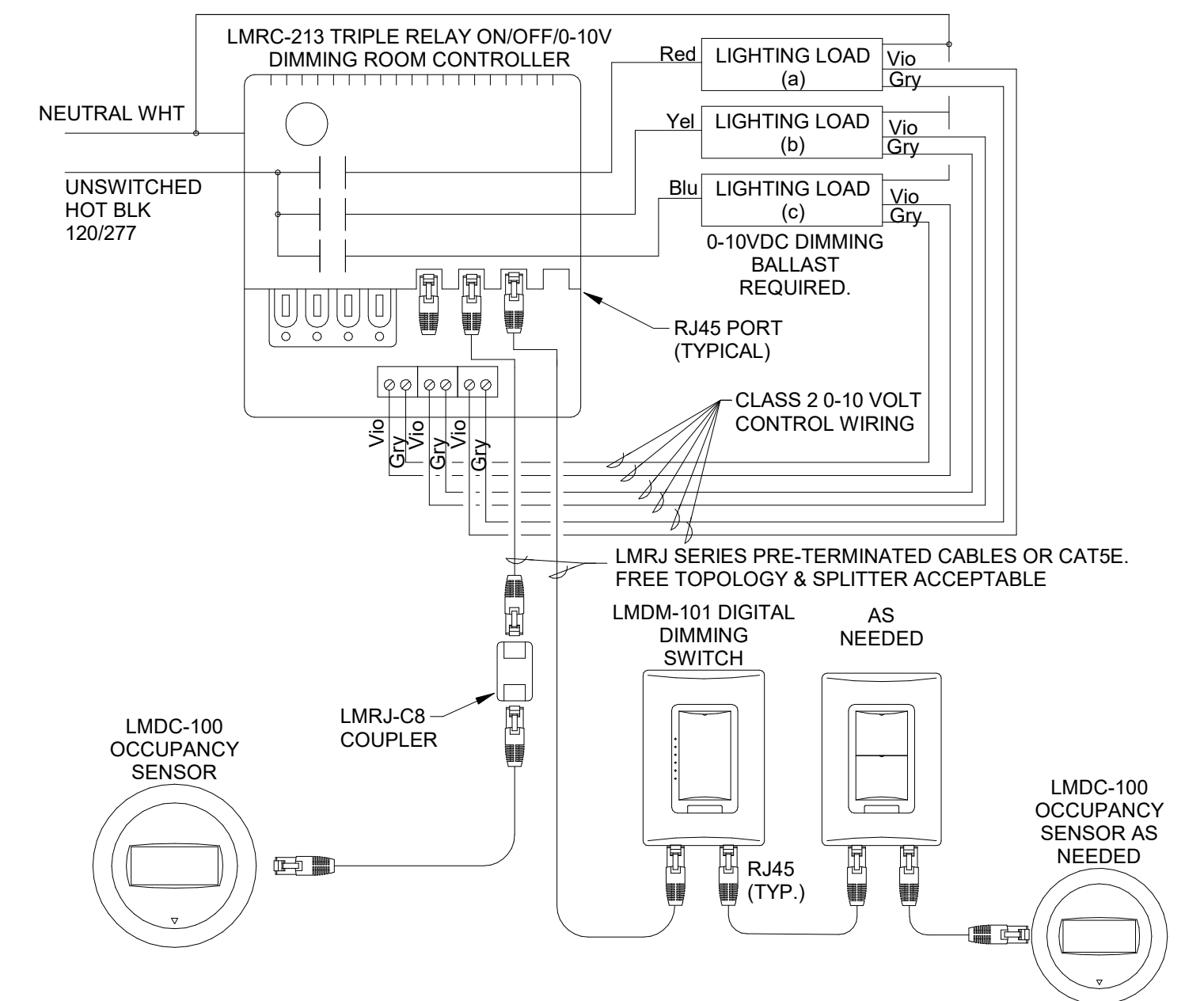
4 ACCESS CONTROL INFRASTRUCTURE DETAIL
N.T.S.



5 LIGHTING CONTROL DIAGRAM (TYP. SPACE WITH NO DIMMING)
N.T.S.



2 EMERGENCY LIGHTING CONTROL DIAGRAM (TYP. SPACE WITH DIMMING)
N.T.S.



6 LIGHTING CONTROL DIAGRAM (TYP. SPACE WITH DIMMING)
N.T.S.



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DRAWN BY:	JLG	
REVIEWED BY:	RPM	
REV.	DESCRIPTION	DATE



PPA#21-0028
 MMI#6161.007
 AAI#21062.01

**SHEET TITLE
 ELECTRICAL
 ONE-LINE AND
 DETAILS**

**SHEET
 E02**

DATE
03-08-23

LUMINAIRE SCHEDULE

TYPE	LAMPS	LOAD (W)	OUTPUT (LM, NOMINAL)	CCT (K)	DESCRIPTION	MFR	CATALOG NO. OR SERIES	MOUNTING	VOLTAGE	NOTES
D1	LED	9 W	1000	3500	4" ROUND LED DOWNLIGHT	WILLIAMS	4DR-TL-L10/835-DIM-UNV-OW-OF-CS-N-F1	RECESSED	277 V	2,4,6
D1E	LED	9 W	1000	3500	4" ROUND LED DOWNLIGHT CONNECTED TO EM POWER	WILLIAMS	4DR-TL-L10/835-DIM-UNV-OW-OF-CS-N-F1	RECESSED	120 V	2,4,6
F1	LED	36 W	5261	3500	4" LED STRIP FIXTURE	WILLIAMS	76R-4-L52/835-SMH-76R-DIM-UNV	SURFACE	277 V	2,4,7
F1E	LED	36 W	5261	3500	4" LED STRIP FIXTURE CONNECTED TO EM POWER	WILLIAMS	76R-4-L52/835-SMH-76R-DIM-UNV	SURFACE	120 V	2,4,7
F2	LED	20 W	3067	3500	4" LED STRIP FIXTURE	WILLIAMS	76R-4-L30/835-ACFL-D48-DIM-UNV	SUSPENDED	277 V	2,4,8
F2E	LED	20 W	3067	3500	4" LED STRIP FIXTURE CONNECTED TO EM POWER	WILLIAMS	76R-4-L30/835-ACFL-D48-DIM-UNV	SUSPENDED	120 V	2,4,8
G1	LED	37 W	5000	3500	4" LED VANITY	WILLIAMS	SLF-4-L52/835-HA-DIM-UNV	WALL	277 V	2,4,6,9
V1	LED	30 W	4000	3500	4" LED VAPOR TIGHT	WILLIAMS	96-4-L40/835-HIAFR-WET11-DIM-UNV	SURFACE	277 V	2,4,7
X1	LED	4 W	N/A	N/A	LED EXIT SIGN	LIGHTALARMS	GRAN-ND-G-W	UNIVERSAL	120 V	2,6
X2	LED	4 W	N/A	N/A	LED EXIT SIGN	LIGHTALARMS	GRAN-ND-G-W-GRA-24"-W	PENDANT	120 V	2,6

NOTES:
 1. PRIOR SUBMITTAL NOT REQUIRED. ALL ALTERNATE FIXTURE SHOP DRAWINGS WILL BE REVIEWED AFTER THE PROJECT IS AWARDED.
 2. PRIOR SUBMITTAL IS REQUIRED. SEE PROJECT MANUAL FOR SUBSTITUTION PROCEDURES.
 3. ALTERNATE FIXTURE IS NOT ACCEPTED FOR SUBSTITUTIONS.
 4. PROVIDE 0-10V DIMMING, DOWN TO 10% LUMEN OUTPUT, MINIMUM.
 5. PROVIDE FUSING.
 6. VERIFY FINISH WITH ARCHITECT.
 7. MOUNT FIXTURE TO BOTTOM OF STRUCTURE.
 8. SUSPEND FIXTURE EVEN WITH BOTTOM OF DUCTWORK IN SPACE.
 9. MOUNT FIXTURE TO EXISTING BACKBOX.
 10. MOUNT BOTTOM OF FIXTURE CENTERED AT 6" ABOVE TOP OF MIRROR. SEE ARCHITECT ELEVATIONS.

GENERAL NOTE:
 THE ELECTRICAL CONTRACTOR SHALL VERIFY ALL CEILING TYPES AND PROVIDE ALL MOUNTING, FIRE-RATED, AND IC-RATED ACCESSORIES AS REQUIRED. FOR FIRE-RATED CEILING ASSEMBLIES AND FOR CEILINGS WITH INSULATION, VERIFY ALL RECESSED LUMINAIRE HOUSINGS ARE RATED APPROPRIATELY OR PROVIDE DROP-OVER ENCLOSURES OR TENTS FOR LUMINAIRES. VERIFY THAT DROP-OVER ENCLOSURES OR TENTS ALLOW FOR AIR SPACE AROUND LUMINAIRE PER MANUFACTURER'S RECOMMENDATIONS.

MEP COORDINATION SCHEDULE

MARK	DESCRIPTION	ELECTRICAL DATA		CONTROL		NOTES	DISCONNECT / STARTER		DISCONNECT				FEEDER	
		LOAD	VOLT-PHASE	TYPE	DIV		TYPE	DIV	SIZE (NEMA)	SWITCH (AMPS)	FUSE (AMPS)	ENCLOSURE (NEMA)	COPPER WIRE (AWG)	CONDUIT (INCHES)
DF-1	DRINKING FOUNTAIN	6 FLA	120 / 1	INT	22 / 22		RCPT	26 / 26	-	-	-	-	#12	3/4"

CONTROL TYPE:
 BAS BUILDING AUTOMATION SYSTEM
 CO CARBON MONOXIDE DETECTOR
 CONT CONTINUOUS OPERATION
 EF INTERLOCK WITH EXHAUST FAN
 HCP HOOD CONTROL PANEL
 INT INTEGRAL
 L LIGHT SWITCH
 MS MANUAL SWITCH
 OS OCCUPANCY SENSOR
 PS PRESSURE SWITCH
 T THERMOSTAT
 TC TIME CLOCK
 UC UNIT CONTROLLER
 VE VEHICLE EXHAUST DETECTION SYSTEM
 N/A NOT APPLICABLE

DISCONNECT/STARTER TYPE:
 CB PANELBOARD CIRCUIT BREAKER WITHIN SIGHT OF EQUIPMENT
 CSFD COMBINATION STARTER/DISCONNECT - HOA
 FD FUSED DISCONNECT
 FST FUSTAT
 FW FACTORY-WIRED SINGLE POINT CONNECTION
 MOCP MOTOR OVER-CURRENT PROTECTION
 MSS MANUAL STARTER SWITCH WITH THERMAL OVERLOADS (1-, 2- OR 3-POLE AS REQUIRED)
 NFD NON-FUSED DISCONNECT
 RCPT 20A DUPLEX RECEPTACLE (GFCI PROTECTED AS REQUIRED), CORD AND PLUG
 RVSS REDUCED VOLTAGE SOLID-STATE
 VFD VARIABLE FREQUENCY DRIVE - HOA
 N/A NOT APPLICABLE

DIVISION OF RESPONSIBILITIES:
 22/22 FURNISHED AND INSTALLED BY DIV. 22. WIRED BY DIV. 22
 22/26 FURNISHED AND INSTALLED BY DIV. 22. WIRED BY DIV. 26
 23/23 FURNISHED AND INSTALLED BY DIV. 23. WIRED BY DIV. 23
 23/26 FURNISHED AND INSTALLED BY DIV. 23. WIRED BY DIV. 26
 26/26 FURNISHED AND INSTALLED BY DIV. 26. WIRED BY DIV. 26

NOTES:
 A. CONTROL WIRING SHALL BE CONCEALED WITHIN WALL CONSTRUCTION, ABOVE CEILING, OR RUN IN CONDUIT. EXPOSED CONTROL WIRING IS UNACCEPTABLE.
 B. UNLESS SPECIFICALLY NOTED, ALL FEEDERS SHALL INCLUDE A FULL SIZE NEUTRAL. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY WITH THE MANUFACTURER OF THE ACTUAL EQUIPMENT BEING SUPPLIED WHETHER A NEUTRAL IS REQUIRED PRIOR TO ROUGH-IN.

Branch Panel: CLJ

Location: JANITOR 115
Supply From: TLR
Mounting: Surface
Enclosure: Type 1
Volts: 120/208 Wye
Phases: 3
Wires: 4
A.I.C. Rating: 10,000
Mains Type: MCB
Mains Rating: 225 A
MCB Rating: 125 A

Notes:

CKT	Circuit Description	Load Classification	Trip	Poles	A	B	C	Poles	Trip	Load Classification	Circuit Description	CKT	
1	<1>RCPT- WOMEN'S LOCKER ROOM 118-A	Receptacle	20 A	1	1080	600		1	20 A	Lighting	LTG-MEN'S 116-A & WOMEN'S 118-A LOCKERS	2	
3	<1>RCPT- WOMEN'S LOCKER ROOM 118-A	Receptacle	20 A	1			1080	1000		Power	MEN'S 116, WOMEN'S 118 ACCESS CONTROLS	4	
5	<1>RCPT- WOMEN'S LOCKER ROOM 118-A	Receptacle	20 A	1							SPARE	6	
7	RCPT- WOMEN'S LOCKER ROOM 118-A	Receptacle	20 A	1	540	0			1	20 A	SPARE	8	
9	<1>RCPT- DF-1 WOMEN'S LOCKER ROOM 118-A	Receptacle	20 A	1			180	0		1	20 A	SPARE	10
11	RCPT- WOMEN'S TEAM SPACE 118-B	Receptacle	20 A	1				720	0	1	20 A	SPARE	12
13	RCPT- WOMEN'S TEAM SPACE 118-B	Receptacle	20 A	1	720	0			1	20 A	SPARE	14	
15	RCPT- WOMEN'S TEAM SPACE 118-B	Receptacle	20 A	1			180	0		1	20 A	SPARE	16
17	RCPT- WOMEN'S TEAM SPACE 118-B	Receptacle	20 A	1				180	0	1	20 A	SPARE	18
19	<1>RCPT- MEN'S LOCKER ROOM 116-A	Receptacle	20 A	1	1440	0			1	20 A	SPARE	20	
21	<1>RCPT- MEN'S LOCKER ROOM 116-A	Receptacle	20 A	1			1440	0		1	20 A	SPARE	22
23	RCPT- MEN'S LOCKER ROOM 116-A	Receptacle	20 A	1				540	0	1	20 A	SPARE	24
25	<1>RCPT- DF-1 MEN'S LOCKER ROOM 116-A	Receptacle	20 A	1	180	0			1	20 A	SPARE	26	
27	RCPT- MEN'S TEAM SPACE 116-B	Receptacle	20 A	1			180	0		1	20 A	SPARE	28
29	RCPT- MEN'S TEAM SPACE 116-B	Receptacle	20 A	1				180	0	1	20 A	SPARE	30
31	RCPT- MEN'S TEAM SPACE 116-B	Receptacle	20 A	1	900	--			1	--	SPACE	32	
33	RCPT- MEN'S TEAM SPACE 116-B	Receptacle	20 A	1		900	--		1	--	SPACE	34	
35	RCPT- MEN'S GAME REVIEW 116-C	Receptacle	20 A	1			540	--	1	--	SPACE	36	
37	SPACE	--	--	1	--	--	--	--	1	--	SPACE	38	
39	SPACE	--	--	1	--	--	--	--	1	--	SPACE	40	
41	SPACE	--	--	1	--	--	--	--	1	--	SPACE	42	
Total Load:					5460 VA	4960 VA	3060 VA						
Total Amps:					48 A	44 A	26 A						

Legend:

<1> PROVIDE 5mA GFCI CIRCUIT BREAKER FOR THIS CIRCUIT.

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Lighting	600 VA	125.00%	750 VA	
Power	1000 VA	100.00%	1000 VA	Total Conn. Load: 13480 VA
Receptacle	11880 VA	92.09%	10940 VA	Total Est. Demand: 12690 VA
				Total Conn.: 37 A
				Total Est. Demand: 35 A

Notes:

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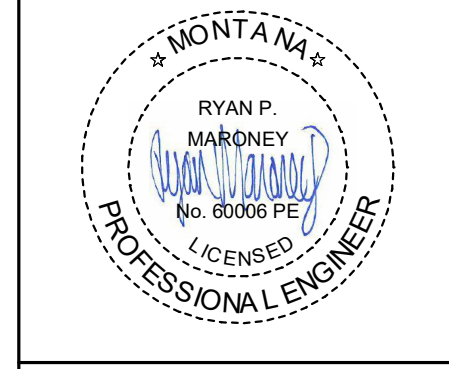


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BRICK BREEDEN
 FIELDHOUSE LOCKER
 ROOM RENOVATION



DRAWN BY: JLG
REVIEWED BY: RPM
REV. DESCRIPTION DATE



PPA#21-0028
MMI#6161.007
AAI#21062.01

SHEET TITLE
 ELECTRICAL
 SCHEDULES

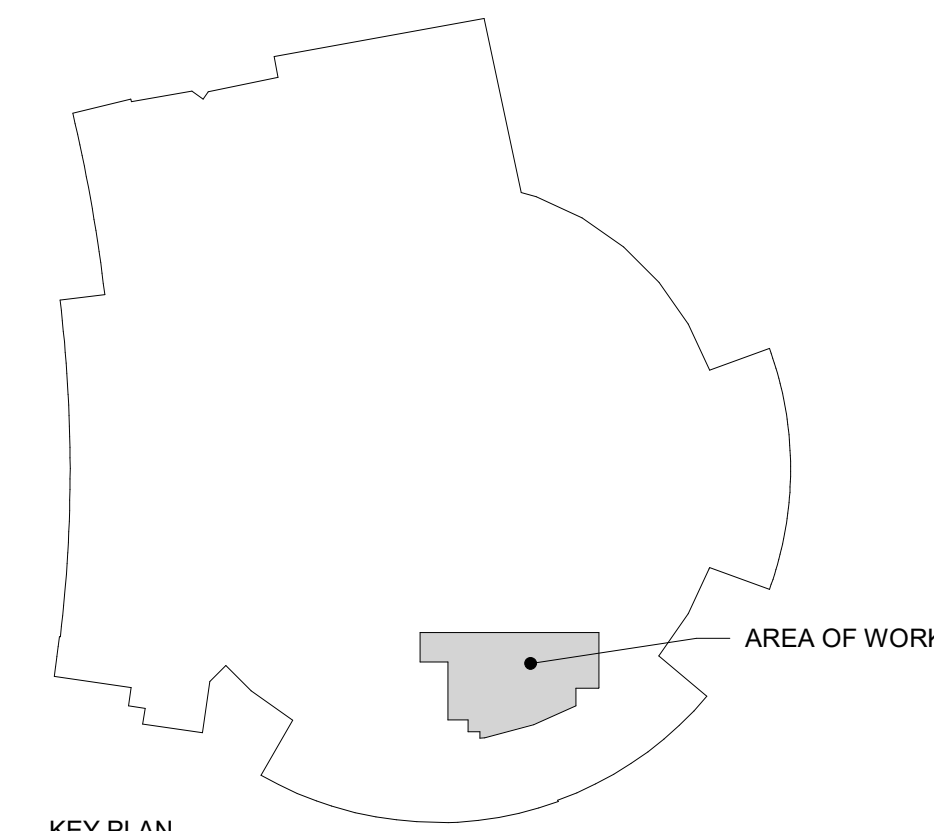
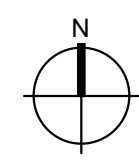
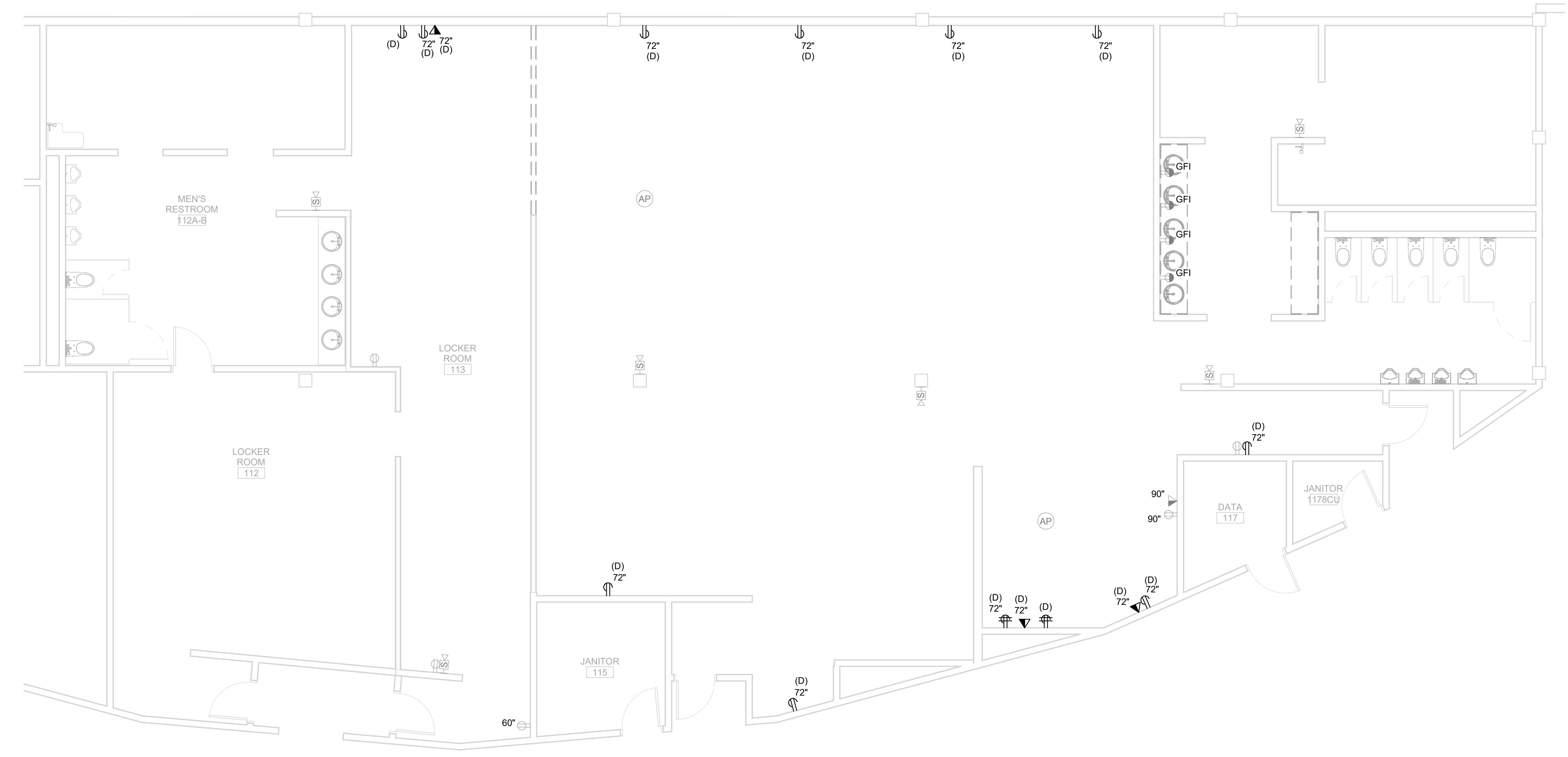
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03-08-23

GENERAL ELECTRICAL DEMO NOTES

- A. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF ANY EXISTING CONDUIT OR FEEDER CIRCUITS THAT ARE INTENDED TO REMAIN, THAT ARE SAW-CUT, OR OTHERWISE DAMAGED AS PART OF THE DEMOLITION PROCESS. PROVISION FOR THIS WORK SHALL INCLUDE, BUT IS NOT LIMITED TO: ALL NECESSARY CONDUIT AND CONDUCTORS, MOUNTING ACCESSORIES AND LABOR, TO RESTORE SYSTEM TO INTENDED FUNCTION.
- B. ELECTRICAL DRAWINGS SHOWING EXISTING BUILDING CONDITIONS, SUCH AS DEMOLITION DRAWINGS, EXISTING PANEL SCHEDULES, ETC. ARE BASED ON RECORD DRAWINGS AND SITE VISITS. IF ACTUAL EXISTING CONDITIONS DIFFER FROM THOSE SHOWN ON DRAWINGS, PLEASE NOTIFY ENGINEER.
- C. ELECTRICAL DEVICES SHOWN IN GREY ARE EXISTING TO REMAIN. ELECTRICAL DEVICES SHOWN IN BLACK/DASHED WITH A 'D' ARE TO BE DEMOLISHED UNO. FOR DEVICES NOTED TO BE DEMOLISHED, ELECTRICAL CONTRACTOR SHALL REMOVE IN ENTIRETY, INCLUDING ASSOCIATED BRANCH CIRCUIT BACK TO SOURCE OR NEAREST UPSTREAM LIVE DEVICE, OR DISCONNECT UNUSED WIRING AND CAP-OFF IN ASSOCIATED J-BOX(ES) IN A SAFE AND CODE-COMPLIANT MANNER.
- D. PATCH/REPAIR ALL HOLES IN FLOOR, WALLS, AND DECK RESULTING FROM DEMOLITION WORK AS REQUIRED.

KEY NOTES:



1 LEVEL 1 POWER & SIGNAL DEMOLITION PLAN
3/16" = 1'-0"



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BRICK BREEDEN FIELDHOUSE LOCKER ROOM RENOVATION

100% CONSTRUCTION DOCUMENTS

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REVIEWED BY: RPM		
REV.	DESCRIPTION	DATE



PPA#21-0028

MMI#6161.007

AAI#21062.01

SHEET TITLE
POWER & SIGNAL
DEMOLITION PLAN

SHEET
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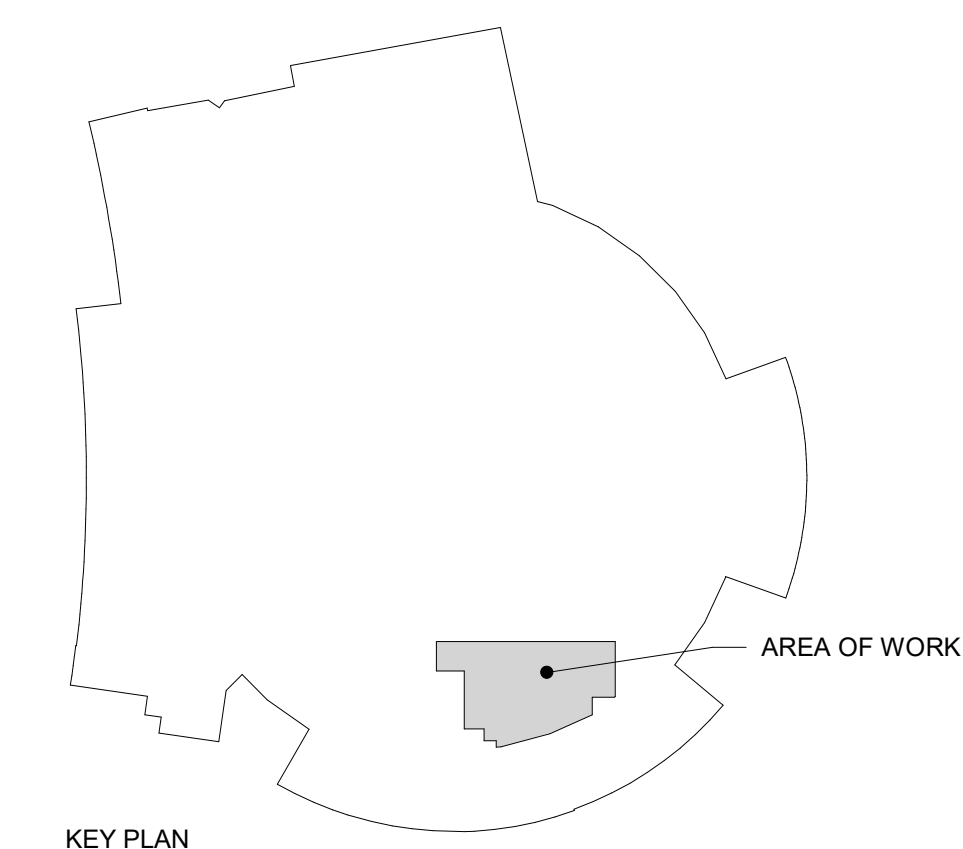
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- D. PATCH/REPAIR ALL HOLES IN FLOOR, WALLS, AND DECK RESULTING FROM DEMOLITION WORK AS REQUIRED.

KEY NOTES:

- 1. SAVE EXISTING LIGHTING CIRCUIT HOME-RUN(S) RUNNING BACK TO EXISTING PANELBOARD(S), FOR RE-USE TO SERVE THE NEW LIGHTING.



1 LEVEL 1 LIGHTING DEMOLITION PLAN
3/16" = 1'-0"



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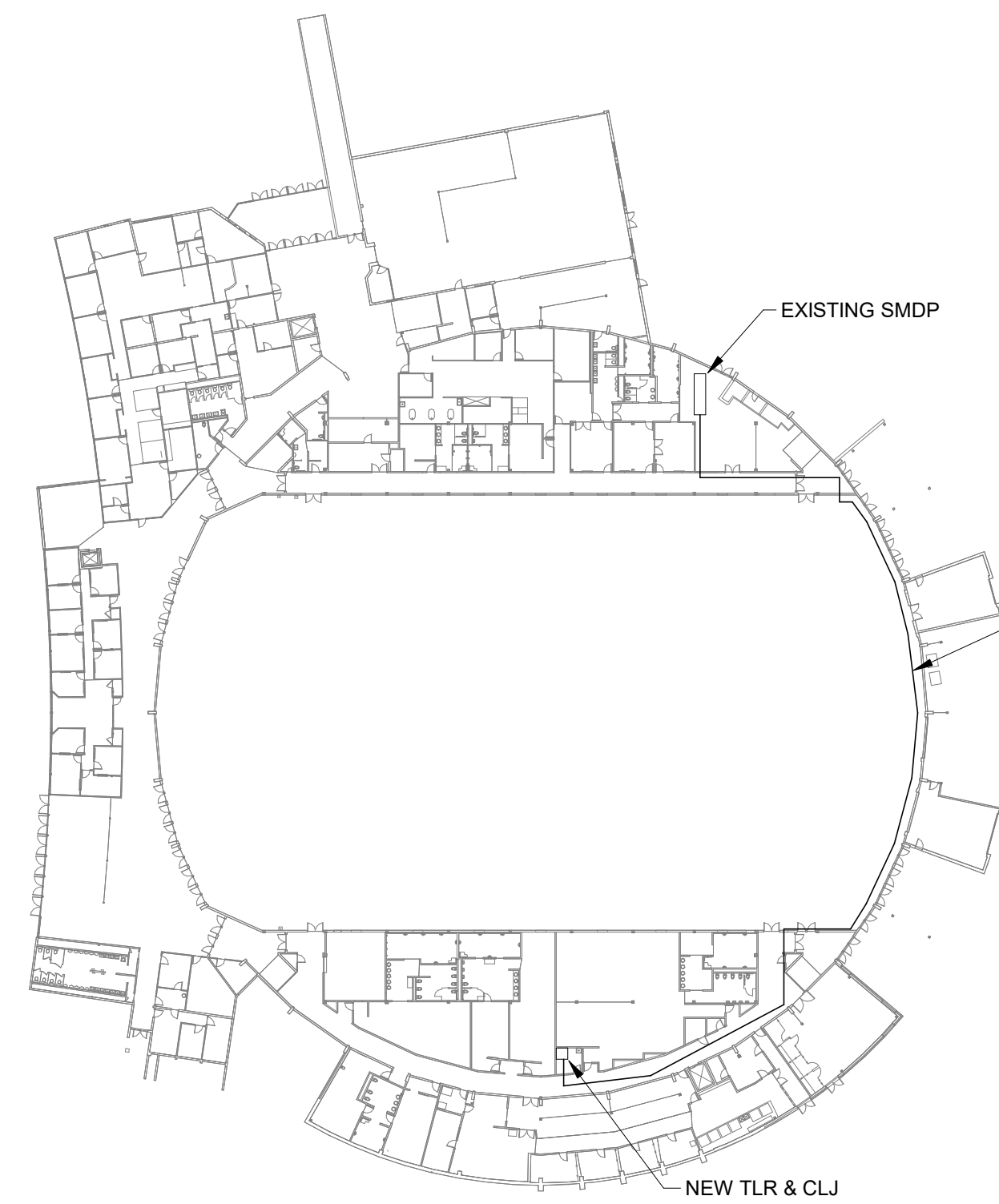
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APPROXIMATE ROUTING OF NEW FEEDER SHOWN FOR REFERENCE ONLY. ROUTE FEEDER EXPOSED ALONG EAST WALL OF ARENA. FOLLOW PATH OF EXISTING CONDUIT AND PIPING ROUTED ALONG WALL. PROVIDE PULL BOX(ES) AS REQUIRED ALONG ROUTE. CUT/DRILL AS REQUIRED FOR WALL PENETRATIONS AND PATCH/SEAL TO MATCH EXISTING. PAINT CONDUIT AFTER INSTALLATION TO MATCH EXISTING WALL/CEILING FINISH. CONTRACTOR TO FIELD VERIFY ROUTING PRIOR TO BID AND ROUGH-IN. COORDINATE WITH OWNER PRIOR TO WORK COMMENCING.

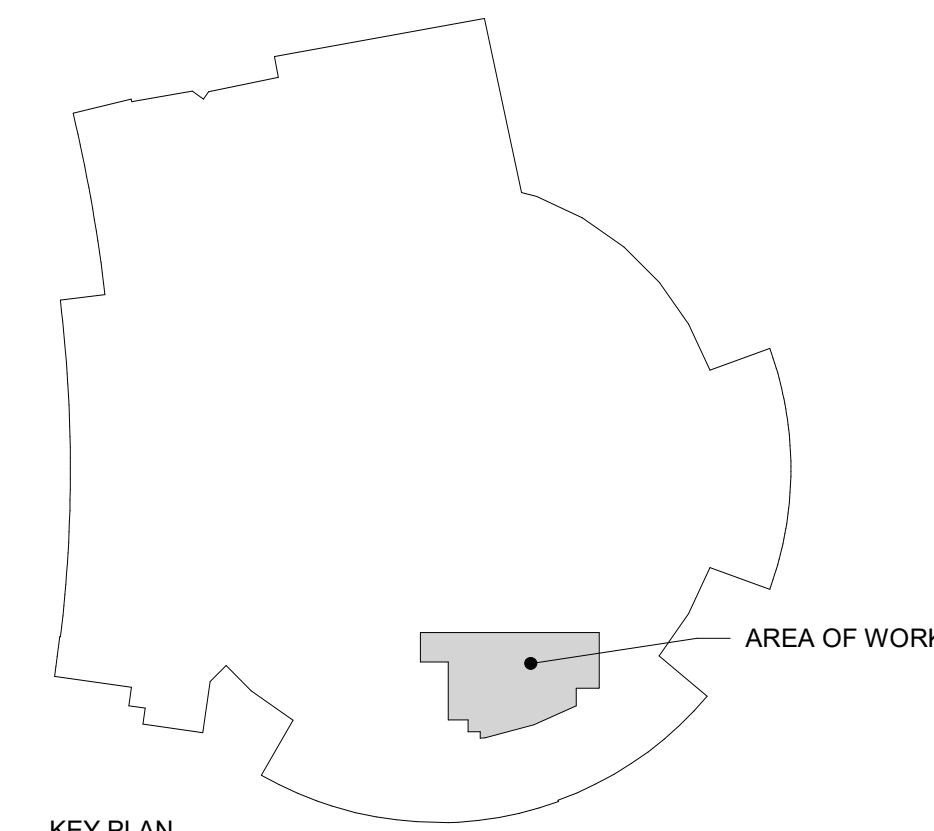
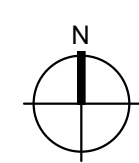
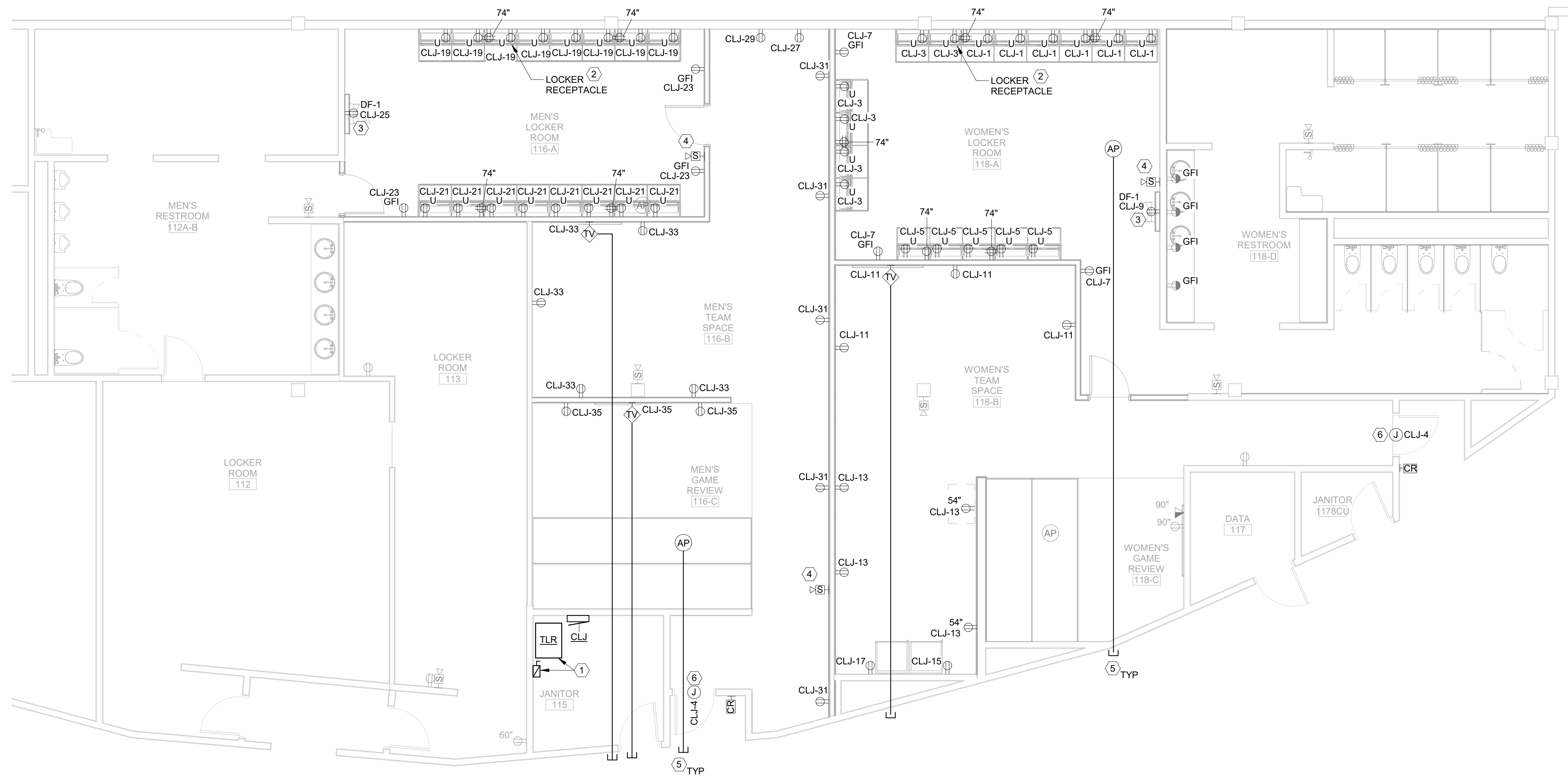
GENERAL ELECTRICAL NOTES

- A. IT IS ABSOLUTELY NECESSARY FOR ALL TRADES INVOLVED TO COORDINATE WITH EACH OTHER AND VERIFY THAT THERE ARE NO CONFLICTS IN LOCATION OF DUCTS, CONDUITS, DIFFUSERS, BOXES, AND OTHER ITEMS THROUGHOUT THIS PROJECT BEFORE FINAL PLACEMENT OF MATERIALS.
- B. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL CUTTING OF FLOORS, WALLS, CEILINGS, AND ROOFS TO PERFORM THE REQUIRED WORK DEPICTED IN THESE DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR ALL PATCHING OF HOLES TO THE SATISFACTION OF THE ARCHITECT/ENGINEER.
- C. LOW VOLTAGE CABLES (LIGHTING CONTROLS), SHALL BE ROUTED IN CONDUIT. UNO. LOW VOLTAGE CABLES (FIRE ALARM) SHALL BE ROUTED IN RED CONDUIT.
- D. ELECTRICAL ITEMS SHOWN IN GRAY ARE EXISTING TO REMAIN AND ELECTRICAL ITEMS SHOWN SOLID DARD ARE NEW UNLESS NOTED OTHERWISE.

KEY NOTES:

- 1. MOUNT BOTTOM OF EQUIPMENT 6'-0" A.F.F.
- 2. USE LOCKER RECEPTACLE AND BACKBOX PROVIDED WITH LOCKERS. EC TO PROVIDE CONDUIT AND WIRING. COORDINATE WITH LOCKER PROVIDER PRIOR TO ROUGH-IN. PROVIDE 5mA GFCI BREAKER IN PANEL SERVING LOAD.
- 3. COORDINATE EXACT LOCATION OF RECEPTACLE WITH PLUMBING CONTRACTOR PRIOR TO ROUGH-IN. PROVIDE 5mA GFCI BREAKER IN PANEL SERVING LOAD.
- 4. EXTEND EXISTING SIMPLEX (JC) FIRE ALARM SYSTEM WITHIN BUILDING AS REQUIRED TO SERVE NEW SPEAKER STROBES.
- 5. APPROXIMATE CONDUIT ROUTING SHOWN FOR REFERENCE. SEE LEGENDS ON SHEET E01 FOR ROUGH-IN REQUIREMENTS.
- 6. SEE DETAIL 4 / E02. ROUTE SIGNAL CABLE TO EXISTING CAT CARD READER BOARD IN DATA ROOM 117. COORDINATE WITH MSU.

2 OVERALL LEVEL 1 REFERENCE PLAN
1" = 60'-0"



1 LEVEL 1 POWER & SIGNAL PLAN
3/16" = 1'-0"



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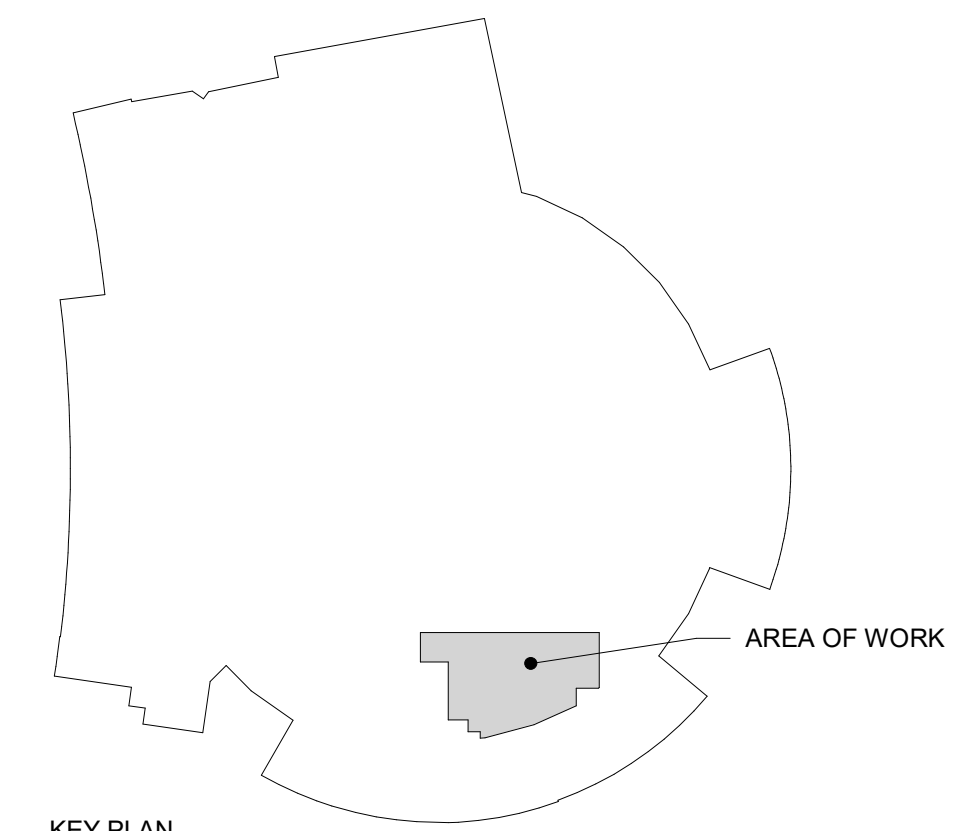
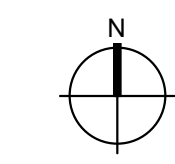
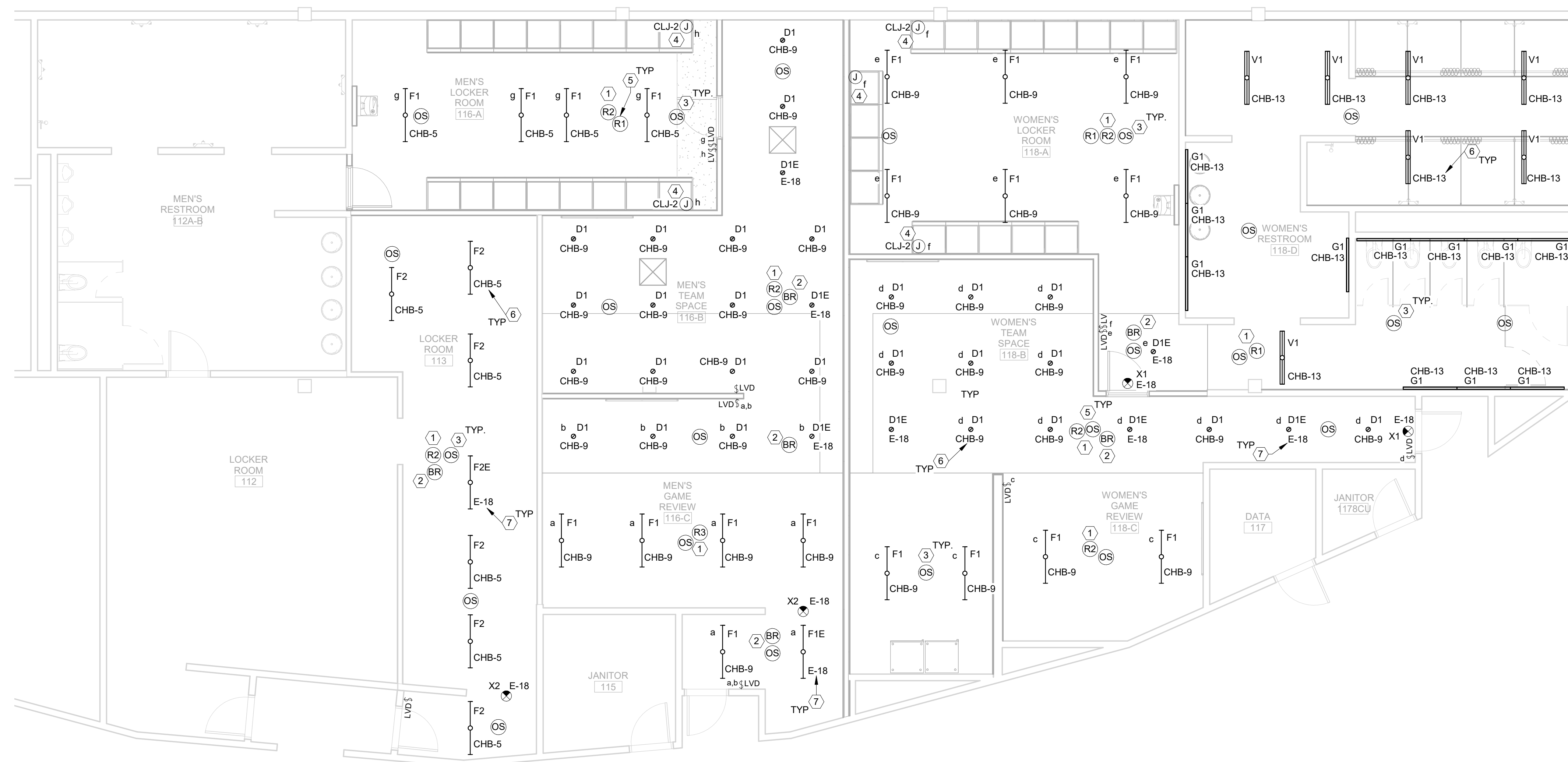
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- ELECTRICAL ITEMS SHOWN IN GRAY ARE EXISTING TO REMAIN AND ELECTRICAL ITEMS SHOWN SOLID DARD ARE NEW UNLESS NOTED OTHERWISE.

KEY NOTES:

- SPACE SHALL BE CONFIGURED FOR OCCUPANCY SENSORS TO PROVIDE AUTO ON, AUTO OFF CONTROL. WHERE PRESENT, MANUAL SWITCH(ES) SHALL PROVIDE FULL DIMMING OVERRIDE.
- SEE DETAIL 2/E02 FOR TYPICAL EMERGENCY LIGHTING CONTROL DIAGRAM.
- MOUNT OCCUPANCY SENSORS IN AREAS OPEN TO STRUCTURE TO BOTTOM OF STRUCTURE IN SPACE. COORDINATE LOCATION WITH DUCTWORK, PIPING AND OTHER SYSTEMS FOR BEST FIT IN SPACE.
- PROVIDE CONNECTION FOR TOEICK LIGHTING PROVIDED WITH LOCKERS. COORDINATE LOCATION AND QUANTITY OF DRIVERS WITH LOCKER PROVIDER PRIOR TO ROUGH-IN. CIRCUIT VIA R1 ROOM CONTROLLER SHOWN WITHIN SPACE FOR CONTROL VIA OCC SENSORS & LV SWITCH.
- LOCATE ROOM CONTROLLERS IN A NEARBY BACK-OF-HOUSE LOCATION (SUCH AS A STORAGE OR JANITOR CLOSET), DO NOT LOCATE WHERE VISIBLE TO THE PUBLIC.
- ALL LIGHTING CIRCUITS SHOWN ON THIS SHEET ARE MATCHING THE EXISTING LIGHTING CIRCUITS SHOWN ON AS-BUILT DRAWINGS SERVING OLD DEMOLISHED LIGHTING WITHIN THE OLD SPACES. EXTEND EXISTING LIGHTING CIRCUITS TO NEW LUMINAIRES AS SHOWN, VIA NEW CONTROLS.
- ALL EMERGENCY LIGHTING CIRCUITS ON THIS SHEET ARE MATCHING THE EXISTING LIGHTING CIRCUITS SHOWN ON AS-BUILT DRAWINGS SERVING OLD DEMOLISHED LIGHTING WITHIN THE OLD SPACES. EXTEND EXISTING LIGHTING CIRCUITS TO NEW LUMINAIRES AS SHOWN, VIA NEW CONTROLS.



1 LEVEL 1 LIGHTING PLAN
3/16" = 1'-0"

KEY PLAN

FIRE SPRINKLER LEGEND

ABBREVIATIONS	ANNOTATION SYMBOLS	PIPE FITTINGS
ADJ ADJUSTABLE AFF ABOVE FINISHED FLOOR AFG ABOVE FINISHED GRADE ATR ALL THREAD ROD AS AUTOMATIC SPRINKLER BHP BRAKE HORSEPOWER BOD BOTTOM OF DECK BOJ BOTTOM OF JOIST CIF CUT IN FIELD CLG CEILING CONT CONTINUATION CORR CORRIDOR CV CONTROL VALVE DN DOWN ELEV ELEVATION FP FIRE PROTECTION GA GAUGE GALV GALVANIZED GBG GROOVE BOTH ENDS GOE GROOVE ONE END GC GENERAL CONTRACTOR GEN GENERATOR GPM GALLONS PER MINUTE HP HORSEPOWER HR HOUR ID INSIDE DIAMETER IPS IRON PIPE SIZE MFR MANUFACTURER NC NORMALLY CLOSED NIC NOT IN CONTRACT NO NORMALLY OPEN NPS NOMINAL PIPE SIZE OS&Y OUTSIDE STEM & YOKE P PUMP PRV PRESSURE REDUCING VALVE PSIA PSI, ABSOLUTE PSIG PSI, GAUGE QTY QUANTITY RN RISER NIPPLE SD SMOKE DETECTOR SP STATIC PRESSURE SS STAINLESS STEEL SSP STANDARD SPRAY PENDENT SSU STANDARD SPRAY UPRIGHT T&G THREAD AND GROOVE TBE THREAD BOTH ENDS TOE THREAD ONE END TYP TYPICAL UON UNLESS OTHERWISE NOTED W/ WITH	3D VIEW NUMBER DETAIL NUMBER SHEET NUMBER SECTION NUMBER SHEET NUMBER POINT OF NEW CONNECTION POINT OF DISCONNECTION KEYNOTE PIPE CENTERLINE FROM FINISHED FLOOR PIPE CENTERLINE BELOW DECK CEILING HEIGHT SECTION VIEW SPRINKLER SYMBOL FIRE SPRINKLERS NEW RECESSED PENDENT SPRINKLER NEW UPRIGHT SPRINKLER ON-LINE NEW UPRIGHT SPRINKLER ON-SPRIG EXISTING RECESSED PENDENT SPRINKLER EXISTING UPRIGHT SPRINKLER ON-LINE EXISTING UPRIGHT SPRINKLER ON-SPRIG FIRE SPRINKLER PIPING WET FIRE SPRINKLER PIPE (STEEL) EXISTING FIRE SPRINKLER PIPE NOTE: THIS IS A STANDARD LEGEND. NOT ALL PIPE TYPES AND SYMBOLS ARE NECESSARILY UTILIZED IN THE DRAWINGS.	ELBOW PIPE BREAK ELBOW UP ELBOW DOWN SIDE CONNECTION OR TEE FITTING TOP CONNECTION BOTTOM CONNECTION UNION FLANGE CAPPED OUTLET BLIND FLANGE FIRE ALARM SYMBOLS FLOW SWITCH TAMPER SWITCH PRESSURE SWITCH LOW AIR ALARM VALVES ISOLATION VALVE - SEE SPECIFICATIONS FOR TYPE BUTTERFLY VALVE HOSE END DRAIN STRAINER CHECK VALVE BACKFLOW PREVENTER PRESSURE REDUCING VALVE

INSTALLATION REQUIREMENTS

PIPE HANGERS AND SUPPORTS:

- PROVIDE HANGERS, BRACKETS, SUPPORTS, ANCHORS, AND RELATED APPURTENANCES, AS REQUIRED, TO SUPPORT ALL PIPING AND EQUIPMENT PROVIDED UNDER THIS SECTION.
- INSTALL IN ACCORDANCE WITH NFPA 13 AND UL LISTING.
- INSTALL HANGERS TO PROVIDE MINIMUM 1/2 INCH (15MM) SPACE BETWEEN FINISHED COVERING AND ADJACENT WORK.
- USE HANGERS WITH 1-1/2 INCH (40MM) MINIMUM VERTICAL ADJUSTMENT. DESIGN HANGERS FOR PIPE MOVEMENT WITHOUT DISENGAGEMENT OF SUPPORTED PIPE.
- SUPPORT VERTICAL PIPING AT EVERY FLOOR. SUPPORT RISER PIPING INDEPENDENTLY OF CONNECTED HORIZONTAL PIPING.
- WHERE SEVERAL PIPES CAN BE INSTALLED IN PARALLEL AND AT SAME ELEVATION, PROVIDE MULTIPLE OR TRAPEZE HANGERS.
- SEE DETAILS FOR HANGER SPACING REQUIREMENTS.

JOINTS:

- JOINTS SHALL CONFORM TO NFPA 13. SHOP WELDED JOINTS WILL BE PERMITTED. FLANGED JOINTS OR MECHANICAL GROOVED COUPLINGS SHALL BE PROVIDED WHERE INDICATED OR REQUIRED BY NFPA 13. GROOVED PIPE AND FITTINGS SHALL BE PREPARED IN ACCORDANCE WITH THE MANUFACTURER'S LATEST PUBLISHED SPECIFICATION ACCORDING TO PIPE MATERIAL, WALL THICKNESS AND SIZE. MECHANICAL COUPLINGS AND FITTINGS SHALL BE FROM THE SAME MANUFACTURER.
- THREADED JOINTS SHALL BE CUT WITH AN APPROVED THREAD-CUTTING OIL. JOINTS SHALL BE MADE TIGHT WITH A STIFF MIXTURE OF LITHARGE AND GLYCERIN OR OTHER APPROVED THREAD JOINT COMPOUND OR TAPE. NOT MORE THAN THREE THREADS SHALL SHOW AFTER THE JOINT IS MADE UP.
- FLANGED JOINTS SHALL BE FACED TRUE, PROVIDED WITH GASKETS AND MADE SQUARE AND TIGHT.
- MECHANICAL GROOVED PIPE JOINTS SHALL CONFORM TO AWWA C608. JOINTS SHALL BE MADE USING A UL-04 LISTED OR FM-7725 APPROVED COMBINATION OF FITTINGS, GASKETS, AND GROOVES. CUT OR ROLLED PIPE GROOVES SHALL BE DIMENSIONALLY COMPATIBLE WITH THE FITTINGS.
- MECHANICAL PIPE COUPLINGS SHALL BE OF THE BOLTED TYPE AND SHALL CONSIST OF A HOUSING FABRICATED IN ONE OR MORE PARTS, A SYNTHETIC RUBBER GASKET, AND NUTS AND BOLTS TO SECURE THE UNIT TOGETHER. GASKETS SHALL BE OF MOLDED SYNTHETIC RUBBER WITH CENTRAL CAVITY, PRESSURE RESPONSIVE CONFIGURATION AND SHALL CONFORM TO ASTM D2000.

REDUCERS:

- REDUCTIONS IN PIPE SIZES SHALL BE MADE WITH ONE PIECE REDUCING FITTINGS OR REDUCING COUPLINGS. REDUCING COUPLINGS SHALL NOT BE USED IN DRY SYSTEMS AND PREACTION SYSTEMS.

PIPE SLEEVES:

- PIPES PASSING THROUGH CONCRETE OR MASONRY WALLS OR CONCRETE FLOORS SHALL BE PROVIDED WITH PIPE SLEEVES FITTED INTO PLACE AT THE TIME OF CONSTRUCTION. EACH SLEEVE SHALL EXTEND THROUGH ITS RESPECTIVE WALL OR FLOOR, AND BE CUT FLUSH WITH EACH SURFACE UNLESS OTHERWISE INDICATED. SLEEVES SHALL BE OF SUCH SIZE AS TO PROVIDE A MINIMUM OF 1/4 INCH ALL AROUND CLEARANCE BETWEEN THE PIPE AND SLEEVE. SLEEVES IN BEARING WALLS AND WET AREAS SHALL BE STEEL PIPE OR CAST IRON PIPE. SLEEVES IN NONBEARING WALLS, FLOORS, OR CEILINGS MAY BE STEEL PIPE, CAST IRON PIPE, OR GALVANIZED SHEET METAL WITH LOCK-TYPE LONGITUDINAL SEAM.
- WHERE PIPES PASS THROUGH FIRE WALLS, FIRE PARTITIONS, OR FLOORS, A FIRE SEAL OF FIRE RESISTANT CAULK SHALL BE PLACED BETWEEN THE PIPE AND SLEEVE.

WALL/FLOOR/CEILING ESCUTCHEONS:

- ESCUTCHEONS SHALL BE PROVIDED AT ALL FINISHED SURFACES WHERE EXPOSED PIPING PASSES THROUGH FLOORS, WALLS, OR CEILINGS EXCEPT IN BOILER, UTILITY, OR EQUIPMENT ROOMS. WHERE THE RISER INTO UPPER LEVEL MECHANICAL ROOMS PENETRATES THE CONCRETE FLOOR, PROVIDE AND INSTALL A MECHANICAL SEAL.

DRAINS AND DRIPS:

- MAIN DRAIN: PROVIDE MAIN DRAIN ON SPRINKLER SYSTEM APPROXIMATELY 4'-0" ABOVE FLOOR. DISCHARGE TO EXTERIOR OR APPROVED DRAIN LOCATION.
- ALL PIPING SHALL DRAIN BACK TO THE MAIN RISER. WHERE NOT POSSIBLE, PROVIDE AUXILIARY DRAINS DISCHARGING TO ARCHITECTURALLY APPROVED LOCATIONS.
- INSTALL AUXILIARY DRAINS AT ALL LOW POINTS IN SYSTEM. FIVE OR FEWER TRAPPED GALLONS WILL NOT REQUIRE A DRAIN VALVE IF IT CAN BE DRAINED THROUGH A SINGLE PENDENT SPRINKLER OR AN EASILY SEPARATED CONNECTION. DRAIN VALVES TO BE PIPED TO A SAFE PLACE OF DISCHARGE. VERIFY LOCATION OF DRAINS WITH OWNER'S REPRESENTATIVE. ANY DRAIN NOT DIRECTLY DISCHARGING TO A RECEPTACLE SHALL HAVE A 3/4 INCH HOSE LINE CONNECTION.
- IF MAIN DRAINS, AUXILIARY DRAINS, OR INSPECTOR'S TEST CONNECTIONS CANNOT BE SAFELY DISCHARGED WITHOUT CAUSING PROPERTY DAMAGE, PROVIDE 18"X18" CONCRETE SPLASH BLOCKS TO DEFLECT FLOW AND MINIMIZE DAMAGE.

PIPING MAINTENANCE AND PROTECTION REQUIREMENTS:

- FLUSHING: FLUSHING ARRANGEMENTS SHALL BE PROVIDED BY NFPA 13 IN ACCESSIBLE LOCATIONS.
- FLUSHING CONNECTIONS: 1-1/4" NIPPLES WITH CAPS AT EXTREME ENDS OF ALL CROSS MAINS.

PIPING SPECIFICATIONS

SPRINKLER PIPING, ABOVE GROUND (STEEL PIPE):

- THREADED PIPING: 1-INCH AND LARGER - ASTM A135 OR 795, GRADE A, SCHEDULE 40, WRW, BLACK STEEL PIPE.
- GROOVED PIPING: 1-1/4" AND LARGER - ASTM A135 OR 795, GRADE A SCHEDULE 10 OR SCHEDULE 40, WRW, BLACK STEEL PIPE, ROLL GROOVED ENDS.
- ALL PIPING USED IN DRY PIPE SPRINKLER SYSTEMS SHALL BE ASTM A135 OR 795, GRADE A, SCHEDULE 40, WRW, BLACK STEEL PIPE, THREADED OR ROLL GROOVED ENDS.
- ALL PIPING ON THE EXTERIOR OF THE BUILDING SHALL BE CORROSION RESISTANT.

FITTINGS:

- CAST-IRON THREADED FITTINGS: ANSI B16.4, CLASS 125, STANDARD PATTERN. THREADS SHALL CONFORM TO ANSI B1.20.1.
- MALLEABLE-IRON THREADED FITTINGS: ANSI B16.3, CLASS 150, STANDARD PATTERN. THREADS SHALL CONFORM TO ANSI B1.20.1.
- DUCTILE-IRON THREADED FITTINGS: ANSI B16.42, CLASS 300, STANDARD PATTERN. THREADS SHALL CONFORM TO ANSI B1.20.1.
- STEEL FITTINGS: ASTM A234, SEAMLESS OR WELDED, FOR WELDED JOINTS.
- GROOVED MECHANICAL FITTINGS: ASTM A536, GRADE 65-45-12 DUCTILE IRON; ASTM A47 GRADE 32510 MALLEABLE IRON; OR ASTM A53, TYPE F OR TYPES E OR S, GRADE B FABRICATED STEEL FITTINGS WITH GROOVES OR SHOULDERS DESIGNED TO ACCEPT GROOVED END COUPLINGS.
- GROOVED MECHANICAL COUPLINGS: CONSIST OF DUCTILE OR MALLEABLE IRON HOUSING, A SYNTHETIC RUBBER GASKET OF A CENTRAL CAVITY PRESSURE-RESPONSIVE DESIGN WITH NUTS, BOLTS, LOCKING IN, LOCKING TOGGLE, OR LUGS TO SECURE ROLL-GROOVED PIPE AND FITTINGS. GROOVED MECHANICAL COUPLINGS INCLUDING GASKETS USED ON DRY-PIPE SYSTEMS SHALL BE LISTED FOR DRY-PIPE SERVICE.
- CAST-IRON FLANGES: ANSI B16.1, CLASS 125, RAISED GROUND FACE, BOLT HOLES SPOT FACED.
- CAST BRONZE FLANGES: ANSI B16.24, CLASS 150, RAISED GROUND FACE, BOLT HOLES SPOT FACED.
- UNIONS: ASME B16.39, MALLEABLE IRON, CLASS 150 HEXAGONAL STOCK, WITH BALL-AND-SOCKET JOINTS, METAL-TO-METAL BRONZE SEATING SURFACES, FEMALE THREADED ENDS. THREADS SHALL CONFORM TO ASME B1.20.1.
- DIELECTRIC UNIONS: THREADED, SOLDER, OR GROOVED-END CONNECTIONS AS REQUIRED TO SUIT APPLICATION CONSTRUCTED TO ISOLATE DISSIMILAR METALS, PREVENT GALVANIC ACTION, AND PREVENT CORROSION.
- FLANGE GASKETS: GASKETS SHALL BE NON-ASBESTOS COMPRESSED MATERIAL IN ACCORDANCE WITH ASME B16.21, 1/16 INCH THICKNESS, FULL FACE OR SELF-CENTERING FLAT RING TYPE. THE GASKETS SHALL CONTAIN ARAMID FIBERS BONDED WITH STYRENE BUTADIENE RUBBER (SBR) OR NITRILE BUTADIENE RUBBER (NBR).
- SQUAREHEAD BOLTS AND HEAVY HEXAGON NUTS: ASME B18.2.1 AND ASME B18.2.2, AND ASTM A 307, ASTM A575, OR ASTM A 576.
- SADDLE TYPE MECHANICAL TEES SHALL NOT BE ACCEPTABLE FOR NEW PIPING.
- PLAIN-END FITTINGS/JOINTS SHALL NOT BE ACCEPTABLE.

GENERAL NOTES

- DRAWINGS ARE INTENDED TO SHOW GENERAL ARRANGEMENT OF SYSTEM(S).
- ALL DIMENSIONS AND EXACT LOCATIONS ARE TO BE FIELD VERIFIED AND COORDINATED WITH ALL OTHER TRADES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING SHOP DRAWINGS AND CALCULATIONS TO THE AHJ AND RECEIVING APPROVAL PRIOR TO STARTING CONSTRUCTION.
- CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY AND ASSOCIATED PERMITTING FEES.
- CONTRACTOR TO PROVIDE A LISTED FIRESTOPPING SYSTEMS ASSEMBLY AT ALL PIPE AND THROUGH PENETRATIONS PASSING THROUGH RATED CONSTRUCTION (FIRE RATED WALLS, FLOORS, CEILINGS, ETC.)
- ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO STATE ADOPTED CODES AND REGULATIONS AS AMENDED.
- COORDINATE AUTOMATIC FIRE SUPPRESSION SYSTEM DESIGN WITH ALL OTHER TRADES PRIOR TO ANY FABRICATION OR INSTALLATION.
- CONTRACTOR SHALL PROVIDE ALL REQUIRED PIPE, FITTINGS, VALVES, AND OTHER INCIDENTAL DEVICES REQUIRED FOR A COMPLETE, FULL FUNCTIONING SYSTEM. ALL EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.
- CONTRACTOR SHALL PROVIDE ALL NECESSARY TEST CONNECTIONS AND PIPE DISCHARGE TO AN APPROVED SAFE POINT OUTSIDE OF THE BUILDING.
- ALL SYSTEM PIPING SHALL BE HYDROSTATICALLY TESTED AT 200 PSI OR AT 50 PSI ABOVE THE SYSTEM OPERATING PRESSURE, WHICHEVER IS GREATER AND WITNESSED BY OWNERS REPRESENTATIVE AND AHJ.
- PROVIDE SYSTEM TESTING AND CERTIFICATION DOCUMENTATION TO BE INCLUDED IN THE PROJECT O&M MANUAL.
- CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND PROVIDING ALL PIPE SLEEVES, CORE DRILLING, FLOOR/WALL/CEILING CUTTING AND PATCHING.
- CONTRACTOR SHALL PROVIDE ALL REQUIRED SPARE SPRINKLER HEADS, HEAD CABINET(S), SIGNS, HYDRAULIC PLACARDS AND SYSTEM INFORMATION DISPLAYS AS SPECIFIED IN NFPA 13.
- CONTRACTOR SHALL PROVIDE SPRINKLER GUARDS AT ALL HEADS SUBJECT TO DAMAGE.
- HEAT COLLECTORS SHALL NOT BE USED AS A MEANS TO ASSIST THE ACTIVATION OF SPRINKLER HEADS PER NFPA 13.
- SPRINKLER HEAD AND ESCUTCHEON FINISHES TO BE COORDINATED WITH ARCHITECT UNLESS OTHERWISE INDICATED.
- SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION AND CONTRACTOR RESPONSIBILITIES.

VALVES/HANGERS/SUPPORTS

- GATE VALVES:**
- UP TO AND INCLUDING 2 INCHES (50MM): BRONZE BODY, BRONZE TRIM, RISING STEM, HANDWHEEL, INSIDE SCREW, SINGLE WEDGE OR DISC, TREADED ENDS.
 - OVER 2 INCHES (50MM): IRON BODY, BRONZE TRIM, RISING STEM, HANDWHEEL, OS&Y, SOLID WEDGE, FLANGED ENDS.
- GLOBE (OR ANGLE) VALVES:**
- UP TO 2 INCHES (50MM): BRONZE BODY, BRONZE TRIM, RISING STEM AND HANDWHEEL, INSIDE SCREW, RENEWABLE COMPOSITION DISC, SCREWED ENDS, WITH BACKSEATING CAPACITY RE-PACKABLE UNDER PRESSURE.
 - OVER 2 INCHES (50MM): IRON BODY, BRONZE TRIM, RISING STEM, HANDWHEEL, OS&Y, PLUG-TYPE DISC, FLANGED ENDS, RENEWABLE SEAT AND DISC.
- BALL VALVES:**
- UP TO AND INCLUDE 2 INCHES (50MM): BRONZE TWO-PIECE BODY, STAINLESS STEEL BALL, TEFLON SEATS AND STUFFING BOX RING, LEVER HANDLE, TREADED ENDS WITH UNION.
- BUTTERFLY VALVES:**
- CAST OR DUCTILE IRON BODY, CHROME OR NICKEL PLATED DUCTILE IRON DISC, RESILIENT REPLACEABLE EPDM SEAT, WAFER OR LUG ENDS, EXTENDED NECK, HANDWHEEL AND GEAR DRIVE AND INTEGRAL INDICATING DEVICE.
- CHECK VALVES:**
- UP TO AND INCLUDING 2 INCHES: BRONZE SWING DISC, SCREWED ENDS.
 - OVER 2 INCHES (50MM): IRON BODY, BRONZE TRIM, SWING DISC, RENEWABLE DISC AND SEAT, FLANGED ENDS.
 - IRON BODY, BRONZE TRIM, STAINLESS STEEL SPRING, RENEWABLE COMPOSITION DISC, SCREWED, WAFER OR FLANGED ENDS.
- DRAIN VALVES:**
- BRONZE GLOBE VALVE WITH HOSE THREAD NIPPLE AND CAP.
 - BRASS BALL VALVE WITH CAP, 3/4 INCH (19MM) HOSE THREAD.
- PIPE HANGERS AND SUPPORTS:**
- CONFORM TO NFPA 13. HANGERS SHALL BE UL LISTED FOR USE IN SPRINKLER SYSTEMS.
 - HANGERS FOR PIPE SIZES 1 INCH AND LARGER: STEEL, ADJUSTABLE SWIVEL, SPLIT RING.
 - MULTIPLE OR TRAPEZE HANGERS: STEEL CHANNELS WITH WELDED SPACERS AND HANGER RODS.
 - WALL SUPPORT FOR PIPE SIZES TO 3 INCHES: CAST IRON HOOK.
 - WALL SUPPORT FOR PIPE SIZES 4 INCHES AND OVER: WELDED STEEL BRACKET AND WROUGHT STEEL CLAMP.
 - VERTICAL SUPPORT: STEEL RISER CLAMP.
 - FLOOR SUPPORT: CAST IRON ADJUSTABLE PIPE SADDLE, LOCK NUT, NIPPLE, FLOOR FLANGE, AND CONCRETE PIER OR STEEL SUPPORT.

SEISMIC NOTES

- EVALUATION OF EXISTING SEISMIC BRACING IS OUT OF THE SCOPE OF THIS PROJECT. ADDITIONAL SEISMIC BRACING SHALL NOT BE REQUIRED SINCE THE CROSS MAINS ARE NOT BEING MODIFIED. ADDITIONAL SEISMIC RESTRAINT MAY BE REQUIRED ON BRANCH LINES AND SHALL COMPLY WITH NFPA 13-2019.

SEISMIC DESIGN CRITERIA

SITE CLASSIFICATION	D
BUILDING SEISMIC OCCUPANCY CATEGORY	III
MAX. SPECTRAL RESPONSE ACCELERATION (SHORT PERIOD)	$S_{DS} = 0.569$
MAX. SPECTRAL RESPONSE ACCELERATION (1-SEC. PERIOD)	$S_{D1} = 0.310$
MAPPED SPECTRAL ACCELERATION (SHORT PERIOD)	$S_s = 0.679$
MAPPED SPECTRAL ACCELERATION (1-SEC. PERIOD)	$S_1 = 0.214$
SEISMIC DESIGN CATEGORY	D

CODES AND STANDARDS

- 2021 INTERNATIONAL BUILDING CODE-AS AMENDED
- 2021 INTERNATIONAL FIRE CODE-AS AMENDED
- 2019 NFPA 13 STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS.
- ALL LOCAL CODES AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.

SCOPE OF WORK

- MODIFY EXISTING WET-PIPE FIRE SPRINKLER SYSTEM TO ACCOMMODATE NEW WALLS, CEILINGS, ETC.

FIRE SPRINKLER PERMIT

CONTRACTOR SHALL SUBMIT THESE DRAWINGS TO THE AHJ FOR FIRE SPRINKLER PERMIT. CONTRACTOR IS RESPONSIBLE FOR PROVIDING MATERIAL SUBMITTAL.

FIRE PROTECTION SHEET INDEX

NUMBER	SHEET NAME
F01	FIRE PROTECTION COVER SHEET
F02	FIRE PROTECTION DETAILS
F10	FIRE PROTECTION FLOOR PLAN

100% CONSTRUCTION DOCUMENTS



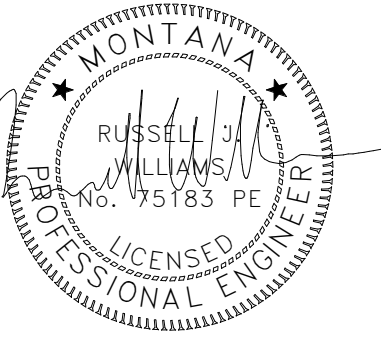
MSU-CPDC
MONTANA STATE UNIVERSITY
BOZEMAN, MONTANA
PHONE: 406.994.5413
FAX: 406.994.5665

**BRICK BREEDEN
FIELDHOUSE LOCKER
ROOM RENOVATION**



DRAWN BY: **TJP**
REVIEWED BY: **RJW**

REV.	DESCRIPTION	DATE



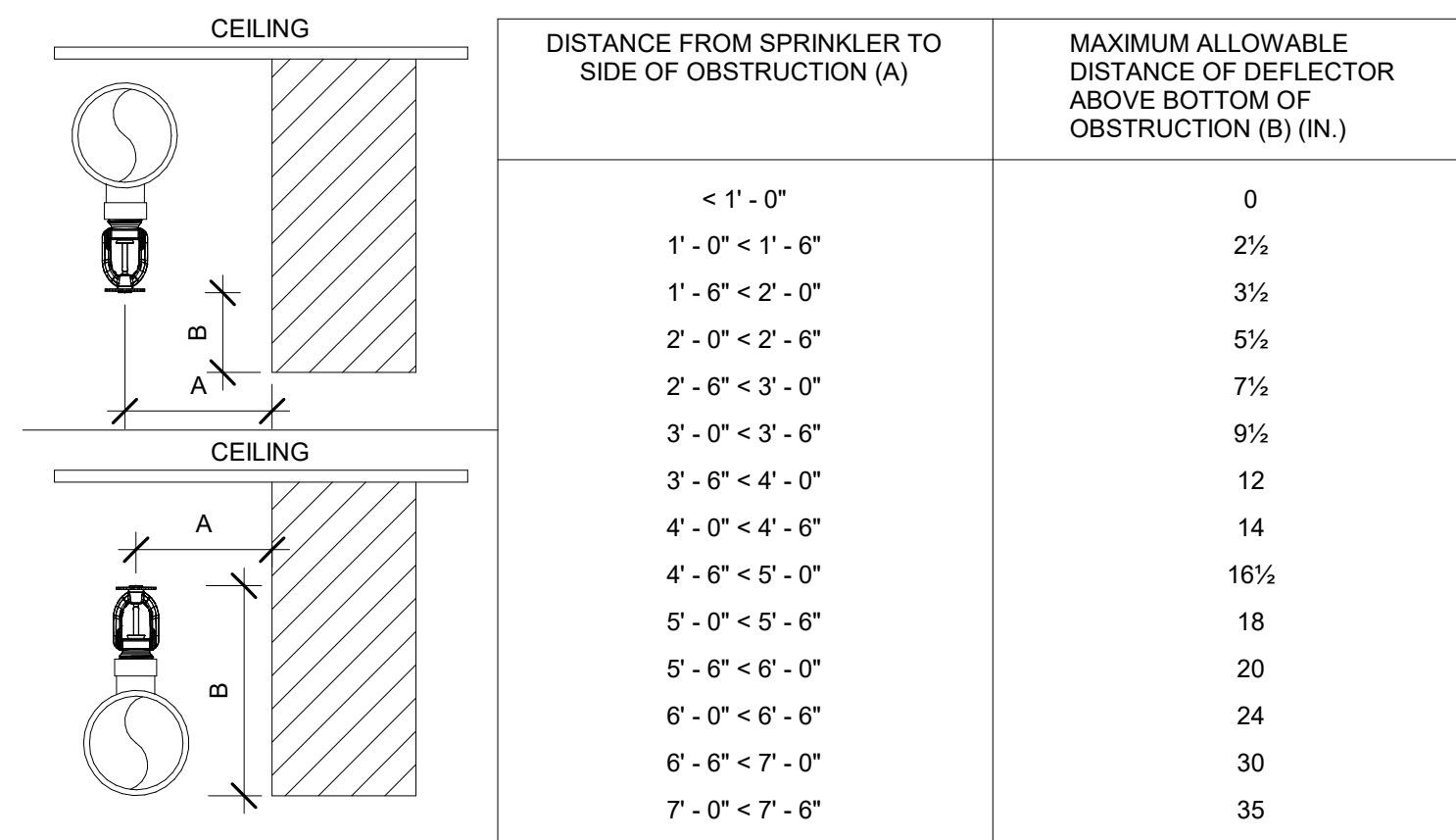
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A/E#

AAI#21062.01
SHEET TITLE
FIRE PROTECTION
COVER SHEET

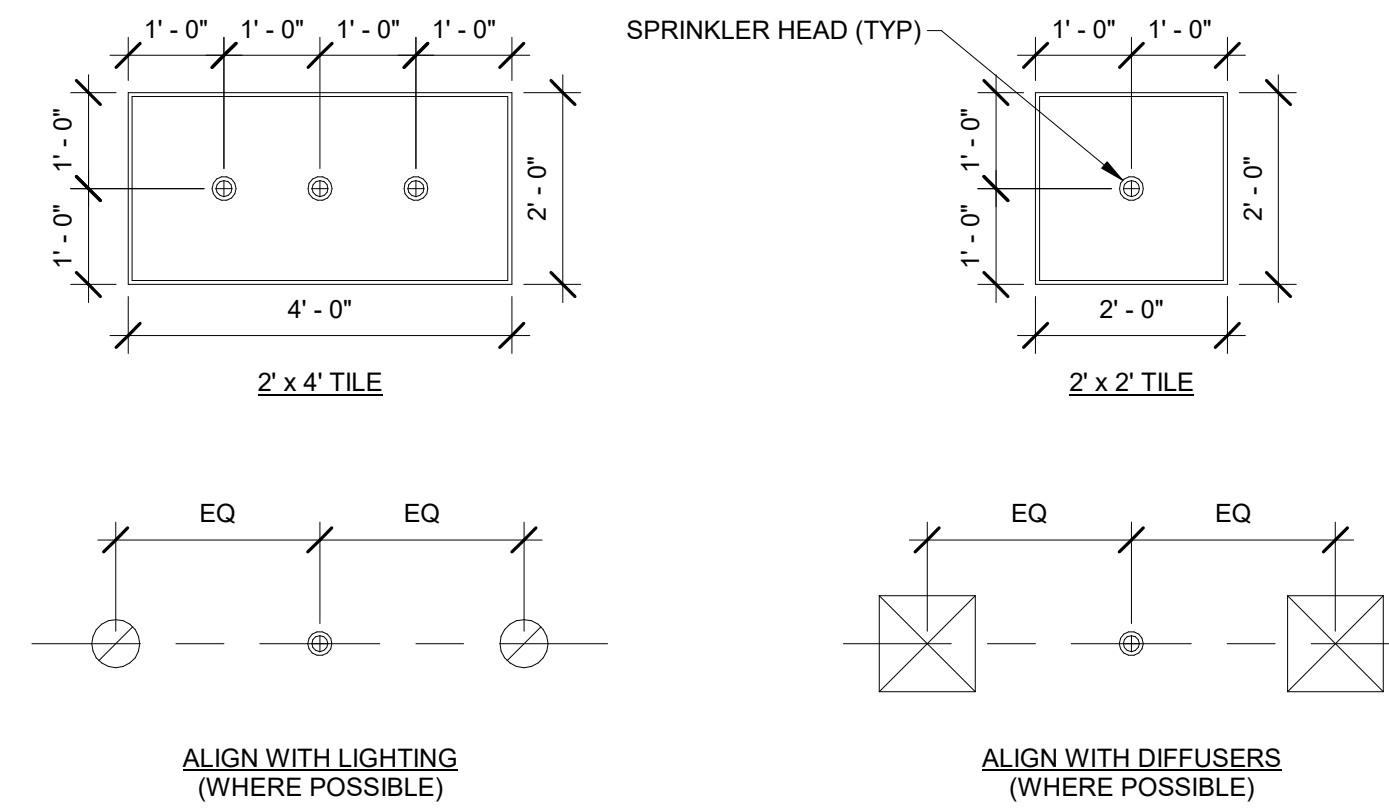
SHEET
F01
DATE
03-08-23

SPRINKLER SCHEDULE - PROJECT TOTAL

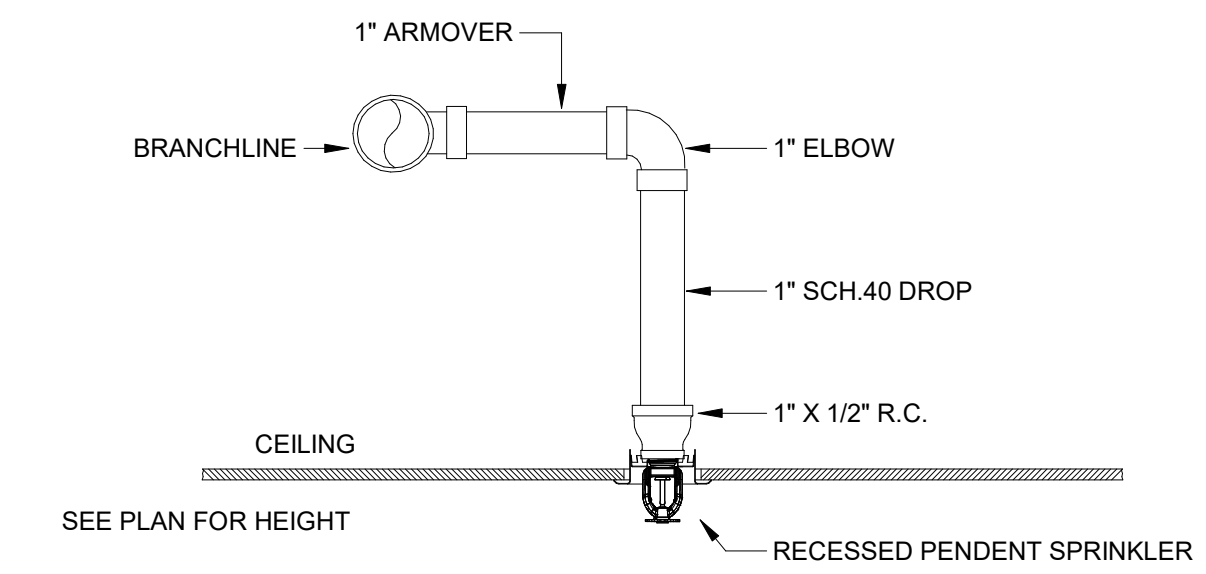
SYMBOL	MANUFACTURER	MODEL	SIN	RESPONSE	K-FACTOR	THREAD	ORIENTATION	FINISH	ESCUTCHEON	TEMP	NOTES	QUANTITY
●	TYCO	TY-FRB	TY323	QUICK	5.6	1/2"	PENDENT	WHITE	STYLE 15	155° F	RECESSED	10
○	TYCO	TY-FRB	TY313	QUICK	5.6	1/2"	UPRIGHT	BRASS	N/A	155° F	ON-LINE	8
◎	TYCO	TY-FRB	TY313	QUICK	5.6	1/2"	UPRIGHT	BRASS	N/A	155° F	ON-SPRIG	12
NOTE: EQUIVALENT SPRINKLERS WILL BE ACCEPTED											TOTAL	30



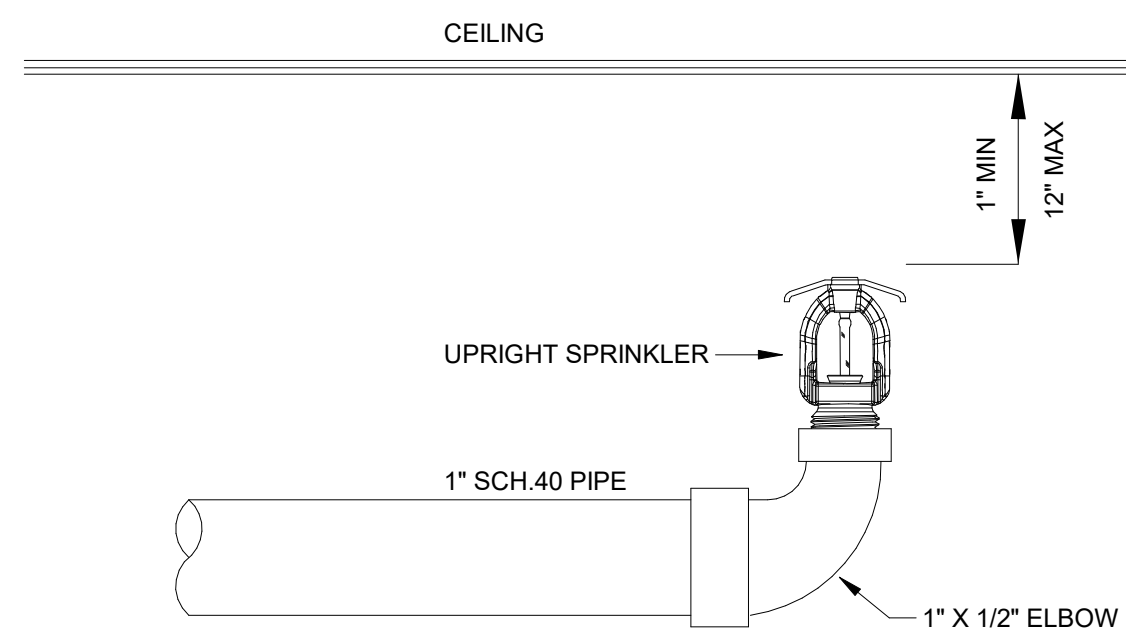
1 SSU/SSP SPRINKLER CEILING OBSTRUCTION DETAIL
N.T.S.



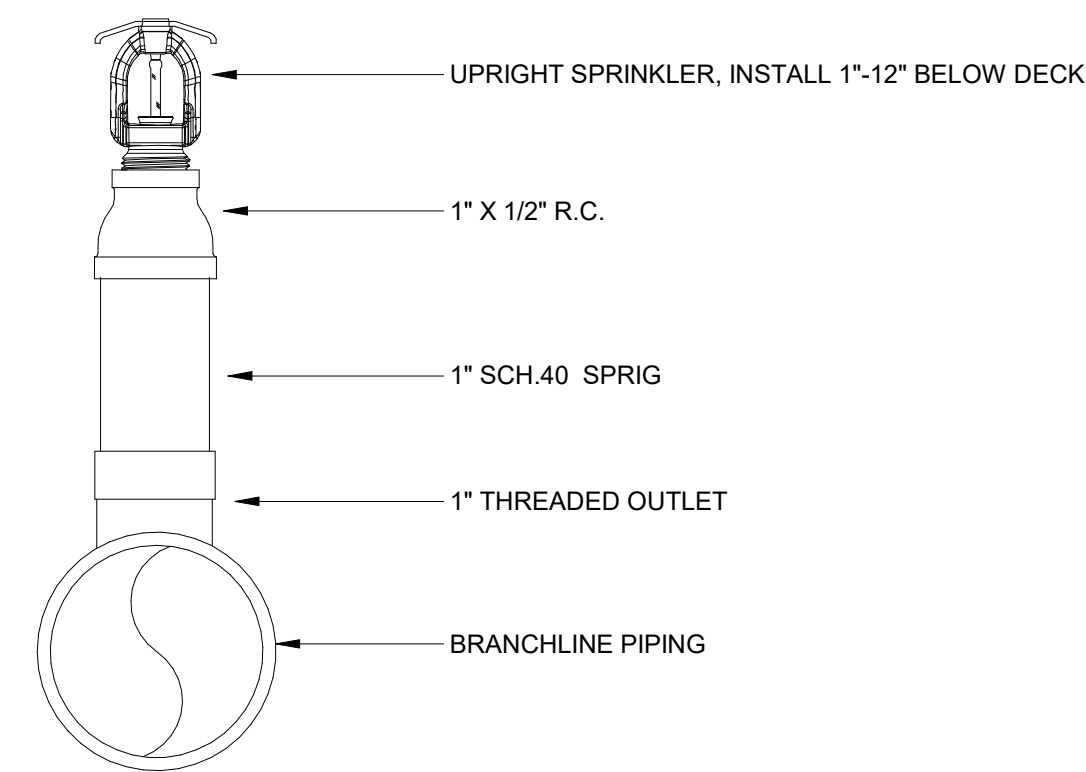
2 ACCEPTABLE SPRINKLER HEAD LOCATIONS
N.T.S.



3 DROP TO PENDENT SPRINKLER DETAIL
N.T.S.



4 UPRIGHT SPRINKLER DETAIL
N.T.S.



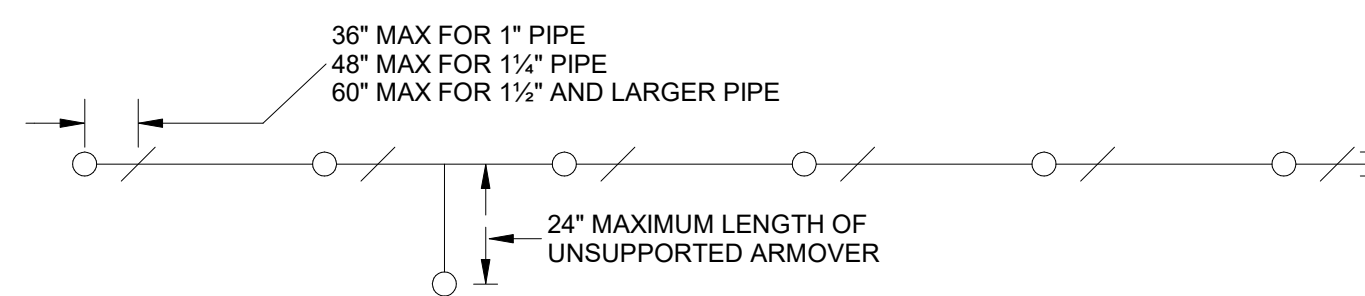
5 UPRIGHT SPRINKLER WITH SPRIG DETAIL
N.T.S.

HANGER ROD SCHEDULE	
PIPE SIZE	ROD SIZE
4" & LESS	3/8"
5, 6, 8"	1/2"
10 & 12"	5/8"

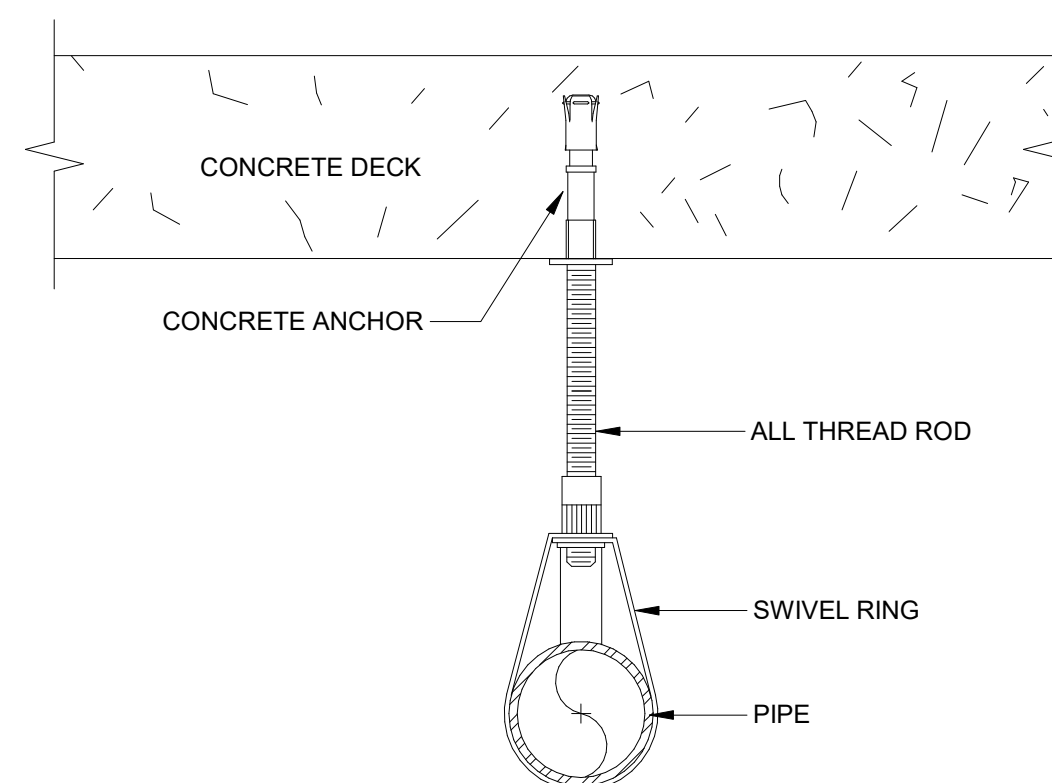
PIPE SIZE	DISTANCE BETWEEN HANGERS		
	STEEL PIPE	CPVC PIPE	THINWALL
3/4"	N/A	5'-6"	N/A
1"	12'-0"	6'-0"	12'-0"
1 1/4"	12'-0"	6'-6"	12'-0"
1 1/2"	15'-0"	7'-0"	12'-0"
2"	15'-0"	8'-0"	12'-0"
2 1/2"	15'-0"	9'-0"	12'-0"
3"	15'-0"	10'-0"	12'-0"
4"	15'-0"	N/A	N/A
6"	15'-0"	N/A	N/A

6 PIPE HANGER REQUIREMENTS
N.T.S.

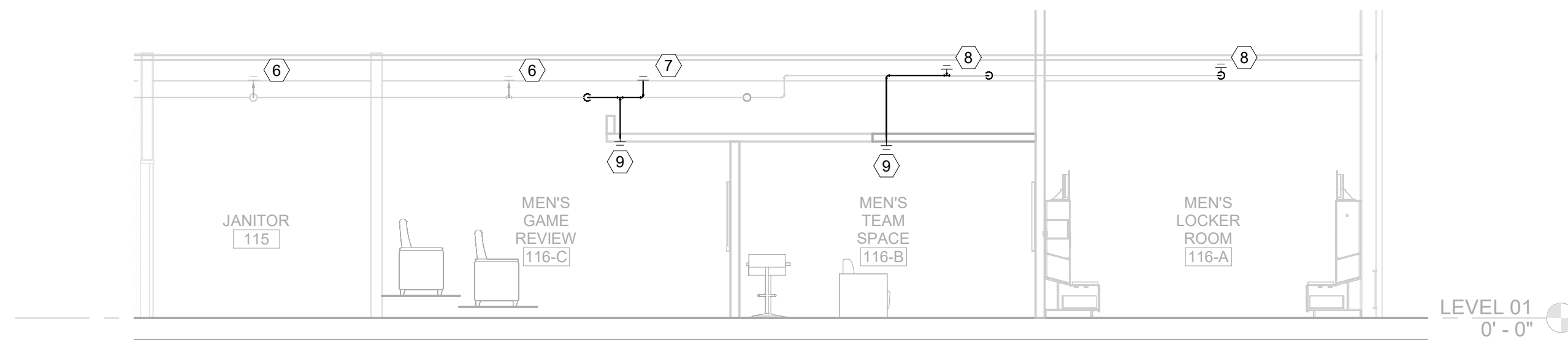
DISTANCE BETWEEN THE END SPRINKLER AND THE LAST HANGER ON THE LINE - MAXIMUM PRESSURE ≤ 100 PSI (STEEL PIPE, ALL SPRINKLER TYPES)



7 PIPE HANGER REQUIREMENTS
N.T.S.



8 CONCRETE ANCHOR DETAIL
N.T.S.



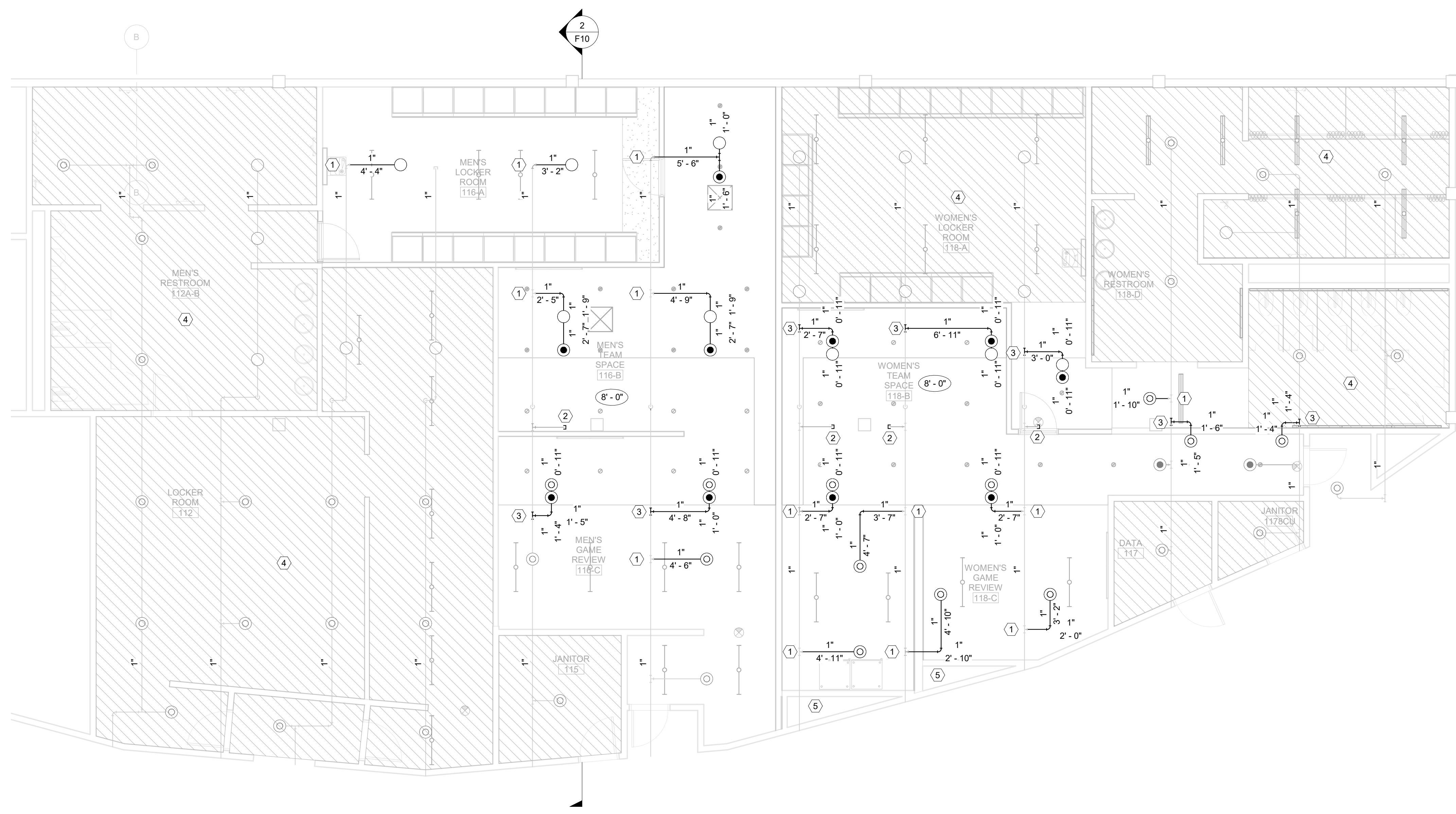
2 FIRE SPRINKLER REFERENCE BUILDING SECTION
3/16" = 1'-0"

FIRE PROTECTION GENERAL NOTES:

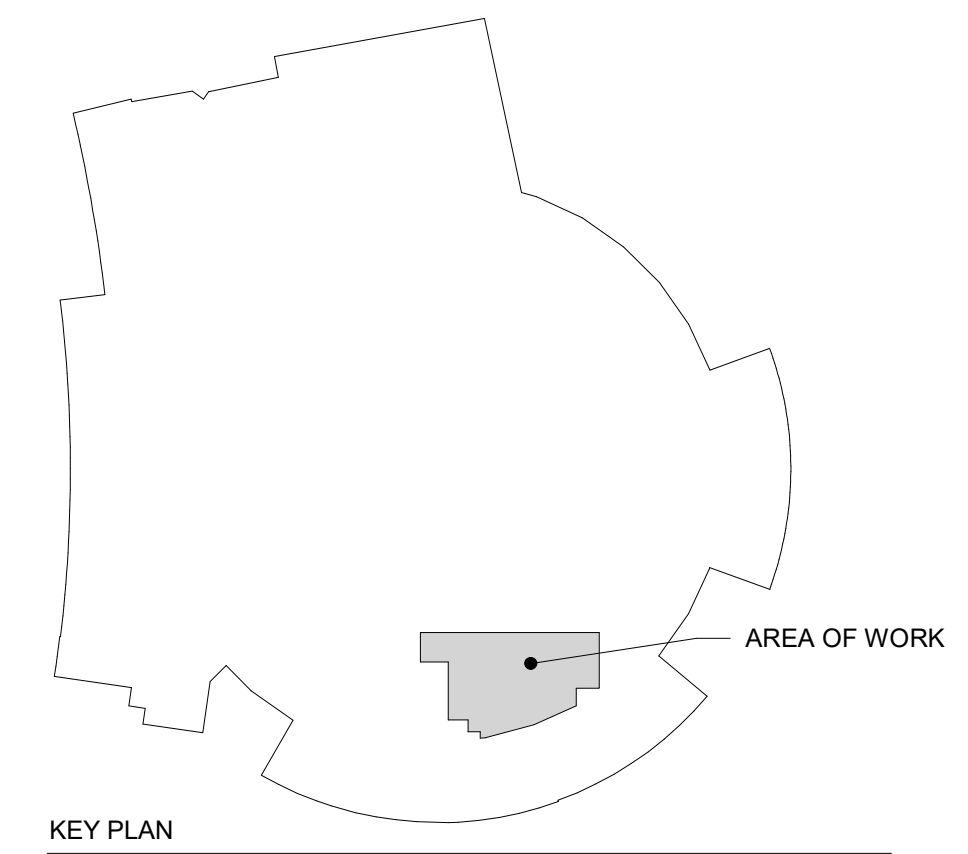
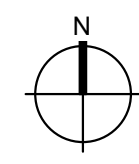
1. FIRE SPRINKLERS, PIPING, HANGERS, ETC. SHALL BE MODIFIED TO ACCOMMODATE NEW WALLS AND CEILING AS SHOWN.
2. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO START OF WORK.
3. PIPE HANGERS AND SEISMIC RESTRAINT NOT SHOWN FOR CLARITY AND SHALL COMPLY WITH THE APPLICABLE DETAILS AND NFPA 13-2019.
4. ALL CEILING ARE OPEN TO STRUCTURE UNLESS OTHERWISE NOTED.
5. ALL SPRIGS THIS SHEET 1"x2'-6" (CIF) TOE UNLESS OTHERWISE NOTED.
6. ALL HARD PIPE DROPS THIS SHEET 1"x2'-6" (CIF) TOE UNLESS OTHERWISE NOTED.

KEY NOTES:

1. DEMOLISH EXISTING SPRINKLER AND ASSOCIATED PIPING, FITTINGS, AND HANGERS AS REQUIRED BACK TO EXISTING OUTLET. INSTALL NEW SPRINKLER(S), PIPE, FITTINGS, AND HANGERS AS SHOWN.
2. DEMOLISH EXISTING SPRINKLER AND ASSOCIATED PIPING, FITTINGS, AND HANGERS AS REQUIRED. PLUG EXISTING OUTLET. CEILING SHALL BE PATCHED BY OTHERS.
3. CUT IN NEW 1" THREADED TEE. INSTALL NEW SPRINKLER(S), PIPE, FITTINGS, AND HANGERS AS SHOWN.
4. NO SCOPE OF WORK IN HATCHED AREA.
5. NONCOMBUSTIBLE CONCEALED SPACE - NO SPRINKLER PROTECTION REQUIRED IN ACCORDANCE WITH NFPA 13-2019 SECTION 9.2.1.1.
6. EXISTING UPRIGHT SPRINKLER ON-SPRIG.
7. NEW UPRIGHT SPRINKLER ON-SPRIG.
8. NEW UPRIGHT SPRINKLER ON-LINE.
9. NEW RECESSED PENDENT SPRINKLER.



1 LEVEL 1 FIRE PROTECTION PLAN
3/16" = 1'-0"



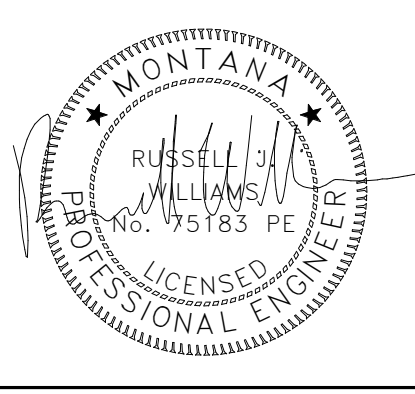
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**BRICK BREEDEN
FIELDHOUSE LOCKER
ROOM RENOVATION**

100% CONSTRUCTION DOCUMENTS

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DRAWN BY: TJP		
REVIEWED BY: RJW		
REV.	DESCRIPTION	DATE



PPA#21-0028

A/E#

AAI#21062.01

**SHEET TITLE
FIRE PROTECTION
FLOOR PLAN**

**SHEET
F10**

DATE
03-08-23