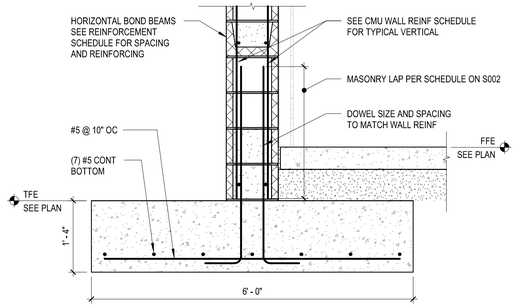
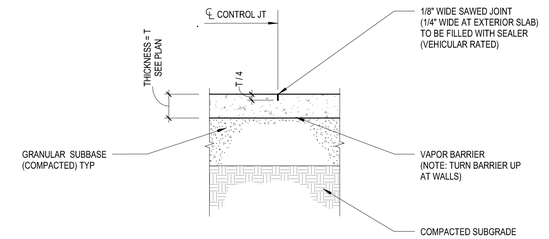
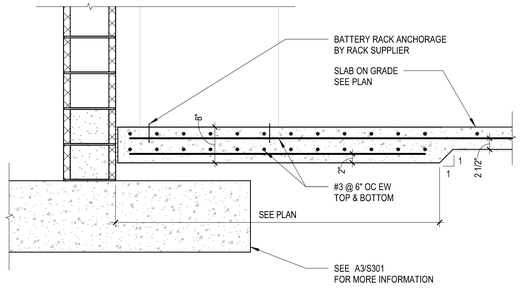


A3 DETAIL
3/4" = 1'-0"

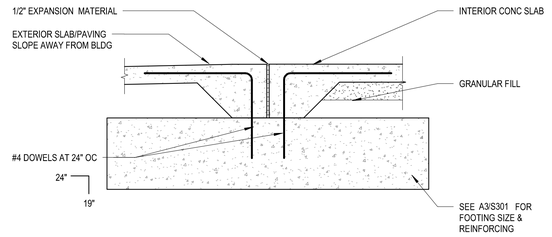


NOTES:
1. DO NOT LOCATE JOINTS BELOW MASONRY WALLS.
2. SAW CUTTING OF JOINTS SHALL BE AS SOON AS THE CONCRETE SETS SUFFICIENTLY TO PERMIT CUTTING WITHOUT CHIPPING, SPALLING OR TEARING, BUT NOT MORE THAN 24 HOURS AFTER PLACING.

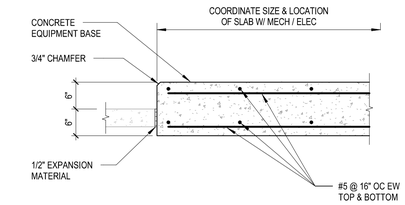
A2 TYPICAL CONTROL JOINT (CJ)
NOT TO SCALE



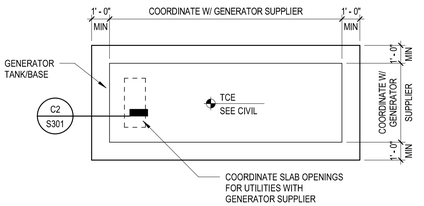
B3 DETAIL
3/4" = 1'-0"



B2 TYPICAL THRESHOLD
NOT TO SCALE



C2 TYPICAL ON GRADE EQUIPMENT BASE
NOT TO SCALE



D2 GENERATOR PAD
1/4" = 1'-0"

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LICENSED PROFESSIONAL ENGINEER
JASON DOUGLAS KUHNLE
C 84526
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STATE OF CALIFORNIA

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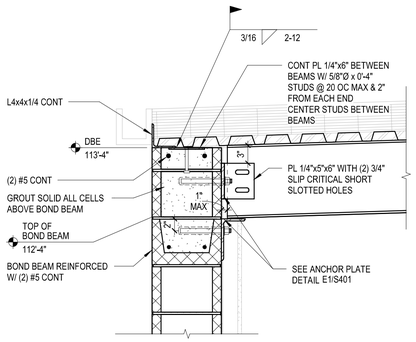
8/23/2022

ISSUANCE
BIDS AND PERMITS
08/22/2022

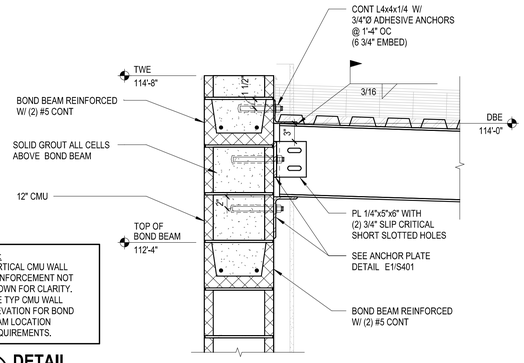
REVISIONS
NO. DATE DESCRIPTION

FILE NUMBER	92260017
PROJECT MANAGER	JD
PROFESSIONAL	BAA
DRAWN BY	ASP
CHECKED BY	JDK

TYPICAL CONCRETE DETAILS
S301

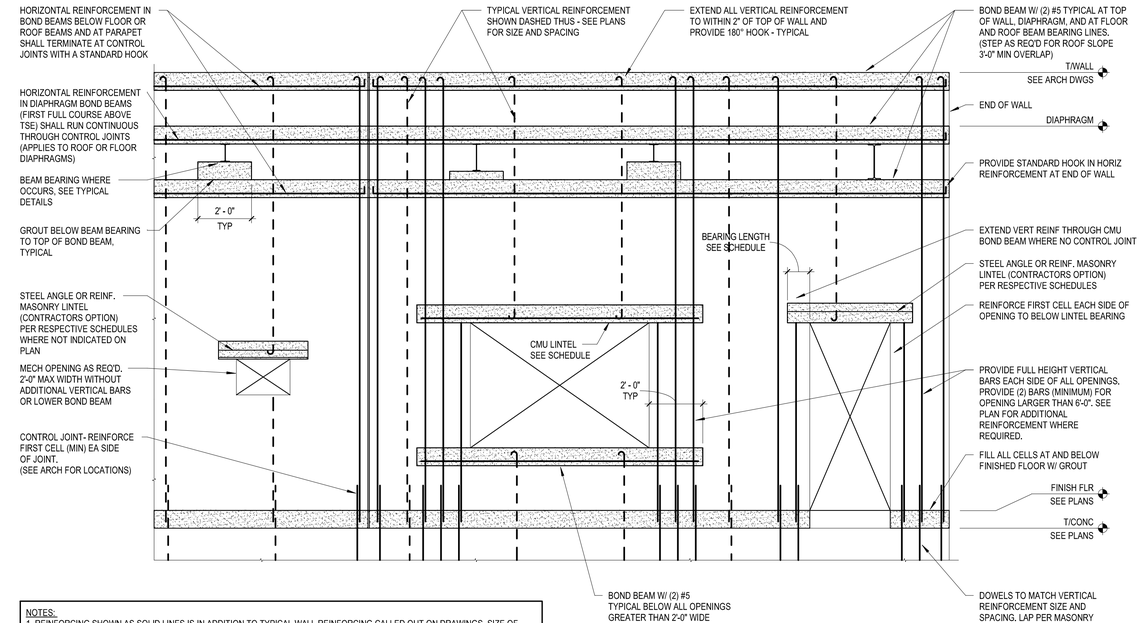


A6 DETAIL
1" = 1'-0"



NOTE:
1. VERTICAL CMU WALL REINFORCEMENT NOT SHOWN FOR CLARITY.
2. SEE TYP CMU WALL ELEVATION FOR BOND BEAM LOCATION REQUIREMENTS.

B6 DETAIL
1" = 1'-0"



NOTES:
1. REINFORCING SHOWN AS SOLID LINES IS IN ADDITION TO TYPICAL WALL REINFORCING CALLED OUT ON DRAWINGS. SIZE OF ADDITIONAL BARS SHALL MATCH TYPICAL WALL REINFORCING SIZE UNLESS NOTED OTHERWISE.
2. WALL ELEVATION IS TYPICAL FOR STRUCTURAL & NON-STRUCTURAL CMU WALLS.
3. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF NON-STRUCTURAL CMU WALLS.
4. PROVIDE "LADDER" TYPE HORIZONTAL MASONRY REINFORCEMENT AT 16" OC IN CMU AND BRICK VENEER. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
5. SEE LAP SPLICE SCHEDULE FOR LAP LENGTHS.

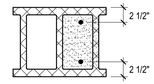
B4 TYPICAL CMU WALL ELEVATION
NOT TO SCALE

MASONRY WALL REINFORCING SCHEDULE

WALL TYPE	CMU SIZE	REINFORCING		GROUT SPACING	REMARKS
		VERTICAL	BOND BEAMS		
W1	12"	(2) #5 @ 24" OC	NOTE A	24"	-

TYPICAL SCHEDULE NOTES (APPLY TO ALL WALL TYPES):
1. REINFORCING DEFINED IN SCHEDULE IS THE MINIMUM REQUIRED. SEE PLANS, TYPICAL DETAILS AND NOTES FOR ADDITIONAL REINFORCING REQUIRED.
2. PROVIDE BOND BEAMS REINFORCED WITH (2) #5 CONTINUOUS AT TOP OF ALL CMU WALLS, AT FLOOR & ROOF LEVELS, AND WHERE SHOWN IN DETAILS.
3. SEE S401 FOR TYPICAL MASONRY DETAILS, ALL OF WHICH APPLY UNLESS NOTED OTHERWISE.
4. SEE ARCHITECTURAL DRAWINGS FOR WALL LOCATIONS NOT DEFINED HEREIN.

OTHER NOTES (APPLY WHERE NOTED):
A. PROVIDE BOND BEAMS REINFORCED W/ (2) #5 CONTINUOUS AT 3'-4" OC VERTICALLY.
B. ONE VERT BAR EACH FACE - SEE

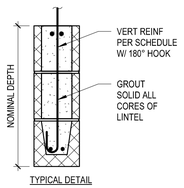


DOUBLY REINFORCED WALL BAR PLACEMENT DIAGRAM

REINFORCED MASONRY LINTEL SCHEDULE

CLEAR SPAN	NOMINAL DEPTH	REINFORCING
UP TO 4'-0"	8"	(2) # 4 BOT
>4'-0" TO 6'-8"	16"	(2) # 4 T&B
>6'-8" TO 8'-8"	24"	(2) # 5 T&B
>8'-8" TO 10'-8"	32"	(2) # 6 T&B
>10'-8" TO 12'-8"	40"	(2) # 6 T&B

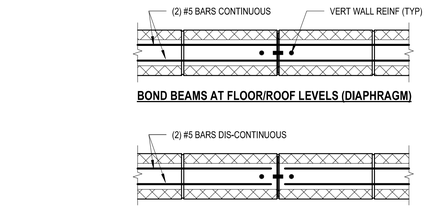
NOTES:
1. SEE ARCHITECTURAL DRAWINGS FOR OPENING LOCATIONS AND CLEAR SPANS.
2. LINTELS ARE CONTINUOUS FULL WIDTH OF OPENING.
3. PROVIDE 8" MINIMUM BEARING FOR CLEAR SPANS 8'-0" OR LESS; 16" MINIMUM BEARING FOR CLEAR SPANS GREATER THAN 8'-0".
4. EXTEND BOTTOM REINFORCEMENT TO END OF BEARING EACH SIDE. EXTEND TOP REINFORCEMENT WITH STANDARD HOOK AT CONTROL JOINTS OR FREE EDGES.
5. SEE TYPICAL CMU WALL ELEVATION FOR ADDITIONAL REQUIREMENTS.



TYPICAL DETAIL

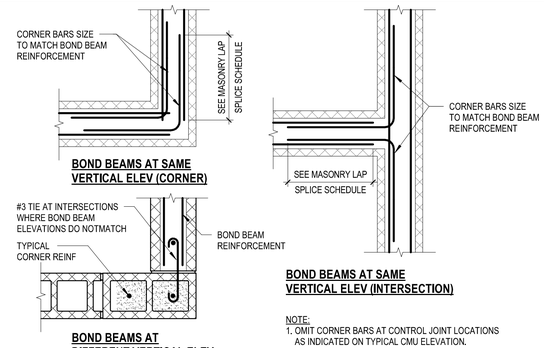
MASONRY LAP SPLICE SCHEDULE
(F'm=2000 PSI)

BAR SIZE \ PLACEMENT	CENTER		EDGE
	8" CMU	12" CMU	ALL CMU
#3	18"	18"	18"
#4	24"	24"	24"
#5	30"	30"	30"
#6	38"	36"	57"
#7	-	42"	80"
#8	-	50"	-



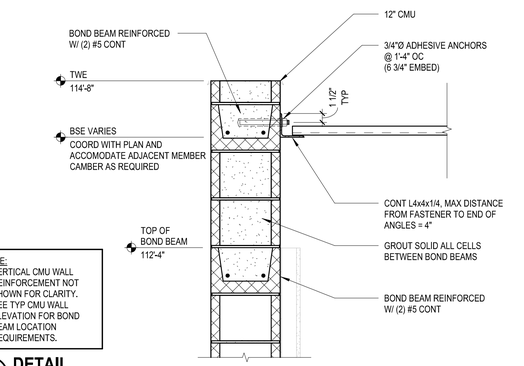
NOTE:
COORDINATE CJ LOCATIONS WITH ARCHITECTURAL DRAWINGS

C4 TYPICAL BOND BEAMS AT CONTROL JOINTS
NOT TO SCALE



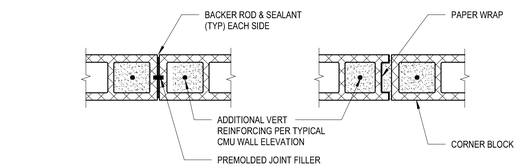
NOTE:
1. OMIT CORNER BARS AT CONTROL JOINT LOCATIONS AS INDICATED ON TYPICAL CMU ELEVATION.

C3 TYPICAL CMU BOND BEAM REINFORCEMENT
NOT TO SCALE



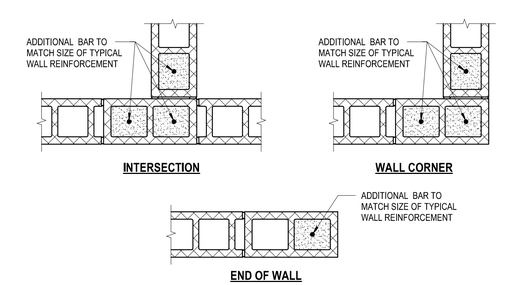
NOTE:
1. VERTICAL CMU WALL REINFORCEMENT NOT SHOWN FOR CLARITY.
2. SEE TYP CMU WALL ELEVATION FOR BOND BEAM LOCATION REQUIREMENTS.

C6 DETAIL
1" = 1'-0"

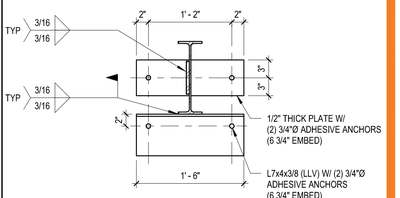


NOTES:
1. SEE ARCH DWGS FOR CONTROL JOINT LOCATIONS.
2. TERMINATE HORIZONTAL JOINT REINFORCEMENT AT CONTROL JOINT.
3. BOND BEAM REINFORCEMENT SHALL BE CONTINUOUS THROUGH CONTROL JOINT WHERE NOTED.
4. MAXIMUM CONTROL JOINT SPACING SHALL BE 25'-0" UNO.

D4 TYPICAL CMU CONTROL JOINT (CJ)
NOT TO SCALE



D3 TYPICAL CMU VERTICAL REINFORCEMENT
NOT TO SCALE



E1 ANCHOR PLATE DETAIL
NOT TO SCALE

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LICENSED PROFESSIONAL ENGINEER
JASON DOUGLAS KUHNLE
C 84526
CIVIL
STATE OF CALIFORNIA

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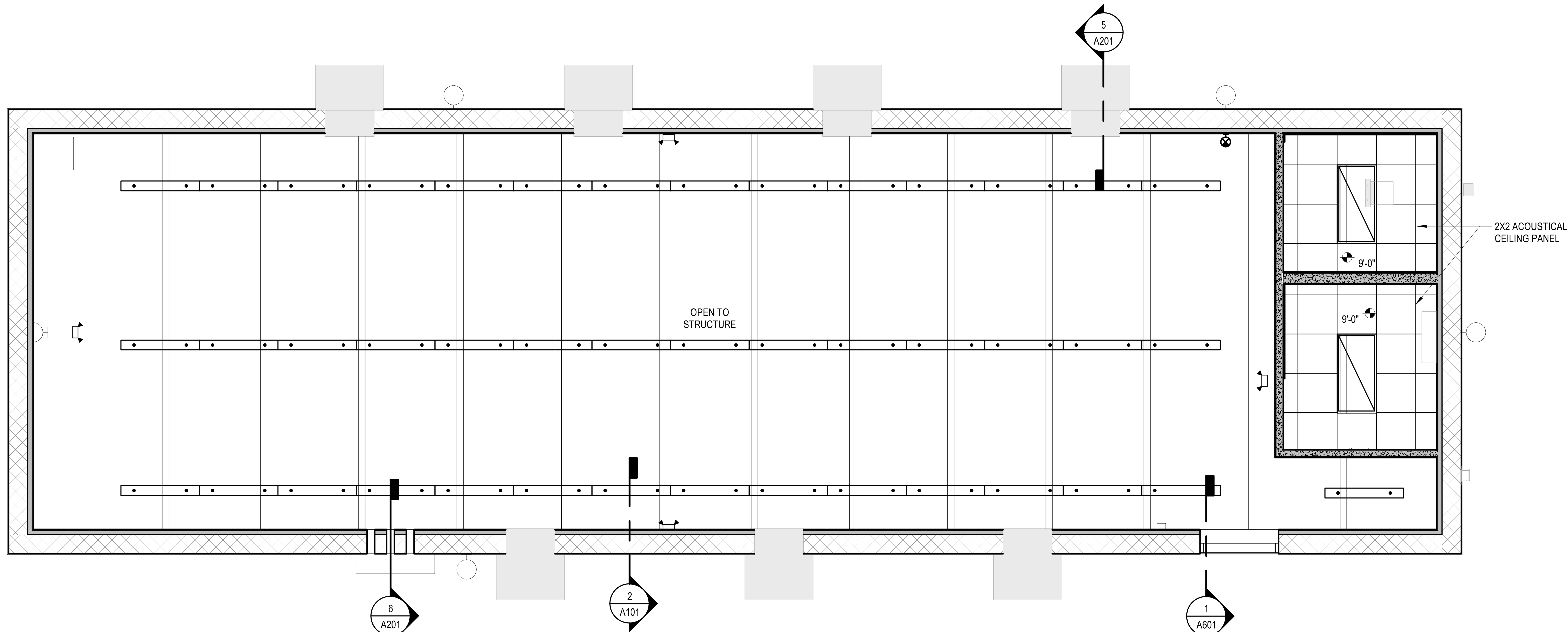
8/23/2022

ISSUANCE
BIDS AND PERMITS
08/22/2022

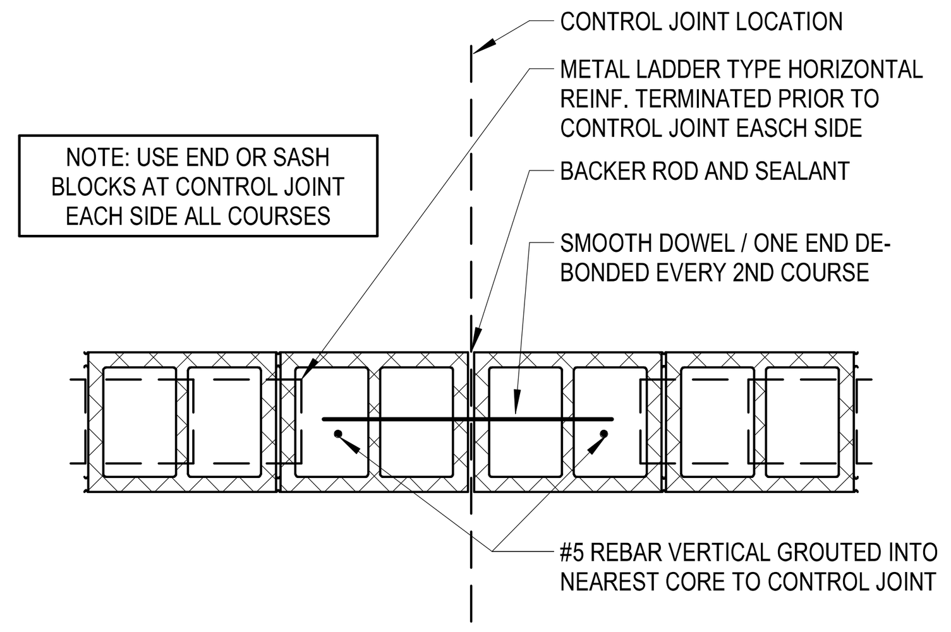
REVISIONS
NO. DATE DESCRIPTION

FILE NUMBER	92260017
PROJECT MANAGER	JD
PROFESSIONAL	BAA
DRAWN BY	ASP
CHECKED BY	JDK

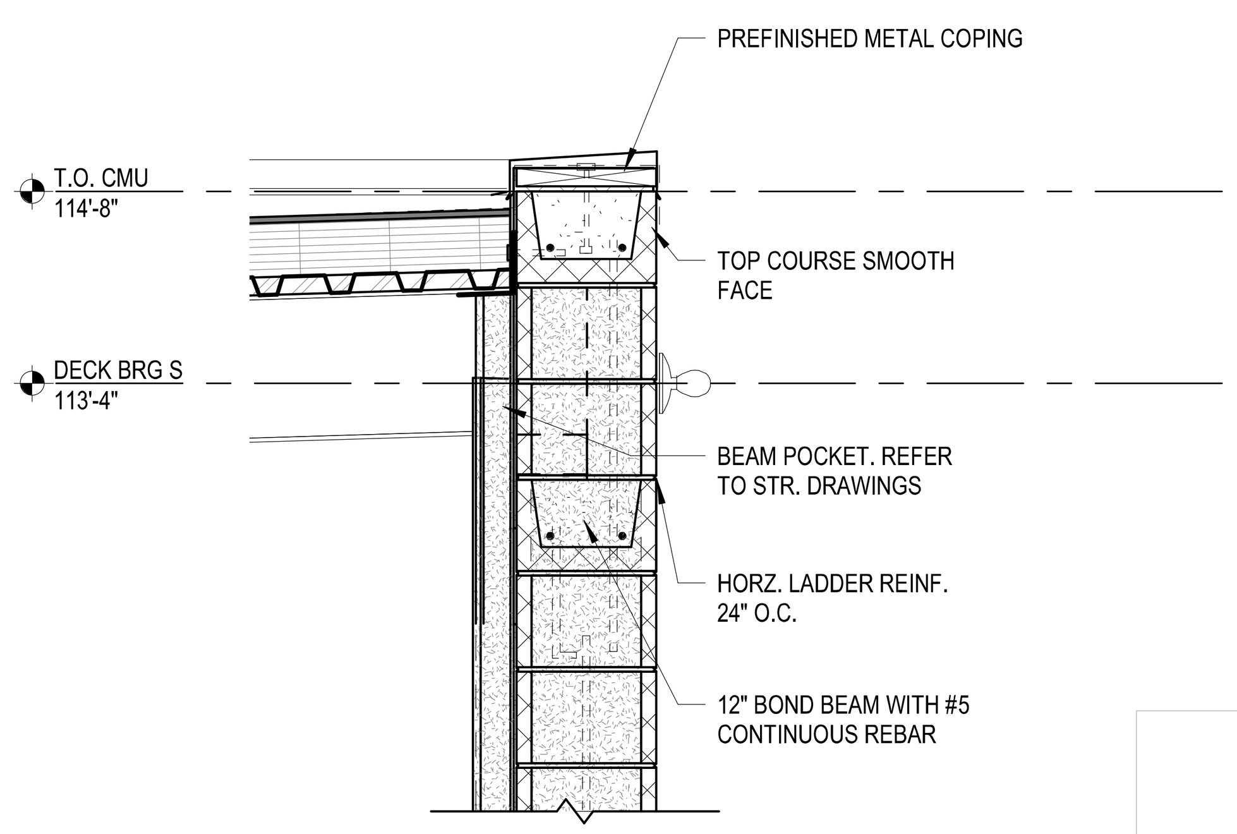
MASONRY DETAILS
S401



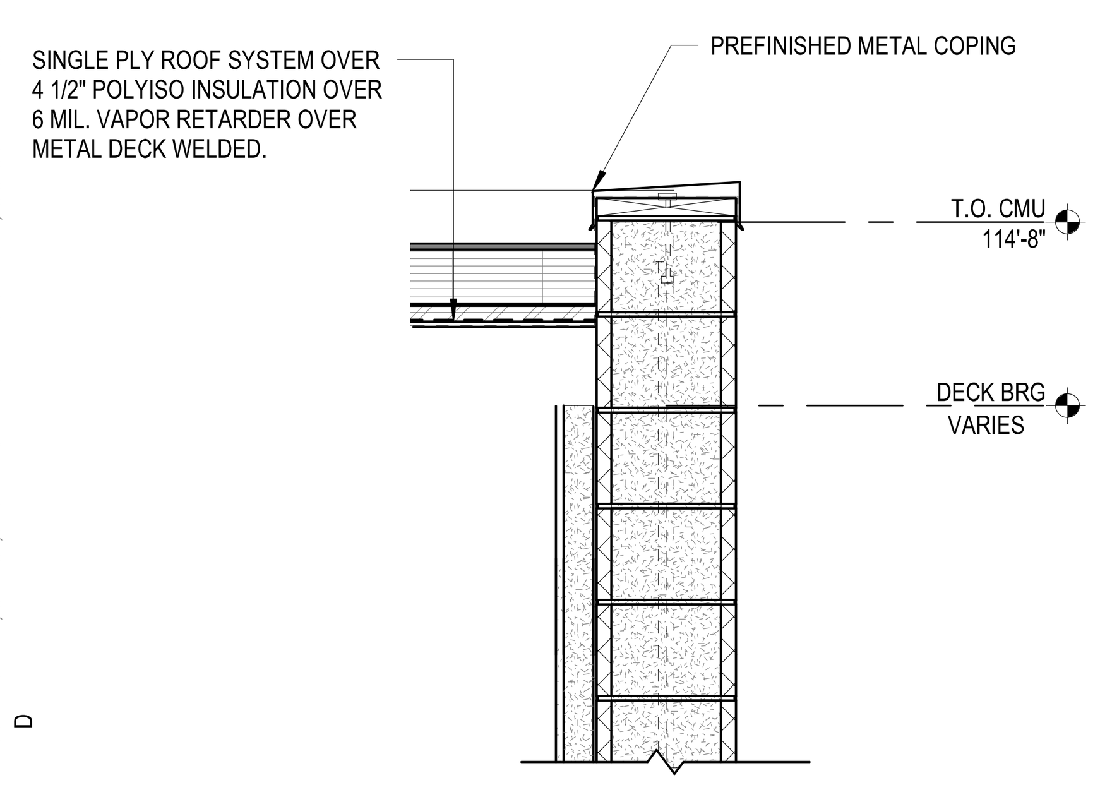
REFLECTED CEILING PLAN
1/4" = 1'-0"



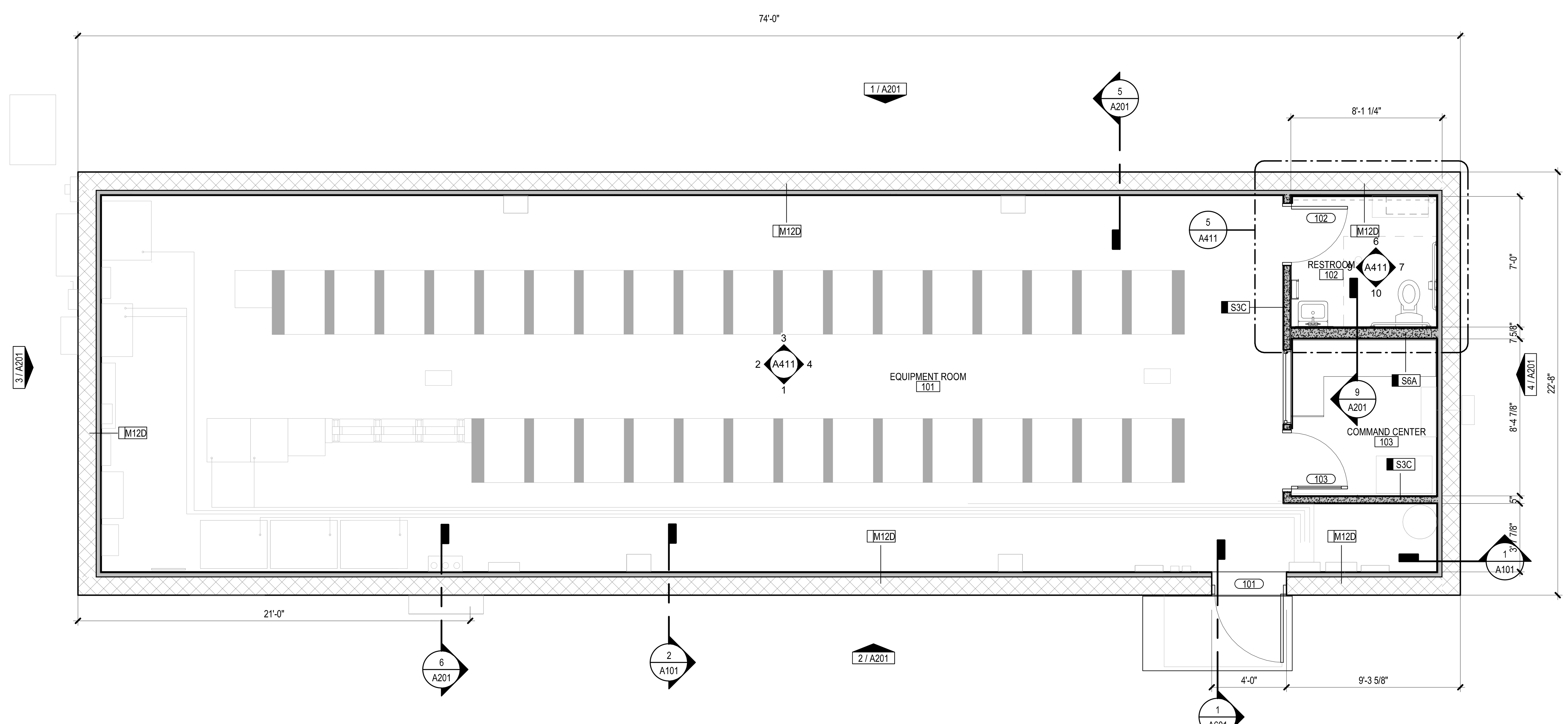
3 CONTROL JOINT DETAIL
3/4" = 1'-0"



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



1 EAST/WEST WALL SECTION
3/4" = 1'-0"



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

GENERAL NOTES

1. DO NOT SCALE DRAWINGS.
2. FINISH FLOOR ELEVATION = 100' - 0". REFER TO CIVIL DRAWINGS FOR SITE DATUM ELEVATION EQUIVALENT.
3. BEGINNING WORK INDICATES THAT THE CONTRACTOR HAS ACCEPTED AND VERIFIED EXISTING CONDITIONS.
4. REFER TO CODE COMPLIANCE DRAWING(S) FOR LOCATIONS OF RATED ASSEMBLIES AND CODE SUMMARY.
5. WALL DIMENSIONS ARE TO FACE OF MASONRY, FACE OF CONCRETE, FACE OF STUDS, COLUMN CENTERLINE AS SHOWN OR EXISTING CONSTRUCTION UNLESS OTHERWISE NOTED.
6. ALL DIMENSIONS ARE PERPENDICULAR AND PARALLEL, UNLESS NOTED OTHERWISE.
7. PROVIDE APPROVED SMOKE/FIRESTOPPING ASSEMBLIES AT ALL MECHANICAL AND ELECTRICAL PENETRATIONS THROUGH FIRE RATED AND SMOKE RESISTANT PARTITIONS IDENTIFIED ON CODE COMPLIANCE DRAWINGS.
8. OWNER FURNISHED EQUIPMENT IS SHOWN LIGHT DASHED FOR REFERENCE ONLY. REFER TO EQUIPMENT DRAWINGS FOR ADDITIONAL INFORMATION.

INTERIOR PARTITION GENERAL NOTES

NEW MASONRY WALL CONSTRUCTION

NEW STUD WALL CONSTRUCTION

1. CONSTRUCT ALL WALLS TIGHT TO DECK ABOVE AND EXTEND INTO DECK FLUTES AND WEBS OF STEEL MEMBERS UNLESS OTHERWISE NOTED.
2. PROVIDE DEFLECTION TRACK AT THE TOP OF ALL INTERIOR NON-BEARING METAL STUD WALLS CAPABLE OF ACCOMMODATING 1" ROOF/FLOOR DEFLECTION.
3. FIRE RATED AND SMOKE RESISTANT ASSEMBLIES SHALL BE CONTINUOUS, WHERE OTHER PARTITIONS ABUT THEM.
4. PROVIDE ACOUSTICAL SEALANT AT ALL WALLS WITH ACOUSTICAL INSULATION.

INTERIOR PARTITION TAG LEGEND

CORE MATERIAL
S - STEEL STUDS
M - MASONRY

M12A

ACOUSTICAL INSULATION
PROVIDE ACOUSTICAL INSULATION AT TAGGED LOCATIONS

PARTITION TYPE SUFFIX
REFER TO SCHEDULE BELOW

CORE SIZE (NOMINAL)

	S	M
0	7/8"	
1	1 5/8"	
2	2 1/2"	
3	3 5/8"	
4	4"	4"
5	5 1/2"	
6	6"	6"
7		
8	8" CFMF	8"
9		
10		10"
11		
12		12"

INTERIOR PARTITION TYPE SUFFIXES

A	5/8" GYPSUM BOARD ON BOTH SIDES; EXTEND TO DECK (OR HARD CEILING WHERE IT OCCURS)
C	5/8" GYPSUM BOARD ON BOTH SIDES; EXTEND TAGGED SIDE TO DECK AND OTHER SIDE TO 6" ABOVE CEILING (OR HARD CEILING WHERE IT OCCURS)
D	5/8" GYPSUM BOARD ON ROOM SIDE ONLY; EXTEND TO DECK

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LICENSED ARCHITECT
Aug 23, 2022
SCOTT DOUGLAS WURL
C-31290
06.30.23
RENEWAL DATE
STATE OF CALIFORNIA

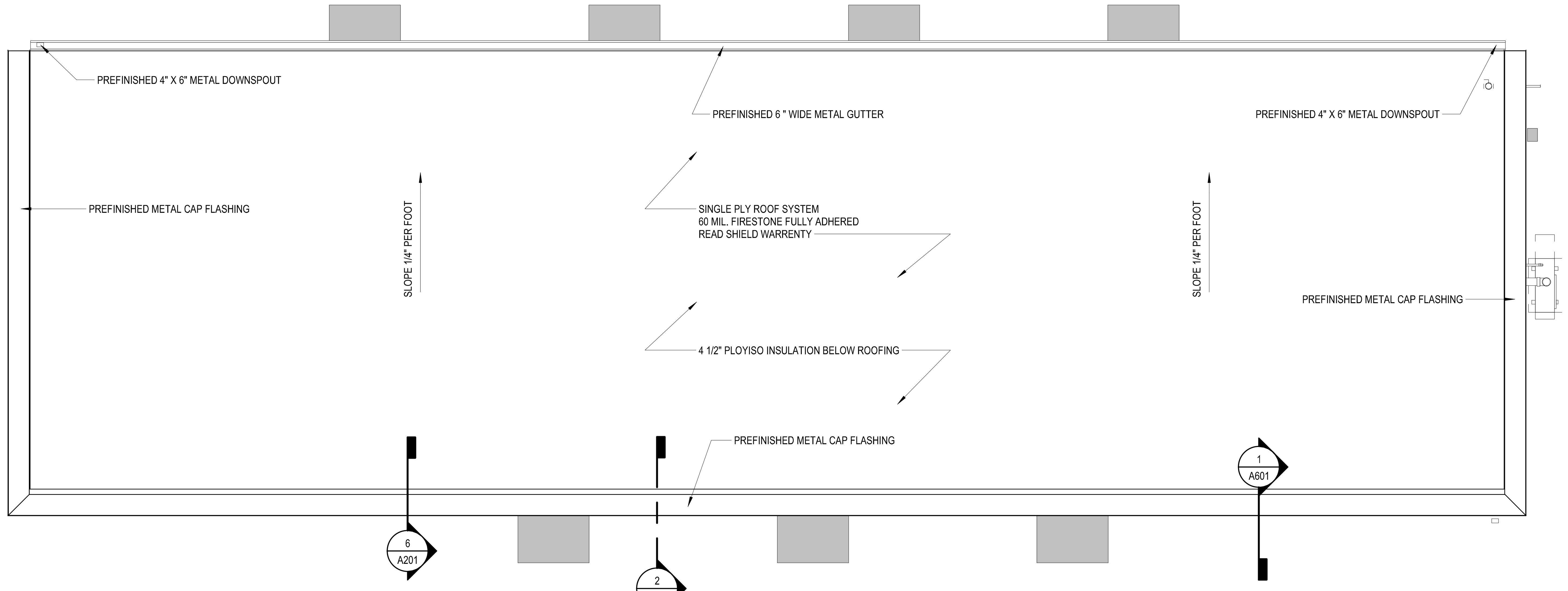
ISSUANCE
BIDS AND PERMITS
08/22/2022

REVISIONS
NO. DATE DESCRIPTION

FILE NUMBER	92260017
PROJECT MANAGER	JD
PROFESSIONAL	SDW
DRAWN BY	AG
CHECKED BY	JD

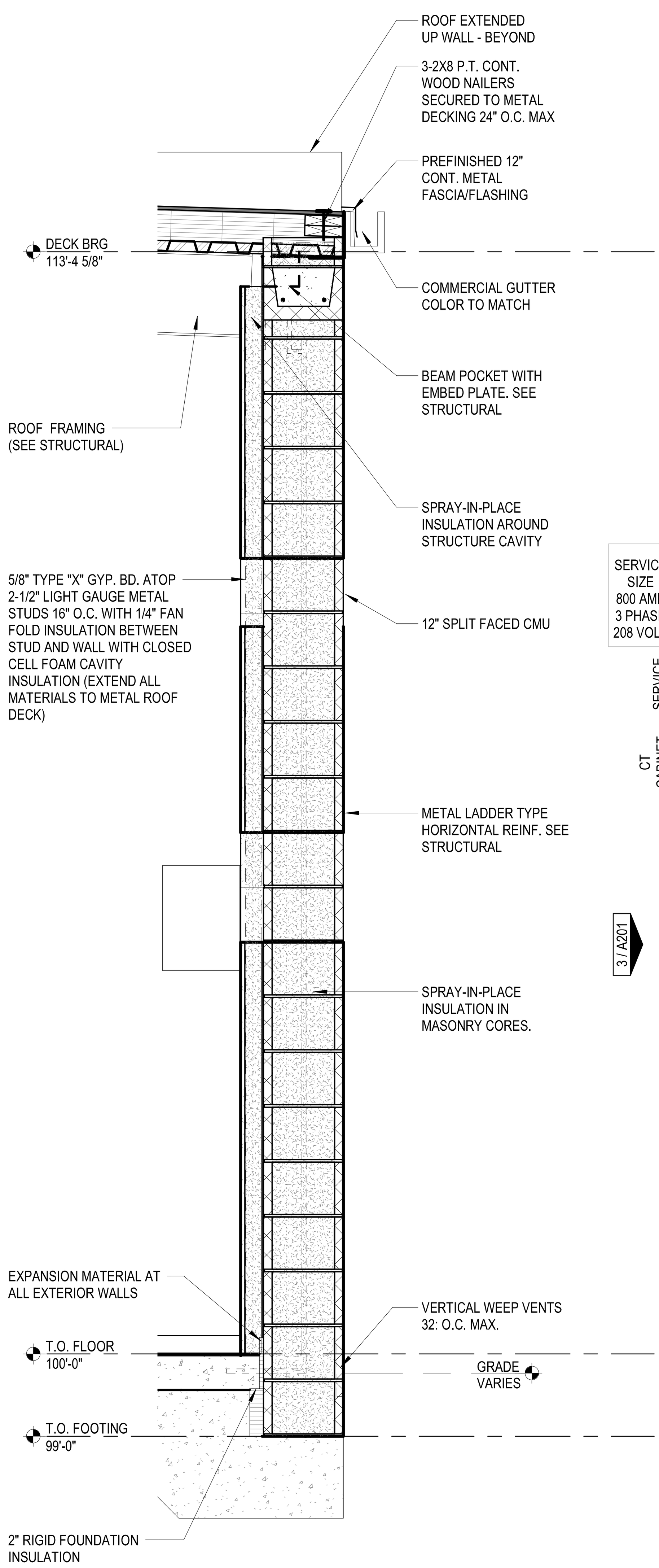
FLOOR PLAN AND REFLECTED CEILING PLAN & SECTIONS

A101



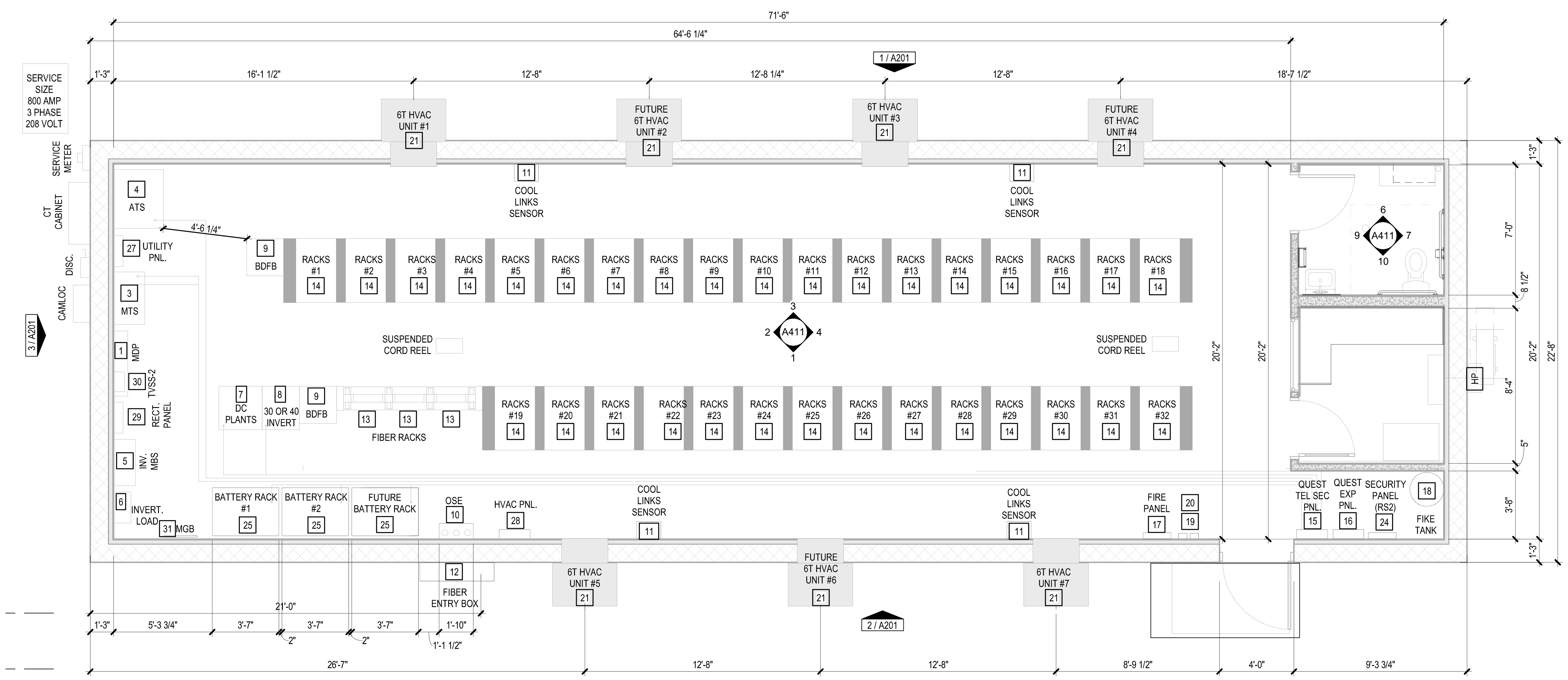
ROOF PLAN

1/4" = 1'-0"



1 WEST WALL SECTION

3/4" = 1'-0"



EQUIPMENT PLAN

1/4" = 1'-0"

EQUIPMENT LEGEND

AC POWER

1	MDP (42"W X 9 1/2"D X 60"H)
2	(NOT USED)
3	MTS (34"W X 20"D X 72"H)
4	ATS (38"W x 32"D X 91"H)
26	MDP TVSS-2
27	UTILITY PANEL
28	AC UNITS PANEL
30	POWERLOGIC POWER METER
31	MASTER GROUND BAR (MGB)

DC POWER

5	INVERTOR MBS
6	INVERTOR LOAD
7	DC PLANT
8	AMPS HB2-20
9	BDFB
25	BATTERY RACKS AT-29
29	RECTIFIER PANEL

FIBER

10	OSE (INTERIOR FIBER BOX)
12	EXTERIOR FIBER ENTRY BOX
13	FIBER RACKS (3)

OTHER

14	EQUIPMENT RACKS (23)
24	SECURITY PANEL (RS2)

MONITORING

15	QUEST TEL SEC PANEL
16	QUEST EXPANSION PANEL
T/H	TEMPERATURE/HUMIDITY SENSOR
T	TEMPERATURE SENSOR

FIRE PROTECTION

17	FIRE PANEL
18	FM-200 TANKS
19	ALARMS / STROBES
20	PULL STATION / SHUT OFF

HVAC

21	MARV AIR 6 TON ASDCA72A 000CU-A5-100-VAR COMPAC II
11	COOL LINKS SENSOR
22	MARV AIR AC CONTROL PANEL
23	250 KW GENERATOR

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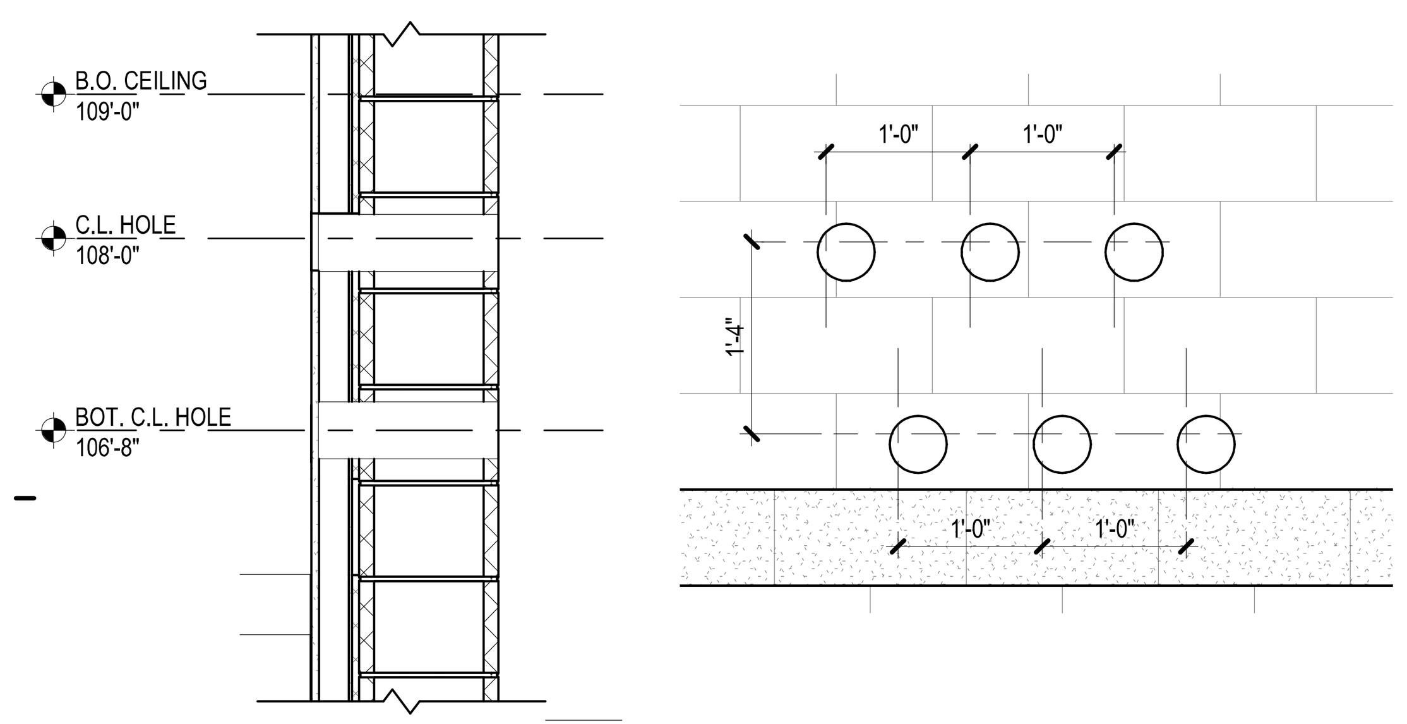
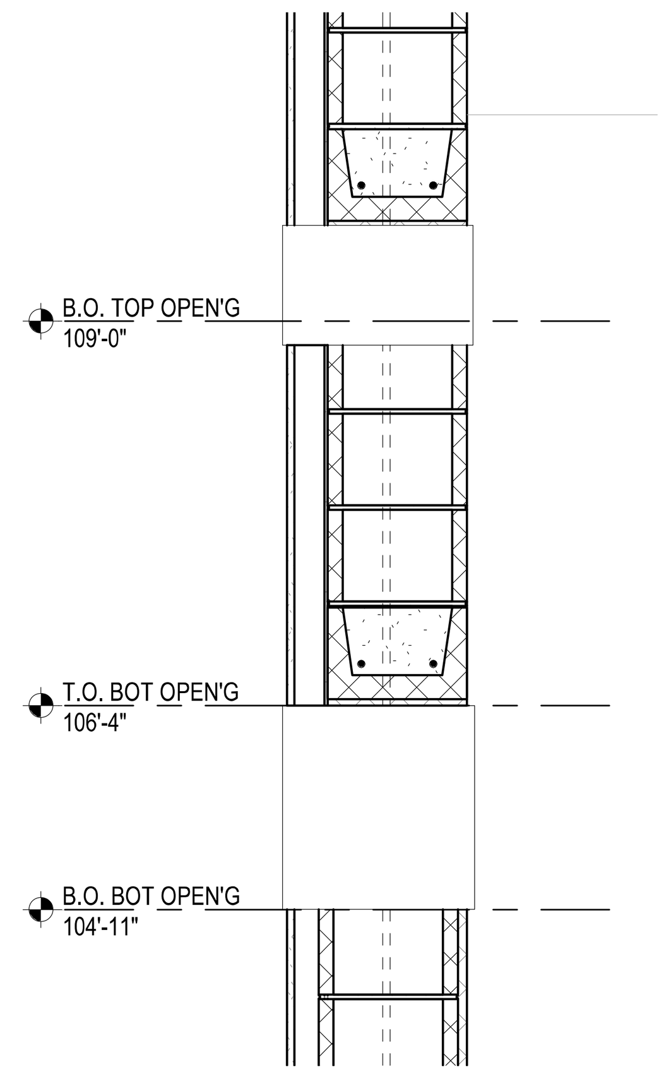
PROJECT MANAGER	JD
PROFESSIONAL	SDW
DRAWN BY	AG
CHECKED BY	JD

EQUIPMENT PLAN AND ROOF PLAN & SECTIONS

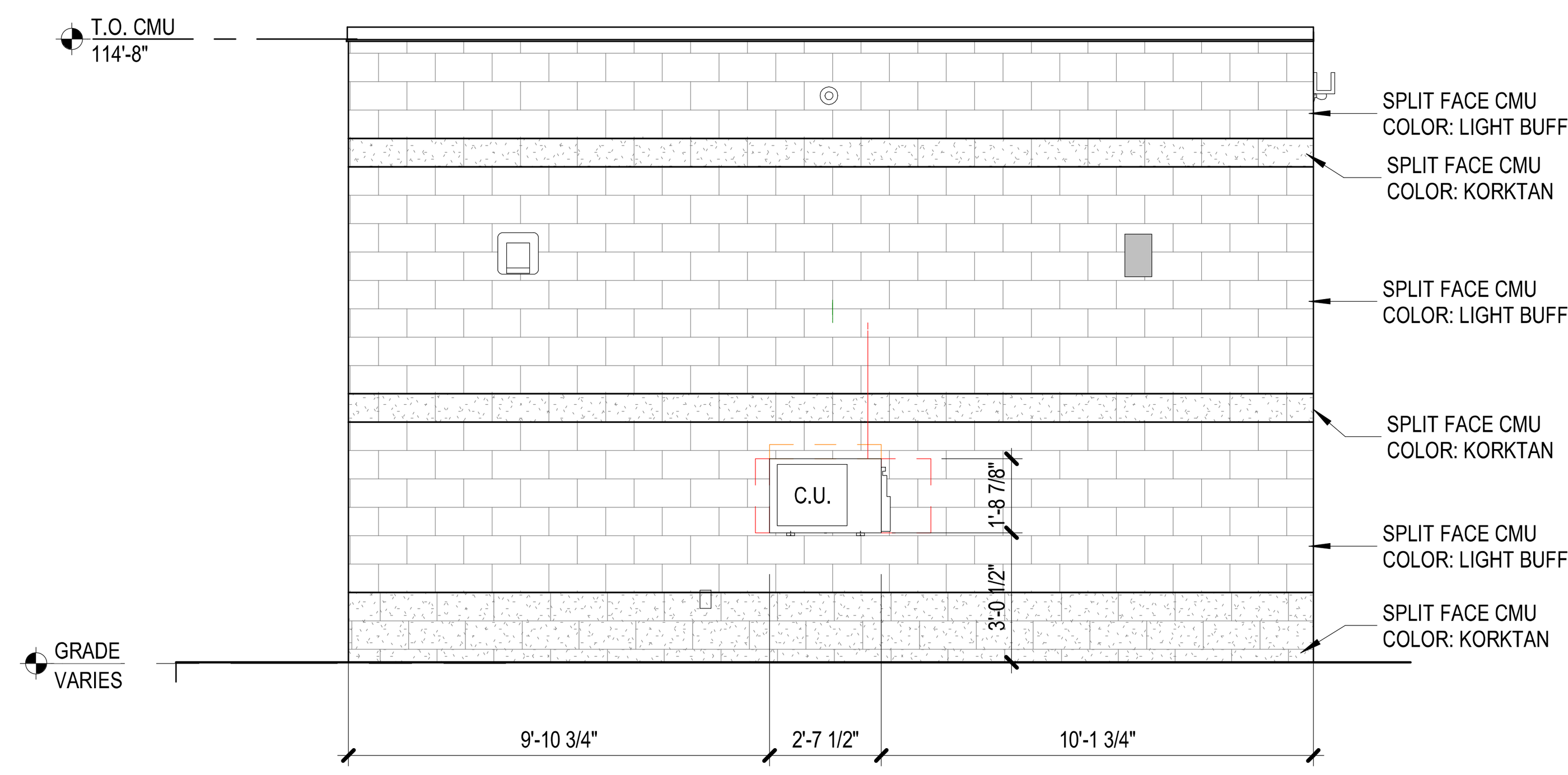
A102



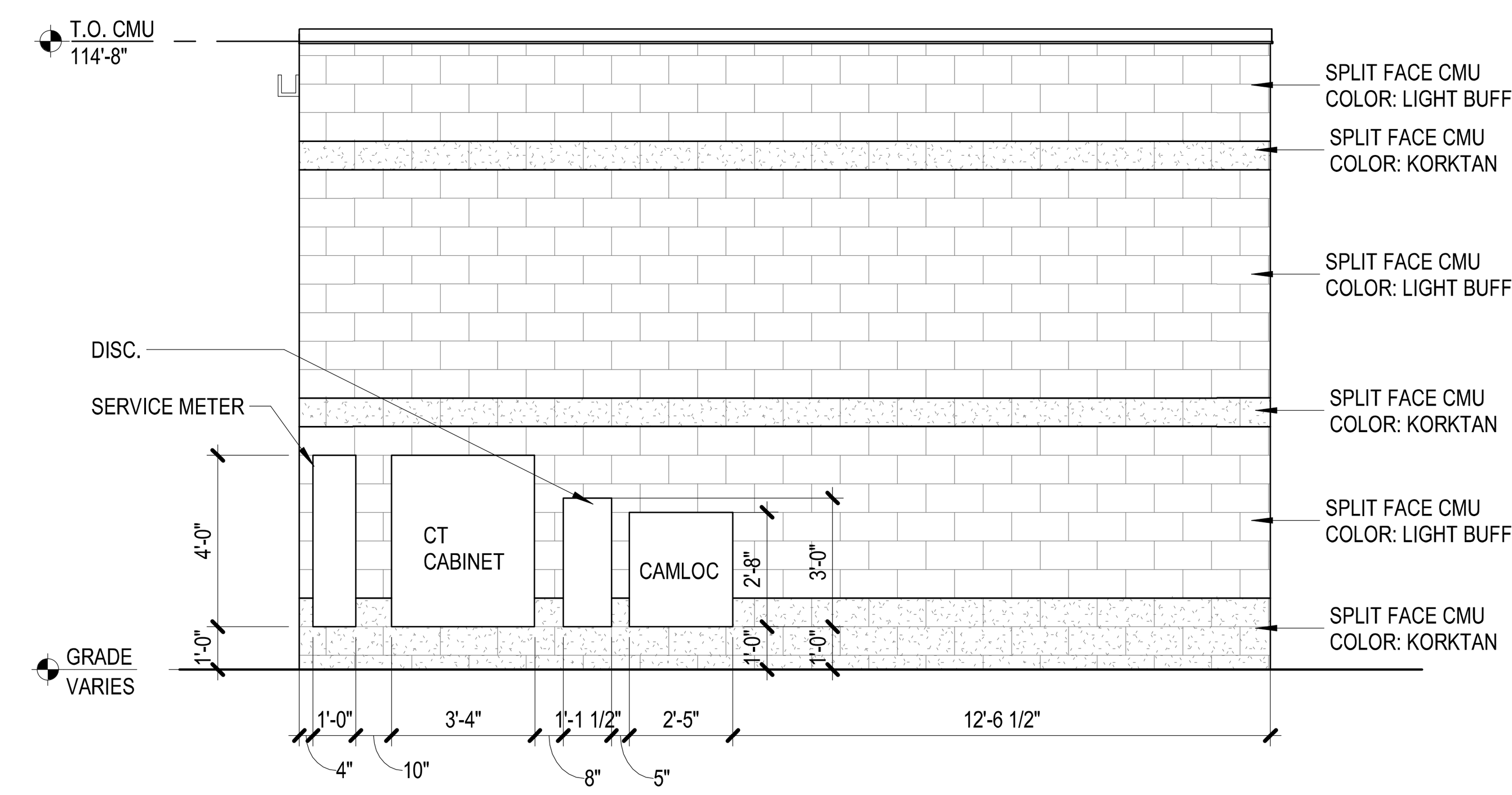
6 FIBER OPTIC CABLE HOLE- SECTION & ELEVATION
3/4" = 1'-0"



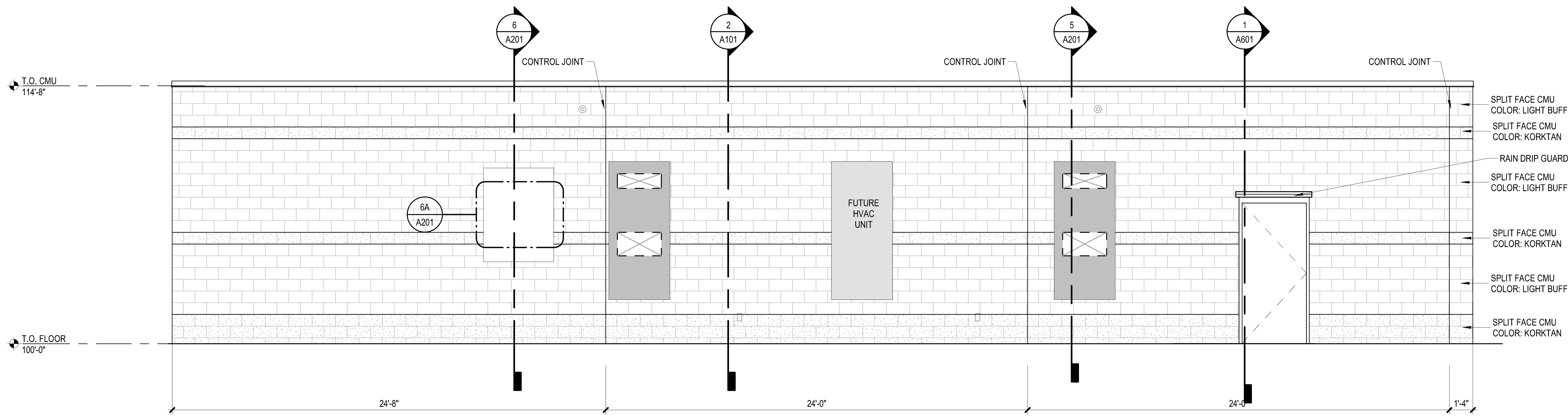
5 HVAC OPENING
3/4" = 1'-0"



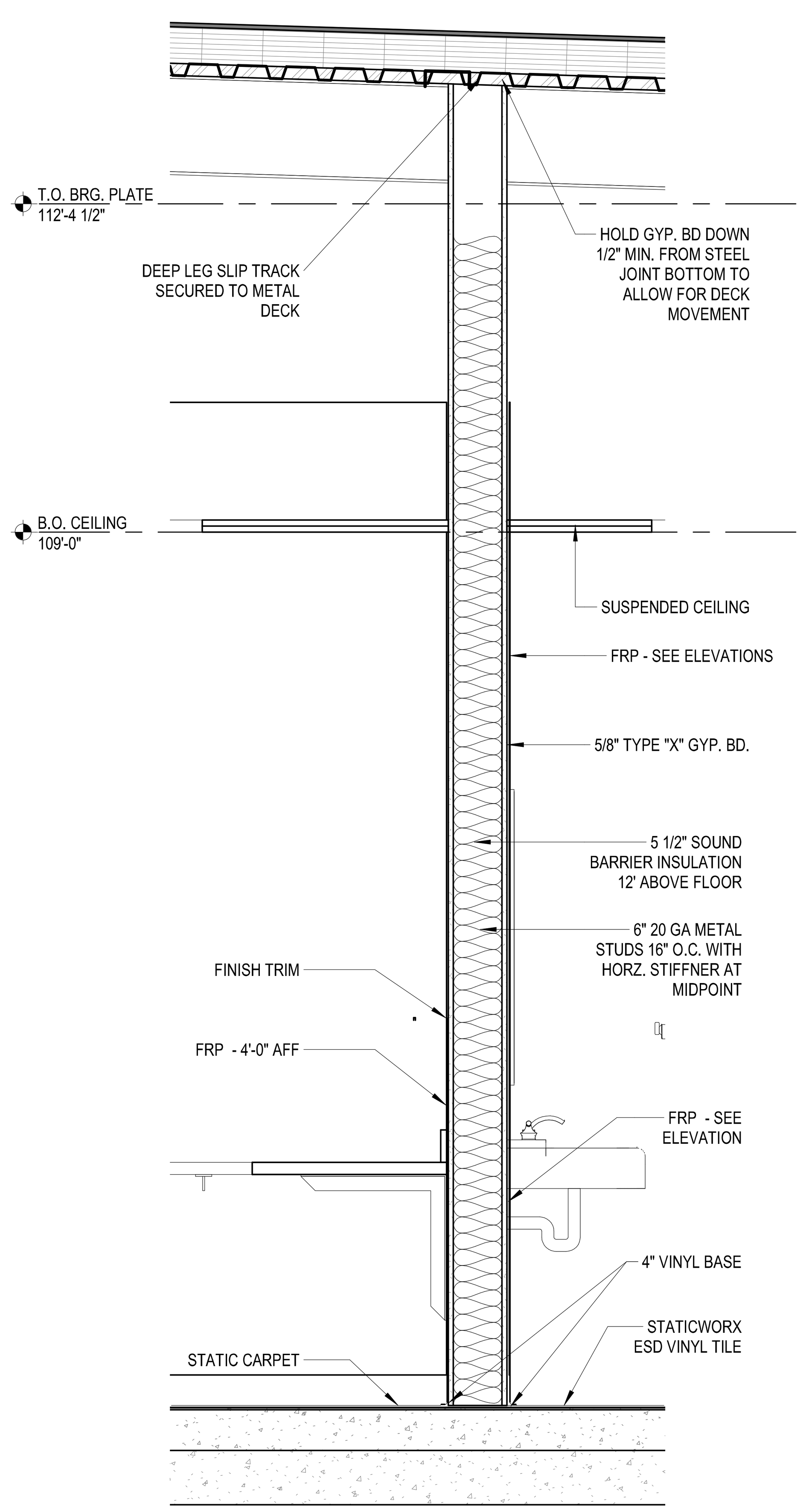
4 NORTH ELEVATION
1/4" = 1'-0"



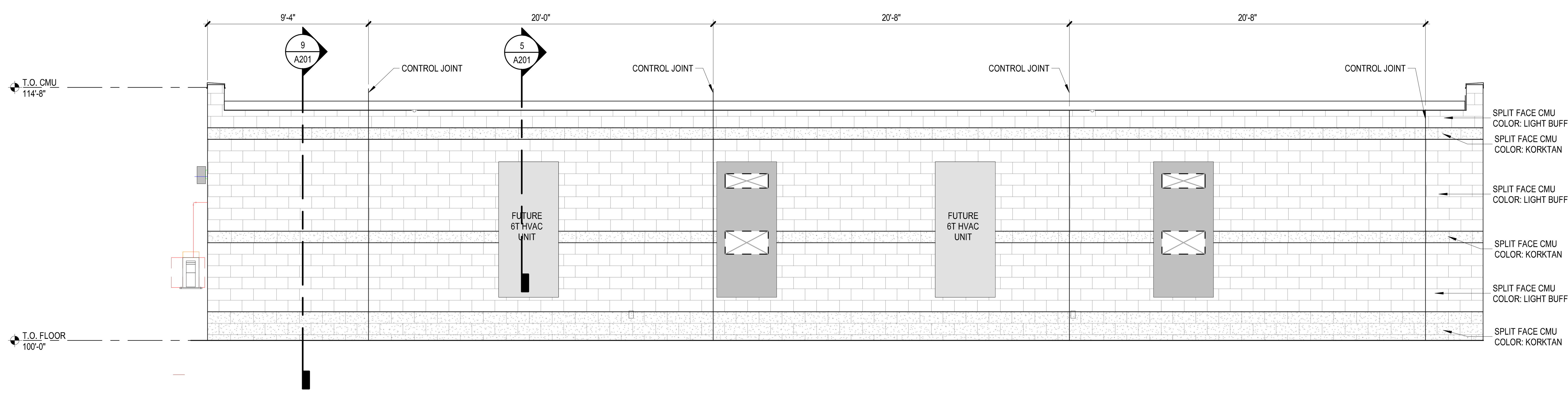
3 SOUTH ELEVATION
1/4" = 1'-0"



2 EAST ELEVATION
1/4" = 1'-0"



9 INTERIOR WALL SECTION
3/4" = 1'-0"



1 WEST ELEVATION
1/4" = 1'-0"

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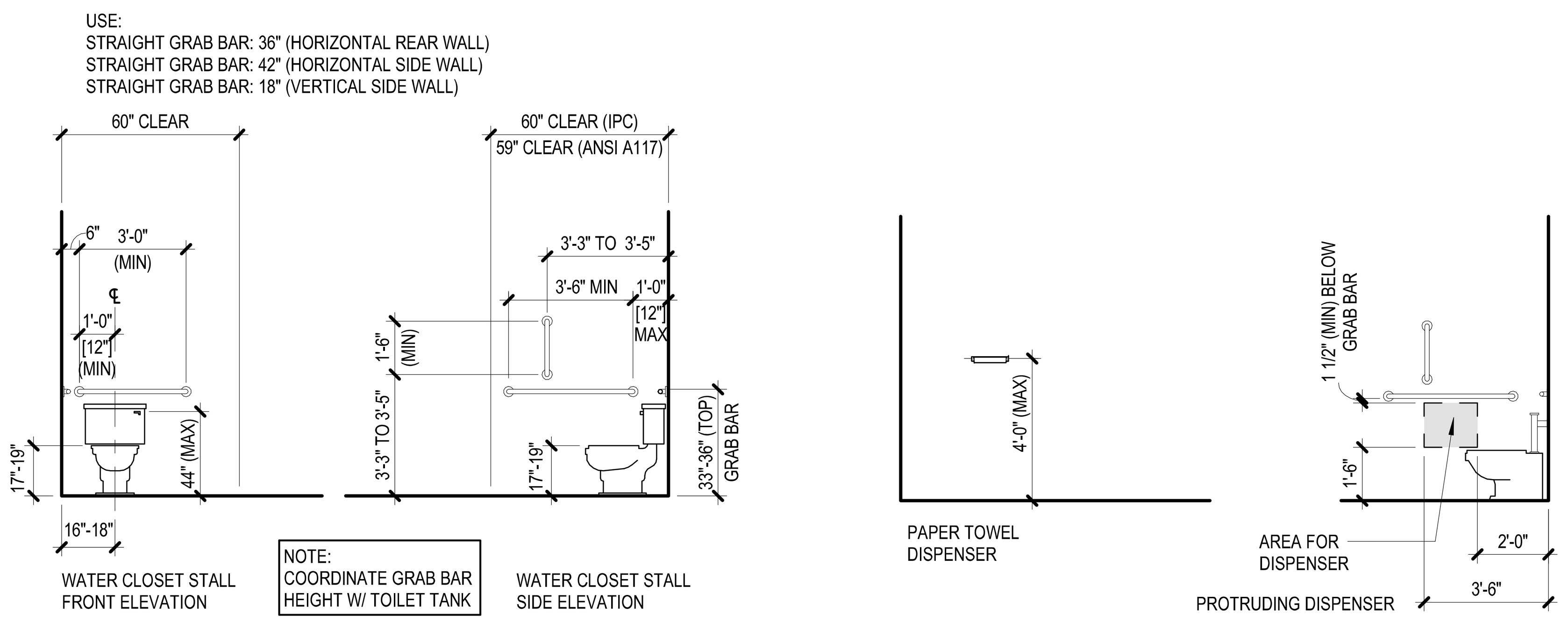
FILE NUMBER	92260017
PROJECT MANAGER	JD
PROFESSIONAL	SDW
DRAWN BY	AG
CHECKED BY	JD

ELEVATIONS AND WALL SECTIONS

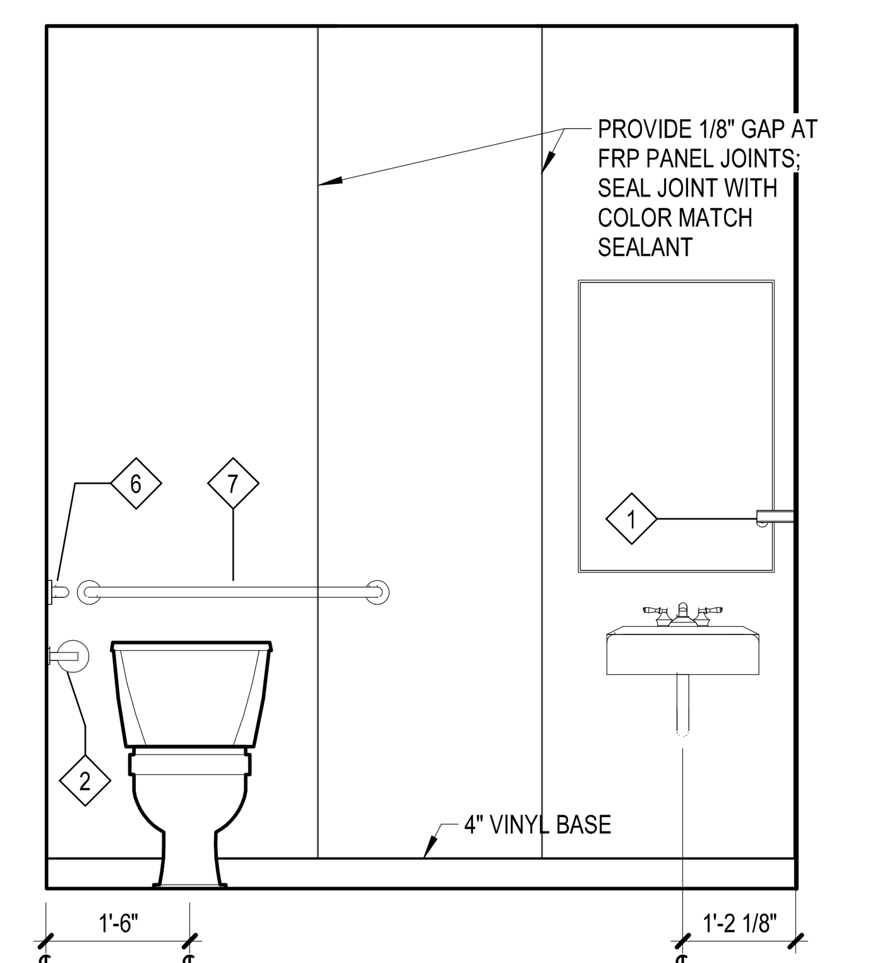
A201

RESTROOM ACCESSORIES

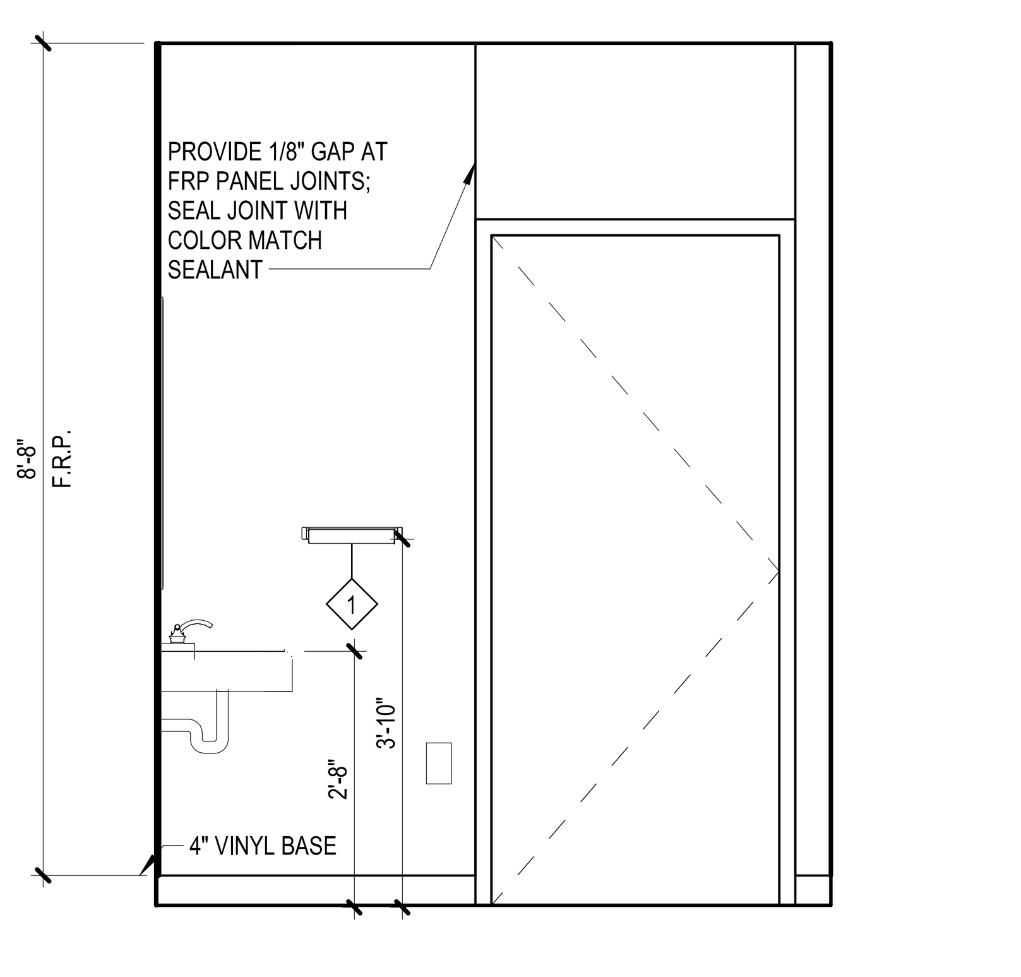
MARK	MODEL	MANUFACTURER	DESCRIPTION
1			
2	B-7685	Bobrick	Surface-Mounted Single Roll Tissue Dispenser
5	B-290	Bobrick	24" X 36" Mirror
6	B-490 42"	Bobrick	42" Grab Bar
7	B-490 36"	Bobrick	36" Grab Bar



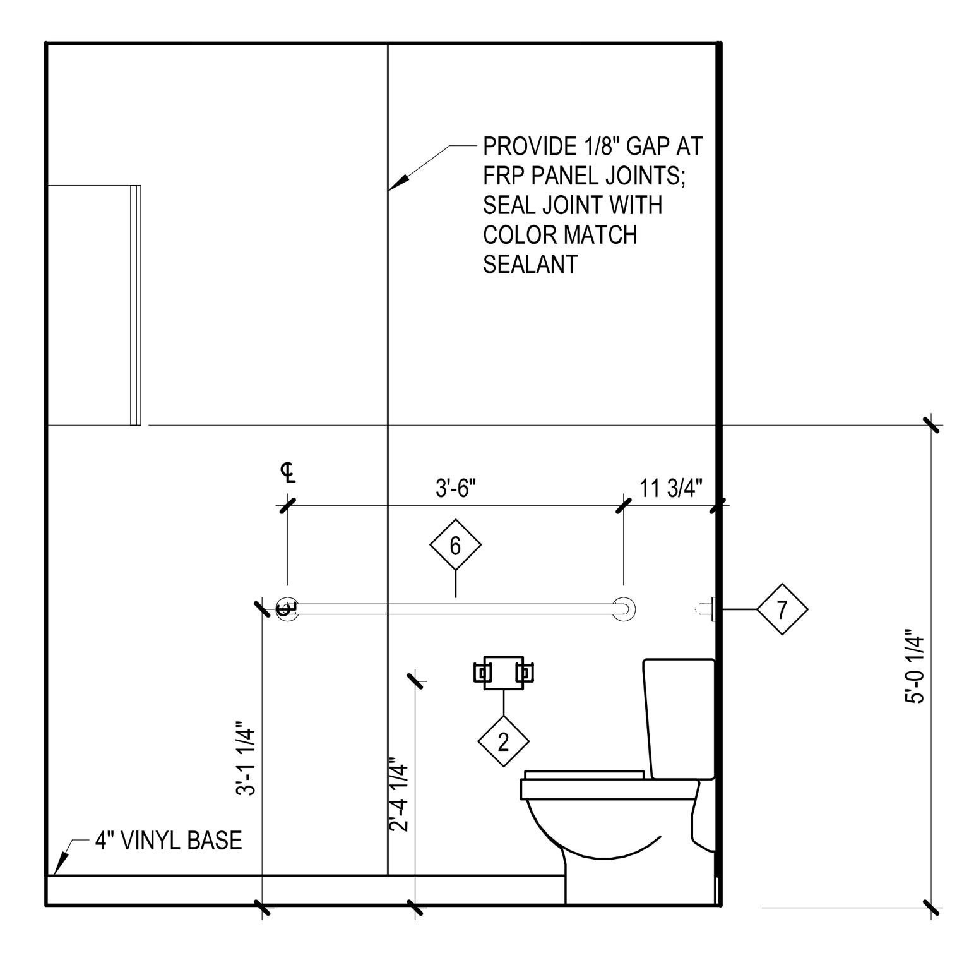
11 TOILET ROOM ACCESSORIES
1/4" = 1'-0"



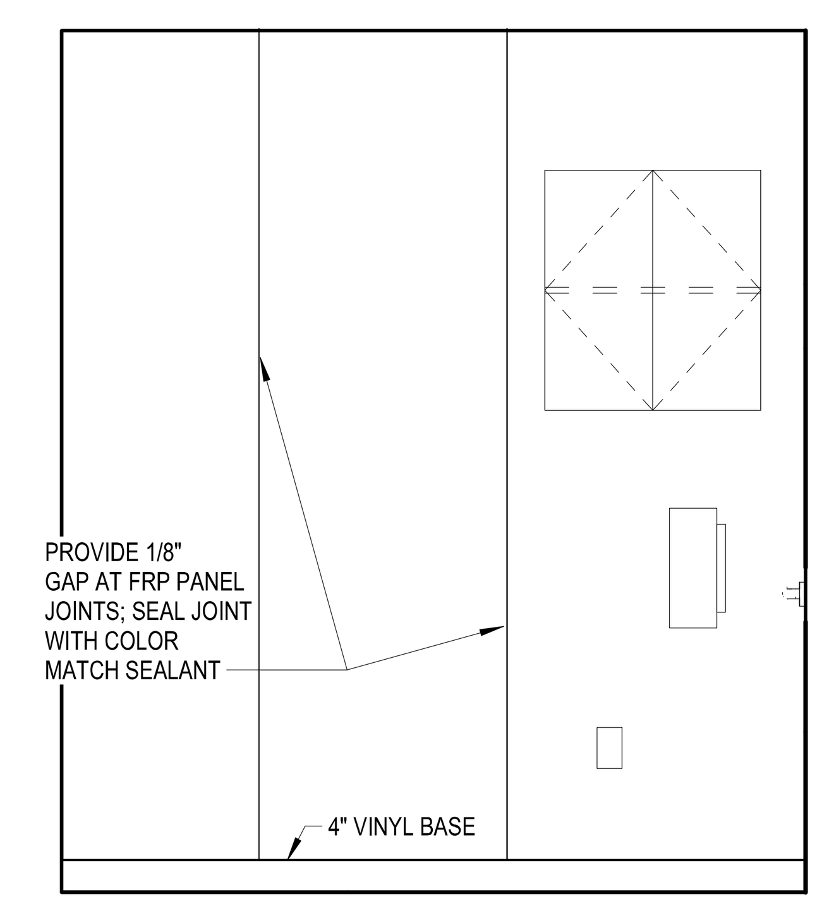
10 RESTROOM INTERIOR ELEVATION 4
1/2" = 1'-0"



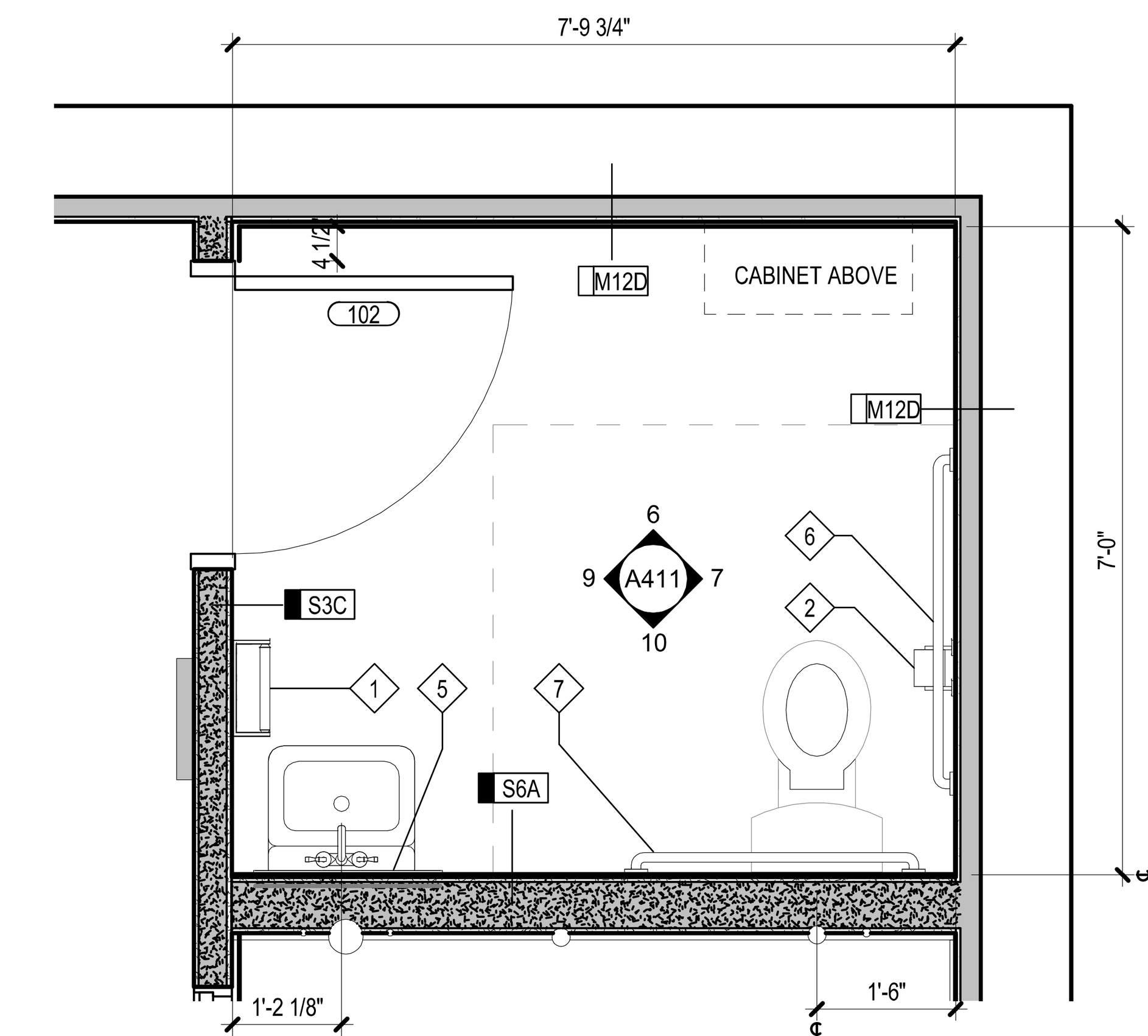
9 RESTROOM INTERIOR ELEVATION 3
1/2" = 1'-0"



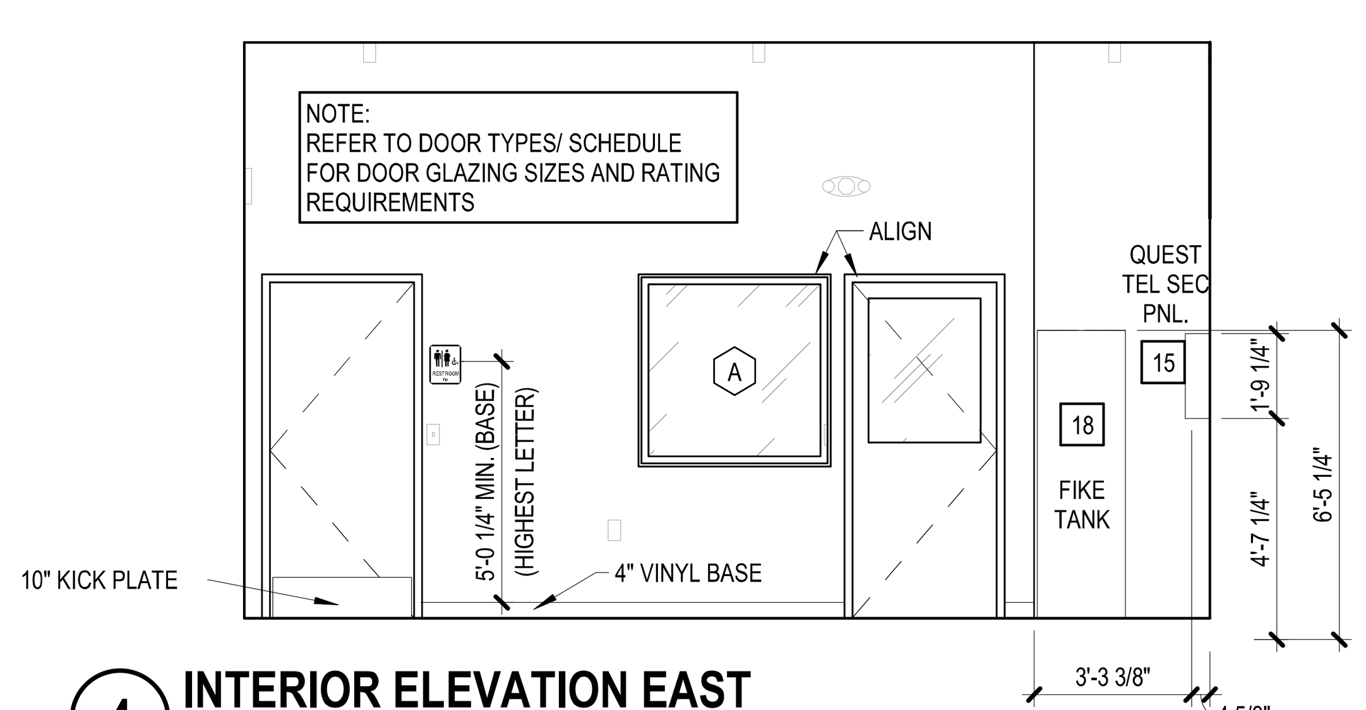
7 RESTROOM INTERIOR ELEVATION 2
1/2" = 1'-0"



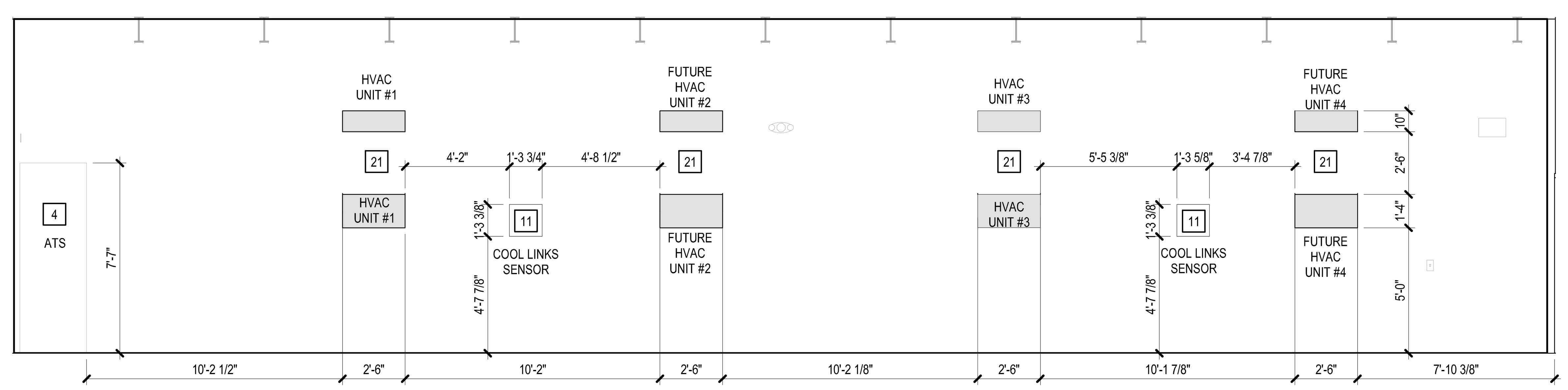
6 RESTROOM ELEVATION 1
1/2" = 1'-0"



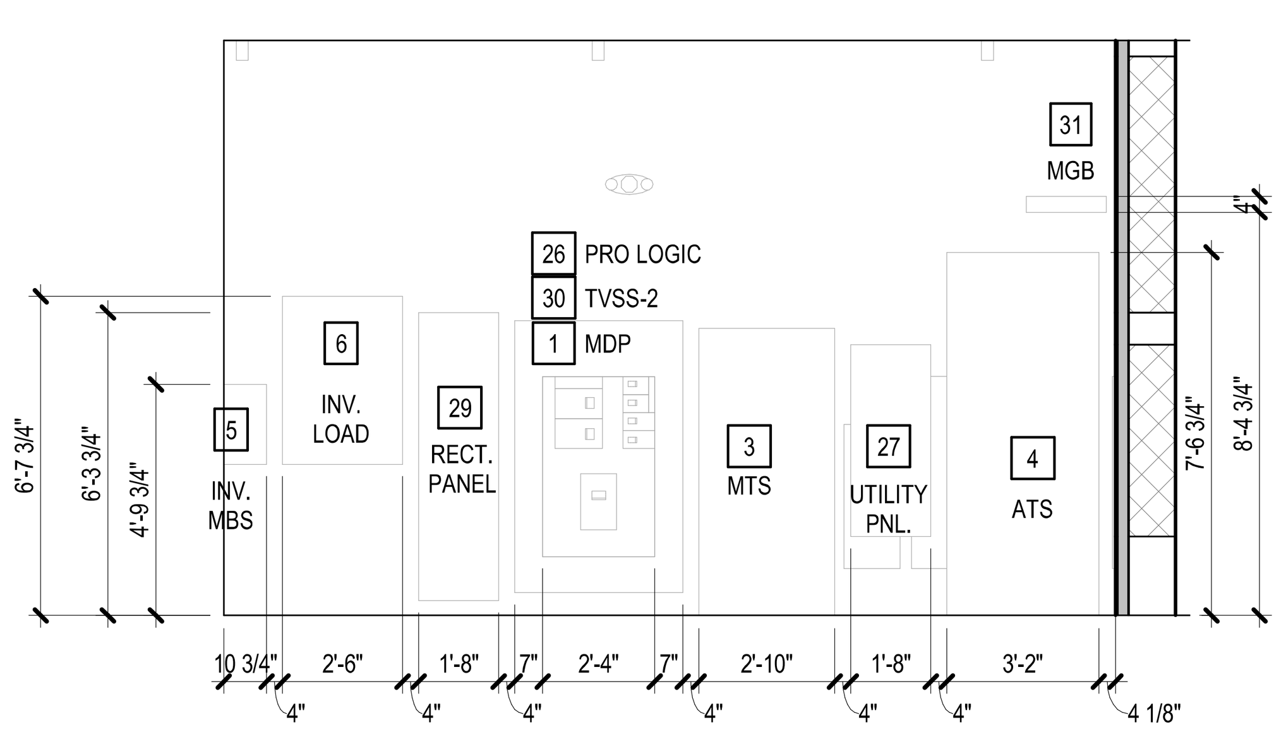
5 RESTROOM ENLARGED PLAN
1/2" = 1'-0"



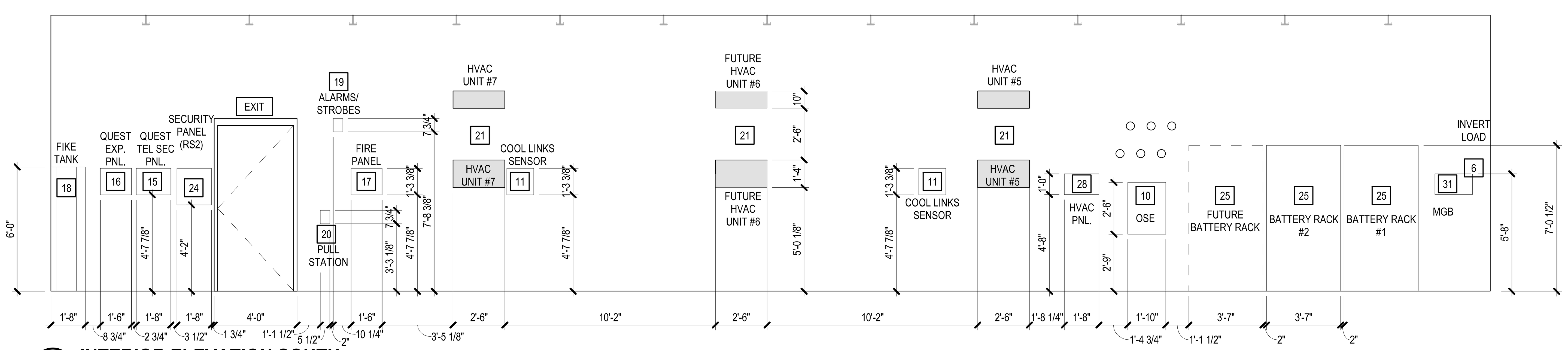
4 INTERIOR ELEVATION EAST
1/4" = 1'-0"



3 INTERIOR ELEVATION NORTH
1/4" = 1'-0"



2 INTERIOR ELEVATION WEST
1/4" = 1'-0"

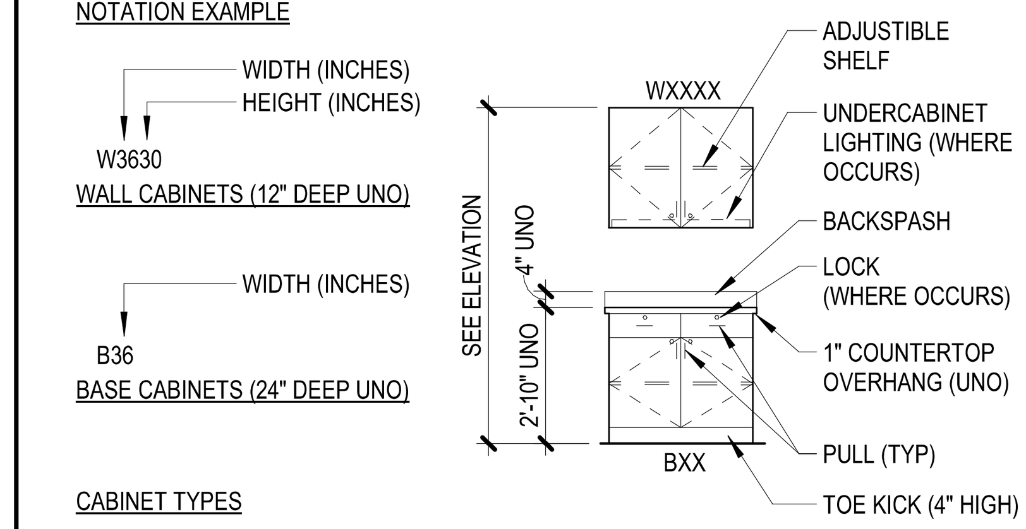


1 INTERIOR ELEVATION SOUTH
1/4" = 1'-0"

CASEWORK LEGEND AND NOTES

1. ALL SHELVES ARE ADJUSTABLE, UNLESS NOTED OTHERWISE.
2. PROVIDE EQUAL SIZED FILLER PANELS AT CABINET ELEVATIONS. MINIMUM 1" AND MAXIMUM 6" UNLESS NOTED OTHERWISE.
3. PROVIDE FINISH BASE AT ALL BASE CABINETS TO MATCH ADJACENT WALL BASE, UNLESS NOTED OTHERWISE.
4. PROVIDE SEALANT AT BOTTOM, TOP AND ENDS OF BACKSPLASHES AND SIDESPLASHES.
5. PROVIDE 2" LIGHT VALANCE AT ALL WALL CABINETS WITH UNDERCABINET LIGHTING.

NOTATION EXAMPLE



CABINET TYPES

B BASE CABINET
W WALL CABINET OR SHELVES
SB SINK BASE CABINET
T TALL STORAGE CABINET

INTERIOR ELEVATION GENERAL NOTES

1. REFER TO DRAWING A121 FOR FINISH MATERIAL LIST AND DETAILED FINISH INFORMATION.
2. REFER TO CASEWORK LEGEND ON THIS SHEET FOR TYPICAL CASEWORK ANNOTATIONS AND SYMBOLOGY.
3. ALL COUNTERTOPS SHALL BE 34" AFF (AS REQUIRED FOR ACCESSIBILITY) UNLESS NOTED OTHERWISE.
4. ALL WORK SURFACES SHALL BE 30" AFF UNLESS NOTED OTHERWISE.
5. EXPOSED OUTSIDE CORNERS OF COUNTERTOPS SHALL BE EASED. REFER TO DRAWINGS FOR ADDITIONAL RADIUS REQUIREMENTS.

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LICENSED ARCHITECT
Aug 23, 2022
SCOTT DOUGLAS WURL
C-31290
06.30.23
RENEWAL DATE
STATE OF CALIFORNIA

ISSUANCE
BIDS AND PERMITS
08/22/2022

REVISIONS
NO. DATE DESCRIPTION

FILE NUMBER	92260017
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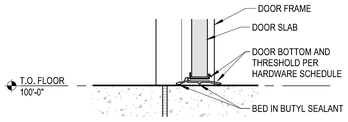
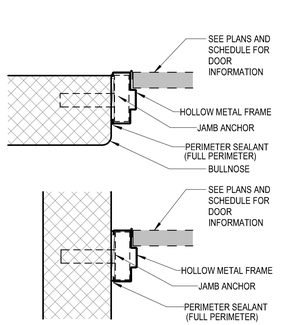
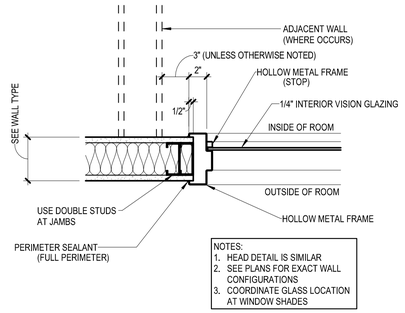
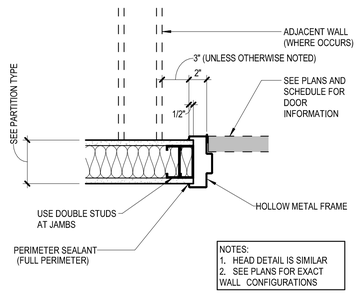
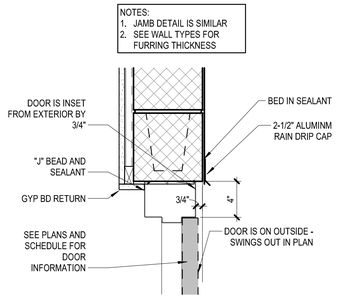
SECTIONS & INTERIOR ELEVATIONS
A411

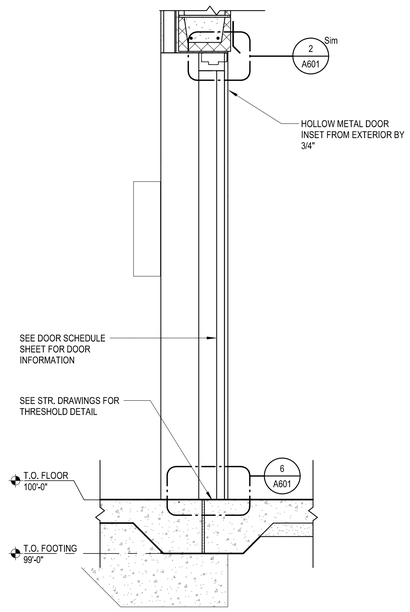


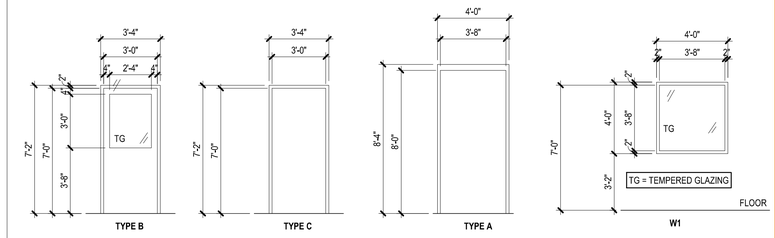












6 SECTION AT ENTRACE DOOR - THRESHOLD

1 1/2" = 1'-0"

5 HOLLOW METAL FRAME AT CMU

1 1/2" = 1'-0"

NOTES:
1. HEAD DETAIL IS SIMILAR
2. SEE PLANS FOR EXACT WALL CONFIGURATIONS
3. COORDINATE GLASS LOCATION AT WINDOW SHADES

4 INTERIOR HOLLOW METAL FRAME WINDOW

1 1/2" = 1'-0"

NOTES:
1. HEAD DETAIL IS SIMILAR
2. SEE PLANS FOR EXACT WALL CONFIGURATIONS

3 INTERIOR HOLLOW METAL FRAME

1 1/2" = 1'-0"

NOTES:
1. JAMB DETAIL IS SIMILAR
2. SEE WALL TYPES FOR FURRING THICKNESS

2 HOLLOW METAL AT CMU FURRING

1 1/2" = 1'-0"

1 SECTION AT ENTRACE DOOR

3/4" = 1'-0"

ROOM FINISH SCHEDULE

ROOM		FLOORS		CEILING		
NO.	NAME	FINISH	BASE	FINISH	Wall Finish	REMARKS
101	EQUIPMENT ROOM	F-01	B-01	OPEN TO STRUCTURE	P-01	
102	RESTROOM	F-02	B-01	C-01	P-04	
103	COMMAND CENTER	F-01	B-01	C-01	P-04	

MATERIAL LEGEND

WALL FINISHES

P-01

SHERWIN WILLIAMS
WATERBORNE ACRYLIC DRYFALL 1
B42BW3 FLAT BACK

P-02

BENJAMIN MOORE
AURA TRIM PAINT
WHITE DOVE * OC-17
SEMI GLOSS FINISH

P-03

BENJAMIN MOORE
AURA EXTERIOR PAINT
WHITE DOVE * OC-17
MATTE FINISH

P-04

FRP BY CRANE COMPOSITES - EMBOSSED WHITE

FLOOR MATERIALS

F-01

STATICWORX 1215
12" X 12" SPRING SNOW TILE
WITH GROUNDTRACK PRESSURE SENSATIVE
RELEASABLE ADHESIVE
WITH COPPER STRIP 2" X 0.016" 26 GA

F-02

STATIC CARPET 2X2 TILES
CONTROL - BOLYU - TCTL - CTL52
APPROVED STATIC ADHESIVE

WALL BASE MATERIALS

B-01

FLEXCO 4" X 0.08" VINYL WALL BASE
MODEL VC40C81P058 SHADOW BLUE

CEILING MATERIALS

C-01

USG *56099 2' X 2' X 5/8" CLEAN ROOM
ACCOUSTICAL TILES - WHITE VINYL
15/16" WHITE GRID; 9/16" WHITE WALL ANGLE

CORNER PROTECTION MATERIALS

CP-01

48" X 3" X 3" STAINLESS STEEL 16 GA
CORNER GUARDS (ROUNDED CORNER)

COUNTER TOP MATERIALS

CT-01

30" A.F.F - NEVARMAR LAMINATE - CASA PIEDRA COLOR
WITH MATCHING PVC EDGEBAND - WILSON ART D50-60 KHAKI BROWN

WINDOW SCHEDULE

	WINDOW		FRAME				
Mark	WIDTH	HEIGHT	WIDTH	HEIGHT	SILL HEIGHT	COUNT	COMMENTS
C	3'-8"	3'-8"	4'-0"	4'-0"	3'-2"	1	

DOOR-WINDOW TYPES

DOOR SCHEDULE

	ROOM	DOOR				FRAME				DETAILS		
MARK	NAME	WIDTH	HEIGHT	TYPE	MATERIAL	TYPE	MATERIAL	RATING	HDW	HEAD	JAMB	NOTES
T.O. FOUNDATION												
101	EQUIPMENT ROOM	3'-8"	8'-0"	A	HM	A	HM		H-01			4" HEAD FRAME
102	RESTROOM	3'-0"	7'-0"	C	HM	C	HM		H-03			
103	COMMAND CENTER	3'-0"	7'-0"	B	HM	B	HM		H-02			

DOOR HARDWARE TYPES

H-01
CONTINUOUS HINGE
HAGER 3480 GRADE 1 (STOREROOM) CYLINDRICAL LOCKSET - SATIN CHROME (OR APPROVED EQUAL)
LCN 4040 XP CLOSURE ALUM (OR APPROVED EQUAL
ADA ALUM. THRESHOLD
WEATHER STRIPPING HEAD AND JAMBS
BRUSH DOOR SWEEP
ALUM. 2 1/2" RAIN GUARD ABOVE DOOR
10" X 34" STAINLESS STEEL KICK GUARD (INTERIOR ONLY)
HESS 4500 ELECTRONIC STRIKE

H-02
CONTINUOUS HINGE
HAGER 3410 GRADE 1 PASSAGE (CYLINDRICAL) LOCK SET - SATIN CHROME (OR APPROVED EQUAL)
LCN 4040 XP CLOSURE ALUM. (OR APPROVED EQUAL)
10" X 30" STAINLESS STEEL KICK GUARD (BOTH SIDES)

H-03
5 KNUCKLE BALL-BEARING HINGE (NRP)
HAGER 3410 GRADE 1 PASSAGE (CYLINDRICAL) LOCK SET - SATIN CHROME (OR APPROVED EQUAL)
ACTIVE DOOR ONLY
UPPER AND LOWER FLUSH BOLTS (INACTIVE DOOR) - SATIN CHROME
10" X 30" STAINLESS STEEL KICK GUARD (BOTH DOORS/ BOTH SIDES)

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CHECKED BY	JD

DOORS, WINDOWS AND DETAILS

A601

8/23/2022 1:22:08 PM
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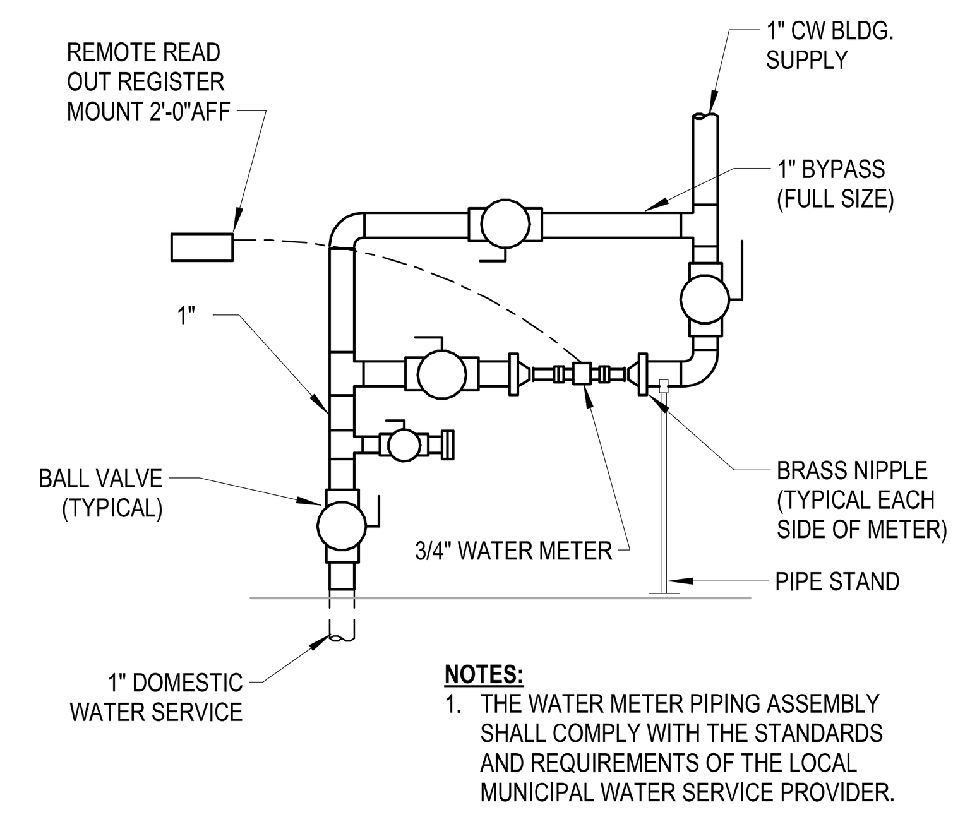
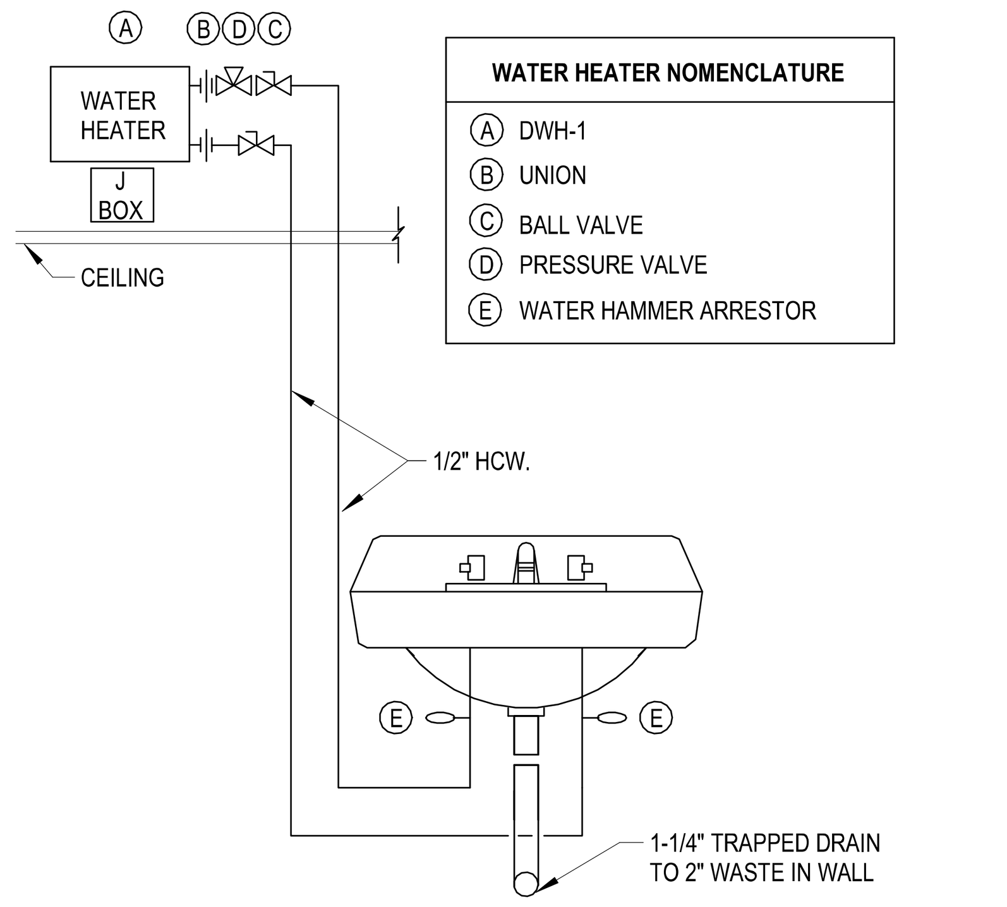
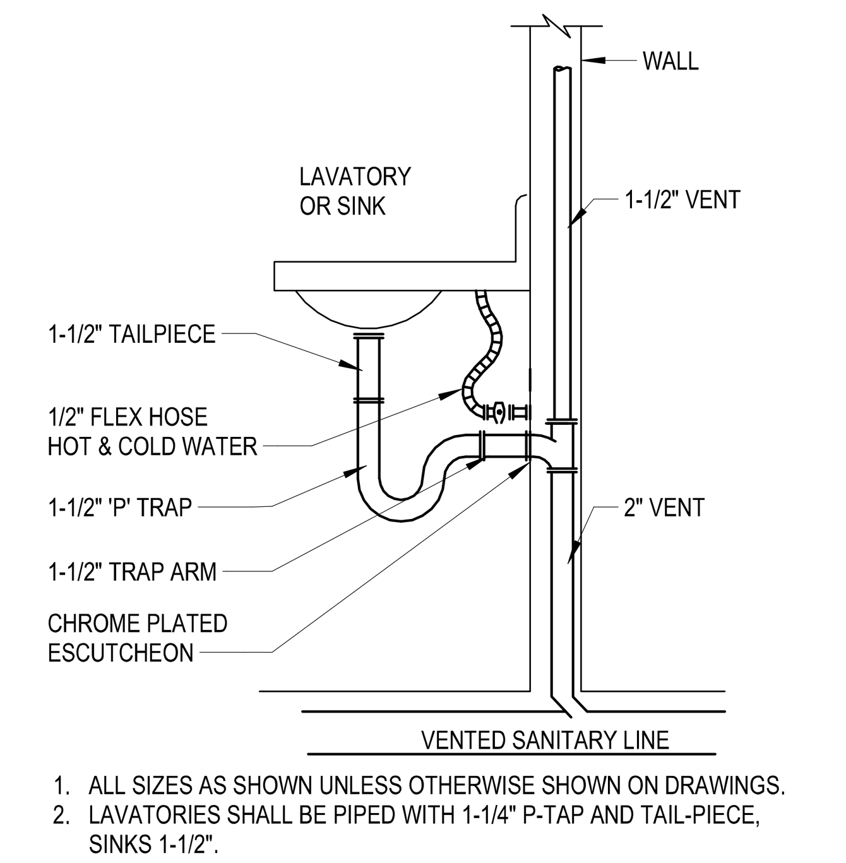
35
A601
DOORS, WINDOWS AND DETAILS



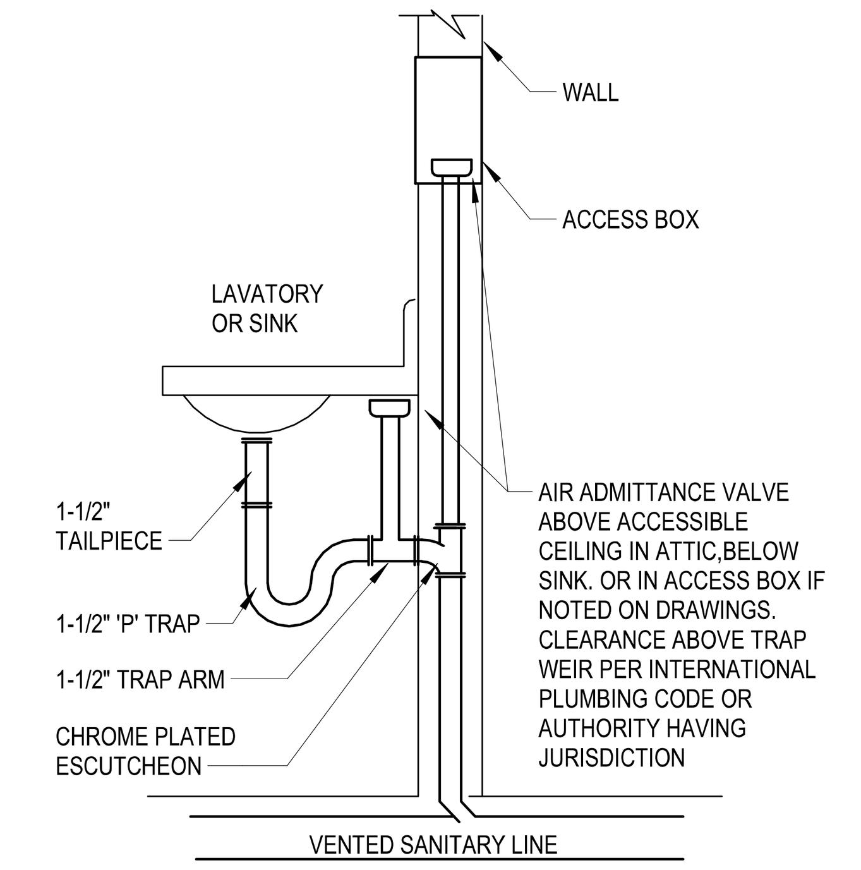
A3 DOMESTIC WATER METER PIPING DETAIL
NOT TO SCALE



A2 HOT WATER SYSTEM PIPING SCHEMATIC
NOT TO SCALE



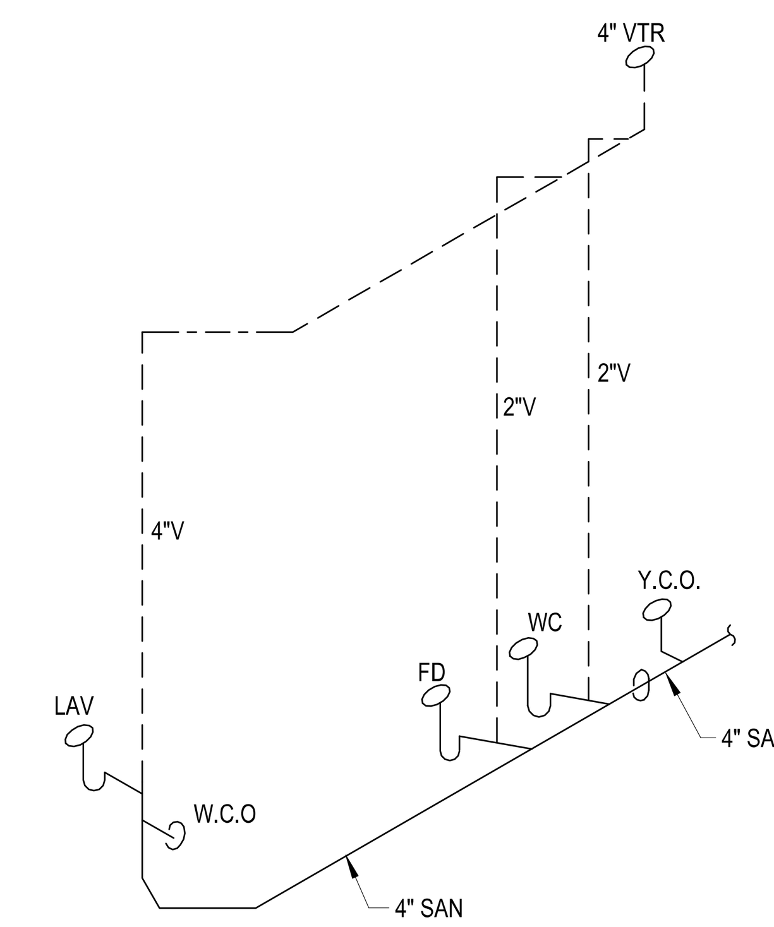
A1 TYPICAL SINK/LAVATORY DETAIL
NOT TO SCALE



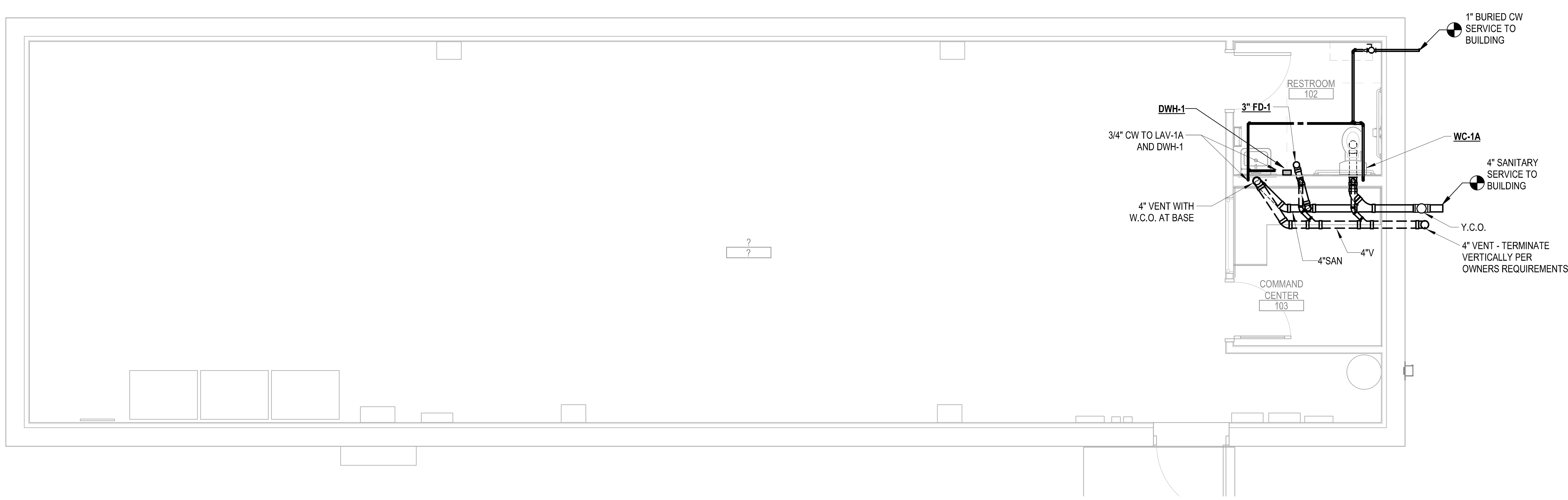
NOTE:
PROVIDE ADA COMPLIANT PIPING PROTECTION SYSTEM FOR WATER AND WASTE PIPING.

ELECTRIC WATER HEATER SCHEDULE

TAG	MANUFACTURER	MODEL	GPH @ 33 F RISE	KW	VOLTS	PHASE	REMARKS
DWH-1	BRADFORD WHITE	TET065V240	1	4.9	208	1	INSTALL PER MANUFACTURER'S INSTRUCTIONS



B1 SANITARY SEWER PIPING DETAIL
NOT TO SCALE



FIRST FLOOR PLUMBING PLAN
1/4" = 1'-0"

PLUMBING GENERAL NOTES

1. COORDINATE ROUTING OF PIPING WITH ALL OTHER TRADES PRIOR TO INSTALLATION TO AVOID CONFLICTS.
2. COMPLY WITH ALL APPLICABLE LOCAL AND STATE CODES.
3. PROVIDE TRAP SEAL PROTECTION ON ALL FLOOR DRAINS, FLOOR SINKS AND HUB DRAINS SUBJECT TO EVAPORATION. INSTALL PER MANUFACTURERS RECOMMENDATIONS.
4. PROVIDE ASSE 1070 MIXING VALVE AT ALL BARRIER FREE SINKS AND ALL HAND WASHING SINKS TO PROVIDE TEMPERED WATER TO HOT WATER SIDE OF FAUCET.
5. PIPING INSTALLED IN THE WAY OF ACCESS OR MAINTENANCE TO EQUIPMENT SHALL BE RELOCATED AT THE EXPENSE OF THE INSTALLING CONTRACTOR.
6. ALL PLUMBING WORK SHALL MEET LOCAL CURRENT PLUMBING CODE REQUIREMENTS AS A MINIMUM UNLESS EXCEEDED BY PROJECT CONSTRUCTION DOCUMENTS. THE OWNER EXPECTS THE HIGHEST LEVEL OF WORKMANSHIP AND QUALITY STANDARDS.
7. PROVIDE SHUTOFF VALVES AT ALL FIXTURES AND EQUIPMENT.
8. COORDINATE LOCATIONS OF FLOOR DRAINS AND FLOOR SINKS WITH LOCATIONS OF EQUIPMENT AND EQUIPMENT HOUSEKEEPING PADS. COORDINATE WITH SLOPING OF FLOOR SO THAT RIM OF DRAIN IS FLUSH WITH FINISH FLOOR.
9. COORDINATE HANGING AND SUPPORT OF PIPING WITH STRUCTURAL.
10. PROVIDE PIPE SLEEVES WHERE PIPES PENETRATE WALLS.
11. PROVIDE PIPE SLEEVES WHERE PIPES RUN BELOW FOOTING.
12. INSTALL EXTERIOR CLEAN OUTS FLUSH WITH SURFACE.
13. INSTALL PIPING IN AN ORGANIZED MANNER. DO NOT ROUTE IN FRONT OF WINDOWS.
14. THE INSTALLATION OF ALL PIPING SHALL BE CLOSELY COORDINATED WITH NEW SHEET METAL. HVAC PIPING, ELECTRICAL, AND STRUCTURAL CONDITIONS. NOT ALL REQUIRED OFFSETS AND FITTINGS ARE INDICATED, BUT SHALL BE PROVIDED. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR CLEARANCES. THE LOCATION OF SANITARY, STORM AND VENT LINES SHALL TAKE PRECEDENCE OVER HVAC AND FIRE PROTECTION PIPING AND ELECTRICAL CONDUIT AND CABLE TRAY.
15. PROVIDE WATER HAMMER ARRESTORS PER PDI WH-201 AND UP STREAM OF ALL AUTOMATIC AND FAST CLOSING VALVES INCLUDING BUT NOT LIMITED TO SOLENOID VALVES.

PLUMBING SYMBOLS

- BALL VALVE
- CHECK VALVE W/ARROW INDICATING FLOW
- GATE VALVE
- CO — END OF LINE, CLEANOUT
- CO — FLOOR, CLEANOUT
- WCO — WALL, CLEANOUT
- UNION

PLUMBING SYMBOLOGY

- CW — COLD WATER
- HW — HOT WATER
- SAN — SANITARY WASTE
- C — COIL CONDENSATE TO DRAIN

ABBREVIATIONS - PLUMBING

AC	ARCHITECTURAL CONTRACTOR
ADA	AMERICANS WITH DISABILITIES ACT
BV	BALL VALVE
CIP	CAST IRON PIPE
CO	CLEANOUT
CV	CHECK VALVE
CW	COLD WATER
D&T	DRIP AND TRAP
DWH	DOMESTIC WATER HEATER
FCO	FLOOR CLEAN OUT
IE	INVERT ELEVATION
IW	INDIRECT WASTE
KVAR	KILOVOLT-AMPERES REACTIVE
LAV	LAVATORY
MCA	MINIMUM CIRCUIT AMPS
PSI	POUNDS PER SQUARE INCH
S	SINK
SAN	SANITARY
SNS	SANITARY SEWER
SPHD	SPRINKLER HEAD
V	VENT
VS	VENT STACK
VTR	VENT THROUGH ROOF
W	WASTE
WCO	WALL CLEANOUT
WS	WASTE STACK

PLUMBING FIXTURE SCHEDULE

1. **WC-1A BARRIER FREE:** EQUAL TO AMERICAN STANDARD #760AA.101 CADET OVATION RIGHT HEIGHT ELONGATED COMPLETE TOILET. VITREOUS CHINA, MEETS DEFINITION FOR HET (HIGH EFFICIENCY TOILET), HIGH EFFICIENCY 1.28 GPF, MEETS EPA WATERSENSE CRITERIA, 16-1/2" RIM HEIGHT FOR ADA ACCESSIBLE APPLICATION, ELONGATED SIPHON ACTION JETTED BOWL, FULLY-GLAZED 2-1/8" TRAPWAY WITH 2" BALL PASS, 9" X 8" WATER SURFACE AREA, 12" ROUGH-IN, 3" FLUSH VALVE, COLOR-MATCHED SLOW-CLOSE TOILET SEAT AND COVER.
2. **LAV-1A, BARRIER FREE:** EQUAL TO AMERICAN STANDARD #0355.012 LUCERNE WALL-HUNG LAVATORY. VITREOUS CHINA, FRONT OVERFLOW, D-SHAPED BOWL, SELF-DRAINING DECK AREA WITH CONTOURED BACK AND SIDE SPLASH SHIELDS, FAUCET LEDGE. FURNISH WITH CONCEALED ARM CARRIER, ASSE 1070 MIXING VALVE, UNDER LAVATORY SUPPLY AND WASTE PIPING COVERS. FAUCET: EQUAL TO AMERICAN STANDARD #6114114.002, CAST BRASS CENTERSET BODY WITH METAL LEVER HANDLE, WASHERLESS CERAMIC DISC VALVE CARTRIDGE ASSURES DRIP-FREE PERFORMANCE, 1/2" MALE THREADED INLET SHANKS WITH QUICK SPIN NUTS, ADJUSTABLE HOT LIMIT SAFETY STOP HELPS PREVENT ACCIDENTAL SCALDING, 0.35 GPM PRESSURE-COMPENSATING VR MULTI-LAMINAR SPRAY, CHROME PLATED BRASS GRID DRAIN AND HOLE, PRESSURE COMPENSATING OUTLET: PROVIDES A CONSTANT WATER FLOW THROUGHOUT THE PRESSURE RANGE, METAL LEVER HANDLE, 1/2" MALE THREADED BRASS INLET SHANKS WITH QUICK SPIN NUTS.

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YUCCA VALLEY, CA 92284

REGISTERED PROFESSIONAL ENGINEER THOMAS L. FREY M 35690 Aug 23, 2022 MECHANICAL STATE OF CALIFORNIA

This item has been electronically signed and sealed by Thomas Loren Frey using a Digital Signature and date. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

ISSUANCE
BIDS AND PERMITS
08/22/2022

REVISIONS
NO. DATE DESCRIPTION

FILE NUMBER	92260017
PROJECT MANAGER	JD
PROFESSIONAL	TLF
DRAWN BY	TDK
CHECKED BY	TDK

GENERAL PLUMBING INFORMATION
P001

FAN SCHEDULE

MARK	BASED ON	MODEL	CFM	ESP	SONE	FAN RPM	BACKDRAFT DAMPER		ELECTRICAL					REMARKS
							REQUIRED	TYPE	WATTS	V	PH	HZ	FLA	
EF-1	Greenheck	SP-B110	75	0.50	2	804	Yes	GRAVITY	80	120	1	60	1.15	FURNISH WITH SPEED CONTROLLER FOR BALANCING; CONTROL FROM ROOM LIGHT SWITCH

SPLIT SYSTEM HEAT PUMP UNIT (INDOOR UNIT)

SPLIT SYSTEM AIR CONDITIONING UNIT SCHEDULE		SPLIT SYSTEM AIR CONDITIONING UNIT SCHEDULE					
					ELECTRICAL		
MARK	Manufacturer	MODEL	CFM	NOMINAL COOLING CAP (BTUH)	VOLTAGE	PHASE	PAIRED UNIT
AHU-1	Mitsubishi Electric	MSZ-GL09NA-U1	406	9000.0	208 V	1	CCU-1

SPLIT SYSTEM HEAT PUMP UNIT (OUTDOOR UNIT)

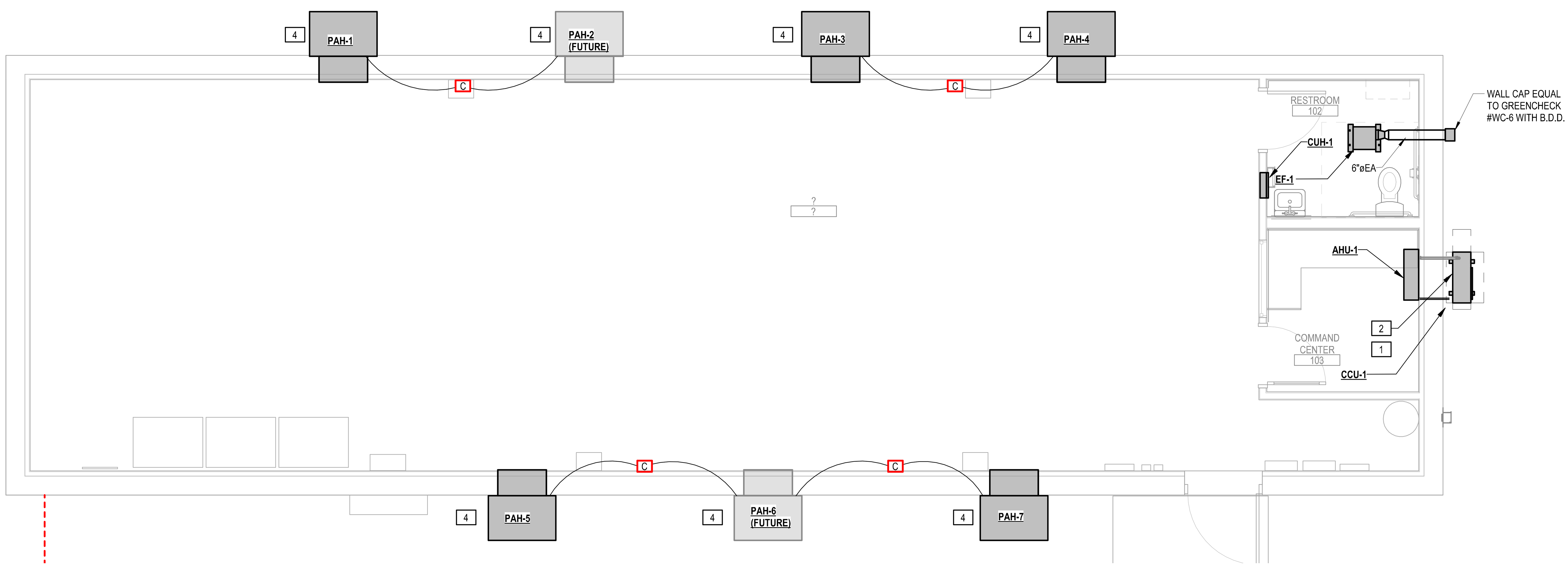
SPLIT SYSTEM AIR CONDITIONING UNIT SCHEDULE		SPLIT SYSTEM AIR CONDITIONING UNIT SCHEDULE				
				ELECTRICAL		
MARK	Manufacturer	MODEL	NOMINAL COOLING CAP (BTUH)	VOLTAGE	PHASE	PAIRED UNIT
CCU-1	Mitsubishi Electric	MUZ-GL09NA-U8	9000.0	208 V	1	AHU-1

PACKAGE AIR CONDITIONING UNIT

MARK	Manufacturer	MODEL	CFM	NOMINAL COOLING CAP (BTUH)	ELECTRICAL		NOTES
					VOLTAGE	PHASE	
PAH-1	MARVAIR	MGA1072AA050C	1925	72000.0	208 V	1	FURNISHED WITH AIRSIDE ECONOMIZER
PAH-2 (FUTURE)	MARVAIR	MGA1072AA050C	1925	72000.0	208 V	1	FURNISHED WITH AIRSIDE ECONOMIZER
PAH-3	MARVAIR	MGA1072AA050C	1925	72000.0	208 V	1	FURNISHED WITH AIRSIDE ECONOMIZER
PAH-4	MARVAIR	MGA1072AA050C	1925	72000.0	208 V	1	FURNISHED WITH AIRSIDE ECONOMIZER
PAH-5	MARVAIR	MGA1072AA050C	1925	72000.0	208 V	1	FURNISHED WITH AIRSIDE ECONOMIZER
PAH-6 (FUTURE)	MARVAIR	MGA1072AA050C	1925	72000.0	208 V	1	FURNISHED WITH AIRSIDE ECONOMIZER
PAH-7	MARVAIR	MGA1072AA050C	1925	72000.0	208 V	1	FURNISHED WITH AIRSIDE ECONOMIZER

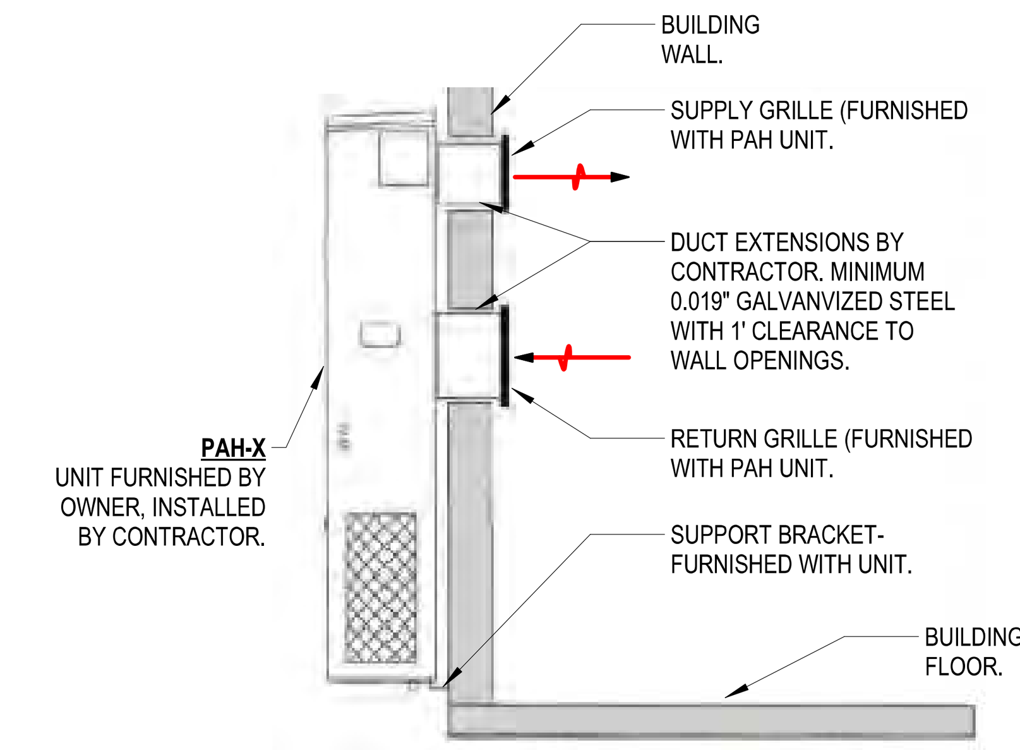
ELECTRIC UNIT HEATER SCHEDULE

MARK	MANUFACTURER	UNIT DIMENSIONS		KW	ELECTRICAL			REMARKS
		W	H		AMPS	V	PH	
CUH-1	QMARK #AWH3150F	15 3/4"	19 5/16"	1.5	12.5 A	120 V	1	FURNISHED WITH INTEGRAL THERMOSTAT AND 1" SEMI-RECESSED FRAME.



FIRST FLOOR HVAC PLAN

1/4" = 1'-0"



A1 PAH DETAIL

NOT TO SCALE

ABBREVIATIONS - HVAC

AC	ARCHITECTURAL CONTRACTOR
ACU	AIR CONDITIONING UNIT
ADA	AMERICANS WITH DISABILITIES ACT
AHU	AIR HANDLING UNIT
BDD	BACKDRAFT DAMPER
CAP	CAPACITY
CC	COOLING COIL
CD	CONDENSATE DRAIN
CF	CUBIC FOOT
CFM	CUBIC FEET PER MINUTE
CH	CABINET HEATER
CLR	CLEAR, CLEARANCE
COND	CONDENSATE
CONV	CONVECTOR
COORD	COORDINATE
CU	COPPER
CV	CONTROL VALVE
DB	DRY BULB
DISC	DISCONNECT
DPR	DAMPER
EA	EXHAUST AIR
EDB	ENTERING DRY BULB
EF	EXHAUST FAN
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EXH	EXHAUST
FDS	FUSED DISCONNECT SWITCH
GEN	GENERATOR
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GV	GATE VALVE
HG	REFRIGERATION HOT GAS
HP	HORSEPOWER
INS	INSULATE, INSULATION
IR	INFRARED
KVAR	KILOVOLT-AMPERES REACTIVE
MCA	MINIMUM CIRCUIT AMPS
NF	NONFUSED
NFDS	NONFUSED DISCONNECT SWITCH
OV	OUTLET VELOCITY
PH	PHASE
S	REFRIGERATION SUCTION
V	VOLTS

MECHANICAL GENERAL NOTES

1. COMPLY WITH ALL APPLICABLE LOCAL, STATE AND/OR REGULATORY AGENCIES, CODES AND REGULATIONS FOR NEW WORK.
2. DO NOT INSTALL EQUIPMENT, PIPING OR DUCTWORK OVER ANY ELECTRICAL EQUIPMENT OR COMMUNICATION ROOMS.
3. DO NOT RUN ANY PIPING OR DUCTWORK INTO THE ELECTRICAL ROOM UNLESS DEDICATED TO SERVE THAT ROOM.
4. INSTALL MECHANICAL EQUIPMENT TO FACILITATE SERVICING, MAINTENANCE, AND REPAIR OR REPLACEMENT OF EQUIPMENT COMPONENTS. AS MUCH AS PRACTICAL, CONNECT EQUIPMENT FOR EASE OF DISCONNECTING, WITH A MINIMUM OF INTERFERENCE WITH OTHER INSTALLATIONS.
5. LOCATE THERMOSTAT/TEMPERATURE SENSORS/CONTROLLERS 48" ABOVE FINISHED FLOOR OR AS NOTED ON THE PLANS.
6. WORK IDENTIFIED WITH MECHANICAL AND ELECTRICAL NOTES AND KEY NOTES SHALL BE PERFORMED BY QUALIFIED MECHANICAL AND ELECTRICAL CONTRACTORS RESPECTIVELY UNDER DIRECTION OF THE CONSTRUCTION MANAGER. COORDINATE WITH OWNER'S REPRESENTATIVE OR CONSTRUCTION MANAGER.
7. VERIFY ALL CONDITIONS IN FIELD BEFORE START OF CONSTRUCTION. NOTIFY ARCHITECT/ENGINEER OF DISCREPANCIES BETWEEN DRAWINGS AND ACTUAL FIELD CONDITIONS.
8. COORDINATE WORK WITH OTHER TRADES AND WITH THE CONSTRUCTION MANAGER.
9. COORDINATE ANY REQUIRED SHUTDOWN OF SERVICES OR EQUIPMENT WITH OWNER'S REPRESENTATIVE OR CONSTRUCTION MANAGER, MINIMIZE INTERRUPTION OF EXISTING SERVICES.
10. PROVIDE ALL MISCELLANEOUS STEEL AND ITEMS REQUIRED FOR THE PROPER INSTALLATION OF ALL PIPE, SHEET METAL AND EQUIPMENT.
11. COORDINATE FLOOR, WALL & ROOF PENETRATIONS ETC. WITH ARCHITECTURAL TRADES.
12. FIRESTOP SHALL BE PROVIDED IN HOLES AND PENETRATIONS IN RATED ASSEMBLIES.

SHEETMETAL NOTES

1. THE INSTALLATION OF ALL DUCTWORK SHALL BE CLOSELY COORDINATED WITH NEW PLUMBING, ELECTRICAL, AND STRUCTURAL CONDITIONS. NOT ALL REQUIRED OFFSETS AND FITTINGS ARE INDICATED ON DRAWINGS, BUT SHALL BE PROVIDED. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR CLEARANCES. ALTERNATE DUCT ROUTING SHALL BE APPROVED BY ARCHITECT/ENGINEER BEFORE PROCEEDING IN ORDER TO ENSURE THAT THE AVAILABLE STATIC PRESSURE REMAINS ADEQUATE. DUCTWORK LOCATION SHALL TAKE PRECEDENCE OVER HVAC AND FIRE PROTECTION PIPING AND ELECTRICAL CONDUIT AND CABLE TRAY.
2. REFER TO DUCT TAKEOFF DETAILS. SPIN-IN TYPE WITH SCOOPS SHALL NOT BE ACCEPTED. A MINIMUM OF 2 FEET SHALL BE PROVIDED BETWEEN RUNOUT TAKEOFFS FROM TRUNK DUCTS.
3. THERMOSTAT AND SENSORS LOCATIONS WITHIN DUCTWORK SHALL BE VERIFIED WITH ARCHITECT/ ENGINEER BEFORE ROUGH -IN.
4. RUNOUT BALANCING DAMPERS SHALL BE MOUNTED AS CLOSE TO MAIN DUCT AS POSSIBLE.
5. DUCTWORK LAYOUT HAS BEEN DESIGNED TO ABSORB NOISE. ALL FITTINGS SHALL BE PROVIDED AS INDICATED.
6. TERMINAL UNITS SHALL BE MOUNTED TO NOT IMPAIR ACCESS TO FILTERS, COILS AND CONTROLS.
7. WATERTIGHT CONCRETE CURBS SHALL BE PROVIDED AROUND ELEVATED FLOOR SLAB PENETRATIONS.
8. DUCTWORK AND ASSOCIATED COMPONENTS SHALL CLEAR DOORS AND WINDOWS.
9. UNLESS OTHERWISE NOTED, ALL DUCTWORK ABOVE CEILING OR EXPOSED IS OVERHEAD AND AS HIGH AS POSSIBLE TO THE UNDERSIDE OF THE STRUCTURE, WITH SPACE FOR INSULATION WHERE REQUIRED.
10. LOCATE MECHANICAL EQUIPMENT SUCH THAT THERE IS UNOBSTRUCTED ACCESS TO UNIT ACCESS PANELS, CONTROLS AND VALVING.
11. PROVIDE FLEXIBLE CONNECTIONS IN ALL DUCTWORK SYSTEMS CONNECTED TO MECHANICAL EQUIPMENT THAT REQUIRE VIBRATION ISOLATION. FLEXIBLE CONNECTIONS SHALL BE PROVIDED AT THE POINT OF CONNECTION TO THE EQUIPMENT UNLESS OTHERWISE NOTED.
12. DUCTWORK SIZES ARE INSIDE CLEAR DIMENSIONS.
13. ALL ELBOWS IN DUCTWORK SHALL BE RADIUS ELBOWS UNLESS OTHERWISE NOTED. RADIUS ELBOWS SHALL HAVE CENTERLINE RADIUS OF CURVATURE 1.5 TIMES THE DUCT DIAMETER OR WIDTH IN THE PLANE OF TURN. WHERE SQUARE ELBOWS ARE SHOWN, INSTALL TURNING VANES.
14. DUCTS CONNECTED TO EQUIPMENT SHALL EQUAL EQUIPMENT CONNECTION SIZE UNLESS NOTED OTHERWISE.
15. MAXIMUM LENGTH ON FLEXIBLE DUCT SHALL BE 5'-0", UNLESS OTHERWISE NOTED ON DETAILS OR SPECIFICATION.
16. REFER TO ARCH REFLECTED CEILING PLANS FOR EXACT DIFFUSER LOCATIONS IN AREAS WITH A CEILING.

MECHANICAL SYMBOLS

(symbol)	EXHAUST DUCT UP
(symbol)	EXHAUST DUCT DOWN
###-#	MECHANICAL EQUIPMENT (EXAMPLE ACV-##) SEE SCHEDULE FOR ADDITIONAL
CUH-#	CABINET UNIT HEATER, TYPE 'CUH-#'

? HVAC KEYNOTES

1. MOUNT OUTDOOR AIR COOLED CONDENSING UNIT 36" ABOVE GRADE ON WALL BRACKETS (81 POUND WEIGHT). INSTALL PER THE MANUFACTURER'S INSTRUCTIONS, MAINTAIN ALL REQUIRED UNIT CLEARANCES.
2. SIZE AND INSTALL REFRIGERANT PIPING BETWEEN INDOOR EVAPORATOR (AHU-1) AND OUTDOOR AIR COOLED CONDENSING UNIT (CCU-1) PER THE MANUFACTURER'S INSTRUCTIONS; INSULATE PER THE SPECIFICATIONS.
3. MOUNT TOP OF AHU-1 6" BELOW THE FINISH CEILING HEIGHT. FURNISH AND INSTALL A 1" TRAPPED COPPER CONDENSATE LINE IN THE EXTERIOR WALL AND DISCHARGE AT THE BUILDING EXTERIOR 6" ABOVE FINISH GRADE.
4. PACKAGE THROUGH THE WALL AIR CONDITIONING UNIT FURNISHED BY THE OWNER INSTALLED BY THE CONTRACTOR. UNITS ARE PROVIDED WITH FACTORY INSTALLED ECONOMIZER CONTROLS (FIELD INSTALLED THERMOSTAT), SUPPLY AND RETURN GRILLES. INTALL UNIT PER THE MANUFACTURER'S INSTRUCTIONS. FURNISH AND INSTALL A 1" TRAPPED COPPER CONDENSATE LINE AND DISCHARGE AT THE BUILDING EXTERIOR 6" ABOVE FINISH GRADE.

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LAKESHORE CONSTRUCTION GROUP, LLC

CHARTER HEADEND YUCCA VALLEY

6720 LA CONTENTA RD
YUCCA VALLEY, CA 92284

REGISTERED PROFESSIONAL ENGINEER THOMAS L. FREY M 35690 Aug 23, 2022 MECHANICAL STATE OF CALIFORNIA

ISSUANCE
BIDS AND PERMITS
08/22/2022

REVISIONS
NO. DATE DESCRIPTION

FILE NUMBER	92260017
PROJECT MANAGER	JD
PROFESSIONAL	TLF
DRAWN BY	TDK
CHECKED BY	TDK

GENERAL MECHANICAL INFORMATION

M001

STATE OF CALIFORNIA

Mechanical Systems

NRCC-MCH-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-MCH-E
This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4, or §141.0(b)2 for alterations.			
Project Name:	Charter Headend Yucca Valley	**Report Page:**	(Page 1 of 13)
Project Address:	6720 La Contenta Rd.	**Date Prepared:**	4/6/2022

A. GENERAL INFORMATION

01	Project Location (city)	Yucca Valley	04	Total Conditioned Floor Area	1390
02	Climate Zone	14	05	Total Unconditioned Floor Area	0
03	Occupancy Types Within Project:		06	# of Stories (Habitable Above Grade)	1
☐	Office (B)	☐ Retail (M)	☐	Non-refrigerated Warehouse (S)	
☐	Hotel/ Motel Guest Rooms (R-1)	☐ School (E)	☐	Healthcare Facility (I)	
☐	High-Rise Residential (R-2/R-3)	☐ Relocatable Class Bldg (E)	☒	Other (write in)	See Table J

B. PROJECT SCOPE

This table Includes mechanical systems or components that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4, or §141.0(b)2 for alterations.

01		02		03	
Air System(s)		Wet System Components		Dry System Components	
☒	Heating Air System	☐	Water Economizer	☒	Air Economizer
☒	Cooling Air System	☒	Pumps	☒	Electric Resistance Heat
Mechanical Controls		☐	System Piping	☒	Fan Systems
☒	Mechanical Controls (existing to remain, altered or new)	☐	Cooling Towers	☒	Ductwork (existing to remain, altered or new)
		☐	Chillers	☒	Ventilation
		☒	Boilers	☐	Zonal Systems/ Terminal Boxes

STATE OF CALIFORNIA

Mechanical Systems

NRCC-MCH-E — CALIFORNIA ENERGY COMMISSION

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C. COMPLIANCE RESULTS

Table C will indicate if the project data input into the compliance document is compliant with mechanical requirements. This table is not editable by the user. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D., or the table indicated as not compliant for guidance.

01		02		03		04		05		06		07		08	09
System Summary §110.1, §110.2, §140.4	AND	Pumps §140.4(k)	AND	Fans/ Economizers §140.4(c), §140.4(e)	AND	System Controls §110.2, §120.2, §140.4(f)	AND	Ventilation §120.1	AND	Terminal Box Controls §140.4(d)	AND	Distribution §120.3, §140.4(l)	AND	Cooling Towers §110.2(e)2	Compliance Results
(See Table F)		(See Table G)		(See Table H)		(See Table I)		(See Table J)		(See Table K)		(See Table L)		(See Table M)	
No	AND	Yes	AND	Yes	AND	Yes	AND	Yes	AND		AND	Yes	AND		DOES NOT COMPLY
Mandatory Measures Compliance (See Table Q for Details)										COMPLIES					

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

Registration Number: Registration Date/Time: Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Schema Version: rev 20190401 Report Generated: 2022-04-06 08:47:50

STATE OF CALIFORNIA

Mechanical Systems

NRCC-MCH-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-MCH-E
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F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

This table is used to demonstrate compliance for mechanical equipment with mandatory requirements found in §110.1 and §110.2(a) and prescriptive requirements found in §140.4(a), §140.4(b) and §140.4(k) or §141.0(b)2 for alterations.

Dry System Equipment Sizing (includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters)

01	02	03	04	05	06	07	08	09	10	11
				Equipment Sizing per Mechanical Schedule (kBtu/h) §140.4 (a&b)						
				Heating Output[2,3]			Cooling Output[2,3]		Load Calculations[3,4]	
Name or Item Tag	Equipment Category per Tables 110.2	Equipment Type per Tables 110.2 & Title 20	Smallest Size Available[1] §140.4(a)	Per Design (kBtu/h)	Rated (kBtu/h)	Supp. Heating Output (kBtu/h)	Sensible Per Design (kBtu/h)	Rated (kBtu/h)	Total Heating Load (kBtu/h)	Total Sensible Cooling Load (kBtu/h)
Marv Air 6 ton AC	Unitary Heat Pumps	Air-cooled, split (3 phase)	NA: Load Controls	57	16	0	392.63	43.4	-3.07	14.79
CCU-1	Unitary Heat Pumps	Air-cooled, split (3 phase)	NA: Load Controls	8.45	16.6	0	10.89	8.4	-0.44	1.02
Heat only restroom	Unitary AC/ Condensers	AC, air cooled, split (3 phase)	NA: Load Controls	0	0	0	0	0	0	0.41

[1]*FOOTNOTES: Equipment shall be the smallest size, within the available options of the desired equipment line, necessary to meet the design heating and cooling loads of the building per §140.4(a). Healthcare facilities are excepted.*

[2]*It is common practice to show rated output capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables.*

[3] *If equipment is heating only, leave cooling output and load blank. If equipment is cooling only, leave heating output and load blank.*

[4] *Authority Having Jurisdiction may ask for load calculations used for compliance per §140.4(b).*

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STATE OF CALIFORNIA

Mechanical Systems

NRCC-MCH-E — CALIFORNIA ENERGY COMMISSION

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F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP))

01	02	03	04	05	06	07	08	09
		Heating Mode				Cooling Mode		
Name or Item Tag	Size Category (Btu/h)	Rating Condition (°F)	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency
Marv Air 6 ton AC	<65,000		HSPF	8.2	11	SEER	13.0	13
CCU-1	<65,000		HSPF	8.2	11	SEER	13.0	20
Heat only restroom	<65,000					SEER	13.0	13

Boiler Efficiency and Controls

01	02	03	04	05	06	07	08	09
							Boiler Controls per §140.4(k)	
Name or Item Tag	Equipment Type[1]	Qty	Rated Input Capacity (Btu/h)[2,3]	Rated Efficiency	Minimum Efficiency Required per §110.2	Efficiency Unit	Isolation Valve	Temperature Reset
no central heating plant	Hot Water, Gas-Fired	1	<300,000	0.82	0.82	AFUE	NA: only 1 boiler in plant	NA: <=500,00 Btu/h

[1]*FOOTNOTES: Use NRCC-PLB to document compliance with domestic water heating equipment.*

[2]*Maximum capacity- minimum and maximum ratings as provided for and allowed by the unit's controls*

[3] *Includes oil-fired (residual)*

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F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Electric Resistance Heating

01	02	03	04
Name or Item Tag	Equipment Description	Output Capacity (kW)	Applicable Exception to §140.4(g) Allowing Electric Resistance Heating
Heat only restroom	Other	0	Exception1: Supplement to a heating system in which at least 60% of the annual energy requirement is supplied by site-solar or recovered energy.

G. PUMPS

This table is used to demonstrate compliance with Prescriptive hydronic system requirements found in §140.4(k) applicable to pumps < 5hp.

01	02	03	04	05	06	07	08
				Controls per §140.4(k)			
Name or Item Tag	Equipment Type	Qty	HP	Variable Flow	Hydronic Heat Pump Isolation	VSD on Pumps > 5HP	Differential Pressure Sensor

H. FAN SYSTEMS & AIR ECONOMIZERS

This table is used to demonstrate compliance with prescriptive requirements found in §140.4(c), §140.4(e) and §140.4(m) for fan systems. Fan systems serving only process loads are exempt from these requirements and do not need to be included in Table H.

System Name:	Marv Air 6 ton AC	**Economizer:**[1]	Differential Enthalpy	**Economizer Controls:**	Designed per §140.4(e) and (m)	**System Fan Type:**	Constant Volume
01	02	03	04	05	06	07	08
						Fan Power Pressure Drop Adjustment - Table 140.4-B	
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit[2]	Design HP	Device	Design Airflow through Device (CFM)
SF	Supply	7	30800	BHP	0.1		
Total System Design Supply Airflow (CFM):			30800	Total System Design (B)HP:	0.7	**Maximum System Fan Power (B)HP:**	4.14

Registration Number: Registration Date/Time: Registration Provider: Energysoft
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H. FAN SYSTEMS & AIR ECONOMIZERS

System Name:	CCU-1	**Economizer:**[1]	NA: <=54 kBtu/h cooling	**Economizer Controls:**	Designed per §140.4(e) and (m)	**System Fan Type:**	Constant Volume
01	02	03	04	05	06	07	08
						Fan Power Pressure Drop Adjustment - Table 140.4-B	
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit[2]	Design HP	Device	Design Airflow through Device (CFM)
SF	Supply	1	400	BHP	0.1		
Total System Design Supply Airflow (CFM):			400	Total System Design (B)HP:	0.1	**Maximum System Fan Power (B)HP:**	0.38
System Name:	Heat only restroom	**Economizer:**[1]	NA: <=54 kBtu/h cooling	**Economizer Controls:**	Designed per §140.4(e) and (m)	**System Fan Type:**	Constant Volume
01	02	03	04	05	06	07	08
						Fan Power Pressure Drop Adjustment - Table 140.4-B	
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit[2]	Design HP	Device	Design Airflow through Device (CFM)
SF	Supply	1	0	BHP	0		
Total System Design Supply Airflow (CFM):			0	Total System Design (B)HP:	0	**Maximum System Fan Power (B)HP:**	0

[1] *FOOTNOTES: Computer room economizers must meet requirements of §140.9(a) and will be documented on the NRCC-PRC-E document.*

[2] *The unit used for HP must be consistent for all fans within a system.*

Registration Number: Registration Date/Time: Registration Provider: Energysoft
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Mechanical Systems

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I. SYSTEM CONTROLS

This table is used to demonstrate compliance with mandatory controls in §110.2 and §120.2 and prescriptive controls in §140.4(f) and (n) or requirements in §141.0(b)2E for altered space conditioning systems.

01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area Being Served (ft²)	Thermostats §110.2(b) & (c)[1], §120.2(a)or §141.0(b)2E	Shut-Off Controls §120.2(e)	Isolation Zone Controls §120.2(g)	Demand Response §110.12 and §120.2(b)	Supply Air Temp. Reset §140.4(f)	Window Interlocks per §140.4(n)
Marv Air 6 ton AC	Single zone	<= 25,000 ft²	NA: Eq. type per 110.2(c) exception[1]	NA: 7 day per §120.2(e)1	NA: Continuous Heat/Cool	NA: PTAC, PTHP, Rm AC, HP	NA: Single Zone	NA: No operable windows
CCU-1	Single zone	<= 25,000 ft²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
Heat only restroom	Single zone	<= 25,000 ft²	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided

[1]*FOOTNOTES: Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves are not required to have setback thermostats.*

*Notes: Controls with a * require a note in the space below explaining how compliance is achieved. EX: system 1: SA Temp Reset: Exempt because zones compliant with §140.4(d) ; EXCEPTION 1 to §140.4(f)

J. VENTILATION AND INDOOR AIR QUALITY

This table is used to demonstrate compliance with mandatory ventilation requirements in §120.1 and §120.2(e)3B for all nonresidential, high-rise residential and hotel/motel occupancies. For alterations, only ventialtion systems being altered within the scope of the permit application need to be documented in this table. In lieu of this table, the required outdoor ventilation rates and airflows may be shown on the plans or the calculations can be presented in a spreadsheet.

01	☐	Check the box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table.
02	☒	Check this box if the project included Nonresidential or Hotel/Motel spaces
	☐	Check this box if the project included new or altered high-rise residential dwelling units.
03	☐	Check the box if the project is using natural ventilation in any nonresidential or hotel/motel spaces to meet required ventilation rates per §120.1(c)2.

Nonresidential and Hotel/ Motel Ventilation Systems

Registration Number: Registration Date/Time: Registration Provider: Energysoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.1.003 Schema Version: rev 20190401 Report Generated: 2022-04-06 08:47:50

STATE OF CALIFORNIA

Mechanical Systems

NRCC-MCH-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-MCH-E
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J. VENTILATION AND INDOOR AIR QUALITY

04		05			06			07	
System Name	Marv Air 6 ton AC	System Design OA CFM Airflow[1]		0	System Design Transfer Air CFM		0	Air Filtration per §120.1(c) and §141.0(b)2 [2] / Provided per §120.1(c) (NR and Hotel/Motel))	
08	09	10	11	12	13	14	15	16	
	Mechanical Ventilation Required per §120.1(c)3 [3]					Exh. Vent per §120.1(c)4			
Space Name ot item Tag	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM	DCV or Sensor Controls per §120.1(d)3, §120.1(d)5, and §120.1(e)3 [6]	
Equipment Room	All others	1258			0	0	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				0	18	Ventilation for this System Complies?		Yes
04		05			06			07	
System Name	CCU-1	System Design OA CFM Airflow[1]		0	System Design Transfer Air CFM		0	Air Filtration per §120.1(c) and §141.0(b)2 [2] / Provided per §120.1(c) (NR and Hotel/Motel))	
08	09	10	11	12	13	14	15	16	
	Mechanical Ventilation Required per §120.1(c)3 [3]					Exh. Vent per §120.1(c)4			
Space Name ot item Tag	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM	DCV or Sensor Controls per §120.1(d)3, §120.1(d)5, and §120.1(e)3 [6]	
Command Center	All others	67			0	0	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				0	18	Ventilation for this System Complies?		Yes

Registration Number: Registration Date/Time: Registration Provider: Energysoft
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STATE OF CALIFORNIA

Mechanical Systems

NRCC-MCH-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-MCH-E
Project Name:	Charter Headend Yucca Valley	**Report Page:**	(Page 9 of 13)
Project Address:	6720 La Contenta Rd.	**Date Prepared:**	4/6/2022

J. VENTILATION AND INDOOR AIR QUALITY

04		05			06			07	
System Name	Heat only restroom	System Design OA CFM Airflow[1]		0	System Design Transfer Air CFM		0	Air Filtration per §120.1(c) and §141.0(b)2 [2] / Provided per §120.1(c) (NR and Hotel/Motel))	
08	09	10	11	12	13	14	15	16	
	Mechanical Ventilation Required per §120.1(c)3 [3]					Exh. Vent per §120.1(c)4			
Space Name ot item Tag	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM	DCV or Sensor Controls per §120.1(d)3, §120.1(d)5, and §120.1(e)3 [6]	
Restroom	Toilet, private	65			0	0	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				0	18	Ventilation for this System Complies?		Yes

[1] *FOOTNOTES: System CFM should include both mechanical and natural ventilation for the zone/system*

[2] *Air filtration requirements apply to the following three system types per §120.1(c)1A : space conditioning systems utilizing ducts to supply air to occupiable space; supply-only ventilation systems providing outside air to occupiable space; supply side of balanced ventilation systems including heat recovery and energy recovery ventilation systems providing outside air to occupiable space.*

[3] *Uniform Mechanical Code may have more stringent ventilation requirements; the most stringent code requirement takes precedence.*

[4] *See Standards Tables 120.1-A and 120.1-B.*

[5] *For lecture halls with fixed seating, the expected number of occupants shall be shall be determined in accordance with the California Building Code.*

[6] *§120.2(e)3 requires systems serving rooms that are required by §130.1(c) to have lighting occupancy sensing controls to also have occupancy sensing zone controls for ventilation. Examples of spaces which require lighting occupancy sensors include offices 250ft² or smaller, multipurpose rooms less than 1,000 ft², classrooms, conference rooms, restrooms, aisles and open areas in warehouses, library book stack aisles, corridors, stairwells, parking garages, and loading and unloading zones, unless excepted by §130.1(c).*

K. TERMINAL BOX CONTROLS

This section does not apply to this project.

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This item has been electronically signed and sealed by Thomas Loren Frey using a Digital Signature and date. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

ISSUANCE

BIDS AND PERMITS
08/22/2022

REVISIONS

NO.	DATE	DESCRIPTION

FILE NUMBER	92260017
PROJECT MANAGER	JD
PROFESSIONAL	TLF
DRAWN BY	BP
CHECKED BY	TDK

TITLE 24 DOCUMENTATION

M601