



CITY OF PORTLAND PUBLIC WORKS DEPARTMENT

Sanitation Office / Crew Space

109 District Road,
Portland, ME

CONSULTANTS

Architect:
WINTON SCOTT ARCHITECTS

5 Milk Street
Portland, ME 04101
T. 207.774.4811
wintonscott.com

Structural Engineering:
**STRUCTURAL INTEGRITY
CONSULTING ENGINEERS, INC.**

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HVAC & Plumbing Engineering:
**MECHANICAL SYSTEMS
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Yarmouth, ME 04096
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Electrical Engineering:
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Royal River Center, Unit 8B
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PLUMBING

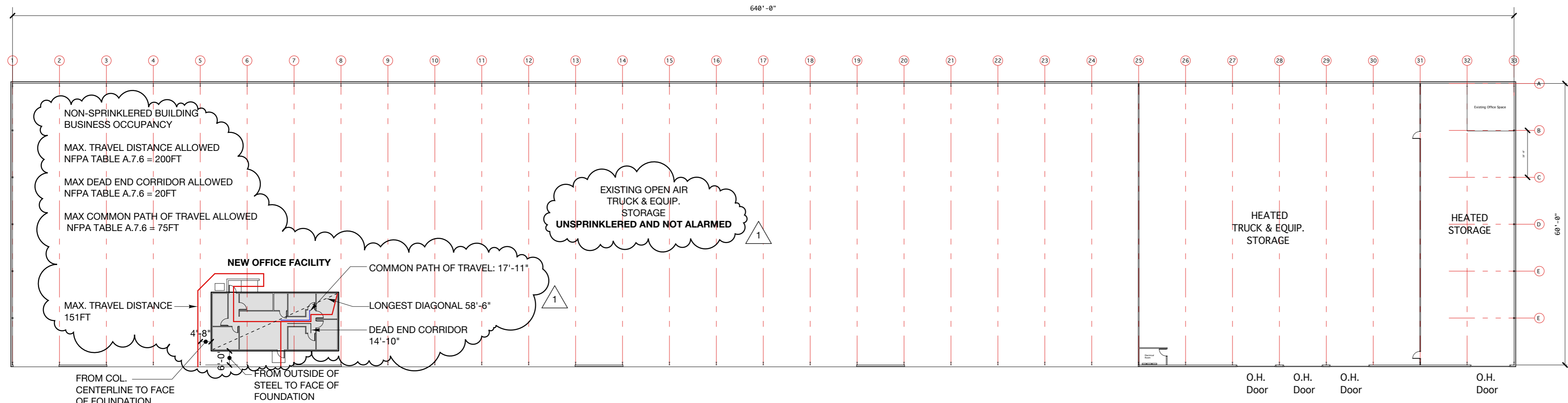
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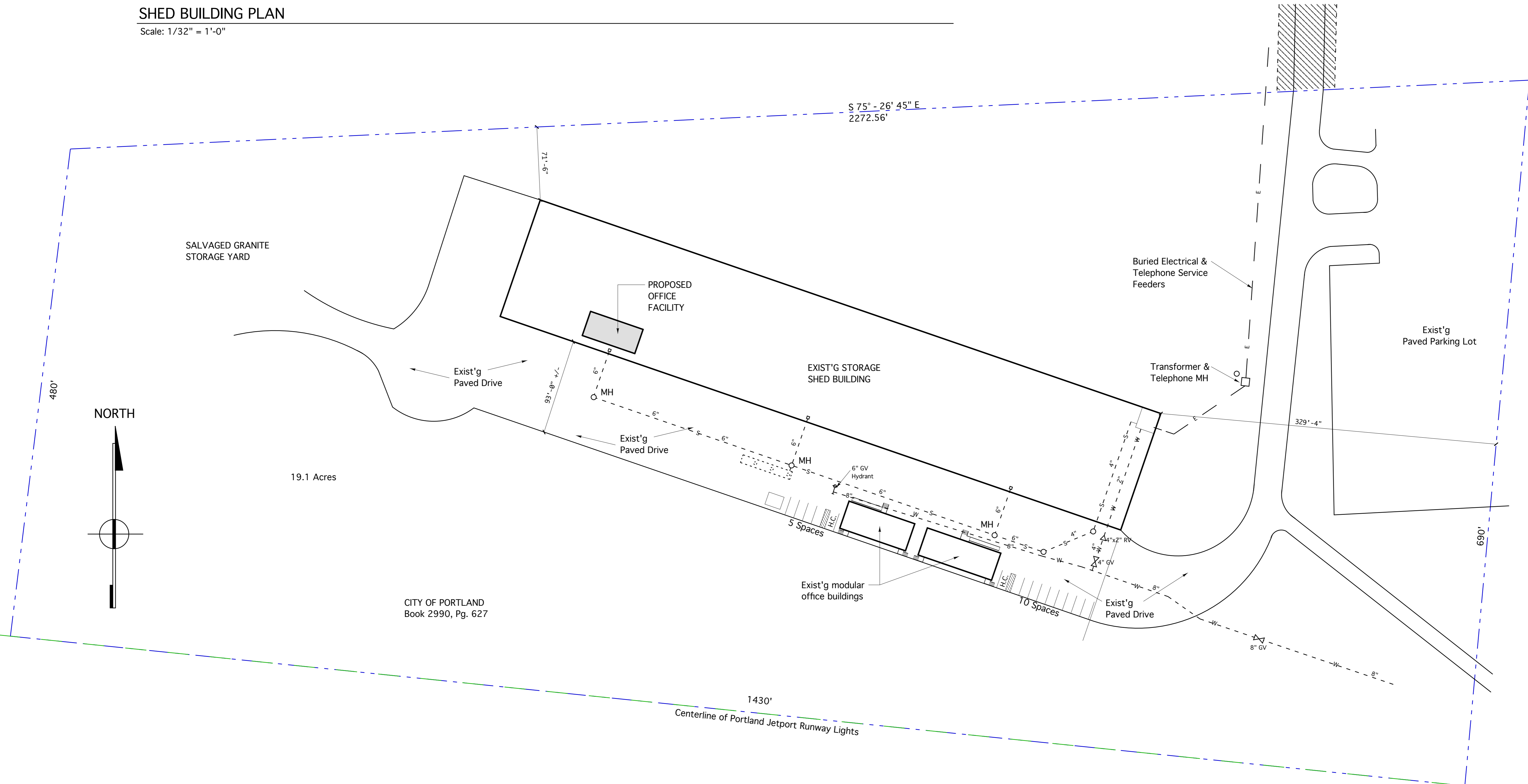
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BID SET
September 5, 2018



SHED BUILDING PLAN
Scale: 1/32" = 1'-0"



SITE PLAN
Scale: 1" = 50'



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REVISD 10-30-2018

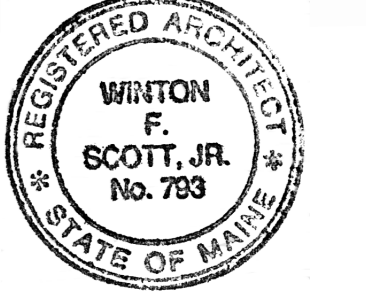
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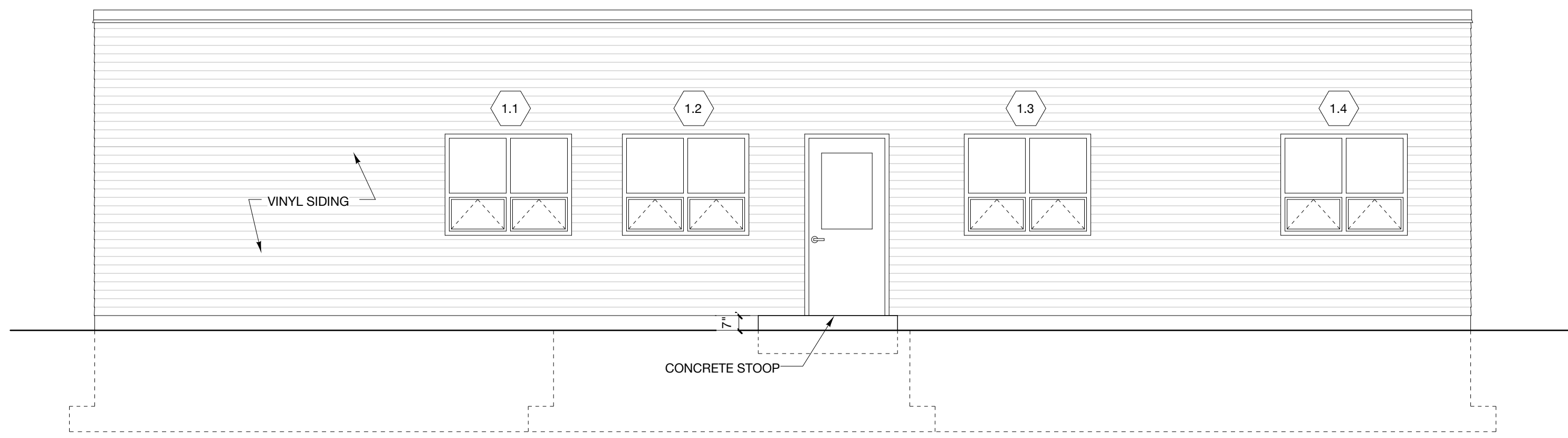


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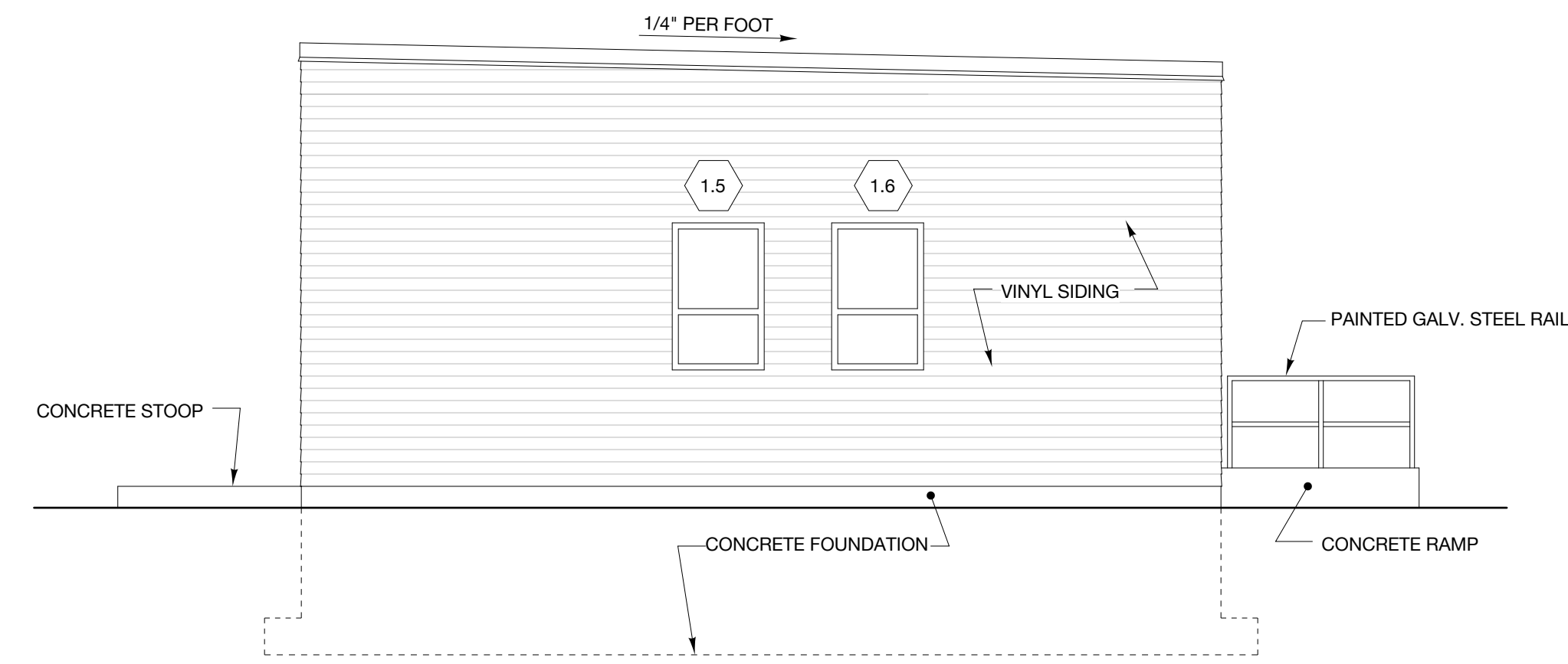
**SITE PLAN &
SHED BUILDING
PLAN**

A0.1

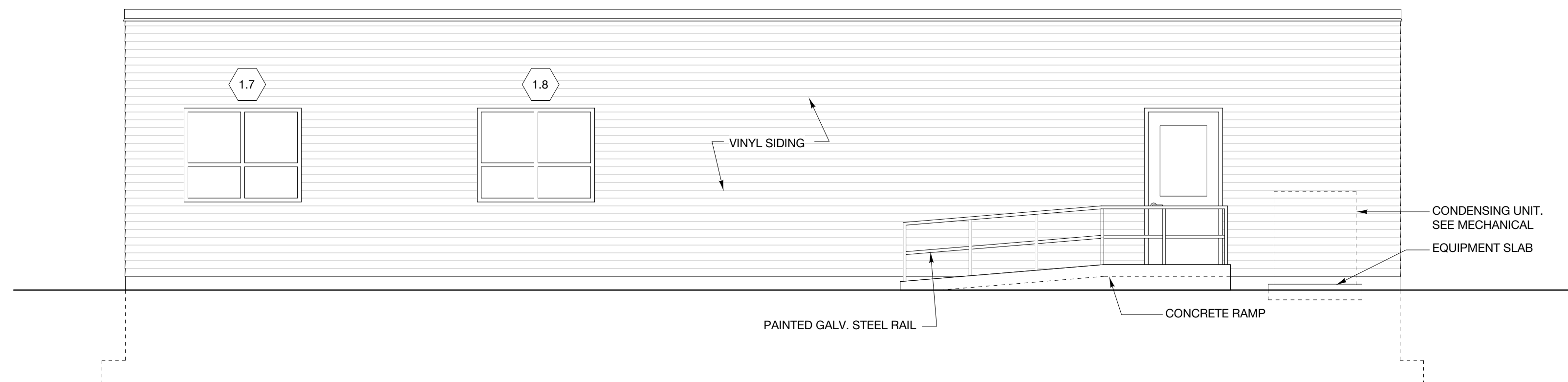
SEPTEMBER 5, 2018



1 BUILDING ELEVATION - FRONT
1/4" = 1'-0"



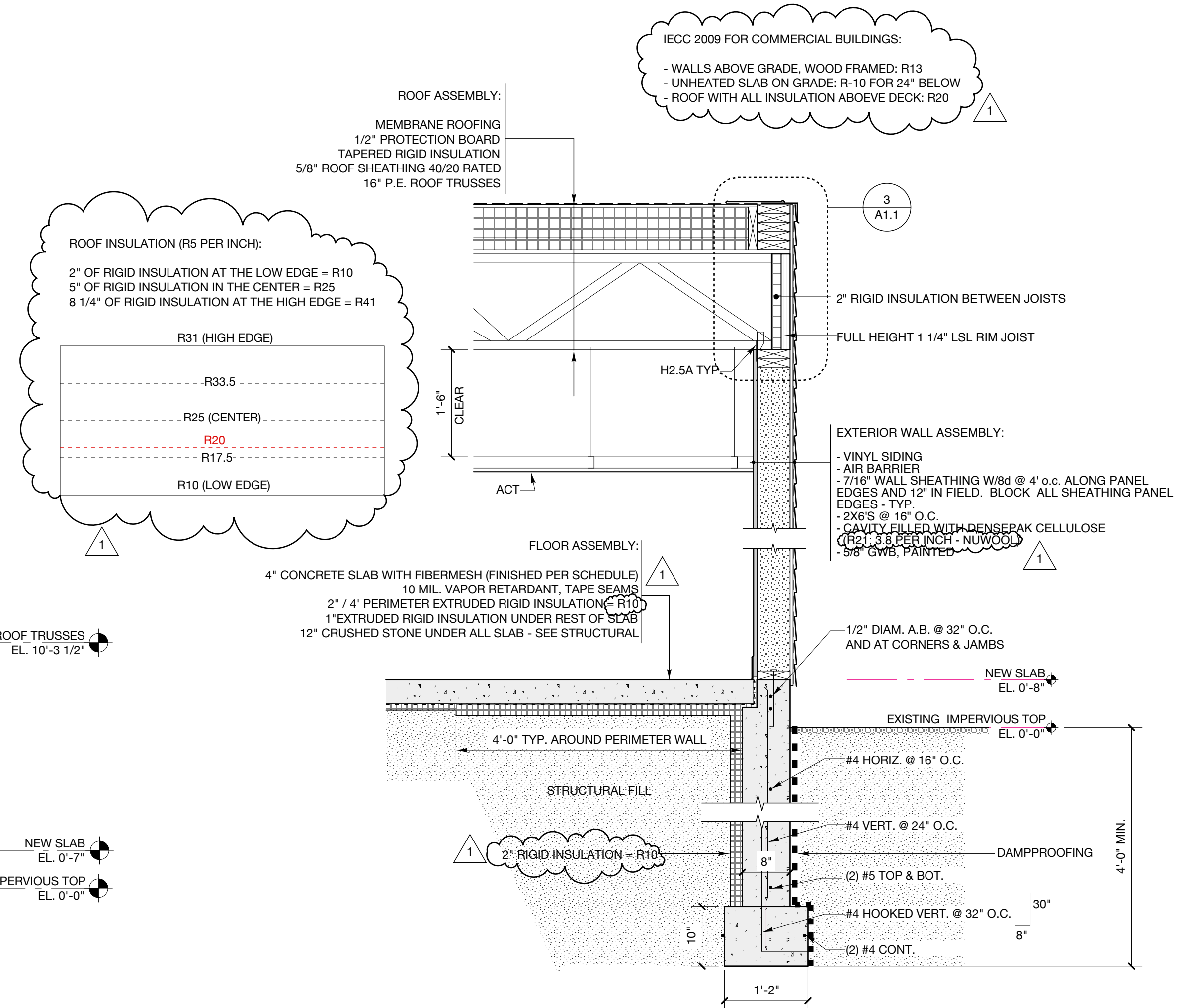
2 BUILDING ELEVATION - SIDE
1/4" = 1'-0"



3 BUILDING ELEVATION - REAR
1/4" = 1'-0"



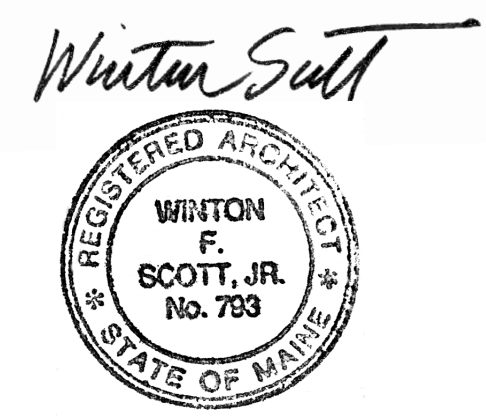
4 BUILDING SECTION
1/4" = 1'-0"



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



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BUILDING
ELEVATIONS,
BUILDING SECTION
& WALL SECTION

A2.1

FINISH SCHEDULE

Room Name	Floor	Base	Walls	Ceiling	Remarks
Conf. / Break 100	CONC-1	4" rubber	Ptd GWB	ACT-1	
Hall 101	CONC-1	4" rubber	Ptd GWB	ACT-1	
Office 102	CONC-1	4" rubber	Ptd GWB	ACT-1	
Office 103	CONC-1	4" rubber	Ptd GWB	ACT-1	
Office 104	CONC-1	4" rubber	Ptd GWB	ACT-1	
Office 105	CONC-1	4" rubber	Ptd GWB	ACT-1	
Toilet 106	CONC-1	4" rubber	Ptd GWB	ACT-1	
Toilet / Shower / Dressing 107	CONC-1	4" rubber	Ptd GWB	ACT-2	
Hall 108	CONC-1	4" rubber	Ptd GWB	ACT-1	
Locker Room 109	CONC-1	4" rubber	Ptd GWB	ACT-1	
Mechanical / Utility / Stor. 110	CONC-2	4" rubber	Ptd GWB	GWB	

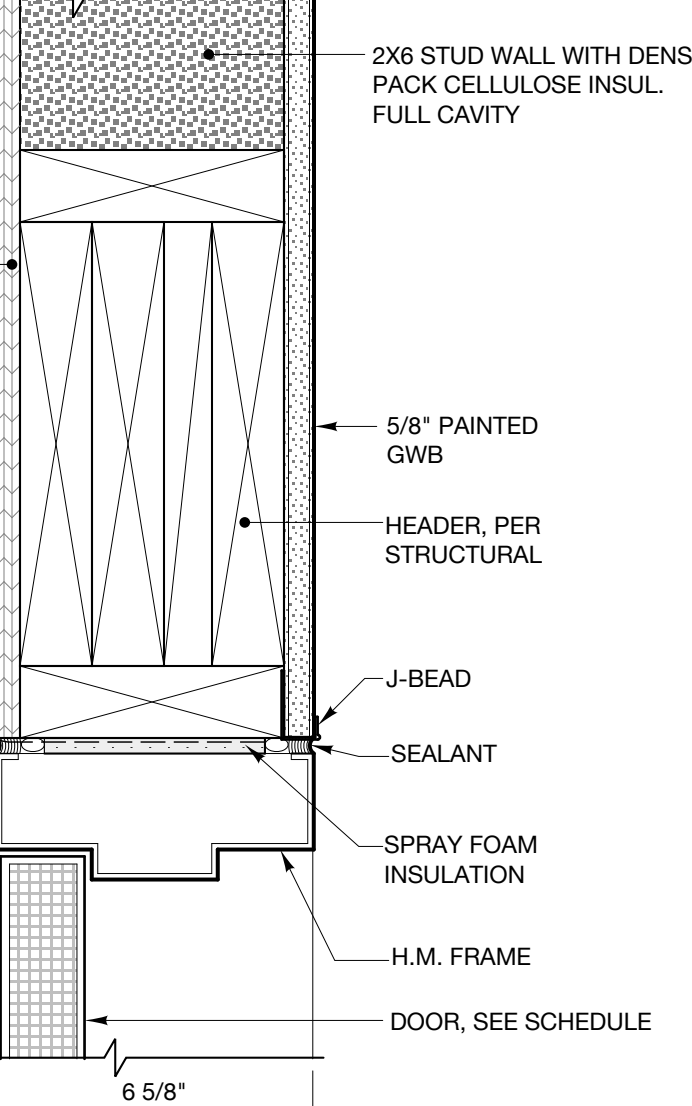
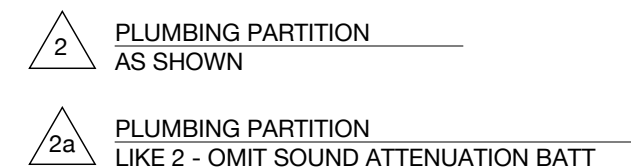
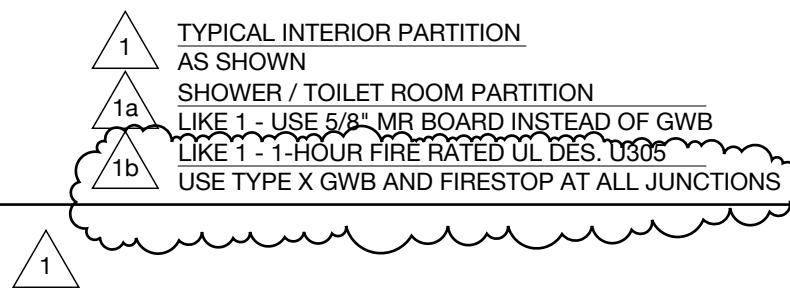
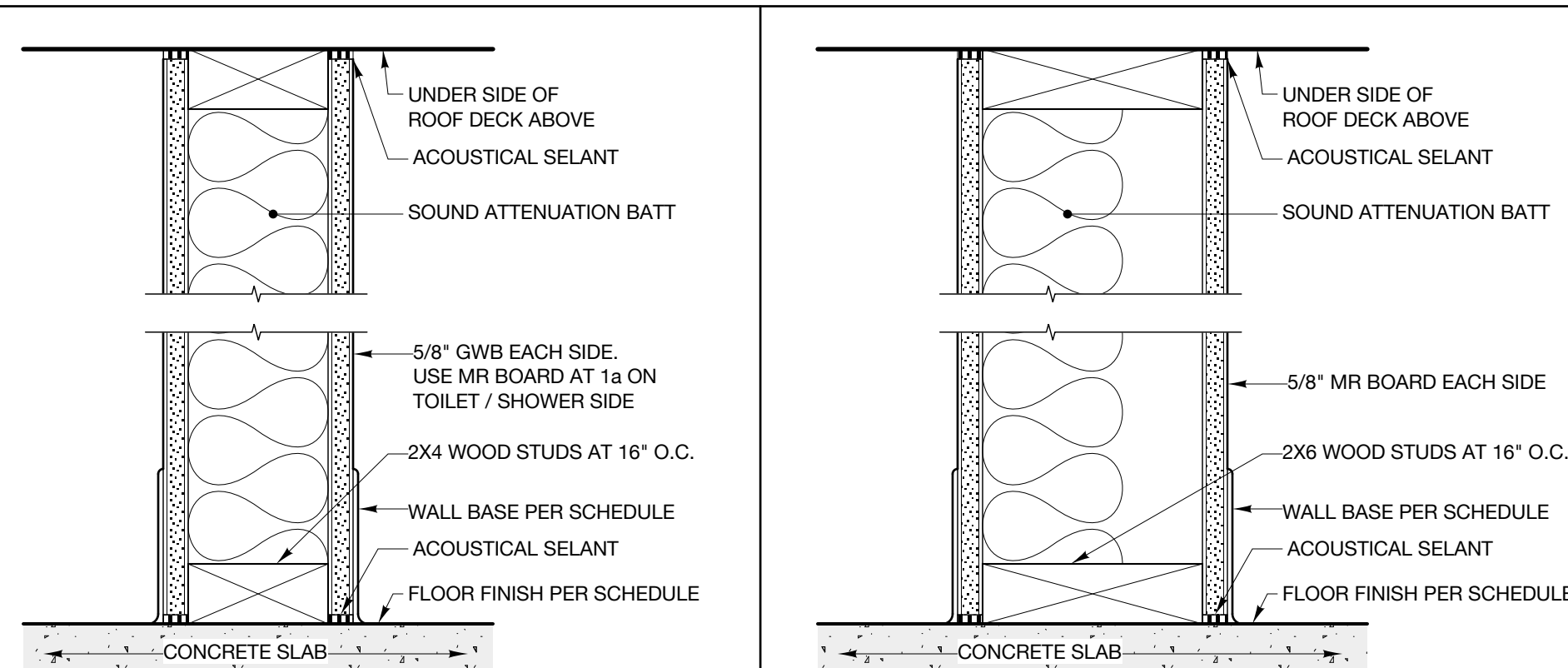
ABBREVIATIONS

CONC-1	Polished, Colored Concrete
CONC-2	Concrete
GWB	Gypsum Wall Board
ACT-1	Acoustical Ceiling Tile
ACT-2	Moisture Resistant Acoustical Ceiling Tile
PTD	Painted

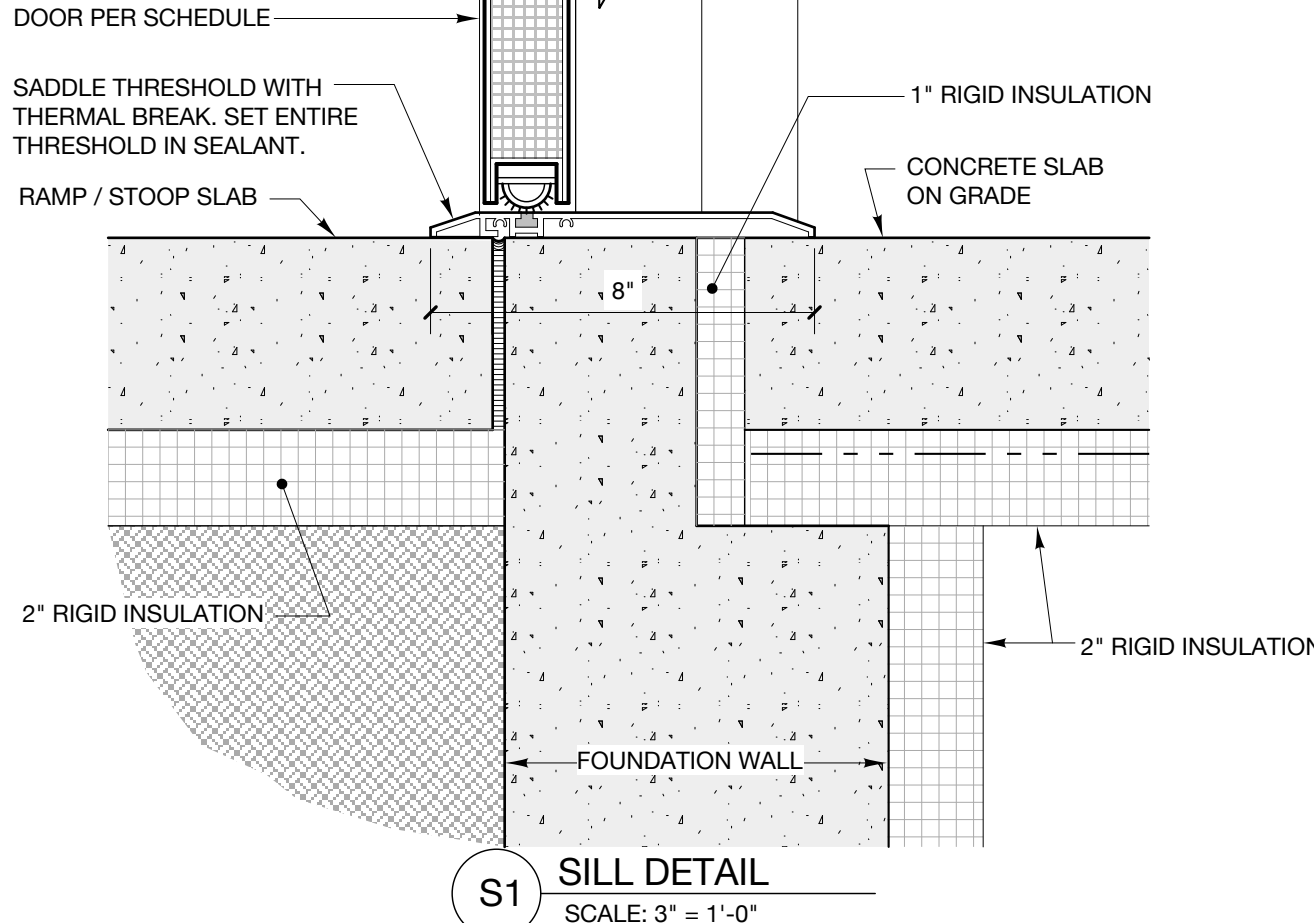
NOTES

1- CONCRETE SLAB SHALL BE GROUND SMOOTH AT ALL RESILIENT FLOORING APPLICATION

PARTITION TYPES



H1 HEAD DETAIL
SCALE: 3" = 1'-0"

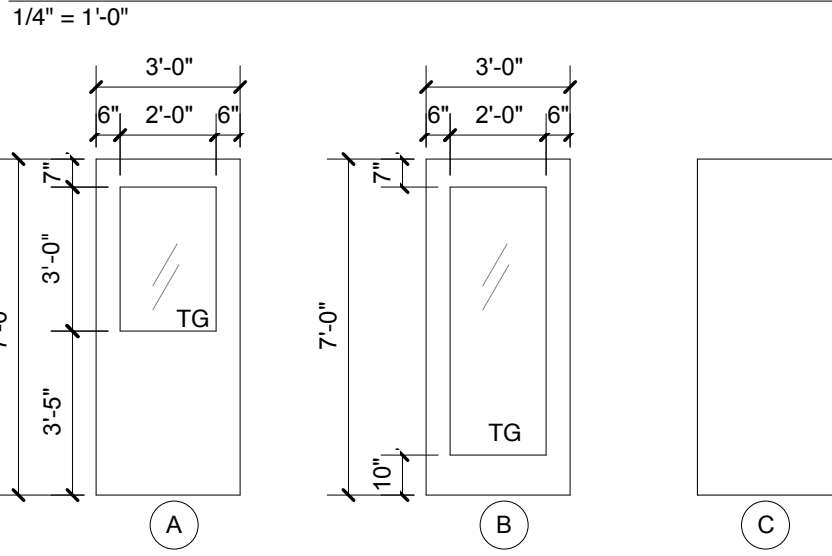


S1 SILL DETAIL
SCALE: 3" = 1'-0"

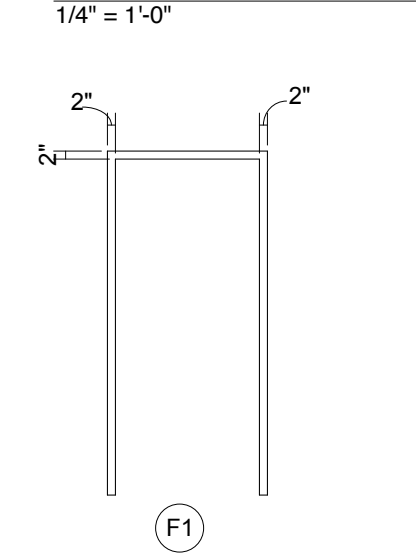
DOOR & FRAME SCHEDULE

FIRST FLOOR														
General			Door			Frame			Details					
Door No.	Size (W x H)	Thickness	Material	Finish	Type	Material	Finish	Type	Head	Jamb	Threshold	Hardware	Label	Remarks
100.1	3'-0" X 7'-0"	1 3/4"	HM	PTD	A	HM	Ptd	F1	H1	J1	S1	HW1	--	INSULATED DOOR
102.1	PR 3'-0" X 7'-0"	1 3/4"	SCWD	PTD	B	HM	Ptd	F1	H2	J2	--	HW2	--	
103.1	3'-0" X 7'-0"	1 3/4"	SCWD	PTD	B	HM	Ptd	F1	H2	J2	--	HW2	--	
104.1	3'-0" X 7'-0"	1 3/4"	SCWD	PTD	B	HM	Ptd	F1	H2	J2	--	HW2	--	
105.1	3'-0" X 7'-0"	1 3/4"	SCWD	PTD	B	HM	Ptd	F1	H2	J2	--	HW2	--	
106.1	3'-0" X 7'-0"	1 3/4"	SCWD	PTD	C	HM	Ptd	F1	H2	J2	--	HW5	--	
107.1	PR 3'-0" X 7'-0"	1 3/4"	SCWD	PTD	C	HM	Ptd	F1	H2	J2	--	HW5	--	
108.1	3'-0" X 7'-0"	1 3/4"	HM	PTD	A	HM	Ptd	F1	H1	J1	S1	HW1	--	INSULATED DOOR
109.1	3'-0" X 7'-0"	1 3/4"	SCWD	PTD	C	HM	Ptd	F1	H2	J2	--	HW4	--	
110.1	3'-0" X 7'-10"	1 3/4"	HM	PTD	C	HM	Ptd	F1	H2	J2	--	HW3	60min	

DOOR TYPES



FRAME TYPES



ABBREVIATIONS

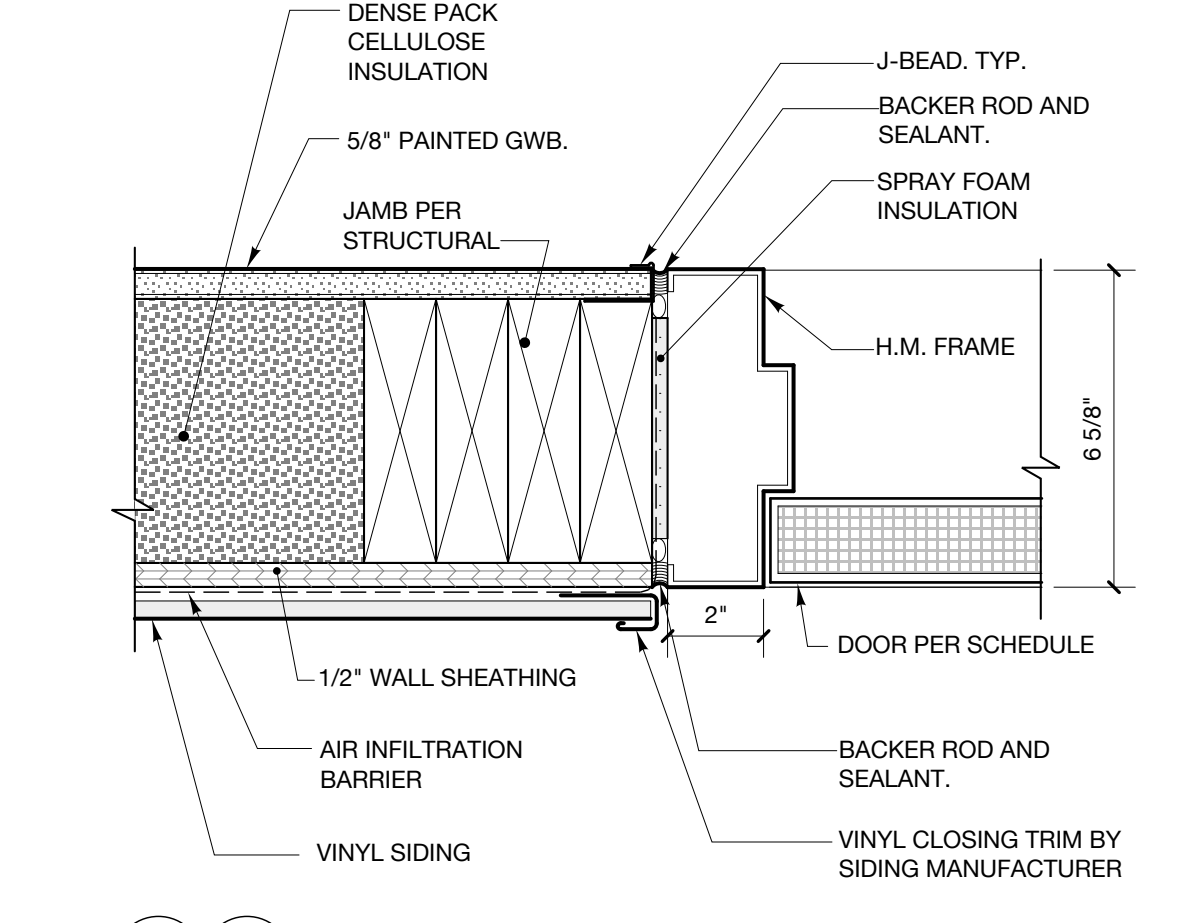
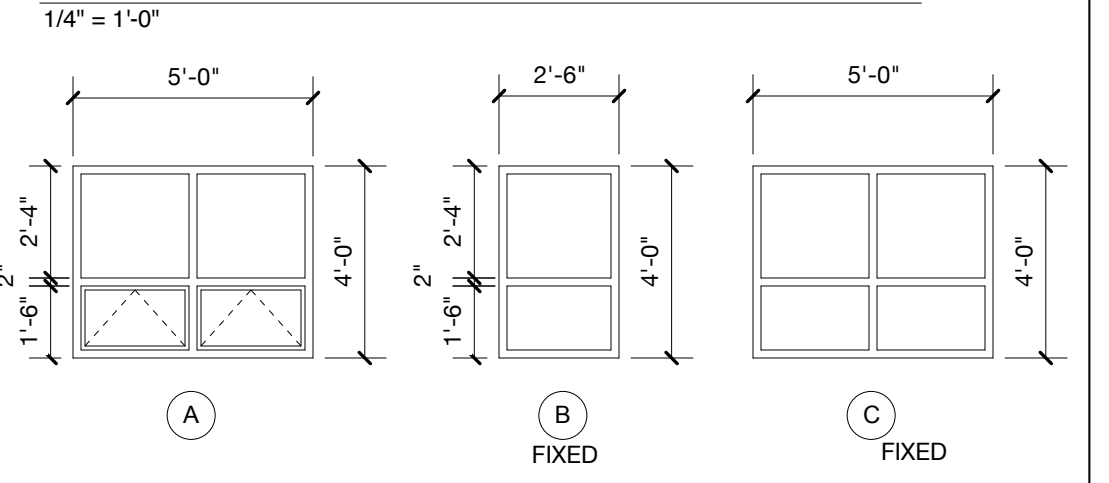
SCWD	Solid Core wood door
Clr. F.	Clear Finish
F.F.	Factory Finish
HM	Hollow Metal
Insul. Mtl	Insulated Metal
Ptd.	Painted
HW	Hardware Set
TG	1/4" Tempered Glass
FG	1/4" Fire Glass

J2 H2 JAMB DETAIL / HEAD SIMILAR
SCALE: 3" = 1'-0"

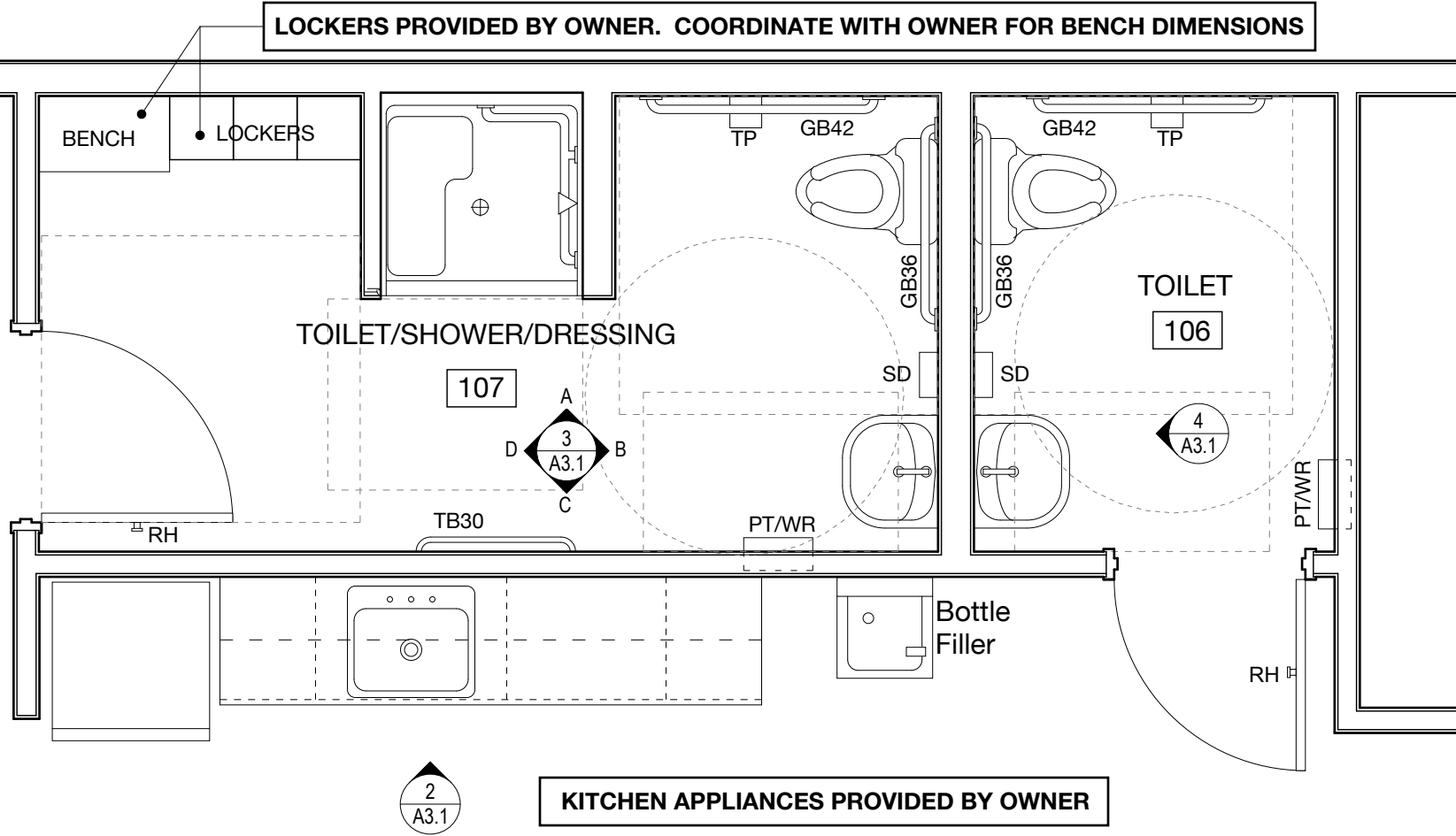
WINDOW SCHEDULE

FIRST FLOOR - LOW											
General		Frame			Details			Notes			
Window No.	Type	Material	Finish	Head	Jamb	Sill					
1.1	A	FIBERGLASS	FF	H3 / A4.1	J3 / A4.1	S3 / A4.2					
1.2	A	FIBERGLASS	FF	H3 / A4.1	J3 / A4.1	S3 / A4.2					
1.3	A	FIBERGLASS	FF	H3 / A4.1	J3 / A4.1	S3 / A4.2					
1.4	A	FIBERGLASS	FF	H3 / A4.1	J3 / A4.1	S3 / A4.2					
1.5	B	FIBERGLASS	FF	H3 / A4.1	J3 / A4.1	S3 / A4.2					
1.6	B	FIBERGLASS	FF	H3 / A4.1	J3 / A4.1	S3 / A4.2					
1.7	C	FIBERGLASS	FF	H3 / A4.1	J3 / A4.1	S3 / A4.2					
1.8	C	FIBERGLASS	FF	H3 / A4.1	J3 / A4.1	S3 / A4.2					

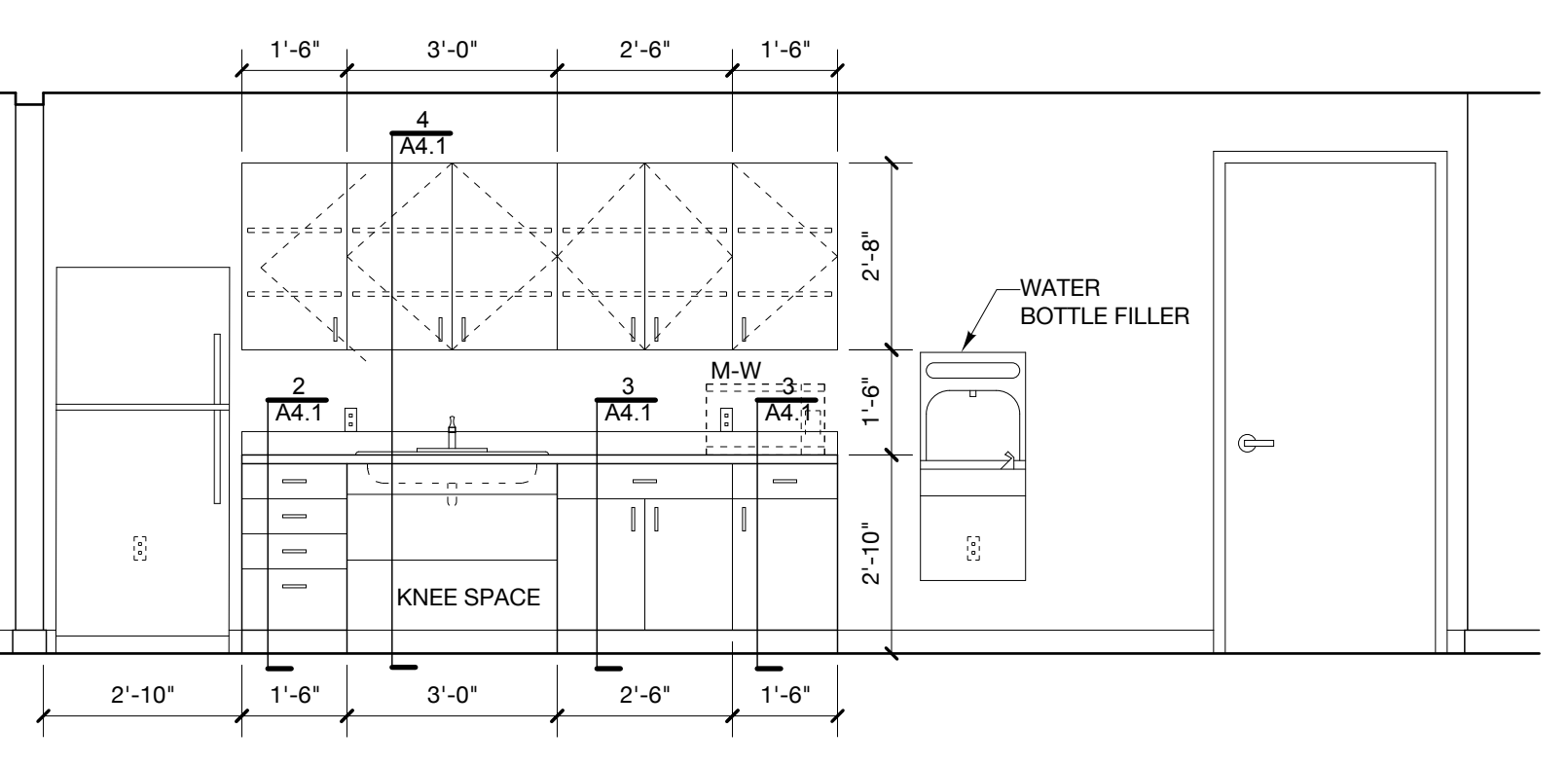
WINDOW TYPES



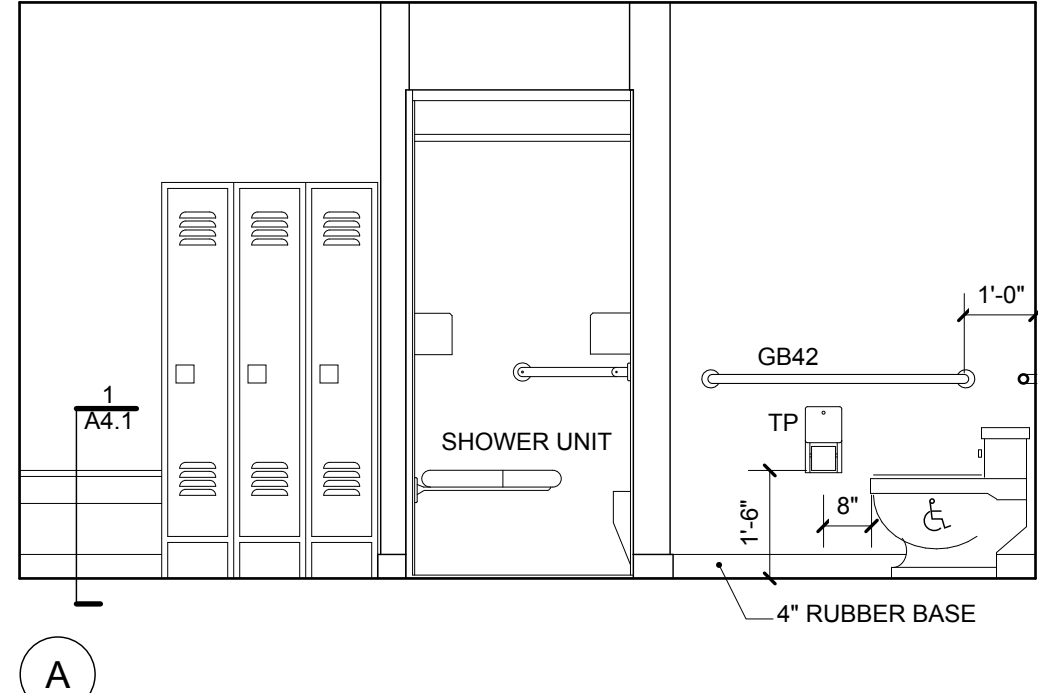
J1 H1 JAMB DETAIL / HEAD SIMILAR
SCALE: 3" = 1'-0"



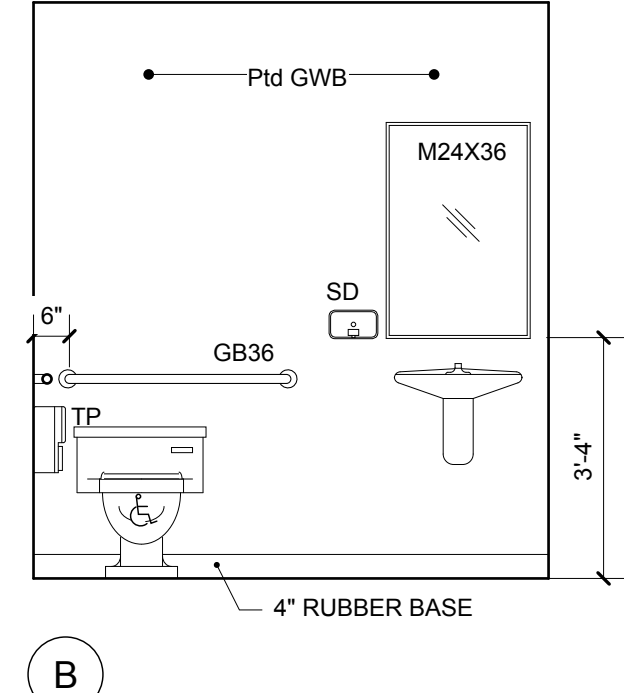
1 ENLARGED KITCHENETTE / BATHROOM PLAN
3/8" = 1'-0"



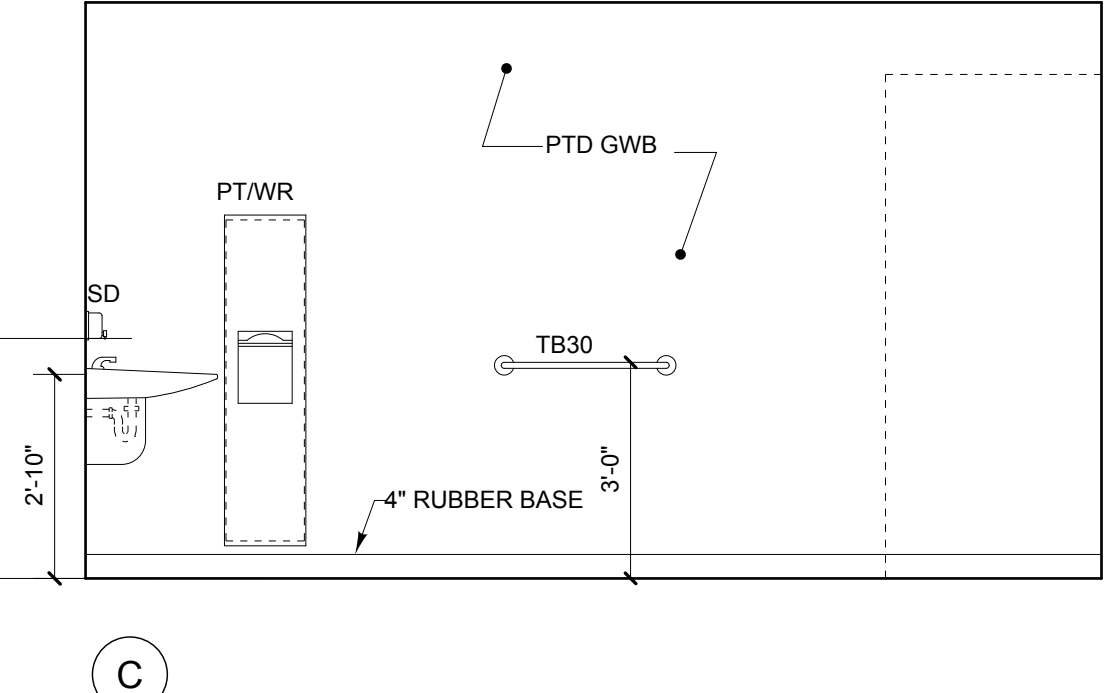
2 BREAK ROOM 100 KITCHENETTE ELEVATION
3/8" = 1'-0"



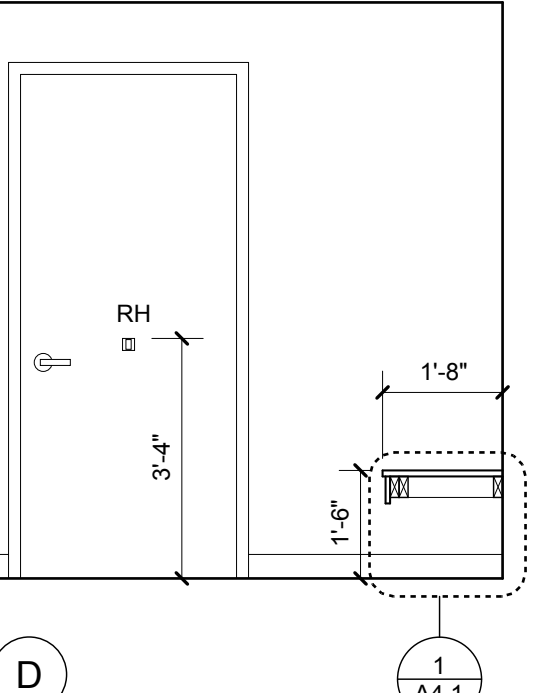
3 TOILET / SHOWER / DRESSING 107 ELEVATION
3/8" = 1'-0"



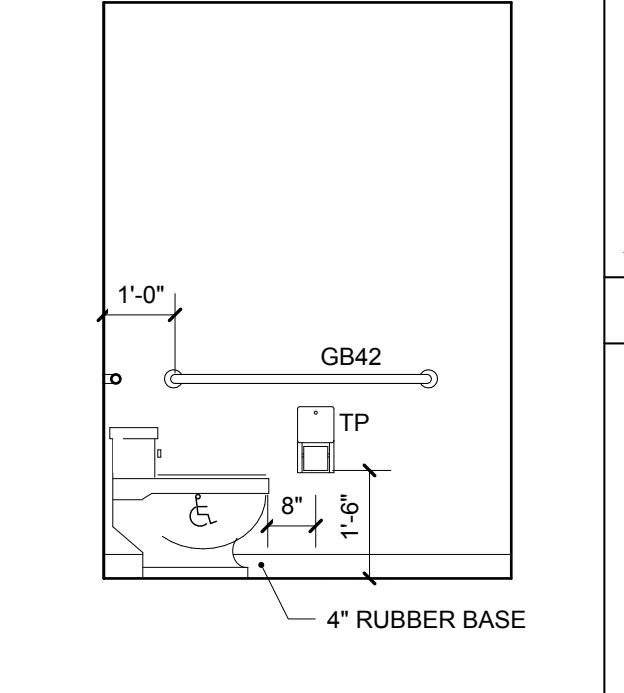
TOILET 106 ELEV. (part of 4)



TOILET 106 ELEV. (part of 4)



TOILET 106 ELEV. (part of 4)



TOILET 106 ELEV. (part of 4)

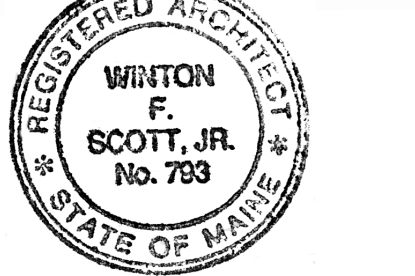


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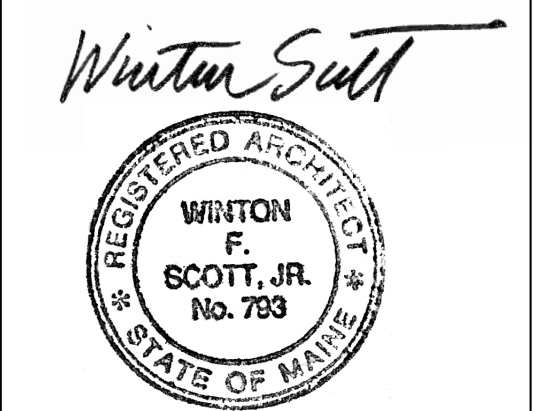
PARTITION TYPES,
SCHEDULES &
INTERIOR DETAILS

A3.1

SEPTEMBER 5, 2018



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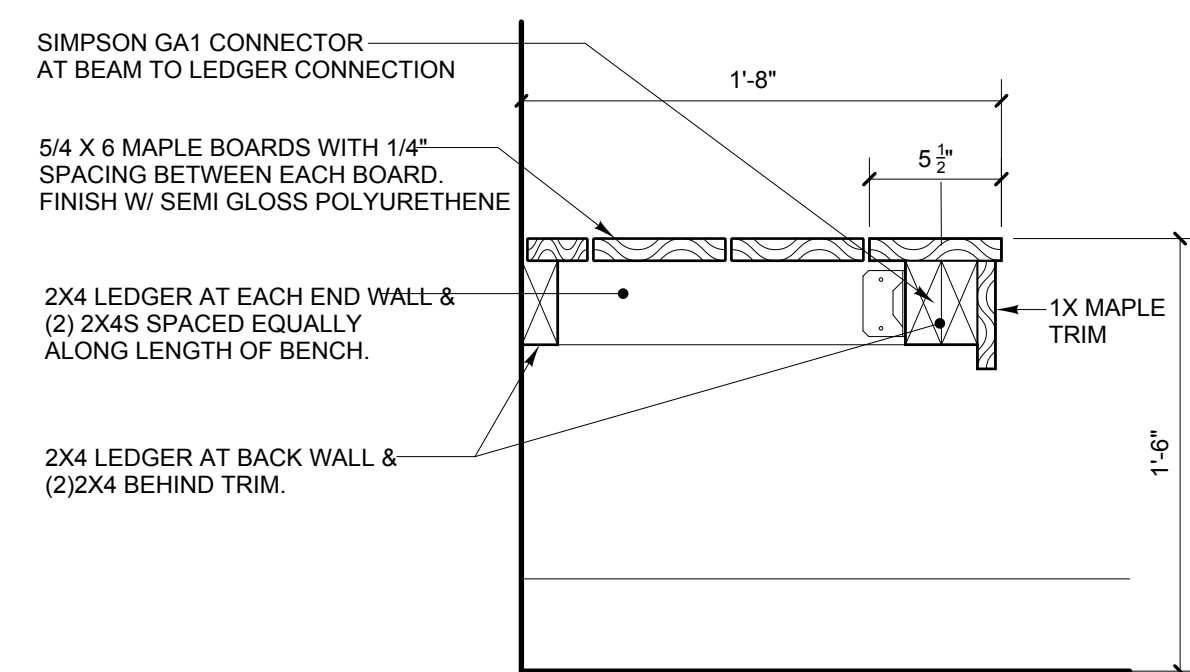
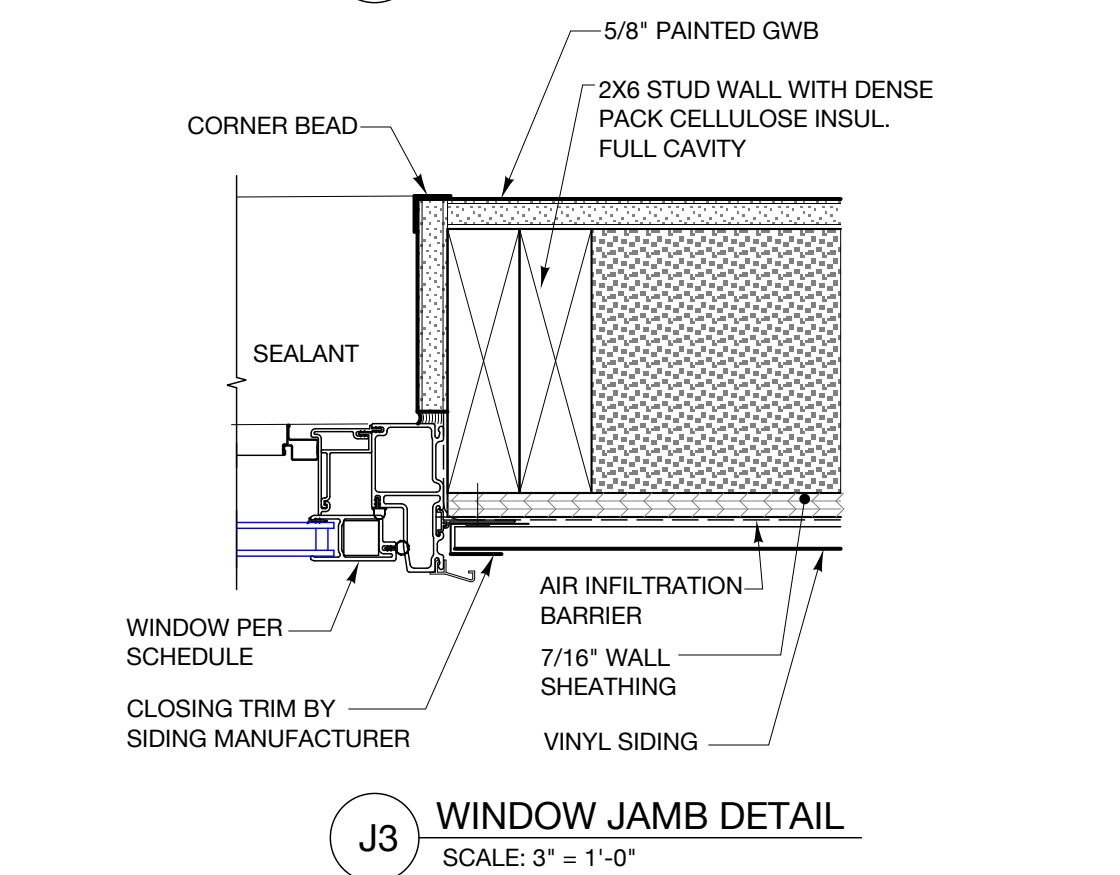
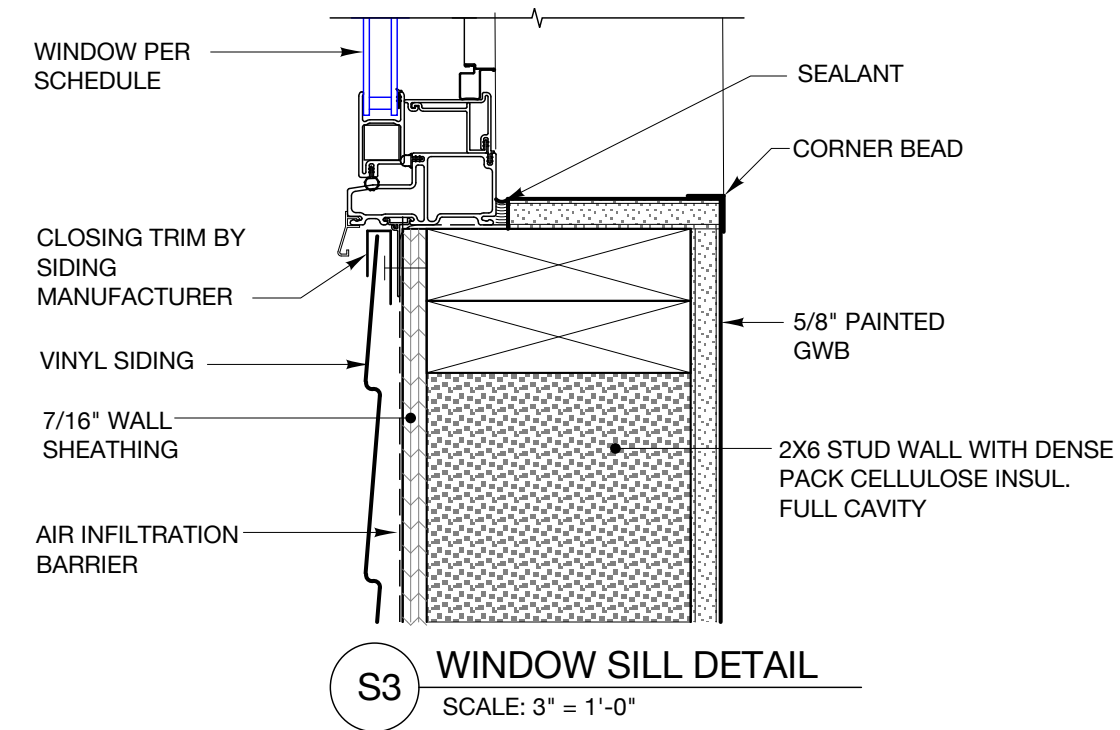
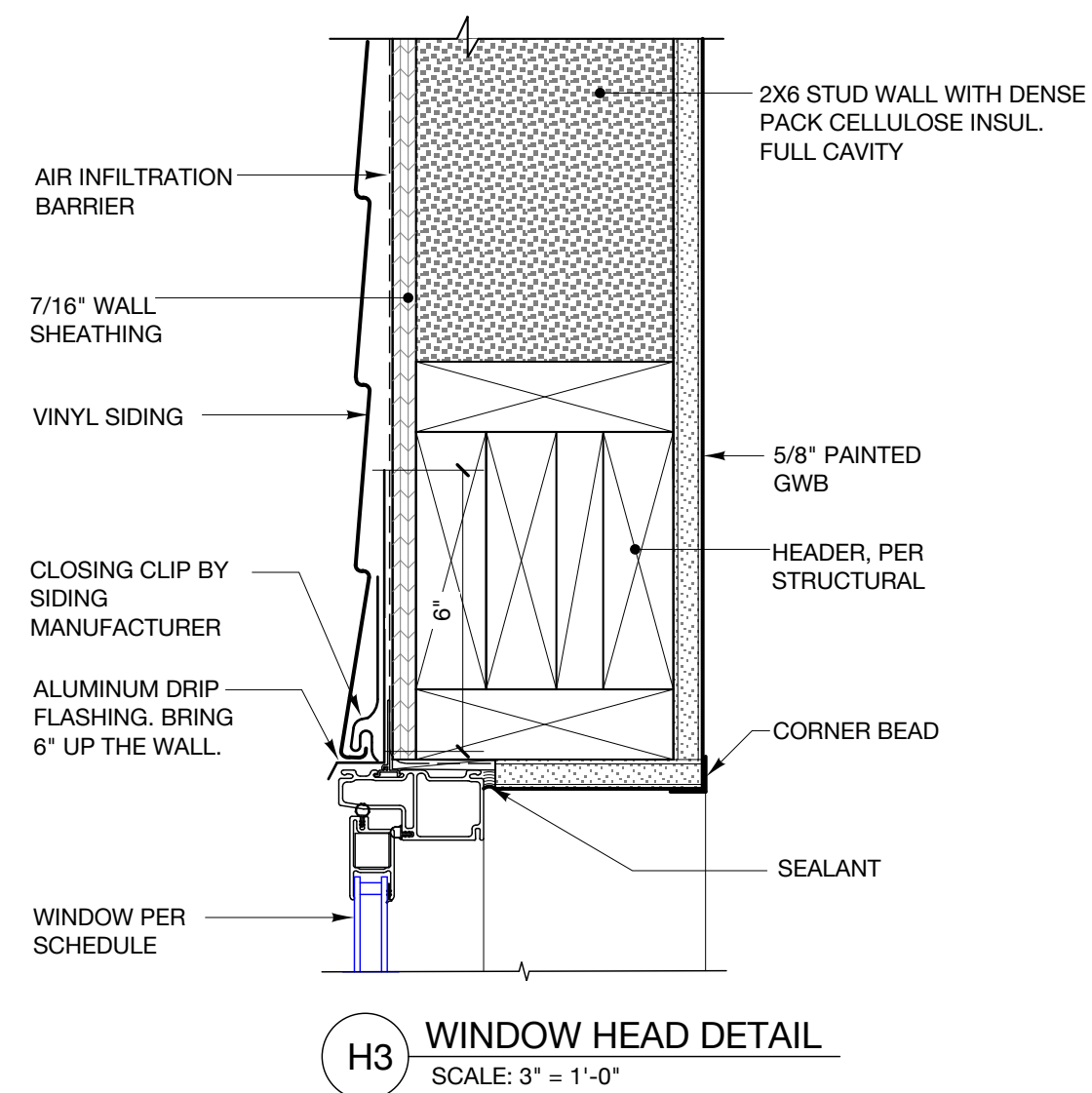
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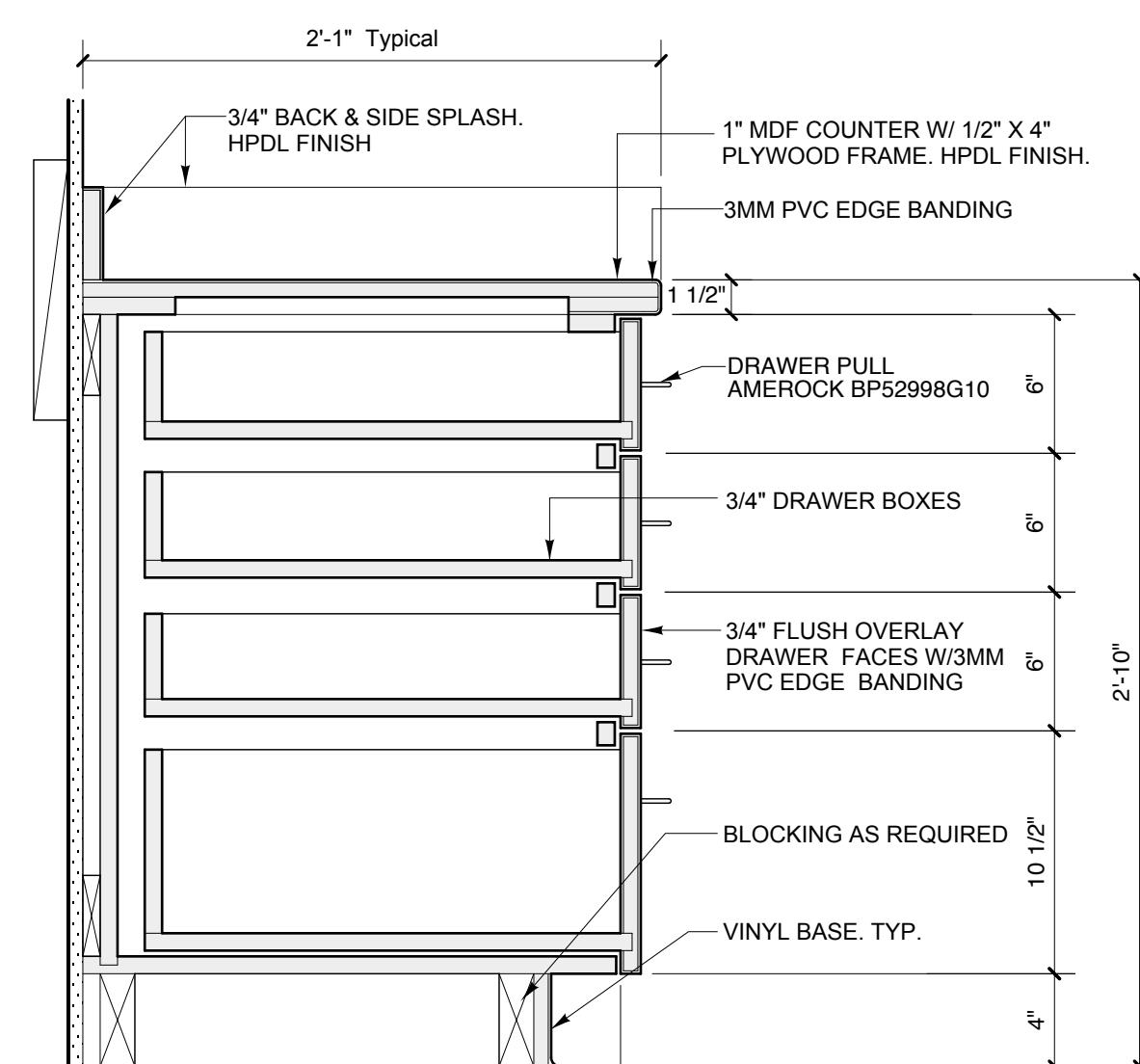
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CABINET,
MILLWORK &
WINDOW DETAILS

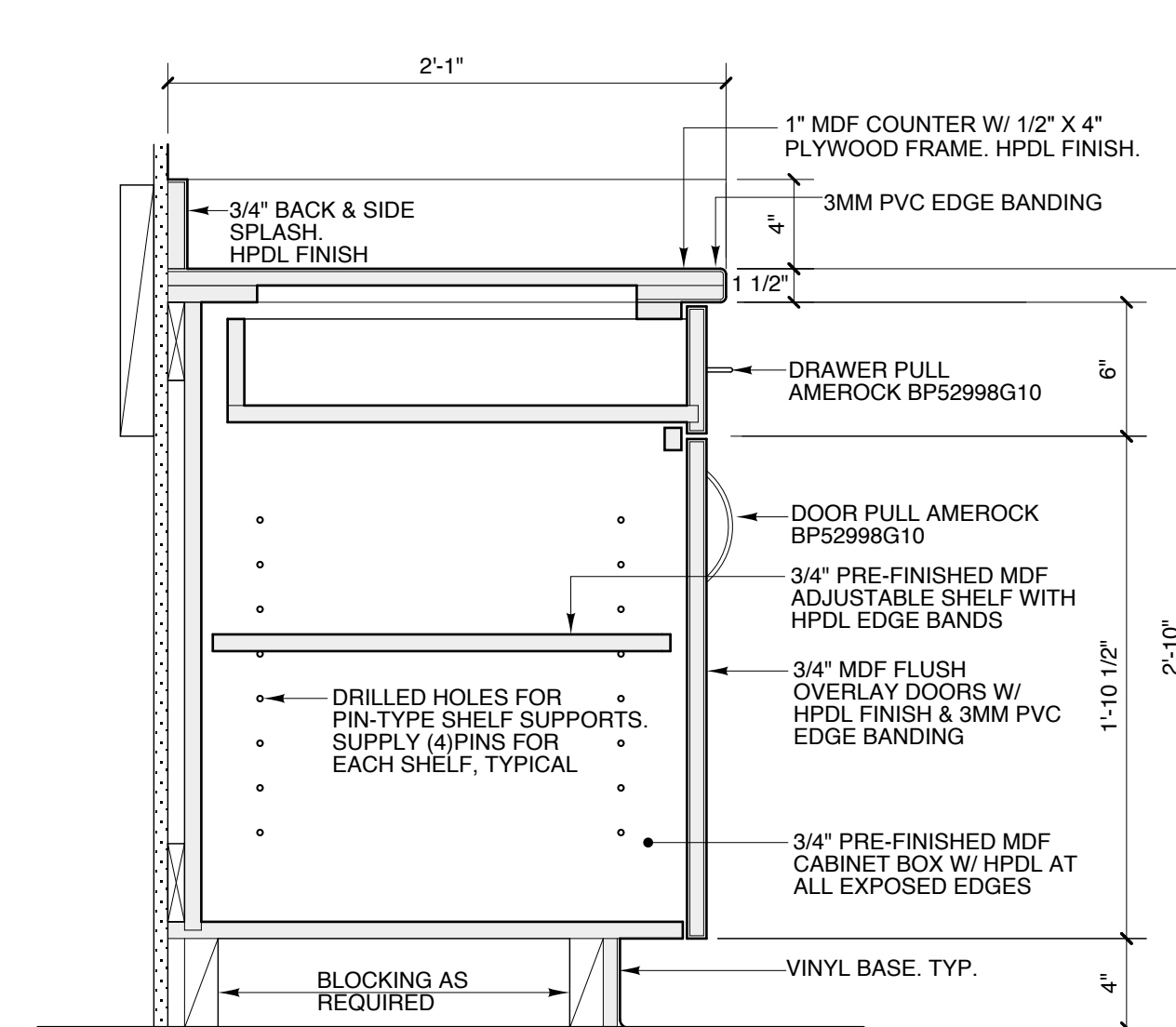
A4.1



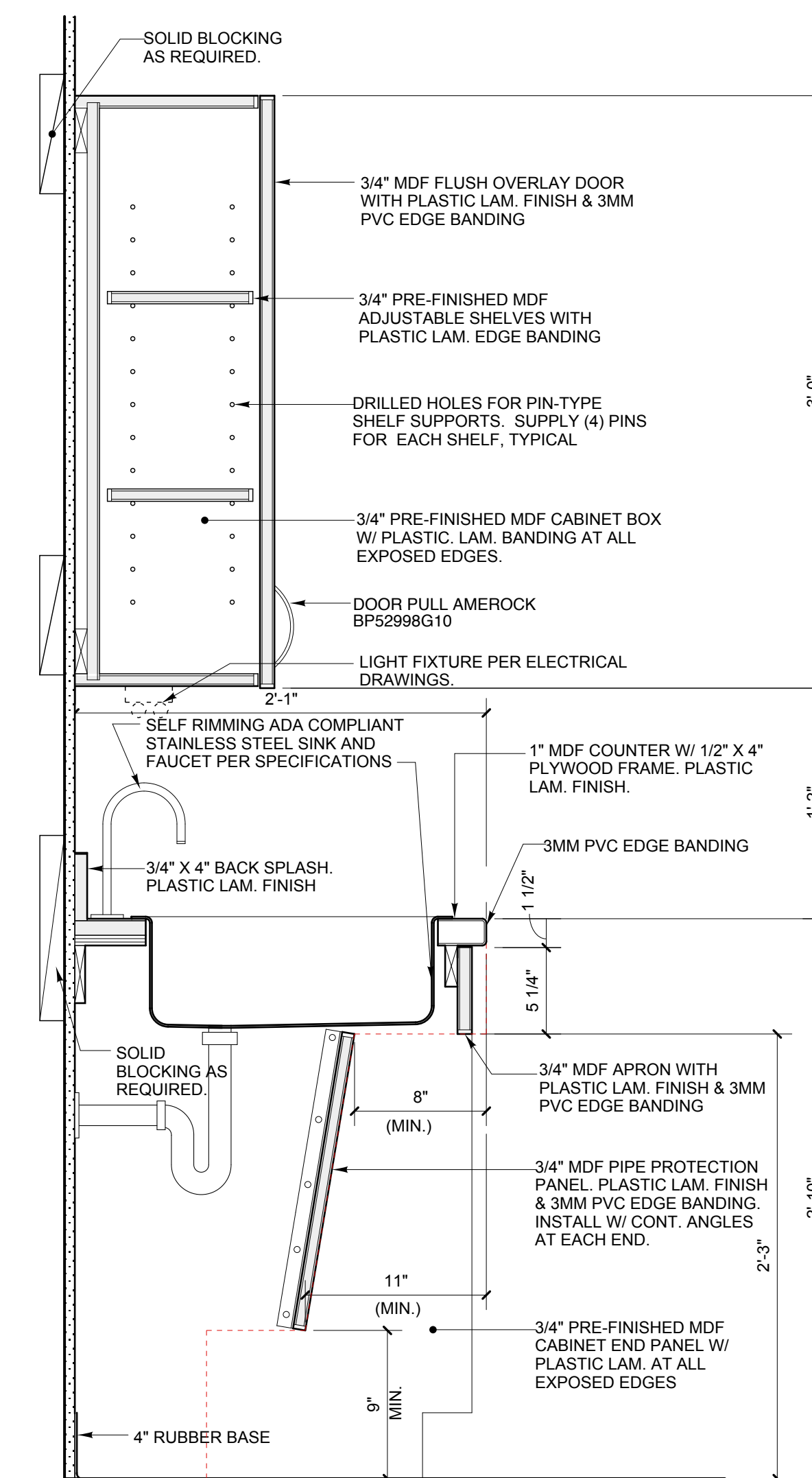
1 SHOWER BENCH DETAIL
SCALE: 1 1/2" = 1'-0"



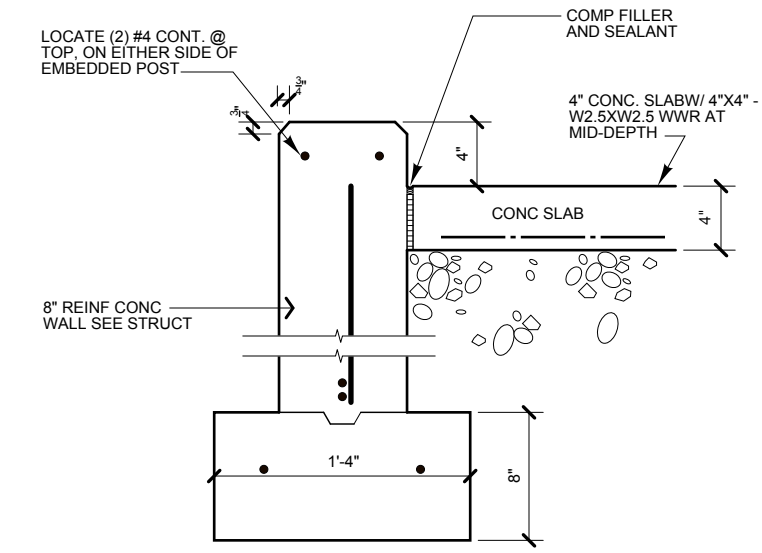
2 BREAK ROOM DRAWER BASE SECTION DETAIL
SCALE: 1 1/2" = 1'-0"



3 BREAK ROOM BASE CABINET SECTION DETAIL
SCALE: 1 1/2" = 1'-0"

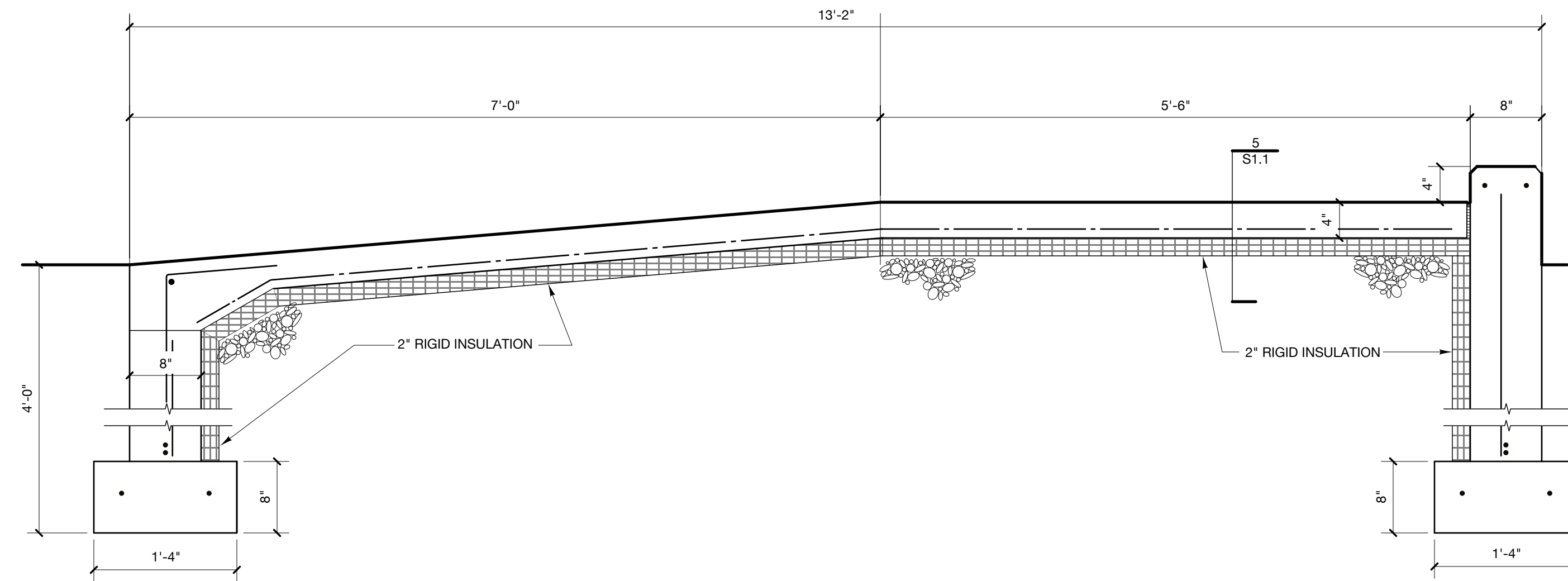


4 SECTION DETAIL AT SINK
SCALE: 1 1/2" = 1'-0"

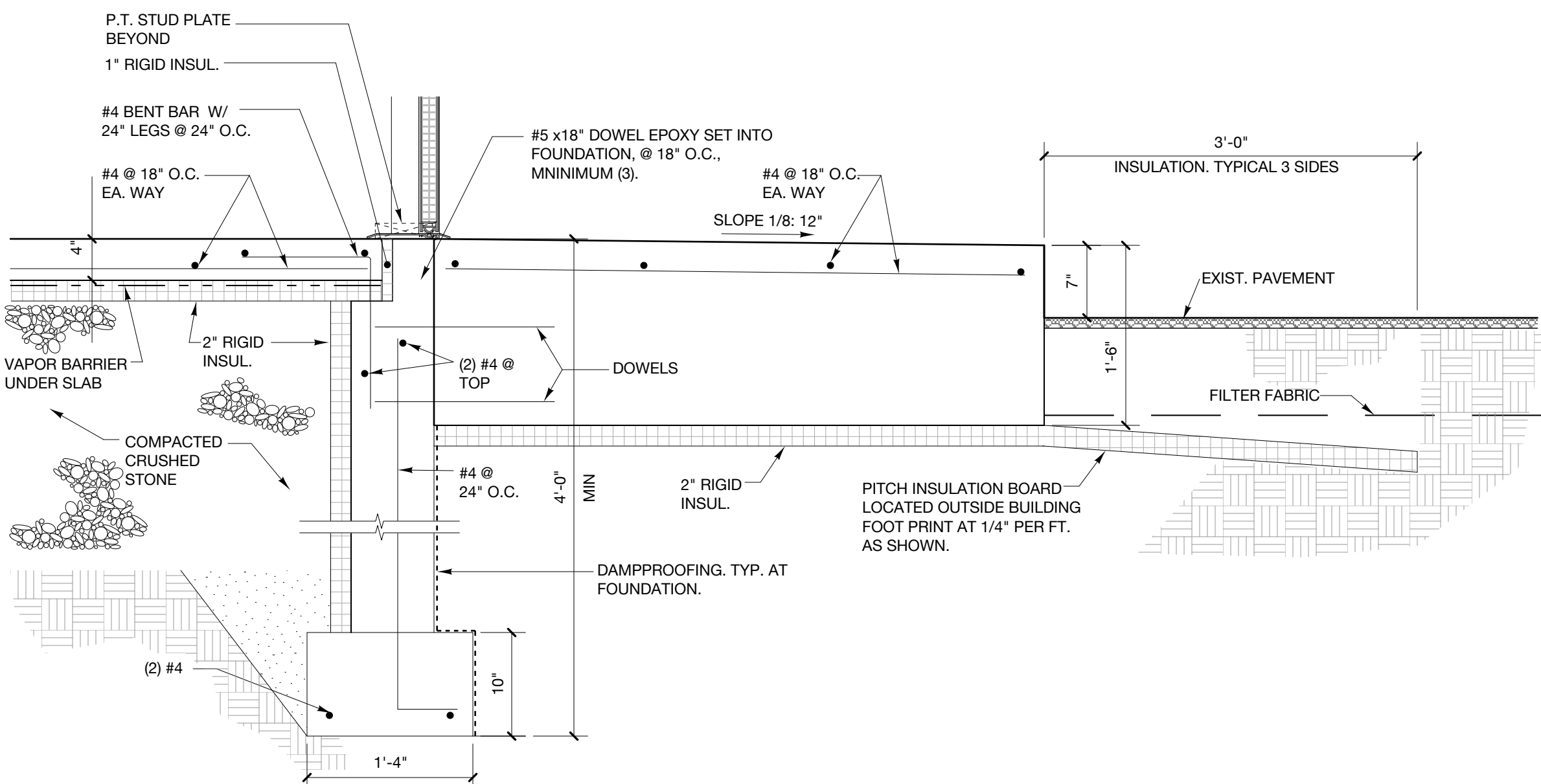


TYPICAL RAMP FOUNDATION WALL:
 8" C.I.P. FOUND. WALL W/ #5 VERTS @ 24" O.C., #4 CONT. @ 16" O.C., (2) #4 CONT. AT TOP & BOT. OF WALL, #4 HOOKED DOWELS INTO FTG @ 32" O.C.
 TYP. FOOTING:
 16" WIDE X 8" DEEP W/ (2) #4 CONT.

5 RAMP SECTION DETAIL
 1" = 1'-0"

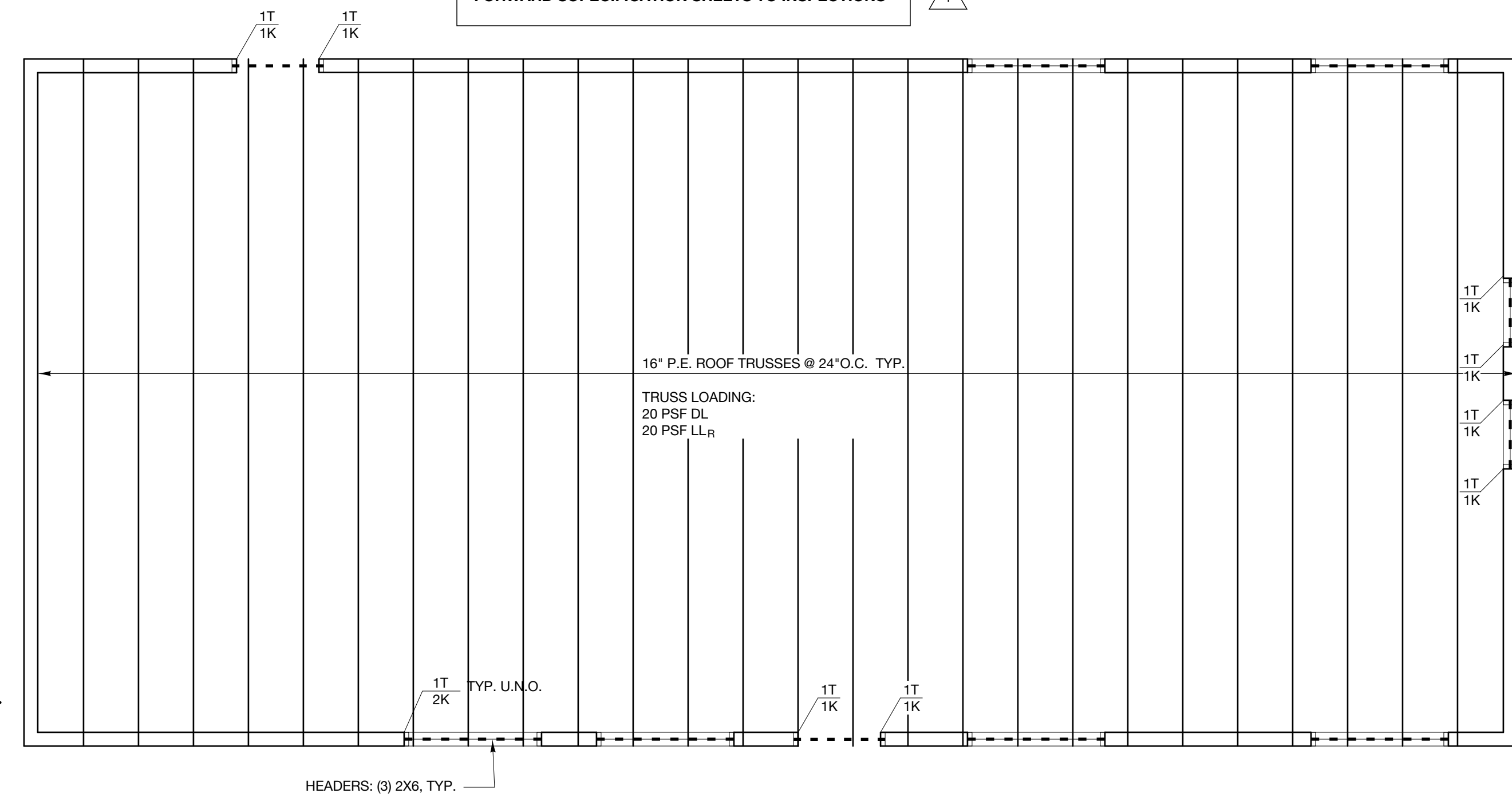


4 RAMP SECTION DETAIL
 1" = 1'-0"

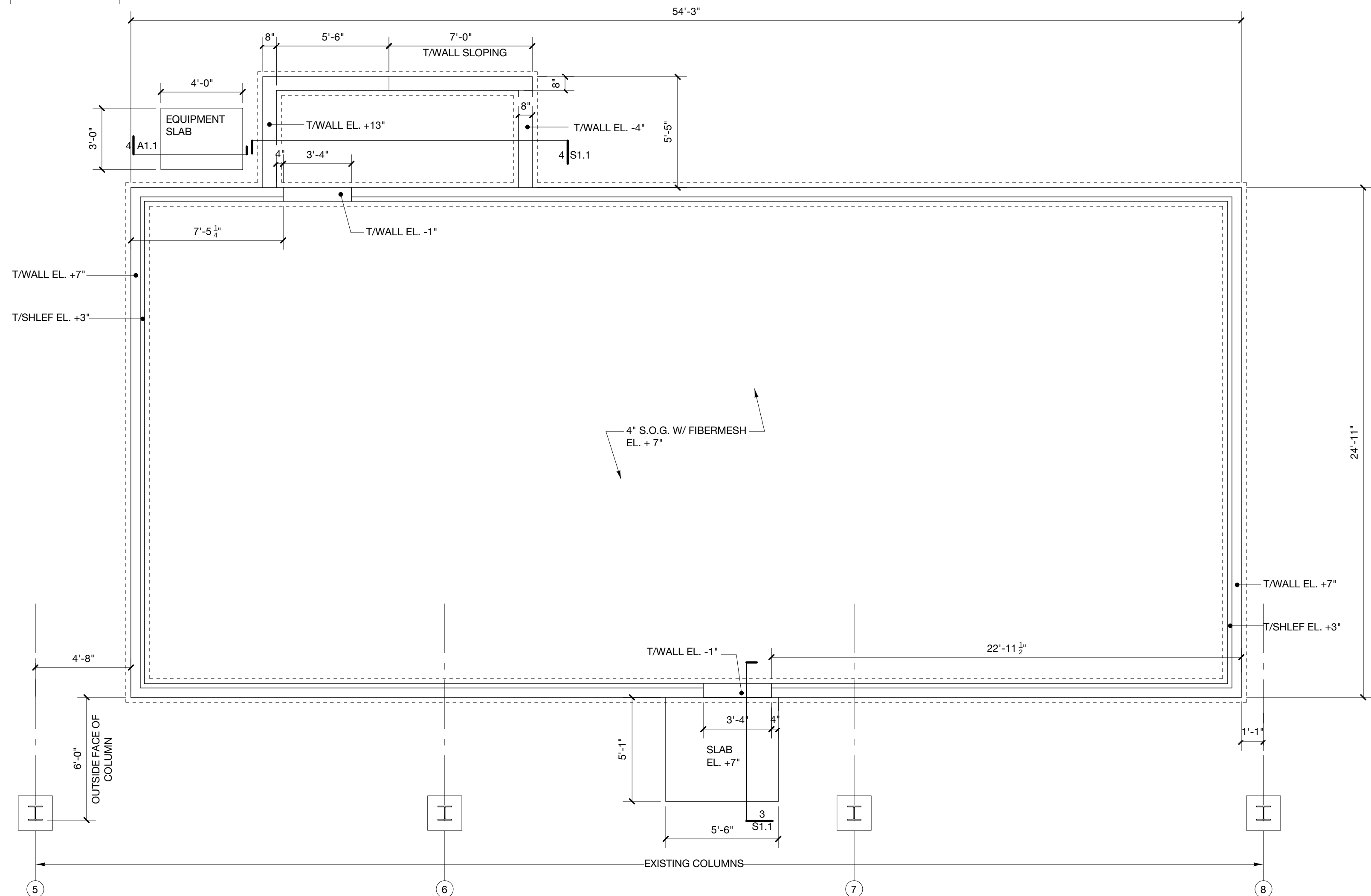


3 FOUNDATION DETAIL
 1" = 1'-0"

OWNER IS PURCHASING ROOF TRUSSES AND WILL FORWARD SOPECIFICATION SHEETS TO INSPECTIONS



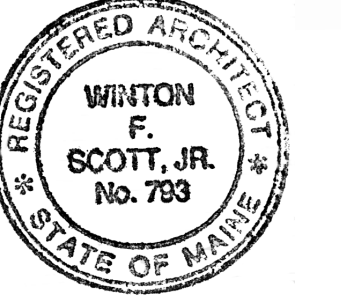
2 ROOF FRAMING PLAN
 1/4" = 1'-0"



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



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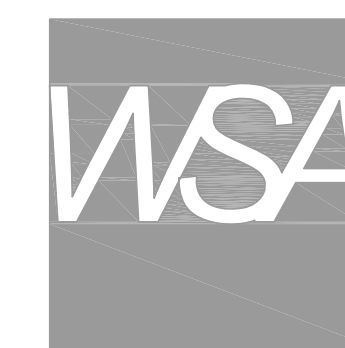
**ROOF FRAMING PLAN,
 FOUNDATION PLAN &
 DETAILS**

S1.1



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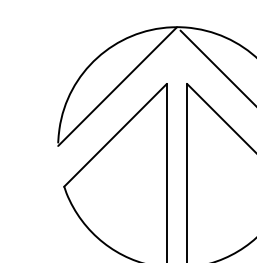
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NORTH



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Department:

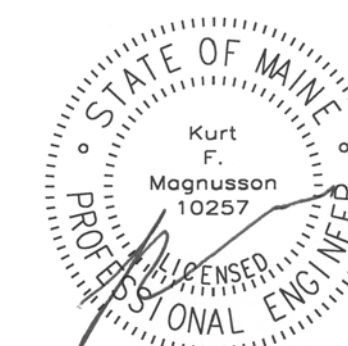
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MECHANICAL
SHEETMETAL
PLAN

BID SET

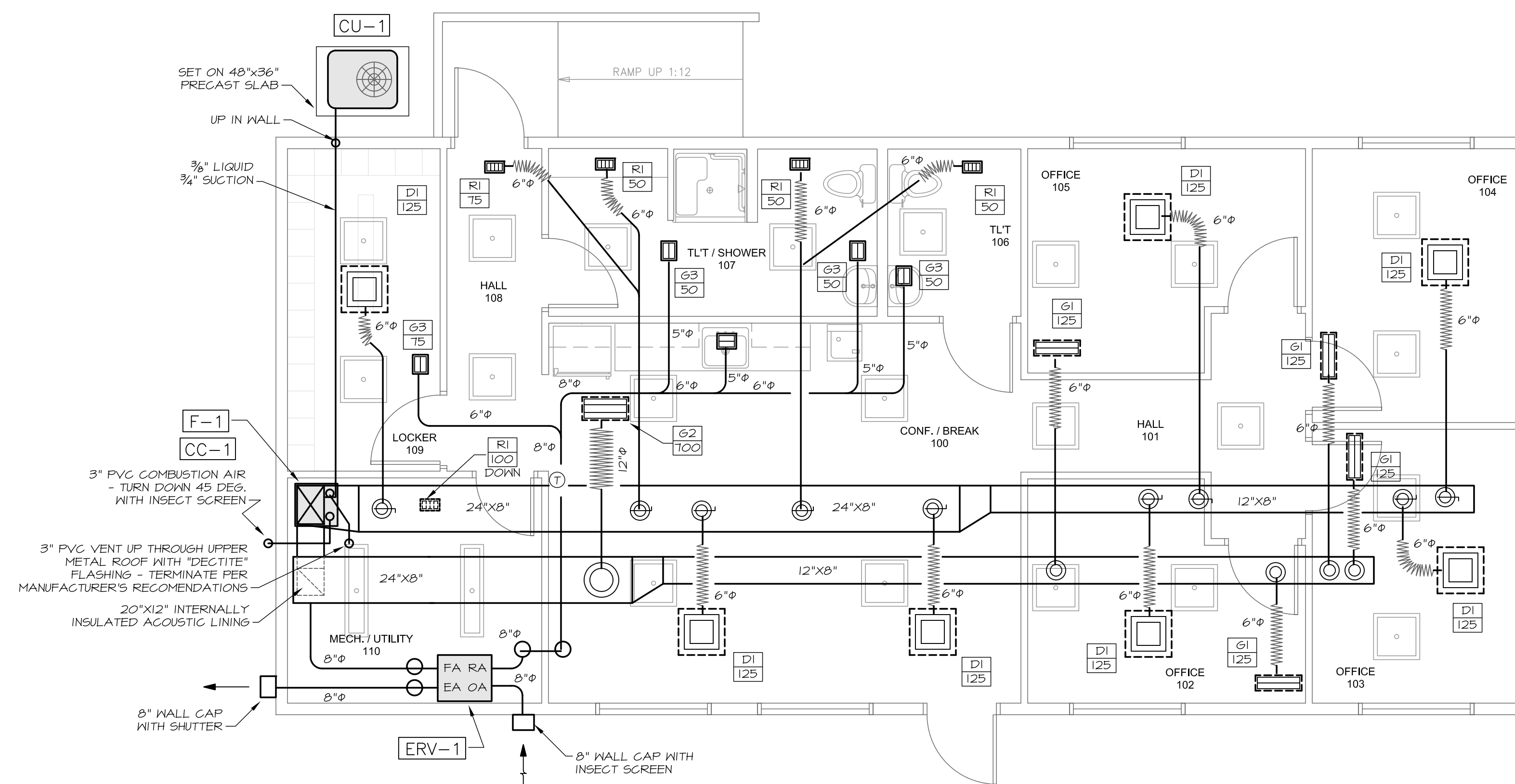
Scale: 1/4" = 1'-0"



M1

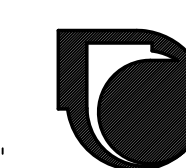
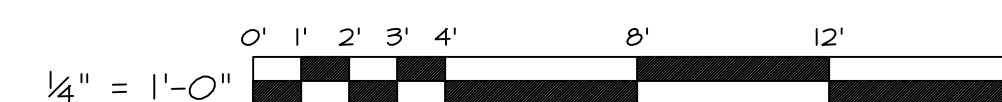
Proj. 1827

SEPTEMBER 05, 2018



SHEETMETAL LEGEND	
	4-WAY CEILING SUPPLY DIFFUSER, T-BAR LAY-IN
	RETURN OR EXHAUST INLET, T-BAR LAY-IN
	RETURN OR EXHAUST INLET, SURFACE MOUNT
	DOUBLE DEFLECTION REGISTER WITH OPPOSED BLADE DAMPERS
	BELLMOUTH TAKEOFF
	BELLMOUTH TAKEOFF WITH HEAVY DUTY 24 GA. DAMPER AND CLOSED END BEARING
	UL LISTED FLEXIBLE DUCTWORK, INSULATED 1-1/2" MAXIMUM RUN LENGTH 6'-0"
	MANUAL DAMPER - LOCKING QUADRANT
	THERMOSTAT

1 MECHANICAL SHEETMETAL PLAN
SCALE: 1/4" = 1'-0"



MECHANICAL SYSTEMS ENGINEERS
ROYAL RIVER CENTER, UNIT 10B
10 FOREST FALLS DRIVE, YARMOUTH, MAINE 04096
(207) 846-1441
FACEBOOK: MECHANICAL SYSTEMS ENGINEERS
CELEBRATING 50 YEARS IN BUSINESS
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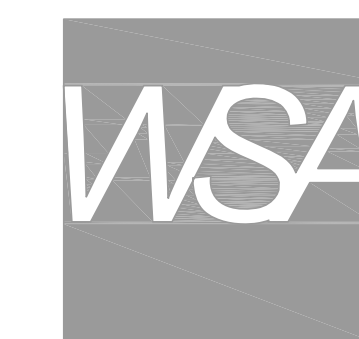


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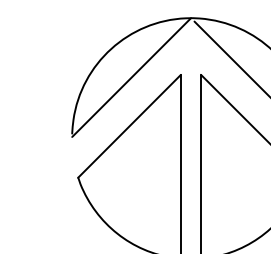
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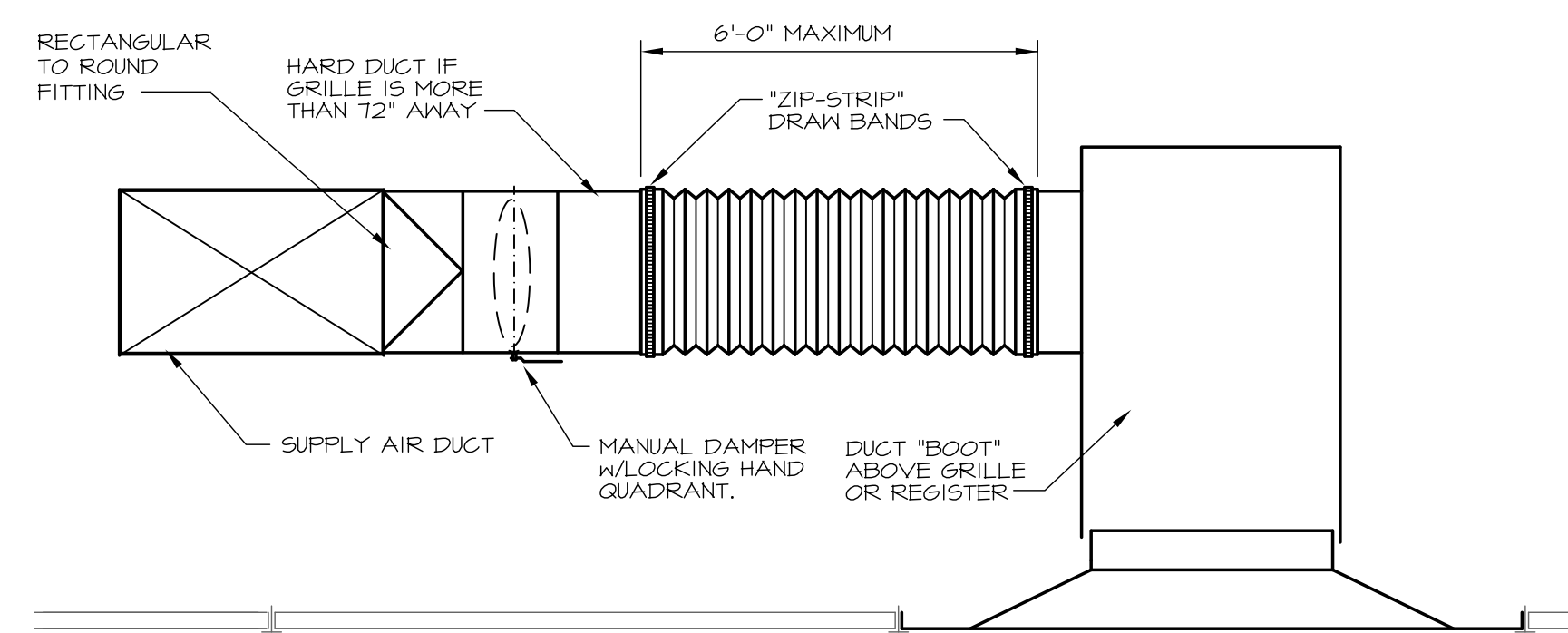
MECHANICAL
DETAILS &
SECTIONS

BID SET

Scale: NO SCALE

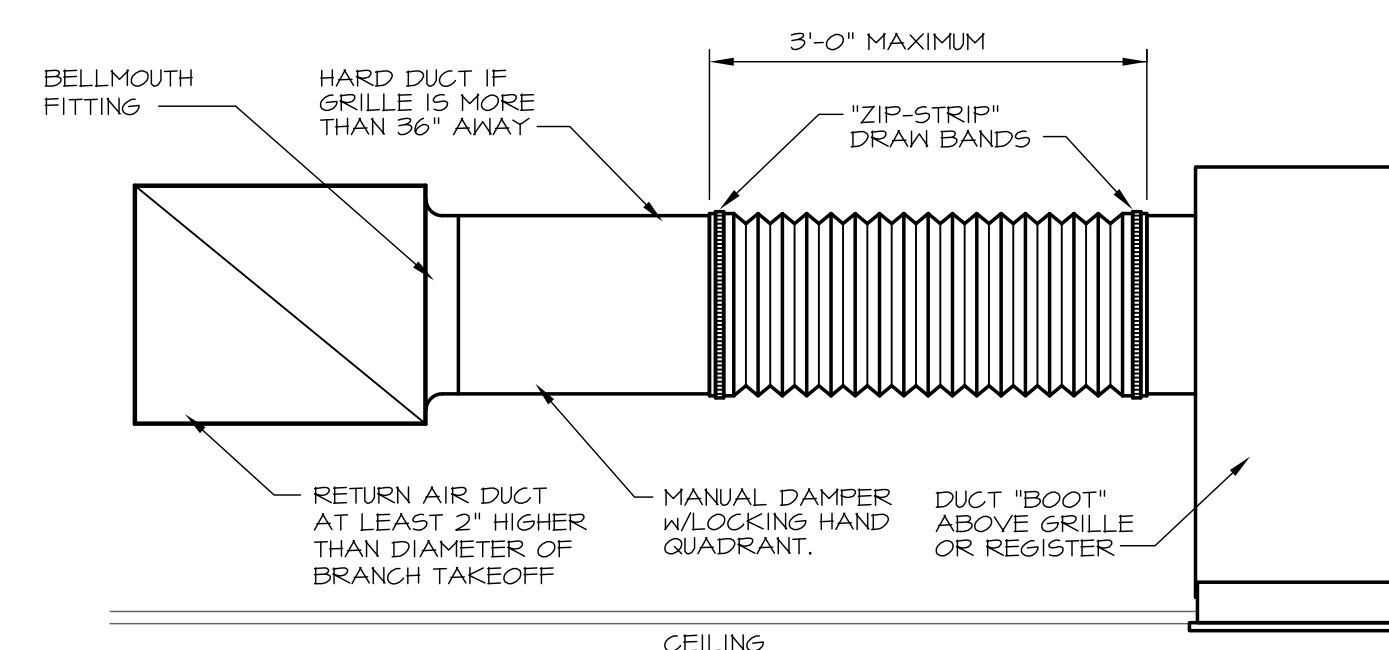
M2

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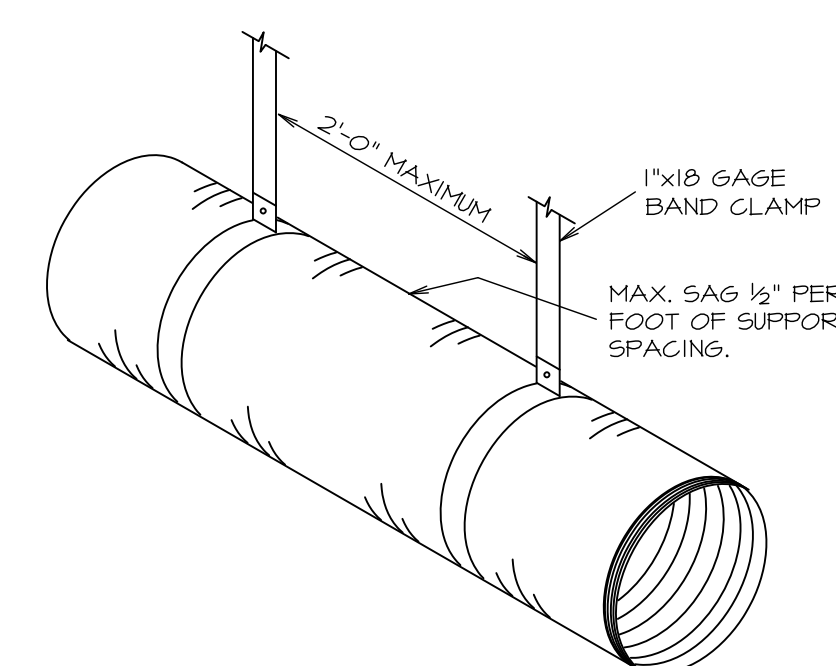
1 FLEXIBLE DUCT & DIFFUSER CONNECTION DETAIL

NO SCALE



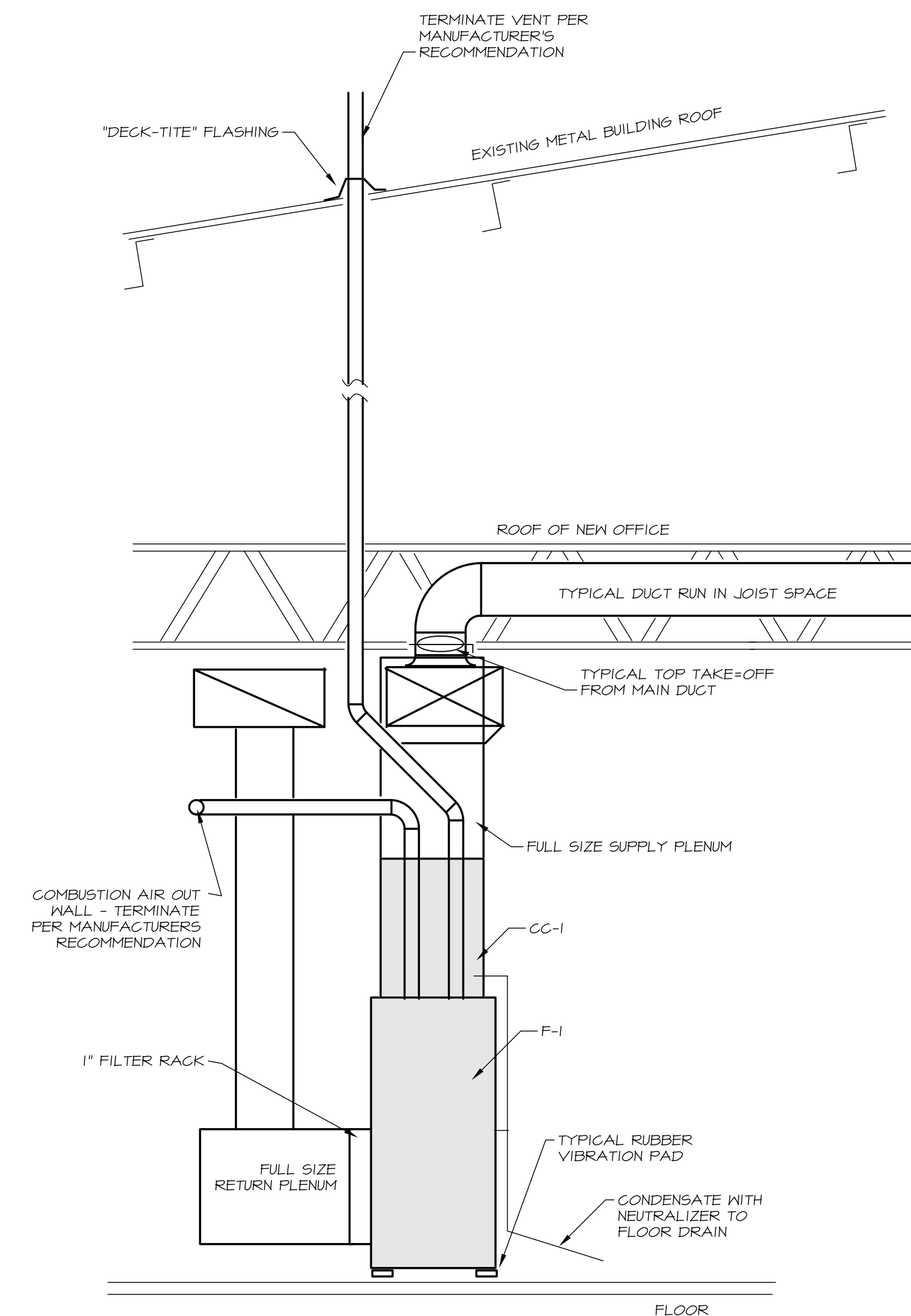
2 FLEXIBLE DUCT & RETURN REGISTER CONNECTION

NO SCALE



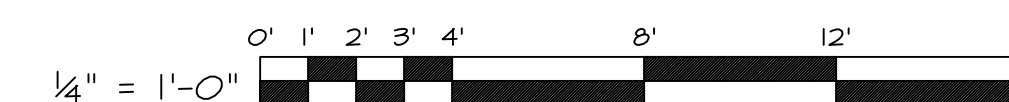
3 FLEXIBLE DUCT SUPPORT DETAIL

NO SCALE



4 F-1 & CC-1 SECTION VIEW

NO SCALE



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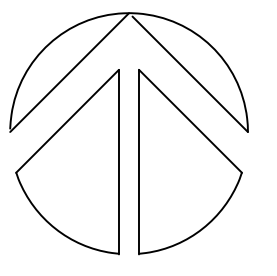
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MECHANICAL
SCHEDULES
& NOTES

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M3

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GAS FURNACE SCHEDULE

TAG	DESIGN MANUFACTURER & MODEL	BTUH INPUT	BTUH OUTPUT	AFUE	FUEL	CFM	E.S.P.	MOTOR HP	POWER	REMARKS
F-1	TRANE TUX1080A9H31B	80,000	74,000	92%	LP GAS	1,200	0.50"	1/2	115/60/1	CONDENSING FURNACE SEALED COMBUSTION W/ SIDE RETURN FILTER BOX AND ECM MOTOR

COOLING COIL SCHEDULE

TAG	DESIGN MANUFACTURER & MODEL	TOTAL BTUH	SEER	REMARKS
CC-1	TRANE TO MATCH FURNACE AND MEET SEER SPECIFIED	36,000	13	CASED COIL WITH TX VALVE

CONDENSING UNIT SCHEDULE

TAG	DESIGN MANUFACTURER & MODEL	NOMINAL SIZE	NUMBER OF CIRCUITS	REFRIGERANT	ELECTRIC			WEIGHT	REMARKS
					POWER	MCA	MOP		
CU-1	TRANE 4TTR3036H100N	3.0 TONS	1	410A	208/60/1	18	30	175 LBS	MATCH WITH COOLING COIL FOR MINIMUM 13 SEER

ENERGY RECOVERY VENTILATOR SCHEDULE

TAG	DESIGN MANUFACTURER AND MODEL	RECOVERY TYPE	EFFECTIVENESS			WINTER O.A.		EXHAUST AND SUPPLY		ELECTRIC		WEIGHT	REMARKS
			SENSIBLE	WINTER	SUMMER	TEMP.	GRAINS	EXHAUST	SUPPLY	POWER	FLA		
ERV-1	RENEWAIRE EV300	CORE	70%	63%	47%	-5	2.5	275	275	115/60/1	3.31	85 LBS	WITH MERV 8 1" PLEATED FILTERS, EXHAUST & OUTSIDE AIR BACK DRAFT DAMPERS

AIR TERMINAL SCHEDULE

TAG	MANUFACTURER & MODEL	SIZE	MAX NC	MAX SP	REMARKS
DI	PRICE SMD3P	6"x6"	20	.07	T-BAR MOUNT CEILING DIFFUSER
RI	PRICE 520SD	12"x8"	20	.07	DOUBLE DEFLECTION SUPPLY REGISTER WITH DAMPER
G1	PRICE 530	22"x8"	20	.07	45 DEGREE RETURN GRILLE FOR LAY-IN T-BAR MOUNT
G2	PRICE 530	22"x12"	20	.07	45 DEGREE RETURN GRILLE FOR LAY-IN T-BAR MOUNT
G3	PRICE 530	10"x6"	20	.07	45 DEGREE RETURN GRILLE FOR SURFACE MOUNT

SHEETMETAL NOTES

- All ductwork to be fabricated and installed per SMACNA Low Pressure Ductwork Standards.
- Ductwork is shown diagrammatically and does not indicate all the offsets, rises and drops that will be required.
- All square elbows are to be installed with turning vanes.
- Flexible ductwork to be insulated with 1-1/2" fiberglass duct wrap with foil-faced vapor barrier. Flexible ductwork to be UL181 listed and limited to a maximum run of 6'-0".
- All supply ductwork to be insulated with 1-1/2" fiberglass duct wrap with foil faced vapor barrier.

PIPING NOTES

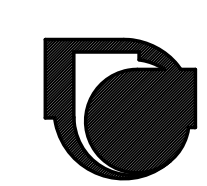
- Piping is shown diagrammatically and does not indicate all the offsets, rises and drops that will be required.
- All refrigerant piping to be Type "K" copper or ACR tube.
- All refrigerant suction line piping to be insulated with closed cell (Armaflex) or equal -3/4"
- All outdoor refrigerant insulation to be painted with a paint approved by the insulation manufacturer.
- All condensate piping to be Schedule 40 PVC plastic.
- Provide and install condensate piping to the condensing gas furnaces and the cooling coils.
- Provide a condensate neutralizing kit with all furnaces.

CONTROL NOTES

- It will be the Mechanical Contractor's responsibility to provide and install all controls and all control wiring.
- All control wiring that is run in concealed spaces to be plenum rated.
- All control wiring that is run exposed shall be in electrical conduit provided and installed by the mechanical contractor.
- All thermostats to be electronic programmable with 7-day programming. Set up indoor fans to run continuously during the occupied cycle, indoor fans during the unoccupied cycle to only run on a call for heating or cooling.
- ERV-1 to be off during the unoccupied cycle. During the occupied cycle as determined by Thermostat serving F-2 (offices) energize ERV-1

GENERAL NOTES

- All systems are to be to meet the following Codes and Standards.
 - ASHRAE 90.1 2013 - Energy Standard for Commercial Buildings.
 - ASHRAE 60.1 2013- Standard for Indoor Air Quality in Commercial Buildings.
 - 2009 IECC - International Energy Conservation Code.
 - NFPA - National Fire Protection Association Standards.
- Do not cut any structural members without pre-approval of structural engineer.



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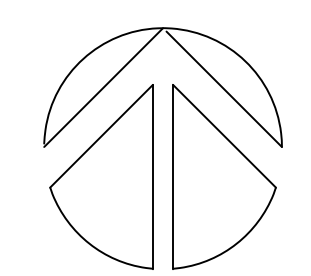
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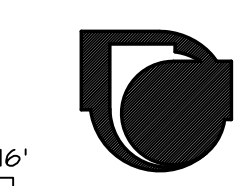
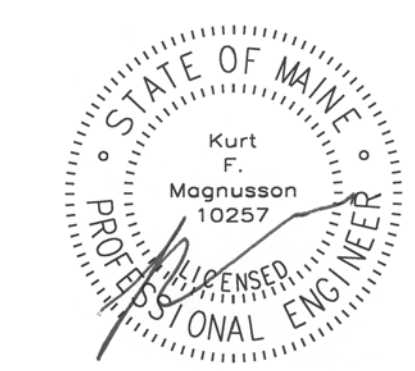
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PLUMBING
PLAN
& NOTES

BID SET

Scale: 1/4" = 1'-0"



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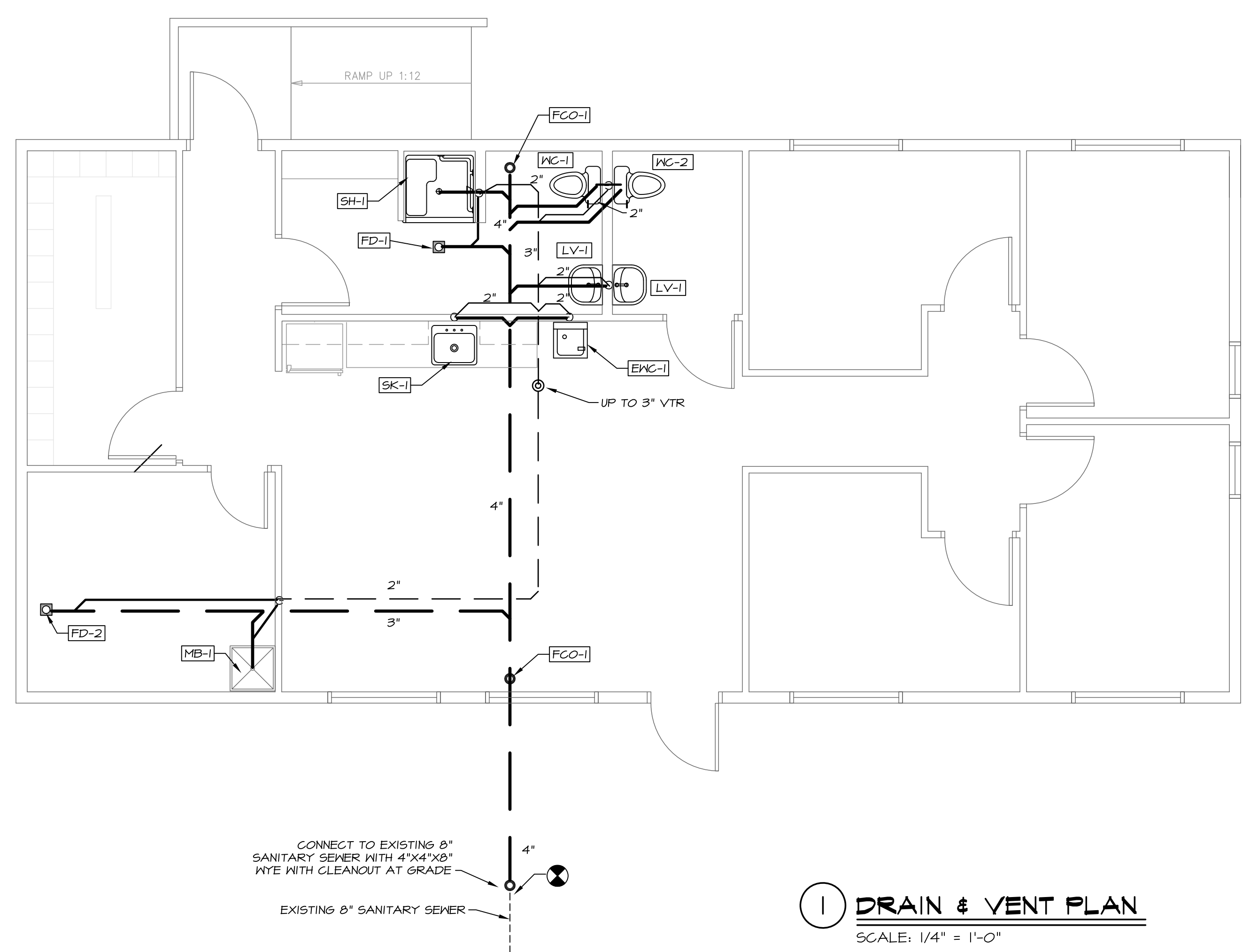
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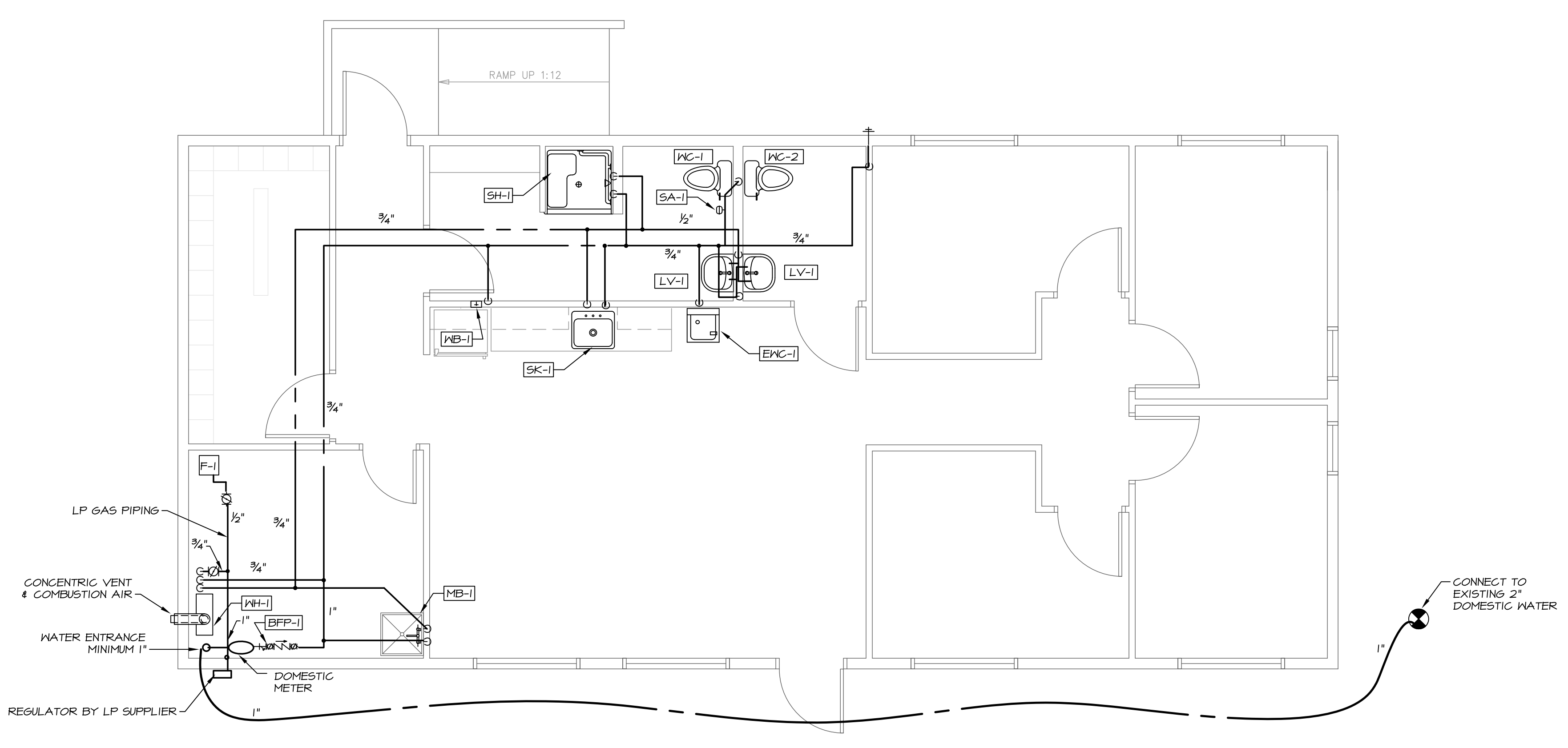
SEPTEMBER 05, 2018

GENERAL NOTES

- All work shall be in accordance with the State Plumbing Code, local codes and ordinances, National Fire Code (NFPA), or these plans or specifications, whichever is more strict.
- All drawings are schematic only, and are intended to indicate the intent, extent, and general arrangement of work. They are not meant to show every fitting, change of direction or every situation. Verify locations in the field. Work indicated shall be furnished complete to perform the function intended.
- Carefully coordinate the space requirements and location of piping with the other trade contractors. If coordination fails, conflicts will be decided in favor of the other contractors with this contractor relocating his piping and equipment at no expense to the Owner.
- All plumbing fixtures shall be vented.
- This contractor shall make all final plumbing connections to equipment/ fixtures provided by other contractors.
- For pipe sizes not shown on floor plans, refer to adjacent or enlarged plans, then appropriate schedules and details, and as a minimum use actual equipment connection sizes. For otherwise indeterminable pipe segments, the size shall be the same as the largest adjacent segment. Where pipe sizes are erroneously shown to decrease then increase, the smaller segment shall be increased to match the larger segment. When a conflict exists, the larger size shall govern. Pipe sizes are nominal (not O.D.) unless specifically noted otherwise.
- All piping shall run concealed above ceilings, in walls, in soffits and in chases unless noted otherwise.
- No structural members shall be cut without approval of the Architect.
- All plumbing shall be supported from the building structure. All piping drops to fixtures shall be anchored solid to walls with a steel support bracket with adjustable clip. Hangers longer than 12" will be seismically braced if required by the International Building Code.
- All water piping shall be installed parallel to building lines and pitched to low points. Provide drain-offs at low points. Piping shall be run neatly grouped together when practical.
- All piping through roofs, concrete walls and masonry partitions shall have steel pipe sleeves. Openings between pipes and sleeves shall be caulked and sealed smoke and water tight. All pipe penetrations through a fire rated wall or floor shall have a UL rated fire stop system rated to match the rating of the wall assembly, as per the NFPA.
- All wall mounted fixtures shall be carrier mounted unless otherwise specified.
- All above ground domestic water piping shall be insulated unless otherwise specified.
- Run all water and drain piping on warm side of building insulation. No lines shall be run in exterior walls, unless directly indicated, and protected.
- Provide shock absorbers where shown on drawings, and on the tops of risers/drops to all flushvalve water closets and urinals, dishwashers and clotheswashers. Sizes shall conform to F.D.I. standards.
- All sanitary waste piping less than 4" shall pitch down at 1/4" per L.F. All 4" and larger piping shall pitch at 1/8" per L.F. unless permission to run at 1/8" per L.F. is obtained from the Code Enforcement Officer.
- Any copper domestic water piping shall be type "K" or "L" copper, type "M" is prohibited.



1 DRAIN & VENT PLAN
SCALE: 1/4" = 1'-0"



2 DOMESTIC WATER & GAS PLAN
SCALE: 1/4" = 1'-0"



ABBREVIATIONS

A	AMPERE
AC	ALTERNATING CURRENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPERES INTERRUPTING CAPACITY
AL	ALUMINUM
ASYM	ASYMMETRICAL
ATS	AUTOMATIC TRANSFER SWITCH
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
BKR	BREAKER
C	CONDUIT
CAB	CABINET
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CT	CURRENT TRANSFORMER
CU	COPPER
DC	DIRECT CURRENT
DISC	DISCONNECT
EG	EQUIPMENT GROUND
EH	ELECTRICALLY HELD
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
EO	ELECTRICALLY OPERATED
EPR	ETHYLENE PROPYLENE RUBBER
EQUIP	EQUIPMENT
EX	EXTERIOR
FA	FIRE ALARM
FC	FOOT-CANDLE
FDR	FEEDER
FLUOR	FLUORESCENT
FS	FLOW SWITCH (FA SYSTEM)
FVNR	FULL VOLTAGE NON REVERSING
FVR	FULL VOLTAGE REVERSING
GEN	GENERATOR
GF	GROUND FAULT
GFI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
HO	HAND HOLE
HOA	HAND-OFF-AUTOMATIC
HP	HORSE POWER
HPS	HIGH PRESSURE SODIUM
HV	HIGH VOLTAGE
HZ	HERTZ
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
INCAND	INCANDESCENT
JB	JUNCTION BOX
KCMIL	THOUSAND CIRCULAR MILS
KV	KILOVOLT
KVA	KILO VOLT-AMPERE
KW	KILOWATT
KWH	KILOWATT HOUR
LPS	LOW PRESSURE SODIUM
LTG	LIGHTING
LSW	LIGHT SWITCH
LV	LOW VOLTAGE
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTION
MH	METAL HALIDE
EMH	ELECTRICAL MANHOLE
MLO	MECHANICALLY OPERATED
MO	MECHANICALLY OPERATED
MOD	MOTOR OPERATED DAMPER
MTS	MANUAL TRANSFER SWITCH
MV	MERCURY VAPOR
MVA	MEGAVOLT-AMPERE
NC	NORMALLY CLOSED
NO	NORMALLY OPENED
OH	OVERHEAD
OL	OVER LOAD
OQA	ON-OFF-AUTOMATIC
OSY	OUTSIDE STEM & YOKE VALVE (FA SYSTEM)
P	POLE
PB	PUSH BUTTON
PF	POWER FACTOR
PH	PHASE
PNL	PANEL
PRI	PRIMARY
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE
RGSC	RIGID GALVANIZED STEEL CONDUIT
RVSS	REDUCED VOLTAGE SOLID STATE
RSC	RIGID STEEL CONDUIT
RVAT	REDUCED VOLTAGE AUTO TRANSFORMER
S	SIGNAL
SEC	SECONDARY
SHLD	SHIELDED CABLE
SW	SWITCH
SWBD	SWITCHBOARD
SYM	SYMMETRICAL
T	TELEPHONE
TR	TRANSFORMER
TBD	TO BE DETERMINED
TD	TELEDIALER
TDR	TIME DELAY RELAY
TEL	TELEPHONE
TM	TELEMETRY
UG	UNDERGROUND
UT	UTILITY
V	VOLT
VA	VOLT-AMPERE
VFD	VARIABLE FREQUENCY DRIVE
W	WATT
WH	WATT HOUR
WP	WEATHERPROOF
XFMR	TRANSFORMER
XLP	CROSS LINKED POLYETHYLENE
XP	EXPLOSION PROOF

POWER SYMBOLS

	CIRCUIT BREAKER
	GROUND CONNECTION
	HOME RUN TO PANEL (CKT. NO. AS SHOWN)
	TRANSFORMER
	CURRENT TRANSFORMER
	POTENTIAL TRANSFORMER
	20 AMPERE, 120 VOLT DUPLEX RECEPTACLE, +18" AFF
	20 AMPERE, 120 VOLT DOUBLE DUPLEX RECEPTACLE, +18" AFF
	20 AMPERE, 120 VOLT SINGLE RECEPTACLE
	20 AMPERE, 120 VOLT DUPLEX GFCI RECEPTACLE, +18" AFF
	OTHER POWER RECEPTACLE NEMA DESIGNATION AS NOTED
	MOTOR
	JUNCTION BOX
	POWER POLE CONNECTION TO MODULAR FURNITURE WHIP
	TRANSFORMER
	CIRCUIT BREAKER SIZED AS NOTED
	ELECTRICAL PANEL
	BUS DUCT AMPERE RATING AS NOTED
	FLOOR RECEPTACLE CONDUIT INSTALLED IN SLAB
	UNFUSED SAFETY SWITCH, RATING AS NOTED
	FUSED SAFETY SWITCH, RATING AS NOTED
	MAGNETIC MOTOR STARTER, RATING AS NOTED
	MANUAL TOGGLE OPERATED MOTOR STARTER
	SMOKE DAMPER TOGGLE
	ELECTRIC ACTUATED VALVE
	MOTOR CONTACTOR
	CONTACT NORMALLY OPEN
	CONTACT NORMALLY CLOSED
	SELECTOR SWITCH
	TEMPERATURE SWITCH
	PILOT LIGHT

SYSTEMS SYMBOLS

	TELEPHONE SYSTEM WALL JACK
	COMBINATION VOICE/DATA SYSTEM OUTLET
	COMBINATION VOICE/DATA SYSTEM OUTLET IN FLOOR BOX. FURNISH 1" CONDUIT IN SLAB
	CEILING MOUNTED JACK FOR WIRELESS ACCESS POINT.
	CATV JACK
	SECURITY SYSTEM DOOR SWITCH
	ELECTRIC DOOR LOCK SET
	SECURITY SYSTEM CARD ACCESS PAD
	INTERCOM SYSTEM SPEAKER
	INTERCOM MASTER STATION
	CABLE TRAY
	PUSH BUTTON
	DOOR BELL
	CARD READER
	CAMERA

4D = 4 CAMERA DOME

LIGHTING SYMBOLS

	LIGHT FIXTURE
	LIGHT FIXTURE W/ EMERGENCY BATTERY BALLAST
	WALL MOUNTED LIGHT FIXTURE
	PENDANT MOUNTED LIGHT FIXTURE
	STRIP/WRAP LIGHT FIXTURE
	EXTERIOR WALL-PACK
	ROUND RECESSED CEILING MOUNTED FIXTURE
	SURFACE MOUNTED FIXTURE
	WALL MOUNTED LIGHTING FIXTURE
	WALL SCONCE
	TRACK LIGHTING FIXTURE (TRACK MOUNTED FIXTURE TYPE MAY VARY)
	EMERGENCY LED EXIT SIGN
	COMBINATION EMERGENCY EXIT SIGN & LIGHTING FIXTURE WITH DUAL LAMPS HEADS BATTERY AND CHARGER
	EMERGENCY LIGHTING FIXTURE WITH DUAL LAMPS HEADS BATTERY AND CHARGER
	REMOTE EMERGENCY LIGHTING LAMP HEAD
	LIGHT SWITCH
	DENOTES FIXTURE SWITCHED P = PILOT LIGHT (WHERE NOTED)
	3 = 3-WAY (WHERE NOTED)
	4 = 4-WAY (WHERE NOTED)
	LIGHT SWITCH
	ULTRASONIC/INFRARED OCCUPANCY SENSOR
	TIME CLOCK
	LIGHTING CONTACTOR
	PHOTOCELL

C = CEILING MOUNTED
W = WALL MOUNTED
48" AFF (TO TOP)

GENERAL NOTES

- ALL WORK SHALL BE IN COMPLIANCE WITH NFPA-70, NATIONAL ELECTRICAL CODE.
- ALL MOTOR SAFETY SWITCHES, DISCONNECTS AND MOTOR STARTERS ARE FURNISHED BY DIVISION 16000 UNLESS NOTED AS FURNISHED WITH EQUIPMENT (FWE).
- ALL PENETRATIONS THROUGH FLOORS, RATED WALLS AND PARTITIONS SHALL BE SEALED WITH A UL APPROVED FIRE SEALANT MATERIAL TO MAINTAIN THE RATING OF THE SEPARATION.
- LIGHTING TOGGLE SWITCHES SHALL BE COMMERCIAL SPECIFICATION GRADE, 120 VOLT, SIDE WIRED AS MANUFACTURED BY LEVITON, PASS & SEYMOUR, OR APPROVED EQUAL.
- CONVENIENCE RECEPTACLES SHALL BE COMMERCIAL SPECIFICATION GRADE UNLESS SHOWN OTHERWISE. GROUNDING TYPE, NEMA 5-20R, SIDE WIRED, AS MANUFACTURED BY LEVITON, PASS & SEYMOUR, OR APPROVED EQUAL.
- DEVICE COVERPLATES SHALL BE BRUSHED STAINLESS STEEL COVERPLATES. ALL DEVICES SHALL BE WHITE.
- UNLESS OTHERWISE NOTED ALL HOMERUNS FOR 15 OR 20A CIRCUITS SHALL BE #12AWG & #12GND. HOMERUNS FED FROM 20A, 1P CIRCUITS IN EXCESS OF 100 FEET (FOR 120V CIRCUITS) SHALL BE #10AWG. ALL WIRING SHALL BE COPPER.
- CONDUIT SYSTEMS: EXPOSED INTERIOR CONDUITS SHALL BE EMT, 3/4" MINIMUM. PROPERLY SUPPORTED MC CABLE ASSEMBLIES MAY BE USED ABOVE CEILINGS AND IN WALLS. FLEXIBLE LIQUIDTIGHT CONDUIT WHIPS SHALL BE USED FOR CONNECTION TO VIBRATING EQUIPMENT IN THE MECHANICAL ROOM.
- MOUNTING HEIGHTS FOR EQUIPMENT SHALL BE AS FOLLOWS:
 - CONVENIENCE RECEPTACLES: 18" AFF TO BOTTOM OF BOX
 - LIGHTING TOGGLE SWITCHES: 48" AFF TO TOP OF BOX



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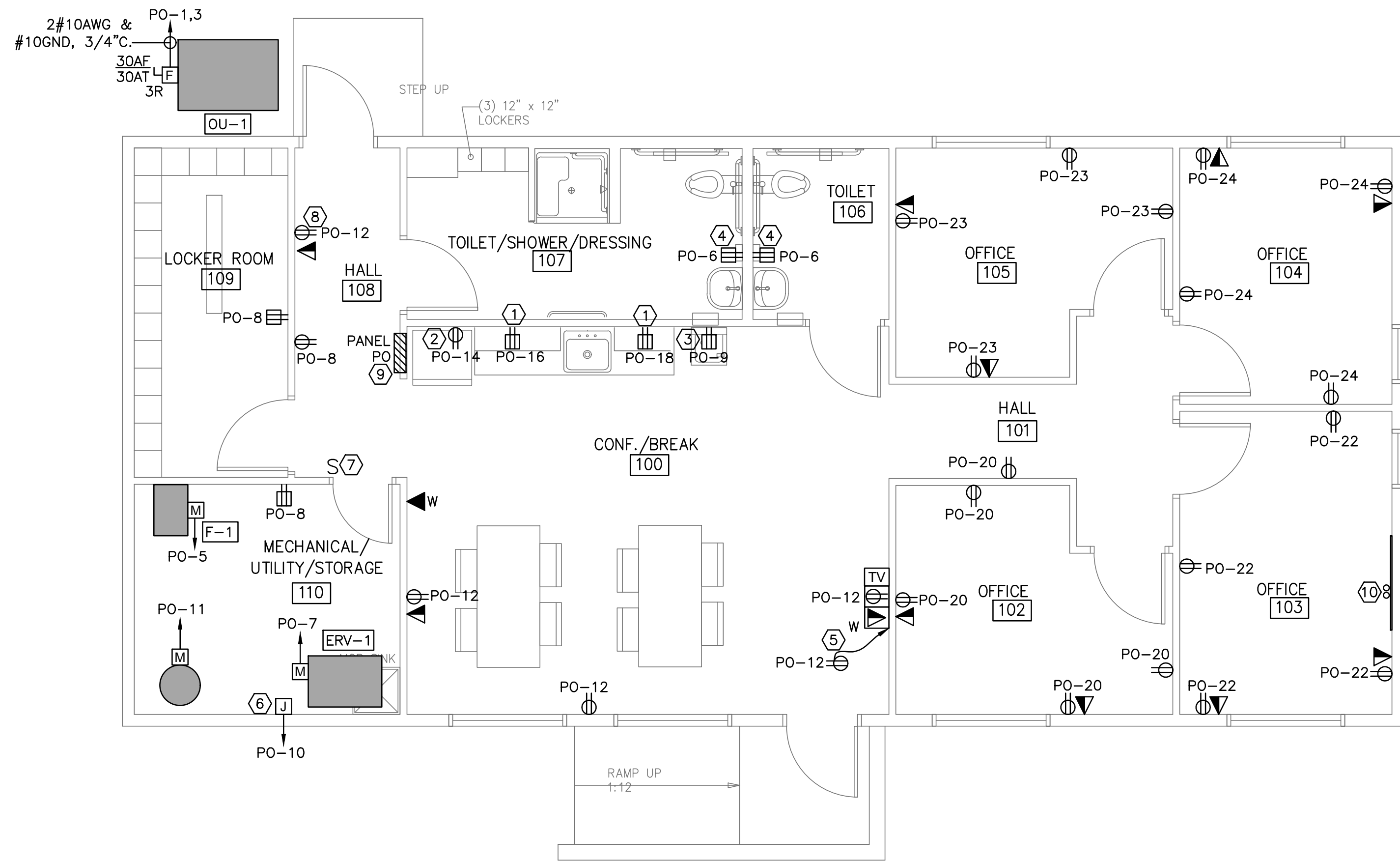
BID SET - 9/5/18

SEPTEMBER 5th, 2018

ELECTRICAL GENERAL
NOTES & LEGEND

Scale: As Noted

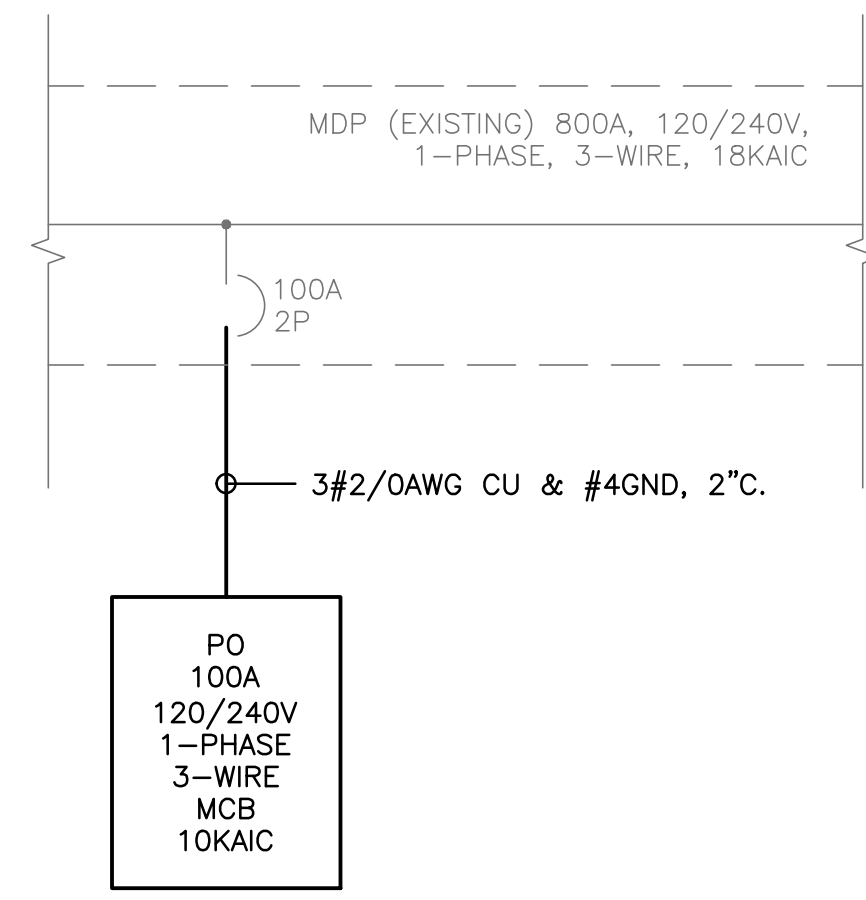
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1 ELECTRICAL POWER & SYSTEMS PLAN
SCALE: 1/4"=1'

DIRECTORY	KVA LOAD		CKT #	BRK AMPS	PHASE	BRK AMPS	CKT #	KVA LOAD		DIRECTORY	
	A	B						A	B		
CU-1	1.9		1	30	A	20	2	0.4		LOCKER/CONF. RM LTS.	
		1.9	3		B	20	4		0.4	OFFICE LTS.	
F-1	1.2		5	20	A	20	6	0.4		TOILET RECEPITS	
ERV-1		0.4	7	20	B	20	8		0.4	LOCKER/MECH RECEPITS	
WATER FOUNTAIN	0.6		9	20	A	20	10	1.0		MECH CONTROLS	
HWH		0.1	11	20	B	20	12		0.8	CONF./BREAK RECEPITS	
SPARE	*		13	20	A	20	14	0.5		REFRIGERATOR	
SPARE		*	15	20	B	20	16		0.2	COUNTERTOP RECEPITS	
SPARE	*		17	20	A	20	18	0.2		COUNTERTOP RECEPITS	
SPARE		*	19	20	B	20	20	1.0		OFFICE 102/HALL 101 RECEPITS	
SPARE	*		21	20	A	20	22	0.8		OFFICE 103 RECEPITS	
OFFICE 105 RECEPITS		*	23	20	B	20	24		0.8	OFFICE 104 RECEPITS	
SUBTOTAL	3.7	3.3						3.3	3.6	SUBTOTAL	
VOLTAGE: 120Y/240V		PHASE: 1		POLES: 3		TOTAL KVA A-PHASE		7.0		PANEL	PO
MAIN BREAKER: 100A		BUS AMPS: 100A		TOTAL KVA B-PHASE		6.9					
MOUNTING: RECESSED										LOCATION	MECHANICAL ROOM
SHORT CIRCUIT RATING: 10KAIC						TOTAL KVA		13.9			

2 PANEL SCHEDULE
SCALE: NOT TO SCALE



3 ONE-LINE DIAGRAM (PARTIAL)
SCALE: NOT TO SCALE

NOTES:

- SEE E.O FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES.
- TELEPHONE, DATA AND CATV SERVICE TO BE COORDINATED WITH LOCAL UTILITY. EXISTING TRAILER ON SITE IN SAME LOCATION ALREADY HAS SERVICE.
- INTENT IS TO FEED THIS OUT OF THE NEW MDP PANEL AT THE EAST END OF THE BUILDING, CURRENTLY UNDER CONSTRUCTION. THIS PROJECT SHALL BE COMPLETED PRIOR TO ENERGIZING NEW OFFICE STRUCTURE. NOTE THAT THIS IS APPROXIMATELY 540' CIRCUIT FEET AWAY FROM NEW PANEL LOCATION.

KEYED NOTES:

- MOUNT 6" ABOVE COUNTERTOP COORDINATE WITH BACKSPASH.
- REFRIGERATOR.
- BOTTLE FILLER. COORDINATE LOCATION OF RECEPTACLE WITH EQUIPMENT FURNISHED.
- MOUNT 48" AFF TO TOP OF BOX.
- FURNISH THREE GANG RECESSED TV BOX. AS MANUFACTURED BY LEGRAND MODEL TV3WMTVSSW, OR EQUAL. MOUNT 60" AFF.
- MECHANICAL CONTROLS COORDINATE LOCATION WITH MECHANICAL CONTRACTOR.
- WIRE EMERGENCY POWER SWITCH AND FIRE TROL DEVICE AS REQUIRED BY CODE.
- TIMECLOCK.
- FURNISH CONDUIT PENETRATION THROUGH ROOF. DIRECTLY INTO PANEL.
- TELEPHONE/DATA BACKBOARD 4' X 4' MOUNTED 5' AFF MOUNT PUNCHDOWN BLOCK HERE. RUN AND TERMINATE ALL CAT6 TO BLOCK. FURNISH SERVICE MASTS - (2)-3" GRS ALONG SIDE OF BUILDING PENETRATING WALL AT BACKBOARD FOR UTILITY DEMARICATION POINT.



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CITY OF PORTLAND PUBLIC WORKS DEPARTMENT:
Sanitation Office/
Crew Space
109 District Rd,
Portland

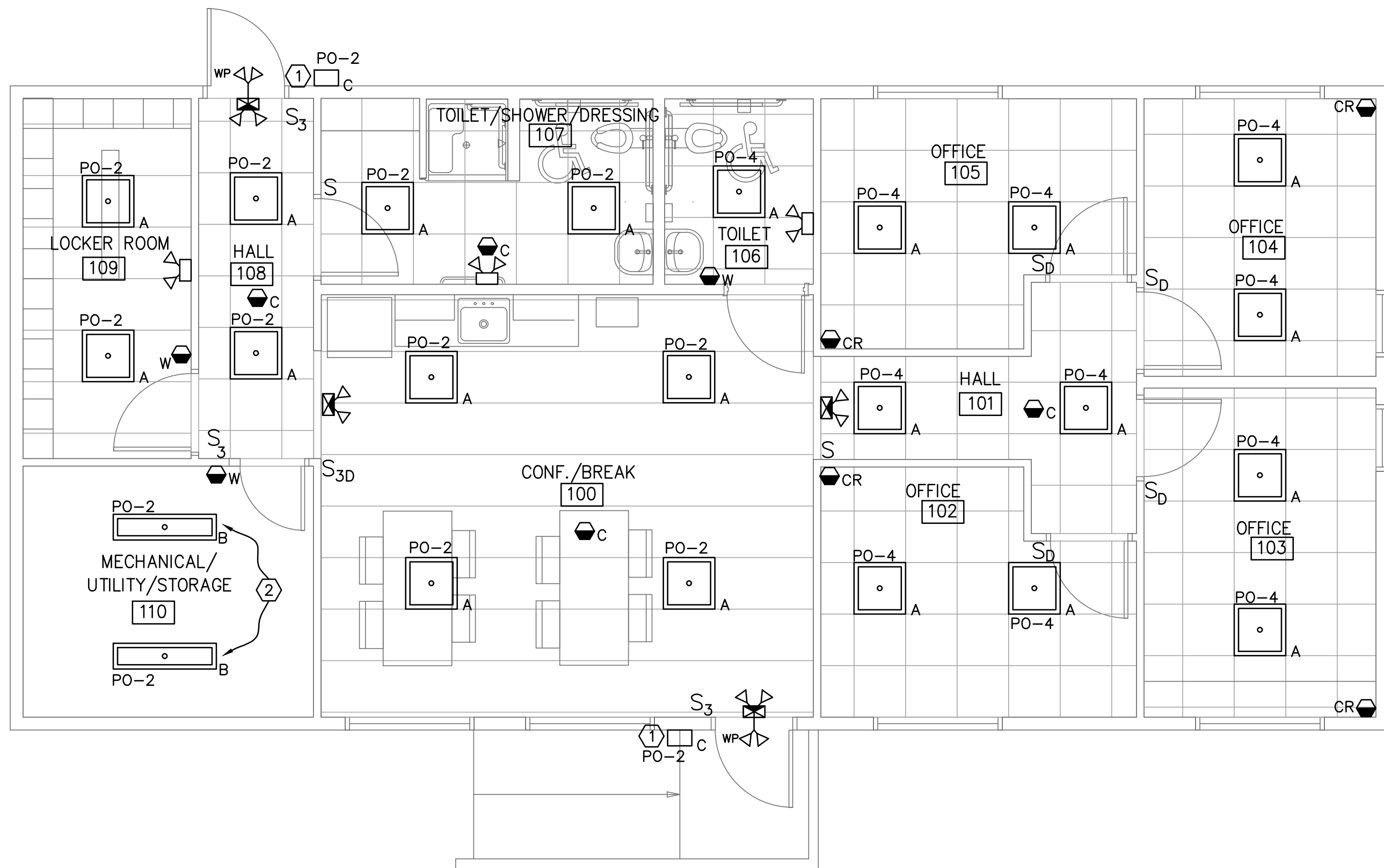
BID SET - 9/5/18

SEPTEMBER 5th, 2018

ELECTRICAL POWER & SYSTEMS PLAN, ONE-LINE DIAGRAM & PANEL SCHEDULES

Scale: As Noted

E1.0



1 ELECTRICAL LIGHTING & FIRE ALARM PLAN
SCALE: 1/4"=1'

NOTES:

1. SEE E0.0 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES.

KEYED NOTES:

- ① CONTROLLED BY PHOTOCELL WITH OVERRIDE IN MECHANICAL ROOM.
- ② MOUNT FIXTURES ON CEILING, COORDINATE EXACT LOCATION IN FIELD TO AVOID CONFLICTS WITH MECHANICAL DUCTWORK.



Reviewed for Code Compliance
Permitting and Inspections Department
Approved with Conditions

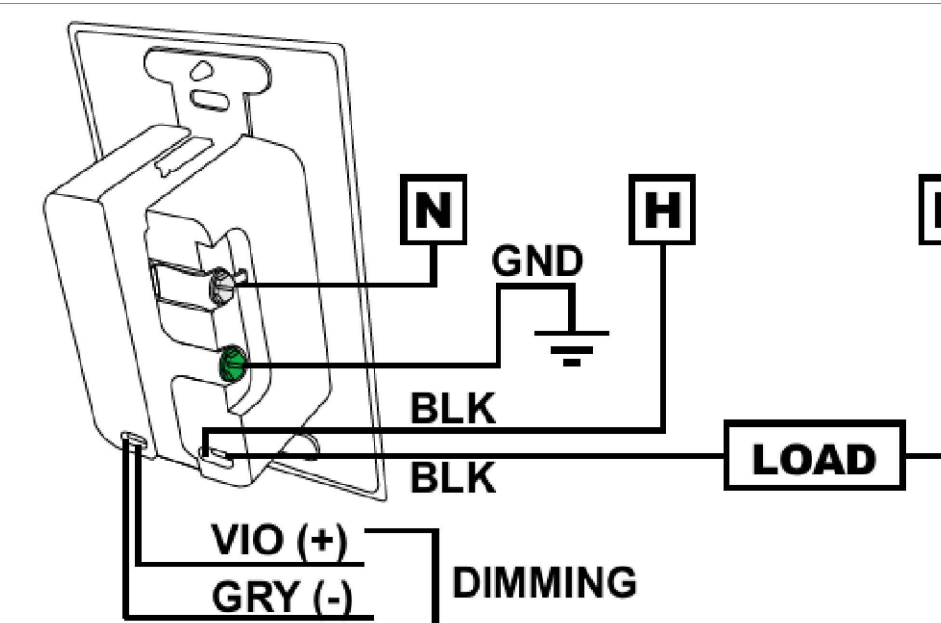
12/03/2018



LIGHTING SCHEDULE					
TYPE	DESCRIPTION	MANUFACTURER	LAMPS	MOUNTING	NOTES
A	2' X 2' EDGE LIT FLAT PANEL. DLC PREMIUM LISTED. 120V	COLUMBIA LIGHTING	32W LED 3500K 3300 LUMENS	CEILING GRID	MODEL #: CFP22-3335-HE
B	4' LENSED STRIPLIGHT 120V	COLUMBIA LIGHTING	19W LED 3500K 2576 LUMENS	CEILING SURFACE	MODEL #: LCL-4-35LW-EU
C	SMALL WALL PACK. 120V	LUMARK LIGHTING	18W LED 5000K 2135 LUMENS	WALL SURFACE	MODEL #: XT0R2B-PC1
C	CEILING MOUNTED DUAL TECHNOLOGY ULTRASONIC AND PASSIVE INFRARED OCCUPANCY SENSOR 120V	HUBBELL	N/A	CEILING SURFACE	MODEL #: OMNIDT500 FURNISH RELAYS/POWER PACKS AS REQUIRED FOR A COMPLETE AND OPERABLE INSTALLATION
CM	CORNER MOUNTED DUAL TECHNOLOGY ULTRASONIC AND PASSIVE INFRARED OCCUPANCY SENSOR 120V	HUBBELL	N/A	WALL CORNER	MODEL #: LODT FURNISH RELAYS/POWER PACKS AS REQUIRED FOR A COMPLETE AND OPERABLE INSTALLATION
W	WALL MOUNT PASSIVE INFRARED OCCUPANCY SENSOR 120V	HUBBELL	N/A	WALL	MODEL #: LHIRS11
⊞	EMERGENCY BATTERY UNIT 120V	DUAL-LITE	2W LED	WALL SURFACE	MODEL #: EV4D-02L
WP	WEATHER PROOF REMOTE HEAD. WHITE FINISH. 120V	DUAL-LITE	(2) 1W LED	WALL SURFACE	MODEL #: EVO-D-W
⊞	LED EXIT SIGN EMERGENCY BATTERY UNIT COMBINATION WITH REMOTE CAPACITY 120V	DUAL-LITE	(2) 1W LED	CEILING SURFACE	MODEL #: EVCU-R-W-D4
⊞	LED EXIT SIGN EMERGENCY BATTERY UNIT 120V	DUAL-LITE	2W LED	CEILING SURFACE	MODEL #: EVEU-R-W

2 LIGHTING SCHEDULE
SCALE: NOT TO SCALE

WIRE COLOR KEY
120/277 VAC WIRING
 BLACK* - Line 1 Input } *BLACK wires can be reversed
 BLACK* - Load 1 Output }
 VIOLET - Low Voltage Dim Output (0-10 VDC)
 GRAY - Low Voltage Common
347 VAC WIRING (-347 Option)
 Red wires replace Black wires.



NOTES:

- 1. PER NEC REQUIREMENTS, THE 0-10V (VIOLET AND GRAY) WIRES MUST BE INSTALLED AS CLASS ONE.
- 2. THE 0-10V (VIOLET AND GRAY) WIRES SHALL NOT EXCEED 240' IN LENGTH AND SHALL BE SIZED AS #18AWG.

3 SINGLE-POLE DIMMER WIRING APPLICATION
SCALE: NOT TO SCALE

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BID SET - 9/5/18

SEPTEMBER 5th, 2018

ELECTRICAL LIGHTING
PLAN & LIGHTING
SCHEDULE

Scale: As Noted

E2.0