

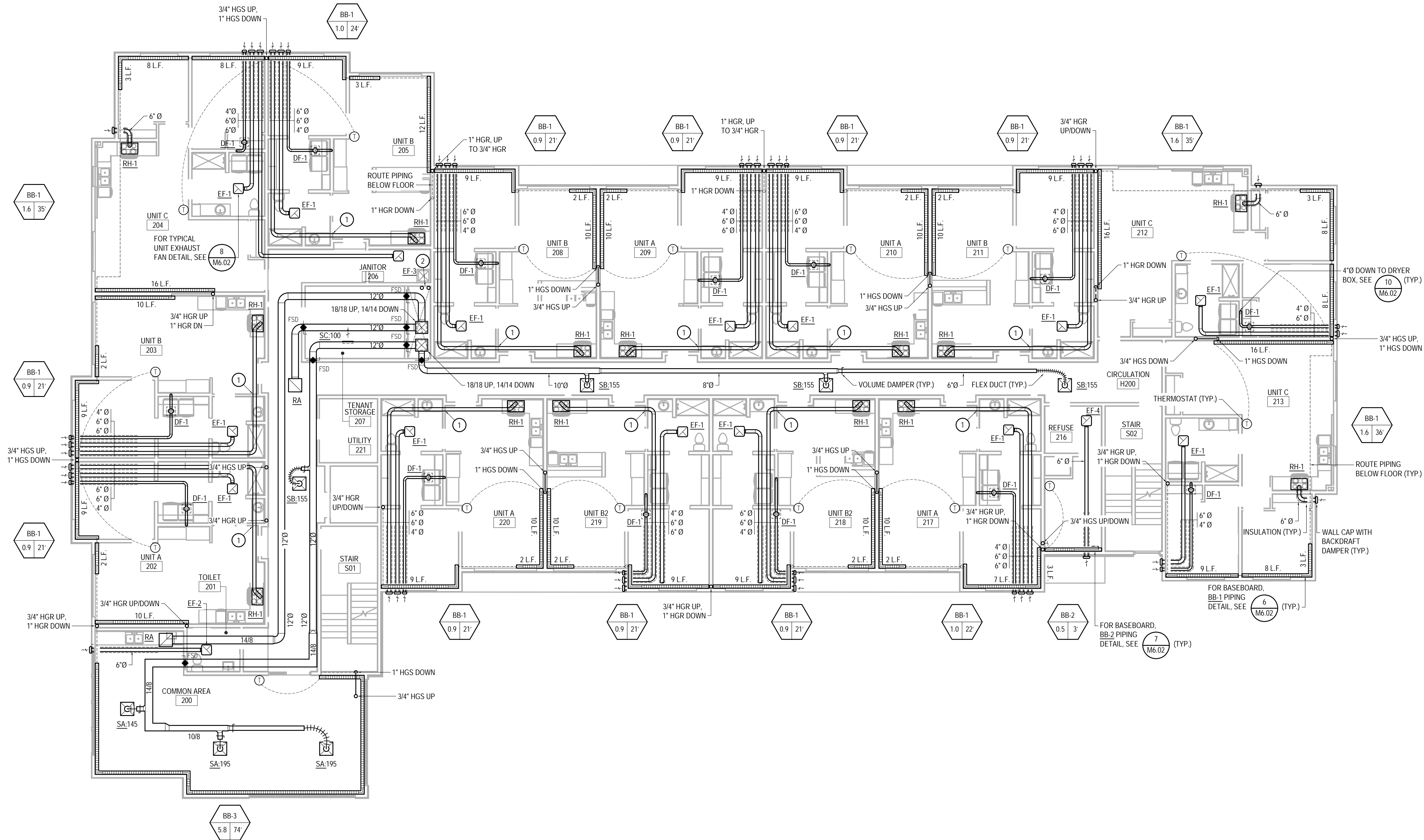
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1"
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SHEET NOTES

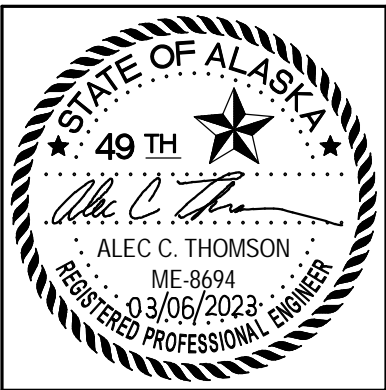
1. BRANCH PIPING TO INDIVIDUAL TERMINAL HEATING UNITS SHALL BE 3/4" UNLESS OTHERWISE INDICATED ON PLANS OR SCHEDULES. BRANCH PIPING FOR BB-3 SHALL BE 1".

KEY NOTES

1. COORDINATE WITH ELECTRICAL SUCH THAT THE ELECTRICAL PANEL IS NOT LOCATED BELOW DUCT.
2. 1-1/2" HEATING GLYCOL RETURN AND SUPPLY UP TO ROOF.



1 LEVEL 2 HEATING AND VENTILATION PLAN
SCALE: 1/8" = 1'-0"



CERTIFICATE OF AUTHORIZATION NO:
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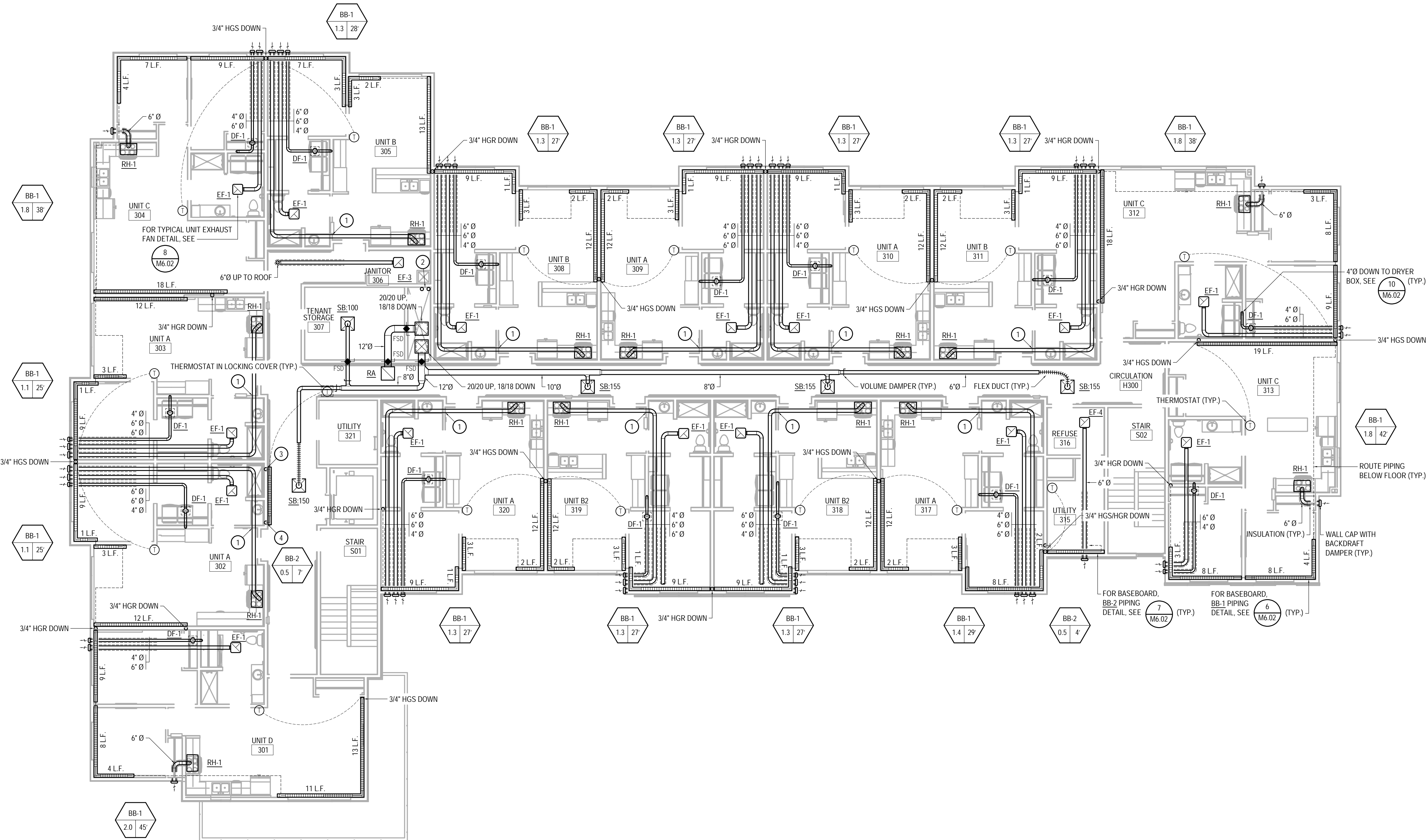
ASPEN HOUSE LIMITED PARTNERSHIP
ASPEN HOUSE SENIOR APARTMENTS
WASILLA, ALASKA

REVISION SCHEDULE		
#	DESCRIPTION	DATE

JOB NO. 2023.007.0
DATE 03/06/2023
DRAWN DBS/STH/MDP
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SHEET NAME
LEVEL 2
HEATING AND
VENTILATION PLAN

SHEET NO.
M2.03



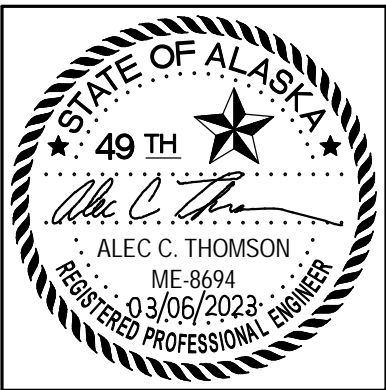
1 LEVEL 3 HEATING AND VENTILATION PLAN
SCALE: 1/8" = 1'-0"

SHEET NOTES

1. BRANCH PIPING TO INDIVIDUAL TERMINAL HEATING UNITS SHALL BE 3/4" UNLESS OTHERWISE INDICATED ON PLANS OR SCHEDULES.
2. PROVIDE PIPE GUIDES PER EXPANSION LOOP MANUFACTURER'S RECOMMENDATIONS.

KEY NOTES

1. COORDINATE WITH ELECTRICAL SUCH THAT THE ELECTRICAL PANEL IS NOT LOCATED BELOW DUCT.
2. 1-1/2" HEATING GLYCOL RETURN AND SUPPLY UP TO ROOF.
3. 3/4" HEATING GLYCOL SUPPLY DOWN.
4. 3/4" HEATING GLYCOL RETURN DOWN.



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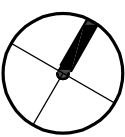
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ASPEN HOUSE SENIOR APARTMENTS
WASILLA, ALASKA

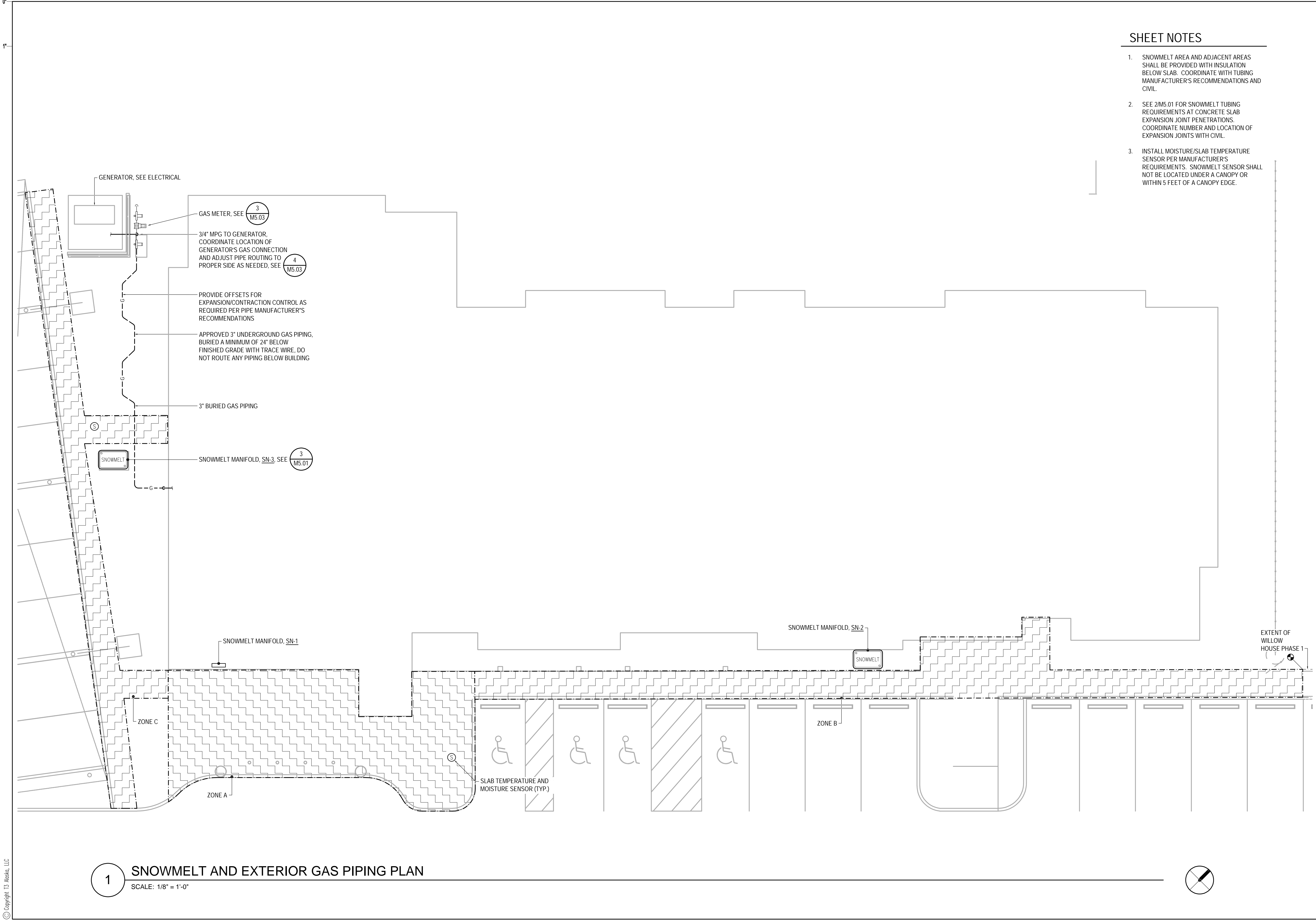
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SHEET NAME
LEVEL 3
HEATING AND
VENTILATION PLAN

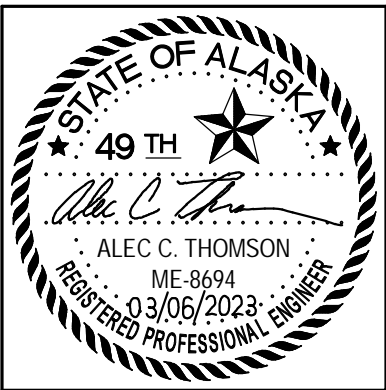
SHEET NO.
M2.04





SHEET NOTES

1. SNOWMELT AREA AND ADJACENT AREAS SHALL BE PROVIDED WITH INSULATION BELOW SLAB. COORDINATE WITH TUBING MANUFACTURER'S RECOMMENDATIONS AND CIVIL.
2. SEE 2/M5.01 FOR SNOWMELT TUBING REQUIREMENTS AT CONCRETE SLAB EXPANSION JOINT PENETRATIONS. COORDINATE NUMBER AND LOCATION OF EXPANSION JOINTS WITH CIVIL.
3. INSTALL MOISTURE/SLAB TEMPERATURE SENSOR PER MANUFACTURER'S REQUIREMENTS. SNOWMELT SENSOR SHALL NOT BE LOCATED UNDER A CANOPY OR WITHIN 5 FEET OF A CANOPY EDGE.



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SHEET NAME
SNOWMELT PLAN
AND EXTERIOR
GAS PIPING

SHEET NO.
M2.05

1 SNOWMELT AND EXTERIOR GAS PIPING PLAN
SCALE: 1/8" = 1'-0"

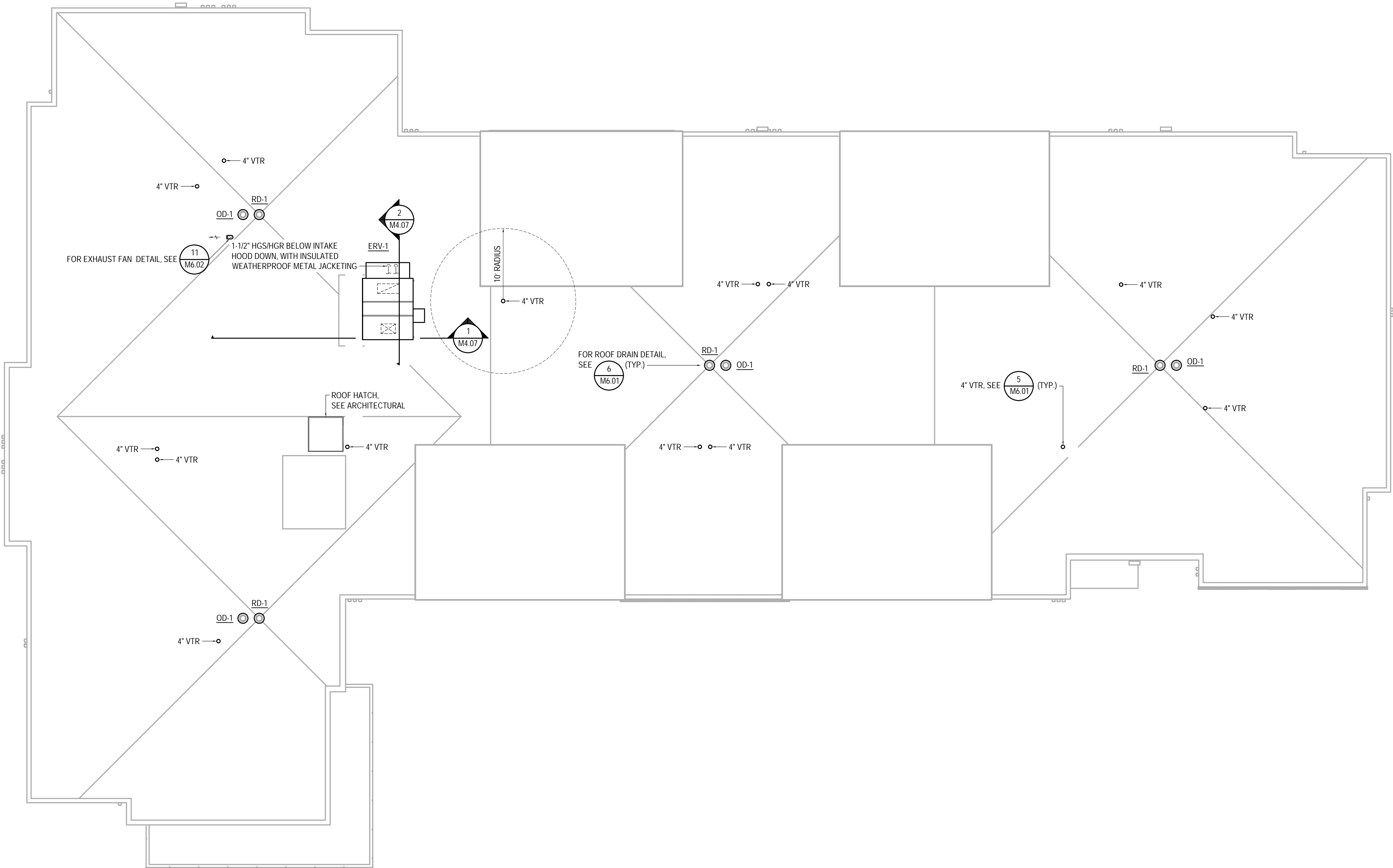
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1

MECHANICAL ROOF PLAN

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



SHEET NOTES

1. BRANCH PIPING TO INDIVIDUAL PLUMBING FIXTURES SHALL EQUAL THE SIZE INDICATED ON THE PLUMBING FIXTURE SCHEDULE UNLESS OTHERWISE INDICATED.
2. STORM DRAIN PIPING SHALL BE SLOPED AT 1/8" PER LINEAR FOOT MINIMUM.



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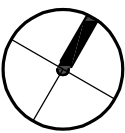
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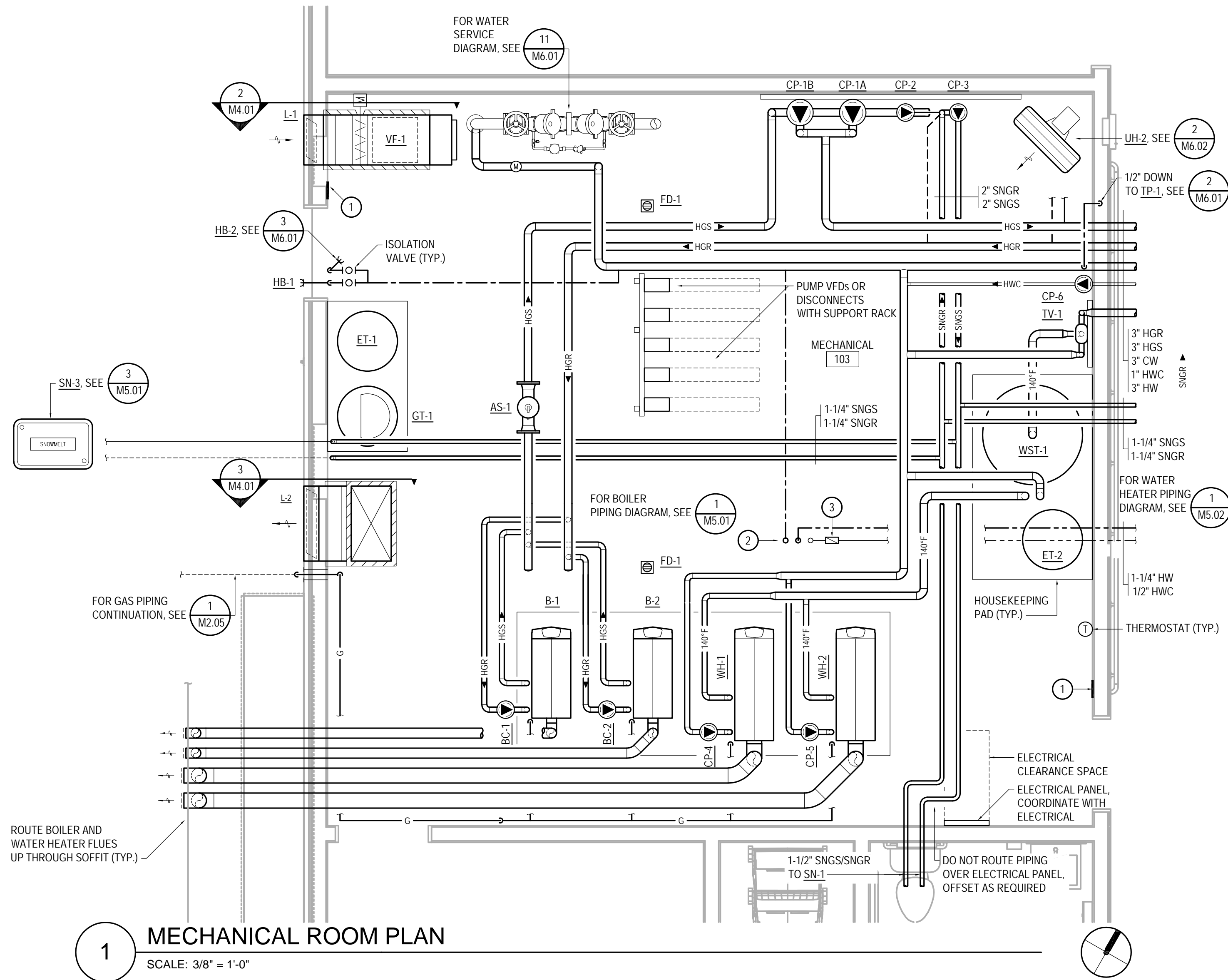
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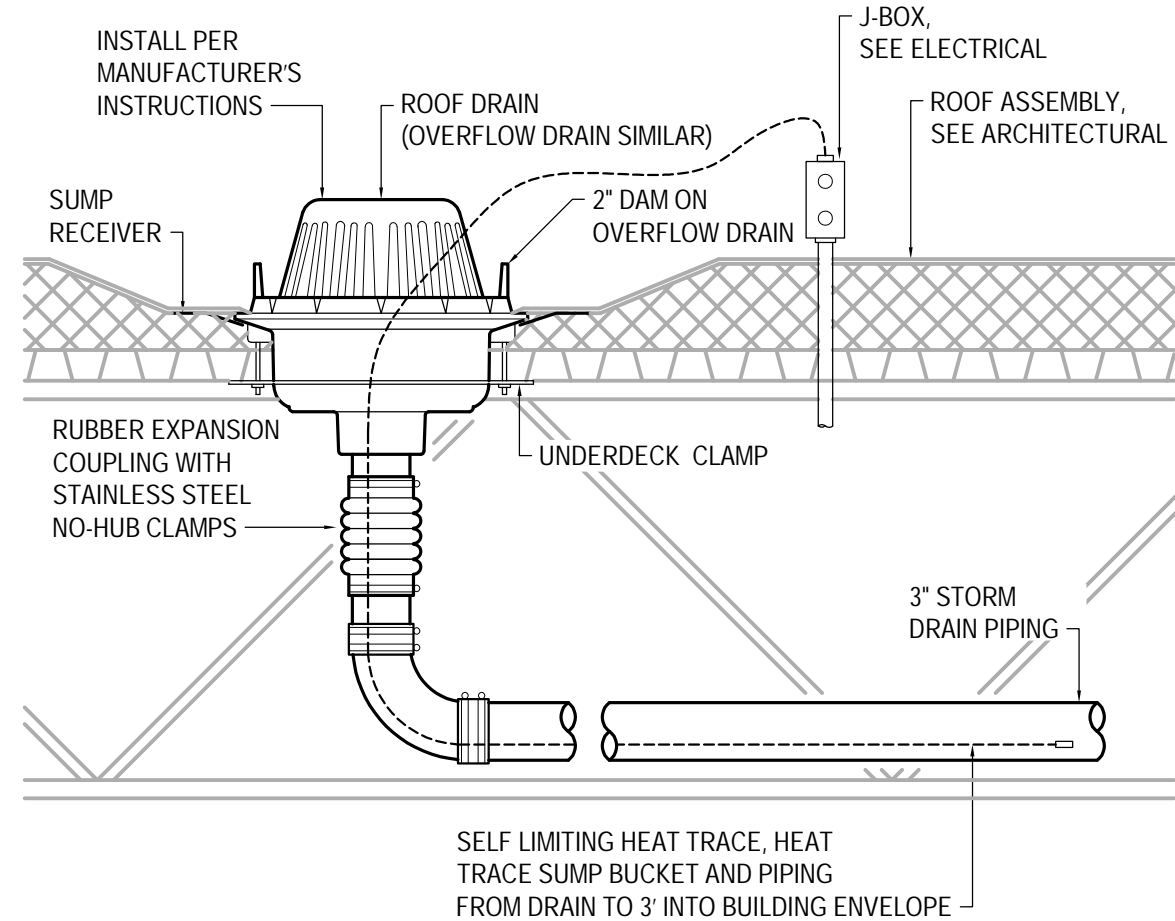
SHEET NAME
MECHANICAL ROOF PLAN

SHEET NO.
M3.01

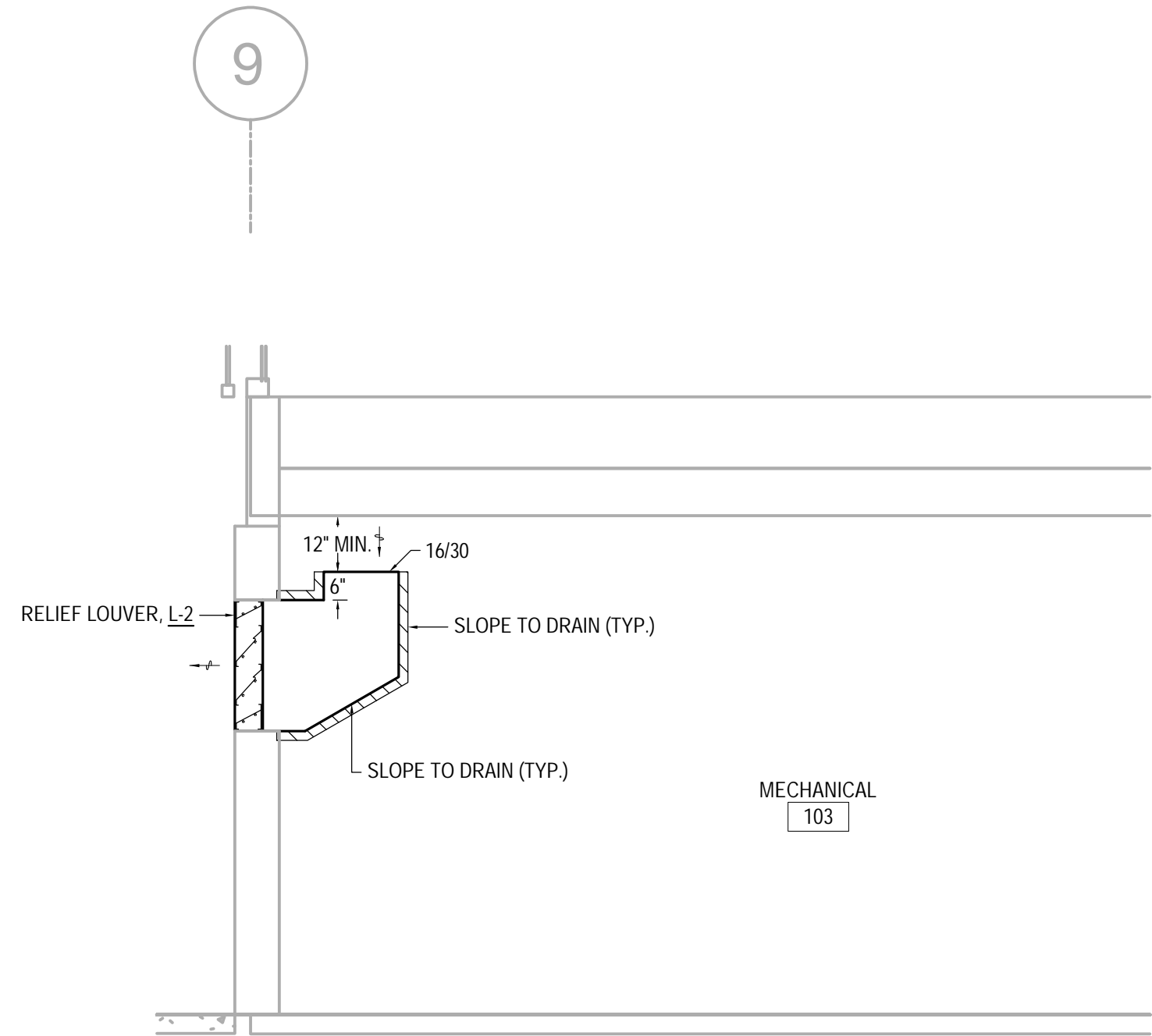




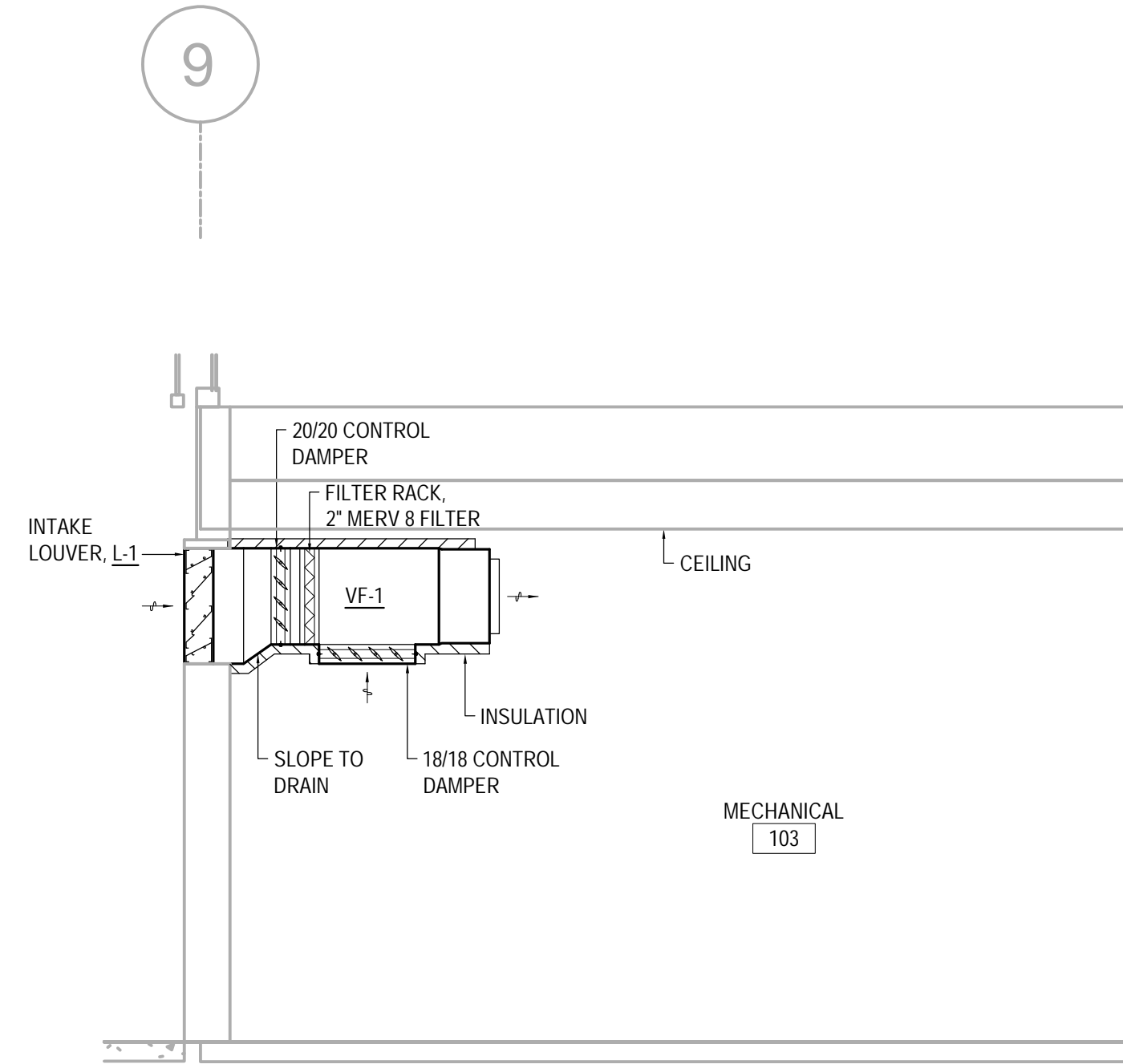
1 MECHANICAL ROOM PLAN
SCALE: 3/8" = 1'-0"



4 CANOPY DRAIN DETAIL
SCALE: NONE



2 MECHANICAL ROOM COMBUSTION / RELIEF AIR SECTION
SCALE: 3/8" = 1'-0"



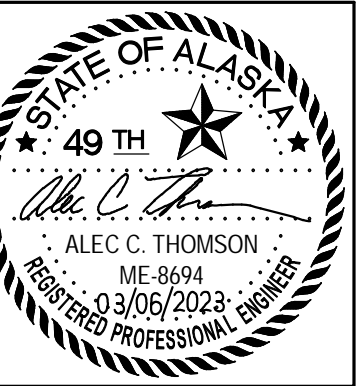
3 MECHANICAL ROOM VENTILATON FAN SECTION
SCALE: 3/8" = 1'-0"

SHEET NOTES

1. AIR SEPARATORS ARE TO BE SUPPORTED AND RESTRAINED FOR UNIT WEIGHT AND FULL WATER CAPACITY.

KEY NOTES

- 1 ASME IV EMERGENCY BOILER SHUTDOWN SWITCH. PROVIDE WITH CLEAR FLIP COVER TO PROTECT AGAINST ACCIDENTAL ACTIVATION. LABEL SWITCH "EMERGENCY BOILER SHUTDOWN". COORDINATE WITH ELECTRICAL.
- 2 1/2" HOT WATER CIRCULATED, 1-1/4" HOT WATER, AND 1-1/4" COLD WATER UP TO LEVELS 2 AND 3.
- 3 PROVIDE AUTOMATIC FLOW LIMITING VALVE WITH 0.33 GPM CARTRIDGE.



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WASILLA, ALASKA

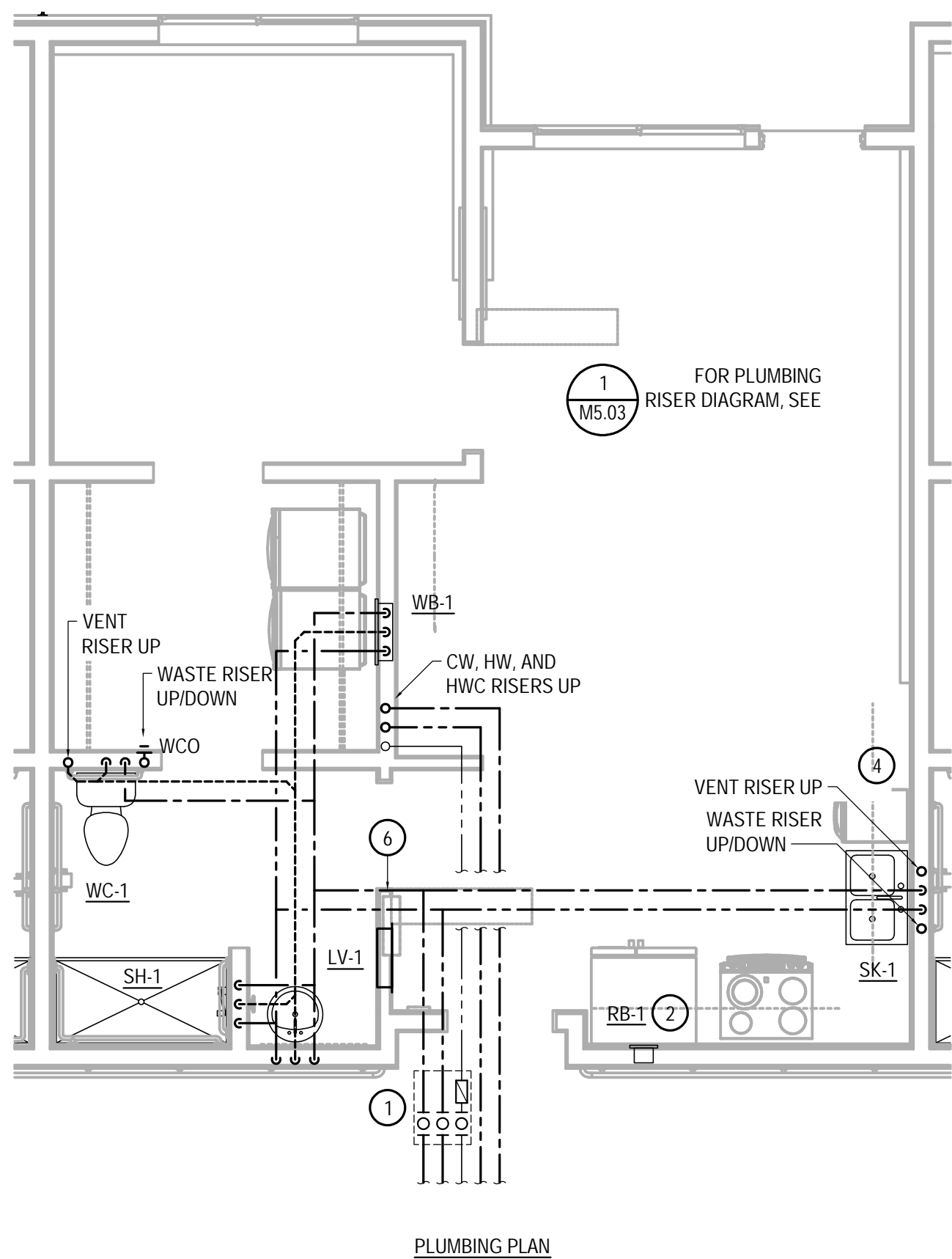
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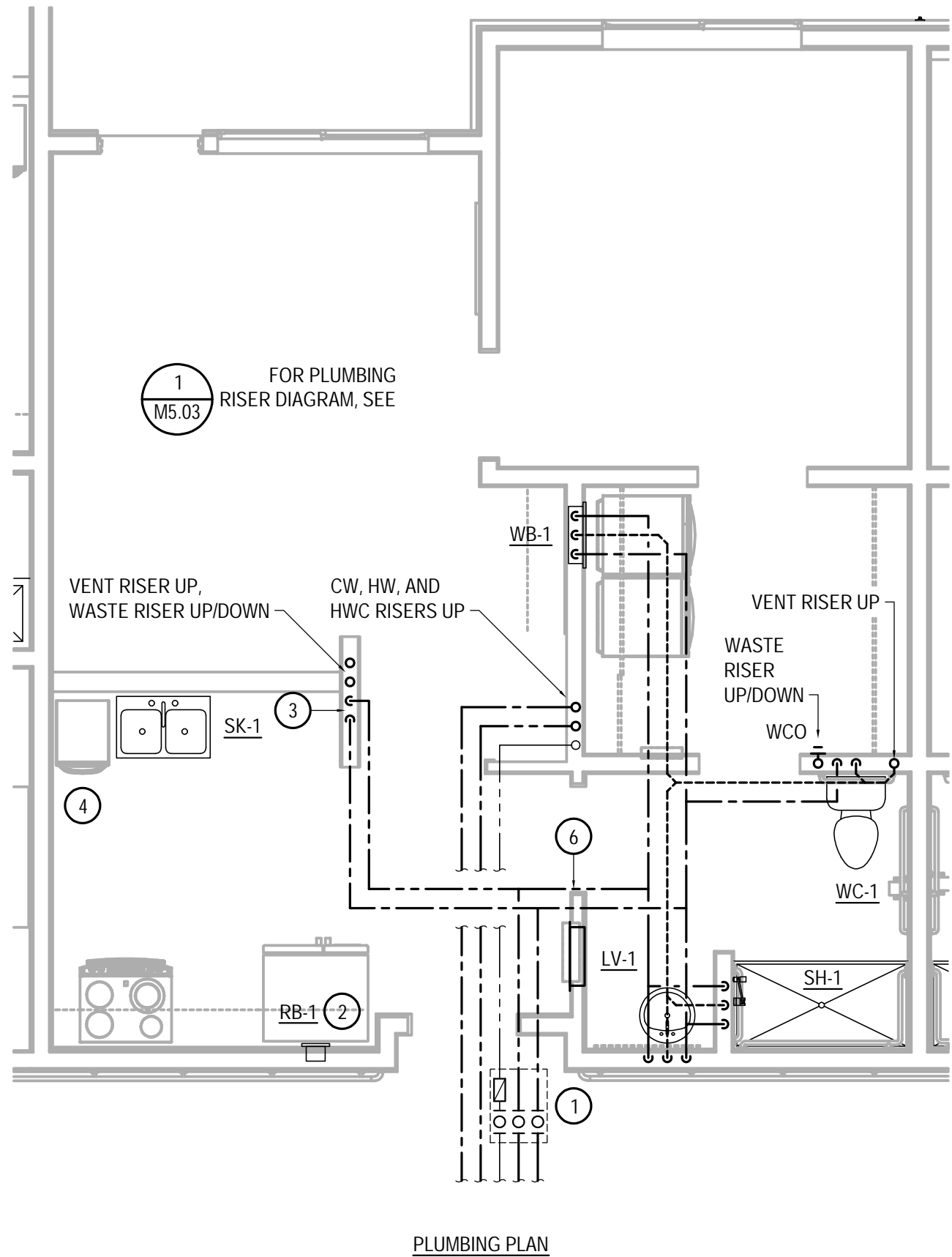
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MECHANICAL ROOM
PLAN AND SECTIONS

SHEET NO.
M4.01

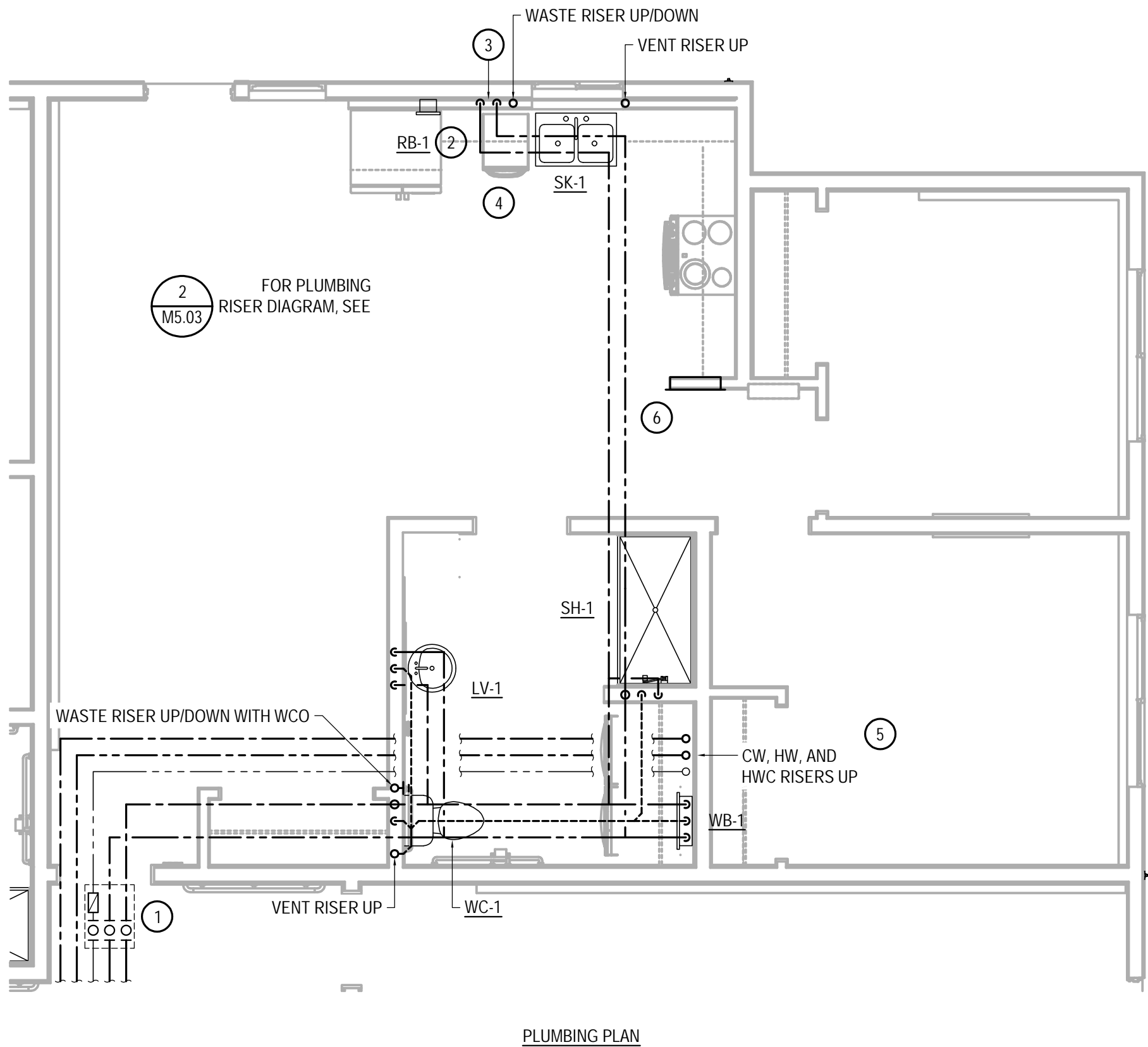
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1
TYPICAL LEVEL 1
UNIT A PLUMBING PLANS
SCALE: 1/4" = 1'-0"



2
TYPICAL LEVEL 1
UNIT B, B2 PLUMBING PLANS
SCALE: 1/4" = 1'-0"



3
TYPICAL LEVEL 1
UNIT C PLUMBING PLANS
SCALE: 1/4" = 1'-0"

SHEET NOTES

1. BRANCH PIPING TO INDIVIDUAL PLUMBING FIXTURES SHALL EQUAL THE SIZE INDICATED ON THE PLUMBING FIXTURE SCHEDULE UNLESS OTHERWISE INDICATED.
2. PROVIDE CLEANOUT ON ALL INDIVIDUAL SINK RISERS.
3. DO NOT ROUTE ANY PIPING IN EXTERIOR WALLS. PIPING SHOWN CLOSE TO EXTERIOR WALLS ARE TO BE ROUTED IN FURRED OUT WALL CAVITIES, SEE ARCHITECTURAL.
4. INSTALL WASHER BOX BEHIND WASHER. COORDINATE WASHER/DRYER ARRANGEMENT WITH ARCHITECTURAL INTERIOR ELEVATIONS.

KEY NOTES

1. PROVIDE ACCESS DOOR TO VALVES LOCATED IN GWB CEILING.
2. PROVIDE 1/2" COLD WATER LINE TO RECESSED WATER CONNECTION BOX, RB-1, TO SERVE REFRIGERATOR. PROVIDE CONNECTION BETWEEN RB-1 AND APPLIANCE PER APPLIANCE MANUFACTURER'S RECOMMENDATIONS.
3. ROUTE 1/2" COLD WATER AND 1/2" HOT WATER DOWN WALL AND THROUGH CABINETRY OR PONY WALL TO SINK, SK-1.
4. PROVIDE WATER LINE TO DISHWASHER PER MANUFACTURER'S RECOMMENDATION. PROVIDE AIR GAP FITTING AT ADJACENT SINK FOR DISHWASHER DRAIN. CONNECT PER EQUIPMENT MANUFACTURER'S REQUIREMENTS. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR LOCATION.
5. PIPING RISERS SHOWN AT THIS LOCATION FOR CLARITY. COORDINATE FINAL LOCATION AS REQUIRED TO AVOID CONFLICT WITH DRYER DUCT.
6. COORDINATE WITH ELECTRICAL SUCH THAT THE ELECTRICAL PANEL IS NOT LOCATED BELOW PIPING.



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ASPEN HOUSE SENIOR APARTMENTS
WASILLA, ALASKA

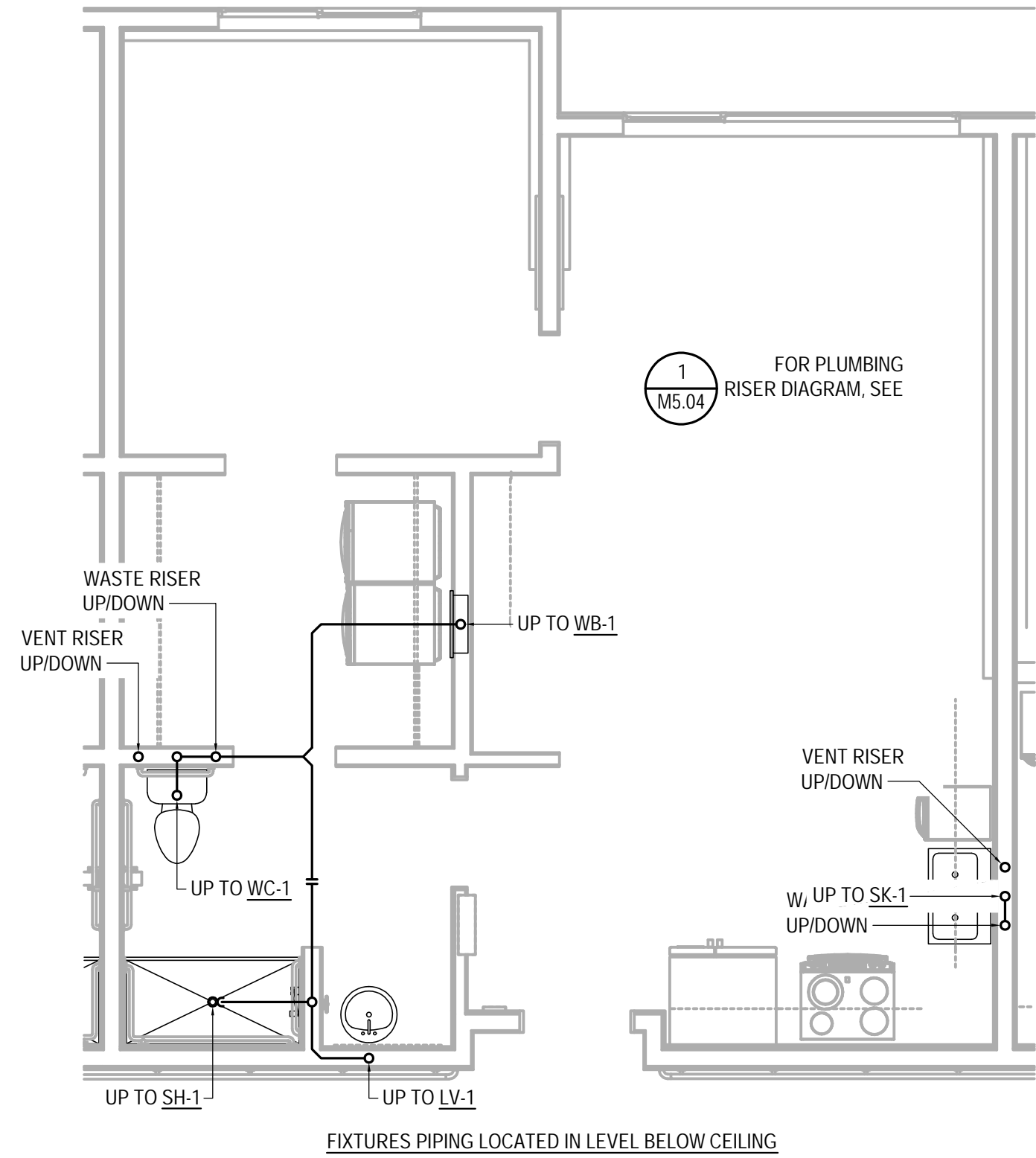
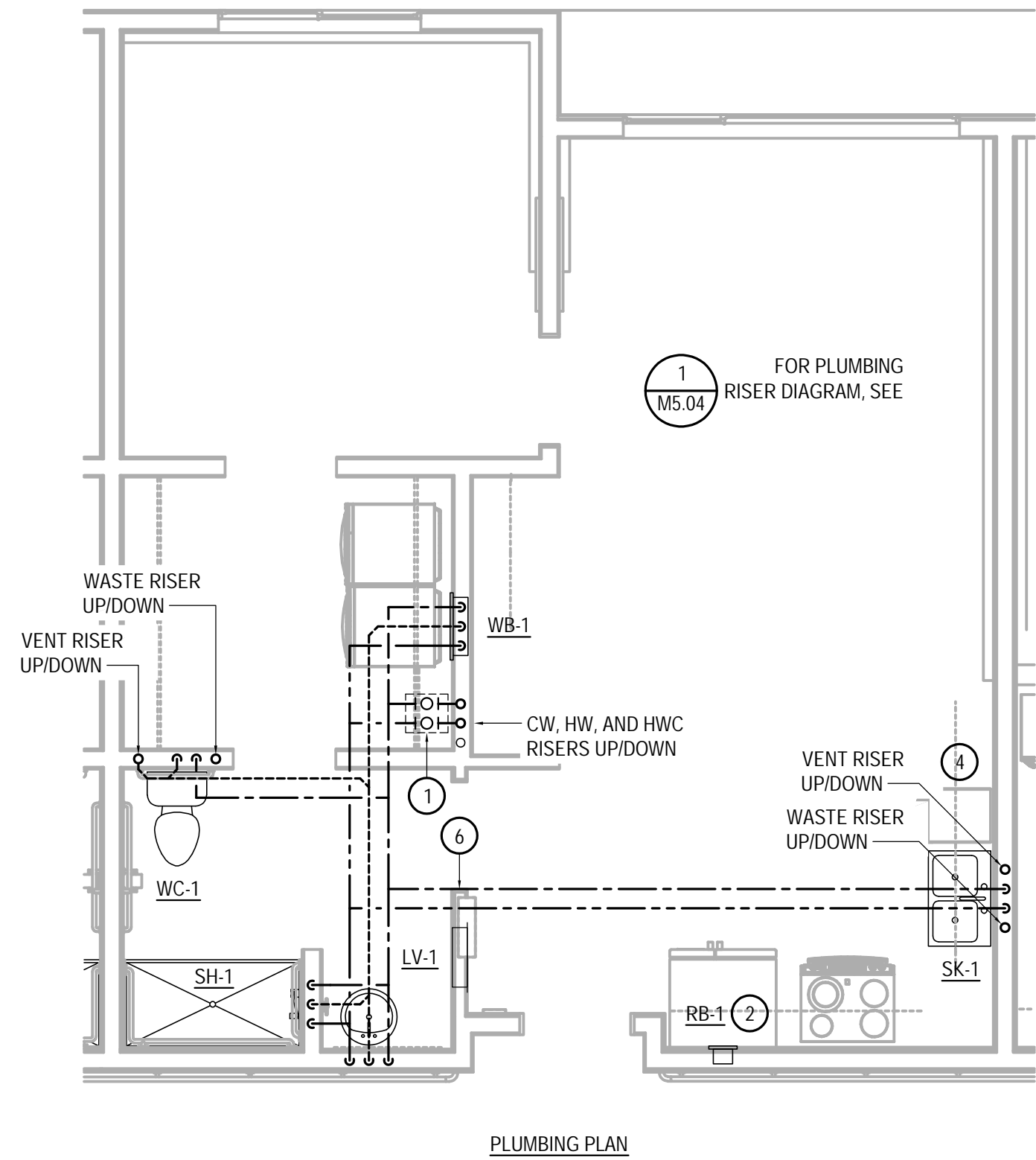
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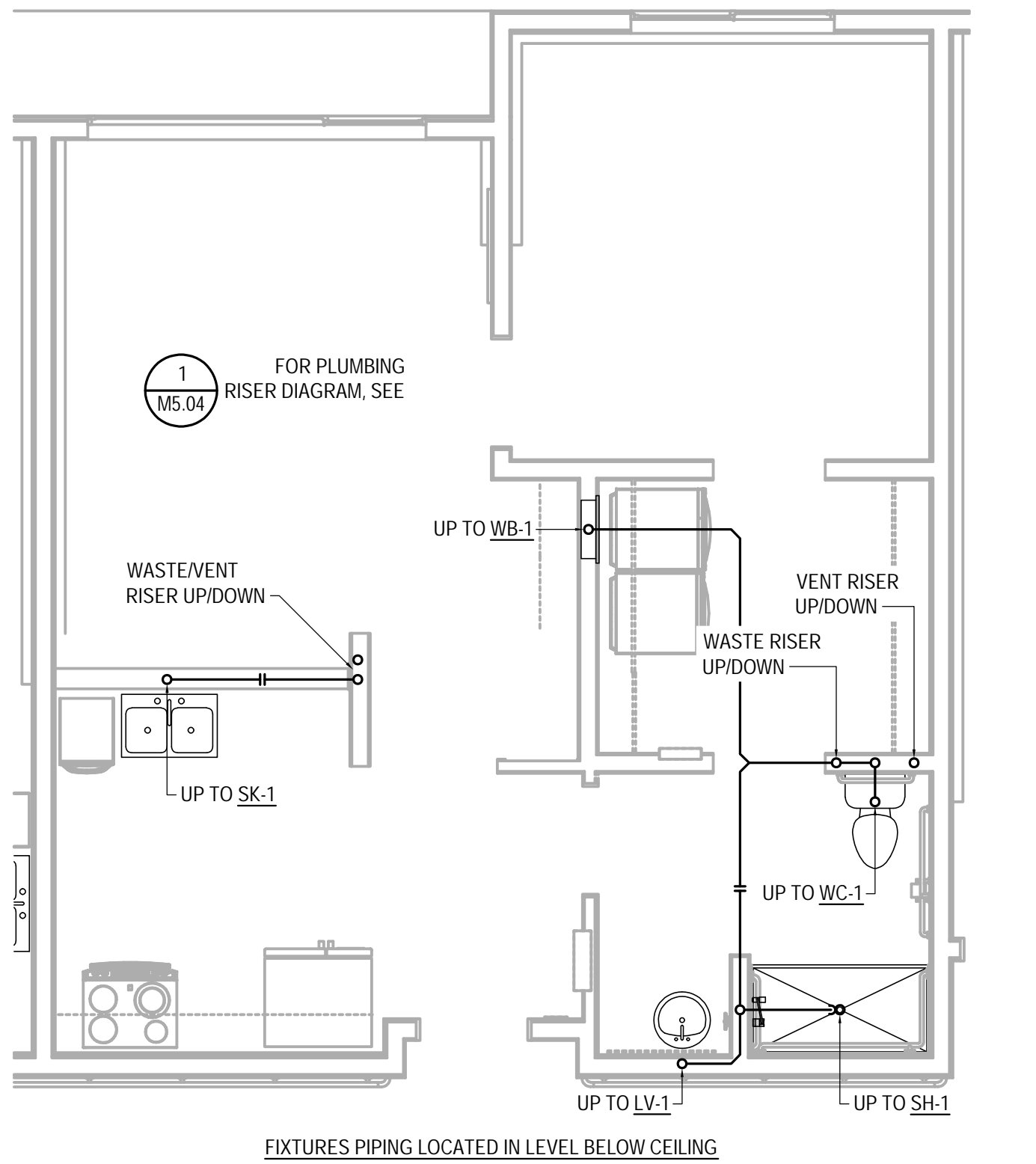
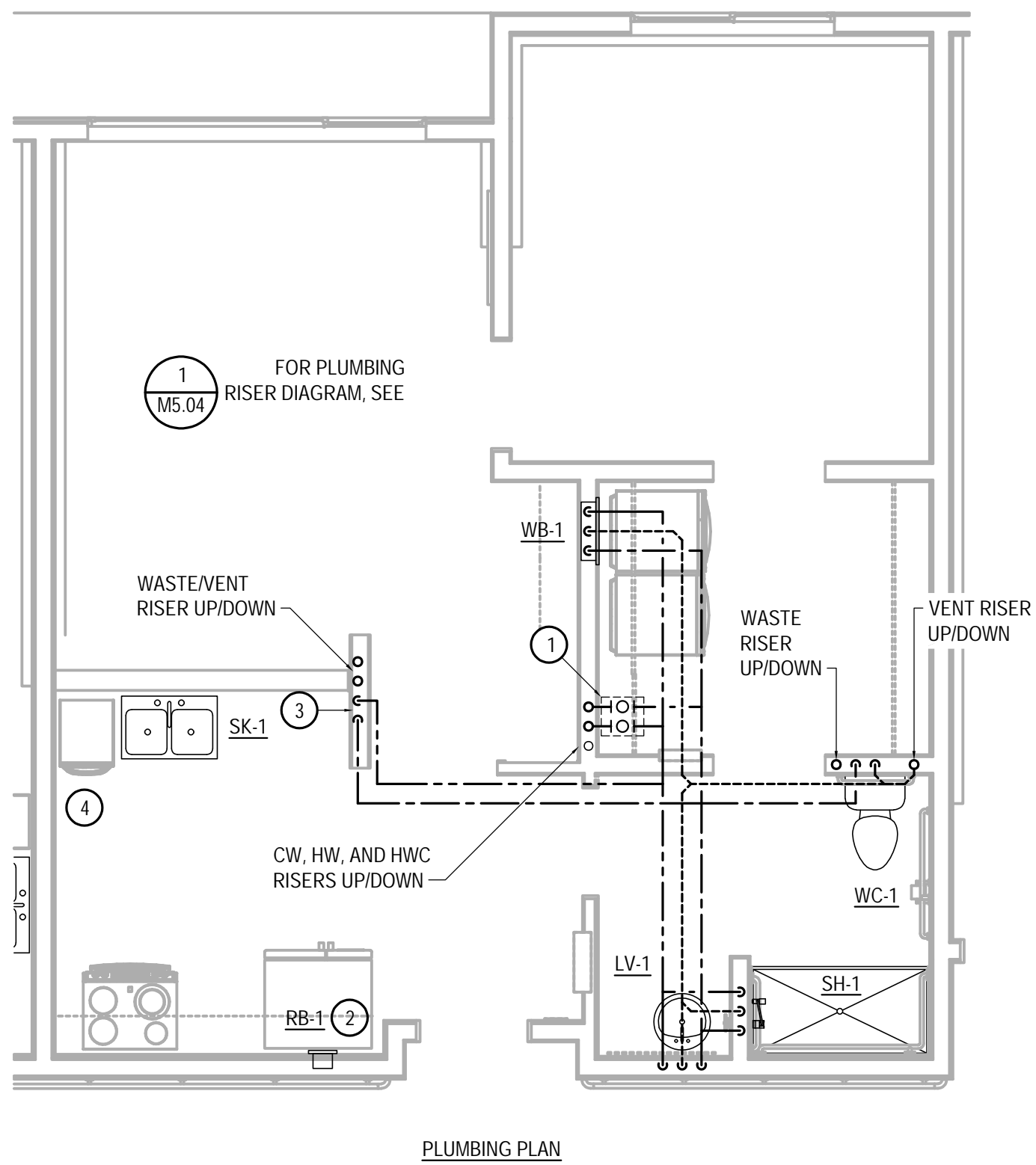
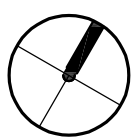
SHEET NAME
ENLARGED
PLUMBING PLANS

SHEET NO.
M4.02

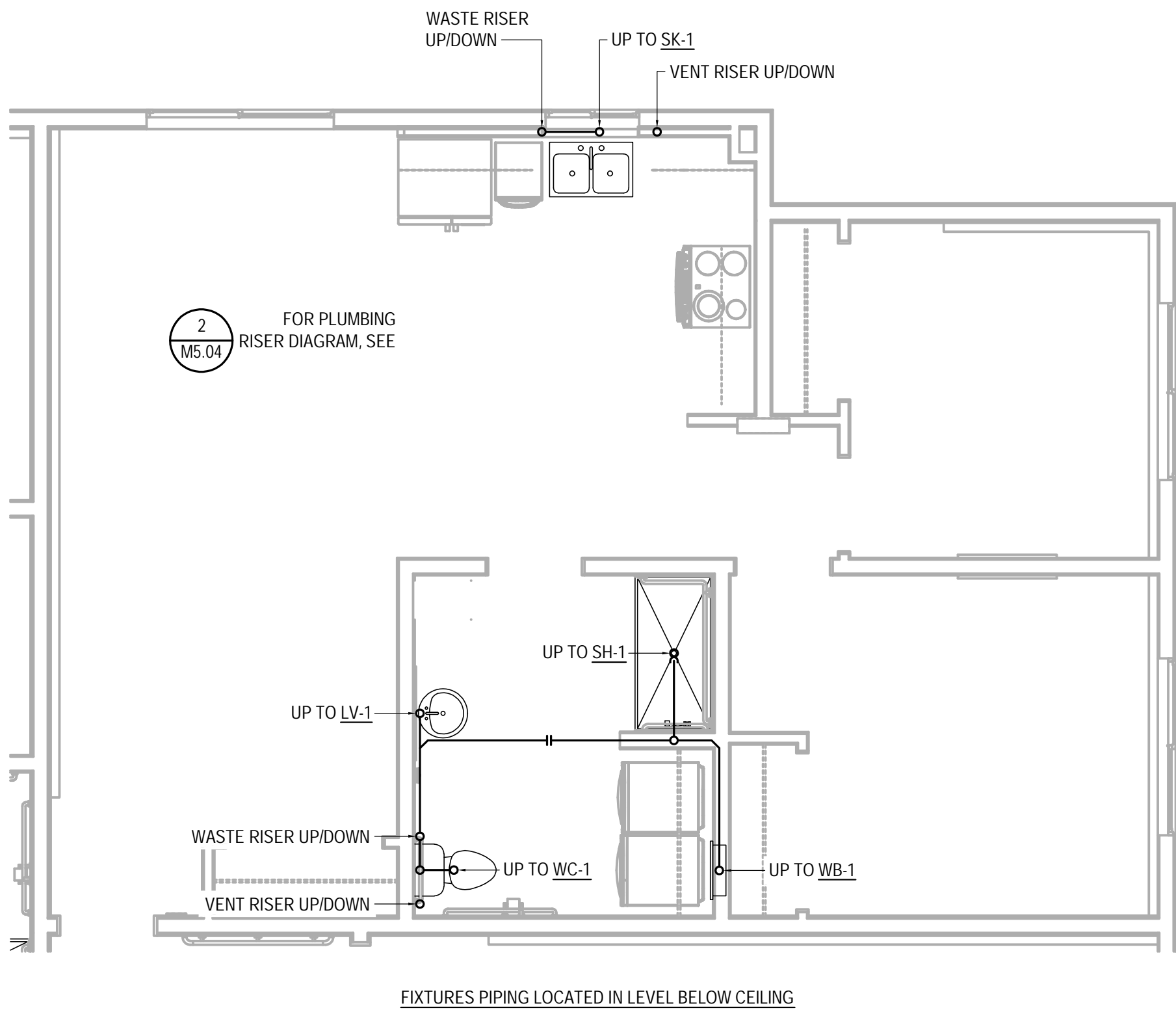
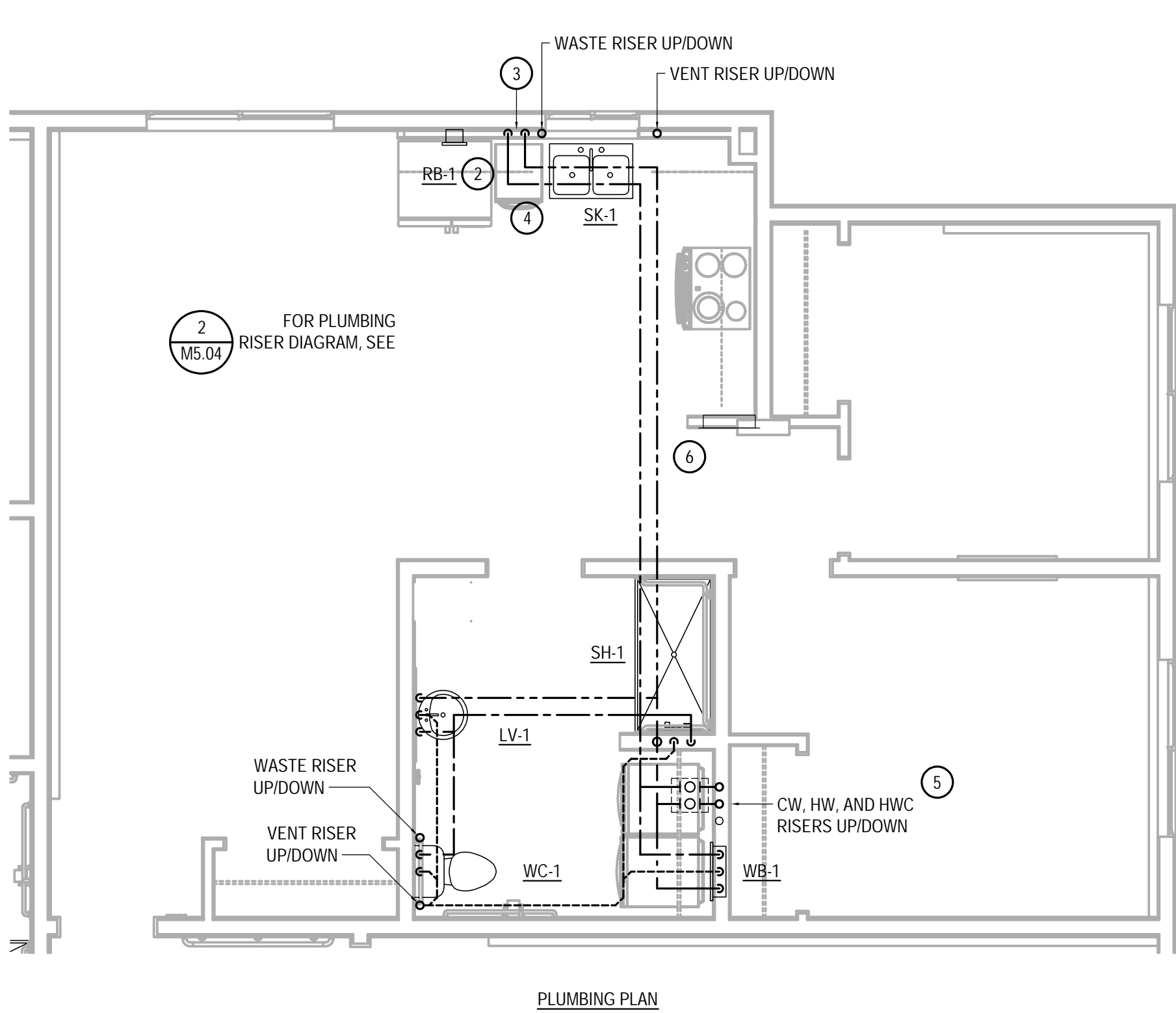
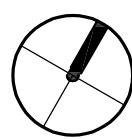
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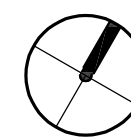
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TYPICAL LEVEL 2
UNIT A PLUMBING PLANS
SCALE: 1/4" = 1'-0"



2
TYPICAL LEVEL 2
UNIT B, B2 PLUMBING PLANS
SCALE: 1/4" = 1'-0"



3
TYPICAL LEVEL 2
UNIT C PLUMBING PLANS
SCALE: 1/4" = 1'-0"



SHEET NOTES

1. BRANCH PIPING TO INDIVIDUAL PLUMBING FIXTURES SHALL EQUAL THE SIZE INDICATED ON THE PLUMBING FIXTURE SCHEDULE UNLESS OTHERWISE INDICATED.
2. PROVIDE CLEANOUT ON ALL INDIVIDUAL SINK RISERS.
3. DO NOT ROUTE ANY PIPING IN EXTERIOR WALLS. PIPING SHOWN CLOSE TO EXTERIOR WALLS ARE TO BE ROUTED IN FURRED OUT WALL CAVITIES, SEE ARCHITECTURAL.
4. INSTALL WASHER BOX BEHIND WASHER. COORDINATE WASHER/DRYER ARRANGEMENT WITH ARCHITECTURAL INTERIOR ELEVATIONS.

KEY NOTES

1. PROVIDE ACCESS DOOR TO VALVES LOCATED IN CEILING OR WALL.
2. PROVIDE 1/2" COLD WATER LINE TO RECESSED WATER CONNECTION BOX, RB-1, TO SERVE REFRIGERATOR. PROVIDE CONNECTION BETWEEN RB-1 AND APPLIANCE PER APPLIANCE MANUFACTURER'S RECOMMENDATIONS.
3. ROUTE 1/2" COLD WATER AND 1/2" HOT WATER DOWN WALL AND THROUGH CABINETRY OR PONY WALL TO SINK, SK-1.
4. PROVIDE WATER LINE TO DISHWASHER PER MANUFACTURER'S RECOMMENDATION. PROVIDE AIR GAP FITTING AT ADJACENT SINK FOR DISHWASHER DRAIN. CONNECT PER EQUIPMENT MANUFACTURER'S REQUIREMENTS. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR LOCATION.
5. PROVIDE ACCESS DOOR TO VALVES LOCATED IN CEILING OR WALL. PIPING RISERS SHOWN AT THIS LOCATION FOR CLARITY. COORDINATE FINAL LOCATION AS REQUIRED TO AVOID CONFLICT WITH DRYER DUCT.
6. COORDINATE WITH ELECTRICAL SUCH THAT THE ELECTRICAL PANEL IS NOT LOCATED BELOW PIPING.



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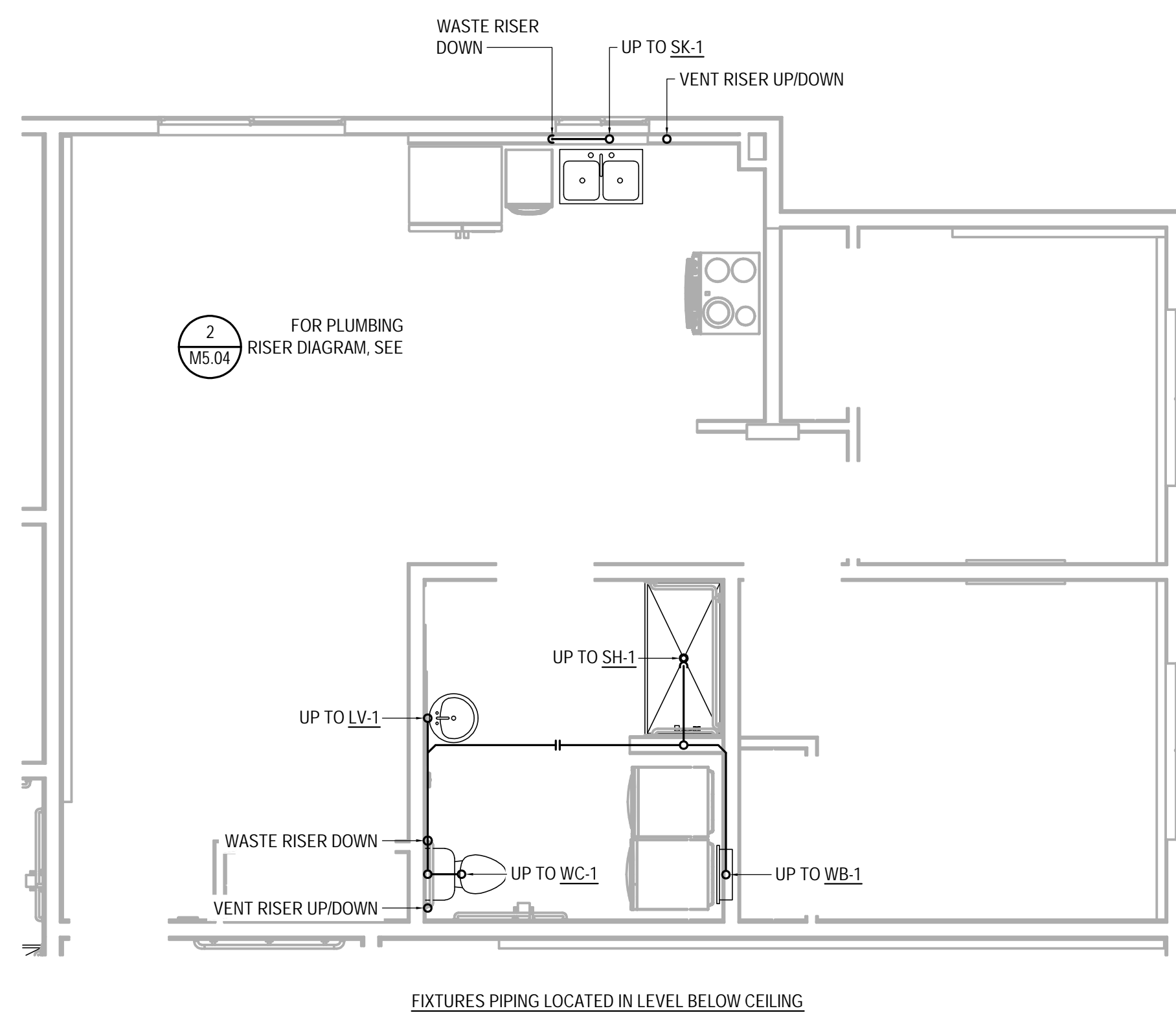
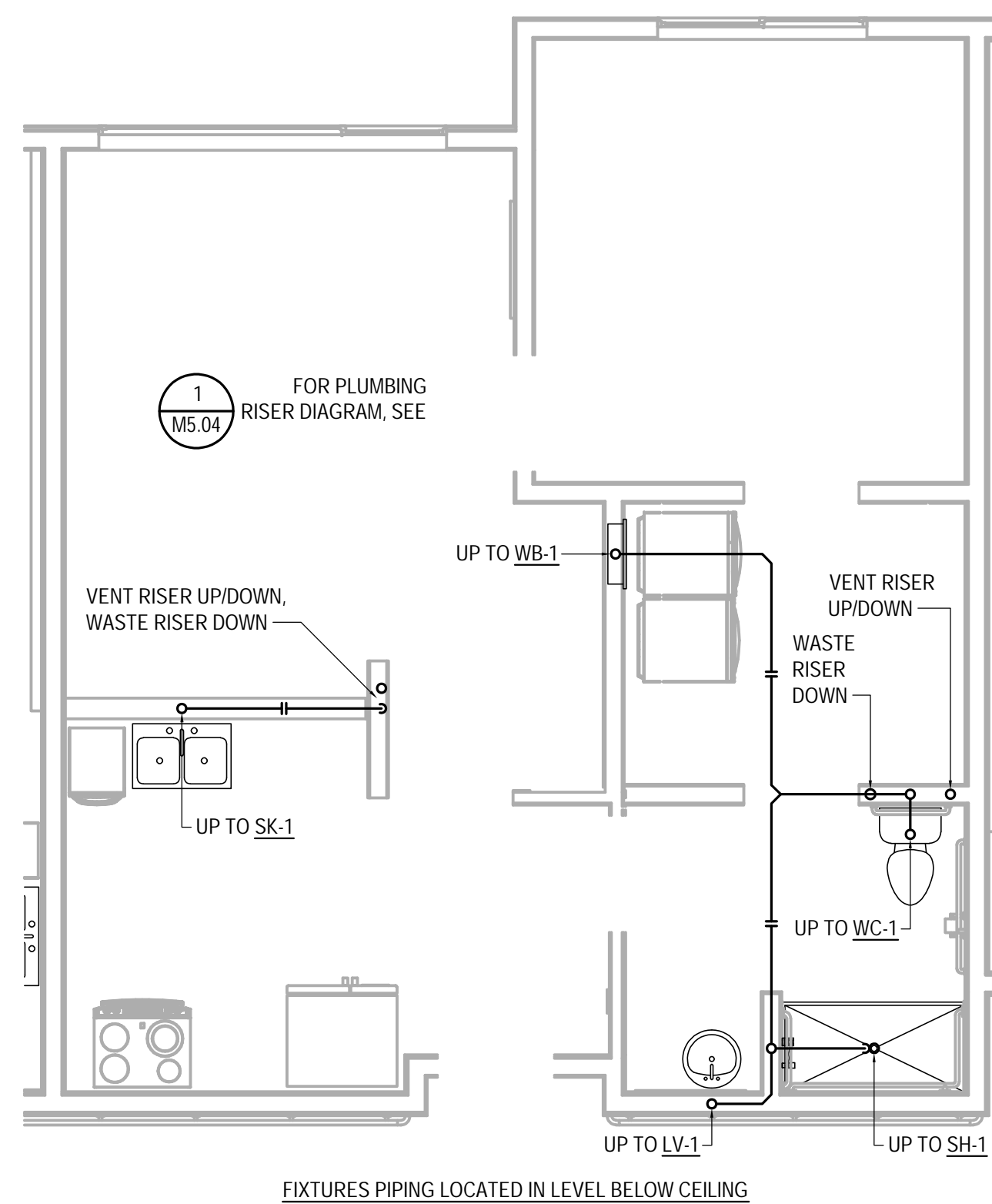
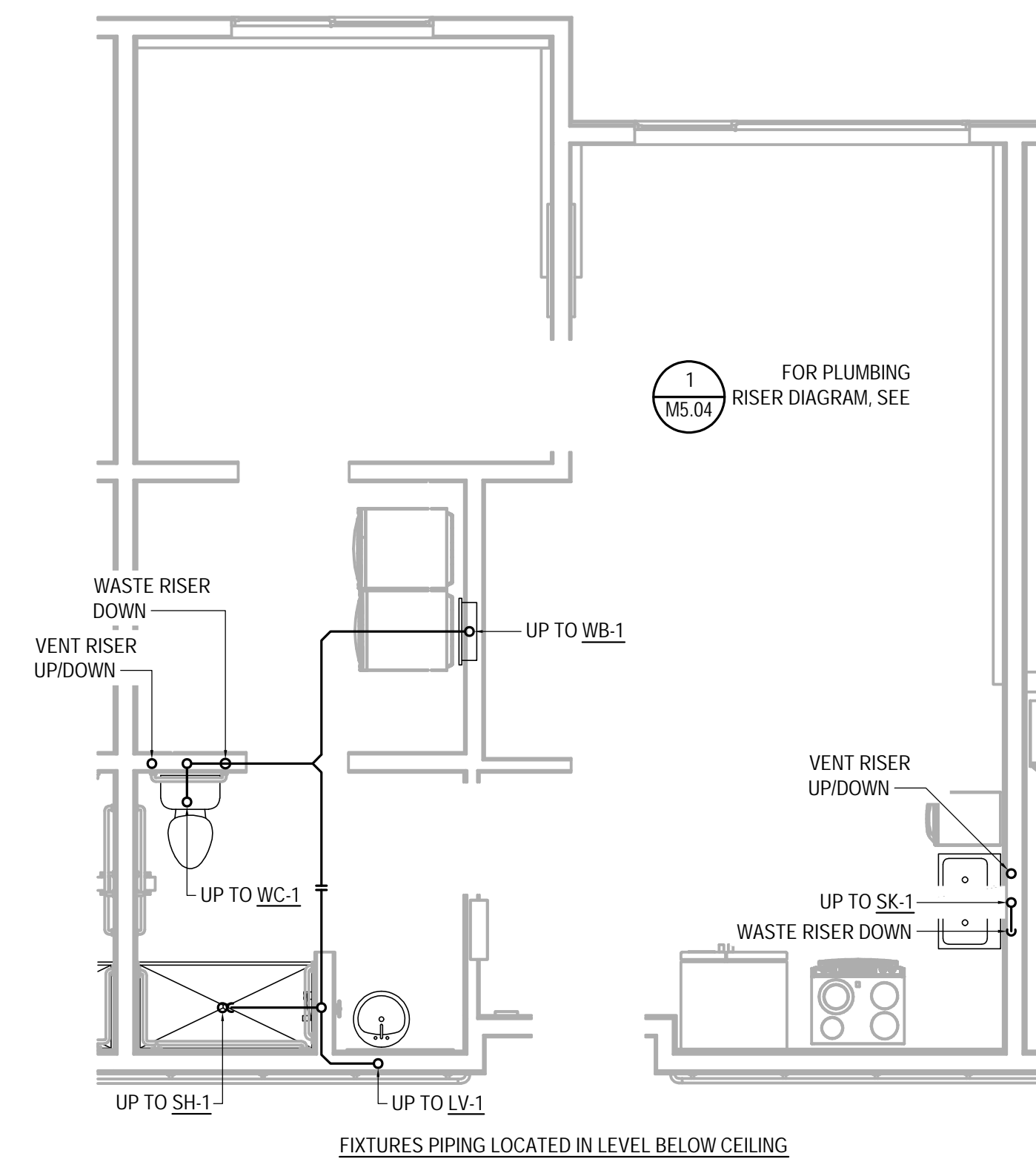
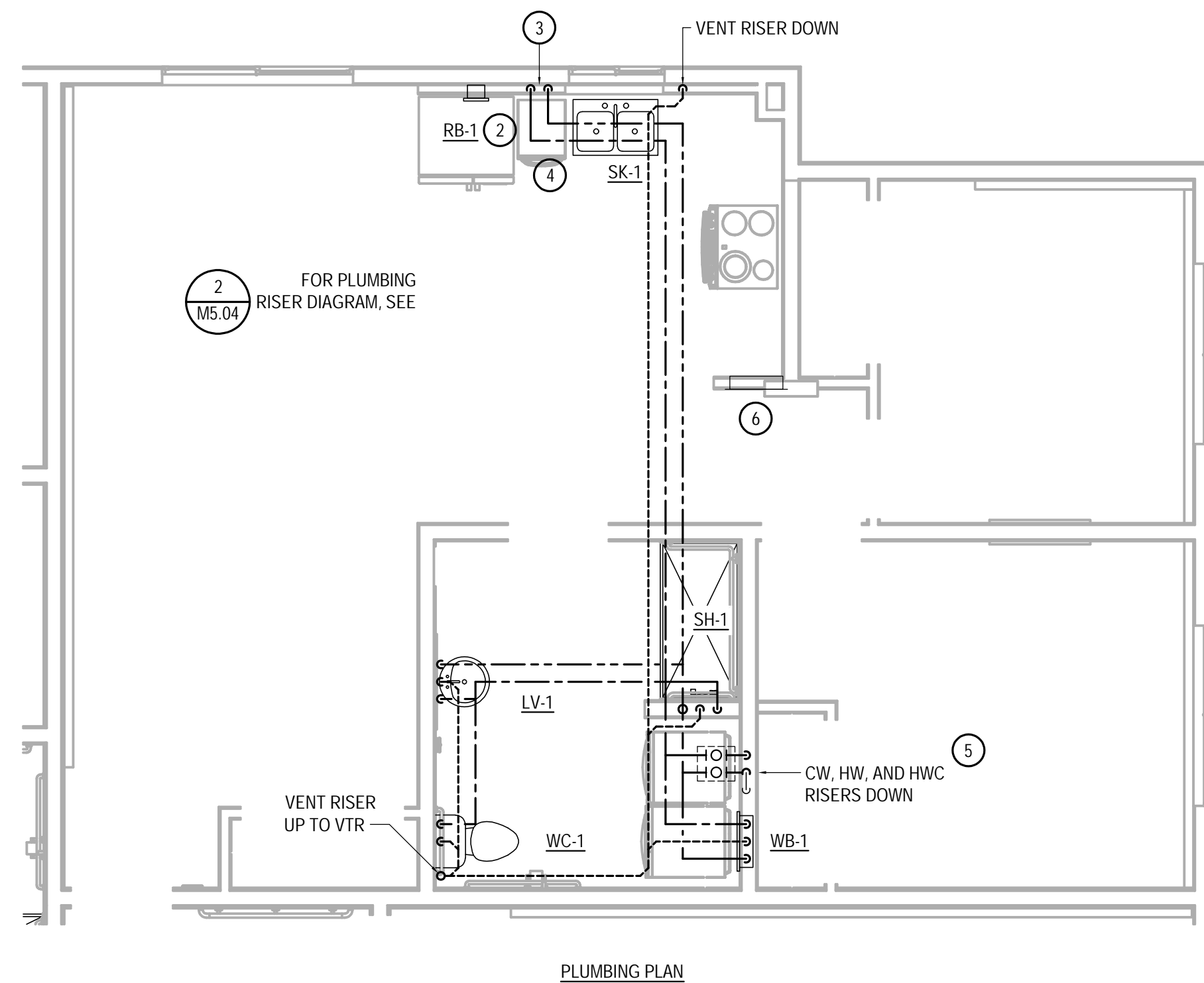
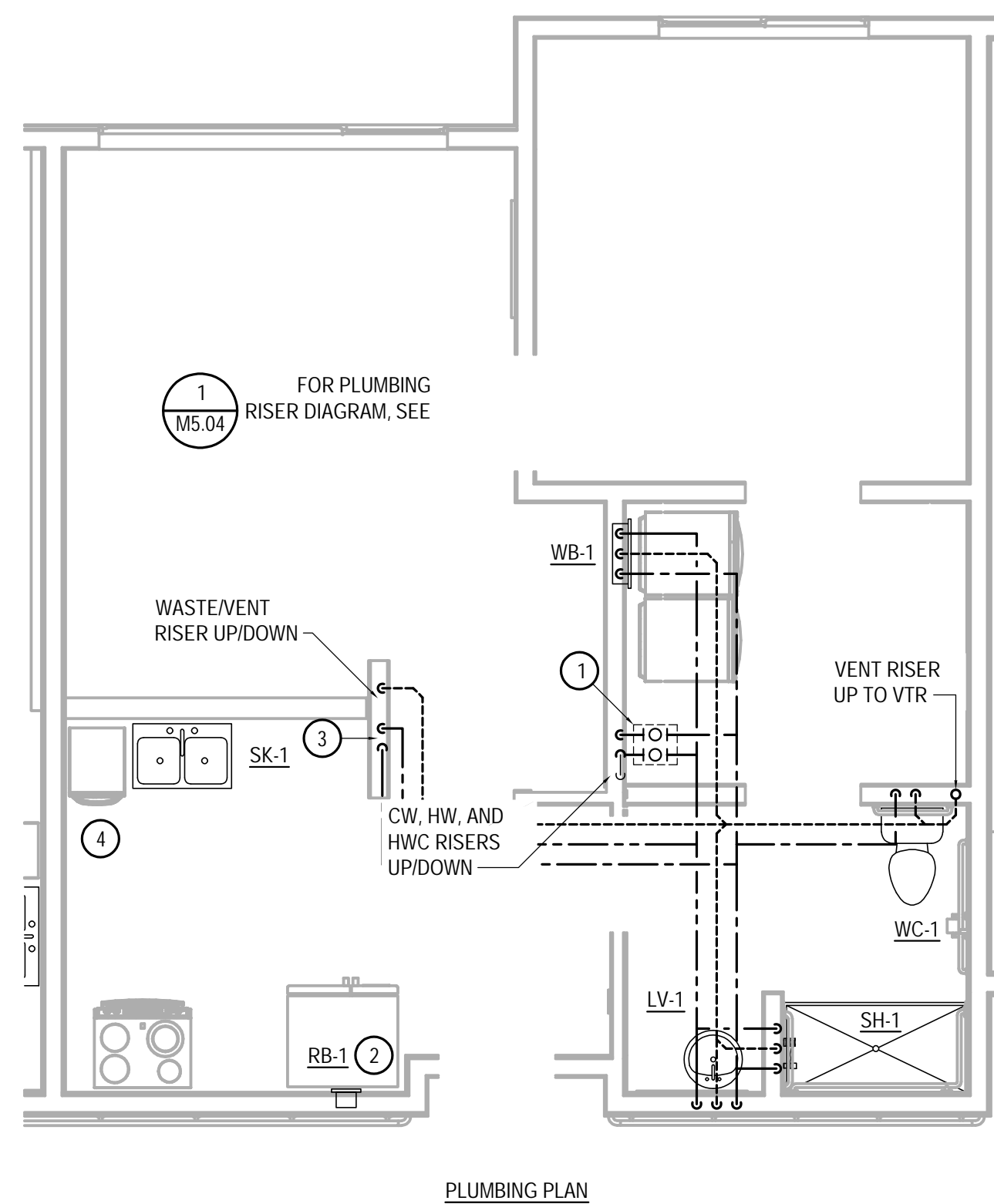
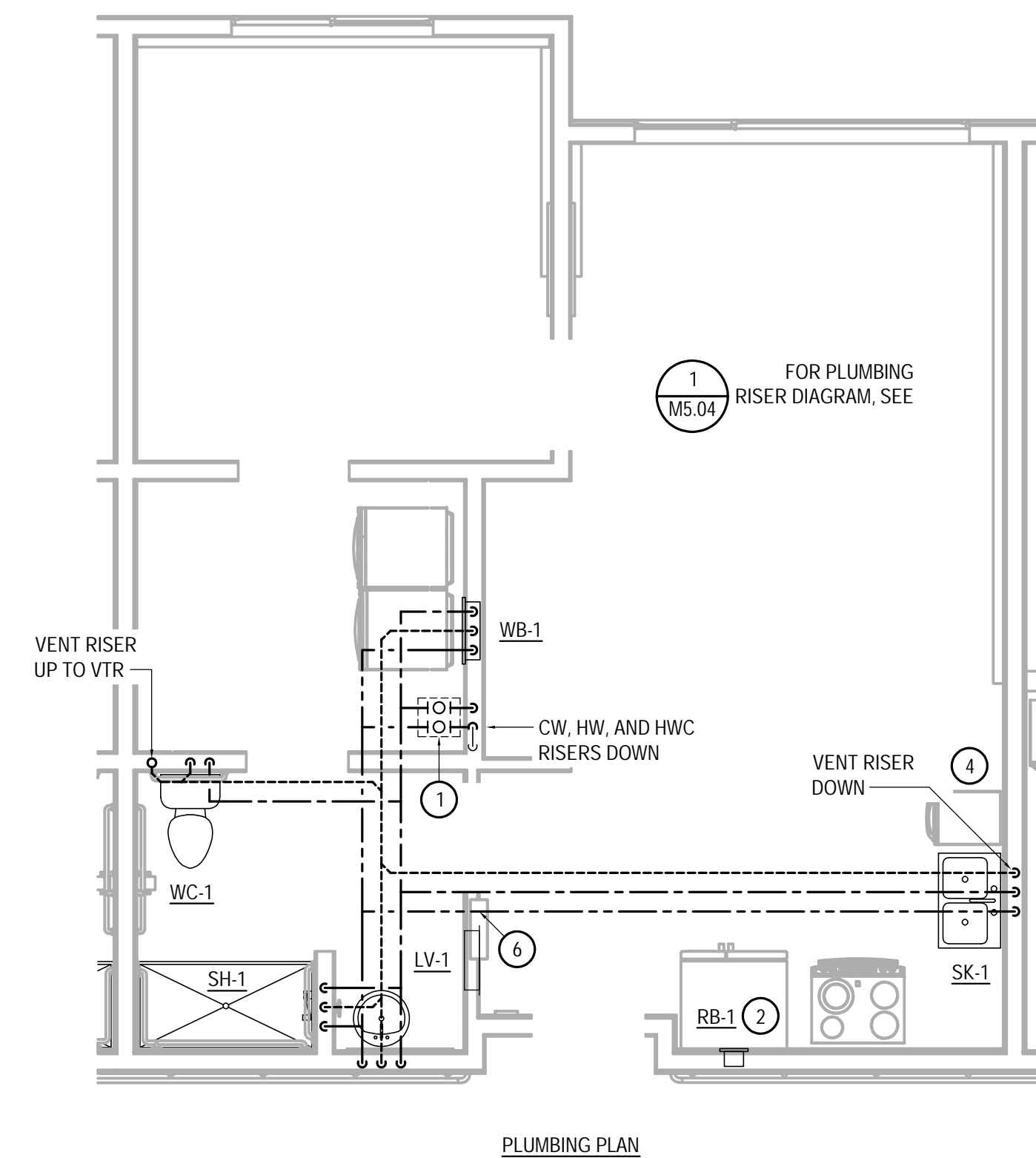
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ASPEN HOUSE SENIOR APARTMENTS
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ENLARGED
PLUMBING PLANS

SHEET NO.
M4.03



TYPICAL LEVEL 3 UNIT A PLUMBING PLANS

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

TYPICAL LEVEL 3
UNIT B, B2 PLUMBING PLANS

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

TYPICAL LEVEL 3 UNIT C PLUMBING PLANS

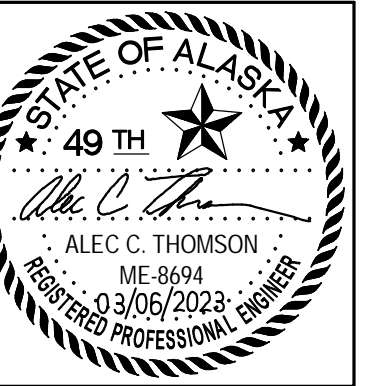
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SHEET NOTES

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4. INSTALL WASHER BOX BEHIND WASHER. COORDINATE WASHER/DRYER ARRANGEMENT WITH ARCHITECTURAL INTERIOR ELEVATIONS.

KEY NOTES

- 1 PROVIDE ACCESS DOOR TO VALVES LOCATED IN CEILING OR WALL.
- 2 PROVIDE 1/2" COLD WATER LINE TO RECESSED WATER CONNECTION BOX, RB-1, TO SERVE REFRIGERATOR. PROVIDE CONNECTION BETWEEN RB-1 AND APPLIANCE PER APPLIANCE MANUFACTURER'S RECOMMENDATIONS.
- 3 ROUTE 1/2" COLD WATER AND 1/2" HOT WATER DOWN WALL AND THROUGH CABINETY OR PONY WALL TO SINK, SK-1.
- 4 PROVIDE WATER LINE TO DISHWASHER PER MANUFACTURER'S RECOMMENDATION. PROVIDE AIR GAP FITTING AT ADJACENT SINK FOR DISHWASHER DRAIN. CONNECT PER EQUIPMENT MANUFACTURER'S REQUIREMENTS. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR LOCATION.
- 5 PROVIDE ACCESS DOOR TO VALVES LOCATED IN CEILING OR WALL. PIPING RISERS SHOWN AT THIS LOCATION FOR CLARITY. COORDINATE FINAL LOCATION AS REQUIRED TO AVOID CONFLICT WITH DRYER DUCT.
- 6 COORDINATE WITH ELECTRICAL SUCH THAT THE ELECTRICAL PANEL IS NOT LOCATED BELOW PIPING.



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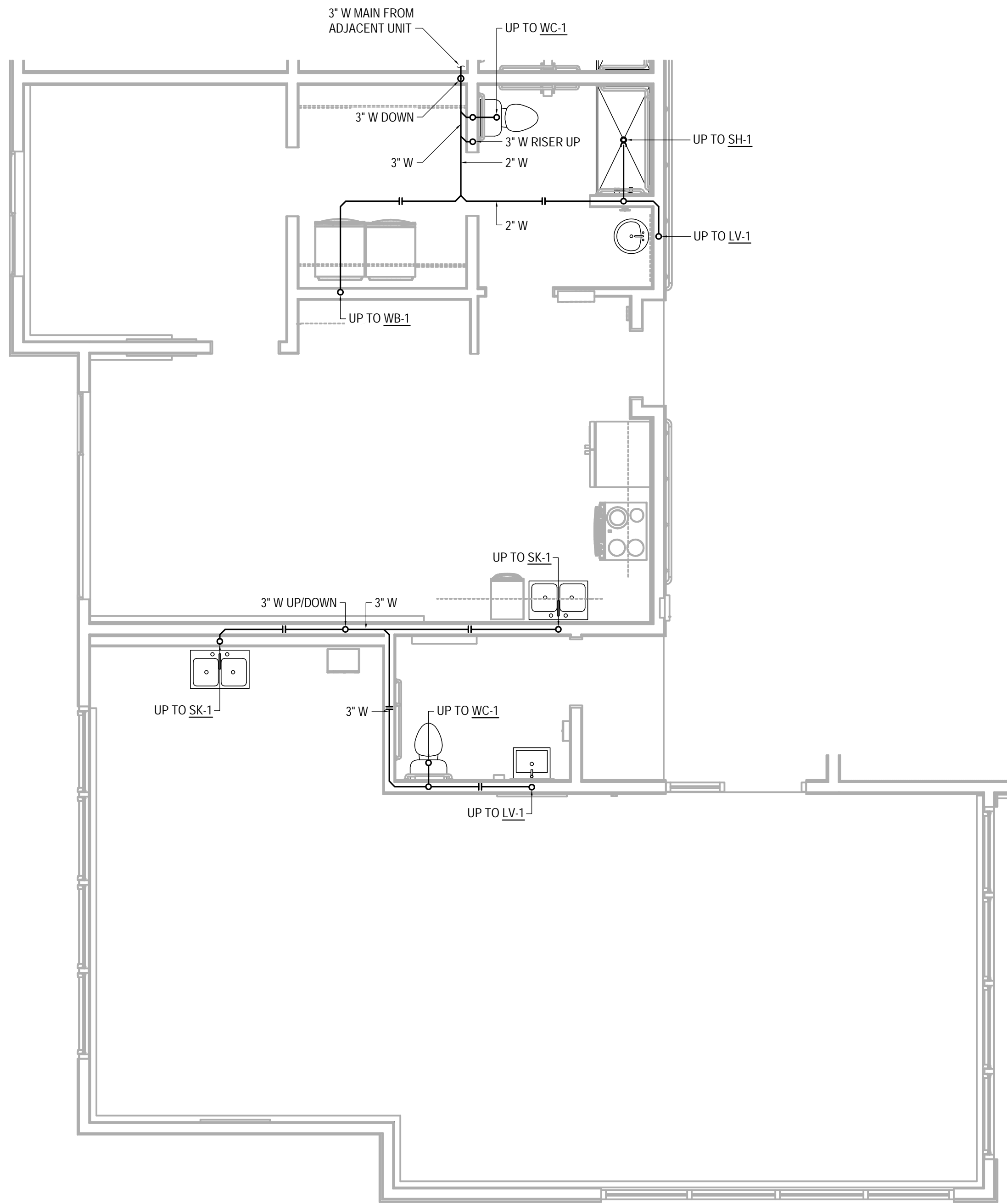
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SHEET NAME
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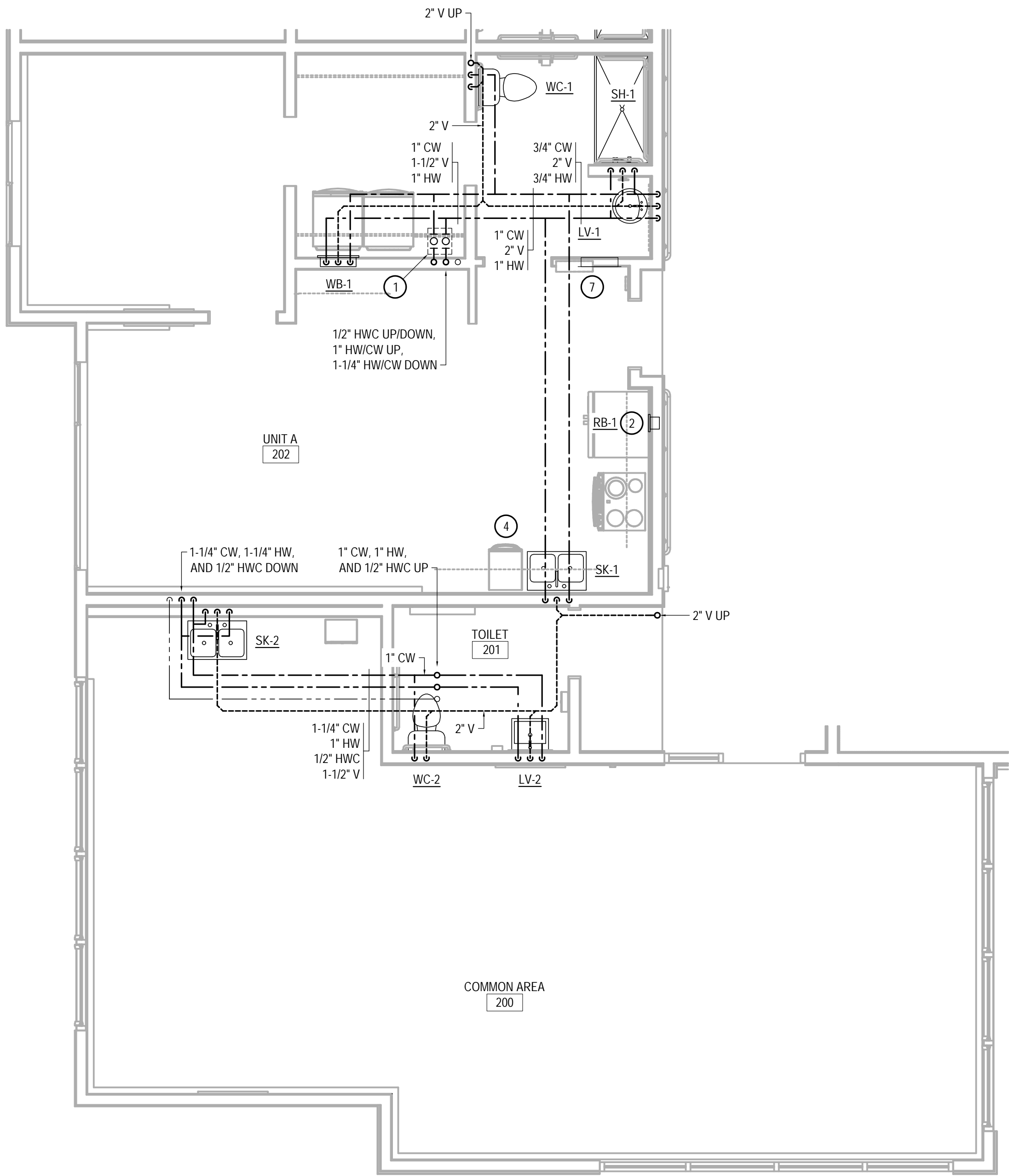
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FIXTURES PIPING LOCATED IN LEVEL BELOW CEILING



PLUMBING PLAN

SHEET NOTES

1. BRANCH PIPING TO INDIVIDUAL PLUMBING FIXTURES SHALL EQUAL THE SIZE INDICATED ON THE PLUMBING FIXTURE SCHEDULE UNLESS OTHERWISE INDICATED.
2. PROVIDE CLEANOUT ON ALL INDIVIDUAL SINK RISERS.

KEY NOTES

1. PROVIDE ACCESS DOOR TO VALVES LOCATED IN CEILING OR WALL.
2. PROVIDE 1/2" COLD WATER LINE TO RECESSED WATER CONNECTION BOX, RB-1, TO SERVE REFRIGERATOR. PROVIDE CONNECTION BETWEEN RB-1 AND APPLIANCE PER APPLIANCE MANUFACTURER'S RECOMMENDATIONS.
3. COLD WATER, HOT WATER, AND HOT WATER CIRCULATED RISERS UP/DOWN.
4. ROUTE 1/2" COLD WATER AND 1/2" HOT WATER DOWN WALL AND THROUGH CABINETRY TO SINK, SK-1.
5. WASTE AND VENT RISER UP/DOWN.
6. PROVIDE WATER LINE TO DISHWASHER PER MANUFACTURER'S RECOMMENDATION. PROVIDE AIR GAP FITTING AT ADJACENT SINK FOR DISHWASHER DRAIN. CONNECT PER EQUIPMENT MANUFACTURER'S REQUIREMENTS. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR LOCATION.
7. COORDINATE WITH ELECTRICAL SUCH THAT THE ELECTRICAL PANEL IS NOT LOCATED BELOW PIPING.



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REVISION SCHEDULE

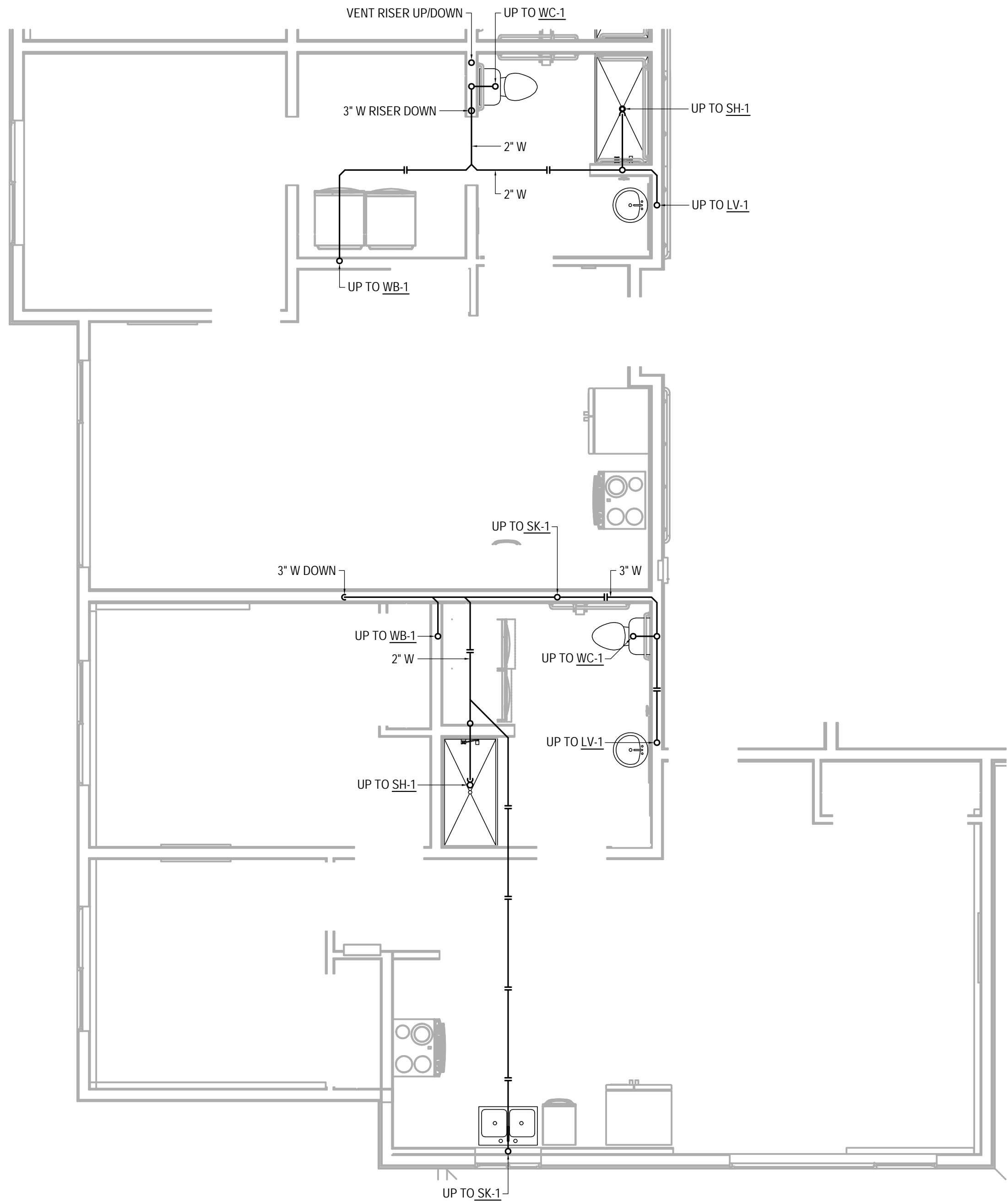
#	DESCRIPTION	DATE

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DATE 03/06/2023
DRAWN STH/MDP
REVIEWED ACT

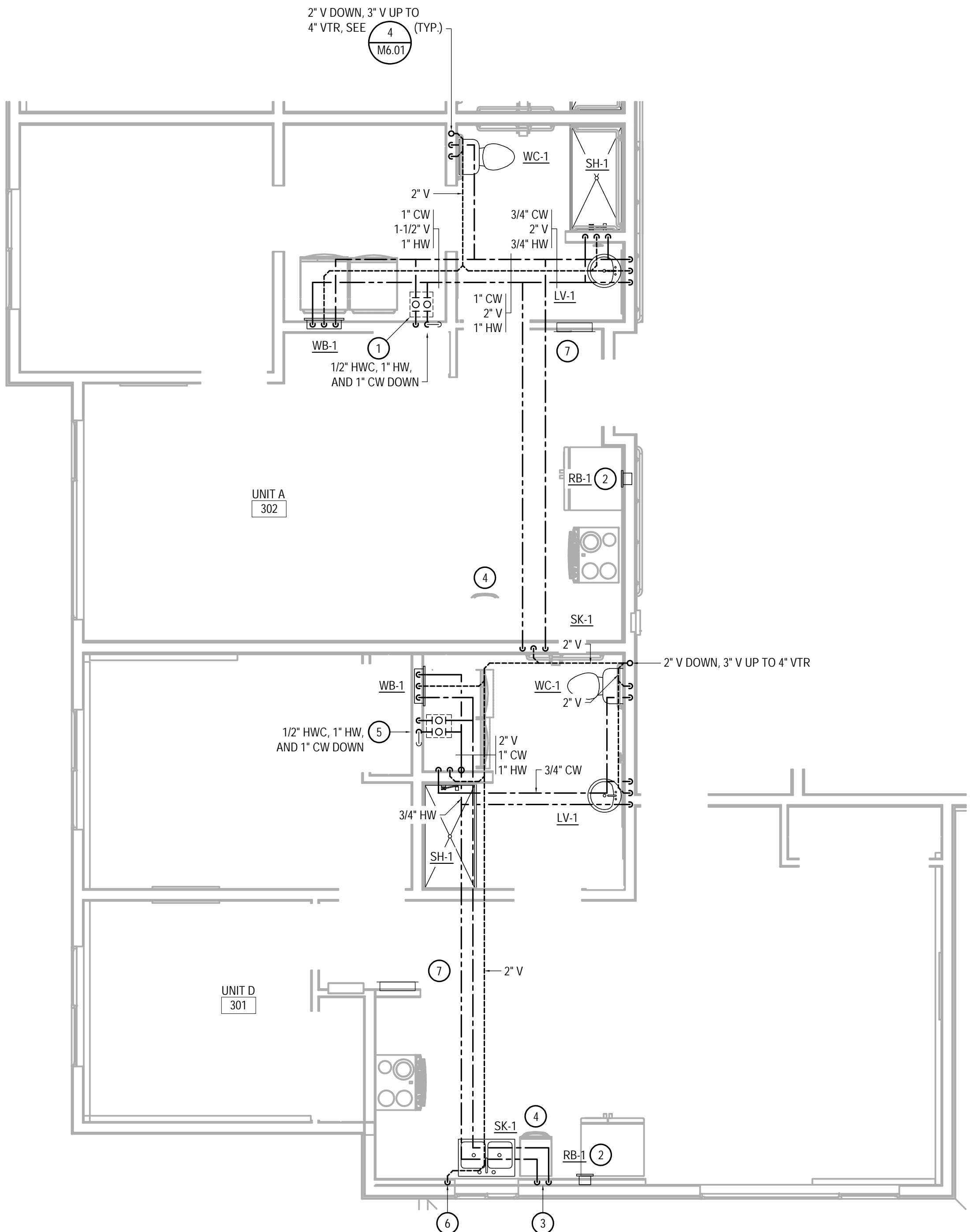
SHEET NAME
ENLARGED
PLUMBING PLANS

SHEET NO.
M4.05

0"
1"
© Copyright, T3 Alaska, LLC



FIXTURES PIPING LOCATED IN LEVEL BELOW CEILING



PLUMBING PLAN

SHEET NOTES

1. BRANCH PIPING TO INDIVIDUAL PLUMBING FIXTURES SHALL EQUAL THE SIZE INDICATED ON THE PLUMBING FIXTURE SCHEDULE UNLESS OTHERWISE INDICATED.
2. PROVIDE CLEANOUT ON ALL INDIVIDUAL SINK RISERS.

KEY NOTES

1. PROVIDE ACCESS DOOR TO VALVES LOCATED IN CEILING OR WALL.
2. PROVIDE 1/2" COLD WATER LINE TO RECESSED WATER CONNECTION BOX, RB-1, TO SERVE REFRIGERATOR. PROVIDE CONNECTION BETWEEN RB-1 AND APPLIANCE PER APPLIANCE MANUFACTURER'S RECOMMENDATIONS.
3. ROUTE 1/2" COLD WATER AND 1/2" HOT WATER DOWN WALL AND THROUGH CABINetry OR PONY WALL TO SINK, SK-1.
4. PROVIDE WATER LINE TO DISHWASHER PER MANUFACTURER'S RECOMMENDATION. PROVIDE AIR GAP FITTING AT ADJACENT SINK FOR DISHWASHER DRAIN. CONNECT PER EQUIPMENT MANUFACTURER'S REQUIREMENTS. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR LOCATION.
5. PROVIDE ACCESS DOOR TO VALVES LOCATED IN CEILING OR WALL. PIPING RISERS SHOWN AT THIS LOCATION FOR CLARITY. COORDINATE FINAL LOCATION AS REQUIRED TO AVOID CONFLICT WITH DRYER DUCT.
6. ROUTE 1-1/2" VENT DOWN WALL AND THROUGH CABINetry OR PONY WALL TO SINK, SK-1.
7. COORDINATE WITH ELECTRICAL SUCH THAT THE ELECTRICAL PANEL IS NOT LOCATED BELOW PIPING.



CERTIFICATE OF AUTHORIZATION NO:
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PH: 907-865-7900 FAX: 907-865-7975

ASPEN HOUSE LIMITED PARTNERSHIP
ASPEN HOUSE SENIOR APARTMENTS
WASILLA, ALASKA

REVISION SCHEDULE		
#	DESCRIPTION	DATE

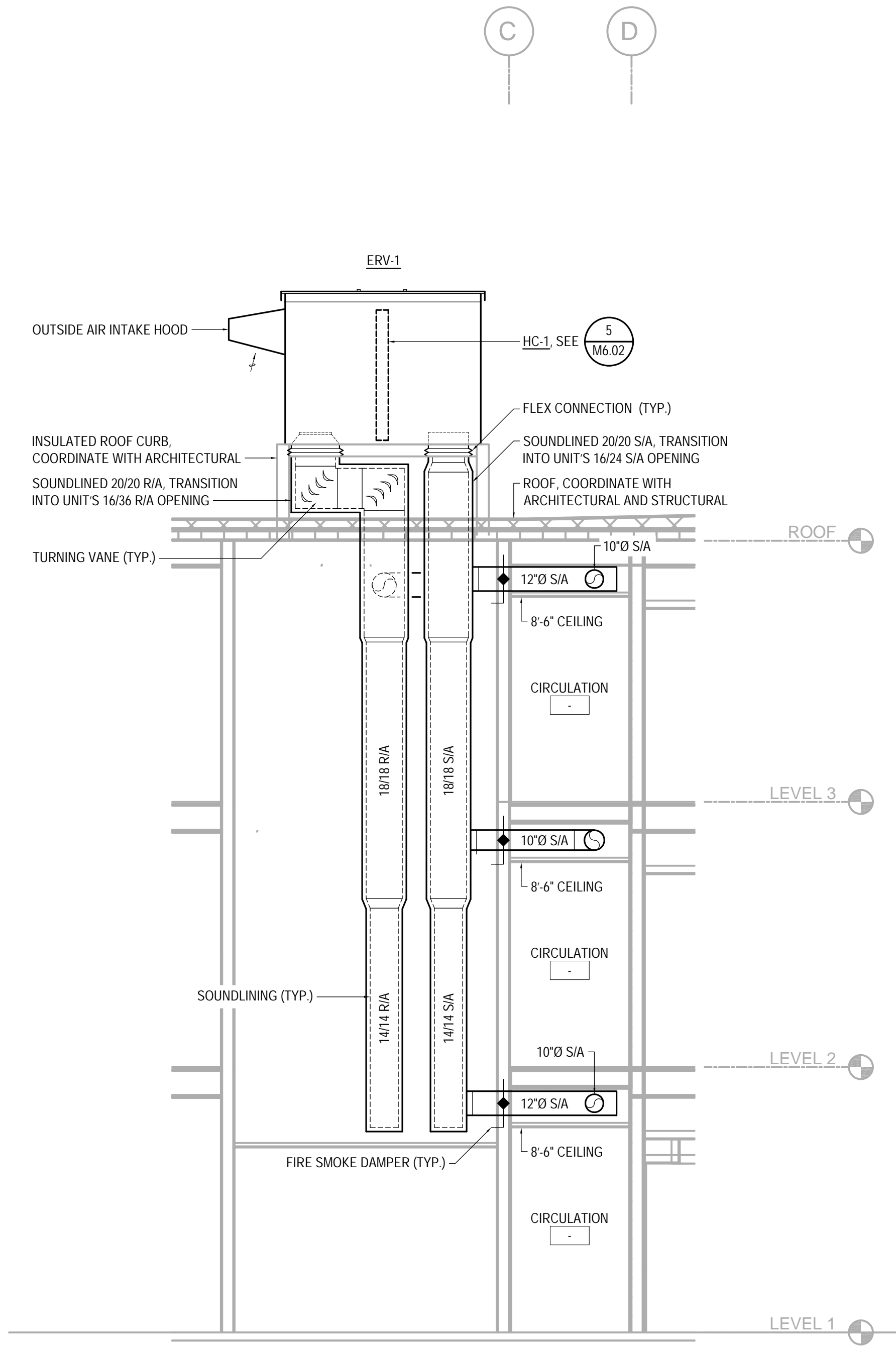
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SHEET NAME
ENLARGED
PLUMBING PLANS

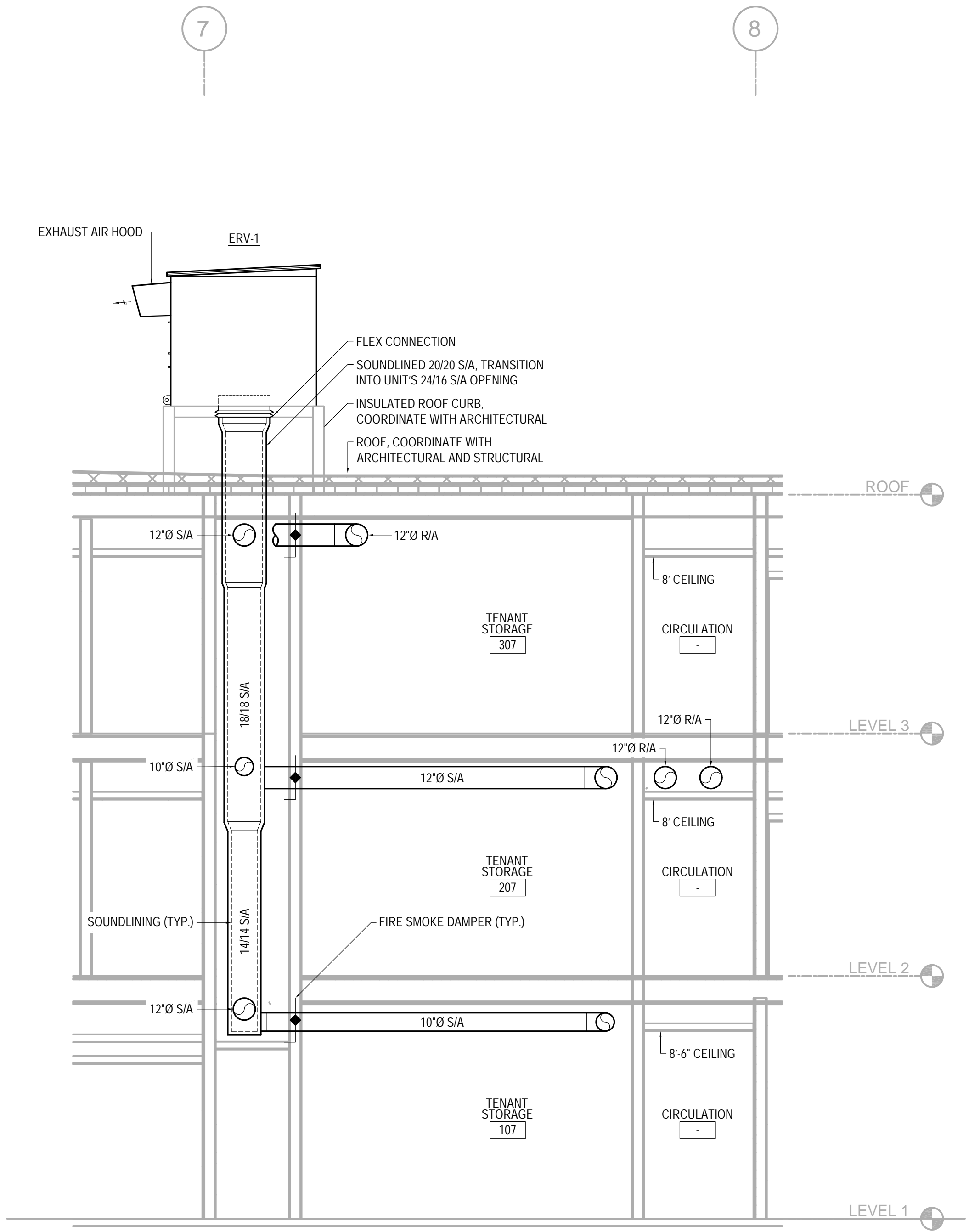
SHEET NO.
M4.06

0'
1'

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1 ERV-1 SECTION
SCALE: 1/4" = 1'-0"



2 ERV-1 SECTION
SCALE: 1/4" = 1'-0"



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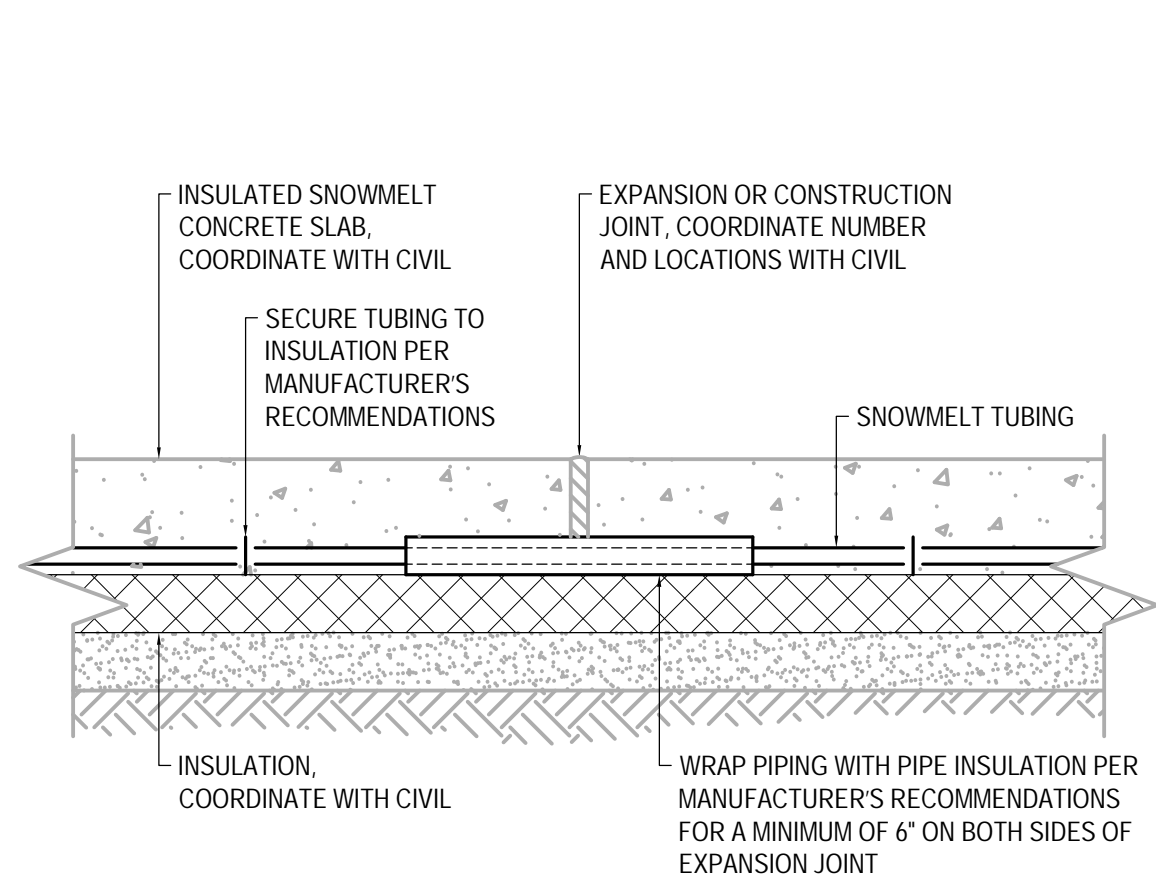
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#	DESCRIPTION	DATE

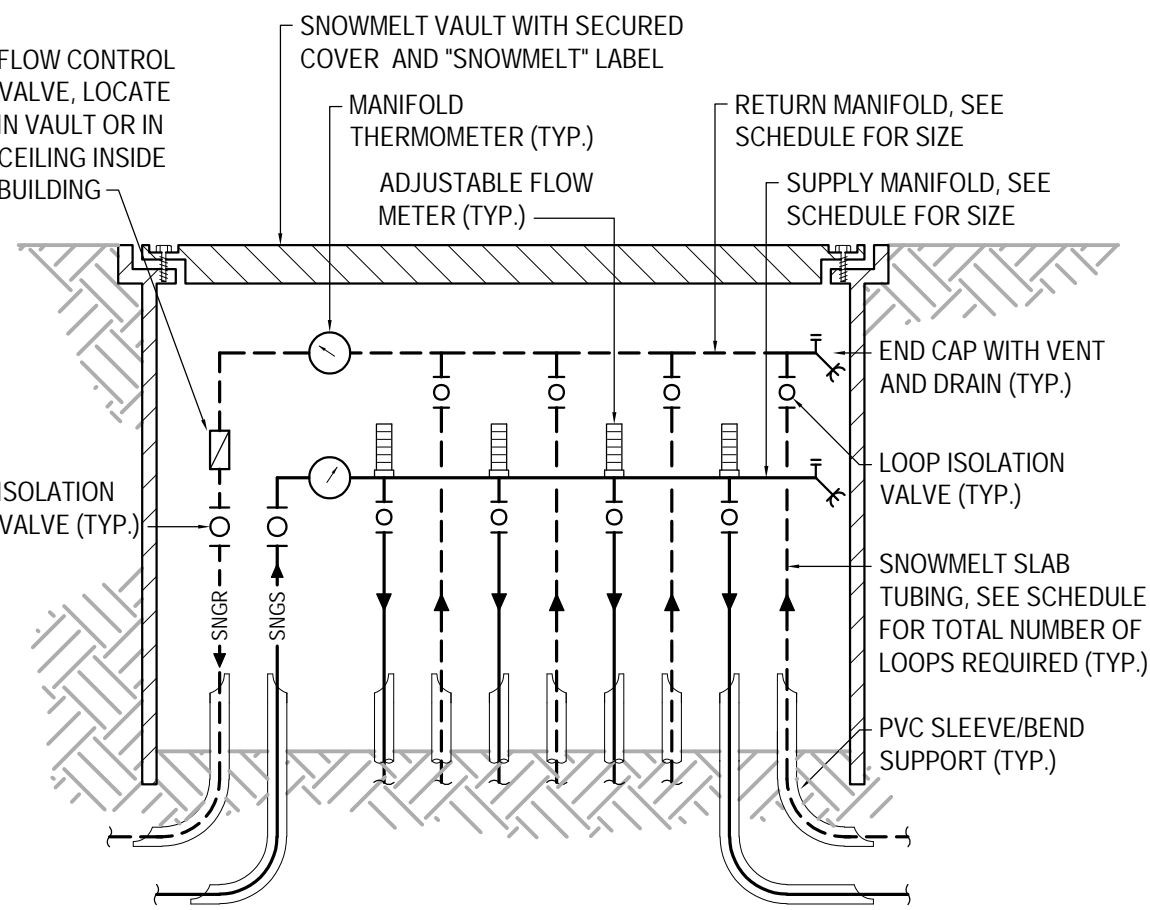
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DATE	03/06/2023
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SHEET NAME	MECHANICAL SECTIONS
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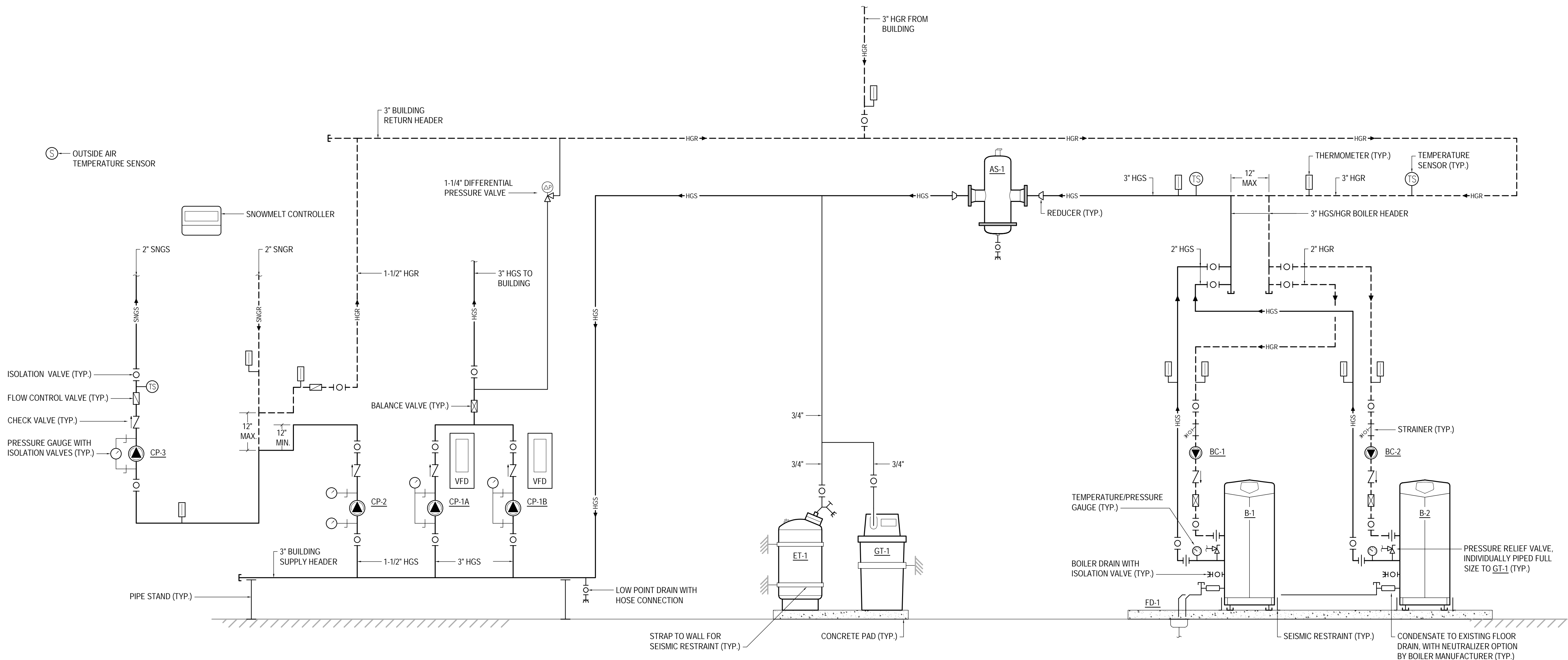
SHEET NO.	M4.07
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2 SNOWMELT TUBING JOINT DETAIL
SCALE: NONE



3 SNOWMELT MANIFOLD DETAIL
SCALE: NONE



1 BOILER PIPING DIAGRAM
SCALE: NONE



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SHEET NAME
BOILER PIPING
DIAGRAM

SHEET NO.
M5.01



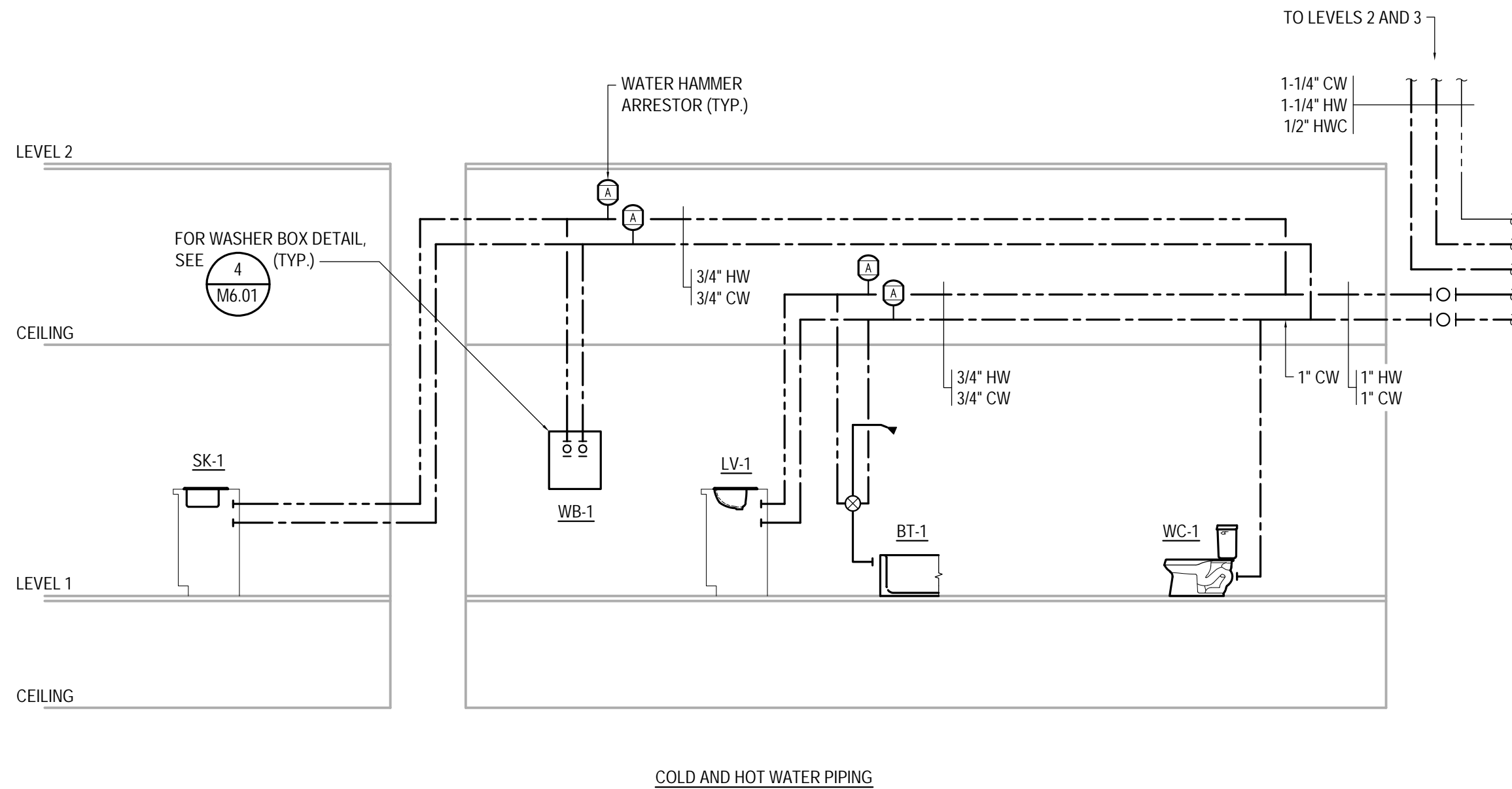
HEET NO.

M5.02

0"
1"
© Copyright T3 Alaska, LLC

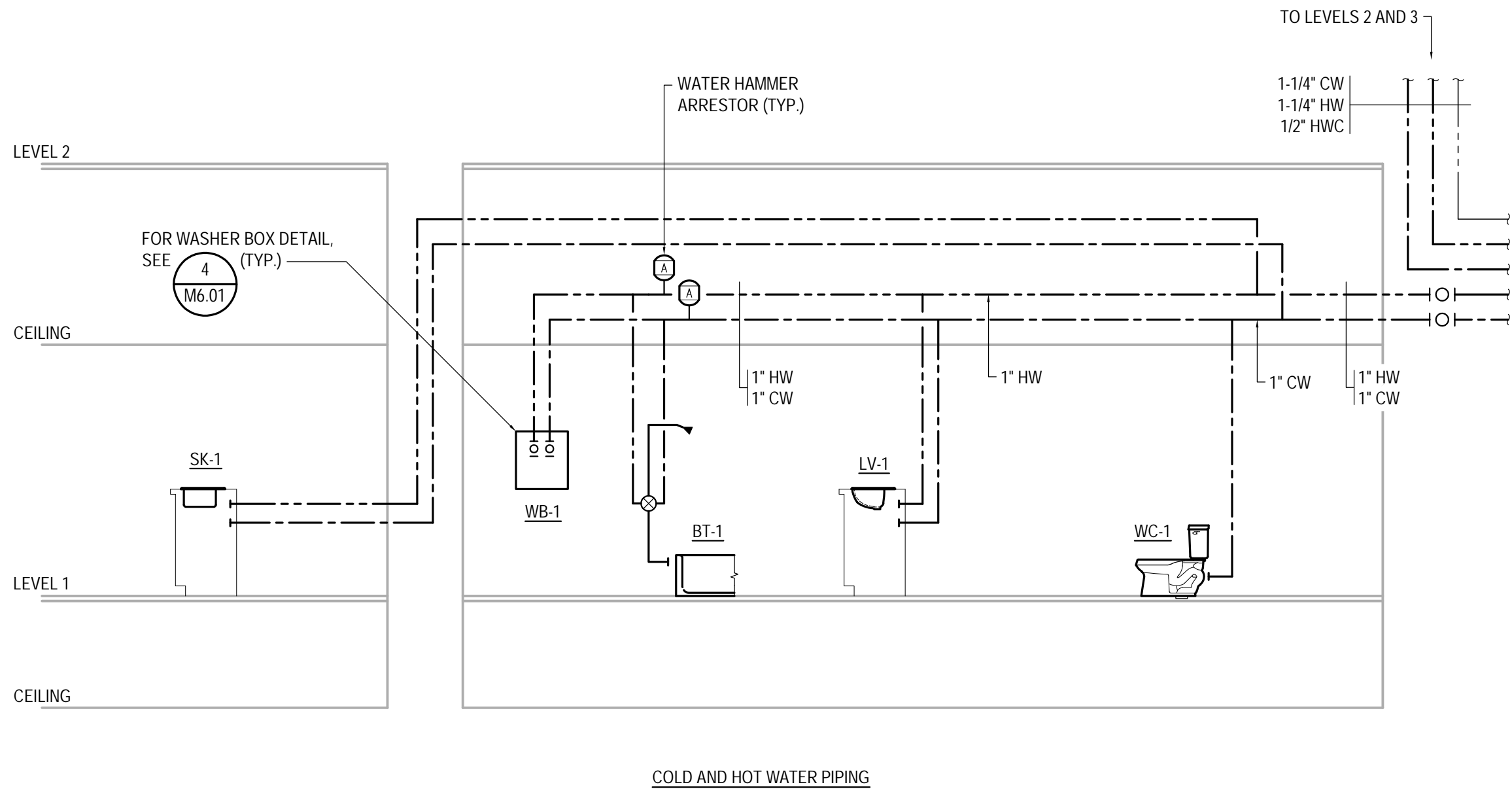
SHEET NOTES

- BRANCH PIPING TO INDIVIDUAL PLUMBING FIATURES SHALL EQUAL THE SIZE INDICATED ON THE PLUMBING FIATURE SCHEDULE UNLESS OTHERWISE INDICATED.
- PROVIDE CLEANOUT ON ALL INDIVIDUAL SINK RISERS.



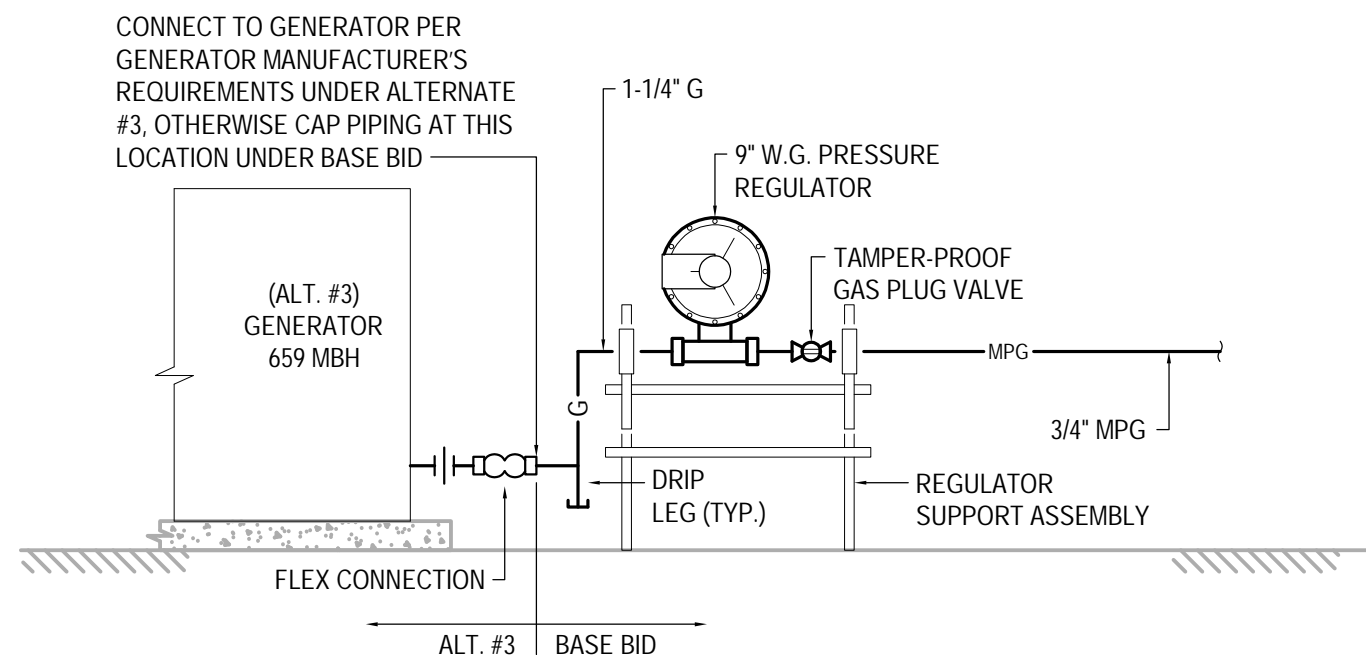
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LEVEL 1
TYPICAL PLUMBING RISER DIAGRAM - UNIT A, B, B2

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



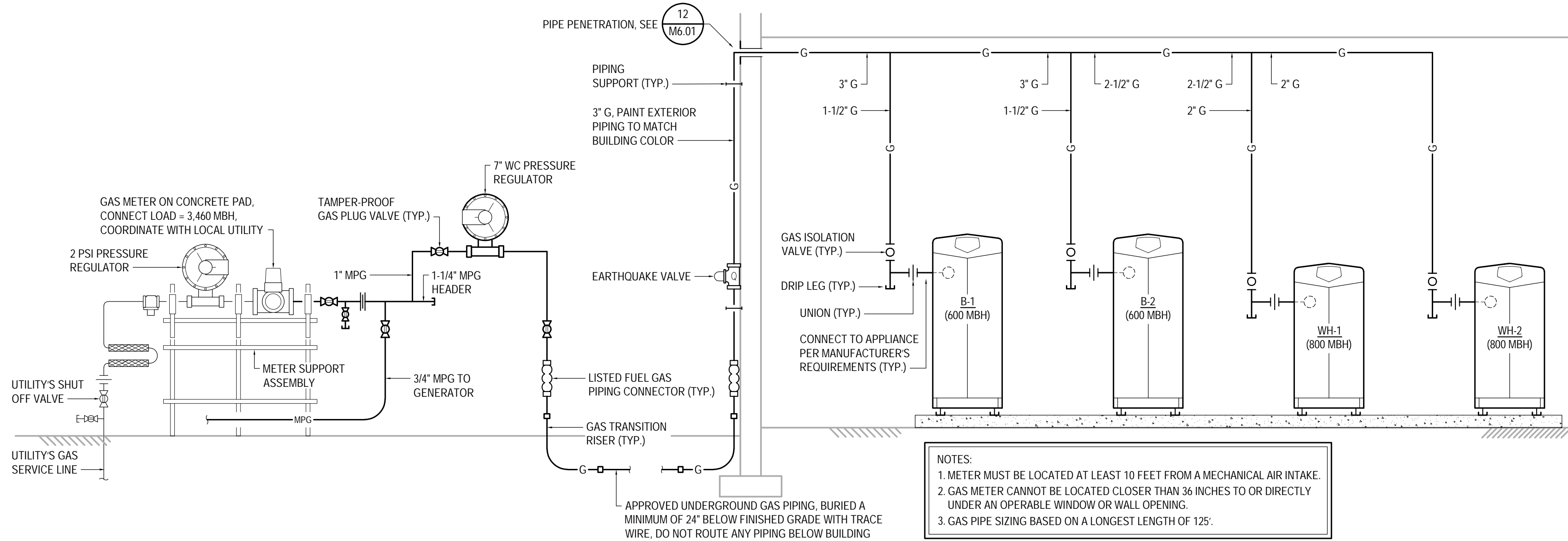
2
LEVEL 1
TYPICAL PLUMBING RISER DIAGRAM - UNIT C

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



4
GAS AT GENERATOR DETAIL

SCALE: NONE



3
GAS PIPING DIAGRAM

SCALE: NONE



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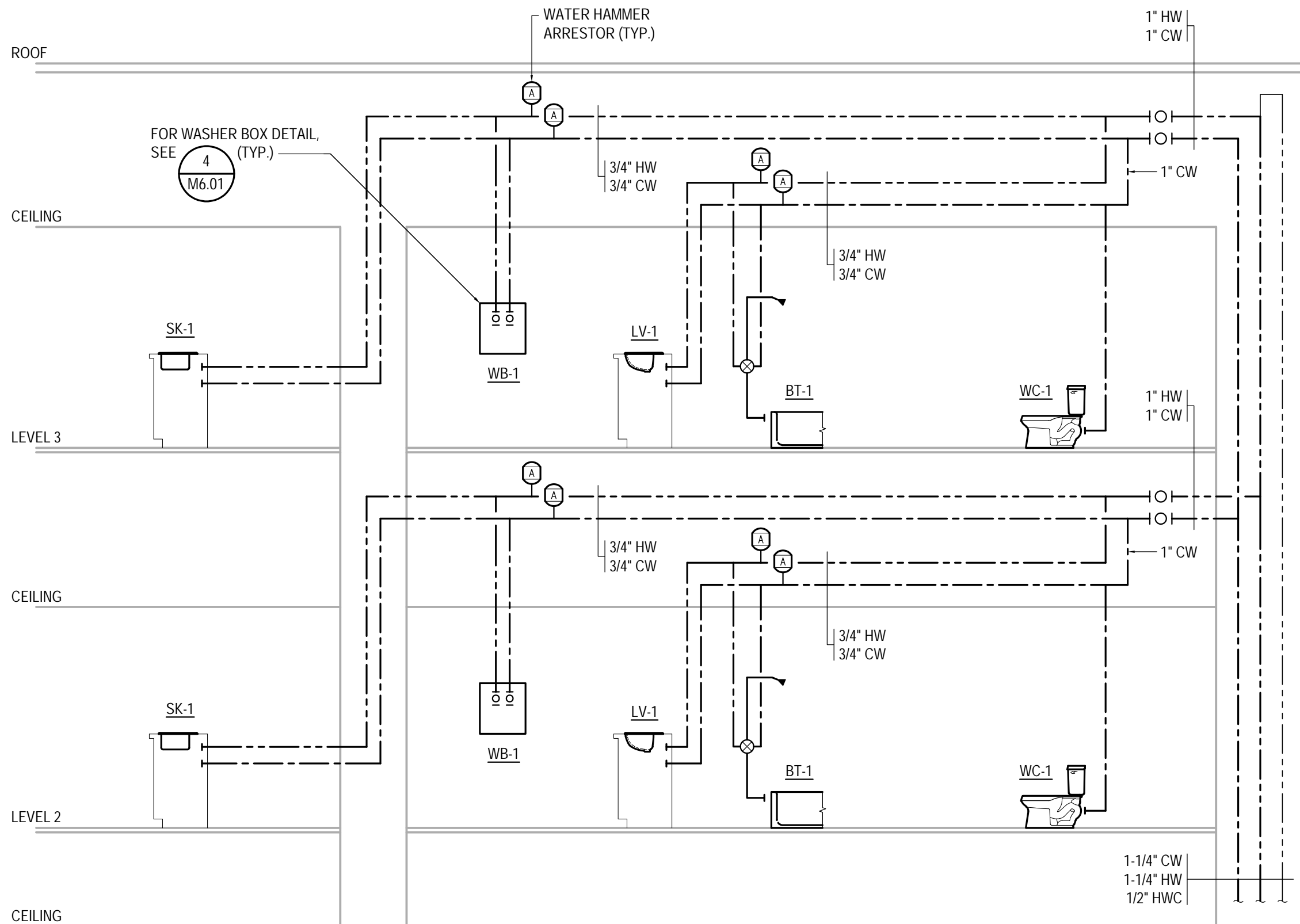
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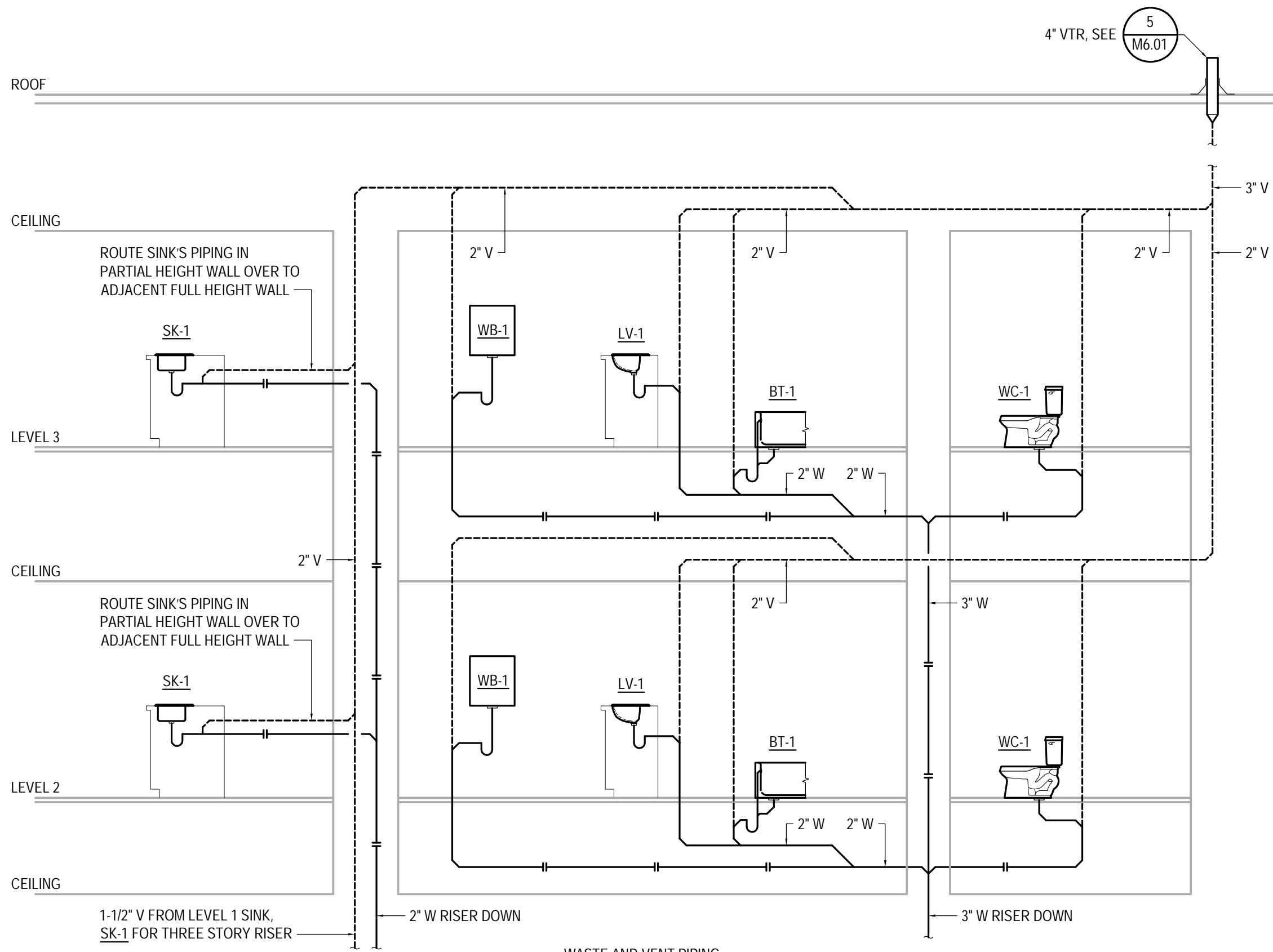
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PLUMBING RISER DIAGRAM

SHEET NO.
M5.03

0"
1"
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COLD AND HOT WATER PIPING

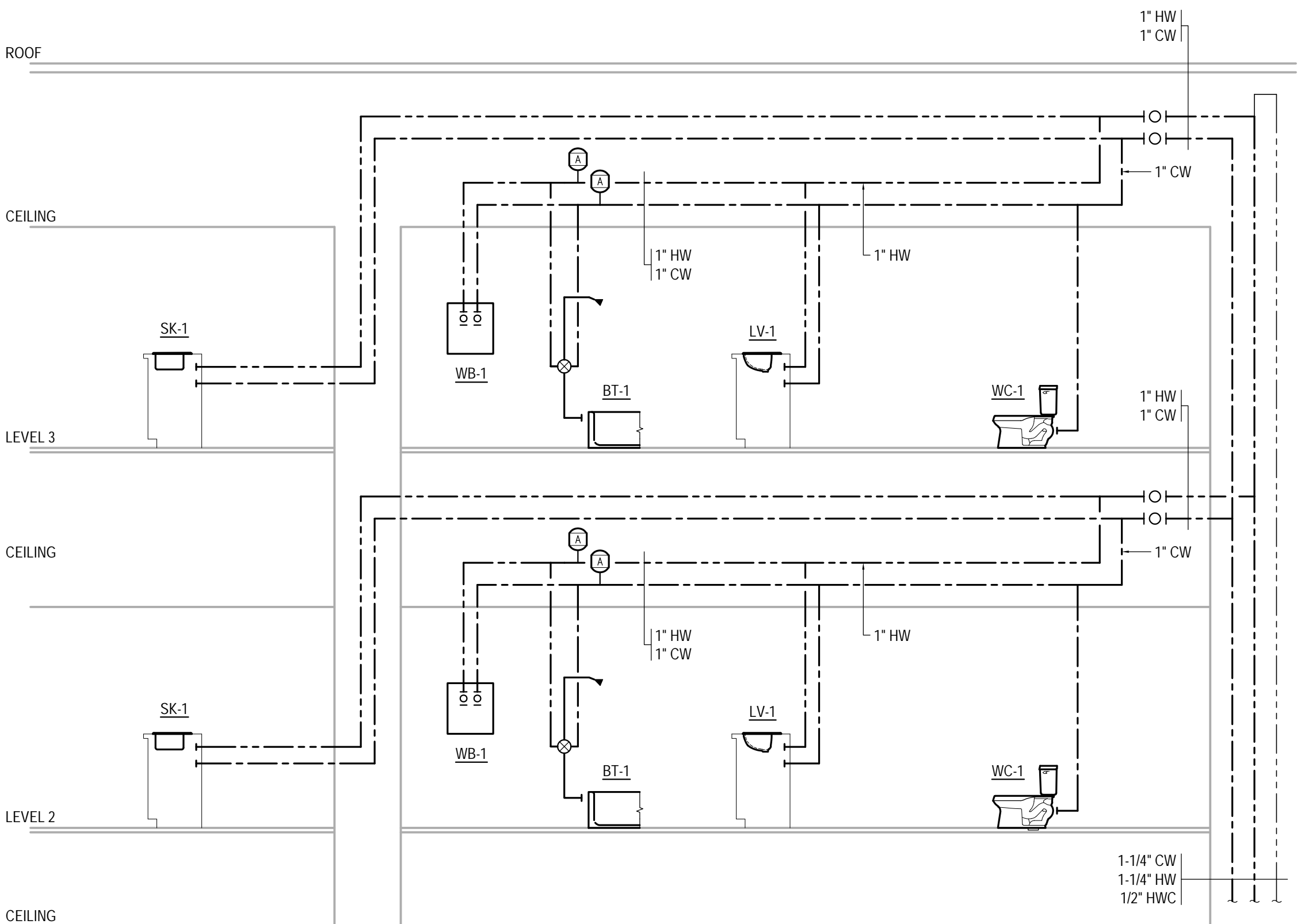


WASTE AND VENT PIPING

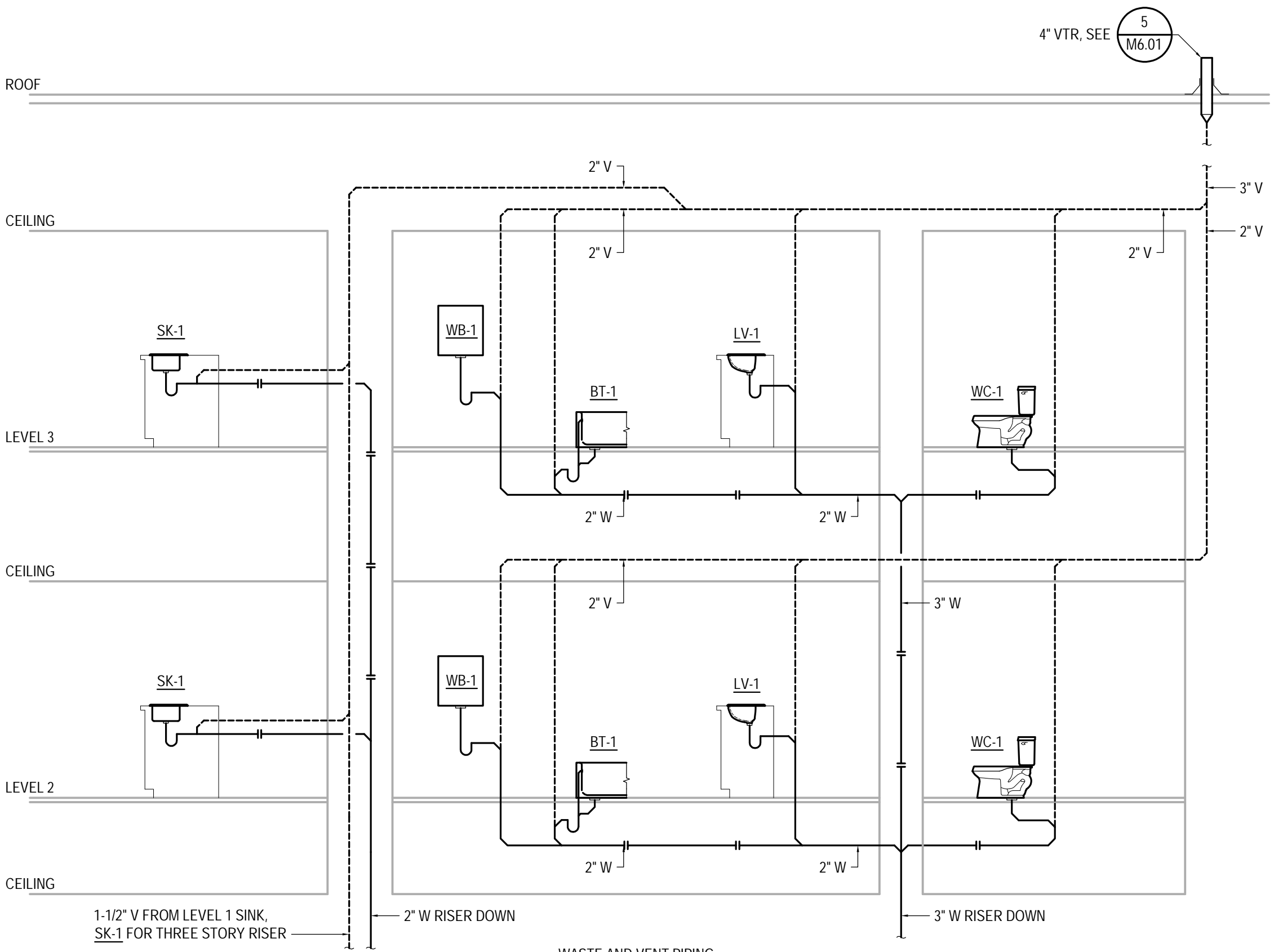
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TYPICAL PLUMBING RISER DIAGRAM - UNIT A, B, B2

SCALE: NONE



COLD AND HOT WATER PIPING



WASTE AND VENT PIPING

2

TYPICAL PLUMBING RISER DIAGRAM - UNIT C

SCALE: NONE

SHEET NOTES

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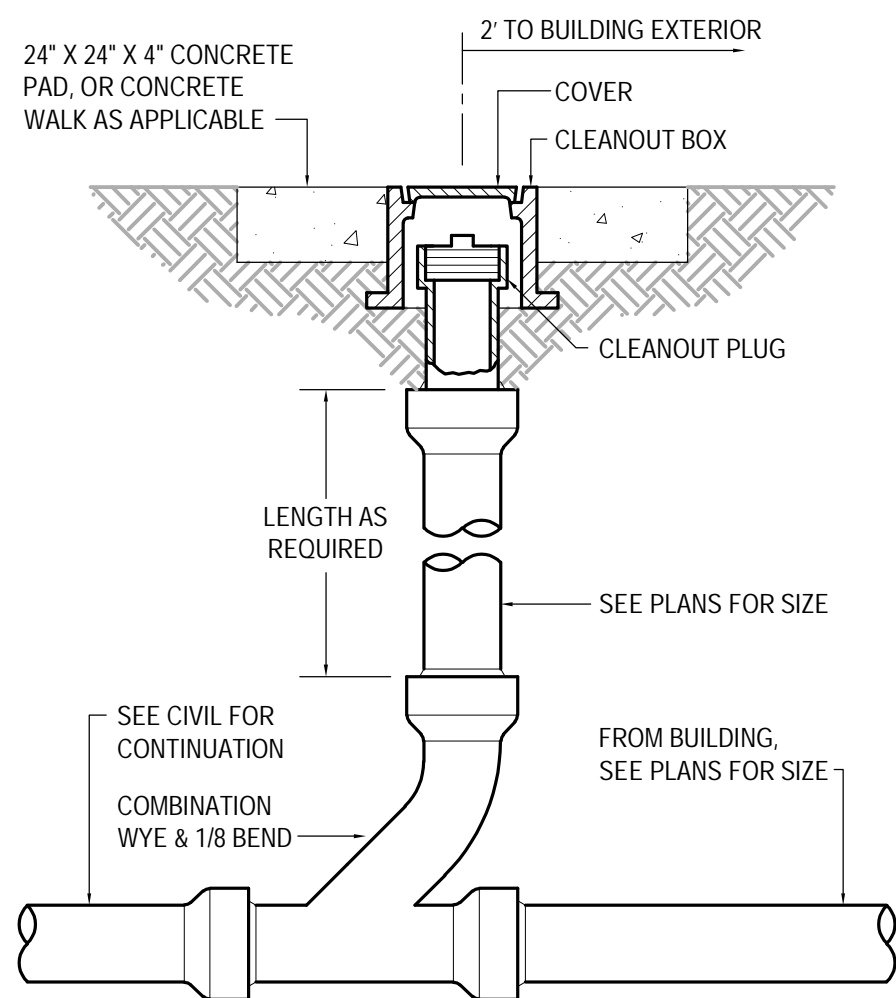
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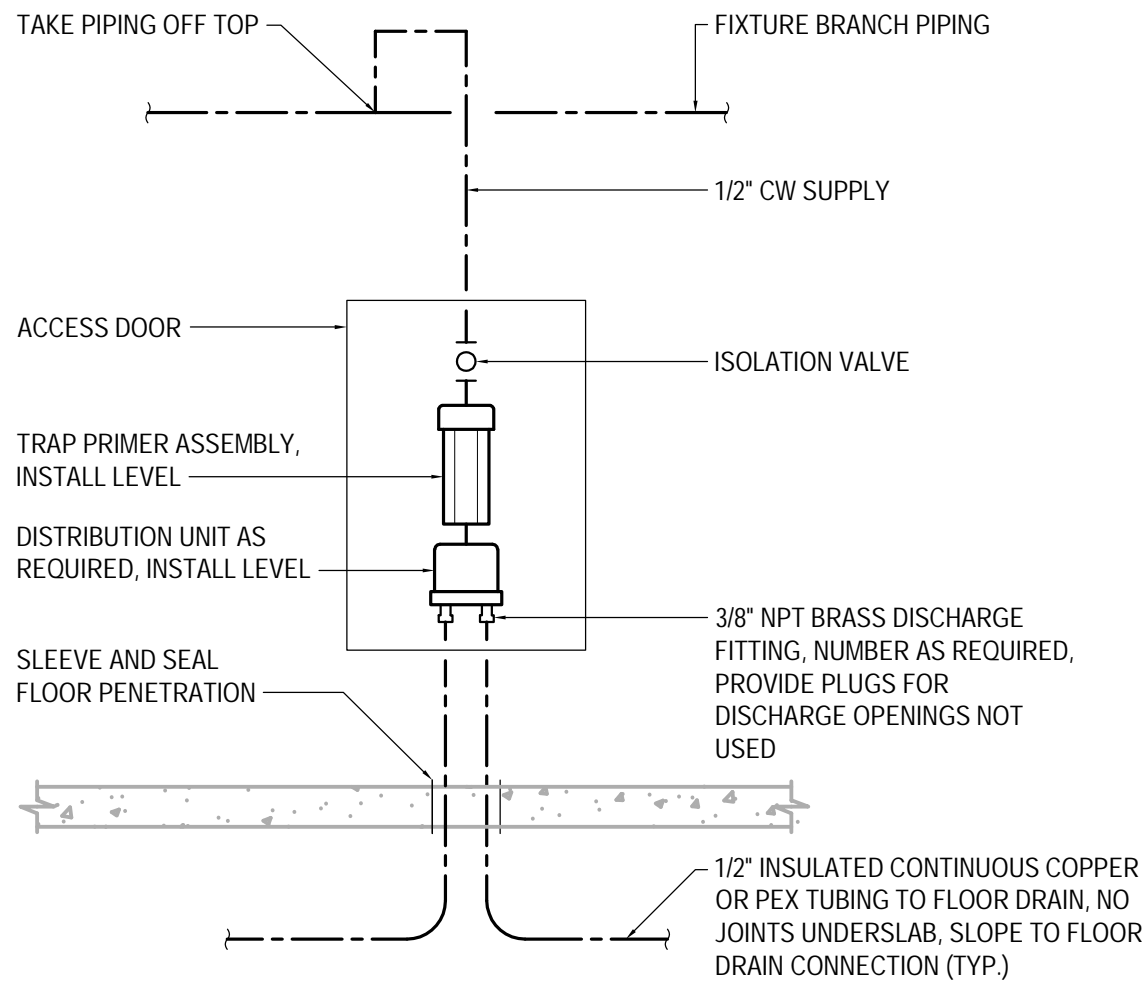
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SHEET NAME
PLUMBING RISER DIAGRAM

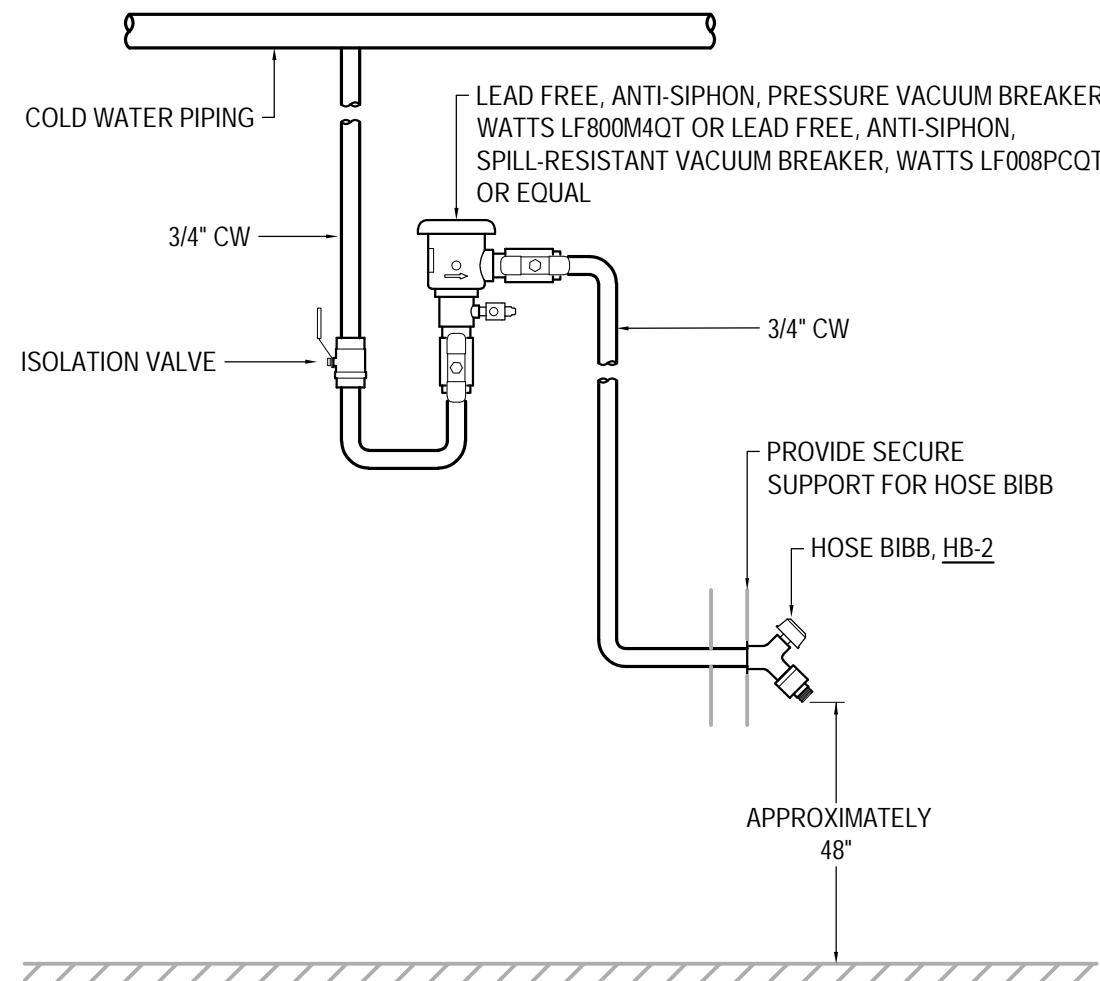
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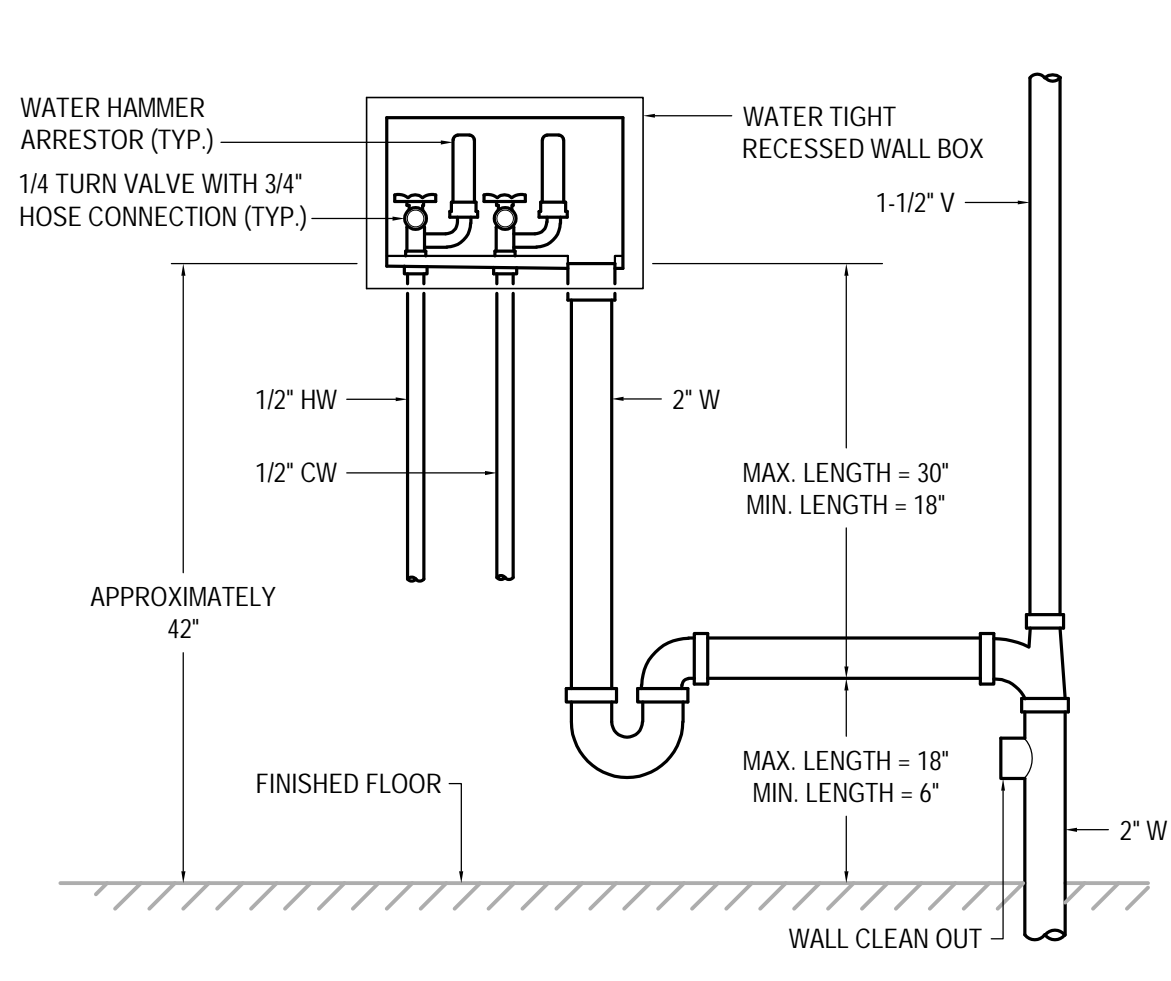
1 YARD CLEANOUT DETAIL
SCALE: NONE



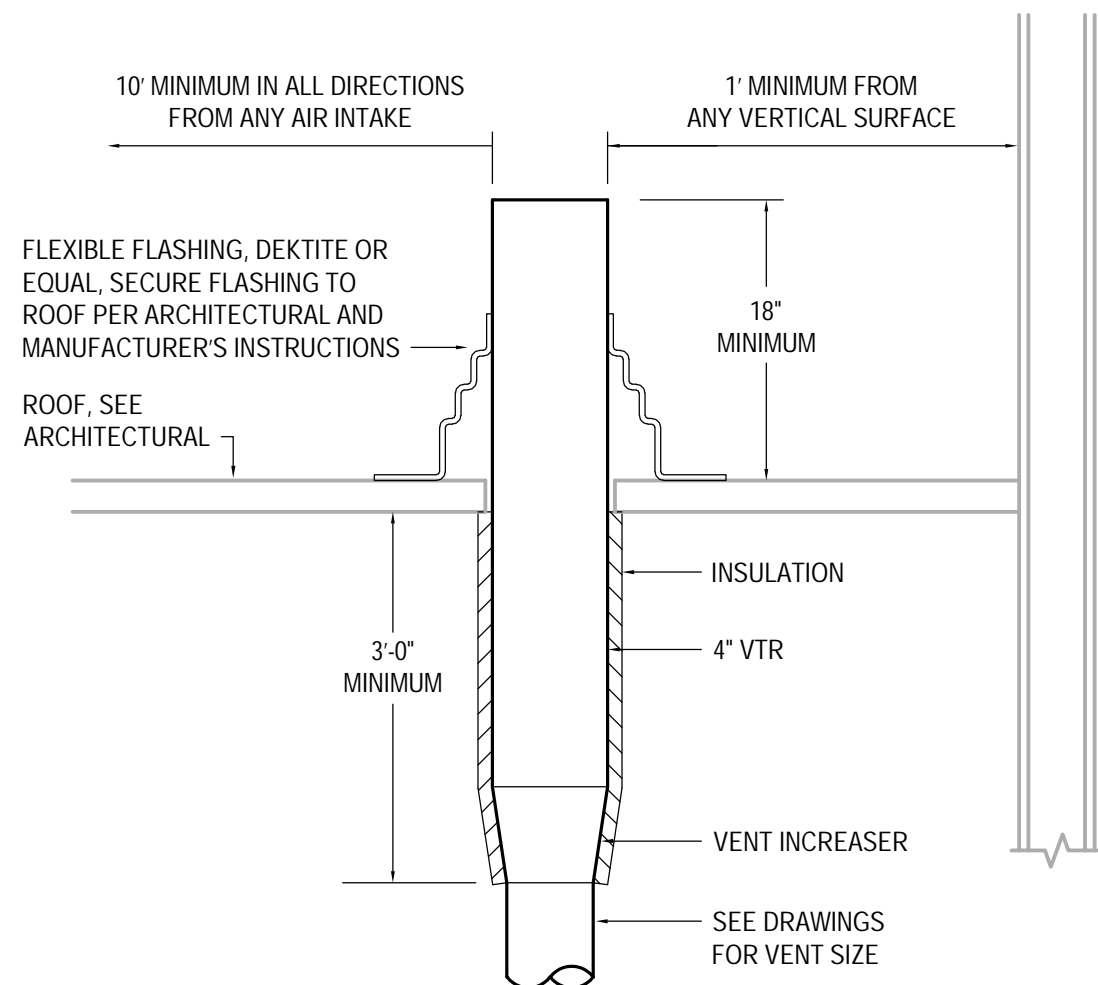
2 TRAP PRIMER DETAIL
SCALE: NONE



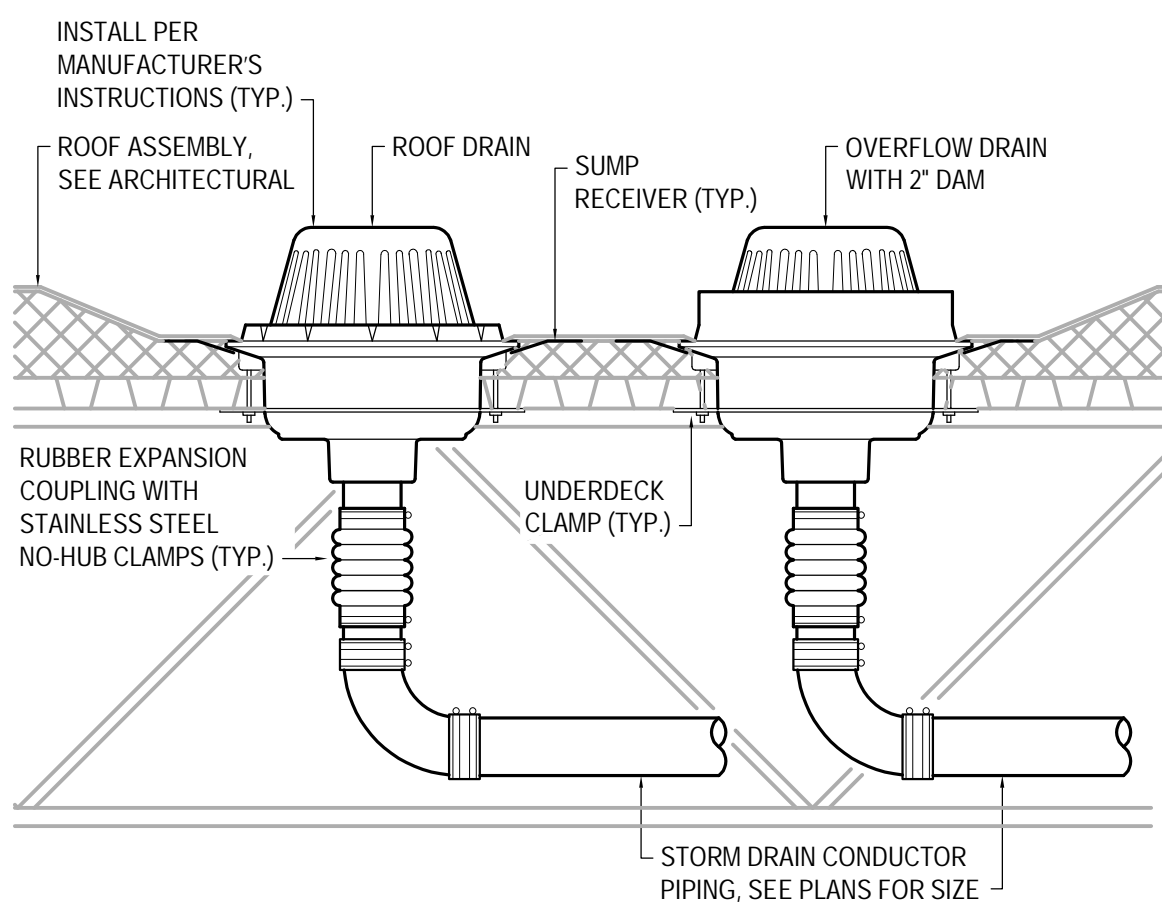
3 INTERIOR HOSE BIBB DETAIL
SCALE: NONE



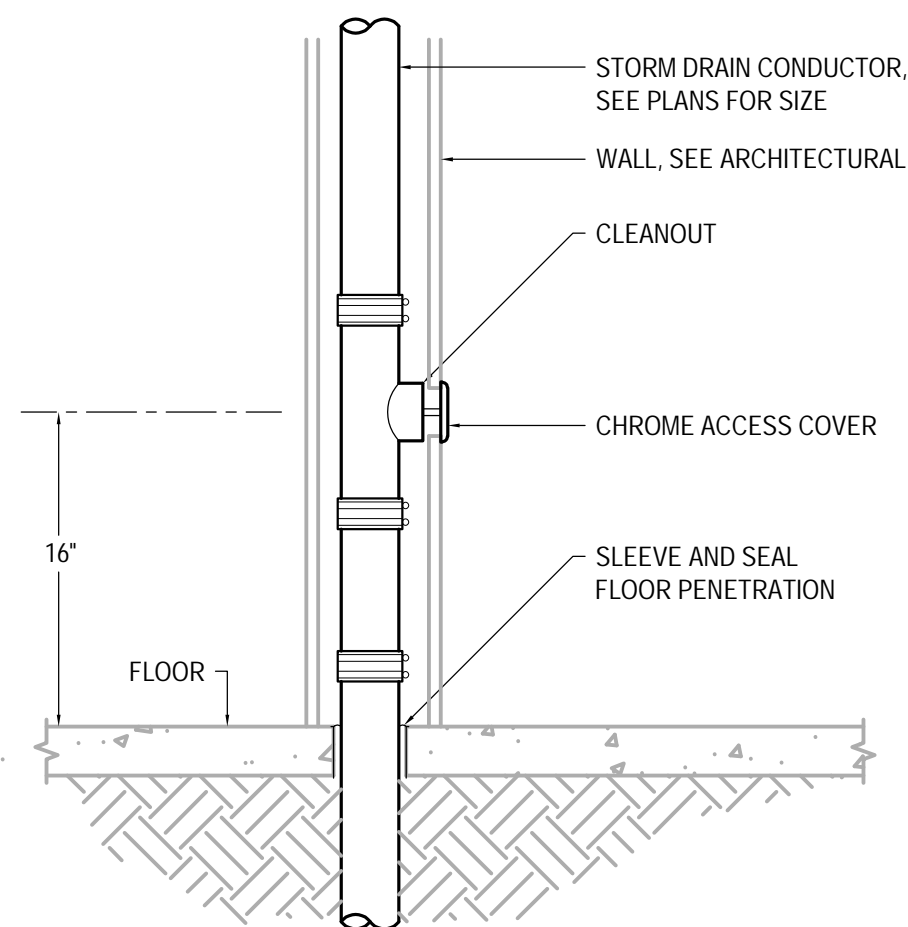
4 WASHER BOX PIPING DETAIL
SCALE: NONE



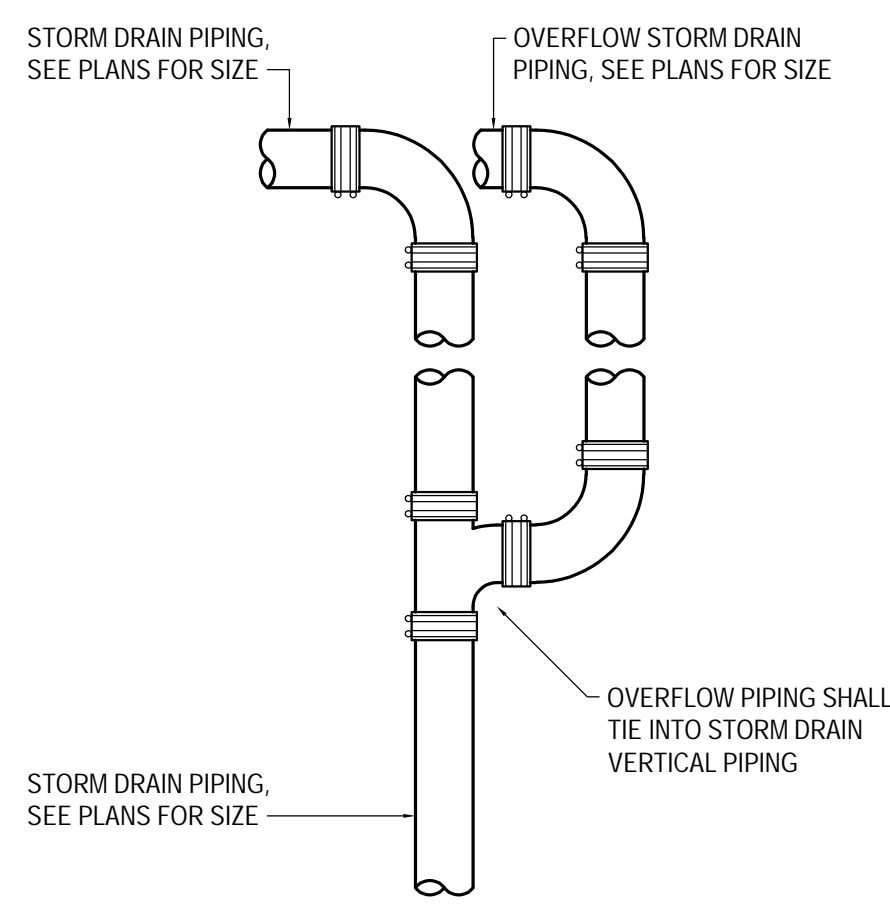
5 VENT THROUGH ROOF DETAIL
SCALE: NONE



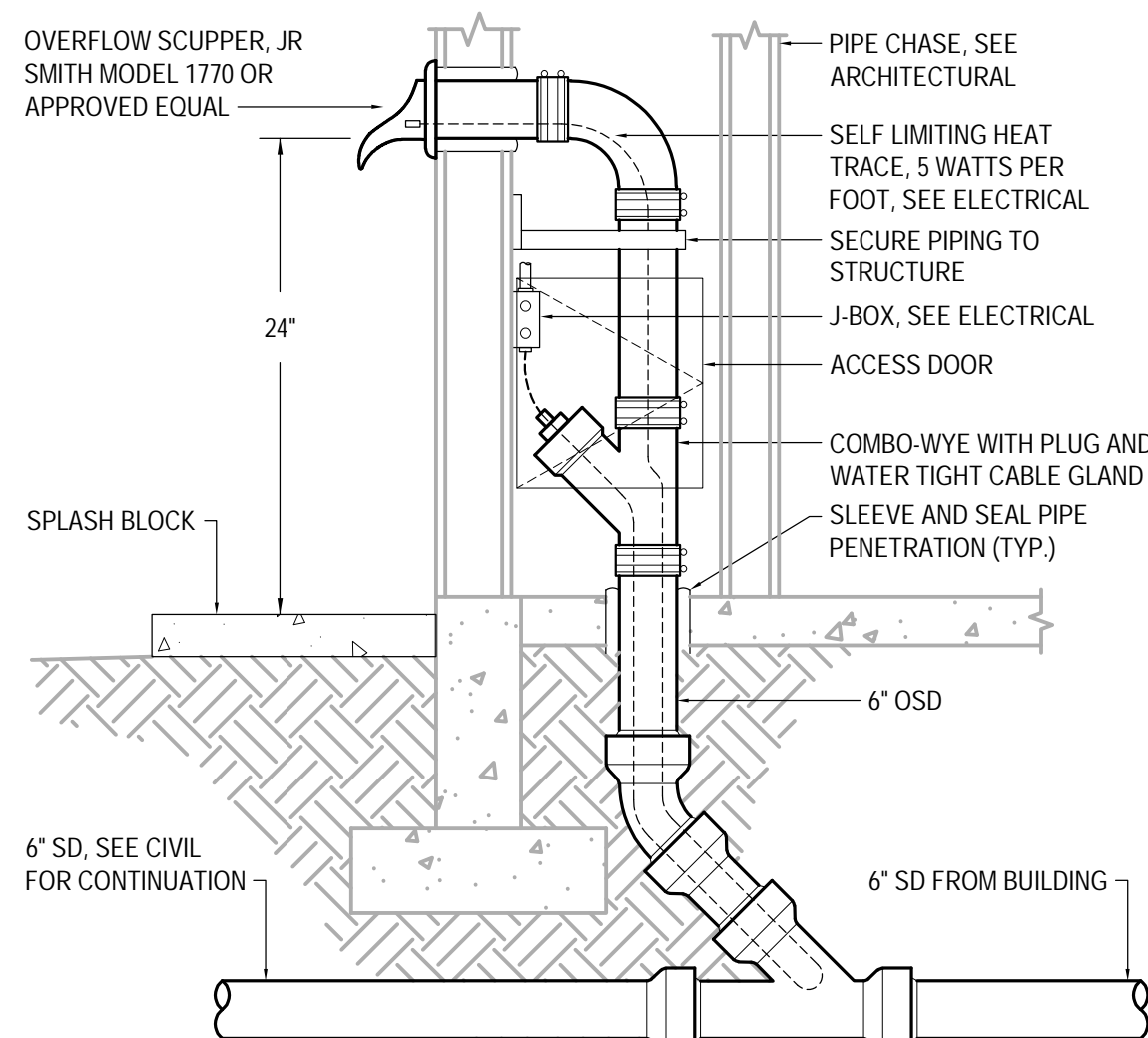
6 ROOF / OVERFLOW DRAIN DETAIL
SCALE: NONE



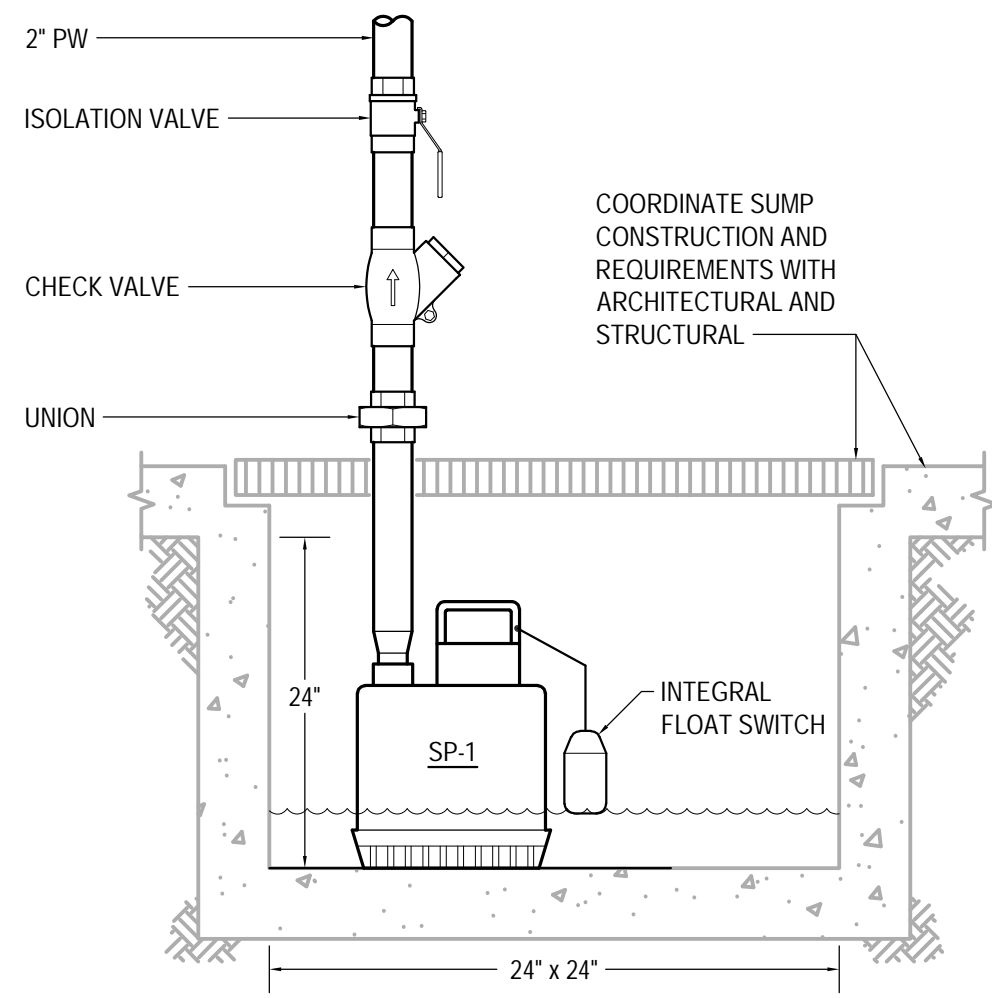
7 STORM DRAIN CLEANOUT DETAIL
SCALE: NONE



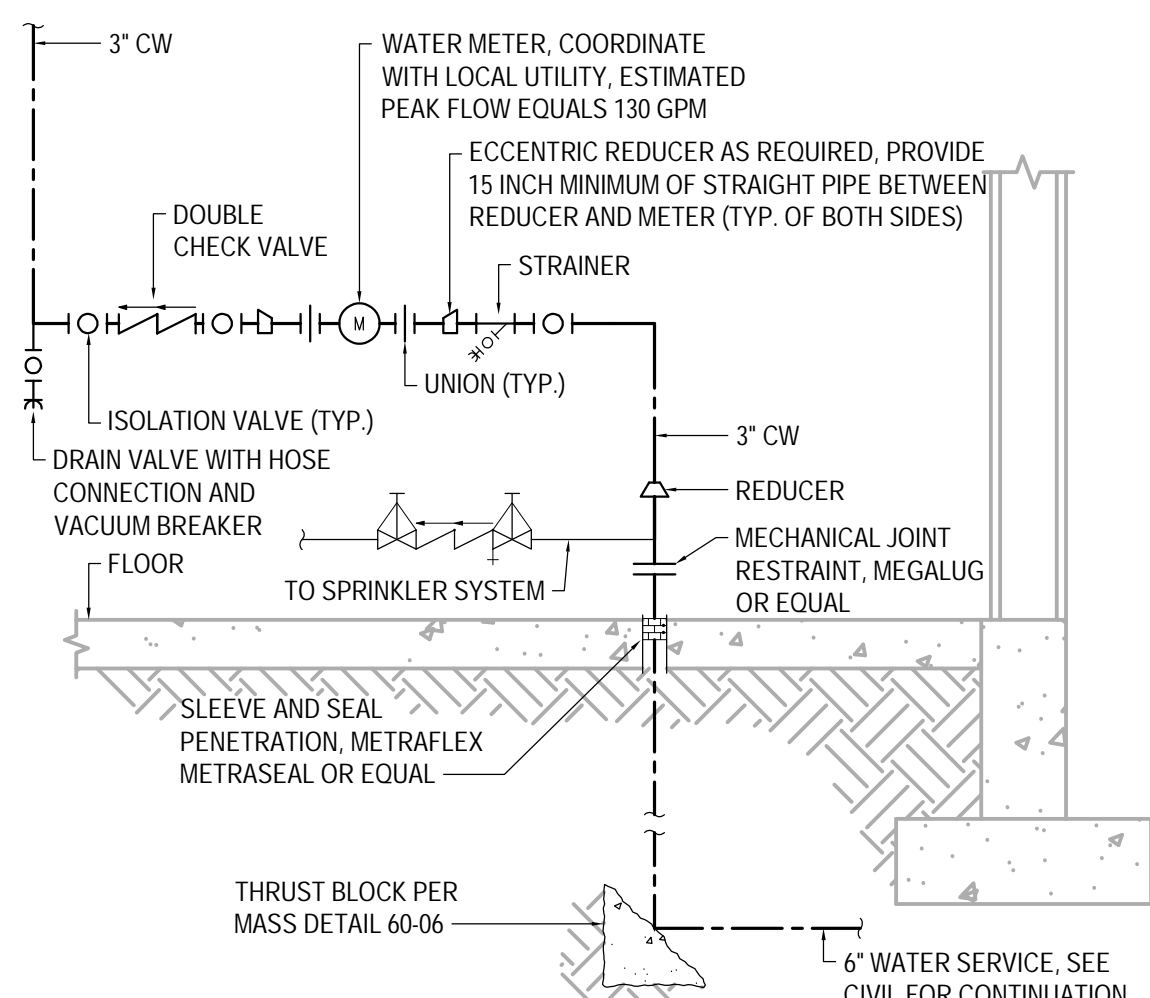
8 STORM DRAIN TIE-IN DETAIL
SCALE: NONE



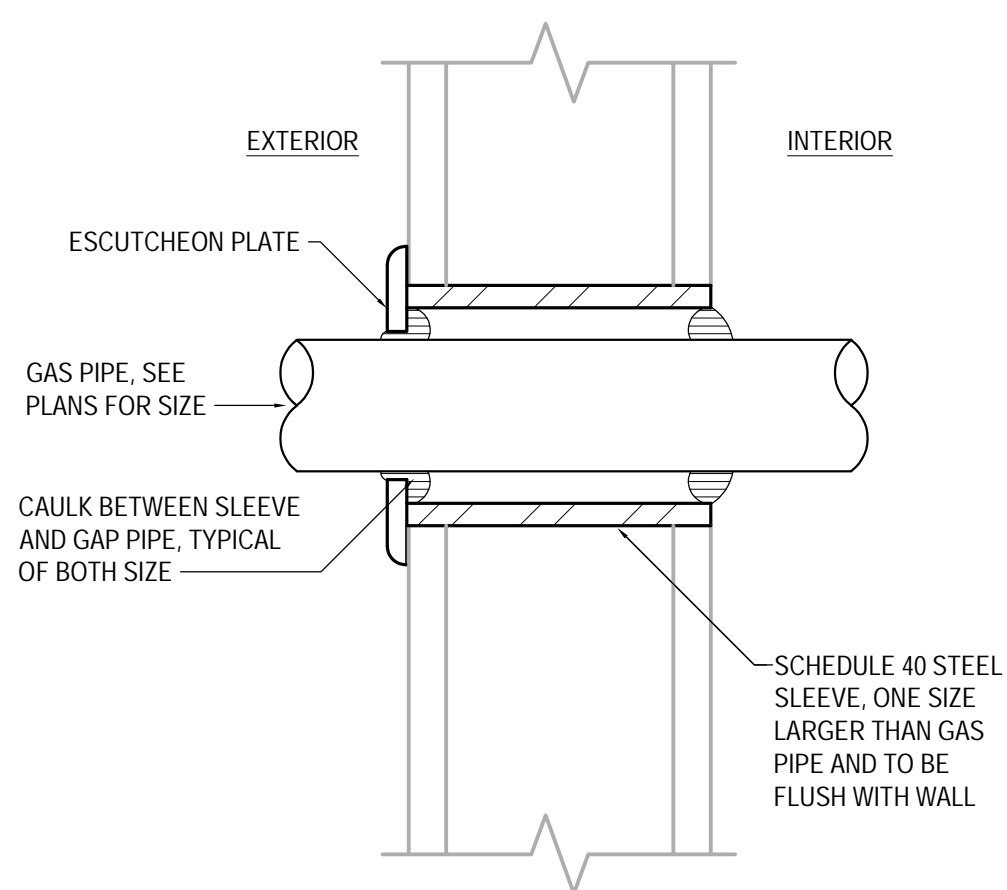
9 OVERFLOW SCUPPER DETAIL
SCALE: NONE



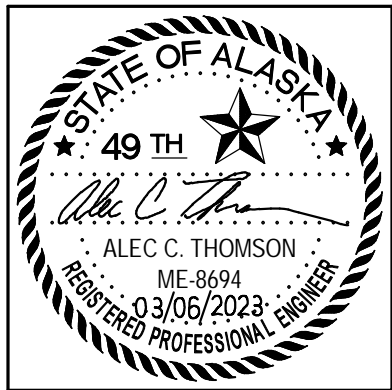
10 ELEVATOR SUMP PUMP DETAIL
SCALE: NONE



11 WATER SERVICE DETAIL
SCALE: NONE



12 GAS PIPE PENETRATION DETAIL
SCALE: NONE



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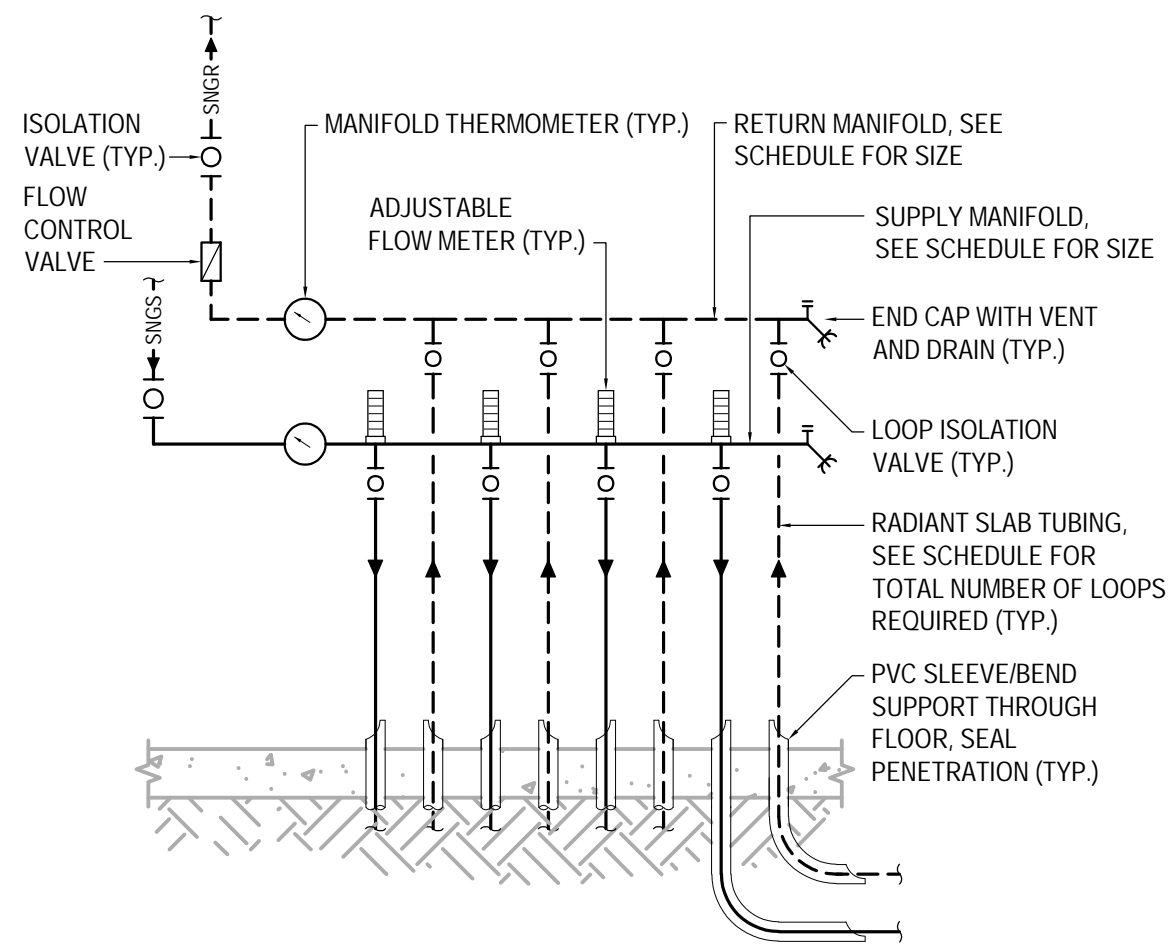
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ASPEN HOUSE SENIOR APARTMENTS
WASILLA, ALASKA

REVISION SCHEDULE		
#	DESCRIPTION	DATE

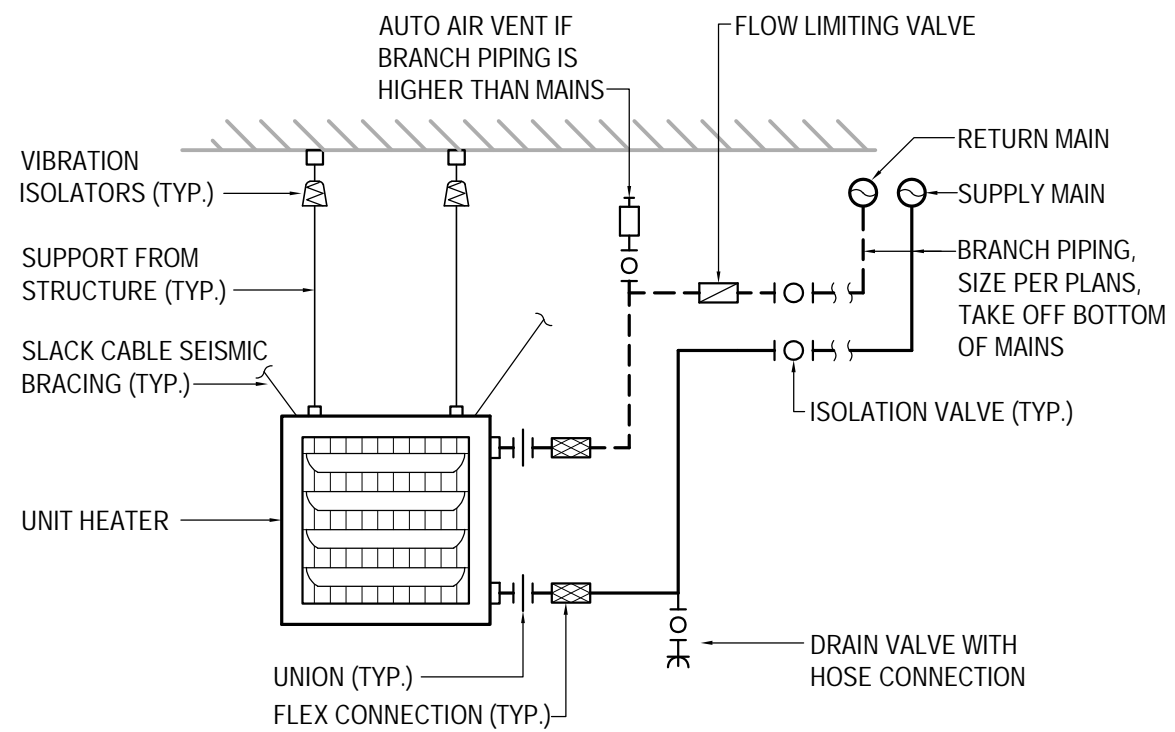
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MECHANICAL DETAILS

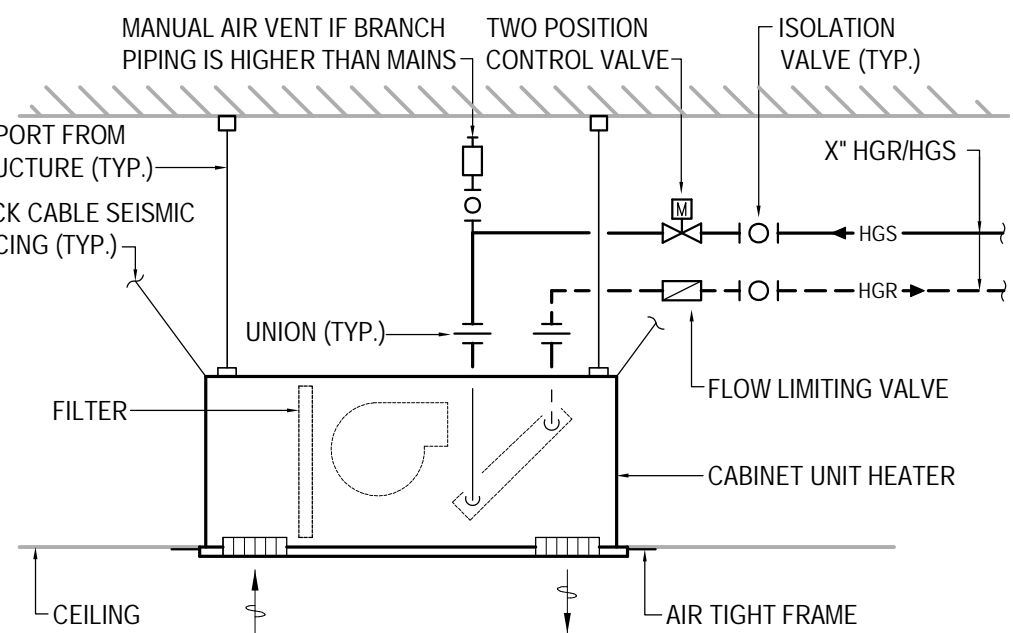
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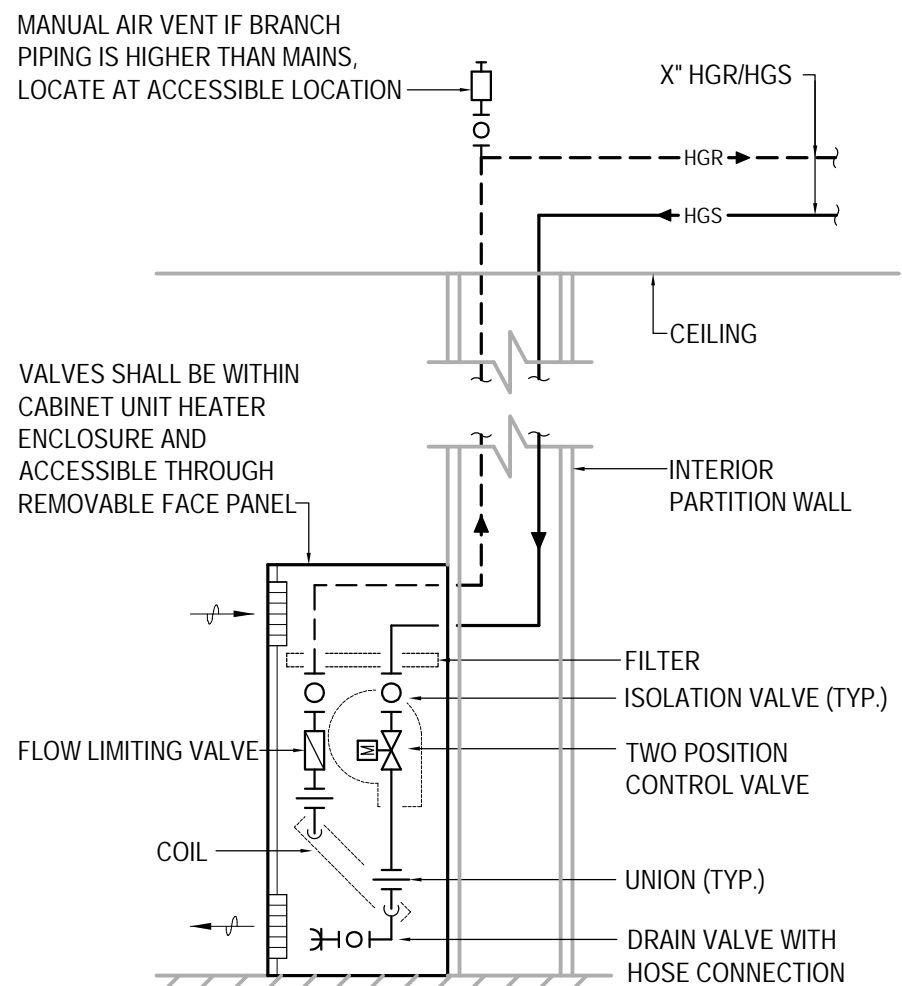
1 SNOWMELT MANIFOLD DETAIL
SCALE: NONE



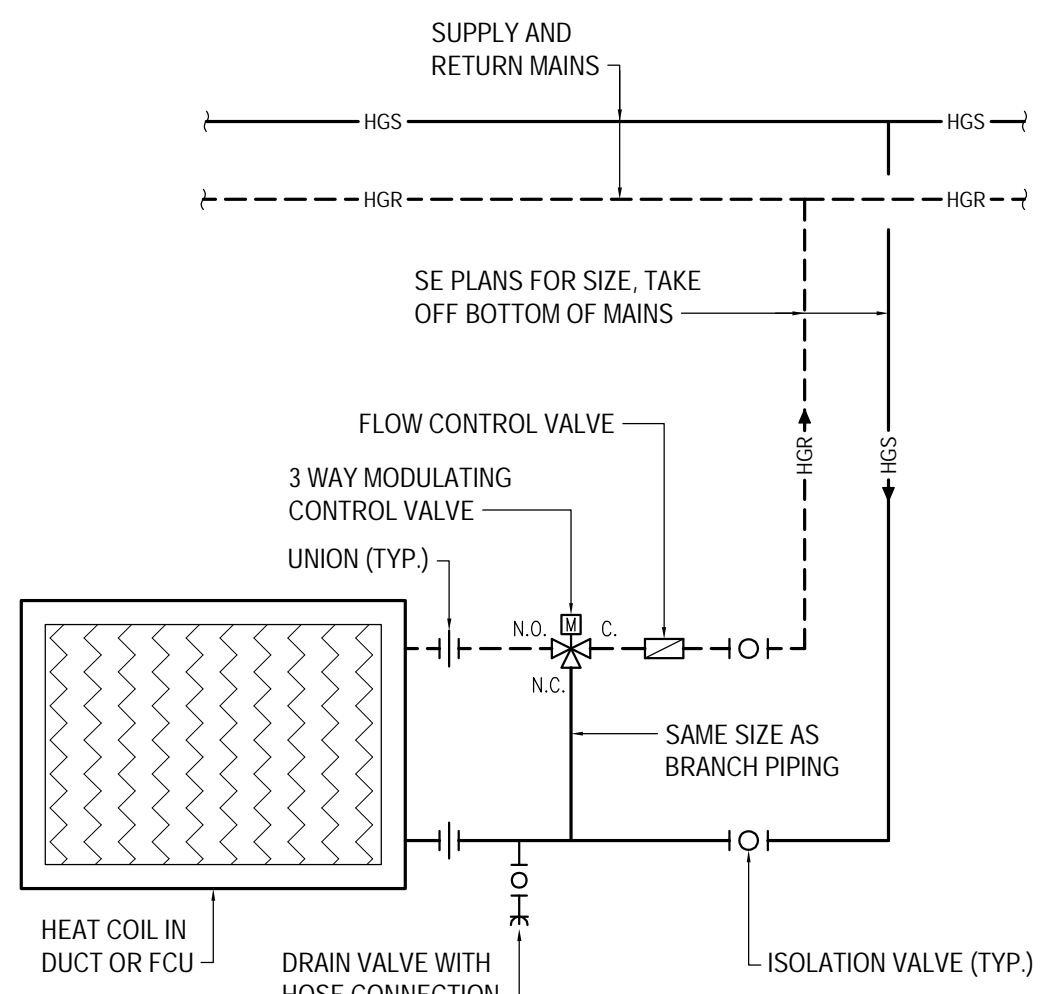
2 UNIT HEATER DETAIL
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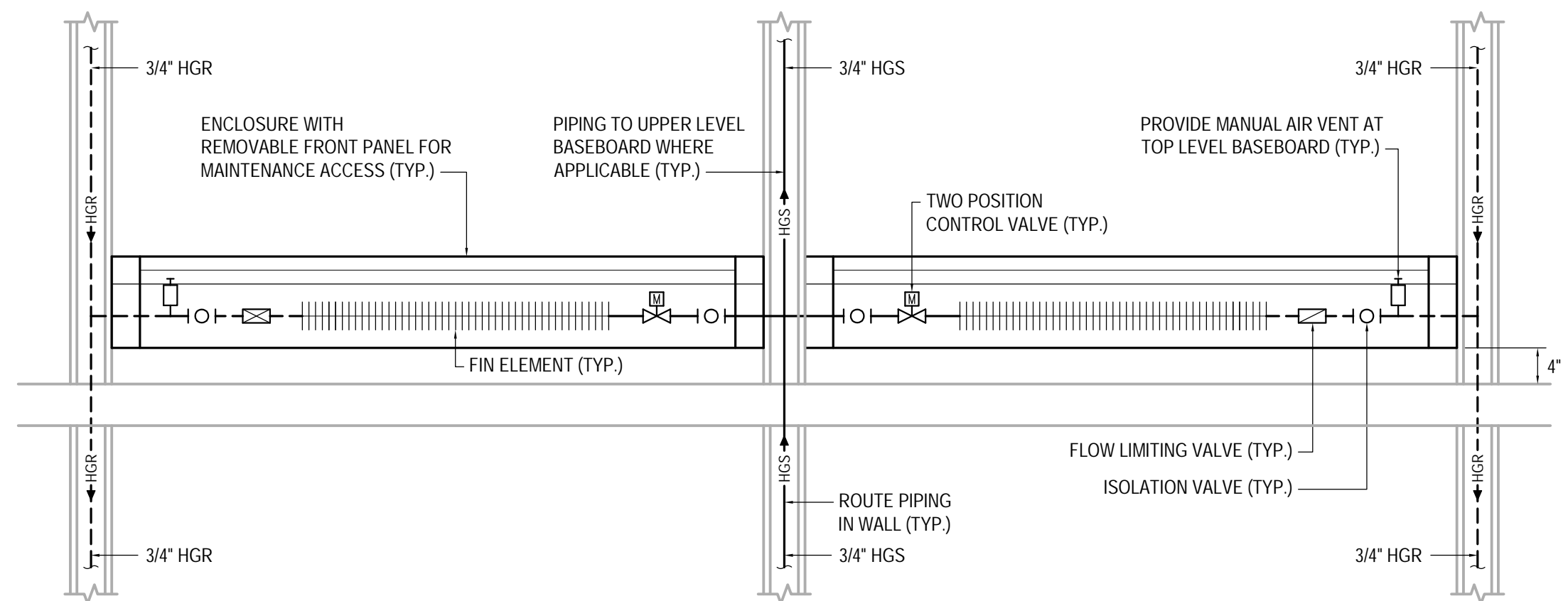
3 CABINET UNIT HEATER DETAIL
SCALE: NONE



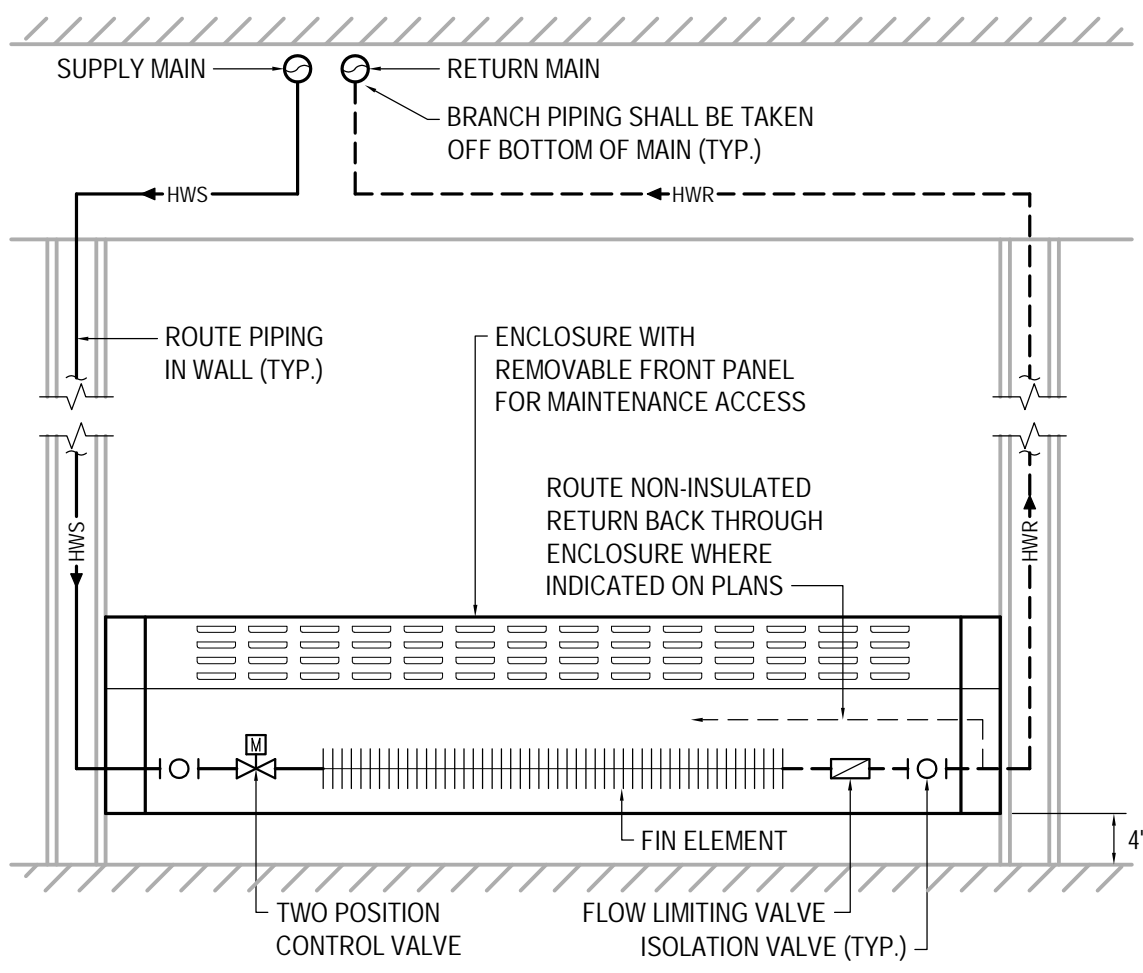
4 CABINET UNIT HEATER DETAIL
SCALE: NONE



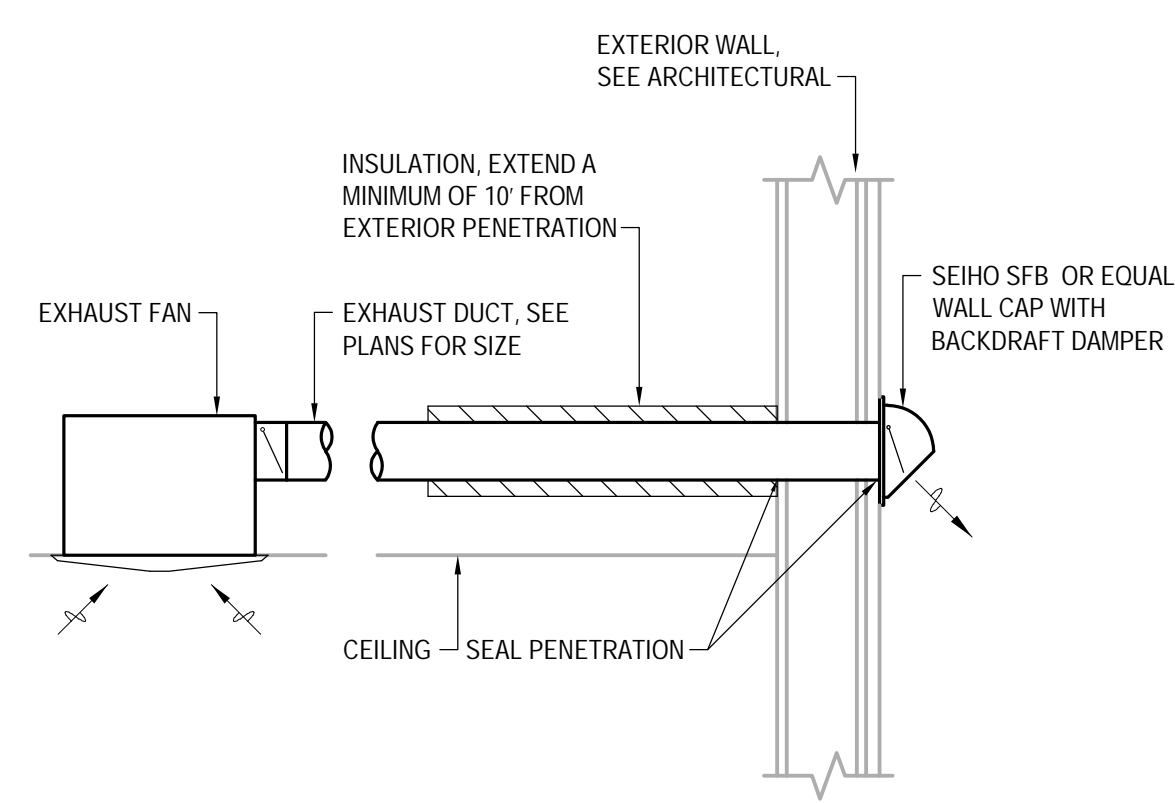
5 HEAT COIL PIPING DETAIL
SCALE: NONE



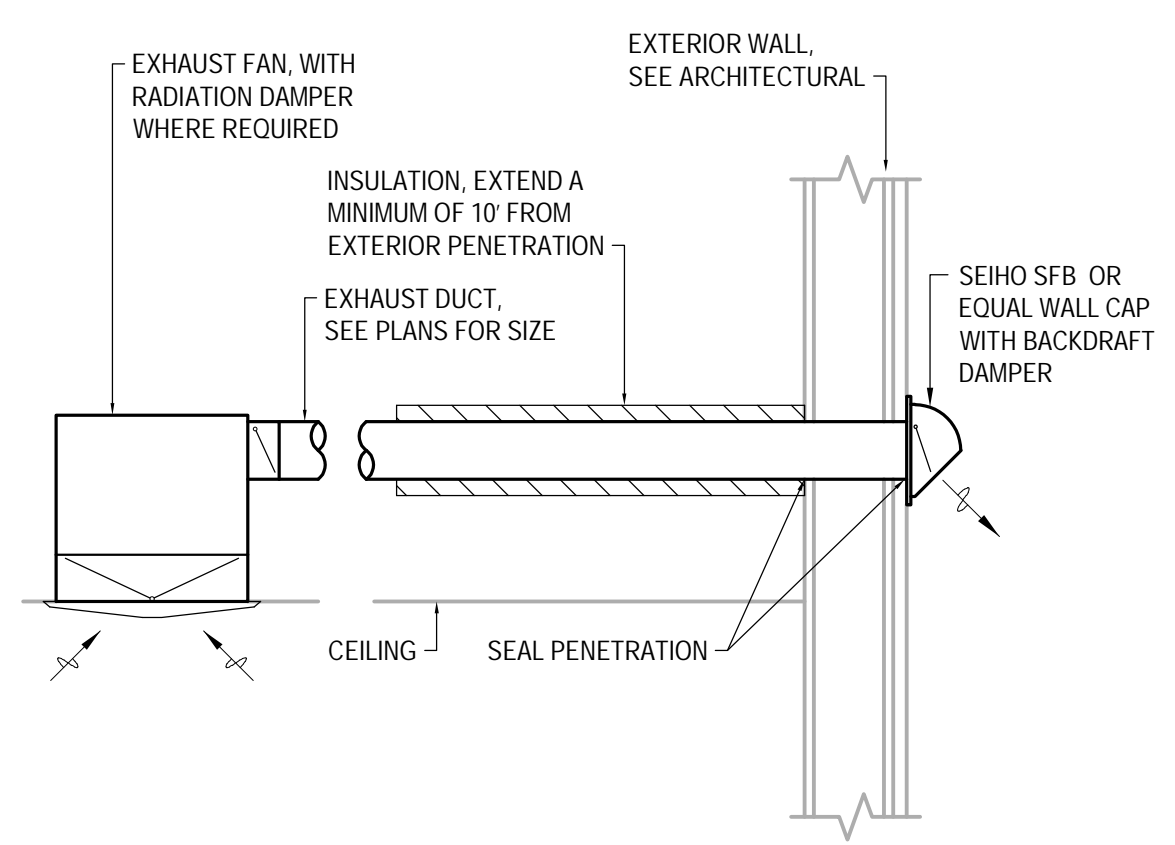
6 RESIDENTIAL BASEBOARD DETAIL: BB-1
SCALE: NONE



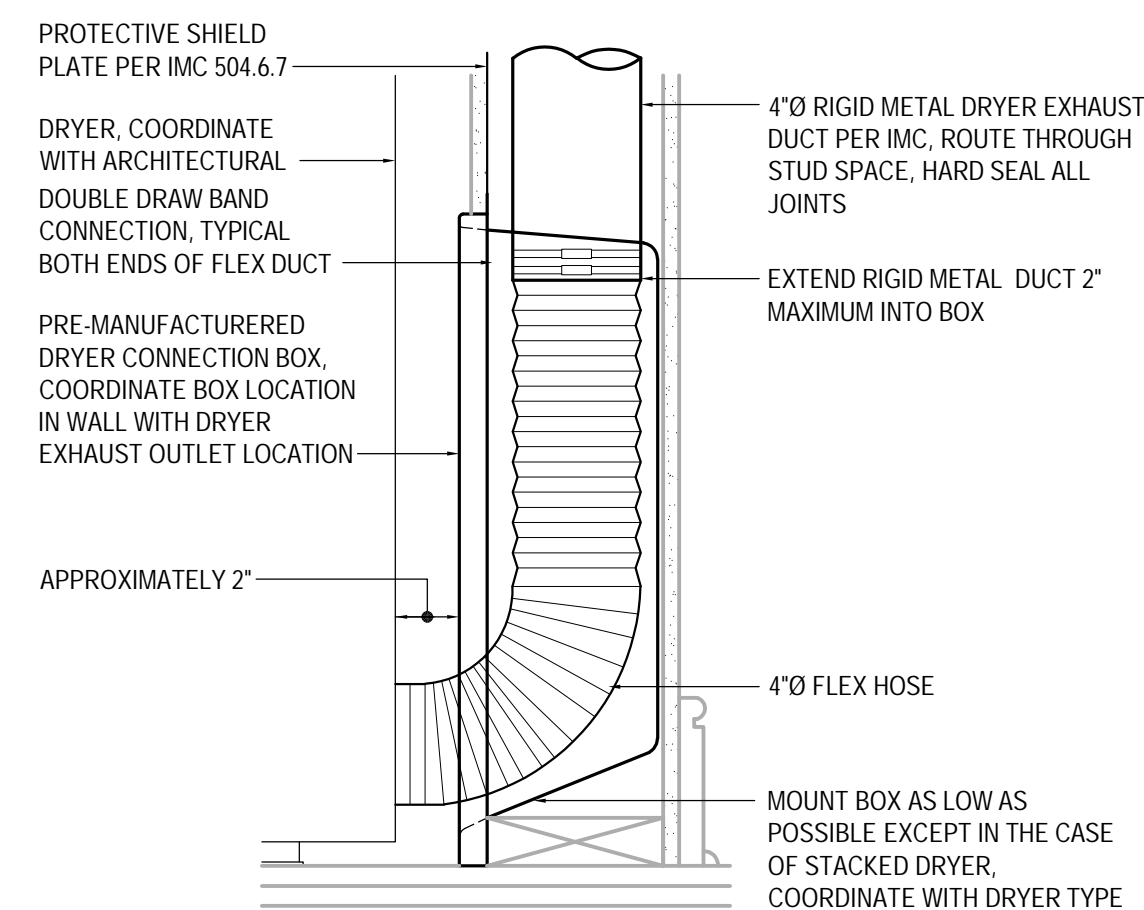
7 BASEBOARD DETAIL: BB-2
SCALE: NONE



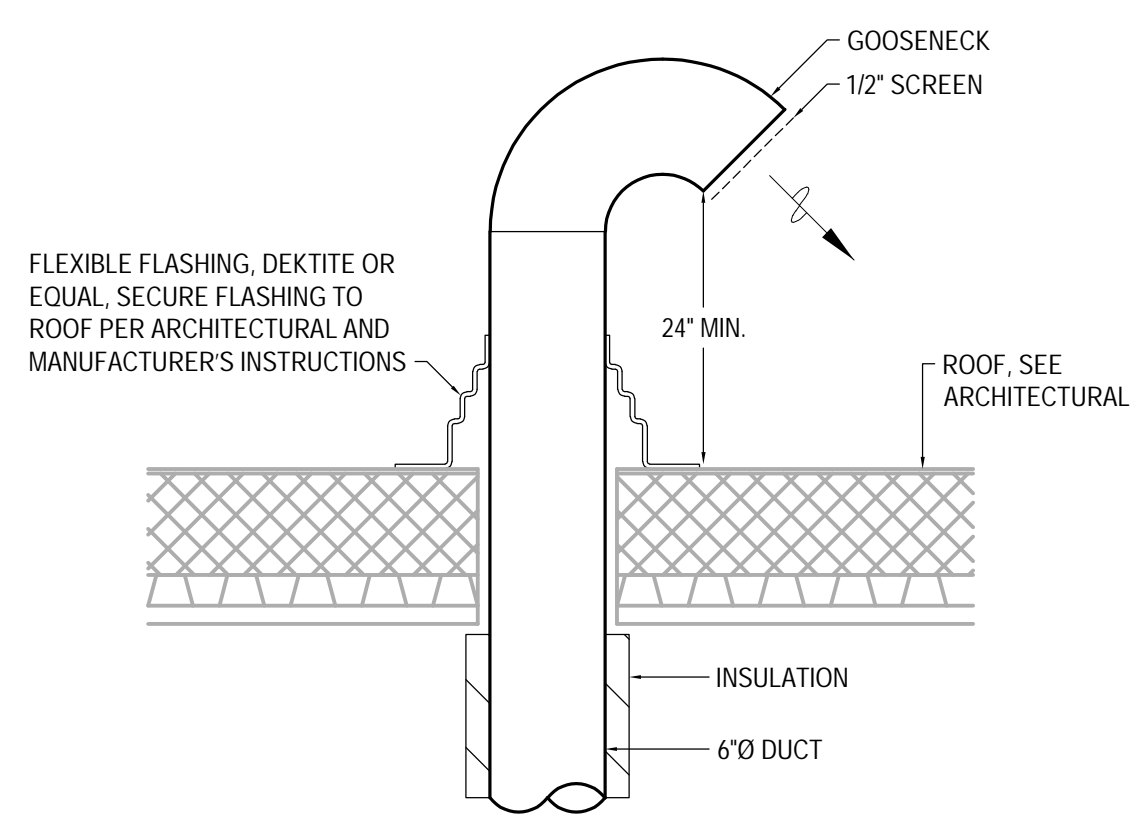
8 EXHAUST FAN DETAIL
SCALE: NONE



9 EXHAUST FAN DETAIL
SCALE: NONE



10 DRYER DUCT BOX DETAIL
SCALE: NONE



11 GOOSENECK ROOF OUTLET DETAIL
SCALE: NONE



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MECHANICAL DETAILS

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M6.02

0"
1"

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ELECTRICAL ABBREVIATIONS

AC ABOVE COUNTER
AFF ABOVE FINISHED FLOOR
AFCI ARC FAULT CIRCUIT INTERRUPTER
AIC AMPERES INTERRUPTING CAPACITY
AMP, A AMPERE
ARCH ARCHITECTURAL
ATS AUTOMATIC TRANSFER SWITCH
AWG AMERICAN WIRE GAUGE

C CONDUIT
°C CELSIUS
CB CIRCUIT BREAKER
CKT CIRCUIT
CLG CEILING
CO CONDUIT ONLY
COMM COMMUNICATIONS

DW DISH WASHER

EF EXHAUST FAN
E, EX, EXIST EXISTING
EM EMERGENCY
EMT ELECTRICAL METALLIC TUBING

FA FIRE ALARM
FACP FIRE ALARM CONTROL PANEL
FLA FULL LOAD AMPS

G, GRD GROUND
GFCI GROUND FAULT CURRENT INTERRUPTER
GF GROUND FAULT PROTECTION

HP HORSE POWER

IN, " INCHES

K DEGREE KELVIN
KCMIL, MCM THOUSAND CIRCULAR MILS
KVA KILOVOLT AMPERES
KW KILOWATT

LC LIGHTING CONTACTOR

MAX MAXIMUM
MCB MAIN CIRCUIT BREAKER
MECH MECHANICAL
MLO MAIN LUGS ONLY
MW MICROWAVE

N NEUTRAL
NC NORMALLY CLOSED
NEC NATIONAL ELECTRIC CODE
NIC NOT IN CONTRACT
NO NORMALLY OPEN
NO, # NUMBER

OFCI OWNER FURNISHED/
CONTRACTOR INSTALLED

PA PUBLIC ADDRESS
PC PHOTO CELL
PH, Ø PHASE

RECP, REC RECEPTACLE
REF REFRIGERATOR
REQ, REQD REQUIRED
R RELOCATED

TELECOM TELECOMMUNICATIONS
TV TELEVISION
TYP TYPICAL

UC UNDER COUNTER
UG UNDERGROUND
UON UNLESS OTHERWISE NOTED
UPS UNINTERRUPTIBLE POWER SUPPLY
UTP UNSHIELDED TWISTED PAIR

V VOLTS
VA VOLT AMPERES
VFD VARIABLE FREQUENCY DRIVE

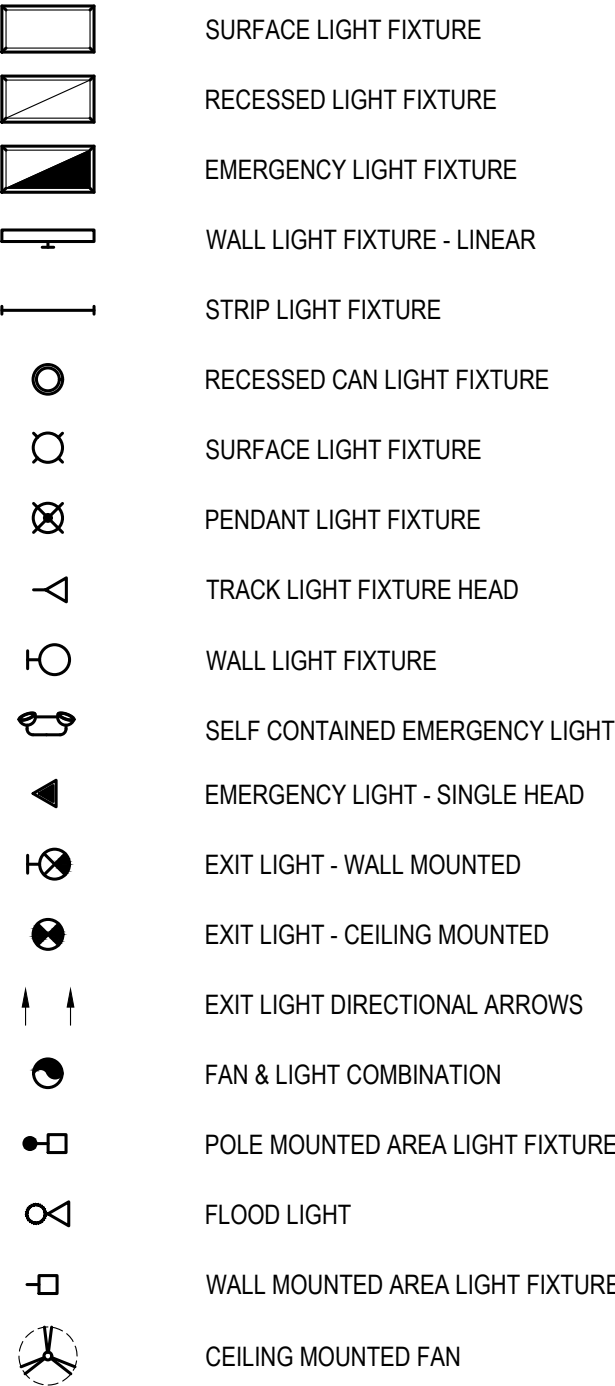
W WATT
WP WEATHERPROOF
WR WEATHER RESISTANT

XFMR TRANSFORMER

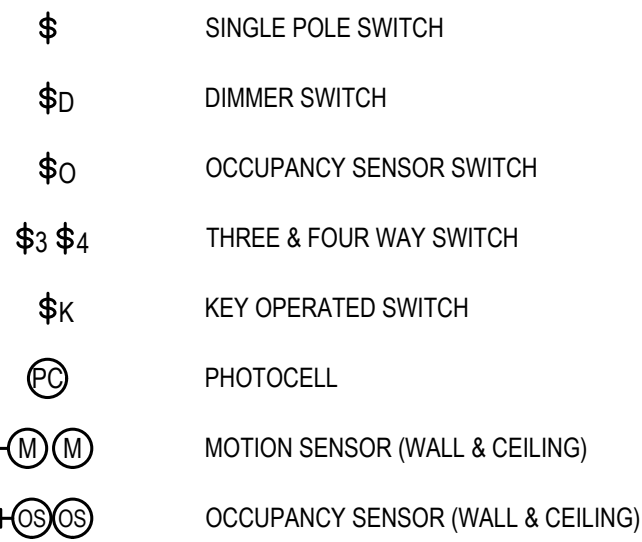
MOUNTING HEIGHT SCHEDULE	
*SWITCHES	4'-0"
*RECEPTACLES	1'-6"
*WEATHERPROOF RECEPTACLES	2'-0"
BRANCH PANELS (TOP)	6'-6"
DISCONNECT SWITCHES (TOP)	5'-6"
MOUNTING HEIGHTS SHALL PREVAIL ON ALL NEW CONSTRUCTION UNLESS OTHERWISE NOTED.	
MOUNTING HEIGHTS ARE TO CENTER OF DEVICE AND ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED.	
COORDINATE FINAL MOUNTING HEIGHTS FOR DEVICES ABOVE COUNTERS WITH ARCHITECTURAL ELEVATIONS.	
COORDINATE FINAL MOUNTING HEIGHTS FOR DEVICES FOR EQUIPMENT WITH ARCHITECTURAL ELEVATIONS.	
MOUNTING FOR DEVICES SHOWN ABOVE BASEBOARD HEATERS, 4" ABOVE HEATER, MOUNTED VERTICALLY.	
THESE ARE TYPICAL MOUNTING HEIGHTS. NOT ALL DEVICES ARE NECESSARILY APPLICABLE TO THIS PROJECT.	
*MOUNTING HEIGHTS COMPLY WITH ICC/ANSI A117.1-09	

ELECTRICAL SYMBOLS

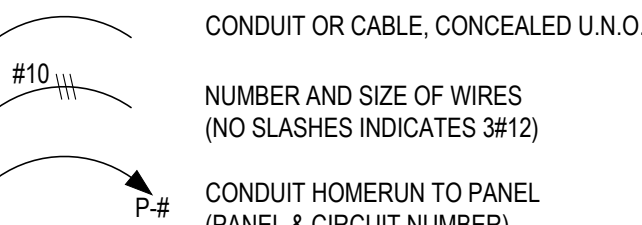
LIGHTING FIXTURES



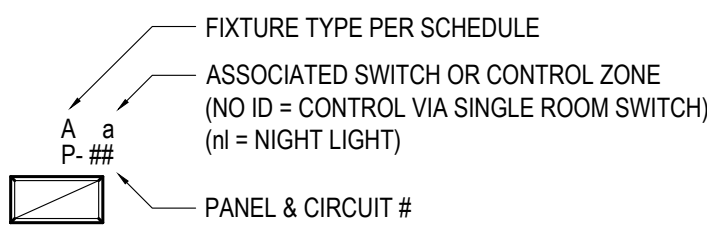
LIGHTING CONTROLS



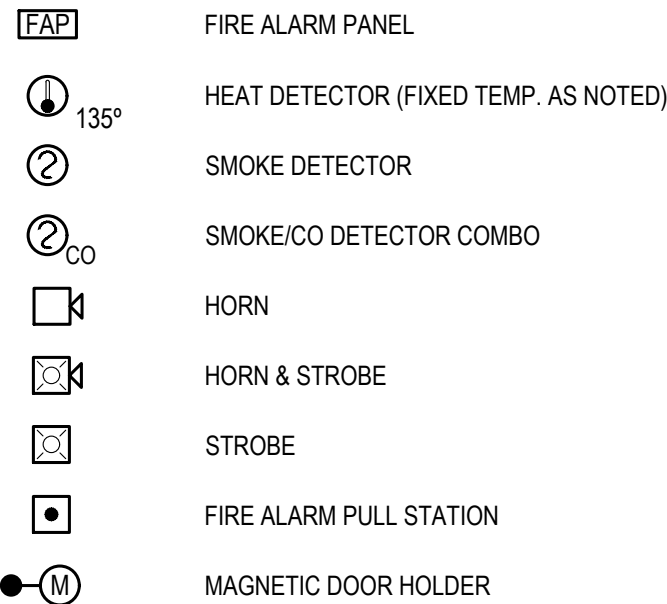
CONDUITS AND CONDUCTORS



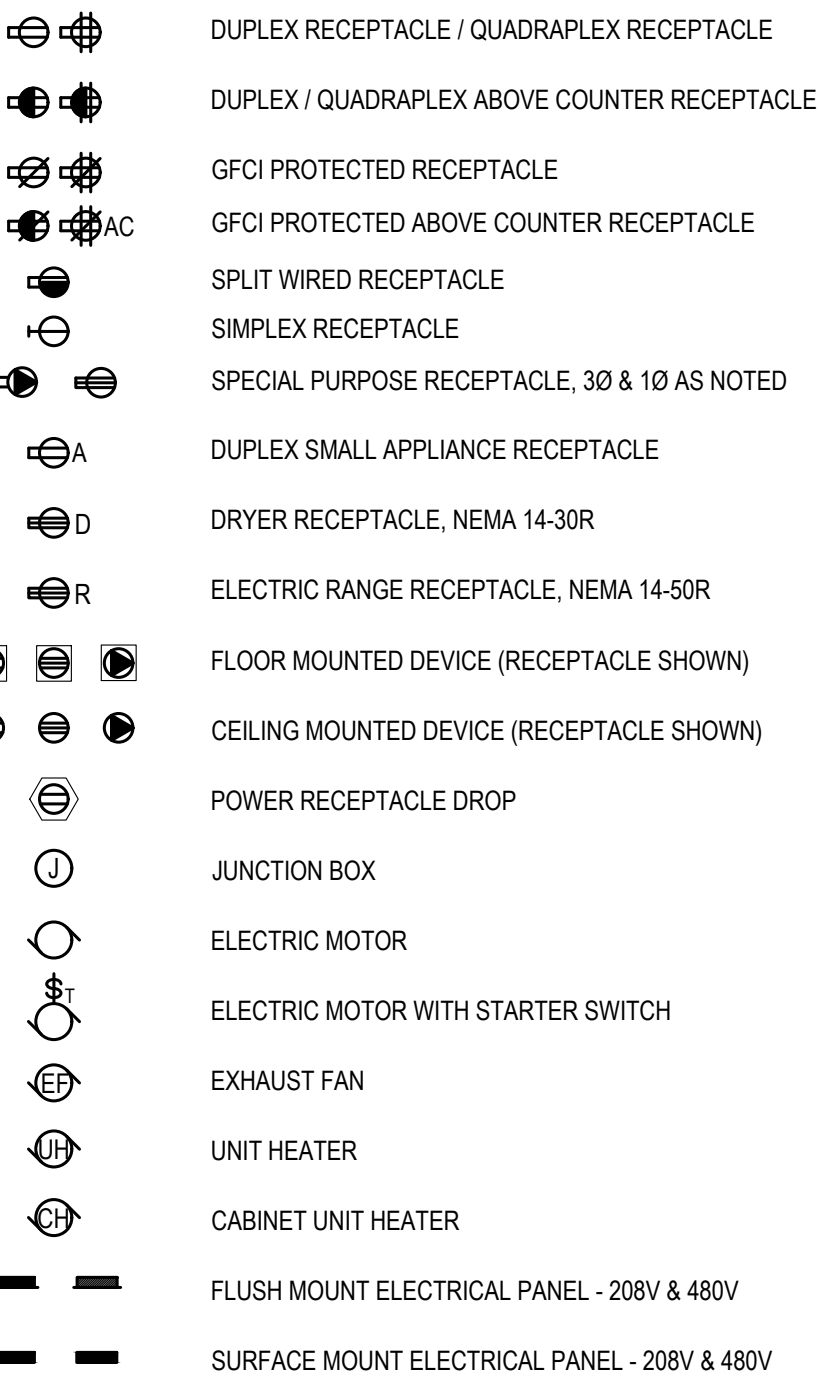
LIGHT FIXTURE NOMENCLATURE



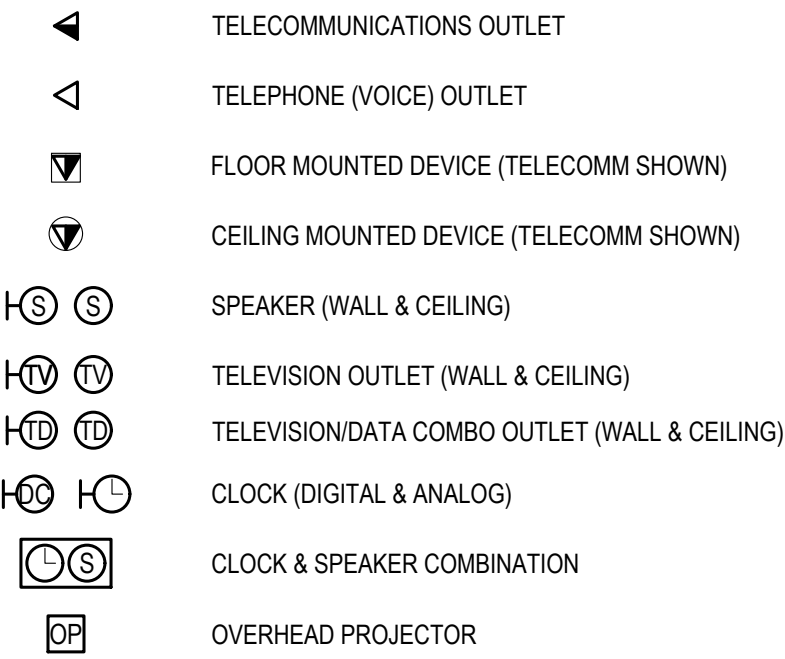
FIRE ALARM DEVICES



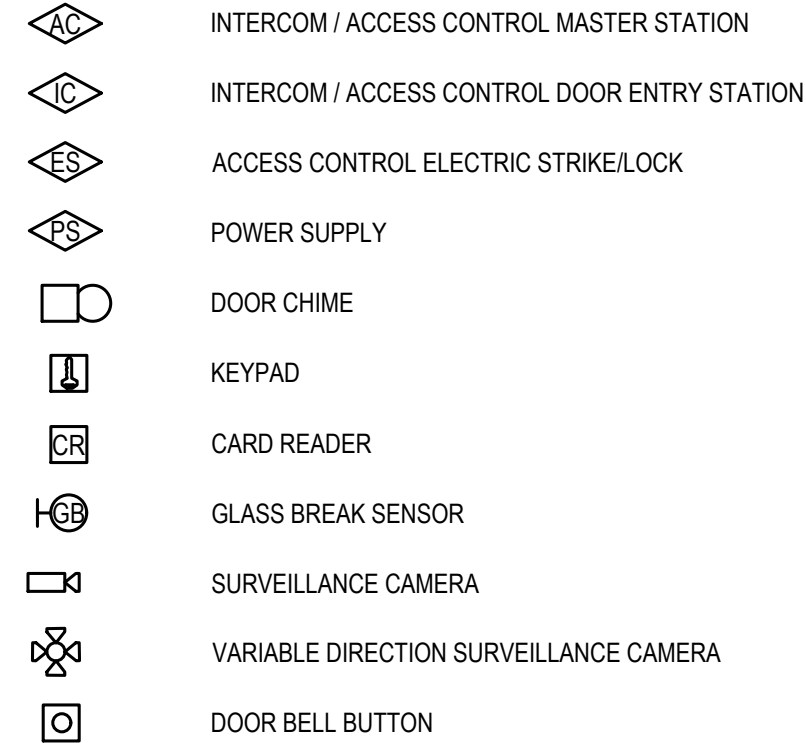
POWER DEVICES AND EQUIPMENT



TELECOMMUNICATION DEVICES



SECURITY SYSTEM DEVICES



LIGHTING FIXTURE SCHEDULE

Type ID	Manufacturer Model Number	Fixture Description	Lamp		LED		Mounting	
			Type	Qty	Lumens	Watts	Type	Height
A	JLC TECH #TBSL-MN-4-24-D-U-W	4' LINEAR T-BAR FIXTURE WITH 4000K COLOR TEMPERATURE, DIFFUSING LENS, AND WHITE FINISH. PROVIDE 24VDC POWER SUPPLIES FOR EVERY 12' FIXTURE LENGTH AND CONTROL WIRING AS REQUIRED.	LED		2,277	32	RECESSED	CEILING
					71 lm/w			
B	GOTHAM #EVO6-40/10-AR-MD-LSS-MVOLT-GZ10	6" LED RECESSED DOWNLIGHT WITH 4000K COLOR TEMPERATURE, 0-10V DIMMING CAPABILITIES, WET LISTING, AND SEMI-SPECULAR FINISH.	LED		1,074	12	RECESSED	CEILING
					91 lm/w			
C	LITHONIA #ZL1N-L48-SMR-5000LM-FST-MVOLT-40K-80CRI-WH (#HC36)	4' LINEAR STRIPLIGHT WITH 4000K COLOR TEMPERATURE AND WHITE FINISH. PROVIDE HANGER CHAIN FOR SUSPENDED FIXTURES, SEE DRAWINGS FOR LOCATIONS.	LED		4,585	34	SURFACE / SUSPENDED	CEILING / WALL
					135 lm/w			
D	LITHONIA LIGHTING #WL4-40L-EZ1-LP840-N100-NE57ADCX-DIM50	4' STAIRWELL FIXTURE WITH INTEGRAL OCCUPANCY SENSOR AND PHOTOCELL. SEE LIGHTING CONTROL SCHEDULE FOR STAIRWELL CONTROL.	LED		4,325	40	SURFACE	WALL +48" AFF
					108 lm/w			
F	LITHONIA LIGHTING #FMVCCLS-24IN-MVOLT-30K35K40K-90CRE-BN	24" WIDE 'BASIS' VANITY FIXTURE WITH BRUSHED NICKEL FINISH AND SATIN ETCHED WHITE SHADES.	LED		1,052	24	WALL	66" TO BOTTOM
					44 lm/w			
G	LITHONIA LIGHTING #LBL4W-800LM-80CRI-30K-NODIM-MVOLT	16"x4" MODULAR LINEAR LED WITH 3000K COLOR TEMPERATURE WHITE ACRYLIC SOFT CLOUD DIFFUSER.	LED		7,840	64	SURFACE	CEILING
					123 lm/w			
H6	MARK ARCHITECTURAL LIGHTING #SL4L-LOP-8FT-FLP-FL-80CRI-40K-400LMF-NODIM-120-WL	4'X6' LINEAR EXTERIOR RECESSED FIXTURE WITH 4000K COLOR TEMPERATURE, FLUSH SATIN ACRYLIC LENS, FLANGE MOUNTING, AND WET LISTING. CONFIRM MOUNTING TYPE SPECIFIED WITH FINAL CANOPY DETAILS PRIOR TO ORDERING.	LED		1,896	24	RECESSED	CANOPY
					79 lm/w			
H8	MARK ARCHITECTURAL LIGHTING #SL4L-LOP-8FT-FLP-FL-80CRI-40K-400LMF-NODIM-120-WL	4'X8' LINEAR EXTERIOR RECESSED FIXTURE WITH 4000K COLOR TEMPERATURE, FLUSH SATIN ACRYLIC LENS, FLANGE MOUNTING, AND WET LISTING. CONFIRM MOUNTING TYPE SPECIFIED WITH FINAL CANOPY DETAILS PRIOR TO ORDERING.	LED		2,528	32	RECESSED	CANOPY
					79 lm/w			
I	JUNO LIGHTING #JSF-13IN 18LM-30K-90CRI-MVOLT-ZT-WH	SLIM FORM SURFACE MOUNT WITH 13" DIAMETER, 3000K COLOR TEMPERATURE, AND WHITE FINISH.	LED		1,800	20	SURFACE	CEILING
					90 lm/w			
J	BRUCK LIGHTING #MLED-30K-90-300-MC-P	CYLINDRICAL PENDANT WITH 'WHITE' FINISH, FIELD ADJUSTABLE CORD, AND 3000K COLOR TEMPERATURE.	LED		389	6	PENDANT	76" TO BOTTOM
					65 lm/w			
K	NORA LIGHTING #NLOPAC-R6509-30A-N	DIMMABLE 6" AREA LIGHT WITH 3000K COLOR TEMPERATURE, NATURAL METAL FINISH, AND WET LISTING.	LED		1,050	15	RECESSED	CEILING
					70 lm/w			
L	LITHONIA LIGHTING #OVWP LED-40K-120-PE-DOB-M4	EXTERIOR WALL SCONCE WITH 4000K COLOR TEMPERATURE AND BRONZE FINISH.	LED		1,242	14	SURFACE	WALL
					89 lm/w			
P	LITHONIA LIGHTING #CNY LED-P0-40K-MVOLT-DOB	10" X 10" EXTERIOR CANOPY FIXTURE WITH 4000K COLOR TEMPERATURE AND DARK BRONZE FINISH.	LED		3,500	27	SURFACE	CANOPY
					130 lm/w			
SW	LITHONIA LIGHTING #WDE3 LED-P3-70 CRI-4000K-R3-MVOLT-SRM-DBLXD	EXTERIOR ARCHITECTURAL WALL SCONCE WITH 4000K COLOR TEMPERATURE, TYPE 3 DISTRIBUTION, AND BLACK FINISH.	LED		10,054	71	SURFACE	WALL
					142 lm/w			
EM	LITHONIA LIGHTING #AFF-OEL-DBLBXD-UVOLT-WT-CW	EXTERIOR WALL MOUNTED REMOTE EMERGENCY FIXTURE WITH BLACK TEXTURED FINISH AND WET LISTING.	LED		N/A	11	SURFACE	WALL
					- lm/w			
EX	LITHONIA LIGHTING #EDG-1/2-R	EDGE LIT EXIT SIGN WITH BRUSHED ALUMINUM HOUSING, RED LETTERING. PROVIDE SINGLE OR DOUBLE FACED FIXTURE AS INDICATED ON DRAWINGS.	LED		N/A	4	SURFACE	CEILING OR WALL AT 90°
					- lm/w			

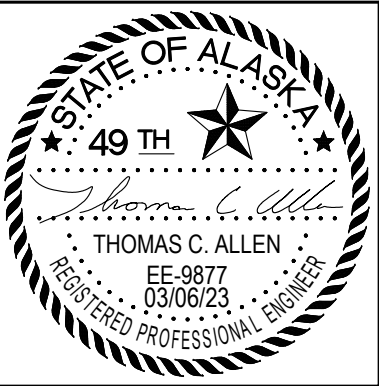
NOTE: ALL FIXTURE TYPES, COLORS, & FINISHES ARE TO BE REVIEWED AND APPROVED BY OWNER/PROJECT MANAGER PRIOR TO ORDERING.

LIGHTING CONTROL SCHEDULE

ROOM TYPE	CONTROL ZONE(S)	LIGHTING CONTROL NOTE
CORRIDORS	a, b, c	1
STAIRWELLS	d, e	2
EXTERIOR SITE	N/A	3

LIGHTING CONTROL SCHEDULE NOTES

NOTE	CONTROL TYPE
1	MOTION SENSORS, AUTO-ON TO 100%. AUTOMATICALLY REDUCE LIGHT OUTPUT BY 50% WHEN OCCUPANCY IS NOT DETECTED. AUTO-OFF WITH 15-MINUTE TIME DELAY. PROVIDE CONTROL ACCESSORIES AS REQUIRED TO CONTROL NORMAL AND INVERTER-POWERED FIXTURES UNDER SAME CONTROL SEQUENCE.
2	OCCUPANCY/PHOTOCELL COMBINATION UNIT INTEGRAL TO FIXTURE. AUTO-ON TO PHOTOCELL CONTROLLED LIGHTING LEVEL WHEN OCCUPANCY IS DETECTED. MULTILEVEL PHOTOCONTROL ZONE AS SHOWN ON LIGHTING PLAN. AUTO-DIM TO 50% WHEN OCCUPANCY IS NOT DETECTED FOR 5-MINUTES. AUTO FULL-OFF WITH 15-MINUTE TIME DELAY.
3	EXTERIOR PHOTOCELL, AUTO-ON / AUTO-OFF.



CERTIFICATE OF AUTHORIZATION NO:
T3 ALASKA, LLC AECL #: 1625



ASPEN HOUSE LIMITED PARTNERSHIP
ASPEN HOUSE SENIOR APARTMENTS
WASILLA, ALASKA

REVISION SCHEDULE		
#	DESCRIPTION	DATE

JOB NO.	2023.007.0
DATE	03/06/2023
DRAWN	MJM
REVIEWED	TCA

SHEET NAME
SYMBOLS, LEGENDS,
& ABBREVIATIONS

SHEET NO.
E0.01

ELECTRICAL SPECIFICATIONS

SECTION 26 05 00 - COMMON WORK RESULTS FOR ELECTRICAL

1. PROVIDE MATERIALS AND EQUIPMENT THAT ARE PRODUCTS OF MANUFACTURERS REGULARLY ENGAGED IN THE PRODUCTION OF SUCH PRODUCTS. ALL MATERIALS SHALL BE LISTED AND LABELED FOR THE APPLICATION WITH A NATIONALLY RECOGNIZED TESTING LABORATORY IN ACCORDANCE WITH NFPA 70.
2. MATERIALS AND EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH ALL REQUIREMENTS OF THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE, STATE, MUNICIPAL, AND FEDERAL LAWS, AND AMENDMENTS GOVERNING THE PROJECT. INSTALLATION OF EQUIPMENT SHALL BE ACCORDANCE WITH THE WRITTEN INSTRUCTIONS RECOMMENDATIONS OF THE MANUFACTURER.
3. THE CONTRACTOR SHALL BECOME FAMILIAR WITH ALL DETAILS OF WORK AND VERIFY ALL DIMENSIONS IN THE FIELD SO THAT ALL OUTLETS AND EQUIPMENT ARE PROPERLY LOCATED AND READILY ACCESSIBLE.
4. LIGHTING FIXTURES, OUTLETS, AND OTHER EQUIPMENT AND MATERIALS SHALL BE COORDINATED WITH STRUCTURAL FEATURES AND ALL OTHER TRADES PRIOR TO INSTALLATION. IF ANY CONFLICTS OCCUR NECESSITATING DEPARTURES FROM THE DRAWINGS, DETAILS OF, AND REASONS FOR DEPARTURES SHALL BE SUBMITTED AND ACCEPTED PRIOR TO IMPLEMENTING ANY CHANGE.
5. THE LISTED PUBLICATIONS BELOW ESTABLISH MINIMUM REQUIREMENTS FOR MATERIALS, SYSTEMS AND EXECUTION THAT MAY BE SPECIFIED IN THIS SECTION AND UTILIZED FOR THIS PROJECT.

A. NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION (NECA): NECA 1 - STANDARD PRACTICES FOR GOOD WORKMANSHIP IN ELECTRICAL CONSTRUCTION

B. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA): NFPA 70 NATIONAL ELECTRICAL CODE, NFPA 70E STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE.

SECTION 26 05 19 - POWER CONDUCTORS AND CABLES

1. PROVIDE WIRING, CABLES AND ASSOCIATED SPLICES, CONNECTORS, AND TERMINATIONS FOR WIRING SYSTEMS RATED 600 VOLTS AND LESS. CONDUCTOR AMPACITY SHALL BE BASED ON TABLE 310-16 OF THE NEC UTILIZING THE 60-DEGREE C RATING COLUMN FOR CIRCUITS TERMINATING ON DEVICES RATED BELOW 100 AMPS AND THE 75-DEGREE C RATING COLUMN FOR CIRCUITS TERMINATING ON DEVICES AND IN ENCLOSURES RATED 100 AMPS AND GREATER.
2. ALL CONDUCTORS SHALL BE COPPER UNLESS NOTED OTHERWISE. ALL CONDUCTORS INSTALLED IN UNHEATED SPACES WITHIN THE BUILDING, UNDERGROUND, OR LOCATED OUTSIDE OF THE BUILDING SHALL HAVE TYPE XHHW 90 DEGREE C INSULATION. ALL CONDUCTORS INSTALLED WITHIN HEATED SPACES MAY HAVE XHHW OR THHN 90 DEGREE C INSULATION.
3. CONDUCTORS NO. 8 AWG AND LARGER DIAMETER SHALL BE STRANDED. CONDUCTORS NO. 12 AWG AND SMALLER SHALL BE SOLID, EXCEPT THAT CONDUCTORS FOR REMOTE CONTROL, ALARM, AND SIGNAL CIRCUITS, CLASSES 1, 2, AND 3 SHALL BE STRANDED.
4. BRANCH CIRCUITS: CONDUCTORS SHALL BE NOT SMALLER THAN NO. 12 AWG. CONDUCTORS FOR BRANCH CIRCUITS OF 120 VOLTS MORE THAN 100 FEET LONG AND OF 277 VOLTS MORE THAN 200 FEET LONG FROM PANEL TO FARTHEST DEVICE OR LOAD, SHALL BE NO SMALLER THAN NO. 10 AWG. CONDUCTORS FOR BRANCH CIRCUITS OF 120 VOLTS MORE THAN 150 FEET LONG AND OF 277 VOLTS MORE THAN 300 FEET LONG FROM PANEL TO FARTHEST DEVICE OR LOAD, SHALL BE NO SMALLER THAN NO. 8 AWG.
5. TYPE NM CABLE IS ACCEPTABLE FOR USE IN THE RESIDENTIAL AREAS AS ALLOWED BY THE NATIONAL ELECTRICAL CODE.
6. INSTALL CONDUCTORS IN COMPLIANCE WITH NEC REQUIREMENTS FOR TEMPERATURE AND CONDUIT FILL DERATING AND BOX FILL LIMITATIONS.
7. COLOR CODE CONDUCTORS AS FOLLOWS:

A. 120/208 VOLT, 1 PHASE, 3 WIRE: BLACK, RED, WHITE

B. 120/208 VOLT, 3 PHASE, 4 WIRE: BLACK, RED, BLUE, WHITE
8. NEUTRAL (GROUNDED) CONDUCTOR: PROVIDE AN UNSHARED DEDICATED NEUTRAL FOR EACH CIRCUIT UNLESS SPECIFICALLY NOTED OTHERWISE. IDENTIFY GROUNDED CONDUCTORS PER NEC FOR ALL CIRCUITS
9. GROUNDING CONDUCTORS: PROVIDE A GREEN EQUIPMENT GROUNDING CONDUCTOR IN EACH NEW RACEWAY, SIZED IN ACCORDANCE WITH NFPA 70, REGARDLESS OF THE TYPE OF CONDUIT.

SECTION 26 05 33 - RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS

1. PROVIDE RACEWAYS AND BOXES LISTED AND SUITABLE FOR THE PROPOSED APPLICATION. PROVIDE AN EFFICIENTLY LAID OUT SYSTEM THAT ALLOWS FOR FUTURE GROWTH. COORDINATE RACEWAYS WITH THE WORK OF OTHER TRADES, AND COORDINATE LAYOUT AND CONSTRUCTION WITH OTHER CONSTRUCTION ELEMENTS TO ENSURE MAXIMUM HEADROOM, WORKING CLEARANCE, AND ACCESS.
2. UTILIZE RACEWAY SYSTEMS LISTED AND SUITABLE FOR THE ENVIRONMENT INSTALLED AS DEFINED BELOW:

A. OUTDOORS (EXPOSED): WEATHERPROOF RIGID STEEL CONDUIT OR EMT SYSTEM.

B. INDOORS (NOT SUBJECT TO PHYSICAL DAMAGE): EMT, MC OR NM CABLE.

C. CONNECTION TO VIBRATING EQUIPMENT: FLEXIBLE METAL CONDUIT, LIQUID-TIGHT IN DAMP AND WET LOCATIONS.

SECTION 26 24 16 PANELBOARDS & LOAD CENTERS

1. ALL PANELBOARDS SHALL BE FACTORY ASSEMBLED OF THE BOLTED CIRCUIT BREAKERS TYPE WITH SOLID COPPER BUSSING, FULL SIZED NEUTRAL, 100% GROUND BUSSING, AND OVERALL HINGED/LOCKABLE DOOR. ALL CIRCUIT BREAKERS SHALL BE OF THE QUICK-MAKE AND QUICK-BREAK DESIGN, THERMAL-MAGNETIC TYPE, TRIP FREE AND TRIP-INDICATING. ALL PANELS SHALL BE DEAD FRONT AND FLUSH OR SURFACE MOUNTED AS SHOWN AND SHALL BE FURNISHED WITH A TYPEWRITTEN DIRECTORY CARD OF THE CIRCUITS AND AN ENGRAVED NAMEPLATE. RESIDENTIAL STYLE PANELS MAY BE USED IN THE RESIDENTIAL UNITS.
2. CIRCUIT BREAKER PANELBOARDS SHALL HAVE FULL LENGTH NON-TAPERED BUS BARS ARRANGED AND DRILLED FOR SEQUENCE PHASING.
3. ALL PANELS SHALL HAVE DOORS FLUSH WITH THE TRIM, EQUIPPED WITH LOCKS, AND KEYS ALIKE. ALL MULTI-POLE BREAKERS SHALL BE COMMON TRIP.
4. ALL PANELBOARDS PHASE AMPERAGE SHALL BE BALANCED TO WITHIN 10 PERCENT MAX. TO MIN. REARRANGE BRANCH CIRCUITS AS REQUIRED AND NOTE CHANGES ON RECORD DRAWINGS.
5. PANELS SHALL BE AS INDICATED ON THE DRAWINGS. ALL BRANCH CIRCUIT BREAKERS (C/B) SHALL BE RATED 20 AMPERES SINGLE POLE MINIMUM, EXCEPT AS NOTED OR REQUIRED BY LOCAL CODES.
6. PROVIDE LOCKOUT CLIPS ON CIRCUIT BREAKERS WHERE INDICATED ON PANEL SCHEDULE.
7. PROVIDE ONE SPARE 1" CONDUIT FOR EACH SIX SPACES OR SPARE CIRCUIT BREAKERS IN EACH RECESSED MOUNTED PANEL. MINIMUM 1- SPARE CONDUIT PER PANEL. RUN CONDUIT TO A LOCATION JUST ABOVE CEILING.
8. CIRCUIT BREAKERS SERVING HEATING, VENTILATION, AND/OR AIR CONDITIONING (HVAC) EQUIPMENT SHALL BE RATED AND MARKED "HACR", IF FUSING IS NOT PROVIDED AT PIECE OF HVAC EQUIPMENT. FIELD VERIFY EXACT "HACR" BREAKER REQUIREMENTS WITH HVAC EQUIPMENT NAMEPLATE AND MANUFACTURER'S REQUIREMENTS PRIOR TO INSTALLATION.
9. IN SERVICE ENTRANCE APPLICATIONS, PANELS SHALL BEAR THE MANUFACTURER'S LABEL INDICATING THE EQUIPMENT IS RATED FOR "SERVICE ENTRANCE" APPLICATION IN ACCORDANCE WITH THE NEC AND AS INDICATED ON DRAWINGS.
10. PANELBOARDS SHALL HAVE A MINIMUM SHORT CIRCUIT CURRENT RATING AS INDICATED ON THE DRAWINGS.
11. VERIFY ACTUAL AIC SHORT CIRCUIT CURRENT REQUIREMENTS WITH OWNER OR UTILITY COMPANY PRIOR TO ORDERING EQUIPMENT.
12. AFTER COMPLETION, ALL PANELBOARDS SHALL BE CLEANED BOTH INSIDE AND OUTSIDE.
13. MANUFACTURER SHALL BE SQUARE "D" OR EQUAL BY GENERAL ELECTRIC, CUTLER HAMMER OR APPROVED EQUAL.

SECTION 26 27 26 - WIRING DEVICES

1. PROVIDE RECEPTACLES, CONNECTORS, SWITCHES, AND FINISH PLATES OF TYPES AND QUANTITIES SUITABLE FOR THE PROJECT AND INTENDED USE. WIRING DEVICES SHALL MEET NEMA WD 1 AND NEMA WD 6. WIRING TERMINALS SHALL BE OF THE SCREW TYPE OR OF THE SOLDERLESS PRESSURE TYPE HAVING SUITABLE CONDUCTOR-RELEASE ARRANGEMENT. WIRING DEVICES SHALL BE IMPACT RESISTANT NYLON WITH WHITE COLOR UNLESS NOTED OTHERWISE.
2. DEVICE PLATES ON UNFINISHED WALLS MAY BE OF ZINC-COATED SHEET STEEL, OR CAST METAL HAVING ROUNDED OR BEVELED EDGES. DEVICE PLATES ON FINISHED WALLS SHALL MATCH DEVICE COLOR. SCREWS SHALL BE OF METAL WITH COUNTERSUNK HEADS, IN A COLOR TO MATCH THE FINISH OF THE PLATE.
3. SINGLE AND DUPLEX RECEPTACLES SHALL BE RATED 20 AMPERES, 125 VOLTS, 2-POLE, 3-WIRE, GROUNDING TYPE WITH POLARIZED PARALLEL SLOTS, BACK AND SIDE WIRED.
4. TOGGLE SWITCHES SHALL BE RATED 120-277 VOLT AC GROUNDING TYPE, TOTALLY ENCLOSED, GENERAL USE.

SECTION 26 51 00- INTERIOR LIGHTING

1. PROVIDE AND INSTALL ALL LIGHTING EQUIPMENT AS SHOWN ON THE DRAWINGS AND SPECIFIED IN THE LIGHTING FIXTURE SCHEDULE. PROVIDE WITH ALL OPTIONS AND ACCESSORIES AS REQUIRED FOR A COMPLETE INSTALLATION IN COMPLIANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. PAINT ALL EXPOSED RACEWAYS AND BOXES TO MATCH ADJACENT SURFACES.

SECTION 28 31 11 - DIGITAL FIRE ALARM SYSTEM

1. GENERAL: PROVIDE A COMPLETE, NON-CODED ADDRESSABLE, MICROPROCESSOR-BASED FIRE ALARM SYSTEM WITH INITIATING DEVICES, NOTIFICATION APPLIANCES, AND MONITORING AND CONTROL DEVICES AS SPECIFIED HEREIN. FURNISH AND INSTALL A COMPLETE FIRE ALARM SYSTEM AS DESCRIBED HEREIN AND AS SHOWN ON THE PLANS. INCLUDE SUFFICIENT CONTROL UNIT(S), ANNUNCIATOR(S), MANUAL STATIONS, AUTOMATIC FIRE DETECTORS, SMOKE DETECTORS, AUDIBLE AND VISIBLE NOTIFICATION APPLIANCES, WIRING, TERMINATIONS, ELECTRICAL BOXES, ETHERNET DROPS, AND ALL OTHER NECESSARY MATERIAL FOR A COMPLETE OPERATING SYSTEM. PLEASE NOTE: THE DEVICE LAYOUT AS INDICATED ON THE DRAWINGS IS DIAGRAMMATIC IN NATURE AND IS NOT INTENDED TO INDICATE A FULL INSTALLATION. RATHER IT IS INTENDED TO INDICATE SCOPE AND EXTEND OF DESIRED LAYOUTS. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PROVIDE A FULLY CODE COMPLIANT SYSTEM.
2. UFAS - ALL UNITS MUST COMPLY WITH THE UNIFORM FEDERAL ACCESSIBILITY STANDARDS (UFAS), UNITS AND SHALL BE PROVIDED WITH FIRE ALARM DEVICES AND CONNECTIONS AS REQUIRED TO BE CODE COMPLIANT WITH SAID ACT.
3. PROVIDE SUBMITTAL AS FOLLOWS: PRODUCT DATA SHEETS FOR SYSTEM COMPONENTS HIGHLIGHTED TO INDICATE THE SPECIFIC PRODUCTS, FEATURES, OR FUNCTIONS REQUIRED TO MEET THIS SPECIFICATION. WIRING DIAGRAMS FROM MANUFACTURER. SHOP DRAWINGS SHOWING SYSTEM DETAILS INCLUDING LOCATION OF FACU, ALL DEVICES, CIRCUITING AND DETAILS OF GRAPHIC ANNUNCIATOR, SYSTEM POWER AND BATTERY CALCULATIONS AND VOLTAGE DROP CALCULATIONS TO ASSURE THAT THE SYSTEM WILL OPERATE IN ACCORDANCE WITH THE PRESCRIBED BACKUP TIME PERIODS AND UNDER ALL VOLTAGE CONDITIONS PER UL AND NFPA STANDARDS
4. SUBMISSION TO AUTHORITY HAVING JURISDICTION: IN ADDITION TO ROUTINE SUBMISSION OF THE ABOVE MATERIAL, MAKE AN IDENTICAL SUBMISSION TO THE AUTHORITY HAVING JURISDICTION. INCLUDE COPIES OF SHOP DRAWINGS AS REQUIRED TO DEPICT COMPONENT LOCATIONS TO FACILITATE REVIEW. UPON RECEIPT OF COMMENTS FROM THE AUTHORITY, MAKE RESUBMISSIONS, IF REQUIRED, TO MAKE CLARIFICATIONS OR REVISIONS TO OBTAIN APPROVAL.
5. THE FIRE ALARM SYSTEM SHALL CONSIST OF ALL NECESSARY HARDWARE EQUIPMENT AND SOFTWARE PROGRAMMING TO PERFORM THE FOLLOWING FUNCTIONS:
6. FIRE ALARM SYSTEM DETECTION AND NOTIFICATION OPERATIONS. CONTROL AND MONITORING OF ELEVATORS, DOOR HOLD-OPEN DEVICES, FIRE SUPPRESSION SYSTEMS, AND OTHER EQUIPMENT AS INDICATED IN THE DRAWINGS AND SPECIFICATIONS. SYSTEM OPERATION DESCRIPTION INCLUDING METHOD OF OPERATION AND SUPERVISION OF EACH TYPE OF CIRCUIT AND SEQUENCE OF OPERATIONS FOR ALL MANUALLY AND AUTOMATICALLY INITIATED SYSTEM INPUTS AND OUTPUTS. A LIST OF ALL INPUT AND OUTPUT POINTS IN THE SYSTEM SHALL BE PROVIDED WITH A LABEL, INDICATING LOCATION OR USE OF DC, SLC, NAC, RELAY, SENSOR, AND AUXILIARY CONTROL CIRCUITS. OPERATING INSTRUCTIONS FOR FACU.
7. OPERATION AND MAINTENANCE DATA FOR INCLUSION IN OPERATING AND MAINTENANCE MANUAL. INCLUDE DATA FOR EACH TYPE PRODUCT, INCLUDING ALL FEATURES AND OPERATING SEQUENCES, BOTH AUTOMATIC AND MANUAL. PROVIDE THE NAMES, ADDRESSES, AND TELEPHONE NUMBERS OF SERVICE ORGANIZATIONS.
8. THE SYSTEM AS INDICATED IS BASED ON A SIMPLEX SYSTEM. APPROVED EQUALS WILL BE CONSIDERED.
9. INSTALL SYSTEM COMPONENTS AND ALL ASSOCIATED DEVICES IN ACCORDANCE WITH APPLICABLE NFPA STANDARDS AND MANUFACTURER'S RECOMMENDATIONS. INSTALLATION PERSONNEL SHALL BE SUPERVISED BY PERSONS WHO ARE QUALIFIED AND EXPERIENCED IN THE INSTALLATION, INSPECTION, AND TESTING OF FIRE ALARM SYSTEMS. INSTALLATION SHALL BE BY PERSONNEL LICENSED OR CERTIFIED BY STATE OF ALASKA.
10. SEQUENCING: CONTRACTOR SHALL COORDINATE WITH THE OWNER FOR PROPER SEQUENCING FOR ALARM CONDITIONS FOR ALL ELEMENTS OF THE BUILDING AND SPECIFICALLY HOW DWELLING UNIT ALARMS ARE SEQUENCED TO COMMON AREA ALARMS.
11. TRAINING: PROVIDE THE SERVICES OF A FACTORY-AUTHORIZED SERVICE REPRESENTATIVE TO DEMONSTRATE THE SYSTEM AND TRAIN OWNER'S MAINTENANCE PERSONNEL. PROVIDE A MINIMUM OF 4 HOURS' TRAINING. SCHEDULE TRAINING WITH THE OWNER AT LEAST SEVEN DAYS IN ADVANCE.

SECTION 28 13 53 - TENANT ENTRY SYSTEM

1. INSTALL TENANT ENTRY SYSTEM IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AT LOCATIONS INDICATED ON THE DRAWINGS. THE SYSTEM AS SHOWN ON THE DRAWINGS IS DIAGRAMMITIC IN NATURE AND IS INTENDED TO SHOW THE LAYOUT, INTENT AND LEVEL OF SYSTEM INSTALLATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A COMPLETE DESIGN AND SUBMITTING FOR APPROVAL. DEVICE OR LAYOUT OMISSIONS DOES NOT RELEASE THE CONTRACTOR FROM PROVIDING A COMPLETE SYSTEM.
2. MOUNT EQUIPMENT PLUMB, LEVEL, SQUARE, AND SECURE. FOR VIDEO ENTRANCE STATIONS AND VIDEO DOOR STATIONS, COMPLY WITH MANUFACTURER'S DESIGN REQUIREMENTS TO PROVIDE OPTIMUM PICTURE QUALITY OF STATION MONITORING.
3. PROVIDE ALL CONDUIT, WIRING AND ACCESSORIES AS NECESSARY TO PROVIDE A COMPLETE INSTALLATION AND OPERATION IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION REQUIREMENTS.
4. SET-UP AND ADJUSTING: ADJUST INTEGRATED SECURITY AND COMMUNICATION SYSTEM FOR PROPER OPERATION IN ACCORDANCE WITH MANUFACTURER'S

INSTRUCTIONS

5. DEMONSTRATE THAT SYSTEM FUNCTIONS PROPERLY.
6. PROVIDE INSTRUCTION AND TRAINING OF OWNER'S PERSONNEL AS REQUIRED.

SECTION 28 13 54 - ACCESS CONTROL

1. SEPARATE ACCESS CONTROL SYSTEM SHALL BE PROVIDED IN ADDITION TO THE AUDIO/VIDEO ENTRY SYSTEM WITH ACCESS CONTROL AS INDICATED ON THE DRAWINGS. THE SYSTEM AS SHOWN ON THE DRAWINGS IS DIAGRAMMITIC IN NATURE AND IS INTENDED TO SHOW THE LAYOUT, INTENT AND LEVEL OF SYSTEM INSTALLATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A COMPLETE DESIGN AND SUBMITTING FOR APPROVAL. DEVICE OR LAYOUT OMISSIONS DOES NOT RELEASE THE CONTRACTOR FROM PROVIDING A COMPLETE SYSTEM.
2. BASIS OF DESIGN IS A LENEL ONGUARD SYSTEM, ALTERNATES WILL BE CONSIDERED PRIOR TO CONSTRUCTION AND MUST MEET OR EXCEED THE BASIS OF DESIGN AND BE APPROVED BY THE OWNER PRIOR TO CONSTRUCTION COMMENCEMENT.
3. THE SYSTEM AS SHOWN ON THE DRAWINGS IS DIAGRAMMITIC IN NATURE AND IS INTENDED TO SHOW THE LAYOUT, INTENT AND LEVEL OF SYSTEM INSTALLATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A COMPLETE DESIGN AND SUBMITTING FOR APPROVAL. DEVICE OR LAYOUT OMISSIONS DO NOT RELEASE THE CONTRACTOR FROM PROVIDING A COMPLETE SYSTEM.
4. SEPARATE ACCESS CONTROL SYSTEM SHALL BE PROVIDED IN ADDITION TO THE AUDIO/VIDEO ENTRY SYSTEM WITH ACCESS CONTROL AS INDICATED ON THE DRAWINGS.
5. THE SECURITY MANAGEMENT SYSTEM (SYSTEM) SHALL PROVIDE A NUMBER OF FUNCTIONS INCLUDING THE ABILITY TO REGULATE ACCESS THROUGH SPECIFIC DOORS AND GATES TO SECURED AREAS OF THE CUSTOMER FACILITY AND PROVIDE COMPUTER GENERATED COLOR EMPLOYEE AND VISITOR CREDENTIALS FOR THAT USE. THE SYSTEM SHALL ALSO RECORD AND STORE DIGITAL VIDEO OF ACTIVITIES OCCURRING IN THE FACILITY AS WELL AS MANAGE AND TRACK CORPORATE ASSETS. THE SYSTEM MUST UTILIZE A SINGLE SEAMLESSLY INTEGRATED RELATIONAL DATABASE FOR ALL FUNCTIONALITY. THIS INTEGRATION SHALL BE PROVIDED WITH ONE OPERATING ENVIRONMENT. THE SYSTEM'S OPERATING ENVIRONMENT SHALL BE THE FULLY MULTI-TASKING MULTI-THREADING MICROSOFT® WINDOWS 10 OPERATING SYSTEM. THE SYSTEM SHALL BE WRITTEN SO THAT ALL SYSTEM MODULES (ACCESS CONTROL, ALARM MONITORING, CREDENTIAL MANAGEMENT, DIGITAL VIDEO, VISITOR MANAGEMENT, INTRUSION DETECTION, ASSET MANAGEMENT, ETC.) ARE DEVELOPED AND BUILT FROM A UNIFIED 64-BIT SOURCE CODE SET. THERE ABSOLUTELY SHALL NOT BE SEPARATE SOURCE CODE BASES FOR THE INDIVIDUAL MODULES OF THE SYSTEM.
6. THE SYSTEM SHALL ALLOW THE CONFIGURATION OF AN ENROLLMENT AND BADGING CLIENT WORKSTATION, AN ALARM MONITORING CLIENT WORKSTATION, AN ADMINISTRATIVE CLIENT WORKSTATION, AN ASSET MANAGEMENT CLIENT WORKSTATION, A DIGITAL VIDEO MANAGEMENT CLIENT WORKSTATION, AN INTRUSION DETECTION CLIENT WORKSTATION, A VISITOR ENROLLMENT CLIENT WORKSTATION, A REMOTE ACCESS LEVEL MANAGEMENT CLIENT WORKSTATION, AND AN INTEGRATED CLIENT WORKSTATION (WHICH SHALL INCLUDE ANY COMBINATION OF THE ABOVE CLIENT WORKSTATIONS). THE SYSTEM SHALL BE EXPANDABLE TO SUPPORT AN UNLIMITED NUMBER OF INDIVIDUAL MODULE OR INTEGRATED CLIENT WORKSTATIONS. ALL ACCESS CONTROL FIELD HARDWARE, INCLUDING INTELLIGENT SYSTEM CONTROLLERS (ISCS), SHALL BE CONNECTED TO EVERY/ANY WINDOWS 10 BASED ACCESS CONTROL SYSTEM WORKSTATION ON THE NETWORK.
7. THE ALARM MONITORING CLIENT WORKSTATION MUST BE ABLE TO CONNECT TO, AND MONITOR, FIELD HARDWARE DEVICES, SUCH AS CARD READERS AND ISCS. ADMINISTRATIVE TASKS INCLUDING DEFINING ASSET INFORMATION, ACCESS GROUPS, TIMEZONES, INTRUSION DETECTION DEVICES, CONFIGURING DIGITAL VIDEO DEVICES, GENERATING REPORTS, CREATING MAPS, ETC. SHALL BE PROVIDED FROM ANY CLIENT WORKSTATION ON THE NETWORK THAT IS LICENSED TO DO SO. THE ENROLLMENT AND BADGING CLIENT WORKSTATION SHALL SERVE AS BOTH THE CREDENTIAL CREATION AND DATA INPUT CLIENT WORKSTATION FOR THE CREDENTIAL MANAGEMENT MODULE OF THE SYSTEM. THE VISITOR MANAGEMENT CLIENT WORKSTATION SHALL ALLOW FOR THE ENROLLMENT OF VISITORS AND THE SCHEDULING OF VISITS. THE INTEGRATED CLIENT WORKSTATION SHALL ALLOW FOR ANY COMBINATION OF FUNCTIONS OF THE SYSTEM TO BE AVAILABLE FROM THE SINGLE CLIENT WORKSTATION. ALL SYSTEM DATA MUST RESIDE ON A SINGLE DATABASE ON THE NETWORK AND MUST BE ACCESSIBLE IN REAL TIME TO EVERY/ANY SYSTEM WORKSTATION CONNECTED TO THE NETWORK. THIS SHALL ALLOW FOR AUTOMATIC CHANGE PROPAGATION TO ALL CLIENT WORKSTATIONS ON THE SYSTEM AS WELL AS A COMMON DATABASE TO CONSOLIDATE ALL INFORMATION AND ALLOW FOR BETTER DISASTER RECOVERY.
8. THE SYSTEM MUST BE DESIGNED TO PERFORM A WIDE VARIETY OF FEATURE RICH FUNCTIONS. THESE SYSTEM FUNCTIONS ARE CATEGORIZED INTO 19 PRIMARY "SYSTEM MODULES" WHICH SHALL INCLUDE:

8.1. ACCESS CONTROL

8.2. ALARM MONITORING

8.3. CREDENTIAL MANAGEMENT

8.4. DIGITAL VIDEO MANAGEMENT

8.5. INTRUSION DETECTION MANAGEMENT

8.6. ASSET MANAGEMENT

8.7. VISITOR MANAGEMENT

8.8. REMOTE ACCESS LEVEL MANAGEMENT

8.9. THIRD-PARTY INTERFACES

8.10. SYSTEM ADMINISTRATION

8.11. MOBILE ENTERPRISE SOLUTIONS

8.12. BADGE LAYOUT CREATION

8.13. SCREEN/FORMS CREATION

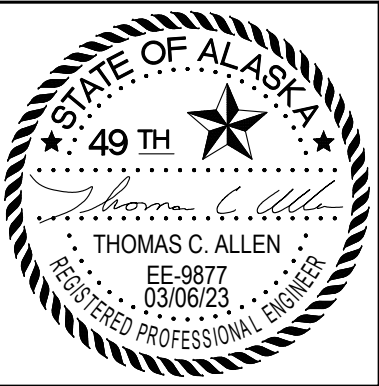
8.14. GRAPHICAL MAP CREATION

8.15. BI-DIRECTIONAL DATA EXCHANGE

8.16. SERVER REDUNDANCY
9. PROVIDE THREE TIME THE NUMBER OF UNITS OF SPARE CARDS FOR FUTURE USE BY OWNER AT PROJECT COMPLETION.

SECTION 33 00 10 - SURVEILLANCE CAMERA SYSTEM

1. SYSTEM DESCRIPTION - VIDEO SURVEILLANCE AND MONITORING AT POINTS AS INDICATED ON THE DRAWINGS. PROVIDE CAMERAS WITH HD QUALITY PICTURES AND SURVEILLANCE CAPABILITIES CONNECTED TO DVR WITH A MINIMUM OF 1 TB of MEMORY. SYSTEM SHALL BE PROVIDED AS A COMPLETE TURN KEY SYSTEM AND SHALL INCLUDE AS A MINIMUM CAMERAS, MONITOR, SWITCHING EQUIPMENT, DVR, POWER SUPPLIES, ETC AS NECESSARY FOR A COMPLETE SYSTEM. THE SYSTEM SHALL BE PROVIDED AND DESIGNED BY THE SPECIALITY CONTRACTOR THAT PROVIDES THE SYSTEM. THE BASIS OF DESIGN IS A HANWHA TECHWIN SYSTEM WITH #SNV-6013 2 MEGAPIXEL FULL HD VANDAL RESISTANT INTERIOR CAMERA'S, XNV-L6080R 2 MEGAPIXEL EXTERIOR FULL HD CAMERAS AND XRN-1610S NETWORK VIDEO RECORDER. ALTERNATES MAY BE PROVIDED WITH PRIOR APPROVAL BY THE OWNER AND IF THEY MEET OR EXCEED THE BASIS OF DESIGN AND ARE APPROVED BEFORE A COMPLETE DESIGN OR INSTALLATION IS PROVIDED.
2. A COMPLETE SUBMITTAL SHALL BE PROVIDED THAT INCLUDES AS MINIMUM THE FOLLOWING: SIGNAL AND CONTROL DRAWINGS INDICATING DEVICE LOCATIONS, WIRING, RACEWAYS, PULL BOXES, CONTROL CABINETS AND DVR LOCATION. PRODUCT DEVICE SUBMITTALS SHALL INCLUDE CAMERAS, DVR, CONTROL EQUIPMENT, CABLING, POWER SUPPLIES, ETC AS NECESSARY TO PROVIDE A COMPLETE DESIGN OF THE SYSTEM. AT PROJECT COMPLETION, ANY APPROVED CHANGES TO THE APPROVED SUBMITTAL DRAWINGS SHALL BE PROVIDED AS AS-BUILT DRAWINGS TO THE OWNER.
3. FIELD QUALITY CONTROL - AFTER INSTALLATION, INSPECT AND TEST FOR PROPER OPERATION. EQUIPMENT ACCEPTANCE: ADJUST, REPAIR, MODIFY, OR REPLACE COMPONENTS FAILING TO PERFORM AS SPECIFIED AND RERUN TESTS.
4. DEMONSTRATION- DEMONSTRATE EQUIPMENT STARTUP, SHUTDOWN, ROUTINE MAINTENANCE, AND EMERGENCY REPAIR PROCEDURES TO OWNER'S PERSONNEL.
5. WARRANTY - PROVIDE SERVICE AND MAINTENANCE OF SECURITY ACCESS EQUIPMENT FOR ONE YEAR FROM DATE OF SUBSTANTIAL COMPLETION.



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ASPEN HOUSE LIMITED PARTNERSHIP

ASPEN HOUSE SENIOR APARTMENTS

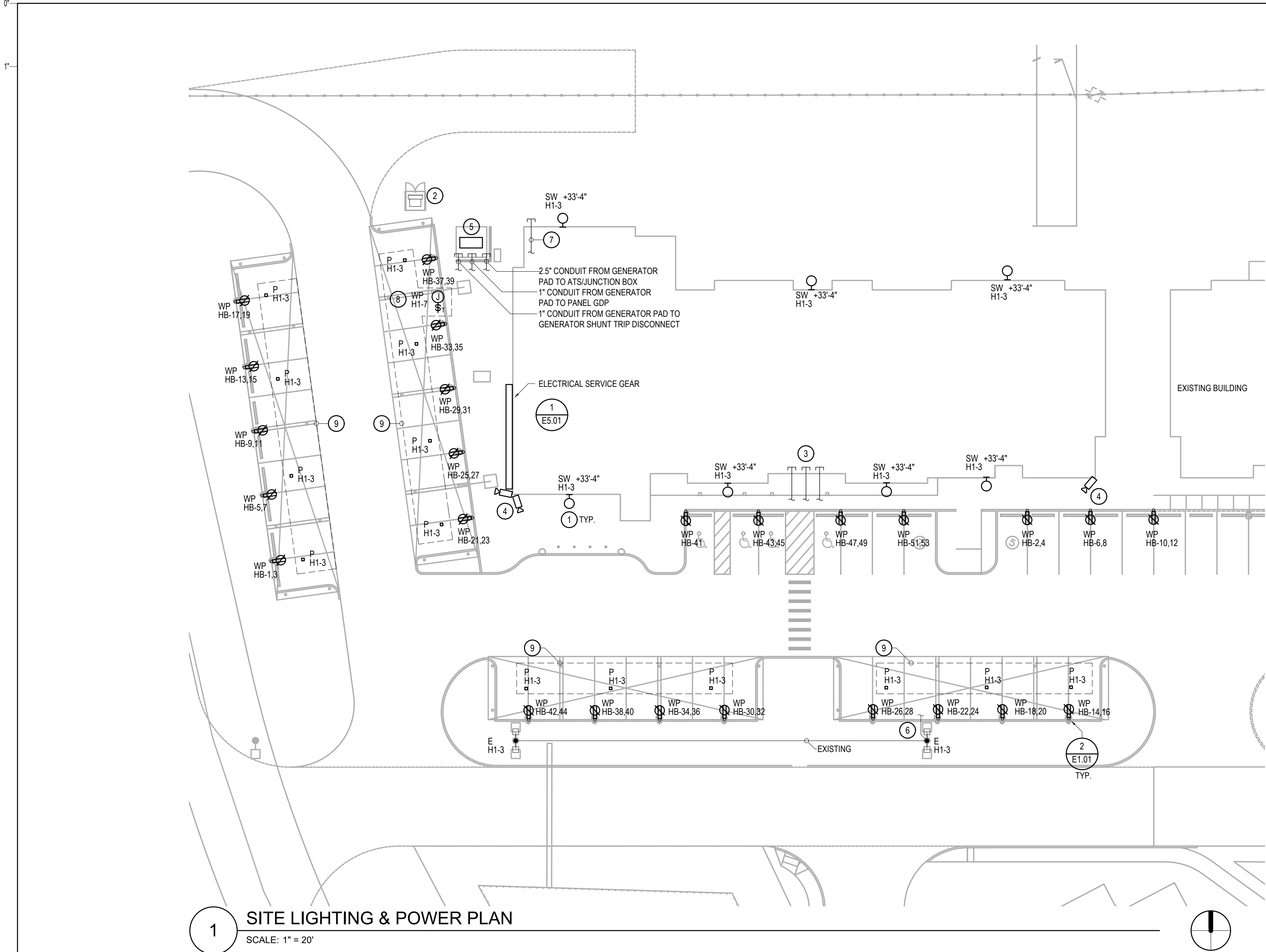
WASILLA, ALASKA

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#	DESCRIPTION	DATE

JOB NO.	2023.007.0
DATE	03/06/2023
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REVIEWED	TCA

SHEET NAME
SPECIFICATIONS

SHEET NO.
E0.02



1 SITE LIGHTING & POWER PLAN
SCALE: 1" = 20'

GENERAL NOTES

- MINIMUM BURIAL DEPTH OF LIGHTING & POWER SYSTEM CONDUIT SHALL BE 24" MINIMUM UNLESS SPECIFICALLY NOTED OTHERWISE. REFERENCE ALSO CIVIL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL TRENCHING AND BACKFILL REQUIREMENTS.
- ALL EXTERIOR FEEDER AND BRANCH CIRCUITS SHALL UTILIZE CONDUCTORS WITH TYPE XHHW INSULATION.
- MINIMUM BURIAL DEPTH OF TELECOMMUNICATIONS SYSTEM CONDUITS SHALL BE 36" MINIMUM UNLESS SPECIFICALLY NOTED OTHERWISE. REFERENCE ALSO CIVIL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL TRENCHING AND BACKFILL REQUIREMENTS.

SHEET NOTES

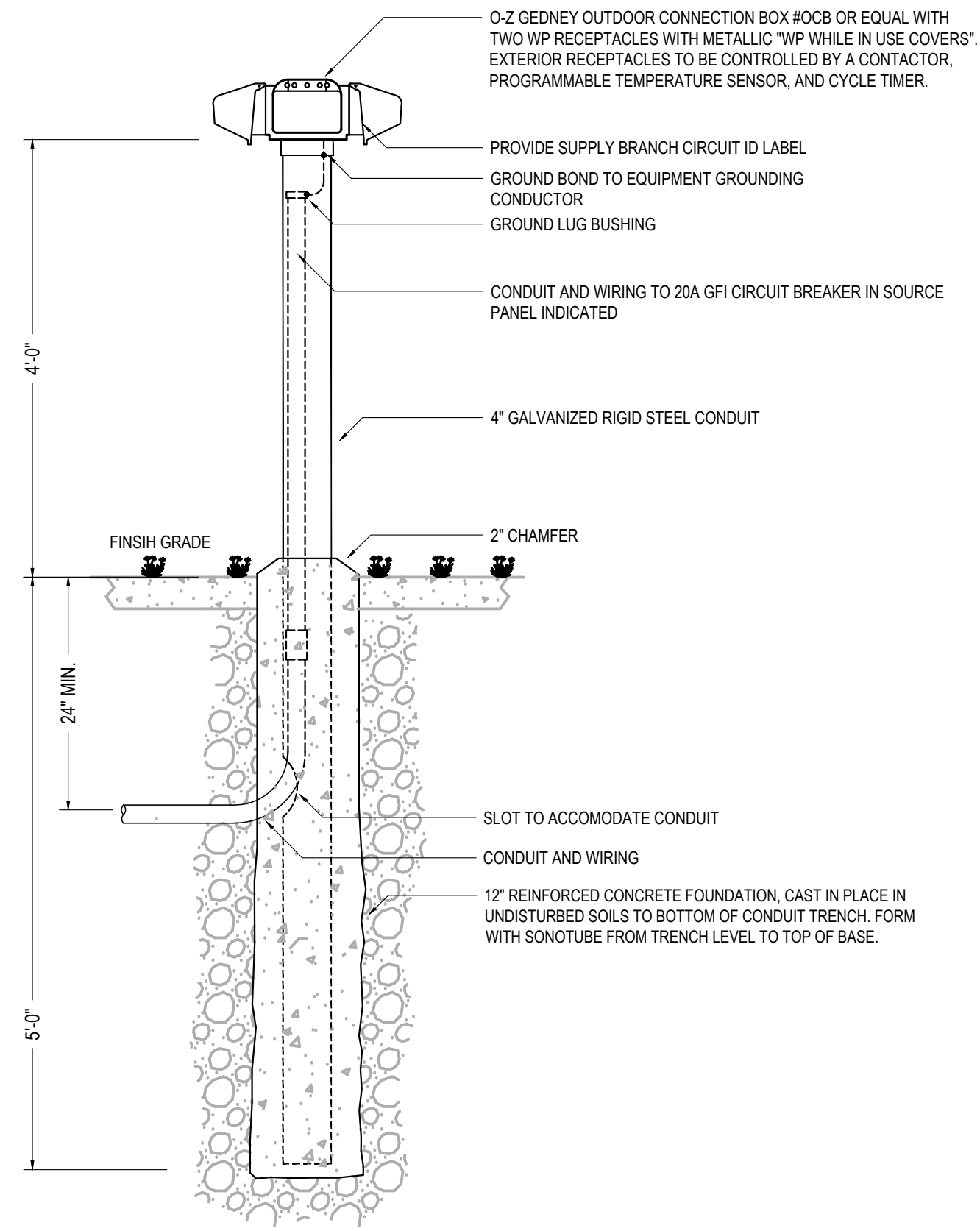
INDICATED BY: #

- ROUTE SITE LIGHTING CIRCUIT H1-3 THROUGH PHOTOCELL. FIELD LOCATE. SEE FIRST FLOOR LIGHTING PLAN FOR ADDITIONAL EXTERIOR FIXTURES ON CIRCUIT.
- PROPOSED LOCATION FOR UTILITY PADMOUNT TRANSFORMER.
- PROVIDE TWO 4" PVC CONDUITS FOR COMMERCIAL TELEPHONE AND TELECOMMUNICATIONS SERVICE AND ONE 2" PVC CONDUIT FOR COMMERCIAL TELEVISION SERVICE. EXTEND CONDUITS TO UTILITY EASEMENT, COORDINATE EXACT TERMINATION LOCATION WITH APPROPRIATE UTILITY. CAP AND PROVIDE LOCATES FOR FUTURE USE. STUB UP CONDUITS BELOW TELECOMMUNICATIONS BACKBOARD IN ELECTRICAL ROOM AS INDICATED ON FLOOR PLANS.
- MOUNT CAMERA'S AT ROOF LEVEL TO MONITOR PARKING AREAS. COORDINATE WITH OWNER AND ARCHITECT FOR EXACT LOCATION PRIOR TO ROUGH-IN. CAMER'S SHALL BE PROVIDED WITH PARAPET OR WALL MOUNTED ACCESSORIES BASED ON INSTALLATION.
- ADDITIVE ALTERNATE #3: GENERATOR LOCATION, PROVIDE 3/4", 1" AND 2.25" CONDUIT FROM GENERATOR PAD TO GENERATOR DISCONNECT, PANEL GDP AND ATS FOR CONNECTION TO GENERATOR POWER PANEL AND ATS. IF FUNDING DOES NOT ALLOW FOR ALTERNATE, PROVIDE INFRASTRUCTURE FOR FUTURE INSTALLATION SUCH AS CONDUITS TO GENERATOR AND GENERATOR SHUNT TRIP DISCONNECT AS PART OF THE BASE BID.

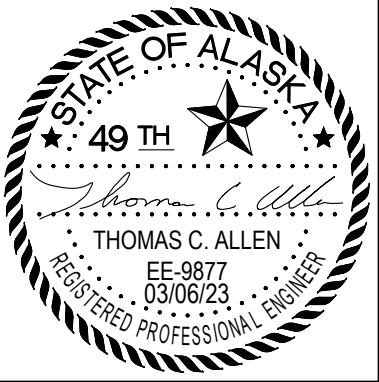
SHEET NOTES

INDICATED BY: #

- EXISTING SITE LIGHTING POLES & FIXTURES ARE EXISTING TO BE RE-CIRCUITED FROM NEW BUILDING. CAPTURE EXISTING 1" EMPTY CONDUIT FROM EAST SITE LIGHTING FIXTURE TO NEW BUILDING.
- STUB 2-1" CONDUITS FROM BELOW PANEL 'H1' TO BUILDING EXTERIOR FOR FUTURE CONNECTIONS. PROVIDE LOCATION OR LABELING AT BUILDING CORNER TO LOCATE STUBS.
- PROVIDE SELF LIMITING HEAT TRACE (RAYCHEM GM-1X OR EQUAL) AT BOTTOM OF CARPORT ROOF LINE, DOWNSPOUT, AND PIPING TO DRY WELLS. 250 SQUARE-FEET OF CARPORT ROOF & 40 LINEAR FEET OF DRAINS TO DRY WELLS. PROVIDE LOCAL WEATHERPROOF CONTROL SWITCH FOR HEAT TRACE AND CAP PER MANUFACTURER'S INSTRUCTIONS.
- DEDUCTIVE ALTERNATE #1: CARPORTS AND ASSOCIATED LIGHTING AND HEAT TRACE ARE A DEDUCTIVE ALTERNATE, OMIT FROM DESIGN IF FUNDING DOES NOT ALLOW.



2 HEADBOLT HEATER DETAIL
SCALE: NTS



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SHEET NAME
SITE ELECTRICAL PLAN
& HEADBOLT HEATER DETAIL

SHEET NO.
E1.01



1

FIRST FLOOR LIGHTING PLAN

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

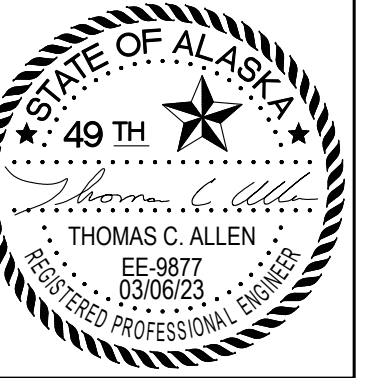
GENERAL NOTES

- CONNECT EXIT SIGNS TO UNSWITCHED LEG OF INVERTER EMERGENCY LIGHTING CIRCUIT INDICATED.
- ALL FIXTURES ARE CIRCUITED TO PANEL "GDP" UNLESS OTHERWISE NOTED.

SHEET NOTES

INDICATED BY: #

- BATHROOM LIGHT SWITCH SHALL CONTROL LIGHT COMPONENT OF FAN/LIGHT COMBINATION UNIT SPECIFIED BY MECHANICAL. FAN COMPONENT CONTROLLED BY OCCUPANCY SENSOR.
- FIELD LOCATE ELEVATOR PIT LIGHT SWITCH & FIXTURES TO ACCESSIBLE LOCATIONS AND TO AVOID MAJOR ELEVATOR & STRUCTURAL MEMBERS.
- EXTERIOR FIXTURES ON CIRCUIT H1-3 ARE TO BE CONTROLLED BY PHOTOCELL. SEE SITE PLAN FOR ADDITIONAL EXTERIOR FIXTURES ON CIRCUIT.
- TYPE "C" FIXTURES TO BE SUSPENDED IN THIS ROOM, PROVIDE HANGER CHAIN AS SPECIFIED IN FIXTURE SCHEDULE. COORDINATE FIXTURE LOCATIONS WITH MECHANICAL DUCTWORK PRIOR TO ROUGH IN.



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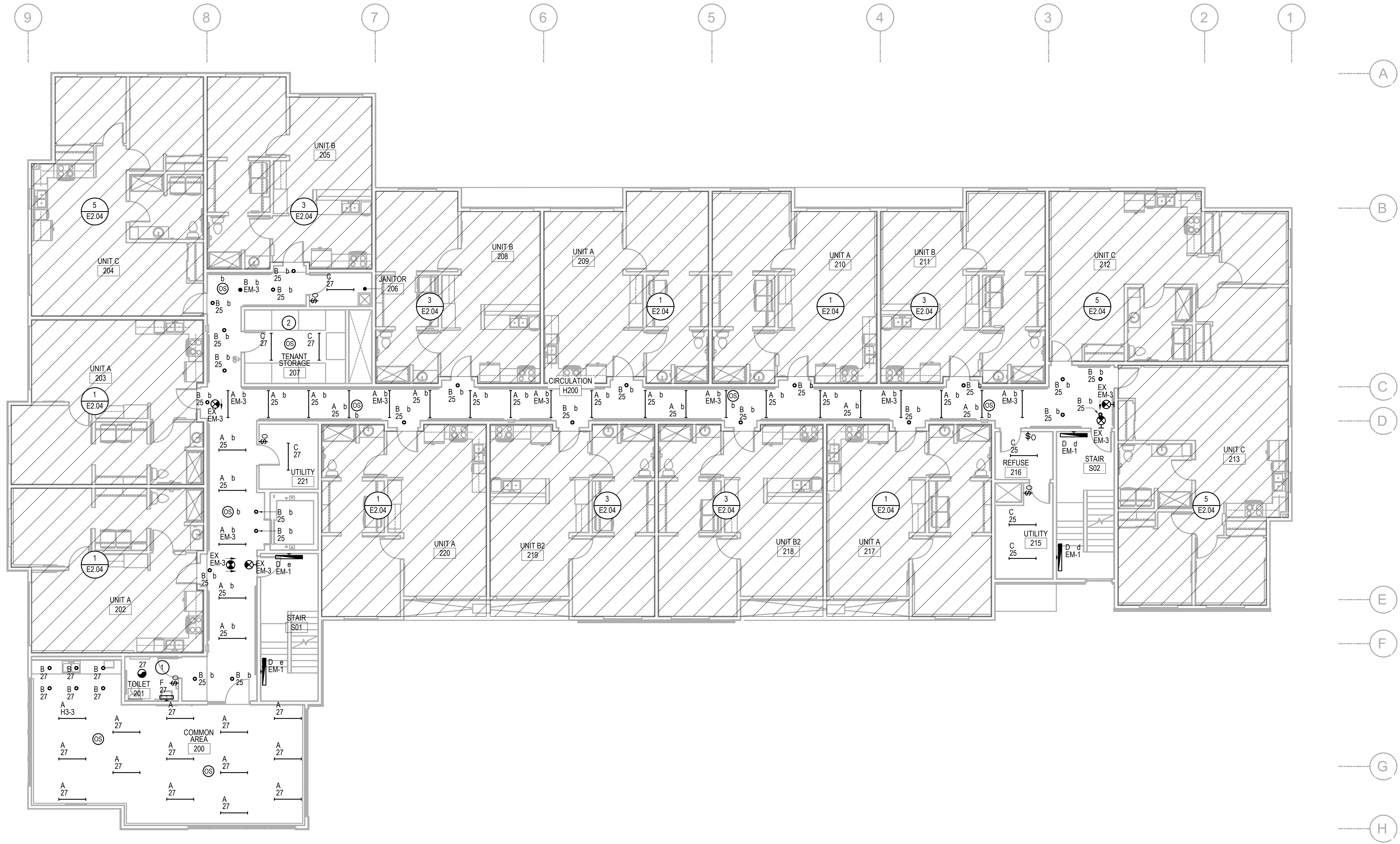
#	DESCRIPTION	DATE

JOB NO. 2023.007.0
DATE 03/06/2023
DRAWN MJM
REVIEWED TCA

SHEET NAME
FIRST FLOOR
LIGHTING PLAN

SHEET NO.
E2.01

0"
1"
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1 SECOND FLOOR LIGHTING PLAN

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

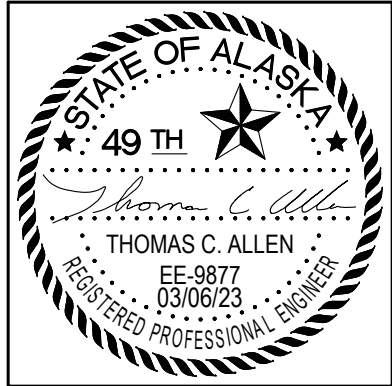
GENERAL NOTES

- CONNECT EXIT SIGNS TO UNSWITCHED LEG OF INVERTER EMERGENCY LIGHTING CIRCUIT INDICATED.
- ALL FIXTURES ARE CIRCUITED TO PANEL 'GDP' UNLESS OTHERWISE NOTED.

SHEET NOTES

INDICATED BY: #

- BATHROOM LIGHT SWITCH SHALL CONTROL LIGHT COMPONENT OF FAN/LIGHT COMBINATION UNIT SPECIFIED BY MECHANICAL. FAN COMPONENT CONTROLLED BY OCCUPANCY SENSOR.
- TYPE 'C' FIXTURES TO BE SUSPENDED IN THIS ROOM, PROVIDE HANGER CHAIN AS SPECIFIED IN FIXTURE SCHEDULE. COORDINATE FIXTURE LOCATIONS WITH MECHANICAL DUCTWORK PRIOR TO ROUGH IN.



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SHEET NAME
SECOND FLOOR
LIGHTING PLAN

SHEET NO.
E2.02

0"
1"
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1 THIRD FLOOR LIGHTING PLAN

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

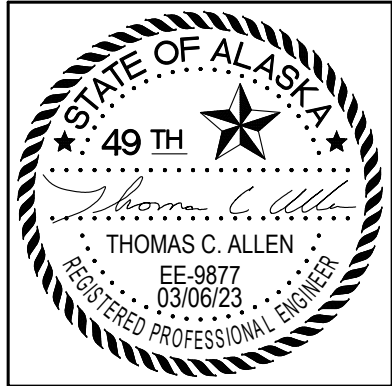
GENERAL NOTES

- CONNECT EXIT SIGNS TO UNSWITCHED LEG OF INVERTER EMERGENCY LIGHTING CIRCUIT INDICATED.
- ALL FIXTURES ARE CIRCUITED TO PANEL "GDP" UNLESS OTHERWISE NOTED.

SHEET NOTES

INDICATED BY: #

- PROVIDE LOCAL SWITCH TO OVERRIDE RECESSED DOWNLIGHTS IN ELEVATOR CONTROL AREA TO 100% ON. PROVIDE LABELING TO READ "ELEVATOR CONTROL AREA LIGHT SWITCH".
- TYPE "C" FIXTURES TO BE SUSPENDED IN THIS ROOM, PROVIDE HANGER CHAIN AS SPECIFIED IN FIXTURE SCHEDULE. COORDINATE FIXTURE LOCATIONS WITH MECHANICAL DUCTWORK PRIOR TO ROUGH IN.



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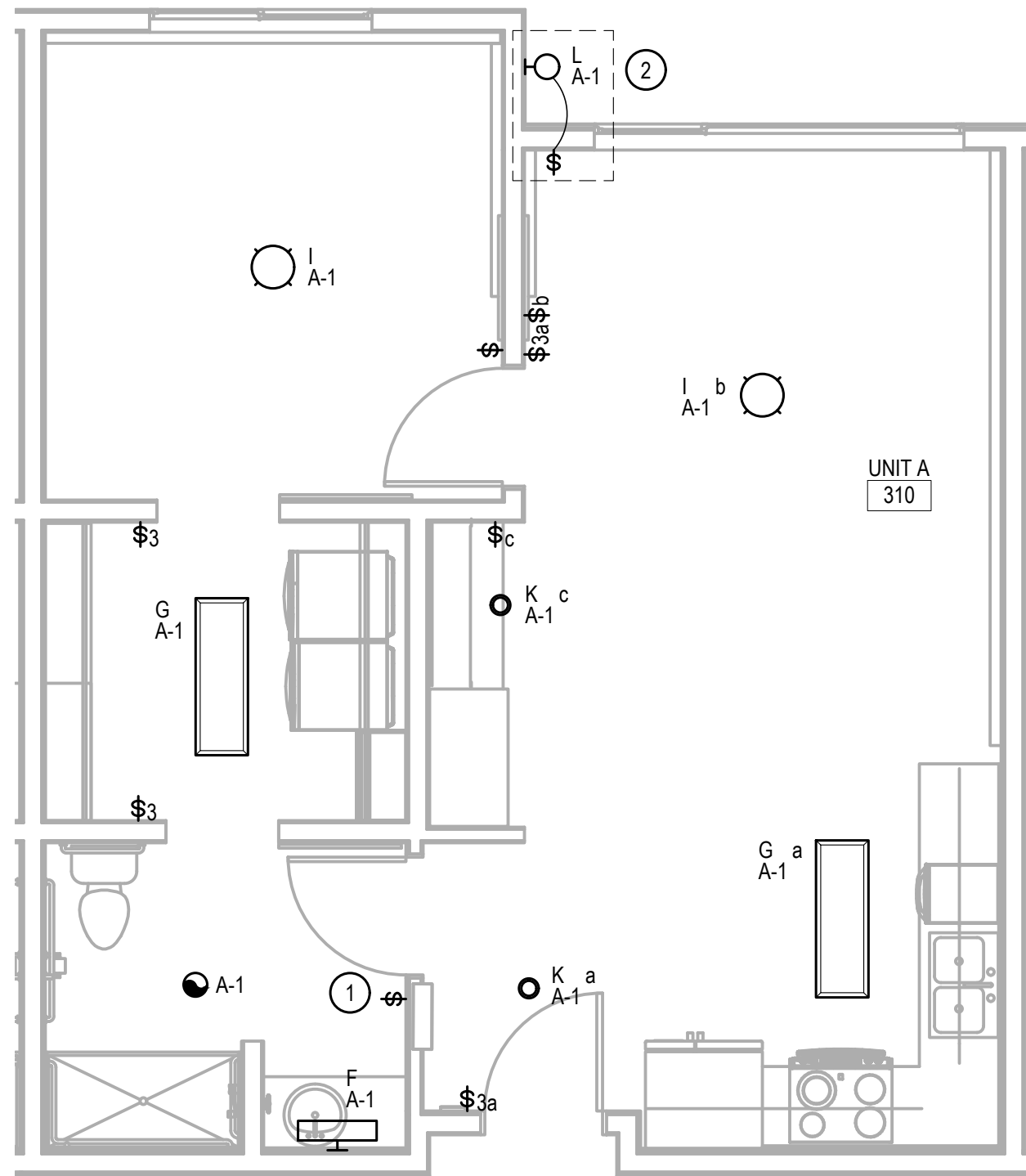
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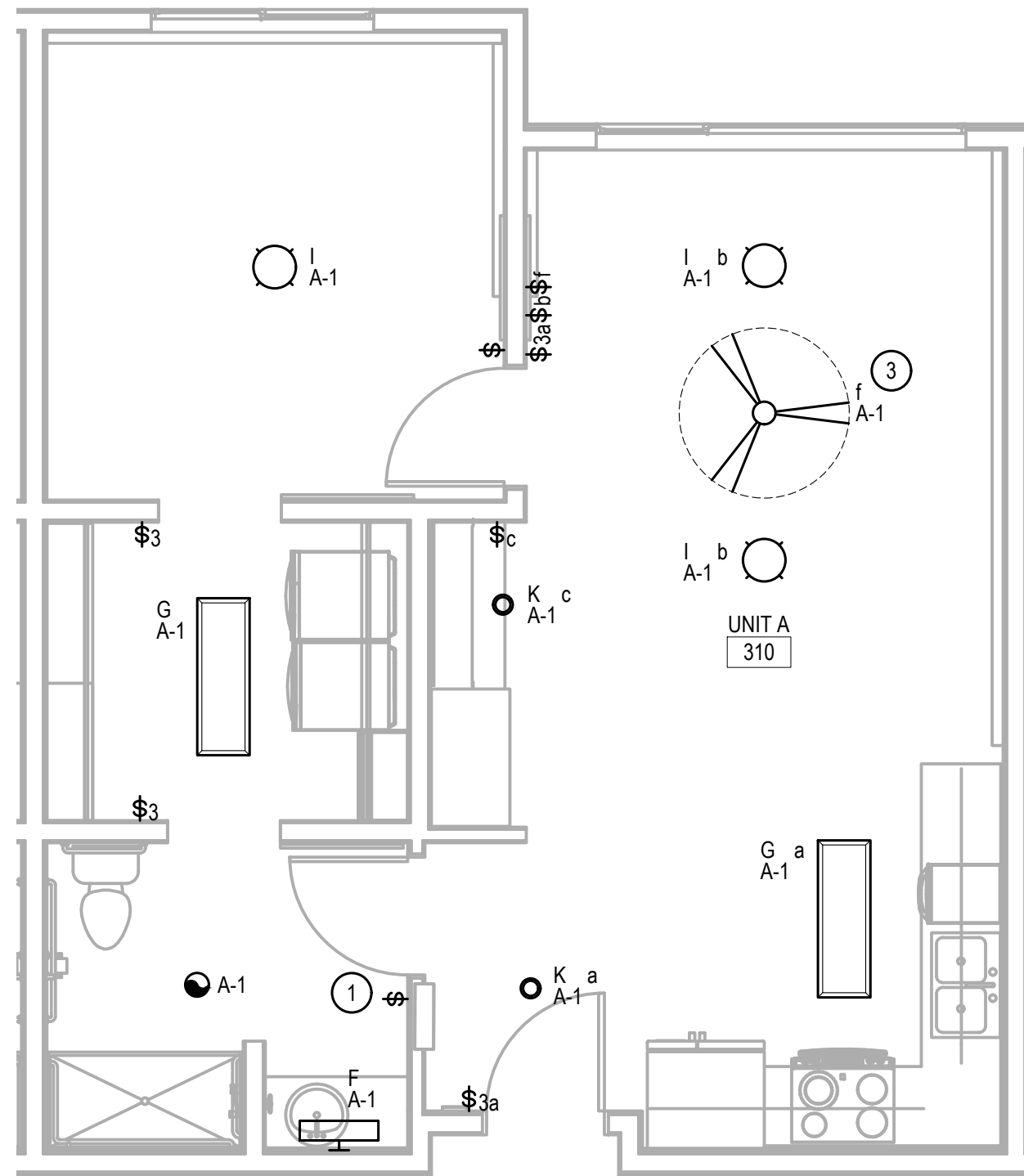
SHEET NAME	THIRD FLOOR LIGHTING PLAN
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SHEET NO.	E2.03
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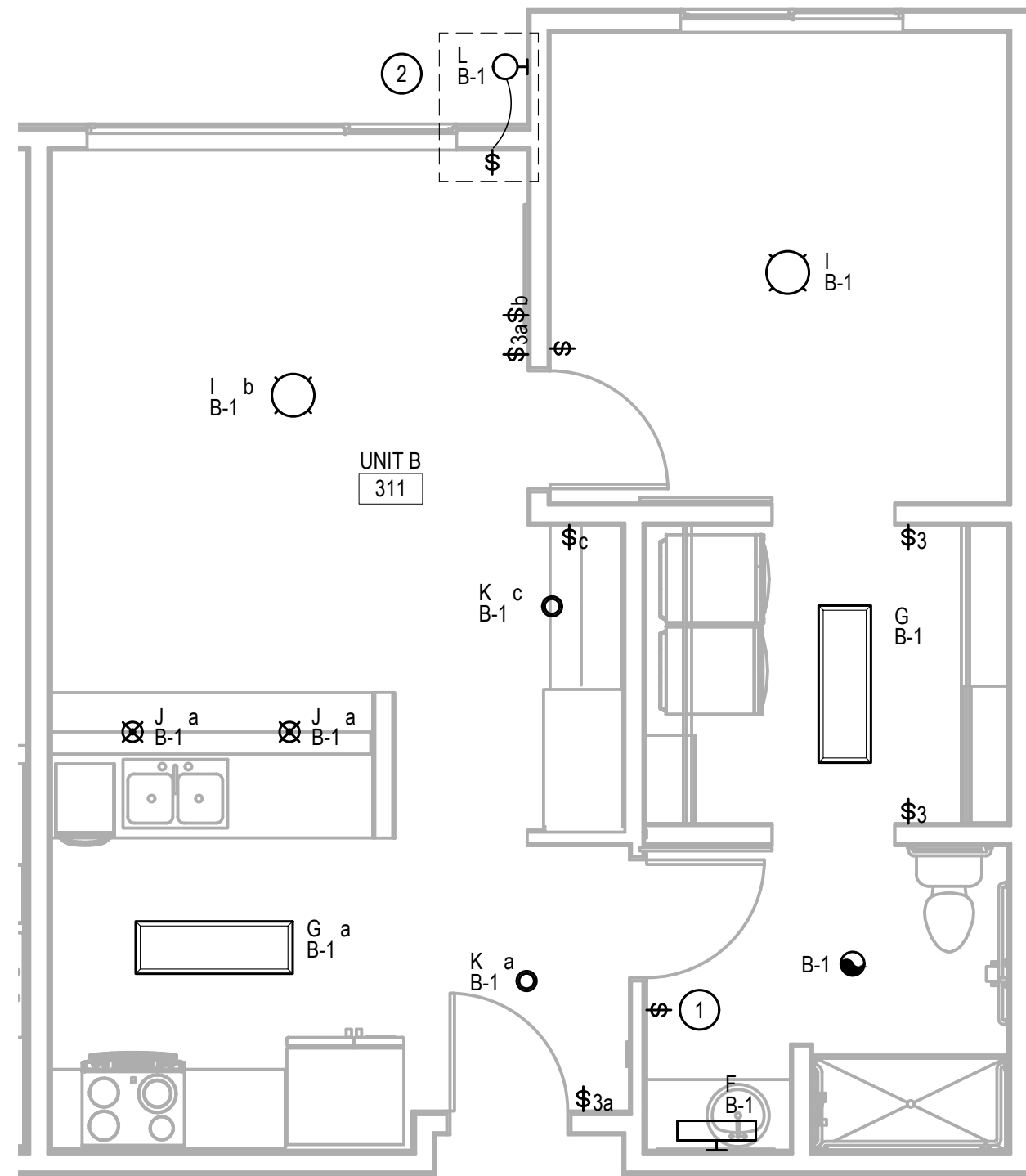
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1"
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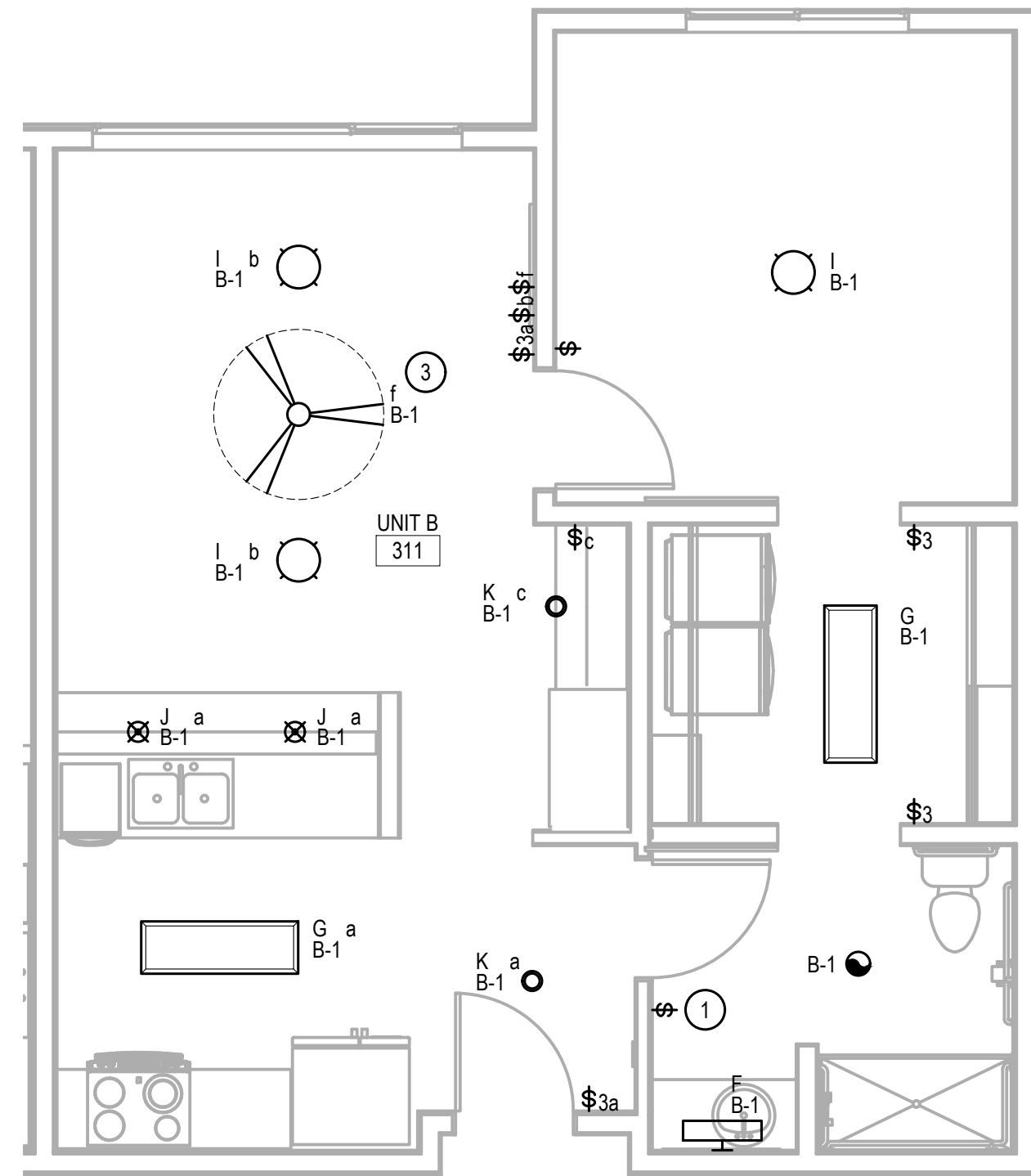
1 ENLARGED LIGHTING PLAN - TYPICAL UNIT A
SCALE: 1/4" = 1'-0"



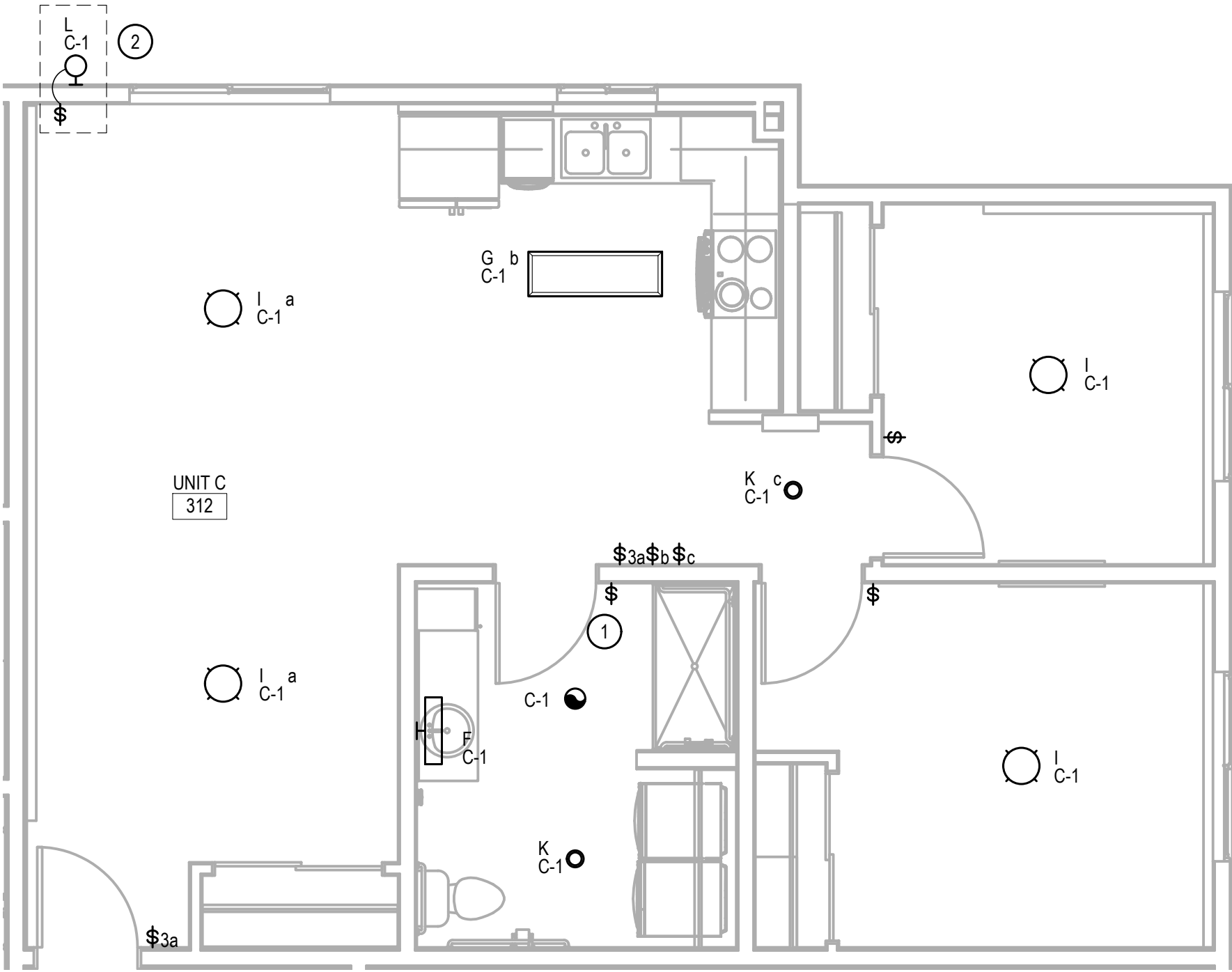
2 ENLARGED LIGHTING PLAN
TYPE A UNITS 309, 310, 317, & 320 ONLY
SCALE: 1/4" = 1'-0"



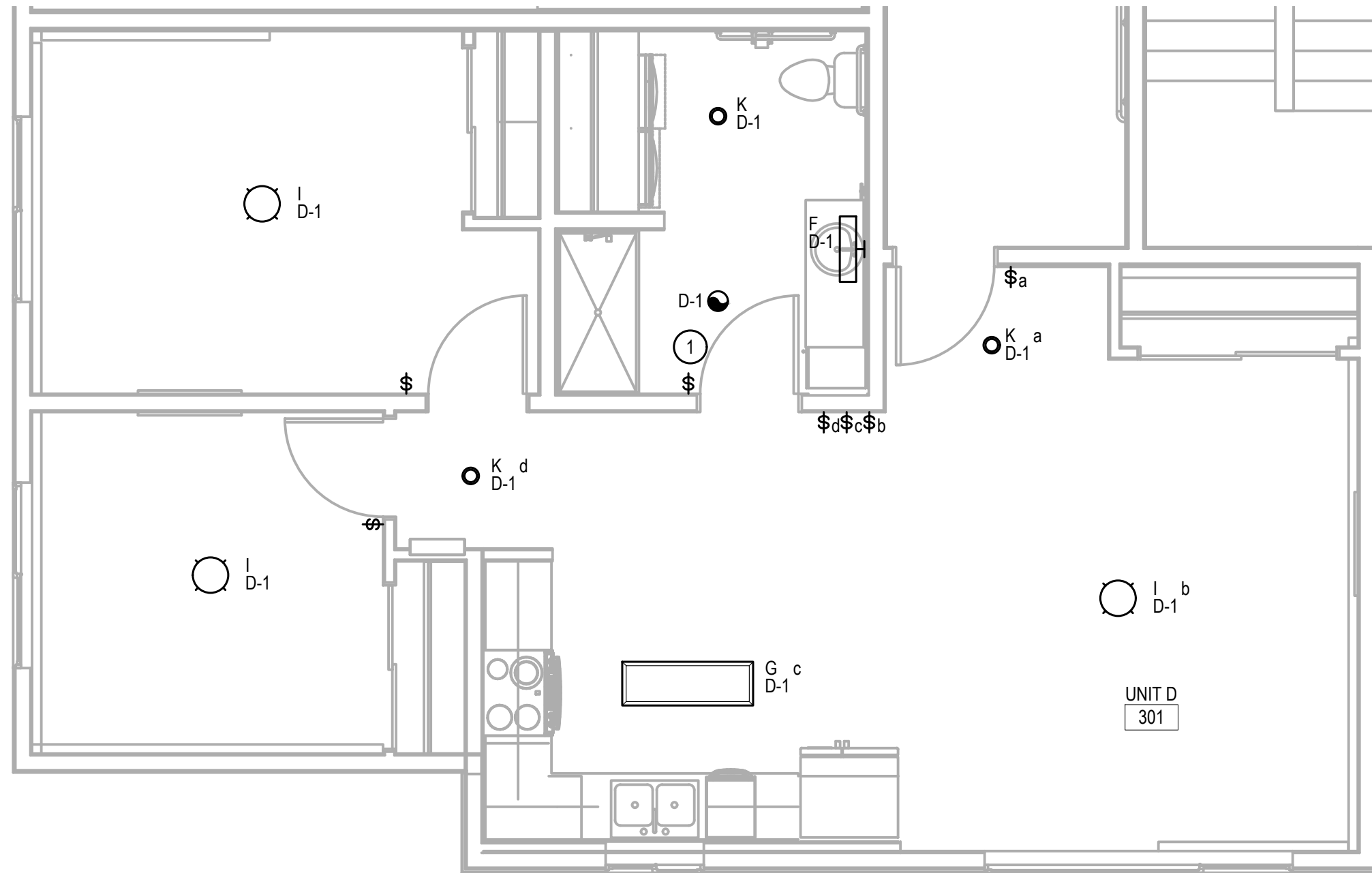
3 ENLARGED LIGHTING PLAN - TYPICAL UNIT B
SCALE: 1/4" = 1'-0"



4 ENLARGED LIGHTING PLAN
TYPE B UNITS 308, 311, 318, & 319 ONLY
SCALE: 1/4" = 1'-0"



5 ENLARGED LIGHTING PLAN - TYPICAL UNIT C
SCALE: 1/4" = 1'-0"

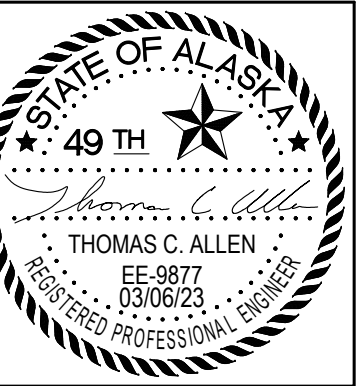


6 ENLARGED LIGHTING PLAN - TYPICAL UNIT D
SCALE: 1/4" = 1'-0"

SHEET NOTES

INDICATED BY: #

- BATHROOM LIGHT SWITCH SHALL CONTROL LIGHT COMPONENT OF FAN/LIGHT COMBINATION UNIT SPECIFIED BY MECHANICAL. FAN COMPONENT CONTROLLED BY OCCUPANCY SENSOR.
- EXTERIOR FIXTURE TO BE INSTALLED IN FIRST FLOOR UNITS ONLY AT EXTERIOR PATIO.
- CEILING FAN, 'BIG ASS FANS HAIKU #MK-HK4-05-2406-01-A470-F222-132" (21.3W, 120V) AS A BASIS OF DESIGN. PROVIDE FIXED WALL CONTROL.



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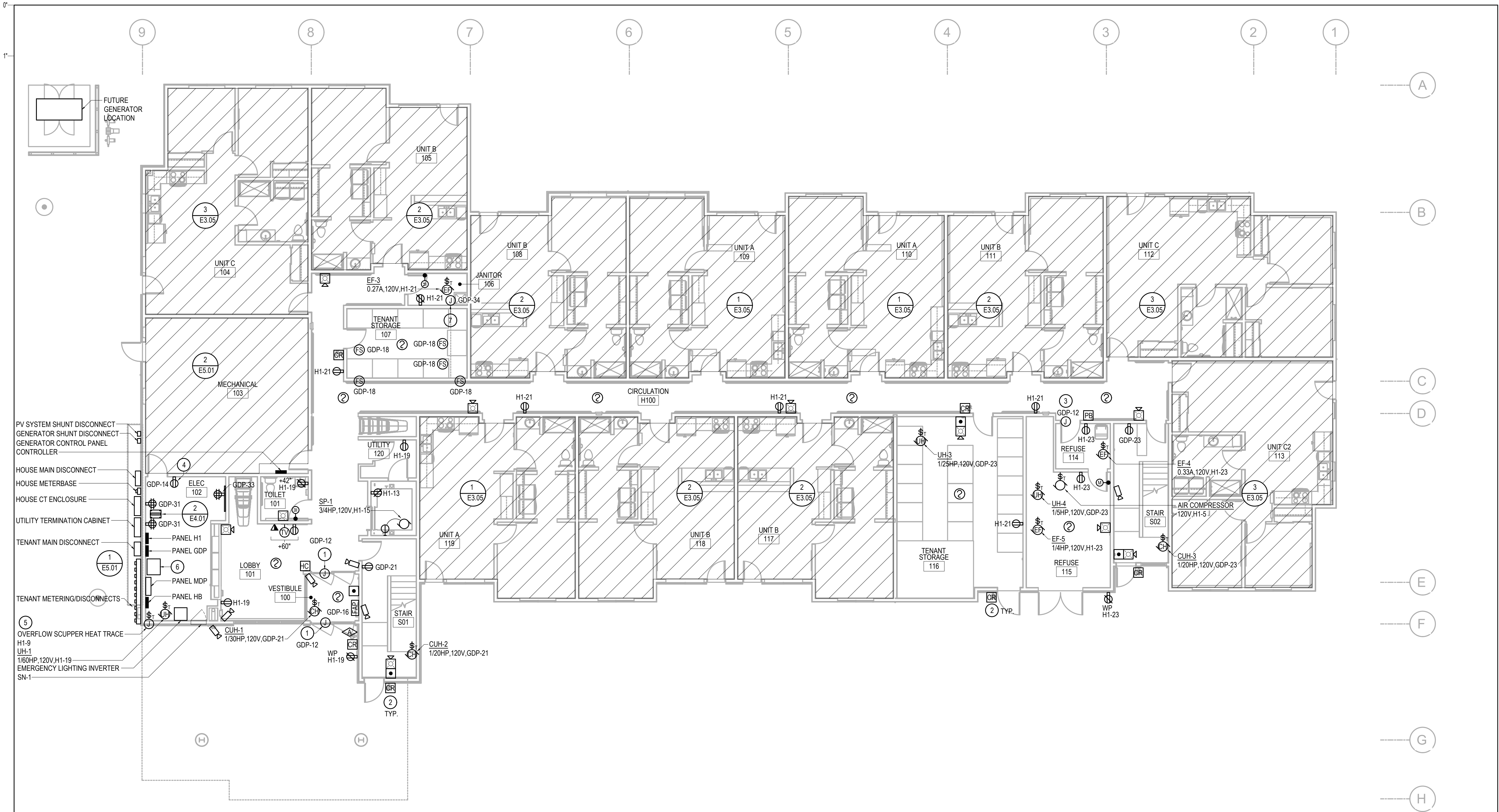
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ASPEN HOUSE SENIOR APARTMENTS
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SHEET NAME
UNIT ENLARGED
LIGHTING PLANS

SHEET NO.
E2.04



1

FIRST FLOOR POWER & SIGNAL PLAN

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

GENERAL NOTES

- SEE DETAIL 1/E4.01 FOR VISITOR ENTRY SYSTEM.
- THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR FOR QUANTITIES, LOCATION AND INSTALLATION OF ANY LINE VOLTAGE THERMOSTATS OR DEVICES THAT THE MECHANICAL CONTRACTOR SHALL PROVIDE. ELECTRICAL CONTRACTOR TO INSTALL ALL LINE VOLTAGE THERMOSTATS/DEVICES.

SHEET NOTES

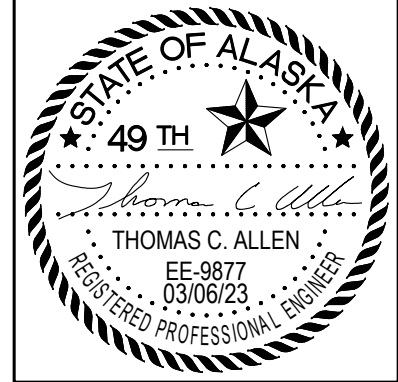
INDICATED BY: #

- PROVIDE POWER TO AUTOMATIC DOOR CONTROLS. ALL DOOR CONTROLS TO BE CIRCUITED TO GDP-12. COORDINATE WITH ARCHITECTURAL AND SUPPLIED EQUIPMENT FOR EXACT CONNECTION LOCATIONS AND REQUIREMENTS.
- PROVIDE POWER TO ACCESS CONTROLS. ALL ACCESS CONTROLS TO BE CIRCUITED TO GDP-14. COORDINATE WITH ARCHITECTURAL AND SUPPLIED EQUIPMENT FOR EXACT CONNECTION LOCATIONS AND REQUIREMENTS.
- POWER AND PUSH BUTTON FOR AUTOMATIC DOOR CONTROLS. COORDINATE WITH ARCHITECTURAL AND SUPPLIED EQUIPMENT FOR EXACT CONNECTION LOCATIONS AND REQUIREMENTS.
- POWER AND CONNECTION FOR ACCESS CONTROL AND TENANT ENTRY SYSTEMS.

SHEET NOTES

INDICATED BY: #

- PROVIDE 5 WATTS PER FOOT SELF LIMITING HEAT TRACE (RAYCHEM GM-1X OR EQUAL) AT OVERFLOW SCUPPER. PROVIDE CONTROL FOR HEAT TRACE IN ELECTRICAL ROOM 102 AND ENTER DRAIN PIPING UTILIZING SUITABLE STRAIN RELIEF GASKET CONNECTOR AT THREADED "Y" FITTING PROVIDED UNDER MECHANICAL DESIGN. EXTEND HEAT TRACE TO OUTFALL LIP OF SCUPPER AND CAP PER MANUFACTURER'S INSTRUCTIONS. CIRCUIT TO H1-9. SEE MECHANICAL DETAIL 9/M6.01.
- JUNCTION BOX INTENDED FOR FUTURE REPLACEMENT WITH 225A AUTOMATIC TRANSFER SWITCH. ENSURE PROPER CLEARANCES FOR FUTURE ATS.
- PROVIDE 120V POWER FOR LOW VOLTAGE TRANSFORMER SERVING UNIT THERMOSTAT AND ZONE VALVES. COORDINATE EXACT LOCATION WITH MECHANICAL PRIOR TO ROUGH IN.



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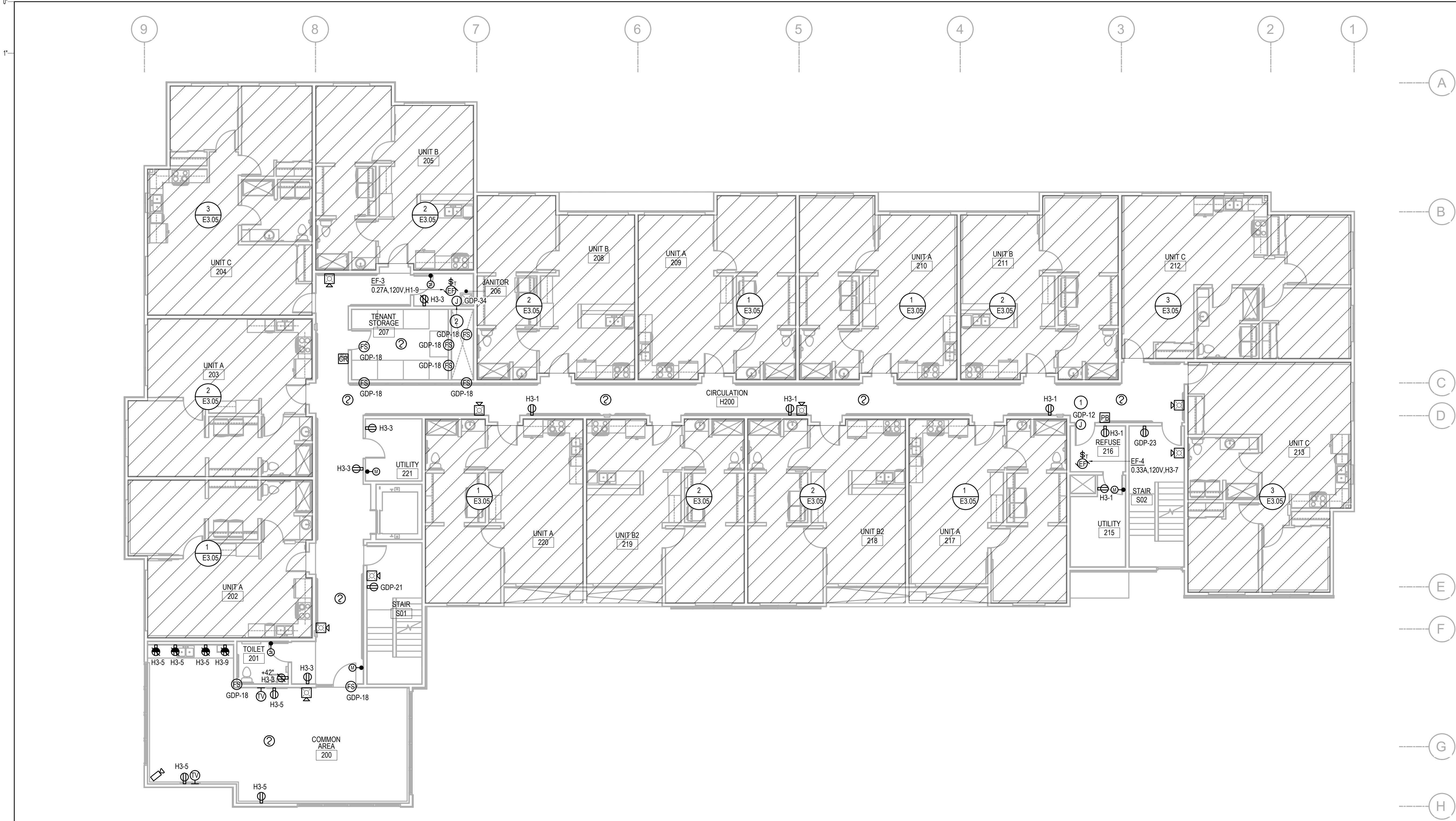
WASILLA, ALASKA

REVISION SCHEDULE		
#	DESCRIPTION	DATE

JOB NO.	2023.007.0
DATE	03/06/2023
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SHEET NAME	FIRST FLOOR POWER PLAN
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SHEET NO.	E3.01
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1 SECOND FLOOR POWER & SIGNAL PLAN

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

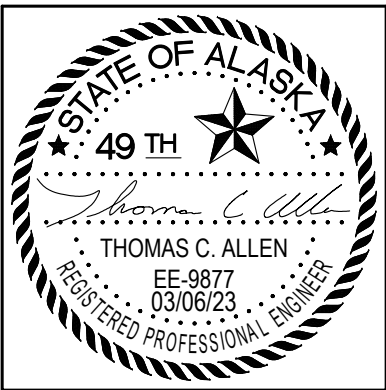
GENERAL NOTES

- THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR FOR QUANTITIES, LOCATION AND INSTALLATION OF ANY LINE VOLTAGE THERMOSTATS OR DEVICES THAT THE MECHANICAL CONTRACTOR SHALL PROVIDE. ELECTRICAL CONTRACTOR TO INSTALL ALL LINE VOLTAGE THERMOSTATS/DEVICES.

SHEET NOTES

INDICATED BY: (#)

- POWER AND PUSH BUTTON FOR AUTOMATIC DOOR CONTROLS. COORDINATE WITH ARCHITECTURAL AND SUPPLIED EQUIPMENT FOR EXACT CONNECTION LOCATIONS AND REQUIREMENTS.
- PROVIDE 120V POWER FOR LOW VOLTAGE TRANSFORMER SERVING UNIT THERMOSTAT AND ZONE VALVES. COORDINATE EXACT LOCATION WITH MECHANICAL PRIOR TO ROUGH IN.



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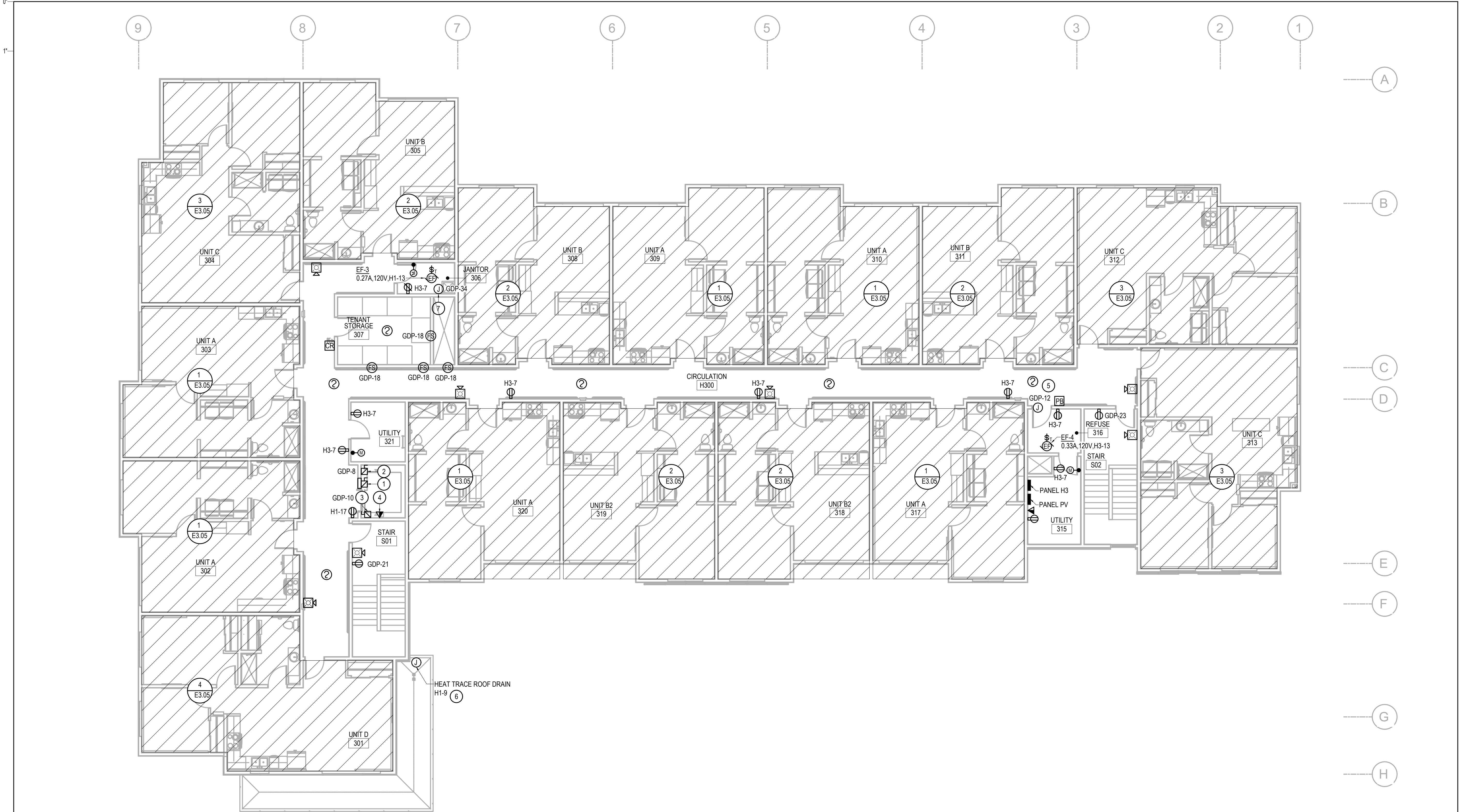
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SHEET NAME
SECOND FLOOR
POWER PLAN

SHEET NO.
E3.02



1 **THIRD FLOOR POWER & SIGNAL PLAN**
SCALE: 1/8" = 1'-0"

GENERAL NOTES

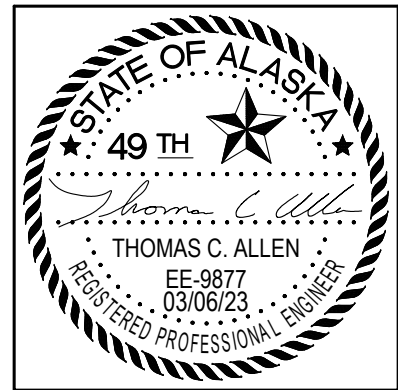
- THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR FOR QUANTITIES, LOCATION AND INSTALLATION OF ANY LINE VOLTAGE THERMOSTATS OR DEVICES THAT THE MECHANICAL CONTRACTOR SHALL PROVIDE. ELECTRICAL CONTRACTOR TO INSTALL ALL LINE VOLTAGE THERMOSTATS/DEVICES.

SHEET NOTES INDICATED BY: (#)

- ELEVATOR: 65A, 208V, 3Ø, GDP-2.4.6. DISCONNECT AND CONNECTION TO ELEVATOR CONTROLLER. SEE SINGLE LINE DIAGRAM AND FEEDER SCHEDULE FOR FEEDER & CONDUIT SIZE.
- DEDICATED 20A CIRCUIT AND FUSED DISCONNECT CAPABLE OF BEING LOCKED IN THE OPEN POSITION FOR CONNECTION OF CAR LIGHTS, CAR TOP RECEPTACLE, AUXILIARY LIGHTING POWER SOURCE, AND CAR VENTILATION. COORDINATE CONNECTION LOCATION WITH ELEVATOR EQUIPMENT PRIOR TO ROUGH IN.
- LOCKABLE 125V, 15A FUSED DISCONNECT FOR REMOTE ELEVATOR MONITORING (REM). COORDINATE CONNECTION LOCATION WITH ELEVATOR EQUIPMENT PRIOR TO ROUGH IN.
- PROVIDE TELEPHONE/DATA CONNECTION FOR ELEVATOR CONTROL.

SHEET NOTES INDICATED BY: (#)

- POWER AND PUSH BUTTON FOR AUTOMATIC DOOR CONTROLS. COORDINATE WITH ARCHITECTURAL AND SUPPLIED EQUIPMENT FOR EXACT CONNECTION LOCATIONS AND REQUIREMENTS.
- JUNCTION BOX FOR ROOF DRAIN HEAT TRACE, INSTALL WEATHERPROOF JUNCTION BOX ON PARAPET WALL AND PROVIDE 5 WATTS PER FOOT SELF LIMITING HEAT TRACE (RAYCHEM GM-1X OR EQUAL) TO ROOF DRAIN. PROVIDE CONTROL FOR HEAT TRACE IN ELECTRICAL ROOM 102 AND INSTALL HEAT TRACE INSIDE OF DRAIN PIPING TO INTERIOR OF THE BUILDING (APPROXIMATELY 20' CAP PER MANUFACTURER'S INSTRUCTIONS. CIRCUIT TO H1-9. SEE MECHANICAL DETAIL 4/M4.01.
- PROVIDE 120V POWER FOR LOW VOLTAGE TRANSFORMER SERVING UNIT THERMOSTAT AND ZONE VALVES. COORDINATE EXACT LOCATION WITH MECHANICAL PRIOR TO ROUGH IN.



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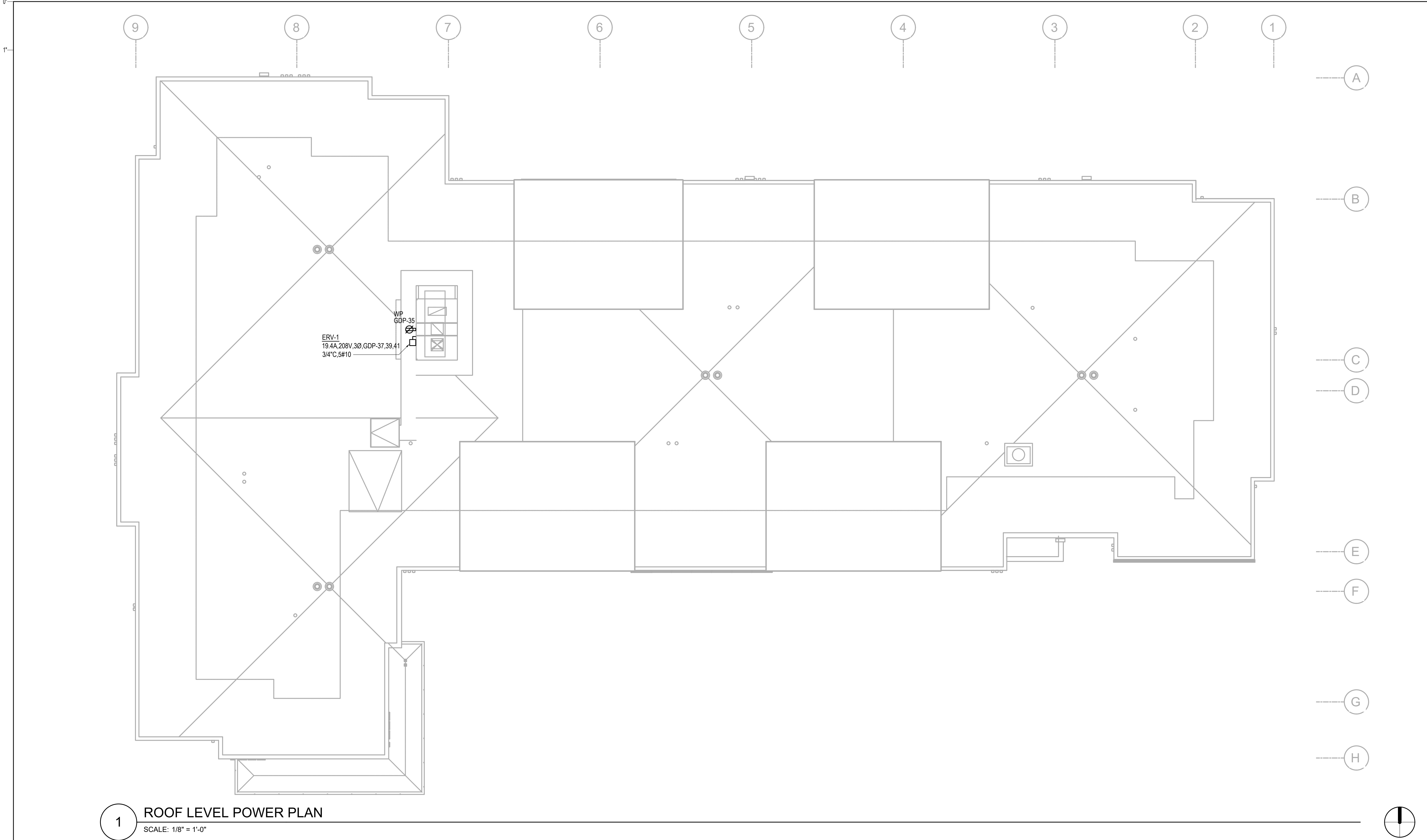
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WASILLA, ALASKA

REVISION SCHEDULE		
#	DESCRIPTION	DATE

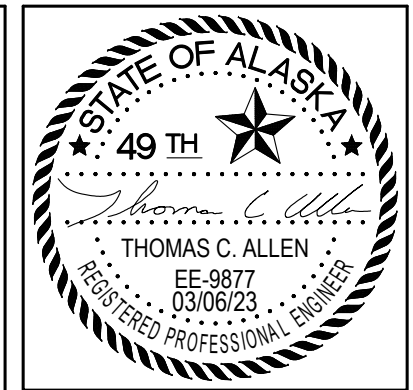
JOB NO. 2023.007.0
DATE 03/06/2023
DRAWN MJM
REVIEWED TCA

SHEET NAME
THIRD FLOOR
POWER PLAN

SHEET NO.
E3.03



1 ROOF LEVEL POWER PLAN
SCALE: 1/8" = 1'-0"



CERTIFICATE OF AUTHORIZATION NO:
T3 ALASKA, LLC AECL #: 1625

spark design,llc

T3 ALASKA LLC

Mechanical & Electrical Engineering
301 Calista Court, Suite 100
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ASPEN HOUSE LIMITED PARTNERSHIP
ASPEN HOUSE SENIOR APARTMENTS
WASILLA, ALASKA

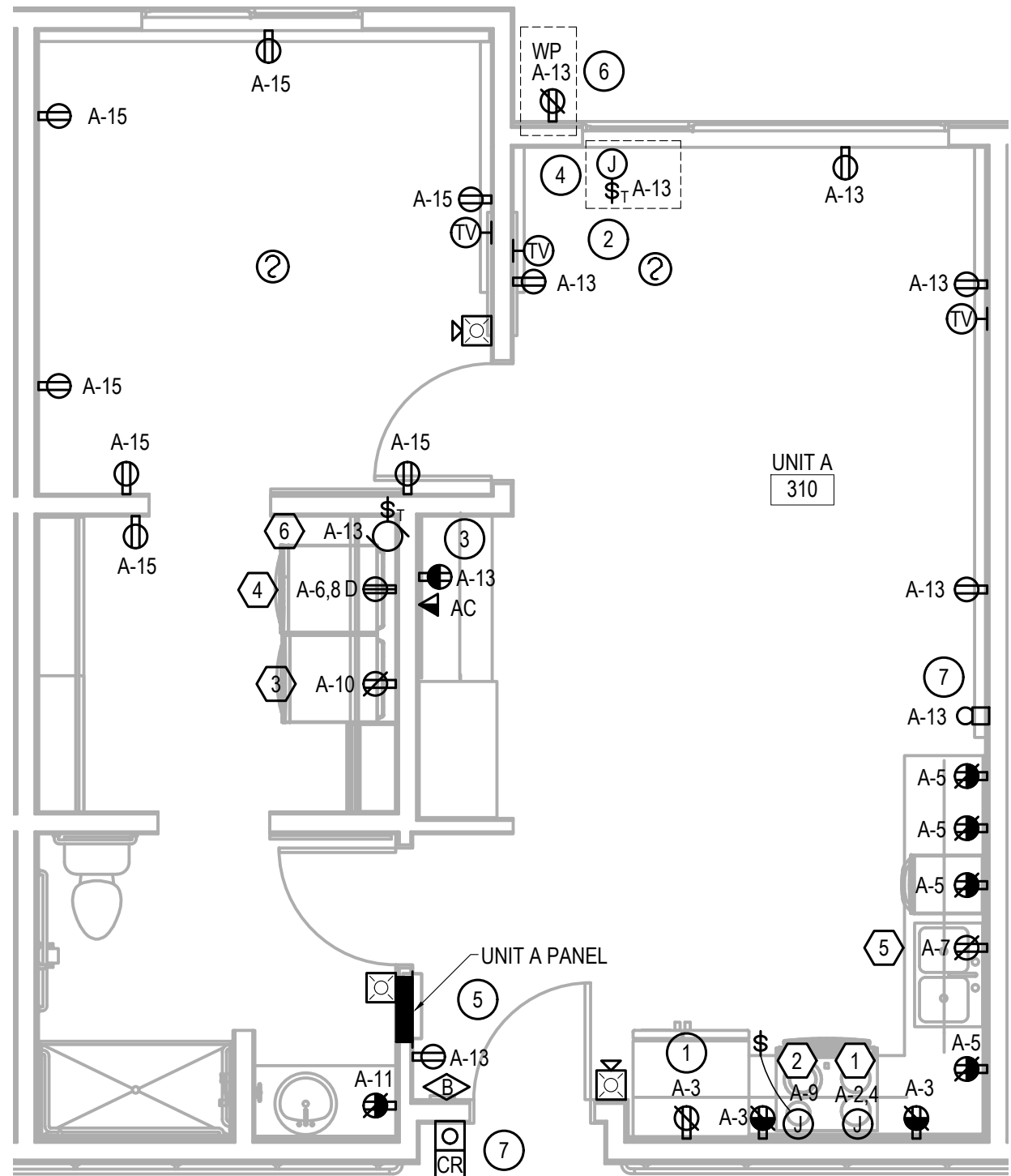
REVISION SCHEDULE		
#	DESCRIPTION	DATE

JOB NO.	2023.007.0
DATE	03/06/2023
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REVIEWED	TCA

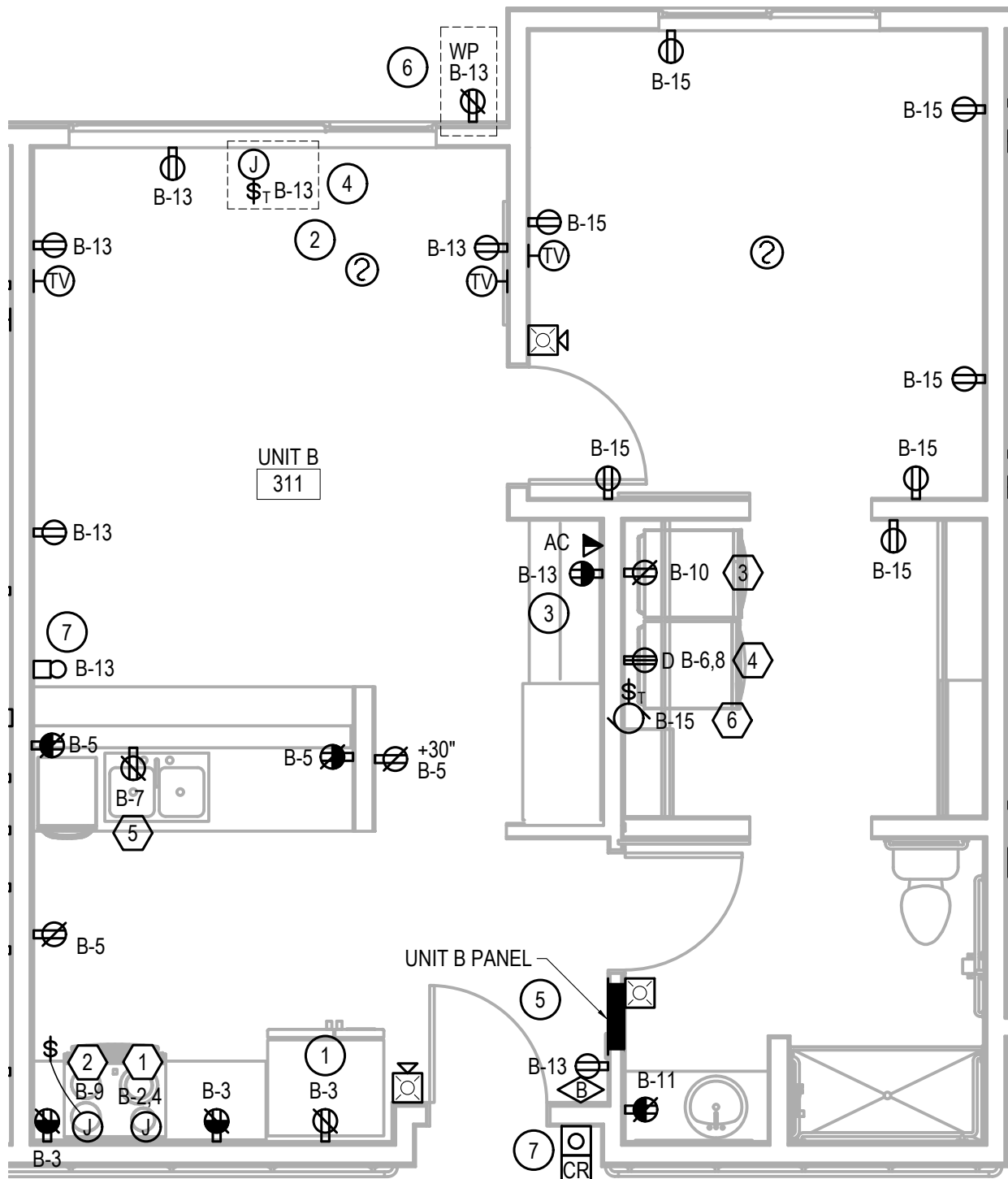
SHEET NAME
ROOF POWER PLAN

SHEET NO.
E3.04

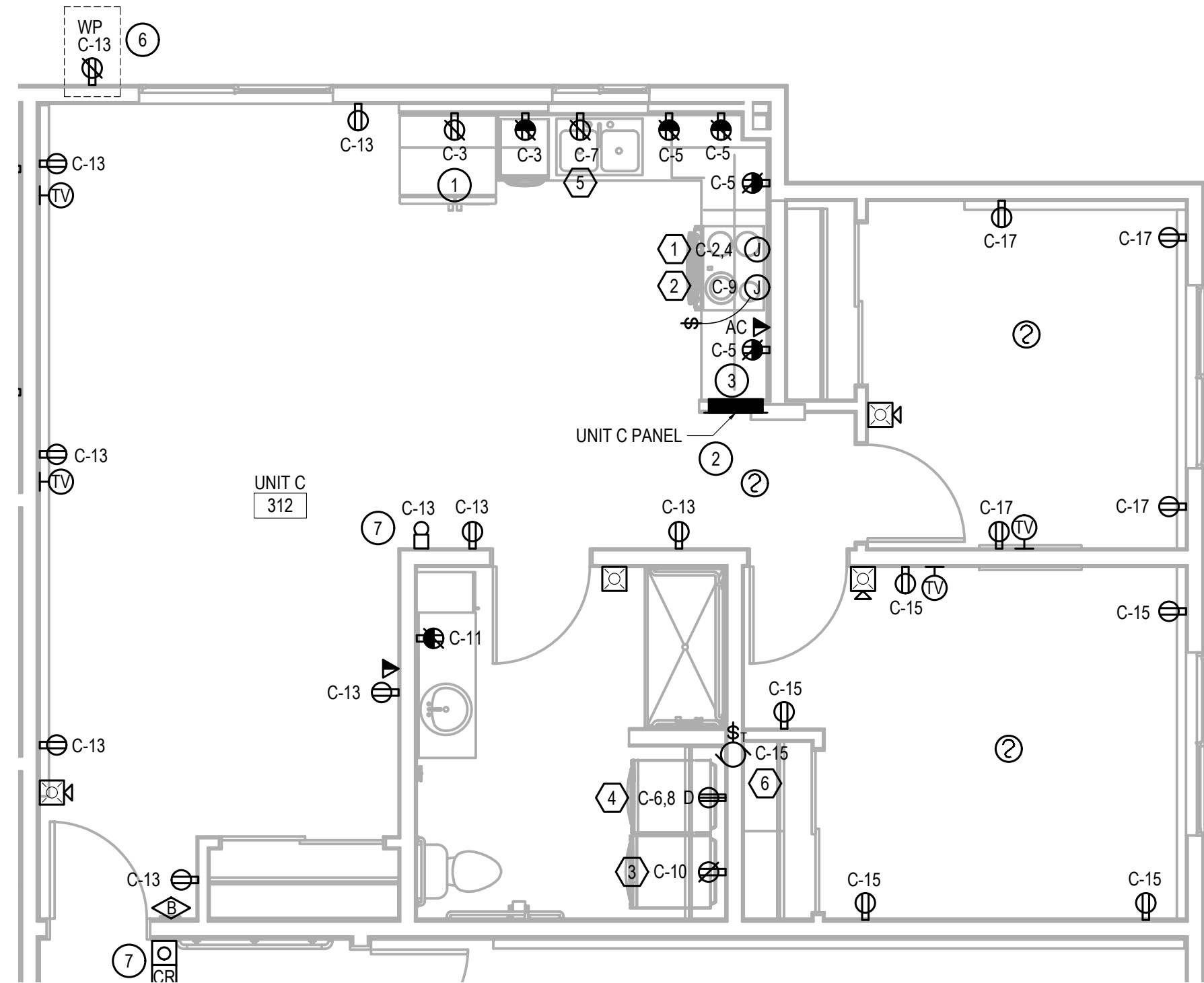
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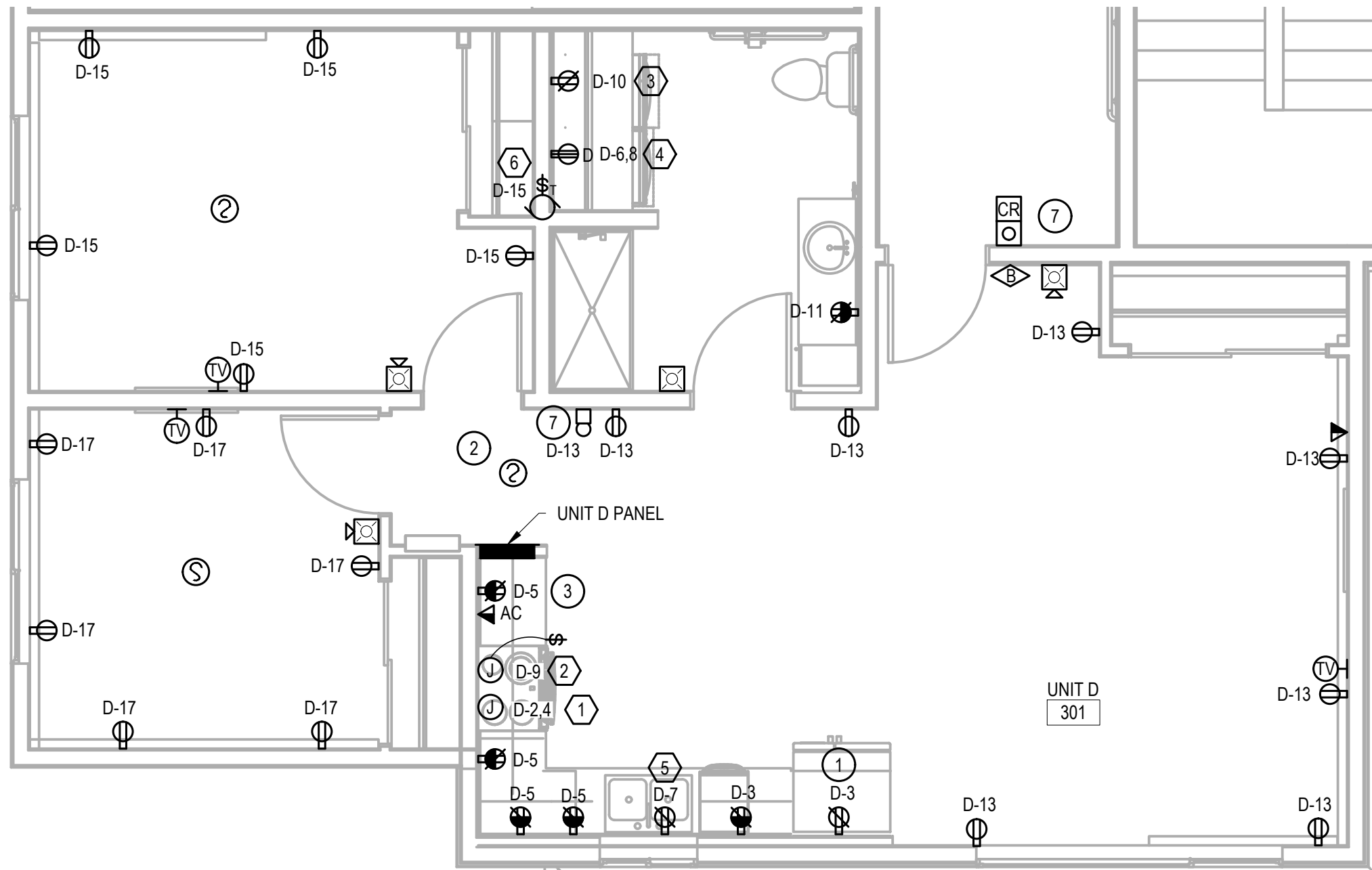
1 ENLARGED POWER & SIGNAL PLAN - TYPICAL UNIT A
SCALE: 1/4" = 1'-0"



2 ENLARGED POWER & SIGNAL PLAN - TYPICAL UNIT B
SCALE: 1/4" = 1'-0"



3 ENLARGED POWER & SIGNAL PLAN - TYPICAL UNIT C
SCALE: 1/4" = 1'-0"



4 ENLARGED POWER & SIGNAL PLAN - TYPICAL UNIT D
SCALE: 1/4" = 1'-0"

GENERAL NOTES

- SEE DETAIL 2/E4.01 FOR VISITOR ENTRY SYSTEM.
- ALL 120V, 20A RECEPTACLES IN UNITS SHALL BE LISTED TAMPER RESISTANT TYPE.

ACOUSTICAL NOTES

- SEE ARCHITECTURAL FOR ADDITIONAL REQUIREMENTS.
- PROVIDE 2 LAYERS OF PUTTY PADS BEHIND EACH BACK BOX FOR ALL DEVICE BOXES, INCLUDING BUT NOT LIMITED TO POWER, SIGNAL AND TELECOM.

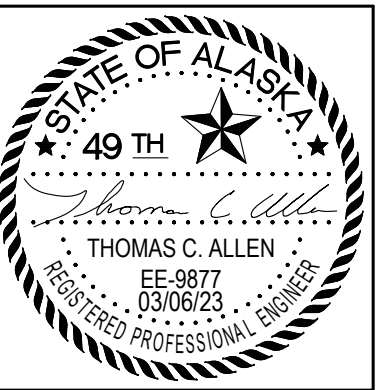
SHEET NOTES

- PROVIDE GFCI PROTECTION FOR REFRIGERATOR RECEPTACLE VIA NEAREST ACCESSIBLE ABOVE COUNTER RECEPTACLE.
- SYSTEM DETECTORS AND STROBES / HORN STROBES, TYPICAL ALL UNITS.
- INSTALL RECEPTACLE WITH DUAL INTEGRAL USB OUTLETS.
- PROVIDE JUNCTION BOX AND LOCAL SWITCH FOR MOTORIZED SHADES IN THIRD FLOOR TYPE A UNITS 309, 310, 317, & 320 & TYPE B UNITS 308, 311, 318, & 319 ONLY. COORDINATE JUNCTION BOX LOCATION WITH SHADE MANUFACTURER'S INSTRUCTIONS PRIOR TO ROUGH IN. COORDINATE CONTROL LOCATION WITH ARCHITECTURAL PRIOR TO ROUGH IN.
- COORDINATE EXACT PANELBOARD LOCATION TO AVOID RANGE HOOD DUCTING ABOVE.
- WEATHERPROOF RECEPTACLE TO BE INSTALLED IN FIRST FLOOR UNITS ONLY AT EXTERIOR PATIO.
- ALTERNATE #7: PROVIDE CARD READERS & DOOR BELL SWITCH, CHIMES, & TRANSFORMER AS NECESSARY. IQ AMERICA #PC-7520 OR APPROVED EQUAL.

EQUIPMENT SCHEDULE

INDICATED BY: #

- RANGE: 8,900W, 208V, 1Ø, 1"C, 4#8.
- RANGE HOOD RH-1: 1.4A, 120V, 1Ø. COORDINATE REMOTE RANGE HOOD CONNECTION WITH ARCHITECTURAL AND MECHANICAL.
- WASHER: 1500W, 120V, 1Ø.
- DRYER: 4,400W, 208V, 1Ø, 3/4"C, 4#10.
- DISHWASHER: 6.7A, 120V, 1Ø.
- DRYER BOOSTER FAN DF-1: 0.54A, 120V, 1Ø.



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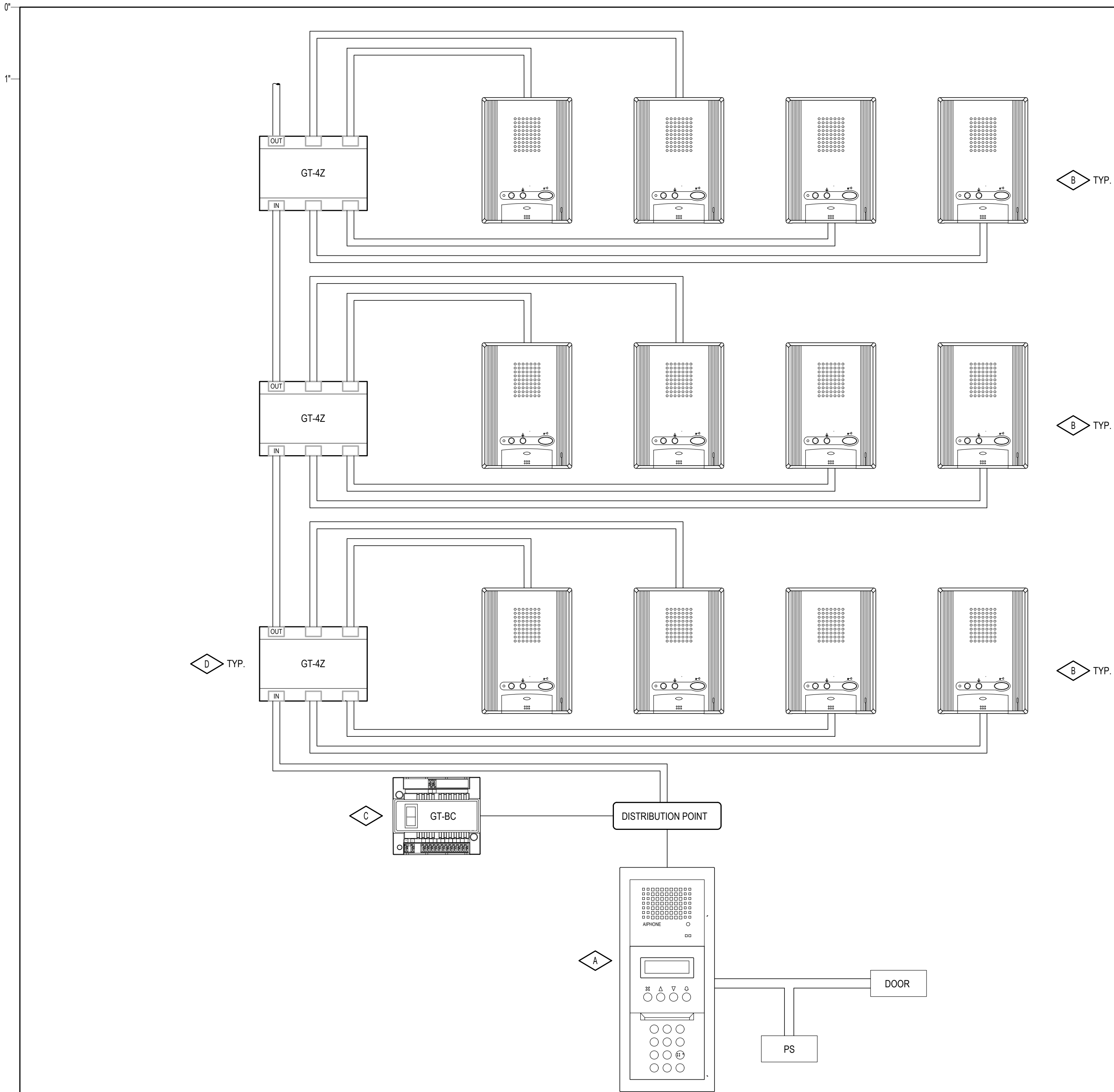
ASPEN HOUSE LIMITED PARTNERSHIP
ASPEN HOUSE SENIOR APARTMENTS
WASILLA, ALASKA

REVISION SCHEDULE		
#	DESCRIPTION	DATE

JOB NO. 2023.007.0
DATE 03/06/2023
DRAWN MJM
REVIEWED TCA

SHEET NAME
UNIT ENLARGED
POWER PLANS

SHEET NO.
E3.05



1 ENTRY INTERCOM RISER DIAGRAM
SCALE: NTS

INTERCOM RISER DIAGRAM NOTES

- RISER SHOWN IS A CONCEPTUAL SCHEMATIC DIAGRAM ONLY. SUPPLIER TO PROVIDE AN INSTALLATION SHOP DRAWING & SUBMITTAL FOR APPROVAL DETAILING EQUIPMENT LAYOUT WITH WIRING DIAGRAMS AND SHOWING ALL NECESSARY EQUIPMENT, CABLING, & ACCESSORIES REQUIRED FOR A COMPLETE INSTALLATION.
- SUPPLIER TO PROVIDE SYSTEM SET-UP, PROGRAMMING, TESTING, COMMISSIONING, & TRAINING SERVICES AS DIRECTED BY THE OWNER'S REPRESENTATIVE TO PROVIDE FOR A FULLY OPERATIONAL SYSTEM.
- PROVIDE ELECTRICAL CONNECTIONS AND FUNCTIONALITY TO ACTIVATE ENTRY DOORS STRIKE RELEASE FUNCTIONS FROM ENTRY PANELS AND TENANT STATIONS.
- SYSTEM DESIGN BASED ON AIPHONE GT SERIES, WITH ONE MASTER STATION AND 40 TENANT STATIONS.

SYSTEM EQUIPMENT SCHEDULE

INDICATED BY:

- 10-KEY AUDIO ENTRANCE PANEL: AIPHONE #GTA-DESB.
- AUDIO OPEN VOICE TENANT STATION: AIPHONE #GT-1A.
- AUDIO BUS CONTROL UNIT: AIPHONE #GT-BC.
- 4-WAY DISTRIBUTION: AIPHONE #GT-4Z.

2 COMM RISER DIAGRAM
SCALE: NTS

COMM RISER EQUIPMENT

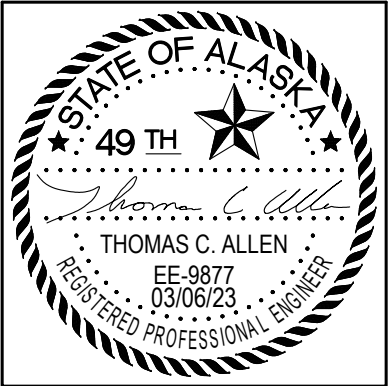
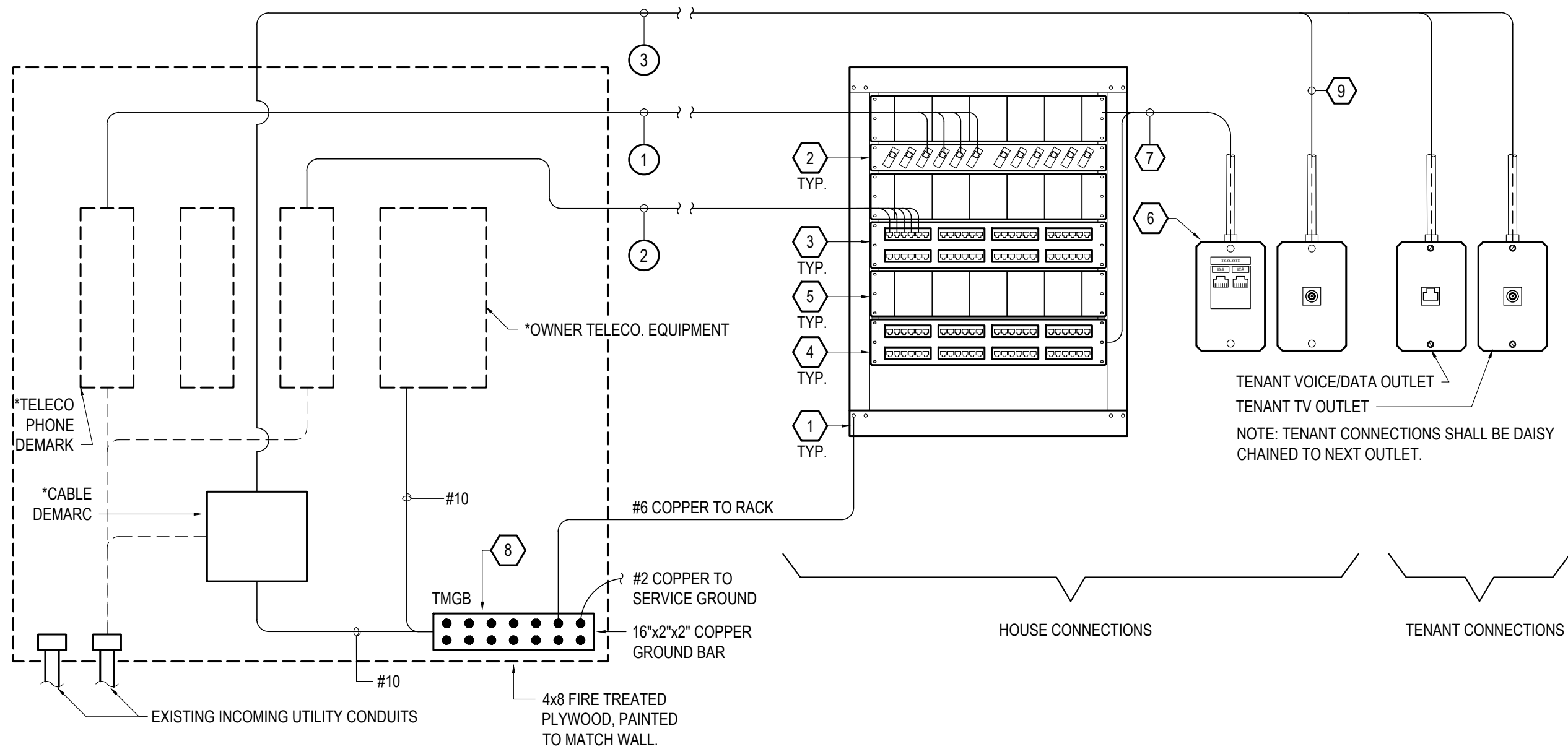
INDICATED BY:

- 4 STRAND (2-PAIR) SM FIBER CABLES FROM MDF.
- 5-CATEGORY 6 CABLES FROM MDF.
- RG-6 COAX CABLE, PLENUM RATED.

COMM EQUIPMENT SCHEDULE

INDICATED BY:

- WALL MOUNTED EQUIPMENT RACK
- 12 PORT FIBER OPTIC PATCH PANELS AT MDF WITH TYPE SC CONNECTOR PORTS
- CAT 6 UTP PATCH PANEL - VOICE BACKBONE
- CAT 6 UTP PATCH PANEL - HORIZONTAL CABLE
- WIRE MANAGEMENT PANEL
- TELECOMMUNICATIONS OUTLET: PROVIDE WITH TWO CAT 6 8P8C JACKS PER OUTLET UNLESS NOTED OTHERWISE. INSTALL IN 4 11/16"x4 11/16"x2 1/8" BACK BOX WITH SINGLE GANG DEVICE RING.
- CAT 6 CABLE, TWO PER JACK, TYPICAL
- 12"x4"x1/4" GROUNDING BAR ON ISOLATORS WITH GROUNDING CONDUCTOR BACK TO MAIN CER GROUNDING BAR AND ACCESSIBLE BUILDING STEEL
- RG-6 COAX TO VIDEO JACK, ONE PER JACK, TYPICAL.



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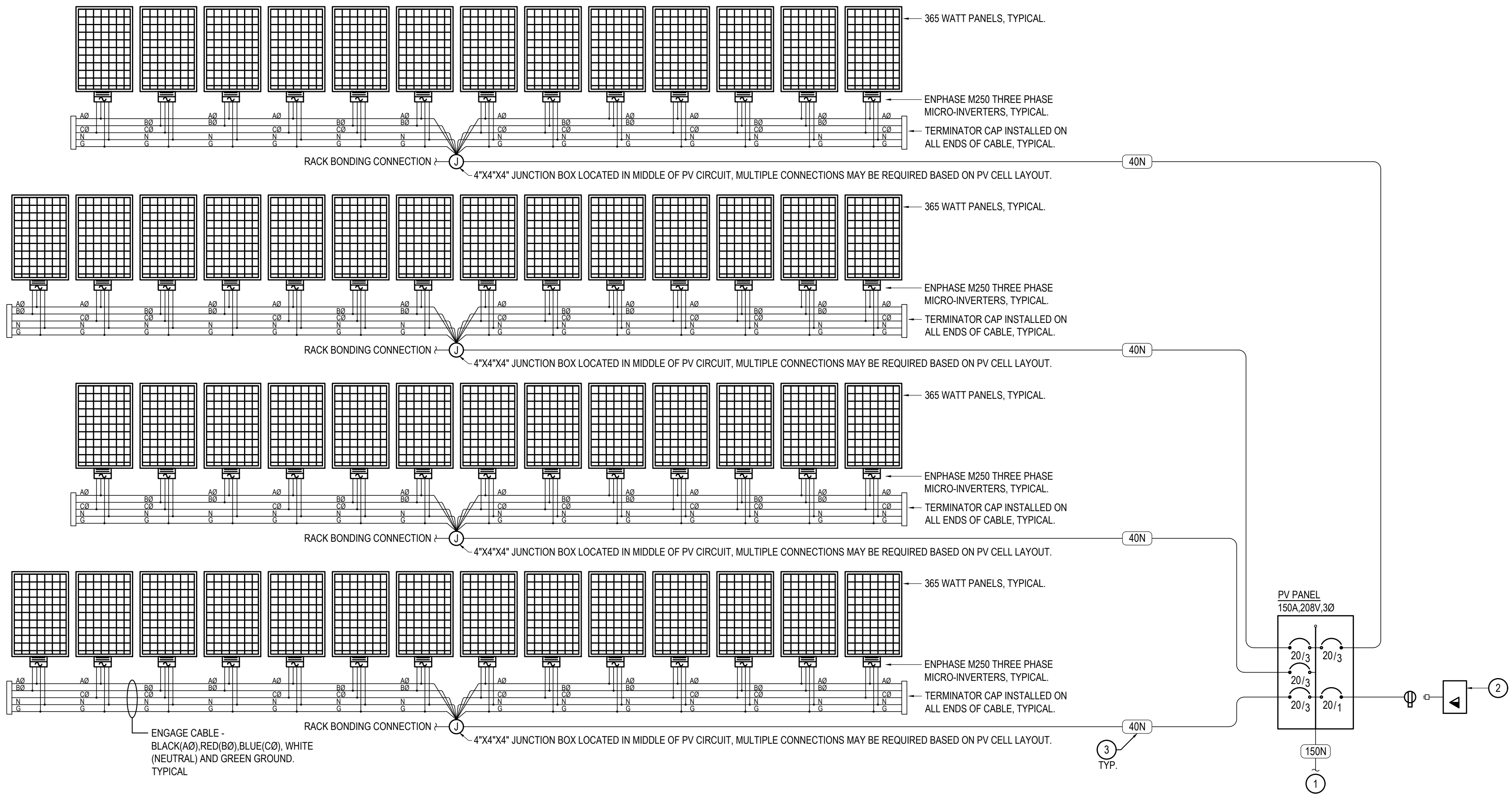
REVISION SCHEDULE		
#	DESCRIPTION	DATE

JOB NO.	2023.007.0
DATE	03/06/2023
DRAWN	MJM
REVIEWED	TCA

SHEET NAME
TELECOMMUNICATIONS
& INTERCOM RISER DIAGRAMS

SHEET NO.
E4.01

0"
1"
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1 PHOTOVOLTAIC RISER DIAGRAM

SCALE: NTS

PV SYSTEM GENERAL NOTES

- TOTAL OF 54 PV MODULES, (19.7KW SYSTEM), LAYOUT AS SHOWN IS GENERIC THE CONTRACTOR SHALL PROVIDE A BALANCED LAYOUT AND CONNECTION PER MANUFACTURER RECOMMENDATIONS. BRANCH POWER CONNECTIONS SHALL ALWAYS BE MADE IN THE MIDDLE OF THE PV CIRCUITS TO ENSURE BALANCED DISTRIBUTION.
- PV SYSTEM SHALL MEET UL 1741/IEEE 1574 AND NEC REQUIREMENTS.
- PROVIDE AND COMPLY WITH ALL NEC REQUIREMENTS INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
 - LABELING PER NEC 690.13, 690.18, &690.51

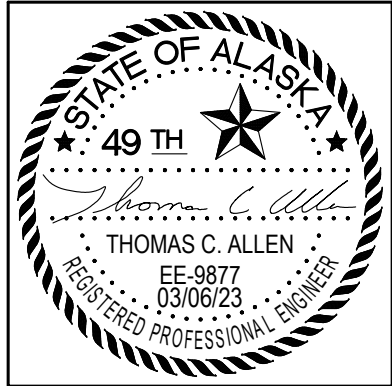
PV SYSTEM GENERAL NOTES

- RAPID SHUTDOWN AS REQUIRED BY 690.12 IS PROVIDED AS AN INTEGRAL PART OF THE MICROINVERTERS (ENPHASE M250).
- THE ENPHASE MICROINVERTER HAS INTEGRATED GROUND AND NO GEC IS REQUIRED. THE DC CIRCUIT IS ISOLATED AND INSULATED FROM GROUND AND MEETS THE REQUIREMENTS OF NEC 690.35. GROUNDING CONNECTION AS SHOWN IS FOR EQUIPMENT GROUNDING.
- ALL CIRCUIT BREAKERS ASSOCIATED WITH THE PV SYSTEM AND BACK TO THE MDP SHALL BE RATED FOR BACK-FEEDING.

SHEET NOTES

INDICATED BY: (1)

- SEE E5.01 FOR ELECTRICAL RISER DIAGRAM.
- ENVOY COMMUNICATIONS GATEWAY, PLUGGED INTO DEDICATED RECEPTACLE, LOCATED NEXT TO PANEL. PROVIDE COMMUNICATION OUTLET/CONNECTION.
- REFERENCE FEEDER SCHEDULE, E5.01.



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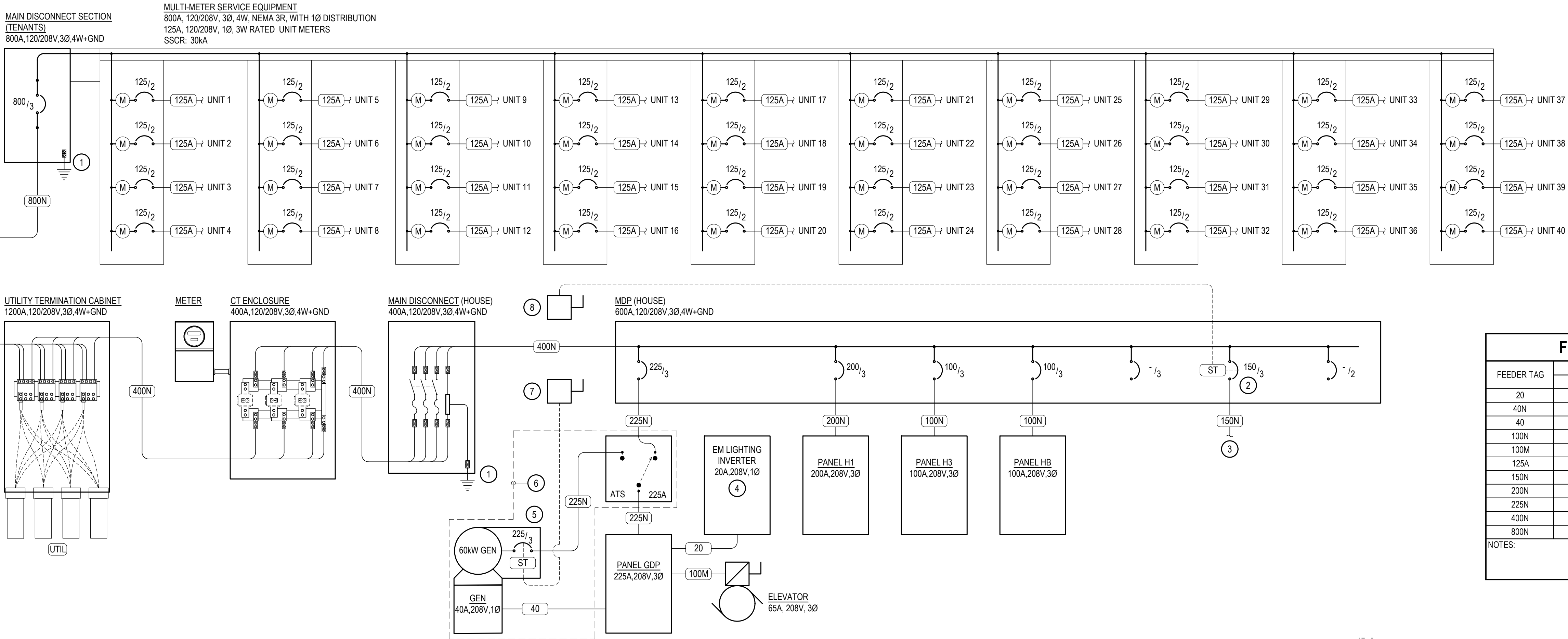
ASPEN HOUSE LIMITED PARTNERSHIP
ASPEN HOUSE SENIOR APARTMENTS
WASILLA, ALASKA

REVISION SCHEDULE		
#	DESCRIPTION	DATE

JOB NO. 2023.007.0
DATE 03/06/2023
DRAWN MJM
REVIEWED TCA

SHEET NAME
PHOTOVOLTAIC
RISER DIAGRAM

SHEET NO.
E4.02



RISER DIAGRAM GENERAL NOTES

- IMMEDIATELY UPON PROJECT INCEPTION THE CONTRACTOR SHALL COORDINATE WITH MEA FOR THE INSTALLATION OF A NEW ELECTRICAL SERVICE. EQUIPMENT LAYOUT AS SHOWN IS DIAGRAMMATIC. THE CONTRACTOR SHALL SUBMIT DETAILED INFORMATION REGARDING THE PROPOSED SERVICE ENTRANCE EQUIPMENT TO THE UTILITY COMPANY AND OWNER/ARCHITECT FOR APPROVAL PRIOR TO ORDERING ANY EQUIPMENT. ALL EQUIPMENT AND INSTALLATION SHALL COMPLY WITH CHUGACH STANDARDS AND THE LATEST ADOPTED NEC INCLUDING REQUIREMENTS FOR PV SYSTEM INSTALLATION.
- METERS AND DISCONNECTS SHALL BE LABELED WITH ENGRAVED PLACARDS, IDENTIFYING EACH TENANT WITH THE ADDRESS OR OTHER MEANS AND BUSSED TERMINATION ENCLOSURES SHALL HAVE PROVISIONS TO BE SEALED. EXTERIOR EQUIPMENT WILL BE PROVIDED IN NEMA 3R ENCLOSURES.

RISER DIAGRAM DETAIL NOTES

INDICATED BY: (#)

- PROVIDE GROUNDING ELECTRODE SYSTEM AS FOLLOW: #3/0 CU. TO WATER MAIN, #3/0 CU. TO BUILDING STEEL, 2Ø OF #3/0 CU. ENCASED IN FOOTING CONCRETE AND BONDED TO REBAR. AND #4 CU. TO DRIVEN ROD ELECTRODE.
- PROVIDE A 150A/3-POLE BACK-FED CIRCUIT BREAKER FOR THE SOLAR PV SYSTEM. INSTALL ACCORDING TO SUPPLIER FURNISHED SHOP DRAWINGS & SUBMITTALS, COMPLY WITH 2015 NEC 690.
- SEE E4.02 FOR PV SYSTEM DETAILS.
- MYERS POWER PRODUCTS, INC. ILLUMINATOR SERIES 1.5kW MODEL #3-IE-1-S-BA2002-Z OR EQUIVALENT. 208V, 1Ø INPUT; 120V, 1Ø OUTPUT VIA TWO NORMALLY "ON" BRANCH CIRCUIT BREAKERS.
- PROVIDE 'ASCO 5101' (OR APPROVED EQUAL) GENERATOR ENGINE START MODULE AND ATS ENGINE START MODULE FOR ATS ENGINE START CIRCUIT MONITORING. INCLUDE ALL CONTROL WIRING AND ADDITIONAL ACCESSORIES REQUIRED FOR COMPLETE INSTALLATION.
- ADDITIVE ALTERNATE #3:** PROVIDE GENERATOR & AUTOMATIC TRANSFER SWITCH AS A LINE ITEM ALTERNATE. PROVIDE JUNCTION BOX IN PLACE OF ATS AND CONDUIT FOR ATS AND GENERATOR PANEL FOR FUTURE INSTALLATION SHOULD ALTERNATE NOT BE SELECTED. SEE GENERATOR AND ATS BASIS OF DESIGN REQUIREMENTS, THIS SHEET.
- PROVIDE LOCKABLE KNIFE SWITCH STYLE DISCONNECT AT ELECTRICAL SERVICE LOCATION AND CONNECT TO PROVIDE FOR SHUNT TRIP OPERATION OF GENERATOR OUTPUT CIRCUIT BREAKER. LOCATE NEXT TO SERVICE ENTRANCE GEAR. PROVIDE LAMINATED ENGRAVED PLACARD, RED WITH WHITE 1" LETTERING TO READ "GENERATOR DISCONNECT SHUNT TRIP SWITCH".
- PROVIDE LOCKABLE KNIFE SWITCH STYLE DISCONNECT AT ELECTRICAL SERVICE LOCATION AND CONNECT TO PROVIDE FOR SHUNT TRIP OPERATION OF PV PANEL CIRCUIT BREAKER. LOCATE NEXT TO SERVICE ENTRANCE GEAR. PROVIDE LAMINATED ENGRAVED PLACARD, RED WITH WHITE 1" LETTERING TO READ "PV SYSTEM DISCONNECT SHUNT TRIP SWITCH".

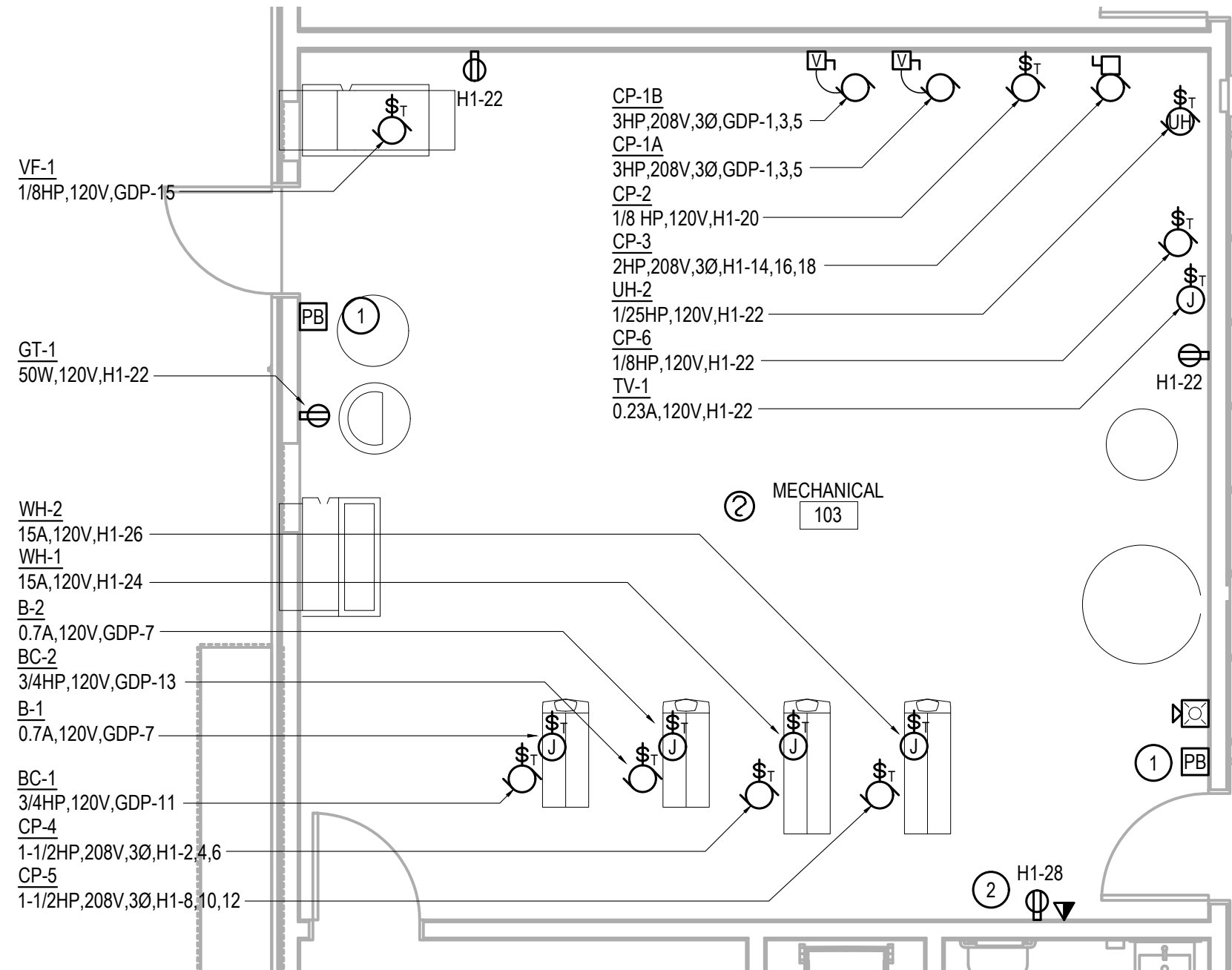
GENERATOR & ATS GENERAL NOTES

GENERATOR IS A STANDBY GENERATOR ONLY. PROVIDE GENERATOR AND ATS AS FOLLOWS:

GENERATOR: BASIS OF DESIGN MTU GS60. THIS LIST IS NOT INCLUSIVE AND REPRESENTS THE MINIMUM REQUIREMENTS. GENERATOR AND ATS SET SHALL BE PROVIDE IN WHOLE AND AS A TURN KEY SYSTEM.

- 60KW NATURAL GAS GENERATOR - 208V 3PHASE, 60HZ, 1800 RPM
- LEVEL 2 SELF-CONTAINED HEATED ENCLOSURE, WITH SOUND ATTENUATION, INTERIOR LIGHTING, ETC.
- 225A 100% RATED CIRCUIT BREAKER WITH SHUNT TRIP.
- BATTERY AND BATTERY CHARGERS, SPACE HEATER, CONVENIENCE RECEPTCLE, COOLANT HEATER, HOUSING LIGHTS, BATTERY PAD HEATER, BLOCK HEATER, ETC.
- GENERATOR CONTROLLER WITH REMOTE MONITORING AND START FUNCTIONS.
- GENERATOR PANEL WITH
 - HOUSING SPACE HEATER
 - BLOCK HEATER
 - GENERATOR STRIP HEATER
 - BATTERY CHARGER
 - CONVENIENCE RECEPTACLES
 - COOLANT HEATER
 - HOUSING LIGHTS
 - BATTER PAD HEATER

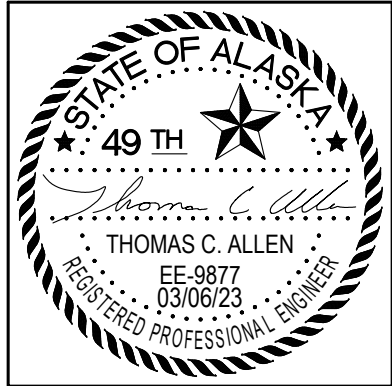
ATS: 225A, OPEN TRANSITION, 3 POLE IN A NEMA 1 ENLCOSURE. 120/208V, 3 PHASE. WIRE. 50KAIC MINIMUM. STANDARD CONTROL FEATURES.



ENLARGED PLAN NOTES

INDICATED BY: (#)

- PROVIDE PUSHBUTTON FOR EMERGENCY BOILER SHUTOFF. CONNECT TO BOILER SHUNT TRIP BREAKERS.
- DEDICATED CIRCUIT FOR MECHANICAL EQUIPMENT CONTROLS (DDC). COORDINATE LOCATION WITH MECHANICAL PRIOR TO ROUGH IN.



CERTIFICATE OF AUTHORIZATION NO:
T3 ALASKA, LLC. AECL # 1625



ASPEN HOUSE LIMITED PARTNERSHIP
ASPEN HOUSE SENIOR APARTMENTS
WASILLA, ALASKA

REVISION SCHEDULE		
#	DESCRIPTION	DATE

JOB NO. 2023.007.0
DATE 03/06/2023
DRAWN MJM
REVIEWED TCA

SHEET NAME
ELECTRICAL SINGLE LINE
DIAGRAM & ENLARGED
MECHANICAL PLAN

SHEET NO.
E5.01

MDP				VOLTAGE : 120/208V,3PH,4W		AMPERE RATING: 600 A					
				MOUNTING: SURFACE		MAIN CIRCUIT BREAKER RATING: MLO					
				SUPPLIED FROM: HOUSE SERVICE DISCONNECT		SHORT CIRCUIT CURRENT RATING (SCCR): 30,000 A					
CKT	AMP	POLE	LOAD DESCRIPTION	PHASE A VA	PHASE B VA	PHASE C VA	LOAD DESCRIPTION	POLE	AMP	CKT	
1	200		PANEL H1	7,628	19,545		PANEL GDP VIA ATS		225	2	
3						7,912		17,876			4
5		3						7,080	20,925	3	
7	100		PANEL H3	2,920			PV SYSTEM			150	8
9						2,100					10
11		3						1,080	3		12
13	100		PANEL HB	9,600			SPACE	1	-	14	
15						9,600		SPACE	1	-	16
17		3					9,000	SPACE	1	-	18
19	-	1		SPACE				SPACE	1	-	20
21	-	1		SPACE				SPACE	1	-	22
23	-	1		SPACE				SPACE	1	-	24
25	-	1		SPACE				SPACE	1	-	26
27	-	1		SPACE				SPACE	1	-	28
29	-	1		SPACE				SPACE	1	-	30
CONNECTED LOAD (VA)				39,693	37,487	38,085	115,265 VA				
CONNECTED LOAD (AMPERES)				331		317		320 A			
DEMAND LOAD (VA) *				39,693	37,487	38,085	115,265 VA				
DEMAND LOAD (AMPERES) *				331		317		320 A			

S - PROVIDE SHUNT TRIP TYPE CIRCUIT BREAKER, *- DEMAND LOAD CALCULATED WITH LARGEST MOTOR LOAD AT 125%

PANEL HB				VOLTAGE : 120/208V,3PH,4W		AMPERE RATING: 100 A				
				MOUNTING: SURFACE		MAIN CIRCUIT BREAKER RATING: MLO				
				SUPPLIED FROM: MDP		SHORT CIRCUIT CURRENT RATING (SCCR): 30,000 A				
CKT	AMP	POLE	LOAD DESCRIPTION	PHASE A VA	PHASE B VA	PHASE C VA	LOAD DESCRIPTION	POLE	AMP	CKT
1	20	1	REC - HEADBOLT HEATER SPOT 1 WEST	600	600		REC - HEADBOLT HEATER SPOT 28 NORTH	1	20	2
3	20	1	REC - HEADBOLT HEATER SPOT 2 WEST				REC - HEADBOLT HEATER SPOT 29 NORTH	1	20	
5	20	1	REC - HEADBOLT HEATER SPOT 3 WEST				REC - HEADBOLT HEATER SPOT 30 NORTH	1	20	6
7	20	1	REC - HEADBOLT HEATER SPOT 4 WEST	600	600		REC - HEADBOLT HEATER SPOT 31 NORTH	1	20	8
9	20	1	REC - HEADBOLT HEATER SPOT 5 WEST				REC - HEADBOLT HEATER SPOT 32 NORTH	1	20	10
11	20	1	REC - HEADBOLT HEATER SPOT 6 WEST				REC - HEADBOLT HEATER SPOT 33 NORTH	1	20	12
13	20	1	REC - HEADBOLT HEATER SPOT 7 WEST	600	600		REC - HEADBOLT HEATER SPOT 34 SOUTH	1	20	14
15	20	1	REC - HEADBOLT HEATER SPOT 8 WEST				REC - HEADBOLT HEATER SPOT 35 SOUTH	1	20	16
17	20	1	REC - HEADBOLT HEATER SPOT 9 WEST				REC - HEADBOLT HEATER SPOT 36 SOUTH	1	20	18
19	20	1	REC - HEADBOLT HEATER SPOT 10 WEST	600	600		REC - HEADBOLT HEATER SPOT 37 SOUTH	1	20	20
21	20	1	REC - HEADBOLT HEATER SPOT 11 WEST				REC - HEADBOLT HEATER SPOT 38 SOUTH	1	20	22
23	20	1	REC - HEADBOLT HEATER SPOT 12 WEST				REC - HEADBOLT HEATER SPOT 39 SOUTH	1	20	24
25	20	1	REC - HEADBOLT HEATER SPOT 13 WEST	600	600		REC - HEADBOLT HEATER SPOT 40 SOUTH	1	20	26
27	20	1	REC - HEADBOLT HEATER SPOT 14 WEST				REC - HEADBOLT HEATER SPOT 41 SOUTH	1	20	28
29	20	1	REC - HEADBOLT HEATER SPOT 15 WEST				REC - HEADBOLT HEATER SPOT 42 SOUTH	1	20	30
31	20	1	REC - HEADBOLT HEATER SPOT 16 WEST	600	600		REC - HEADBOLT HEATER SPOT 43 SOUTH	1	20	32
33	20	1	REC - HEADBOLT HEATER SPOT 17 WEST				REC - HEADBOLT HEATER SPOT 44 SOUTH	1	20	34
35	20	1	REC - HEADBOLT HEATER SPOT 18 WEST				REC - HEADBOLT HEATER SPOT 45 SOUTH	1	20	36
37	20	1	REC - HEADBOLT HEATER SPOT 19 WEST	600	600		REC - HEADBOLT HEATER SPOT 46 SOUTH	1	20	38
39	20	1	REC - HEADBOLT HEATER SPOT 20 WEST				REC - HEADBOLT HEATER SPOT 47 SOUTH	1	20	40
41	20	1	REC - HEADBOLT HEATER SPOT 21 NORTH				REC - HEADBOLT HEATER SPOT 48 SOUTH	1	20	42
43	20	1	REC - HEADBOLT HEATER SPOT 22 NORTH	600			REC - HEADBOLT HEATER SPOT 49 SOUTH	1	20	44
45	20	1	REC - HEADBOLT HEATER SPOT 23 NORTH				SPACE	1	-	46
47	20	1	REC - HEADBOLT HEATER SPOT 24 NORTH				SPACE	1	-	48
49	20	1	REC - HEADBOLT HEATER SPOT 25 NORTH	600			SPACE	1	-	50
51	20	1	REC - HEADBOLT HEATER SPOT 26 NORTH				SPACE	1	-	52
53	20	1	REC - HEADBOLT HEATER SPOT 27 NORTH				SPACE	1	-	54
CONNECTED LOAD (VA)				9,600	9,600	9,000	28,200 VA			
CONNECTED LOAD (AMPERES)				80	80	75	78 A			
DEMAND LOAD (VA) *				9,750	9,750	9,150	28,650 VA			
DEMAND LOAD (AMPERES) *				81	81	76	80 A			

PANEL GDP				VOLTAGE : 120/208V,3PH,4W			AMPERE RATING: 225 A						
				MOUNTING: SURFACE			MAIN CIRCUIT BREAKER RATING: MLO						
				SUPPLIED FROM: MDP			SHORT CIRCUIT CURRENT RATING (SCCR): 30,000 A						
CKT	AMP	POLE	LOAD DESCRIPTION	PHASE A VA		PHASE B VA		PHASE C VA		LOAD DESCRIPTION	POLE	AMP	CKT
1	20		CP-1A, CP-1B - MECH 103	1,320	7,800					ELEVATOR		100	2
3					1,320	7,800			4				
5						1,320	7,800					6	
7	20	1	B-1, B-2	84	500			1,320	7,800	ELEVATOR CAB LIGHTING & POWER	1	20	8
9	-	1	BOILER SHUNT TRIP BREAKER				500			ELEVATOR REMOTE MONITORING	1	20	10
11	25	1	BC-1 - MECH 103					1,656	200	DOOR CONTROLS	1	20	12
13	25	1	BC-2 - MECH 103	1,656	200					ACCESS CONTROLS	1	20	14
15	20	1	VF-1 - MECH 103			300	500			FIRE ALARM	1	20	16
17	20	1	LTG - 1ST FLR CORRIDOR, REFUSE, STORAGE 116					1,056	500	FIRE SMOKE DAMPERS	1	20	18
19	20	1	LTG - 1ST FLR MECH, ELEC, STORAGE 107, JAN, UTILITY	558					SPACE		1	-	20
21	20	1	LTG/PWR - STAIR 1 EAST, CUH VESTIBULE			980			SPACE		1	-	22
23	20	1	LTG/PWR - STAIR 2 WEST, CUH STOR., REFUSE					1,180	SPACE		1	-	24
25	20	1	LTG - SECOND FLOOR CORRIDOR, SOUTH	1,458					SPACE		1	-	26
27	20	1	LTG - SECOND FLOOR COMMON, NORTH			554			SPACE		1	-	28
29	20	1	LTG - THIRD FLOOR COMMON & CORRIDOR					1,376	SPACE		1	-	30
31	20	1	REC - COMM	720					SPACE		1	-	32
33	20	1	REC - TTB			360	900			THERMOSTAT POWER SUPPLIES	1	20	34
35	20	1	REC - ERV MAINTENANCE (ON ROOF)					180	740	EM LIGHTING INVERTER	2	20	36
37	30		ERV-1 (ON ROOF)	2,328	472					GENERATOR PANEL (FUTURE)		40	38
39					2,328							40	40
41				3				2,328				2	42
CONNECTED LOAD (VA)				17,092		15,542		18,336		50,970 VA			
CONNECTED LOAD (AMPERES)				142		130		153		142 A			
DEMAND LOAD (VA) *				19,545		17,876		20,925		58,346 VA			
DEMAND LOAD (AMPERES) *				163		149		174		162 A			

* - DEMAND LOAD CALCULATED WITH LIGHTING & LARGEST MOTOR LOAD AT 125%

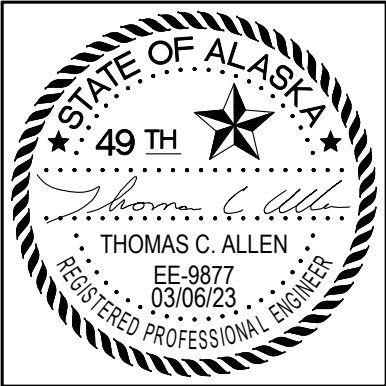
S - PROVIDE SHUNT TRIP TYPE BREAKER, L - PROVIDE RED LOCKABLE CIRCUIT BREAKER, GP - PROVIDE CLASS B EPD TYPE CIRCUIT BREAKER (30mA)

PANEL H1				VOLTAGE : 120/208V,3PH,4W		AMPERE RATING: 200 A						
				MOUNTING: SURFACE		MAIN CIRCUIT BREAKER RATING: MLO						
				SUPPLIED FROM: MDP		SHORT CIRCUIT CURRENT RATING (SCCR): 30,000 A						
GP GP	CKT	AMP	POLE	LOAD DESCRIPTION		PHASE A VA	PHASE B VA	PHASE C VA	LOAD DESCRIPTION	POLE	AMP	CKT
	1	20	1	SPARE		828			CP-4 - MECH ROOM		20	2
	3	20	1	LTG - EXTERIOR/SITE			1,511	828				4
	5	20	1	TRASH CHUTE AIR COMPRESSOR				1,500		828	3	
	7	20	1	CARPORT HEAT TRACE	1,500	828					20	8
	9	20	1	OVERFLOW SCUPPER HEAT TRACE			45	828				10
	11	20	1	LTG - ELEVATOR PIT				68	828	3		12
	13	20	1	REC - ELEVATOR PIT	180	936					15	14
	15	25	1	SP-1 - ELEVATOR PIT			1,656	936				16
	17	20	1	REC - ELEVATOR CONTROL AREA (3RD FLR)				180	936	3		18
	19	20	1	REC - EXT. VEST, LOBBY, UTILITY, TOILET, ELEC RM UH	1,100	456				1	20	20
	21	20	1	REC - JAN., CORRIDOR, TENANT STORAGE			900	1,158		1	20	22
	23	20	1	REC - EXT. WEST, REFUSE				940	1,800	1	20	24
	25	20	1	SPARE		1,800				1	20	26
	27	20	1	SPARE				50		1	20	28
	29	20	1	SPARE						1	-	30
	31	20	1	SPARE						1	-	32
33	20	1	SPARE						1	-	34	
35	20	1	SPARE						1	-	36	
37	-	1	SPACE						1	-	38	
39	-	1	SPACE						1	-	40	
41	-	1	SPACE						1	-	42	
CONNECTED LOAD (VA)				7,628	7,912	7,080	22,620 VA					
CONNECTED LOAD (AMPERES)				64	66	59	63 A					
DEMAND LOAD (VA) *				8,042	8,326	7,287	23,655 VA					
DEMAND LOAD (AMPERES) *				67	69	61	66 A					

* - DEMAND LOAD CALCULATED WITH LIGHTING & LARGEST MOTOR LOAD AT 125%

S - PROVIDE SHUNT TRIP TYPE BREAKER, L - PROVIDE RED LOCKABLE CIRCUIT BREAKER, GP - PROVIDE CLASS B EPD TYPE CIRCUIT BREAKER (30mA)

PANEL H3				VOLTAGE :			120/208V,3PH,4W	AMPERE RATING:			100 A				
				MOUNTING:			SURFACE			MAIN CIRCUIT BREAKER RATING:			MLO		
				SUPPLIED FROM:			MDP			SHORT CIRCUIT CURRENT RATING (SCCR):			10,000 A		
CKT	AMP	POLE	LOAD DESCRIPTION	PHASE A VA	PHASE B VA	PHASE C VA	LOAD DESCRIPTION			POLE	AMP	CKT			
1	20	1	REC - SECOND FLOOR 215, 216, CORRIDOR WEST	1,100			SPACE			1	-	2			
3	20	1	REC - SECOND FLOOR 201, 206, 221, CORRIDOR EAST		900		SPACE			1	-	4			
5	20	1	REC - SECOND FLOOR COMMON 200			1,080	SPACE			1	-	6			
7	20	1	REC - THIRD FLOOR 315, 316, CORRIDOR WEST	1,820			SPACE			1	-	8			
9	20	1	REC - COMMON AREA 200 MICROWAVE		1,200		SPACE			1	-	10			
11	20	1	SPARE				SPACE			1	-	12			
13	20	1	SPARE				SPACE			1	-	14			
15	20	1	SPARE				SPACE			1	-	16			
17	20	1	SPARE				SPACE			1	-	18			
19	20	1	SPARE				SPACE			1	-	20			
21	20	1	SPARE				SPACE			1	-	22			
23	-	1	SPACE				SPACE			1	-	24			
25	-	1	SPACE				SPACE			1	-	26			
27	-	1	SPACE				SPACE			1	-	28			
29	-	1	SPACE				SPACE			1	-	30			
31	-	1	SPACE				SPACE			1	-	32			
33	-	1	SPACE				SPACE			1	-	34			
35	-	1	SPACE				SPACE			1	-	36			
37	-	1	SPACE				SPACE			1	-	38			
39	-	1	SPACE				SPACE			1	-	40			
41	-	1	SPACE				SPACE			1	-	42			
CONNECTED LOAD (VA)				2,920	2,100	1,080				6,100 VA					
CONNECTED LOAD (AMPERES)				24	18	9				17 A					
DEMAND LOAD (VA) *				2,920	2,100	1,080				6,100 VA					
DEMAND LOAD (AMPERES) *				24	18	9				17 A					



CERTIFICATE OF AUTHORIZATION NO:
T3 ALASKA, LLC AECL #: 1625

spark design,llc

T3 ALASKA LLC

Mechanical & Electrical Engineering
301 Calista Court, Suite 100
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Ph: 907-665-7900 Fax: 907-665-7975

ASPEN HOUSE LIMITED PARTNERSHIP

ASPEN HOUSE SENIOR APARTMENTS

WASILLA, ALASKA

REVISION SCHEDULE		
#	DESCRIPTION	DATE

JOB NO.	2023.007.0
DATE	03/06/2023
DRAWN	MJM
REVIEWED	TCA

SHEET NAME
SCHEDULES

SHEET NO.
E5.03

TYPICAL UNIT A PANEL				VOLTAGE : 120/208V,1PH,3W		AMPRERE RATING: 125 A	
				MOUNTING: SURFACE		MAIN CIRCUIT BREAKER RATING: MLO	
				SUPLIED FROM: SERVICE DISC		SHORT CIRCUIT CURRENT RATING (SCCR): 10,000 A	
CKT	AMP	POLE	LOAD DESCRIPTION	PHASE A VA	PHASE B VA	LOAD DESCRIPTION	POLE AMP CKT
1	20	1	LIGHTING	468	4,450	RANGE	50 2
3	20	1	REC - SMALL APPLIANCE & REF		1,500 4,450		2 4
5	20	1	REC - SMALL APPLIANCE	1,500	2,200		30 6
7	20	1	REC - DISHWASHER		804 2,200	REC - DRYER	2 8
9	20	1	RANGE HOOD	168	1,500	REC - WASHER	1 20 10
11	20	1	REC - BATHROOM		180	SPARE	1 20 12
13	20	1	REC - LIVING ROOM, (MOTORIZED SHADE**)	900		SPARE	1 20 14
15	20	1	REC - BEDROOM & CLOSET CONV.		1,260	SPACE	1 - 16
17	20	1	SMOKE & CO DETECTORS	50		SPACE	1 - 18
19	-	1	SPACE			SPACE	1 - 20
21	-	1	SPACE			SPACE	1 - 22
23	-	1	SPACE			SPACE	1 - 24
25	-	1	SPACE			SPACE	1 - 26
27	-	1	SPACE			SPACE	1 - 28
29	-	1	SPACE			SPACE	1 - 30
CONNECTED LOAD (VA)				11,224	10,394	21,618 VA	
CONNECTED LOAD (AMPERES)				94	87	104 A	
DEMAND LOAD (VA) *				10,692	9,901	20,593 VA	
DEMAND LOAD (AMPERES) *				89	83	99 A	

A - PROVIDE ARC-FAULT TYPE CIRCUIT BREAKER, AG - PROVIDE ARC FAULT/GFCI COMBINATION TYPE CIRCUIT BREAKER, L - PROVIDE LOCKABLE CIRCUIT BREAKER
* - SEE SINGLE UNIT WORST CASE DEMAND LOAD CALCULATION, E5.03, ** - MOTORIZED SHADE ONLY TO BE INSTALLED ON 3RD FLOOR TYPE 1A UNITS 309, 310, 317, & 320. OMIT FROM ALL OTHER PANEL SCHEDULES.

TYPICAL UNIT B PANEL				VOLTAGE : 120/208V,1PH,3W		AMPRERE RATING: 125 A	
				MOUNTING: SURFACE		MAIN CIRCUIT BREAKER RATING: MLO	
				SUPLIED FROM: SERVICE DISC		SHORT CIRCUIT CURRENT RATING (SCCR): 10,000 A	
CKT	AMP	POLE	LOAD DESCRIPTION	PHASE A VA	PHASE B VA	LOAD DESCRIPTION	POLE AMP CKT
1	20	1	LIGHTING	468	4,450	RANGE	50 2
3	20	1	REC - SMALL APPLIANCE & REF		1,500 4,450		2 4
5	20	1	REC - SMALL APPLIANCE	1,500	2,200		30 6
7	20	1	REC - DISHWASHER		804 2,200	REC - DRYER	2 8
9	20	1	RANGE HOOD	168	1,500	REC - WASHER	1 20 10
11	20	1	REC - BATHROOM		180	SPARE	1 20 12
13	20	1	REC - LIVING ROOM, (MOTORIZED SHADE**)	1,080		SPARE	1 20 14
15	20	1	REC - BEDROOM & CLOSET CONV.		1,260	SPACE	1 - 16
17	20	1	SMOKE & CO DETECTORS	50		SPACE	1 - 18
19	-	1	SPACE			SPACE	1 - 20
21	-	1	SPACE			SPACE	1 - 22
23	-	1	SPACE			SPACE	1 - 24
25	-	1	SPACE			SPACE	1 - 26
27	-	1	SPACE			SPACE	1 - 28
29	-	1	SPACE			SPACE	1 - 30
CONNECTED LOAD (VA)				11,416	10,394	21,810 VA	
CONNECTED LOAD (AMPERES)				95	87	105 A	
DEMAND LOAD (VA) *				10,779	9,814	20,593 VA	
DEMAND LOAD (AMPERES) *				90	82	99 A	

A - PROVIDE ARC-FAULT TYPE CIRCUIT BREAKER, AG - PROVIDE ARC FAULT/GFCI COMBINATION TYPE CIRCUIT BREAKER, G - PROVIDE GFCI TYPE CIRCUIT BREAKER, L - PROVIDE LOCKABLE CIRCUIT BREAKER
* - SEE SINGLE UNIT WORST CASE DEMAND LOAD CALCULATION, E5.03, ** - MOTORIZED SHADE ONLY TO BE INSTALLED ON 3RD FLOOR TYPE 1B UNITS 308, 311, 318, & 319. OMIT FROM ALL OTHER PANEL SCHEDULES.

ELECTRICAL TENANT LOAD CALCULATION	
GENERAL LIGHTING DEMAND LOAD (NEC 220.42)	
GENERAL LIGHTING (TOTAL TENANT AREA)	
28,197 FT*2 @ 3 VA/FT*2	= 84,591 VA
SMALL APPLIANCE LOAD	
80 CKTS @ 1,500 VA/CKT	= 120,000 VA
LAUNDRY LOAD	
40 CKTS @ 1,500 VA/CKT	= 60,000 VA
SUB-TOTAL	
284,591 VA	
FIRST 3000 VA OR LESS AT 100% = 3,000 VA	
FROM 3001 TO 120,000 VA AT 35% = 40,950 VA	
REMAINDER OVER 120,000 VA AT 25% = 36,148 VA	
TOTAL GENERAL LIGHTING DEMAND LOAD =	
80,098 VA	
ELECTRIC CLOTHES DRYER DEMAND LOAD (NEC 220.54)	
40 @ 5,000 VA EACH = 200,000 VA	
DEMAND FACTOR PER NEC T220.54 = 26.5%	
TOTAL DRYER DEMAND LOAD =	
53,000 VA	
ELECTRIC RANGE DEMAND LOAD (NEC 220.55)	
40 @ 8,900 VA EACH = 356,000 VA	
DEMAND FACTOR PER NEC T220.55 = 15KW + 1KW EACH	
TOTAL RANGE DEMAND LOAD =	
55,000 VA	
APPLIANCE DEMAND LOAD (NEC 220.54)	
DISHWASHERS 40 @ 804 VA EACH	= 32,160 VA
MICROWAVES 40 @ 1,200 VA EACH	= 48,000 VA
DISPOSALS 0 @ 1,200 VA EACH	= 0 VA
GAS DRYERS 0 @ 500 VA EACH	= 0 VA
RANGE HOODS 40 @ 216 VA EACH	= 8,640 VA
DEMAND FACTOR PER NEC 220.53 = 75%	
TOTAL FIXED APPLIANCE DEMAND LOAD =	
66,600 VA	
TOTAL CALCULATED ELECTRICAL DEMAND LOAD	
254,698 VA	
707 AMPS @120/208v,1PH	

DWELLING FACILITY	
SINGLE UNIT WORST CASE DEMAND LOAD CALCULATION	
GENERAL LIGHTING DEMAND LOAD (NEC 220.52)	
GENERAL LIGHTING (WORST CASE)	
903 FT*2 @ 3 VA/FT*2	= 2,709 VA
SMALL APPLIANCE LOAD	
2 CKTS @ 1,500 VA/CKT	= 3,000 VA
LAUNDRY LOAD	
1 CKTS @ 1,500 VA/CKT	= 1,500 VA
SUB-TOTAL	
7,209 VA	
FIRST 3000 VA OR LESS AT 100% = 3,000 VA	
FROM 3001 TO 120,000 VA AT 35% = 1,473 VA	
REMAINDER OVER 120,000 VA AT 25% = 0 VA	
TOTAL GENERAL LIGHTING DEMAND LOAD =	
4,473 VA	
ELECTRIC CLOTHES DRYER DEMAND LOAD (NEC 220.54)	
1 @ 5000 VA EACH	
DEMAND FACTOR PER NEC T220.54 = 100%	
TOTAL DRYER DEMAND LOAD =	
5,000 VA	
ELECTRIC RANGE DEMAND LOAD (NEC 220.55)	
1 @ 8900 VA EACH = 8,900 VA	
DEMAND FACTOR PER NEC T220.55 = 100%	
TOTAL RANGE DEMAND LOAD =	
8,900 VA	
APPLIANCE DEMAND LOAD (NEC 220.54)	
DISHWASHERS 1 @ 804 VA EACH	= 804 VA
MICROWAVES 1 @ 1,200 VA EACH	= 1,200 VA
DISPOSALS 0 @ 1,200 VA EACH	= 0 VA
GAS DRYERS 0 @ 500 VA EACH	= 0 VA
RANGE HOODS 1 @ 216 VA EACH	= 216 VA
DEMAND FACTOR PER NEC 220.53 = 100%	
TOTAL FIXED APPLIANCE DEMAND LOAD =	
2,220 VA	
TOTAL CALCULATED ELECTRICAL DEMAND LOAD	
20,593 VA	
99 AMPS @120/208v,1PH	

FAULT CURRENT CALCULATION SUMMARY				ASSUMED UTILITY CONFIGURATION	
				UTILITY CONTRIBUTION: INFINITE	
				TRANSFORMER RATING: 300KVA	
				TRANSFORMER IMPEDEENCE: 2.52%z	
EQUIPMENT	SUPPLY FEEDER RATING AND LENGTH	FAULT CURRENT L-L	FAULT CURRENT L-N	BUS RATING	
UTILITY TRANS SECONDARY	N/A	33,045 A	N/A	N/A	
UTILITY TERMINATION CABINET	4 EA. #500 AL PER PHASE 70'	26,973 A	22,218 A	30,000 A	
HOUSE CT ENCLOSURE	2 EA. #3/0 CU PER PHASE 5'	25,843 A	20,351 A	30,000 A	
HOUSE MAIN DISCONNECT	2 EA. #3/0 CU PER PHASE 5'	24,804 A	18,773 A	30,000 A	
MDP	2 EA. #3/0 CU PER PHASE 25'	20,653 A	13,529 A	30,000 A	
(FUTURE) ATS	1 EA. #4/0 CU PER PHASE 5'	19,539 A	12,172 A	30,000 A	
PANEL GDP	1 EA. #4/0 CU PER PHASE 5'	18,539 A	11,062 A	30,000 A	
ELEVATOR	1 EA. #2 CU PER PHASE 60'	7,220 A	3,105 A	10,000 A	
ERV-1	1 EA. #10 CU PER PHASE 90'	1,224 A	708 A	5,000 A	
PANEL H1	1 EA. #3/0 CU PER PHASE 10'	18,214 A	10,773 A	30,000 A	
PANEL H3	1 EA. #2 CU PER PHASE 170'	3,471 A	1,388 A	10,000 A	
PANEL HB	1 EA. #2 CU PER PHASE 5'	18,028 A	10,724 A	30,000 A	
PANEL PV	1 EA. #1/0 CU PER PHASE 170'	4,830 A	1,975 A	10,000 A	
TENANT MAIN DISCONNECT	3 EA. #250 CU PER PHASE 5'	26,374 A	21,321 A	30,000 A	
TENANT MULTI-METER GEAR	3 EA. #250 CU PER PHASE 5'	25,801 A	20,483 A	30,000 A	
TENANT PANEL (WORST CASE)	1 EA. #1 CU PER PHASE 60'	9,323 A	4,405 A	10,000 A	

CONTRACTOR TO CONFIRM UTILITY ASSUMPTIONS UTILIZED FOR THIS CALCULATION AS WELL AS INSTALLED CONDUCTOR CONFIGURATIONS AND LENGTHS DURING CONSTRUCTION. REPORT ANY DECREASE IN TRANSFORMER IMPEDEENCE AND INSTALLED CABLE LENGTHS AS WELL AS ANY INCREASE IN TRANSFORMER KVA RATING AND CONDUCTOR RATINGS TO ENGINEER FOR RE-EVALUATION PRIOR TO DISTRIBUTION EQUIPMENT PROCUREMENT.
* - CONFIRM ELEVATOR SHORT CIRCUIT CURRENT RATING WITH FINAL EQUIPMENT SUPPLIED PRIOR TO ROUGH IN.

TYPICAL UNIT C PANEL				VOLTAGE : 120/208V,1PH,3W		AMPRERE RATING: 125 A	
				MOUNTING: SURFACE		MAIN CIRCUIT BREAKER RATING: MLO	
				SUPLIED FROM: SERVICE DISC		SHORT CIRCUIT CURRENT RATING (SCCR): 10,000 A	
CKT	AMP	POLE	LOAD DESCRIPTION	PHASE A VA	PHASE B VA	LOAD DESCRIPTION	POLE AMP CKT
1	20	1	LIGHTING	412	4,450	RANGE	50 2
3	20	1	REC - SMALL APPLIANCE & REF		1,500 4,450		2 4
5	20	1	REC - SMALL APPLIANCE	1,500	2,200		30 6
7	20	1	REC - DISHWASHER		804 2,200	REC - DRYER	2 8
9	20	1	RANGE HOOD	168	1,500	REC - WASHER	1 20 10
11	20	1	REC - BATHROOM		180	SPARE	1 20 12
13	20	1	REC - LIVING ROOM	1,260		SPARE	1 20 14
15	20	1	REC - BEDROOM 1		900	SPACE	1 - 16
17	20	1	REC - BEDROOM 2	720		SPACE	1 - 18
19	20	1	SMOKE & CO DETECTORS		50	SPACE	1 - 20
21	-	1	SPACE			SPACE	1 - 22
23	-	1	SPACE			SPACE	1 - 24
25	-	1	SPACE			SPACE	1 - 26
27	-	1	SPACE			SPACE	1 - 28
29	-	1	SPACE			SPACE	1 - 30
CONNECTED LOAD (VA)				12,210	10,084	22,294 VA	
CONNECTED LOAD (AMPERES)				102	84	107 A	
DEMAND LOAD (VA) *				11,278	9,315	20,593 VA	
DEMAND LOAD (AMPERES) *				94	78	99 A	

A - PROVIDE ARC-FAULT TYPE CIRCUIT BREAKER, AG - PROVIDE ARC FAULT/GFCI COMBINATION TYPE CIRCUIT BREAKER, G - PROVIDE GFCI TYPE CIRCUIT BREAKER, L - PROVIDE LOCKABLE CIRCUIT BREAKER
* - SEE SINGLE UNIT WORST CASE DEMAND LOAD CALCULATION, E5.03

TYPICAL UNIT D PANEL				VOLTAGE : 120/208V,1PH,3W		AMPRERE RATING: 125 A	
				MOUNTING: SURFACE		MAIN CIRCUIT BREAKER RATING: MLO	
				SUPLIED FROM: SERVICE DISC		SHORT CIRCUIT CURRENT RATING (SCCR): 10,000 A	
CKT	AMP	POLE	LOAD DESCRIPTION	PHASE A VA	PHASE B VA	LOAD DESCRIPTION	POLE AMP CKT
1	20	1	LIGHTING	393	4,450	RANGE	50 2
3	20	1	REC - SMALL APPLIANCE & REF		1,500 4,450		2 4
5	20	1	REC - SMALL APPLIANCE	1,500	2,200		30 6
7	20	1	REC - DISHWASHER		804 2,200	REC - DRYER	2 8
9	20	1	RANGE HOOD	168	1,500	REC - WASHER	1 20 10
11	20	1	REC - BATHROOM		180	SPARE	1 20 12
13	20	1	REC - LIVING ROOM	1,260		SPARE	1 20 14
15	20	1	REC - BEDROOM 1		900	SPACE	1 - 16
17	20	1	REC - BEDROOM 2	1,080		SPACE	1 - 18
19	20	1	SMOKE & CO DETECTORS			SPACE	1 - 20
21	-	1	SPACE			SPACE	1 - 22
23	-	1	SPACE			SPACE	1 - 24
25	-	1	SPACE			SPACE	1 - 26
27	-	1	SPACE			SPACE	1 - 28