

GENERAL PLUMBING NOTES:

- A. SUPPLY AND INSTALL ALL FIRE STOPPING MATERIAL AND ENSURE THAT ALL FIRE PENETRATIONS ARE PROTECTED AS REQUIRED BY THE NATIONAL BUILDING CODE - ALBERTA EDITION AND THE LOCAL AUTHORITIES.
- B. WEEPING TILE LAYOUT IS FOR REFERENCE ONLY. WEEPING TILE TO BE SUPPLIED AND INSTALLED BY GENERAL CONTRACTOR. EXACT ROUTING, SIZE AND INSTALLATION OF WEEPING TILE MUST BE CONFIRMED BY GEOTECHNICAL ENGINEER PRIOR TO INSTALLATION.
- C. PROVIDE A LOCKABLE TAMPER-PROOF ENCLOSURE AROUND ALL PUBLICLY EXPOSED CONTROL PANELS AND ASSOCIATED POWER SUPPLY.
- D. ALL STORM AND SANITARY SUMP COVERS ARE TO BE SEALED AIR-TIGHT TO PREVENT RADON GAS FROM ENTERING THE BUILDING. COVERS TO BE RATED FOR VEHICULAR TRAFFIC WHERE REQUIRED.
- E. DRAWINGS ARE DIAGRAMMATIC ONLY. CONTRACTOR TO INSTALL ALL DRAINS AND VENTS NOT SHOWN TO BE INSTALLED IN ACCORDANCE WITH THE NATIONAL PLUMBING CODE OF CANADA. CONTRACTOR TO PROVIDE AN ACCURATE AS-BUILT REFLECTING SUCH.
- F. COORDINATE ALL SANITARY PIPING, FIXTURE LOCATIONS AND VENT LINES WITH STRUCTURAL FRAMING BEFORE INSTALLATION.
- G. PROVIDE SLEEVES AS REQUIRED THROUGH STRUCTURAL ELEMENTS FOR ALL MECHANICAL SYSTEMS.
- H. THIS CONTRACTOR SHALL ENSURE HOUSEKEEPING PADS AT 100mm THICK ARE INSTALLED UNDER ALL MECHANICAL EQUIPMENT IN MECHANICAL ROOM. COORDINATE WITH GENERAL CONTRACTOR.
- I. ALL STORM PIPING WITHIN THE PARKADE MUST BE PRESSURE RATED.
- J. ENSURE ALL MECHANICAL LOCATED IN THE PARKADE IS INSTALLED WITH A HEAD HEIGHT CLEARANCE FROM THE FINISHED FLOOR EQUAL TO OR GREATER THAN THE CLEARANCE OF THE PARKADE ENTRANCE DOOR.
- K. PROVIDE ACCESS PANELS AT DRYWALL CEILINGS FOR ALL PLUMBING INSTALLATIONS AS REQUIRED. COORDINATE WITH GENERAL CONTRACTOR.
- L. PROVIDE SHUT-OFF VALVES CW ACCESS PANELS IN ALL SUITES FOR DOMESTIC HOT & COLD WATER LINES. ENSURE STICKER IS PLACED ON ACCESS PANEL TO INDICATE LOCATION OF VALVES.
- M. PROVIDE A 1/2"Ø (13mmØ) COLD WATER LINE TO FRIDGE LOCATION IN EACH DWELLING UNIT CW SHUT-OFF VALVE.
- N. ALLOW DEDICATED SANITARY RISER FOR LAUNDRY CLOTHES WASHERS. SANITARY RISER CANNOT SHARE DRAINAGE WITH ANY OTHER PLUMBING FIXTURES.
- O. WHERE A VERTICAL GAS LINE EXISTS IN A PIPE CHASE THE CHASE MUST HAVE AN OPENING WITH MINIMUM AREA EQUIVALENT TO A ROUND OPENING OF 1 INCH (25mm) IN DIAMETER AT THE TOP AND BOTTOM OF CHASE TO COMPLY WITH ARTICLE 6.7.5, OF CSA-B149.1-15. COORDINATE INSTALLATION OF REQUIRED OPENINGS WITH GENERAL CONTRACTOR.
- P. SANITARY RISERS, DOMESTIC HOT, COLD & RECIRCULATION RISERS, HEATING HOT WATER SUPPLY & RETURN RISERS, GAS LINE RISERS & STORM PIPE RAIN WATER LEADERS TO BE EQUIPPED WITH RISER CLAMPS AND EXPANSION FITTINGS TO ALLOW FOR BUILDING SHRINKAGE. EXPANSION FITTINGS TO BE INSTALLED IN VERTICAL PIPING PER MANUFACTURERS SPECIFICATIONS. ALLOW FOR OVERSIZED HOLES IN STUD WALLS WHERE HORIZONTAL TAKE OFF SERVICE PIPING TEES OFF OF MAIN VERTICAL RISERS TO MITIGATE SHEAR WITH BUILDING SETTLEMENT AND SHRINKAGE.

**ISSUED FOR
COORDINATION**

NO.	ISSUE/REVISION	DATE
1	30% Review	2026-04-30

PROJECT MANAGER	DRAWN
K.V	T.K/G.T
PROJECT LEAD	CHECKED
J.P/G.U	J.P/G.U/K.V

**BLACK BEAR
CROSSING - BLACK
BIRCH HEIGHTS**

BLACK BEAR CROSSING SW, TSUU
T'INA NATION 145 AB

PROJECT # 25141.1
CITY FILE #



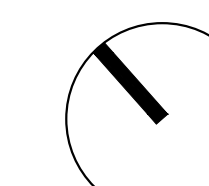
**BUILDING A - PARKADE PLAN
SANITARY LAYOUT**
SCALE: 1/16" = 1'-0"

PIPING ABBREVIATION SCHEDULE	
SANITARY LINE UNDERSLAB	SAN. U/S
SANITARY LINE OVERHEAD	SAN. O/H

MECHANICAL PLUMBING RISER LEGEND	
TAG	DESCRIPTION
(SR)	SANITARY RISER LOCATION

PIPING LEGEND	
NEW SANITARY LINE (UNDERSLAB / BURIED)	
NEW SANITARY LINE (OVERHEAD / EXPOSED)	

SCALE



M20-01-01

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- C. PROVIDE A LOCKABLE TAMPER-PROOF ENCLOSURE AROUND ALL PUBLICLY EXPOSED CONTROL PANELS AND ASSOCIATED POWER SUPPLY.
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- F. COORDINATE ALL SANITARY PIPING, FIXTURE LOCATIONS AND VENT LINES WITH STRUCTURAL FRAMING BEFORE INSTALLATION.
- G. PROVIDE SLEEVES AS REQUIRED THROUGH STRUCTURAL ELEMENTS FOR ALL MECHANICAL SYSTEMS.
- H. THIS CONTRACTOR SHALL ENSURE HOUSEKEEPING PADS AT 100mm THICK ARE INSTALLED UNDER ALL MECHANICAL EQUIPMENT IN MECHANICAL ROOM. COORDINATE WITH GENERAL CONTRACTOR.
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- M. PROVIDE A 1/2"Ø (13mmØ) COLD WATER LINE TO FRIDGE LOCATION IN EACH DWELLING UNIT CW SHUT-OFF VALVE.
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**BLACK BEAR
CROSSING - BLACK
BIRCH HEIGHTS**

BLACK BEAR CROSSING SW, TSUU
T'INA NATION 145 AB

PROJECT # 25141.1
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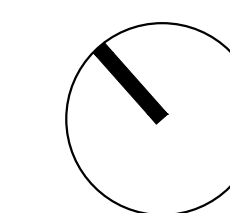
**BUILDING A - PARKADE PLAN
DOMESTIC WATER & GAS LAYOUT**
SCALE: 1/16" = 1'-0"

PIPING ABBREVIATION SCHEDULE	
COLD WATER LINE	C
HOT WATER LINE	H
HOT WATER RECIRCULATION LINE	REC.
GAS LINE	G

MECHANICAL PLUMBING RISER LEGEND	
TAG	DESCRIPTION
WR	WATER RISER (COLD, HOT AND RECIRCULATION) LOCATION
GR	GAS RANGE & / OR GAS BBQ RISER. PROVIDE SHUT OFF VALVE AT EACH OUTLET LOCATION

PIPING LEGEND	
NEW DOMESTIC COLD WATER LINE	---
NEW DOMESTIC HOT WATER LINE	---
NEW DOMESTIC HOT WATER RECIRCULATION LINE	---
NEW NATURAL GAS LINE	---

SCALE



M20-01-02

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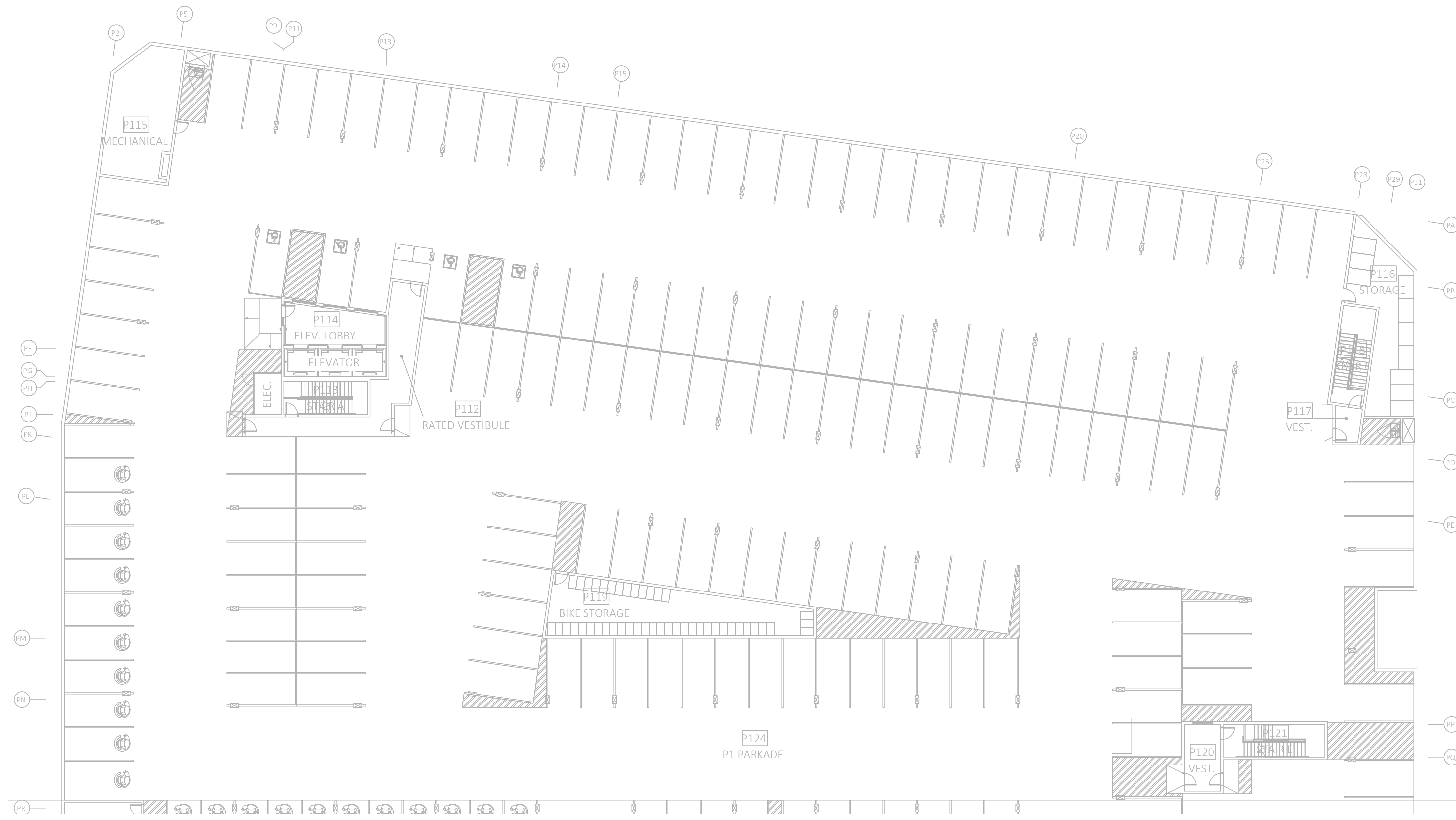
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PROJECT LEAD	CHECKED
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**BLACK BEAR
CROSSING - BLACK
BIRCH HEIGHTS**

BLACK BEAR CROSSING SW, TSUU
T'INA NATION 145 AB

PROJECT # 25141.1
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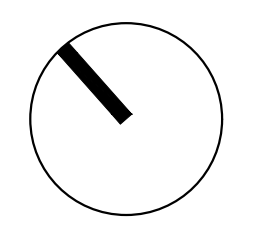


**BUILDING A - PARKADE PLAN
STORM LAYOUT**
SCALE: 1/16" = 1'-0"

PIPING ABBREVIATION SCHEDULE	
STORM LINE UNDERSLAB	ST. U/S
STORM LINE OVERHEAD	ST. O/H

PIPING LEGEND	
WEEPING TILE DRAINAGE LINE	
NEW STORM LINE (UNDERSLAB / BURIED)	
NEW STORM LINE (OVERHEAD / EXPOSED)	

SCALE



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BLACK BEAR
CROSSING - BLACK
BIRCH HEIGHTS

BLACK BEAR CROSSING SW, TSUU
T'INA NATION 145 AB

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GENERAL HVAC NOTES:

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- B. THIS CONTRACTOR SHALL ENSURE HOUSEKEEPING PADS AT 100mm THICK ARE INSTALLED UNDER ALL MECHANICAL EQUIPMENT IN MECHANICAL ROOM. COORDINATE WITH GENERAL CONTRACTOR.
- C. ENSURE ALL MECHANICAL LOCATED IN THE PARKADE IS INSTALLED WITH A HEAD HEIGHT CLEARANCE FROM THE FINISHED FLOOR EQUAL TO OR GREATER THAN THE CLEARANCE OF THE PARKADE ENTRANCE DOOR.
- D. THE MECHANICAL SUB-CONTRACTOR SHALL REFER TO THE CONDENSING UNIT INSTALLATION AND OPERATION MANUALS FOR MAXIMUM ALLOWED REFRIGERANT LINE LENGTHS TO COOLING COILS IN MECHANICAL UNITS.
- E. PROVIDE MINIMUM 1/2" SUPPLY AND RETURN HOT WATER HEATING LINES TO ALL FORCE FLOW HEATERS, UNITS HEATERS AND RADIATION CABINETS UNLESS NOTED OTHERWISE.
- F. ALL WASHROOM RETURN GRILLES AND ASSOCIATED DUCTS ARE TO BE INSTALLED WITHIN DROPPED CEILINGS. COORDINATE EXACT LOCATION OF DROPPED CEILINGS ON SITE.
- G. ALLOW FOR WALL CAPS AT ALL DUCTWORK ON EXTERIOR WALLS AS REQUIRED.
- H. AIR BALANCE DAMPERS TO BE PROVIDED FOR ALL BRANCH DUCTWORK FEEDING INDIVIDUAL DIFFUSERS.
- I. ENSURE ALL DUCTWORK EXTENDING TO EXTERIOR OF BUILDING IS WRAPPED WITH INSULATION. (REFER TO SPECIFICATIONS)
- J. ENSURE THERMOWELLS ARE UTILIZED FOR ALL TEMPERATURE GAUGES IN HEATING SYSTEM
- K. ENSURE SHUT OFF VALVES ARE INSTALLED BETWEEN ALL GAUGES AND TEE CONNECTION TO ALLOW EASY REPLACEMENT/REPAIR OF GAUGES.
- L. DRYER EXHAUST FANS MUST BE INTERLOCKED WITH DRYER BY MEANS OF AIR PROVING SWITCH OR CONTROL RELAY (TO BE PROVIDED BY MECHANICAL CONTRACTOR).
- M. ALL ELECTRIC HEATING EQUIPMENT IS SHOWN AS A REFERENCE. ALL ELECTRIC HEATING EQUIPMENT TO BE SUPPLIED AND INSTALLED BY ELECTRICAL SUB-CONTRACTOR.
- N. ALL LINE VOLTAGE THERMOSTATS CONTROLLING ELECTRIC HEATING EQUIPMENT IS SHOWN AS A REFERENCE. ALL LINE VOLTAGE THERMOSTATS TO BE SUPPLIED AND INSTALLED BY ELECTRICAL SUB-CONTRACTOR.
- O. INSULATE ALL FRESH AIR INTAKE DUCTS FROM OUTSIDE EXTERIOR WALL TO MECHANICAL UNITS. REFER TO SPECIFICATIONS.
- P. VERTICAL HEATING SUPPLY AND RETURN PIPING MUST BE LOCATED OUTSIDE OF DWELLING UNIT PARTY WALLS TO AVOID COMPROMISING THE INTEGRITY OF THE FIRE SEPARATIONS. COORDINATE WITH GENERAL CONTRACTOR.
- Q. WHERE COMBINATION FIRE & SMOKE DAMPERS ARE INSTALLED AND COULD OBSTRUCT ALL AIRFLOW FOR A PARTICULAR HVAC UNIT, THE HVAC UNIT NEEDS TO BE SHUT DOWN AUTOMATICALLY WHEN THE FIRE & SMOKE DAMPER CLOSES. COORDINATE WITH ELECTRICAL SUB-CONTRACTOR.
- R. WHERE AN EXHAUST OUTLET IS LOCATED WITHIN A SOFFIT, THE SOFFIT SHALL EITHER BE UN-VENTED, OR IF VENTED, THE FULL DEPTH OF THE SOFFIT SHALL BE BLOCKED FOR A DISTANCE OF 1.8m ON EACH SIDE OF THE EXHAUST OUTLET PER NBC 2023-45 - ARTICLE 9.32.3.13. COORDINATE WITH GENERAL CONTRACTOR.
- S. WHERE AN EXHAUST OUTLET IS LOCATED IN A SIDEWALL LESS THAN 1.8m FROM A SOFFIT, A SECTION OF THE SOFFIT ABOVE THE EXHAUST OUTLET SHALL BE UN-VENTED, OR IF VENTED, THE FULL DEPTH OF THE SOFFIT SHALL BE BLOCKED IN ACCORDANCE WITH THE WIDTHS STIPULATED IN NBC 2023-45, TABLE 9.32.3.13-A, CENTERED OVER THE LOCATION OF THE OUTLET. COORDINATE WITH GENERAL CONTRACTOR.
- T. VERTICAL HVAC DUCTING TO BE EQUIPPED WITH RISER CLAMPS AND EXPANSION FITTINGS TO ALLOW FOR BUILDING SHRINKAGE. EXPANSION FITTINGS TO BE INSTALLED PER MANUFACTURERS SPECIFICATIONS.

HVAC DRAWING KEYNOTES:

1. ??x?? INSULATED COMBUSTION AIR DUCT DOWN TO 450mm (18") ABOVE FINISHED MECHANICAL ROOM FLOOR C/W COLD AIR TRAP. BOTTOM OF COMBUSTION AIR LOUVER TO BE LOCATED AT LEAST 450mm (18") ABOVE GRADE & AT LEAST 300mm (12") AWAY FROM RELIEF AIR LOUVER.
2. ??x?? RELIEF AIR DUCT FROM HIGH LEVEL IN MECHANICAL ROOM TO EXTERIOR LOUVER. BOTTOM OF RELIEF LOUVER TO BE LOCATED AT LEAST 450mm (18") ABOVE GRADE AND AT LEAST 300mm (12") AWAY FROM COMBUSTION AIR LOUVER.
3. ? x ?0 (CATEGORY IV) DOMESTIC HOT WATER HEATER MANUFACTURER APPROVED U.L.C 5636 PVC FLUE VENTS AND ? x ?0 INNER DIAMETER (?0 OUTER DIAMETER) (CAT II) BOILER MANUFACTURER APPROVED U.L.C 5636 STAINLESS STEEL VENTS FROM MECHANICAL ROOM UP TO MANUFACTURER APPROVED TERMINATIONS ABOVE THE ROOF.
4. ALL EXPOSED DUCTWORK ON THE ROOF TO BE THERMALLY INSULATED AND SURROUNDED BY A PROTECTIVE CLADDING. REFER TO SPECIFICATIONS. ALL EXPOSED DUCTWORK ON THE ROOF TO BE THERMALLY INSULATED TO THE SAME R-VALUE AS THE BUILDING WALLS C/W A PROTECTIVE CLADDING. REFER TO SPECIFICATIONS.
5. ?x? CORRIDOR SUPPLY AIR DUCT. REFER TO CORRIDOR VENTILATION SCHEMATIC FOR MORE INFORMATION.
6. PROVIDE COMBINATION FIRE / SMOKE DAMPER AT CORRIDOR WALL PENETRATION. DAMPER TO BE CONTROLLED BY FIRE CONTROL PANEL. COORDINATE WITH ELECTRICAL CONTRACTOR AND REFER TO DETAIL.
7. SUPPLY AIR GRILLE WITH COMBINATION FIRE AND SMOKE DAMPER. REFER TO MECHANICAL DETAILS.
8. ENSURE AT LEAST 10' (3m) CLEARANCE IS PROVIDED BETWEEN THE PARKADE EXHAUST AIR GRATE ON GRADE AND ANY BUILDING OPENINGS.
9. ALLOW FOR CONDENSATE DRAIN FROM AIR CONDITIONING EVAPORATOR INSTALLED ON WALL WITHIN DWELLING UNIT. CONDENSATE DRAIN FROM EVAPORATOR TO BE CONNECTED TO CONDENSATE RISER DRAIN AS SHOWN. CONDENSATE RISER DRAIN TO BE INSTALLED VERTICALLY THROUGH BUILDING AND TIED TO STORM SYSTEM IN PARKADE / BASEMENT.
10. SUPPLY AND INSTALL A REVERSE ACTING THERMOSTAT IN THIS LOCATION. REVERSE ACTING THERMOSTAT TO BE CONNECTED TO PARKADE VENTILATION CONTROL SYSTEM TO ALLOW PARKADE MAKE UP AIR UNIT AND EXHAUST FAN(S) TO OPERATE WHEN DESIRED PARKADE AIR TEMPERATURE IS EXCEEDED. REVERSE ACTING THERMOSTAT TO BE SET TO 18°C (64°F).
11. ?x? CORRIDOR MAKE UP AIR DUCT FROM ABOVE. PROVIDE COMBINATION FIRE & SMOKE DAMPER AT MAIN FLOOR SLAB. COORDINATE WITH ELECTRICAL CONTRACTOR. REFER TO DETAILS.
12. ?x? RATED EXHAUST SHAFT C/W SHEET METAL LINER UP TO EXHAUST FAN AND GOOSENECK TERMINATION ON ROOF. REFER TO CENTRAL EXHAUST SHAFT TERMINATION DETAIL.
13. DUCTS RUNNING IN EXIT CORRIDOR TO BE FULLY SURROUNDED BY A RATED ENCLOSURE TO MAINTAIN THE INTEGRITY OF THE EXIT.
14. PROVIDE 20m CONTROL WIRE COILED WITH THERMOSTAT FOR INSTALLATION BY FUTURE TENANT.
15. 94"x40" CONCRETE EXHAUST AIR TUNNEL TO 94"x40" PARKADE EXHAUST GRATE ON GRADE. REFER TO MAIN FLOOR PLAN FOR CONTINUATION. ENSURE AT LEAST 10' (3m) CLEARANCE IS PROVIDED BETWEEN THE EXHAUST AIR GRATE AND ANY BUILDING OPENINGS.
16. 72"x52" CONCRETE EXHAUST AIR TUNNEL TO 72"x52" PARKADE EXHAUST GRATE ON GRADE. REFER TO MAIN FLOOR PLAN FOR CONTINUATION. ENSURE AT LEAST 10' (3m) CLEARANCE IS PROVIDED BETWEEN THE EXHAUST AIR GRATE AND ANY BUILDING OPENINGS.
17. PROVIDE ?? FEET OF BARE HOT WATER FINNED RADIATION IN THE COLD SOFFIT SPACE C/W ZONE VALVE, THERMOSTAT & SHUT OFF VALVE. PROVIDE INSULATED ACCESS PANELS FOR THERMOSTAT AND VALVES.
18. ENSURE A 3/4" DOOR UNDERCUT IS PROVIDED. COORDINATE WITH GENERAL CONTRACTOR.
19. EXHAUST FAN TO TERMINATE INTO SOFFIT SPACE ABOVE RAMP. EXHAUST FAN TO BE CONTROLLED BY THERMOSTAT WITHIN SOFFIT SPACE. PROVIDE ACCESS PANEL FOR THE THERMOSTAT WITHIN SOFFIT SPACE.
20. TRANSFER AIR OPENING FROM SOFFIT SPACE TO PARKADE.
21. FLUE PIPING TO BE LOCATED IN A FIRE RATED ENCLOSURE TO MAINTAIN THE INTEGRITY OF THE FIRE SEPARATION FOR THE MECHANICAL ROOM.
22. ??0 TRANSFER AIR DUCT C/W COMBINATION FIRE / SMOKE DAMPER (F.S.D-2) AT CORRIDOR FIREWALL PENETRATION. DAMPER TO BE CONTROLLED BY FIRE CONTROL PANEL. COORDINATE WITH ELECTRICAL CONTRACTOR AND REFER TO DETAIL.
23. ALLOTTED AREA FOR SNOW MELT MANIFOLD AND ASSOCIATED EQUIPMENT. MECHANICAL CONTRACTOR TO COORDINATE EXACT REQUIREMENTS ON SITE. PROVIDE ?0 HWS & HWV PIPE FROM MANIFOLD LOCATION.



BUILDING A - PARKADE PLAN
HVAC LAYOUT
SCALE: 1/16" = 1'-0"

PIPING ABBREVIATION SCHEDULE

HOT WATER HEATING SUPPLY LINE	HWS
HOT WATER HEATING RETURN LINE	HWV
HOT WATER HEATING HOME RUN LINE	HWHR

HVAC ABBREVIATION SCHEDULE

SUPPLY AIR	S/A
EXHAUST AIR	E/A
RETURN AIR	R/A
OUTDOOR AIR	O/A
TRANSFER AIR	T/A

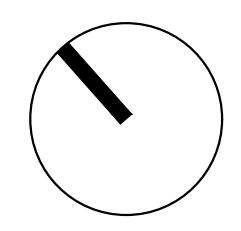
MECHANICAL PLUMBING RISER LEGEND

TAG	DESCRIPTION
(S1)	HOT WATER HEATING SYSTEM SUPPLY RISER LOCATION
(R1)	HOT WATER HEATING SYSTEM RETURN RISER LOCATION

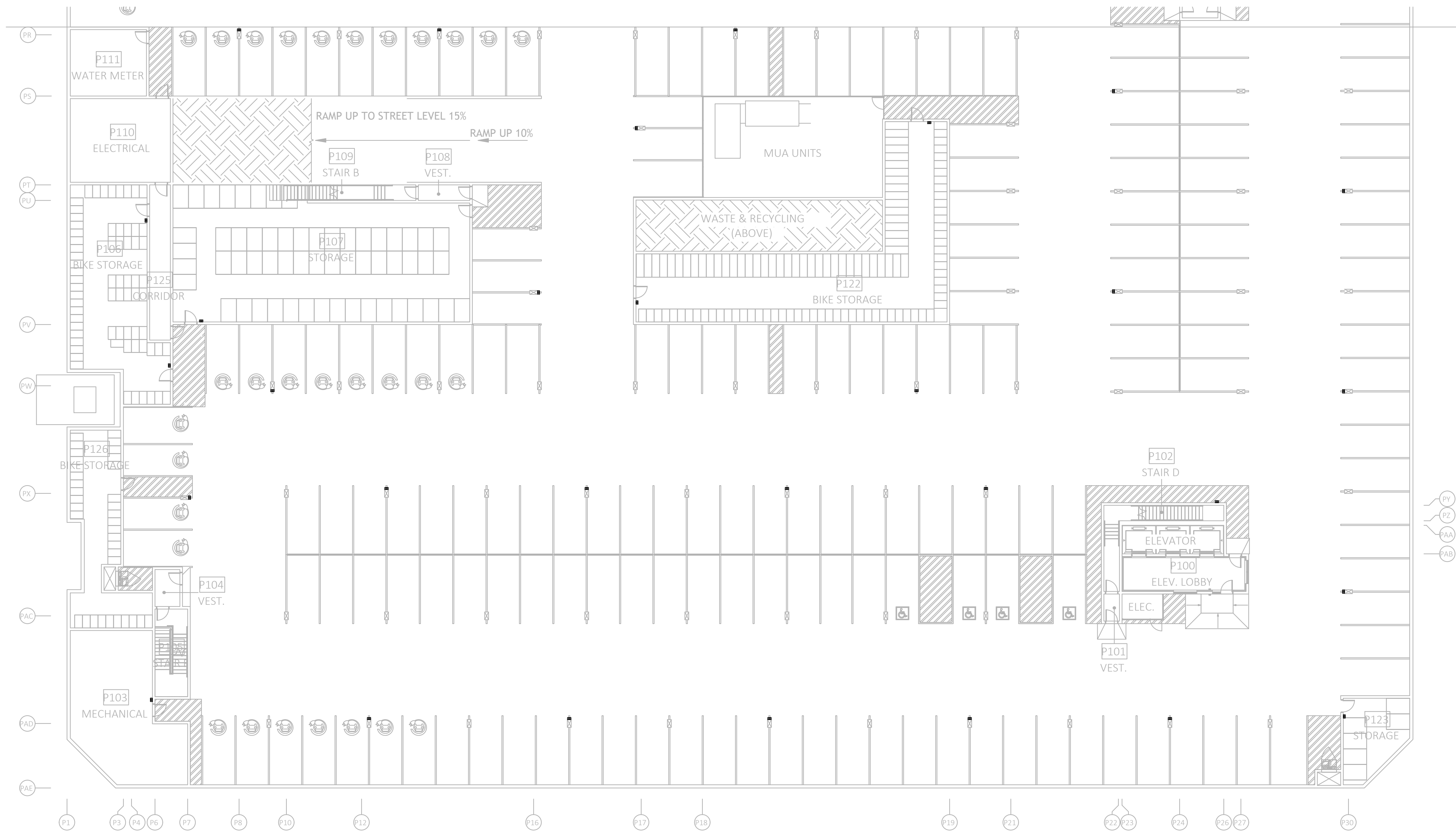
PIPING LEGEND

HEATING SYSTEM HOT WATER SUPPLY LINE	
HEATING SYSTEM HOT WATER RETURN LINE	
HEATING SYSTEM HOT WATER HOMERUN RETURN LINE	

SCALE



M20-01-04



GENERAL PLUMBING NOTES:

- A. SUPPLY AND INSTALL ALL FIRE STOPPING MATERIAL AND ENSURE THAT ALL FIRE PENETRATIONS ARE PROTECTED AS REQUIRED BY THE NATIONAL BUILDING CODE - ALBERTA EDITION AND THE LOCAL AUTHORITIES.
- B. WEeping TILE LAYOUT IS FOR REFERENCE ONLY. WEeping TILE TO BE SUPPLIED AND INSTALLED BY GENERAL CONTRACTOR. EXACT ROUTING, SIZE AND INSTALLATION OF WEeping TILE MUST BE CONFIRMED BY GEOTECHNICAL ENGINEER PRIOR TO INSTALLATION.
- C. PROVIDE A LOCKABLE TAMPER-PROOF ENCLOSURE AROUND ALL PUBLICLY EXPOSED CONTROL PANELS AND ASSOCIATED POWER SUPPLY.
- D. ALL STORM AND SANITARY SUMP COVERS ARE TO BE SEALED AIR-TIGHT TO PREVENT RADON GAS FROM ENTERING THE BUILDING. COVERS TO BE RATED FOR VEHICULAR TRAFFIC WHERE REQUIRED.
- E. DRAWINGS ARE DIAGRAMMATIC ONLY. CONTRACTOR TO INSTALL ALL DRAINS AND VENTS NOT SHOWN TO BE INSTALLED IN ACCORDANCE WITH THE NATIONAL PLUMBING CODE OF CANADA. CONTRACTOR TO PROVIDE AN ACCURATE AS-BUILT REFLECTING SUCH.
- F. COORDINATE ALL SANITARY PIPING, FIXTURE LOCATIONS AND VENT LINES WITH STRUCTURAL FRAMING BEFORE INSTALLATION.
- G. PROVIDE SLEEVES AS REQUIRED THROUGH STRUCTURAL ELEMENTS FOR ALL MECHANICAL SYSTEMS.
- H. THIS CONTRACTOR SHALL ENSURE HOUSEKEEPING PADS AT 100mm THICK ARE INSTALLED UNDER ALL MECHANICAL EQUIPMENT IN MECHANICAL ROOM. COORDINATE WITH GENERAL CONTRACTOR.
- I. ALL STORM PIPING WITHIN THE PARKADE MUST BE PRESSURE RATED.
- J. ENSURE ALL MECHANICAL LOCATED IN THE PARKADE IS INSTALLED WITH A HEAD HEIGHT CLEARANCE FROM THE FINISHED FLOOR EQUAL TO OR GREATER THAN THE CLEARANCE OF THE PARKADE ENTRANCE DOOR.
- K. PROVIDE ACCESS PANELS AT DRYWALL CEILINGS FOR ALL PLUMBING INSTALLATIONS AS REQUIRED. COORDINATE WITH GENERAL CONTRACTOR.
- L. PROVIDE SHUT-OFF VALVES CW ACCESS PANELS IN ALL SUITES FOR DOMESTIC HOT & COLD WATER LINES. ENSURE STICKER IS PLACED ON ACCESS PANEL TO INDICATE LOCATION OF VALVES.
- M. PROVIDE A 1/2"Ø (13mmØ) COLD WATER LINE TO FRIDGE LOCATION IN EACH DWELLING UNIT CW SHUT-OFF VALVE.
- N. ALLOW DEDICATED SANITARY RISER FOR LAUNDRY CLOTHES WASHERS. SANITARY RISER CANNOT SHARE DRAINAGE WITH ANY OTHER PLUMBING FIXTURES.
- O. WHERE A VERTICAL GAS LINE EXISTS IN A PIPE CHASE THE CHASE MUST HAVE AN OPENING WITH MINIMUM AREA EQUIVALENT TO A ROUND OPENING OF 1 INCH (25mm) IN DIAMETER AT THE TOP AND BOTTOM OF CHASE TO COMPLY WITH ARTICLE 6.7.5. OF CSA-B149.1-15. COORDINATE INSTALLATION OF REQUIRED OPENINGS WITH GENERAL CONTRACTOR.
- P. SANITARY RISERS, DOMESTIC HOT, COLD & RECIRCULATION RISERS, HEATING HOT WATER SUPPLY & RETURN RISERS, GAS LINE RISERS & STORM PIPE RAIN WATER LEADERS TO BE EQUIPPED WITH RISER CLAMPS AND EXPANSION FITTINGS TO ALLOW FOR BUILDING SHRINKAGE. EXPANSION FITTINGS TO BE INSTALLED IN VERTICAL PIPING PER MANUFACTURERS SPECIFICATIONS. ALLOW FOR OVERSIZED HOLES IN STUD WALLS WHERE HORIZONTAL TAKE OFF SERVICE PIPING TEES OFF OF MAIN VERTICAL RISERS TO MITIGATE SHEAR WITH BUILDING SETTLEMENT AND SHRINKAGE.

**ISSUED FOR
COORDINATION**

NO.	ISSUE/REVISION	DATE
1	30% Review	2026-04-30

PROJECT MANAGER	DRAWN
K.V	T.K/G.T
PROJECT LEAD	CHECKED
J.P/G.U	J.P/G.U/K.V

**BLACK BEAR
CROSSING - BLACK
BIRCH HEIGHTS**

BLACK BEAR CROSSING SW, TSUU
T'INA NATION 145 AB

PROJECT # 25141.1
CITY FILE #



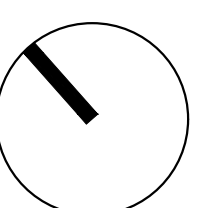
1
**PARKADE PLAN
SANITARY LAYOUT**
SCALE: 1/16" = 1'-0"

PIPING ABBREVIATION SCHEDULE	
SANITARY LINE UNDERSLAB	SAN. U/S
SANITARY LINE OVERHEAD	SAN. O/H

MECHANICAL PLUMBING RISER LEGEND	
TAG	DESCRIPTION
(SR)	SANITARY RISER LOCATION

PIPING LEGEND	
NEW SANITARY LINE (UNDERSLAB / BURIED)	
NEW SANITARY LINE (OVERHEAD / EXPOSED)	

SCALE



M20-02-01

GENERAL PLUMBING NOTES:

- A. SUPPLY AND INSTALL ALL FIRE STOPPING MATERIAL AND ENSURE THAT ALL FIRE PENETRATIONS ARE PROTECTED AS REQUIRED BY THE NATIONAL BUILDING CODE - ALBERTA EDITION AND THE LOCAL AUTHORITIES.
- B. WEEPING TILE LAYOUT IS FOR REFERENCE ONLY. WEEPING TILE TO BE SUPPLIED AND INSTALLED BY GENERAL CONTRACTOR. EXACT ROUTING, SIZE AND INSTALLATION OF WEEPING TILE MUST BE CONFIRMED BY GEOTECHNICAL ENGINEER PRIOR TO INSTALLATION.
- C. PROVIDE A LOCKABLE TAMPER-PROOF ENCLOSURE AROUND ALL PUBLICLY EXPOSED CONTROL PANELS AND ASSOCIATED POWER SUPPLY.
- D. ALL STORM AND SANITARY SUMP COVERS ARE TO BE SEALED AIR-TIGHT TO PREVENT RADON GAS FROM ENTERING THE BUILDING. COVERS TO BE RATED FOR VEHICULAR TRAFFIC WHERE REQUIRED.
- E. DRAWINGS ARE DIAGRAMMATIC ONLY. CONTRACTOR TO INSTALL ALL DRAINS AND VENTS NOT SHOWN TO BE INSTALLED IN ACCORDANCE WITH THE NATIONAL PLUMBING CODE OF CANADA. CONTRACTOR TO PROVIDE AN ACCURATE AS-BUILT REFLECTING SUCH.
- F. COORDINATE ALL SANITARY PIPING, FIXTURE LOCATIONS AND VENT LINES WITH STRUCTURAL FRAMING BEFORE INSTALLATION.
- G. PROVIDE SLEEVES AS REQUIRED THROUGH STRUCTURAL ELEMENTS FOR ALL MECHANICAL SYSTEMS.
- H. THIS CONTRACTOR SHALL ENSURE HOUSEKEEPING PADS AT 100mm THICK ARE INSTALLED UNDER ALL MECHANICAL EQUIPMENT IN MECHANICAL ROOM. COORDINATE WITH GENERAL CONTRACTOR.
- I. ALL STORM PIPING WITHIN THE PARKADE MUST BE PRESSURE RATED.
- J. ENSURE ALL MECHANICAL LOCATED IN THE PARKADE IS INSTALLED WITH A HEAD HEIGHT CLEARANCE FROM THE FINISHED FLOOR EQUAL TO OR GREATER THAN THE CLEARANCE OF THE PARKADE ENTRANCE DOOR.
- K. PROVIDE ACCESS PANELS AT DRYWALL CEILINGS FOR ALL PLUMBING INSTALLATIONS AS REQUIRED. COORDINATE WITH GENERAL CONTRACTOR.
- L. PROVIDE SHUT-OFF VALVES C/W ACCESS PANELS IN ALL SUITES FOR DOMESTIC HOT & COLD WATER LINES. ENSURE STICKER IS PLACED ON ACCESS PANEL TO INDICATE LOCATION OF VALVES.
- M. PROVIDE A 1/2"Ø (13mmØ) COLD WATER LINE TO FRIDGE LOCATION IN EACH DWELLING UNIT C/W SHUT-OFF VALVE.
- N. ALLOW DEDICATED SANITARY RISER FOR LAUNDRY CLOTHES WASHERS. SANITARY RISER CANNOT SHARE DRAINAGE WITH ANY OTHER PLUMBING FIXTURES.
- O. WHERE A VERTICAL GAS LINE EXISTS IN A PIPE CHASE THE CHASE MUST HAVE AN OPENING WITH MINIMUM AREA EQUIVALENT TO A ROUND OPENING OF 1 INCH (25mm) IN DIAMETER AT THE TOP AND BOTTOM OF CHASE TO COMPLY WITH ARTICLE 6.7.5. OF CSA-B149.1-15. COORDINATE INSTALLATION OF REQUIRED OPENINGS WITH GENERAL CONTRACTOR.
- P. SANITARY RISERS, DOMESTIC HOT, COLD & RECIRCULATION RISERS, HEATING HOT WATER SUPPLY & RETURN RISERS, GAS LINE RISERS & STORM PIPE RAIN WATER LEADERS TO BE EQUIPPED WITH RISER CLAMPS AND EXPANSION FITTINGS TO ALLOW FOR BUILDING SHRINKAGE. EXPANSION FITTINGS TO BE INSTALLED IN VERTICAL PIPING PER MANUFACTURERS SPECIFICATIONS. ALLOW FOR OVERSIZED HOLES IN STUD WALLS WHERE HORIZONTAL TAKE OFF SERVICE PIPING TEES OFF OF MAIN VERTICAL RISERS TO MITIGATE SHEAR WITH BUILDING SETTLEMENT AND SHRINKAGE.

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PROJECT MANAGER	DRAWN
K.V	T.K/G.T
PROJECT LEAD	CHECKED
J.P/G.U	J.P/G.U/K.V

**BLACK BEAR
CROSSING - BLACK
BIRCH HEIGHTS**

BLACK BEAR CROSSING SW, TSUU
T'INA NATION 145 AB

PROJECT # 25141.1
CITY FILE #

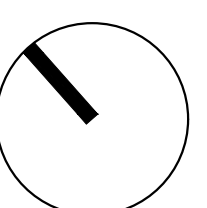


PIPING ABBREVIATION SCHEDULE	
COLD WATER LINE	C
HOT WATER LINE	H
HOT WATER RECIRCULATION LINE	REC.
GAS LINE	G

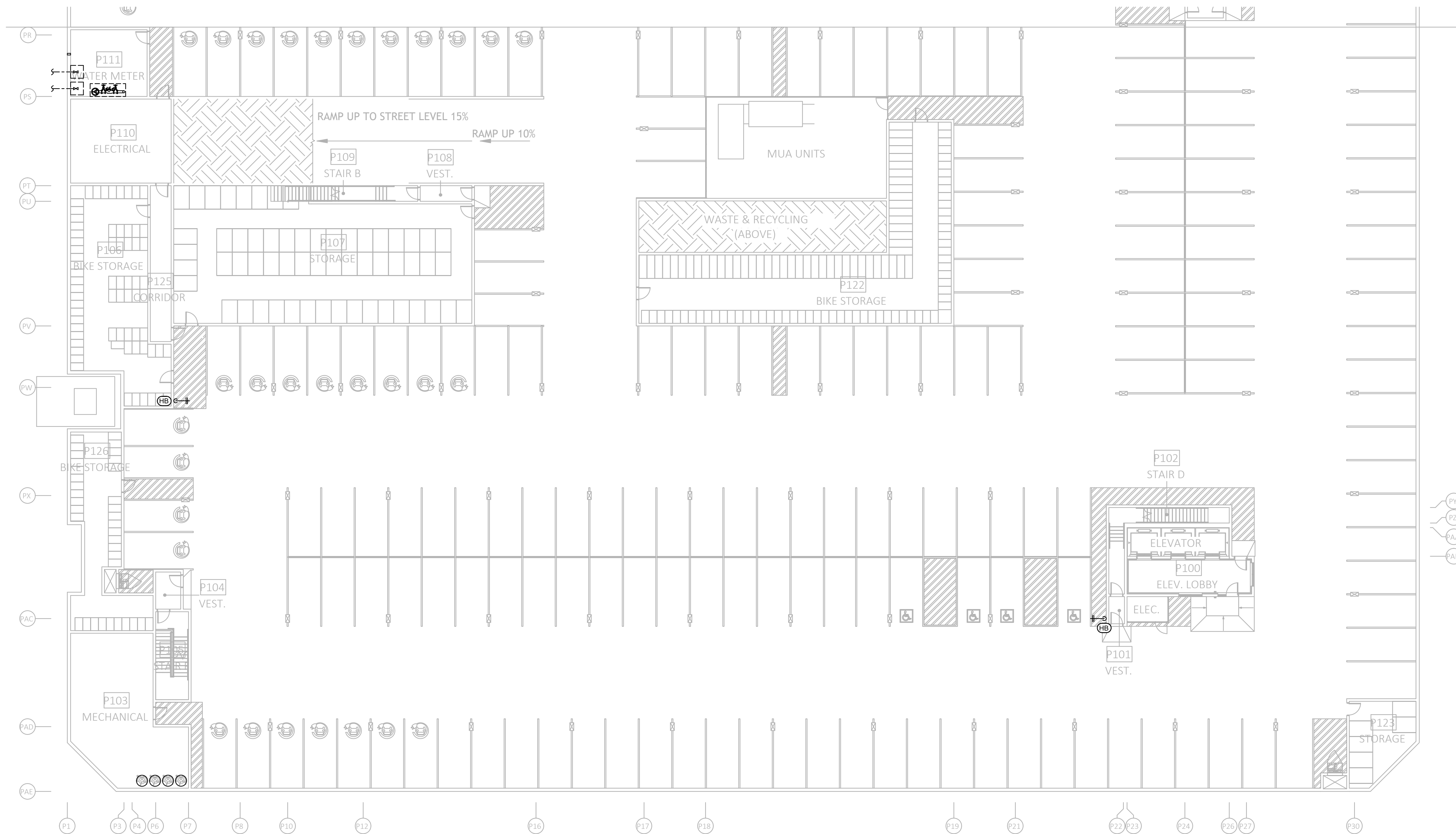
MECHANICAL PLUMBING RISER LEGEND	
TAG	DESCRIPTION
WR	WATER RISER (COLD, HOT AND RECIRCULATION) LOCATION
GR	GAS RANGE & / OR GAS BBQ RISER. PROVIDE SHUT OFF VALVE AT EACH OUTLET LOCATION

PIPING LEGEND	
NEW DOMESTIC COLD WATER LINE	---
NEW DOMESTIC HOT WATER LINE	---
NEW DOMESTIC HOT WATER RECIRCULATION LINE	---
NEW NATURAL GAS LINE	---

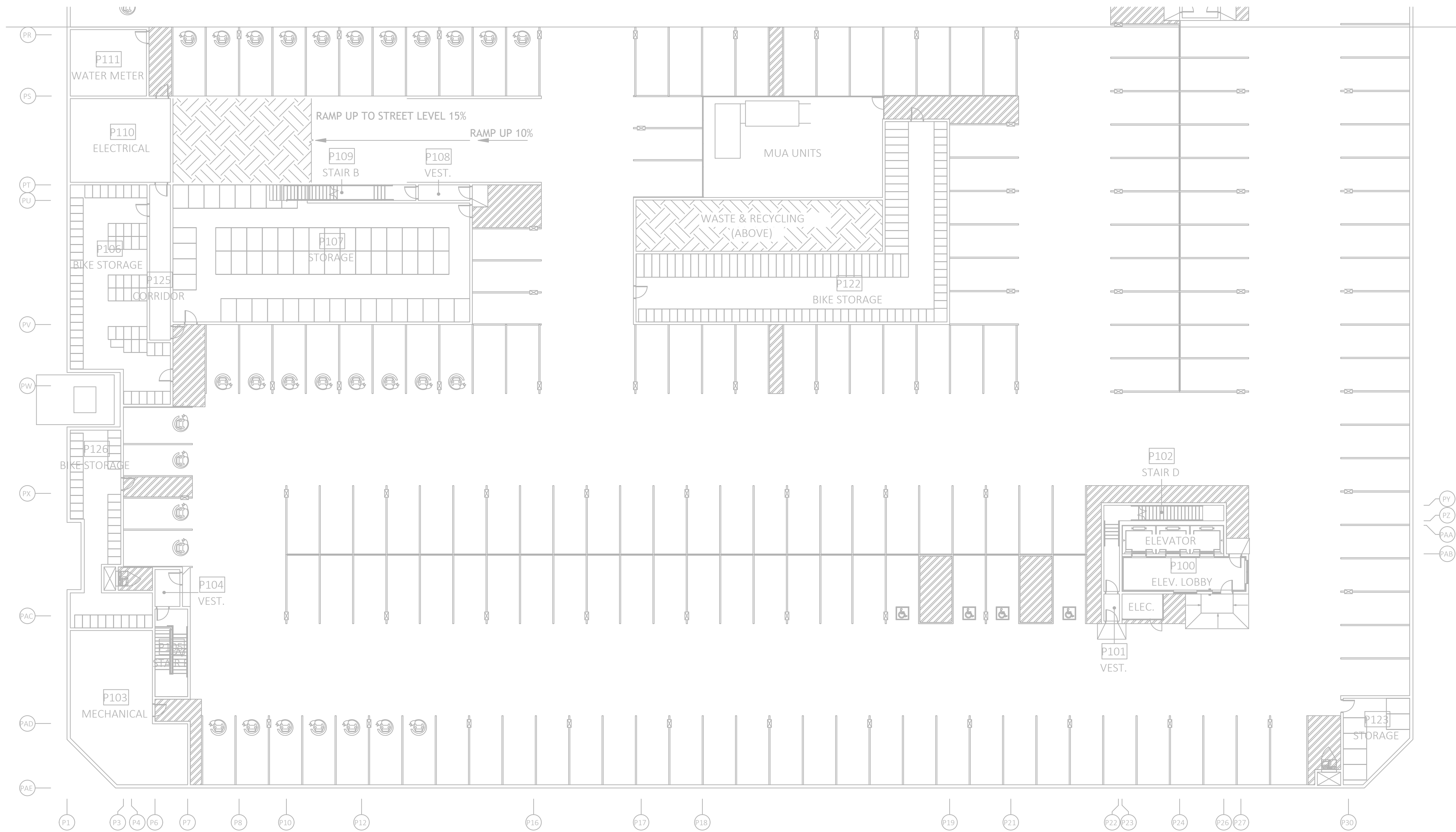
SCALE



M20-02-02



**BUILDING B - PARKADE PLAN
DOMESTIC WATER & GAS LAYOUT**
SCALE: 1/16" = 1'-0"



GENERAL PLUMBING NOTES:

- A. SUPPLY AND INSTALL ALL FIRE STOPPING MATERIAL AND ENSURE THAT ALL FIRE PENETRATIONS ARE PROTECTED AS REQUIRED BY THE NATIONAL BUILDING CODE - ALBERTA EDITION AND THE LOCAL AUTHORITIES.
- B. WEEPING TILE LAYOUT IS FOR REFERENCE ONLY. WEEPING TILE TO BE SUPPLIED AND INSTALLED BY GENERAL CONTRACTOR. EXACT ROUTING, SIZE AND INSTALLATION OF WEEPING TILE MUST BE CONFIRMED BY GEOTECHNICAL ENGINEER PRIOR TO INSTALLATION.
- C. PROVIDE A LOCKABLE TAMPER-PROOF ENCLOSURE AROUND ALL PUBLICLY EXPOSED CONTROL PANELS AND ASSOCIATED POWER SUPPLY.
- D. ALL STORM AND SANITARY SUMP COVERS ARE TO BE SEALED AIR-TIGHT TO PREVENT RADON GAS FROM ENTERING THE BUILDING. COVERS TO BE RATED FOR VEHICULAR TRAFFIC WHERE REQUIRED.
- E. DRAWINGS ARE DIAGRAMMATIC ONLY. CONTRACTOR TO INSTALL ALL DRAINS AND VENTS NOT SHOWN TO BE INSTALLED IN ACCORDANCE WITH THE NATIONAL PLUMBING CODE OF CANADA. CONTRACTOR TO PROVIDE AN ACCURATE AS-BUILT REFLECTING SUCH.
- F. COORDINATE ALL SANITARY PIPING, FIXTURE LOCATIONS AND VENT LINES WITH STRUCTURAL FRAMING BEFORE INSTALLATION.
- G. PROVIDE SLEEVES AS REQUIRED THROUGH STRUCTURAL ELEMENTS FOR ALL MECHANICAL SYSTEMS.
- H. THIS CONTRACTOR SHALL ENSURE HOUSEKEEPING PADS AT 100mm THICK ARE INSTALLED UNDER ALL MECHANICAL EQUIPMENT IN MECHANICAL ROOM. COORDINATE WITH GENERAL CONTRACTOR.
- I. ALL STORM PIPING WITHIN THE PARKADE MUST BE PRESSURE RATED.
- J. ENSURE ALL MECHANICAL LOCATED IN THE PARKADE IS INSTALLED WITH A HEAD HEIGHT CLEARANCE FROM THE FINISHED FLOOR EQUAL TO OR GREATER THAN THE CLEARANCE OF THE PARKADE ENTRANCE DOOR.
- K. PROVIDE ACCESS PANELS AT DRYWALL CEILINGS FOR ALL PLUMBING INSTALLATIONS AS REQUIRED. COORDINATE WITH GENERAL CONTRACTOR.
- L. PROVIDE SHUT-OFF VALVES C/W ACCESS PANELS IN ALL SUITES FOR DOMESTIC HOT & COLD WATER LINES. ENSURE STICKER IS PLACED ON ACCESS PANEL TO INDICATE LOCATION OF VALVES.
- M. PROVIDE A 1/2"Ø (13mmØ) COLD WATER LINE TO FRIDGE LOCATION IN EACH DWELLING UNIT C/W SHUT-OFF VALVE.
- N. ALLOW DEDICATED SANITARY RISER FOR LAUNDRY CLOTHES WASHERS. SANITARY RISER CANNOT SHARE DRAINAGE WITH ANY OTHER PLUMBING FIXTURES.
- O. WHERE A VERTICAL GAS LINE EXISTS IN A PIPE CHASE THE CHASE MUST HAVE AN OPENING WITH MINIMUM AREA EQUIVALENT TO A ROUND OPENING OF 1 INCH (25mm) IN DIAMETER AT THE TOP AND BOTTOM OF CHASE TO COMPLY WITH ARTICLE 6.7.5. OF CSA-B149.1-15. COORDINATE INSTALLATION OF REQUIRED OPENINGS WITH GENERAL CONTRACTOR.
- P. SANITARY RISERS, DOMESTIC HOT, COLD & RECIRCULATION RISERS, HEATING HOT WATER SUPPLY & RETURN RISERS, GAS LINE RISERS & STORM PIPE RAIN WATER LEADERS TO BE EQUIPPED WITH RISER CLAMPS AND EXPANSION FITTINGS TO ALLOW FOR BUILDING SHRINKAGE. EXPANSION FITTINGS TO BE INSTALLED IN VERTICAL PIPING PER MANUFACTURERS SPECIFICATIONS. ALLOW FOR OVERSIZED HOLES IN STUD WALLS WHERE HORIZONTAL TAKE OFF SERVICE PIPING TEES OFF OF MAIN VERTICAL RISERS TO MITIGATE SHEAR WITH BUILDING SETTLEMENT AND SHRINKAGE.

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PROJECT MANAGER	DRAWN
K.V	T.K/G.T
PROJECT LEAD	CHECKED
J.P/G.U	J.P/G.U/K.V

**BLACK BEAR
CROSSING - BLACK
BIRCH HEIGHTS**

BLACK BEAR CROSSING SW, TSUU
T'INA NATION 145 AB

PROJECT # 25141.1
CITY FILE #

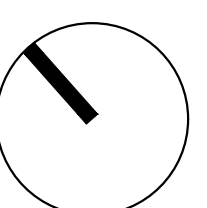


**BUILDING B - PARKADE PLAN
STORM LAYOUT**
SCALE: 1/16" = 1'-0"

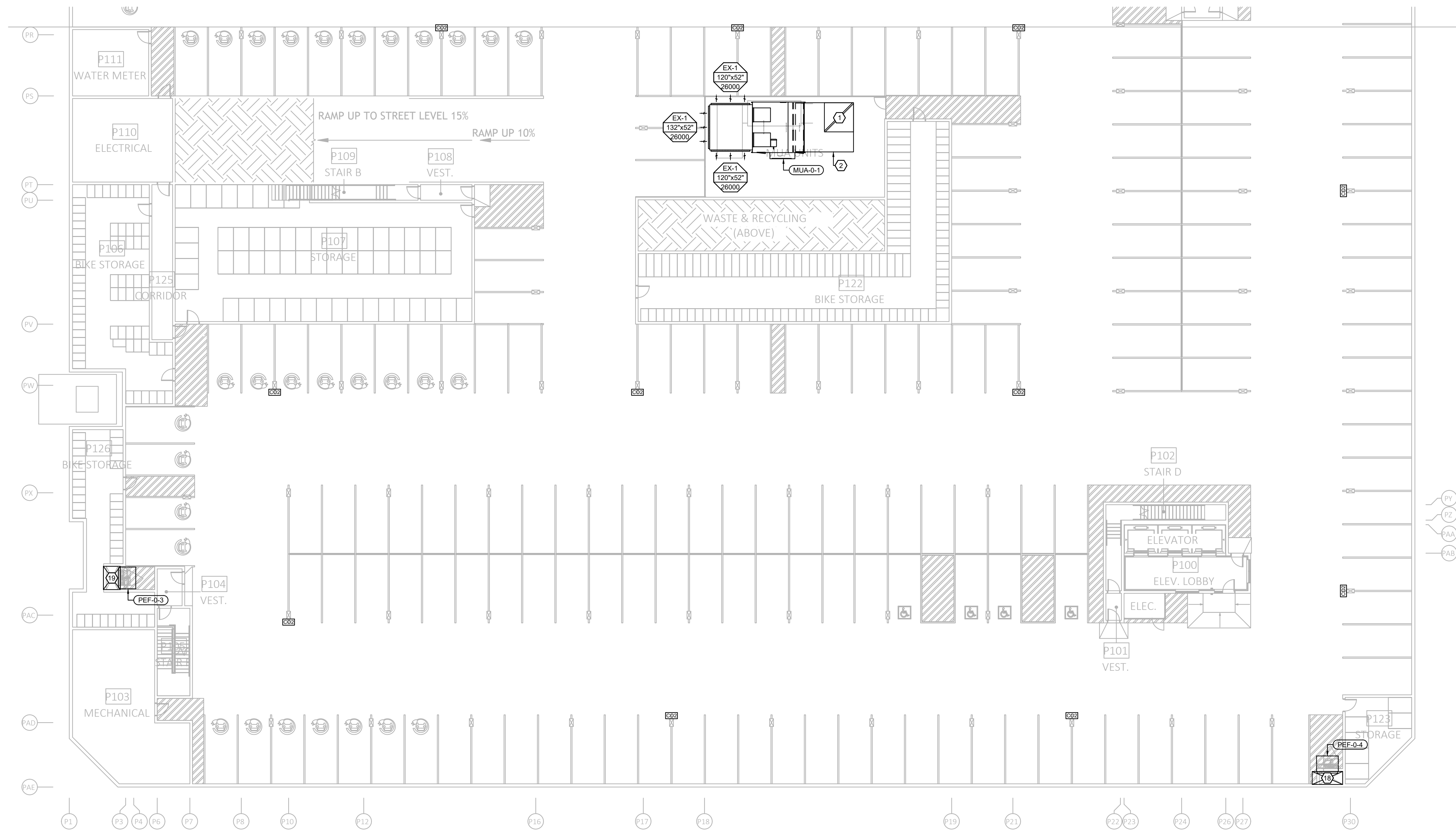
PIPING ABBREVIATION SCHEDULE	
STORM LINE UNDERSLAB	ST. U/S
STORM LINE OVERHEAD	ST. O/H

PIPING LEGEND	
WEEPING TILE DRAINAGE LINE	--- -- -- -- --
NEW STORM LINE (UNDERSLAB / BURIED)	--- -- -- -- --
NEW STORM LINE (OVERHEAD / EXPOSED)	--- -- -- -- --

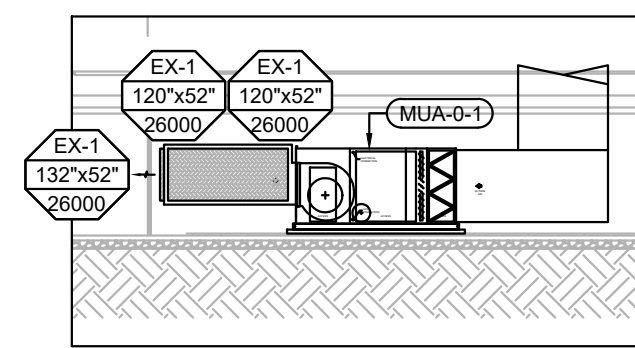
SCALE



M20-02-03



1
BUILDING B - PARKADE PLAN
HVAC LAYOUT
SCALE: 1/16" = 1'-0"



2
PARKADE MAKE-UP AIR UNIT
ELEVATION VIEW LAYOUT
SCALE: 1/16" = 1'-0"

GENERAL HVAC NOTES:

- A. SUPPLY AND INSTALL ALL FIRE STOPPING MATERIAL AND ENSURE THAT ALL FIRE PENETRATIONS ARE PROTECTED AS REQUIRED BY THE NATIONAL BUILDING CODE - ALBERTA EDITION AND THE LOCAL AUTHORITIES.
- B. THIS CONTRACTOR SHALL ENSURE HOUSEKEEPING PADS AT 100mm THICK ARE INSTALLED UNDER ALL MECHANICAL EQUIPMENT IN MECHANICAL ROOM. COORDINATE WITH GENERAL CONTRACTOR.
- C. ENSURE ALL MECHANICAL LOCATED IN THE PARKADE IS INSTALLED WITH A HEAD HEIGHT CLEARANCE FROM THE FINISHED FLOOR EQUAL TO OR GREATER THAN THE CLEARANCE OF THE PARKADE ENTRANCE DOORS.
- D. THE MECHANICAL SUB-CONTRACTOR SHALL REFER TO THE CONDENSING UNIT INSTALLATION AND OPERATION MANUALS FOR MAXIMUM ALLOWED REFRIGERANT LINE LENGTHS TO COOLING COILS IN MECHANICAL UNITS.
- E. PROVIDE MINIMUM 2"Ø SUPPLY AND RETURN HOT WATER HEATING LINES TO ALL FORCE FLOW HEATERS, UNITS HEATERS AND RADIATION UNITS UNLESS NOTED OTHERWISE.
- F. ALL WASHROOM RETURN GRILLES AND ASSOCIATED DUCTS ARE TO BE INSTALLED WITHIN DROPPED CEILINGS. COORDINATE EXACT LOCATION OF DROPPED CEILINGS ON SITE.
- G. ALLOW FOR WALL GAPS AT ALL DUCTWORK ON EXTERIOR WALLS AS REQUIRED.
- H. AIR BALANCE DAMPERS TO BE PROVIDED FOR ALL BRANCH DUCTWORK FEEDING INDIVIDUAL DIFFUSERS.
- I. ENSURE ALL DUCTWORK EXTENDING TO EXTERIOR OF BUILDING IS WRAPPED WITH INSULATION. (REFER TO SPECIFICATIONS)
- J. ENSURE THERMOWELLS ARE UTILIZED FOR ALL TEMPERATURE GAUGES IN HEATING SYSTEM.
- K. ENSURE SHUT OFF VALVES ARE INSTALLED BETWEEN ALL GAUGES AND TEE CONNECTION TO ALLOW EASY REPLACEMENT/REPAIR OF GAUGES.
- L. DRYER EXHAUST FANS MUST BE INTERLOCKED WITH DRYER BY MEANS OF AIR PROVING SWITCH OR CONTROL RELAY (TO BE PROVIDED BY MECHANICAL CONTRACTOR).
- M. ALL ELECTRIC HEATING EQUIPMENT IS SHOWN AS A REFERENCE. ALL ELECTRIC HEATING EQUIPMENT TO BE SUPPLIED AND INSTALLED BY ELECTRICAL SUB-CONTRACTOR.
- N. ALL LINE VOLTAGE THERMOSTATS CONTROLLING ELECTRIC HEATING EQUIPMENT IS SHOWN AS A REFERENCE. ALL LINE VOLTAGE THERMOSTATS TO BE SUPPLIED AND INSTALLED BY ELECTRICAL SUB-CONTRACTOR.
- O. INSULATE ALL FRESH AIR INTAKE DUCTS FROM OUTSIDE EXTERIOR WALL TO MECHANICAL UNITS. REFER TO SPECIFICATIONS.
- P. VERTICAL HEATING SUPPLY AND RETURN PIPING MUST BE LOCATED OUTSIDE OF DWELLING UNIT PARTY WALLS TO AVOID COMPROMISING THE INTEGRITY OF THE FIRE SEPARATIONS. COORDINATE WITH GENERAL CONTRACTOR.
- Q. WHERE COMBINATION FIRE & SMOKE DAMPERS ARE INSTALLED AND COULD OBSTRUCT ALL AIRFLOW FOR A PARTICULAR HVAC UNIT, THE HVAC UNIT NEEDS TO BE SHUT DOWN AUTOMATICALLY WHEN THE FIRE & SMOKE DAMPER CLOSES. COORDINATE WITH ELECTRICAL SUB-CONTRACTOR.
- R. WHERE AN EXHAUST OUTLET IS LOCATED WITHIN A SOFFIT, THE SOFFIT SHALL EITHER BE UN-VENTED, OR IF VENTED, THE FULL DEPTH OF THE SOFFIT SHALL BE BLOCKED FOR A DISTANCE OF 1.8m ON EACH SIDE OF THE EXHAUST OUTLET PER NBC 2023-4E - ARTICLE 9.32.3.13. COORDINATE WITH GENERAL CONTRACTOR.
- S. WHERE AN EXHAUST OUTLET IS LOCATED IN A SIDEWALL LESS THAN 1.8m FROM A SOFFIT, A SECTION OF THE SOFFIT ABOVE THE EXHAUST OUTLET SHALL BE UN-VENTED, OR IF VENTED, THE FULL DEPTH OF THE SOFFIT SHALL BE BLOCKED IN ACCORDANCE WITH THE WIDTHS STIPULATED IN NBC 2023-4E, TABLE 9.32.3.13-A, CENTERED OVER THE LOCATION OF THE OUTLET. COORDINATE WITH GENERAL CONTRACTOR.
- T. VERTICAL HVAC DUCTING TO BE EQUIPPED WITH RISER CLAMPS AND EXPANSION FITTINGS TO ALLOW FOR BUILDING SHRINKAGE. EXPANSION FITTINGS TO BE INSTALLED PER MANUFACTURERS SPECIFICATIONS.

HVAC DRAWING KEYNOTES:

1. 90"x90" FRESH AIR INTAKE DUCT FROM DOGHOUSE ABOVE.
2. 152"x152" AIR PLENUM TO THE PARKADE MUA UNIT (MUA-0-1).
3. 140"x128"60" HORIZONTAL SUPPLY AIR PLENUM FROM PARKADE MUA UNIT (MUA-0-1).
4. 7"x7" INSULATED COMBUSTION AIR DUCT DOWN TO 450mm (18") ABOVE FINISHED MECHANICAL ROOM FLOOR C/W COLD AIR TRAP. BOTTOM OF COMBUSTION AIR LOUVER TO BE LOCATED AT LEAST 450mm (18") ABOVE GRADE & AT LEAST 300mm (12") AWAY FROM RELIEF AIR LOUVER.
5. 7"x7" RELIEF AIR DUCT FROM HIGH LEVEL IN MECHANICAL ROOM TO EXTERIOR LOUVER. BOTTOM OF RELIEF LOUVER TO BE LOCATED AT LEAST 450mm (18") ABOVE GRADE AND AT LEAST 300mm (12") AWAY FROM COMBUSTION AIR LOUVER.
6. 7 x 7Ø (CATEGORY IV) DOMESTIC HOT WATER HEATER MANUFACTURER APPROVED U.L.C. 5636 PVC FLUE VENTS AND 7 x 7Ø INNER DIAMETER (7Ø OUTER DIAMETER) (CAT II) BOILER MANUFACTURER APPROVED U.L.C. 5636 STAINLESS STEEL VENTS FROM MECHANICAL ROOM UP TO MANUFACTURER APPROVED TERMINATIONS ABOVE THE ROOF.
7. ALL EXPOSED DUCTWORK ON THE ROOF TO BE THERMALLY INSULATED AND SURROUNDED BY A PROTECTIVE CLADDING. REFER TO SPECIFICATIONS. ALL EXPOSED DUCTWORK ON THE ROOF TO BE THERMALLY INSULATED TO THE SAME R-VALUE AS THE BUILDING WALLS C/W A PROTECTIVE CLADDING. REFER TO SPECIFICATIONS.
8. 7"x7" CORRIDOR SUPPLY AIR DUCT. REFER TO CORRIDOR VENTILATION SCHEMATIC FOR MORE INFORMATION.
9. PROVIDE COMBINATION FIRE / SMOKE DAMPER AT CORRIDOR WALL PENETRATION. DAMPER TO BE CONTROLLED BY FIRE CONTROL PANEL. COORDINATE WITH ELECTRICAL CONTRACTOR AND REFER TO DETAIL.
10. SUPPLY AIR GRILLE WITH COMBINATION FIRE AND SMOKE DAMPER. REFER TO MECHANICAL DETAILS.
11. ENSURE AT LEAST 10' (3m) CLEARANCE IS PROVIDED BETWEEN THE PARKADE EXHAUST AIR GRATE ON GRADE AND ANY BUILDING OPENINGS.
12. ALLOW FOR CONDENSATE DRAIN FROM AIR CONDITIONING EVAPORATOR INSTALLED ON WALL WITHIN DWELLING UNIT. CONDENSATE DRAIN FROM EVAPORATOR TO BE CONNECTED TO CONDENSATE RISER DRAIN AS SHOWN. CONDENSATE RISER DRAIN TO BE INSTALLED VERTICALLY THROUGH BUILDING AND TIED TO STORM SYSTEM IN PARKADE / BASEMENT.
13. SUPPLY AND INSTALL A REVERSE ACTING THERMOSTAT IN THIS LOCATION. REVERSE ACTING THERMOSTAT TO BE CONNECTED TO PARKADE VENTILATION CONTROL SYSTEM TO ALLOW PARKADE MAKE UP AIR UNIT AND EXHAUST FAN(S) TO OPERATE WHEN DESIRED PARKADE AIR TEMPERATURE IS EXCEEDED. REVERSE ACTING THERMOSTAT TO BE SET TO 18°C (64°F).
14. 7"x7" CORRIDOR MAKE UP AIR DUCT FROM ABOVE. PROVIDE COMBINATION FIRE & SMOKE DAMPER AT MAIN FLOOR SLAB. COORDINATE WITH ELECTRICAL CONTRACTOR. REFER TO DETAILS.
15. 7"x7" RATED EXHAUST SHAFT C/W SHEET METAL LINER UP TO EXHAUST FAN AND GOOSENECK TERMINATION ON ROOF. REFER TO CENTRAL EXHAUST SHAFT TERMINATION DETAIL.
16. DUCTS RUNNING IN EXIT CORRIDOR TO BE FULLY SURROUNDED BY A RATED ENCLOSURE TO MAINTAIN THE INTEGRITY OF THE EXIT.
17. PROVIDE 20m OF CONTROL WIRE COILED WITH THERMOSTAT FOR INSTALLATION BY FUTURE TENANT.
18. 94"Ø CONCRETE EXHAUST AIR TUNNEL TO 94"Ø PARKADE EXHAUST GRATE ON GRADE. REFER TO MAIN FLOOR PLAN FOR CONTINUATION. ENSURE AT LEAST 10' (3m) CLEARANCE IS PROVIDED BETWEEN THE EXHAUST AIR GRATE AND ANY BUILDING OPENINGS.
19. 72"Ø CONCRETE EXHAUST AIR TUNNEL TO 72"Ø PARKADE EXHAUST GRATE ON GRADE. REFER TO MAIN FLOOR PLAN FOR CONTINUATION. ENSURE AT LEAST 10' (3m) CLEARANCE IS PROVIDED BETWEEN THE EXHAUST AIR GRATE AND ANY BUILDING OPENINGS.
20. PROVIDE 7' FEET OF BARE HOT WATER FINNED RADIATION IN THE COLD SOFFIT SPACE C/W ZONE VALVE, THERMOSTAT & SHUT OFF VALVE. PROVIDE INSULATED ACCESS PANELS FOR THERMOSTAT AND VALVES.
21. ENSURE A 3/4" DOOR UNDERCUT IS PROVIDED. COORDINATE WITH GENERAL CONTRACTOR.
22. EXHAUST FAN TO TERMINATE INTO SOFFIT SPACE ABOVE RAMP. EXHAUST FAN TO BE CONTROLLED BY THERMOSTAT WITHIN SOFFIT SPACE. PROVIDE ACCESS PANEL FOR THE THERMOSTAT WITHIN SOFFIT SPACE.
23. TRANSFER AIR OPENING FROM SOFFIT SPACE TO PARKADE.
24. FLUE PIPING TO BE LOCATED IN A FIRE RATED ENCLOSURE TO MAINTAIN THE INTEGRITY OF THE FIRE SEPARATION FOR THE MECHANICAL ROOM.
25. 7"Ø TRANSFER AIR DUCT C/W COMBINATION FIRE / SMOKE DAMPER (F.S.D-2) AT CORRIDOR FIREWALL PENETRATION. DAMPER TO BE CONTROLLED BY FIRE CONTROL PANEL. COORDINATE WITH ELECTRICAL CONTRACTOR AND REFER TO DETAIL.
26. ALLOTTED AREA FOR SNOW MELT MANIFOLD AND ASSOCIATED EQUIPMENT. MECHANICAL CONTRACTOR TO COORDINATE EXACT REQUIREMENTS ON SITE. PROVIDE 7Ø HWS & HWV PIPE TO/FROM MANIFOLD LOCATION.

PIPING ABBREVIATION SCHEDULE	
HOT WATER HEATING SUPPLY LINE	HWS
HOT WATER HEATING RETURN LINE	HWV
HOT WATER HEATING HOME RUN LINE	HWHR

HVAC ABBREVIATION SCHEDULE	
SUPPLY AIR	S/A
EXHAUST AIR	E/A
RETURN AIR	R/A
OUTDOOR AIR	O/A
TRANSFER AIR	T/A

MECHANICAL PLUMBING RISER LEGEND	
TAG	DESCRIPTION
(S1)	HOT WATER HEATING SYSTEM SUPPLY RISER LOCATION
(R1)	HOT WATER HEATING SYSTEM RETURN RISER LOCATION

PIPING LEGEND	
HEATING SYSTEM HOT WATER SUPPLY LINE	
HEATING SYSTEM HOT WATER RETURN LINE	
HEATING SYSTEM HOT WATER HOMERUN RETURN LINE	

ISSUED FOR
COORDINATION

NO.	ISSUE/REVISION	DATE
1	30% Review	2026-04-30

PROJECT MANAGER	DRAWN
K.V	T.K/G.T
PROJECT LEAD	CHECKED
J.P/G.U	J.P/G.U/K.V

BLACK BEAR
CROSSING - BLACK
BIRCH HEIGHTS

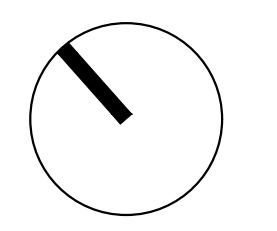
BLACK BEAR CROSSING SW, TSUU
T'INA NATION 145 AB

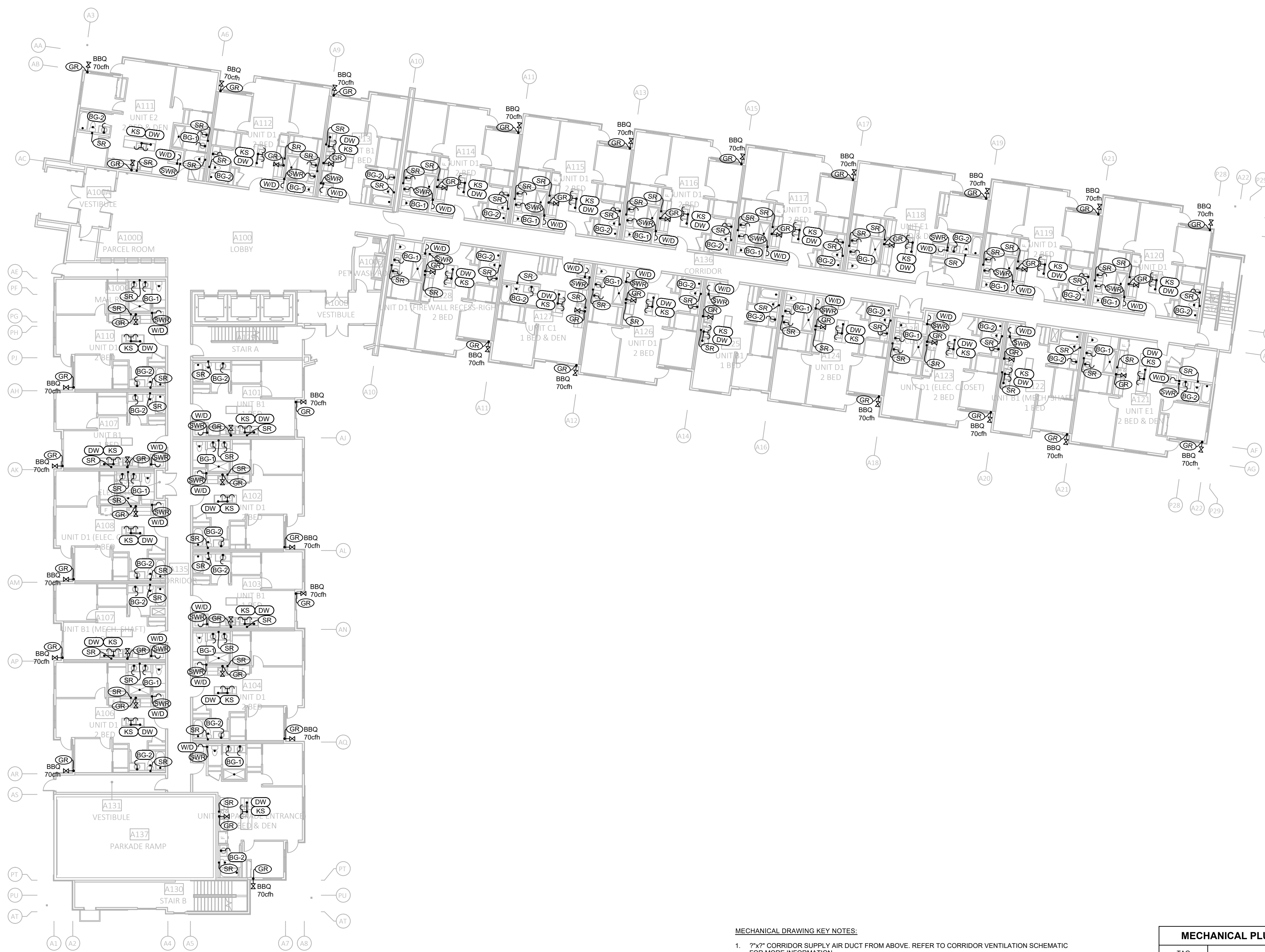
PROJECT # 25141.1
CITY FILE #



SCALE

M20-02-04





BUILDING A - LEVEL 1 FLOOR PLAN
MECHANICAL LAYOUT
SCALE: 1/16" = 1'-0"

- MECHANICAL DRAWING KEY NOTES:**
- 7"x7" CORRIDOR SUPPLY AIR DUCT FROM ABOVE. REFER TO CORRIDOR VENTILATION SCHEMATIC FOR MORE INFORMATION.
 - SUPPLY AIR GRILLE WITH COMBINATION FIRE AND SMOKE DAMPER, REFER TO MECHANICAL DETAILS.
 - LOCATION OF SEMI-RECESSED FIRE EXTINGUISHER CABINET C/W FIRE EXTINGUISHER.
 - PROPOSED LOCATION OF FIRE PROTECTION SYSTEM STANDPIPE IN STAIRWELL PER FIRE PROTECTION ENGINEERED DESIGN DOCUMENTS. AREA NEEDED FOR STANDPIPE AND CONNECTIONS IS APPROXIMATELY 22' x 13'. COORDINATE WITH FIRE PROTECTION CONTRACTOR AND ENGINEER.
 - GAS RANGE CONNECTION C/W SHUT-OFF VALVE. (65cft)
 - 3/4"Ø COLD WATER LINE FROM BELOW TO SUPPLY FROST FREE HOSE BIBB.
 - 4"Ø STORM LINE FROM ABOVE.
 - 4"Ø STORM LINE DOWN TO LEVEL P1.
 - 3/4"Ø GAS LINE (2 PSI) UP FROM PARKADE.

MECHANICAL PLUMBING RISER LEGEND

TAG	DESCRIPTION
SWR	SANITARY RISER LOCATION & WATER RISER (COLD, HOT AND RECIRCULATION) LOCATION
SR	SANITARY RISER LOCATION
GR	GAS RANGE & / OR GAS BBO RISER. PROVIDE SHUT OFF VALVE AT EACH OUTLET LOCATION

PIPING LEGEND

NEW SANITARY LINE (OVERHEAD / EXPOSED)	
NEW STORM LINE (OVERHEAD / EXPOSED)	
HEATING SYSTEM HOT WATER SUPPLY LINE	
HEATING SYSTEM HOT WATER RETURN LINE	

PLUMBING FIXTURE CONNECTION SCHEDULE

TAG	DESCRIPTION	PIPE SIZE (INCHES)				
		TRAP	WASTE	VENT	COLD WATER	HOT WATER
WC	WATER CLOSET / FLUSH TANK / FLOOR MOUNTED	INT.	3"Ø	1 1/2"Ø	1/2"Ø	---
VAN	SINGLE COMPARTMENT SINK	1 1/2"Ø	1 1/2"Ø	1 1/4"Ø	1/2"Ø	1/2"Ø
SHR	SHOWER	1 1/2"Ø	1 1/2"Ø	1 1/4"Ø	1/2"Ø	1/2"Ø
TUB	BATH TUB	1 1/2"Ø	1 1/2"Ø	1 1/4"Ø	1/2"Ø	1/2"Ø
WID	CLOTHES WASHER / DRYER	2"Ø	2"Ø	1 1/2"Ø	1/2"Ø	1/2"Ø
KS/DW	KITCHEN SINK / DISHWASHER	1 1/2"Ø	1 1/2"Ø	1 1/4"Ø	1/2"Ø	1/2"Ø
MSJS	JANITOR SINK / MOP SINK	1 1/2"Ø	1 1/2"Ø	1 1/4"Ø	1/2"Ø	1/2"Ø

BATHROOM GROUP TAGS

TAG	FIXTURES
BG-1	WC
	VAN
	SHR
BG-2	WC
	VAN
	TUB
BG-3	WC
	VAN
	SHR

- GENERAL PLUMBING NOTES:**
- SUPPLY AND INSTALL ALL FIRE STOPPING MATERIAL AND ENSURE THAT ALL FIRE PENETRATIONS ARE PROTECTED AS REQUIRED BY THE NATIONAL BUILDING CODE - ALBERTA EDITION AND THE LOCAL AUTHORITIES.
 - WEEPING TILE LAYOUT IS FOR REFERENCE ONLY. WEEPING TILE TO BE SUPPLIED AND INSTALLED BY GENERAL CONTRACTOR. EXACT ROUTING, SIZE AND INSTALLATION OF WEEPING TILE MUST BE CONFIRMED BY GEOTECHNICAL ENGINEER PRIOR TO INSTALLATION.
 - PROVIDE A LOCKABLE TAMPER-PROOF ENCLOSURE AROUND ALL PUBLICLY EXPOSED CONTROL PANELS AND ASSOCIATED POWER SUPPLY.
 - ALL STORM AND SANITARY SUMP COVERS ARE TO BE SEALED AIR-TIGHT TO PREVENT RADON GAS FROM ENTERING THE BUILDING. COVERS TO BE RATED FOR VEHICULAR TRAFFIC WHERE REQUIRED.
 - DRAWINGS ARE DIAGRAMMATIC ONLY. CONTRACTOR TO INSTALL ALL DRAINS AND VENTS NOT SHOWN TO BE INSTALLED IN ACCORDANCE WITH THE NATIONAL PLUMBING CODE OF CANADA. CONTRACTOR TO PROVIDE AN ACCURATE AS-BUILT REFLECTING SUCH.
 - COORDINATE ALL SANITARY PIPING, FIXTURE LOCATIONS AND VENT LINES WITH STRUCTURAL FRAMING BEFORE INSTALLATION.
 - PROVIDE SLEEVES AS REQUIRED THROUGH STRUCTURAL ELEMENTS FOR ALL MECHANICAL SYSTEMS.
 - THIS CONTRACTOR SHALL ENSURE HOUSEKEEPING PADS AT 100mm THICK ARE INSTALLED UNDER ALL MECHANICAL EQUIPMENT IN MECHANICAL ROOM. COORDINATE WITH GENERAL CONTRACTOR.
 - ALL STORM PIPING WITHIN THE PARKADE MUST BE PRESSURE RATED.
 - ENSURE ALL MECHANICAL LOCATED IN THE PARKADE IS INSTALLED WITH A HEAD HEIGHT CLEARANCE FROM THE FINISHED FLOOR EQUAL TO OR GREATER THAN THE CLEARANCE OF THE PARKADE ENTRANCE DOOR.
 - PROVIDE ACCESS PANELS AT DRYWALL CEILING FOR ALL PLUMBING INSTALLATIONS AS REQUIRED. COORDINATE WITH GENERAL CONTRACTOR.
 - PROVIDE SHUT-OFF VALVES C/W ACCESS PANELS IN ALL SUITES FOR DOMESTIC HOT & COLD WATER LINES. PROVIDE STICKERS IS PLACED ON ACCESS PANEL TO INDICATE LOCATION OF VALVES.
 - PROVIDE A 1/2"Ø (13mmØ) COLD WATER LINE TO FRIDGE LOCATION IN EACH DWELLING UNIT C/W SHUT-OFF VALVE.
 - ALLOW DEDICATED SANITARY RISER FOR LAUNDRY CLOTHES WASHERS. SANITARY RISER CANNOT SHARE DRAINAGE WITH ANY OTHER PLUMBING FIXTURES.
 - WHERE A VERTICAL GAS LINE EXISTS IN A PIPE CHASE THE CHASE MUST HAVE AN OPENING WITH MINIMUM AREA EQUIVALENT TO A ROUND OPENING OF 1 INCH (25mm) IN DIAMETER AT THE TOP AND BOTTOM OF CHASE WITH ARTICLE 6.7.5. OF CSA-B49.1-15. COORDINATE INSTALLATION OF REQUIRED OPENINGS WITH GENERAL CONTRACTOR.
 - SANITARY RISERS, DOMESTIC HOT, COLD & RECIRCULATION RISERS, HEATING HOT WATER SUPPLY & RETURN RISERS, GAS LINE RISERS & STORM PIPE RAIN WATER LEADERS TO BE EQUIPPED WITH RISER CLAMPS AND EXPANSION FITTINGS TO ALLOW FOR BUILDING SHRINKAGE. EXPANSION FITTINGS TO BE INSTALLED IN VERTICAL PIPING PER MANUFACTURERS SPECIFICATIONS. ALLOW FOR OVERSIZING WALLS IN HORIZONTAL TAKE OFF SERVICE PIPING TEES OFF OF MAIN VERTICAL RISERS TO MITIGATE SHEAR WITH BUILDING SETTLEMENT AND SHRINKAGE.

- GENERAL HVAC NOTES:**
- SUPPLY AND INSTALL ALL FIRE STOPPING MATERIAL AND ENSURE THAT ALL FIRE PENETRATIONS ARE PROTECTED AS REQUIRED BY THE NATIONAL BUILDING CODE - ALBERTA EDITION AND THE LOCAL AUTHORITIES.
 - THIS CONTRACTOR SHALL ENSURE HOUSEKEEPING PADS AT 100mm THICK ARE INSTALLED UNDER ALL MECHANICAL EQUIPMENT IN MECHANICAL ROOM. COORDINATE WITH GENERAL CONTRACTOR.
 - ENSURE ALL MECHANICAL LOCATED IN THE PARKADE IS INSTALLED WITH A HEAD HEIGHT CLEARANCE FROM THE FINISHED FLOOR EQUAL TO OR GREATER THAN THE CLEARANCE OF THE PARKADE ENTRANCE DOOR.
 - THE MECHANICAL SUB-CONTRACTOR SHALL REFER TO THE CONDENSING UNIT INSTALLATION AND OPERATION MANUALS FOR MAXIMUM ALLOWED REFRIGERANT LINE LENGTHS TO COOLING COILS IN MECHANICAL UNITS.
 - PROVIDE MINIMUM 1/2"Ø SUPPLY AND RETURN HOT WATER HEATING LINES TO ALL FORCE FLOW HEATERS, UNITS HEATERS AND RADIATION CABINETS UNLESS NOTED OTHERWISE.
 - ALL WASHROOM RETURN GRILLES AND ASSOCIATED DUCTS ARE TO BE INSTALLED WITHIN DROPPED CEILINGS. COORDINATE EXACT LOCATION OF DROPPED CEILINGS ON SITE.
 - ALLOW FOR WALL CAPS AT ALL DUCTWORK ON EXTERIOR WALLS AS REQUIRED.
 - AIR BALANCE DAMPERS TO BE PROVIDED FOR ALL BRANCH DUCTWORK FEEDING INDIVIDUAL DIFFUSERS.
 - ENSURE ALL DUCTWORK EXTENDING TO EXTERIOR OF BUILDING IS WRAPPED WITH INSULATION. REFER TO SPECIFICATIONS.
 - ENSURE THERMOWELLS ARE UTILIZED FOR ALL TEMPERATURE GAUGES IN HEATING SYSTEM.
 - ENSURE SHUT OFF VALVES ARE INSTALLED BETWEEN ALL GAUGES AND TEE CONNECTION TO ALLOW EASY REPAIR OF GAUGES.
 - DRYER EXHAUST FANS MUST BE INTERLOCKED WITH DRYER BY MEANS OF AIR PROVING SWITCH OR CONTROL RELAY (TO BE PROVIDED BY MECHANICAL CONTRACTOR).
 - ALL ELECTRIC HEATING EQUIPMENT IS SHOWN AS A REFERENCE. ALL ELECTRIC HEATING EQUIPMENT TO BE SUPPLIED AND INSTALLED BY ELECTRICAL SUB-CONTRACTOR.
 - ALL LINE VOLTAGE THERMOSTATS CONTROLLING ELECTRIC HEATING EQUIPMENT IS SHOWN AS A REFERENCE. ALL LINE VOLTAGE THERMOSTATS TO BE SUPPLIED AND INSTALLED BY ELECTRICAL SUB-CONTRACTOR.
 - INSULATE ALL FRESH AIR INTAKE DUCTS FROM OUTSIDE EXTERIOR WALL TO MECHANICAL UNITS. REFER TO SPECIFICATIONS.
 - VERTICAL HEATING SUPPLY AND RETURN PIPING MUST BE LOCATED OUTSIDE OF DWELLING UNIT PARTY WALLS TO AVOID COMPROMISING THE INTEGRITY OF THE FIRE SEPARATIONS. COORDINATE WITH GENERAL CONTRACTOR.
 - WHERE COMBINATION FIRE & SMOKE DAMPERS ARE INSTALLED AND COULD OBSTRUCT ALL AIRFLOW FOR A PARTICULAR HVAC UNIT, THE HVAC UNIT NEEDS TO BE SHUT DOWN AUTOMATICALLY WHEN THE FIRE & SMOKE DAMPER CLOSES. COORDINATE WITH ELECTRICAL SUB-CONTRACTOR.
 - WHERE AN EXHAUST OUTLET IS LOCATED WITHIN A SOFFIT, THE SOFFIT SHALL EITHER BE UN-VENTED, OR IF VENTED, THE FULL DEPTH OF THE SOFFIT SHALL BE BLOCKED FOR A DISTANCE OF 1.8m ON EACH SIDE OF THE EXHAUST OUTLET PER NBC 2023-AE - ARTICLE 9.32.3.13. COORDINATE WITH GENERAL CONTRACTOR.
 - WHERE AN EXHAUST OUTLET IS LOCATED IN A SIDEWALL LESS THAN 1.8m FROM A SOFFIT, A SECTION OF THE SOFFIT ABOVE THE EXHAUST OUTLET SHALL BE UN-VENTED, OR IF VENTED, THE FULL DEPTH OF THE SOFFIT SHALL BE BLOCKED IN ACCORDANCE WITH THE WIDTHS STIPULATED IN NBC 2023-AE, TABLE 9.32.3.13-A, CENTERED OVER THE LOCATION OF THE OUTLET. COORDINATE WITH GENERAL CONTRACTOR.
 - VERTICAL HVAC DUCTING TO BE EQUIPPED WITH RISER CLAMPS AND EXPANSION FITTINGS TO ALLOW FOR BUILDING SHRINKAGE. EXPANSION FITTINGS TO BE INSTALLED PER MANUFACTURERS SPECIFICATIONS.

ISSUED FOR
COORDINATION

NO. ISSUE/REVISION DATE
1 30% Review 2026-04-30

PROJECT MANAGER DRAWN
K.V T.K/G.T
PROJECT LEAD CHECKED
J.P/G.U J.P/G.U/K.V

BLACK BEAR
CROSSING - BLACK
BIRCH HEIGHTS

BLACK BEAR CROSSING SW, TSUU
T'INA NATION 145 AB

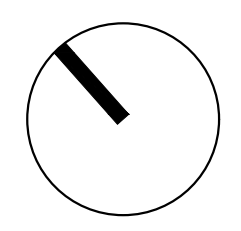
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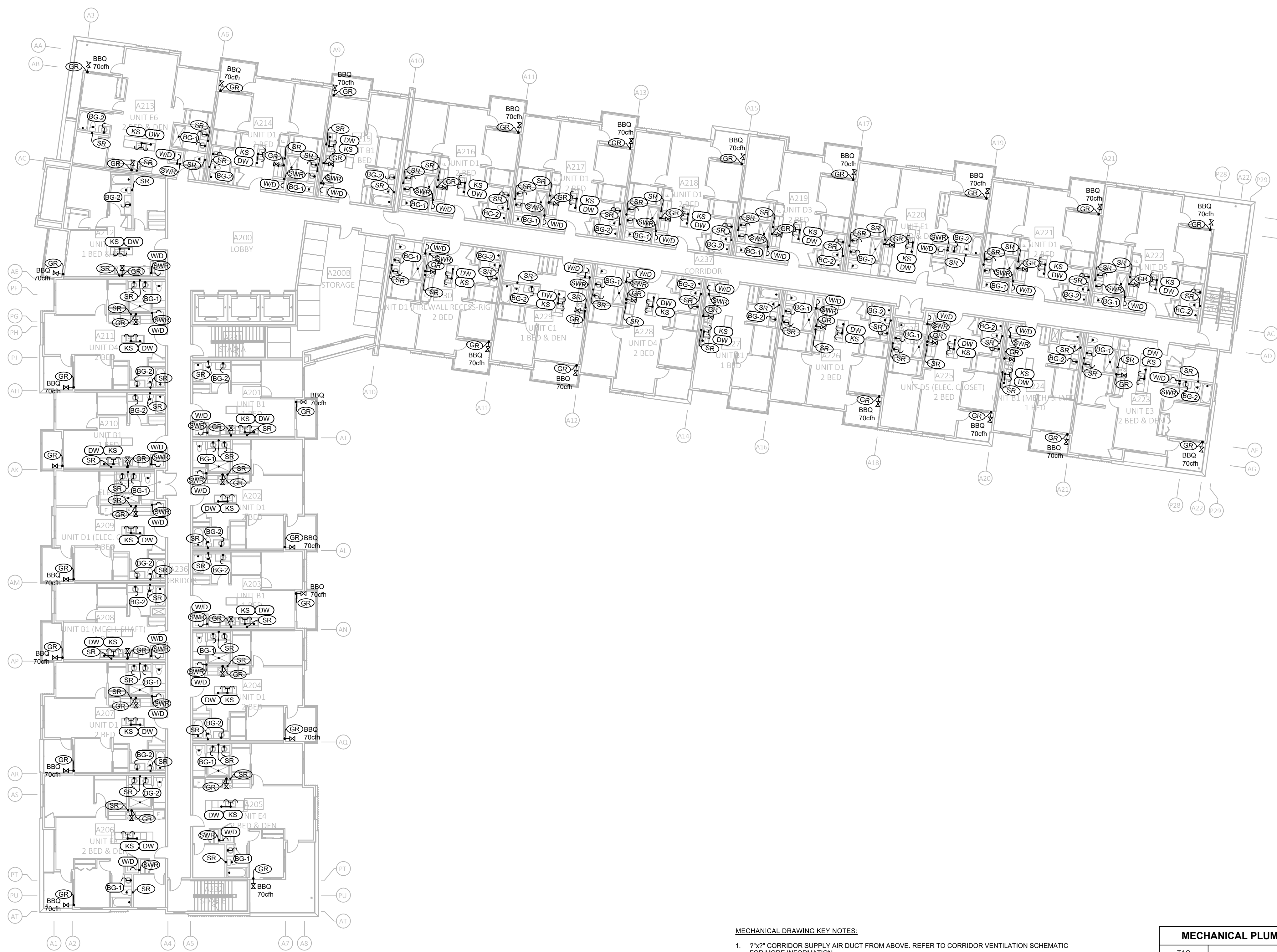


BUILDING A - LEVEL 1
FLOOR PLAN
MECHANICAL
LAYOUT

SCALE

M30-01-01





BUILDING A - LEVEL 2 FLOOR PLAN
MECHANICAL LAYOUT
SCALE: 1/16" = 1'-0"

- MECHANICAL DRAWING KEY NOTES:**
- 7"Y" CORRIDOR SUPPLY AIR DUCT FROM ABOVE. REFER TO CORRIDOR VENTILATION SCHEMATIC FOR MORE INFORMATION.
 - SUPPLY AIR GRILLE WITH COMBINATION FIRE AND SMOKE DAMPER, REFER TO MECHANICAL DETAILS.
 - LOCATION OF SEMI-RECESSED FIRE EXTINGUISHER CABINET C/W FIRE EXTINGUISHER.
 - PROPOSED LOCATION OF FIRE PROTECTION SYSTEM STANDPIPE IN STAIRWELL PER FIRE PROTECTION ENGINEERED DESIGN DOCUMENTS. AREA NEEDED FOR STANDPIPE AND CONNECTIONS IS APPROXIMATELY 22' x 13'. COORDINATE WITH FIRE PROTECTION CONTRACTOR AND ENGINEER.
 - GAS RANGE & / OR GAS BBQ RISER. PROVIDE SHUT OFF VALVE AT EACH OUTLET LOCATION.
 - 3/4"Ø COLD WATER LINE FROM BELOW TO SUPPLY FROST FREE HOSE BIBB.
 - 4"Ø STORM LINE FROM ABOVE.

MECHANICAL PLUMBING RISER LEGEND

TAG	DESCRIPTION
(SWR)	SANITARY RISER LOCATION & WATER RISER (COLD, HOT AND RECIRCULATION) LOCATION
(SR)	SANITARY RISER LOCATION
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PIPING LEGEND

NEW SANITARY LINE (OVERHEAD / EXPOSED)	
NEW STORM LINE (OVERHEAD / EXPOSED)	
HEATING SYSTEM HOT WATER SUPPLY LINE	
HEATING SYSTEM HOT WATER RETURN LINE	

PLUMBING FIXTURE CONNECTION SCHEDULE

TAG	DESCRIPTION	PIPE SIZE (INCHES)				
		TRAP	WASTE	VENT	COLD WATER	HOT WATER
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BATHROOM GROUP TAGS

TAG	FIXTURES
BG-1	WC
	VAN
	SHR
BG-2	WC
	VAN
	TUB
BG-3	WC
	VAN
	SHR

- GENERAL PLUMBING NOTES:**
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 - PROVIDE SHUT-OFF VALVES C/W ACCESS PANELS IN ALL SUITES FOR DOMESTIC HOT & COLD WATER LINES. PROVIDE ACCESS PANELS TO INDICATE LOCATION OF VALVES.
 - PROVIDE A 1/2"Ø (13mmØ) COLD WATER LINE TO FRIDGE LOCATION IN EACH DWELLING UNIT C/W SHUT-OFF VALVE.
 - ALLOW DEDICATED SANITARY RISER FOR LAUNDRY CLOTHES WASHERS. SANITARY RISER CANNOT SHARE DRAINAGE WITH ANY OTHER PLUMBING FIXTURES.
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 - PROVIDE MINIMUM 3/8"Ø SUPPLY AND RETURN HOT WATER HEATING LINES TO ALL FORCE FLOW HEATERS, UNITS HEATERS AND RADIATION CABINETS UNLESS NOTED OTHERWISE.
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ISSUED FOR
COORDINATION

NO. ISSUE/REVISION DATE
1 30% Review 2026-04-30

PROJECT MANAGER DRAWN
K.V T.K/G.T
PROJECT LEAD CHECKED
J.P/G.U J.P/G.U/K.V

BLACK BEAR
CROSSING - BLACK
BIRCH HEIGHTS

BLACK BEAR CROSSING SW, TSUU
T'INA NATION 145 AB

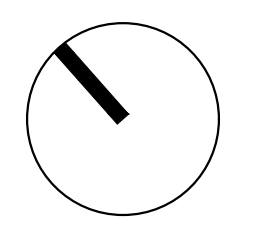
PROJECT # 25141.1
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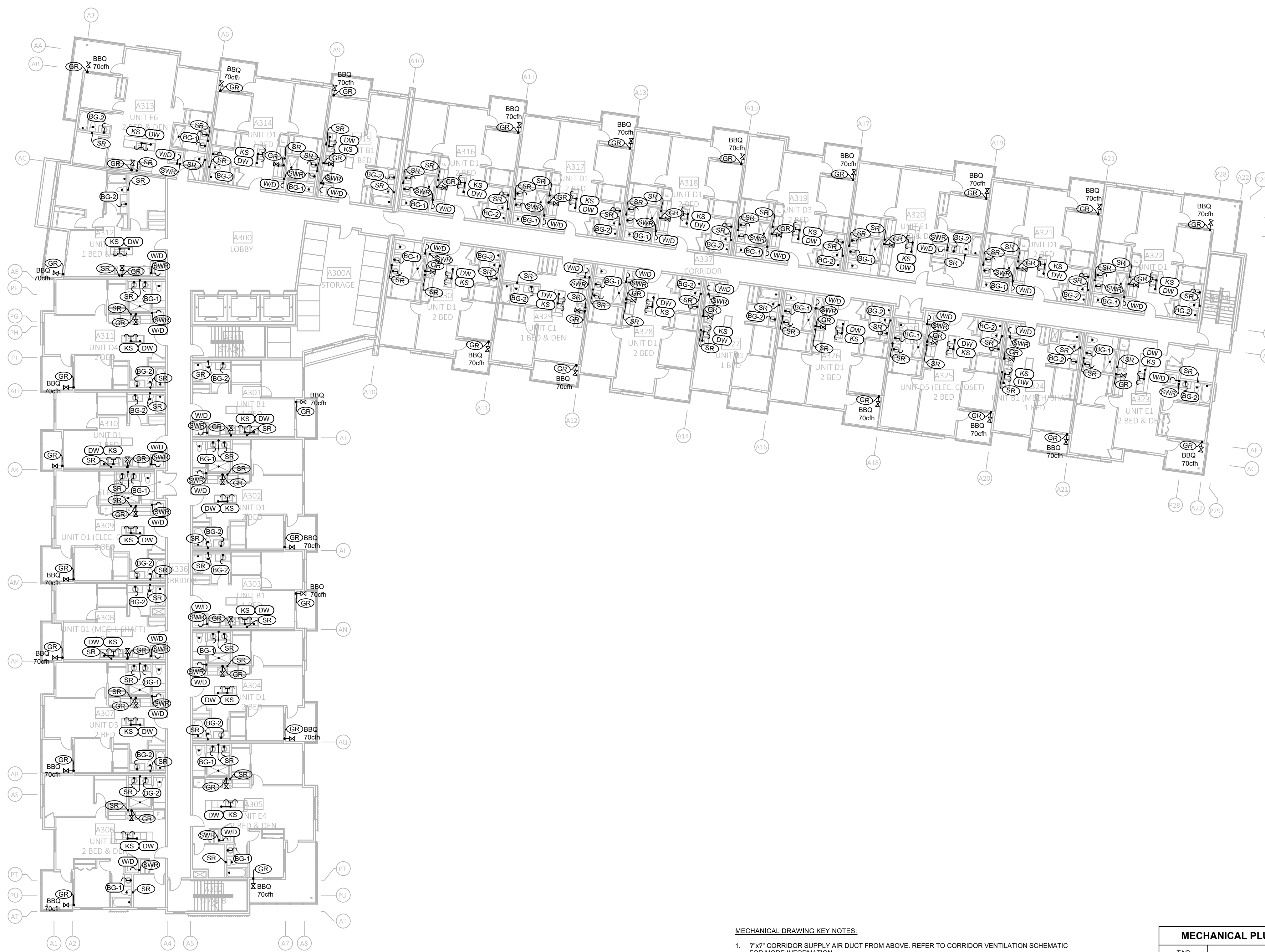


BUILDING A - LEVEL 2
FLOOR PLAN
MECHANICAL
LAYOUT

SCALE

M30-01-02





BUILDING A - LEVEL 3 FLOOR PLAN
MECHANICAL LAYOUT
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MECHANICAL PLUMBING RISER LEGEND

TAG	DESCRIPTION
(SWR)	SANITARY RISER LOCATION & WATER RISER (COLD, HOT AND RECIRCULATION) LOCATION
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PIPING LEGEND

NEW SANITARY LINE (OVERHEAD / EXPOSED)	
NEW STORM LINE (OVERHEAD / EXPOSED)	
HEATING SYSTEM HOT WATER SUPPLY LINE	
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TAG	DESCRIPTION	PIPE SIZE (INCHES)				
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VAN	SINGLE COMPARTMENT SINK	1 1/2"Ø	1 1/2"Ø	1 1/4"Ø	1/2"Ø	1/2"Ø
SHR	SHOWER	1 1/2"Ø	1 1/2"Ø	1 1/4"Ø	1/2"Ø	1/2"Ø
TUB	BATH TUB	1 1/2"Ø	1 1/2"Ø	1 1/4"Ø	1/2"Ø	1/2"Ø
WID	CLOTHES WASHER / DRYER	2"Ø	2"Ø	1 1/2"Ø	1/2"Ø	1/2"Ø
KS/DW	KITCHEN SINK / DISHWASHER	1 1/2"Ø	1 1/2"Ø	1 1/4"Ø	1/2"Ø	1/2"Ø
MSJS	JANITOR SINK / MOP SINK	1 1/2"Ø	1 1/2"Ø	1 1/4"Ø	1/2"Ø	1/2"Ø

BATHROOM GROUP TAGS

TAG	FIXTURES
BG-1	WC
	VAN
	SHR
BG-2	WC
	VAN
	TUB
BG-3	WC
	VAN
	SHR

- GENERAL PLUMBING NOTES:**
- SUPPLY AND INSTALL ALL FIRE STOPPING MATERIAL AND ENSURE THAT ALL FIRE PENETRATIONS ARE PROTECTED AS REQUIRED BY THE NATIONAL BUILDING CODE - ALBERTA EDITION AND THE LOCAL AUTHORITIES.
 - WEEPING TILE LAYOUT IS FOR REFERENCE ONLY. WEEPING TILE TO BE SUPPLIED AND INSTALLED BY GENERAL CONTRACTOR. EXACT ROUTING, SIZE AND INSTALLATION OF WEEPING TILE MUST BE CONFIRMED BY GEOTECHNICAL ENGINEER PRIOR TO INSTALLATION.
 - PROVIDE A LOCKABLE TAMPER-PROOF ENCLOSURE AROUND ALL PUBLICLY EXPOSED CONTROL PANELS AND ASSOCIATED POWER SUPPLY.
 - ALL STORM AND SANITARY SUMP COVERS ARE TO BE SEALED AIR-TIGHT TO PREVENT RADON GAS FROM ENTERING THE BUILDING. COVERS TO BE RATED FOR VEHICULAR TRAFFIC WHERE REQUIRED.
 - DRAWINGS ARE DIAGRAMMATIC ONLY. CONTRACTOR TO INSTALL ALL DRAINS AND VENTS NOT SHOWN TO BE INSTALLED IN ACCORDANCE WITH THE NATIONAL PLUMBING CODE OF CANADA. CONTRACTOR TO PROVIDE AN ACCURATE AS-BUILT REFLECTING SUCH.
 - COORDINATE ALL SANITARY PIPING, FIXTURE LOCATIONS AND VENT LINES WITH STRUCTURAL FRAMING BEFORE INSTALLATION.
 - PROVIDE SLEEVES AS REQUIRED THROUGH STRUCTURAL ELEMENTS FOR ALL MECHANICAL SYSTEMS.
 - THIS CONTRACTOR SHALL ENSURE HOUSEKEEPING PADS AT 100mm THICK ARE INSTALLED UNDER ALL MECHANICAL EQUIPMENT IN MECHANICAL ROOM. COORDINATE WITH GENERAL CONTRACTOR.
 - ALL STORM PIPING WITHIN THE PARKADE MUST BE PRESSURE RATED.
 - ENSURE ALL MECHANICAL LOCATED IN THE PARKADE IS INSTALLED WITH A HEAD HEIGHT CLEARANCE FROM THE FINISHED FLOOR EQUAL TO OR GREATER THAN THE CLEARANCE OF THE PARKADE ENTRANCE DOOR.
 - PROVIDE ACCESS PANELS AT DRYWALL CEILING FOR ALL PLUMBING INSTALLATIONS AS REQUIRED. COORDINATE WITH GENERAL CONTRACTOR.
 - PROVIDE SHUT-OFF VALVES C/W ACCESS PANELS IN ALL SUITES FOR DOMESTIC HOT & COLD WATER LINES. PROVIDE ACCESS PANELS TO INDICATE LOCATION OF VALVES.
 - PROVIDE A 1/2"Ø (13mmØ) COLD WATER LINE TO FRIDGE LOCATION IN EACH DWELLING UNIT C/W SHUT-OFF VALVE.
 - ALLOW DEDICATED SANITARY RISER FOR LAUNDRY CLOTHES WASHERS. SANITARY RISER CANNOT SHARE DRAINAGE WITH ANY OTHER PLUMBING FIXTURES.
 - WHERE A VERTICAL GAS LINE EXISTS IN A PIPE CHASE THE CHASE MUST HAVE AN OPENING WITH MINIMUM AREA EQUIVALENT TO A ROUND OPENING OF 1 INCH (25mm) IN DIAMETER AT THE TOP AND BOTTOM OF CHASE TO COMPLY WITH ARTICLE 6.7.5. OF CSA-B49.1-15. COORDINATE INSTALLATION OF REQUIRED OPENINGS WITH GENERAL CONTRACTOR.
 - SANITARY RISERS, DOMESTIC HOT, COLD & RECIRCULATION RISERS, HEATING HOT WATER SUPPLY & RETURN RISERS, GAS LINE RISERS & STORM PIPE RAIN WATER LEADERS TO BE EQUIPPED WITH RISER CLAMPS AND EXPANSION FITTINGS TO ALLOW FOR BUILDING SHRINKAGE. EXPANSION FITTINGS TO BE INSTALLED IN VERTICAL PIPING PER MANUFACTURERS SPECIFICATIONS. ALLOW OVERSIZED HOLES IN STUD WALLS WHERE HORIZONTAL TAKE OFF SERVICE PIPING TEES OFF OF MAIN VERTICAL RISERS TO MITIGATE SHEAR WITH BUILDING SETTLEMENT AND SHRINKAGE.

- GENERAL HVAC NOTES:**
- SUPPLY AND INSTALL ALL FIRE STOPPING MATERIAL AND ENSURE THAT ALL FIRE PENETRATIONS ARE PROTECTED AS REQUIRED BY THE NATIONAL BUILDING CODE - ALBERTA EDITION AND THE LOCAL AUTHORITIES.
 - THIS CONTRACTOR SHALL ENSURE HOUSEKEEPING PADS AT 100mm THICK ARE INSTALLED UNDER ALL MECHANICAL EQUIPMENT IN MECHANICAL ROOM. COORDINATE WITH GENERAL CONTRACTOR.
 - ENSURE ALL MECHANICAL LOCATED IN THE PARKADE IS INSTALLED WITH A HEAD HEIGHT CLEARANCE FROM THE FINISHED FLOOR EQUAL TO OR GREATER THAN THE CLEARANCE OF THE PARKADE ENTRANCE DOOR.
 - THE MECHANICAL SUB-CONTRACTOR SHALL REFER TO THE CONDENSING UNIT INSTALLATION AND OPERATION MANUALS FOR MAXIMUM ALLOWED REFRIGERANT LINE LENGTHS TO COOLING COILS IN MECHANICAL UNITS.
 - PROVIDE MINIMUM 3/8"Ø SUPPLY AND RETURN HOT WATER HEATING LINES TO ALL FORCE FLOW HEATERS, UNITS HEATERS AND RADIATION CABINETS UNLESS NOTED OTHERWISE.
 - ALL WASHROOM RETURN GRILLES AND ASSOCIATED DUCTS ARE TO BE INSTALLED WITHIN DROPPED CEILINGS. COORDINATE EXACT LOCATION OF DROPPED CEILINGS ON SITE.
 - ALLOW FOR WALL CAPS AT ALL DUCTWORK ON EXTERIOR WALLS AS REQUIRED.
 - AIR BALANCE DAMPERS TO BE PROVIDED FOR ALL BRANCH DUCTWORK FEEDING INDIVIDUAL DIFFUSERS.
 - ENSURE ALL DUCTWORK EXTENDING TO EXTERIOR OF BUILDING IS WRAPPED WITH INSULATION. (REFER TO SPECIFICATIONS)
 - ENSURE THERMOWELLS ARE UTILIZED FOR ALL TEMPERATURE GAUGES IN HEATING SYSTEM.
 - ENSURE SHUT OFF VALVES ARE INSTALLED BETWEEN ALL GAUGES AND TEE CONNECTION TO ALLOW EASY REPAIR OF GAUGES.
 - DRYER EXHAUST FANS MUST BE INTERLOCKED WITH DRYER BY MEANS OF AIR PROVING SWITCH OR CONTROL RELAY (TO BE PROVIDED BY MECHANICAL CONTRACTOR).
 - ALL ELECTRIC HEATING EQUIPMENT IS SHOWN AS A REFERENCE. ALL ELECTRIC HEATING EQUIPMENT TO BE SUPPLIED AND INSTALLED BY ELECTRICAL SUB-CONTRACTOR.
 - ALL LINE VOLTAGE THERMOSTATS CONTROLLING ELECTRIC HEATING EQUIPMENT IS SHOWN AS A REFERENCE. ALL LINE VOLTAGE THERMOSTATS TO BE SUPPLIED AND INSTALLED BY ELECTRICAL SUB-CONTRACTOR.
 - INSULATE ALL FRESH AIR INTAKE DUCTS FROM OUTSIDE EXTERIOR WALL TO MECHANICAL UNITS. REFER TO SPECIFICATIONS.
 - VERTICAL HEATING SUPPLY AND RETURN PIPING MUST BE LOCATED OUTSIDE OF DWELLING UNIT PARTY WALLS TO AVOID COMPROMISING THE INTEGRITY OF THE FIRE SEPARATIONS. COORDINATE WITH GENERAL CONTRACTOR.
 - WHERE COMBINATION FIRE & SMOKE DAMPERS ARE INSTALLED AND COULD OBSTRUCT ALL AIRFLOW FOR A PARTICULAR HVAC UNIT, THE HVAC UNIT NEEDS TO BE SHUT DOWN AUTOMATICALLY WHEN THE FIRE & SMOKE DAMPER CLOSES. COORDINATE WITH ELECTRICAL SUB-CONTRACTOR.
 - WHERE AN EXHAUST OUTLET IS LOCATED WITHIN A SOFFIT, THE SOFFIT SHALL EITHER BE UN-VENTED, OR IF VENTED, THE FULL DEPTH OF THE SOFFIT SHALL BE BLOCKED FOR A DISTANCE OF 1.8m ON EACH SIDE OF THE EXHAUST OUTLET PER NBC 2023-AE - ARTICLE 9.32.3.13. COORDINATE WITH GENERAL CONTRACTOR.
 - WHERE AN EXHAUST OUTLET IS LOCATED IN A SIDEWALL LESS THAN 1.8m FROM A SOFFIT, A SECTION OF THE SOFFIT ABOVE THE EXHAUST OUTLET SHALL BE UN-VENTED, OR IF VENTED, THE FULL DEPTH OF THE SOFFIT SHALL BE BLOCKED IN ACCORDANCE WITH THE WIDTHS STIPULATED IN NBC 2023-AE, TABLE 9.32.3.13-A, CENTERED OVER THE LOCATION OF THE OUTLET. COORDINATE WITH GENERAL CONTRACTOR.
 - VERTICAL HVAC DUCTING TO BE EQUIPPED WITH RISER CLAMPS AND EXPANSION FITTINGS TO ALLOW FOR BUILDING SHRINKAGE. EXPANSION FITTINGS TO BE INSTALLED PER MANUFACTURERS SPECIFICATIONS.

ISSUED FOR
COORDINATION

NO. ISSUE/REVISION DATE
1 30% Review 2026-04-30

PROJECT MANAGER DRAWN
K.V T.K/G.T
PROJECT LEAD CHECKED
J.P/G.U J.P/G.U/K.V

BLACK BEAR
CROSSING - BLACK
BIRCH HEIGHTS

BLACK BEAR CROSSING SW, TSUU
T'INA NATION 145 AB

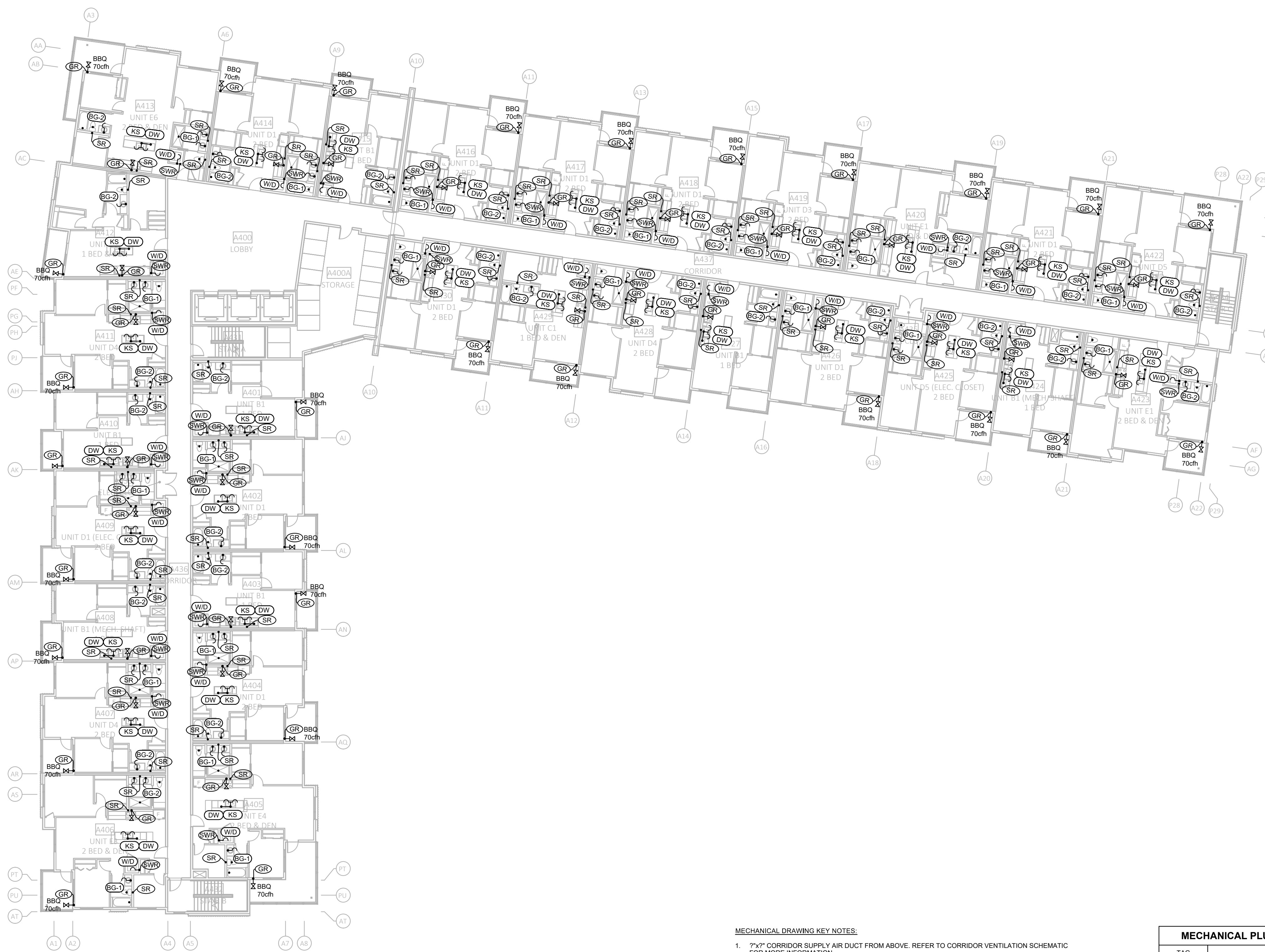
PROJECT # 25141.1
CITY FILE #



BUILDING A - LEVEL 3
FLOOR PLAN
MECHANICAL
LAYOUT

SCALE

M30-01-03



BUILDING A - LEVEL 4 FLOOR PLAN
MECHANICAL LAYOUT
SCALE: 1/16" = 1'-0"

- MECHANICAL DRAWING KEY NOTES:**
- 7"Y" CORRIDOR SUPPLY AIR DUCT FROM ABOVE. REFER TO CORRIDOR VENTILATION SCHEMATIC FOR MORE INFORMATION.
 - SUPPLY AIR GRILLE WITH COMBINATION FIRE AND SMOKE DAMPER, REFER TO MECHANICAL DETAILS.
 - LOCATION OF SEMI-RECESSED FIRE EXTINGUISHER CABINET C/W FIRE EXTINGUISHER.
 - PROPOSED LOCATION OF FIRE PROTECTION SYSTEM STANDPIPE IN STAIRWELL PER FIRE PROTECTION ENGINEERED DESIGN DOCUMENTS. AREA NEEDED FOR STANDPIPE AND CONNECTIONS IS APPROXIMATELY 22' x 13'. COORDINATE WITH FIRE PROTECTION CONTRACTOR AND ENGINEER.
 - GAS RANGE & / OR GAS BBQ RISER. PROVIDE SHUT OFF VALVE AT EACH OUTLET LOCATION.
 - 3/4"Ø COLD WATER LINE FROM BELOW TO SUPPLY FROST FREE HOSE BIBB.
 - 4"Ø STORM LINE FROM ABOVE.

MECHANICAL PLUMBING RISER LEGEND

TAG	DESCRIPTION
(SWR)	SANITARY RISER LOCATION & WATER RISER (COLD, HOT AND RECIRCULATION) LOCATION
(SR)	SANITARY RISER LOCATION
(GR)	GAS RANGE & / OR GAS BBQ RISER. PROVIDE SHUT OFF VALVE AT EACH OUTLET LOCATION

PIPING LEGEND

NEW SANITARY LINE (OVERHEAD / EXPOSED)	
NEW STORM LINE (OVERHEAD / EXPOSED)	
HEATING SYSTEM HOT WATER SUPPLY LINE	
HEATING SYSTEM HOT WATER RETURN LINE	

PLUMBING FIXTURE CONNECTION SCHEDULE

TAG	DESCRIPTION	PIPE SIZE (INCHES)				
		TRAP	WASTE	VENT	COLD WATER	HOT WATER
WC	WATER CLOSET / FLUSH TANK / FLOOR MOUNTED	INT.	3"Ø	1 1/2"Ø	1/2"Ø	---
VAN	SINGLE COMPARTMENT SINK	1 1/2"Ø	1 1/2"Ø	1 1/4"Ø	1/2"Ø	1/2"Ø
SHR	SHOWER	1 1/2"Ø	1 1/2"Ø	1 1/4"Ø	1/2"Ø	1/2"Ø
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WID	CLOTHES WASHER / DRYER	2"Ø	2"Ø	1 1/2"Ø	1/2"Ø	1/2"Ø
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BATHROOM GROUP TAGS

TAG	FIXTURES
BG-1	WC
	VAN
	SHR
BG-2	WC
	VAN
	TUB
BG-3	WC
	VAN
	SHR

- GENERAL PLUMBING NOTES:**
- SUPPLY AND INSTALL ALL FIRE STOPPING MATERIAL AND ENSURE THAT ALL FIRE PENETRATIONS ARE PROTECTED AS REQUIRED BY THE NATIONAL BUILDING CODE - ALBERTA EDITION AND THE LOCAL AUTHORITIES.
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 - PROVIDE A LOCKABLE TAMPER-PROOF ENCLOSURE AROUND ALL PUBLICLY EXPOSED CONTROL PANELS AND ASSOCIATED POWER SUPPLY.
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 - PROVIDE ACCESS PANELS AT DRYWALL CEILING FOR ALL PLUMBING INSTALLATIONS AS REQUIRED. COORDINATE WITH GENERAL CONTRACTOR.
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 - ALLOW DEDICATED SANITARY RISER FOR LAUNDRY CLOTHES WASHERS. SANITARY RISER CANNOT SHARE DRAINAGE WITH ANY OTHER PLUMBING FIXTURES.
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 - SANITARY RISERS, DOMESTIC HOT, COLD & RECIRCULATION RISERS, HEATING HOT WATER SUPPLY & RETURN RISERS, GAS LINE RISERS & STORM PIPE RAIN WATER LEADERS TO BE EQUIPPED WITH RISER CLAMPS AND EXPANSION FITTINGS TO ALLOW FOR BUILDING SHRINKAGE. EXPANSION FITTINGS TO BE INSTALLED IN VERTICAL PIPING PER MANUFACTURERS SPECIFICATIONS. ALLOW OVERLAP IN STUD WALLS WHERE HORIZONTAL TAKE OFF SERVICE PIPING TEES OFF OF MAIN VERTICAL RISERS TO MITIGATE SHEAR WITH BUILDING SETTLEMENT AND SHRINKAGE.

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 - THE MECHANICAL SUB-CRONTACTOR SHALL REFER TO THE CONDENSING UNIT INSTALLATION AND OPERATION MANUALS FOR MAXIMUM ALLOWED REFRIGERANT LINE LENGTHS TO COOLING COILS IN MECHANICAL UNITS.
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ISSUED FOR
COORDINATION

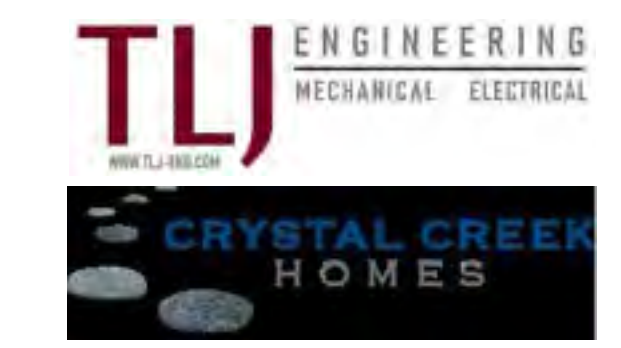
NO. ISSUE/REVISION DATE
1 30% Review 2026-04-30

PROJECT MANAGER DRAWN
K.V T.K/G.T
PROJECT LEAD CHECKED
J.P/G.U J.P/G.U/K.V

BLACK BEAR
CROSSING - BLACK
BIRCH HEIGHTS

BLACK BEAR CROSSING SW, TSUU
T'INA NATION 145 AB

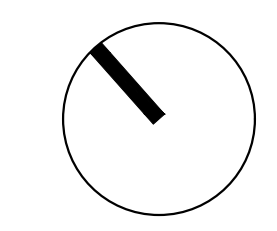
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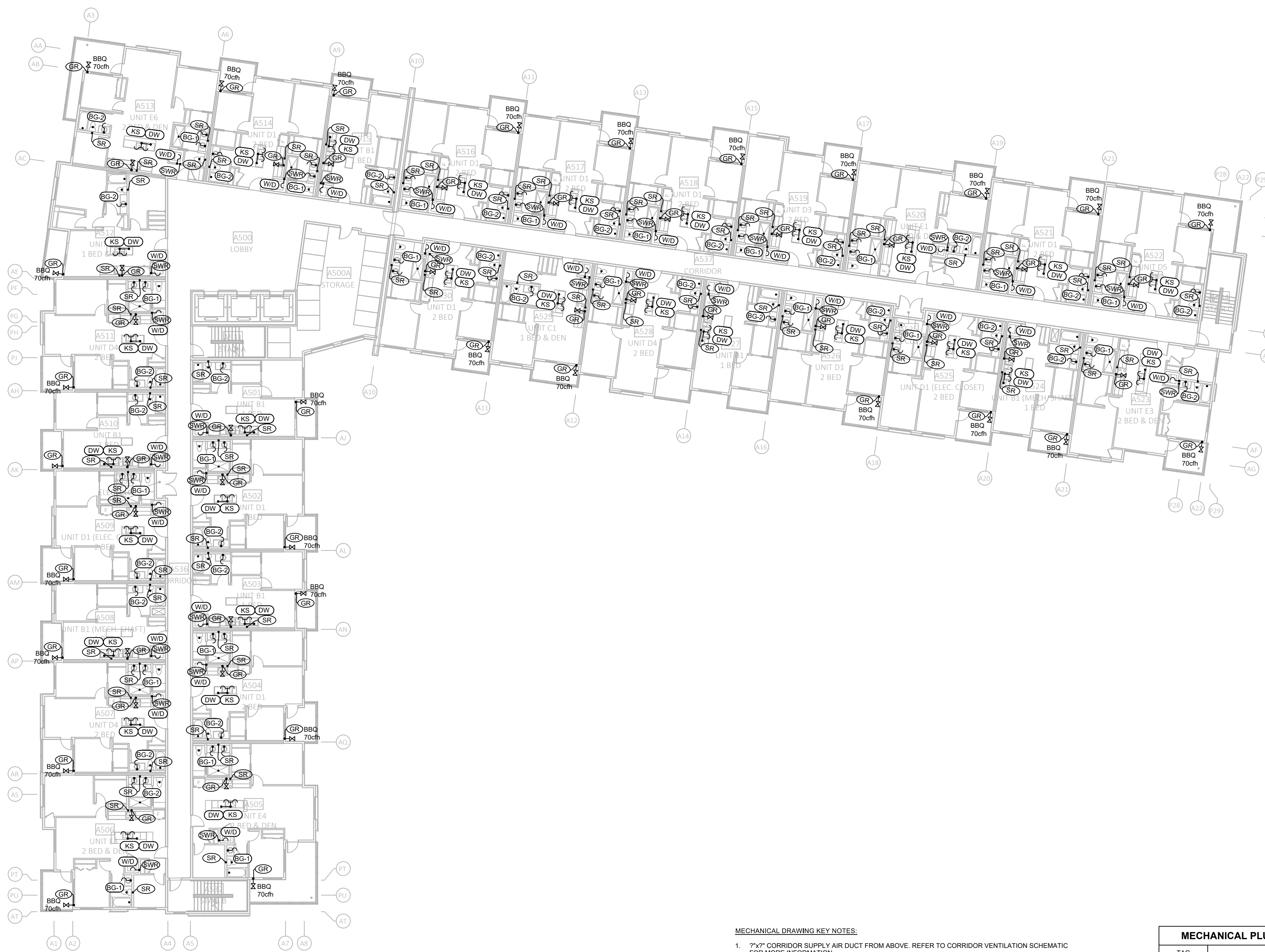


BUILDING A - LEVEL 4
FLOOR PLAN
MECHANICAL
LAYOUT

SCALE

M30-01-04





BUILDING A - LEVEL 5 FLOOR PLAN
MECHANICAL LAYOUT
SCALE: 1/16" = 1'-0"

- MECHANICAL DRAWING KEY NOTES:**
- 7"Y" CORRIDOR SUPPLY AIR DUCT FROM ABOVE. REFER TO CORRIDOR VENTILATION SCHEMATIC FOR MORE INFORMATION.
 - SUPPLY AIR GRILLE WITH COMBINATION FIRE AND SMOKE DAMPER, REFER TO MECHANICAL DETAILS.
 - LOCATION OF SEMI-RECESSED FIRE EXTINGUISHER CABINET C/W FIRE EXTINGUISHER.
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 - GAS RANGE & / OR GAS BBQ RISER. PROVIDE SHUT OFF VALVE AT EACH OUTLET LOCATION.
 - 3/4"Ø COLD WATER LINE FROM BELOW TO SUPPLY FROST FREE HOSE BIBB.
 - 4"Ø STORM LINE FROM ABOVE.

MECHANICAL PLUMBING RISER LEGEND

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PIPING LEGEND

NEW SANITARY LINE (OVERHEAD / EXPOSED)	
NEW STORM LINE (OVERHEAD / EXPOSED)	
HEATING SYSTEM HOT WATER SUPPLY LINE	
HEATING SYSTEM HOT WATER RETURN LINE	

PLUMBING FIXTURE CONNECTION SCHEDULE

TAG	DESCRIPTION	PIPE SIZE (INCHES)				
		TRAP	WASTE	VENT	COLD WATER	HOT WATER
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BATHROOM GROUP TAGS

TAG	FIXTURES
BG-1	WC
	VAN
	SHR
BG-2	WC
	VAN
	TUB
BG-3	WC
	VAN
	SHR

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 - PROVIDE ACCESS PANELS AT DRYWALL CEILING FOR ALL PLUMBING INSTALLATIONS AS REQUIRED. COORDINATE WITH GENERAL CONTRACTOR.
 - PROVIDE SHUT-OFF VALVES C/W ACCESS PANELS IN ALL SUITES FOR DOMESTIC HOT & COLD WATER LINES. PROVIDE ACCESS PANELS IN STUD WALLS TO INDICATE LOCATION OF VALVES.
 - PROVIDE A 1/2"Ø (13mmØ) COLD WATER LINE TO FRIDGE LOCATION IN EACH DWELLING UNIT C/W SHUT-OFF VALVE.
 - ALLOW DEDICATED SANITARY RISER FOR LAUNDRY CLOTHES WASHERS. SANITARY RISER CANNOT SHARE DRAINAGE WITH ANY OTHER PLUMBING FIXTURES.
 - WHERE A VERTICAL GAS LINE EXISTS IN A PIPE CHASE THE CHASE MUST HAVE AN OPENING WITH MINIMUM AREA EQUIVALENT TO A ROUND OPENING OF 1 INCH (25mm) IN DIAMETER AT THE TOP AND BOTTOM OF CHASE TO COMPLY WITH ARTICLE 6.7.5. OF CSA-B49.1-15. COORDINATE INSTALLATION OF REQUIRED OPENINGS WITH GENERAL CONTRACTOR.
 - SANITARY RISERS, DOMESTIC HOT, COLD & RECIRCULATION RISERS, HEATING HOT WATER SUPPLY & RETURN RISERS, GAS LINE RISERS & STORM PIPE RAIN WATER LEADERS TO BE EQUIPPED WITH RISER CLAMPS AND EXPANSION FITTINGS TO ALLOW FOR BUILDING SHRINKAGE. EXPANSION FITTINGS TO BE INSTALLED IN VERTICAL PIPING PER MANUFACTURERS SPECIFICATIONS. ALLOW OVERSIZED HOLES IN STUD WALLS WHERE HORIZONTAL TAKE OFF SERVICE PIPING TEES OFF OF MAIN VERTICAL RISERS TO MITIGATE SHEAR WITH BUILDING SETTLEMENT AND SHRINKAGE.

- GENERAL HVAC NOTES:**
- SUPPLY AND INSTALL ALL FIRE STOPPING MATERIAL AND ENSURE THAT ALL FIRE PENETRATIONS ARE PROTECTED AS REQUIRED BY THE NATIONAL BUILDING CODE - ALBERTA EDITION AND THE LOCAL AUTHORITIES.
 - THIS CONTRACTOR SHALL ENSURE HOUSEKEEPING PADS AT 100mm THICK ARE INSTALLED UNDER ALL MECHANICAL EQUIPMENT IN MECHANICAL ROOM. COORDINATE WITH GENERAL CONTRACTOR.
 - ENSURE ALL MECHANICAL LOCATED IN THE PARKADE IS INSTALLED WITH A HEAD HEIGHT CLEARANCE FROM THE FINISHED FLOOR EQUAL TO OR GREATER THAN THE CLEARANCE OF THE PARKADE ENTRANCE DOOR.
 - THE MECHANICAL SUB-CRONTACTOR SHALL REFER TO THE CONDENSING UNIT INSTALLATION AND OPERATION MANUALS FOR MAXIMUM ALLOWED REFRIGERANT LINE LENGTHS TO COOLING COILS IN MECHANICAL UNITS.
 - PROVIDE MINIMUM 3/8"Ø SUPPLY AND RETURN HOT WATER HEATING LINES TO ALL FORCE FLOW HEATERS, UNITS HEATERS AND RADIATION CABINETS UNLESS NOTED OTHERWISE.
 - ALL WASHROOM RETURN GRILLES AND ASSOCIATED DUCTS ARE TO BE INSTALLED WITHIN DROPPED CEILINGS. COORDINATE EXACT LOCATION OF DROPPED CEILINGS ON SITE.
 - ALLOW FOR WALL CAPS AT ALL DUCTWORK ON EXTERIOR WALLS AS REQUIRED.
 - AIR BALANCE DAMPERS TO BE PROVIDED FOR ALL BRANCH DUCTWORK FEEDING INDIVIDUAL DIFFUSERS.
 - ENSURE ALL DUCTWORK EXTENDING TO EXTERIOR OF BUILDING IS WRAPPED WITH INSULATION. (REFER TO SPECIFICATIONS)
 - ENSURE THERMOWELLS ARE UTILIZED FOR ALL TEMPERATURE GAUGES IN HEATING SYSTEM.
 - ENSURE SHUT OFF VALVES ARE INSTALLED BETWEEN ALL GAUGES AND TEE CONNECTION TO ALLOW EASY REPAIR OF GAUGES.
 - DRYER EXHAUST FANS MUST BE INTERLOCKED WITH DRYER BY MEANS OF AIR PROVING SWITCH OR CONTROL RELAY (TO BE PROVIDED BY MECHANICAL CONTRACTOR).
 - ALL ELECTRIC HEATING EQUIPMENT IS SHOWN AS A REFERENCE. ALL ELECTRIC HEATING EQUIPMENT TO BE SUPPLIED AND INSTALLED BY ELECTRICAL SUB-CRONTACTOR.
 - ALL LINE VOLTAGE THERMOSTATS CONTROLLING ELECTRIC HEATING EQUIPMENT IS SHOWN AS A REFERENCE. ALL LINE VOLTAGE THERMOSTATS TO BE SUPPLIED AND INSTALLED BY ELECTRICAL SUB-CRONTACTOR.
 - INSULATE ALL FRESH AIR INTAKE DUCTS FROM OUTSIDE EXTERIOR WALL TO MECHANICAL UNITS. REFER TO SPECIFICATIONS.
 - VERTICAL HEATING SUPPLY AND RETURN PIPING MUST BE LOCATED OUTSIDE OF DWELLING UNIT PARTY WALLS TO AVOID COMPROMISING THE INTEGRITY OF THE FIRE SEPARATIONS. COORDINATE WITH GENERAL CONTRACTOR.
 - WHERE COMBINATION FIRE & SMOKE DAMPERS ARE INSTALLED AND COULD OBSTRUCT ALL AIRFLOW FOR A PARTICULAR HVAC UNIT, THE HVAC UNIT NEEDS TO BE SHUT DOWN AUTOMATICALLY WHEN THE FIRE & SMOKE DAMPER CLOSES. COORDINATE WITH ELECTRICAL SUB-CRONTACTOR.
 - WHERE AN EXHAUST OUTLET IS LOCATED WITHIN A SOFFIT, THE SOFFIT SHALL EITHER BE UN-VENTED, OR IF VENTED, THE FULL DEPTH OF THE SOFFIT SHALL BE BLOCKED FOR A DISTANCE OF 1.8m ON EACH SIDE OF THE EXHAUST OUTLET PER NBC 2023-AE - ARTICLE 9.32.3.13. COORDINATE WITH GENERAL CONTRACTOR.
 - WHERE AN EXHAUST OUTLET IS LOCATED IN A SIDEWALL LESS THAN 1.8m FROM A SOFFIT, A SECTION OF THE SOFFIT ABOVE THE EXHAUST OUTLET SHALL BE UN-VENTED, OR IF VENTED, THE FULL DEPTH OF THE SOFFIT SHALL BE BLOCKED IN ACCORDANCE WITH THE WIDTHS STIPULATED IN NBC 2023-AE, TABLE 9.32.3.13-A. CENTERED OVER THE LOCATION OF THE OUTLET. COORDINATE WITH GENERAL CONTRACTOR.
 - VERTICAL HVAC DUCTING TO BE EQUIPPED WITH RISER CLAMPS AND EXPANSION FITTINGS TO ALLOW FOR BUILDING SHRINKAGE. EXPANSION FITTINGS TO BE INSTALLED PER MANUFACTURERS SPECIFICATIONS.

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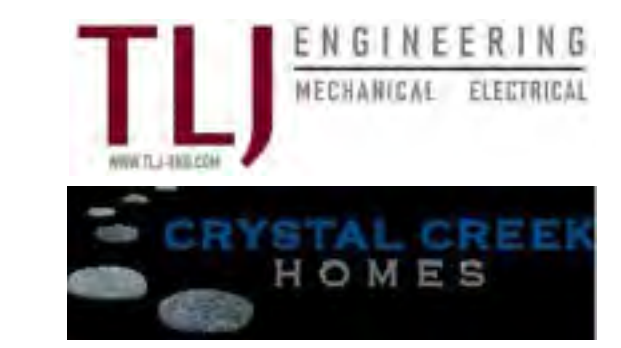
NO. ISSUE/REVISION DATE
1 30% Review 2026-04-30

PROJECT MANAGER DRAWN
K.V T.K/G.T
PROJECT LEAD CHECKED
J.P/G.U J.P/G.U/K.V

BLACK BEAR
CROSSING - BLACK
BIRCH HEIGHTS

BLACK BEAR CROSSING SW, TSUU
T'INA NATION 145 AB

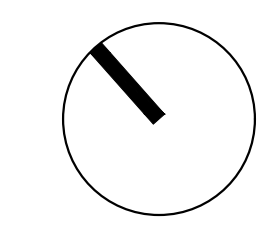
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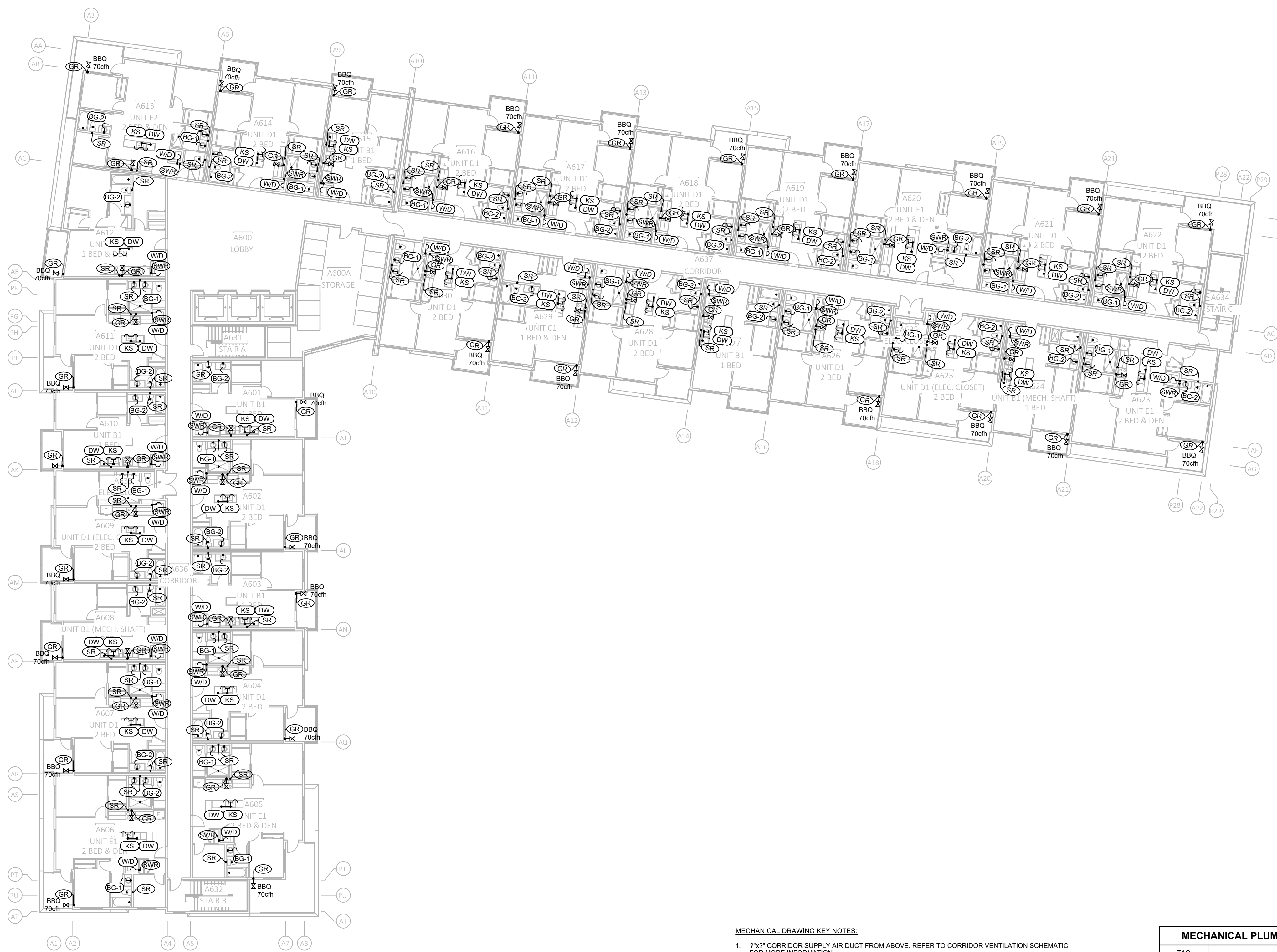


BUILDING A - LEVEL 5
FLOOR PLAN
MECHANICAL
LAYOUT

SCALE

M30-01-05





BUILDING A - LEVEL 6 FLOOR PLAN
MECHANICAL LAYOUT
SCALE: 1/16" = 1'-0"

- MECHANICAL DRAWING KEY NOTES:**
- 7"x7" CORRIDOR SUPPLY AIR DUCT FROM ABOVE. REFER TO CORRIDOR VENTILATION SCHEMATIC FOR MORE INFORMATION.
 - SUPPLY AIR GRILLE WITH COMBINATION FIRE AND SMOKE DAMPER, REFER TO MECHANICAL DETAILS.
 - LOCATION OF SEMI-RECESSED FIRE EXTINGUISHER CABINET C/W FIRE EXTINGUISHER.
 - PROPOSED LOCATION OF FIRE PROTECTION SYSTEM STANDPIPE IN STAIRWELL PER FIRE PROTECTION ENGINEERED DESIGN DOCUMENTS. AREA NEEDED FOR STANDPIPE AND CONNECTIONS IS APPROXIMATELY 22' x 13'. COORDINATE WITH FIRE PROTECTION CONTRACTOR AND ENGINEER.
 - GAS RANGE & / OR GAS BBQ RISER. PROVIDE SHUT OFF VALVE AT EACH OUTLET LOCATION.
 - 3/4" COLD WATER LINE FROM BELOW TO SUPPLY FROST FREE HOSE BIBB.
 - 4" STORM LINE FROM ABOVE.

MECHANICAL PLUMBING RISER LEGEND

TAG	DESCRIPTION
(SWR)	SANITARY RISER LOCATION & WATER RISER (COLD, HOT AND RECIRCULATION) LOCATION
(SR)	SANITARY RISER LOCATION
(GR)	GAS RANGE & / OR GAS BBQ RISER. PROVIDE SHUT OFF VALVE AT EACH OUTLET LOCATION

PIPING LEGEND

NEW SANITARY LINE (OVERHEAD / EXPOSED)	
NEW STORM LINE (OVERHEAD / EXPOSED)	
HEATING SYSTEM HOT WATER SUPPLY LINE	
HEATING SYSTEM HOT WATER RETURN LINE	

PLUMBING FIXTURE CONNECTION SCHEDULE

TAG	DESCRIPTION	PIPE SIZE (INCHES)				
		TRAP	WASTE	VENT	COLD WATER	HOT WATER
WC	WATER CLOSET / FLUSH TANK / FLOOR MOUNTED	INT.	3"	1 1/2"	1 1/2"	---
VAN	SINGLE COMPARTMENT SINK	1 1/2"	1 1/2"	1 1/4"	1 1/2"	1 1/2"
SHR	SHOWER	1 1/2"	1 1/2"	1 1/4"	1 1/2"	1 1/2"
TUB	BATH TUB	1 1/2"	1 1/2"	1 1/4"	1 1/2"	1 1/2"
WID	CLOTHES WASHER / DRYER	2"	2"	1 1/2"	1 1/2"	1 1/2"
KS/DW	KITCHEN SINK / DISHWASHER	1 1/2"	1 1/2"	1 1/4"	1 1/2"	1 1/2"
MSJS	JANITOR SINK / MOP SINK	1 1/2"	1 1/2"	1 1/4"	1 1/2"	1 1/2"

BATHROOM GROUP TAGS

TAG	FIXTURES
BG-1	WC
	VAN
	SHR
BG-2	WC
	VAN
	TUB
BG-3	WC
	VAN
	SHR

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 - PROVIDE A LOCKABLE TAMPER-PROOF ENCLOSURE AROUND ALL PUBLICLY EXPOSED CONTROL PANELS AND ASSOCIATED POWER SUPPLY.
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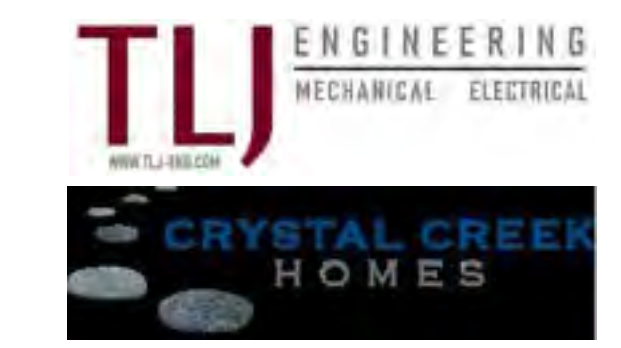
NO. ISSUE/REVISION DATE
1 30% Review 2026-04-30

PROJECT MANAGER DRAWN
K.V T.K/G.T
PROJECT LEAD CHECKED
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BLACK BEAR
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BLACK BEAR CROSSING SW, TSUU
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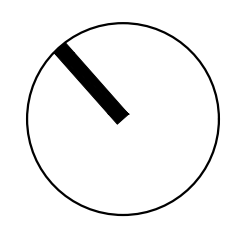
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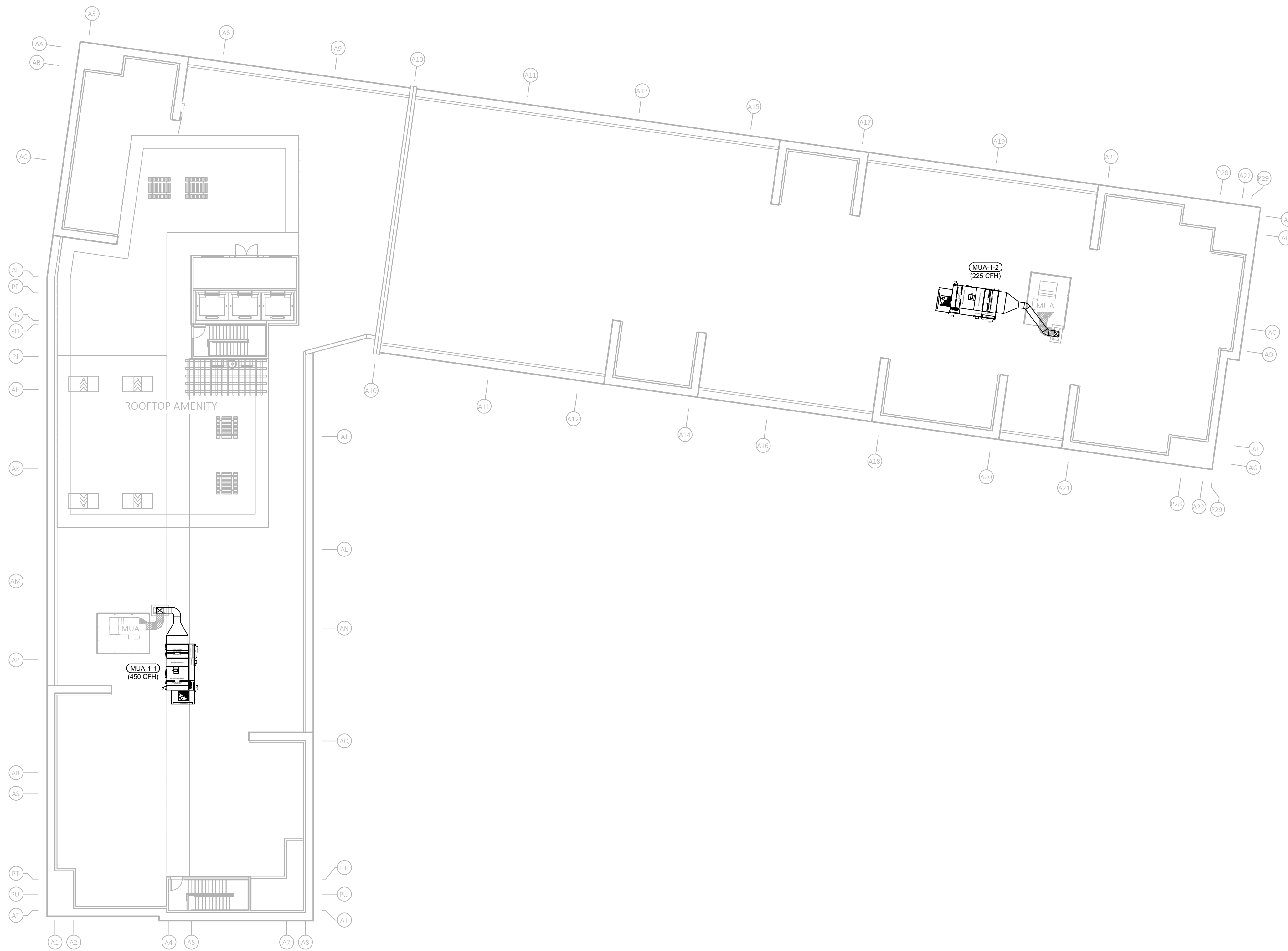


BUILDING A - LEVEL 6
FLOOR PLAN
MECHANICAL
LAYOUT

SCALE

M30-01-06





1
M30-01-07
BUILDING A - ROOF LEVEL FLOOR PLAN
MECHANICAL LAYOUT
SCALE: 1/16" = 1'-0"

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ISSUED FOR COORDINATION

NO.	ISSUE/REVISION	DATE
1	30% Review	2026-04-30

PROJECT MANAGER	DRAWN
K.V	T.K/G.T
PROJECT LEAD	CHECKED
J.P/G.U	J.P/G.U/K.V

BLACK BEAR CROSSING - BLACK BIRCH HEIGHTS

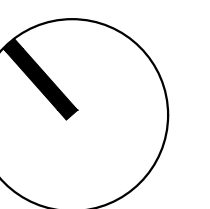
BLACK BEAR CROSSING SW, TSUU T'INA NATION 145 AB

PROJECT # 25141.1
CITY FILE #

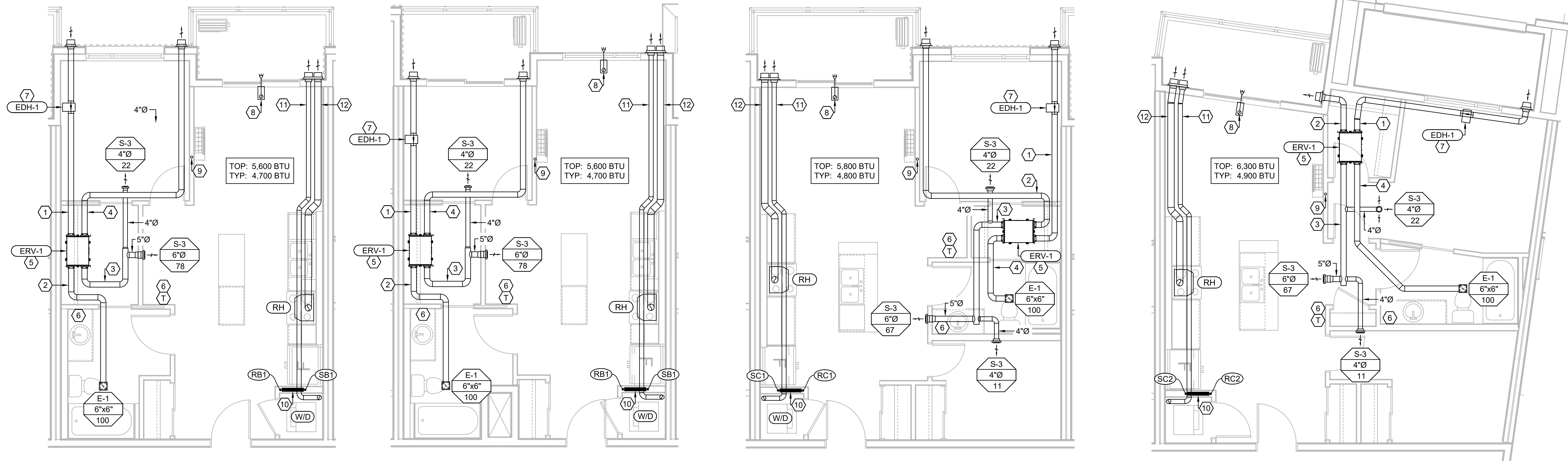


BUILDING A - ROOF PLAN MECHANICAL LAYOUT

SCALE



M30-01-07



1 UNIT B1
HVAC LAYOUT
SCALE: 1/4" = 1'-0"

2 UNIT B1 - MECH SHAFT
HVAC LAYOUT
SCALE: 1/4" = 1'-0"

3 UNIT C1
HVAC LAYOUT
SCALE: 1/4" = 1'-0"

4 UNIT C2
HVAC LAYOUT
SCALE: 1/4" = 1'-0"

ISSUED FOR
COORDINATION

NO.	ISSUE/REVISION	DATE
1	30% Review	2026-04-30

PROJECT MANAGER	DRAWN
K.V	T.K/G.T
PROJECT LEAD	CHECKED
J.P/G.U	J.P/G.U/K.V

BLACK BEAR
CROSSING - BLACK
BIRCH HEIGHTS

BLACK BEAR CROSSING SW, TSUU
T'INA NATION 145 AB

PROJECT # 25141.1
CITY FILE #



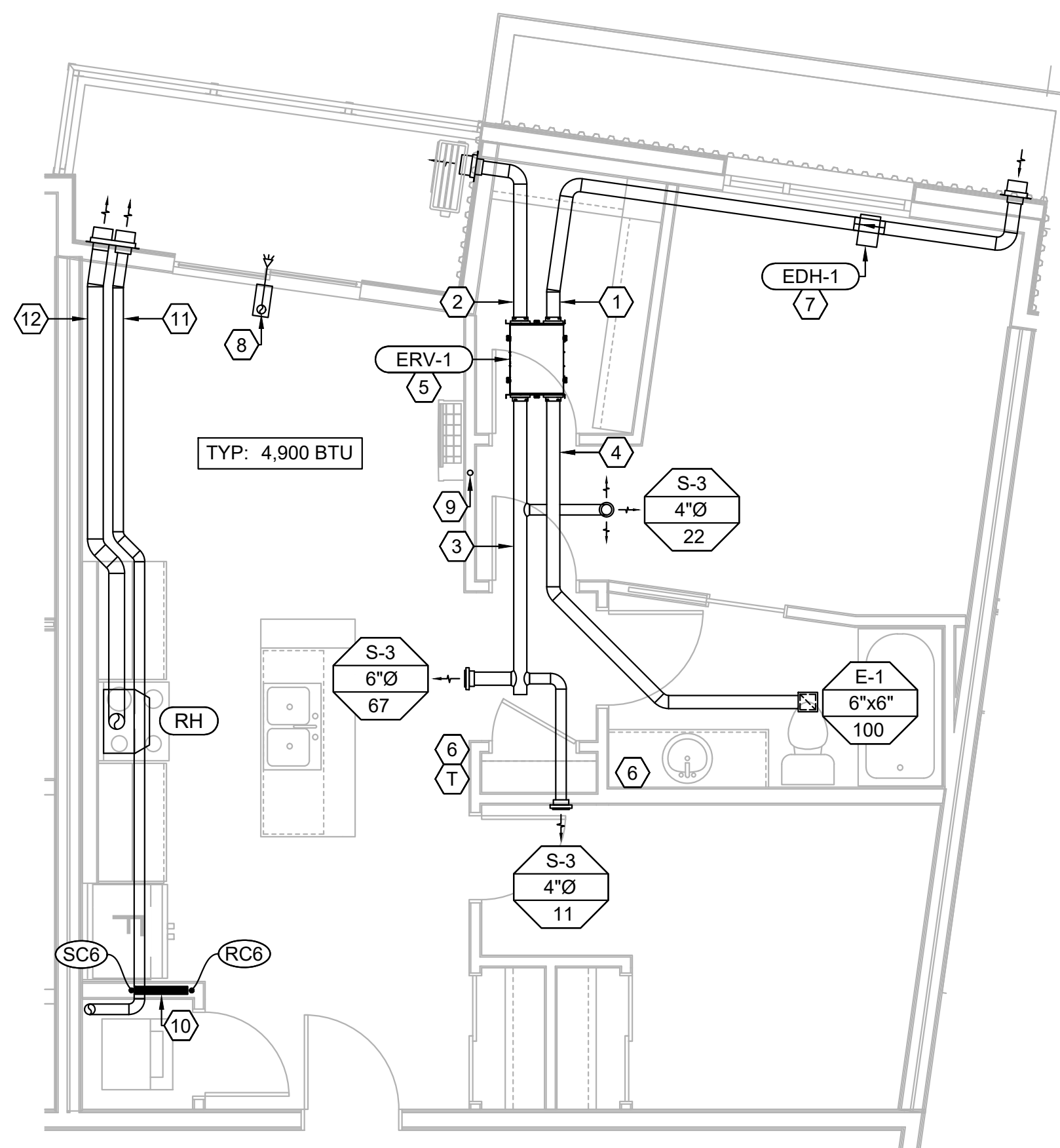
BUILDING A -
UNIT PLANS
HVAC LAYOUT

SUITE HVAC DRAWING KEY NOTES: (#)

- 5"Ø RIGID FRESH AIR DUCT FROM ENERGY RECOVERY VENTILATOR (ERV) FRESH AIR INTAKE PORT TO EXTERIOR WALL. INSULATE ALL FRESH AIR INTAKE DUCTS FROM OUTSIDE EXTERIOR WALL TO ERV UNIT WITH DUCT INSULATION AS PER SPECIFICATIONS.
- 5"Ø RIGID EXHAUST AIR DUCT FROM ENERGY RECOVERY VENTILATOR (ERV) EXHAUST AIR PORT TO EXTERIOR WALL. ENSURE EXTERIOR WALL TERMINATION IS AT PROPER DISTANCE AWAY FROM OTHER VENTS, INTAKE OPENINGS, OPENABLE WINDOWS & OPENABLE DOORS ACCORDING TO CODE. EXHAUST AIR DUCT TO BE INSULATED PER SPECIFICATIONS.
- 5"Ø ACOUSTICALLY INSULATED FLEX SUPPLY AIR DUCT FROM ENERGY RECOVERY VENTILATOR (ERV) TO SUPPLY AIR GRILLE WITHIN MAIN LIVING SPACE.
- 5"Ø RIGID RETURN AIR DUCT FROM BATHROOM GRILLES TO ENERGY RECOVERY VENTILATOR (ERV) RETURN AIR PORT.
- LOCATION OF ERV. ALLOW FOR ACCESS PANEL. ACCESS PANEL TO BE SIZED TO ALLOW FOR COMPLETE REMOVAL AND REPLACEMENT OF ERV UNIT AS WELL AS MAINTENANCE ACCESS FOR FILTER REPLACEMENT.
- LOCATION OF ERV MAIN WALL CONTROLLER LOCATED NEXT TO THE HEATING / COOLING THERMOSTAT IN THE PRINCIPLE LIVING AREA. LOCATION OF TIMER SWITCHES IN EACH OF THE BATHROOMS. CONTROL WIRING & PROGRAMMING FOR THE ERV, MAIN ERV CONTROLLER AND TIMER SWITCHES TO BE INSTALLED TO ALLOW THE TIMER SWITCHES THAT ARE LOCATED IN EACH OF THE BATHROOMS TO CONTROL THE ERV EVEN WHEN THE MAIN WALL CONTROLLER IS IN THE "OFF" POSITION TO COMPLY WITH CODE ARTICLE 9.32.3.7.(7) OF THE NATIONAL BUILDING CODE. COORDINATE WITH ELECTRICAL SUB-CONTRACTOR.
- LOCATION OF ELECTRIC IN-LINE HEATER ON FRESH AIR DUCT OF ERV. ALLOW FOR ACCESS PANEL. ACCESS PANEL TO BE SIZED TO ALLOW FOR COMPLETE REMOVAL AND REPLACEMENT OF ELECTRIC IN-LINE HEATER AS WELL AS MAINTENANCE ACCESS.
- PROPOSED LOCATION OF BALCONY SIDE WALL DRY SPRINKLER HEAD PER FIRE PROTECTION DESIGN DOCUMENTS. COORDINATE WITH FIRE PROTECTION CONTRACTOR & ENGINEER. COORDINATE WITH ARCHITECTURAL FOR BULKHEAD REQUIREMENTS. REFER TO BULKHEAD DETAIL.
- ALLOW FOR CONDENSATE DRAIN & REFRIGERANT LINE ROUGH-INS FOR FUTURE MINI-SPLIT AIR CONDITIONING SYSTEM. CONDENSATE DRAIN FROM EVAPORATOR TO BE CONNECTED TO CONDENSATE RISER DRAIN AS SHOWN. CONDENSATE RISER DRAIN TO BE INSTALLED VERTICALLY THROUGH BUILDING AND TIED TO OVERHEAD SANITARY SYSTEM IN PARKADE UPSTREAM OF SHOWER OR TUB TRAP.
- LOCATION OF IN-FLOOR HEATING HYDRONIC MANIFOLD. REFER TO DETAILS.
- 4"Ø RIGID EXHAUST AIR DUCT FROM CLOTHES DRYER TO SPECIFIED WALL CAP. ENSURE WALL CAP IS AT LEAST 6' FROM FRESH AIR INTAKES.
- 6"Ø RIGID EXHAUST AIR DUCT FROM RANGE HOOD TO SPECIFIED WALL CAP. ENSURE CAP IS AT PROPER DISTANCE AWAY FROM OTHER VENTS, INTAKES, OPERABLE WINDOWS AND DOORS PER BUILDING CODE.
- 6"Ø RIGID FRESH AIR DUCT FROM ENERGY RECOVERY VENTILATOR (ERV) FRESH AIR INTAKE PORT TO EXTERIOR WALL. INSULATE ALL FRESH AIR INTAKE DUCTS FROM OUTSIDE EXTERIOR WALL TO ERV UNIT WITH DUCT INSULATION AS PER SPECIFICATIONS.
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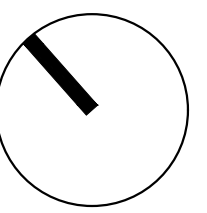
SUITE HVAC GENERAL NOTES:

- ALL DUCTWORK TO BE INSTALLED ABOVE CEILING. COORDINATE ALL DUCTWORK THAT MUST BE RUN IN BULKHEADS WITH ARCHITECTURAL DRAWINGS PRIOR TO INSTALLATION.
- STUB-OUT DRYER DUCT 12" BELOW FINISHED CEILING. ALL DRYER EXHAUST DUCTS ARE TO BE VENTED TO A WALL CAP.
- ANY DRYER DUCTS WITH AN EQUIVALENT LENGTH OF MORE THAN 50 FEET MUST BE EQUIPPED WITH A BOOSTER FAN AND SECONDARY LINT TRAP. REFER TO MECHANICAL SCHEDULE FOR DETAILS.
- DRYER BOOSTER FANS MUST BE INTERLOCKED WITH DRYERS BY MEANS OF AN AIR PROVING SWITCH OR CONTROL RELAY (PROVIDED BY MECHANICAL CONTRACTOR).
- WHEN BALCONY SPRINKLER LINE SHARES BULKHEAD WITH EXHAUST DUCTS, ENSURE THE SPRINKLER LINE IS THERMALLY SEPARATED FROM EXHAUST BULKHEAD. REFER TO ARCHITECTURAL PLANS FOR DETAILS.
- ALL GAS LINES RUNNING IN ANY CONCEALED SPACE TO BE THE "YELLOW JACKET" TYPE WITH NO THREADED CONNECTIONS.
- PROVIDE EXTERNAL 1" FOIL FACED FIBREGLASS INSULATION ON ALL EXHAUST DUCTWORK FOR A DISTANCE OF 10 FEET FROM EXTERIOR WALL TERMINATION. PROVIDE EXTERNAL INSULATION (JOHNS MANVILLE MICROLITE OR EQUIVALENT) ON ALL FRESH AIR INTAKE DUCTWORK FOR THE ENTIRE DISTANCE FROM THE EXTERIOR WALL INTAKE TO THE ERV.
- EXHAUST AIR WALL CAP(S) TO BE AS SHOWN ON DRAWINGS AND SPECIFICATIONS. ALL WALL CAP(S) TO BE PAINTED TO MATCH BUILDING EXTERIOR. COORDINATE WITH ARCHITECTURAL PLANS AND GENERAL CONTRACTOR.
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- LOCATE ERV TIMER SWITCH ADJACENT TO WASHROOM ELECTRICAL SWITCHES. TIMER TO ALLOW 20/40/60 MINUTE OPERATION. TIMER TO ALLOW ERV TO SWITCH FROM CONTINUOUS LOW SPEED TO HIGH SPEED FOR PERIOD OF TIME AS SELECTED BY OCCUPANT.

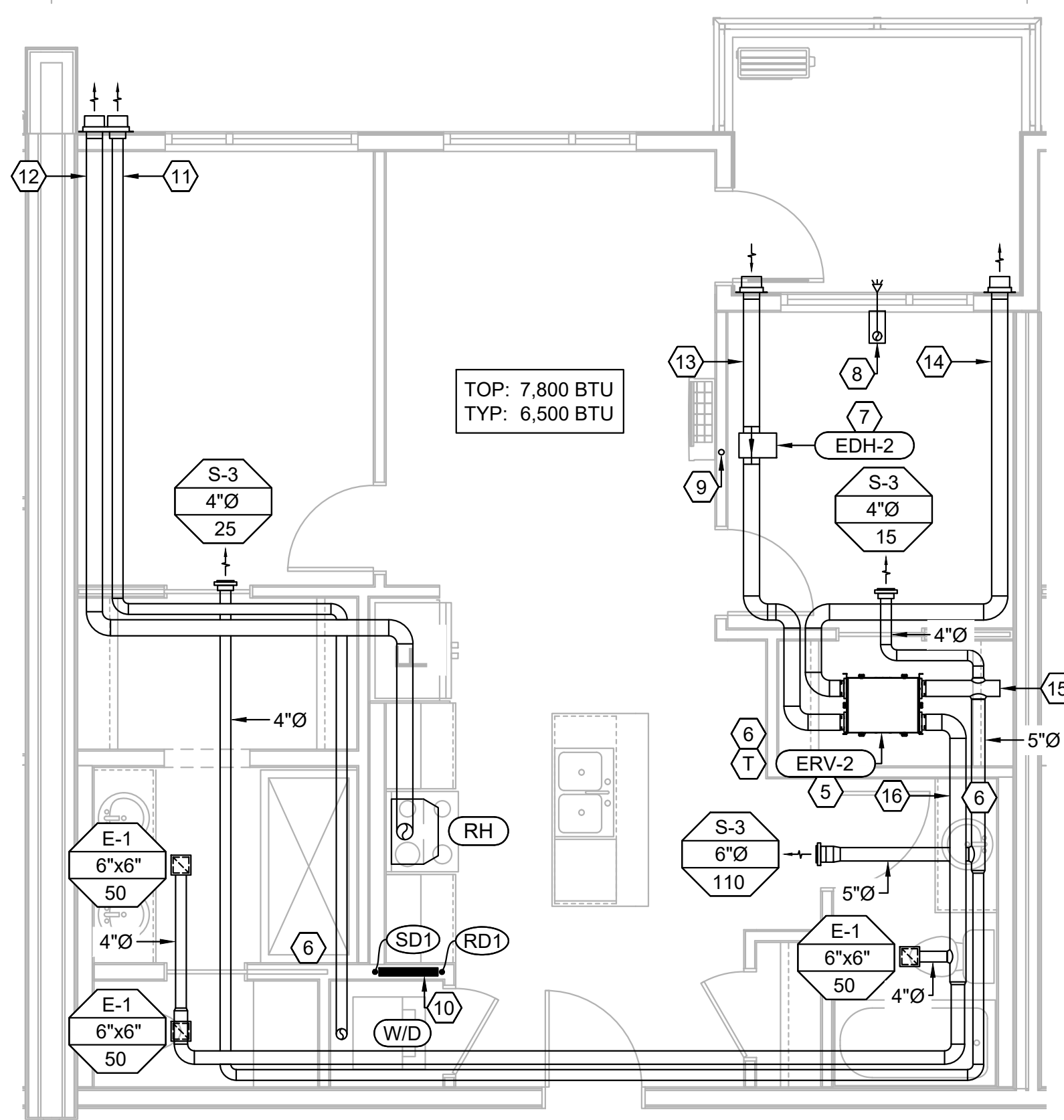


5 UNIT C6
HVAC LAYOUT
SCALE: 1/4" = 1'-0"

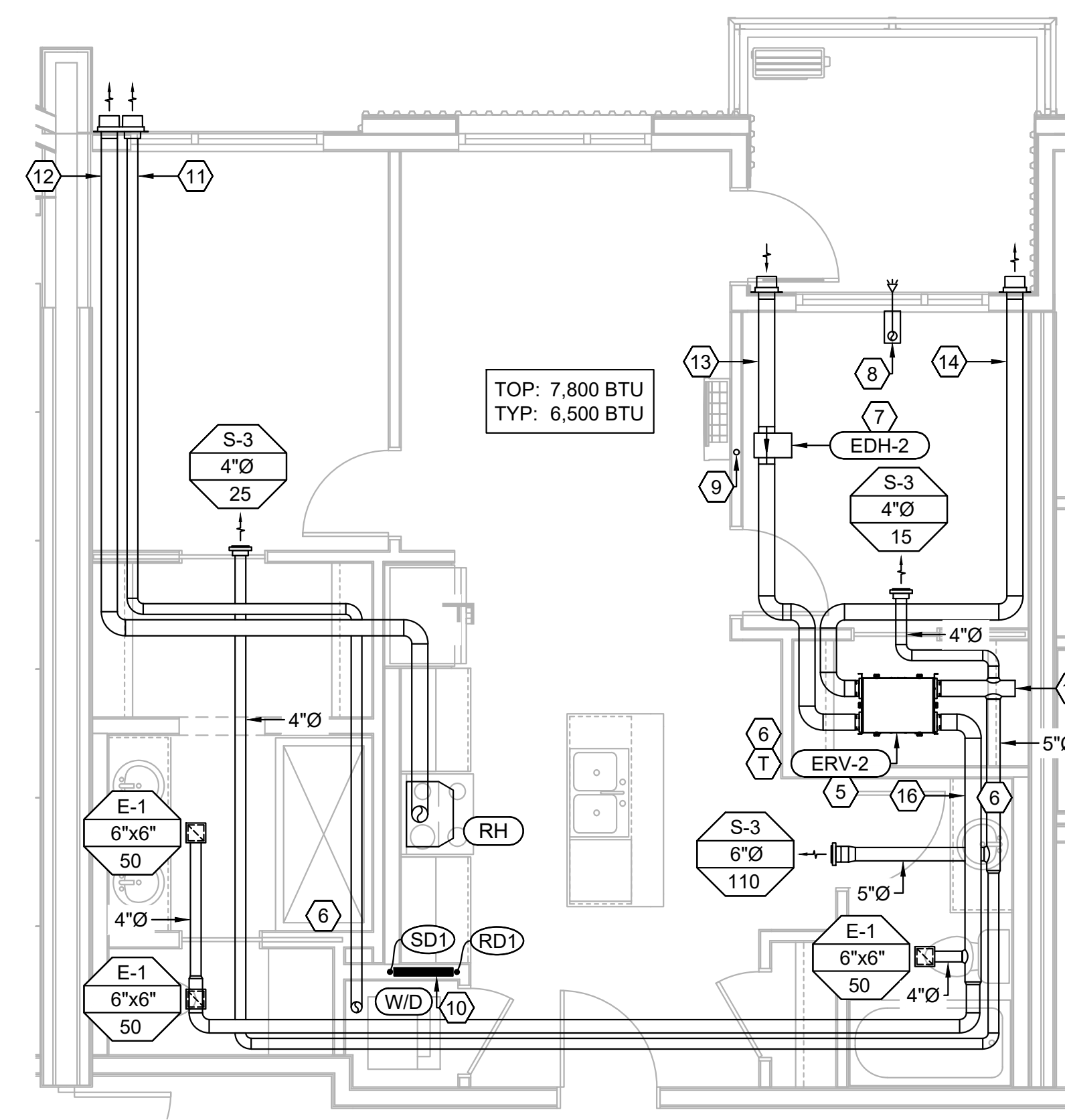
SCALE



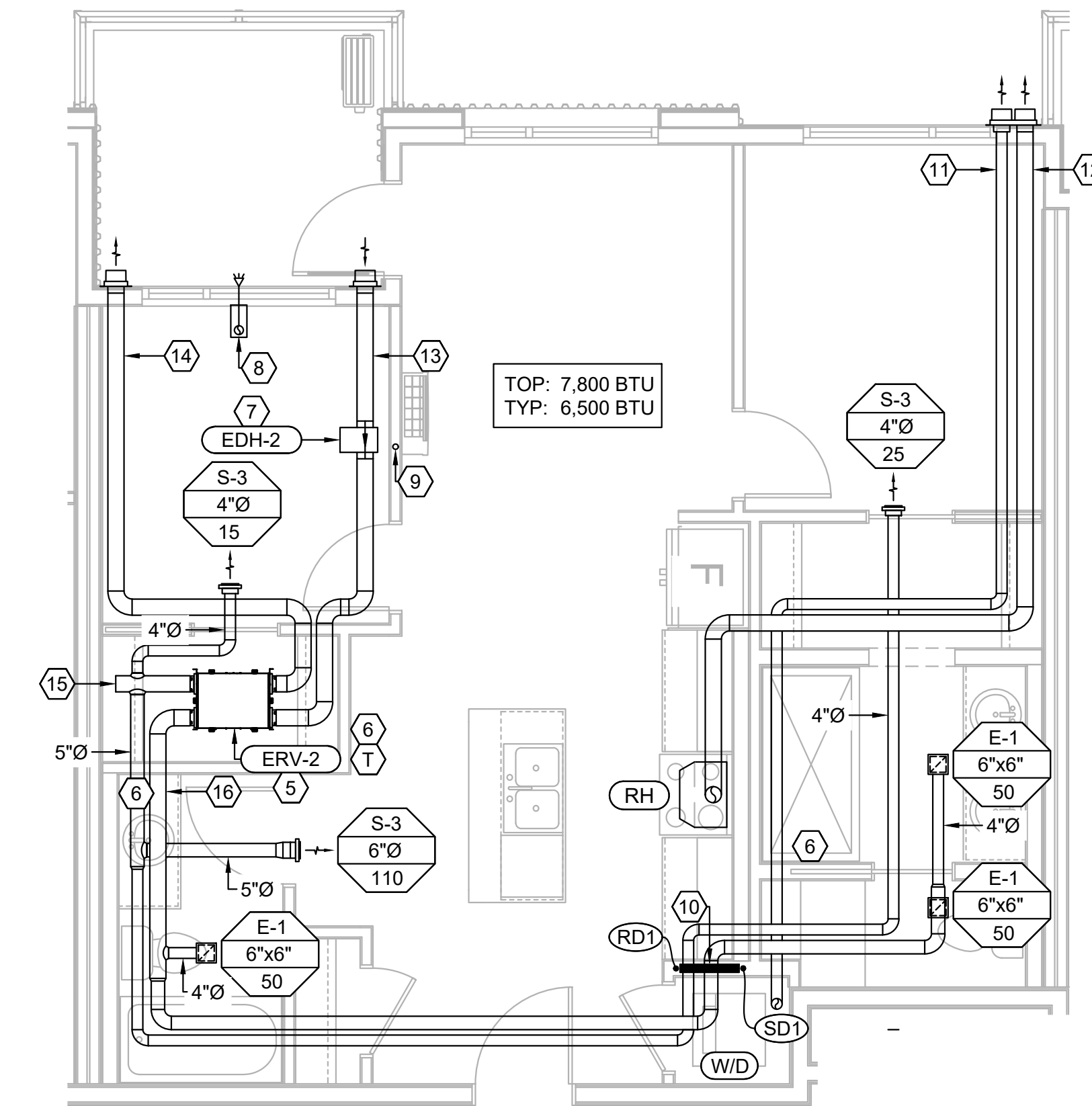
M40-01-01



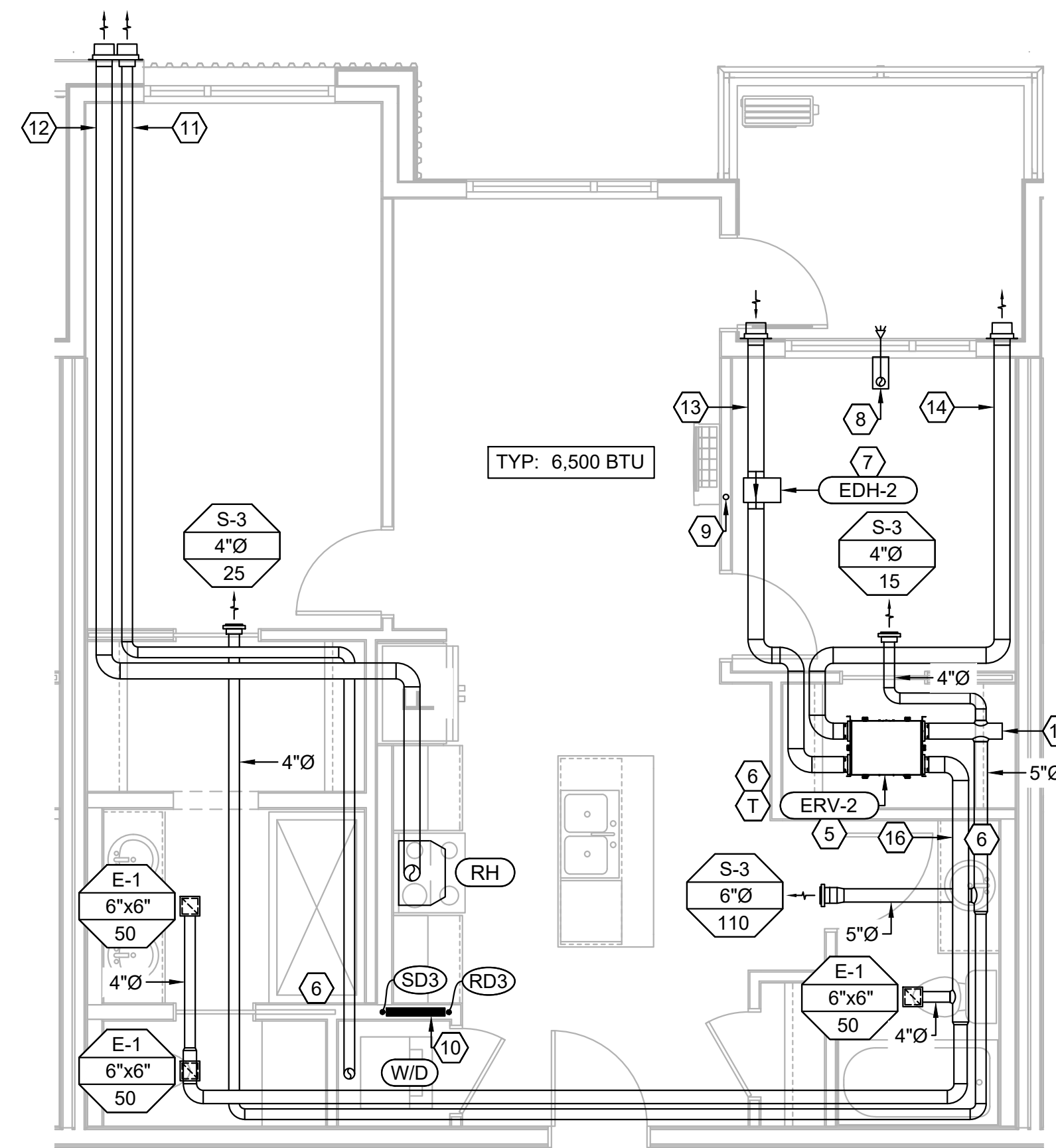
1
UNIT D1
HVAC LAYOUT
SCALE: 1/4" = 1'-0"



2
UNIT D1 - FIREWALL
HVAC LAYOUT
SCALE: 1/4" = 1'-0"



3
UNIT D1 - ELECTRICAL CLOSET
HVAC LAYOUT
SCALE: 1/4" = 1'-0"



4
UNIT D3
HVAC LAYOUT
SCALE: 1/4" = 1'-0"

SUITE HVAC DRAWING KEY NOTES: (#)

1. 5"Ø RIGID FRESH AIR DUCT FROM ENERGY RECOVERY VENTILATOR (ERV) FRESH AIR INTAKE PORT TO EXTERIOR WALL. INSULATE ALL FRESH AIR INTAKE DUCTS FROM OUTSIDE EXTERIOR WALL TO EXTERIOR WALL. ENSURE EXTERIOR WALL TERMINATION IS AT PROPER DISTANCE AWAY FROM OTHER VENTS, INTAKE OPENINGS, OPERABLE WINDOWS & OPENABLE DOORS ACCORDING TO CODE. EXHAUST AIR DUCT TO BE INSULATED PER SPECIFICATIONS.
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3. 6"Ø ACOUSTICALLY INSULATED FLEX SUPPLY AIR DUCT FROM ENERGY RECOVERY VENTILATOR (ERV) TO SUPPLY AIR GRILLE WITHIN MAIN LIVING SPACE.
4. 5"Ø RIGID RETURN AIR DUCT FROM BATHROOM GRILLES TO ENERGY RECOVERY VENTILATOR (ERV) RETURN AIR PORT.
5. LOCATION OF ERV. ALLOW FOR ACCESS PANEL. ACCESS PANEL TO BE SIZED TO ALLOW FOR COMPLETE REMOVAL AND REPLACEMENT OF ERV UNIT AS WELL AS MAINTENANCE ACCESS FOR FILTER REPLACEMENT.
6. LOCATION OF ERV MAIN WALL CONTROLLER LOCATED NEXT TO THE HEATING / COOLING THERMOSTAT IN THE PRINCIPLE LIVING AREA. LOCATION OF TIMER SWITCHES IN EACH OF THE BATHROOMS. CONTROL WIRING & PROGRAMMING FOR THE ERV, MAIN ERV CONTROLLER AND TIMER SWITCHES TO BE INSTALLED TO ALLOW THE TIMER SWITCHES THAT ARE LOCATED IN EACH OF THE BATHROOMS TO CONTROL THE ERV EVEN WHEN THE MAIN WALL CONTROLLER IS IN THE "OFF" POSITION TO COMPLY WITH CODE ARTICLE 9.32.3.7.(7) OF THE NATIONAL BUILDING CODE. COORDINATE WITH ELECTRICAL SUB-CONTRACTOR.
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8. PROPOSED LOCATION OF BALCONY SIDE WALL DRY SPRINKLER HEAD PER FIRE PROTECTION DESIGN DOCUMENTS. COORDINATE WITH FIRE PROTECTION CONTRACTOR & ENGINEER. COORDINATE WITH ARCHITECTURAL FOR BULKHEAD REQUIREMENTS. REFER TO BULKHEAD DETAIL.
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15. 6"Ø ACOUSTICALLY INSULATED FLEX SUPPLY AIR DUCT FROM ENERGY RECOVERY VENTILATOR (ERV) TO SUPPLY AIR GRILLE WITHIN MAIN LIVING SPACE.
16. 6"Ø RIGID RETURN AIR DUCT FROM BATHROOM GRILLES TO ENERGY RECOVERY VENTILATOR (ERV) RETURN AIR PORT.

SUITE HVAC GENERAL NOTES:

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ISSUED FOR
COORDINATION

NO.	ISSUE/REVISION	DATE
1	30% Review	2026-04-30

PROJECT MANAGER	DRAWN
K.V	T.K/G.T
PROJECT LEAD	CHECKED
J.P/G.U	J.P/G.U/K.V

BLACK BEAR
CROSSING - BLACK
BIRCH HEIGHTS

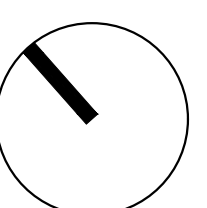
BLACK BEAR CROSSING SW, TSUU
T'INA NATION 145 AB

PROJECT # 25141.1
CITY FILE #



BUILDING A -
UNIT PLANS
HVAC LAYOUT

SCALE



M40-01-02

ISSUED FOR
COORDINATION

NO.	ISSUE/REVISION	DATE
1	30% Review	2026-04-30

PROJECT MANAGER	DRAWN
K.V	T.K/G.T
PROJECT LEAD	CHECKED
J.P/G.U	J.P/G.U/K.V

BLACK BEAR
CROSSING - BLACK
BIRCH HEIGHTS

BLACK BEAR CROSSING SW, TSUU
T'INA NATION 145 AB

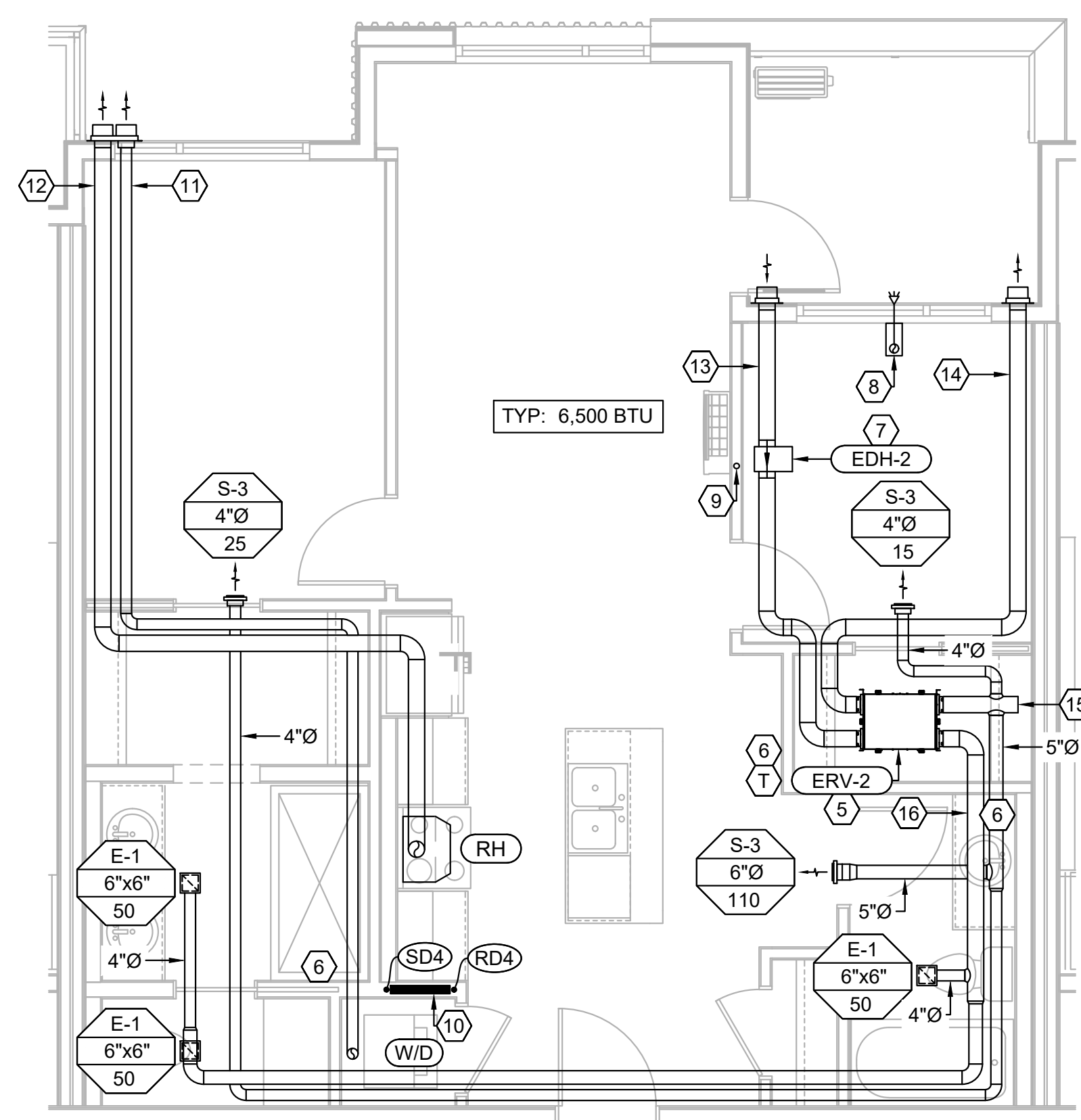
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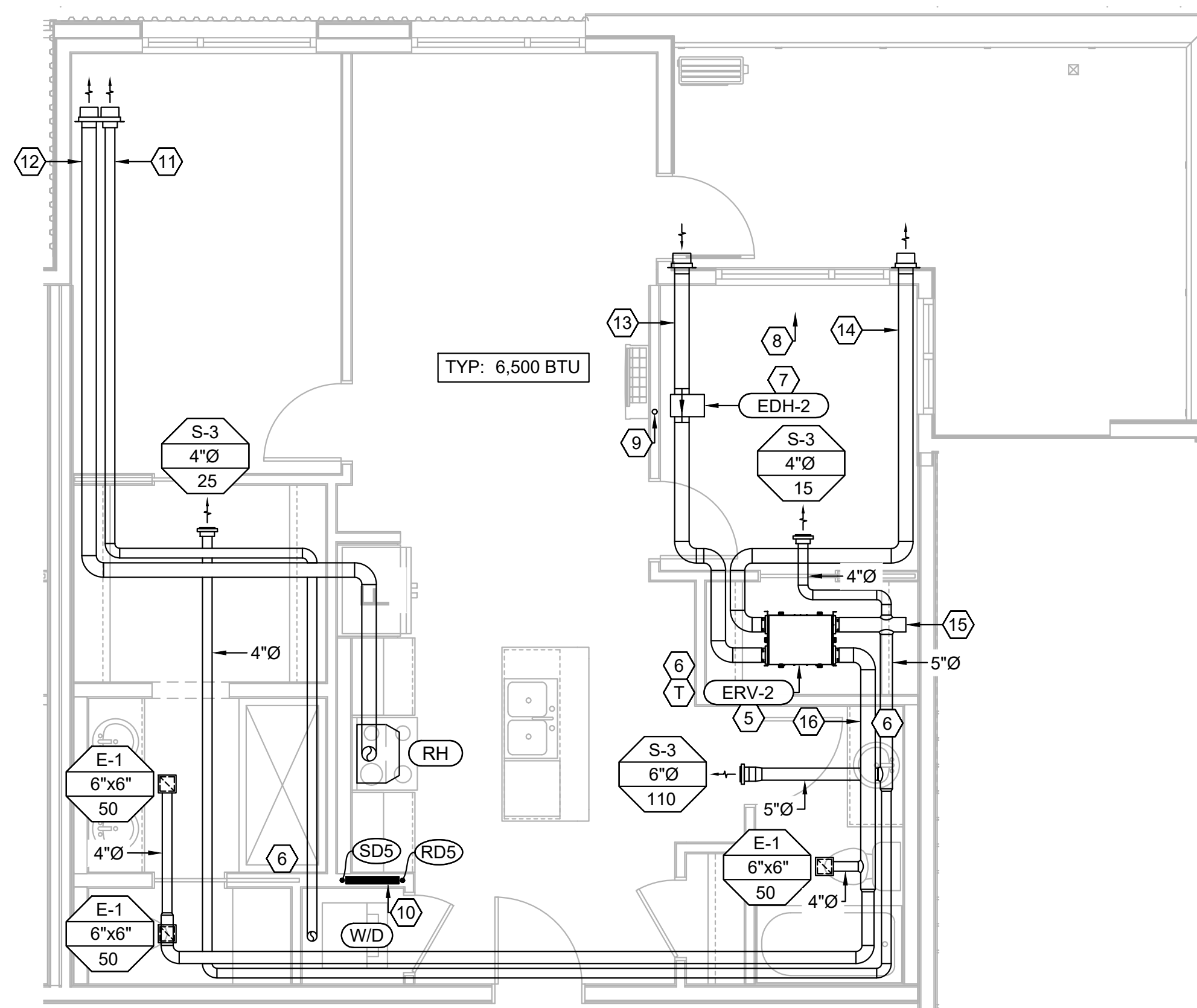
BUILDING A -
UNIT PLANS
HVAC LAYOUT

SCALE

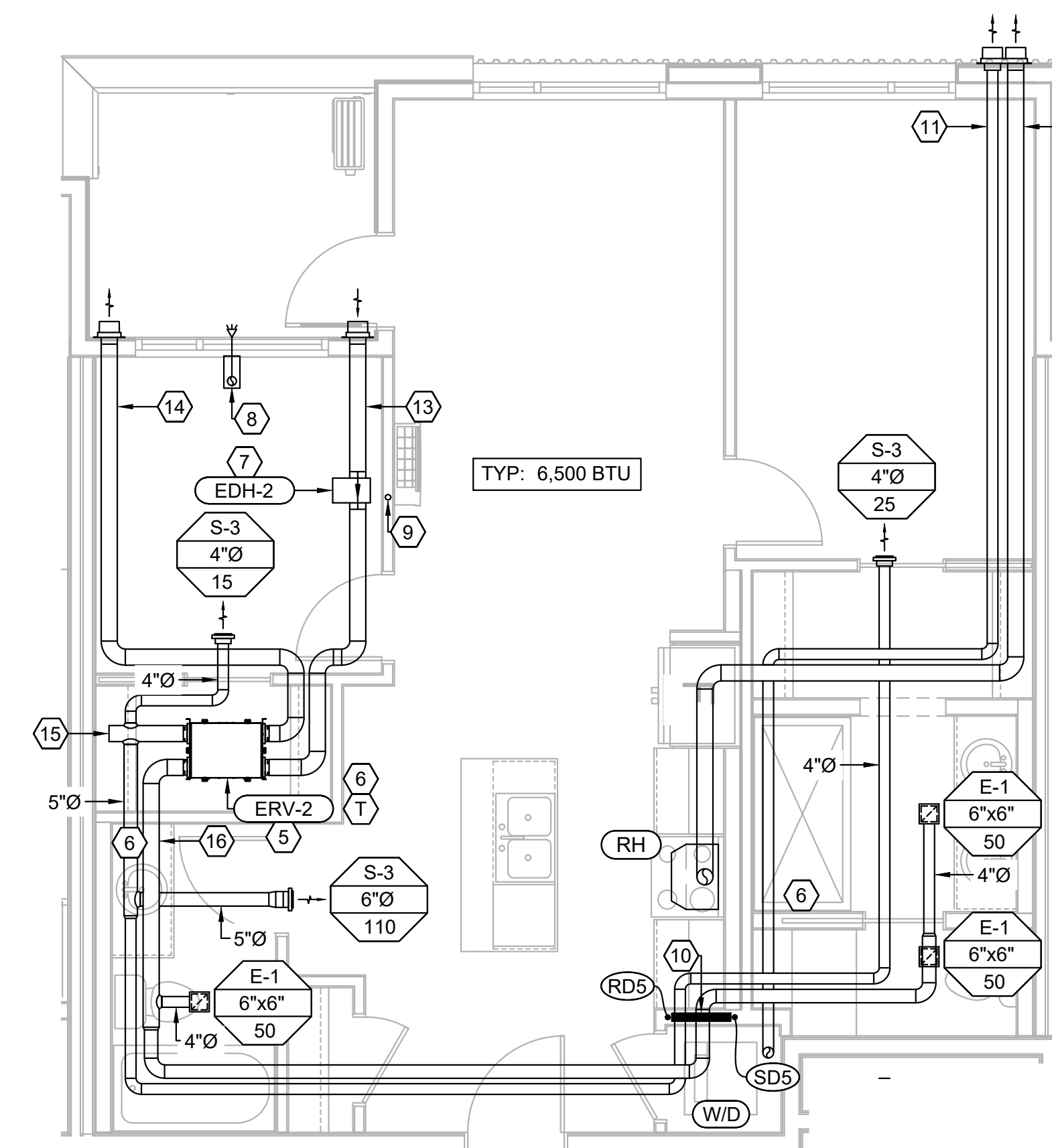
M40-01-03



1 UNIT D4
HVAC LAYOUT
SCALE: 1/4" = 1'-0"



2 UNIT D5
HVAC LAYOUT
SCALE: 1/4" = 1'-0"



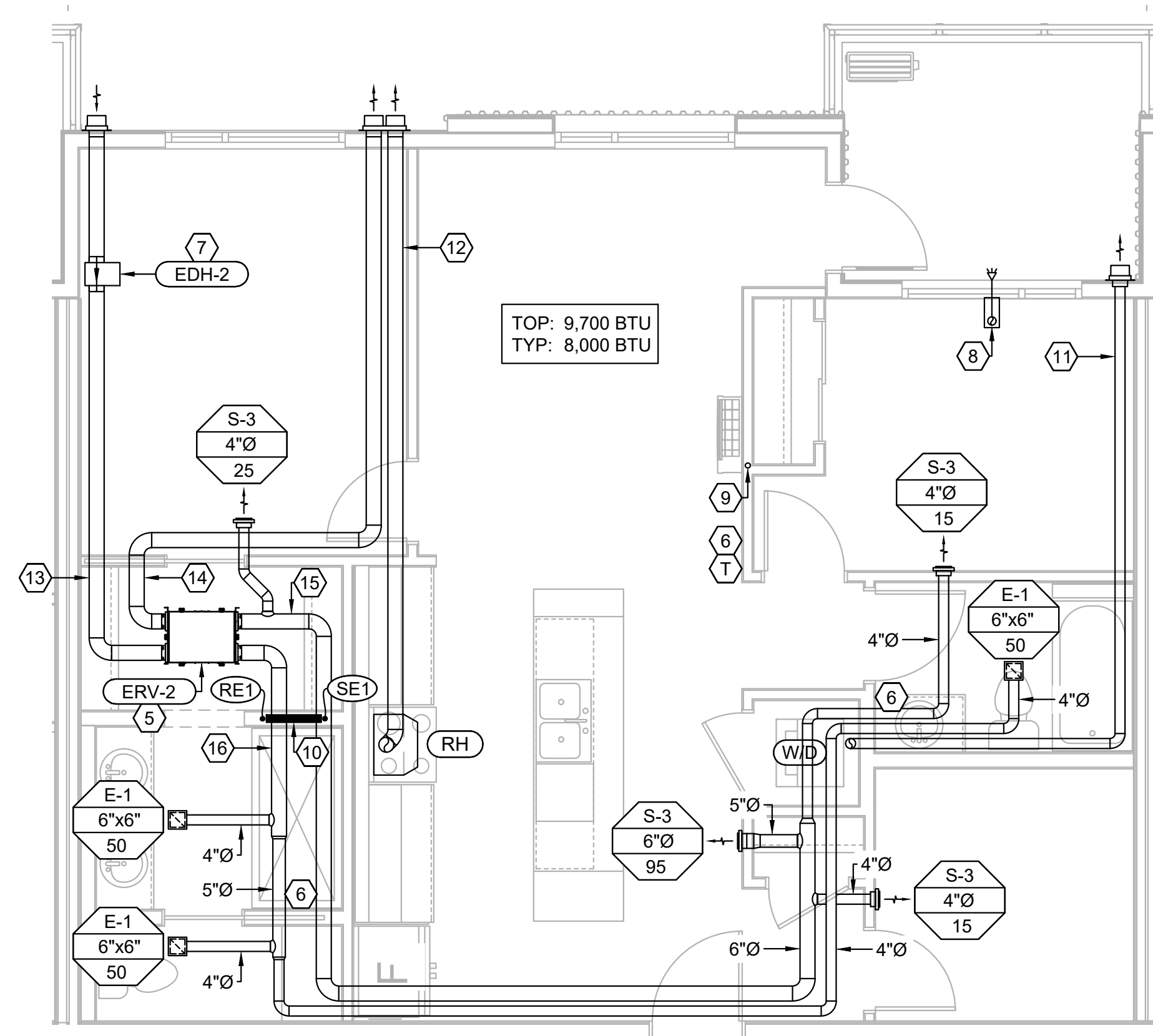
3 UNIT D5 - ELECTRICAL CLOSET
HVAC LAYOUT
SCALE: 1/4" = 1'-0"

SUITE HVAC DRAWING KEY NOTES: (#)

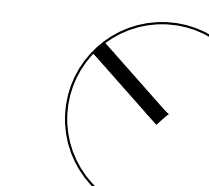
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4 UNIT E1
HVAC LAYOUT
SCALE: 1/4" = 1'-0"



ISSUED FOR
COORDINATION

NO.	ISSUE/REVISION	DATE
1	30% Review	2026-04-30

PROJECT MANAGER	DRAWN
K.V	T.K/G.T
PROJECT LEAD	CHECKED
J.P/G.U	J.P/G.U/K.V

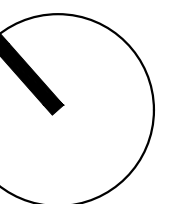
BLACK BEAR
CROSSING - BLACK
BIRCH HEIGHTS

BLACK BEAR CROSSING SW, TSUU
T'INA NATION 145 AB

PROJECT # 25141.1
CITY FILE #

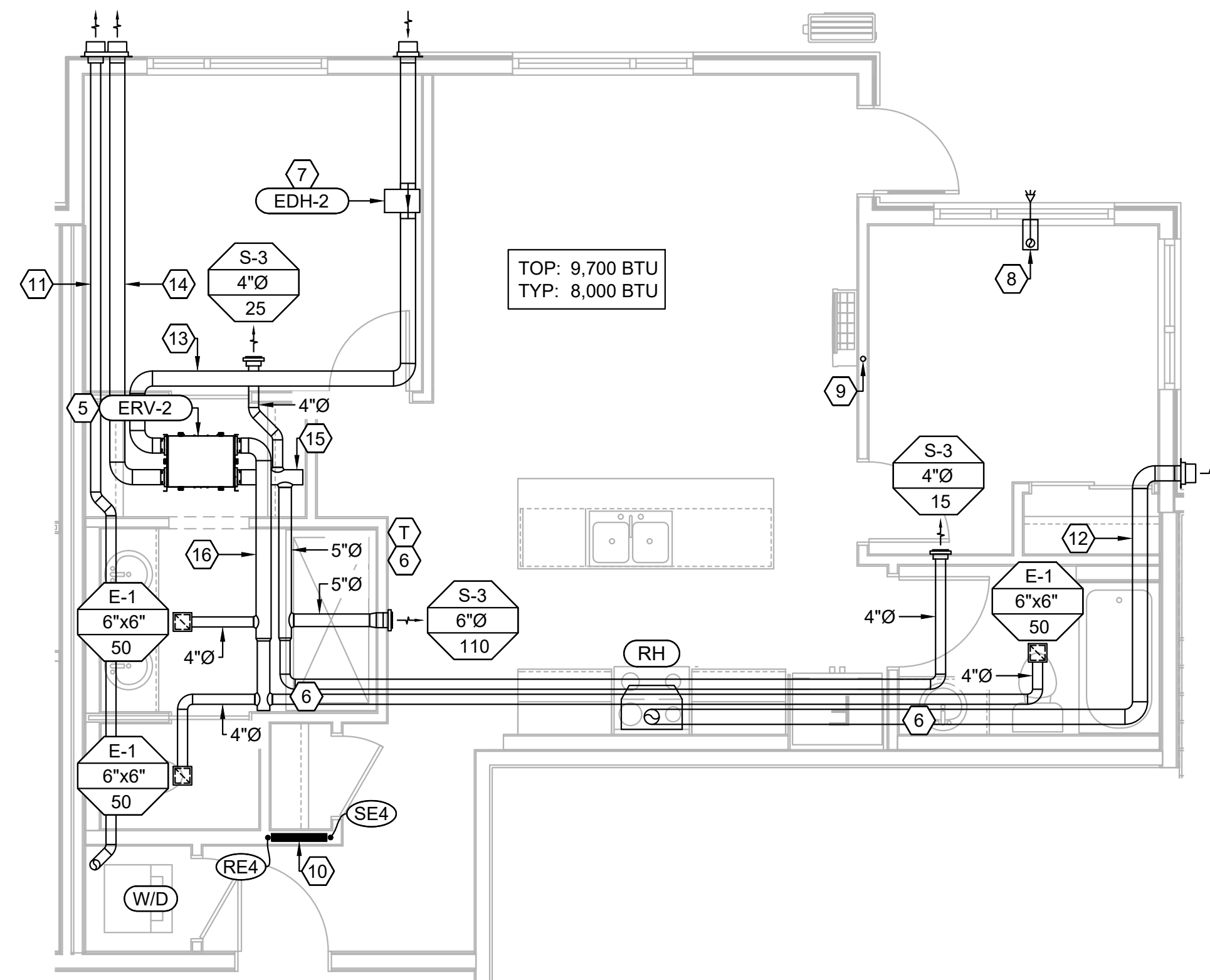


BUILDING A -
UNIT PLANS
HVAC LAYOUT

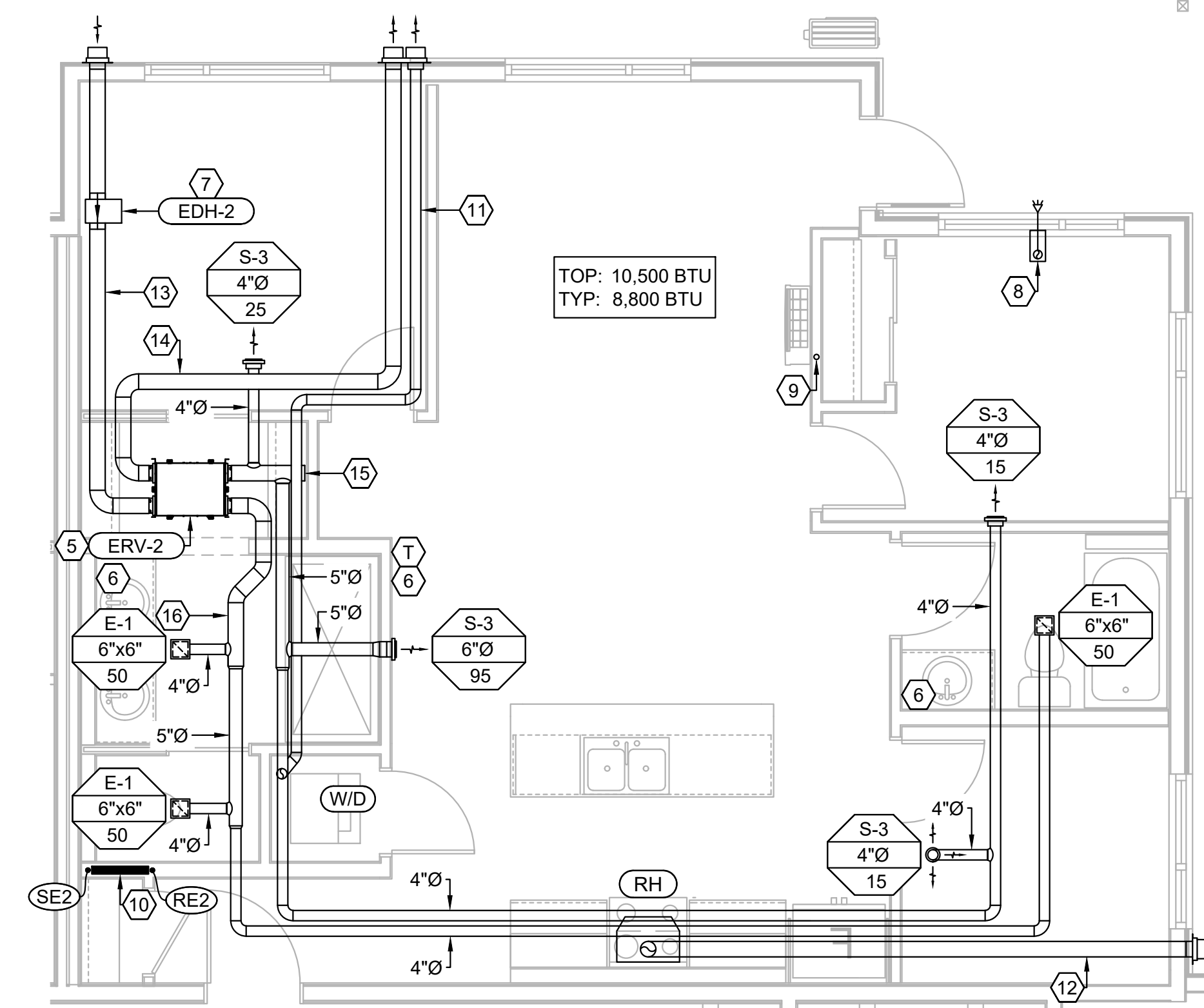


SCALE

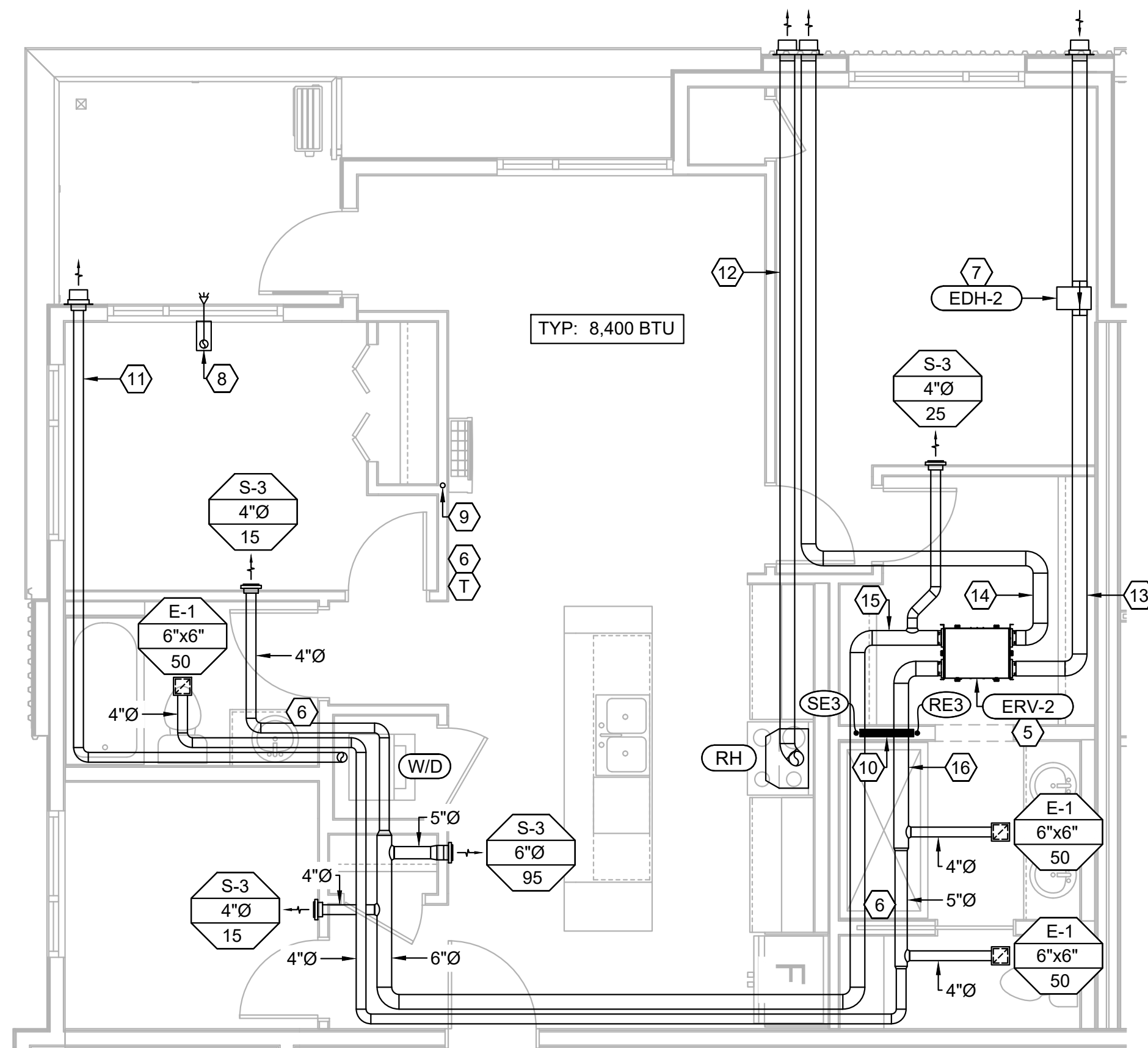
M40-01-04



1
UNIT E1 - PARKADE
HVAC LAYOUT
SCALE: 1/4" = 1'-0"



2
UNIT E2
HVACC LAYOUT
SCALE: 1/4" = 1'-0"



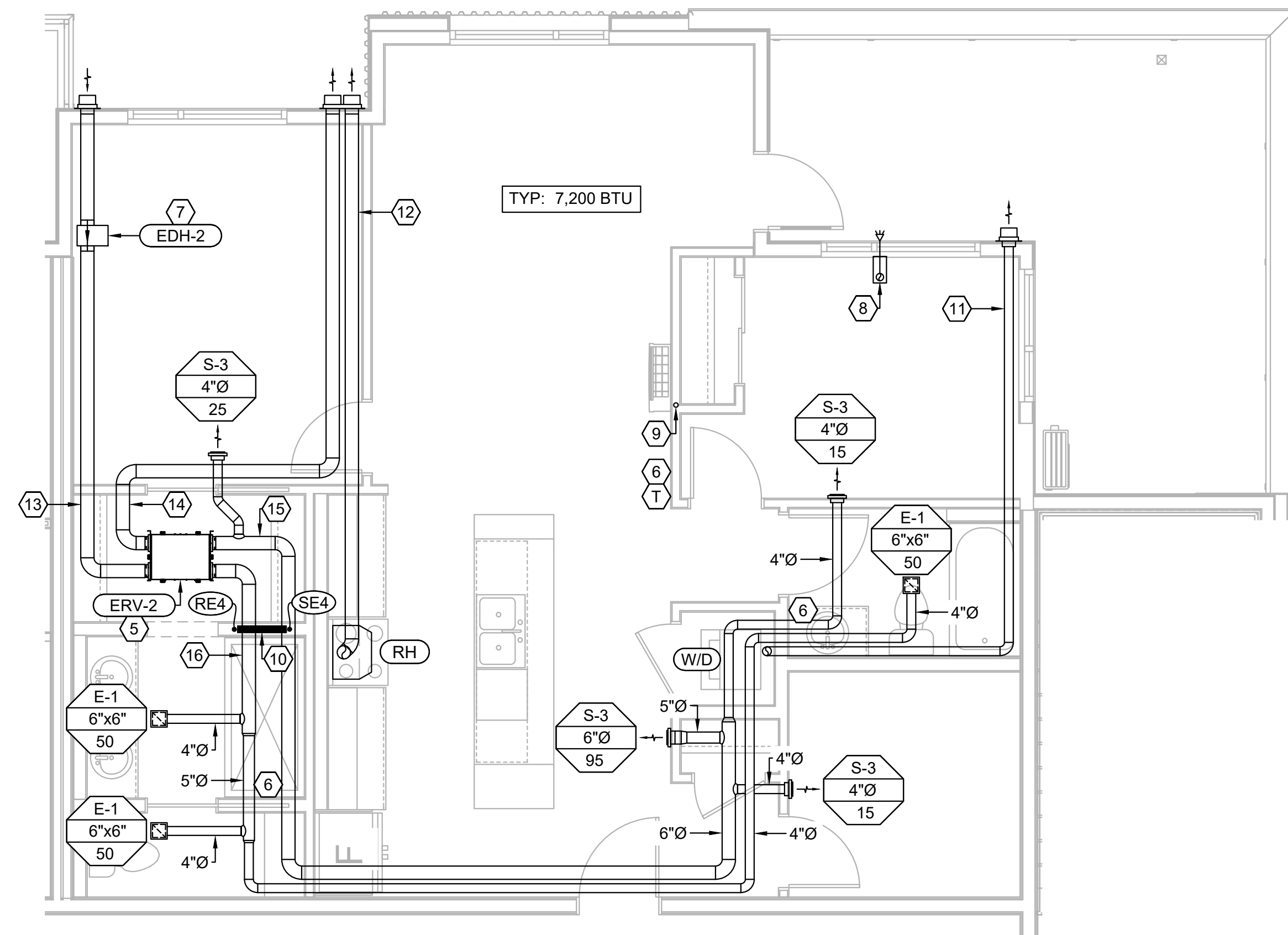
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UNIT E3
HVAC LAYOUT
SCALE: 1/4" = 1'-0"

SUITE HVAC DRAWING KEY NOTES: (#)

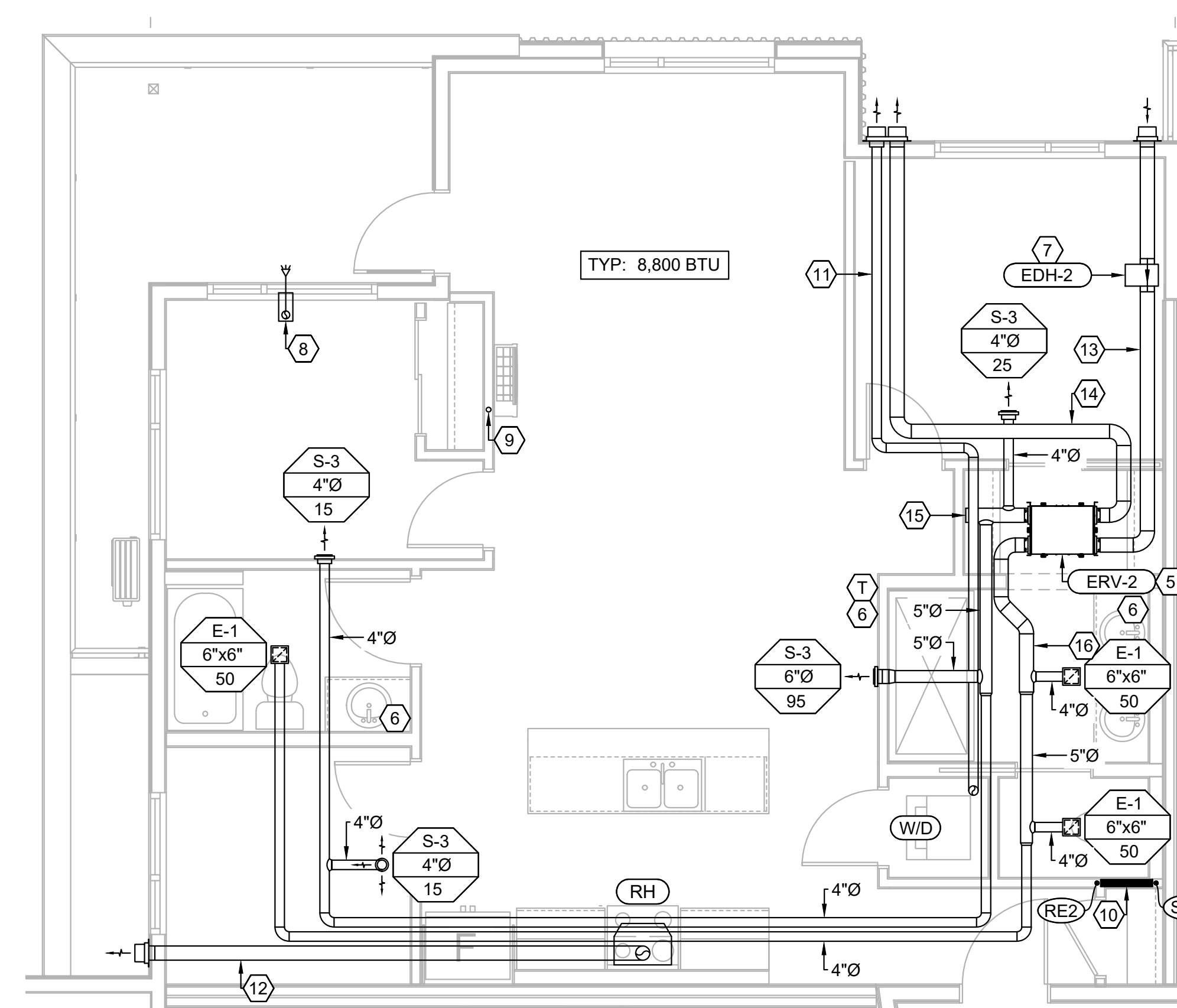
- 5"Ø RIGID FRESH AIR DUCT FROM ENERGY RECOVERY VENTILATOR (ERV) FRESH AIR INTAKE PORT TO EXTERIOR WALL. INSULATE ALL FRESH AIR INTAKE DUCTS FROM OUTSIDE EXTERIOR WALL TO ERV UNIT WITH DUCT INSULATION AS PER SPECIFICATIONS.
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- LOCATION OF ERV. ALLOW FOR ACCESS PANEL. ACCESS PANEL TO BE SIZED TO ALLOW FOR COMPLETE REMOVAL AND REPLACEMENT OF ERV UNIT AS WELL AS MAINTENANCE ACCESS FOR FILTER REPLACEMENT.
- LOCATION OF ERV MAIN WALL CONTROLLER LOCATED NEXT TO THE HEATING / COOLING THERMOSTAT IN THE PRINCIPLE LIVING AREA. LOCATION OF TIMER SWITCHES IN EACH OF THE BATHROOMS. CONTROL WIRING & PROGRAMMING FOR THE ERV, MAIN ERV CONTROLLER AND TIMER SWITCHES TO BE INSTALLED TO ALLOW THE TIMER SWITCHES THAT ARE LOCATED IN EACH OF THE BATHROOMS TO CONTROL THE ERV EVEN WHEN THE MAIN WALL CONTROLLER IS IN THE "OFF" POSITION TO COMPLY WITH CODE ARTICLE 9.32.3.7.(7) OF THE NATIONAL BUILDING CODE. COORDINATE WITH ELECTRICAL SUB-CONTRACTOR.
- LOCATION OF ELECTRIC IN-LINE HEATER ON FRESH AIR DUCT OF ERV. ALLOW FOR ACCESS PANEL. ACCESS PANEL TO BE SIZED TO ALLOW FOR COMPLETE REMOVAL AND REPLACEMENT OF ELECTRIC IN-LINE HEATER AS WELL AS MAINTENANCE ACCESS.
- PROPOSED LOCATION OF BALCONY SIDE WALL DRY SPRINKLER HEAD PER FIRE PROTECTION DESIGN DOCUMENTS. COORDINATE WITH FIRE PROTECTION CONTRACTOR & ENGINEER. COORDINATE WITH ARCHITECTURAL FOR BULKHEAD REQUIREMENTS. REFER TO BULKHEAD DETAIL.
- ALLOW FOR CONDENSATE DRAIN & REFRIGERANT LINE ROUGH-INS FOR FUTURE MINI-SPLIT AIR CONDITIONING SYSTEM. CONDENSATE DRAIN FROM EVAPORATOR TO BE CONNECTED TO CONDENSATE RISER DRAIN AS SHOWN. CONDENSATE RISER DRAIN TO BE INSTALLED VERTICALLY THROUGH BUILDING AND TIED TO OVERHEAD SANITARY SYSTEM IN PARKADE UPSTREAM OF SHOWER OR TUB TRAP.
- LOCATION OF IN-FLOOR HEATING HYDRONIC MANIFOLD. REFER TO DETAILS.
- 4"Ø RIGID EXHAUST AIR DUCT FROM CLOTHES DRYER TO SPECIFIED WALL CAP. ENSURE WALL CAP IS AT LEAST 6" FROM FRESH AIR INTAKES.
- 6"Ø RIGID EXHAUST AIR DUCT FROM RANGE HOOD TO SPECIFIED WALL CAP. ENSURE CAP IS AT PROPER DISTANCE AWAY FROM OTHER VENTS, INTAKES, OPERABLE WINDOWS AND DOORS PER BUILDING CODE.
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SUITE HVAC GENERAL NOTES:

- ALL DUCTWORK TO BE INSTALLED ABOVE CEILING. COORDINATE ALL DUCTWORK THAT MUST BE RUN IN BULKHEADS WITH ARCHITECTURAL DRAWINGS PRIOR TO INSTALLATION.
- STUB-OUT DRYER DUCT 12" BELOW FINISHED CEILING. ALL DRYER EXHAUST DUCTS ARE TO BE VENTED TO A WALL CAP.
- ANY DRYER DUCTS WITH AN EQUIVALENT LENGTH OF MORE THAN 50 FEET MUST BE EQUIPPED WITH A BOOSTER FAN AND SECONDARY LINT TRAP. REFER TO MECHANICAL SCHEDULE FOR DETAILS.
- DRYER BOOSTER FANS MUST BE INTERLOCKED WITH DRYERS BY MEANS OF AN AIR PROVING SWITCH OR CONTROL RELAY (PROVIDED BY MECHANICAL CONTRACTOR).
- WHEN BALCONY SPRINKLER LINE SHARES BULKHEAD WITH EXHAUST DUCTS, ENSURE THE SPRINKLER LINE IS THERMALLY SEPARATED FROM EXHAUST BULKHEAD. REFER TO ARCHITECTURAL PLANS FOR DETAILS.
- ALL GAS LINES RUNNING IN ANY CONCEALED SPACE TO BE THE "YELLOW JACKET" TYPE WITH NO THREADED CONNECTIONS.
- PROVIDE EXTERNAL 1" FOIL FACED FIBREGLASS INSULATION ON ALL EXHAUST DUCTWORK FOR A DISTANCE OF 10 FEET FROM EXTERIOR WALL TERMINATION. PROVIDE EXTERNAL INSULATION (JOHNS MANVILLE MICROLITE OR EQUIVALENT) ON ALL FRESH AIR INTAKE DUCTWORK FOR THE ENTIRE DISTANCE FROM THE EXTERIOR WALL INTAKE TO THE ERV.
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- LOCATE ERV TIMER SWITCH ADJACENT TO WASHROOM ELECTRICAL SWITCHES. TIMER TO ALLOW 20/40/60 MINUTE OPERATION. TIMER TO ALLOW ERV TO SWITCH FROM CONTINUOUS LOW SPEED TO HIGH SPEED FOR PERIOD OF TIME AS SELECTED BY OCCUPANT.



**UNIT E4
HVAC LAYOUT**
SCALE: 1/4" = 1'-0"



**UNIT E6
HVAC LAYOUT**
SCALE: 1/4" = 1'-0"

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COORDINATION**

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1	30% Review	2026-04-30

PROJECT MANAGER	DRAWN
K.V	T.K/G.T
PROJECT LEAD	CHECKED
J.P/G.U	J.P/G.U/K.V

**BLACK BEAR
CROSSING - BLACK
BIRCH HEIGHTS**

BLACK BEAR CROSSING SW, TSUU
T'INA NATION 145 AB

PROJECT # 25141.1
CITY FILE #



**BUILDING A -
UNIT PLANS
HVAC LAYOUT**

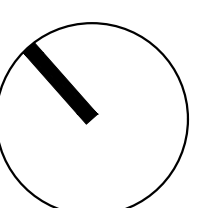
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SCALE



M40-01-05

ISSUED FOR
COORDINATION

NO. ISSUE/REVISION DATE
1 30% Review 2026-04-30

PROJECT MANAGER DRAWN
K.V. T.K./G.T.
PROJECT LEAD CHECKED
J.P./G.U. J.P./G.U./K.V.

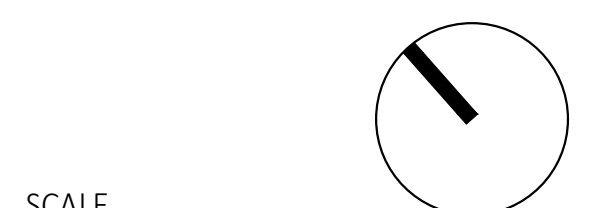
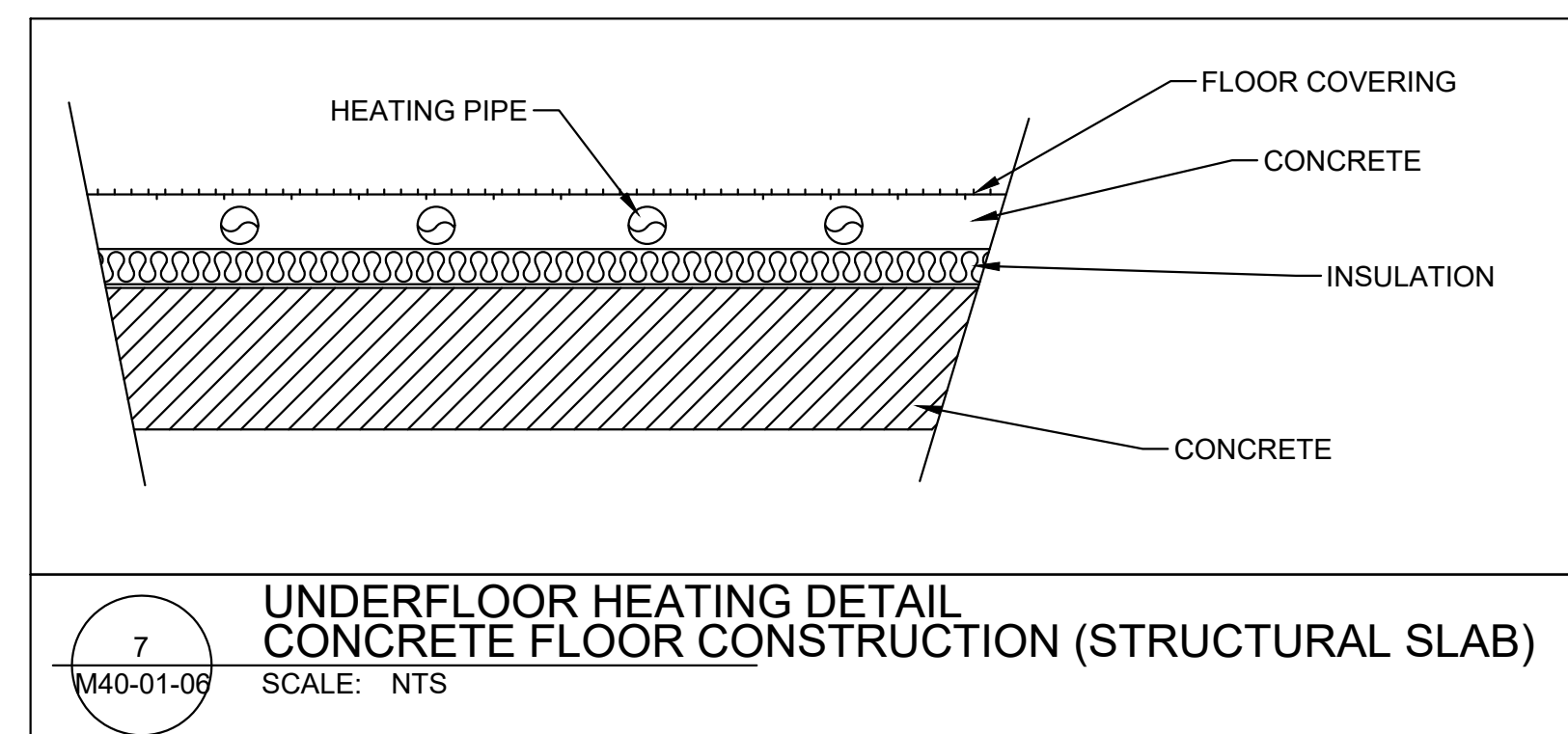
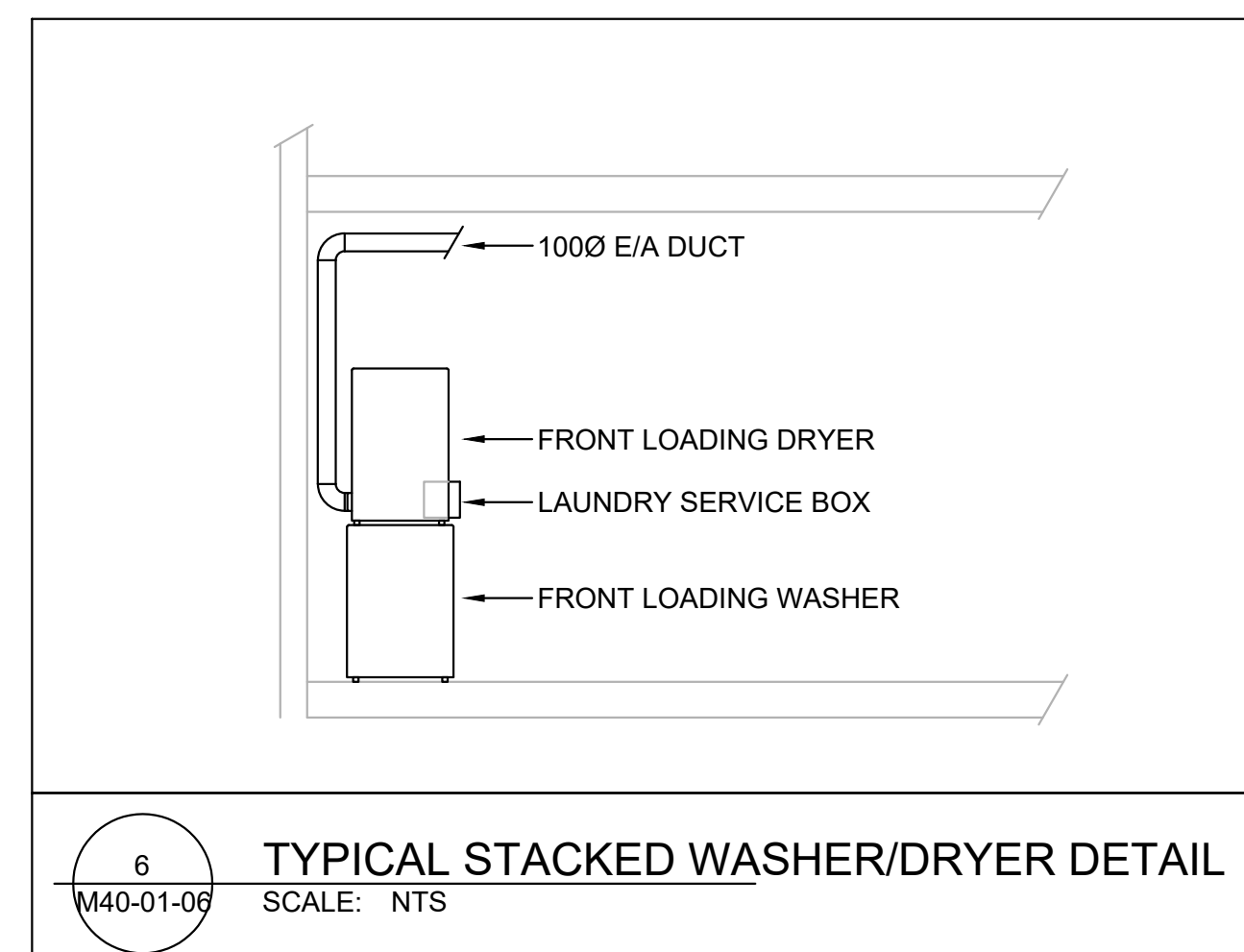
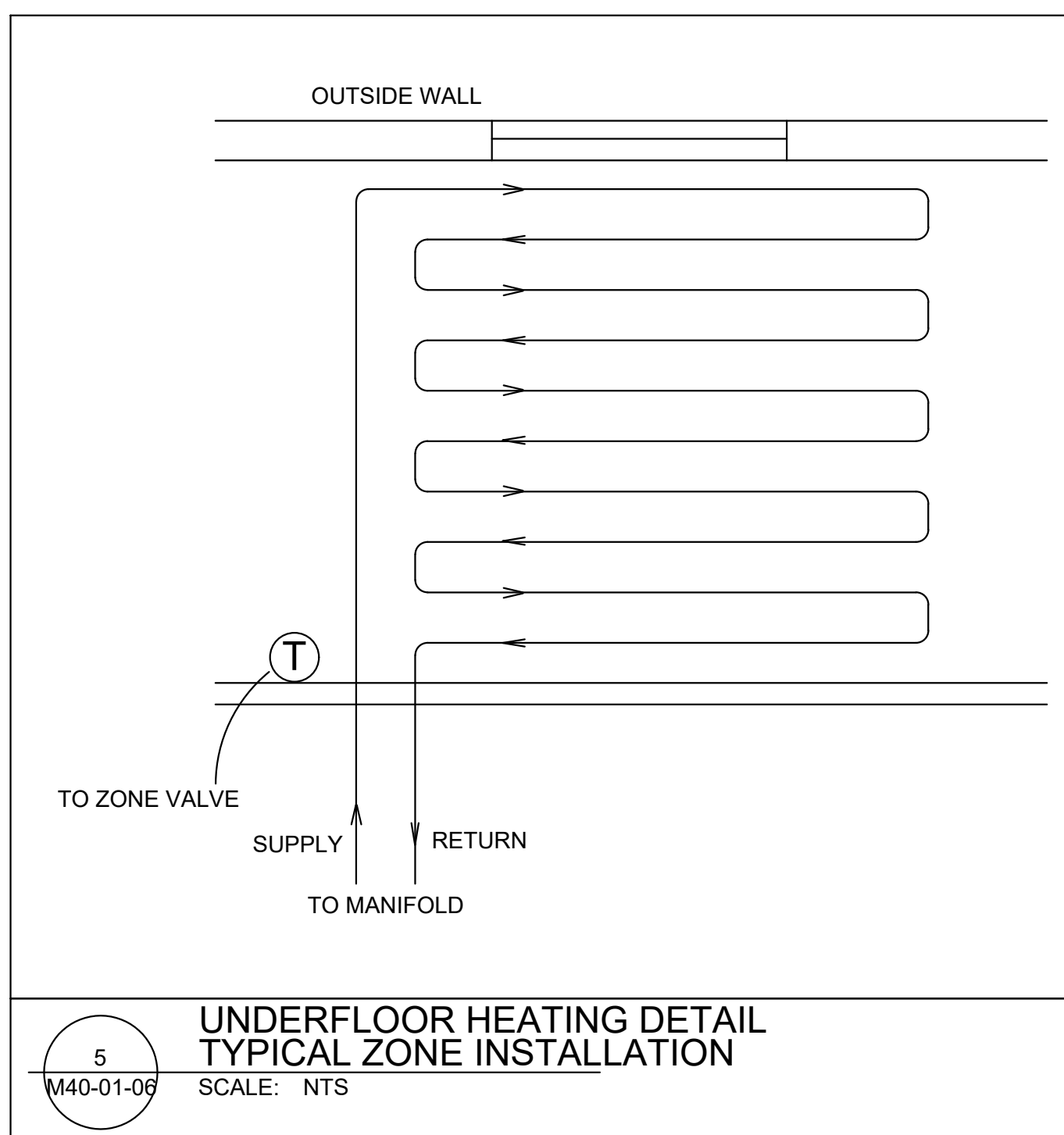
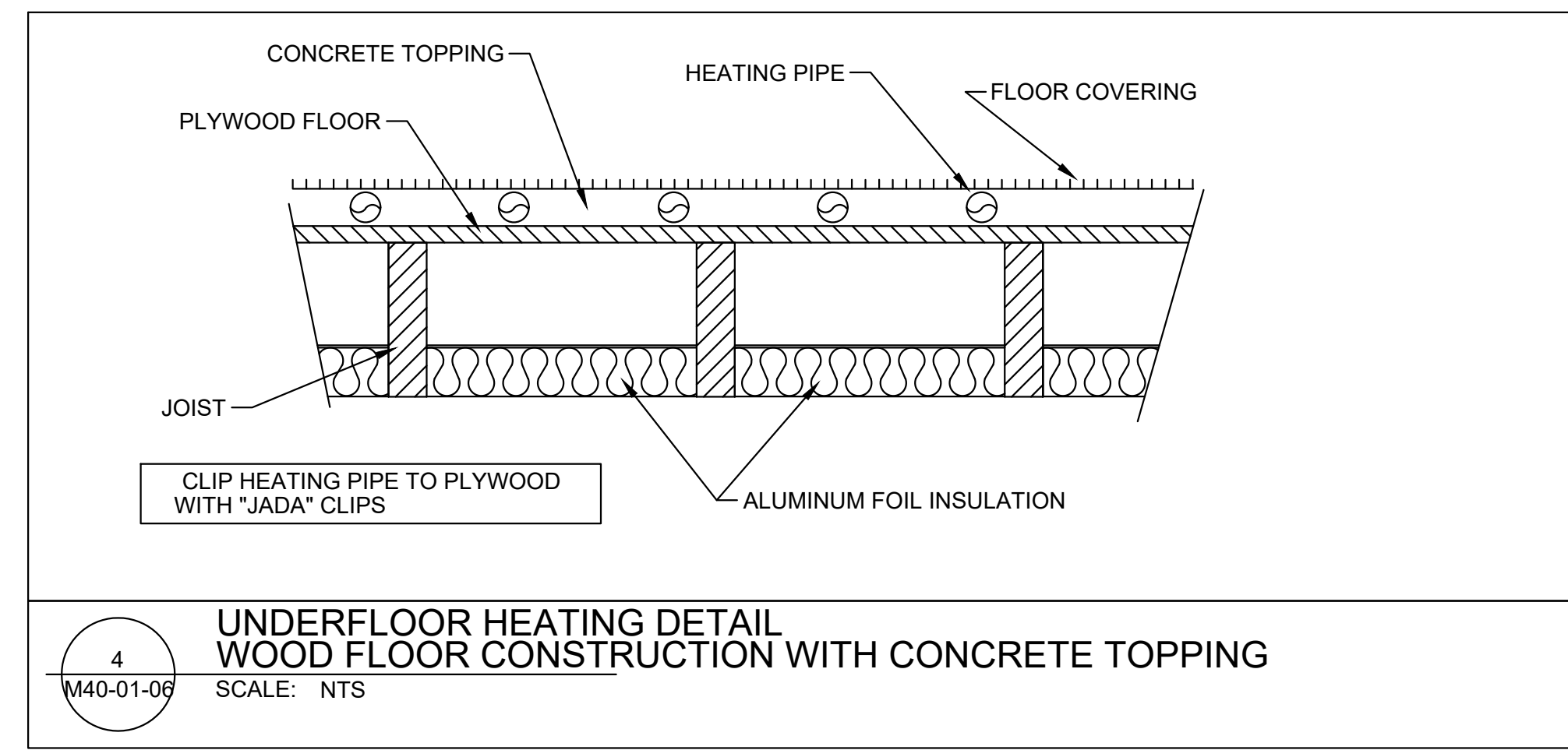
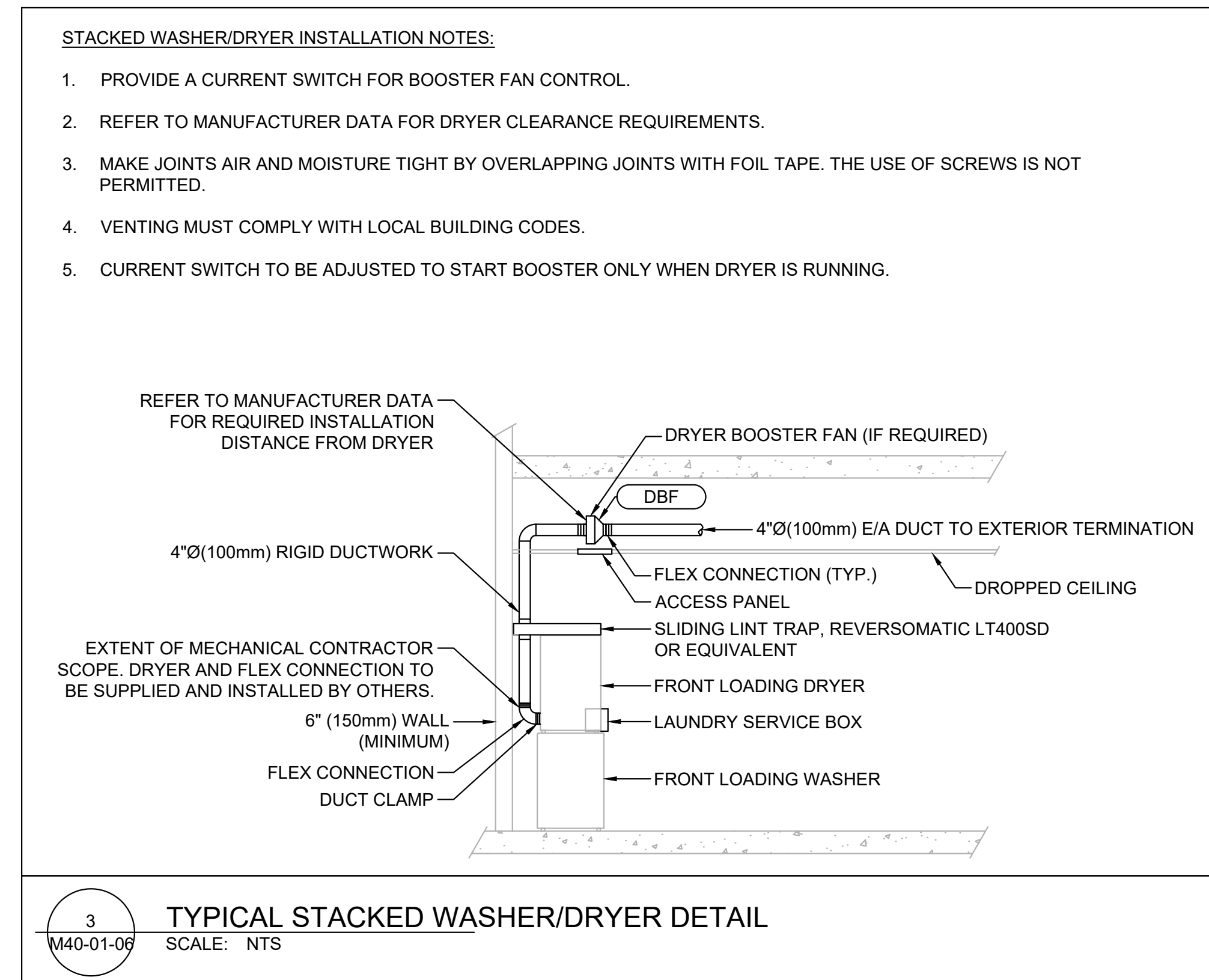
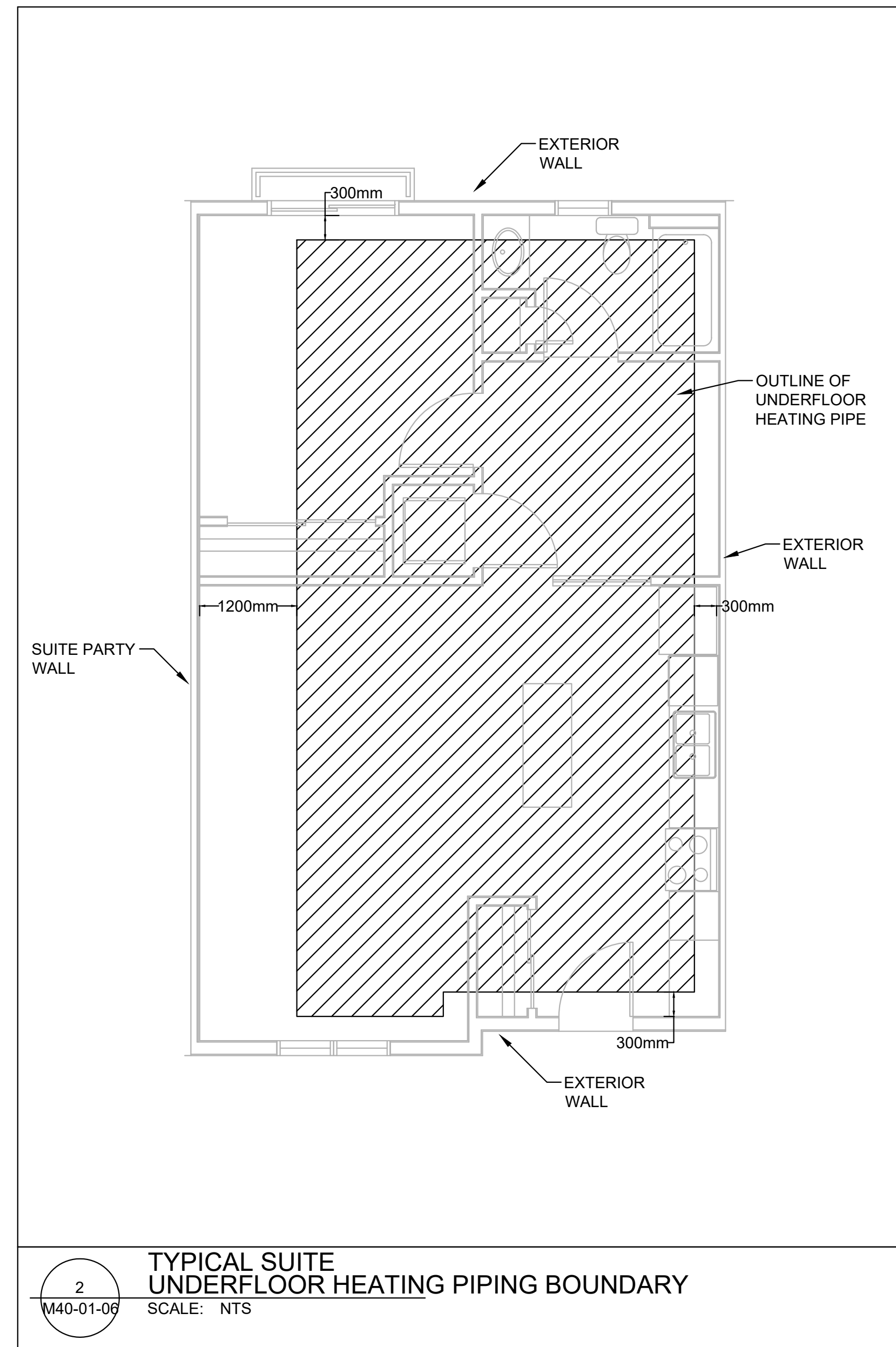
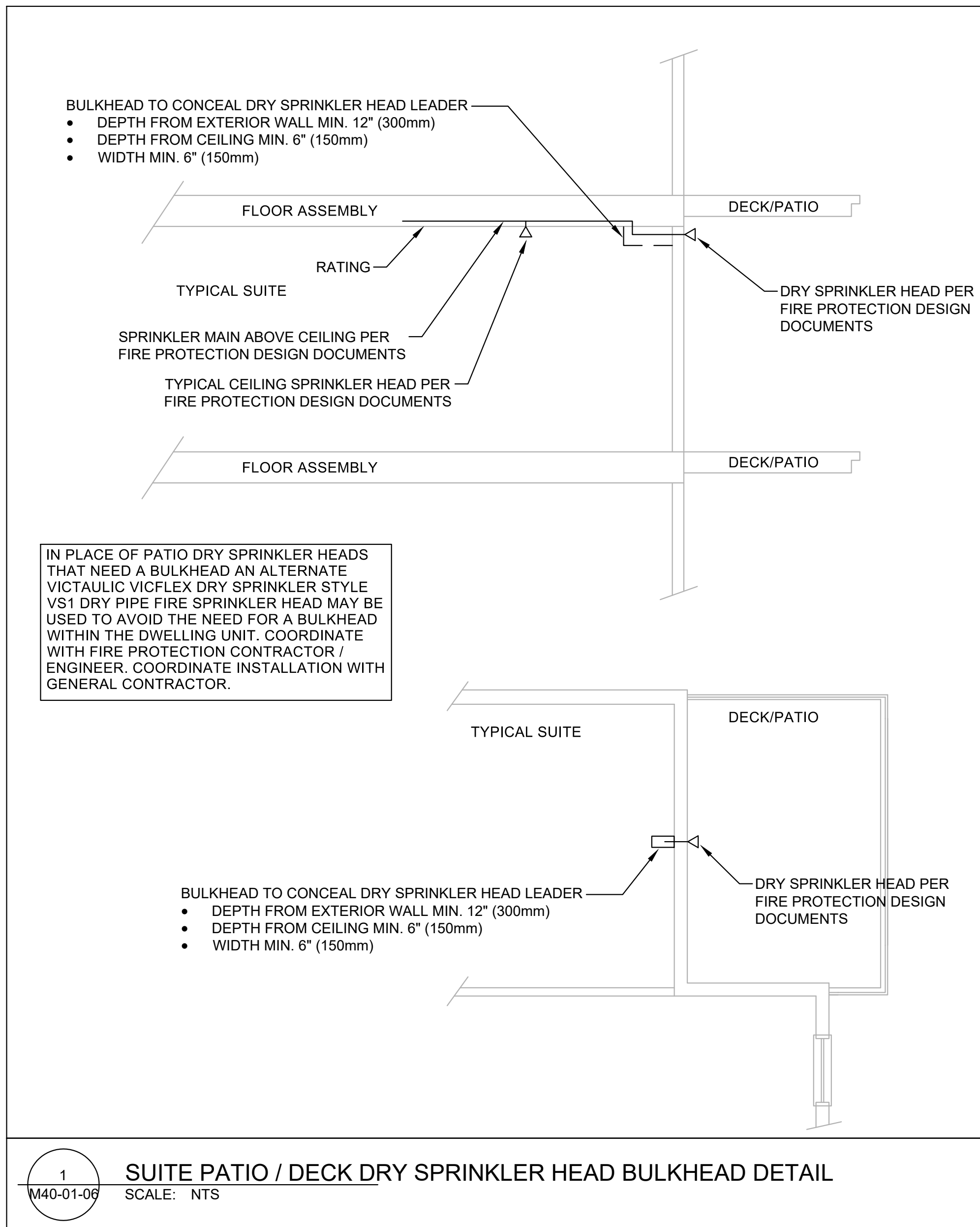
BLACK BEAR
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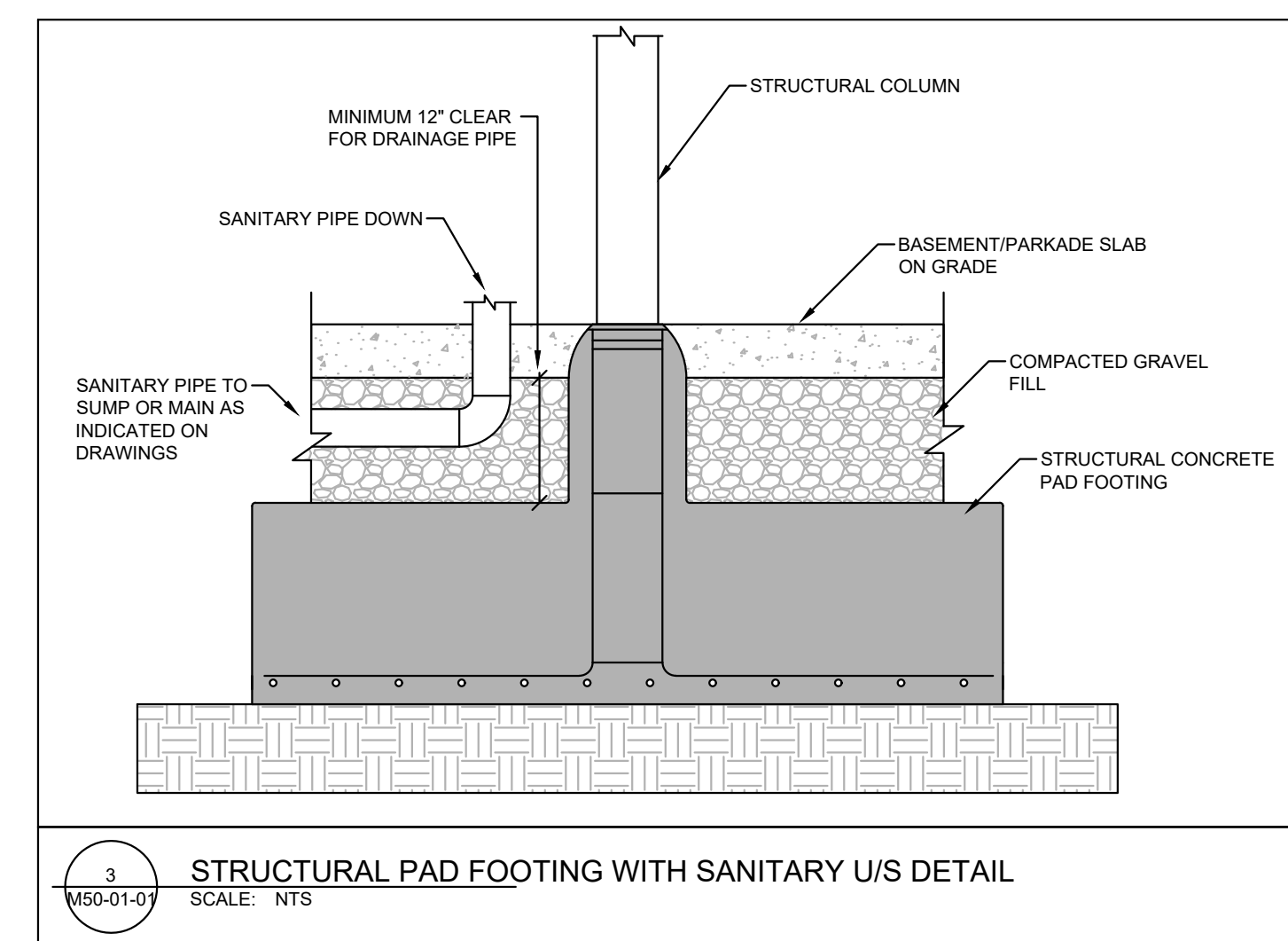
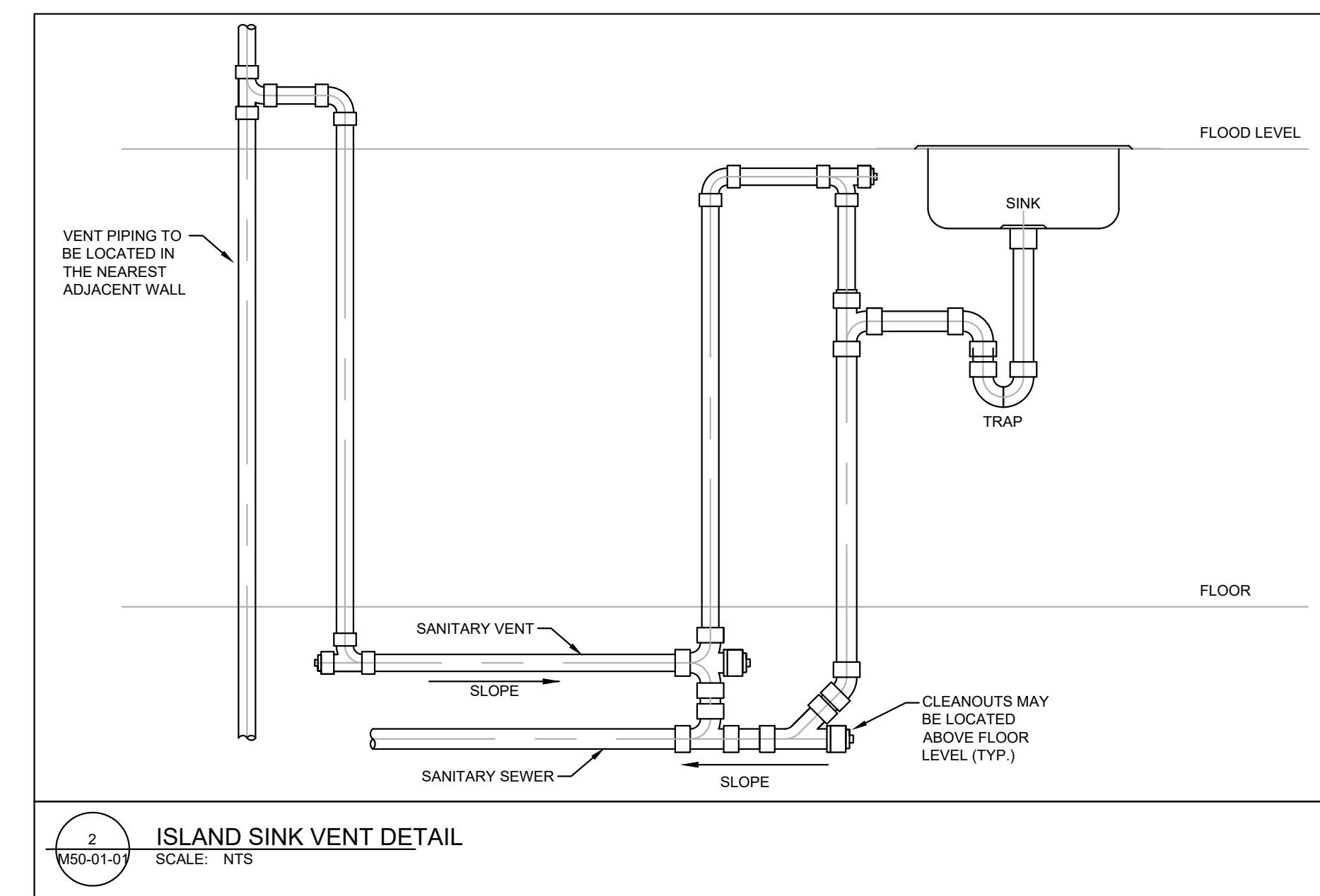
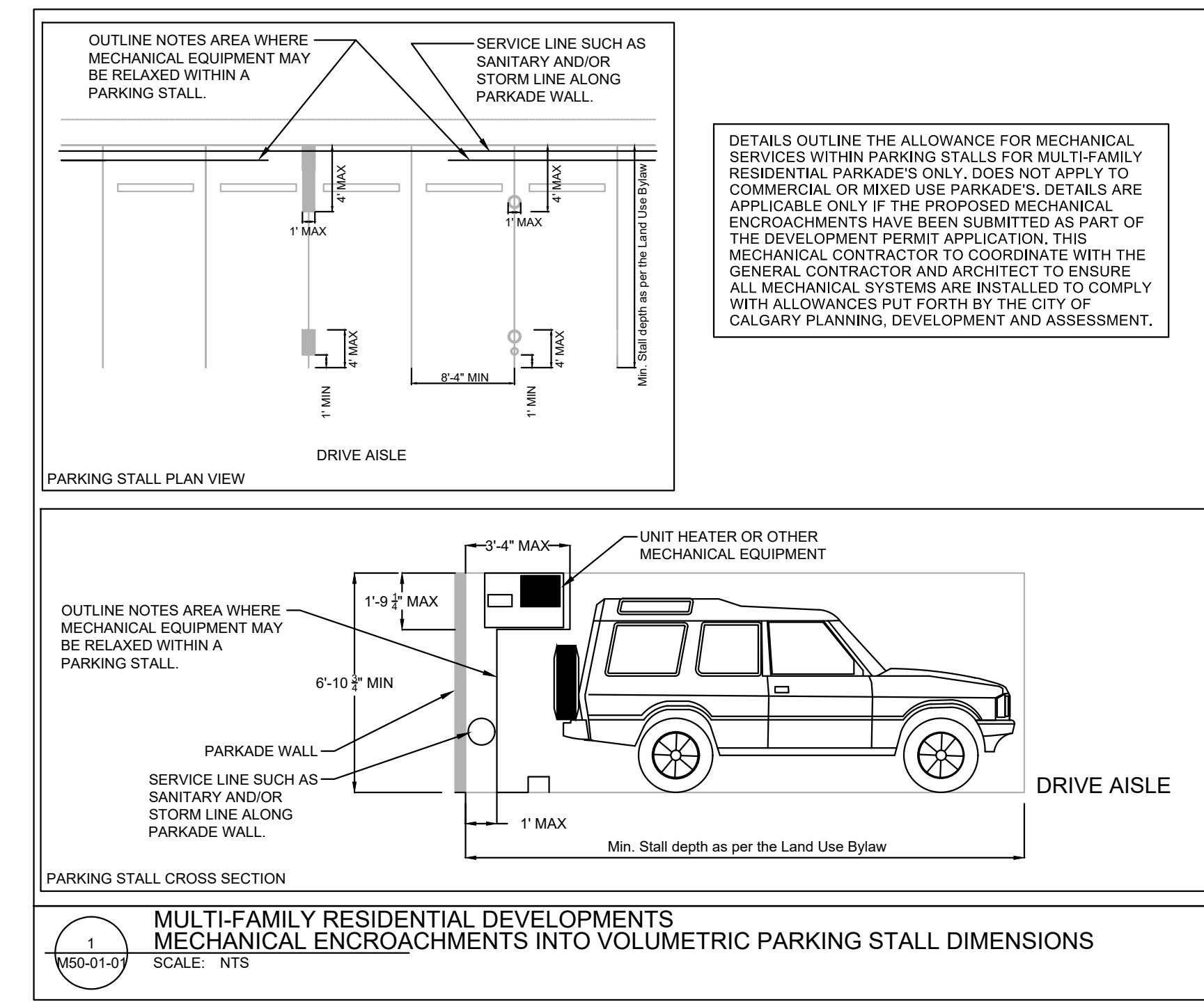
BUILDING A -
UNIT PLANS
HVAC LAYOUT

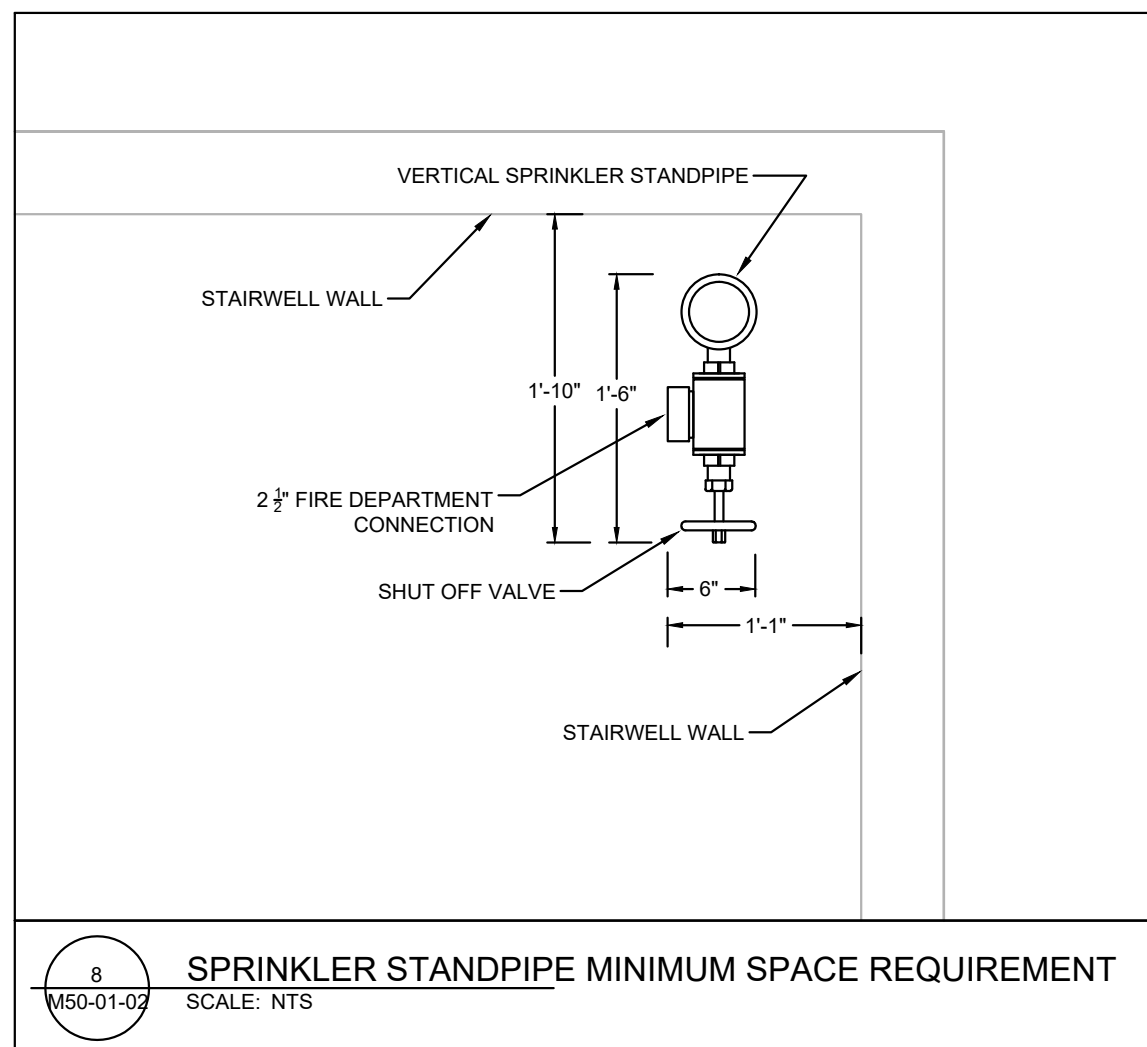
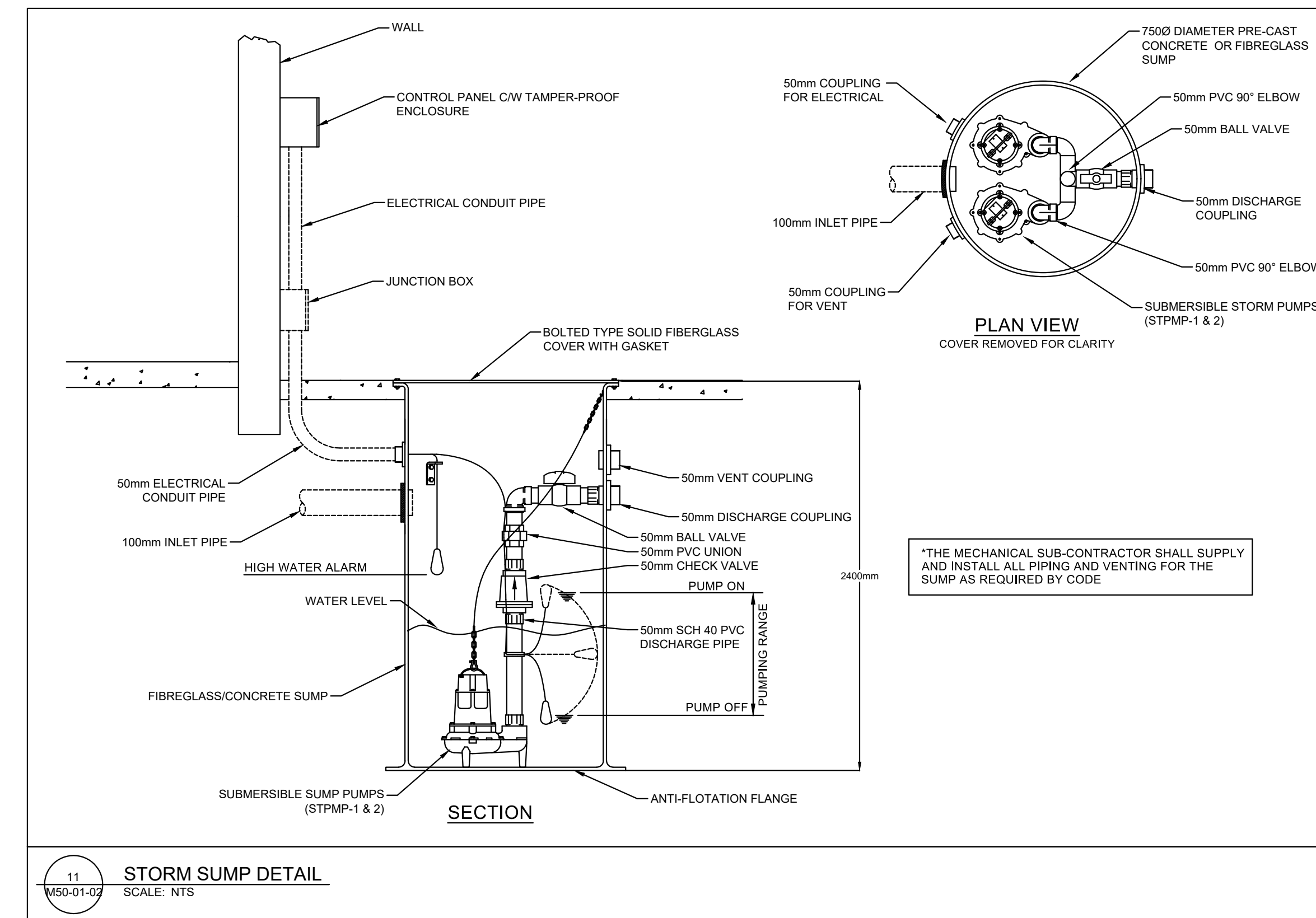
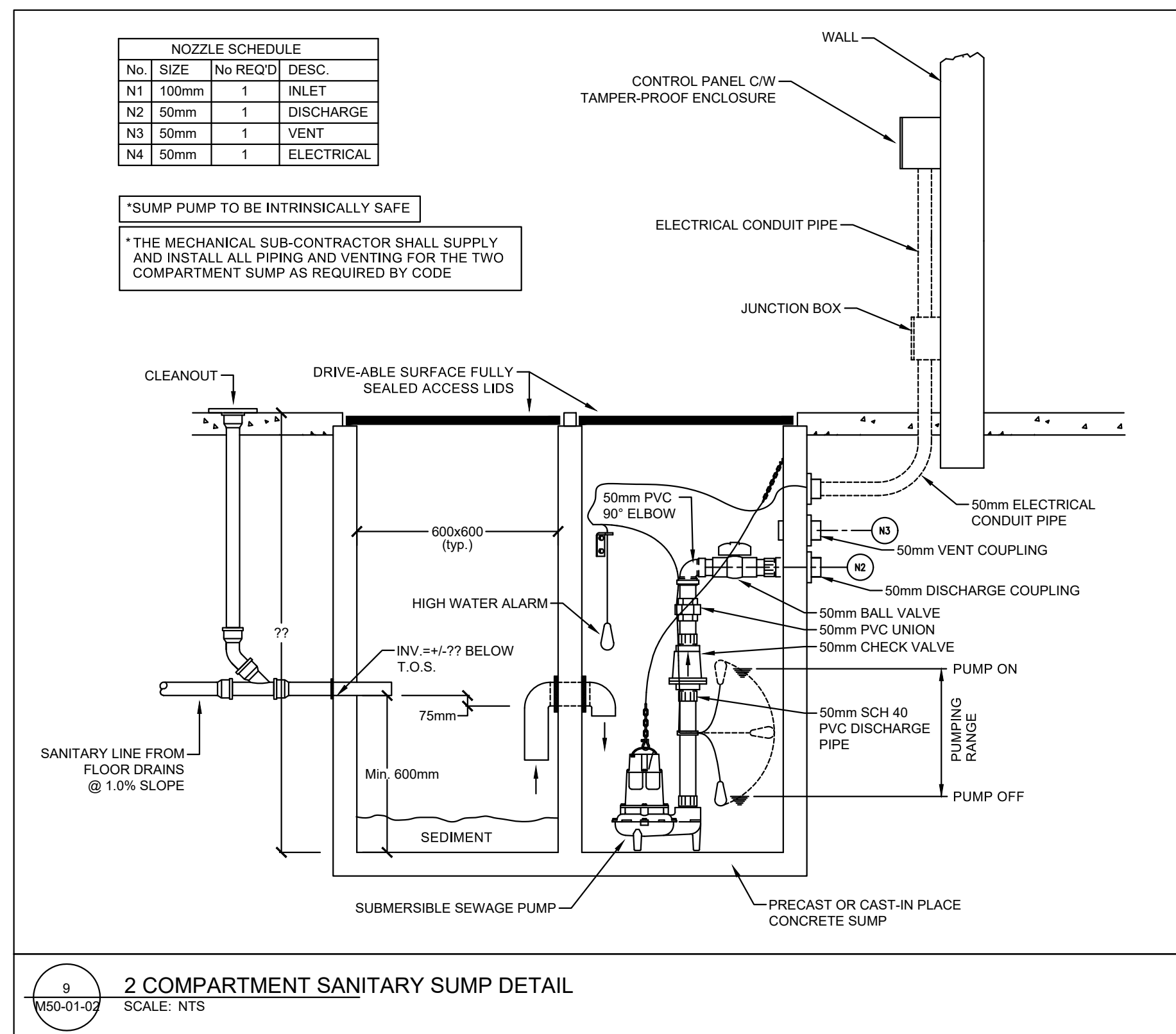
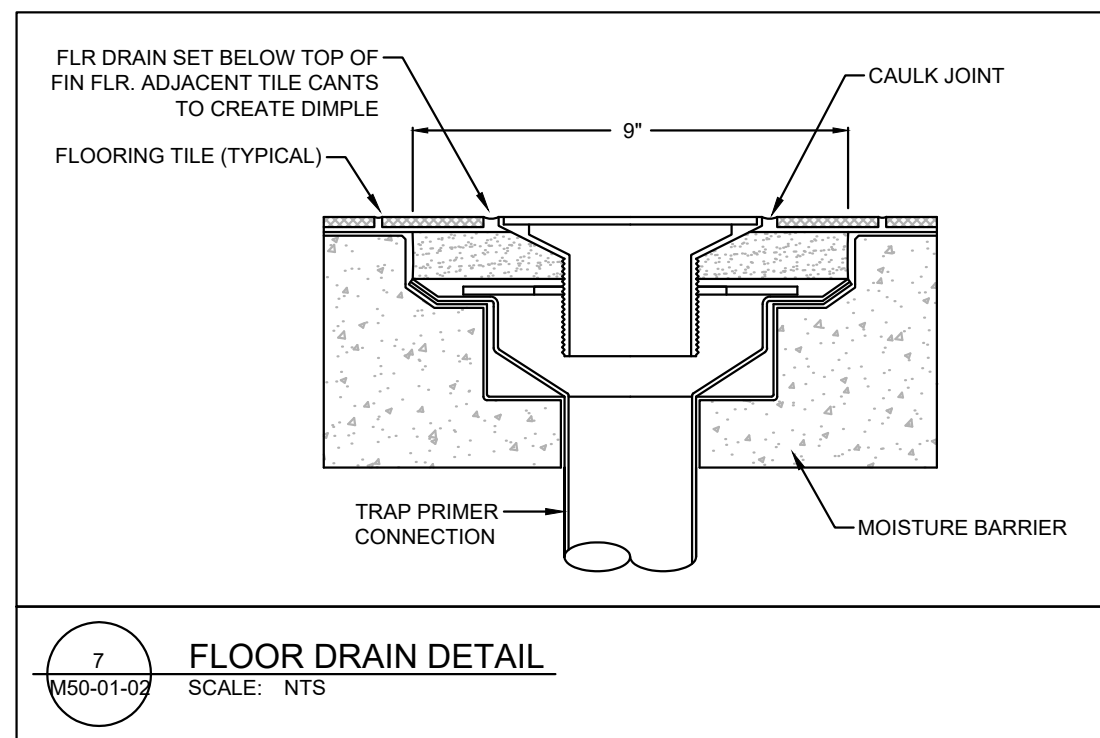
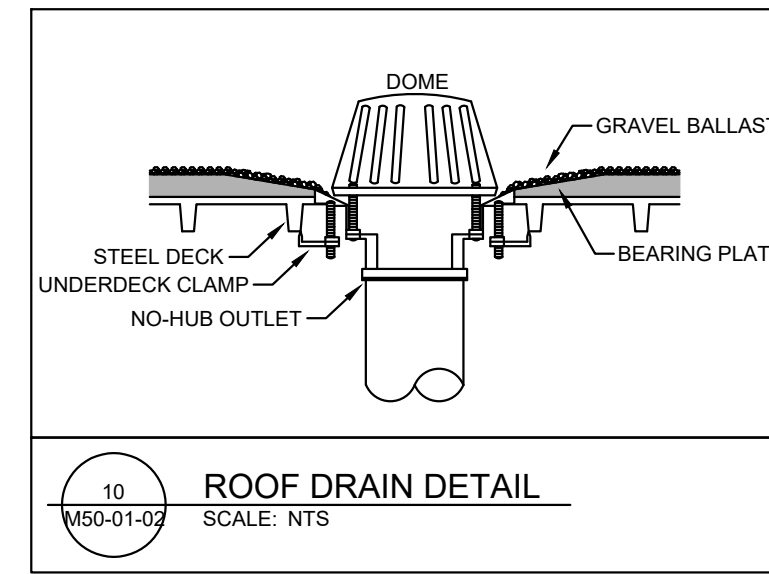
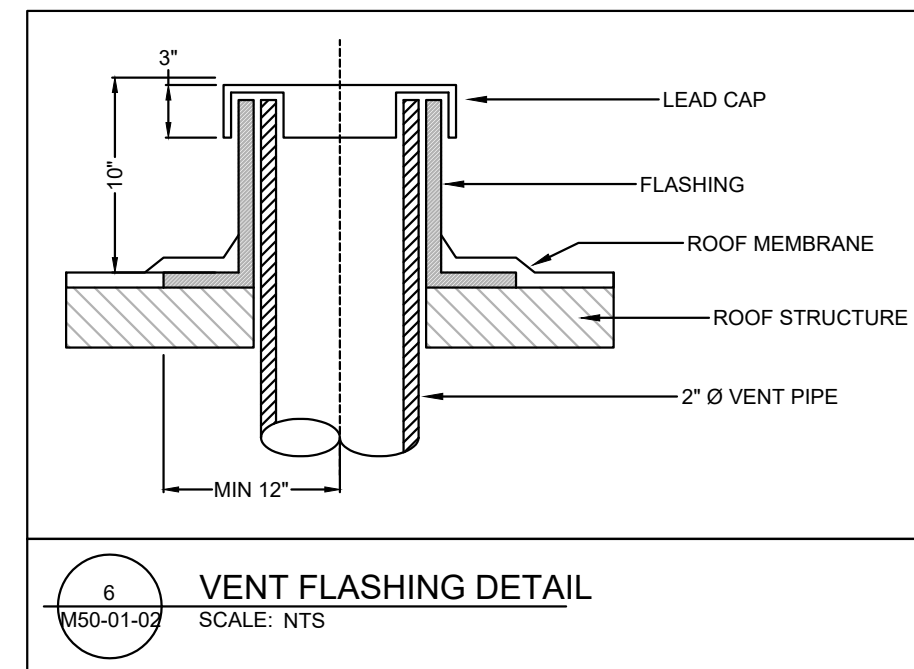
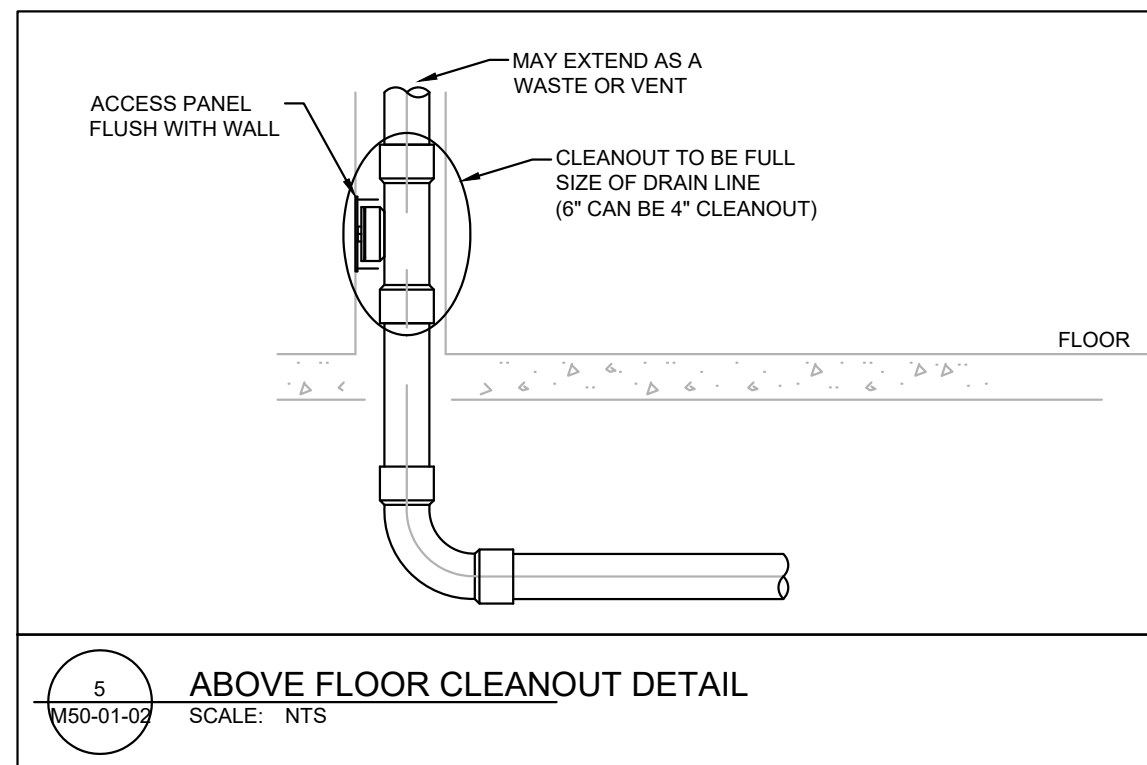
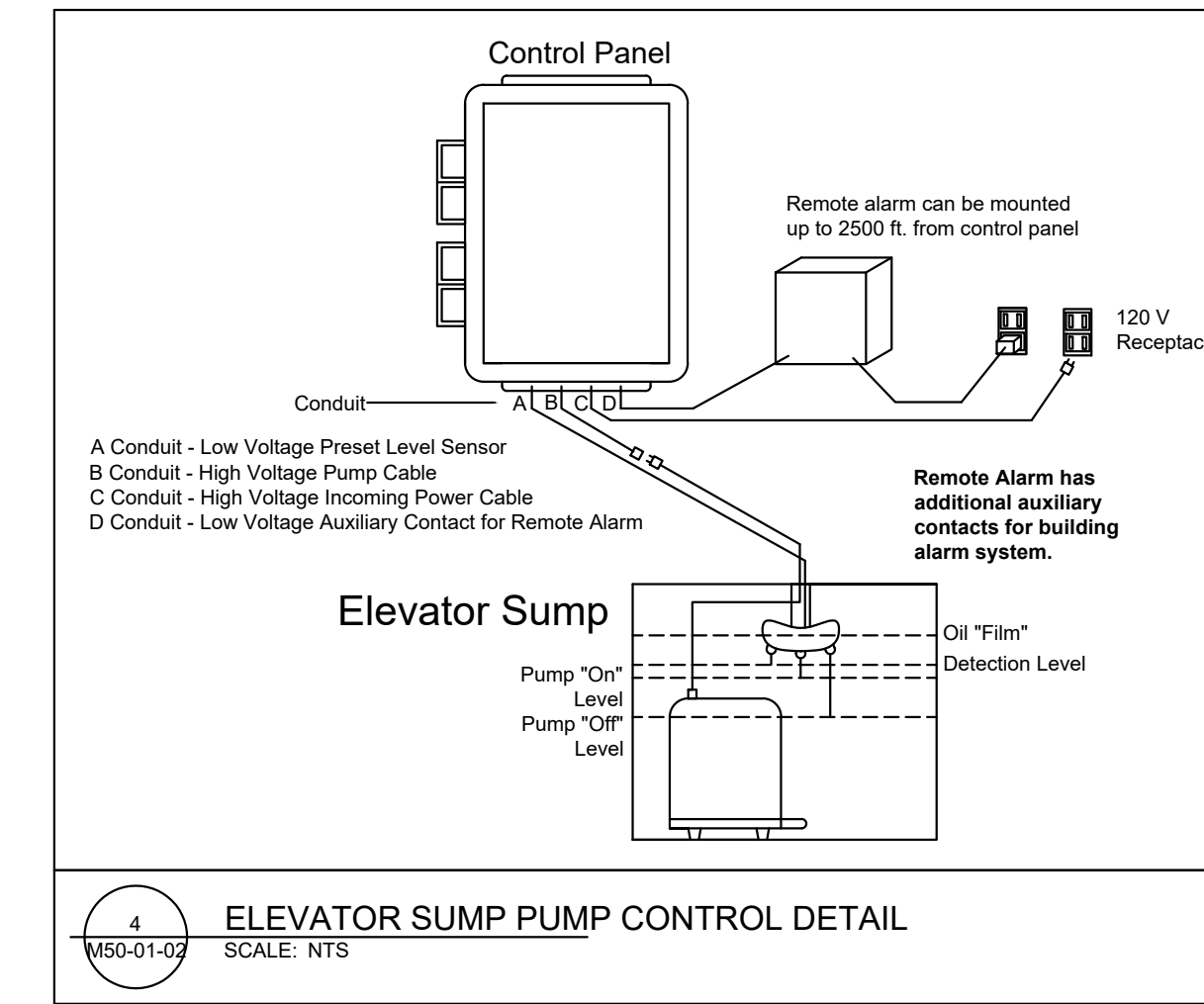
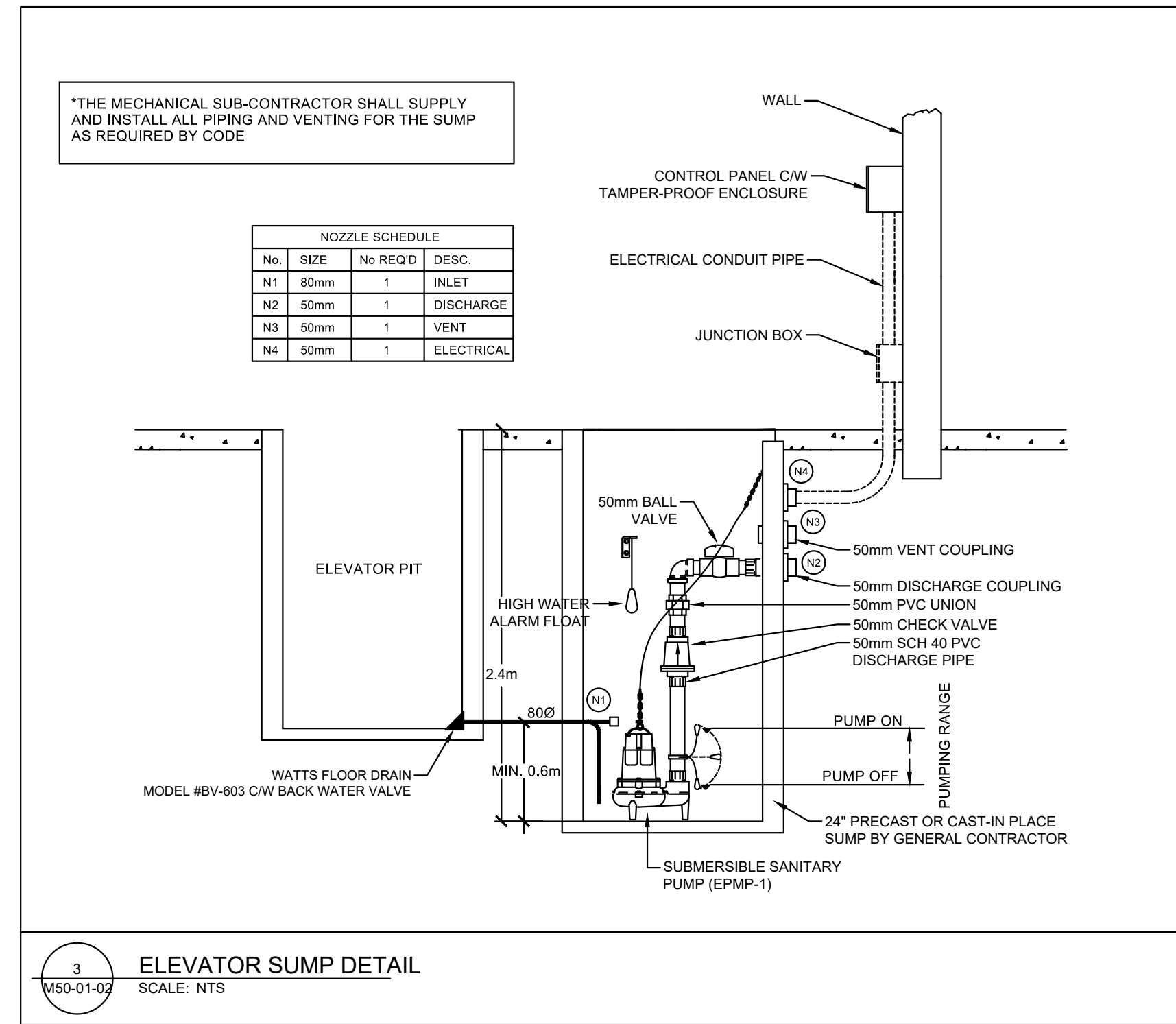
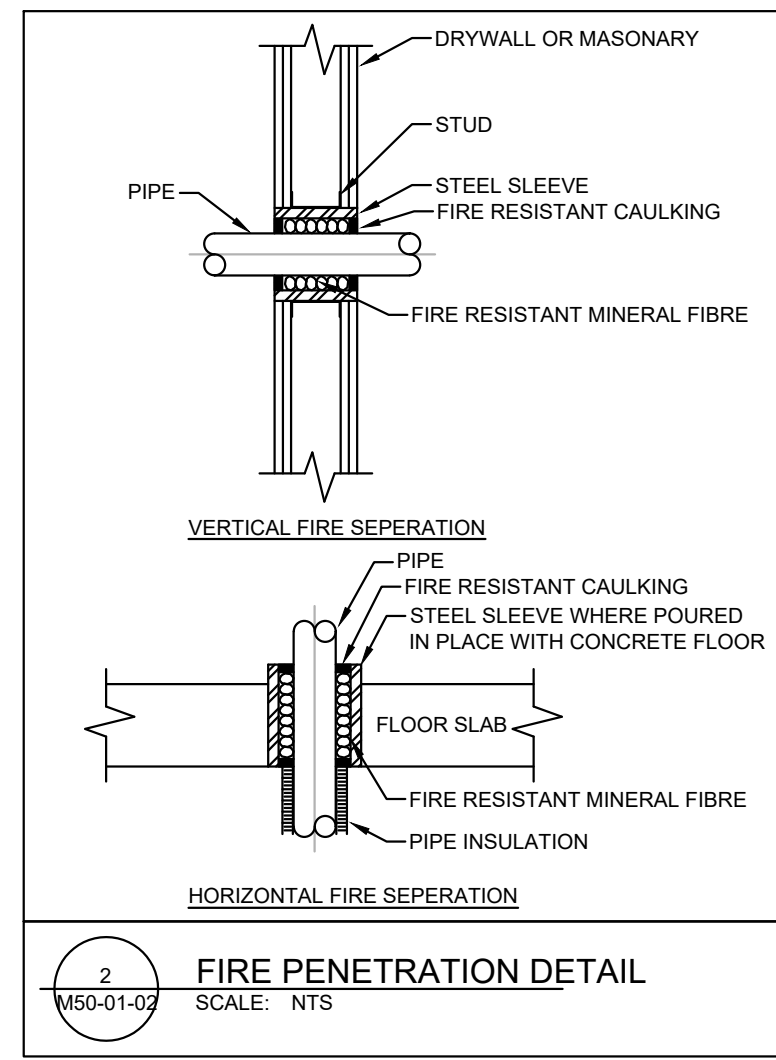
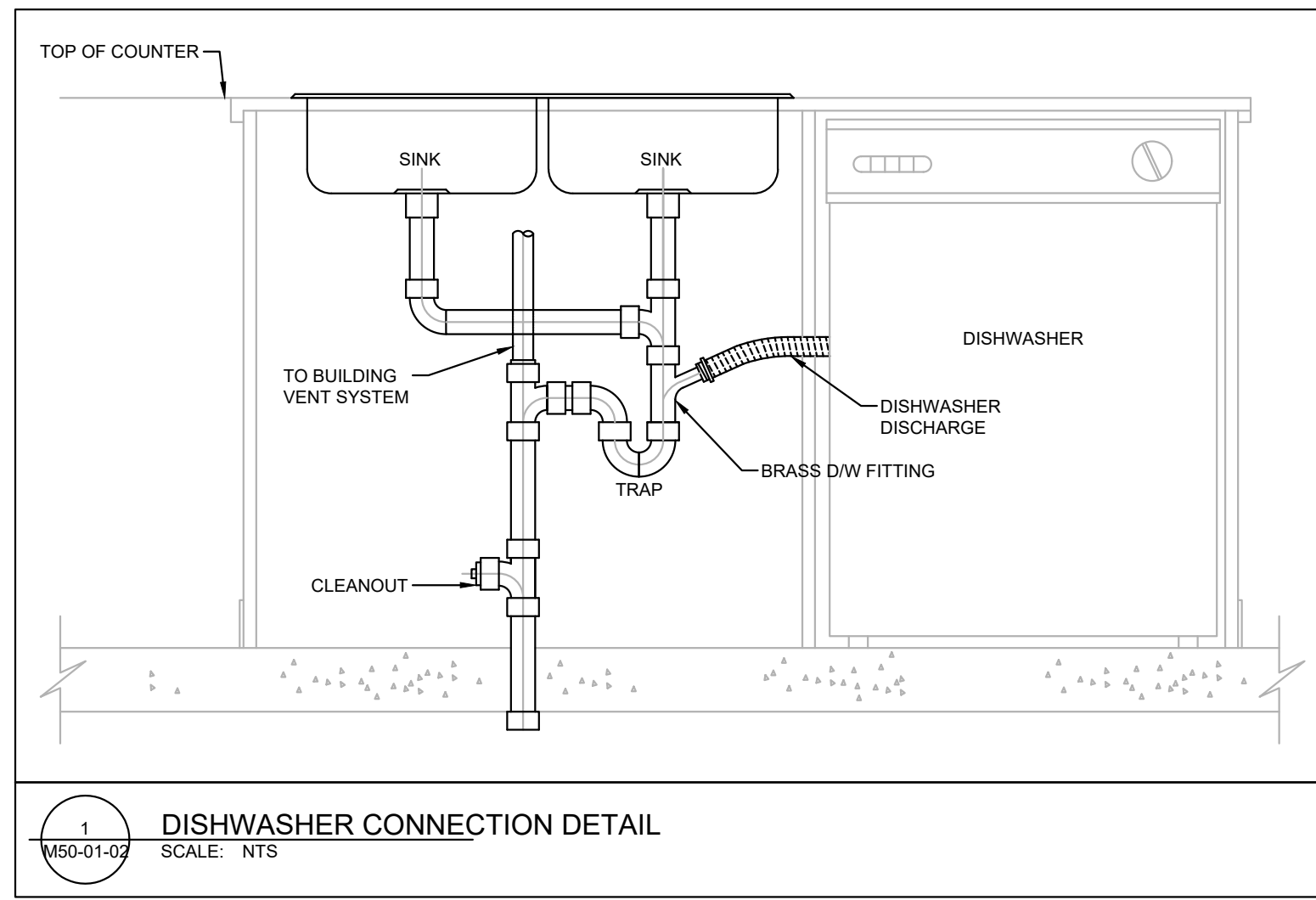


SCALE

M40-01-06

MECHANICAL SYSTEMS SYMBOL SCHEDULE					
NEW SANITARY LINE (UNDERSLAB / BURIED)		SECTION ARROW		AIR FLOW ARROW	
NEW SANITARY LINE (OVERHEAD / EXPOSED)		LOUVRE / GRILLE TAG		ROUND DUCT	
EXISTING SANITARY LINE		DIFFUSER / GRILLE TAG		SUPPLY AIR DUCT	
SANITARY VENT LINE		CARBON MONOXIDE / NITROGEN DIOXIDE DETECTOR		RETURN AIR DUCT	
WEeping TILE DRAINAGE LINE		THERMOSTAT		FRESH AIR DUCT	
NEW STORM LINE (UNDERSLAB / BURIED)		REVERSE ACTING THERMOSTAT		EXHAUST AIR DUCT	
NEW STORM LINE (OVERHEAD / EXPOSED)		HUMIDISTAT		SHEET METAL DUCT (1st FIGURE-SIDE SHOWN)	
EXISTING STORM LINE		CLEAN OUT		DUCT FLEX CONNECTION	
NEW DOMESTIC COLD WATER LINE		WATER METER		UNDERGROUND DUCTWORK	
EXISTING DOMESTIC COLD WATER LINE		GAS METER		TURNING VANES	
NEW DOMESTIC HOT WATER LINE		GAS OUTLET		FIRE DAMPER	
EXISTING DOMESTIC HOT WATER LINE		HOSE BIBB		MOTORIZED CONTROL DAMPER	
NEW DOMESTIC HOT WATER RECIRCULATION LINE		NON FREEZE HOSE BIBB		BALANCING DAMPER	
NEW NATURAL GAS LINE		P-TRAP		FLUE	
EXISTING NATURAL GAS LINE		DUAL SINK P-TRAPS		CONCENTRIC TERMINATION	
HEATING SYSTEM HOT WATER SUPPLY LINE		FLOOR DRAIN		GOOSENECK DUCT TERMINATION	
HEATING SYSTEM HOT WATER RETURN LINE		ROOF DRAIN		COLLECTOR EXHAUST BOXES	
HEATING SYSTEM HOT WATER HOMERUN RETURN LINE		AREA DRAIN		EXHAUST HOOD	
COOLING SYSTEM CHILLED WATER SUPPLY LINE		PUMP (IN-LINE OR SUMP)		INTAKE HOOD	
COOLING SYSTEM CHILLED WATER RETURN LINE		SPRINKLER SIAMEZE CONNECTION		TANDEM WALL TERMINATION	
COOLING SYSTEM CHILLED WATER HOMERUN RETURN LINE		SPRINKLER HOSE RISER		EXHAUST LOUVRE	
VACUUM LINE		SPRINKLER SYSTEM MAIN MANIFOLD (SPRINKLER TREE)		INTAKE LOUVRE	
COOLING SYSTEM DX CONDENSER LINE		RECESSED FIRE EXTINGUISHER		EXHAUST GRILLE	
SPRINKLER MAIN LINE		SURFACE MOUNTED FIRE EXTINGUISHER		INTAKE GRILLE	
COMPRESSED AIR LINE		FIRE EXTINGUISHER C/W HOSE VALVE CONNECTION		COMMERCIAL GRADE SUPPLY AIR DIFFUSERS	
LIQUID FLOW ARROW / DIRECTION		FIRE EXTINGUISHER (HOOK MOUNTED)		COMMERCIAL GRADE LINEAR DIFFUSER	
FLOW METER		PERIMETER HOT WATER RADIATION		COMMERCIAL GRADE RETURN AIR GRILLES	
PRESSURE GAUGE		CONTROL PANEL		DUCTED RETURN AIR GRILLE	
PIPE THERMOMETER		SNOW MELT CONTROL / SYSTEM PANEL		RESIDENTIAL GRADE SUPPLY / RETURN AIR GRILLES	
AUTOMATIC AIR VENT		IN-LINE DRYER BOOSTER FAN		RADON GAS TESTING ROUGH IN LINE	
PIPE GUIDE OR SLEEVE		EXHAUST FAN			
ANCHOR		RESIDENTIAL TYPE RANGE HOOD			
PIPE EXPANSION COMPENSATOR		HOT WATER HEATING UNIT HEATER			
FLEXIBLE CONNECTION		GAS FIRED UNIT HEATER			
THREE WAY VALVE		HOT WATER FORCE FLOW HEATER			
GATE VALVE		HOT WATER FORCE FLOW HEATER (CEILING MOUNTED)			
GLOBE VALVE		ELECTRIC FORCE FLOW HEATER			
BUTTERFLY VALVE		IN-LINE FAN			
CONTROL VALVE		COMBINATION FIRE & SMOKE DAMPER			
SOLENOID VALVE					
QUICK OPENING VALVE					
BALANCING VALVE / CIRCUIT SETTER					
BACK FLOW PREVENTION CHECK VALVE					
PRESSURE REDUCING VALVE					
PIPE REDUCER					
"Y" STRAINER					
PLUG VALVE					
UNION					





ISSUED FOR
COORDINATION

NO. ISSUE/REVISION DATE
1 30% Review 2026-04-30

PROJECT MANAGER DRAWN
K.V T.K/G.T
PROJECT LEAD CHECKED
J.P/G.U J.P/G.U/K.V

BLACK BEAR
CROSSING - BLACK
BIRCH HEIGHTS

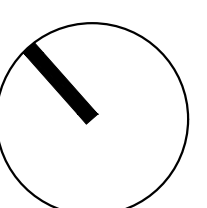
BLACK BEAR CROSSING SW, TSUU
T'INA NATION 145 AB

PROJECT # 25141.1
CITY FILE #

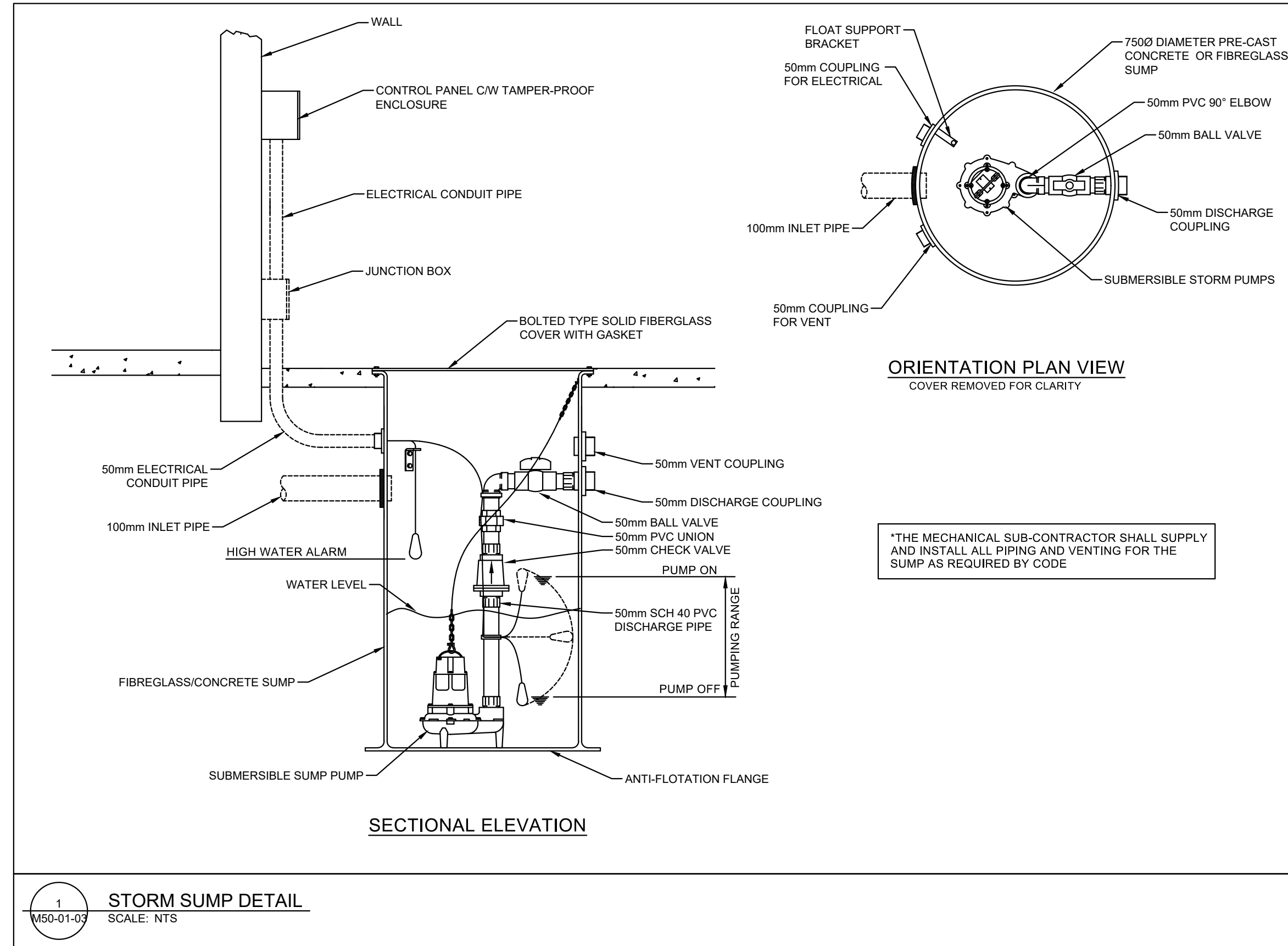


BUILDING A &
PARKADE
MECHANICAL
DETAILS

SCALE



M50-01-02



ISSUED FOR
COORDINATION

NO.	ISSUE/REVISION	DATE
1	30% Review	2026-04-30

PROJECT MANAGER	DRAWN
K.V	T.K/G.T
PROJECT LEAD	CHECKED
J.P/G.U	J.P/G.U/K.V

**BLACK BEAR
CROSSING - BLACK
BIRCH HEIGHTS**

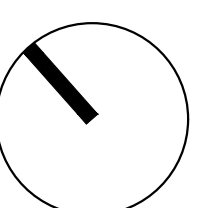
BLACK BEAR CROSSING SW, TSUU
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PROJECT # 25141.1
CITY FILE #



**BUILDING A &
PARKADE
MECHANICAL
DETAILS**

SCALE



M50-01-03