MECHANICAL/PIPING ABBREVIATIONS

A
- AAV AUTOMATIC AIR VENT
- AC AIR COMPRESSOR
- AD AIR DRYER, AUTOMATIC DRAIN
- AFF ABOVE FINISHED FLOOR
- ATF AUTOMATIC TRANSMISSION FLUID

B
- B BOILER
- BFF BELOW FINISHED FLOOR
- BTUH BRITISH THERMAL UNITS PER HOUR
- BW BOOT WASH

C
- CA COMPRESSED AIR, LOW PRESSURE, 100PSIG
- CW COLD DOMESTIC WATER
- CFM CUBIC FEET PER MINUTE
- CO CLEANOUT

D

E
- E EXHAUST
- EA EXHAUST AIR
- EB ELECTRIC BASEBOARD
- EC ELECTRIC CEILING PANEL
- EF EXHAUST FAN
- EO1 ENGINE OIL, 15W40
- EO2 ENGINE OIL, 5W20
- EVP EVAPORATOR
- EWC ELECTRIC WATER COOLER
- EXH EXHAUST
- EXST EXISTING
- EW EYEWASH

F
- FCO FLOOR CLEANOUT
- FD FLOOR DRAIN
- FTU FAN TERMINAL UNIT
- FRL FILTER, REGULATOR, LUBRICATOR

G
- GPM GALLONS PER MINUTE
- GR GREASE

H
- H HEADER
- HB HOSE BIBB
- HC HEATING COIL
- HW HOT DOMESTIC WATER
- HF HYDRAULIC FLUID
- HP HIGH PRESSURE COMPRESSED AIR, 150PSIG
- HWR HEATING WATER RETURN
- HWS HEATING WATER SUPPLY
- HV HEATING AND VENTILATION UNIT
- HX HEAT EXCHANGER

I
- IA INTAKE AIR
- IW INDUSTRIAL WATER (NON-POTABLE)

K

L
- L LAVATORY

M
- MAX MAXIMUM
- MBH THOUSAND BRITISH THERMAL UNITS PER HOUR
- MIN MINIMUM
- MS MIXING STATION
- MSB MOP SERVICE BASIN
- MU MAKE UP

N

O
- OA OUTSIDE AIR
- ORD OVERFLOW ROOF DRAIN

P
- P PUMP

Q

R
- RA RETURN AIR
- RPBP REDUCED PRESSURE BACKFLOW PREVENTOR
- RD ROOF DRAIN
- RF RETURN FAN
- RG RETURN GRILLE

S
- S SINK
- SA SUPPLY AIR
- SCF SOURCE CAPTURE FAN
- SD SUPPLY DIFFUSER
- SF SUPPLY FAN
- SHR SHOWER
- SL SLOPE
- SR SUPPLY REGISTER
- SS STAINLESS STEEL

T
- T TANK
- TD TRENCH DRAIN
- TYP TYPICAL

U
- UH UNIT HEATER
- UR URINAL

V
- V VENT
- VFD VARIABLE FREQUENCY DRIVE
- VL VEHICLE LIFT
- VTR VENT THRU ROOF

W
- W WASTE
- WC WATER CLOSET, WATER COLUMN
- WH WATER HEATER
- WM WASH MACHINE

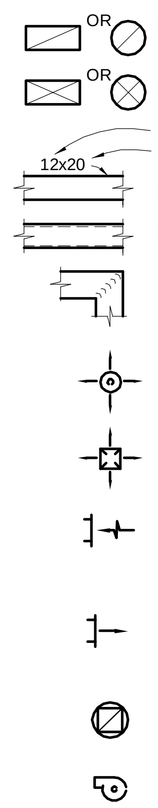
X

Y
- Y YARD CLEANOUT

Z

DUCTWORK SYMBOLS

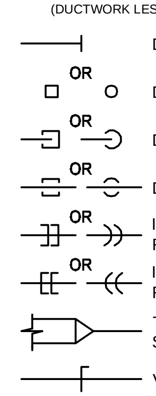
DOUBLE LINE DUCT



- DUCT SECTION (EXHAUST OR RETURN)
- DUCT SECTION (SUPPLY)
- SIZE OF SIDE SHOWN
- SIZE OF SIDE NOT SHOWN
- DUCT SIZE IN INCHES
- DUCT WITH LINING/INSULATION
- TURNING VANES
- SUPPLY DIFFUSER OR GRILLE. THE NUMBER OF ARROWS AND DIRECTION INDICATES 1, 2, 3, OR 4-WAY DEFLECTION
- RETURN GRILLE OR REGISTER MOUNTED IN A VERTICAL POSITION
- SUPPLY GRILLE OR REGISTER MOUNTED IN A VERTICAL POSITION
- POWER OR GRAVITY ROOF VENTILATOR- EXHAUST
- FAN

SINGLE LINE DUCT

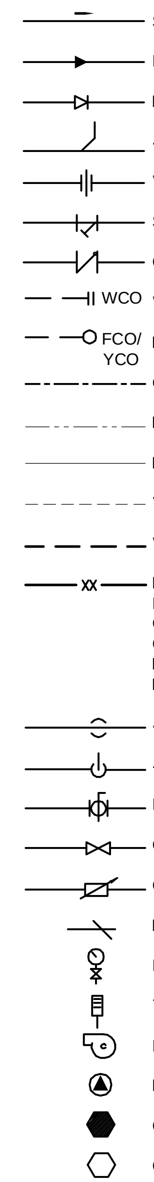
(DUCTWORK LESS THAN 12"WIDE)



- DUCT END
- DUCT SECTION
- DUCT BEND DOWN
- DUCT TEE DOWN
- INCLINED DROP IN RESPECT TO AIR FLOW
- INCLINED RISE IN RESPECT TO AIR FLOW
- TRANSITION DOUBLE LINE TO SINGLE LINE
- VOLUME DAMPER

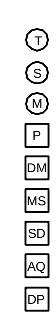
PIPING SYMBOLS

PIPING



- SLOPE (DN TOWARD ARROW DIRECTION)
- DIRECTION OF FLOW
- REDUCER
- 45° TEE
- WALL CLEANOUT
- STRAINER
- CHECK VALVE
- WALL CLEANOUT
- FLOOR CLEANOUT/ YARD CLEANOUT
- COLD DOMESTIC WATER (CW)
- HOT DOMESTIC WATER (HW)
- HOT DOMESTIC WATER RECIRC (HDWR)
- VENT
- WASTE BELOW SLAB
- INDICATES LIQUID/GAS TRANSPORTATION BY PIPE,
  - CHWR: CHILLED WATER RETURN
  - CHWS: CHILLED WATER SUPPLY
  - HWR: HEATING WATER RETURN
  - HWS: HEATING WATER SUPPLY
- 45° OR 90° OFF BOTTOM
- 45° OR 90° OFF TOP
- BALL VALVE
- GATE VALVE FLOW
- CONTROL VALVE
- HOSE BIBB
- PRESSUR GAUGE WITH ISOLATION VALVE
- THERMOMETER
- PUMP
- IN-LINE PUMP
- COMPRESSED AIR STATION, LOW PRESSURE
- COMPRESSED AIR STATION, HIGH PRESSURE

CONTROL SYMBOLS



- THERMOSTAT
- SWITCH
- MOTOR
- PRESSURE SENSOR
- MOTORIZED DAMPER
- MOTOR STARTER
- SMOKE DETECTOR
- AIR QUALITY SENSOR
- DIFFERENTIAL PRESSURE SENSOR

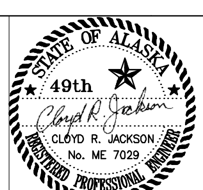
MECHANICAL/PIPING GENERAL NOTES

THESE NOTES APPLY TO ALL M, FP & P DRAWINGS UNLESS NOTED OTHERWISE

SEE SPECIFICATION DIVISION 15 FOR INSTALLATION AND OTHER REQUIREMENTS FOR MECHANICAL WORK SHOWN ON "M", "FP" AND "P" SERIES DRAWINGS.

1. THE DESIGN SHOWN ON THE DRAWINGS IS BASED ON THE EQUIPMENT MANUFACTURERS LISTED IN THE MECHANICAL EQUIPMENT SCHEDULES. EQUIPMENT PROPOSED BY THE CONTRACTOR THAT IS NOT LISTED IN THE SCHEDULES SHALL BE SUBMITTED TO CITY/BOROUGH OF JUNEAU AS A REQUEST FOR SUBSTITUTION IN ACCORDANCE WITH DIVISION 1.
2. PROVIDE ALL MECHANICAL SYSTEMS IN ACCORDANCE WITH THE FIRE WALL, FIRE BLOCKING AND FIRE STOP PROVISIONS SHOWN ON THE ARCHITECTURAL DRAWINGS.
3. COORDINATE SUPPLY AIR DIFFUSERS AND RETURN/EXHAUST AIR GRILLE LOCATIONS WITH ARCHITECTURAL DRAWINGS. COORDINATE DUCT ROUTING WITH LIGHT FIXTURE LOCATIONS.
4. MECHANICAL WORK SHOWN IS DIAGRAMMATIC. PROVIDE OFFSETS, TRANSITIONS, AND OTHER DUCTWORK, PIPING AND ASSOCIATED CONSTRUCTION WHERE REQUIRED TO AVOID BUILDING STRUCTURAL ELEMENTS OR THE WORK OF OTHER TRADES.
5. DUCTWORK DIMENSIONS SHOWN ARE NET INSIDE DIMENSIONS. ENLARGE DUCT DIMENSIONS AS REQUIRED FOR INTERNALLY LINED DUCTWORK, SEE SPECIFICATIONS.
6. PAINT EXTERIOR PIPING, DUCTWORK, FANS, CURBS AND SHEET METAL WITH URETHANE FINISH, COLOR AS SELECTED BY ARCHITECT. PAINT UNFINISHED STEEL, GALVANIZED, ALUMINUM OR SST EXTERIOR SURFACES, MATERIALS OR EQUIPMENT, PROVIDED UNDER DIVISION 15, COLOR AS SELECTED BY ARCHITECT.
7. TEMPERATURE SENSORS SHALL BE LOCATED WHERE SHOWN 48 INCHES ABOVE FINISHED FLOOR.
8. PROVIDE BIRDSCREENS FOR ALL LOUVERS AND ALL OUTSIDE AIR INTAKES.
9. PENETRATE ROOF DECKS AS REQUIRED TO INSTALL MECHANICAL WORK. PROVIDE BLOCKING AROUND PENETRATIONS AND AS NOTED ON STRUCTURAL DRAWINGS. SEAL ALL PENETRATIONS AIR AND WATER TIGHT.
10. PROVIDE ACCESS PANELS FOR ALL MECHANICAL EQUIPMENT OR VALVES ENCLOSED IN PERMANENT CONSTRUCTION OR DUCTWORK.
11. INSTALL DUCTWORK TO MAINTAIN SERVICE CLEARANCES, ACCESS DOOR CLEARANCES AND COIL PULL CLEARANCES AT ALL HVAC EQUIPMENT.
12. COORDINATE FLOOR AND WALL CLEANOUT LOCATIONS WITH OFFICE CASEWORK VENDOR DRAWINGS AND OTHER FURNISHINGS, RELOCATE AS REQUIRED.
13. PROVIDE FINAL LOCATIONS FOR ROUGH-IN AND FINISH OF WASTE, VENT, AND WATER SUPPLY. CONNECTIONS AND LOCATIONS PER CASEWORK VENDOR DRAWINGS.
14. PROVIDE ALL FLOOR DRAINS, FLOOR SINKS, INDIRECT WASTE CONNECTIONS, AND OPEN HUB DRAINS WITH VENTS AND TRAP PRIMERS, EXCLUDING THE MAINTENANCE AREAS AND FLEET BAY.
15. SURVEY AND FIELD VERIFY ALL INVERT ELEVATIONS SHOWN ON PLUMBING DRAWINGS. INVERT ELEVATIONS SHOWN ARE APPROXIMATE, PROVIDE BUILDING WASTE PLUMBING TO PROPERLY INTERCONNECT WITH SITE WASTE PLUMBING. SEE CIVIL DRAWINGS.
16. T-PULL BRANCH PIPING NOT ALLOWED. ALL CHANGES IN DIRECTION SHALL BE MADE WITH FITTINGS.
17. ALL PENETRATIONS AND SLEEVES THRU FLOORS/ WALLS SHALL BE SEALED WEATHERTIGHT.
18. ALL CONDENSATE DRAINS SHALL BE ROUTED FULLSIZE TO NEAREST WASTE LINE OR APPROVED EXTERIOR LOCATION.
19. ALL UNDER BUILDING PIPING SHALL BE SLOPED AT 2%, FOR YARD PIPING SLOPES SEE CIVIL DRAWINGS.
20. EXTEND VTR PIPING AS REQUIRED TO MAINTAIN 10' MINIMUM CLEARANCE TO OUTSIDE AIR INTAKE LOUVERS.

ONE INCH AT FULL SIZE
1"
IF NOT ONE INCH, SCALE ACCORDINGLY



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CITY/BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
DEPARTMENT OF ENGINEERING

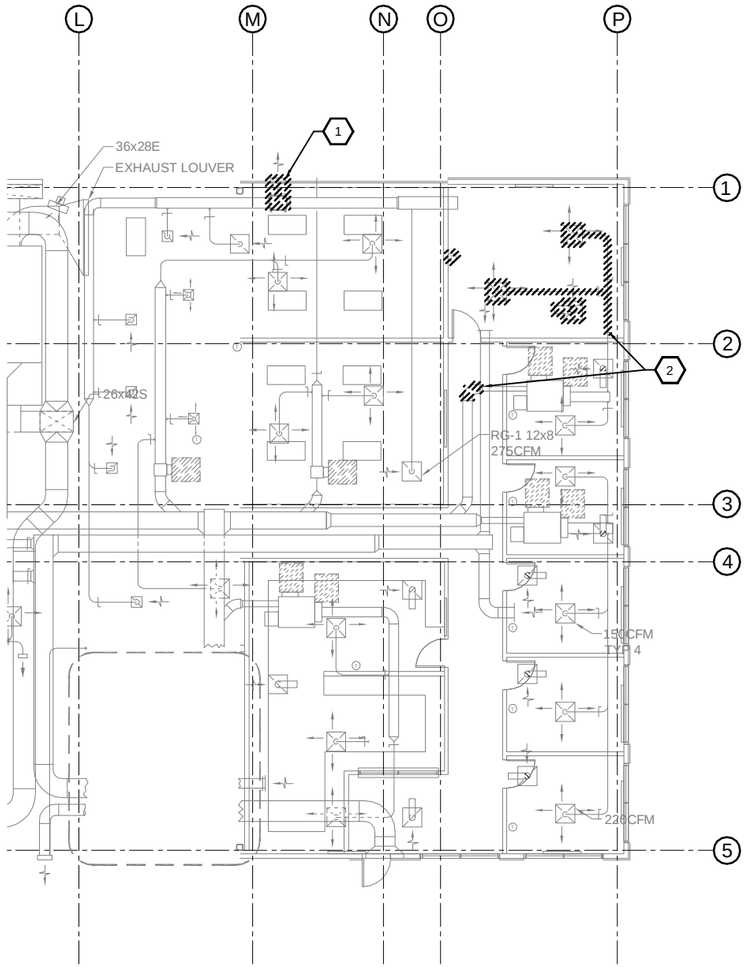
DRAWN BY:	DESIGNED BY:	CHECKED BY:	DATE:
DS	DS	CRJ	MAY 2010

CONSOLIDATED PUBLIC WORKS FACILITY STREETS WING ADDITION, E10-273

MECHANICAL ABBREVIATIONS & SYMBOLS

SHEET NO. M0.01

TOTAL SHEETS 31 - 72



HVAC DEMOLITION PLAN 1

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

8' 0 8' 16'

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

NOTES:

1. DRAWINGS SHOW GENERAL INTENT OF THE DEMOLITION WORK. DEMOLITION OF EQUIPMENT AND COMPONENTS SHALL INCLUDE ALL SUPPORTS, PADS, HANGERS, INSULATION, CONTRLS, STARTERS, ACCESSORIES AND APPURTENANCES NOT REQUIRED FOR THE INSTALLATION OF THE NEW SYSTEM.
2. SEE DWG M1.02 FOR LOCATION OF RELOCATED EQUIPMENT.
3. ALL OPENINGS CREATED BY THE ABANDONMENT OR REMOVAL OF EXISTING SYSTEMS SHALL BE PATCHED TO MATCH EXISTING.

KEY NOTES:

1. RELOCATE EF-3, LOUVER AND ALL RELATED APPURTENANCES AND PATCH 14E DUCTWORK FOR CONTINUITY. PATCH WALL OPENING TO MATCH EXISTING.
2. COMPLETELY REMOVE INDICATED DUCTWORK AND RELATED APPURTENANCES AND COORDINATE WITH INSTALLATION OF NEW WORK INDICATED IN DWG M1.02.

ONE INCH AT FULL SIZE

IF NOT ONE INCH, SCALE ACCORDINGLY

STATE OF ALASKA 49th
CLOYD R. JACKSON
No. ME 7029
REGISTERED PROFESSIONAL ENGINEER

DRAWN BY: DS | DESIGNED BY: DS | CHECKED BY: CRJ | DATE: MAY 2010

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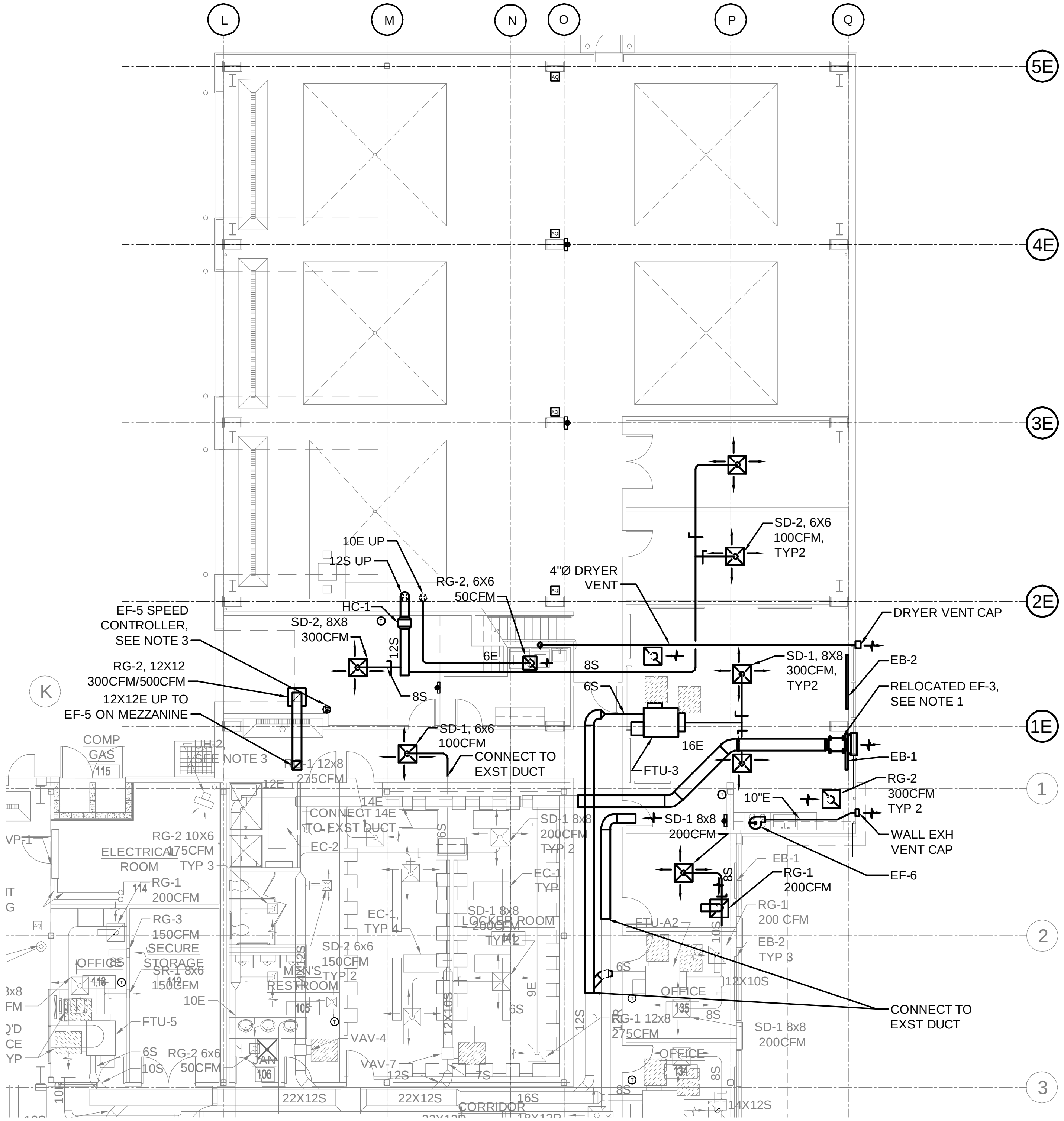
STREETS WING ADDITION,
E10-273

MECHANICAL
HVAC DEMOLITION
PLAN

SHEET NO. M1.01

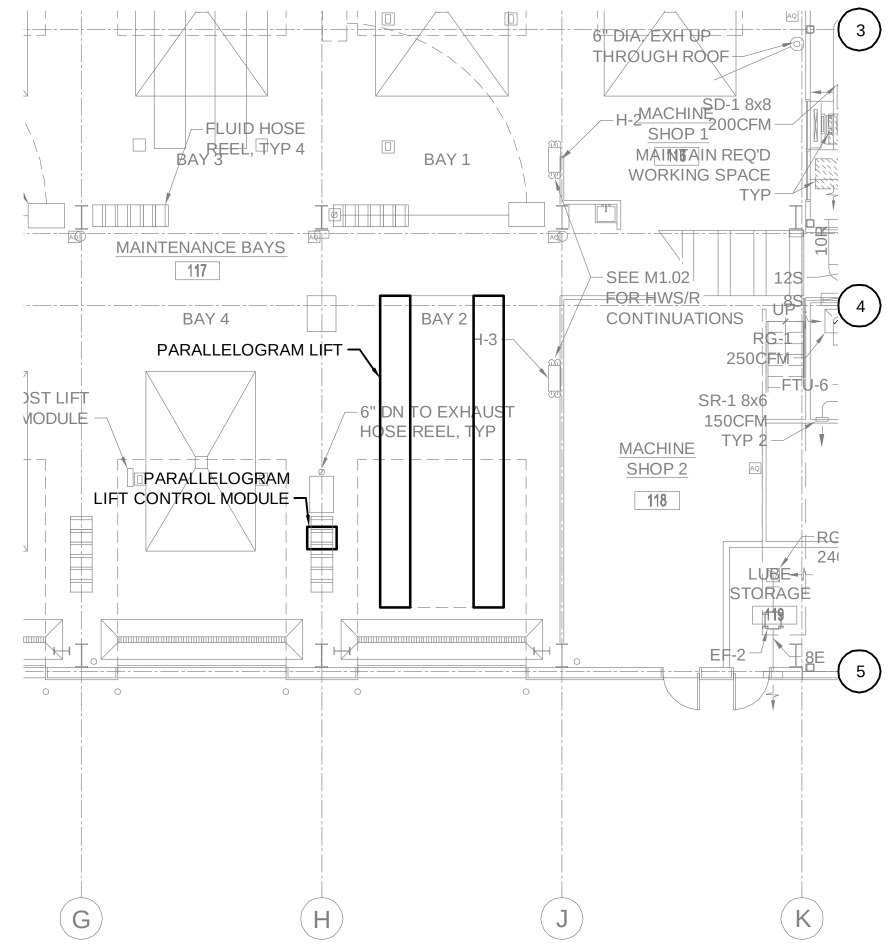
TOTAL SHEETS 32 - 72



1ST FLOOR HVAC PLAN (1/–)

SCALE: 1/8" = 1'0"

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



ADD. ALTERNATE #1 (2/–)

SCALE: 1/8" = 1'0"

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

NOTES:

1. RELOCATE EF-3, LOUVER AND RELATED APPURTENANCES. BALANCE EF-3 TO 1325CFM.
2. SEE P1.02 FOR RADIANT FLOOR ZONING.
3. PROVIDE WALL SPEED CONTROLLER WITH 300CFM IN LOW SPEED POSITION AND 500CFM IN HIGH SPEED POSITION.
4. PROVIDE RIGID GALVANIZED DRYER DUCT WITH MAXIMUM NUMBER OF BENDS TO NOT EXCEED TWO 90° ELBOWS. USE TYPE A VENT HOOD WITH NO MESH SCREEN.
5. REBALANCE FTU-A2 TO 400CFM
6. PER ADDITIVE ALTERNATE #1, INSTALL PARALLELOGRAM VEHICLE LIFT IN ROOM 117, BAY 2 OF THE EXISTING MAINTENANCE BAYS AREA.

ONE INCH AT FULL SIZE
IF NOT ONE INCH, SCALE ACCORDINGLY

STATE OF ALASKA — 49th — CLOYD R. JACKSON — No. ME 7029 — REGISTERED PROFESSIONAL ENGINEER

DRAWN BY: DS | DESIGNED BY: DS | CHECKED BY: CRJ | DATE: MAY 2010

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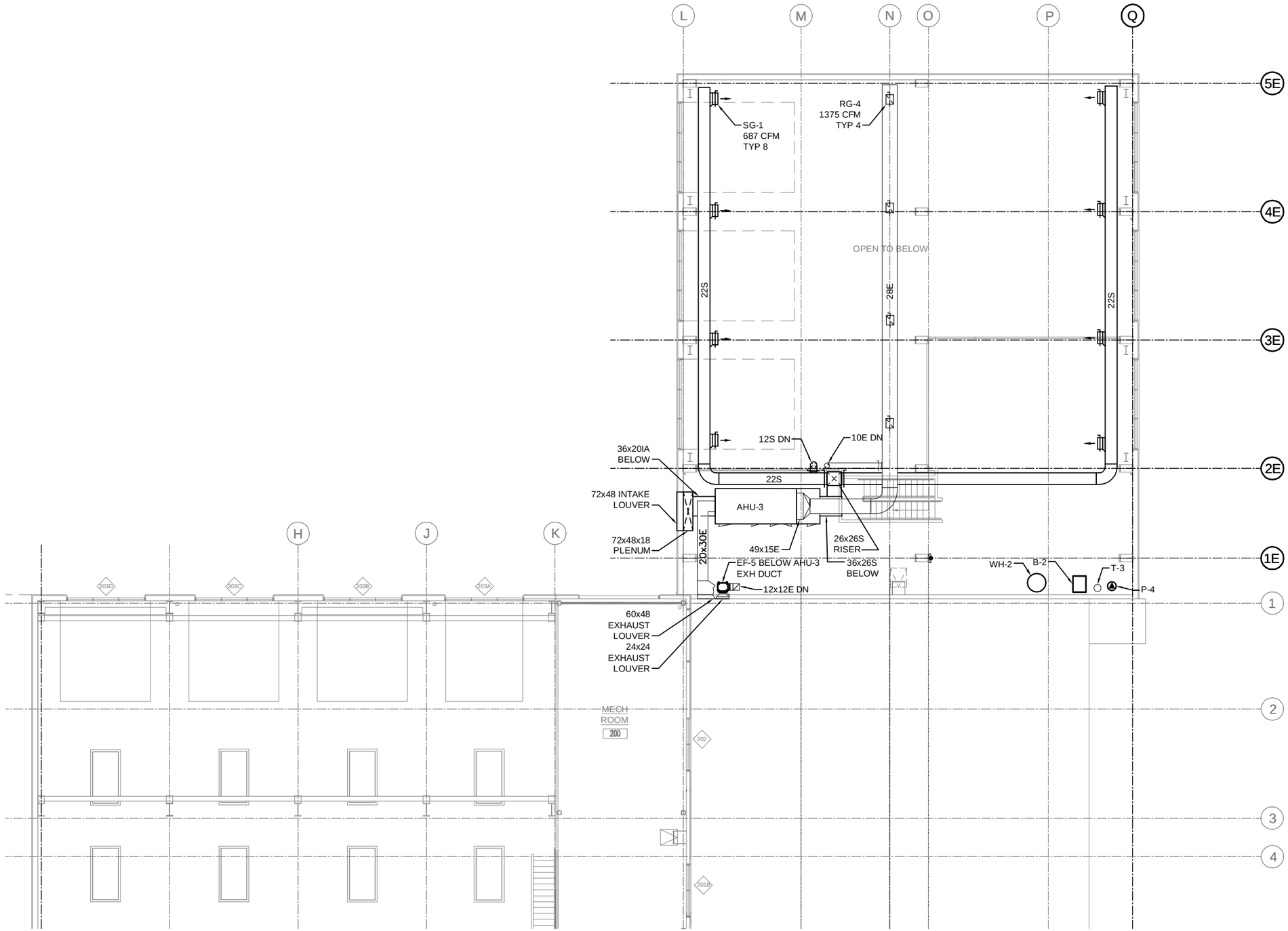
CONSOLIDATED PUBLIC WORKS FACILITY STREETS WING ADDITION, E10-273

MECHANICAL FIRST FLOOR HVAC PLAN

SHEET NO. M1.02

TOTAL SHEETS 33 - 72



2ND FLOOR HVAC PLAN (1 / –)

SCALE: 1/8" = 1'0"

8' 0 8' 16'

SCALE: 1/8"=1'–0"

N

ONE INCH AT FULL SIZE

1"

IF NOT ONE INCH, SCALE ACCORDINGLY

STATE OF ALASKA
49th
Cloyd R. Jackson
CLOYD R. JACKSON
No. ME 7029
REGISTERED PROFESSIONAL ENGINEER

DRAWN BY: DS	DESIGNED BY: DS	CHECKED BY: CRJ	DATE: MAY 2010

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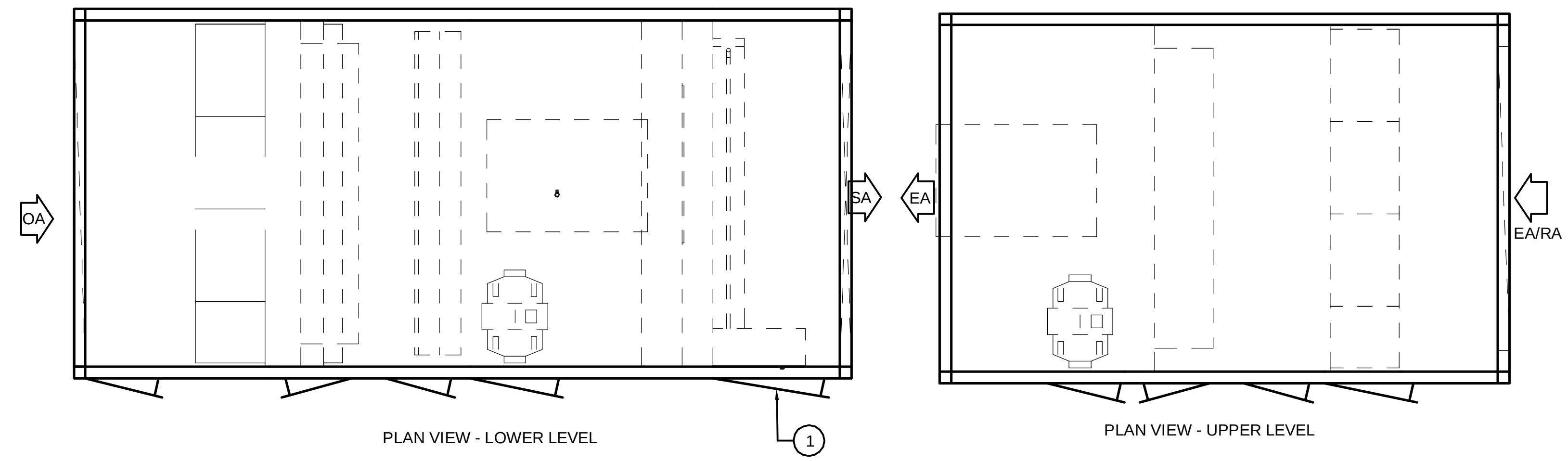
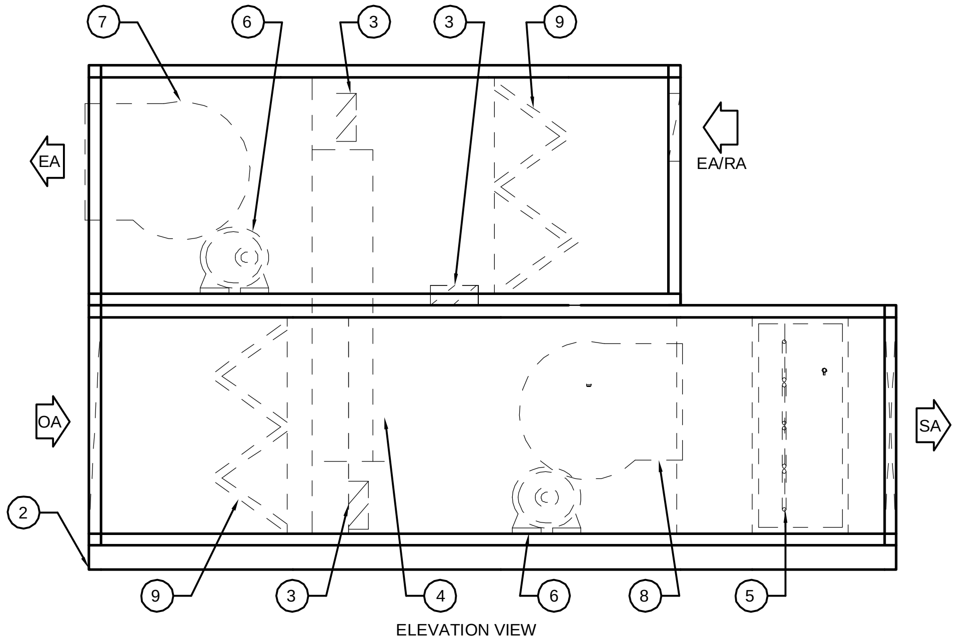
CONSOLIDATED PUBLIC WORKS FACILITY
STREETS WING ADDITION, E10-273

MECHANICAL
SECOND FLOOR
HVAC PLAN

SHEET NO.
M1.03

TOTAL SHEETS
34 - 72

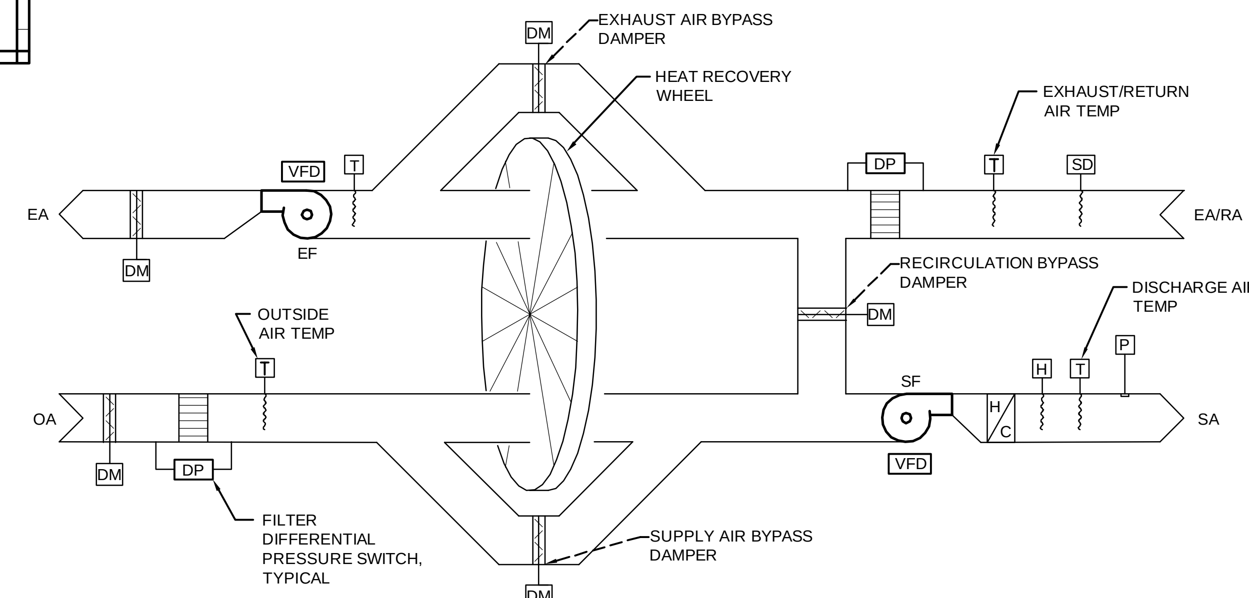




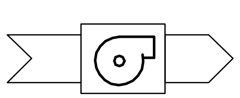
LEGEND

1. ACCESS DOORS
2. BASE RAIL
3. DAMPER
4. HEAT RECOVERY WHEEL
5. HEATING COIL
6. MOTOR
7. RETURN OR EXHAUST FAN
8. SUPPLY FAN
9. FILTER BANK

AHU-3
DETAIL 1 / M1.03
SCALE: NTS

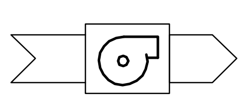


AHU-3 CONTROL
SCHEMATIC 2 / -
SCALE: NTS



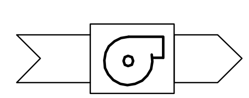
NOTES:
1. CONTINUOUS OPERATION

EF-3
CONTROL
SCHEMATIC 3 / M1.02
SCALE: NTS



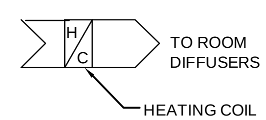
(S) SPEED CONTROLLER IN ROOM LOW (300CFM)/HIGH(500CFM)

EF-5
CONTROL
SCHEMATIC 4 / M1.03
SCALE: NTS



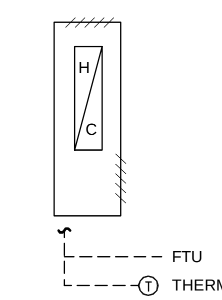
(S) LOCAL VARIABLE SPEED CONTROL

EF-6
CONTROL
SCHEMATIC 5 / M1.02
SCALE: NTS



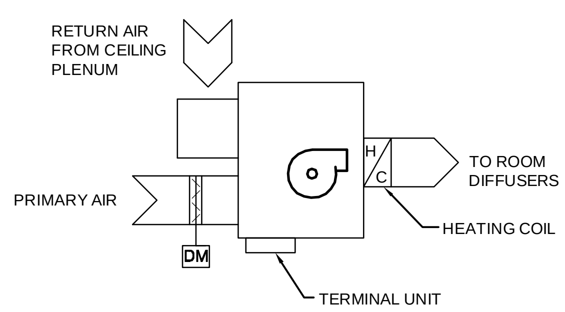
(T) ROOM SENSOR

DUCT HEATER
CONTROL
SCHEMATIC 6 / M1.02
SCALE: NTS



NOTES:
1. INTERLOCK WITH FTU AS SECOND STAGE OF HEATING

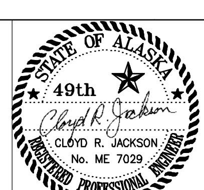
ELECTRIC BASEBOARD
CONTROL
SCHEMATIC 7 / M1.02
SCALE: NTS



(T) ROOM SENSOR

FAN TERMINAL UNIT
CONTROL
SCHEMATIC 8 / M1.02
SCALE: NTS

ONE INCH AT FULL SIZE
1"
IF NOT ONE INCH, SCALE ACCORDINGLY



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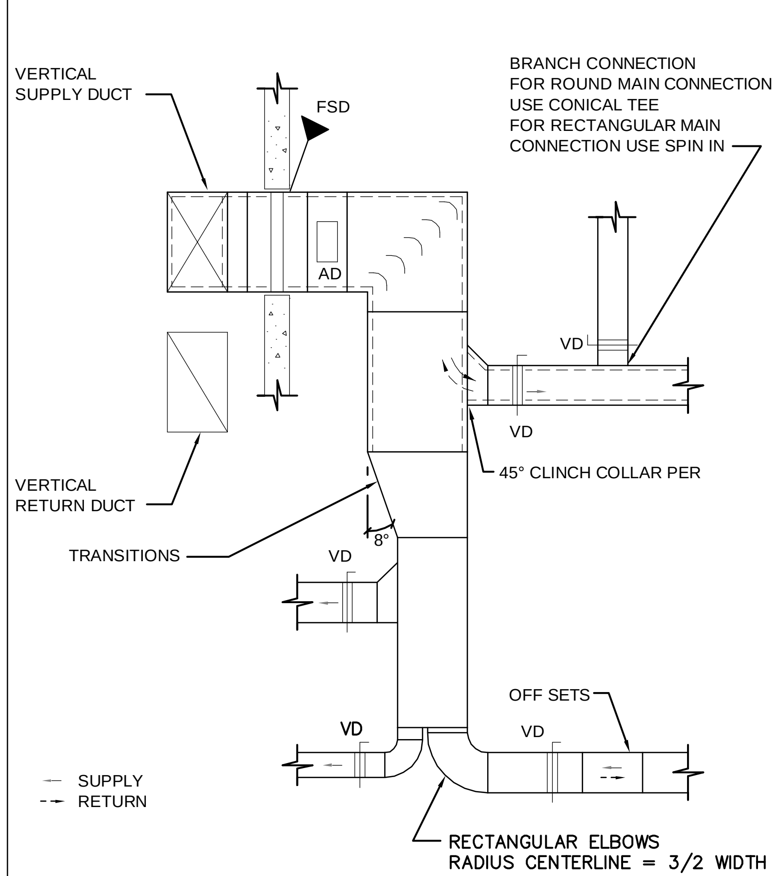
CONSOLIDATED PUBLIC WORKS FACILITY
STREETS WING ADDITION, E10-273

MECHANICAL
HVAC DETAILS AND SCHEMATICS

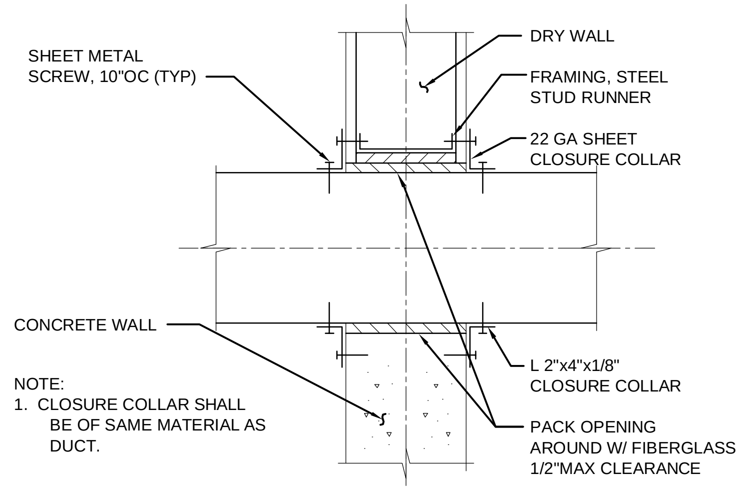
SHEET NO.
M5.01
TOTAL SHEETS
35 - 72



REFERENCED FIGURES REFER TO FIGURES IN SMACNA HVAC DUCT CONSTRUCTION STANDARDS

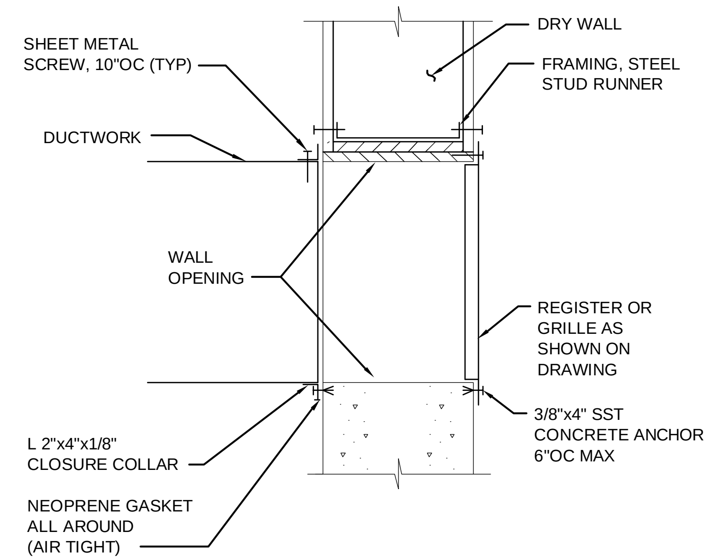
TYPICAL SUPPLY OR RETURN DUCT

DETAIL 1 TYP
SCALE: NTS



WALL PENETRATION

DETAIL 2 TYP
SCALE: NTS

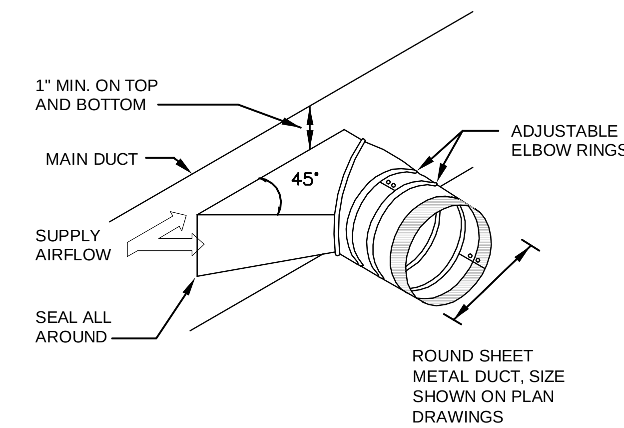


NOTES:

1. SIMILAR INSTALLATION FOR: BACK TO BACK GRILLE, DUCTWORK ATTACHED TO WALL OPENING, AND SINGLE WALL OPENING.
2. PROVIDE FIRE DAMPERS AND VOLUME DAMPERS WHERE SHOWN ON FLOOR PLANS.
3. CLOSURE COLLAR SHALL BE OF SAME MATERIAL AS DUCT.

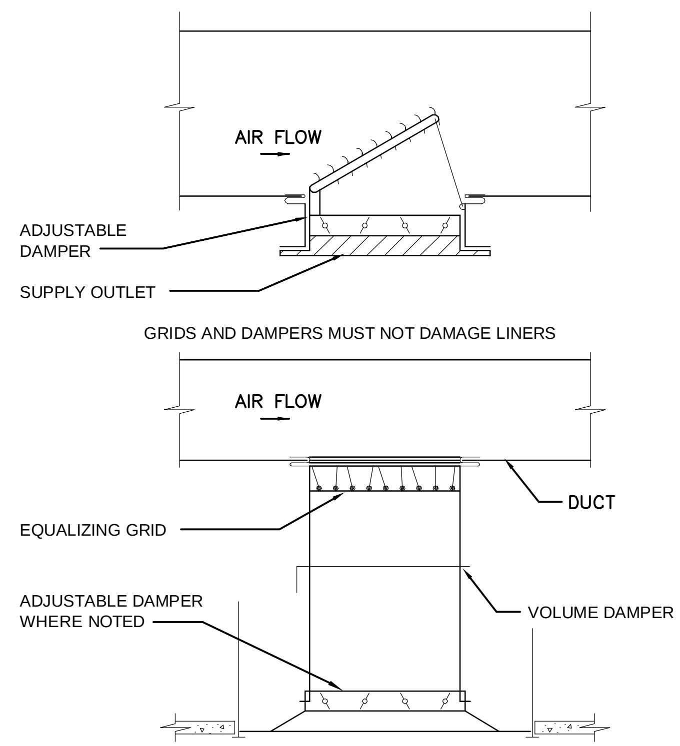
WALL MOUNTED GRILLE AND REGISTER

DETAIL 3 TYP
SCALE: NTS



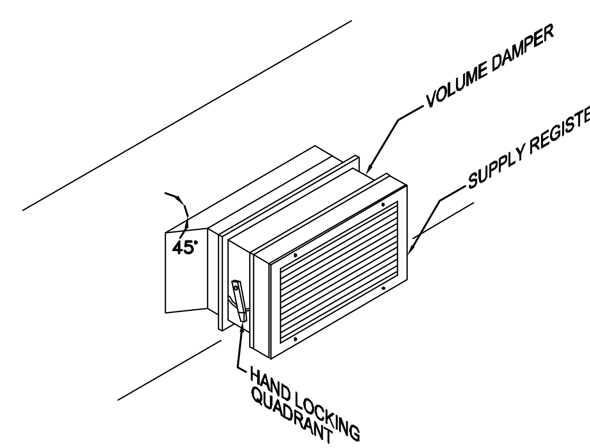
TYP FTU SUPPLY DUCT TAKE OFF

DETAIL 4 TYP
SCALE: NTS



TYPICAL DUCT MOUNTED DIFFUSERS

DETAIL 6 TYP
SCALE: NTS

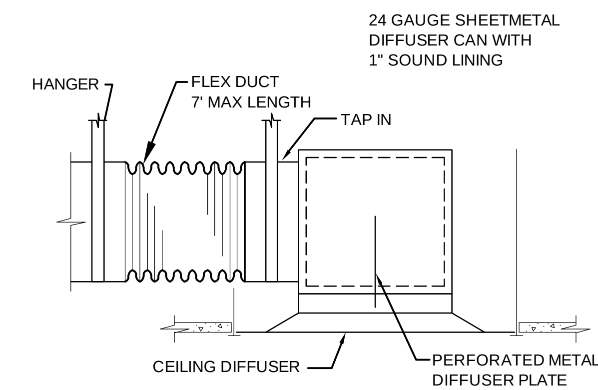


NOTES:

1. REFER TO PLAN DRAWINGS FOR MOUNTING ANGLE ON ROUND DUCT.

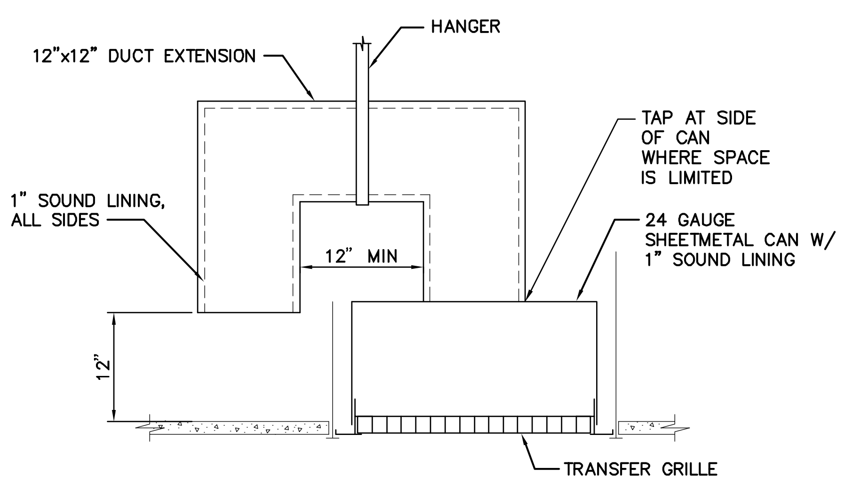
SUPPLY GRILLE (SG-1)

DETAIL 7 TYP
SCALE: NTS



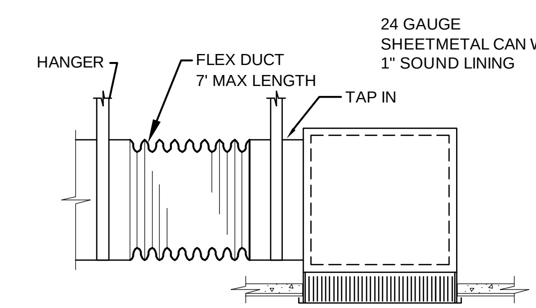
TYP CEILING MOUNTED SQUARE NECK DIFFUSER

DETAIL 8 TYP
SCALE: NTS



TRANSFER GRILLE

DETAIL 5 TYP
SCALE: NTS



TYP CEILING MOUNTED RETURN/EXHAUST GRILLE

DETAIL 8 TYP
SCALE: NTS

ONE INCH AT FULL SIZE
1"
IF NOT ONE INCH, SCALE ACCORDINGLY

STATE OF ALASKA 49th CLOYD R. JACKSON No. ME 7029 REGISTERED PROFESSIONAL ENGINEER

TETRA TECH
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CITY/BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
DEPARTMENT OF ENGINEERING

CONSOLIDATED PUBLIC WORKS FACILITY STREETS WING ADDITION, E10-273

MECHANICAL TYPICAL DETAILS DUCTWORK

DRAWN BY: DS	DESIGNED BY: DS	CHECKED BY: CRJ	DATE: MAY 2010

SHEET NO. M5.02

TOTAL SHEETS 36 - 72

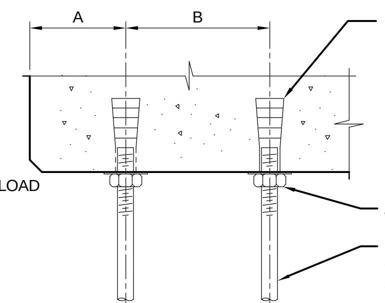
CAPACITY: 3/8" PIPE THROUGH 12" PIPE

MAXIMUM ALLOWABLE LOAD

3/8"ROD	610 LBS
1/2"ROD	1130 LBS
5/8"ROD	1810 LBS
3/4"ROD	2550 LBS
7/8"ROD	2630 LBS

MINIMUM SPACING: A=EDGE DISTANCE B=CENTER TO CENTER

3/8"ROD	3"	4"
1/2"ROD	4"	5"
5/8"ROD	4"	6"
3/4"ROD	5"	7"
7/8"ROD	6"	8"



CONC ANCHOR BOLTS

JAMB NUT

SUPPORT ROD OR BOLT. SIZE AS REQUIRED

SEE TABLE A AND TYP SUPPORT ROD FOR PIPES SUBJECT TO HORIZONTAL MOVEMENT DETAIL

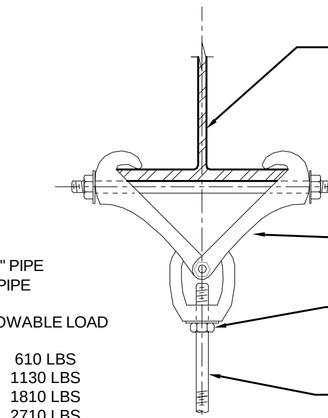
TYPE A

DETAIL 1 TYP
SCALE: NTS

CAPACITY: 3/8" PIPE THROUGH 12" PIPE

MAXIMUM ALLOWABLE LOAD

3/8"ROD	610 LBS
1/2"ROD	1130 LBS
5/8"ROD	1810 LBS
3/4"ROD	2710 LBS
7/8"ROD	3770 LBS



STEEL I BEAM, MAX FLANGE 15" WIDE x 1.031" THICK

BEAM CLAMP W/ EYE NUT

JAMB NUT

SUPPORT ROD SIZE AS REQUIRED

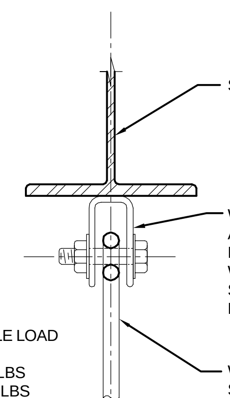
TYPE B

DETAIL 2 TYP
SCALE: NTS

CAPACITY: 3/8" PIPE THROUGH 12" PIPE

MAXIMUM ALLOWABLE LOAD

3/8"ROD	610 LBS
1/2"ROD	1120 LBS
5/8"ROD	1810 LBS
3/4"ROD	2710 LBS
7/8"ROD	3770 LBS



STRUCTURAL STEEL

WELDED BEAM ATTACHMENT W/ BOLT AND NUT. WELD TO STRUC STEEL PER MFRS RECOMMENDATIONS

WELDED EYE ROD SIZE AS REQUIRED

TYPE C

DETAIL 3 TYP
SCALE: NTS

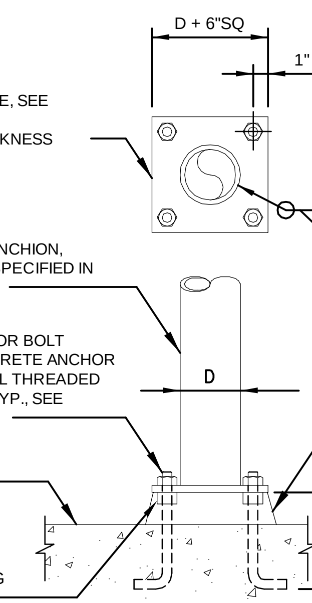
STL PLATE, SEE TABLE B FOR THICKNESS

PIPE STANCHION, SIZE AS SPECIFIED IN TABLE B

SS ANCHOR BOLT OR CONCRETE ANCHOR WITH FULL THREADED STUDS, TYP., SEE TABLE B

FINISH FLOOR

LEVELING NUTS



GROUT AFTER LEVELING WITH NON-SHRINK GROUT

1" TO 4"

EMBED DEPTH, SEE TABLE B

NOTE:

1. SPACING SHALL BE AS REQUIRED, BUT SHALL NOT EXCEED SPANS SHOWN IN TABLE A.

TYPICAL STRUCTURAL ATTACHMENT

DETAIL 4 TYP
SCALE: NTS

TABLE A

PIPE SIZE	DESIGN WEIGHT	SUPPORT ROD SIZE BASED ON SINGLE ROD SEE NOTE1	MAXIMUM SPAN, IN FEET, FOR PIPES NOT IN RACKS SEE NOTE 2.			
			STEEL	COPPER	PLASTIC SEE NOTE 3	CAST IRON SEE NOTE 4
3/8"TO 3/4"	275 LBS	3/8"	5	5	CONTINUOUS	—
1"	275 LBS	3/8"	7	6	5	—
1-1/4"	300 LBS	3/8"	7	7	5	—
1-1/2"	300 LBS	3/8"	9	8	5	—
2"	325 LBS	3/8"	10	8	6	PRESSURE
2-1/2"	375 LBS	1/2"	10	9	6	PIPE 12 FT
3"	575 LBS	1/2"	10	10	7	SOIL PIPE
4"	600 LBS	5/8"	10	10	7	10 FT.
6"	750 LBS	3/4"	10	10	9	"
8"	950 LBS	7/8"	10	10	9	"

NOTES: (TABLE A)

1. ROD SIZE IS BASED ON CARRYING SINGLE PIPE. WHEN MORE THAN ONE PIPE IS TO BE SUPPORTED. RODS SHALL BE SIZED USING DESIGN WEIGHTS TO DETERMINE TOTAL LOAD.

2. WHERE MODULARLY SPACED INSERTS ARE REQUIRED SUPPORT PIPES AT INSERT MODULE. NO SPECIAL INSERTS WILL BE ALLOWED FOR INDIVIDUAL PIPE SUPPORTS UNLESS SPECIFICALLY DETAILED OR AUTHORIZED BY THE PROJECT REP.

3. SPACING BASED ON SCHEDULE 80 PIPE AT 100°F. SCHEDULE 40 PIPE OR HIGHER TEMPERATURE REQUIRE SHORTER SPANS. SEE MANUFACTURER'S RECOMMENDATIONS.

4. INSTALL AT LEAST ONE HANGER PER PIPE LENGTH. LOCATE AS NEAR THE JOINT OR FITTING AS POSSIBLE.

5. IN ADDITION TO SUPPORTING DUCTS AND PIPES FOR GRAVITY LOADS, DUCTS AND PIPES SHALL BE SUPPORTED TO RESIST VERTICAL, LATERAL AND LONGITUDINAL SEISMIC FORCES. FORCES ARE TO BE DETERMINED ACCORDING TO 2006 INTERNATIONAL BUILDING CODE. SEISMIC BRACE DESIGN SHALL BE ACCORDING TO THE LATEST "SEISMIC RESTRAINT MANUAL GUIDELINES FOR MECHANICAL SYSTEMS" BY SMACNA. THE DESIGN FOR SEISMIC SUPPORTS SHALL BE STAMPED AND SEALED BY A PROFESSIONAL STRUCTURAL ENGINEER REGISTERED IN THE STATE OF ALASKA.

6. DESIGN WEIGHTS REFER TO THE PIPE SIZE SHOWN SUPPORTED AT THE SPACING LISTED AND SHALL BE USED FOR DESIGN OF ALL SPECIAL HANGER SYSTEMS.

7. AT LEAST ONE PIPE HANGER OR SUPPORT SHALL BE LOCATED IMMEDIATELY ADJACENT TO THE JOINT OF ANY CONCENTRATED LOAD OR BEND IN THE PIPE SUCH AS VALVES, FITTINGS, ETC., IN ADDITION TO THE MAXIMUM SPANS LISTED ABOVE.

8. TYPICAL DETAILS SHOWN ON THIS DRAWING ARE FOR REFERENCE ONLY. REFER TO SPECIFICATION SECTION 15071 FOR SEISMIC DESIGN REQUIREMENTS.

TABLE B - PIPE STANCHION

PIPE SIZE	NOMINAL PIPE STANCHION DIA (SCHEDULE 40)	PLATE THICKNESS	BOLT SIZE	BOLT EMBED
2"	1 1/2"	1/4"	3/8"	5"
2 1/2"	1 1/2"	1/4"	3/8"	5"
3"	2"	3/8"	1/2"	5"
4"	3"	3/8"	1/2"	5"
6"	3"	3/8"	1/2"	5"
8"	4"	3/8"	5/8"	8"
10"	4"	3/8"	5/8"	8"
12"	6"	3/8"	5/8"	8"
14"	6"	1/2"	3/4"	8"
16"	6"	1/2"	3/4"	8"
18"	8"	5/8"	7/8"	8"
20"	8"	5/8"	7/8"	8"
24"	8"	3/4"	1"	8"
30"	10"	3/4"	1"	8"

ONE INCH AT FULL SIZE
1"
IF NOT ONE INCH, SCALE ACCORDINGLY

STATE OF ALASKA 49th CLOYD R. JACKSON No. ME 7029 REGISTERED PROFESSIONAL ENGINEER

DRAWN BY: DS **DESIGNED BY:** DS **CHECKED BY:** CRJ **DATE:** MAY 2010

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DEPARTMENT OF ENGINEERING

CONSOLIDATED PUBLIC WORKS FACILITY STREETS WING ADDITION, E10-273

MECHANICAL HVAC DETAILS AND SCHEMATICS

SHEET NO. M5.03

TOTAL SHEETS 37 - 72

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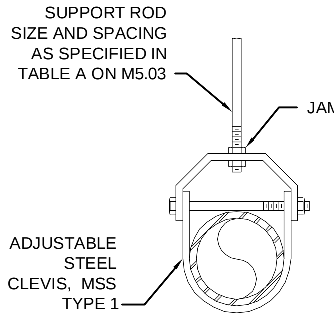
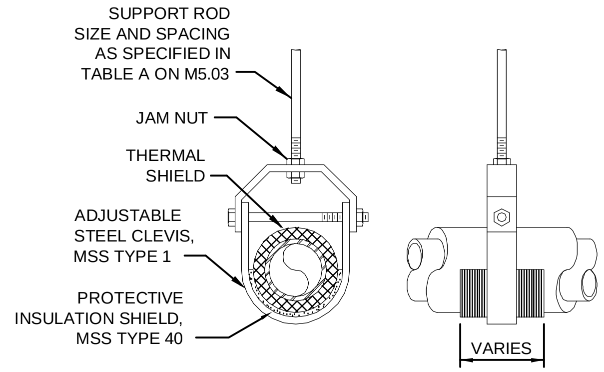


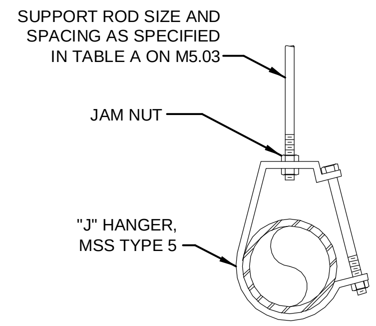
TYPE 1

DETAIL 1 TYP
SCALE: NTS



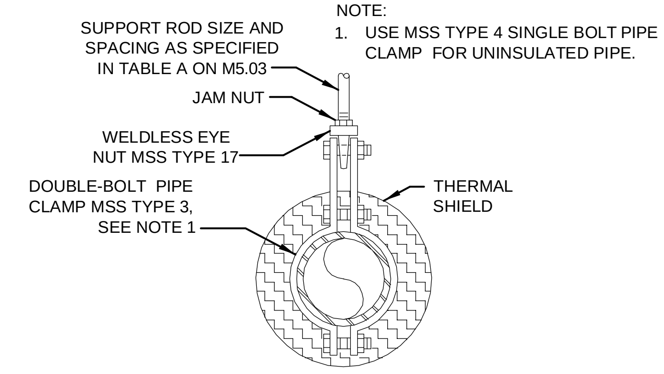
TYPE 1A

DETAIL 2 TYP
SCALE: NTS



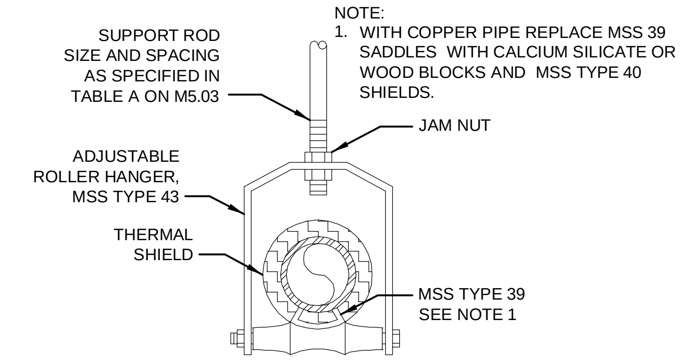
TYPE 2

DETAIL 3 TYP
SCALE: NTS



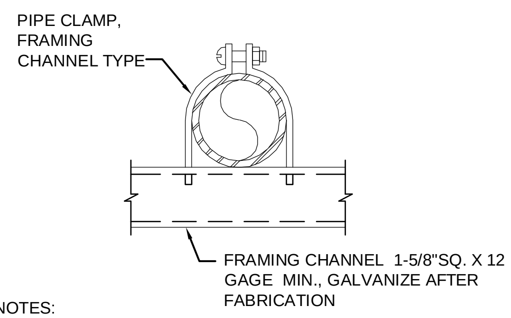
TYPE 3

DETAIL 4 TYP
SCALE: NTS



TYPE 4

DETAIL 5 TYP
SCALE: NTS

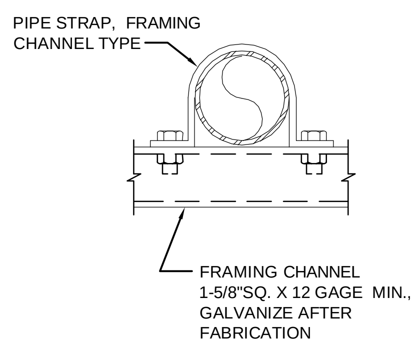


NOTES:

1. DO NOT USE FOR HORIZONTAL PIPES LARGER THAN 2" WHEN FRAMING CHANNEL IS MOUNTED VERTICALLY.

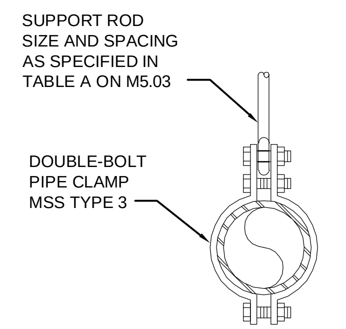
TYPE 5

DETAIL 6 TYP
SCALE: NTS



TYPE 6

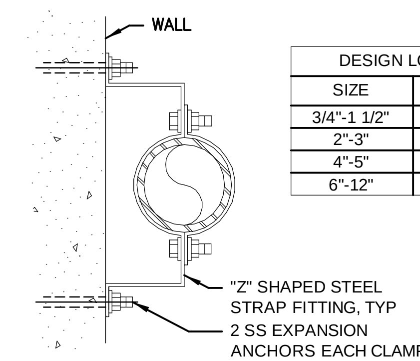
DETAIL 7 TYP
SCALE: NTS



3/4" THROUGH 30" PIPE

TYPE 7

DETAIL 8 TYP
SCALE: NTS

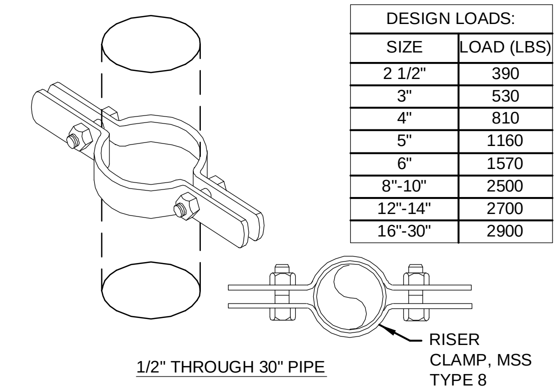


DESIGN LOADS:	
SIZE	LOAD (LBS)
3/4"-1 1/2"	190
2"-3"	420
4"-5"	610
6"-12"	870

3/4" THROUGH 12" PIPE
FOR VERTICAL PIPE ONLY

TYPE 8

DETAIL 9 TYP
SCALE: NTS

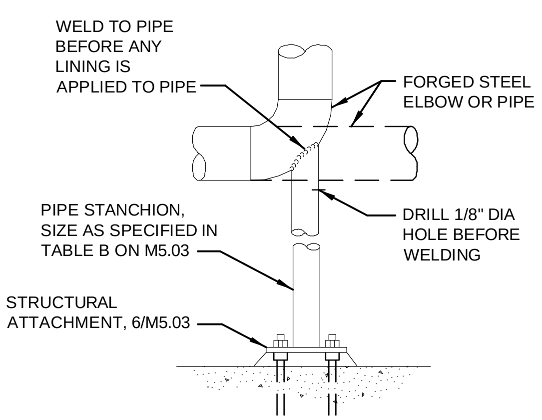


DESIGN LOADS:	
SIZE	LOAD (LBS)
2 1/2"	390
3"	530
4"	810
5"	1160
6"	1570
8"-10"	2500
12"-14"	2700
16"-30"	2900

1/2" THROUGH 30" PIPE
FOR VERTICAL PIPE ONLY

TYPE 9

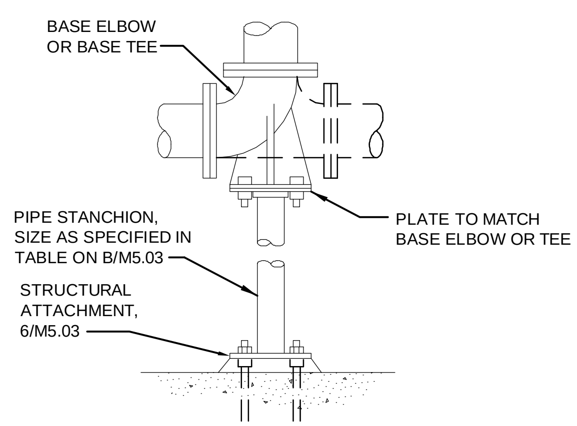
DETAIL 10 TYP
SCALE: NTS



2 1/2" THROUGH 30" PIPE

TYPE 10

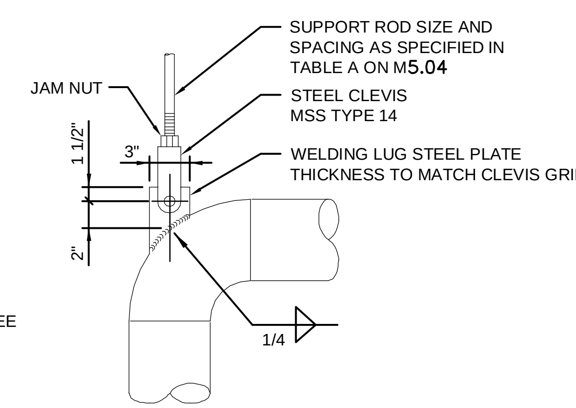
DETAIL 11 TYP
SCALE: NTS



4" THROUGH 8" PIPE

TYPE 11

DETAIL 12 TYP
SCALE: NTS



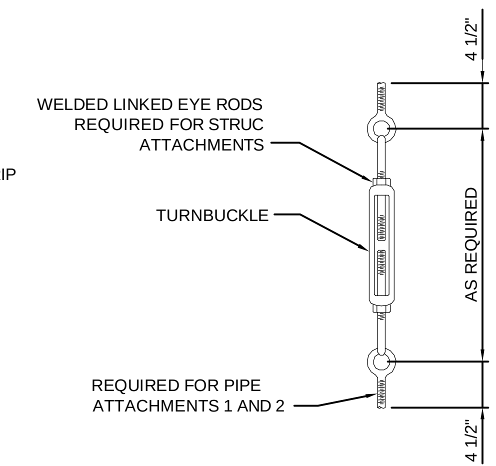
2" THROUGH 12" PIPE

NOTE:

1. LUG SHALL BE WELDED TO PIPE BEFORE INTERNAL LINING IS APPLIED.

TYPE 12

DETAIL 13 TYP
SCALE: NTS



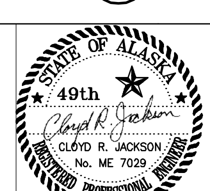
TYP SUPPORT ROD

DETAIL 14 TYP
SCALE: NTS

GENERAL NOTES:

1. WITH COPPER PIPE PROVIDE A FULL 360° WRAP OF 1/16 INCH THICK NEOPRENE BONDED TO PIPE WITH A COMPATIBLE WATERPROOF ADHESIVE. FOR REQUIREMENTS ON INSULATION USED WITH PIPE HANGERS.
2. PIPE HANGERS SHALL BE OVERSIZED AS REQUIRED TO ACCOMMODATE THICKNESS OF INSULATION SPECIFIED. HANGER SHALL NOT COME INTO CONTACT WITH THE INSULATION DIRECTLY, EITHER AT THE VERTICAL YOKE OR AT THE POINT OF SUPPORT. SEE SPECIFICATIONS.
3. REFER TO SPECIFICATION SECTION 15071 FOR SEISMIC DESIGN REQUIREMENTS.

ONE INCH AT FULL SIZE
1"
IF NOT ONE INCH, SCALE ACCORDINGLY



DRAWN BY: DS | DESIGNED BY: DS | CHECKED BY: CRJ | DATE: MAY 2010

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ALASKA'S CAPITAL CITY
DEPARTMENT OF ENGINEERING

CONSOLIDATED PUBLIC WORKS FACILITY STREETS WING ADDITION, E10-273

MECHANICAL
TYPICAL DETAILS
PIPE HANGERS

SHEET NO. M5.04

TOTAL SHEETS 38 - 72

AIR HANDLING UNIT (AHU) SCHEDULE

SYMBOL	LOCATION	SERVICE	WEIGHT (LBS)	SUPPLY FAN - DRAW THRU						RETURN FAN						ELECTRIC HEATING COIL				HEAT EXCHANGER					FILTERS					SELECTION BASED ON MANUFACTURER/MODEL (OR APPROVED EQUAL)
				AIRFLOW (CFM)	TOTAL STATIC PRESSURE (IN W.C.)	EXTERNAL STATIC PRESSURE (IN W.C.)	ELECTRICAL			AIRFLOW (CFM)	TOTAL STATIC PRESSURE (IN W.C.)	EXTERNAL STATIC PRESSURE (IN W.C.)	ELECTRICAL			AIR TEMP (°F)		CAPACITY (KW)	VOLT-P-HZ	TYPE	MIN. SENSIBLE EFF. (%)	MOTOR								
							BHP	HP	VOLT-P-HZ				BHP	HP	VOLT-P-HZ	ENT.	LVG.					HP	FLA	VOLT-P-HZ	MERV	QTY.	SIZE (IN)	PD (IN)	DEPTH (IN)	
AHU-3	STREET WING	VARIABLE VOLUME	4500	6000	2.7	2.1	4.9	7.5	460-3-60	5550	2.1	1.0	3.8	5	460-3-60	28	70	80	460-3-60	WHEEL	63	0.25	0.4	460-3-60	7	4 8	24x20 16x20	0.08	2	YORK SOLUTIONS AIR HANDLING UNIT

NOTES:
1. HEAT RECOVERY PERFORMANCE IS BASED ON COIL EAT 28°F WITH 29% RH ON BOTH SA AND RA.
2. VFDs SHALL BE PROVIDED BY DDC CONTRACTOR AND INSTALLED IN THE FIELD.

FAN POWER TERMINAL UNIT SCHEDULE

SYMBOL	SIZE			CFM		NC LEVELS		FAN			ELECTRIC HEATING COIL		ELECTRICAL			MFR/MODEL	REMARKS
	UNIT	INLET	OUTLET	MAX	MIN	RAD	DISCH	CFM	ESP	HP	KW	EAT/LAT	VOLT	PH	HZ		
FTU-3	C	08	14.1x1.1	600	350	19	13	600	0.20	0.33	5.0	55/95	277	1	60	TITUS/DTFS-F	FTU-3 IS AN OWNER FURNISHED CONTRACTOR INSTALLED ITEM

NOTES:
1. ROOM NC LEVEL SHOWN INCLUDES ATTENUATION TRANSFER FUNCTIONS FROM TABLES IN ARI STANDARD 885-89.
2. SOUND DATA SHALL BE OBTAINED FROM TESTS CONDUCTED IN ACCORDANCE WITH ARI STANDARD 880-94.

FAN SCHEDULE

SYMBOL	LOCATION	TYPE	AIRFLOW (CFM)	STATIC PRESSURE (IN W.C.)	DRIVE	FAN RPM	SOUND POWER (dBA)	MOTOR				CONTROL	MFR/MODEL	FEATURES	WEIGHT (LBS)
								HP	RPM	VOLT-P-HZ	ENCLOSURE				
EF-5	STREET WINGS MEZZANINE	INLINE	300/ 500	0.3	DIRECT	1521	54	1/10	1550	115-1-60	TEAO	TWO SPEED SWITCH	GREENHECK SQ-90-D	ADJUSTABLE SPEED FAN	41
EF-6	KITCHEN HOOD FAN	INLINE	600	0.5	DIRECT	-	-	1/6	-	120-1-60	-	VARIABLE SPEED CONTROL	FABER INCA PRO 30	REMOTE SWITCH W/ SPEED CONTROL	-

NOTES:
1. KITCHEN HOOD SHALL INCLUDE TRIM WITH BAFFLE TYPE FILTERS AND LIGHTS.

ELECTRIC HEATER SCHEDULE

SYMBOL	TYPE	LOCATION	CAPACITY (KW)	LENGTH (IN)	VOLT-P-HZ	AMPS	SELECTION BASED ON MANUFACTURER/MODEL (OR APPROVED EQUAL)	REMARKS
EB-1	BASEBOARD	LUNCH/TRAINING	1.0	48	277-1-60	3.6	MARKEL 3900 HYDRONIC ELECTRIC	REMOTE T'STAT
EB-2	BASEBOARD	LUNCH/TRAINING	1.5	72	277-1-60	5.4	MARKEL 3900 HYDRONIC ELECTRIC	REMOTE T'STAT
HC-1	DUCT HEATER	SIGN SHOP	4	-	277-1-60	8.3	NAILOR DH	SPACE THERMOSTAT

DIFFUSER/GRILLE/REGISTER SCHEDULE

SYMBOL	TYPE	SELECTION BASED ON MANUFACTURER/MODEL (OR APPROVED EQUAL)	MAX NC	MAX APD (IN WC)	REMARKS
SD-1	CEILING MOUNT	TITUS MCD	30	0.1	-
SD-2	DUCT MOUNT	TITUS MCD	30	0.1	-
SG-1	DUCT MOUNT	TITUS 272RL	30	0.1	WITH OPPOSED BLADE DAMPER
RG-1	CEILING MOUNT	TITUS 350ZRL	30	0.1	-
RG-2	DUCT MOUNT	TITUS 350ZRL	30	0.1	-
RG-4	DUCT MOUNT	TITUS 350ZRL	30	0.1	-

NOTES:
1. CEILING MOUNT TYPE SHALL BE MOUNTED ACCORDINGLY FOR 24" x 24" CEILING MODULE OR GYPBOARD CEILING PER REFLECTED CEILING PLAN. INCLUDE ANY ADDITIONAL APPURTENANCES AS NEEDED.

ONE INCH AT FULL SIZE
1"
IF NOT ONE INCH, SCALE ACCORDINGLY

STATE OF ALASKA
49th
CLOYD R. JACKSON
No. ME 7029
REGISTERED PROFESSIONAL ENGINEER

DRAWN BY: DS | DESIGNED BY: DS | CHECKED BY: CRJ | DATE: MAY 2010

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CITY/BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
DEPARTMENT OF ENGINEERING

CONSOLIDATED PUBLIC WORKS FACILITY
STREETS WING ADDITION,
E10-273

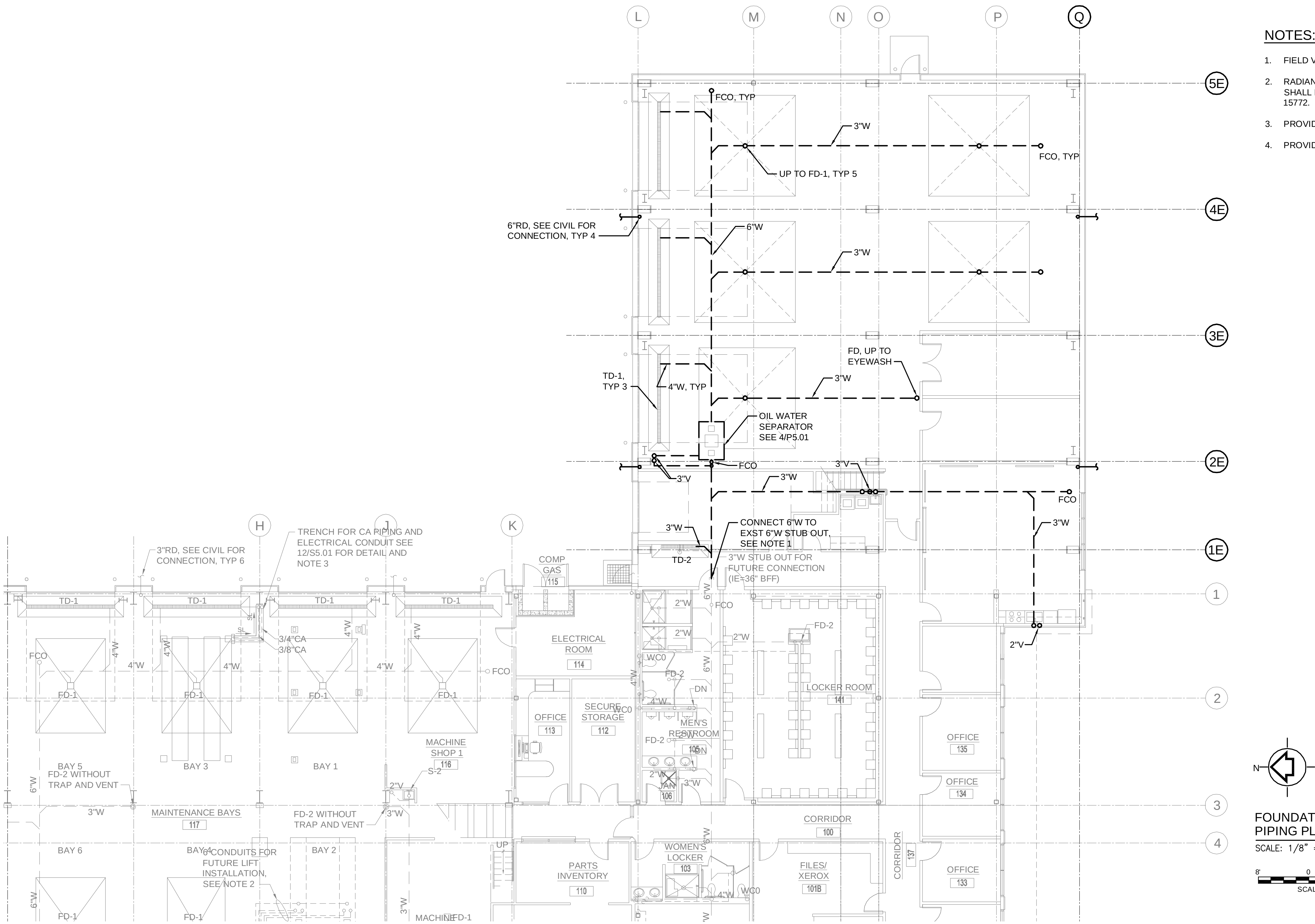
MECHANICAL
HVAC EQUIPMENT SCHEDULES

SHEET NO.
M6.01

TOTAL SHEETS
39 - 72

NOTES:

1. FIELD VERIFY EXACT SIZE AND LOCATION OF STUB OUT.
2. RADIANT FLOOR HEATING SYSTEM UNDER SLAB IS NOT SHOWN. DESIGN SHALL BE PROVIDED BY CONTRACTOR IN COMPLIANCE WITH SECTION 15772.
3. PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS.
4. PROVIDE ACCESS PANELS FOR ALL IN WALL TRAP PRIMERS.



FOUNDATION PIPING PLAN 1/–

SCALE: 1/8" = 1'0"

8' 0 8' 16'
SCALE: 1/8"=1'-0"

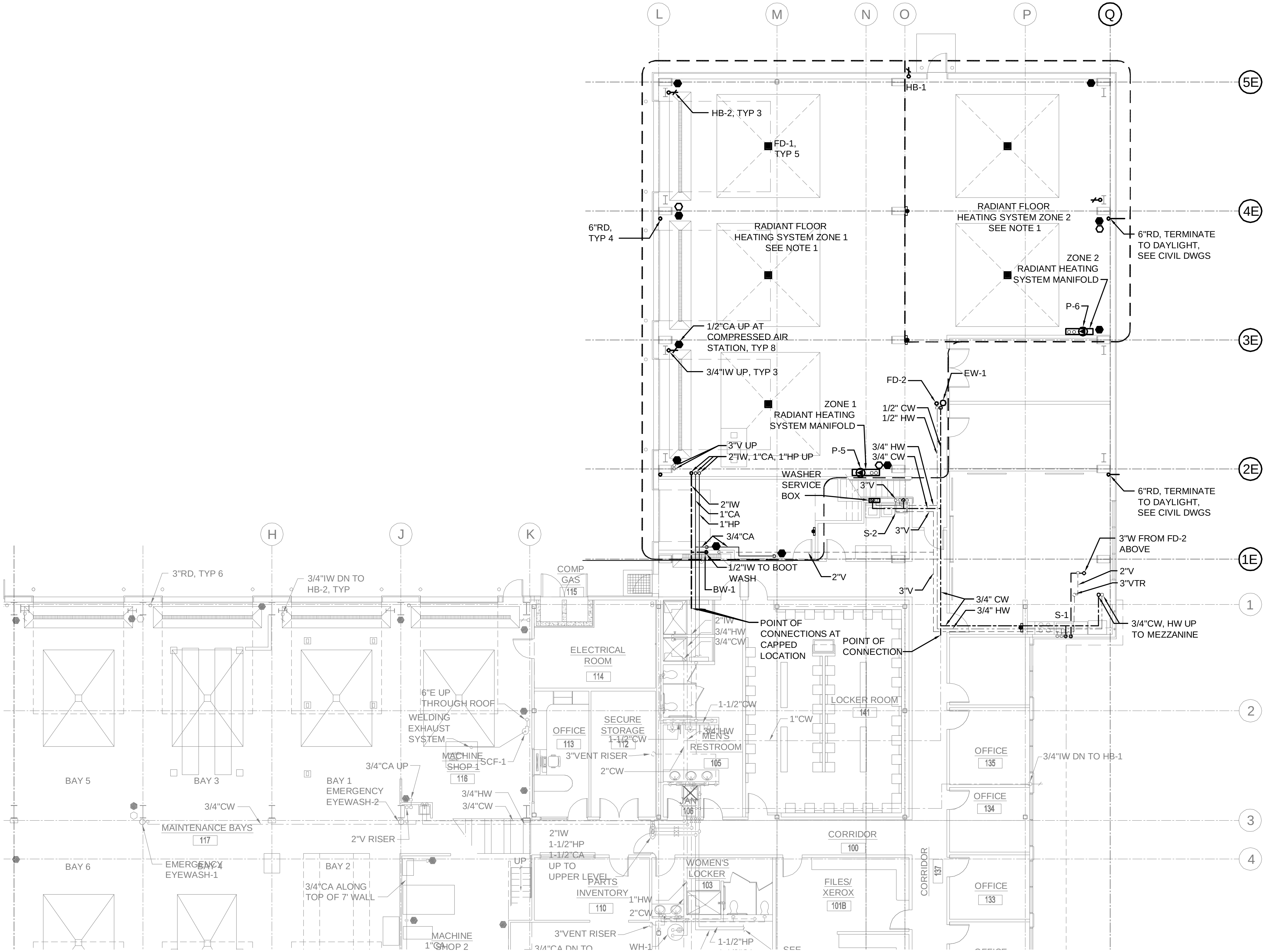
ONE INCH AT FULL SIZE
1"
IF NOT ONE INCH, SCALE ACCORDINGLY

STATE OF ALASKA 49th — CLOYD R. JACKSON No. ME 7029 — REGISTERED PROFESSIONAL ENGINEER	TETRA TECH www.tetratech.com 230 South Franklin, Suite 212 Juneau, Alaska 99801 Phone: 907-586-6400 Fax: 907-463-3677	CITY/BOROUGH OF JUNEAU ALASKA'S CAPITAL CITY DEPARTMENT OF ENGINEERING	CONSOLIDATED PUBLIC WORKS FACILITY STREETS WING ADDITION, E10-273	MECHANICAL FOUNDATION PIPING PLAN

DRAWN BY: DS | DESIGNED BY: DS | CHECKED BY: CRJ | DATE: MAY 2010

SHEET NO. P1.01

TOTAL SHEETS 40 - 72



NOTES:

1. RADIANT FLOOR HEATING SYSTEM UNDER SLAB DESIGN (NOT SHOWN) SHALL BE PROVIDED BY CONTRACTOR IN COMPLIANCE WITH SECTION 15772.

FIRST FLOOR PIPING PLAN 1
SCALE: 1/8" = 1'0"

8' 0 8' 16'
SCALE: 1/8"=1'-0"

ONE INCH AT FULL SIZE
1"
IF NOT ONE INCH, SCALE ACCORDINGLY

STATE OF ALASKA 49th CLOYD R. JACKSON No. ME 7029 REGISTERED PROFESSIONAL ENGINEER

DRAWN BY: DS | DESIGNED BY: DS | CHECKED BY: CRJ | DATE: MAY 2010

TETRA TECH
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230 South Franklin, Suite 212
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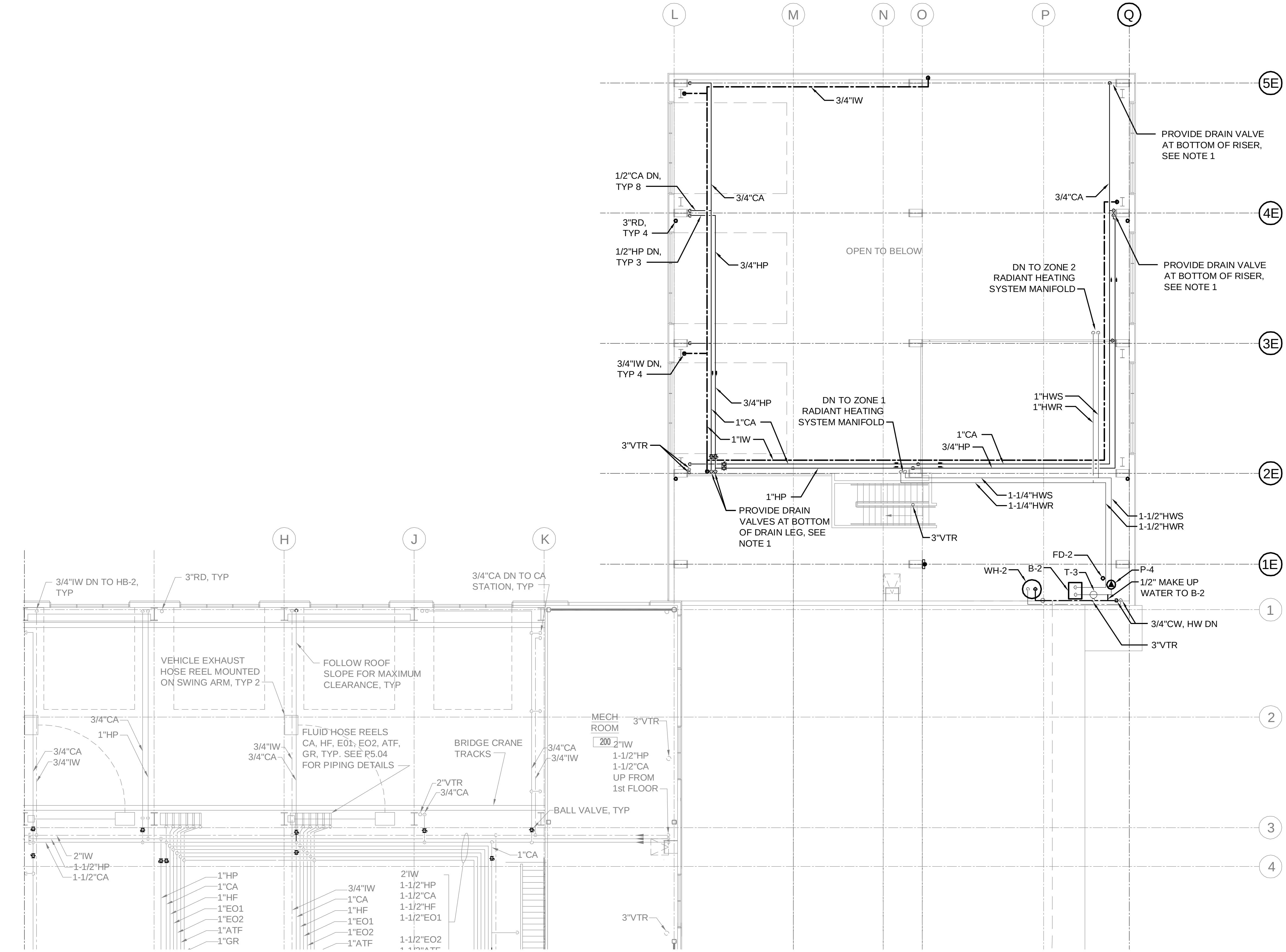
CITY/BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY
DEPARTMENT OF ENGINEERING

CONSOLIDATED PUBLIC WORKS FACILITY STREETS WING ADDITION, E10-273

MECHANICAL FIRST FLOOR PIPING PLAN

SHEET NO. P1.02

TOTAL SHEETS 41 - 72



NOTES:

1. SLOPE HP AND CA PIPING DOWN TOWARD DRAIN LEG AND PROVIDE DRAIN VALVE AT 3' AFF.

N

SECOND FLOOR PIPING PLAN
SCALE: 1/8" = 1'0"
1
–

8' 0 8' 16'
SCALE: 1/8"=1'-0"

ONE INCH AT FULL SIZE
1"
IF NOT ONE INCH, SCALE ACCORDINGLY

STATE OF ALASKA
49th
CLOYD R. JACKSON
No. ME 7029
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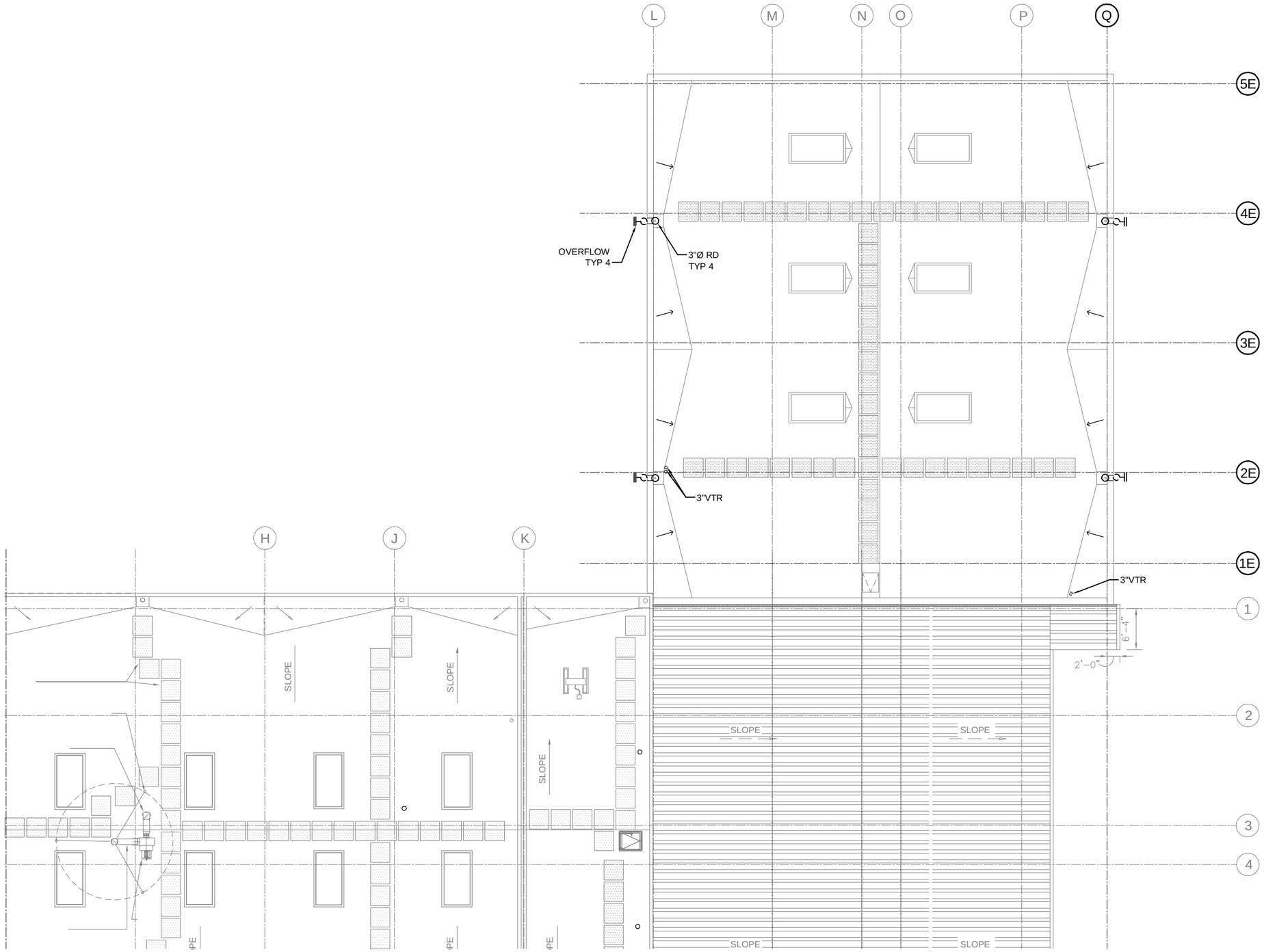
MECHANICAL SECOND FLOOR PIPING PLAN

SHEET NO.
P1.03

TOTAL SHEETS
42 - 72



N

ROOF PIPING PLAN 1/–

SCALE: 1/8" = 1'0"

8' 0 8' 16'

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

ONE INCH AT FULL SIZE

1"

IF NOT ONE INCH, SCALE ACCORDINGLY

STATE OF ALASKA 49th
CLOYD R. JACKSON
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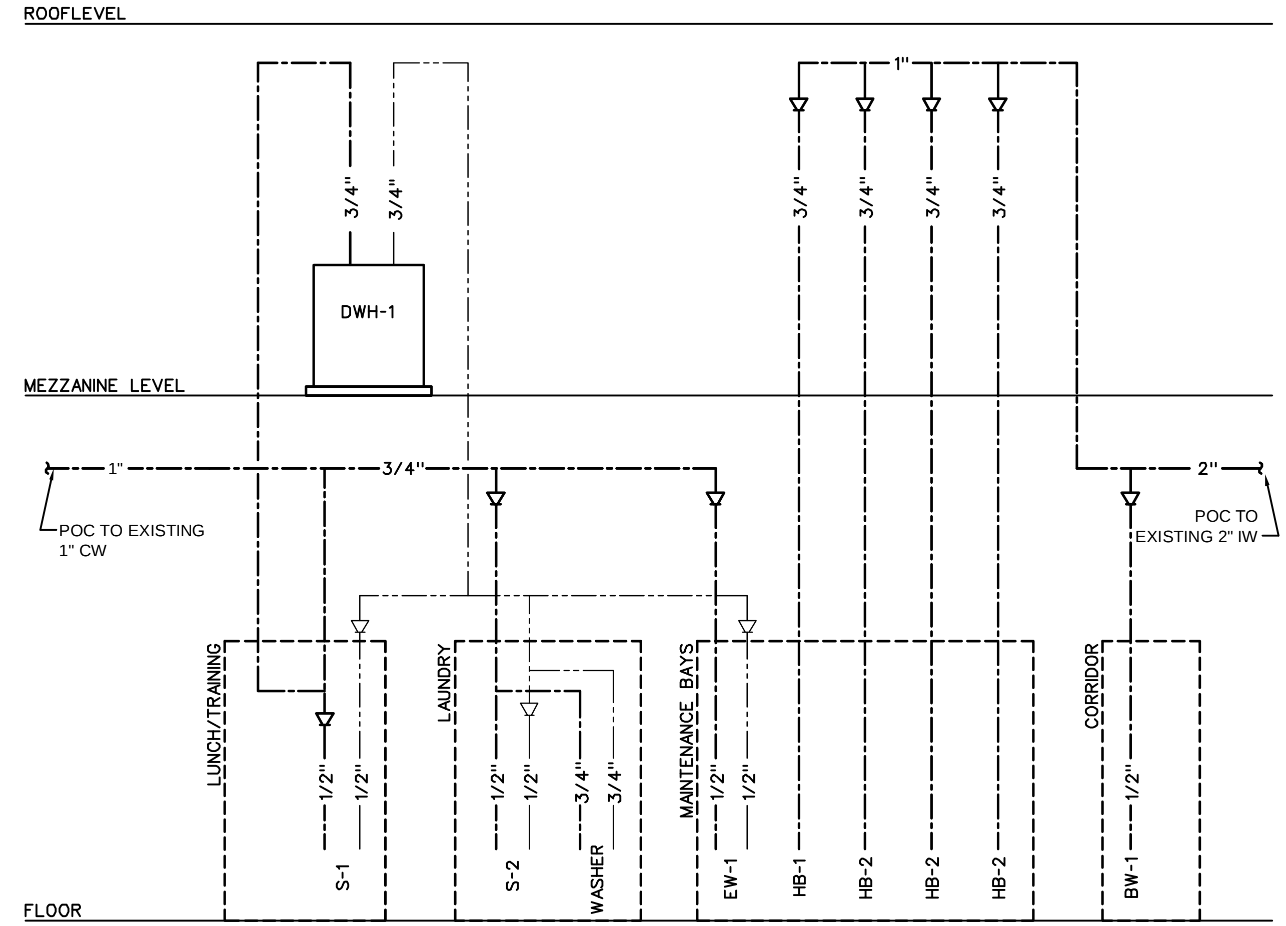
E10-273

MECHANICAL
ROOF
PIPING PLAN

SHEET NO.
P1.04

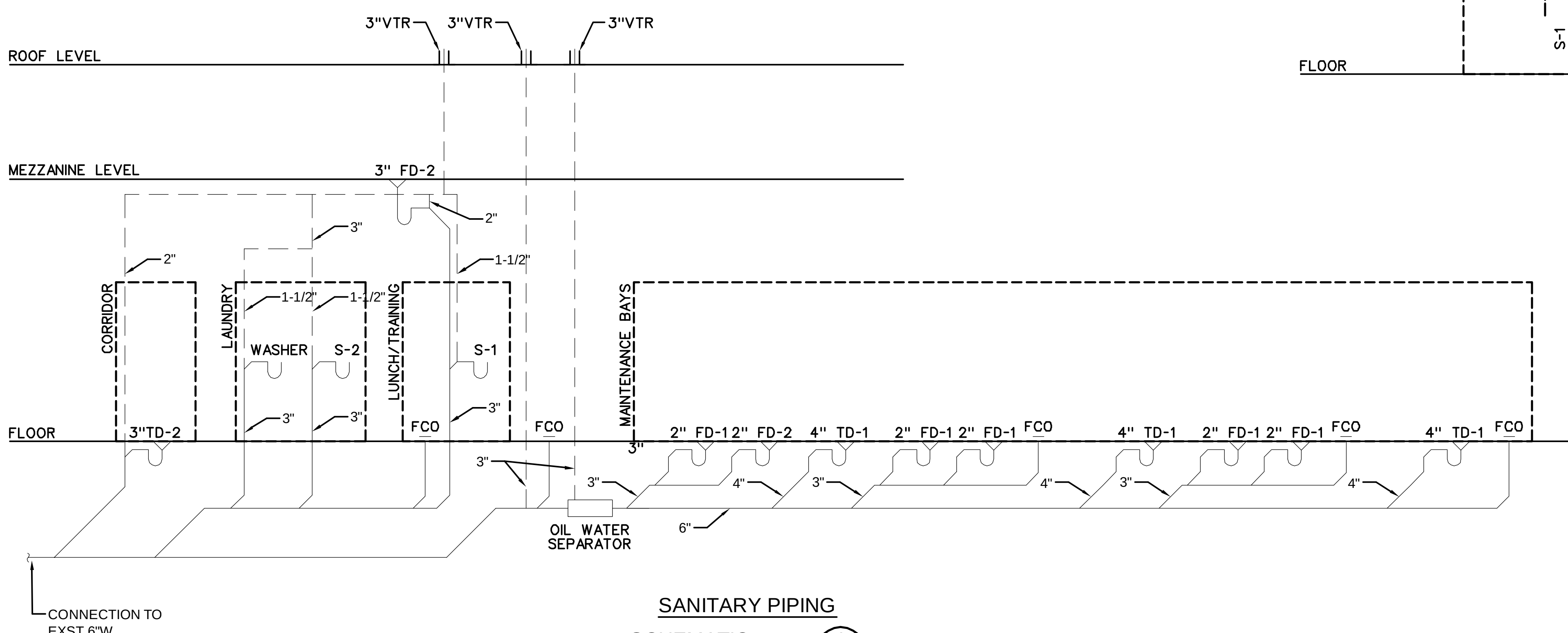
TOTAL SHEETS
43 - 72



WATER PIPING

SCHEMATIC 2

SCALE: NTS



SANITARY PIPING

SCHEMATIC 1

SCALE: NTS

ONE INCH AT FULL SIZE
1"
IF NOT ONE INCH, SCALE ACCORDINGLY

STATE OF ALASKA
49th
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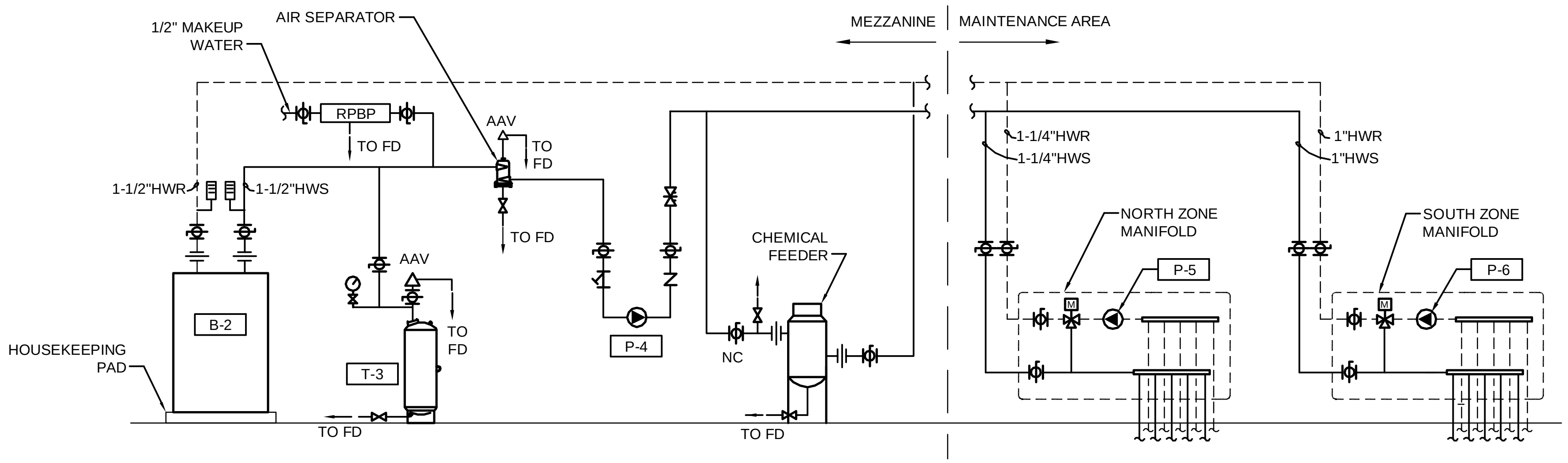
E10-273

MECHANICAL
PIPING
SCHEMATICS

SHEET NO.
P2.01

TOTAL SHEETS
44 - 72



SLAB TEMPERATURE SENSOR IN NORTH ZONE

SLAB TEMPERATURE SENSOR IN SOUTH ZONE

RADIANT HEATING WATER PIPING

SCHEMATIC 1 / -

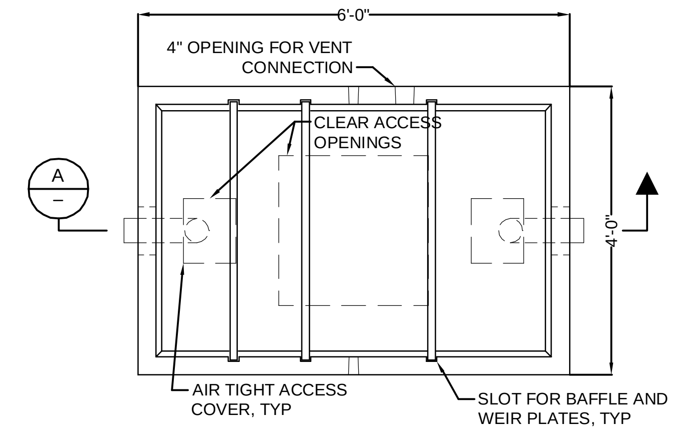
SCALE: NTS

NOTES:

1. SEE PLAN DWGS FOR VENT PIPING CONNECTION AND ROUTING.

2. PROVIDE AIR TIGHT COVERS AND REQUIRED HARDWARE FOR INDOOR INSTALLATION.

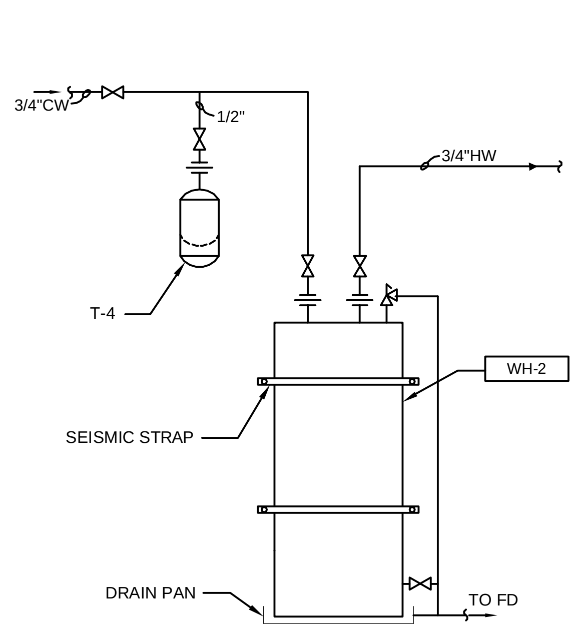
3. TOP AND ACCESS PANEL SHALL HAVE H20 VECHICLE LOADING CAPABILITY.



OIL WATER SEPARATOR

DETAIL 4 / -

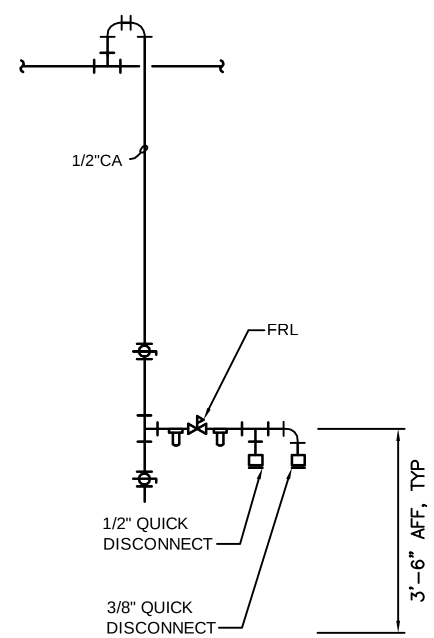
SCALE: NTS



POTABLE WATER HEATER PIPING

DETAIL 3 / -

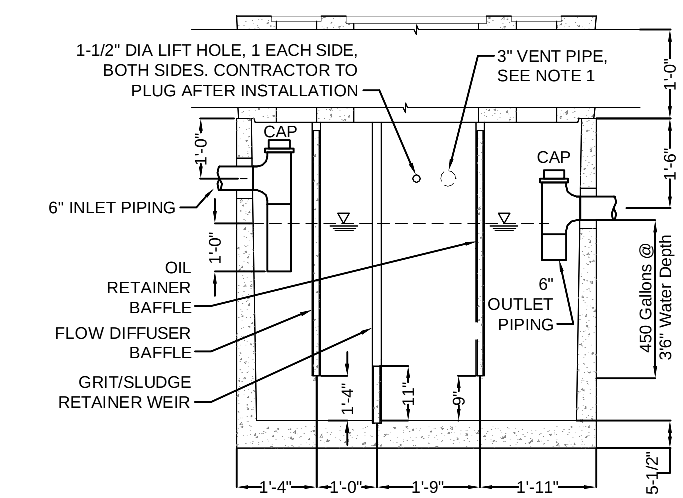
SCALE: NTS



CA STATIONS

DETAIL 3 / TYP

SCALE: NTS



OIL WATER SEPARATOR

SECTION A / -

SCALE: NTS

ONE INCH AT FULL SIZE

1"

IF NOT ONE INCH, SCALE ACCORDINGLY

STATE OF ALASKA 49th CLOYD R. JACKSON No. ME 7029 REGISTERED PROFESSIONAL ENGINEER

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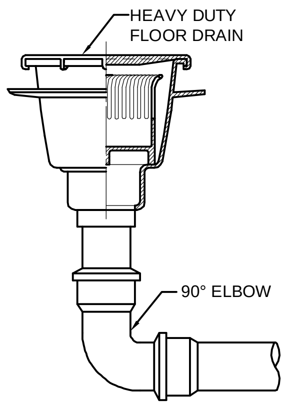
CONSOLIDATED PUBLIC WORKS FACILITY STREETS WING ADDITION, E10-273

MECHANICAL PIPING DETAILS

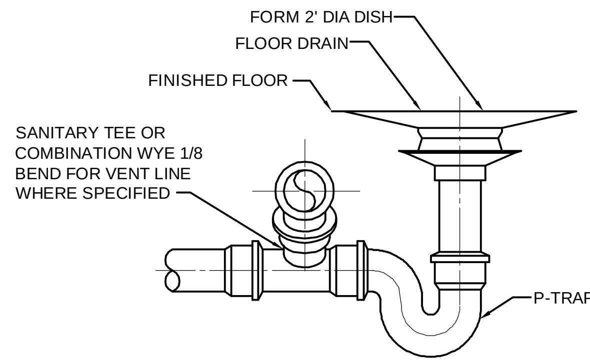
SHEET NO. P5.01

TOTAL SHEETS 45 - 72



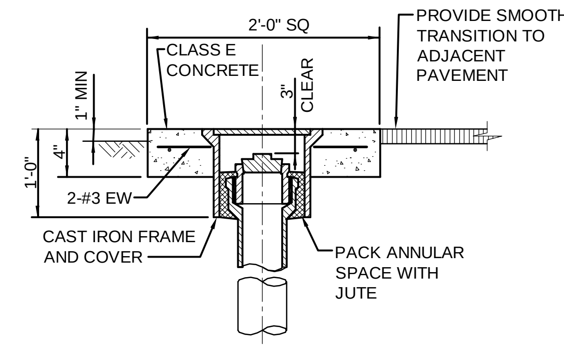
HEAVY DUTY
FLOOR DRAIN (FD-1)

DETAIL 1 TYP
SCALE: NTS



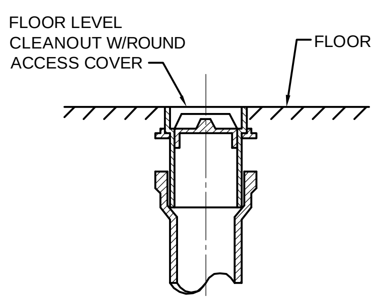
FLOOR DRAIN (FD-2)

DETAIL 2 TYP
SCALE: NTS



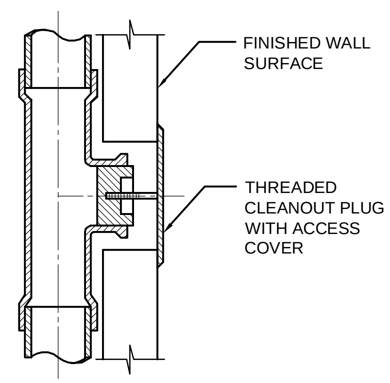
YARD CLEANOUT

DETAIL 3 TYP
SCALE: NTS



FLOOR CLEANOUT

DETAIL 4 TYP
SCALE: NTS



WALL CLEANOUT

DETAIL 5 TYP
SCALE: NTS

ONE INCH AT FULL SIZE
1"
IF NOT ONE INCH, SCALE ACCORDINGLY

STATE OF ALASKA 49th
CLOYD R. JACKSON
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STREETS WING ADDITION,
E10-273

MECHANICAL
PIPING DETAILS

SHEET NO.
P5.02

TOTAL SHEETS
46 - 72

PLUMBING FIXTURE SCHEDULE

FIXTURE NO.	DESCRIPTION	MODEL	FLUSH VALVE	TRIM	CONNECTION SIZES				REMARKS
					CW	HW	TRAP & DRAIN	VENT	
S-1	KITCHEN SINK	KOHLER K-3346-3	-	KOHLER 15171-FL	3/8"	3/8"	1-1/2"	1-1/2"	-
S-2	SERVICE SINK	KOHLER K-6714	-	K-8905	1/2"	1/2"	3"	3"	PROVIDE 3-INCH IRON PIPE TRAP FOR SERVICE SINK
HB-1	HOSE BIBB	ZURN Z1300	-	-	3/4"	-	-	-	NON-FREEZE IN-WALL HYDRANT
HB-2	HOSE BIBB	ZURN 195 SERIES	-	-	3/4"	-	-	-	-
FD-1	FLOOR DRAIN	JOSAM 37840	-	-	-	-	4"	-	16"X16" HEAVY DUTY DRAIN WITH SLOTTED GRATE
FD-2	FLOOR DRAIN	ZURN ZS400B	-	-	-	-	3"	1-1/2"	ROUND WITH SLOTTED OPENINGS
TD-1	TRENCH DRAIN	ZURN Z886	-	-	-	-	4"	1-1/2"	-
TD-2	TRENCH DRAIN	ZURN Z886	-	K-973 SHOWER HEAD	1/2"	-	3"	1-1/2"	BOOT WASH WITH 6' HAND HELD SHOWER HEAD
EW-1	EYE WASH	GUARDIAN G1814	-	-	1/2"	1/2"	-	-	PROVIDE GUARDIAN G3600 THERMOSTATIC MIXING VALVE
BW-1	BOOT WASH	SYMMONS 1-25-FSB	-	-	1/2"	1/2"	-	-	-

ELECTRIC POTABLE WATER HEATER SCHEDULE

SYMBOL	LOCATION	INPUT CAPACITY (KW)	STORAGE (GAL)	RECOVERY RATE (GPH)/ TEMP. RISE (°F)	TEMPERATURE RISE (°F)	VOLT-P-HZ	FLA	SELECTION BASED ON MANUFACTURER/MODEL (OR APPROVED EQUAL)	SHIPPING WEIGHT (LBS)
WH-2	STREET WING MEZZANINE	1.5	30	21/90	90	120-1-60	-	BRADFORD WHITE M-2-30R6DS	85

ELECTRIC BOILER SCHEDULE

SYMBOL	LOCATION	INPUT CAPACITY (KW)	OUTLET WATER TEMP (°F)	ELEMENTS			VOLT-P-HZ	SELECTION BASED ON MANUFACTURER/MODEL (OR APPROVED EQUAL)	SHIPPING WEIGHT (LBS)
				QTY	KW	STEPS@KW			
B-2	STREET WING MEZZANINE	54	140	3	18	1@18, 1@36	480-3-60	LOCHINVAR BW 1-054C	600

PUMP SCHEDULE

SYMBOL	LOCATION	TYPE	SERVICE	FLOW (GPM)	TDH (FT H_2O)	MOTOR			SELECTION BASED ON MFR/MODEL	REMARKS
						HP	RPM	VOLT-P-HZ		
P-4	STREET WING MEZZANINE	INLINE	BOILER	24	15	0.33	1750	115-1-60	BELL & GOSSETT 60 1-1/2x5-1/4	-
P-5	ZONE 1 MANIFOLD	INLINE	RADIANT FLOOR	13	33	0.25	1750	115-1-60	GRUNDFOS	-
P-6	ZONE 2 MANIFOLD	INLINE	RADIANT FLOOR	7	35	0.25	1750	115-1-60	GRUNDFOS	-

RADIANT FLOOR HEATING SCHEDULE

SYMBOL	TYPE	ZONE	MIN OUTPUT (BTUH)	NO OF LOOPS	FLOW RATE (GPM)	HEAD LOSS (FT. H20)	SELECTION BASED ON MANUFACTURER/MODEL (OR APPROVED EQUAL)	REMARKS
-	MANIFOLD	1	107000	6	12.9	33.1	HEATLINK	-
-	MANIFOLD	2	55000	3	6.6	35.4	HEATLINK	-

TANK SCHEDULE

SYMBOL	LOCATION	SERVICE	TYPE	DIAMETER (IN)	LENGTH (IN)	TANK VOLUME (GAL)	WEIGHT (LBS)	SELECTION BASED ON MANUFACTURER/MODEL (OR APPROVED EQUAL)
T-3	STREET WING MEZZANINE	RADIANT HEATING	EXPANSION TANK	16	34	22	270	BELL AND GOSSETT B-85LA
T-4	STREET WING MEZZANINE	DOMESTIC WATER HEATING	EXPANSION TANK	10	10-3/8	2	21	BELL AND GOSSETT PTA-5

ONE INCH AT FULL SIZE
1"
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STATE OF ALASKA 49th CLOYD R. JACKSON No. ME 7029 REGISTERED PROFESSIONAL ENGINEER

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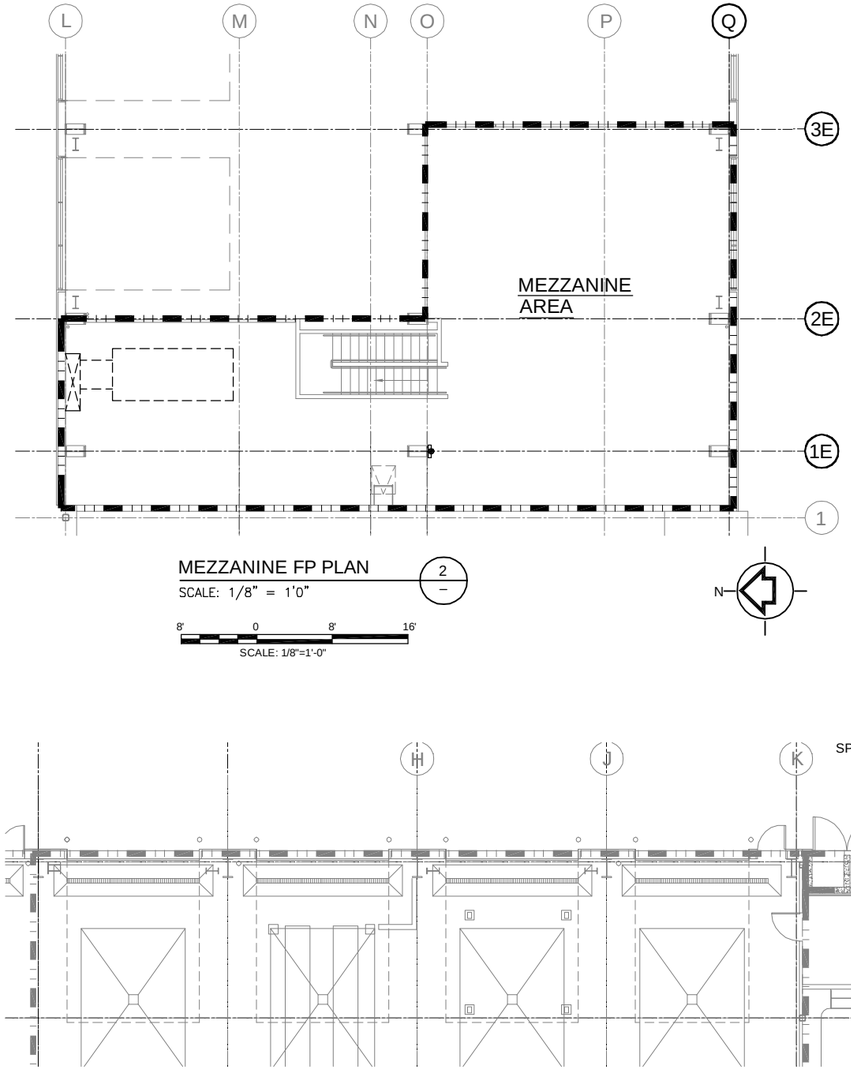
CONSOLIDATED PUBLIC WORKS FACILITY STREETS WING ADDITION, E10-273

MECHANICAL PLUMBING EQUIPMENT SCHEDULES

SHEET NO. P6.01

TOTAL SHEETS 47 - 72



MEZZANINE FP PLAN (2)
SCALE: 1/8" = 1'0"

8' 0 8' 16'
SCALE: 1/8"=1'-0"

FIRST FLOOR FP PLAN (1)
SCALE: 1/8" = 1'0"

8' 0 8' 16'
SCALE: 1/8"=1'-0"

NOTES:

1. SPRINKLER SYSTEM SHALL BE DESIGNED BY LICENSED FIRE PROTECTION ENGINEER.
2. SPRINKLER DESIGN AND INSTALLATION SHALL BE IN ACCORDANCE WITH NFPA 13 AND APPROVED BY CITY/BOROUGH OF JUNEAU FIRE DEPARTMENT.

FIRE SPRINKLER ZONE		
ZONE	CLASSIFICATION	DENSITY
MAINTENANCE BAYS/ SIGN SHOP	ORDINARY HAZARD GROUP 2	0.25 GPM/SF PER FM GLOBAL STANDARDS
LUNCH/TRAINING/ CORRIDOR	LIGHT HAZARD	0.10 GPM/SF OR PER NFPA 13
TOOL REPAIR/ SECURE STORAGE	ORDINARY HAZARD GROUP 2	0.20 GPM/SF OR PER NFPA 13
MEZZANINE	ORDINARY HAZARD GROUP 2	0.20 GPM/SF OR PER NFPA 13

ONE INCH AT FULL SIZE
1"
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STATE OF ALASKA 49th
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DEPARTMENT OF ENGINEERING

CONSOLIDATED PUBLIC WORKS FACILITY
STREETS WING ADDITION, E10-273

FIRE PROTECTION PLAN

SHEET NO. FP1.01
TOTAL SHEETS 48 - 72