

VALDEZ ANIMAL SHELTER FUEL PIPING PROJECT

VALDEZ, ALASKA

FOR THE
CITY OF VALDEZ
CAPITAL FACILITIES

VALDEZ, ALASKA

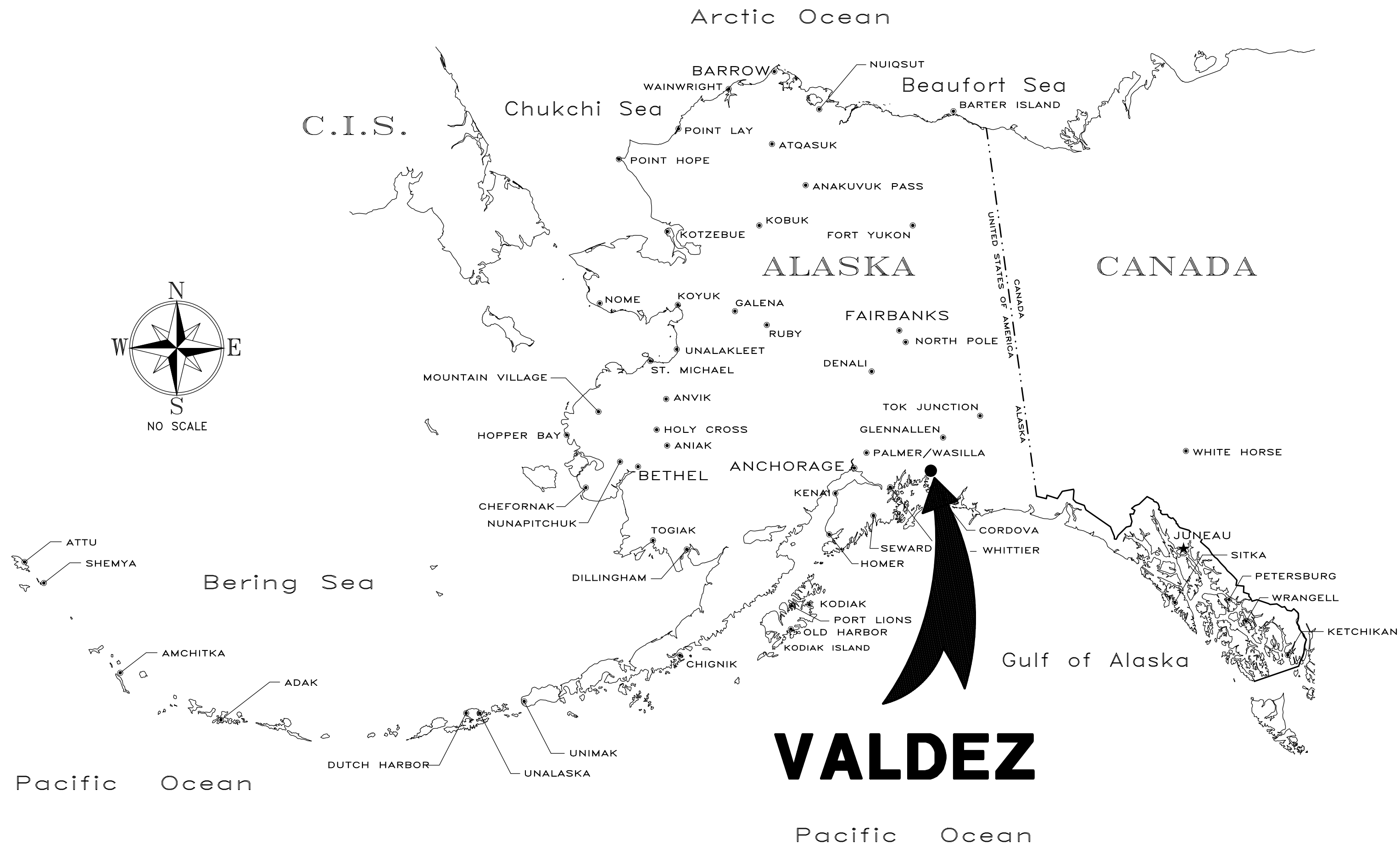
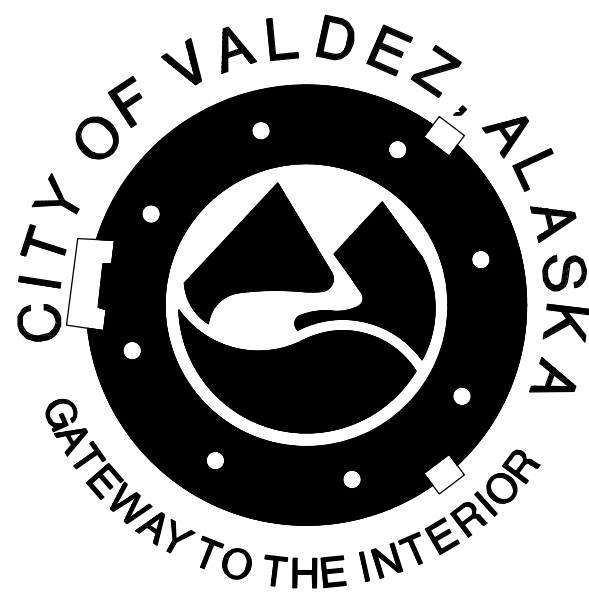
RSA Engineering, Inc.
MECHANICAL AND ELECTRICAL CONSULTING ENGINEERS
670 W FIREWEED. SUITE 200 ANCHORAGE, AK 99503 (907)276-0521

INDEX TO DRAWINGS:

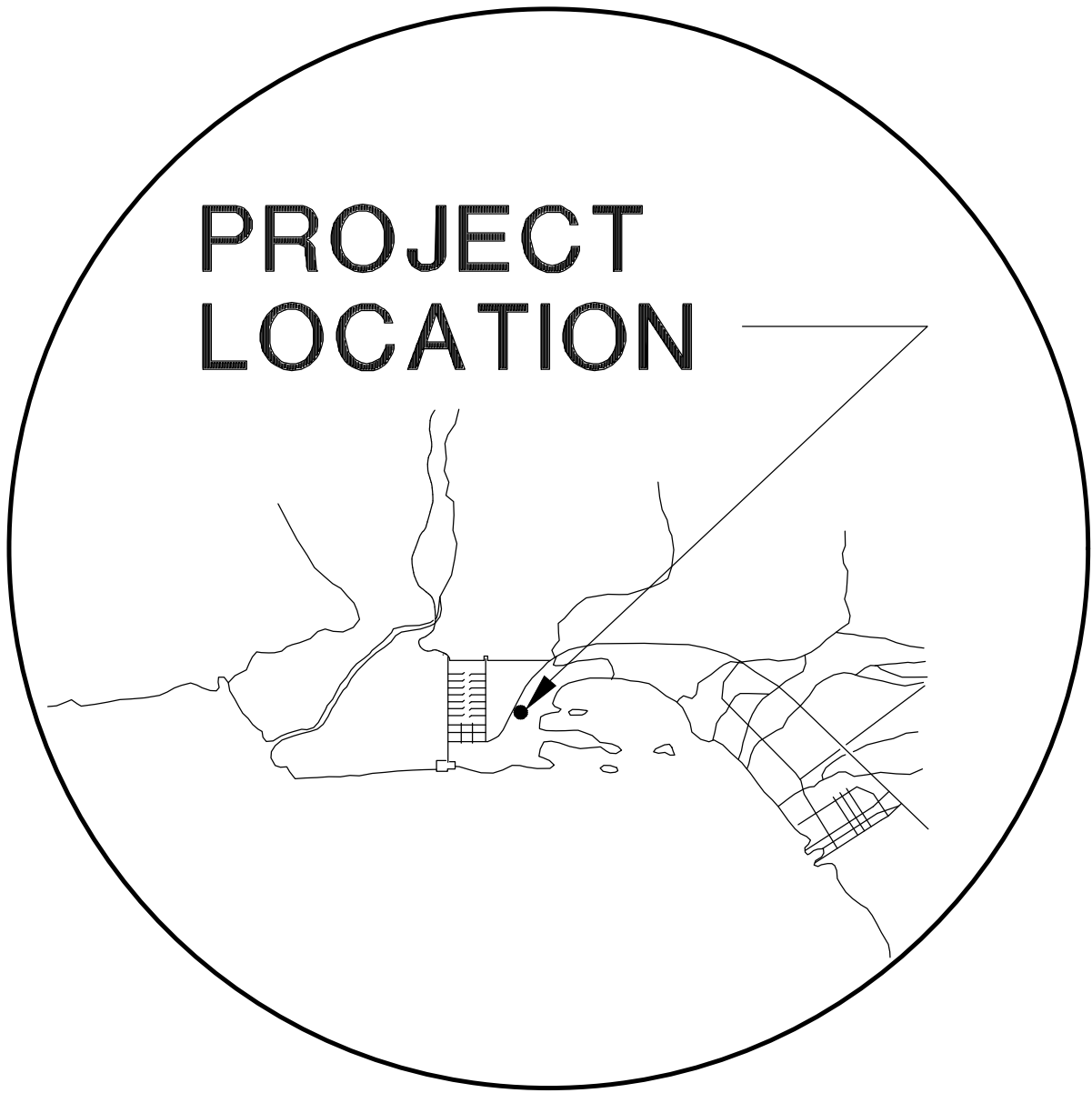
- MECHANICAL**
M001 MECHANICAL LEGEND, ABBREVIATIONS, AND SCHEDULES
M101 MECHANICAL SITE DEMOLITION PLAN
M102 MECHANICAL BOILER ROOM DEMOLITION PLAN
M201 MECHANICAL SITE REMODEL PLAN
M202 MECHANICAL BOILER ROOM REMODEL PLAN
M301 MECHANICAL DETAILS
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- ELECTRICAL**
E101 ELECTRICAL LEGEND AND PLANS

APRIL, 30 2026



VALDEZ



PROJECT LOCATION

0"
1"
2"
3"

PIPING LEGEND

DENOTES DEMOLITION

COLD WATER

SEE ABBREVIATIONS FOR MEDIA

PIPE UP

PIPE DOWN

TEE UP

TEE DOWN

CAP

UNION

BALL VALVE

CHECK VALVE

BALANCE VALVE

FLOW CONTROL VALVE

AIR VENT

2-WAY MOTORIZED CONTROL VALVE

HOSE BIBB

CLEANOUT

STRAINER W/ BLOWDOWN

DUCTWORK LEGEND

ROUND DUCT UP & DOWN

SUPPLY AIR UP & DOWN

RETURN AIR UP & DOWN

EXHAUST AIR UP & DOWN

VOLUME DAMPER

THERMOSTAT

THERMOSTAT W/ COVER

LOGIC

DETAIL NUMBER

SHEET LOCATED ON

ABBREVIATIONS

ABV
ADJ
AFF
AMPS
APD
BDD
BLDG
BTUH
C/A
CAP
CFM
CIRC
COND
CONN
CU
CW
dB
DEG
DIA
DIM
DT-X
DWG
(E)
E/A
EFF
ENT
ESP

ABOVE
ADJUSTABLE
ABOVE FINISHED FLOOR
AMPERES
AIR PRESSURE DROP
BACKDRAFT DAMPER
BUILDING
BRITISH THERMAL UNIT/HOUR
COMBUSTION AIR
CAPACITY
CUBIC FEET PER MINUTE
CIRCULATING
CONDENSATE
CONNECTION
COPPER
COLD WATER
DECIBLES
DEGREE
DIAMETER
DIMENSION
DAY TANK DESIGNATOR
DRAWING
EXISTING
EXHAUST AIR
EFFICIENCY
ENTERING
EXTERNAL STATIC PRESSURE

ET-X
F
FLA
FO
FOR
FOS
FOT
FPM
FT
GA
GAL
GPH
GPM
GT
HC-X
HD
HGS
HGR
HP
HW
HWC
IBC
IN
LAT
MAX
MBH
MCA

EXPANSION TANK DESIGNATOR
FAHRENHEIT
FULL LOAD AMPS
FUEL OIL
FUEL OIL RETURN
FUEL OIL SUPPLY
FUEL OIL TANK
FEET PER MINUTE
FEET
GAUGE
GALLONS
GALLONS PER HOUR
GALLONS PER MINUTE
GLYCOL TANK
HEATING COIL DESIGNATOR
HEAD
HEATING GLYCOL SUPPLY
HEATING GLYCOL RETURN
HORSEPOWER
HOT WATER
HOT WATER CIRCULATION
INTERNATIONAL BUILDING CODE
INCHES
LEAVING AIR TEMPERATURE
MAXIMUM
THOUSAND BTUH
MINIMUM CIRCUIT AMPACITY

MFGR
MTD
NC
NO.
NG
NTS
O/A
PD
PG
PH
PMP
PSI
R/A
RPM
S/A
TBD
TEMP
T' STAT
TYP
UPC
V
W
W/
WPD

MANUFACTURER
MOUNTED
NOISE CRITERIA
NUMBER
NATURAL GAS
NOT TO SCALE
OUTSIDE AIR
PRESSURE DROP
PROPYLENE GLYCOL
PHASE
PUMP
POUND PER SQUARE INCH
RETURN AIR
REVOLUTIONS PER MINUTE
SUPPLY AIR
TO BE DETERMINED
TEMPERATURE
THERMOSTAT
TYPICAL
UNIFORM PLUMBING CODE
VENT
WASTE
WITH
WATER PRESSURE DROP

DAY TANK SCHEDULE

SYMBOL	MANUFACTURER	MODEL	FUNCTION	MEDIUM	MATERIAL	TANK CAPACITY	DIMENSIONS	LABEL	MOTOR	REMARKS	
									HP	POWER	
DT-1	SIMPLEX	STS 10	BOILER FUEL	F.O. #2	STEEL	10 GAL	26"x30"x47"	UL-142	(2) 1/3	115V/1ø	DOUBLE WALL TANK, UL 508A STS LEVEL CONTROLLER, OPT. 345, TANK LEAK SENSOR, OPTIONAL HAND PUMP, DUPLEX 2.0 GPM SUPPLY AND SINGLE 4.0 GPM RETURN PUMP, FILL CHECK VALVE.

EXISTING FUEL OIL TANK SCHEDULE

SYMBOL	MANUFACTURER	MODEL	FUNCTION	MEDIUM	MATERIAL	TANK CAPACITY	DIAMETER	LENGTH	LABEL	REMARKS
						(GAL)				
FOT (E)	--	--	FUEL STORAGE	FUEL OIL #2	--	500	5'-5"	6'-4"	UL-142	EXISTING TO BE REMOVED AND RELOCATED.

SEQUENCE OF OPERATIONS:

DAY TANK, DT-1

A. ALARMS:

1. HIGH LEVEL

2. LOW LEVEL

B. AUTOMATED CONTROL:

1. UNIT SHALL OPERATE ON MANUFACTURER'S PACKAGED CONTROLS. TANK LEVEL CONTROLLER SHALL OPERATE SUPPLY PUMP TO MAINTAIN TANK LEVEL, ON FAILURE OF SUPPLY PUMP OR LOW LEVEL THE SECONDARY PUMP SHALL OPERATE. ON HIGH LEVEL ALARM THE RETURN PUMP SHALL OPERATE.

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VALDEZ ANIMAL SHELTER FUEL PIPING

CITY OF VALDEZ
300 AIRPORT RD, STE 201
VALDEZ, ALASKA 99686

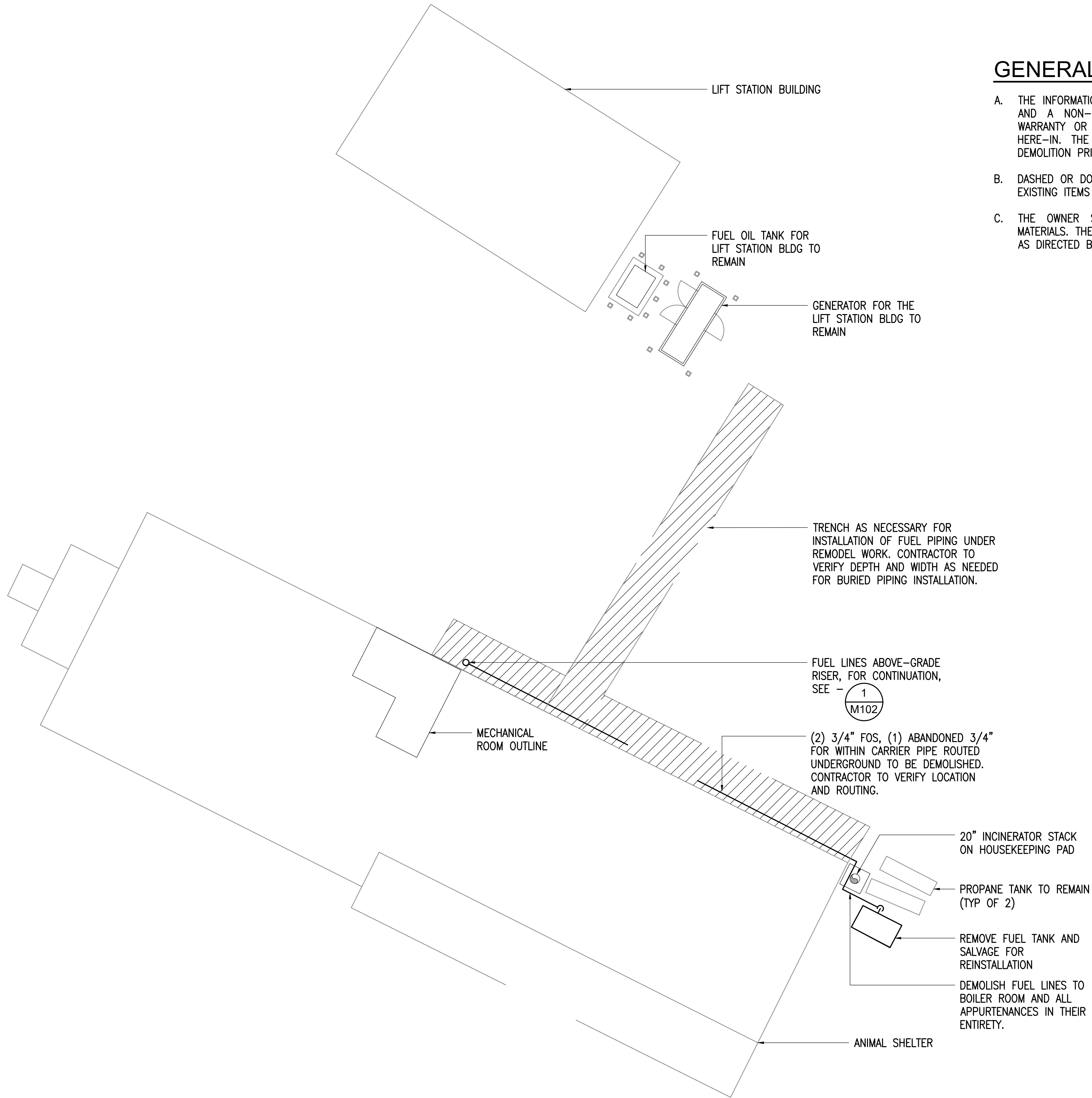
REVISIONS:

DRAWN BY: CAA
CHECKED BY: IAW
DATE: 04/27/26
JOB NUMBER: M6016
DWG FILE: MSERIES

DRAWING TITLE:
MECHANICAL LEGEND,
ABBREVIATIONS, AND,
AND SCHEDULES

SHEET:
M001

0"
1"
2"
3"

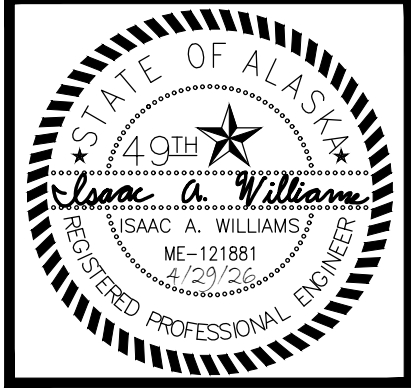


GENERAL NOTES:

- THE INFORMATION SHOWN ON THIS DRAWING IS TAKEN FROM AS BUILT DRAWINGS AND A NON-DESTRUCTIVE WALK THROUGH OF THE FACILITY. THERE IS NO WARRANTY OR GUARANTEE AS TO THE ACCURACY OF THE INFORMATION SHOWN HERE-IN. THE CONTRACTOR SHALL FIELD VERIFY ALL ITEMS SCHEDULED FOR DEMOLITION PRIOR TO START OF WORK.
- DASHED OR DOTTED LINES INDICATE ITEMS TO BE REMOVED. SOLID LINES INDICATE EXISTING ITEMS TO REMAIN.
- THE OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL SALVAGEABLE MATERIALS. THE CONTRACTOR SHALL DELIVER SALVAGED MATERIALS TO A LOCATION AS DIRECTED BY THE OWNER IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

1 MECHANICAL SITE DEMOLITION PLAN

3/32" = 1'-0"



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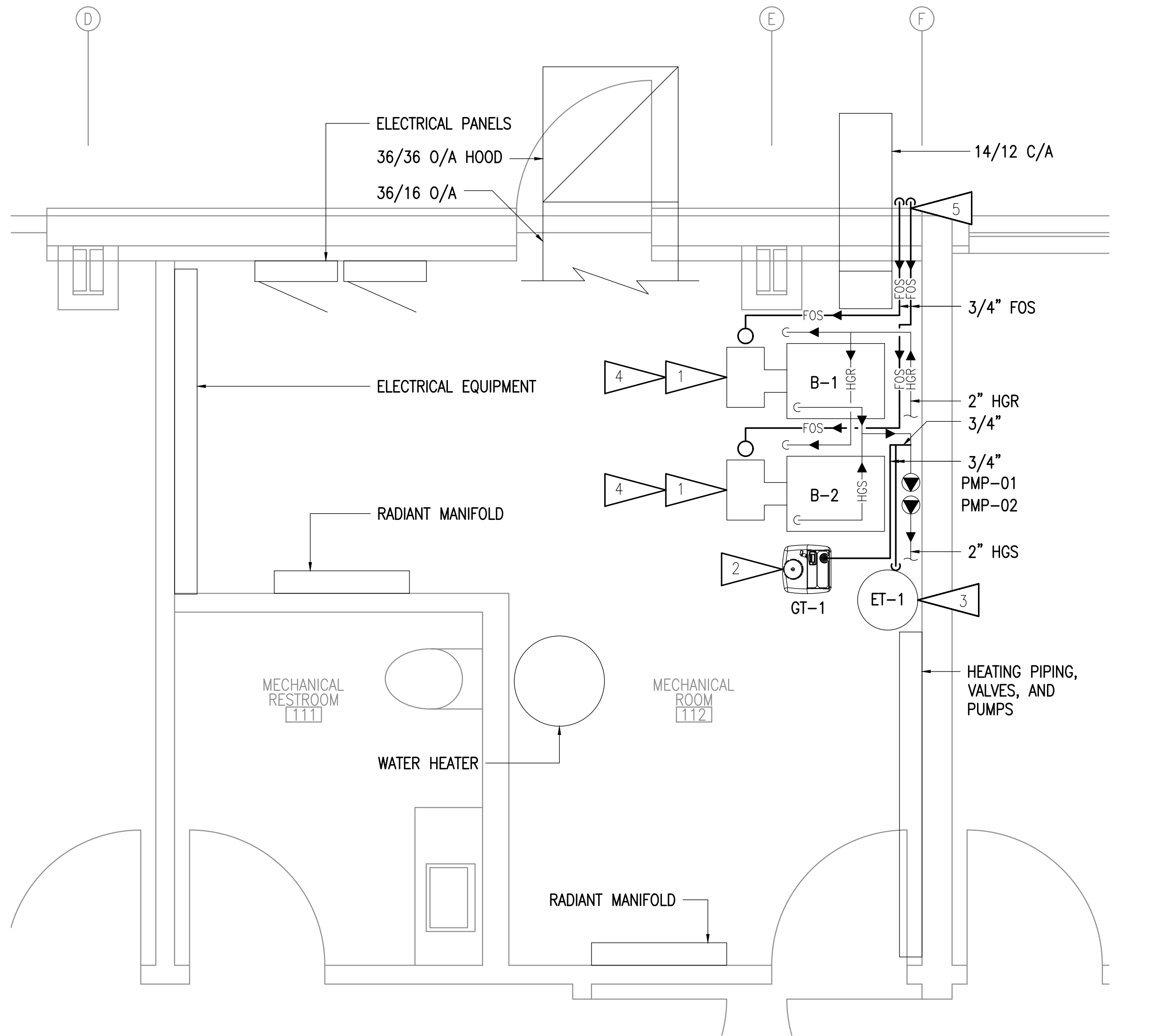
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DEMOLITION PLAN

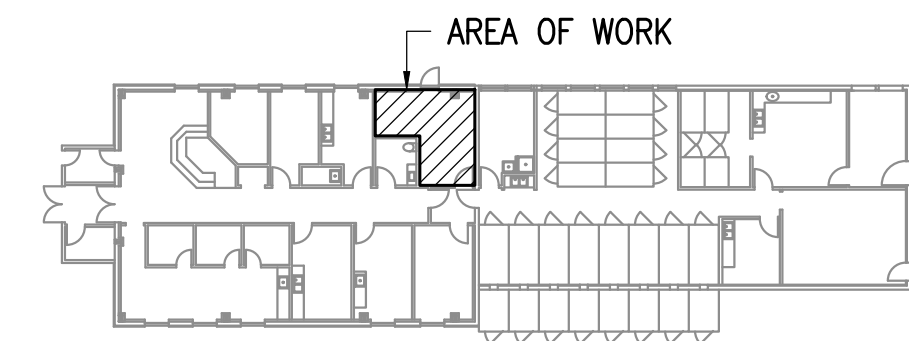
SHEET:

M101

0"
1"
2"
3"



1 MECHANICAL ROOM DEMOLITION PLAN
1/2" = 1'-0"

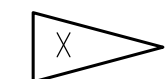


KEY PLAN
NO SCALE

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- THE OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL SALVAGEABLE MATERIALS. THE CONTRACTOR SHALL DELIVER SALVAGED MATERIALS TO A LOCATION AS DIRECTED BY THE OWNER IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- LIMITED HEATING AND PLUMBING PIPING SHOWN DUE TO MINIMAL SCOPE OF WORK.

SHEET NOTES:



- DEMOLISH FUEL OIL PIPING, FILTER, AND ASSOCIATED APPURTENANCES SERVING BOILERS. BOILERS AND BURNERS TO REMAIN.
- REMOVE GLYCOL TANK AND SALVAGE FOR REINSTALLATION. DEMOLISH ASSOCIATED PIPING AND VALVES AS REQUIRED TO ACCOMMODATE NEW WORK.
- REMOVE EXPANSION TANK AND SALVAGE FOR REINSTALLATION. DEMOLISH ASSOCIATED PIPING AND VALVES AS REQUIRED TO ACCOMMODATE NEW WORK.
- DEMOLISH BOILER DISCHARGE PIPING ROUTED TO GT AS REQUIRED TO ACCOMMODATE NEW WORK.
- PATCH WALL TO MATCH EXISTING AFTER REMOVAL OF PIPE AND ASSOCIATED PENETRATION.



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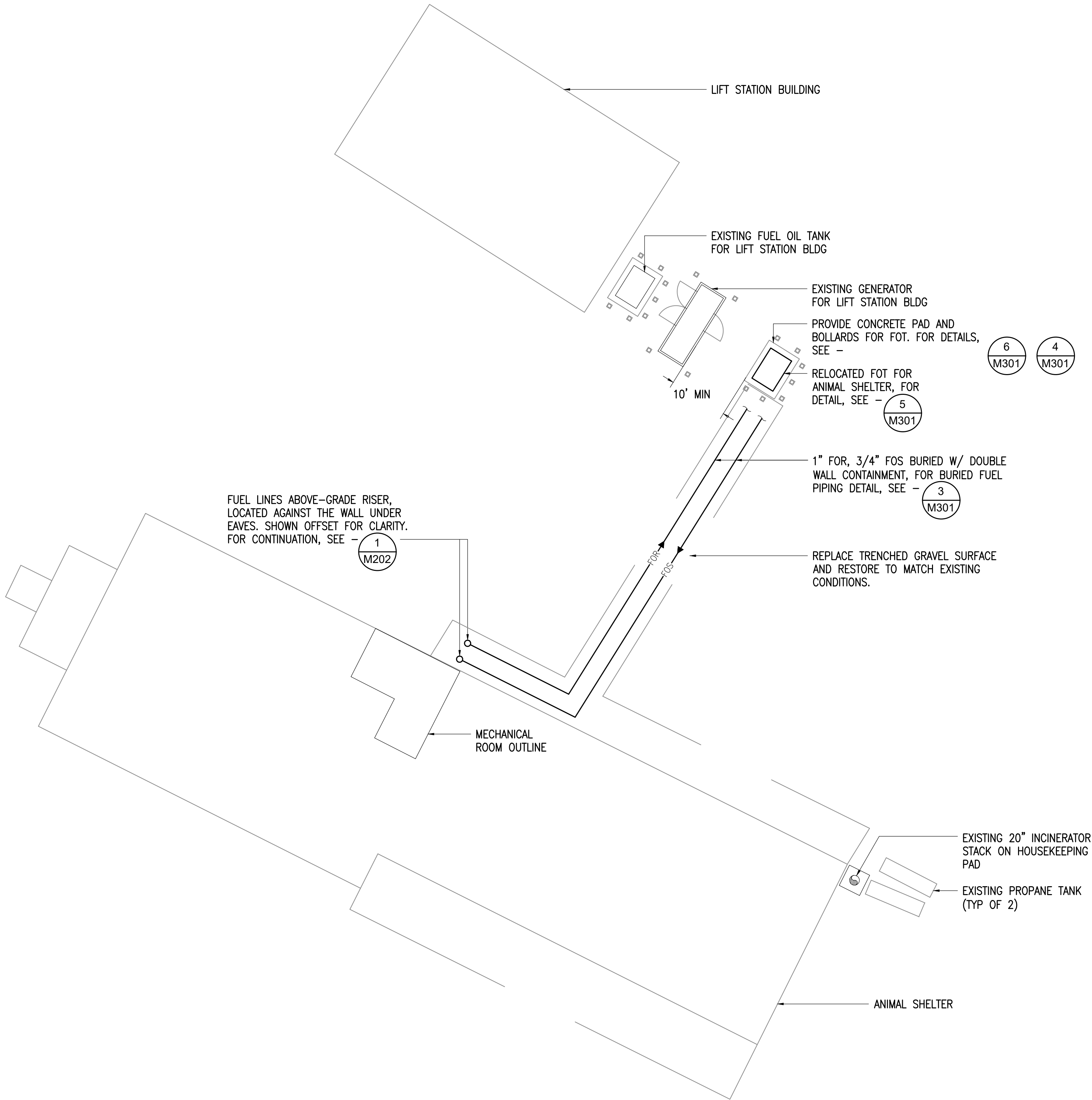
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DRAWING TITLE:
MECHANICAL ROOM
DEMOLITION PLAN

SHEET:
M102

0"
1"
2"
3"



1 MECHANICAL SITE REMODEL PLAN
3/32" = 1'-0"



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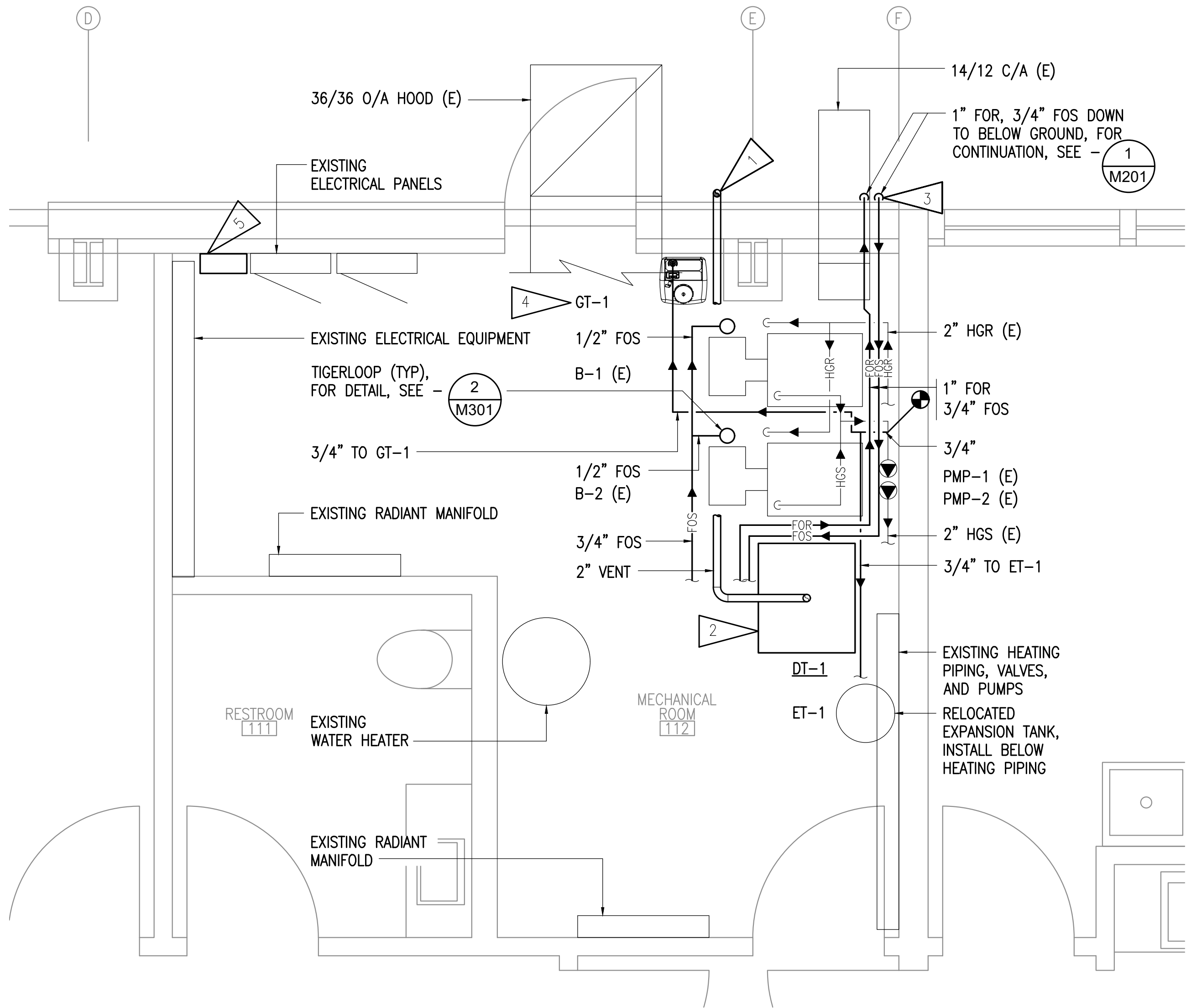
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DRAWING TITLE:
MECHANICAL SITE
REMODEL PLAN

SHEET:

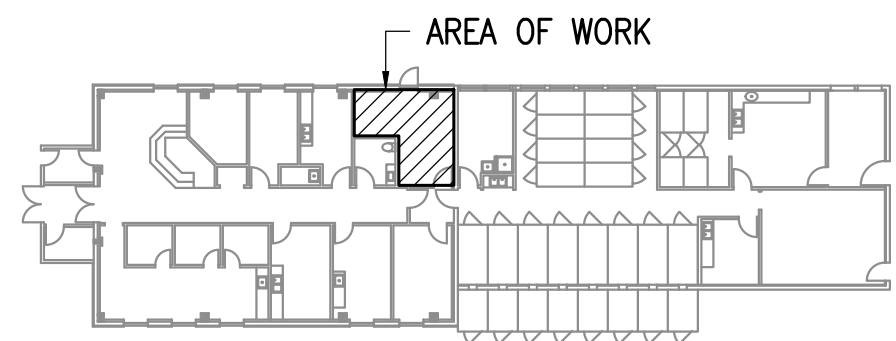
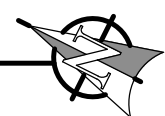
M201

0"
1"
2"
3"



1 MECHANICAL ROOM REMODEL PLAN

1/2" = 1'-0"



KEY PLAN

NO SCALE



GENERAL NOTES:

A. LIMITED HEATING AND PLUMBING PIPING SHOWN DUE TO MINIMAL SCOPE OF WORK.

SHEET NOTES:



1. ROUTE DAY TANK VENT FULL SIZE THROUGH WALL AND UP ALONG WALL TO 3' ABOVE OUTSIDE AIR INTAKE AND MINIMUM 12' AFG.
2. FOR DAY TANK DETAIL SEE - (1) M301
3. ROUTE FUEL PIPING TO ENTER BUILDING AT ELEVATION ABOVE EXISTING BOILERS. SEAL AND SLEEVE WALL PENETRATION.
4. FOR GLYCOL TANK DETAIL, SEE - (1) M302
5. PROVIDE FUEL LEAK DETECTION PANEL AND ALL REQUIRED SENSORS AND WIRING PER SPECIFICATIONS.



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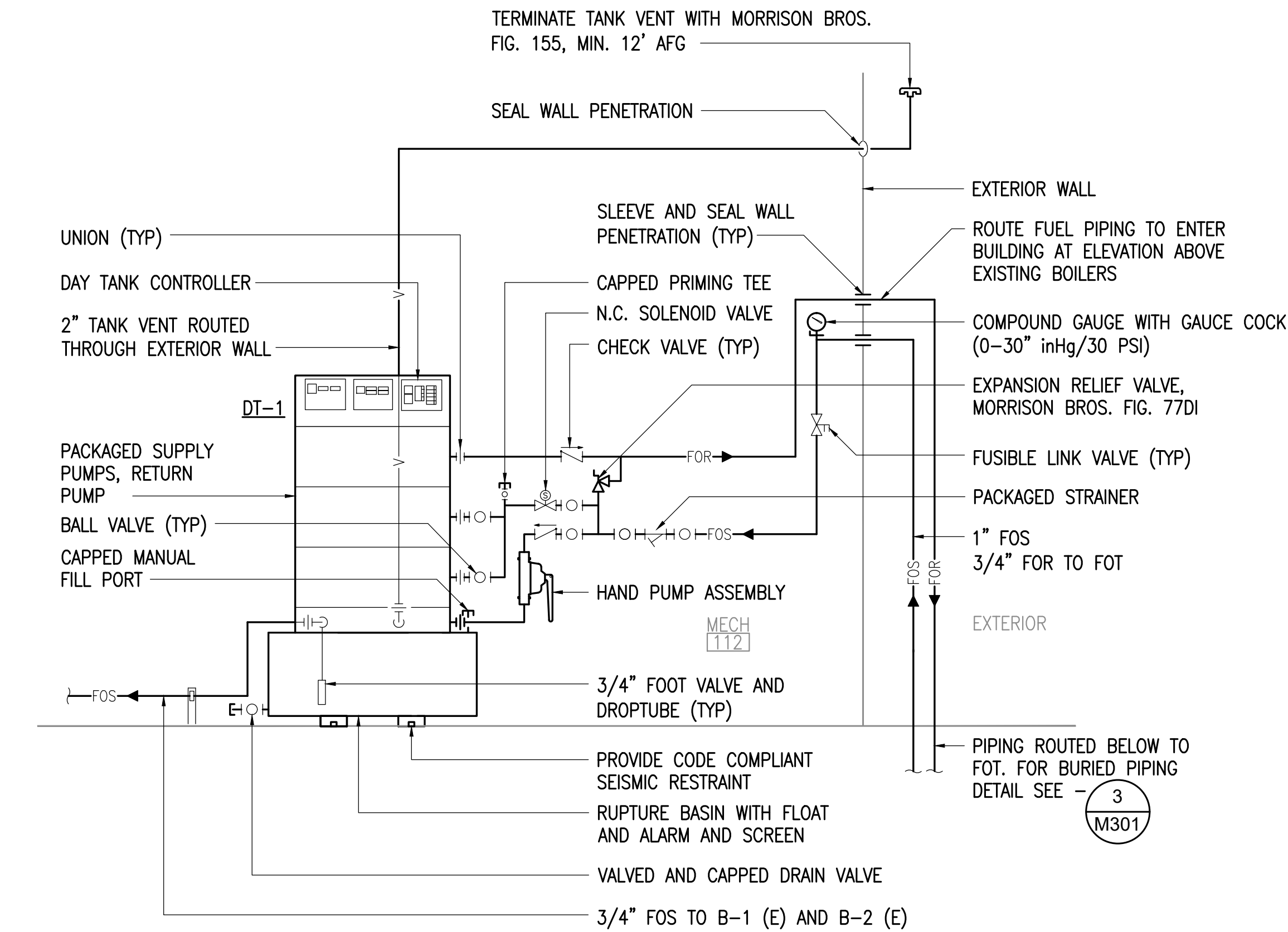
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DRAWING TITLE:
MECHANICAL ROOM
REMODEL PLAN

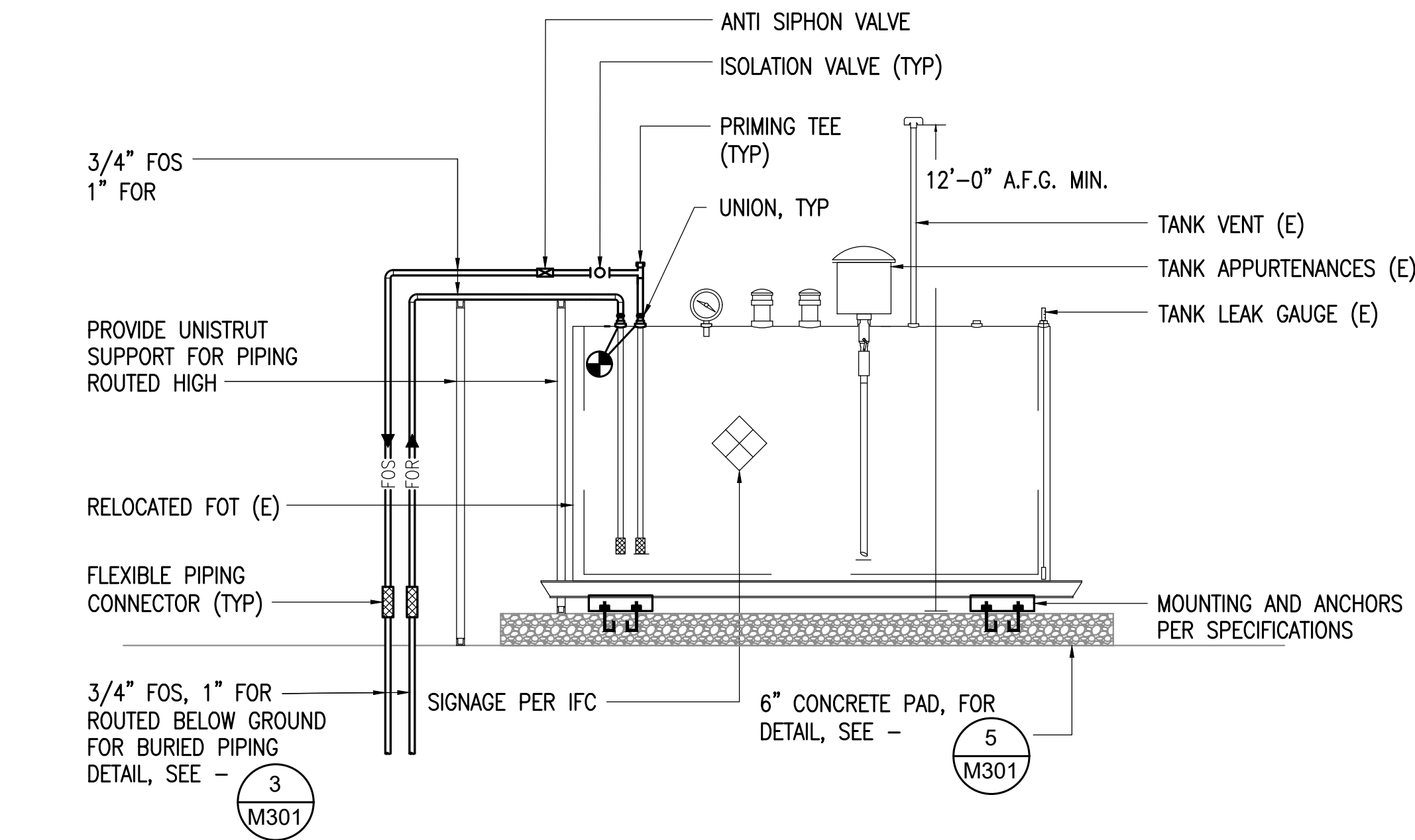
SHEET:

M202

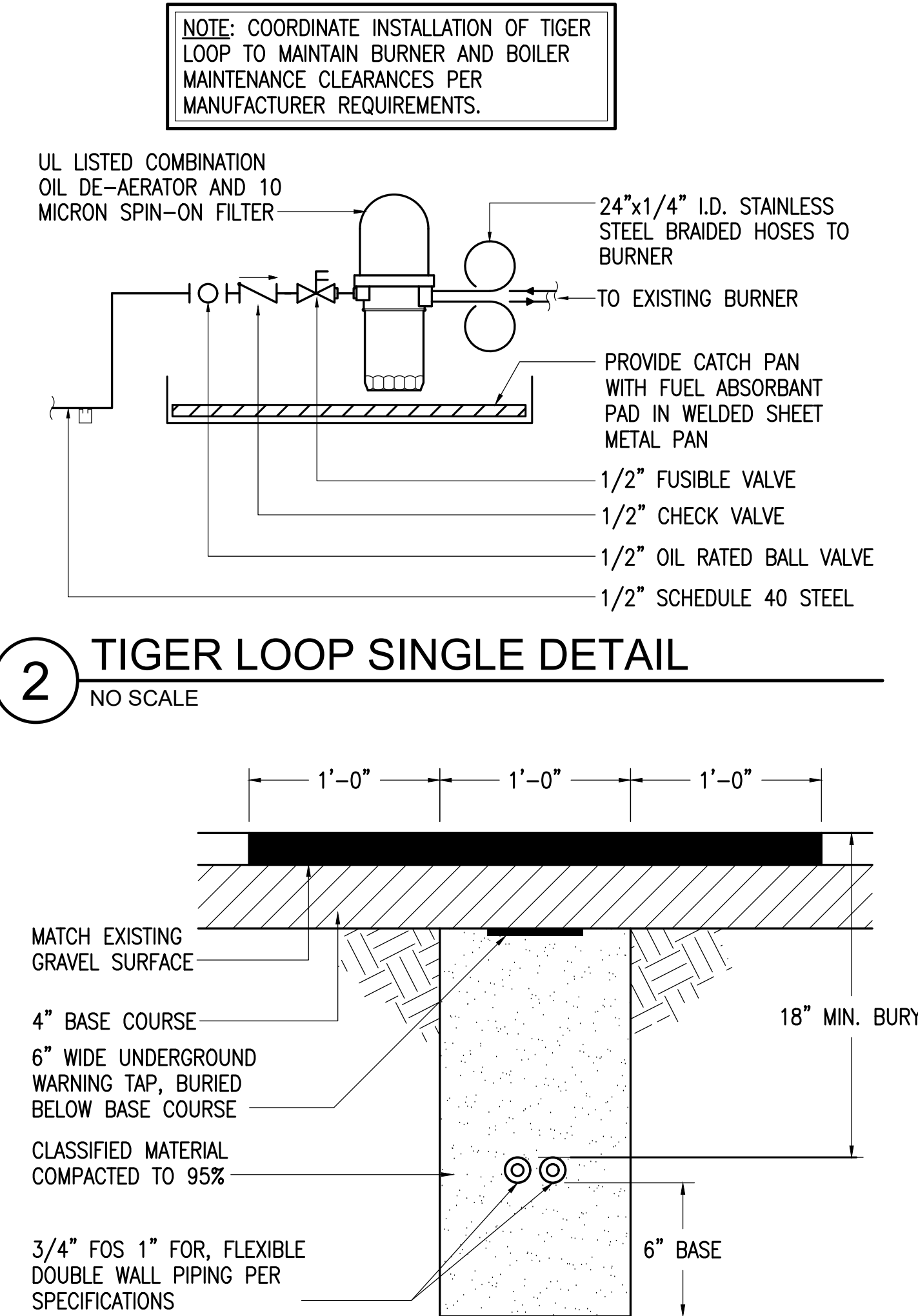
0"
1"
2"
3"



1 DAY TANK DETAIL
NO SCALE

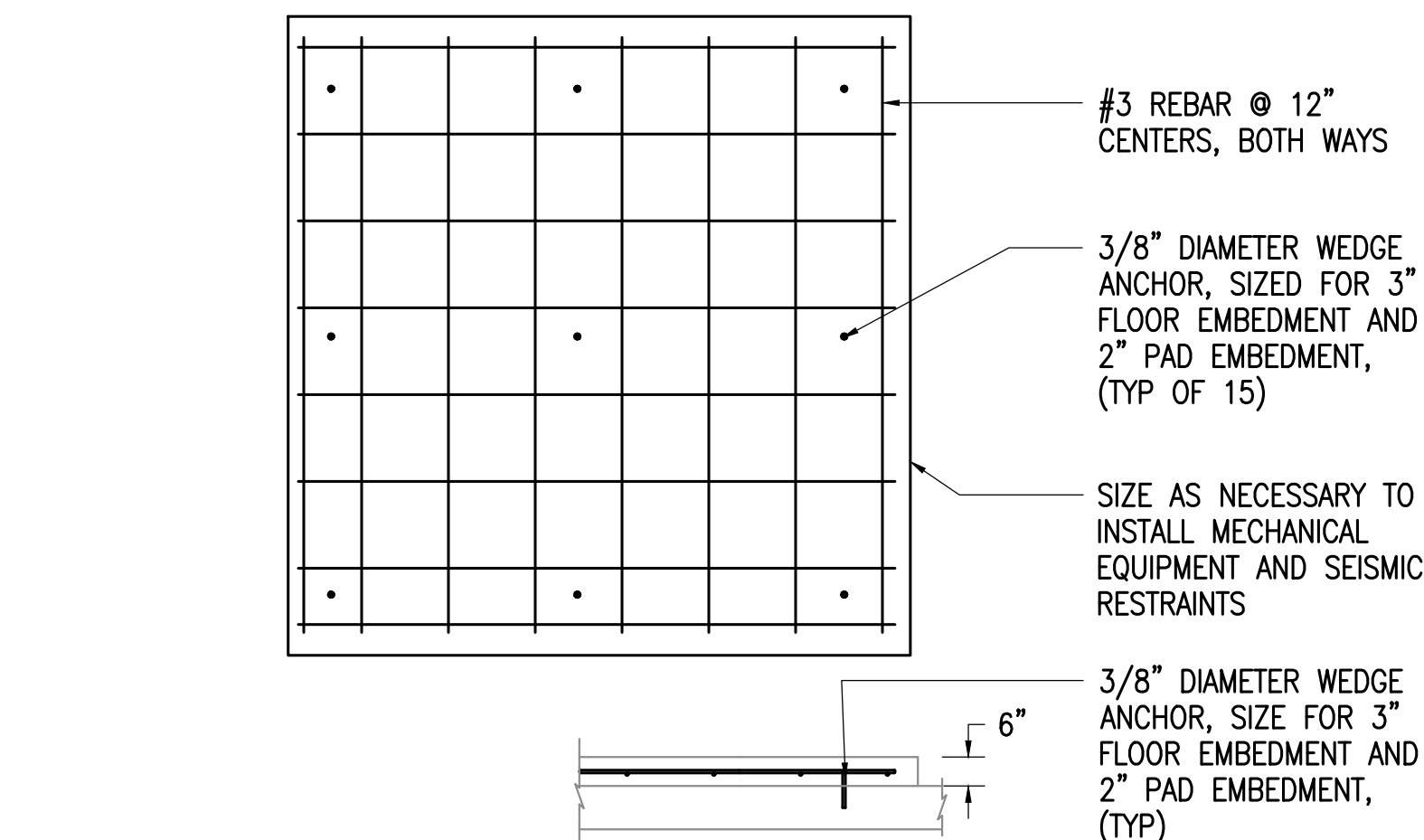


5 FUEL OIL TANK DETAIL
NO SCALE

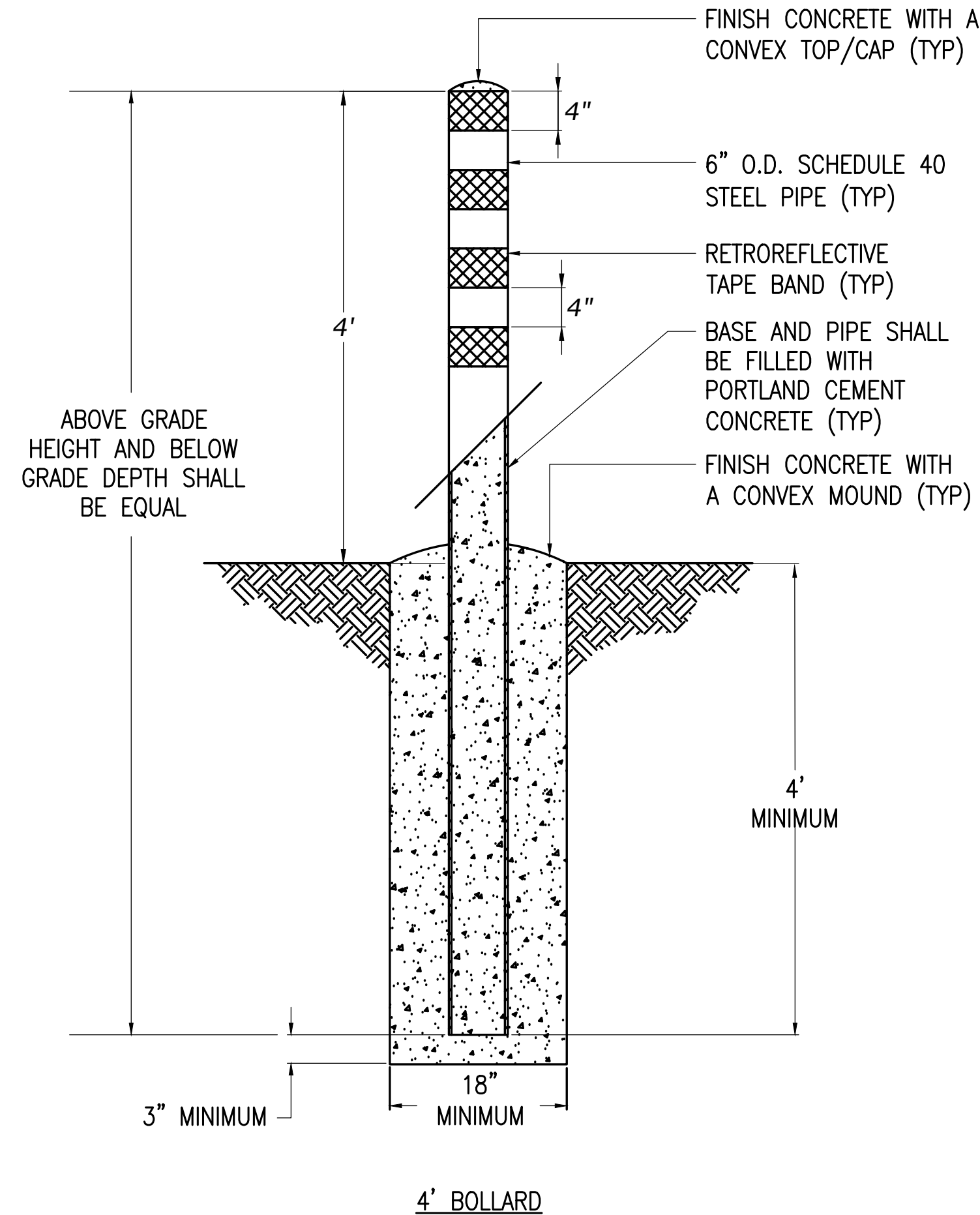


2 TIGER LOOP SINGLE DETAIL
NO SCALE

3 BURIED PIPING DETAIL
NO SCALE



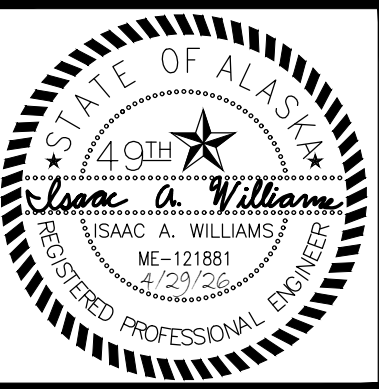
6 CONCRETE PAD
NO SCALE



- NOTES:
- BOLLARD SHALL BE PAINTED WITH MINIMUM ONE (1) PRIMER COAT AND TWO (2) FINISH COATS OF HIGH-INTENSITY YELLOW PAINT; OTHER FINISH COLORS MAY BE USED WITH PRIOR APPROVAL OF THE CO.
 - RETROREFLECTIVE TAPE SHALL BE UNIFORM IN COLOR AND APPLIED IN FOUR (4") APART.

4 BOLLARD DETAIL
NO SCALE

NOTE:
CONCRETE - STRUCTURAL CONCRETE SHALL HAVE A 28 DAY STRENGTH, F'C OF 4,500 PSI. MAXIMUM WATER TO CEMENT RATIO EQUAL 0.45. MAXIMUM UN-PLASTICIZED SLUMP SHALL BE 4 INCHES. ENTRAIN AIR IN ACCORDANCE WITH IBC TABLE 1904.2.1 FOR SEVERE EXPOSURE CONCRETE. REINFORCING STEEL SHALL BE ASTM A615, GRADE 60 DETAILED OR IN ACCORDANCE WITH ACI 318. CONCRETE COVER OVER REINFORCEMENT SHALL BE AS NOTED ON THE DRAWINGS AND IN ACCORDANCE WITH ACI 301. WELDING OF REINFORCEMENT IS PROHIBITED. SUPPORT ALL REBAR ON CHAIRS, DOBIES OR OTHER APPROVED MEANS. CONTRACTOR SHALL TAKE SPECIAL CARE TO PREVENT DISTURBANCE DURING CONCRETE PLACEMENT TO ENSURE THAT REINFORCEMENT REMAINS AT ITS PROPER ELEVATION AND POSITION. ALL CONCRETE SHALL CONFORM TO THE LATEST STANDARDS AND SPECIFICATIONS OF THE AMERICAN CONCRETE INSTITUTE.



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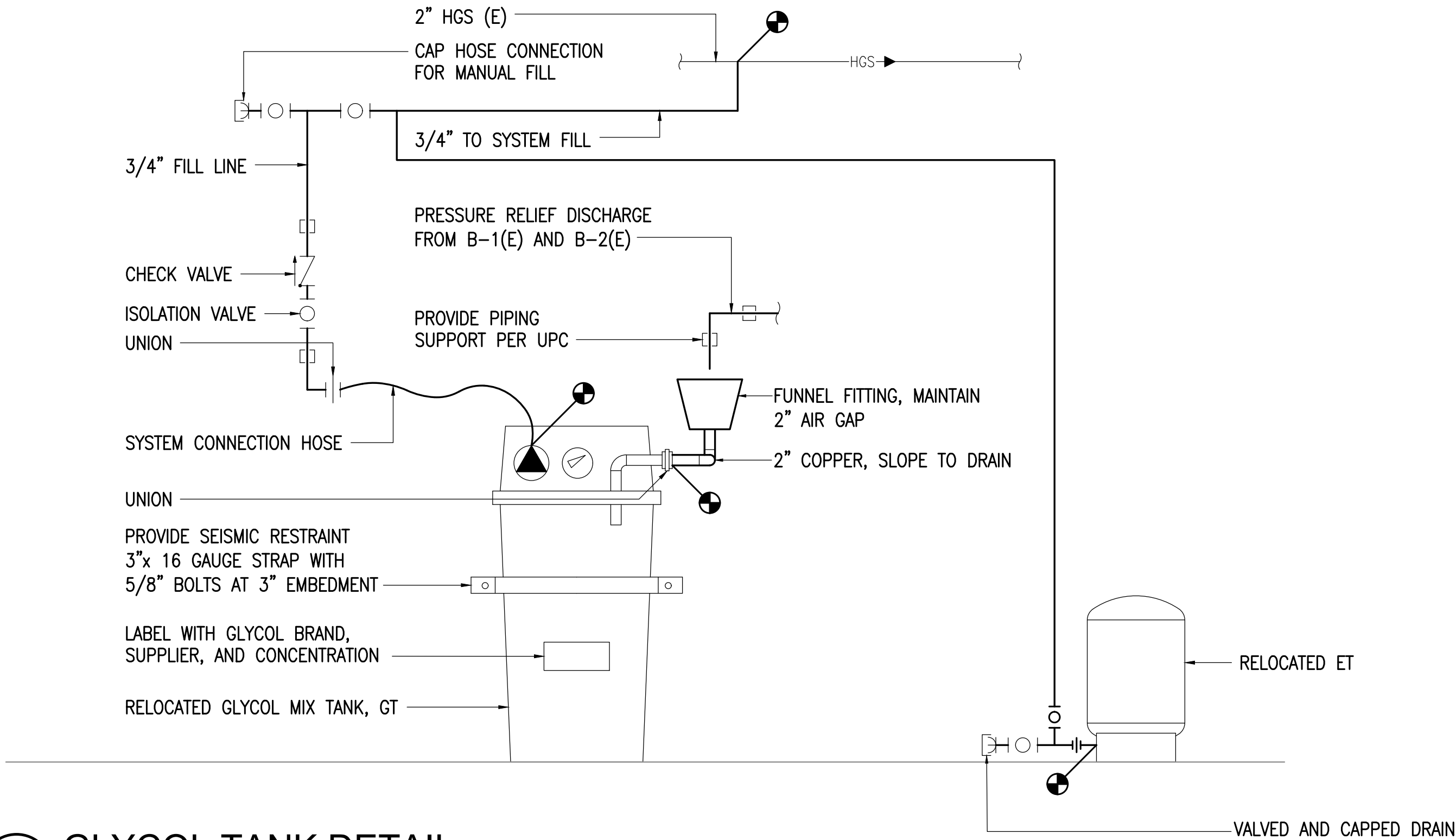
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DRAWING TITLE:
MECHANICAL DETAILS

SHEET:
M301

0"
1"
2"
3"



1 GLYCOL TANK DETAIL
NO SCALE



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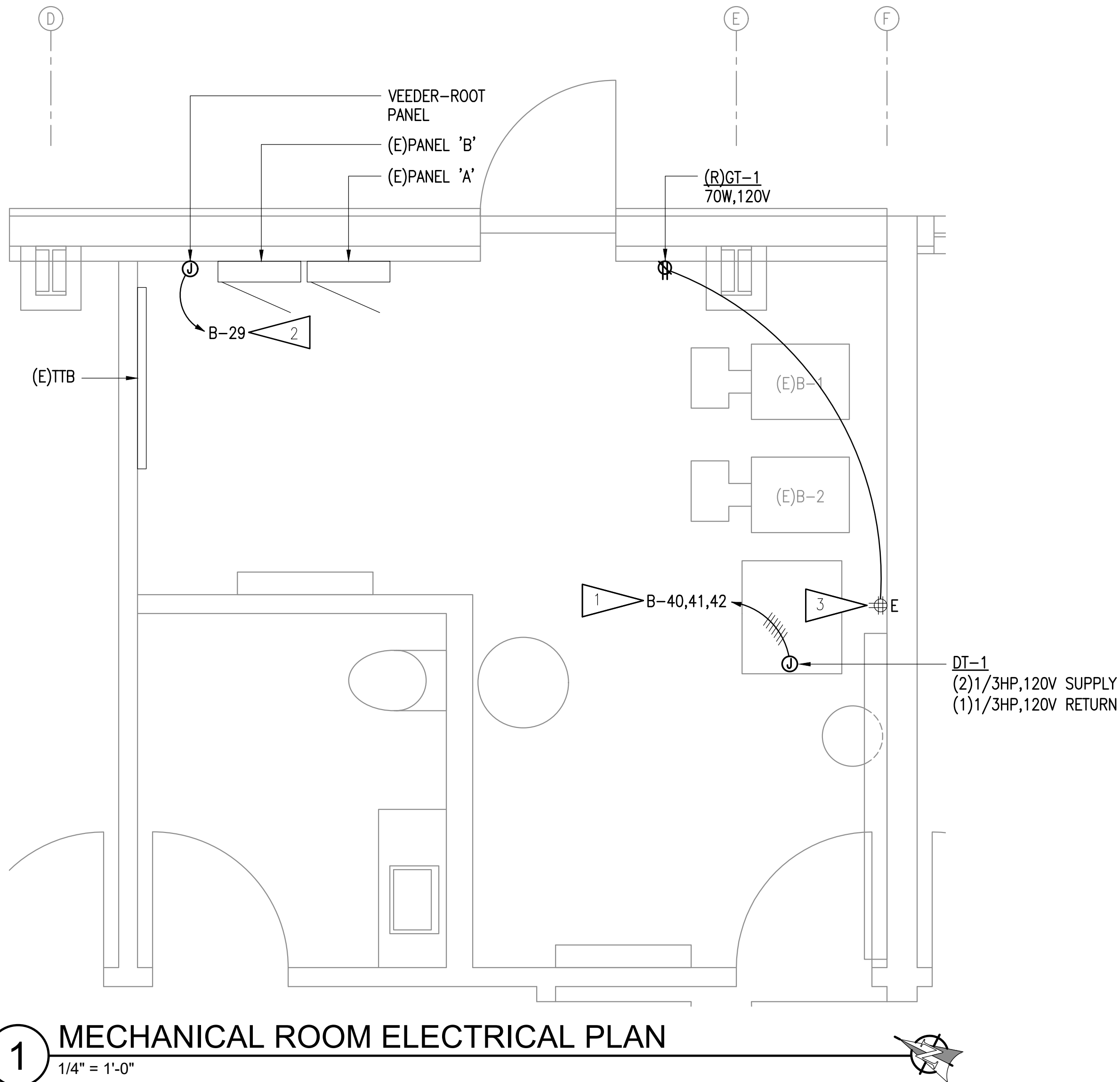
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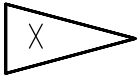
SHEET:
M302

0"
1"
2"
3"

LEGEND	
	CONDUIT, CONCEALED
	NUMBER AND SIZE OF WIRES (NO MARKS = 3 #12)
	HOMERUN TO PANEL (PANEL AND CIRCUIT No.)
	EXISTING PANEL
	DUPLEX RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTER
	QUADRAPLEX RECEPTACLE
	JUNCTION BOX
	NOTE TAG (No. INDICATES NOTE)
AFF	ABOVE FINISHED FLOOR
C	CONDUIT
E	DENOTES EXISTING ITEM
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GRSC	GALVANIZED RIGID STEEL CONDUIT
NEC	NATIONAL ELECTRICAL CODE



SHEET NOTES:



- INSTALL (3) NEW 15A, 1P, CIRCUIT BREAKERS IN SPACE AVAILABLE IN THE EXISTING PANEL. THE EXISTING PANEL IS A CUTLER-HAMMER TYPE CH, 120/208V, 3Ø, 4W, WITH A 225A MAIN LUGS. THE NEW CIRCUIT BREAKERS SHALL BE COMPATIBLE WITH AND LISTED FOR USE IN THE EXISTING PANEL AND SHALL HAVE A MINIMUM SHORT CIRCUIT AIC RATING TO MATCH THE LOWEST RATED EXISTING DEVICE IN THE PANEL. COORDINATE EXACT CIRCUIT NUMBER AND SIZE REQUIREMENTS WITH THE ACTUAL EQUIPMENT PROVIDED PRIOR TO ORDERING AND INSTALLING.
- CONNECT TO SPARE BREAKER IN CIRCUIT INDICATED.
- PROVIDE EXTENSION OF EXISTING CIRCUIT TO RELOCATED GT-1. PROVIDER JUNCTION BOXES, CONDUIT, AND WIRE AS REQUIRED.

ELECTRICAL SERVICE LOAD CALCULATION

EXISTING SERVICE IS 400A, 208V, 3-PHASE, 4-WIRE SERVICE WITH 4#250KCMIL, FEEDERS AND 225A MAIN DISCONNECT

PANEL 'A' AND 'B' ARE FEED THROUGH TYPE 225A WITH MAIN LUGS FED WITH 4#250KCMIL, AND 1#4 GROUND

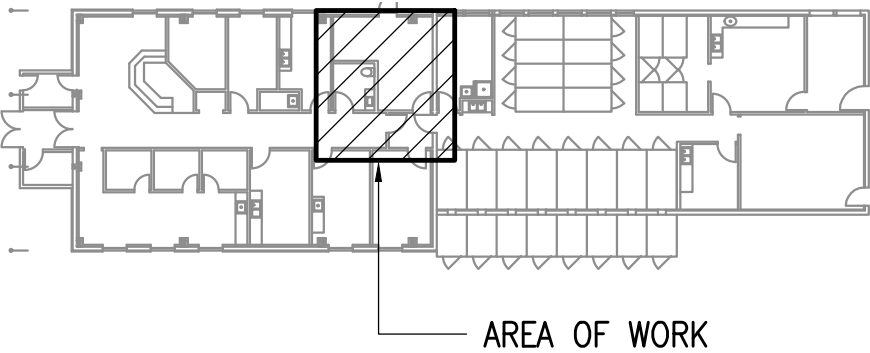
EXISTING DEMAND LOAD ON SERVICE AND PANELS FROM PLANS DATED 12/07/04: 64,800 W

NEW LOAD ADDED	NO.	VA	
DT-1	1	1,968	1,968 VA
VEEDER-ROOT	1	240	240 VA

TOTAL LOAD ADDED 2,208 VA = 6 A

NEW CALCULATED LOAD ON SERVICE AND PANELS 67,008 VA = 186 A

EXISTING SERVICE AND DISTRIBUTION EQUIPMENT HAVE ADEQUATE CAPACITY FOR NEW LOAD ADDED.



KEYPLAN

NO SCALE



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ELECTRICAL LEGEND
AND PLANS

SHEET:

E101