

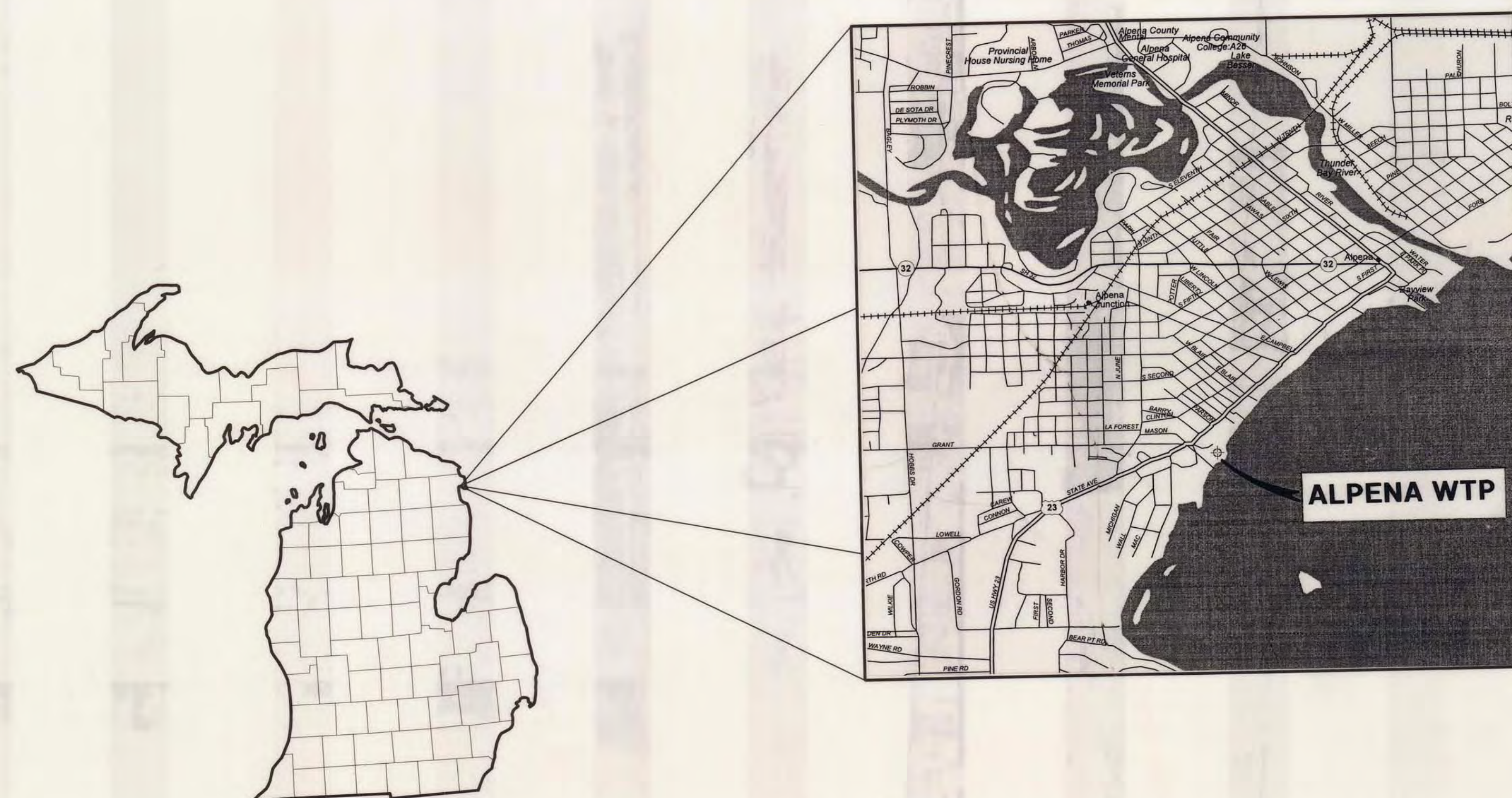
CITY OF ALPENA

ALPENA COUNTY, MICHIGAN

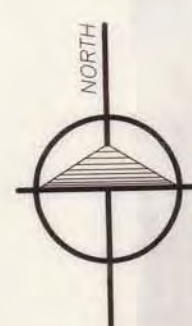
1998 WATER TREATMENT PLANT IMPROVEMENTS CHEMICAL AND STORAGE BUILDING

NOVEMBER, 1998

BUILDING CODE INFORMATION	
CONSTRUCTION TYPE	3B
OCCUPANCY	F-2
ALLOWABLE FLOOR AREA	14,400 S.F.
ACTUAL FLOOR AREA	2,331 S.F.

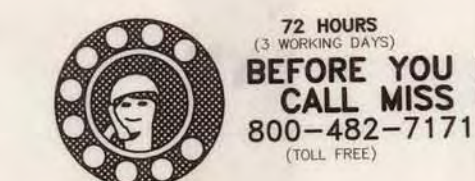


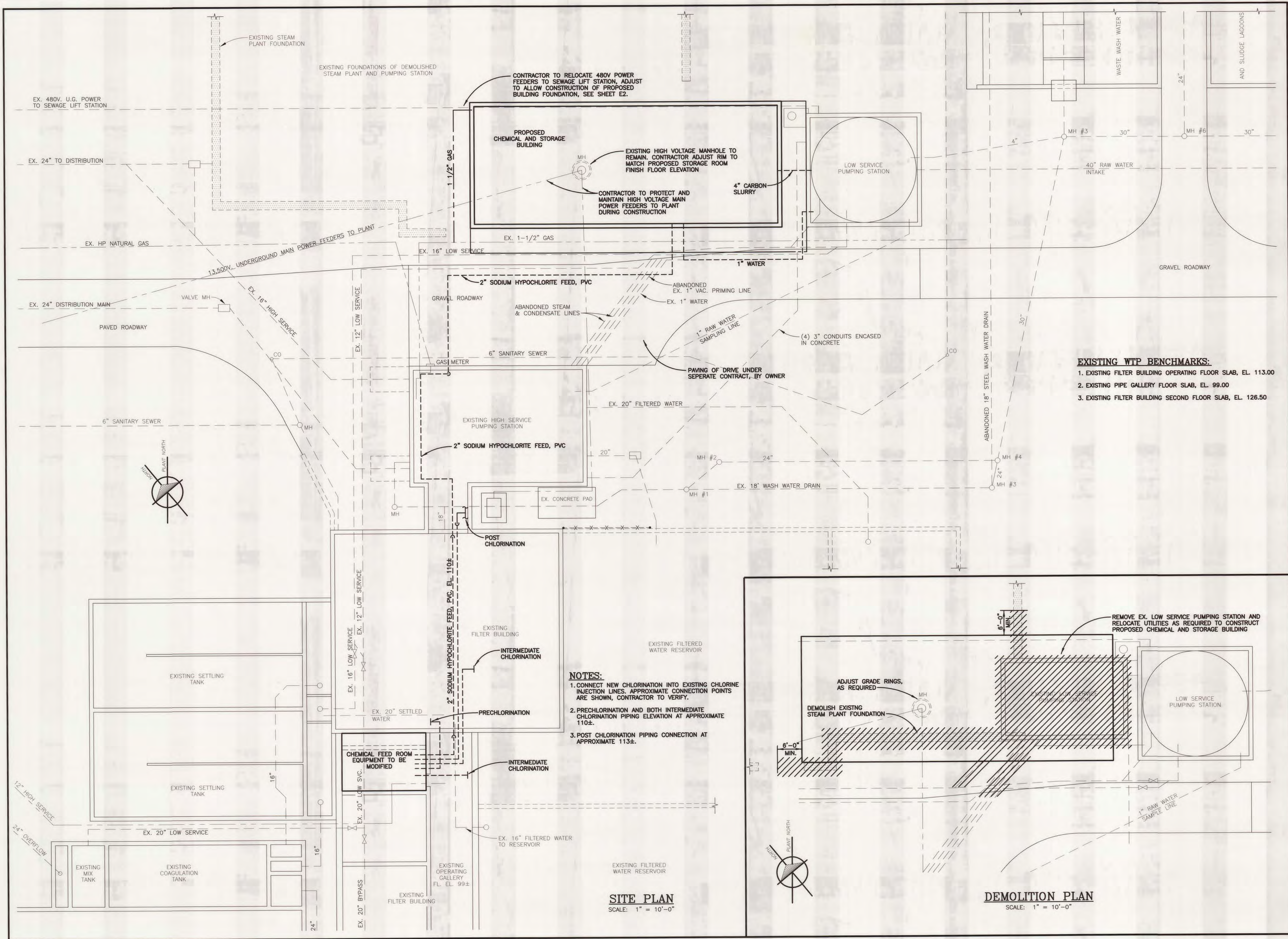
LOCATION MAP



SHT. NO.	DRAWING INDEX
-	COVER SHEET
C1	CHEMICAL AND STORAGE BLDG. SITE PLAN w/DEMOLITION PLAN
C2	STANDARD DETAILS
A1	CHEMICAL AND STORAGE BLDG. PLAN AND ELEVATION
A2	CHEMICAL AND STORAGE BLDG. EXTERIOR ELEVATIONS
A3	CHEMICAL AND STORAGE BLDG. WALL SECTIONS
A4	CHEMICAL AND STORAGE BLDG. SCHEDULES AND DETAILS
S1	CHEMICAL AND STORAGE BLDG. FOUNDATION PLAN & DETAILS
S2	CHEMICAL AND STORAGE BLDG. ROOF FRAMING PLAN & DETAILS
S3	MISC. STRUCTURAL DETAILS
M1	CHEMICAL AND STORAGE BUILDING PLAN CHEMICAL FEED PIPING LAYOUT
M2	SODIUM HYPOCHLORITE SCHEMATIC LAYOUT
M3	CHEMICAL FEED ROOM PLANS
H1	CHEMICAL AND STORAGE BLDG. HVAC PLAN
E1	ELECTRICAL LEGEND
E2	ELECTRICAL SITE PLAN
E3	CHEMICAL AND STORAGE BUILDING ELECTRICAL PLAN
E4	CHEMICAL AND STORAGE BUILDING LIGHTING PLAN
E5	CHEMICAL FEED ROOM ELECTRICAL PLAN

25012.01





- EXISTING WTP BENCHMARKS:**
1. EXISTING FILTER BUILDING OPERATING FLOOR SLAB, EL. 113.00
 2. EXISTING PIPE GALLERY FLOOR SLAB, EL. 99.00
 3. EXISTING FILTER BUILDING SECOND FLOOR SLAB, EL. 126.50

- NOTES:**
1. CONNECT NEW CHLORINATION INTO EXISTING CHLORINE INJECTION LINES. APPROXIMATE CONNECTION POINTS ARE SHOWN, CONTRACTOR TO VERIFY.
 2. PRECHLORINATION AND BOTH INTERMEDIATE CHLORINATION PIPING ELEVATION AT APPROXIMATE 110±.
 3. POST CHLORINATION PIPING CONNECTION AT APPROXIMATE 113±.

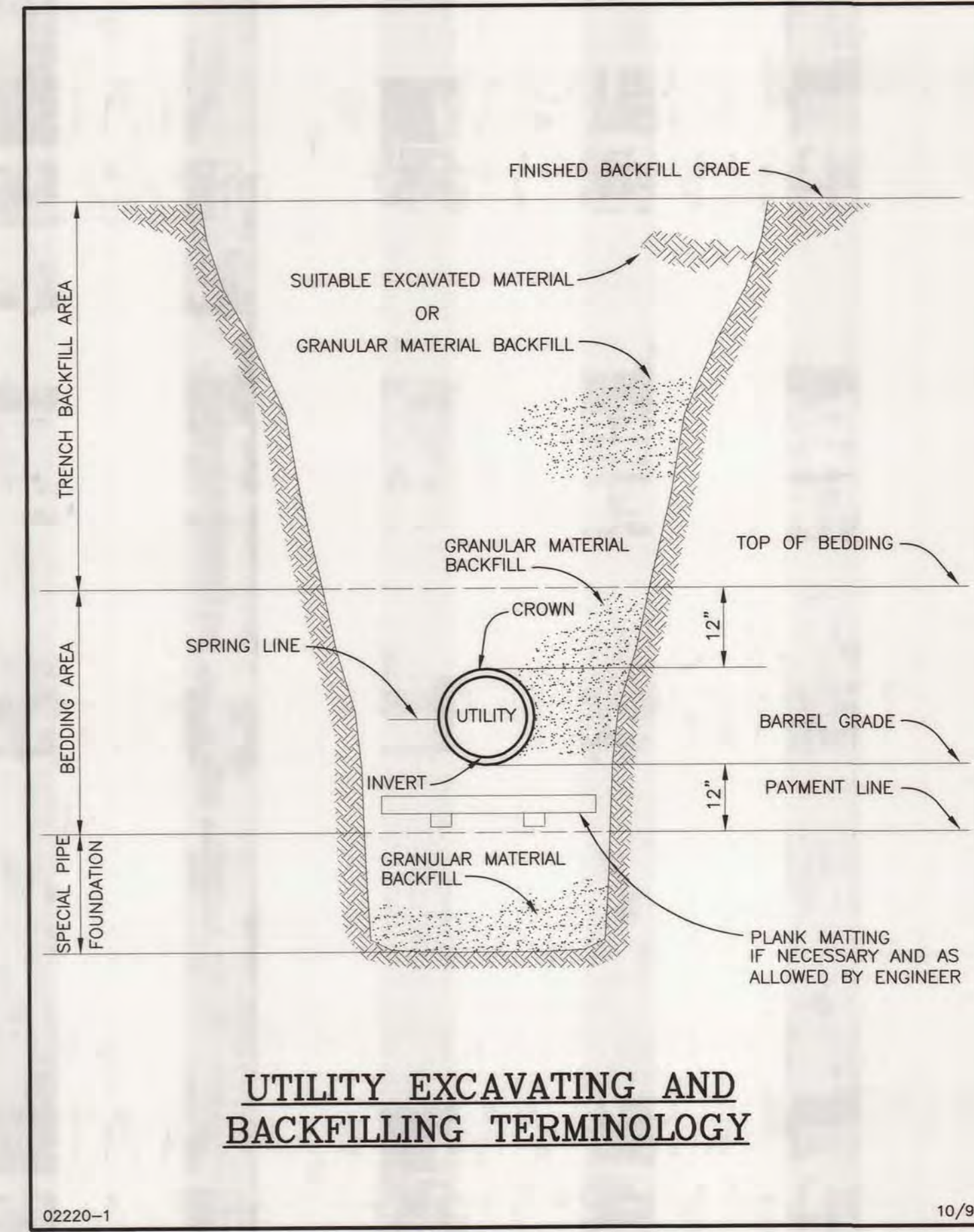
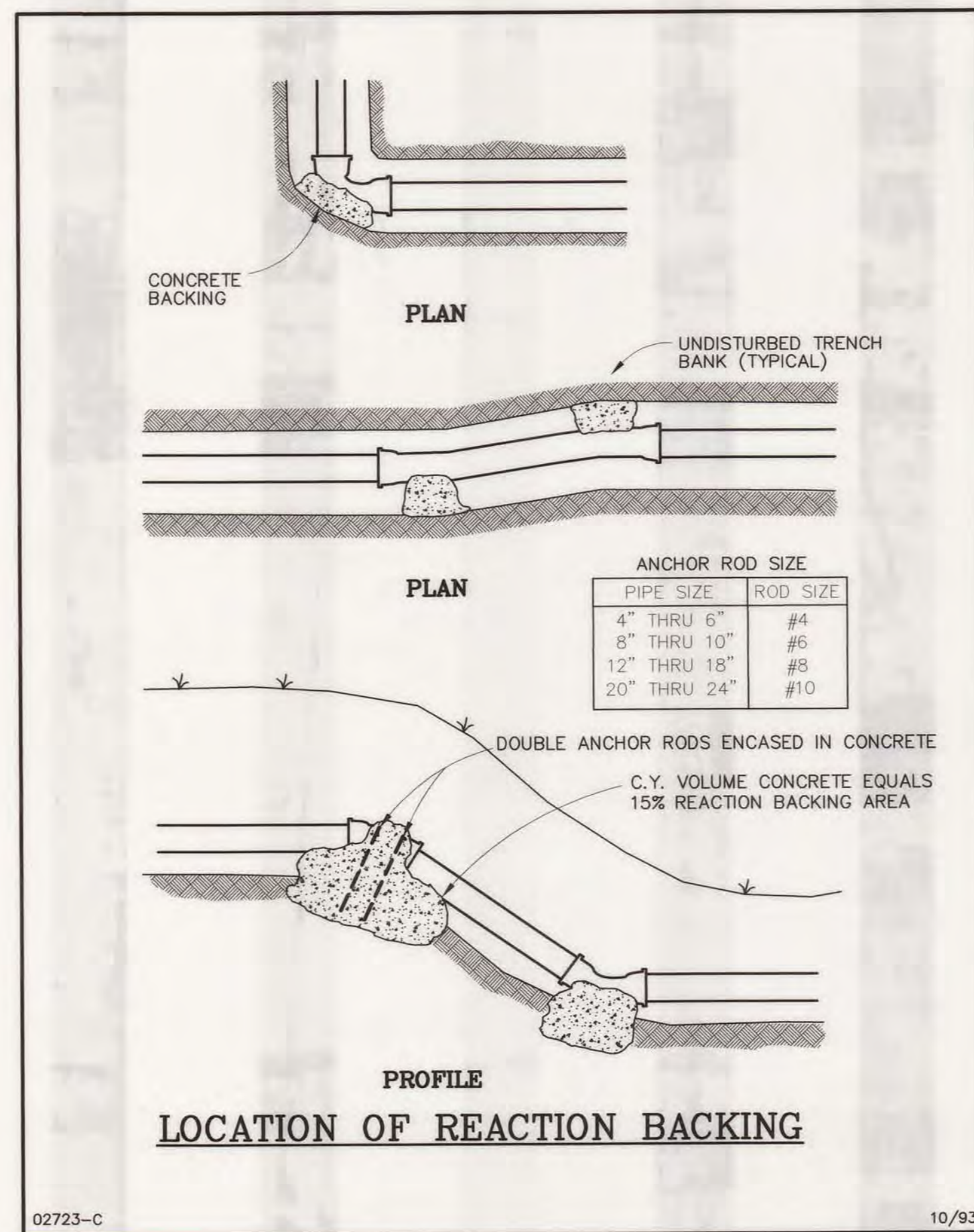
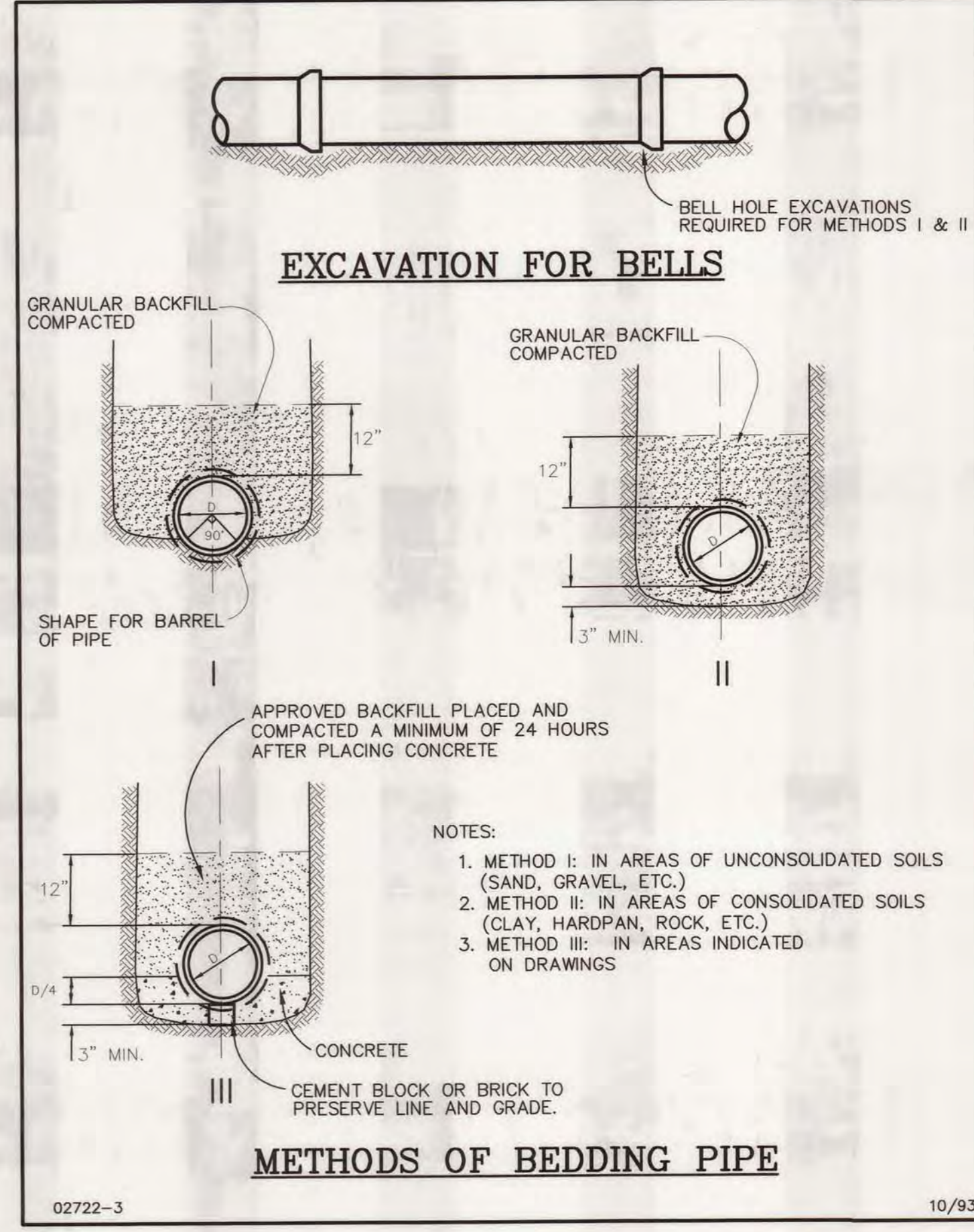
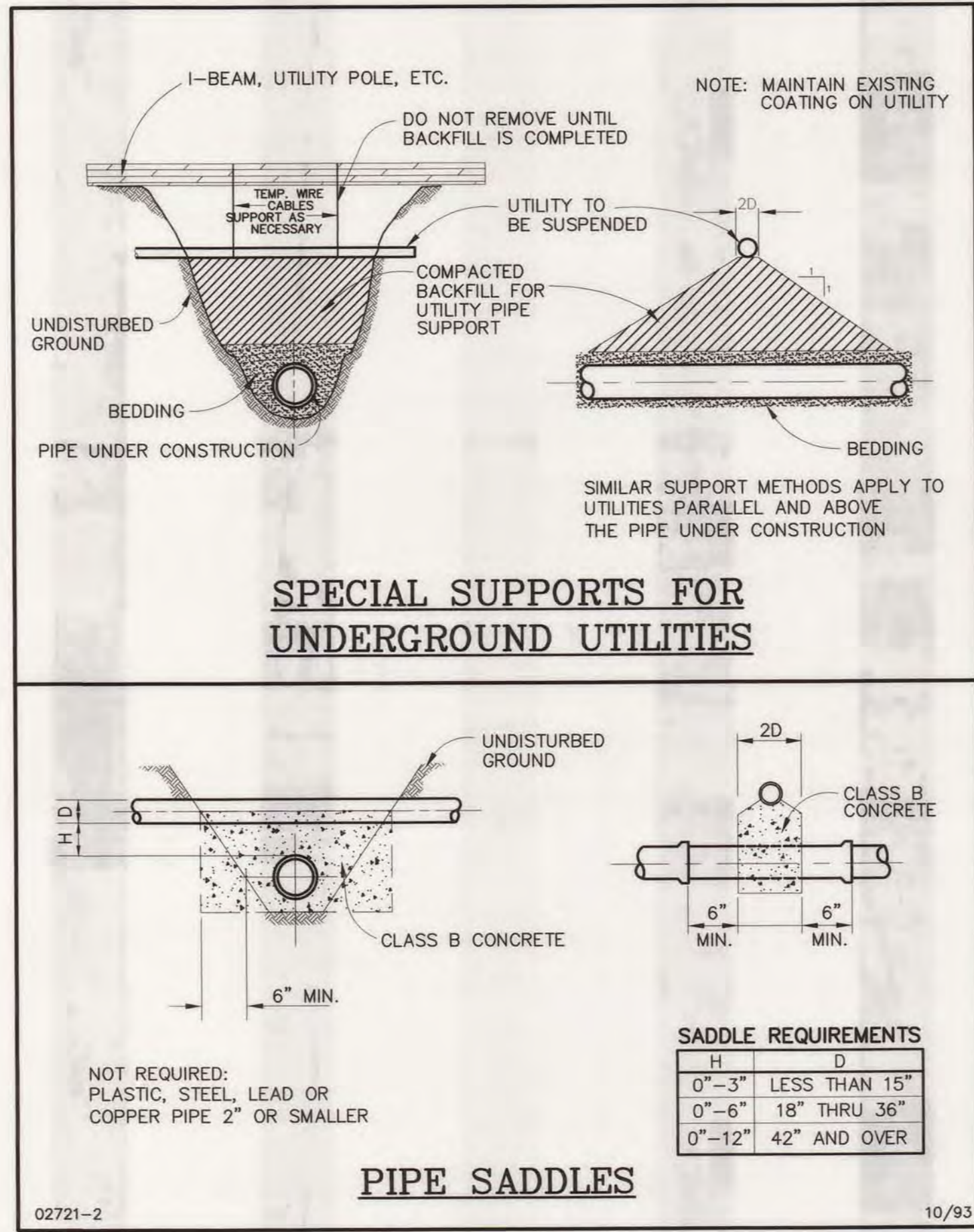
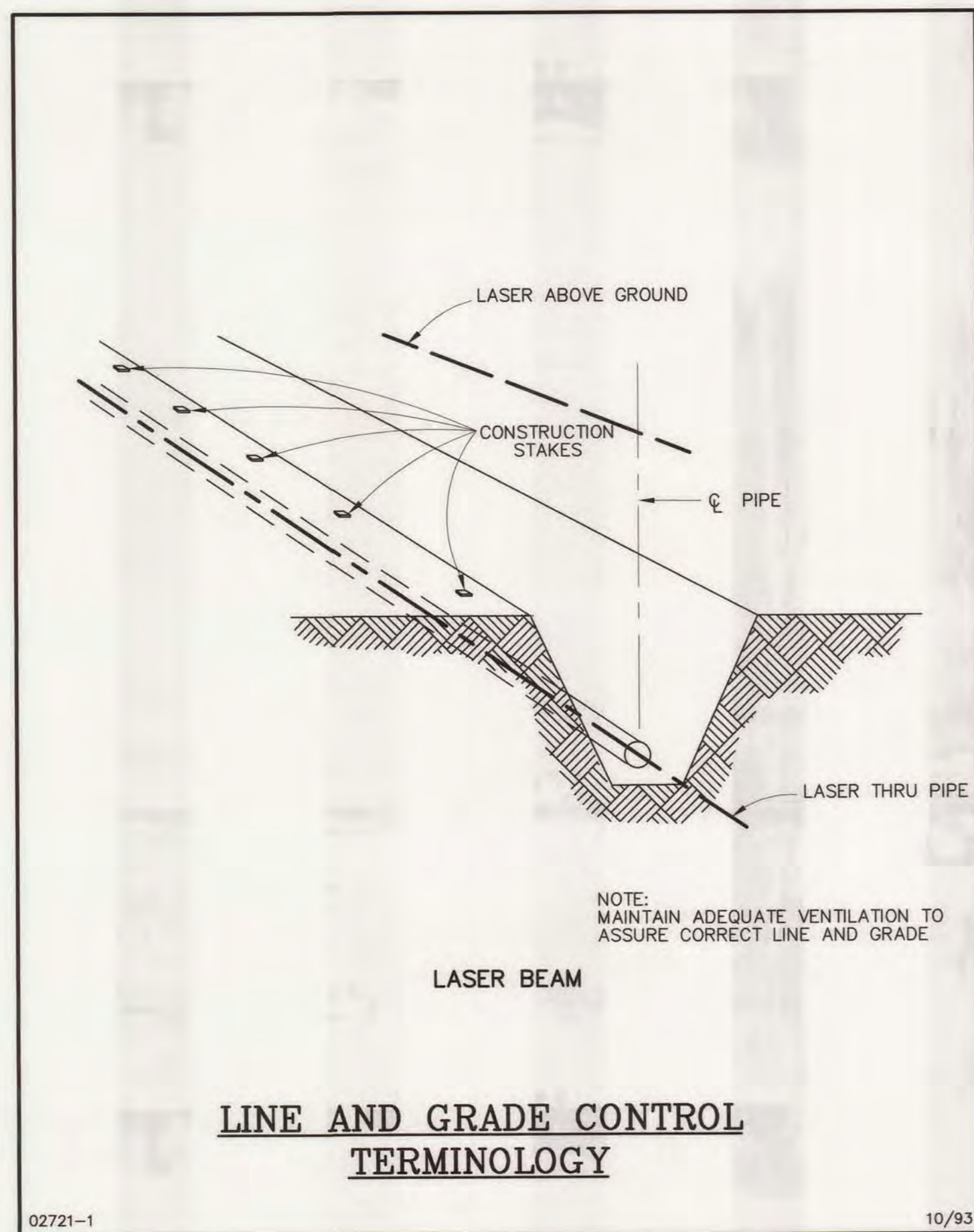
SITE PLAN
 SCALE: 1" = 10'-0"

DEMOLITION PLAN
 SCALE: 1" = 10'-0"

NO.	DATE	BY	REVISION
1			ISSUED FOR CONSTRUCTION
2			ISSUED FOR PERMIT
3			REVISIONS
4			
5			

CITY OF ALPENA
 ALPENA COUNTY, MICHIGAN
 1998 WTP IMPROVEMENTS
 CHEMICAL AND STORAGE BLDG.
 SITE PLAN w/ DEMOLITION PLAN

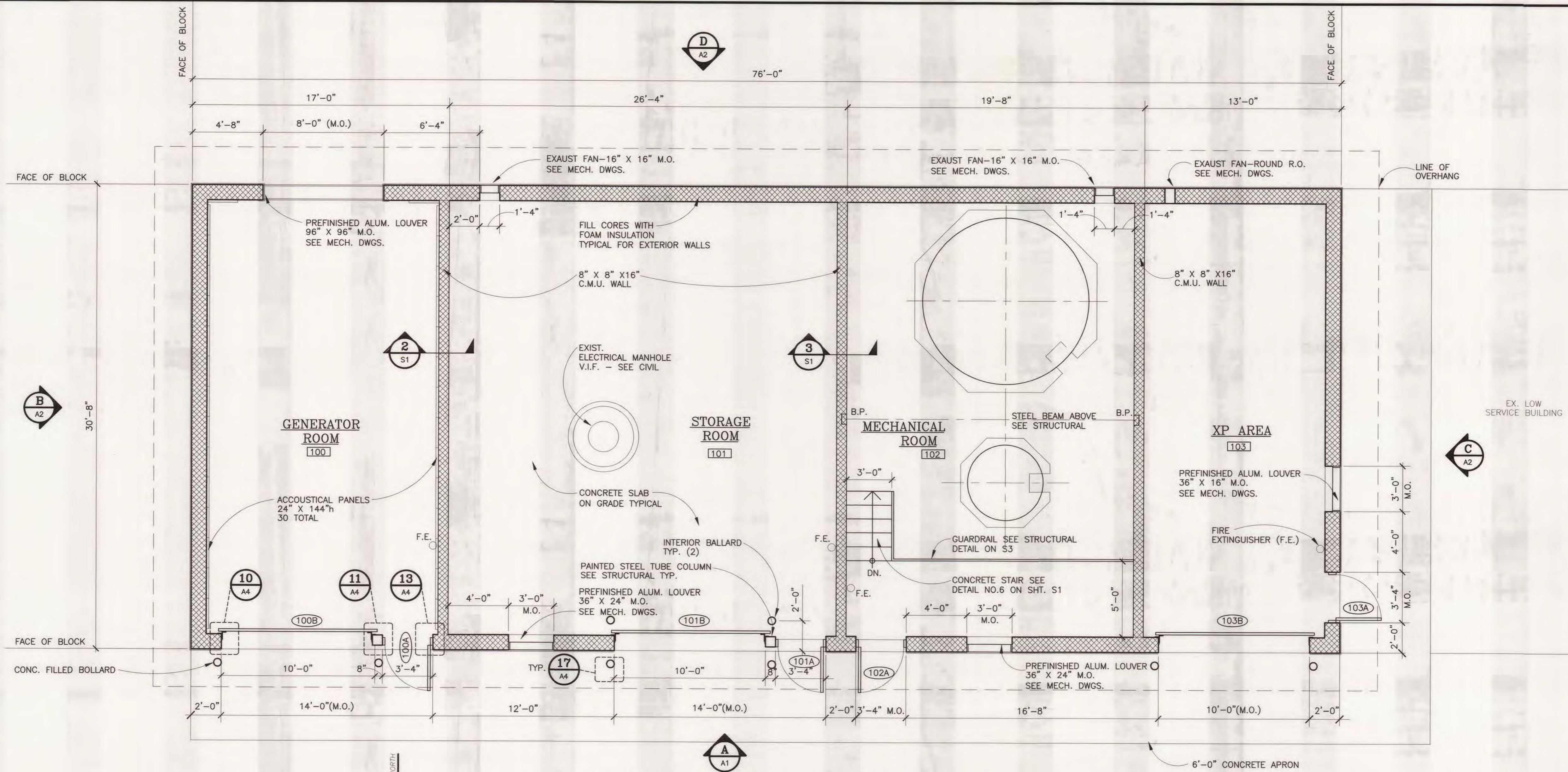
DESIGNED BY	DATE
D.J.B.	FEB. '98
DRAWN BY	DATE
D.C.T.	FEB. '98
CHECKED BY	DATE
D.C.H.	JUN. '98
FILE	EDIT
25012C1	DCT102998
SCALE	DRAWING
1"=10'-0"	1:120
PROJECT	PLAT
25012	
C1	
SHEET NO.	



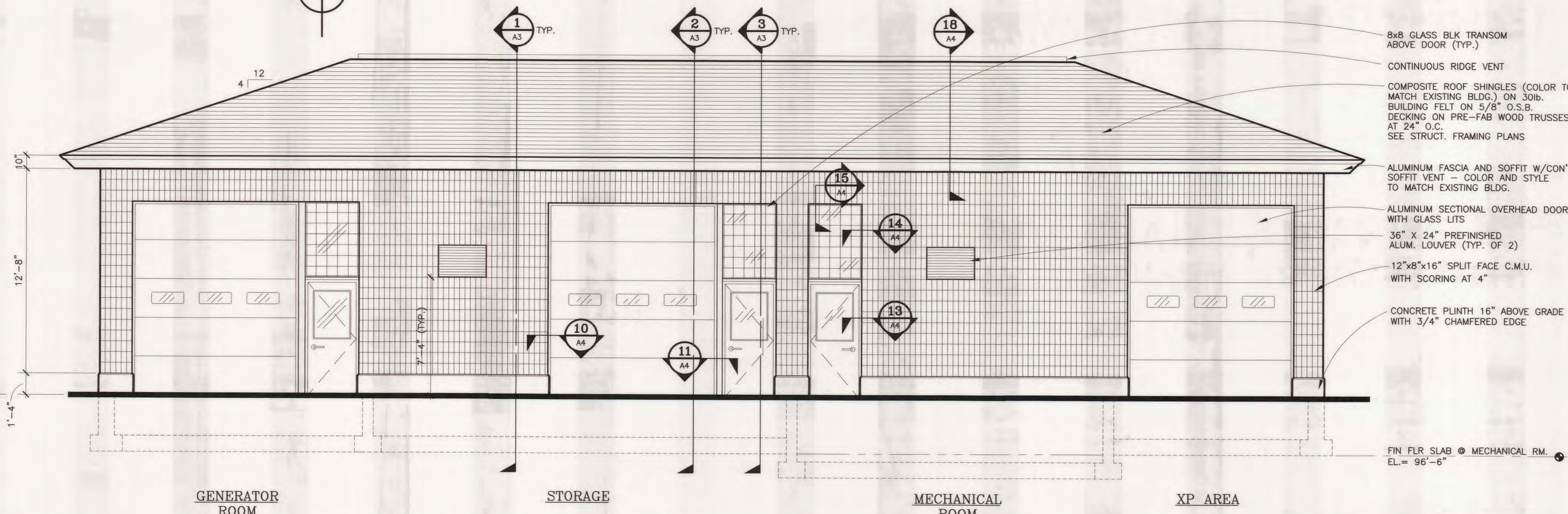
NO.	DATE	BY	REVISIONS
1	NOV 1998	D.C.T.	ISSUED FOR CONSTRUCTION
2	JULY 1998	J.K.P.	ISSUED FOR PERMIT
3	JUN 1998	J.K.P.	REVISIONS
4	JUN 1998	J.K.P.	REVISIONS

DESIGNED BY: D.C.H. DATE: JUN '98
DRAWN BY: D.C.T. DATE: JUN '98
CHECKED BY: J.K.P. DATE: JUN '98
FILE: 25012C2 DCT102998
SCALE: NONE
DRAWING: 1:1
PROJECT: 25012

**CITY OF ALPENA
ALPENA COUNTY, MICHIGAN
1998 WTP IMPROVEMENTS
STANDARD DETAILS**



B CHEMICAL AND STORAGE BUILDING FLOOR PLAN
SCALE: 1/4"=1'-0"



A BUILDING SOUTH ELEVATION
SCALE: 1/4"=1'-0"

NO.	DATE	BY	REVISIONS
1			BASED FOR CONSTRUCTION
2			ISSUED FOR PERMIT
3			REVISED IN ACCORDANCE WITH CONSTRUCTION RECORDS

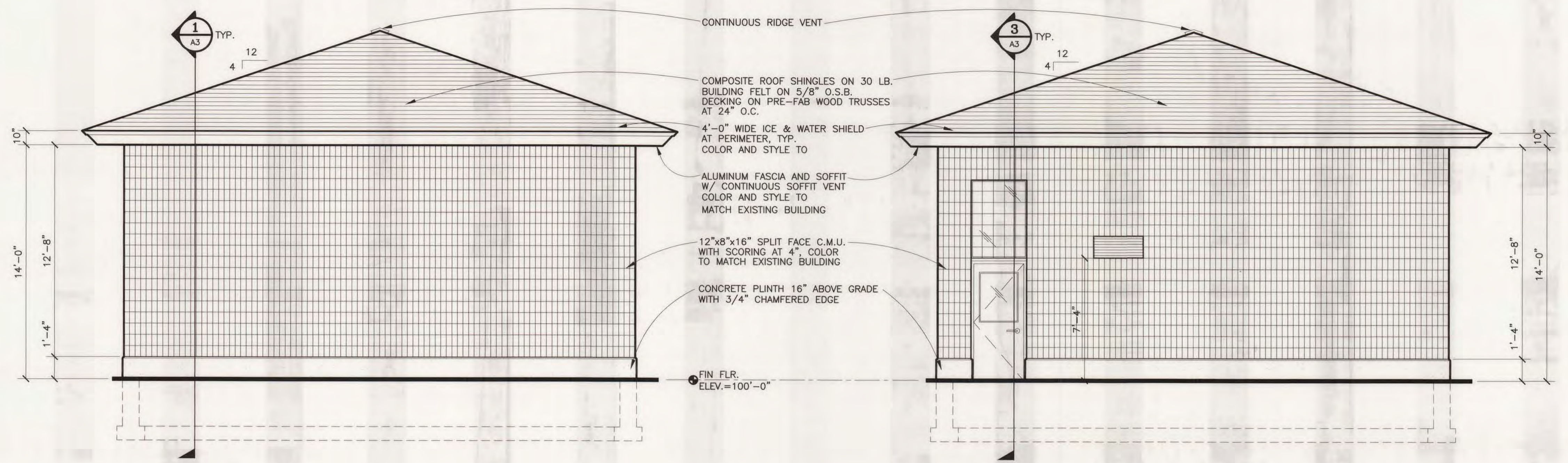
CITY OF ALPENA
ALPENA COUNTY, MICHIGAN
1998 WTP IMPROVEMENTS
CHEMICAL AND STORAGE BLDG.
PLAN AND ELEVATION

DESIGNED BY	DATE
D.L.B.	MAR. '98
DRAWN BY	DATE
E.K.S.	MAR. '98
CHECKED BY	DATE
D.M.M.	MAR. '98
FILE	EDIT
25012A1	DCT102998
SCALE	DRAWING
1/4"=1'-0"	1:1
PLOT	
PROJECT	25012

NO.	DATE	BY	REVISIONS
1	NOV 1998	DLB	ISSUED FOR CONSTRUCTION
0	JULY 1998	R.K.S.	ISSUED FOR REVIEW
0	NOV 1997	D.M.M.	REVISIONS

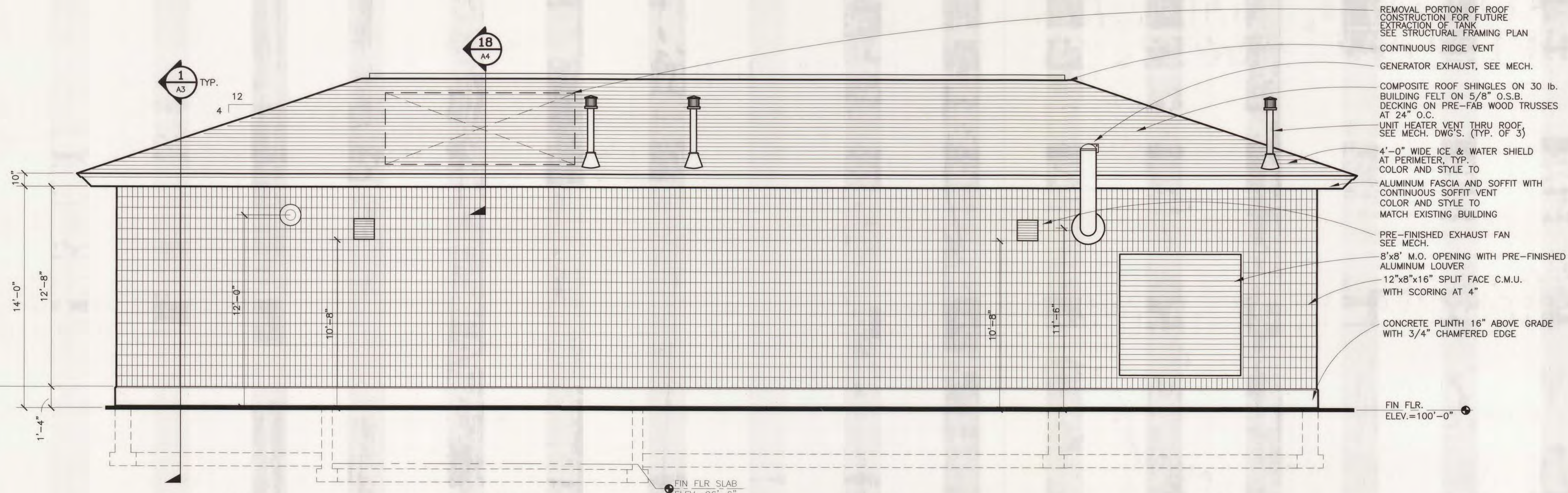
**CITY OF ALPENA
ALPENA COUNTY, MICHIGAN
1998 WTP IMPROVEMENTS
CHEMICAL AND STORAGE BLDG.
EXTERIOR ELEVATIONS**

DESIGNED BY	DATE
D.L.B.	MAR '98
DRAWN BY	DATE
R.K.S.	MAR '98
CHECKED BY	DATE
D.M.M.	MAR '98
FILE	EDIT
25012A2	DCT102998
SCALE	1/4"=1'-0"
DRAWING	1:1
PLOT	
PROJECT	25012



B BUILDING WEST ELEVATION
SCALE: 1/4"=1'-0"

C BUILDING EAST ELEVATION
SCALE: 1/4"=1'-0"



D BUILDING NORTH ELEVATION
SCALE: 1/4"=1'-0"

XP AREA

MECHANICAL ROOM

STORAGE

GENERATOR ROOM

DRAWING NUMBER

SAFCO PRODUCTS • NEW HOPE, MINNESOTA
REFERS BY PART NUMBER 6532

DRAWING NUMBER

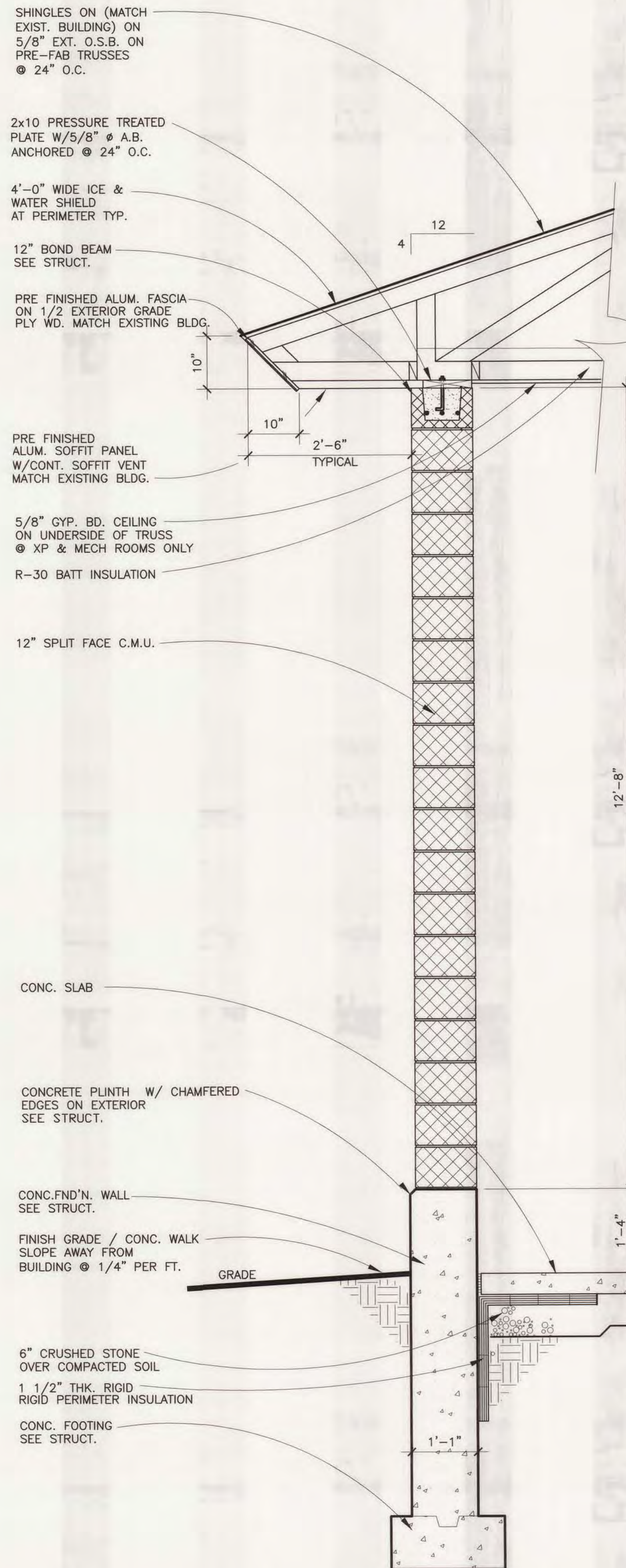
SAFCO PRODUCTS • NEW HOPE, MINNESOTA
REFERS BY PART NUMBER 6532

Wastewater Treatment Plant
Chemical & Storage Building
1998
A2 of 19

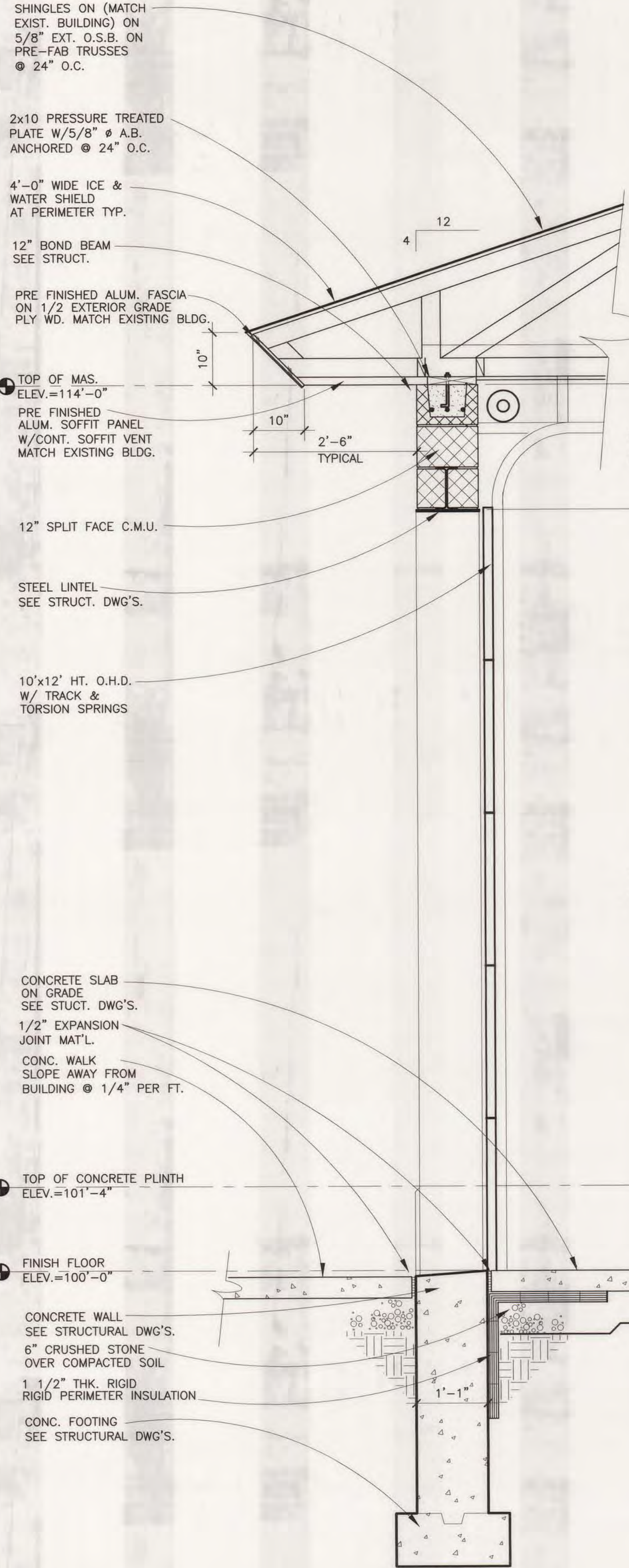
SAFCO PRODUCTS • NEW HOPE, MINNESOTA
REFERS BY PART NUMBER 6532

DRAWING NUMBER

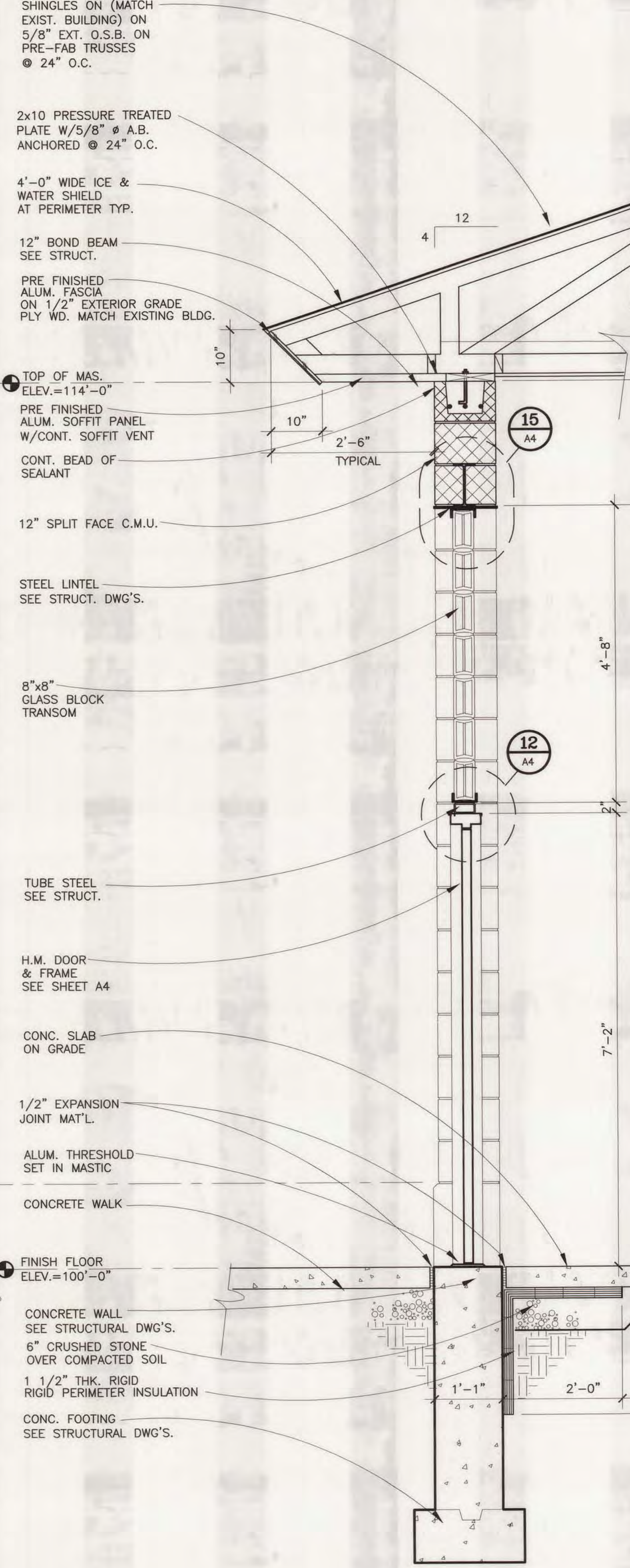
SAFCO PRODUCTS • NEW HOPE, MINNESOTA
REFERS BY PART NUMBER 6532



1 WALL SECTION
SCALE: 3/4" = 1'-0"



2 WALL SECTION
SCALE: 3/4" = 1'-0"



3 WALL SECTION
SCALE: 3/4" = 1'-0"

NO.	REVISIONS	DATE	BY
1	ISSUED FOR CONSTRUCTION		
0	ISSUED FOR PERMIT		

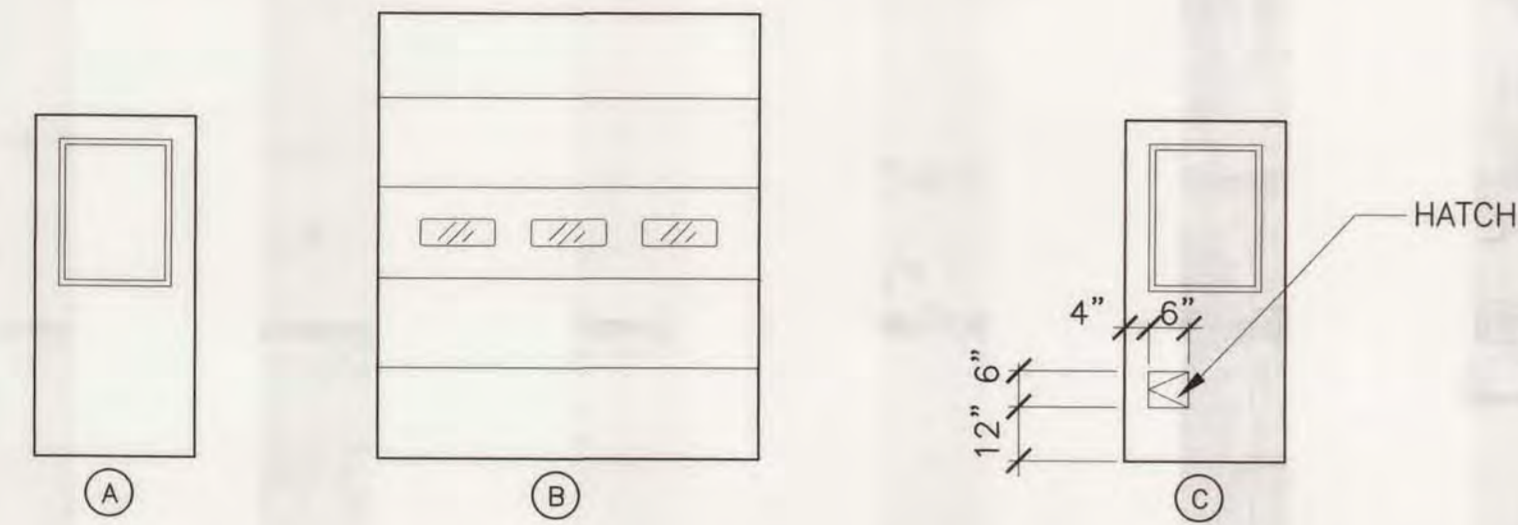
CITY OF ALPENA
ALPENA COUNTY, MICHIGAN
1998 WTP IMPROVEMENTS
CHEMICAL AND STORAGE BLDG.
WALL SECTIONS

DESIGNED BY	DATE
D.L.B.	MAR '98
DRAWN BY	DATE
R.K.S.	MAR '98
CHECKED BY	DATE
D.M.M.	MAR '98
FILE	EDIT
25012A3	DC1102998
SCALE	DRAWING
3/4" = 1'-0"	1:1
PROJECT	25012

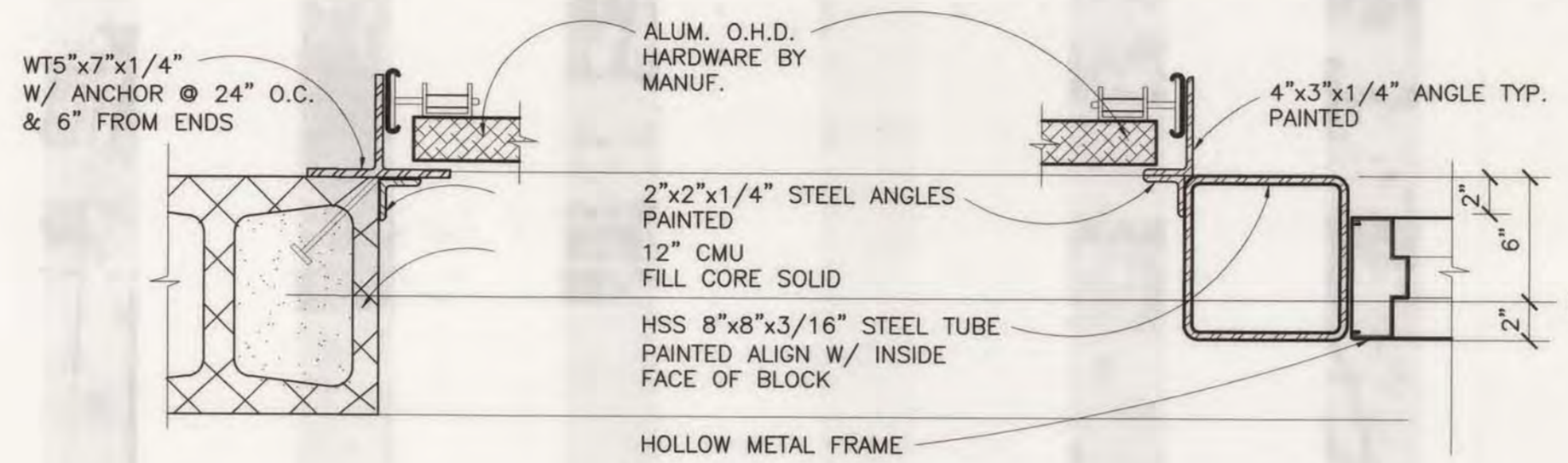
DOOR SCHEDULE												
DOOR	LOCATION	SIZE (WxH)	DOOR		FRAME			REMARKS				
			TYPE	MATERIAL	MATERIAL	FINISH	WEATHERSTRIP	THRESHOLD	FIRE RATING (min.)	HARDWARE		
100A	GENERATOR ROOM	3'-0" x 7'-0"	A	ST/GL	PT	MTL	PT	X	X	1	INSULATED	
100B	GENERATOR ROOM	10'-0"x12'-0"	B	AL/GL	FF	-	-	-	-	2	INSULATED	
101A	STORAGE ROOM	3'-0" x 7'-0"	A	ST/GL	PT	MTL	PT	X	X	1	INSULATED	
101B	STORAGE ROOM	10'-0"x12'-0"	B	AL/GL	FF	-	-	-	-	2	INSULATED	
102A	MECHANICAL ROOM	3'-0" x 7'-0"	C	FG/GL	EPT	MTL	EPT	X	X	1	INSULATED	
103A	XP ROOM	3'-0" x 7'-0"	A	ST/GL	PT	MTL	PT	X	X	1	INSULATED	
103B	XP ROOM	10'-0"x12'-0"	B	AL/GL	FF	-	-	-	-	2	INSULATED	

KEYS: AL: Aluminum FF: factory finish ST:Steel FG: Fiber Glass
GL: Glass PT: Paint EPT: Epoxy Paint

ROOM FINISH											
ROOM	LOCATION	FLOOR	BASE	WALLS	CEILING	CLG. HT.	REMARKS	DESIGNATES WALL SURFACE TYPICAL			
								N	E	S	
100	GENERATOR ROOM	CONC. SEALED			GYP. BD.	PT	14'-0"	W/ R-30 BATT INSUL. ABOVE CEILING			
101	STORAGE ROOM	CONC. SEALED			GYP. BD.	PT	14'-0"	W/ R-30 BATT INSUL. ABOVE CEILING			
102	MECHANICAL ROOM	CONC. SEALED			GYP. BD.	EPT	14'-0"	W/ R-30 BATT INSUL. ABOVE CEILING			
103	XP AREA	CONC. SEALED			GYP. BD.	PT	14'-0"	W/ R-30 BATT INSUL. ABOVE CEILING			

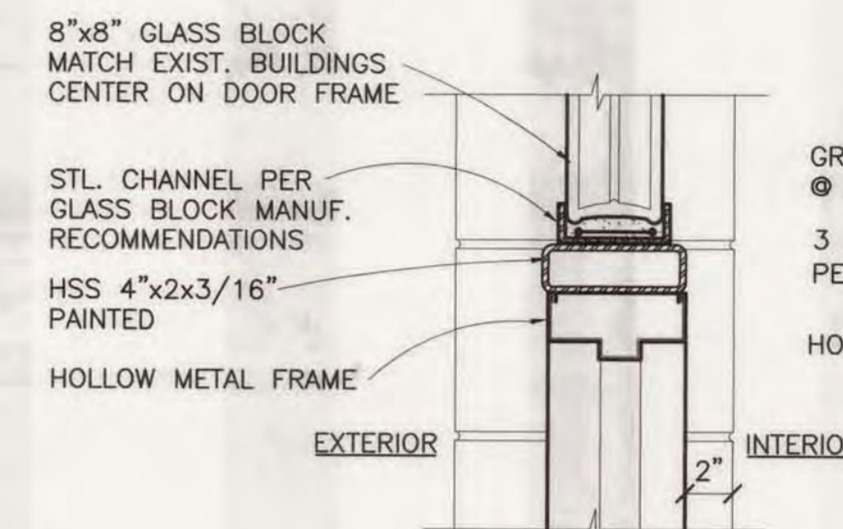


DOOR TYPES
N.T.S.

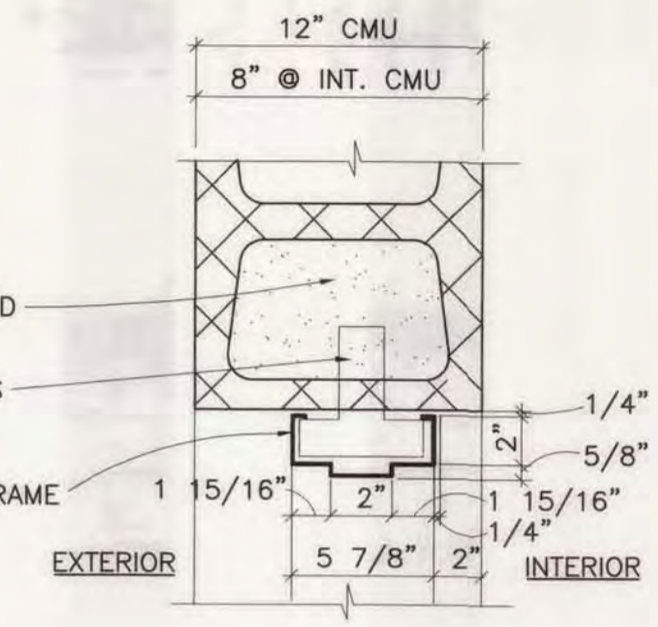


10 OVERHEAD DOOR JAMB
SCALE: 1 1/2" = 1'-0"

11 OVERHEAD DOOR JAMB
SCALE: 1 1/2" = 1'-0"



12 HEAD @ DOOR
SCALE: 1 1/2" = 1'-0"



13 DOOR JAMB TYP.
SCALE: 1 1/2" = 1'-0"

DOOR HARDWARE SCHEDULE

SET NO.1

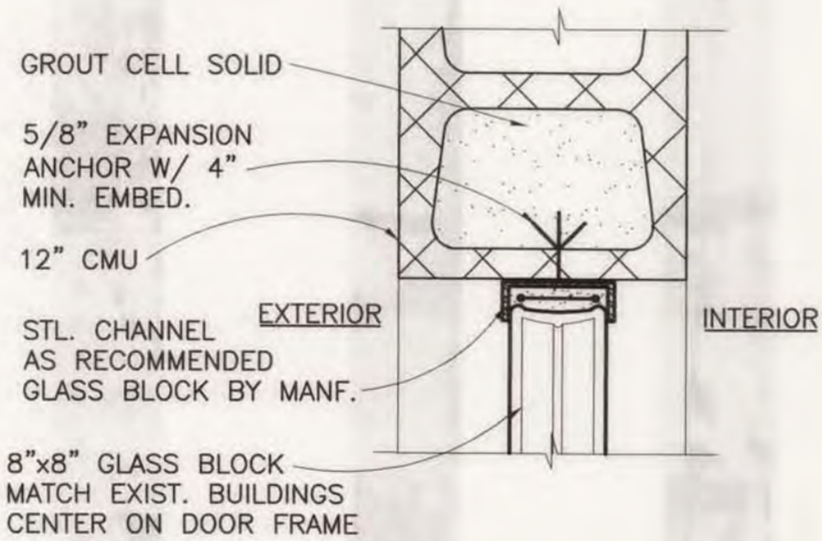
DOORS NO : 100A, 101A, 102A, 103A
EACH TO HAVE :
1 1/2 PAIR HINGES : STANLEY CB 1960
STOREROOM FUNCTION
LOCKSET : YALE 533FXUS32D
EXIT DEVICE : YALE 2100 US32D
THRESHOLD : ROCKWOOD : 10 x 36, .050, US32D

SET NO.2

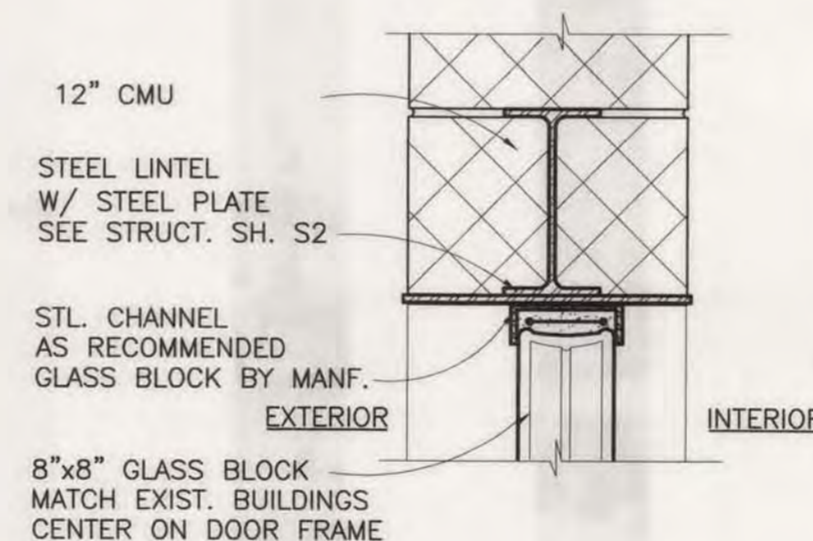
DOORS NO : 100B, 101B, 103B
TO BE PROVIDED BY OVERHEAD DOOR MANUFACTURER

NOTE:

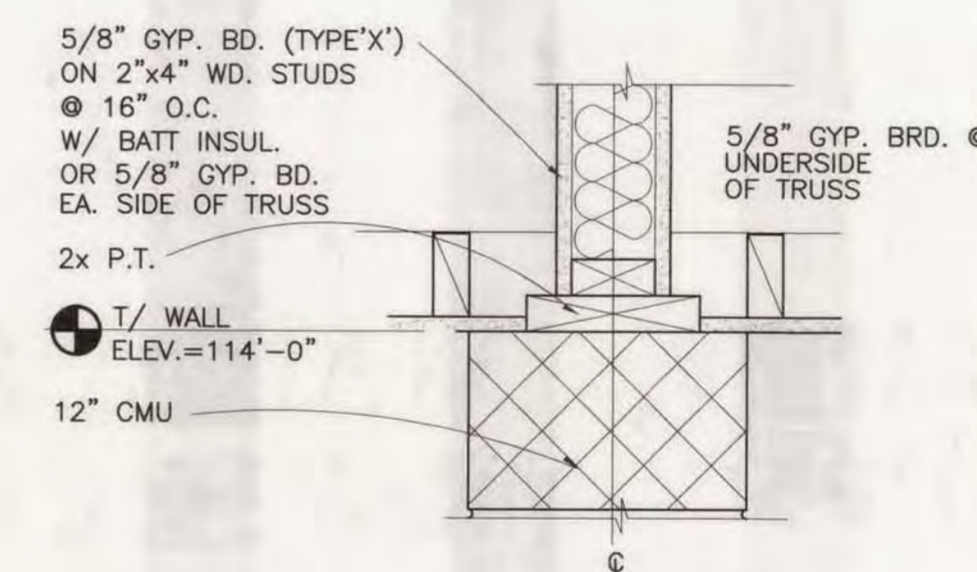
ALL DOORS TO HAVE KICKPLATE ON BOTH SIDES, AND WEATHER STRIPPING, AND SILENCERS
COORDINATE KEYING OF ALL DOORS (MANDOORS AND O.V.H.D.) WITH OWNER



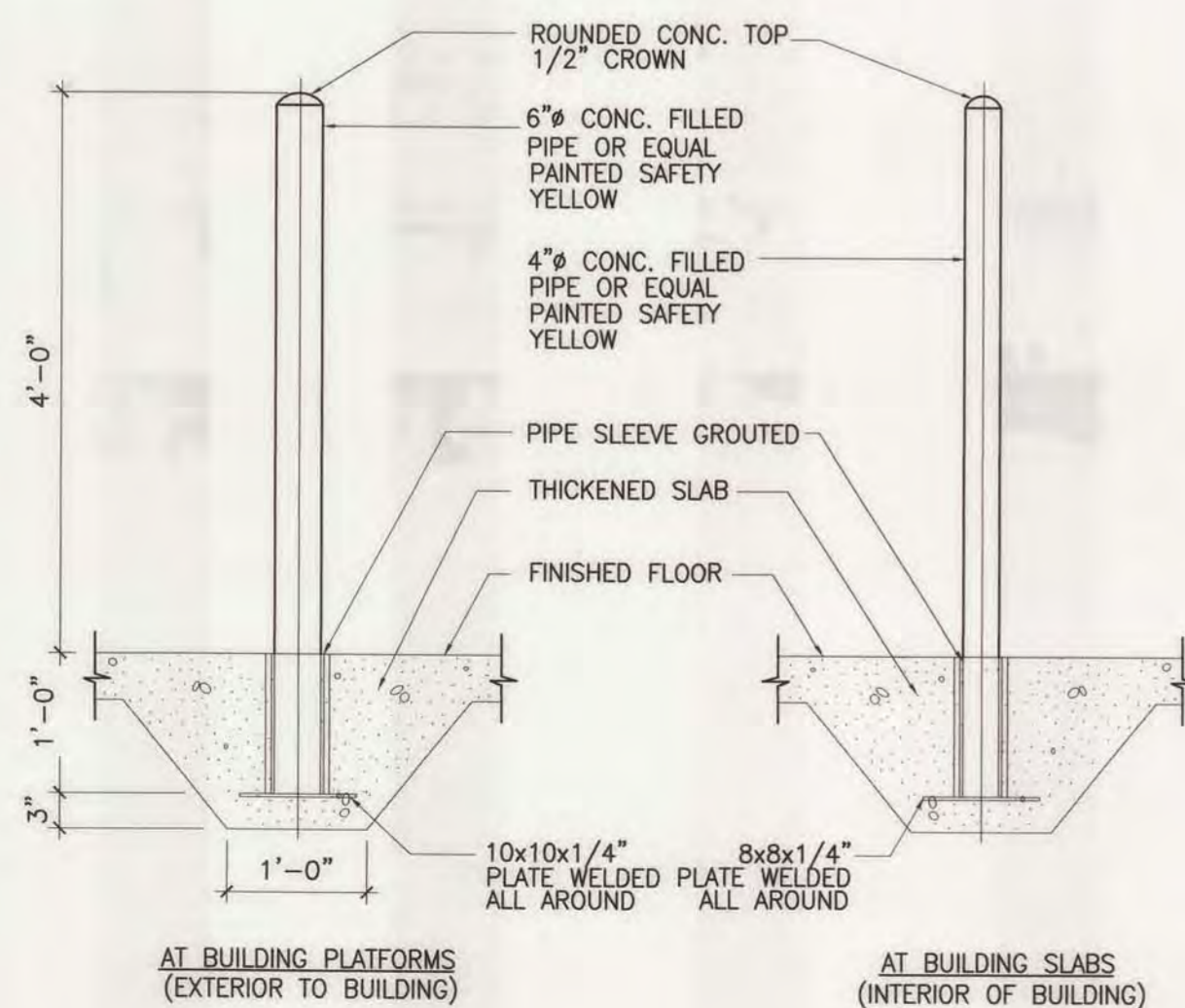
14 JAMB @ GLASS BLK.
SCALE: 1 1/2" = 1'-0"



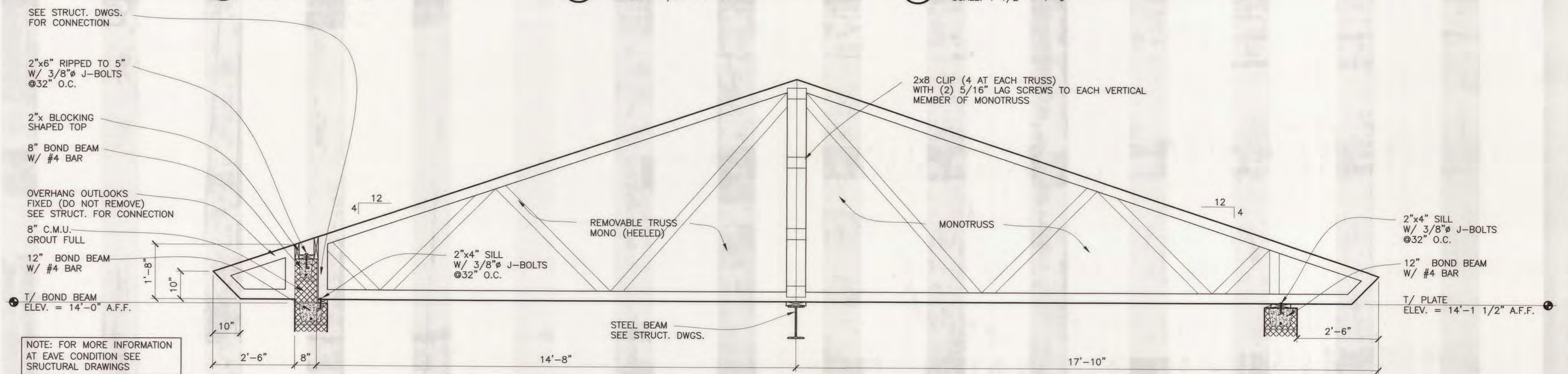
15 HEAD @ GLASS BLK.
SCALE: 1 1/2" = 1'-0"



16 TOP OF BLOCK PARTITION
SCALE: 1 1/2" = 1'-0"



17 BOLLARD DETAIL
SCALE: 3/4" = 1'-0"

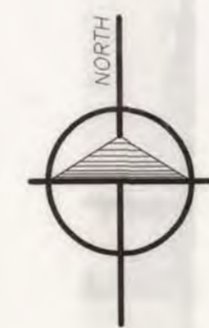
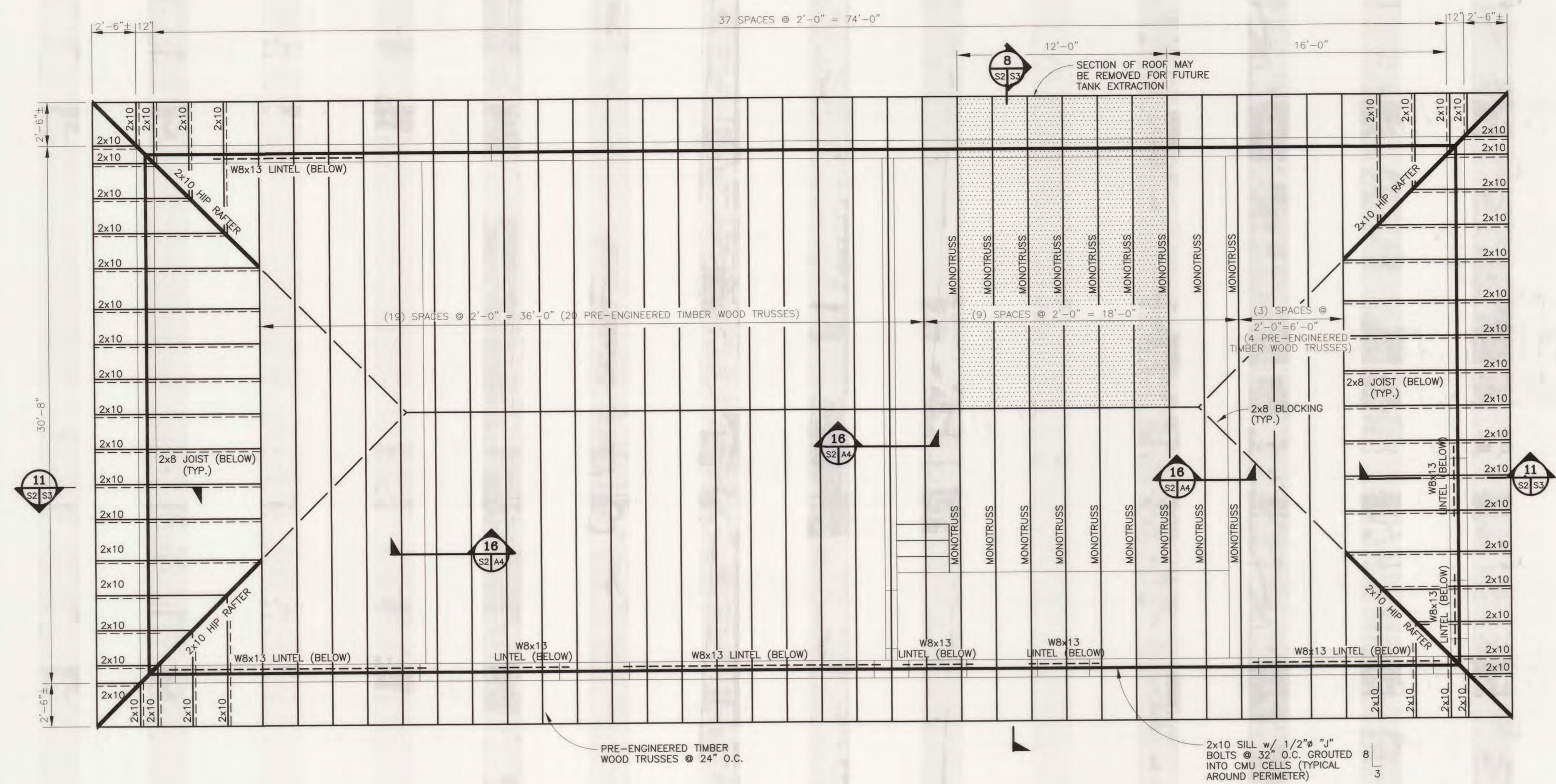


18 SECTION @ REMOVABLE ROOF
SCALE: 1/2" = 1'-0"

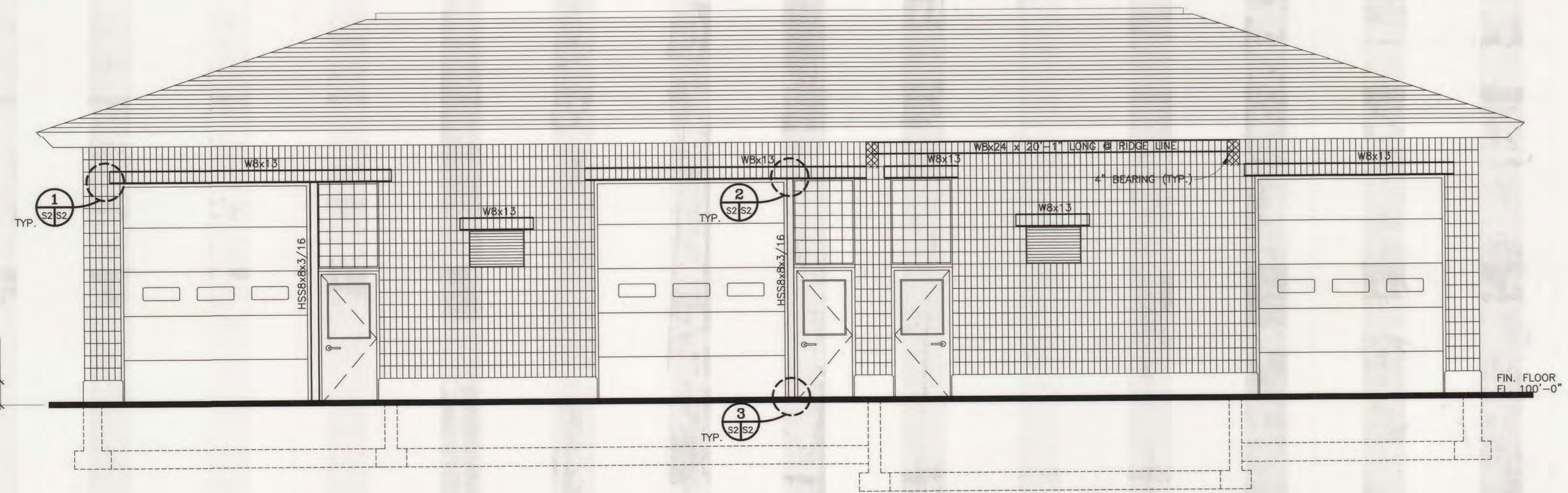
NO.	DATE	BY	REVISIONS
1			ISSUED FOR CONSTRUCTION
2			ISSUED FOR PERMIT
3			REVISIONS

CITY OF ALPENA
ALPENA COUNTY, MICHIGAN
WTP CHEMICAL AND STORAGE BLDG.
CHEMICAL AND STORAGE BUILDING
SCHEDULES AND DETAILS

DESIGNED BY	DATE
D.L.B.	MAR '98
DRAWN BY	DATE
E.C.B.	MAR '98
CHECKED BY	DATE
D.L.B.	MAR '98
FILE	EDIT
25012A4	DCT102998
SCALE	AS NOTED
	1:1
PLOT	
PROJECT	25012



ROOF FRAMING PLAN
SCALE: 1/4" = 1'-0"

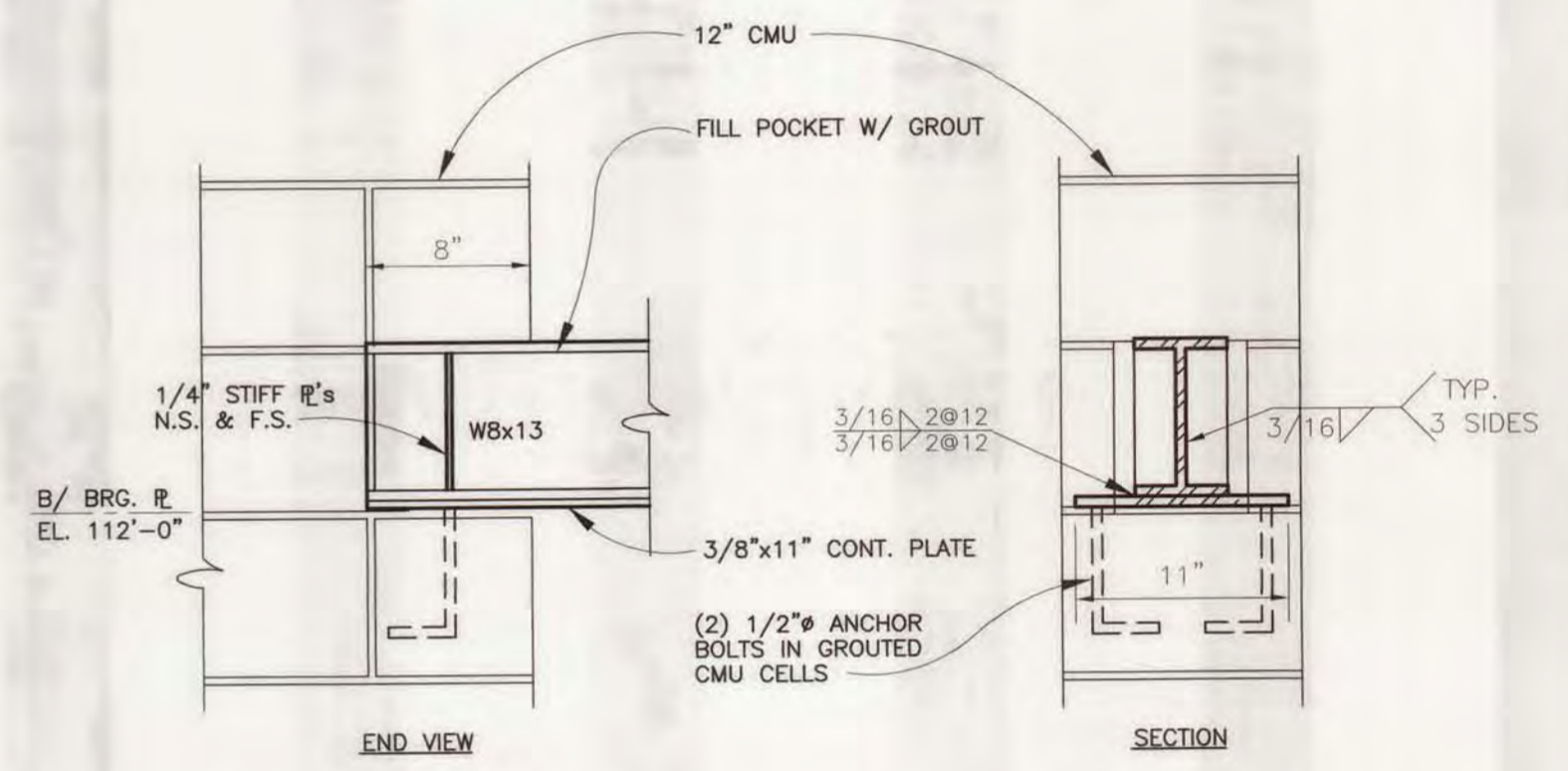


SOUTH ELEVATION
SCALE: 1/4" = 1'-0"

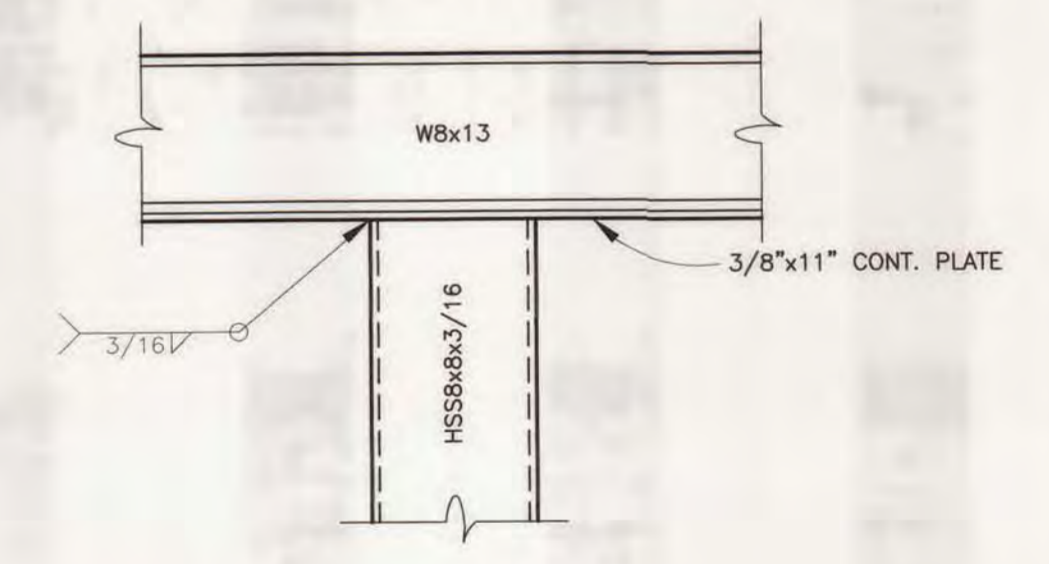
- ### WOOD TRUSS AND RAFTER NOTES
- GENERAL: WOOD TRUSS MANUFACTURER SHALL HAVE AT LEAST TEN YEARS EXPERIENCE IN THE DESIGN AND FABRICATION OF WOOD TRUSSES. SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL INCLUDING FULL DESIGN CALCULATIONS SEALED AND SIGNED BY A STRUCTURAL ENGINEER CURRENTLY REGISTERED IN MICHIGAN. DIFFERENT TRUSS CONFIGURATIONS AND LUMBER SPECIFICATIONS MAY BE SUBMITTED FOR APPROVAL. HOWEVER, EACH SUBMITTAL SHALL INCLUDE STRUCTURAL CALCULATIONS.
 - ROOF LOADS:

LIVE	50 psf
DESIGN ROOF SNOW	35 psf (0.20x50)
DEAD	14 psf (TOP CHORD)
	8 psf (BOT. CHORD)

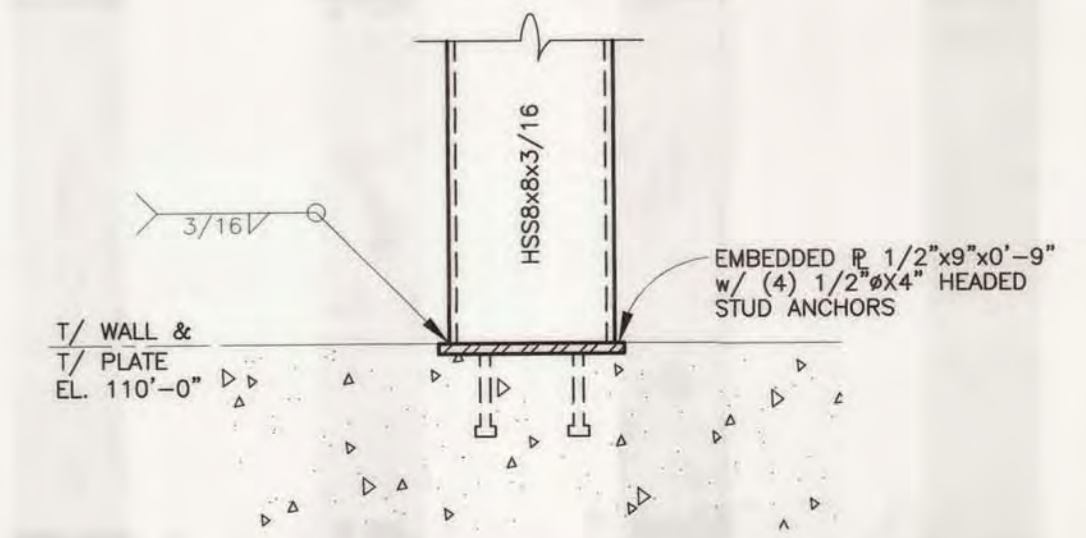
DEFLECTION SHALL BE LESS THAN L/360 FOR FULL DEAD AND LIVE LOAD.
 - MATERIALS: MEET THE REQUIREMENTS OF SPECIFICATION 06190 CONNECTOR PLATES: ALL CONNECTOR PLATES SHALL BE A MINIMUM THICKNESS OF 0.036 INCHES AND SHALL BE MANUFACTURED FROM STEEL MEETING THE REQUIREMENTS OF ASTM A446 GRADE A, AND SHALL BE HOT DIP GALVANIZED ACCORDING TO ASTM A525, COATING DESIGNATION G60.
 - BRACING: ALL TRUSSES MUST BE SECURELY BRACED BOTH DURING ERECTION AND AFTER PERMANENT INSTALLATION. ERECTION BRACING SHALL HOLD TRUSSES STRAIGHT AND PLUMB AND IN SAFE CONDITION UNTIL DECKING AND PERMANENT TRUSS BRACING HAS BEEN FASTENED FORMING A STRUCTURALLY SOUND ROOF FRAMING SYSTEM. ALL ERECTION AND PERMANENT BRACING SHALL BE INSTALLED AND ALL TRUSSES PERMANENTLY FASTENED BEFORE APPLICATION OF ANY LOADS. MATERIALS USED IN BRACING ARE TO BE FURNISHED BY THE ERECTION CONTRACTOR.
 - PROVIDE 12" ELEVATED SEAT AT ALL BEARING POINTS OF MASONRY WALLS.
 - ALL TRUSSES TO BE GABLE TYPE EXCEPT WHERE NOTED.



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



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

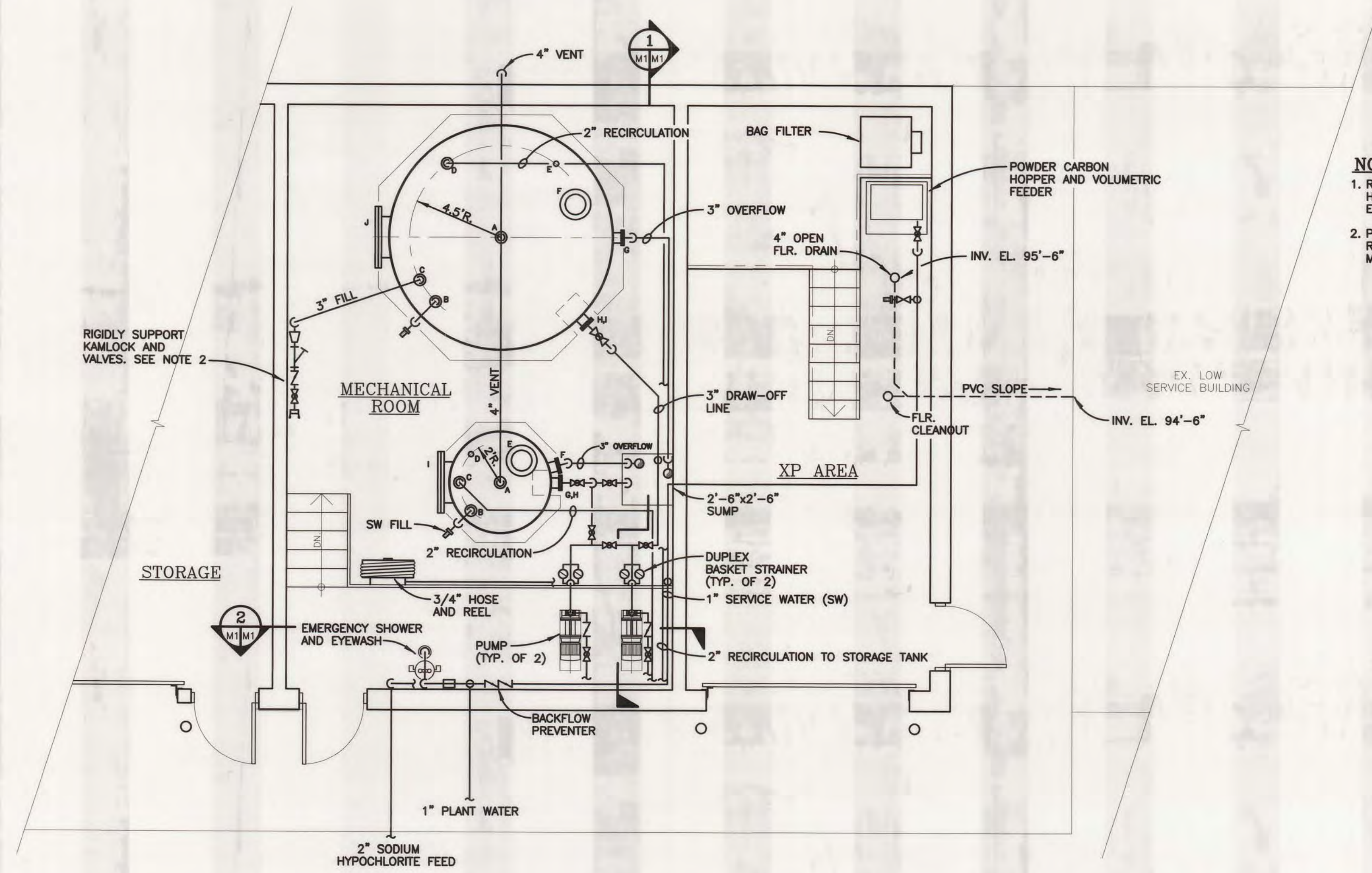


3 DETAIL
SCALE: 1 1/2" = 1'-0"

NO.	DATE	BY	REVISIONS
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

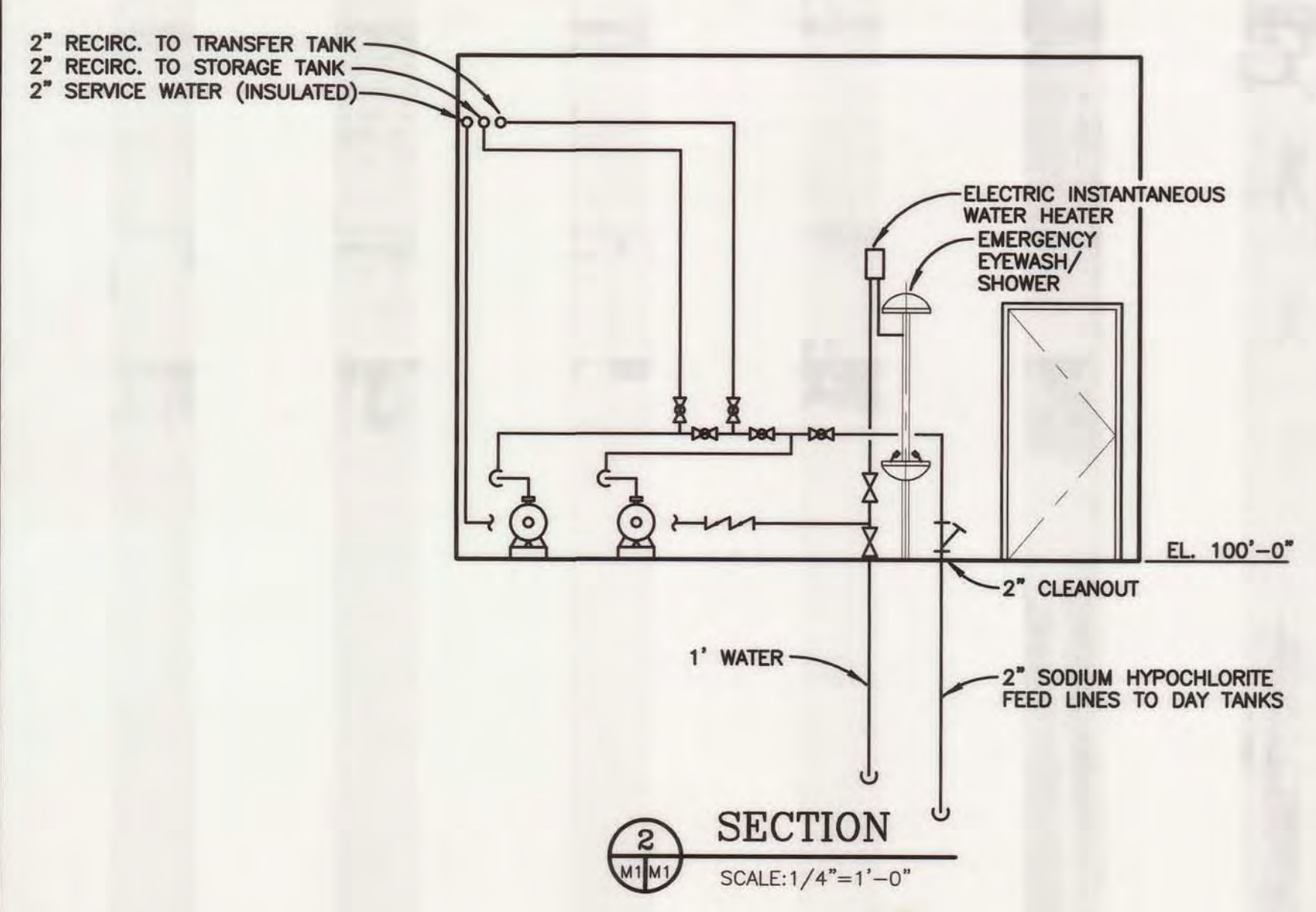
CITY OF ALPENA
ALPENA COUNTY, MICHIGAN
1998 WTP IMPROVEMENTS
CHEMICAL AND STORAGE BLDG.
ROOF FRAMING PLAN & DETAILS

DESIGNED BY	DATE
J.F.S.	MAR '98
DRAWN BY	DATE
M.F.E.	MAR '98
CHECKED BY	DATE
M.S.S.	MAY '98
FILE	25012S2
DATE	DCT102998
SCALE	1/4" = 1'-0"
DRAWING	1:48
PLOT	
PROJECT	25012

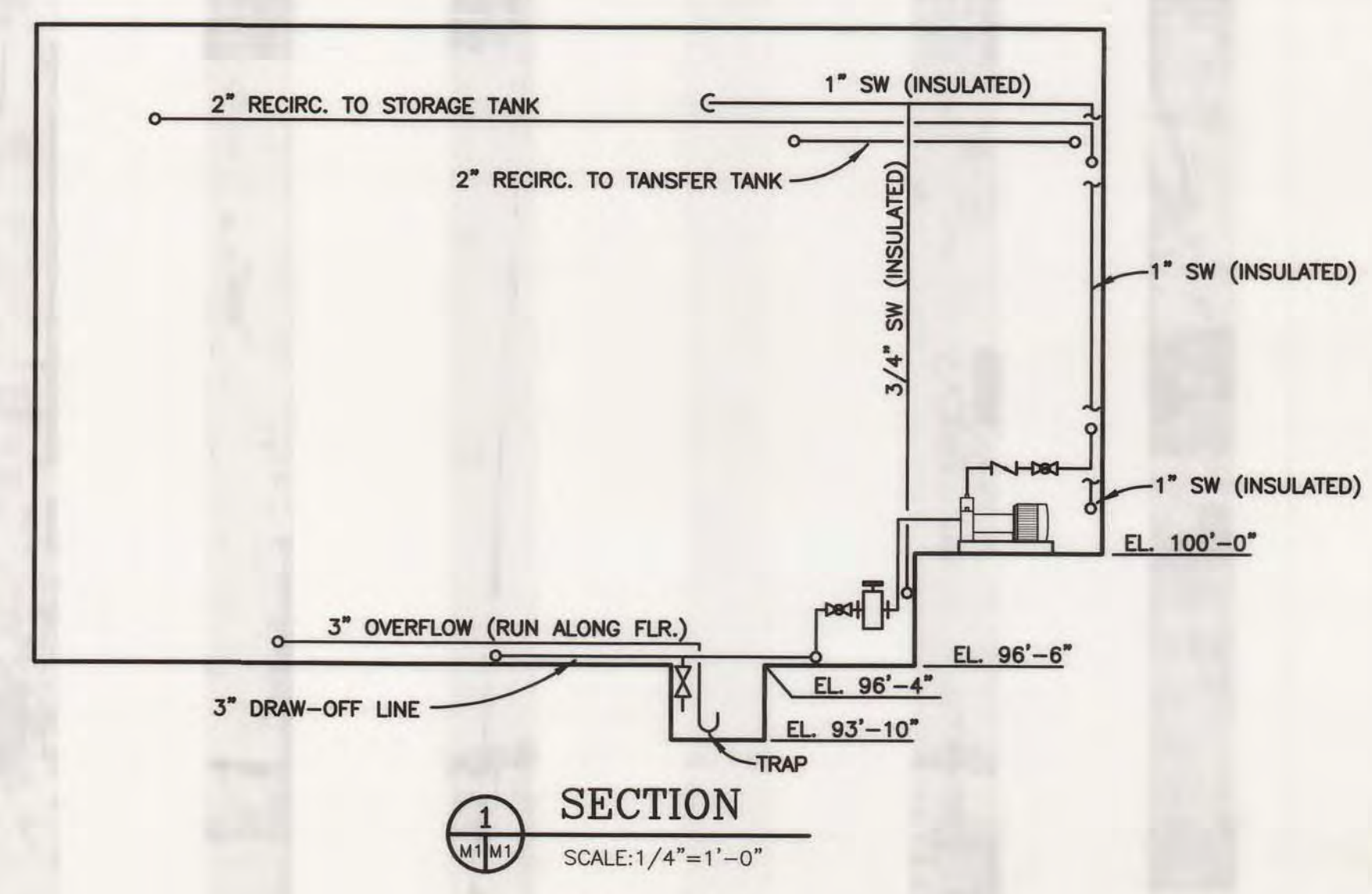


- NOTES:**
1. RELOCATE POWDER CARBON BAG FILTER, HOPPER AND VOLUMETRIC FEED FROM EXISTING SHED TO NEW XP ROOM.
 2. PROVIDE ENGRAVED PLASTIC SIGN WHICH READS "SODIUM HYPOCHLORITE FILL STATION". MOUNT 48" A.F.F.

CHEMICAL AND STORAGE BUILDING
SCALE: 1/4"=1'-0"



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



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

8,100 GALLON SODIUM HYPOCHLORITE TANK PENETRATION SCHEDULE

SHELL HGT.=144"
INSIDE DIA.=11'-0"

MARK	DIAMETER OPENING *	ORIENTATION	DISTANCE **	DESCRIPTION
ROOF				
A	4"	TANK CENTER	-	VENT
B	2" #	135'	-	SERVICE WATER FILL
C	3" #	157.7'	-	FILL LINE
D	2" #	225'	-	RECIRCULATION
E	4"	315'	-	SPARE
F	18"	337.5'	-	OBSERVATION MANHOLE
WALL				
G	3"	0'	138"	OVERFLOW
H	3"	45'	12"	SUCTION LINE
I	3"	45'	0"	DRAIN LINE
J	24"	180'	12"	MANWAY

* ALL OPENINGS ARE FLANGED.
 ** DISTANCE FROM BASE OF TANK TO INVERT OF PENETRATION.
 # EXTEND FIXED PVC DRAIN PIPE ASSEMBLIES TO WITHIN 2 FEET OF TANK BOTTOM. IN EACH LINE, DRILL THREE (3) 1/16" HOLES BETWEEN TOP OF TANK AND OVERFLOW LEVEL FOR SIPHON BREAK.

1,200 GALLON SODIUM HYPOCHLORITE TRANSFER TANK PENETRATION SCHEDULE

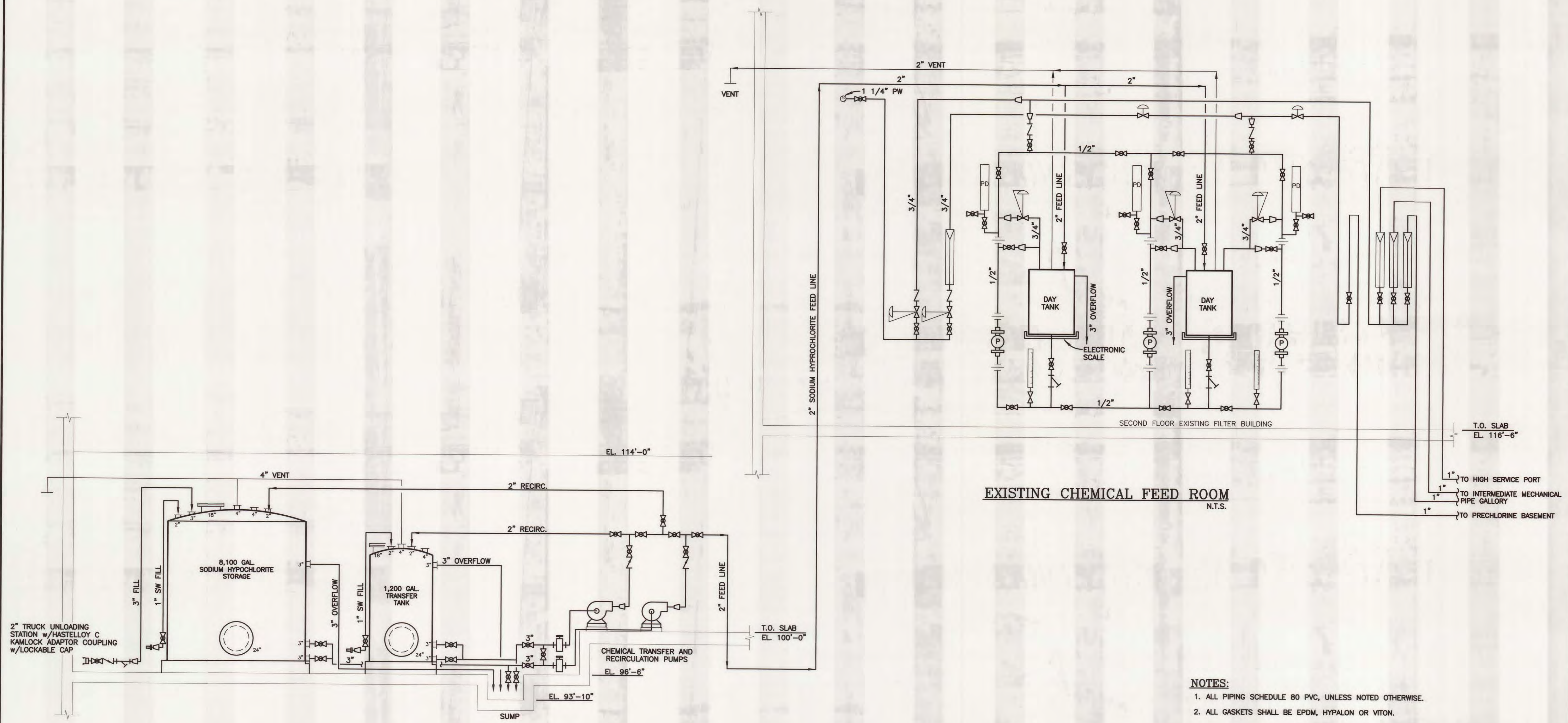
SHELL HGT.=108"
INSIDE DIA.=5'-0"

MARK	DIAMETER OPENING *	ORIENTATION	DISTANCE **	DESCRIPTION
ROOF				
A	4"	TANK CENTER	-	VENT
B	2" #	135'	-	SERVICE WATER FILL
C	2" #	180'	-	RECIRCULATION
D	4"	225'	-	SPARE
E	18"	315'	-	OBSERVATION MANHOLE
WALL				
F	3"	345'	102"	OVERFLOW
G	3"	0'	12"	SUCTION LINE
H	3"	0'	0"	DRAIN LINE
I	24"	180'	12"	MANWAY

* ALL OPENINGS ARE FLANGED.
 ** DISTANCE FROM BASE OF TANK TO INVERT OF PENETRATION.
 # EXTEND FIXED PVC DRAIN PIPE ASSEMBLIES TO WITHIN 2 FEET OF TANK BOTTOM. IN EACH LINE, DRILL THREE (3) 1/16" HOLES BETWEEN TOP OF TANK AND OVERFLOW LEVEL FOR SIPHON BREAK.

**CITY OF ALPENA
ALPENA COUNTY, MICHIGAN
1998 WTP IMPROVEMENTS
CHEMICAL AND STORAGE BUILDING PLAN
CHEMICAL FEED PIPING LAYOUT**

DESIGNED BY	D.C.H.	DATE	JUN. '98
DRAWN BY	D.C.T.	DATE	JUN. '98
CHECKED BY	J.K.P.	DATE	JUN. '98
TITLE	25012M1	DCT102998	
SCALE	1/4"=1'-0"		
DRAWING			
PILOT			



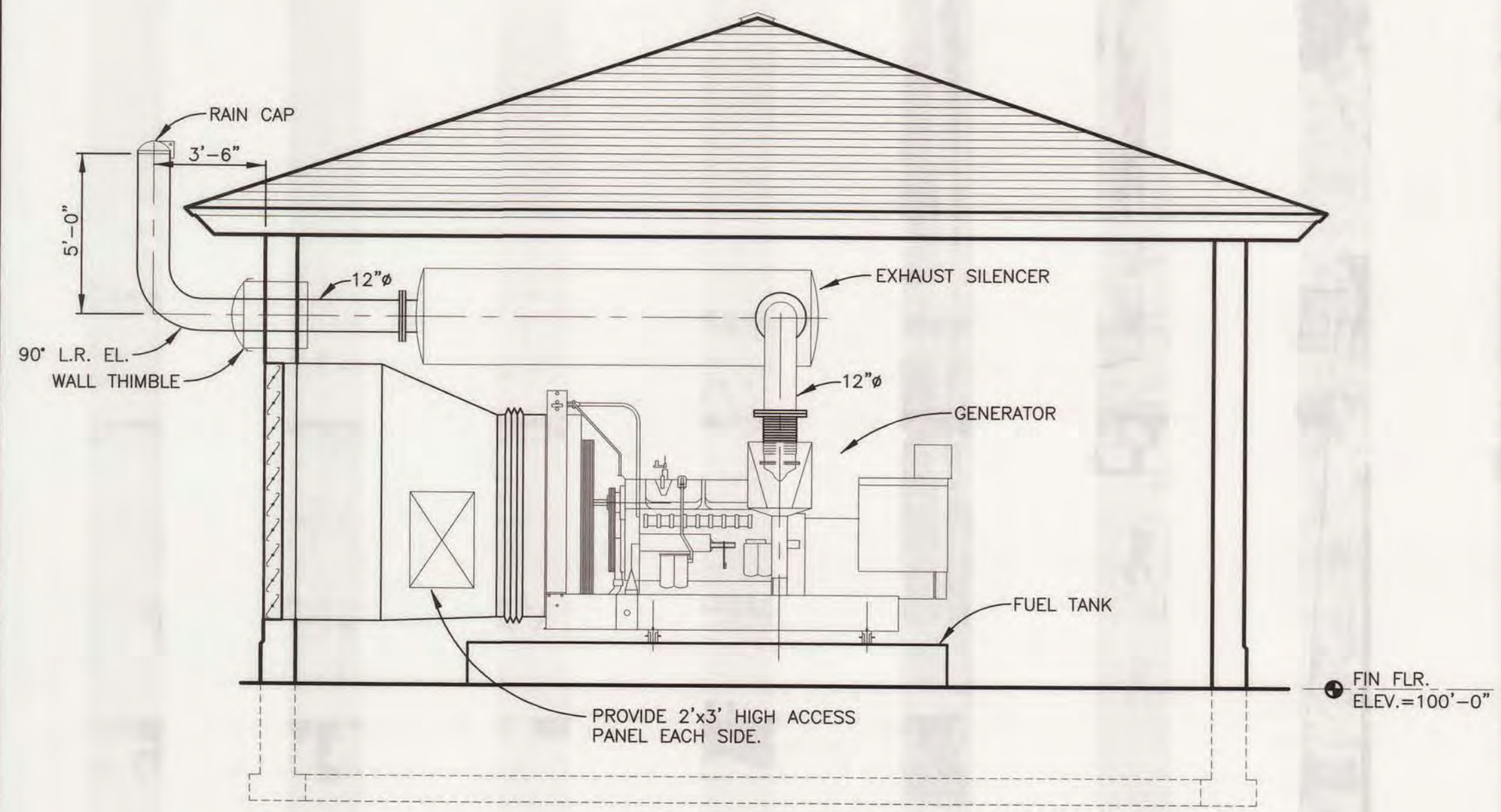
- NOTES:**
1. ALL PIPING SCHEDULE 80 PVC, UNLESS NOTED OTHERWISE.
 2. ALL GASKETS SHALL BE EPDM, HYPALON OR VITON.

- SYMBOL LEGEND:**
- BALL VALVE
 - CHECK VALVE
 - PRESSURE RELIEF VALVE
 - HOSE BIBB (3/4")
 - DUPLEX BASKET STRAINER
 - REDUCER
 - WYE STRAINER
 - UNION
 - SW SERVICE WATER
 - PW POTABLE WATER
 - BACK PRESSURE VALVE
 - MAGNETICALLY COUPLED PUMP
 - DIAPHRAGM METERING PUMP
 - ROTAMETER (0-5.8 GPM)
 - PULSATION DAMPENERS
 - CALIBRATION CHAMBER (500CC)

NO.	DATE	BY	REVISIONS
1			ISSUED FOR CONSTRUCTION
2			ISSUED FOR PERMIT
3			REVISIONS

**CITY OF ALPENA
ALPENA COUNTY, MICHIGAN
1998 WTP IMPROVEMENTS
SODIUM HYPOCHLORITE
SCHEMATIC LAYOUT**

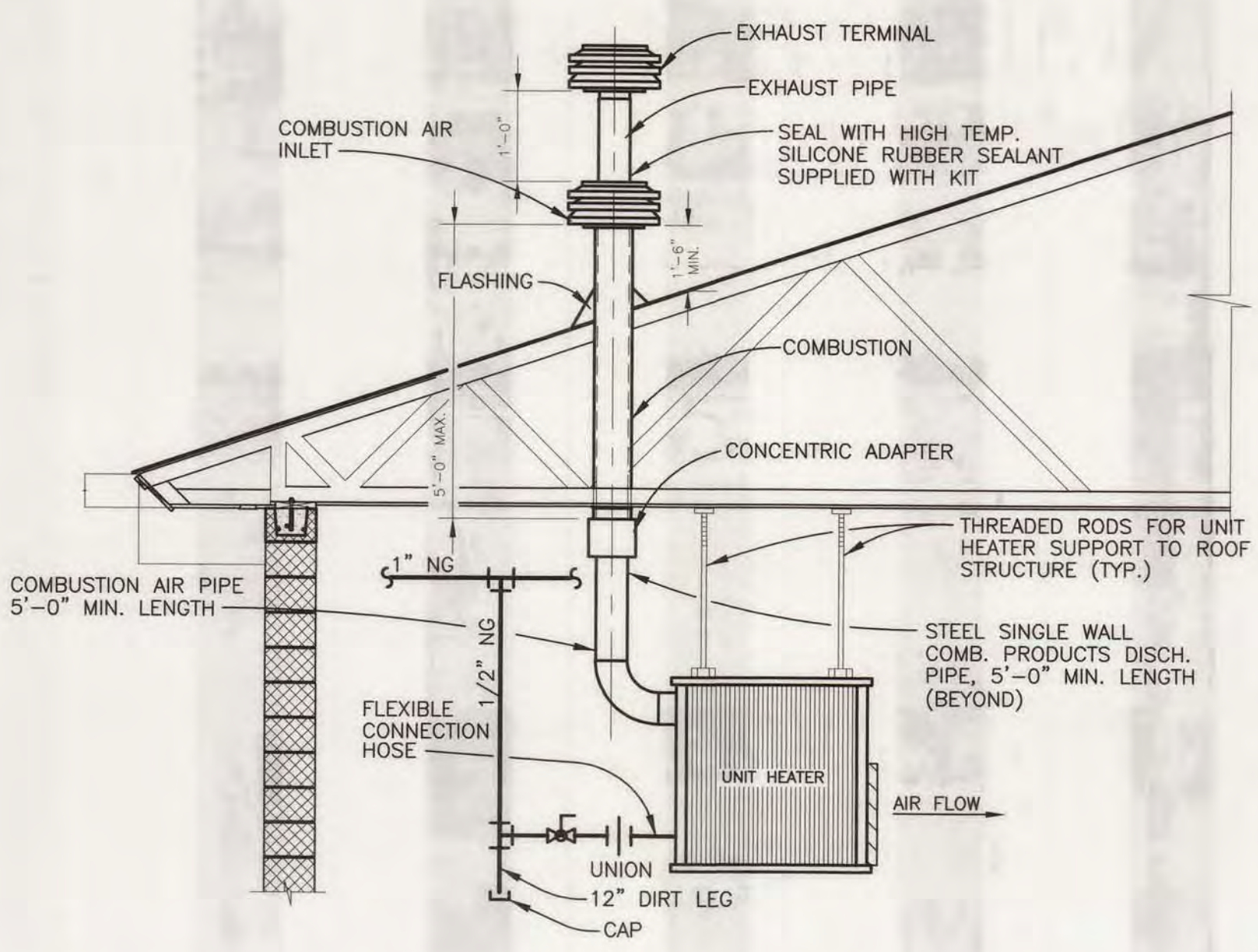
DESIGNED BY D.C.H.	DATE JUN. '98
DRAWN BY D.C.T.	DATE JUN. '98
CHECKED BY D.C.H.	DATE JUN. '98
FILE 25012M2	EXT DCT102998
SCALE 1/4" = 1'-0"	DRAWING 1:48
PROJECT 25012	SHEET NO. M2



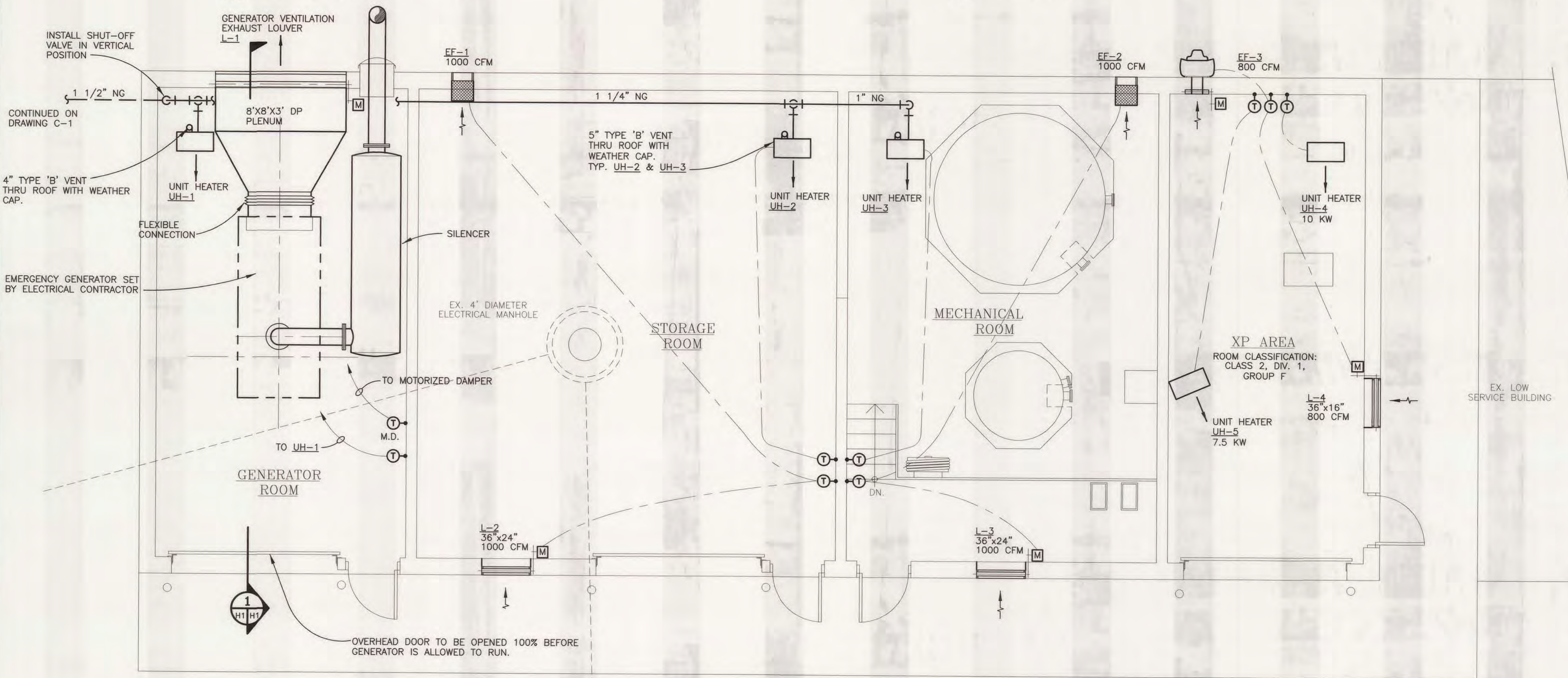
NOTES:

1. WALL THIMBLE, RAIN CAP, EXHAUST SILENCER, FUEL TANK AND GENERATOR TO BE FURNISHED BY OWNER AND INSTALLED BY MECHANICAL CONTRACTOR.
2. MECHANICAL CONTRACTOR TO PROVIDE EXHAUST PIPING AND FILL FUEL TANK.
3. ALL INTERIOR EXHAUST PIPING AND SILENCER SHALL BE INSULATED. PROVIDE AND INSTALL 1 1/2" THICK, 3M FIRE STOP INSULATION, w/3/4" ALUMINUM STRAPS OR EQUAL.

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



TYP. SEPARATED COMBUSTION UNIT HEATER DETAIL
NOT TO SCALE



HVAC PLAN VIEW
SCALE: 1/4" = 1'-0"

MOUNT THERMOSTATS 5'-0" A.F.F.
MOUNT UNIT HEATERS 10'-0" A.F.F. TO BOTTOM.

LEGEND

	MOTORIZED DAMPER
	THERMOSTAT
	1" NG NATURAL GAS PIPING, SCH 40 BLACK IRON
	BALL VALVE, 1/4 TURN, NATURAL GAS SERVICE

EQUIPMENT SCHEDULE

MARK	DESCRIPTION
L-1	RUSKIN COMBINATION LOUVER/DAMPER, MODEL ELC6375D, 96"x96", WITH 120V MOTORIZED DAMPER ACTUATOR, BIRD SCREEN, KYNAR FINISH, AND STANDARD CONSTRUCTION SEALS, 30.38 SF FREE AREA.
L-2&3	RUSKIN EPOXY COATED COMBINATION LOUVER/DAMPER, MODEL ELC6375D, 36"x24", WITH 120V MOTORIZED DAMPER ACTUATOR, BIRD SCREEN, KYNAR FINISH, AND STANDARD CONSTRUCTION SEALS, 2.21 SF FREE AREA, 1000 CFM INTAKE.
L-4	RUSKIN COMBINATION LOUVER/DAMPER, MODEL ELC6375D, 36"x16", WITH 120V/1/60 EXPLOSIONPROOF MOTORIZED DAMPER ACTUATOR, RUSKIN/SWARTOUT, SIEBE ENVIRONMENTAL CONTROLS, MODEL M46418, KYNAR FINISH, AND STANDARD CONSTRUCTION SEALS, BIRD SCREEN, 1.16 SF FREE AREA, 800 CFM INTAKE.
UH-1	REZNR MODEL SFT-45, 45 MBH INPUT, 36 MBH OUTPUT, 39 FT THROW, 747 CFM, 1/16 HP MOTOR, 115/1/60, INCLUDE HANGER KIT AND VERTICAL INLET AIR/VENT TERMINAL KIT.
UH-2	REZNR MODEL SCA-125, 125,000 BTUH INPUT, 100,000 BTUH OUTPUT, 1400 CFM, 1/20 HP MOTOR, 115/1/60, 4.9 FLA, 245.0 WATTS, 5" VENT THRU ROOF. INCLUDE HANGER KIT AND VERTICAL INLET AIR/VENT TERMINAL KIT.
UH-3	REZNR MODEL SCA-125, 125,000 BTUH INPUT, 100,000 BTUH OUTPUT, 1400 CFM, 1/20 HP MOTOR, 115/1/60, 4.9 FLA, 245.0 WATTS, 5" VENT THRU ROOF. INCLUDE S.S. HEAT EXCHANGER, HANGER KIT AND VERTICAL INLET AIR/VENT TERMINAL KIT.
UH-4	INDEECO MODEL 232-F17H-0109U COMPLETE WITH BUILT IN CONTROLS AND EXPLOSIONPROOF CONTROL PANEL (NEMA 9 ENCLOSURE), AND REMOTE EXPLOSIONPROOF THERMOSTAT MODEL C251-012, CEILING MOUNTING BRACKETS. FOR INSTALLATION IN A CLASS II, DIV 1, GROUP F, ATMOSPHERE. 10.0 kW CAPACITY, 460/3/60. POWER CONNECTIONS TO BE A SINGLE 3-WIRE CONNECTION TO THE HEATER.
UH-5	INDEECO MODEL 232-F04F-0087U COMPLETE WITH BUILT IN CONTROLS AND EXPLOSIONPROOF CONTROL PANEL (NEMA 9 ENCLOSURE), AND REMOTE EXPLOSIONPROOF THERMOSTAT MODEL C251-012, CEILING MOUNTING BRACKETS. FOR INSTALLATION IN A CLASS II, DIV 1, GROUP F, ATMOSPHERE. 7.5 kW CAPACITY, 460/3/60. POWER CONNECTIONS TO BE A SINGLE 3-WIRE CONNECTION TO THE HEATER.
EF-1	COOK MODEL 12SP15D, DIRECT DRIVE WALL MOUNT PROPELLER FAN, 0.125 ESP, 1000 CFM, 1/10 HP, 1250 RPM, 120V/1/60. FURNISH WITH BACK DRAFT DAMPER AND 1/2" MESH FAN SCREEN.
EF-2	COOK MODEL 12SP15D, DIRECT DRIVE EPOXY COATED WALL MOUNT PROPELLER FAN, 0.125 ESP, 1000 CFM, 1/10 HP, 1250 RPM, 120V/1/60. FURNISH WITH BACK DRAFT DAMPER AND 1/2" MESH FAN SCREEN.
EF-3	COOK MODEL 100W2B, 800 CFM AT 0.125 ESP, BELT DRIVE 1/6 HP MOTOR, WALL MOUNTED, FURNISH WITH MOTORIZED BACK DRAFT DAMPERS AND 1/2" MESH FAN SCREEN AT INLET. 120V/1/60 CLASS 1, GROUP D, EXPLOSIONPROOF MOTOR. EXPLOSIONPROOF THERMOSTAT MODEL C251-012.

NOTES:

1. UNIT HEATER, INTAKE FAN, LOUVER/DAMPER ASSEMBLIES, DAMPER ACTUATOR MOTORS AND THERMOSTATS FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR.
2. ALL EQUIPMENT AND CONTROLS IN NOTE 1 REQUIRING FIELD WIRING TO BE BY ELECTRICAL CONTRACTOR.
3. ALL POWER WIRING FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
4. SEE ELECTRICAL DRAWINGS FOR CONTROL SCHEMATICS.
5. SEALING AND FLASHING OF ALL ROOF AND WALL PENETRATIONS BY MECHANICAL CONTRACTOR.
6. UNIT HEATER UH-3 & EXHAUST FAN EF-2 TO HAVE CORROSION RESISTANT T-STAT CHROMALOX MODEL WCRT-100, FOR MODERATELY CORROSIVE CONDITIONS. 120V/1/60HZ THERMOSTAT, FIELD WIRING BY ELECTRICAL CONTRACTOR.
7. CONTRACTOR TO SUBMIT LOUVER COLOR SAMPLES TO OWNER PRIOR TO PURCHASE AND INSTALLATION.
8. IN GENERATOR ROOM, MAINTAIN 2'-0" MIN. CLEARANCE BETWEEN GENERATOR EXHAUST PIPE AND GAS LINES.
9. INSTALL ALL EQUIPMENT PER MANUFACTURERS RECOMMENDATIONS.

HEATING & VENTILATION SEQUENCE OF OPERATIONS:

- A. UNIT HEATER UH-1, UH-2, UH-4 & UH-5 CYCLES AS REQUIRED TO SATISFY THE RESPECTIVE HEATING ONLY THERMOSTAT. (SET POINT 60°F, ADJUSTABLE.).
- B. UNIT HEATER UH-3 CYCLES AS REQUIRED TO SATISFY THE HEATING ONLY THERMOSTAT T (SETPOINT 70°F, ADJUSTABLE.).
- C. EXHAUST FANS EF-1, EF-2, EF-3 AND LOUVER/DAMPER L-1 CYCLES AS REQUIRED TO SATISFY THE RESPECTIVE VENTILATION THERMOSTAT (SET POINT 90°) ALL UNITS TO OPERATE WITH MANUAL OVERRIDE WALL SWITCH.
- D. BEFORE EMERGENCY GENERATOR SET IS ENERGIZED LOUVER L-1 AND OVERHEAD DOOR IS FULLY OPENED.
- E. SEE ELECTRICAL DRAWINGS FOR CONTROL WIRING DIAGRAMS.

EARTHTECH
 5555 Greenwood Hills Parkway, SE • P.O. Box 874 • Grand Rapids, MI 49588-0874 • (616) 945-9600

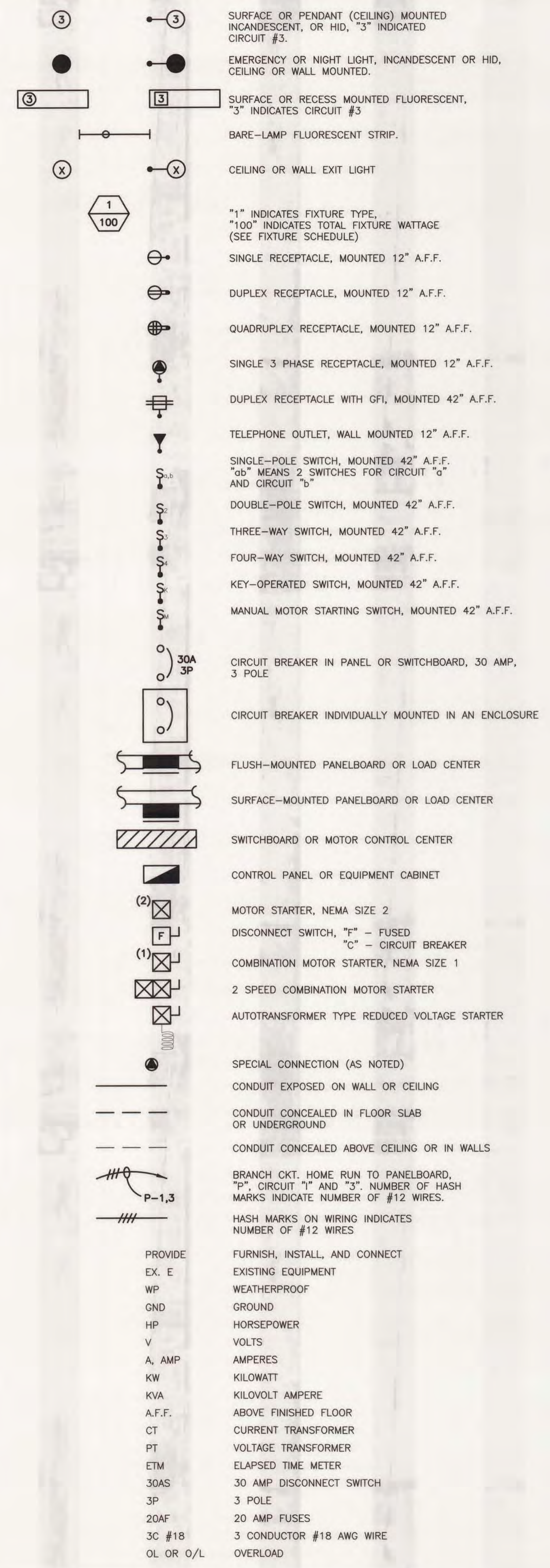
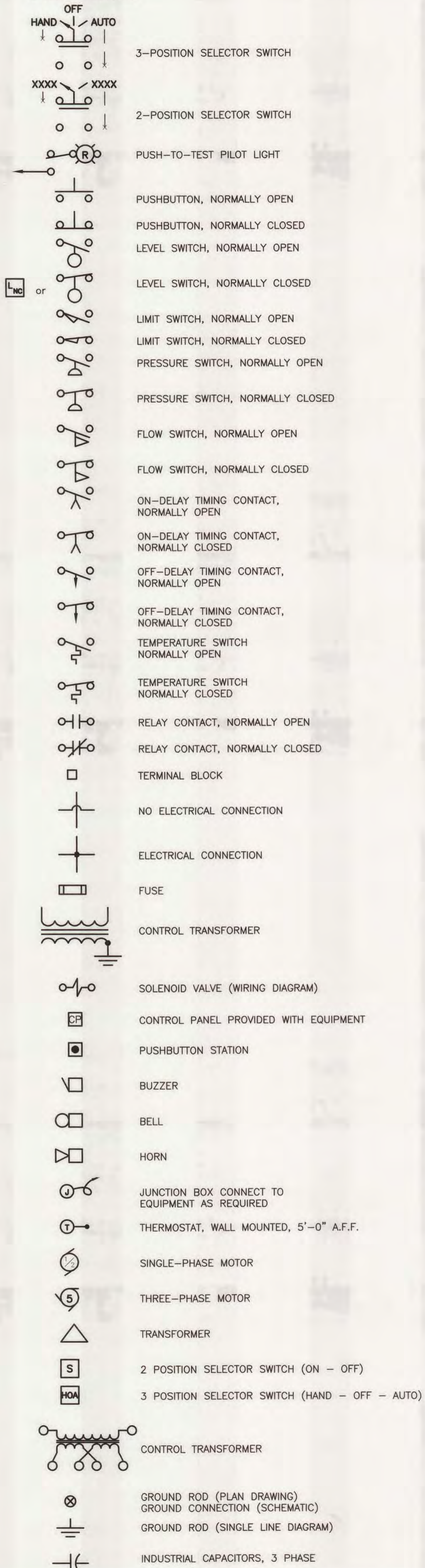
ISSUED FOR CONSTRUCTION	NOV 1998	DATE	
ISSUED FOR PERMIT		DATE	
REVISIONS		DATE	

CITY OF ALPENA
 ALPENA COUNTY, MICHIGAN
 1998 WTP IMPROVEMENTS
 CHEMICAL AND STORAGE BLDG.
 HVAC PLAN

DESIGNED BY	DATE
N.D.W.	MAR '98
DRAWN BY	DATE
N.D.W.	MAR '98
CHECKED BY	DATE
J.K.P.	JUL '98
FILE	EST
25012H1	DCT102998
SCALE	1/4" = 1'-0"
DRAWING	1:48
PLOT	
PROJECT	25012

H1
 SHEET NO.

SCHEMATIC SYMBOLS



GENERAL INSTRUMENT OR FUNCTION SYMBOLS

	PRIMARY LOCATION NORMALLY ACCESSIBLE TO OPERATOR	PRIMARY LOCATION NORMALLY INACCESSIBLE OR BEHIND PANEL	FIELD MOUNTED	AUXILIARY LOCATION NORMALLY ACCESSIBLE TO OPERATOR
DISCRETE INSTRUMENTS				
SHARED DISPLAY, SHARED CONTROL				
COMPUTER FUNCTION				
PROGRAMMABLE LOGIC CONTROL				

MEANINGS OF IDENTIFICATION LETTERS

	FIRST LETTER		SUCCEEDING LETTERS		
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM		
B	BURNER FLAME		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
C	CONDUCTIVITY			CONTROL	
D	DENSITY (MASS) OR SPECIFIC GRAVITY	DIFFERENTIAL			
E	VOLTAGE (EMF)		PRIMARY ELEMENT		
F	FLOW RATE	RATIO (FRACTION)			
G	GAGING (DIM.)		GLASS		
H	HAND (MANUALLY INITIATED)				HIGH
I	CURRENT		INDICATE		
J	POWER	SCAN			
K	TIME OR TIME SCHEDULE			CONTROL STATION	
L	LEVEL		LIGHT (PILOT)		LOW
M	MOISTURE OR HUMIDITY				MIDDLE OR INTERMEDIATE
N	USER'S CHOICE		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
O	USER'S CHOICE		ORIFICE (RESTRICTION)		
P	PRESSURE OR VACUUM		POINT (TEST CONNECTION)		
Q	QUANTITY OR EVENT	INTEGRATE OR TOTALIZE			
R	RADIOACTIVITY		RECORD OR PRINT		
S	SPEED OR FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VISCOSITY			VALVE, DAMPER OR LOUVER	
W	WEIGHT OR FORCE		WELL		
X	UNCLASSIFIED		UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	USER'S CHOICE			RELAY OR COMPUTE	
Z	POSITION			DRIVE, ACTUATE OR UNCLASSIFIED FINAL ELEMENT	

P & ID ABBREVIATIONS

AS - AIR SUPPLY
 IA - INSTRUMENT AIR
 ES - ELECTRIC SUPPLY
 HS - HYDRAULIC SUPPLY
 N₂ - NITROGEN SUPPLY
 WS - WATER SUPPLY
 STM75 - STEAM SUPPLY-PRESSURE

LINE DESIGNATION

AIR TUBING
 CAPILLARY
 ELECTRICAL
 PROCESS CONNECTION OR SUPPLY
 HYDRAULIC SIGNAL

ELECTROMAGNETIC OR SONIC SIGNAL (GUIDED)

 ELECTROMAGNETIC OR SONIC SIGNAL (NOT GUIDED)

 INTERNAL SYSTEM LINK (SOFTWARE OR DATA LINK)

 MECHANICAL LINK

NO.	DATE	BY	REVISIONS
1			ISSUED FOR CONSTRUCTION
2			ISSUED FOR PERMIT
3			REVISIONS

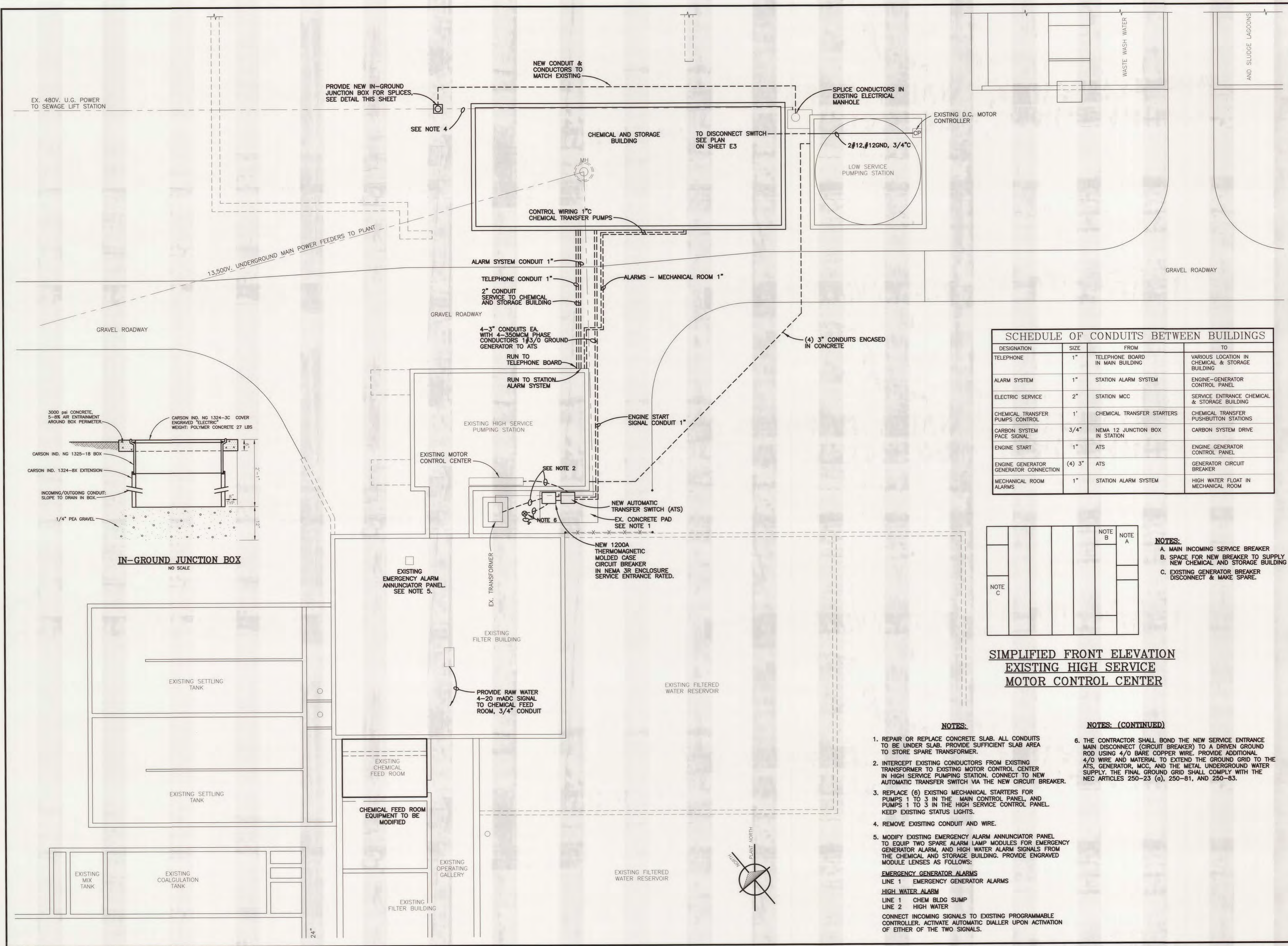
CITY OF ALPENA
ALPENA COUNTY, MICHIGAN
1998 WTP IMPROVEMENTS
ELECTRICAL LEGEND

DESIGNED BY	DATE
D.L.P.	JUN. '98
DRAWN BY	DATE
D.C.T.	JUN. '98
CHECKED BY	DATE
D.L.P.	JUN. '98
FILE	EDIT
25012E1	DCT102998
SCALE	DRAWING
NONE	1:1
PROJECT	PLOT
25012	

NO.	DATE	BY	DATE	REVISIONS
1				ISSUED FOR CONSTRUCTION
2				ISSUED FOR PERMIT
3				
4				
5				
6				

**CITY OF ALPENA
ALPENA COUNTY, MICHIGAN
1998 WTP IMPROVEMENTS
ELECTRICAL SITE PLAN**

DESIGNED BY	DATE
D.L.P.	JUN. '98
DRAWN BY	DATE
D.C.T.	JUN. '98
CHECKED BY	DATE
D.L.P.	JUN. '98
FILE	EDIT
25012E2	DCT102998
SCALE	1"=20'-0"
DRAWING	1:120
PROJECT	25012
E2	SHEET NO.



SCHEDULE OF CONDUITS BETWEEN BUILDINGS

DESIGNATION	SIZE	FROM	TO
TELEPHONE	1"	TELEPHONE BOARD IN MAIN BUILDING	VARIOUS LOCATION IN CHEMICAL & STORAGE BUILDING
ALARM SYSTEM	1"	STATION ALARM SYSTEM	ENGINE-GENERATOR CONTROL PANEL
ELECTRIC SERVICE	2"	STATION MCC	SERVICE ENTRANCE CHEMICAL & STORAGE BUILDING
CHEMICAL TRANSFER PUMPS CONTROL	1"	CHEMICAL TRANSFER STARTERS	CHEMICAL TRANSFER PUSHBUTTON STATIONS
CARBON SYSTEM PACE SIGNAL	3/4"	NEMA 12 JUNCTION BOX IN STATION	CARBON SYSTEM DRIVE
ENGINE START	1"	ATS	ENGINE GENERATOR CONTROL PANEL
ENGINE GENERATOR GENERATOR CONNECTION	(4) 3"	ATS	GENERATOR CIRCUIT BREAKER
MECHANICAL ROOM ALARMS	1"	STATION ALARM SYSTEM	HIGH WATER FLOAT IN MECHANICAL ROOM

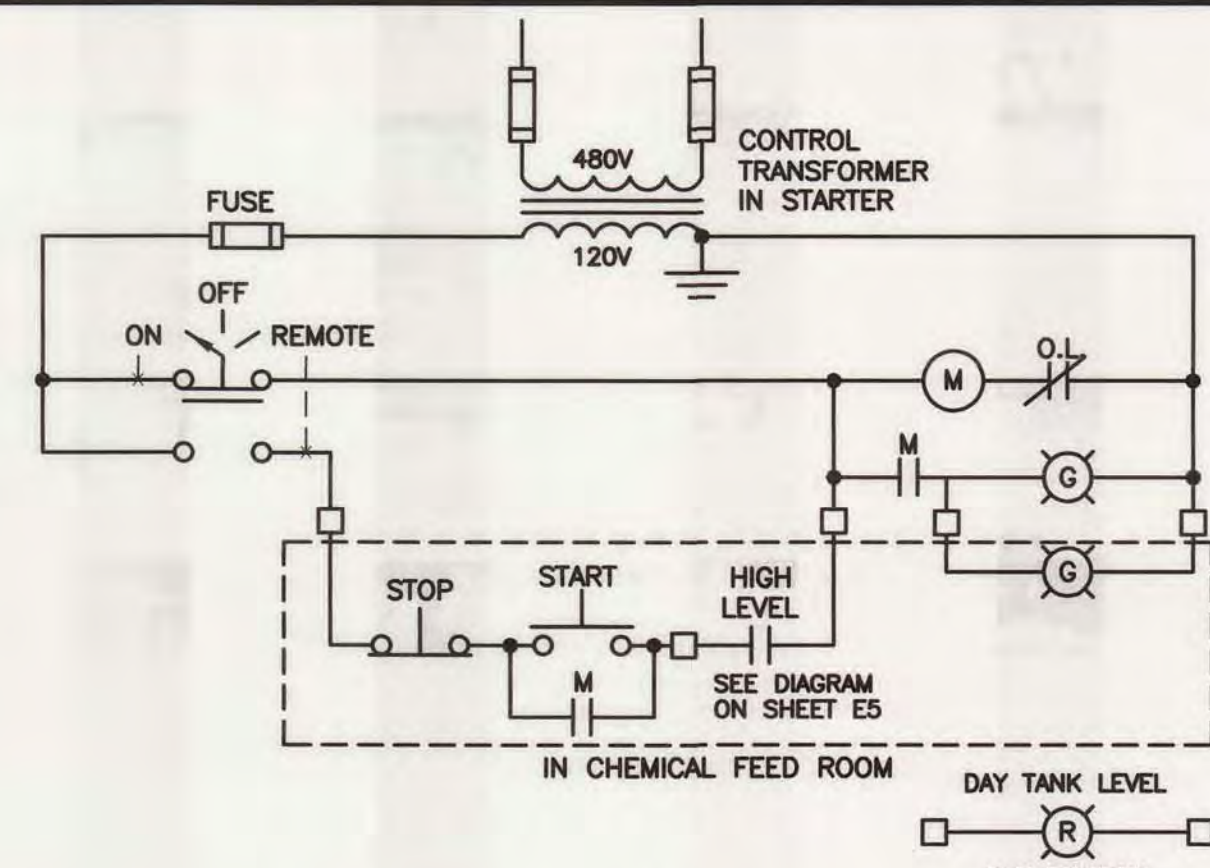
NOTE A	
NOTE B	
NOTE C	

- NOTES:**
- A. MAIN INCOMING SERVICE BREAKER
 - B. SPACE FOR NEW BREAKER TO SUPPLY NEW CHEMICAL AND STORAGE BUILDING
 - C. EXISTING GENERATOR BREAKER DISCONNECT & MAKE SPARE.

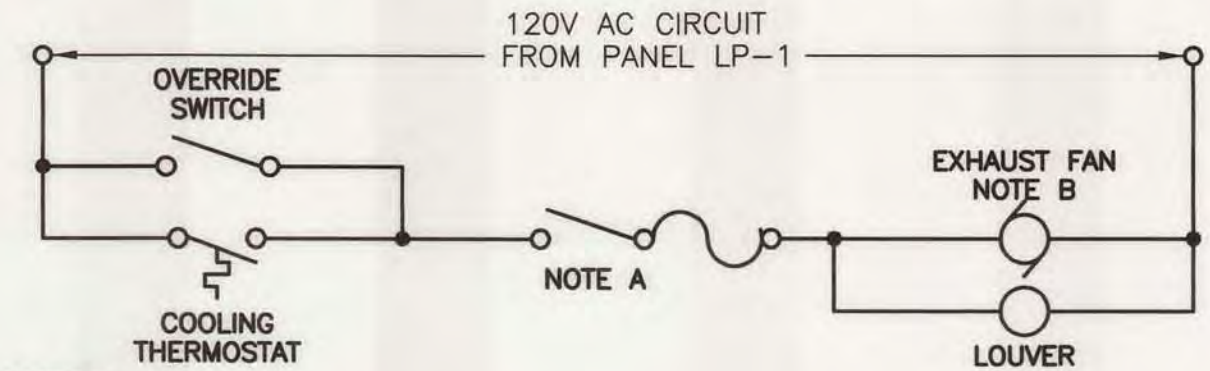
**SIMPLIFIED FRONT ELEVATION
EXISTING HIGH SERVICE
MOTOR CONTROL CENTER**

- NOTES:**
- REPAIR OR REPLACE CONCRETE SLAB. ALL CONDUITS TO BE UNDER SLAB. PROVIDE SUFFICIENT SLAB AREA TO STORE SPARE TRANSFORMER.
 - INTERCEPT EXISTING CONDUCTORS FROM EXISTING TRANSFORMER TO EXISTING MOTOR CONTROL CENTER IN HIGH SERVICE PUMPING STATION. CONNECT TO NEW AUTOMATIC TRANSFER SWITCH VIA THE NEW CIRCUIT BREAKER.
 - REPLACE (6) EXISTING MECHANICAL STARTERS FOR PUMPS 1 TO 3 IN THE MAIN CONTROL PANEL, AND PUMPS 1 TO 3 IN THE HIGH SERVICE CONTROL PANEL. KEEP EXISTING STATUS LIGHTS.
 - REMOVE EXISTING CONDUIT AND WIRE.
 - MODIFY EXISTING EMERGENCY ALARM ANNUNCIATOR PANEL TO EQUIP TWO SPARE ALARM LAMP MODULES FOR EMERGENCY GENERATOR ALARM, AND HIGH WATER ALARM SIGNALS FROM THE CHEMICAL AND STORAGE BUILDING. PROVIDE ENGRAVED MODULE LENSES AS FOLLOWS:
EMERGENCY GENERATOR ALARMS
 LINE 1 EMERGENCY GENERATOR ALARMS
HIGH WATER ALARM
 LINE 1 CHEM BLDG SUMP
 LINE 2 HIGH WATER
 CONNECT INCOMING SIGNALS TO EXISTING PROGRAMMABLE CONTROLLER. ACTIVATE AUTOMATIC DIALLER UPON ACTIVATION OF EITHER OF THE TWO SIGNALS.
- NOTES: (CONTINUED)**
- THE CONTRACTOR SHALL BOND THE NEW SERVICE ENTRANCE MAIN DISCONNECT (CIRCUIT BREAKER) TO A DRIVEN GROUND ROD USING 4/0 BARE COPPER WIRE. PROVIDE ADDITIONAL 4/0 WIRE AND MATERIAL TO EXTEND THE GROUND GRID TO THE ATS, GENERATOR, MCC, AND THE METAL UNDERGROUND WATER SUPPLY. THE FINAL GROUND GRID SHALL COMPLY WITH THE NEC ARTICLES 250-23 (a), 250-81, AND 250-83.



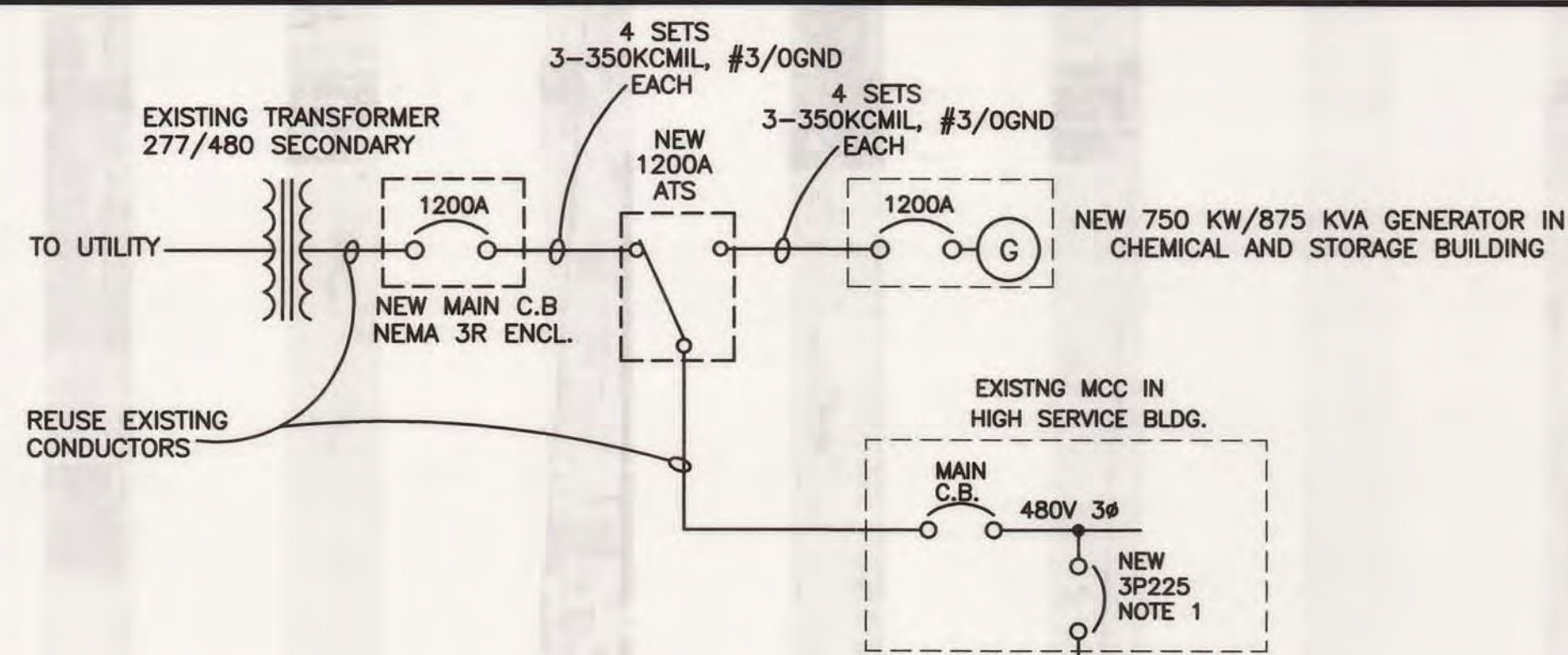


CHEMICAL TRANSFER PUMP CONTROL SCHEMATIC DIAGRAM
(TYPICAL OF 2)



NOTES:
A. PROVIDE THERMAL AND CURRENT OVERLOAD PROTECTION IN ACCORDANCE WITH THE NEC ARTICLE 430.
B. PROVIDE WIRING FOR CLASS 1, DIV 1 GROUP C,D LOCATION FOR EF-3 ONLY.

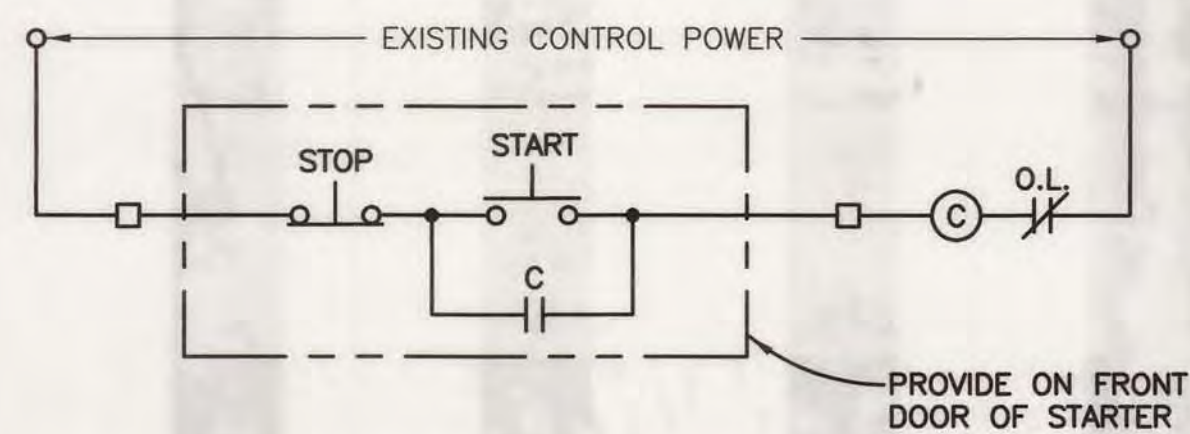
EXHAUST FANS EF-1, EF-2 & EF-3 CONTROL DIAGRAM



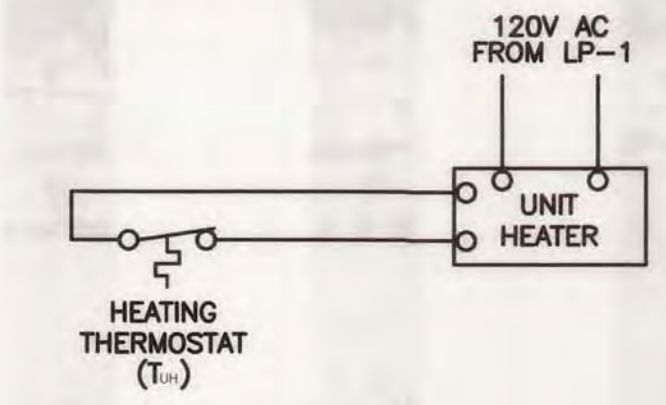
NOTES:

- DESIGN BASED ON SQUARE-D CAT. KAL36225 IN WESTINGHOUSE MCC.
- DESIGN BASED ON SQUARE-D CAT. 8539SCG44V02 STARTER IN NEMA 4X ENCLOSURE.
- PANELBOARD SHALL HAVE SHORT CIRCUIT RATING OF 22,000A RMS. PANELBOARD SHALL HAVE NEMA 1 ENCLOSURE. DESIGN BASED ON SQUARE-D TYPE I-LINE TYPE HCM PANELBOARD.

HIGH SERVICE AND CHEMICAL/STORAGE BUILDINGS SINGLE LINE DIAGRAM

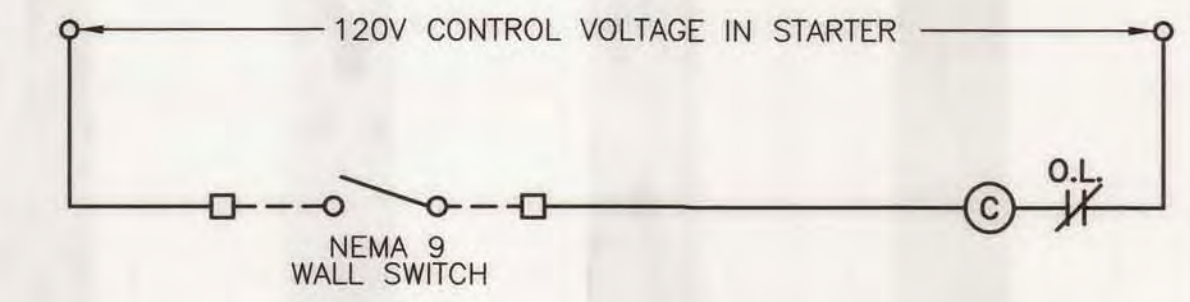


MOTOR STARTER CONTROL CHANGES TO EXISTING MOTORS

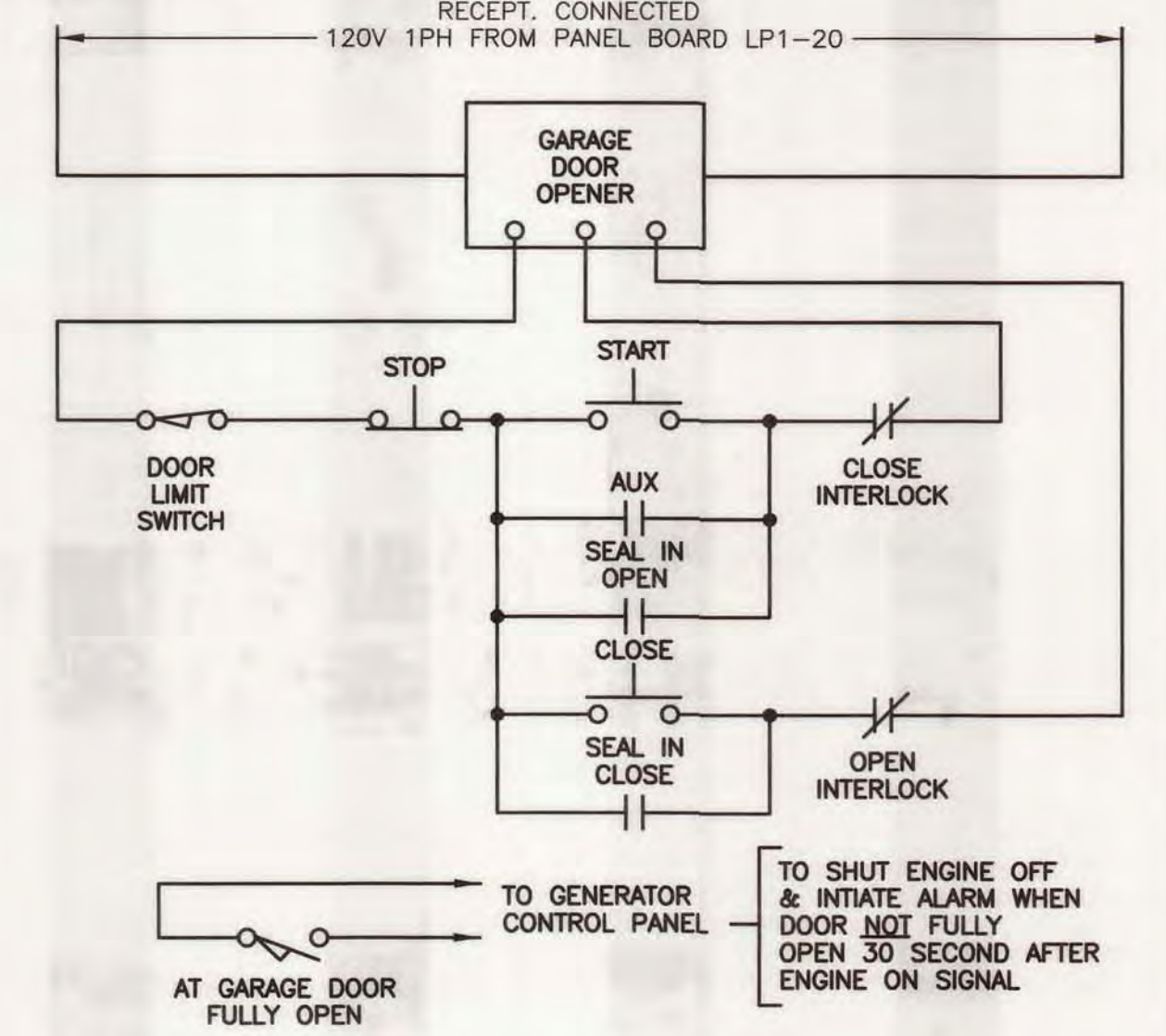
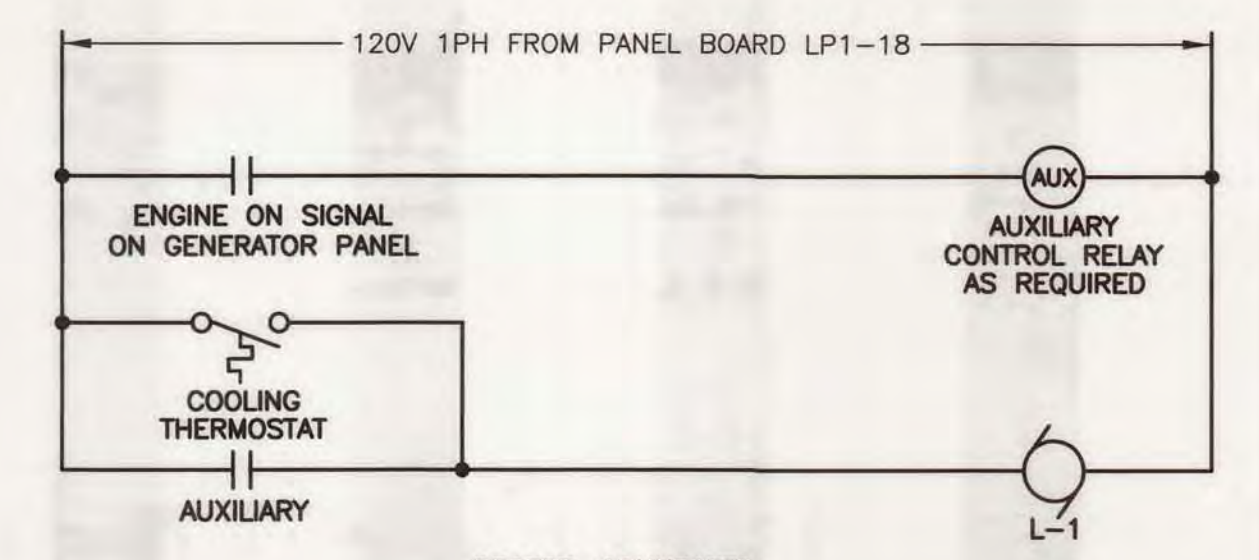


UNIT HEATERS UH1, UH2, UH3 CONTROL DIAGRAM

(SEE SINGLE LINE DIAGRAM FOR WIRING OF UH-4, 5)

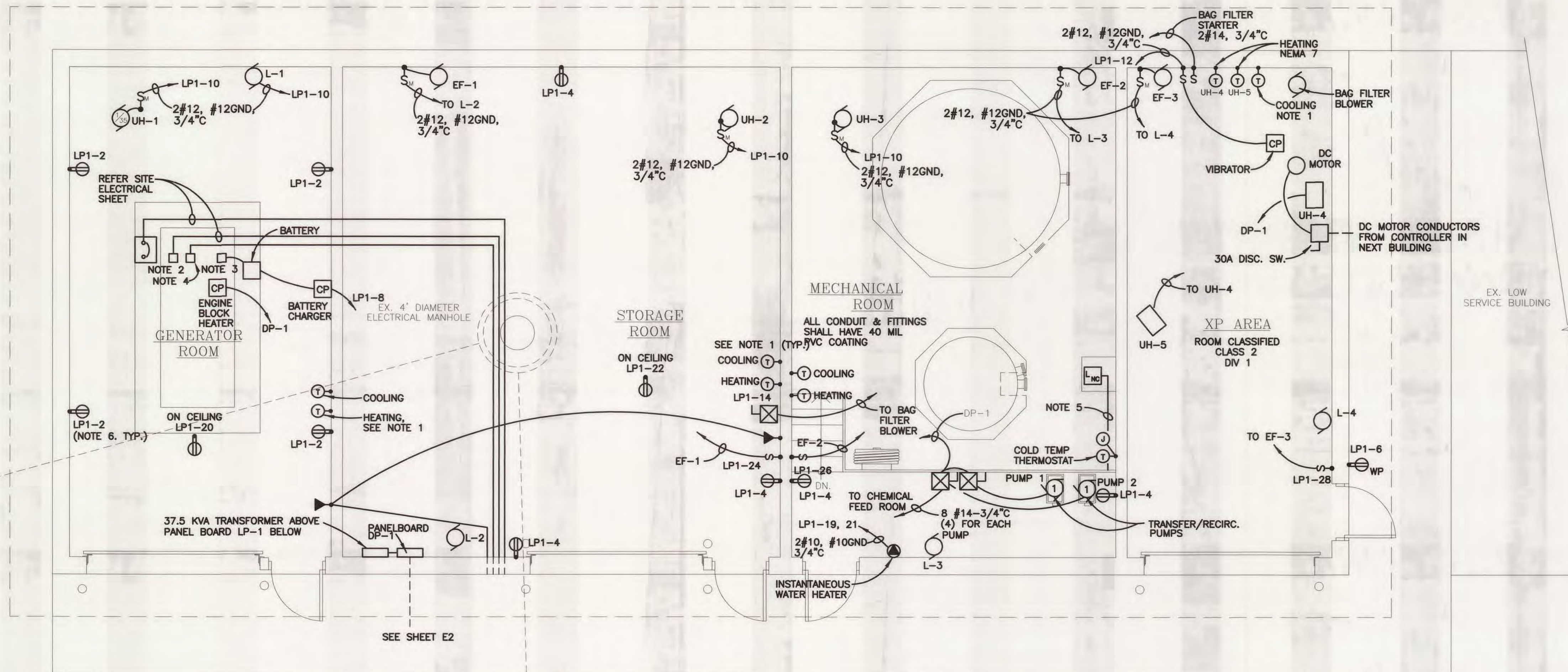


BAG FILTER BLOWER CONTROL DIAGRAM



GENERATOR ROOM VENTILATION CONTROL DIAGRAM

- NOTES:**
- THERMOSTATS SUPPLIED AND INSTALLED BY MECHANICAL TRADES. WIRING CONNECTIONS BY ELECTRICAL TRADES.
 - ENGINE START SIGNAL FROM AUTOMATIC TRANSFER SWITCH (ATS) 2-#12 IN 3/4" C. INCLUDE #12 GROUND.
 - ENGINE STARTING MOTOR - CONNECT TO BATTERY IN ACCORDANCE WITH ENGINE GENERATOR MANUFACTURER'S INSTRUCTIONS.
 - CONNECT TO ENGINE - GENERATOR ALARM ANNUNCIATOR FOR COMMON ALARM. 2-#14 CONDUCTORS: ENGINE START SIGNAL 2-#14 CONDUCTORS: CONNECT TO PLANT ALARM SYSTEM.
 - HIGH WATER ALARM: COLD TEMPERATURE THERMOSTAT - CONNECT TO PLANT ALARM SYSTEM 2-#14 CONDUCTORS EACH SIGNAL.
 - PROVIDE NUMBER 12 AWG WIRE FOR 20 AMPERE RECEPTACLE AND EQUIPMENT CIRCUITS UP TO 100 FEET. PROVIDE NUMBER 10 AWG WIRE FOR RUNS LONGER THAN 100 FEET. SIZE CONDUIT PER NEC.



CHEMICAL AND STORAGE BUILDING
SCALE: 1/4"=1'-0"



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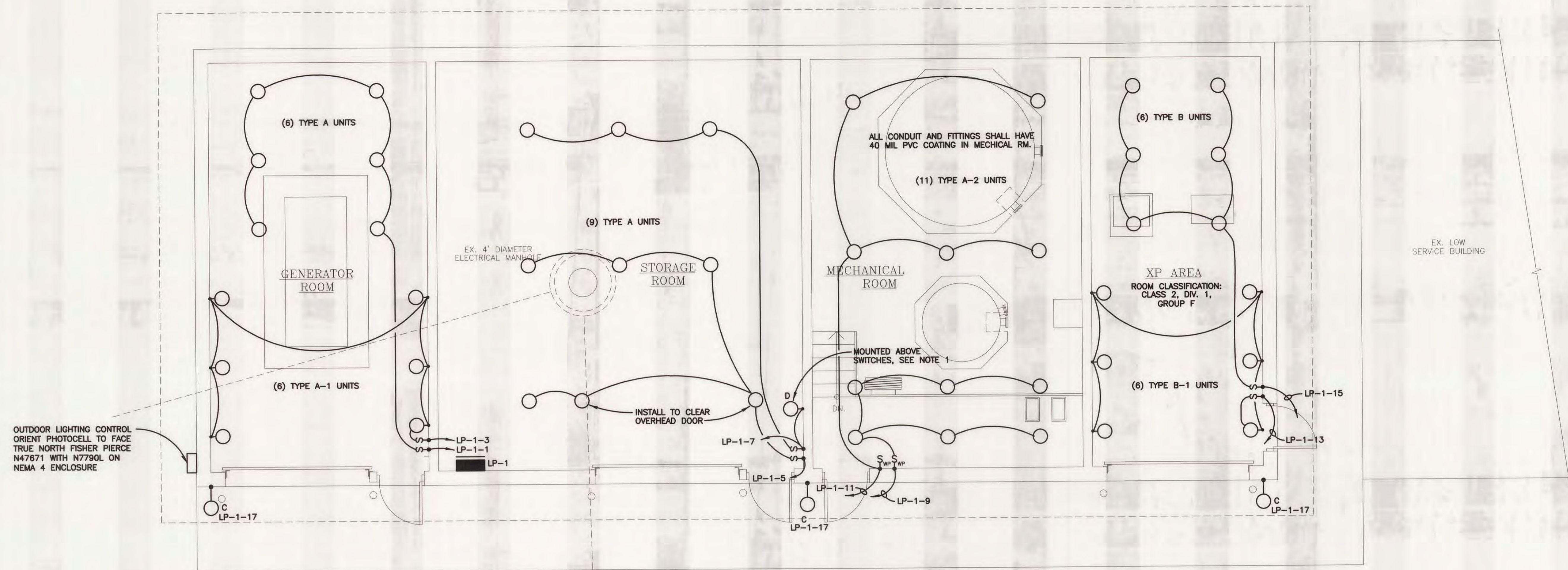
5555 Genesee Hills Parkway, S.E. P.O. Box 874 • Grand Rapids, MI 49508-0874 • (616) 942-9600

DESIGNED BY	DATE	BY	DATE
D.L.P.	JUN '98		
DRAWN BY	DATE	BY	DATE
D.C.T.	JUN '98		
CHECKED BY	DATE	BY	DATE
D.L.P.	JUN '98		
FILE NO.	DATE	BY	DATE
25012E3	DCT102998		
SCALE	1/4"=1'-0"		
DRAWING	1:48		
PLOT			
PROJECT	25012		

E3

SHEET NO.

1998 of 19
 SAFECO PRODUCTS • NEW HOPE, MINNESOTA
 REORDER BY PART NUMBER 6552



OUTDOOR LIGHTING CONTROL
 ORIENT PHOTOCELL TO FACE
 TRUE NORTH FISHER PIERCE
 N47671 WITH N7790L ON
 NEMA 4 ENCLOSURE

NOTE:
 1. CONNECT FIXTURES "D" ON SOURCE SIDE OF LIGHT
 SWITCH ARRANGED TO BE ON CONTINUOUSLY.



CHEMICAL AND STORAGE BUILDING
 SCALE: 1/4"=1'-0"

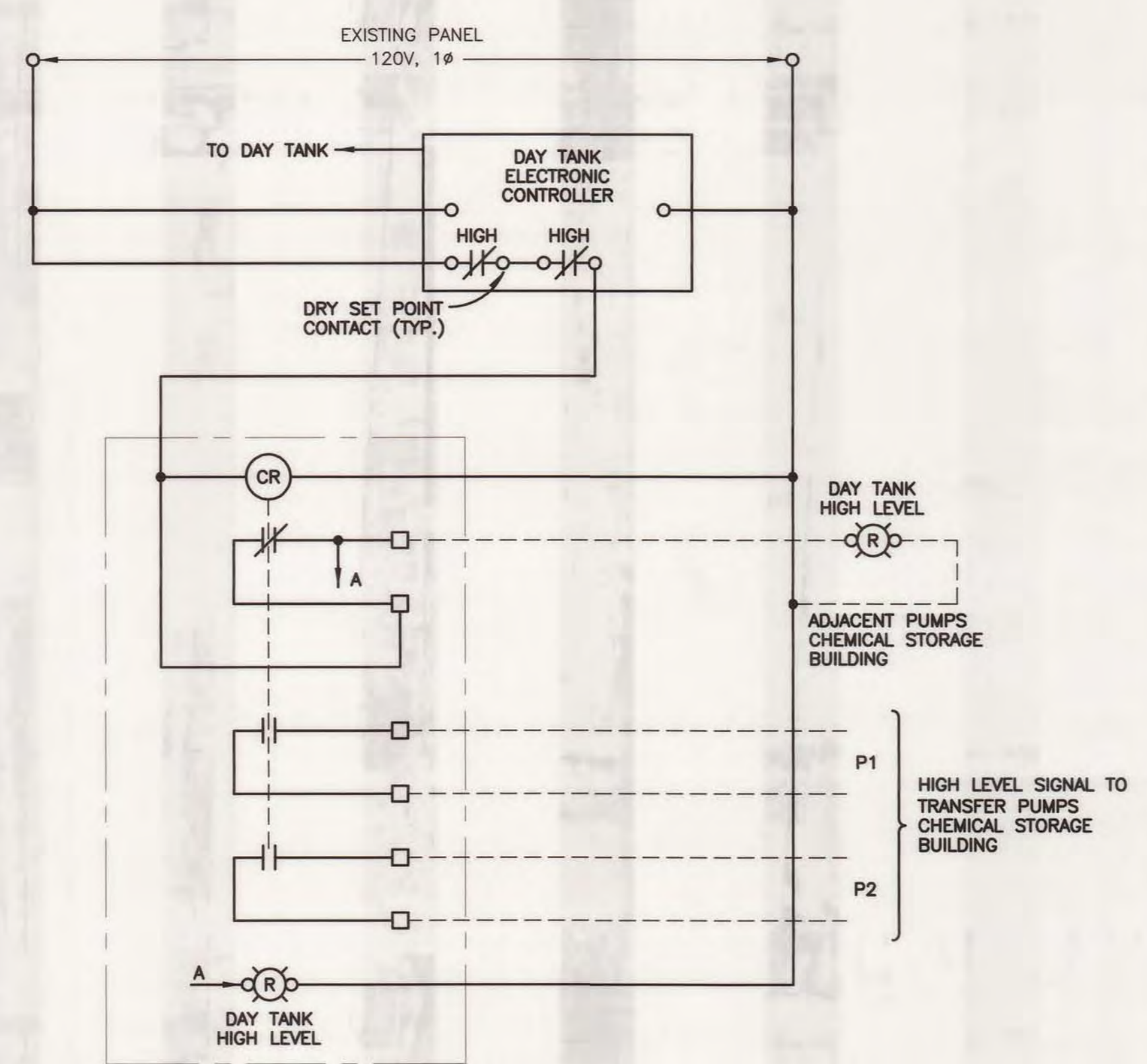
CIRCUIT		OUTLETS			DESCRIPTION	VOLT AMP.		DESCRIPTION	OUTLETS			CIRCUIT				
NO.	AMPS	POLES	VA	LTS.		REC.	OTHER		#A	#B	LTS.	REC.	OTHER	VA	POLES	AMPS
1	20	1	1800	6			2600		RECEPTACLE, GENERATOR ROOM	4			800	1	20	2
3	20	1	1800	6			2800		RECEPTACLE, STORAGE, MECH. RM	5			1000	1	20	4
5	20	1	1800	6			2000		RECEPTACLE, CARBON ROOM	1			200	1	20	6
7	20	1	950	4			2100		BATTERY CHARGER			1	1200	1	20	8
9	20	1	1800	6			2100		MECH. ROOM LIGHTS, PLATFORM			3	300	1	20	10
11	20	1	1500	5			1730		CARBON FEED VIBRATOR			1	230	1	20	12
13	20	1	1800	6			3400		CARBON BAG FILTER BLOWER			1	1600	1	20	14
15	20	1	1800	6			1800		CARBON ROOM LIGHTS							16
17	20	1	540	3			640		LOUVER L-1				960	1	20	18
19	30	2	2750			WATER HEATER	3750		RECEPTACLE, DOOR OPENER GEN. RM.				1000	1	20	20
21			2750				3750		RECEPTACLE, DOOR OPENER STOR. RM.				1000	1	20	22
23	20						300		EF-1 & L-2			2	300	1	20	24
25	20						300		EF-2 & L-3			2	300	1	20	26
27	20						600		EF-3 & L-4			2	600	1	20	28
29	20								SPARE							30
31	20								SPARE							32
33	20								SPARE							34
35	20								SPARE							36
37	20								SPARE							38
39	20								SPARE							40
41	20								SPARE							42
					TOTALS			14790	13080							

TYPE	DESCRIPTION	TOTAL W	LAMP		MOUNTING
			W	TYPE	
A	APPLETON V-51 ENCLOSED & GASKETED INCANDESCENT CAT #VXHA2050G WITH PORCELAIN ENAMEL REFLECTOR OR EQUAL CROUSE HINDS	300	300	INC PS-300 MED	IMMEDIATELY BELOW RAFTERS. PROVIDE AUX MOUNTING AS NECESSARY.
A-1	SIMILAR TO UNIT A EXCEPT FOR WALL MOUNTING. APPLETON JBW20G	300	300	INC PS-300 MED	11'-0" A.F.F.
A-2	SAME AS A EXCEPT COAT ALL EXPOSED METAL PARTS w/40 MIL PVC	300	300	INC PS-300 MED	IMMEDIATELY BELOW RAFTERS. PROVIDE AUX MOUNTING AS NECESSARY.
B	APPLETON A-51 INCANDESCENT EXPLOSION PROOF CAT #AC2050 WITH PORCELAIN ENAMEL OR EQUAL CROUSE HINDS	300	300	INC PS-300 MED	ON CEILING
B-1	SIMILAR TO UNIT B EXCEPT FOR WALL MOUNTING. APPLETON ALB-1050, LONG BRACKET	300	300	INC PS-300 MED	11'-0" A.F.F.
C	APPLETON WALLMASTER HIGH PRESSURE SODIUM WALL MOUNT FIXTURE CAT #G-WM334L-12RH	126	100	HPS	13'-0" ABOVE FOUNDATION
D	APPLETON MERCMASTER ENCLOSED AND GASKETED, WALL MOUNTED APPLETON MLWL352G1N1	50	35	HPS 35W	8'-0" A.F.F.

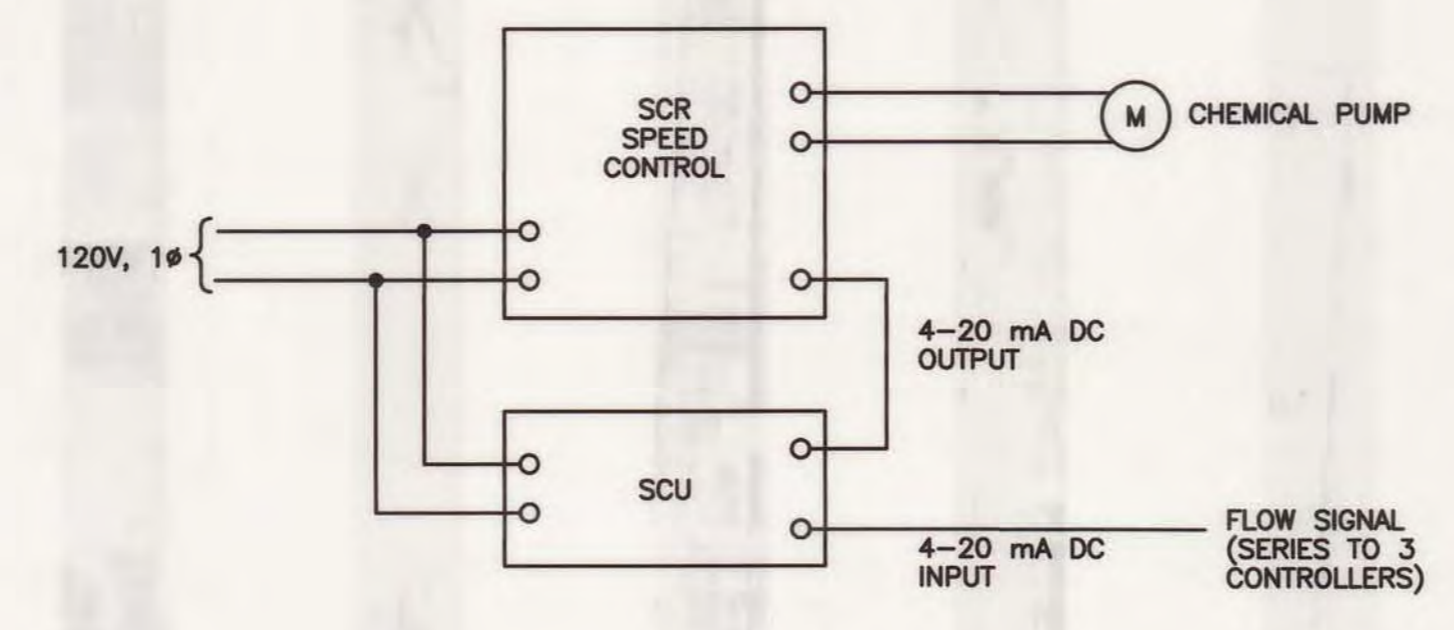
NO.	DATE	BY	REVISIONS

CITY OF ALPENA
 ALPENA COUNTY, MICHIGAN
 1998 WTP IMPROVEMENTS
 CHEMICAL AND STORAGE BUILDING
 LIGHTING PLAN

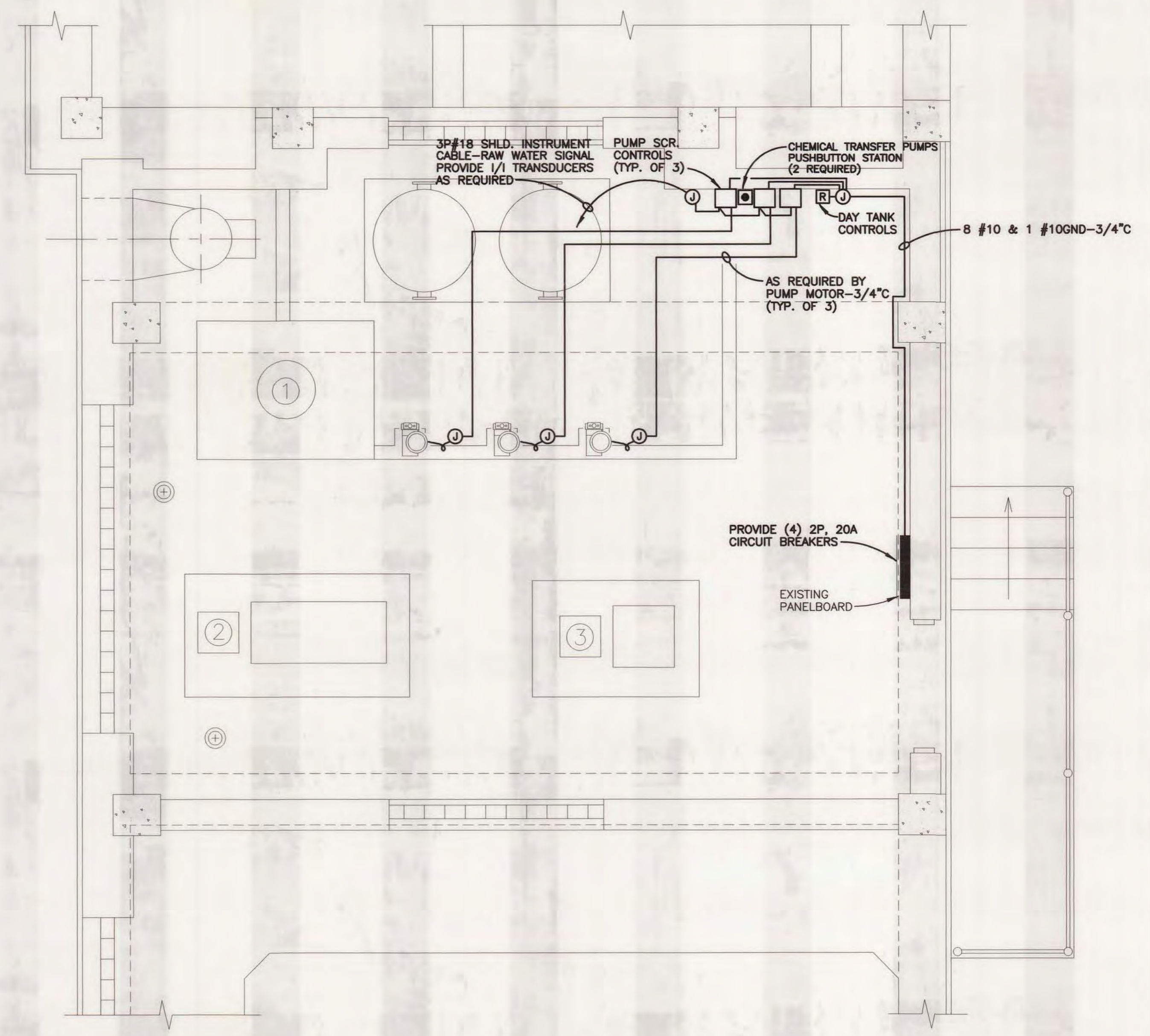
DESIGNED BY	DATE
D.L.P.	JUN. '98
DRAWN BY	DATE
D.C.T.	JUN. '98
CHECKED BY	DATE
D.L.P.	JUN. '98
FILE	EDIT
25012E4	DCT 02998
SCALE	1/4"=1'-0"
DRAWING	1:48
PLOT	
PROJECT	25012
E4	
SHEET NO.	



DAY TANK LEVEL CONTROL DIAGRAM



**CHEMICAL METERING PUMP
BLOCK CONTROL DIAGRAM
(TYPICAL OF 3)**



PROPOSED LAYOUT CHEMICAL FEED ROOM
SCALE: 1/2"=1'-0"

NO.	DATE	BY	REVISIONS
1	JUN 98	D.L.P.	ISSUED FOR CONSTRUCTION
2	JULY 98	D.C.T.	ISSUED FOR PERMIT
3	AUG 98	D.L.P.	REVISIONS

**CITY OF ALPENA
ALPENA COUNTY, MICHIGAN
1998 WTP IMPROVEMENTS
CHEMICAL FEED ROOM
ELECTRICAL PLAN**

DESIGNED BY	DATE
D.L.P.	JUN '98
DRAWN BY	DATE
D.C.T.	JUN '98
CHECKED BY	DATE
D.L.P.	JUN '98
FILE	EDIT
25012E5	DCT102998
SCALE	DRAWING
1/2"=1'-0"	1:24
PLOT	
PROJECT	25012