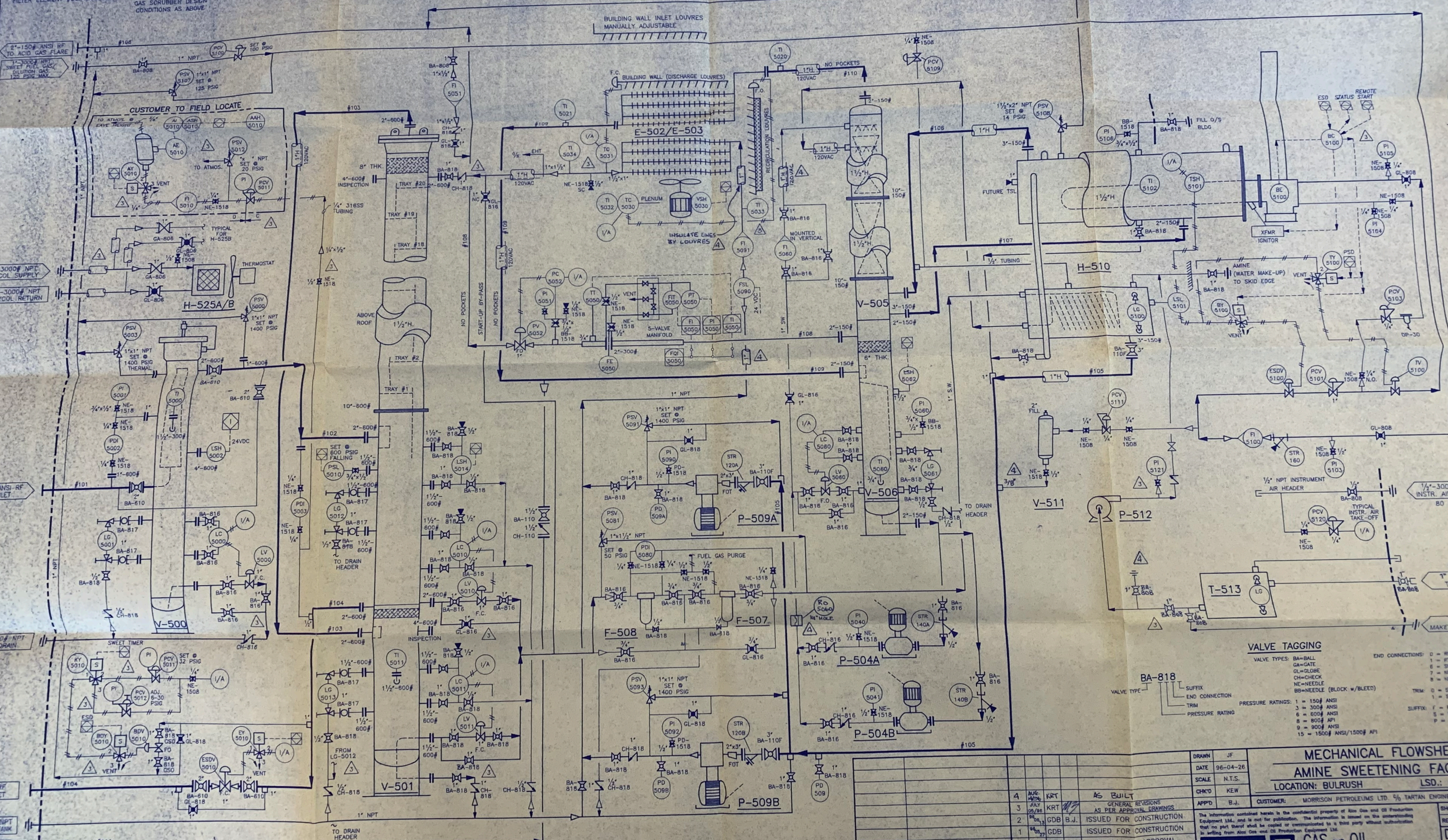


- V-500**  
INLET FILTER/SEPARATOR  
6 3/4" OD x 3'-8" SM/SM  
1400 PSIG DP @ -20/150°F  
1/2" CA VERTICAL C/W (1) FORDUS  
MEDIA 0.5 MICRON COALESCING  
FILTER ELEMENT #0CA36003V
- V-501**  
AMINE CONTACTOR  
10 1/2" OD x 45'-3 1/4" SM/SM  
1400 PSIG DP @ -20/150°F  
1800 RPM, 7.5 HP MOTOR  
1/4" CA VERTICAL  
20 BUBBLE CAP TRAYS  
INTEGRAL SWEET FUEL  
GAS SCRUBBER DESIGN  
CONDITIONS AS ABOVE
- P-509A/B**  
AMINE CHARGE PUMP  
UNION DX-5 DUPLEX  
3/8" BORE, 7.5 HP MOTOR  
36/60/460 VAC  
5.02 USGPM FLOWRATE
- E-502**  
AERIAL REFLUX CONDENSER  
230,000 BTU/HR DUTY  
14.9 PSIG DP @ -20/300°F + 1/8" CA  
AUTO LOUVRES, 7 1/2 HP 3/60/480  
5 HP, 1750 RPM, 60" FAN;  
36/60/480 VAC, X.P. MOTOR
- E-503**  
AERIAL AMINE COOLER  
209,000 BTU/HR DUTY  
14.9 PSIG DP @ -20/300°F + 1/8" CA  
10 3/4" OD x 47'-3 3/4" SM/SM (NON-CODE)  
14.9 PSIG DP @ -20/300°F + 1/8" CA  
(1) 20' SECTION SS PACKING  
(1) 15' SECTION SS PACKING  
INTEGRAL REFLUX ACCUMULATOR
- H-510**  
AMINE REBOILER  
450,000 BTU/HR DUTY  
14.9 PSIG DP @ -20/300°F + 1/8" CA  
36" OD x 10'-0" LG REBOILER  
30" OD x 8'-0" LG AMINE SURGE  
12 3/4" OD REMOVABLE FIRETUBE  
12 3/4" OD x 15'-0" HIGH STACK  
500,000 BTU/HR FLAME ARRESTOR
- P-504A/B**  
REFLUX PUMP  
DEANLINE 3/4" DL, 316SS  
2 1/2" LG, 1 1/2" HP, 3600 RPM  
36/480/60 Hz X.P. MOTOR
- F-508**  
AMINE PARTICULATE FILTER  
PECO #SS-A-3316  
9" W (4) ELEMENTS  
175 PSIG @ 250°F
- F-507**  
AMINE CHARCOAL FILTER  
PECO #11-1-720  
4" W (7) ELEMENTS  
175 PSIG @ 250°F
- V-511**  
ANTIFOAM SHOTPOT  
8 1/2" O.D. x 24" H.P.  
350 PSIG D.P.  
-20/200°F + 1/16" CA
- H-525A/B**  
GLYCOL HEATER  
RUFFNECK HP 3-16  
120/1/60 1/4 H.P.
- P-512**  
MAKE-UP PUMP  
BY OTHERS
- T-513**  
WATER TANK  
BY OTHERS



**VALVE TAGGING**

VALVE TYPES: BA-BALL, GA-GATE, GL-GLOBE, CH-CHECK, NE-NEEDLE, BB-NEEDLE (BLOCK w/BLEED)

END CONNECTIONS: 0 = RFF, 1 = RTG, 2 = SW, 3 = NPT x SW, 4 = NPT, 5 = TRIM, 6 = STANDARD, 7 = SOUR

PRESSURE RATINGS: 1 = 150# ANSI, 3 = 300# ANSI, 6 = 600# ANSI, 8 = 800# API, 9 = 900# ANSI, 15 = 1500# ANSI/1500# API

SUFFIX: F = FULL PORT, S = SWING CHECK, P = PISTON CHECK

**MECHANICAL FLOWSHEET**  
**AMINE SWEETENING FACILITY**  
LOCATION: BULRUSH LSD: c-53-F/

CUSTOMER: MORRISON PETROLEUMS LTD. 5% TARTAN ENGINEERING

DATE	96-04-26	SCALE	N.T.S.
DRWN	JF	CHKD	KEW
APPD	B.J.	REV. DATE	REV. BY

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**ALCO GAS AND OIL PRODUCTION EQUIPMENT LTD.**

SHOP ORDER: A-17040  
REVISION: DWG: A-

NO.	DATE	BY	DESCRIPTION
4	AUG 96	KRT	AS BUILT
3	JULY 96	KRT	GENERAL REVISIONS AS PER APPROVAL DRAWINGS
2	06/27	GDB B.J.	ISSUED FOR CONSTRUCTION
1	06/27	GDB	ISSUED FOR CONSTRUCTION
0		JF	ISSUED FOR APPROVAL

REFERENCE DRAWINGS: A-20348 LAYOUT/ASSEMBLY  
DWG. DESCRIPTION: REV. DATE: REV. BY: DESCRIPTION

**V-500**  
**INLET FILTER/SEPARATOR**

6 5/8" OD x 5'-8" SM/SM  
1400 PSIG DP @ -20/150°F  
1/8" CA, VERTICAL c/w (1) POROUS  
MEDIA 0.3 MICRON COALESCING  
FILTER ELEMENT #GC34360E03V

**V-501**  
**AMINE CONTACTOR**

10 3/4" OD x 45'-2 1/4" SM/SM  
1400 PSIG DP @ -20/150°F  
1/8" CA, VERTICAL  
20 BUBBLE CAP TRAYS  
c/w INTEGRAL SWEET FUEL  
GAS SCRUBBER DESIGN  
CONDITIONS AS ABOVE

**P-509A/B**  
**AMINE CHARGE PUMP**

UNION DX-5 DUPLEX  
1800 RPM, 7.5 HP MOTOR  
3ø/60/460 VAC.  
5.02 USGPM FLOWRATE

**E-502**  
**AERIAL REFLUX CONDENSER**

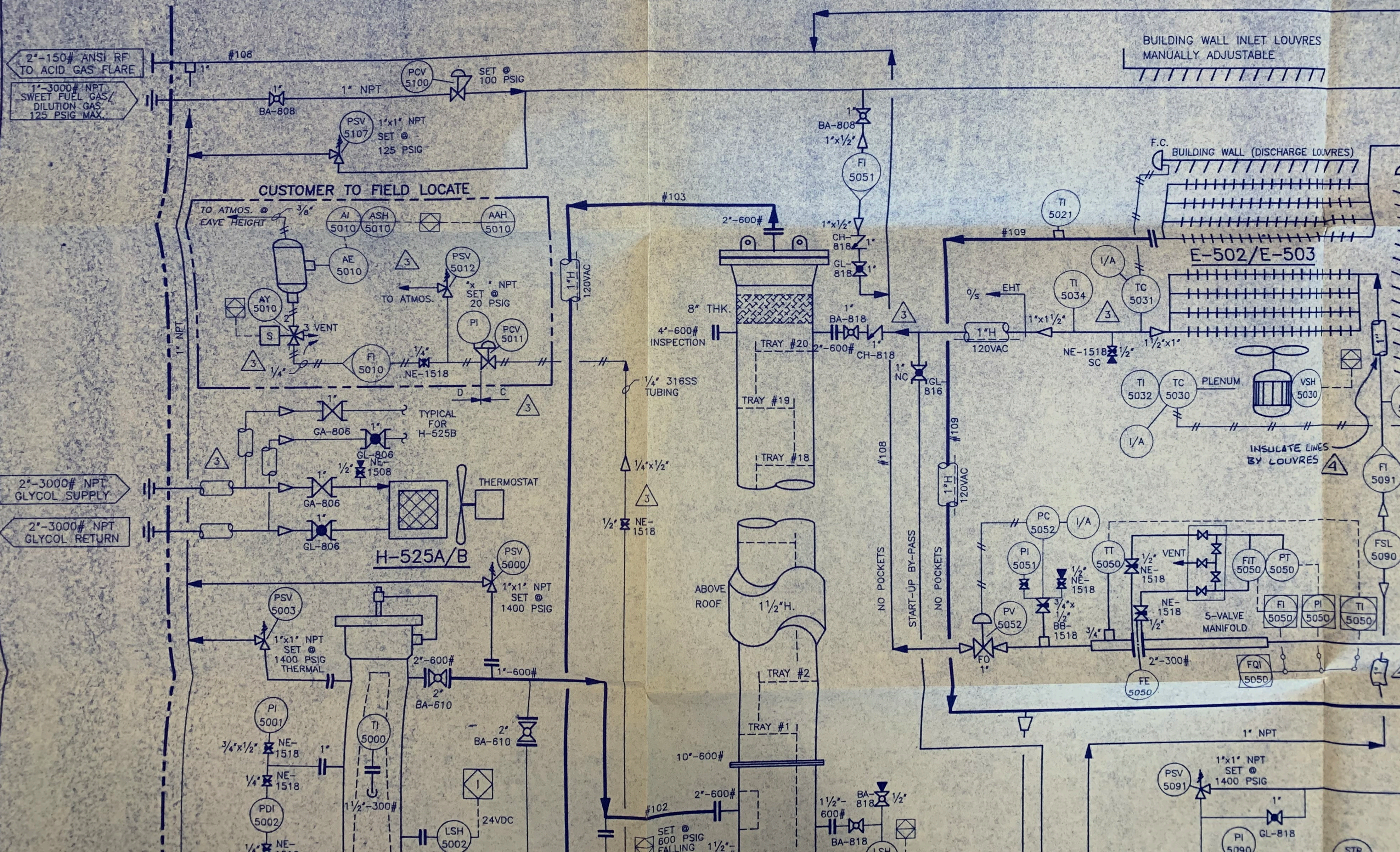
230,000 BTU/HR DUTY  
14.9 PSIG DP @ -20/300°F + 1/8" CA  
AUTO LOUVRES, 7 1/2 HP 3/60/480  
5 HP, 1750 RPM, 60" FAN,  
3ø/60/480 VAC. X.P. MOTOR

**E-503**  
**AERIAL AMINE COOLER**

209,000 BTU/HR DUTY  
1400 PSIG DP @ -20/300°F + 1/16" CA  
AUTO LOUVRES w/ ACTUATOR  
& AUTO RECIRCULATION

**V-505/V-506**  
**AMINE REGENERATOR/  
REFLUX ACCUMULATOR**

14.9 PSIG DP @ -20/300°F + 1/8" CA  
(1) 20' SECTION SS PACKING  
(1) 15' SECTION SS PACKING  
INTEGRAL REFLUX ACCUMULATOR



BUILDING WALL INLET LOUVRES  
MANUALLY ADJUSTABLE

F.C. BUILDING WALL (DISCHARGE LOUVRES)

E-502/E-503  
INSULATE LINES BY LOUVRES

NO POCKETS  
START-UP BY-PASS

5-VALVE MANIFOLD  
FSL 5090

SET @ 600 PSIG FALLING

PSV 5091 SET @ 1400 PSIG

**V-506**  
REGENERATOR/  
ACCUMULATOR

3 5/8" SM/SM (NON-CODE)  
@ -20/300°F + 1/8" CA  
SECTION SS PACKING  
SECTION SS PACKING  
REFLUX ACCUMULATOR

**H-510**  
AMINE REBOILER

450,000 BTU/HR DUTY  
14.9 PSIG DP @ -20/300°F + 1/8" CA  
36" OD x 10'-0" LG REBOILER  
30" OD x 8'-0" LG AMINE SURGE  
12 3/4" OD REMOVABLE FIRETUBE  
12 3/4" OD x 15'-0" HIGH STACK  
500,000 BTU/HR FLAME ARRESTOR

**P-504A/B**  
REFLUX PUMP

DEANLINE 3/4 DL, 316SS  
c/w 1 1/2 HP, 3600 RPM  
3φ/480/60 Hz X.P. MOTOR

**F-508**  
AMINE PARTICULATE  
FILTER

PECO #55-A-336  
9W (4) ELEMENTS  
175 PSIG @ 250°F

**F-507**  
AMINE CHARCOAL  
FILTER

PECO #11-1-720  
9W (1) ELEMENT  
175 PSIG @ 250°F

**V-511**  
ANTIFOAM SHOTPOT

8 5/8" O.D. x 24" 5/8"  
350 PSIG D.P.  
@ -20/200°F + 1/16" CA

**H-525A/B**  
GLYCOL HEATER

RUFFNECK HP 3-16  
120/1/60 1/4 H.P.

**P-512**  
MAKE-UP PUMP

BY OTHERS

**T-513**  
WATER TANK

BY OTHERS

BUILDING WALL INLET LOUVRES  
FULLY ADJUSTABLE

BUILDING WALL (DISCHARGE LOUVRES)

**E-502/E-503**

PLENUM

INSULATE LINES  
BY LOUVRES

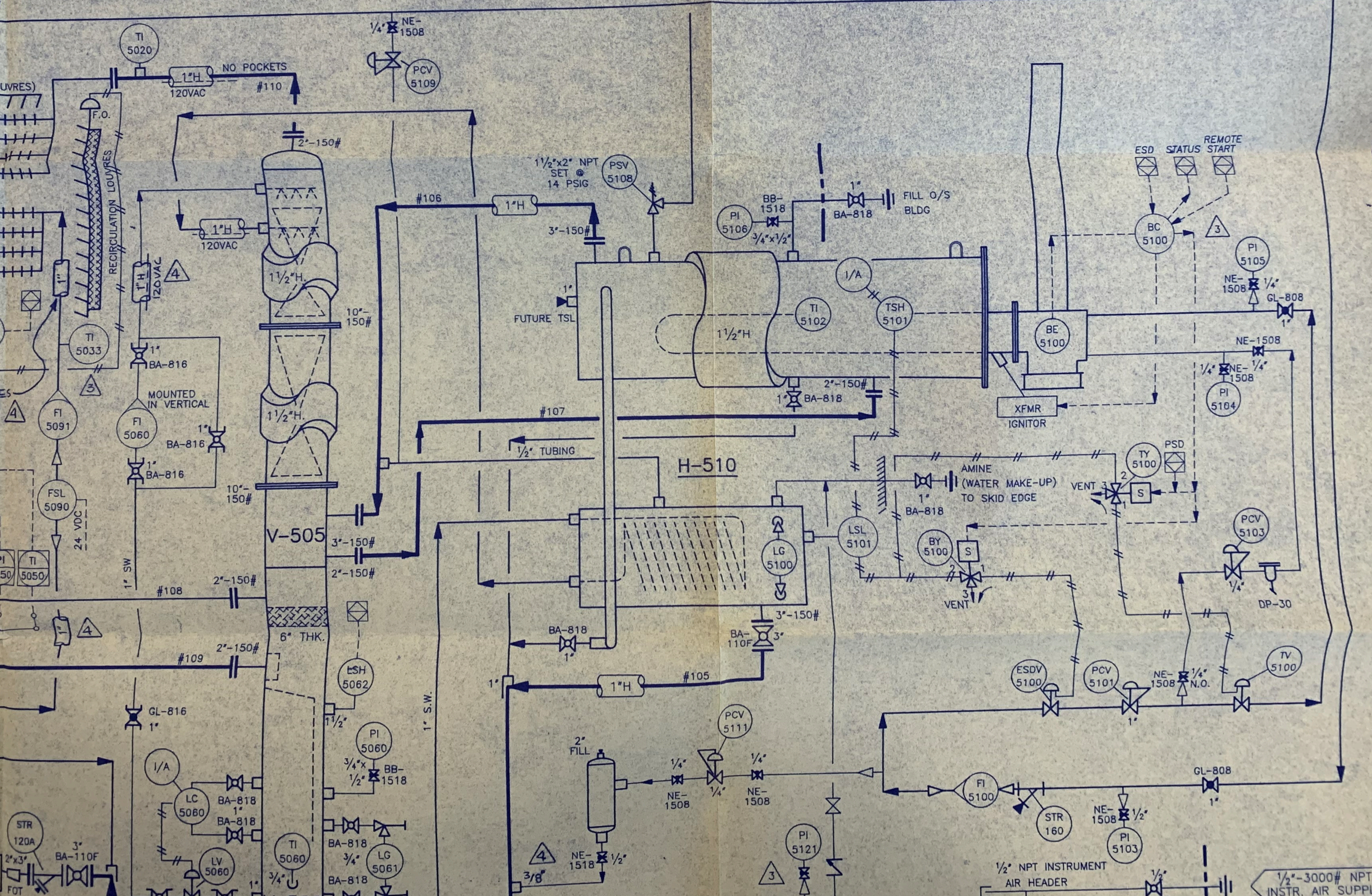
5-VALVE  
MANIFOLD

1" NPT

1"x1" NPT  
SET @  
1400 PSIG

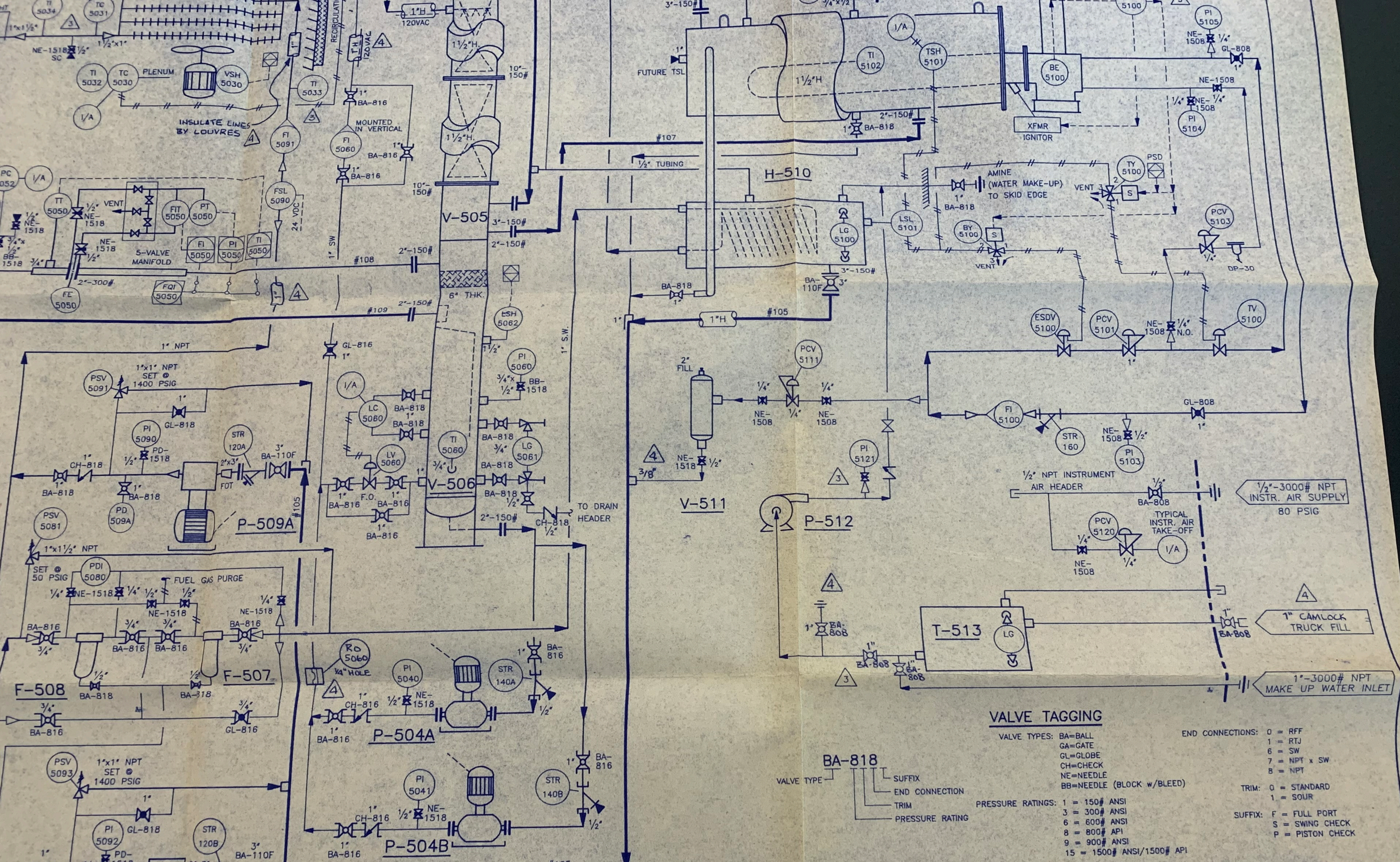
STR  
120A

STR  
160



1/2" NPT INSTRUMENT  
AIR HEADER

1/2"-3000# NPT  
INSTR. AIR SUPPLY  
80 PSIG



**VALVE TAGGING**

VALVE TYPES: BA=BALL, GA=GATE, GL=GLOBE, CH=CHECK, NE=NEEDLE, BB=NEEDLE (BLOCK w/BLEED)

END CONNECTIONS: 0 = RFF, 1 = RTJ, 6 = SW, 7 = NPT x SW, 8 = NPT

TRIM: 0 = STANDARD, 1 = SOUR

SUFFIX: F = FULL PORT, S = SWING CHECK, P = PISTON CHECK

PRESSURE RATINGS: 1 = 150# ANSI, 3 = 300# ANSI, 6 = 600# ANSI, 8 = 800# API, 9 = 900# ANSI, 15 = 1500# ANSI/1500# API

VALVE TYPE: BA-818

SUFFIX: SUFFIX

END CONNECTION: END CONNECTION

TRIM: TRIM

PRESSURE RATING: PRESSURE RATING

REV.	DATE	BY	APP'D BY	DESCRIPTION		
4	AUG. 14/96	KRT		AS BUILT		
3	JULY 05/96	KRT		GENERAL REVISIONS AS PER APPROVAL DRAWINGS		
2	96-08-13	GDB	B.J.	ISSUED FOR CONSTRUCTION		
1	96-05-27	GDB		ISSUED FOR CONSTRUCTION		
A-20348		LAYOUT/ASSEMBLY	JF	ISSUED FOR APPROVAL		
DWG.		DESCRIPTION	REV. DATE	REV. BY	APP'D BY	DESCRIPTION
		REFERENCE DRAWINGS				REVISIONS

**MECHANICAL FLOWSHEET**  
**AMINE SWEETENING FACILITY**  
 LOCATION: BULRUSH LSD.: c-53-F/94-A-16

DRAWN: JF  
 DATE: 96-04-26  
 SCALE: N.T.S.  
 CHK'D: KEW  
 APP'D: B.J.

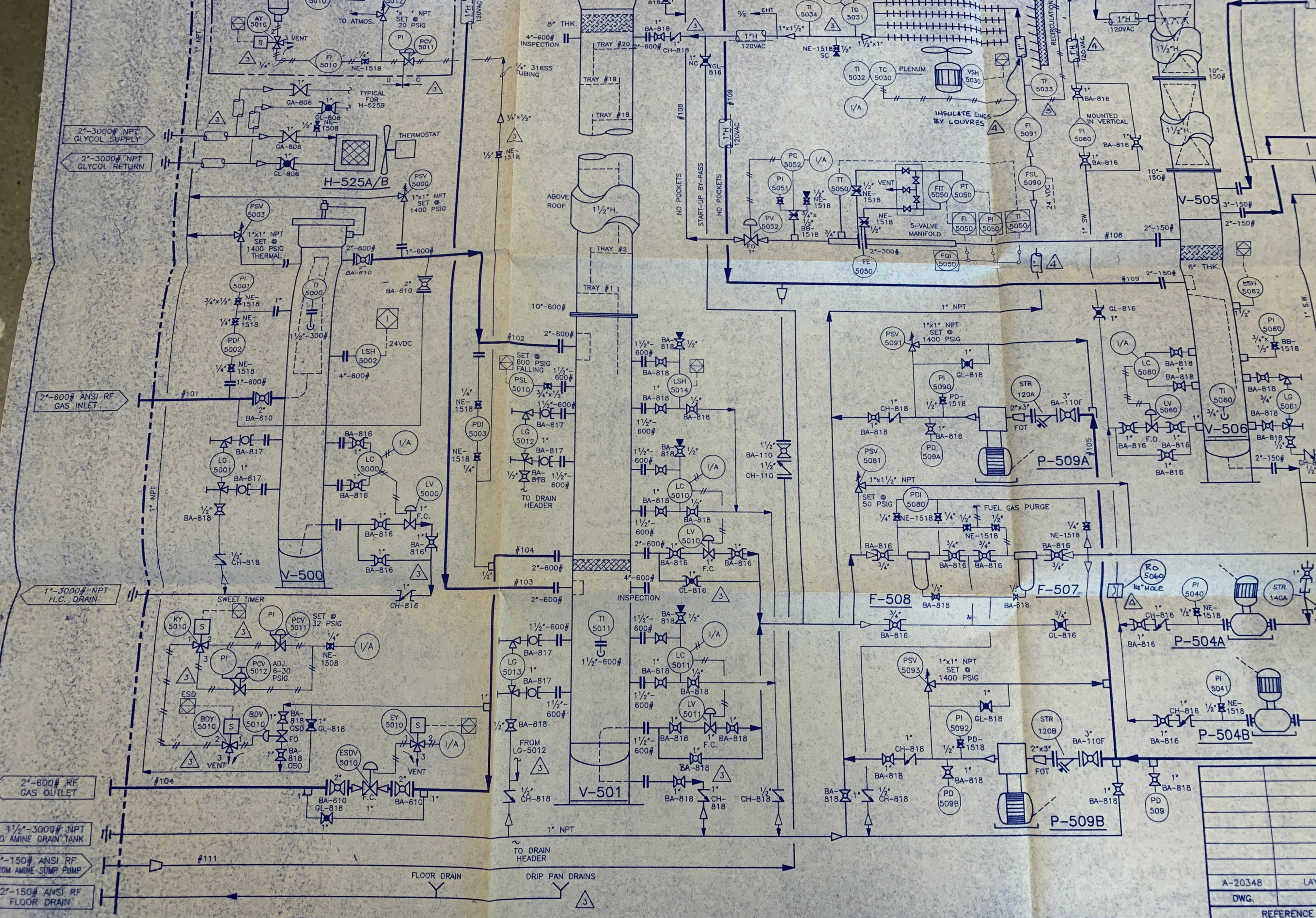
CUSTOMER: MORRISON PETROLEUMS LTD. % TARTAN ENGINEERING

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SHOP ORDER: 96c-5544-50  
 REVISION: 4  
 DWG: A-20347

**ALCO** GAS AND OIL PRODUCTION EQUIPMENT LTD

A-17040



A-20348	LAY
DWG.	
REFERENCE	