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VAPOR RECOVERY UNIT
PROJECT: 5252 (A/B/C/D/E)

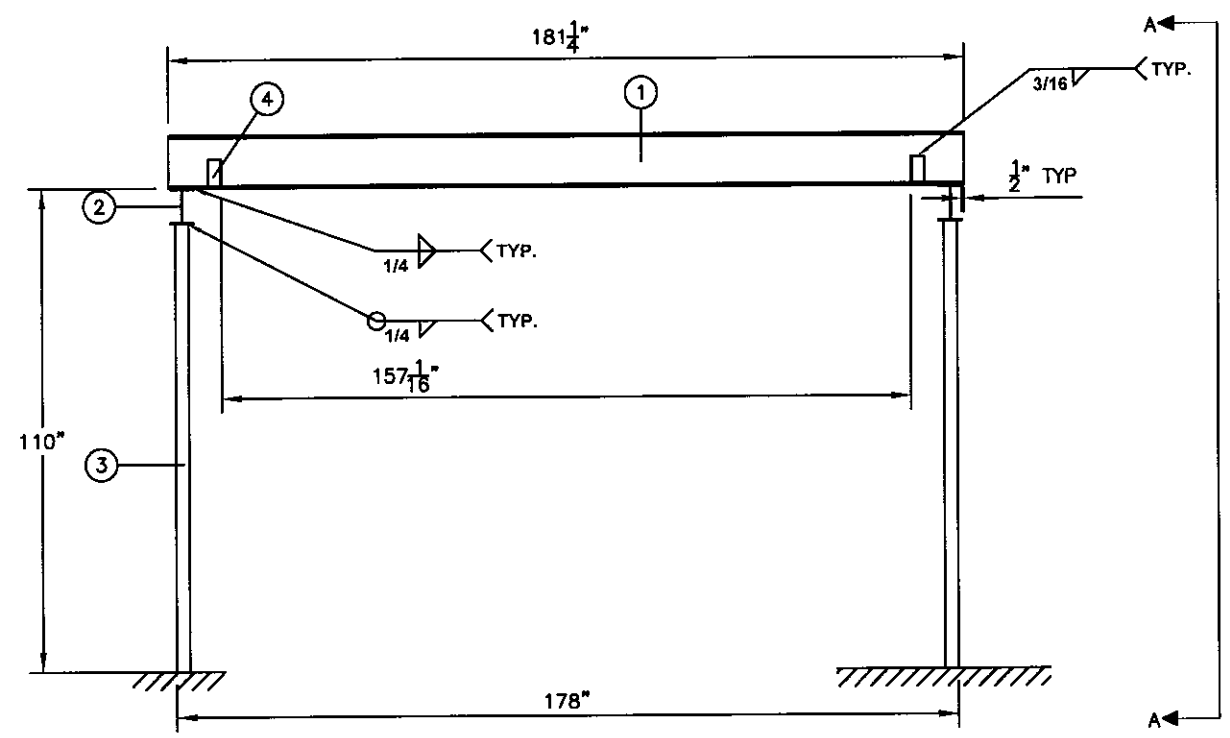
22/01/07	-	-	5252-300 (SHT 2/2)	2
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																1E	ML	ADDED DIMENSIONS	14/05/07
REF.	QTY.	FUNCTION	DESCRIPTION	CUT SIZE	REF.	QTY.	FUNCTION	DESCRIPTION	CUT SIZE	REF.	QTY.	FUNCTION	DESCRIPTION	CUT SIZE		1D	ML	MOVED DRIP UP, REVISED END ROLL AND ADD SEC. 6	11/05/07
A	2	MAIN RUNNERS	8"x4"x1/4" HSS	336"	Z	4	HALF COUPLING	1 1/2" NPT HALF COUPLING	-							1C	ML	ADD HALF COUPLINGS & PIPES	07/05/07
B	2	END CAPS	C8x18.75	336"	AA	2	DRAIN PIPE	1 1/2" NPT PIPE	3 1/4"							1B	ML	ADD PAD AND MOVE C CHANNEL	05/03/07
C	2	ROLL ENDS	4" SCH 80 PIPE	159 1/2"	BB	2	VANT PORT	1"-40 PIPE	2							1A	LQ	MOVED HSS, DELETED ITEM O	28/04/07
D	14	CROSS RUNNERS	8"x4"x1/4" HSS	56 1/4"	CC	4	END PLATE	3/16" PLATE 3 1/2 X 7 1/2	-							1	ML	ISSUED FOR CONSTRUCTION	19/04/07
E	6	CROSS RUNNERS	8"x4"x1/4" HSS	18 1/2"	DD	2	HALF COUPLING	1" NPT HALF COUPLING	-							2	ML	AS BUILT	21/08/07 SA
P	4	PIPE END CAPS	1/4" PLATE 6" DIA	-												1F	LQ	ADDED HSS ON LOWER SKID	15/12/07 SA
Q	4	END COVER	3/8" PLATE 8" X 24"	-												REV	BY	DESCRIPTION	00-WW-YY CHK'D

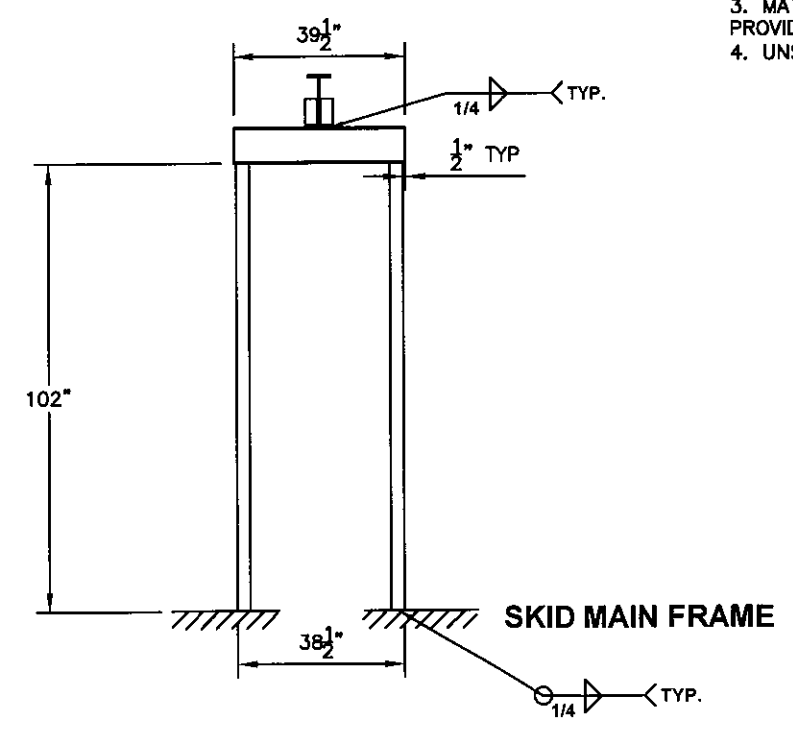
DETAIL FOR ITEM R														1E	ML	ADDED DIMENSIONS	14/05/07	
REF.	QTY.	FUNCTION	DESCRIPTION	CUT SIZE	REF.	QTY.	FUNCTION	DESCRIPTION	CUT SIZE	REF.	QTY.	FUNCTION	DESCRIPTION	CUT SIZE	10	ML	MOVED DRIP LIP, REVSIED END ROLL & ADD SEC. 6.	11/05/07
F	1	LOWER SKID	SEE SHT 2/2	-	M	2	CRANE SUPPORT	6"x4"x3/16" HSS	24"						1C	ML	ADD HALF COUPLINGS & PIPES	07/05/07
G	5	TOP RUNNERS	6"x4"x3/16" HSS	18 1/2"	N	2	CRANE SUPPORT	6"x4"x3/16" HSS	12 5/8"	U	1	DECK PLATE	1/4"CHECKER PLATE143 1/2 X191 7/8	-	1B	ML	ADD PAD AND MOVE C CHANNEL	05/03/07
H	2	TOP RUNNERS	6"x4"x3/16" HSS	136						V	2	TANK	12" X 12" X 6" X 1/4" WALL	-	1A	LQ	MOVED HSS, DELETED ITEM O	28/04/07
I	2	TOP RUNNERS	6"x4"x3/16" HSS	192 3/8"						W	1	DRIP LIP	L 3 X 3 X 1/4 X 669 1/2 LG	2-143 1/2 2-191"	1	ML	ISSUED FOR CONSTRUCTION	18/04/07
J	2	TOP RUNNERS	6"x4"x3/16" HSS	184 3/8"						X	2	FLANGE	2" DRAIN PIPE THREADED	-	2	ML	AS BUILT	21/08/07
K	10	CROSS RUNNERS	6"x4"x3/16" HSS	54 3/4"	R	4	VESSEL PAD	1" PLATE 6" X 8 1/2"	-	Y	1	PAD	1" PLATE 12" X 12"	-	1F	LQ	ADDED HSS ON LOWER SKID	15/05/07
L	4	CROSS RUNNERS	C4x7.25	54 3/4"	S	4	ENGINE PAD	1" PLATE 4 1/2" X 4 1/2"	-	EE	4	COLUMN	3 1/2 X 3 1/2 X 1/4" HSS	9"	REV	BY	DESCRIPTION	DO-MM-YY CHK

- LOAD CONDITIONS
- 1. MAXIMUM LIFTING LOAD 2 TONS
 - 2. FOR INFREQUENT MAINTENANCE AND REPLACEMENT SERVICES ONLY
 - 3. MANUALLY DRIVEN TROLLEY
 - 4. ALL LOADING MUST BE MOVED SLOWLY AND DYNAMIC LOADING CAN NOT BE APPLIED
 - 5. INSIDE USE ONLY

- GENERAL NOTES
- 1. S BEAM MUST BE STRAIGHT AND FREE FROM MILL SCALES, RUST AND SURFACE IMPERFECTIONS.
 - 2. VERTICAL COLUMNS MUST BE WELDED TO THE MAIN FRAME OF THE SKID
 - 3. MATERIAL MUST CONFORM TO THE SPEC PROVIDED IN THE TABLE.
 - 4. UNSPECIFIED WELD TO BE 1/4" FILLET




FRONT ELEVATION VIEW



VIEW A

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REF.	QTY.	FUNCTION	DESCRIPTION	CUT SIZE	REF.	QTY.	FUNCTION	DESCRIPTION	CUT SIZE						
1	1	MAIN BEAM	S12X31.8, CSA G40.21, GRADE 50W	181 1/4"											
2	2	SUPPORT BEAM	W8X18, CSA G40.21, GRADE 50W	39 1/2"											
3	4	COLUMN	3"x3"x1/4" HSS, G40.21, 50W	102"						2	LQ	AS BUILT	21/08/07	SA	
4	4	BLOCKER	L3"x3"x1/4", G40.21, 44W	6"						1A	LQ	UPDATED CRANE LENGTH	26/04/07	GK	
										1	LQ	ISSUED FOR CONSTRUCTION	25/04/07	GK	
										0	LQ	ISSUED FOR REVIEW	25/04/07	GK	
										REV	BY	DESCRIPTION	DD-MM-YY	CHK'D	

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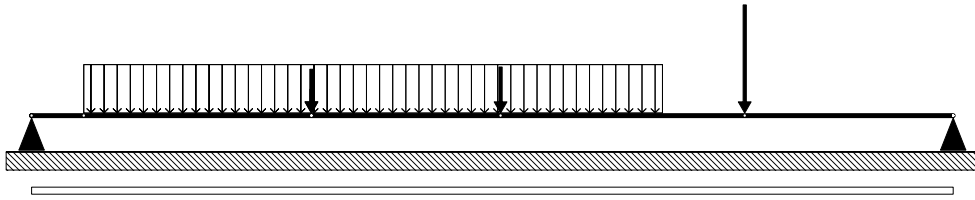
VAPOR RECOVERY UNIT
PROJECT: 5252 (A/B/C/D/E)

CRANE

REV	DATE	BY	CHK'D	DATE	DESCRIPTION
	25/04/07	-	-		

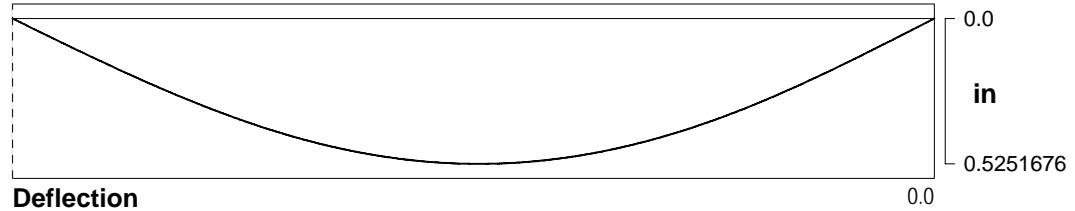
5252-3012

5252-300_skid_calc_base_runners-0



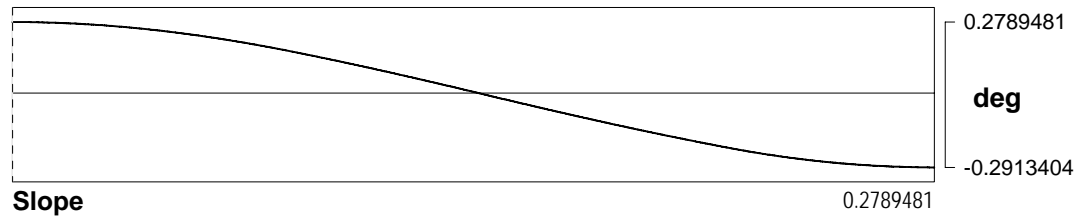
Beam Length: 336.0 in

Location: 0.0 in



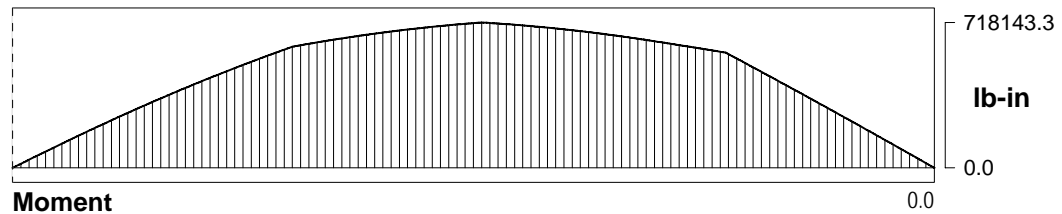
Deflection

0.0



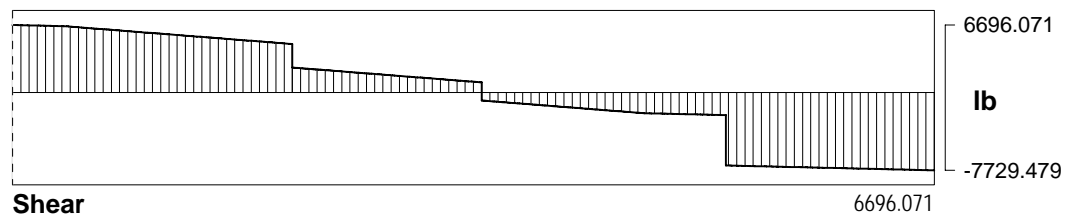
Slope

0.2789481



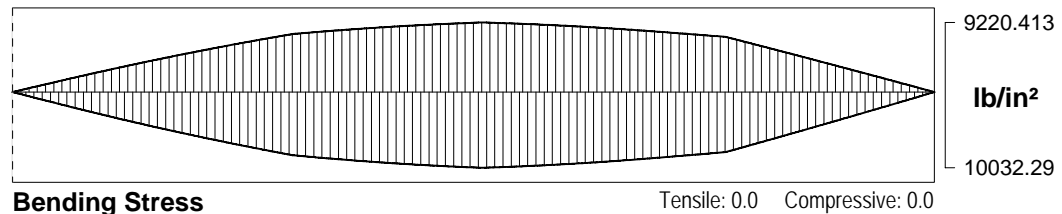
Moment

0.0



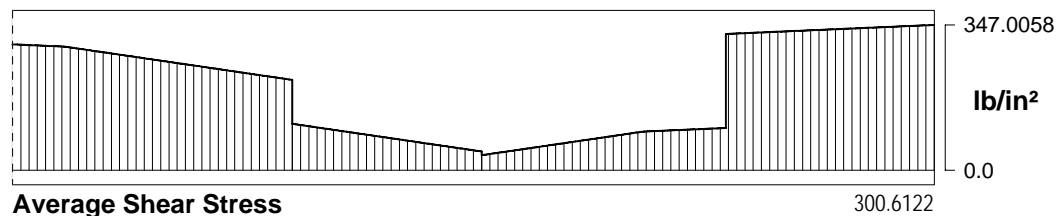
Shear

6696.071



Bending Stress

Tensile: 0.0 Compressive: 0.0



Average Shear Stress

300.6122

** 5252-300_skid_calc_base_runners-0 *****

Analysis based on worst case, where the two (2) skid base runners support all substantial loads (over 400 lbs.).

BEAM LENGTH = 336.0 in

MATERIAL PROPERTIES

Base Runner:
Modulus of elasticity = 30000000.0 lb/in²
Stress limit = 30000.0 lb/in²
Density = 0.284 lb/in³

CROSS-SECTION PROPERTIES

Base Runners (2):
Moment of inertia = 530.6567 in⁴
Top height = 7.41315 in
Bottom height = 6.813228 in
Area = 22.27478 in²

EXTERNAL CONCENTRATED FORCES

V-135 (16"): 650.0 lb at 102.0 in
K-120: 1685.0 lb at 102.0 in
Engine: 1800.0 lb at 171.0 in
Cooler: 5000.0 lb at 260.0 in

UNIFORMLY DISTRIBUTED FORCES

Piping/Electrical: 15.0 lb/in at 19.0 over 211.0 in

LIMITS - ABSOLUTE

Design Criteria:
Tensile = 14000.0 lb/in²
Compressive = 14000.0 lb/in²
Shear = 10000.0 lb/in²
Deflection = 0.75 in

SELF WEIGHT LOADS ***

Load #1: 6.326039 lb/in at 0.0 over 336.0 in
Total self weight = 2125.549 lb

SUPPORT REACTIONS ***

Rollbar 1: Simple at 0.0 in
Reaction Force = -6696.071 lb

Rollbar 2: Simple at 336.0 in
Reaction Force = -7729.479 lb

MAXIMUM DEFLECTION ***

0.5251676 in at 169.9076 in
Safety Factor = 1.428
Safety Margin = 0.2248323 in

MAXIMUM BENDING MOMENT ***

718143.3 lb-in at 171.0 in

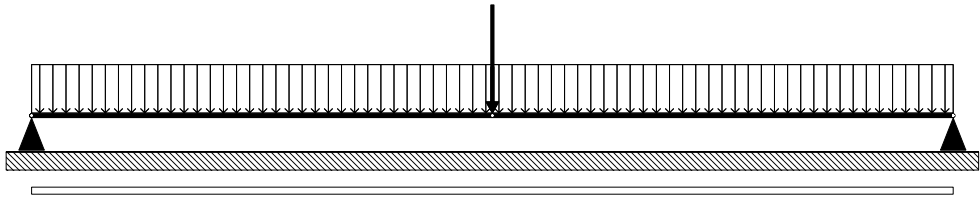
MAXIMUM SHEAR FORCE ***

-7729.479 lb at 336.0 in

MAXIMUM STRESS ***

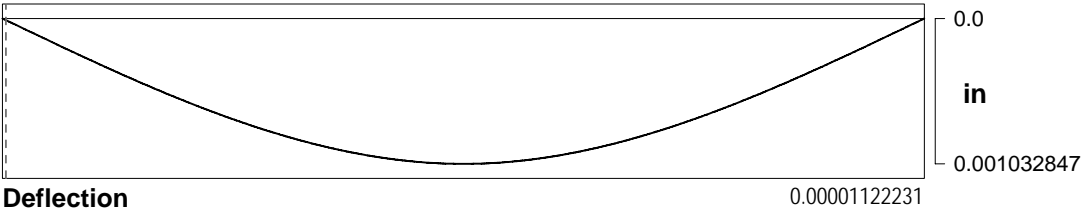
Tensile	= 9220.413 lb/in ²	Safety Factor = 1.518
Compressive	= 10032.29 lb/in ²	Safety Factor = 1.395
Shear (Avg)	= 347.0058 lb/in ²	Safety Factor = 28.818

5252-300 Skid Calc Cross Runners-0

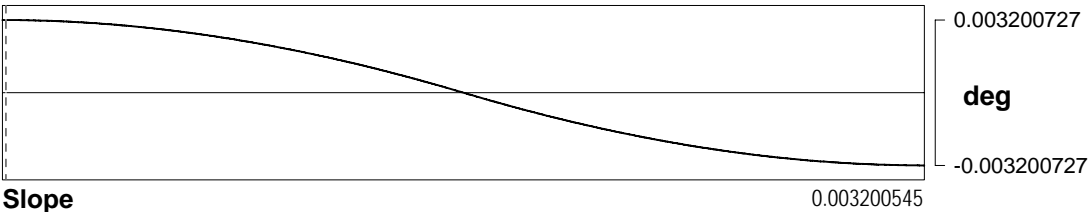


Beam Length: 56.25 in

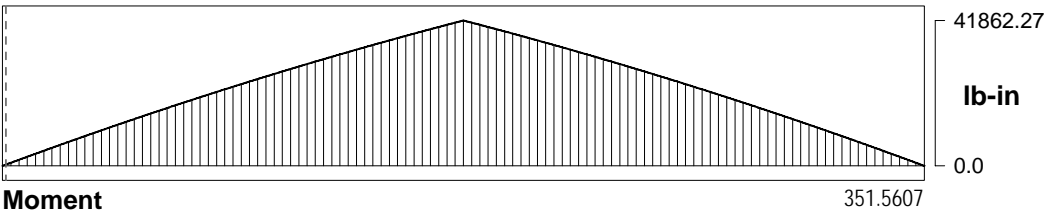
Location: 0.2008929 in



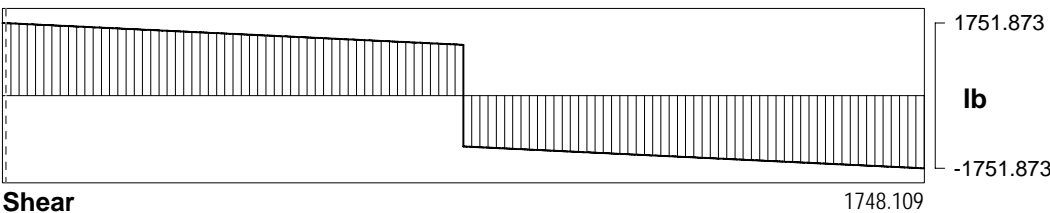
Deflection



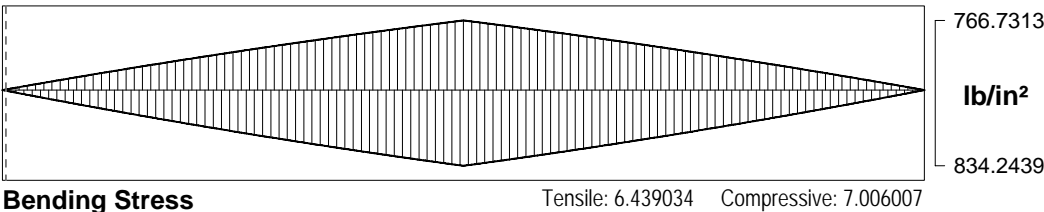
Slope



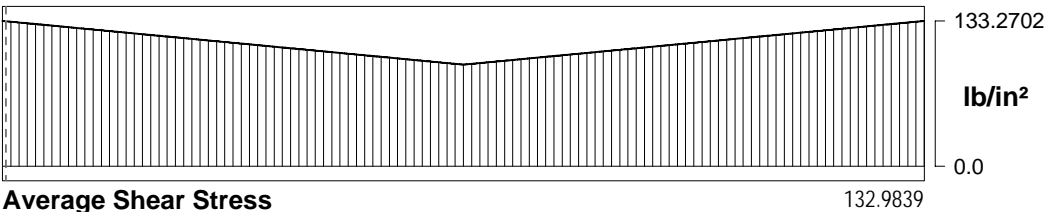
Moment



Shear



Bending Stress



Average Shear Stress

** 5252-300 Skid Calc Cross Runners-0 *****

Analysis based on worst case, where the skid cross runners support all substantial loads (over 400 lbs.).

BEAM LENGTH = 56.25 in

MATERIAL PROPERTIES

Base Runner:
Modulus of elasticity = 30000000.0 lb/in²
Stress limit = 30000.0 lb/in²
Density = 0.284 lb/in³

CROSS-SECTION PROPERTIES

Cross Runner:
Moment of inertia = 371.9911 in⁴
Top height = 7.41315 in
Bottom height = 6.813228 in
Area = 13.14527 in²

EXTERNAL CONCENTRATED FORCES

V-135 (16"): 650.0 lb at 28.125 in
Motor: 1800.0 lb at 28.125 in

UNIFORMLY DISTRIBUTED FORCES

Piping/Electrical: 15.0 lb/in at 0.0 over 56.25 in

LIMITS - ABSOLUTE

Design Criteria:
Tensile = 14000.0 lb/in²
Compressive = 14000.0 lb/in²
Shear = 10000.0 lb/in²
Deflection = 0.75 in

SELF WEIGHT LOADS ***

Load #1: 3.733256 lb/in at 0.0 over 56.25 in
Total self weight = 209.9956 lb

SUPPORT REACTIONS ***

Rollbar 1: Simple at 0.0 in
Reaction Force = -1751.873 lb

Rollbar 2: Simple at 56.25 in
Reaction Force = -1751.873 lb

MAXIMUM DEFLECTION ***

0.001032847 in at 28.125 in
Safety Factor = 726.148
Safety Margin = 0.7489672 in

MAXIMUM BENDING MOMENT ***

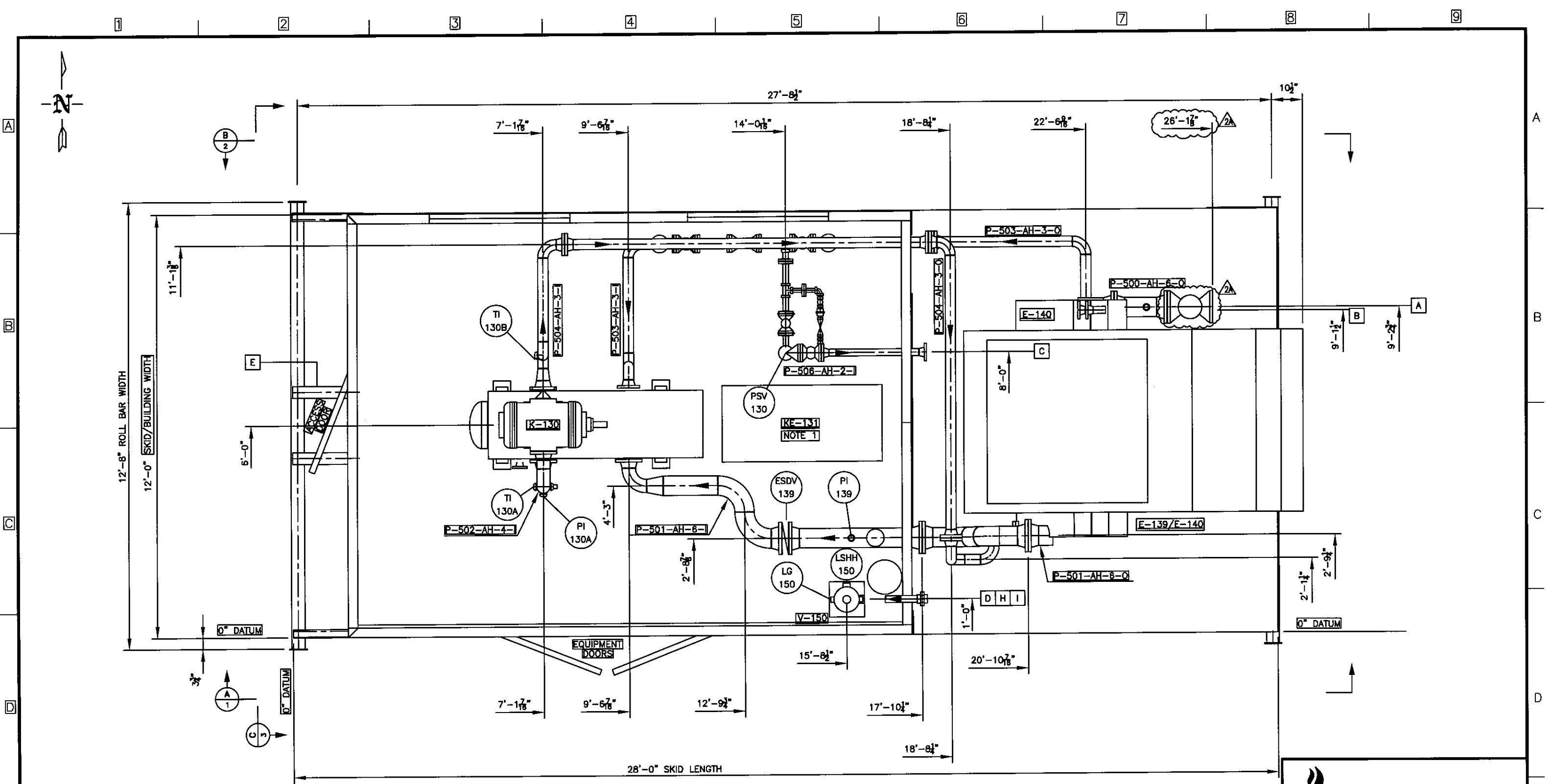
41862.27 lb-in at 28.125 in

MAXIMUM SHEAR FORCE ***

1751.873 lb at 0.0 in
-1751.873 lb at 56.25 in

MAXIMUM STRESS ***

Tensile	= 766.7313 lb/in ²	Safety Factor = 18.259
Compressive	= 834.2439 lb/in ²	Safety Factor = 16.782
Shear (Avg)	= 133.2702 lb/in ²	Safety Factor = 75.036



PLAN
SCALE 3/8"=1'-0"

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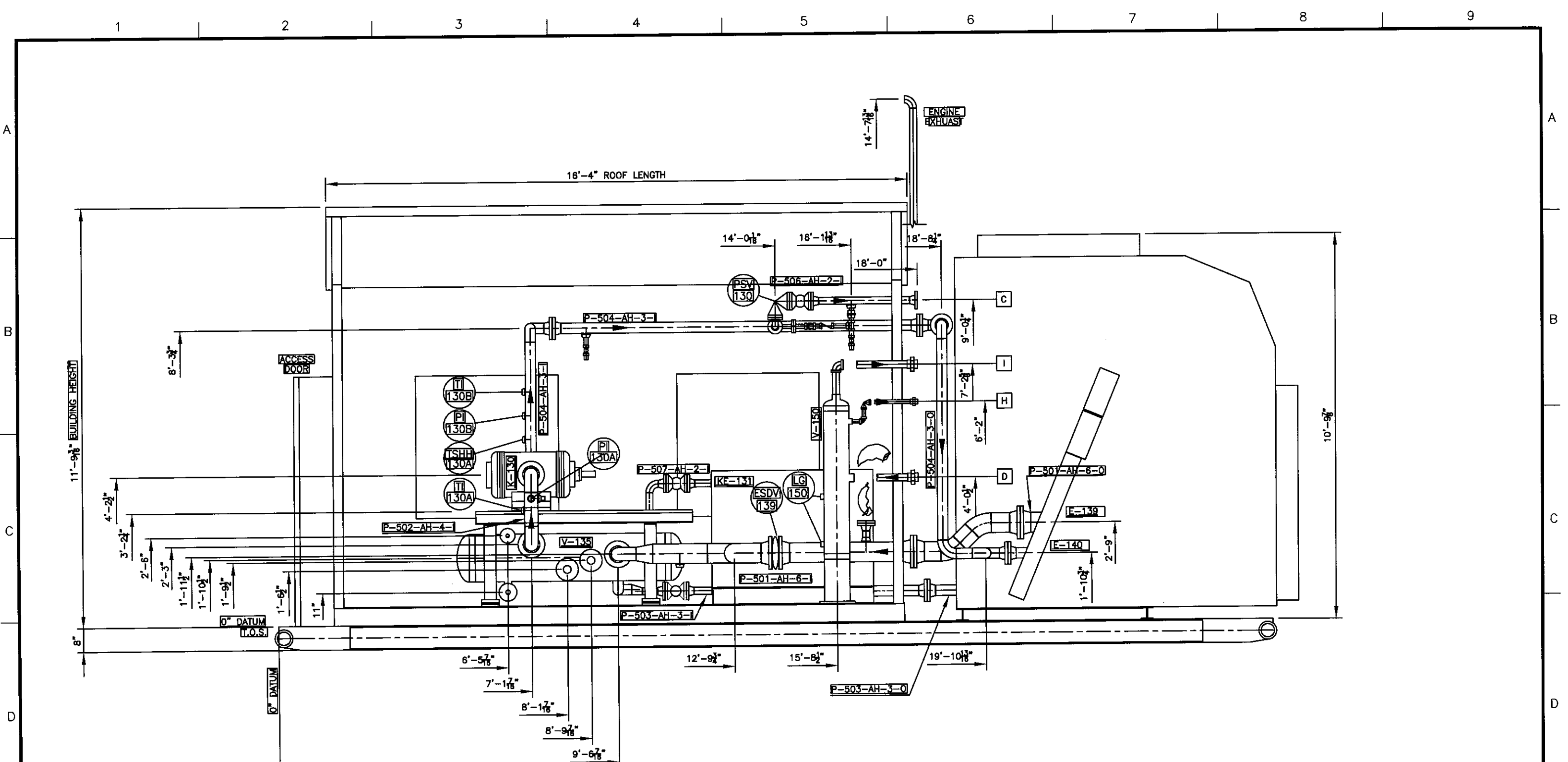


HUSKY ENERGY
c/o IMV PROJECTS INC.
ROTARY VANE VAPOR RECOVERY COMPRESSOR
PROJECT: 5252-A
LOCATION: L.S.D. 11-38-49-20 W3M

GENERAL ARRANGEMENT

NOTES
1) DRIVER MAY NOT BE POSITIONED AS PRESENTED.

REF.	FUNCTION	SIZE RATING	PROV.	PRES.	TEMP.	REF.	FUNCTION	SIZE RATING	PROV.	PRES.	TEMP.	1C	LQ	REVISED MOTOR POSITION, SPOOLS	03/08/07	SA
A	GAS INLET	6" CL150 RF										1B	LQ	REVISED PSV HEADER ELEVATION	30/07/07	SA
B	GAS OUTLET	3" CL150 RF										1A	LQ	REVISED COMP OUTLET / PEDESTAL	26/08/07	SA
C	RELIEF OUTLET	2" CL150 RF										1	LQ	ISSUED FOR CONSTRUCTION	15/08/07	SA
D	FUEL GAS INLET	2" CL3000 NPT										2A	LQ	AS BUILT	29/08/07	SA
E	DRAIN TANK OUTLET	1" CL3000 NPT										2	LQ	REVISED CONSTRUCTION	21/08/07	SA
H	FUEL GAS SCRUBBER RELIEF	1" CL3000 NPT										1D	LQ	REVISED RELIEF OUTLET	14/08/07	SA
I	FUEL GAS OUTLET	2" CL3000 NPT										REV	BY	DESCRIPTION	DD-MM-YY	CHK'D



SECTION A
SCALE 3/8" = 1'-0"

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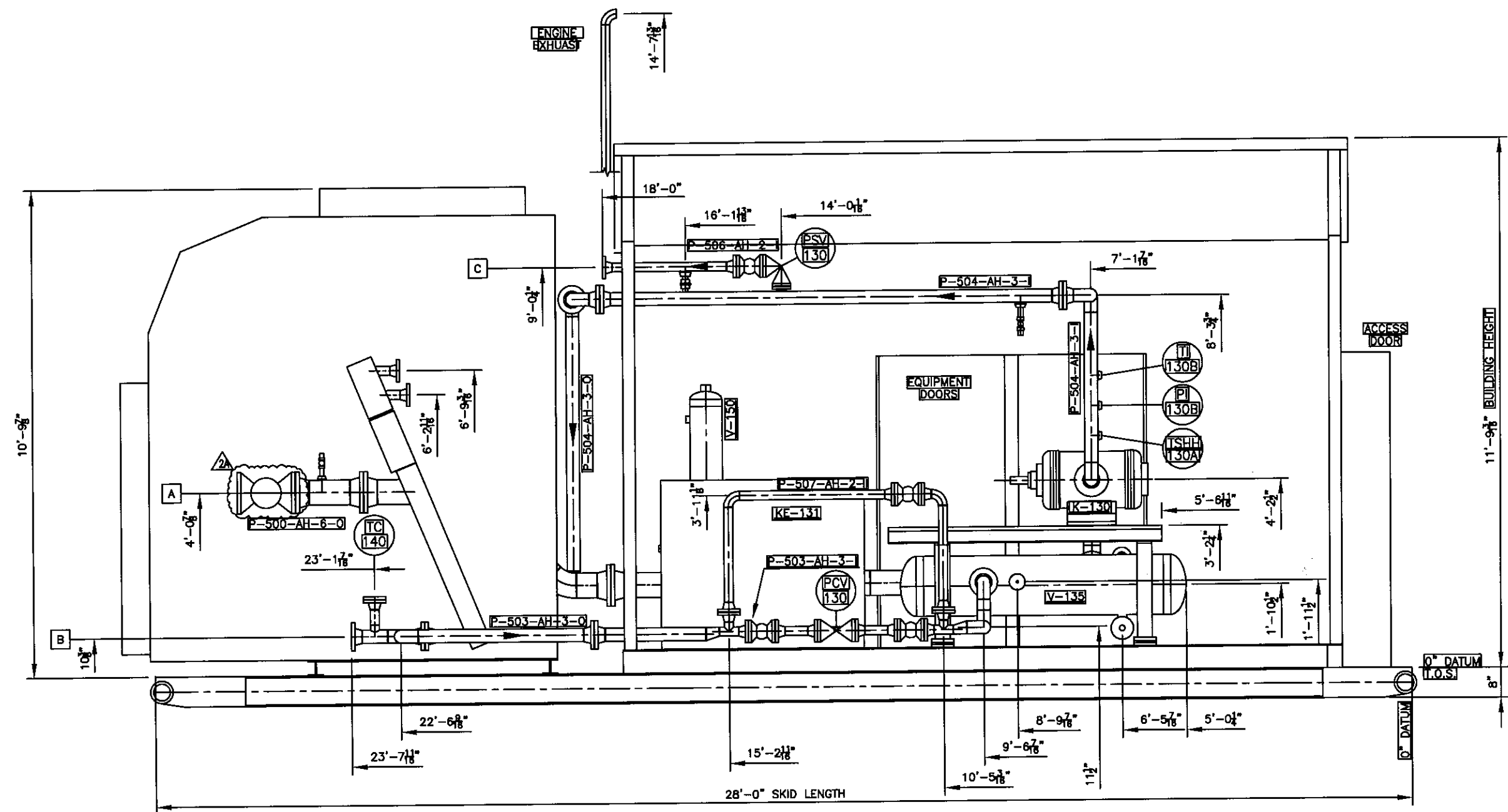


HUSKY ENERGY
c/o IMV PROJECTS INC.
ROTARY VANE VAPOR RECOVERY COMPRESSOR
PROJECT: 5252-A
LOCATION: L.S.D. 11-36-49-20 W3M

GENERAL ARRANGEMENT

NOTES
1) SOUTH WALL OMITTED FOR CLARITY

REF.	FUNCTION	SIZE RATING	PROJ.	PRES.	TEMP.	REF.	FUNCTION	SIZE RATING	PROJ.	PRES.	TEMP.	1C	LQ	REVISED MOTOR POSITION, SPOOLS	03/08/07	SA
A	GAS INLET	5" CL150 RF										1B	LQ	REVISED PSV HEADER ELEVATION	30/07/07	SA
B	GAS OUTLET	3" CL150 RF										1A	LQ	REVISED COMP OUTLET / PEDESTAL	26/08/07	SA
C	RELIEF OUTLET	2" CL150 RF										1	LQ	ISSUED FOR CONSTRUCTION	15/08/07	SA
D	FUEL GAS INLET	2" CL3000 NPT										2A	LQ	AS BUILT	29/08/07	SA
E	DRAIN TANK OUTLET	1" CL3000 NPT										2	LQ	REVISED CONSTRUCTION	21/08/07	SA
H	FUEL GAS SCRUBBER RELIEF	1" CL3000 NPT										1D	LQ	REVISED RELIEF OUTLET	14/08/07	SA
I	FUEL GAS OUTLET	2" CL3000 NPT										REV	BY	DESCRIPTION	00-MM-YY	CHK'D



SECTION **B**
SCALE 3/8" = 1'-0"

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HUSKY ENERGY
c/o IMV PROJECTS INC.

ROTARY VANE VAPOR RECOVERY COMPRESSOR
PROJECT: 5252-A
LOCATION: L.S.D. 11-36-49-20 W3M

GENERAL ARRANGEMENT

NOTES
1) NORTH WALL OMITTED FOR CLARITY

REF.	FUNCTION	SIZE RATING	PROJ.	PRES.	TEMP.	REF.	FUNCTION	SIZE RATING	PROJ.	PRES.	TEMP.	IC	LQ	REVISED MOTOR POSITION, SPOOLS	03/08/07	SA
A	GAS INLET	6" CL150 RF										1B	LQ	REVISED PSV HEADER ELEVATION	30/07/07	SA
B	GAS OUTLET	3" CL150 RF										1A	LQ	REVISED COMP OUTLET / PEDESTAL	26/06/07	SA
C	RELIEF OUTLET	2" CL150 RF										1	LQ	ISSUED FOR CONSTRUCTION	15/06/07	SA
D	FUEL GAS INLET	2" CL3000 NPT										2A	LQ	AS BUILT	28/08/07	SA
E	DRAIN TANK OUTLET	1" CL3000 NPT										2	LQ	REVISED CONSTRUCTION	21/08/07	SA
H	FUEL GAS SCRUBBER RELIEF	1" CL3000 NPT										1D	LQ	REVISED RELIEF OUTLET	14/08/07	SA
I	FUEL GAS OUTLET	2" CL3000 NPT										REV	BY	DESCRIPTION	00-WW-TY	CHK'D

22/01/07 **5252A-200** 3 OF 4 **2A**

A

B

C

D

E

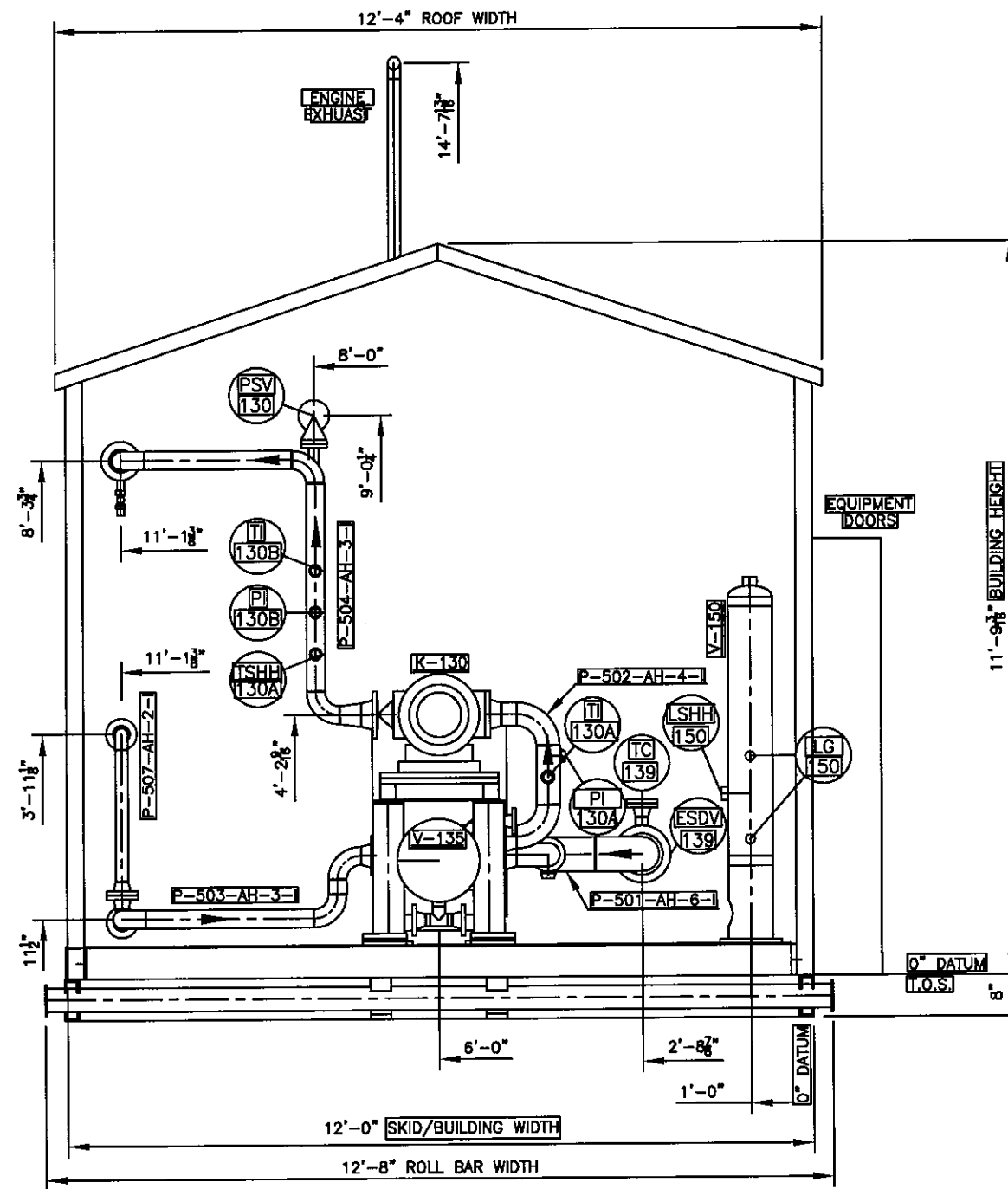
A

B

C

D

E




SECTION C
SCALE 3/8" = 1'-0"

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NOTES
1) WEST WALL OMITTED FOR CLARITY

REF.	FUNCTION	SIZE RATING	PROJ.	PRES.	TEMP.	REF.	FUNCTION	SIZE RATING	PROJ.	PRES.	TEMP.	1C	LQ	REVISED MOTOR POSITION, SPOOLS	03/08/07	SA
A	GAS INLET	6" CL150 RF										1B	LQ	REVISED PSV HEADER ELEVATION	30/07/07	SA
B	GAS OUTLET	3" CL150 RF										1A	LQ	REVISED COMP OUTLET / PEDESTAL	26/06/07	SA
C	RELIEF OUTLET	2" CL150 RF										1	LQ	ISSUED FOR CONSTRUCTION	15/06/07	SA
D	FUEL GAS INLET	2" CL3000 NPT										2A	LQ	AS BUILT	29/08/07	SA
E	DRAIN TANK OUTLET	1" CL3000 NPT										2	LQ	REVISED CONSTRUCTION	21/08/07	SA
H	FUEL GAS SCRUBBER RELIEF	1" CL3000 NPT										1D	LQ	REVISED RELIEF OUTLET	14/08/07	SA
I	FUEL GAS OUTLET	2" CL3000 NPT										REV	BY	DESCRIPTION	DD-MM-YY	CHK'D

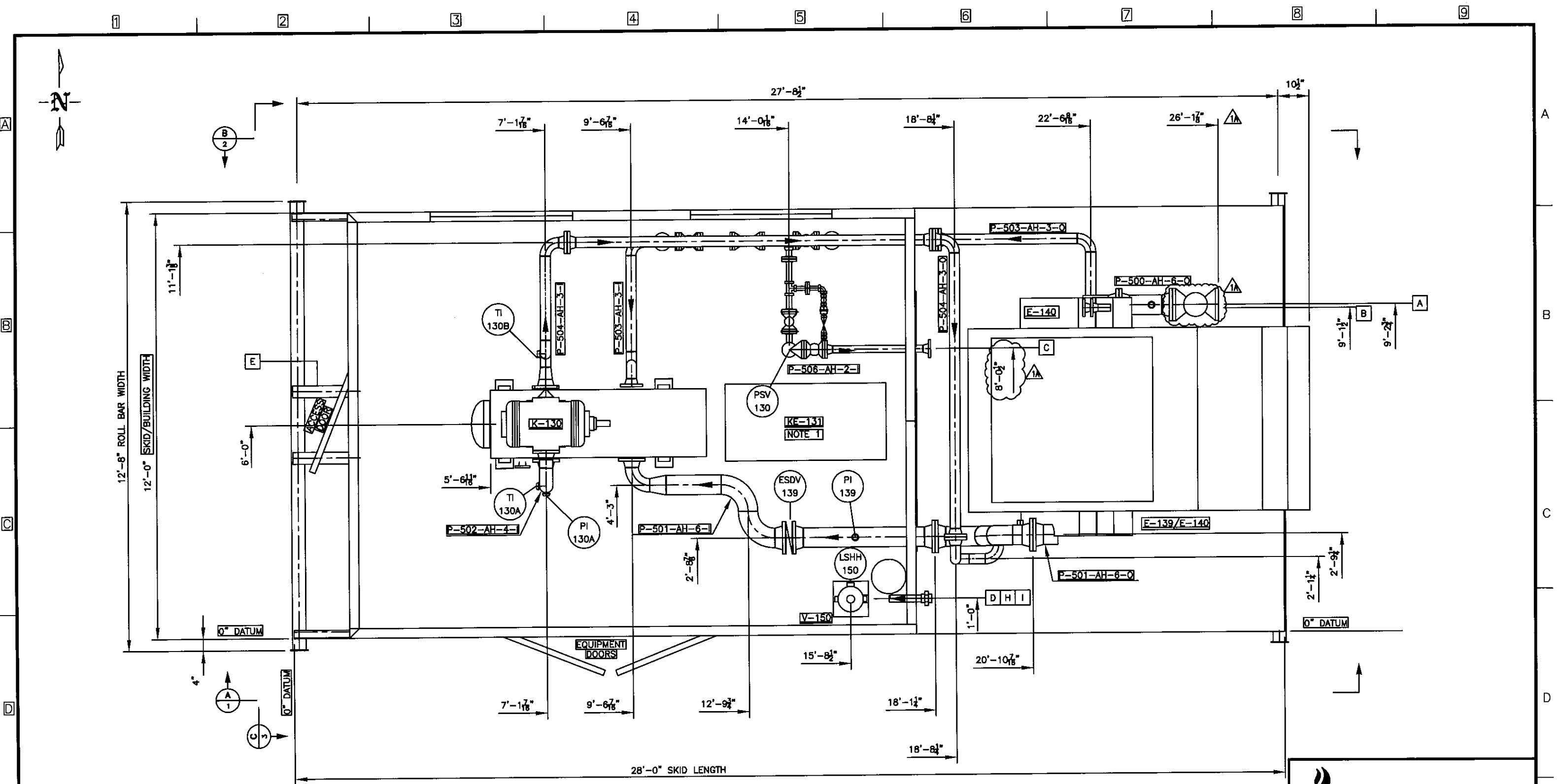
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HUSKY ENERGY
c/o IMV PROJECTS INC.

ROTARY VANE VAPOR RECOVERY COMPRESSOR
PROJECT: 5252-A
LOCATION: L.S.D. 11-36-49-20 W3M

GENERAL ARRANGEMENT

22/01/075252A-2004 OF 42A



PLAN
SCALE 3/8"=1'-0"

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HUSKY ENERGY
c/o IMV PROJECTS INC.
ROTARY VANE VAPOR RECOVERY COMPRESSOR
PROJECT: 5252-B
LOCATION: L.S.D. 11-36-49-20 W3M

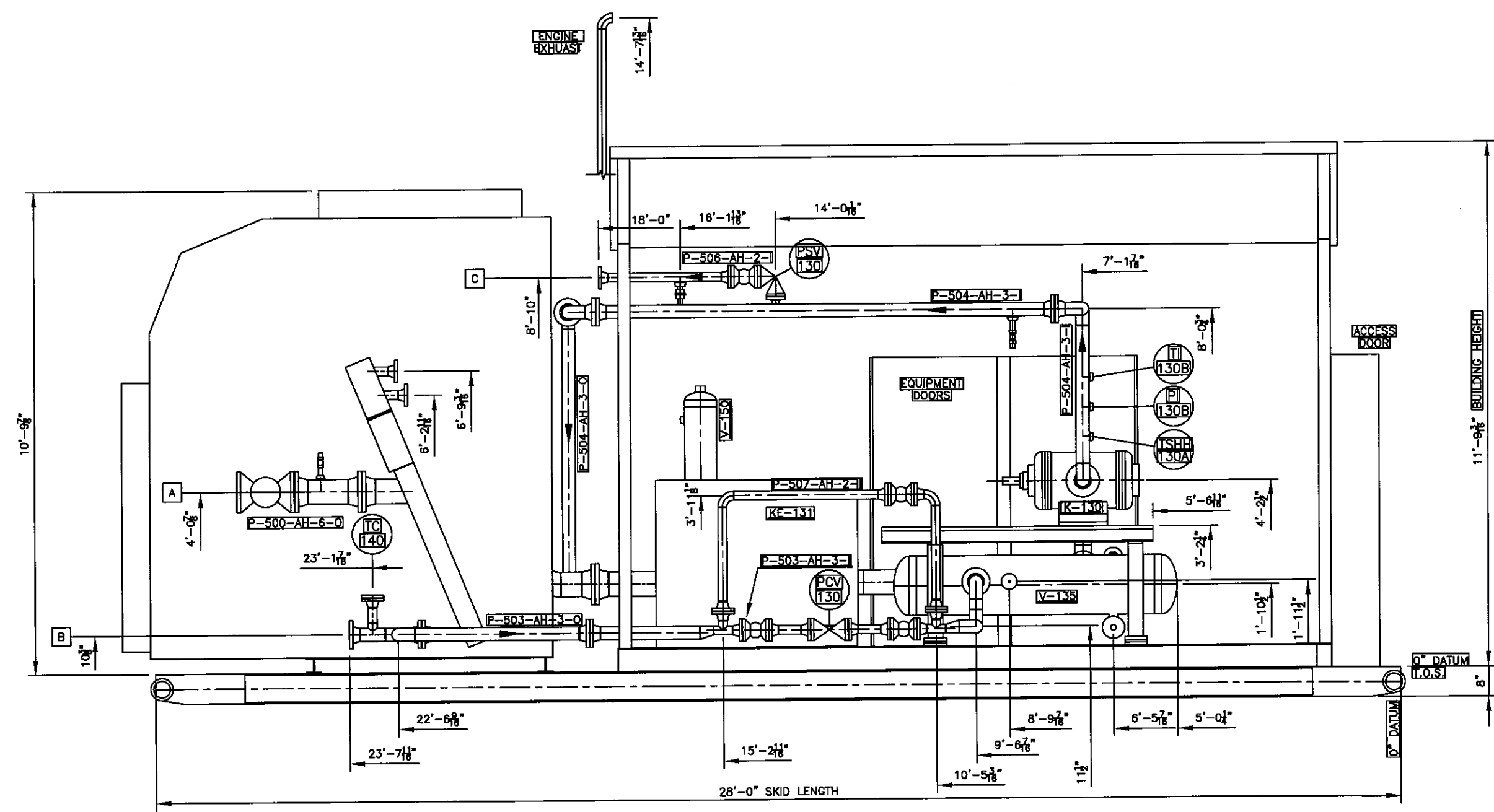
GENERAL ARRANGEMENT

NOTES
1) DRIVER MAY NOT BE POSITIONED AS PRESENTED.

REF.	FUNCTION	SIZE RATING	PROJ.	PRES.	TEMP.	REF.	FUNCTION	SIZE RATING	PROJ.	PRES.	TEMP.	REF.	FUNCTION	SIZE RATING	PROJ.	PRES.	TEMP.
A	GAS INLET	6" CL150 RF															
B	GAS OUTLET	3" CL150 RF															
C	RELIEF OUTLET	2" CL150 RF															
D	FUEL GAS INLET	2" CL3000 NPT										2	GE	AS BUILT		05/10/07	SA
E	DRAIN TANK OUTLET	1" CL3000 NPT										1A	LQ	ASBUILT UPDATES		27/08/07	SA
H	FUEL GAS SCRUBBER RELIEF	1" CL3000 NPT										1	LQ	ISSUED FOR CONSTRUCTION		21/08/07	SA
I	FUEL GAS OUTLET	2" CL3000 NPT										REV	BY	DESCRIPTION		DO-MM-YY	CHK'D

A
B
C
D
E

1 2 3 4 5 6 7 8 9




SECTION B
SCALE 3/8" = 1'-0" 2

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NOTES
1) NORTH WALL OMITTED FOR CLARITY

REF.	FUNCTION	SIZE RATING	PROJ.	PRES.	TEMP.	REF.	FUNCTION	SIZE RATING	PROJ.	PRES.	TEMP.					
A	GAS INLET	6" CL150 RF														
B	GAS OUTLET	3" CL150 RF														
C	RELIEF OUTLET	2" CL150 RF														
D	FUEL GAS INLET	2" CL3000 NPT										2	CE	AS BUILT	05/10/07	SA
E	DRAIN TANK OUTLET	1" CL3000 NPT										1A	LQ	ASBUILT UPDATES	27/08/07	SA
H	FUEL GAS SCRUBBER RELIEF	1" CL3000 NPT										1	LQ	ISSUED FOR CONSTRUCTION	21/08/07	SA
I	FUEL GAS OUTLET	2" CL3000 NPT										REV	BY	DESCRIPTION	DO-WM-YY	CHK'D

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HUSKY ENERGY
c/o IMV PROJECTS INC.

ROTARY VANE VAPOR RECOVERY COMPRESSOR
PROJECT: 5252-B
LOCATION: L.S.D. 11-36-49-20 W3M

GENERAL ARRANGEMENT

DATE	22/01/07	NO.	5252B-200	SHEET NO.	3 OF 4	TOTAL	2
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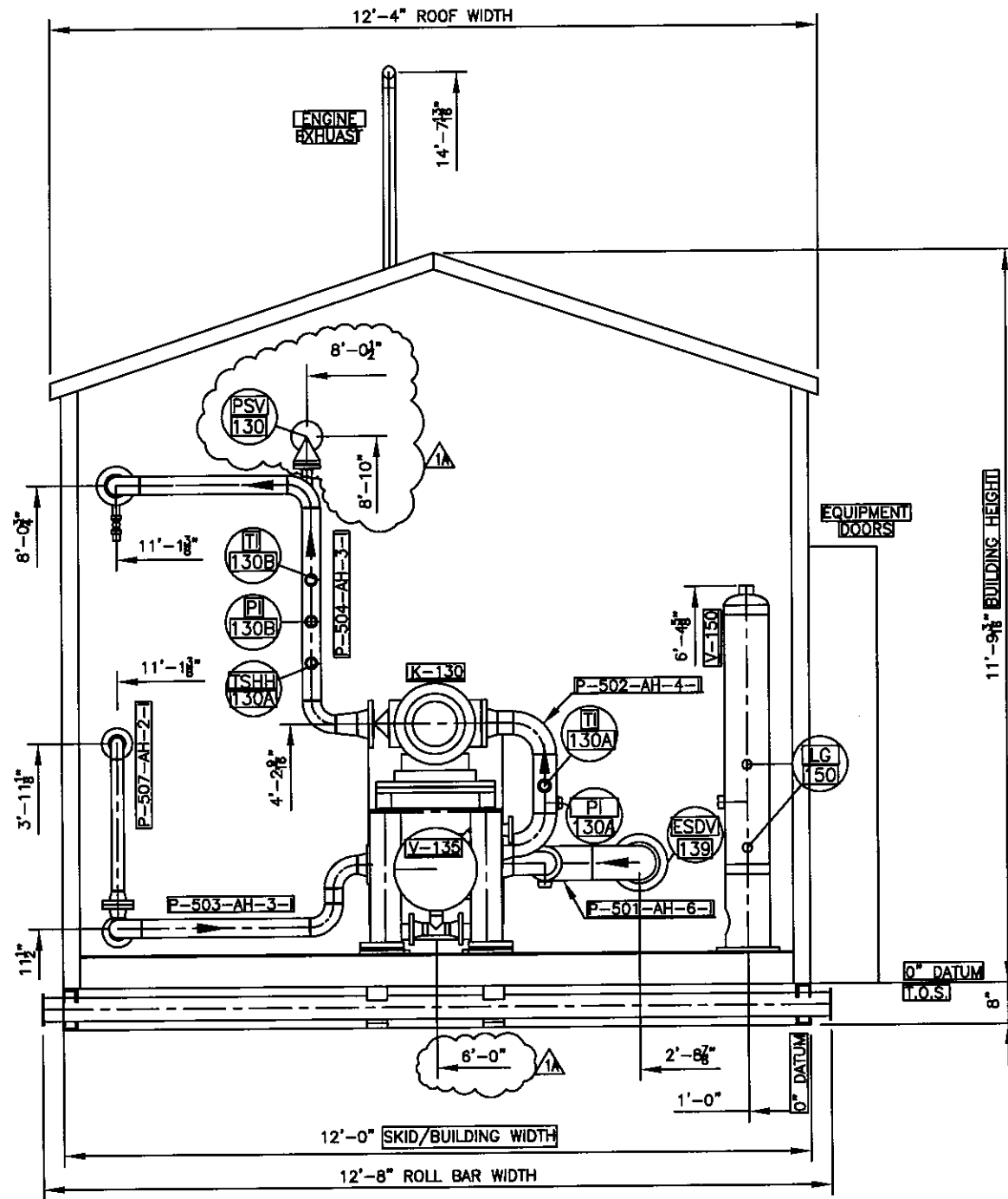
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SECTION C
SCALE 3/8" = 1'-0"

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NOTES
1) WEST WALL OMITTED FOR CLARITY

REF.	FUNCTION	SIZE RATING	PROL.	PRES.	TEMP.	REF.	FUNCTION	SIZE RATING	PROL.	PRES.	TEMP.						
A	GAS INLET	6" CL150 RF															
B	GAS OUTLET	3" CL150 RF															
C	RELIEF OUTLET	2" CL150 RF															
D	FUEL GAS INLET	2" CL3000 NPT										2	CE	AS BUILT	05/10/07	SA	
E	DRAIN TANK OUTLET	1" CL3000 NPT										1A	LQ	ASBUILT UPDATES	27/08/07	SA	
H	FUEL GAS SCRUBBER RELIEF	1" CL3000 NPT										1	LQ	ISSUED FOR CONSTRUCTION	21/08/07	SA	
I	FUEL GAS OUTLET	2" CL3000 NPT										REV	BY	DESCRIPTION	00-MM-YY	CHK'D	

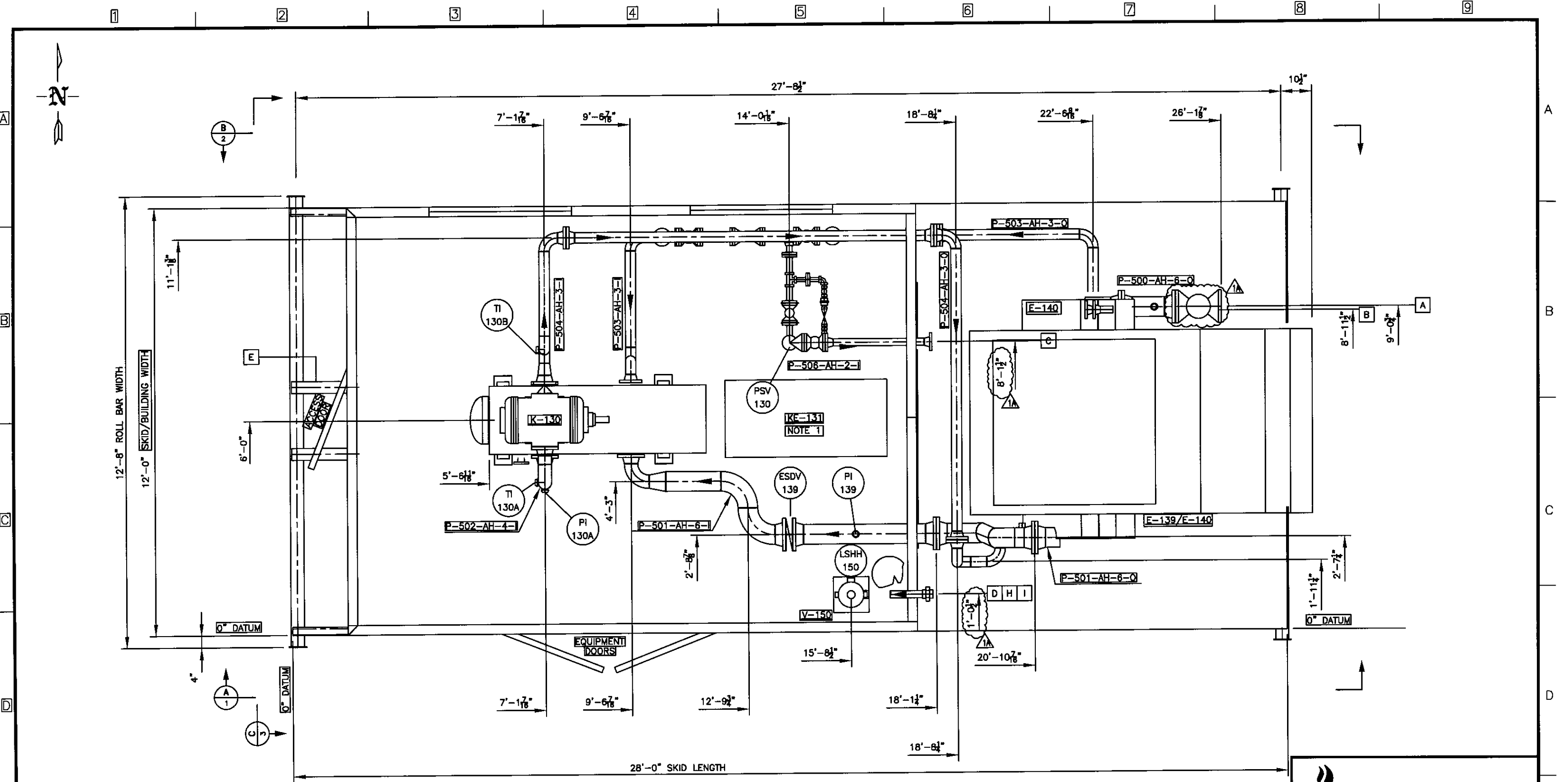
**VAPORTECH**
energy services inc.

HUSKY ENERGY
c/o IMV PROJECTS INC.

ROTARY VANE VAPOR RECOVERY COMPRESSOR
PROJECT: 5252-B
LOCATION: L.S.D. 11-38-49-20 W3M

GENERAL ARRANGEMENT

22/01/07	5252B-200	4 OF 4	2
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PLAN
SCALE 3/8"=1'-0"

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2007 VaporTech Energy Services Inc.

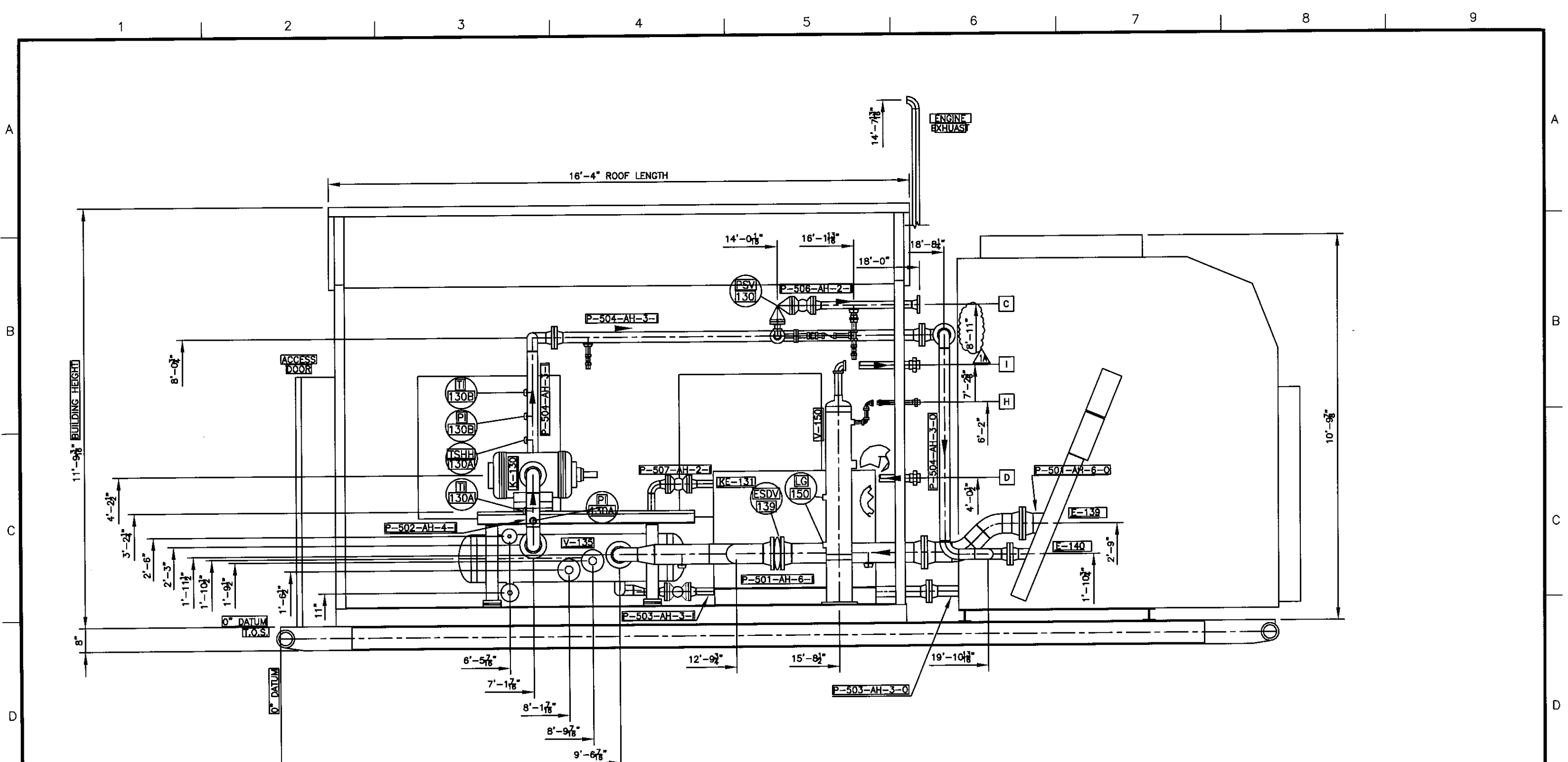


HUSKY ENERGY
c/o IMV PROJECTS INC.
ROTARY VANE VAPOR RECOVERY COMPRESSOR
PROJECT: 5252-C
LOCATION: L.S.D. 11-36-49-20 W3M

GENERAL ARRANGEMENT

NOTES
1) DRIVER MAY NOT BE POSITIONED AS PRESENTED.

REF.	FUNCTION	SIZE RATING	PROJ.	PRES.	TEMP.	REF.	FUNCTION	SIZE RATING	PROJ.	PRES.	TEMP.						
A	GAS INLET	6" CL150 RF															
B	GAS OUTLET	3" CL150 RF															
C	RELIEF OUTLET	2" CL150 RF															
D	FUEL GAS INLET	2" CL3000 NPT										2	CE	AS BUILT	05/10/07	SA	
E	DRAIN TANK OUTLET	1" CL3000 NPT										1A	LQ	ASBUILT UPDATES	27/08/07	SA	
H	FUEL GAS SCRUBBER RELIEF	1" CL3000 NPT										1	LQ	ISSUED FOR CONSTRUCTION	21/08/07	SA	
I	FUEL GAS OUTLET	2" CL3000 NPT										REV	BY	DESCRIPTION	00-MM-YY	CHK'D	



SECTION A
SCALE 3/8" = 1'-0"

This drawing and any designs shown are the confidential property of VaporTech Energy Services Inc. and must not be used, copied or communicated in any form without the express written consent of VaporTech. 2007 VaporTech Energy Services Inc.

NOTES
1) SOUTH WALL OMITTED FOR CLARITY

REF.	FUNCTION	SIZE RATING	PROJ.	PRES.	TEMP.	REF.	FUNCTION	SIZE RATING	PROJ.	PRES.	TEMP.
A	GAS INLET	6" CL150 RF									
B	GAS OUTLET	3" CL150 RF									
C	RELIEF OUTLET	2" CL150 RF									
D	FUEL GAS INLET	2" CL3000 NPT									
E	DRAIN TANK OUTLET	1" CL3000 NPT									
H	FUEL GAS SCRUBBER RELIEF	1" CL3000 NPT									
I	FUEL GAS OUTLET	2" CL3000 NPT									



HUSKY ENERGY
c/o IMV PROJECTS INC.
ROTARY VANE VAPOR RECOVERY COMPRESSOR
PROJECT: 5252-C
LOCATION: L.S.D. 11-36-49-20 W3M

GENERAL ARRANGEMENT
5252C-200 2 OF 4 2

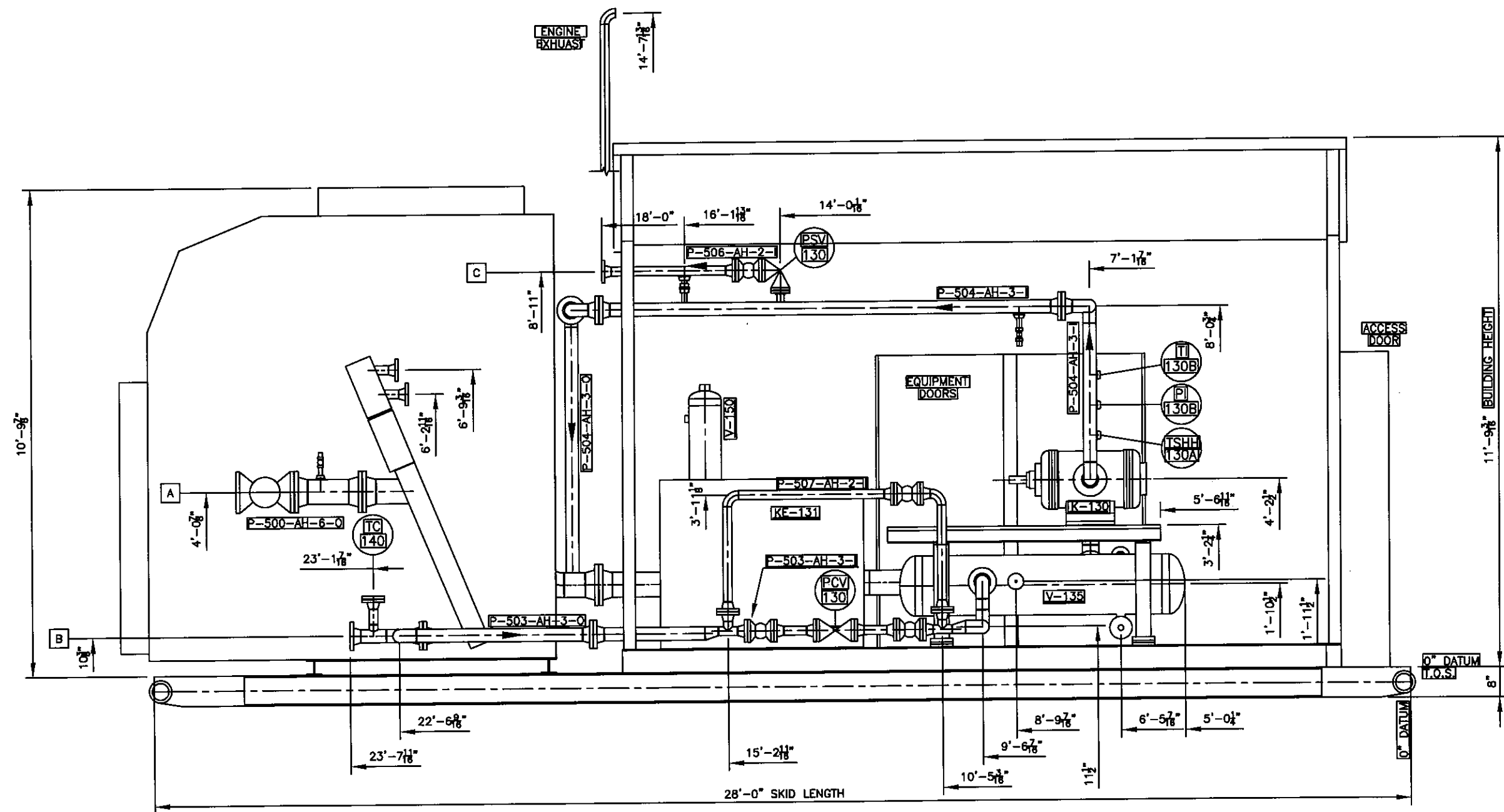
A

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SECTION B
SCALE 3/8" = 1'-0" 2

This drawing and any designs shown are the confidential property of VaporTech Energy Services Inc. and must not be used, copied or communicated in any form without the express written consent of VaporTech. 2007 VaporTech Energy Services Inc.

NOTES

- 1) NORTH WALL OMITTED FOR CLARITY

REF.	FUNCTION	SIZE RATING	PROJ.	PRES.	TEMP.	REF.	FUNCTION	SIZE RATING	PROJ.	PRES.	TEMP.
A	GAS INLET	6" CL150 RF									
B	GAS OUTLET	3" CL150 RF									
C	RELIEF OUTLET	2" CL150 RF									
D	FUEL GAS INLET	2" CL3000 NPT									
E	DRAIN TANK OUTLET	1" CL3000 NPT									
H	FUEL GAS SCRUBBER RELIEF	1" CL3000 NPT									
I	FUEL GAS OUTLET	2" CL3000 NPT									



HUSKY ENERGY
c/o IMV PROJECTS INC.

ROTARY VANE VAPOR RECOVERY COMPRESSOR
PROJECT: 5252-C
LOCATION: L.S.D. 11-38-49-20 W3M

GENERAL ARRANGEMENT

22/01/07 **5252C-200** 3 OF 4 2

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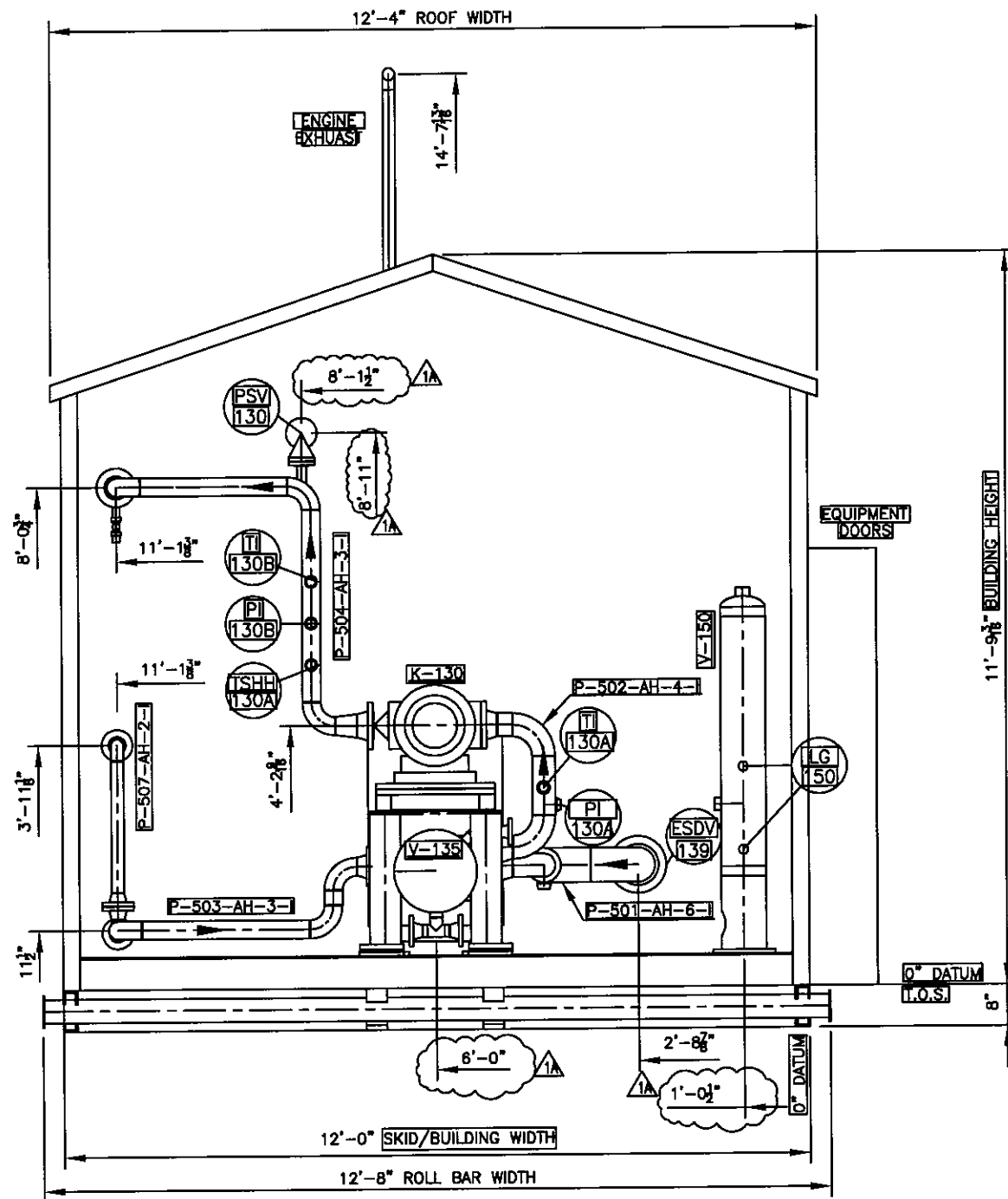
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SECTION C
SCALE 3/8" = 1'-0"

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NOTES
1) WEST WALL OMITTED FOR CLARITY

REF.	FUNCTION	SIZE RATING	PROJ.	PRES.	TEMP.	REF.	FUNCTION	SIZE RATING	PROJ.	PRES.	TEMP.						
A	GAS INLET	6" CL150 RF															
B	GAS OUTLET	3" CL150 RF															
C	RELIEF OUTLET	2" CL150 RF															
D	FUEL GAS INLET	2" CL3000 NPT															
E	DRAIN TANK OUTLET	1" CL3000 NPT															
H	FUEL GAS SCRUBBER RELIEF	1" CL3000 NPT															
I	FUEL GAS OUTLET	2" CL3000 NPT															

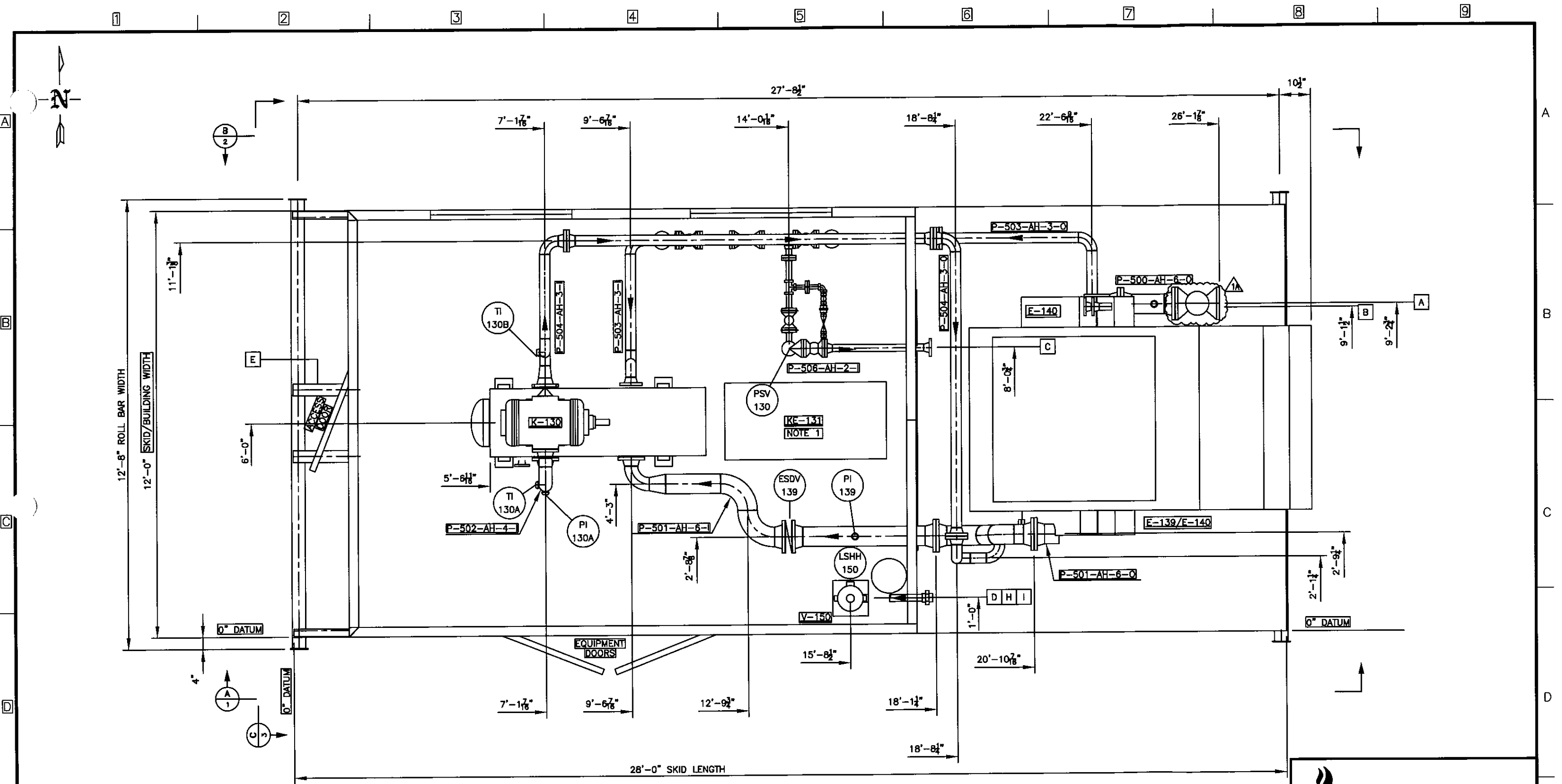
**VAPORTECH**
energy services inc.

HUSKY ENERGY
c/o IMV PROJECTS INC.

ROTARY VANE VAPOR RECOVERY COMPRESSOR
PROJECT: 5252-C
LOCATION: L.S.D. 11-36-49-20 W3M

GENERAL ARRANGEMENT

REV	REVISION	DATE	BY	CHK'D
2	CE	05/10/07	SA	
1A	LQ	27/08/07	SA	
1	LQ	21/08/07	SA	
REV	BY	DESCRIPTION	DATE	CHK'D
22/01/07		5252C-2004 OF 4	2	



PLAN
SCALE 3/8"=1'-0"

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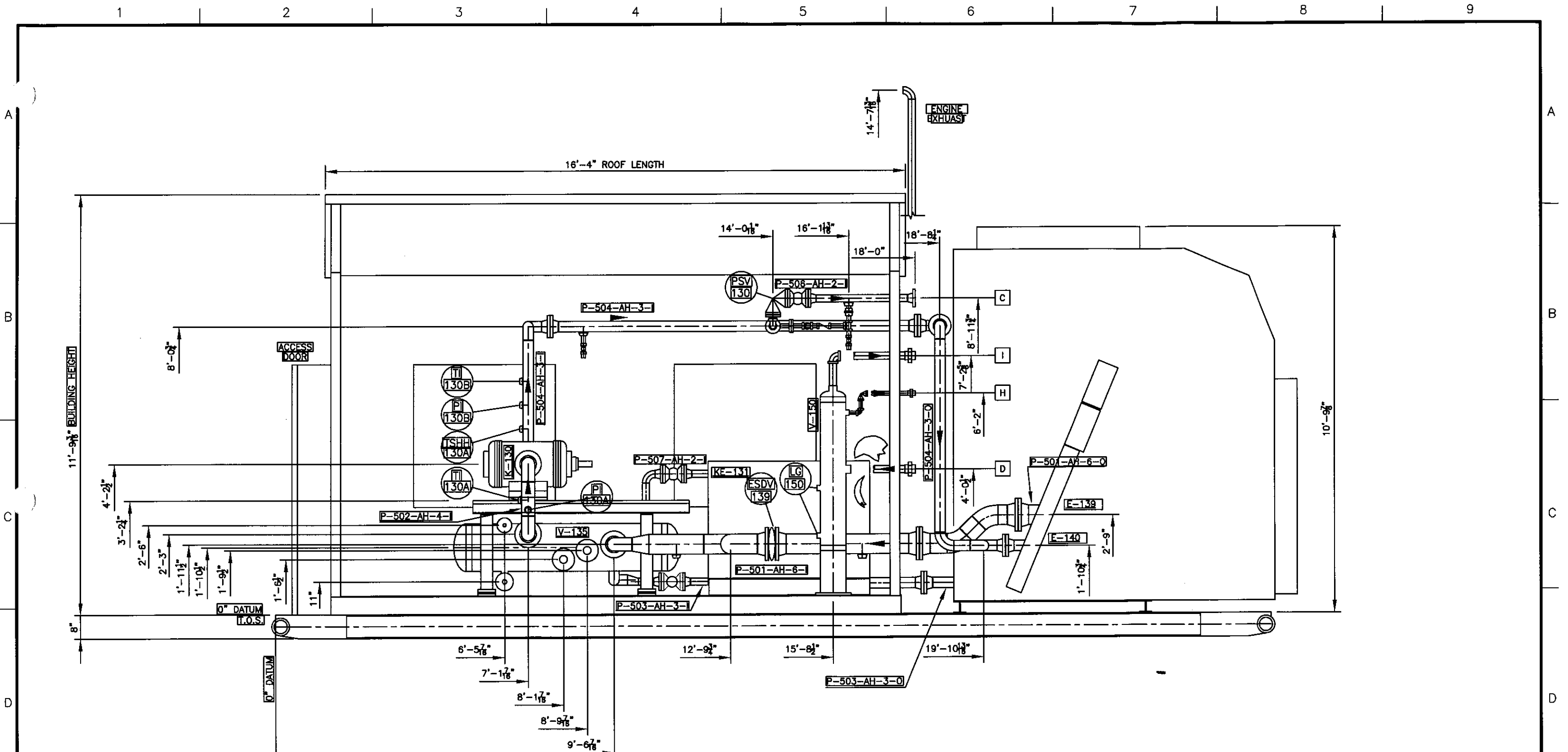


HUSKY ENERGY
c/o IMV PROJECTS INC.
ROTARY VANE VAPOR RECOVERY COMPRESSOR
PROJECT: 5252-D
LOCATION: L.S.D. 11-36-49-20 W3M

GENERAL ARRANGEMENT

- NOTES
1) DRIVER MAY NOT BE POSITIONED AS PRESENTED.

REF.	FUNCTION	SIZE RATING	PROJ.	PRES.	TEPM.	REF.	FUNCTION	SIZE RATING	PROJ.	PRES.	TEPM.								
A	GAS INLET	6" CL150 RF																	
B	GAS OUTLET	3" CL150 RF																	
C	RELIEF OUTLET	2" CL150 RF																	
D	FUEL GAS INLET	2" CL3000 NPT											2	CE	AS BUILT	05/10/07	SA		
E	DRAIN TANK OUTLET	1" CL3000 NPT											1A	LQ	ASBUILT UPDATES	27/08/07	SA		
H	FUEL GAS SCRUBBER RELIEF	1" CL3000 NPT											1	LQ	ISSUED FOR CONSTRUCTION	21/08/07	SA		
I	FUEL GAS OUTLET	2" CL3000 NPT											REV	BY	DESCRIPTION	DD-MM-YY	CHK'D		




SECTION A
SCALE 3/8" = 1'-0"

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NOTES
1) SOUTH WALL OMITTED FOR CLARITY

REF.	FUNCTION	SIZE RATING	PROJ.	PRES.	TEMP.	REF.	FUNCTION	SIZE RATING	PROJ.	PRES.	TEMP.						
A	GAS INLET	6" CL150 RF															
B	GAS OUTLET	3" CL150 RF															
C	RELIEF OUTLET	2" CL150 RF															
D	FUEL GAS INLET	2" CL3000 NPT										2	CE	AS BUILT	05/10/07	SA	
E	DRAIN TANK OUTLET	1" CL3000 NPT										1A	LQ	ASBUILT UPDATES	27/08/07	SA	
H	FUEL GAS SCRUBBER RELIEF	1" CL3000 NPT										1	LQ	ISSUED FOR CONSTRUCTION	21/08/07	SA	
I	FUEL GAS OUTLET	2" CL3000 NPT										REV	BY	DESCRIPTION	DD-WK-YY	CHK'D	

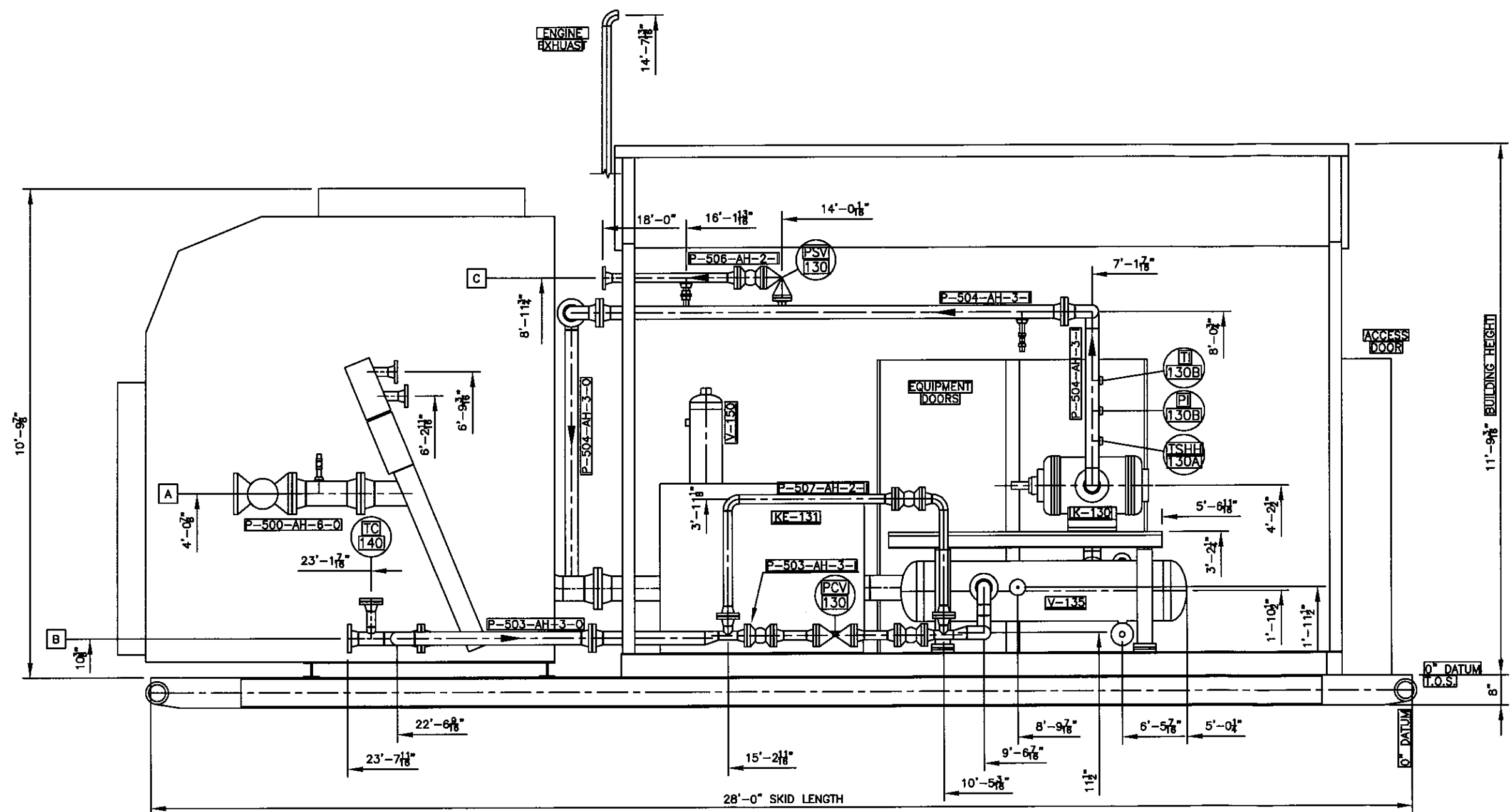
**VAPORTECH**
energy services inc.

HUSKY ENERGY
c/o IMV PROJECTS INC.

ROTARY VANE VAPOR RECOVERY COMPRESSOR
PROJECT: 5252-D
LOCATION: L.S.D. 11-36-49-20 W3M

GENERAL ARRANGEMENT

22/01/07	5252D-200	2 OF 4	2
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SECTION B
SCALE 3/8" = 1'-0" 2

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NOTES
1) NORTH WALL OMITTED FOR CLARITY

REF.	FUNCTION	SIZE RATING	PROJ.	PRES.	TEMP.	REF.	FUNCTION	SIZE RATING	PROJ.	PRES.	TEMP.						
A	GAS INLET	6" CL150 RF															
B	GAS OUTLET	3" CL150 RF															
C	RELIEF OUTLET	2" CL150 RF															
D	FUEL GAS INLET	2" CL3000 NPT										2	CE	AS BUILT	05/10/07	SA	
E	DRAIN TANK OUTLET	1" CL3000 NPT										1A	LQ	ASBUILT UPDATES	27/08/07	SA	
H	FUEL GAS SCRUBBER RELIEF	1" CL3000 NPT										1	LQ	ISSUED FOR CONSTRUCTION	21/08/07	SA	
I	FUEL GAS OUTLET	2" CL3000 NPT										REV	BY	DESCRIPTION	DD-MM-YY	CHK'D	



VAPORTECH
energy services inc.

HUSKY ENERGY
c/o IMV PROJECTS INC.

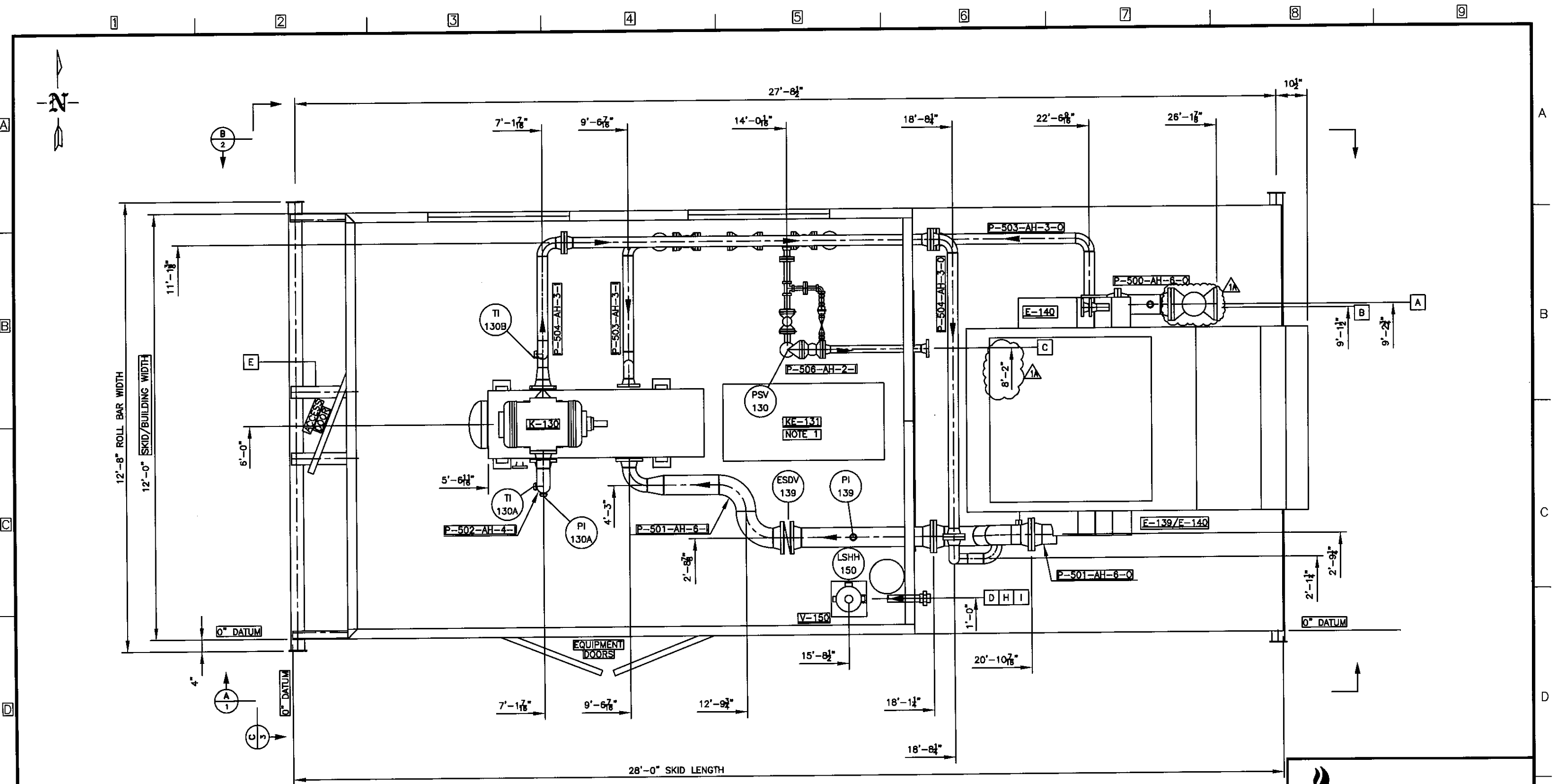
ROTARY VANE VAPOR RECOVERY COMPRESSOR
PROJECT: 5252-D
LOCATION: L.S.D. 11-36-49-20 W3M

GENERAL ARRANGEMENT

DATE: 22/01/07

5252D-200 3 OF 4

2



NOTES

1) DRIVER MAY NOT BE POSITIONED AS PRESENTED.

REF.	FUNCTION	SIZE RATING	PROV.	PRES.	TEMP.	REF.	FUNCTION	SIZE RATING	PROV.	PRES.	TEMP.
A	GAS INLET	6" CL150 RF									
B	GAS OUTLET	3" CL150 RF									
C	RELIEF OUTLET	2" CL150 RF									
D	FUEL GAS INLET	2" CL3000 NPT									
E	DRAIN TANK OUTLET	1" CL3000 NPT									
H	FUEL GAS SCRUBBER RELIEF	1" CL3000 NPT									
I	FUEL GAS OUTLET	2" CL3000 NPT									

VAPORTECH

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HUSKY ENERGY

c/o IMV PROJECTS INC.

ROTARY VANE VAPOR RECOVERY COMPRESSOR

PROJECT: 5252-E

LOCATION: L.S.D. 11-36-49-20 W3M

GENERAL ARRANGEMENT

22/01/07

5252E-200

1 OF 4

2

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REV

BY

DESCRIPTION

DATE

CHK'D

2

CE

AS BUILT

05/10/07

SA

1A

LQ

ASBUILT UPDATES

27/08/07

SA

1

LQ

ISSUED FOR CONSTRUCTION

21/08/07

SA

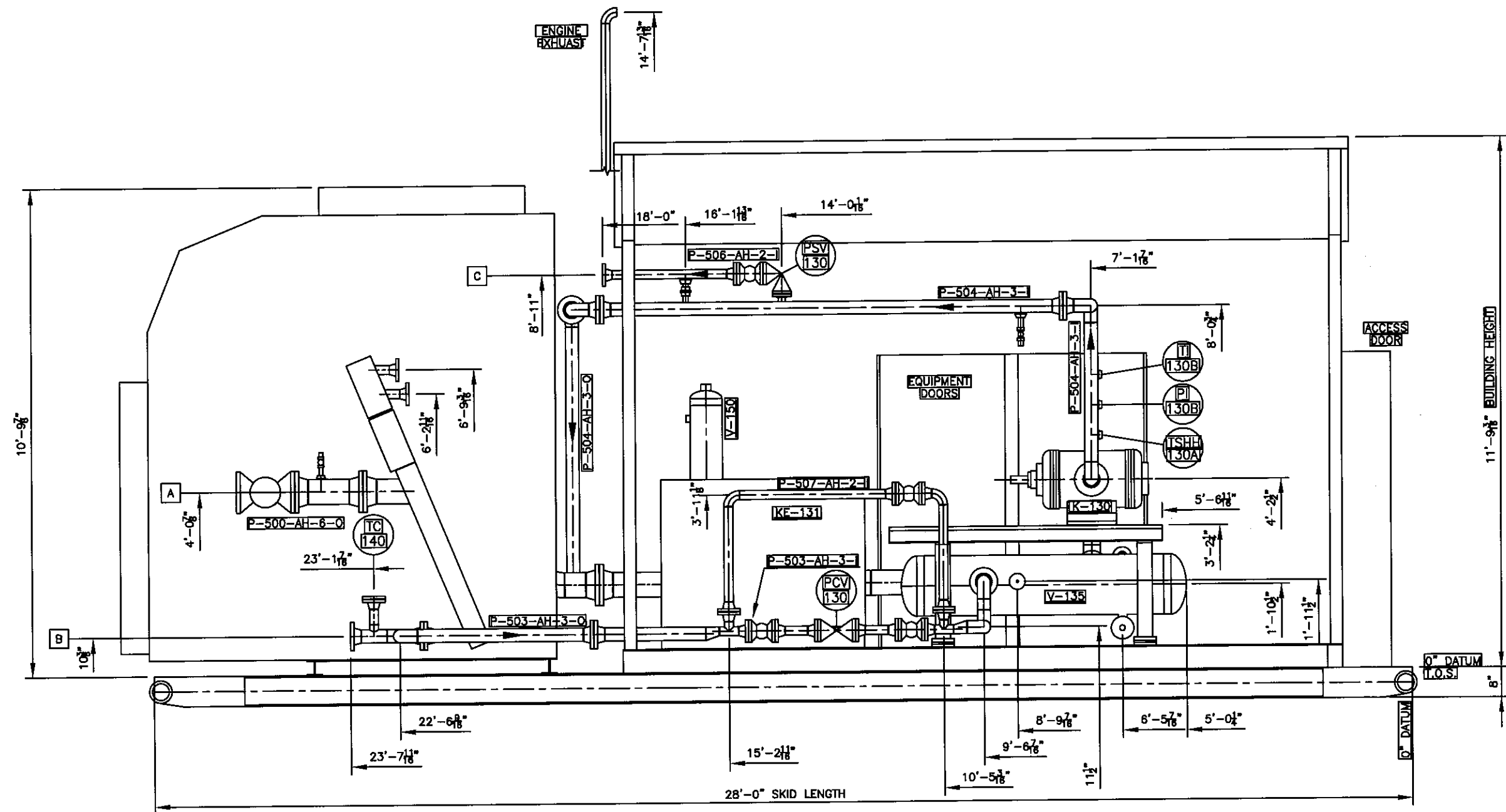
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SECTION B
SCALE 3/8" = 1'-0" 2

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NOTES

- 1) NORTH WALL OMITTED FOR CLARITY

REF.	FUNCTION	SIZE RATING	PROJ.	PRES.	TEPL.	REF.	FUNCTION	SIZE RATING	PROJ.	PRES.	TEPL.
A	GAS INLET	6" CL150 RF									
B	GAS OUTLET	3" CL150 RF									
C	RELIEF OUTLET	2" CL150 RF									
D	FUEL GAS INLET	2" CL3000 NPT									
E	DRAIN TANK OUTLET	1" CL3000 NPT									
H	FUEL GAS SCRUBBER RELIEF	1" CL3000 NPT									
I	FUEL GAS OUTLET	2" CL3000 NPT									



HUSKY ENERGY
c/o IMV PROJECTS INC.

ROTARY VANE VAPOR RECOVERY COMPRESSOR
PROJECT: 5252-E
LOCATION: L.S.D. 11-36-49-20 W3M

GENERAL ARRANGEMENT

DATE: 22/01/07
5252E-200 3 OF 4
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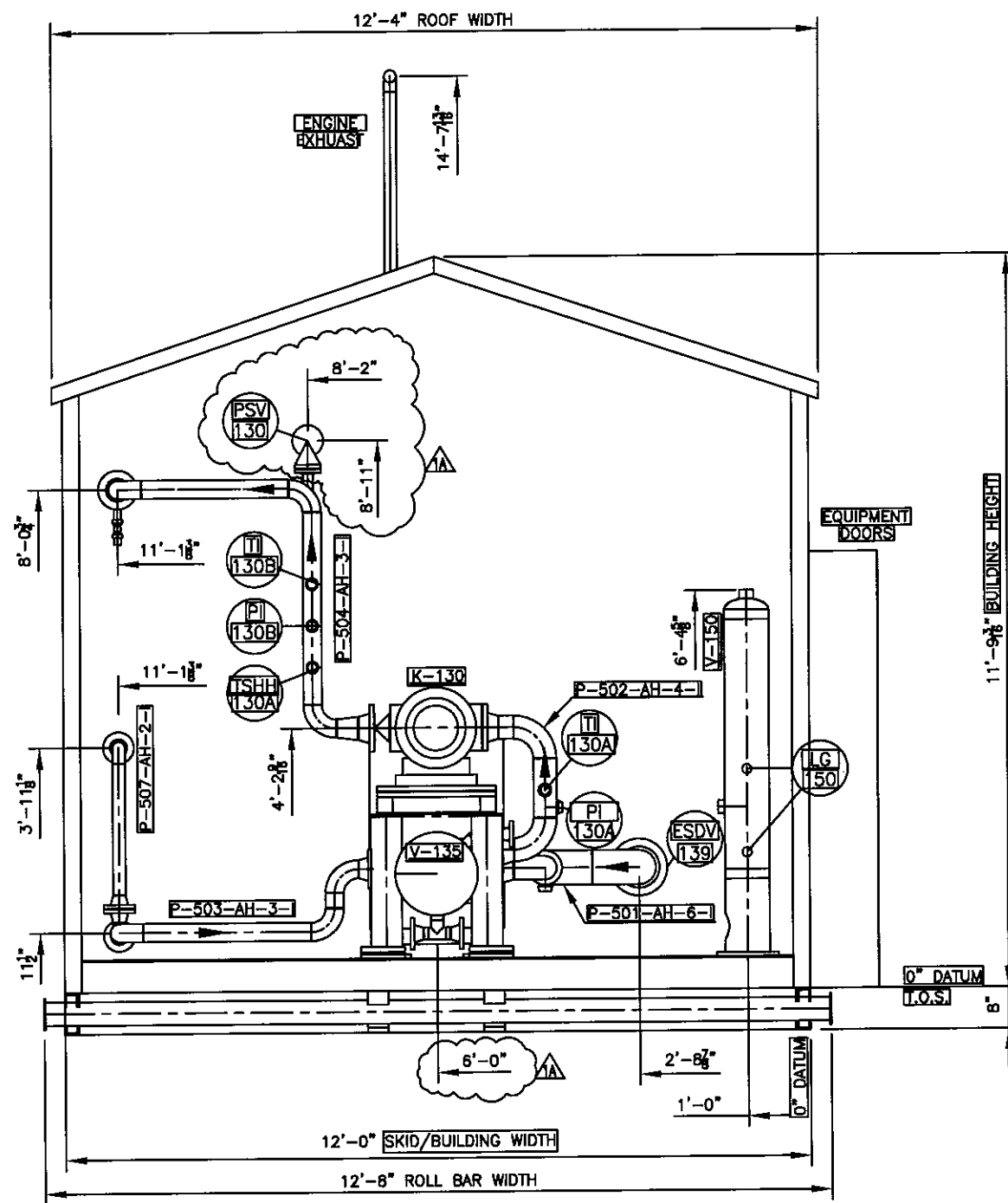
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SECTION C
SCALE 3/8" = 1'-0"

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NOTES
1) WEST WALL OMITTED FOR CLARITY

REF.	FUNCTION	SIZE RATING	PROJ.	PRES.	TEMP.	REF.	FUNCTION	SIZE RATING	PROJ.	PRES.	TEMP.						
A	GAS INLET	6" CL150 RF															
B	GAS OUTLET	3" CL150 RF															
C	RELIEF OUTLET	2" CL150 RF															
D	FUEL GAS INLET	2" CL3000 NPT										2	CE	AS BUILT	05/10/07	SA	
E	DRAIN TANK OUTLET	1" CL3000 NPT										1A	LQ	ASBUILT UPDATES	27/08/07	SA	
H	FUEL GAS SCRUBBER RELIEF	1" CL3000 NPT										1	LQ	ISSUED FOR CONSTRUCTION	21/08/07	SA	
I	FUEL GAS OUTLET	2" CL3000 NPT										REV	BY	DESCRIPTION	DD-MM-YY	CHK'D	

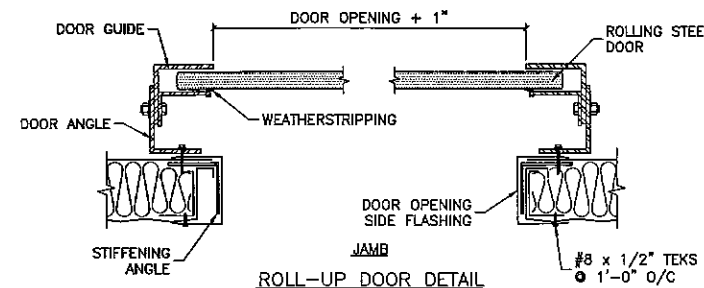
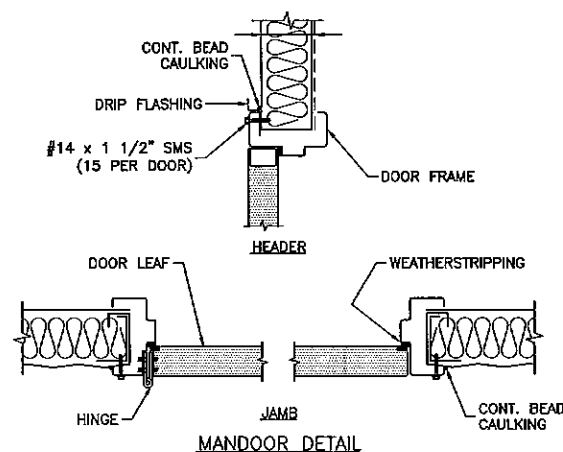
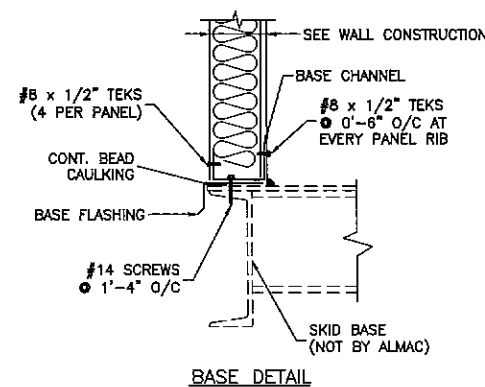
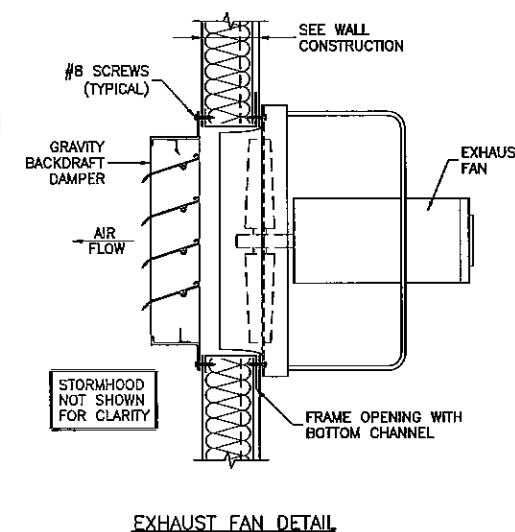
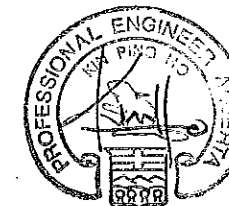
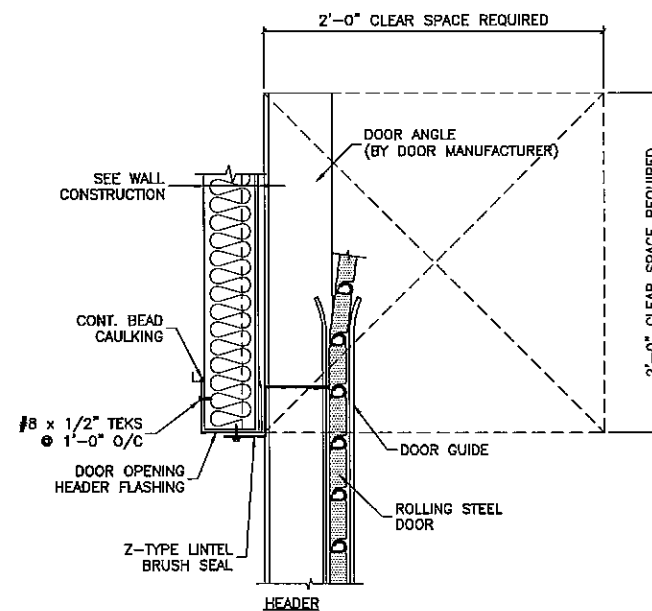
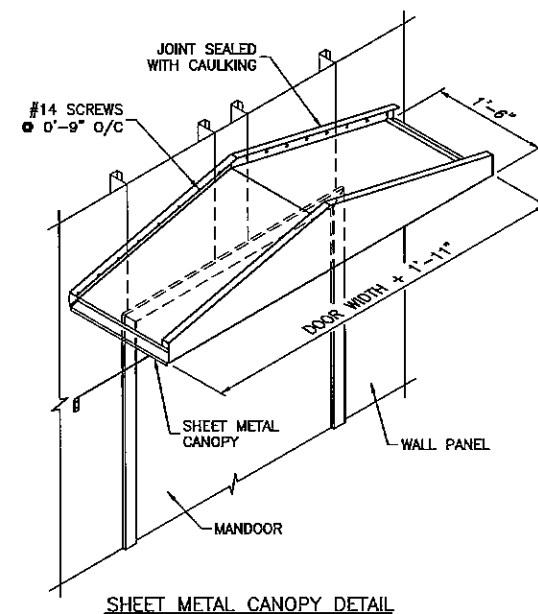
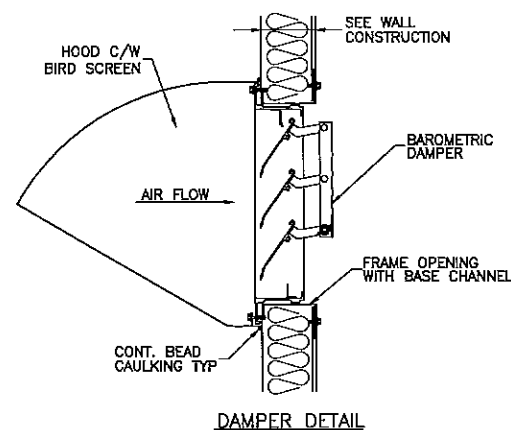
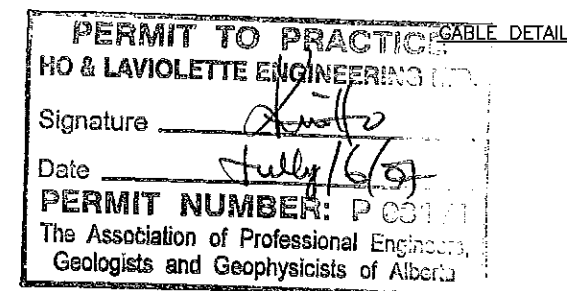
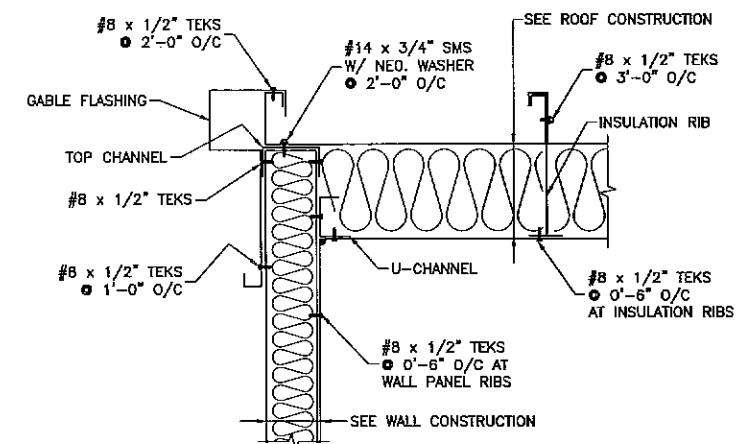
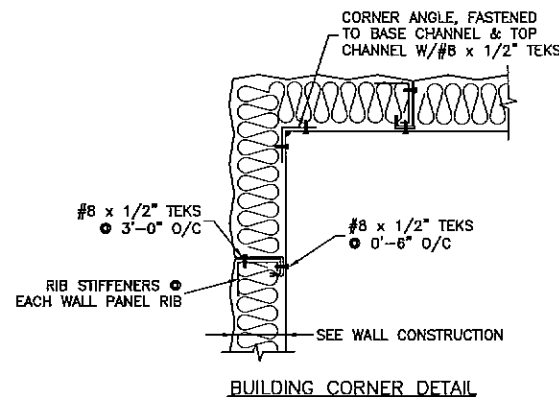
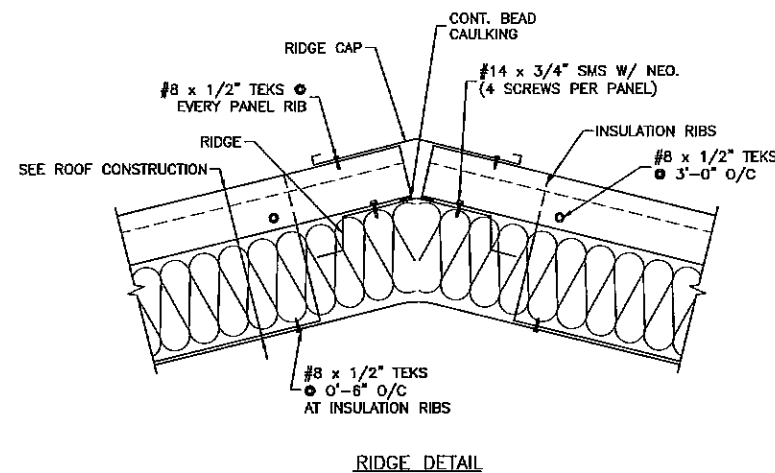
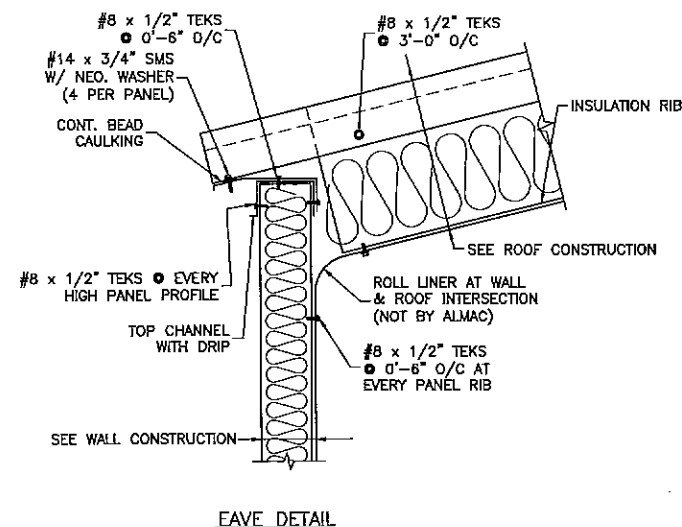
**VAPORTECH**
energy services inc.

HUSKY ENERGY
c/o IMV PROJECTS INC.

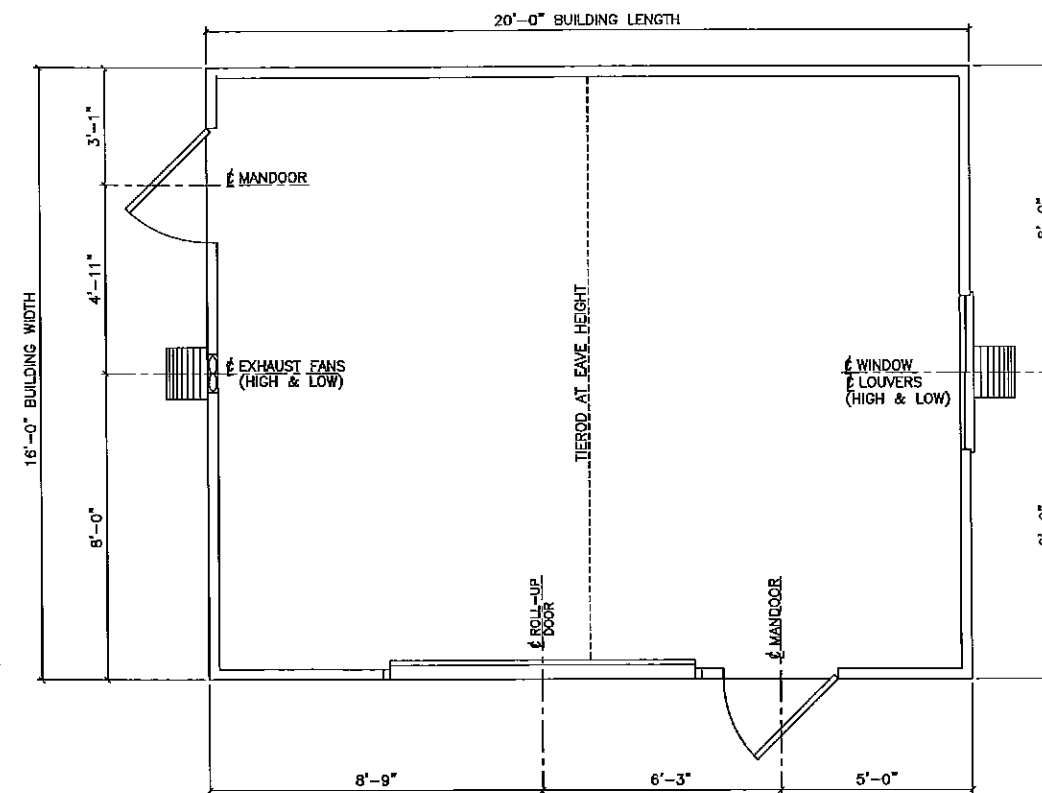
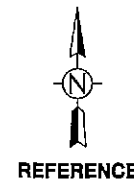
ROTARY VANE VAPOR RECOVERY COMPRESSOR
PROJECT: 5252-E
LOCATION: L.S.D. 11-36-49-20 W3M

GENERAL ARRANGEMENT

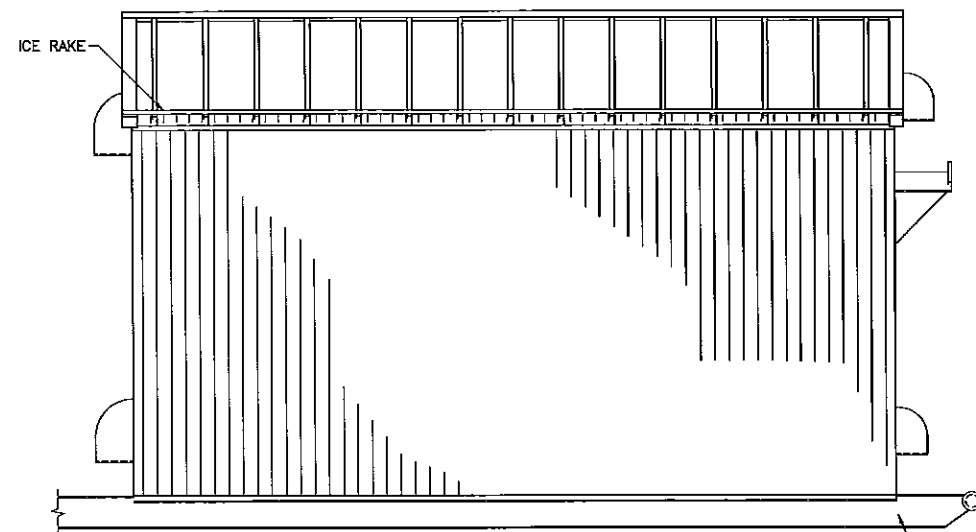
22/01/07	5252E-2004 OF 4	2
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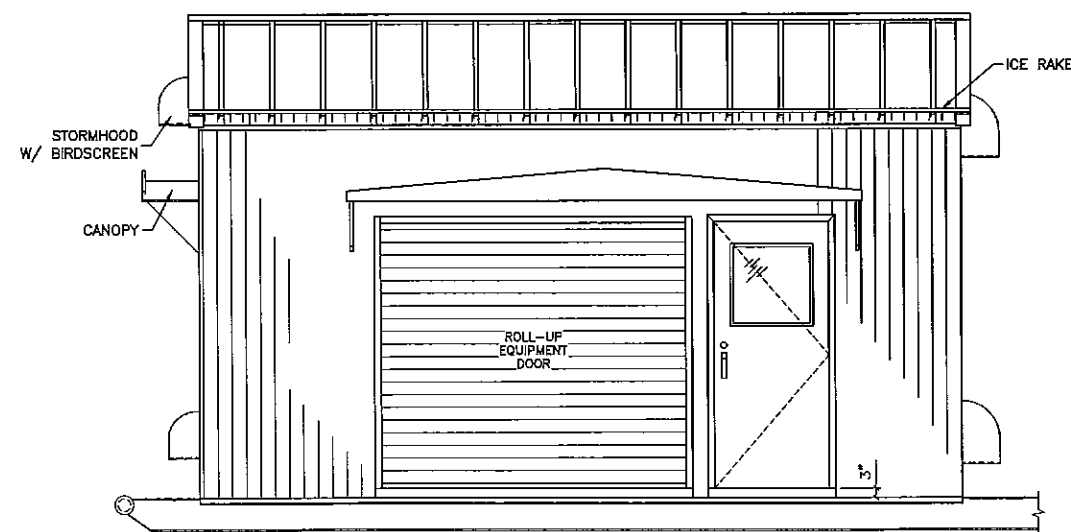
ISSUED AS BUILT	MA	2007/05/23
REV.	DESCRIPTION	BY DATE
Almac Metal Industries Ltd. 5140-75th AVENUE EDMONTON, ALBERTA T6B 0A6 PHONE: (780) 465-0961 FAX: (780) 465-4198		
CLIENT:	VAPORTECH ENERGY SERVICES INC.	DRAWN BY: MA CHECKED BY:
TITLE:	HUSKY ENERGY c/o TARTAN ENGINEERING VAPOR RECOVERY UNIT	SCALE: NTS
LOCATION:	EDMONTON, AB	DATE: 2007/05/23
SHEET DESCRIPTION:	TYPICAL BUILDING DETAILS	JOB NUMBER: 8554 SHEET: 8554-2 REV. 0



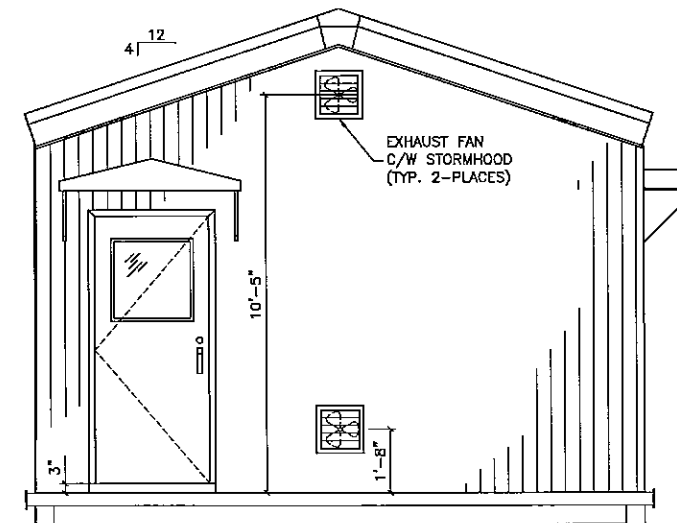
FLOOR PLAN VIEW



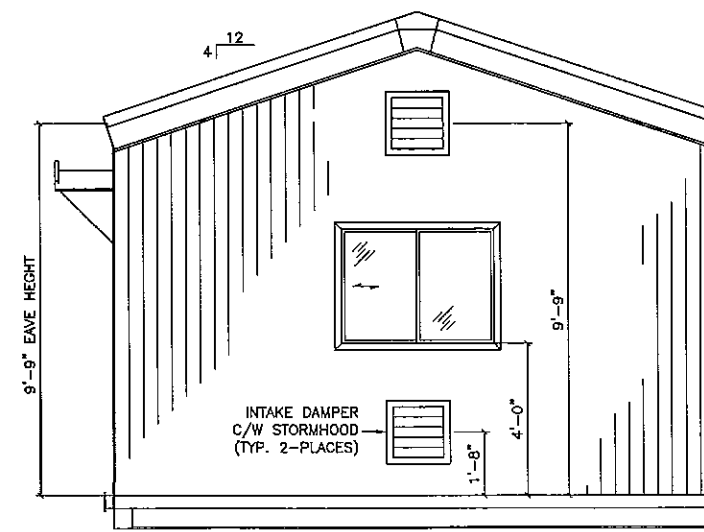
NORTH ELEVATION



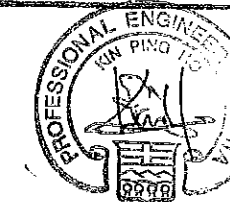
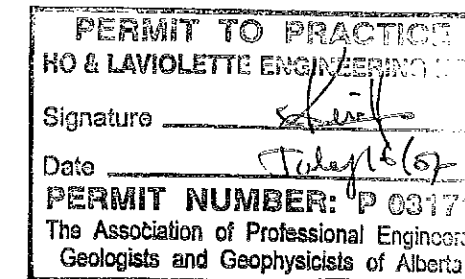
SAUTH ELEVATION



WEST ELEVATION

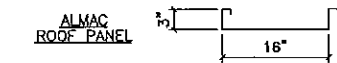


EAST ELEVATION



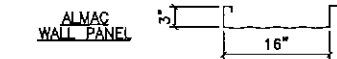
ROOF CONSTRUCTION:

- 22 GA. PREPAINTED STEEL INTERLOCKING STRUCTURAL RIB ROOF PANELS C/W 8000 SERIES PAINT SYSTEM, TO COLOUR: GOLD (QC-276)
- STEEL INSULATION RIBS AT ROOF PANEL JOINTS.
- R20 (6") FIBREGLASS BATT INSULATION.
- 5 MIL POLY VAPOUR BARRIER.
- 24 GA. PERFORATED ALUMINUM FLUTED PROFILE LINER PANELS, TO COLOUR: WHITE



WALL CONSTRUCTION:

- 22 GA. PREPAINTED STEEL INTERLOCKING STRUCTURAL RIB ROOF PANELS C/W 8000 SERIES PAINT SYSTEM, TO COLOUR: GOLD (QC-276)
- R12 (3") FIBREGLASS BATT INSULATION.
- 6 MIL POLY VAPOUR BARRIER.
- 24 GA. PERFORATED ALUMINUM FLUTED PROFILE LINER PANELS, TO COLOUR: WHITE



TRIM COLOURS:

- GABLE FLASHING AND ALL NOTED FLASHINGS ARE TO BE FORMED FROM 8000 SERIES PREPAINTED STEEL MATERIAL, TO COLOUR: METRO BROWN (QC-228)

ACCESSORIES:

- (A) TWO ONLY 3'-0" x 7'-0" STEEL INSULATED EXTERIOR WALK-IN DOOR C/W HARDWARE AS FOLLOWS:
 - *DOOR LEAF-20 GA. STEEL 45mm THK HONEYCOMB CORE (R4)
 - *DOOR FRAME-18 GA. PRESSED STEEL
 - *BUTT HINGES-"SHANAHAN'S" #BB1679 x 4.5x4 x 26D
 - *PANIC HARDWARE-"VON DUPRIN" #44TP
 - *LOCK CYLINDER-"DOREX" #501 KA x C26D
 - *WIRE GLASS 24" x 24" SINGLE GLAZED (I.W.G.)
 - *CHECK CHAIN-"CANAROPA" #3548
 - *THRESHOLD-"KN CROWDER" #CT-94 (ALUM.)
 - *WEATHERSTRIP-"KN CROWDER" #W-2 (ALUM./VINYL)
 - *SWEEP-"DRAFTSEAL" #DS-9 (ALUM./VINYL)
 - *SHEET METAL CANOPY, TO COLOUR: METRO BROWN (QC-228)
- DOOR LEAF FINISH: METRO BROWN (QC-228)
- DOOR FRAME FINISH: METRO BROWN (QC-228)
- (B) ONE ONLY 8'-0" WIDE x 7'-0" HIGH, INSULATED STEEL MINI STORAGE ROLL-UP DOORS C/W HSS DOOR FRAME.
- (C) ONE ONLY 4'-0" WIDE x 3'-0" HIGH (NOM. SIZE), DOUBLE GLAZED ALUMINUM SLIDING WINDOW C/W LOCK, FIBREGLASS CLOTH SCREEN AND PLAIN GLASS. FINISH: METRO BROWN (QC-228)
- (D) TWO ONLY 20'-0" LONG CONTINUOUS ROOF MOUNTED ICE RAKES. FINISH: TO MATCH ROOF PANELS
- (E) TWO ONLY 1'-4" WIDE x 1'-4" HIGH, BAROMETRIC INTAKE DAMPER, C/W EXTRUDED ALUMINUM BLADES AND STORMHOOD W/ BIRDSCREEN HOOD FINISH: GOLD (QC-276)
- (F) TWO ONLY WALL MOUNT EXPLOSION PROOF EXHAUST FAN, "ENERTECH" MODEL NO. ET-12-2, C/W 120/60hz/1ph, 1/2hp MOTOR, SHUTTER, GUARDS AND STORMHOOD W/ BIRDSCREEN. HOOD FINISH: GOLD (QC-276)

CONSTRUCTION NOTES:

1. ALL EXTERIOR SCREWS ARE TO BE CADMIUM PLATED. "UN-PAINTED"
2. INTERIOR LINER SCREWS ARE TO BE PAINTED WHITE TO MATCH LINER PANELS
3. BUILDING PACKAGE INCLUDES BASE FLASHING.
4. BUILDING PACKAGE INCLUDES INTERIOR DRIP LIP FLASHING (3" HIGH).

BUILDING DESIGN LOADS (kPa)

GROUND SNOW LOAD - $S_s = 1.60$, $S_r = 0.10$

WIND LOAD $q_{1/30} = 0.40$

SEISMIC ZONE - $Z_a = 0.00$, $Z_v = 1.00$, $V = 0.05$

REV.	DESCRIPTION	MA	2007/05/22
1	ISSUED AS-BUILT	MA	2007/05/22

		Almac Metal Industries Ltd.	
6140-76th AVENUE EDMONTON, ALBERTA T6B 0A8		PHONE: (780) 465-0861 FAX: (780) 465-4198	
CLIENT:	VAPOR-TECH ENERGY SERVICES INC.	DRAWN BY:	MA
TITLE:	HUSKY ENERGY c/o TARTAN ENGINEERING VAPOR RECOVERY UNIT	CHECKED BY:	
LOCATION:	EDMONTON, AB	SCALE:	3/16"=1'-0"
SHEET DESCRIPTION:	PLAN AND ELEVATION VIEWS	DATE:	2007/05/22
		JOB NUMBER	8554
		SHEET	8554-1
		REV.	0