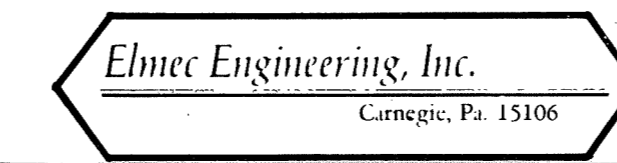


REV.	ITEM	PANEL	DESCRIPTION	AUTH'D & DATE	REF.

FOR NOTES SEE DWG. 349139

CONTR. NO.	REFERENCE DWGS.
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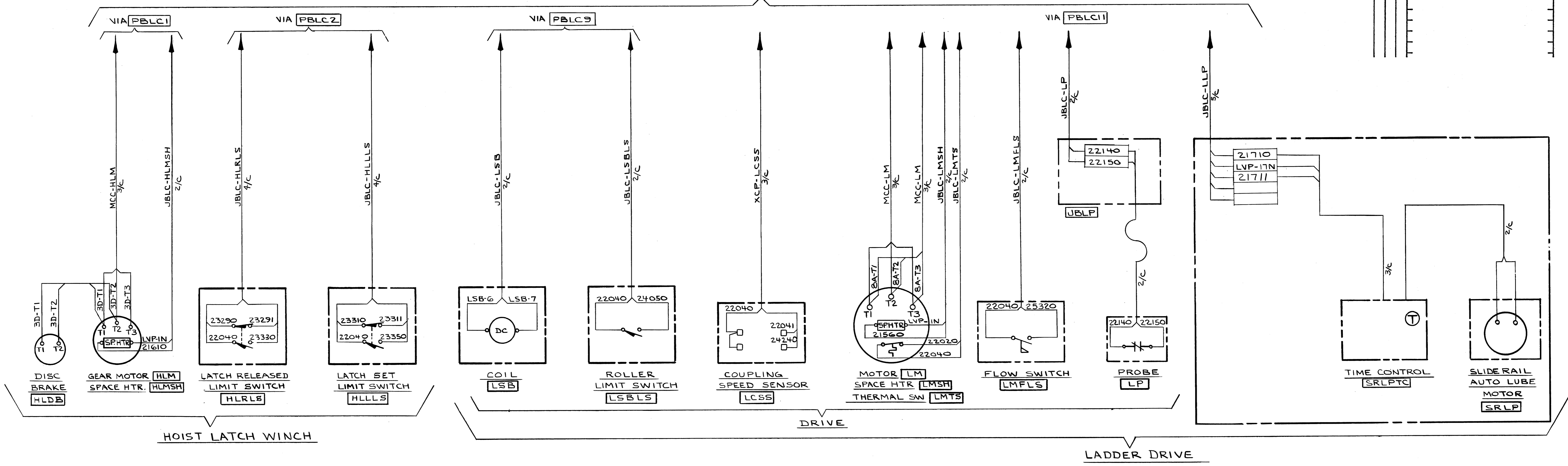
I W-4139		B.L
NO. CONTRACT	SHOP BILL NO.	DIST.
ALABAMA STATE DOCKS CONTINUOUS BARGE UNLOADER BARGE HAUL DIG & RETURN WINCH INTERCONNECTIONS		
SCALE	APP'D <i>J.M. Mathews</i> 2-5-81	DATE <i>Tambis</i> 2/2/81
DR PJS 11-19-80	DATE	DEL 2/5/81
CHK JRM 12-3-80	DRAWING NO.	REV.
349138		
DRAWING NO. 349138		

Dravo Corporation, Pittsburgh, Pa. DIV E.W.D.

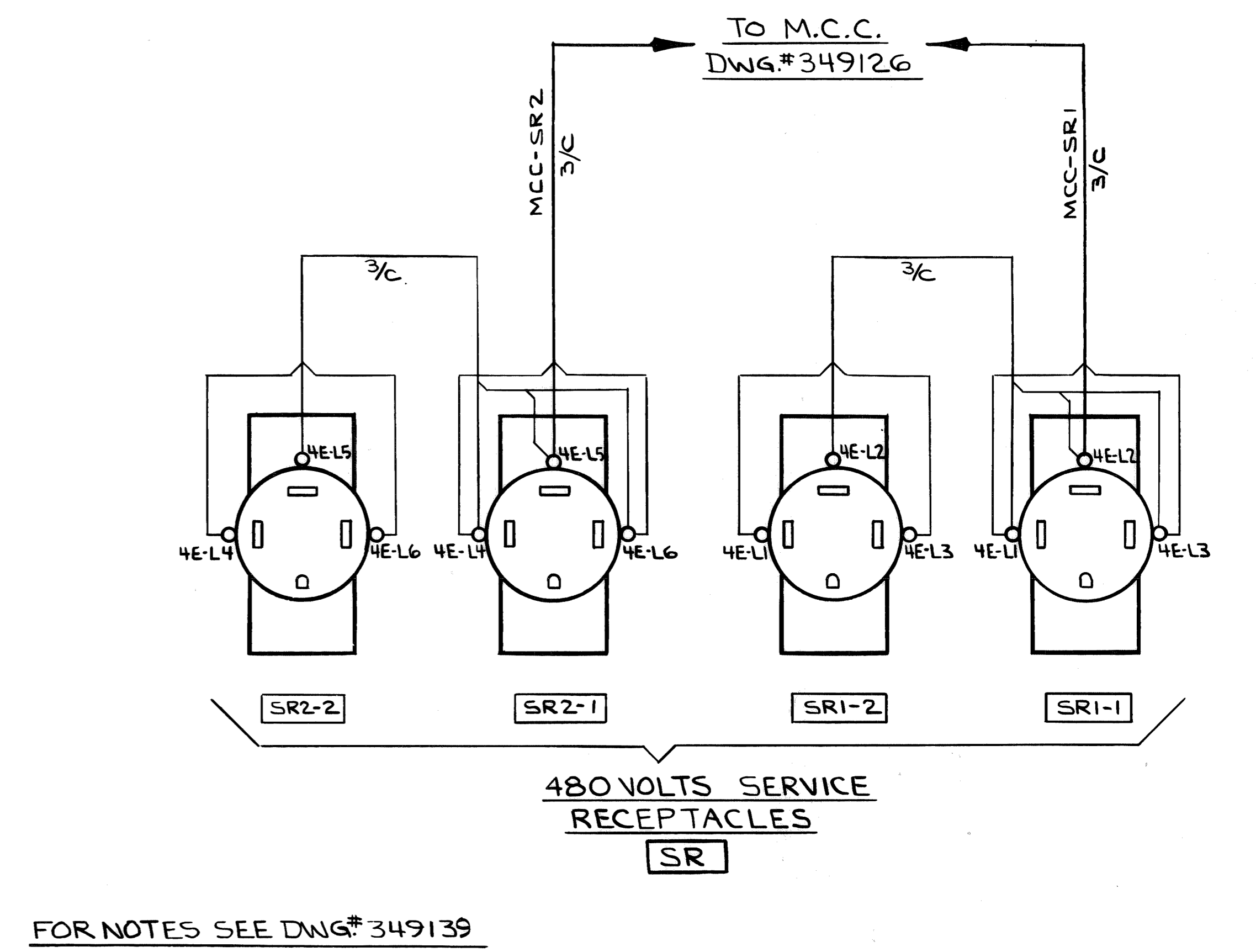
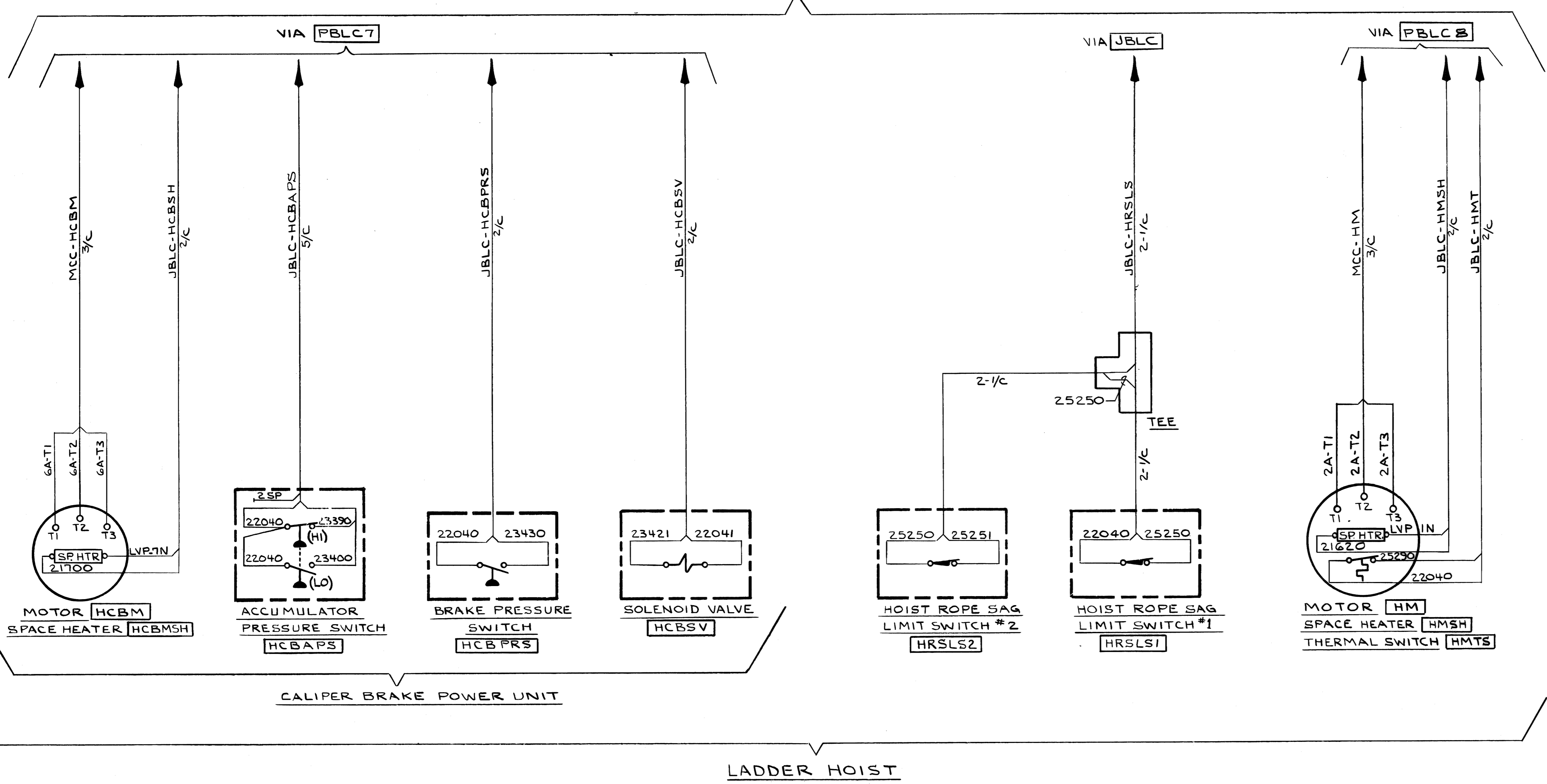
Vertical scale markings on the left side of the drawing, ranging from 0 to 32.

DWG #349134

REV.	ITEM	PANEL	DESCRIPTION	AUTH'D DATE	REF.



DWG #349134



FOR NOTES SEE DWG# 349139

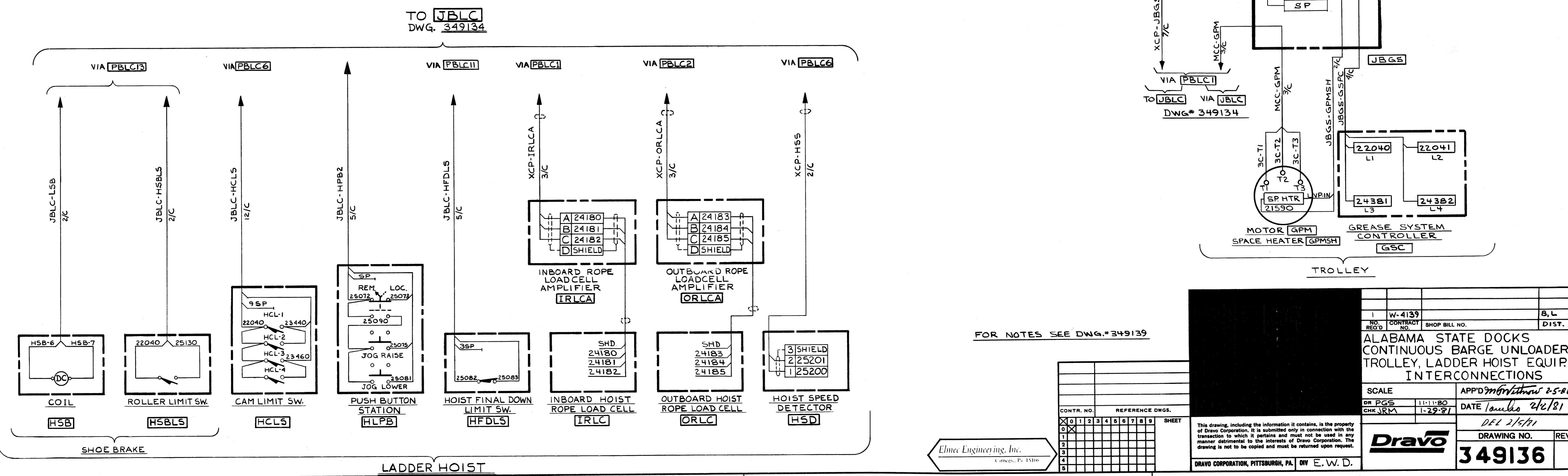
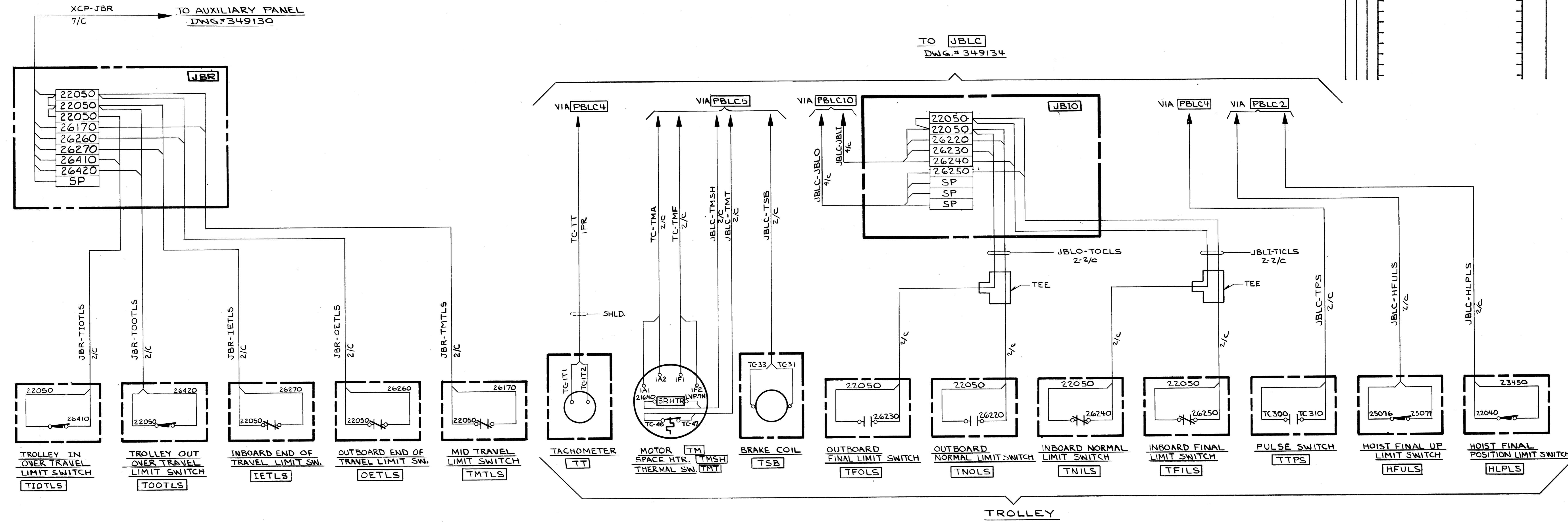
Elma Engineering, Inc.  
Pittsburgh, Pa. 15106

CONTR. NO.	REFERENCE DWGS.	SHEET

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NO. W-4139	CONTRACT NO.	SHOP BILL NO.	B/L
ALABAMA STATE DOCKS CONTINUOUS BARGE UNLOADER LADDER HOIST#DR, HOIST LATCH WH INTERCONNECTIONS			
SCALE	APP'D <i>W/Without</i> 2-5-81	DATE <i>Jan 26</i> 2/2/81	REV.
DR <i>SM</i>	12-2-80	1-29-81	
CHK <i>RSS</i>			
DRAWING NO.			
349137			





FOR NOTES SEE DWG.# 349139

CONTR. NO.	REFERENCE DWGS.	SHEET
0	1 2 3 4 5 6 7 8 9	
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W-4139

ALABAMA STATE DOCKS CONTINUOUS BARGE UNLOADER TROLLEY, LADDER HOIST EQUIP. INTERCONNECTIONS

SCALE: APP'D *mbr* 2-5-81

DR. PGS: 1-11-80 DATE: *1/11/80*

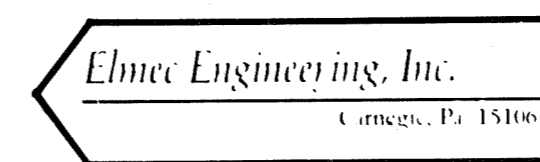
CHK: JRM 1-29-81

DEL 2/5/81

DRAWING NO. **349136**

REV. **1**

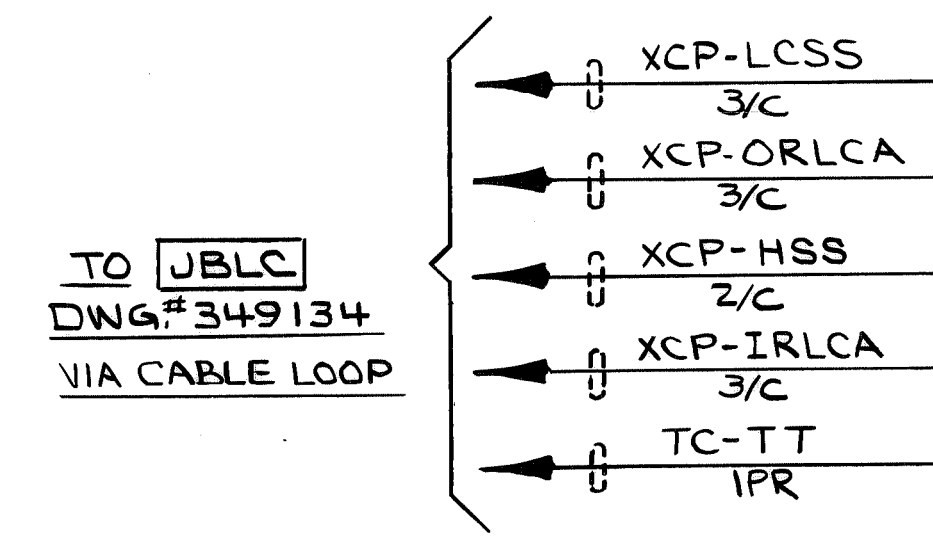
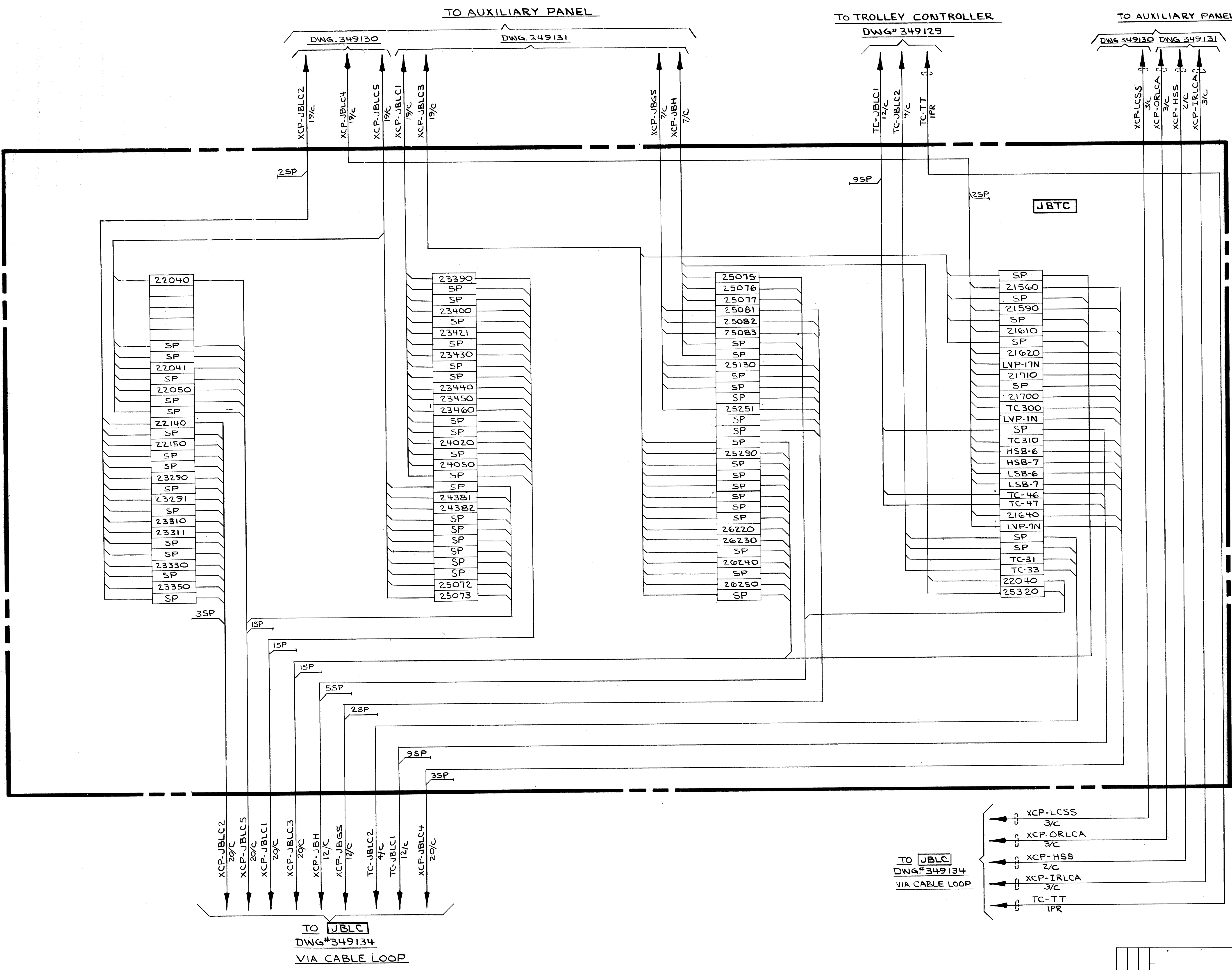
Dravo Corporation, Pittsburgh, Pa. DIV. E. W. D.





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No.	REV.	DESCRIPTION	Length FT	Length Inch	Piece or Pattern Number	Drawing Number	Mat'l.
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FOR NOTES SEE DWG#349139

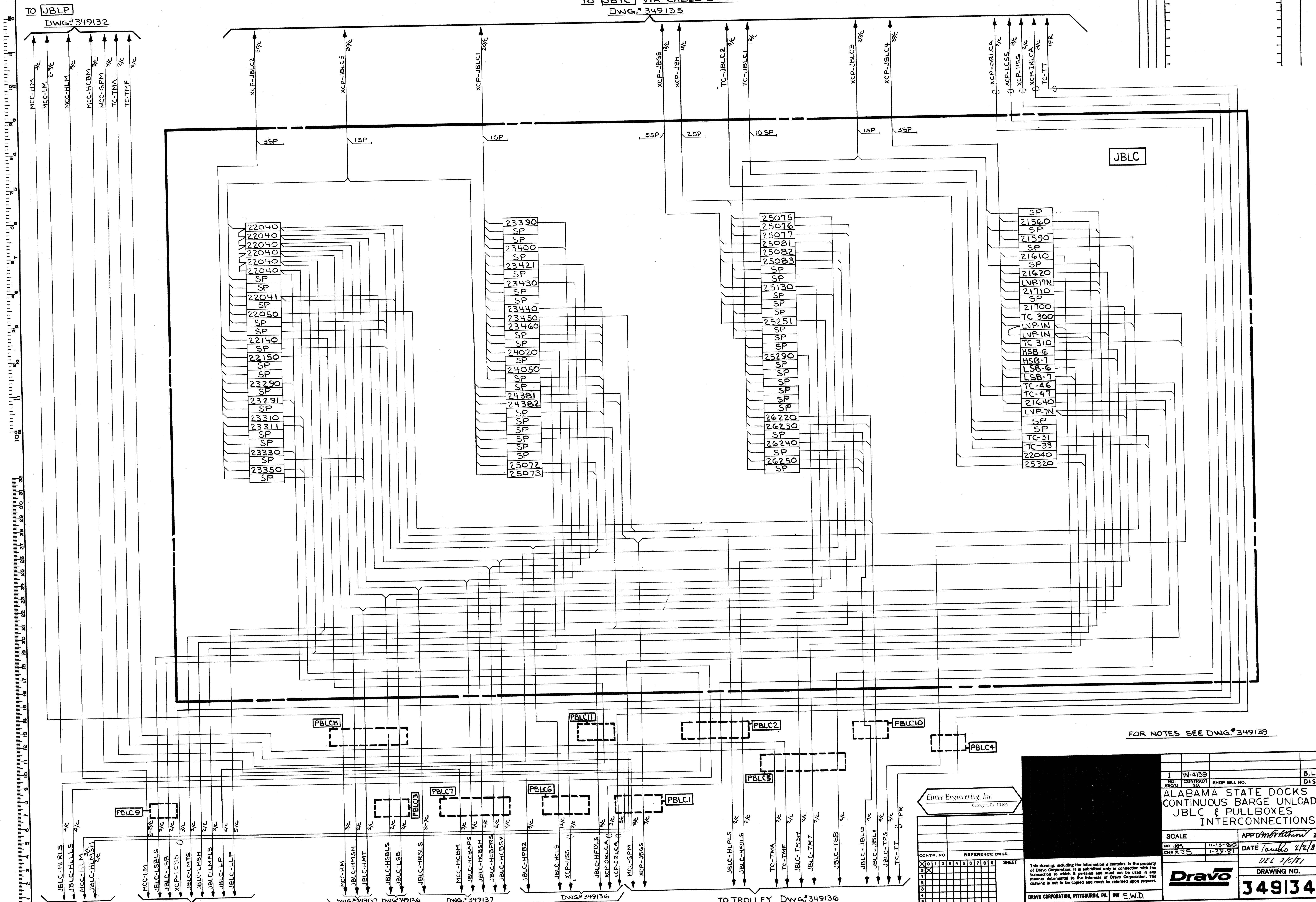
Elmec Engineering, Inc.  
Carnegie, Pa. 15106

REV.	ITEM	DESCRIPTION	AUTH'D & DATE

NO. 1	CONTRACT W-4139	SHOP BILL NO.	SHOPS	DIST. BL
ALABAMA STATE DOCKS CONTINUOUS BARGE UNLOADER JBTC INTERCONNECTIONS				
SCALE		PASSED <i>10/2/87</i>		
DR. JRM	11-30-85	APP'D <i>11/30/85</i>		
CHK. RJS	1-29-81	DEL 2/5/81		
DRAWING NO.		REV.		
349135				

NOMINAL MACHINING DIMENSIONS  
± 0.010 UNLESS NOTED

CONTR. NO. REFERENCE DWGS. DRAVO CORPORATION, PITTSBURGH, PA. DIV. E.W.D. SHEET 1



FOR NOTES SEE DWG.#349139

CONTR. NO. 1 W-4139		SHOP BILL NO.		B.L.
SCALE		APP'D <i>Dravo</i> 2-5-81		DIST.
DR. RA		DATE <i>10/15/80</i>		
CHK RJS		DATE <i>1-29-81</i>		
DRAWING NO. 349134		REV.		
DRAVO CORPORATION, PITTSBURGH, PA. DW E.W.D.				

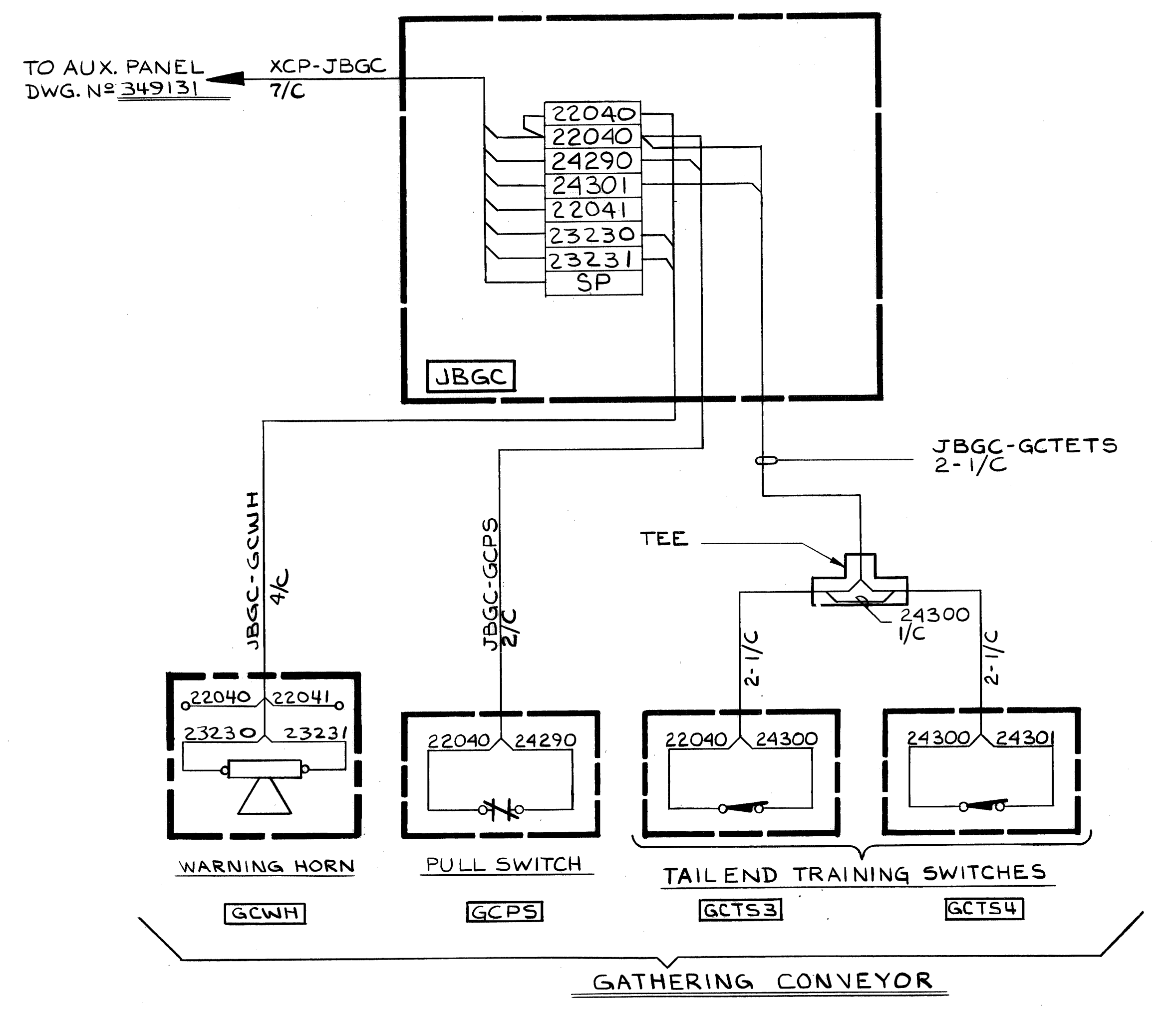
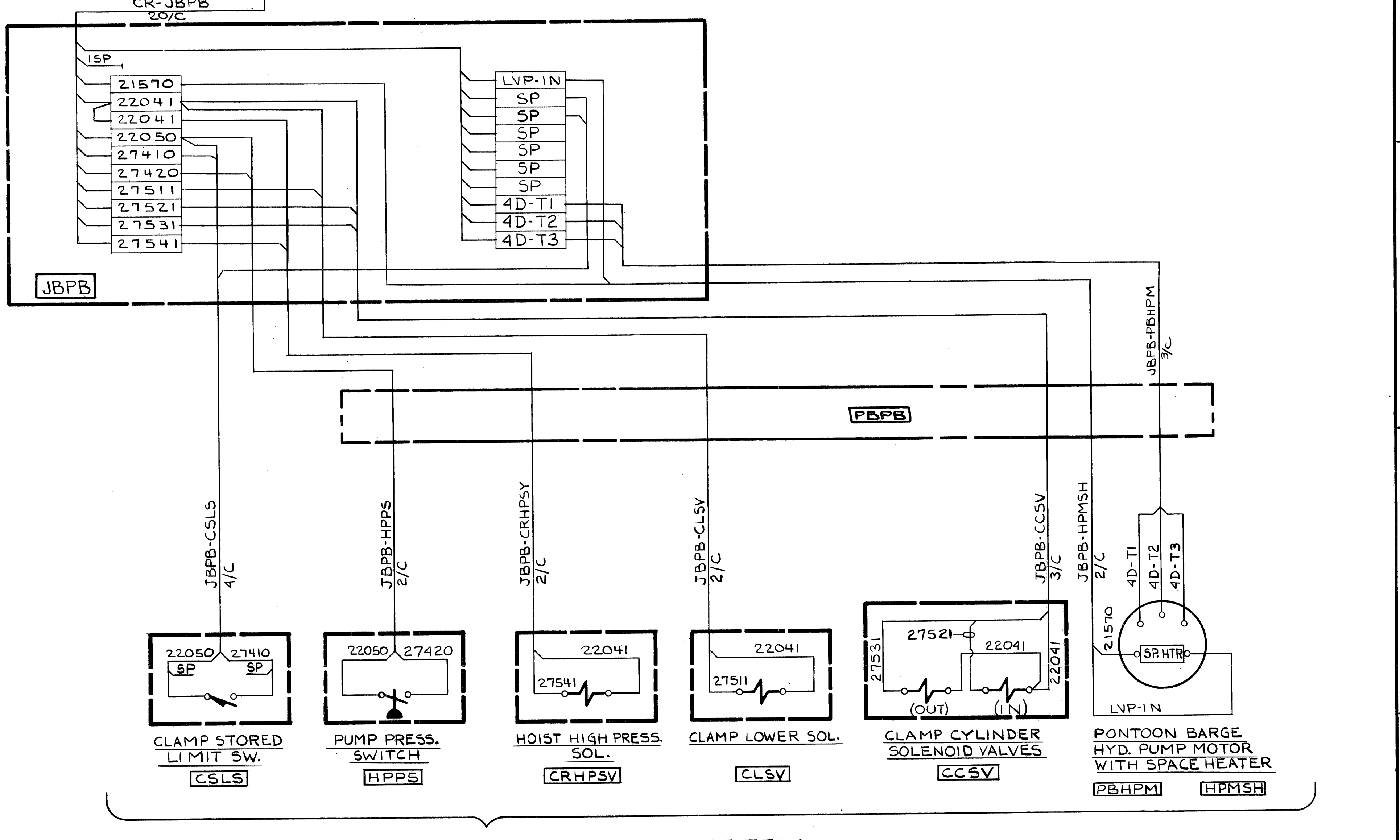
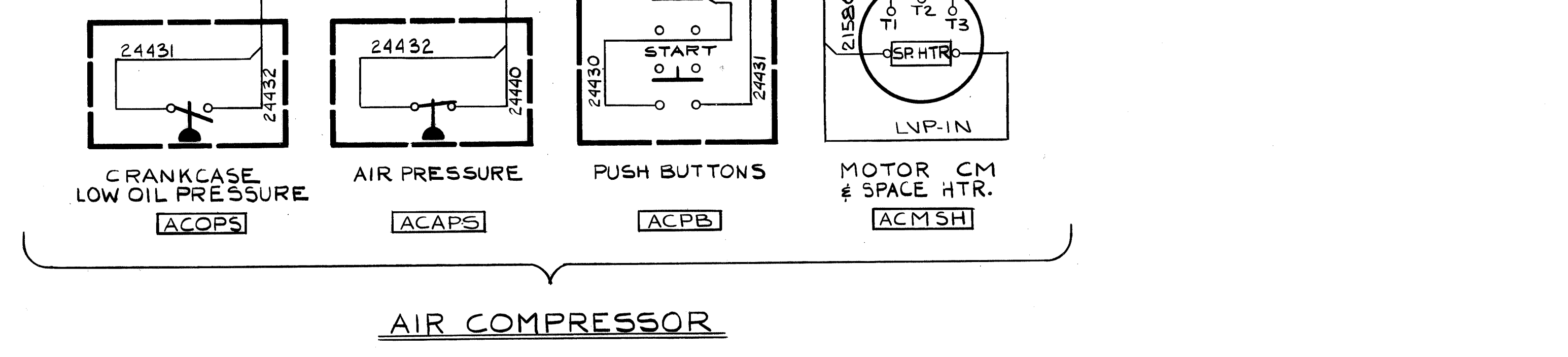
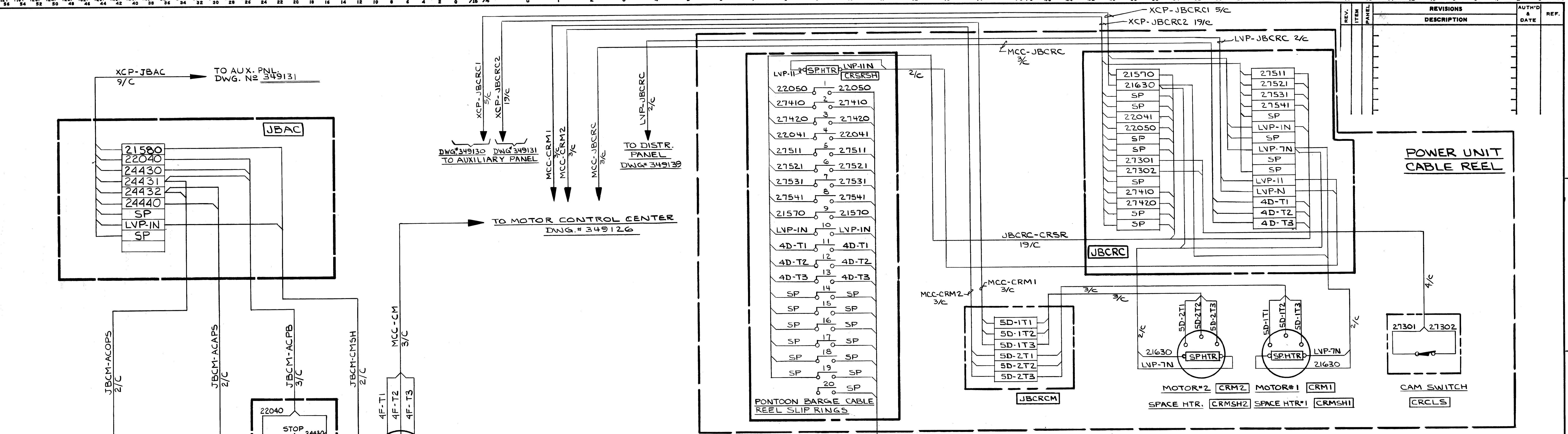
ALABAMA STATE DOCKS  
CONTINUOUS BARGE UNLOADER  
JBLC & PULLBOXES  
INTERCONNECTIONS

Dravo Engineering, Inc.  
Greenville, Pa. 15106

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REV.	ITEM	DESCRIPTION	AUTH'D & DATE	REF.



FOR NOTES SEE DWG. 349139

CONTR. NO.	REFERENCE DWGS.	SHEET
0	1	1
1	2	2
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3	4	4
4	5	5

NO. 1 W-4139 B.L.

CONTRACT NO. SHOP BILL NO. DIST.

**ALABAMA STATE DOCKS**  
CONTINUOUS BARGE UNLOADER  
AIR COMPR. CABLE REEL & CONV.  
INTERCONNECTIONS

SCALE: APP'D: *[Signature]* 2-5-81  
DATE: *[Signature]* 2/2/81

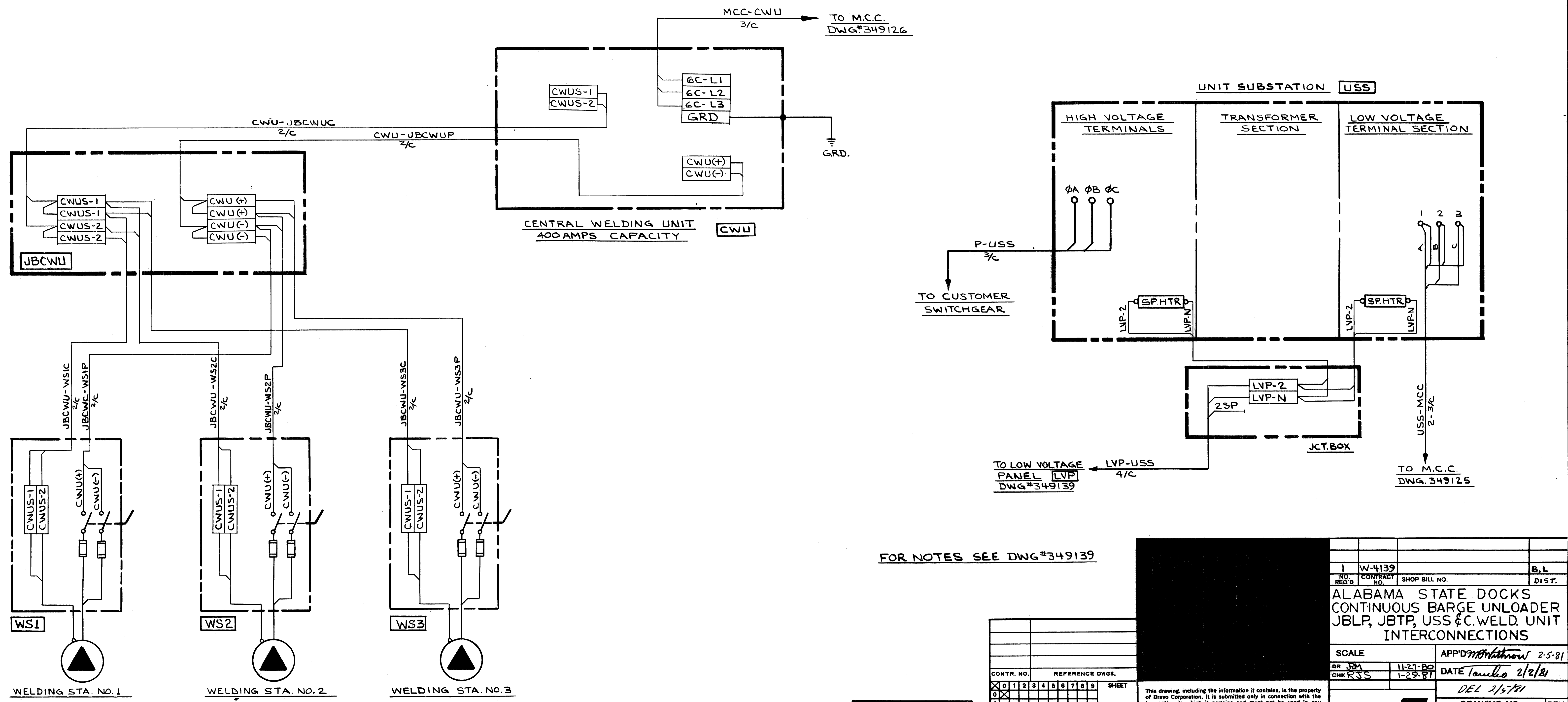
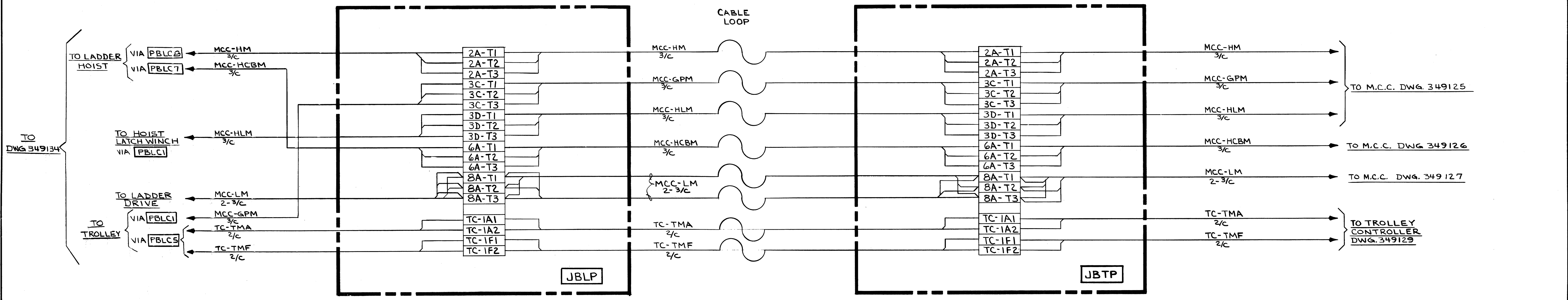
DR. PGS. 10-22-80  
CHK. R.S. 1-29-81

**Dravo**  
DRAWING NO. **349133** REV. 1

DRAVO CORPORATION, PITTSBURGH, PA. DIV. E.W.D.



REV.	ITEM	PANEL	REVISIONS DESCRIPTION	AUTHOR & DATE	REF.



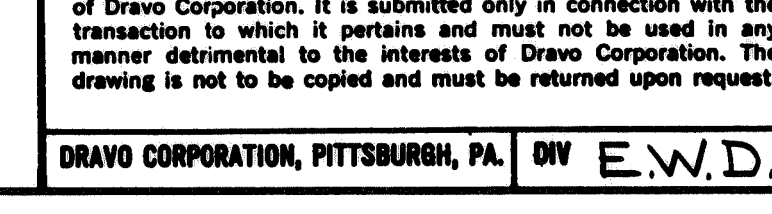
FOR NOTES SEE DWG#349139

CONTR. NO.	REFERENCE DWGS.	SHEET

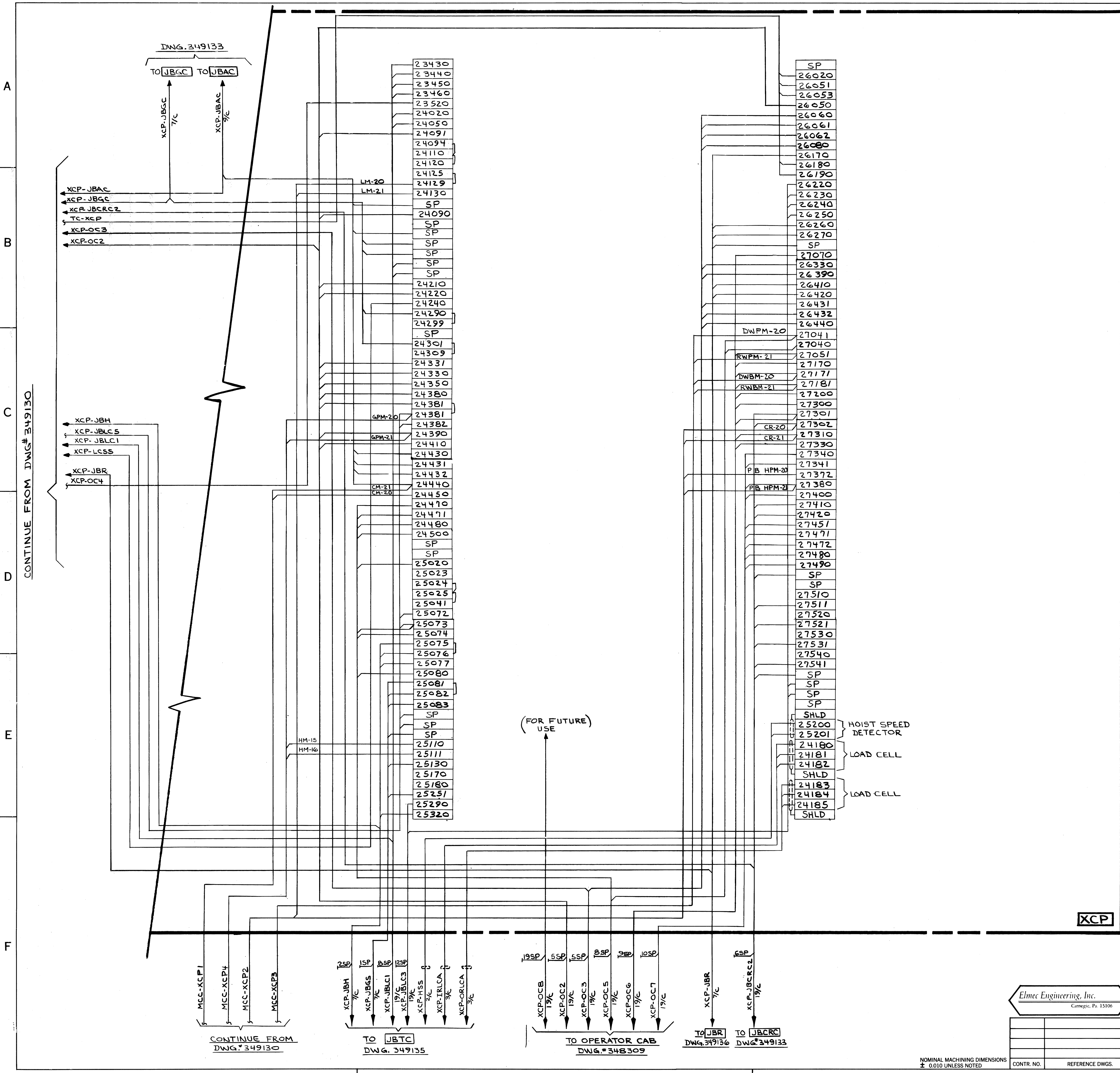
Elmec Engineering, Inc.  
Carnegie, Pa. 15106

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NO. 1	W-4139	B.L.
REV. 1	CONTRACT NO.	SHOP BILL NO.
ALABAMA STATE DOCKS CONTINUOUS BARGE UNLOADER JBLP, JBTP, USS & C. WELD. UNIT INTERCONNECTIONS		
SCALE	APP'D <i>[Signature]</i> 2-5-81	DATE <i>[Signature]</i> 2/2/81
DR. J.M. CHK. R.S.S.	11-21-80	1-29-81
DRAWING NO.		REV.
<b>349132</b>		



DRAVO CORPORATION, PITTSBURGH, PA. DW E.W.D.



L	Trail No. of Pcs. on Contract	No. of Pcs. Assembled	DESCRIPTION		Length		Piece or Pattern Number	Drawing Number	Mat'l.
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FOR NOTES SEE DWG #349139

Elmec Engineering, Inc.  
 Carnegie, Pa. 15106

REV. ITEM PANEL		DWG. REVISIONS DESCRIPTION		AUTHOR & DATE	DR. P.S. 1-3-81 CHK. RM. 1-25-81
NO. REQD.		CONTRACT NO.		SHOP BILL NO.	
NO.		CONTRACT NO.		SHOPS	
NO.		CONTRACT NO.		DIST.	
ALABAMA STATE DOCKS CONTINUOUS BARGE UNLOADER AUXILIARY PANEL SHEET 20F2 INTERCONNECTIONS				SCALE	
PASSED <i>taulio 2/2/81</i>				APP'D <i>2/2/81</i>	
DEL <i>2/5/81</i>				DRAWING NO.	
DRAVO				REV.	
DRAVO CORPORATION, PITTSBURGH, PA. DIV E.W.D				SHEET	
349131					

NOMINAL MACHINING DIMENSIONS  
 ± 0.010 UNLESS NOTED

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CONTINUE FROM DWG # 349130

CONTINUE FROM DWG # 349130

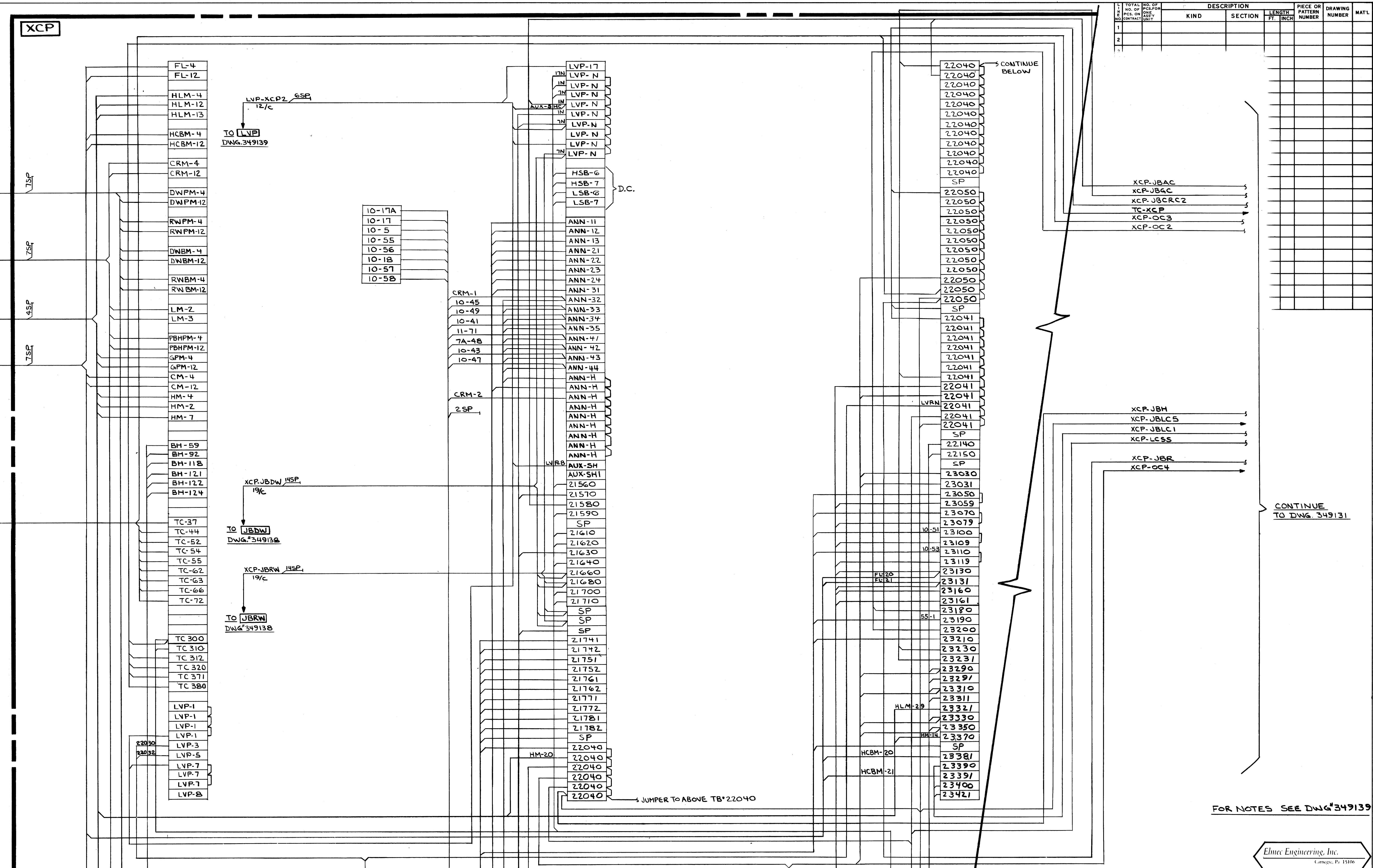
TO JBTC  
 DWG # 349135

TO OPERATOR CAB  
 DWG # 348309

TO JBR  
 DWG # 349136

TO JBCRC  
 DWG # 349133





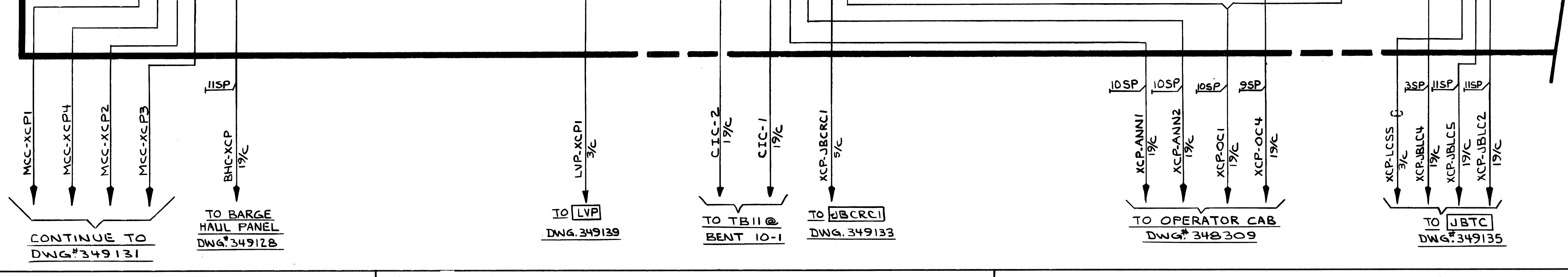
L	NO. OF P.C.S. ON CONTRACT	NO. OF P.C.S. ON ONE UNIT	DESCRIPTION		LENGTH FT. INCH	PIECE OR PATTERN NUMBER	DRAWING NUMBER	MATL.
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CONTINUE TO DWG. 349131

FOR NOTES SEE DWG. 349139

Elme Engineering, Inc.  
Carnegie, Pa. 15106

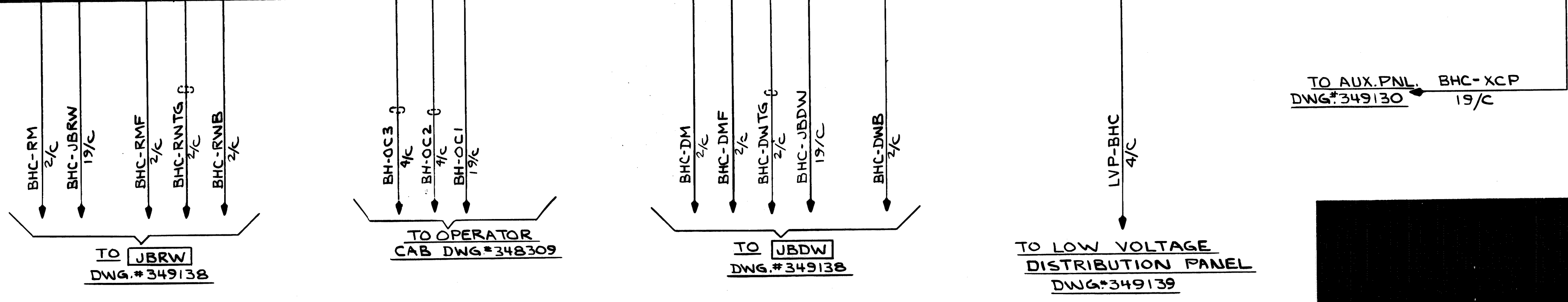
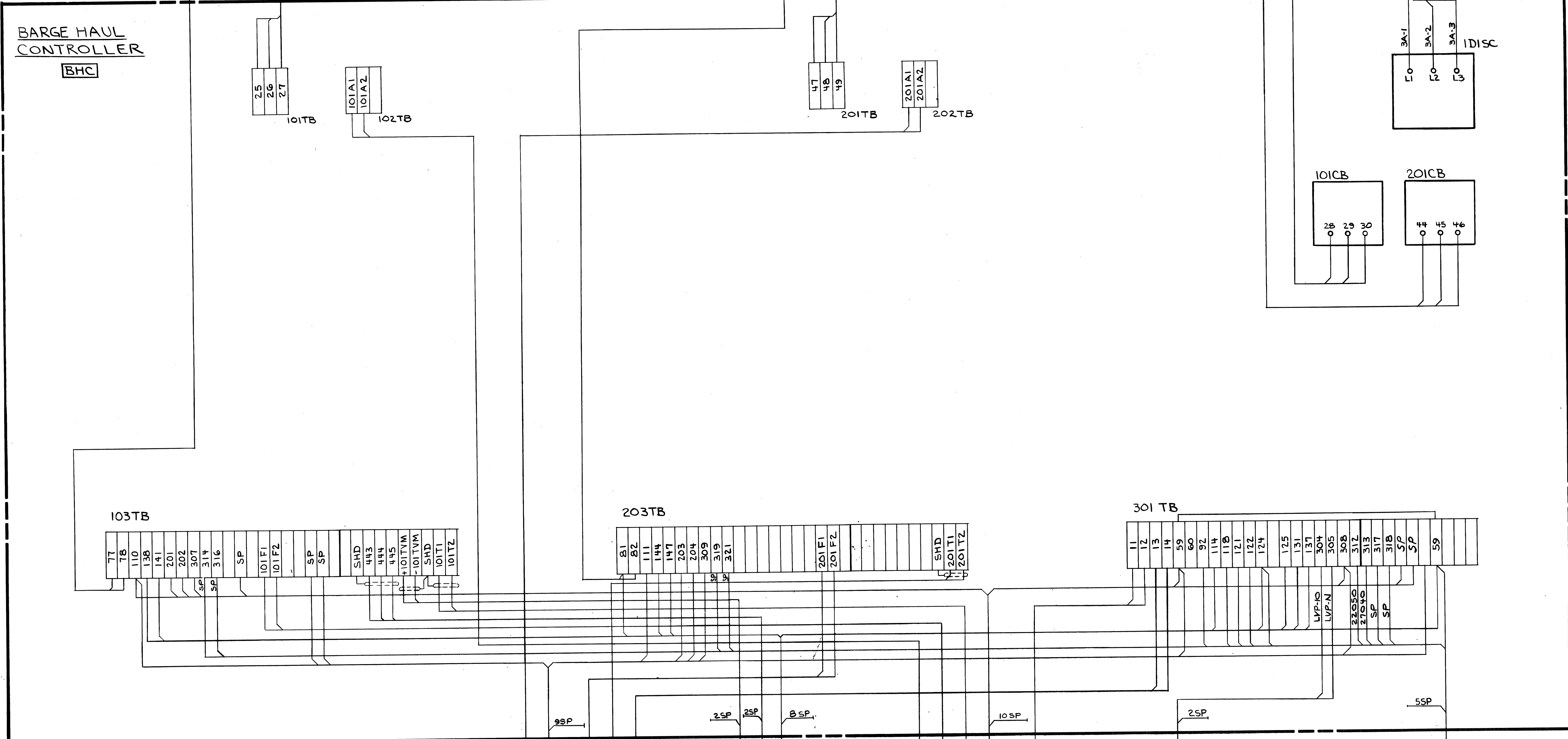
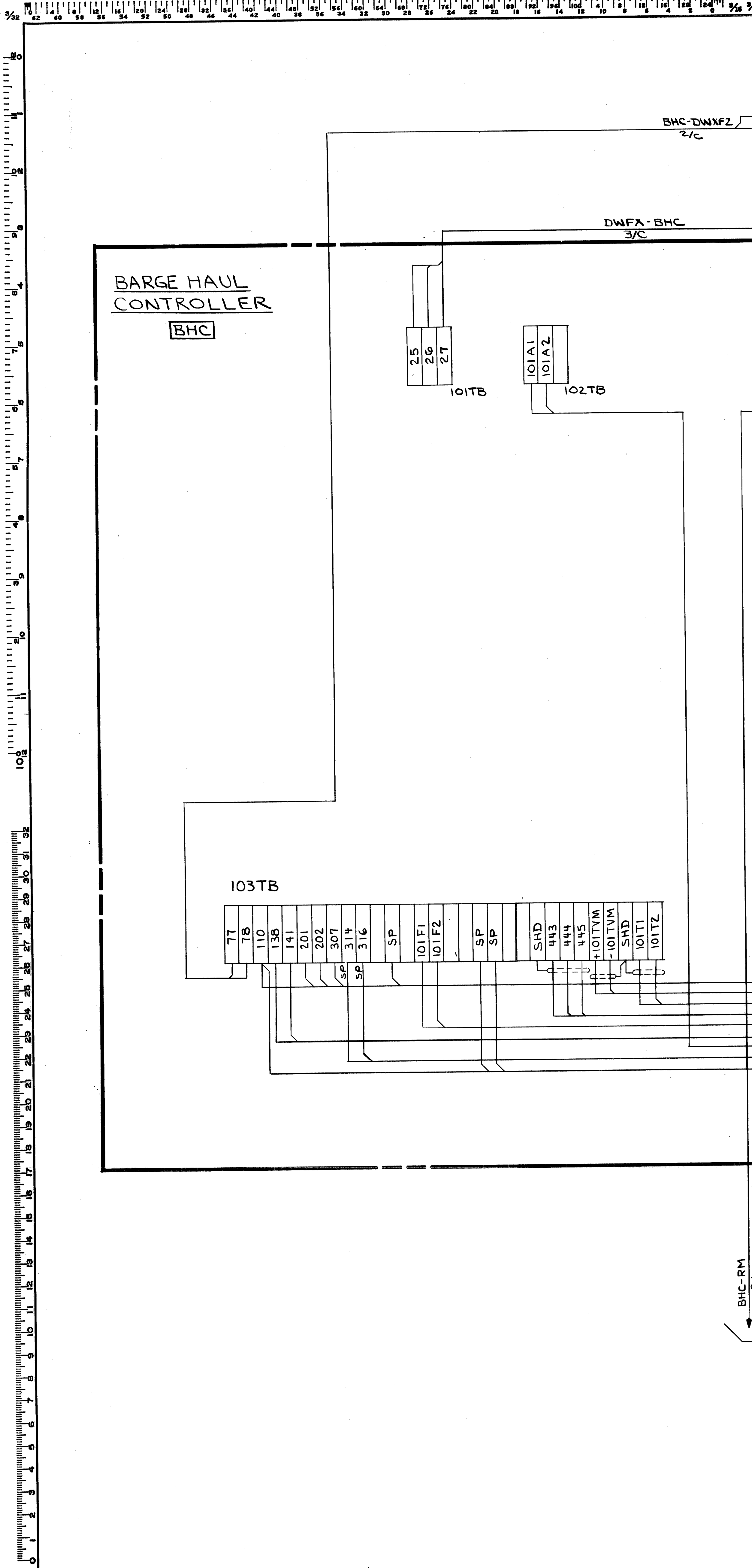
REV.	ITEM	DESCRIPTION	AUTHOR & DATE
1	W-4139	ALABAMA STATE DOCKS CONTINUOUS BARGE UNLOADER AUXILIARY PANEL SHEET 1 OF 2 INTERCONNECTIONS	APP'D: [Signature] 2/2/81
SCALE		DR. JRM	12-20-80
DWG. REVISIONS		CHK: JSS	1-29-81
DRAWING NO.		349130	
SHEET		1	



4 3 2 1







REV.	ITEM	PANEL	REVISIONS	DESCRIPTION	AUTH'D & DATE	REF.

FOR NOTES SEE DWG.# 349139

CONTR. NO.	REFERENCE DWGS.	SHEET
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Elmic Engineering, Inc.  
Carnegie, Pa. 15106

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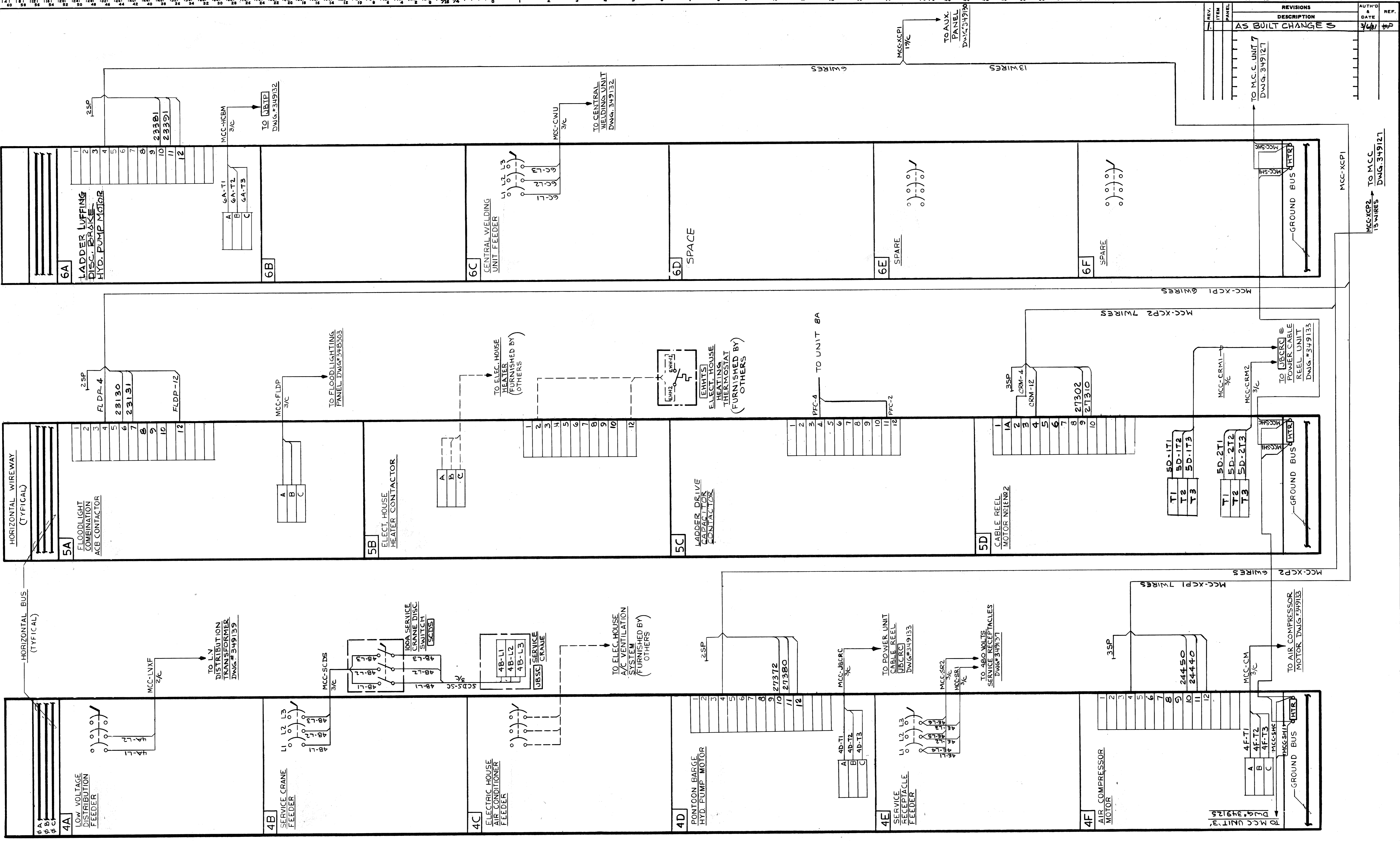
DRAVO CORPORATION, PITTSBURGH, PA. DIV E.W.D.

W-4139	CONTRACT NO.	B.L.
REQ'D	SHOP BILL NO.	DIST.
ALABAMA STATE DOCKS CONTINUOUS BARGE UNLOADER BARGE HAUL CONTROLLER INTERCONNECTIONS		
SCALE	APP'D	DATE
12-5-80	<i>[Signature]</i>	2/2/81
DR: SA	DATE	REV.
CHK: KSS	12-8-80	DEL 2/5/81
DRAWING NO.		REV.
349128		





0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100



FOR NOTES SEE DWG# 349139

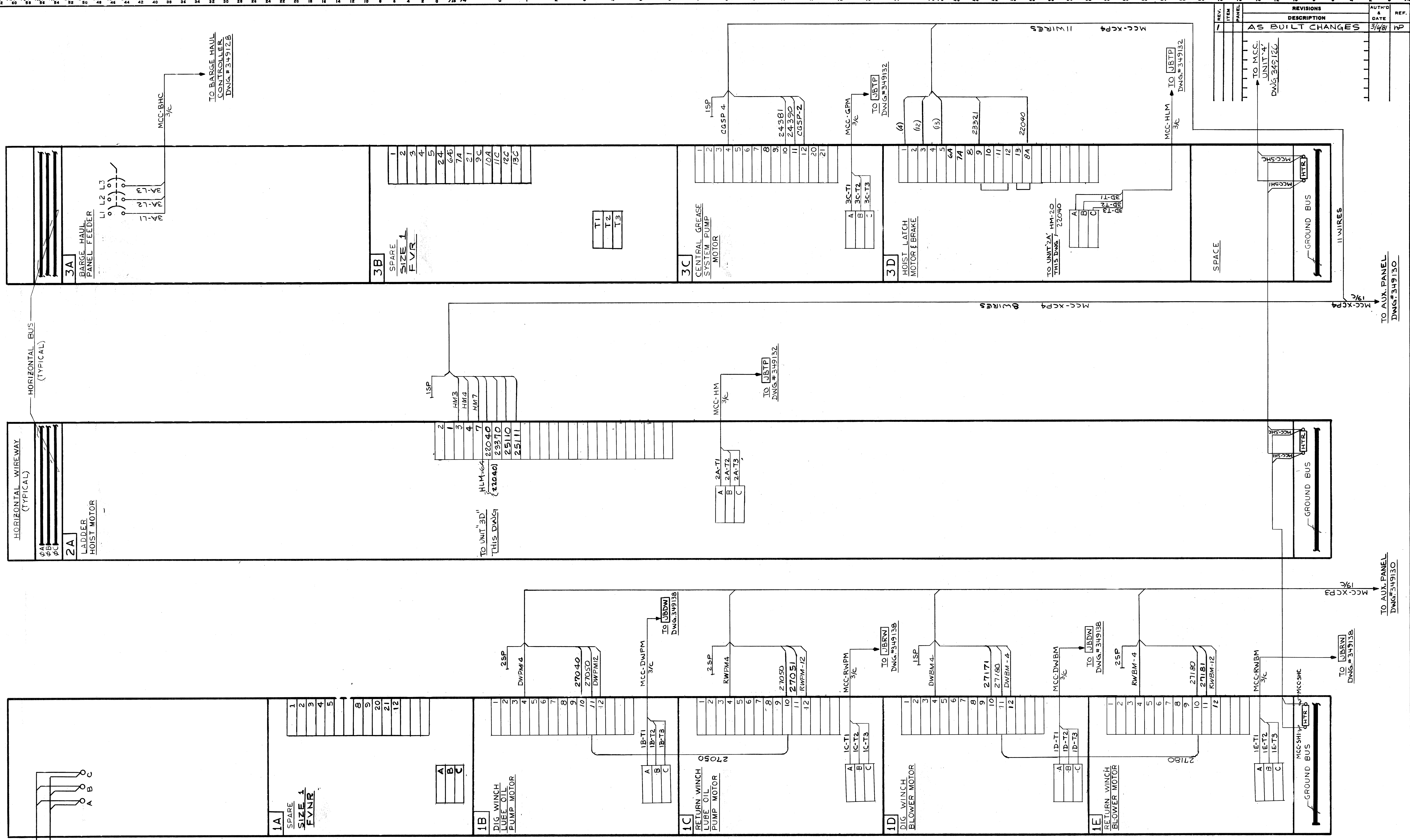
CONTR. NO.	REFERENCE DWGS.	SHEET
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Elmeo Engineering, Inc.  
 CONSULTING ENGINEERS  
 15108

1	W-4139	B, L
REV. NO.	CONTRACT NO.	SHOP BILL NO.
<b>ALABAMA STATE DOCKS          CONTINUOUS BARGE UNLOADER          MOTOR CONTROL CENTER          INTERCONNECTIONS</b>		
SCALE	APP'D	DATE
DR P/S	12-24-83	2/2/81
CHK JRM	1-29-87	
<b>Dravo</b> DRAWING NO. <b>349126</b>		
DRavo CORPORATION, PITTSBURGH, PA. DIV E.W.D.		REF. <b>1</b>

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REV.	ITEM	DESCRIPTION	DATE	BY	REF.
1		AS BUILT CHANGES	3/9/81	MP	

FOR NOTES SEE DWG#349139

CONTR. NO.	REFERENCE DWGS.
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Elmec Engineering, Inc.  
Carnegie, Pa. 15106

NO. 1	W-4139	B.L.
CONTRACT NO.		DIST.
SHOP BILL NO.		
ALABAMA STATE DOCKS CONTINUOUS BARGE UNLOADER MOTOR CONTROL CENTER INTERCONNECTIONS		
SCALE	APP'D <i>[Signature]</i> 2-5-81	
DR. R.M.	12-B-80	DATE Tomko 2/2/81
CHK. R.M.	1-29-B1	
DEL 2/5/81		
DRAWING NO.		REV.
349125		1
DRAVO CORPORATION, PITTSBURGH, PA. DIV E.W.D.		

F 26 55 1









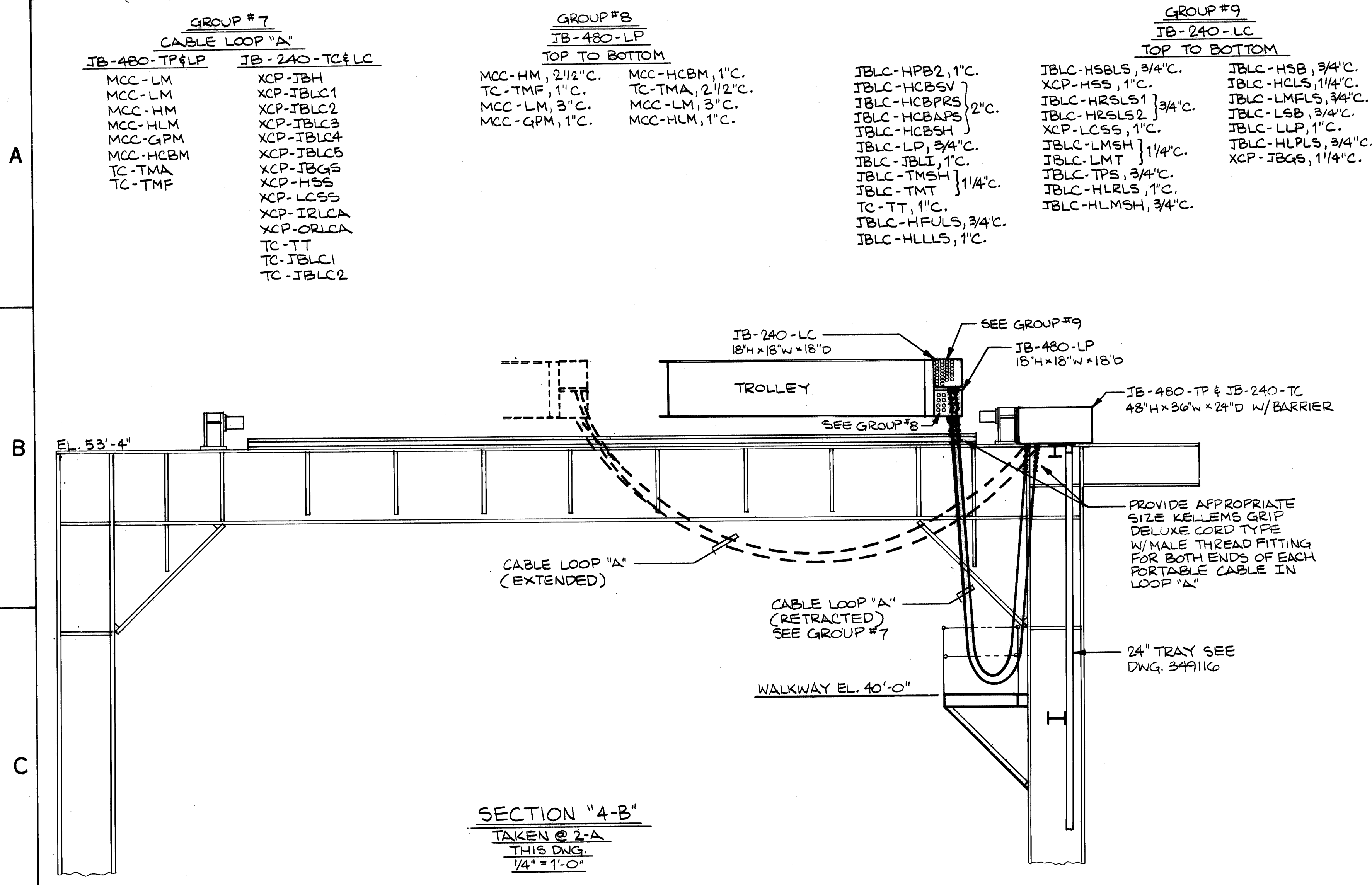






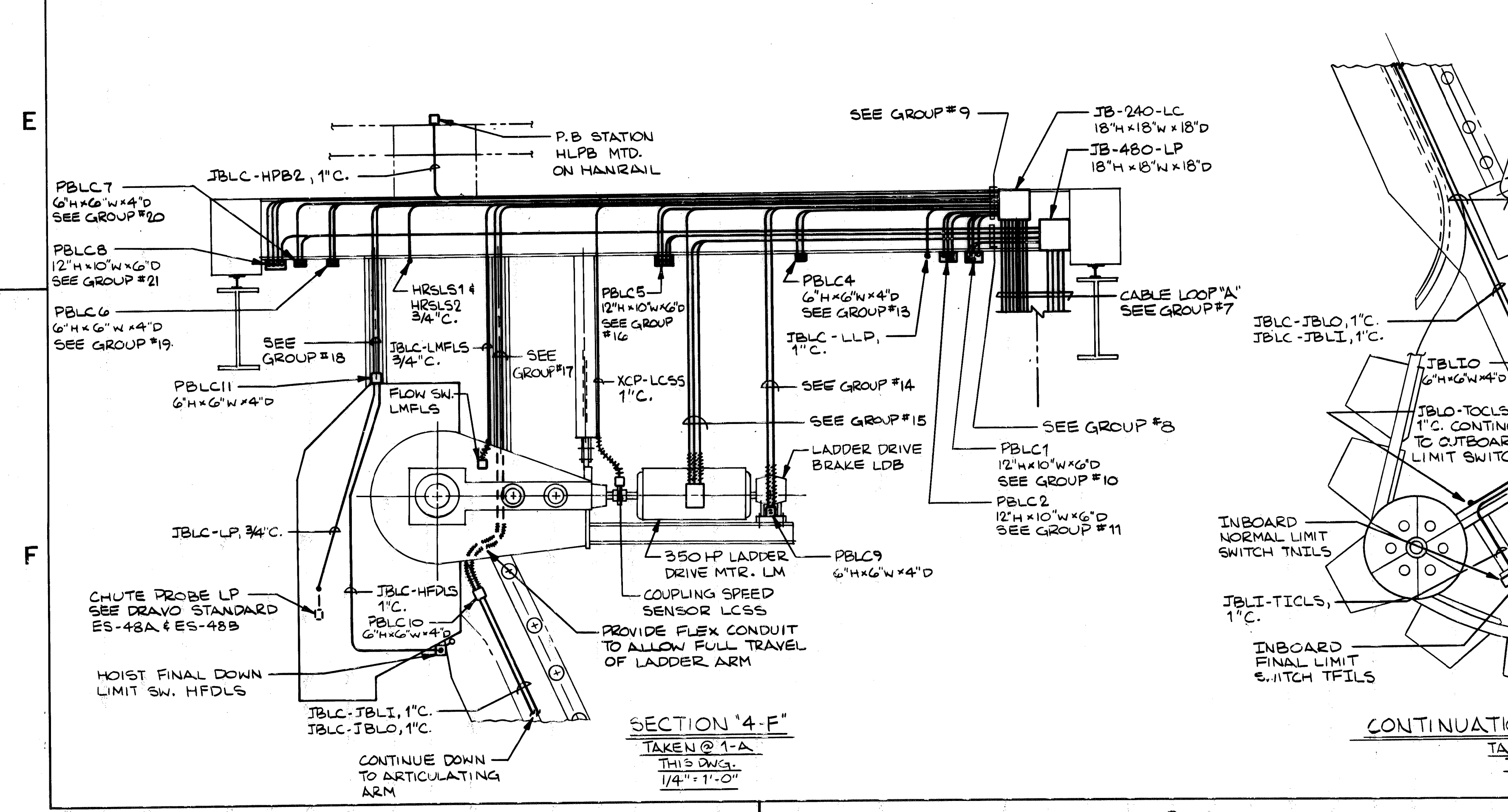
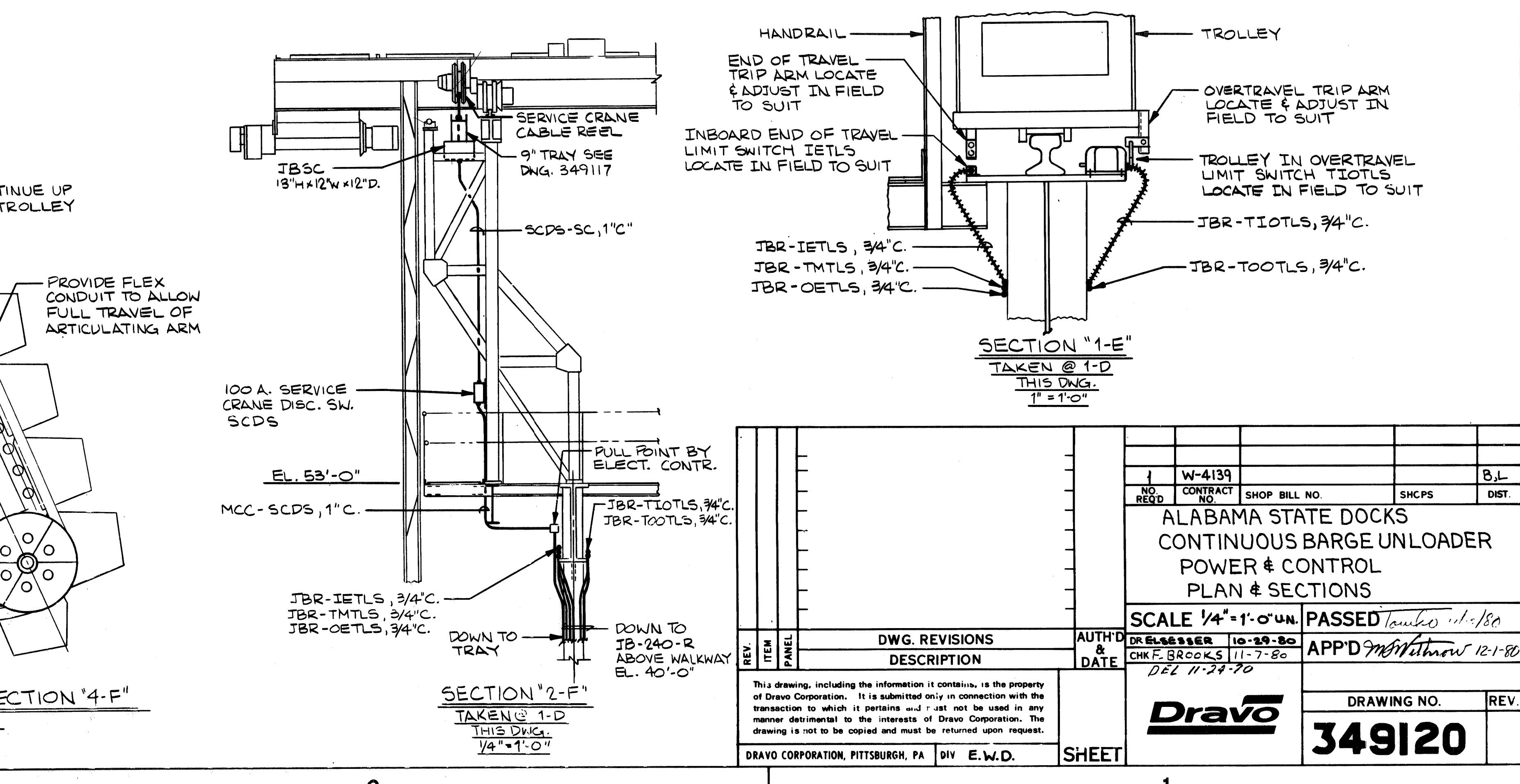
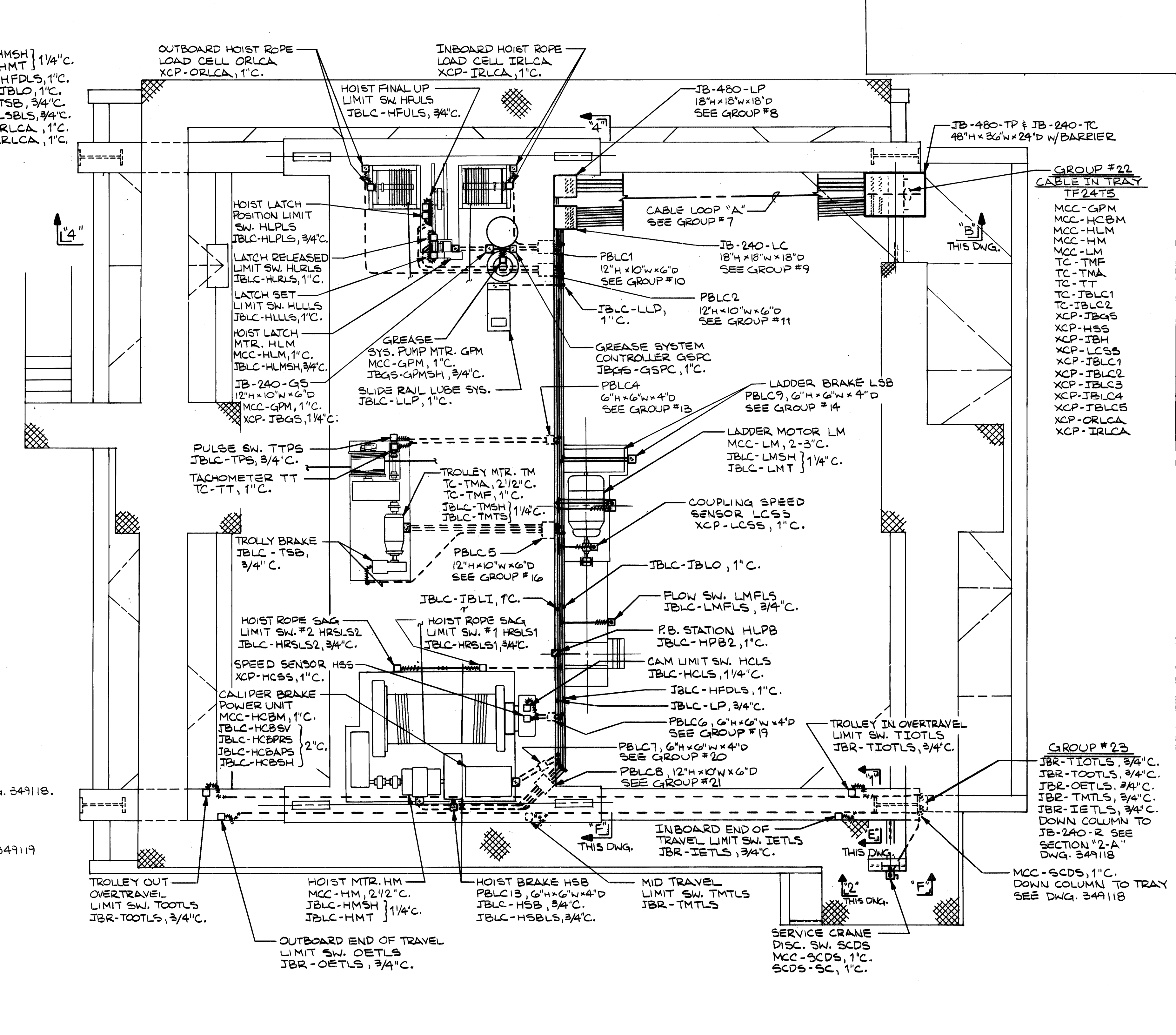






- GROUP #7**  
CABLE LOOP "A"  
JB-480-TP&LP  
MCC-LM  
MCC-LM  
MCC-HM  
MCC-HLM  
MCC-GPM  
MCC-HCBM  
TC-TMA  
TC-TMF
- GROUP #8**  
JB-480-LP  
TOP TO BOTTOM  
MCC-HM, 2 1/2" C.  
TC-TMF, 1" C.  
MCC-LM, 3" C.  
MCC-GPM, 1" C.  
MCC-HCBM, 1" C.  
TC-TMA, 2 1/2" C.  
MCC-LM, 3" C.  
MCC-HLM, 1" C.
- GROUP #9**  
JB-240-LC  
TOP TO BOTTOM  
JBLC-HPB2, 1" C.  
JBLC-HCBVS, 1" C.  
JBLC-HCBPRS, 1 1/2" C.  
JBLC-HCBAPS, 1 1/2" C.  
JBLC-LP, 3/4" C.  
JBLC-JBLI, 1" C.  
JBLC-TMHS, 1 1/4" C.  
JBLC-TMT, 1" C.  
TC-TT, 1" C.  
JBLC-HFULS, 3/4" C.  
JBLC-HLLLS, 1" C.
- GROUP #10**  
PBL C1  
MCC-HLM, 1" C.  
MCC-GPM, 1" C.  
XCP-JBGS, 1 1/4" C.  
XCP-IRLCA, 1" C.  
JBLC-HLMSH, 3/4" C.
- GROUP #11**  
PBL C2  
XCP-ORLCA, 1" C.  
JBLC-HLPLS, 3/4" C.  
JBLC-HFULS, 3/4" C.  
JBLC-HLRLS, 1" C.  
JBLC-HLLLS, 1" C.
- GROUP #12**  
PBL C3  
MCC-LM, 3" C.  
MCC-LM, 3" C.  
JBLC-LMSH, 1 1/4" C.  
JBLC-LMT, 1" C.
- GROUP #13**  
PBL C4  
TC-TT, 1" C.  
JBLC-TPS, 3/4" C.
- GROUP #14**  
PBL C9  
JBLC-LSB, 3/4" C.  
JBLC-LSBL, 3/4" C.
- GROUP #15**  
MTR. LM  
MCC-LM, 3" C.  
MCC-LM, 3" C.  
JBLC-LMSH, 1 1/4" C.  
JBLC-LMT, 1" C.
- GROUP #16**  
PBL C5  
TC-TMA, 2 1/2" C.  
TC-TMF, 1" C.  
JBLC-TMHS, 1 1/4" C.  
JBLC-TMT, 1" C.
- GROUP #17**  
PBL C10  
JBLC-JBLI, 1" C.  
JBLC-JBLO, 1" C.
- GROUP #18**  
PBL C11  
JBLC-LP, 3/4" C.  
JBLC-HFULS, 1" C.
- GROUP #19**  
PBL C6  
XCP-HSS, 1" C.  
JBLC-HCLS, 1 1/4" C.
- GROUP #20**  
PBL C7  
MCC-HCBM, 1" C.  
JBLC-HCBVS, 1" C.  
JBLC-HCBPRS, 1 1/2" C.  
JBLC-HCBAPS, 1 1/2" C.  
JBLC-HCBSH, 1" C.
- GROUP #21**  
PBL C8  
MCC-HM, 2 1/2" C.  
JBLC-HMSH, 1 1/4" C.  
JBLC-HMT, 1" C.  
JBLC-HSB, 3/4" C.  
JBLC-HSBL, 3/4" C.

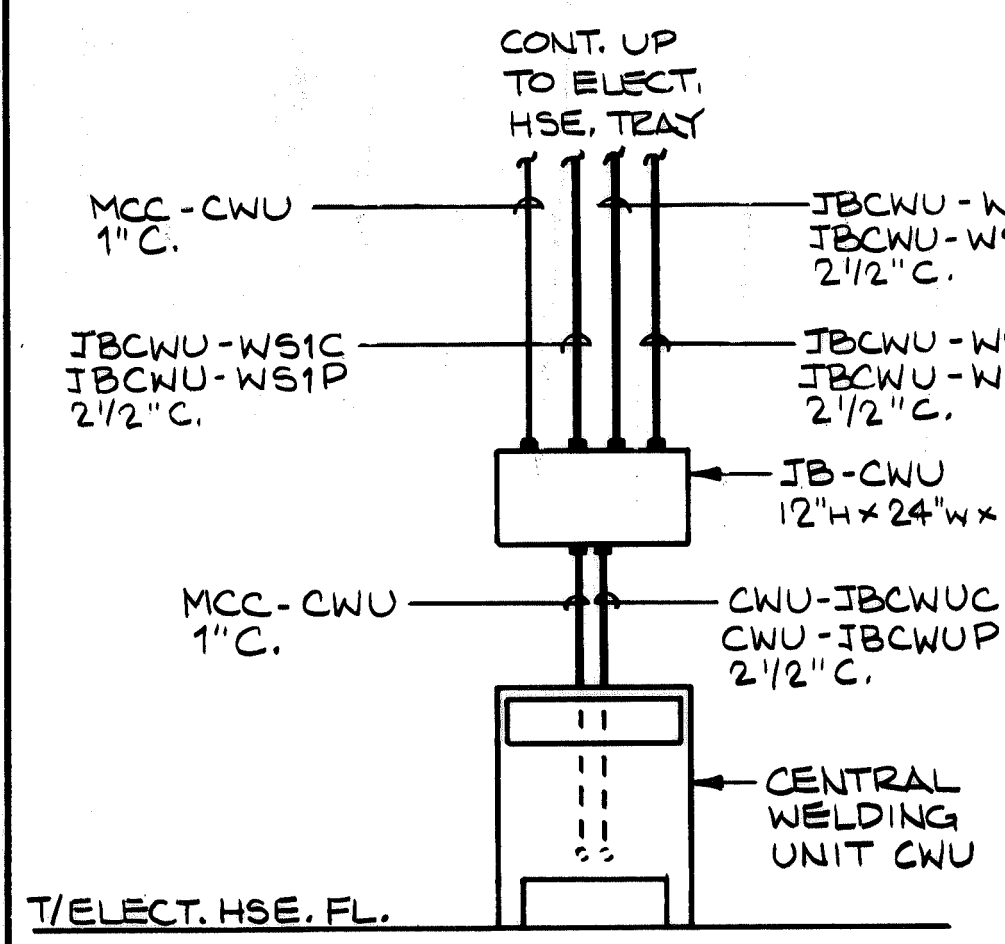
**NOTES:**  
1. FOR POWER & CONTROL NOTES SEE DWG. 349118.  
2. FOR TRAY LOCATION & IDENTIFICATION SEE DWG. 349116 & 349117.  
3. WORK THIS DWG. WITH DWGS. 349118 & 349119



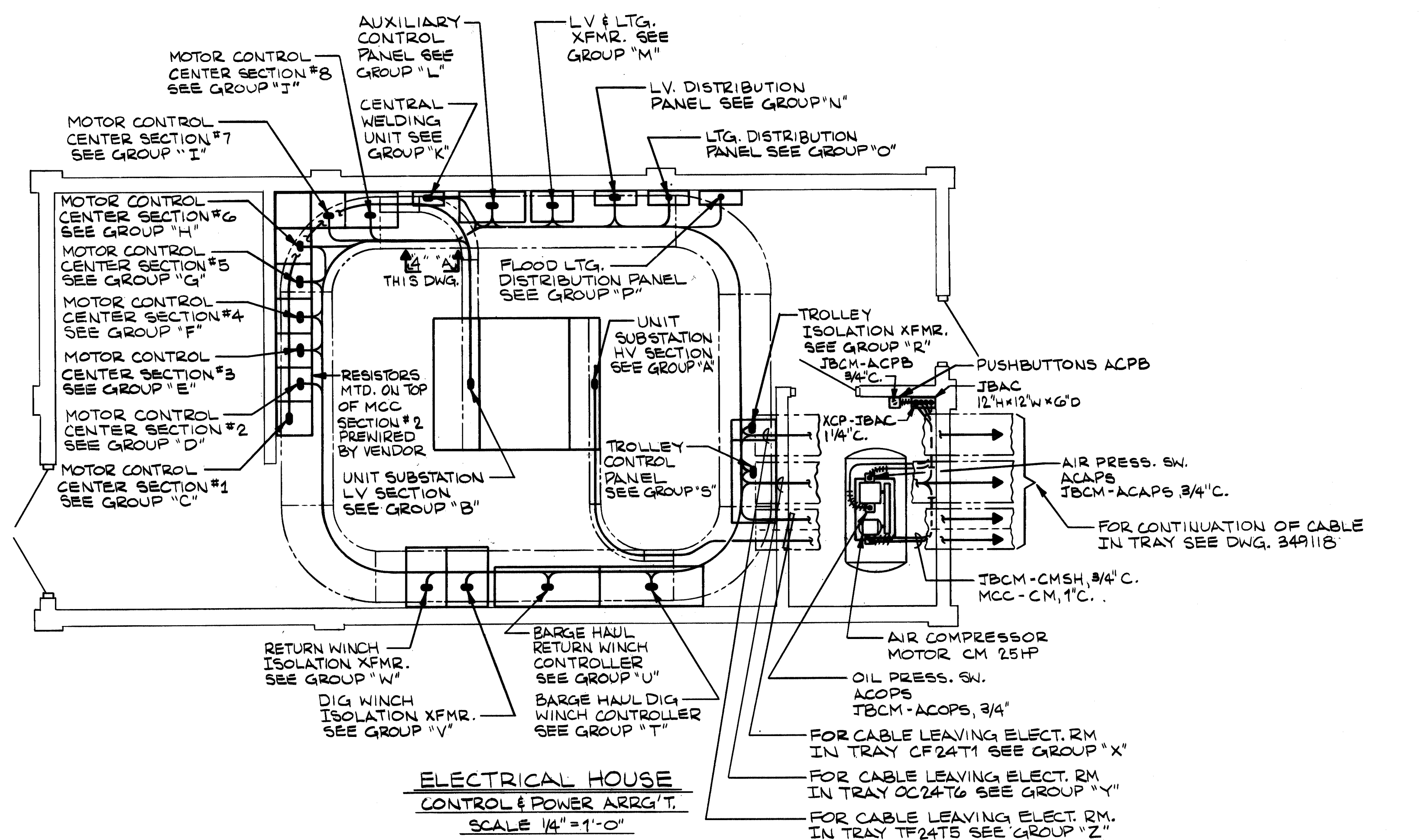
NO.	W-4139	SHOP BILL NO.	SHEETS	B.L.
REGD.	CONTRACT NO.			DIST.
ALABAMA STATE DOCKS CONTINUOUS BARGE UNLOADER POWER & CONTROL PLAN & SECTIONS				
SCALE 1/4" = 1'-0" UN.		PASSED		55
DWG. REVISIONS		AUTH'D & DATE		26
DESCRIPTION		APP'D		1
DR. RELEASED 10-29-80 CHK. BROOKS 11-7-80 DEL 11-24-80				
DRAWING NO.				REV.
<b>349120</b>				
DRAWO CORPORATION, PITTSBURGH, PA. DIV. E.W.D. SHEET				



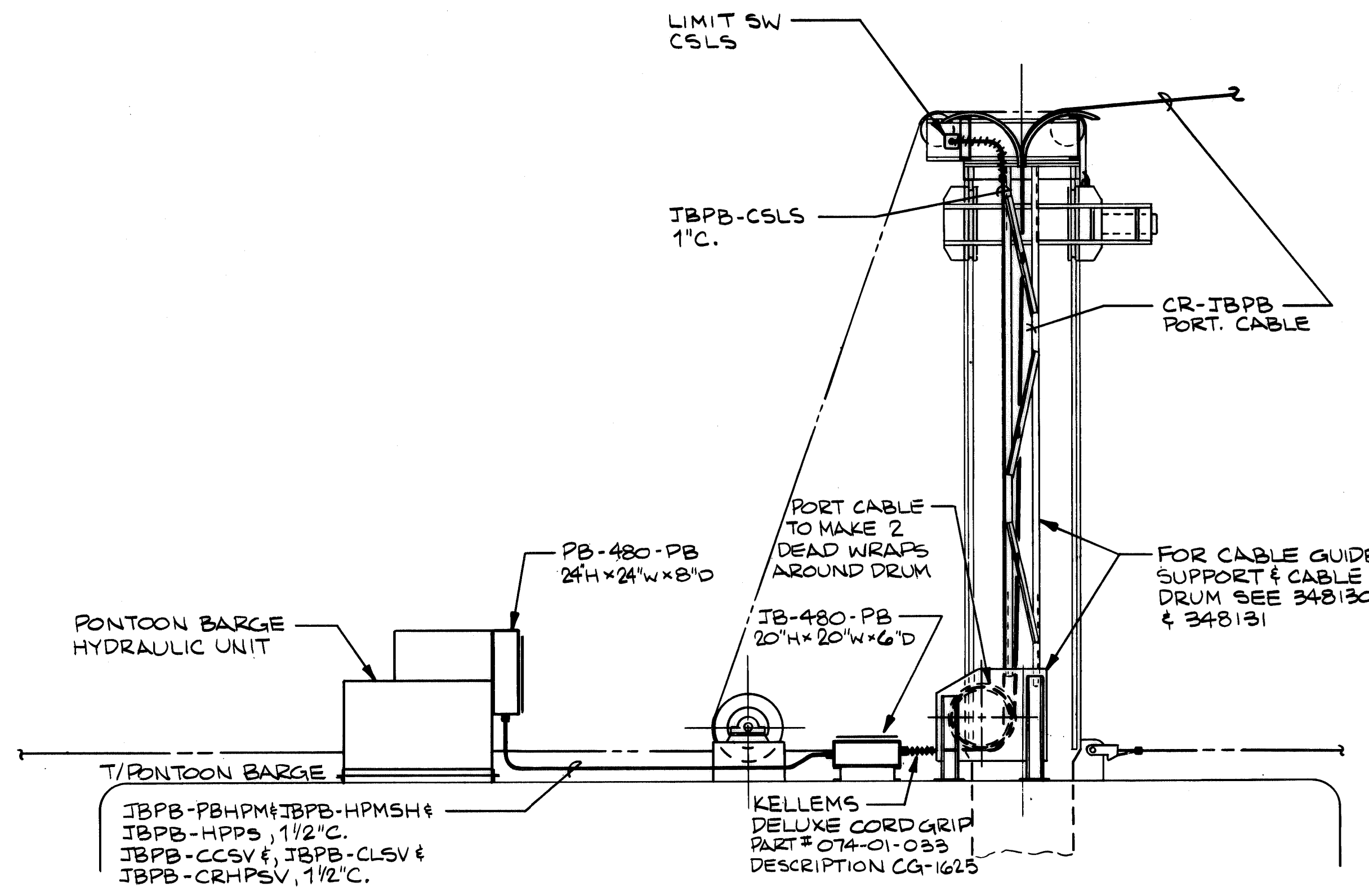
REV.	ITEM	DESCRIPTION	AUTHOR & DATE	REF.



**SECTION "4-A"**  
TAKEN @ 3-B  
THIS DWG.  
1/2" = 1'-0"



**ELECTRICAL HOUSE**  
CONTROL & POWER ARRANGEMENT  
SCALE 1/4" = 1'-0"



**SECTION "1-C"**  
TAKEN AT 4-B  
DWG. 349118  
3/8" = 1'-0"

**TRAY DROP OUT GROUPINGS**

<b>USS</b> GROUP "A" P-USS -I.A.C.	<b>MCC</b> GROUP "H" MCC-HCBM MCC-CWU } 2"C.	<b>XCP</b> GROUP "L" CONT. XCP-OC5 XCP-OC6 } 4"C.	<b>LVP</b> GROUP "N" CONT. LVXF-LVP-2 1/2"C.	<b>BHC</b> GROUP "T" CONT. BHC-DM BHC-DMF } 2 1/2"C.	<b>GROUP "X"</b> TRAY CF24T1 P-USS CIC#1 *CIC#2	<b>GROUP "Y" CONT.</b> TRAY OC24TG LVP-OC JBCWU-WS1C JBCWU-WS1P JBCWU-WS2C JBCWU-WS2P JBCWU-WS3C JBCWU-WS3P MCC-SCDS MCC-JBCRC MCC-CRM TC-OC MCC-DWPM MCC-DWBM MCC-RWPM MCC-RWBM MCC-OC1 MCC-OC2 MCC-OC3 MCC-OC4 MCC-OC9 XCP-HSS } 3"C.	<b>GROUP "Z" CONT.</b> TRAY TF24TG TC-TMF TC-TMA TC-TT TC-JBLC1 TC-JBLC2 XCP-JBGS XCP-HSS XCP-JBH XCP-LCSS XCP-JBLC1 XCP-JBLC2 XCP-JBLC3 XCP-JBLC4 XCP-JBLC5 XCP-ORLCA XCP-IRLCA
<b>USS</b> GROUP "B" USS-MCC-2, 3"C. LVP-USS-1"C.	<b>MCC</b> GROUP "I" MCC-TC-1"C.	<b>XCP</b> GROUP "J" XCP-ANN1 XCP-OC10 XCP-ORLCA XCP-ANN2 XCP-JBGC } 3"C.	<b>LVP</b> GROUP "O" LVP-LDP-1"C.	<b>BHC</b> GROUP "U" BHC-XCP-2"C. XCP-JBRW-2"C. BHC-JBRW-2"C. MCC-BHC-2"C. BHC-RM BHC-RMF } 2 1/2"C.	<b>GROUP "Y" CONT.</b> TRAY OC24TG LVP-OC JBCWU-WS1C JBCWU-WS1P JBCWU-WS2C JBCWU-WS2P JBCWU-WS3C JBCWU-WS3P MCC-SCDS MCC-JBCRC MCC-CRM TC-OC MCC-DWPM MCC-DWBM MCC-RWPM MCC-RWBM MCC-OC1 MCC-OC2 MCC-OC3 MCC-OC4 MCC-OC5 MCC-OC6 MCC-OC7 MCC-OC8 MCC-OC9 MCC-OC10 MCC-ANN1 MCC-ANN2	<b>GROUP "Z" CONT.</b> TRAY TF24TG MCC-GPM MCC-HCBM MCC-HLM MCC-HM MCC-LM	
<b>MCC</b> GROUP "C" USS-MCC-2, 3"C. LVP-MCC MCC-DWPM } 2"C.	<b>MCC</b> GROUP "K" MCC-CWU-1" JBCWU-WS1C JBCWU-WS1P } 2 1/2"C.	<b>XCP</b> GROUP "K" XCP-IRCLA XCP-LCSS } 3"C.	<b>LVP</b> GROUP "P" LVP-LDP-1"C.	<b>BHC</b> GROUP "V" BHC-DWXF1-1 1/4"C. DWXF-BHC-1 1/4"C. BHC-DWXF2-3/4"C.	<b>GROUP "Y" CONT.</b> TRAY OC24TG LVP-OC JBCWU-WS1C JBCWU-WS1P JBCWU-WS2C JBCWU-WS2P JBCWU-WS3C JBCWU-WS3P MCC-SCDS MCC-JBCRC MCC-CRM TC-OC MCC-DWPM MCC-DWBM MCC-RWPM MCC-RWBM MCC-OC1 MCC-OC2 MCC-OC3 MCC-OC4 MCC-OC5 MCC-OC6 MCC-OC7 MCC-OC8 MCC-OC9 MCC-OC10 MCC-ANN1 MCC-ANN2	<b>GROUP "Z" CONT.</b> TRAY TF24TG MCC-GPM MCC-HCBM MCC-HLM MCC-HM MCC-LM	
<b>MCC</b> GROUP "D" MCC-HM-2"C. MCC-XCP4-2"C.	<b>MCC</b> GROUP "L" MCC-XCP1 MCC-XCP2 } 4"C.	<b>XCP</b> GROUP "L" XCP-JBLC2 XCP-JBLC3 XCP-JBLC4 XCP-JBLC5 XCP-JBCRC2 XCP-JBAC XCP-JBDW XCP-JBRW XCP-JBH XCP-JBR XCP-JBCRC1 LVP-XCP1 } 2 1/2"C.	<b>LVP</b> GROUP "Q" LVP-LDP-1"C.	<b>BHC</b> GROUP "W" BHC-RWXF1-1 1/4"C. RWXF-BHC-1 1/4"C. BHC-RWXF2-3/4"C.	<b>GROUP "Y" CONT.</b> TRAY OC24TG LVP-OC JBCWU-WS1C JBCWU-WS1P JBCWU-WS2C JBCWU-WS2P JBCWU-WS3C JBCWU-WS3P MCC-SCDS MCC-JBCRC MCC-CRM TC-OC MCC-DWPM MCC-DWBM MCC-RWPM MCC-RWBM MCC-OC1 MCC-OC2 MCC-OC3 MCC-OC4 MCC-OC5 MCC-OC6 MCC-OC7 MCC-OC8 MCC-OC9 MCC-OC10 MCC-ANN1 MCC-ANN2	<b>GROUP "Z" CONT.</b> TRAY TF24TG MCC-GPM MCC-HCBM MCC-HLM MCC-HM MCC-LM	
<b>MCC</b> GROUP "E" MCC-BHC-2"C. MCC-GPM } 1 1/2"C.	<b>MCC</b> GROUP "M" MCC-CWU-1" JBCWU-WS1C JBCWU-WS1P } 2 1/2"C.	<b>XCP</b> GROUP "M" XCP-IRCLA XCP-LCSS } 3"C.	<b>LVP</b> GROUP "R" LVP-LDP-1"C.	<b>BHC</b> GROUP "X" BHC-DWXF1-1 1/4"C. DWXF-BHC-1 1/4"C. BHC-DWXF2-3/4"C.	<b>GROUP "Y" CONT.</b> TRAY OC24TG LVP-OC JBCWU-WS1C JBCWU-WS1P JBCWU-WS2C JBCWU-WS2P JBCWU-WS3C JBCWU-WS3P MCC-SCDS MCC-JBCRC MCC-CRM TC-OC MCC-DWPM MCC-DWBM MCC-RWPM MCC-RWBM MCC-OC1 MCC-OC2 MCC-OC3 MCC-OC4 MCC-OC5 MCC-OC6 MCC-OC7 MCC-OC8 MCC-OC9 MCC-OC10 MCC-ANN1 MCC-ANN2	<b>GROUP "Z" CONT.</b> TRAY TF24TG MCC-GPM MCC-HCBM MCC-HLM MCC-HM MCC-LM	
<b>MCC</b> GROUP "F" MCC-LVXF MCC-SCDS MCC-JBCRC MCC-SR1 MCC-SR2 } 2"C.	<b>MCC</b> GROUP "N" MCC-CWU-1" JBCWU-WS1C JBCWU-WS1P } 2 1/2"C.	<b>XCP</b> GROUP "N" XCP-IRCLA XCP-LCSS } 3"C.	<b>LVP</b> GROUP "S" LVP-LDP-1"C.	<b>BHC</b> GROUP "Y" BHC-DWXF1-1 1/4"C. DWXF-BHC-1 1/4"C. BHC-DWXF2-3/4"C.	<b>GROUP "Y" CONT.</b> TRAY OC24TG LVP-OC JBCWU-WS1C JBCWU-WS1P JBCWU-WS2C JBCWU-WS2P JBCWU-WS3C JBCWU-WS3P MCC-SCDS MCC-JBCRC MCC-CRM TC-OC MCC-DWPM MCC-DWBM MCC-RWPM MCC-RWBM MCC-OC1 MCC-OC2 MCC-OC3 MCC-OC4 MCC-OC5 MCC-OC6 MCC-OC7 MCC-OC8 MCC-OC9 MCC-OC10 MCC-ANN1 MCC-ANN2	<b>GROUP "Z" CONT.</b> TRAY TF24TG MCC-GPM MCC-HCBM MCC-HLM MCC-HM MCC-LM	
<b>MCC</b> GROUP "G" MCC-FLDP } 2"C.	<b>MCC</b> GROUP "O" MCC-CWU-1" JBCWU-WS1C JBCWU-WS1P } 2 1/2"C.	<b>XCP</b> GROUP "O" XCP-IRCLA XCP-LCSS } 3"C.	<b>LVP</b> GROUP "T" LVP-LDP-1"C.	<b>BHC</b> GROUP "Z" BHC-DWXF1-1 1/4"C. DWXF-BHC-1 1/4"C. BHC-DWXF2-3/4"C.	<b>GROUP "Y" CONT.</b> TRAY OC24TG LVP-OC JBCWU-WS1C JBCWU-WS1P JBCWU-WS2C JBCWU-WS2P JBCWU-WS3C JBCWU-WS3P MCC-SCDS MCC-JBCRC MCC-CRM TC-OC MCC-DWPM MCC-DWBM MCC-RWPM MCC-RWBM MCC-OC1 MCC-OC2 MCC-OC3 MCC-OC4 MCC-OC5 MCC-OC6 MCC-OC7 MCC-OC8 MCC-OC9 MCC-OC10 MCC-ANN1 MCC-ANN2	<b>GROUP "Z" CONT.</b> TRAY TF24TG MCC-GPM MCC-HCBM MCC-HLM MCC-HM MCC-LM	

**CABLE LEAVING ELECTRICAL ROOM**

<b>GROUP "X"</b> TRAY CF24T1 P-USS CIC#1 *CIC#2	<b>GROUP "Y" CONT.</b> TRAY OC24TG LVP-OC JBCWU-WS1C JBCWU-WS1P JBCWU-WS2C JBCWU-WS2P JBCWU-WS3C JBCWU-WS3P MCC-SCDS MCC-JBCRC MCC-CRM TC-OC MCC-DWPM MCC-DWBM MCC-RWPM MCC-RWBM MCC-OC1 MCC-OC2 MCC-OC3 MCC-OC4 MCC-OC5 MCC-OC6 MCC-OC7 MCC-OC8 MCC-OC9 MCC-OC10 MCC-ANN1 MCC-ANN2	<b>GROUP "Z" CONT.</b> TRAY TF24TG TC-TMF TC-TMA TC-TT TC-JBLC1 TC-JBLC2 XCP-JBGS XCP-HSS XCP-JBH XCP-LCSS XCP-JBLC1 XCP-JBLC2 XCP-JBLC3 XCP-JBLC4 XCP-JBLC5 XCP-ORLCA XCP-IRLCA
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- NOTES:**
- FOR POWER & CONTROL NOTES SEE DWG. 349118.
  - FOR TRAY LOCATION & IDENTIFICATION SEE DWG. 349116 & 349117.
  - \* INDICATES CUSTOMER INTERFACE CABLE ORIGINATING AT CONTROL TERMINAL BOX LOCATED AT COLUMN 10-1.
  - WORK THIS DWG. WITH DWGS. 349118, 349120.

CONTR. NO.	REFERENCE DWGS.
0	1 2 3 4 5 6 7 8 9
1	
2	
3	
4	
5	

1 W-4139

ALABAMA STATE DOCKS  
CONTINUOUS BARGE UNLOADER  
POWER & CONTROL ARRANGEMENT  
PLAN & SECTIONS

SCALE 1/4" = 1'-0" U.N. APP'D: *[Signature]* 12-1-80

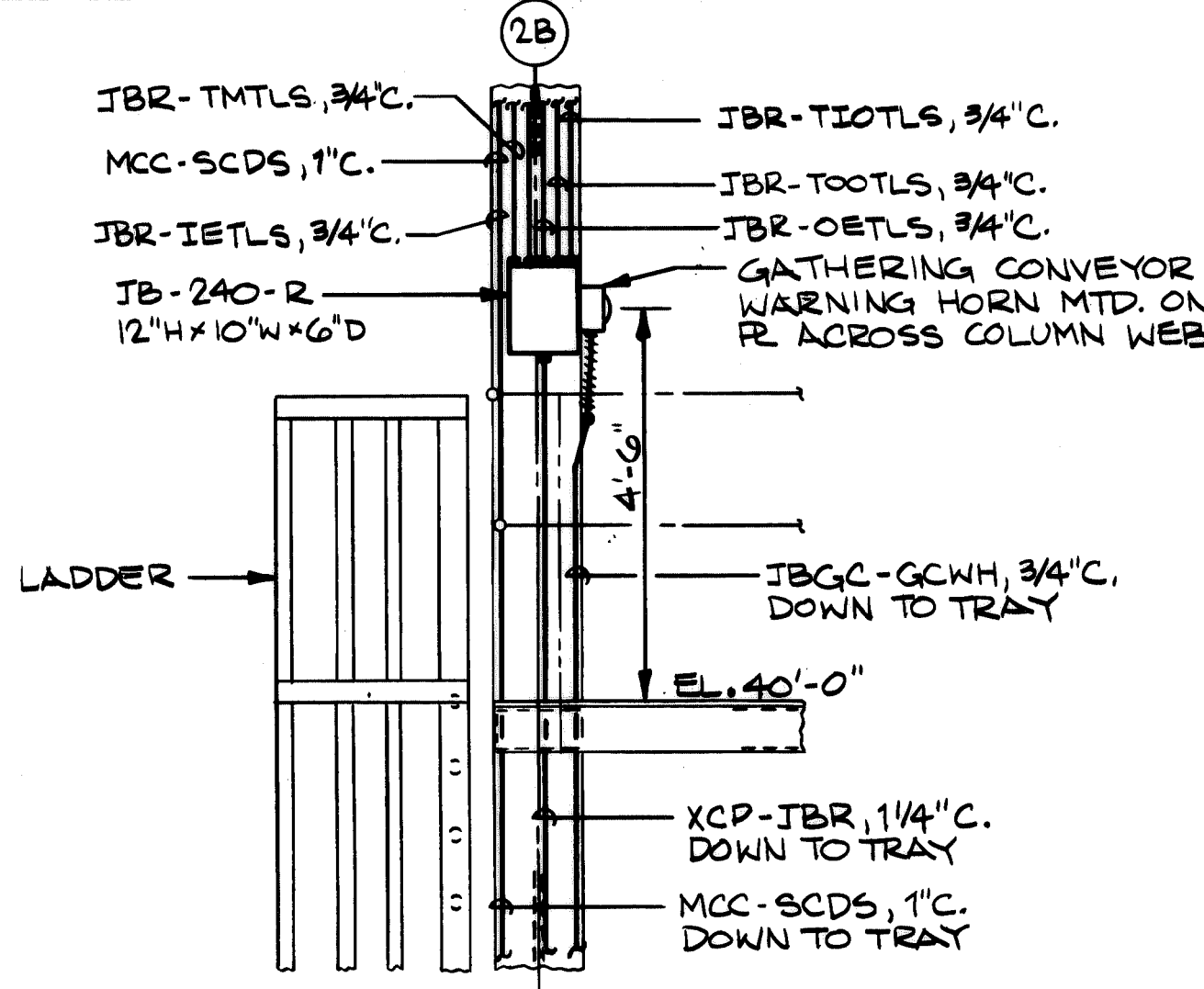
DRAWING NO. **349119**

DATE: *[Signature]* 11/1/80

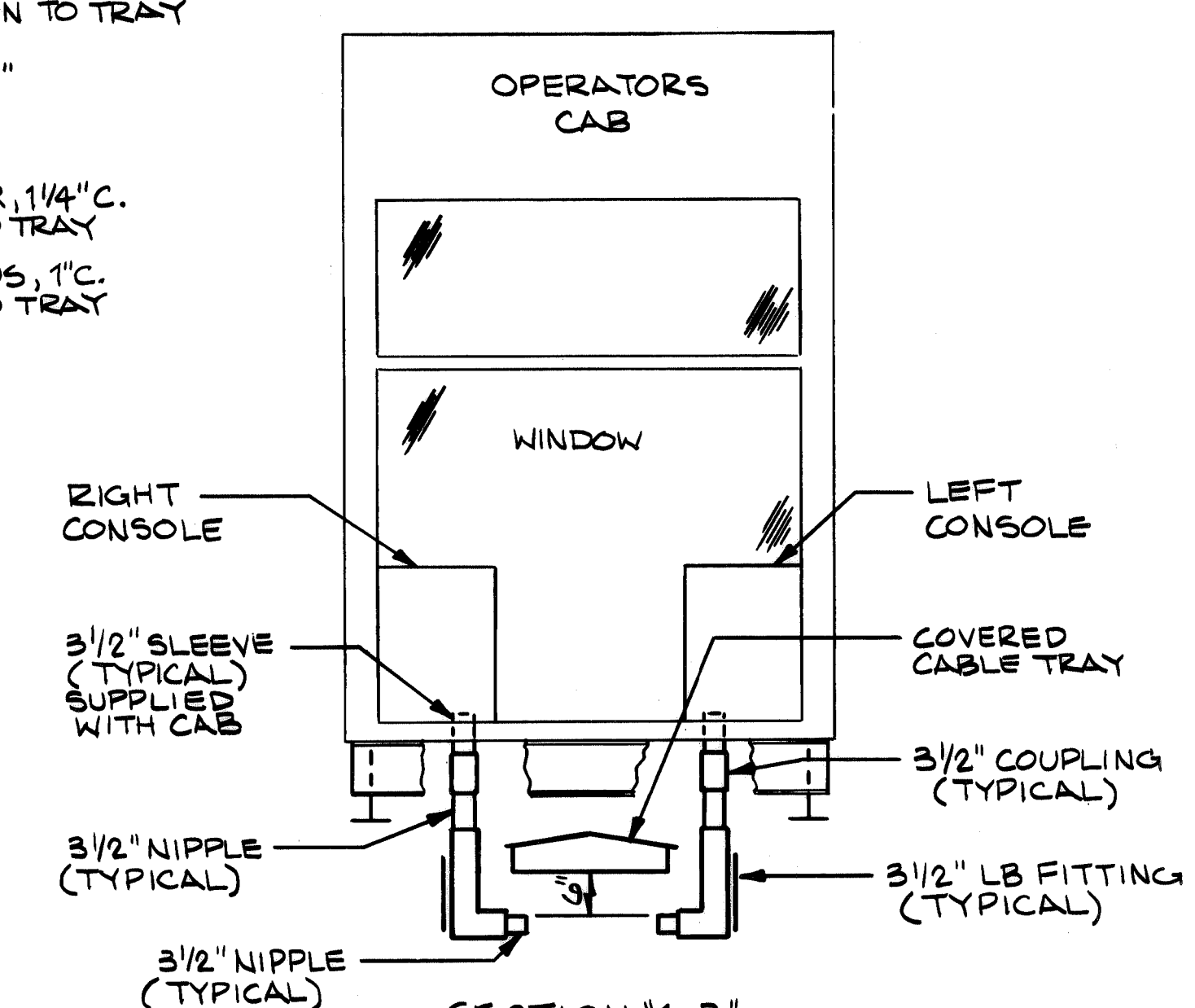
DRAYO CORPORATION, PITTSBURGH, PA. DW E.W.D.



GROUP #1 OPERATORS CAB		GROUP #2 TRAY C24T0	
LVP-OC	XCP-OC9	LVP-OC	BHC-OC2
TC-OC	XCP-OC10	JBCWU-WS1C	BHC-OC3
BHC-OC1	XCP-ANN1	JBCWU-WS1P	BHC-DWB
BHC-OC2	XCP-ANN2	JBCWU-WS2C	BHC-DMF
BHC-OC3	*CIC #3	JBCWU-WS2P	BHC-DM
XCP-OC1	*CIC #4	JBCWU-WS3C	XCP-JBDW
XCP-OC2	*CIC #5	JBCWU-WS3P	BHC-DWTG
XCP-OC3	*CIC #6	MCC-SCDS	BHC-JBDW
XCP-OC4	*CIC #7	MCC-JBCRC	BHC-IBRN
XCP-OC5	*CIC #8	MCC-CRM	BHC-RWTA
XCP-OC6	*CIC #9	TC-OC	XCP-JBRW
XCP-OC7	*CIC #10	MCC-DWPM	BHC-RM
XCP-OC8	LDP-55	MCC-DNBM	BHC-RMF
		MCC-RWBM	BHC-RWB
		MCC-RWPM	XCP-OC1
		BHC-OC1	XCP-OC2



REV.	ITEM	DESCRIPTION	AUTHOR	DATE



GROUP #3 TRAY TF24T5	
MCC-GPM	XCP-HSS
MCC-HCBM	XCP-JBH
MCC-HLM	XCP-LCSS
MCC-HM	XCP-JBLC1
MCC-LM	XCP-JBLC2
TC-TMF	XCP-JBLC3
TC-TMA	XCP-JBLC4
TC-TT	XCP-JBLC5
TC-JBLC2	XCP-ORLCA
TC-JBLC1	XCP-IRLCA
XCP-JBGS	

GROUP #4 TRAY CF24T1	
P-USS	*CIC #1
	*CIC #2

GROUP #5 TRAY CF24T1	
P-USS	*CIC #6
*CIC #1	*CIC #7
*CIC #2	*CIC #8
*CIC #3	*CIC #9
*CIC #4	*CIC #10
*CIC #5	

GROUP #4 TRAY CF24T1	
JBGC-GCPS	*CIC #7
*CIC #3	*CIC #8
*CIC #4	*CIC #9
*CIC #5	*CIC #10
*CIC #6	

- NOTES:**
- ALL CONDUIT SHALL BE RIGID GALVANIZED STEEL AND CONFORM TO FEDERAL SPECIFICATIONS WW-C-581.
  - ALL JUNCTION BOXES AND PULLBOXES IN OUTDOOR APPLICATIONS SHALL BE NEMA TYPE 4X WITH CONTINUOUS HINGE DOOR.
  - FOR BEST POSSIBLE ROUTING ALL CONDUIT TO BE RUN IN FIELD TO SUIT.
  - ALL CONDUIT, JUNCTION BOXES & PULLBOXES TO BE SUPPORTED IN FIELD TO SUIT.
  - FOR OPERATORS FLOOR SLEEVES SEE DNG. 348306.
  - FOR TRAY LOCATION AND IDENTIFICATION SEE DNG. 349116 & 349117.
  - \* = INDICATES CUSTOMER INTERFACE CABLE ORIGINATING AT CONTROL TERMINAL BOX LOCATED AT COLUMN 10-1.
  - WORK THIS DNG. WITH DNG. 349119, 349120.

**SECTION 4-F**  
TAKEN AT 4-B  
THIS DNG.  
3/8" = 1'-0"

**SECTION 3-F**  
TAKEN AT 2-C  
THIS DNG.  
1/2" = 1'-0"

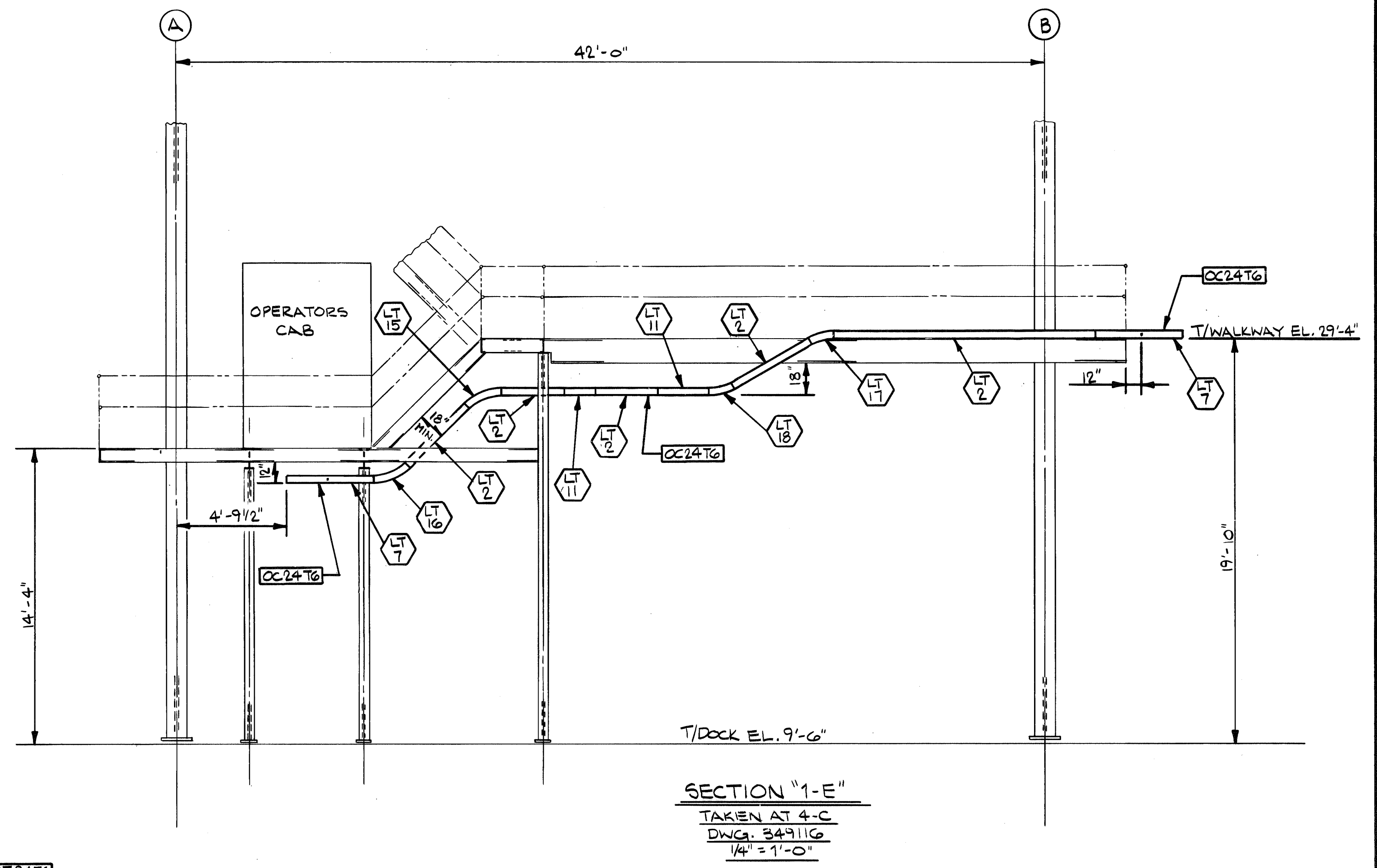
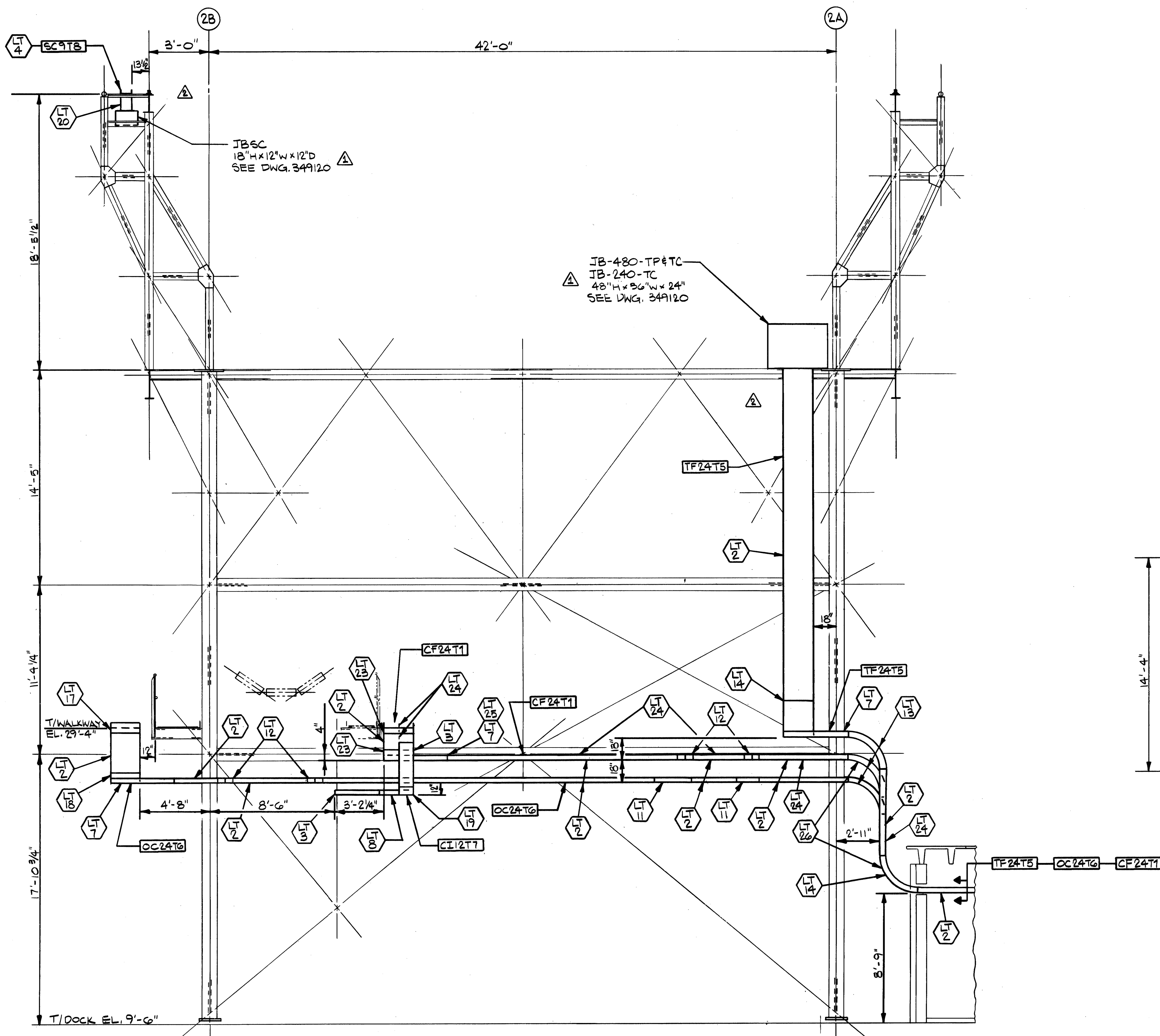
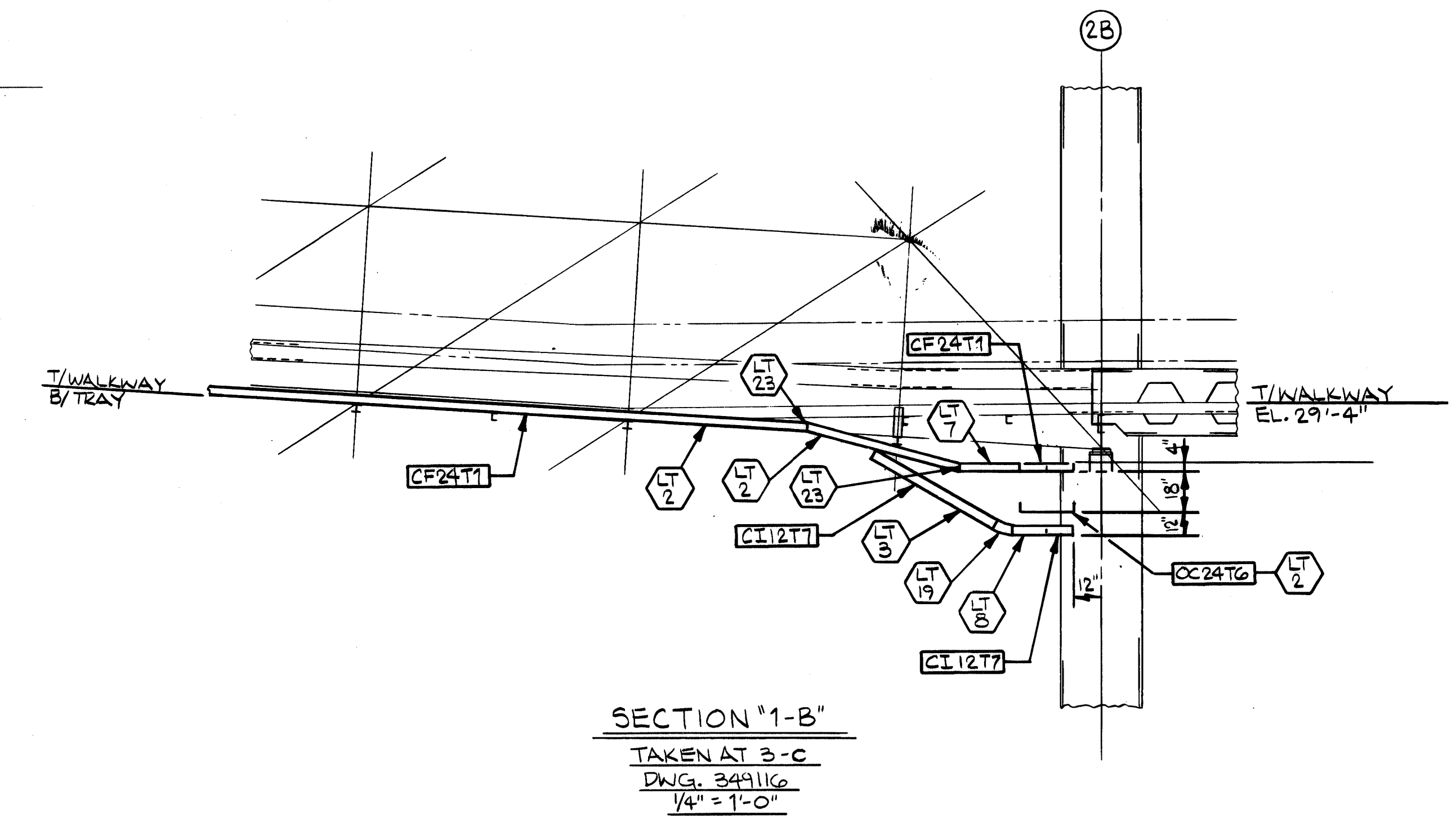
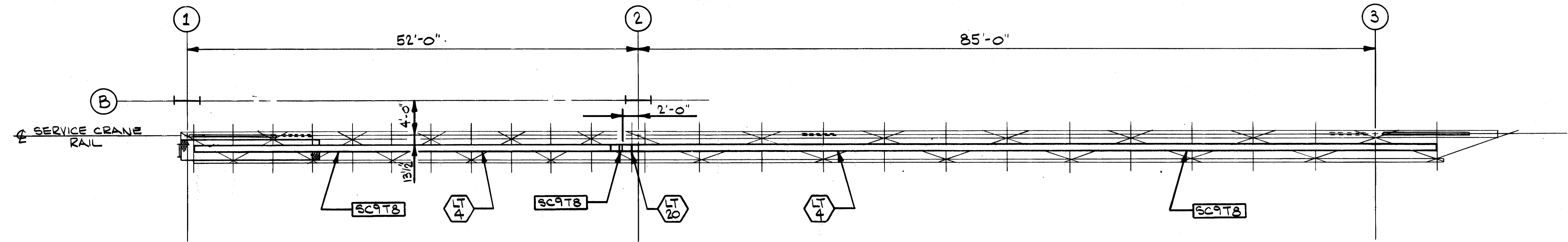
**SECTION 2-F**  
TAKEN AT 2-D  
THIS DNG.  
1/4" = 1'-0"

CONTR. NO.	REFERENCE DNG.	SHEET

1	W-4139	B.L.
NO. CONTRACT	SHOP BILL NO.	DIST.
ALABAMA STATE DOCKS CONTINUOUS BARGE UNLOADER POWER & CONTROL ARRANGEMENT PLAN & SECTIONS		
SCALE 1/4" = 1'-0" U.N.	APP'D <i>[Signature]</i> 12-1-80	55
DWG. NO. 349118	DATE <i>[Signature]</i> 11-1-80	26
CHE. E. BRONKHORST 11-7-80	26 11-24-80	1
DRAWING NO. <b>349118</b>		REV.
DRavo CORPORATION, PITTSBURGH, PA. DW E.W.D.		



REV.	ITEM	DESCRIPTION	AUTHOR & DATE	REF.
1		REVISED JUNCTION BOX CALLOUT AND DELETED REFERENCE DWG. NOS.	OCB 10-20-80	
2		DELETED BOX CONNECTORS	OCB 5-10-80	



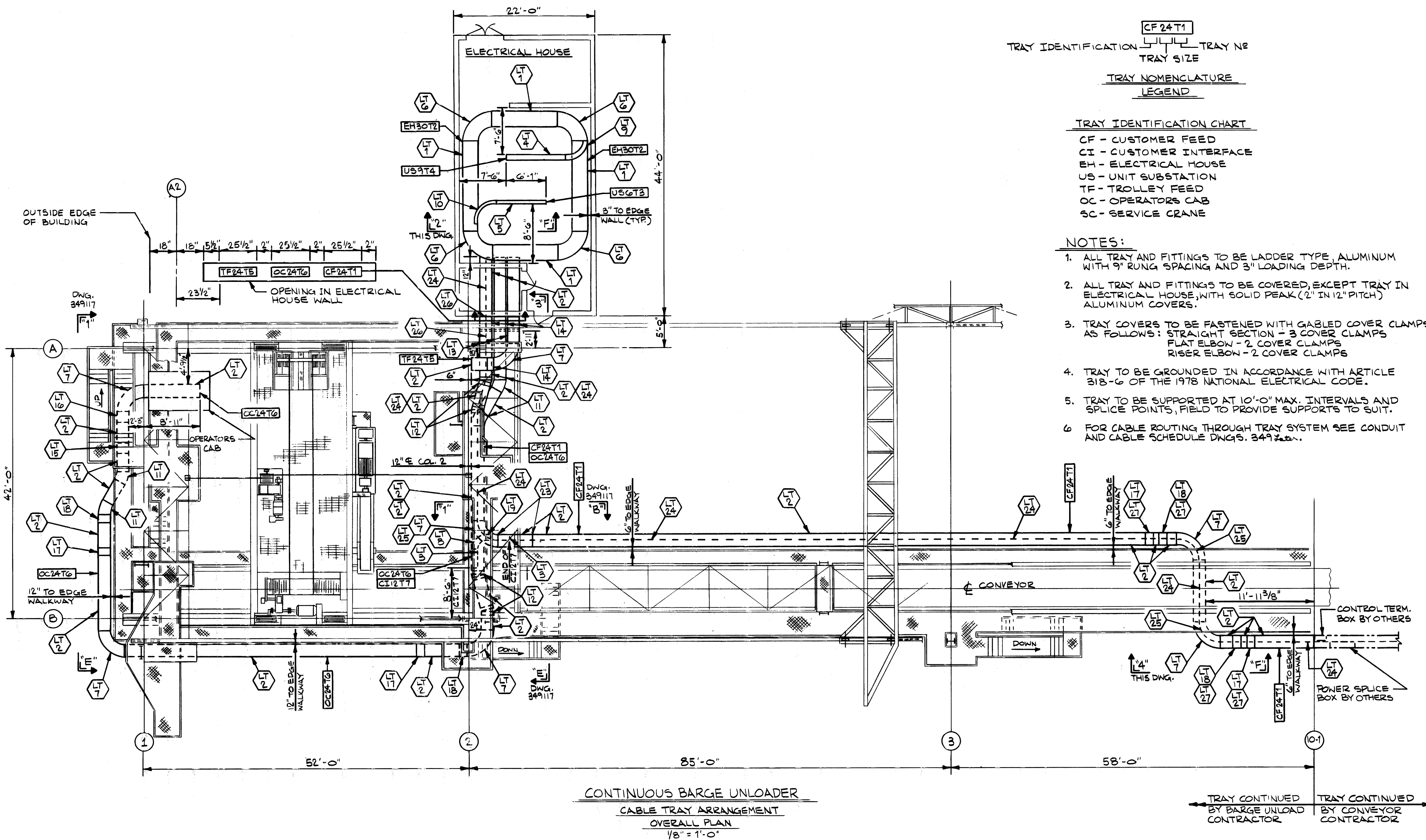
- NOTES:
- FOR LEGEND, PIECE CHART, NOTES AND OVERALL PLAN VIEW SEE DWG. 34911G.
  - WORK THIS DWG. WITH DWG. 34911G.

CONTR. NO.	REFERENCE DWGS.	SHEET
0	1 2 3 4 5 6 7 8 9	
1		
2		
3		
4		
5		

1	W-4139	B.L.
NO. CONTRACT RECD	NO. SHOP BILL NO.	DIST.
ALABAMA STATE DOCKS CONTINUOUS BARGE UNLOADER CABLE TRAY ARRANGEMENT PLAN & SECTIONS		
SCALE	APP'D	DATE
DR. F. ELSENER 9-29-80 CHK. F. BROOKS 10-6-80 DEL. 10-14-80	<i>[Signature]</i> 10-14-80	10/16/80
DRAWING NO.		REV.
349117		2
DRAYO CORPORATION, PITTSBURGH, PA. DIV. E. W. D.		



1/8" = 1'-0"



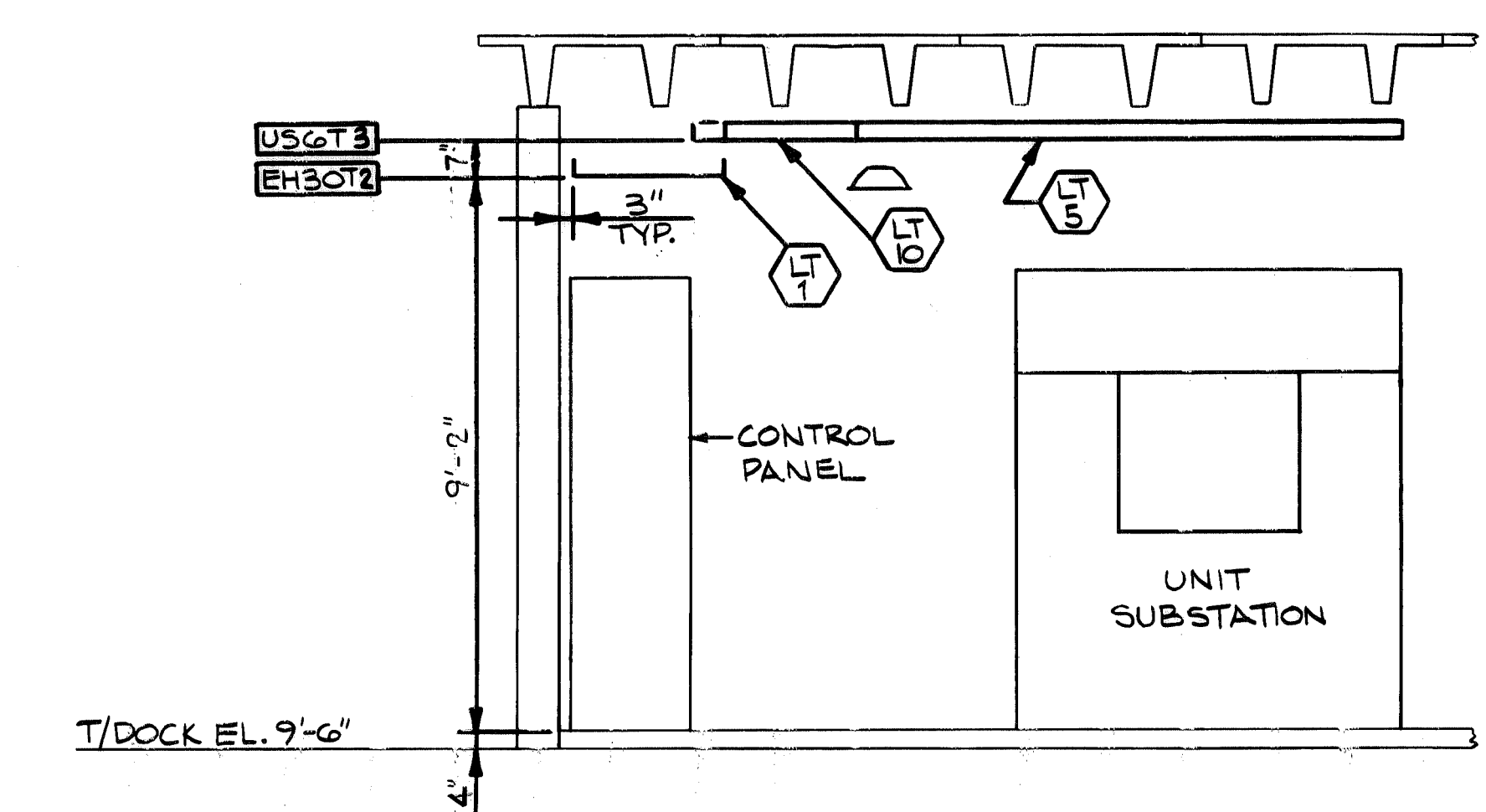
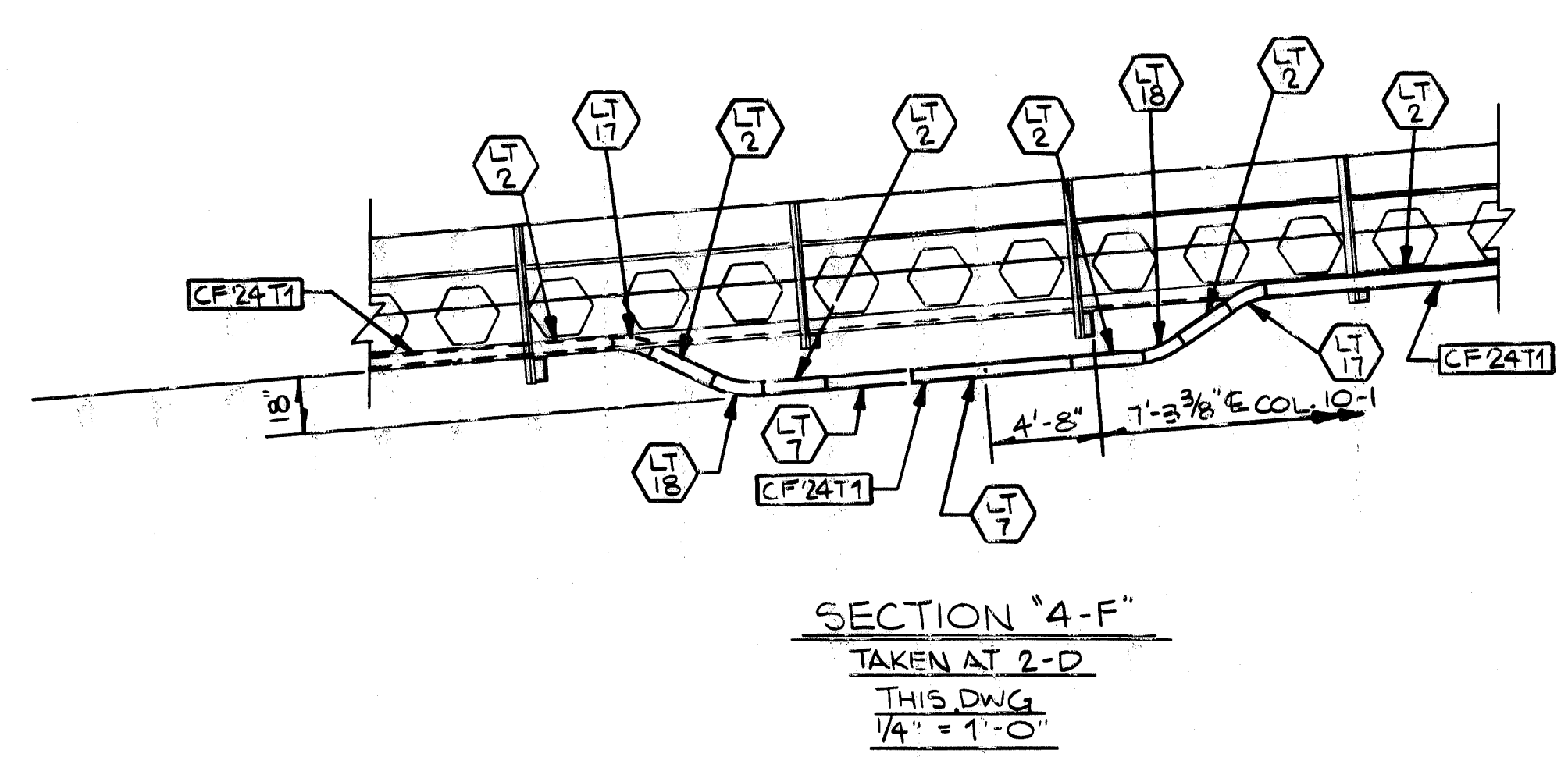
CF 24 T1  
 TRAY IDENTIFICATION  
 TRAY NO  
 TRAY SIZE  
 TRAY NOMENCLATURE  
 LEGEND

TRAY IDENTIFICATION CHART  
 CF - CUSTOMER FEED  
 CI - CUSTOMER INTERFACE  
 EH - ELECTRICAL HOUSE  
 US - UNIT SUBSTATION  
 TF - TROLLEY FEED  
 OC - OPERATORS CAB  
 SC - SERVICE CRANE

- NOTES:
1. ALL TRAY AND FITTINGS TO BE LADDER TYPE, ALUMINUM WITH 9" RUNG SPACING AND 3" LOADING DEPTH.
  2. ALL TRAY AND FITTINGS TO BE COVERED, EXCEPT TRAY IN ELECTRICAL HOUSE, WITH SOLID PEAK (2" IN 12" PITCH) ALUMINUM COVERS.
  3. TRAY COVERS TO BE FASTENED WITH GABLED COVER CLAMPS AS FOLLOWS: STRAIGHT SECTION - 3 COVER CLAMPS  
 FLAT ELBOW - 2 COVER CLAMPS  
 RISER ELBOW - 2 COVER CLAMPS
  4. TRAY TO BE GROUNDED IN ACCORDANCE WITH ARTICLE 318-6 OF THE 1978 NATIONAL ELECTRICAL CODE.
  5. TRAY TO BE SUPPORTED AT 10'-0" MAX. INTERVALS AND SPLICE POINTS, FIELD TO PROVIDE SUPPORTS TO SUIT.
  6. FOR CABLE ROUTING THROUGH TRAY SYSTEM SEE CONDUIT AND CABLE SCHEDULE DWGS. 349117.

REV.	ITEM	PANEL	DESCRIPTION	AUTHOR	DATE	REF.
1			REV. PIECE # LT1 FROM 3 TO 5 DELETED BOX CONNECTORS	255	2-17-81	

PIECE NO.	QUANTITY	DESCRIPTION	WIDTH	RADIUS INCHES
LT1	5	30" STRAIGHT LENGTH 12'-0" LONG	30"	
LT2	35	24" STRAIGHT LENGTH 12'-0" LONG 24" SOLID PEAK COVER 12'-0" LONG	24"	24"
LT3	1	12" STRAIGHT LENGTH 12'-0" LONG 12" SOLID PEAK COVER 12'-0" LONG	12"	12"
LT4	15	9" STRAIGHT LENGTH 12'-0" LONG	9"	
LT5	1	6" STRAIGHT LENGTH 12'-0" LONG	6"	
LT6	4	90° FLAT ELBOW	30"	24"
LT7	7	90° FLAT ELBOW 90° SOLID PEAK COVER	24"	24"
LT8	1	90° FLAT ELBOW 90° SOLID PEAK COVER	12"	12"
LT9	1	90° FLAT ELBOW	9"	24"
LT10	1	90° FLAT ELBOW	6"	24"
LT11	4	30° FLAT ELBOW 30° SOLID PEAK COVER	24"	24"
LT12	4	FLAT ADJUSTABLE ELBOW	24"	
LT13	3	90° OUTSIDE RISER 90° OUTSIDE RISER SOLID PEAK COVER	24"	24"
LT14	4	90° INSIDE RISER 90° INSIDE RISER SOLID PEAK COVER	24"	24"
LT15	1	45° OUTSIDE RISER 45° OUTSIDE RISER SOLID PEAK COVER	24"	24"
LT16	1	45° INSIDE RISER 45° INSIDE RISER SOLID PEAK COVER	24"	24"
LT17	4	30° OUTSIDE RISER 30° OUTSIDE RISER SOLID PEAK COVER	24"	24"
LT18	4	30° INSIDE RISER 30° INSIDE RISER SOLID PEAK COVER	24"	24"
LT19	1	30° INSIDE RISER 30° INSIDE RISER SOLID PEAK COVER	12"	12"
LT20	1	VERTICAL TEE	9"	12"
LT23	4	VERTICAL ADJUSTABLE CONNECTOR		
LT24	30	STRAIGHT LENGTH BARRIER STRIP		
LT25	5	FLAT FITTING BARRIER STRIP		
LT26	2	90° RISER BARRIER STRIP	24"	
LT27	4	30° RISER BARRIER STRIP	24"	
	12	BARRIER STRIP CLAMP ASSEMBLY		
	80	STANDARD SPLICE PLATE		
	20	EXPANSION SPLICE PLATE		
	80	RISER SPLICE PLATE		
	250	EXPANSION HOLD DOWN CLAMP		
	150	24" PEAK COVER CLAMP		
	8	12" PEAK COVER CLAMP		
	180	BONDING GROUND JUMPER		

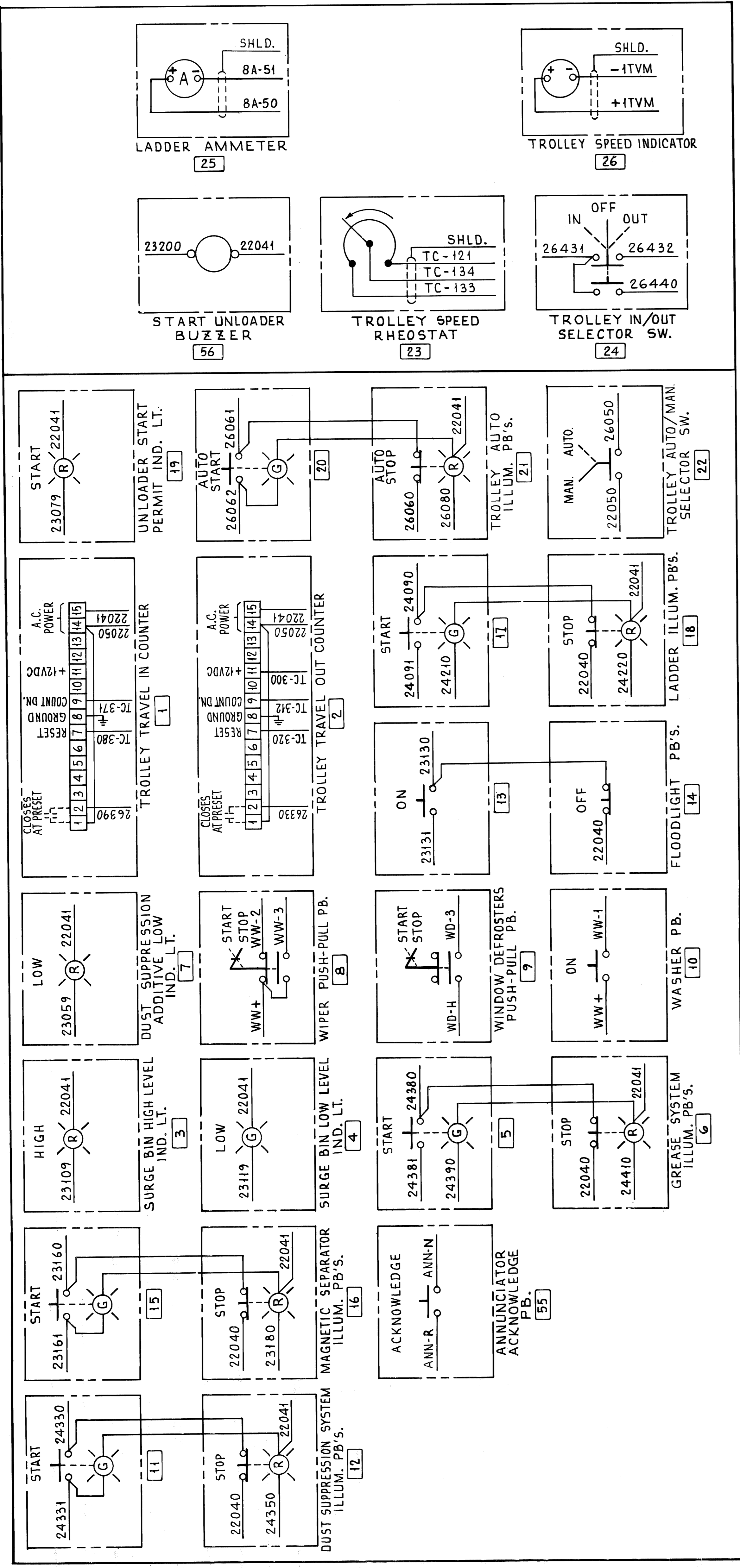


CONTR. NO.	REFERENCE DWGS.	SHEET
0	1	1
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2	3	3
3	4	4
4	5	5
5	6	6
6	7	7
7	8	8
8	9	9

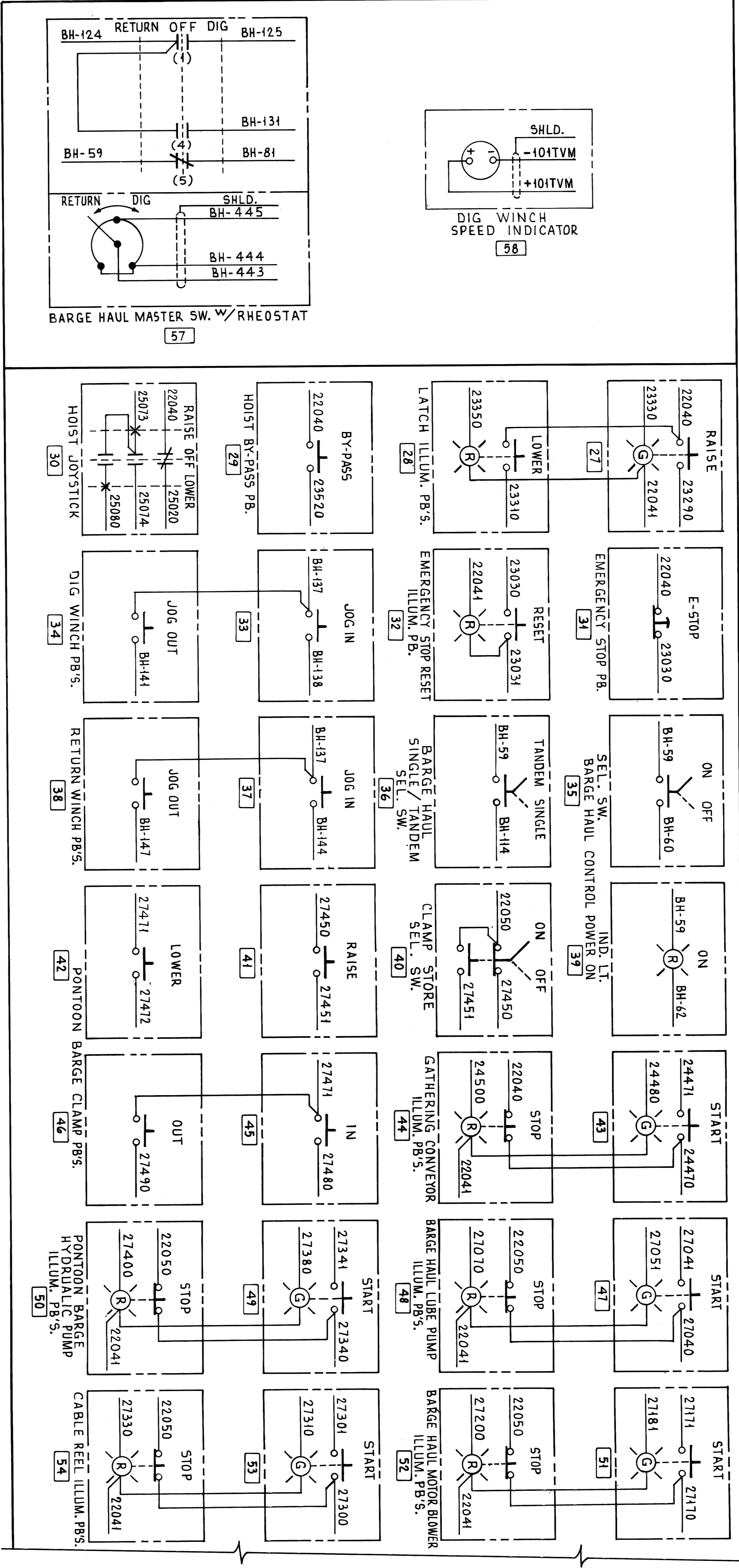
NO. 1 W-4139 B.I.L.  
 REGD. NO. CONTRACT NO. SHOP BILL NO. DIST.  
 ALABAMA STATE DOCKS  
 CONTINUOUS BARGE UNLOADER  
 CABLE TRAY ARRANGEMENT  
 PLAN & SECTIONS  
 SCALE 1/8" = 1'-0" U.N. APP'D [Signature] 10/14/80  
 DR. ELSBESSER 9-29-80 DATE [Signature] 10/16/80  
 CHK. F. BROOKS 10-6-80  
 DEL 10-14-80  
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**Dravo**  
 DRAVO CORPORATION, PITTSBURGH, PA. DIV. E. W. D.  
 DRAWING NO. **349116** REV. 1



LEFT HAND CONSOLE



RIGHT HAND CONSOLE



NOTE:  
1. NUMBERS IN [ ] INDICATE MARK NUMBERS SHOWN ON DWG. 348306

(WORK THIS DWG. WITH DWG. 348309)

REV. ITEM PANEL		REVISED REFERENCE DWG. NO.		SCALE		PASSED	
		DWG. REVISIONS DESCRIPTION		DR. F. L. B. 10-30-80 CHK. F. BROOKS 10-30-80		AUTH'D & DATE	
						APP'D <i>[Signature]</i> 11-7-80	
						DRAWING NO. 348310	
						SHEET 1	

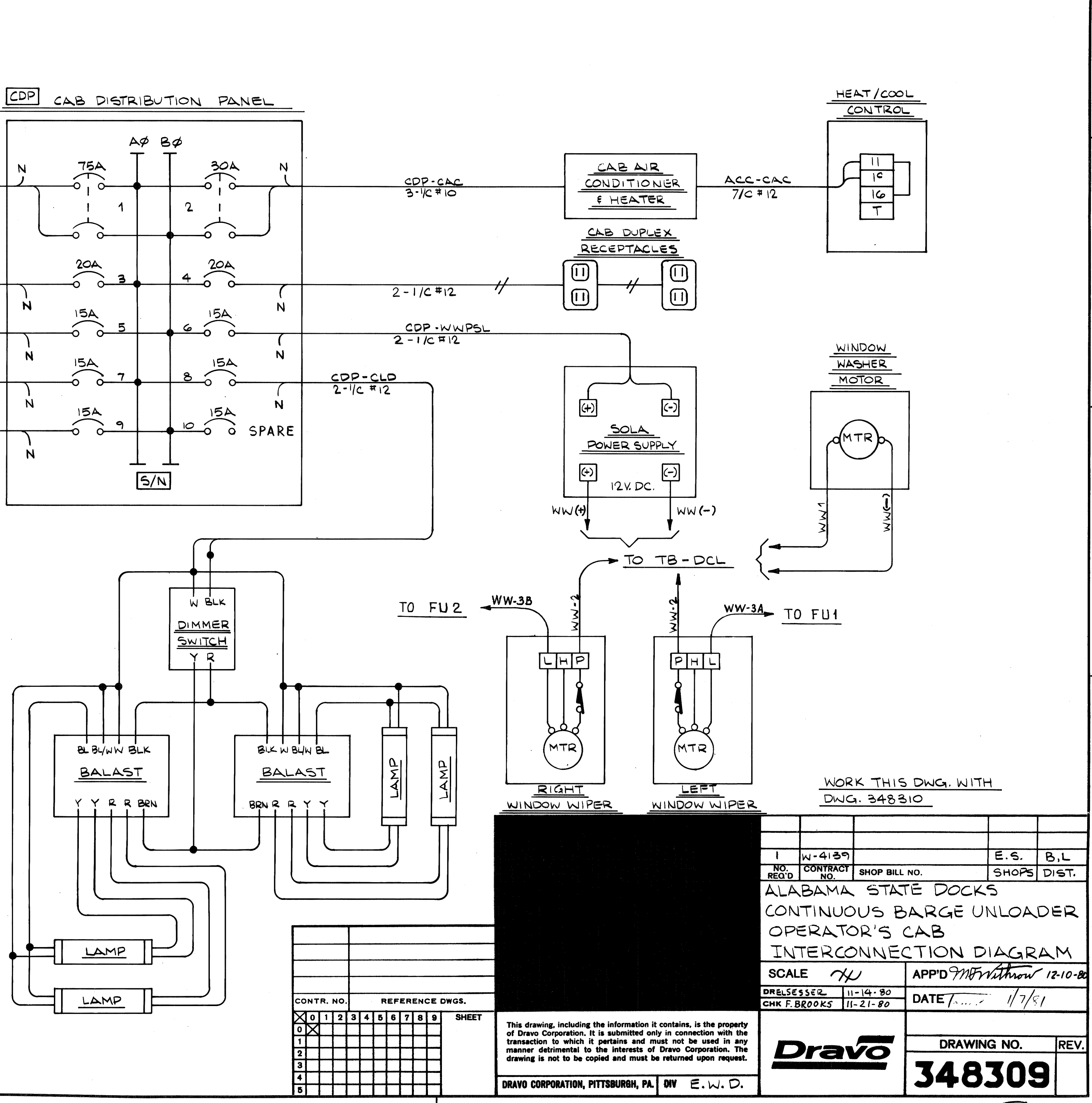
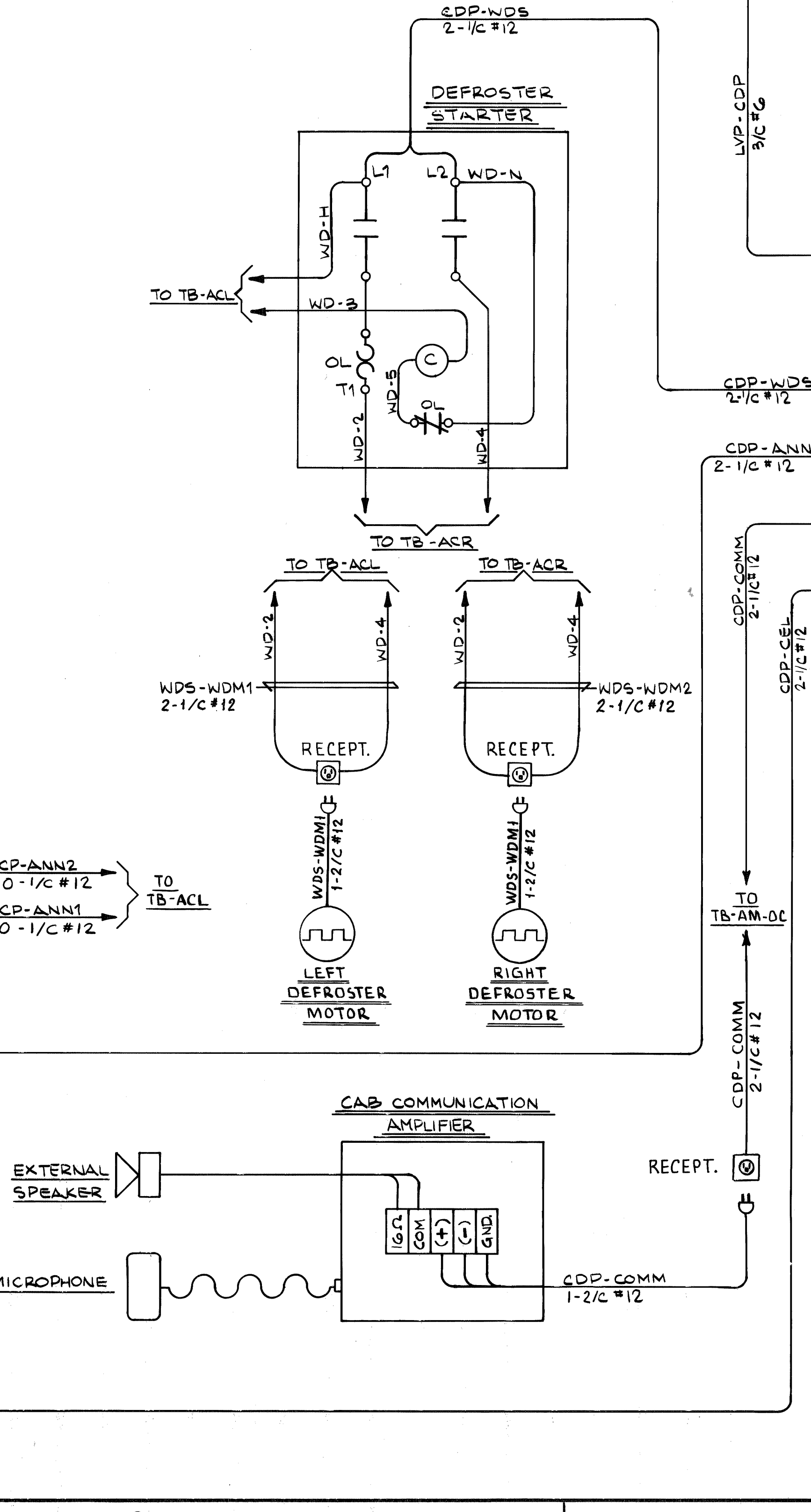
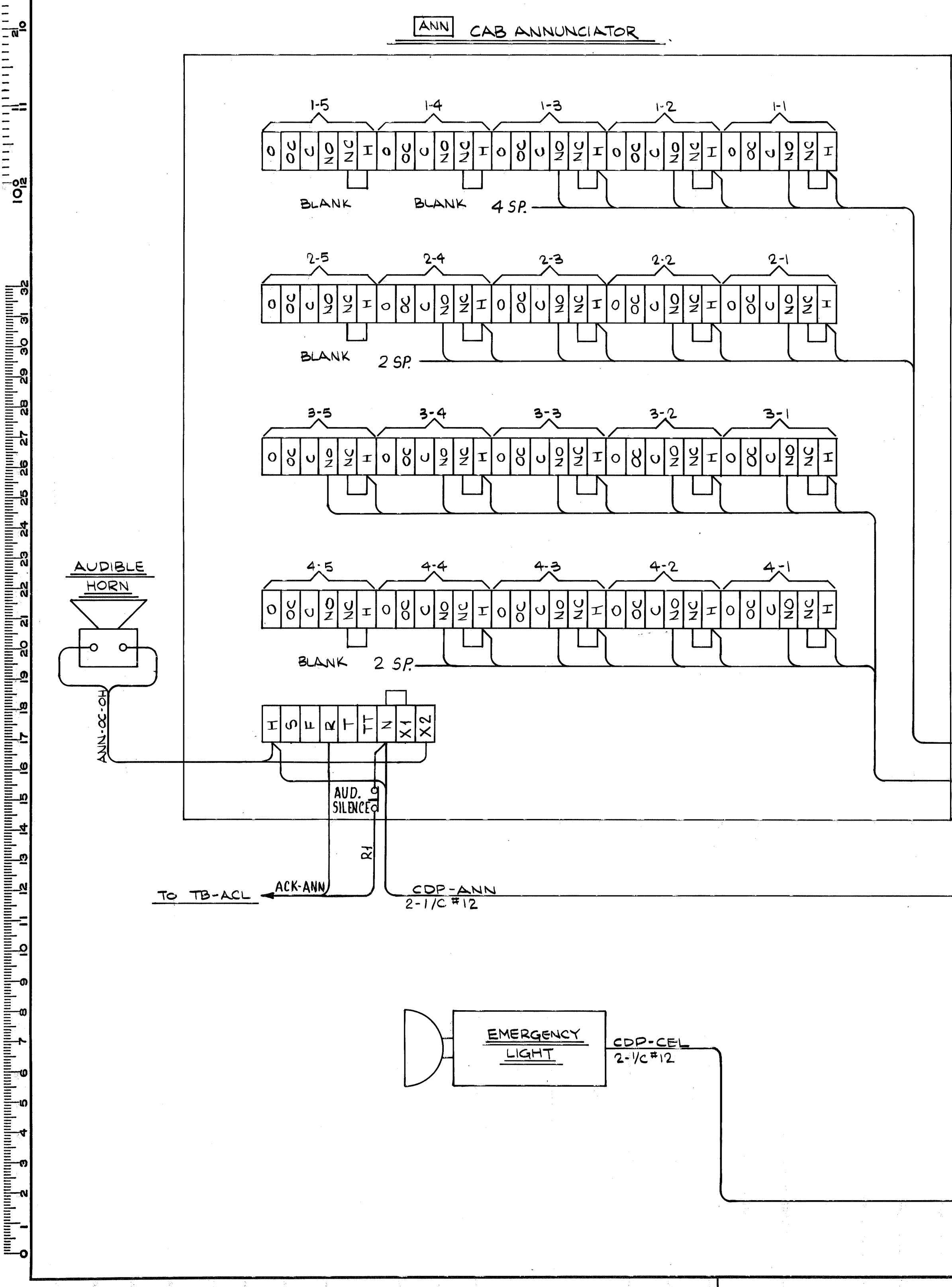
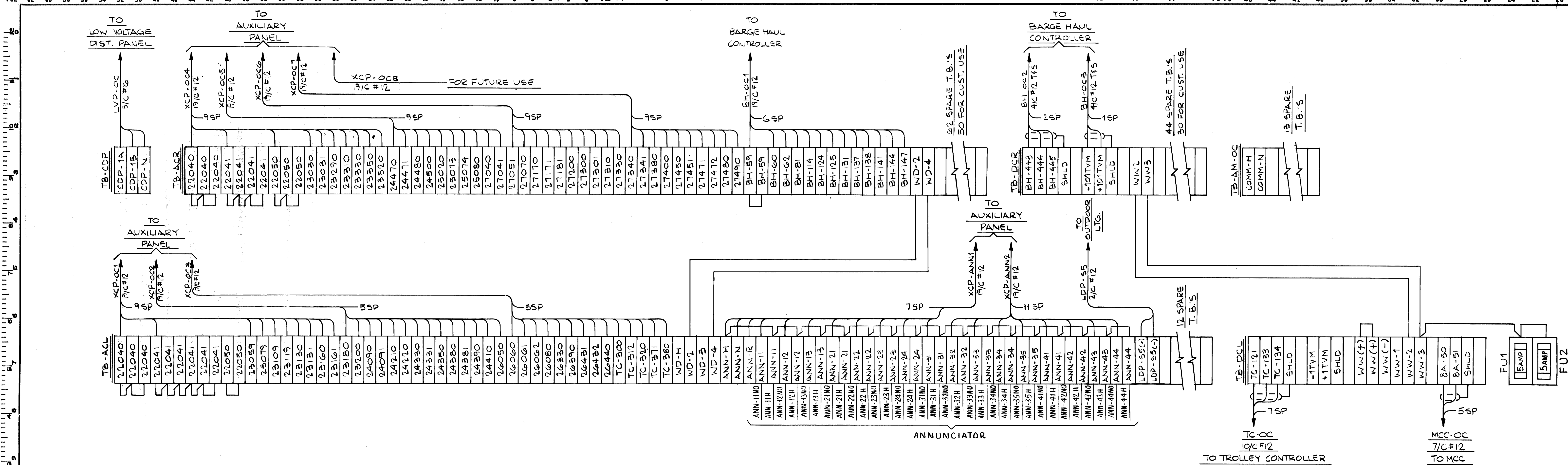
CONSOLE CONTINUES FOR CUSTOMER'S USE

DRAWING 44131 201212

55 26 1



REV.	ITEM	DESCRIPTION	AUTH'D & DATE	REF.



WORK THIS DWG. WITH DWG. 348310

NO. 1	W-4139	E.S.	B.L.
NO. 2	CONTRACT NO.	SHOPS	DIST.
ALABAMA STATE DOCKS			
CONTINUOUS BARGE UNLOADER			
OPERATOR'S CAB			
INTERCONNECTION DIAGRAM			
SCALE	7X	APP'D	12-10-80
DRAWN	11-14-80	DATE	11/7/81
CHECKED	11-21-80		

CONTR. NO. REFERENCE DWGS. SHEET

0 1 2 3 4 5 6 7 8 9

Dravo

DRAWING NO. 348309

REV.

DRavo CORPORATION, PITTSBURGH, PA. DIV E.W.D.

A

B

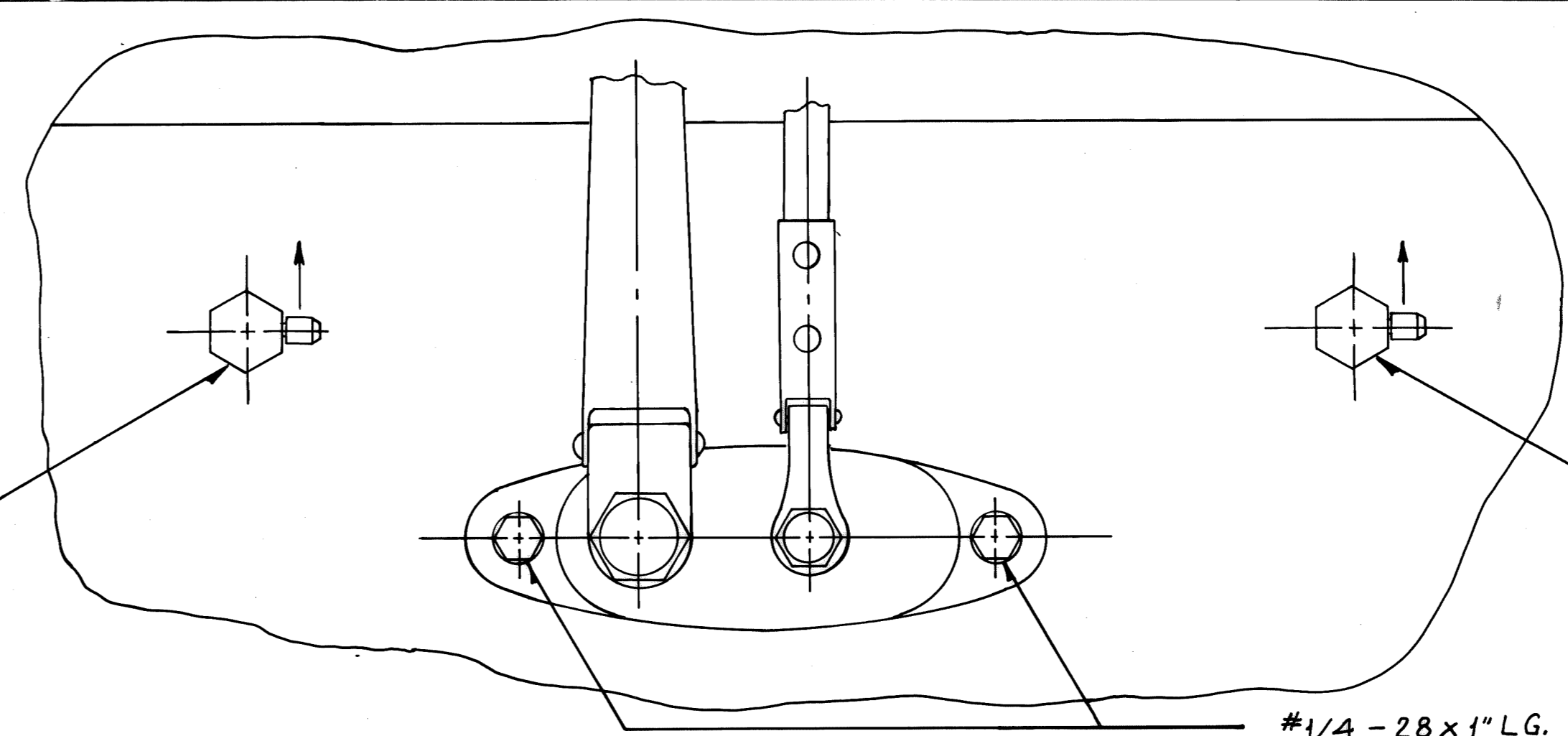
C

D

E

F

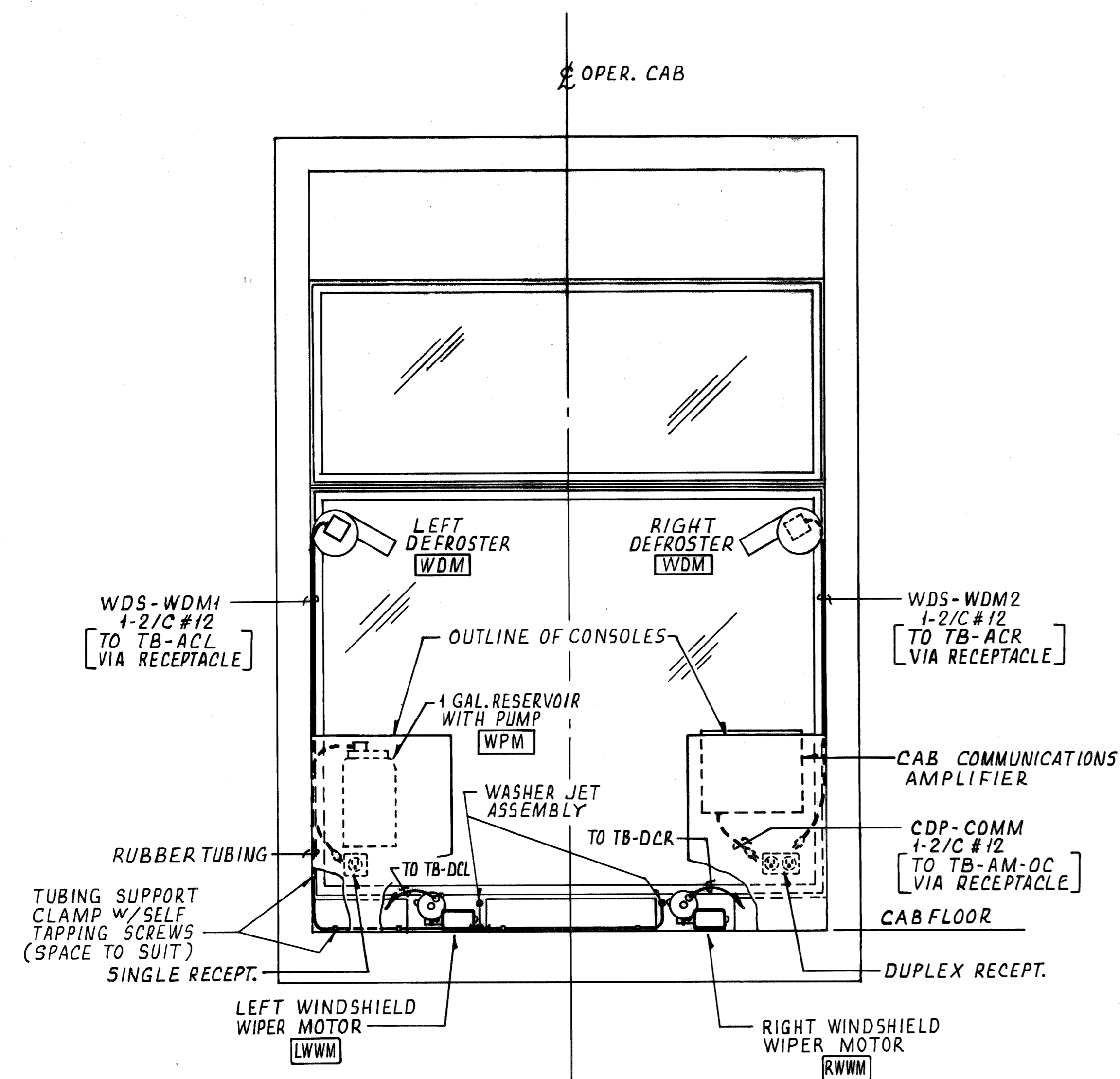
LOCATION OF JET USED WITH WIPER ASSEMBLY MOUNTED ON RIGHT SIDE OF CAB LOOKING FROM OUTSIDE TO INSIDE



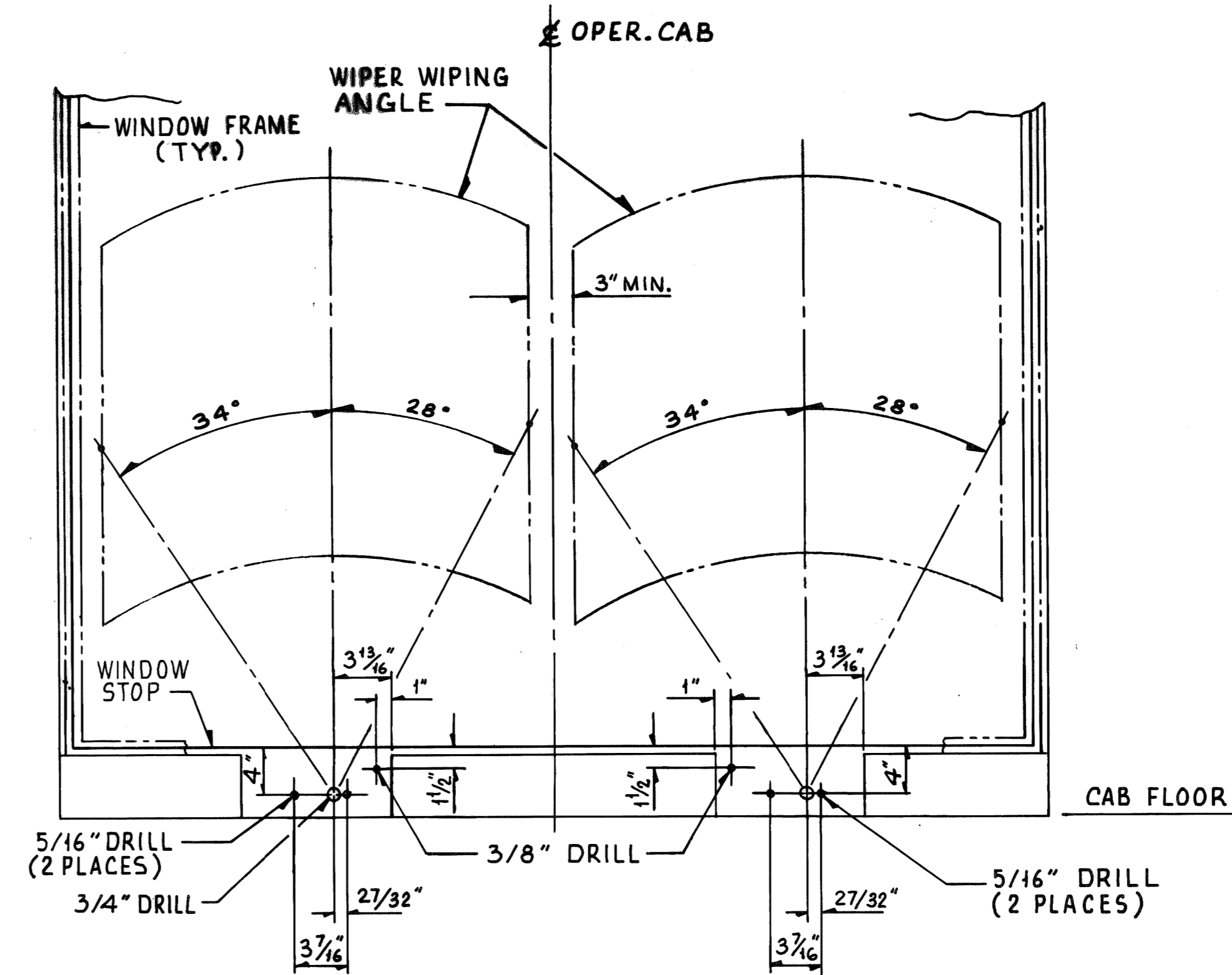
LOCATION OF JET USED WITH WIPER ASSEMBLY MOUNTED ON LEFT SIDE OF CAB LOOKING FROM OUTSIDE TO INSIDE

ASSEMBLED WIPER (LOOKING AT OUTSIDE OF CAB) (TYPICAL TWO PLACES) FULL SCALE

#1/4 - 28 x 1" L.G. HEX HEAD (2 REQ'D. PER ASSEMBLY)



SECTION 4~D (TAKEN @ 4~C, DWG. 348306) 1" = 1'-0"

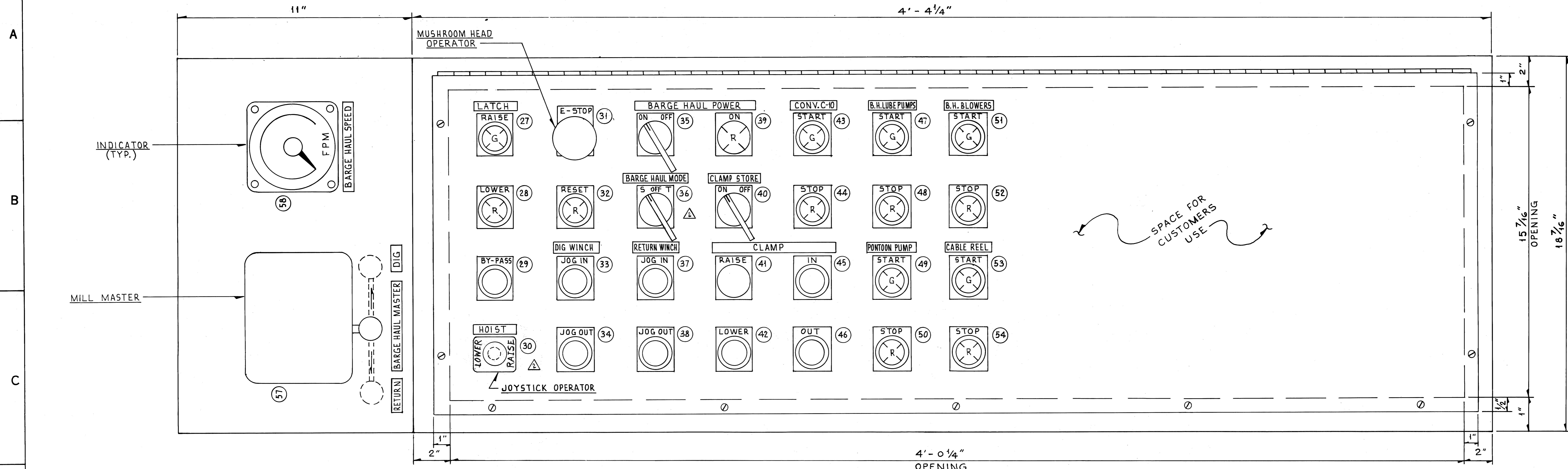


HOLES FOR WIPER MOTOR AND WASHER JET ASSEMBLY (LOOKING TO FRONT OF CAB) 1/2" = 1'-0"

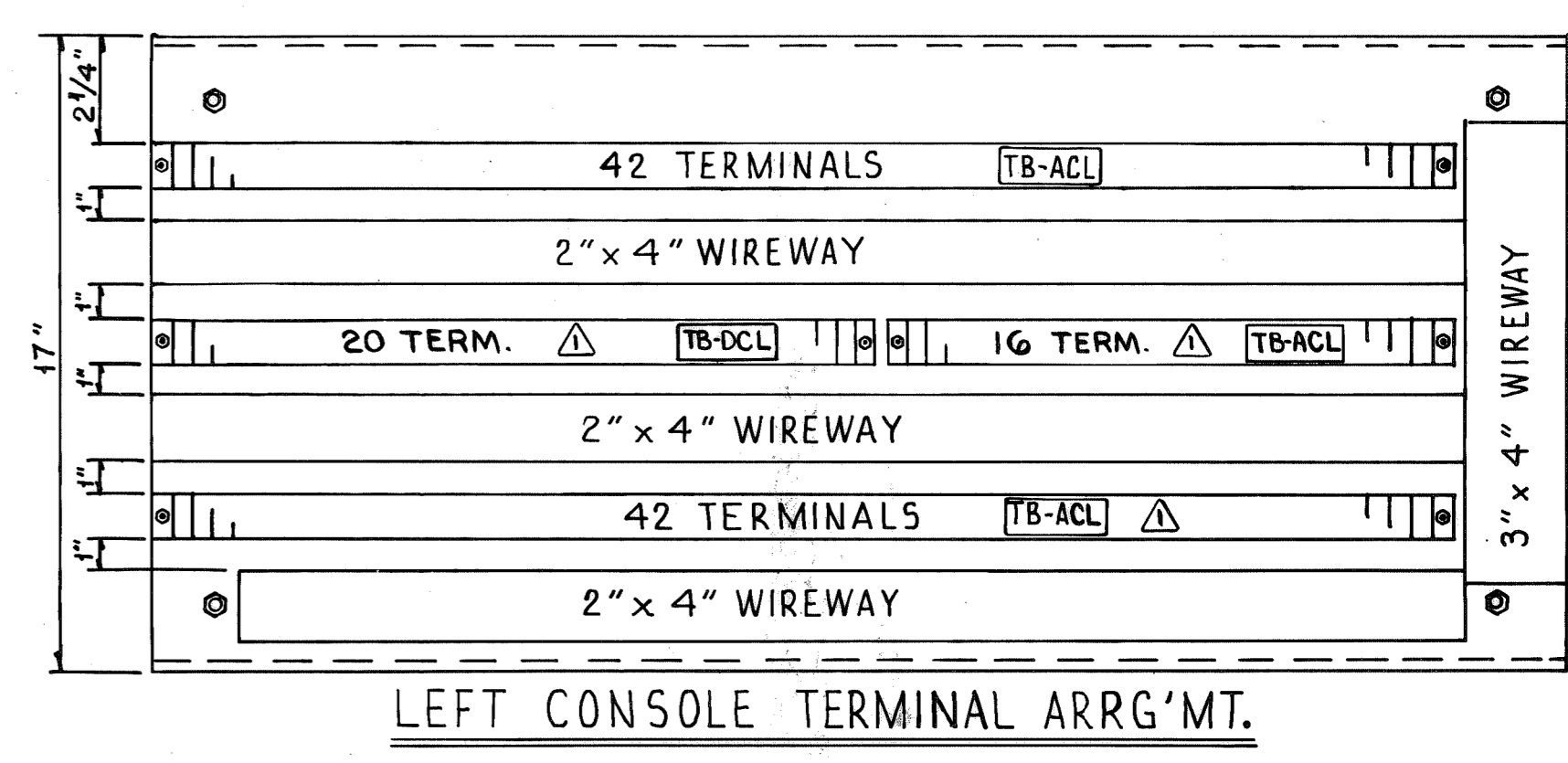
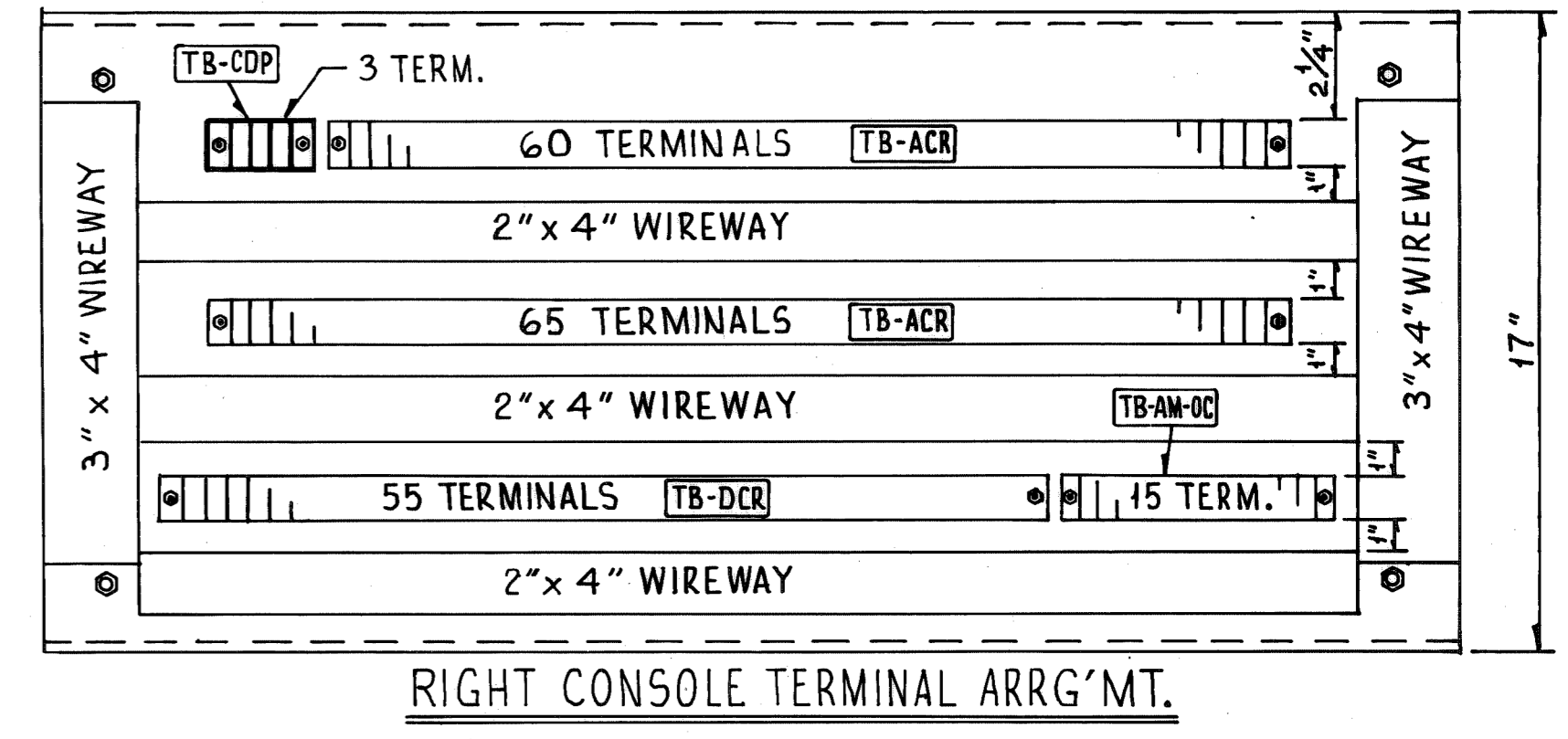
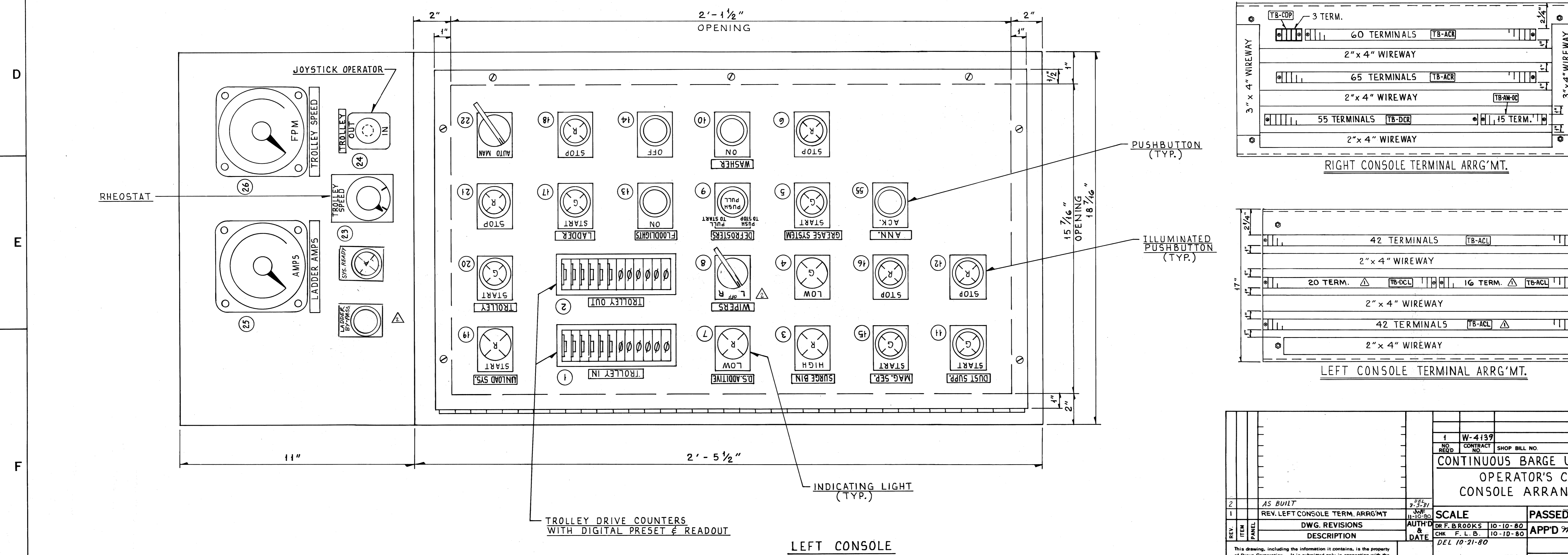
NO. REQ'D.	CONTRACT NO.	SHOP BILL NO.	E.S.	B.L.
1	W-4139			
ALABAMA STATE DOCKS CONTINUOUS BARGE UNLOADER CAB SECTION & DETAILS				
SCALE AS NOTED		PASSED <i>hanks</i> 1/6/81		
DWG. REVISIONS		AUTH'D & DATE	APP'D <i>W. Withrow</i> 1-5-81	
DESCRIPTION		DEL 11-24-80		
<small>This drawing, including the information it contains, is the property of Dravo Corporation. It is submitted only in connection with the transaction to which it pertains and must not be used in any manner detrimental to the interests of Dravo Corporation. The drawing is not to be copied and must be returned upon request.</small>				
DRAYO CORPORATION, PITTSBURGH, PA. DIV. E.W.D.		DRAWING NO.		REV.
SHEET		348308		



RIGHT CONSOLE



SPACE FOR CUSTOMERS USE



1		W-4139	E. S.	B.L.
NO. REQD.		CONTRACT NO.	SHOP BILL NO.	SHOPS
2		AS BUILT	SCALE	PASSED
1		REV. LEFT CONSOLE TERM. ARR'G'MT	DR F. B. BROOKS 10-10-80	APP'D
REV. ITEM PANEL		DESCRIPTION	DATE	DEL 10-21-80
DRAYO CORPORATION, PITTSBURGH, PA. DIV E.W.D.		SHEET		DRAWING NO. 348307



A

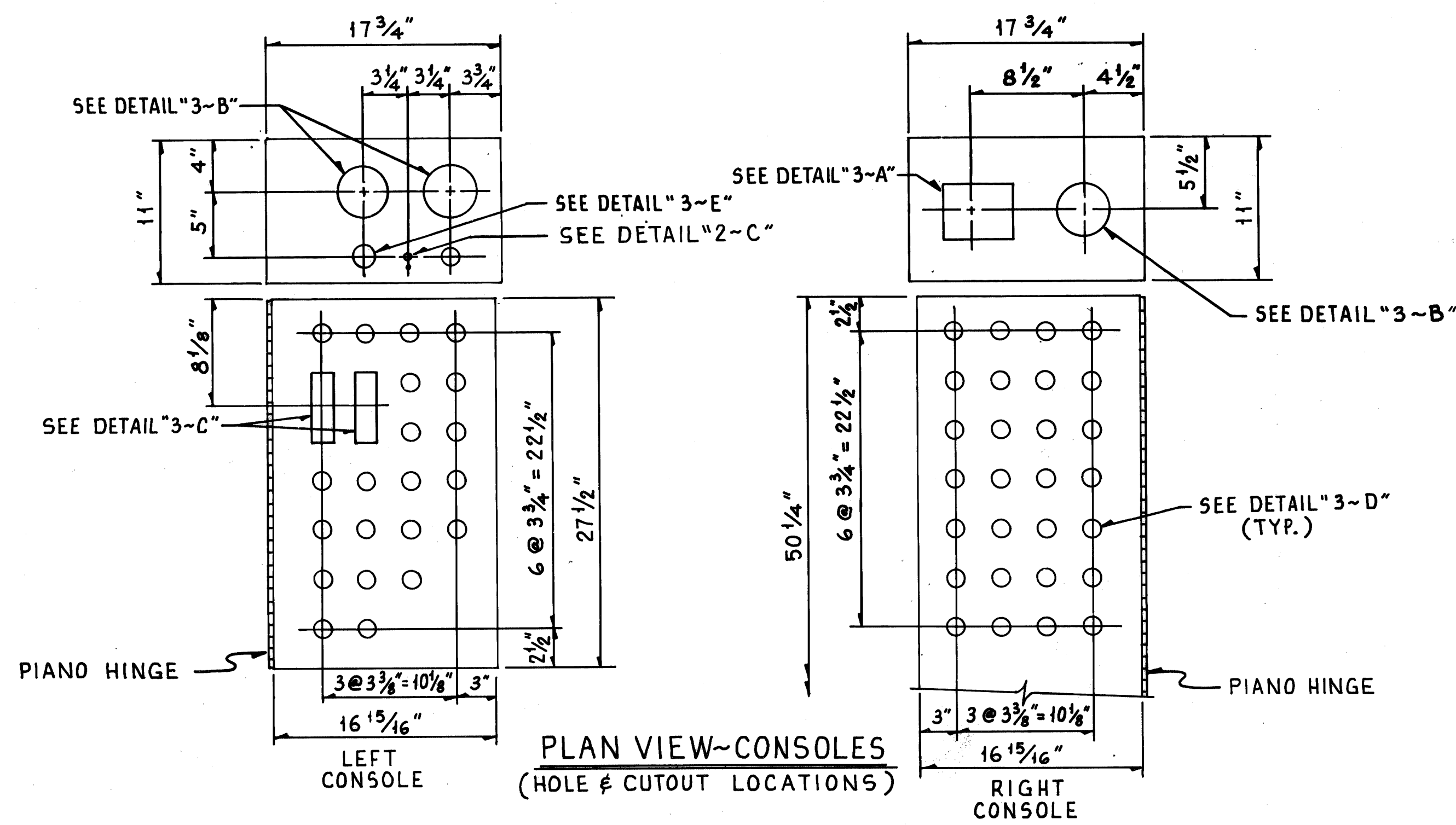
B

C

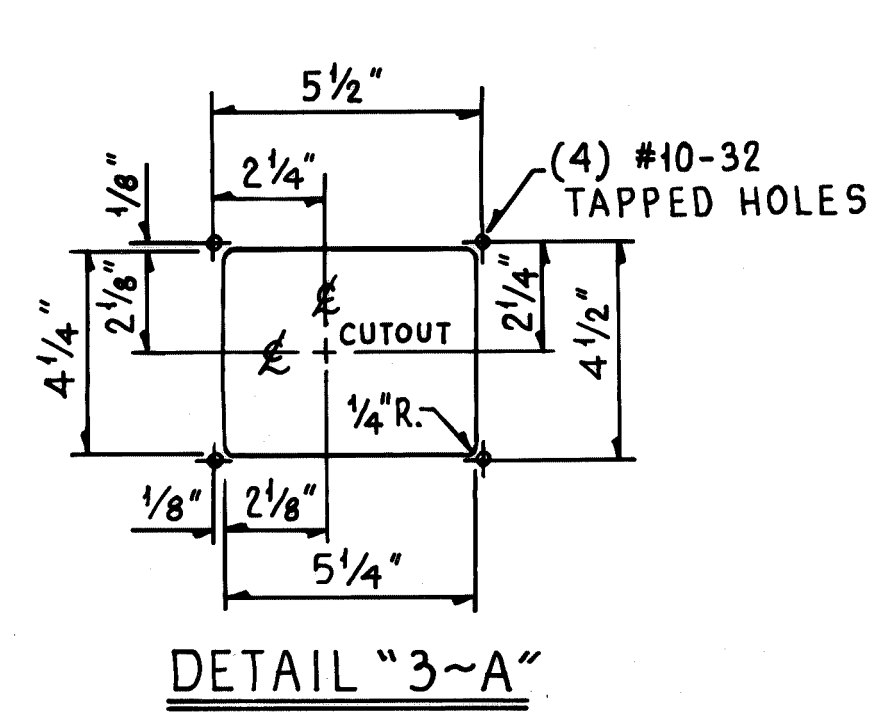
D

E

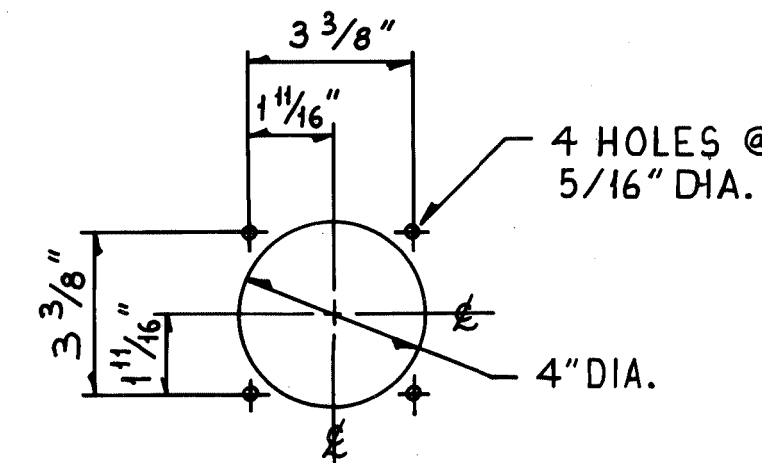
F



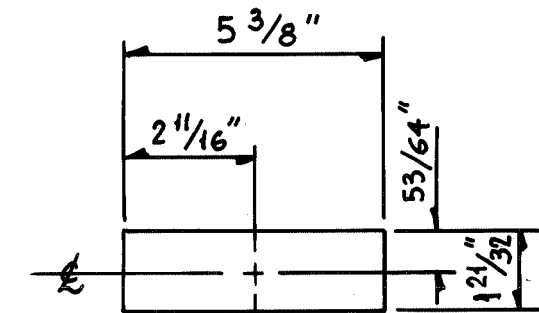
PLAN VIEW-CONSOLES  
(HOLE & CUTOUT LOCATIONS)



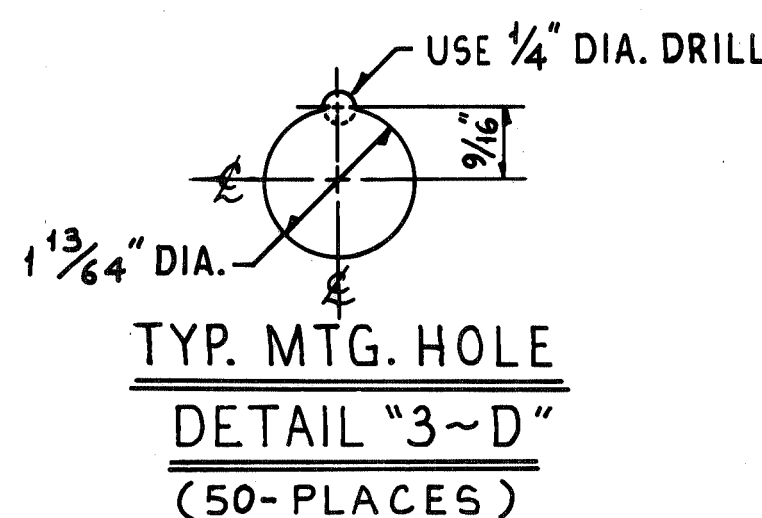
DETAIL "3-A"



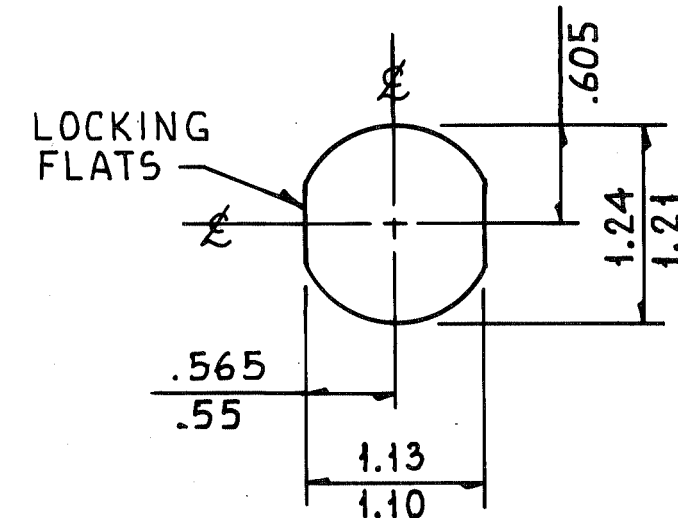
DETAIL "3-B"  
(3-PLACES)



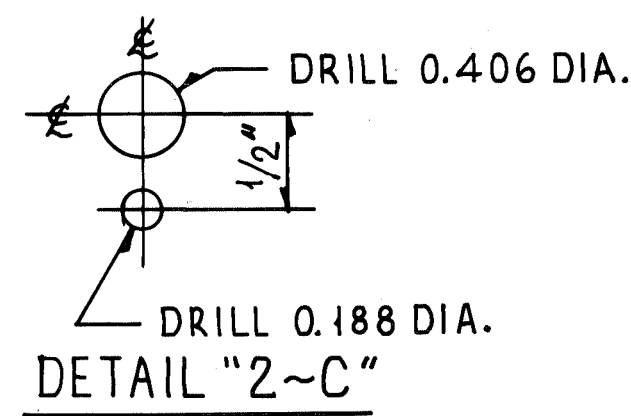
DETAIL "3-C"  
(2-PLACES)



TYP. MTG. HOLE  
DETAIL "3-D"  
(50-PLACES)

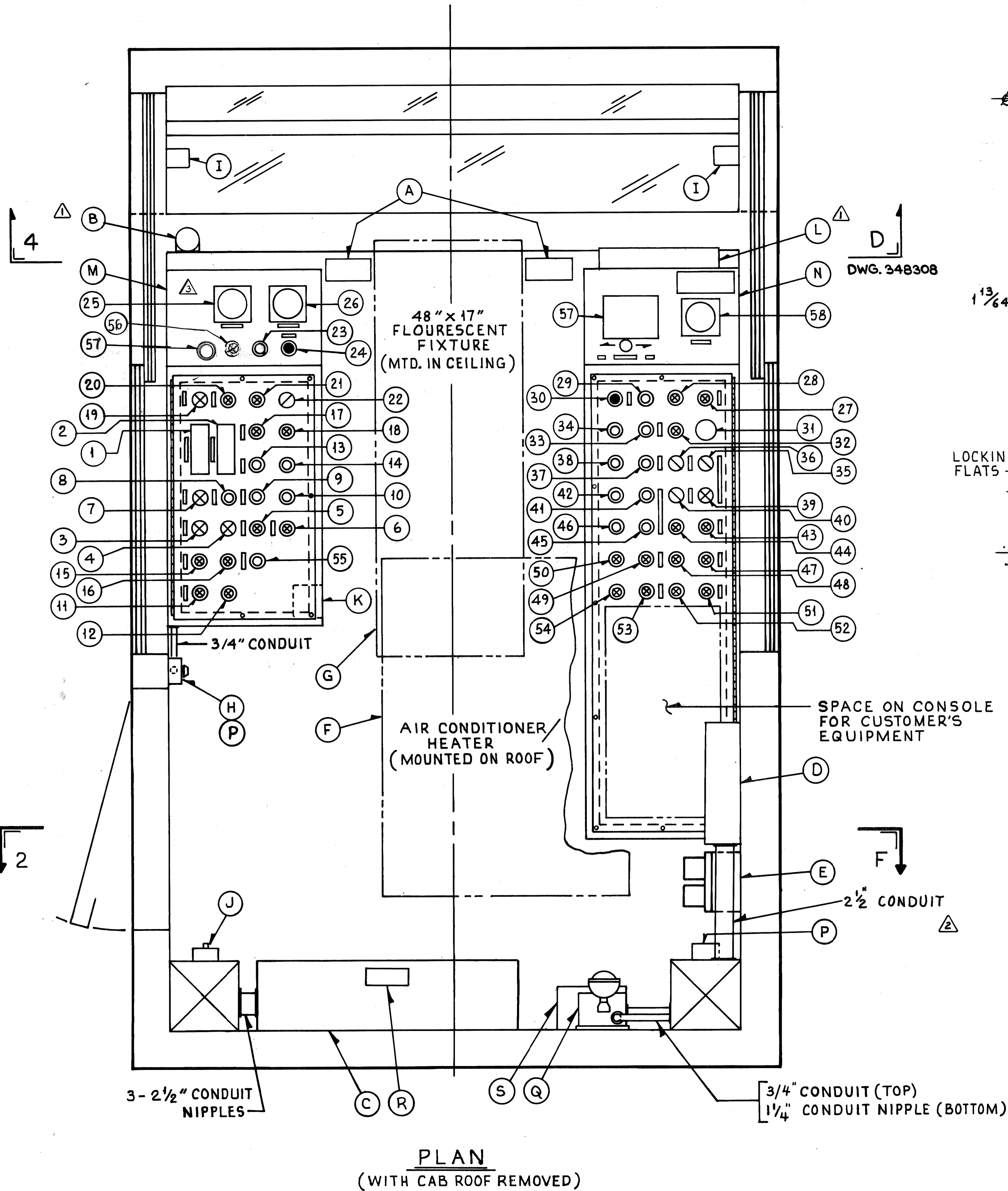


DETAIL "3-E"

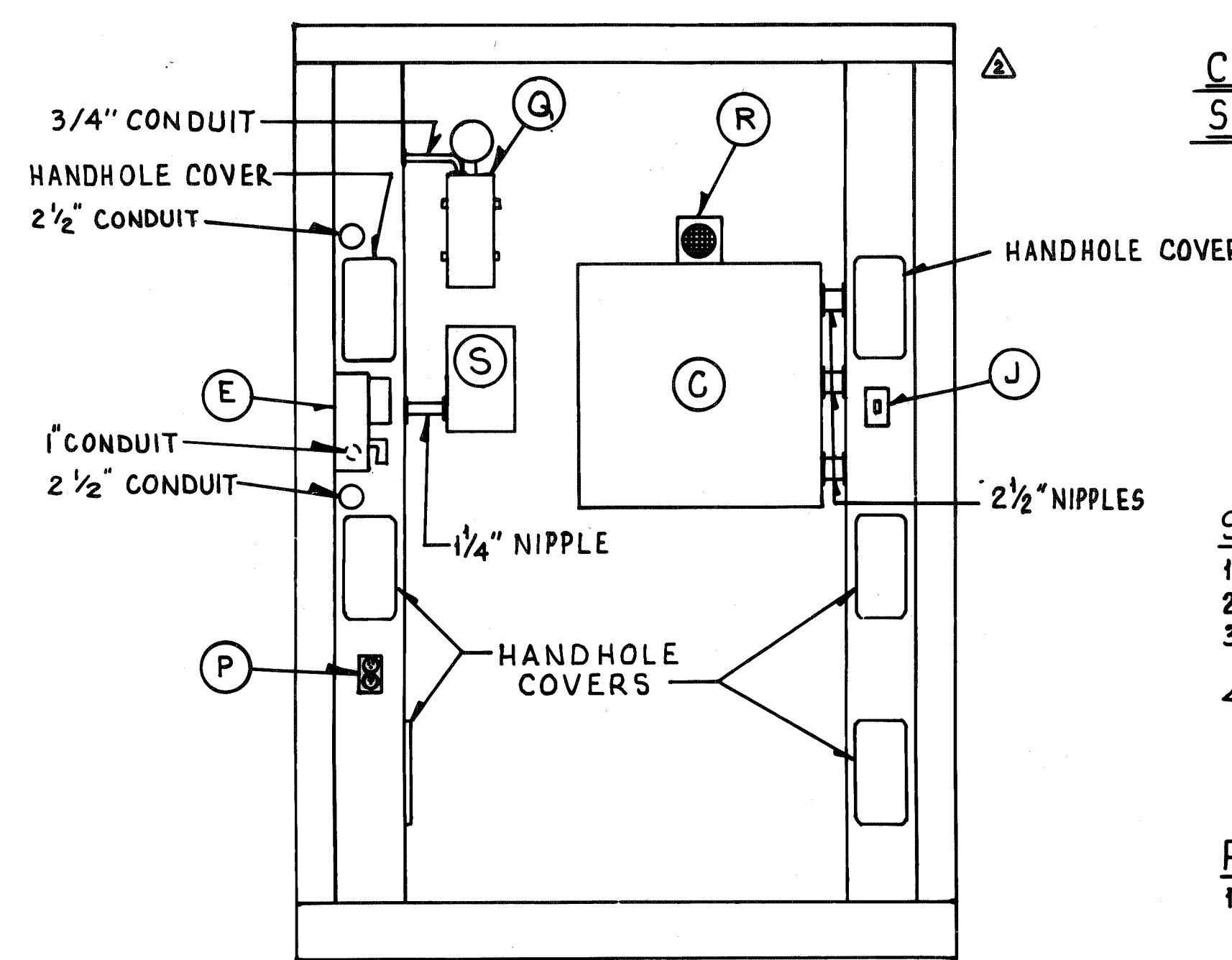


DETAIL "2-C"

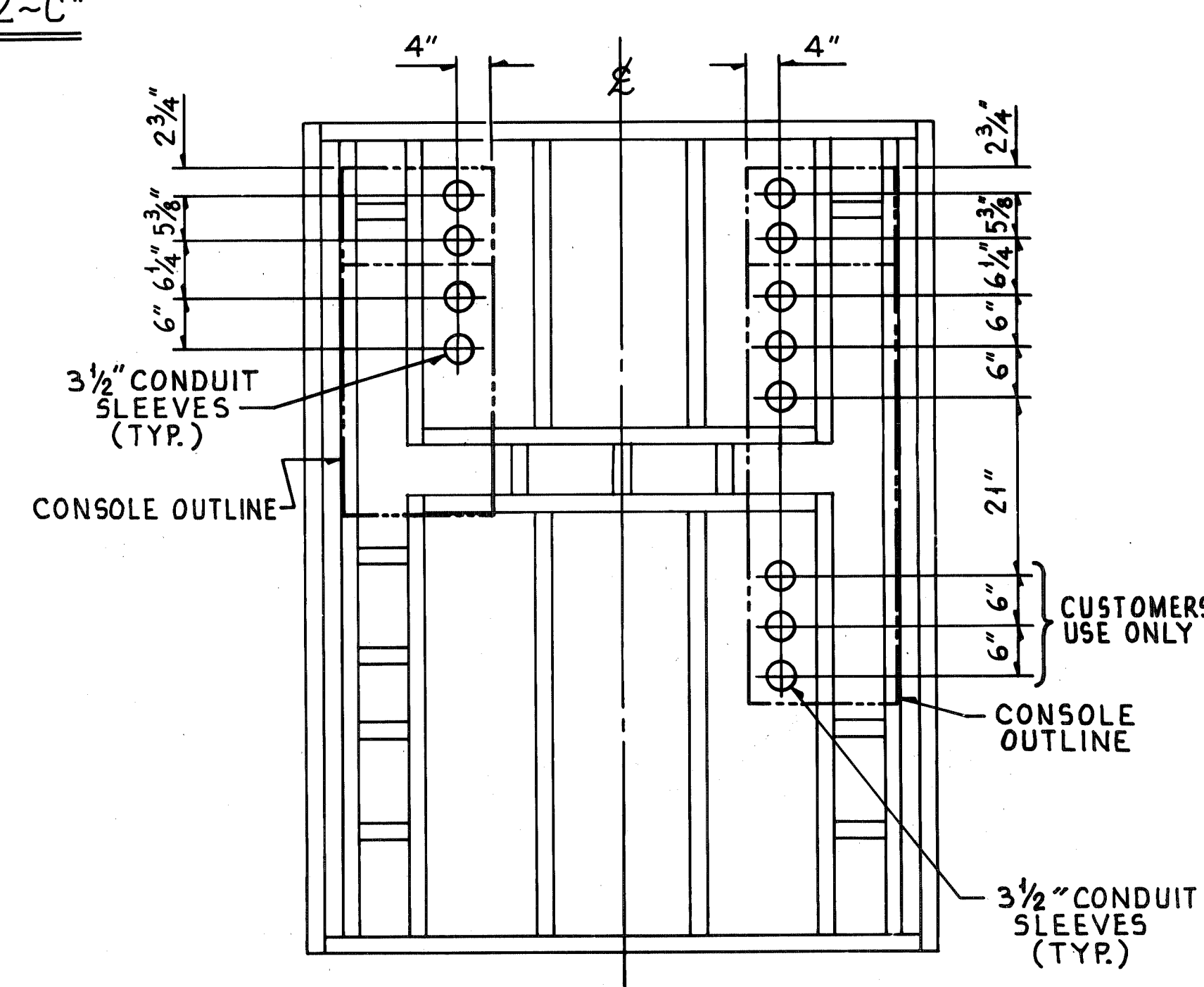
OPERATOR'S CAB EQUIPMENT						CONSOLE EQUIPMENT					
BILL #	MARK	ITEM	DEVICE	MFR.	REMARKS	BILL #	MARK	ITEM	DEVICE	MFR.	REMARKS
1643	A	WWM	WINDOW WIPER ASSEMBLY	AMERICAN BOSCH		1644	1	TIC	TROLLEY "IN" COUNTER	KESSELER ELLIS	
1643	B	WPM	WINDOW WASHER MTR. & RESERVOIR	TRICO		1644	2	TOC	TROLLEY "OUT" COUNTER		
1647	C	ANN	ANNUNCIATOR	PANALARM		1633	11	3	SBHLLI	SURGE BIN HI LEVEL IND. LIGHT	A-B
1631	D	CDP	DISTRIBUTION PANEL	SQUARE D		1633	8	4	SBLLIL	SURGE BIN LO LEVEL IND. LIGHT	
1605	E		A/C HEATING PILOT CONTROL	LINTERN	FURNISHED AND INSTALLED BY LINTERN	1634	7	5	GSPB-1	GREASE SYSTEM START ILLUM. PB.	
1605	F		A/C HEATING UNIT	LINTERN		1634	8	6	GSPB-2	GREASE SYSTEM STOP ILLUM. PB.	
	G		FLOURESCENT FIXTURE			1633	7	7	DSLIL	DUST SUPP. ADDITIVE LO IND. LT.	
	H		FLOURESCENT LIGHT DIMMER		FURNISHED BY CAB VENDOR	1637	8	8	WWPB	WIPER PUSH-PULL PB.	
1649	I		WINDOW DEFROSTERS			1637	9	9	WDPB	DEFROSTERS PUSH-PULL PB.	
	J		OUTSIDE LIGHT TOGGLE SWITCH			1636	10	10	WPB	WASHER PB.	
1640	K	WWPS	WIPER / WASHER POWER SUPPLY	SOLA	TO BE INSTALLED INSIDE LEFT CONSOLE	1634	9	11	DSPB-1	DUST SUPP. START ILLUM. PB.	
1643	L	COMM	PUBLIC ADDRESS UNIT	C.W. THOMSON		1634	10	12	DSPB-2	DUST SUPP. STOP ILLUM. PB.	
	M		LEFT OPERATOR'S CONSOLE	LINTERN	PILOT DEVICES AND WIRING BY DRAVO	1636	8	13	FLPB-1	FLOODLIGHTS ON PB.	
	N		RIGHT OPERATOR'S CONSOLE	LINTERN		1636	9	14	FLPB-2	FLOODLIGHTS OFF PB.	
	P		CONVENIENCE RECEPTACLE			1634	11	15	MSPB-1	MAGNETIC SEP. START ILLUM. PB.	
1645	Q	CEL	EMERGENCY LIGHT FIXTURE	HOLOPHANE		1634	12	16	MSPB-2	MAGNETIC SEP. STOP ILLUM. PB.	
1647	R	OC-AH	ANNUNCIATOR HORN	PANALARM		1634	13	17	LPB-1	DIGGING LADDER START ILLUM. PB.	
1651	S		DEFROSTER STARTER			1634	14	18	LPB-2	DIGGING LADDER STOP ILLUM. PB.	
	57		LADDER BYPASS PB		A-B BY CUST.	1633	9	19	USPIL	UNLOADER START PERMIT IND. LT.	
						1634	15	20	TAPB-1	TROLLEY AUTO START ILLUM. PB.	
						1634	16	21	TAPB-2	TROLLEY AUTO STOP ILLUM. PB.	
						1638	7	22	TSS	TROLLEY AUTO/MAN SEL. SW.	
						1601	11	23	TR	TROLLEY SPEED RHEOSTAT	OHMITE FURNISHED BY A-B
						1639	7	24	LTJ5	TROLLEY MANUAL JOYSTICK	A-B
						1646	7	25	LA	LADDER AMMETER	G.E.
						1646	10	26	TSI	TROLLEY SPEED INDICATOR	A-B
						1634	17	27	HLPB-1	LATCH RAISE ILLUM. PB.	
						1636	18	28	HLPB-2	LATCH LOWER ILLUM. PB.	
						1636	10	29	HBPPB	HOIST BY-PASS PB.	
						1639	8	30	HJ5	HOIST OPERATOR JOY STICK	
						1636	11	31	ESPB	E-STOP PB. (MUSHROOM TYPE)	
						1634	19	32	ESRPB	E-STOP RESET ILLUM. PB.	
						1636	14	33	DWPB-1	DIG WINCH JOG IN PB.	
						1636	15	34	DWPB-2	DIG WINCH JOG OUT PB.	
						1638	9	35	BHP055	BARGE HAUL POWER SEL. SW.	
						1638	8	36	BH55	BARGE HAUL MODE SEL. SW.	
						1636	12	37	RWPB-1	RETURN WINCH JOG IN PB.	
						1636	13	38	RWPB-2	RETURN WINCH JOG OUT PB.	
						1633	10	39	BHP0IL	BARGE HAUL POWER ON IND. LT.	
						1638	10	40	PB55	CLAMP STORE SELECTOR SW.	
						1636	16	41	PBPB-1	CLAMP RAISE PB.	
						1636	17	42	PBPB-2	CLAMP LOWER PB.	
						1634	20	43	GCPB-1	CONVEYOR C10 START ILLUM. PB.	
						1634	21	44	GCPB-2	CONVEYOR C10 STOP ILLUM. PB.	
						1636	18	45	PBPB-3	CLAMP IN PB.	
						1636	19	46	PBPB-4	CLAMP OUT PB.	
						1635	5	47	BHLPB-1	B.H. LUBE PUMP START ILLUM. PB.	
						1635	6	48	BHLPB-2	B.H. LUBE PUMP STOP ILLUM. PB.	
						1635	7	49	HPPB-1	PONTOON PUMP START ILLUM. PB.	
						1635	8	50	HPPB-2	PONTOON PUMP STOP ILLUM. PB.	
						1635	9	51	BHBPB-1	B.H. BLOWER START ILLUM. PB.	
						1635	10	52	BHBPB-2	B.H. BLOWER STOP ILLUM. PB.	
						1635	11	53	CRPB-1	CABLE REEL START ILLUM. PB.	
						1635	12	54	CRPB-2	CABLE REEL STOP ILLUM. PB.	
						1636		55	ACK	ANNUNCIATOR ACK. PB.	
						1632	3	56	SUB	START UNLOADER IND LGT	
						1601	2	57	BHM	B.H. MASTER SWITCH	G.E. FURNISHED BY A-B
						1646	13	58	BHSI	B.H. SPEED INDICATOR	



PLAN  
(WITH CAB ROOF REMOVED)



SECTION "2-F"  
3/4" = 1'-0"  
TAKEN AT "4-E"



CAB FLOOR CONDUIT  
SLEEVE PENETRATION

SHOP NOTES:

1. INSTALL ALL EQUIPMENT IN CAB.
2. INSTALL SLEEVES THRU CAB FLOOR.
3. INSTALL TERMINAL BOARDS IN CONSOLES AS REQUIRED.
4. CONNECT ALL EQUIPMENT AS SHOWN ON DWG. 348309.

FIELD NOTES:

1. INSTALL CONDUIT & CABLE TO CAB TERMINAL BOARD & CONNECT PER DWG.

NO. 1	W-4139	E.S.	B.L.
NO. 2	CONTRACT NO.	SHOPS	DIST.
CONTINUOUS BARGE UNLOADER OPERATOR'S CAB ELECTRICAL ARRANGEMENT			
SCALE 1 1/2" = 1'-0"	PASSED	DATE	
DR. F. BROOKS	10-20-80	APP'D	10/21/80
CHK. F.L.B.	10-20-80		
DRAWING NO. 348306			
DRAVO CORPORATION, PITTSBURGH, PA. DIV. E.W.D. SHEET			



A

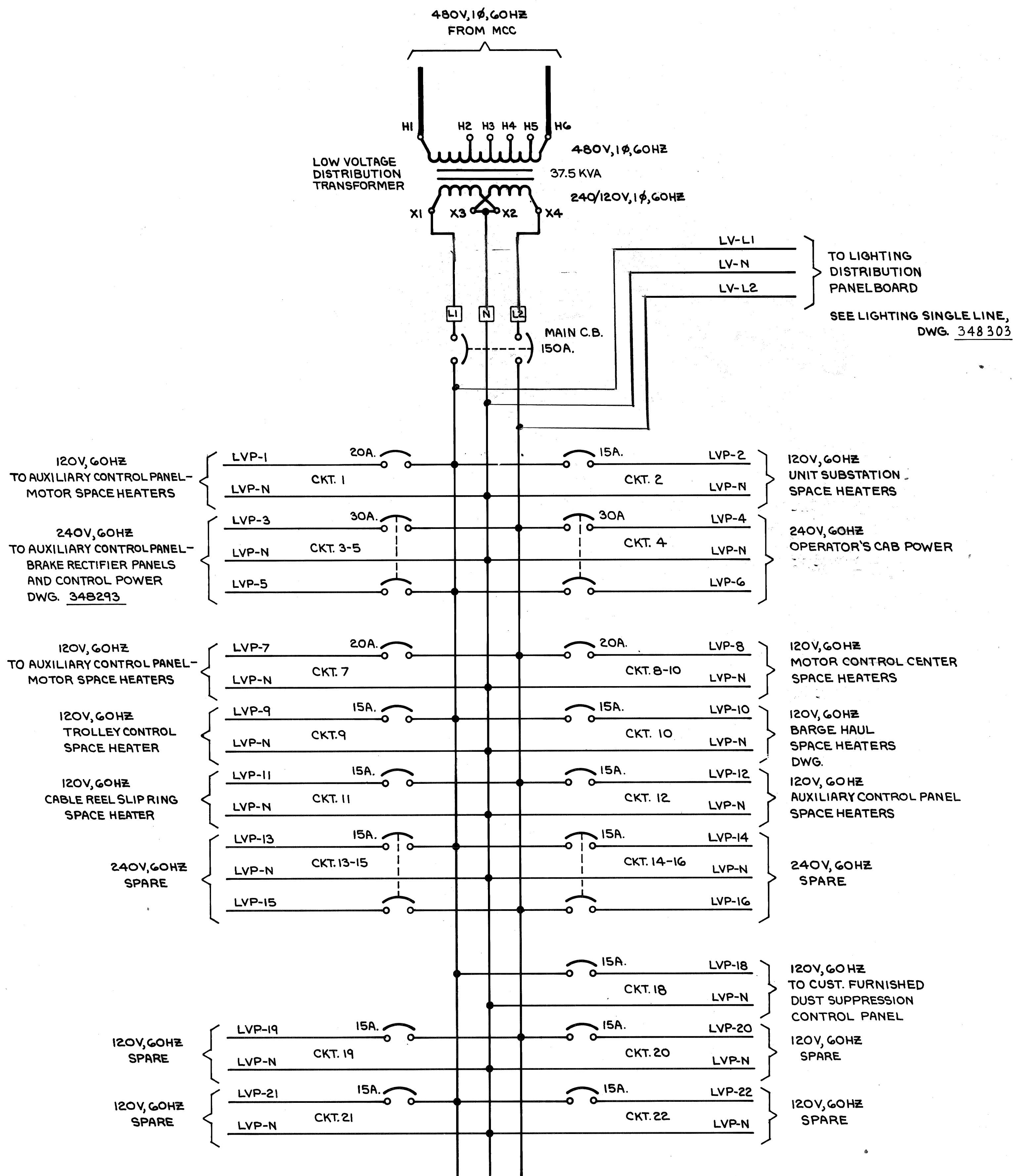
B

C

D

E

F

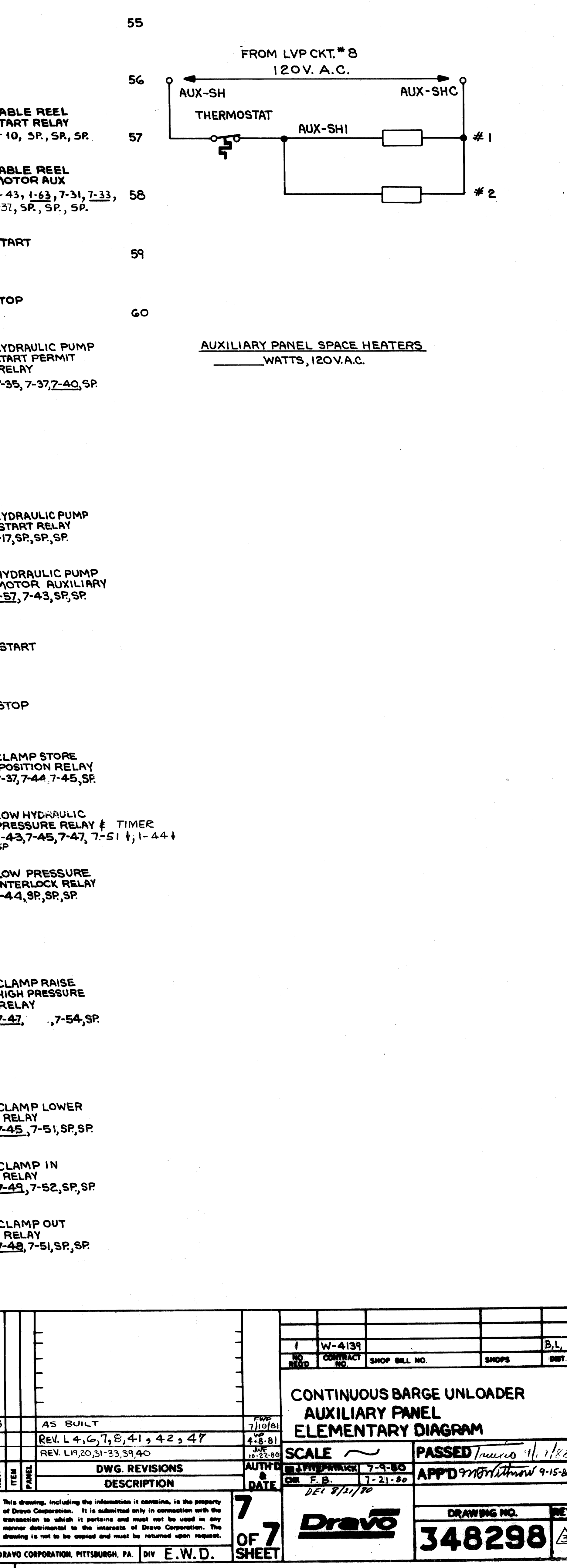
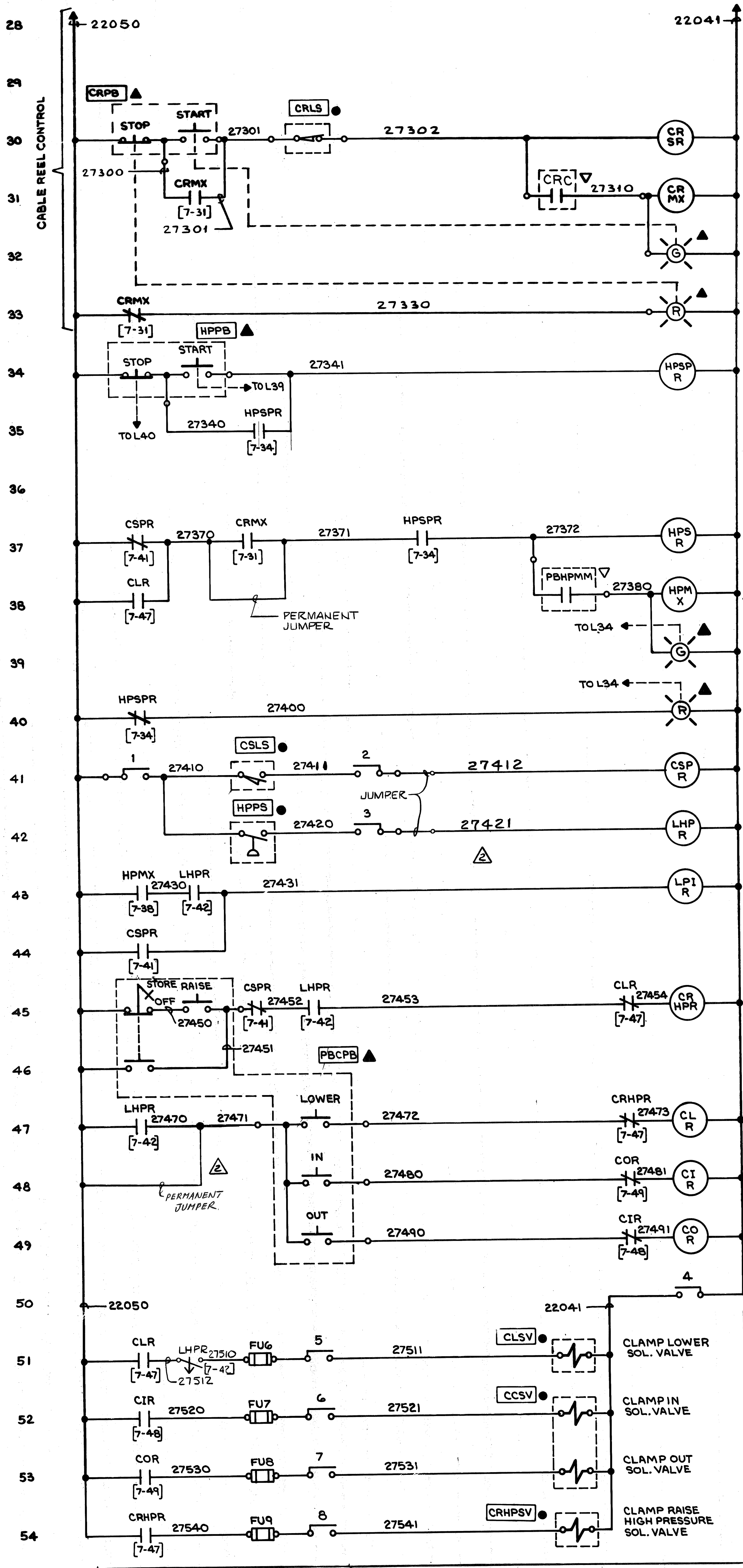
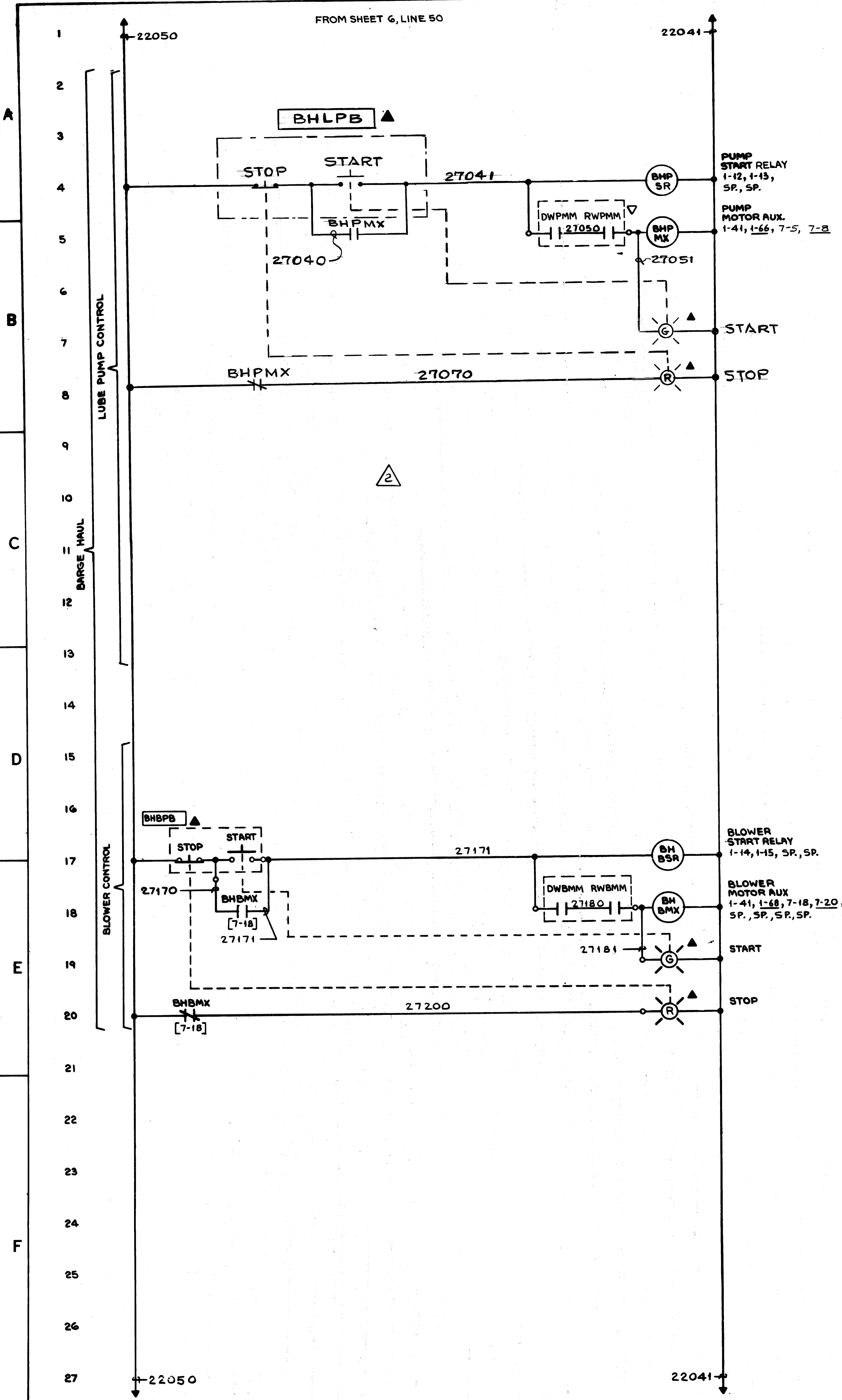


NO. REQ'D	CONTRACT NO.	SHOP BILL NO.	SHOPS	B.L.
1	W-4139			
ALABAMA STATE DOCKS CONTINUOUS BARGE UNLOADER LOW VOLTAGE DISTRIBUTION PANEL SINGLE LINE DIAGRAM				
SCALE		PASSED	10/22/80	
DR. J. FITZPATRICK	9-11-80	APP'D: <i>[Signature]</i>		
CHK. F. BROOKS	10-22-80	10-23-80		
DWG. REVISIONS		AUTH. & DATE	DRAWING NO.	
DESCRIPTION			348305	
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DRAYO CORPORATION, PITTSBURGH, PA. DIV		E.W.D.	OF 1 SHEET	REV.

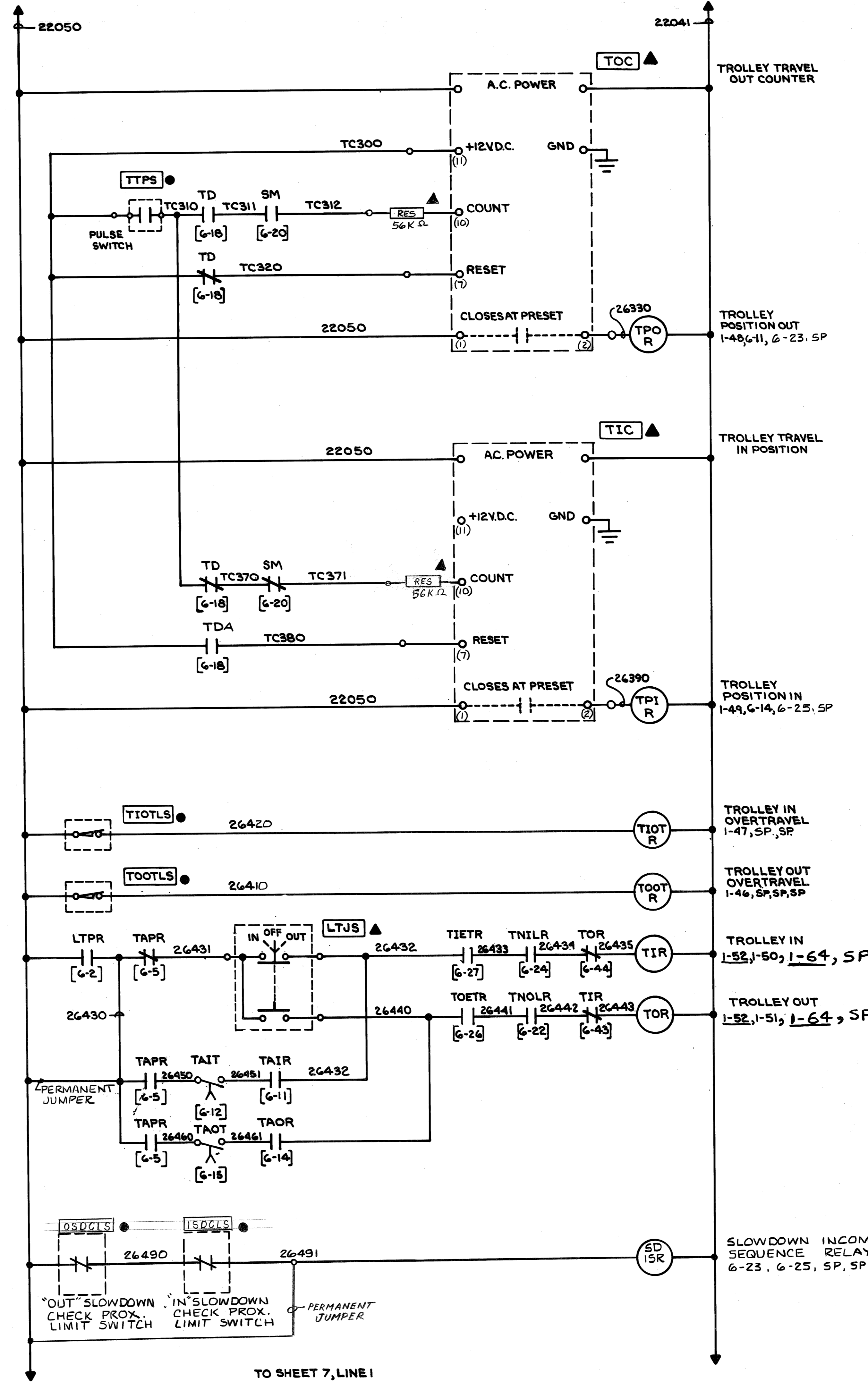
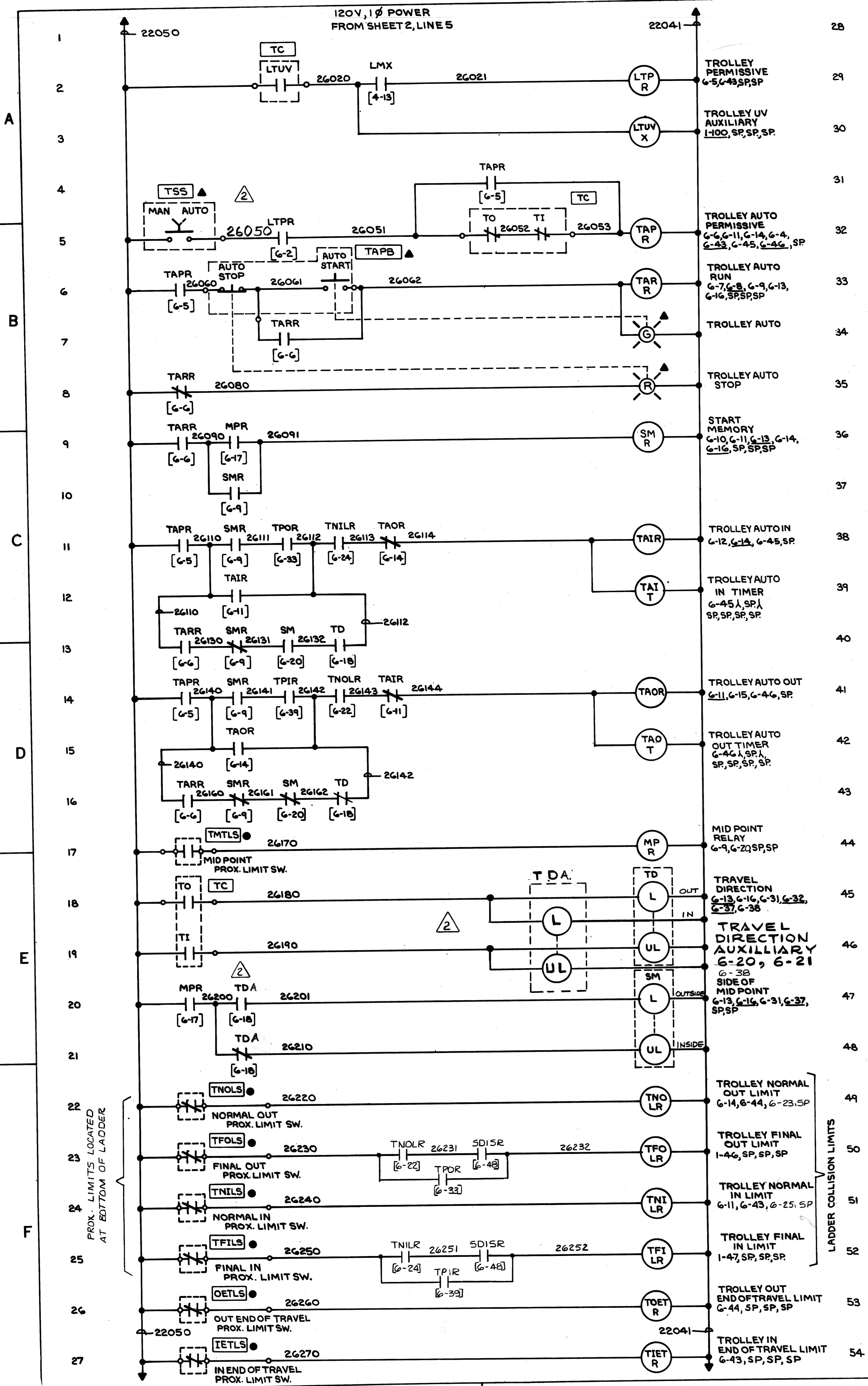




FROM SHEET G, LINE 50



3		AS BUILT	7/10/81	SCALE	PASSED	11/1/80
2		REV. L 4, G, I, E, 41, 42, 47	4/8/81	APPROVED	APPROVED 9-15-80	
1		REV. L 19, 20, 31-33, 39, 40	12/25/80	DATE	DEC 9/21/80	
REV.	BY	DESCRIPTION	DATE	DRAWING NO. 348298		
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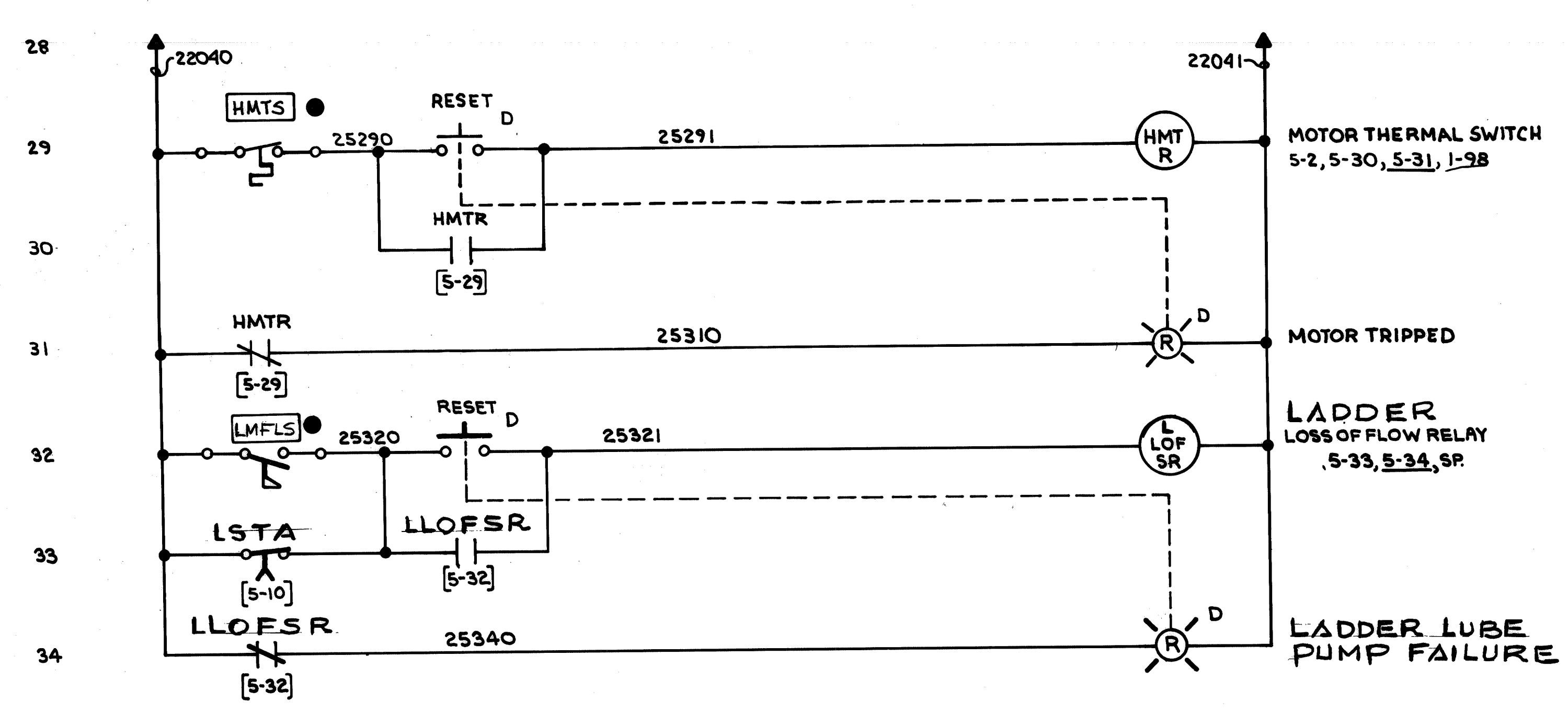
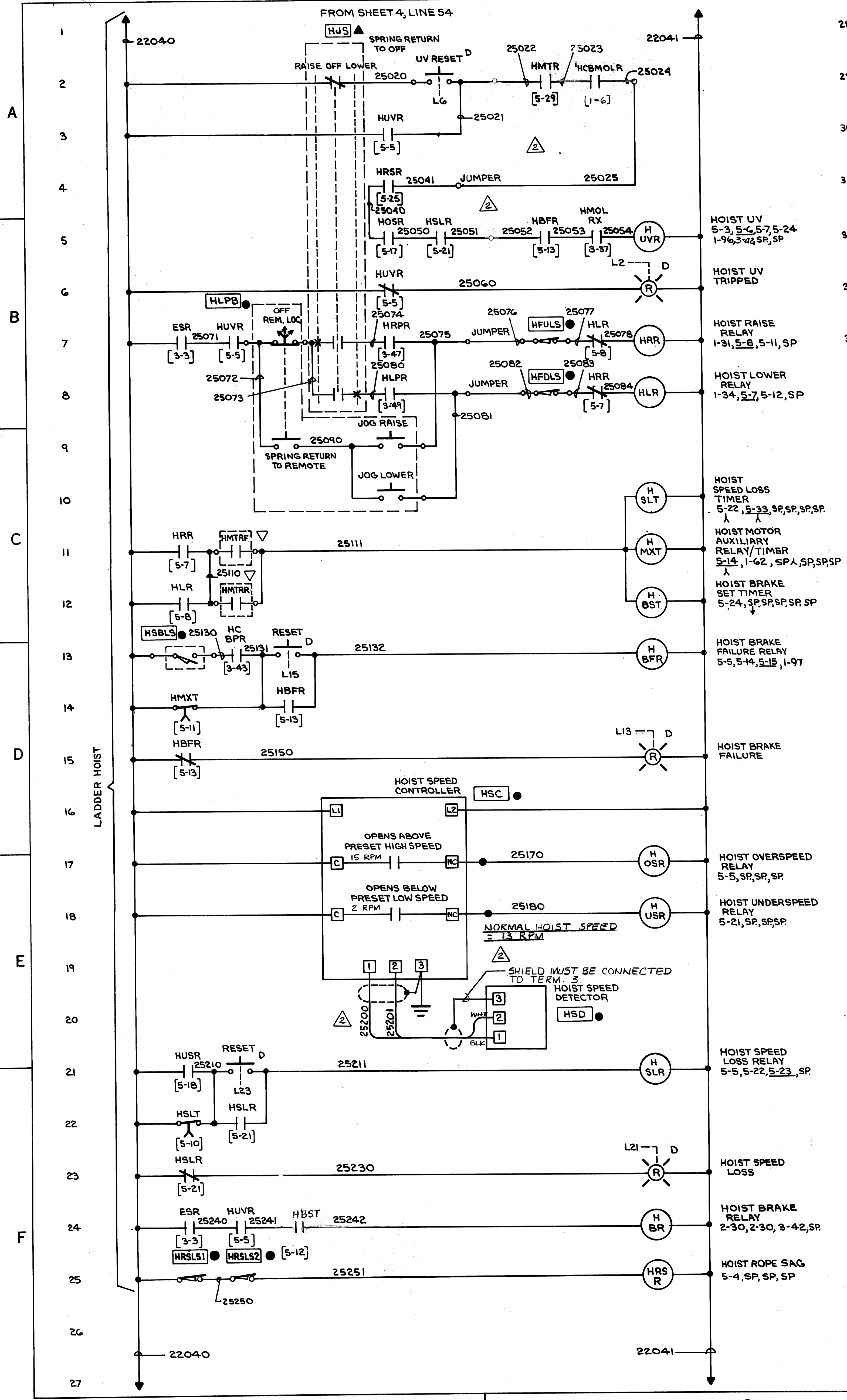


PROX. LIMITS LOCATED AT BOTTOM OF LADDER

LADDER COLLISION LIMITS

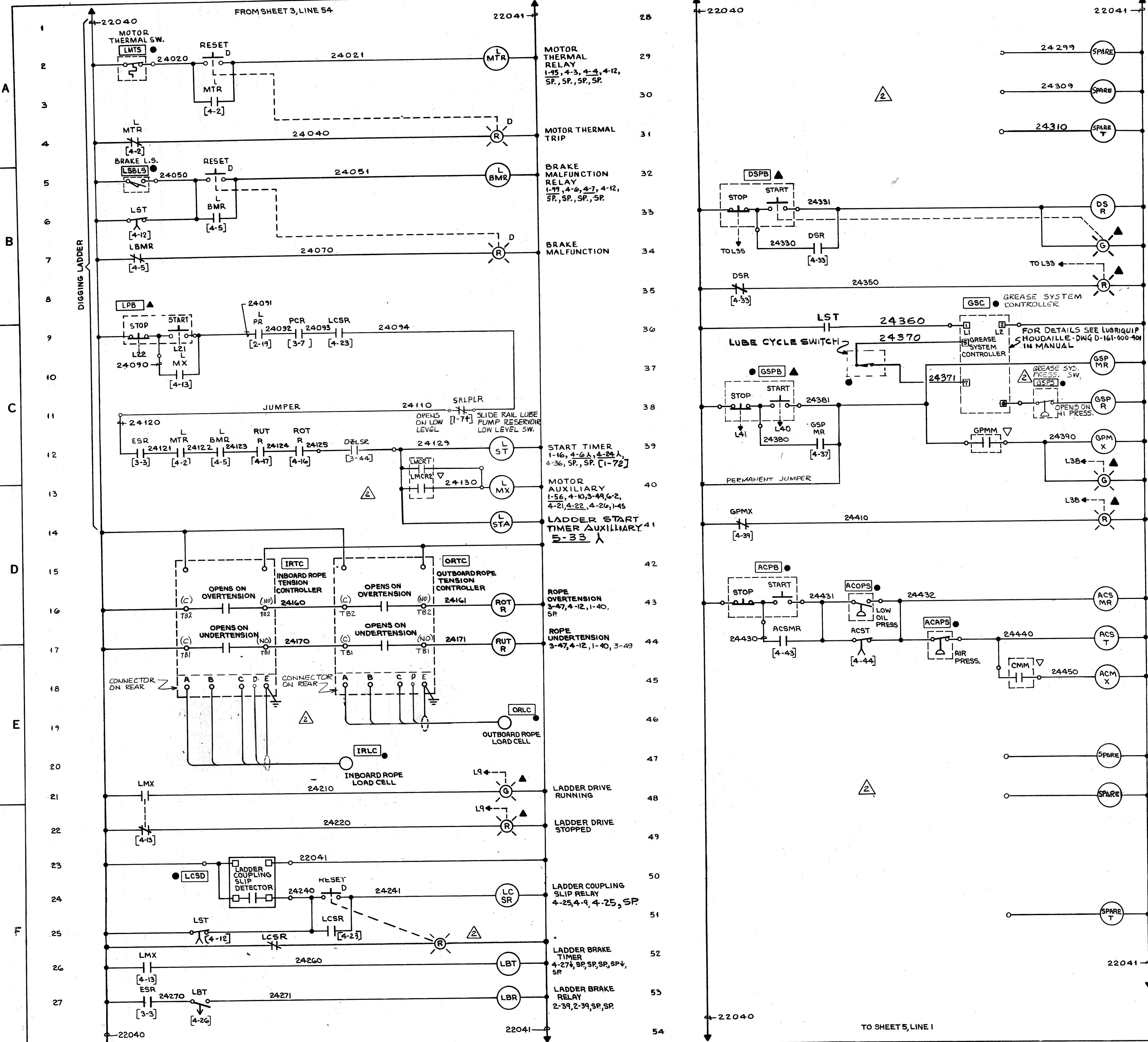
NO. REV'D		W-4139	CONTRACT NO.	SHOP BILL NO.	SHOPS	DIST
CONTINUOUS BARGE UNLOADER AUXILIARY PANEL ELEMENTARY DIAGRAM						
SCALE		DWG. REVISIONS		AUTH'D & DATE		PASSED
DESCRIPTION		DATE		CHK F. B.		APP'D
<small>This drawing, including the information it contains, is the property of Dravo Corporation. It is submitted only in connection with the transaction to which it pertains and must not be used in any manner detrimental to the interests of Dravo Corporation. The drawing is not to be copied and must be returned upon request.</small>						
6 OF 7 SHEET		DRAWING NO.		REV.		
		348297				
DRAVO CORPORATION, PITTSBURGH, PA. DIV E.W.D.						





LADDER HOIST

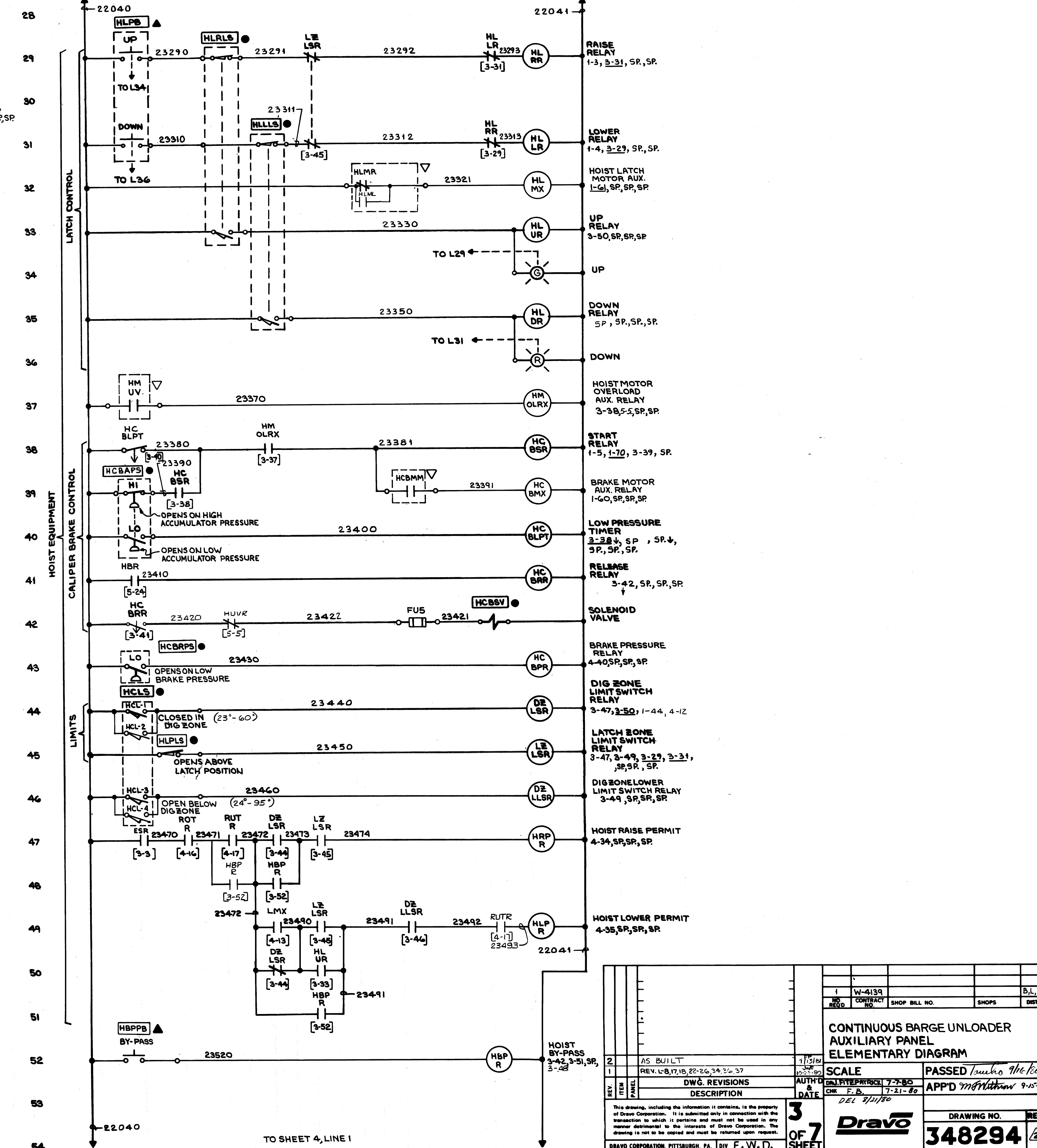
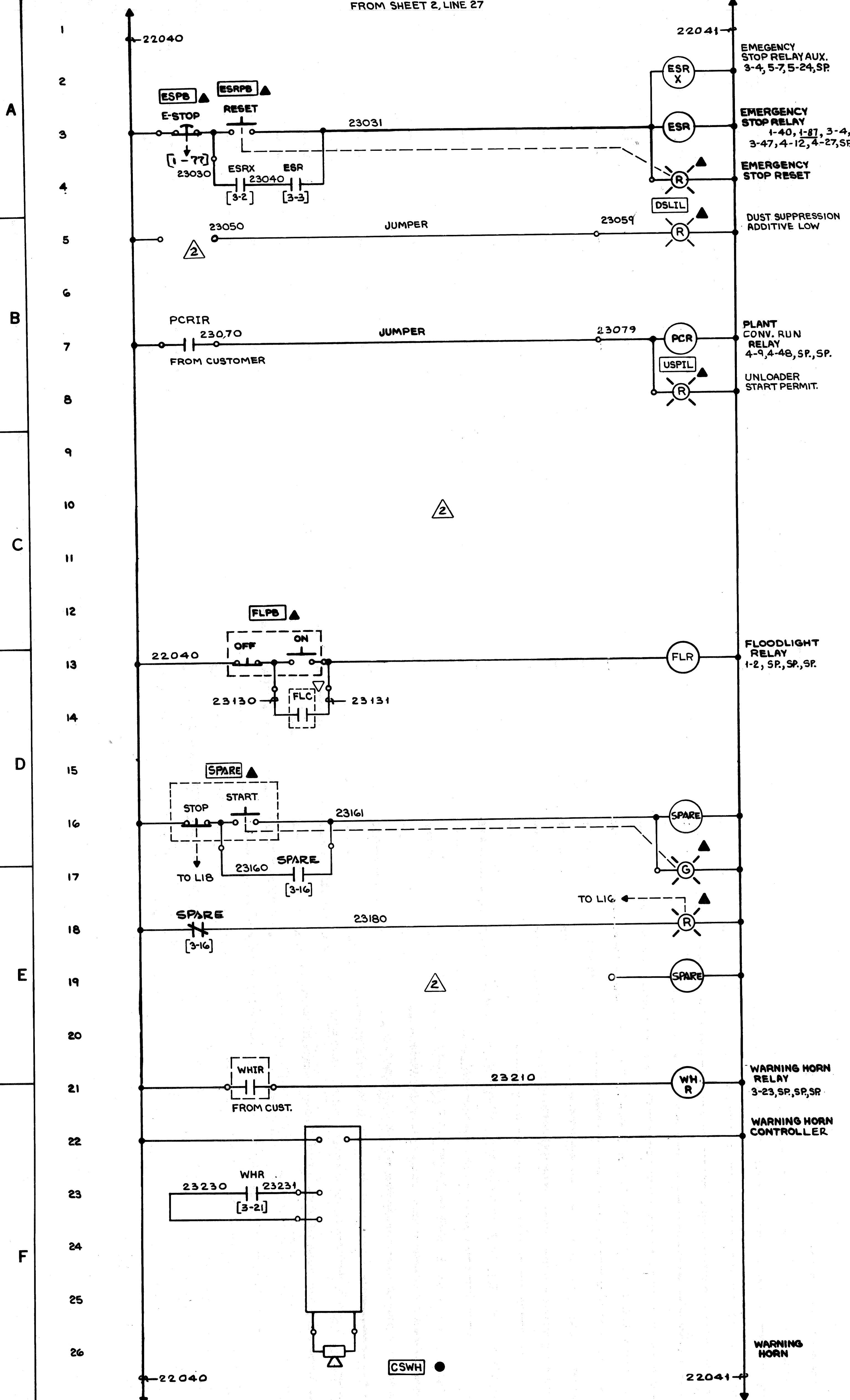
NO. REQD.	W-4139	CONTRACT NO.	SHOP BILL NO.	SHOPS	DIST.
CONTINUOUS BARGE UNLOADER AUXILIARY PANEL ELEMENTARY DIAGRAM					
SCALE	AS BUILT	DATE	7/10/80	PASSED	7/11/80
REV. 1	REV. L-2,7,8,10,11,12 ADD. L-32-34	AUTH'D & DATE	DR. FITZPATRICK 7-10-80	APP'D	M. G. WILSON 7/15/80
REV. 2	DWG. REVISIONS	DESCRIPTION	CHK. F. B. 7-21-80	DATE	DEL. 8/21/80
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DRAVO CORPORATION, PITTSBURGH, PA. DIV. E.W.D.					



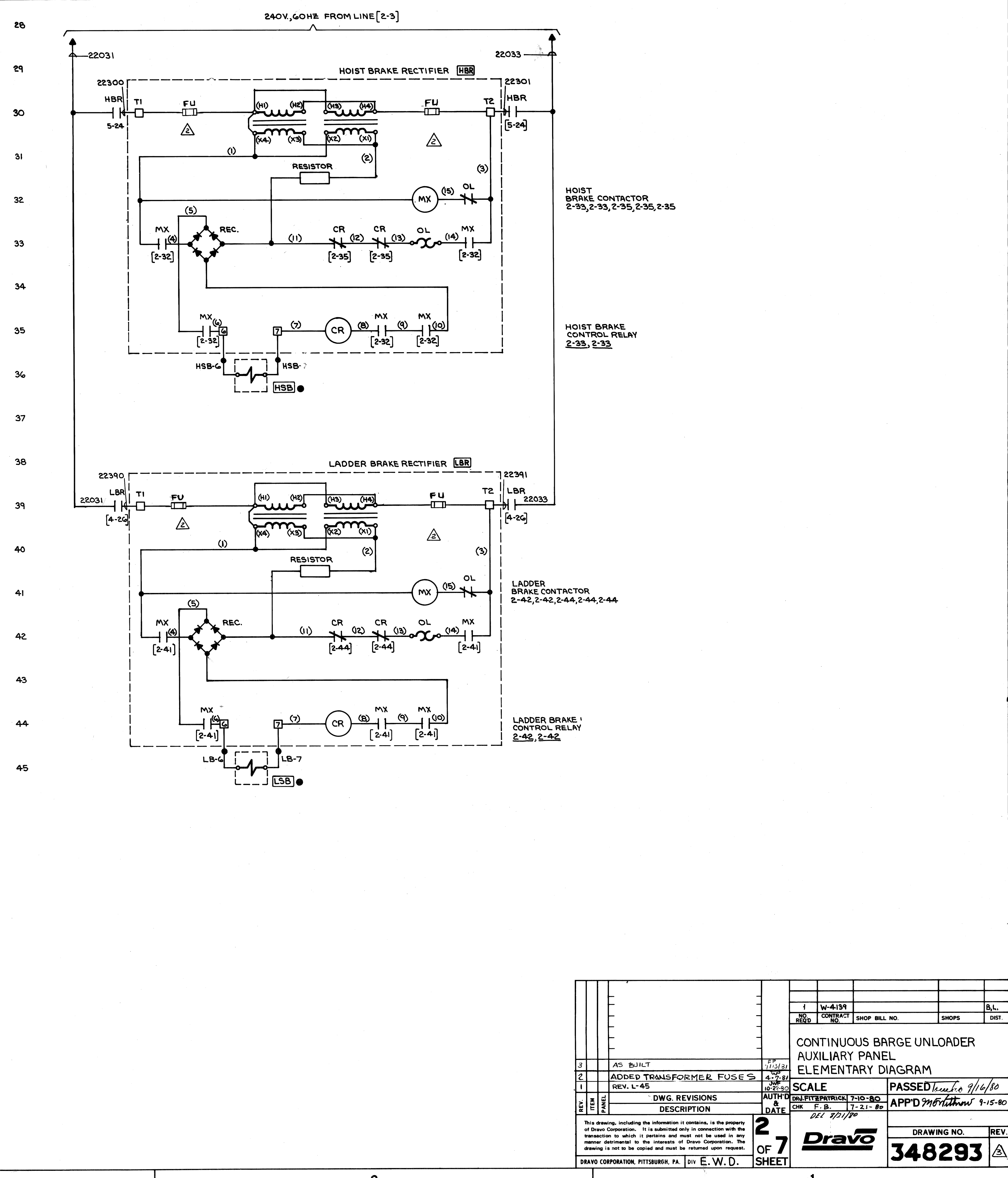
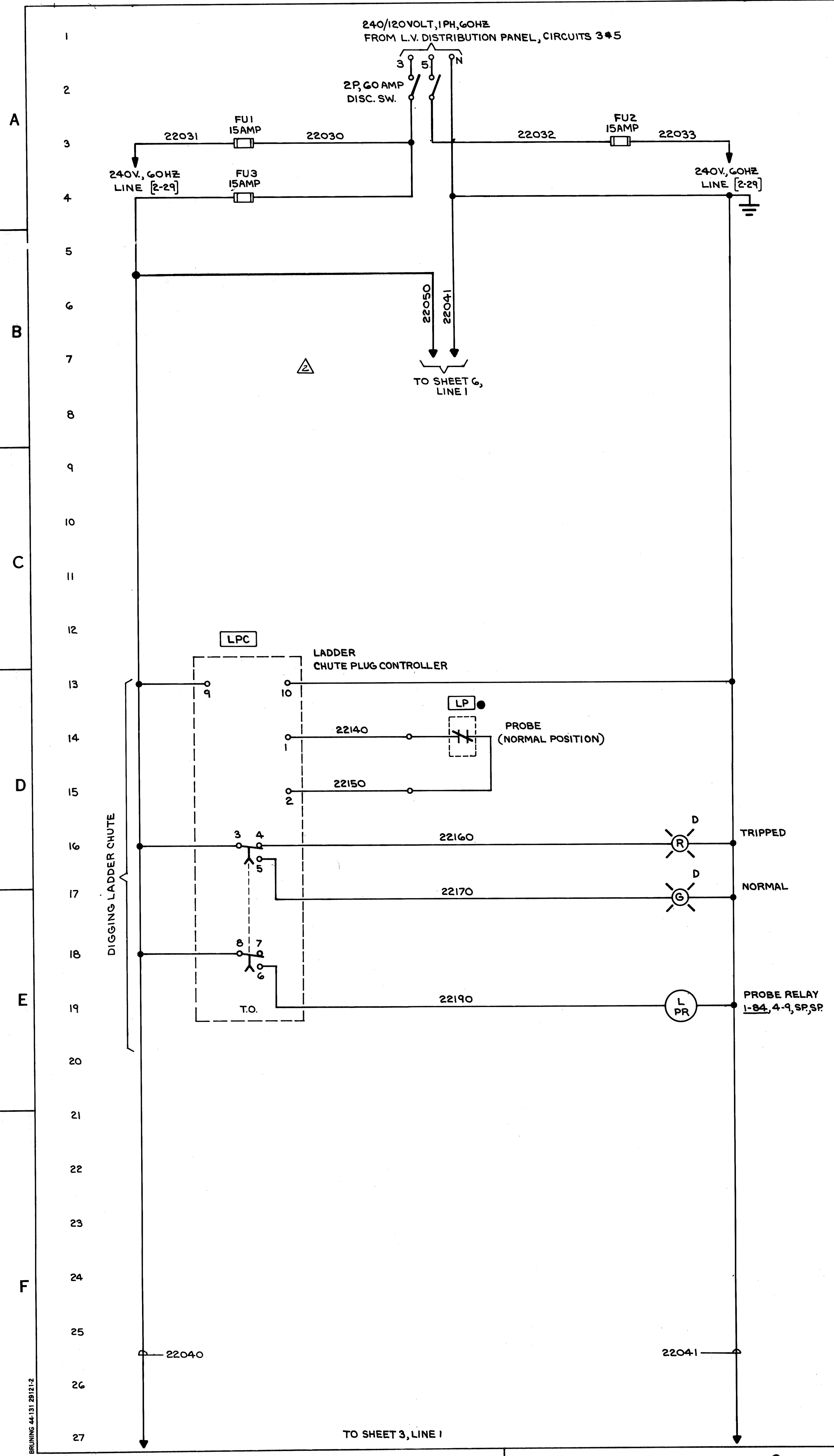
REV	NO.	DATE	DESCRIPTION	BY	CHK	DATE	DESCRIPTION	SCALE	PASSED
1	W-4139								
2	AS BUILT	7/11/81							
3	REV L-9, 13, 24, 30, 34, 35, 40, 41, 44, 49, 50, ADD L-51	12-22-82							
4	DWG. REVISIONS								
5	DESCRIPTION								
This drawing, including the information it contains, is the property of Dravo Corporation. It is submitted only in connection with the transaction to which it pertains and must not be used in any manner detrimental to the interests of Dravo Corporation. The drawing is not to be copied and must be returned upon request.								AUTHORITY DATE	APPROVED DATE
Dravo Corporation, Pittsburgh, Pa. Div. E. W. D.								DRAWING NO. <b>348295</b>	REV 1



FROM SHEET 2, LINE 27

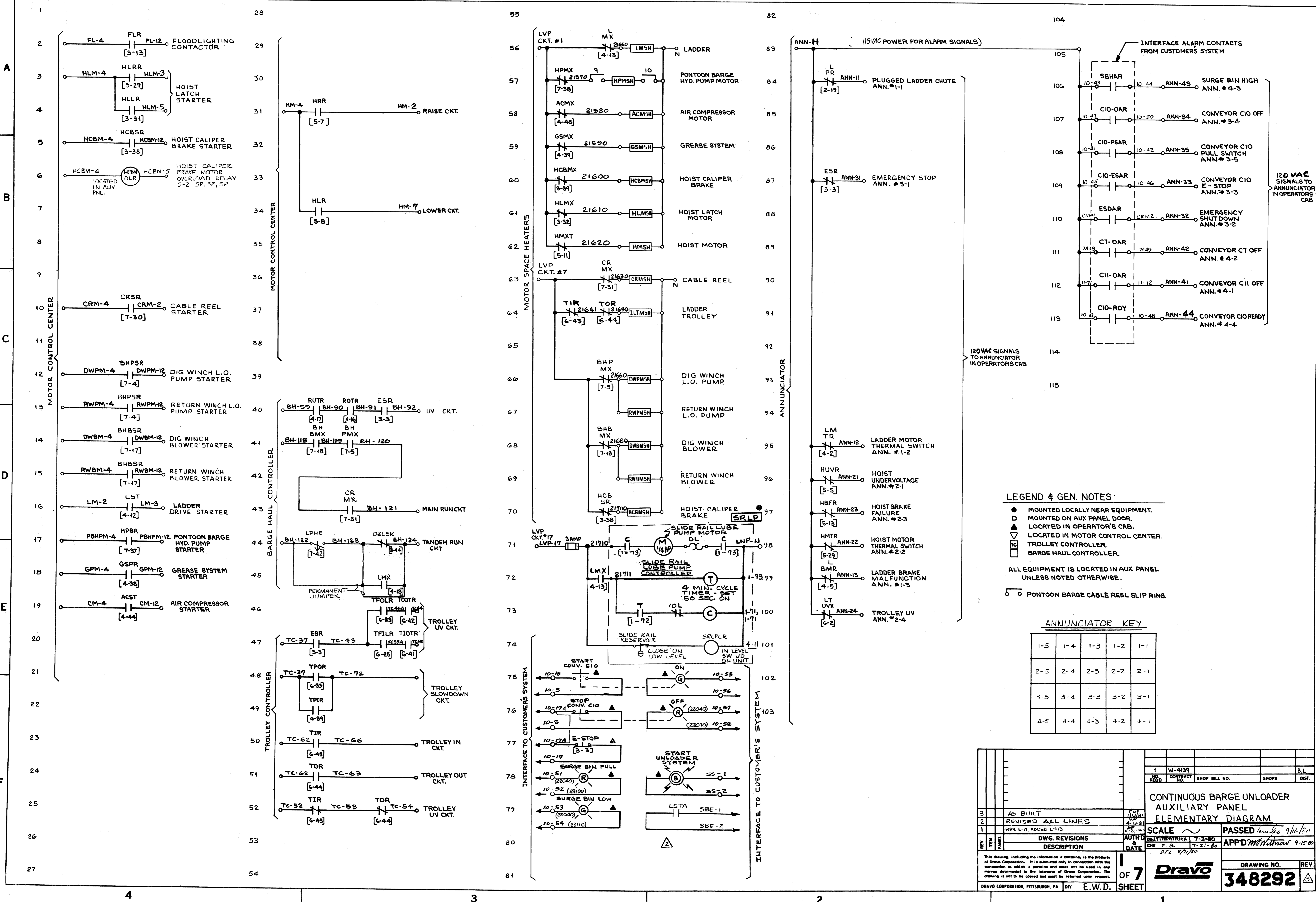


NO. W-4139		B.L.	
CONTRACT NO.	SHOP BILL NO.	SHOPS	DIST.
<b>CONTINUOUS BARGE UNLOADER AUXILIARY PANEL ELEMENTARY DIAGRAM</b>			
2	AS BUILT	7/15/80	PASSED <i>Tomoko 9/16/80</i>
1	REV. L-8, 17, 18, 22-26, 34, 36, 37	7-2-80	APP'D <i>mg</i>
REV. ITEM	DESCRIPTION	AUTH'D & DATE	DATE
1	DWG. REVISIONS	7-2-80	7-21-80
2	DESCRIPTION	7-21-80	
<small>This drawing, including the information it contains, is the property of Dravo Corporation. It is admitted only in connection with the transaction to which it pertains and must not be used in any manner detrimental to the interests of Dravo Corporation. The drawing is not to be copied and must be returned upon request.</small>			
<b>3 OF 7 SHEET</b>		<b>Dravo</b>	
DRAWING NO. <b>348294</b>		REV. <b>3</b>	
DRAVO CORPORATION, PITTSBURGH, PA. DIV. E. W. D.			



NO.	W-4199	SHOP BILL NO.	SHOPS	DIST.
CONTINUOUS BARGE UNLOADER AUXILIARY PANEL ELEMENTARY DIAGRAM				
SCALE	DATE		PASSED	
REV. L-45	10-22-80		7/16/80	
DWG. REVISIONS			AUTH'D	
DESCRIPTION			DATE	
DRAVO CORPORATION, PITTSBURGH, PA. DIV. E. W. D.			APP'D	
2 OF 7 SHEET			DRAWING NO. 348293	





**LEGEND & GEN. NOTES**

- MOUNTED LOCALLY NEAR EQUIPMENT.
  - ▲ MOUNTED ON AUX PANEL DOOR.
  - △ LOCATED IN OPERATOR'S CAB.
  - ▽ LOCATED IN MOTOR CONTROL CENTER.
  - TROLLEY CONTROLLER.
  - ▭ BARGE HAUL CONTROLLER.
- ALL EQUIPMENT IS LOCATED IN AUX PANEL UNLESS NOTED OTHERWISE.
- PONTON BARGE CABLE REEL SLIP RING.

**ANNUNCIATOR KEY**

1-5	1-4	1-3	1-2	1-1
2-5	2-4	2-3	2-2	2-1
3-5	3-4	3-3	3-2	3-1
4-5	4-4	4-3	4-2	4-1

REV.	ITEM	DESCRIPTION	DATE	BY	CHK.
1		AS BUILT	4-13-81		
2		REVISED ALL LINES	4-13-81		
3		REV. L-71, ADDED L-113	7-21-82		

**CONTINUOUS BARGE UNLOADER AUXILIARY PANEL ELEMENTARY DIAGRAM**

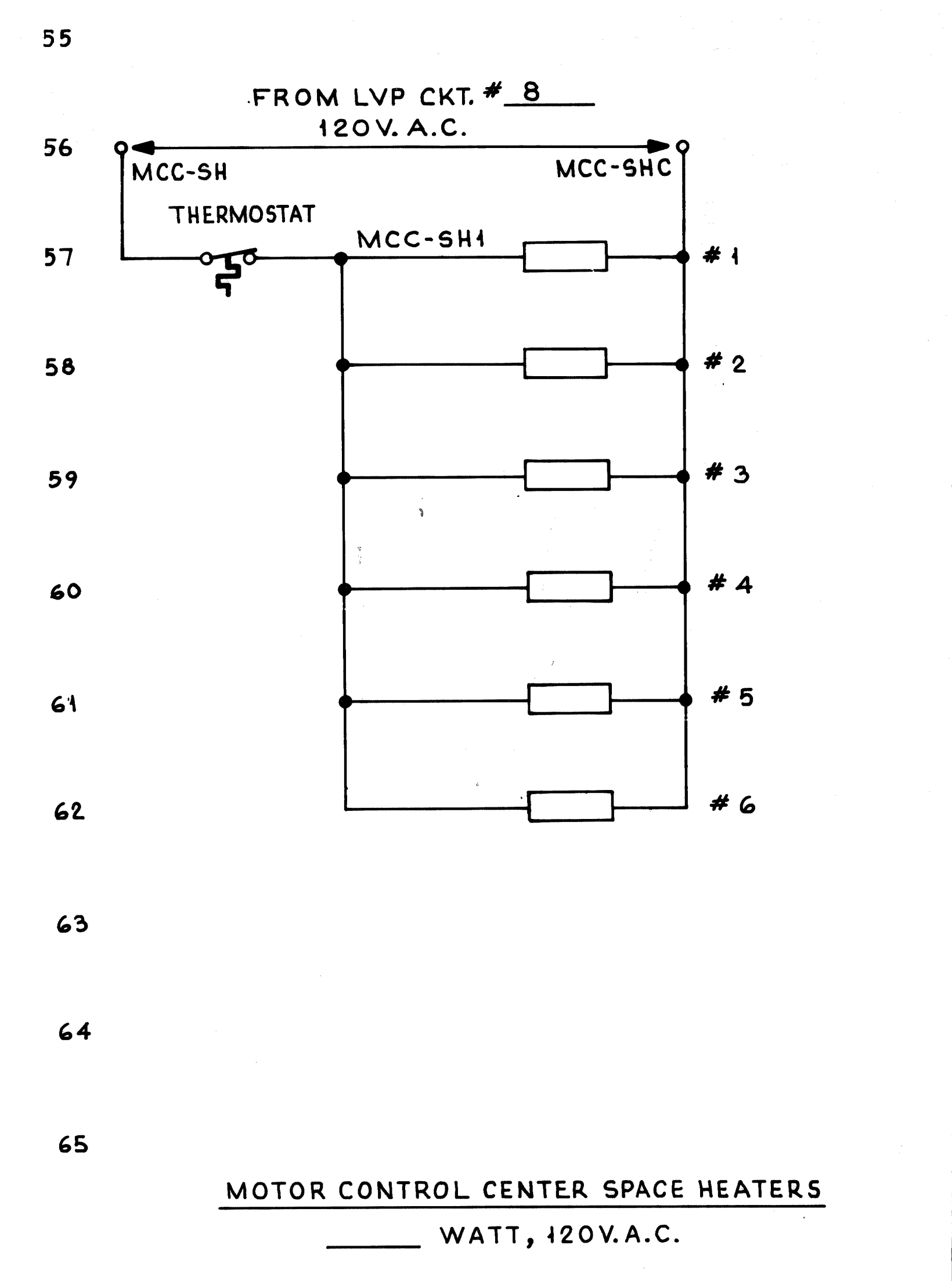
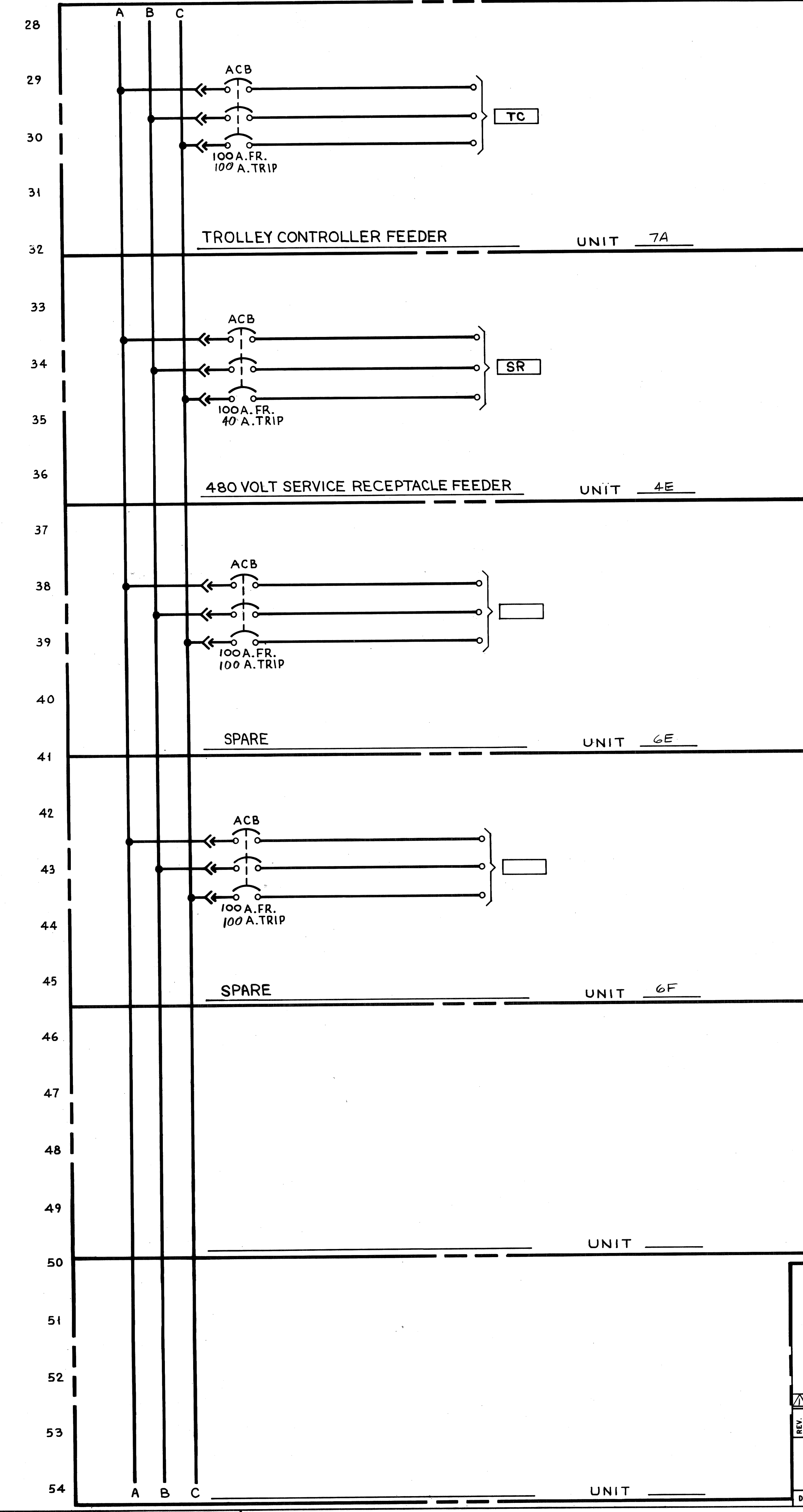
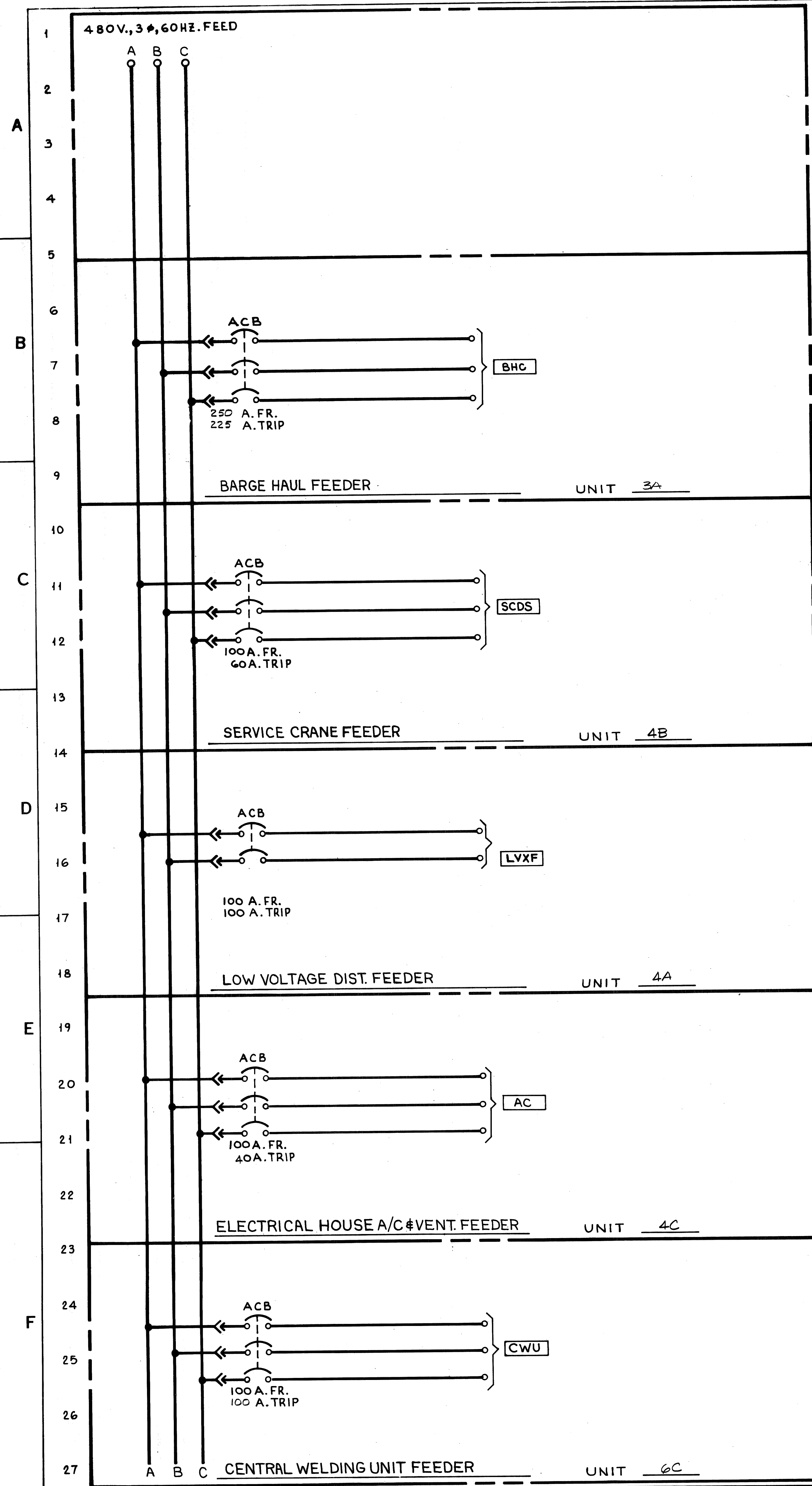
SCALE PASSED *10/16/81*

APP'D *M. J. ...* 9-15-80

DRAWING NO. **348292**

OF 7 SHEETS

DRAVO CORPORATION, PITTSBURGH, PA. DIV. E.W.D.



**GENERAL NOTES**

**LEGEND:**

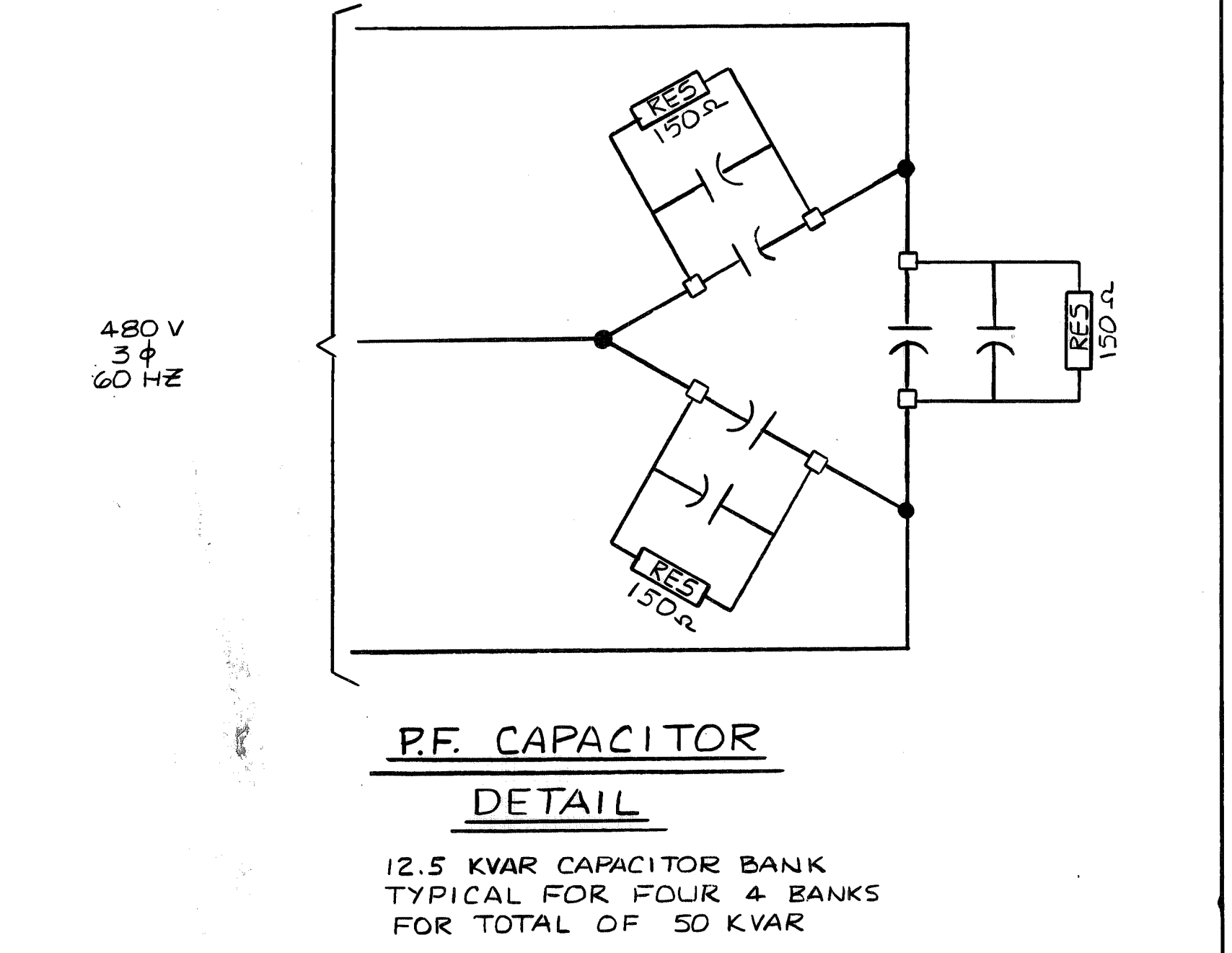
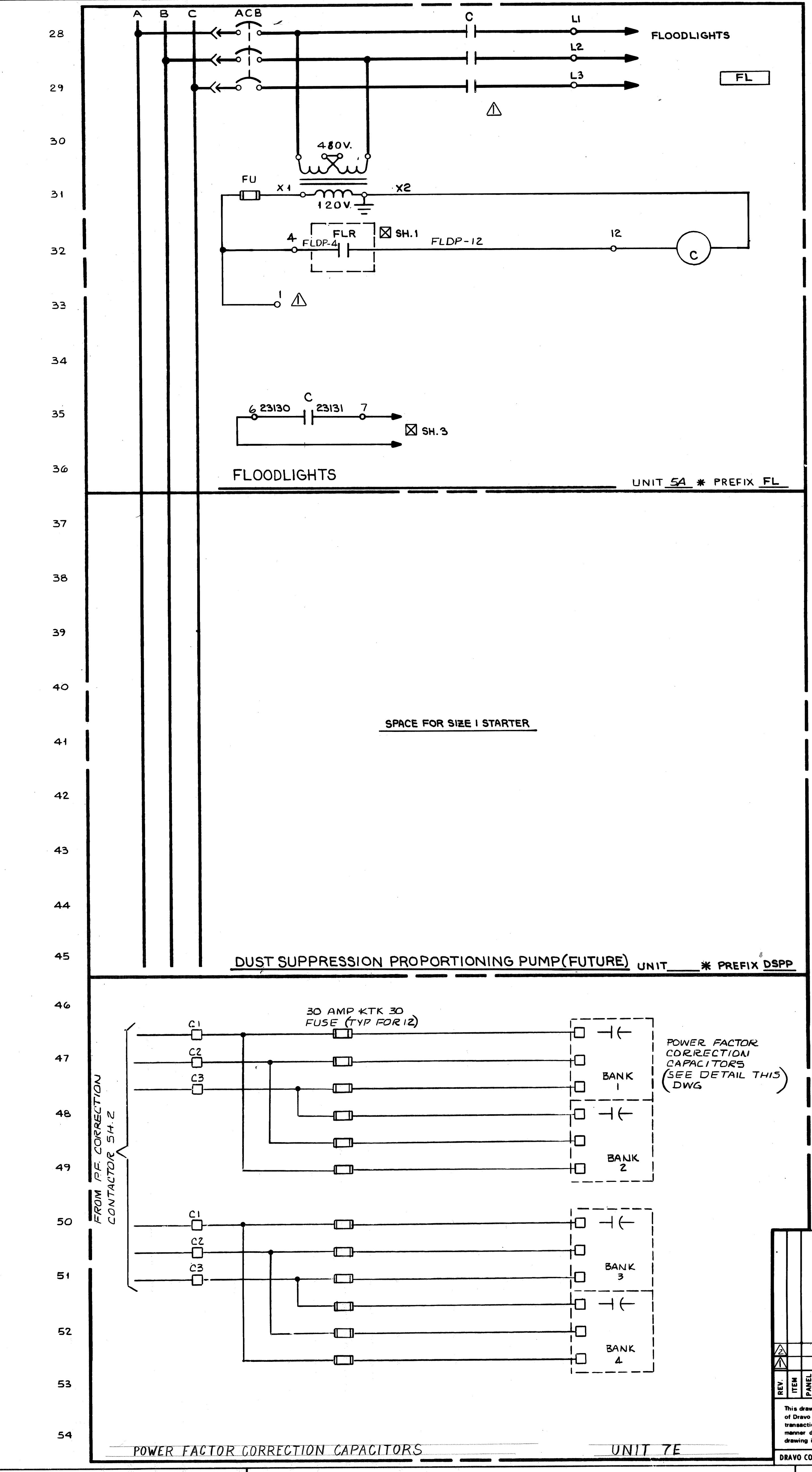
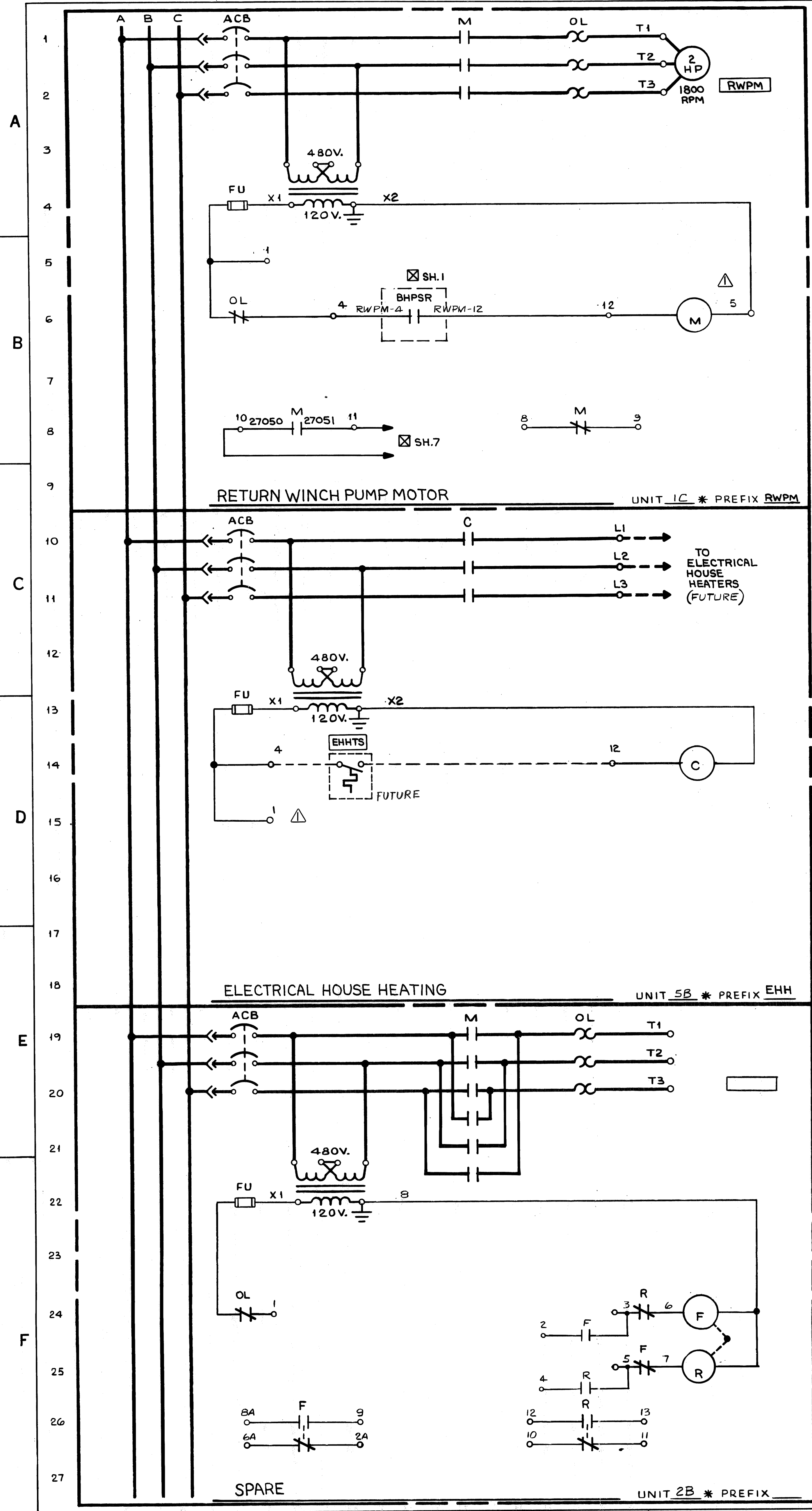
- XXX - INDICATES DRavo EQUIPMENT DESIGNATIONS.
- SH - INDICATES SHEET NUMBER OF PANEL ELEMENTARY DIAGRAM.
- ☒ - LOCATED IN AUXILIARY CONTROL PANEL.
- ▲ - LOCATED IN OPERATOR'S CAB.

**NOTES:**

1. ALL CABLE TO HAVE STRANDED COPPER CONDUCTORS.
2. NEMA STARTER SIZE 1 THRU 4 TO PROVIDE SCREW TYPE TERMINAL BLOCKS FOR MOTOR LEADS.

NO. RECD	CONTRACT NO.	SHOP BILL NO.	SHOPS	B.L.
	W-4134			
ALABAMA STATE DOCKS CONTINUOUS BARGE UNLOADER MOTOR CONTROL CENTER ELEMENTARY WIRING DIAGRAM				
REV.	ITER.	DATE	DESCRIPTION	AUTHOR & DATE
			AS BUILT FWP 7/8/81	DR. J. FITZPATRICK 6-6-80
			DWG. REVISIONS	CHK F. B. 7-21-80
				APP'D [Signature] 9-15-80
This drawing, including the information it contains, is the property of Dravo Corporation. It is submitted only in connection with the transaction to which it pertains and must not be used in any manner detrimental to the interests of Dravo Corporation. The drawing is not to be copied and must be returned upon request.			5 OF 5 SHEET	SCALE ~ PASSED [Signature] 9/15/80
DRavo CORPORATION, PITTSBURGH, PA. DIV. E. W. D.			DRAWING NO.	REV.
			348291	▲





REV	ITEM	DESCRIPTION	DATE	APP'D	DATE
1	W-4131	AS BUILT	FWP 7/8/81		
2		AS NOTED BY	RSC 2-24-80		
3		DWG REVISIONS			
4		DESCRIPTION			

NO.	CONTRACT NO.	SHOP BILL NO.	SHOPS	B.L.
1	W-4131			

ALABAMA STATE DOCKS  
 CONTINUOUS BARGE UNLOADER  
 MOTOR CONTROL CENTER  
 ELEMENTARY WIRING DIAGRAM

SCALE ~ PASSED *harr* 9/15/80  
 AUTH'D & DATE  
 DR. J. PATRICK 6-6-80  
 CHK. E. B. 7-21-80  
 D.E.L. 8/21/80

DRAYO CORPORATION, PITTSBURGH, PA. DIV. E. W. D.

DRAWING NO. **348290** REV. **1**

4 OF 5 SHEETS

A

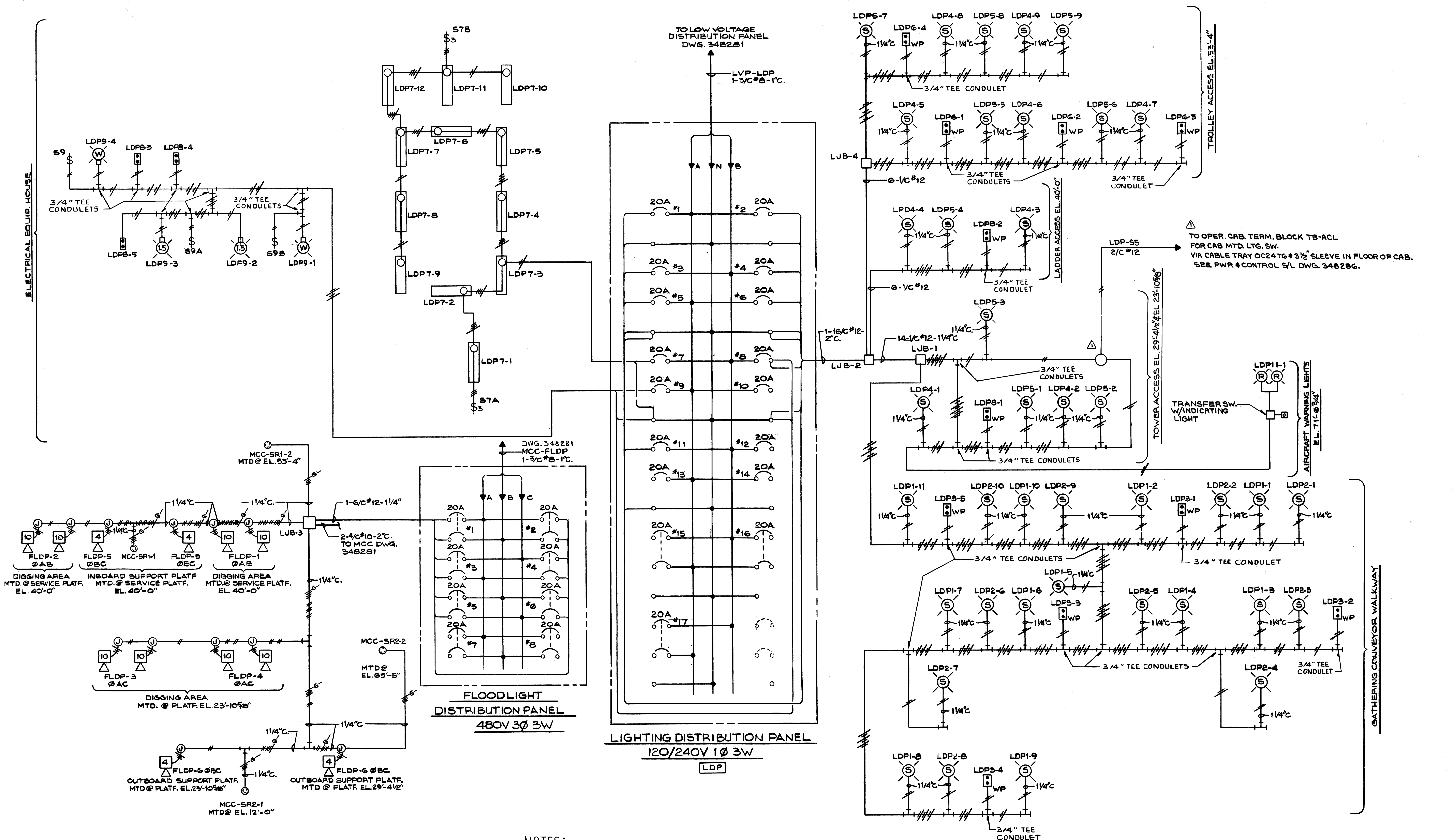
B

C

D

E

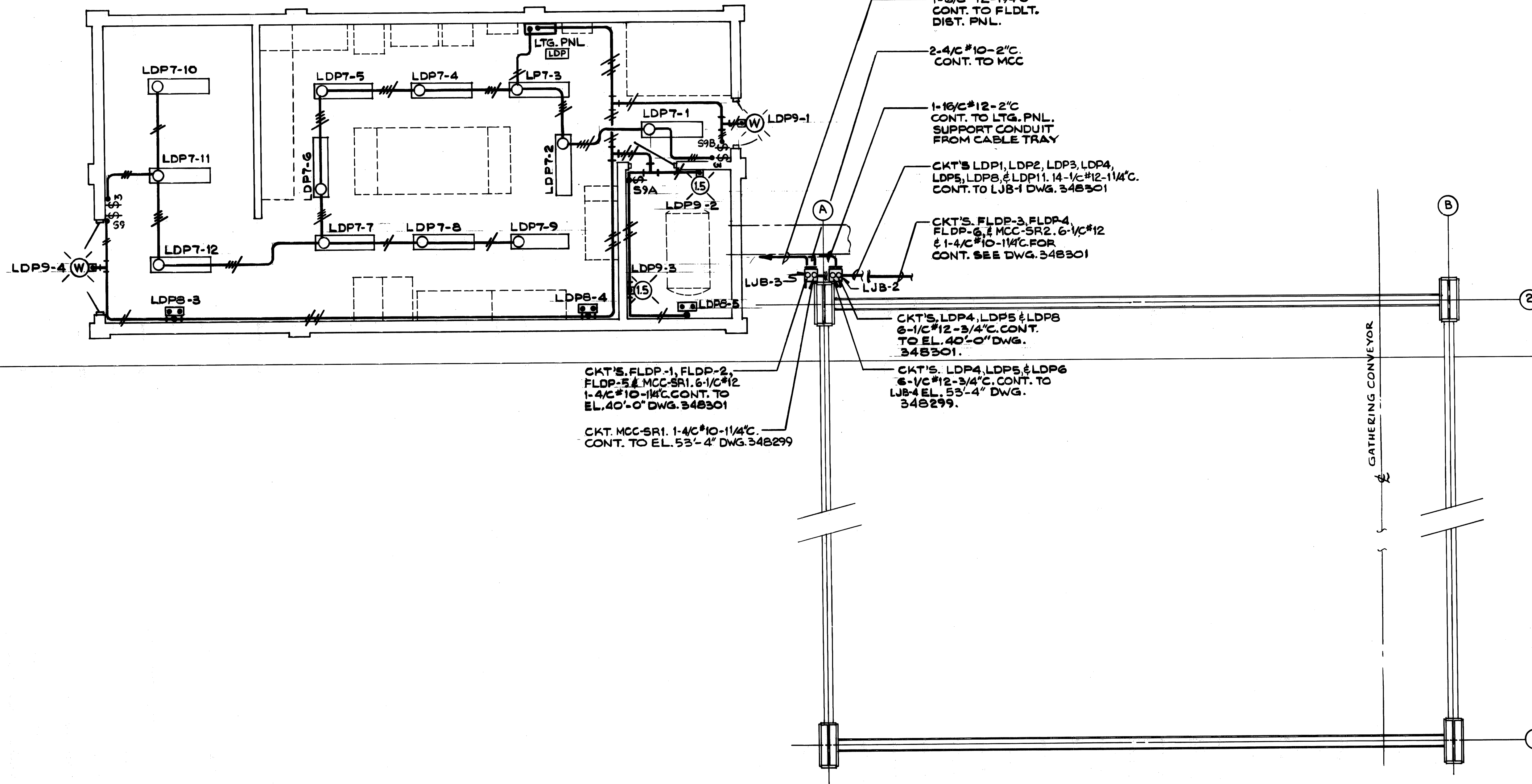
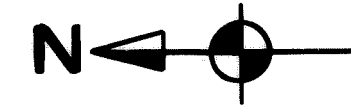
F



- NOTES:**
1. ALL CABLE TO BE SINGLE CONDUCTOR NO. 12 A.W.G. UNLESS OTHERWISE NOTED.
  2. ALL CONDUIT TO BE 3/4" UNLESS OTHERWISE NOTED.
  3. # STROKES INDICATE NUMBER OF CONDUCTORS IN THAT SECTION OF CONDUIT.
  4. FOR IDENTIFICATION OF SYMBOLS SEE LIGHTING WIRING SCHEDULE DWG. 348304
  5. LETTERS/NUMBERS IN   ARE DRAVO EQUIPMENT DESIGNATIONS AS NOTED ON SHOP BILLS.
  6. TEE CONDULETS TO BE 1/4" UNLESS OTHERWISE NOTED.

REV. CT. AT TOWER ACCESS		JWF 10-30-80	SCALE	PASSED <i>Janice 9/17/80</i>
REV. ITEM	DESCRIPTION	DATE	AUTH & DATE	APP'D <i>9-22-80</i>
DWG. REVISIONS			DR. G. SNYDER 8-18-80	
			CHK. F. BROOKS 9-9-80	
DRAWING NO. 348303		SHEET		REV. <span style="border: 1px solid black; padding: 0 2px;"> </span>



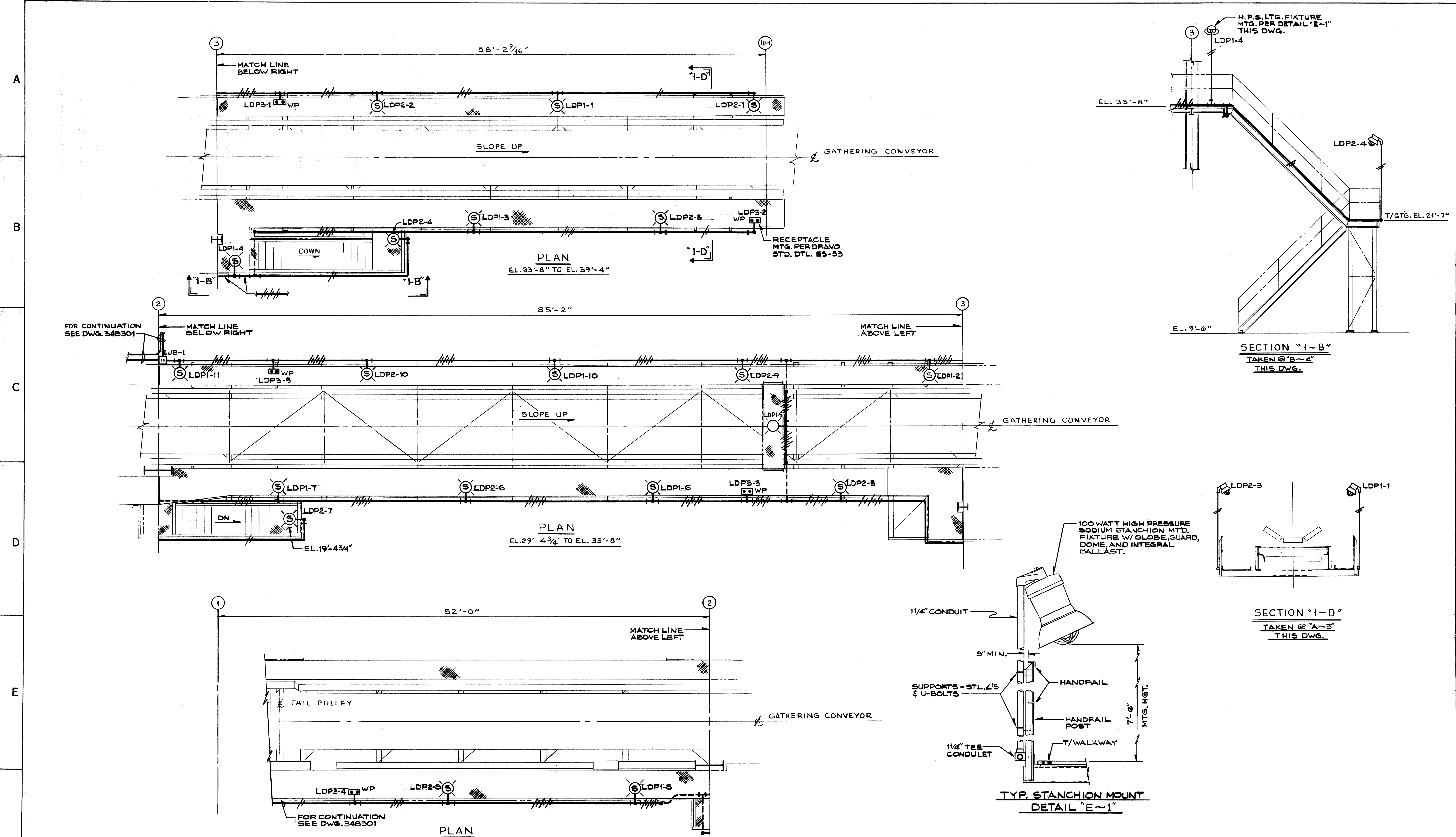


NO. REQD.	CONTRACT NO.	SHOP BILL NO.	SHOPS	DIST.
1	W-4139			B.L.
<b>ALABAMA STATE DOCKS</b>				
<b>CONTINUOUS BARGE UNLOADER</b>				
<b>ELECT. EQUIP. HSE. LTG. PLAN</b>				
SCALE 1/4" = 1'-0"		PASSED <i>Trullis</i> 9/17/80		
DRG. SNYDER 6-15-80		APP'D <i>F. Brooks</i> 9-22-80		
CHK F. BROOKS 9-8-80				
REV.	ITEM	PANEL	DWG. REVISIONS	AUTH'D & DATE
			DESCRIPTION	
<small>This drawing, including the information it contains, is the property of Dravo Corporation. It is submitted only in connection with the transaction to which it pertains and must not be used in any manner detrimental to the interests of Dravo Corporation. The drawing is not to be copied and must be returned upon request.</small>				
<b>Dravo</b>			DRAWING NO.	REV
DRAVO CORPORATION, PITTSBURGH, PA. DIV EWD			<b>348302</b>	
SHEET			1	

55  
26  
1







NO. W-4139		BL 55	
REV'D	CONTRACT NO.	SHOP BILL NO.	SHOPS
<b>ALABAMA STATE DOCKS</b>			
<b>CONTINUOUS BARGE UNLOADER</b>			
<b>LIGHTING PLAN &amp; SECTIONS</b>			
SCALE 1/4" = 1'-0"		PASSED <i>Tanaka 9/17/80</i>	
AUTH'D & DATE		APP'D <i>9/22/80</i>	
DR. G. SNYDER 8-12-80		CHK. F. BROOKS 9-8-80	
DWG. REVISIONS DESCRIPTION		DRAWING NO. <b>348300</b>	
This drawing, including the information it contains, is the property of Dravo Corporation. It is submitted only in connection with the transaction to which it pertains and must not be used in any manner detrimental to the interests of Dravo Corporation. The drawing is not to be copied and must be returned upon request.		DRAVO CORPORATION, PITTSBURGH, PA. DIV. E.W.D. SHEET	

F

E

D

C

B

A

4

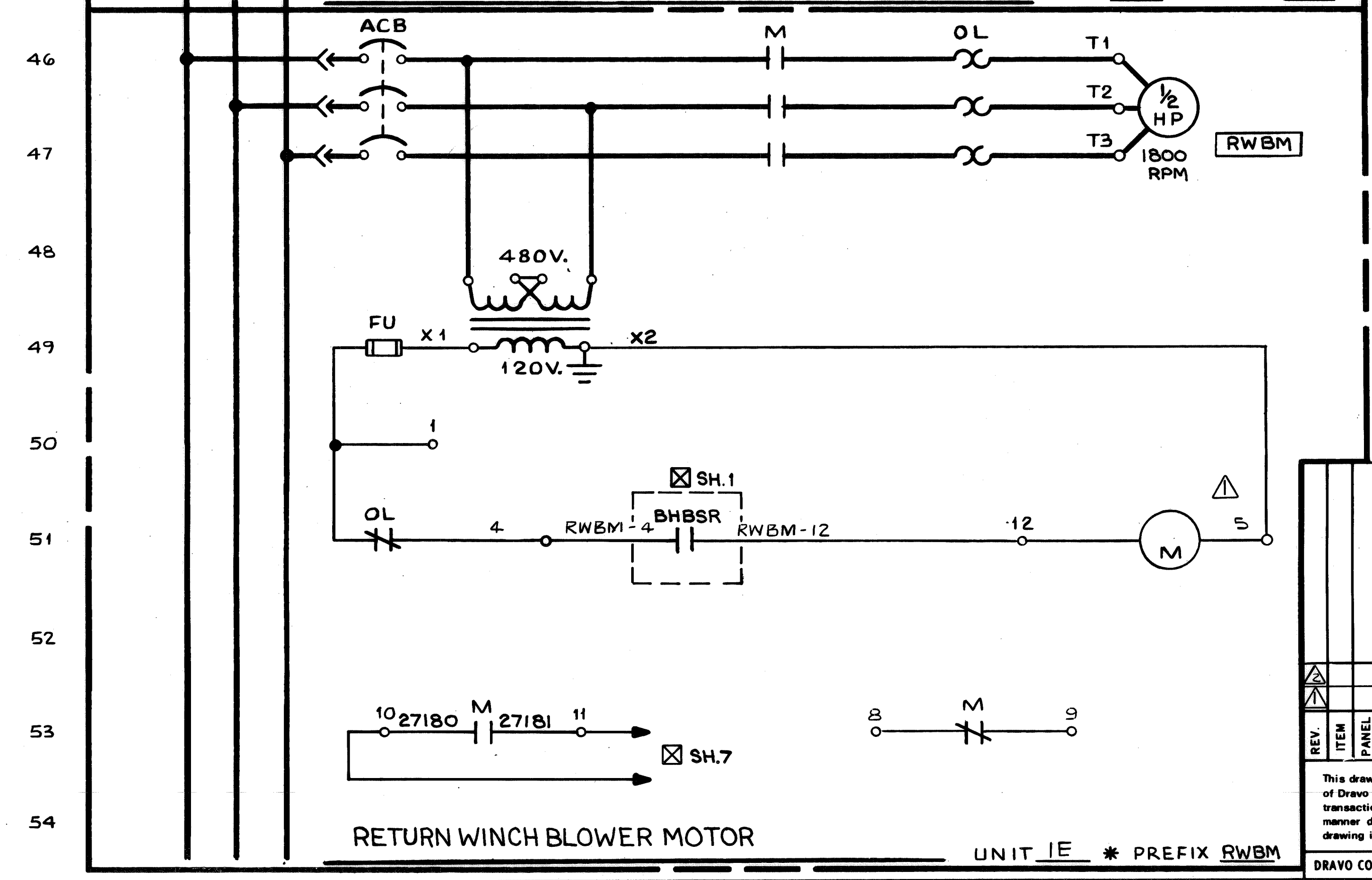
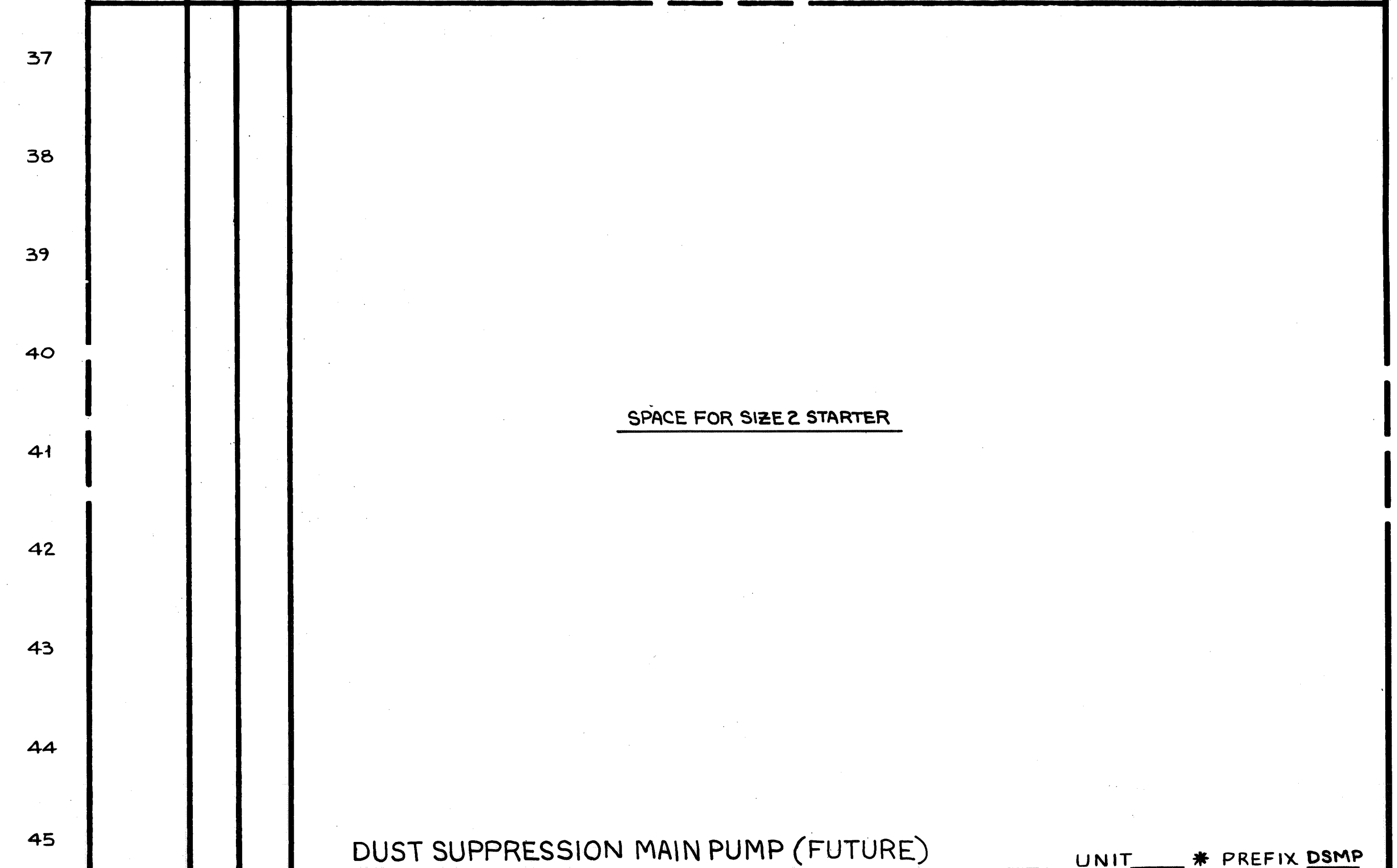
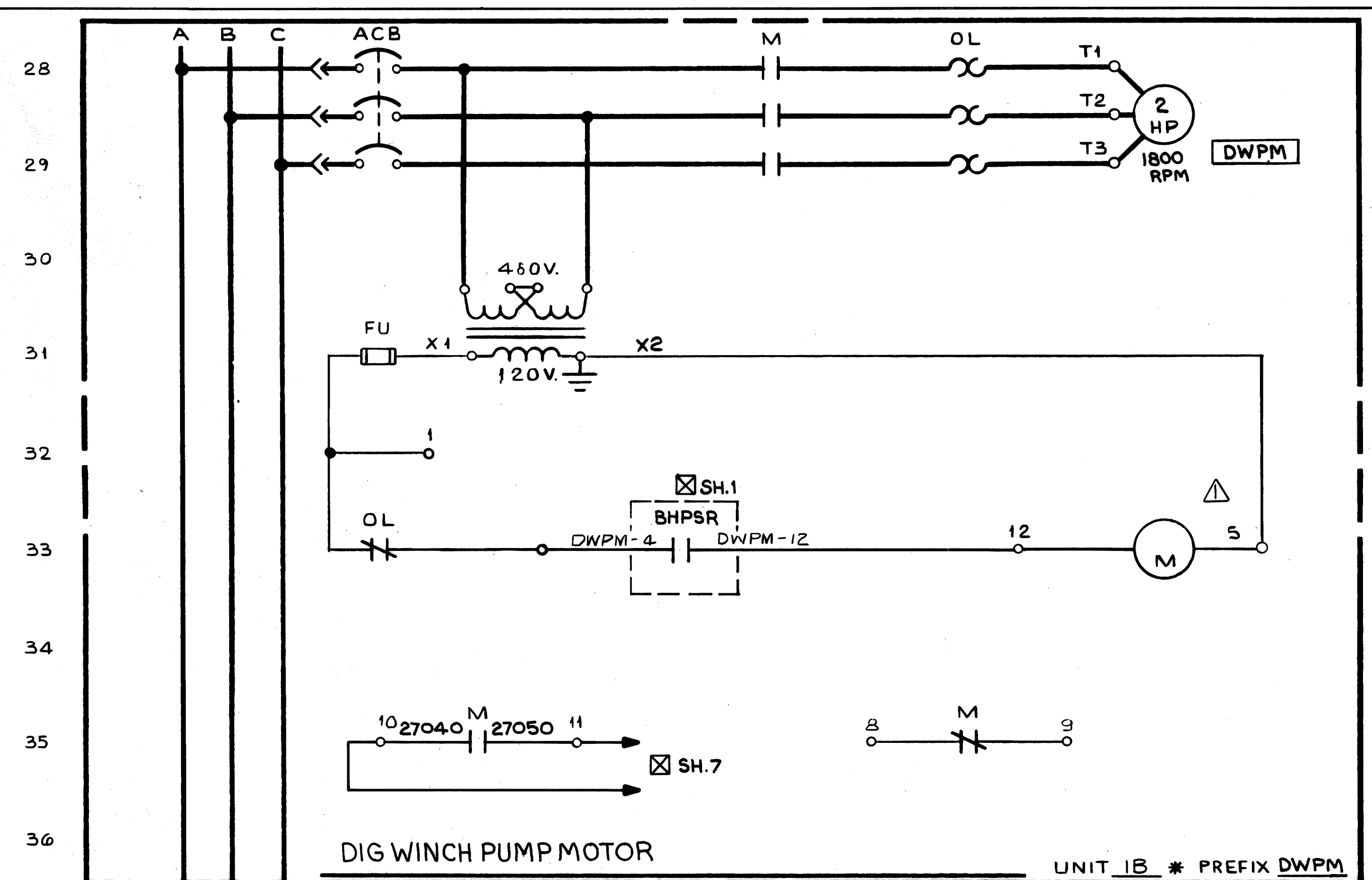
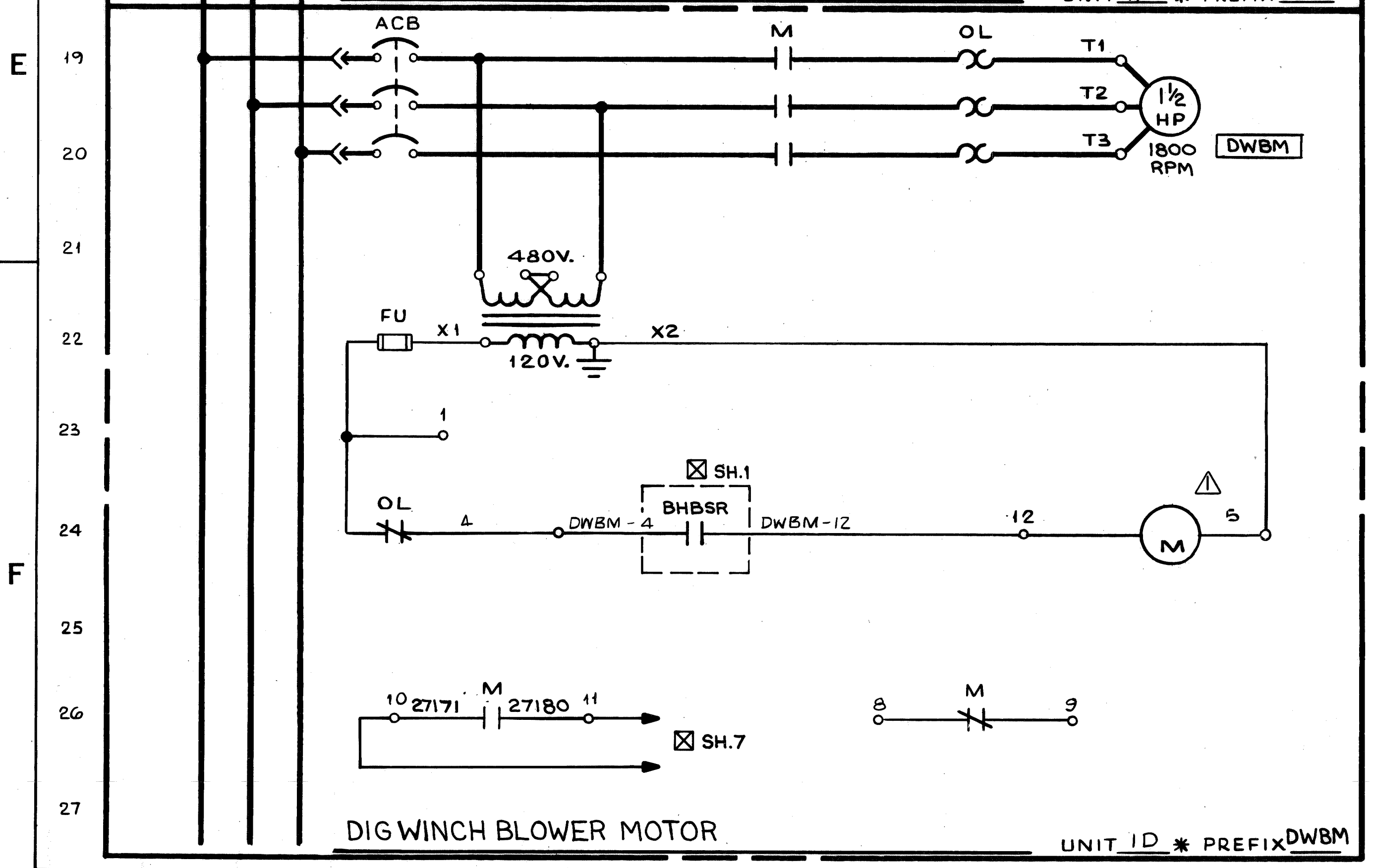
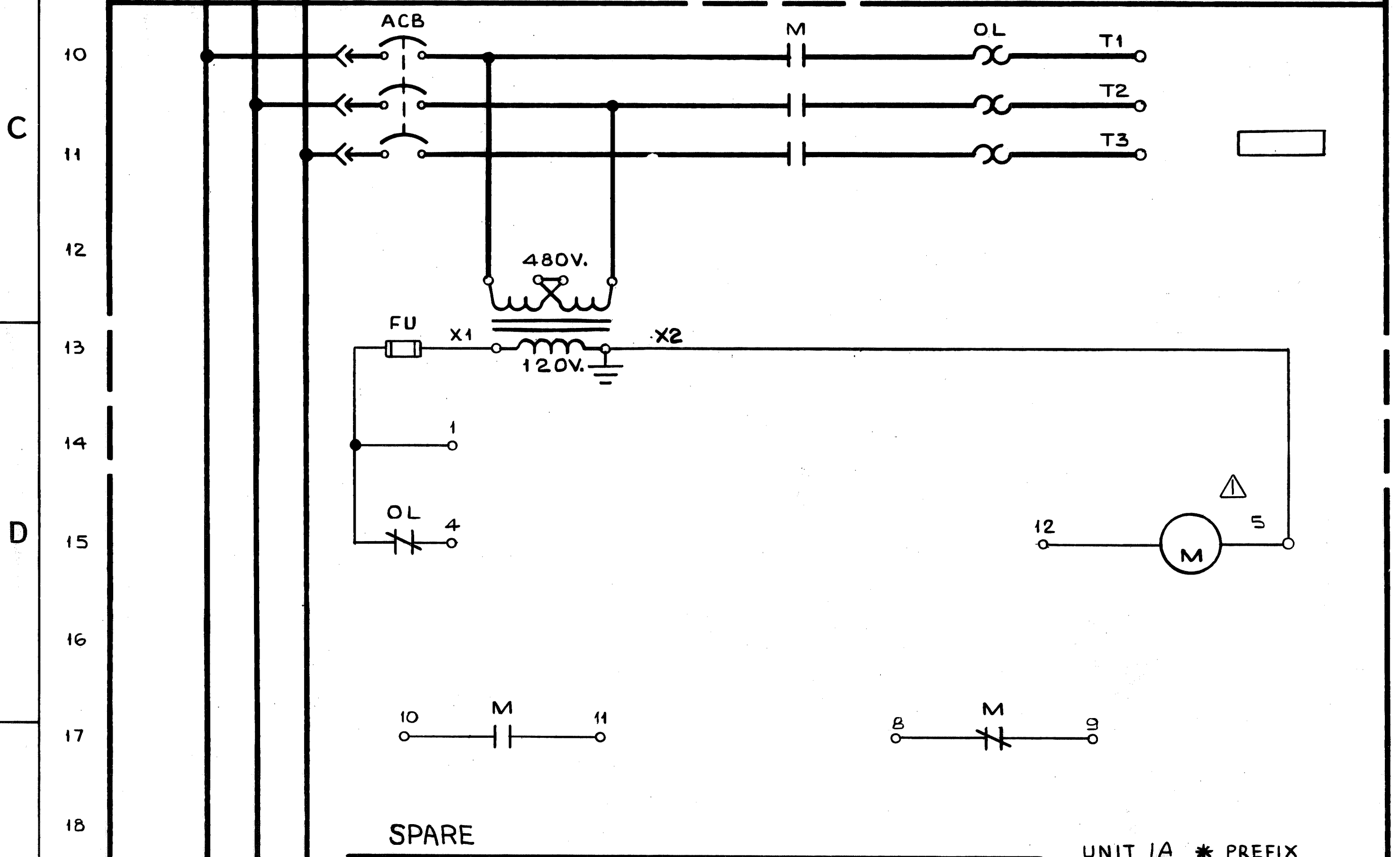
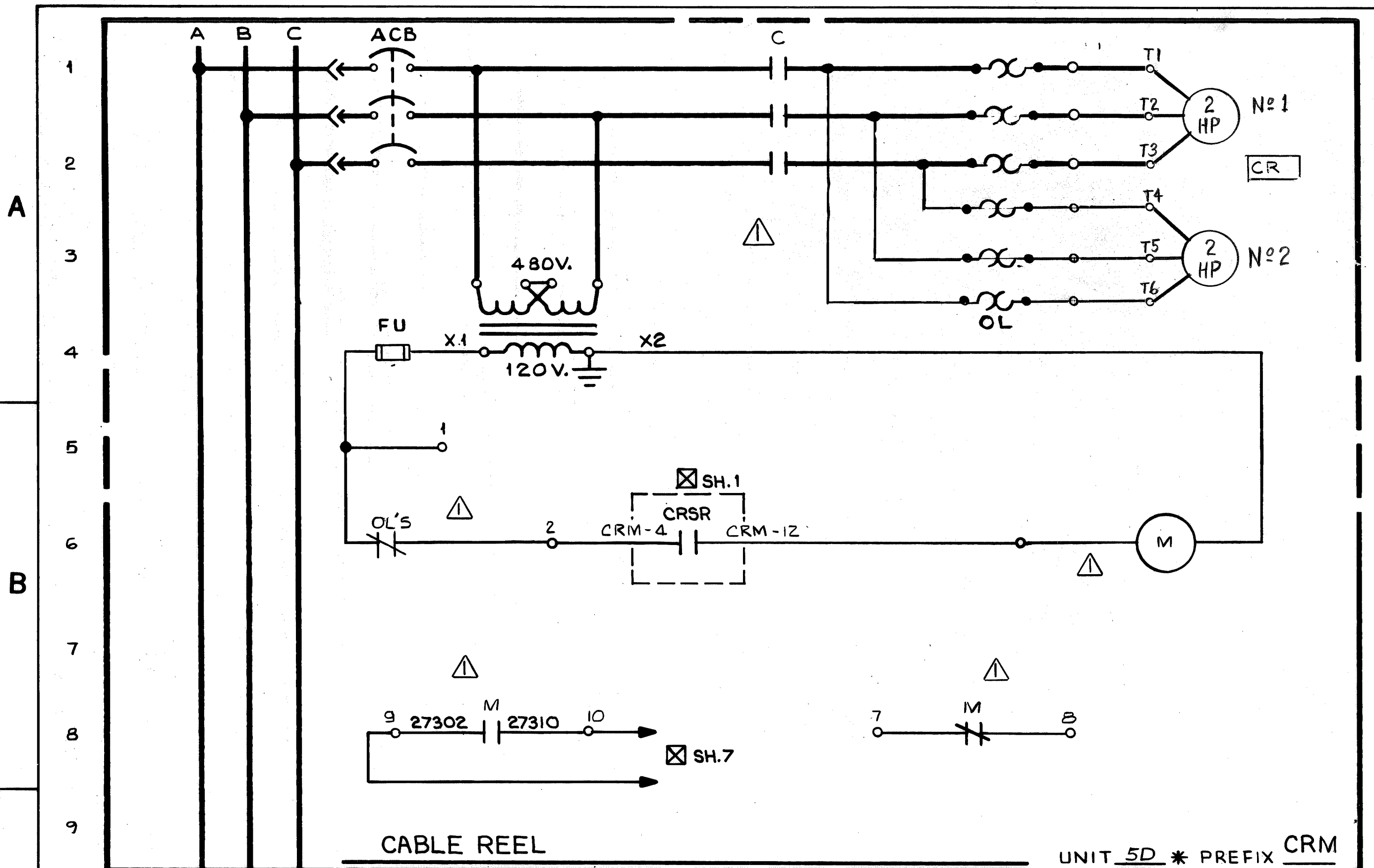
3

2

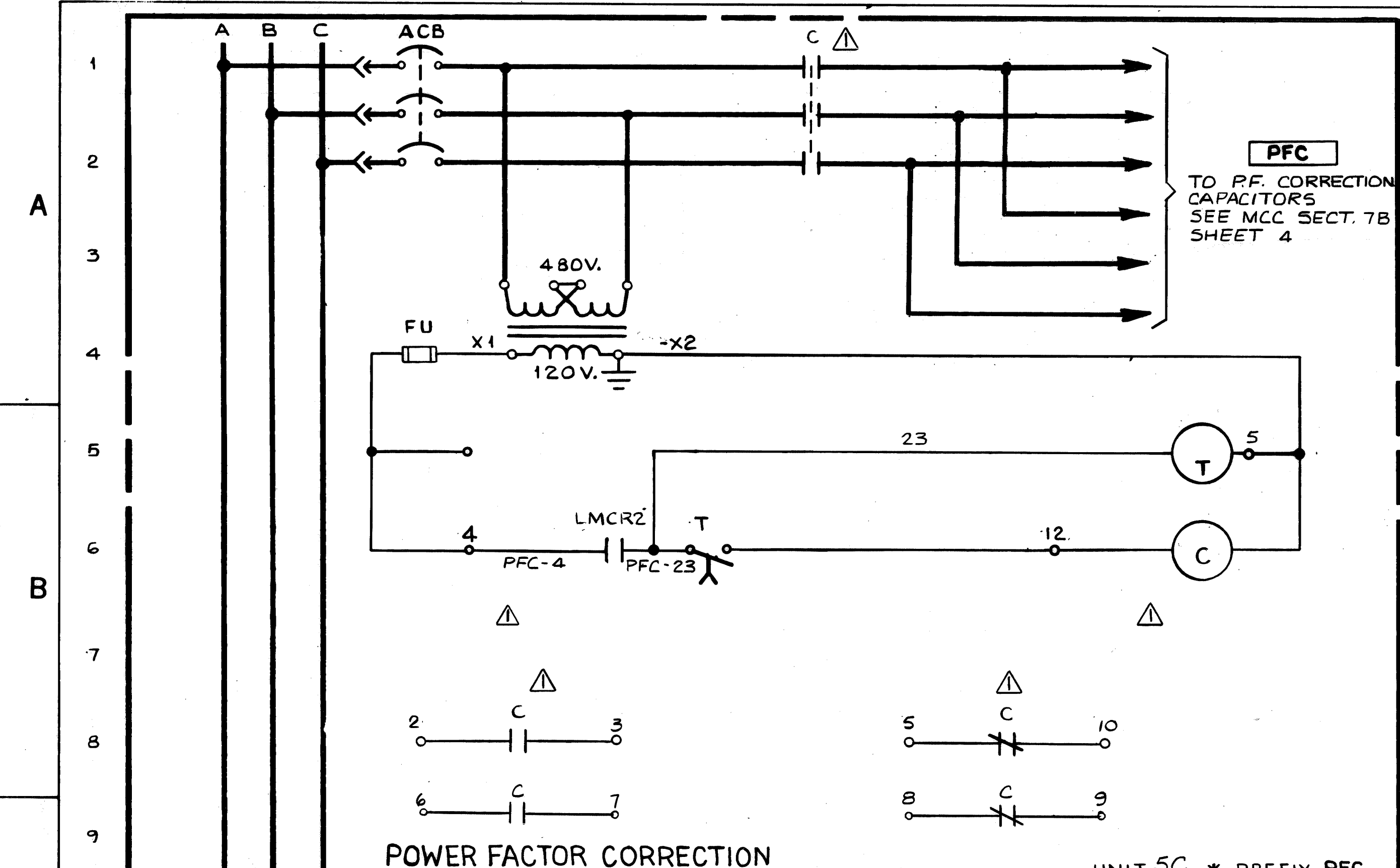
1



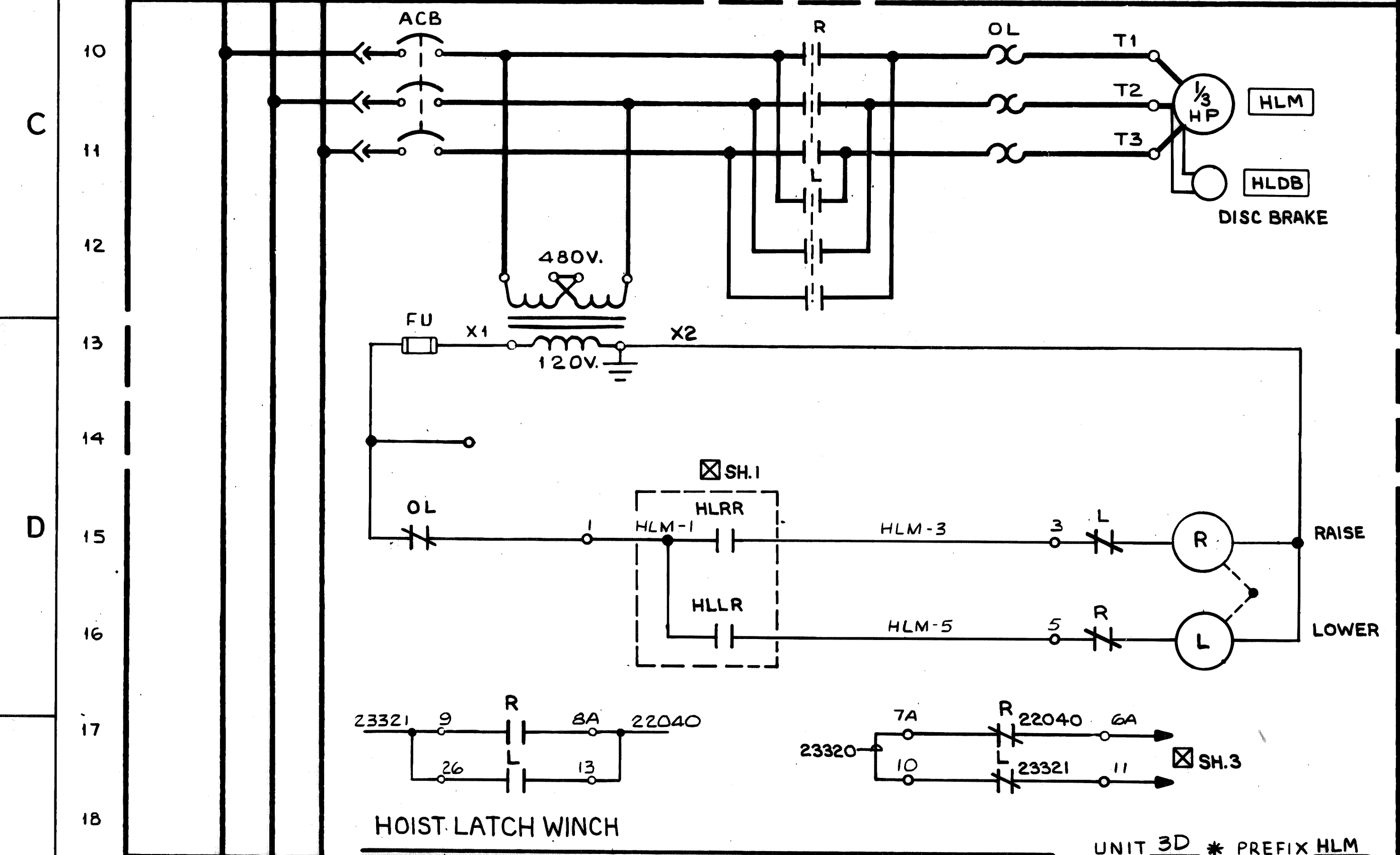




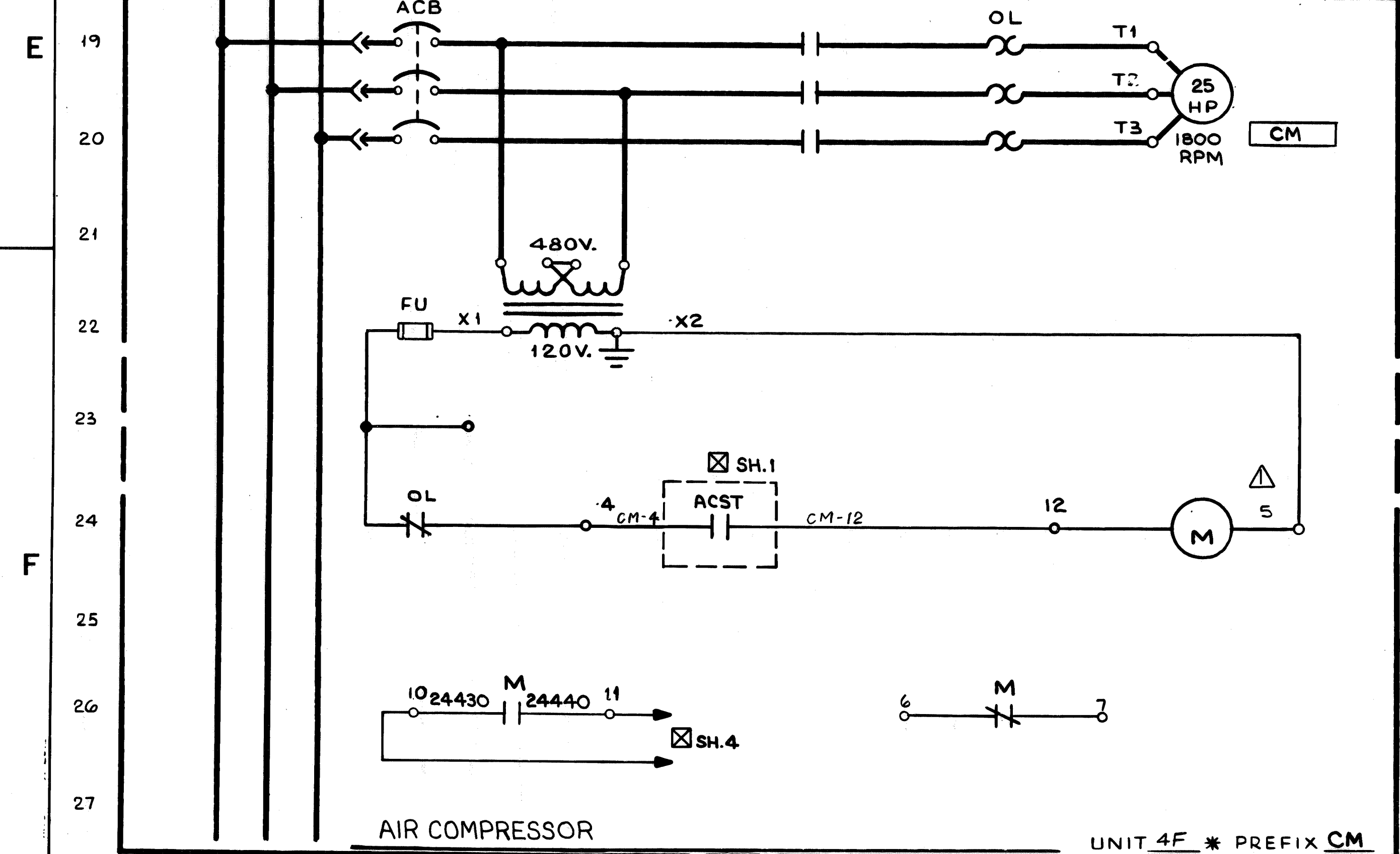
REV	DATE	DESCRIPTION	AUTH'D & DATE	SCALE	PASSED
1	W-4139	AS BUILT FWP 7/8/81	DR. J. FITZPATRICK 6-5-80	SCALE	PASSED
2		AS NOTED BY RSC 9-24-80	CHK F.B. 7-21-80	DEL 9/21/80	APP'D
DWG. REVISIONS			DATE	SCALE	PASSED
DESCRIPTION			DATE	SCALE	PASSED
This drawing, including the information it contains, is the property of Dravo Corporation. It is submitted only in connection with the transaction to which it pertains and must not be used in any manner detrimental to the interests of Dravo Corporation. The drawing is not to be copied and must be returned upon request.			3 OF 5 SHEETS	Dravo	DRAWING NO. 348289
DRAVO CORPORATION, PITTSBURGH, PA. DIV. E. W. D.					



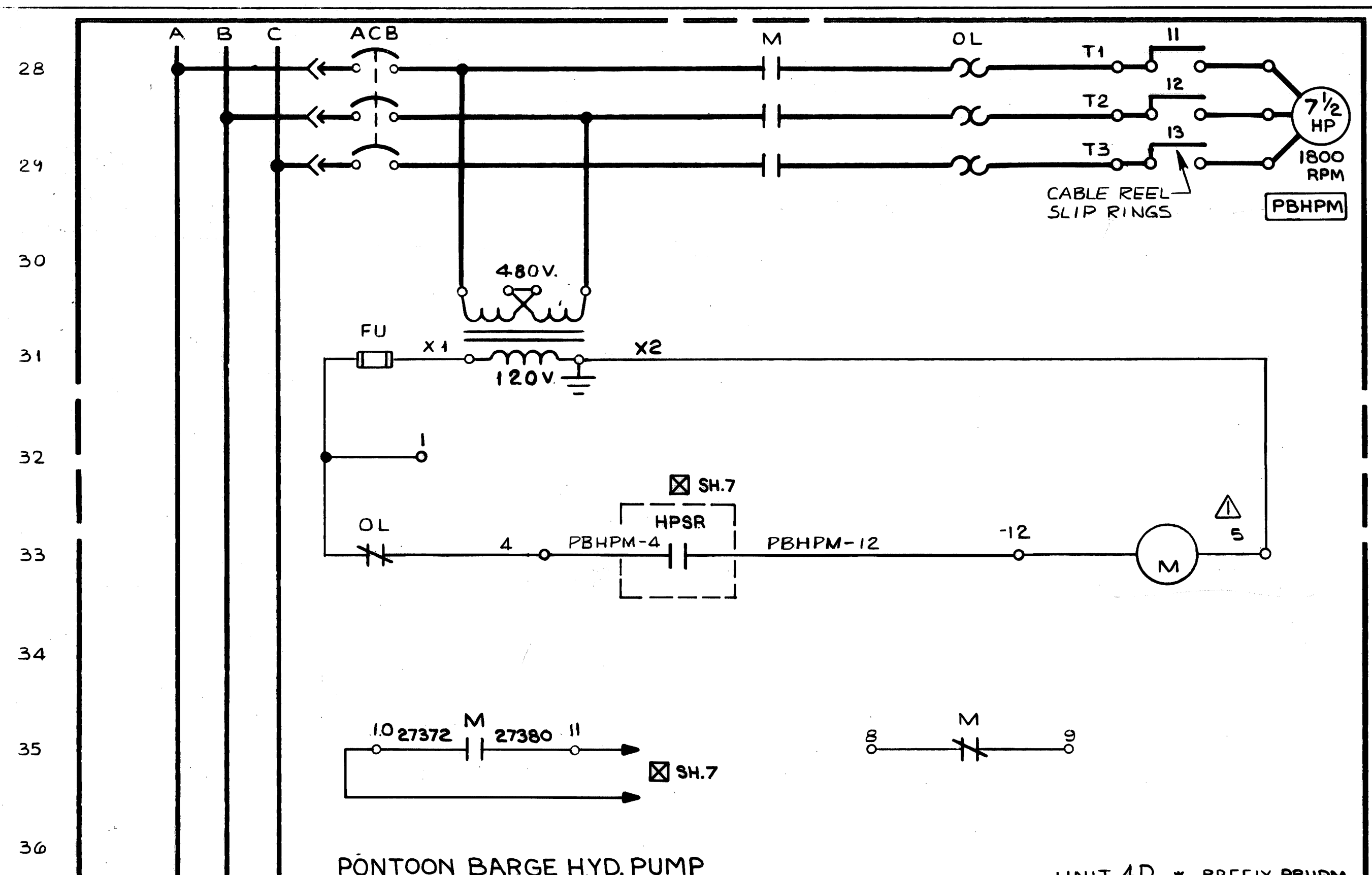
POWER FACTOR CORRECTION UNIT 5C \* PREFIX PFC



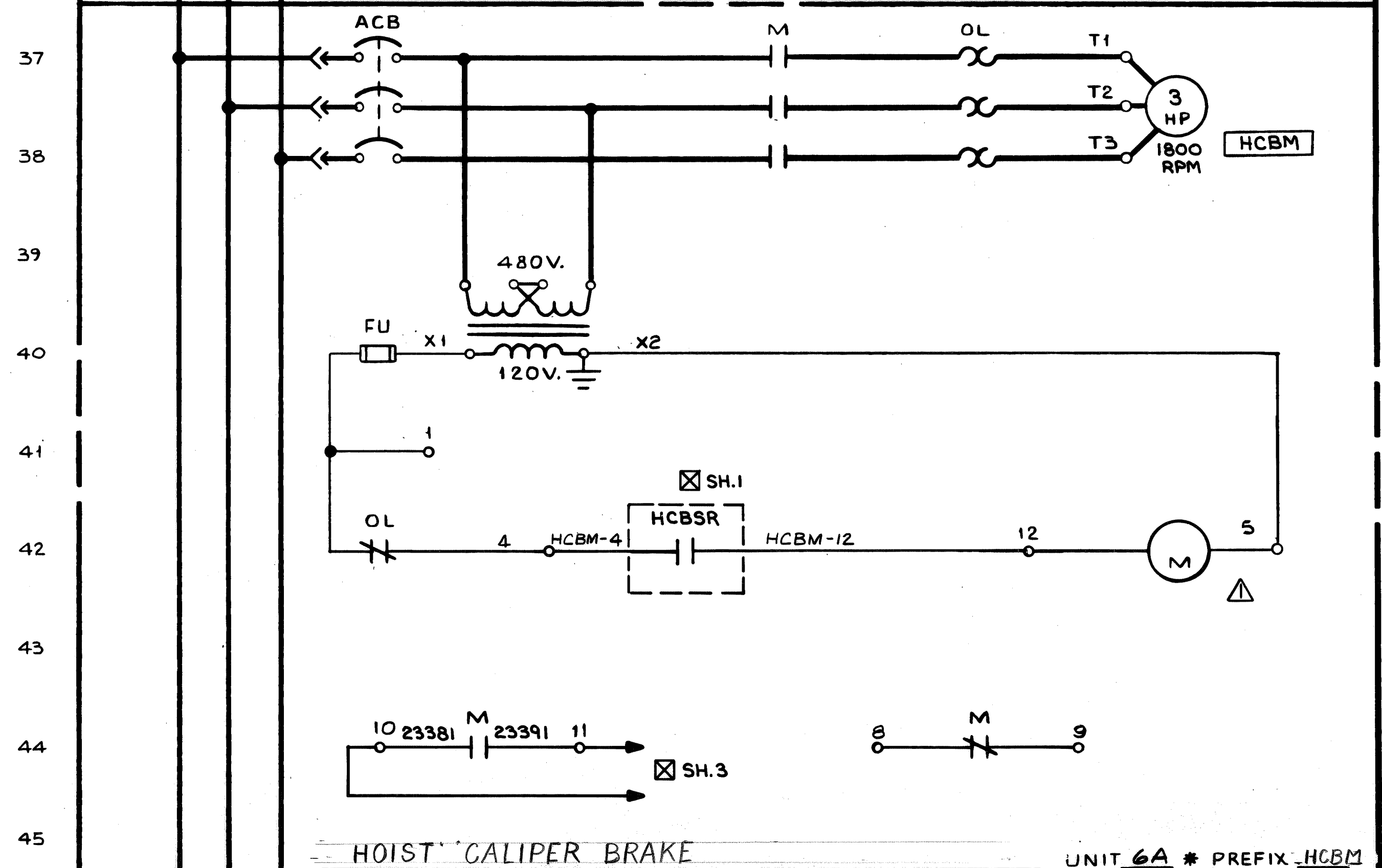
HOIST LATCH WINCH UNIT 3D \* PREFIX HLM



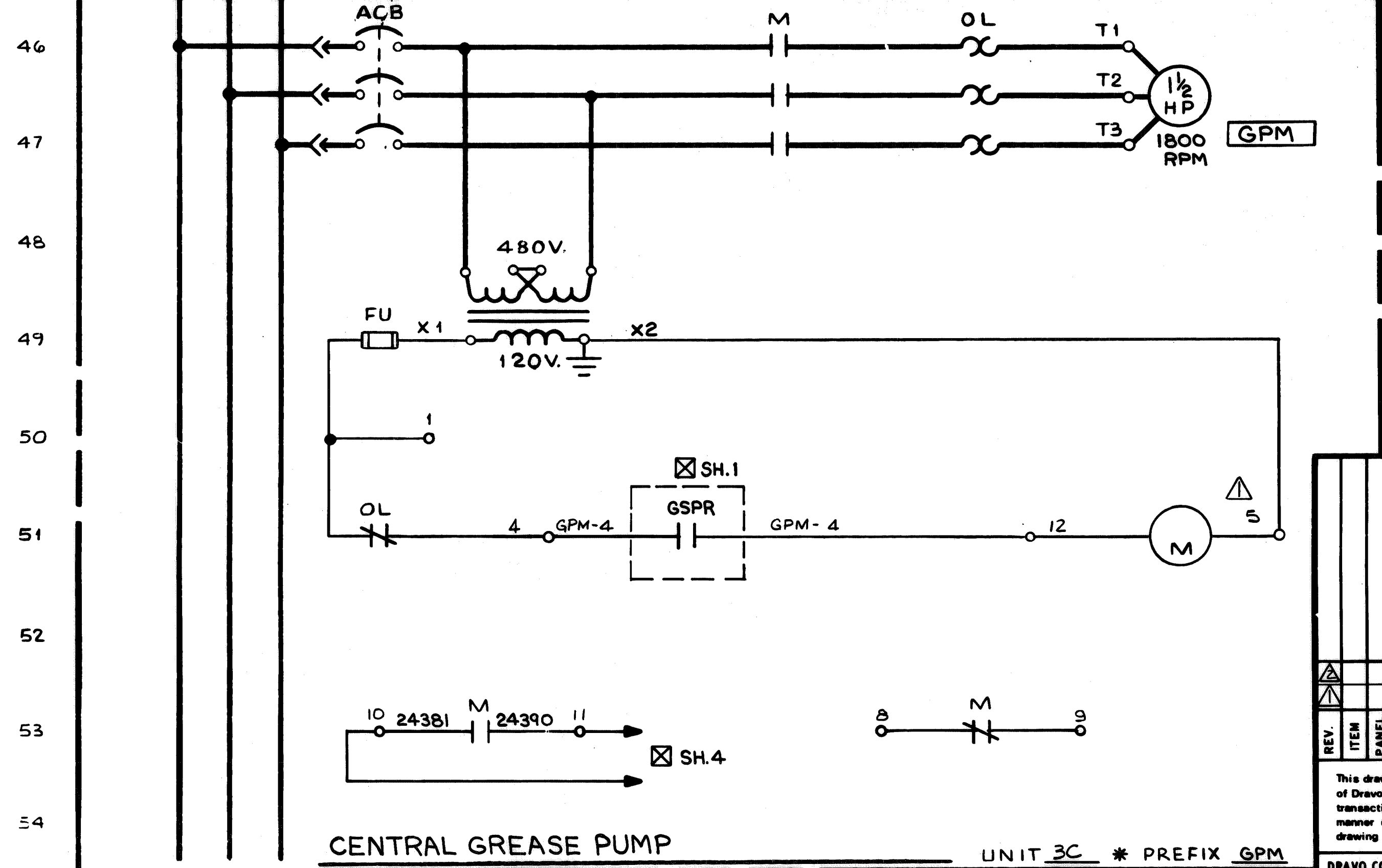
AIR COMPRESSOR UNIT 4F \* PREFIX CM



PONTOON BARGE HYD. PUMP UNIT 4D \* PREFIX PBHPM



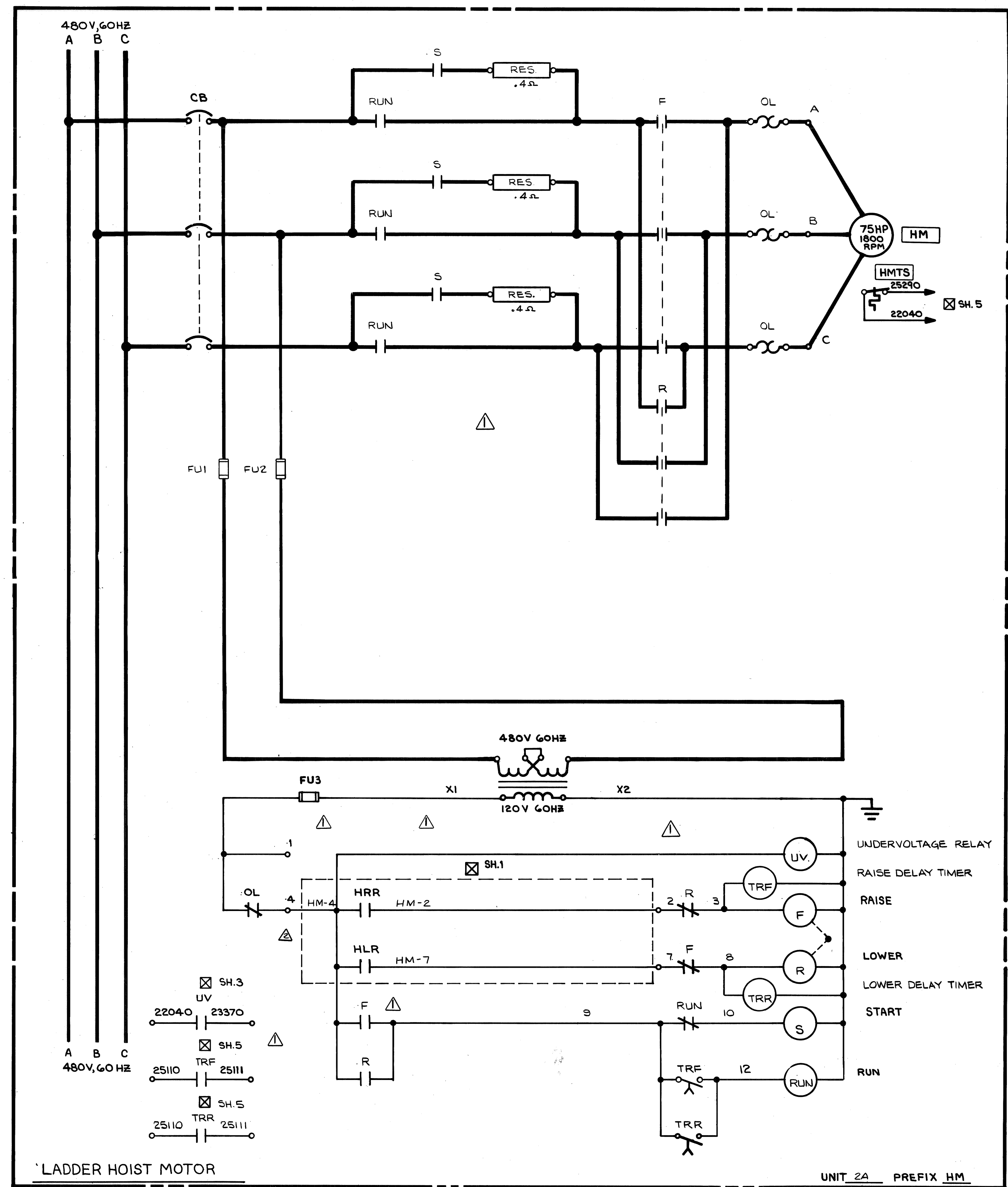
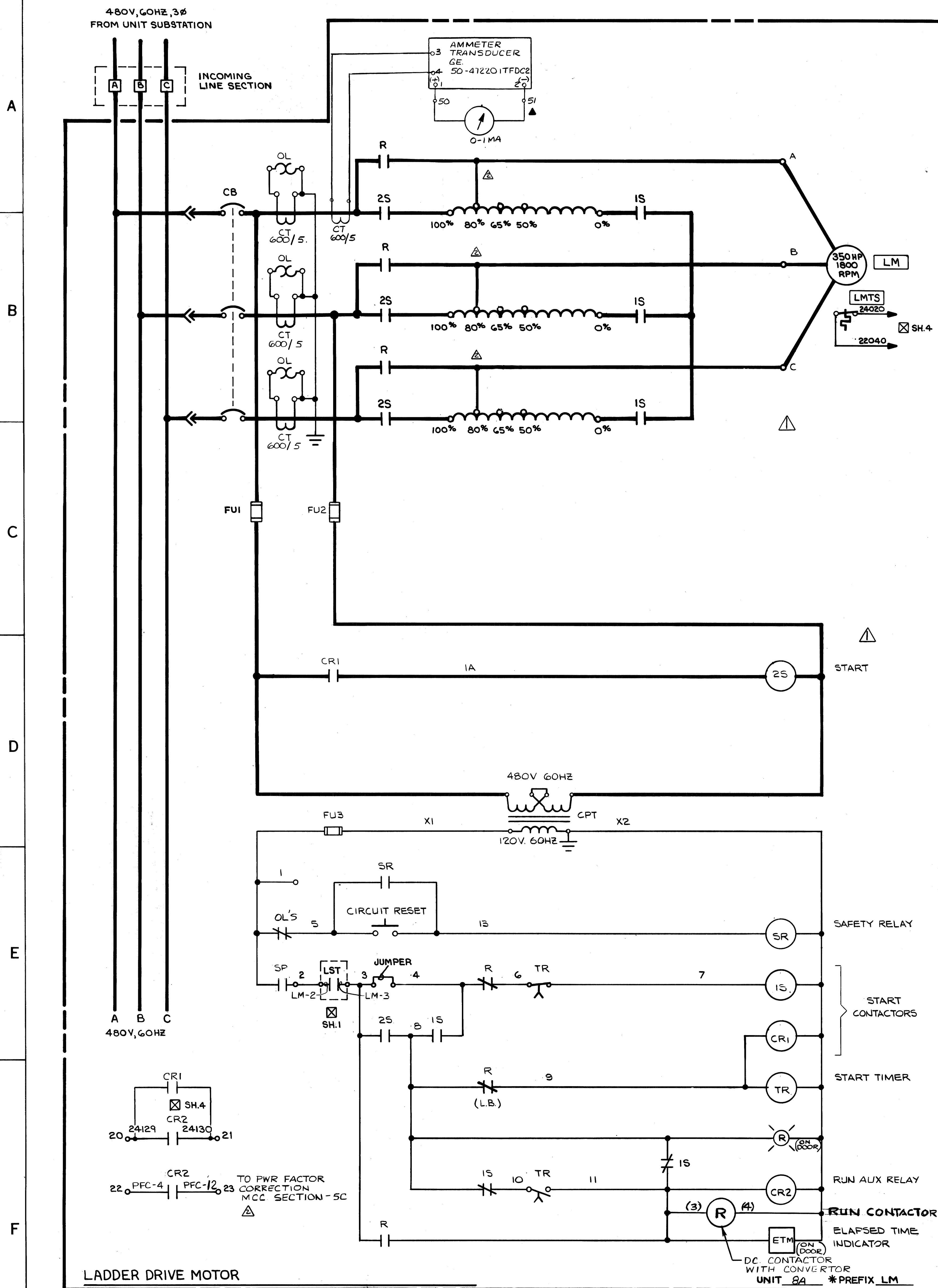
HOIST CALIPER BRAKE UNIT 6A \* PREFIX HCBM



CENTRAL GREASE PUMP UNIT 3C \* PREFIX GPM

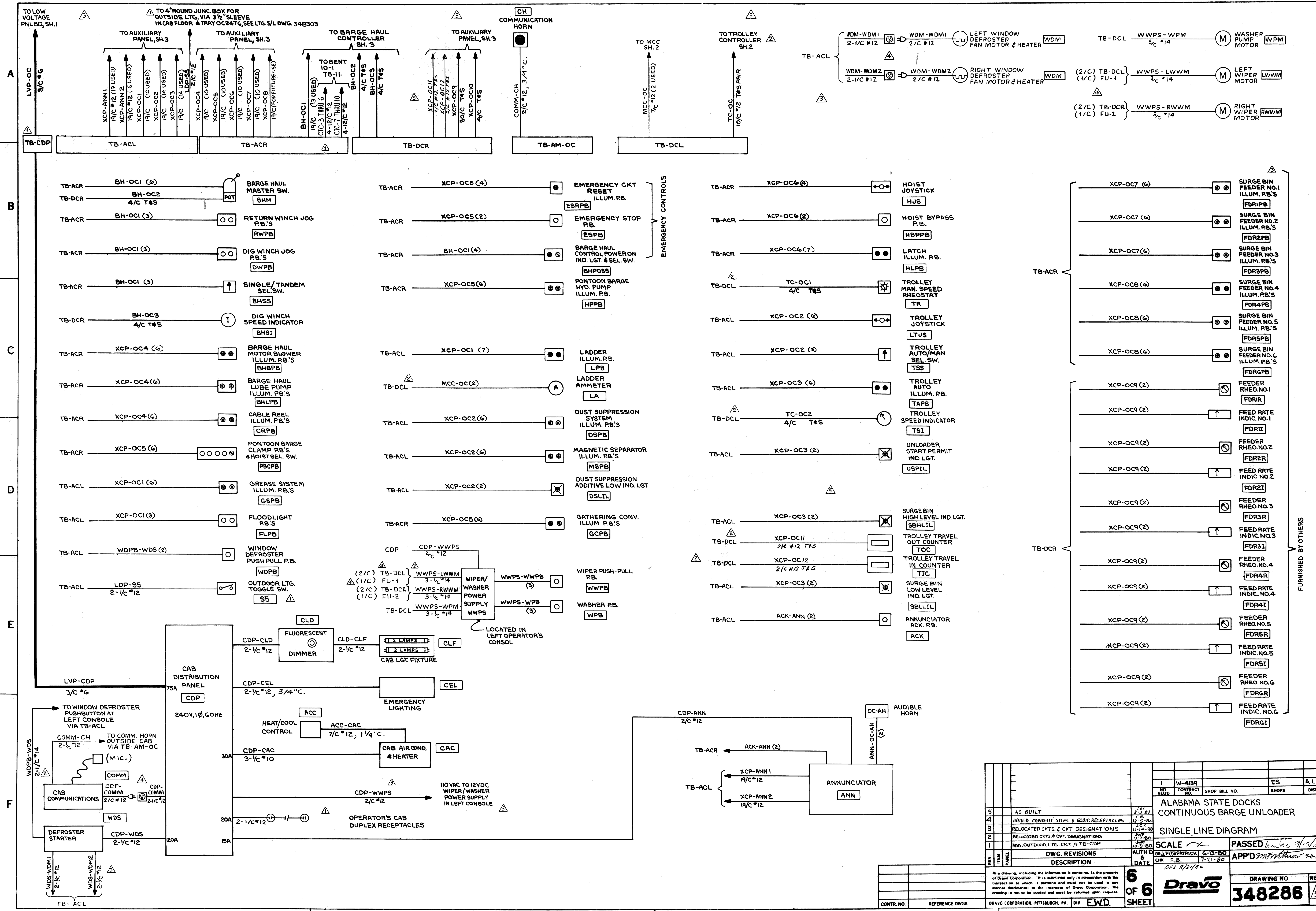
NO. REQD.	CONTRACT NO.	SHOP BILL NO.	SHOPS	DIST.
	W-4151			B.L.
ALABAMA STATE DOCKS CONTINUOUS BARGE UNLOADER MOTOR CONTROL CENTER ELEMENTARY WIRING DIAGRAM				
AS BUILT FWP 7/781		SCALE		PASSED <i>James 9/15/80</i>
AS NOTED BY <i>ESC 9-24-80</i>		DWG. REVISIONS		APP'D <i>Mark 9-15-80</i>
REV.	ITEM	DESCRIPTION	AUTH'D & DATE	
<small>This drawing, including the information it contains, is the property of Dravo Corporation. It is admitted only in connection with the transaction to which it pertains and must not be used in any manner detrimental to the interests of Dravo Corporation. The drawing is not to be copied and must be returned upon request.</small>				
2 OF 5 SHEET			<b>Dravo</b> DRAWING NO. <b>348288</b> DEL 8/11/80 DRAVO CORPORATION, PITTSBURGH, PA. DIV E. W. D.	





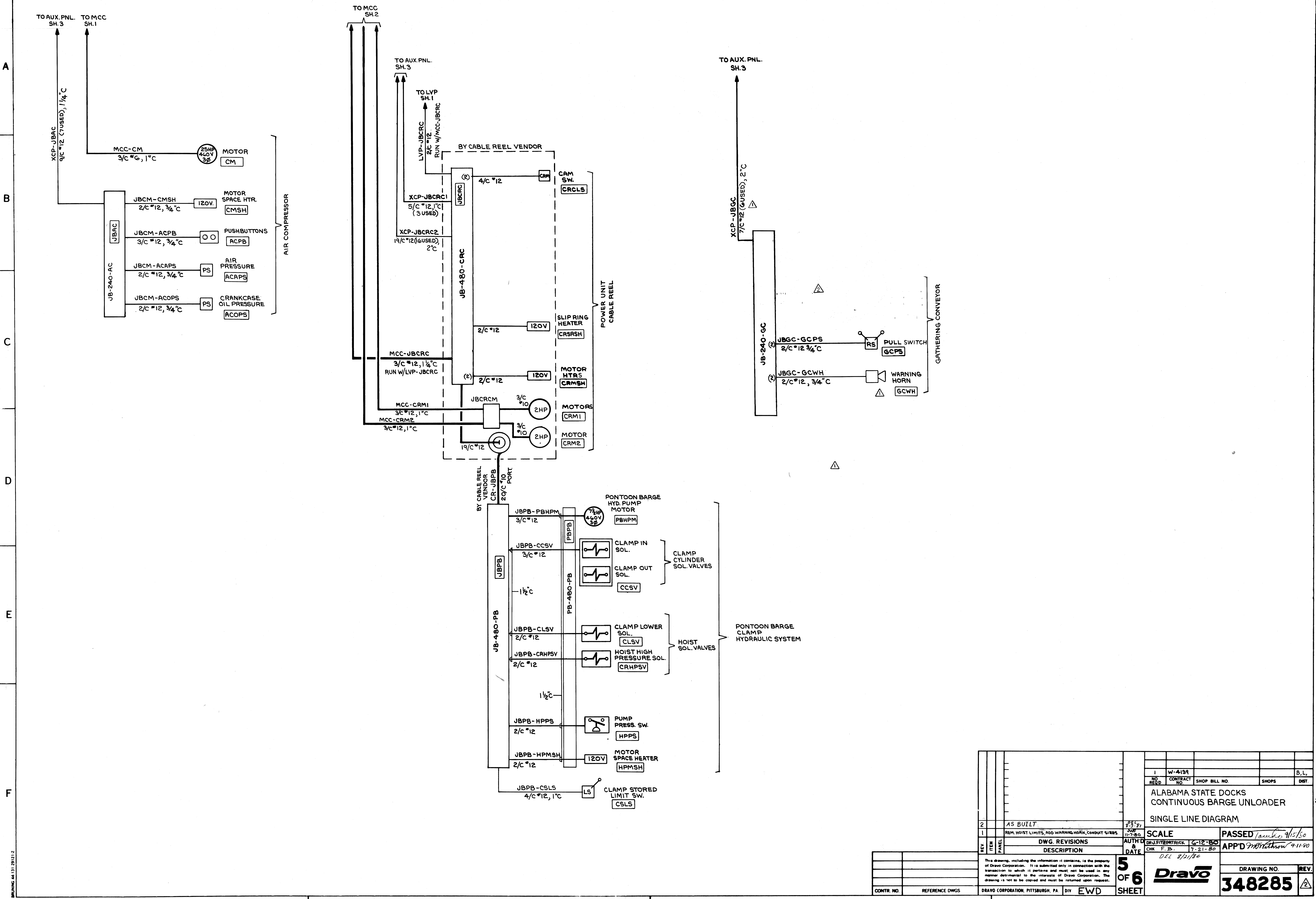
▲ LOCATED IN OPERATOR'S CAB  
 ☒ LOCATED IN AUXILIARY CONTROL PANEL

NO. REV'D	W-4139	CONTRACT NO.	SHOP BILL NO.	SHOPS	B.L.
ALABAMA STATE DOCKS CONTINUOUS BARGE UNLOADER MOTOR CONTROL CENTER ELEMENTARY WIRING DIAGRAM					
SCALE	AS BUILT BY FWP 7/18/81	AUTH'D	DR. PATRICK 6-4-80	DATE	7-21-80
REV. ITEM PANEL	DESCRIPTION	DATE	DEL 8/21/80	APP'D	9-15-80
This drawing, including the information it contains, is the property of Dravo Corporation. It is submitted only in connection with the transaction to which it pertains and must not be used in any manner detrimental to the interests of Dravo Corporation. The drawing is not to be copied and must be returned upon request.				DRAWING NO. 348287	
DRAVO CORPORATION, PITTSBURGH, PA. DIV. E. W. D.				SHEET 5 OF 5	



NO. REQ'D	CONTRACT NO.	SHOP BILL NO.	ES	B,L	DIST.
1	W-4139				
ALABAMA STATE DOCKS CONTINUOUS BARGE UNLOADER					
SINGLE LINE DIAGRAM					
SCALE			PASSED <i>[Signature]</i> 9/15/80		
DWG. REVISIONS			AUTH'D <i>[Signature]</i> 6-13-80		
DESCRIPTION			DATE 7-21-80		
REV.	ITEM	PANEL	DESCRIPTION		
5			AS BUILT		
4			ADDED CONDUIT SITES & EQUIP. RECEPTACLES		
3			RELOCATED CKTS. & CKT. DESIGNATIONS		
2			RELOCATED CKTS. & CKT. DESIGNATIONS		
1			ADD. OUTDOOR LTG. CKT. # TB-CDP		
DR. J. FITZPATRICK			DATE 8/21/80		
CHW. F.B.			DATE 7-21-80		
DRAWING NO.			REV.		
348286			5		





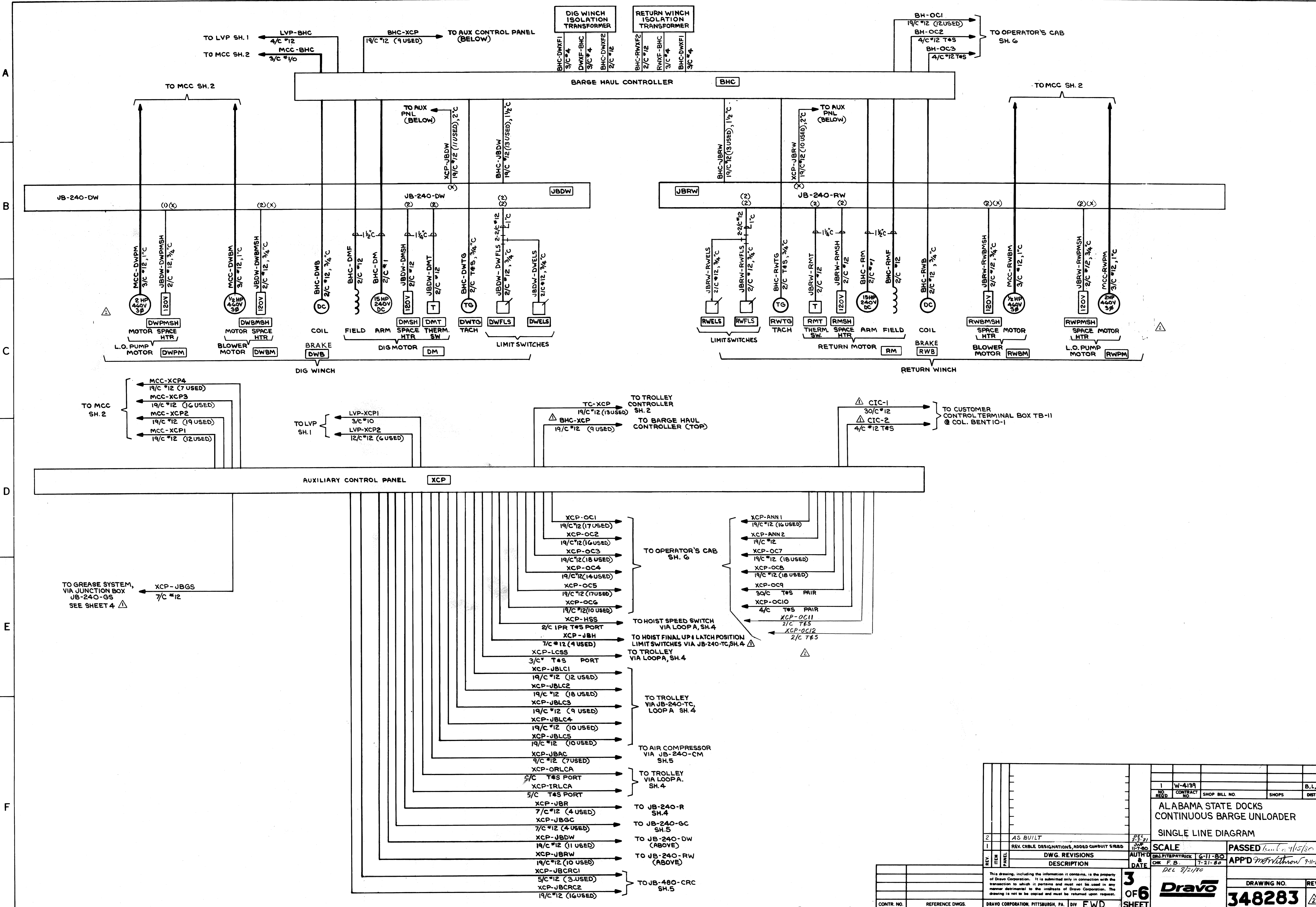
NO. 1	W-4139			B, L, L
REV. 1	CONTRACT NO.	SHOP BILL NO.	SHOPS	DIST.
ALABAMA STATE DOCKS CONTINUOUS BARGE UNLOADER				
SINGLE LINE DIAGRAM				
2	AS BUILT	8/21/80		
1	REM. HOIST LIMITS, ADD WARNING HORN, CONDUIT SIZES	7/21/80		
REV. ITEM PANEL	DWG. REVISIONS		AUTH. & DATE	SCALE
	DESCRIPTION			PASSED <i>1/10/80</i>
				APP'D <i>1/10/80</i>
<small>This drawing, including the information it contains, is the property of Dravo Corporation. It is submitted only in connection with the transaction to which it pertains and must not be used in any manner detrimental to the interests of Dravo Corporation. The drawing is not to be copied and must be returned upon request.</small>				
CONTR. NO.			REFERENCE DWGS.	DRAYO CORPORATION, PITTSBURGH, PA. DIV EWD
5 OF 6 SHEET			DRAWING NO. 348285	

DRAWING 44131 28212.2

1  
26  
55



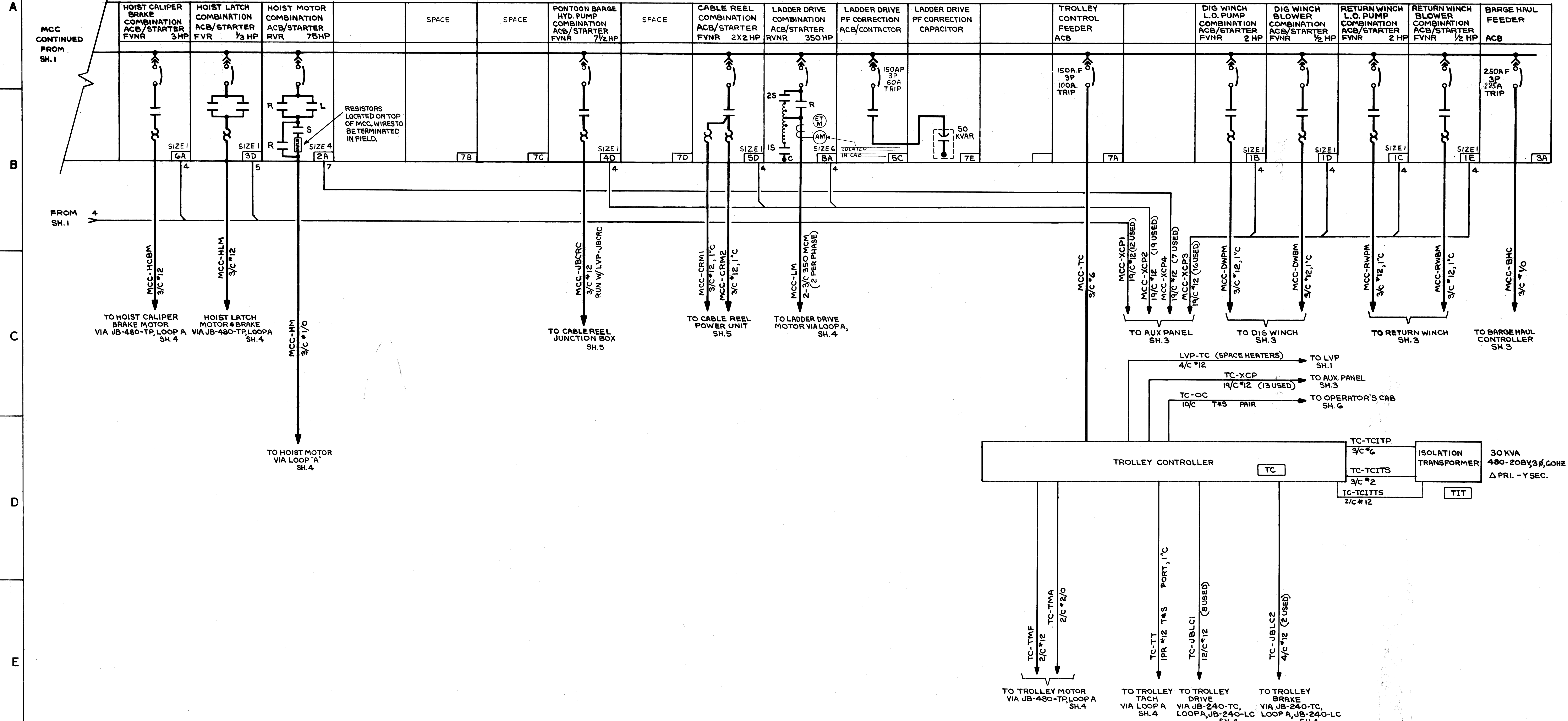




TO GREASE SYSTEM,  
VIA JUNCTION BOX  
JB-240-GS  
SEE SHEET 4

NO. REQ'D	CONTRACT NO.	SHOP BILL NO.	SHOPS	B.L. DIST.
1	W-4194			
ALABAMA STATE DOCKS CONTINUOUS BARGE UNLOADER SINGLE LINE DIAGRAM				
REV.	ITEM	DESCRIPTION	AUTH'D & DATE	DATE
2		AS BUILT		7-21-80
1		REV. CABLE DESIGNATIONS, ADDED CONDUIT SIZED		7-21-80
DWG. REVISIONS			APP'D	DATE
			DR. PATRICK	6-11-80
			CHK. F.B.	7-21-80
			DEL. 8/21/80	
This drawing, including the information it contains, is the property of Dravo Corporation. It is submitted only in connection with the transaction to which it pertains and must not be used in any manner detrimental to the interests of Dravo Corporation. The drawing is not to be copied and must be returned upon request.			DRAWING NO. REV.	
			<b>3 OF 6 SHEETS</b>	
CONTR. NO. REFERENCE DWGS.			<b>Dravo</b>	
			<b>348283</b>	

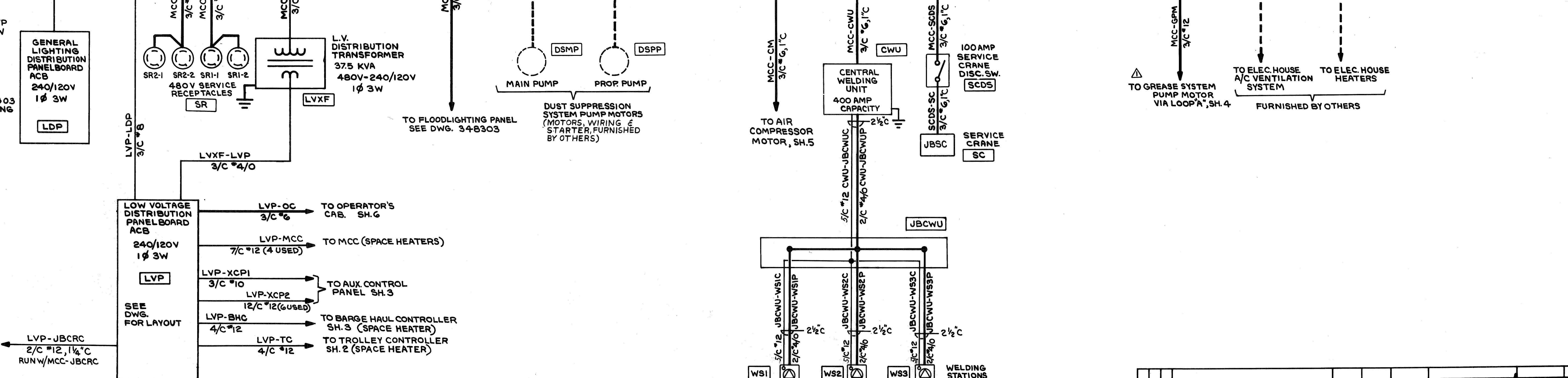
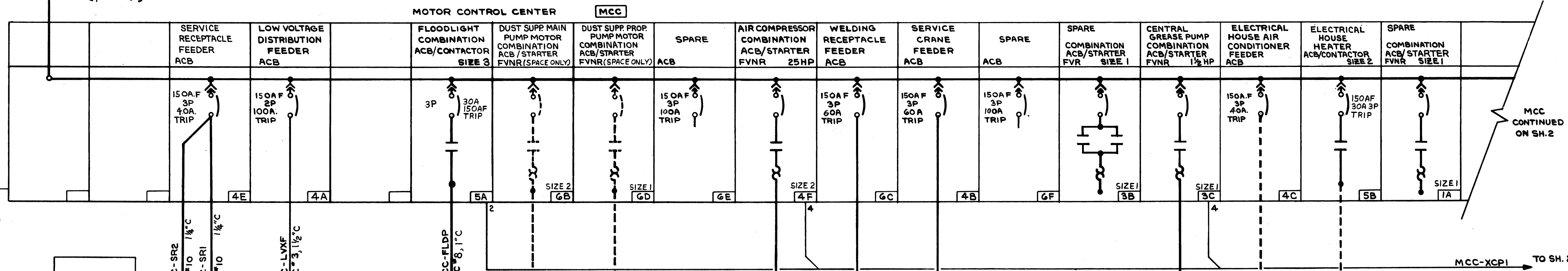
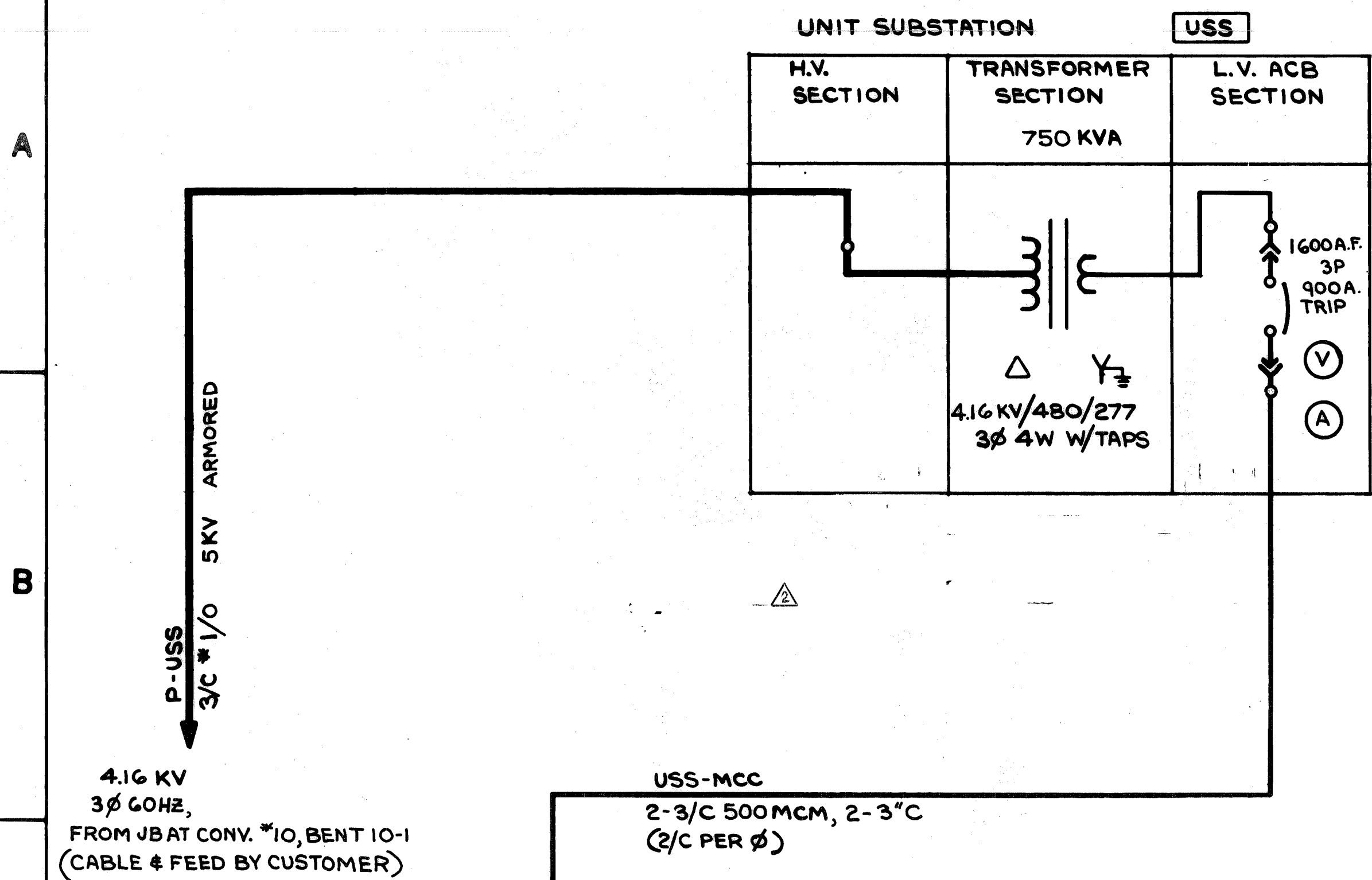
MOTOR CONTROL CENTER MCC



A  
B  
C  
D  
E  
F

NO. REQ'D	W-4134	CONTRACT NO.	SHOP BILL NO.	SHOPS	B. L.
ALABAMA STATE DOCKS CONTINUOUS BARGE UNLOADER					
SINGLE LINE DIAGRAM					
REV. 1	ADDED CONDUIT SIZES	SCALE	SCALE	DATE	APPROVED
REV. 2	DWG. REVISIONS	DATE	DATE	DATE	DATE
REV. 3	DESCRIPTION	DATE	DATE	DATE	DATE
This drawing, including the information it contains, is the property of Dravo Corporation. It is submitted only in connection with the transaction to which it pertains and must not be used in any manner detrimental to the interests of Dravo Corporation. The drawing is not to be copied and must be returned upon request.					
CONTR. NO.		REFERENCE DWGS.	DRAVO CORPORATION, PITTSBURGH, PA.	DIV. E.W.D.	SHEET
2 OF 6		DRAWING NO. 348282		REV.	1





NO. 1	WS1	5/C 12 JBCWU-WS1C	2 1/2" C
NO. 2	WS2	5/C 12 JBCWU-WS2C	2 1/2" C
NO. 3	WS3	5/C 12 JBCWU-WS3C	2 1/2" C

PORTABLE CONTROL CABLE  
CONTROL UNIT (WCU)  
HOLDER (WH)  
GND. CLAMP

REV.	ITEM	DESCRIPTION	DATE
1	AS BUILT		
2	REVISED GREASE SYSTEM TO SH.4 ORG. NOB. CONDUIT SIZES		

NO. FEED	CONTRACT NO.	SHOP BILL NO.	SHOPS	B.L.	DIST.
1	W-4139				

ALABAMA STATE DOCKS  
CONTINUOUS BARGE UNLOADER

SINGLE LINE DIAGRAM

SCALE: PASSED *9/15/80*

DWG. REVISIONS: AUTH'D & DATE: *7-21-80*

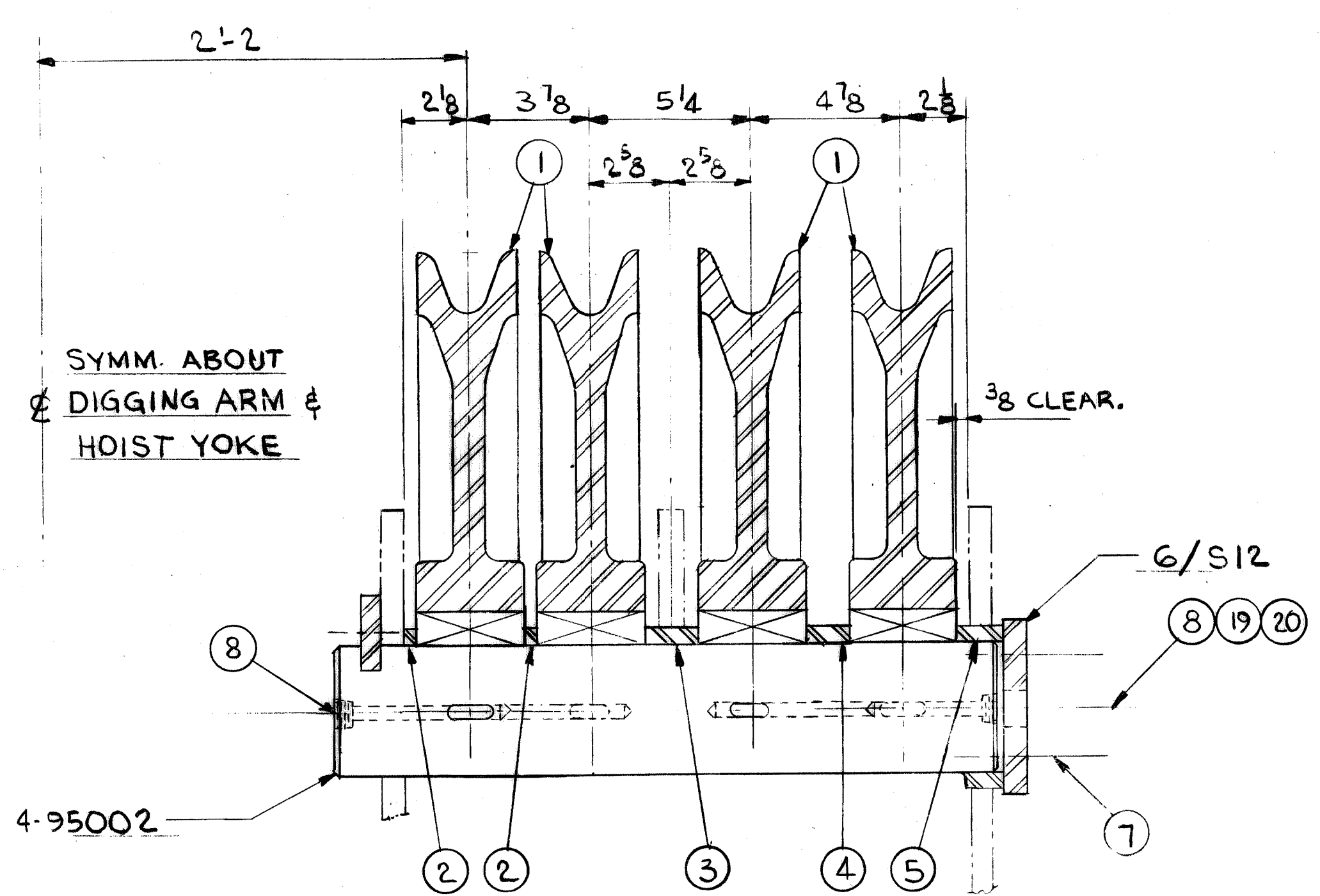
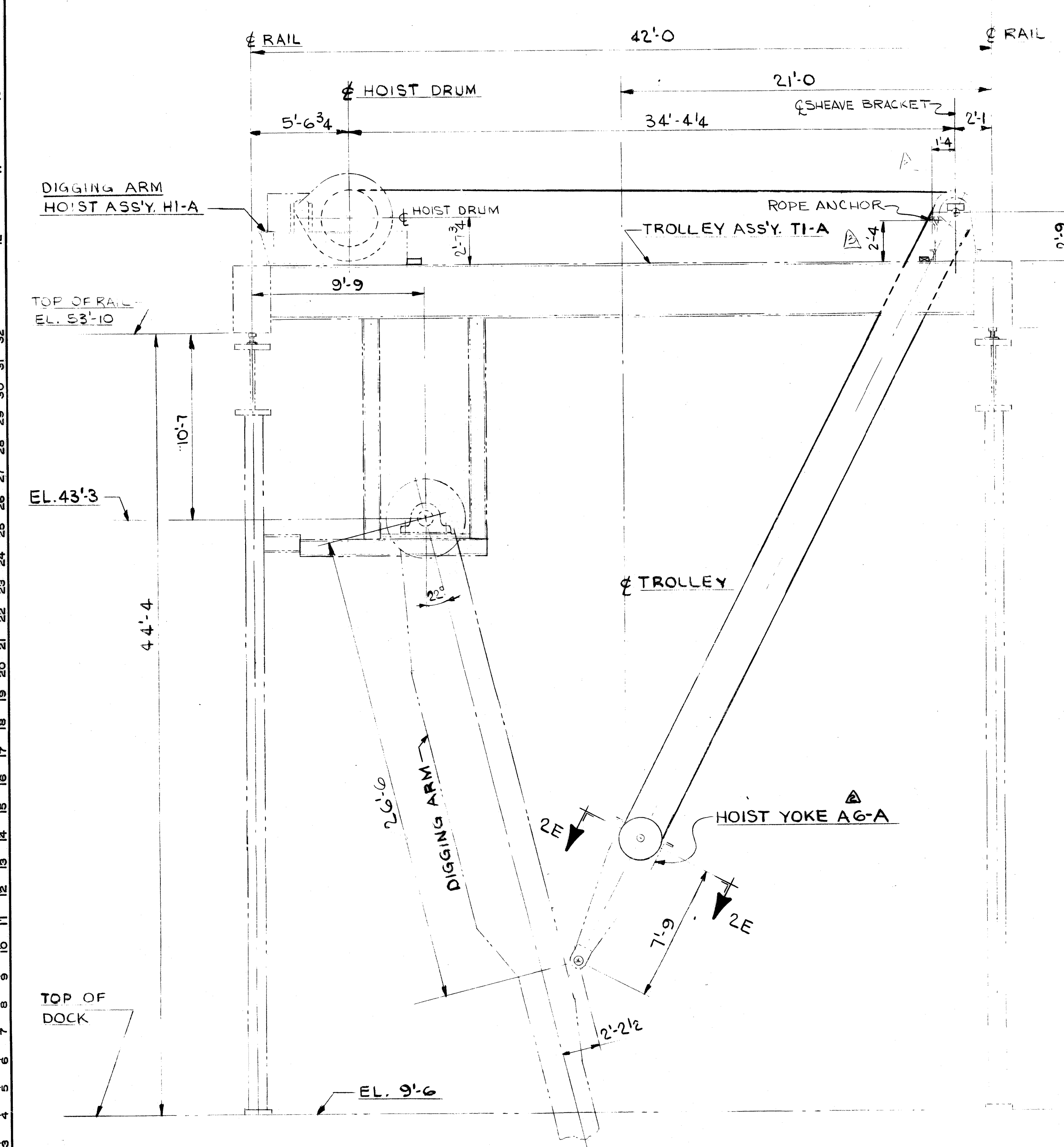
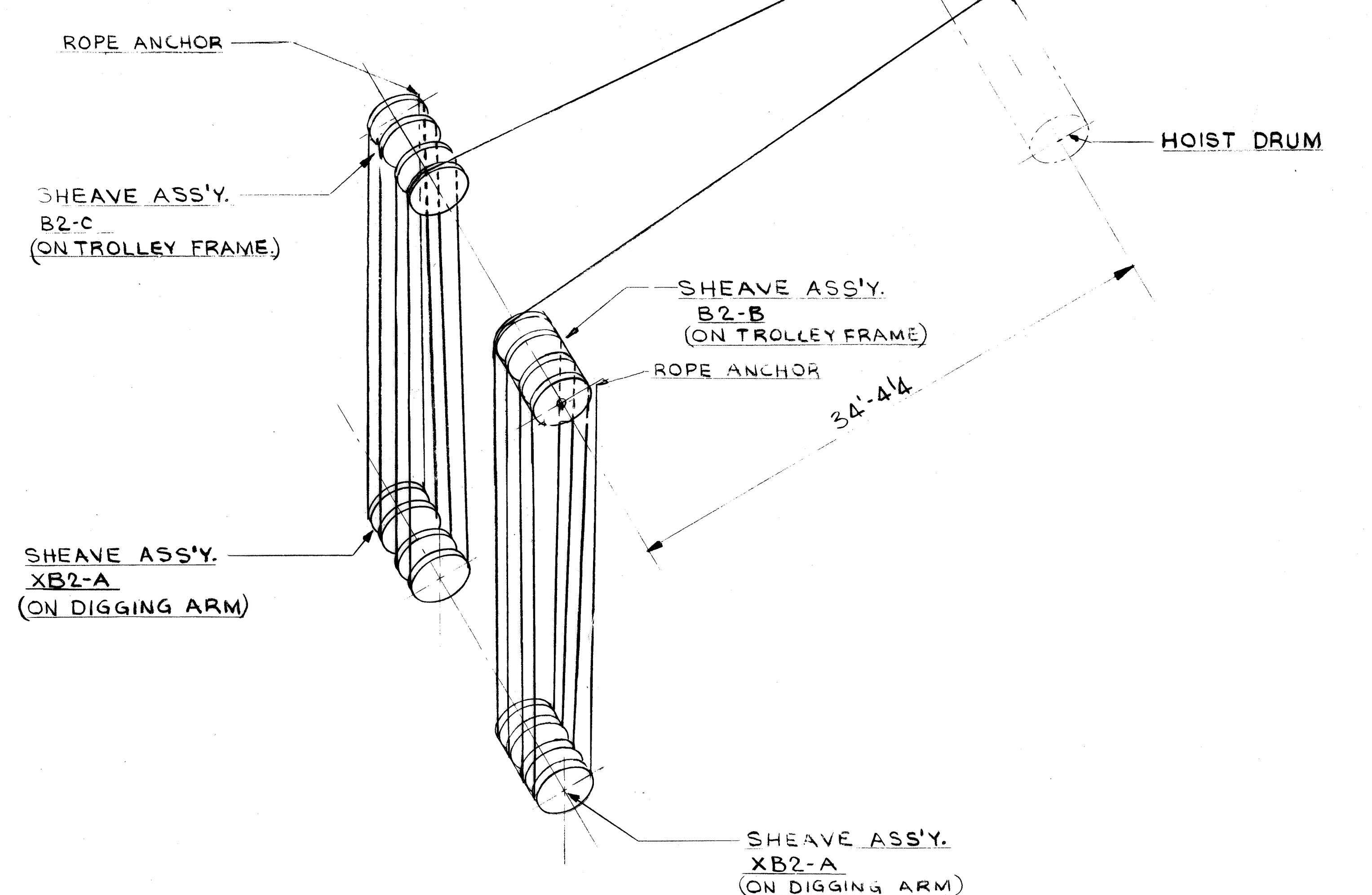
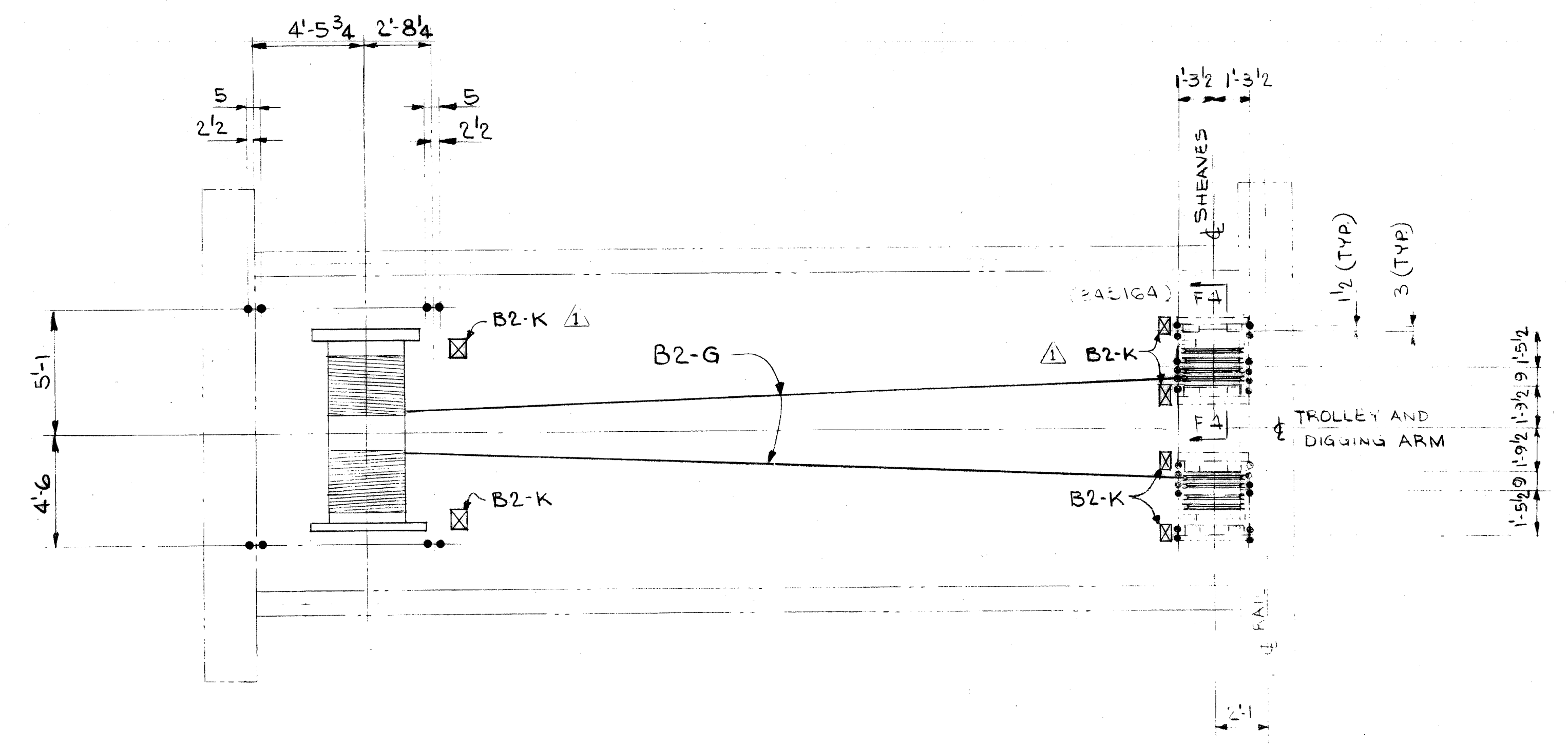
DESCRIPTION: *DEL 8/21/80*

DRAWING NO. **348281**

OF 6 SHEET

CONTR. NO. REFERENCE DWGS. DRAYO CORPORATION, PITTSBURGH, PA. DIV. E.W.D.

REV.	ITEM	DESCRIPTION	AUTH'D & DATE	REF.
		REVISIONS		
		DESCRIPTION		
		ITEM B2-K ADDED	JMS 5-19-80	
		REV. REF. DWG. N°	MAV 10-8-80	
			10-2-80	
			5-26-81	



SECT. 2-E  
DIGGING ARM SHEAVE ASSEMBLY XB2-A  
WT. 571#

REFERENCE DWGS:-

TROLLEY GEN'L. ARR'G'T.	341096-TI
DIGGING ARM HOIST ARR'G'T.	347110-HI
HOIST YOKE	347117-A0
REEVING ARR'G'T. FOR DIGGING ARM	348164
STANDARD PIN	95002
STANDARD END R	95042-S12
STANDARD KEEPER	95044-S5
SHEAVE BRACKET & DETAILS	348162-B1

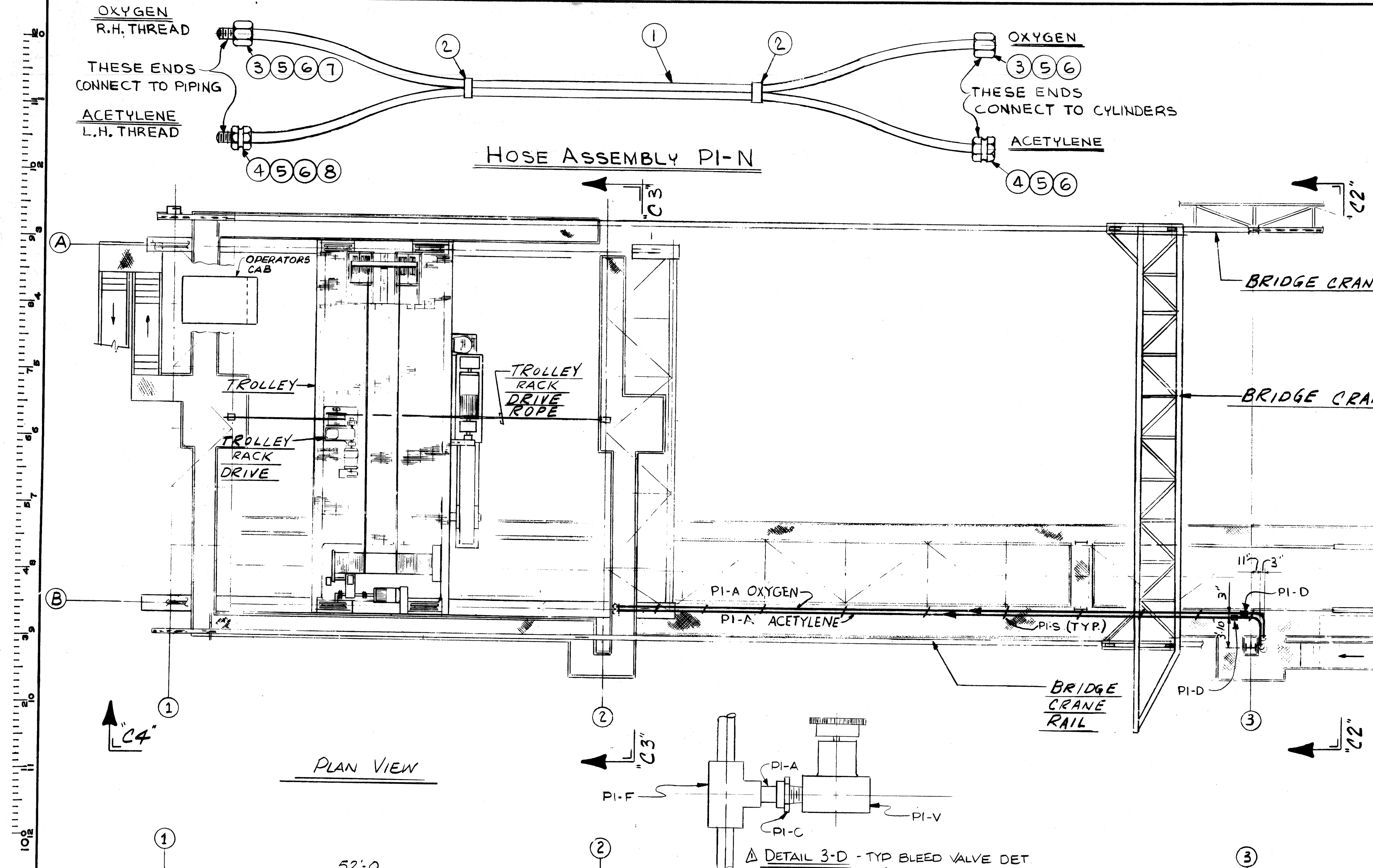
DIGGING ARM HOIST REEVING SYSTEM ARRANGEMENT

CONTR. NO.	REFERENCE DWGS.	SHEET
		0
		1
		2
		3
		4
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		9

NO. REQ'D	CONTRACT NO.	SHOP BILL NO.	MS, SS	BLOU	PART
CONTINUOUS BARGE UNLOADER REEVING ARRANGEMENT FOR DIGGING ARM					
SCALE 1/4" = 3'-10"			APPD. <i>[Signature]</i> 4/1/80		
DR. J. STURTE 5-14-80			DATE <i>[Signature]</i> 5/21/80		
CHKD. K. [Signature] 5-28-80					
DRAWING NO.			REV.		
348163			3		
DRAWING NO. 348163-3					
DRAWING NO. 348163-3					

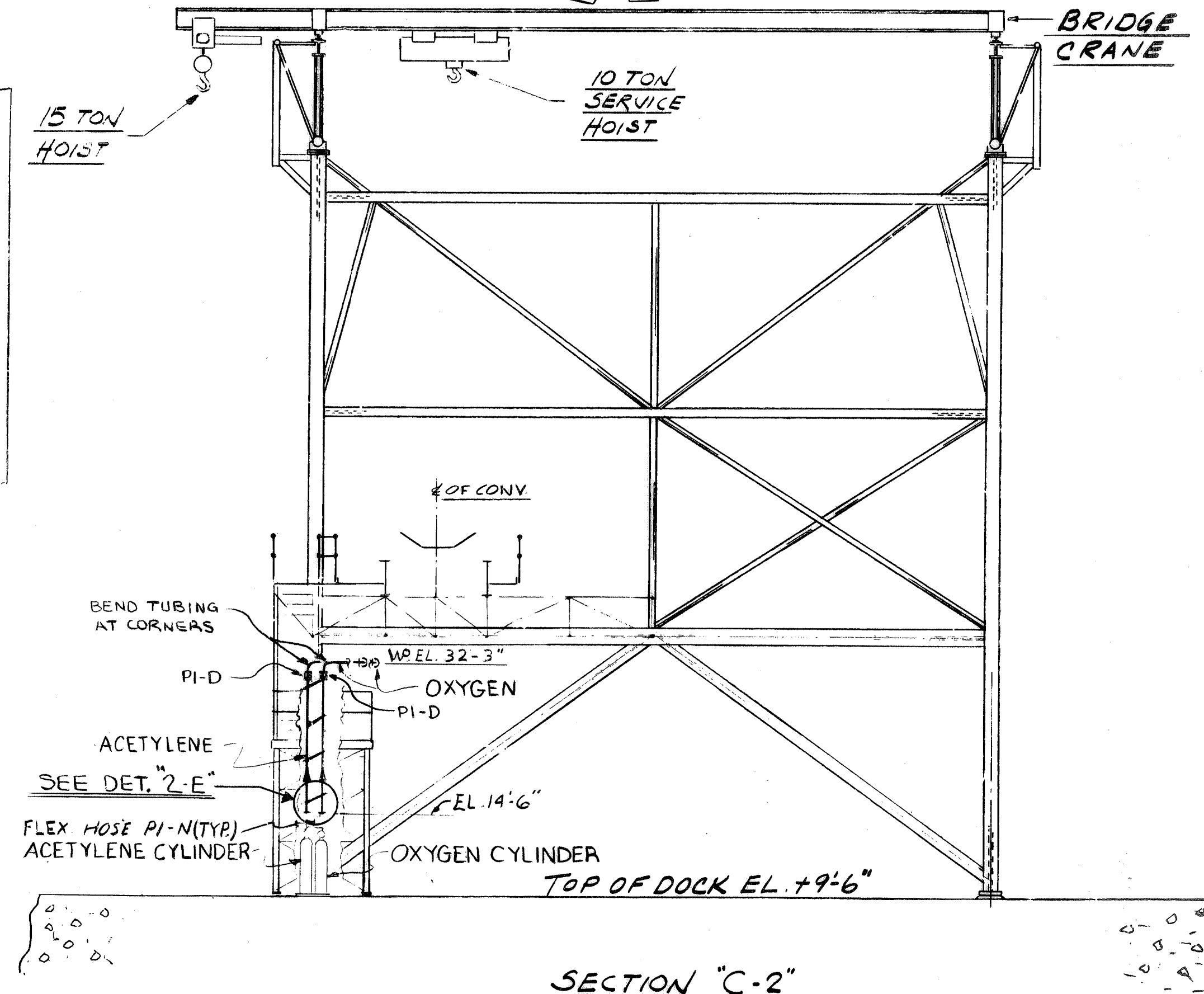
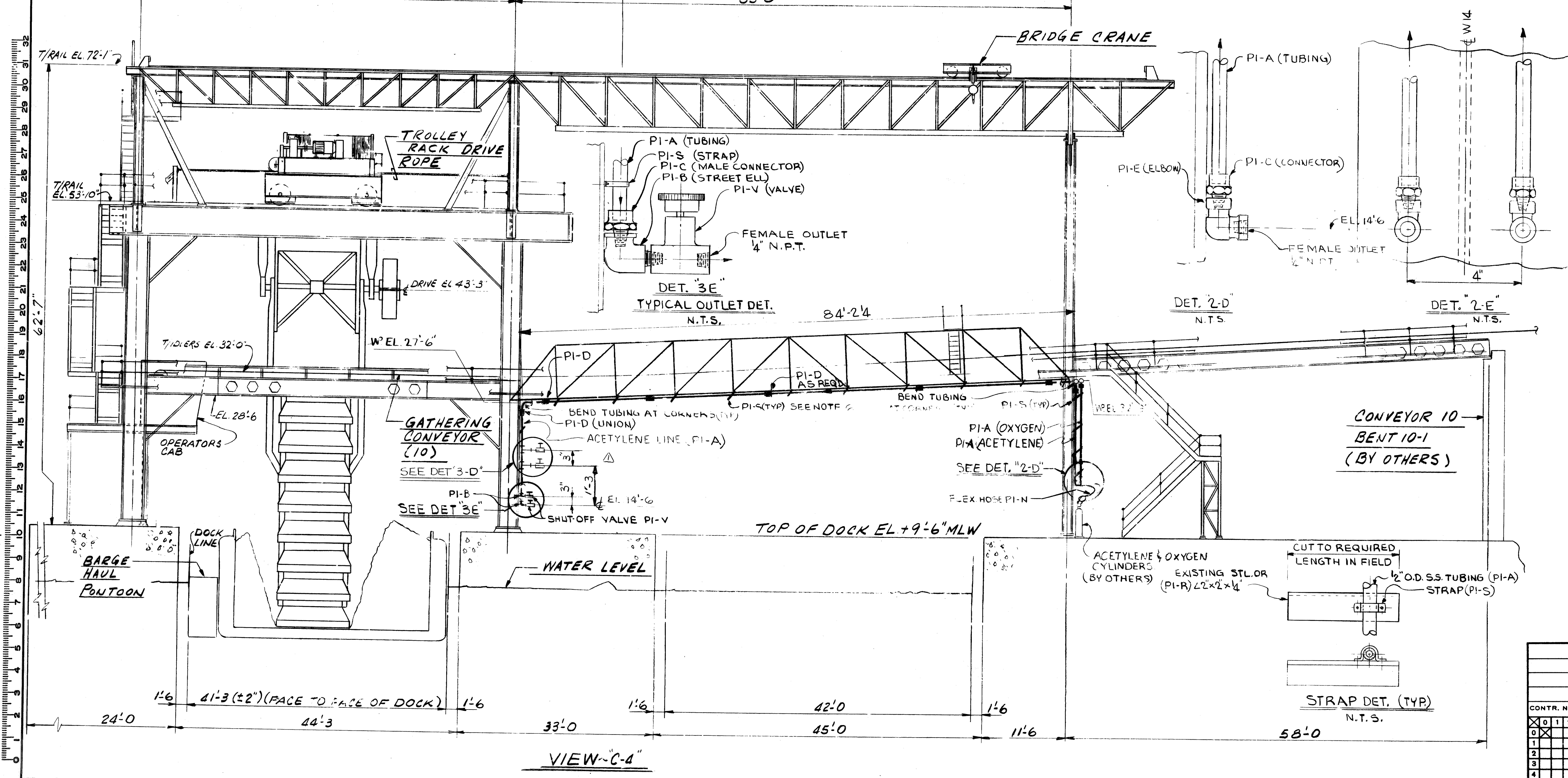
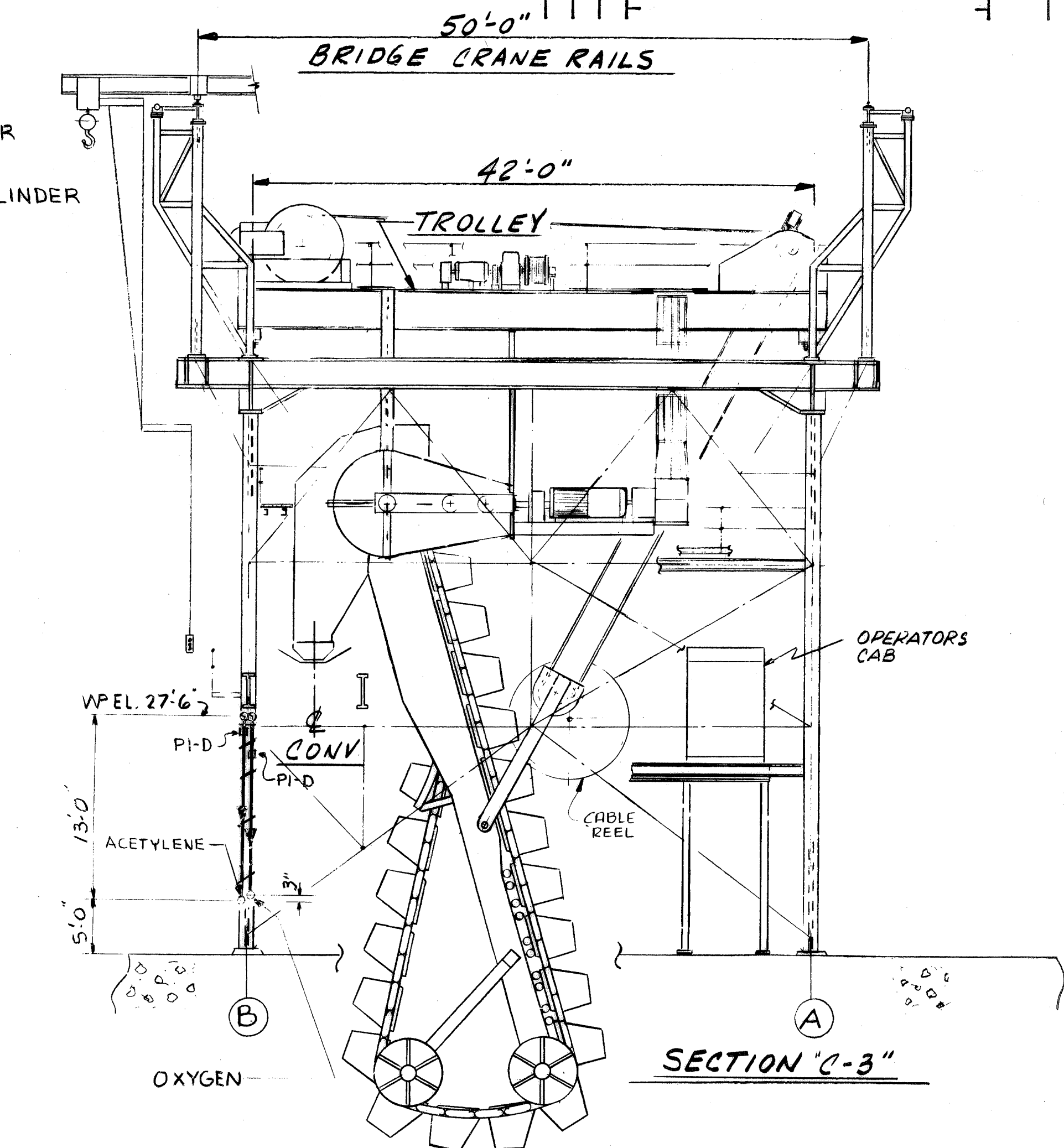
Vertical scale markings on the left side of the drawing, ranging from 0 to 100 feet.





- NOTES:-**
1. TUBING FOR OXYGEN & ACETYLENE SHALL BE INSTALLED, TESTED AND CLEANED IN ACCORDANCE WITH NATIONAL FIRE PROTECTION ASSOCIATION STANDARD 51 "OXYGEN-FUEL GAS SYSTEM FOR WELDING AND CUTTING." LATEST EDITION.
  2. USE TEFLON TAPE AT ALL THREADED PIPE CONNECTIONS.
  3. OXYGEN PIPING SYSTEM AND ACETYLENE PIPING SYSTEM EACH TO BE ELECTRICALLY GROUNDED.
  4. ATTACH I.D. TAG PI-P TO OXYGEN LINE AT CYLINDER AND AT STATION.
  5. ATTACH I.D. TAG PI-Q TO ACETYLENE LINE AT CYLINDER AND AT STATION.
  6. MAXIMUM SPACING FOR TUBING SUPPORTS-5'-0"
  7. USE E308 STAINLESS WELDING RODS.

REV.	ITEM	DESCRIPTION	AUTHOR & DATE	REF.
1		ADDED DETAIL 3-D		



CONTR. NO.		REFERENCE DWGS.		SHEET	
0	1	2	3	4	5
6	7	8	9	10	11
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CONTR. NO.		REFERENCE DWGS.		SHEET	
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222	223	224	225	226	227
228					







BRUNING 44.131.28121.2

F

E

D

C

B

A

No.	Total No. of Pcs. On Contract	No. of Pcs. to be Made	DESCRIPTION	SECTION	Length Ft. In.	Drawing Number	Mat'l.
1			BARGE HAUL ASSY ~ M5-A				
2			REDUCER - BROWNING			MS 347126	
3			5009 HP-2 PARALLEL SHAFT WITH SPECIAL LOW SPEED SHAFT AND EXTERNAL LUBE PUMP - RATIO 31.37:1				
4			MOTOR - 15/30 HP. 800/1600 RPM			MS 347126	
5			230/460 V DC. MILL MOTOR - T.E.F.V.				
6			BRAKE - AISE SHOE BRAKE				
7			FLOOR MOUNTED ~ 10" DIA.				
8			LIMIT SWITCH				
9			TACHOMETER				
10			COUPLING - FALK 1015G20				
11			COUPLING - G.E.				
12			MDB02 - MD806				
13			(CONT. ON S.B.#)				

No.	Total No. of Pcs. On Contract	No. of Pcs. to be Made	DESCRIPTION	SECTION	Length Ft. In.	Drawing Number	Mat'l.
1			BARGE HAUL ASSY ~ M5-A (CONT. FROM S.B.#)				
2			BEARING - TORRINGTON			MS 347126	
3			80 SD 22 W33				
4			GASKET - 8 1/2 O.D. x 5 3/8 I.D. x 1/16 THK. W/ 6 HOLES - 1/16" DIA. EQUALLY SPACED ON 7" B.C.				
5			1/4" ALUMITE FITTING - A-1186				
6			WASHER - 8" O.D. x 4 1/16" I.D. x 1/16 THK. (F.A.O.)				
7			1" STD. PIPE CAP ~ 150#				
8			(SLOT TOP 3/16" WIDE x 7/16" LG.)				
9			1" STD. TEE ~ 150#				
10			1" STD. HEX HD. PIPE PLUG				
11			1" STD. PIPE (THD. 2E) x 1'				
12			1" STD. PIPE (THD. 2E) x 0 8/2'				
13			(CONT. ON S.B.#)				

No.	Total No. of Pcs. On Contract	No. of Pcs. to be Made	DESCRIPTION	SECTION	Length Ft. In.	Drawing Number	Mat'l.
1			BARGE HAUL ASSY ~ M5-A (CONT. FROM S.B.#)				
2			OIL GAGE ASSY			MS 347126	
3			WINCH BASE ASSY				
4			SHAFT SUPPORT ASSY				
5			WINCH DRUM ASSY				
6			UPPER HALF GEAR GUARD				
7			LOWER HALF GEAR GUARD				
8			BENT R				
9			BENT R				
10			DRUM SHAFT				
11			LUBE BOLT				
12			ROPE ANCHOR R				
13			COUPLING GUARD				
14			COUPLING GUARD SUPPORT				
15			HEX HD. BOLT W/ NUT & F.W.				
16			HEX HD. BOLT W/ NUT & F.W.				
17			PILLOW BLOCK ASSY				
18			R				
19			HEX HD. BOLT				
20			1/8" WIRE				
21			GEAR GUARD SPACER ASSY				
22			GEAR GUARD SPACER ASSY				
23			(CONT. ON S.B.#)				

No.	Total No. of Pcs. On Contract	No. of Pcs. to be Made	DESCRIPTION	SECTION	Length Ft. In.	Drawing Number	Mat'l.
1			BARGE HAUL ASSY ~ M5-A (CONT. FROM S.B.#)				
2			R				
3			L				
4			HEX HD. CAPSCREW W/ L.W.				
5			HEX HD. BOLT W/ NUT & F.W.				
6			PINION - 8.800 PD. 2 1/2 D.P., 22 TEETH, 3 1/4" FACE WIDTH				
7			MAT'L: FORGED STL.-AISI 4340, HARDEN & TEMPER TO 302-341 BHN THRU HARDNESS TO TOOTH DEPTH BEFORE CUTTING TEETH.				
8			GEAR - 50.800 PD. 2 1/2 D.P., 127 TEETH, 3" FACE WIDTH				
9			MAT'L: FORGED STL.-AISI 4340, HARDEN & TEMPER TO 255-285 BHN THRU HARDNESS TO TOOTH DEPTH BEFORE CUTTING TEETH.				
10			(CONT. ON S.B.#)				

No.	Total No. of Pcs. On Contract	No. of Pcs. to be Made	DESCRIPTION	SECTION	Length Ft. In.	Drawing Number	Mat'l.
1			BARGE HAUL ASSY ~ M5-A (CONT. FROM S.B.#)				
2			SHIM PACK				
3			SHIM PACK				
4			SHIM PACK				
5			SHIM PACK				
6			SHIM PACK				
7			SHIM PACK				
8							
9			CHLG GUARD SIGN				
10			SELF TAPPING SCREW N# 8 TYPE F				
11			NOTE: SHOP TO LOCATE SIGN COUPLING & MOUNT WITH SCREWS				
12			MISCELLANEOUS				
13			CHOCK BAR 4 x 2 1/2				
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							

SEE DWG. 347126 FOR BARGE HAUL WINCH ARRGT.

REV.	ITEM	DESCRIPTION	DATE
1	LINE 17 ADDED (MS-H)		7-25-80
2	ADD MARKS XMS-G & 20/MS TO BILL LINES 10 TO 15		7-9-80
3	DWG. REVISIONS		
4			

NO. REGD.	W-4139	CONTRACT NO.	529 THRU 533	MS	BLOU PAINT
SHOP BILL NO.		SHOPS		DIST.	

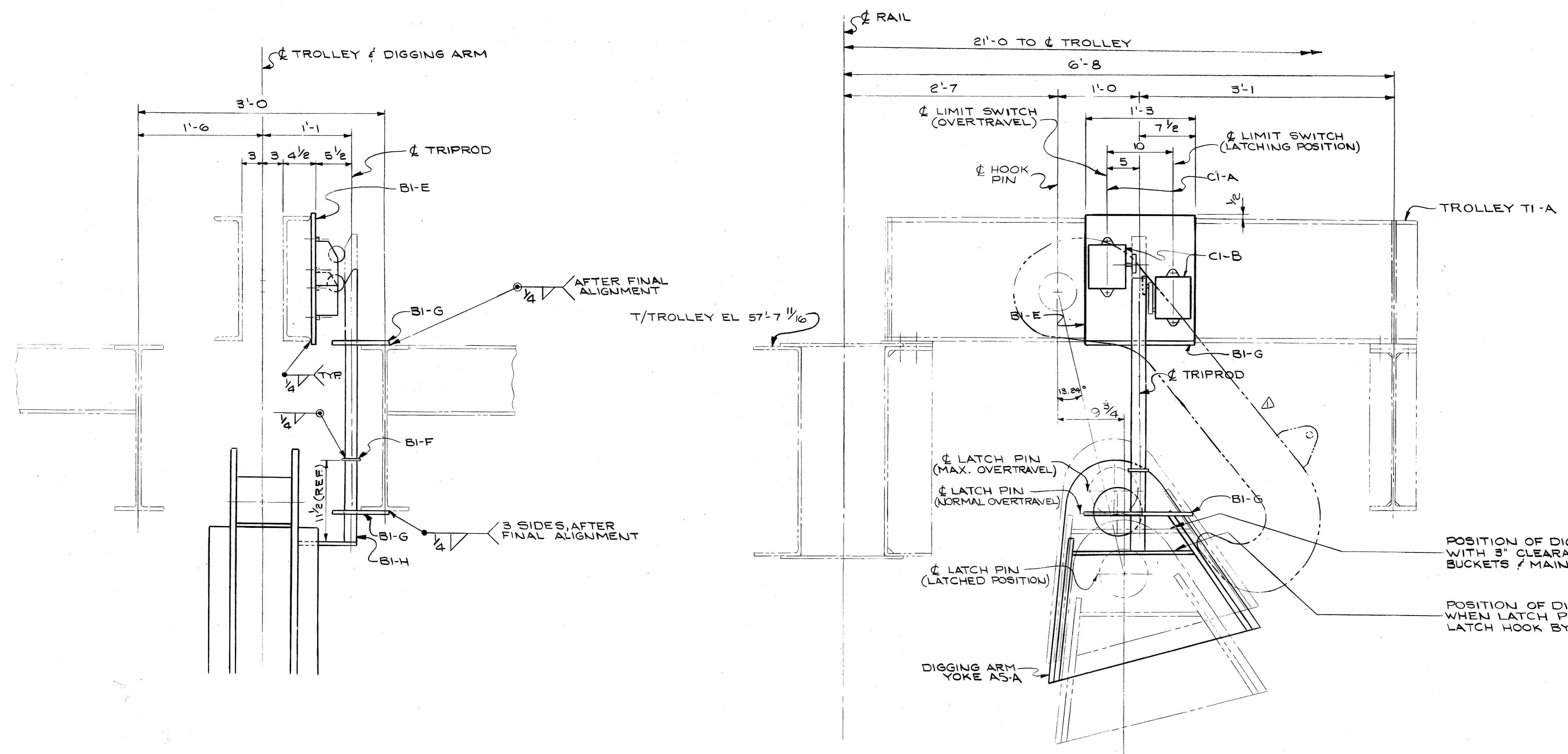
**BARGE HAUL WINCH ARRANGEMENT BILLS OF MATERIAL**

SCALE: PASSED *6/20/80*  
 AUTH'D & DATE: DR. CLEMENTS 5-29-80  
 CH. P. B. *6-19-80*

DRAWING NO. **347127** REV. **2**

DRAVO CORPORATION, PITTSBURGH, PA. DIV. E.W.D. SHEET

I.T.E. NO.	Qty	No. Of Pcs. Or For One Assembly	DESCRIPTION		Length	Drawing Number	Mat'l	
			KIND	SECTION				
1	4		HEX HD BOLT	3/8 φ	0 1 3/4	C1-A	348165	STL
2			HEX NUT	F.W.				
3	2		CUTLER-HAMMER LIMIT SWITCH-CAT #14977H14			C1-B		-
4			TYPE 14977					
5	1		PLATE			B1-E	348162	-
6	1		PLATE			B1-F		-
7	2		PLATE			B1-G		-
8	1		BAR			B1-H		-



- REFERENCE DRAWINGS:
- DIGGING ARM YOKE \_\_\_\_\_ 347095-A5
  - HOIST REEVING SYSTEM \_\_\_\_\_ 348162-B1
  - DETAILS \_\_\_\_\_ 347134-P4
  - LATCH RELEASE ASS'Y \_\_\_\_\_ 347096-T1
  - TROLLEY GENERAL ARR'G'T \_\_\_\_\_ 347096-T1

POSITION OF DIGGING ARM WITH 3" CLEARANCE BETWEEN BUCKETS & MAIN TROLLEY GIRDER

POSITION OF DIGGING ARM WHEN LATCH PIN CLEARS LATCH HOOK BY 3"

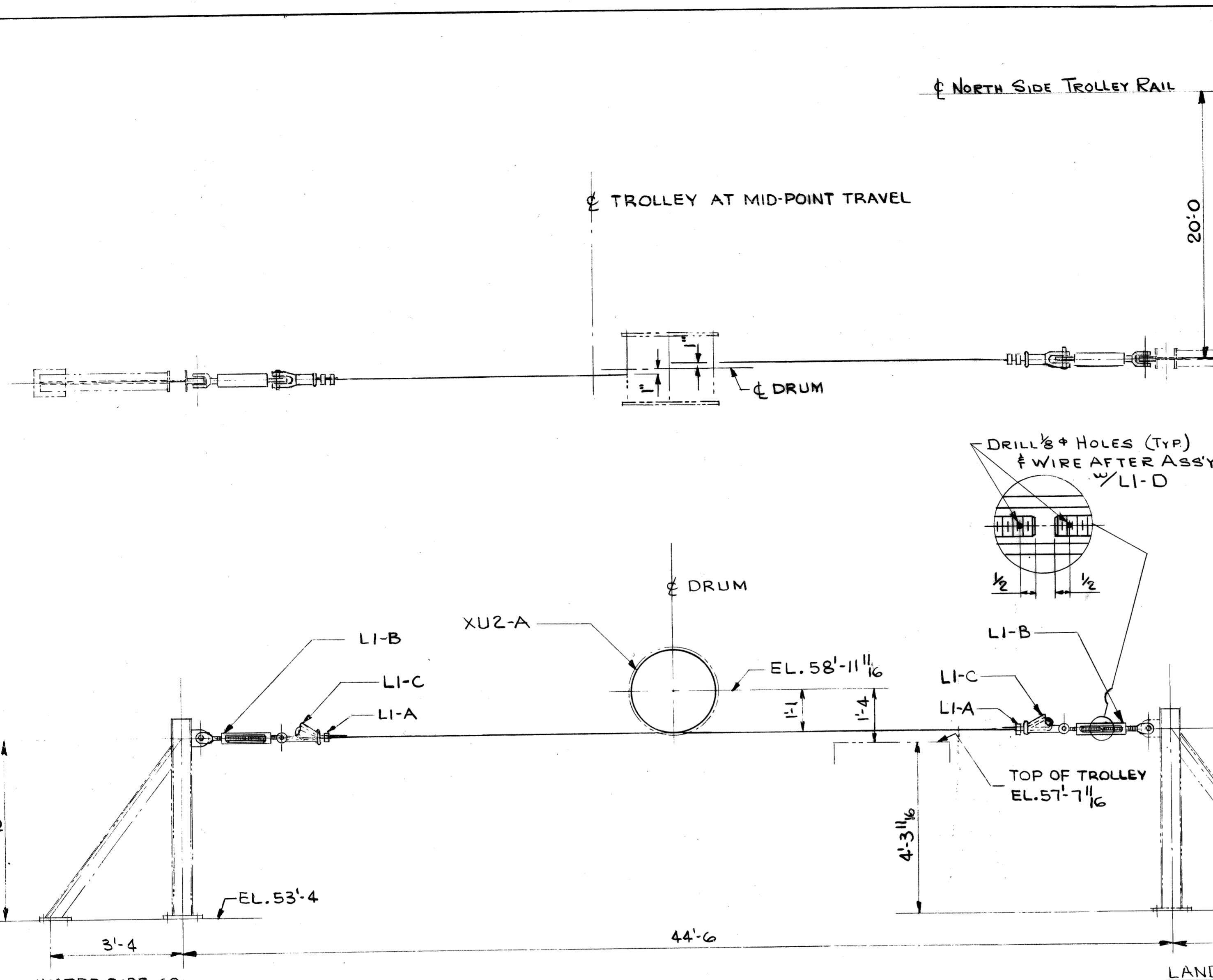
DIGGING ARM UPPER LUFFING LIMIT SWITCH ARRANGEMENT

NO. REQ'D	W-4139	419	NO SHOP BLOW
CONTRACT NO.			SHOPS
SHOP BILL NO.			DIST.
UPPER LUFFING LIMIT SWITCH ARRANGEMENT			
SCALE 1 1/2" = 1'-0"		PASSED <i>T. S. [Signature]</i> 5/29/80	
DR. VINSKI 5-23-80		APP'D. W. Sel... 4/1/80	
CHK'D. Klina 5-29-80			
DRAWING NO. <b>348165</b>			
DRAYO CORPORATION, PITTSBURGH, PA. DIV EWD SHEET			

NOMINAL MACHINING DIMENSIONS ± 0.010 UNLESS NOTED

A  
B  
C  
D  
E  
F





L I E NO.	Total No. Of Pcs. On Contract	No. Of Pieces For One Assembly Unit	DESCRIPTION		Length Ft.	Length Inch.	Piece or Pattern Number	Drawing Number	Mat'l.
			KIND	SECTION					
1	2		7/8" WIRE ROPE CLIPS				LI-A	35871	FORGE STL
2									
3	2		1/4 x 12 JAW & EYE TURNBUCKLE				LI-B	35871	FORGE STL
4									
5	2		OPEN WEDGE SOCKET FOR 7/8 ROPE				LI-C	35871	CAST STL
6									
7	150'		7/8" DIA. 6x19 I.W.R.C. IPS WIRE ROPE (34.6 TON BREAKING STRENGTH)						
8									
9									
10									
11									
12									
13									
14									
15									
16									
17	1 pc		#14 LOCKING WIRE		2 0		LI-D	35871	LOCK WIRE
18									
19									
20									
21									
22									
23									
24									

REFERENCE DRAWINGS  
 RACK DRIVE ARR'G'T. 347112-U4  
 RACK DRUM 347114-U2

NOTE:  
 PRETENSION RACK ROPE WITH TROLLEY AT EXTREME TRAVEL TO LIMIT SAG IN LONGER ROPE TO 3/4"

NOMINAL MACHINING DIMENSIONS ± 0.010 UNLESS NOTED

CONTR. NO.	REFERENCE DWGS.

REV.	ITEM	PANEL	DESCRIPTION	AUTH'D & DATE

This drawing, including the information it contains, is the property of Dravo Corporation. It is submitted only in connection with the transaction to which it pertains and must not be used in any manner detrimental to the interests of Dravo Corporation. The drawing is not to be copied and must be returned upon request.

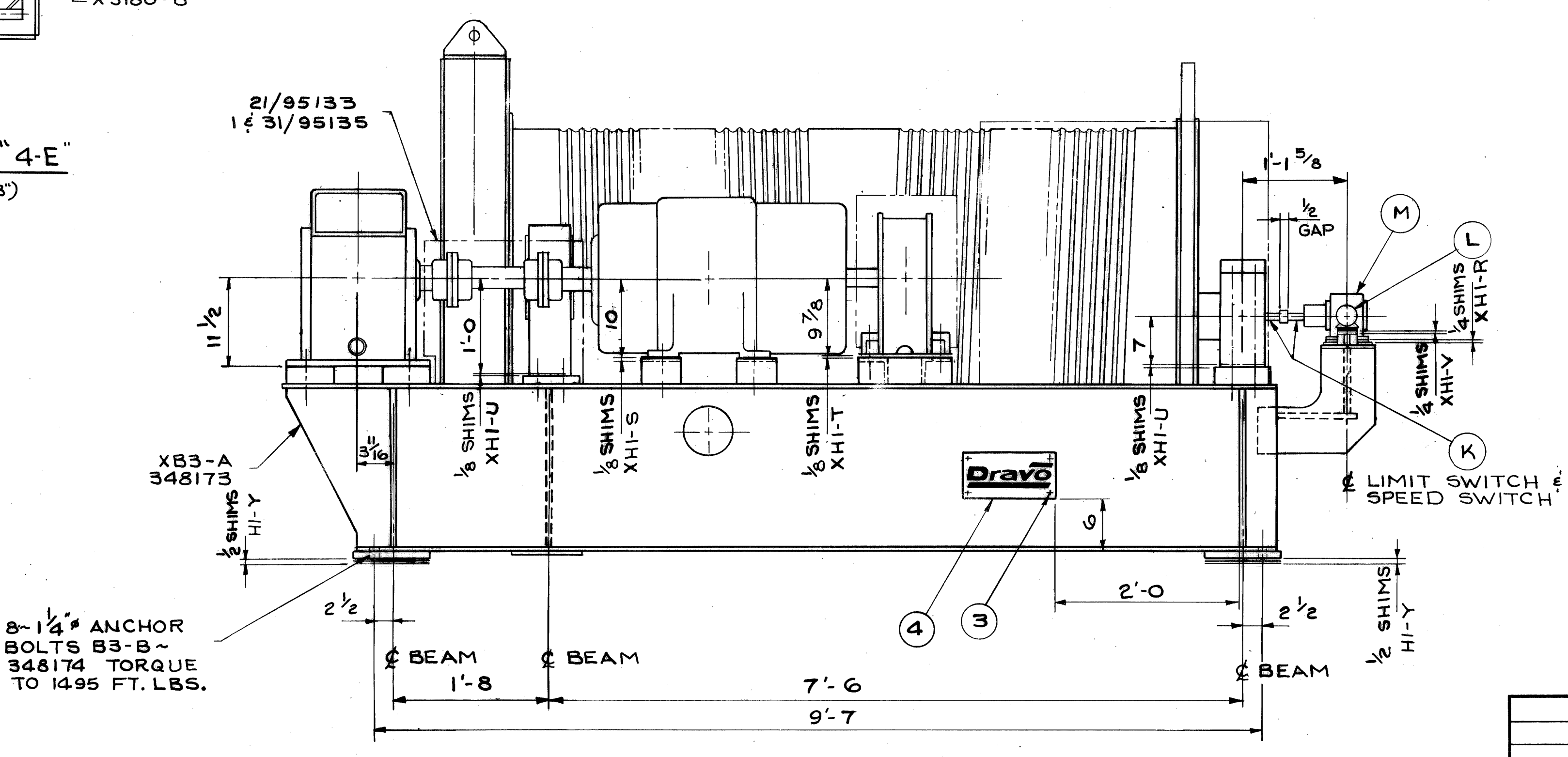
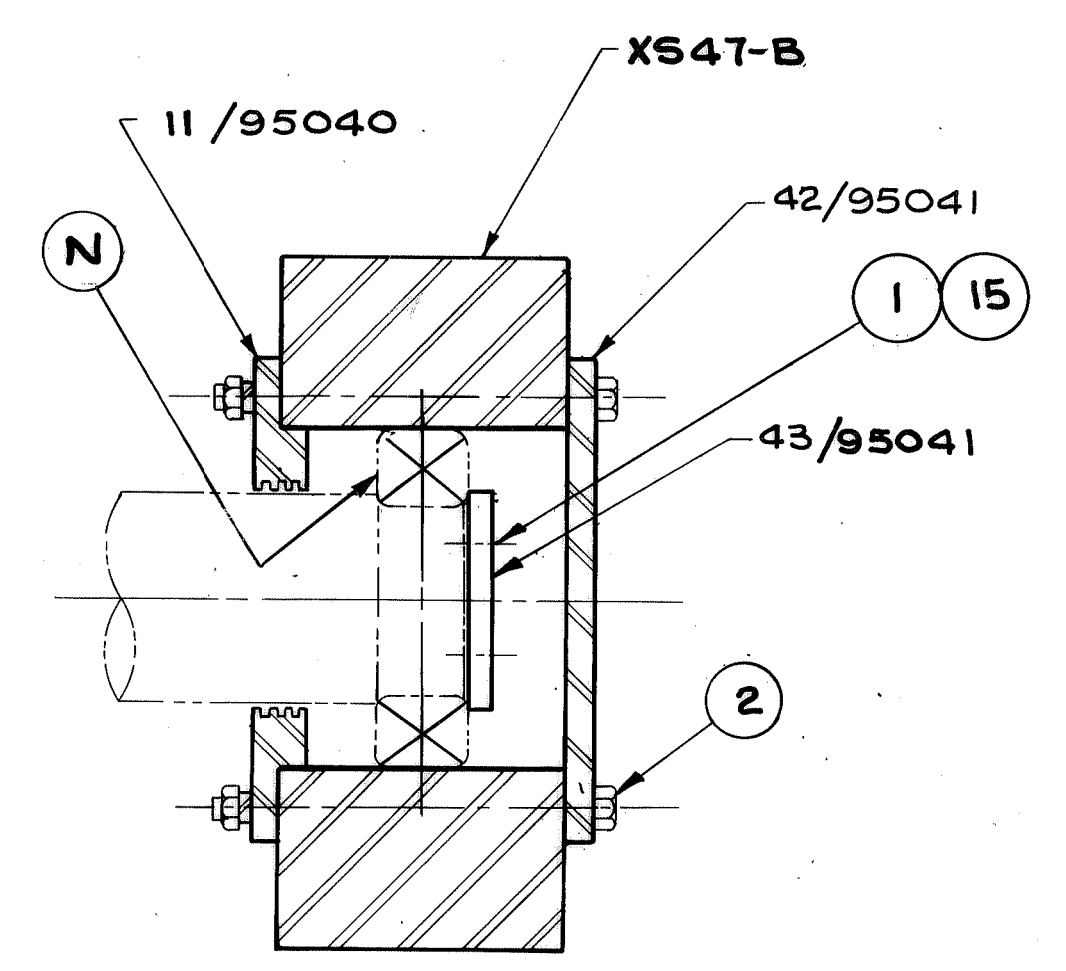
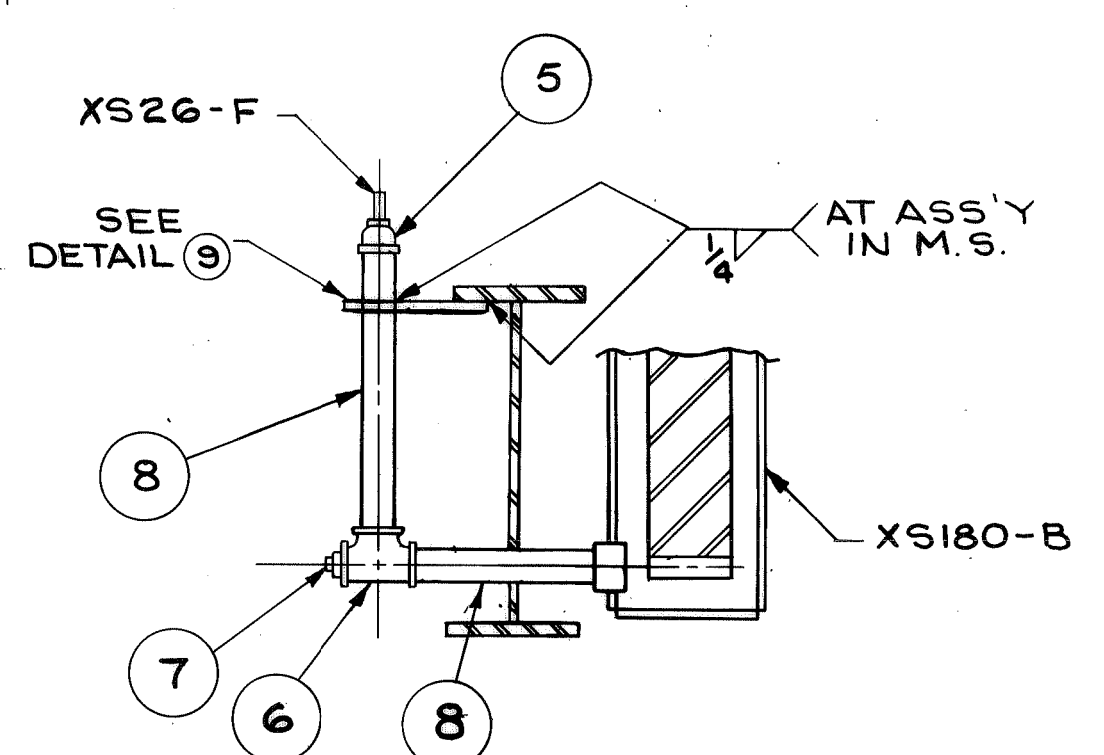
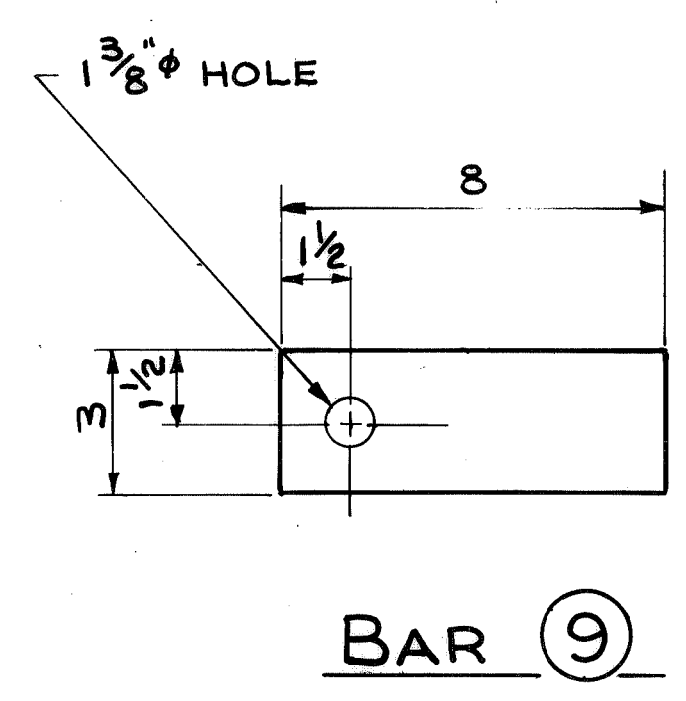
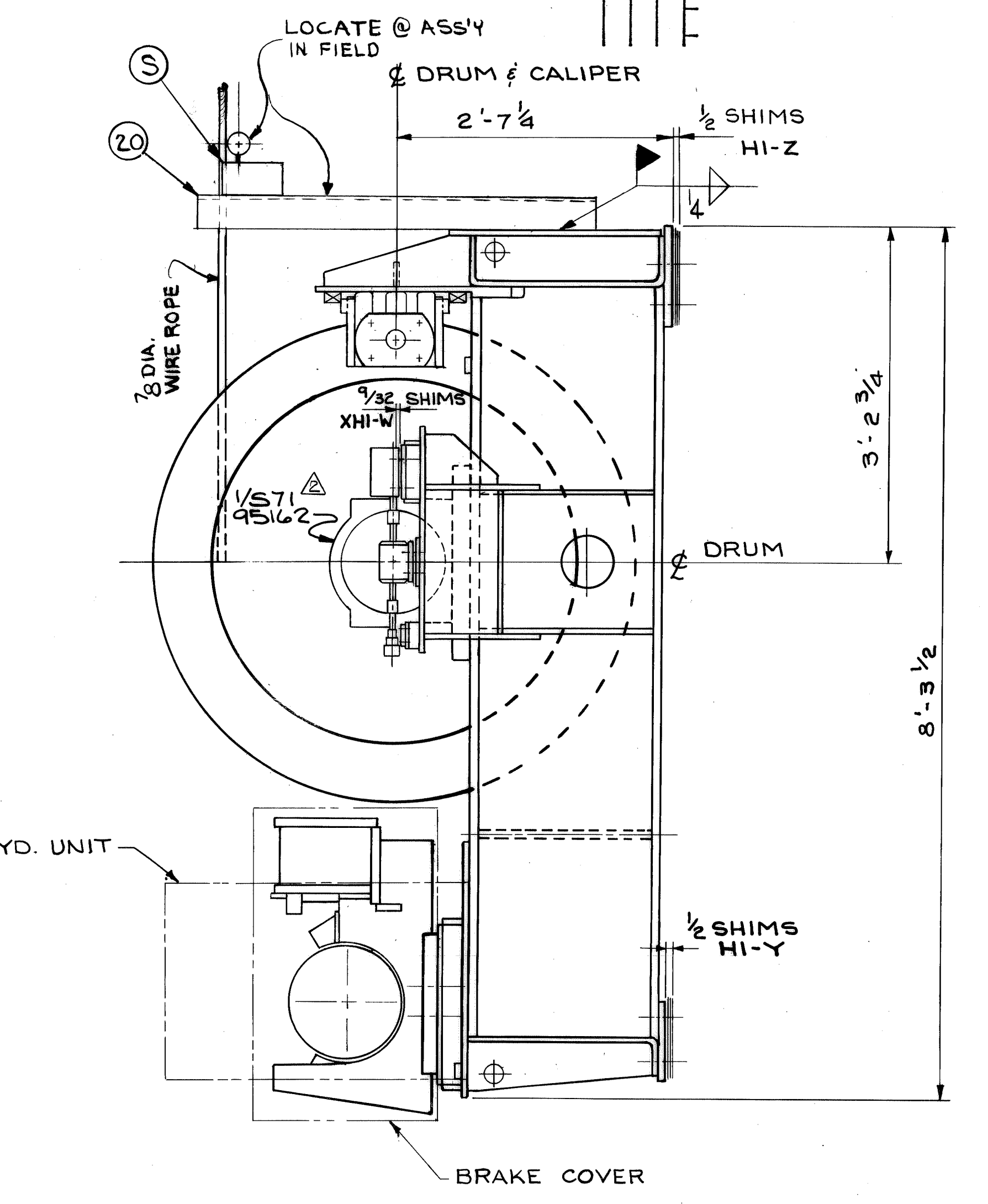
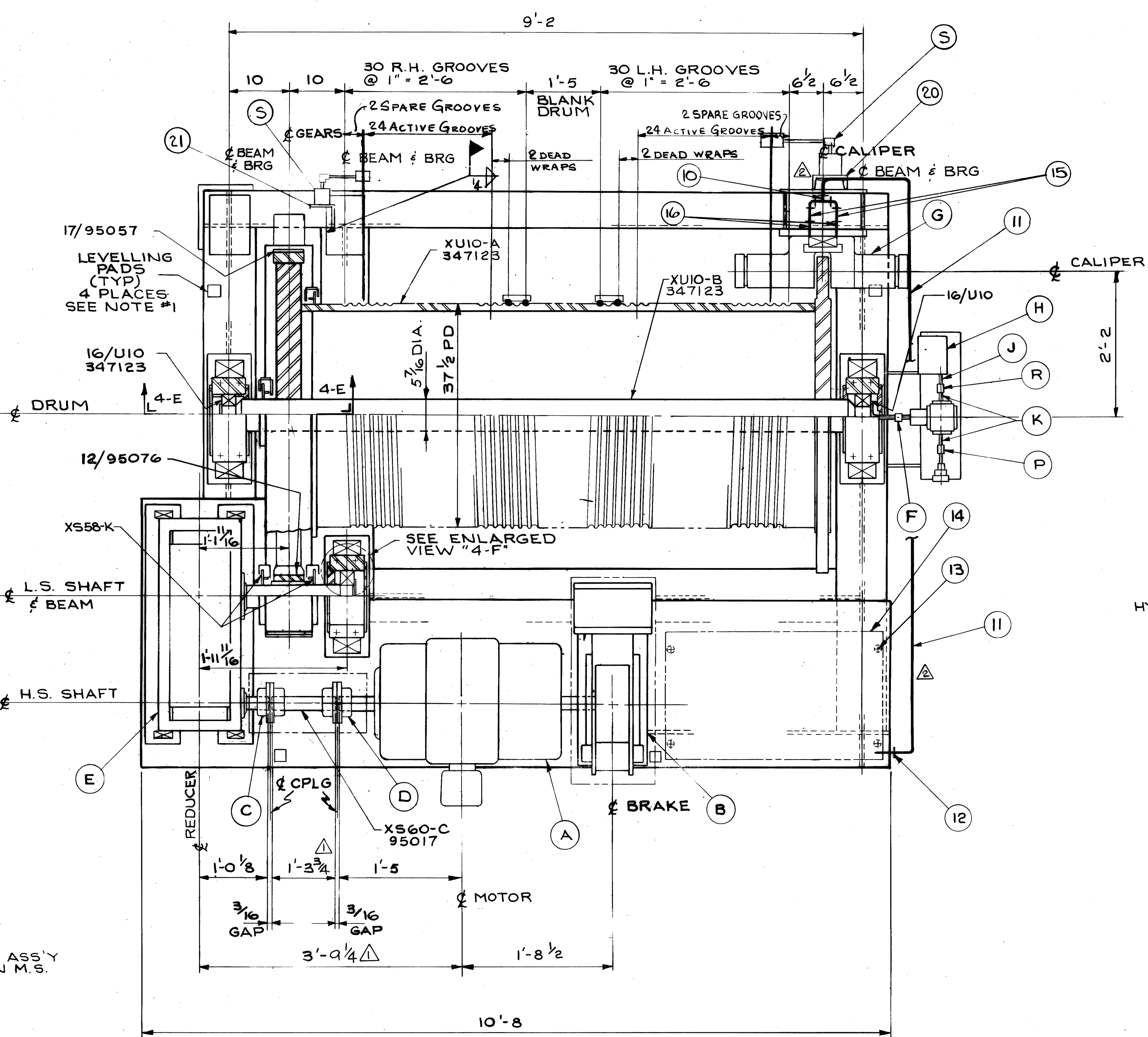
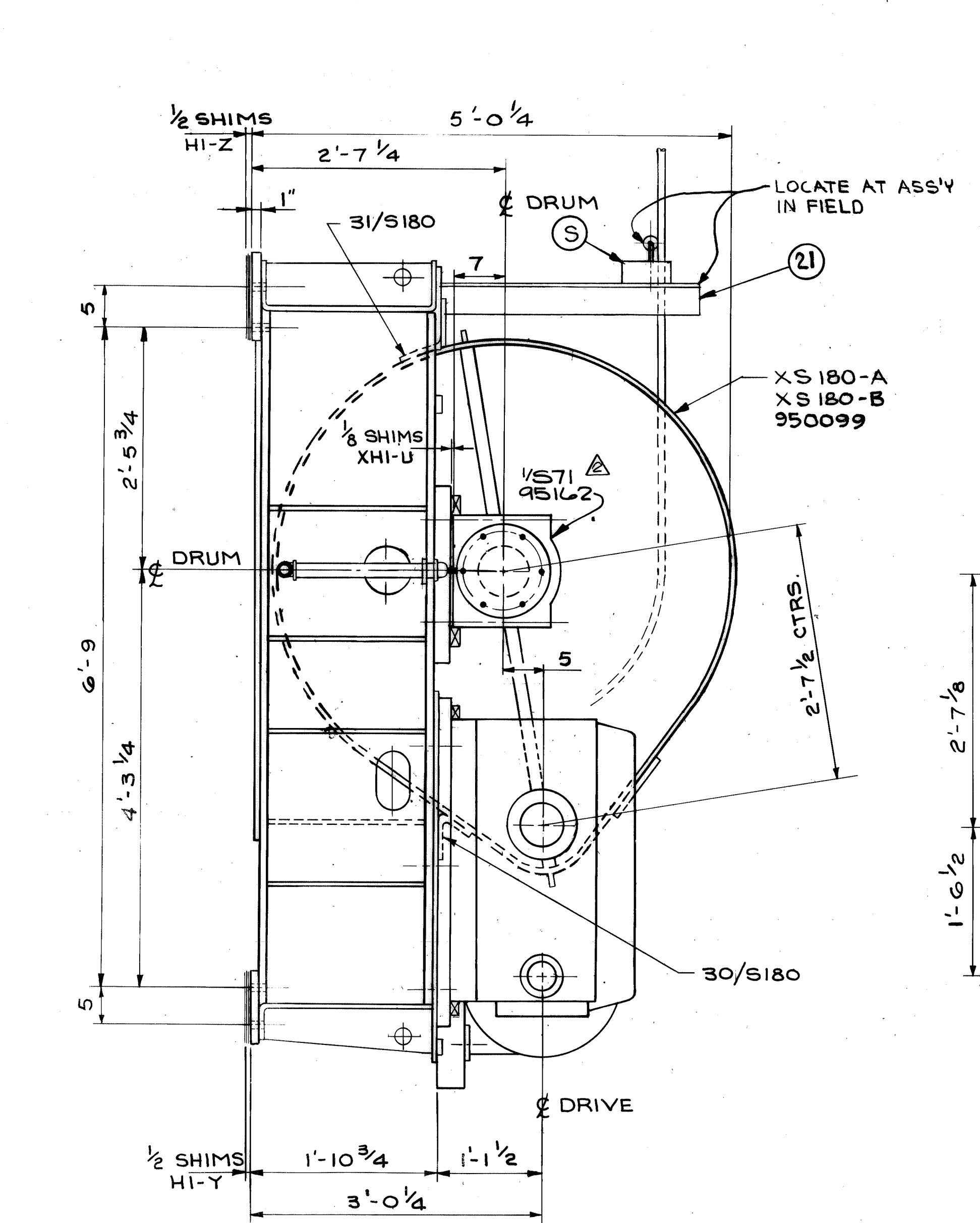
NO. REQ'D	CONTRACT NO.	SHOP BILL NO.	SHOPS	DIST.
1	W-4139		M.S.	BLOU
CONTINUOUS BARGE UNLOADER RACK LINE REEVING ARRANGEMENT				
SCALE 1/2" = 1'-0"		PASSED <i>Touche</i> 6/30/80		
DR. J. STURTZ 6-6-80		APP'D. <i>J. W. Selvester</i> 6/1/80		
CHK. <i>P. Park</i> 6-26-80		AHZ 7/25/80		
DRAWING NO.				REV.
35871				



DRAVO CORPORATION, PITTSBURGH, PA. DIV E.W.D.

SHEET

REV. ITEM	DESCRIPTION	AUTHOR	DATE	REF.
1	REV. SHAFT DIM. IN HI-A	BJR	12-15-80	
2	REV. DIM. OF (C) & (D) - ADDED	BJR	2-19-85	
3	REV. DIM. OF PILLOW BLOCK	BJR	2-19-85	
4	REV. DIM. OF REM. (E)	BJR	2-19-85	



8-1/4" ANCHOR BOLTS B3-B ~ 348174 TORQUE TO 1495 FT. LBS.

REFERENCE DRAWINGS

HOIST BASE	348173 ~ B3
HOIST DRUM & DRUM SHAFT ASS'Y	347123 ~ U10
GEAR GUARD DETAIL	950099 ~ S180
REEVING ARRANGEMENT	348163 ~ B2
REEVING ARRANGEMENT SECTIONS	348164
HOIST BASE SECTIONS	348174 ~ B4
COUPLING GUARD	95133 & 95135
FLOATING SHAFT	95017 ~ S60
RING GEAR	95057 ~ I7
PINION	95076 ~ I2
OIL GAGE ASS'Y	95075 ~ S7
ROPE ANCHOR	95996 ~ S57
RETAINER PLATE	95040 ~ S10
END PLATE	95041 ~ S11
RETAINER PLATE ASS'Y	95043 ~ S7
SHAFT EXTENSION ASS'Y	95095 ~ S33
GEAR GUARD SPACER	95116 ~ S58
SPACER	95117 ~ S33
PILLOW BLOCKS	95157 ~ S47

- NOTES:
1. M.S. TO LEVEL BASE TO LEVELLING PADS BEFORE ASSEMBLING MACHINERY
  2. WORK THIS DRAWING WITH 347111 (BILL OF MAT'L.)
  3. MAX. LINE PULL ---- 9500 LBS.
  4. LINE SPEED ---- 122 F.P.M.

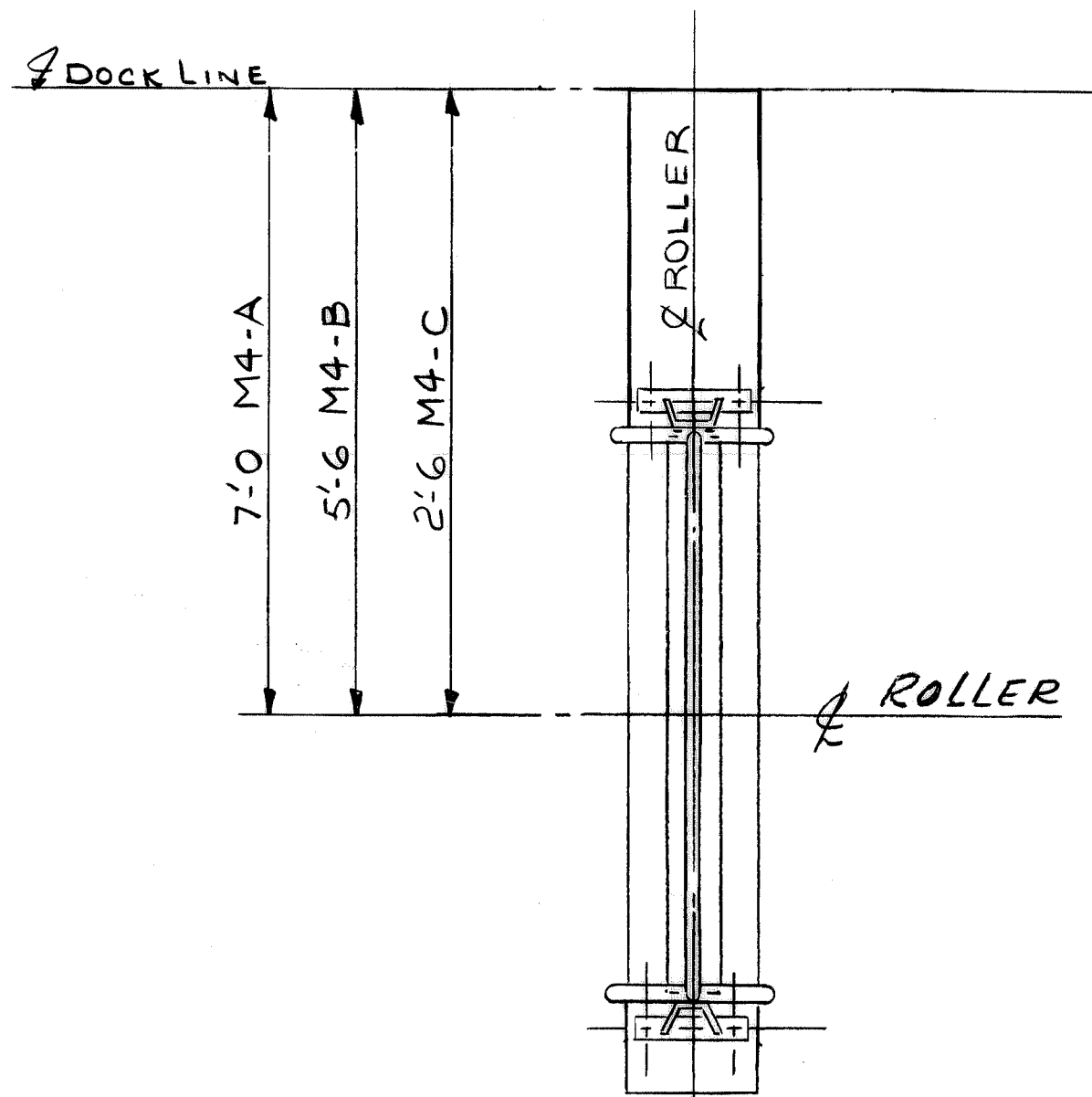
HOIST ARRANGEMENT HI-A  
(WEIGHT = 18,000 LBS.)

CONTR. NO.	REFERENCE DWGS.	SHEET
0	1	1
1	2	2
2	3	3
3	4	4
4	5	5
5	6	6
6	7	7
7	8	8
8	9	9

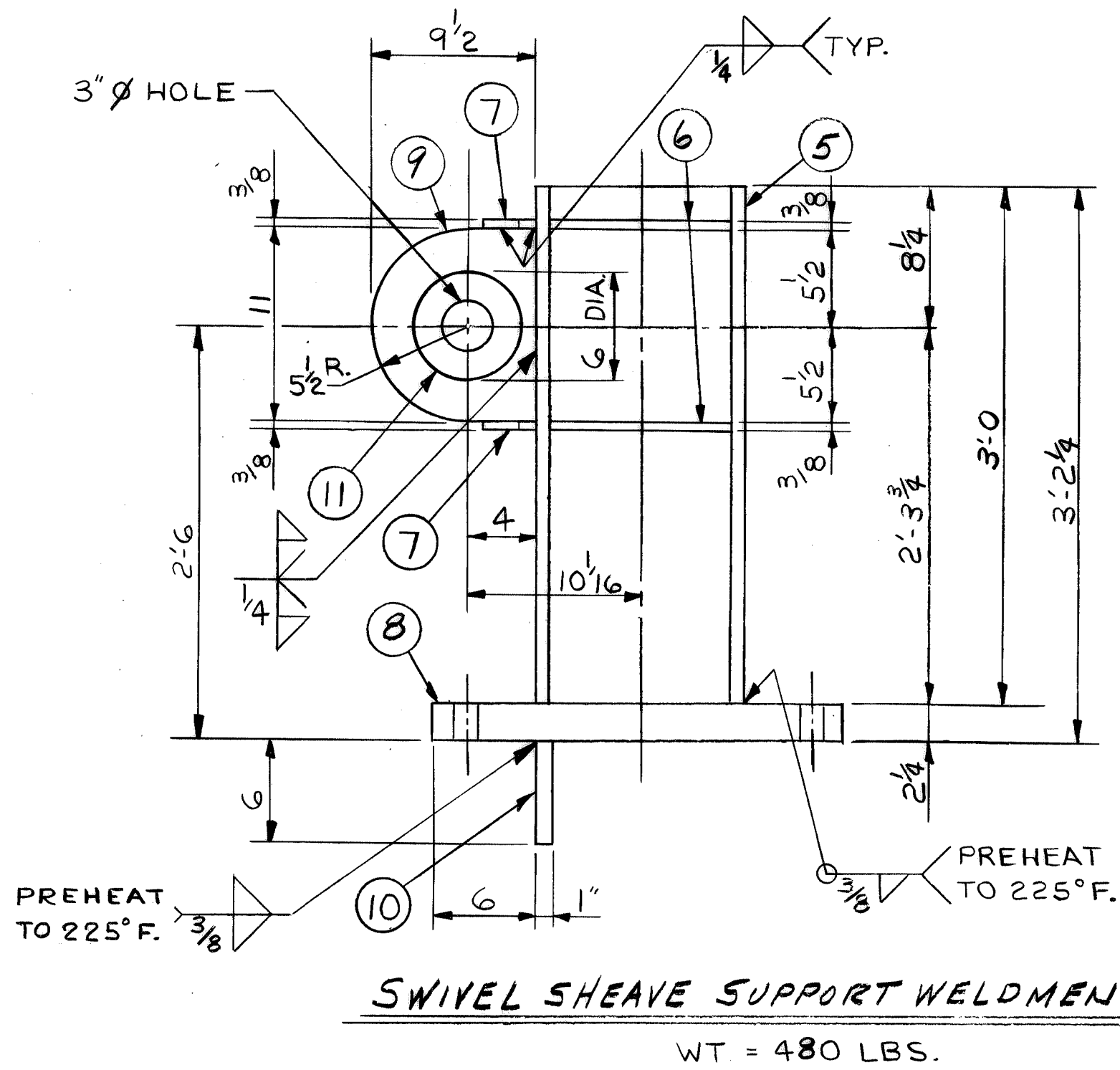
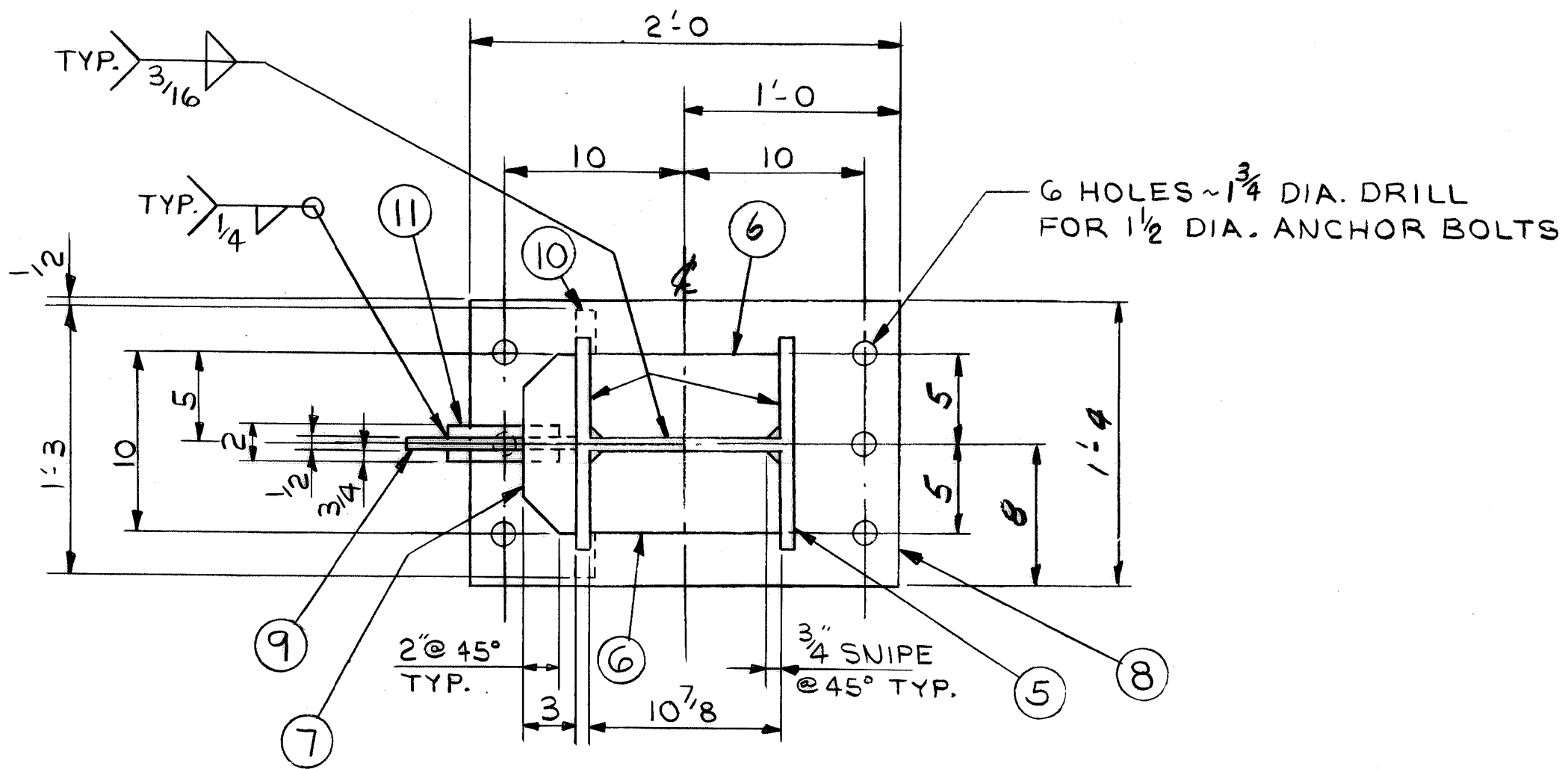
1	W-4139	443-447	MS,SS	BLOU
NO.	CONTRACT	SHOP BILL NO.	SHOPS	DIST.
<b>BARGE UNLOADER DIGGING ARM HOIST ARRANGEMENT</b>				
SCALE 1" = 1'-0		APP'D R.P. Lombardi		
DR VINSKI 17-23-80		DATE 1/18/80		
CHW 1/16/80		STANLEY CONS. CONJTR. #213		
ANZ 9/26/80		DRAWING NO. REV.		
<b>Dravo</b>		<b>347110</b>		
DRAVO CORPORATION, PITTSBURGH, PA. DIV EWD				



A  
B  
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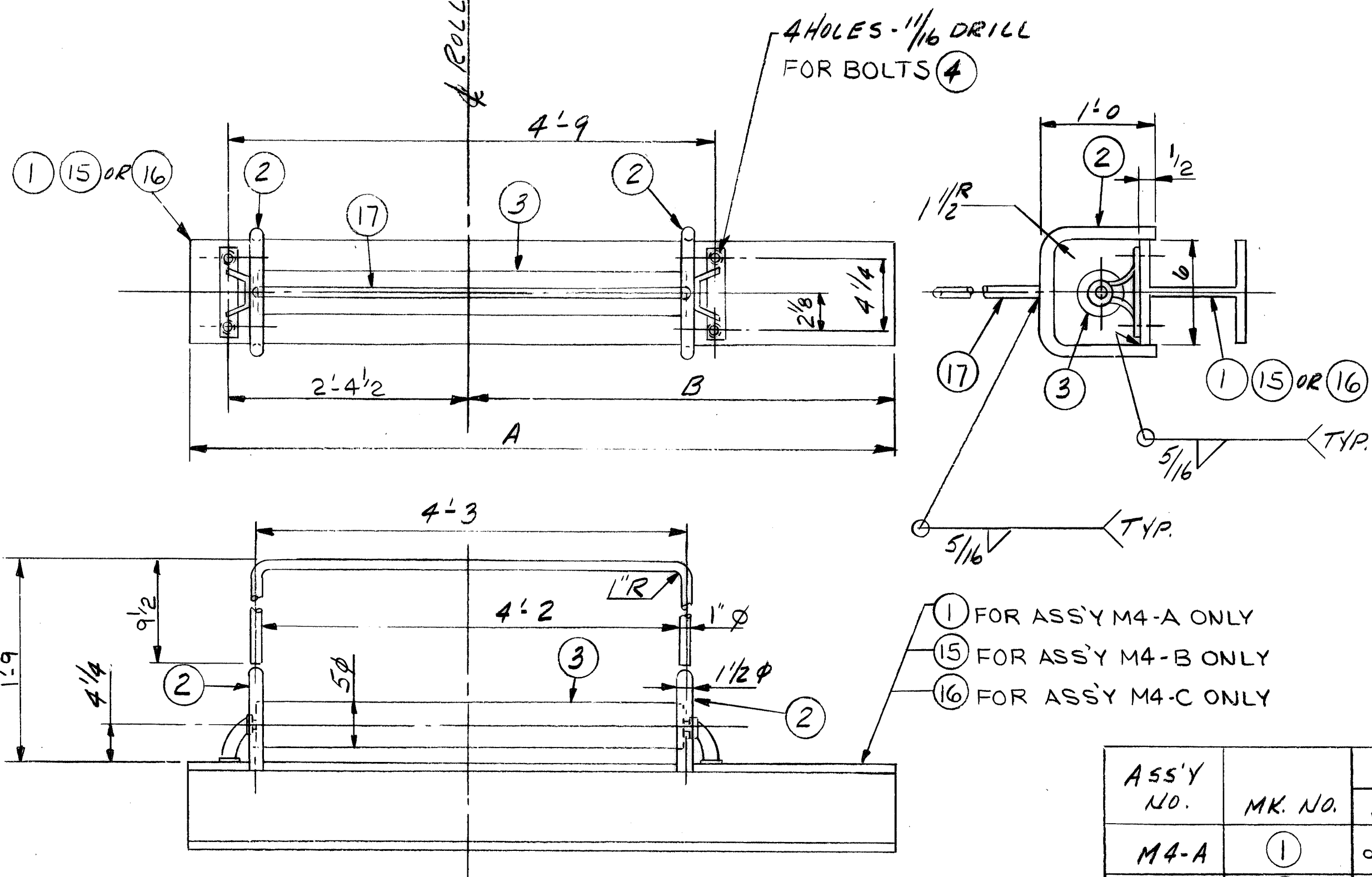


TYPICAL SUPPORT ROLLER ARRGT.



SWIVEL SHEAVE SUPPORT WELDMENT-M4-D

WT = 480 LBS.



- 1 FOR ASS'Y M4-A ONLY
- 15 FOR ASS'Y M4-B ONLY
- 16 FOR ASS'Y M4-C ONLY

ASS'Y NO.	MK. NO.	DIM.		WT.
		A	B	
M4-A	1	9'-9"	7'-0"	220
M4-B	15	8'-3"	5'-6"	200
M4-C	16	5'-3"	2'-6"	155

SUPPORT ROLLER BRACKET ASS'Y  
M4-A, M4-B, & M4-C

NO.	QTY.	DESCRIPTION	SECTION	LENGTH	PIECE OR PATTERN NUMBER	DRAWING NUMBER	MATERIAL
1		1~SUPPORT ROLLER BRKT ASS'Y M4-A			M4	347125	STL
1		1~SUPPORT ROLLER BRKT ASS'Y M4-B			M4		STL
2		2~SUPPORT ROLLER BRKT ASS'Y M4-C			M4		STL
1		1 W6 X 15 (FOR M4-A ONLY)	9	9	M4	347125	STL
2		2 RND. (BENT) 1 1/2" DIA.	2	4 3/8	M4		STL
1		1 JEFFREY PERMASEAL TYPE MD 151 BELT IDLER ROLLER - 4 1/4" STAND #13 LG. ROLLER - 5" DIA. CAT.# 769265			M4		
4		4 HEX HD BOLT - 5/8" - 1 1/2" UNF. 2 X 0 - 1 1/2" LG. WITH HEX NUT & LOCK WASHER	4		M4		STL
1		1 W6 X 15 (FOR M4-B ONLY)	8	3	M4		STL
1		1 W6 X 15 (FOR M4-C ONLY)	5	3	M4		STL
1		1 RND. (BENT) 1" DIA.	5	7 3/8	M4		STL

NO.	QTY.	DESCRIPTION	SECTION	LENGTH	PIECE OR PATTERN NUMBER	DRAWING NUMBER	MATERIAL		
								FT.	INCH.
1		1~SWIVEL SHEAVE SUPPORT WELDMT M4-D			M4		STL		
1		1 W	12 X 65	3	0	5	M4	347125	STL
4		4 PL	5 X 3/8	0	10	6	M4		STL
2		2 PL	3 X 3/8	0	10	7	M4		STL
1		1 PL	16 X 2 1/4	2	0	8	M4		STL
1		1 PL	9 1/2 X 1/2	0	11	9	M4		STL
1		1 PL	6 X 1"	1	3	10	M4		STL
2		2 PL	6" DIA.	0	0	11	M4		STL

BRUNING 44-11-25121-6

4

3

2

1

(37)

NOMINAL MACHINING DIMENSIONS ± 0.010 UNLESS NOTED

CONTR. NO.	W-4139
REFERENCE DWGS.	347306-M2
DR	DR
CHK	CHK
DATE	3-10-80
DATE	4-15-80
DATE	4-25-80

NO. 1 W-4139 503.504 55 PAINT B

CONTRACT NO. SHOP BILL NO. SHOPS DIST.

BARGE HAUL  
SUPPORT ROLLERS &  
SWIVEL SHEAVE SUPPORT

REV DIM. L-6, L-16 & L-19 IN 8/M

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

PASSED 10/17/80

APP'D W. Sedwiter 10/17/80

DRAWING NO. 347125

REV. 2

DRAVO CORPORATION, PITTSBURGH, PA DIV E.W.D.

SHEET 1

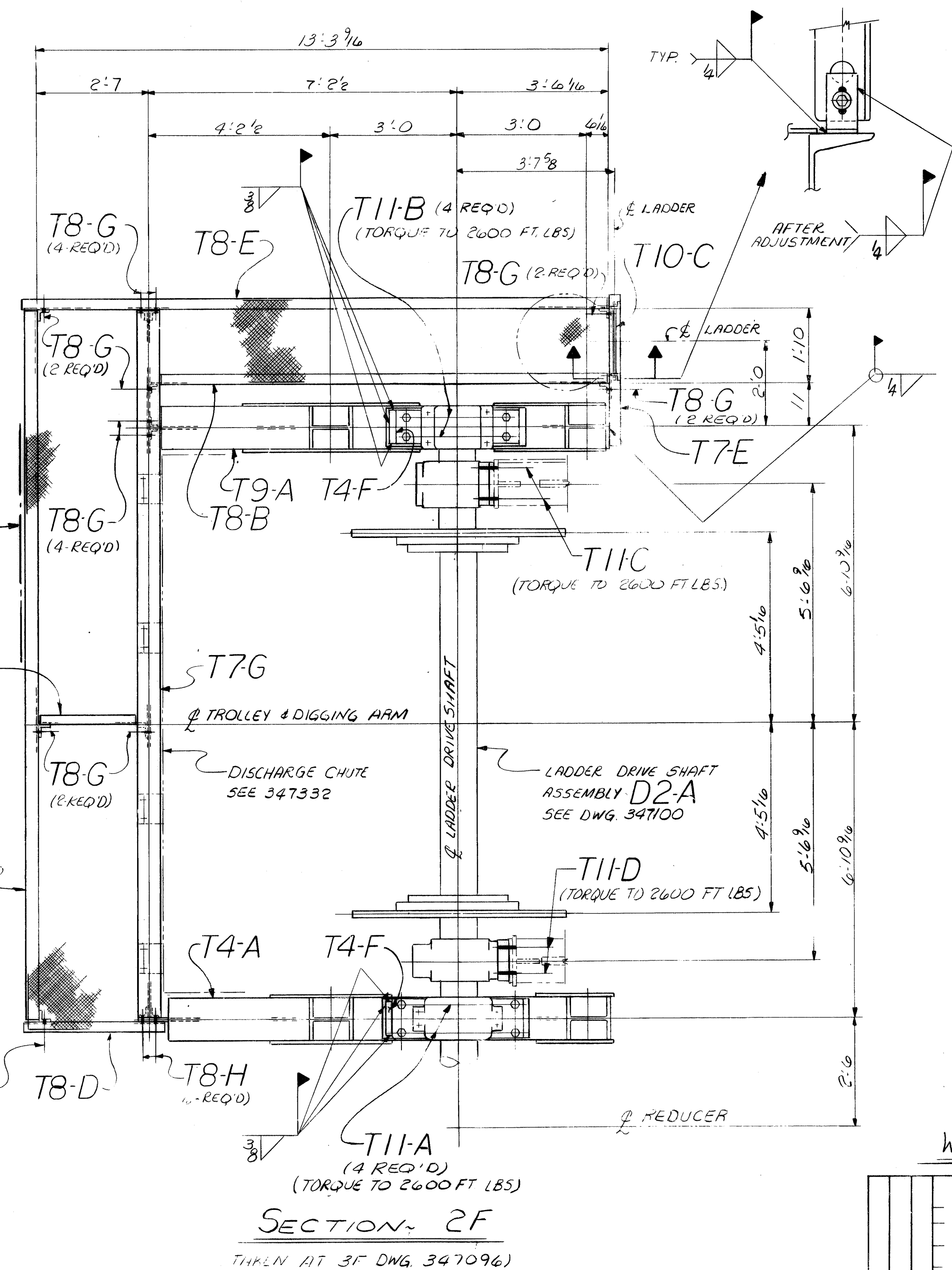
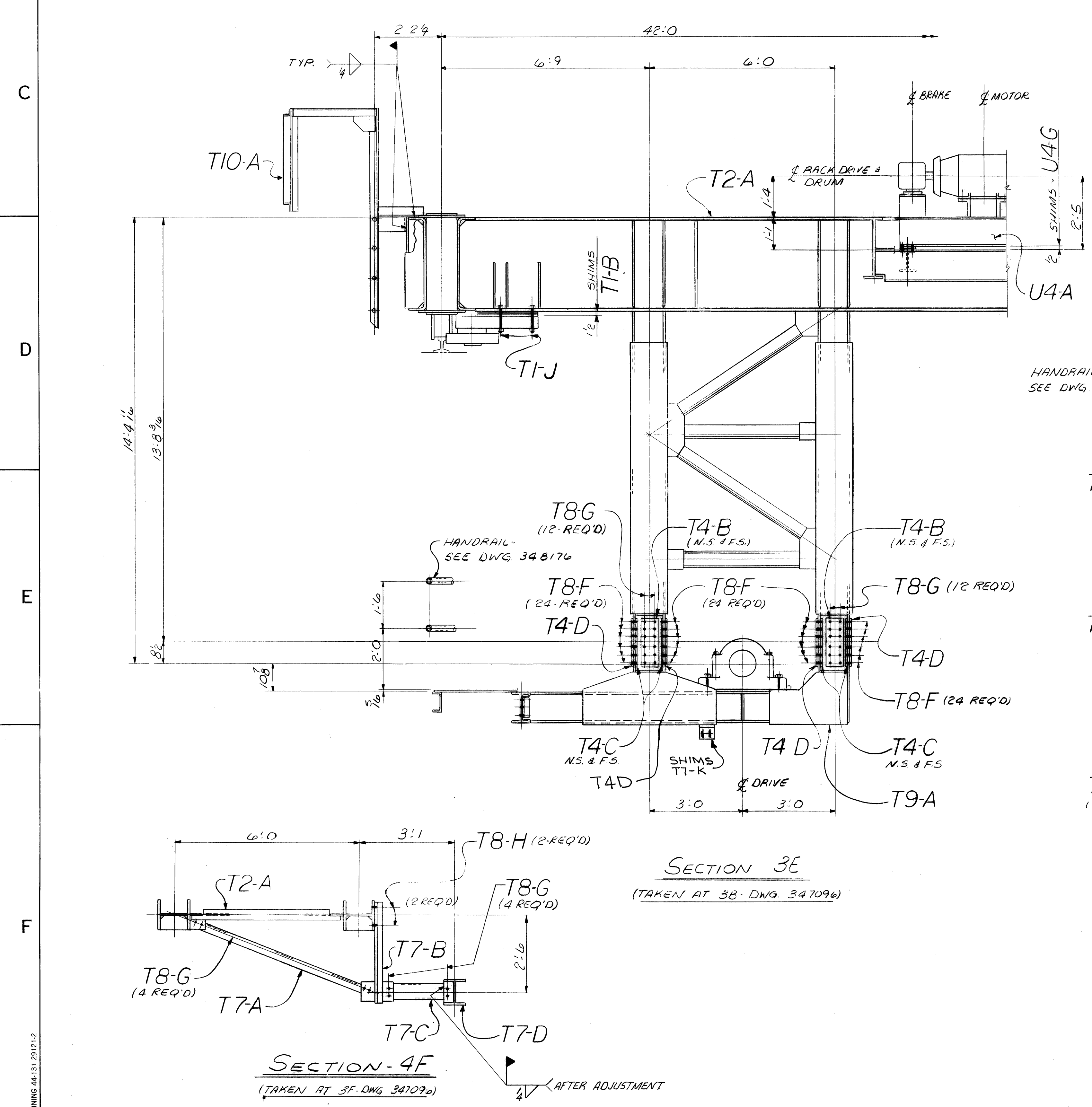


L	No. of Pieces	No. of Pieces From One Assembly Unit	DESCRIPTION	SECTION	Length Ft. Inch.	Drawing Number	Mat'l
1	1	1	TROLLEY ASSEMBLY	T1-A		347137	
2	1	1	TROLLEY FRAME	T2-A		347142	
3	1	1	ANGLE	T7-A		347142	
4	1	1	TIE	T7-B			
5	1	1	C	T7-C			
6	1	1	SUPPORT	T7-D			
7	1	1	C	T7-E			
8	1	1	WALKWAY SUPPORT	T7-G			
9	1	1	WALKWAY SUPPORT	T7-H			
10	2	2	SHIM PACK	T7-I			
11	2	2	SHIM PACK	T7-J			
12	4	4	PLATE	T7-K		347139	
13	1/6	1/6	PLATE	T4-C			
14	8	8	PLATE	T4-D			
15	2	2	CHECK BAR	T4-F			
16	1	1	TROLLEY FRAME	T9-A		347144	
17	1	1	TROLLEY FRAME	T9-B		347143	
18	1	1	WALKWAY SUPPORT	T8-B			
19	1	1	WALKWAY SUPPORT	T8-C			
20	1	1	WALKWAY SUPPORT	T8-E			
21	1	1	C	T8-D			
22	192	192	Hex Hd Bolt				
23			CONTINUED ON S.B.#				

L	No. of Pieces	No. of Pieces From One Assembly Unit	DESCRIPTION	SECTION	Length Ft. Inch.	Drawing Number	Mat'l
1			(CONT. FROM S.B.#)	Trolley Assy-T1-A			
2	86	86	Hex Hd Bolt	T8-G		347143	
3	8	8	Hex Hd Bolt	T8-H		347143	
4	1	1	TROLLEY LADDER	T10-A		347145	
5	1	1	TROLLEY LADDER	T10-B		347145	
6	1	1	TROLLEY LADDER	T10-C		347145	
7	2	2	BEARING RETAINER ASSEMBLY	X420-B		347098	
8	2	2	BEARING CAP ASSEMBLY	X420-O			
9	4	4	WHEEL	X420-L			
10	4	4	WHEEL	X420-R			
11	8/16	8/16	Hex Hd Cap Screw	U40			
12	45	45	WIRE	U40			
13	1/6	1/6	Hex Hd Cap Screw	U40			
14	4	4	PIPE NIPPLE	U40			
15	4	4	PIPE COUPLING	U40			
16	6	6	ARMATURE FITTING	U40			
17	2	2	PIPE FLANG	U40			
18	12	12	Hex Hd Bolt	U40			
19	2	2	AXLE	U40			
20	2	2	END CAP	U40			
21	2	2	GUIDE ROLLER	U40			
22			CONTINUED ON S.B.#				

L	No. of Pieces	No. of Pieces From One Assembly Unit	DESCRIPTION	SECTION	Length Ft. Inch.	Drawing Number	Mat'l
1			(CONT. FROM S.B.#)	Trolley Assy-T1-A			
2	4	4	AXLE	U20		347098	
3	4	4	SPACER	U20			
4	4	4	BEARING CAP B	U20			
5	8	8	BEARING RETAINER B	U20			
6	2	2	TAPER BEARING	T1		347096	
7	1	1	W/BLOTTED CONE SPACER	D2-A		347100	
8	2	2	FLAT WARMER	D2-B			
9	2	2	SCOTED NUTS	D2-C			
10	2	2	COTTER PIN	D2-D			
11	2	2	PN	D2-E			
12	2	2	BUSHING	D2-F			
13	1	1	RAIL DRIVE ASSEMBLY	U4-A		347112	
14	12	12	Hex Hd Bolts	U4-B			
15	6	6	SHIM PACK	U4-G			
16	1	1	DIGGING ARM ASSEMBLY	H1-A		347110	
17	2	2	SHIM PACK	H1-Y		347110	
18	2	2	TROLLEY SHAFT ASSEMBLY	B2-B		347109	
19	2	2	SHIM PACK	H1-Z		347110	
20	8	8	Hex Hd Bolts	B3-B		347113	
21			CONTINUED ON S.B.#				

L	No. of Pieces	No. of Pieces From One Assembly Unit	DESCRIPTION	SECTION	Length Ft. Inch.	Drawing Number	Mat'l
1			(CONT. FROM S.B.#)	Trolley Assy-T1-A			
2	1	1	SHIM PACK	T1-H		347096	
3	1	1	SHIM PACK	T1-B		347096	
4	4	4	Hex Hd Bolt 1/4"	O 8		347096	1325
5	4	4	W/Hex Nut & Hard Fl W				
6	4	4	Hex Hd Bolt 1/4"	O 82		347096	1325
7	4	4	W/Hex Nut & Hard Fl W				
8							
9	2	2	Check Bar 3x2	T1-G		347096	276
10							
11	6	6	WT 3x7.5	T1-M		347096	A36
12							
13	1	1	ROPE GUARD	T10-G		347145	
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24			CONT. ON S.B.#				



L	No. of Pieces	No. of Pieces From One Assembly Unit	DESCRIPTION	SECTION	Length Ft. Inch.	Drawing Number	Mat'l
1			(CONT. FROM S.B.#)	Trolley Assy-T1-A			
2	4	4	Hex Hd Bolt 1/2"	O 7		347097	325
3	4	4	W/HARD. FL. W.				
4	4	4	Hex Hd Bolt 1/2"	O 74		347097	325
5	4	4	W/HARD. FL. W.				
6	4	4	Hex Hd Bolt 1/2"	O 63		347097	325
7	4	4	W/HARD. FL. W.				
8	4	4	Hex Hd Bolt 1/2"	O 64		347097	325
9	4	4	W/HARD. FL. W.				
10	24	24	Hex Hd Bolt 3/8"	O 3		347097	325
11	4	4	W/HARD. FL. W.				
12							
13							
14							
15							
16							
17							
18							
19	1	1	FLAT BELT RETURN IDLER 18" WIDTH 4" DIA. CEMA I	T11-J		347097	
20							
21	4	4	Hex Hd Bolt 1/2"			347097	325
22	4	4	W/Hex Nut & Hard Fl. W.				
23							
24			CONT. ON S.B.#				

WORK THIS DRAWING WITH DRAWING 347097/T1 & 347101/D1

NO. 1	W4/39	21 THEU 28	M5 55	B/110
CONTRACT NO.		SHOP BILL NO.	SHOP	DIST.
CONTINUOUS BARGE UNLOADER TROLLEY ASSEMBLY & GENERAL ARRANGEMENT SECTIONS				
SCALE	1/2" = 1'-0"	PASSED	10/2/80	
AUTHOR	MUSHER	DATE	8-6-80	
CHKD BY	CHAS. COLEMAN	DATE	9-2-80	
REV. ITEM	DESCRIPTION			
1	ADD SHIMS T1-K			
DWG. REVISIONS				
DRAWING NO. 347097				
REV. 1				

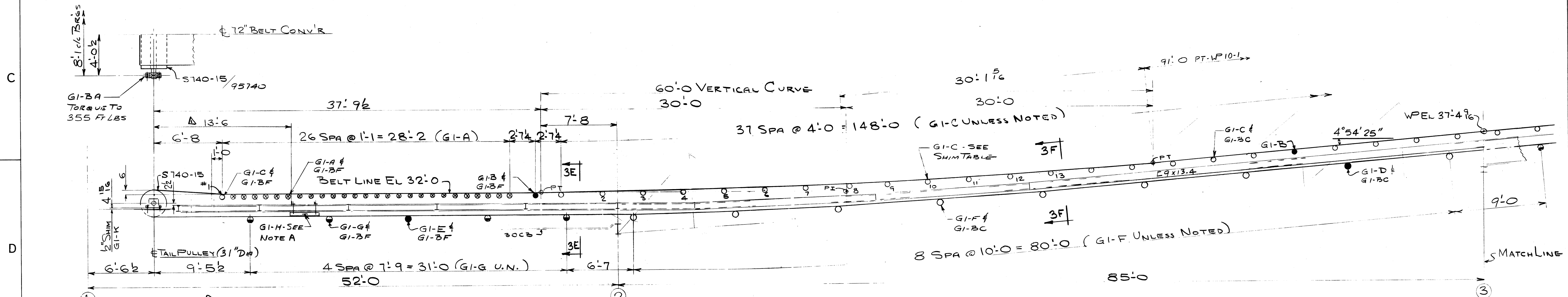


NO.	QTY.	DESCRIPTION	SECTION	LENGTH	PIECE OR PATTERN NUMBER	DRAWING NUMBER	MATERIAL
26		72"-35° TROUGH IMPACT IDLER w/3 EQUAL 7" RUBBER DISC ROLLS			G1-A	348170	
2		72"-35° TROUGH TRAINING IDLER w/3 EQUAL 6" STEEL ROLLS			G1-B		
38		72"-35° TROUGH IDLER w/3 EQUAL 6" STEEL ROLLS			G1-C		
1		72"-7" RUBBER DISC RETURN TRAINING IDLER			G1-D		
1		72"-7" RUBBER DISC RETURN TRAINING IDLER			G1-E		

NO.	QTY.	DESCRIPTION	SECTION	LENGTH	PIECE OR PATTERN NUMBER	DRAWING NUMBER	MATERIAL
8		72"-7" RUBBER DISC RETURN IDLER CEMA E7			G1-F	348170	
12		72"-7" RUBBER DISC RETURN IDLER CEMA E7			G1-G		
1		BELT WIPER CONVR COMPONENTS Co. MODEL HPT FOR 72" BELT			G1-H		
1		PULLEY ASSEMBLY w/ ST40-15 95740 SHEET & SKF DRG'S N° SAFS22522A 31" DIA (OVER LAGGING)					
2		1/2" SHIM PACK (SEE SB356)			G1-K	348170	STL

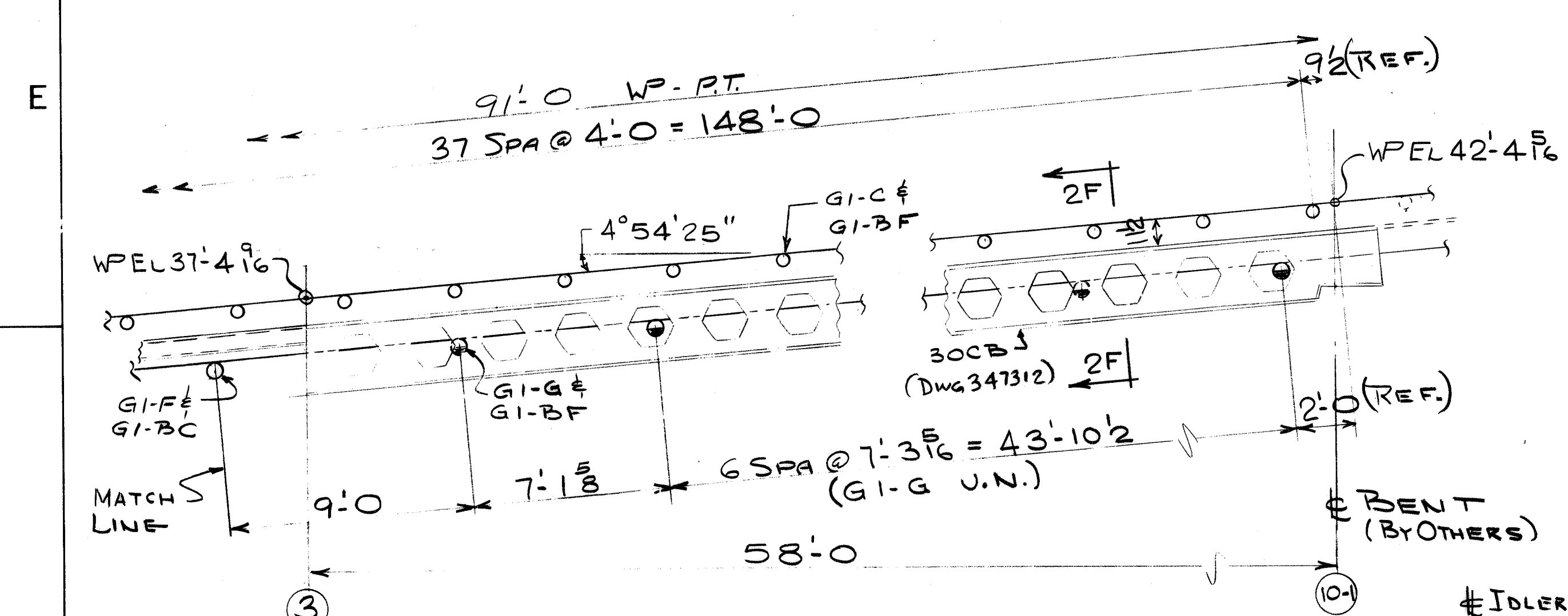
NO.	QTY.	DESCRIPTION	SECTION	LENGTH	PIECE OR PATTERN NUMBER	DRAWING NUMBER	MATERIAL
8		HEX HD BOLT 3/8" x 4 1/2" LG w/ HVY HEX NUT & HD F.W.			G1-BA	348170	304S
12		HEX HD BOLTS 3/8" x 3 1/2" LG w/ HEX NUT, L.V. & BEV.W.			G1-BB		STL
120		HEX HD BOLTS 3/8" x 3" LG w/ HEX NUT, L.V. & BEV.W.			G1-BC		STL
4		HEX HD BOLTS 3/8" x 4 1/4" LG w/ HEX NUT, L.V. & BEV.W.			G1-BD		STL
240		HEX HD BOLTS 3/8" x 3" LG w/ HEX NUT & L.W.			G1-BE		STL

NO.	QTY.	DESCRIPTION	SECTION	LENGTH	PIECE OR PATTERN NUMBER	DRAWING NUMBER	MATERIAL
1							
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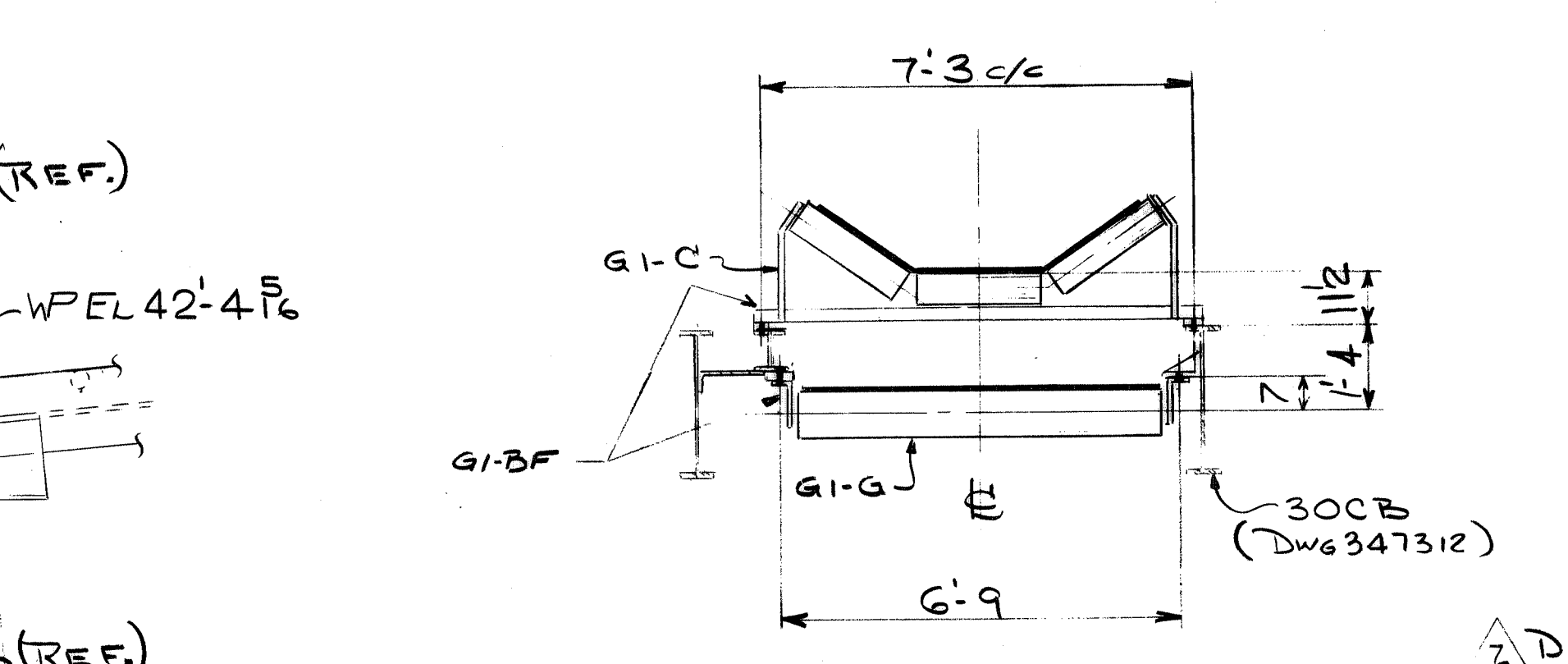


NOTE A:  
 PROVIDE 13" FIELD HOLES IN CONVR FRAME & BELT WIPER SUPPORT ANGLES FOR BOLTS G1-BF. 4 REQ'D - LOCATE TO SUIT.

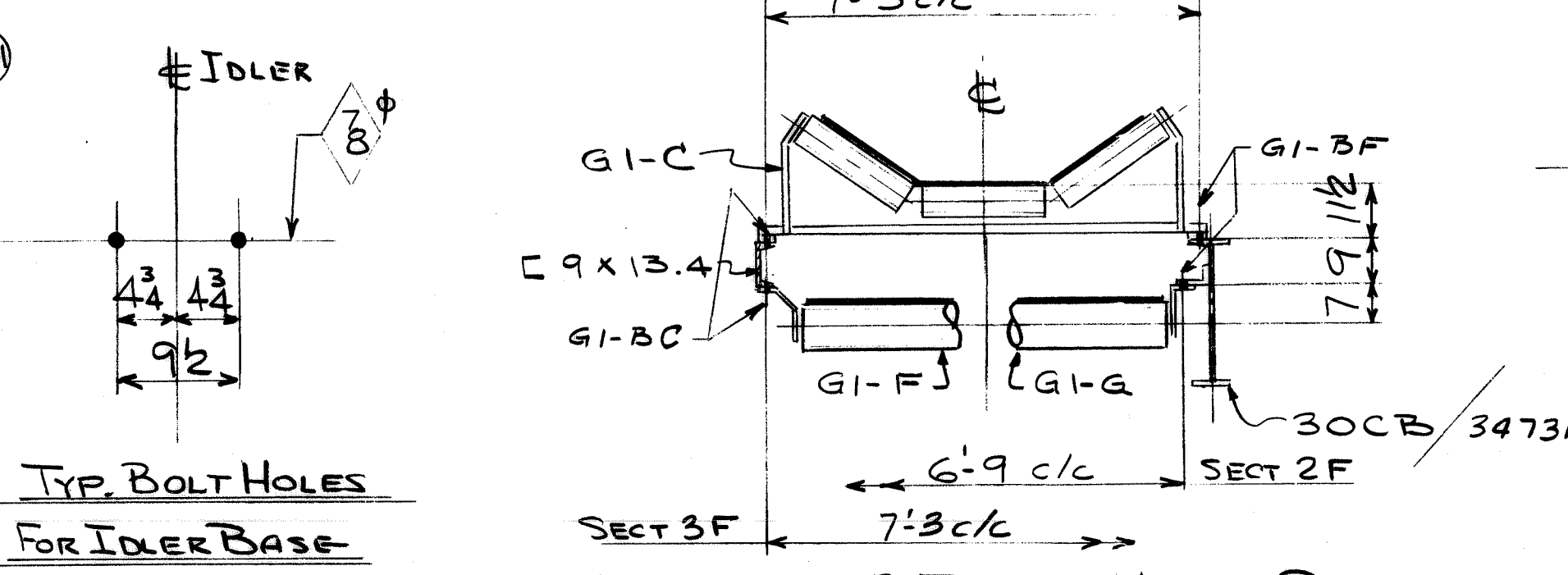
ELEVATION - LOOKING NORTH



ELEVATION - LOOKING NORTH



SECTION 3E

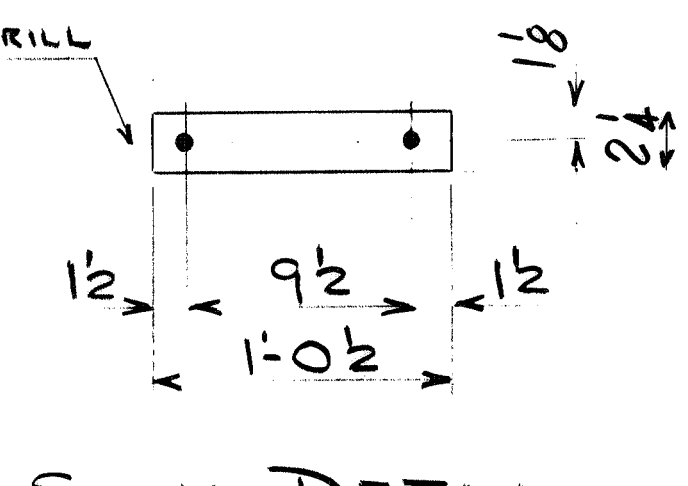


HALF SECTION 3F HALF SECTION 2F

IDLER#	SHIM	BOLT
1	b	G1-BF
2	b	G1-BC
3	b	G1-BB
4	b	G1-BA
5	b	G1-BB
6	b	G1-BC
7	b	G1-BC
8	b	G1-BC
9	b	G1-BC
10	b	G1-BC
11	b	G1-BC
12	b	G1-BB
13	b	G1-BC

○	WIDE BASE TROUGH & RETURN
⊗	WIDE BASE IMPACT
●	TRAINERS
○	STD BASE RETURN

- GENERAL NOTES!
1. TAPER LOCK HUBS ON PULLEY ASS'Y TO BE RETIGHTENED AFTER TWO HOURS OF CONTINUOUS OPERATION.
  2. ALL IDLER & TAIL PULLEY LUBRICATION FIT'GS TO BE PIPED TO THE WALKWAY BY THE ERECTOR. ERECTOR TO SUPPLY ALL TUBING & FIT'GS AS REQ'D. TUBING TO BE COPPER. FIT'GS TO BE ZERK TYPE.
  3. ALL IDLER SHIMS TO BE SUPPLIED BY ERECTOR.
  4. CONVR SPEC'S:  
 CAPACITY: 5000 T.P.H.  
 BELT SPEED: 733 F.P.M.



SHIM DETAIL

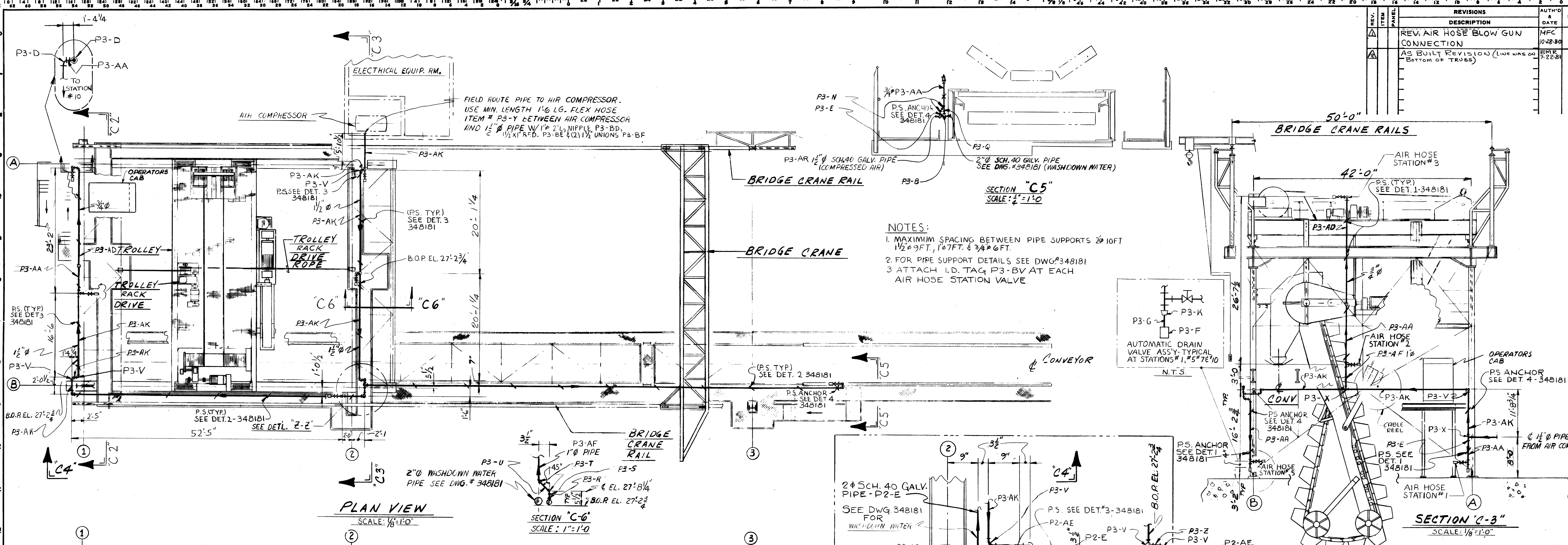
NO. REQ'D	W4139	350, TRV 35G	NO SHOP	BLBU
CONTRACT NO.		SHOP BILL NO.	SHOPS	DIST.
CONTINUOUS BARGE UNLOADER 72" GATHERING CONVEYOR PROFILE				
REV.	ITEM	DESCRIPTION	DATE	SCALE 1/8" = 1'-0"
1	DA	MOVED G1-F REVISED NOTE 2	5-21-80	PASSED
		DWG REVISIONS	AUTH & DATE	APP'D. W. ...
This drawing, including the information it contains, is the property of Drawo Corporation. It is submitted only in connection with the transaction to which it pertains and must not be used in any manner detrimental to the interests of Drawo Corporation. The drawing is not to be copied and must be returned upon request.				
CONTR NO	347312	REFERENCE DWGS	DRAYO CORPORATION PITTSBURGH PA	DIV EWD
				DRAWING NO. 348170 REV. 2







REV.	ITEM	DESCRIPTION	AUTHOR	DATE	REF.
1		REV. AIR HOSE BLOW GUN CONNECTION	MFC	10-28-80	
2		AS BUILT REVISION (LINE WAS ON BOTTOM OF TRUSS)	EMK	7-22-81	

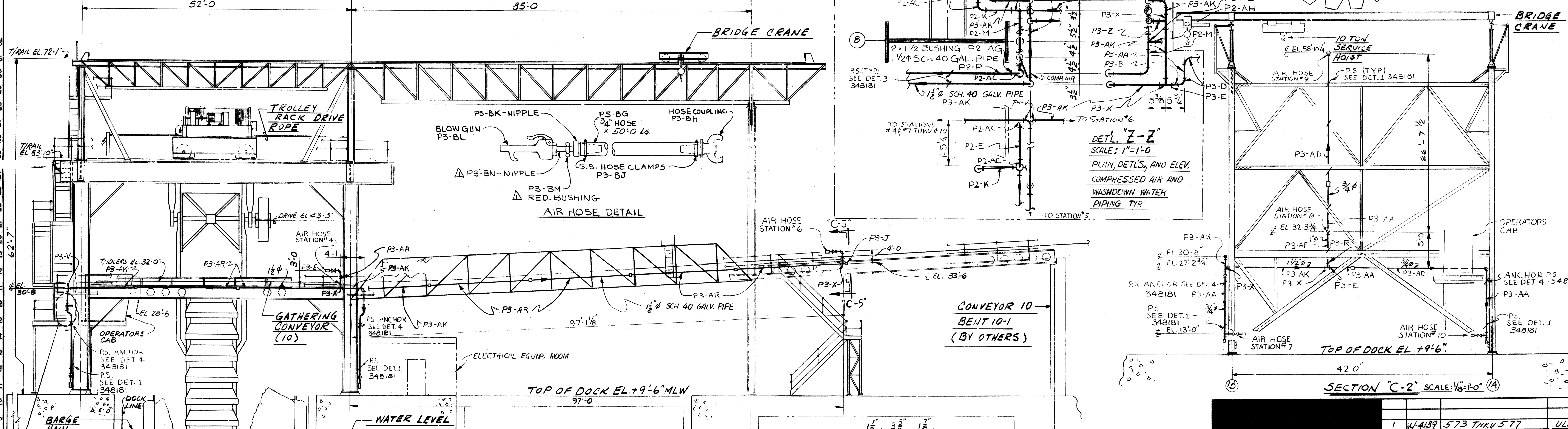


**NOTES:**  
 1. MAXIMUM SPACING BETWEEN PIPE SUPPORTS TO 10 FT  
 1 1/2" O.D. TAG P3-BV AT EACH AIR HOSE STATION VALVE  
 2. FOR PIPE SUPPORT DETAILS SEE DWG# 348181  
 3. ATTACH I.D. TAG P3-BV AT EACH AIR HOSE STATION VALVE

**PLAN VIEW**  
 SCALE: 1/8"=1'-0"

**SECTION "C-5"**  
 SCALE: 1/4"=1'-0"

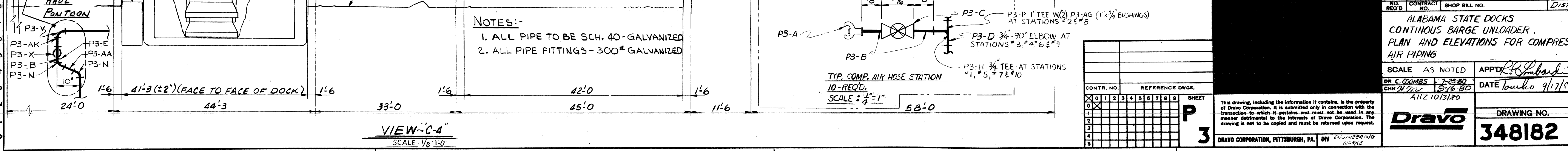
**SECTION "C-3"**  
 SCALE: 1/8"=1'-0"



**AIR HOSE DETAIL**

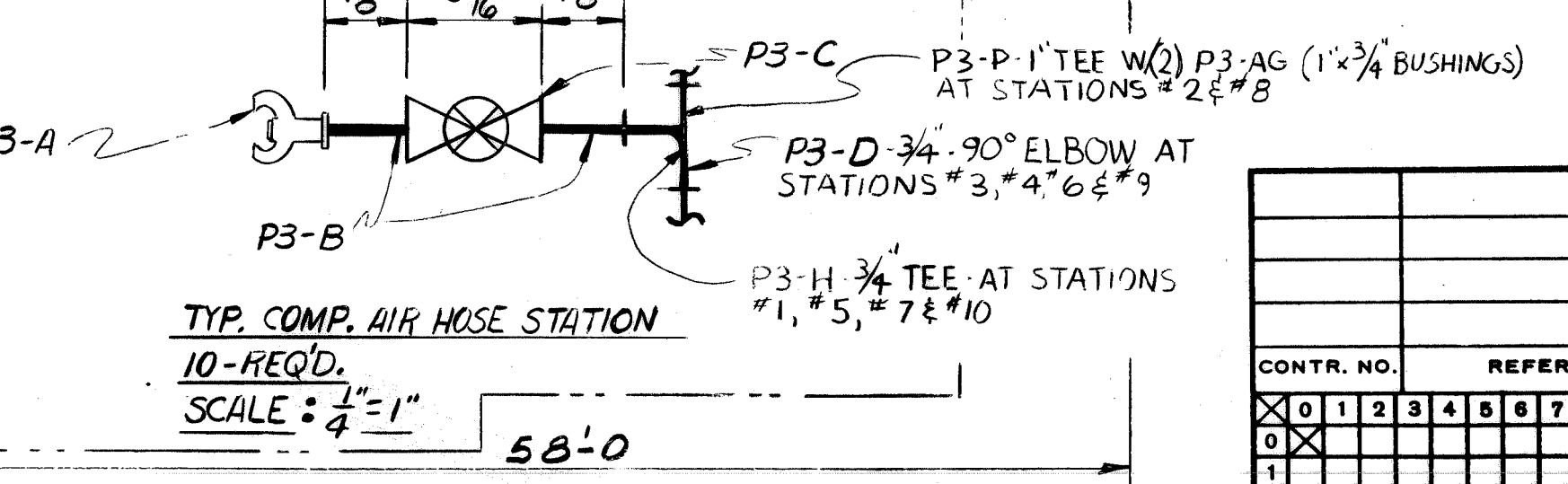
**DET. "Z-Z"**  
 SCALE: 1"=1'-0"  
 PLAN, DETLS. AND ELEV. COMPRESSED AIR AND WASHDOWN WATER PIPING TYP.

**SECTION "C-2"** SCALE: 1/8"=1'-0"



**VIEW "C-4"**  
 SCALE: 1/8"=1'-0"

**NOTES:-**  
 1. ALL PIPE TO BE SCH. 40-GALVANIZED  
 2. ALL PIPE FITTINGS - 300# GALVANIZED



**TYP. COMP. AIR HOSE STATION 10-REQD.**  
 SCALE: 1/4"=1'-0"

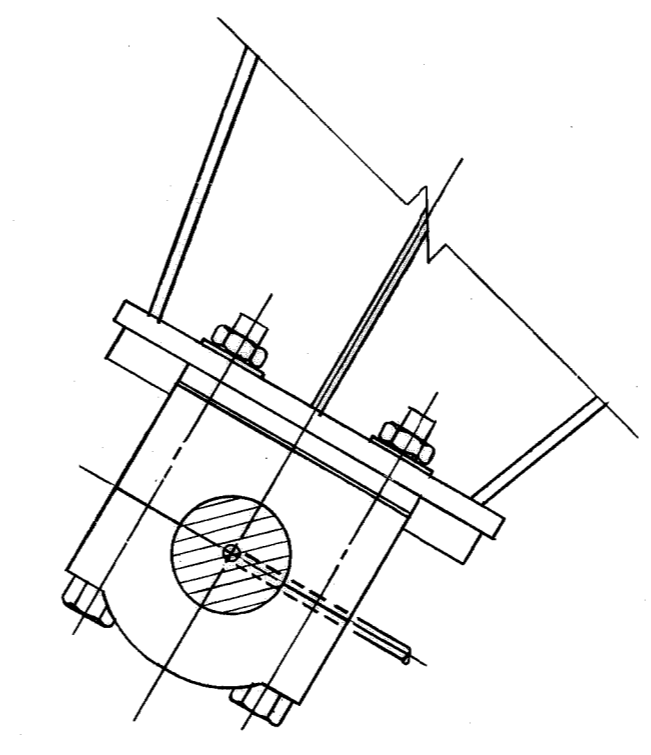
CONTR. NO.	REFERENCE DWGS.
0	1
1	2
2	3
3	4
4	5
5	6
6	7
7	8
8	9
9	10

NO.	44139	573 THRU 577	ULOB
CONTRACT NO.			Dist.
SHOP BILL NO.			
ALABAMA STATE DOCKS CONTINUOUS BARGE UNLOADER. PLAN AND ELEVATIONS FOR COMPRESSED AIR PIPING			
SCALE	AS NOTED	APP'D	194/6a
DR. C. GUMBS	7-23-80	DATE	10/17/80
CHK. H. W.	7/6/80		
AHZ 1013120			
DRAWING NO.			REV.
<b>348182</b>			2
DRavo CORPORATION, PITTSBURGH, PA. DIV. ENGINEERING WORKS			

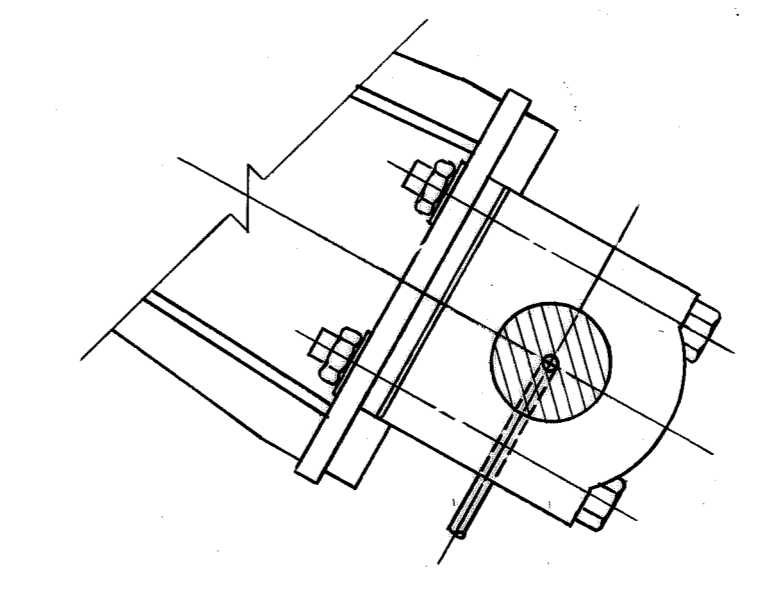


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L No.	Total No. of Pcs. or Qty. per Contract	No. of Pcs. or Qty. per Assembly	DESCRIPTION			Drawing Number	Mat'l
			KIND	SECTION	Length Ft. Inch.		
1			BUCKET CHAIN GUIDE ROLLER ASSY-UB-A				
2			GUIDE ROLLER WELDMENT	XU7-A	347121	-	
3			BEARING CAP	9	U7	-	
4			BEARING BASE	10	U7	-	
5			SHAFT	11	U7	-	
6			WEAR PLATE	12	U7	-	
7			SHIM PLATE	13	U7	-	
8			END PLATE	14	U7	-	
9			FLAT HD. SOC. CAP SCR.	15	U7	-	
10			HEX HD. BLT.	16	U7	-	
11			TEMP CONN PL	17	U7	-	
12			PIPE PLUG	18	U7	-	
13			HEX HD. BOLT	19	U7	-	
14			PIPE PLUG	20	U7	-	
15			LOCKING WIRE	21	U7	-	

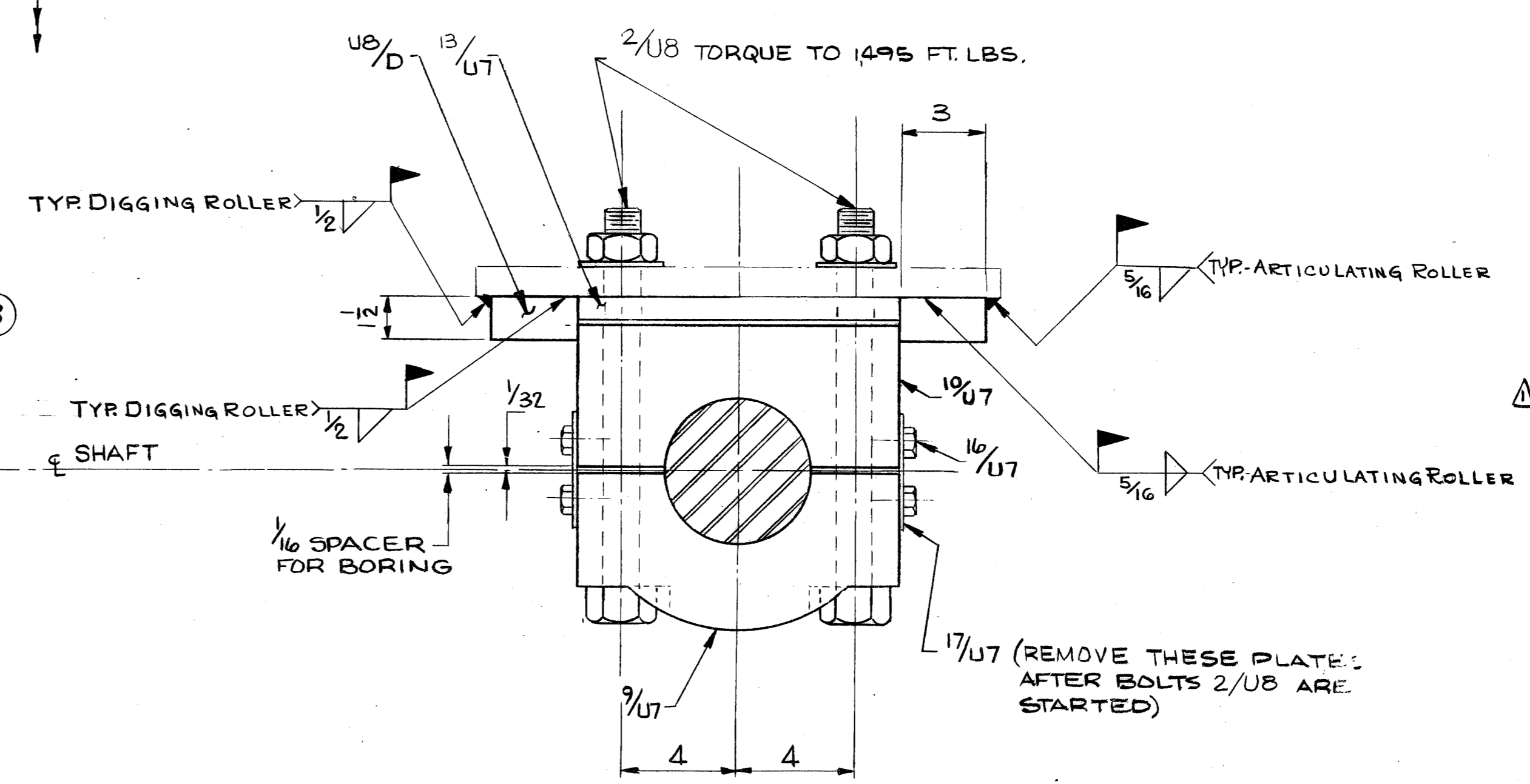
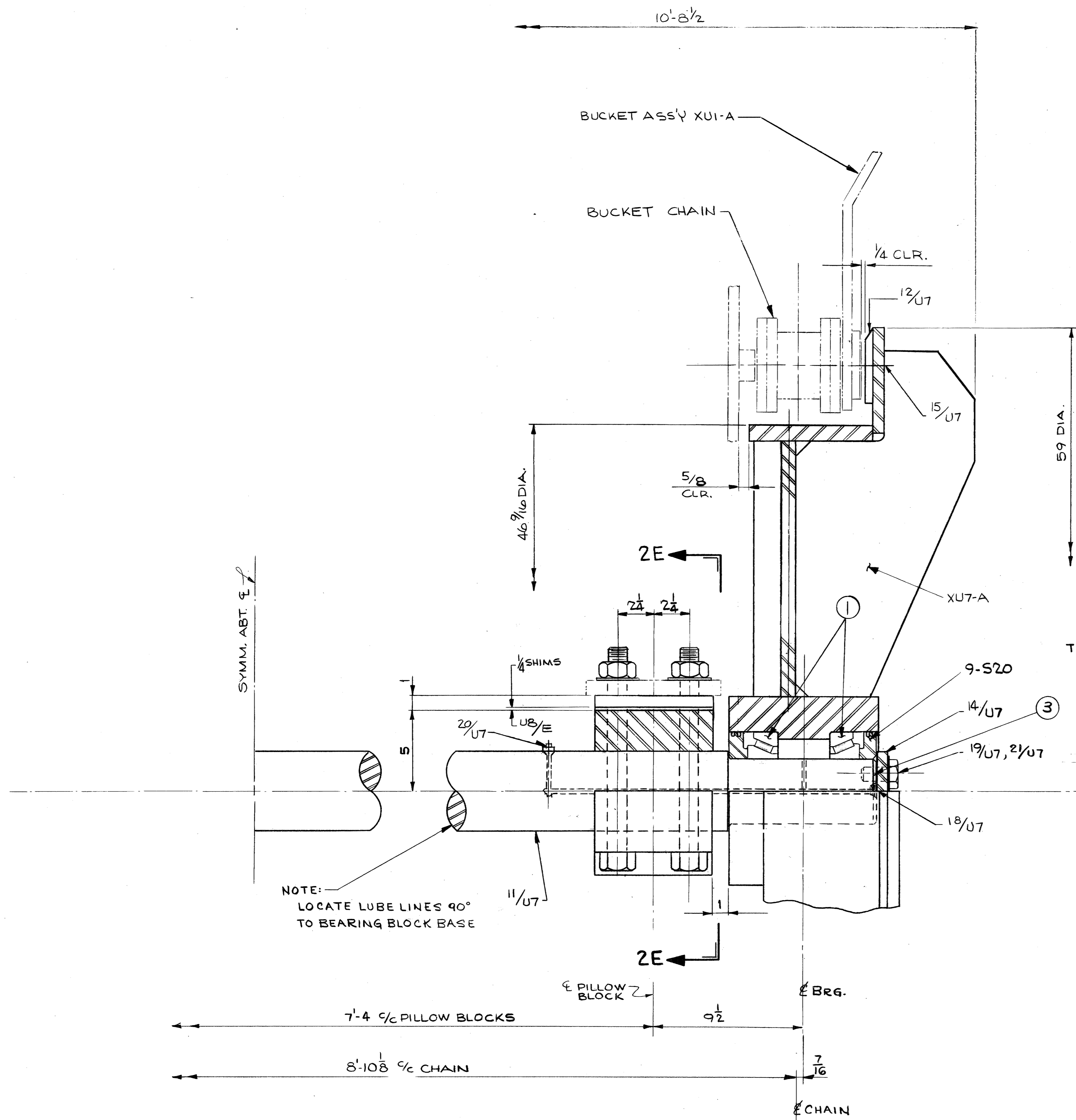


FRONT ROLLER  
LUBE ARRGT



ARTICULATING ROLLER  
LUBE ARRGT

~ CONT. ON SB# 158 ~



SECTION - 2E

L No.	Total No. of Pcs. or Qty. per Contract	No. of Pcs. or Qty. per Assembly	DESCRIPTION			Drawing Number	Mat'l		
			KIND	SECTION	Length Ft. Inch.				
1			BUCKET CHAIN GUIDE ROLLER ASSY-UB-A						
2			~ CONT' FROM SB# 157 ~						
3			TIMKEN BRG - TYPE TS-71412	1	UB	347120	-		
4			71750 - 4 1/8 BORE						
5			CHOCK BAR	3 x 1 1/2	0 6	UB-D	347120	STL	
6			SHIM PACK (SEE SB# )			UB-E	347120	-	
7			HEX HD. BOLT	1/4-7UNC-2A	1 1	UB	347120	A325	
8			1/2 SELF LOCKING NUT & HARD. F.W. & MIN. 0-4 THD.						
9			RETAINER PL.	7/16 x 1 1/2	1 1/2	9 520	95046	STL	
10			SHIM PACK (TIMKEN)			3	UB	347120	STL
11			EACH CONSISTING OF:						
12			3-T50611						
13			3-T50612						
14			2-T50613						

BUCKET CHAIN GUIDE ROLLER ARRANGEMENT-UB-A  
WEIGHT=3,500 LBS.

REFERENCE DRAWINGS:  
 BUCKET CHAIN GUIDE ROLLER DETAILS - 347121-U7  
 ARTICULATING SUPPORT DETAIL - 347122-U13  
 BUCKET ASSEMBLY - 347090-U1  
 BUCKET CHAIN - 347088

1	W4139	157, 158, 161	MS. 55	BLO	PAIN
NO. RECD.	CONTRACT NO.	SHOP BILL NO.	SHOPS	DIST.	24
BARGE UNLOADER BUCKET CHAIN GUIDE ROLLER ARRANGEMENT					
SCALE 3"=1'-0"	PASSED/AMK 3/27/80		APP'D W. Schuster 3/27/80		
DR. J.R.	DATE 12-18-80	ANZ 411780			
DRAWING NO. 347120					
SHEET 1					

BRUNING 24-11-2017.6





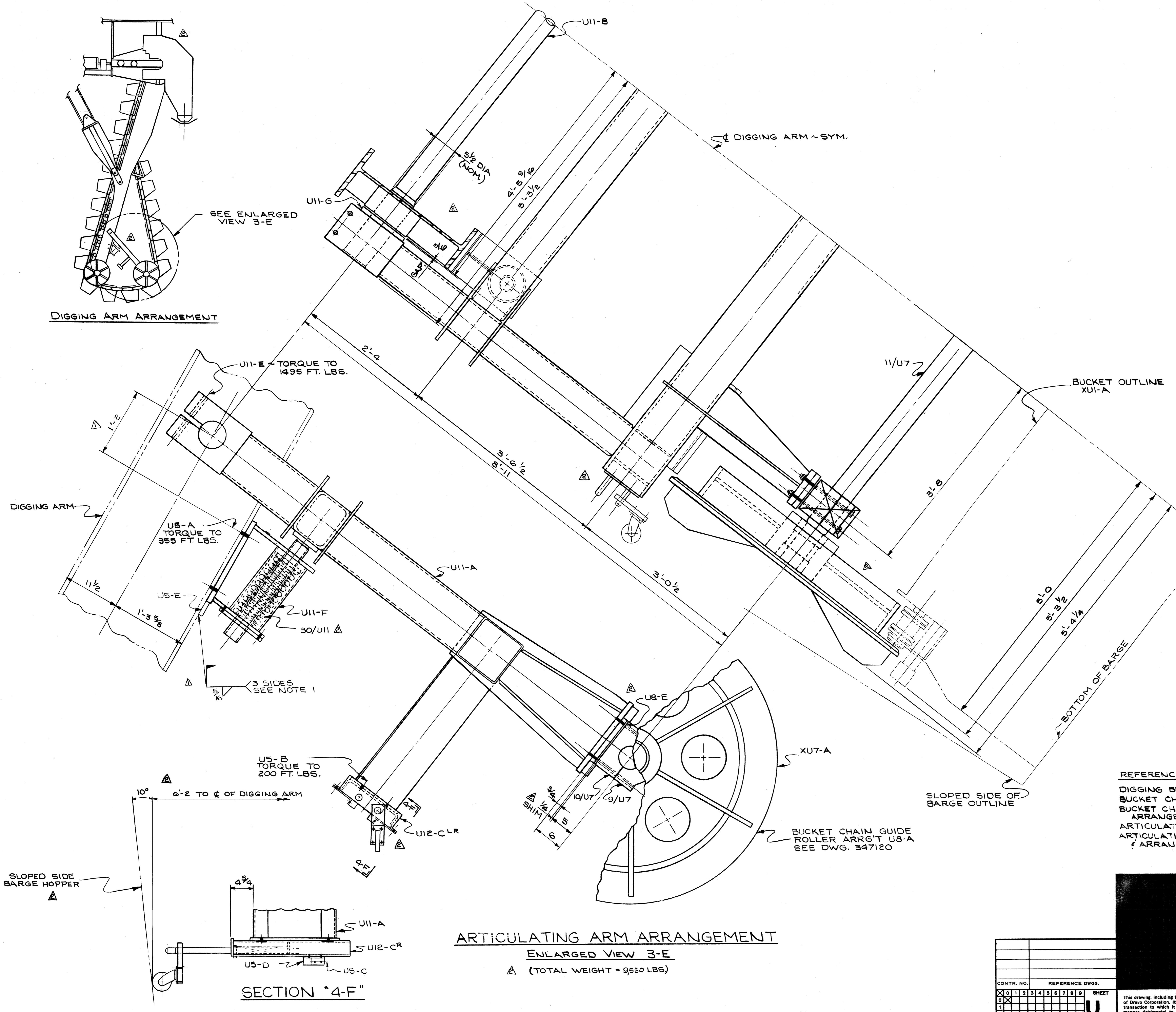






REVISIONS		AUTH'D	DATE	REF.
1	ADDED CHOCK BAR WELDING NOTE 1" DIM FROM PIN TO BOLT	MAN	6-18-80	
2	MINOR DETAIL REVISIONS	MAN	8-19-80	

ITEM NO.	QTY	DESCRIPTION	KIND	SECTION	Length FL INCH	Price of Pattern Number	Drawing Number	Mat'l
1	8	HEX HD BOLT	3/4"	0 2 1/2"	U5-A	348171	A-325	
2		W/HEX NUT & HARDENED F.W.						
3	8	HEX HD BOLT	5/8"	0 1 3/4"	U5-B		A-325	
4		W/HEX NUT & HARDENED F.W.						
5	8	HEX HD BOLT	1/2"	0 2 1/4"	U5-C		STL	
6		W/HEX NUT & L.W.						
7	4	LIMIT SWITCH			U5-D		~	
8		"90" SERIES 43-100D						
9	2	CHOCK BAR			U5-E		STL	
10	2	SPRINGS 1 3/8" WIRE			30 U11	347135	STL	L-20
11		5/8" MEAN DIA. ~5000 LB/IN.						
12		LOAD RATE ~12" SOLID						
13		HEIGHT ~16 1/2" FREE HEIGHT						
14		GROUND ENDS SQUARE						
15		MAT'L: ALLOY STL ~ SHOT PEENED						



DIGGING ARM ARRANGEMENT

ARTICULATING ARM ARRANGEMENT  
ENLARGED VIEW 3-E  
△ (TOTAL WEIGHT = 9550 LBS)

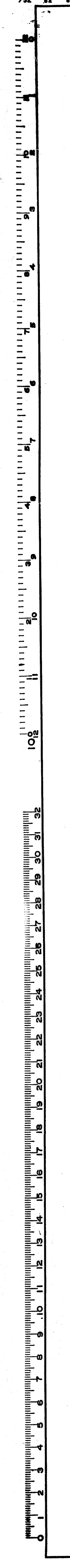
SECTION 4-F

△ NOTES:  
1. WELD CHOCK BARS U5-E AFTER IT HAS BEEN VERIFIED THAT BOTH BUFFERS ARE EQUALLY COMPRESSED

- REFERENCE DRAWINGS:
- DIGGING BUCKET DETAILS 347090 ~ U1
  - BUCKET CHAIN GUIDE ROLLER DETAILS 347121 ~ U7
  - BUCKET CHAIN GUIDE ROLLER ARRANGEMENT 347120 ~ U8
  - ARTICULATING SUPPORT DETAILS 347135 ~ U11
  - ARTICULATING LIMIT SWITCH DETAIL & ARRANGEMENT 347136 ~ U12

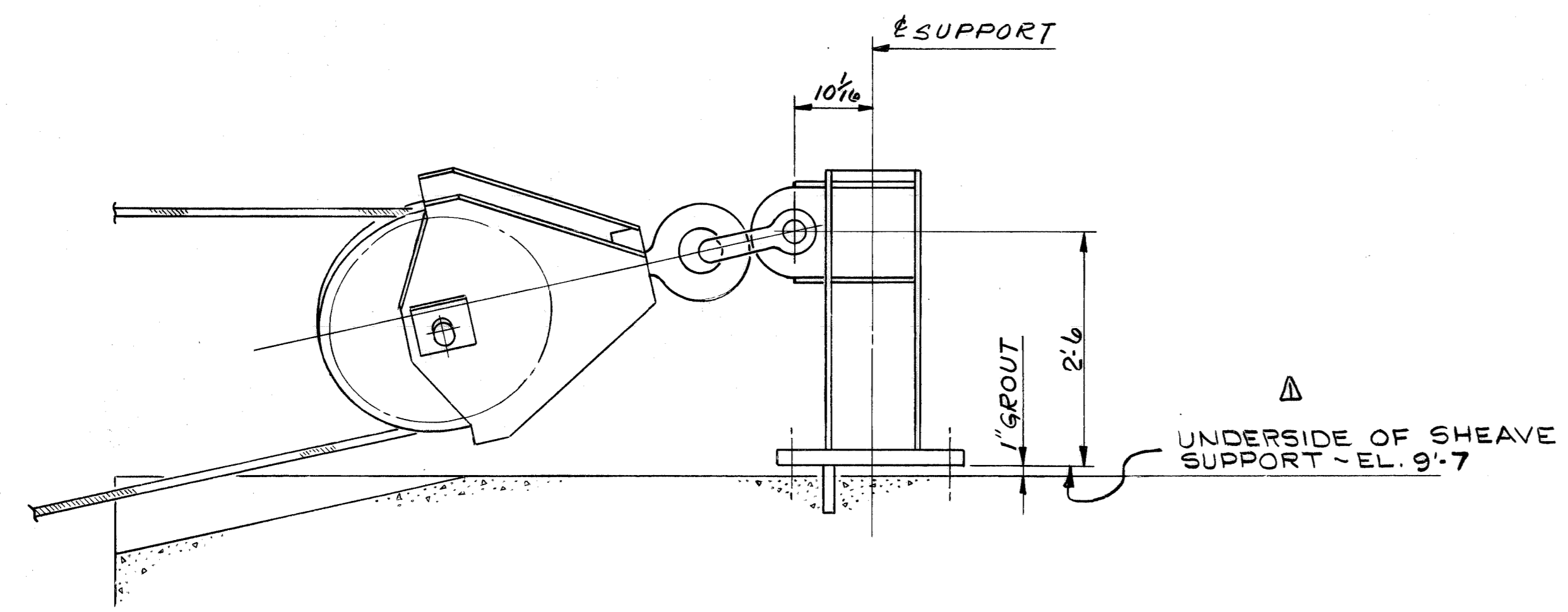
CONTR. NO.	REFERENCE DWGS.	SHEET
0	1	1
1	2	2
2	3	3
3	4	4
4	5	5
5	6	6
6	7	7
7	8	8
8	9	9

W-4139 164  
NO. CONTRACT NO. SHOP BILL NO. BLDG DIST.  
CONTINUOUS BARGE UNLOADER  
ARTICULATING ARM  
ARRANGEMENT  
SCALE 1 1/2" = 1'-0" APP'D. U.S. Sell Jan 4/9/80  
DR VINSKI 6-3-80 DATE 6/6/80  
CHK THE 6-6-80  
DRAWING NO. 348171 REV. 2  
DRAGO CORPORATION, PITTSBURGH, PA. DV EWD

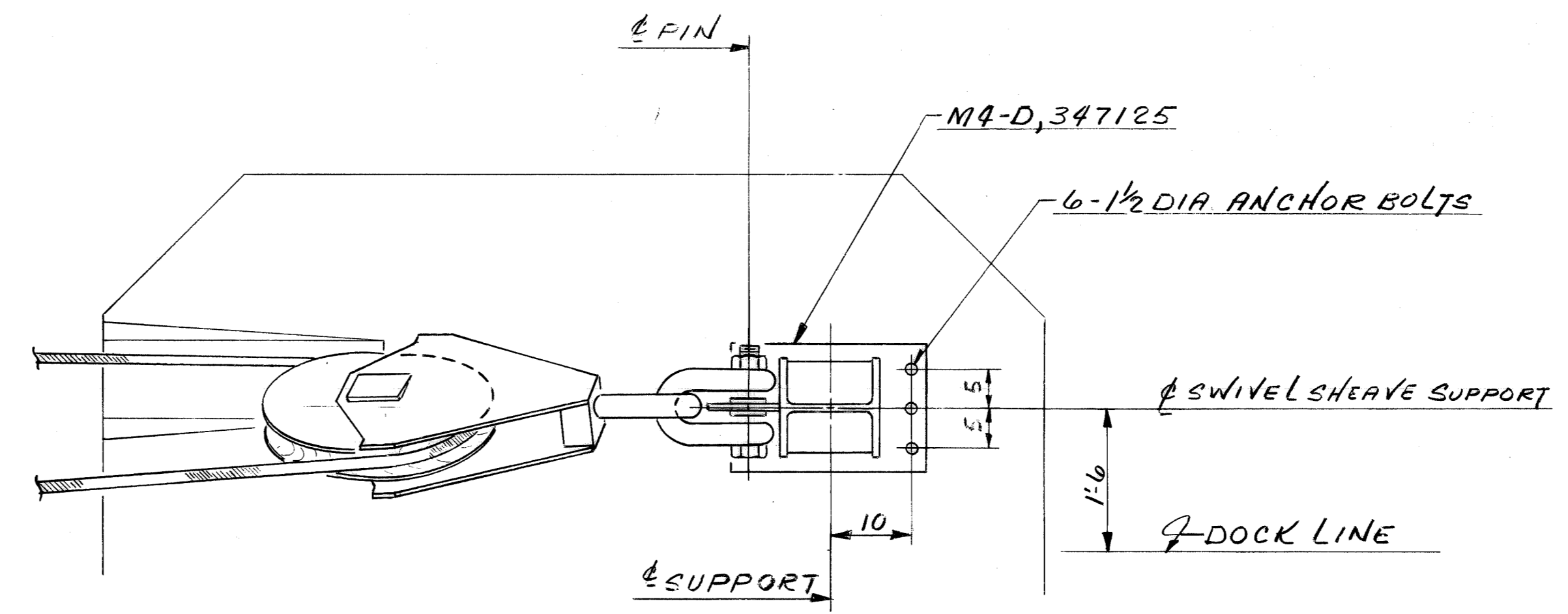




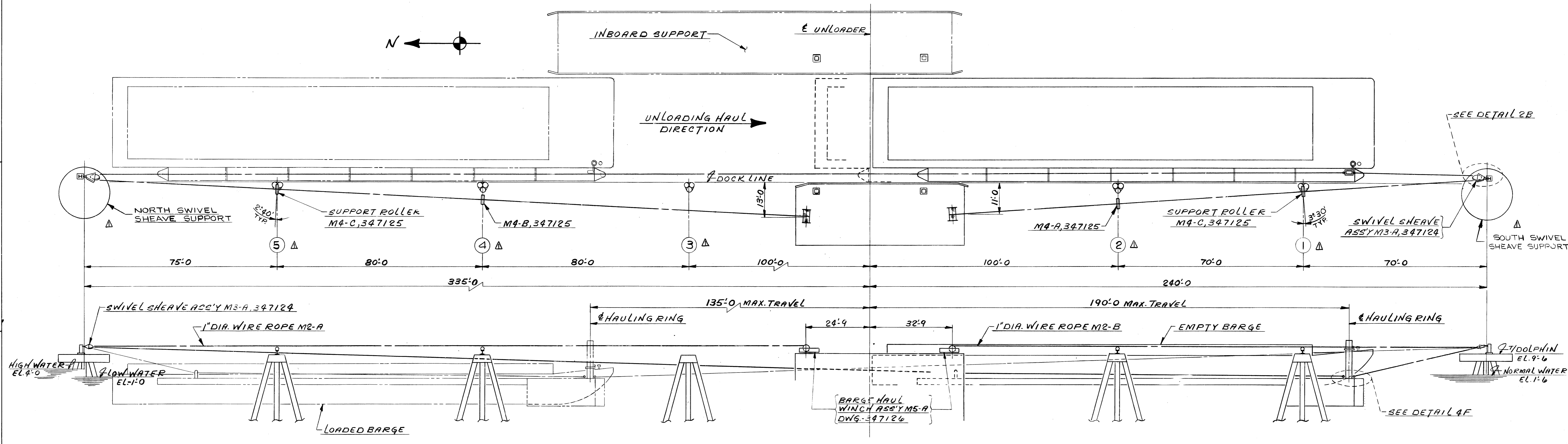
No.	Qty	Description	Section	Length		Drawing Number	Mat'l.
				FE	INCH		
1							
1		WIRE ROPE 1" DIA.				M2-A	347306
		6 x 19 IPS ~ 1 WRC x 900' 0 LG.					
1		WIRE ROPE 1" DIA.				M2-B	347306
		6 x 19 IPS ~ 1 WRC x 650' 0 LG.					
2		CROSBY-LAUGHLIN OPEN WEDGE SOCKET-3421 FOR 1" DIA. WIRE ROPE				M2-C	347306
							FOR SCL
2		CROSBY-LAUGHLIN WIRE ROPE CLIPS-6450 FOR 1" DIA. WIRE ROPE				M2-D	347306
							FOR SCL



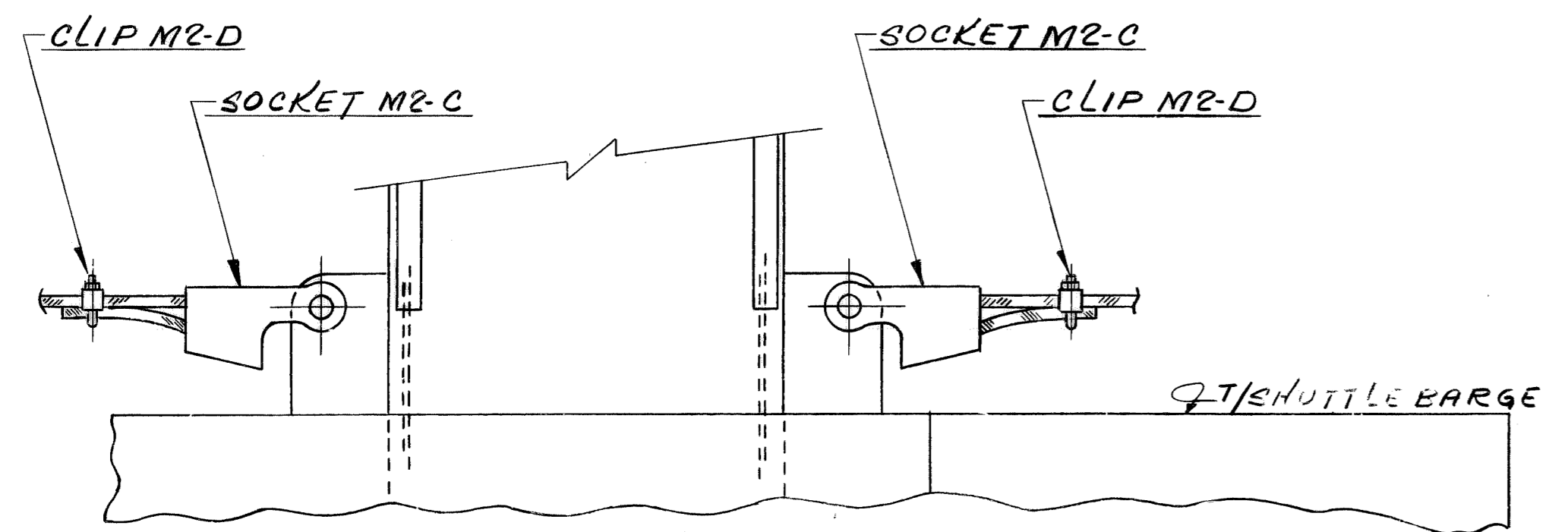
VIEW 4B  
LOW WATER POSITION



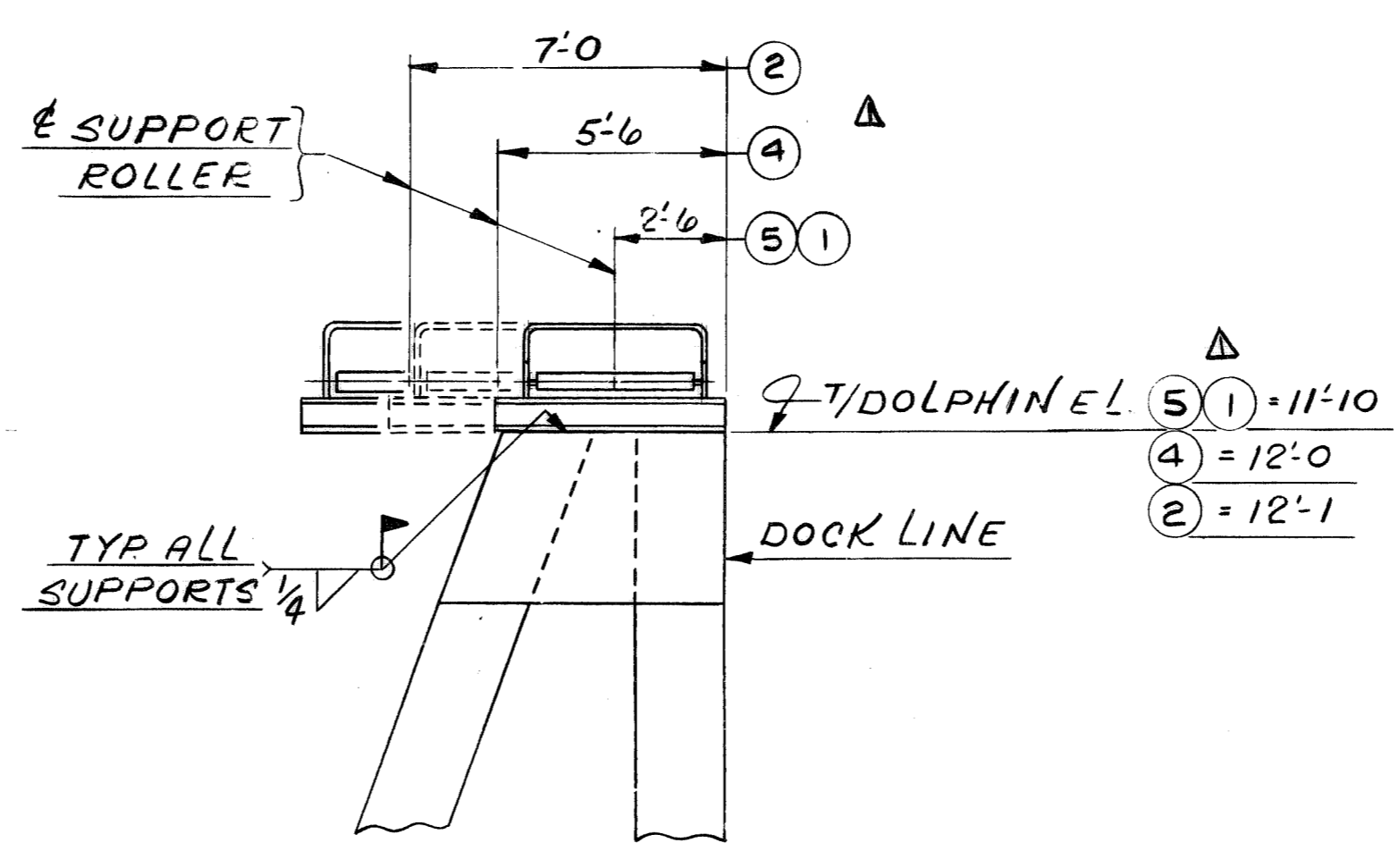
DETAIL 2B



- REFERENCE DRAWINGS:
- BARGE HAUL WINCH ARR'G'T - 347126
  - SWIVEL SHEAVE ASS'Y - 347124
  - SHUTTLE BARGE ARR'G'T - 370677
  - HAULING ARM ARR'G'T - 348130 - W4148
  - SWIVEL SHEAVE SUPPORT - 347125



DETAIL 4-F



SECTION THRU DOLPHINS

NO. 4139	502	NONE	APL
REQD	CONTRACT NO.	SHOP BILL NO.	SHOPS
<b>ALABAMA STATE DOCKS</b>			
<b>CONTINUOUS BARGE UNLOADER</b>			
<b>BARGE HAUL GEN'L ARR'G'T</b>			
REV. DOLPHIN NOS TO AGREE WITH ALABAMA STATE DOCK DWG'S	MAY 7-17-80	SCALE - NTS	PASSED <i>tenko</i> 4/1/80
DWG. REVISIONS	AUTH'D & DATE	DR - BRAD E 12-31-80	APP'D <i>W. S. ...</i> 4/1/80
DESCRIPTION	DATE	CHK ENVS 4/1/80	
<small>This drawing, including the information it contains, is the property of Dravo Corporation. It is submitted only in connection with the transaction to which it pertains and must not be used in any manner detrimental to the interests of Dravo Corporation. The drawing is not to be copied and must be returned upon request.</small>			
CONTR. NO.		REFERENCE DWGS.	DRAVO CORPORATION, PITTSBURGH, PA. DIV - EWD
<b>M2</b>		<b>Dravo</b>	
SHEET		DRAWING NO. <b>347306</b>	

NOMINAL MACHINING DIMENSIONS ± 0.010 UNLESS NOTED

BRUNING 44131 291212

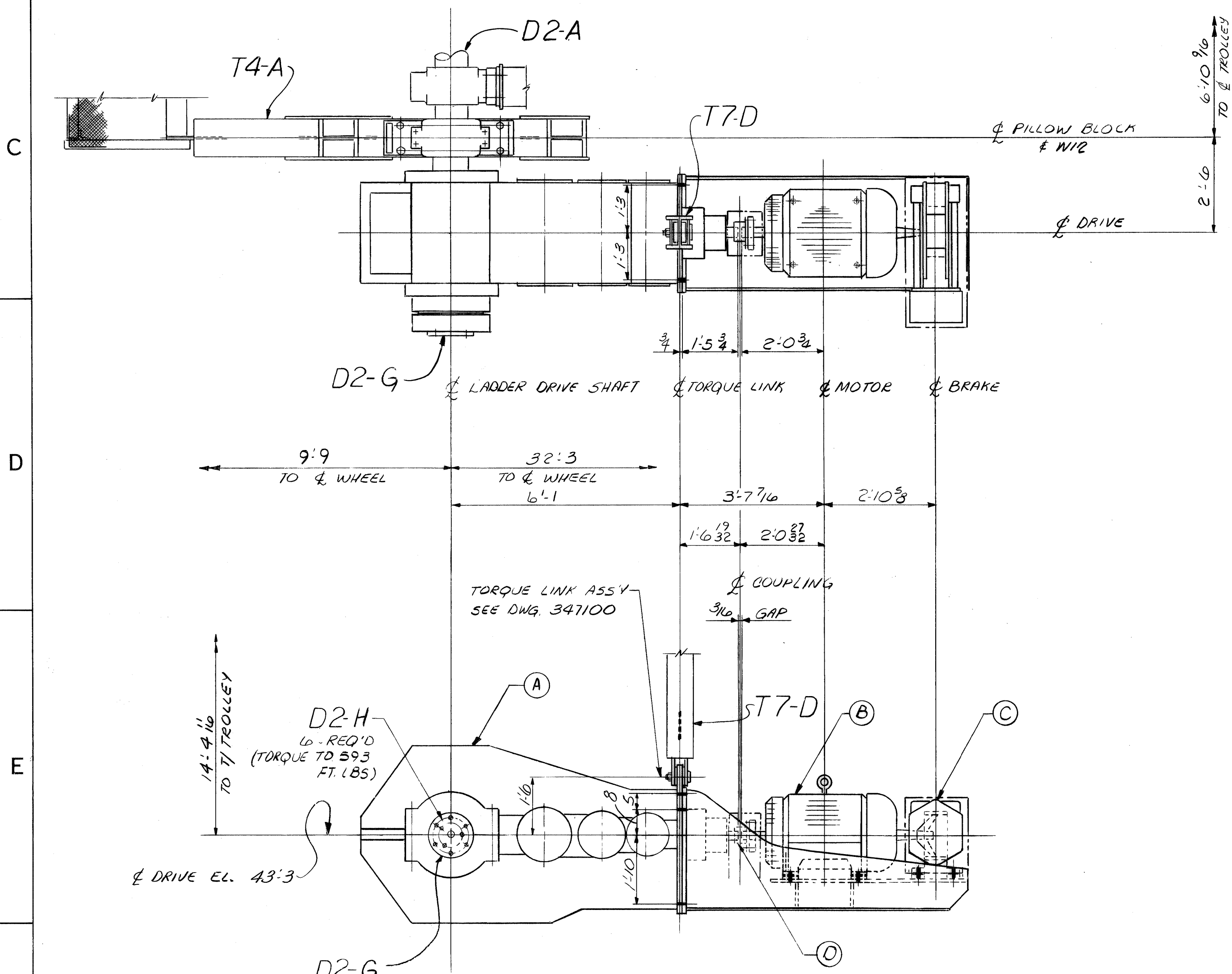


No. of Pieces on Contract	No. of Pieces on Assembly	No. of Pieces on Drawing	DESCRIPTION	SECTION	Length Ft. Inch.	Drawing Number	Mat'l.
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							

No. of Pieces on Contract	No. of Pieces on Assembly	No. of Pieces on Drawing	DESCRIPTION	SECTION	Length Ft. Inch.	Drawing Number	Mat'l.
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							

No. of Pieces on Contract	No. of Pieces on Assembly	No. of Pieces on Drawing	DESCRIPTION	SECTION	Length Ft. Inch.	Drawing Number	Mat'l.
1							
2							
3							
4							
5							
6							
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8							
9							
10							
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14							
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16							
17							
18							
19							
20							
21							
22							
23							
24							

No. of Pieces on Contract	No. of Pieces on Assembly	No. of Pieces on Drawing	DESCRIPTION	SECTION	Length Ft. Inch.	Drawing Number	Mat'l.
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							



VIEW 4F  
LADDER DRIVE ARRANGEMENT  
(TAKEN @ 3D-347096)

No. of Pieces on Contract	No. of Pieces on Assembly	No. of Pieces on Drawing	DESCRIPTION	SECTION	Length Ft. Inch.	Drawing Number	Mat'l.
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							

No. of Pieces on Contract	No. of Pieces on Assembly	No. of Pieces on Drawing	DESCRIPTION	SECTION	Length Ft. Inch.	Drawing Number	Mat'l.
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
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14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							

WORK THIS DRAWING WITH DRAWINGS 347096/T1 & 347097/T11

REV.	ITEM	PANEL	DESCRIPTION	AUTH'D & DATE	DR. D. FISHER 8/15/80	CHK. J. W. B. 9-8-80
DWG. REVISIONS			SCALE 1/2" = 1'-0"			
DESCRIPTION			PASSED 10/12/80			
CONTR. NO.			DRAWING NO. 347101			
REFERENCE DWGS.			REV. 24			
DRAWO CORPORATION, PITTSBURGH, PA. DIV. E.W.O.			SHEET 24			

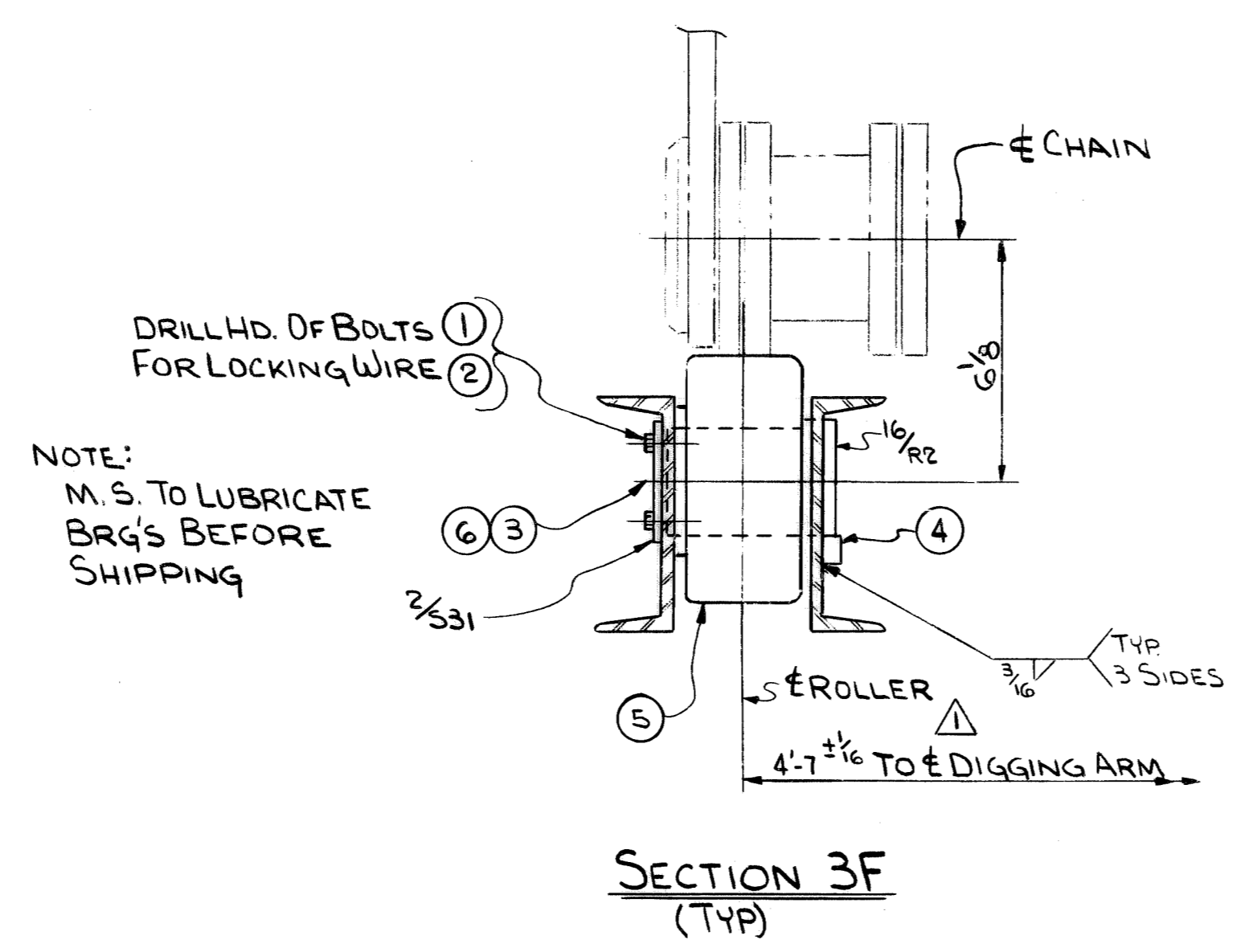
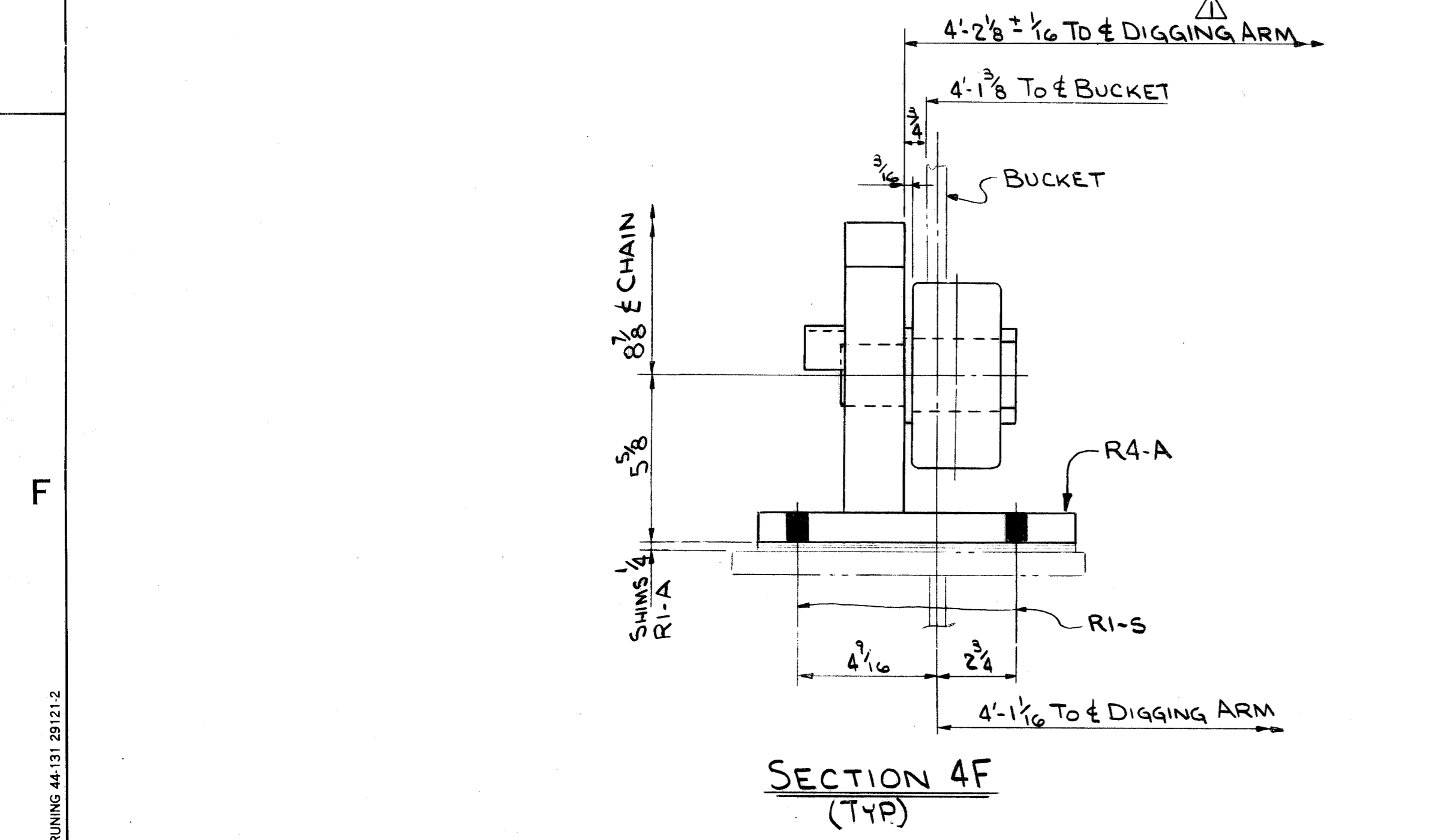
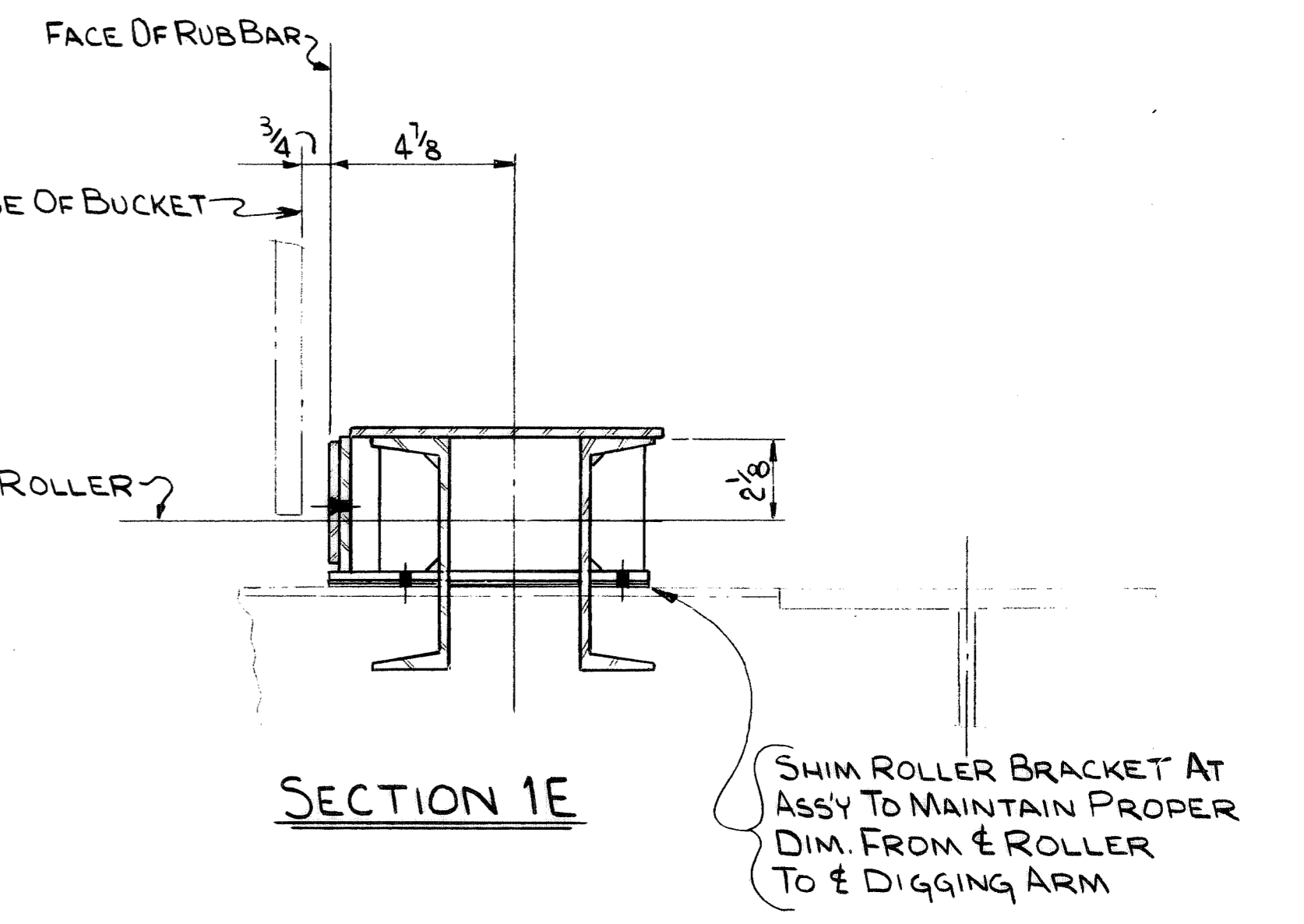
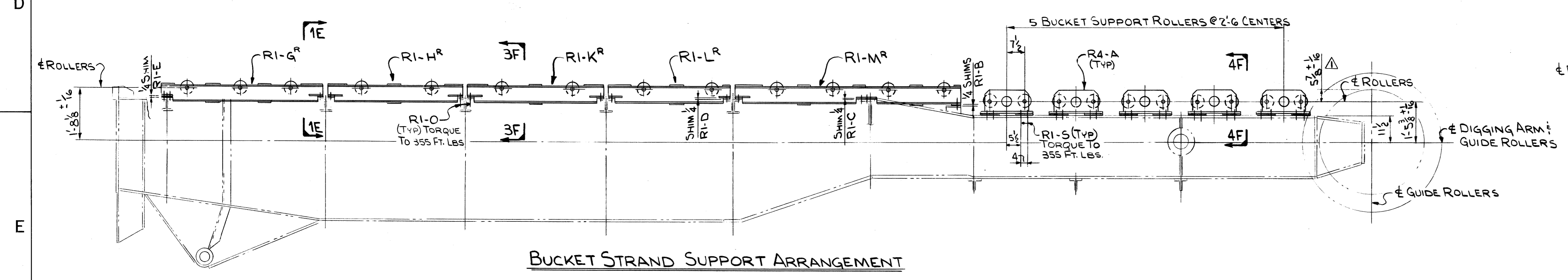
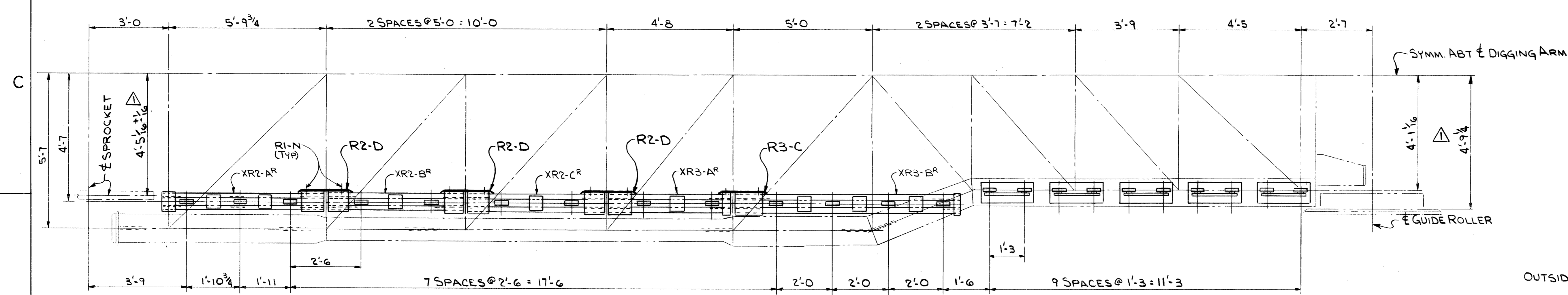


Part	Quantity	Description	Material	Drawing Number
1R	1R	SUPPORT ROLLER ASSY	RI-G <sup>R</sup>	347147
1R	1R	CHANNEL SUPPORT	XR2A <sup>R</sup>	347148
3	3	TIMKEN BRG TYPE TNA3UWH	5 RI	347147
3	3	#NA483 SW-188207 (2% LOCKWASER)	2 S31	95051
9	9	HEX HD BOLT 1/2 DIA 0 1/4	1 RI	347147
3R	3R	N9 LOCKING WIRE 0 6	2 RI	
3	3	PIPE NIPPLE 1/4" (STD) 0 2	3 RI	
3	3	PIPE CAP 1/4"	3 RI	
3	3	BAR (MANTLE) 3/4 x 1/2 0 2 1/4	4 RI	
3	3	PIN	16 R2	347148
1R	1R	SUPPORT ROLLER ASSY	RI-H <sup>R</sup>	347147
2	2	PIPE NIPPLE	3 RI	
1R	1R	CHANNEL SUPPORT	XR2B <sup>R</sup>	347148
2	2	TIMKEN BRG TYPE TNA3UWH	3 RI	347147
2	2	PIN	16 R2	347148
2	2	END R	2 S31	95051
6	6	HEX HD BOLT	1 RI	347147
2R	2R	LOCKING WIRE	2 RI	
2	2	PIPE CAP	2 RI	
2	2	BAR	4 RI	

Part	Quantity	Description	Material	Drawing Number
1R	1R	SUPPORT ROLLER ASSY	RI-K <sup>R</sup>	347147
1R	1R	CHANNEL SUPPORT	XR2C <sup>R</sup>	347148
2	2	TIMKEN BRG TYPE TNA3UWH	5 RI	347147
2	2	PIN	16 R2	347148
2	2	END R	2 S31	95051
6	6	HEX HD BOLT	1 RI	347147
2R	2R	LOCKING WIRE	2 RI	
2	2	PIPE CAP	2 RI	
2	2	BAR	4 RI	
1R	1R	SUPPORT ROLLER ASSY	RI-L <sup>R</sup>	347147
2	2	PIPE NIPPLE	3 RI	
1R	1R	CHANNEL SUPPORT	XR3A <sup>R</sup>	347149
2	2	TIMKEN BRG TYPE TNA3UWH	5 RI	347147
2	2	PIN	16 R2	347148
2	2	END R	2 S31	95051
6	6	HEX HD BOLT	1 RI	347147
2R	2R	LOCKING WIRE	2 RI	
2	2	PIPE CAP	2 RI	
2	2	BAR	4 RI	

Part	Quantity	Description	Material	Drawing Number
1R	1R	SUPPORT ROLLER ASSY	RI-M <sup>R</sup>	347147
4	4	PIPE NIPPLE	3 RI	
1R	1R	CHANNEL SUPPORT	XR3B <sup>R</sup>	347149
4	4	TIMKEN BRG TYPE TNA3UWH	5 RI	347147
4	4	PIN	16 R2	347148
4	4	END R	2 S31	95051
12	12	HEX HD BOLT	1 RI	347147
4R	4R	LOCKING WIRE	2 RI	
4	4	PIPE CAP	2 RI	
4	4	BAR	4 RI	
		MISCELLANEOUS		
	20	SHIM PACK	RI-A	
	2	SHIM PACK	RI-B	
	4	SHIM PACK	RI-C	
	16	SHIM PACK	RI-D	
	2	SHIM PACK	RI-E	
	10	ROLLER SUPPORT ASSY	R4-A	347150
	6	RUB BAR	R2-D	347148
	2	RUB BAR	R3-C	347149

QTY	DESCRIPTION	SECTION	Length Ft. Inch	Piece or Pattern Number	Drawing Number	Mat'l
16	SLOT FH MACH SCREW (UNDERCUT) W/ HEX NUT & LOCKWASHER	1/2" φ	0 1 1/2	RI-N	347147	STL
52	HEX HD BOLT W/ Hvy. HEX NUT & HARD BEVEL & FLAT WASH.	3/4" φ	0 3	RI-O		A325
80	HEX HD BOLT W/ Hvy. HEX NUT & HARD F/WASHER	3/4" φ	0 3 1/4	RI-S		A325





No. in Contract	No. of Pieces for One Assembly Unit	No. of Pieces for One Assembly Unit	DESCRIPTION	SECTION	Length Ft. Inch.	Piece or Pattern Number	Drawing Number	Mat'l.
1	1	1	HOIST ASS'Y				347110	
1	1	1	MOTOR ~ 75 HP, 1800 RPM	A			347110	
1	1	1	460 VAC, 60 HZ, S.C. INDUCTION					
1	1	1	BRAKE ~ AISE SHOE	B			347110	
1	1	1	FLOOR MOUNTED ~ 13 DIA WHEEL					
1	1	1	FALK CPLG ~ FLEX RIGID TYPE	C			347110	
1	1	1	652 SIZE 1020G					
1	1	1	FALK CPLG ~ FLEX RIGID TYPE	D			347110	
1	1	1	652 SIZE 1020G					
1	1	1	REDUCER ~ BROWNING #5010 HP2	E			347110	
1	1	1	HORIZ. PARALLEL SHAFT RATIO 19:41					
1	1	1	W/SPECIAL LOW SPEED SHAFT					
1	1	1	HOIST DRUM ASS'Y	XUIO-A			347123	
1	1	1	DRUM SHAFT ASS'Y	XUIO-B			347123	
1	1	1	HOIST BASE WELDMENT	XB3-A			348173	
1	1	1	UPPER HALF GEAR GUARD ASS'Y	XSI80-A			950099	
1	1	1	(CONT. ON SB#)					

No. in Contract	No. of Pieces for One Assembly Unit	No. of Pieces for One Assembly Unit	DESCRIPTION	SECTION	Length Ft. Inch.	Piece or Pattern Number	Drawing Number	Mat'l.
1	1	1	HOIST ASS'Y	(CONT FROM SB#)				
1	1	1	LOWER HALF GEAR GUARD ASS'Y	XSI80-B			950099	
1	1	1	REXNORD COUPLING DBL - TS	F			347110	
1	1	1	BRAKE-CALIPER #39RC-TIE ROD TYPE	G			347110	
1	1	1	LIMIT SWITCH ~ GEMCO	H			347110	
1	1	1	TYPE 2000 ~ NEMA 4					
1	1	1	WOODRUFF KEY #3	J			347110 STL	
1	1	1	KEY	K			347110 C.F.	
1	1	1	SPEED SWITCH ~ CONV. COMP.	L			347110	
1	1	1	CAT. # MSD-1					
1	1	1	MITER GEAR BOX ~ MORSE	M			347110	
1	1	1	#4 M ~ 1:1 RATIO					
1	1	1	TORRINGTON BRG #60SD22W33	16			347123	
1	1	1	TORRINGTON BRG #85SD23W33	N			347110	
1	1	1	FLOATING SHAFT ASS'Y	X960-C			95017	
1	1	1	LOVEJOY CPLG L070	P			347110	
1	1	1	LOVEJOY CPLG L070	R			347110	
1	1	1	(CONT ON SB#)					

No. in Contract	No. of Pieces for One Assembly Unit	No. of Pieces for One Assembly Unit	DESCRIPTION	SECTION	Length Ft. Inch.	Piece or Pattern Number	Drawing Number	Mat'l.
1	1	1	HOIST ASS'Y	(CONT FROM SB#)				
1	1	1	PINION ~ 7.67 PD, 3 DP, 23 TEETH, 9 3/4 FACE		23	12	95076 L-5	
1	1	1	MAT'L: FORGED STL-AISI 4340 HARDEN & TEMPER TO 302-341 BHN THRU HARDNESS TO TOOTH DEPTH-FURNACE HARDEN TEETH					
1	1	1	To 400-500 BHN					
1	1	1	RING GEAR ~ 55.33 PD, 3 DP, 166 TEETH, 5 1/2 FACE					
1	1	1	MAT'L: FORGED STL-AISI 4340 HARDEN & TEMPER TO 302-341 BHN THRU HARDNESS TO TOOTH DEPTH					
1	1	1	HYD UNIT				347110	
1	1	1	NAMCO LIMIT SW. CAT. NO. EAT00-20100	S			347110	
1	1	1	WITH ARM EL 160-56500					
1	1	1	HOSE ASSY-AEROSQUIP				347110	
1	1	1	#2781-6-12" (1/4) 190264-8-65 (4721-8-65)					
1	1	1	BENT R				950099	
1	1	1	BENT R				950099	
1	1	1	L				950099	
1	1	1	BOLTS				B3-B 348173	
1	1	1	(CONT ON SB#)					

No. in Contract	No. of Pieces for One Assembly Unit	No. of Pieces for One Assembly Unit	DESCRIPTION	SECTION	Length Ft. Inch.	Piece or Pattern Number	Drawing Number	Mat'l.
1	1	1	HOIST ASS'Y	(CONT FROM SB#)				
1	1	1	CPLG GUARD			21	95133	
1	1	1	HEX HD BOLT W/HEX NUT #FW 1/2" x 1 1/4"			31	95135 STL	
1	1	1	BAR 2 x 1/4"			51	95135 STL	
1	1	1	SHIM PACK ASS'Y			XHI-R	347110	
1	1	1	SHIM PACK ASS'Y			XHI-S	347110	
1	1	1	SHIM PACK ASS'Y			XHI-T	347110	
1	1	1	SHIM PACK ASS'Y			XHI-U	347110	
1	1	1	SHIM PACK ASS'Y			XHI-V	347110	
1	1	1	SHIM PACK ASS'Y			XHI-W	347110	
1	1	1	SHIM PACK ASS'Y			HI-Y	347110	
1	1	1	SHIM PACK ASS'Y			HI-Z	347110	
1	1	1	#16 LOCKING WIRE 1/8" x 1/4"			HI	347110 STL	
1	1	1	HEX HD BOLT 1/2" x 1 1/4"			HI	347110 STL	
1	1	1	W/L.W. DRILL HD FOR (B)					
1	1	1	HEX HD BOLT 5/8" x 8"			HI	347110 STL	
1	1	1	W/HEX NUT & L.W.					
1	1	1	DRAVO TRADEMARK R 5 x 3/16"			HI	347110 CAST ALUM	
1	1	1	SLOTTED RND HD SELF TAPPING SCREW TYPE "F" #10 x 24 0 1/2"			HI	347110 STL	
1	1	1	(CONT ON SB#)					

No. in Contract	No. of Pieces for One Assembly Unit	No. of Pieces for One Assembly Unit	DESCRIPTION	SECTION	Length Ft. Inch.	Piece or Pattern Number	Drawing Number	Mat'l.
1	1	1	HOIST ASS'Y	(CONT FROM SB#)				
1	1	1	PILLOW BLOCK ASS'Y			X547-B	95157	
1	1	1	RETAINER R 100.0 x 4 1/2" ID x 1" THK			11 S10	95040 STL	
1	1	1	END R 100.0 x 1/2" THK			42 S11	95041 STL	
1	1	1	END R 4 1/2" x 1/2" THK			43 S11	95041 STL	
1	1	1	GEAR GUARD SPACER ASS'Y			X558-K	95116	
1	1	1	MC 4 @ 13.8"			20 HI	347110 A36	
1	1	1	OIL GAGE ASS'Y			X526-F	95075	
1	1	1	L 4 x 4 x 1/4"			21 HI	347110 A36	
1	1	1	1" STD PIPE CAP ~ 150#			5 HI	347110 M.I.	
1	1	1	(SLOT TOP 3/16" WIDE x 1/16" LG)					
1	1	1	1" STD. TEE ~ 150#			6 HI	M.I.	
1	1	1	1" STD. HEX HD PIPE PLUG			7 HI	STL	
1	1	1	1" STD. PIPE (THD 2E) x 1 1/2"			8 HI	STL	
1	1	1	BAR 3 x 1/4" x 0 8 9			9 HI	STL	
1	1	1	ADAPTER-UNION #2033-8-BS			10 HI		
1	1	1	HOSE ASSY ~ AEROSQUIP #2781-6-132" (1/4) 4721-8-65			11 HI	STL	
1	1	1	ADAPTER-AEROSQUIP #2021-6-BS			12 HI	STL	
1	1	1	HEX HD BOLT 7/16" x 0 1 1/2"			13 HI	STL	
1	1	1	W/NUT & LW					
1	1	1	ADAPTER-AEROSQUIP #2021B-6-BS			16 HI	STL	

No. in Contract	No. of Pieces for One Assembly Unit	No. of Pieces for One Assembly Unit	DESCRIPTION	SECTION	Length Ft. Inch.	Piece or Pattern Number	Drawing Number	Mat'l.
1	1	1	HOIST ASS'Y	(CONT FROM SB#)				
1	1	1	1" STD. TEE ~ 150#			6 HI	M.I.	
1	1	1	1" STD. HEX HD PIPE PLUG			7 HI	STL	
1	1	1	2 1" STD. PIPE (THD 2E) x 1 1/2"			8 HI	STL	
1	1	1	1 BAR 3 x 1/4" x 0 8 9			9 HI	STL	
1	1	1	ADAPTER-UNION #2033-8-BS			10 HI		
1	1	1	HOSE ASSY ~ AEROSQUIP #2781-6-132" (1/4) 4721-8-65			11 HI	STL	
1	1	1	ADAPTER-AEROSQUIP #2021-6-BS			12 HI	STL	
1	1	1	HEX HD BOLT 7/16" x 0 1 1/2"			13 HI	STL	
1	1	1	W/NUT & LW					
1	1	1	ADAPTER-AEROSQUIP #2021B-6-BS			16 HI	STL	

No. in Contract	No. of Pieces for One Assembly Unit	No. of Pieces for One Assembly Unit	DESCRIPTION	SECTION	Length Ft. Inch.	Piece or Pattern Number	Drawing Number	Mat'l.
1	1	1	HOIST ASS'Y	(CONT FROM SB#)				
1	1	1	REV. COUPLING (M) MFGR.					
1	1	1	CHG'D PCKMK (M) ADDED PCKMK (M)					
1	1	1	DWG REVISIONS					
1	1	1	DESCRIPTION					

No. in Contract	No. of Pieces for One Assembly Unit	No. of Pieces for One Assembly Unit	DESCRIPTION	SECTION	Length Ft. Inch.	Piece or Pattern Number	Drawing Number	Mat'l.
1	1	1	HOIST ASS'Y	(CONT FROM SB#)				
1	1	1	W-4139 443 THRU 447			MS, SS	BLOU	
1	1	1	BARGE UNLOADER DIGGING ARM HOIST					
1	1	1	ARRGT BILL OF MAT'L					
1	1	1	SCALE					
1	1	1	AUTH'D & DATE					
1	1	1	DR. VINKSI 7-29-80					
1	1	1	APP'D R.P. Gombard 7/29/80					
1	1	1	STANLEY CONG. CONTR. #213					
1	1	1	DRAWING NO.					
1	1	1	347111					
1	1	1	REV.					
1	1	1	2					

1	1	1	REV. COUPLING (M) MFGR.					
1	1	1	CHG'D PCKMK (M) ADDED PCKMK (M)					
1	1	1	DWG REVISIONS					
1	1	1	DESCRIPTION					

1	1	1	W-4139 443 THRU 447			MS, SS	BLOU	
1	1	1	BARGE UNLOADER DIGGING ARM HOIST					
1	1	1	ARRGT BILL OF MAT'L					
1	1	1	SCALE					
1	1	1	AUTH'D & DATE					
1	1	1	DR. VINKSI 7-29-80					
1	1	1	APP'D R.P. Gombard 7/29/80					
1	1	1	STANLEY CONG. CONTR. #213					
1	1	1	DRAWING NO.					
1	1	1	347111					
1	1	1	REV.					
1	1	1	2					

1	1	1	REV. COUPLING (M) MFGR.					
1	1	1	CHG'D PCKMK (M) ADDED PCKMK (M)					
1	1	1	DWG REVISIONS					
1	1	1	DESCRIPTION					





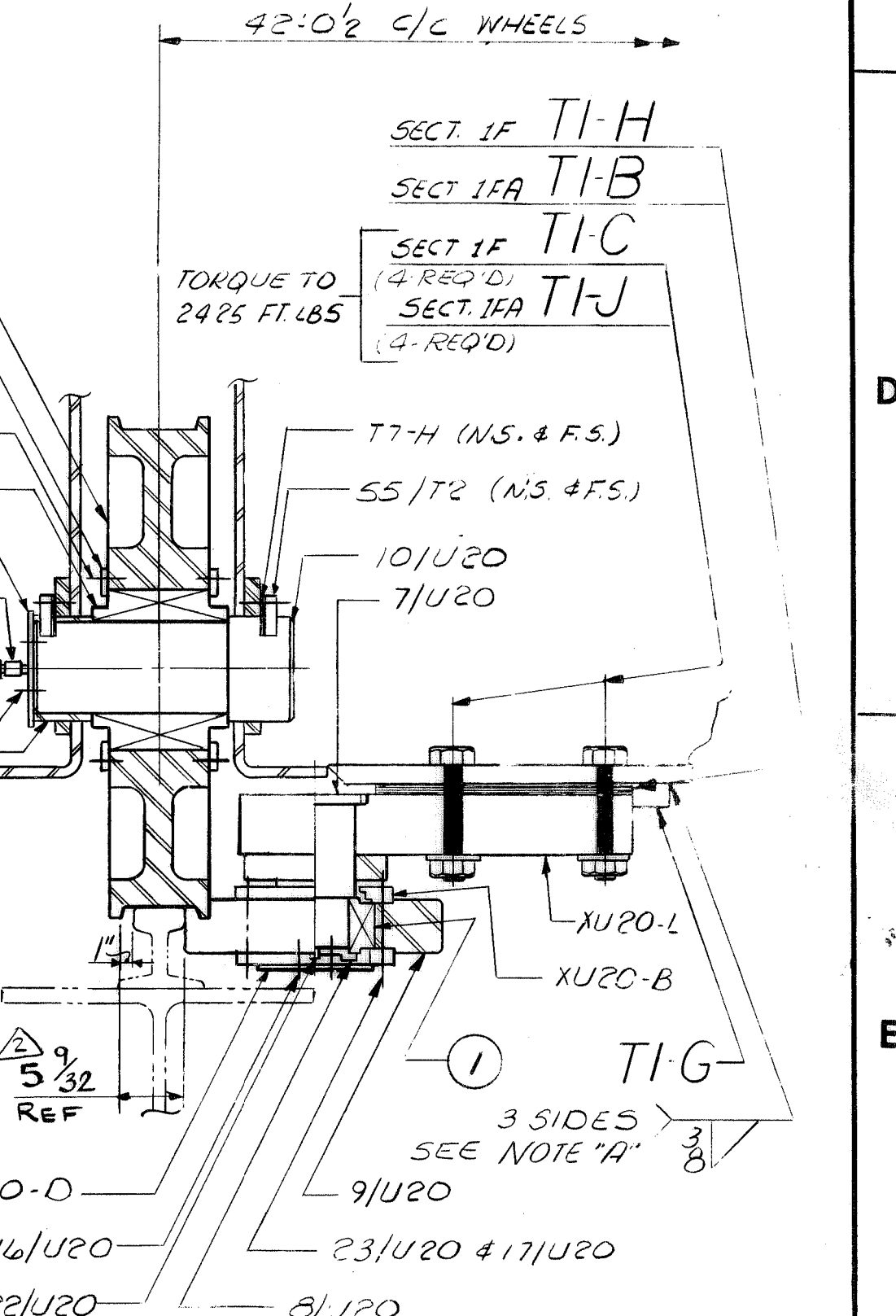
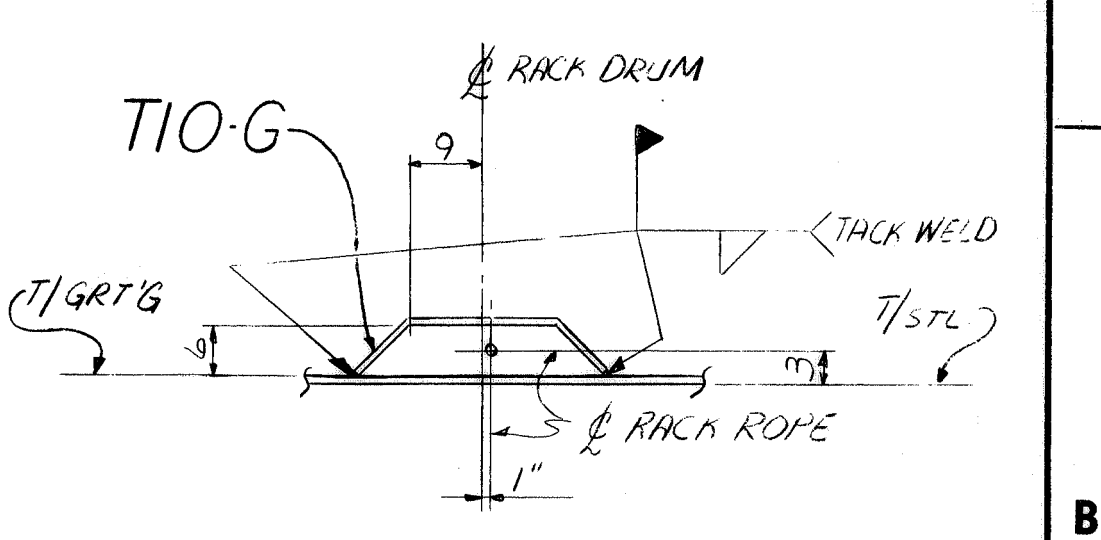
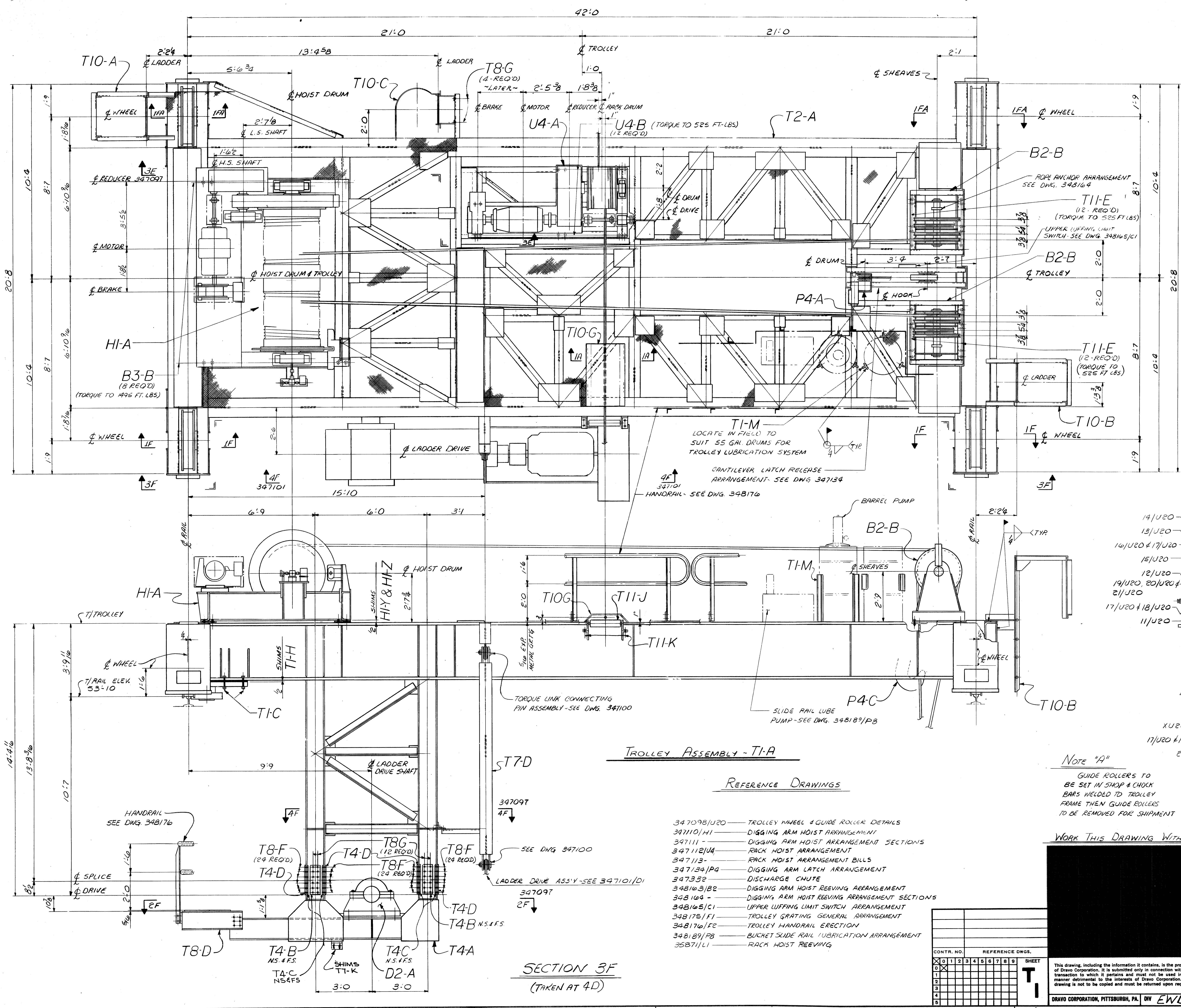








REV.	ITEM	DESCRIPTION	DATE	REF.
1		ADD TITLE TIA & SHIMS TT-K	10/28/80	
2		ADD DIM IN SECT IF & IFA	11/12/80	



**TROLLEY ASSEMBLY - TIA**

**REFERENCE DRAWINGS**

- 347098/U20 - TROLLEY WHEEL & GUIDE ROLLER DETAILS
- 34710/H1 - DIGGING ARM HOIST ARRANGEMENT
- 347111 - DIGGING ARM HOIST ARRANGEMENT SECTIONS
- 347112/U4 - RACK HOIST ARRANGEMENT
- 347113 - RACK HOIST ARRANGEMENT BILLS
- 347134/P4 - DIGGING ARM LATCH ARRANGEMENT
- 347332 - DISCHARGE CHUTE
- 348163/B2 - DIGGING ARM HOIST REEVING ARRANGEMENT
- 348164 - DIGGING ARM HOIST REEVING ARRANGEMENT SECTIONS
- 348165/C1 - UPPER LUFFING LIMIT SWITCH ARRANGEMENT
- 348175/F1 - TROLLEY GRATING GENERAL ARRANGEMENT
- 348176/F2 - TROLLEY HANDRAIL ERECTION
- 348189/P8 - BUCKET SLIDE RAIL LUBRICATION ARRANGEMENT
- 35271/L1 - RACK HOIST REEVING

**Note "A"**  
GUIDE ROLLERS TO BE SET IN SHOP & CHOCK BARS WELDED TO TROLLEY FRAME THEN GUIDE ROLLERS TO BE REMOVED FOR SHIPMENT

**SECTION 1F (TAKEN AT 4C+2C)**  
**SECTION IFA (TAKEN AT 4A+2A)**

WORK THIS DRAWING WITH DRAWING 347097/T11 & 347101/D1

**SECTION 3F**  
(TAKEN AT 4D)

CONTRACT NO. 1 WA139		DATE 21 THRU 28		MS 55 BULO	
NO. 0		CONTRACT NO. 347097		SHOPS D13 F	
<b>CONTINUOUS BARGE UNLOADER</b>					
<b>Trolley Assembly &amp; General Arrangement</b>					
SCALE 1/2" = 1'-0"		APP'D R.P. [Signature]			
DR. [Signature]		DATE 10/28/80		DATE 10/28/80	
CHK. [Signature]		DRAWING NO. 347096			
REV. 1		REV. 2			
DRAVO CORPORATION, PITTSBURGH, PA. DW EWD					

CONTR. NO.	REFERENCE DWGS.
0	1
1	2
2	3
3	4
4	5
5	6
6	7
7	8
8	9
9	10

Vertical scale markings on the left edge of the drawing, ranging from 0 to 30.



No. of Pieces	No. of Pieces in Drawing	DESCRIPTION	SECTION	Length FT. INCH.	Drawing Number	Mkt.
1	1	RACK DRIVE ARRGT			U4-A 347112	-
1	1	MOTOR ~ 2.5 H.P. ~ SHUNT WOUND, DC, Ø TO 1750 RPM, 0 TO 240V, TEFC			A	-
1	1	BRAKE ~ SHOE TYPE FLOOR MOUNTED, 8" DIA. WHEEL, 100 FT. LB.			B	-
1	1	REDUCER ~ BROWNING ~ UNIT SIZE 50H, TYPE H.P. RATIO=24.81			C	-
1	1	TRIPLE REDUCTION, SPECIAL EXTENDED LOW SPEED SHAFT, DOUBLE EXTENDED HIGH SPEED SHAFT				-
1	1	SHAFT				-
1	1	COUPLING GUARD SIGN			XU4-G	-
1	1	COUPLING ~ FALK ~ 1040G			D	-
1	1	TYPE G.20			E	-
1	1	TACHOMETER ~ G.E. MODEL # ~ BC-42				-
4	4	SELF TAPPING SCREW N# 8 0 3/4 10 0.4 347112 STL				-
		CONT'D. ON S. B. #				-

No. of Pieces	No. of Pieces in Drawing	DESCRIPTION	SECTION	Length FT. INCH.	Drawing Number	Mkt.
1	1	RACK DRIVE ARRGT U4-A CONT'D FROM S.B.#				-
1	1	VANE LIMIT SWITCH ~ G.E. MODEL # CR11E A30 AC			F	347112
1	1	PILLOW BLOCK ~ SKF #SAPS 22216C - EXPANSION ONE END CLOSED			G	347112
1	1	3" SHAFT DIA.				-
1	1	RACK DRIVE DRUM ASSY			XU2-A 347114	-
1	1	RACK DRIVE BASE ASSY			XM1-A 347115	-
1	1	CPLG. GUARD				95133 STL
2	2	ROPE ANCHOR P				10 S57 95996 -
1	1	TACHOMETER GUARD			XM11-A 348166	-
4	4	HEX HD. BOLT 1/2" W/HEX NUT & F.W.				95135 STL
2	2	BAR 2x 1/4				95135 STL
6	6	Hex Hd Bolt 7/8" Ø 1/2" FLAT WASH.				U4 347112 STL
		CONT'D. ON S. B. #				-

No. of Pieces	No. of Pieces in Drawing	DESCRIPTION	SECTION	Length FT. INCH.	Drawing Number	Mkt.
1	1	RACK DRIVE ARRGT U4-A CONT'D FROM S.B.#				-
1	1	COUPLING ~ REX ~ DOUBLE FLEX DISC. TYPE DBZ - 50 FOR 3/8 DIA. SHAFT - STD. KEYWAY			H	347112
1	1	COUPLING ~ REX ~ DOUBLE FLEX DISC. TYPE DBZ - 163 HALF FOR 1/2" SHAFT & 1/2" HALF FOR 1/2" SHAFT W/STD. KEYWAY			J	347112
1	1	COUPLING GUARD				95133 STL
1	1	KEY 1/2" x 1/4" x 1/4"			K	347112 1045
2	2	KEY 3/16" x 3/16" x 1/2"			L	1045
2	2	BAR 2x 1/4				95135 STL
1	1	SHAFT 1 1/2" Ø				95017 H.B. 1045
4	4	H.H. Bolt w/ Nut & F.W. 1/2" Ø 1/2" FLAT WASH.				95135 STL
1	1	VANE WHEEL			XM11-B 348166	-
6	6	SHIM PACK			U4-G 347112	-
12	12	HI-STR. HEX HD BOLT W/ HWY. HEX NUT & HARD F.W.			U4-B 347112	A325
1	1	SHIM PACK			XU4-C	-
2	2	SHIM PACK			XU4-D	-
4	4	SHIM PACK			XU4-E	-
2	2	SHIM PACK			XU4-F	-

C

D

E

F

BRUNING 44-131-2917-2

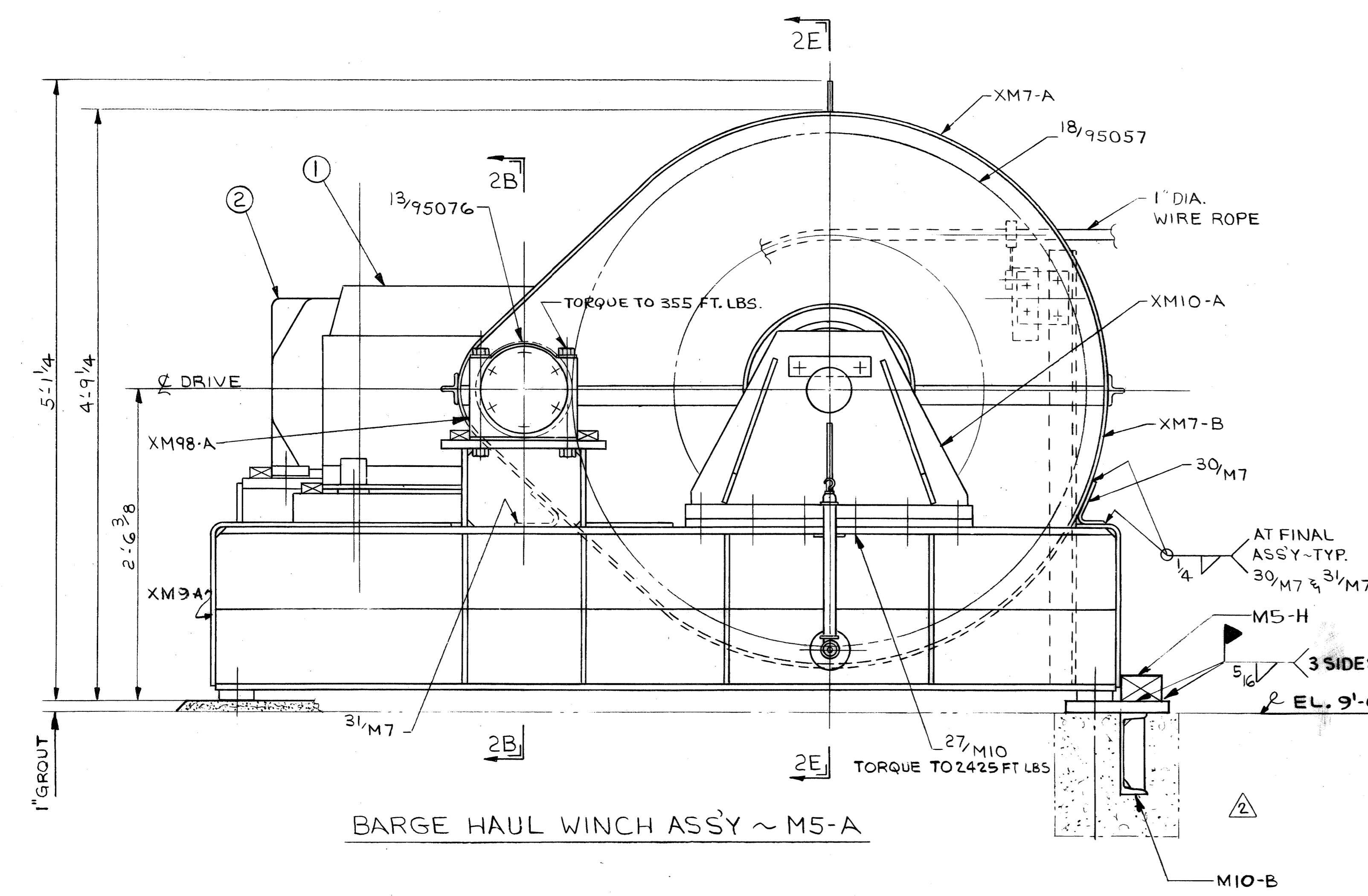
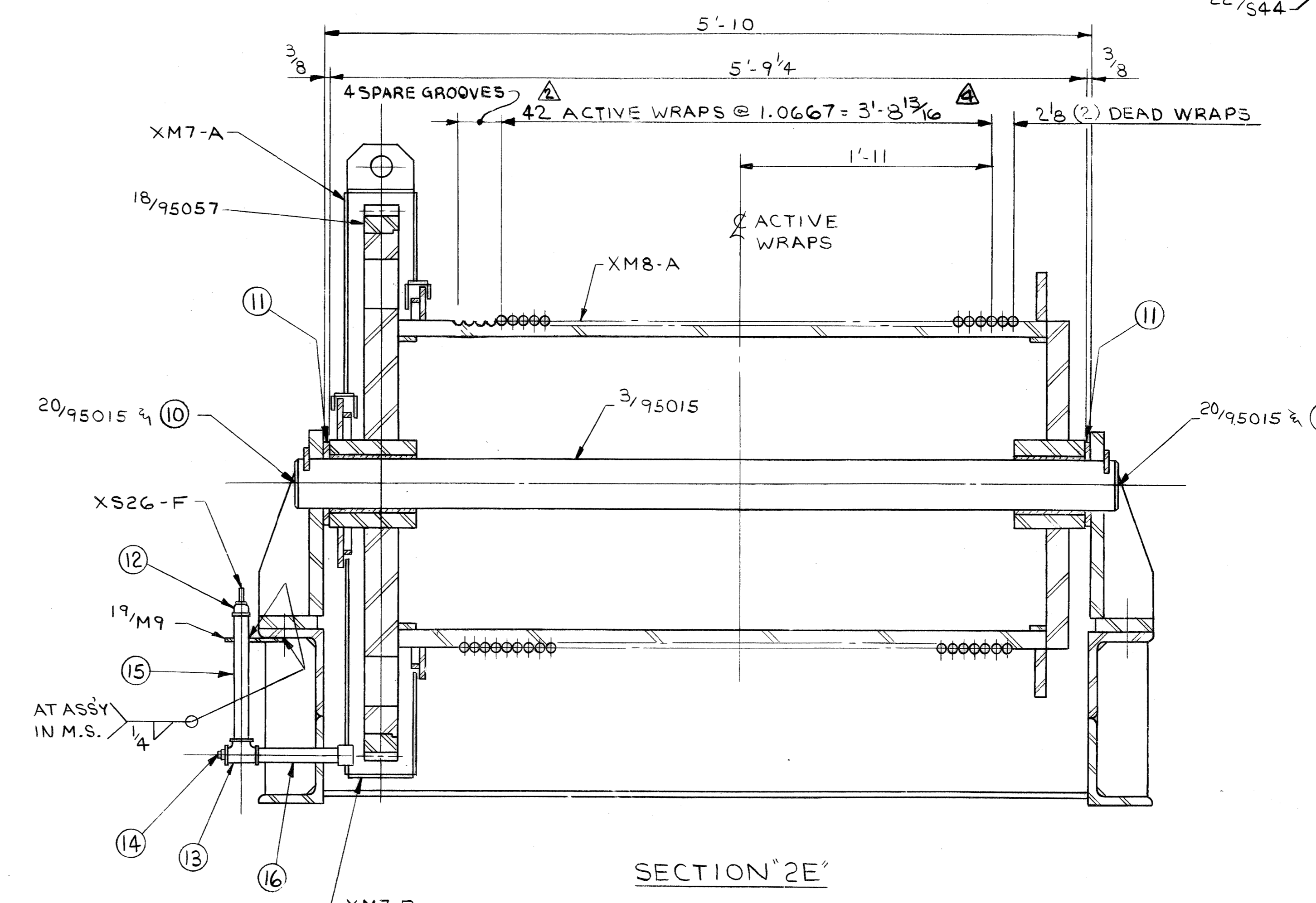
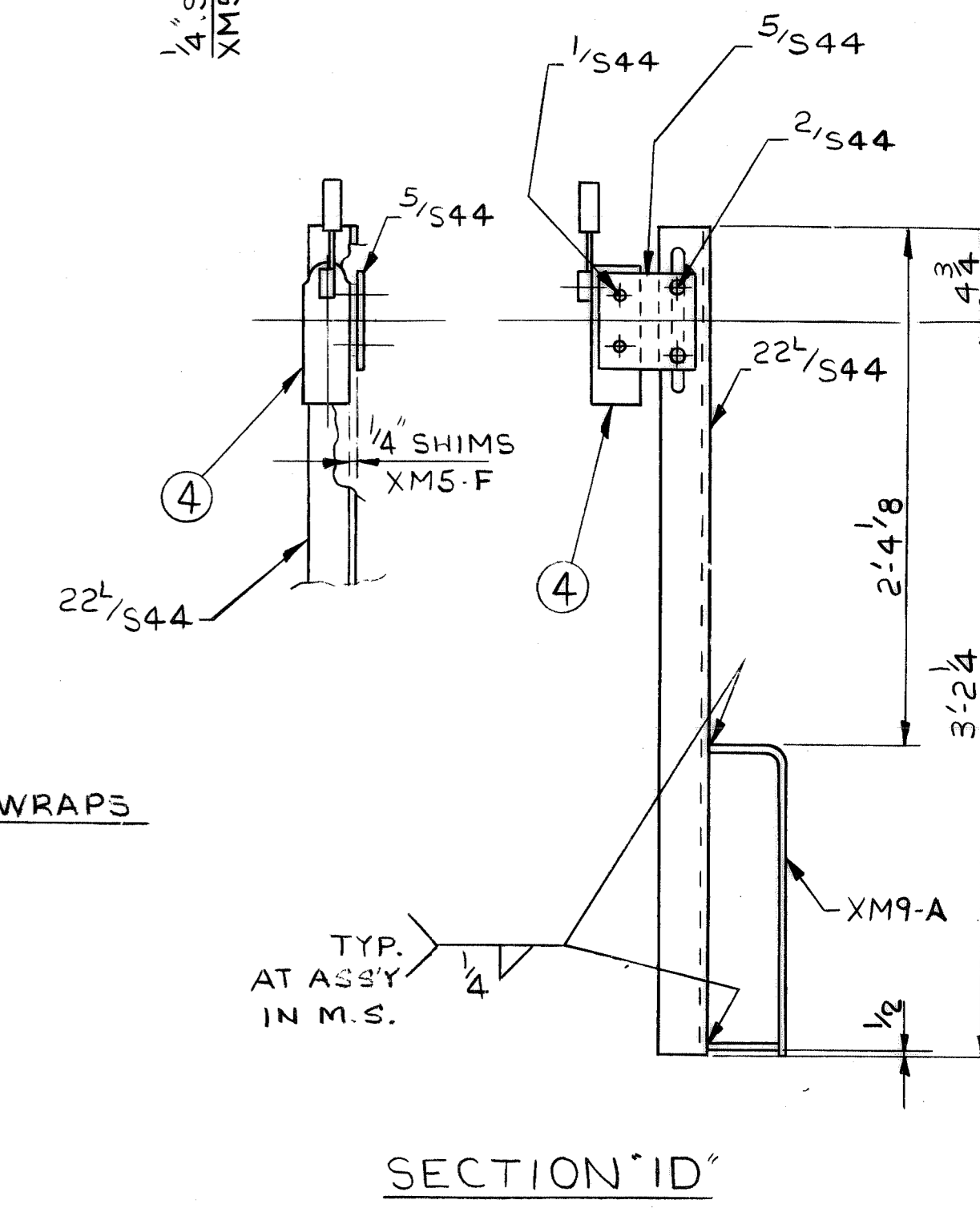
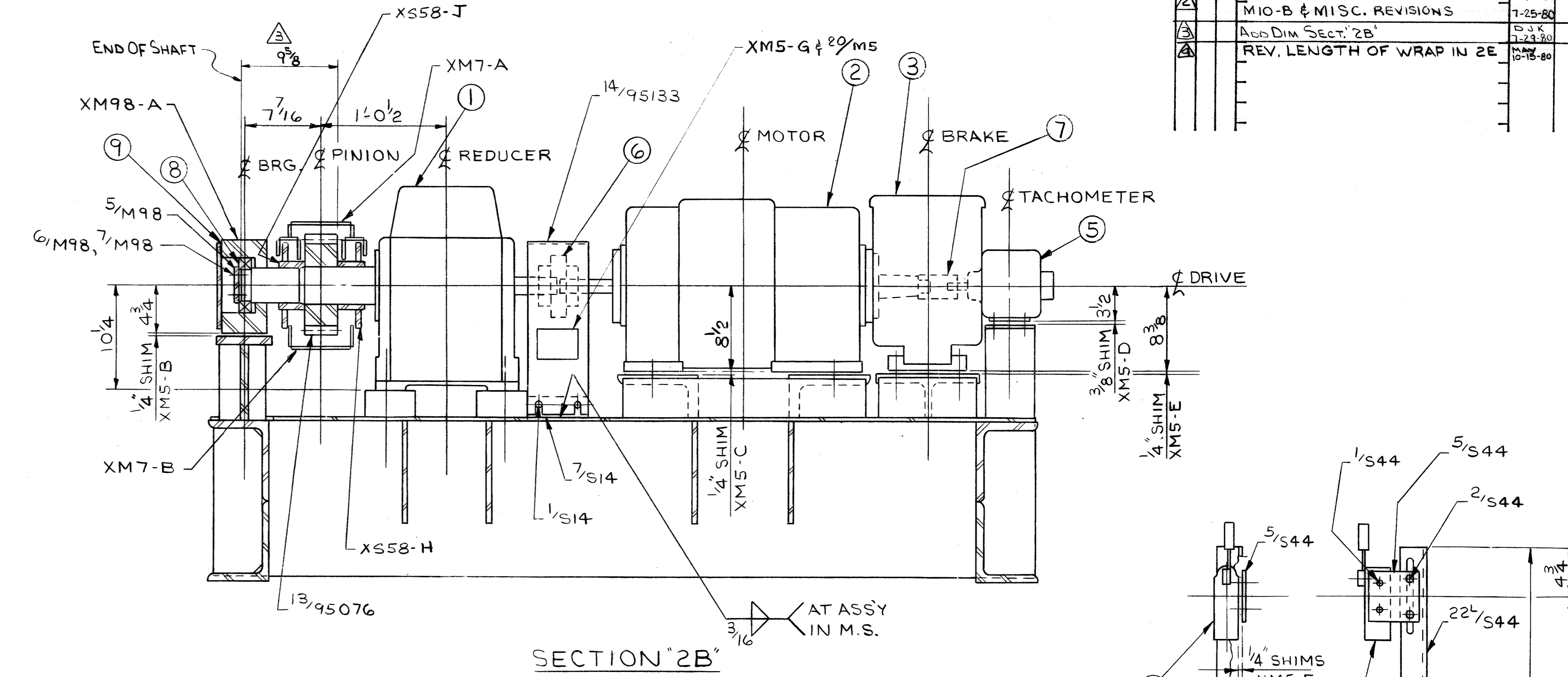
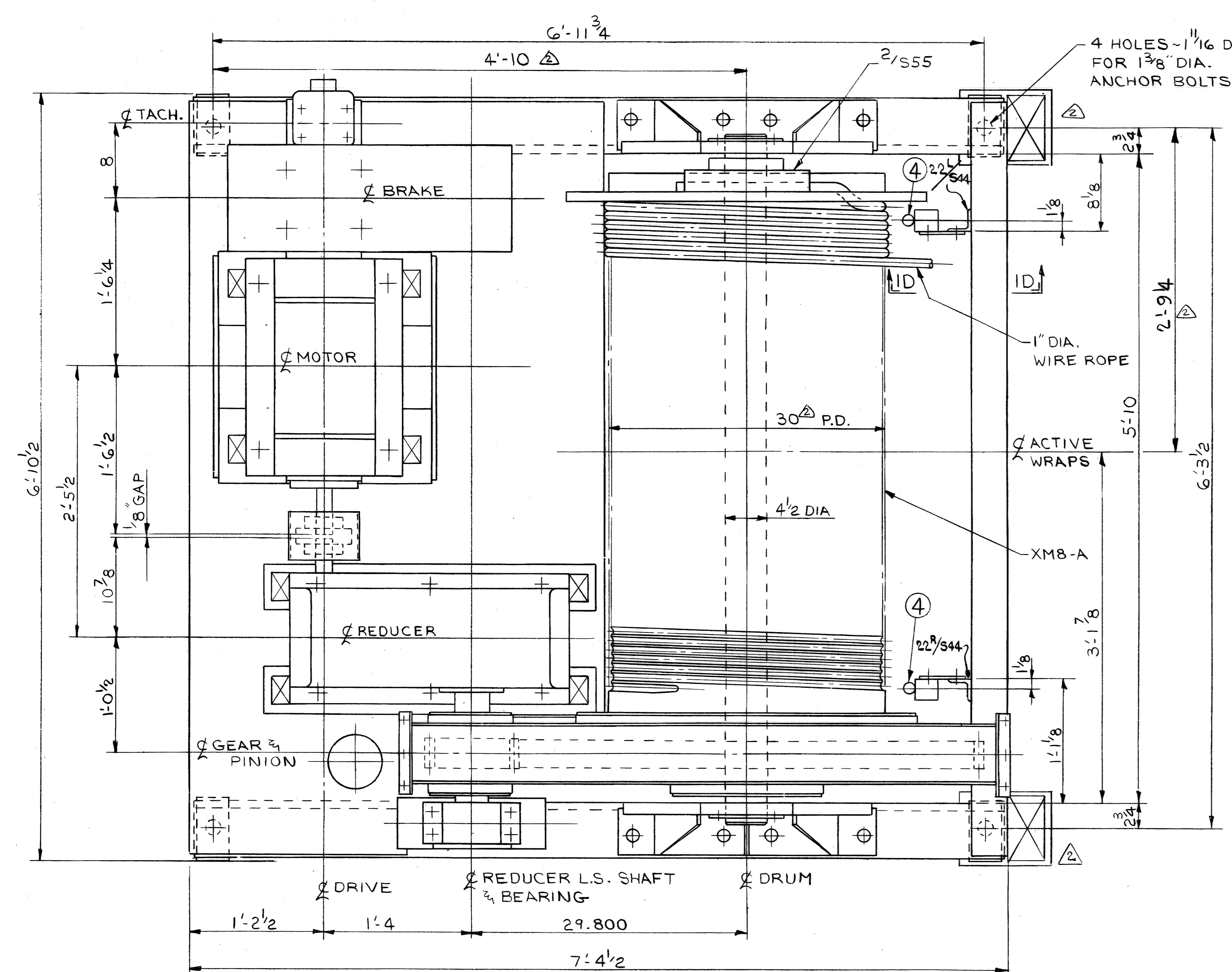
NOMINAL MACHINING DIMENSIONS ± 0.010 UNLESS NOTED

CONTR. NO.	REFERENCE DWGS.	DRAYO CORPORATION, PITTSBURGH, PA. DIV E.W.D.
SHEET		2

NO. RECD	W4139	CONTRACT NO.	111, 112, 113	M.S. S.S. BLOW PAINT
SHOP BILL NO.		SHOPS		DIST
CONTINUOUS BARGE UNLOADER RACK DRIVE ARRANGEMENT BILLS				
SCALE		PASSED <i>W. Schuster</i> 6/30/80		
AUTHOR & DATE		DR. J. STURTZ 10-5-80		
DESCRIPTION		APP'D. <i>W. Schuster</i> 6/16/80		
DRAWING NO.		REV.		
347113		2		



REV.	ITEM	DESCRIPTION	AUTH'D	DATE	REF.
1		ADD M. XMS-G & M5 TO SECT 2B	BMR	7-9-80	
2		ADD CHECK BAR SUPPORT ASSY	J.M.S.	7-25-80	
3		MIO-B & MISC. REVISIONS	J.M.S.	7-25-80	
4		ADD DIM SECT 2B	J.M.S.	12-23-80	
5		REV. LENGTH OF WRAP IN 2E	J.M.S.	12-23-80	



- REFERENCE DWG'S:
- WINCH BASE — 347130-M9
  - WINCH DRUM ASSY — 347129-M8
  - GEAR GUARD — 347128-M7
  - DRUM GEAR — 95057
  - DRUM SHAFT — 95015
  - OIL GAGE ASSY — 95075-S26
  - ROPE ANCHOR — 95998-S55
  - STD. PINION — 95076
  - PILLOW BLOCK — 31739-M98
  - GEAR GUARD SPACER — 95116-S58
  - COUPLING GUARD — 95133
  - COUPLING GUARD SUPPORT — 95135-S14
  - DRUM SHAFT SUPPORT — 347131-M10

SPECIFICATIONS:

- ROPE SPEED — ADJUSTABLE TO 70 F.P.M.
- RATED ROPE PULL — 12,000 LBS.
- STALL ROPE PULL — 24,000 LBS.
- TOTAL WINCH WEIGHT — 7,100#

SEE DWG. 346127 FOR BILL OF MATERIAL.

CONTR. NO.	REFERENCE DWGS.	SHEET
0		1
1		2
2		3
3		4
4		5
5		6
6		7
7		8
8		9
9		10

W-4139 S29 THRU S33 MS BLOW PAINT  
NO. CONTRACT NO. SHOP BILL NO. SHOPS DIST.

**BARGE HAUL WINCH ARRANGEMENT**

SCALE 1/2" = 1'-0" APP'D: W. J. Seltzer 6/20/80  
DIMENSIONS 5-30-80 DATE 6/20/80  
CHK'D: P. L. 6/19/80 - AHZ 1/23/80

**Dravo** DRAWING NO. 347126 REV. 4  
DRAVO CORPORATION, PITTSBURGH, PA. DIV E.W.D.





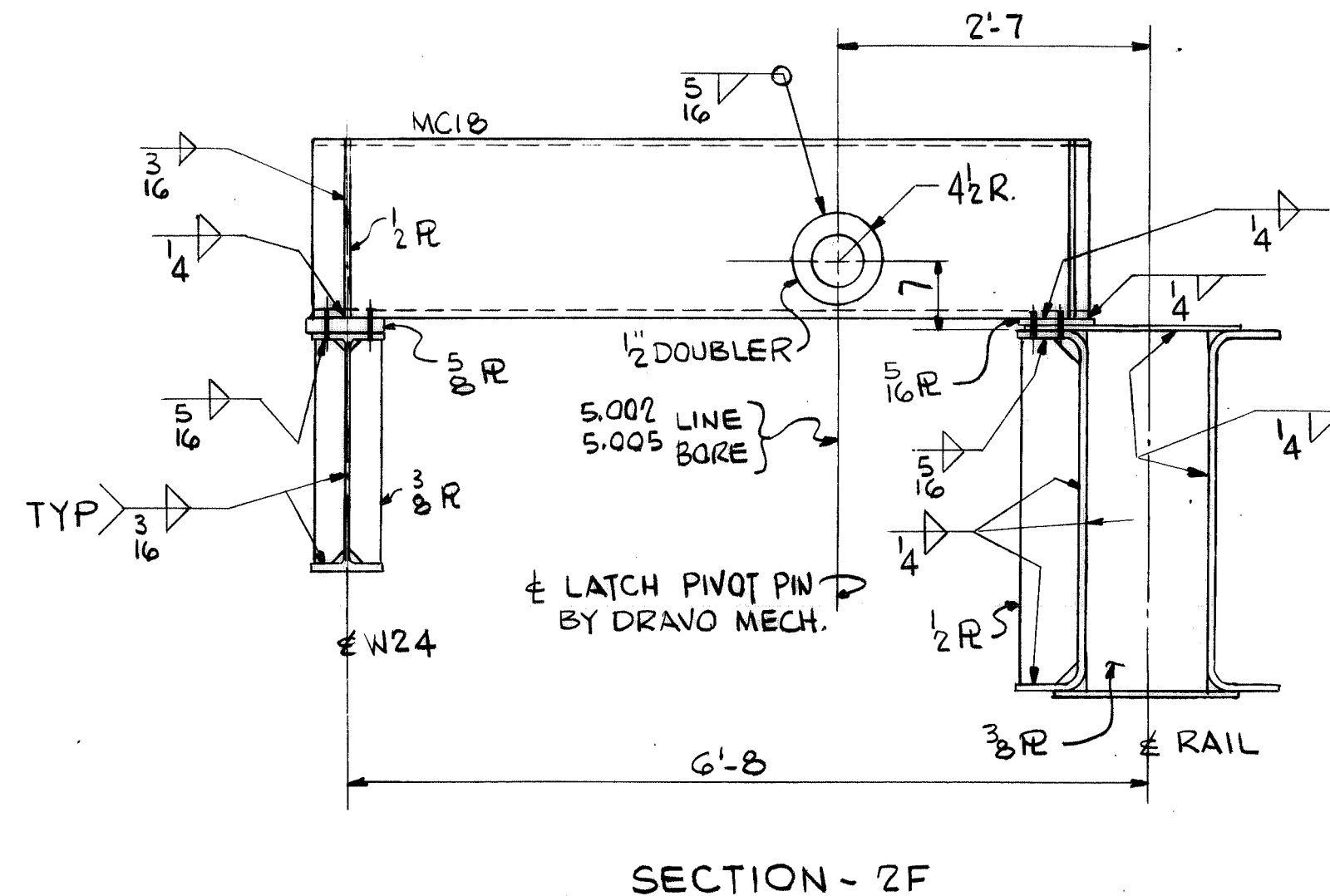
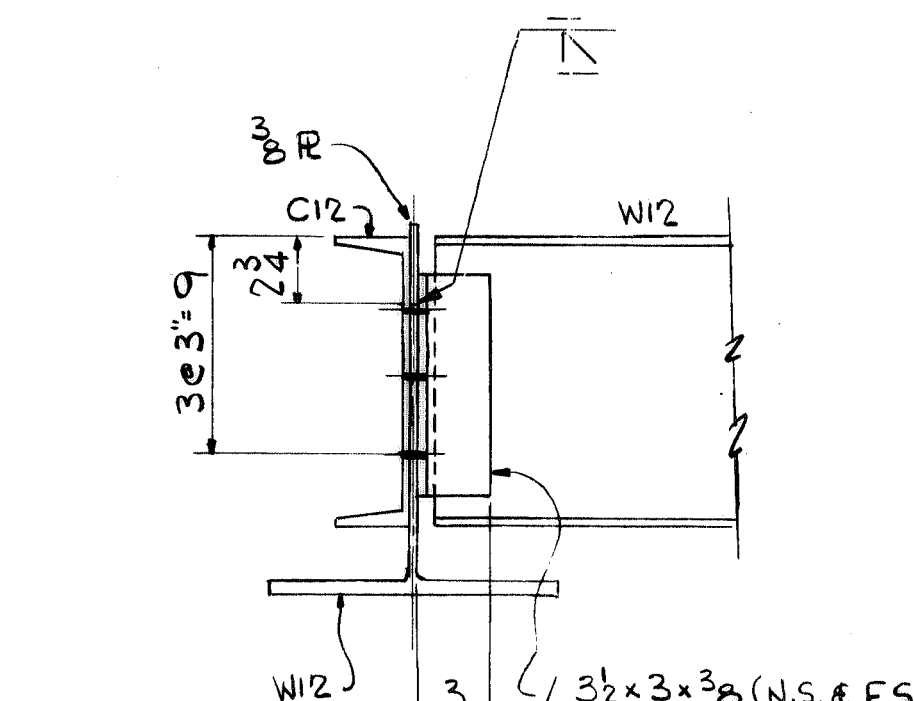
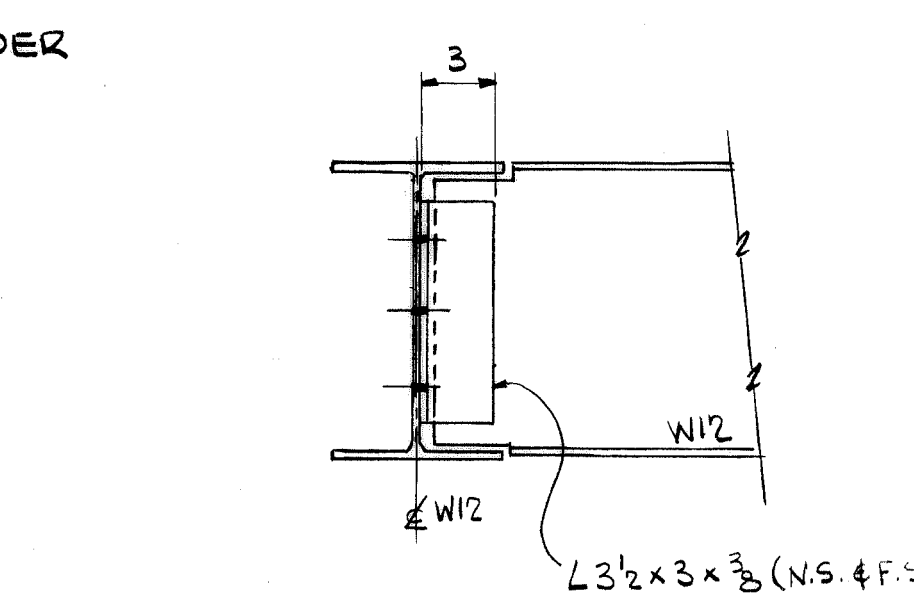
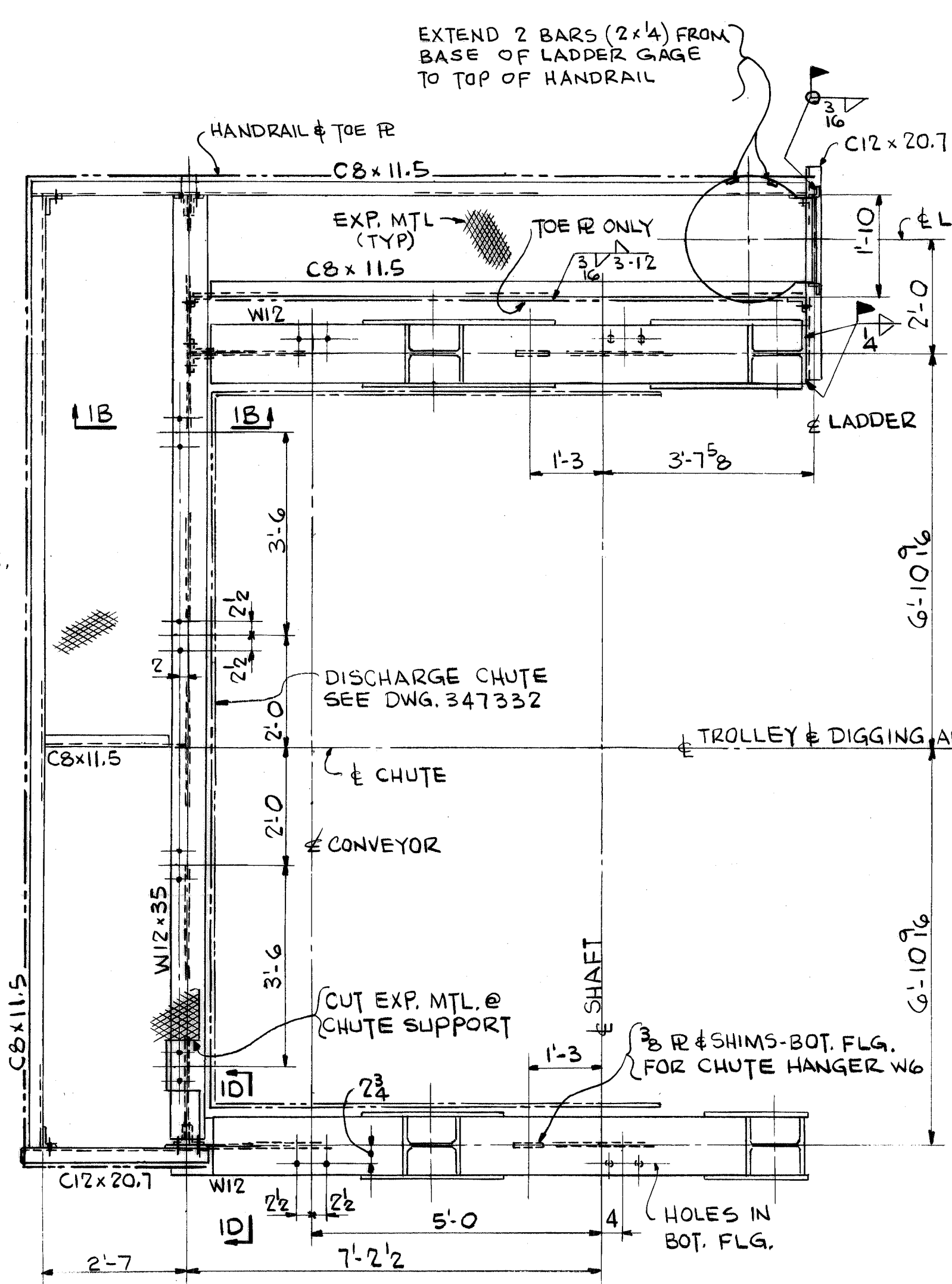
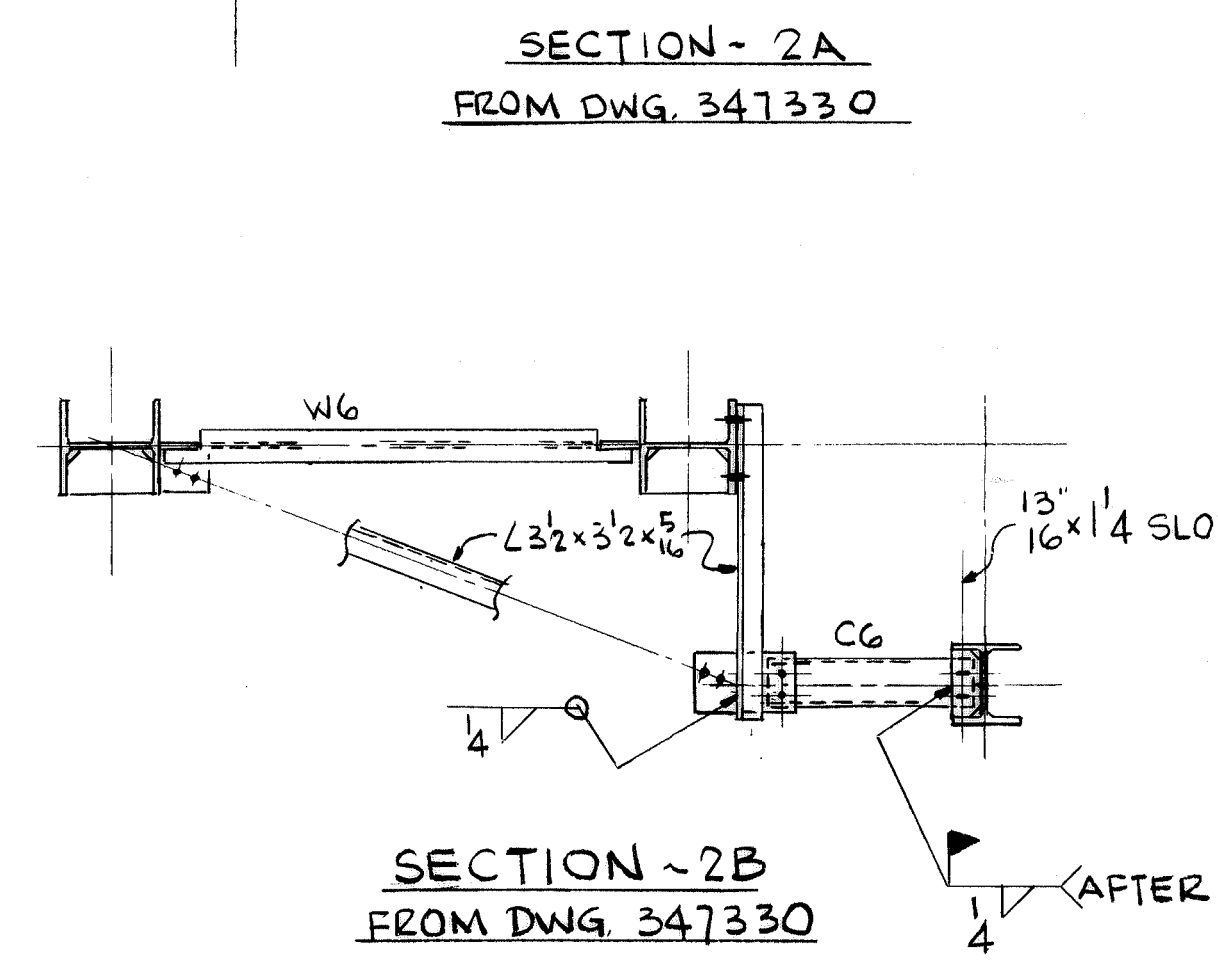
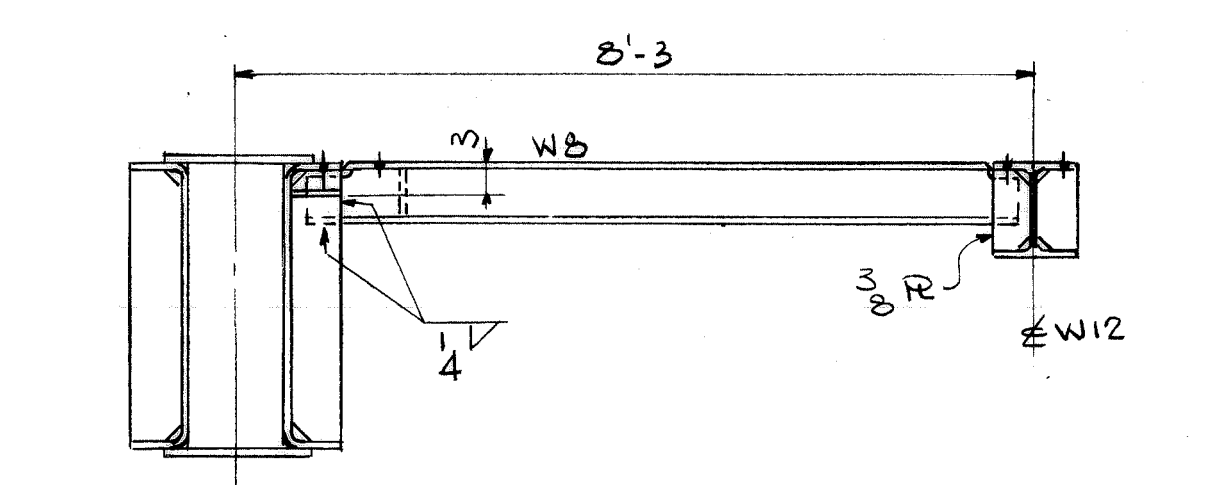
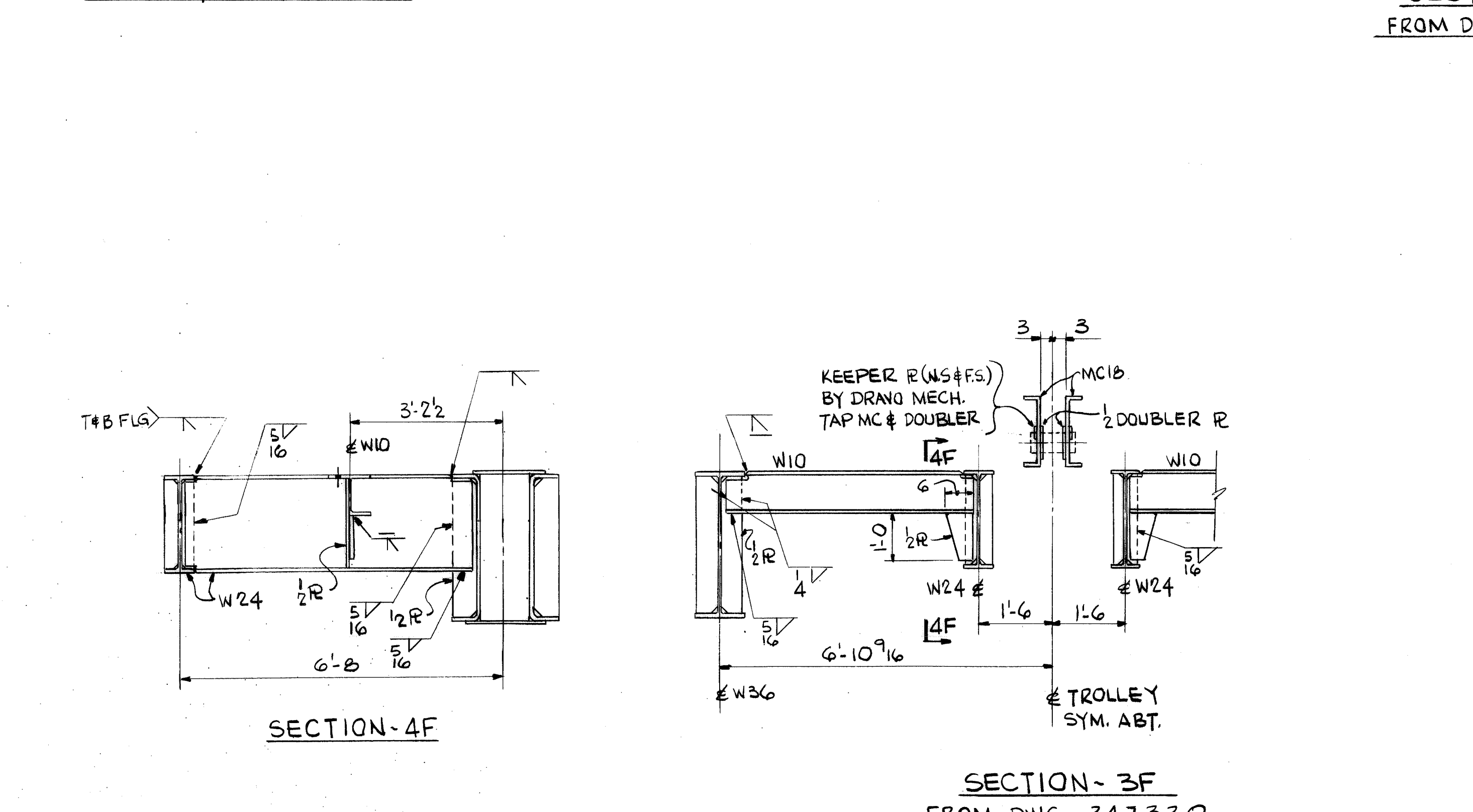
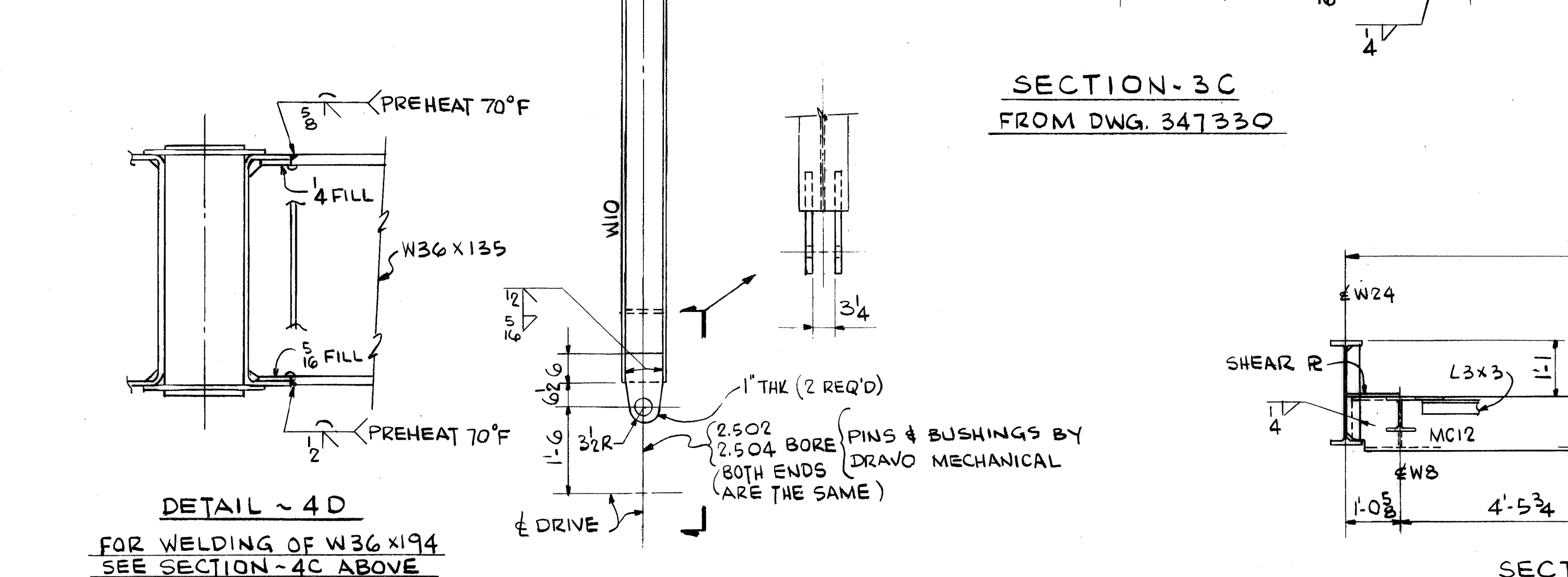
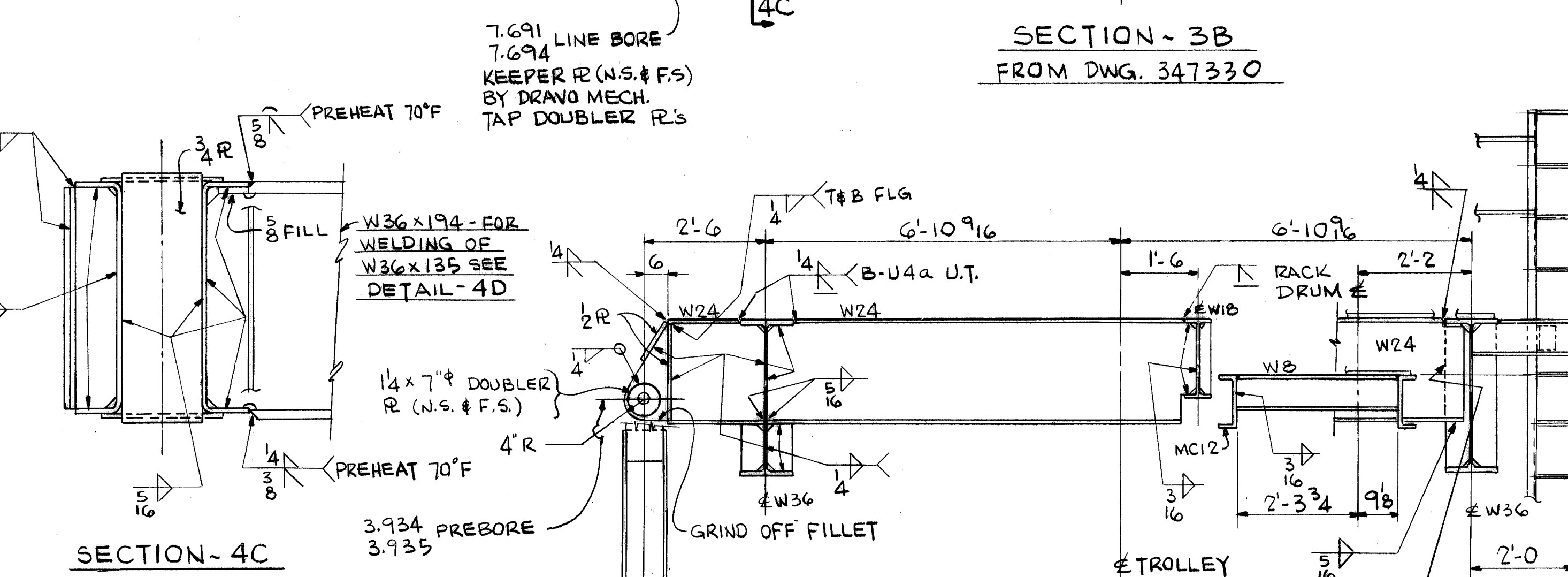
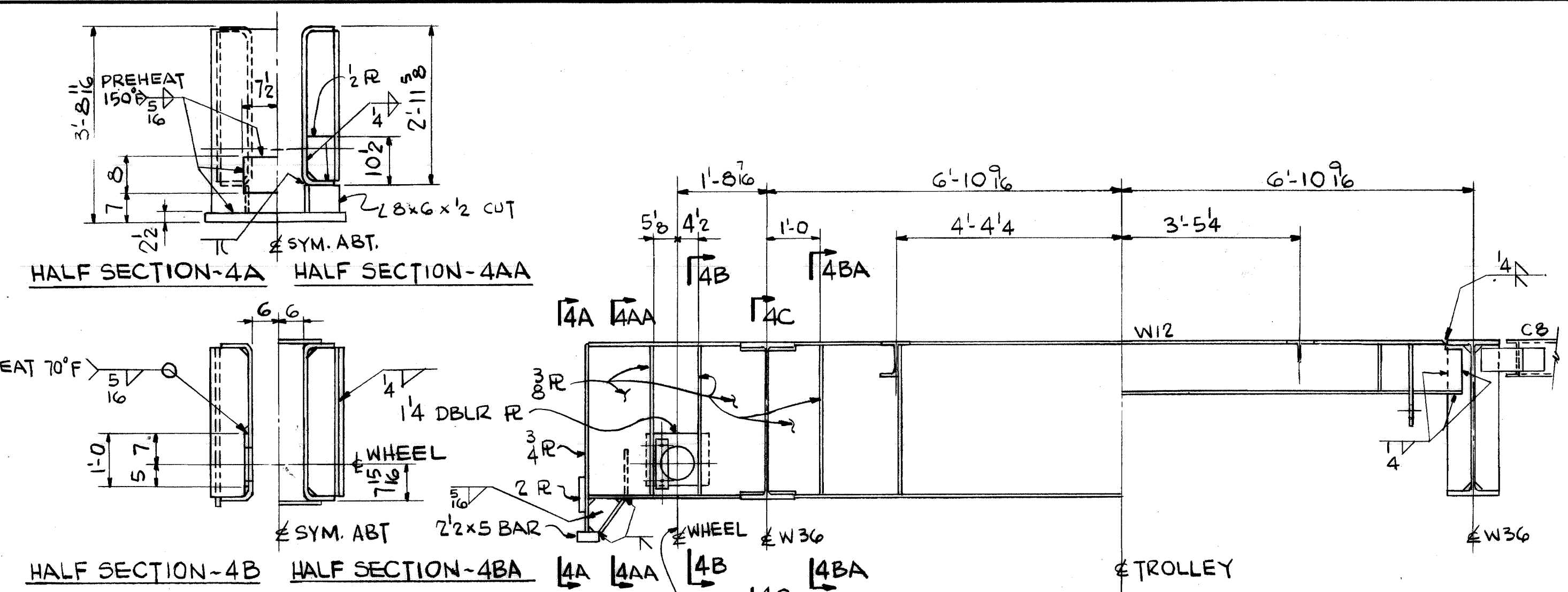








REV.	ITEM	DESCRIPTION	DATE	REF.
1		REV. CORR. IN SECT. 1-B & 1-D ALSO	9/12/80	ROWNA
2		ADD BORE IN SECT. 3-C	GLW	
		NOTED FOR AS-BUILT	7/9/81	ROWNA



WORK THIS DWG. WITH DWG'S. 347330 & 347332

CONTR. NO.		REFERENCE DWGS.	
0	1	2	3
4	5	6	7
8	9		

NO. REG'D	W4139	SHOP BILL NO.	BLOU
CONTRACT NO.		DIST.	F
CONTINUOUS BARGE UNLOADER			
DESIGN OF			
SECTIONS OF TROLLEY FRAME			
SCALE	1/2" = 3' = 1'-0"	APP'D	S. L. Wick
DR	ROWNA	DATE	4/29/80
CHK	FORTMAN		

DRAWING NO. 347331

REV. 2

DRAWO CORPORATION, PITTSBURGH, PA. DIV EWD









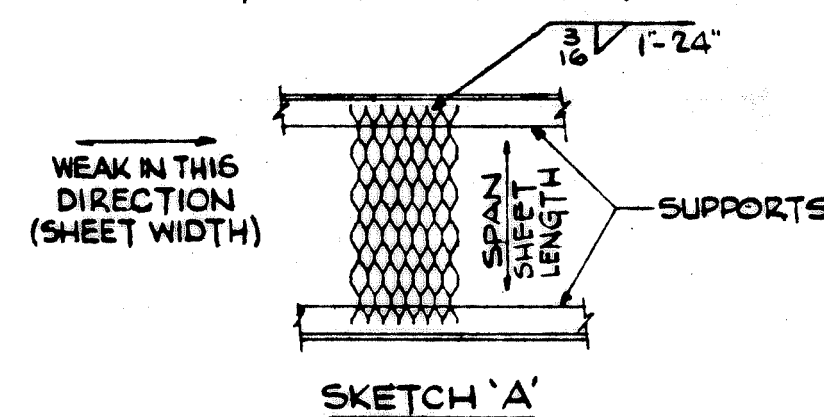




**EXP. METAL GRATING**

EXP. METAL GRATING / REGULAR EXP. METAL USED AS GRATING SHOULD BE USED AS FOLLOWS:

1. SUPPORT GRATING PER SKETCH 'A'

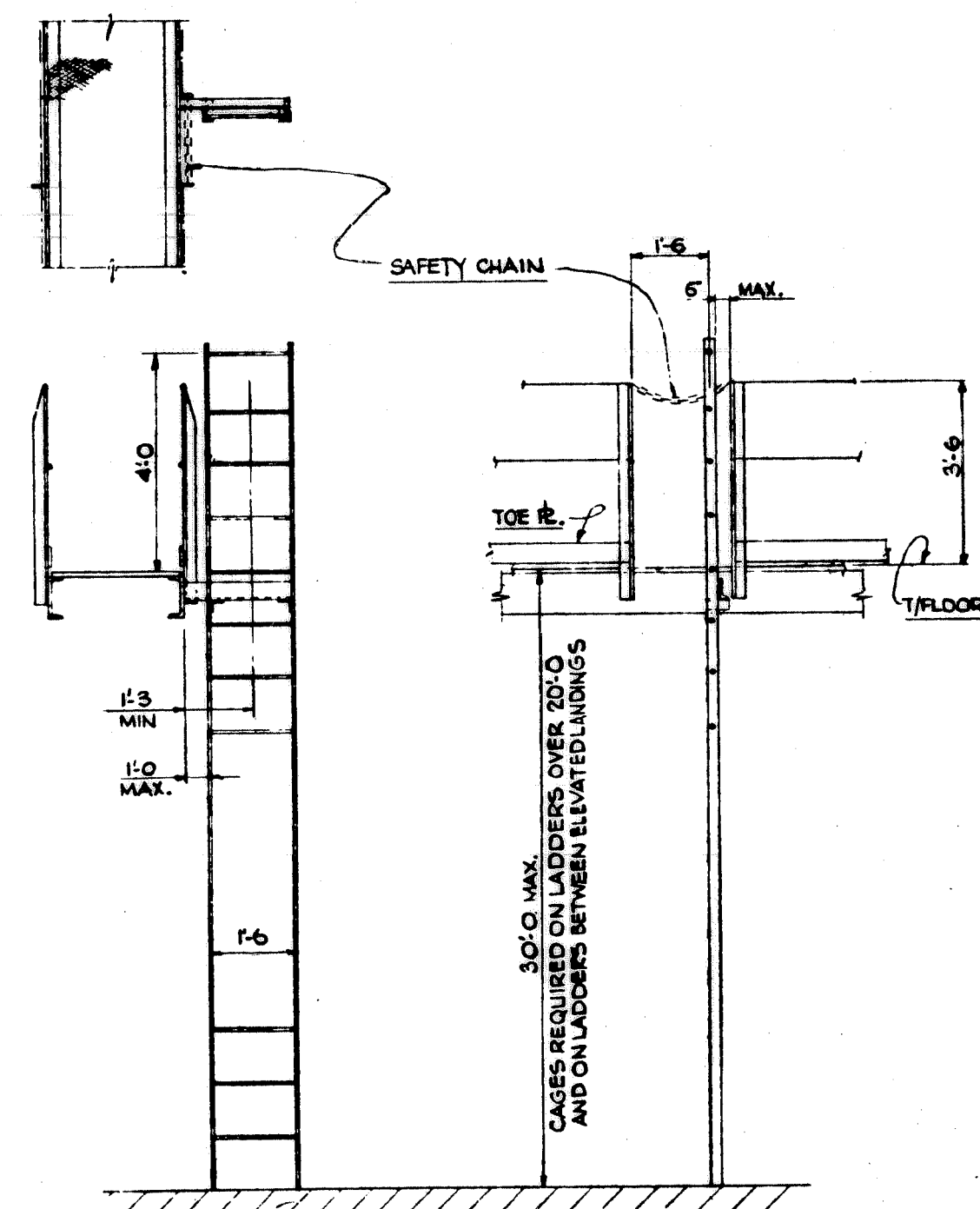


2. WHEN CUTTING TO THE LONG DIMENSION OF THE DIAMONDS, CUT SO A FULL DIAMOND REMAINS.

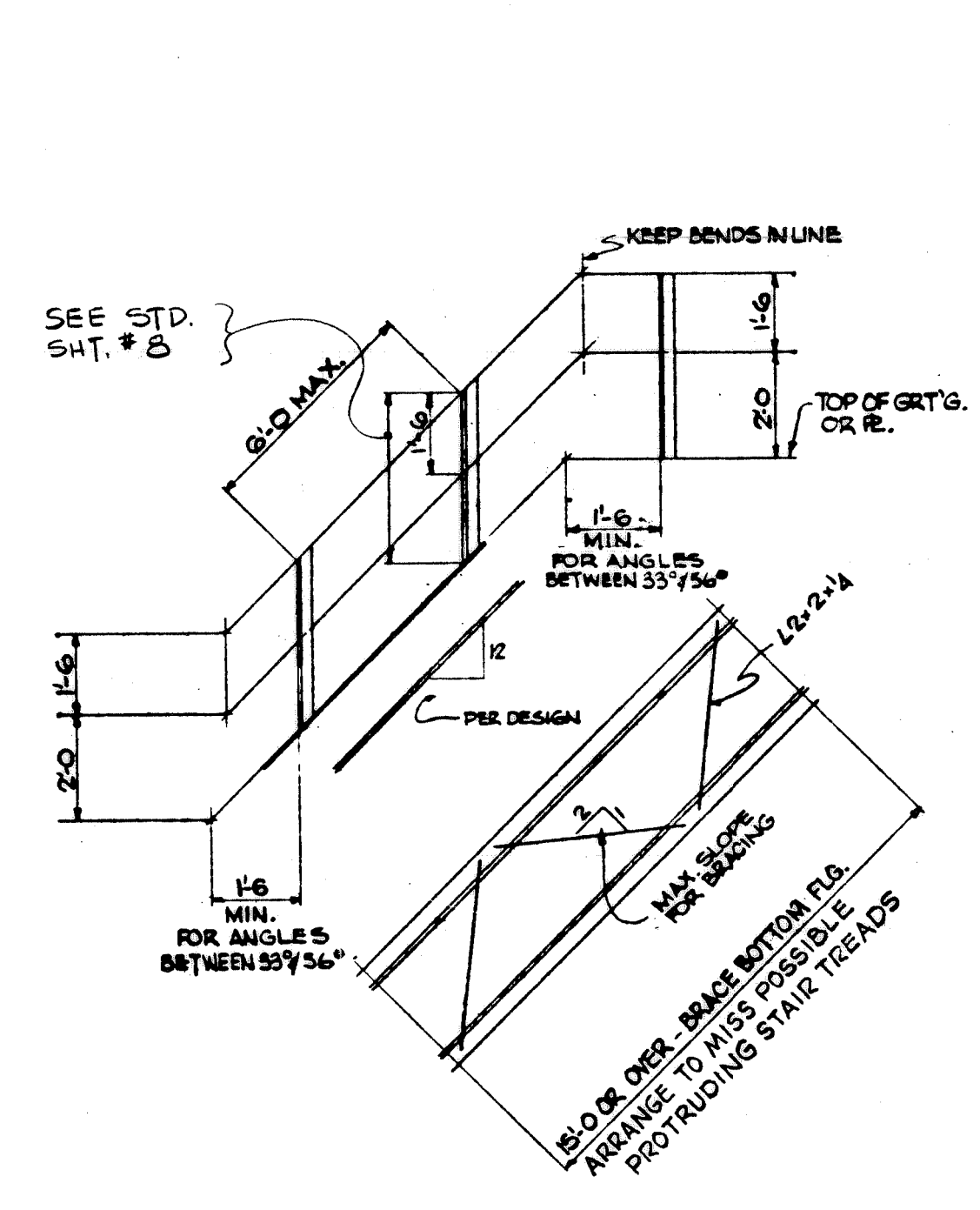
3. ON INCLINED WALKS BARS OF THE EXP. METAL MUST BE ORIENTED PER SKETCH 'A' DETAILS IF NECESSARY / ERECTION DIAGRAMS MUST CONVEY THIS INFORMATION.

4. 5" EXP. METAL GRATING IS STD. FOR WALKWAYS / PLATFORMS.

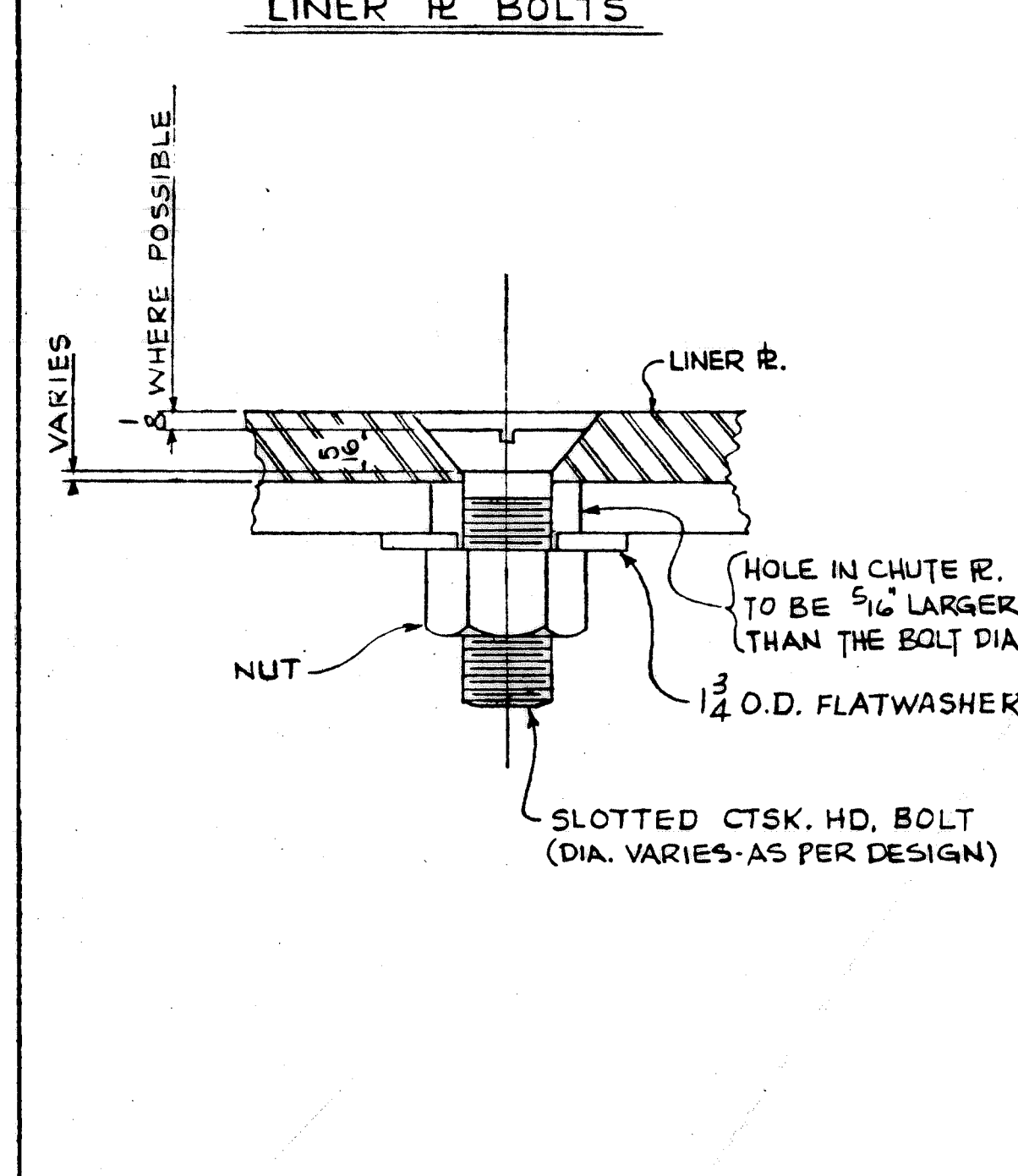
DRAVO CORPORATION STANDARDS	EXPANDED METAL GRATING	Div. EWD DATE 8-9-71	SHEET No. 1
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DRAVO CORPORATION STANDARDS	LADDER CLEARANCES	Div. EWD DATE 8-2-71	SHEET No. 4
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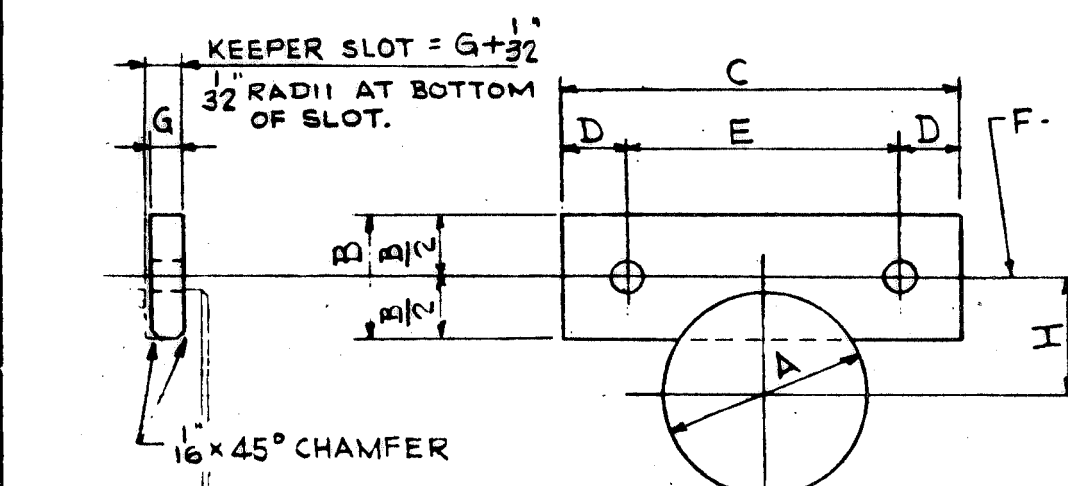


DRAVO CORPORATION STANDARDS	HANDRAIL AND BRACING ON STAIRS	Div. EWD DATE 8-9-71	SHEET No. 7
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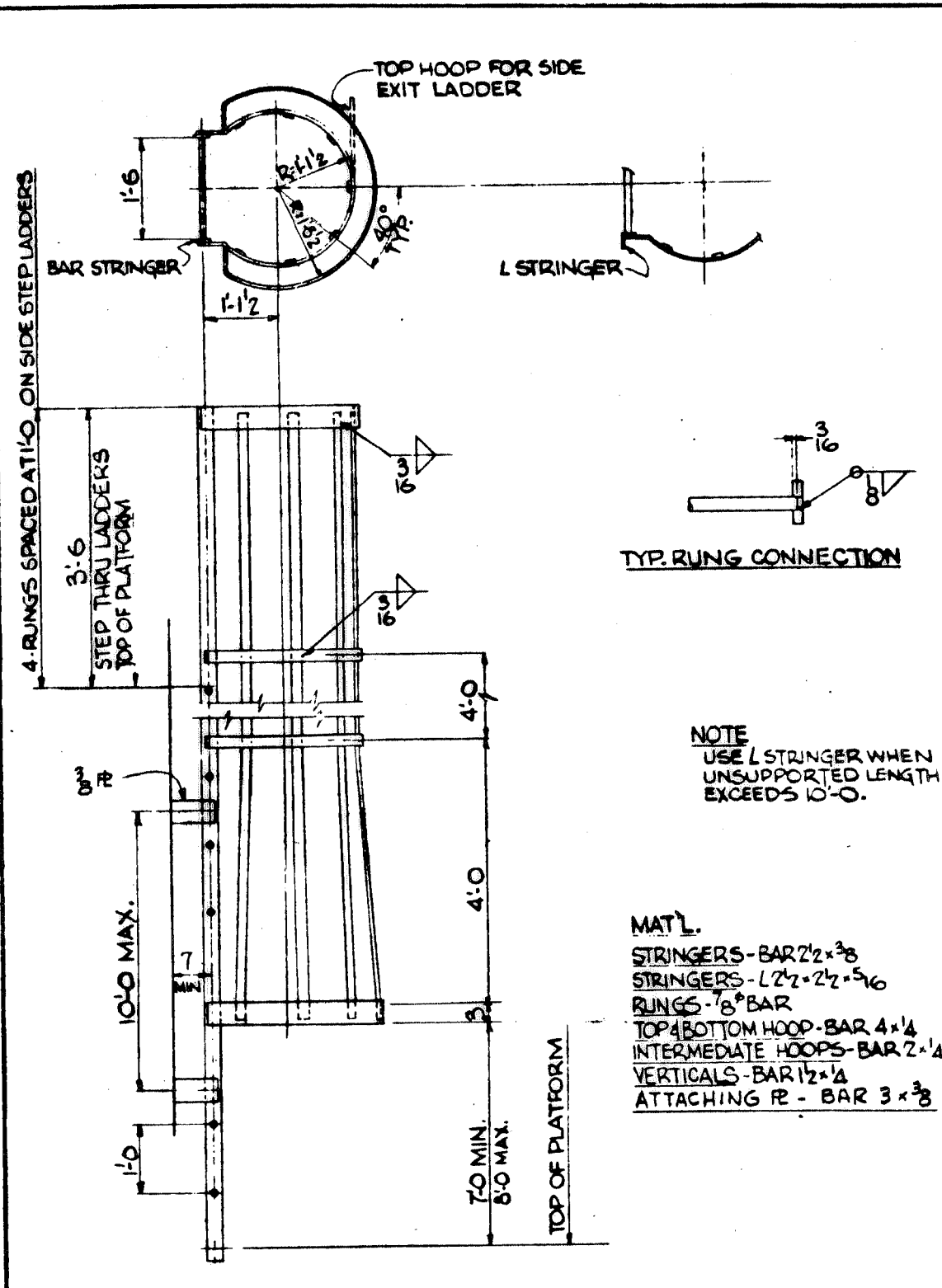
DRAVO CORPORATION STANDARDS	LINER PLATE BOLTS	Div. EWD DATE 8-9-71	SHEET No. 10
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MARK	F.N.	A	B	C	D	E	F	G	H
SST1	.5	1 1/4	5/8	3/4	5/8	2 1/2	1 1/2	3/8	1 1/2
SST2	.5	1 1/4	5/8	1	5/8	2 1/2	1 1/2	3/8	1 1/2
SST3	.5	1 1/4	5/8	1 1/4	5/8	2 1/2	1 1/2	3/8	1 1/2
SST4	.55	1 1/4	5/8	1 1/2	5/8	2 1/2	1 1/2	3/8	1 1/2
SST5	.8	2	1 1/2	5/8	3/4	2 1/2	1 1/2	3/8	1 1/2
SST6	.8	2	1 1/2	5/8	3/4	2 1/2	1 1/2	3/8	1 1/2
SST7	.82	2 1/4	1 1/2	5/8	3/4	2 1/2	1 1/2	3/8	1 1/2
SST8	.9	2 3/4	1 1/2	5/8	3/4	2 1/2	1 1/2	3/8	1 1/2
SST9	1.2	3	1 1/2	5/8	3/4	2 1/2	1 1/2	3/8	1 1/2
SST10	1.8	3 1/2	2	1	6/8	1	4 1/2	1 1/2	1 1/2
SST11	1.9	3 1/2	2	1	7/8	1	5	1 1/2	1 1/2
SST12	2	3 3/4	2	1	7/8	1	5 1/2	1 1/2	1 1/2
SST13	2	4	2	1	7/8	1	6	1 1/2	1 1/2
SST14	2.1	4 1/4	2	1	7/8	1	6 1/2	1 1/2	1 1/2
SST15	2.2	4 1/2	2	1	7/8	1	7	1 1/2	1 1/2
SST16	2.2	4 1/2	2	1	8/8	1	7 1/2	1 1/2	1 1/2
SST17	2.8	5	2	1	8/8	1	8 1/2	1 1/2	1 1/2
SST18	5	5 1/2	3	1 1/2	9/8	1 1/2	9 1/2	1 1/2	1 1/2
SST19	5.5	6	3	1 1/2	10	1 1/2	10 1/2	1 1/2	1 1/2
SST20	5.5	6	3	1 1/2	10 1/2	1 1/2	11 1/2	1 1/2	1 1/2
SST21	5.7	7	3	1 1/2	10 3/4	1 1/2	12 1/4	1 1/2	1 1/2
SST22	5.8	7 1/2	3	1 1/2	11 1/8	1 1/2	12 5/8	1 1/2	1 1/2
SST23	7.2	8	3 1/2	1 3/4	11 3/8	1 1/2	13 1/4	1 1/2	1 1/2

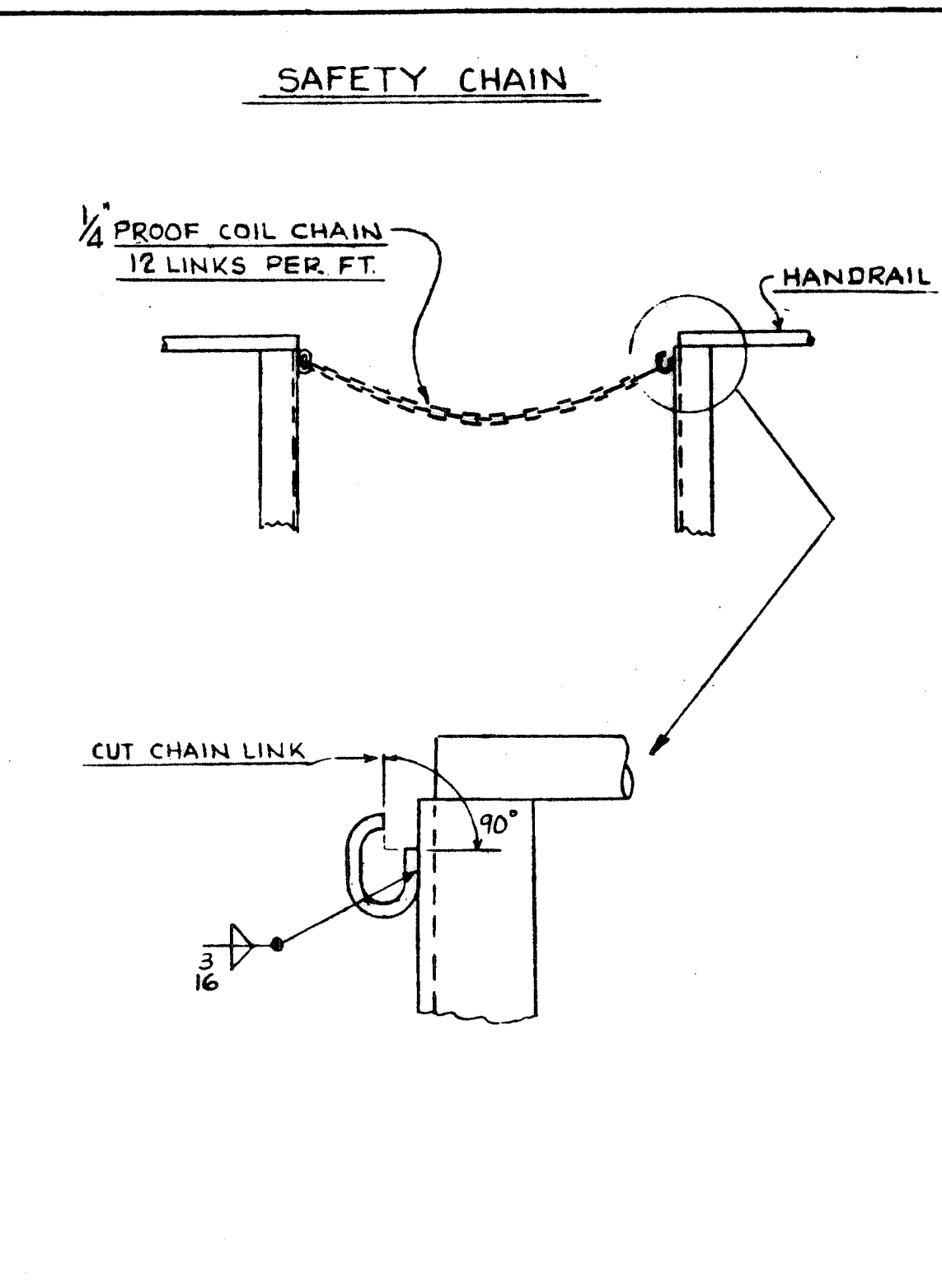


NOTE: WHEN PINS HAVE KEEPERS AT BOTH ENDS SHIMS ARE REQUIRED.

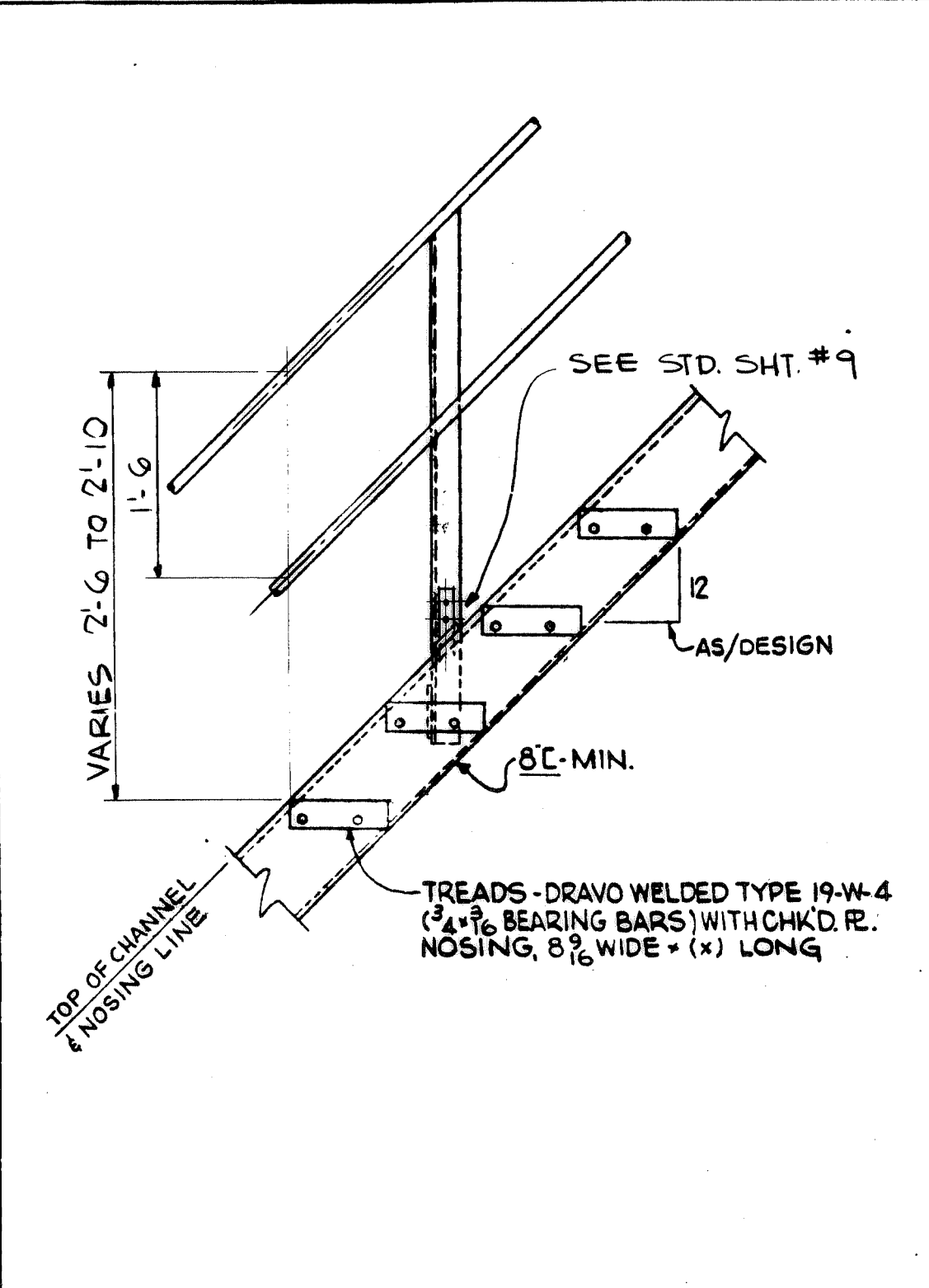
DRAVO CORPORATION STANDARDS	KEEPER PLATES	Div. EWD DATE 8-11-71	SHEET No. 12
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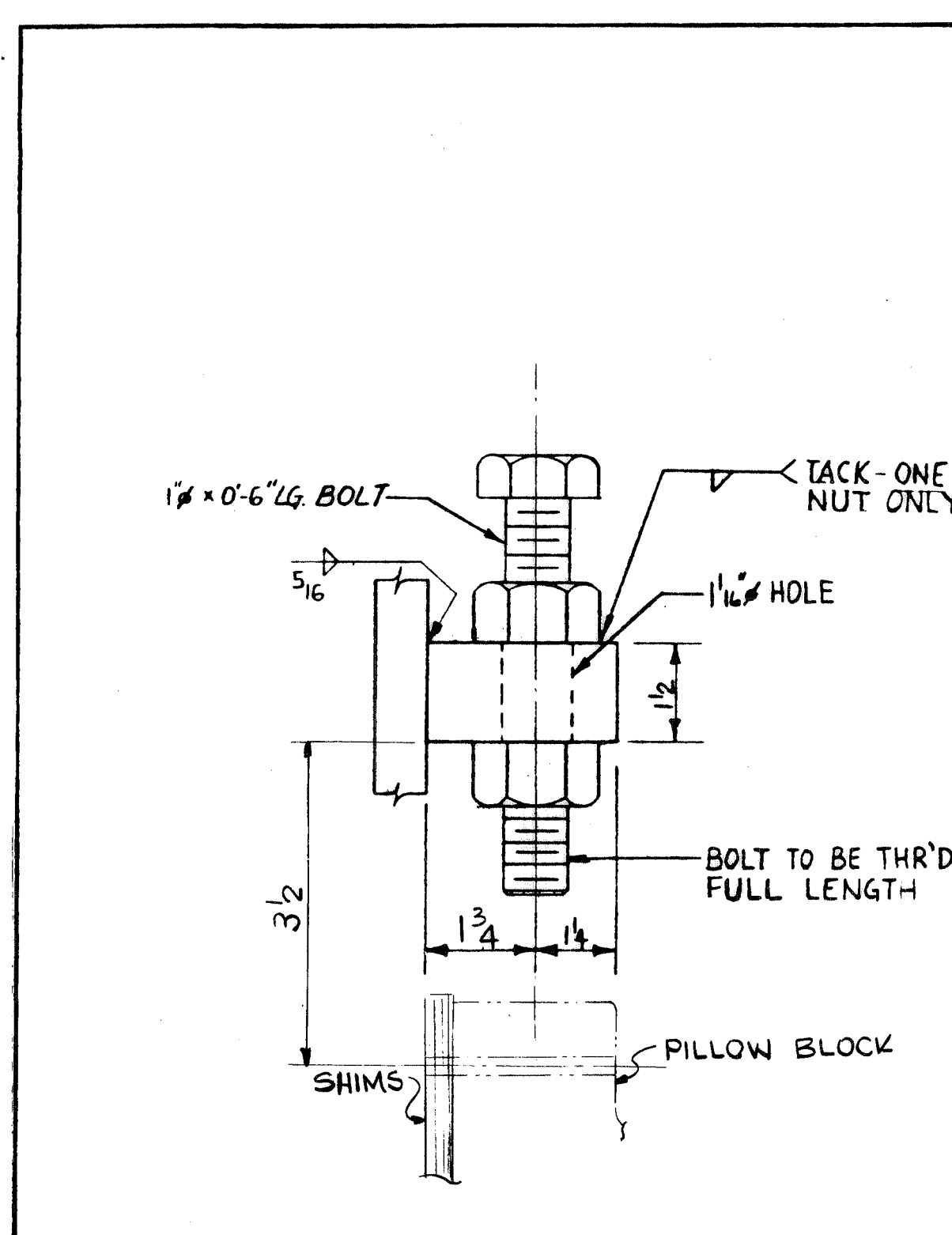
DRAVO CORPORATION STANDARDS	BAR CAGE LADDER	Div. EWD DATE 8-9-71	SHEET No. 2
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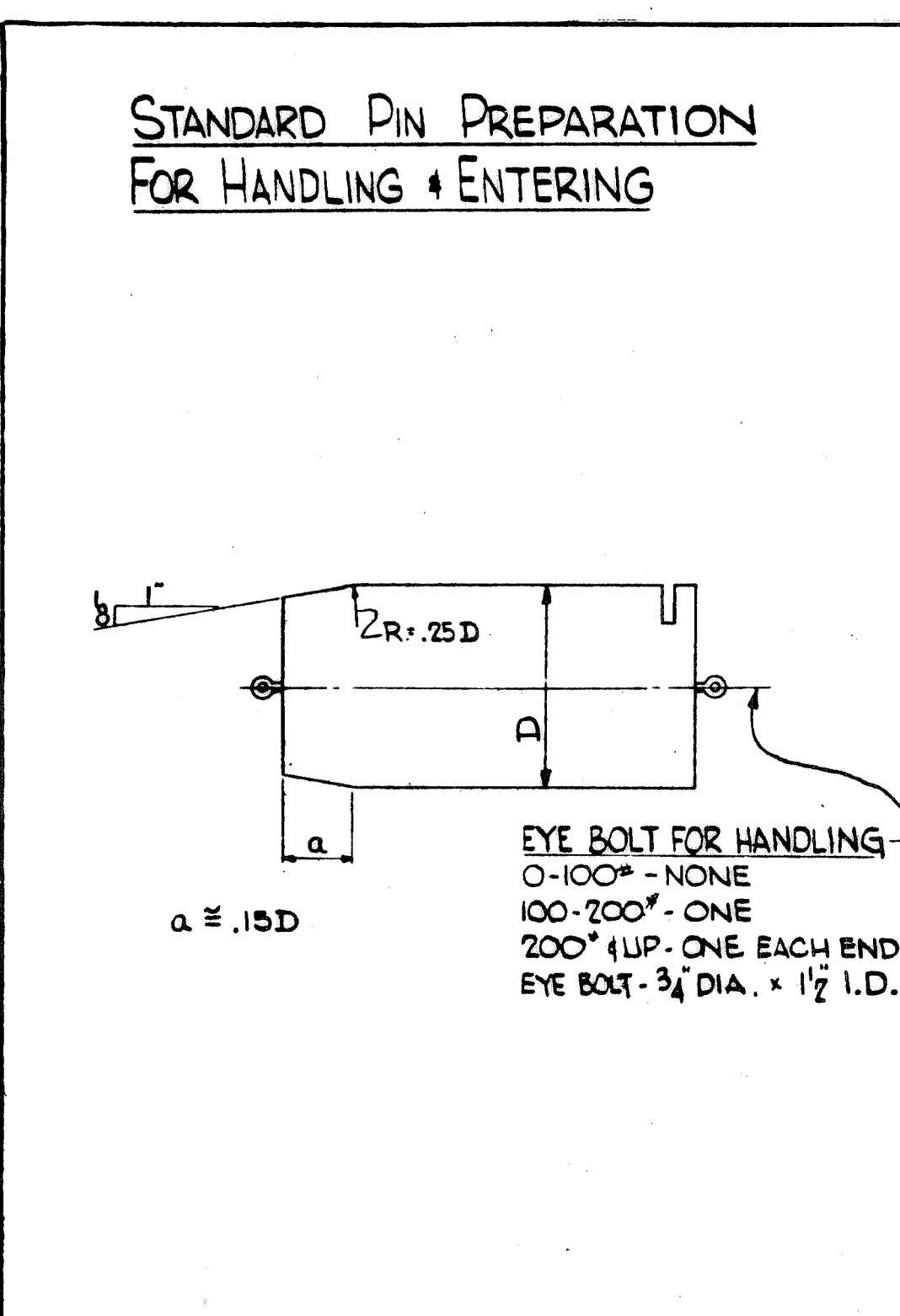
DRAVO CORPORATION STANDARDS	SAFETY CHAIN	Div. EWD DATE 11/11/70	SHEET No. 5
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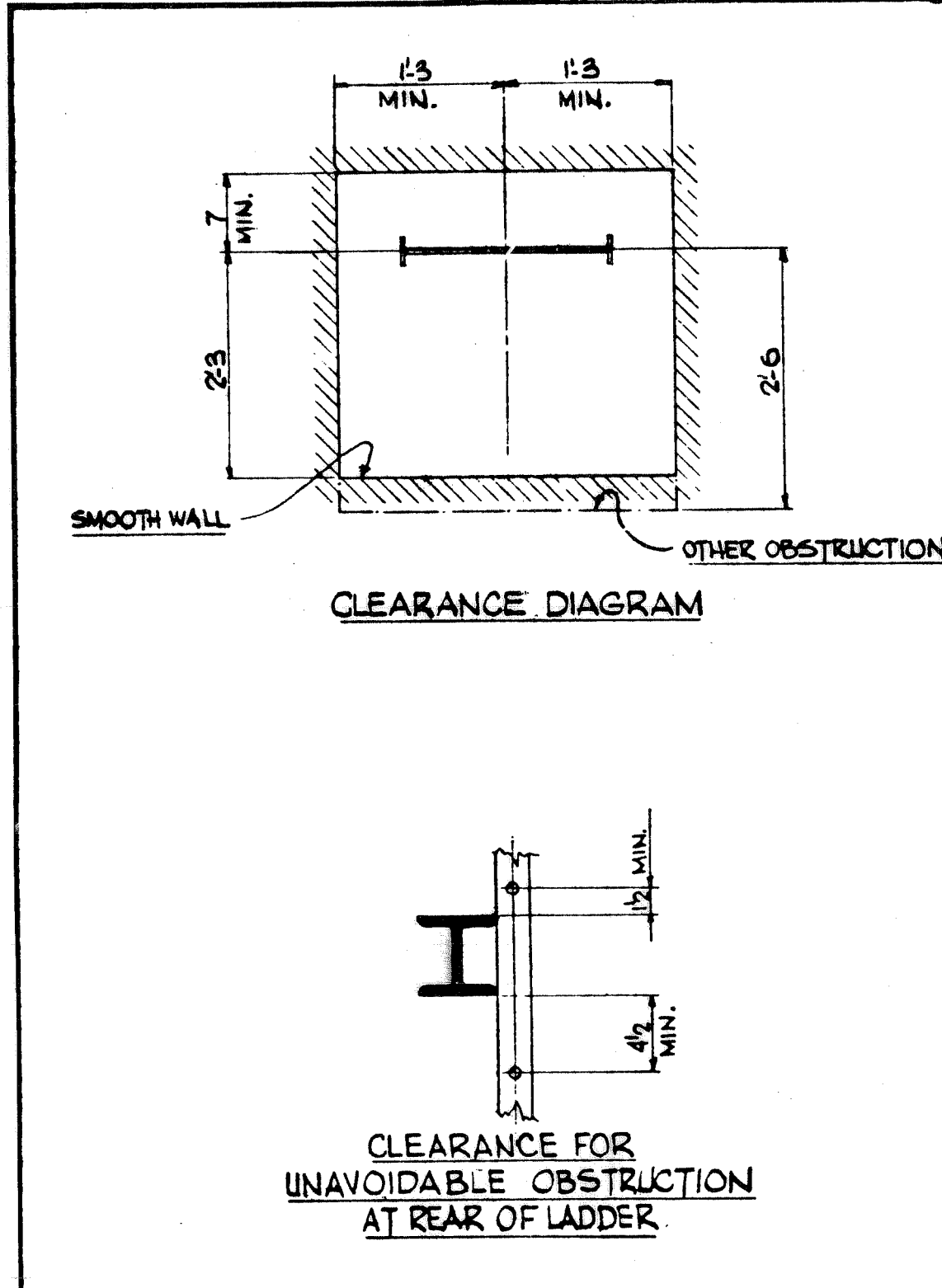
DRAVO CORPORATION STANDARDS	STAIR AND HANDRAIL	Div. EWD DATE 8-9-71	SHEET No. 8
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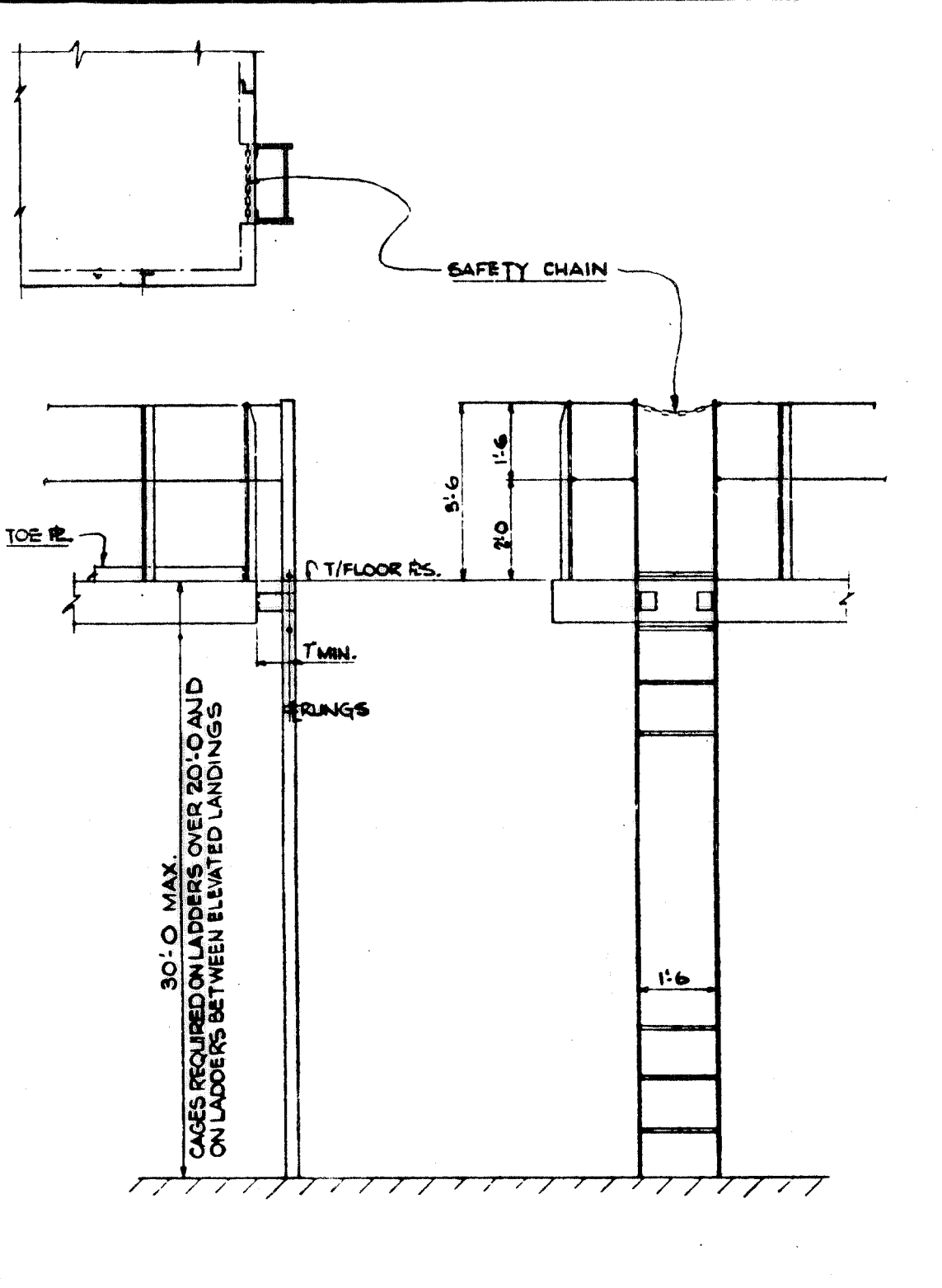
DRAVO CORPORATION STANDARDS	JACKING BOLT	Div. EWD DATE 7-1-76	SHEET No. 11
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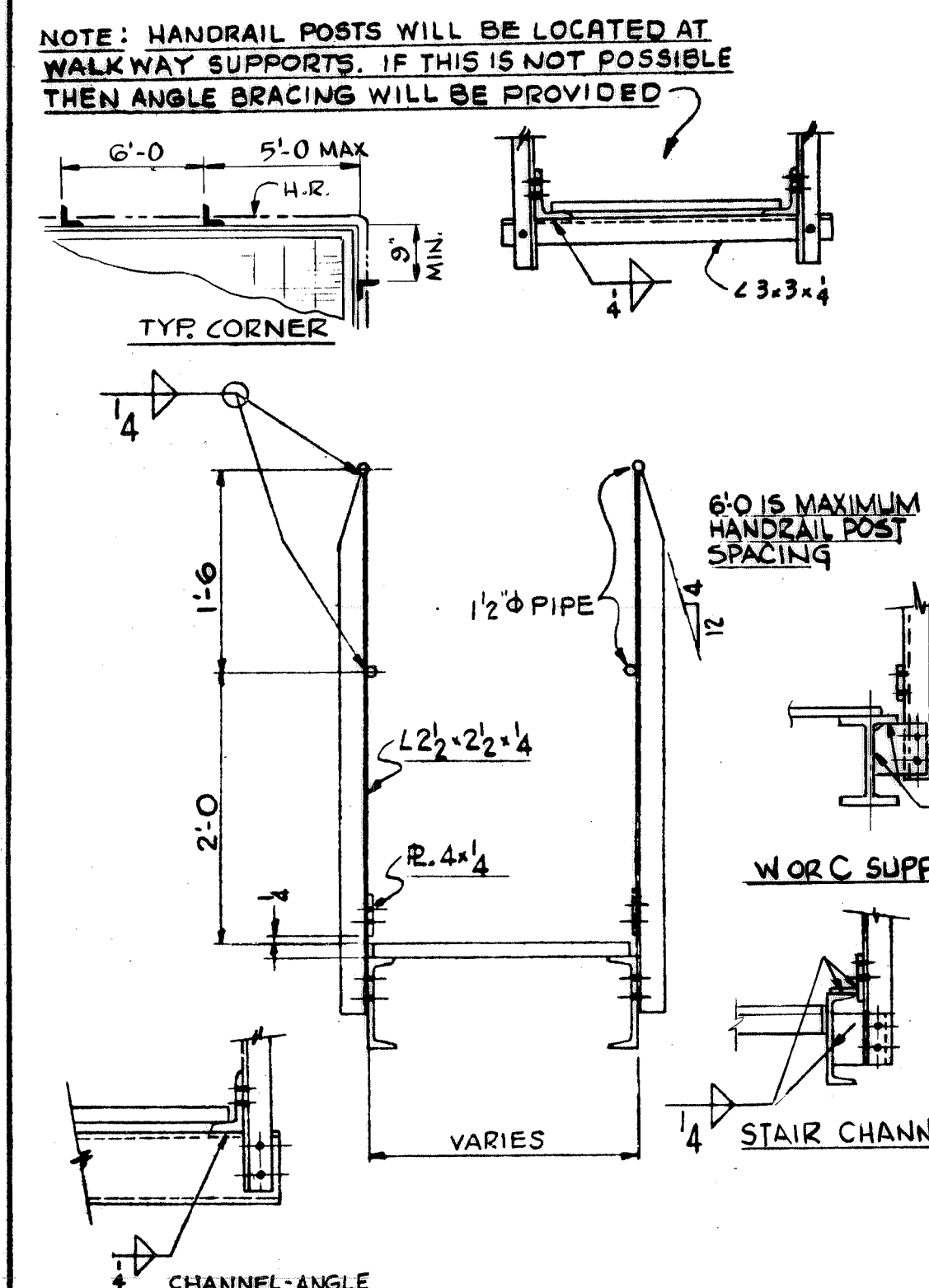
DRAVO CORPORATION STANDARDS	STRUCTURAL PINS	Div. EWD DATE 8-9-71	SHEET No. 13
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DRAVO CORPORATION STANDARDS	LADDER CLEARANCES	Div. EWD DATE 8-2-71	SHEET No. 3
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DRAVO CORPORATION STANDARDS	LADDER CLEARANCES	Div. EWD DATE 8-2-71	SHEET No. 6
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DRAVO CORPORATION STANDARDS	SUPPORTS AND HANDRAIL	Div. EWD DATE 8-9-71	SHEET No. 9
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FOR GENERAL STRUCTURAL NOTES SEE DWG 347307

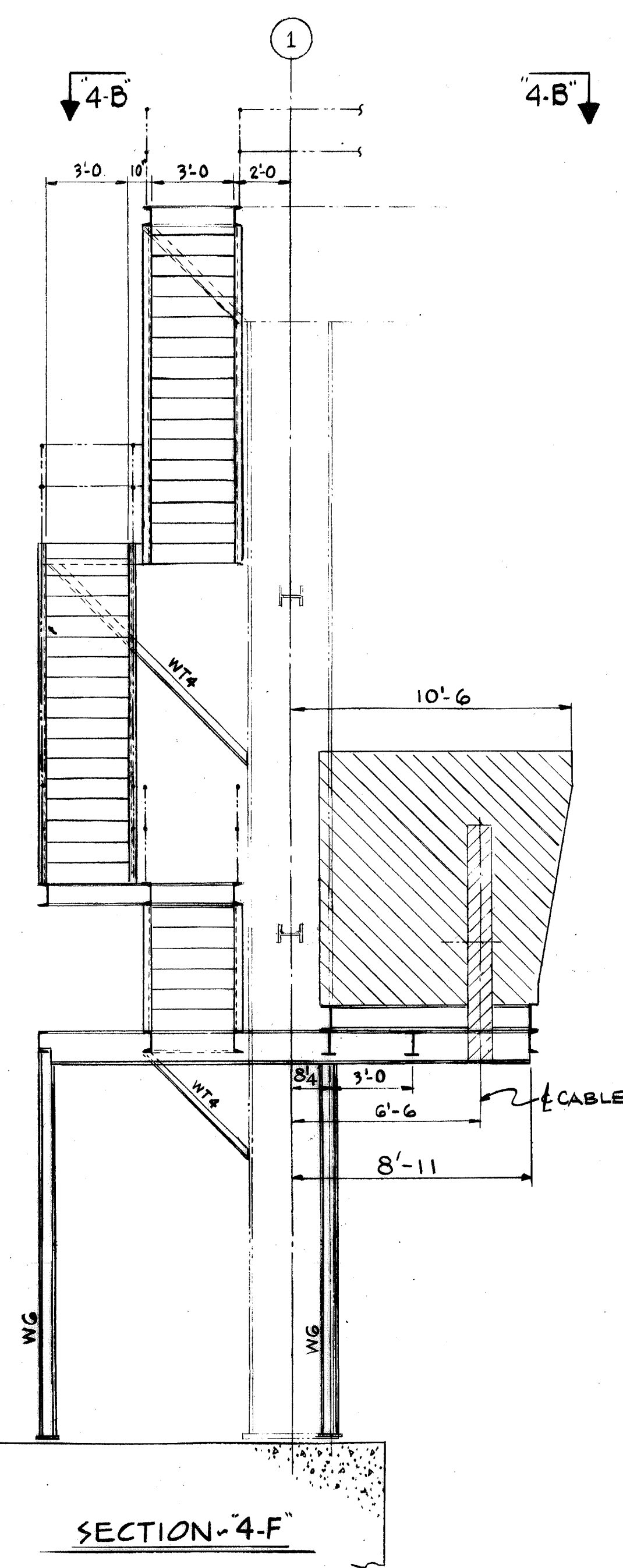
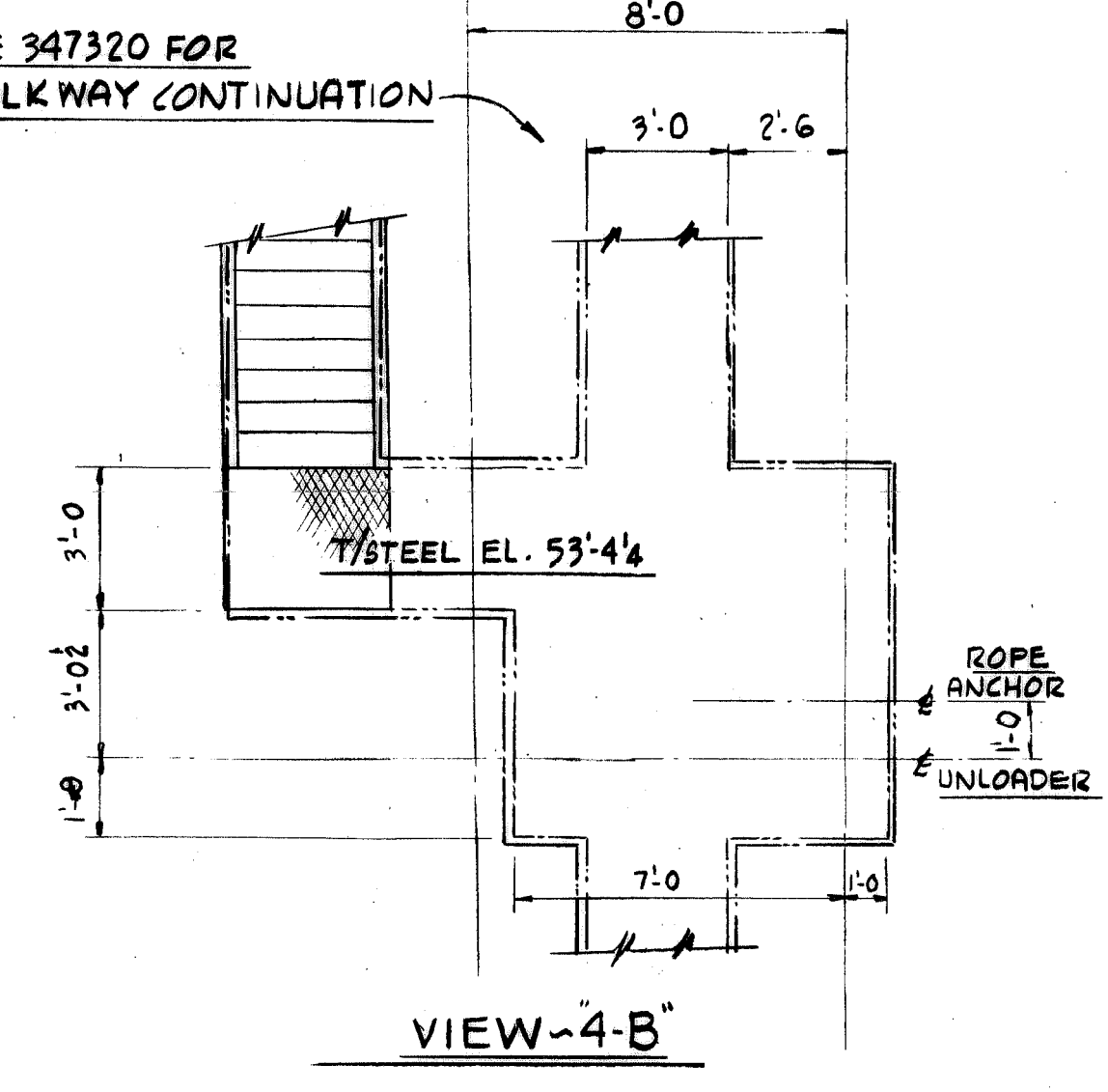
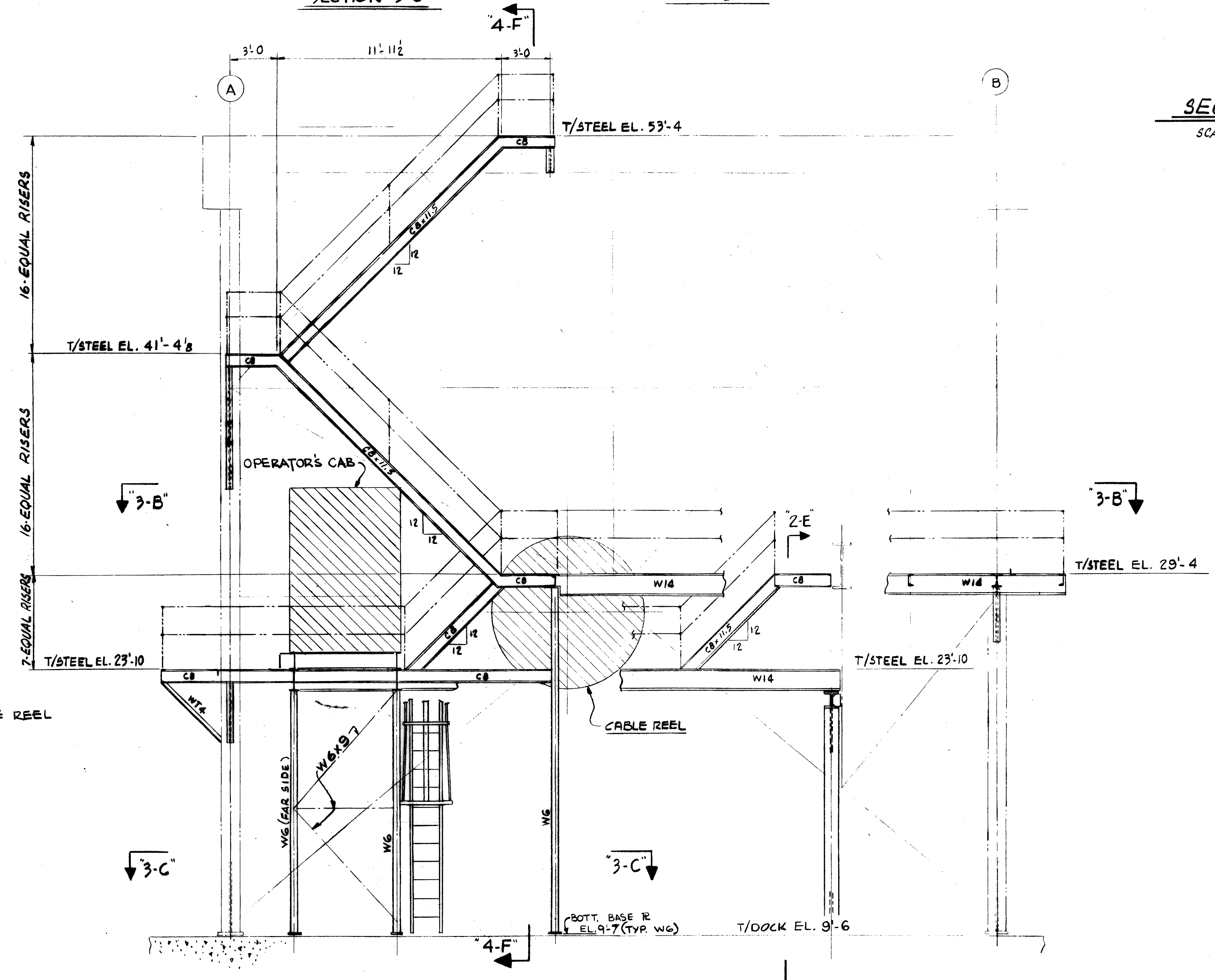
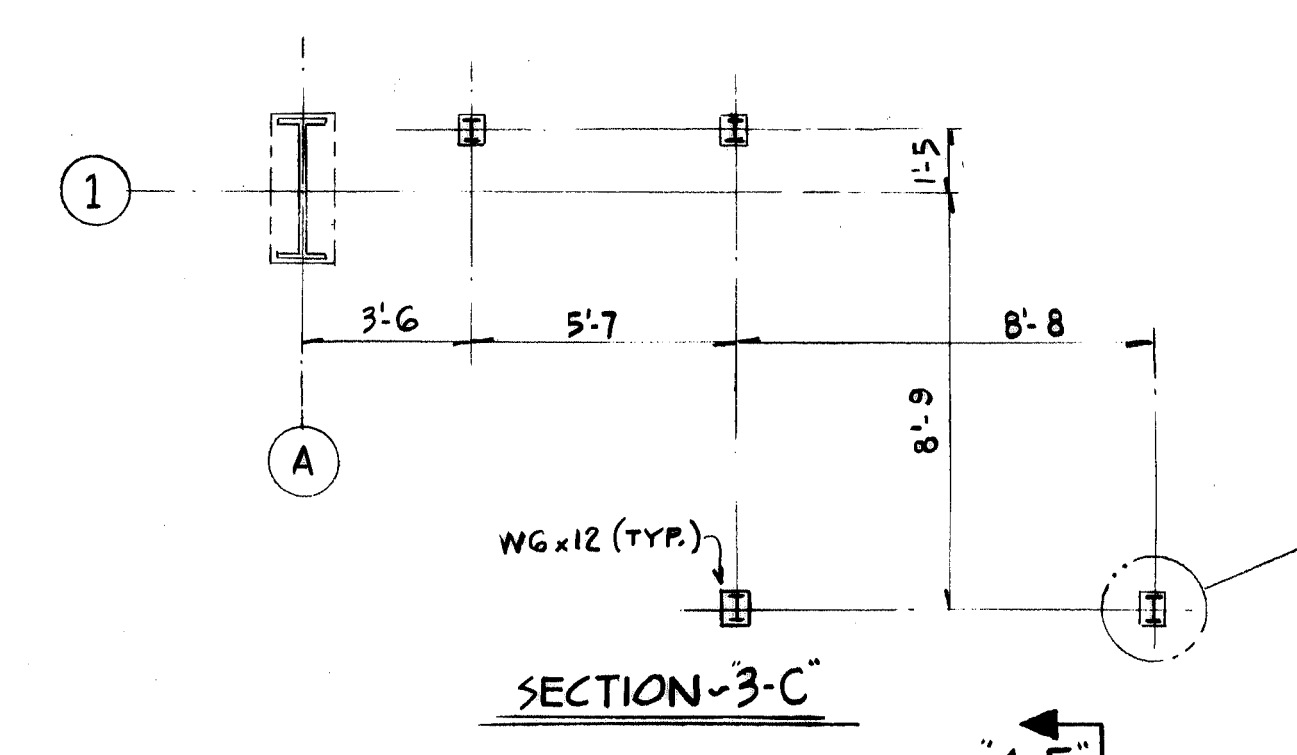
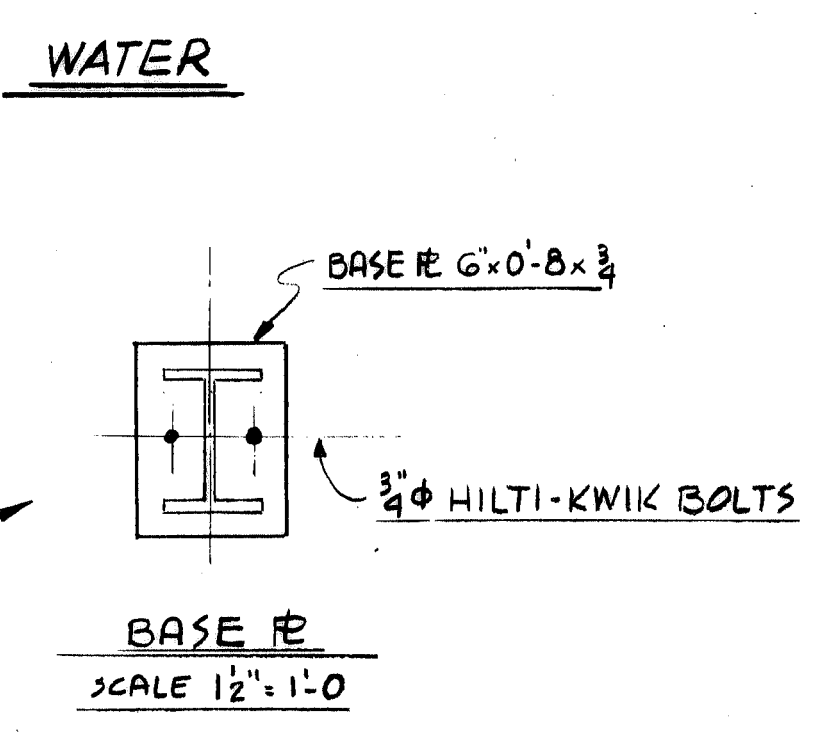
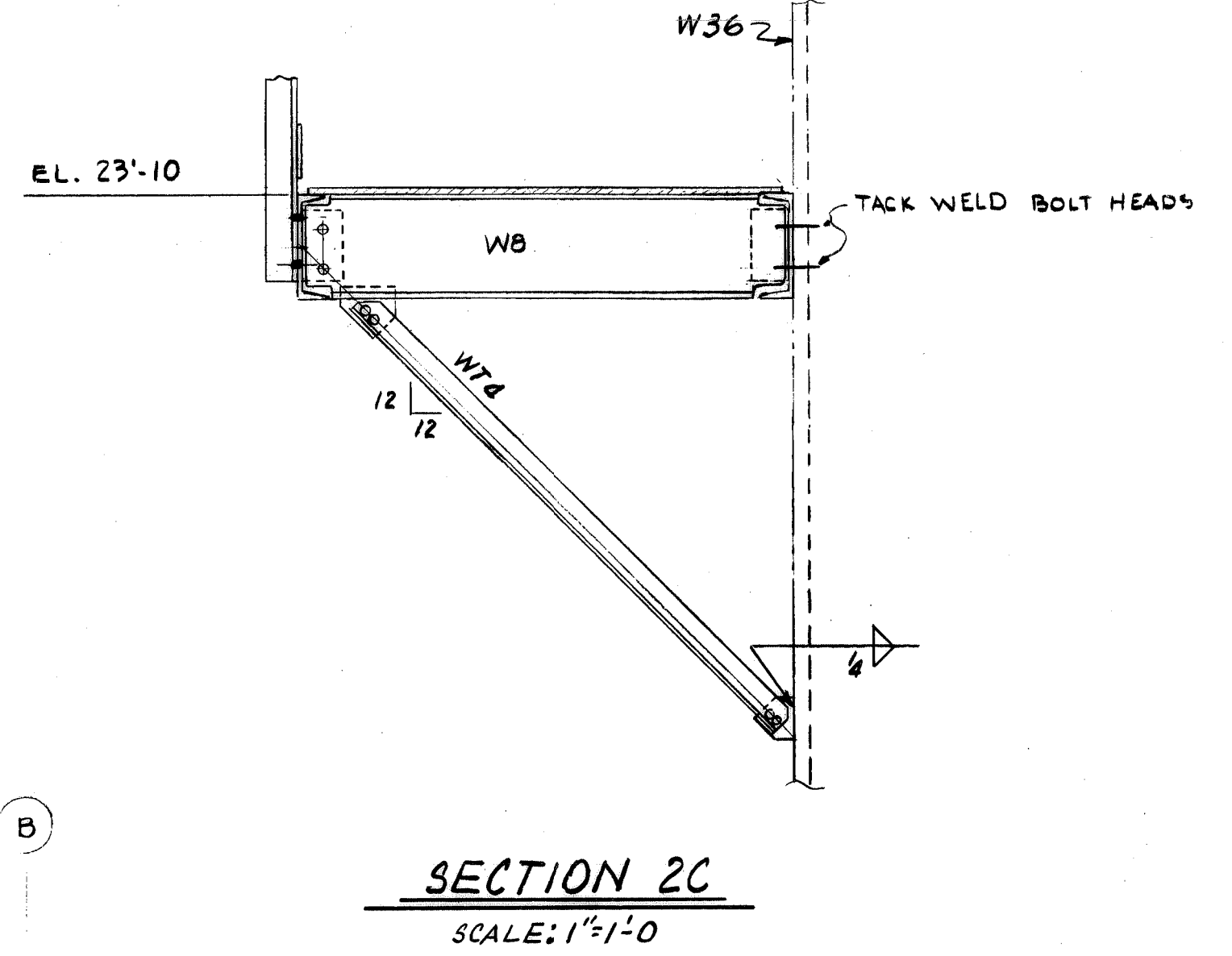
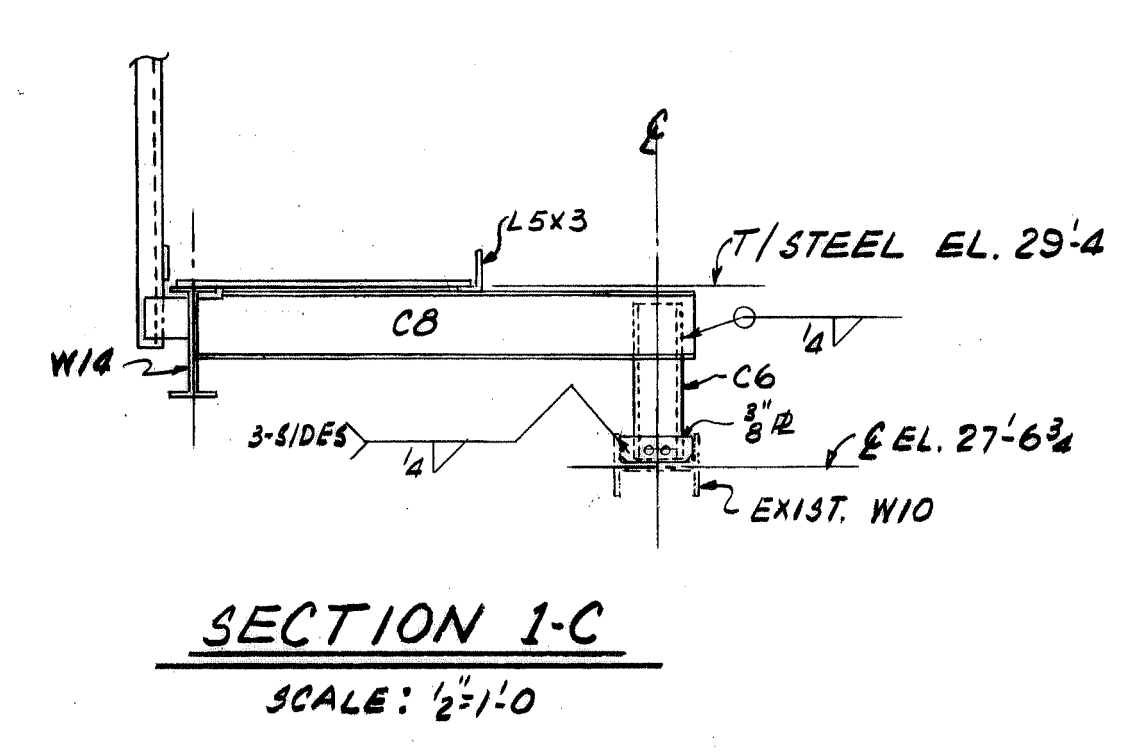
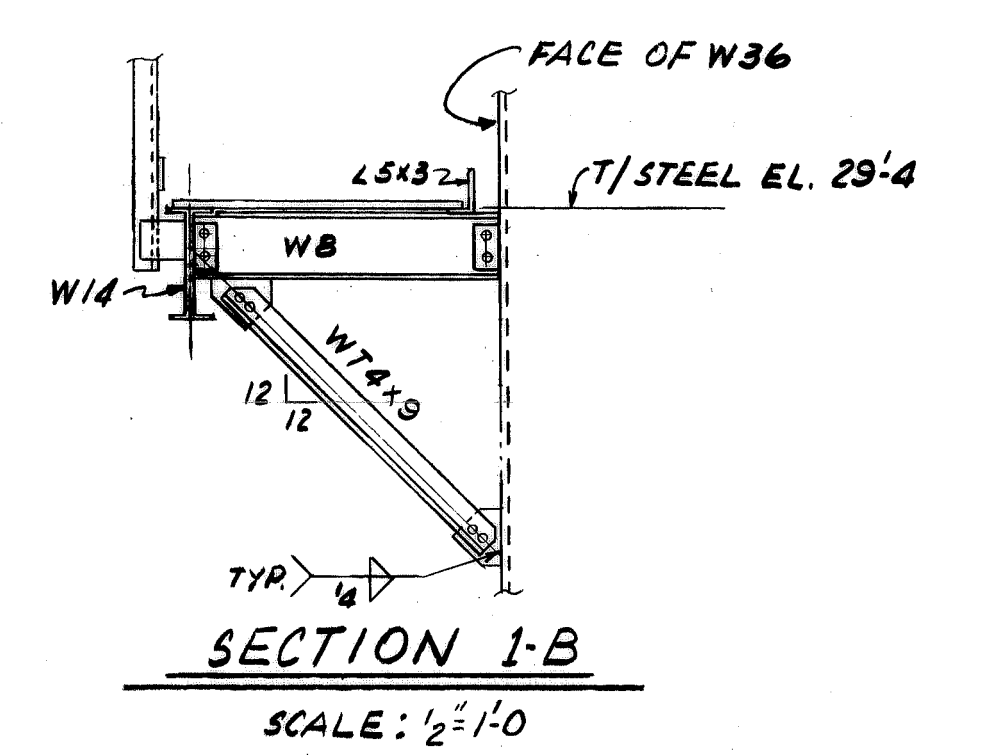
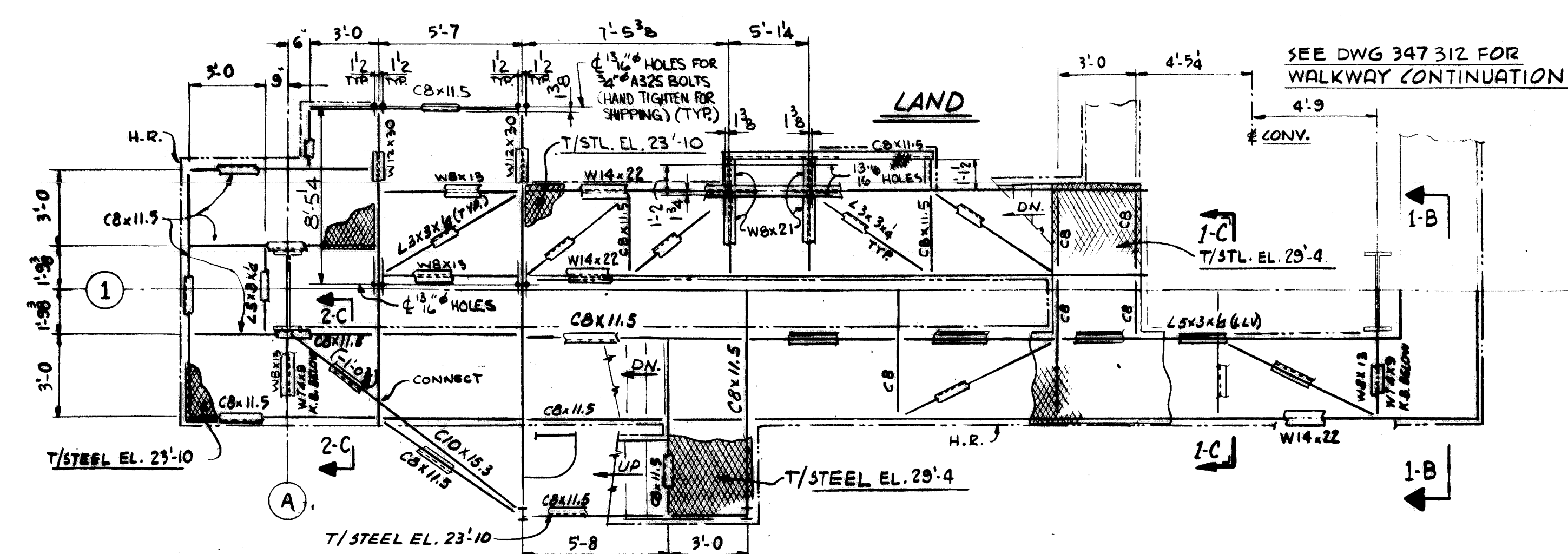
NO. 1	W-4139	LOUDB
CONTRACT NO.	SHOP BILL NO.	DIST.
<b>ALABAMA STATE DOCKS</b>		
<b>CONTINUOUS BARGE UNLOADER</b>		
<b>STRUCTURAL STANDARDS</b>		
SCALE No SCALE	APP'D <i>S.L. Wick</i>	
DR KOHLBERG 2-25-80	DATE 3/26/80	
CHK <i>S. Gorman</i> 3-26-80		
<b>Dravo</b>		DRAWING NO. REV.
DRAVO CORPORATION, PITTSBURGH, PA DIV EWD		<b>347327</b>



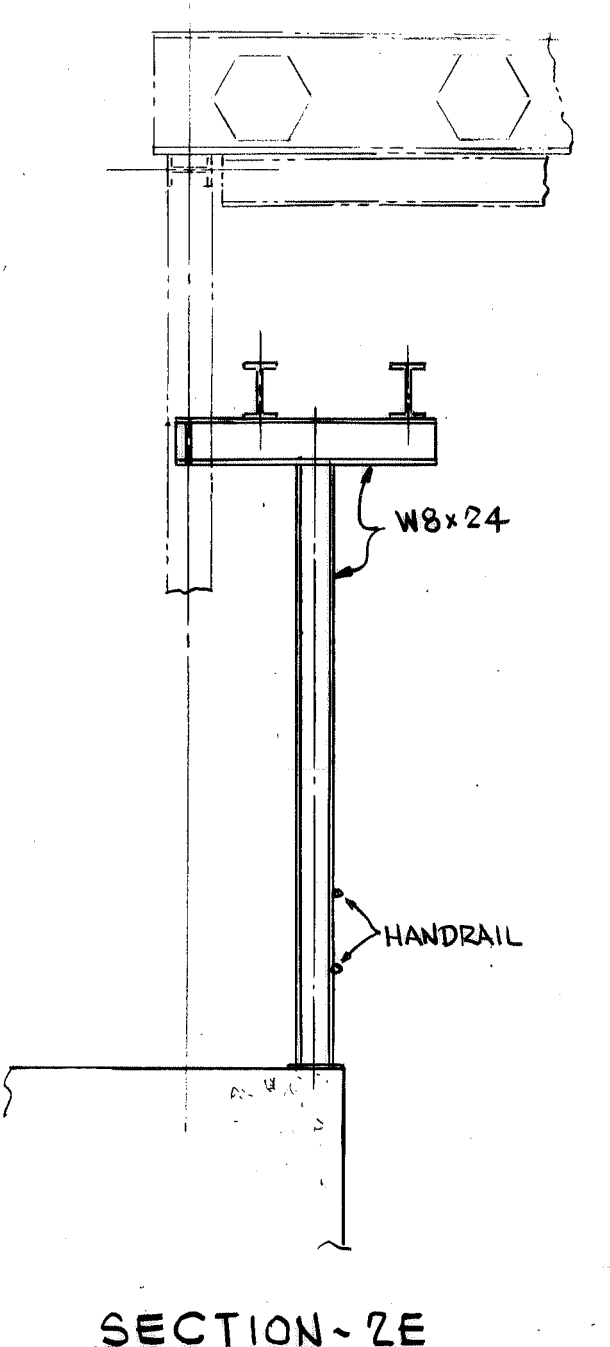




REV.	ITEM	DESCRIPTION	AUTH'D	DATE	REF.
1		ADDED BOLT HOLES TO SUPPORT CAB	7-7-80	BWB	
2		ADDED BOLT HOLES FOR CABLE REEL	10/15/80	RONKA	
3		NOTED FOR AS-BUILT	7/9/81	RONKA	



REFERENCE DWGS:  
 STRUCTURAL STANDARDS - 347327, 347328  
 STRUCTURAL NOTES - 347307  
 GEN'L ARRGMT - 347305  
 WORK THIS DWG. WITH DWG. 347320.



CONTR. NO.	REFERENCE DWGS.	SHEET
0	1	2
1	3	4
2	5	6
3	7	8
4	9	

NO. W-4199	CONTRACT NO.	SHOP BILL NO.	BLODU
REV'D			OIST.
<b>CONTINUOUS BARGE UNLOADER</b>			
<b>DESIGN OF TOWER ACCESS STL.</b>			
SCALE 1/4" = 1'-0" U.N.	APP'D <i>J.L. Wick</i>	DATE 5/8/80	
DR KOHLBERG MAR. 11-80	CHK FORTMAN 5/7/80		
<b>Dravo</b>		DRAWING NO.	REV.
DRAVO CORPORATION, PITTSBURGH, PA. DIV EWD		<b>347325</b>	3

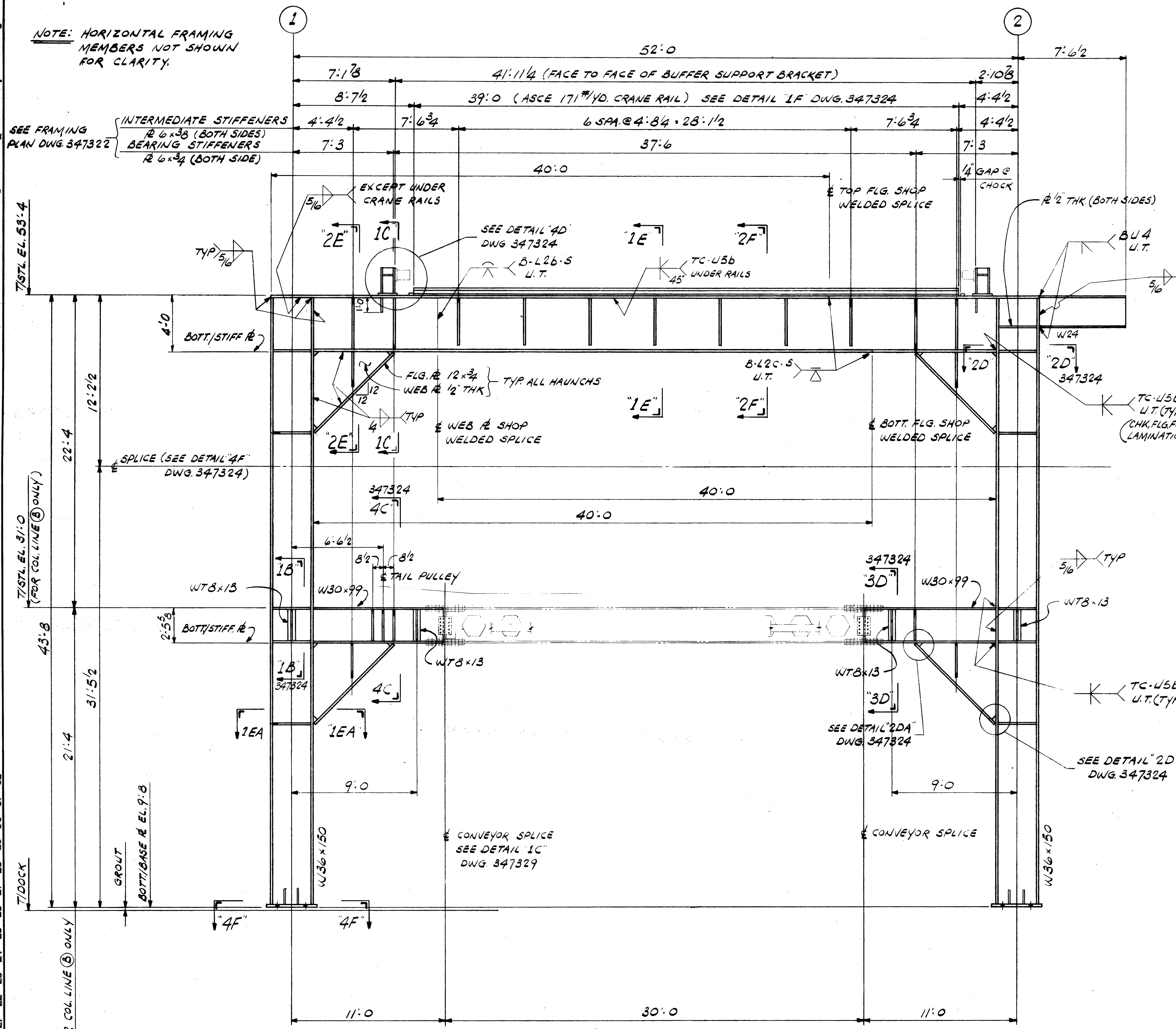




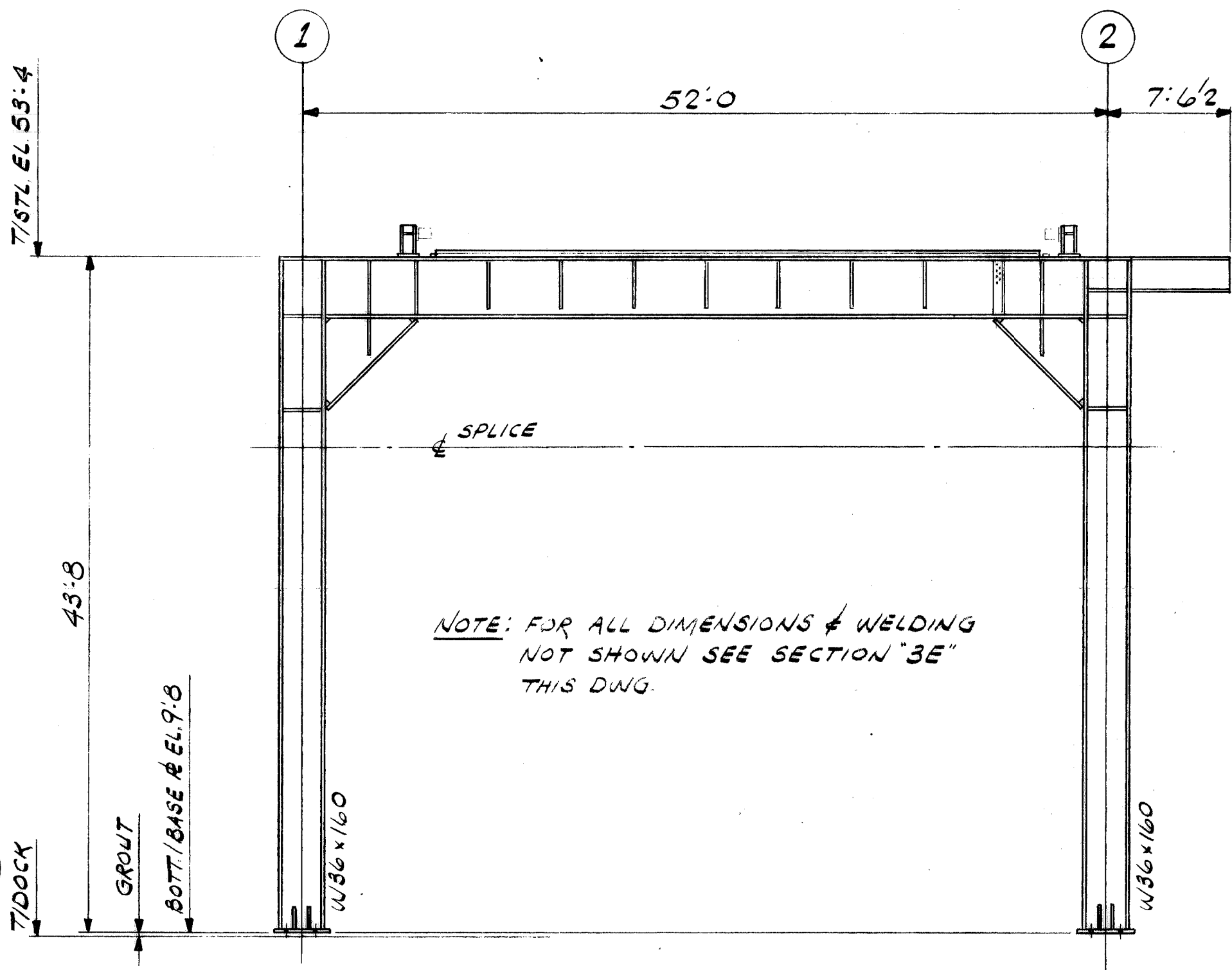




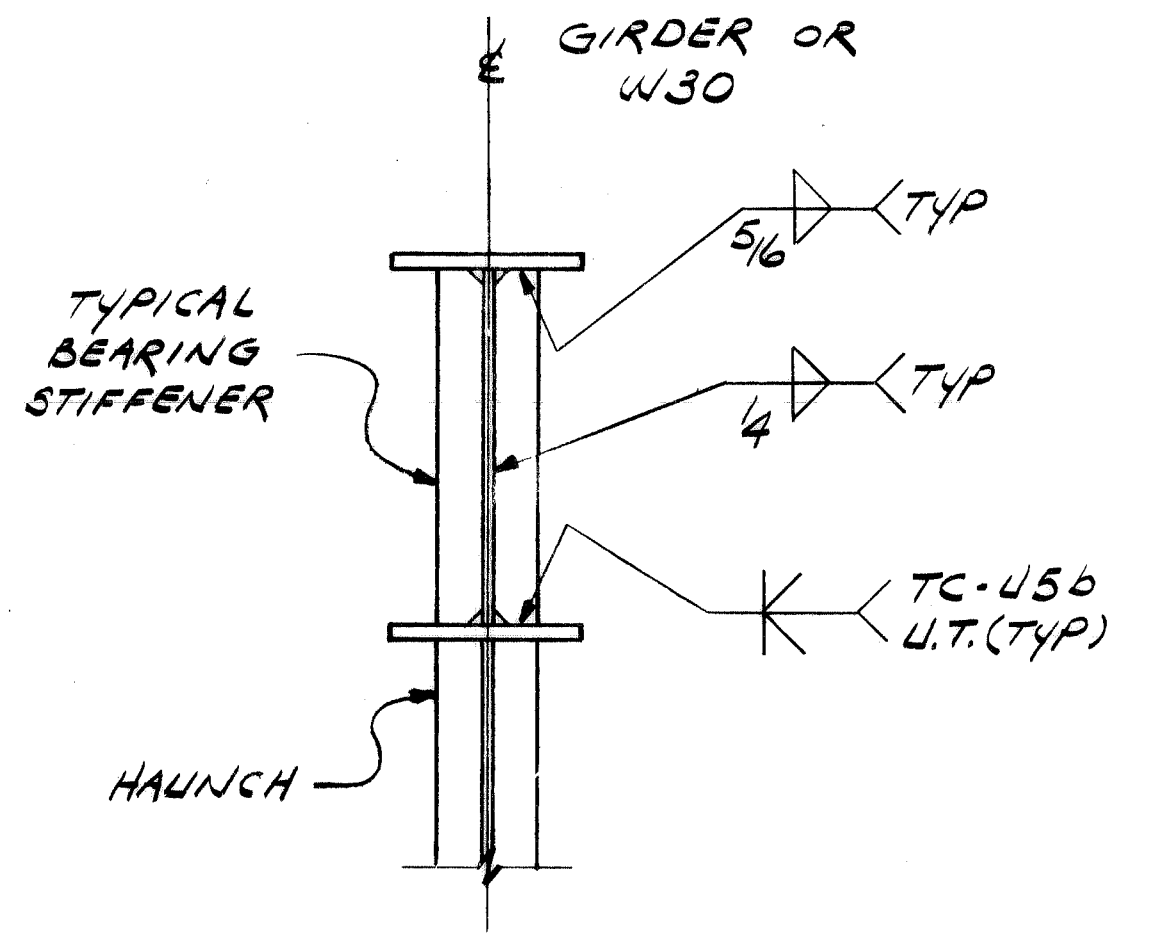
NOTE: HORIZONTAL FRAMING MEMBERS NOT SHOWN FOR CLARITY.



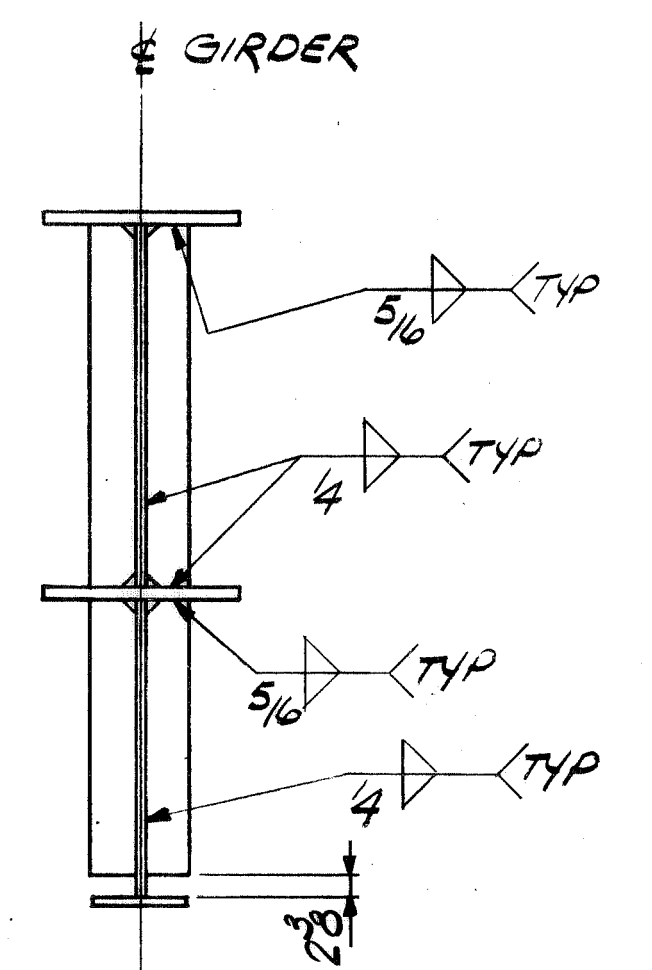
REV.	ITEM	DESCRIPTION	DATE	BY	CHK	REF.
1		REVISED SECTION 4F, ADDED STIFFENER AT BUMPER MOUNT.	5/18/80	GLW		



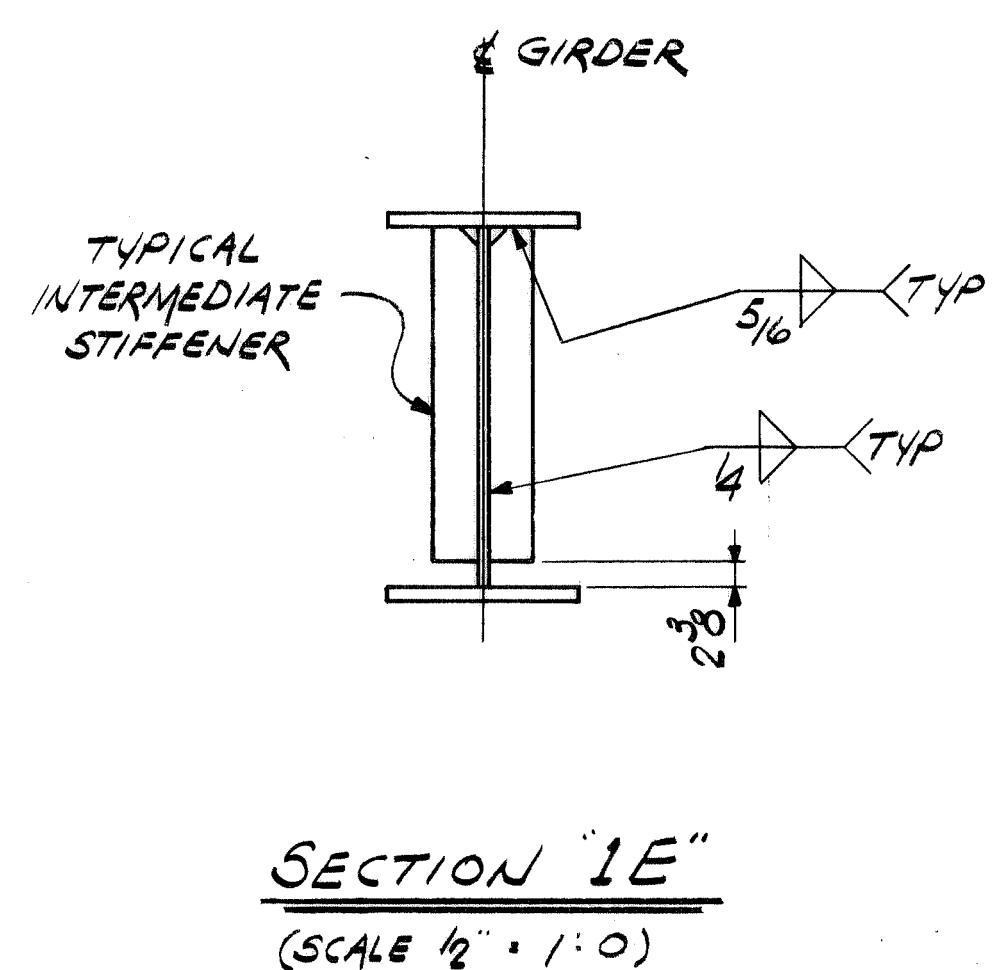
SECTION "2C"  
SCALE 3/4" = 1'-0"  
COLUMN LINE (A)  
REF DWG 347322



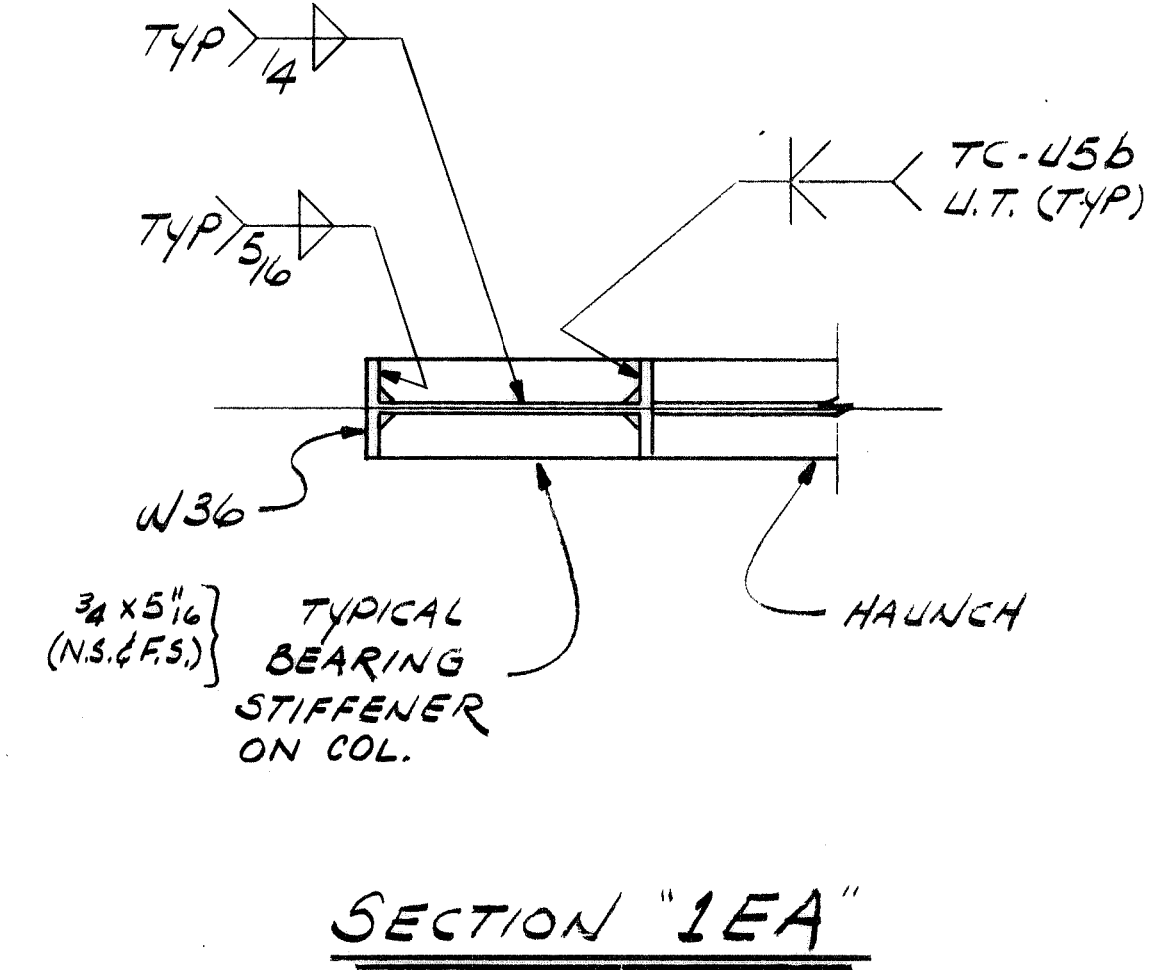
SECTION "1C"  
SCALE 1/2" = 1'-0"



SECTION "2E"  
SCALE 1/2" = 1'-0"



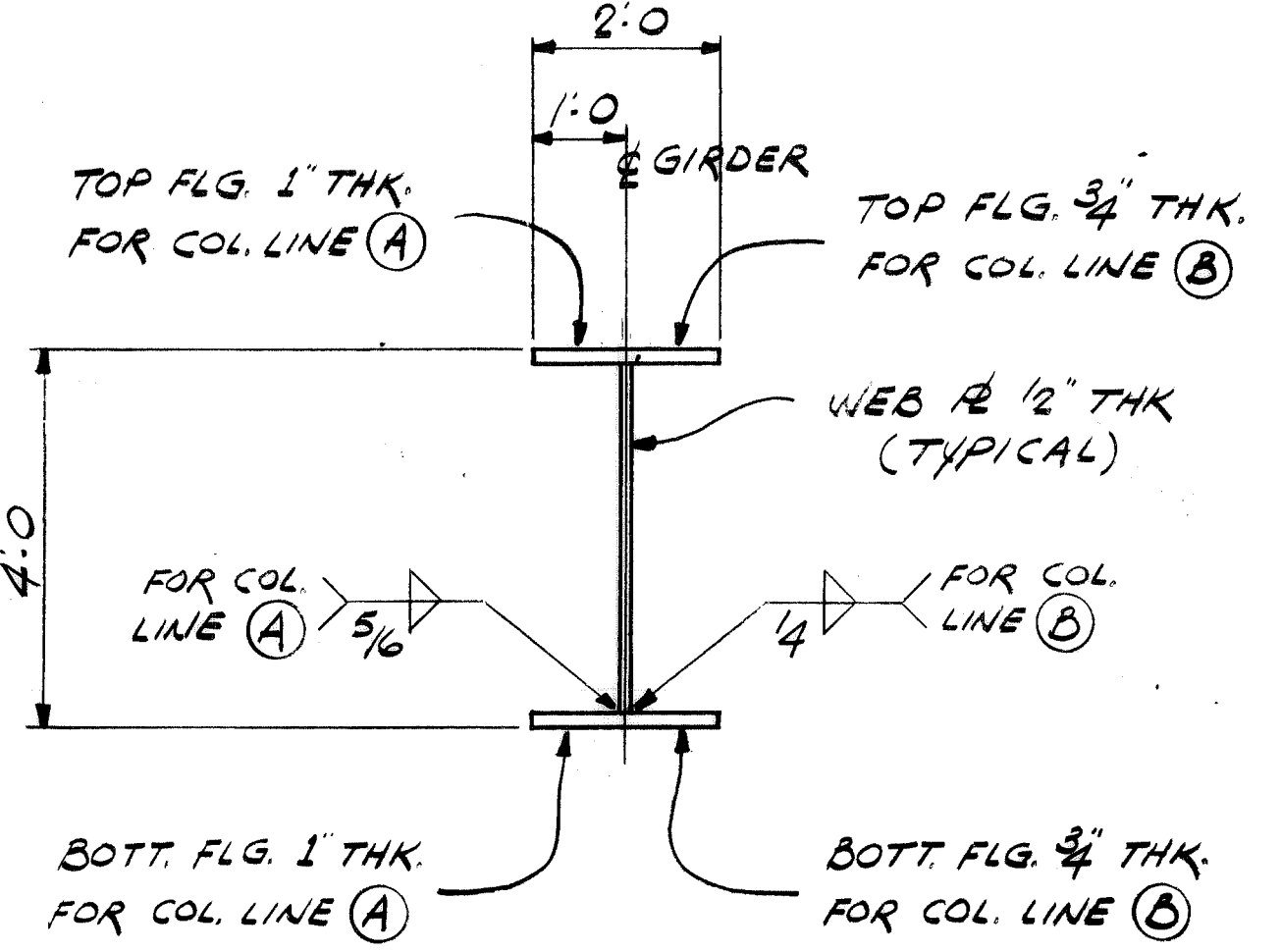
SECTION "1E"  
SCALE 1/2" = 1'-0"



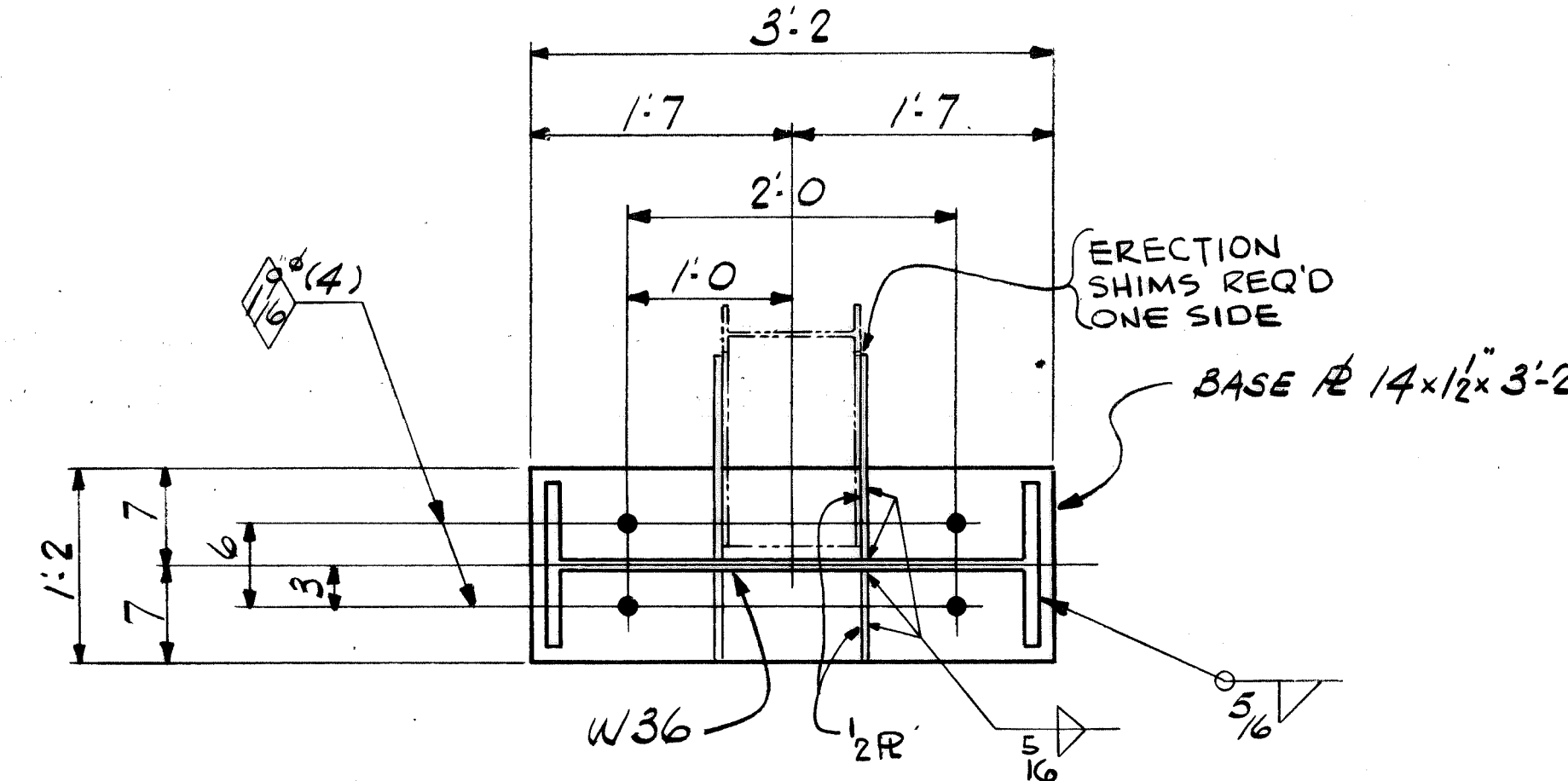
SECTION "1EA"  
SCALE 1/2" = 1'-0"

- NOTES:
- FOR GENERAL NOTES SEE DWG 347307
  - CRANE RAILS SHALL BE STRAIGHT, PARALLEL, LEVEL AND AT THE SAME ELEVATION. THE DISTANCE CENTER TO CENTER AND THE ELEVATION SHALL BE WITHIN A TOLERANCE OF PLUS OR MINUS 1/8". RAILS TO BE FASTENED PER AISC "TIGHT CLAMP METHOD". RAIL CLAMPS TO BE PRESSED STEEL WITH DOUBLE BOLTS AND ADJUSTMENT FEATURE BY ECCENTRIC PUNCHING OF FILLERS AND POSITIVE ATTACHMENT OF RAIL TO GIRDER. PURCHASE ORDERS FOR CRANE RAILS SHOULD BE NOTED "FOR CRANE SERVICE".

SECTION "3E"  
COLUMN LINE (B)  
REF DWG 347322



SECTION "2F"  
SCALE 1/2" = 1'-0"



SECTION "4F"  
SCALE 1" = 1'-0"

LEGEND  
U.T. = ULTRASONIC TEST

CONTR. NO.	REFERENCE DWGS.	SHEET
0	1 2 3 4 5 6 7 8 9	
1		
2		
3		
4		
5		

WORK THIS DWG WITH DWGS 347322, 347324, 347327, 3578A

NO. REQ'D	CONTRACT NO.	SHOP BILL NO.	DB LOU
1	W4139		DIST.

CONTINUOUS BARGE UNLOADER  
DESIGN OF  
TOWER FRAMING

SCALE	9" = 1'-0" U.N.	APP'D	G.H. Wink
DR	EJK	DATE	4/21/80
CHK	RONKA		

**Dravo** ENGINEERING WORKS  
DRAWING NO. 347323



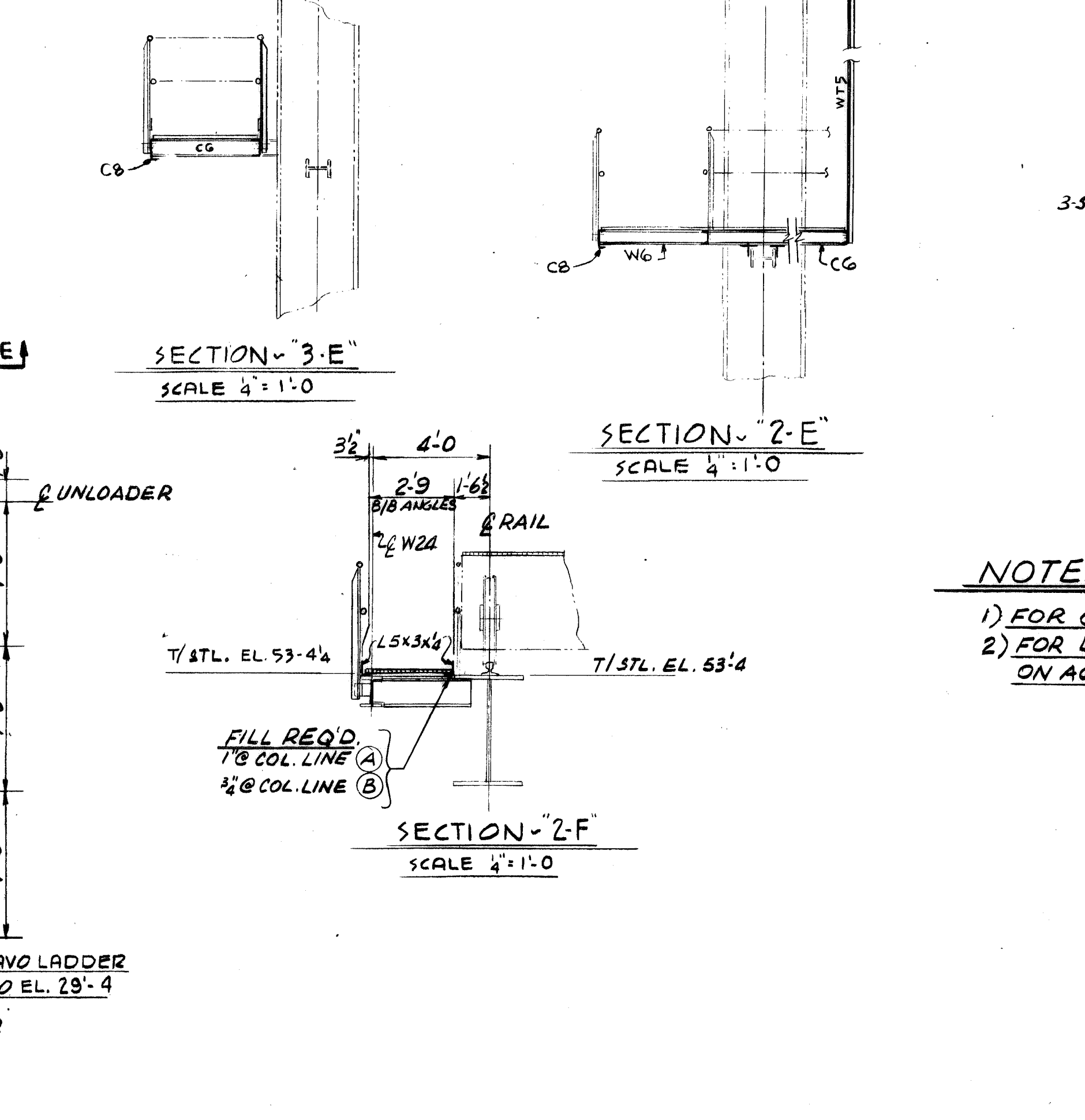
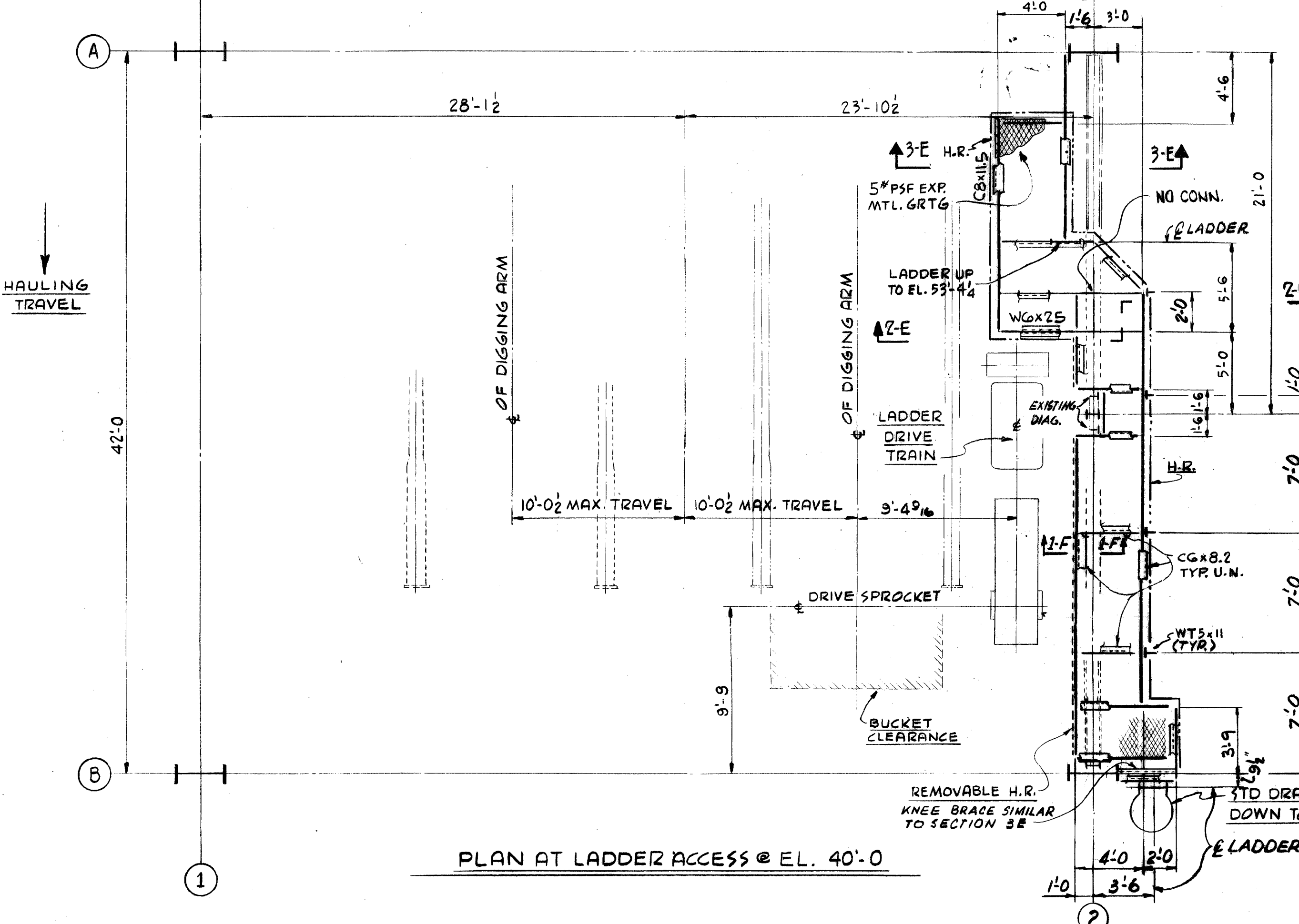
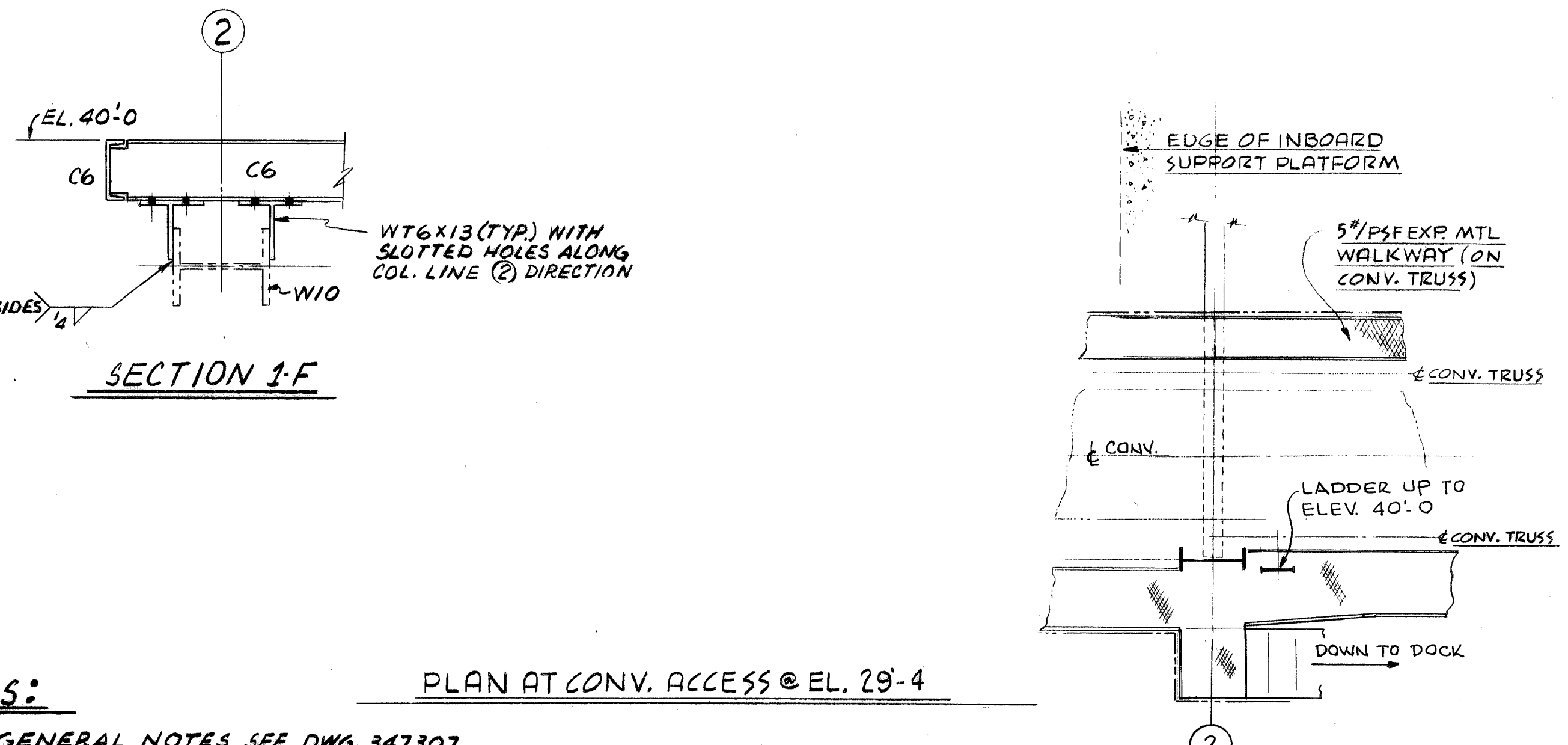
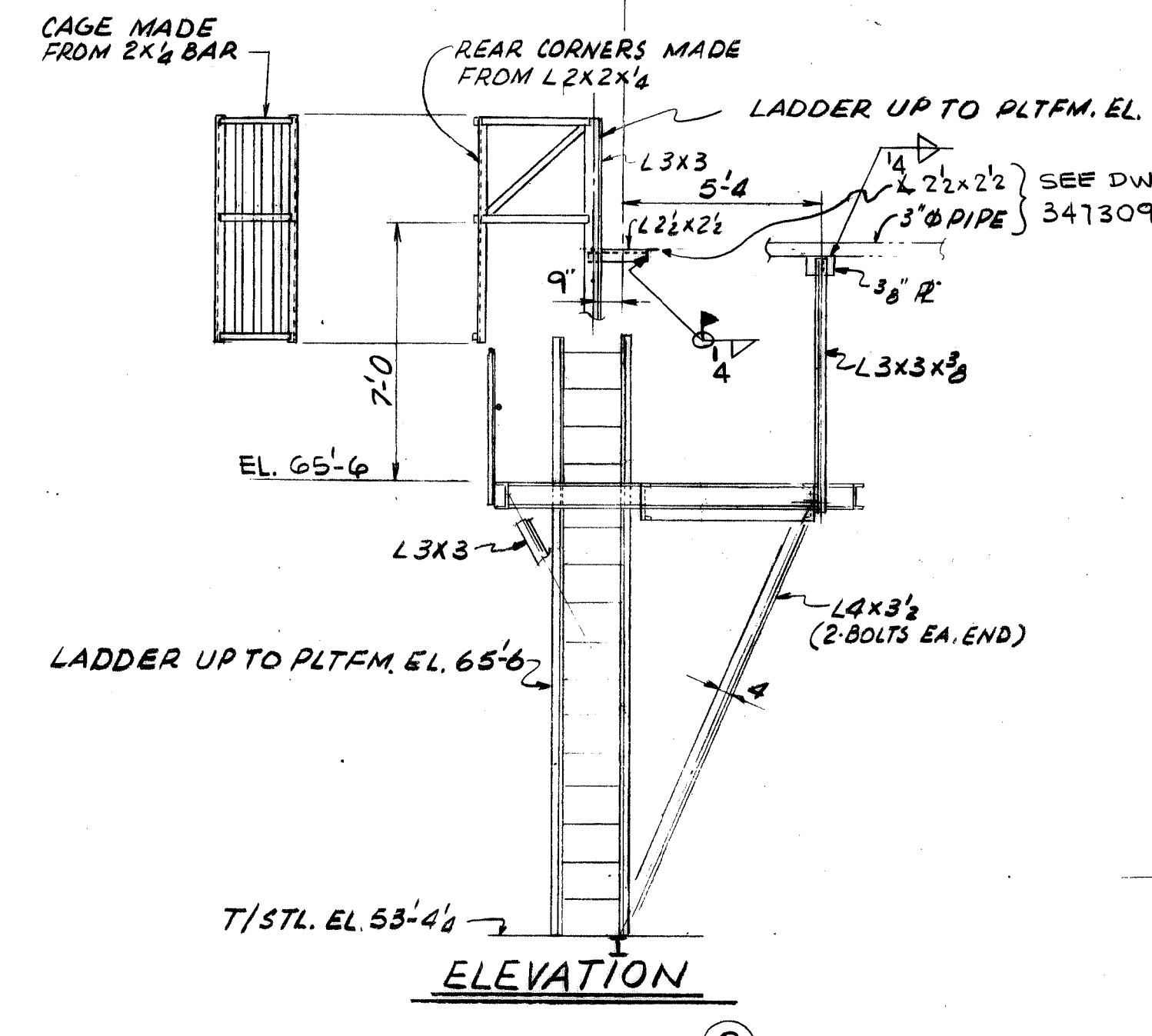
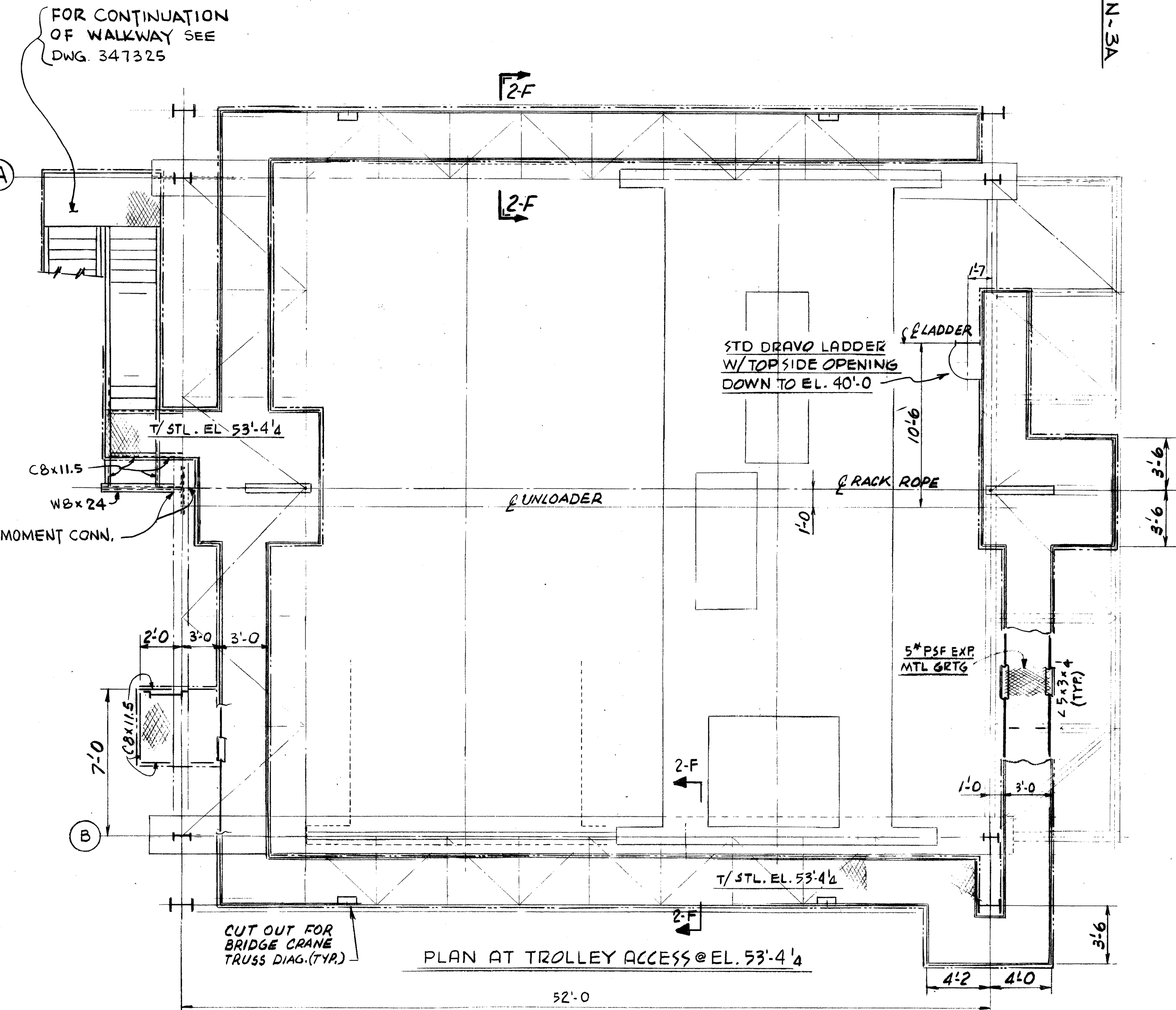
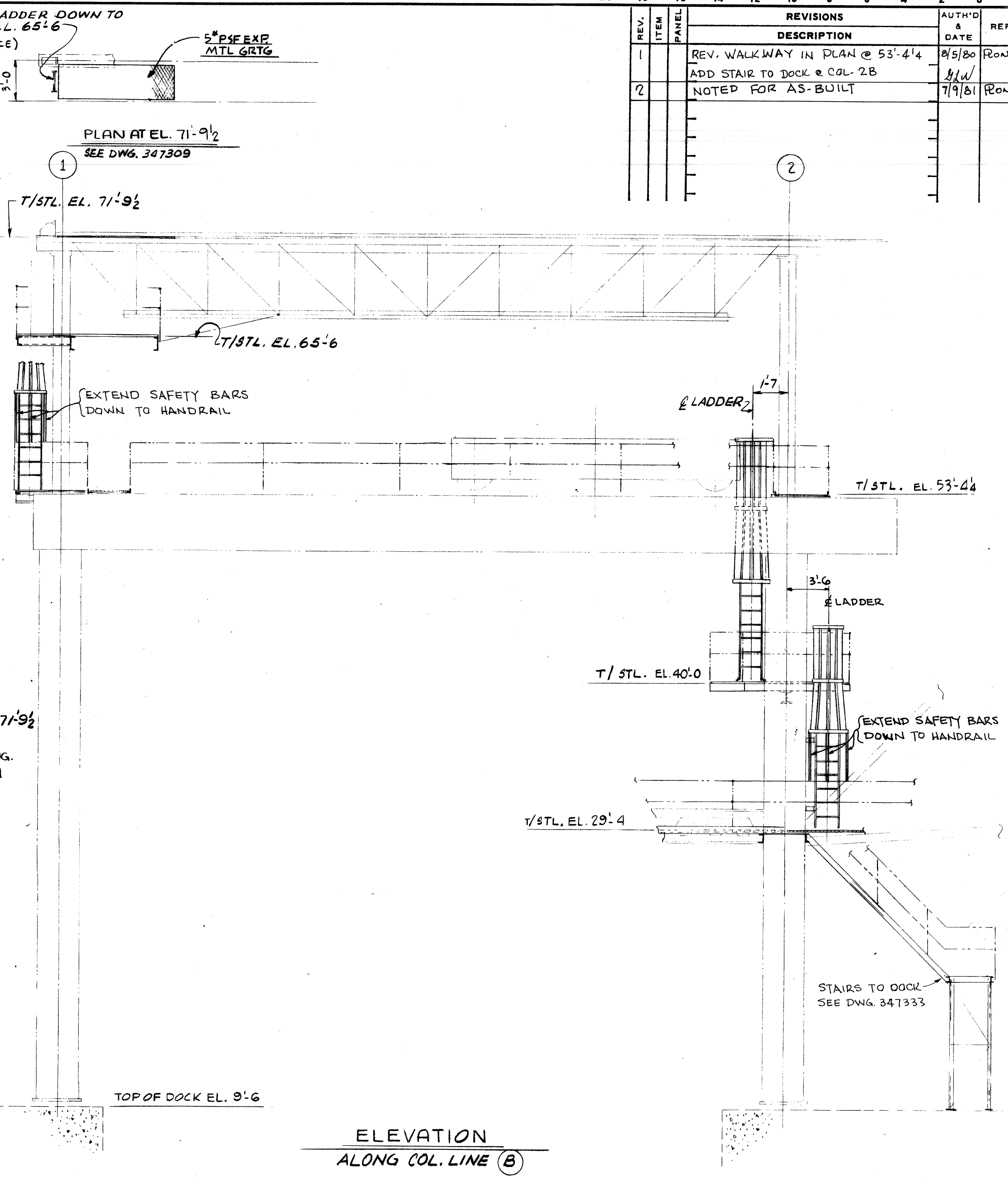
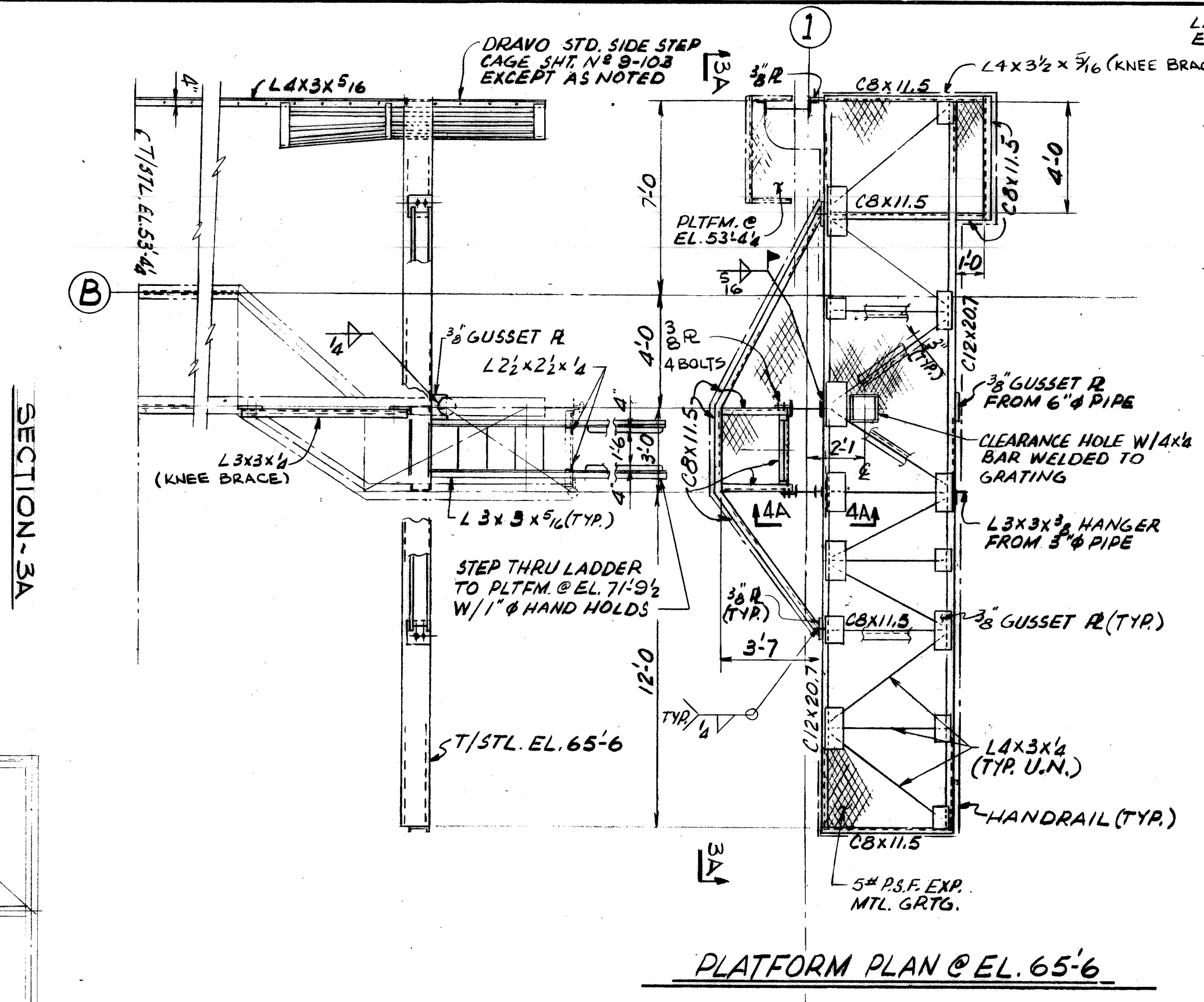
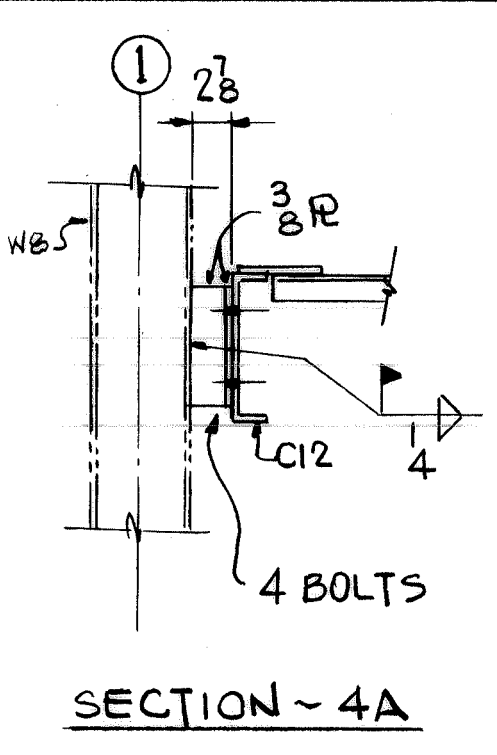








REV.	ITEM	DESCRIPTION	DATE	BY	CHK	REF.
1		REV. WALKWAY IN PLAN @ 53'-4"	8/5/80	JLW		FROM
2		ADD STAIR TO DOCK & COL. 2B	7/9/81	JLW		FROM
		NOTED FOR AS-BUILT				



- NOTES:**
- 1) FOR GENERAL NOTES SEE DWG. 347307
  - 2) FOR DRAWO STRUCTURAL DETAILS STANDARDS ON ACCESS SEE DWGS. 347327 & 347328.

WORK THIS DWG. WITH DWGS. 347325 & 347322 & 347333

CONTR. NO.	REFERENCE DWGS.
0	1
1	2
2	3
3	4
4	5
5	6
6	7
7	8
8	9
9	10

DRAWO CORPORATION, PITTSBURGH, PA. DIV EWD

CONTRACT NO. W-4139

SHOP BILL NO. DBLOU

**CONTINUOUS BARGE UNLOADER**

DESIGN OF **TOWER ACCESS**

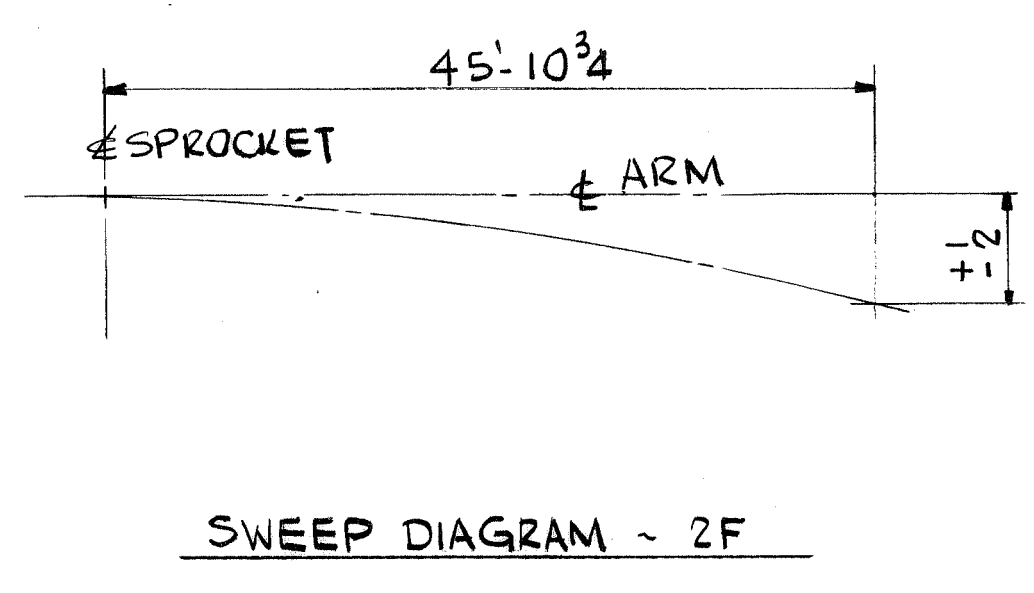
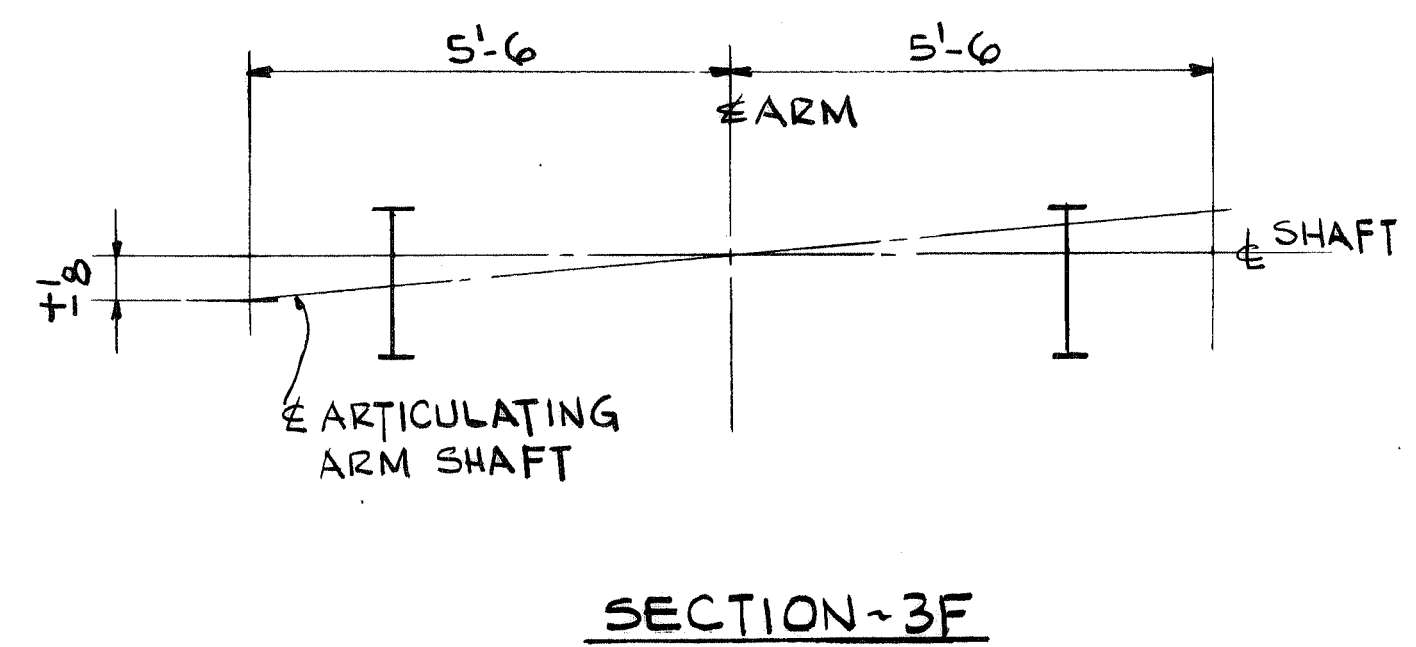
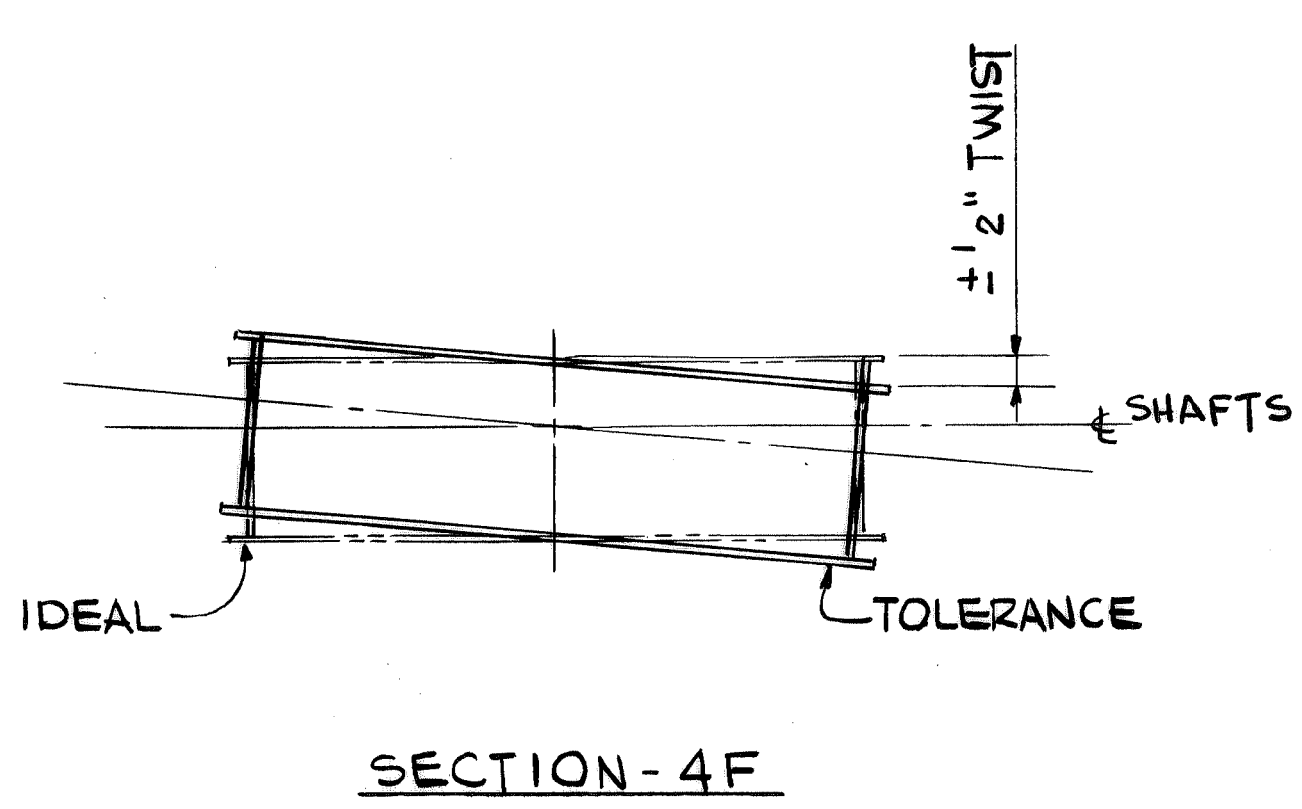
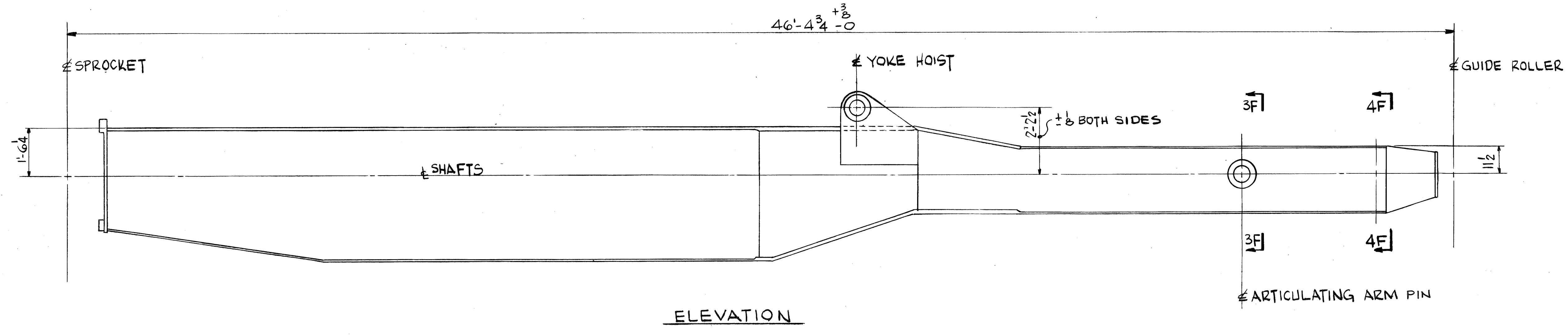
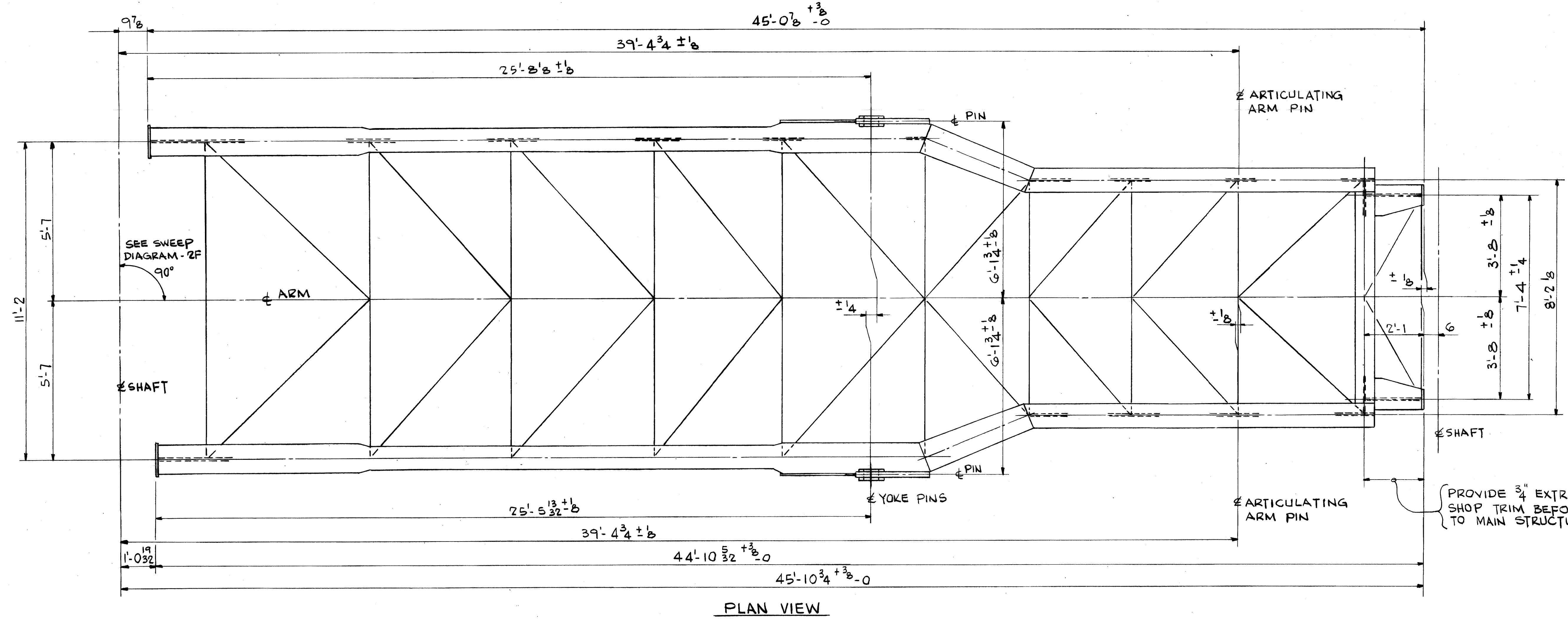
SCALE 3/16" = 1'-0" U.N. APP'D *J.L. Wick*

DATE 5/12/80

DRAWING NO. **347320** REV. 2



REV.	ITEM	PANEL	REVISIONS	DATE	REF.
1			DELETE YOKE PIN TOL. NOTE # REV. TOL. ON ART. ARM PIN	5/14/80	CONOR



CONTR. NO.	REFERENCE DWGS.	SHEET
0		
1		
2		
3		
4		
5		

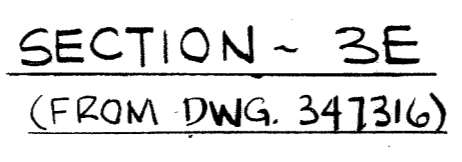
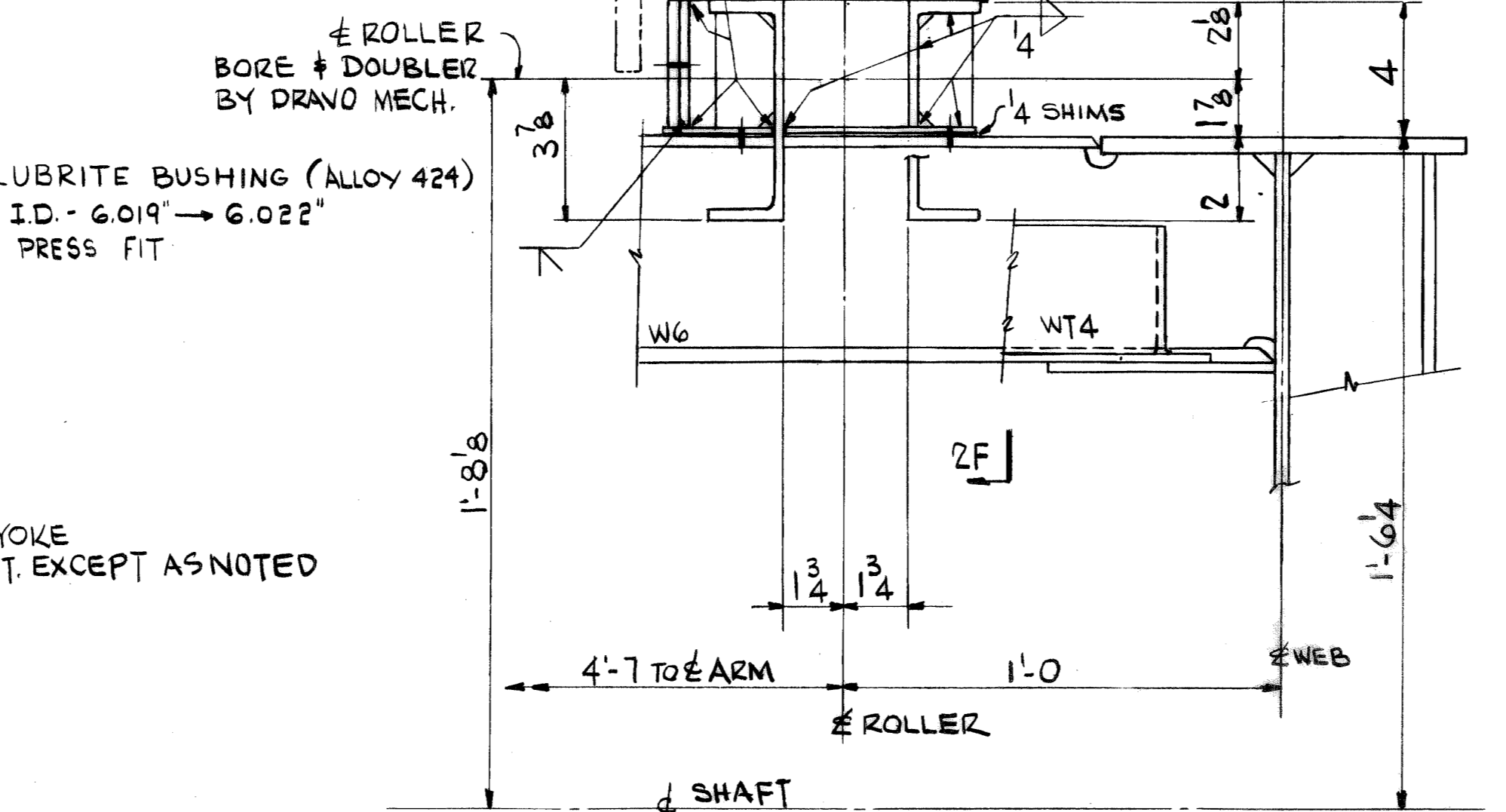
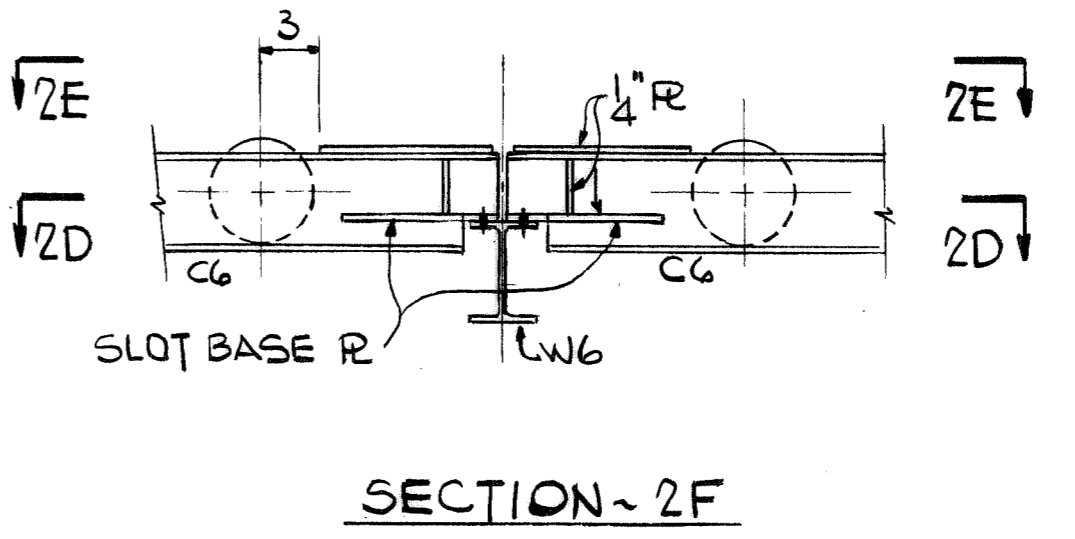
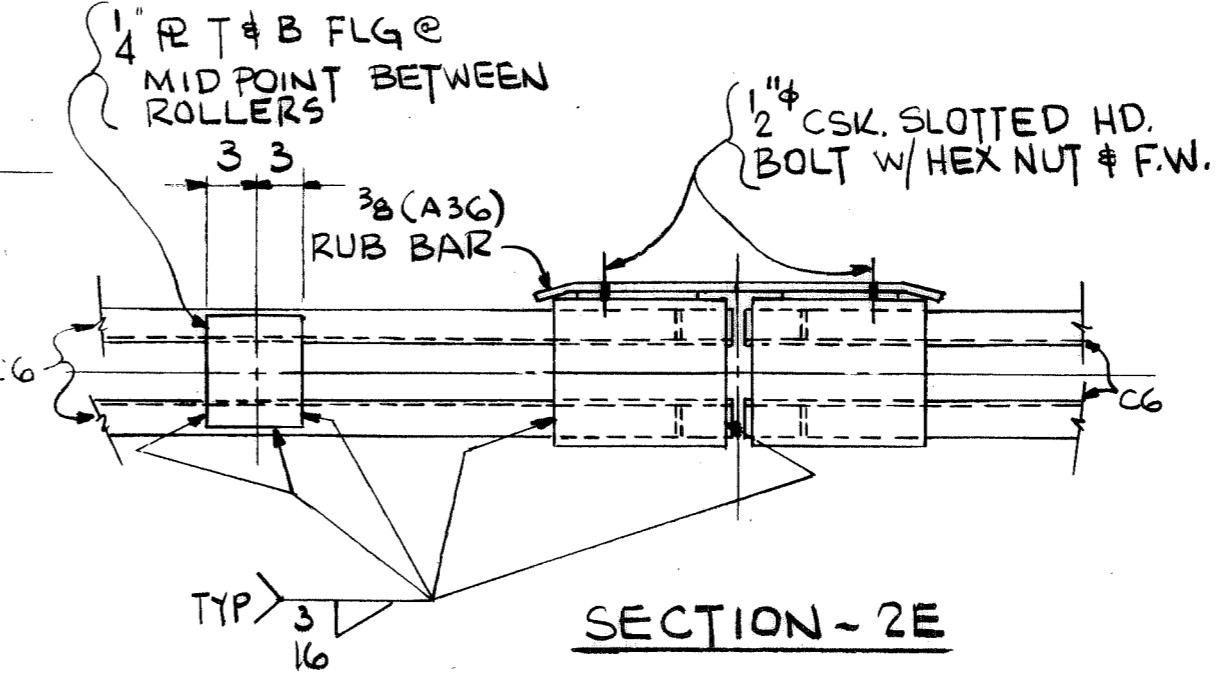
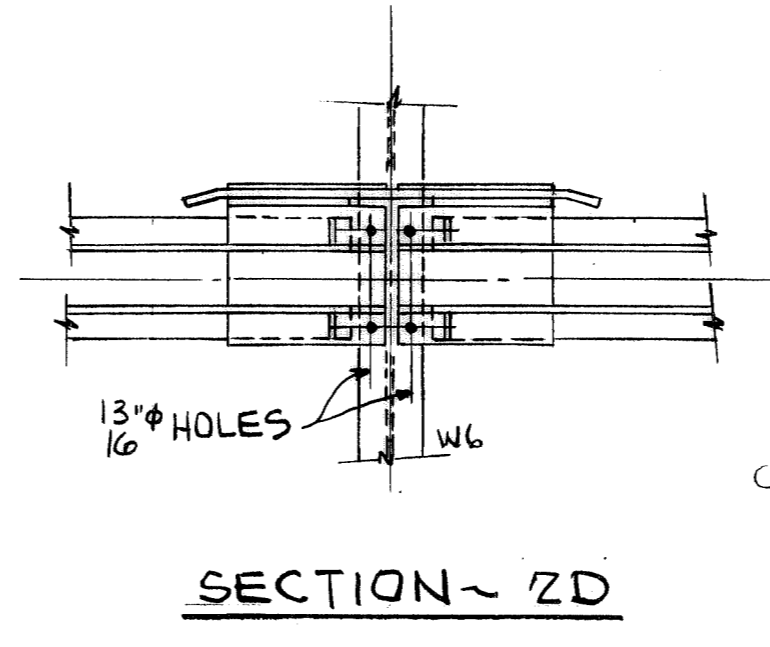
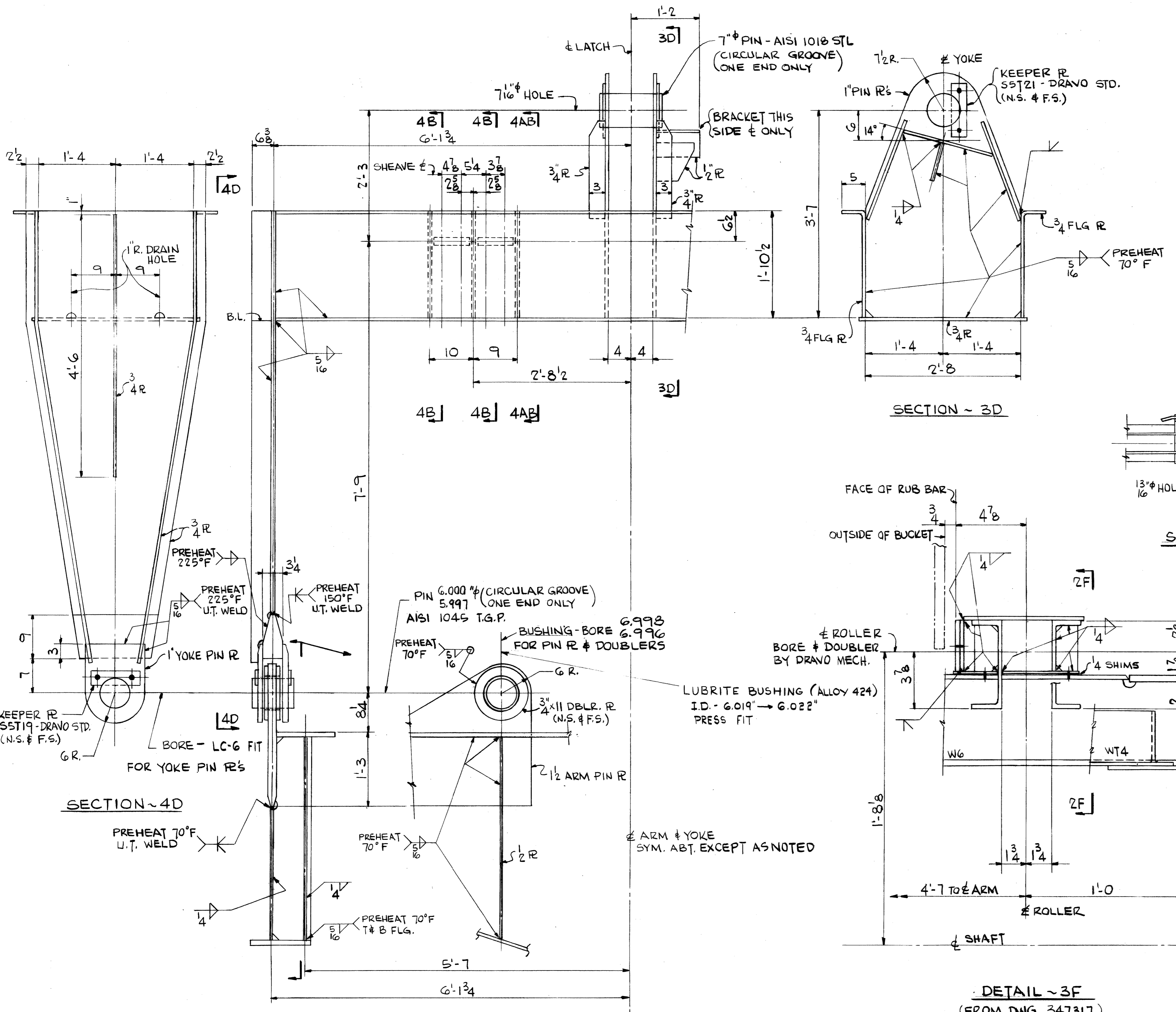
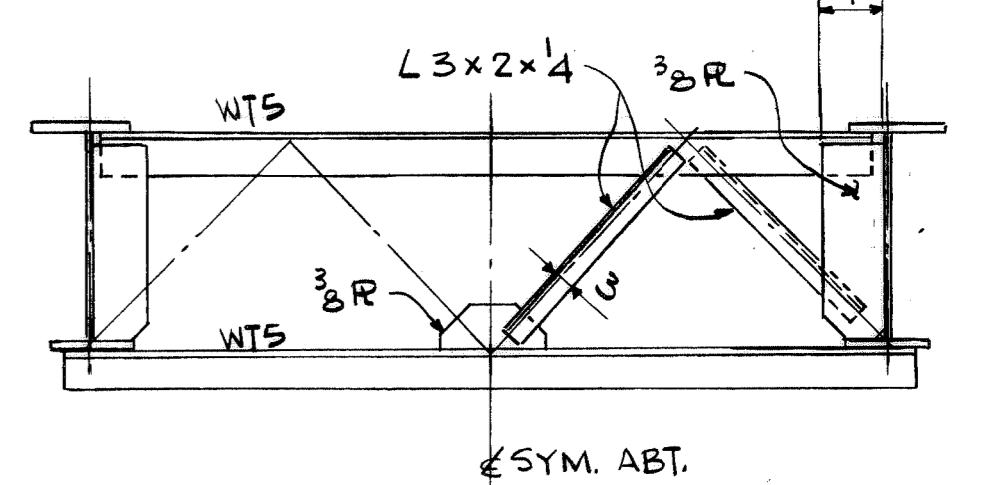
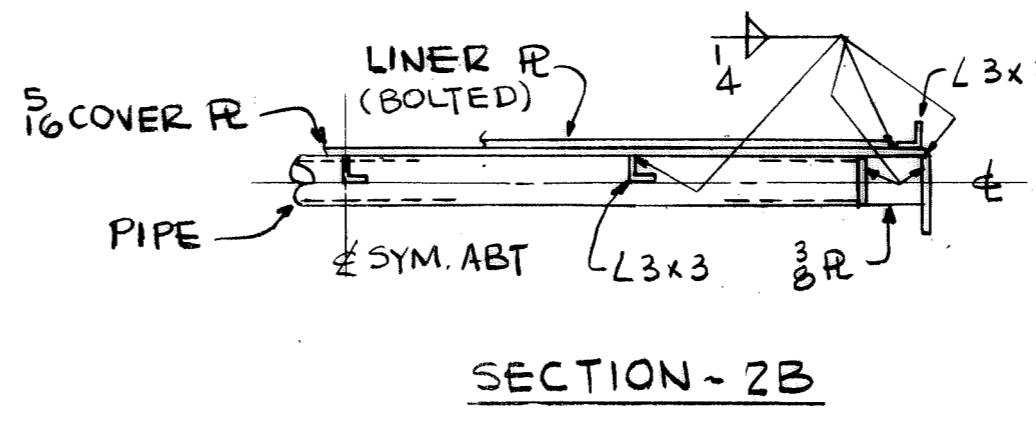
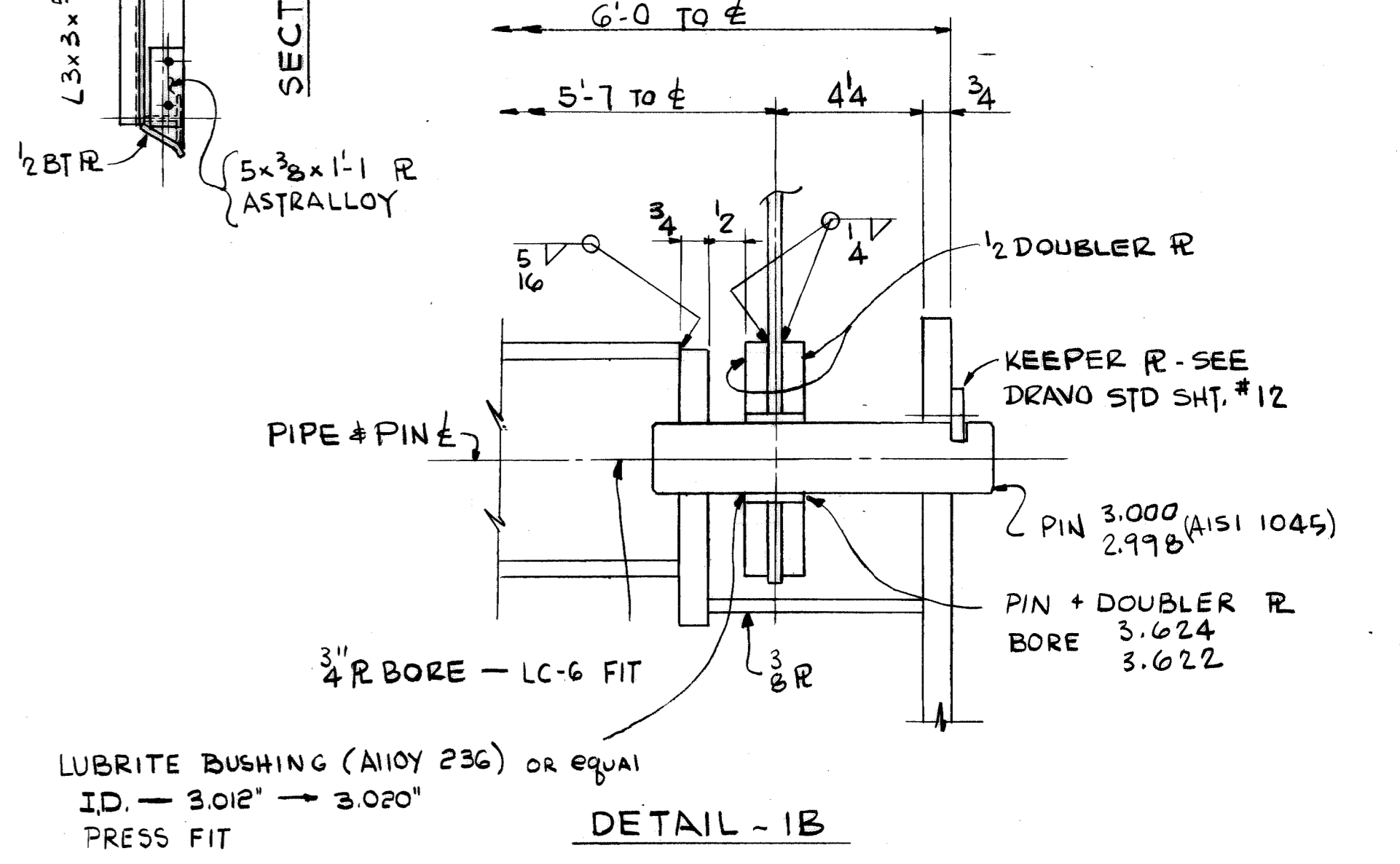
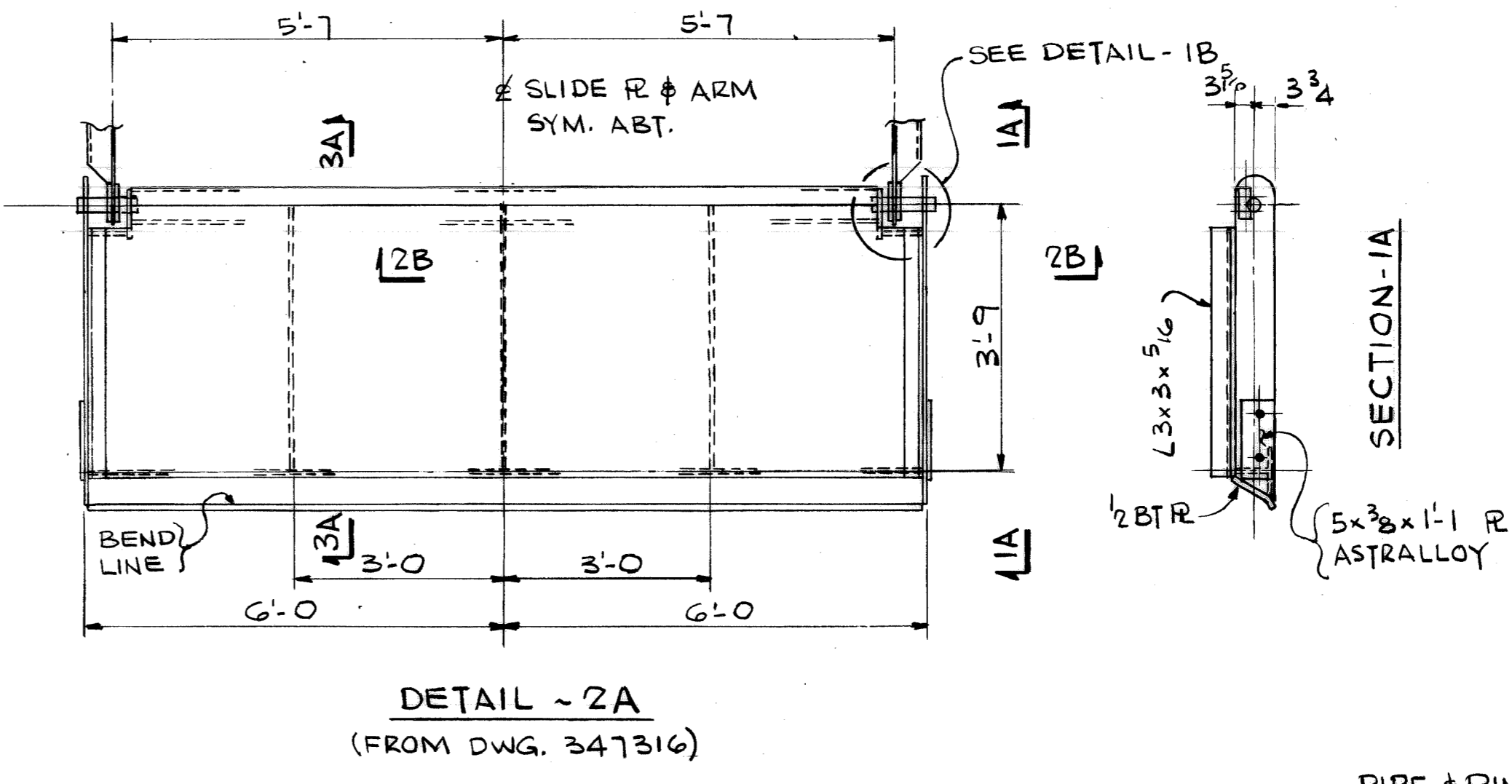
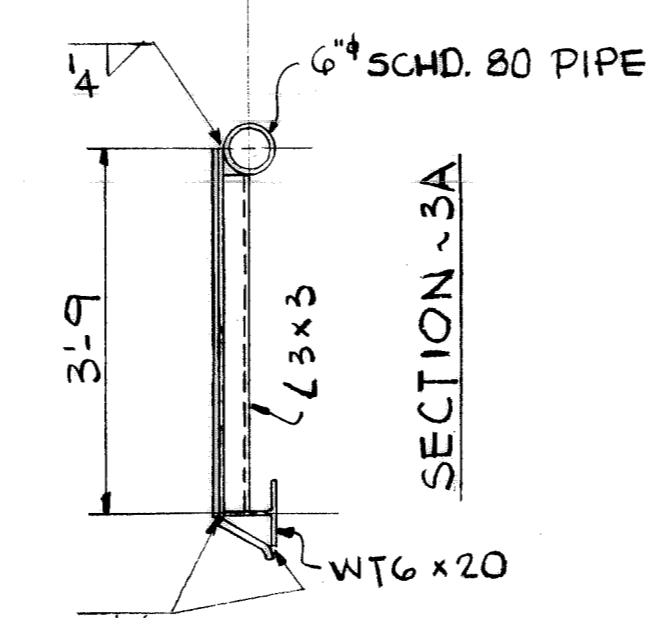
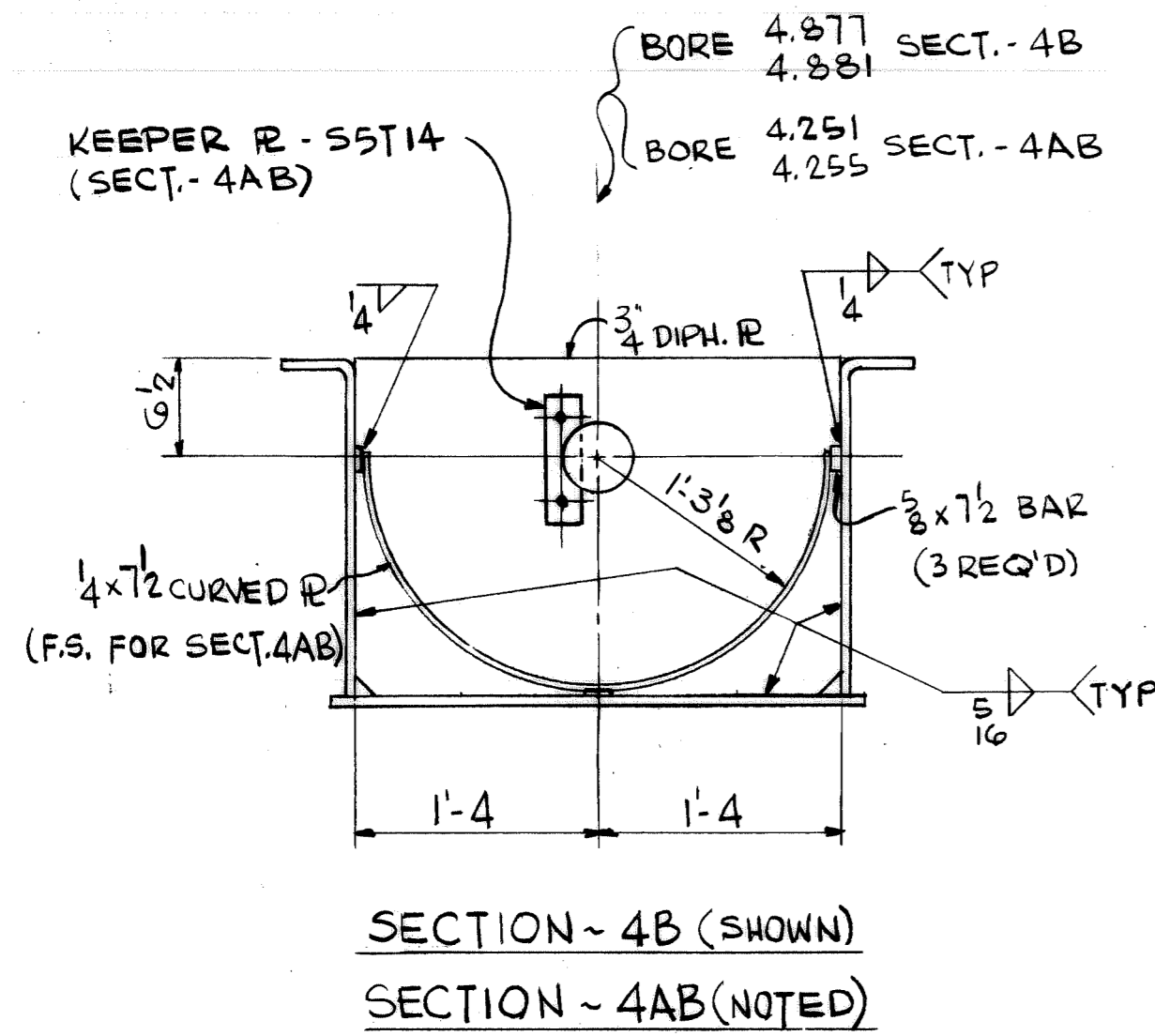
WORK THIS DWG WITH DWG. 347316

NO. 1	CONTRACT NO. W4139	SHOP BILL NO.	U LOT M.S. S.S.
REG'D.			DIST.
CONTINUOUS BARGE UNLOADER			
DIGGING ARM			
CONTROL DIMENSIONS			
SCALE 1/2" = 1'-0"	APP'D & L. Wick	DATE 5/7/80	
DR. KONKA	2-8-80		
CHK. BOGEMAN	5-6-80		
DRAWING NO. 347319			REV. 1

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DRAYO CORPORATION, PITTSBURGH, PA. DW EWD

REV.	ITEM	DESCRIPTION	DATE	REF.
1		REV. BORE ON YOKE DOUBLERS	5/17/80	R02



WORK THIS DWG WITH DWGS 347316 & 347317

NO. 4139	CONTRACT NO.	SHOP BILL NO.	BLOUT
REG'D.	NO.		DIST.
CONTINUOUS BARGE UNLOADER			
DESIGN OF			
YOKE & SECTIONS @ DIGGING ARM			
SCALE 1/2" = 1'-0"	APP'D. & L. Wick	DATE 5/17/80	
DR. CONNA	4-15-80		
CHK. BRENNAN	5-7-80		
DRAWING NO. 347318			REV. 1

CONTR. NO.	REFERENCE DWGS.	SHEET
0	1	2
1	3	3
2	4	4
3	5	5
4	6	6
5	7	7
6	8	8
7	9	9

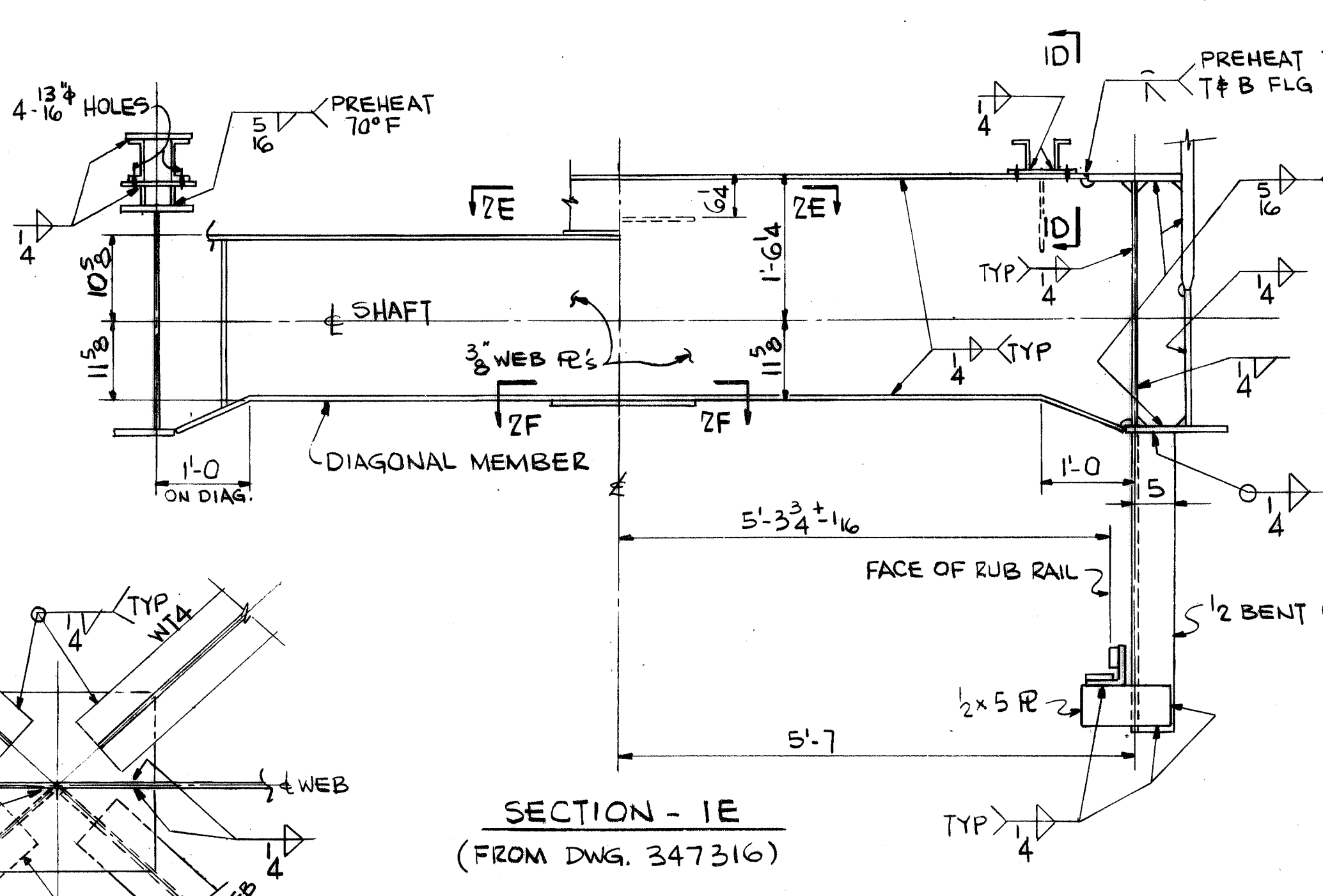
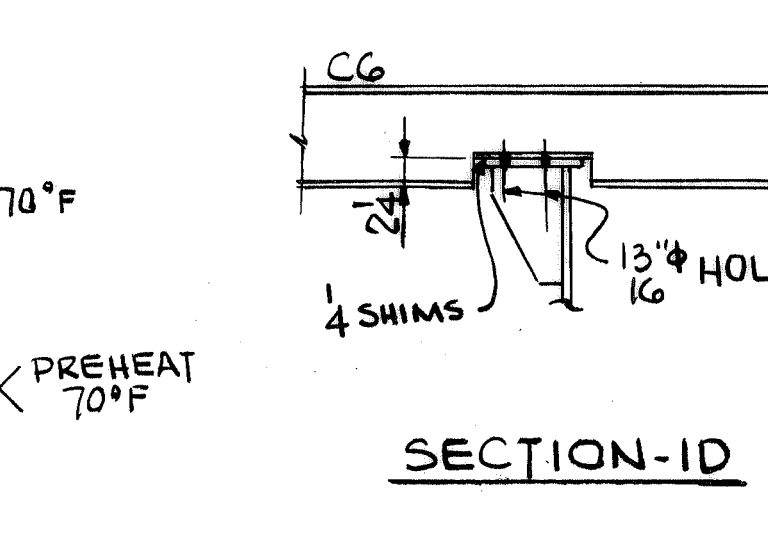
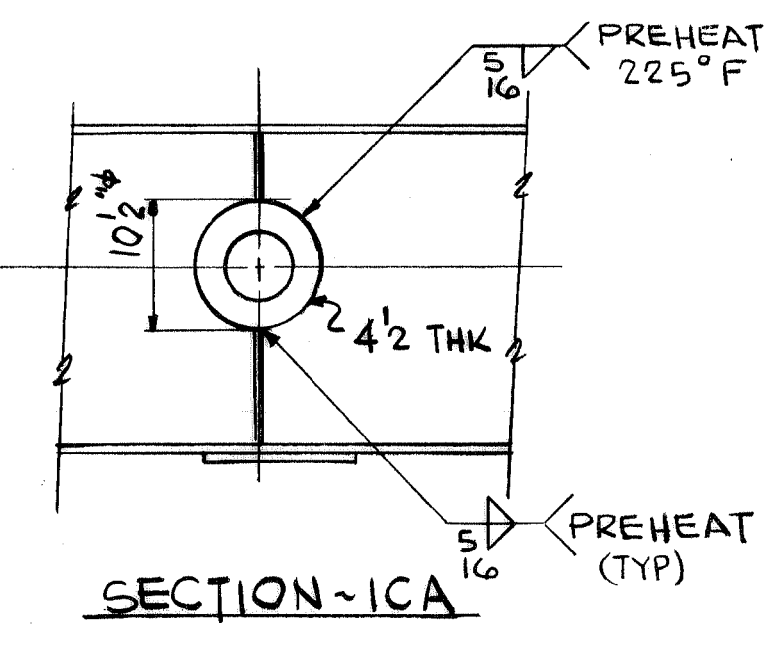
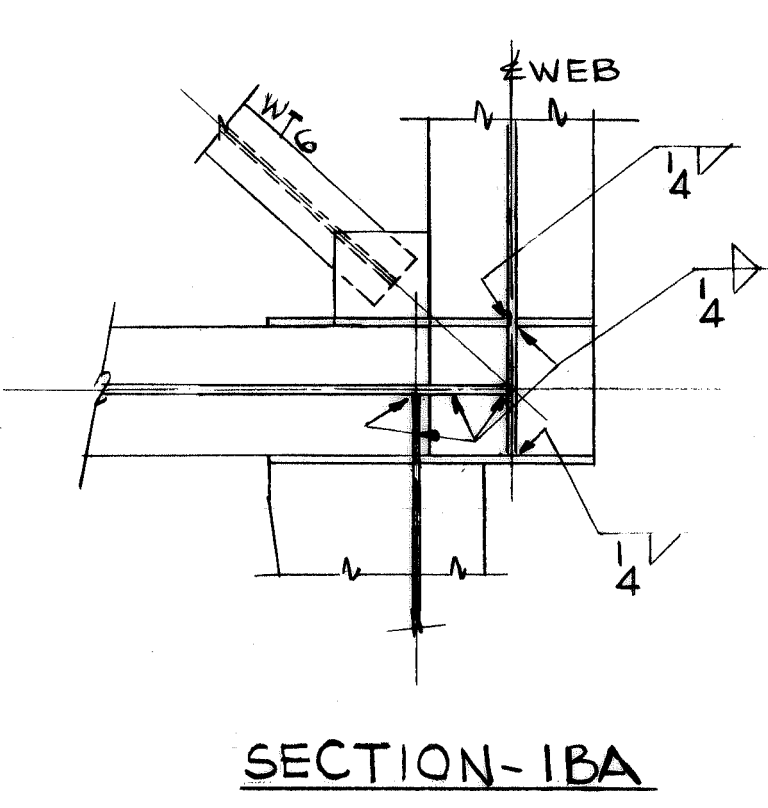
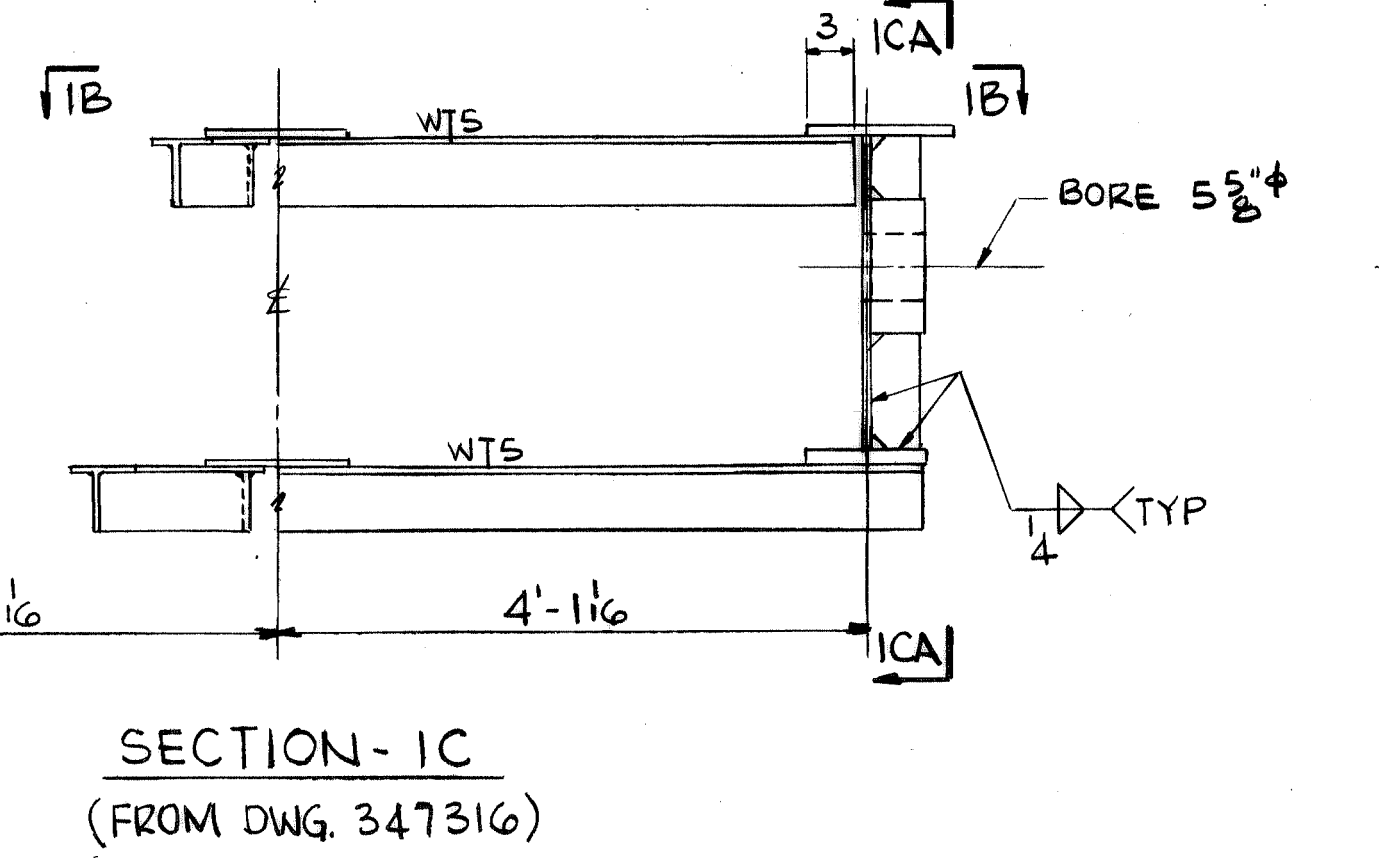
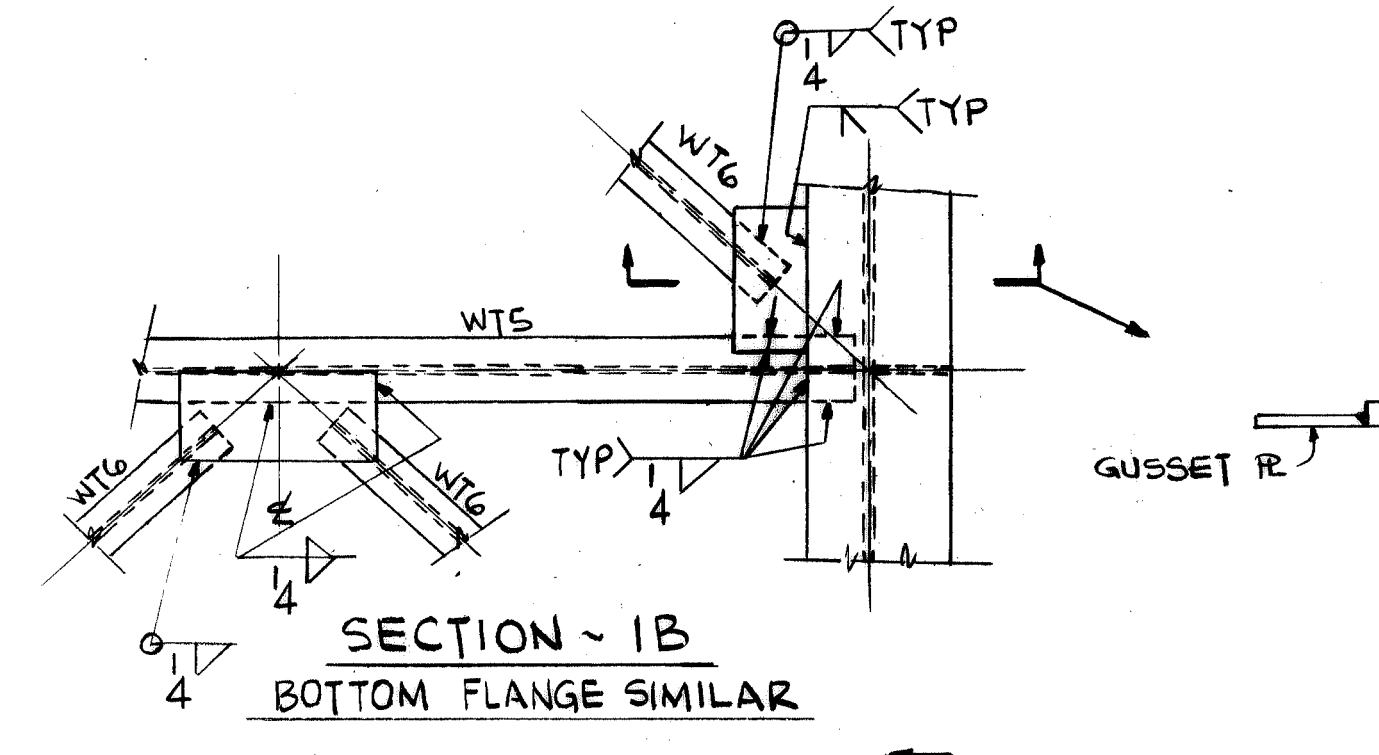
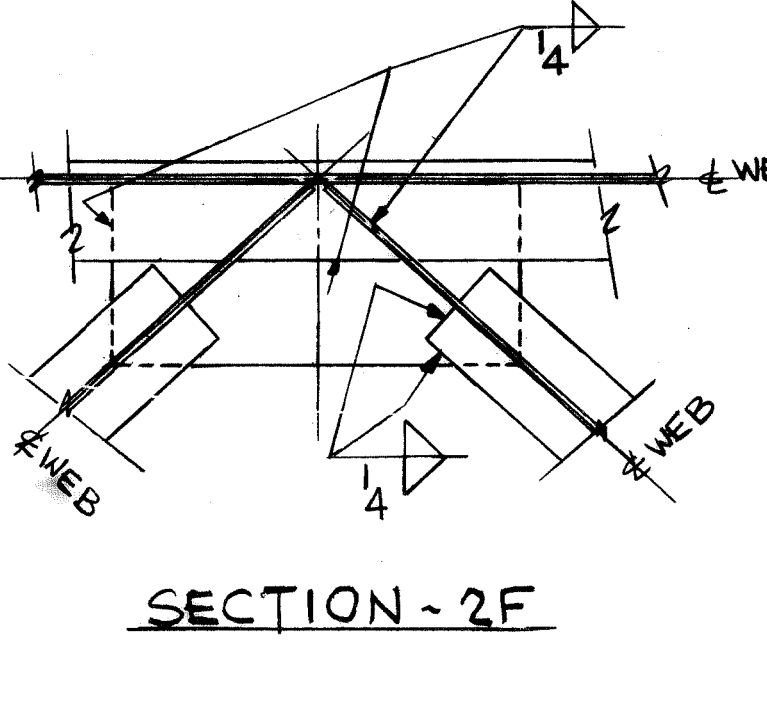
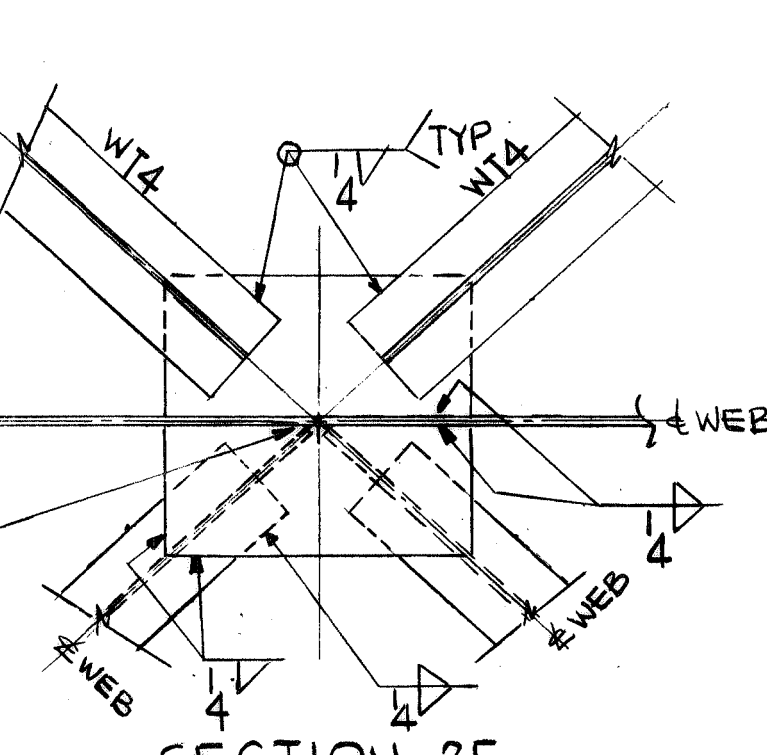
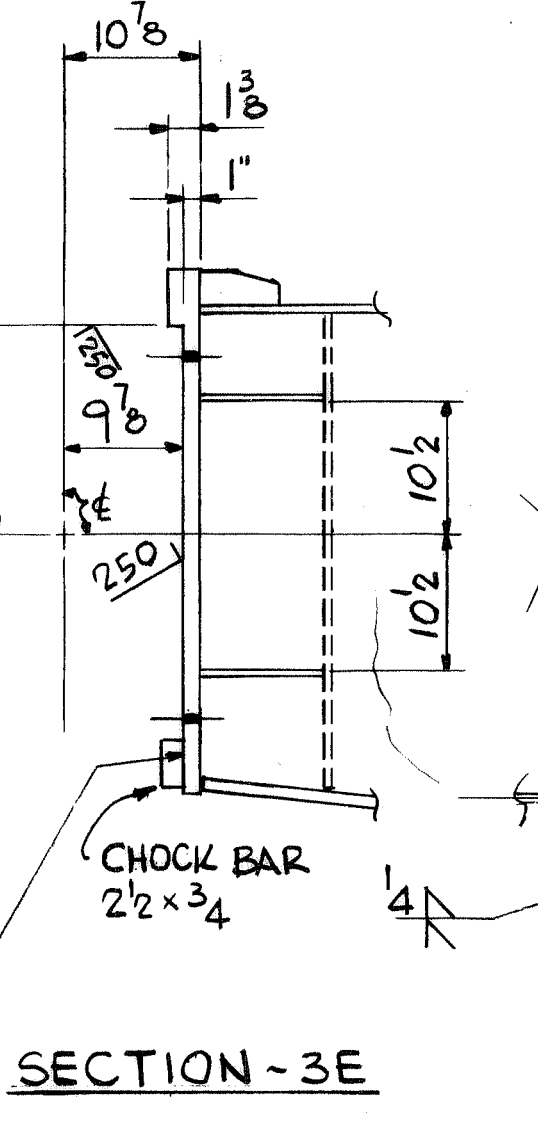
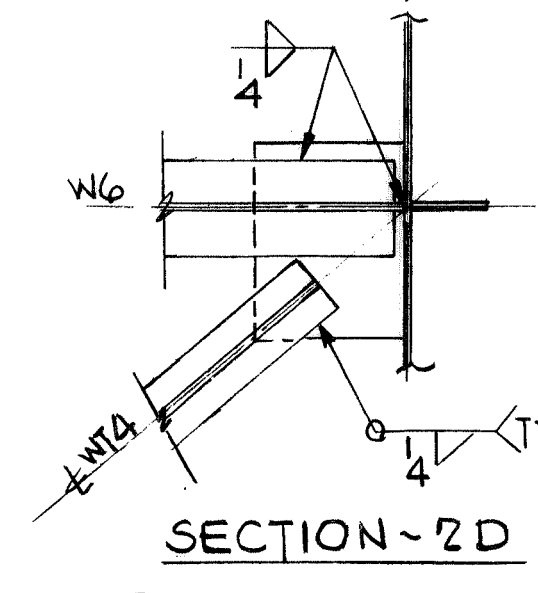
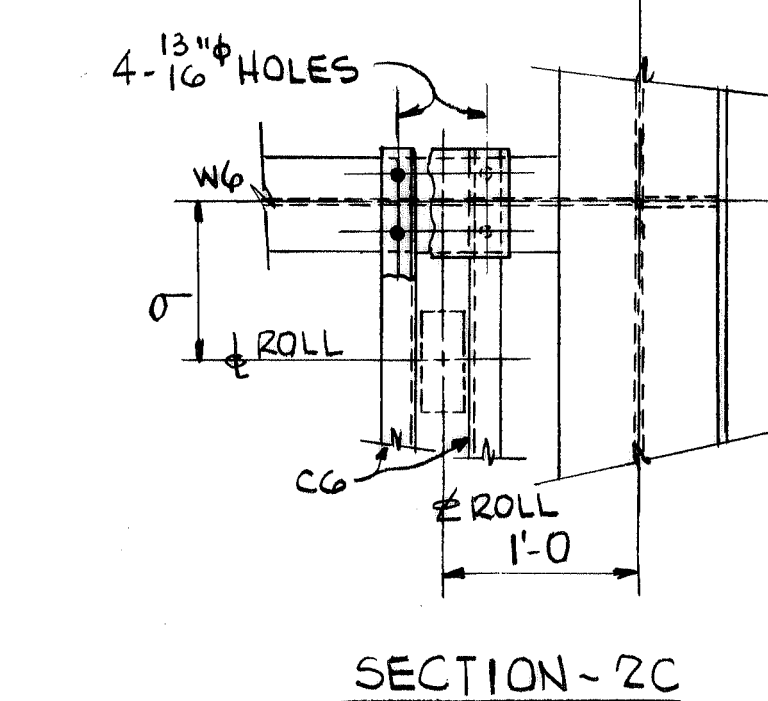
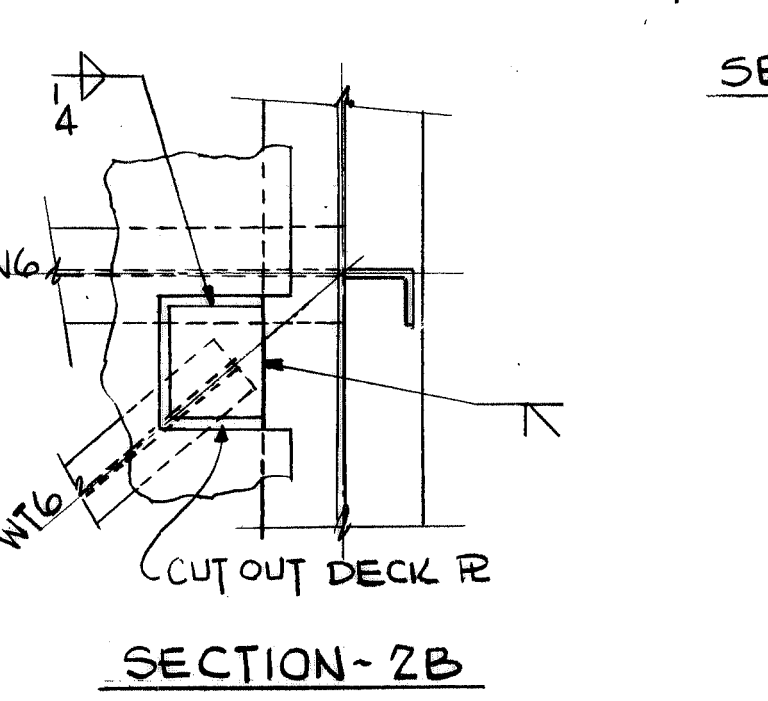
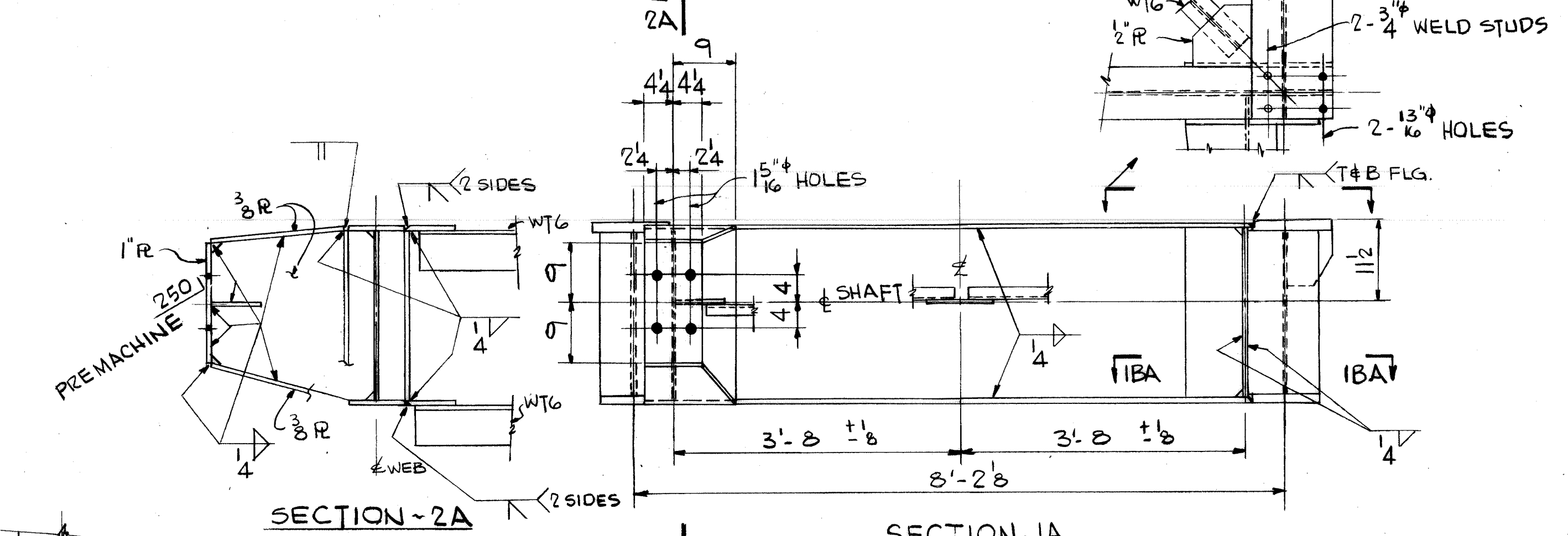
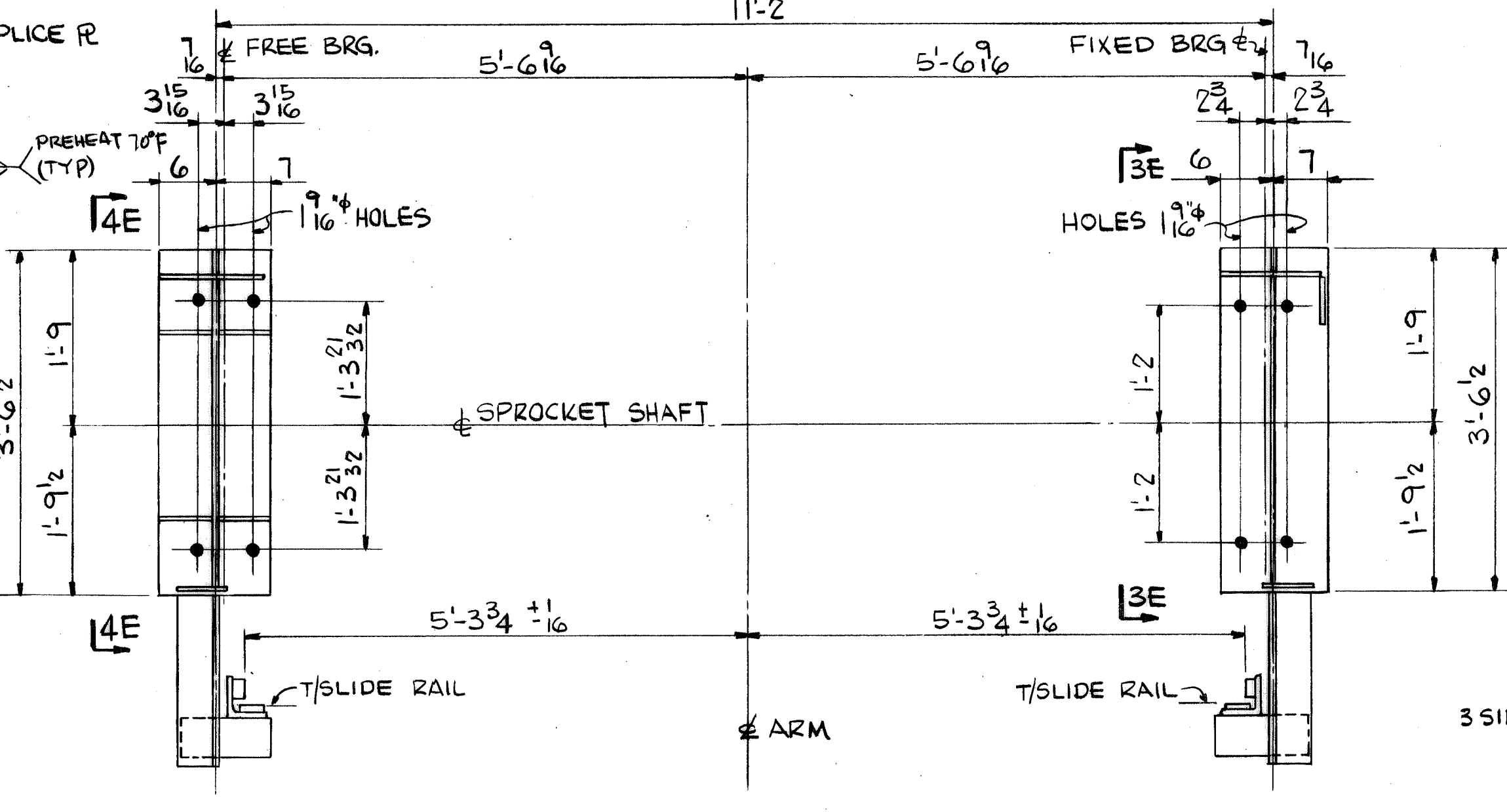
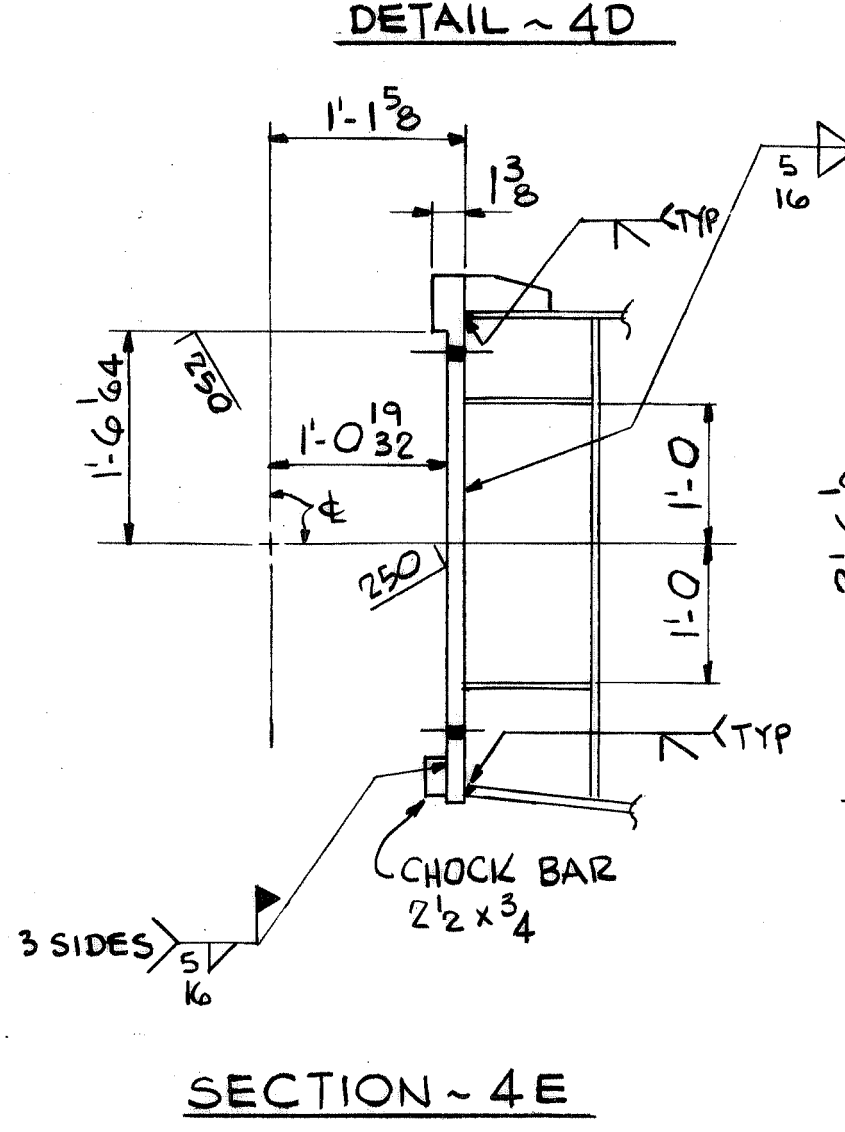
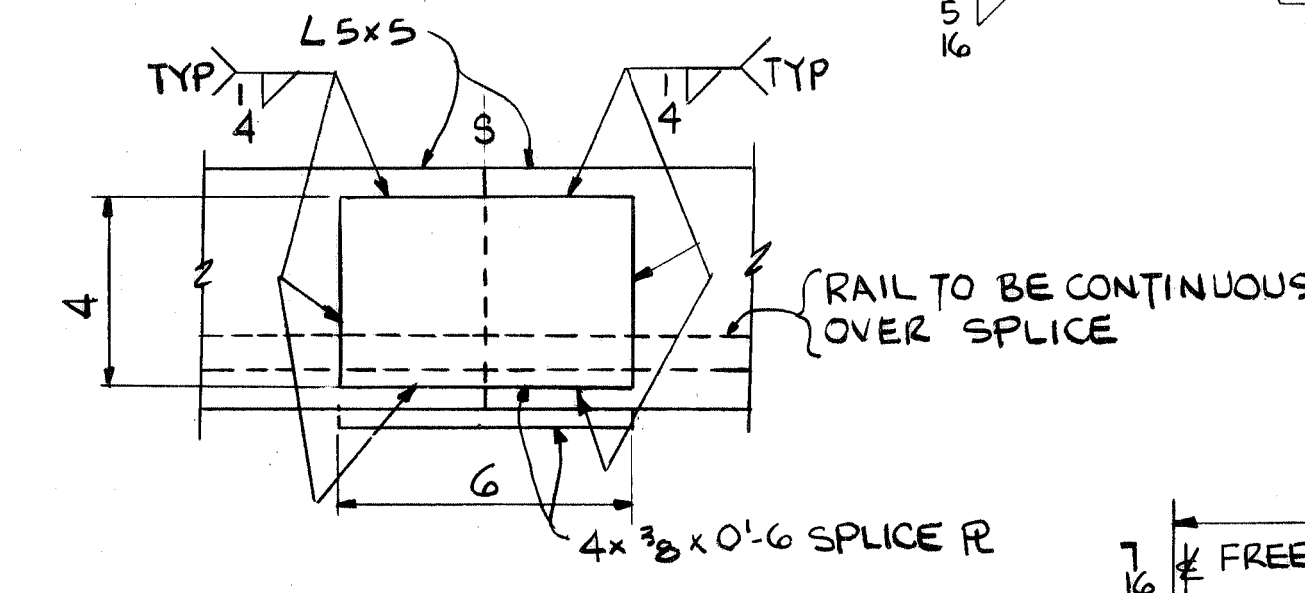
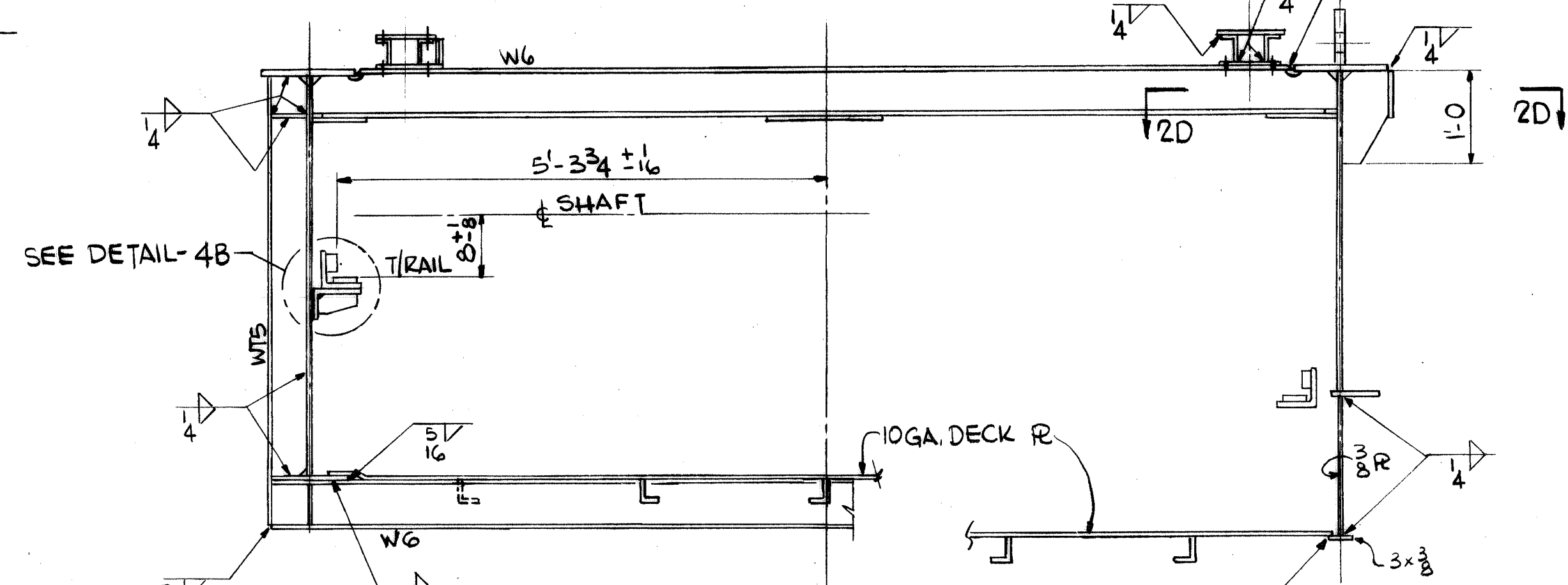
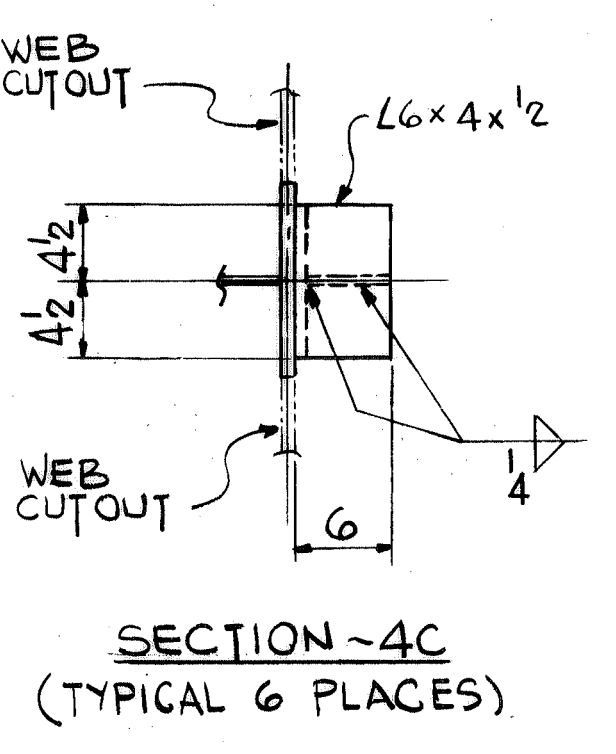
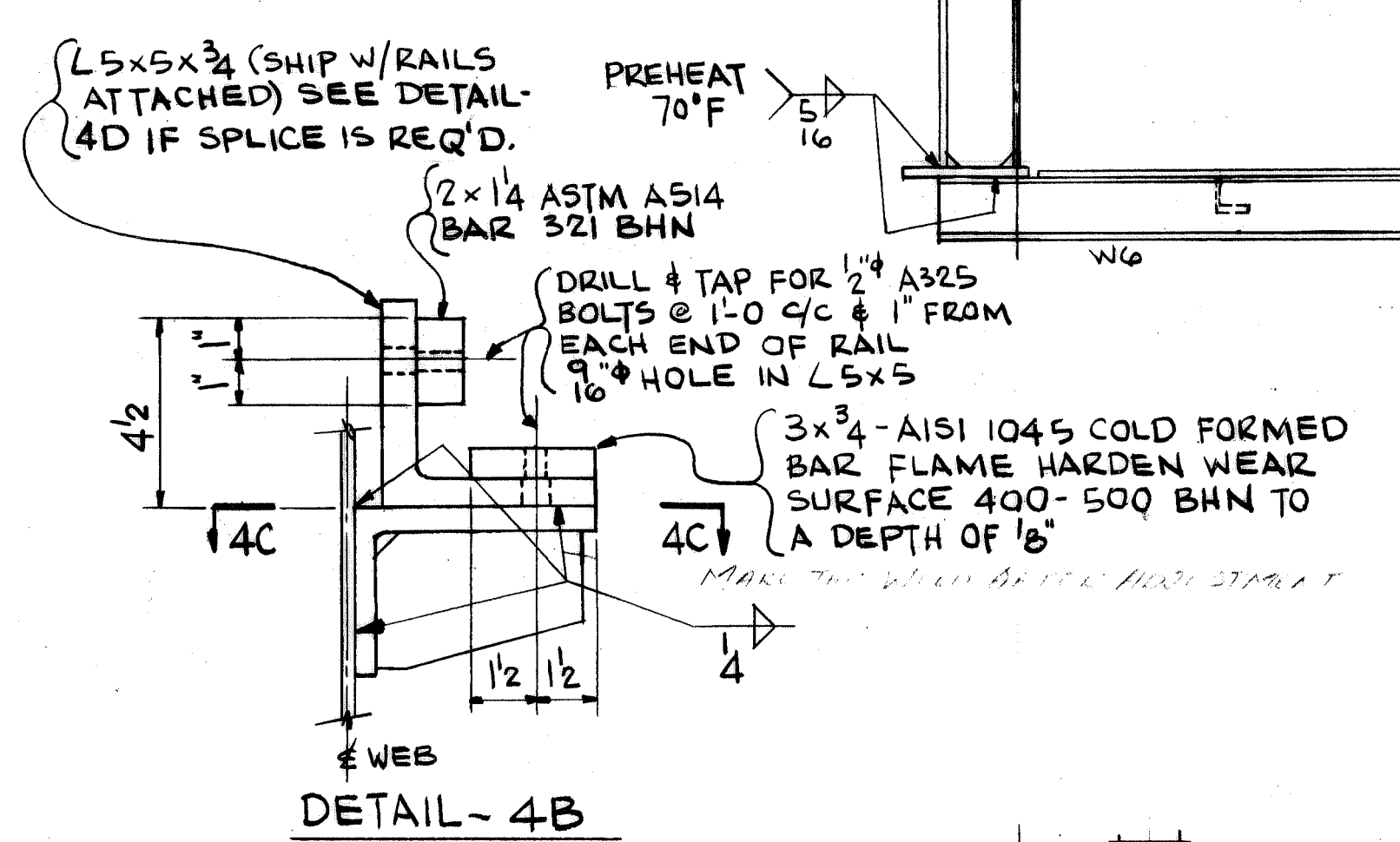
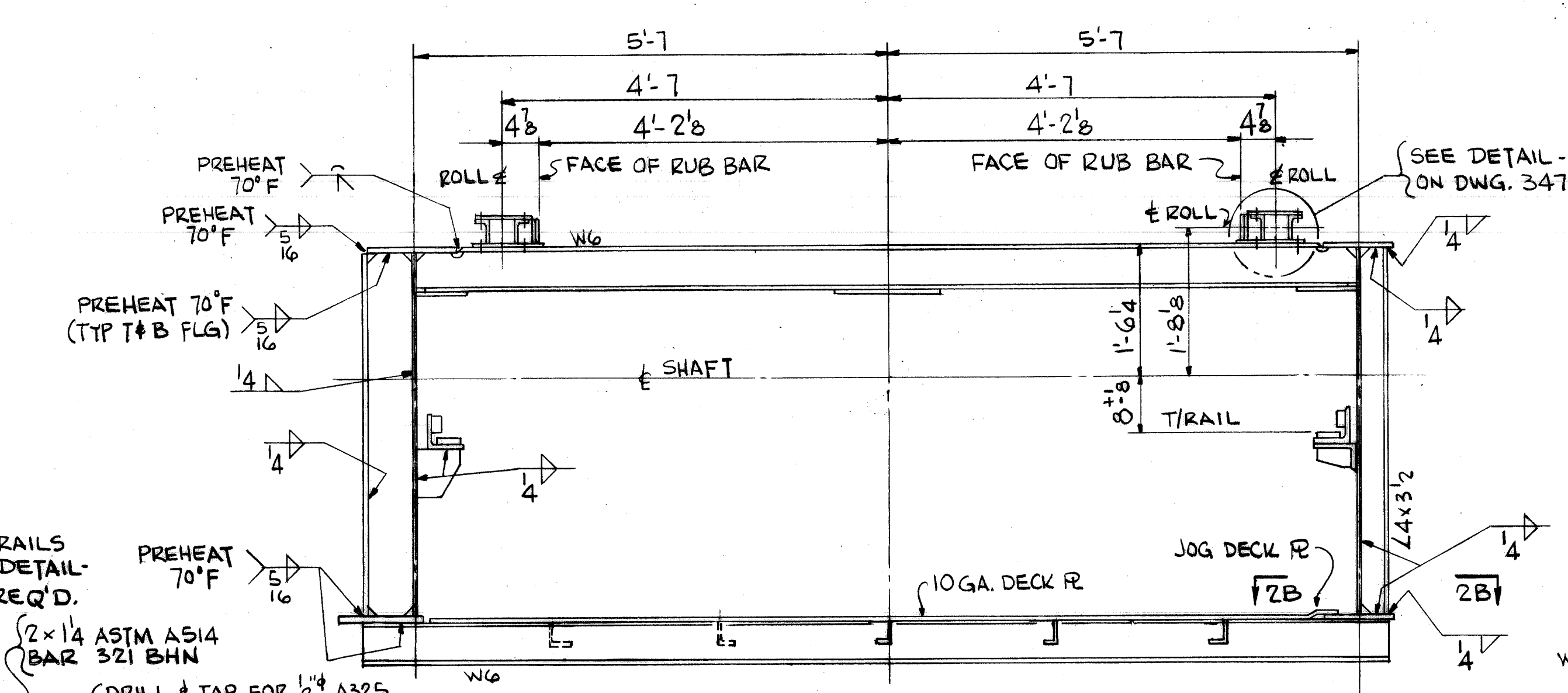
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**Dravo**

DRAVO CORPORATION, PITTSBURGH, PA. DIV EWD



REV.	ITEM	DESCRIPTION	AUTH'D & DATE	REF.
1		REV. TOP FLG. CROSS MBR. SECT. 1B & 1C ALSO REV. BT. FLG. CUT SECT. 1E		



CONTR. NO.		REFERENCE DWGS.		SHEET
1	2	3	4	
5	6	7	8	9
10	11	12	13	14
15	16	17	18	19
20	21	22	23	24

NO. CONTRACT	W4139	SHOP BILL NO.	BLOUT
REV'D			DISP
CONTINUOUS BARGE UNLOADER			
DESIGN OF			
SECTIONS @ DIGGING ARM			
SCALE	3/4" = 1'-0"	APP'D	J.L. Wick
DR	REYNOLDS	DATE	5/7/80
CHK	BOREMAN		

DRAWING NO.		REV.
347317		1

WORK THIS DWG. WITH DWGS 347316 & 347318

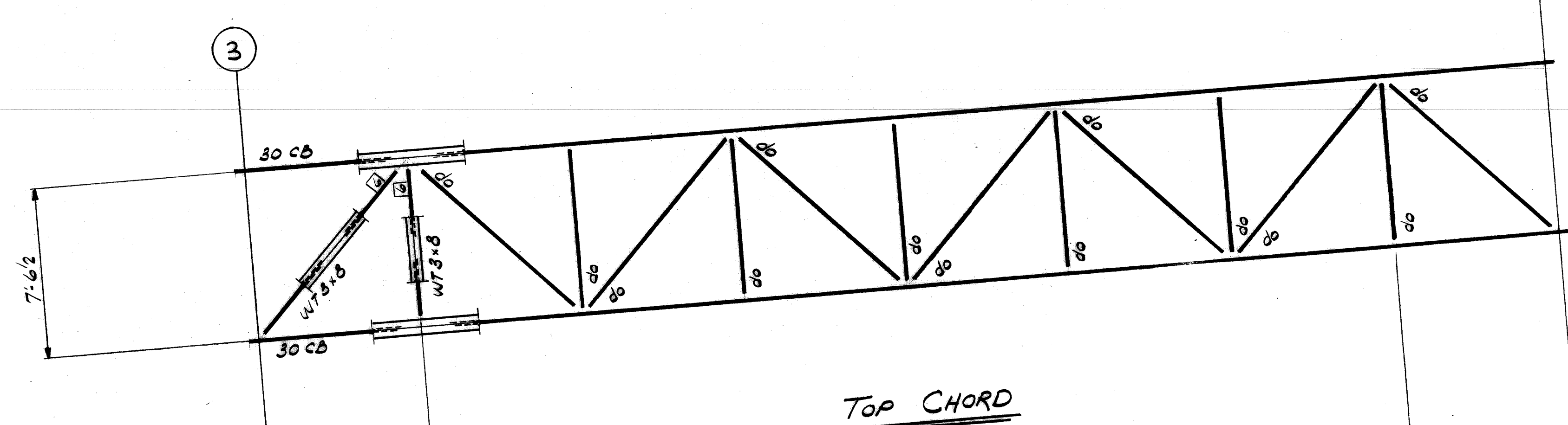
This drawing, including the information it contains, is the property of Dravo Corporation. It is submitted only in connection with the transaction to which it pertains and must not be used in any manner detrimental to the interests of Dravo Corporation. The drawing is not to be copied and must be returned upon request.

Dravo Corporation, Pittsburgh, PA, DW EWD

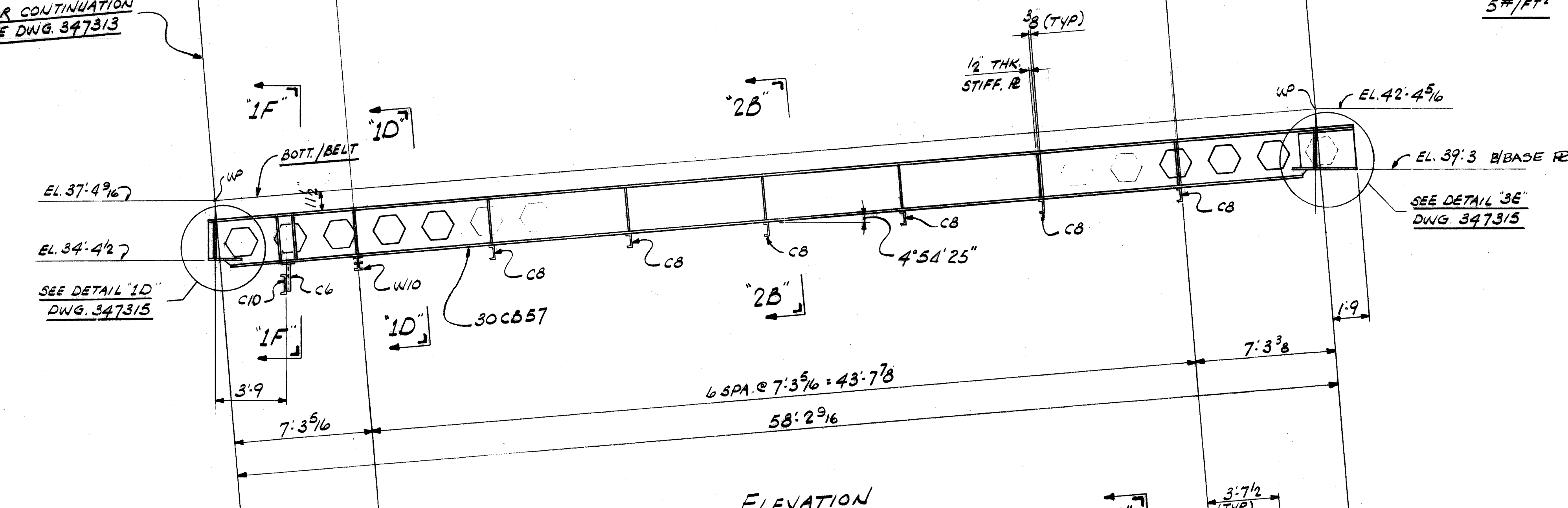




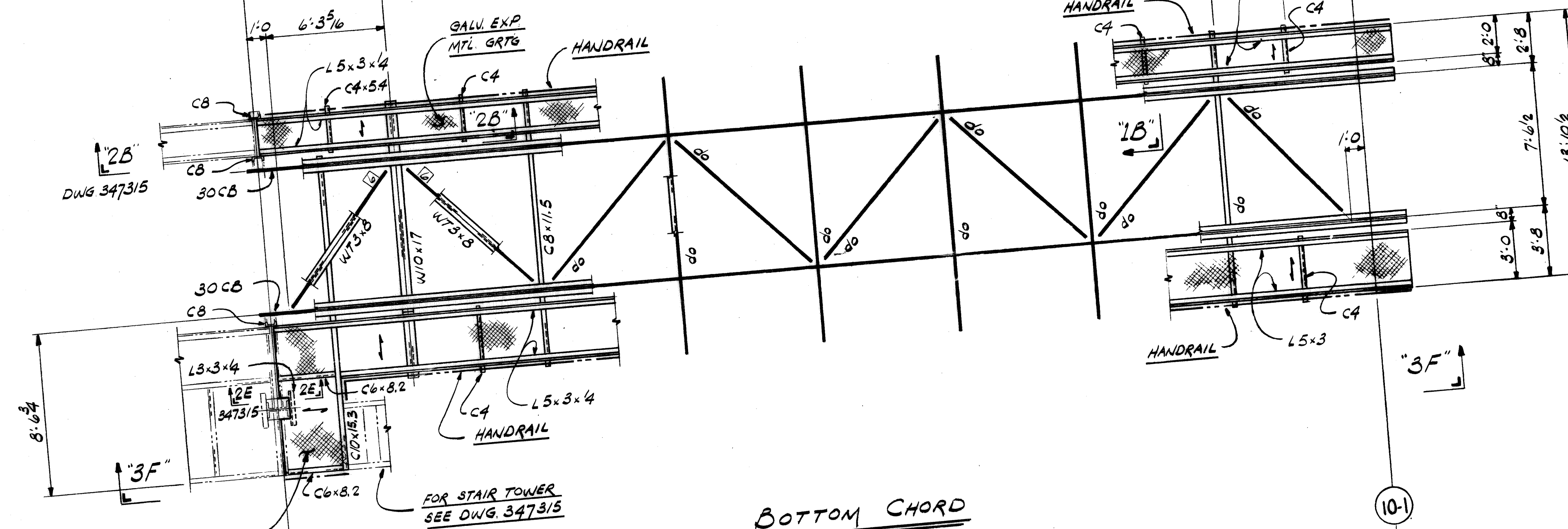




FOR CONTINUATION  
SEE DWG. 347313



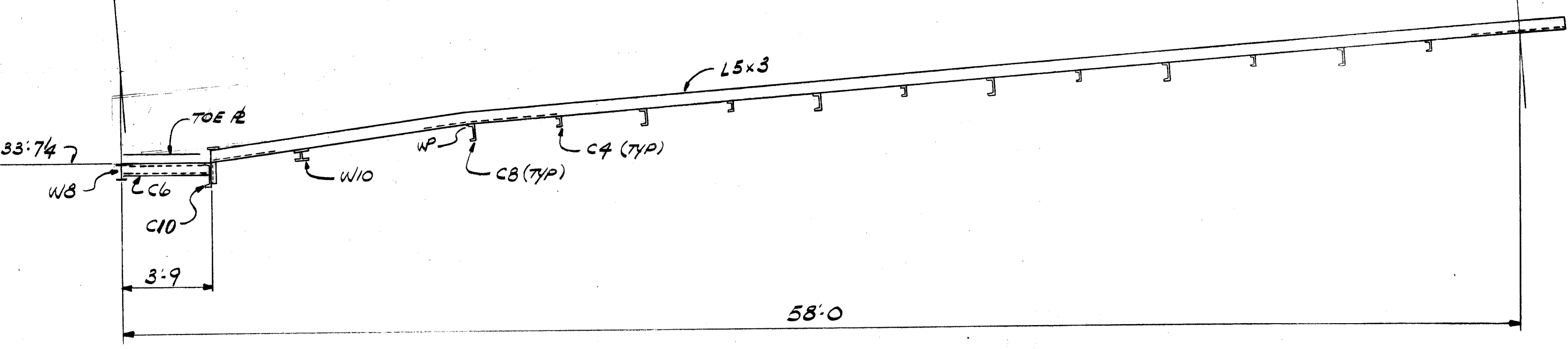
ELEVATION



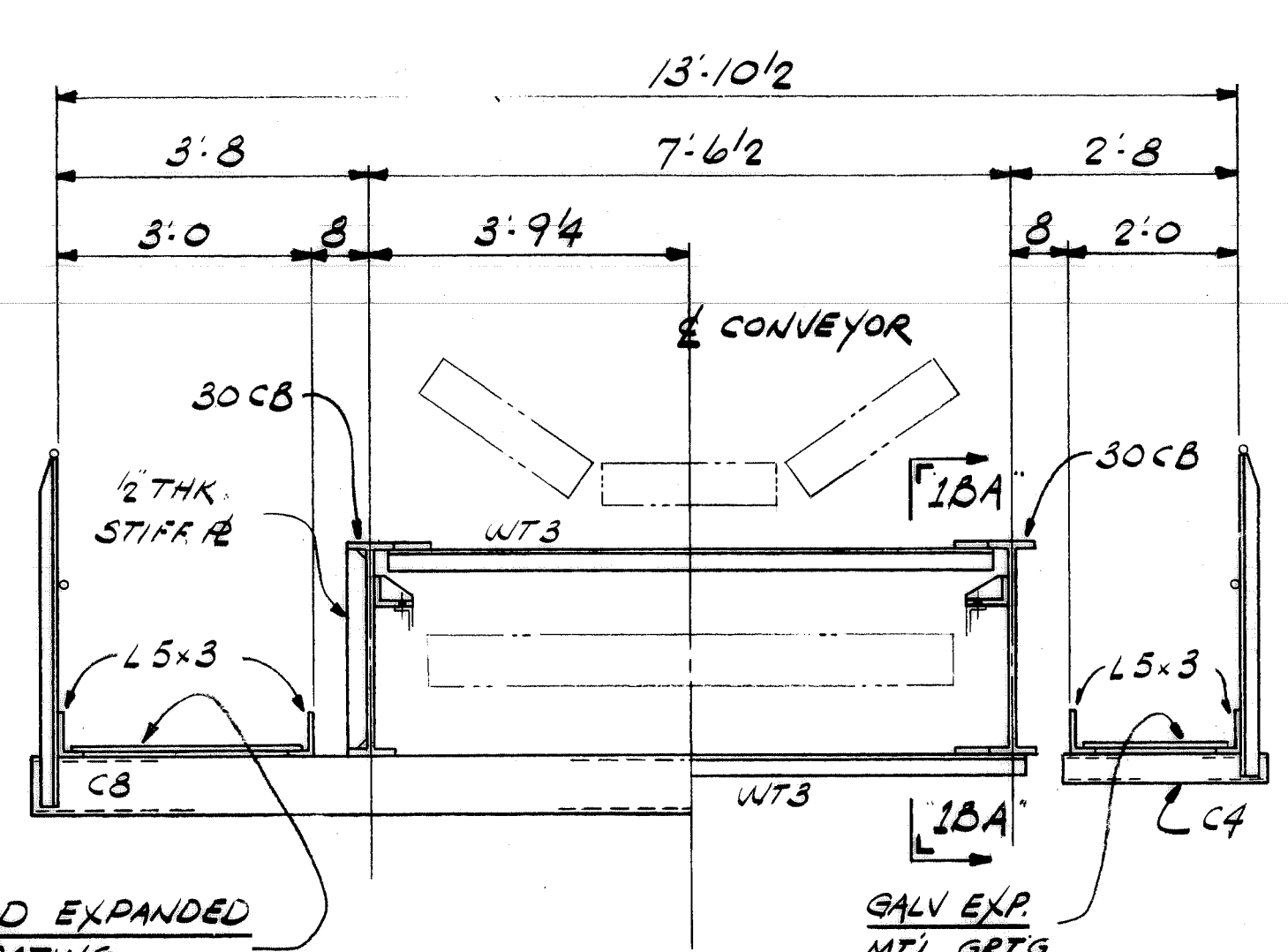
BOTTOM CHORD

GALVANIZED EXPANDED  
METAL GRATING  
5# / FT<sup>2</sup>

FOR STAIR TOWER  
SEE DWG. 347315



VIEW "3F"

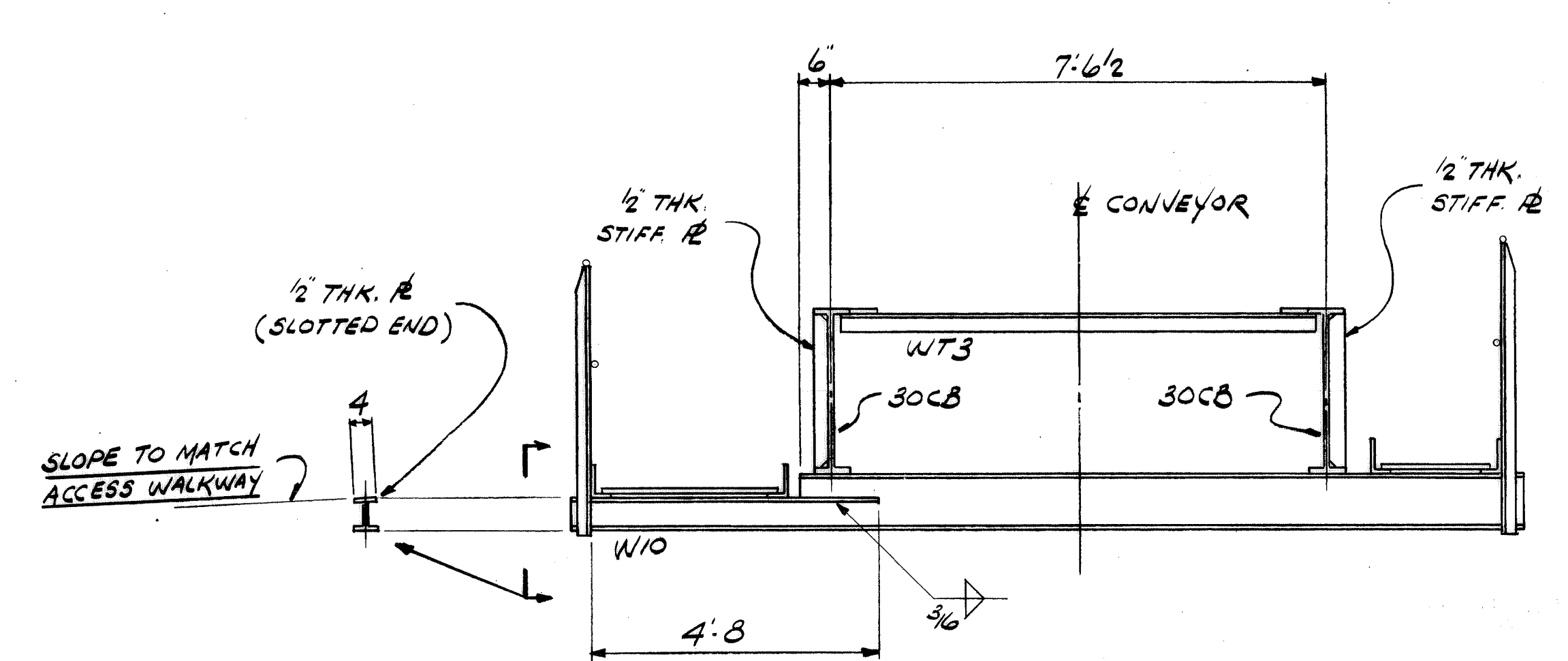


HALF SECTION "2B"  
(SCALE 1/2" = 1'-0")

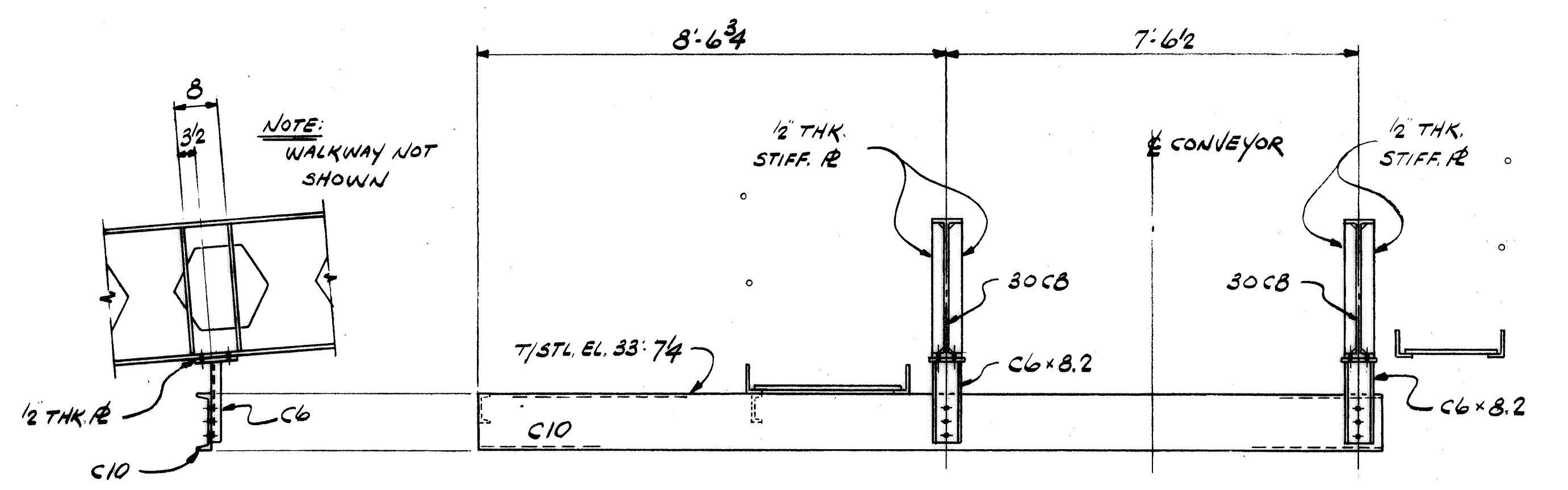
HALF SECTION "1B"  
(SCALE 1/2" = 1'-0")

REV.	ITEM	PANEL	REVISIONS DESCRIPTION	AUTH'D DATE	REF.

SECTION "1BA"  
(SCALE 1/2" = 1'-0")



SECTION "1D"  
(SCALE 1/2" = 1'-0")



SECTION "1F"  
(SCALE 1/2" = 1'-0")

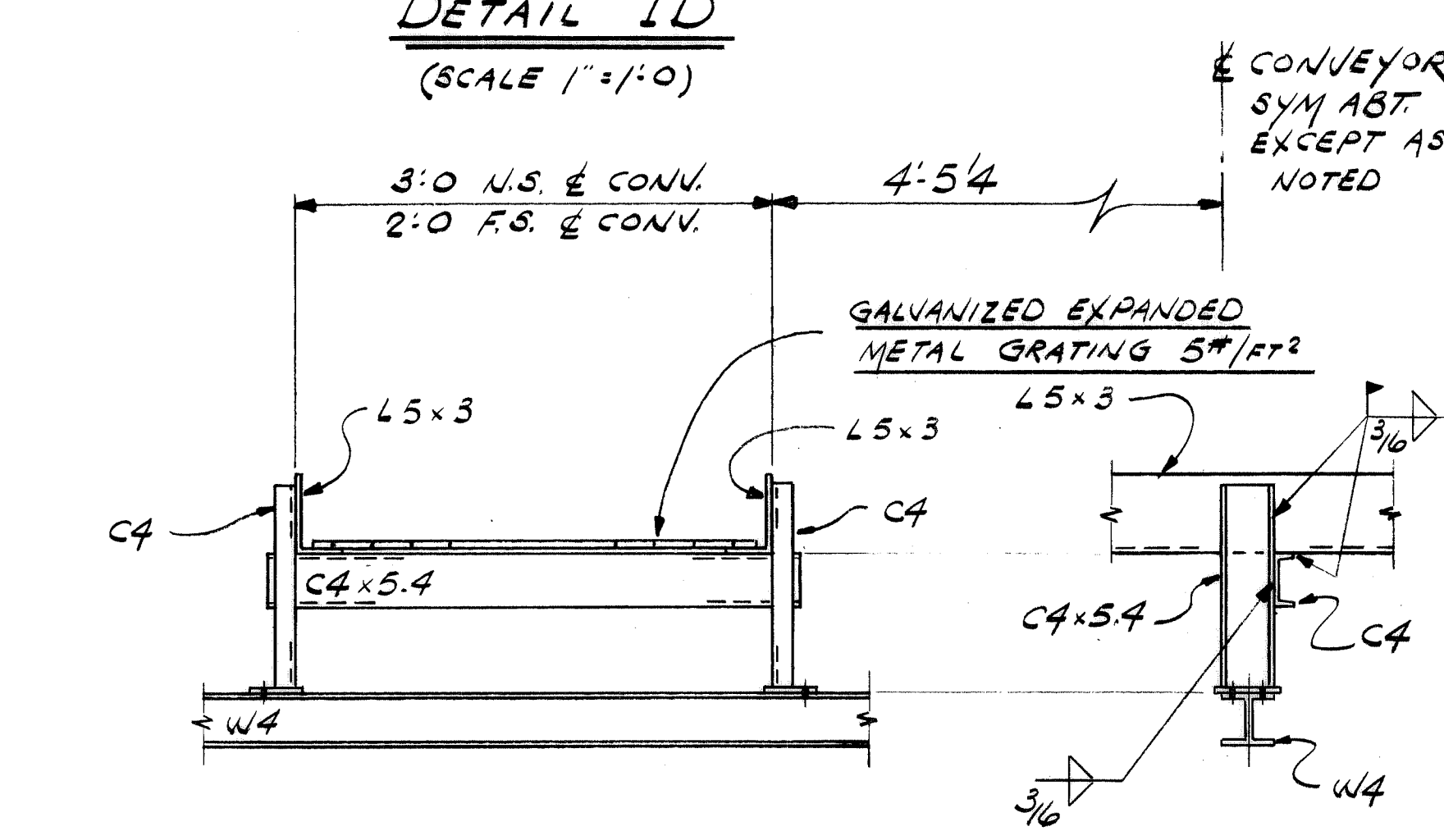
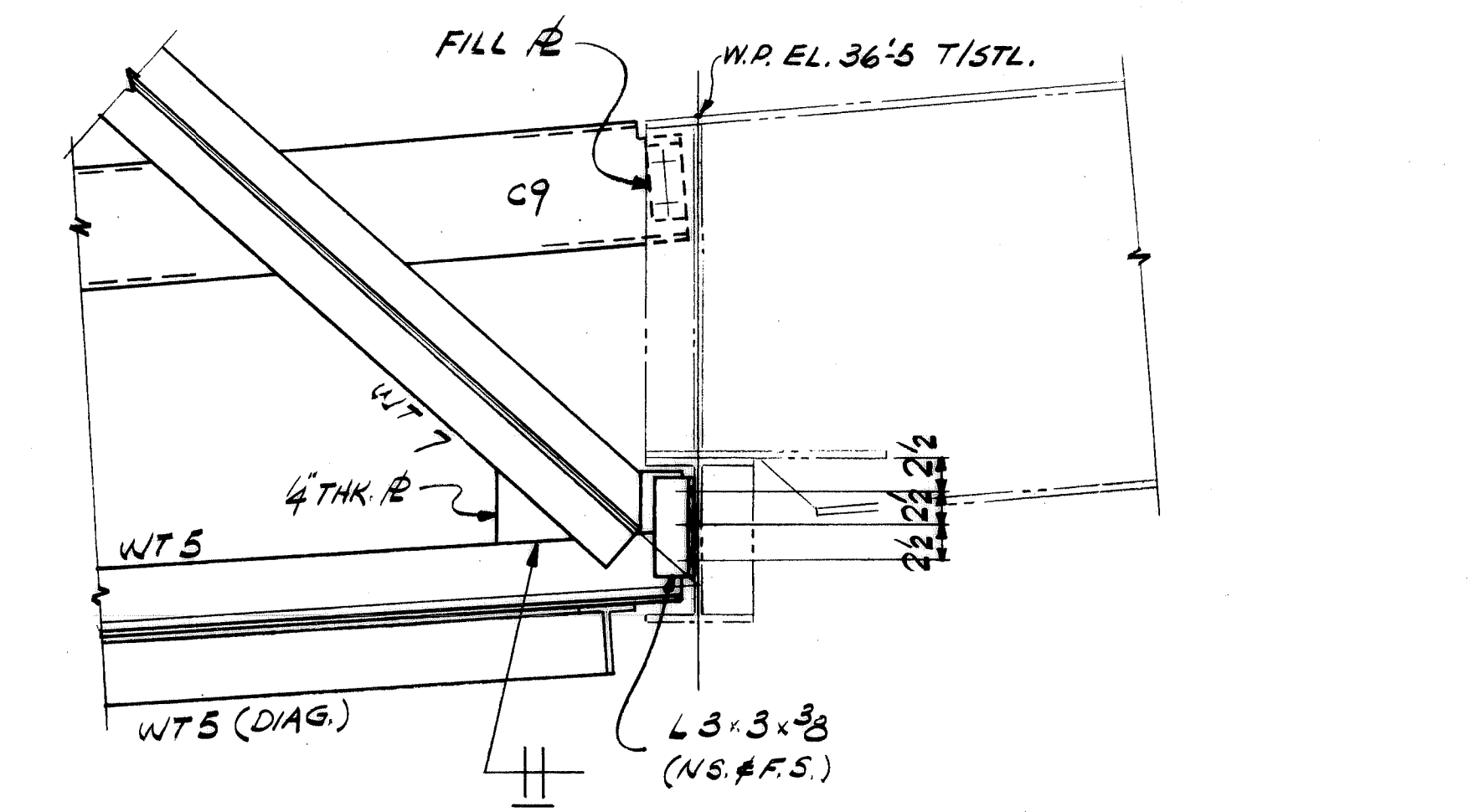
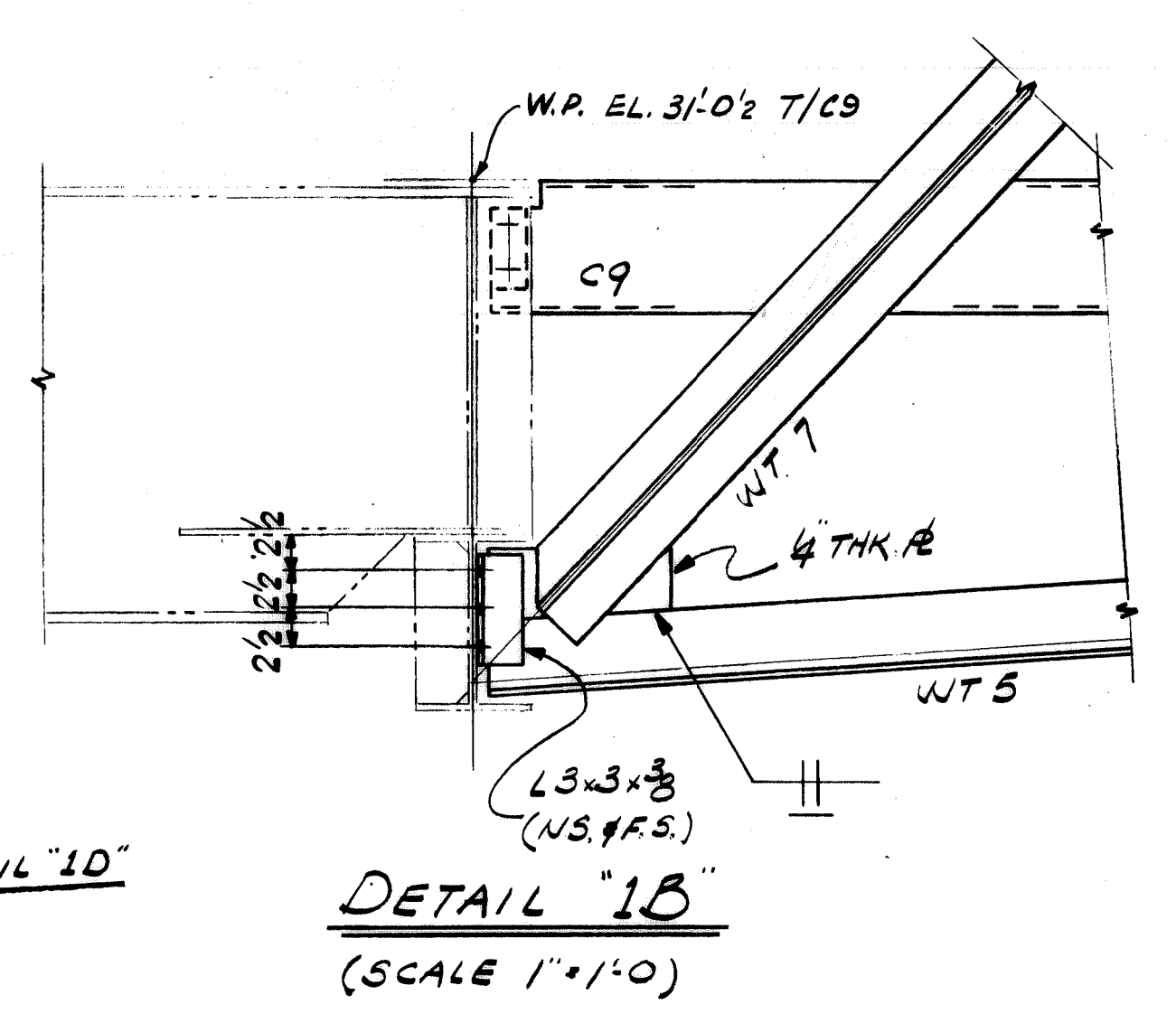
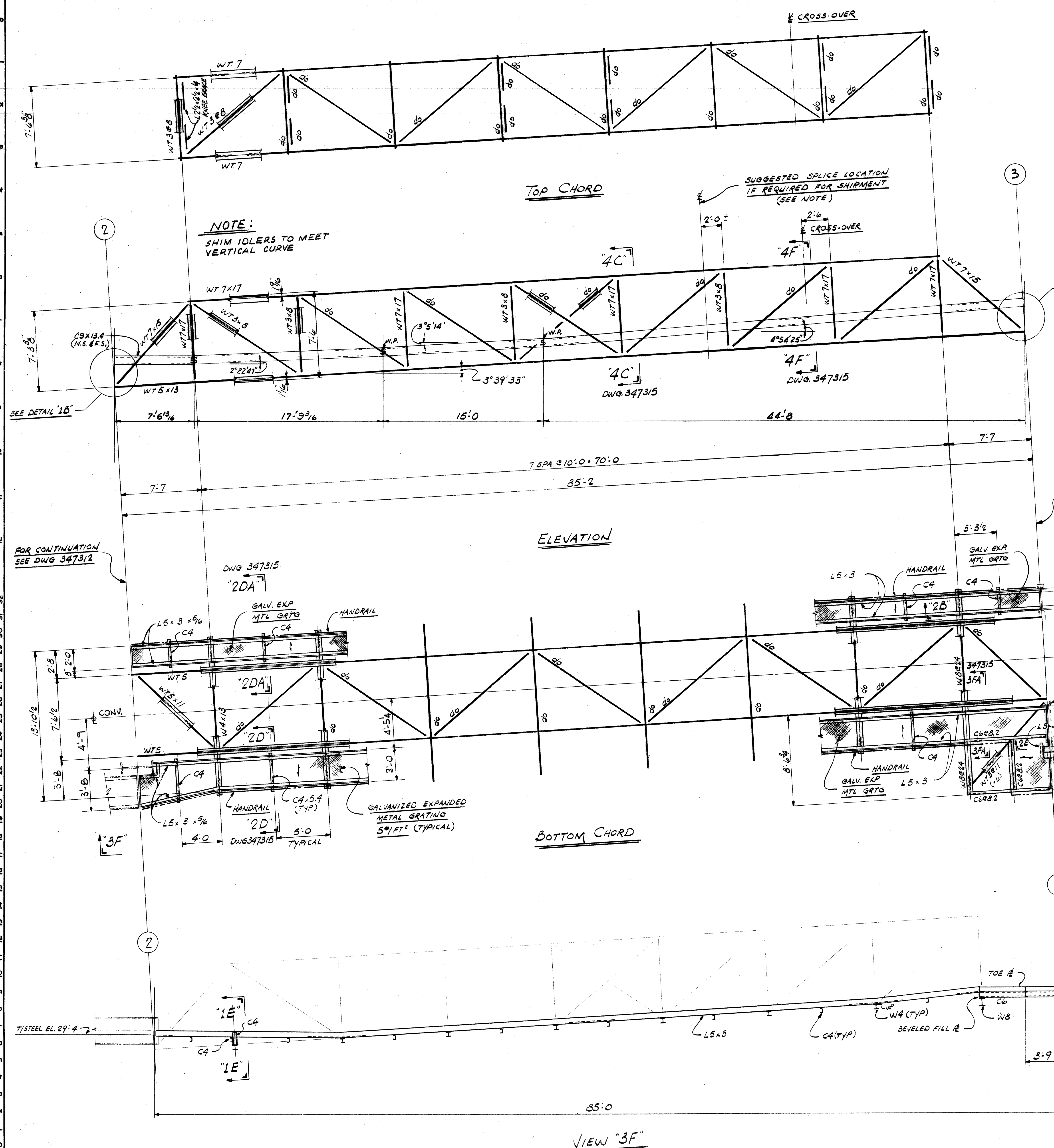
- NOTES:
1. WORK THIS DWG WITH DWGS 347315
  2. SEE PROFILE DWG (HOLD) FOR IDLER SPACING.
- WORK THIS DWG WITH DWGS 347313, 347315

CONTR. NO.	REFERENCE DWGS.	SHEET

1	WA139	DB L01
NO.	CONTRACT	DIST.
REQ'D	NO.	SHOP BILL NO.
CONTINUOUS BARGE UNLOADER		
DESIGN OF		
GATHERING CONVEYOR		
CASTELLATED MODULE II		
SCALE 1/2" = 1'-0" U.N.	APP'D <i>R.L. Wick</i>	
DR <i>R.L.</i>	DATE 4/21/80	
CHK <i>W.M.K.</i>		
		DRAWING NO.
DRAVO CORPORATION, PITTSBURGH, PA. DIV. ENGINEERING WORKS		<b>347314</b>



REV.	ITEM	DESCRIPTION	AUTH'D & DATE	REF.
1		REV. T/GRG. TO T/STL @ 29'-4"	5/6/80 RONNA	
2		ADD JOG IN WALKWAY @ COL. B-2	5/14/80 RONNA	



- NOTES:**
1. SHIPPING SPLICE MUST BE APPROVED BY ENGINEERING.
  2. WORK THIS DWG WITH DWGS 347312, 347314, 347315 & 347321
  3. SEE PROFILE DWG. 34B170 FOR IDLER SPACING.

WORK THIS DWG WITH DWGS 347312, 347314, 347315

NO. 1	DATE 4/1/89	BY DB L O U
CONTRACT NO.	SHOP BILL NO.	DIST.
<b>CONTINUOUS BARGE UNLOADER DESIGN OF GATHERING CONVEYOR TRUSS MODULE</b>		
SCALE 1/2"=1'-0", U.N.	APP'D <i>[Signature]</i>	
DR. <i>[Signature]</i>	DATE 4/21/80	
CHK. RONNA	4-16-80	

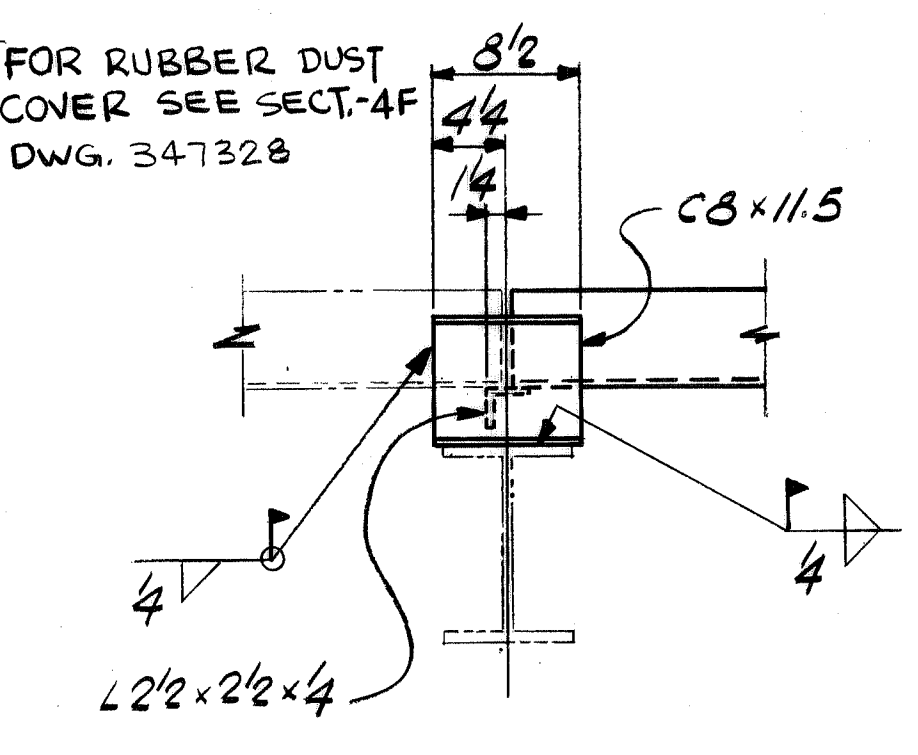
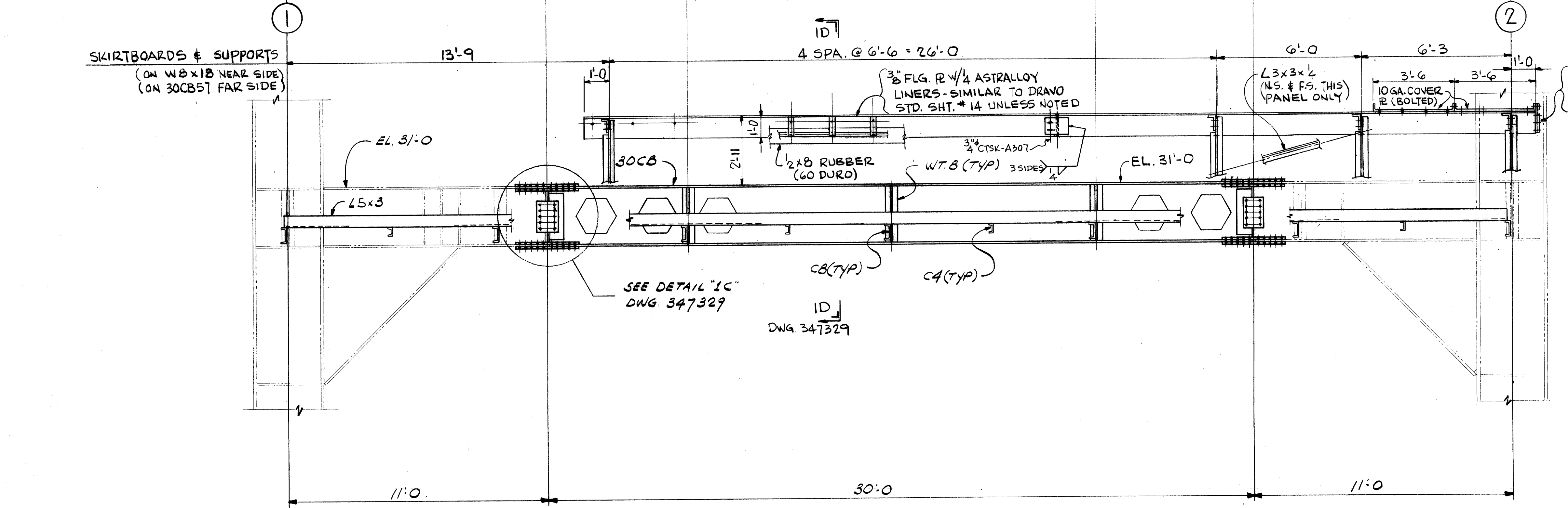
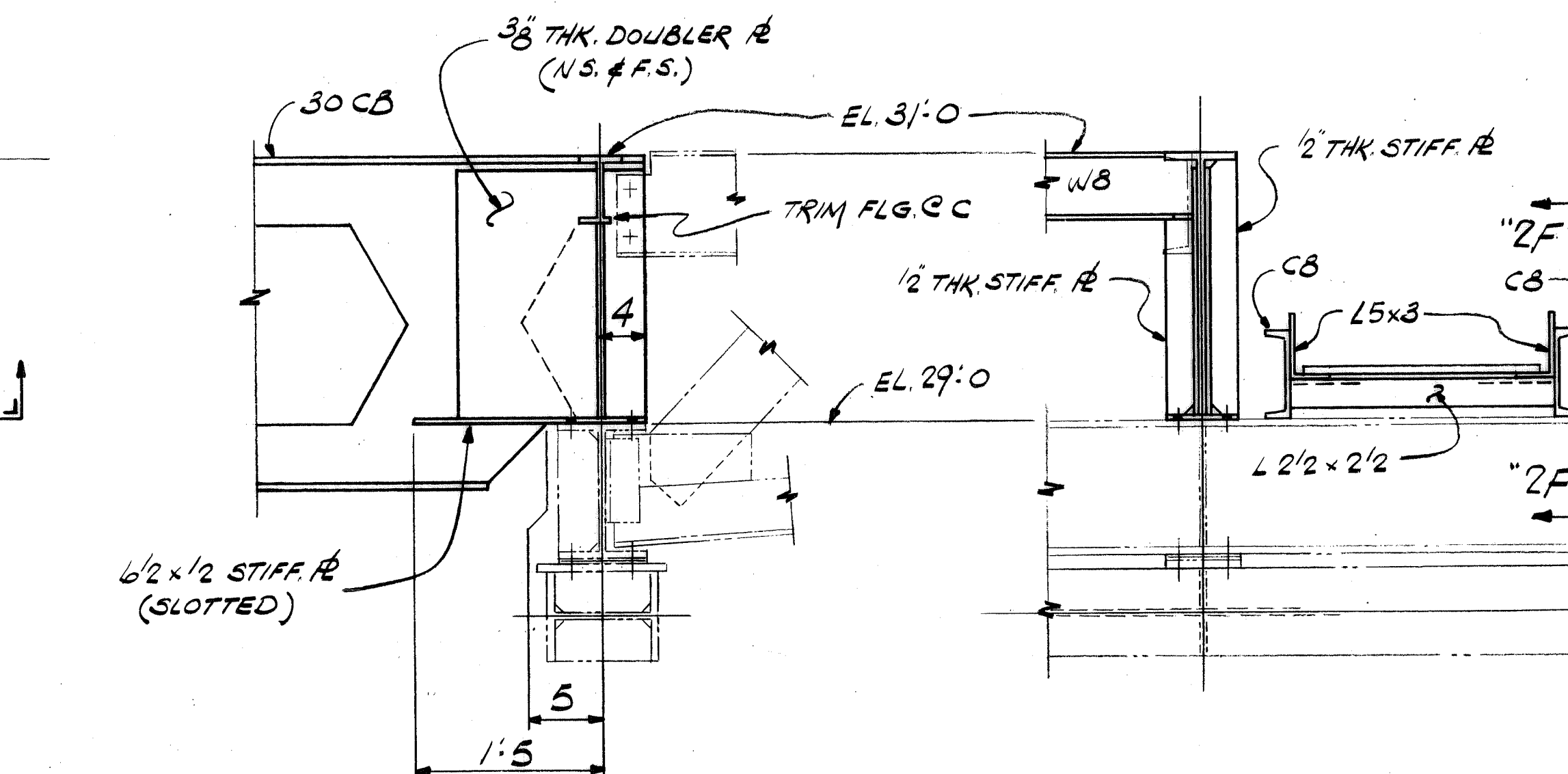
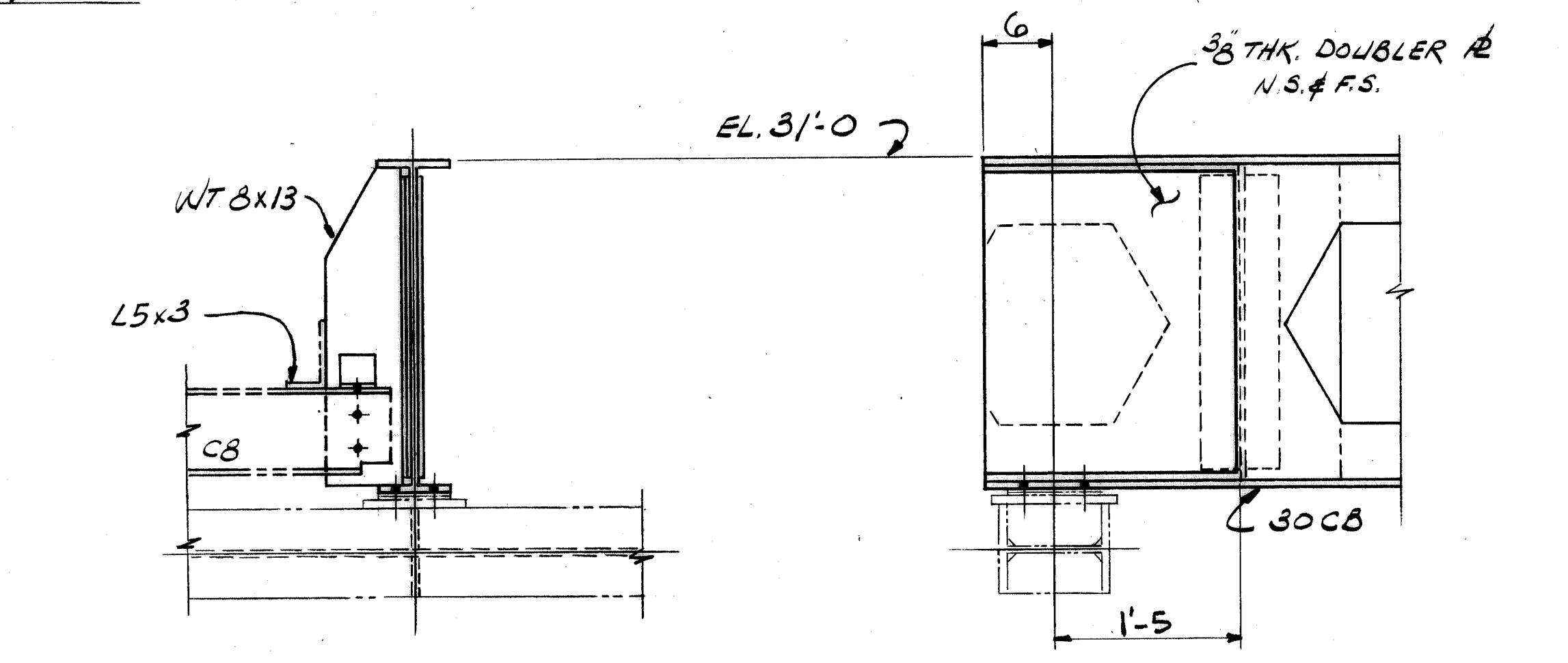
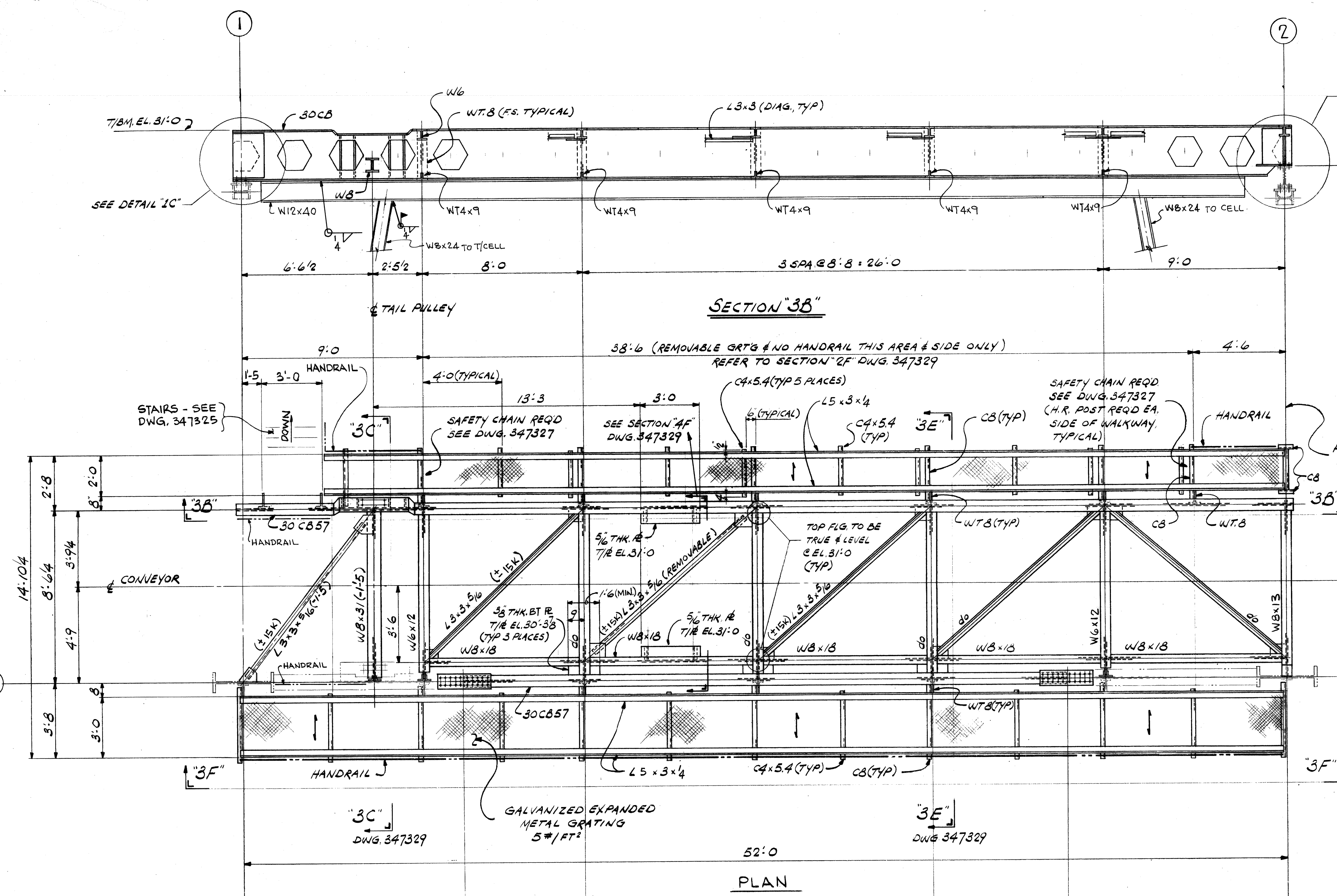
DRAWING NO. **347313** SHEET 2

DRAGO CORPORATION, PITTSBURGH, PA. DIV. ENGINEERING WORKS

CONTR. NO.	REFERENCE DWGS.	SHEET
0	1	2
1	3	4
2	5	6
3	7	8
4	9	
5		



REV.	ITEM	DESCRIPTION	DATE	REF.
1		NOTED FOR AS-BUILT	7/10/81	R0000A



NOTES:  
 1. FOR GENERAL NOTES SEE DWG. 347307  
 2. SEE CONVEYOR PROFILE DWG. 348170 FOR IDLER SPACING, GAGE & HOLE SIZE

WORK THIS DWG WITH 347313, 347329

CONTR. NO.	REFERENCE DWGS.	SHEET
0	1 2 3 4 5 6 7 8 9	1

NO. 4139  
 CONTRACT NO. SHOP BILL NO. D.B. LOU  
 REG'D. NO. 0/37

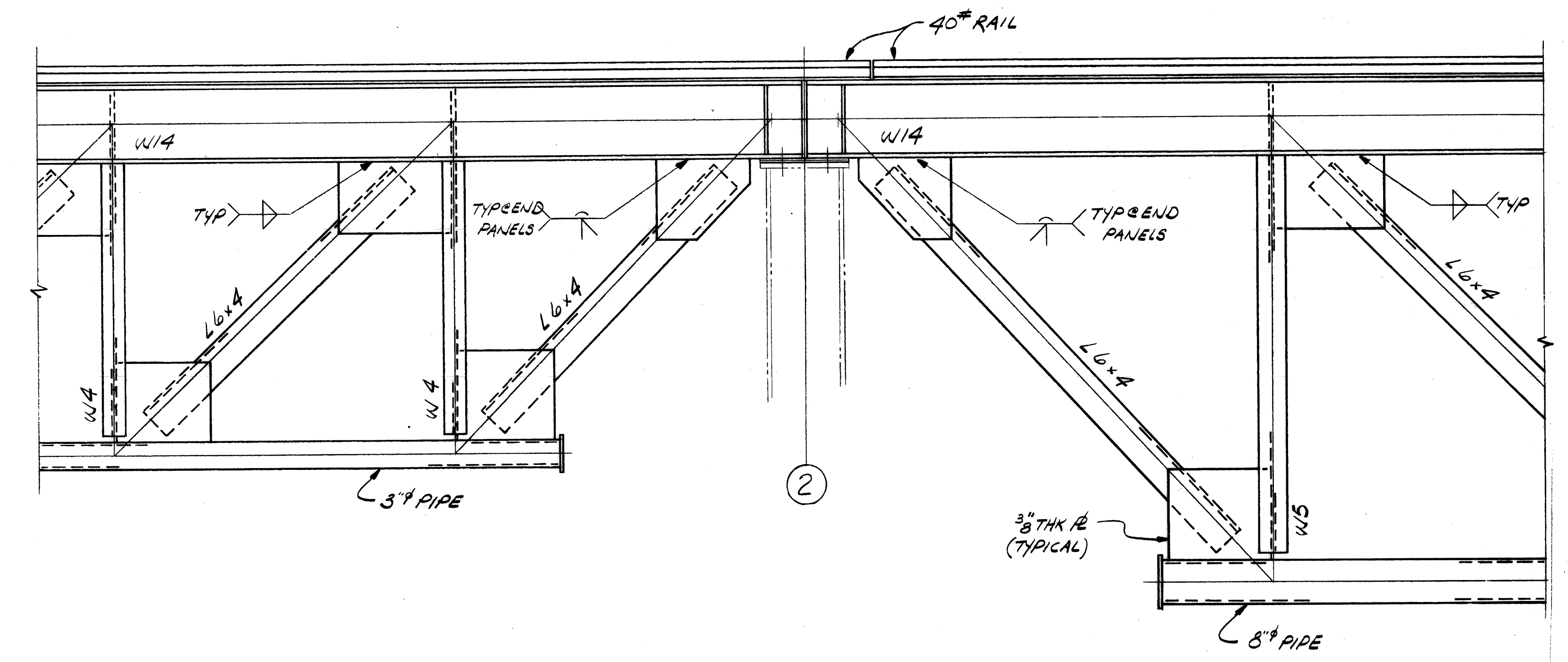
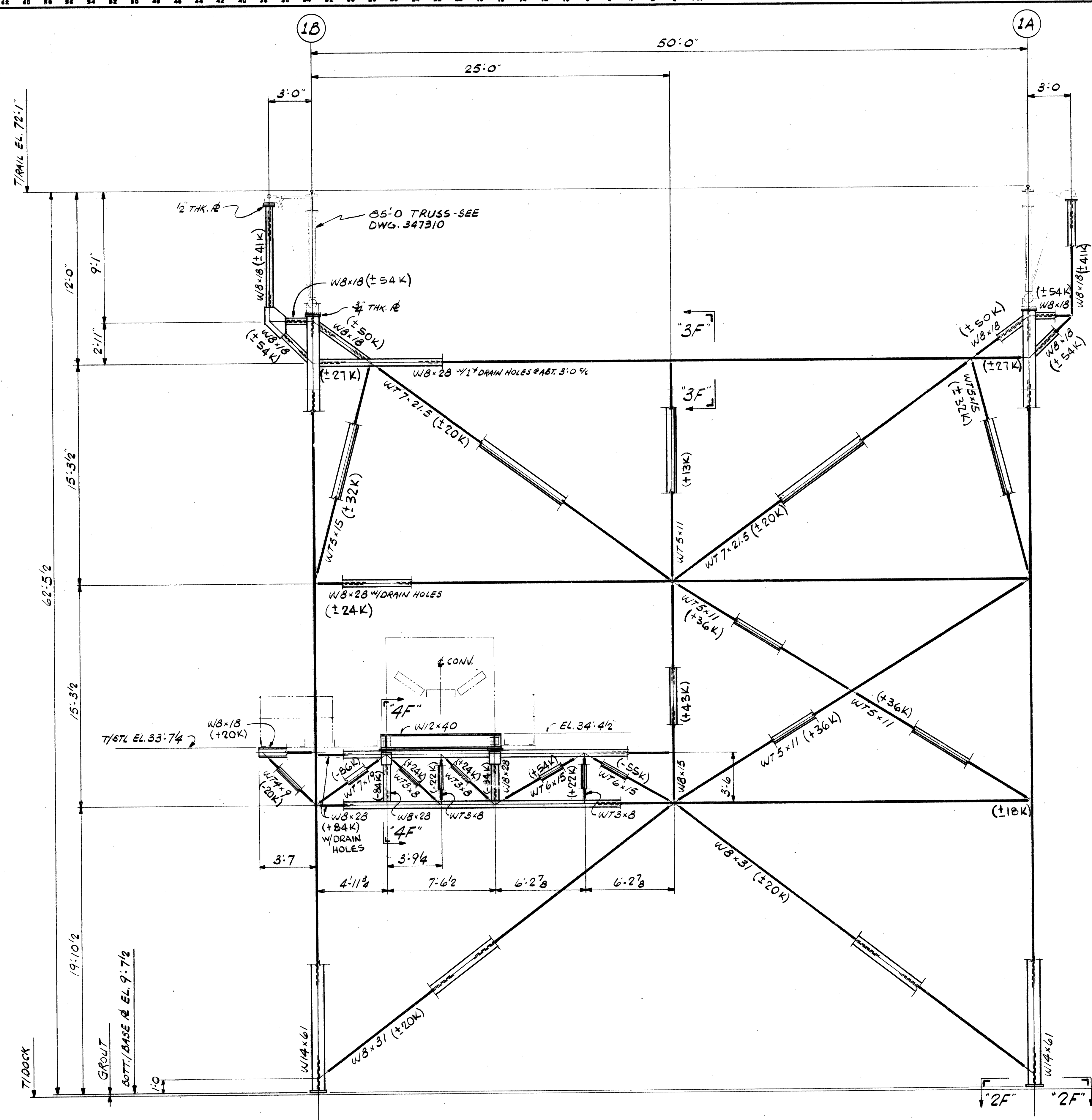
**CONTINUOUS BARGE UNLOADER  
 DESIGN OF  
 GATHERING CONVEYOR  
 CASTELLATED MODULE I**

SCALE 3/8"=1'-0" U.N. APP'D *Ed. Wick*  
 DR. *Ed. Wick* 28,780  
 CHK. *R0000A* 4-16-80 DATE 4/21/80

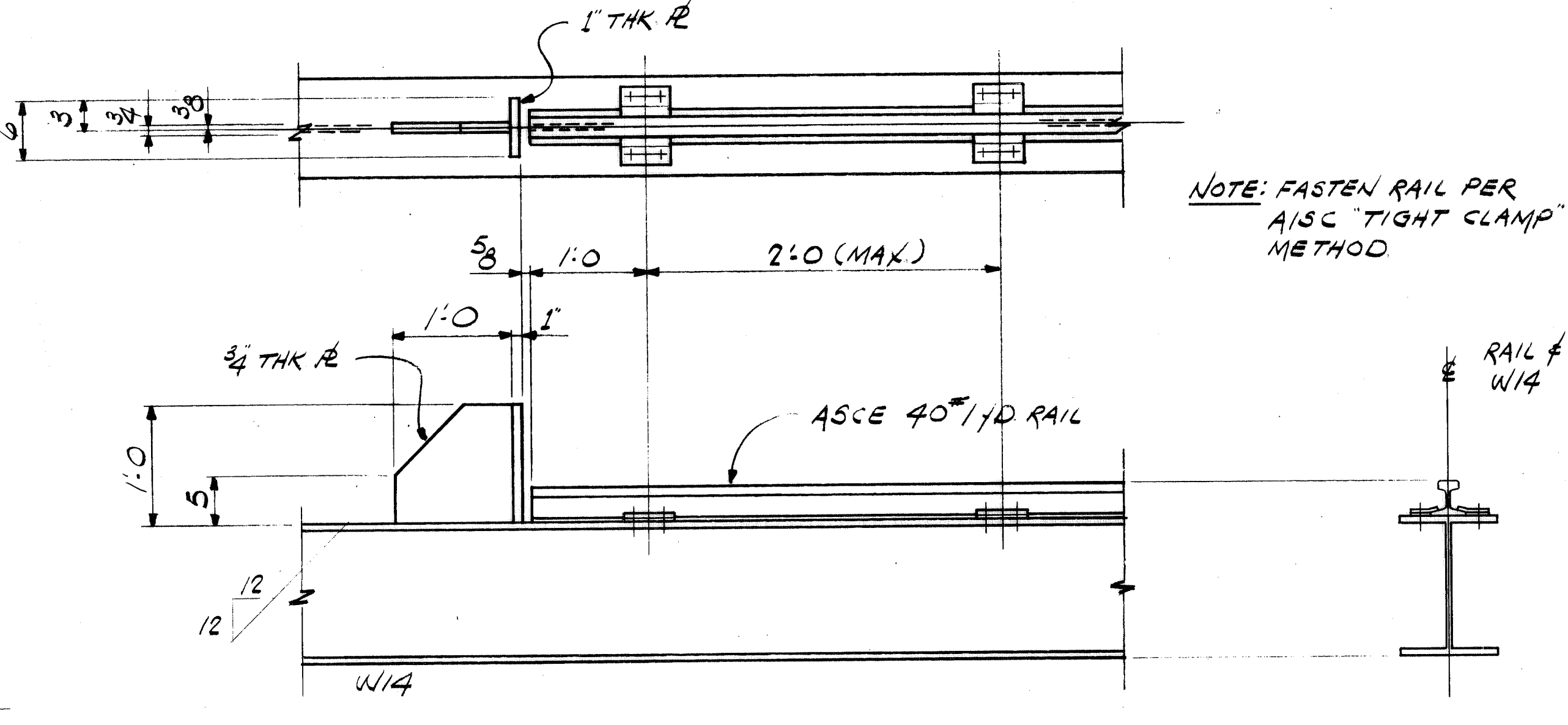
**Dravo** DRAWING NO. 347312 REV. 1  
 DRavo CORPORATION, PITTSBURGH, PA. DIV. ENGINEERING WORKS



REVISIONS			AUTH'D	REF.
REV.	ITEM	DESCRIPTION	DATE	



DETAIL "1C"  
(SCALE 1"=1'-0")  
REF DWG 347309 & 347310

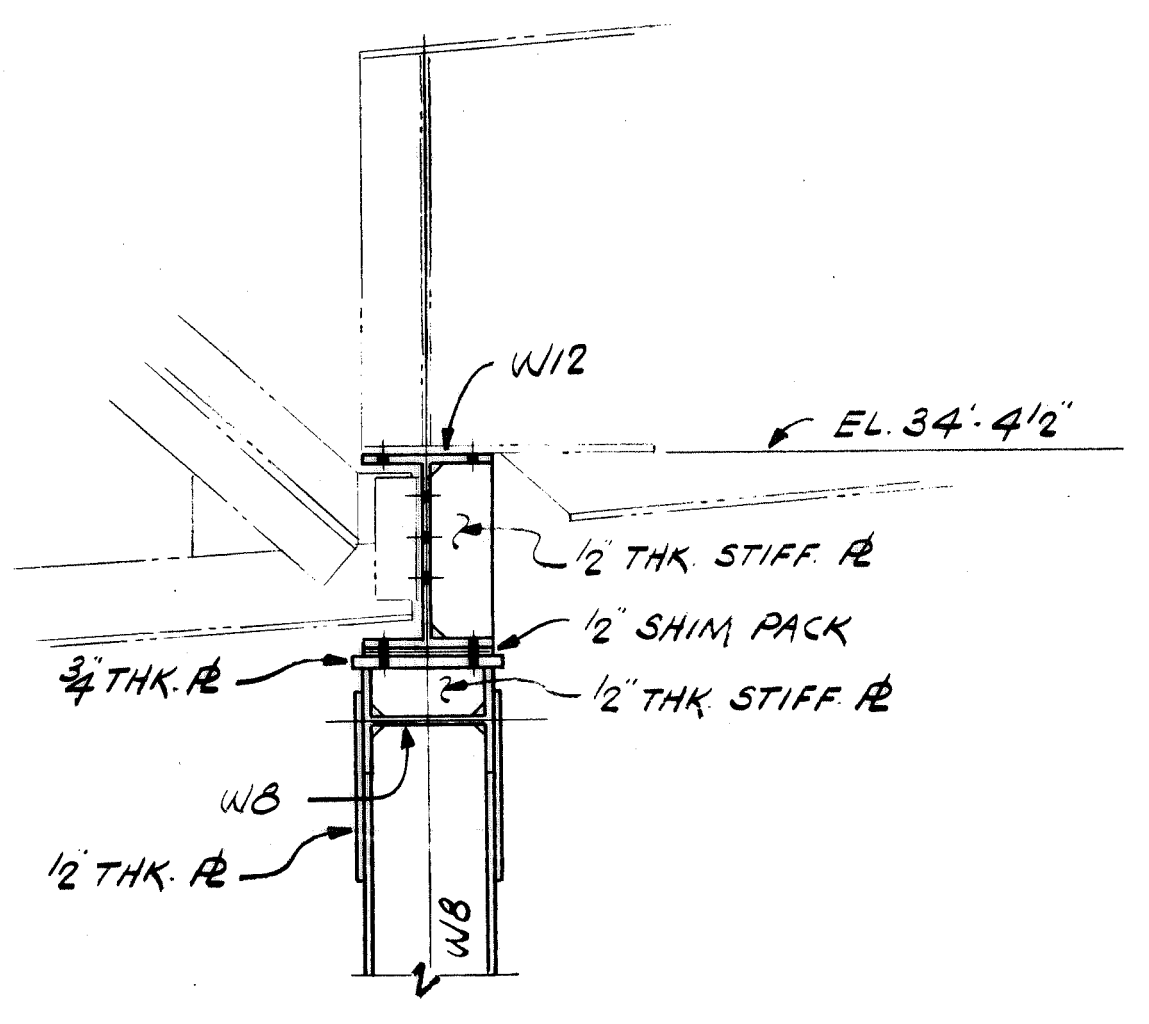


DETAIL "2E" (AS SHOWN)  
REF DWG 347309

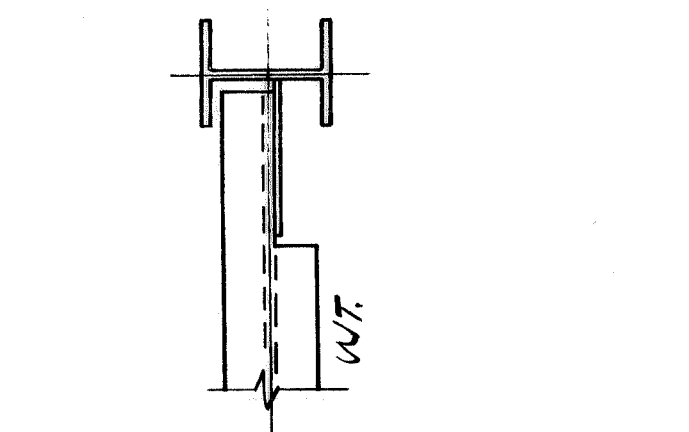
DETAIL "2EA" (OPP HAND)  
REF DWG 347310  
(SCALE 1"=1'-0")

NOTES:  
1. FOR GENERAL NOTES SEE DWG 347307

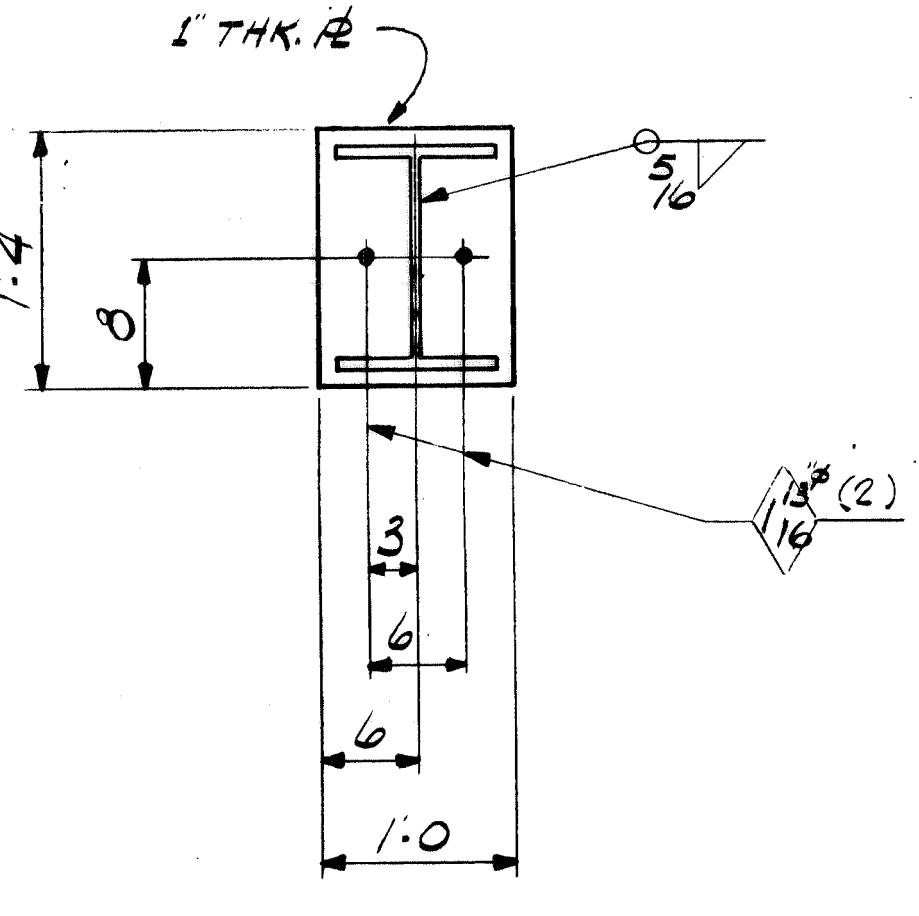
BENT ELEVATION  
COLUMN LINE (3)



SECTION "4F"  
(SCALE 1"=1'-0")



SECTION "3F"  
(SCALE 1"=1'-0")



SECTION "2F"  
(SCALE 1"=1'-0")

CONTR. NO.	REFERENCE DWGS.	SHEET

WORK THIS DWG WITH DWGS 347309, 347310

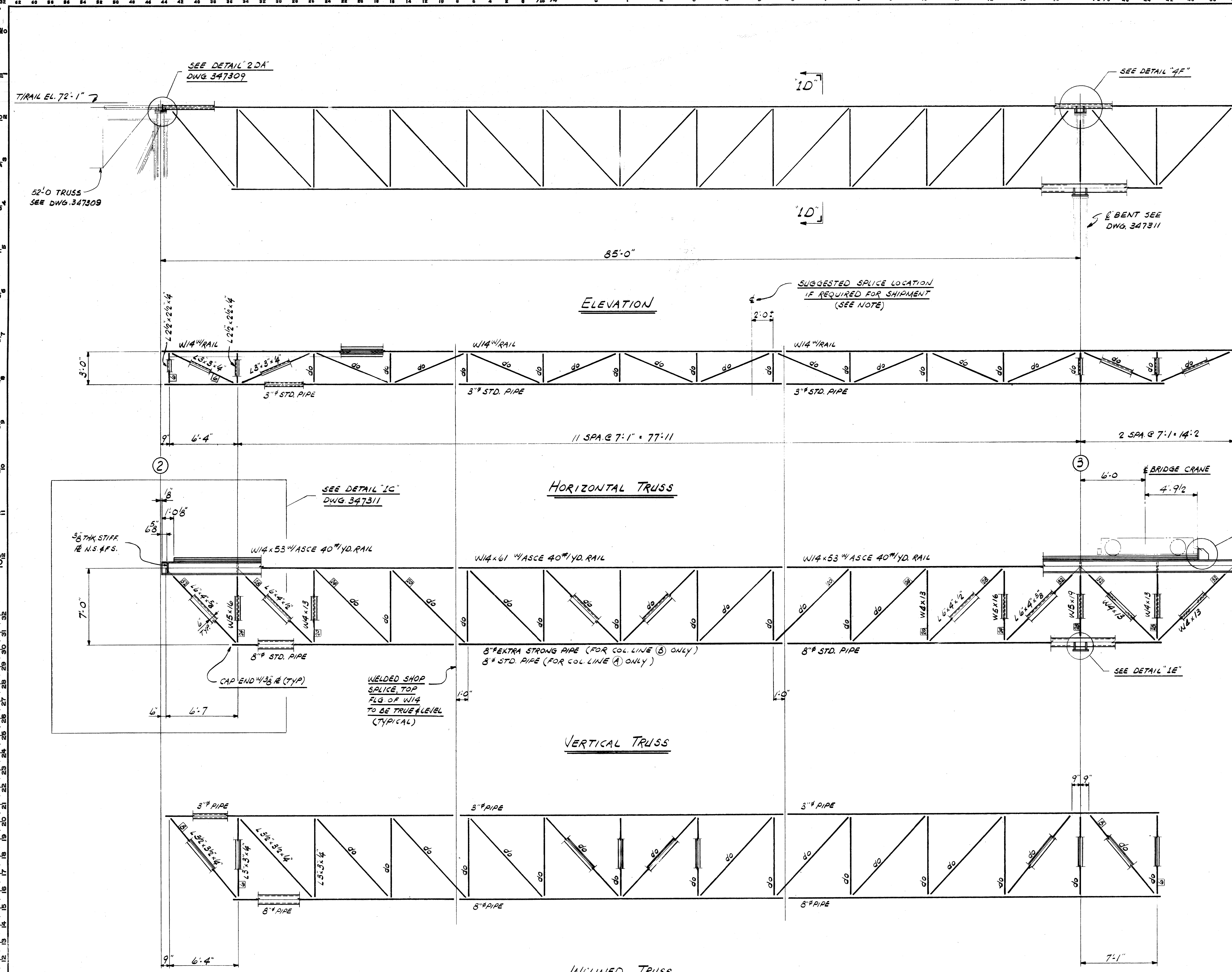
NO. 1	CONTRACT NO. W4139	SHOP BILL NO.	DB LOU
REG'D			DIST.

CONTINUOUS BARGE UNLOADER  
DESIGN OF  
LANDSIDE BENT

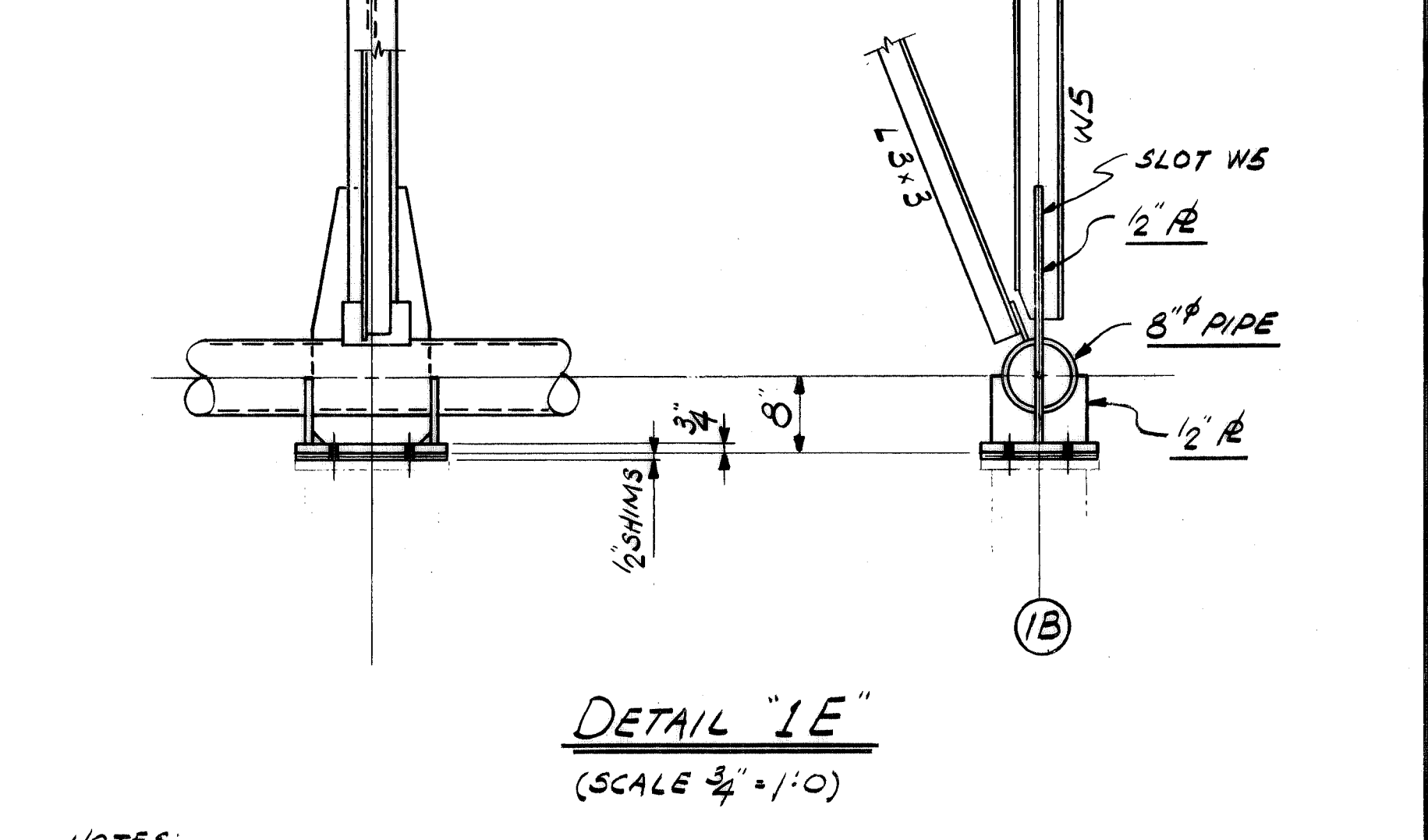
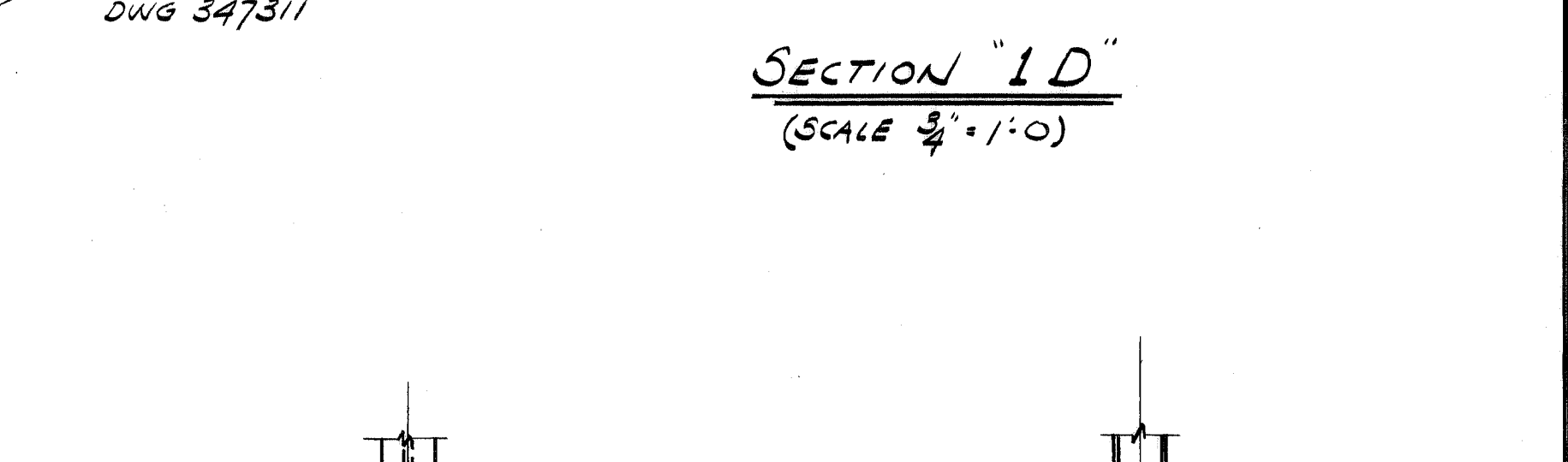
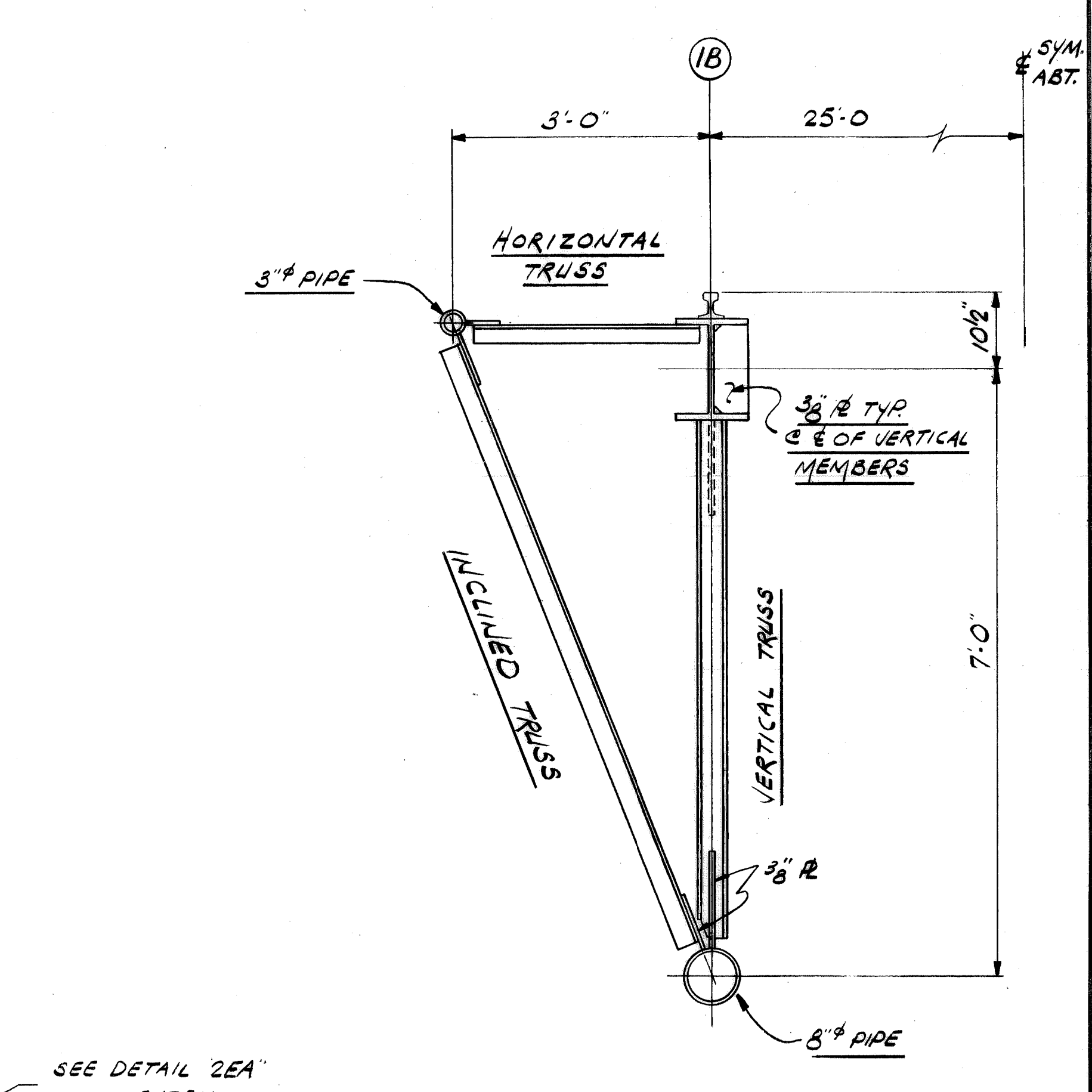
SCALE 1/4"=1'-0", U.N. APP'D *L. Wick*  
DR. FIX. DATE 4/21/80  
CHK. R. J. W. 4-16-80 DATE 4/21/80

**Dravo** ENGINEERING WORKS  
DRAWING NO. 347311 REV. 0

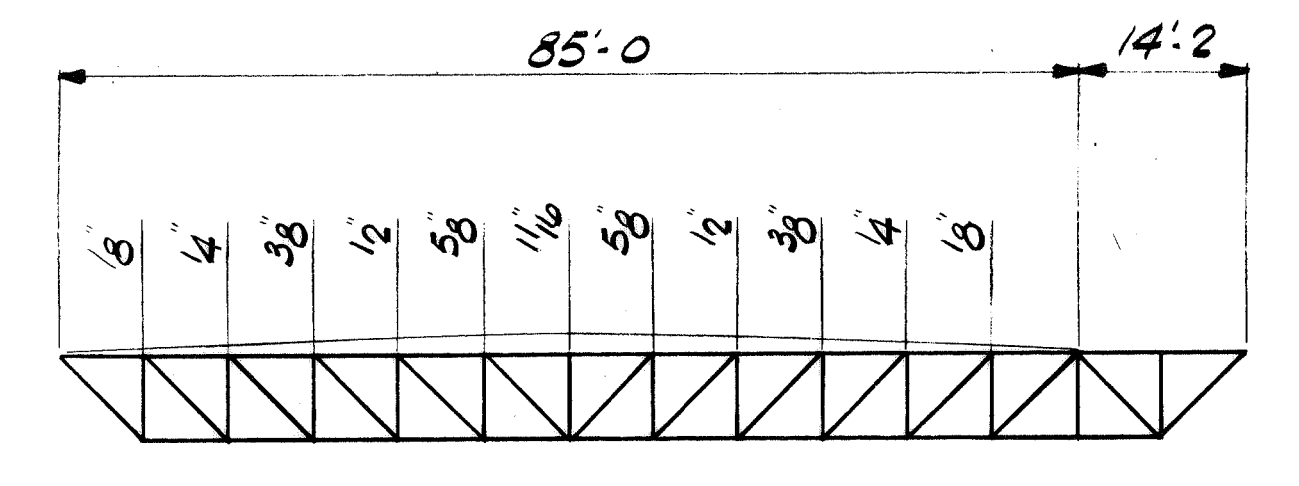




REV.	ITEM	PANEL	REVISIONS	DESCRIPTION	AUTH'D	DATE	REF.



**NOTES:**  
 1. FOR GENERAL NOTES SEE DWG 347307  
 2. FOR CRANE RAIL AND PIPE NOTES SEE NOTE #2 & #3 ON DWG 347309.  
 3. SHIPPING SPLICE MUST BE APPROVED BY ENGINEERING.  
 4. NUMERALS IN □ INDICATE MINIMUM LENGTH OF 1/4 FILLET WELD REQUIRED AT EACH END OF THE MEMBER.  
 WORK THIS DWG. WITH DWG'S 347309, 347311



CONTR. NO.	REFERENCE DWGS.	SHEET

NO.	CONTRACT NO.	SHOP BILL NO.	DB L O U

CONTINUOUS BARGE UNLOADER	
DESIGN OF	
BRIDGE CRANE TRUSS - 85'-0	
SCALE 4"=1'-0, U.N.	APP'D <i>J.R. Wick</i>
DR <i>F.P.</i>	DATE 4/21/80
CHK <i>RONKA</i>	

DRAWING NO.	REV.
347310	0

Dravo Corporation, Pittsburgh, Pa. DIV ENGINEERING WORKS

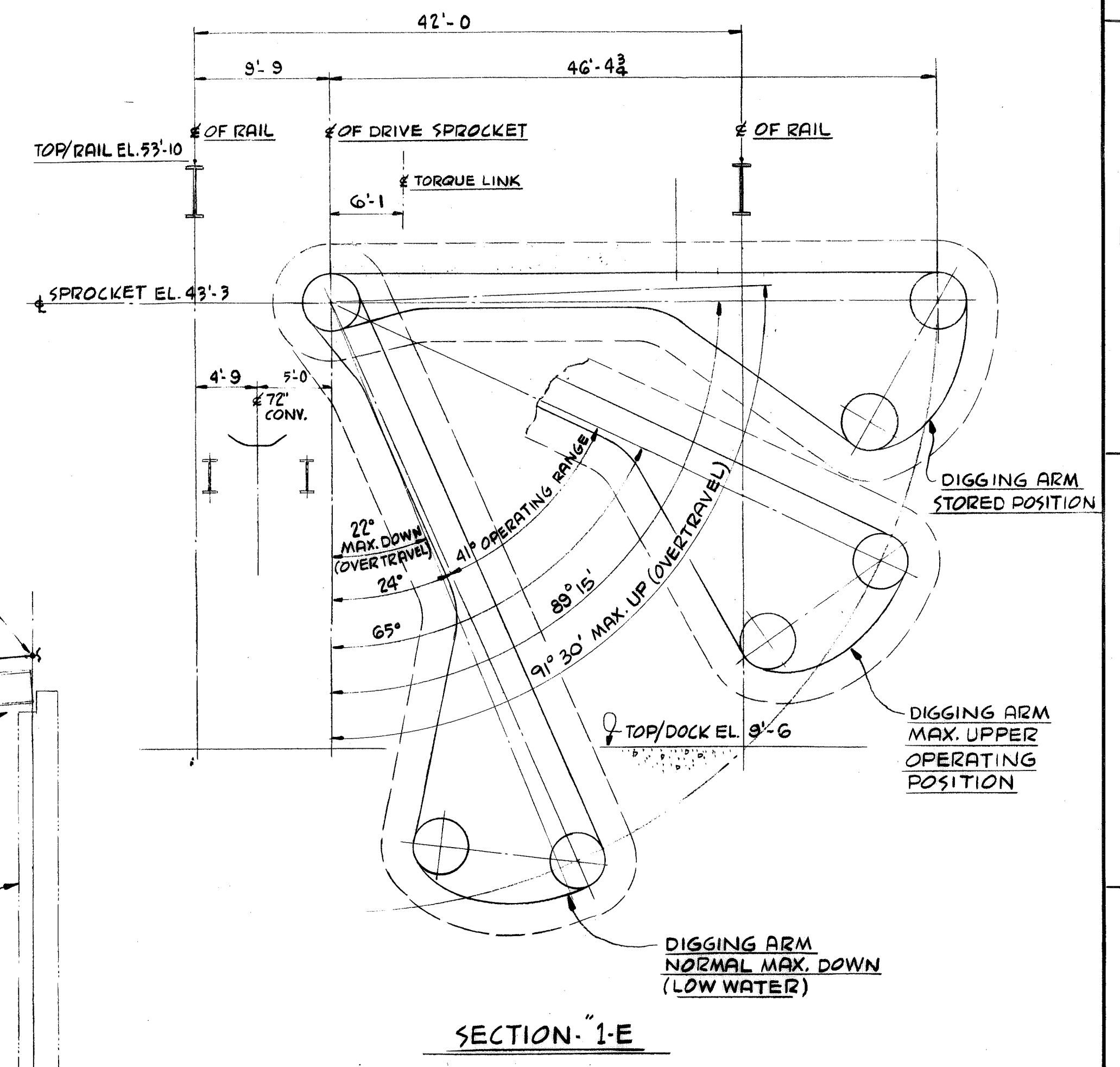
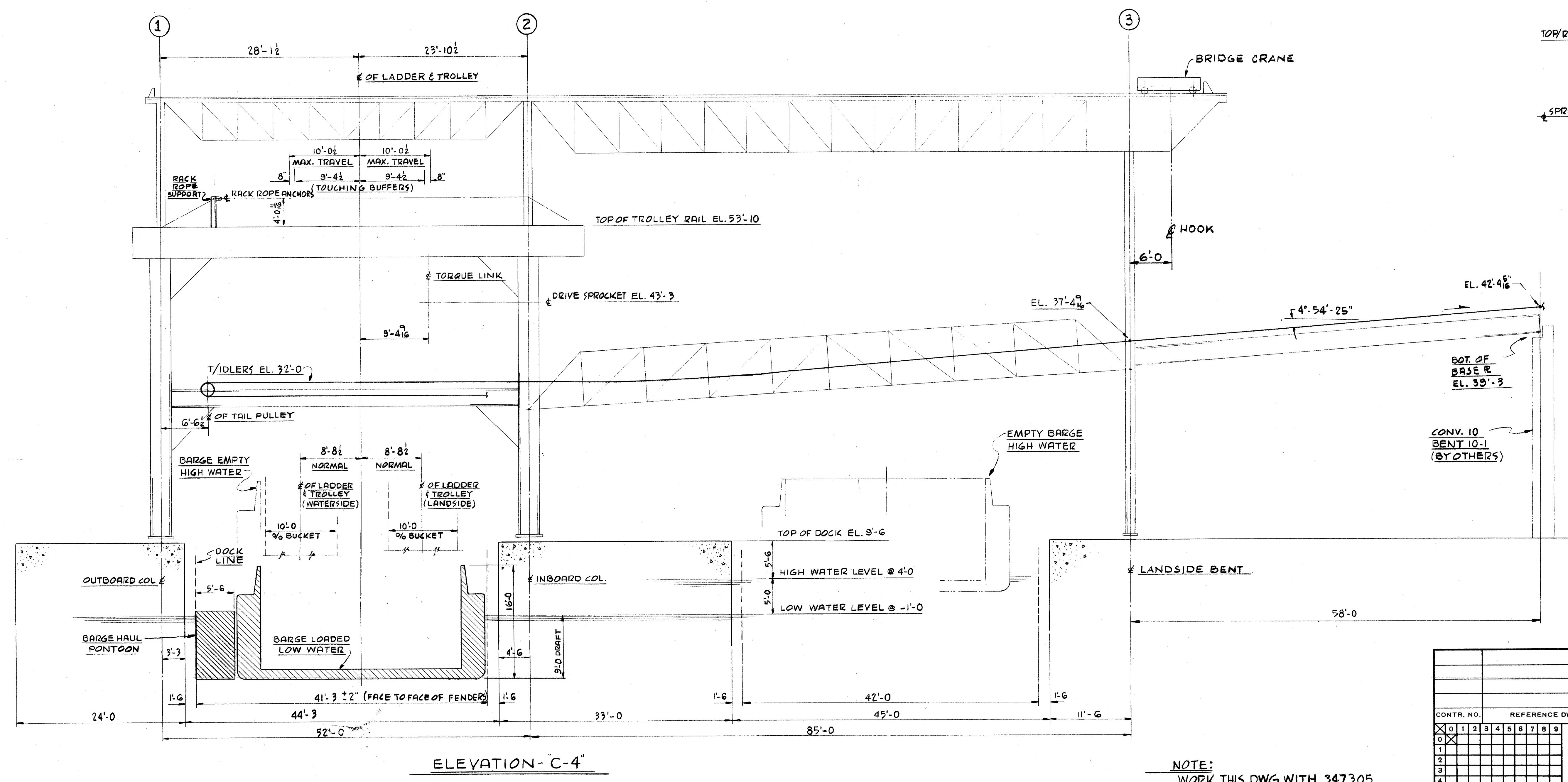
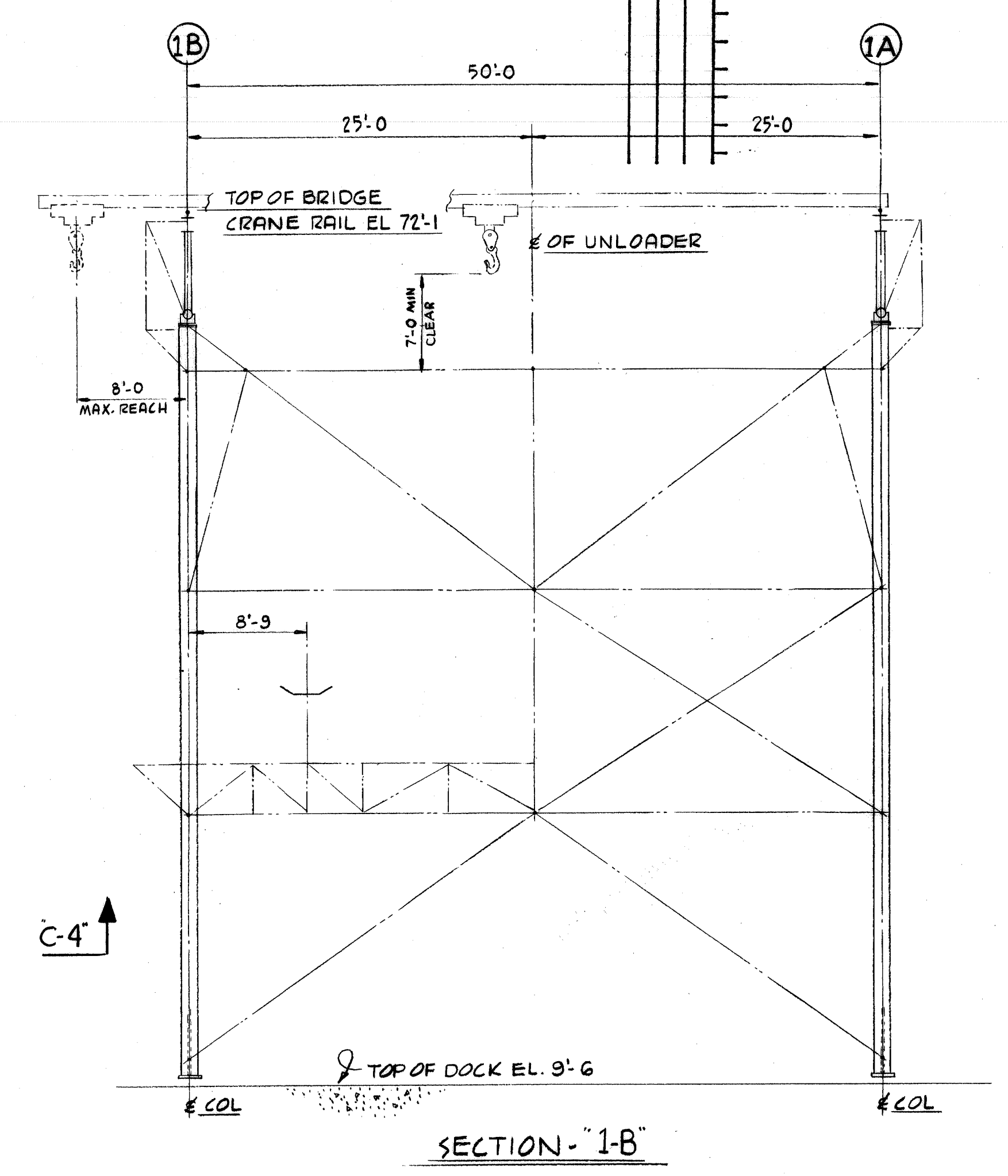
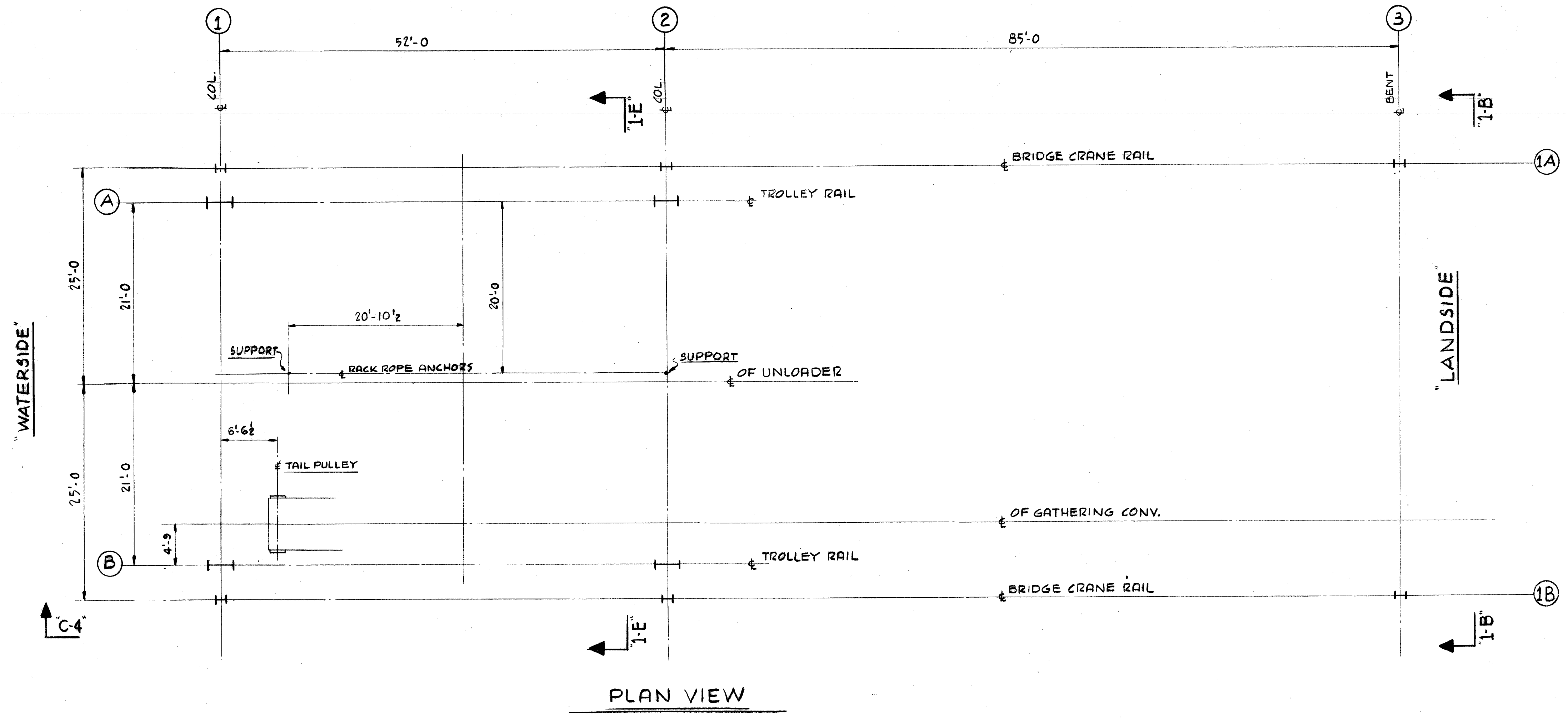
100  
90  
80  
70  
60  
50  
40  
30  
20  
10  
0







REV.	ITEM	DESCRIPTION	DATE	REF.
1		REMOVED HOLDS & UPDATED BELT CURVE AS PER LOST INFO.	4/12/80	



CONTR. NO.	REFERENCE DWGS.	SHEET
0		1
1		2
2		3
3		4
4		5
5		6

W-4139  
 CONTRACT NO. SHOP BILL NO. A-U-L-0  
**CONTINUOUS BARGE UNLOADER**  
 5000 TPH - COAL  
**ALABAMA STATE DOCKS**  
 CONTROL DIMENSIONS  
 SCALE 1/8" = 1'-0"  
 DR KOHLBERG JAN 17, 1980  
 CHK F/R MAR 20, 1980  
 APP'D [Signature] 3/21/80  
 DATE [Signature] 3/20/80  
**Dravo**  
 DRAWING NO. REV. 347308 1  
 DRACO CORPORATION, PITTSBURGH, PA. DIV EWD

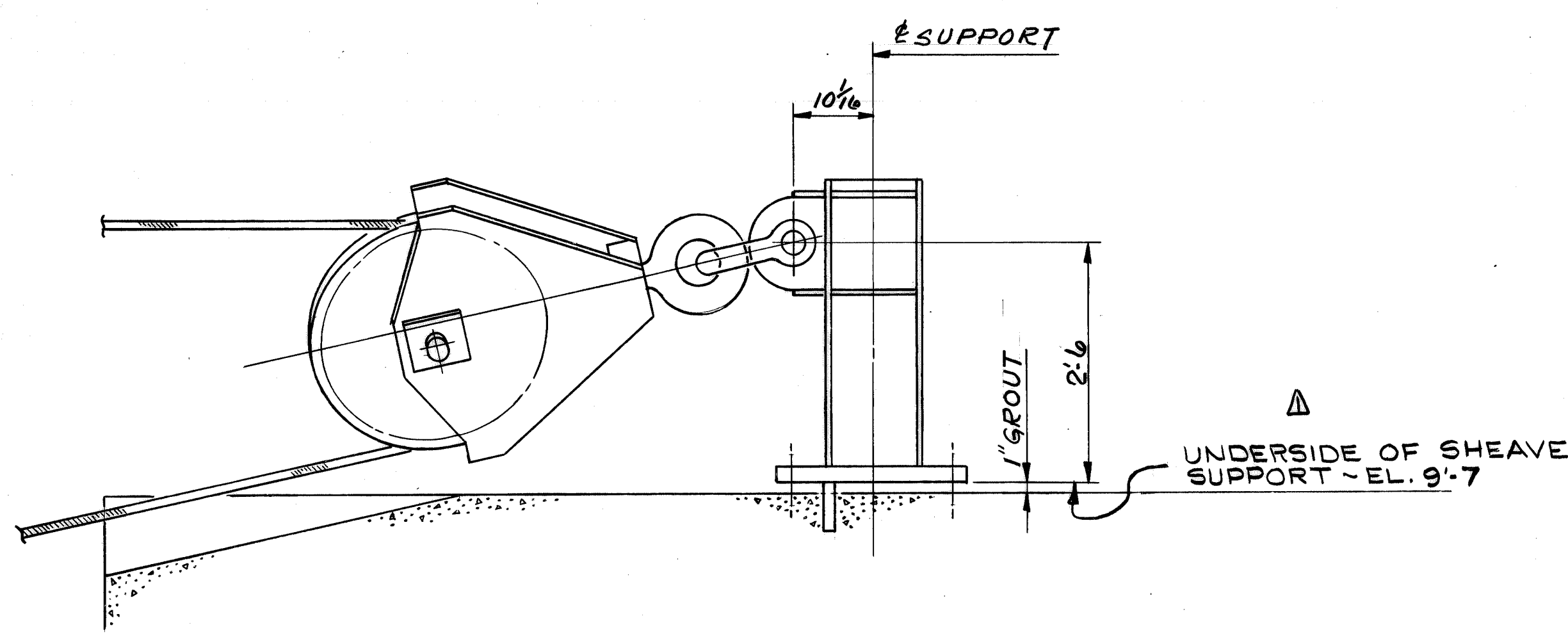
NOTE:  
WORK THIS DWG WITH 347305



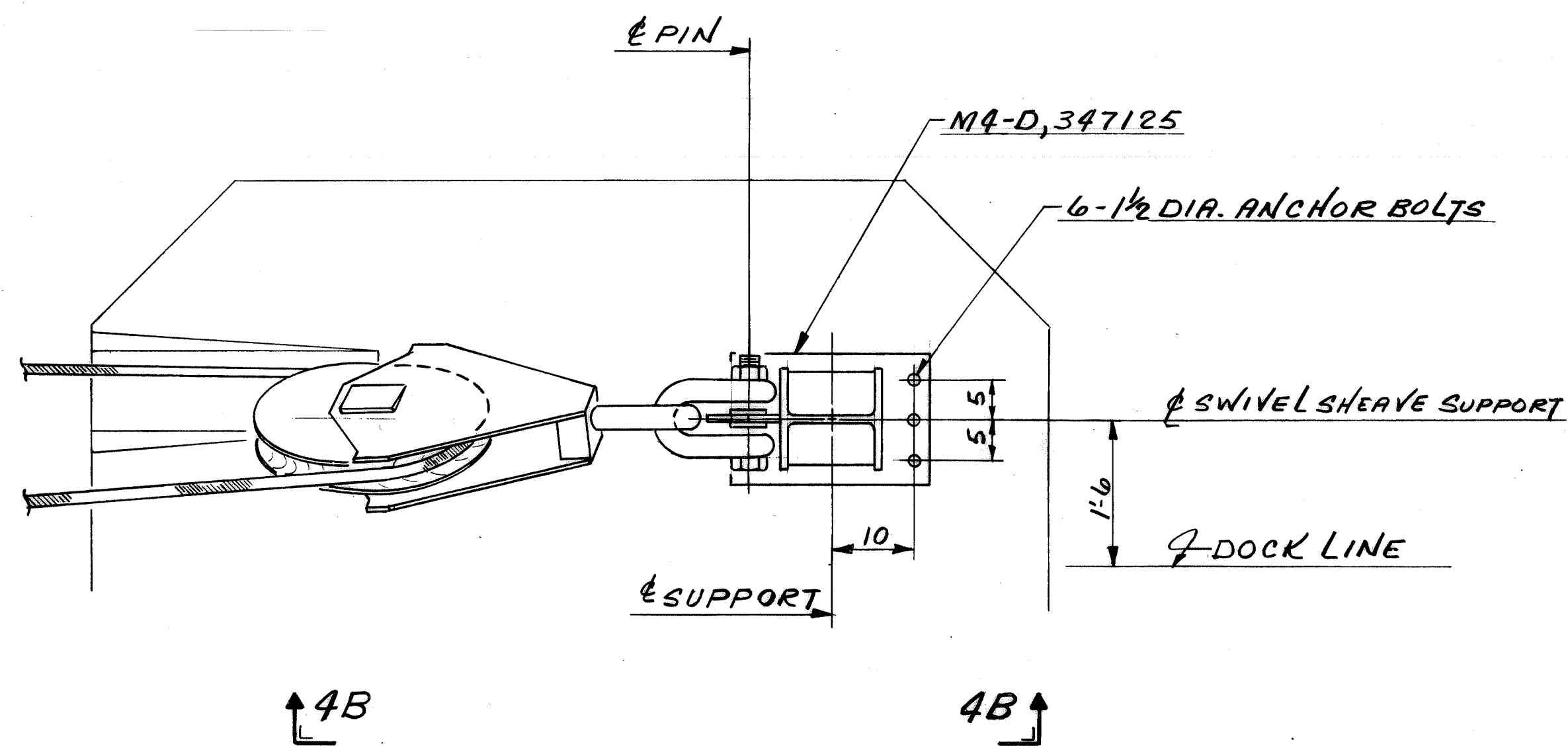




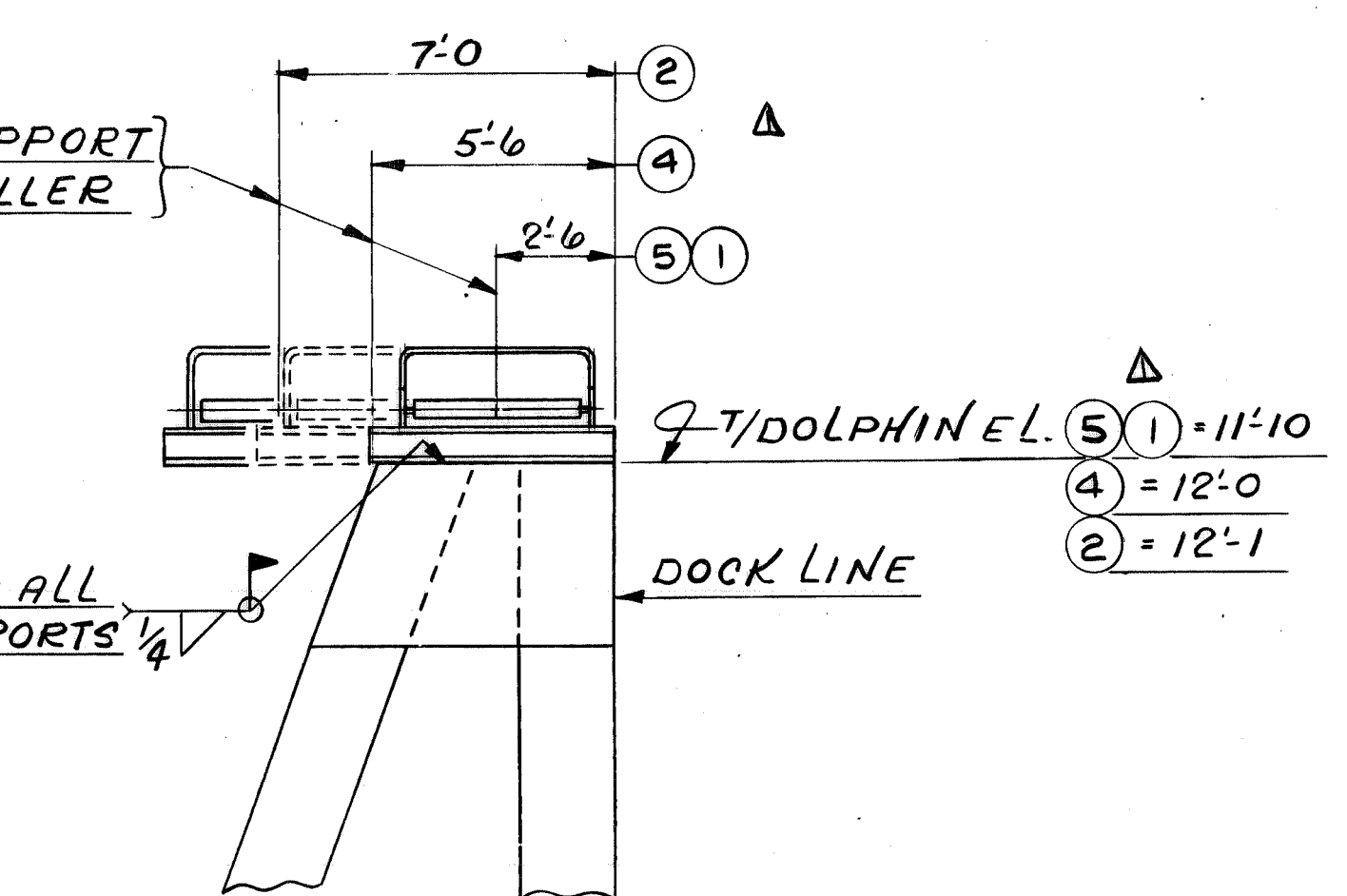
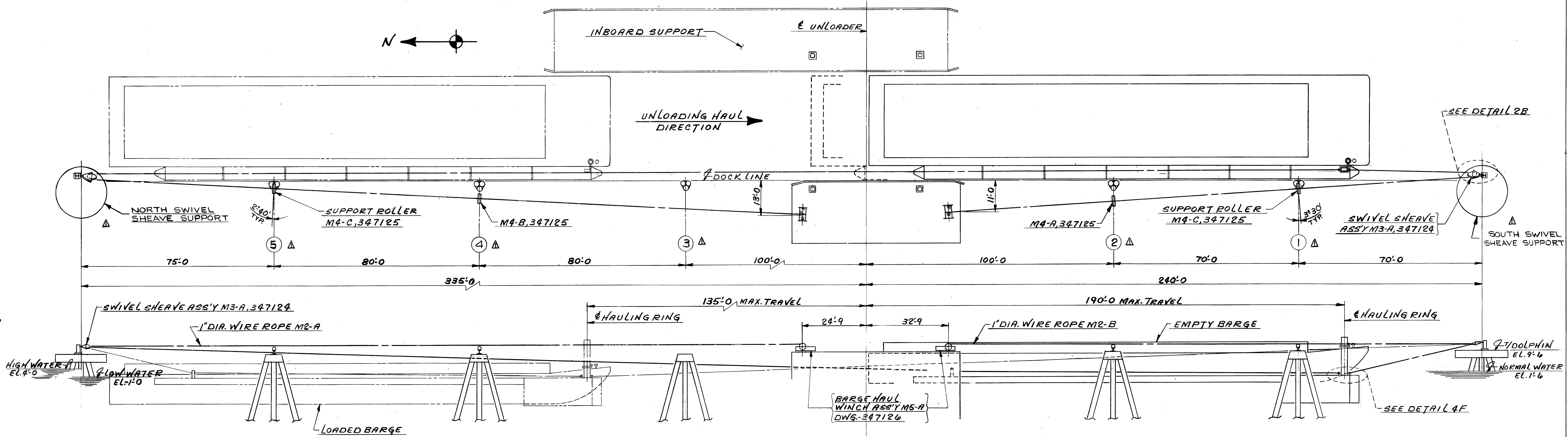
NO.	QTY.	DESCRIPTION	SECTION	Length		Drawing No.	Mat'l.
				FE.	INCH.		
1		WIRE ROPE 1" DIA.				M2-A 347306	-
2		6x19 IPS ~ 1 WRC x 900' OLG.					
1		WIRE ROPE 1" DIA.				M2-B 347306	-
2		6x19 IPS ~ 1 WRC x 650' OLG.					
2		CROSBY-LAUGHLIN OPEN WEDGE SOCKET-S421 FOR 1" DIA. WIRE ROPE				M2-C 347306	CAST STL.
2		CROSBY-LAUGHLIN WIRE ROPE CLIPS-G450 FOR 1" DIA. WIRE ROPE				M2-D 347306	FORG. STL.



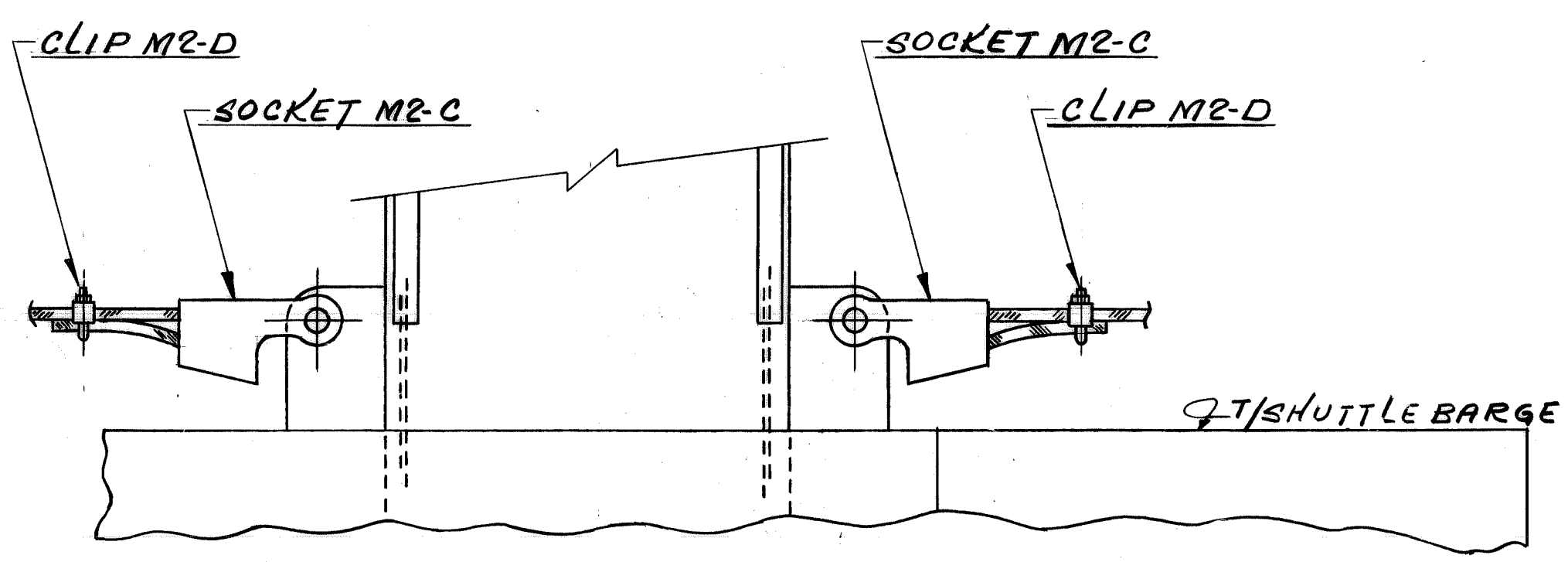
VIEW 4B  
LOW WATER POSITION



DETAIL 2B



SECTION THRU DOLPHINS



DETAIL 4-F

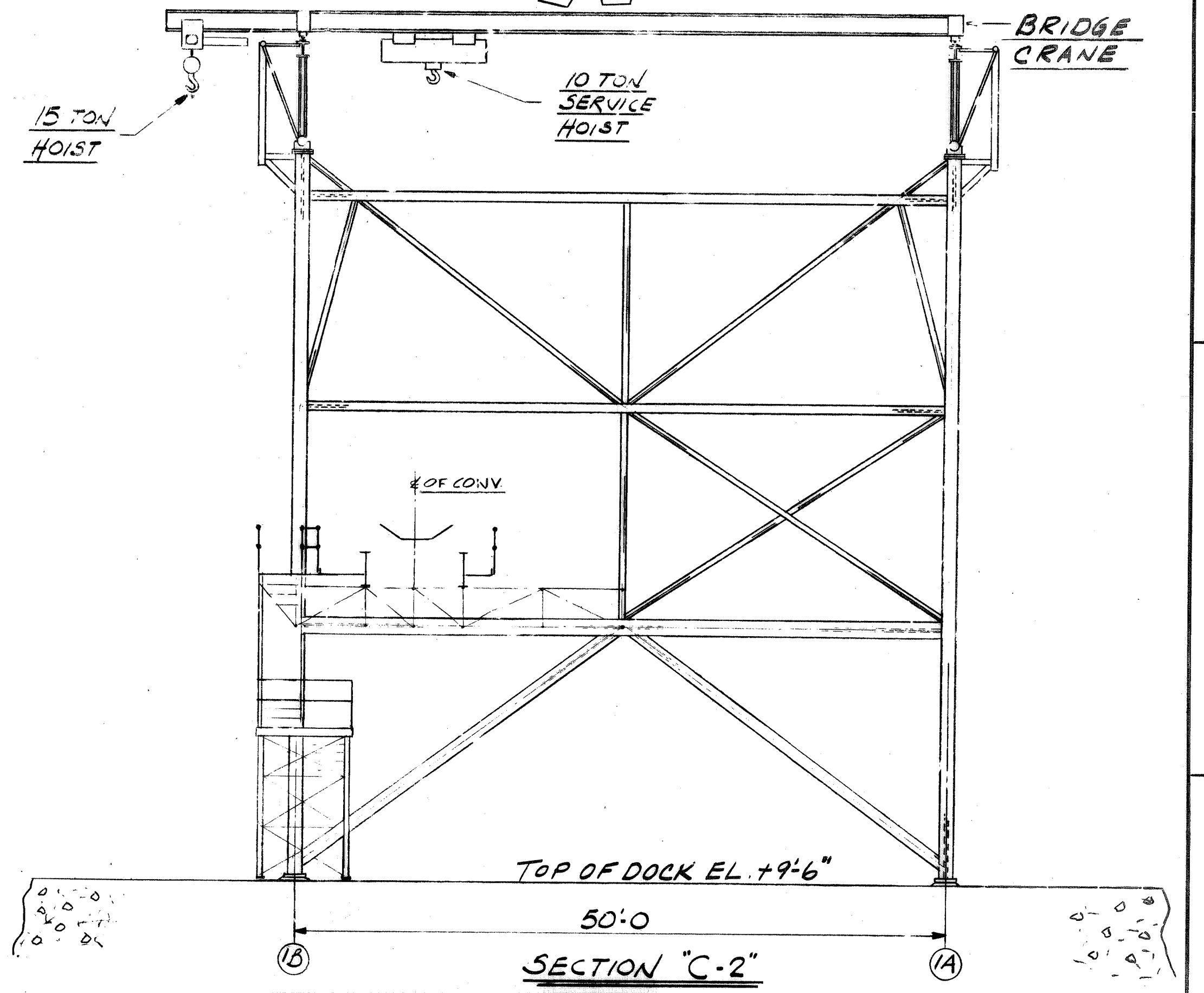
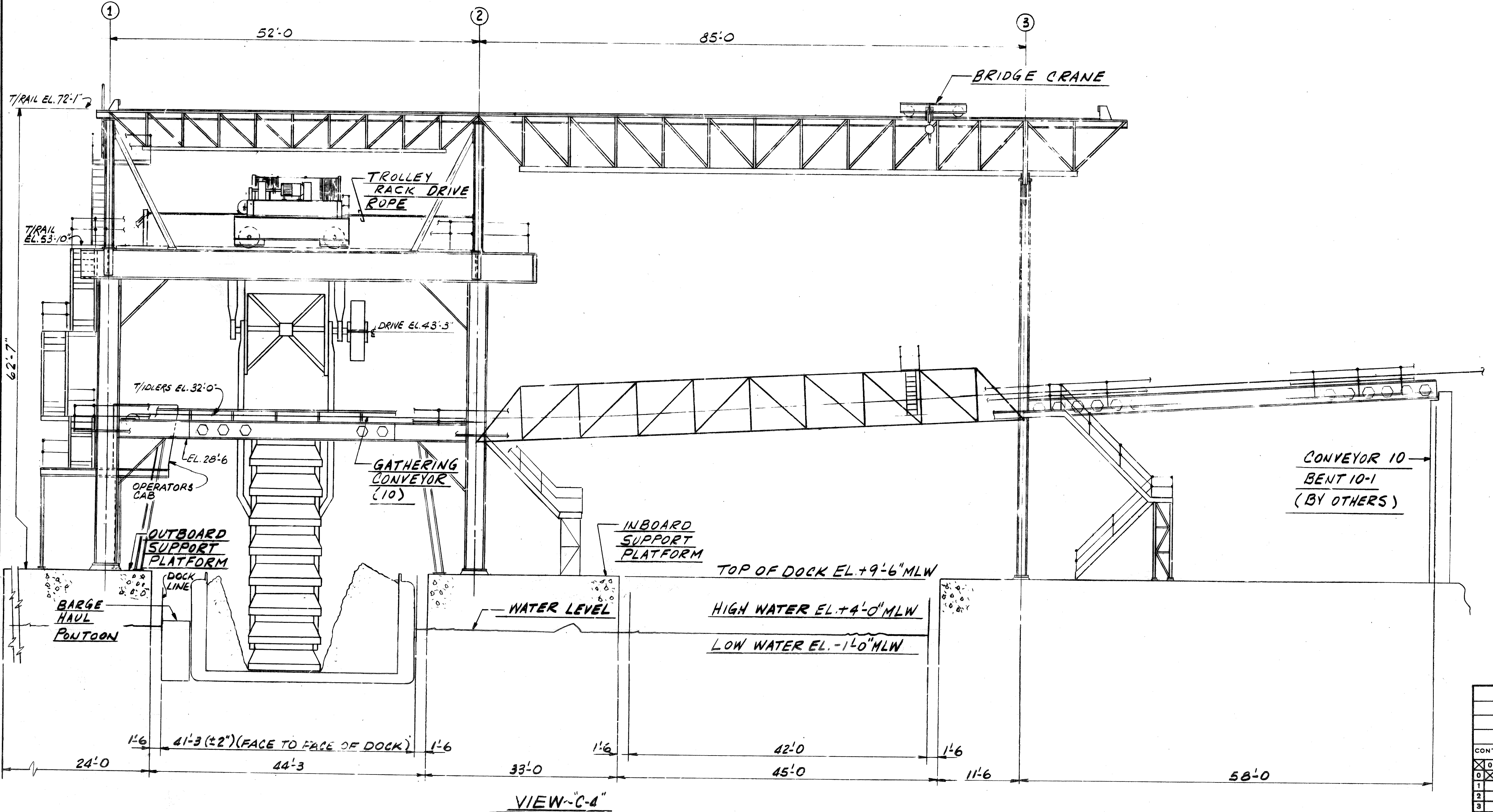
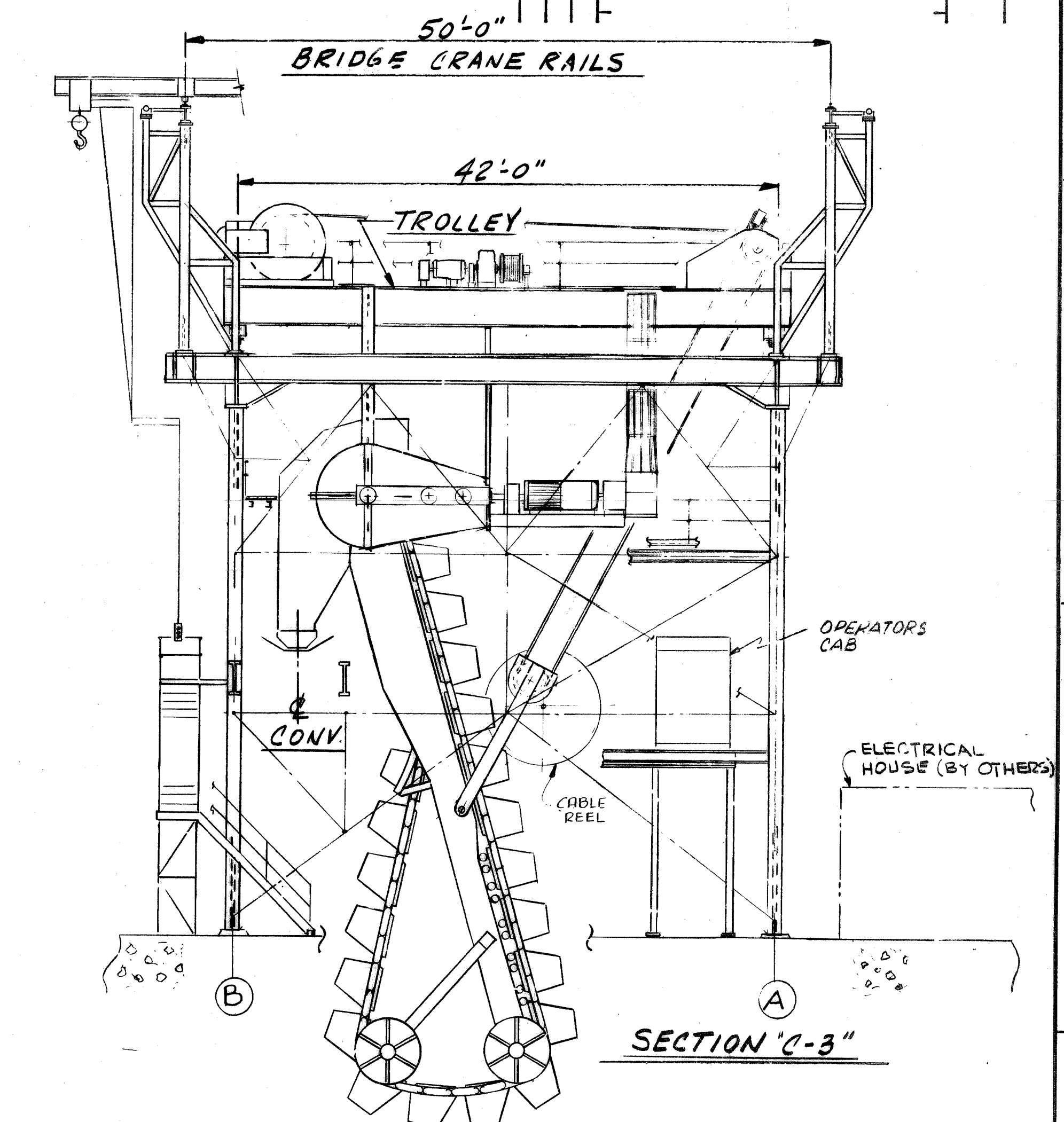
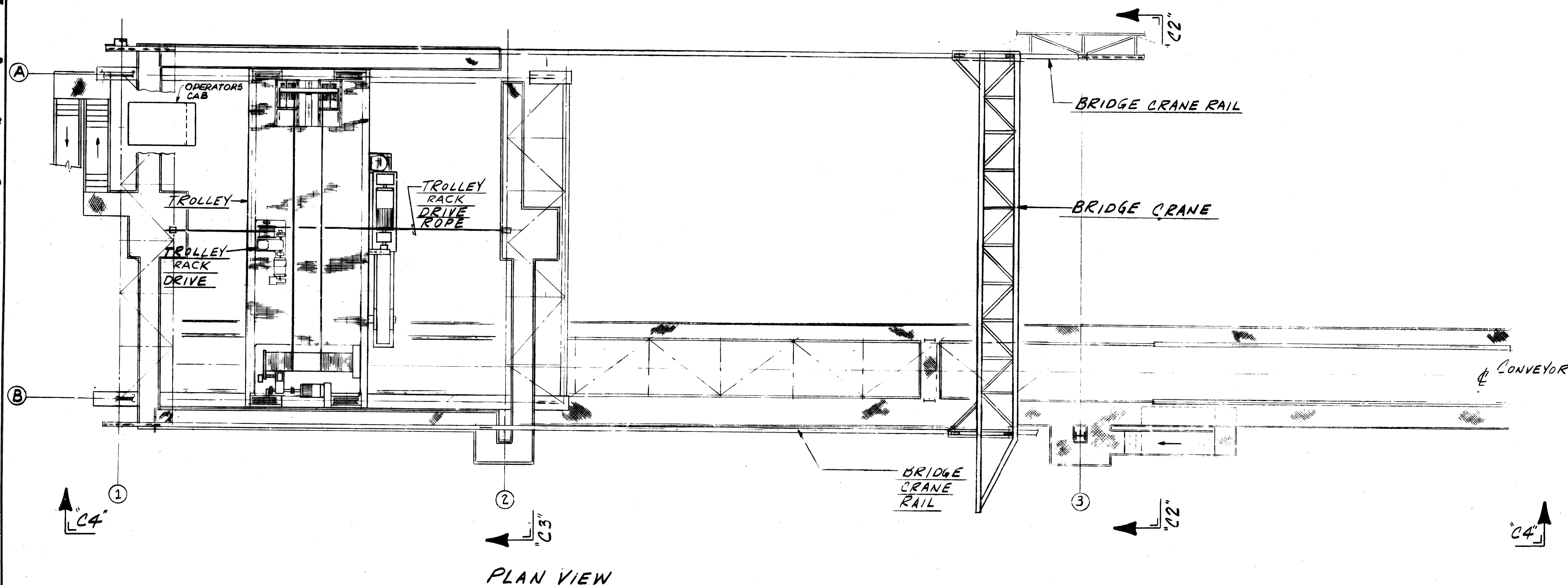
- REFERENCE DRAWINGS:
- BARGE HAUL WINCH ARR'G'T - 347126
  - SWIVEL SHEAVE ASS'Y - 347124
  - SHUTTLE BARGE ARR'G'T - 370677
  - HAULING ARM ARR'G'T - 348130 - W4148
  - SWIVEL SHEAVE SUPPORT - 347125

REV.	ITEM	DESCRIPTION	DATE	NO. REQ'D	CONTRACT NO.	SHOP BILL NO.	NONE	DIST.
1	W4139	502	MAY 7-17-80					
<p>ALABAMA STATE DOCKS CONTINUOUS BARGE UNLOADER BARGE HAUL GEN'L ARR'G'T</p>								
<p>REV. DOLPHIN NOS. TO AGREE WITH ALABAMA STATE DOCK DWG'S</p>				<p>SCALE - NTS</p>		<p>PASSED <i>Lawko</i> 4/17/80</p>		
<p>DWG. REVISIONS</p>				<p>DR. BRAD R. 3-31-80</p>		<p>APP'D. <i>W. Schuster</i> 4/18/80</p>		
<p>DATE</p>				<p>CHK. EWS 4/14/80</p>		<p>DATE 4/11/80</p>		
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<p>CONTR. NO.</p>				<p>REFERENCE DWGS.</p>		<p>DRAVO CORPORATION, PITTSBURGH, PA. DIV - EWD</p>		
<p>M 2 SHEET</p>				<p>DRAVO</p>		<p>DRAWING NO. 347306</p>		

DRAWING 44131 20122



REV.	ITEM	DESCRIPTION	DATE	REF.
1		REVISED ACCESS LADDERS AND STEELWORK AS INDICATED. HONOORABLE CABLE RAIL S. 7. 80. 28. K.	8-7-80	
2		ADD STAIRS @ COL-82 TO T1 DOCK	8/8/80	ROMKA

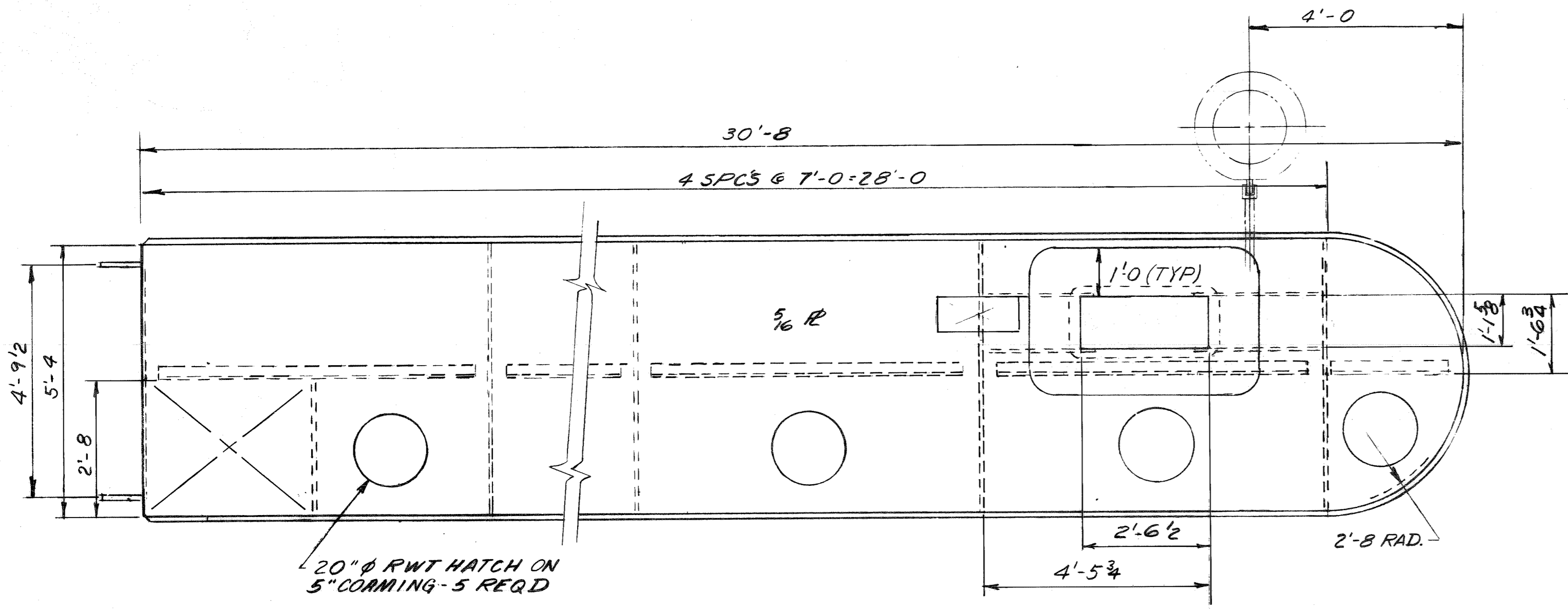


CONTR. NO.	REFERENCE DWGS.	SHEET
0	1	2
3	4	5
6	7	8
9		

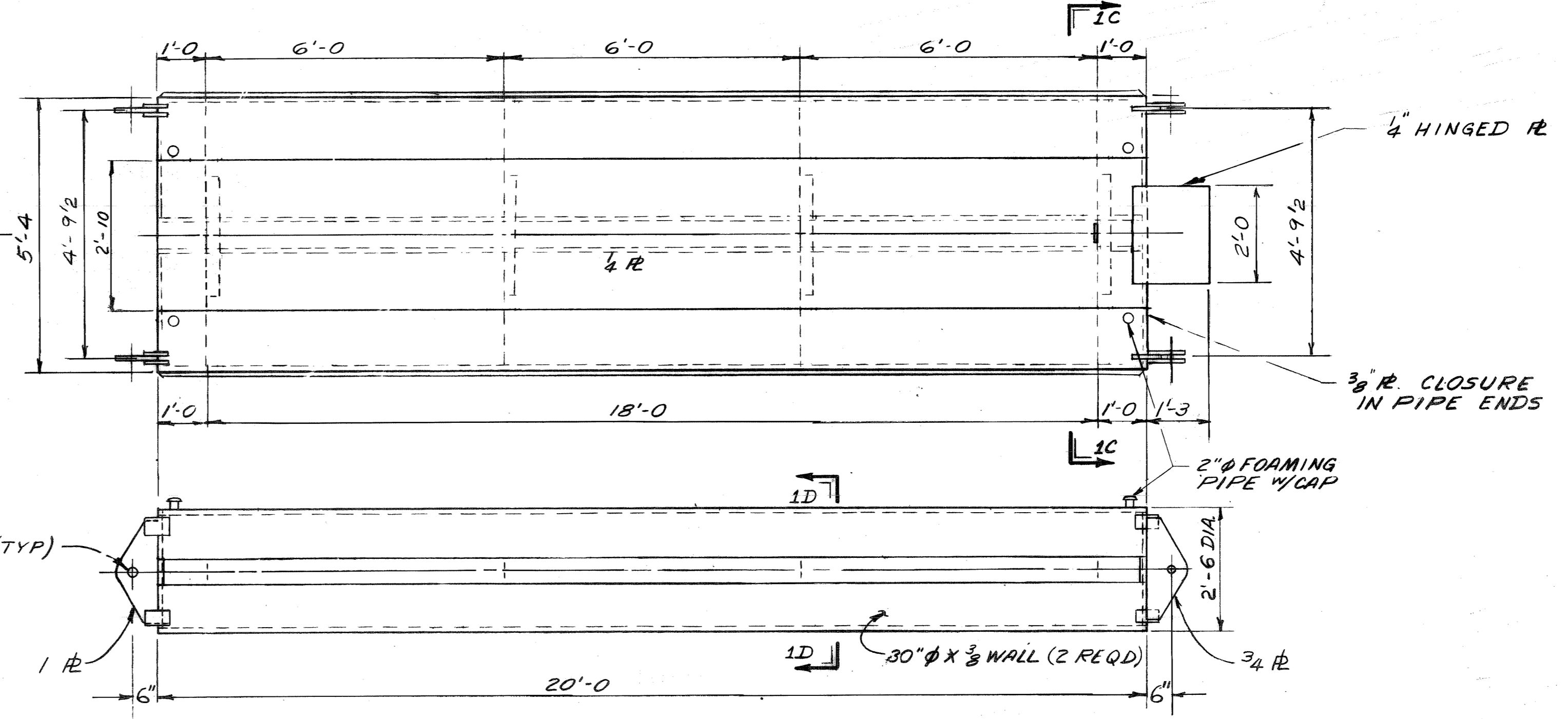
NO. 44139	CONTRACT NO.	SHOP BILL NO.	A-U-L-00
REQ'D			DIST.
GENERAL ARRANGEMENT CONTINUOUS BARGE UNLOADER 5000 TPH - COAL ALABAMA STATE DOCKS			
SCALE 1/8" = 1'-0"		APP'D	DATE 8/2 Wick 3/12/80
DR. J. W. B. 1-8-80	CHK. J. W. B.	DATE	
			DRAWING NO. 347305
DRavo CORPORATION, PITTSBURGH, PA. DIV. ENGINEERING			REV.



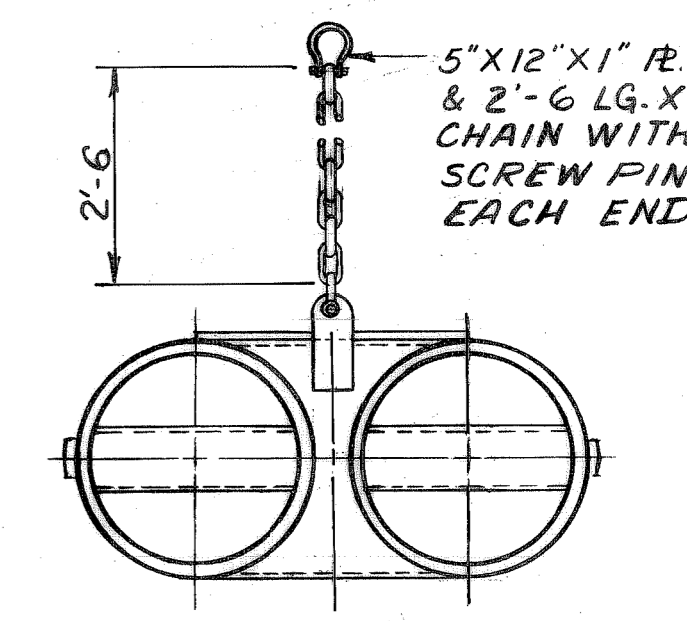
REV.	ITEM	DESCRIPTION	DATE	BY	APP'D
1		ADDED INTERIOR PAINT NOTE & ADDED COUNTERWEIGHT, ADU. BALLAST WEIGHT	JHP 6/11/80	ENG	
2		ADDED LADDER NOTE	JHP 6/11/80	ENG	
3		NOTED FOR AS-BUILT	7/15/81	RDWKA	



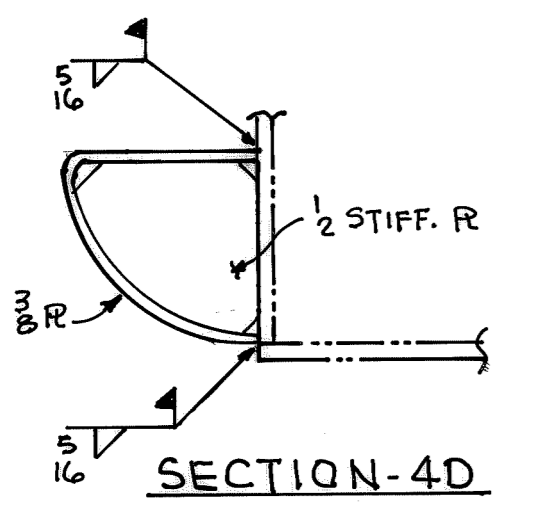
**MACHINERY SECTION PLAN**



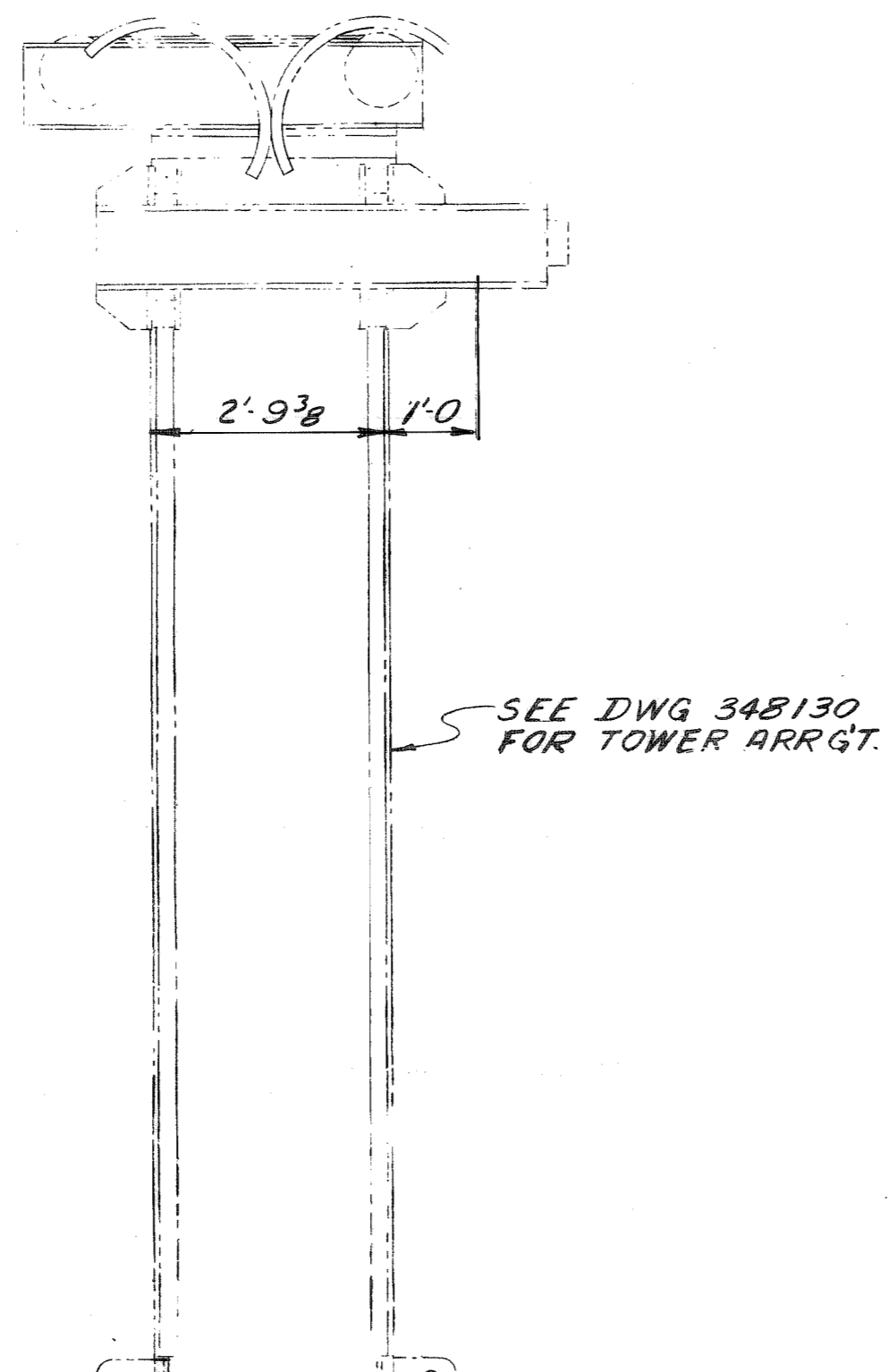
**PIPE SECTION (7 EACH)**



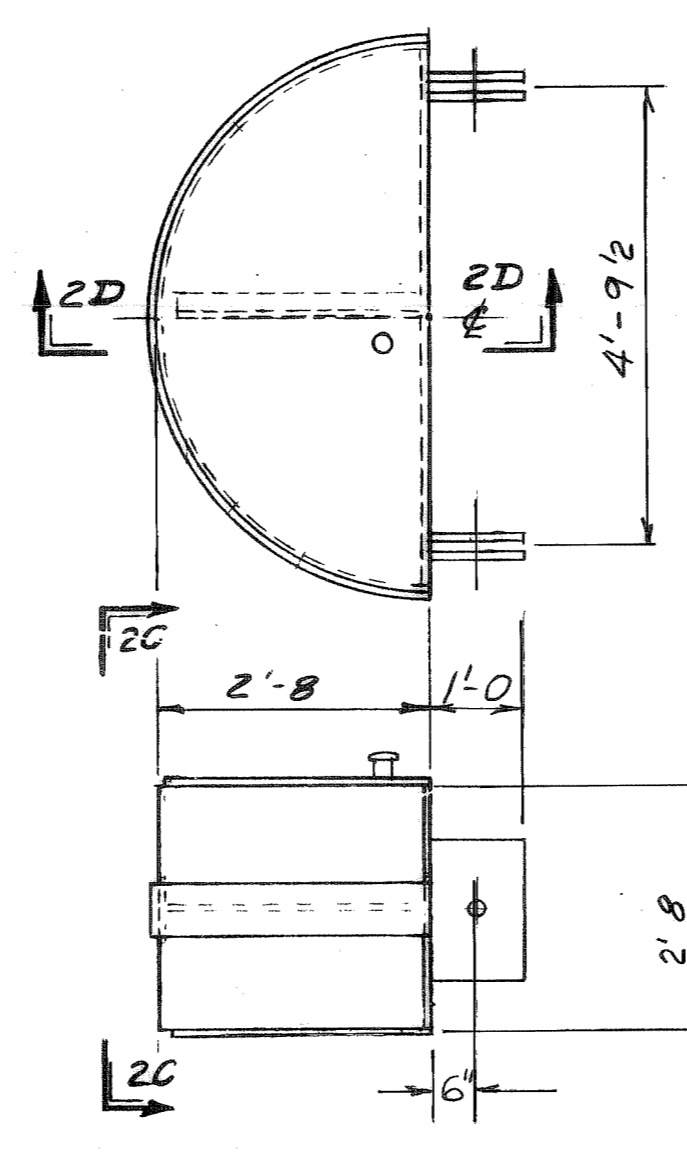
**SECTION 1C**  
\* ONE PLACE ONLY ON PIPE SECTION NEXT TO END SECTION



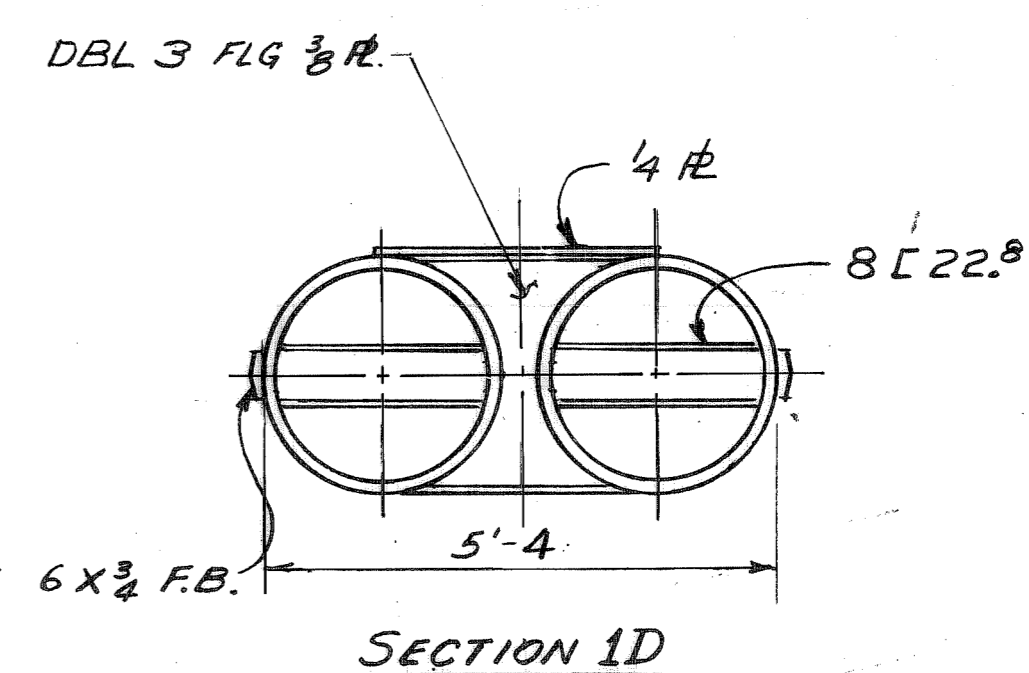
**SECTION-4D**



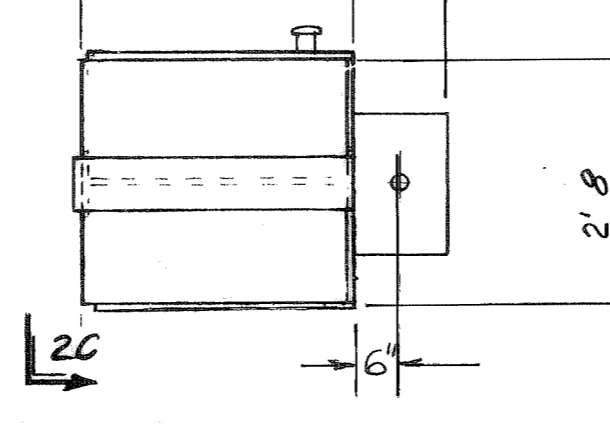
SEE DWG 348130 FOR TOWER ARRGT.



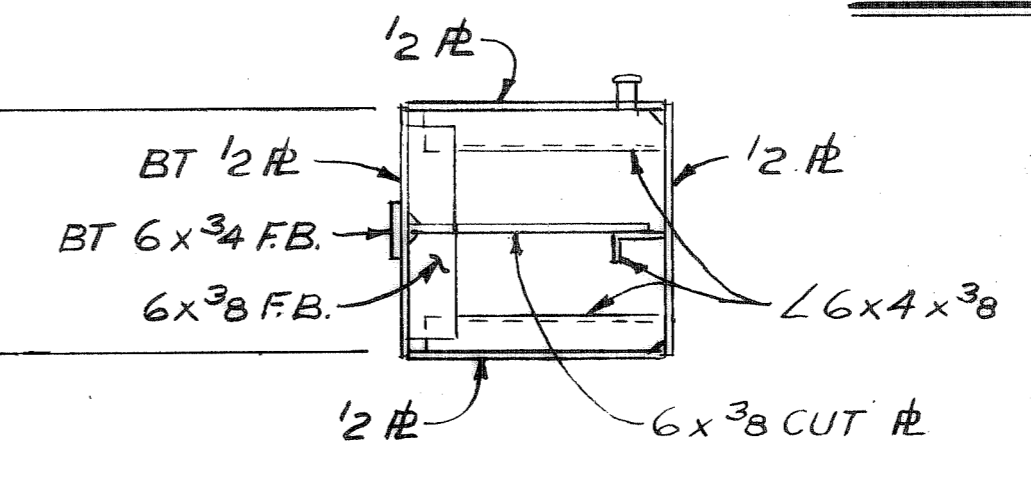
**VIEW 2C**



**SECTION 1D**

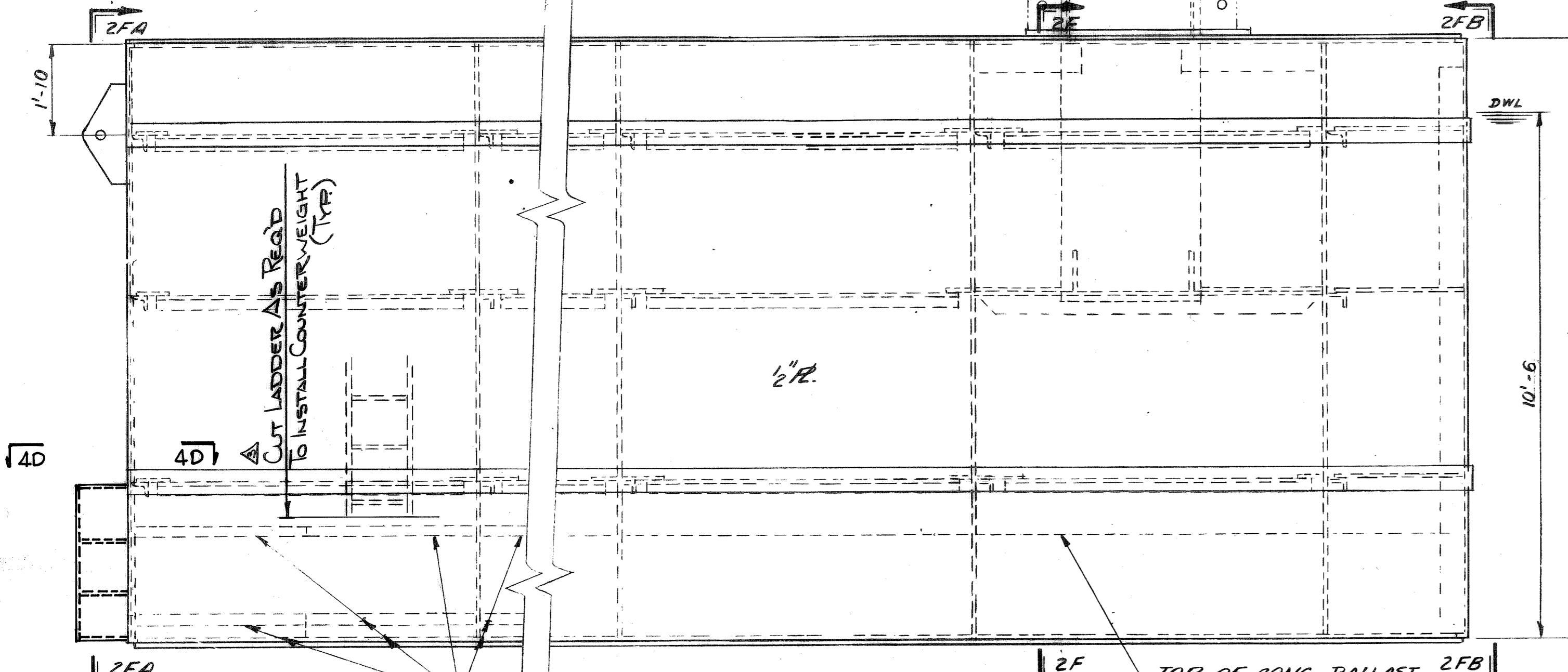


**END SECTION (1 EACH)**

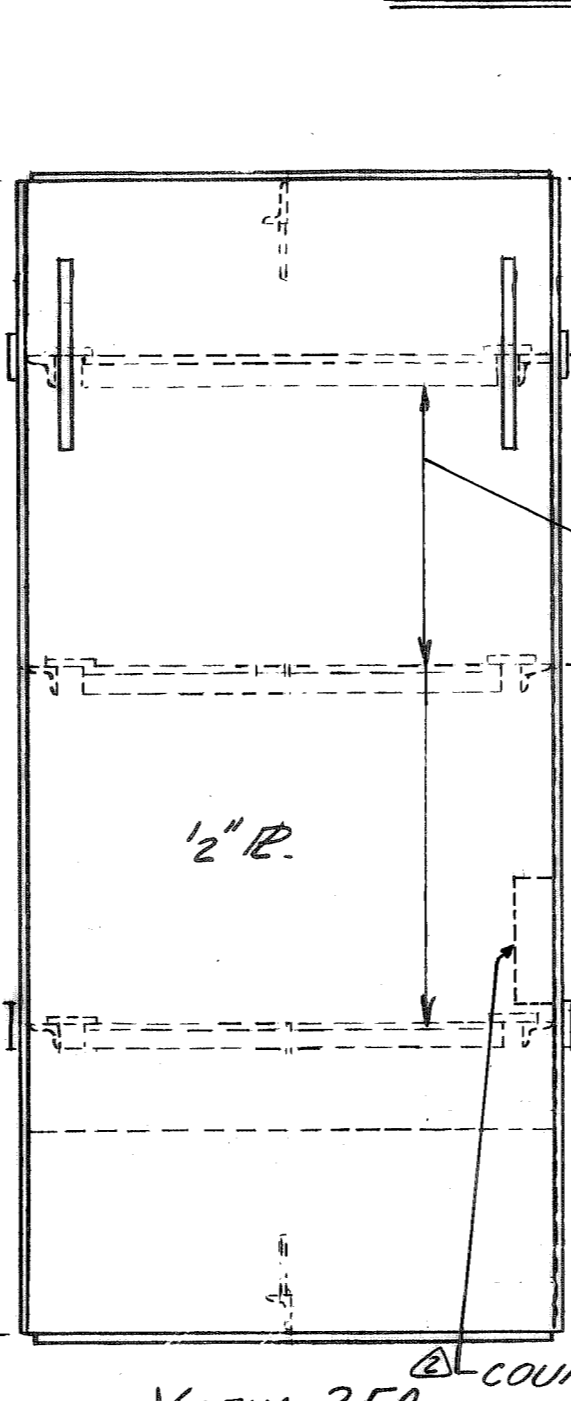


**SECTION 2D**

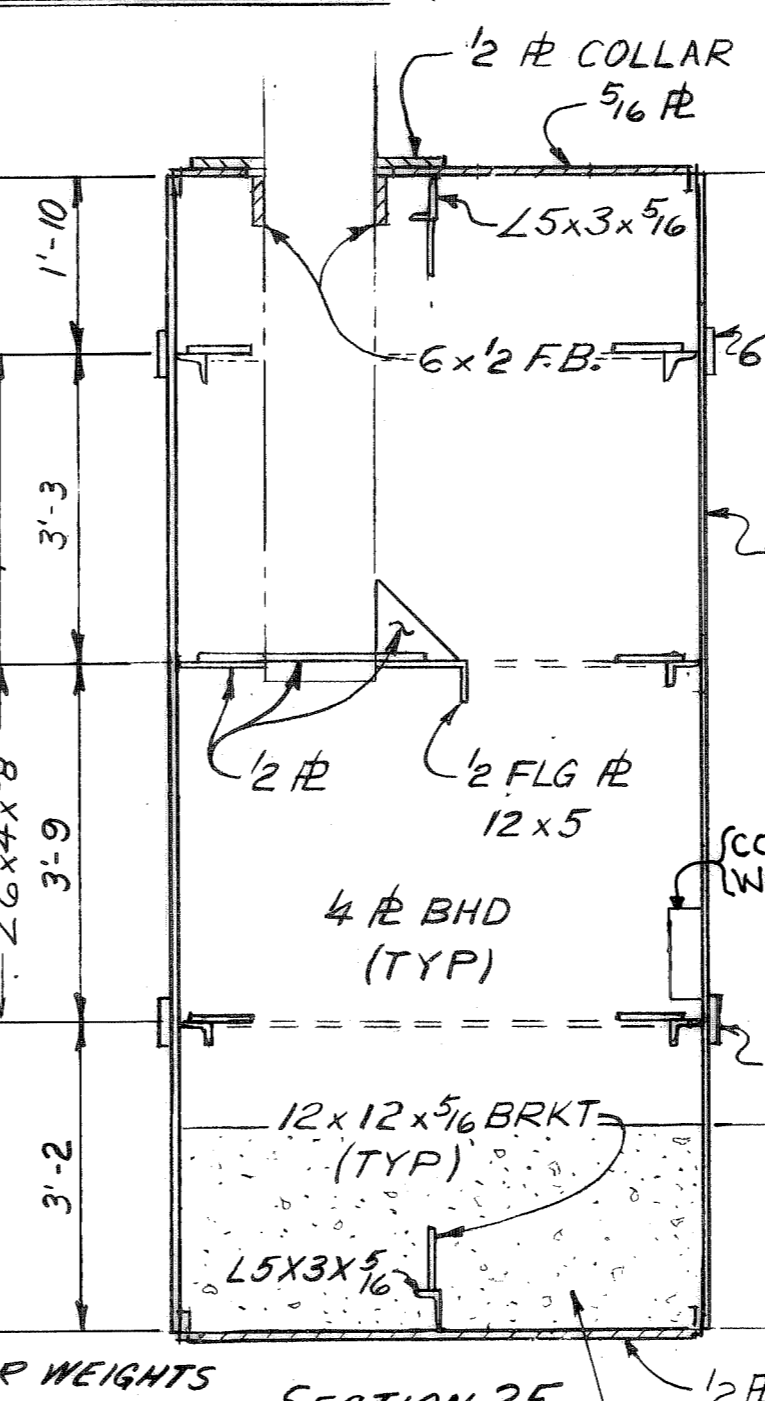
- NOTES:**
- MACHINERY SECTION WILL NOT FLOAT UPRIGHT WITHOUT BALLAST ABOUT 63,000 LB. OF HIGH DENSITY CONCRETE (200 LB/FT<sup>3</sup> OR GREATER) MUST BE DISTRIBUTED IN THE VOIDS BEFORE LAUNCHING TO ESTABLISH STABILITY AND TRIM.
  - EXTERIOR SURFACES OF ALL PIECES SHALL BE CLEANED OF LOOSE RUST AND LOOSE WELD SLAG BY POWER WIRE BRUSHING AND PAINTED WITH ONE (1) COAT OF FAST DRY BARGE RED, #121, 1.5 MILS DFT. SAND SHALL BE SPREAD ON THE DECK WHILE THE PAINT IS WET TO PROVIDE AN ANTISKID FINISH.
  - EACH PIPE SECTION AND THE END SECTION SHALL BE FILLED WITH URETHANE FOAM FOR FLORATION. THE MACHINERY SECTION, BEING COMPARTMENTED SHALL NOT BE FOAMED.
  - MACHINERY SECTION INTERIOR SHALL BE CLEANED OF CONSTRUCTION DEBRIS AND PAINTED WITH ONE (1) COAT OF FROSTPROOF GRAY, # 2239, 1.5 MILS DFT.



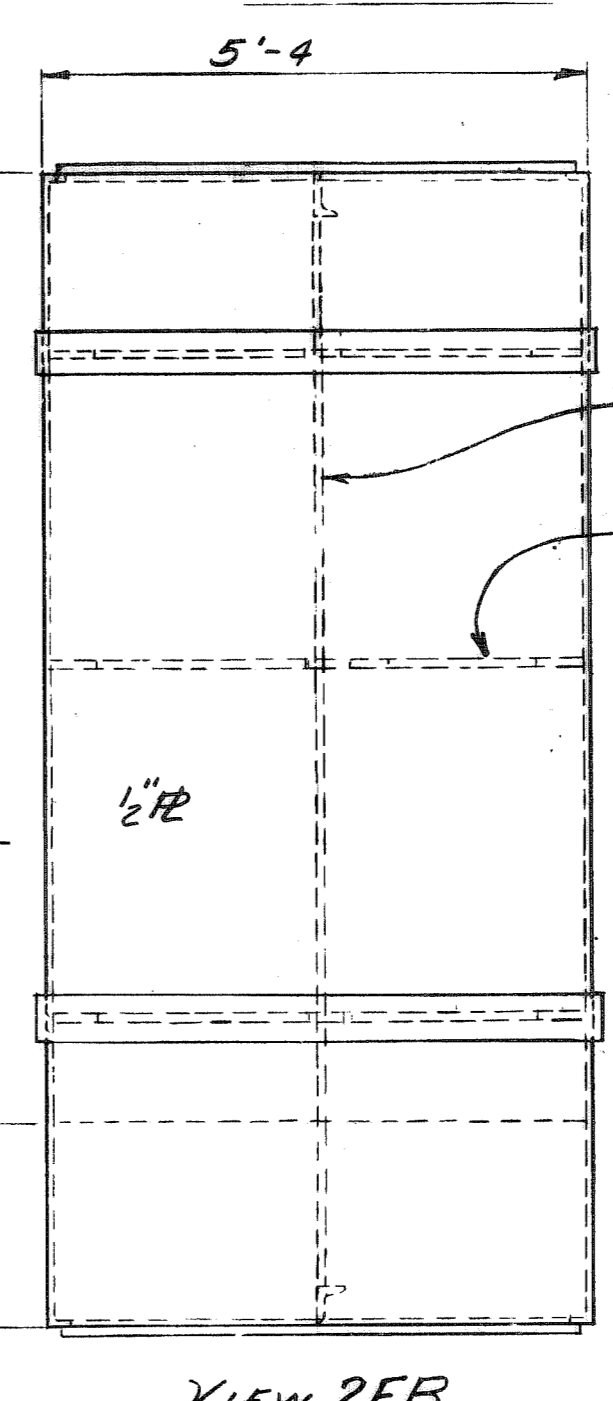
**MACHINERY SECTION ELEVATION**



**VIEW 2FA**



**SECTION 2F**



**VIEW 2FB**

9 STL. COUNTERWEIGHTS @ 3'-6" x 1'-4" x 2'-6"

TOP OF CONG. BALLAST

CONCRETE BALLAST 200LB/FT<sup>3</sup>

W-410B	348130 TOWER ARRGT
W-410B	35864 PONTON 155'Y
CONTR. NO.	REFERENCE DWGS.
0	1 2 3 4 5 6 7 8 9
0	0
1	
2	
3	
4	
5	

SHUTTLE PONTOON GENERAL ARRANGEMENT		181'-4 X 5'-4 X 12'-0	
SCALE 1/2" = 1'-0	APP'D <i>[Signature]</i>	DATE 15 May 1980	
DR VALETINE 5-8-80	CHK FOURNIE 5-15-80		
DRAWING NO. <b>370677</b>		REV. <b>4</b>	

Dravo CORPORATION, PITTSBURGH, PA. DIV