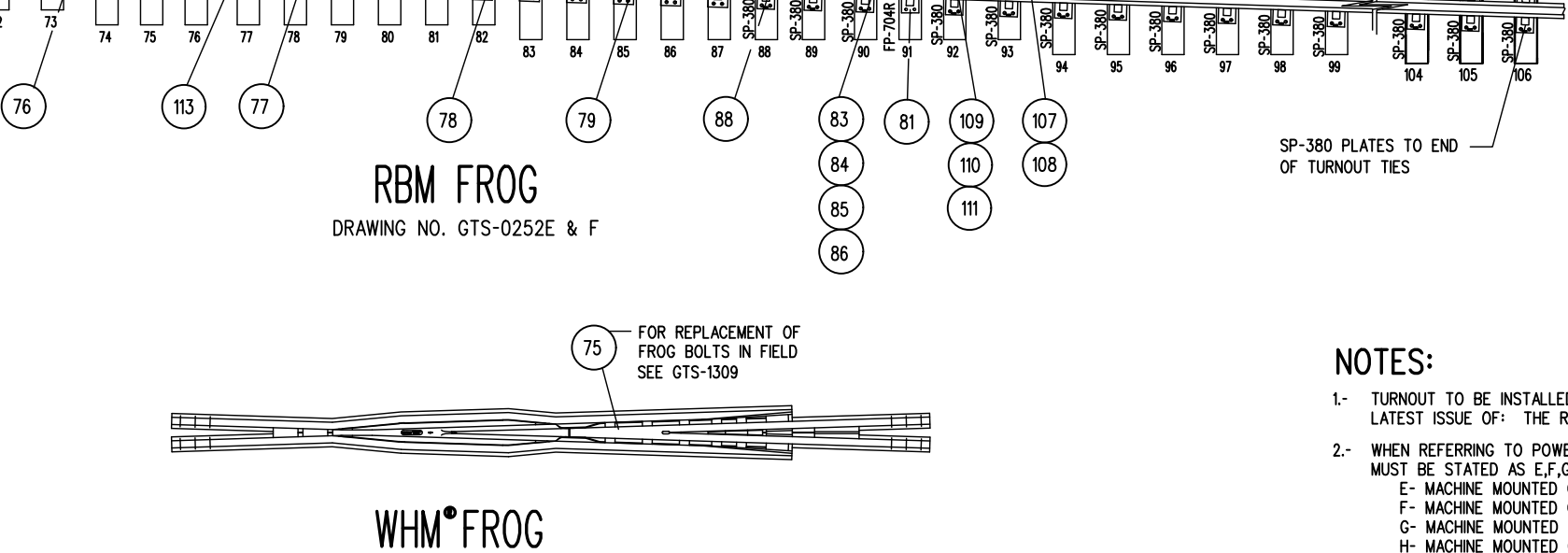
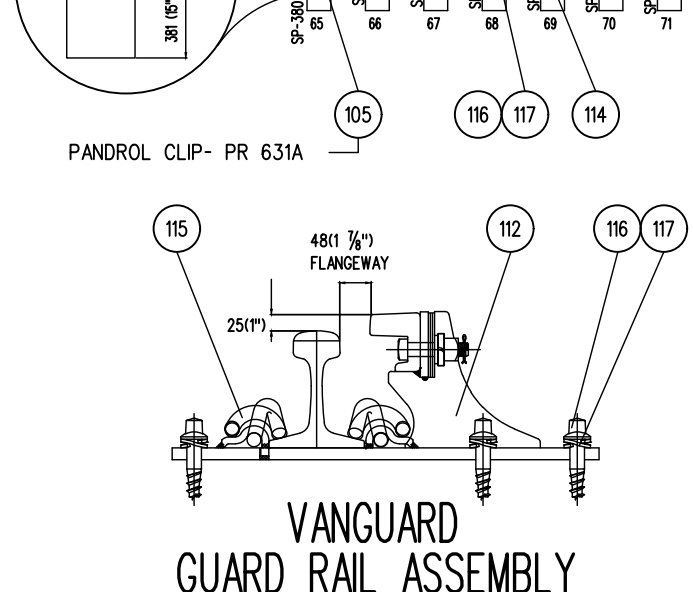
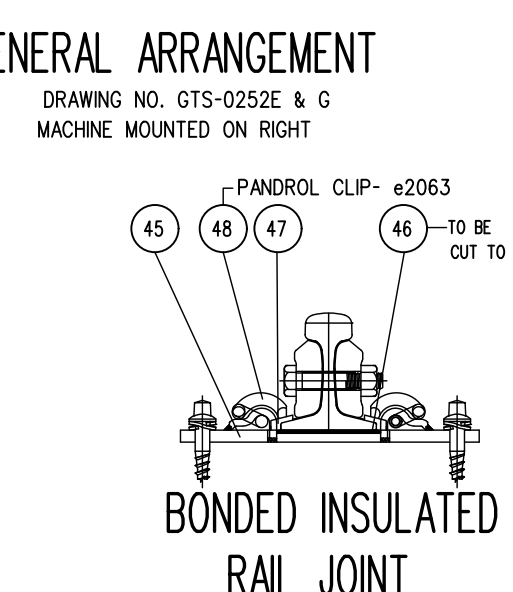
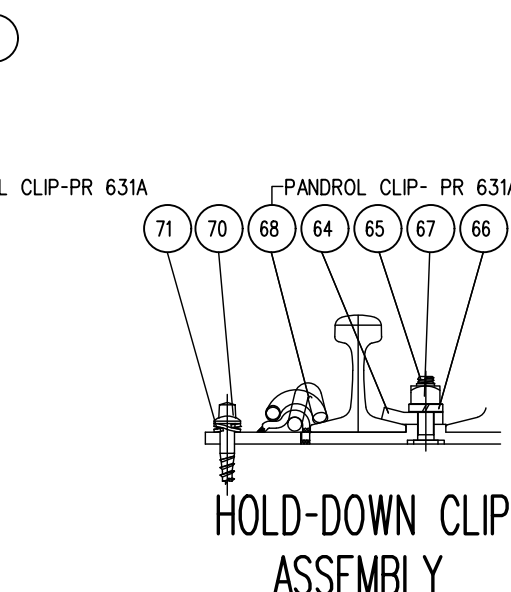
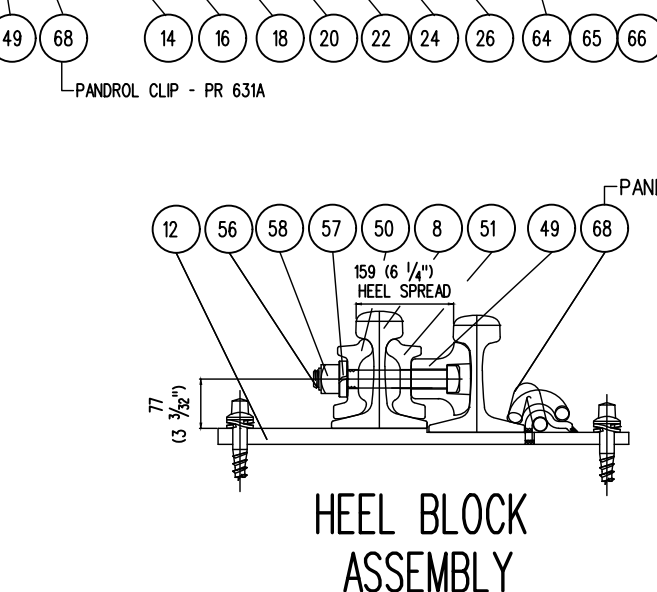
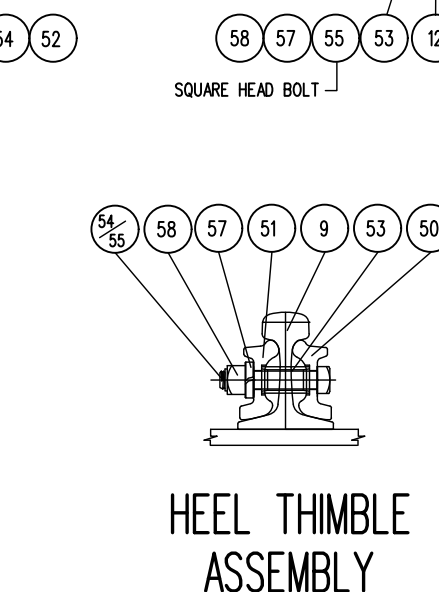
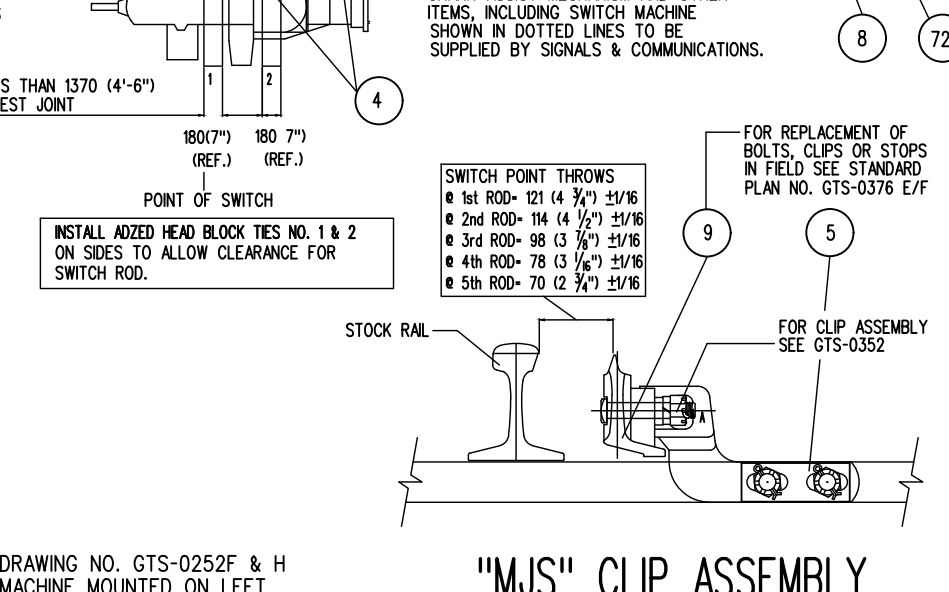
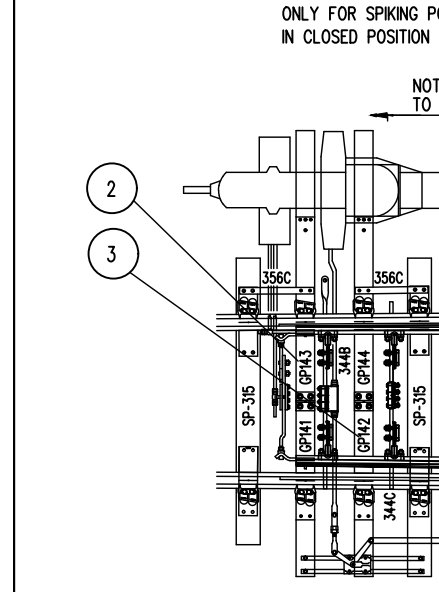


**TURNOUT DATA**

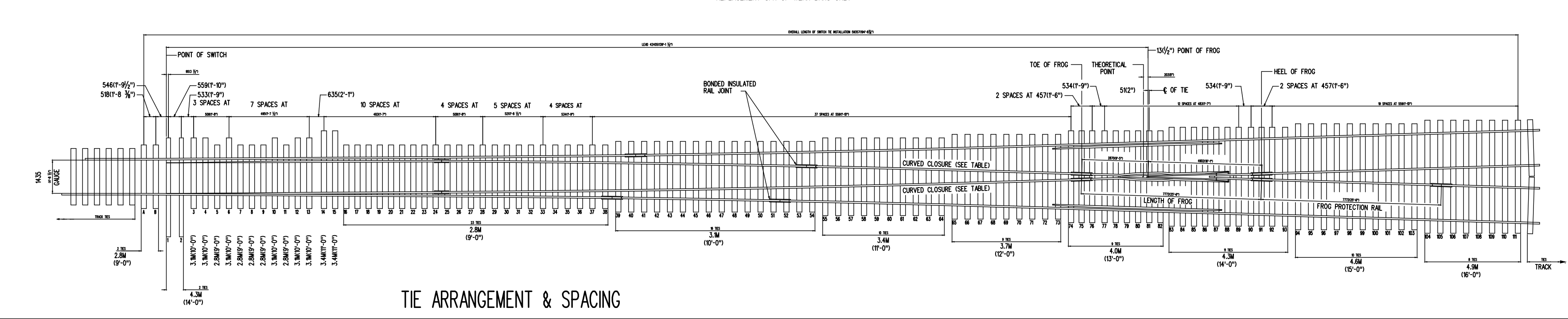
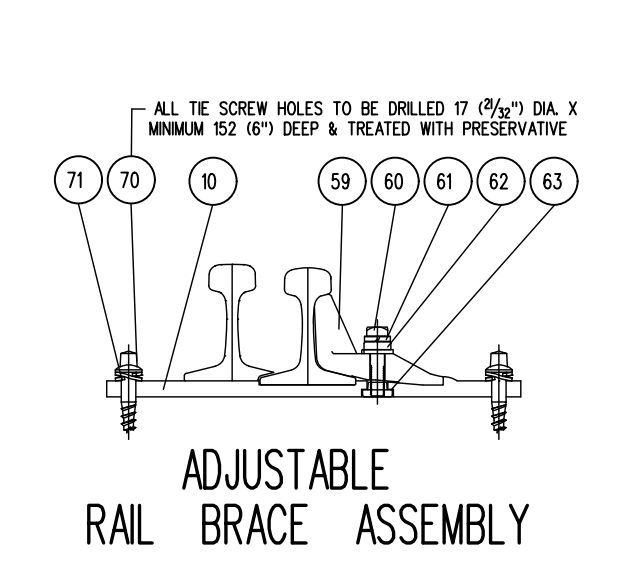
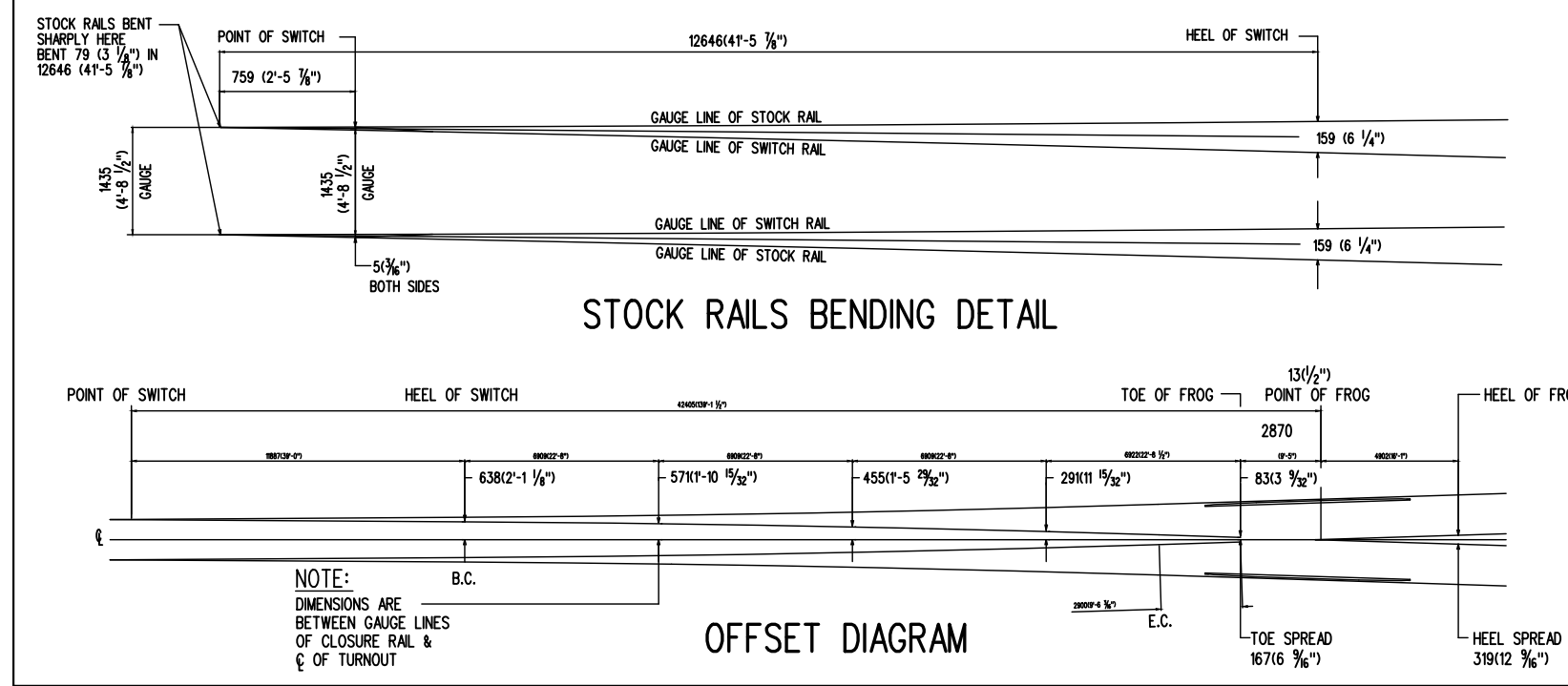
FRUG NO.	16
LENGTH OF SWITCH PT.	11887 (39'-0")
HEEL SPREAD	159 (6 1/4")
LEAD	42405 (139'-1 1/2")
P.S. TO H.F.	47308 (155'-2 1/2")

27654 (90'-8.3/4") CURVED CLOSURE LENGTH  
MADE UP BY:  
A 11887 (39') AND 15767 (51'-8 3/4") RAIL  
OR 2 - 11887 (39') AND 3880 (12'-8 3/4") RAIL.



**NOTES:**

- TURNOUT TO BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE LATEST ISSUE OF: THE RM
- WHEN REFERRING TO POWER OPERATED EQUILATERAL TURNOUTS, DRAWING NUMBER MUST BE STATED AS E,F,G OR H TO INDICATE:  
E- MACHINE MOUNTED ON RIGHT, RBM FROG  
F- MACHINE MOUNTED ON LEFT, RBM FROG  
G- MACHINE MOUNTED ON RIGHT, WHM FROG  
H- MACHINE MOUNTED ON LEFT, WHM FROG
- FOR OTHER TURNOUT COMBINATIONS SEE INDEX GTS-0000 SHEETS 1 TO 3
- TURNOUT GEOMETRY, FOR TABLES OF DIMENSIONS AND OFFSETS SEE FS-323.



**METRIC CONVERSION: 1 inch=25.4mm, 1 foot=304.8mm**

No.	Date	Revision	By Approved
1	8/07/27	ADDED IMPERIAL TO METRIC CONVERSION NOTE	

Standard: **NO. 16 EQUILATERAL TURNOUT-39'0" POWER OPERATED-SAMSON POINT SWITCH UNIFORM RISER DESIGN RBM OR WHM FROG-136LB. RAIL-WOOD TIES**

Drawn: MS Checked: Approved: VP Engineering & Asset Management

Date: SEPT 15/2017 Plan Number: GTS-0252 Rev: 1

REFERENCE: TS-0252\_L0 Sheet 1 OF 1

**BILL OF MATERIALS FOR GTS-0252**

ITEM	DESCRIPTION	STANDARD DRAWING	MARK NO.	QUANTITY			
				E	F	G	H
<b>SWITCH PACK</b>							
1	1st. GAUGE PLATE C/W INSULATION PLATE 136	GTS-0523	GP100/GP100	1	1	1	1
2	2nd. GAUGE PLATE C/W INSULATION PLATE 136	GTS-0523	GP141/GP143	-	1	-	1
	2nd. GAUGE PLATE C/W INSULATION PLATE 136	GTS-0522	GP145/GP147	1	-	1	-
3	3rd. GAUGE PLATE C/W INSULATION PLATE 136	GTS-0523	GP142/GP144	-	1	-	1
	3rd. GAUGE PLATE C/W INSULATION PLATE 136	GTS-0523	GP146/GP148	1	-	1	-
4	MILD STEEL STRAP	GTS-0356C	356C	2	2	2	2
5	SWITCH ROD	GTS-0344B	344B	1	1	1	1
6	SWITCH ROD	GTS-0344C	344C	3	3	3	3
7	SWITCH ROD	GTS-0344D	344D	1	1	1	1
8	RIGHT SAMSON POINT RAIL	GTS-0376E	376E	1	1	1	1
9	LEFT SAMSON POINT RAIL	GTS-0376F	376F	1	1	1	1
10	SWITCH PLATE	GTS-0508	SP315	20	20	20	20
11	SWITCH PLATE	GTS-0530	SP363	24	24	24	24
12	SWITCH HEEL PLATE (RIGHT HAND)	FS-158	SP479R	1	1	1	1
13	SWITCH HEEL PLATE (LEFT HAND)	FS-158	SP479L	1	1	1	1
14	SWITCH PLATE (RIGHT HAND)	GTS-0531	SP743R	1	1	1	1
15	SWITCH PLATE (LEFT HAND)	GTS-0531	SP743L	1	1	1	1
16	SWITCH PLATE (RIGHT HAND)	GTS-0531	SP744R	1	1	1	1
17	SWITCH PLATE (LEFT HAND)	GTS-0531	SP744L	1	1	1	1
18	SWITCH PLATE (RIGHT HAND)	GTS-0531	SP745R	1	1	1	1
19	SWITCH PLATE (LEFT HAND)	GTS-0531	SP745L	1	1	1	1
20	SWITCH PLATE (RIGHT HAND)	GTS-0531	SP746R	1	1	1	1
21	SWITCH PLATE (LEFT HAND)	GTS-0531	SP746L	1	1	1	1
22	SWITCH PLATE (RIGHT HAND)	GTS-0532	SP747R	1	1	1	1
23	SWITCH PLATE (LEFT HAND)	GTS-0532	SP747L	1	1	1	1
24	SWITCH PLATE (RIGHT HAND)	GTS-0532	SP748R	1	1	1	1
25	SWITCH PLATE (LEFT HAND)	GTS-0532	SP748L	1	1	1	1
26	SWITCH PLATE (RIGHT HAND)	GTS-0532	SP749R	1	1	1	1
27	SWITCH PLATE (LEFT HAND)	GTS-0532	SP749L	1	1	1	1
28	SWITCH PLATE	GTS-0537	SP750	2	2	2	2
29	SWITCH PLATE	GTS-0537	SP751	2	2	2	2
30	SWITCH PLATE	GTS-0537	SP752	2	2	2	2
31	SWITCH PLATE	GTS-0537	SP753	2	2	2	2
32	SWITCH PLATE	GTS-0537	SP754	2	2	2	2
33	SWITCH PLATE	GTS-0538	SP755	2	2	2	2
34	SWITCH PLATE	GTS-0538	SP756	2	2	2	2
35	SWITCH PLATE	GTS-0538	SP757	2	2	2	2
36	SWITCH PLATE	GTS-0539	SP758	2	2	2	2
37	SWITCH PLATE	GTS-0539	SP759	2	2	2	2
38	SWITCH PLATE	GTS-0539	SP760	2	2	2	2
39	SWITCH PLATE	GTS-0540	SP761	2	2	2	2
40	SWITCH PLATE	GTS-0540	SP762	2	2	2	2
41	SWITCH PLATE	GTS-0540	SP763	2	2	2	2
42	SWITCH PLATE	GTS-0540	SP764	2	2	2	2
43	SWITCH PLATE	GTS-0540	SP765	2	2	2	2
44	SWITCH PLATE	GTS-0609	SP380	68	68	68	68
45	SWITCH PLATE (FOR INSULATED JOINTS)	GTS-0609	SP381	4	4	4	4
46	RAIL PAD - EVA TYPE	GTS-0519	-	4	4	4	4
47	INSULATOR PANDROL - TYPE 2204 (FOR INSULATED RAIL JOINTS)	GTS-1206	-	8	8	8	8
48	PANDROL CLIP - e2063 (FOR INSULATED JOINTS)	GTS-1322	-	8	8	8	8
49	HEEL BLOCK - SYMMETRICAL	GTS-0387	CN387 R/L	2	2	2	2
50	BENT SPLICE BAR(4 HOLE) - 132/136 LB. R.E.	GTS-1204D	1204D	2	2	2	2
51	STRAIGHT SPLICE BAR (4 HOLE) - 132/136 LB. R.E.	GTS-1203	-	1	1	1	1
52	STRAIGHT SPLICE BAR (6 HOLE) - 132/136 LB. R.E.	GTS-1203	-	2	2	2	2
53	PIPE THIMBLE - 1 - 1/4" DIA. X 2 - 1/4" LONG	GTS-0345K	K	2	2	2	2
54	1 - 1/8"DIA. - 7 NC OVAL NECK TRACK BOLT X 5 - 7/8" LG. C/W SQ. NUT	GTS-1320/1	-	3	3	3	3
55	1 - 1/8"DIA. - 7 UNC SQ. HD. BOLT X 6" LG. C/W SQ. NUT	GTS-1320/32	-	1	1	1	1
56	1 - 1/8"DIA. - 7 UNC SQ. HD. BOLT X 8-1/2" LG. C/W SQ. NUT	GTS-1320/34	-	4	4	4	4
57	SPRING WASHER for 1 - 1/8" DIA. BOLT	GTS-1301	-	8	8	8	8
58	LOCKNUT FOR 1 - 1/8" DIA. - 7 UNC BOLT	GTS-1302	-	8	8	8	8
59	ADJUSTABLE RAIL BRACE	GTS-0354	132M-14	26	26	26	26
60	7/8" DIA. 9 UNC SQ. HD. BOLT X 3-3/4" LG.	GTS-1308/5	-	52	52	52	52
61	SPRING WASHER for 7/8" DIA. BOLT	GTS-1301	-	52	52	52	52
62	DOUBLE WASHER	GTS-0354	M-10	26	26	26	26
63	DOUBLE NUT	GTS-0354	M-9	26	26	26	26
64	HOLD DOWN CLIP	GTS-1334	FS156	32	32	32	32
65	1" DIA. - 8 UNC SQ. HEAD SW. NECK CARRIAGE BOLT X 3-1/2" LG.	GTS-1307/1	-	32	32	32	32
66	SPRING WASHER for 1" DIA. BOLT	GTS-1301	-	32	32	32	32
67	LOCKNUT FOR 1" DIA. - 8 UNC BOLT	GTS-1302	-	32	32	32	32
68	PANDROL CLIP - PR 631A	GTS-1322	-	294	294	294	294
69	PANDROL CLIP - PR 609 (FOR SPLICE BAR INSTALLATIONS)	GTS-1322	-	10	10	10	10
70				680	680	680	680
71	DOUBLE SPRING WASHER - TYPE FE6	GTS-1310	-	680	680	680	680
72	BENT UNDERCUT STOCK RAIL - R/H - 136 LB. R.E. 78" - 0" LG.	GTS-1109X	1109X	1	1	1	1
73	BENT UNDERCUT STOCK RAIL - L/H - 136 LB. R.E. 78" - 0" LG.	GTS-1109Y	1109Y	1	1	1	1
<b>FROG</b>							
74	#16-136 LB. RAIL BOUND MANGANESE STEEL FROG	87-1078 ABC	-	1	1	-	-
		D-11873 NOR	-	-	-	-	-
75	#16-136 LB. WELDED HEEL MANGANESE STEEL FROG	B10679 NOR	-	-	-	1	1
<b>FROG PACK</b>							
76	FROG PLATE	GTS-0638	FP705	1	1	1	1
77	FROG PLATE	GTS-0638	FP706	1	1	1	1
78	FROG PLATE	GTS-0638	FP707	1	1	1	1
79	FROG PLATE	GTS-0638	FP708	1	1	1	1
80	FROG PLATE	GTS-0638	FP709	1	1	1	1
81	FROG PLATE (RIGHT HAND)	GTS-0601	FP704R	1	1	1	1
82	FROG PLATE (LEFT HAND)	GTS-0601	FP704L	1	1	1	1
83	1" DIA. - 8 UNC SQ. HEAD SQ. NECK CARRIAGE BOLT X 3-1/2" LG. C/W SQ. NUT	GTS-1307/1	-	16	16	16	16
84	SPRING WASHER for 1" DIA. BOLT	GTS-1301	-	16	16	16	16
85	PLATE WASHER for 1" DIA. BOLT	GTS-1337	-	16	16	16	16
86	INSULATION PLATE	GTS-526	136	4	4	4	4
87	FROG PLATE	GTS-0554	FP688	1	1	1	1
88	FROG PLATE	GTS-0554	FP689	1	1	1	1
89	FROG PLATE	GTS-0557	FP690	1	1	1	1
90	FROG PLATE	GTS-0557	FP691	1	1	1	1
91	FROG PLATE	GTS-0558	FP692	1	1	1	1
92	FROG PLATE	GTS-0558	FP693	1	1	1	1
93	FROG PLATE	GTS-0558	FP694	1	1	1	1
94	FROG PLATE	GTS-0558	FP695	1	1	1	1
95	FROG PLATE	GTS-0559	FP696	1	1	1	1
96	FROG PLATE	GTS-0559	FP697	1	1	1	1
97	FROG PLATE	GTS-0559	FP698	1	1	1	1
98	FROG PLATE	GTS-0559	FP699	1	1	1	1
99	FROG PLATE	GTS-0559	FP700	1	1	1	1
100	FROG PLATE	GTS-0559	FP701	1	1	1	1
101	FROG PLATE	GTS-0559	FP702	1	1	1	1
102	FROG PLATE	GTS-0559	FP703	1	1	1	1
103	SWITCH PLATE	GTS-0609	SP380	26	26	26	26
104	1 - 1/8"DIA. - 7 UNC SQ. HD. BOLT X 6" LG. C/W SQ. NUT	GTS-1309/32	-	2	2	2	2
105	PANDROL CLIP - PR 631A	GTS-1322	-	137	137	137	137
106	PANDROL CLIP - PR 609 (FOR SPLICE BAR INSTALLATIONS)	GTS-1322	-	7	7	7	7
107				252	252	252	252
108	DOUBLE SPRING WASHER - TYPE FE6	GTS-1310	-	252	252	252	252
109	STRAIGHT SPLICE BAR (6 HOLE) - 132/136 LB. R.E.	GTS-1203	-	4	4	4	4
110	SPRING WASHER for 1 - 1/8" DIA. BOLT	GTS-1301	-	24	24	24	24
111	1 - 1/8"DIA. - 7 NC OVAL NECK TRACK BOLT X 5 - 7/8" LG. C/W SQ. NUT	GTS-1320/1	-	24	24	24	24

BILL OF MATERIALS FOR GTS-0252							
ITEM	DESCRIPTION	STANDARD DRAWING	MARK NO.	QUANTITY			
				E	F	G	H
<b>GUARD RAIL PACK</b>							
112	#16E VANGUARD GUARD RAIL ASSY. LEFT SIDE FOR EQUILATERAL TURNOUT	GTS-1122X	-	1	1	1	1
113	#16E VANGUARD GUARD RAIL ASSY. RIGHT SIDE FOR EQUILATERAL TURNOUT	GTS-1122Y	-	1	1	1	1
114	SWITCH PLATE	GTS-0609	SP380	60	60	60	60
115	PANDROL CLIP - PR 631A	GTS-1322	-	184	184	184	184
116			-	406	406	406	406
117	DOUBLE SPRING WASHER - TYPE FE6	GTS-1310	-	406	406	406	406
<b>TURNOUT PACKAGES</b>							
<b>TURNOUT NUMBER</b>	<b>DESCRIPTION</b>			<b>QUANTITY PER TURNOUT</b>			
GTS- 252A							
GTS- 252E	FROG RBM 16 - 136			1			
	SW-PK INS 39'-0" SAM PO NO. 16E - 136 LBS.			1			
	GR-PK VANGUARD 136			1			
	FR-PK RBM 16 - 136			1			
GTS- 252F	FROG RBM 16 - 136			1			
	SW-PK INS 39'-0" SAM PO NO. 16F - 136 LBS.			1			
	GR-PK VANGUARD 136			1			
	FR-PK RBM 16 - 136			1			
GTS- 252G	FROG WHM 16 - 136			1			
	SW-PK INS 39'-0" SAM PO NO. 16G - 136 LBS.			1			
	GR-PK VANGUARD 136			1			
	FR-PK WHM 16 - 136			1			
GTS- 252H	FROG WHM 16 - 136			1			
	SW-PK INS 39'-0" SAM PO NO. 16H - 136 LBS.			1			
	GR-PK VANGUARD 136			1			
	FR-PK WHM 16 - 136			1			
<b>ABBREAVATIONS</b>							
SW - PK - SWITCH PAK		SAM - SAMSON		SGM - SELF GUARD			
FR - PK - FROG PAK		MANGANESE					
GR - PK - GUARD RAIL PAK		HO - HAND OPERATED		RBM - RAIL BOUND			
INS - INSULATED		MANGANESE					
<b>NOTE:</b>							
1 - For a new installation, necessary rail, bonded insulated joints, splice bars, bolts, washers, rail anchors, connecting rod, switch stand, targe and reflectorized target kit may be required in addition to the materials listed above							
<b>BILL OF SWITCH TIES FOR HAND AND SPRING OPERATION</b>							
<b>TIES 180 X 230 mm (7" X 9")</b>							
<b>LENGTH</b>							
<b>METRES</b>	<b>FEET/INCHES</b>			<b>NO. OF PIECES</b>			
2.8		9' - 0"		30			
3.1		10' - 0"		22			
3.4		11' - 0"		12			
3.7		12' - 0"		9			
4.0		13' - 0"		9			
4.3		14' - 0"		13			
4.6		15' - 0"		10			
4.9		16' - 0"		8			
<b>TOTAL NUMBER OF TIES - 113</b>							