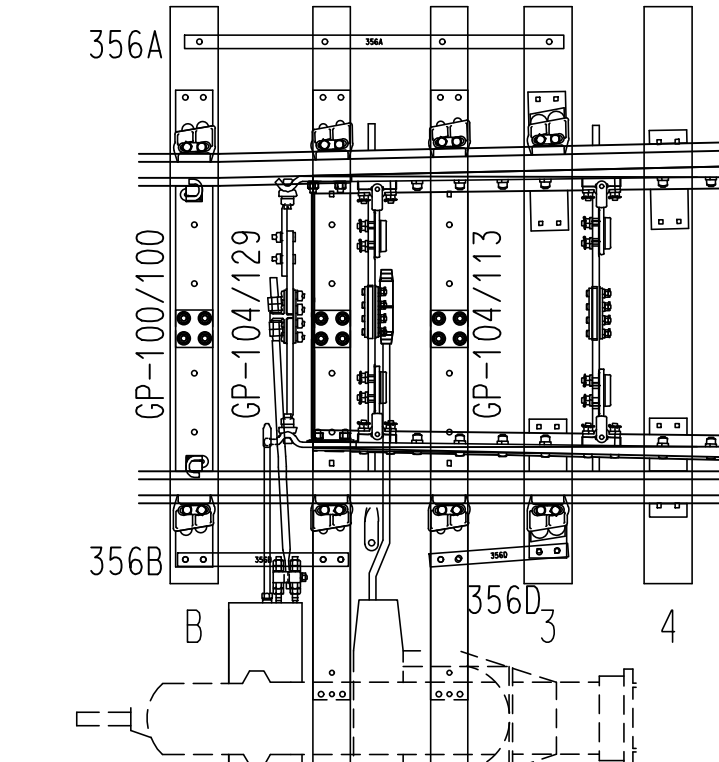
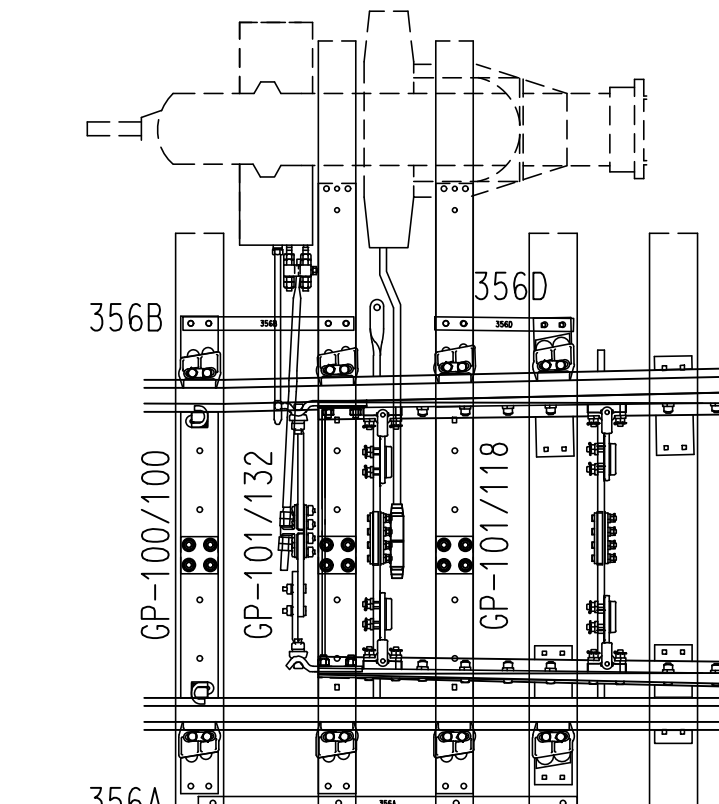


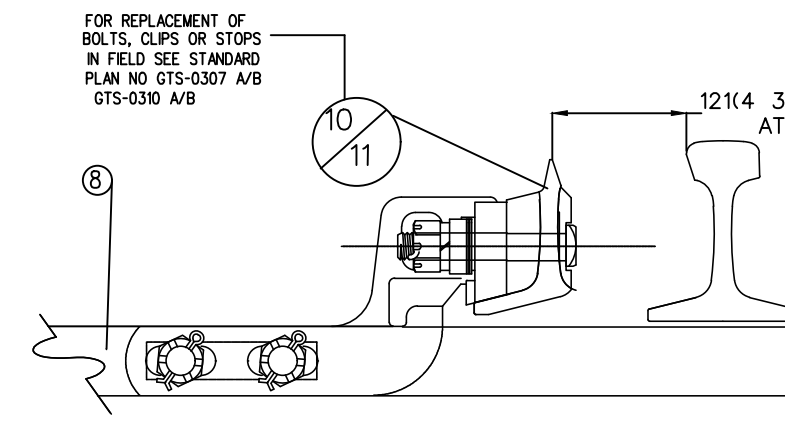
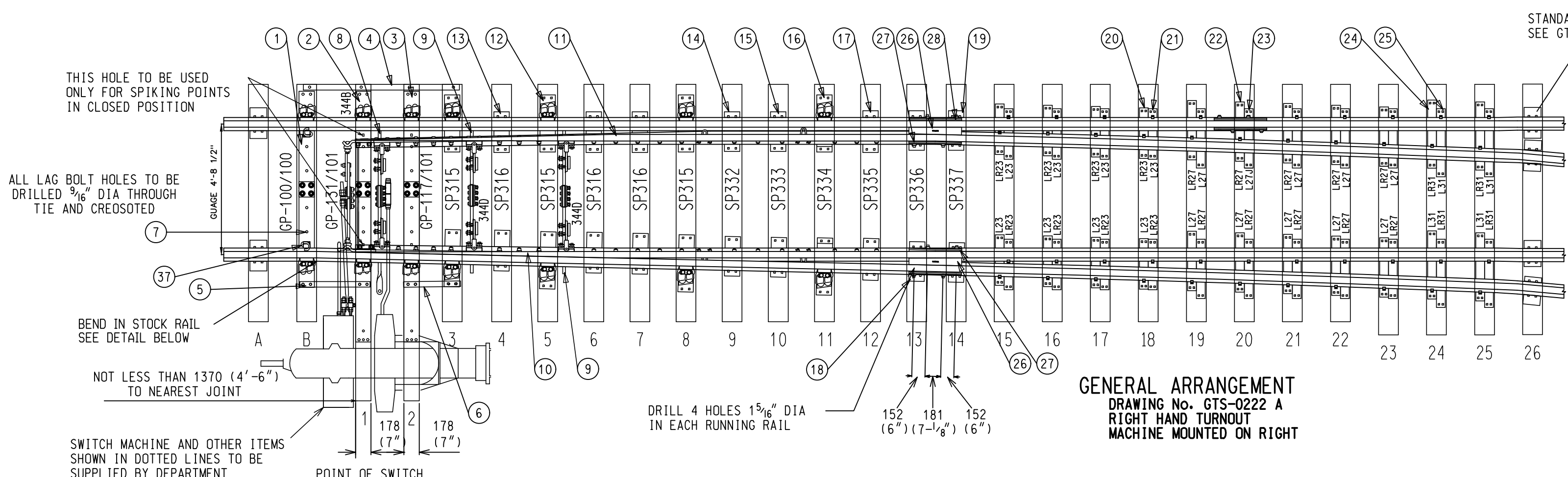
DRAWING No. GTS-0222 B
RIGHT HAND TURNOUT
MACHINE MOUNTED ON LEFT



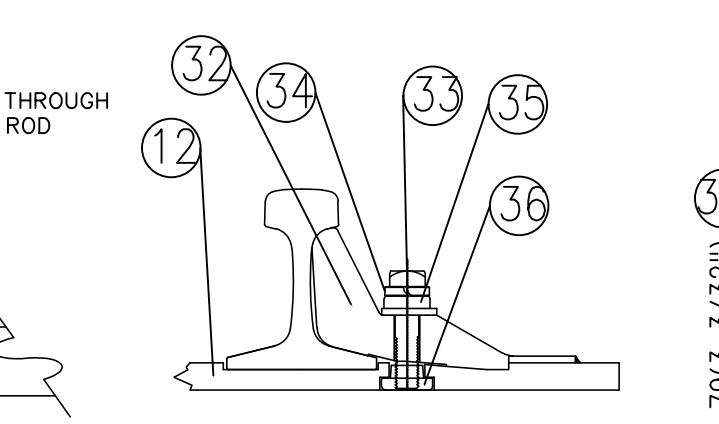
DRAWING No. GTS-0222 C
LEFT HAND TURNOUT
MACHINE MOUNTED ON RIGHT



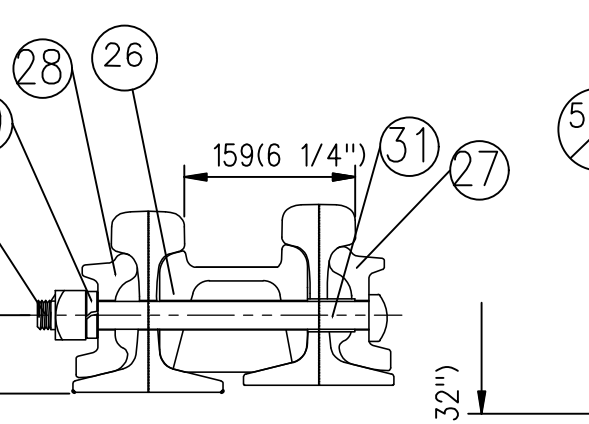
DRAWING No. GTS-0222 D
LEFT HAND TURNOUT
MACHINE MOUNTED ON LEFT



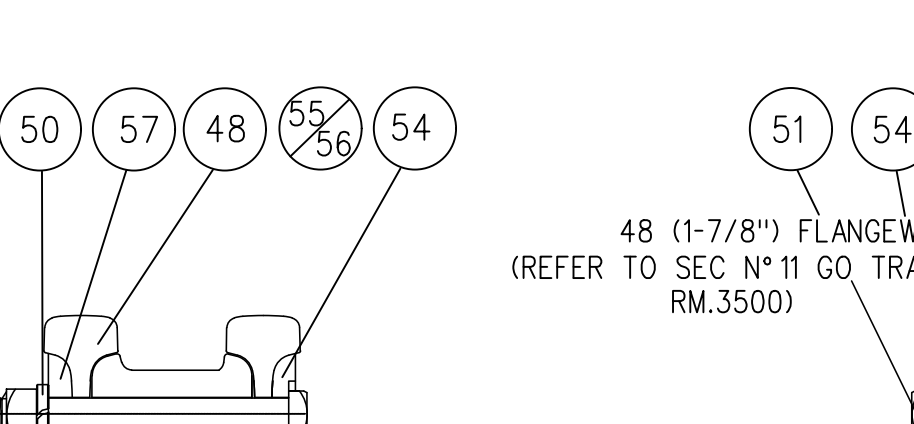
"MJ" CLIP ASSEMBLY



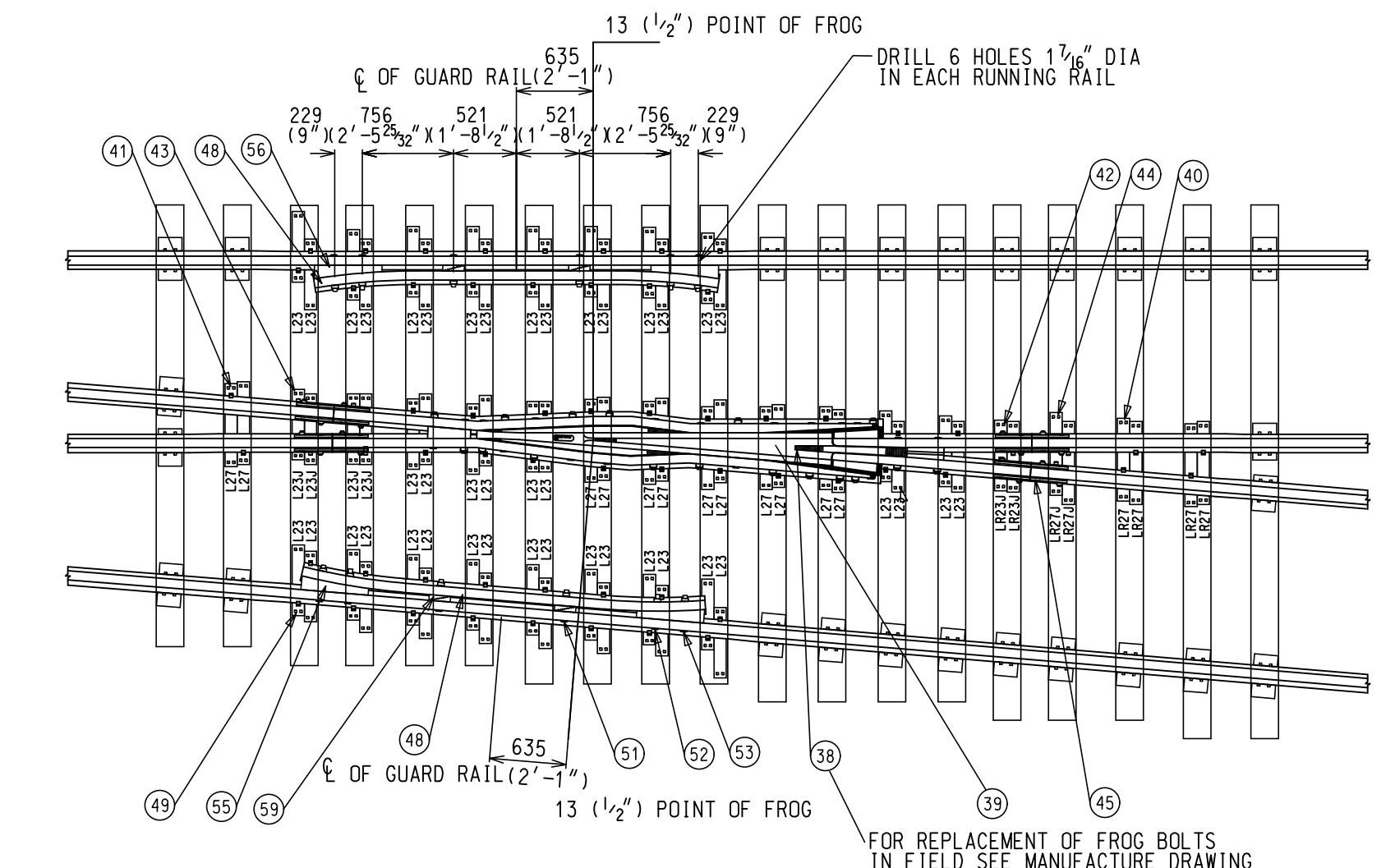
ADJUSTABLE RAIL BRACE ASSEMBLY



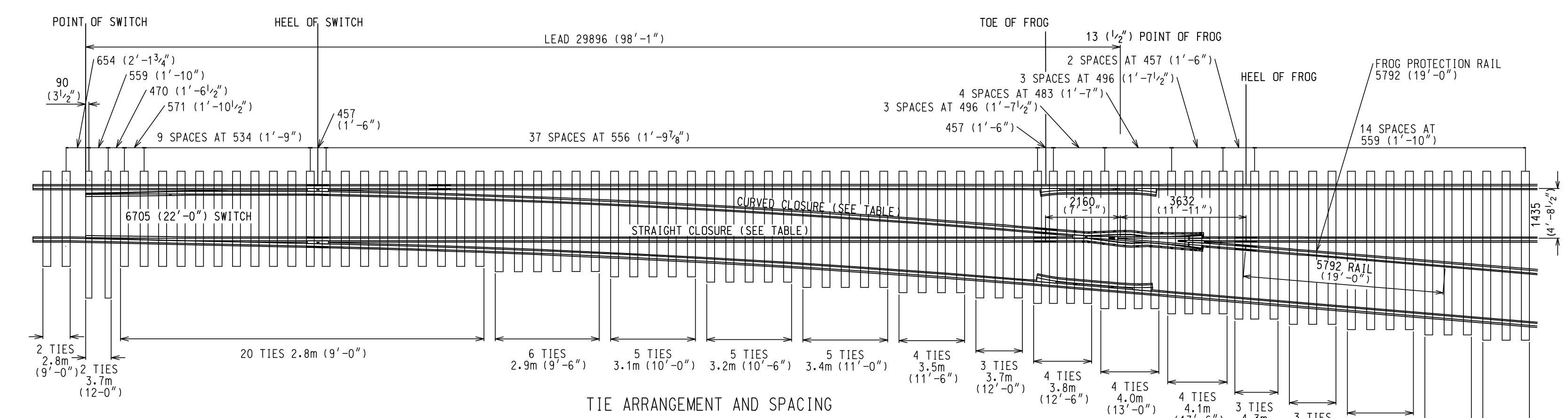
HEEL BLOCK ASSEMBLY



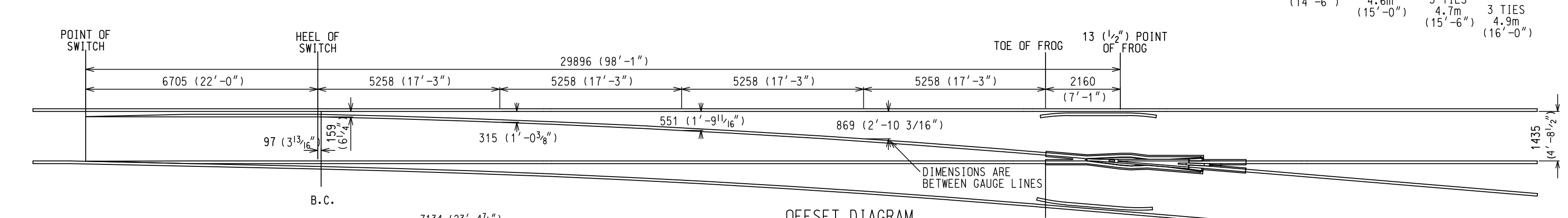
GUARD RAIL ASSEMBLIES



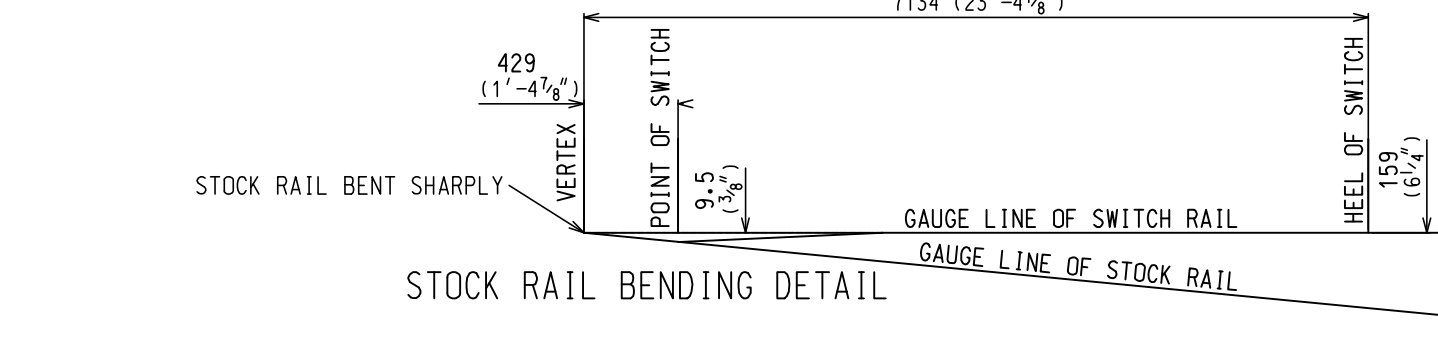
SPLICE BAR ASSEMBLY



TIE ARRANGEMENT AND SPACING



OFFSET DIAGRAM



STOCK RAIL BENDING DETAIL

NOTES

- TURNOUT TO BE INSTALLED AND MAINTAINED IN ACCORDING WITH THE LATEST ISSUE OF:
RM.3500 TURNOUTS
RM.3502 POWER, SPRING AND INSTALLED SWITCH
RM.3506 SWITCH STAND, SWITCH LAMPS AND TARGETS, WHERE APPLICABLE
- WHEN REFERRING TO POWER OPERATED TURNOUTS, DRAWING NUMBER MUST BE STATED AS A, B,C OR D:
A-RIGHT HAND TURNOUT P.O. MACHINE ON RIGHT
B-RIGHT HAND TURNOUT P.O. MACHINE ON LEFT
C-LEFT HAND TURNOUT P.O. MACHINE ON RIGHT
D-LEFT HAND TURNOUT P.O. MACHINE ON LEFT
- FOR THE VARIOUS STANDARD TURNOUT COMBINATIONS SEE INDEX SHEET GTS-0
- TURNOUT GEOMETRY, FOR TABLES OF DIMENSIONS AND OFFSETS SEE GTS-2

TURNOUT DATA

FROG No	12
LENGTH OF SWITCH	6705 (222'-0'')
HEEL SPREAD	159 (6 1/2'')
LEAD	29896 (98'-1'')
P.S. TO H.F.	33528 (110'-0'')
21031 (69') STRAIGHT CLOSURE LENGTHS MADE UP BY A 21031 (69') RAIL OR: A 11887 (39') AND 9144 (30') A 10973 (36') AND 10058 (33')	
21069 (69'-1 1/2'') CURVED CLOSURE LENGTHS MADE UP BY A 21069 (69'-1 1/2'') RAIL OR: A 11887 (39') AND 9182 (30'-1 1/2'') A 10973 (36') AND 10096 (33'-1 1/2'')	

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

No.	18/07/27	ADDED IMPERIAL TO METRIC CONVERSION NOTE	By Approved
Date		Revision	

Standard / NO. 12 TURNOUT-22'0" POINTS
POWER OPERATED
R.B.M. FROG- 132LB. R.E. RAIL

Drawn	MG	Checked	GGG	Approved	Management
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Date	DEC 15, 2017	Plan Number	GTS-0222	Rev	1
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ALL METRIC MEASUREMENTS, MILLIMETERS UNLESS STATED OTHERWISE, ARE A ROUNDED SOFT CONVERSION OF BRITISH UNITS SHOWN IN BRACKETS

BILL OF MATERIALS FOR GTS-0222

ITEM	DESCRIPTION	STANDARD DRAWING	MARK NO.	QUANTITY			
				A	B	C	D
SWITCH PACK							
1	1st. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0522	GP100/GP100	1	1	1	1
2	2nd. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0522	GP131/GP101	1	-	-	-
	2nd. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0522	GP130/GP104	-	1	-	-
	2nd. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0522	GP104/GP129	-	-	1	-
	2nd. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0522	GP101/GP132	-	-	-	1
3	3rd. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0522	GP117/GP101	1	-	-	-
	3rd. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0522	GP115/GP104	-	1	-	-
	3rd. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0522	GP104/GP113	-	-	1	-
	3rd. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0522	GP101/GP118	-	-	-	1
4	MILD STEEL STRAP	GTS-0356A	356A	1	1	1	1
5	MILD STEEL STRAP	GTS-0356B	356B	1	1	1	1
6	MILD STEEL STRAP	GTS-0356D	356D	1	1	1	1
7	DOUBLE SPRING WASHER - TYPE FE6	GTS-1310	-	30	30	30	30
8	SWITCH ROD	GTS-0344B	344B	1	1	1	1
9	SWITCH ROD	GTS-0344D	344D	2	2	2	2
10	RIGHT POINT RAIL	GTS-0333A	333A	1	1	1	1
11	LEFT POINT RAIL	GTS-0333B	333B	1	1	1	1
12	SWITCH PLATE	GTS-0508	SP315	6	6	6	6
13	SWITCH PLATE	GTS-0509	SP316	6	6	6	6
14	SWITCH PLATE	GTS-0509	SP332	2	2	2	2
15	SWITCH PLATE	GTS-0509	SP333	2	2	2	2
16	SWITCH PLATE	GTS-0510	SP334	2	2	2	2
17	SWITCH PLATE	GTS-0511	SP335	2	2	2	2
18	SWITCH PLATE	GTS-0511	SP336	2	2	2	2
19	SWITCH PLATE	GTS-0511	SP337	2	2	2	2
20	HOOK TWIN TIE PLATE	GTS-0503	LR23	8	8	8	8
21	HOOK TWIN TIE PLATE	GTS-0503	L23	8	8	8	8
22	HOOK TWIN TIE PLATE	GTS-0503	LR27	10	10	10	10
23	HOOK TWIN TIE PLATE	GTS-0503	L27	10	10	10	10
24	HOOK TWIN TIE PLATE	GTS-0503	LR31	4	4	4	4
25	HOOK TWIN TIE PLATE	GTS-0503	L31	4	4	4	4
26	HEEL BLOCK	GTS-0360	16-6&22GP1-S	2	2	2	2
27	BENT SPLICE BAR(4 HOLE) - 132/136 LB. R.E.	GTS-1204D	1204D	2	2	2	2
28	STRAIGHT SPLICE BAR (4 HOLE) - 132/136 LB. R.E.	GTS-1203	-	1	1	1	1
29	SPRING WASHER for 1 - 1/8" DIA. BOLT	GTS-1301	-	8	8	8	8
30	1 - 1/8"DIA. - 7 NC OVAL NECK TRACK BOLT X 12 - 1/2" LG. C/W SQ. NUT	GTS-1320/4	-	8	8	8	8
31	PIPE THIMBLE - 1 - 1/4" DIA. X 2 - 3/8" LONG	GTS-0345J	J	2	2	2	2
32	ADJUSTABLE RAIL BRACE	GTS-0354	132M-14	14	14	14	14
33	7/8" DIA. 9 UNC SQ. HD. BOLT X 3-3/4" LG.	GTS-1308/5	-	28	28	28	28
34	SPRING WASHER for 7/8" DIA. BOLT	GTS-1301	-	28	28	28	28
35	DOUBLE WASHER	GTS-0354	M-10	14	14	14	14
36	DOUBLE NUT	GTS-0354	M-9	14	14	14	14
37	PANDROL CLIP - PR 631A	GTS-1322	-	2	2	2	2
FROG							
38	#12 - 132 LB. RAIL BOUND MANGANESE STEEL FROG	GTS-0832	-	1	1	1	1
FROG PACK							
39	HOOK TWIN TIE PLATE	GTS-0503	L23	10	10	10	10
40	HOOK TWIN TIE PLATE	GTS-0503	LR27	4	4	4	4
41	HOOK TWIN TIE PLATE	GTS-0503	L27	12	12	12	12
42	HOOK TWIN TIE PLATE	GTS-0503	LR23J	2	2	2	2
43	HOOK TWIN TIE PLATE	GTS-0503	L23J	4	4	4	4
44	HOOK TWIN TIE PLATE	GTS-0503	LR27J	2	2	2	2
45	STRAIGHT SPLICE BAR (4 HOLE) - 132/136 LB R.E.	GTS-1203	-	4	4	4	4
46	SPRING WASHER for 1 - 1/8" DIA. BOLT	GTS-1301	-	16	16	16	16
47	1-1/8" DIA. 7 NC OVAL NECK TRACK BOLT X 5-7/8" LG. C/W SQ. NUT	GTS-1320/1	-	16	16	16	16
GUARD RAIL PACK							
48	FROG GUARD RAIL 11' - 0" LONG	GTS-1106	-	2	2	2	2
49	HOOK TWIN TIE PLATE	GTS-0503	L23	32	32	32	32
50	SPRING WASHER for 1 - 3/8" DIA BOLT	GTS-1301	-	12	12	12	12
51	1 - 3/8" DIA. 6 UNC SQ. HD. BOLT X 9-1/2" LG. C/W SQ. NUT	GTS-1309/100	-	4	4	4	4
52	1 - 3/8" DIA. 6 UNC SQ. HD. BOLT X 10-1/2" LG. C/W SQ. NUT	GTS-1309/102	-	4	4	4	4
53	1 - 3/8" DIA. 6 UNC SQ. HD. BOLT X 11" LG. C/W SQ. NUT	GTS-1309/104	-	4	4	4	4
54	HEAD WASHER	GTS-0836J	837J	12	12	12	12
55	END CASTING LEFT HAND 132 LB. R.E.	GTS-0848	GG2-S	2	2	2	2
56	END CASTING RIGHT HAND 132 LB. R.E.	GTS-0848	GG3-S	2	2	2	2
57	TAIL WASHER (BEVELLED)	GTS-0837B	837B	8	8	8	8
58	TAIL WASHER (NOT BEVELLED)	GTS-0837K	837K	4	4	4	4
59	ADJUSTABLE BLOCK 132 LB. R.E.	GTS-0848	GG1-S	8	8	8	8
TO UPGRADE EXISTING TURNOUT, REPLACE 132 LB. PLATES WITH EQUIVALENT 136 LB. PLATES							
MINOR TIE SPACING ADJUSTMENTS MAY BE NECESSARY							
TURNOUT PACKAGES							
TURNOUT NUMBER	DESCRIPTION			QUANTITY PER TURNOUT			
GTS- 222A	FROG RBM NO. 12-132			1			
	SW-PK INS PO NO. 12A-132 LBS.			1			
	GR-PK 132 11'-0"			1			
	FR-PK RBM 12-132			1			
GTS- 222B	FROG RBM NO. 12-132			1			
	SW-PK INS PO NO. 12B-132 LBS.			1			
	GR-PK 132 11'-0"			1			
	FR-PK RBM 12-132			1			
GTS- 222C	FROG RBM NO. 12-132			1			
	SW-PK INS PO NO. 12C-132 LBS.			1			
	GR-PK 132 11'-0"			1			
	FR-PK RBM 12-132			1			
GTS- 222D	FROG RBM NO. 12-132			1			
	SW-PK INS PO NO. 12D-132 LBS.			1			
	GR-PK 132 11'-0"			1			
	FR-PK RBM 12-132			1			
ABBREAVATIONS							
SW - PK - SWITCH PAK		SAM - SAMSON		SGM - SELF GUARD MANGANESE			
FR - PK - FROG PAK		HO - HAND OPERATED		RBM - RAIL BOUND MANGANESE			
GR - PK - GUARD RAIL PAK		SO - SPRING OPERATED					
INS - INSULATED		PO - POWER OPERATED					
NOTE:							
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							
BILL OF SWITCH TIES FOR HAND AND SPRING OPERATION				BILL OF SWITCH FOR POWER OPERATION			
TIES 180 X 230 mm (7" X 9")				TIES 180 X 230 mm (7" X 9")			
LENGTH							
METRES	FEET/INCHES			NO. OF PIECES			
2.8	9' - 0"			22			
3.1	10' - 0"			11			
3.4	11' - 0"			10			
3.7	12' - 0"			9			
4.0	13' - 0"			8			
4.3	14' - 0"			7			
4.6	15' - 0"			7			
4.9	16' - 0"			6			
TOTAL NUMBER OF TIES - 80							