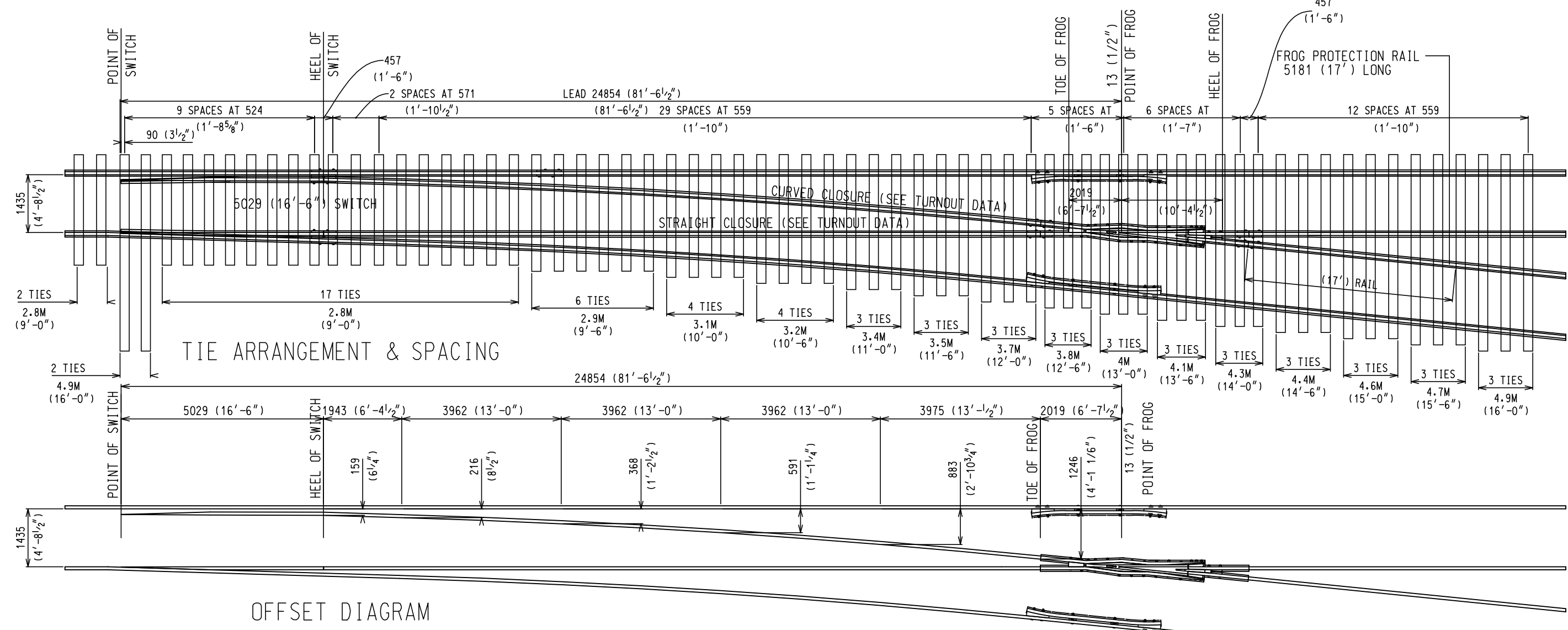
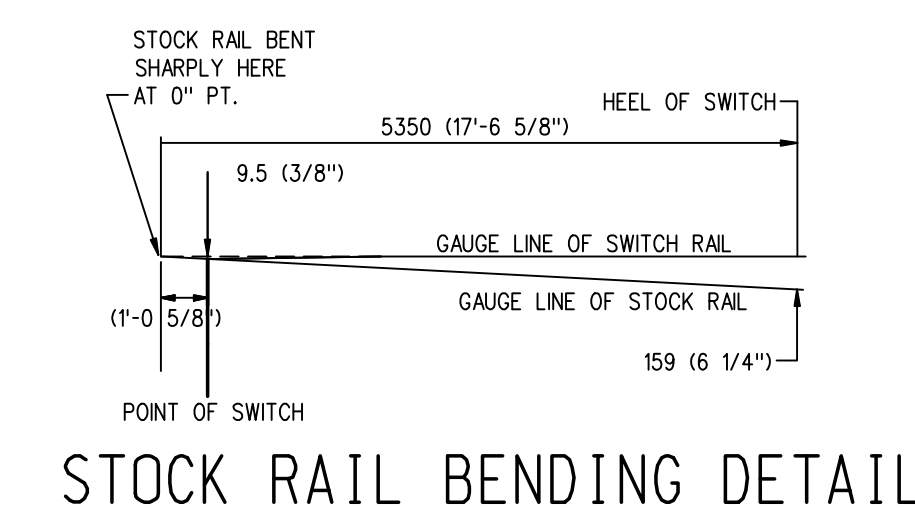


NOTES

- 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 MANUAL TURNOUTS, DRAWING NUMBER MUST BE STATED AS A OR B: A-RIGHT HAND TURNOUT B-LEFT HAND TURNOUT
- FOR GENERAL ARRANGEMENT OF SWITCH STAND & COMBINATION SEE GTS-701 AND GTS-702
- 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 -----10
 LENGTH OF SWITCH-----16'-6"
 HEEL SPREAD-----6 1/4"
 LEAD-----81'-6 1/2"
 PS TO H.F.-----91'-11"
 58'-5" STRAIGHT CLOSURE LENGTH
 MADE UP BY A 58'-5" RAIL OR:
 A 39' AND 19'-5" RAIL
 A 36' AND 22'-5" RAIL
 A 33' AND 25'-5" RAIL
 A 30' AND 28'-5" RAIL

58'-7" CURVE CLOSURE LENGTH
 MADE UP BY A 58'-7" RAIL OR:
 A 39' AND 19'-7" RAIL
 A 36' AND 22'-7" RAIL
 A 33' AND 25'-7" RAIL
 A 30' AND 28'-7" RAIL

METRIC CONVERSION: 1 inch=25.4mm, 1 foot=304.8mm	
1	18/07/27 ADDED IMPERIAL TO METRIC CONVERSION NOTE
No.	Date Revision By Approved
Standard	NO. 10 TURNOUT-16'-6" POINTS R.B.M. FROG- INSULATED 132LB. R.E. RAIL
Drawn	Checked GGS Approved <i>[Signature]</i>
Date	DEC 15, 2017 Plan Number GTS-0146 Rev 1
REFERENCE: TS-146 A/B	Sheet 1 OF 1



BILL OF MATERIALS FOR GTS-0146

ITEM	DESCRIPTION	STANDARD DRAWING	MARK NO.	QUANTITY	
				A	B
SWITCH PACK					
1	1st. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0522	GP100/GP100	1	1
2	2nd. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0522	GP105/GP101	1	-
-	2nd. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0522	GP101/GP102	-	1
3	SWITCH ROD	GTS-0341A	341A	1	1
4	SWITCH ROD	GTS-0341D	341D	1	1
5	RIGHT POINT RAIL	GTS-0316A	316A	1	1
6	LEFT POINT RAIL	GTS-0316B	316B	1	1
7	SWITCH PLATE	GTS-0508	SP315	6	6
8	SWITCH PLATE	GTS-0509	SP316	6	6
9	SWITCH PLATE	GTS-0510	SP317	2	2
10	SWITCH PLATE	GTS-0511	SP335	2	2
11	SWITCH PLATE	GTS-0511	SP336	2	2
12	SWITCH PLATE	GTS-0511	SP337	2	2
13	HOOK TWIN TIE PLATE	GTS-0503	LR23	6	6
14	HOOK TWIN TIE PLATE	GTS-0503	L23	6	6
15	HOOK TWIN TIE PLATE	GTS-0503	LR27	8	8
16	HOOK TWIN TIE PLATE	GTS-0503	L27	8	8
17	HOOK TWIN TIE PLATE	GTS-0503	LR31	4	4
18	HOOK TWIN TIE PLATE	GTS-0503	L31	4	4
19	HEEL BLOCK	GTS-0360	16-6&22GP1-S	2	2
20	BENT SPLICE BAR(4 HOLE) - 132/136 LB. R.E.	GTS-1204D	1204D	2	2
21	STRAIGHT SPLICE BAR (4 HOLE) - 132/136 LB. R.E.	GTS-1203	-	1	1
22	SPRING WASHER for 1 - 1/8" DIA. BOLT	GTS-1301	-	12	12
23	1 - 1/8"DIA. - 7 NC OVAL NECK TRACK BOLT X 12 - 1/2" LG. C/W SQ. NUT	GTS-1320/4	-	8	8
24	PIPE THIMBLE - 1 - 1/4" DIA. X 2 - 3/8" LONG	GTS-0345J	J	2	2
25	1/4" COTTER PIN X 2" LG.	-	-	4	4
26	1-1/8" DIA. - 7 UNC HEX HD. BOLT X 5" LG. C/W HEX NUT	GTS-1311/2	-	4	4
27	ADJUSTABLE RAIL BRACE	GTS-0354	132M-14	12	12
28	7/8" DIA. 9 UNC SQ. HD. BOLT X 3-3/4" LG.	GTS-1308/5	-	24	24
29	SPRING WASHER for 7/8" DIA. BOLT	GTS-1301	-	24	24
30	DOUBLE WASHER	GTS-0354	M-10	12	12
31	DOUBLE NUT	GTS-0354	M-9	12	12
32	PANDROL CLIP - PR 631A	GTS-1322	-	2	2
33				16	16
	DOUBLE SPRING WASHER - TYPE FE6	GTS-1310	-	16	16
FROG					
34	#10-132 LB. RAIL BOUND MANGANESE STEEL FROG	GTS-0823	-	1	1
FROG PACK					
35	HOOK TWIN TIE PLATE	GTS-0503	L23	8	8
36	HOOK TWIN TIE PLATE	GTS-0503	LR27	2	2
37	HOOK TWIN TIE PLATE	GTS-0503	L27	10	10
38	HOOK TWIN TIE PLATE	GTS-0503	LR31	2	2
39	HOOK TWIN TIE PLATE	GTS-0503	L31	2	2
40	HOOK TWIN TIE PLATE	GTS-0503	LR23J	2	2
41	HOOK TWIN TIE PLATE	GTS-0503	L23J	2	2
42	HOOK TWIN TIE PLATE	GTS-0503	LR27J	2	2
43	HOOK TWIN TIE PLATE	GTS-0503	L27J	2	2
44	STRAIGHT SPLICE BAR (4 HOLE) - 132/136 LB. R.E.	GTS-1203	-	4	4
45	SPRING WASHER for 1 - 1/8" DIA. BOLT	GTS-1301	-	16	16
46	1 - 1/8" DIA. - 7 NC OVAL NECK TRACK BOLT X 5-7/8" LG. C/W SQ. NUT	GTS-1320/1	-	16	16
GUARD RAIL PACK					
47	FROG GUARD RAIL 11' - 0" LONG	GTS-1106	-	2	2
48	HOOK TWIN TIE PLATE	GTS-0503	L23	32	32
49	SPRING WASHER for 1 - 3/8" DIA. BOLT	GTS-1301	-	12	12
50	1-3/8" DIA. - 6 UNC SQ. HD. BOLT X 9 - 1/2" LG. C/W SQ. NUT	GTS-1309/100	-	4	4
51	1-3/8" DIA. - 6 UNC SQ. HD. BOLT X 10 - 1/2" LG. C/W SQ. NUT	GTS-1309/102	-	4	4
52	1-3/8" DIA. - 6 UNC SQ. HD. BOLT X 11" LG. C/W SQ. NUT	GTS-1309/104	-	4	4
53	HEAD WASHER	GTS-0837J	837J	12	12
54	END CASTING LEFT HAND 132 LB. R.E.	GTS-0848	GG2-S	2	2
55	END CASTING RIGHT HAND 132 LB. R.E.	GTS-0848	GG3-S	2	2
56	TAIL WASHER (BEVELLED)	GTS-0837B	837B	8	8
57	TAIL WASHER (NOT BEVELLED)	GTS-0837K	837K	4	4
58	ADJUSTABLE BLOCK 132 LB. R.E.	GTS-0848	GG1-S	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- 146A	FROG RBM 10 - 132	1			
	SW-PK INS HO NO. 10A - 132 LBS.	1			
	GR-PK 132 11' - 0"	1			
	FR-PK RBM 10 - 132	1			
GTS- 146B	FROG RBM 10 - 132	1			
	SW-PK INS HO NO. 10B - 132 LBS.	1			
	GR-PK 132 11' - 0"	1			
	FR-PK RBM 10 - 132	1			
ABBREAVATIONS					
SW - PK - SWITCH PAK		SAM - SAMSON	SGM -		
FR - PK - FROG PAK		SELF GUARD MANGANESE	RBM -		
GR - PK - GUARD RAIL PAK		HO - HAND OPERATED			
INS - INSULATED		RAIL BOUND MANGANESE			
		SO - SPRING OPERATED			
		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					
TIES 180 X 230 mm (7" X 9")					
LENGTH					
METRES	FEET/INCHES	NO. OF PIECES			
2.8	9' - 0"	19			
3.1	10' - 0"	10			
3.4	11' - 0"	7			
3.7	12' - 0"	6			
4.0	13' - 0"	6			
4.3	14' - 0"	6			
4.6	15' - 0"	6			
4.9	16' - 0"	8			
TOTAL NUMBER OF TIES - 68					