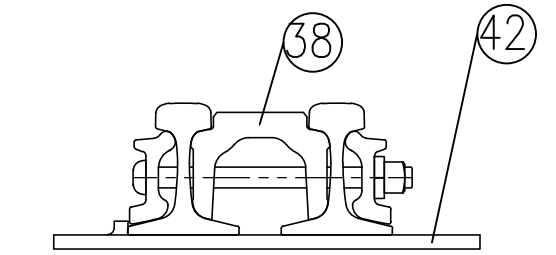
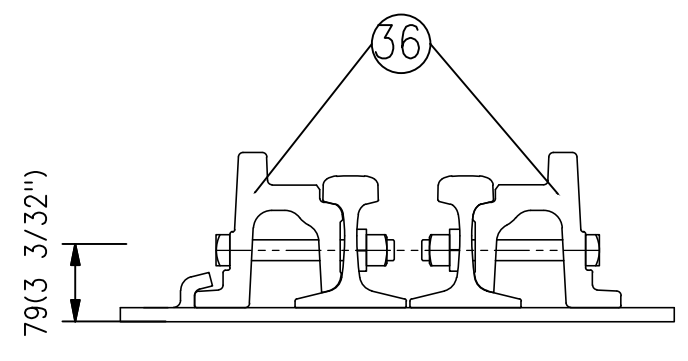
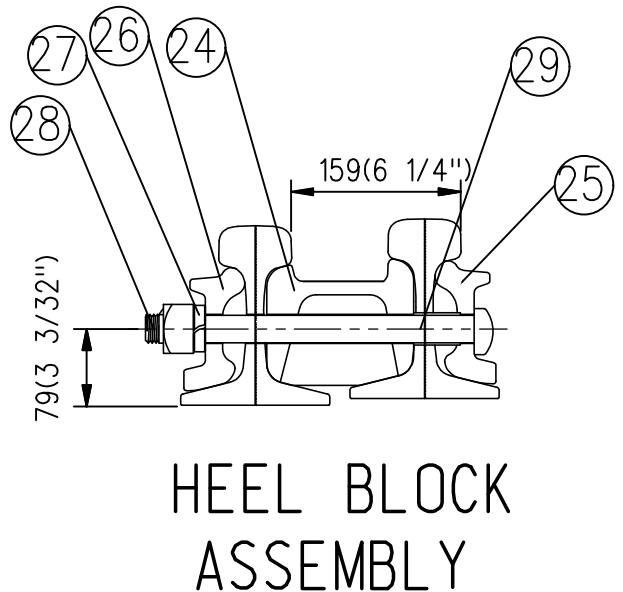


GENERAL ARRANGEMENT  
DRAWING NO GTS-0157 A  
RIGHT HAND TURNOUT  
MACHINE MOUNTED ON RIGHT



HEEL BLOCK ASSEMBLY

TOE OF FROG ASSEMBLY

HEEL OF FROG ASSEMBLY

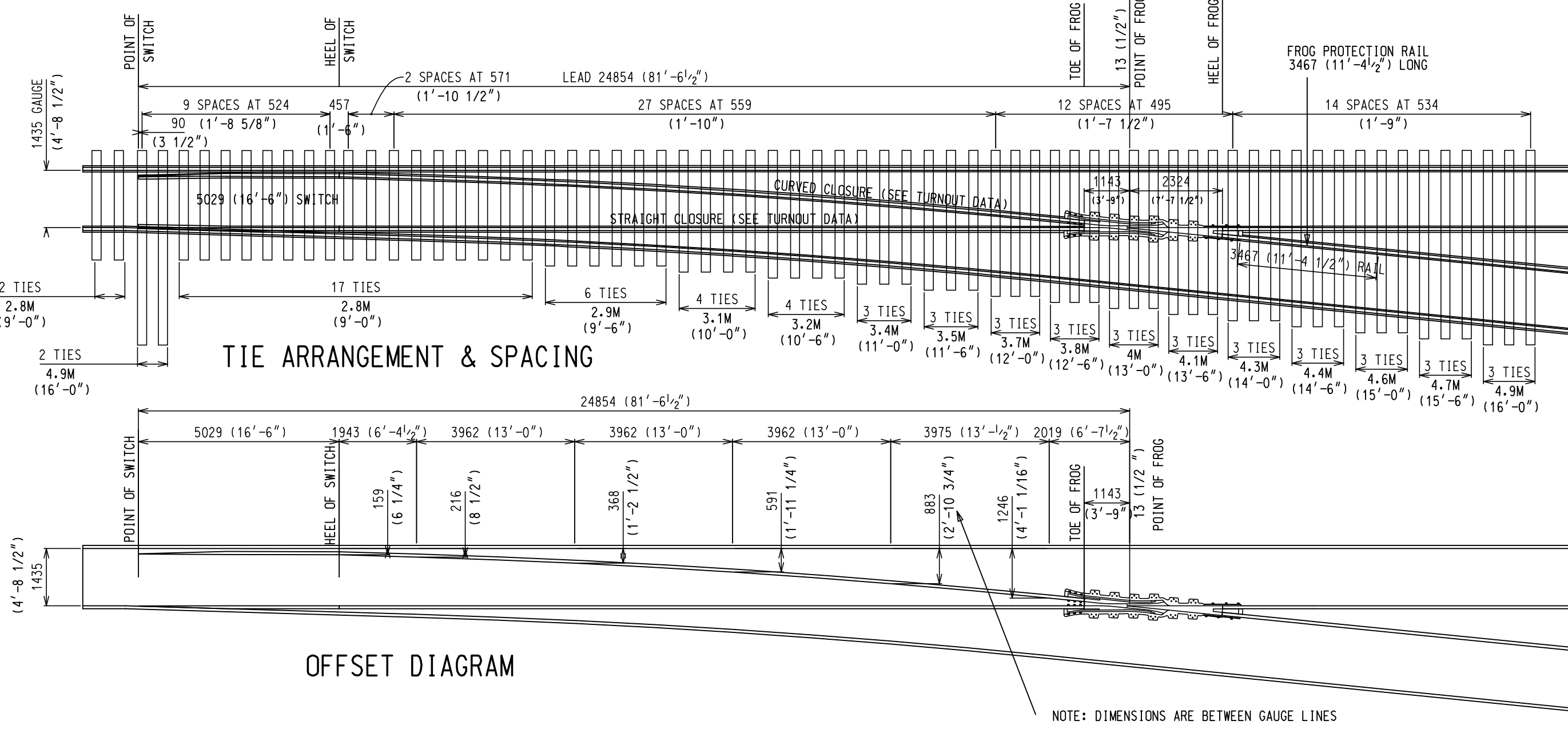


ADJUSTABLE RAIL BRACE ASSEMBLY

"MJ" CLIP ASSEMBLY

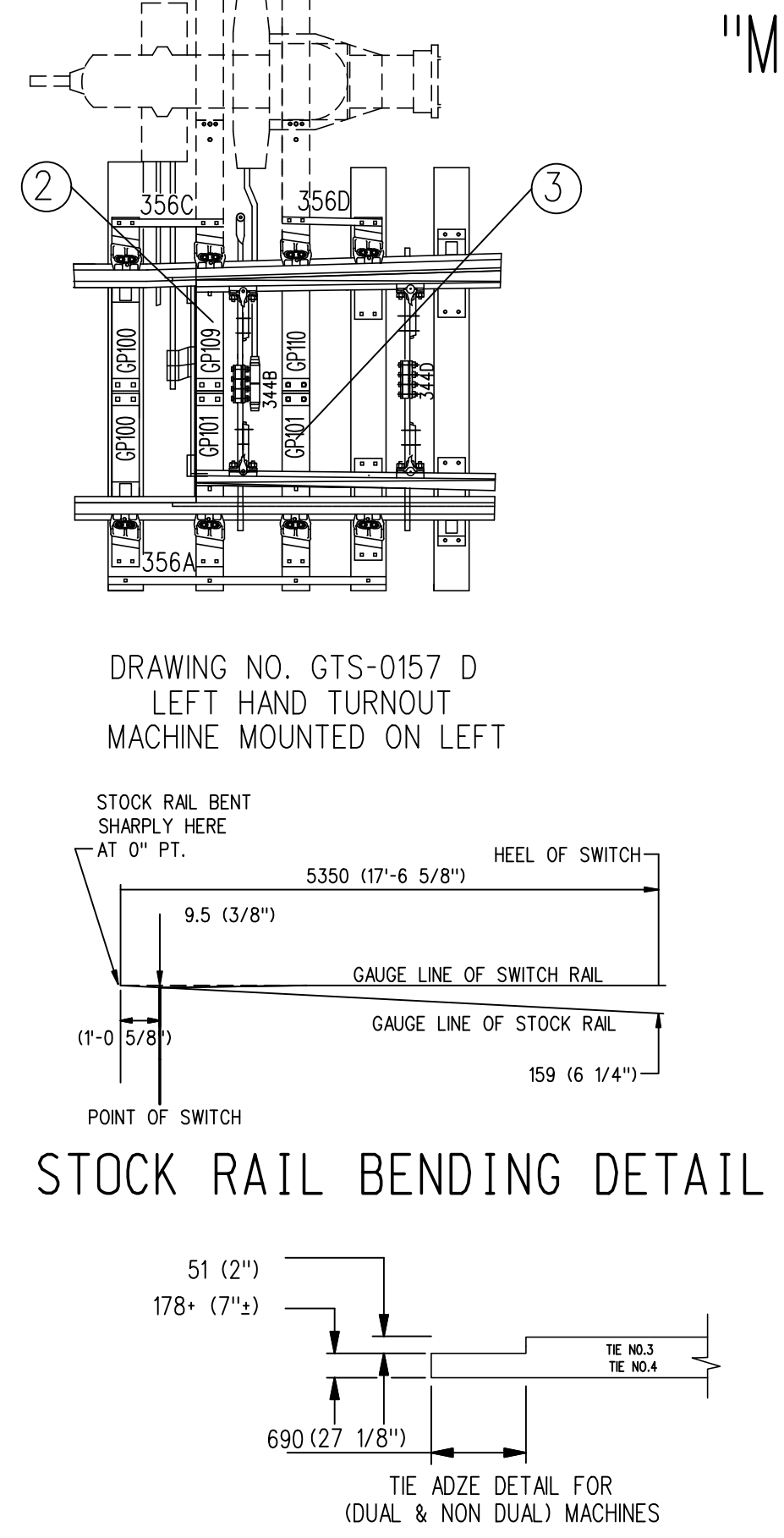
NOTES

- 1- 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
- 2- 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
- 3- FOR THE VARIOUS STANDARD TURNOUT COMBINATIONS SEE INDEX SHEET GTS-0
- 4- TURNOUT GEOMETRY, FOR TABLES OF DIMENSIONS AND OFFSETS SEE GTS-1



TIE ARRANGEMENT & SPACING

OFFSET DIAGRAM



STOCK RAIL BENDING DETAIL

TURNOUT DATA:

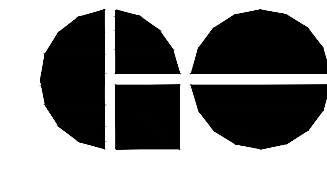
FROG NO -----10  
 LENGTH OF SWITCH-----16'-6"  
 HEEL SPREAD-----6 1/4"  
 LEAD-----81'-6 1/2"  
 PS TO H.F.-----89'-2"

61'-3 1/2" STRAIGHT CLOSURE LENGTH  
 MADE UP BY A 61'-3 1/2" RAIL OR:  
 A 39' AND 22'-3 1/2" RAIL  
 A 36' AND 25'-3 1/2" RAIL  
 A 33' AND 28'-3 1/2" RAIL

61'-5 1/2" CURVE CLOSURE LENGTH  
 MADE UP BY A 61'-5 1/2" RAIL OR:  
 A 39' AND 22'-5 1/2" RAIL  
 A 36' AND 25'-5 1/2" RAIL  
 A 33' AND 28'-5 1/2" RAIL

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

No.	Date	Revision	By Approved
1	18/07/27	ADDED IMPERIAL TO METRIC CONVERSION NOTE	
Standard		NO. 10 TURNOUT-16'-6" POINTS POWER OPERATED S.G.M FROG-132LB. R.E. RAIL	
Drawn	Checked	Approved	
MG	GGG		
Date	Plan Number	GTS-0157	Rev 1
DEC 15, 2017			
REFERENCE: TS-157 A/B		Sheet 1 OF 1	



METROLINX

**BILL OF MATERIALS FOR GTS-0157**

ITEM	DESCRIPTION	STANDARD DRAWING	MARK NO.	QUANTITY			
				A	B	C	D
<b>SWITCH PACK</b>							
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	GP107/GP101	1	-	-	-
	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	GP14/GP102	-	-	1	-
	2nd. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0522	GP101/GP109	-	-	-	1
3	3rd. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0522	GP108/GP101	1	-	-	-
	3rd. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0522	GP106/GP104	-	1	-	-
	3rd. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0522	GP104/GP103	-	-	1	-
	3rd. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0522	GP101/GP110	-	-	-	1
4	MILD STEEL STRAP	GTS-0356A	356A	1	1	1	1
5	MILD STEEL STRAP	GTS-0356D	356D	1	1	1	1
6	MILD STEEL STRAP	GTS-0356C	356C	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	1	1	1	1
10	RIGHT POINT RAIL	GTS-0317A	317A	1	1	1	1
11	LEFT POINT RAIL	GTS-0317B	317B	1	1	1	1
12	SWITCH PLATE	GTS-0508	SP315	4	4	4	4
13	SWITCH PLATE	GTS-0509	SP316	6	6	6	6
14	SWITCH PLATE	GTS-0510	SP317	2	2	2	2
15	SWITCH PLATE	GTS-0511	SP335	2	2	2	2
16	SWITCH PLATE	GTS-0511	SP336	2	2	2	2
17	SWITCH PLATE	GTS-0511	SP337	2	2	2	2
18	HOOK TWIN TIE PLATE	GTS-0503	LR23	6	6	6	6
19	HOOK TWIN TIE PLATE	GTS-0503	L23	6	6	6	6
20	HOOK TWIN TIE PLATE	GTS-0503	LR27	8	8	8	8
21	HOOK TWIN TIE PLATE	GTS-0503	L27	8	8	8	8
22	HOOK TWIN TIE PLATE	GTS-0503	LR31	4	4	4	4
23	HOOK TWIN TIE PLATE	GTS-0503	L31	4	4	4	4
24	HEEL BLOCK	GTS-0360	16-6&22GP1-S	2	2	2	2
25	BENT SPLICE BAR(4 HOLE) - 132/136 LB. R.E.	GTS-1204D	1204D	2	2	2	2
26	STRAIGHT SPLICE BAR (4 HOLE) - 132/136 LB. R.E.	GTS-1203	-	1	1	1	1
27	SPRING WASHER for 1 - 1/8" DIA. BOLT	GTS-1301	-	8	8	8	8
28	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
29	PIPE THIMBLE - 1 - 1/4" DIA. X 2 - 3/8" LONG	GTS-0345J	J	2	2	2	2
30	ADJUSTABLE RAIL BRACE	GTS-0354	132M-14	12	12	12	12
31	7/8" DIA. 9 UNC SQ. HD. BOLT X 3-3/4" LG.	GTS-1308/5	-	24	24	24	24
32	SPRING WASHER for 7/8" DIA. BOLT	GTS-1301	-	24	24	24	24
33	DOUBLE WASHER	GTS-0354	M-10	12	12	12	12
34	DOUBLE NUT	GTS-0354	M-9	12	12	12	12
35	PANDROL CLIP - PR 631A	GTS-1322	-	2	2	2	2
<b>FROG</b>							
36	#10-132 LB. SELF GUARDED MANGANESE STEEL FROG (INTEGRAL BASE)	D-10229 NOR	-	1	1	1	1
<b>FROG PACK</b>							
37	HOOK TWIN TIE PLATE	GTS-0503	LR23	2	2	2	2
38	HOOK TWIN TIE PLATE	GTS-0503	L23	2	2	2	2
39	HOOK TWIN TIE PLATE	GTS-0503	LR27	4	4	4	4
40	HOOK TWIN TIE PLATE	GTS-0503	L27	4	4	4	4
41	HOOK TWIN TIE PLATE	GTS-0503	H31	2	2	2	2
42	HOOK TWIN TIE PLATE	GTS-0503	L23J	4	4	4	4
	STRAIGHT SPLICE BAR (4 HOLE) - 132/136 LB. R.E.	GTS-1203	-	1	1	1	1
***TO UPGRADE EXISTING TURNOUT, REPLACE 132 LB. PLATES WITH EQUIVALENT 136 LB. PLATES.***							
*** MINOR TIE SPACING ADJUSTMENTS MAY BE NECESSARY. ***							
<b>TURNOUT PACKAGES</b>							
<b>TURNOUT NUMBER</b>	<b>DESCRIPTION</b>	<b>QUANTITY PER TURNOUT</b>					
GTS- 157A	FROG SGM 10 - 132	1					
	SW-PK INS PO NO. 10A - 132 LBS.	1					
	FR-PK SGM 10 - 132	1					
GTS- 157B	FROG SGM 10 - 132	1					
	SW-PK INS PO NO. 10B-100 LBS.	1					
	FR-PK SGM 10 - 132	1					
GTS- 157C	FROG SGM 10 - 132	1					
	SW-PK INS PO NO. 10C-100 LBS.	1					
	FR-PK SGM 10 - 132	1					
GTS- 157D	FROG SGM 10 - 132	1					
	SW-PK INS PO NO. 10D-100 LBS.	1					
	FR-PK SGM 10 - 132	1					
<b>ABBREAVATIONS</b>							
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")			
<b>LENGTH</b>							
<b>METRES</b>	<b>FEET/INCHES</b>	<b>NO. OF PIECES</b>					
2.8	9' - 0"	19					
3.1	10' - 0"	10					
3.4	11' - 0"	7					
3.7	12' - 0"	8					
4.0	13' - 0"	6					
4.3	14' - 0"	6					
4.6	15' - 0"	6					
4.9	16' - 0"	6					
TOTAL NUMBER OF TIES - 68							