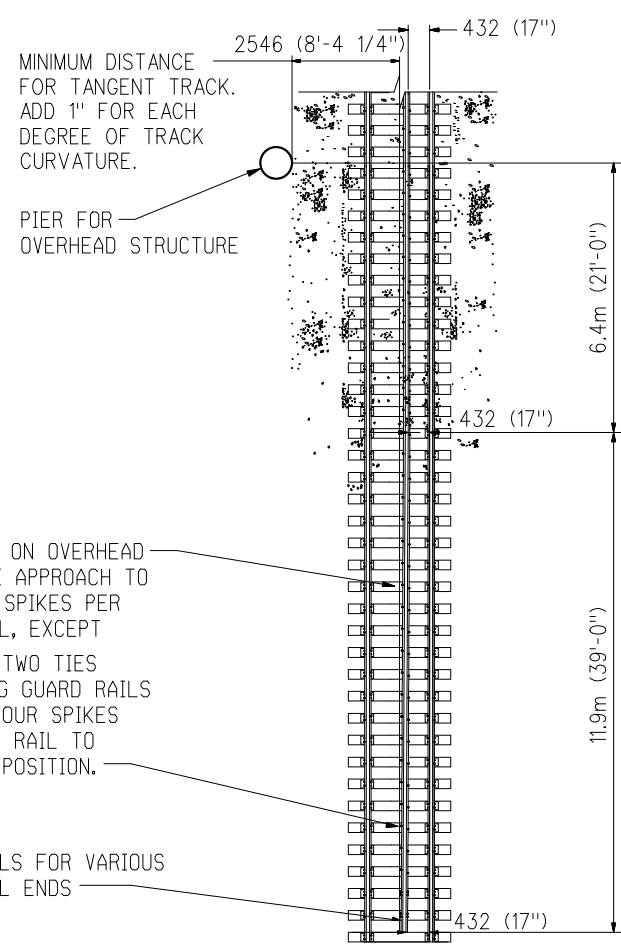


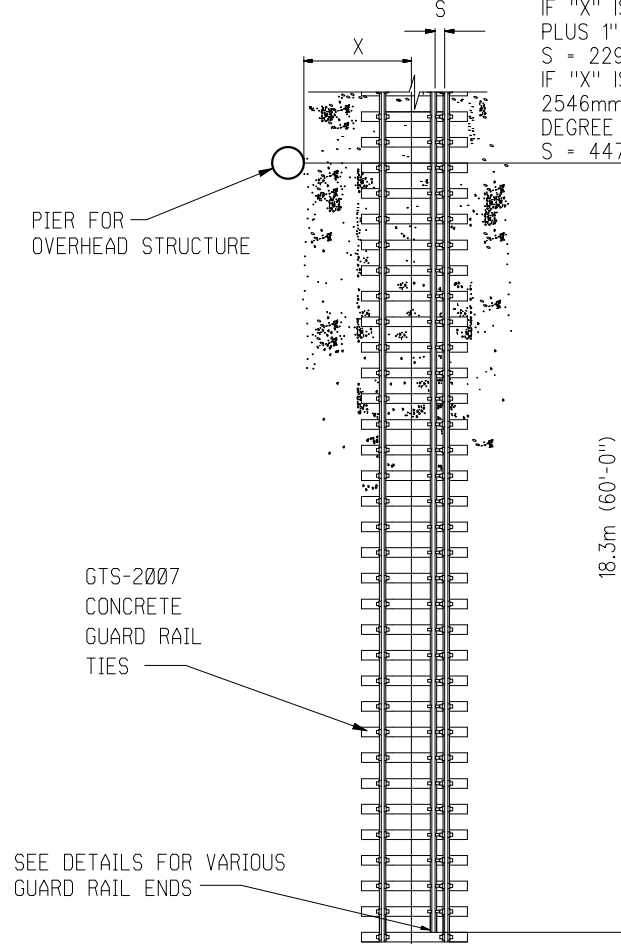
WOOD TIES OVERHEAD STRUCTURES

STRUCTURE CLOSER THAN 2546 (8'-4 1/4") TO CL OF TRACK



WOOD TIES OVERHEAD STRUCTURES

STRUCTURE MORE THAN 2546 (8'-4 1/4") FROM CL OF TRACK ANY PART WITHIN 7.6m (25'-0")

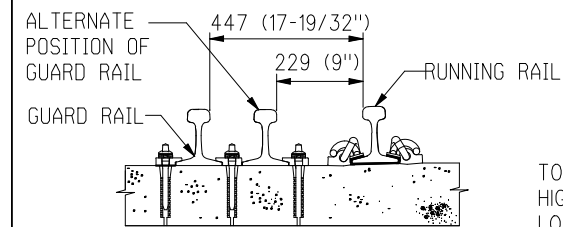


CONCRETE TIES OVERHEAD STRUCTURES

ANY PART WITHIN 7.6m (25'-0")

IF "X" IS LESS THAN 2546mm (8'-4 1/4") PLUS 1" PER DEGREE OF CURVATURE, S = 229mm (9")
IF "X" IS EQUAL TO OR GREATER THAN 2546mm (8'-4 1/4") PLUS 1" PER DEGREE OF CURVATURE, S = 447mm (17-19/32").

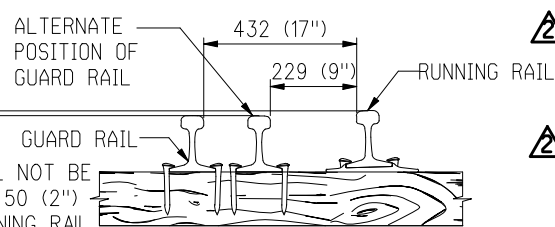
GTS-2007 GUARD RAIL TIES REQUIRE 132 LB. OR 136 LB. GUARD RAILS.



TYPICAL CONCRETE TIE SECTION

TOP OF GUARD RAIL SHALL NOT BE HIGHER, NOR MORE THAN 50 (2") LOWER THAN TOP OF RUNNING RAIL FOR 100 LB. RUNNING RAIL & HEAVIER.

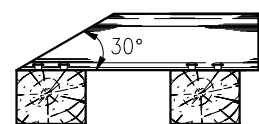
FOR RUNNING RAIL LESS THAN 100 LB., THE GUARD RAIL SHALL NOT BE MORE THAN ONE COMMON WEIGHT LOWER THAN RUNNING RAIL.



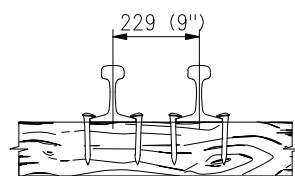
TYPICAL WOOD TIE SECTION



BENT UNDER STYLE



30° SLOPE STYLE



TYPICAL END VIEW

TYPICAL DETAIL OF GUARD RAIL ENDS

NOTES

- 1- GUARD RAILS SHALL BE INSTALLED WHEN:
 - a- THE CENTERLINE OF NEW TRACK INSTALLATION ON REALIGNMENT IS WITHIN 7.6m (25'-0") OF AN EXISTING STRUCTURE
 - b- PIERS OF OVERHEAD STRUCTURES ARE WITHIN 7.6m (25'-0") OF CENTERLINE OF TRACK, AND
 - c- THE TRACK SPEED IS GREATER THAN 15 Km/h (10 mph)
- 2- WHEN NO PART OF STRUCTURE IS WITHIN 7.6m (25'-0") OF CENTERLINE OF TRACK GUARD RAILS ARE NOT REQUIRED.
- 3- WHERE CRASH WALLS ARE PROVIDED GUARD RAILS ARE NOT REQUIRED, EXCEPT WHEN SPECIFIED BY THE CM SENIOR MANAGER OF TRACK AND STRUCTURES
- 4- WHEN SPEED PERMITTED FOR TRAINS, ENGINES AND CARS PASSING UNDER THE STRUCTURE IS NOT GREATER THAN 15 Km/h (10 mph) GUARD RAILS ARE NOT REQUIRED, EXCEPT WHERE SPECIFIED BY THE CM SENIOR MANAGER OF TRACK AND STRUCTURES.
- 5- FOR PERMANENT TRACK INSTALLATION/REALIGNMENT RESULTING IN PIERS OF OVERHEAD STRUCTURES TO BE LOCATED WITHIN 7.6m (25'-0") OF CENTERLINE OF TRACK, PIERS SHALL BE RETROFITTED WITH CRASH PROTECTION.
- 6- WHERE THERE ARE PIERS ON BOTH SIDES OF TRACK WITHIN 7.6m (25'-0") OF CENTRE LINE, GUARD RAILS ARE REQUIRED ON BOTH SIDES OF THE TRACK.
- 7- FOR TYPICAL GUARD RAIL INSTALLATIONS FOR BRIDGES AND TUNNELS SEE GTS-1108 SHEET 1 OF 3 & SHEET 2 OF 3 RESPECTIVELY.
- 8- FOR CLEARANCE DETAILS SEE GTS 8.1. GO TRACK STANDARDS RC-0506-02TRK

THIS DRAWING SUPERSEDES GTS-1108 DATED JUN.'78 REVISED APR.'88

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

| No. | Date | Revision | By | Approved |
|-----|----------|---|----|----------|
| 2 | 20/07/20 | MODIFIED GUARD RAIL REQUIREMENTS IN NOTES | | |
| 1 | 18/07/27 | ADDED IMPERIAL TO METRIC CONVERSION NOTE | | |

Standard / TYPICAL GUARD RAIL INSTALLATION OVERHEAD STRUCTURES

Drawn **MG** Checked **GGG** Approved **VP Engineering & Asset Management**



Date **SEPT 15/2017** Plan Number **GTS-1108** Rev **2**

REFERENCE: TS-1108_SH3_R2 Sheet 3 OF 3