

PCB 12-87
ROB 12-87

GENERAL NOTES

ITEM SPECIAL BALLAST

DESCRIPTION: THIS WORK SHALL CONSIST OF FURNISHING AND TRANSPORTING THE APPROVED MATERIAL, PLACING AND COMPACTING THE MATERIAL IN ACCORDANCE WITH AREA SPECIFICATIONS IN THE TRACK STRUCTURE FOR APPROVAL AND ACCEPTANCE BY THE ENGINEER.

MATERIAL: CRUSHED STONE SHALL BE USED FOR BALLAST. SIZE AND GRAD-ATION SHALL CONFORM WITH AREA SPECIFICATIONS FOR NO. 4 STONE BALLAST. THE BALLAST SHALL BE CRUSHED STONE, CRUSHED AIR COOLED BLAST FURNACE SLAG, HARD, STRONG AND DURABLE PARTICLES, FREE FROM INJURIOUS AMOUNTS OF DELETERIOUS SUBSTANCES AND CONFORMING TO THE REQUIREMENTS OF THE AREA SPECIFICATIONS.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT: BALLAST WILL BE MEASURED AND PAID FOR BY THE CUBIC YARD OF MATERIAL FURNISHED, TRANSPORTED, PLACED AND COMPACTED IN THE TRACK STRUCTURE.

PAYMENT WILL BE MADE UNDER:

ITEM	UNIT	DESCRIPTION
SPECIAL	150 C.Y.	BALLAST

ITEM SPECIAL CROSS TIES

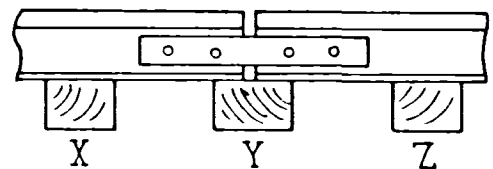
DESCRIPTION: THIS WORK SHALL CONSIST OF REMOVING AND REPLACING TIES OR PROVIDING TIES ACCORDING TO THE PATTERNS AND SPACING SHOWN ON THE CONTRACT PLANS. THE WORK FOR TIE REPLACEMENT SHALL CONSIST OF CLEARING THE TRACK TO ALLOW THE IDENTIFICATION OF DEFECTIVE TIES, MARKING DEFECTIVE CROSS TIES, FURNISHING AND DISTRIBUTING THE REQUIRED NUMBER OF TIES; REMOVAL AND DISPOSAL OF DEFECTIVE TIES; INSTALLATION OF REPLACEMENT TIES; REPLACEMENT OF TIE PLATES; SPIKING REPLACEMENT TIES; TAMPING; REPLACEMENT OF RAIL ANCHORS; AND THE DRESSING OF BALLAST.

PRIOR TO INSTALLING TIES THE CONTRACTOR SHALL MARK FOR REMOVAL THOSE DEFECTIVE TIES WHICH MUST BE REPLACED SO THAT THE TRACK WILL BE IN COMPLIANCE WITH THE TIE REQUIREMENTS AS STATED HEREIN AND OBTAIN THE APPROVAL OF THE ENGINEER. A CROSS TIE IS CONSIDERED TO BE DEFECTIVE WHEN IT IS:

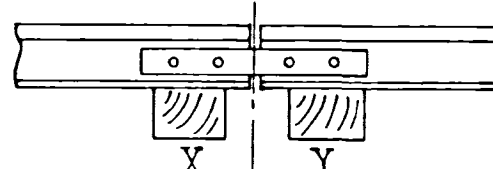
- (1) BROKEN THROUGH;
- (2) SPLIT OR OTHERWISE IMPAIRED TO THE EXTENT IT WILL NOT HOLD SPIKES OR WILL ALLOW THE BALLAST TO WORK THROUGH;
- (3) SO DETERIORATED THAT THE TIE PLATE OR BASE OF RAIL CAN MOVE Laterally MORE THAN ONE-HALF INCH RELATIVE TO THE CROSS TIE;
- (4) CUT BY THE TIE PLATE THROUGH MORE THAN 40 PERCENT OF ITS THICKNESS; OR
- (5) WHEN CONVENTIONAL TRACK IS USED WITH TIMBER TIES AND CUT TRACK SPIKES, THE RAILS MUST BE SPIKED TO THE TIES WITH AT LEAST ONE LINE-HOLDING SPIKE ON THE GAGE SIDE AND ONE LINEHOLDING SPIKE ON THE FIELD SIDE. THE TOTAL NUMBER OF TRACK SPIKES PER RAIL TIE, INCLUDING PLATE-HOLDING SPIKES, MUST BE AT LEAST TWO IN TANGENT SECTIONS AND THREE IN ALL CURVES.

EACH 39 FEET OF TRACK MUST BE SUPPORTED BY NONDEFECTIVE TIES AT A MAXIMUM OF 48" CENTER TO CENTER OR AT LEAST 12 PER 39' OF TRACK. THE MINIMUM NUMBER OF NON-DEFECTIVE TIES UNDER A RAIL JOINT AND THEIR RELATIVE POSITIONS UNDER THE JOINT ARE DESCRIBED IN THE FOLLOWING CHART. THE LETTERS IN THE CHART CORRESPOND TO LETTERS UNDERNEATH THE TIES FOR EACH TYPE OF JOINT DEPICTED.

SUPPORTED JOINT



SUSPENDED JOINT



MINIMUM NUMBER OF NON-DEFECTIVE TIES UNDER A JOINT	REQUIRED POSITION OF NON-DEFECTIVE TIES	
	SUPPORTED JOINT	SUSPENDED JOINT
TWO	X AND Y	X AND Y

THE CONTRACTOR SHALL REMOVE EACH TIE WHICH HAS BEEN MARKED IN SUCH A MANNER SO AS NOT TO DISTURB EXISTING LINE AND SURFACE. TIES TO BE REPLACED WILL BE REMOVED FROM TRACK WITH THE LEAST AMOUNT OF DISTURBANCE TO THE REMAINING TRACK. THE TIE CRIB

SHALL BE CLEANED SUFFICIENTLY TO ALLOW THE INSERTION OF A NEW TIE WITHOUT HITTING THE BASE OF THE RAIL.

ALL TIES WILL BE PLACED WITH THE WIDER HEARTWOOD FACE DOWN, SQUARE WITH THE LINE OF RAILS AND APPROXIMATELY CENTERED WITH THE TRACK.

REPLACEMENT TIES SHALL BE BROUGHT UP TIGHT TO THE BASE OF THE RAILS AND TAMPED WITH AN APPROPRIATE DEVICE.

TIES SHALL BE HANDLED AND PLACED WITH TIE TONGS. THE USE OF PICKS IS NOT ALLOWED. APPROVED MECHANICAL TIE INSERTION DEVICES MAY BE USED.

ALL REPLACEMENT TIES SHALL BE SPIKED TO EXISTING GAGE IF THE GAGE IS TRUE, IF NOT, ANY GAGING REQUIRED WILL BE DONE IN ACCORDANCE

WITH ITEM SPECIAL TRACK LINING, SURFACING, RAISING AND GAGING.

WHERE SPIKES HAVE BEEN WITHDRAWN, THE HOLES IN THE TIE MUST BE

PLUGGED WITH A STANDARD CREOSOTED TIE PLUG, PRIOR TO RESPIKING.

SPIKES SHALL BE DRIVEN VERTICALLY AND SQUARE AND NOT BENT AGAINST

THE RAIL. THE SHANK OF RAIL-HOLDING SPIKES MUST HAVE FULL BEARING

AGAINST THE BASE OF THE RAIL. SPIKES SHALL BE DRIVEN HOME BUT CARE

MUST BE TAKEN NOT TO OVER DRIVE OR TO STRIKE THE RAIL.

TAMPING SHALL BE ACCOMPLISHED WITH A SQUEEZE TYPE TAMPER OR VI-

BRATOR.

MATERIALS: CROSS TIES SHALL CONFORM TO AREA SPECIFICATIONS AND

SHALL MEET A MINIMUM OF CLASS 3A, PREFERABLY CLASS 4 OR 5. NEW

TREATED CROSS TIES WILL BE INSTALLED AND SHALL MEASURE 6"x8"x8"-6".

TRACK SPIKES SHALL BE NEW, 5/8" SQUARE BY 6 INCHES LONG AND SHALL

CONFORM TO AREA SPECIFICATIONS FOR HIGH CARBON STEEL TRACK SPIKES.

METHOD OF MEASUREMENT: THIS ITEM WILL BE MEASURED BY A UNIT FOR

EACH TIE INSTALLED AS ACCEPTED.

BASIS OF PAYMENT: THE ACCEPTED QUANTITIES, AS MEASURED, WILL BE

PAID FOR AT THE CONTRACT UNIT PRICE FOR CROSS TIES REMOVED AND

REPLACED WHICH SHALL BE FULL PAYMENT FOR CLEARING TRACK, MARKING

TIES, FURNISHING AND DISTRIBUTING TIES, FURNISHING OF SPIKES AND

TIE PLUGS AS REQUIRED AS WELL AS ALL LABOR, TOOLS, EQUIPMENT AND

INCIDENTALS NECESSARY TO COMPLETE THE WORK SPECIFIED INCLUDING

REMOVAL AND DISPOSAL OF DEFECTIVE TIES, REINSTALLING TIE PLATES

AND RAIL ANCHORS, SPIKING, TAMPING AND GENERAL CLEAN UP. RAIL

ANCHORS AND BALLAST REQUIRED WILL BE PAID UNDER ITEM SPECIAL RAIL

ANCHORS AND BALLAST RESPECTIVELY.

NEW CROSS TIES INSTALLED WILL BE MEASURED AS SINGLE UNITS AND

WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR EACH TIE IN

PLACE INCLUDING TRACK SPIKES.

PAYMENT WILL BE MADE UNDER:

ITEM	UNIT	DESCRIPTION
SPECIAL	125 EACH	CROSS TIES REMOVED AND REPLACED
SPECIAL	125 EACH	CROSS TIES

ITEM SPECIAL RAIL ANCHORS

DESCRIPTION: THIS WORK SHALL CONSIST OF FURNISHING AND INSTALLING

16 RAIL ANCHORS PER 39 FOOT RAIL LENGTH. THE RAIL ANCHORS SHALL BE

SPACED APPROXIMATELY UNIFORMLY ALONG THE RAIL LENGTH AND AGAINST THE

SAME TIE ON OPPOSITE RAILS. THESE ANCHORS SHALL BE PLACED IN PAIRS

AND BOXED AROUND THE SAME TIE AND IN CONTACT WITH THE TIE FACE.

RAIL ANCHORS SHALL CONFORM TO THE POUND RAIL BEING SALVAGED.

MATERIALS: ALL NEW RAIL ANCHORS SHALL BE MADE OF HIGH CARBON

STEEL IN ACCORDANCE WITH ASTM A-242.

METHOD OF MEASUREMENT: RAIL ANCHORS SHALL BE MEASURED AS SINGLE

UNITS COMPLETELY INSTALLED AS DESCRIBED.

BASIS OF PAYMENT: RAIL ANCHORS WILL BE PAID FOR AT THE CONTRACT

UNIT PRICE FOR EACH ANCHOR COMPLETELY INSTALLED ACCORDING TO THE

CONTRACT PLANS.

PAYMENT WILL BE MADE UNDER:

ITEM	UNIT	DESCRIPTION
SPECIAL	50 EACH	RAIL ANCHORS

ITEM SPECIAL TRACK LINING, SURFACING, RAISING, AND GAGING

DESCRIPTION: THIS WORK SHALL CONSIST OF FURNISHING ALL NECESSARY

LABOR AND EQUIPMENT, TO REALIGN, RESURFACE, RAISE AND GAGE THE

EXISTING TRACK AT THE DIRECTION OF THE ENGINEER.

WHERE SURFACING OPERATIONS ARE REQUIRED THEY SHALL BE PERFORMED

WITH APPROVED POWER OPERATED EQUIPMENT. IN RAISING TRACK, BOTH

RAILS SHALL BE RAISED SIMULTANEOUSLY AND UNIFORMLY. JACKS SHALL

BE PLACED SUFFICIENTLY CLOSE TOGETHER TO PREVENT BENDING RAILS OR

STRAINING RAIL JOINTS. TRACKS SHALL BE MAINTAINED IN ALIGNMENT

AND EACH LIFT GIVEN A GOOD RUNNING SURFACE WITH PROPER RUN-OFF AS

REQUIRED. TRACK SHALL BE RAISED TO THE ESTABLISHED GRADES AND

BALLAST APPLIED UNDER THE TIES FOR THEIR FULL LENGTH AND THROUGHL

TAMPED FOR A SPACE FROM FIFTEEN (15) INCHES INSIDE EITHER RAIL TO

THE ENDS OF TIES. SPOT BOARDS AND TRACK LEVEL BOARDS SHALL BE

USED TO BRING THE TRACK TO ITS FINAL ELEVATION AND TO THE REQUIRED

CROSS LEVEL WITHOUT SUPER-ELEVATION OF THE OUTER RAIL.

AFTER TRACKS HAVE BEEN FINISHED TO TRUE SURFACE AND GRADE, THROWS

OF 1-1/2" MAXIMUM WILL BE PERMITTED TO BRING TRACK TO FINAL

ALIGNMENT. IN EVENT OF THROWS IN EXCESS OF THIS AMOUNT, THE TRACK

MUST BE RESURFACED. AFTER THE TRACK HAS BEEN RAISED TO FINISHED

GRADE AND HAS BEEN PROPERLY COMPACTED, IT SHALL BE GIVEN FINAL

SURFACE TO CONFORM TO THE EXISTING GRADE. AFTER FINAL SURFACING

AND LINING, THE BALLAST SECTION WILL BE DRESSED TO A NEAT CONTOUR.

SUITABLE SHOULDERS OF BALLAST SHALL BE PLACED OUTSIDE OF THE ENDS

OF TIES. THE CONTRACTOR SHALL REDRIVE ALL SPIKES DISTURBED DURING

THE SURFACING OPERATION.

WHERE REGAGING IS REQUIRED THE OLD SPIKE HOLES SHALL BE PLUGGED

AND RESPIKED IN ACCORDANCE WITH ITEM SPECIAL CROSS TIES.

BASIS OF PAYMENT: TRACK LINING, SURFACING, RAISING AND GAGING

WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE BID. IT SHALL

INCLUDE ALL LABOR, TOOLS, AND EQUIPMENT NECESSARY TO COMPLETE

THE WORK AND FOR FURNISHING NEW SPIKES AND TIE PLUGS AS REQUIRED.

BALLAST WILL BE PAID FOR UNDER ITEM SPECIAL BALLAST.

PAYMENT WILL BE MADE UNDER:

ITEM	UNIT	DESCRIPTION
SPECIAL	LUMP	TRACK LINING, SURFACING, RAISING AND GAGING.

ITEM SPECIAL WOOD PLANK HIGHWAY CROSSING

DESCRIPTION: THIS WORK SHALL CONSIST OF REMOVING AND DISPOSING

OF EXISTING MATERIAL TO THE EXISTING TIES; FURNISHING AND REPLAC-

ING ALL CROSS TIES, BALLAST, ELIMINATING JOINT BARS BY WELDING

RAIL WITHIN 20 FEET OF THE CROSSING, AND REPLACING SPIKES THAT

ARE DEFECTIVE UPON APPROVAL BY THE ENGINEER AND THE FURNISHING,

PLACING OF TIMBERS AND THE PROVIDING OF FLANGEWAYS. THE TRACK

THROUGH THE CROSSING SHALL BE RAISED CONSISTENT WITH GRADES AND

ELEVATIONS OF ADJACENT TRACK AND ROADWAY UNDER THE DIRECTION

AND APPROVAL OF THE ENGINEER.

ANY WELDS SHALL BE FULL PENETRATION BUTT WELD IN ACCORDANCE WITH

THE AMERICAN WELDING SOCIETY SPECIFICATIONS. THE PLACING OF

ADDITIONAL STONE BALLAST AS REQUIRED TO RAISE AND SURFACE TRACK.

THE ROAD CROSSING SHALL CONFORM TO THE DETAIL SHOWN IN THE PLAN.

MATERIALS: ALL TIMBER SHALL BE CRESOTE PRESSURE TREATED OAK OR

MIXED HARDWOOD AND SHALL BE FRAMED AND PREBORED IN ACCORDANCE

WITH AREA SPECIFICATIONS.

FRAMING DIMENSIONS SHALL VARY TO ACCOMMODATE THE DIFFERENT RAIL

SECTIONS AND TIE PLATES IN THE CROSSINGS TO BE REBUILT UNDER THIS

CONTRACT.

TIMBER FLANGEWAYS SHALL BE FURNISHED IN MINIMUM 8'9" LENGTHS UNLESS

OTHERWISE APPROVED BY THE ENGINEER.

WASHER HEAD DRIVE SPIKES SHALL BE 3/4" DIAMETER IN ACCORDANCE WITH

AREA SPECIFICATIONS PART 5M. LENGTHS OF DRIVE SPIKES SHALL VARY

ACCORDING TO THE DEPTH OF TIMBER TO BE INSTALLED.

THE BALLAST SHALL CONFORM TO ITEM SPECIAL OF THESE SPECIFICATIONS.

BASIS OF PAYMENT: THE GRADE CROSSING WILL BE PAID FOR ON A

CONTRACT UNIT BASIS EXCEPT FOR CROSS TIES AND BALLAST. THESE

ITEMS WILL BE PAID FOR UNDER ITEMS SPECIAL CROSS TIES AND BALLAST RESPECTIVELY.

PAYMENT WILL BE MADE UNDER:

ITEM	UNIT	DESCRIPTION
SPECIAL	2 EACH	WOOD PLANK HIGHWAY CROSSING