



**STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
DESIGN DIVISION
NASHVILLE, TENNESSEE 37243-0348**

INSTRUCTIONAL BULLETIN NO. 07-02

Regarding Standard Drawings for Railroad Highway Grade Crossings

Effective for the April 27, 2007 letting, standard drawings T-RR-1 (TM-RR-1), T-RR-6 (TM-RR-6), T-S-16 (TM-S-16), and T-S-16A (TM-S-16A) are to be printed with the plans. The drawings shall be identified on the lower left side of the index sheet **“To be printed with plans”**.

The new standard drawing T-RR-6 (TM-RR-6) shall be used for signing and striping at passive (no signals or gates) railroad highway grade crossings. Revised standard drawing T-RR-1 (TM-RR-1) will continue to be used at active (with gates and/or signals) railroad highway grade crossings.

The new ground mounted roadside sign detail standard drawing T-S-16A (TM-S-16A) should be used whenever passive railroad highway grade crossings are on a project. Revised ground mounted roadside sign and details standard drawing T-S-16 (TM-S-16) should be added to the plans for all projects with either passive or active railroad highway grade crossings.

Copies of the drawings are attached. This instructional bulletin voids existing Standard Drawing T-RR-1 (TM-RR-1) and T-S-16 (TM-S-16) with revision dated 7-29-04.

TRAFFIC CONTROL APPURTENANCES – ENGLISH

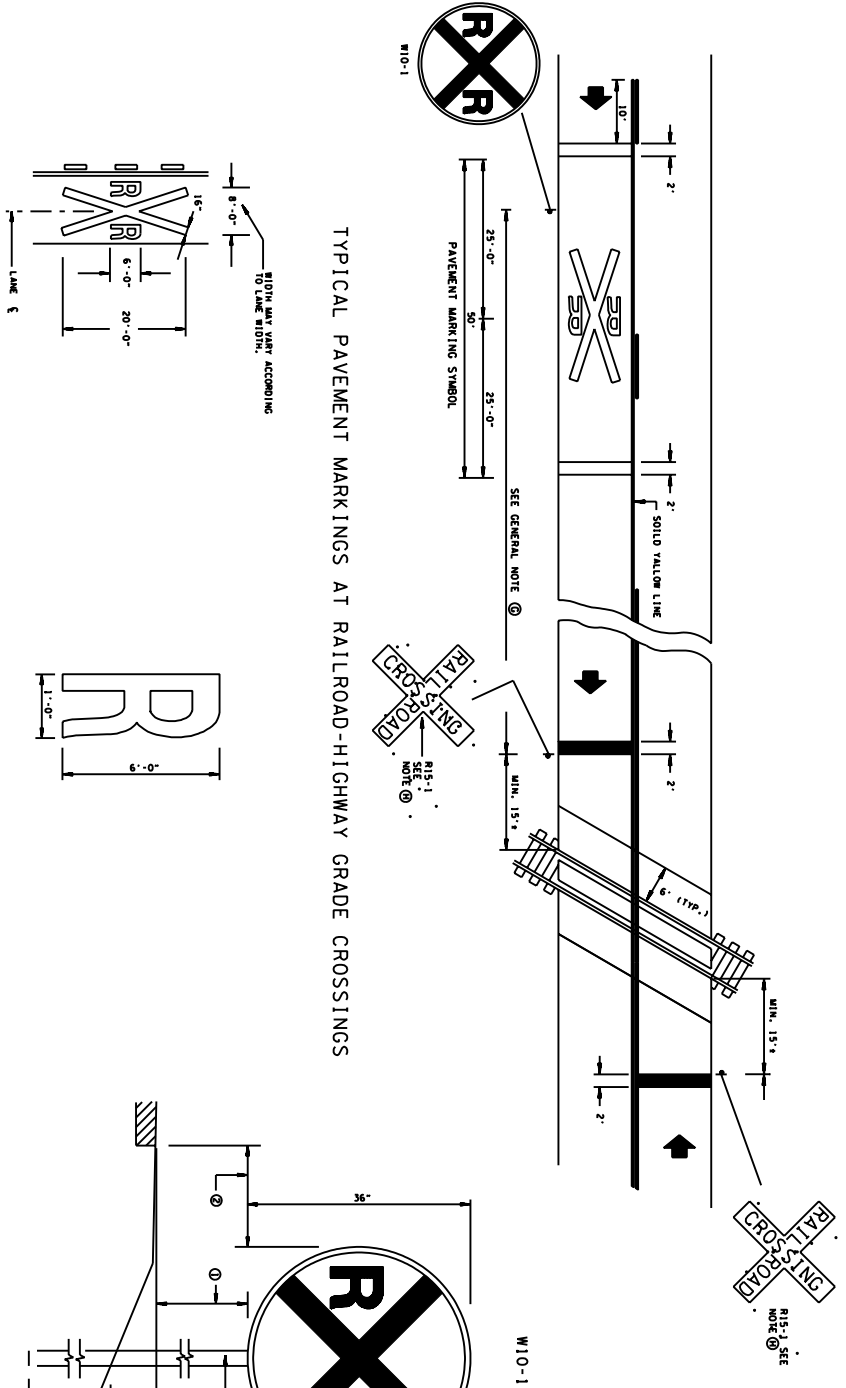
<u>Drawing Number</u>	<u>Current Revision Date</u>	<u>Drawing Title</u>
T-RR-1	10-23-06	TYPICAL PAVEMENT MARKING AT RAILROAD HIGHWAY GRADE CROSSINGS AND RAILROAD ADVANCE WARNING SIGN
T-RR-6		TYPICAL SIGNING AND MARKING AT PASSIVE RAILROAD HIGHWAY GRADE CROSSINGS
T-S-16	10-23-06	GROUND MOUNTED ROADSIDE SIGN AND DETAILS
T-S-16A		GROUND MOUNTED ROADSIDE SIGN PLACEMENT DETAILS

TRAFFIC CONTROL APPURTENANCES – METRIC

<u>Drawing Number</u>	<u>Current Revision Date</u>	<u>Drawing Title</u>
TM-RR-1	10-23-06	TYPICAL PAVEMENT MARKING AT RAILROAD HIGHWAY GRADE CROSSINGS AND RAILROAD ADVANCE WARNING SIGN
TM-RR-6		TYPICAL SIGNING AND MARKING AT PASSIVE RAILROAD HIGHWAY GRADE CROSSINGS
TM-S-16	10-23-06	GROUND MOUNTED ROADSIDE SIGN AND DETAILS
TM-S-16A		GROUND MOUNTED ROADSIDE SIGN PLACEMENT DETAILS

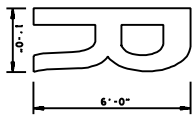
Original signed by Jeff C. Jones
Jeff C. Jones, Civil Engineering Director
Design Division

February 9, 2007
JCJ:MJA:mja
Attachment

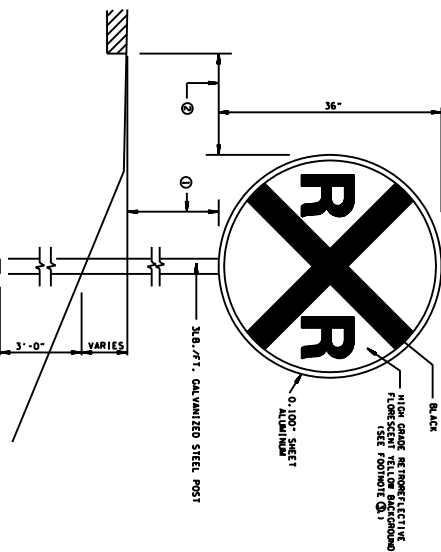


TYPICAL PAVEMENT MARKINGS AT RAILROAD-HIGHWAY GRADE CROSSINGS

- GENERAL NOTES**
1. A PORTION OF PAVEMENT MARKING SYMBOL SHOULD BE DIRECTLY OPPOSITE.
 2. THE ADVANCE WARNING SIGN (W10-1).
 3. A THREE LANE ROADWAY SHOULD BE MARKED WITH A CENTERLINE FOR THE LANE.
 4. ON MULTI-LANE ROADS THE TRANSVERSE BANDS SHOULD EXTEND ACROSS ALL APPROACH PAVEMENTS AND THE APPROACH TO THE CROSSING.
 5. TRANSVERSE BANDS SHOULD BE USED IN EACH APPROACH LANE.
 6. BANDS ON DIRECTED BY THE ENGINEER, EITHER PAINT OR PLASTIC AS SHOWN ON THE DETAILS.
 7. REFER TO STANDARD ALPHABET FOR HIGHWAY SIGNS AND MARKINGS FOR BAND SYMBOLS.
 8. THE COST OF ALL TRANSVERSE BANDS SHALL BE IN THE PRICE BID FOR THE "PAVEMENT MARKING" ITEM.
 9. PLACEMENT OF THE RAILROAD ADVANCE WARNING SIGN SHALL GENERALLY BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR HIGHWAY SIGNS AND MARKINGS.
 10. RAILROAD CROSS-BLOCK SIGN AND SUPPORT SHALL BE INSTALLED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR HIGHWAY SIGNS AND MARKINGS.



- FOOTNOTES**
1. SIGNS ERRECTED AT THE SIDE OF THE ROAD IN URBAN DISTRICTS SHALL BE ERRECTED AT A HEIGHT OF AT LEAST 5 FEET, MEASURED FROM THE BOTTOM OF THE SIGN TO THE CENTERLINE OF THE ROAD. IN RURAL DISTRICTS AND ON FORESTRY ROADS, THE SIGN SHALL BE ERRECTED AT A HEIGHT OF AT LEAST 7 FEET.
 2. NORMALLY, SIGNS SHOULD NOT BE CLOSER THAN 6 FEET FROM THE EDGE OF THE SHOULDER OR IF NONE, 12 FEET FROM THE EDGE OF THE TRAVELED PORTION OF THE ROADWAY. IF THE SIGN IS ERRECTED AS A WARNING UNLAWFUL CROSSING, THE SIGN SHALL BE ERRECTED AS CLOSE TO THE ROAD AS POSSIBLE. THE SIGN SHALL BE AT LEAST 7 FEET FROM THE EDGE OF THE SHOULDER OR IF NONE, 12 FEET FROM THE EDGE OF THE TRAVELED PORTION OF THE ROADWAY. IF THE SIGN IS ERRECTED AS A WARNING UNLAWFUL CROSSING, THE SIGN SHALL BE ERRECTED AS CLOSE TO THE ROAD AS POSSIBLE. THE SIGN SHALL BE AT LEAST 7 FEET FROM THE EDGE OF THE SHOULDER OR IF NONE, 12 FEET FROM THE EDGE OF THE TRAVELED PORTION OF THE ROADWAY.
 3. SEE T007 SPECIAL PROVISION 713A REGARDING SPECIFICATIONS FOR HIGHWAY GRADE REFLECTIVE SHEETING.



RAILROAD ADVANCE WARNING SIGN

TO BE PAID FOR UNDER ITEM 713-16.09 RAILROAD ADVANCE WARNING SIGN AND SUPPORT.

(18" HIGH DIAMETER SIGN)

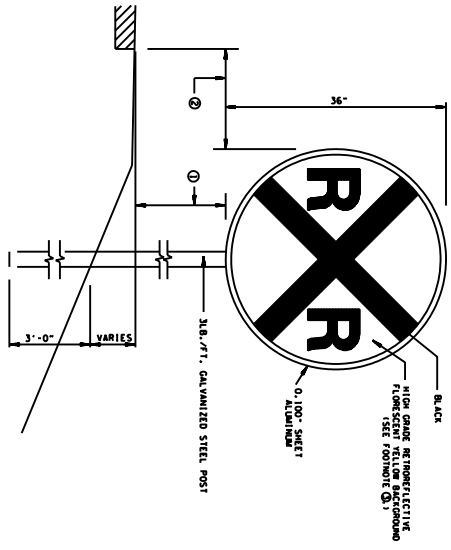
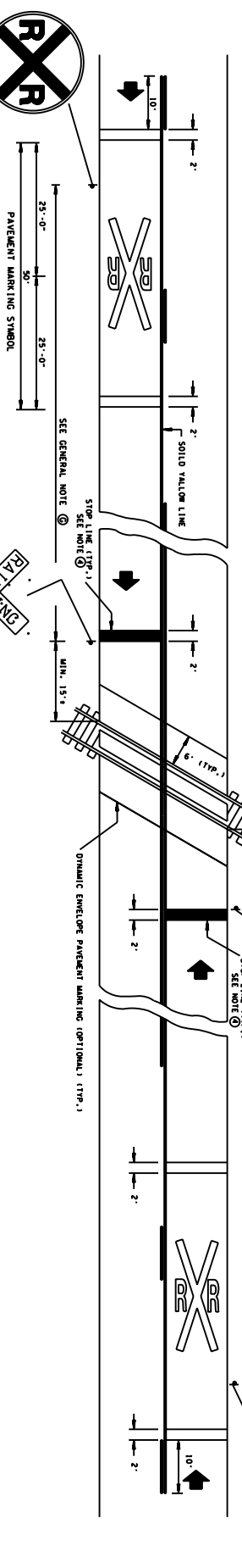
- REV. 5-15-79, ADDED NOTE PERTAINING TO HEIGHT OF RAILROAD ADVANCE WARNING SIGN AND SUPPORT. SEE T007 SPECIAL PROVISION 713A REGARDING SPECIFICATIONS FOR HIGHWAY GRADE REFLECTIVE SHEETING.
- REV. 10-10-79, ADDED NOTE REGARDING PAVEMENT MARKING.
- REV. 5-3-79, ADDED RAILROAD ADVANCE WARNING SIGN NUMBER AND REQUESTED DISTANCES FOR SIGN AND PAVEMENT MARKINGS.
- REV. 9-14-78, ADJUSTED STOP BANDS TO 15 FEET.
- REV. 5-15-79, ADDED TABLE DIMENSIONS TO TYPICAL PAVEMENT MARKINGS. DELETED NOTE REGARDING DISTANCES FOR MARKING DEVICES. DELETED NOTE REGARDING DISTANCES FOR MARKING DEVICES AND NOTE REGARDING DISTANCE FROM MARKINGS TO STOP BANDS.
- REV. 4-13-80, CHANGED DIMENSION BETWEEN CROSS BANDS TO 25'-0". CHANGED THE HEIGHT OF THE "RR" TO 6'-0". DELETED THE "12" WARNING STRIPES FROM THE CROSSING.
- REV. 4-10-80, UPGRADE TO COMPLY WITH THE M.U.C.D.
- REV. 4-10-80, CHANGED DRAWING NUMBER FROM AN-01 TO T-88-1.
- REV. 6-15-82, CORRECTED NOTE REGARDING OFFSET DISTANCE TO RAILROAD ADVANCE WARNING SIGN.
- REV. 6-15-82, CHANGED NOTE REGARDING PAVEMENT MARKING DEVICES.
- REV. 6-15-82, ADDED SIGN SHEET DIMENSIONS.
- REV. 7-29-84, CHANGED DIMENSION BETWEEN CROSS BANDS TO 25'-0". CHANGED THE HEIGHT OF THE "RR" TO 6'-0". DELETED THE "12" WARNING STRIPES FROM THE CROSSING.
- REV. 1-19-93, ADDED SIGN SHEET DIMENSIONS.
- REV. 6-27-88, CHANGED NOTE REGARDING PAVEMENT MARKING DEVICES.
- REV. 10-23-96, ADDED CROSSING SIGN AND GENERAL NOTE (6).
- REV. 7-29-04, CHANGED PLAN VIEW TO CLARIFY DETAIL.
- REV. 10-23-96, ADDED CROSSING SIGN AND GENERAL NOTE (6).

DATE OF REVISION	REVISIONS
10/10/79	ADDED NOTE REGARDING PAVEMENT MARKING.
5/3/79	ADDED RAILROAD ADVANCE WARNING SIGN NUMBER AND REQUESTED DISTANCES FOR SIGN AND PAVEMENT MARKINGS.
9/14/78	ADJUSTED STOP BANDS TO 15 FEET.
5/15/79	ADDED TABLE DIMENSIONS TO TYPICAL PAVEMENT MARKINGS. DELETED NOTE REGARDING DISTANCES FOR MARKING DEVICES. DELETED NOTE REGARDING DISTANCES FOR MARKING DEVICES AND NOTE REGARDING DISTANCE FROM MARKINGS TO STOP BANDS.
4/13/80	CHANGED DIMENSION BETWEEN CROSS BANDS TO 25'-0". CHANGED THE HEIGHT OF THE "RR" TO 6'-0". DELETED THE "12" WARNING STRIPES FROM THE CROSSING.
4/10/80	UPGRADE TO COMPLY WITH THE M.U.C.D.
4/10/80	CHANGED DRAWING NUMBER FROM AN-01 TO T-88-1.
6/15/82	CORRECTED NOTE REGARDING OFFSET DISTANCE TO RAILROAD ADVANCE WARNING SIGN.
6/15/82	CHANGED NOTE REGARDING PAVEMENT MARKING DEVICES.
6/15/82	ADDED SIGN SHEET DIMENSIONS.
7/29/84	CHANGED DIMENSION BETWEEN CROSS BANDS TO 25'-0". CHANGED THE HEIGHT OF THE "RR" TO 6'-0". DELETED THE "12" WARNING STRIPES FROM THE CROSSING.
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7/29/04	CHANGED PLAN VIEW TO CLARIFY DETAIL.
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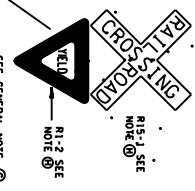
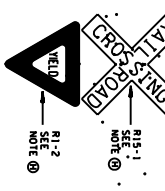
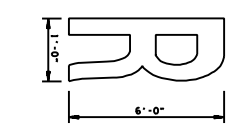
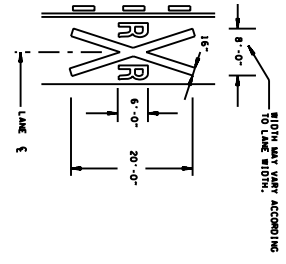


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TYPICAL PAVEMENT MARKINGS AT PASSIVE RAILROAD-HIGHWAY GRADE CROSSINGS



W10-1
TO BE PAID FOR UNDER ITEM 713-16.09 RAILROAD ADVANCE WARNING SIGN AND SUPPORT.
(36 INCH DIAMETER SIGN)
RAILROAD ADVANCE WARNING SIGN



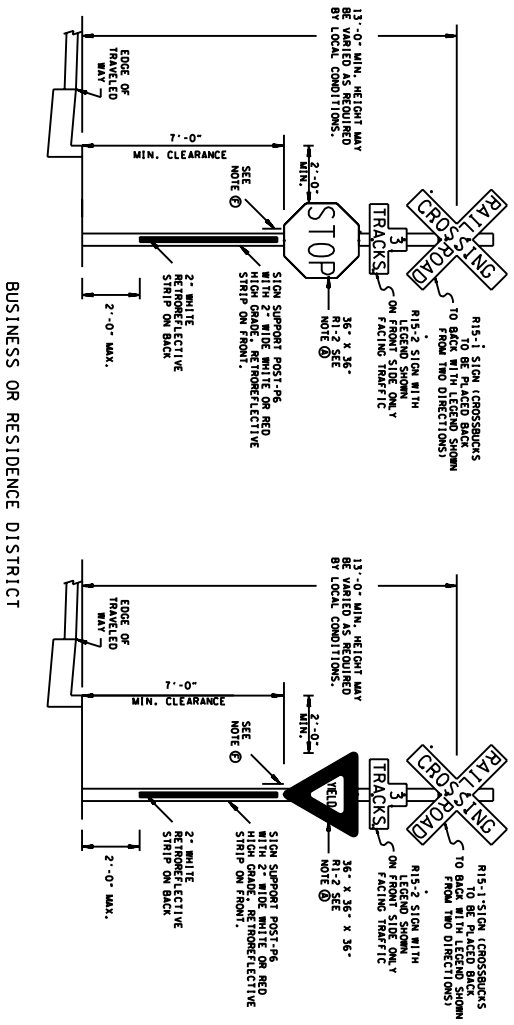
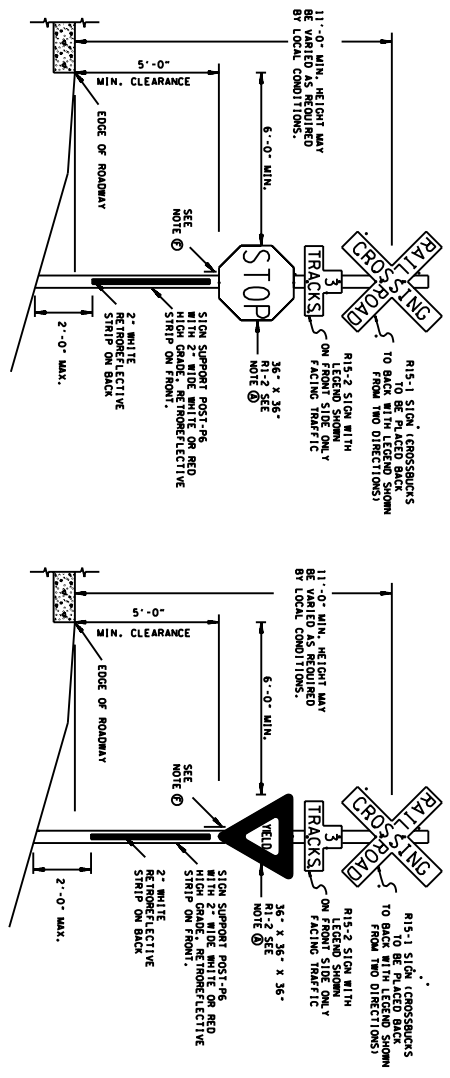
- GENERAL NOTES**
- ① A PORTION OF PAVEMENT MARKING SYMBOL SHOULD BE DIRECTLY OPPOSITE THE ADVANCE WARNING SIGN W10-11.
 - ② A THREE LANE ROADWAY SHOULD BE MARKED WITH A CENTERLINE FOR TWO LANE APPROACH OPERATION ON THE APPROACH TO A CROSSING.
 - ③ ON MULTI-LANE ROADS, THE TRANSVERSE BANDS SHOULD EXTEND ACROSS ALL APPROACH LANES, AND TRADITIONAL "X" SYMBOLS SHOULD BE USED IN EACH APPROACH LANE.
 - ④ PAVEMENT MARKINGS BY THE LAMP CAN BE EITHER PAINT OR PLASTIC AS SHOWN ON THE DETAILS.
 - ⑤ REFER TO STANDARD ALPHABET FOR HIGHWAY SIGNS AND MARKINGS FOR "RR" SYMBOLS.
 - ⑥ THE COST OF ALL TRANSVERSE BANDS SHALL BE IN THE PRICE BID FOR THE "RAILROAD CROSSING" OF THE RAILROAD CROSSING.
 - ⑦ PLACEMENT OF THE RAILROAD ADVANCE WARNING SIGN SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
 - ⑧ RAILROAD CROSSING SIGN AND SUPPORT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
 - ⑨ RAILROAD ADVANCE WARNING SIGN SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

- FOOTNOTES**
- ① SIGNS ERECTED AT THE SIDE OF THE ROAD IN RURAL DISTRICTS SHALL BE SET IN SUCH A MANNER AS TO BE READ FROM THE NEAR BOTTOM OF THE SIGN TO THE NEAR TOP OF THE SIGN IN THE DIRECTION OF TRAVEL AND/OR RESTRICTION ADJUSTMENT IS LIKELY TO OCCUR WHERE THERE ARE OTHER OBSTRUCTIONS TO VIEW. THE CLEARANCE TO THE BOTTOM OF THE SIGN SHALL BE AT LEAST 12 FEET.
 - ② NORMAL V SIGN SHOULD NOT BE CLOSER THAN 6 FEET FROM THE EDGE OF THE SHOULDER OR IF MORE THAN 12 FEET FROM THE EDGE OF THE SHOULDER, THE SIGN SHOULD BE CLOSER THAN 12 FEET FROM THE EDGE OF THE SHOULDER.
 - ③ ALL SIGNS SHALL BE MAINTAINED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
 - ④ SET THE TOP SPECIFIC PROVISION 713A REGARDING SPECIFICATIONS FOR HIGH GRADE REFLECTIVE SHEETING.
 - ⑤ WHEN A YIELD SIGN IS USED YIELD LINE MAY BE SUBSTITUTED.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
TYPICAL SIGNING AND MARKING AT PASSIVE RAILROAD HIGHWAY GRADE CROSSINGS
10-23-06 T-RR-6



STOP OR YIELD SIGN ON SAME POST WITH THE CROSSBUCK SIGN AT PASSIVE HIGHWAY-RAIL GRADE CROSSINGS



GENERAL NOTES

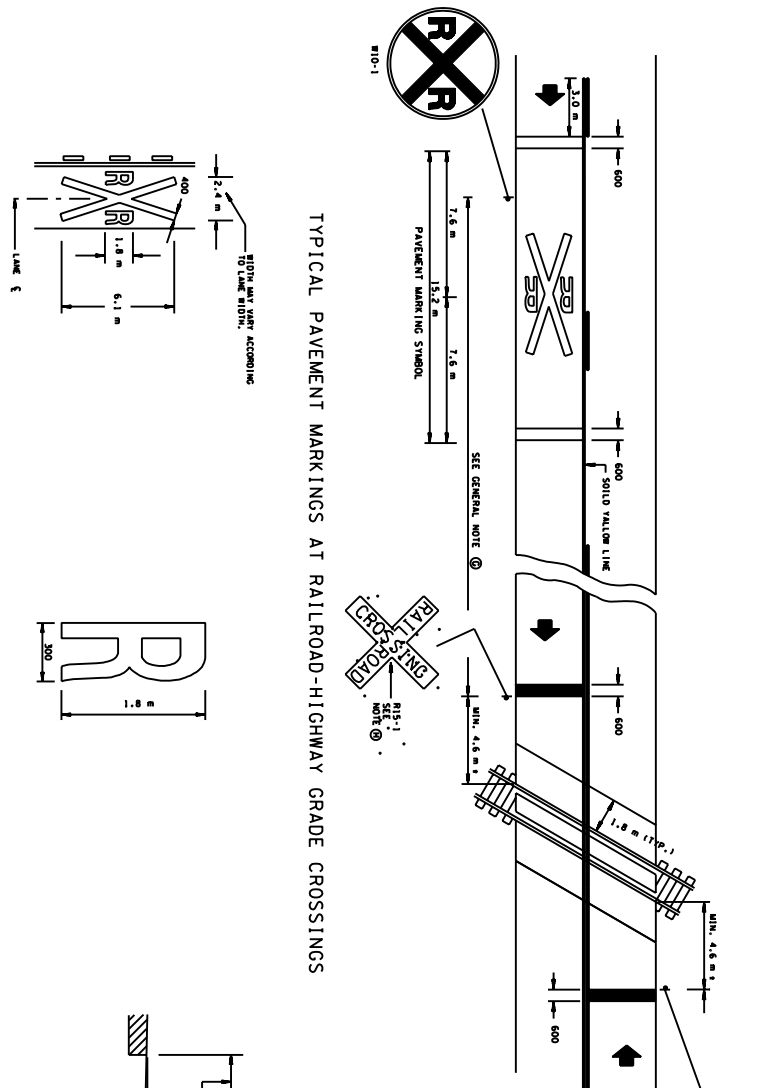
1. YIELD SIGNS SHALL BE THE DEFAULT SIGN AND SHALL BE USED UNLESS AN ENGINEERING STUDY DETERMINES THAT A STOP SIGN IS REQUIRED. IF A STOP SIGN IS REQUIRED, A 36" X 36" SIGN (R10-1) SHALL BE PLACED MINIMUM 15' IN ADVANCE OF THE ADVANCE RAILROAD TRACK (R10-1).
2. SEE STD-080 1-5-16 FOR RAILROAD CROSSBUCK SIGN AND SUPPORT DETAILS.
3. RAILROAD CROSSBUCK SIGN AND SUPPORT, YIELD/STOP SIGN, NUMBER OF TRACKS AUXILIARY SIGN, AND TRACK ID PLATE IS TO BE PAID FOR UNDER ITEM NO. 713-16-05, RAILROAD CROSSBUCK SIGN AND SUPPORT PER SIGN AND NUMBER OF TRACKS. THE FURNISHING AND INSTALLATION OF THE SIGN, SUPPORT AND NUMBER OF TRACKS SHALL BE THE RESPONSIBILITY OF THE SIGN, SUPPORT AND NUMBER OF TRACKS.
4. LOCATION OF THE CROSSBUCK SIGN AND SUPPORT WITH RESPECT TO THE CENTERLINE OF THE TRACKS SHALL BE AS SHOWN ON FIGURE B-7 (PAGE B-7) OF THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
5. IF AN EXISTING CROSSBUCK SIGN AND SUPPORT IS TO BE REMOVED, THE CONTRACTOR SHALL REMOVE AND INSTALL THE EXISTING SIGN NUMBER PLATE ON THE PROPOSED CROSSBUCK SIGN. ALL COST ARE TO BE INCLUDED IN THE PRICE BID FOR ITEM NO. 713-16-05.
6. TRACK ID PLATE TO BE MOUNTED ON LEFT SIDE FACING TRACK.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
GROUND MOUNTED
ROADSIDE
SIGN PLACEMENT
DETAILS
10-23-06 T-S-16A



11/1-95

TYPICAL PAVEMENT MARKINGS AT RAILROAD-HIGHWAY GRADE CROSSINGS

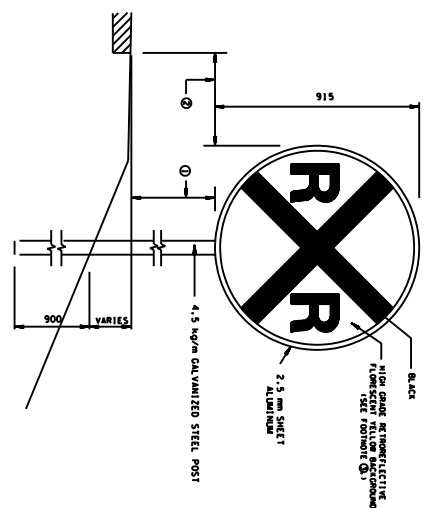


- GENERAL NOTES**
1. LOCATION OF PAVEMENT MARKING SYMBOL SHOULD BE DIRECTLY OPPOSITE
 2. A TRUCK LANE ROBBY SHOULD BE MARKED WITH A CENTRAL LINE FOR TWO LANE
 3. ON MULTILANE ROADS, THE TRANSVERSE BANDS SHOULD EXTEND ACROSS ALL APPROACH
 4. LANES, AND INDIVIDUAL "HAT" SYMBOLS SHOULD BE USED IN EACH APPROACH LANE.
 5. PAVEMENT MARKINGS SHOULD BE EITHER PAINT OR PLASTIC AS SHOWN ON THE
 6. DETAILS.
 7. REFER TO STANDARD DRAWING FOR HIGHWAY SIGNS AND MARKINGS FOR HAT SYMBOL'S
 8. THE COST OF ALL TRANSVERSE BANDS SHALL BE IN THE PRICE BID FOR THE "HAT"
 9. SYMBOLS AT EACH RAILROAD CROSSING.
 10. SYMBOLS AT EACH RAILROAD CROSSING SHALL BE INSTALLED IN ACCORDANCE WITH
 11. THE SECTION OF THE STANDARD DRAWING OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
 12. RAILROAD CROSSING SIGN AND SUPPORT SHALL BE INSTALLED IN ACCORDANCE WITH
 13. THE SECTION OF THE STANDARD DRAWING OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR YIELD
 14. SIGN INSTALLATION.

- FOOTNOTES**
1. SIGN MOUNTED AT THE SIDE OF THE ROAD IN EITHER DIRECTION SHALL BE MOUNTED AT A HEIGHT OF AT LEAST 1.8 M ABOVE THE ROAD SURFACE FROM THE BOTTOM OF THE SIGN TO THE NEAR EDGE OF THE PAVEMENT AND FROM THE NEAR EDGE OF THE PAVEMENT TO THE NEAR EDGE OF THE SIGN. THE CLEARANCE TO THE BOTTOM OF THE SIGN SHALL BE AT LEAST 2.1 M. THE CLEARANCE TO THE BOTTOM OF THE SIGN SHALL BE AT LEAST 2.1 M.
 2. NORMALLY, SIGNS SHOULD NOT BE CLOSER THAN 1.8 M FROM THE EDGE OF THE ROAD. HOWEVER, A LESSER CLEARANCE MAY BE USED WHERE NECESSARY. THROUGH SIGNS ARE RECOMMENDED AS A FIRST PRIORITY AND ADVANCE WARNING SIGNS ARE RECOMMENDED AS A SECOND PRIORITY. THE SIGNABLE WIDTH IS LIMITED ON WHERE EXISTING POLES ARE CLOSE TO THE ROAD.
 3. SEE DOT SPECIAL PROVISION 713M REGARDING SPECIFICATIONS FOR HIGH GRADE REFLECTIVE SHEETING.

RAILROAD ADVANCE WARNING SIGN

TO BE PAID FOR UNDER ITEM 713M6.09 RAILROAD ADVANCE WARNING SIGN AND SUPPORT, 1915 mm DIAMETER SIGN



- REV. 11-1-95, CHANGED TO METRIC.
- REV. 7-29-95, CHANGED ADVANCE WARNING SIGN.
- REV. 1-19-95, ADDED FOOTNOTE 1.
- REV. 7-29-01, CHANGED R.W. V.I.S. TO CLARIFY DETAIL.
- REV. 10-23-04, ADDED CROSSROAD SIGN AND DETAIL, 5013

ALL DIMENSIONS IN MILLIMETERS UNLESS NOTED OTHERWISE

DATE OF SUBMISSION: 11-1-95

APPROVAL: [Signature]

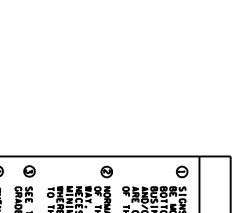
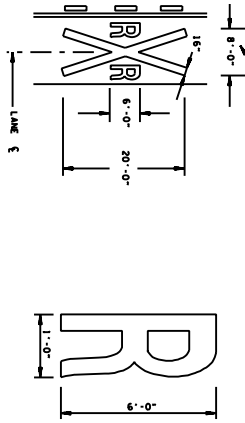
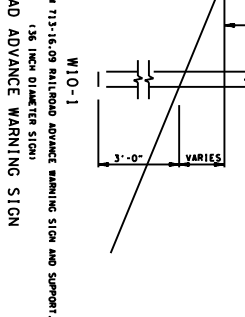
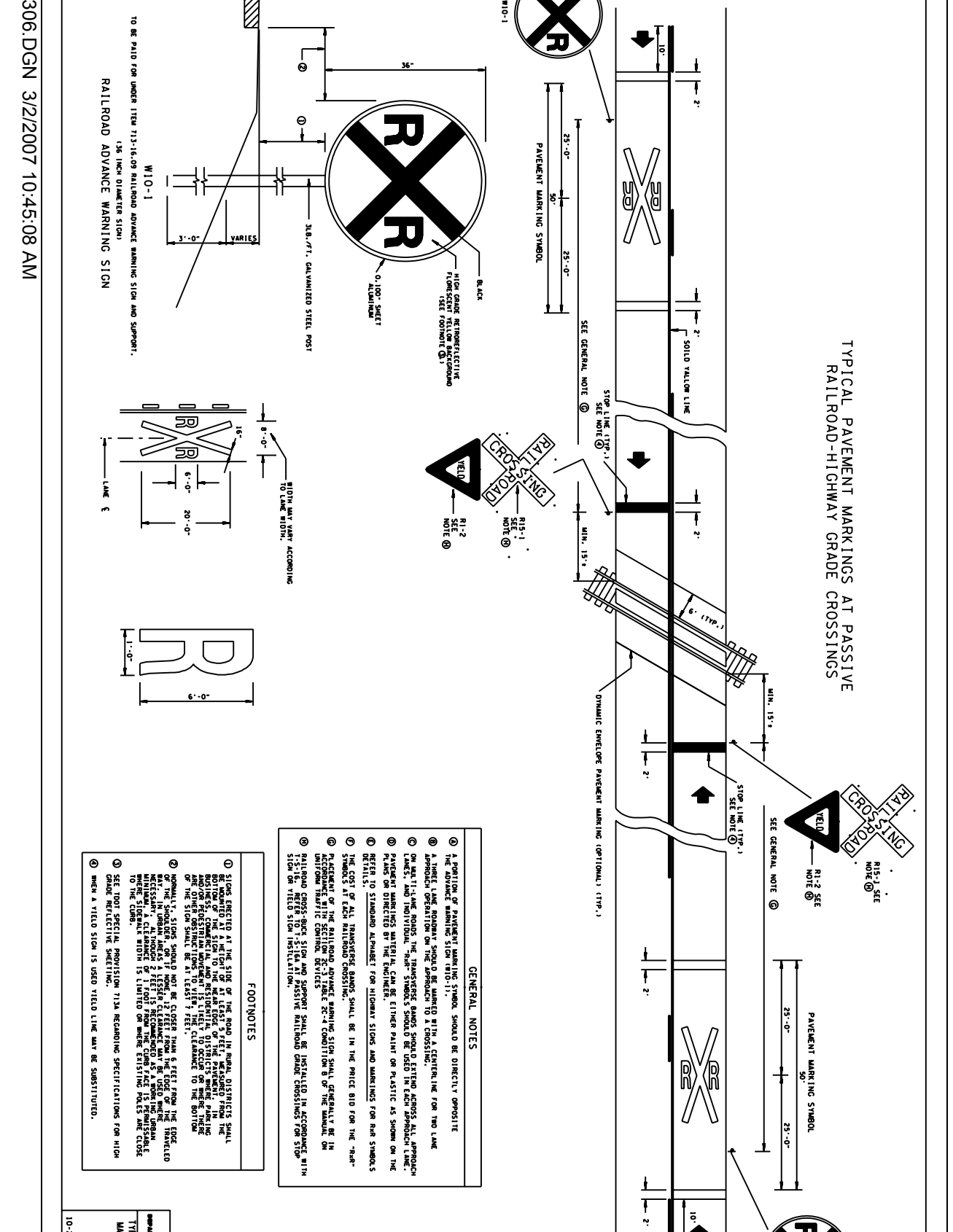
DESIGNER: [Signature]

TYPICAL PAVEMENT MARKING AT RAILROAD HIGHWAY GRADE CROSSINGS AND RAILROAD ADVANCE WARNING SIGN

11-1-95

TM-RR-1

TYPICAL PAVEMENT MARKINGS AT PASSIVE RAILROAD-HIGHWAY GRADE CROSSINGS

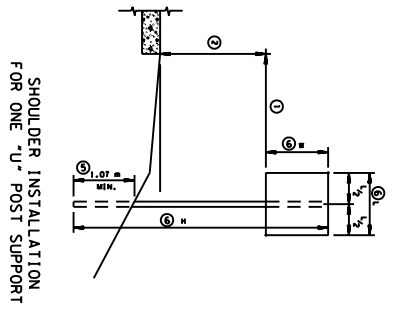


TO BE PAID FOR UNDER ITEM 713-16.09 RAILROAD ADVANCE WARNING SIGN AND SUPPORT.
 (36 INCH DIAMETER SIGN)
RAILROAD ADVANCE WARNING SIGN
 W10-1

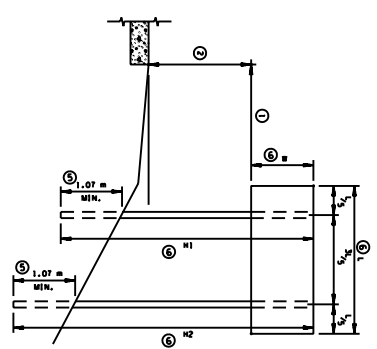
- GENERAL NOTES**
- 1. A PORTION OF PAVEMENT MARKING SYMBOL SHOULD BE DIRECTLY OPPOSITE THE ADVANCE WARNING SIGN W10-11.
 - 2. A THREE LANE ROADWAY SHOULD BE MARKED WITH A CENTERLINE FOR TWO LANES APPROACH OPERATION ON THE APPROACH TO A CROSSING.
 - 3. ON MULTI-LANE ROADS THE TRANSVERSE BANDS SHOULD EXTEND ACROSS ALL APPROACH LANES, AND TRADITIONAL TYPICAL SYMBOLS SHOULD BE USED IN EACH APPROACH LANE.
 - 4. PAVEMENT MARKINGS BY THE USE OF PAINT OR PLASTIC SHOULD BE USED IN EACH APPROACH LANE.
 - 5. REFER TO STANDARD SPECIFICATIONS FOR HIGHWAY SIGNS AND MARKINGS FOR RAIL SYMBOLS AND DETAILS.
 - 6. THE COST OF ALL TRANSVERSE BANDS SHALL BE IN THE PRICE BID FOR THE TRANSVERSE BANDS AT EACH RAILROAD CROSSING.
 - 7. PLACEMENT OF THE RAILROAD ADVANCE WARNING SIGN SHALL, GENERALLY BE IN ACCORDANCE WITH SECTION 26-4-2 CONDITION B OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
 - 8. RAILROAD CROSSING SIGN AND SUPPORT SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 17-516 REFER TO SECTION 17-516 AT PASSIVE RAILROAD GRADE CROSSINGS FOR SIGN ON YIELD SIGN INSTALLATION.

- FOOTNOTES**
- 1. SIGNS ERECTED AT THE SIDE OF THE ROAD IN RURAL DISTRICTS SHALL BE SET AT THE TOP OF THE SIGN TO THE NEAR BOTTOM OF THE PAVEMENT IN THE BOTTOM OF THE SIGN TO THE NEAR BOTTOM OF THE PAVEMENT. IN THE URBAN AND/OR FORESTED AREAS, THE CLEARANCE TO THE SIGN SHALL BE 12 FEET TO THE NEAR BOTTOM OF THE SIGN TO THE NEAR BOTTOM OF THE PAVEMENT. THE CLEARANCE TO THE BOTTOM OF THE SIGN SHALL BE 12 FEET TO THE NEAR BOTTOM OF THE PAVEMENT.
 - 2. NORMAL V. SIGNS SHOULD NOT BE CLOSER THAN 6 FEET FROM THE EDGE OF THE SHOULDER ON IF MORE THAN 12 FEET FROM THE EDGE OF THE SHOULDER. UNDER NORMAL CONDITIONS, THE CLEARANCE OF THE SIGN SHALL BE AT LEAST 1 FOOT FROM THE CURB FACE IS PERMISSIBLE TO THE CURB.
 - 3. SET TOGETHER SPECIAL PROVISION 713A REGARDING SPECIFICATIONS FOR HIGHWAY GRADE REFLECTIVE SHEETING.
 - 4. WHEN A YIELD SIGN IS USED YIELD LINE MAY BE SUBSTITUTED.

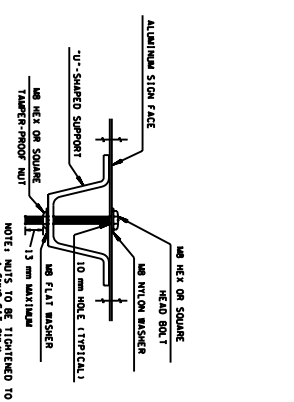
STATE OF TEXAS
 DEPARTMENT OF TRANSPORTATION
 TYPICAL SIGNING AND
 MARKING AT PASSIVE
 RAILROAD
 HIGHWAY GRADE
 CROSSINGS
 10-23-06 T-RR-6



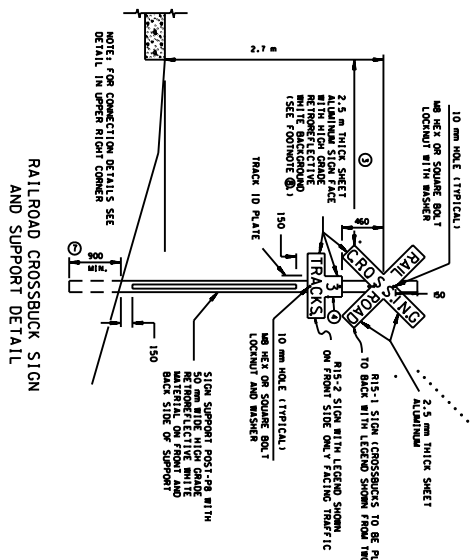
SHOULDER INSTALLATION FOR ONE "U" POST SUPPORT



SHOULDER INSTALLATION FOR TWO "U" POST SUPPORTS



CONNECTION DETAIL FOR "U" POST



RAILROAD CROSSBUCK SIGN AND SUPPORT DETAIL

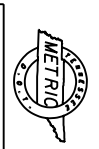
- RAILROAD CROSSBUCK SIGN AND SUPPORT GENERAL NOTES**
- RAILROAD CROSS-BUCK SIGN, NUMBER OF TRACKS AUXILIARY SIGN, TRACK ID PLATE, AND SUPPORT IS TO BE PAID FOR UNDER ITEM NO. 7134B.05, RAILROAD CROSS-BUCK SIGN AND SUPPORT ATTACHMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, FABRICATION, AND INSTALLATION OF THE SIGN, SUPPORT AND ATTACHMENTS.
 - IF AN EXISTING CROSSBUCK SIGN AND SUPPORT IS TO BE REMOVED, THE CONTRACTOR SHALL REMOVE THE SIGN AND SUPPORT AND THE SUPPORT SHALL BE REINSTALLED TO THE ORIGINAL LOCATION AS SHOWN ON FIGURE 8-7 (PAGE 8C-6) OF THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
 - IF AN EXISTING CROSSBUCK SIGN AND SUPPORT IS TO BE REMOVED, THE CONTRACTOR SHALL REMOVE THE SIGN AND SUPPORT AND THE SUPPORT SHALL BE REINSTALLED TO THE ORIGINAL LOCATION AS SHOWN ON FIGURE 8-7 (PAGE 8C-6) OF THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
 - AT PASSIVE RAILROAD CROSSINGS REFER TO TM-5-164 FOR STOP OR YIELD SIGN INSTALLATION. USE SIGN SUPPORT POST-FR FOR STOP OR YIELD SIGN ATTACHMENTS P POST EMBEDMENT IN GROUND SHALL BE MIN. 1.07 m.

LEGEND

1	H-HEIGHT OF SIGN FACE
2	H-HEIGHT OF SIGN SUPPORT

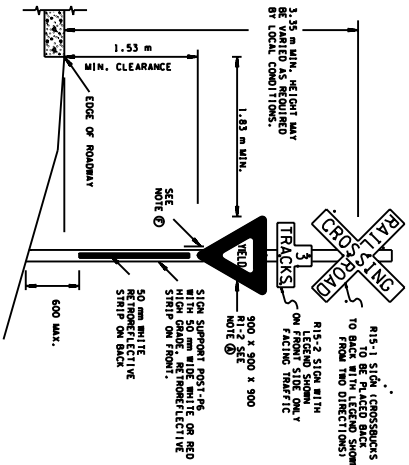
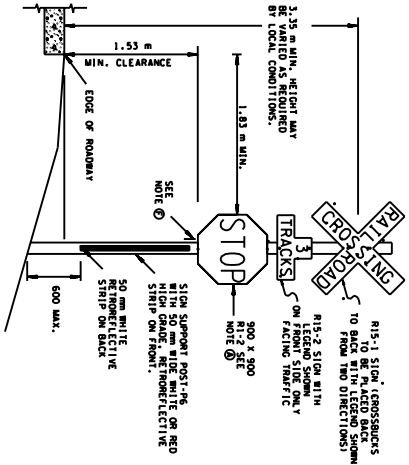
- FOOTNOTES**
- FOR STANDARDIZATION OF LOCATION AND LATERAL CLEARANCE SEE SUBSECTIONS 24-10 AND 24-11 OF THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
 - FOR HEIGHT SEE SUBSECTION 24-23 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
 - FOR LATERAL CLEARANCE OF CROSSBUCK SIGN SEE SUBSECTION 24-24 (PAGE 24-10 AND 24-11) OF THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
 - IF THERE ARE TWO OR MORE TRACKS, TRACKS SHALL BE INDICATED ON AN AUXILIARY SIGN. THE NUMBER OF TRACKS SHALL BE INDICATED ON THE SIGN. THE SIGN SHALL BE SHARED ADOPTED BEFORE THE CROSSBUCK.
 - IF SIGN IS ENCOUNTERED DURING THE INSTALLATION OF SUPPORT POSTS, THE HOLE FOR THE SUPPORT SHALL BE 3'-4" DEPTH IN GROUND. THE HOLE FOR THE SIGN SHALL BE 5'-4" DEPTH IN GROUND.
 - SEE SIGN SPECIFICATIONS IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
 - IF SIGN IS ENCOUNTERED DURING THE INSTALLATION OF SUPPORT POSTS, THE HOLE FOR THE SUPPORT SHALL BE 3'-4" DEPTH IN GROUND. THE HOLE FOR THE SIGN SHALL BE 5'-4" DEPTH IN GROUND.
 - SEE 1007 SPECIAL PROVISIONS 1124 REGARDING SPECIFICATIONS FOR HIGH GRADE REFLECTIVE SHEETING.

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION
GROUND MOUNTED
ROADSIDE
SIGN AND DETAILS
TM-5-16

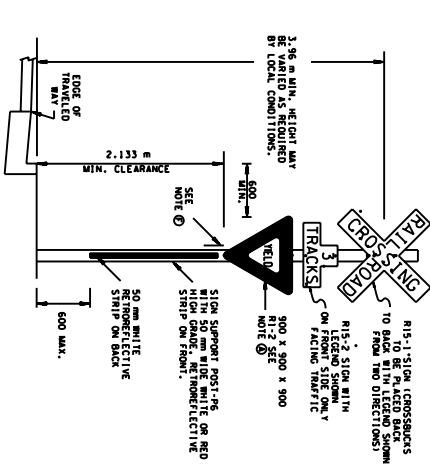
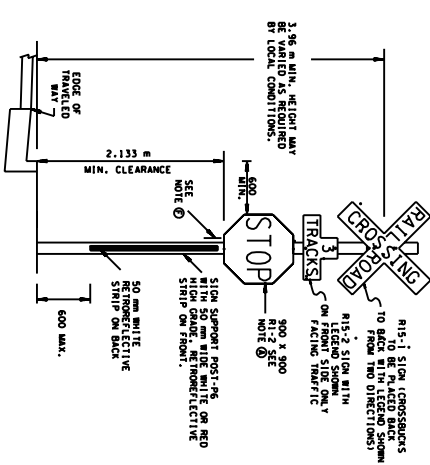


- REV. 1-1-70: CHANGED DEPARTMENT NAME.
- REV. 1-24-73: CORRECT VERTICAL AND LATERAL CLEARANCE OF SIGN AND SUPPORT ATTACHMENTS. SUBMITTED USE OF ROAD NUMBER DETAIL. (BY CHANGELIST)
- REV. 6-24-75: REDESIGN ADDED TO SIGN. USE POST DETAIL. (BY CHANGELIST)
- REV. 7-25-76: PAY ITEM AND NOTE ADDED REGARDING RAILROAD CROSSBUCK SIGN AND SUPPORT.
- REV. 1-1-80: CHANGED DETAIL FROM DETAIL 102306.DGN TO DETAIL 102306.DGN.
- REV. 3-1-80: DETAIL REFERRED TO DETAIL 102306.DGN. (BY CHANGELIST)
- REV. 2-27-77: THE WORD "STEEL" SHOULD BE IN THE DETAIL.
- REV. 0-0-83: CONNECTION DETAIL. U-POST CONNECTION DETAIL. U-POST CHANGED.
- REV. 5-29-84: CONNECTION DETAIL. U-POST CONNECTION DETAIL. U-POST CHANGED.
- REV. 0-0-84: DETAIL REFERRED TO DETAIL 102306.DGN. (BY CHANGELIST)
- REV. 1-2-85: DETAIL REFERRED TO DETAIL 102306.DGN. (BY CHANGELIST)
- REV. 1-28-86: DETAIL REFERRED TO DETAIL 102306.DGN. (BY CHANGELIST)
- REV. 0-0-90: REMOVE AND REDESIGN DETAIL CHANGED FROM DETAIL 102306.DGN TO DETAIL 102306.DGN.
- REV. 1-8-90: EXAMINED SHOULDER INSTALLATION USING TRUCK SUPPORTS.
- REV. 2-28-90: CORRECTED FOOTNOTE INSTALLATION DETAILS.
- REV. 1-29-90: CHANGED DETAIL TO DETAIL 102306.DGN. (BY CHANGELIST)
- REV. 1-18-91: ADDED DETAIL 102306.DGN.
- REV. 5-27-01: CHANGED DETAIL 102306.DGN.
- REV. 7-29-04: IN RAILROAD CROSSBUCK SIGN AND SUPPORT DETAIL, WORD "OR DIMENSION" ADDED TO DETAIL.
- REV. 10-21-05: ADDED GENERAL NOTE TO DETAIL 102306.DGN.

STOP OR YIELD SIGN ON SAME POST WITH THE CROSSBUCK SIGN
AT PASSIVE HIGHWAY-RAIL GRADE CROSSINGS



RURAL DISTRICT



BUSINESS OR RESIDENCE DISTRICT

GENERAL NOTES

- 1 YIELD SIGNS SHALL BE THE DEFAULT SIGN AND SHALL BE USED UNLESS AN ENGINEERING STUDY DETERMINES THAT A STOP SIGN IS REQUIRED. IF A STOP SIGN IS REQUIRED, A 35" x 35" STOP SIGN (R2-1) SHALL BE PLACED MINIMUM 75 FT. IN ADVANCE OF THE ADVANCE RAILROAD SIGN (R10-11).
- 2 SEE STD-08C TM-5-116 FOR RAILROAD CROSSBUCK SIGN AND SUPPORT DETAILS.
- 3 RAILROAD CROSSBUCK SIGN AND SUPPORT, YIELD/STOP SIGN, NUMBER OF TRACKS AUXILIARY SIGN AND TRACK ID PLATE IS TO BE PAID FOR UNDER ITEM NO. 713015.05. RAILROAD CROSSBUCK SIGN AND SUPPORT, STOP SIGN AND SUPPORT SHALL INCLUDE THE FURNISHING AND INSTALLATION OF SIGN, SUPPORT AND ASSUMING.
- 4 LOCATION OF THE CROSSBUCK SIGN AND SUPPORT WITH RESPECT TO THE CENTERLINE OF THE NEAREST TRACK SHALL BE IN ACCORDANCE WITH THE TYPICAL LOCATION PLAN FOR FLASHING LIGHT SIGNAL LOCATIONS AS SHOWN ON FIGURE 8-7 (PAGE BC-6) OF THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- 5 IF AN EXISTING CROSSBUCK SIGN AND SUPPORT IS TO BE REMOVED, THE CONTRACTOR SHALL REMOVE AND INSTALL THE EXISTING SIGN NUMBER PLATE ON THE PROPOSED 713015.05. SIGN. ALL 5001 ARE TO BE INCLUDED IN THE PRICE BID FOR ITEM NO.
- 6 TRACK ID PLATE TO BE MOUNTED ON LEFT SIDE FACING TRACK.



ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
 METRIC SYSTEM - 75mm APPROVAL NOT REQUIRED.

STATE OF MINNESOTA
 DEPARTMENT OF TRANSPORTATION
 GROUND MOUNTED
 SIGN PLACEMENT
 DETAILS
 10-23-06 TM-S-16A