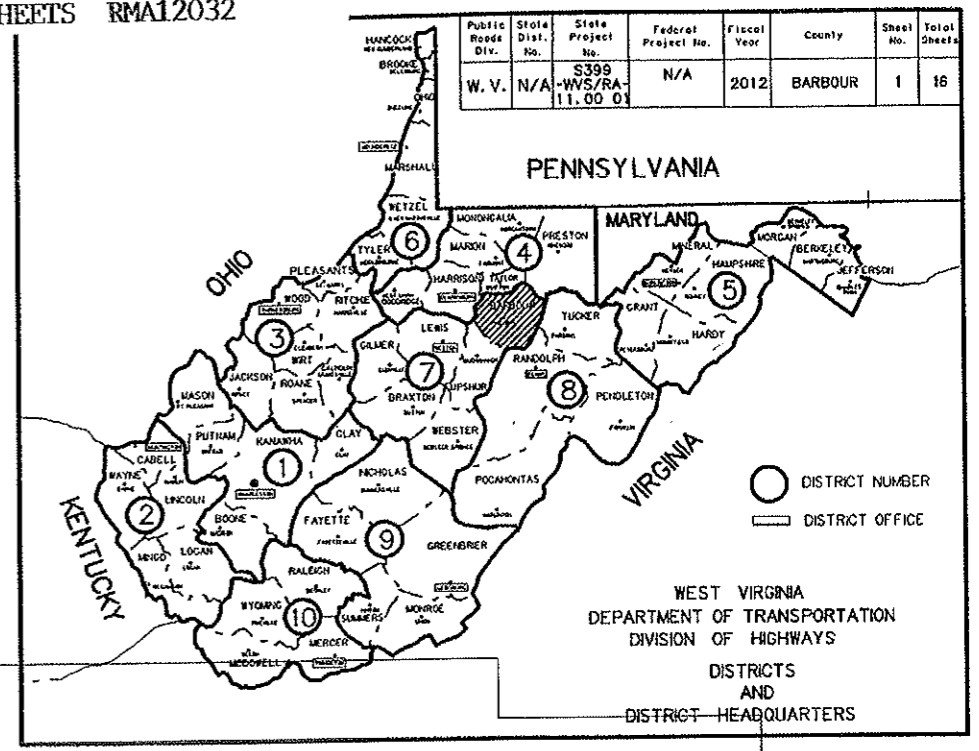
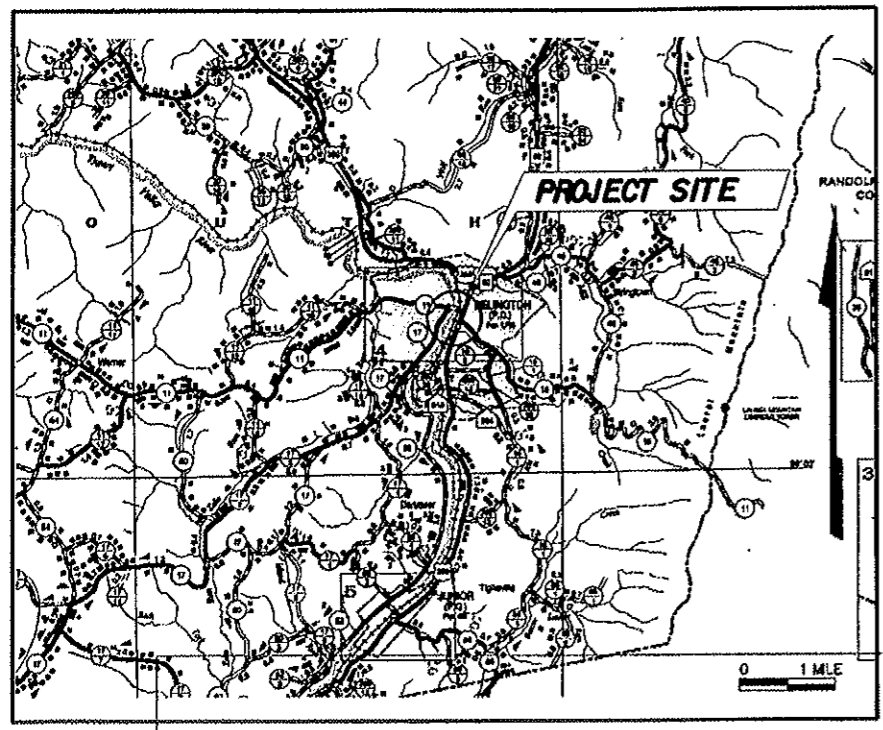


WEST VIRGINIA DEPARTMENT OF TRANSPORTATION PLANS FOR CONSTRUCTION

OF STATE RAILWAY

FEDERAL PROJECT NO. N/A
STATE PROJECT NO. S399-WVS/RA-11.00 01
WEST VIRGINIA CENTRAL RAILROAD
BELINGTON CORPORATION DISTRICT
BARBOUR COUNTY

BELINGTON YARD IMPROVEMENTS



Public Road Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
W. V.	N/A	S399-WVS/RA-11.00 01	N/A	2012	BARBOUR	1	16

	Station	Station	ft.	mile(s)	
MAINLINE	6826+30	to 6828+91	- 261	- 0.05	
MAINLINE	6837+47	to 6844+78	- 731	- 0.14	
SIDING 1	10+00	to 13+81	- 381	- 0.07	
SIDING 2	20+00	to 22+40	- 240	- 0.04	
SIDING 3	32+37	to 37+50	- 513	- 0.10	
Total Project Length *				2,126	0.40

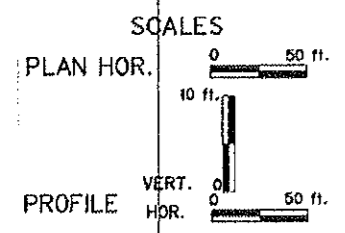
TYPE OF CONSTRUCTION:
RELOCATE MAINLINE, SIDING CONSTRUCTION (3), & TURNOUTS (4)

**BEGIN MAINLINE CONSTRUCTION
STA. 6826+30**

**RESUME MAINLINE CONSTRUCTION
STA. 6837+47**

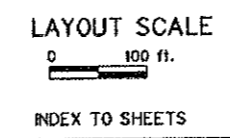
**SUSPEND MAINLINE CONSTRUCTION
STA. 6828+91**

**END MAINLINE CONSTRUCTION
STA. 6844+78**



CONVENTIONAL SIGNS

	STATE LINE
	COUNTY LINE
	CORPORATION LINE
	PROPOSED R/W & EASEMENT LINE
	EXISTING R/W LINE
	PROPERTY LINE
	EXISTING FENCE
	PROPOSED FENCE
	EDGE OF STREAM
	PROPOSED GUARD RAIL
	EXISTING GUARD RAIL
	RAILROAD
	GAS LINE
	WATER LINE
	TELEPHONE LINE
	ELECTRIC LINE
	TELEPHONE POLE
	POWER POLE
	COMBINED POWER AND TELEPHONE POLE
	TREE
	SHRUB
	RIGHT OF WAY MARKER



NO.	DESCRIPTION
1	TITLE SHEET
2-4	TYPICAL SECTIONS
5	SUMMARY OF ESTIMATED QUANTITIES
6-7	GENERAL NOTES
8-10	SPECIAL DETAILS
11-12	PLAN SHEETS
13-16	PROFILE SHEETS

REVISION NUMBER	SHEET NUMBER	REVISIONS	DATE	BY

April 30, 2012
I HEREBY CERTIFY THAT THIS IS A CORRECT COPY OF THE PLANS OF PROJECT S399-WVS/RA-11.00 01
Mia Crookshanks
EXECUTIVE SECRETARY

SIGNED: *James W. P. E.*
RESPONSIBLE CHARGE ENGINEER
DATE: 4/30/12

RECOMMENDED: *Will B.*
PROJECT ENGINEER

RECOMMENDED FOR APPROVAL: *Nancy A. Murphy*
STATE HIGHWAY ENGINEER

APPROVED: *Paul D. Matton*
COMMISSIONER OF HIGHWAYS

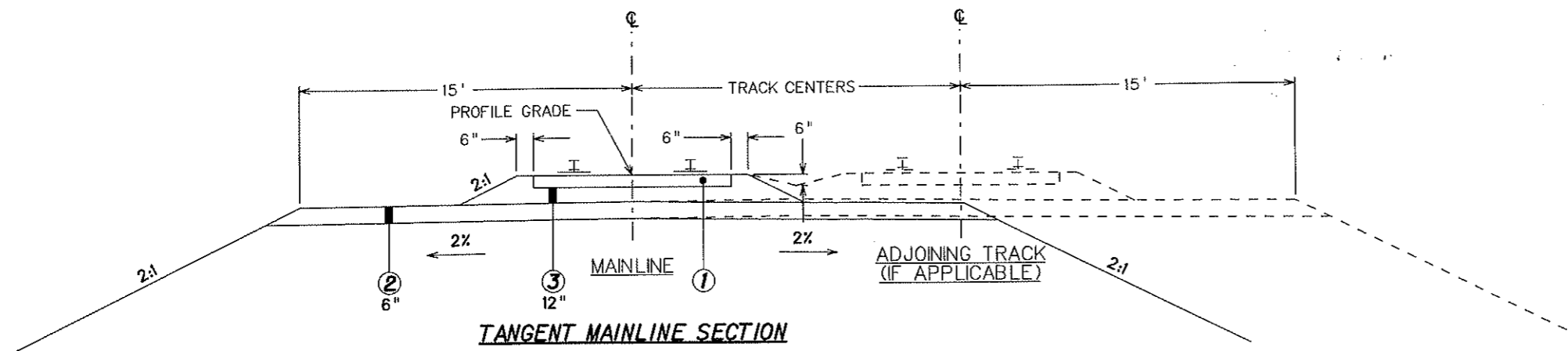
Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
W. V.	N/A	5399 -WVS/RA-11.00 01	N/A	2012	BARBOUR	2	16

LEGEND

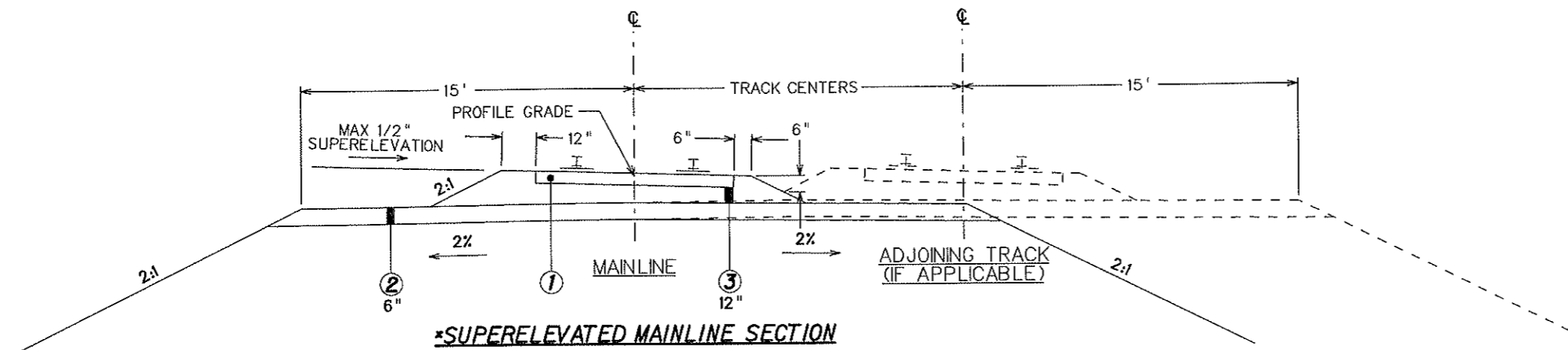
- ① WOODEN CROSS-TIE (20" CENTERS TYP., VARIES ON SPECIAL TRACK WORKS)
- ② COMPACTED SUBBALLAST
- ③ AREMA GRADATION 3 BALLAST

TYPICAL SECTION NOTES

1. THE BALLASTING OF TRACK SHALL BE ACCOMPLISHED IN NOT LESS THAN TWO LIFTS. EACH LIFT SHALL NOT EXCEED FOUR INCHES IN HEIGHT, EXCEPT THE FINAL LIFT SHALL BE APPROXIMATELY TWO INCHES IN HEIGHT.
2. FILL-IN BALLAST (IF REQUIRED) SHALL BE AREMA GRADATION 3.
3. BALLAST SHALL BE EVEN WITH TOP OF TIE.
4. BALLAST SHOULDER SHALL EXTEND 6" FROM END OF TIE TO EDGE OF SLOPE ON TANGENTS AND THE INSIDE OF CURVES, AND 12" ON THE OUTSIDE OF CURVES. THE 12" WIDTH IS TO EXTEND ONTO THE TANGENT AT EACH END OF THE CURVE FOR 100 FEET AND THEN TAPERED IN TO 6" IN THE NEXT 50 FEET.

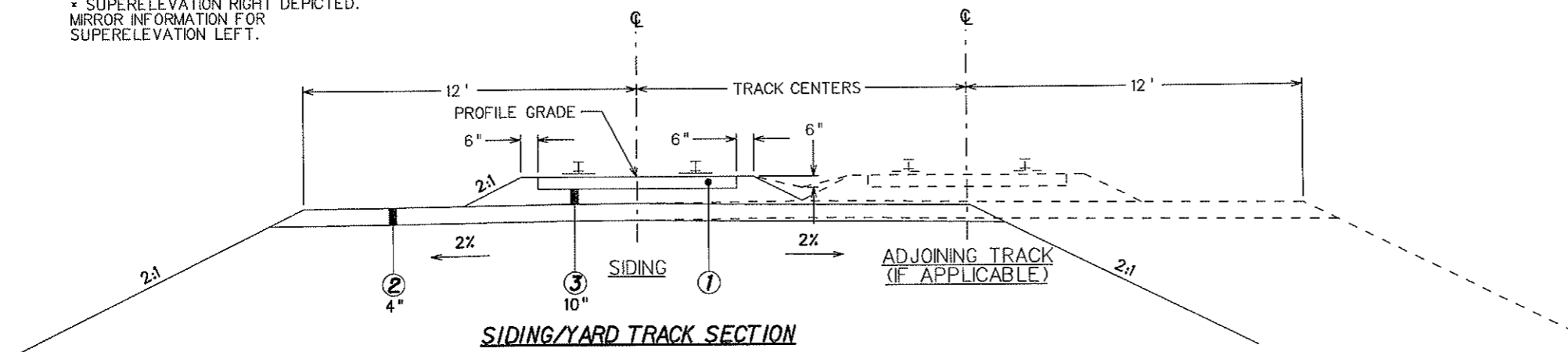


TANGENT MAINLINE SECTION

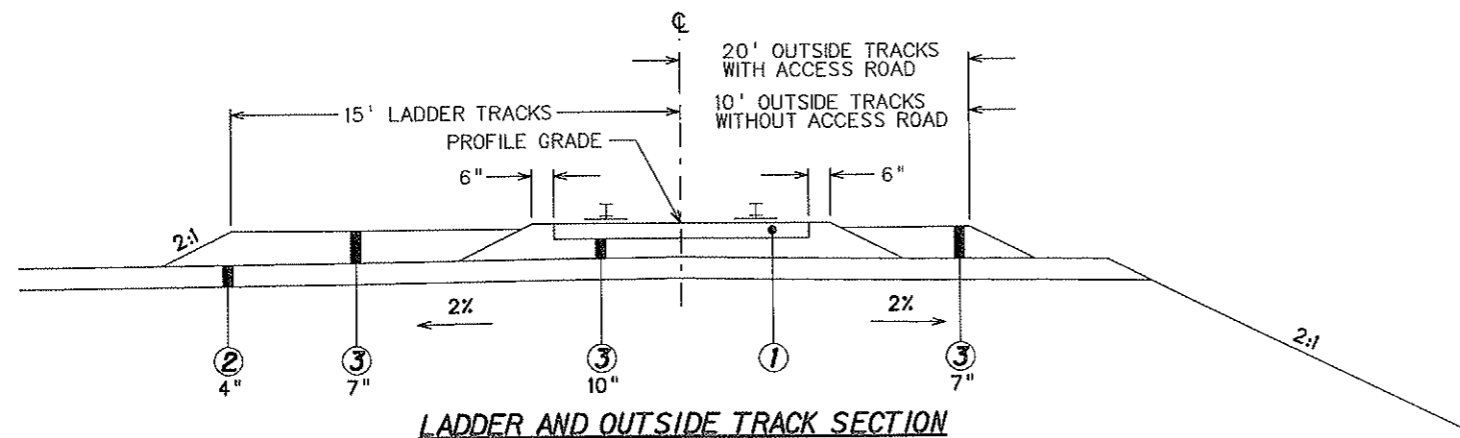


***SUPERELEVATED MAINLINE SECTION**

* SUPERELEVATION RIGHT DEPICTED. MIRROR INFORMATION FOR SUPERELEVATION LEFT.



SIDING/YARD TRACK SECTION



LADDER AND OUTSIDE TRACK SECTION

NOTE

TYPICAL SECTIONS WERE ADAPTED FROM THE CSX TRANSPORTATION PUBLICATION, "STANDARD SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PRIVATE SIDETRACKS", DATED JUNE 1, 2007.

REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

TYPICAL SECTIONS

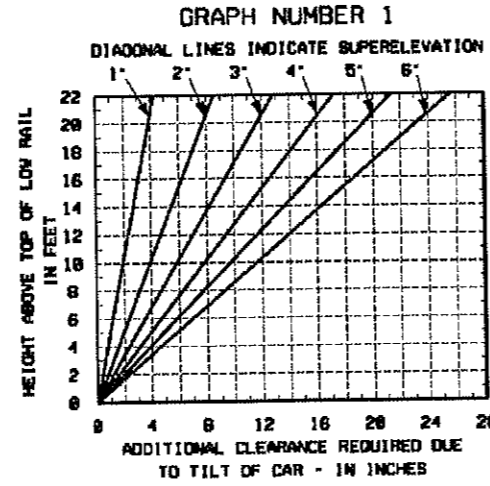
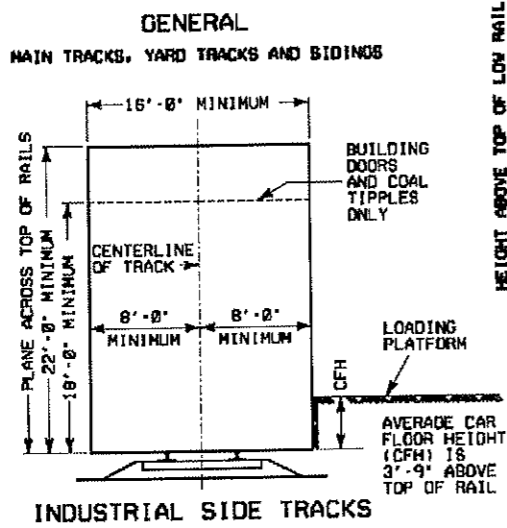
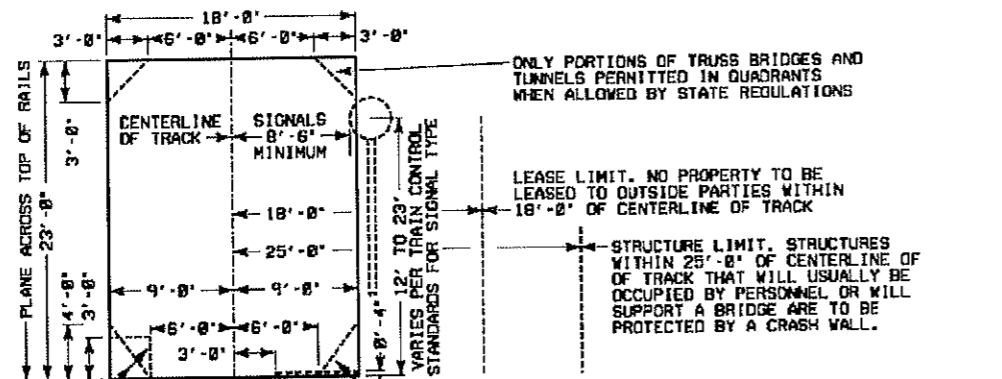


TABLE NUMBER 1

ADDITIONAL CLEARANCE REQUIRED DUE TO CURVATURE - IN INCHES

DEGREE OF CURVE	1	2	3	4	5	6	7	8	9	10	11	12
ALL LOCATIONS EXCEPT FLORIDA	1 1/2	3	4 1/2	6	7 1/2	9	10 1/2	12	13 1/2	15	16 1/2	18
IN THE STATE OF FLORIDA	2	4	6	8	10	12	14	16	18	20	22	24

- 2604
- STANDARD CLEARANCES ARE TO BE USED FOR ALL NEW CONSTRUCTION WHERE THERE ARE NO LEGAL REQUIREMENTS THAT DICTATE GREATER CLEARANCES.
 - CLEARANCES FOR RECONSTRUCTION, REHABILITATION AND ALTERATION WORK ARE DEPENDENT ON EXISTING PHYSICAL CONDITIONS. WHERE POSSIBLE, THEY WILL BE IMPROVED TO COMPLY WITH THE STANDARD CLEARANCES.
 - STATE OR CANADIAN CLEARANCE LAWS MUST NOT BE VIOLATED. LEGAL REQUIREMENTS MAY BE MODIFIED ONLY BY THE GOVERNMENTAL BODY THAT ISSUED THEM.
 - STANDARD CLEARANCE MAY BE MODIFIED ONLY IF APPROVED BY THE CHIEF ENGINEER DESIGN, CONSTRUCTION, AND CAPACITY.
 - STANDARD CLEARANCE DIAGRAMS SHOWN ARE FOR TANGENT TRACK AND INCREASES MUST BE PROVIDED FOR THE EFFECTS OF CURVATURE AND SUPERELEVATION.
 - ADDITIONAL CLEARANCE DUE TO CURVATURE:
WHEN A FIXED OBSTRUCTION IS LOCATED ADJACENT TO A CURVED TRACK, THE HORIZONTAL CLEARANCE WILL BE INCREASED 1 1/2 INCHES PER DEGREE OF CURVATURE ON BOTH SIDES OF THE TRACK CENTERLINE PER TABLE 1. EXCEPTION: FLORIDA REQUIRES 2 INCHES PER DEGREE.
 - ADDITIONAL CLEARANCE DUE TO SUPERELEVATION:
WHEN A FIXED OBSTRUCTION IS LOCATED ADJACENT TO A SUPERELEVATED TRACK, THE HORIZONTAL CLEARANCE ON THE LOW RAIL SIDE OF THE TRACK WILL BE INCREASED TO ALLOW FOR TILT. THE MINIMUM INCREASE IS SHOWN ON GRAPH NO. 1.
 - ADDITIONAL CLEARANCE DUE TO CURVATURE AND SUPERELEVATION:
WHEN A FIXED OBSTRUCTION IS LOCATED ADJACENT TO A CURVED AND SUPERELEVATED TRACK, THE HORIZONTAL CLEARANCE INCREASE WILL BE THE SUM OF THE INCREASES OBTAINED USING 5.A AND 5.B ABOVE. EXCEPTION: CANADA REQUIRES A MINIMUM OF 2 INCHES PER DEGREE.
 - ADDITIONAL CLEARANCE ON TANGENT TRACKS:
WHEN A FIXED OBSTRUCTION IS ADJACENT TO TANGENT TRACK BUT THE TRACK IS CURVED WITHIN 88 FEET OF THE OBSTRUCTION, THE HORIZONTAL CLEARANCE WILL BE INCREASED AS FOLLOWS:

DISTANCE FROM OBSTRUCTION TO CURVED TRACK - FEET	INCREASED HORIZONTAL CLEARANCE
0 TO 20	100% OF PARAGRAPH 5.C
21 TO 40	75% OF PARAGRAPH 5.C
41 TO 60	50% OF PARAGRAPH 5.C
61 TO 80	25% OF PARAGRAPH 5.C
 - VERTICAL CLEARANCE ON SUPERELEVATED TRACK IS MEASURED FROM THE TOP OF THE HIGH RAIL.

CSX TRANSPORTATION

CLEARANCE DIAGRAMS

David W. Gehardt
APPROVED - CHIEF ENGINEER
DESIGN, CONSTRUCTION, & CAPACITY

James D. Bagley
APPROVED - VICE PRESIDENT
ENGINEERING

PREPARED BY: D.C. CLARK
ISSUED: JULY 19, 1996
REVISED: SEPTEMBER 5, 2006

NOTE
DETAILS WERE TAKEN FROM THE CSX TRANSPORTATION PUBLICATION, "STANDARD SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PRIVATE SIDETRACKS", DATED JUNE 1, 2007.

REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

TYPICAL SECTIONS

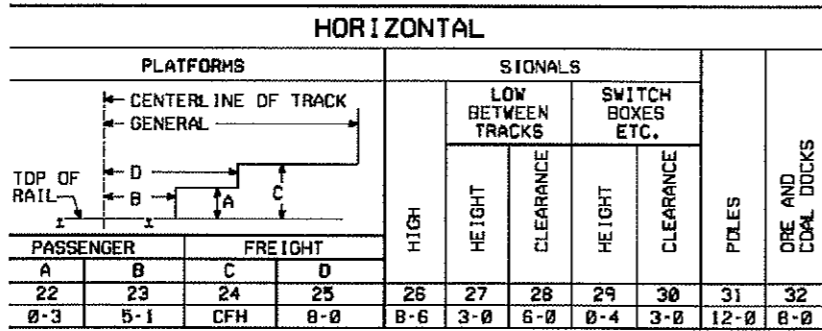
2605

DIMENSIONS - NOTES:

ARE SHOWN IN FEET AND INCHES (FT-IN).
 ARE FOR TANGENT TRACK. SEE CSX 2804 FOR INCREASE DUE TO CURVATURE.
 VERTICAL CLEARANCE IS MEASURED FROM TOP OF HIGH RAIL FOR THE ENTIRE FULL HORIZONTAL WIDTH DESCRIBED BELOW.
 HORIZONTAL CLEARANCE IS MEASURED FROM CENTERLINE OF NEAR TRACK.
 APPLY TO ALL NEW CONSTRUCTION, RECONSTRUCTION AND ALTERATIONS
 ALL COLUMNS ARE MINIMUM EXCEPT COLUMNS 22, 24, 27, AND 29 WHICH ARE MAXIMUM
 CFH = CAR FLOOR HEIGHT.
 REFERENCE CHAPTER 28 OF AREMA MANUAL FOR RAILWAY ENGINEERING FOR ENTIRE DETAILS OF STATE LEGAL CLEARANCES

TRACK CENTERS									VERTICAL					HORIZONTAL						
MAIN TRACKS	ANY TWO NON-MAIN TRACKS	ADJACENT NON-MAIN TRACK TO ANY MAIN TRACK	LADDER TRACK ADJACENT TO ANY PARALLEL TRACK	TWO ADJACENT PARALLEL TRACKS	LADDER TRACKS AND CABOOSE TRACKS	TEAM TRACKS IN PAIRS	UNLOADING TRACKS AT PLATFORMS	MAIN TRACK AND BULK LOADING OR UNLOADING TRACK	GENERAL (UNLESS PROVIDED FOR)	THRU BRIDGES	HIGHWAY BRIDGE (SPANNING TRACKS)	TUNNELS	BUILDING DOORS	IN BUILDINGS	GENERAL (UNLESS PROVIDED FOR)	THRU BRIDGES	HIGHWAY BRIDGE (SPANNING TRACKS)	TUNNELS	BUILDING DOORS	IN BUILDINGS
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
15-0	14-0	15-0	19-0	19-0	14-0	13-6	13-6	18-0	23-0	23-0	23-0	23-0	18-0	22-0	9-0	9-0	18-0	9-0	8-0	8-0

EXCEPTIONS:
 COLUMN 6 SHALL BE 17-0 IN MASSACHUSETTS
 COLUMN 7 AND 8 SHALL BE 14-0 IN MICHIGAN
 COLUMN 14 SHALL BE 21-0 IN OHIO; 22-0 IN INDIANA, WEST VIRGINIA, & CANADA; 22-6 IN CONNECTICUT, MASSACHUSETTS, & MICHIGAN
 COLUMN 15 SHALL BE 22-6 IN CONNECTICUT, MASSACHUSETTS, & MICHIGAN; 23-0 IN DELAWARE
 COLUMN 16 SHALL BE 12-0 IN PENNSYLVANIA
 COLUMN 18 SHALL BE 25-0 IN SOUTH CAROLINA
 COLUMN 20 SHALL BE 8-6 IN MASSACHUSETTS AND MICHIGAN
 COLUMN 21 SHALL BE 8-6 IN MICHIGAN



EXCEPTIONS:
 COLUMN 23 SHALL BE 5-2 IN CONNECTICUT
 COLUMN 25 SHALL BE 8-6 IN CONNECTICUT, MARYLAND, MICHIGAN, NEW YORK, & PENNSYLVANIA
 COLUMN 26 SHALL BE 9-0 IN DELAWARE; 12-0 IN PENNSYLVANIA
 COLUMN 27 SHALL BE 4-0 IN CANADA
 COLUMN 29 SHALL BE 0-5 IN CANADA
 COLUMN 30 SHALL BE 3-10 IN CANADA
 COLUMN 32 SHALL BE 8-4 1/4 IN CANADA; 8-6 IN DC, & MARYLAND

CSX TRANSPORTATION
 STANDARD CLEARANCE MATRIX

Walter W. Ophardt APPROVED - CHIEF ENGINEER
 DESIGN, CONSTRUCTION, & CAPACITY
James D. Bagley APPROVED - VICE PRESIDENT
 ENGINEERING

PREPARED BY: D.C. CLARK
 ISSUED: JULY 19, 1996
 REVISED: SEPTEMBER 5, 2006

NOTE
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REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

TYPICAL SECTIONS

Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
W. V.	N/A	S399 -WVS/RA- 11.00 03	N/A	2012	BARBOUR	5	16

Summary of Estimated Quantities

Item	Unit	Quantity	Notes
Remove Existing Track	Track Foot	2,376.00	Includes all labor, equipment, and materials for the removal of all rail, turnouts, crossties, and associated appurtenances.
Excavation - Mainline	CY	800.00	Cut to bottom of subballast (typ).
Excavation - Siding 1	CY	266.00
Excavation - Siding 2	CY	168.00
Excavation - Siding 3	CY	358.00
Compacted Subballast - Mainline	CY	304.00
Compacted Subballast - Siding 1	CY	112.00
Compacted Subballast - Siding 2	CY	71.00
Compacted Subballast - Siding 3	CY	151.00
#3 AREMA Ballast - Mainline	CY	690.00	
#3 AREMA Ballast - Siding 1	CY	229.00	
#3 AREMA Ballast - Siding 2	CY	144.00	
#3 AREMA Ballast - Siding 3	CY	308.00	
Track - Mainline, 132 RE	Track Foot	992.00	Track includes labor, equipment and materials for all rail, crossties, tie plates, splices, track bots, washers, spikes, anchors, expansion shims, gaging, and other necessary appurtenances as required.
Track - Siding 1, 90 AS	Track Foot	381.00	
Track - Siding 2, 90 AS	Track Foot	240.00	
Track - Siding 3, 90 AS	Track Foot	513.00	
# 8, 132 RE Turnout Right	EA	1.00	Complete assembly.
# 10, 132 RE Turnout Left	EA	1.00	Complete assembly.
# 10, 132 RE Turnout Right	EA	1.00	Complete assembly.
# 12, 132 RE Turnout Right	EA	1.00	Complete assembly, Samson switch points.
90- 132 Compromise Joints	EA	6.00	

REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
SUMMARY OF ESTIMATED QUANTITIES

GENERAL NOTES

GOVERNING SPECIFICATIONS

WORKMANSHIP AND MATERIALS SHALL BE PER CURRENT AREMA SPECIFICATIONS UNLESS OTHERWISE SPECIFIED.

WASTE MATERIAL

ALL MATERIAL REMOVED AND NOT REUSED IN THE CONSTRUCTION OF THE PROJECT WILL BE REMOVED FROM THE PROJECT AND DISPOSED OF BY THE CONTRACTOR.

UTILITIES

THE LOCATIONS OF ALL KNOWN UTILITIES ARE SHOWN ON THE CONTRACT PLANS BASED ON THE BEST AVAILABLE INFORMATION FROM EXISTING PLANS AND FIELD INFORMATION. IT IS THE CONTRACTORS RESPONSIBILITY TO ASCERTAIN THE STATUS AND LOCATION OF EACH UTILITY WHEN PERFORMING WORK WHICH MAY AFFECT THESE FACILITIES, INCLUDING PROBING, EXCAVATION OR ANY OTHER PRECAUTION REQUIRED TO CONFIRM LOCATION. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGE OR DISRUPTION TO UTILITY LINES WHICH ARE KNOWN ACTIVE AND ARE TO REMAIN IN OPERATION.

DRAINAGE

ALL CULVERTS, INLETS, AND OTHER DRAINAGE ITEMS ON THIS PROJECT HAVE BEEN LOCATED AS AVAILABLE INFORMATION ALLOWS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING THE EXACT LOCATION AND ELEVATION OF ALL DRAINAGE ITEMS AND MAKE ANY NECESSARY ADJUSTMENTS IN THE FIELD TO INSURE PROPER DRAINAGE, AFTER REVIEW AND APPROVAL BY THE PROJECT ENGINEER.

VERIFICATION OF DIMENSIONS

THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF ALL PLANS, ELEVATIONS AND DIMENSIONS PRIOR TO ORDERING MATERIALS FOR THE CONSTRUCTION OF VARIOUS BID ITEMS ON THIS PROJECT.

WASTE AND BORROW SITES

NO WASTE OR BORROW SITES WILL BE PERMITTED WITH ANY FLOOD PLAIN, WETLANDS, OR HIGHLY SENSITIVE CULTURAL RESOURCES.

LAYOUT DATA

ONCE A CONTRACTOR HAS BEEN SELECTED BY THE WVSRA, LAYOUT DATA WILL BE PROVIDED UPON REQUEST. AVAILABLE DATA INCLUDES: SURVEY REFERENCE POINTS, GEOMETRIC LAYOUT (BENTLY .dwg GEOMETRY FILE), AND ELECTRONIC MICROSTATION DRAWING FILES.

CONDUCT OF WORK

CONTRACTOR SHALL COORDINATE WORK WITH THE DURBIN & GREENBRIER VALLEY RAILROAD (DGVR), THE OPERATOR OF THE WEST VIRGINIA CENTRAL RAILROAD (WVCR). CONTACT FOR TRACK ACCESS IS MARK SMITH, 304-642-3050 OR marksmith@dvgr.com.

CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE A RADIO OR RADIOS CAPABLE OF COMMUNICATING WITH THE DGVR. THE RADIO MUST BE A MINIMUM OF 40 WATTS. THE CONTRACTOR CAN GET A RADIO FROM HAMMACK COMMUNICATIONS, 304-636-6210, AND HAVE IT PROGRAMMED WITH THE SAME FREQUENCY AS THE DGVR. EACH WORK CREW SHALL BE EQUIPPED WITH A RADIO STATIONED TO ROAD CHANNEL 160.455. A RADIO IS REQUIRED FOR ALL CREWS AS CELL SERVICE MAY BE LIMITED.

ALL WORK SHALL BE SUBJECT TO INSPECTION BY THE STATE RAIL AUTHORITY (SRA) AND WVCR.

THE CONTRACTOR SHALL COMPLY WITH ALL SAFETY RULES AND REGULATIONS AS REQUIRED BY THE FEDERAL RAILROAD ADMINISTRATION, WVCR, AND OTHER PARTIES AS APPLICABLE.

THE CONTRACTOR WILL BE REQUIRED TO HAVE ALL EMPLOYEES THAT WILL BE WORKING ON THIS PROJECT ATTEND A ½ DAY CLASS ON TRACK SAFETY AND TRACK ACCESS. A MANDATORY PRE CONSTRUCTION MEETING WILL BE HELD WITH ALL EMPLOYEES WORKING ON THE PROJECT, THE WVCR OPERATOR AND THEIR EMPLOYEES, AND A REPRESENTATIVE OF THE SRA. THIS MEETING WILL ENSURE THAT EVERYONE UNDERSTANDS THE ENTIRE SCOPE OF WORK AS OUTLINED IN THE AWARDED CONTRACT. CONTRACTOR SHALL SUBMIT A WEEKLY STATUS REPORT TO THE SRA. THE REPORT SHALL BE SIGNED BY THE CONTRACTOR AND RAILROAD REPRESENTATIVE AND WILL LIST THE WORK COMPLETED FOR THE WEEK. A FINAL INSPECTION OF ALL COMPLETED WORK SHALL BE CONDUCTED BY THE CONTRACTOR, THE DGVR, AND AN SRA REPRESENTATIVE TO ASSURE ALL WORK IS COMPLETED AS STATED IN THE CONTRACT DOCUMENTS. FINAL PAYMENT WILL BE WITHHELD UNTIL THIS INSPECTION IS COMPLETE.

CONTRACTOR SHALL USE HEAVY AND HIGHWAY CONSTRUCTION RATES AS ESTABLISHED FOR BARBOUR COUNTY. THESE RATES ARE PURSUANT TO WV CODE 21-5A, ET. SEQ, AND ARE AVAILABLE AT www.wvsos.com/adlaw/wagerates. CONTRACTOR WILL BE RESPONSIBLE FOR SUBMITTING CERTIFIED PAYROLLS TO THE SRA.

SIDINGS AT BELINGTON, ELKINS, BOWDEN, BEMS, AND CHEAT BRIDGE CAN BE USED TO TIE-UP EQUIPMENT. THESE LOCATIONS CAN ALSO BE USED TO STACK OLD TIES UNTIL REMOVAL.

CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANUP OF THE WORK SITE. ALL DEBRIS AND REFUSE SHALL BE REMOVED FROM WVCR PROPERTY AND DISPOSED OF PROPERLY. THIS INCLUDES OLD CROSS-TIES, SWITCH TIES AND SPIKES REMOVED DURING THE PROJECT. OLD RAIL AND OTM REMOVED FOR THIS PROJECT SHALL REMAIN THE PROPERTY OF THE WVCR. CONTRACTOR SHALL GATHER ALL RAIL AND OTM FROM THE PROJECT AND NEATLY STACK AT THE BELINGTON YARD AS DIRECTED BY WVCR PERSONNEL.

MATERIALS

MATERIALS USED IN THIS PROJECT SHALL BE AS DESCRIBED BELOW. SHOULD THESE SPECIFICATIONS NOT COVER WORK DESCRIBED HEREIN, WORKMANSHIP AND MATERIALS SHALL BE AS PER CURRENT AREMA SPECIFICATIONS.

SUBBALLAST

SUBBALLAST SHALL BE COMPOSED OF CRUSHER RUN GRANITE OR LIMESTONE AND SHALL MEET THE REQUIREMENTS SET OUT IN CHAPTER 1 (ROADWAY AND BALLAST) PART 2 (BALLAST), SECTION 2.11 (SUB-BALLAST SPECIFICATIONS) OF THE CURRENT AREMA MANUAL. SUBBALLST MATERIAL SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

SUBBALLAST GRADATION REQUIREMENTS

SCREEN SIZE	% PASSING BY WEIGHT	
	GRADED AGGREGATE	CRUSHER RUN
1½"	100%	100%
¾"	60-100%	-
NO.10	30-55%	15-45%
NO.60	8-35%	-
NO.200	5-20%	5-12%

BALLAST

MATERIAL SHALL BE LIMESTONE, DOLOMITE, OR GRANITE MATERIAL FREE OF LOAMS, DUST, OR OTHER FOREIGN PARTICLES. MATERIAL SHALL BE DESIGNATED AS AREMA #3, IN ACCORDANCE WITH THE GRADATION CHART BELOW.

TRACK BALLAST GRADATION REQUIREMENTS

SCREEN SIZE	% PASSING BY WEIGHT	
	AREMA 3	
3"	-	
2½"	100%	
2"	95-100%	
1½"	35-70%	
1"	0-15%	
¾"	-	
½"	0-5%	
⅜"	-	
NO.4	-	
NO.8	-	

CROSSTIES

ALL CROSSTIES SHALL BE TREATED PER A.W.P.A. MANUAL C-6 TO A NET RETENTION OF 7LB./CU.FT. FOR OAK AND 8½ LB./CU.FT. FOR MIXED HARDWOODS, AND SHALL CONFORM TO AREMA CHAPTER 3. ALL TIES SHALL BE FREE FROM ANY DEFECTS THAT MIGHT IMPAIR THEIR STRENGTH OR DURABILITY AS CROSSTIES, SUCH AS DECAY, LARGE SPLITS, LARGE SHAKES, SLANTING GRAIN, OR LARGE NUMEROUS HOLES OR KNOTS. MAINLINE CROSSTIES SHALL BE SIZE 5 (7"x9"x8'-6" LONG, MINIMUM 8" FACE). SIDETRACK CROSSTIES SHALL BE INDUSTRIAL GRADE (I.G.). SIZE SHALL BE "7"x9"x8'-6" AND CONFORM TO AREMA CHAPTER 3. I.G. TIES SHALL BE 100% END-PLATED, MIXED HARDWOODS AND OAK, CREOSOTE PRESSURE TREATED TO 7* RETENTION OR REFUSAL.

SWITCHTIES

SWITCHTIES SHALL BE PRESSURE TREATED AS SPECIFIED ABOVE. THE SWITCH TIES SHALL BE OF 7"x9" CROSS-SECTION AND SHALL VARY IN LENGTH AS PER THE SPECIFIED TURNOUT DESIGN.

TIE PLATES

TIE PLATES SHALL BE DOUBLE-SHOULDER WITH NO MORE THAN 1:40 CANT AND CONFORM TO AREMA MANUAL CHAPTER FIVE (TRACK), PART 1 (TIE PLATES), EXCEPT IN TURNOUTS AND TRACK CROSSINGS WHERE SPECIAL PLATES ARE REQUIRED.

					THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS	
					GENERAL NOTES	
REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY		

MATERIALS (CONT.)

SPLICES

JOINT BARS SHALL HAVE A DRILLING PATTERN TO MATCH BOLT HOLES IN ABOVE RAIL AND CONFORM TO AREMA CHAPTER FOUR (RAILS), PART THREE (JOINING OF RAILS).

COMPROMISE JOINTS

COMPROMISE JOINTS SHALL CONFORM TO AREMA CHAPTER FOUR (RAILS), PART THREE (JOINING OF RAILS), AND BE OF SIZES AS INDICATED ON THE PLANS.

TRACK BOLTS AND WASHERS

SAE GRADE 8 BUTTON HEAD OVAL NECK BOLTS SHALL BE USED FOR ALL TRACK JOINTS. SPRING WASHERS OF THE APPROPRIATE SIZE AND CONFORMING TO AREMA RECOMMENDATIONS FOUND IN CHAPTER FOUR (RAILS), PART THREE (JOINING OF RAILS), SHALL BE USED ON EACH BOLT.

SPIKES

HIGH-CARBON STEEL TRACK SPIKES SHALL BE USED AND CONFORM TO AREMA RECOMMENDATIONS FOUND IN CHAPTER 5 (TRACK), PART 2 (TRACK SPIKES). TRACK SPIKES SHALL BE 5/8" SQUARE BY 6" LONG.

ANCHORS

RAIL ANCHORS SHALL BE DRIVE ON OR SPRING TYPE, OF APPROVED DESIGN, CONFORMING TO AREMA RECOMMENDATION FOUND IN CHAPTER 5 (TRACK), PART 7 (RAIL ANCHORS). NEW OR APPROVED RECLAIMED RAIL ANCHORS SHALL BE USED. WHERE USED WITH RELAY RAIL, THE ANCHORS MUST BE SIZED TO FIT THE RAIL BASE.

TURNOUTS

ALL TURNOUT MATERIAL SHALL BE OF NO LIGHTER RAIL SECTION THAN THE RAIL SECTION FROM WHICH IT DIVERGES AND SHALL BE SUBJECT TO THE INSPECTION AND APPROVAL OF THE WVCR. ALL TURNOUTS SHALL MEET AREMA SPECIFICATIONS. TURNOUT FROG SHALL BE RAILBOUND MANGANESE. SWITCH STAND SHALL BE A CENTURY SWITCH STAND WITH BOW HANDLE (SAMSON UNDERCUT SWITCH POINT IS NOT NECESSARY).

RAIL (GENERAL)

RAIL FOR THIS PROJECT SHALL BE OF SIZES INDICATED AS INDICATED ON THE PLANS AND SHALL CONFORM TO THE FOLLOWING:

- 1) WEAR SHALL BE NO GREATER THAN 1/4" ON BOTH THE TOP AND GAGE SIDE.
- 2) RAILS SHALL BE STRAIGHT HORIZONTALLY EXCEPT NOT MORE THAN 10% OF THE ORDER MAY HAVE HORIZONTAL CURVES NOT GREATER THAN INDICATED BY THE MID-ORDINATE OF 1/4" IN THIRTY FEET.
- 3) RAILS SHALL BE STRAIGHT VERTICALLY WITH NO UPSWEEP OR DROOP PERMISSIBLE.
- 4) RAILS SHALL BE CLEAN IN APPEARANCE AND FREE OF OBVIOUS DEFECTS. BASES SHALL BE SOLID AND FREE OF VISUAL DEFECTS. SLIGHT INDENTATIONS OR SPIKE NOTCHING WITH A MAXIMUM DEPTH OF 1/8" AND MAXIMUM LENGTH OF 3/4" IS PERMISSIBLE. SLIGHT PITTING IS ALSO ALLOWABLE. WEBS SHALL BE FREE OF VISUAL DEFECTS. RAILS SHALL HAVE GAGE WEAR ON ONE SIDE ONLY. METAL FLOW ON RAIL HEAD SHALL NOT EXCEED 1/8" PER SIDE. ENGINE BURNS SHALL NOT BE GREATER THAN 1/2" WIDE BY 1-1/2" LONG BY 1/8" DEEP, SHALL NOT EXCEED TWO PER RAIL AND SHALL AFFECT NO MORE THAN 10% OF THE ENTIRE ORDER.

LAYING JOINTED RAIL

PLACEMENT

RAILS SHALL BE SO PLACED THAT THE JOINTS IN EACH LINE OF RAIL SHALL BE WITHIN THE MIDDLE HALF OF THE OPPOSITE LENGTH RAIL. TO MINIMIZE THE CUTTING OF FULL-LENGTH RAILS, SHORT RAILS MAY BE USED IN ADJUSTING FOR PROPERTY SPACING OF JOINTS, BUT NO RAIL LESS THAN THIRTY THREE (33') ON CURVES OR NINETEEN FEET SIX INCHES (19'-6") ON TANGENTS SHALL BE USED.

CUTTING OF RAIL

FLAME CUTTING OF RAIL WILL NOT BE PERMITTED. RAIL SHALL BE CUT WITH A SAW. BOLT HOLES SHALL BE DRILLED, NOT TORCH-CUT.

CLEANING

THE BOTTOM OF THE RAIL AND BEARING SURFACES OF THE CROSSTIE AND TIE PLATES SHALL BE CLEANED BEFORE RAIL IS LAID.

RAIL TEMPERATURE

A RAIL THERMOMETER SHALL BE USED IN DETERMINING RAIL TEMPERATURES AT THE TIME OF INSTALLATION. APPROVED THERMOMETERS INCLUDE DIAL RAIL THERMOMETER AND ELECTRONIC SURFACE THERMOMETERS. TEMPERATURES WILL BE READ AND RECORDED PERIODICALLY DURING THE DAY AND SUPERVISORY EMPLOYEE SHALL SEE THAT IT IS CHECKED FREQUENTLY AND THAT PROPER EXPANSION SHIMS ARE USED. WHEN TAKING RAIL TEMPERATURES, THE THERMOMETER WILL BE PLACED ON THE WEB OF THE RAIL ON THE SIDE AWAY FROM THE SUN. NON-CONTACT THERMOMETERS SHALL BE LOCATED NO MORE THAN TWO FEET AWAY AND POINTED DIRECTLY AT THE WEB OF THE RAIL ON THE SIDE AWAY FROM THE SUN. A RECORD OF RAIL LAYING TEMPERATURES AND EXPANSION ARE TO BE MADE AVAILABLE FOR INSPECTION BY REQUEST.

EXPANSION SHIMS

RAIL EXPANSION SHIMS OF APPROVED THICKNESS AND MATERIAL WILL BE USED PER 39-FOOT RAIL IN ACCORDANCE WITH THE FOLLOWING TEMPERATURE TABLE:

EXPANSION REQUIRED FOR JOINTED RAIL

BELOW 6° F	3/8" IN EACH JOINT
6° -25° F	1/4" IN EACH JOINT
26-45° F	3/8" IN EACH JOINT
46-65° F	1/2" IN EACH JOINT
66-85° F	3/4" IN EACH JOINT
OVER 85° F	NO SHIMS NECESSARY

LAYING RAIL

EXCEPT AS OTHERWISE SPECIFIED, RAILS SHALL BE LAID ONE-AT-A-TIME, AND TO INSURE GOOD ADJUSTMENT, THE RAIL ENDS BROUGHT SQUARELY TOGETHER AGAINST SUITABLE RAIL EXPANSION SHIMS AND BOLTED BEFORE SPIKING.

GAGE

THE GAGE OF THE TRACK IS THE DISTANCE BETWEEN THE HEADS OF THE RAILS, MEASURED AT RIGHT ANGLES THERETO, AT A POINT FIVE-EIGHTHS (5/8") INCH BELOW THE TOP RAIL. STANDARD GAGE IS 4'-8-1/2". NO CHANGE IN GAGE ON ACCOUNT OF CURVATURE WILL BE PERMITTED. GAGING SHALL BE DONE AT THE TIME THE RAIL IS LAID.

BUTTING USED RAIL WITH NEW RAIL

WHEN BUTTING USED RAIL WITH NEW RAIL, WELDING SHALL BE USED TO BUILD UP THE END OF THE USED RAIL TO MATCH THE NEW RAIL. THIS PROVIDES A SMOOTH TRANSITION OVER THE JOINT. THE SAME PROCESS SHALL BE USED WHEN IT IS NECESSARY TO BUTT USED RAIL TO NEW FROGS, SWITCHES, ETC.

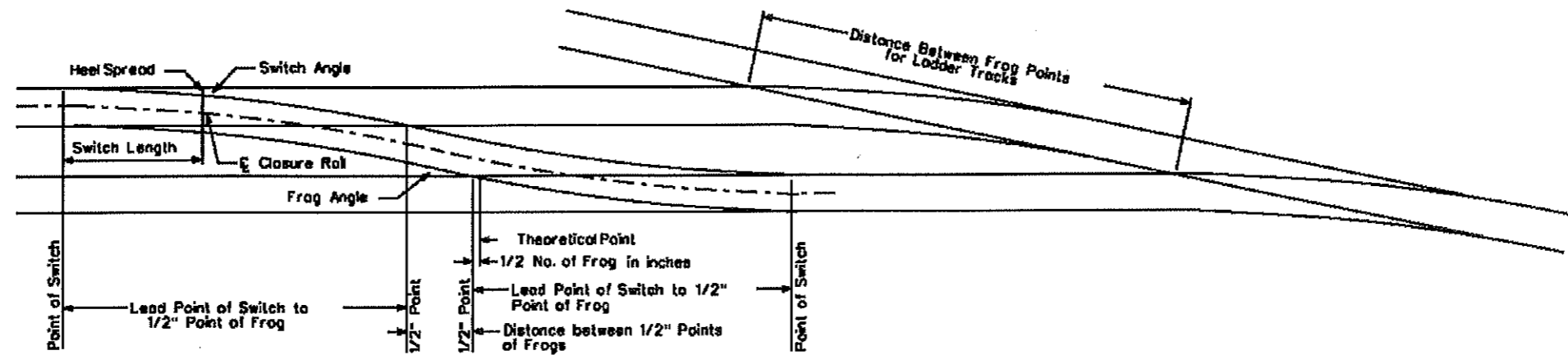
ANCHORS

RAIL ANCHORS FOR JOINTED TRACK SHALL BE APPLIED AT SIXTEEN (16) ANCHORS PER 39 FEET RAIL LENGTH, BOX ANCHORING EIGHT TIES SPACED IN ACCORDANCE WITH THE RAIL ANCHORING DETAIL PROVIDED IN THE PLANS. BOX ANCHORING IS DEFINED AS: AN ANCHOR ON EACH SIDE OF A TIE, ON BOTH RAILS, OR FOUR (4) ANCHORS APPLIED TO ONE TIE. ANCHORS SHALL BE SECURELY AND SQUARELY FASTENED TO RAIL AND HAVE A SOLID BEARING AGAINST THE TIES.

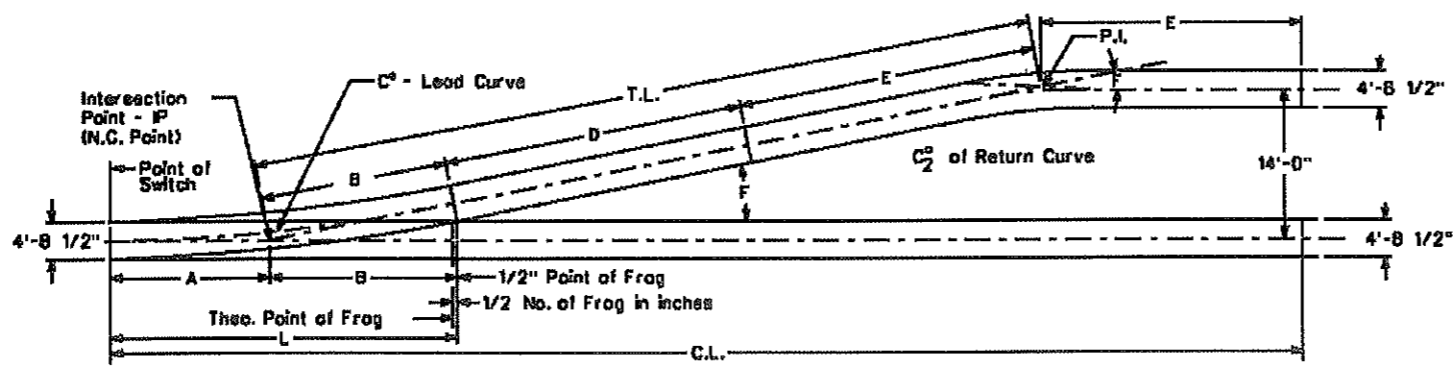
LAYING WELDED RAIL

TRACK LOCATIONS THAT WILL HAVE OVER 400 FEET IN LENGTH OF WELDED RAIL ARE CONSIDERED TO BE CONTINUOUS WELDED RAIL (CWR) TRACK AND SHALL MEET ALL THE REQUIREMENTS FOR CWR TRACK (REFERENCE 49 CFR 213.121(f); SEE <http://www.gpoaccess.gov/cfr/index.html>). FABRICATION OF CWR SHALL BE GOVERNED BY AREMA RECOMMENDATIONS FOUND IN CHAPTER FOUR (RAIL), PART THREE (JOINING OF RAIL), SUBSECTION 3.11 (SPECIFICATION OF FABRICATION FOR CONTINUOUS WELDED RAIL).

					THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS	
					GENERAL NOTES	
REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY		



FROG NO.	L POINT OF SWITCH TO 1/2 POINT OF FROG	C ² DEGREE OF CURVE & CLOSURE RAILS	TURNOUT PLAN NO.	FROG			SWITCH			A P.S. TO INT. PT.	B I.P. TO 1/2" PT FROG	D 1/2" P.F. P.C. RET. CURVE	E TANG. RET. CURVE TO INT. PT.	T.L. I.P. TO P.L. RET. CURVE TO 14'-0" T.C.	C ₂ DEGREE RET. CURVE	C.L. CLEAR LENGTH 14'-0" T.C.	C.L. CLEAR LENGTH 15'-0" T.C.	P.S. TO 16'-0" LAST TIE	CROSSOVER		LADDER TRACKS		FROG NO.	
				F FROG ANGLE	FROG PLAN NO.	LENGTH	ANGLE	HEEL SPREAD	1/2" POINT OF FROG										1/2" POINT OF FROG	14'-0"	15'-0"	14'-0"		15'-0"
				TRACK CENTERS		TRACK CENTERS		TRACK CENTERS											TRACK CENTERS					
7	62'-1"	16° 31' 26"	2-2	8° 10' 16"	4-10	16'-6"	F 44' 11"	6 1/4"	28.83'	33.25'	39.59'	25.66'	98.50'	16° 00'	152.00'	158.96'	93'	30.99'	37.96'	98.50'	105.54'	7		
8	58'-11 1/8"	10° 25' 03"	2-3	7° 09' 10"	4-10	13'-0"	2° 54' 0"	6 1/4"	20.93'	38.00'	38.58'	35.86'	112.44'	10° 00'	168.35'	176.34'	84'	35.56'	43.53'	112.44'	120.47'	8		
8	68'-0"	11° 58' 03"	2-4	7° 09' 10"	4-13	18'-6"	F 44' 11"	6 1/4"	30.00'	38.00'	44.54'	28.90'	112.44'	12° 00'	171.46'	179.43'	93'	35.56'	43.53'	112.44'	120.47'	8		
9	72'-3 1/2"	9° 43' 14"	2-5	6° 21' 35"	4-10	16'-6"	F 44' 11"	6 1/4"	29.54'	42.75'	50.10'	33.55'	126.39'	9° 30'	188.70'	197.67'	100'	40.11'	49.08'	126.39'	135.41'	9		
10	78'-9"	7° 21' 22"	2-7	5° 43' 29"	4-14	16'-6"	F 44' 11"	6 1/4"	31.25'	47.50'	54.63'	38.23'	140.35'	7° 30'	209.13'	219.10'	111'	44.65'	54.63'	140.35'	150.38'	10		
12	95'-4"	5° 11' 20"	2-9	4° 46' 19"	4-15	22'-0"	F 18' 08"	6 1/4"	38.33'	57.00'	63.53'	47.78'	168.29'	5° 00'	253.80'	265.78'	129'	53.71'	65.69'	168.29'	180.31'	12		
14	106'-0"	3° 51' 39"	2-10	4° 05' 27"	4-16	22'-0"	F 18' 08"	6 1/4"	39.50'	66.50'	78.58'	51.17'	196.25'	3° 45'	286.42'	300.40'	152'	62.76'	76.74'	196.25'	210.27'	14		
15	111'-2 3/4"	3° 05' 30"	2-12	3° 49' 08"	4-17	26'-0"	0° 44' 47"	6 1/4"	39.98'	71.25'	70.53'	68.48'	210.23'	2° 48'	318.20'	333.22'	161'	67.27'	82.27'	210.23'	225.25'	15		
15	126'-4 1/2"	3° 19' 48"	2-11	3° 49' 06"	4-17	30'-0"	0° 57' 18"	6 1/4"	55.13'	71.25'	75.31'	63.67'	210.23'	3° 15'	328.56'	343.54'	172'	67.27'	82.27'	210.23'	225.25'	15		
20	156'-0 1/2"	F 43' 15"	2-15	2° 51' 51"	4-18	39'-0"	F 04' 30"	6 1/4"	61.04'	95.00'	89.68'	95.50'	280.18'	F 30'	436.38'	456.35'	220'	89.82'	109.81'	280.18'	283.47'	20		



NORFOLK SOUTHERN RAILWAY COMPANY
**DATA ON TURNOUTS
 AND CROSSOVERS**
 RETURN CURVES AND LADDERS
 JULY 1997
 Atlanta, Georgia

NOTE
 DETAILS WERE TAKEN FROM THE NORFOLK SOUTHERN PUBLICATION, "GUIDELINES FOR DESIGN AND CONSTRUCTION OF PRIVATELY OWNED INDUSTRY TRACKS", DATED MARCH, 2011.

SCALE : 0 N/A ft.

REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
SPECIAL DETAILS

2512

SPIKING REQUIREMENTS											
TRACK ALIGNMENT		MAIN TRACKS AND SIDINGS						SIDE YARD AND INDUSTRY TRACKS			
		MAXIMUM AUTHORIZED FREIGHT SPEED						MAXIMUM AUTHORIZED SPEED			
		UP TO 45 MPH		46 MPH TO 55 MPH		51 MPH AND HIGHER		UP TO 25 MPH		26 MPH AND HIGHER	
DEGREE FROM	DEGREE TO	SPIKES PER TIE PLATE	SPIKING PATTERN	SPIKES PER TIE PLATE	SPIKING PATTERN	SPIKES PER TIE PLATE	SPIKING PATTERN	SPIKES PER TIE PLATE	SPIKING PATTERN	SPIKES PER TIE PLATE	SPIKING PATTERN
TANGENT		2	A	3	B	4	C	2	A	2	A
0°-01'	1°-59'	3	B	4	C	4	C	2	A	2	A
2°-00'	3°-59'	4	C	4	C	4	C	3	B	3	B
4°-00'	5°-59'	4	C	4	C	4	C	4	C	4	C
6°-00'	11°-59'	5	D	5	D	5	D	4	C	4	C
12°-00'	12°-59'	5	D	5	D	5	D	4	C	4	C
13°-00'	AND UP	5	D	5	D	5	D	5	D	5	D

MAIN TRACK - A TRACK, OTHER THAN AN AUXILIARY TRACK, EXTENDING THROUGH YARDS AND BETWEEN STATIONS, UPON WHICH TRAINS ARE OPERATED IN CONFORMANCE WITH RULES OR SPECIAL INSTRUCTIONS.

SIDING - AN AUXILIARY TRACK DESIGNATED IN SPECIAL INSTRUCTIONS FOR THE MEETING OR PASSING OF TRAINS.

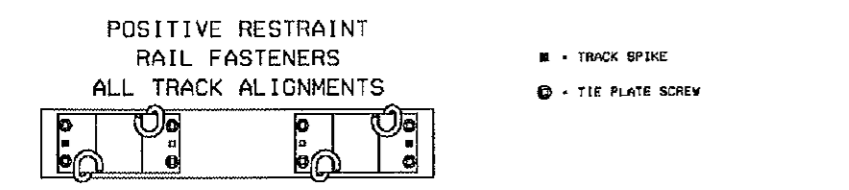
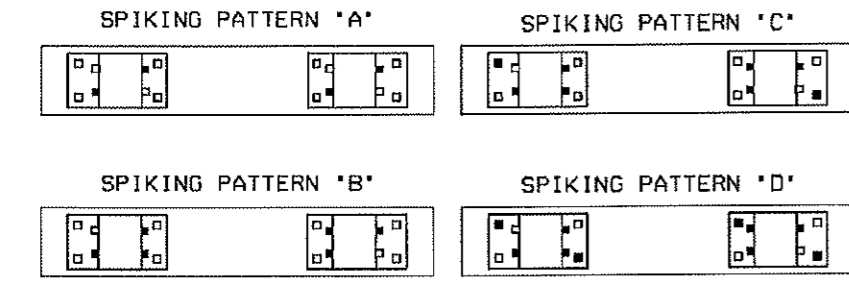
SIDE TRACK - AN AUXILIARY TRACK FOR PURPOSES OTHER THAN MEETING OR PASSING TRAINS.

THE SPIKING PATTERN ON CURVES WILL BEGIN AT THE TANGENT TO SPIRAL MARKER PLATE AND END AT SPIRAL TO TANGENT MARKER PLATE.

THE SPIKING PATTERN ON COMPOUND CURVES WILL BE BASED ON THE HIGHEST DEGREE OF CURVATURE IN THE CURVE AND WILL BE USED FOR THE ENTIRE CURVE.

SIX AXLE LOCOMOTIVES WITH CONVENTIONAL TRUCKS ARE RESTRICTED FROM OPERATING ON CURVES OVER 17°-00'.

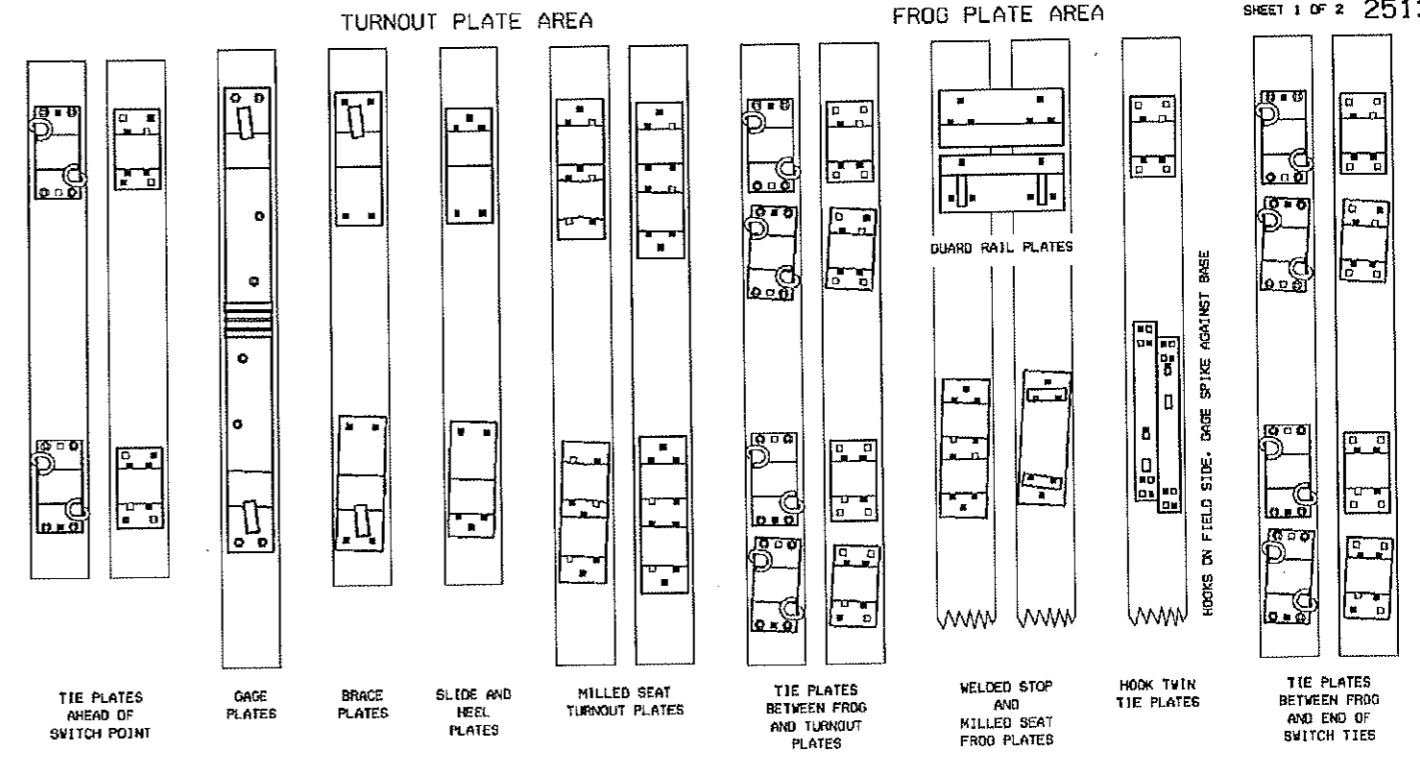
SIX AXLE LOCOMOTIVES WITH RADIAL STEERING TRUCKS ARE RESTRICTED FROM OPERATING ON CURVES OVER 23°-00'.



MAIN TRACK SPIKING PATTERNS
SIDE TRACK SPIKING PATTERNS

REVIEWED - DIRECTOR, ENGINEERING STANDARDS
APPROVED - CHIEF ENGINEER, MAINTENANCE OF WAY

ISSUED: DECEMBER 27, 1996
REVISED: DECEMBER 15, 2005



■ - TRACK SPIKE
● - TIE PLATE SCREW

IF POSITIVE RESTRAINT RAIL FASTENERS ARE USED IN THE TURNOUT, POSITIVE RESTRAINT TIE PLATES MUST BE USED FOR A MINIMUM OF 15 TIES AHEAD OF THE 00 PLATE, AND PAST THE FROG ON BOTH TRACKS UNTIL THE END OF THE SWITCH TIES IS REACHED.

IF REGULAR TIE PLATES ARE USED, SPIKE THE 15 TIE PLATES AHEAD OF THE 00 PLATE WITH SPIKING PATTERN 'D' IN ALL OTHER THAN YARD TRACKS. IN YARD TRACKS USE SPIKING 'B'.

CONE NECK LAG SCREWS MAY BE USED IN GAGE PLATES WITH SQUARE HOLES IN PLACE OF TRACK SPIKES.



TURNOUT SPIKING PATTERNS WITH BETHLEHEM 811 STYLE BRACES

APPROVED - CHIEF ENGINEER, MAINTENANCE OF WAY
APPROVED - VICE PRESIDENT, ENGINEERING

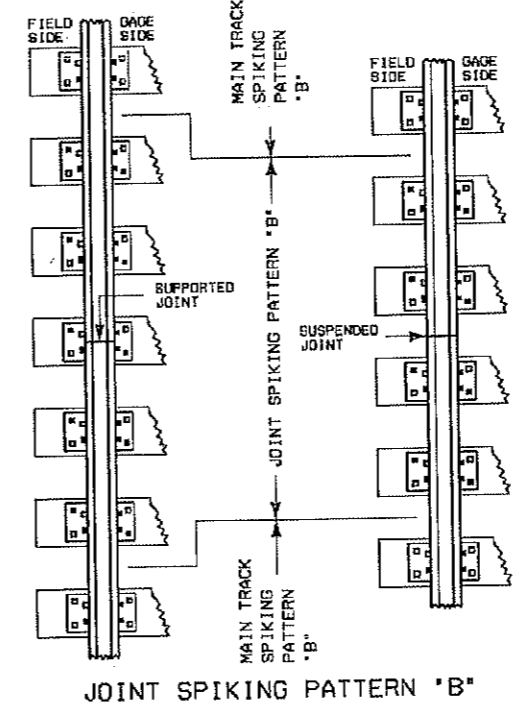
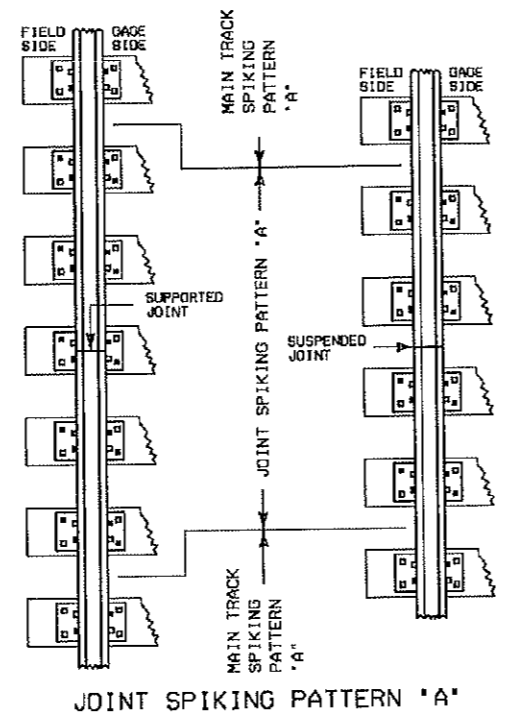
PREPARED BY: J. E. BEYERL
ISSUED: DECEMBER 27, 1996
REVISED: OCTOBER 10, 2005

NOTE
DETAILS WERE TAKEN FROM THE CSX TRANSPORTATION PUBLICATION, "STANDARD SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PRIVATE SIDETRACKS", DATED JUNE 1, 2007.

SCALE: 0 N/A ft.

REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
SPECIAL DETAILS



JOINT SPIKING PATTERN 'A'

JOINT SPIKING PATTERN 'B'

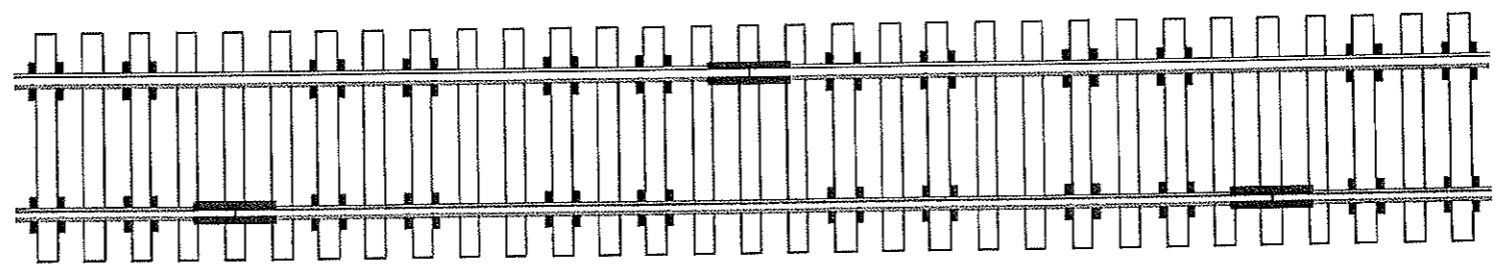


■ - TRACK SPIKE
 JOINT SPIKING PATTERN 'A' USED WITH MAIN TRACK SPIKING PATTERN 'A'.
 JOINT SPIKING PATTERN 'B' USED WITH MAIN TRACK SPIKING PATTERNS 'B', 'C' AND 'D'.
 SEE DRAWING 2512 FOR SPIKING PATTERNS WHEN POSITIVE RESTRAINT RAIL FASTENERS ARE USED.

JOINT AREA SPIKING PATTERNS

REVIEWED: *R.R. Dean*
 DIRECTOR, STANDARDS AND TESTING
 ISSUED: DECEMBER 27, 1996

APPROVED: *A.C. Ziegler*
 ASSISTANT VICE PRESIDENT, EQUIPMENT AND TRACK SYSTEMS ENGINEERING
 REVISED: INITIAL ISSUE



JOINTED RAIL - 18 ANCHORS PER 39 FOOT RAIL, BOX ANCHOR & TIES.
 RAIL ANCHOR PATTERNS

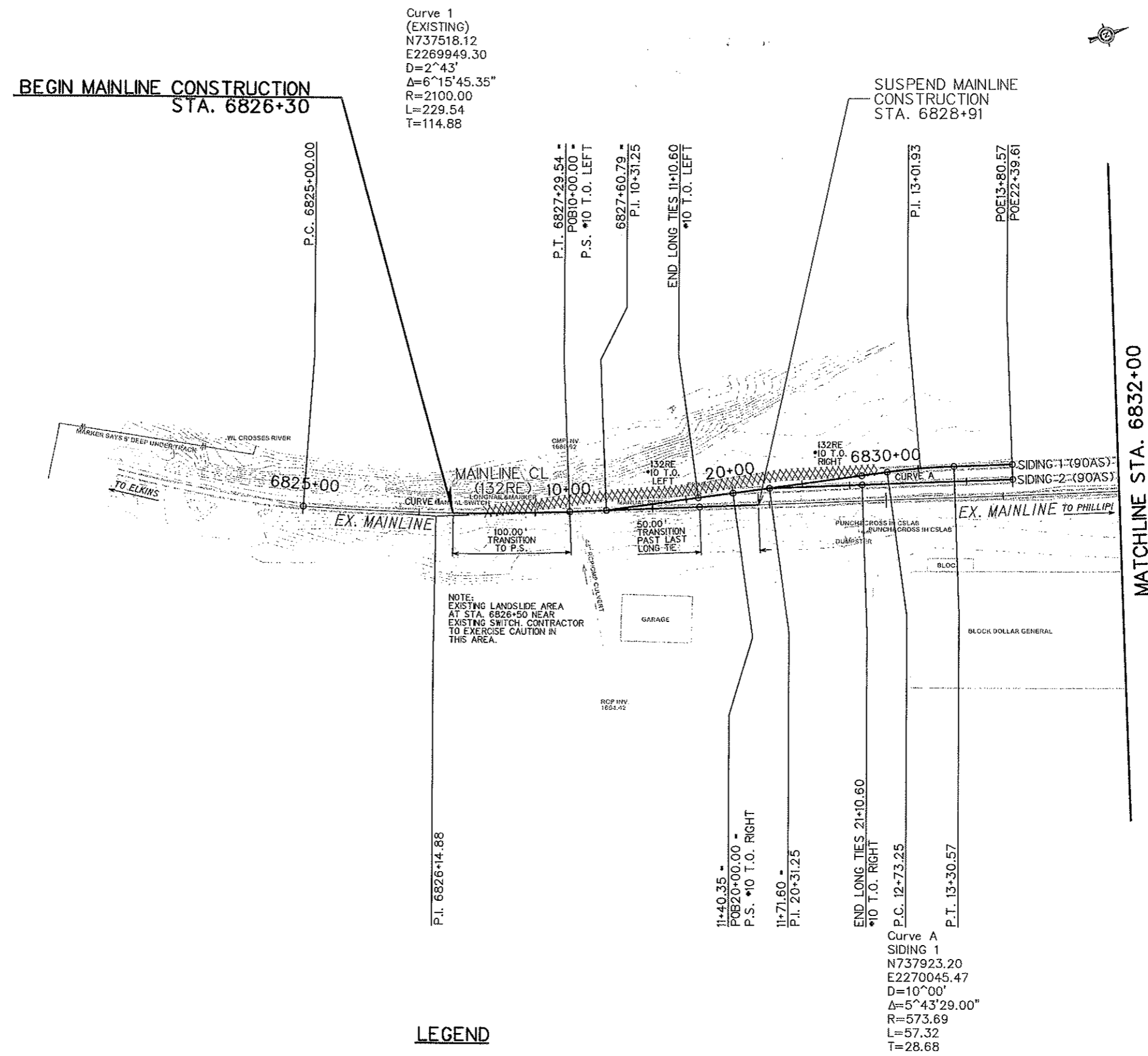
NOTE
 DETAILS WERE TAKEN FROM THE CSX TRANSPORTATION PUBLICATION, "STANDARD SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PRIVATE SIDETRACKS", DATED JUNE 1, 2007.

SCALE: 0 N/A ft.

REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
SPECIAL DETAILS

Public Road Dist.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
W. V.	N/A	S399 -HVS/RA-11.00.01	N/A	2012	BARBOUR	11	16



Curve 1
(EXISTING)
N737518.12
E2269949.30
D=2^43'
Δ=6^15'45.35"
R=2100.00
L=229.54
T=114.88

SUSPEND MAINLINE
CONSTRUCTION
STA. 6828+91

BEGIN MAINLINE CONSTRUCTION
STA. 6826+30

MATCHLINE STA. 6832+00

NOTE:
EXISTING LANDSLIDE AREA
AT STA. 6826+50 NEAR
EXISTING SWITCH. CONTRACTOR
TO EXERCISE CAUTION IN
THIS AREA.

LEGEND

- EXISTING TRACK
- PROPOSED TRACK
- REMOVE EXISTING TRACK, TIES, & APPURTENANCES

SCALE : 50 ft.

REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLAN SHEET

Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
W. V.	N/A	5399 -WV/RA- 11.00.01	N/A	2012	BARBOUR	12	16



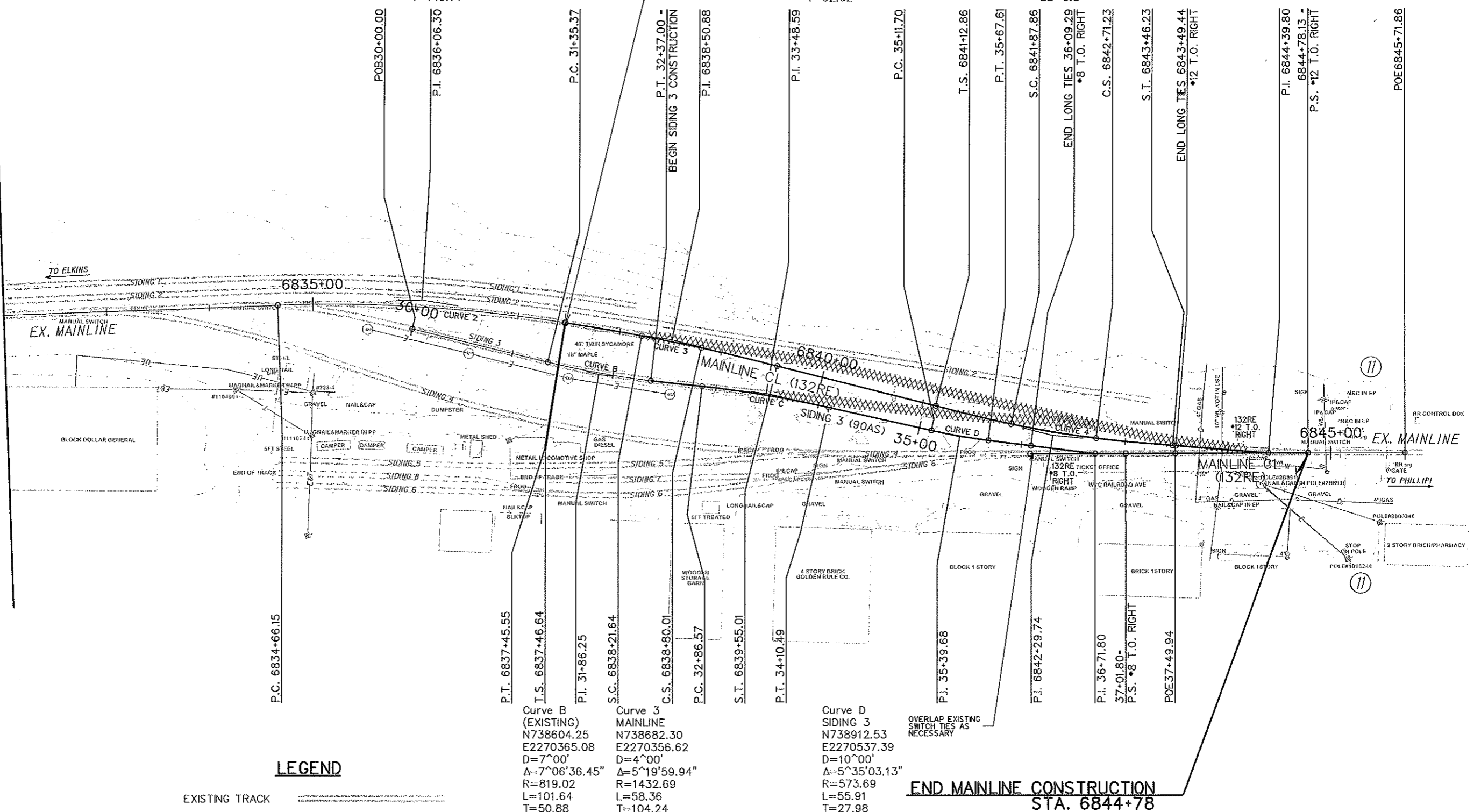
Curve 2
(EXISTING)
N738466.06
E2270240.45
D=4°00'
Δ=11°10'24.40"
R=1432.69
L=279.39
T=140.14

Curve C
SIDING 3
N738750.46
E2270435.93
D=5°00'
Δ=6°11'39.03"
R=1146.28
L=123.92
T=62.02

Curve 4
MAINLINE
N738998.03
E2270566.23
D=6°00'
Δ=9°29'53.12"
R=955.37
L=83.37
T=116.89
L.S.=75.00
V=15 MPH
SE=0.5"

RESUME MAINLINE
CONSTRUCTION
STA. 6837+47

MATCHLINE STA. 6832+00



LEGEND

- EXISTING TRACK
- PROPOSED TRACK
- REMOVE EXISTING TRACK, TIES, & APPURTENANCES

Curve B
(EXISTING)
N738604.25
E2270365.08
D=7°00'
Δ=7°06'36.45"
R=819.02
L=101.64
T=50.88

Curve 3
MAINLINE
N738682.30
E2270356.62
D=4°00'
Δ=5°19'59.94"
R=1432.69
L=58.36
T=104.24
L.S.=75.00
V=15 MPH
SE=0.5"

Curve D
SIDING 3
N738912.53
E2270537.39
D=10°00'
Δ=5°35'03.13"
R=573.69
L=55.91
T=27.98

OVERLAP EXISTING SWITCH TIES AS NECESSARY

**END MAINLINE CONSTRUCTION
STA. 6844+78**

NOTE:
SUPERELEVATION TRANSITION TO BE APPLIED ON SPIRAL CURVES FOR MAINLINE TRACK.

SCALE : 0 50 ft.

REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLAN SHEET

Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
W. V.	N/A	S399 -WVS/RA- 11.00 0	N/A	2012	BARBOUR	13	16

1750

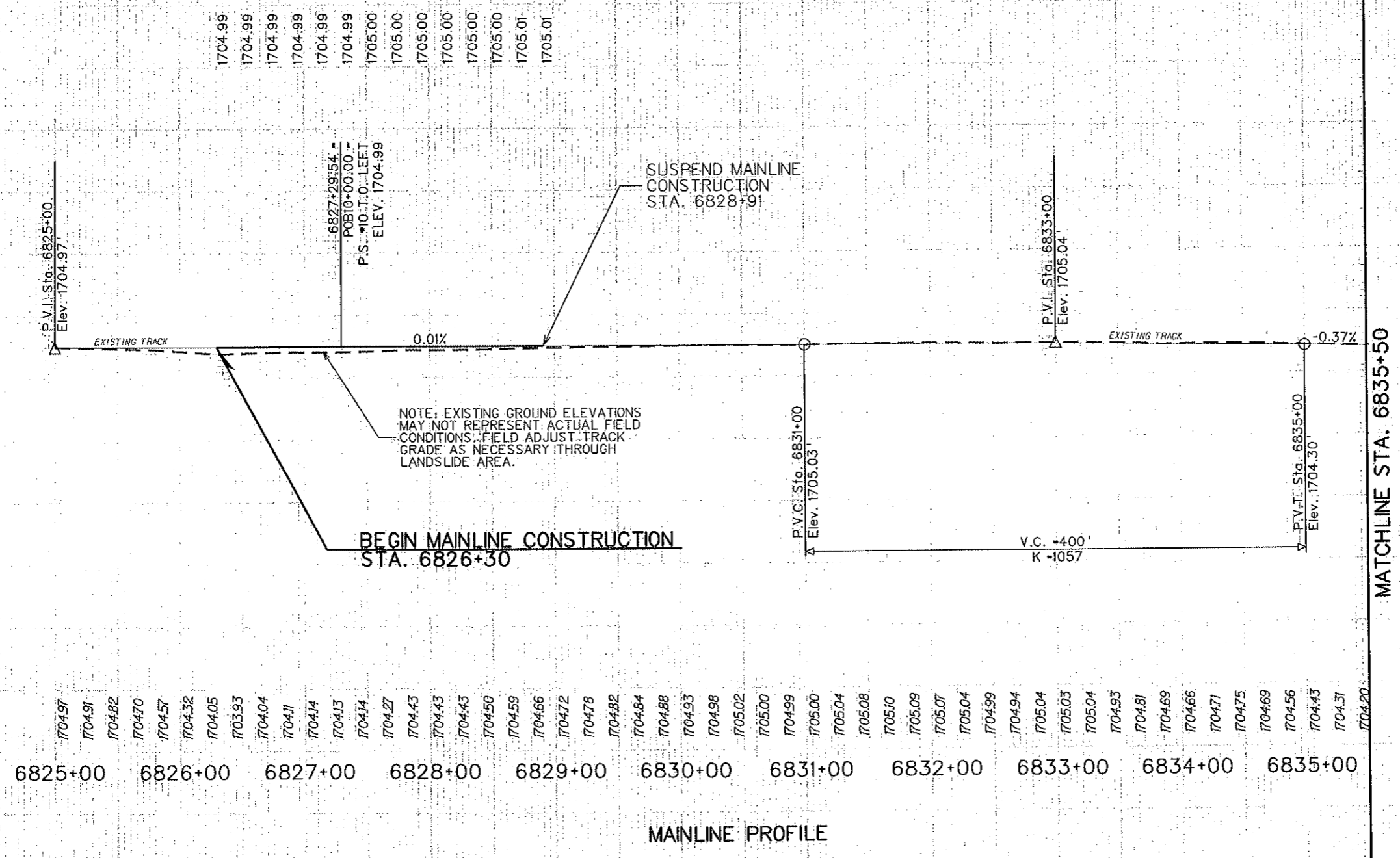
1750

1700

1700

1650

1650



10 ft.

50 ft.

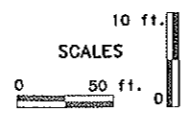
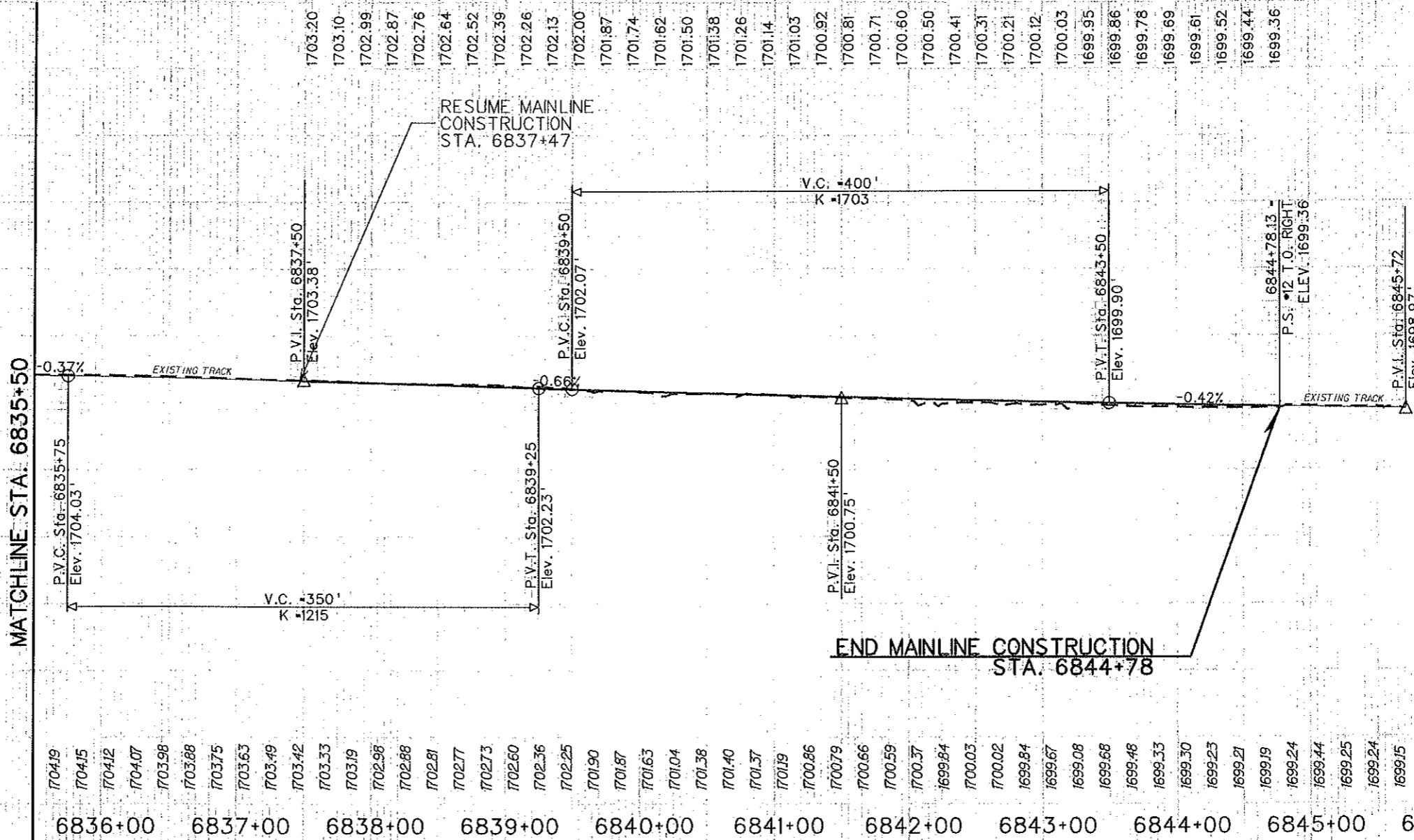
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REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROFILE SHEET

Public Road Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
W. V.	N/A	S399-WVS/RA-11-00 01	N/A	2012	BARBOUR	14	16



REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROFILE SHEET

Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
W. V.	N/A	S399 -WWS/RA- 11.00.01	N/A	2012	BARBOUR	15	16

1750

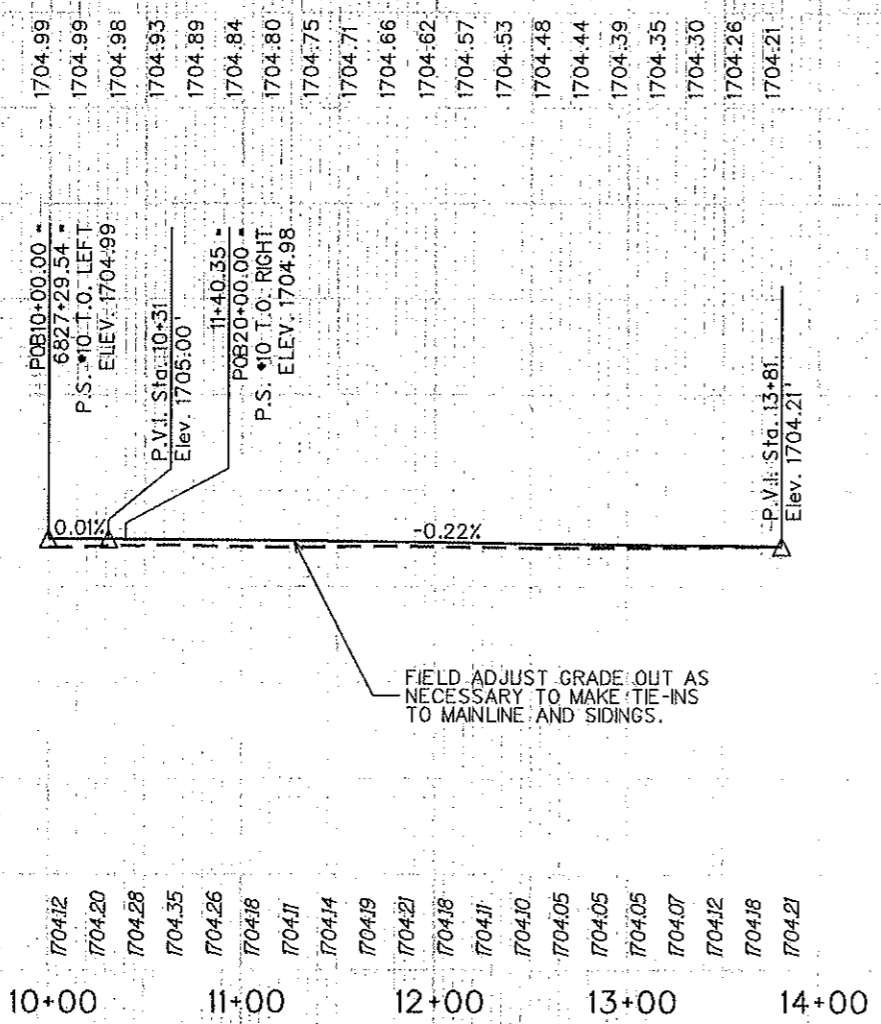
1700

1650

1750

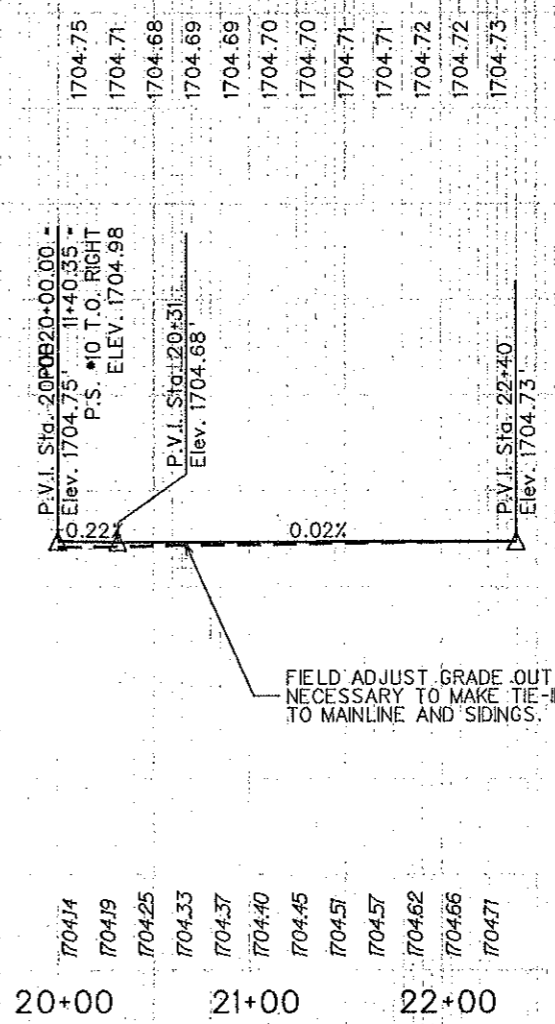
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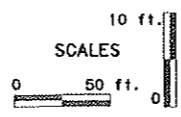
SIDING 1 PROFILE

FIELD ADJUST GRADE OUT AS NECESSARY TO MAKE TIE-INS TO MAINLINE AND SIDINGS.



SIDING 2 PROFILE

FIELD ADJUST GRADE OUT AS NECESSARY TO MAKE TIE-INS TO MAINLINE AND SIDINGS.



REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROFILE SHEET

Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
W. V.	N/A	S399 WVS/RA- 11.00.01	N/A	2012	BARBOUR	16	16

1750

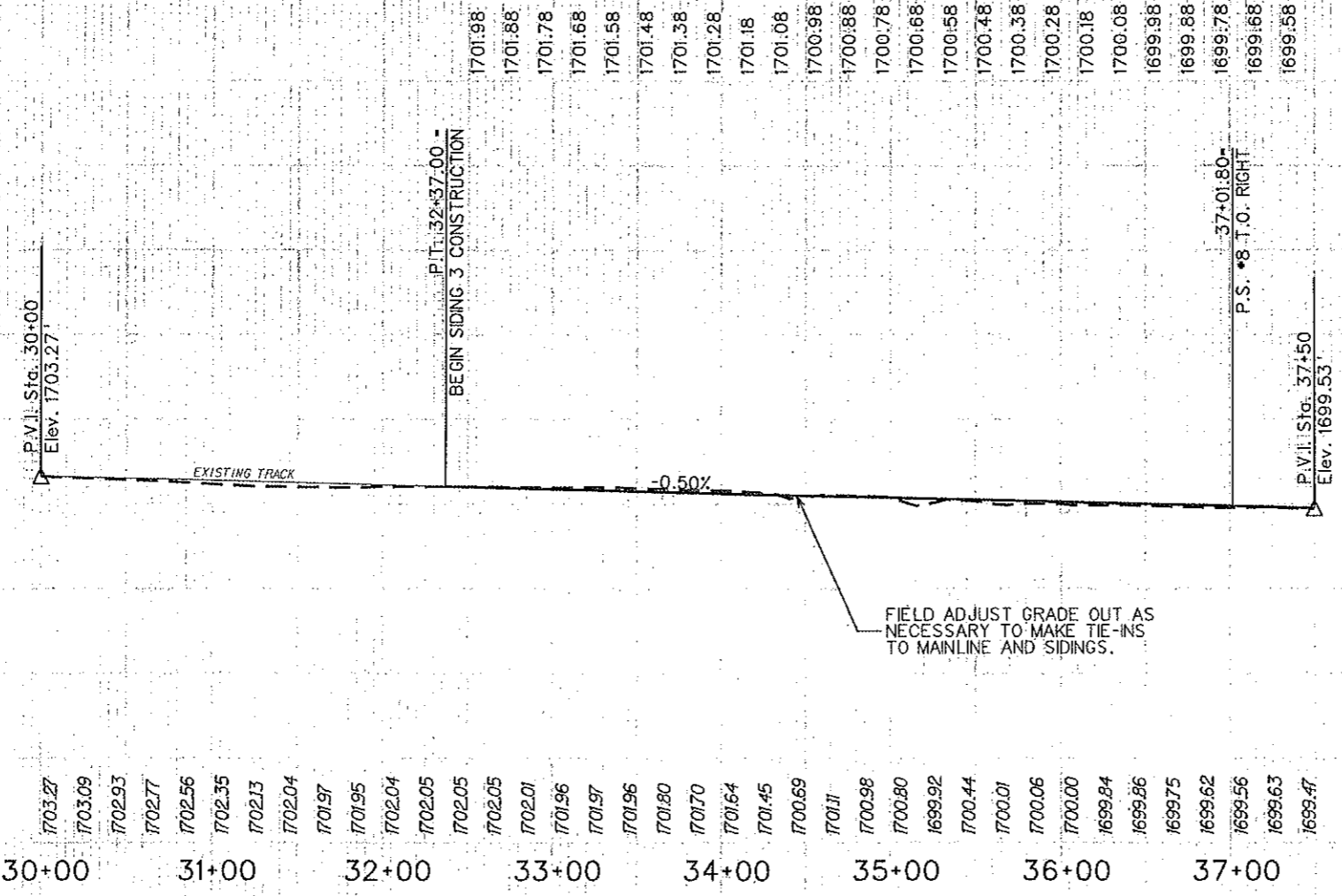
1750

1700

1700

1650

1650



P.I.T. 32+37.00 -
BEGIN SIDING 3 CONSTRUCTION

37+01.80 -
P.S. #8 T.O. RIGHT

FIELD ADJUST GRADE OUT AS NECESSARY TO MAKE TIE-INS TO MAINLINE AND SIDINGS.

SIDING 3 PROFILE

10 ft.				
50 ft.				
0				
0				
REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROFILE SHEET