

# STATE OF VERMONT AGENCY OF TRANSPORTATION

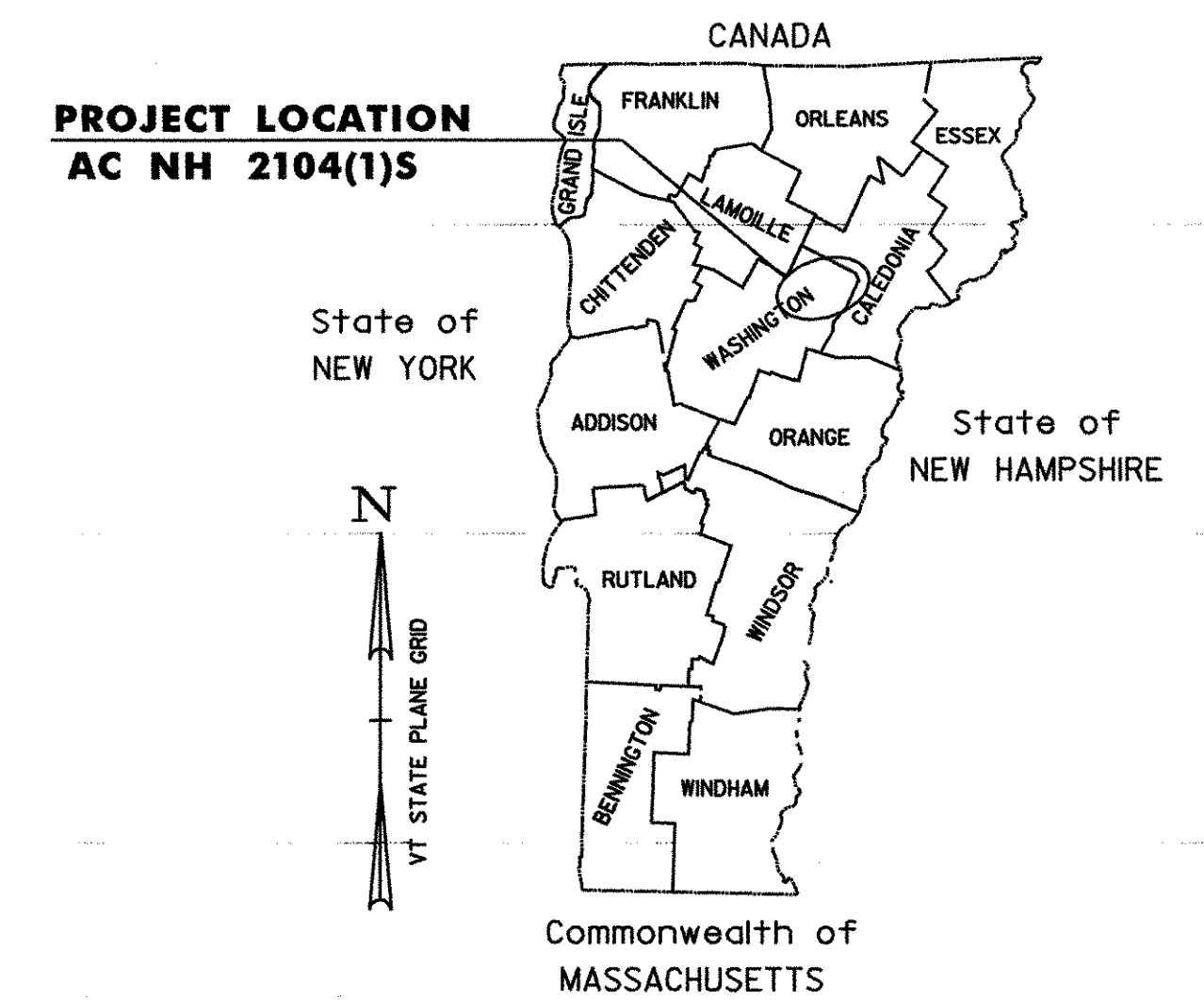
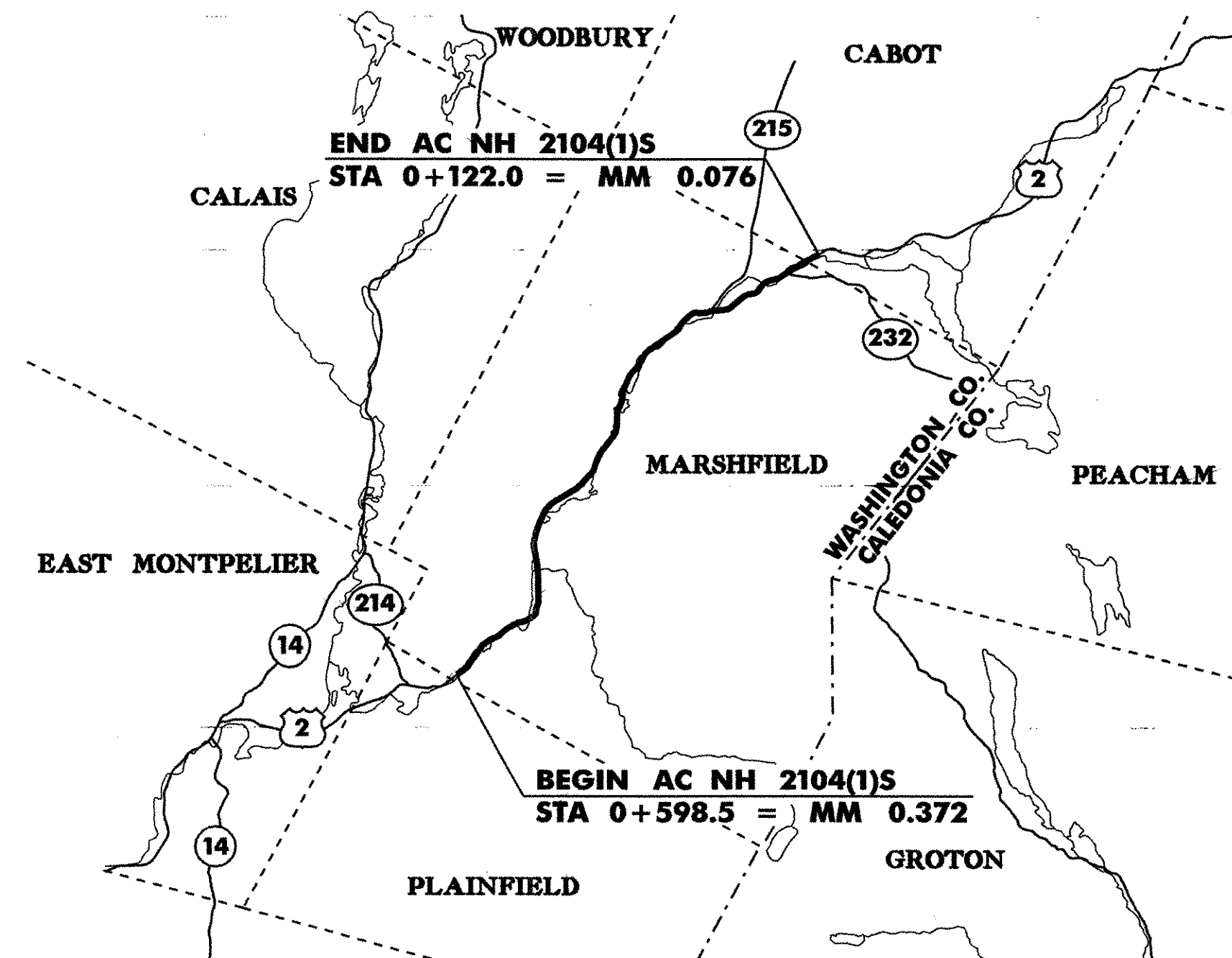


## PROPOSED IMPROVEMENTS TOWNS OF MARSHFIELD AND CABOT COUNTIES OF WASHINGTON US ROUTE 2

BEGINNING IN THE TOWN OF MARSHFIELD AT STA 0+598.5 (MM 0.372), AND EXTENDING EASTERLY ALONG US ROUTE 2 INTO THE TOWN OF CABOT FOR A DISTANCE OF 12,728.0 METERS (7,909 MILES) TO STA 0+122.0 (MM 0.076) IN THE TOWN OF CABOT.

STATION TO STATION DATA	LENGTH	
	(METERS)	(MILES)
TOWN OF MARSHFIELD		
STA 0+598.5 TO STA 13+204.5 (MM 0.372 TO MM 8.205)	12,606.0	7.833
TOWN OF CABOT		
STA 0+000 TO STA 0+122.0 (MM 0.000 TO MM 0.076)	122.0	0.076
<b>PROJECT TOTALS</b>	<b>12,728.0</b>	<b>7.909</b>

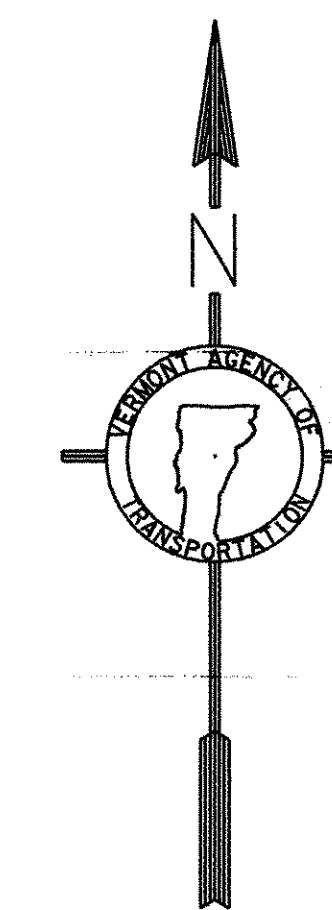
WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES COLD PLANING AND RECLAIMING SECTIONS AND RESURFACING OF THE EXISTING HIGHWAY WITH A COMBINATION OF LEVELING, BASE, AND WEARING COURSES, NEW PAVEMENT MARKINGS, GUARD RAIL INSTALLATION, DRAINAGE IMPROVEMENTS AND INCIDENTAL ITEMS



### TRAFFIC DATA

	ADT		DHV		ESAL'S (2005-2015)	ESAL'S (2005-2025)
	2005	2015	2005	2015		
BEGINNING OF PROJECT TO VT 215 (CABOT ROAD)	5,700	6,600	640	740	1,679,000	4,500,000
VT 215 (CABOT ROAD) TO END OF PROJECT	4,100	4,800	650	740	1,599,000	4,291,000

MARSHFIELD - CABOT US ROUTE 2, MM 0.372 TO MM 0.076	
BITUMINOUS CONCRETE PAVEMENT SUPERPAVE MIXTURE DESIGN CRITERIA	
DESIGN LANE/DESIGN LIFE ESAL	2,250,000
DESIGN NUMBER OF GYRATIONS	75
PERFORMANCE GRADED ASPHALT BINDER	PG 58-34



RIGHT-OF-WAY LIMITS, IF APPLICABLE, ARE PROVIDED SOLELY FOR THE CONVENIENCE OF THE STATE AND ITS CONTRACTOR DURING THE COURSE OF THIS PAVING PROJECT. ANY REFERENCES TO OFFSETS ON THESE PLANS ARE APPROXIMATE AND SHOULD NOT BE RELIED UPON FOR ANY OTHER PURPOSES.

UNLESS OTHERWISE NOTED, ALL DRAWINGS AND DETAILS ON THESE PLANS ARE DRAWN 'NOT TO SCALE'.



THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT.  
CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2001, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JANUARY 4, 2001 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATOR	
APPROVED _____	DATE _____
DIRECTOR OF PROGRAM DEVELOPMENT	
APPROVED <i>[Signature]</i>	DATE 10-5-05
PROJECT MANAGER : <b>WOOLAVER</b>	
PROJECT NAME : <b>MARSHFIELD - CABOT</b>	
PROJECT NUMBER : <b>AC NH 2104 (1) 5</b> (READVERTISED)	
SHEET 1 OF 60 SHEETS	

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### VAOT STANDARDS

C-1M	TREATED TIMBER CURB	01-03-00
D-2M	UNDERDRAIN CONSTRUCTION DETAILS	06-13-97
D-3M	TREATED GUTTERS	06-13-97
D-6M	REINFORCED CONCRETE DROP INLET	06-13-97
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E-107A	BREAKAWAY BARRICADE DETAILS	08-08-95
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E-152	WARNING SIGN DETAILS	05-01-04
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E-154	WARNING SIGN DETAILS	05-01-04
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G-1M	STEEL BEAM GUARD RAIL	01-03-00
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G-4M	YIELDING MARKER POSTS	06-13-97
G-19M	GENERIC GRADING PLANS FOR GUARDRAIL END TERMINAL	11-15-02

NOTICE: THE METRIC VERSIONS OF THE VAOT 'E' SERIES STANDARDS ARE NOT CURRENTLY BEING KEPT UP TO DATE. THE ENGLISH VERSIONS OF THESE STANDARDS ARE SUBSTITUTED FOR THE METRIC VERSIONS REFERENCED IN THESE PLANS.

### RECORD PLANS

CONTRACTOR:	PIKE INDUSTRIES, INC. - BERLIN, VT
RESIDENT ENGINEER:	CARL FIELDER
CONSTRUCTION BEGAN:	APRIL 17, 2006
CONSTRUCTION COMPLETE:	NOVEMBER 28, 2006
RECORD PLANS BY:	CARL FIELDER & C. PIERCE

I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.

BY *[Signature]* RESIDENT ENGINEER

DATE *April 14, 2006*

NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found at Central Files in the electronic archives.

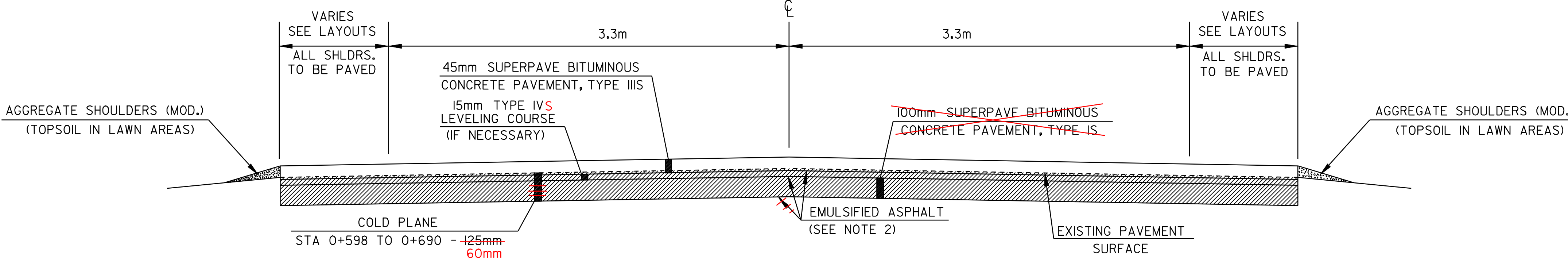
DATUM	
VERTICAL	N/A
HORIZONTAL	N/A

**CIVIL ENGINEERING ASSOCIATES, INC.**  
P.O. BOX 488    SHELBURNE, VT 05482  
802-985-2325    FAX: 802-985-2271    e-mail: metro@cea-vt.com



**NOTES**

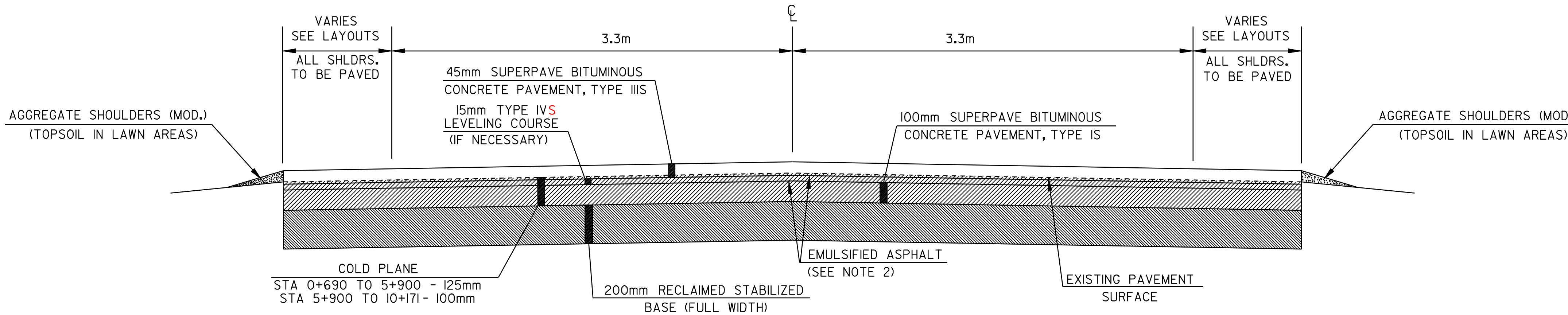
- THE PAVEMENT WEARING COURSE SHALL BE TYPE IIIS.
- THE LEVELING COURSE SHALL BE TYPE IVS UNLESS OTHERWISE DIRECTED BY THE RESIDENT ENGINEER. LEVELING HAS BEEN INCLUDED TO RESHAPE THE ROADWAY PRIOR TO PAVING THE TOP COURSE ALONG THE OVERLAY/COLD PLANE TYPICAL SECTIONS. AN ESTIMATED THICKNESS OF 15mm OF ITEM 490.30 HAS BEEN INCLUDED TO COVER THIS PROVISION. LEVELING HAS ALSO BEEN INCLUDED FOR THE RECLAIMED SEGMENTS OF THE PROJECT TO ELIMINATE ANY IRREGULARITIES PRIOR TO PLACEMENT OF THE WEARING COURSE. A 15mm LIFT HAS BEEN INCLUDED FOR AN ESTIMATED 25% OF THE RECLAIMED SURFACE AREA.
- ALL ASPHALT CEMENT USED IN THE BITUMINOUS PAVEMENT SHALL BE PG 58-34.
- EMULSIFIED ASPHALT SHALL BE APPLIED ON EXISTING PAVEMENT SURFACES, (NOT INCLUDING RECLAIMING SURFACES) BETWEEN ALL COURSES OF PAVEMENT AND ON COLD PLANED SURFACES AT THE RATE OF 0.12 L/SM, OR AS DIRECTED BY THE RESIDENT ENGINEER.
- BITUMINOUS CONCRETE PAVEMENT TOLERANCE = +/- 5 mm (TOTAL THICKNESS EXCLUDING LEVELING).
- EXISTING SHOULDER MATERIAL DEEMED UNSUITABLE BY THE RESIDENT ENGINEER WILL BE EXCAVATED TO A DEPTH OF 75 mm +/- OR AS DIRECTED BY THE ENGINEER. EXCAVATED MATERIAL WILL BE SPREAD ON THE ADJACENT SLOPES OR REMOVED FROM THE PROJECT, AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE PAID UNDER THE APPROPRIATE RENTAL ITEMS SUCH AS ALL PURPOSE EXCAVATOR RENTAL, GRADER RENTAL, LOADER RENTAL, TRUCK RENTAL AND POWER BROOM RENTAL. THE METHOD OF REMOVAL AND THE USE OF RENTAL ITEMS SHALL BE APPROVED BY THE ENGINEER PRIOR TO ANY WORK BEING DONE. MATERIAL BEING REMOVED SHALL BE REPLACED WITH SUBBASE OF CRUSHED GRAVEL (MOD.).
- AN ADDITIONAL QUANTITY OF SUBBASE OF CRUSHED GRAVEL (MOD.) HAS BEEN INCLUDED TO CORRECT SUPERELEVATION AND GRADATION DEFICIENCIES WITHIN THE RECLAIMED SECTIONS. AN ESTIMATED THICKNESS OF 50mm HAS BEEN INCLUDED FOR THE ENTIRE RECLAIMED SURFACE AREA.
- ONE METER OF BACKING IS REQUIRED BEHIND THE FACE OF GUARDRAIL WITH 1.8m POSTS. IF THIS CAN NOT BE OBTAINED THEN 2.4m POSTS SHALL BE USED.
- COLD PLANING SHALL BE COMPLETED ACCORDING TO THE TYPICAL OR AS OTHERWISE NOTED ON THE PLANS. A FULL DEPTH BUTT JOINT SHALL BE CONSTRUCTED AT THE PROJECT ENDS AND AT ALL SIDE ROAD APPROACHES AS DENOTED IN THE PROJECT PLANS OR AS OTHERWISE DIRECTED BY THE RESIDENT ENGINEER.
- ITEMS 604.40 & 604.42 ARE ESTIMATED QUANTITIES AND SHALL BE PERFORMED AT LOCATIONS INDICATED ON THE LAYOUT SHEETS AND AS DIRECTED BY THE RESIDENT ENGINEER. ALL D.I.'S SHALL BE RAISED OR REHABILITATED SUCH THAT THE NEW GRATE ELEVATION IS LEVEL WITH THE SURROUNDING TERRAIN.
- ALL EDGES OF PAVEMENT AND TREATED TIMBER CURB SHALL BE BACKED UP FULL HEIGHT WITH COLD PLANE GRINDINGS AS DIRECTED BY THE RESIDENT ENGINEER AND WILL BE PAID FOR UNDER ITEM 402.12, AGGREGATE SHOULDERS (MOD.).
- PIPE INLET AND OUTLET AREAS, AND GENERAL DITCH CLEANING SHALL BE PERFORMED AT THE LOCATIONS INDICATED ON THE DITCH CLEANING DETAIL SHEET AND AS DIRECTED BY THE RESIDENT ENGINEER. PAYMENT WILL BE MADE UNDER THE APPLICABLE EQUIPMENT RENTALS ITEM(S).
- ALL DRIVES SHALL RECEIVE A PAVED APRON AS DIRECTED BY THE RESIDENT ENGINEER. ANY REQUIRED EXCAVATION IN DRIVE AREAS SHALL BE AS DIRECTED AND WILL BE PAID UNDER THE APPLICABLE RENTAL ITEMS. IF REQUIRED, A NEW DRIVEWAY SUBBASE SHALL BE CONSTRUCTED AND WILL BE PAID UNDER ITEM 301.28, SUBBASE OF CRUSHED GRAVEL (MOD.). A NEW BITUMINOUS SURFACE SHALL BE CONSTRUCTED AS DIRECTED AND WILL BE PAID FOR UNDER ITEM 490.30. QUANTITIES OF THE ABOVE ITEMS HAVE BEEN INCLUDED TO PAY FOR THIS WORK.
- ESTIMATED QUANTITIES OF ITEM 608.25, EXCAVATOR RENTAL AND 608.37, TRUCK RENTAL HAVE BEEN INCLUDED FOR THE PROVISION OF CONSTRUCTING GUARDRAIL FLARES WITH EXCAVATED DITCHING MATERIAL. THE GUARDRAIL FLARES SHALL BE CAPPED WITH AN ESTIMATED 75mm DEPTH OF AGGREGATE SHOULDER MATERIAL (MOD.) UNLESS OTHERWISE DIRECTED BY THE RESIDENT ENGINEER. THE QUANTITIES INCLUDED REFLECT 5 TONS OF AGGREGATE SHOULDER MATERIAL (MOD.) FOR EACH GUARD RAIL TERMINAL.
- ITEM 616.47, BITUMINOUS CONCRETE GUTTERS AND TRAFFIC ISLANDS WILL BE PAID ONLY WHERE SPECIFIED IN THE PLANS. ALL OTHER BITUMINOUS CONCRETE PAVEMENT WORK, WHICH COULD INVOLVE SOME HAND-WORK (SUCH AS DRIVE AND SIDE ROAD APPROACHES AND AROUND DRAINAGE/UTILITY STRUCTURES), SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR ITEM 490.30, SUPERPAVE BITUMINOUS CONCRETE PAVEMENT.
- COMPACTION, GRADING, AND CLEAN UP OF ITEM 301.28, SUBBASE OF CRUSHED GRAVEL (MOD.), ITEM 402.12, AGGREGATE SHOULDER MATERIAL (MOD.), AND ITEM 651.36, TOPSOIL IS TO BE INCLUDED IN THE CONTRACT UNIT PRICE OF EACH ITEM.
- STABILIZING AGENT FOR THE RECLAIMED STABILIZED BASE WILL BE WATER. PAYMENT SHALL BE CONSIDERED INCIDENTAL TO ITEM 310.20.



**COLD PLANED TYPICAL SECTION**

**MARSHFIELD**

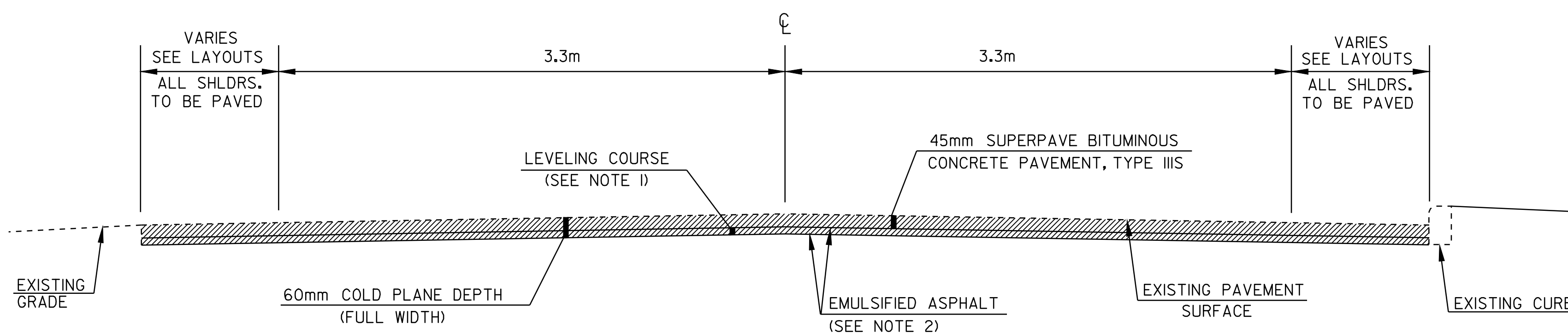
**STA 0+598.5 TO 0+690**



**RECLAIMED STABILIZED BASE TYPICAL SECTION**

**MARSHFIELD**

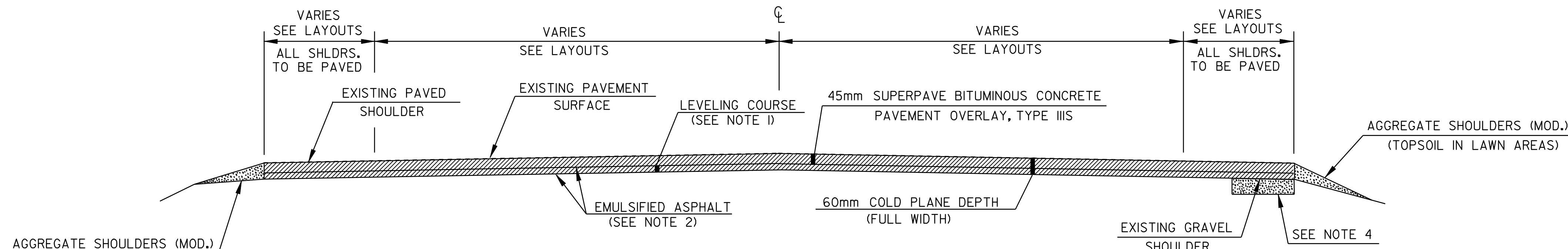
**STA 0+690 TO 10+171**



**COLD PLANED TYPICAL SECTION**

**MARSHFIELD**

**STA 10+171 TO 11+458**



**COLD PLANED TYPICAL SECTION**

**MARSHFIELD**

**STA 11+458 TO 13+204.5**

**CABOT**

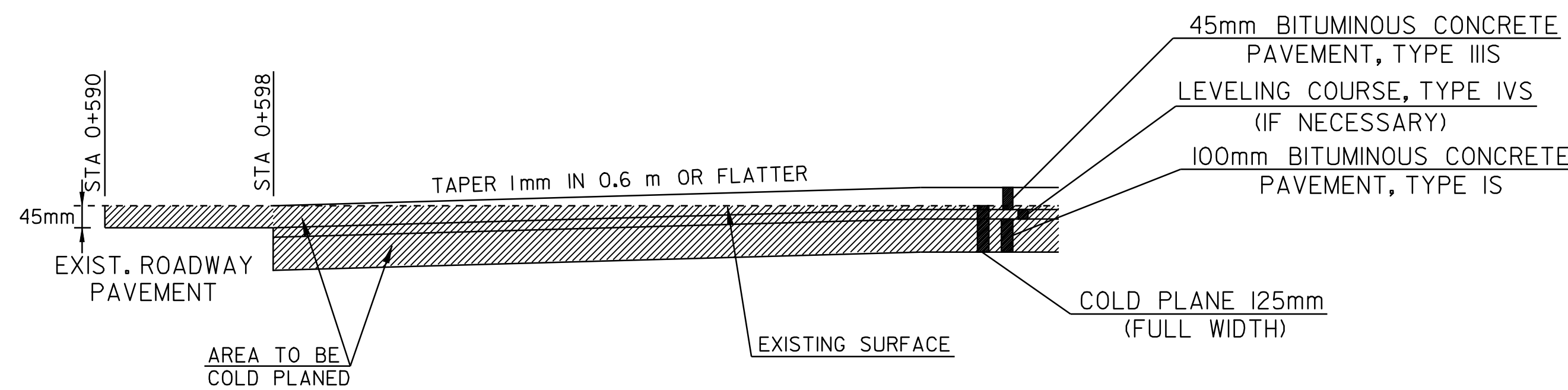
**STA 0+000 TO 0+122**



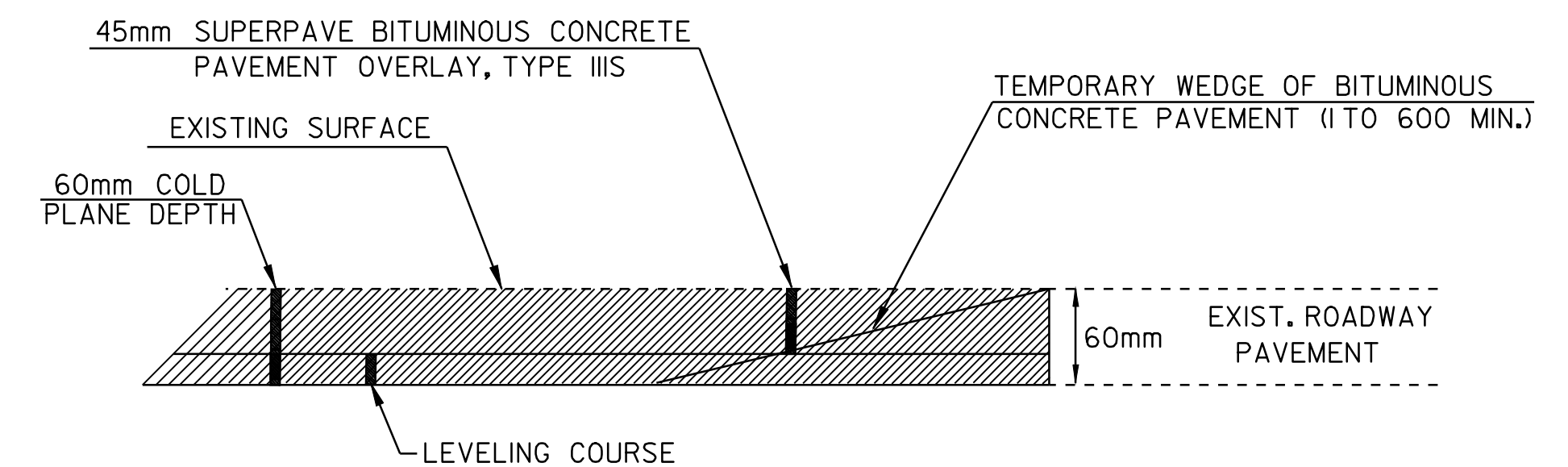
<b>PROJECT TYPICAL SHEET #1</b>	DRAWN BY <u>C.E.A., INC.</u> DATE <u>7-02</u>
	DESIGN FILE NO. <u>/pave/98b090/pb090.dgn</u>
	PRF FILE <u>pb090tyl.i</u> DATE PLOTTED <u>09-MAY-2008</u>
	PROJ. NAME: <b>MARSHFIELD - CABOT</b>
	PROJ. NO.: <b>NH 2104(1)S</b>
SHEET <b>2</b> OF <b>60</b> SHEETS	

# PROJECT PAVING LIMITS

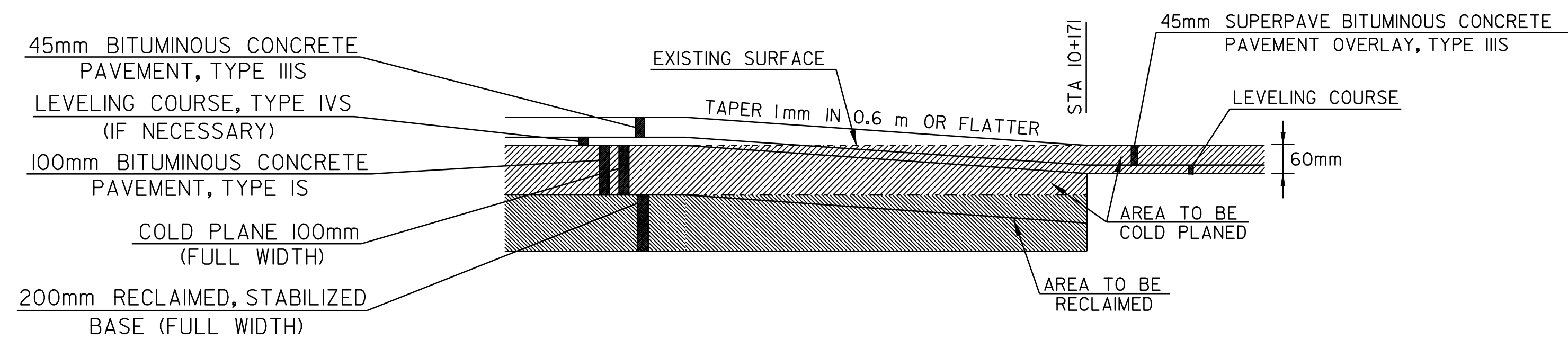
TOWN & ROUTE	BEGIN STATION	END STATION	LANE TYPICAL	WEARING DEPTH	LEVELING Tons	NOTES
MARSHFIELD - US ROUTE 2	0+598	0+690	VARIES - 3.3m - 3.3m - VARIES	45mm	25	COLD PLANE 125mm, 100mm TYPE IS, LEVEL (IF NECESSARY) & PAVE w/45mm TYPE IIIS.
	0+690	5+900	VARIES - 3.3m - 3.3m - VARIES	45mm	400	COLD PLANE 125mm, RECLAIM 200mm, 100mm TYPE IS, LEVEL (IF NECESSARY) & PAVE w/45mm TYPE IIIS.
	5+900	10+171	VARIES - 3.3m - 3.3m - VARIES	45mm	315	COLD PLANE 100mm, RECLAIM 200mm, 100mm TYPE IS, LEVEL (IF NECESSARY) & PAVE w/45mm TYPE IIIS.
	10+171	11+458	VARIES - 3.3m - 3.3m - VARIES	45mm	420	COLD PLANE 60mm, LEVEL & PAVE w/45mm TYPE IIIS.
	11+458	13+204.5	VARIES - VARIES - VARIES - VARIES	45mm	790	COLD PLANE 60mm, LEVEL & PAVE w/45mm TYPE IIIS.
CABOT - US ROUTE 2	0+000	0+122	VARIES - 3.6m - 3.6m - VARIES	45mm	60	COLD PLANE 60mm, LEVEL & PAVE w/45mm TYPE IIIS.



**- APPROACH AREA DETAIL -  
MARSHFIELD  
STA 0+598 (BEGIN PROJECT)**



**- APPROACH AREA DETAIL -  
CABOT  
STA 0+095 TO 0+122 (END PROJECT)**



**- TRANSITION AREA DETAIL -  
MARSHFIELD  
STA 10+171 (END RECLAIMING/BEGIN COLD PLANING)**

### CONSERVATION SEED MIX RURAL AREA - SEED MIXTURE

% WT.	kg/HECTARE	NAME	PUR%	GERM%
38.0	25	CREeping RED FESCUE	98	85
38.0	25	TALL FESCUE	95	90
4.5	3	RED TOP	95	90
15.0	10	BIRDSFOOT TREFOL	98	85
4.5	3	ANNUAL RYEGRASS	95	85
100.0	66			

SEED MIXTURE:  
SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.

SEED:  
TO BE APPLIED PER SEEDING FORMULAS OR AS DIRECTED BY THE ENGINEER.

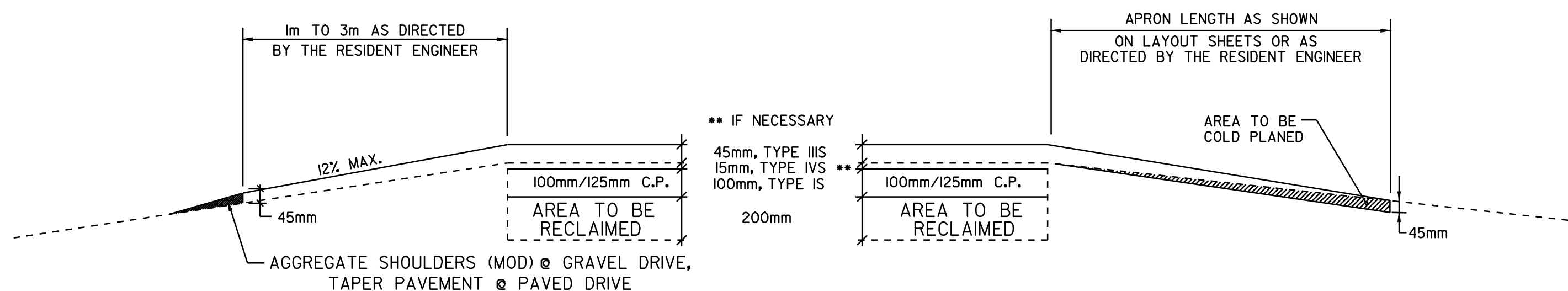
FERTILIZER:  
FORMULA 10-20-10, TO BE USED WITH SEED, APPLIED AT THE RATE OF 560 kg/HECTARE. (HYDRO SEEDERS MAY USE 19-19-19 FORMULA)

AGRICULTURAL LIMESTONE:  
TO BE APPLIED AT THE RATE OF 4.5 TONS/HECTARE, OR AS DIRECTED BY THE ENGINEER.

HAY MULCH:  
TO BE PLACED ON EARTH SLOPES AT THE RATE OF 4.5 TONS/HECTARE, OR AS DIRECTED BY THE ENGINEER.

TOPSOIL:  
TO BE USED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

MARKER POSTS:  
TO BE PLACED AS INDICATED OR AS DIRECTED BY THE ENGINEER.



**DRIVEWAY TRANSITION DETAIL  
@ RECLAIMED STABILIZED BASE AREAS**

**TOWN HIGHWAY TRANSITION DETAIL  
@ RECLAIMED STABILIZED BASE AREAS**

## PROJECT TYPICAL SHEET #2

DESIGNED BY <u>BCE/PJM</u>	DATE <u>7-02</u>
DRAWN BY <u>C.E.A., INC.</u>	DATE <u>7-02</u>
DESIGN FILE NO. <u>/pave/98b090/pb090.dgn</u>	
PRF FILE <u>pb090+y2.i</u>	DATE PLOTTED <u>09-MAY-2008</u>
PROJ. NAME: <b>MARSHFIELD - CABOT</b>	
PROJ. NO.: <b>NH 2104(1)S</b>	
SHEET <b>3</b> OF <b>60</b> SHEETS	







# QUANTITY SHEET



## APPROXIMATE SUMMARY OF QUANTITIES

R.O.W.	EMPLOYEE TRAINEESHIP	NON-GOV'T PARTICIPATING	GOV'T PARTICIPATING		QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.	ROUNDING
			BRIDGE	ROADWAY					
				15	15	EA	THINNING AND TRIMMING	201.31	EST
				50	50	m 3	COMMON EXCAVATION	203.15	EST
				3,000	3,000	m 3	EARTH BORROW	203.30	EST
				1	1	m 3	TRENCH EXCAVATION OF EARTH (N. A. B. I.)	204.20	EST
				10	10	m 3	TRENCH EXCAVATION OF ROCK	204.21	EST
				118,500	118,500	m 2	COLD PLANING - BITUMINOUS PAVEMENT	210.10	100
				14,100	14,100	T	SUBBASE OF CRUSHED GRAVEL (FINE GRADED) (MOD)	301.28	EST
				82,000	82,000	m 2	RECLAIMED STABILIZED BASE	310.20	1176
				4,250	4,250	T	AGGREGATE SHOULDERS (MOD.)	402.12	EST
				21,000	21,000	KG	EMULSIFIED ASPHALT	404.65	EST
				1	1	LU	PRICE ADJ. ASPHALT CEMENT (N. A. B. I.)	406.50	--
				36,500	36,500	T	SUPERPAVE BITUMINOUS CONCRETE (PG 58-34)	490.30	1,180
			2		2	m 3	CONCRETE, CLASS A	501.22	EST
			200		200	KG	REINFORCING STEEL	507.15	EST
			50		50	M	BRIDGE EXPANSION JOINT (ASPHALTIC PLUG)	516.10	10
			31		31	M	REMOVAL OF EXISTING RAILING	525.10	0.6
			10		10	M	BR. RAIL. -H. D. S. B. /CURB MOUNTED (MOD 1)	525.40	0.5
			10		10	M	BR. RAIL. -H. D. S. B. /CURB MOUNTED (MOD 3)	525.40	0.5
			12		12	M	BR. RAIL. -H. D. S. B. /FASCIA MOUNTED (MOD 3)	525.41	0.6
			2		2	m 3	REMOVAL OF CONCRETE OR MASONRY	529.25	EST
				100	100	M	375MM CSP 1.63MM (68MM X 12MM)	601.0010	EST
				100	100	M	450MM CSP 1.63MM (68MM X 12MM)	601.0015	EST
				20	20	M	600MM CSP 1.63MM (68MM X 12MM)	601.0025	EST
				20	20	M	375 RCP CLASS III	601.0810	EST
				20	20	M	450 RCP CLASS III	601.0815	EST
				20	20	M	600 RCP CLASS III	601.0825	EST
				5	5	EA	375MM CSPES 1.63MM (68MM X 12MM)	601.6010	EST
				5	5	EA	450MM CSPES 1.63MM (68MM X 12MM)	601.6015	EST
				100	100	M	CLEANING CULV. PIPE IN PLACE (0 - 600MM INCL.)	601.995	EST
				100	100	M	CLEAN. CULV. PIPE IN PLACE (GREATER THAN 600MM)	601.996	EST
				5	5	EA	CHANGING ELEVATION OF D. I.'S, C. B.'S OR M. H.'S	604.40	EST
				50	50	EA	REHABILITATION OF D. I., C. B. OR M. H. CLASS I	604.412	EST
		4		4	4	EA	CHANGING ELEVATION OF SEWER MANHOLES	604.42	EST
				100	100	M	150MM UNDERDRAIN	605.10	EST
				140	140	HR	POWER GRADER RENTAL	608.15	EST
				450	450	HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I	608.25	EST
				70	70	HR	POWER BROOM RENTAL	608.30	EST
				20	20	HR	POWER BROOM RENTAL, TYPE II	608.31	EST
				900	900	HR	TRUCK RENTAL	608.37	EST
				130	130	HR	LOADER RENTAL, TYPE I	608.40	EST

## DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
COLD PLANING - BITUMINOUS PAVEMENT		
81,580	m 2	STA 0+598 TO 10+171 (RECLAIM SECTION)
11,480	m 2	STA 10+171 TO 11+500 (COLD PLANE SECTION)
23,090	m 2	STA 11+500 TO END OF PROJECT (COLD PLANE SECTION)
1,750	m 2	TOWN HIGHWAYS
500	m 2	DRIVES
100	m 2	ROUNDING
118,500	m 2	TOTAL
SUPERPAVE BIT. CONCRETE PAVEMENT (PG 58-34)		
TYPE IVS (LEVELING)		
740	T	RECLAIM SECTION
1,270	T	COLD PLANE SECTIONS
TYPE IS		
19,580	T	RECLAIM SECTION
650	T	TH' S/DRIVES
TYPE IIIS (WEARING)		
8,820	T	RECLAIM SECTION
3,750	T	COLD PLANE SECTIONS
240	T	TH' S
270	T	DRIVES
1,180	T	ROUNDING
36,500	T	TOTAL
SUBBASE OF CRUSHED GRAVEL (FINE GRADED) (MOD)		
3,300	T	NEW PAVED SHOULDERS
9,300	T	RECLAIMED STABILIZED BASE
1,500	T	ESTIMATED QUANTITY FOR DRIVES/TH' S
14,100	T	ESTIMATED TOTAL
STONE FILL, TYPE I		
100	m 3	DITCHING
50	m 3	ITEM DETAIL SHEET
150	m 3	TOTAL

## DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
SEDIMENT/EROSION CONTROL (INCLUDED AS ROADWAY ITEMS)		
500	m 2	SILT FENCE
50	KG	SEED, WINTER RYE
200	EA	HAY BALES FOR EROSION CONTROL
EROSION MATTING		
2050	m 2	DITCHING
5000	m 2	SIDE SLOPE STABILITY
7050	m 2	TOTAL

STATIONS		PAVEMENT WIDTHS			EQUATIONS		meters	kilometers	REMARKS
FROM	TO				+	-			

**QUANTITY SHEET #1**

PROJECT NAME **MARSHFIELD - CABOT**  
PROJECT NUMBER **NH 2104(1)S**

DATE PLOTTED 09-MAY-2008  
SHEET 5 OF 60 SHEETS

/pave/98b090/pb090.dgn pb090qsl.i

# QUANTITY SHEET



APPROXIMATE SUMMARY OF QUANTITIES									
R.O.W.	EMPLOYEE TRINEESHIP	NON-GOV'T PARTICIPATING	GOV'T PARTICIPATING		QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.	ROUNDING
			BRIDGE	ROADWAY					
				5	5	T	DUST AND ICE CONTROL WITH CALCIUM CHLORIDE	609.15	EST
				150	150	m <sup>3</sup>	STONE FILL, TYPE 1	613.10	--
				240	240	M	TREATED TIMBER CURB	616.35	4
				180	180	T	BITUMINOUS CONC. GUTTERS & TRAFFIC ISLANDS	616.47	--
				7	7	EA	RELOCATE MAIL BOX, SINGLE SUPPORT	617.10	EST
				1	1	EA	RELOCATE MAIL BOX, MULTIPLE SUPPORT	617.12	EST
				50	50	EA	YIELDING MARKER POSTS	619.17	EST
				1,400	1,400	M	STEEL BEAM GUARD RAIL (GALVANIZED)	621.20	51
				3,100	3,100	M	S. B. G. R. (GALVANIZED) (MOD. - W/2.4M POSTS)	621.20	105.6
				90	90	M	H. D. STEEL BEAM GUARD RAIL (GALVANIZED)	621.21	4.5
				60	60	EA	MANUFACTURED TERMINAL SECTION (FLARED)	621.505	--
				12	12	EA	ANCHOR FOR STEEL BEAM RAIL	621.60	--
				4	4	EA	GUARD RAIL APPROACH SECTION, TYPE II	621.71	--
				4,600	4,600	M	REMOVAL AND DISPOSAL OF GUARD RAIL	621.80	14.7
				2	2	EA	REMOVAL AND DISPOSAL OF GUIDE POSTS	621.81	--
		6		6	6	EA	ADJUST ELEVATION OF VALVE BOX	629.20	--
				3,000	3,000	HR	UNIFORMED TRAFFIC OFFICERS	630.10	EST
				7,500	7,500	HR	FLAGGERS	630.15	EST
			C & E	1	1	LS	FIELD OFFICE - ENGINEERS	631.10	--
			C & E	1	1	LS	TESTING EQUIPMENT - CONCRETE	631.16	--
			C & E	1	1	LS	TESTING EQUIPMENT - BITUMINOUS	631.17	--
			C & E	1	1	LU	FIELD OFFICE TELEPHONE ( N. A. B. I. )	631.25	EST
	1040				1040	HR	EMPLOYEE TRINEESHIP	634.10	EST
				1	1	LS	MOBILIZATION/DEMOBILIZATION	635.11	EST
				1	1	LS	TRAFFIC CONTROL	641.10	EST
				1	1	LS	PUBLIC RELATIONS OFFICER	641.12	EST
				2	2	LS	PORTABLE CHANGEABLE MESSAGE SIGN	641.15	EST
				26,000	26,000	M	DURABLE 100 MM WHITE LINE (THERMOPLASTIC)	646.40	--
				25,000	25,000	M	DURABLE 100 MM YELLOW LINE (THERMOPLASTIC)	646.41	--
				150	150	M	DURABLE 200 MM WHITE LINE (THERMOPLASTIC)	646.42	50
				60	60	M	DURABLE 600 MM STOP BAR (THERMOPLASTIC)	646.46	--
				45	45	EA	DURABLE LETTER OR SYMBOL (THERMOPLASTIC)	646.50	--
				52,000	52,000	M	TEMPORARY 100 MM WHITE LINE	646.60	EST
				50,000	50,000	M	TEMPORARY 100 MM YELLOW LINE	646.61	EST
				150	150	M	TEMPORARY 200 MM WHITE LINE	646.62	EST
				120	120	M	TEMPORARY 600 MM STOP BAR	646.66	EST
				90	90	EA	TEMPORARY LETTER OR SYMBOL	646.70	--
				1,500	1,500	EA	LINE STRIPING TARGETS	646.76	EST
				350	350	m <sup>2</sup>	GEOTEXTILE UNDER STONE FILL	649.31	--
				500	500	m <sup>2</sup>	GEOTEXTILE FOR SILT FENCE	649.51	EST

DETAILED SUMMARY OF QUANTITIES		
QUANTITIES	UNIT	ITEMS

DETAILED SUMMARY OF QUANTITIES		
QUANTITIES	UNIT	ITEMS

STATIONS		PAVEMENT WIDTHS		EQUATIONS		meters	kilometers	REMARKS
FROM	TO			+	-			



QUANTITY SHEET



APPROXIMATE SUMMARY OF QUANTITIES									
R.O.W.	EMPLOYEE TRAINEESHIP	NON-GOV'T PARTICIPATING	GOV'T PARTICIPATING		QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.	ROUNDING
			BRIDGE	ROADWAY					
				140	140	KG	SEED	651.15	EST
				50	50	KG	SEED, WINTER RYE	651.17	EST
				1,120	1,120	KG	FERTILIZER	651.18	EST
				10	10	T	AGRICULTURAL LIMESTONE	651.20	EST
				10	10	T	HAY MULCH	651.25	EST
				200	200	EA	HAY BALES FOR EROSION CONTROL	651.26	EST
				200	200	M3	TOPSOIL	651.35	EST
				7,050	7,050	m <sup>2</sup>	EROSION MATTING	654.10	EST
				85.0	85.0	m <sup>2</sup>	TRAFFIC SIGNS, TYPE A	675.20	2.97
							BEGIN OPTION ITEMS		
				800	800	M	FLANGED CHANNEL SIGN POSTS	675.301	10.4
				<del>800</del>	<del>800</del>	<del>M</del>	<del>SQUARE TUBE SIGN POST AND ANCHOR</del>	<del>675.341</del>	<del>10.4</del>
							END OPTION ITEMS		
				249	249	EA	REMOVING SIGNS	675.50	--
				1	1	EA	ERECTING SALVAGED SIGNS	675.60	--
				68	68	EA	DELINEATORS WITH STEEL POST	676.10	--
				10	10	m <sup>2</sup>	TRAVEL INFORMATION SIGN (MOD.)	680.20	0.64
				1	1	LU	PRICE ADJUSTMENT, FUEL (N. A. B. I.)	690.50	--

DETAILED SUMMARY OF QUANTITIES		
QUANTITIES	UNIT	ITEMS

DETAILED SUMMARY OF QUANTITIES		
QUANTITIES	UNIT	ITEMS

STATIONS		PAVEMENT WIDTHS			EQUATIONS		meters	kilometers	REMARKS
FROM	TO				+	-			

TOTALS /pave/98b090/pb090.dgn pb090qs3.i

# ITEM DETAIL SUMMARY SHEET



LOCATION			MISCELLANEOUS ITEMS							DRAINAGE ITEMS							GUARD RAIL ITEMS											REMARKS		
STA	STA	POS.	203.15	203.30	204.20	204.21	402.12	616.47	604.40	604.412	604.42	605.10	629.20	NEW PIPE		613.10	616.35	619.17	621.20	(MOD.)	621.21	621.505	621.60	621.71	621.80	621.81	676.10			
			COM. EXCAV.	EARTH BORROW	TRENCH EXCAV. OF EARTH	TRENCH EXCAV. OF ROCK	AGG. SHOULD. (MOD.)	B. CONC. GUTTER & TRAF. ISLAND	CHANGE ELEV.	REHAB. D.I. CLASS I	CHANGE ELEV. SMH	150mm UNDER-DRAIN	ADJUST ELEV. VALVE BOX	DIA.	LENGTH /THCL	STONE FILL TYPE I	TIMBER CURB	YIELD. MARKER POSTS	STEEL POST G.R.	2.4 M STEEL POST G.R.	HEAVY DUTY S.B. G.R.	MAN. TERMINAL SECTION	ANCHOR FOR G.R.	G.R. APPROACH SECTION TYPE II	REMOVE & DISP. OF G.R.	REMOVE & DISP. OF GUIDE POSTS	DELINE. WITH STEEL POST			
			m <sup>3</sup>	m <sup>3</sup>	m <sup>3</sup>	m <sup>3</sup>	T	T	EA	EA	EA	M	EA	mm	M	m <sup>3</sup>	M	EA	M	M	M	EA	EA	EA	M	EA	EA			
MARSHFIELD																														
0+000	13+205	LT&RT	50	3,000	1		3,870		5	49	4	100	6	375 450 600 375 450 600 375 450	100/1.63 100/1.63 20/1.63 20/III 20/III 20/III (5) CSPES/1.63 (5) CSPES/1.63	50		49												ESTIMATED QUANTITIES TO BE USED AS DIRECTED BY THE RESIDENT ENGINEER.
0+667	0+705	LT					10																						BRIDGE #76. COORDINATE WITH BRIDGE DETAIL SHEETS 1 & 2.	
0+657	0+730	RT					10												26.6		17.1	2								
0+827	0+845	RT					5														7.6	1							REPLACE EXISTING S.B. GUARD RAIL. CONNECT TO BRIDGE ON TH#60. COORDINATE WITH BRIDGE DETAIL SHEETS 1 & 2.	
0+853	1+155	RT					5													281.2	11.4	1								
1+759	1+764	LT				10																							REMOVE EXISTING BOULDER IN SHOULDER TO A MINIMUM OF 1M BELOW SHOULDER ELEVATION.	
2+053	2+273	RT					10														197.6		2						REPLACE EXISTING STEEL BEAM GUARD RAIL.	
2+318	2+601	RT					10														273.6		2						REPLACE EXISTING S.B. GUARD RAIL. REDUCED POST SPACING @ POWER POLE @ STA 2+498 & 2+532.	
2+691	2+779	RT					10														64.6		2						REPLACE EXISTING STEEL BEAM GUARD RAIL.	
3+162	3+230	RT					10														45.6		2						BRIDGE #77. COORDINATE WITH BRIDGE DETAIL SHEETS 1 & 3.	
3+167	3+212	LT					10														22.8		2							
3+509	4+120	RT					10														604.2		2						REPLACE EXISTING S.B. GUARD RAIL. REDUCED POST SPACING @ POWER POLE @ STA 3+561 & 4+107.	
4+222	4+539	RT					10													212.8	79.8		2							REPLACE EXISTING STEEL BEAM GUARD RAIL.
4+551	5+112	RT					10													190.0	349.6		2							REPLACE/EXTEND EXISTING STEEL BEAM GUARD RAIL.
5+926	6+002	LT					10														53.2		2						REPLACE EXISTING STEEL BEAM GUARD RAIL.	
5+927	6+004	RT					10														53.2		2						REPLACE EXISTING STEEL BEAM GUARD RAIL.	
7+350	7+380	LT					10														7.6		2						BRIDGE #78. COORDINATE WITH BRIDGE DETAIL SHEETS 1 & 3.	
7+352	7+382	RT					10														7.6		2							
7+460	7+673	RT					10													34.2	167.2		1	2					REPLACE EXIST. S.B.G.R. INSTALL BURIED END TERMINAL @ STA 7+673 (MAINTAIN EXIST. CULVERT).	
7+895	8+127	RT					10													209.0			1	2					REPLACE EXISTING S.B. GUARD RAIL. MAINTAIN EXIST. FLARE @ BEGINNING OF RAIL.	
8+728	8+732	RT																								2				
8+748	8+782	LT					10														11.4		2						BRIDGE #79. COORDINATE WITH BRIDGE DETAIL SHEETS 1 & 4.	
8+750	8+783	RT					10														11.4		2							
8+841	9+042	RT					5														186.2	7.6		1	2				NEW S.B. GUARD RAIL. CONNECT TO BRIDGE ON TH #35. COORDINATE WITH BRIDGE DETAILS SHEETS 1 & 4.	
9+046	9+141	RT					5														79.8	7.6		1	2					
9+573	9+733	LT					10														136.8		2						REPLACE EXISTING STEEL BEAM GUARD RAIL.	
9+719	9+814	RT					10														72.2		2						NEW STEEL BEAM GUARD RAIL.	
<b>SUB-TOTALS</b>			50	3,000	1	10	4090		5	49	4	100	6	375 450 600 375 450	100/1.63 100/1.63 20/1.63 20/III 20/III (5) CSPES/1.63 (5) CSPES/1.63	50		49	608.0	2,770.2	60.8	42	8			3,363.0	2	46		

## ITEM DETAIL SHEET #1

DESIGNED BY BCE/PJM DATE 7-02

DRAWN BY C.E.A., INC. DATE 7-02

DESIGN FILE NO. /pave/98b090/pb090.dgn

PRF FILE pb090idl.i DATE PLOTTED 09-MAY-2008 10

PROJ. NAME: **MARSHFIELD - CABOT**

PROJ. NO.: **NH 2104(1)S**

SHEET **8** OF **60** SHEETS



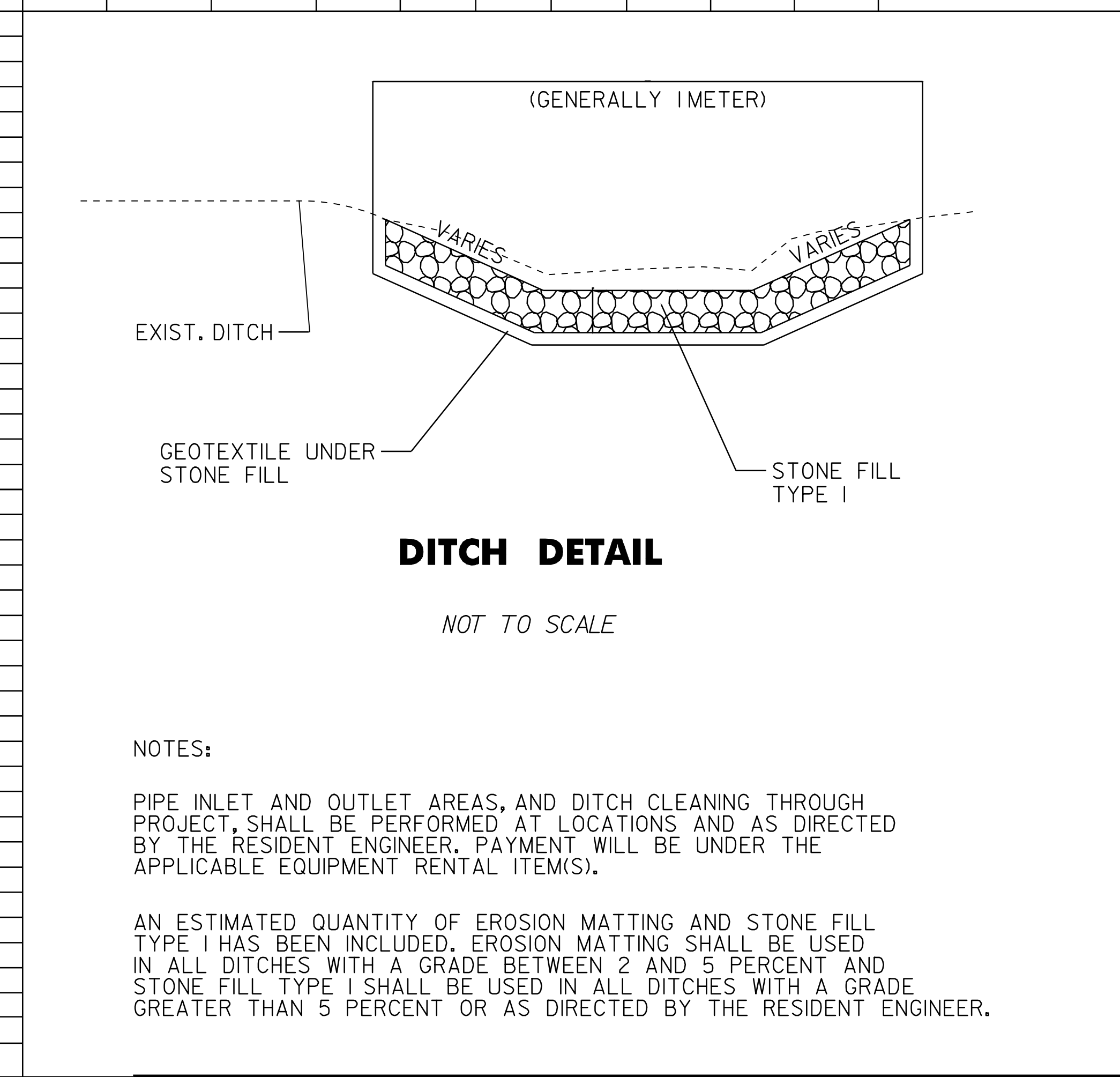
# ITEM DETAIL SUMMARY SHEET



LOCATION			MISCELLANEOUS ITEMS						DRAINAGE ITEMS						GUARD RAIL ITEMS										REMARKS				
STA	STA	POS.	203.15	203.30	204.20	204.21	402.12	616.47	604.40	604.412	604.42	605.10	629.20	NEW PIPE		613.10	616.35	619.17	621.20	(MOD.)	621.21	621.505	621.60	621.71		621.80	621.81	676.10	
			COM. EXCAV.	EARTH BORROW	TRENCH EXCAV. OF EARTH	TRENCH EXCAV. OF ROCK	AGG. SHOULD. (MOD.)	B. CONC. GUTTER & TRAF. ISLAND	CHANGE ELEV.	REHAB. D.I. CLASS I	CHANGE ELEV. SMH	150mm UNDER-DRAIN	ADJUST ELEV. VALVE BOX	DIA.	LENGTH /THCL	STONE FILL TYPE I	TIMBER CURB	YIELD. MARKER POSTS	STEEL POST G.R.	2.4 M STEEL POST G.R.	HEAVY DUTY S.B. G.R.	MAN. TERMINAL SECTION	ANCHOR FOR G.R.	G.R. APPROACH SECTION TYPE II	REMOVE & DISP. OF G.R.	REMOVE & DISP. GUIDE POSTS	DELINE. WITH STEEL POST		
			m <sup>3</sup>	m <sup>3</sup>	m <sup>3</sup>	m <sup>3</sup>	T	T	EA	EA	EA	M	EA	mm	M	m <sup>3</sup>	M	EA	M	M	M	EA	EA	EA	M	EA	EA		
MARSHFIELD																													
9+924	10+172	RT					10													224.2						247	2	REPLACE EXISTING STEEL BEAM GUARD RAIL.	
10+356	10+374	LT																			7.6			2		9.5	2	BRIDGE #80. COORDINATE WITH BRIDGE DETAIL SHEETS 1 & 5.	
10+327	10+396	RT					10													19.0	<del>17.1</del> 22.4M					68.4	2		
10+397	10+660	LT						120																				BITUMINOUS CONCRETE GUTTER. SEE DETAIL, SHEET 4.	
10+445	10+469	RT						5																				BITUMINOUS CONCRETE GUTTER. SEE DETAIL, SHEET 4.	
10+480	10+669	RT						40																				BITUMINOUS CONCRETE GUTTER. SEE DETAIL, SHEET 4.	
10+775	10+847	RT						10																				BITUMINOUS CONCRETE GUTTER. SEE DETAIL, SHEET 4.	
10+863	10+899	RT						5																				BITUMINOUS CONCRETE GUTTER. SEE DETAIL, SHEET 4.	
11+000	11+041	RT					10																			26.6	2	BRIDGE #81. COORDINATE WITH BRIDGE DETAIL SHEETS 1 & 5 AND APPROACH RAIL DETAIL SHEETS (SHEETS 57 & 58)	
11+003	11+041	LT					10																			22.8	2		
11+459	11+731	LT					10										101									269.8	2	REPLACE EXISTING S.B. GUARD RAIL & TIMBER CURB.	
11+703	11+737	RT					10																			34.2	2	REPLACE EXISTING STEEL BEAM GUARD RAIL.	
11+800	11+970	LT					10										135									170	2	REPLACE EXISTING CABLE RAIL.	
12+045	12+269	LT					10																			224	2	REPLACE EXISTING CABLE RAIL.	
12+356	12+441	LT					10																			85	2	REPLACE EXISTING CABLE RAIL.	
12+395	12+460	RT					10																			65	2	REPLACE EXISTING CABLE RAIL.	
CABOT																													
0+000	0+122	LT&RT					60																						ESTIMATED QUANTITIES TO BE USED AS DIRECTED BY THE RESIDENT ENGINEER.
SHEET 9 SUB-TOTALS			--	--	--	--	160	180	--	1	--	--	--	--	--	--	236	1	741.0	224.2	24.7	18	4	4	1,222.3	--	22		
SHEET 8 SUB-TOTALS			50	3,000	1	10	4,090	--	5	49	4	100	6	--	--	50	--	49	608.0	2,770.2	60.8	42	8	--	3,363.0	2	46		
SUB-TOTALS			50	3,000	1	10	4,250	180	5	50	4	100	6	--	--	50	236	50	1,349.0	2,994.4	85.5	60	12	4	4,585.3	2	68		
ROUNDING			--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	--	51.0	105.6	4.5	--	--	--	14.7	--	--		
PROJECT TOTALS			50	3,000	1	10	4,250	180	5	50	4	100	6	375	100/1.63	50	240	50	1,400.0	3,100.0	90.0	60	12	4	4,600.0	2	68		
														450	100/1.63														
														600	20/1.63														
														375	20/III														
														450	20/III														
														600	20/III														
														375	(5) CSPES/1.63														
														450	(5) CSPES/1.63														

<h2 style="margin: 0;">ITEM DETAIL SHEET #2</h2>	DESIGNED BY <u>BCE/PJM</u> DATE <u>7-02</u>
	DRAWN BY <u>C.E.A., INC.</u> DATE <u>7-02</u>
	DESIGN FILE NO. <u>/pave/98b090/pb090.dgn</u>
	PRF FILE <u>pb090id2.i</u> DATE PLOTTED <u>09-MAY-2008 10</u>
	PROJ. NAME: <b>MARSHFIELD - CABOT</b>
PROJ. NO.: <b>NH 2104(1)S</b>	
SHEET <b>9</b> OF <b>60</b> SHEETS	

LOCATION				METERS OF DITCHING			MISC. ITEMS			REMARKS	LOCATION				METERS OF DITCHING			MISC. ITEMS			REMARKS							
SITE	STATION	STATION	POS.	PERCENT GRADE			654.10	613.10	649.31		PERCENT GRADE				654.10	613.10	649.31											
				0-2	2-5	>5	EROS. MATT.	STONE FILL TYP. I	GEOT. UNDER STONE FILL		0-2	2-5	>5	EROS. MATT.	STONE FILL TYP. I	GEOT. UNDER STONE FILL												
																	0-2	2-5	>5	0-2		2-5	>5					
U. S. ROUTE 2 MARSHFIELD DISTRICT #6							m <sup>2</sup>	m <sup>3</sup>	m <sup>2</sup>								m <sup>2</sup>	m <sup>3</sup>	m <sup>2</sup>									
1	0+598	0+671	LT		73		73										36	9+760	9+840	LT	80							
2	0+598	0+646	RT		73		73										37	10+070	10+125	LT	55							
3	0+712	0+970	LT	149	109		109										38	10+160	10+230	LT	70							
4	0+980	1+010	LT	30													39	10+304	10+340	LT	36							
5	1+030	1+275	LT	160	85		85										40	11+270	11+460	RT	60	130		130				
6	1+560	1+640	LT	80													41	12+220	12+385	RT		85	80	85	24	80		
7	1+708	2+210	LT	502													42	12+560	12+610	LT	50							
										PROJECT SUBTOTALS				3,080	2,048	313	2,048	94	313									
										ROUNDING				20	2	37	2	6	37									
										PROJECT TOTALS				3,100	2,050	350	2,050	100	350									
8	2+280	2+300	LT		20		20																					
9	2+375	2+560	LT	113	72		72																					
10	2+750	2+817	LT	67																								
11	2+890	3+125	LT	235																								
12	3+210	3+283	LT			73		22	73																			
13	3+685	4+008	LT	126	197		197																					
14	4+050	4+360	LT	80	70	160	70	48	160																			
15	4+470	4+570	LT	100																								
16	4+648	4+730	LT	82																								
17	5+070	5+240	LT		170		170																					
18	5+125	5+185	RT		60		60																					
19	5+290	5+395	LT		105		105																					
20	5+485	5+537	RT		52		52																					
21	5+485	5+595	LT	35	75		75																					
22	5+625	5+765	LT	140																								
23	6+319	6+400	LT		81		81																					
24	6+400	6+472	RT		72		72																					
25	6+580	6+665	LT		85		85																					
26	6+728	6+770	RT		42		42																					
27	6+850	7+295	LT	295	150		150																					
28	7+525	7+567	LT		42		42																					
29	7+585	7+600	LT		15		15																					
30	7+685	7+710	RT	25																								
31	7+730	7+870	LT	70	70		70																					
32	8+065	8+160	LT	95																								
33	8+180	8+270	LT		90		90																					
34	8+300	8+515	LT	190	25		25																					
35	8+920	9+075	LT	155																								



NOTES:

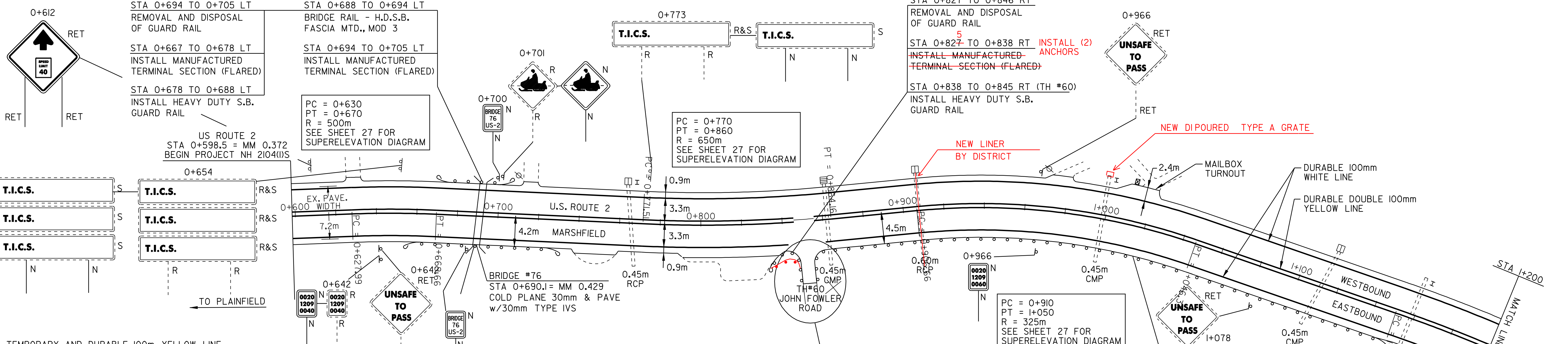
PIPE INLET AND OUTLET AREAS, AND DITCH CLEANING THROUGH PROJECT, SHALL BE PERFORMED AT LOCATIONS AND AS DIRECTED BY THE RESIDENT ENGINEER. PAYMENT WILL BE UNDER THE APPLICABLE EQUIPMENT RENTAL ITEM(S).

AN ESTIMATED QUANTITY OF EROSION MATTING AND STONE FILL TYPE I HAS BEEN INCLUDED. EROSION MATTING SHALL BE USED IN ALL DITCHES WITH A GRADE BETWEEN 2 AND 5 PERCENT AND STONE FILL TYPE I SHALL BE USED IN ALL DITCHES WITH A GRADE GREATER THAN 5 PERCENT OR AS DIRECTED BY THE RESIDENT ENGINEER.

<b>DITCH CLEANING DETAIL SHEET</b>	PROJECT :	MARSHFIELD - CABOT	PROJECT NO. :	NH 2104(I)S
	DESIGN FILE NAME:	/pave/98b090/pb090.dgn		
	IPARM FILE NAME:	pb090d1t.l	PLOT DATE:	09-MAY-2008
	SURVEYED BY:		SURVEY DATE:	
	SQUAD LEADER:		DRAWN BY:	
			SHEET:	10 OF 60

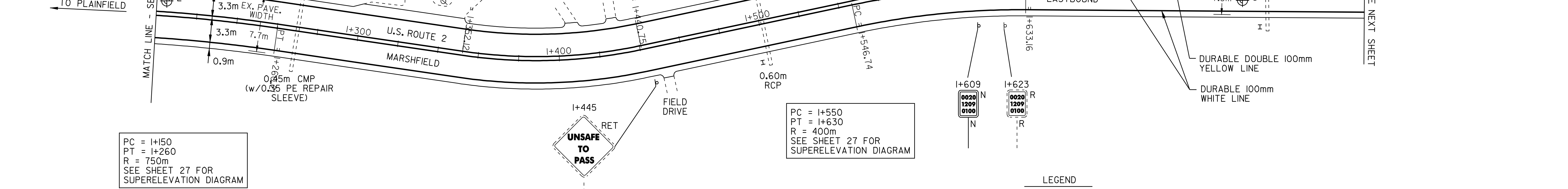






- TEMPORARY AND DURABLE 100m YELLOW LINE  
 STA 0+598.5 TO I+800 SOLID LT&RT  
 STA 0+849 DOUBLE SOLID RT  
 (WITH CENTERLINE BREAKS FOR TOWN HIGHWAYS)  
 TEMPORARY AND DURABLE 100m WHITE LINE  
 STA 0+598.5 TO I+800 SOLID LT&RT  
 (WITH EDGELINE BREAKS FOR TOWN HIGHWAYS)  
 TEMPORARY AND DURABLE 600m STOP BAR  
 STA 0+849 RT JOHN FOWLER RD  
 TEMPORARY AND DURABLE LETTER OR SYMBOL  
 STA 0+849 RT "STOP"  
 REMOVING SIGNS  
 II

- REHABILITATION OF D.I.'S, C.B.'S OR M.H.'S  
 STA 0+765 LT  
 STA 0+861 LT  
 STA 0+907 LT  
 STA I+115 LT  
 YIELDING MARKER POST  
 STA 0+765 LT  
 STA 0+999 LT  
 STA 0+159 LT  
 STA I+501 LT & RT  
 STA I+750 RT



PAVEMENT CORES -

#	TOTAL DEPTH (mm)	SOLID CORE	COMMENTS
1	215	YES	DRAINABLE BASE
2	280	NO	POOR QUALITY CORE
3	255	NO	RUTTING, POOR QUALITY CORE

NOTE:  
 - NO PCC UNDER ANY CORES  
 - NO CORES OVER ASPHALTED (UNLESS NOTED)  
 - NO SHOULDER CORES

- REMOVAL AND DISPOSAL OF GUARD RAIL  
 STA 0+657 TO 0+686 RT  
 STA 0+671 TO 0+688 LT  
 STA 0+692 TO 0+730 RT  
 STA 0+694 TO 0+705 LT  
 STA 0+827 TO 0+846 RT  
 STA 0+853 TO I+155 RT  
 MANUFACTURED TERMINAL SECTION (FLARED)  
 STA 0+657 TO 0+668 RT  
 STA 0+667 TO 0+678 LT  
 STA 0+694 TO 0+705 LT  
 STA 0+719 TO 0+730 RT  
 STA 0+827 TO 0+838 RT  
 STA I+144 TO I+155 RT  
 STEEL BEAM GUARD RAIL  
 STA 0+668 TO 0+676 RT  
 STA 0+700 TO 0+719 RT

- BRIDGE RAILING - HEAVY DUTY S.B. FASCIA MOUNTED (MOD 3)  
 STA 0+686 TO 0+692 RT  
 STA 0+688 TO 0+694 LT  
 HEAVY DUTY STEEL BEAM GUARD RAIL  
 STA 0+676 TO 0+686 RT  
 STA 0+678 TO 0+688 LT  
 STA 0+692 TO 0+700 RT  
 STA 0+838 TO 0+845 RT (TH #60)  
 STA 0+853 TO 0+861 RT (TH #60)  
 STEEL BEAM GUARD RAIL W/2.4m POSTS (MOD.)  
 STA 0+861 TO I+144 RT  
 RELOCATED MAILBOX, SINGLE SUPPORT  
 STA I+557 LT

- LEGEND
- N = NEW
  - R = REMOVE
  - R&S = REMOVE & SALVAGE
  - RET = RETAIN
  - S = SALVAGE
  - B-T-O-B = BACK TO BACK
  - ⊕ = CATCH BASIN/DI/MANHOLE
  - ⊙ = EXISTING THROAT DI SEWER MANHOLE
  - N.W. = NO WORK REQUIRED
  - I = MARKER POST
  - ⊙ = UTIL. POLE
  - ⊙ = UTIL. POLE W/UNDERGROUND UTIL.
  - ⊙ = VALVE/CURB STOP
  - ⊙ = DRIVE

# PAVING PROJECT LAYOUT #1



DESIGNED BY BCE/PJM DATE 7-02  
 DRAWN BY C.E.A., INC. DATE 7-02  
 DESIGN FILE NO. /pave/98b090/pb090.dgn  
 PRF FILE pb090p01 DATE PLOTTED 09-MAY-2008 10  
 PROJ. NAME **MARSHFIELD - CABOT**  
 PROJ. NO. **NH 2104(1)S**  
 SHEET **11** OF **60** SHEETS



TEMPORARY AND DURABLE 100m YELLOW LINE  
 STA I+800 TO 3+000 SOLID LT&RT  
 (WITH CENTERLINE BREAKS FOR TOWN HIGHWAYS)

TEMPORARY AND DURABLE 100m WHITE LINE  
 STA I+800 TO 3+000 SOLID LT&RT  
 (WITH EDGELINE BREAKS FOR TOWN HIGHWAYS)

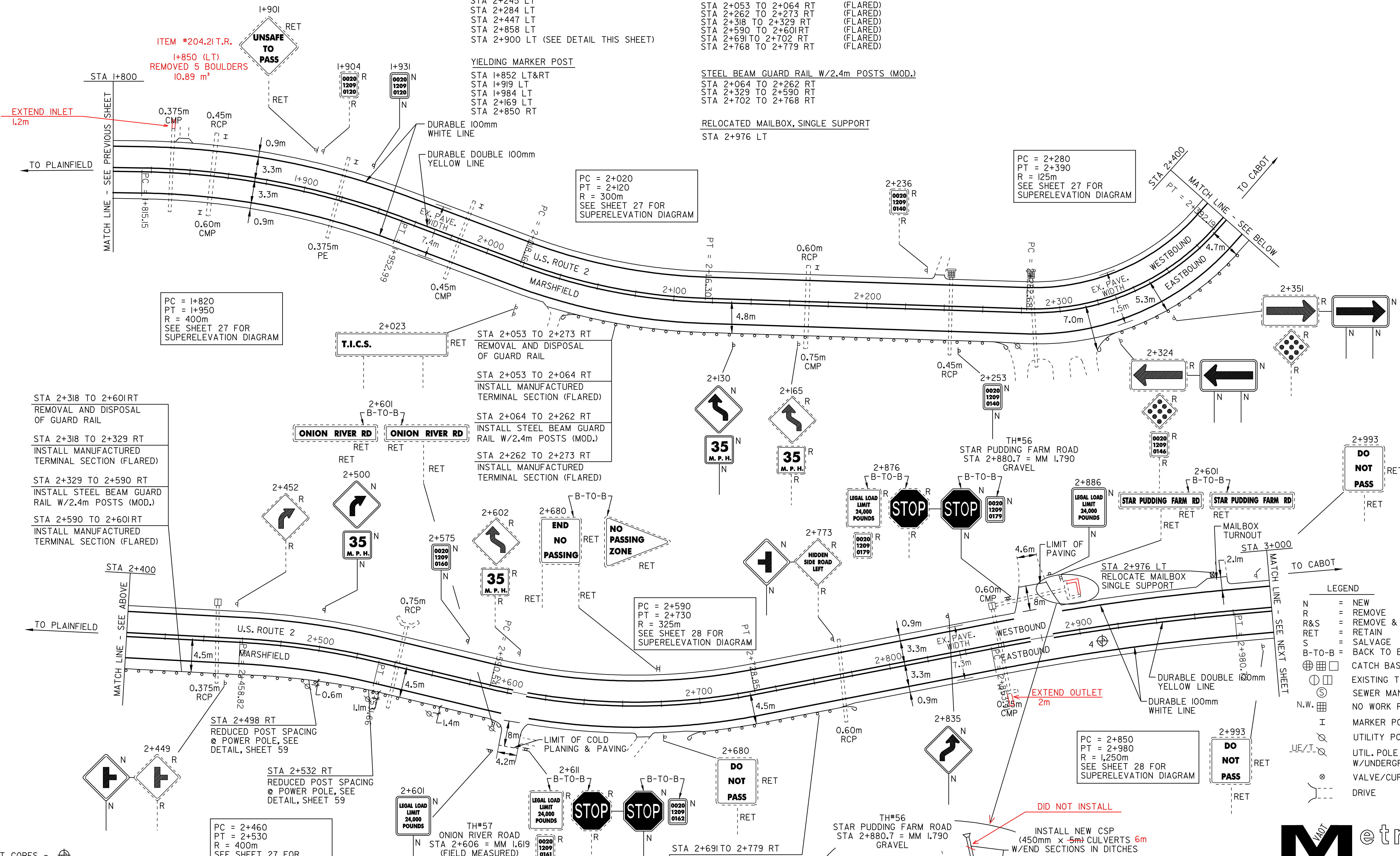
REMOVING SIGNS  
 20

REMOVAL AND DISPOSAL OF GUARD RAIL  
 STA 2+053 TO 2+273 RT  
 STA 2+318 TO 2+601RT  
 STA 2+691 TO 2+779 RT

REHABILITATION OF D.I.'S, C.B.'S OR M.H.'S  
 STA 2+245 LT  
 STA 2+284 LT  
 STA 2+447 LT  
 STA 2+858 LT  
 STA 2+900 LT (SEE DETAIL THIS SHEET)

MANUFACTURED TERMINAL SECTION  
 STA 2+053 TO 2+064 RT (FLARED)  
 STA 2+262 TO 2+273 RT (FLARED)  
 STA 2+318 TO 2+329 RT (FLARED)  
 STA 2+590 TO 2+601RT (FLARED)  
 STA 2+691 TO 2+702 RT (FLARED)  
 STA 2+768 TO 2+779 RT (FLARED)

RELOCATED MAILBOX, SINGLE SUPPORT  
 STA 2+976 LT



ITEM #204.21.T.R.  
 I+850 (LT)  
 REMOVED 5 BOULDERS  
 10.89 m<sup>2</sup>

PC = 2+020  
 PT = 2+120  
 R = 300m  
 SEE SHEET 27 FOR  
 SUPERELEVATION DIAGRAM

PC = I+820  
 PT = I+950  
 R = 400m  
 SEE SHEET 27 FOR  
 SUPERELEVATION DIAGRAM

PC = 2+590  
 PT = 2+730  
 R = 325m  
 SEE SHEET 28 FOR  
 SUPERELEVATION DIAGRAM

PC = 2+280  
 PT = 2+390  
 R = 125m  
 SEE SHEET 27 FOR  
 SUPERELEVATION DIAGRAM

PC = 2+850  
 PT = 2+980  
 R = 1,250m  
 SEE SHEET 28 FOR  
 SUPERELEVATION DIAGRAM

PAVEMENT CORES -	COMMENTS	
#	TOTAL DEPTH (mm)	SOLID CORE
4	290	NO

LEVELLED AREA, POOR QUALITY CORE

NOTE:  
 - NO PCC UNDER ANY CORES  
 - NO CORES OVER ASPHALTED (UNLESS NOTED)  
 - NO SHOULDER CORES

LEGEND

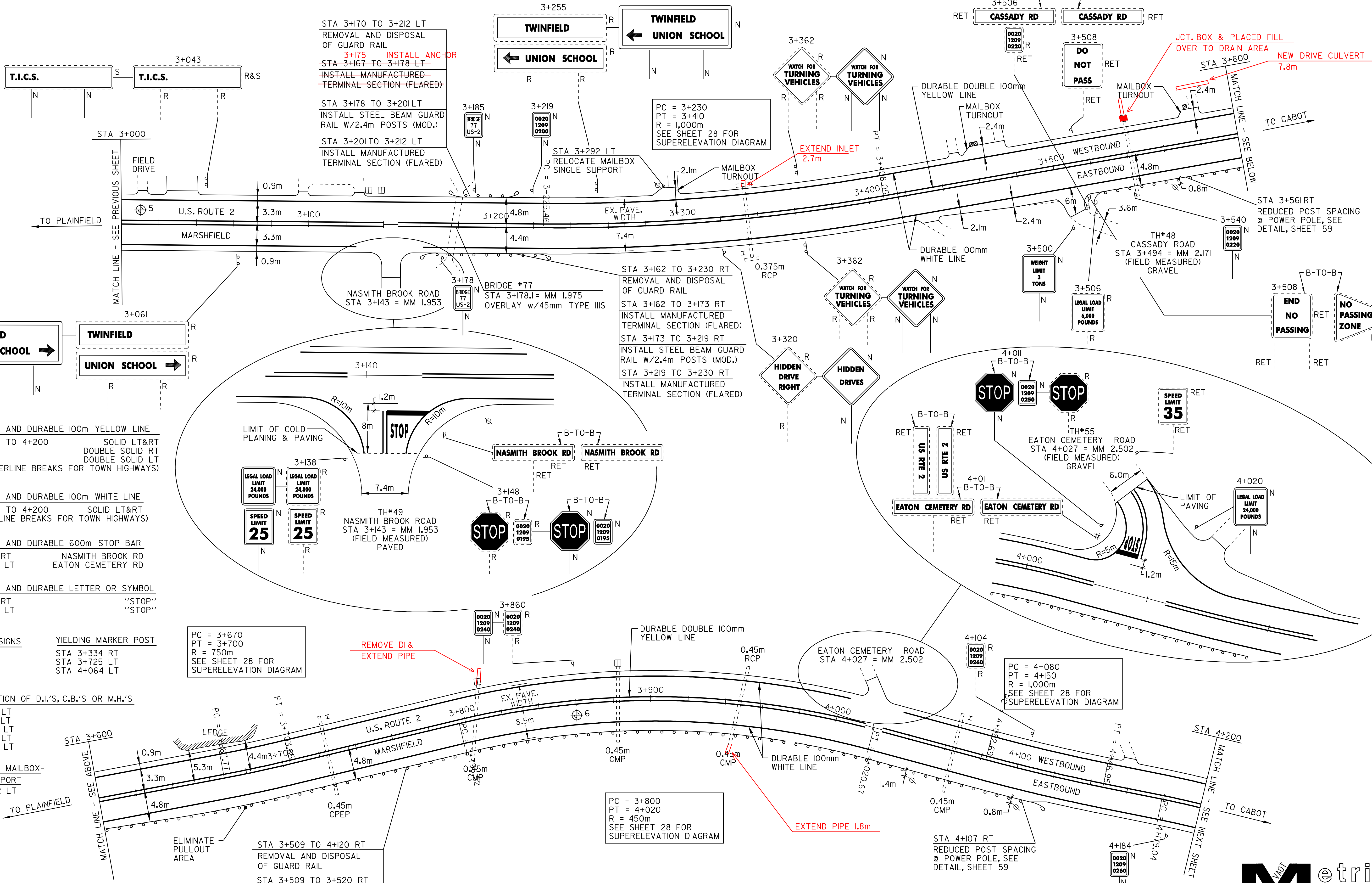
N	= NEW
R	= REMOVE
R&S	= REMOVE & SALVAGE
RET	= RETAIN
S	= SALVAGE
B-T-O-B	= BACK TO BACK
⊕	= CATCH BASIN/DI/MANHOLE
⊙	= EXISTING THROAT DI
⊗	= SEWER MANHOLE
N.W.	= NO WORK REQUIRED
I	= MARKER POST
⊘	= UTILITY POLE
⊘/I	= UTIL. POLE W/UNDERGROUND UTIL.
⊘	= VALVE/CURB STOP
⊘	= DRIVE



## PAVING PROJECT LAYOUT #2

DESIGNED BY BCE/PJM DATE 7-02  
 DRAWN BY C.E.A., INC. DATE 7-02  
 DESIGN FILE NO. /pave/98b090/pb090.dgn  
 PRF FILE pb090p02.i DATE PLOTTED 09-MAY-2008 10  
 PROJ. NAME **MARSHFIELD - CABOT**  
 PROJ. NO. **NH 2104(1)S**  
 SHEET **12** OF **60** SHEETS





**TEMPORARY AND DURABLE 100m YELLOW LINE**  
 STA 3+000 TO 4+200 SOLID LT&RT  
 STA 3+143 DOUBLE SOLID RT  
 STA 4+027 DOUBLE SOLID LT  
 (WITH CENTERLINE BREAKS FOR TOWN HIGHWAYS)

**TEMPORARY AND DURABLE 100m WHITE LINE**  
 STA 3+000 TO 4+200 SOLID LT&RT  
 (WITH EDGELINE BREAKS FOR TOWN HIGHWAYS)

**TEMPORARY AND DURABLE 600m STOP BAR**  
 STA 3+143 RT NASMITH BROOK RD  
 STA 4+027 LT EATON CEMETERY RD

**TEMPORARY AND DURABLE LETTER OR SYMBOL**  
 STA 3+143 RT "STOP"  
 STA 4+027 LT "STOP"

**REMOVING SIGNS** 17  
**YIELDING MARKER POST**  
 STA 3+334 RT  
 STA 3+725 LT  
 STA 4+064 LT

**REHABILITATION OF D.I.'S, C.B.'S OR M.H.'S**  
 STA 3+130 LT  
 STA 3+138 LT  
 STA 3+542 LT  
 STA 3+810 LT  
 STA 3+882 LT

**RELOCATED MAILBOX-SINGLE SUPPORT**  
 STA 3+292 LT

**PAVEMENT CORES - ⊕**

* TOTAL DEPTH (mm)	SOLID CORE	COMMENTS
5 255	NO	POOR QUALITY CORE
6 370	NO	NOT FULL DEPTH

**NOTE:**  
 - NO PCC UNDER ANY CORES  
 - NO CORES OVER ASPHALTED (UNLESS NOTED)  
 - NO SHOULDER CORES

STA 3+509 TO 4+120 RT  
 REMOVAL AND DISPOSAL OF GUARD RAIL  
 STA 3+509 TO 3+520 RT  
 INSTALL MANUFACTURED TERMINAL SECTION (FLARED)  
 STA 3+520 TO 4+109 RT  
 INSTALL STEEL BEAM GUARD RAIL W/2.4m POSTS (MOD.)  
 STA 4+109 TO 4+120 RT  
 INSTALL MANUFACTURED TERMINAL SECTION (FLARED)

**REMOVAL AND DISPOSAL OF GUARD RAIL**  
 STA 3+162 TO 3+230 RT  
 STA 3+170 TO 3+212 LT  
 STA 3+509 TO 4+120 RT

**MANUFACTURED TERMINAL SECTION**  
 STA 3+162 TO 3+173 RT (FLARED)  
 STA 3+167 TO 3+178 LT (FLARED)  
 STA 3+201 TO 3+212 LT (FLARED)  
 STA 3+219 TO 3+230 RT (FLARED)  
 STA 3+509 TO 3+520 RT (FLARED)  
 STA 4+109 TO 4+120 RT (FLARED)

**STEEL BEAM GUARD RAIL W/2.4m POSTS (MOD.)**  
 STA 3+173 TO 3+219 RT  
 STA 3+178 TO 3+201 LT  
 STA 3+520 TO 4+109 RT



# PAVING PROJECT LAYOUT #3

DESIGNED BY BCE/PJM DATE 7-02  
 DRAWN BY C.E.A., INC. DATE 7-02  
 DESIGN FILE NO. /pave/98b090/pb090.dgn  
 PRF FILE pb090p03.1 DATE PLOTTED 09-MAY-2008 10  
 PROJ. NAME **MARSHFIELD - CABOT**  
 PROJ. NO. **NH 2104(1)S**  
 SHEET **13** OF **60** SHEETS

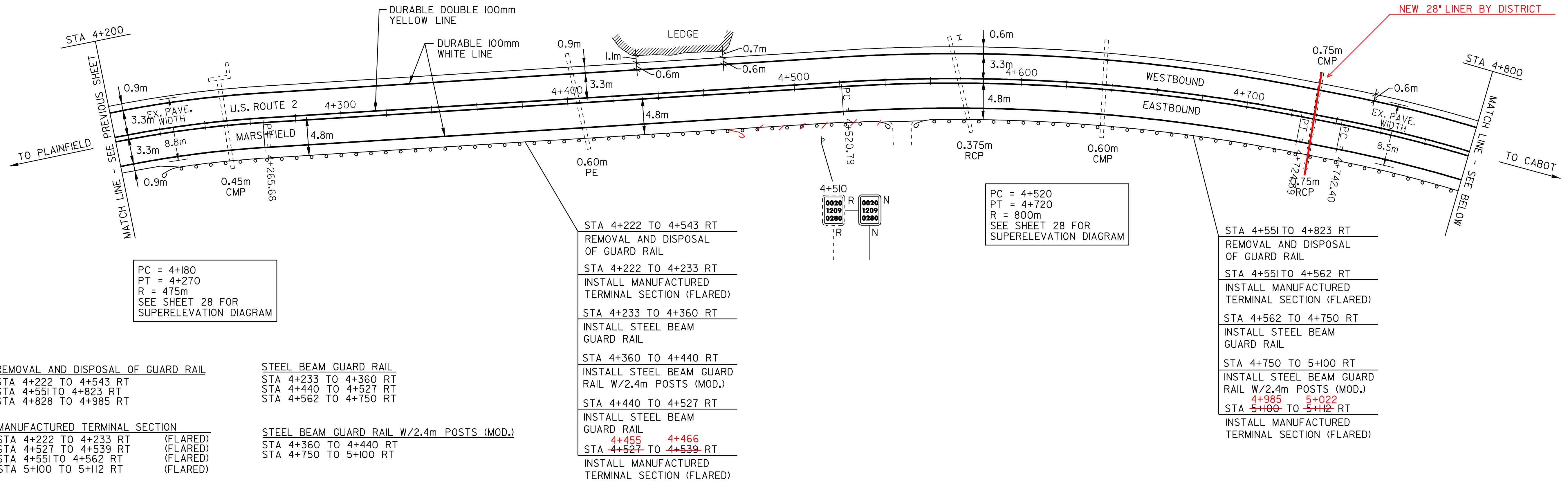


TEMPORARY AND DURABLE 100m YELLOW LINE  
STA 4+200 TO 5+400  
SOLID LT&RT

TEMPORARY AND DURABLE 100m WHITE LINE  
STA 4+200 TO 5+400  
SOLID LT&RT

REMOVING SIGNS  
4

YIELDING MARKER POST  
STA 4+570 LT  
STA 4+945 RT  
STA 5+087 LT



REMOVAL AND DISPOSAL OF GUARD RAIL  
STA 4+222 TO 4+543 RT  
STA 4+551 TO 4+823 RT  
STA 4+828 TO 4+985 RT

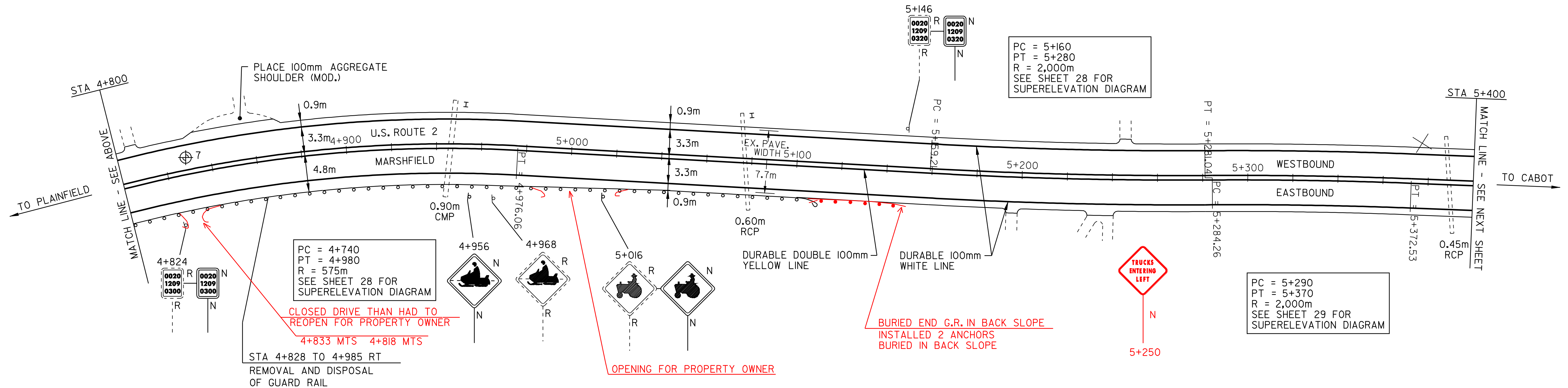
STEEL BEAM GUARD RAIL  
STA 4+233 TO 4+360 RT  
STA 4+440 TO 4+527 RT  
STA 4+562 TO 4+750 RT

MANUFACTURED TERMINAL SECTION (FLARED)  
STA 4+222 TO 4+233 RT  
STA 4+527 TO 4+539 RT  
STA 4+551 TO 4+562 RT  
STA 5+100 TO 5+112 RT

STEEL BEAM GUARD RAIL W/2.4m POSTS (MOD.)  
STA 4+360 TO 4+440 RT  
STA 4+750 TO 5+100 RT

STA 4+222 TO 4+543 RT  
REMOVAL AND DISPOSAL OF GUARD RAIL  
STA 4+222 TO 4+233 RT  
INSTALL MANUFACTURED TERMINAL SECTION (FLARED)  
STA 4+233 TO 4+360 RT  
INSTALL STEEL BEAM GUARD RAIL  
STA 4+360 TO 4+440 RT  
INSTALL STEEL BEAM GUARD RAIL W/2.4m POSTS (MOD.)  
STA 4+440 TO 4+527 RT  
INSTALL STEEL BEAM GUARD RAIL  
4+455 4+466  
STA 4+527 TO 4+539 RT  
INSTALL MANUFACTURED TERMINAL SECTION (FLARED)

STA 4+551 TO 4+823 RT  
REMOVAL AND DISPOSAL OF GUARD RAIL  
STA 4+551 TO 4+562 RT  
INSTALL MANUFACTURED TERMINAL SECTION (FLARED)  
STA 4+562 TO 4+750 RT  
INSTALL STEEL BEAM GUARD RAIL  
STA 4+750 TO 5+100 RT  
INSTALL STEEL BEAM GUARD RAIL W/2.4m POSTS (MOD.)  
4+985 5+022  
STA 5+100 TO 5+112 RT  
INSTALL MANUFACTURED TERMINAL SECTION (FLARED)



PC = 4+740  
PT = 4+980  
R = 575m  
SEE SHEET 28 FOR SUPERELEVATION DIAGRAM  
CLOSED DRIVE THAN HAD TO REOPEN FOR PROPERTY OWNER  
4+833 MTS 4+818 MTS  
STA 4+828 TO 4+985 RT  
REMOVAL AND DISPOSAL OF GUARD RAIL

OPENING FOR PROPERTY OWNER

BURIED END G.R. IN BACK SLOPE  
INSTALLED 2 ANCHORS  
BURIED IN BACK SLOPE

PC = 5+290  
PT = 5+370  
R = 2,000m  
SEE SHEET 29 FOR SUPERELEVATION DIAGRAM

PAVEMENT CORES - ⊕

#	TOTAL DEPTH (mm)	SOLID CORE	COMMENTS
7	265	NO	BROKE UP

NOTE:  
- NO PCC UNDER ANY CORES  
- NO CORES OVER ASPHALTED (UNLESS NOTED)  
- NO SHOULDER CORES



# PAVING PROJECT LAYOUT #4

DESIGNED BY BCE/PJM DATE 7-02  
DRAWN BY C.E.A., INC. DATE 7-02  
DESIGN FILE NO. /pave/98b090/pb090.dgn  
PRF FILE pb090p04.i DATE PLOTTED 09-MAY-2008 10  
PROJ. NAME MARSHFIELD - CABOT  
PROJ. NO. NH 2104(1)S  
SHEET 14 OF 60 SHEETS



TEMPORARY AND DURABLE 100m YELLOW LINE  
 STA 5+400 TO 6+600 SOLID LT&RT  
 (WITH CENTERLINE BREAKS FOR TOWN HIGHWAYS)

TEMPORARY AND DURABLE 100m WHITE LINE  
 STA 5+400 TO 6+600 SOLID LT&RT  
 (WITH EDGELINE BREAKS FOR TOWN HIGHWAYS)

REMOVING SIGNS  
 II

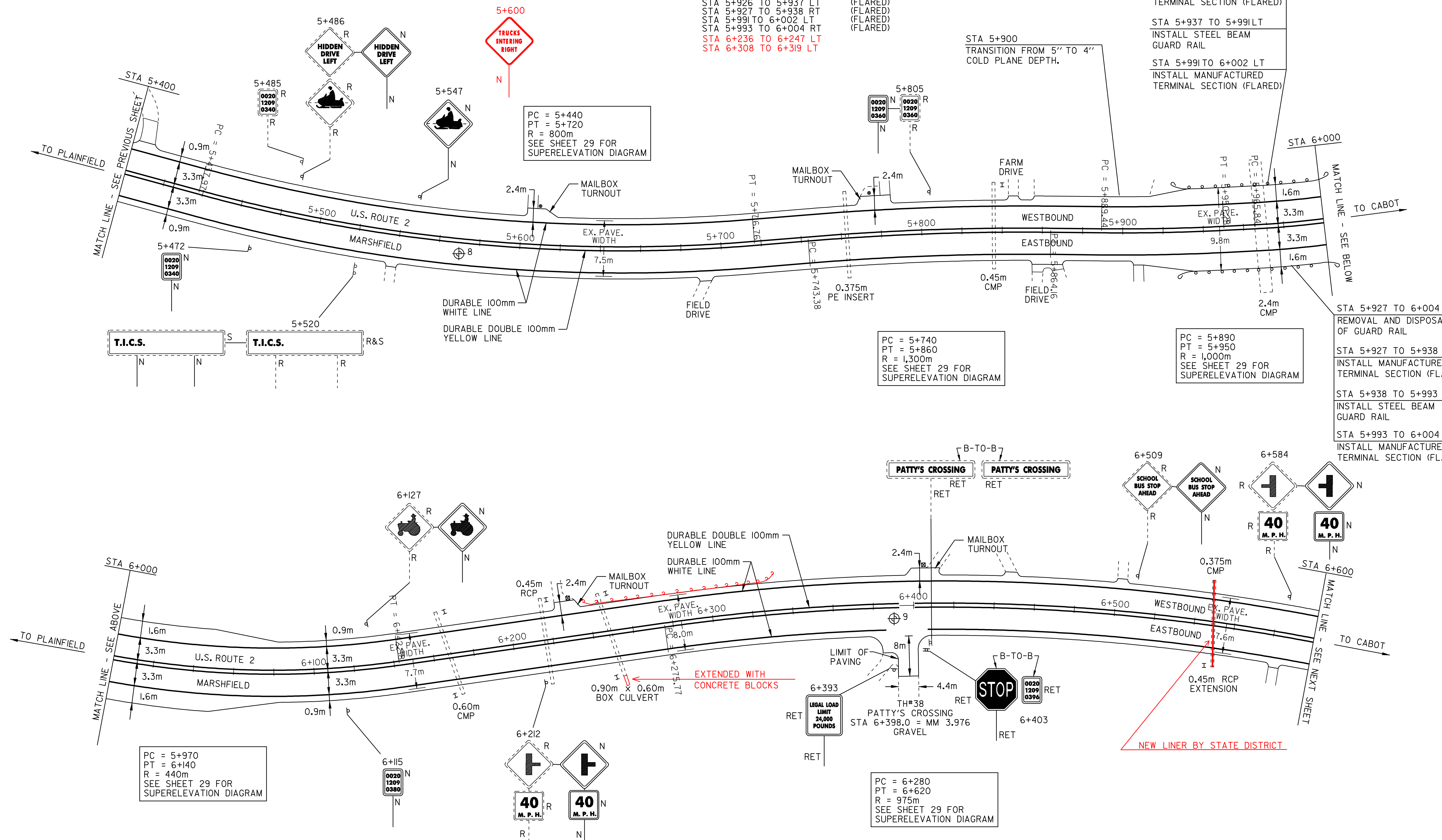
YIELDING MARKER POST  
 STA 5+836 LT  
 STA 6+165 LT&RT  
 STA 6+217 LT  
 STA 6+250 LT&RT  
 STA 6+550 RT

REMOVAL AND DISPOSAL OF GUARD RAIL  
 STA 5+926 TO 6+002 LT  
 STA 5+927 TO 6+004 RT

STEEL BEAM GUARD RAIL  
 STA 5+937 TO 5+991LT  
 STA 5+938 TO 5+993 RT  
 STA 6+247 TO 6+308 LT

STA 5+926 TO 6+002 LT  
 REMOVAL AND DISPOSAL  
 OF GUARD RAIL  
  
 STA 5+926 TO 5+937 LT  
 INSTALL MANUFACTURED  
 TERMINAL SECTION (FLARED)  
  
 STA 5+937 TO 5+991LT  
 INSTALL STEEL BEAM  
 GUARD RAIL  
  
 STA 5+991 TO 6+002 LT  
 INSTALL MANUFACTURED  
 TERMINAL SECTION (FLARED)

MANUFACTURED TERMINAL SECTION  
 STA 5+926 TO 5+937 LT (FLARED)  
 STA 5+927 TO 5+938 RT (FLARED)  
 STA 5+991 TO 6+002 LT (FLARED)  
 STA 5+993 TO 6+004 RT (FLARED)  
 STA 6+236 TO 6+247 LT  
 STA 6+308 TO 6+319 LT



PAVEMENT CORES - ⊕

#	TOTAL DEPTH (mm)	SOLID CORE	COMMENTS
8	280	NO	AREA OF FROST HEAVE
9	255	YES	

NOTE:  
 - NO PCC UNDER ANY CORES  
 - NO CORES OVER ASPHALTED (UNLESS NOTED)  
 - NO SHOULDER CORES



## PAVING PROJECT LAYOUT #5

DESIGNED BY BCE/PJM DATE 7-02  
 DRAWN BY C.E.A., INC. DATE 7-02  
 DESIGN FILE NO. /pave/98b090/pb090.dgn  
 PRF FILE pb090p05.1 DATE PLOTTED 09-MAY-2008 10  
 PROJ. NAME **MARSHFIELD - CABOT**  
 PROJ. NO. **NH 2104(1)S**  
 SHEET **15** OF **60** SHEETS



**TEMPORARY AND DURABLE 100m YELLOW LINE**

STA 6+600 TO 7+850 SOLID LT&RT  
 STA 7+303 DOUBLE SOLID LT  
 (WITH CENTERLINE BREAKS FOR TOWN HIGHWAYS)

**TEMPORARY AND DURABLE 100m WHITE LINE**

STA 6+600 TO 7+850 SOLID LT&RT  
 (WITH EDGELINE BREAKS FOR TOWN HIGHWAYS)

**REHABILITATION OF D.I.'S, C.B.'S OR M.H.'S**

STA 7+294 LT  
 STA 7+319 LT

**TEMPORARY AND DURABLE 600m STOP BAR**

STA 7+303 LT BEAVER MEADOW RD

**TEMPORARY AND DURABLE LETTER OR SYMBOL**

STA 7+303 LT "STOP"

**REMOVING SIGNS**

I3

**YIELDING MARKER POST**

STA 6+692 LT  
 STA 7+159 RT  
 STA 7+455 LT  
 STA 7+732 LT

**RELOCATED MAILBOX, SINGLE SUPPORT**

STA 6+639 LT

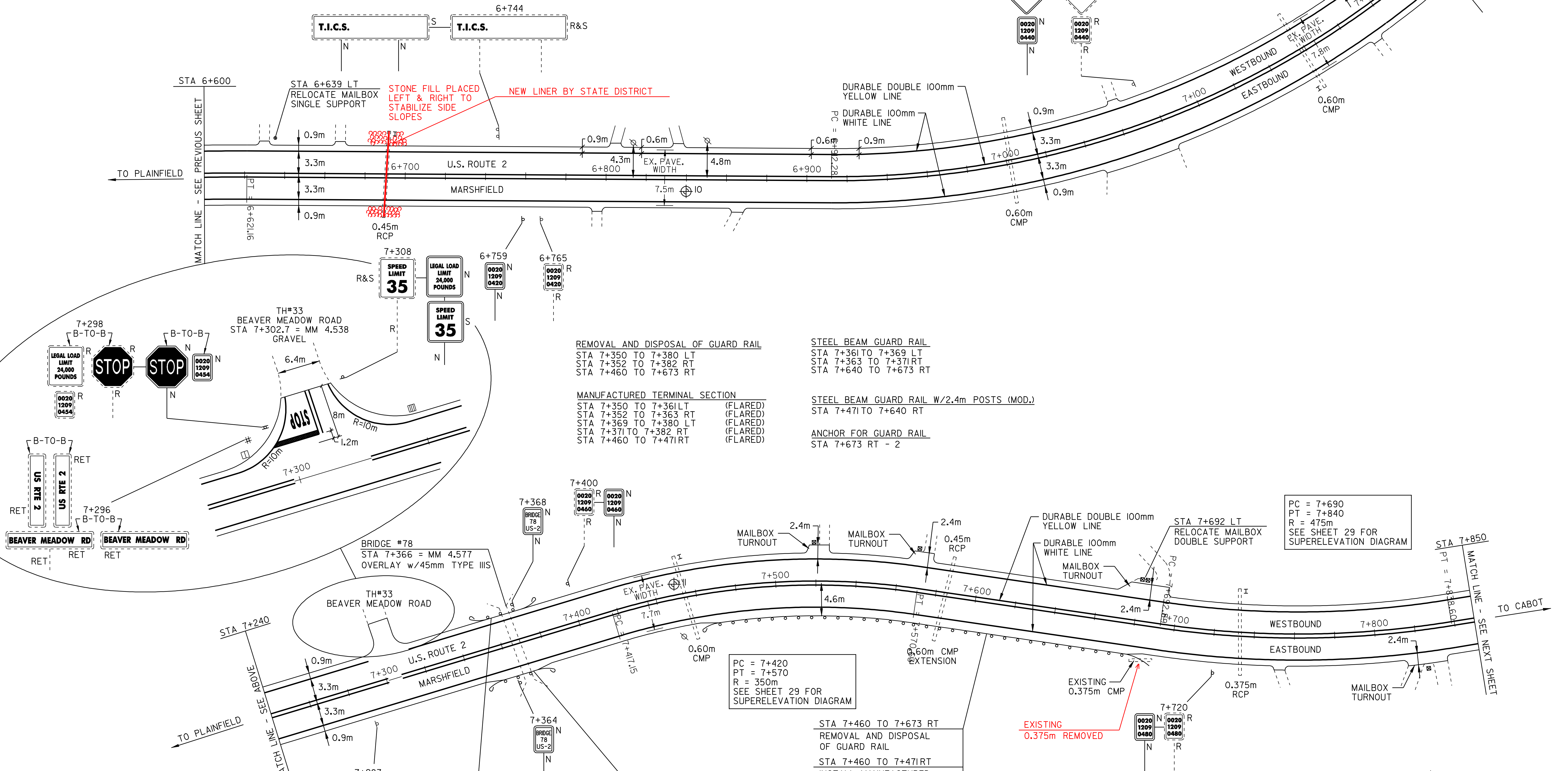
**RELOCATED MAILBOX, MULTIPLE SUPPORT**

STA 7+692 LT (DOUBLE)

PC = 6+910  
 PT = 7+220  
 R = 450m  
 SEE SHEET 29 FOR SUPERELEVATION DIAGRAM

PC = 7+690  
 PT = 7+840  
 R = 475m  
 SEE SHEET 29 FOR SUPERELEVATION DIAGRAM

PC = 7+420  
 PT = 7+570  
 R = 350m  
 SEE SHEET 29 FOR SUPERELEVATION DIAGRAM



PAVEMENT CORES -

#	TOTAL DEPTH (mm)	SOLID CORE	COMMENTS
10	240	NO	CORE BROKE UP OVER CULVERT
11	180	YES	

NOTE:  
 - NO PCC UNDER ANY CORES  
 - NO CORES OVER ASPHALTED (UNLESS NOTED)  
 - NO SHOULDER CORES

- STA 7+350 TO 7+380 LT  
REMOVAL AND DISPOSAL OF GUARD RAIL
- STA 7+350 TO 7+361LT  
INSTALL MANUFACTURED TERMINAL SECTION (FLARED)
- STA 7+361 TO 7+369 LT  
INSTALL STEEL BEAM GUARD RAIL
- STA 7+369 TO 7+380 LT  
INSTALL MANUFACTURED TERMINAL SECTION (FLARED)
- STA 7+352 TO 7+382 RT  
REMOVAL AND DISPOSAL OF GUARD RAIL
- STA 7+352 TO 7+363 RT  
INSTALL MANUFACTURED TERMINAL SECTION (FLARED)
- STA 7+363 TO 7+371RT  
INSTALL STEEL BEAM GUARD RAIL
- STA 7+371 TO 7+382 RT  
INSTALL MANUFACTURED TERMINAL SECTION (FLARED)

- STA 7+460 TO 7+673 RT  
REMOVAL AND DISPOSAL OF GUARD RAIL
- STA 7+460 TO 7+471RT  
INSTALL MANUFACTURED TERMINAL SECTION (FLARED)
- STA 7+471 TO 7+640 RT  
INSTALL STEEL BEAM GUARD RAIL W/2.4m POSTS (MOD.)
- STA 7+640 TO 7+673 RT  
INSTALL STEEL BEAM GUARD RAIL
- STA 7+673 RT  
INSTALL BURIED END TERMINAL SEE SHEET 59 FOR DETAILS (MAINTAIN EXISTING CULVERT)
- INSTALL ANCHOR (2)



**PAVING PROJECT LAYOUT #6**

DESIGNED BY	BCE/PJM	DATE	7-02
DRAWN BY	C.E.A., INC.	DATE	7-02
DESIGN FILE NO.	/pave/98b090/pb090.dgn		
PRF FILE	pb090p06.1	DATE PLOTTED	09-MAY-2008 10
PROJ. NAME	MARSHFIELD - CABOT		
PROJ. NO.	NH 2104(1)S		
SHEET	16	OF	60 SHEETS



TEMPORARY AND DURABLE 100m YELLOW LINE  
 STA 7+850 TO 9+055 SOLID LT&RT  
 STA 9+055 TO 9+100 SOLID LT & DASHED RT  
 (WITH CENTERLINE BREAKS FOR TOWN HIGHWAYS)

YIELDING MARKER POST  
 STA 8+110 LT  
 STA 8+182 LT  
 STA 8+491LT&RT  
 STA 8+943 LT  
 STA 9+095 LT

REMOVING SIGNS  
 II

REMOVAL AND DISPOSAL OF GUARD RAIL  
 STA 7+895 TO 8+127 RT  
 STA 8+750 TO 8+780 LT  
 STA 8+750 TO 8+780 RT  
 STA 9+040 TO 9+042 RT  
 STA 9+046 TO 9+048 RT

STEEL BEAM GUARD RAIL  
 STA 8+759 TO 8+771LT  
 STA 8+761 TO 8+772 RT  
  
 STEEL BEAM GUARD RAIL W/2.4m POSTS (MOD.)  
 STA 7+985 TO 8+116 RT  
 STA 8+852 TO 9+038 RT  
 STA 9+050 TO 9+100 RT

ANCHOR FOR GUARD RAIL  
 STA 7+895 RT  
 STA 7+920 RT  
 STA 9+034 RT  
 STA 9+042 RT  
 STA 9+046 RT  
 STA 9+054 RT

TEMPORARY AND DURABLE 100m WHITE LINE  
 STA 7+850 TO 9+100 SOLID LT&RT  
 (WITH EDGELINE BREAKS FOR TOWN HIGHWAYS)

REHABILITATION OF D.I.'S, C.B.'S OR M.H.'S  
 STA 8+944 LT

REMOVAL AND DISPOSAL OF GUIDE POSTS  
 STA 8+728 TO 8+732 RT - 2

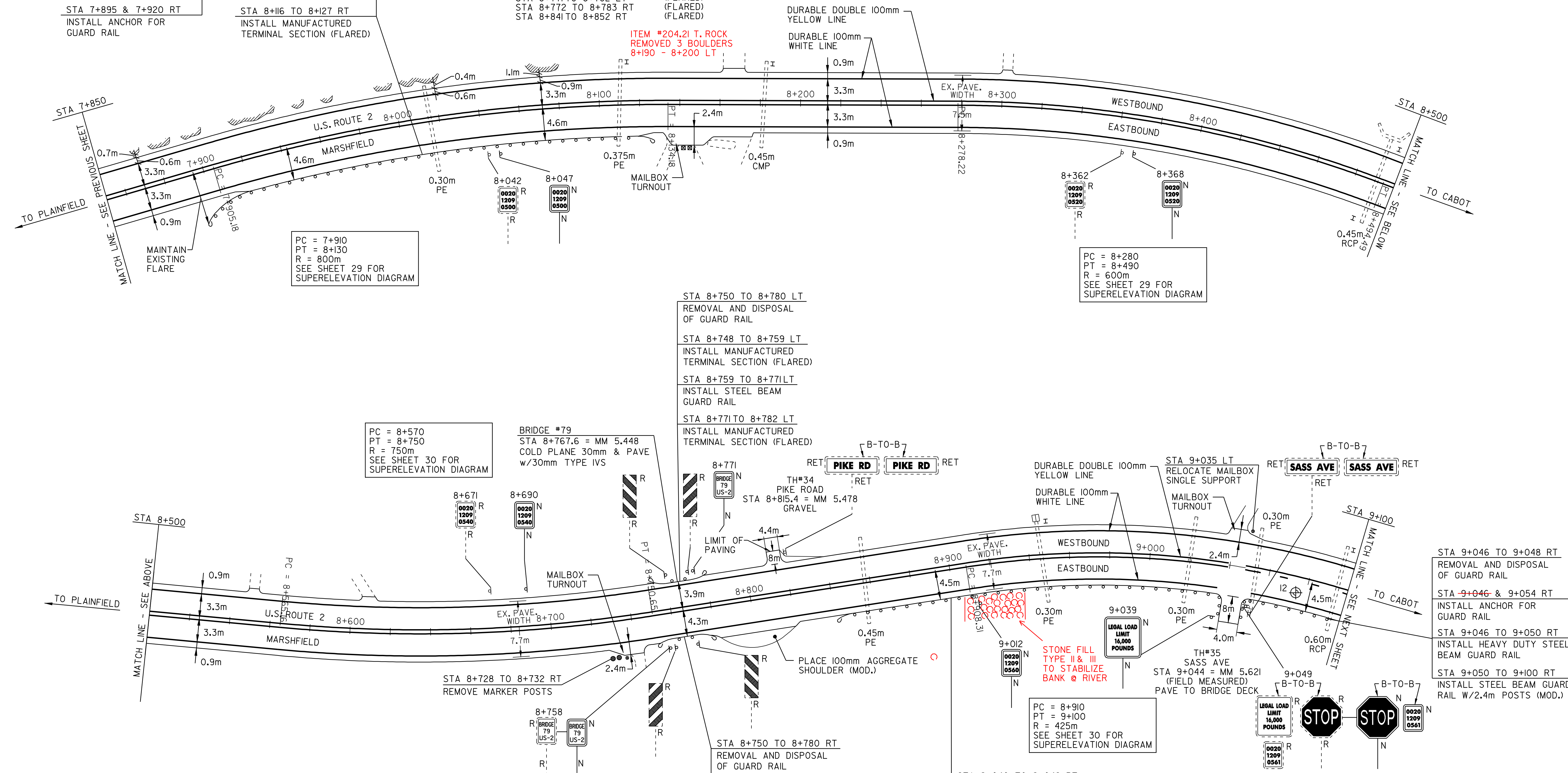
HEAVY DUTY S.B. GUARD RAIL  
 STA 9+038 TO 9+042 RT  
 STA 9+046 TO 9+050 RT

RELOCATED MAILBOX, SINGLE SUPPORT  
 STA 9+035 LT

STA 7+895 TO 8+127 RT  
 REMOVAL AND DISPOSAL  
 OF GUARD RAIL  
  
 STA 7+895 & 7+920 RT  
 INSTALL ANCHOR FOR  
 GUARD RAIL

STA 7+895 TO 8+116 RT  
 INSTALL STEEL BEAM GUARD  
 RAIL W/2.4m POSTS (MOD.)  
  
 STA 8+116 TO 8+127 RT  
 INSTALL MANUFACTURED  
 TERMINAL SECTION (FLARED)

MANUFACTURED TERMINAL SECTION  
 STA 8+116 TO 8+127 RT (FLARED)  
 STA 8+748 TO 8+759 LT (FLARED)  
 STA 8+750 TO 8+761 RT (FLARED)  
 STA 8+771 TO 8+782 LT (FLARED)  
 STA 8+772 TO 8+783 RT (FLARED)  
 STA 8+841 TO 8+852 RT (FLARED)



PC = 7+910  
 PT = 8+130  
 R = 800m  
 SEE SHEET 29 FOR  
 SUPERELEVATION DIAGRAM

PC = 8+570  
 PT = 8+750  
 R = 750m  
 SEE SHEET 30 FOR  
 SUPERELEVATION DIAGRAM

PC = 8+280  
 PT = 8+490  
 R = 600m  
 SEE SHEET 29 FOR  
 SUPERELEVATION DIAGRAM

PC = 8+910  
 PT = 9+100  
 R = 425m  
 SEE SHEET 30 FOR  
 SUPERELEVATION DIAGRAM

PAVEMENT CORES - ⊕

#	TOTAL DEPTH (mm)	SOLID CORE	COMMENTS
12	330	NO	BROKE UP

NOTE:  
 - NO PCC UNDER ANY CORES  
 - NO CORES OVER ASPHALTED (UNLESS NOTED)  
 - NO SHOULDER CORES

STA 8+750 TO 8+780 LT  
 REMOVAL AND DISPOSAL  
 OF GUARD RAIL  
  
 STA 8+748 TO 8+759 LT  
 INSTALL MANUFACTURED  
 TERMINAL SECTION (FLARED)  
  
 STA 8+759 TO 8+771LT  
 INSTALL STEEL BEAM  
 GUARD RAIL  
  
 STA 8+771 TO 8+782 LT  
 INSTALL MANUFACTURED  
 TERMINAL SECTION (FLARED)

BRIDGE #79  
 STA 8+767.6 = MM 5.448  
 COLD PLANE 30mm & PAVE  
 w/30mm TYPE IVS

TH#34  
 PIKE ROAD  
 STA 8+815.4 = MM 5.478  
 GRAVEL

STA 9+035 LT  
 RELOCATE MAILBOX  
 SINGLE SUPPORT

TH#35  
 SASS AVE  
 STA 9+044 = MM 5.621  
 (FIELD MEASURED)  
 PAVE TO BRIDGE DECK

STA 9+046 TO 9+048 RT  
 REMOVAL AND DISPOSAL  
 OF GUARD RAIL  
  
 STA 9+046 & 9+054 RT  
 INSTALL ANCHOR FOR  
 GUARD RAIL  
  
 STA 9+046 TO 9+050 RT  
 INSTALL HEAVY DUTY STEEL  
 BEAM GUARD RAIL  
  
 STA 9+050 TO 9+100 RT  
 INSTALL STEEL BEAM GUARD  
 RAIL W/2.4m POSTS (MOD.)



# PAVING PROJECT LAYOUT #7

DESIGNED BY BCE/PJM DATE 7-02  
 DRAWN BY C.E.A., INC. DATE 7-02  
 DESIGN FILE NO. /pave/98b090/pb090.dgn  
 PRF FILE pb090p07.i DATE PLOTTED 09-MAY-2008 10  
 PROJ. NAME **MARSHFIELD - CABOT**  
 PROJ. NO. **NH 2104(1)S**  
 SHEET **17** OF **60** SHEETS

STA 9+040 TO 9+042 RT  
 REMOVAL AND DISPOSAL  
 OF GUARD RAIL  
  
 STA 8+841 TO 8+852 RT  
 INSTALL MANUFACTURED  
 TERMINAL SECTION (FLARED)  
  
 STA 8+852 TO 9+038 RT  
 INSTALL STEEL BEAM GUARD  
 RAIL W/2.4m POSTS (MOD.)  
  
 STA 9+038 TO 9+042 RT  
 INSTALL HEAVY DUTY STEEL  
 BEAM GUARD RAIL  
  
 STA 9+034 & 9+042 RT  
 INSTALL ANCHOR FOR  
 GUARD RAIL



TEMPORARY AND DURABLE 100m YELLOW LINE  
 STA 9+100 TO 9+269 SOLID LT & DASHED RT  
 STA 9+269 TO 9+318 DASHED  
 STA 9+318 TO 9+559 DASHED LT & SOLID RT

YIELDING MARKER POST  
 STA 9+231LT&RT  
 STA 9+342 LT&RT  
 STA 9+368 LT  
 STA 9+431LT

REMOVING SIGNS  
 I2

REMOVAL AND DISPOSAL OF GUARD RAIL  
 STA 9+573 TO 9+733 LT  
 STA 9+924 TO 10+172 RT

MANUFACTURED TERMINAL SECTION  
 STA 9+130 TO 9+141RT (FLARED)  
 STA 9+573 TO 9+584 LT (FLARED)  
 STA 9+722 TO 9+733 LT (FLARED)  
 STA 9+719 TO 9+730 RT (FLARED)  
 STA 9+803 TO 9+814 RT (FLARED)  
 STA 9+924 TO 9+935 RT (FLARED)  
 STA 10+161 TO 10+172 RT (FLARED)

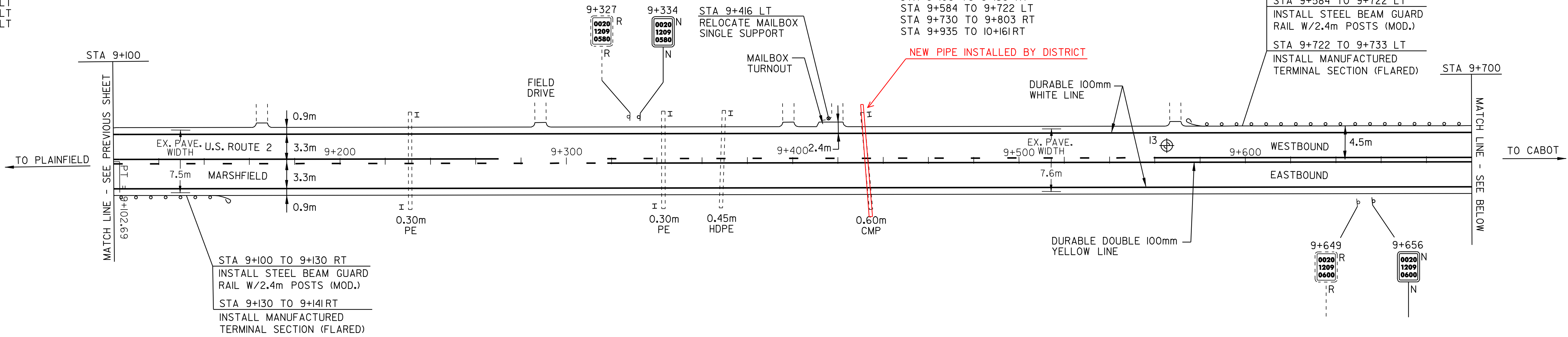
STA 9+573 TO 9+733 LT  
 REMOVAL AND DISPOSAL  
 OF GUARD RAIL  
 STA 9+573 TO 9+584 LT  
 INSTALL MANUFACTURED  
 TERMINAL SECTION (FLARED)  
 STA 9+584 TO 9+722 LT  
 INSTALL STEEL BEAM GUARD  
 RAIL W/2.4m POSTS (MOD.)  
 STA 9+722 TO 9+733 LT  
 INSTALL MANUFACTURED  
 TERMINAL SECTION (FLARED)

TEMPORARY AND DURABLE 100m WHITE LINE  
 STA 7+850 TO 9+100 SOLID LT&RT

RELOCATED MAILBOX, SINGLE SUPPORT  
 STA 9+416 LT  
 STA 9+865 LT

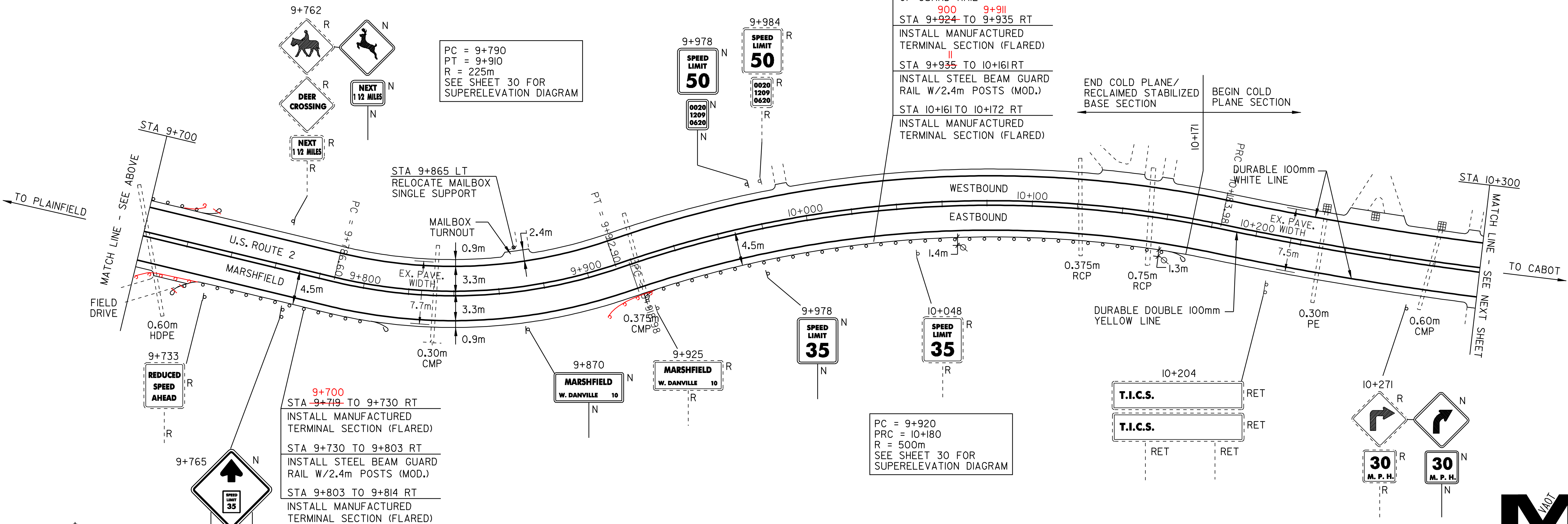
STEEL BEAM GUARD RAIL W/2.4m POSTS (MOD.)  
 STA 9+100 TO 9+130 RT  
 STA 9+584 TO 9+722 LT  
 STA 9+730 TO 9+803 RT  
 STA 9+935 TO 10+161 RT

REHABILITATION OF D.I.'S, C.B.'S OR M.H.'S  
 STA 10+230 LT  
 STA 10+250 LT  
 STA 10+280 LT



STA 9+100 TO 9+130 RT  
 INSTALL STEEL BEAM GUARD  
 RAIL W/2.4m POSTS (MOD.)  
 STA 9+130 TO 9+141RT  
 INSTALL MANUFACTURED  
 TERMINAL SECTION (FLARED)

STA 9+924 TO 10+172 RT  
 REMOVAL AND DISPOSAL  
 OF GUARD RAIL  
 STA 9+924 TO 9+935 RT  
 INSTALL MANUFACTURED  
 TERMINAL SECTION (FLARED)  
 STA 9+935 TO 10+161RT  
 INSTALL STEEL BEAM GUARD  
 RAIL W/2.4m POSTS (MOD.)  
 STA 10+161 TO 10+172 RT  
 INSTALL MANUFACTURED  
 TERMINAL SECTION (FLARED)



PC = 9+790  
 PT = 9+910  
 R = 225m  
 SEE SHEET 30 FOR  
 SUPERELEVATION DIAGRAM

PC = 9+920  
 PRC = 10+180  
 R = 500m  
 SEE SHEET 30 FOR  
 SUPERELEVATION DIAGRAM

PAVEMENT CORES -			
#	TOTAL DEPTH (mm)	SOLID CORE	COMMENTS
13	280	NO	CORE BROKE UP

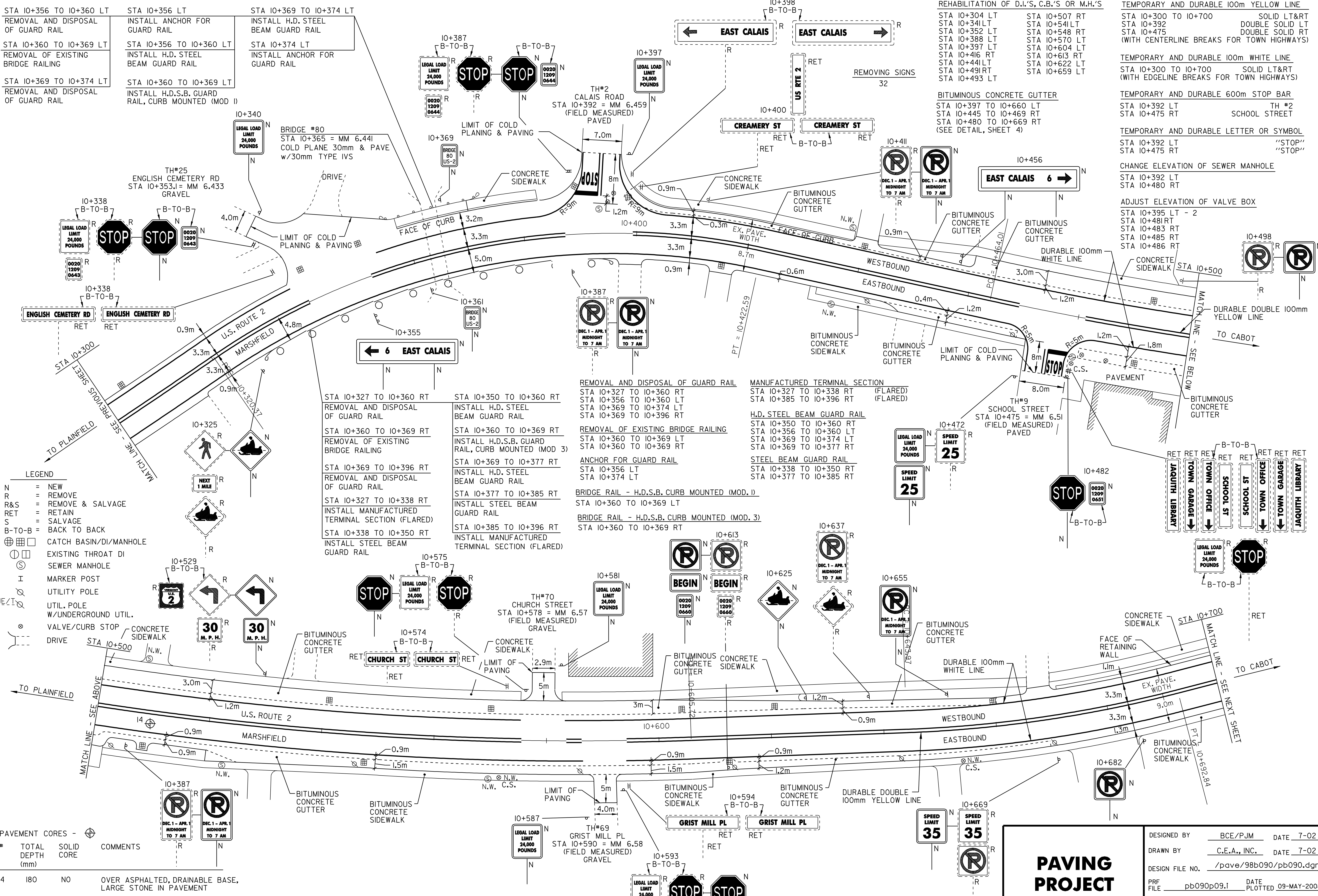
NOTE:  
 - NO PCC UNDER ANY CORES  
 - NO CORES OVER ASPHALTED (UNLESS NOTED)  
 - NO SHOULDER CORES



**PAVING PROJECT LAYOUT #8**

DESIGNED BY BCE/PJM DATE 7-02  
 DRAWN BY C.E.A., INC. DATE 7-02  
 DESIGN FILE NO. /pave/98b090/pb090.dgn  
 PRF FILE pb090p08.1 DATE PLOTTED 09-MAY-2008 10  
 PROJ. NAME **MARSHFIELD - CABOT**  
 PROJ. NO. **NH 2104(1)S**  
 SHEET **18** OF **60** SHEETS





STA 10+356 TO 10+360 LT REMOVAL AND DISPOSAL OF GUARD RAIL	STA 10+356 LT INSTALL ANCHOR FOR GUARD RAIL	STA 10+369 TO 10+374 LT INSTALL H.D. STEEL BEAM GUARD RAIL
STA 10+360 TO 10+369 LT REMOVAL OF EXISTING BRIDGE RAILING	STA 10+356 TO 10+360 LT INSTALL H.D. STEEL BEAM GUARD RAIL	STA 10+374 LT INSTALL ANCHOR FOR GUARD RAIL
STA 10+369 TO 10+374 LT REMOVAL AND DISPOSAL OF GUARD RAIL	STA 10+360 TO 10+369 LT INSTALL H.D.S.B. GUARD RAIL, CURB MOUNTED (MOD 1)	

REMOVAL AND DISPOSAL OF GUARD RAIL	REMOVAL AND DISPOSAL OF GUARD RAIL	REMOVAL AND DISPOSAL OF GUARD RAIL
REMOVAL AND DISPOSAL OF GUARD RAIL	REMOVAL AND DISPOSAL OF GUARD RAIL	REMOVAL AND DISPOSAL OF GUARD RAIL
REMOVAL AND DISPOSAL OF GUARD RAIL	REMOVAL AND DISPOSAL OF GUARD RAIL	REMOVAL AND DISPOSAL OF GUARD RAIL

**LEGEND**

- N = NEW
- R = REMOVE
- R&S = REMOVE & SALVAGE
- RET = RETAIN
- S = SALVAGE
- B-TO-B = BACK TO BACK
- ⊕ = CATCH BASIN/DI/MANHOLE
- ⊙ = EXISTING THROAT DI
- ⊚ = SEWER MANHOLE
- I = MARKER POST
- ⊘ = UTILITY POLE
- ⊗ = UTIL. POLE
- ⊙ = W/UNDERGROUND UTIL.
- ⊙ = VALVE/CURB STOP
- = DRIVE

**PAVEMENT CORES**

#	TOTAL DEPTH (mm)	SOLID CORE	COMMENTS
14	180	NO	OVER ASPHALTED, DRAINABLE BASE, LARGE STONE IN PAVEMENT

**NOTE:**  
 - NO PCC UNDER ANY CORES  
 - NO CORES OVER ASPHALTED (UNLESS NOTED)  
 - NO SHOULDER CORES

# PAVING PROJECT LAYOUT #9

DESIGNED BY	BCE/PJM	DATE	7-02
DRAWN BY	C.E.A., INC.	DATE	7-02
DESIGN FILE NO.	/pave/98b090/pb090.dgn		
PRF FILE	pb090p09.i	DATE PLOTTED	09-MAY-2008 10
PROJ. NAME	MARSHFIELD - CABOT		
PROJ. NO.	NH 2104(1)S		
SHEET	19	OF	60 SHEETS





TEMPORARY AND DURABLE 100m YELLOW LINE  
 STA 10+700 TO 11+000 SOLID LT&RT  
 STA 10+865 DOUBLE SOLID LT  
 STA 10+895 DOUBLE SOLID LT  
 (WITH CENTERLINE BREAKS FOR TOWN HIGHWAYS)

TEMPORARY AND DURABLE 100m WHITE LINE  
 STA 10+700 TO 11+000 SOLID LT&RT  
 STA 10+866 TO 10+896 LT (GORE AROUND ISLAND)(SOLID)  
 (WITH EDGE LINE BREAKS FOR TOWN HIGHWAYS)

TEMPORARY AND DURABLE 600m STOP BAR  
 STA 10+865 LT VT ROUTE 215  
 STA 10+895 LT VT ROUTE 215

TEMPORARY AND DURABLE LETTER OR SYMBOL  
 STA 10+865 LT "STOP"  
 STA 10+895 LT 2 - "STOP"

REHABILITATION OF D.I.'S, C.B.'S OR M.H.'S

STA 10+709 LT  
 STA 10+740 LT  
 STA 10+846 RT  
 STA 10+855 LT  
 STA 10+863 RT  
 STA 10+879 LT

BITUMINOUS CONCRETE GUTTER

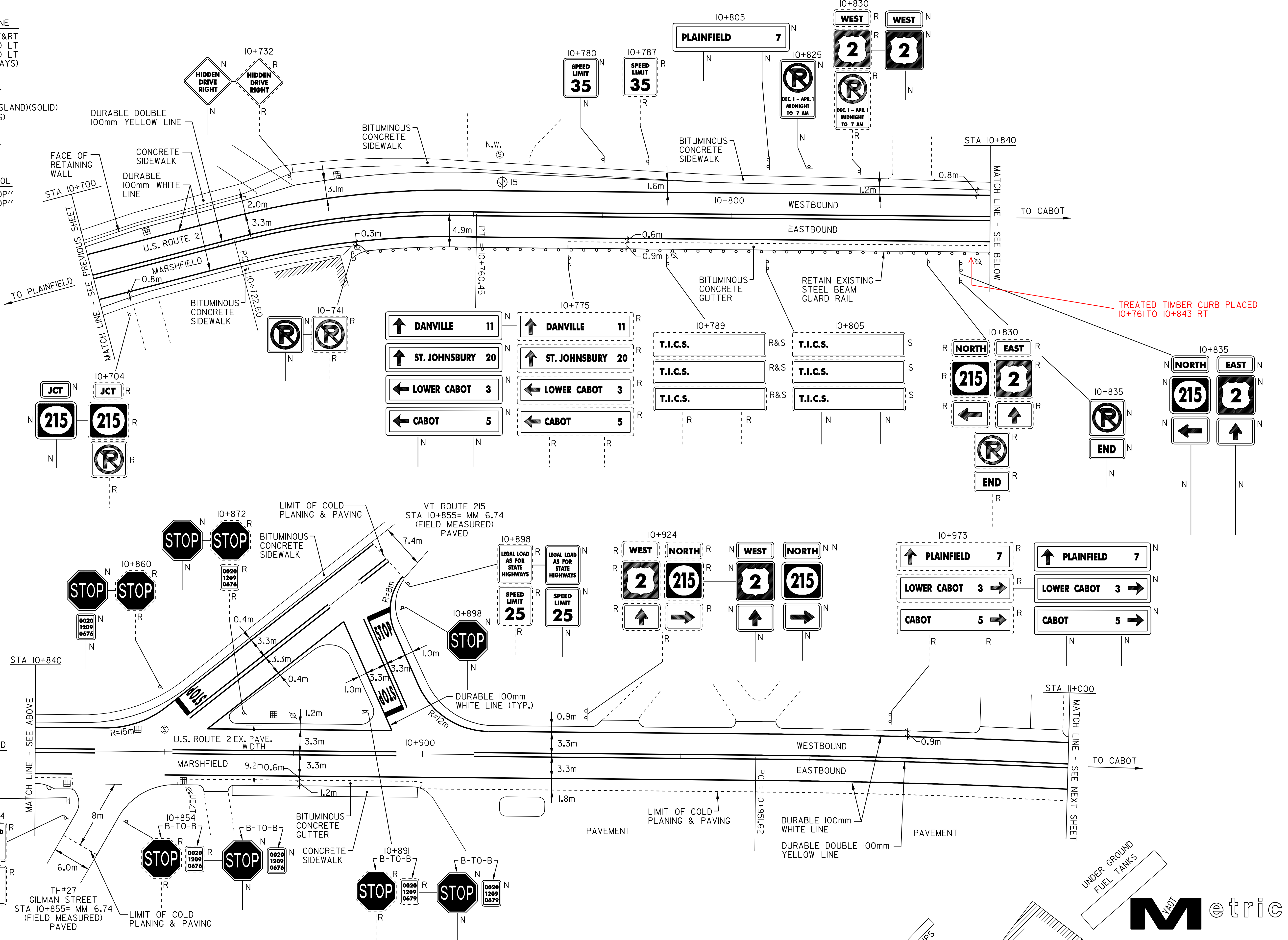
STA 10+775 TO 10+847 RT  
 STA 10+863 TO 10+899 RT  
 (SEE DETAIL, SHEET 4)

CHANGE ELEVATION OF SEWER MANHOLE

STA 10+860 LT

REMOVING SIGNS

44



PAVEMENT CORES - ⊕

* TOTAL DEPTH (mm)	SOLID CORE	COMMENTS
15	140	YES DRAINABLE BASE, CORE AT SIDEWALK

NOTE:  
 - NO PCC UNDER ANY CORES  
 - NO CORES OVER ASPHALTED (UNLESS NOTED)  
 - NO SHOULDER CORES



**PAVING PROJECT LAYOUT #10**

DESIGNED BY BCE/PJM DATE 7-02  
 DRAWN BY C.E.A., INC. DATE 7-02  
 DESIGN FILE NO. /pave/98b090/pb090.dgn  
 PRF FILE pb090p10.i DATE PLOTTED 09-MAY-2008 10  
 PROJ. NAME **MARSHFIELD - CABOT**  
 PROJ. NO. **NH 2104(1)S**  
 SHEET **20** OF **60** SHEETS

TEMPORARY AND DURABLE 100m YELLOW LINE  
 STA II+000 TO II+400 SOLID LT&RT  
 (WITH CENTERLINE BREAKS FOR TOWN HIGHWAYS)

TEMPORARY AND DURABLE 100m WHITE LINE  
 STA II+000 TO II+400 SOLID LT&RT  
 (WITH EDGE LINE BREAKS FOR TOWN HIGHWAYS)

YIELDING MARKER POST REMOVING SIGNS  
 STA II+178 LT 14  
 STA II+273 RT

CHANGE ELEVATION OF SEWER MANHOLE

STA II+270 RT (PAVED OVER)

REHABILITATION OF D.J.'S, C.B.'S OR M.H.'S

STA II+125 LT  
 STA II+175 RT  
 STA II+197 RT

STA II+003 TO II+011 LT  
 REMOVAL AND DISPOSAL  
 OF GUARD RAIL

STA II+003 LT  
 INSTALL ANCHOR FOR  
 GUARD RAIL

STA II+003 TO II+007 LT  
 INSTALL STEEL BEAM  
 GUARD RAIL

STA II+007 TO II+011 LT  
 INSTALL G.R. APPROACH  
 SECTION - TYPE II

STA II+011 TO II+026 LT  
 RETAIN EXISTING BOX  
 BEAM BRIDGE RAIL

STA II+026 TO II+041 LT  
 REMOVAL AND DISPOSAL  
 OF GUARD RAIL

STA II+026 TO II+030 LT  
 INSTALL G.R. APPROACH  
 SECTION - TYPE II

STA II+030 TO II+041 LT  
 INSTALL MANUFACTURED  
 TERMINAL SECTION (FLARED)

STA II+000 TO II+011 RT  
 REMOVAL AND DISPOSAL  
 OF GUARD RAIL

STA II+000 RT  
 INSTALL ANCHOR FOR  
 GUARD RAIL

STA II+000 TO II+007 RT  
 INSTALL STEEL BEAM  
 GUARD RAIL

STA II+007 TO II+011 RT  
 INSTALL G.R. APPROACH  
 SECTION - TYPE II

STA II+011 TO II+026 RT  
 RETAIN EXISTING BOX  
 BEAM BRIDGE RAIL

STA II+026 TO II+041 RT  
 REMOVAL AND DISPOSAL  
 OF GUARD RAIL

STA II+026 TO II+030 RT  
 INSTALL G.R. APPROACH  
 SECTION - TYPE II

STA II+030 TO II+041 RT  
 INSTALL MANUFACTURED  
 TERMINAL SECTION (FLARED)

REMOVAL AND DISPOSAL OF GUARD RAIL

STA II+000 TO II+011 RT  
 STA II+003 TO II+011 LT  
 STA II+026 TO II+041 RT  
 STA II+026 TO II+041 LT

ANCHOR FOR GUARD RAIL  
 STA II+000 RT  
 STA II+003 LT

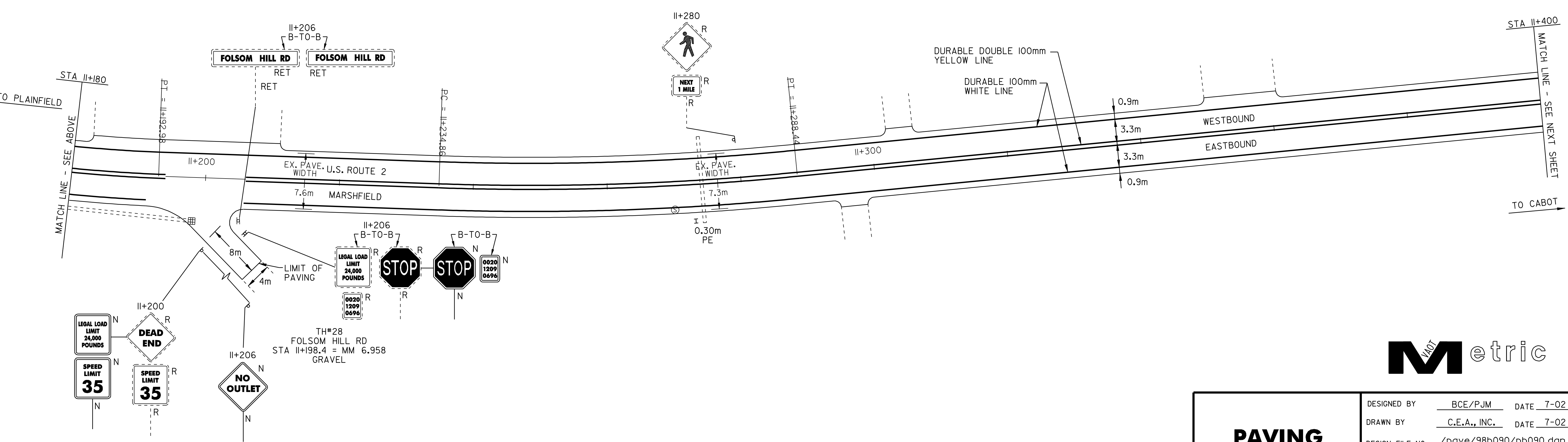
STEEL BEAM GUARD RAIL  
 STA II+000 TO II+007 RT  
 STA II+003 TO II+007 LT

GUARD RAIL APPROACH SECTION - TYPE II

STA II+007 TO II+011 LT  
 STA II+007 TO II+011 RT  
 STA II+026 TO II+030 LT  
 STA II+026 TO II+030 RT

MANUFACTURED TERMINAL SECTION  
 STA II+030 TO II+041 LT (FLARED)  
 STA II+030 TO II+041 RT (FLARED)

BRIDGE #81  
 STA II+018 = MM 6.85  
 (FIELD MEASURED)  
 COLD PLANE 30mm & PAVE  
 w/30mm TYPE IVS



<h2>PAVING PROJECT LAYOUT #11</h2>	DESIGNED BY	BCE/PJM	DATE	7-02
	DRAWN BY	C.E.A., INC.	DATE	7-02
	DESIGN FILE NO.	/pave/98b090/pb090.dgn		
	PRF FILE	pb090pl.i	DATE PLOTTED	09-MAY-2008 10
	PROJ. NAME	MARSHFIELD - CABOT		
PROJ. NO.	NH 2104(1)S			
SHEET	21	OF	60	SHEETS



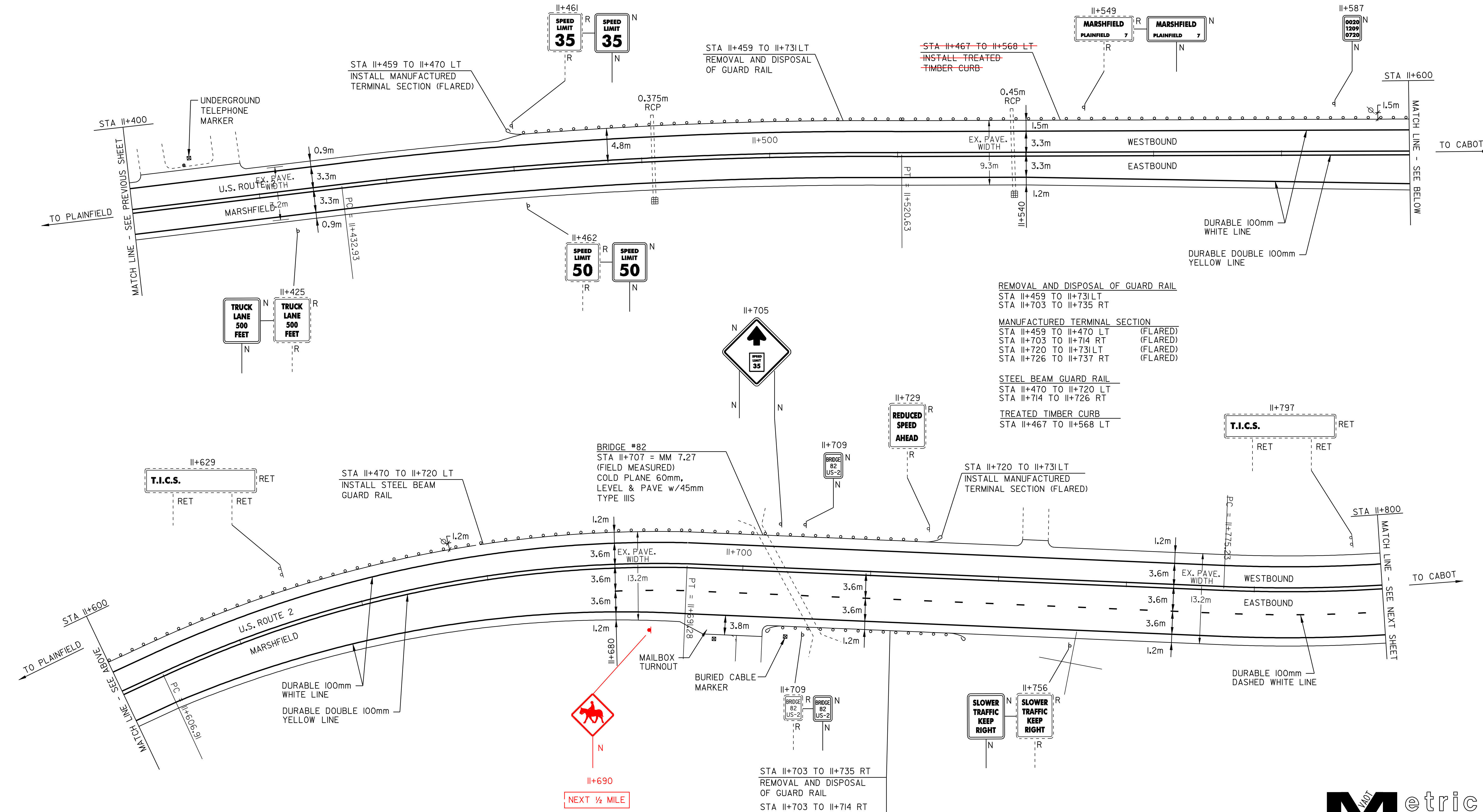
TEMPORARY AND DURABLE 100m YELLOW LINE  
 STA II+400 TO II+800  
 SOLID LT&RT

TEMPORARY AND DURABLE 100m WHITE LINE  
 STA II+400 TO II+800  
 SOLID LT&RT  
 STA II+680 TO II+800  
 DASHED RT

REMOVING SIGNS  
 7

REHABILITATION OF D.I.'S, C.B.'S OR M.H.'S

STA II+483 RT  
 STA II+538 RT



- REMOVAL AND DISPOSAL OF GUARD RAIL  
 STA II+459 TO II+731LT  
 STA II+703 TO II+735 RT
- MANUFACTURED TERMINAL SECTION  
 STA II+459 TO II+470 LT (FLARED)  
 STA II+703 TO II+714 RT (FLARED)  
 STA II+720 TO II+731LT (FLARED)  
 STA II+726 TO II+737 RT (FLARED)
- STEEL BEAM GUARD RAIL  
 STA II+470 TO II+720 LT  
 STA II+714 TO II+726 RT
- TREATED TIMBER CURB  
 STA II+467 TO II+568 LT

II+690  
 NEXT 1/2 MILE

- STA II+703 TO II+735 RT  
 REMOVAL AND DISPOSAL  
 OF GUARD RAIL
- STA II+703 TO II+714 RT  
 INSTALL MANUFACTURED  
 TERMINAL SECTION (FLARED)
- STA II+714 TO II+726 RT  
 INSTALL STEEL BEAM  
 GUARD RAIL
- STA II+726 TO II+737 RT  
 INSTALL MANUFACTURED  
 TERMINAL SECTION (FLARED)



# PAVING PROJECT LAYOUT #12

DESIGNED BY	BCE/PJM	DATE	7-02
DRAWN BY	C.E.A., INC.	DATE	7-02
DESIGN FILE NO.	/pave/98b090/pb090.dgn		
PRF FILE	pb090pl2.i	DATE PLOTTED	09-MAY-2008 10
PROJ. NAME	MARSHFIELD - CABOT		
PROJ. NO.	NH 2104(1)S		
SHEET	22	OF	60 SHEETS

TEMPORARY AND DURABLE 100m YELLOW LINE  
 STA 11+800 TO 12+200  
 SOLID LT&RT

TEMPORARY AND DURABLE 100m WHITE LINE  
 STA 11+800 TO 12+200  
 SOLID LT&RT  
 DASHED RT

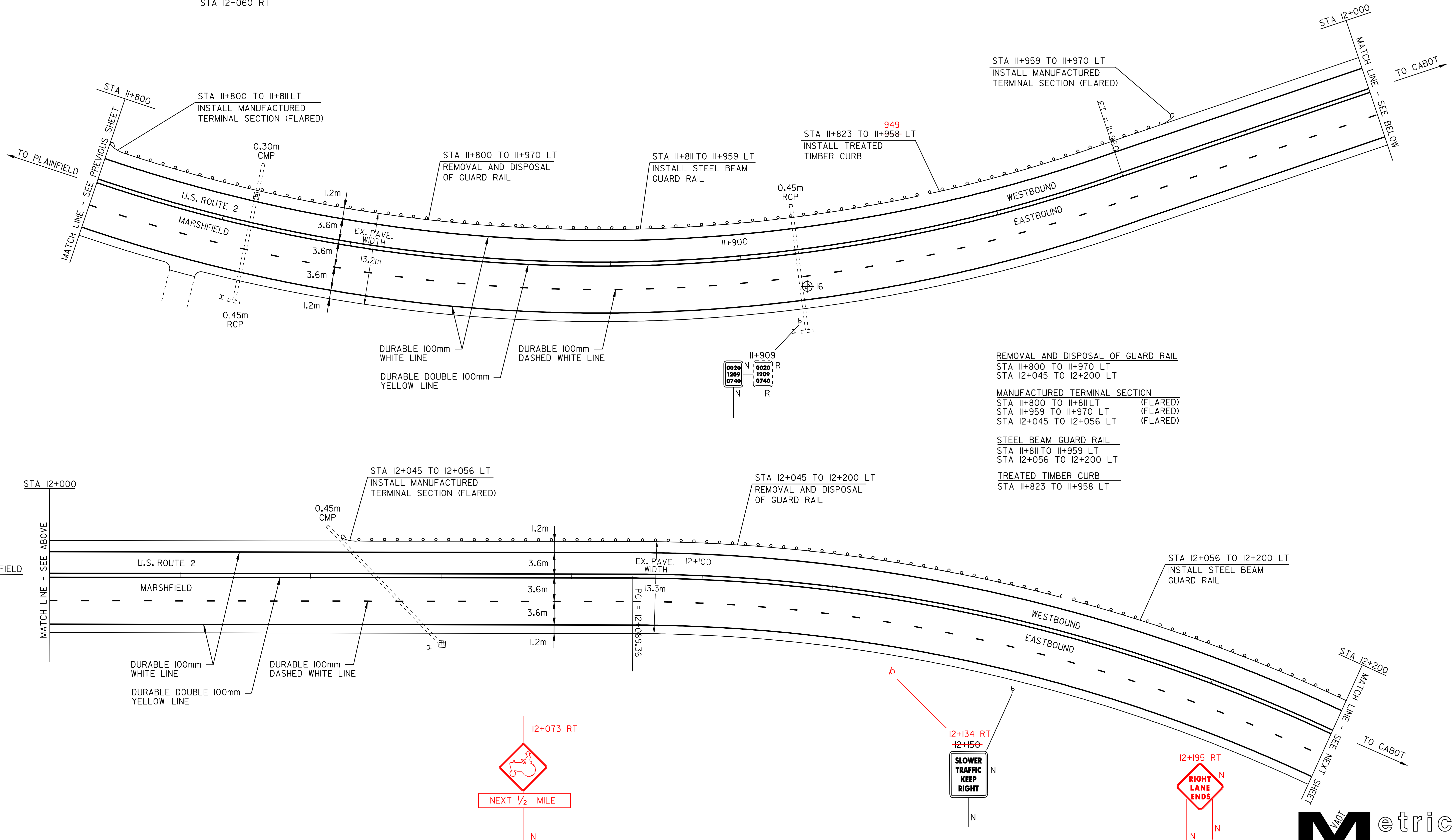
REMOVING SIGNS  
 1

REHABILITATION OF D.I.'S, C.B.'S OR M.H.'S

STA 11+823 LT  
 STA 12+060 RT

YIELDING MARKER POST

STA 11+824 RT  
 STA 11+910 RT  
 STA 12+060 RT



REMOVAL AND DISPOSAL OF GUARD RAIL

STA 11+800 TO 11+970 LT  
 STA 12+045 TO 12+200 LT

MANUFACTURED TERMINAL SECTION

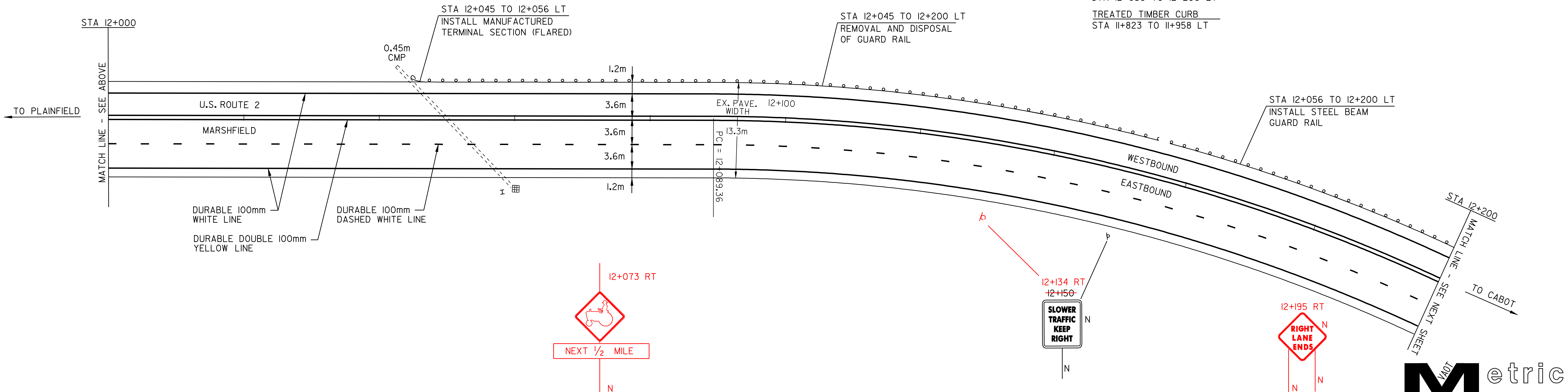
STA 11+800 TO 11+811 LT (FLARED)  
 STA 11+959 TO 11+970 LT (FLARED)  
 STA 12+045 TO 12+056 LT (FLARED)

STEEL BEAM GUARD RAIL

STA 11+811 TO 11+959 LT  
 STA 12+056 TO 12+200 LT

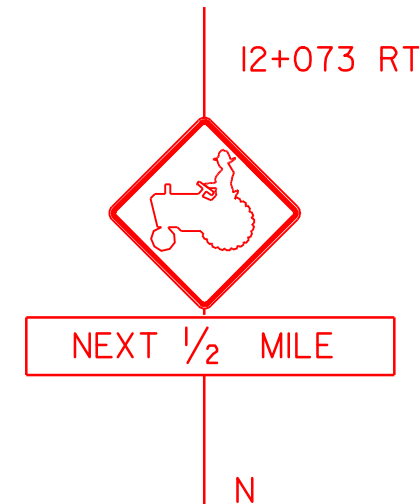
TREATED TIMBER CURB

STA 11+823 TO 11+958 LT



#	TOTAL DEPTH (mm)	SOLID CORE	COMMENTS
16	165	YES	TRUCK LANE

NOTE:  
 - NO PCC UNDER ANY CORES  
 - NO CORES OVER ASPHALTED (UNLESS NOTED)  
 - NO SHOULDER CORES



**Metric**

## PAVING PROJECT LAYOUT #13

DESIGNED BY	BCE/PJM	DATE	7-02
DRAWN BY	C.E.A., INC.	DATE	7-02
DESIGN FILE NO.	/pave/98b090/pb090.dgn		
PRF FILE	pb090pl3.1	DATE PLOTTED	09-MAY-2008 10
PROJ. NAME	MARSHFIELD - CABOT		
PROJ. NO.	NH 2104(1)S		
SHEET	23	OF	60 SHEETS

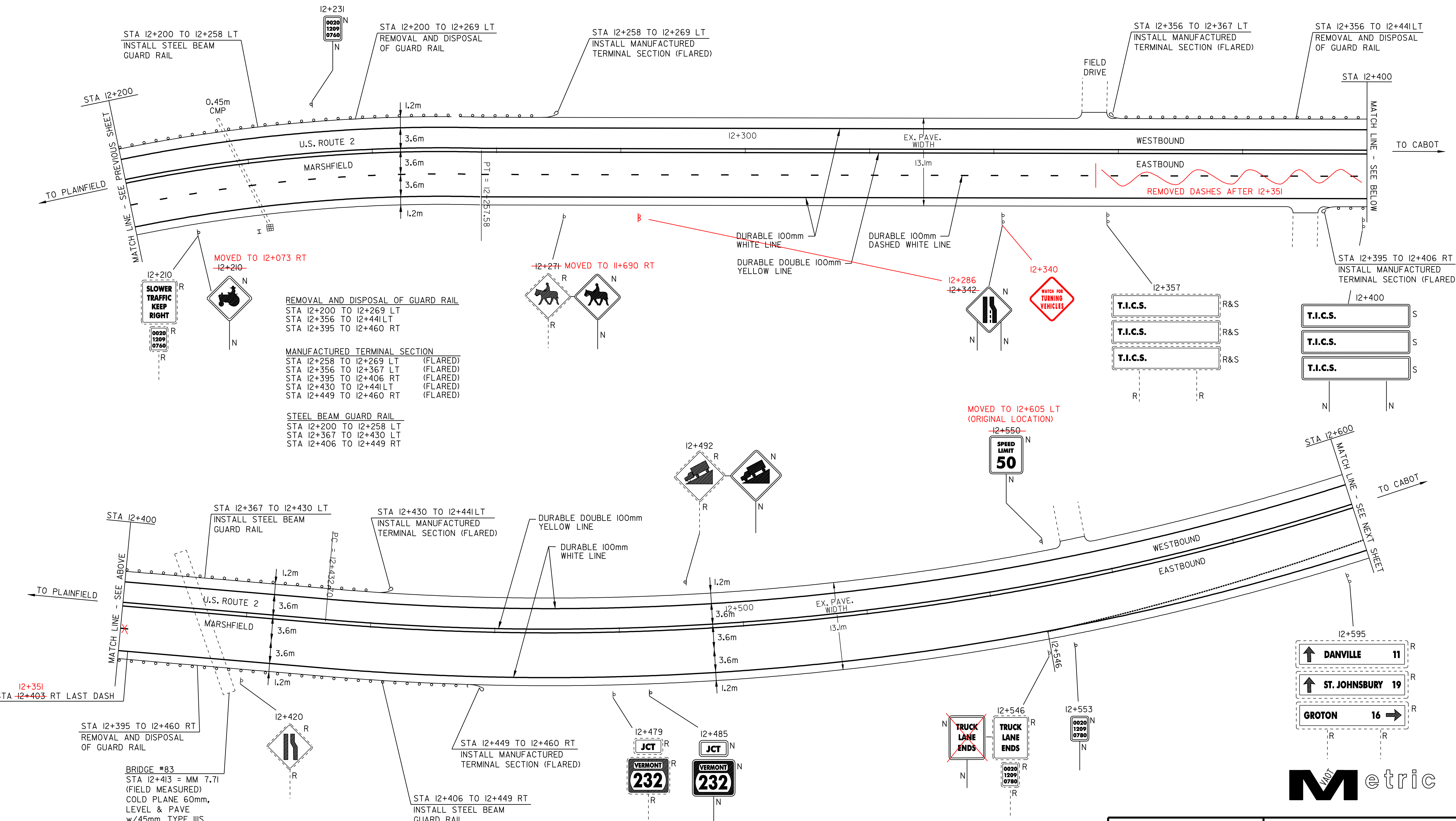


TEMPORARY AND DURABLE 100m YELLOW LINE  
 STA I2+200 TO I2+600  
 SOLID LT&RT

TEMPORARY AND DURABLE 100m WHITE LINE  
 STA I2+200 TO I2+600  
 SOLID LT&RT  
 STA I2+200 TO I2+403  
 DASHED RT  
 STA I2+546 TO I2+600  
 DOTTED RT

REMOVING SIGNS  
 15

REHABILITATION OF D.I.'S, C.B.'S OR M.H.'S  
 STA I2+222 RT



REMOVAL AND DISPOSAL OF GUARD RAIL  
 STA I2+200 TO I2+269 LT  
 STA I2+356 TO I2+441 LT  
 STA I2+395 TO I2+460 RT

MANUFACTURED TERMINAL SECTION  
 STA I2+258 TO I2+269 LT (FLARED)  
 STA I2+356 TO I2+367 LT (FLARED)  
 STA I2+395 TO I2+406 RT (FLARED)  
 STA I2+430 TO I2+441 LT (FLARED)  
 STA I2+449 TO I2+460 RT (FLARED)

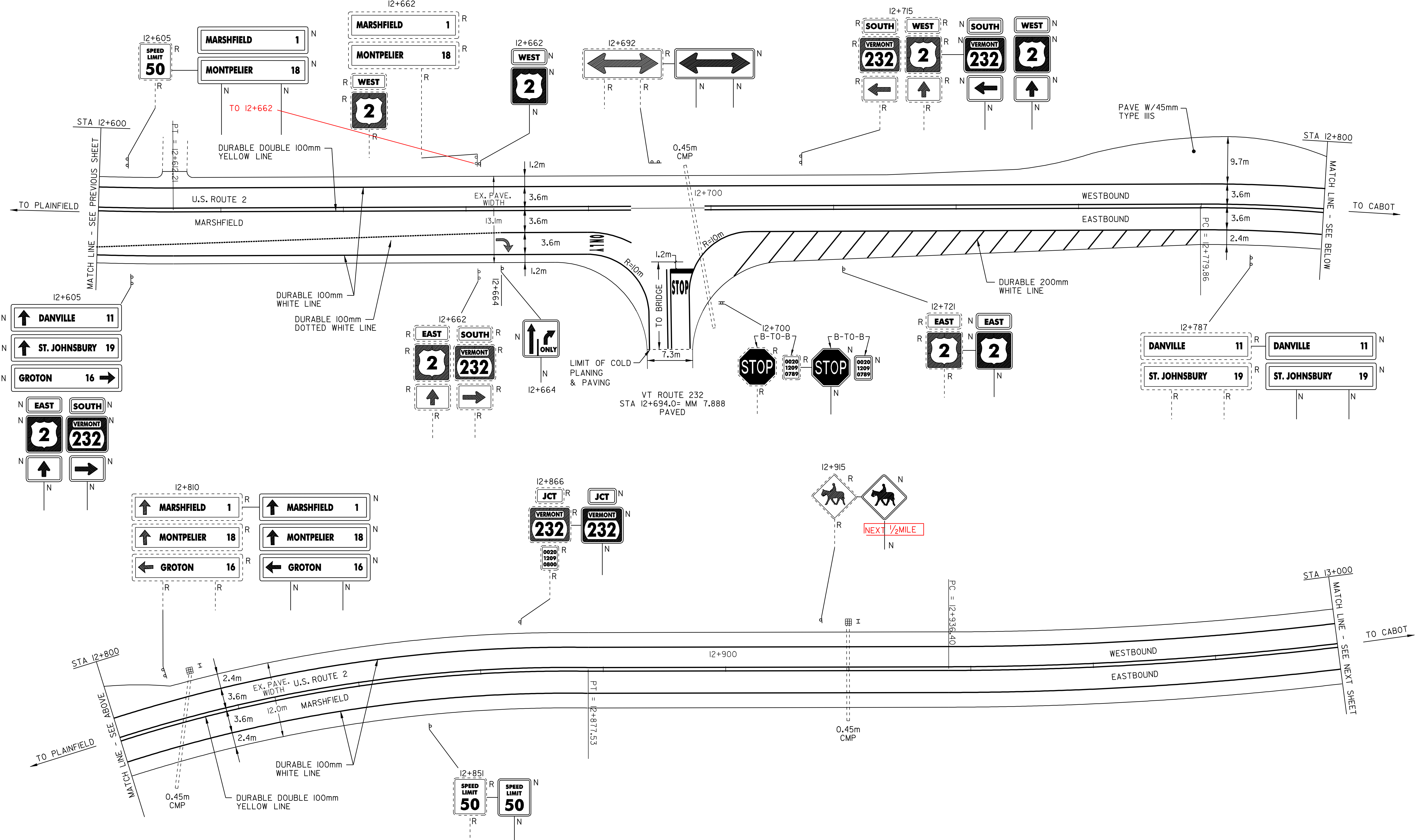
STEEL BEAM GUARD RAIL  
 STA I2+200 TO I2+258 LT  
 STA I2+367 TO I2+430 LT  
 STA I2+406 TO I2+449 RT

BRIDGE #83  
 STA I2+413 = MM 7.71  
 (FIELD MEASURED)  
 COLD PLANE 60mm,  
 LEVEL & PAVE  
 w/45mm TYPE III S

↑ DANVILLE 11  
 ↑ ST. JOHNSBURY 19  
 GROTON 16 →

<h1>PAVING PROJECT LAYOUT #14</h1>	DESIGNED BY	BCE/PJM	DATE	7-02
	DRAWN BY	C.E.A., INC.	DATE	7-02
	DESIGN FILE NO.	/pave/98b090/pb090.dgn		
	PRF FILE	pb090pl4.1	DATE PLOTTED	09-MAY-2008 10
	PROJ. NAME	MARSHFIELD - CABOT		
PROJ. NO.	NH 2104(1)S			
SHEET	24	OF	60	SHEETS





TEMPORARY AND DURABLE 100m YELLOW LINE  
 STA 12+600 TO 13+000 SOLID LT&RT

TEMPORARY AND DURABLE 600m STOP BAR  
 STA 12+694 RT VT ROUTE 232

TEMPORARY AND DURABLE LETTER OR SYMBOL  
 STA 12+664 RT

STA 12+682 RT "ONLY"  
 STA 12+694 RT "STOP"

TEMPORARY AND DURABLE 100m WHITE LINE  
 STA 12+600 TO 13+000 SOLID LT&RT  
 STA 12+600 TO 12+664 SOLID RT  
 STA 12+664 TO 12+687 SOLID RT

TEMPORARY AND DURABLE 200m WHITE LINE  
 STA 12+694 TO 12+780 RT CORE MARKING

REHABILITATION OF D.I.'S, C.B.'S OR M.H.'S  
 STA 12+813 LT  
 STA 12+920 LT

YIELDING MARKER POST  
 STA 12+813 LT  
 STA 12+920 LT

REMOVING SIGNS  
 32



# PAVING PROJECT LAYOUT #15

DESIGNED BY BCE/PJM DATE 7-02  
 DRAWN BY C.E.A., INC. DATE 7-02  
 DESIGN FILE NO. /pave/98b090/pb090.dgn  
 PRF FILE pb090p15.i DATE PLOTTED 09-MAY-2008 10  
 PROJ. NAME MARSHFIELD - CABOT  
 PROJ. NO. NH 2104(1)S  
 SHEET 25 OF 60 SHEETS



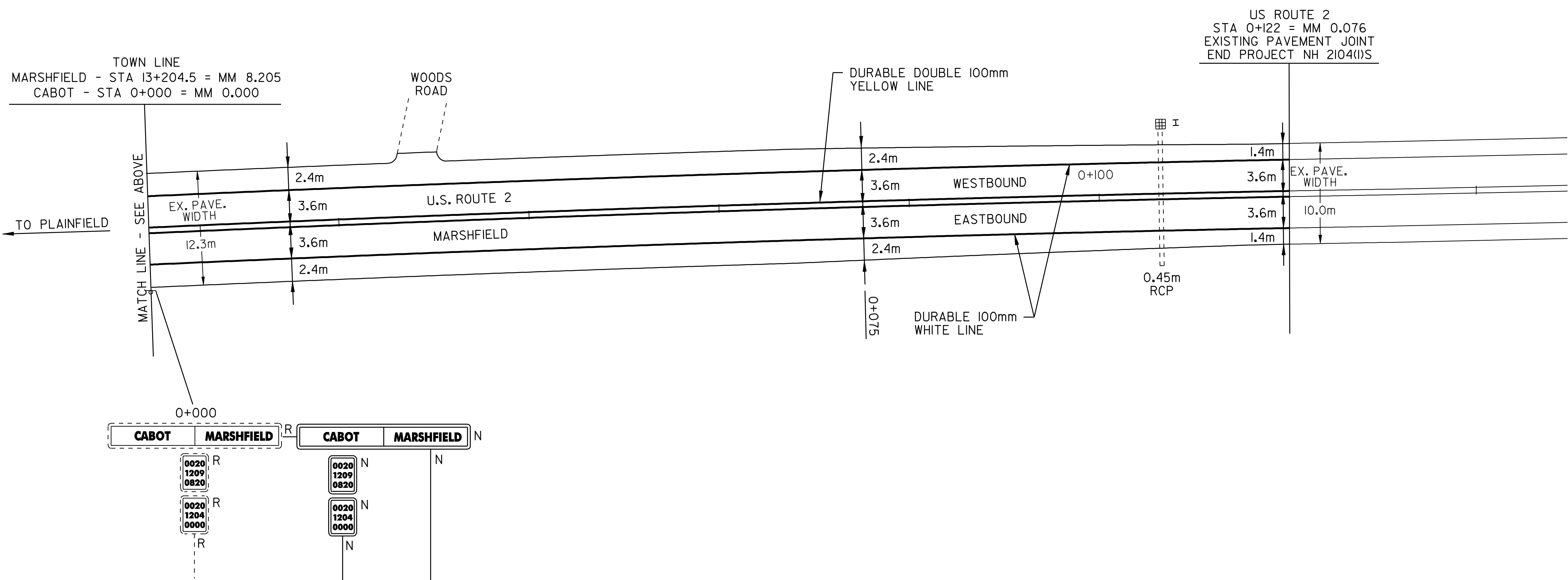
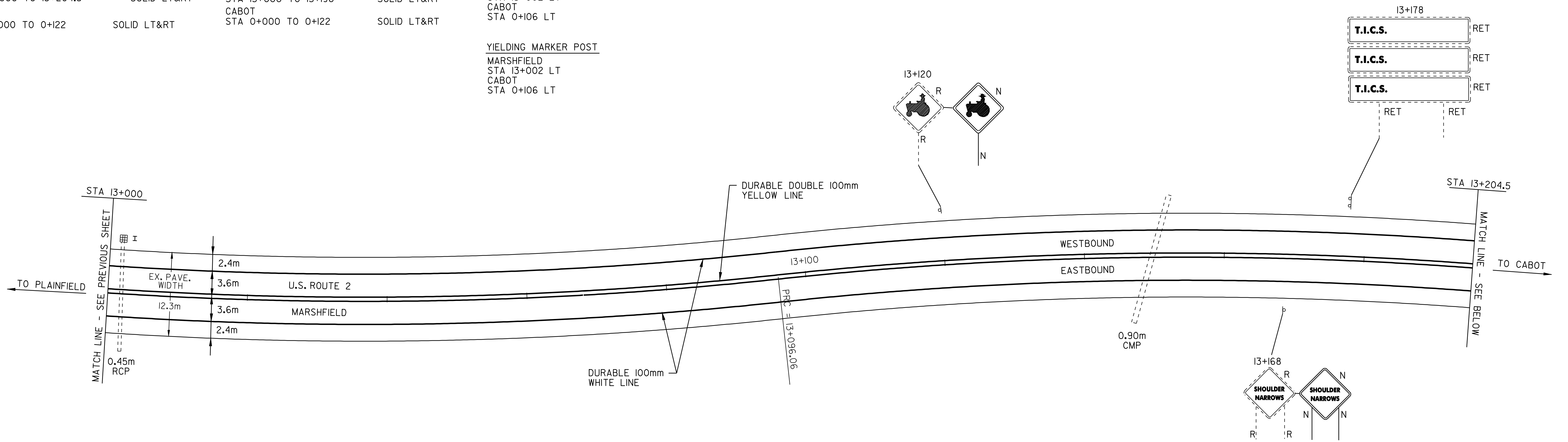
TEMPORARY AND DURABLE 100m YELLOW LINE  
 MARSHFIELD  
 STA 13+000 TO 13+204.5 SOLID LT&RT  
 CABOT  
 STA 0+000 TO 0+122 SOLID LT&RT

TEMPORARY AND DURABLE 100m WHITE LINE  
 MARSHFIELD  
 STA 13+000 TO 13+196 SOLID LT&RT  
 CABOT  
 STA 0+000 TO 0+122 SOLID LT&RT

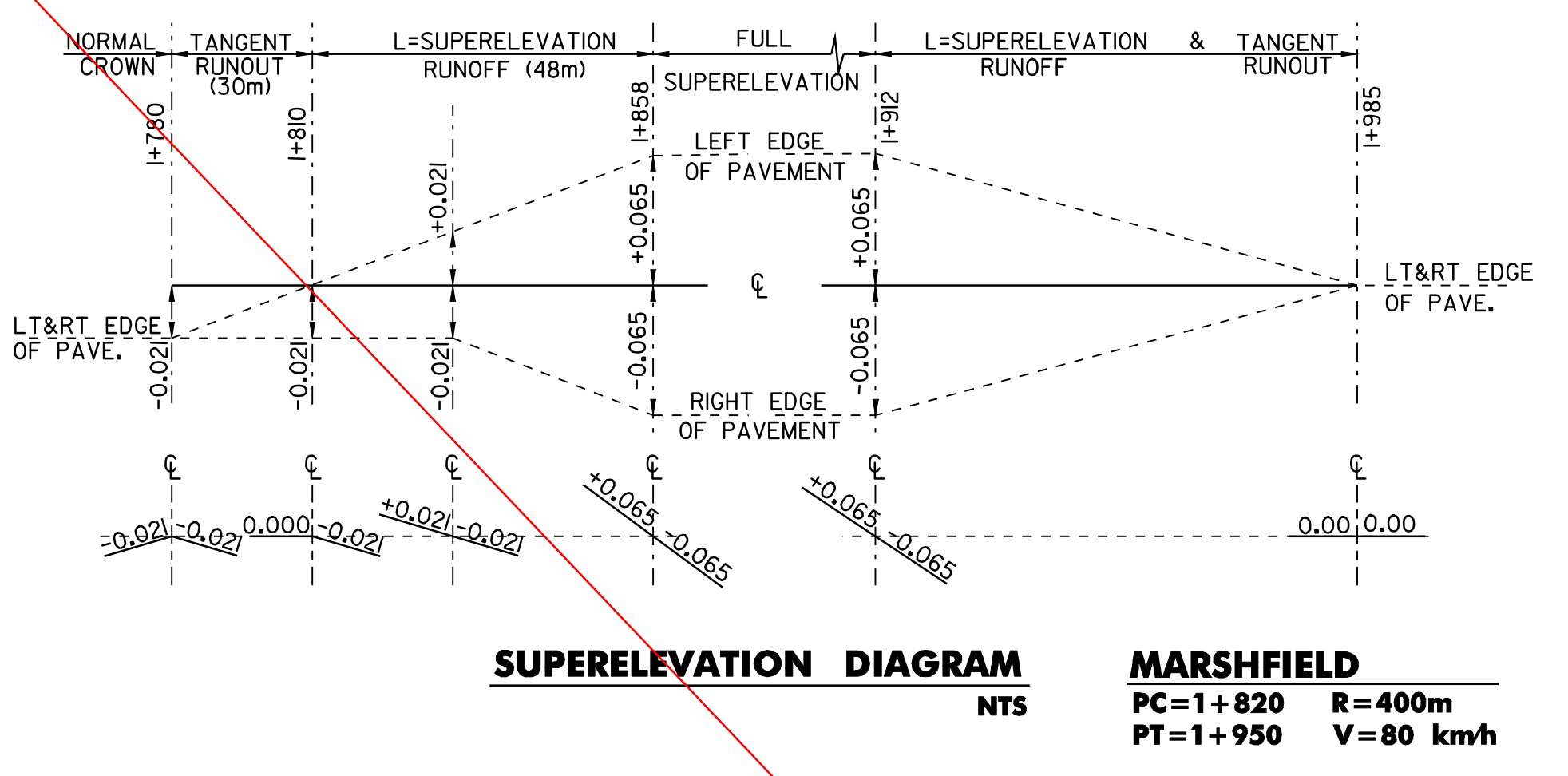
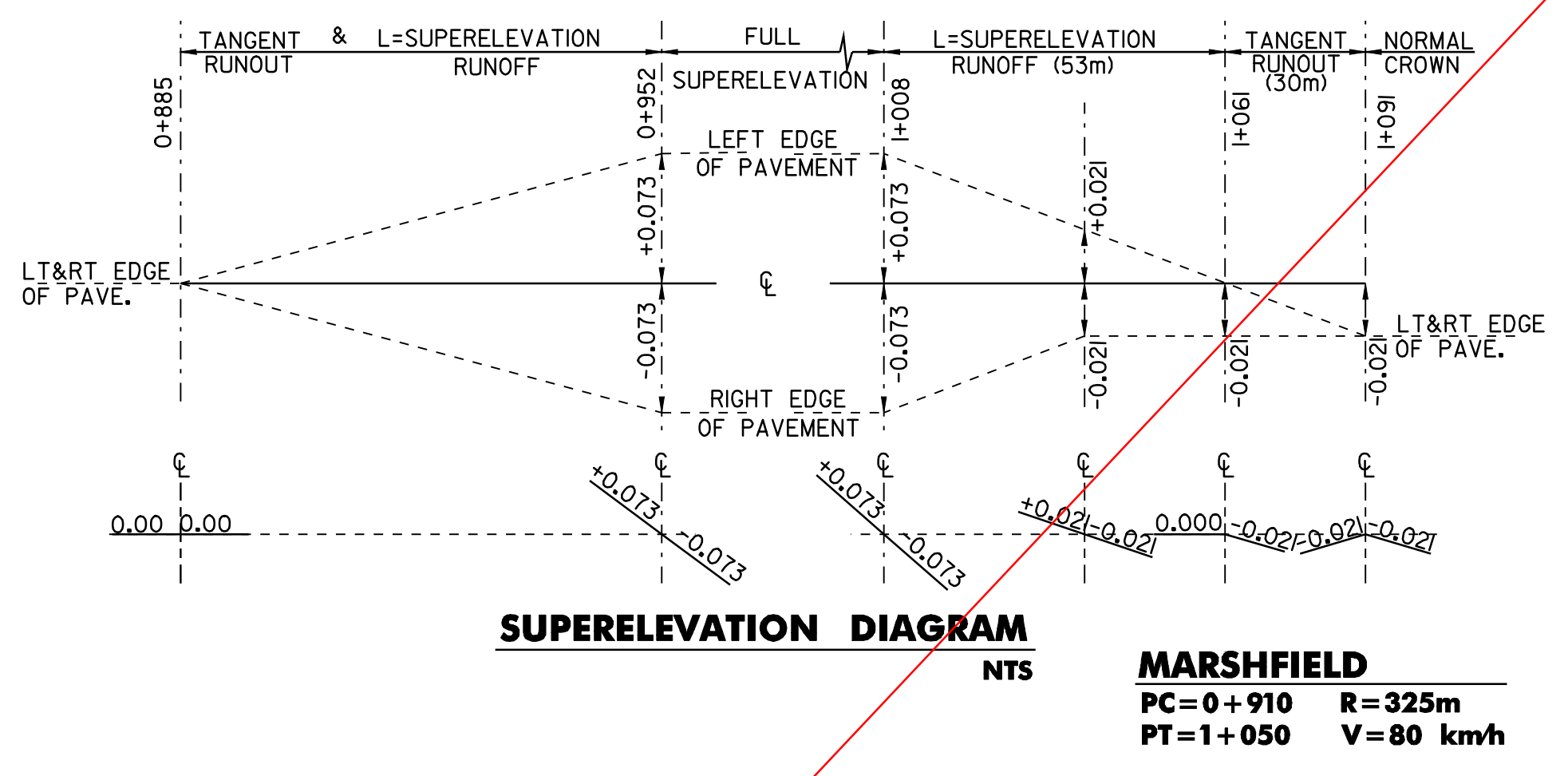
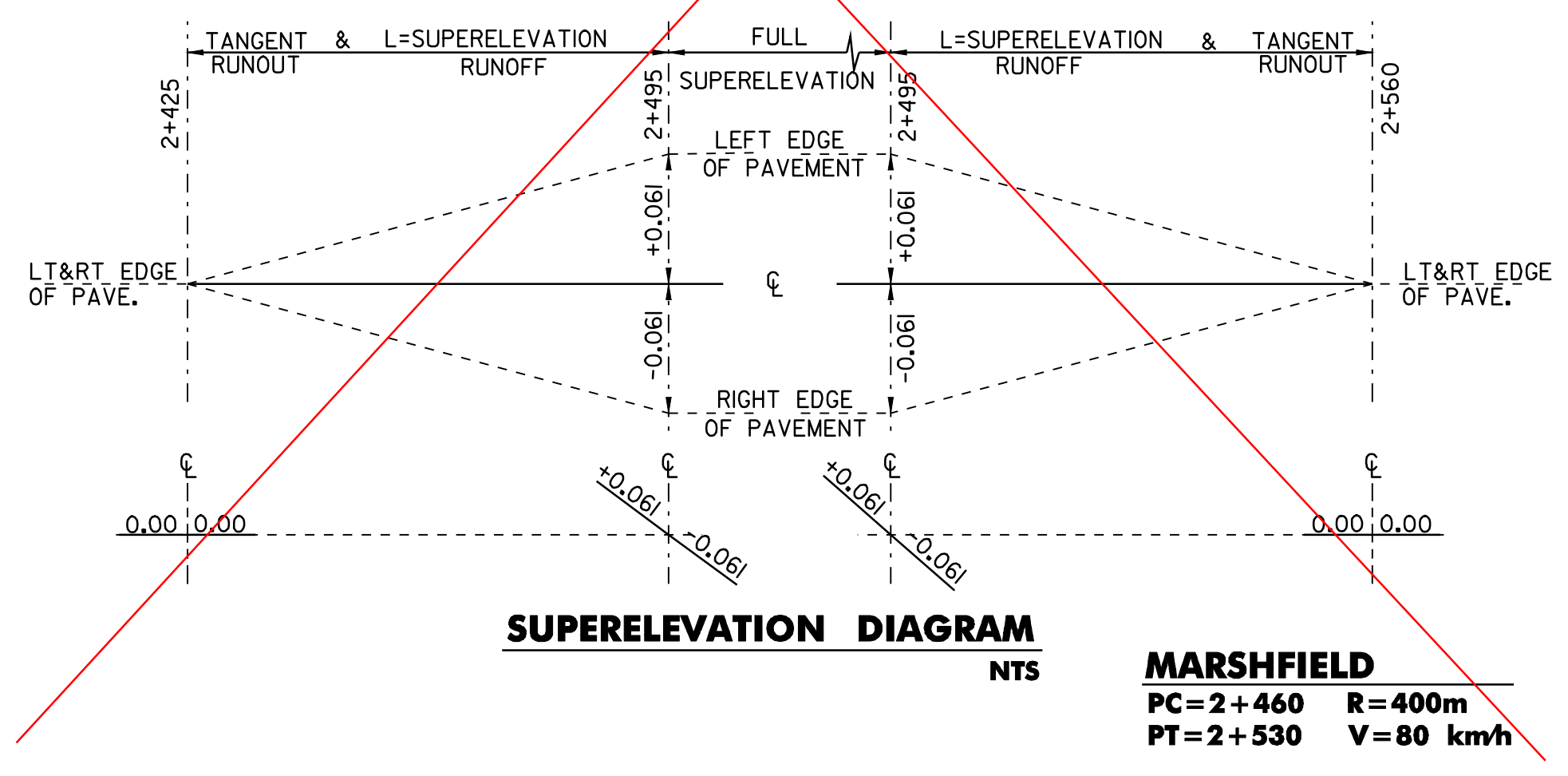
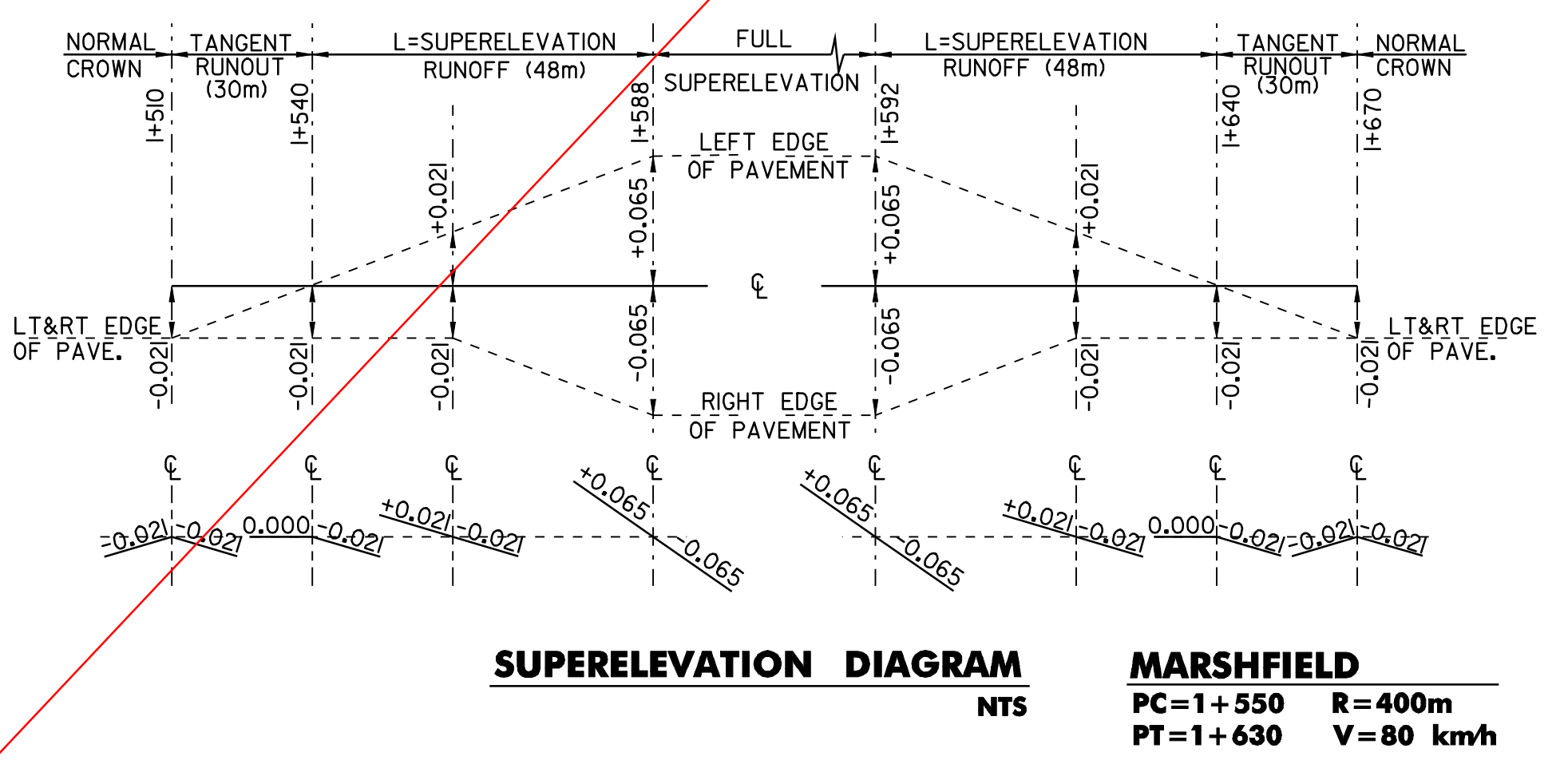
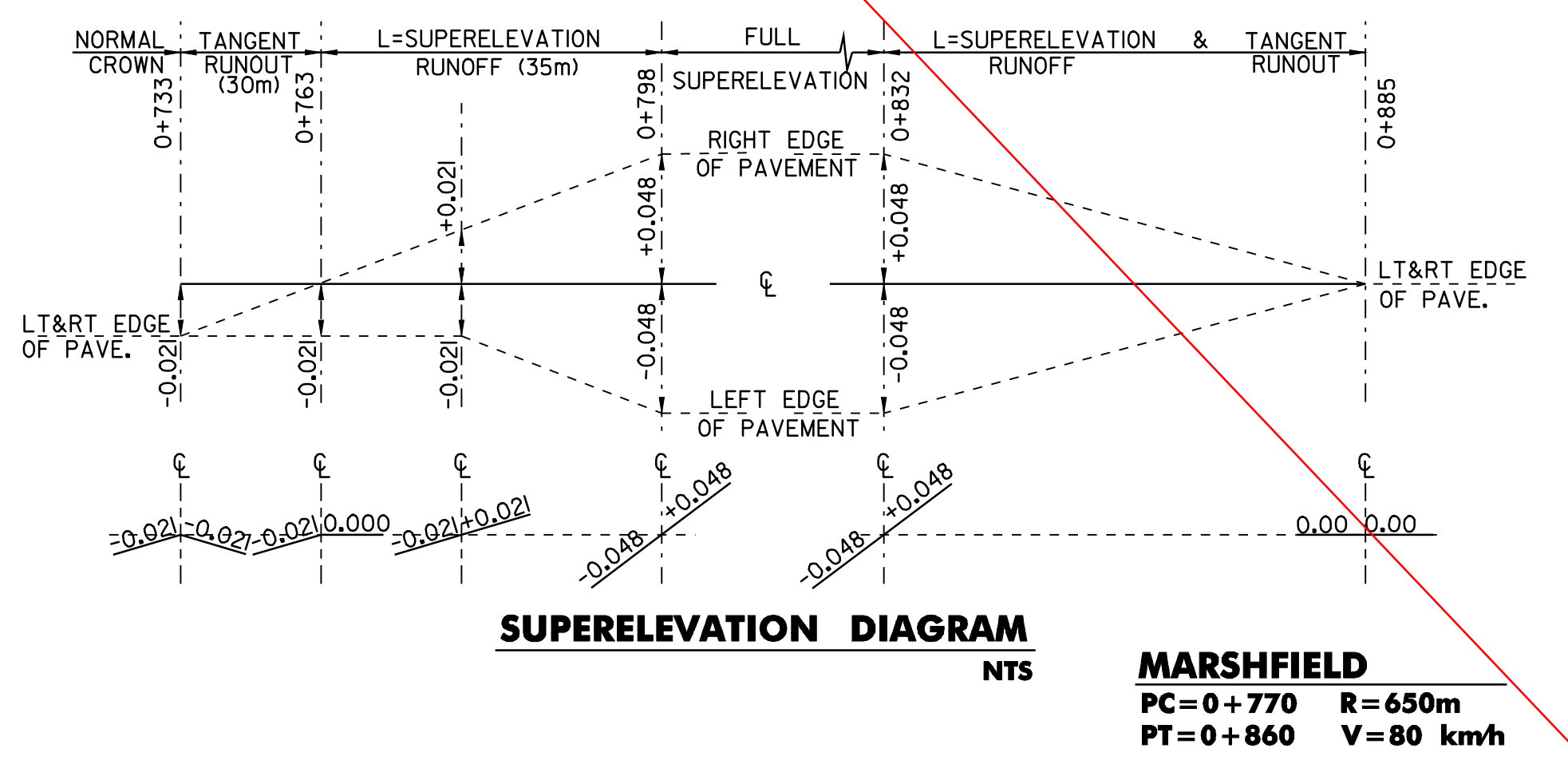
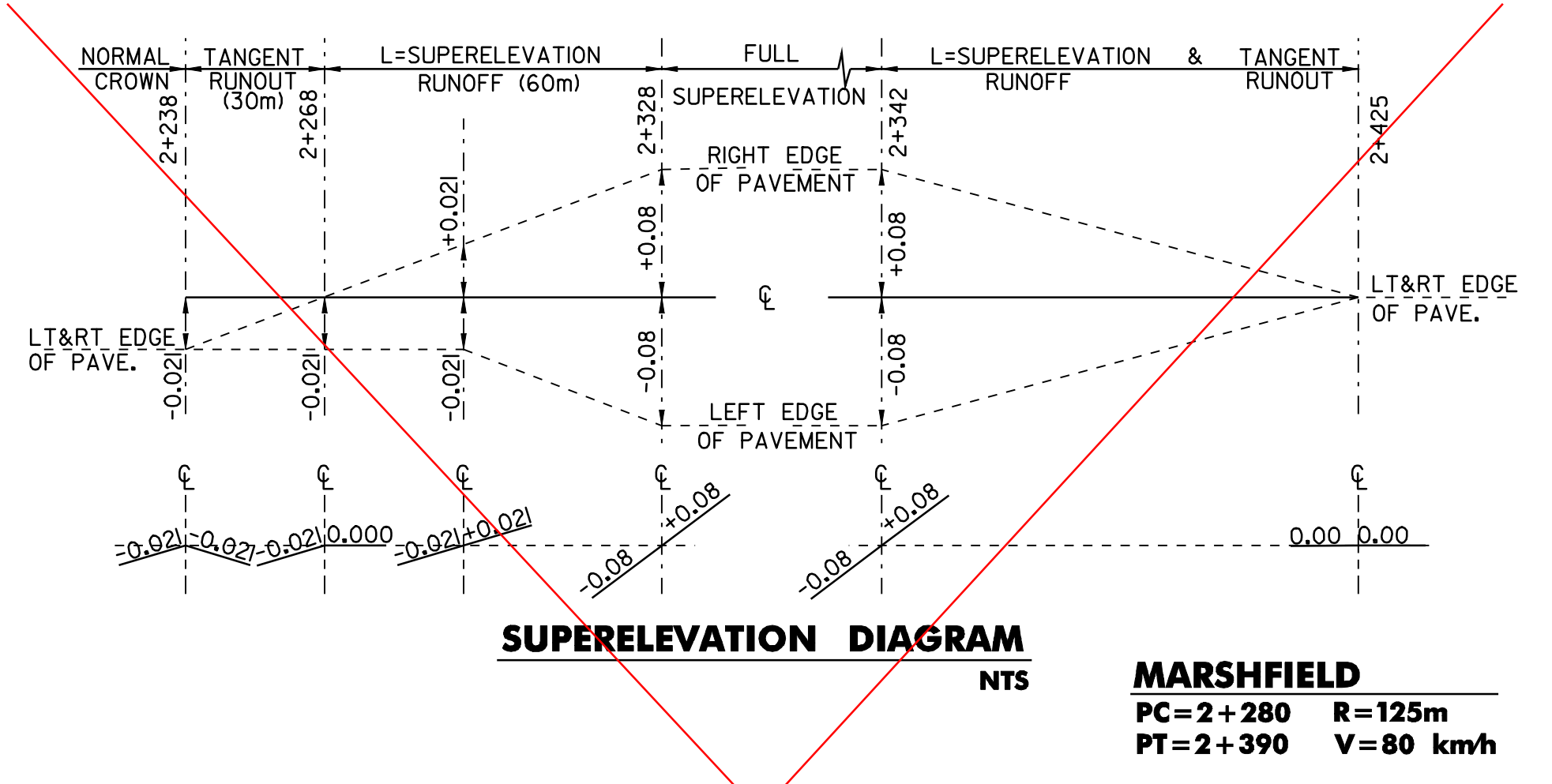
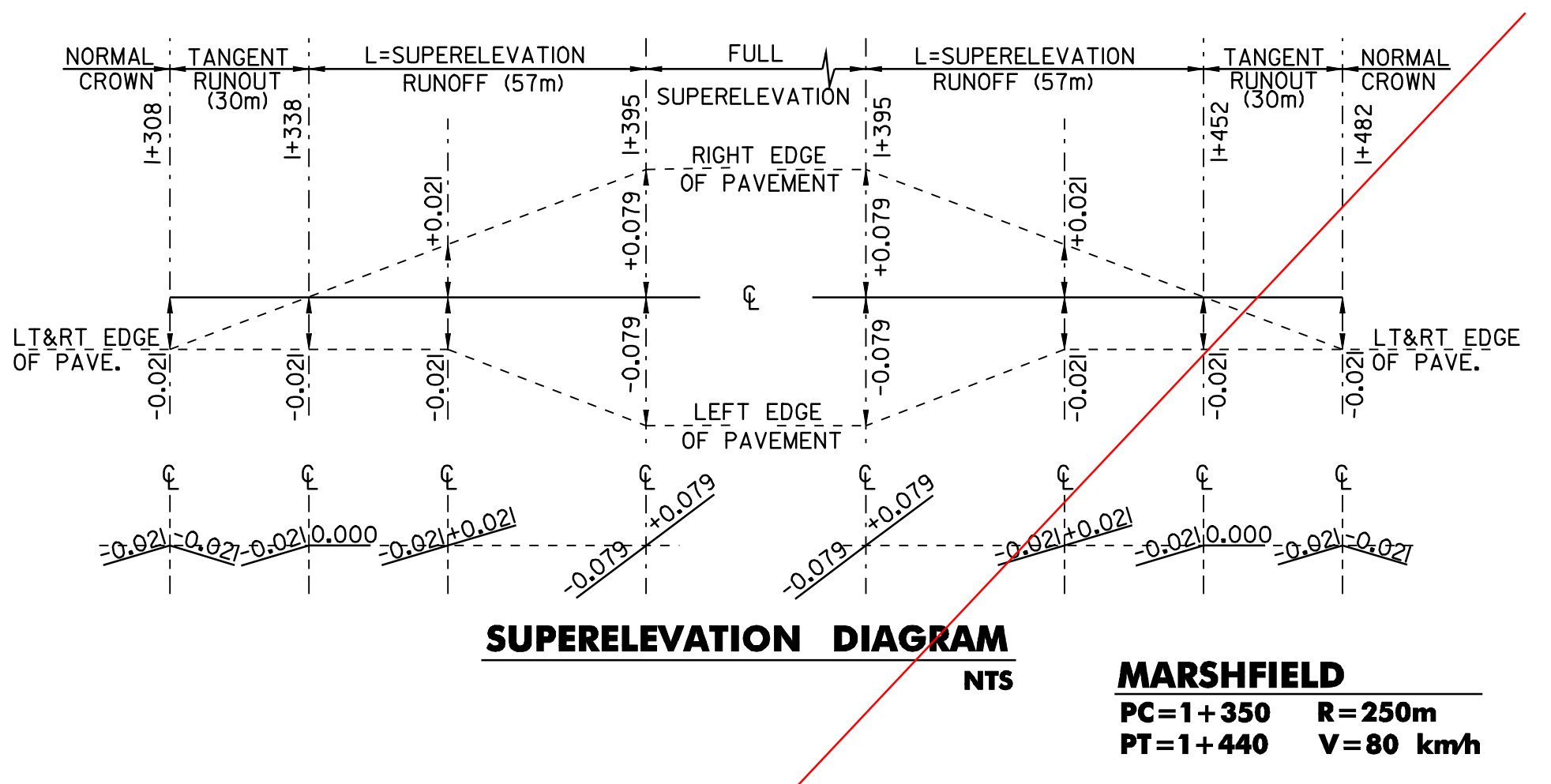
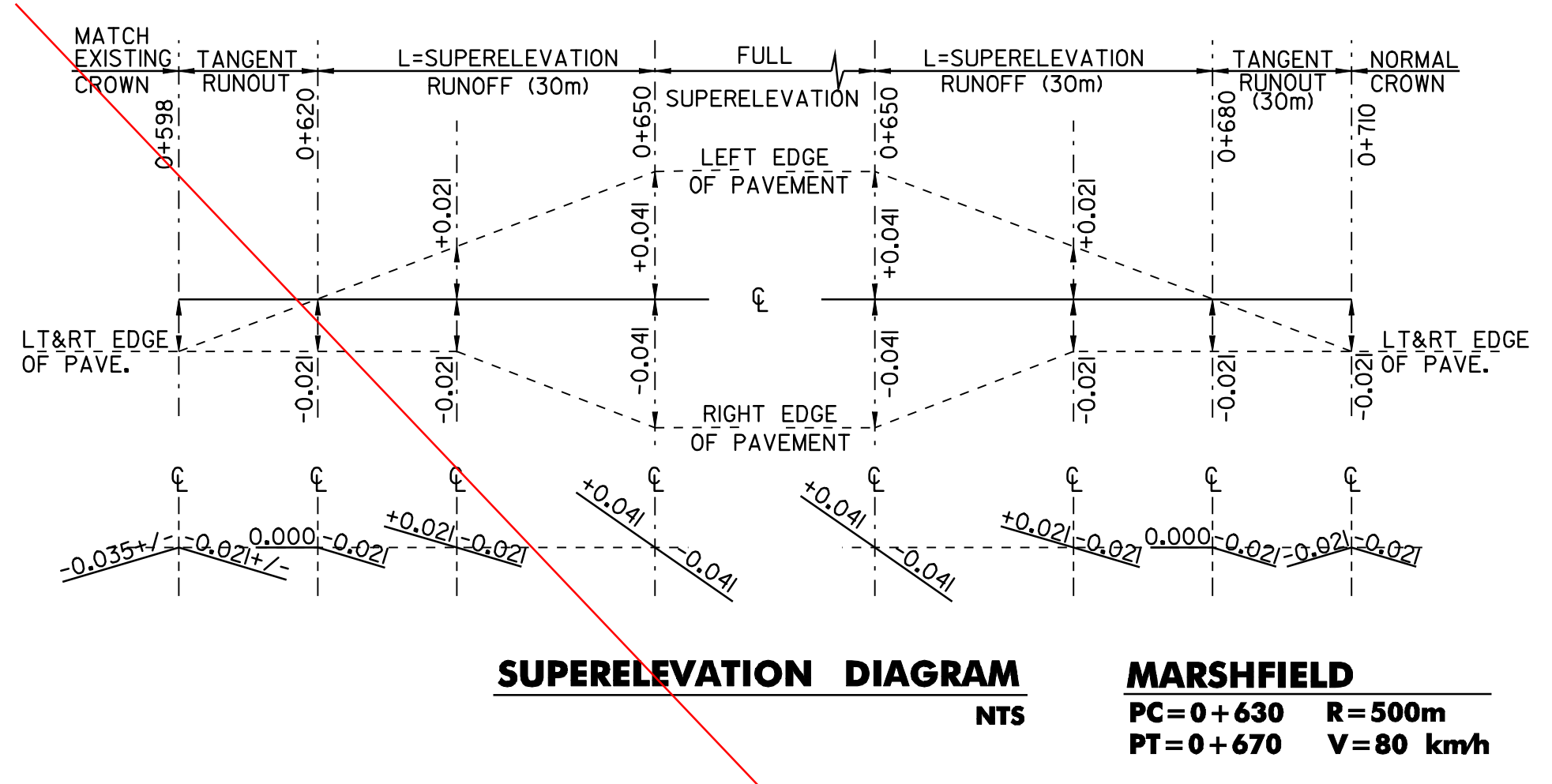
REHABILITATION OF D.I.'S, C.B.'S OR M.H.'S  
 MARSHFIELD  
 STA 13+002 LT  
 CABOT  
 STA 0+106 LT

YIELDING MARKER POST  
 MARSHFIELD  
 STA 13+002 LT  
 CABOT  
 STA 0+106 LT

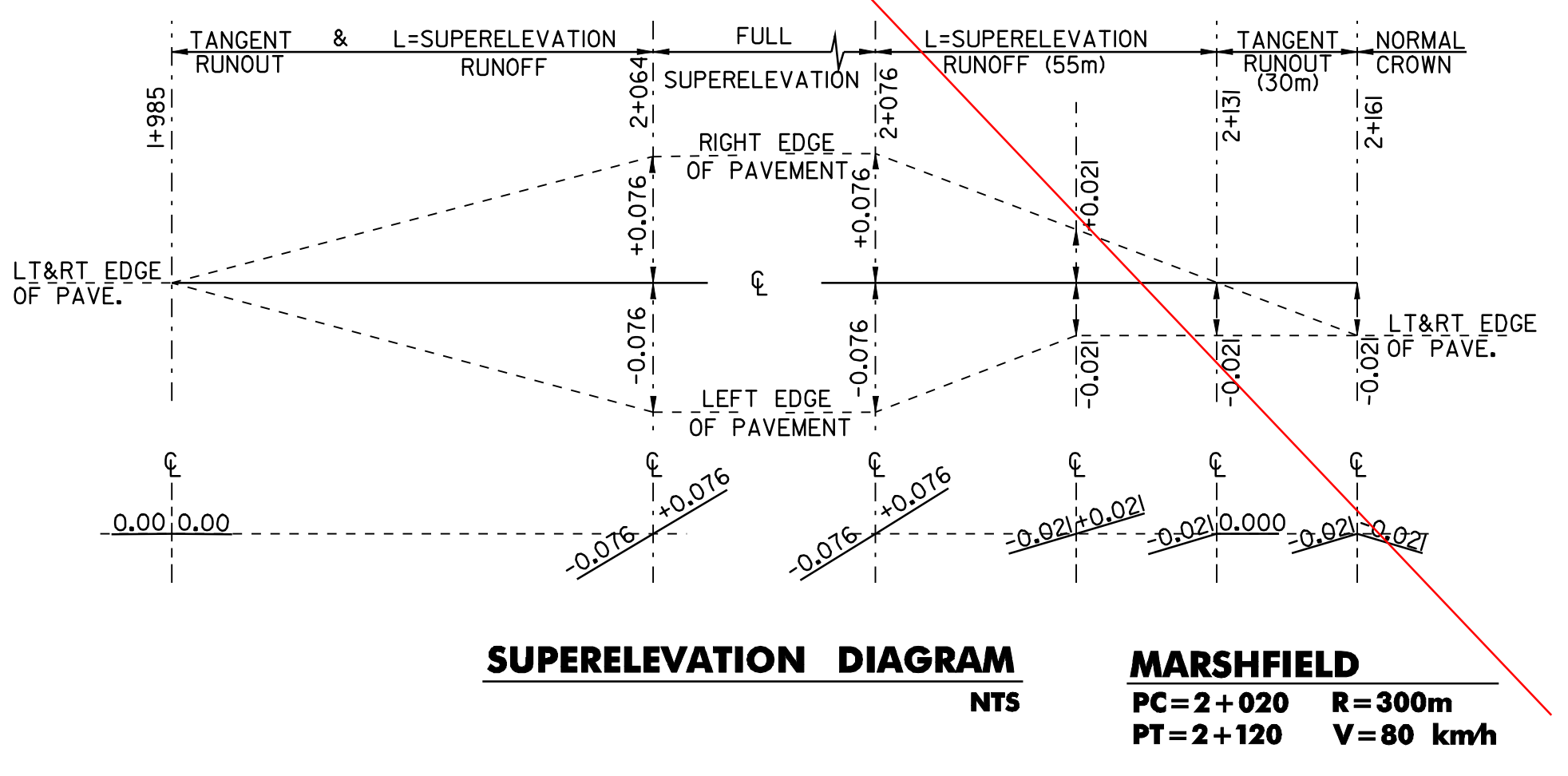
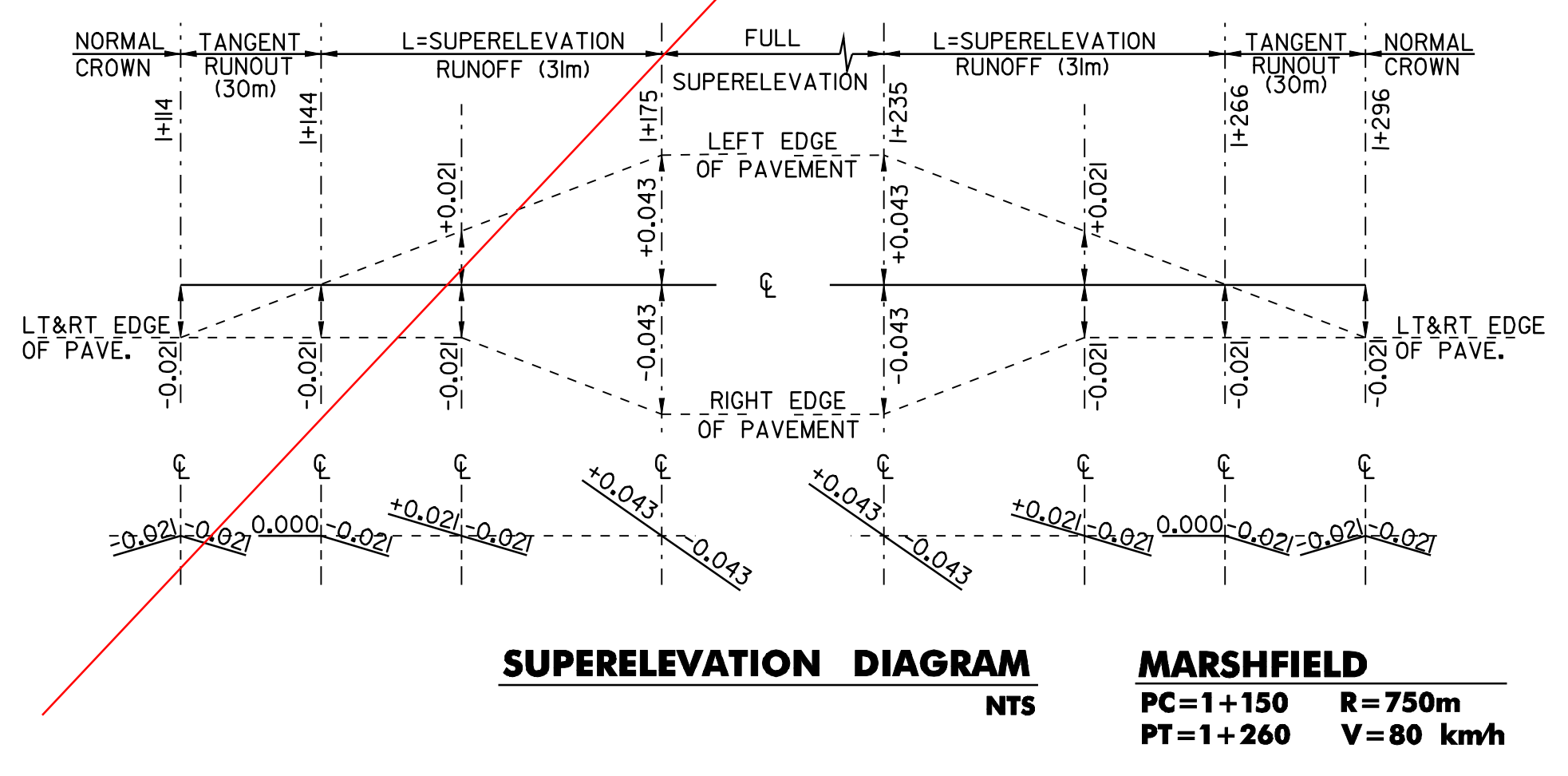
REMOVING SIGNS  
 5



<h2>PAVING PROJECT LAYOUT #16</h2>	DESIGNED BY	BCE/PJM	DATE	7-02
	DRAWN BY	C.E.A., INC.	DATE	7-02
	DESIGN FILE NO.	/pave/98b090/pb090.dgn		
	PRF FILE	pb090pl6.1	DATE PLOTTED	09-MAY-2008 10
	PROJ. NAME	MARSHFIELD - CABOT		
PROJ. NO.	NH 2104(1)S			
SHEET	26	OF	60	SHEETS



SEE HAND DRAWN REVISED BANKING DIAGRAMS



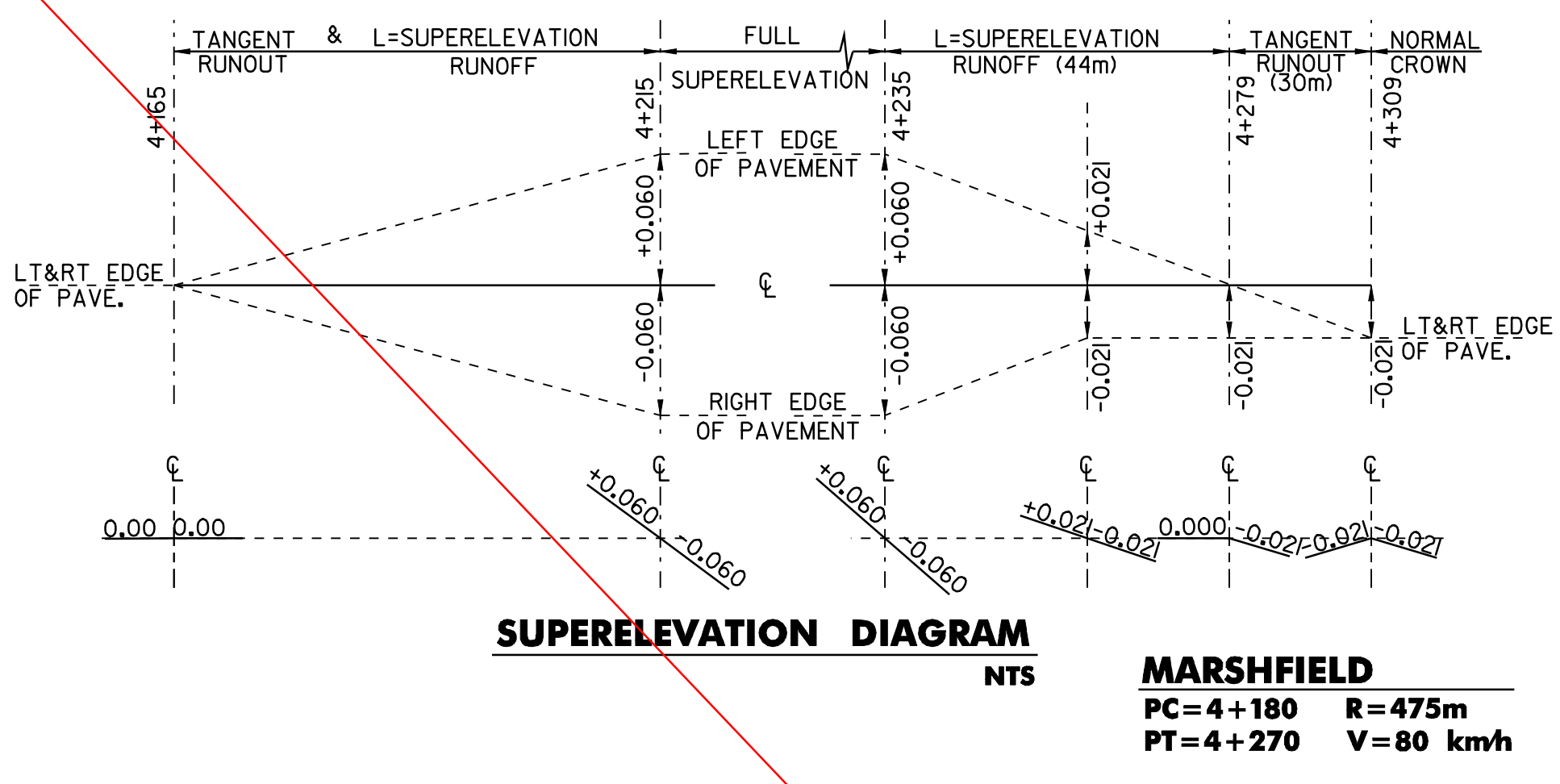
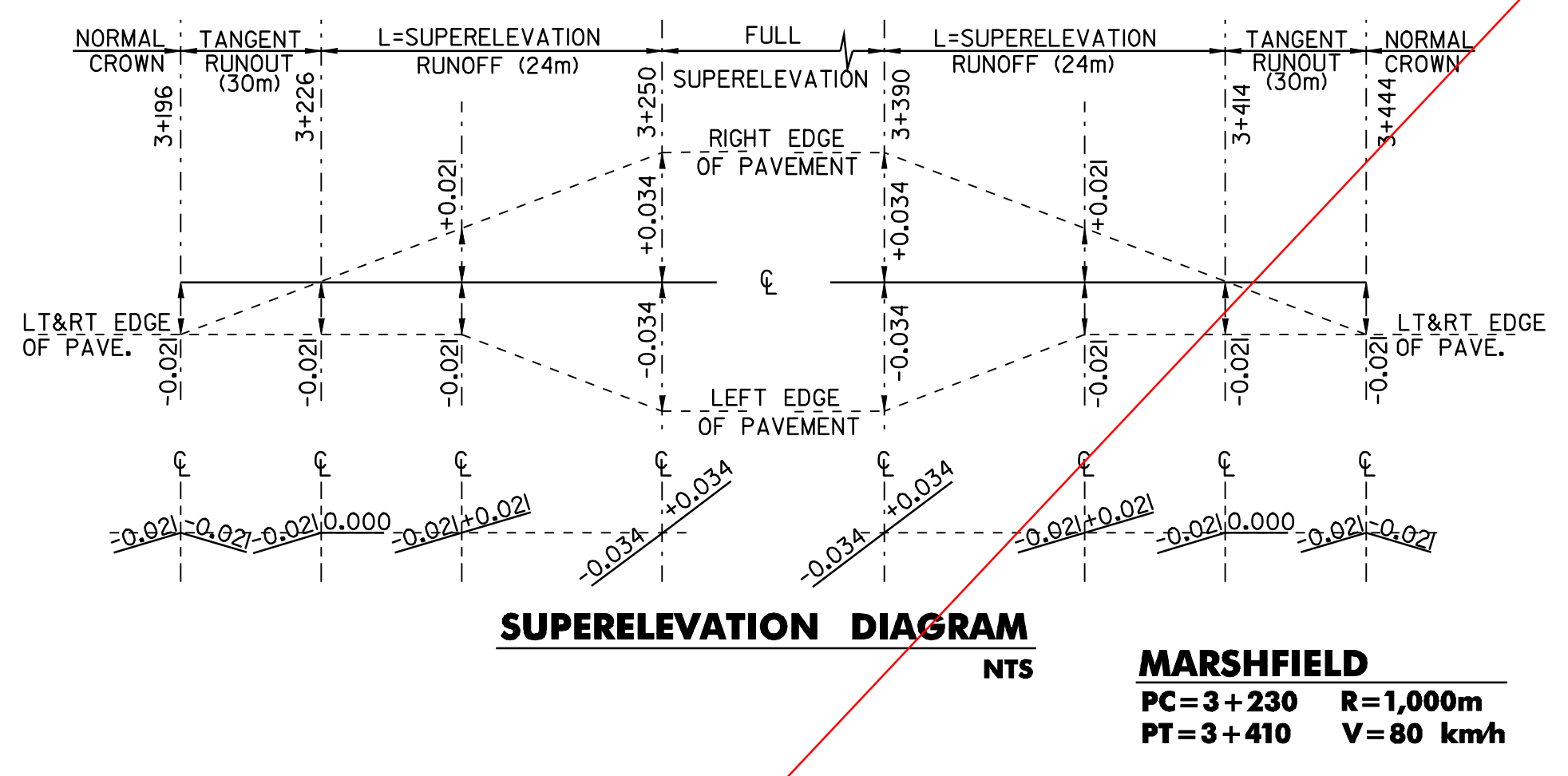
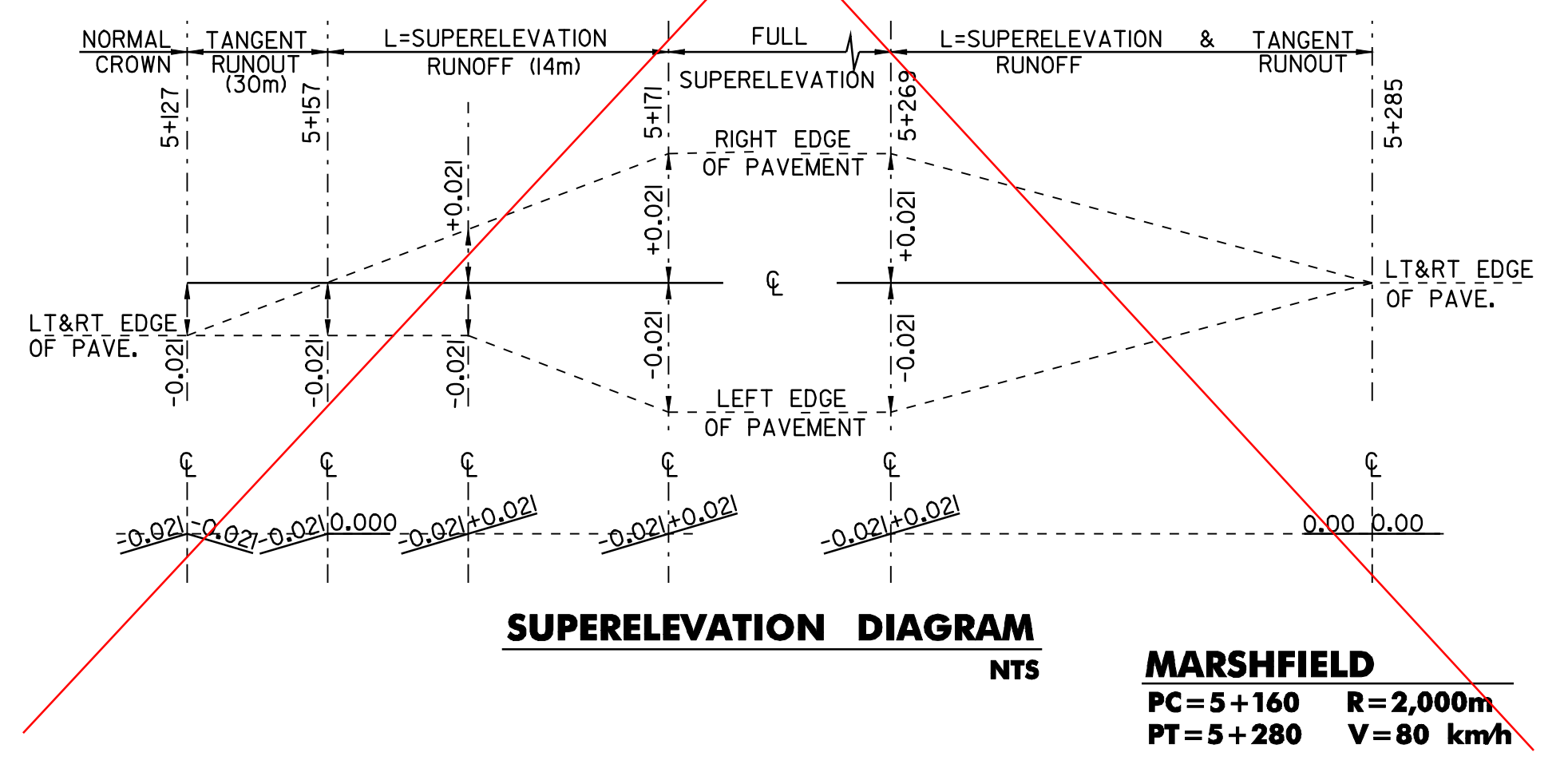
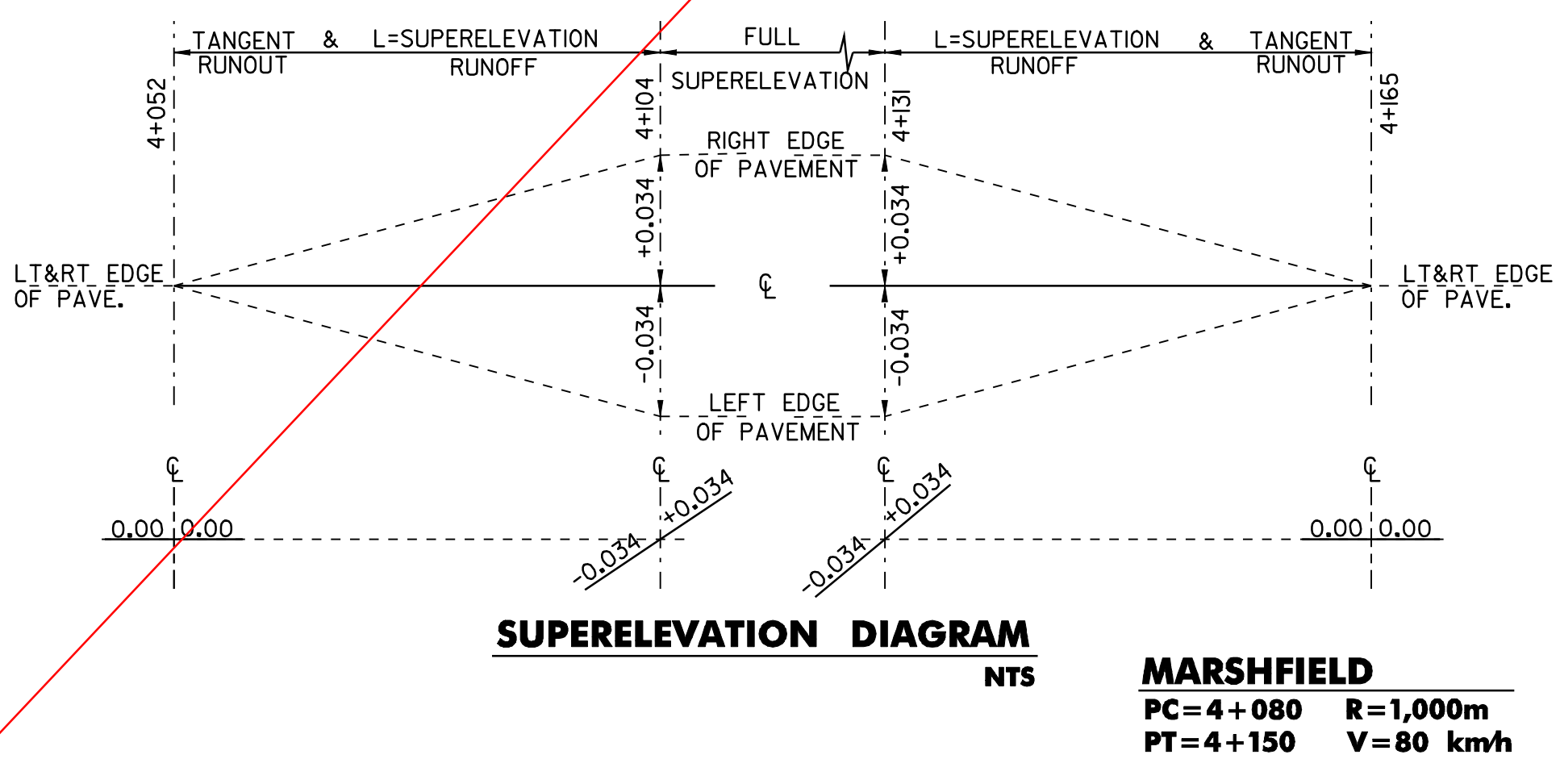
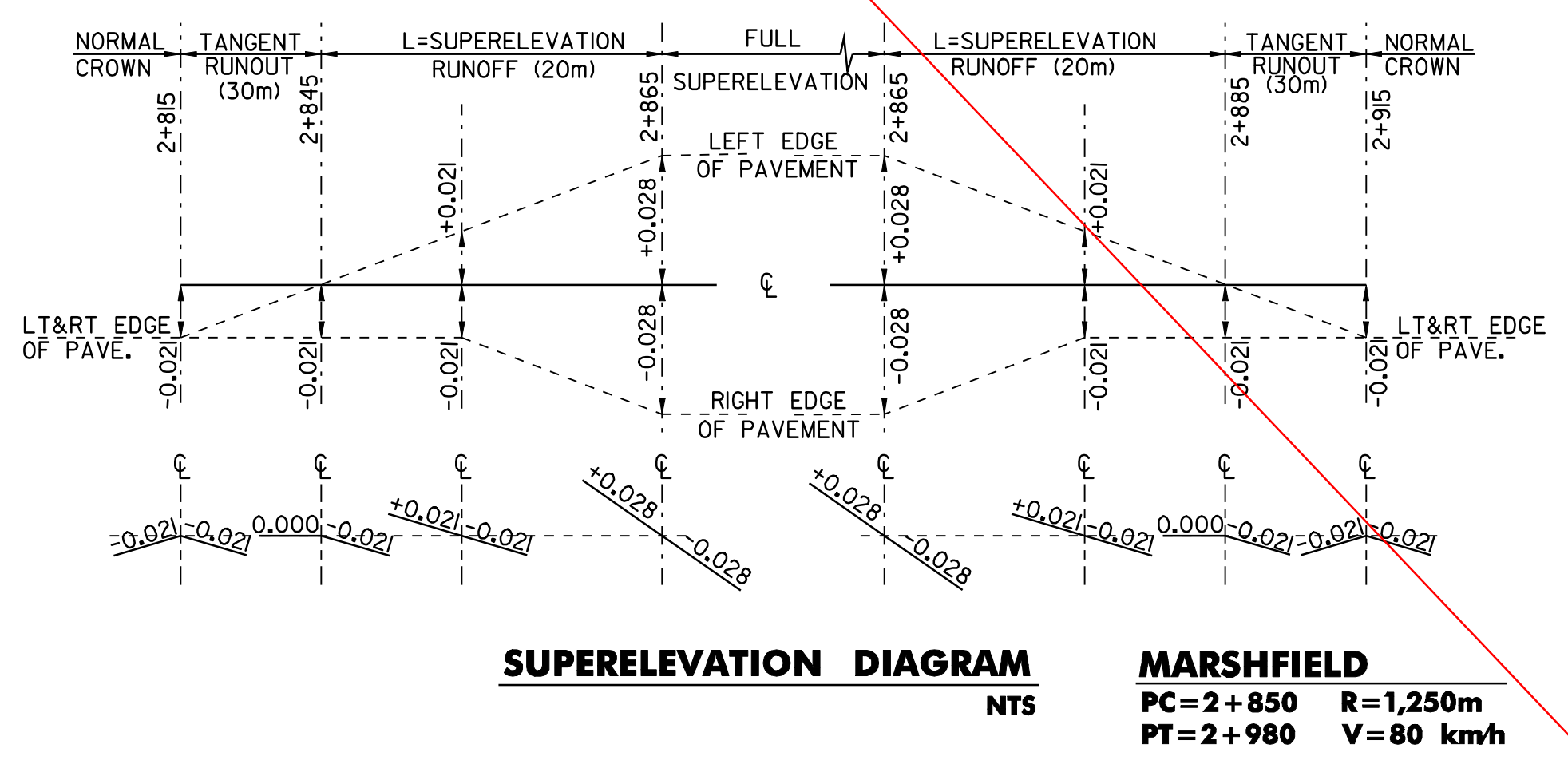
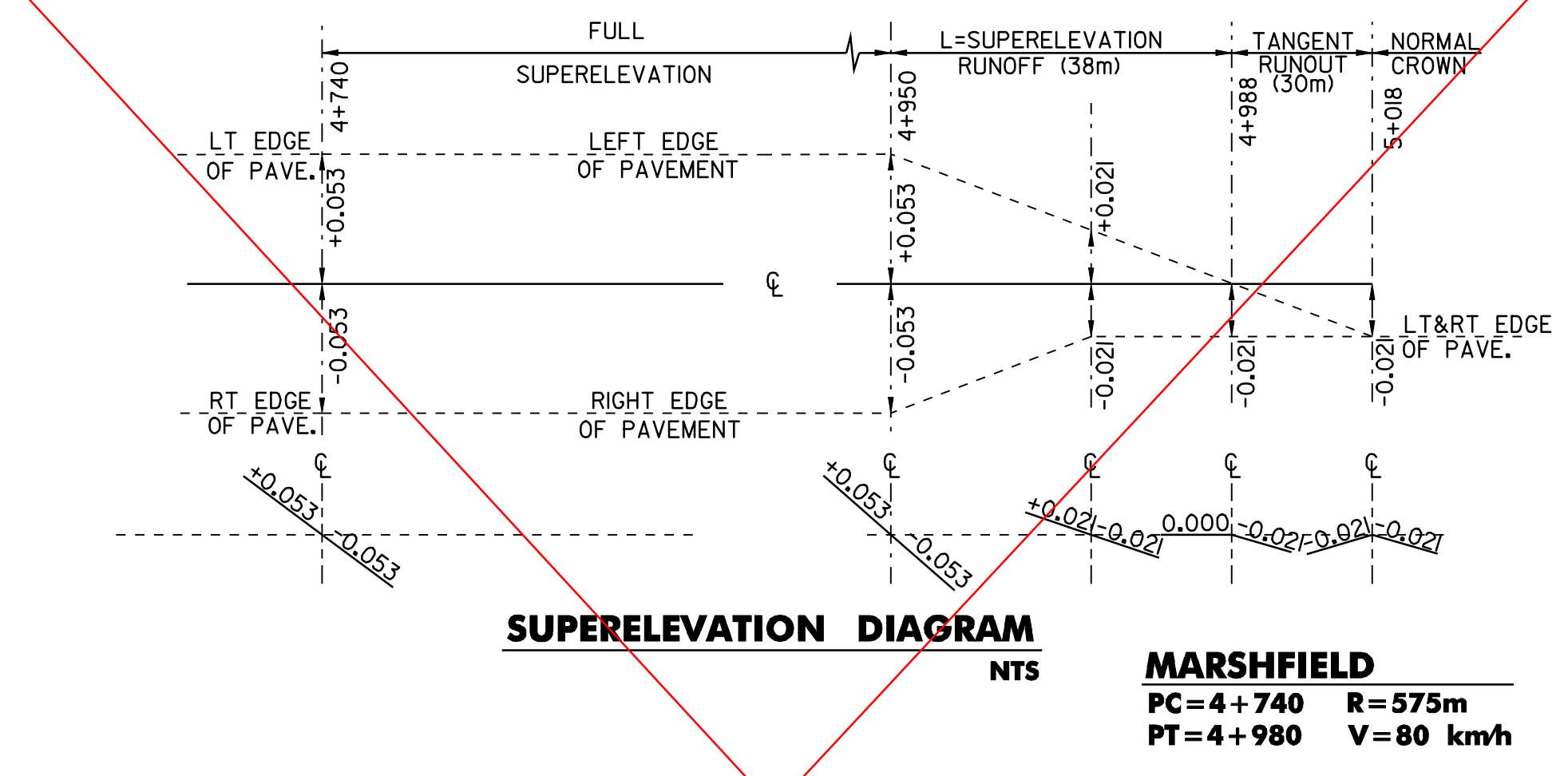
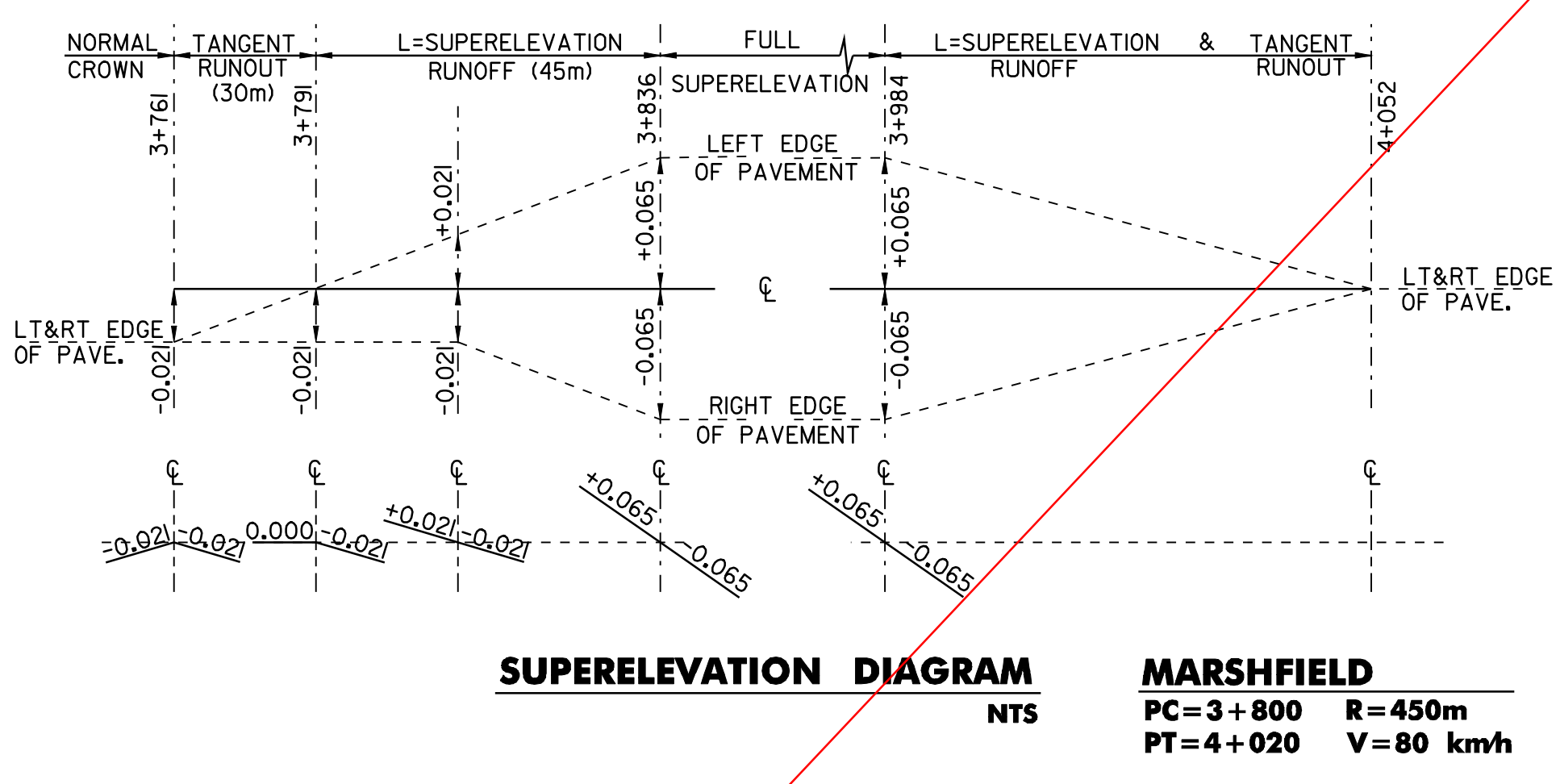
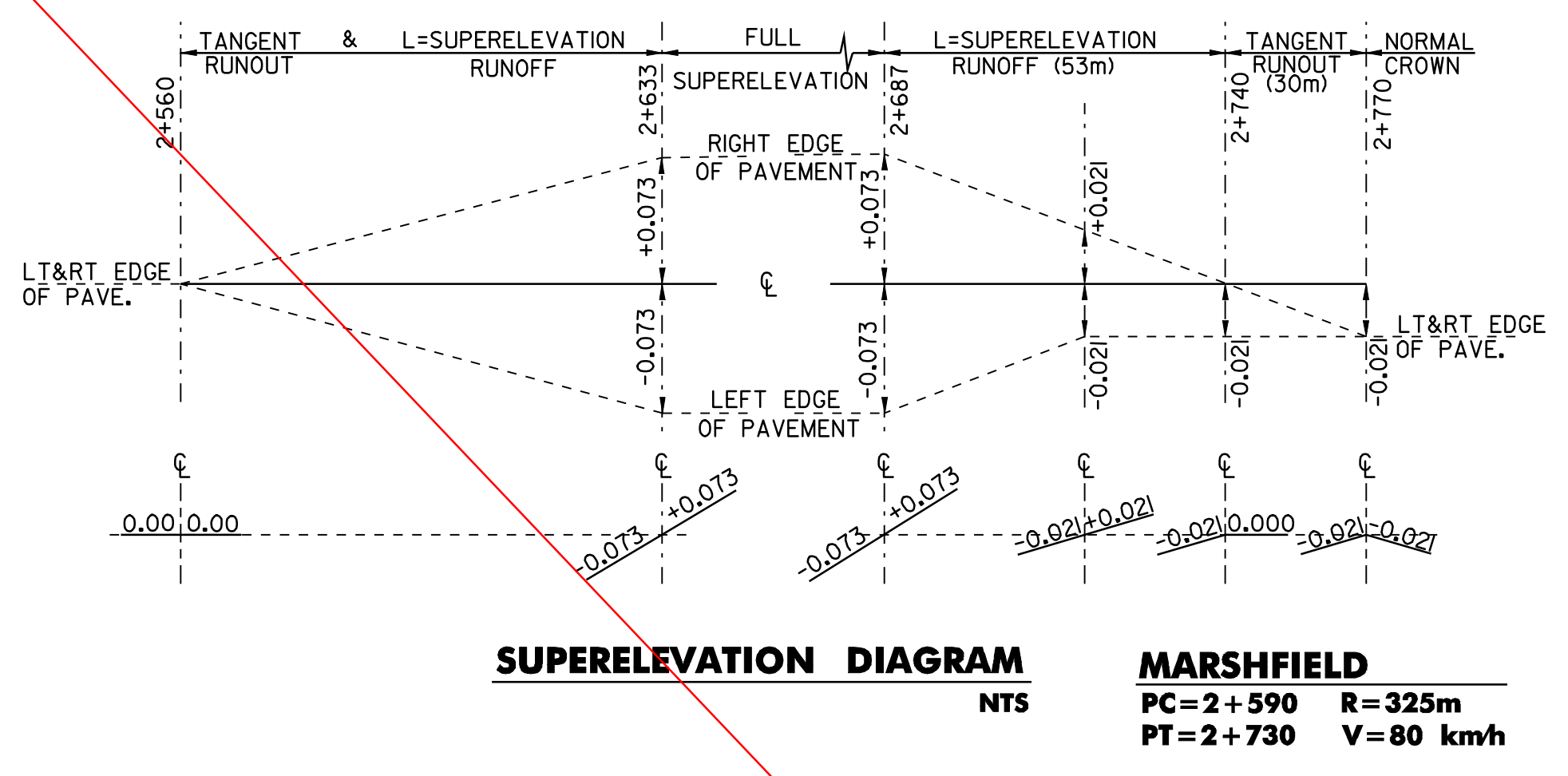
NOTE:  
THE CONTRACTOR IS RESPONSIBLE FOR THE ENGINEERING WORK  
REQUIRED TO LAYOUT AND MAINTAIN THE CROSS SLOPES IN THE  
REGRADING OF THE RECLAIMED AREAS.



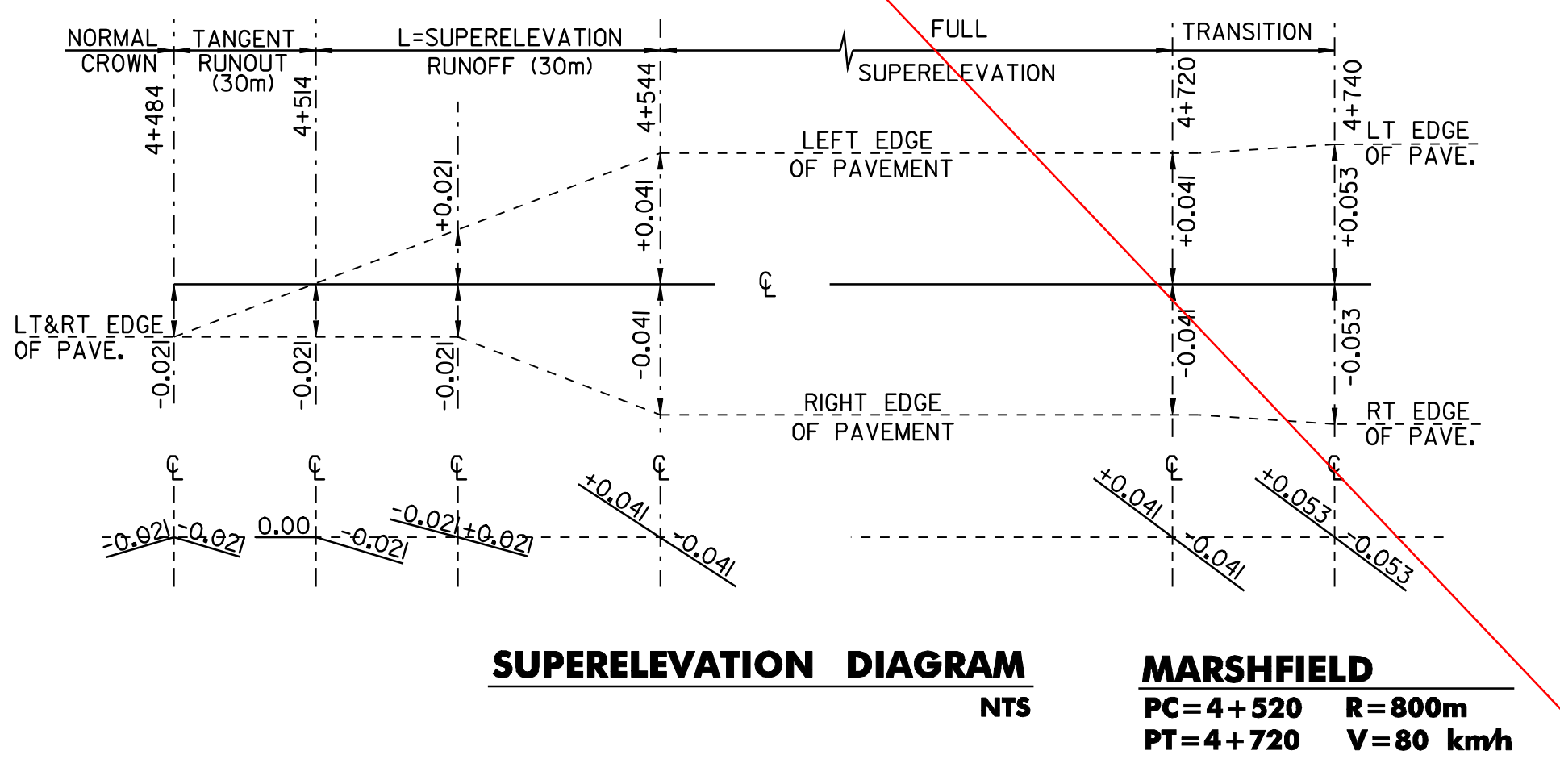
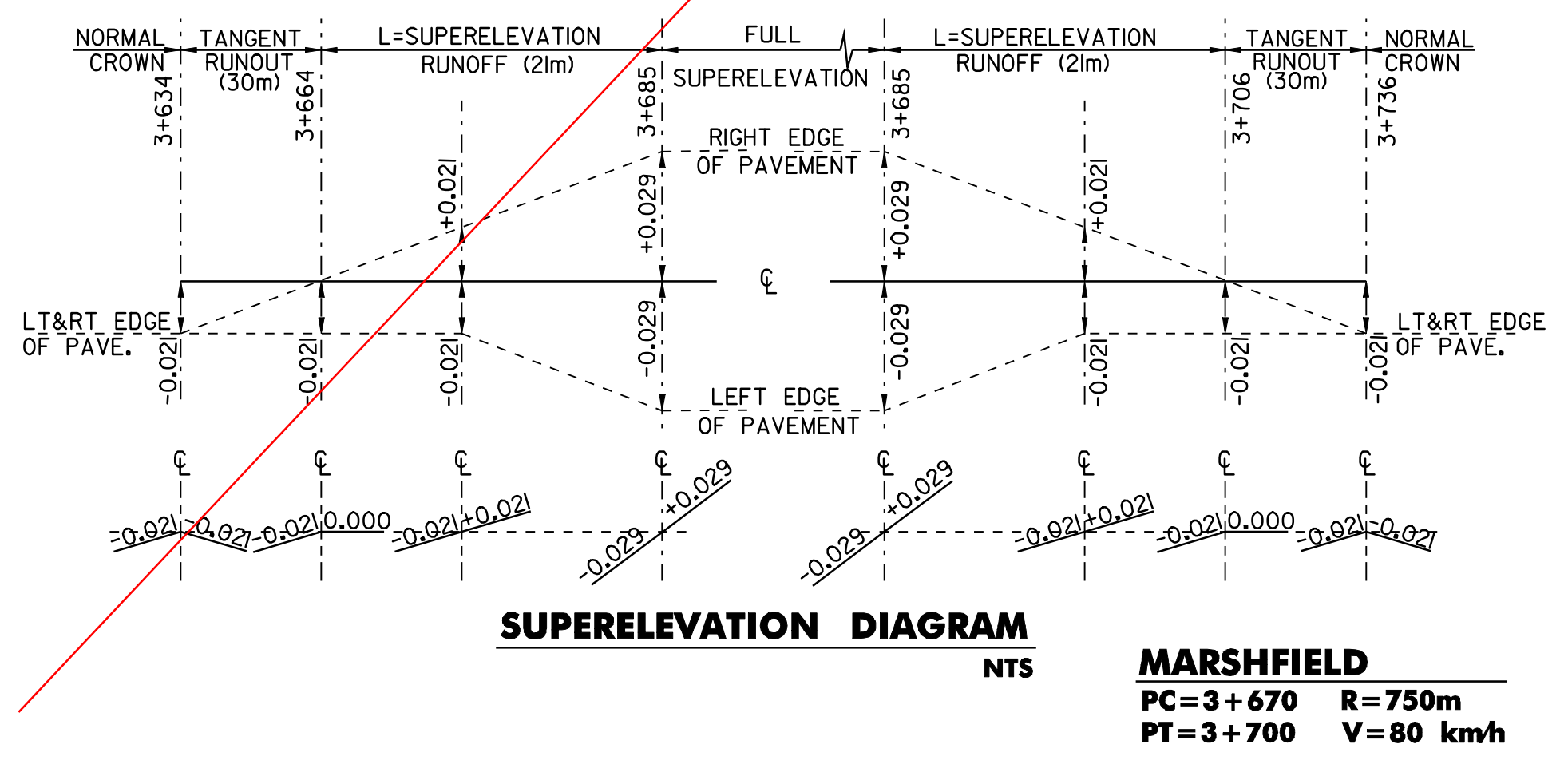
**SUPERELEVATION BANKING DIAGRAM SHEET #1**

DESIGNED BY	BCE/PJM	DATE	7-02
DRAWN BY	C.E.A., INC.	DATE	7-02
DESIGN FILE NO.	/pave/98b090/pb090.dgn		
PRF FILE	pb090bdl.i	DATE PLOTTED	09-MAY-2008
PROJ. NAME	MARSHFIELD - CABOT		
PROJ. NO.	NH 2104(1)S		
SHEET	27	OF	60 SHEETS





SEE HAND DRAWN REVISED BANKING DIAGRAMS



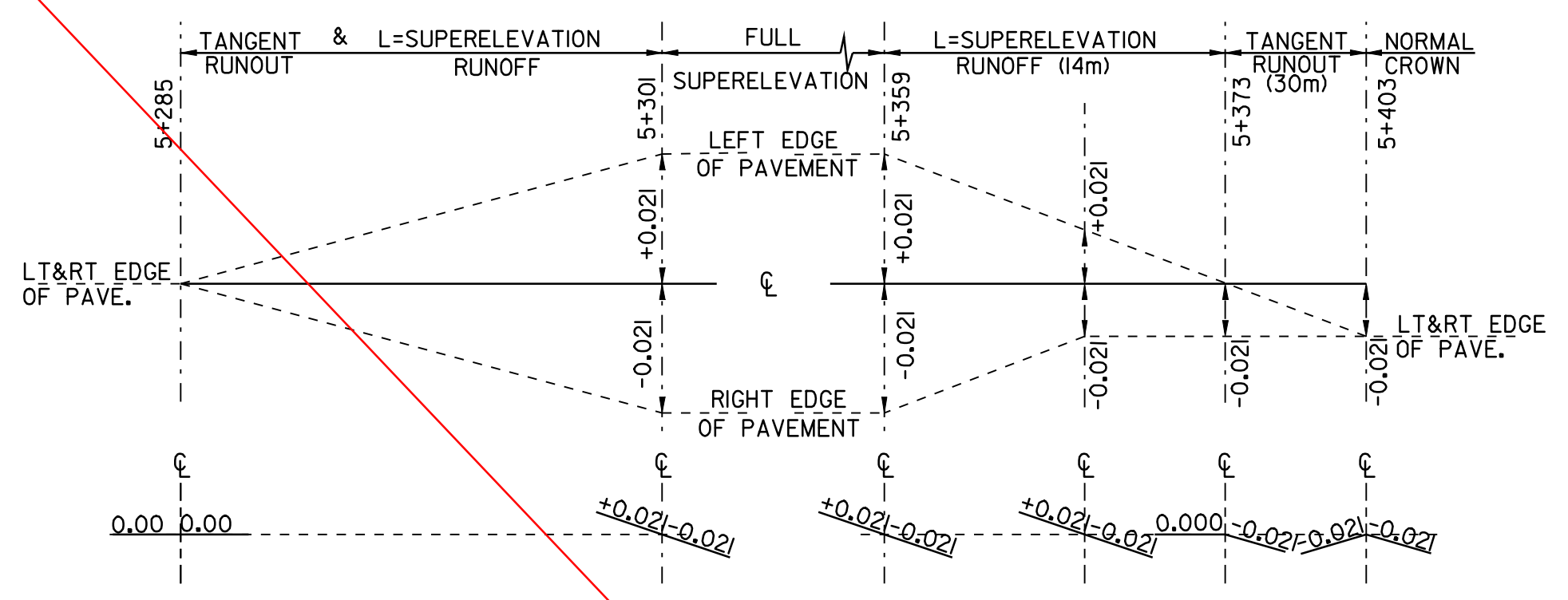
NOTE:  
THE CONTRACTOR IS RESPONSIBLE FOR THE ENGINEERING WORK  
REQUIRED TO LAYOUT AND MAINTAIN THE CROSS SLOPES IN THE  
REGRADEING OF THE RECLAIMED AREAS.



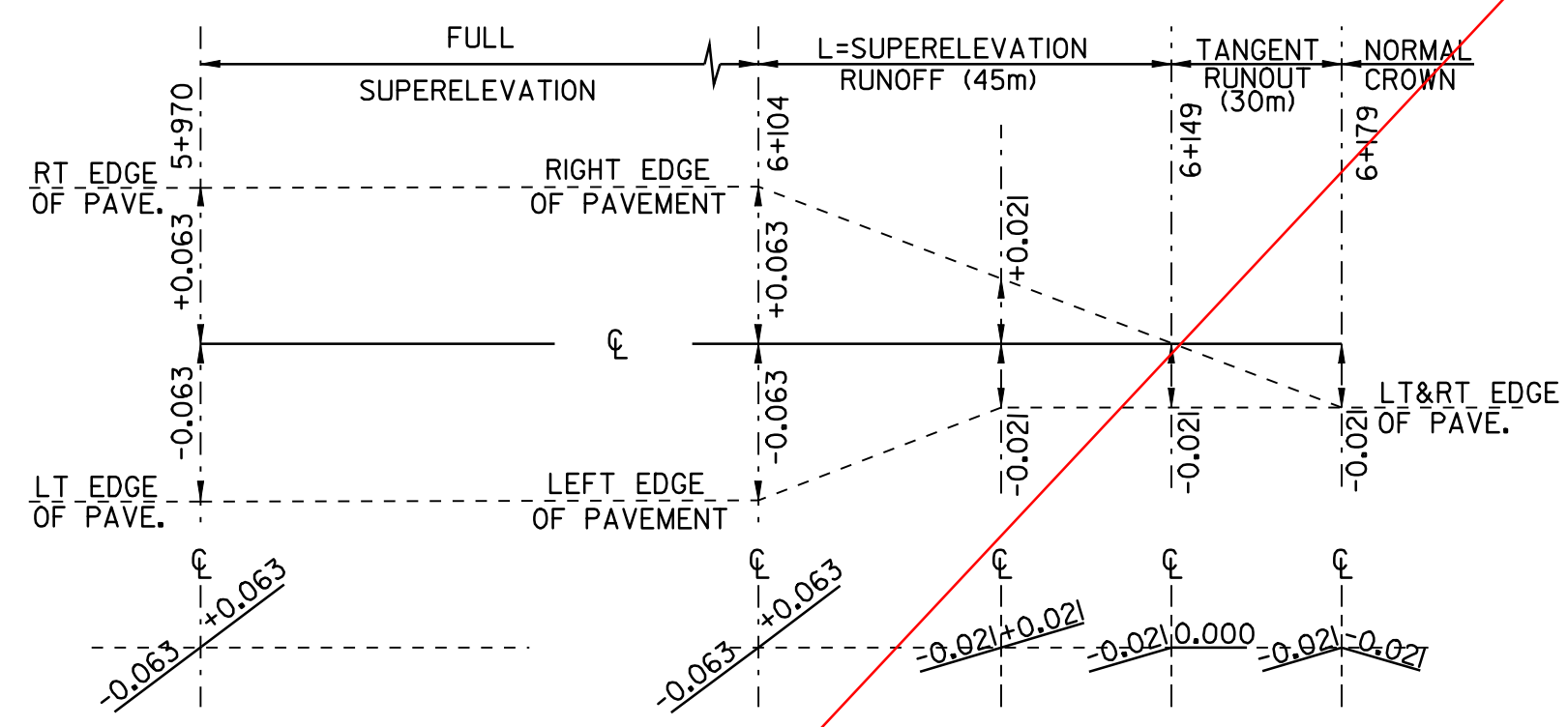
**SUPERELEVATION  
BANKING DIAGRAM  
SHEET #2**

DESIGNED BY	BCE/PJM	DATE	7-02
DRAWN BY	C.E.A., INC.	DATE	7-02
DESIGN FILE NO.	/pave/98b090/pb090.dgn		
PRF FILE	pb090bd2.1	DATE PLOTTED	09-MAY-2008
PROJ. NAME	MARSHFIELD - CABOT		
PROJ. NO.	NH 2104(1)S		
SHEET	28	OF	60 SHEETS

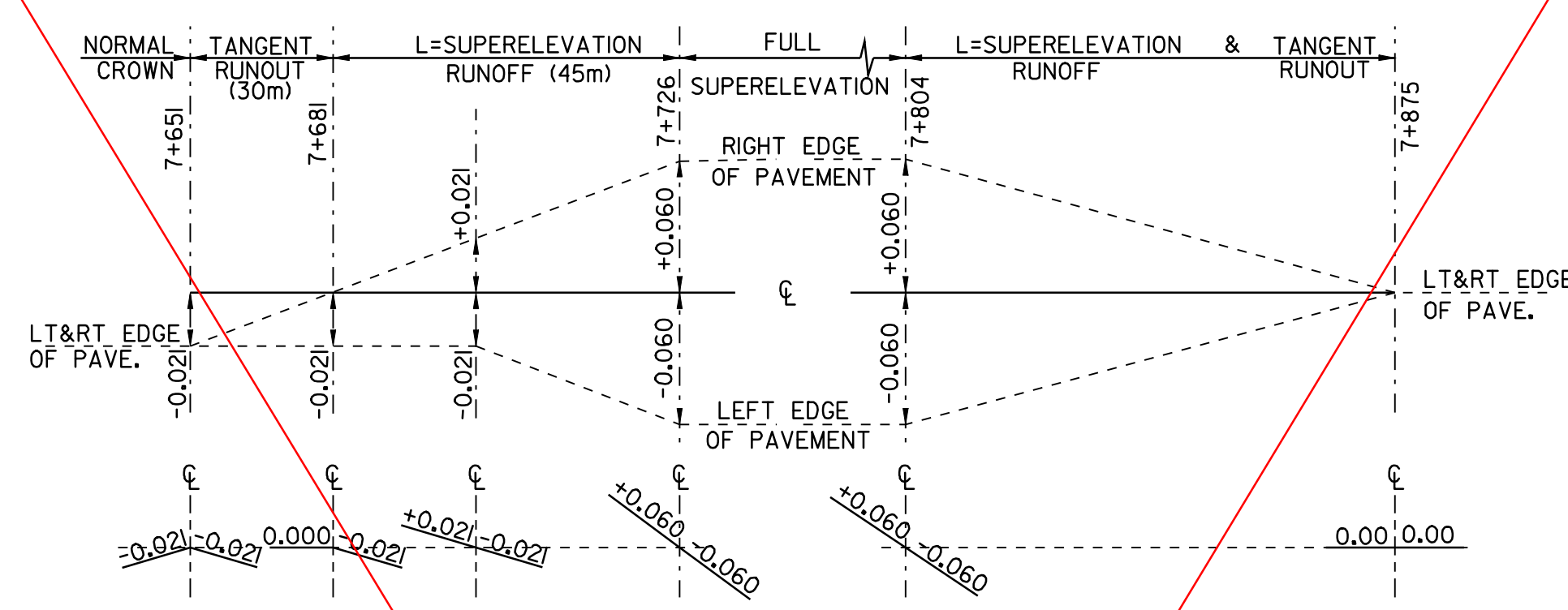




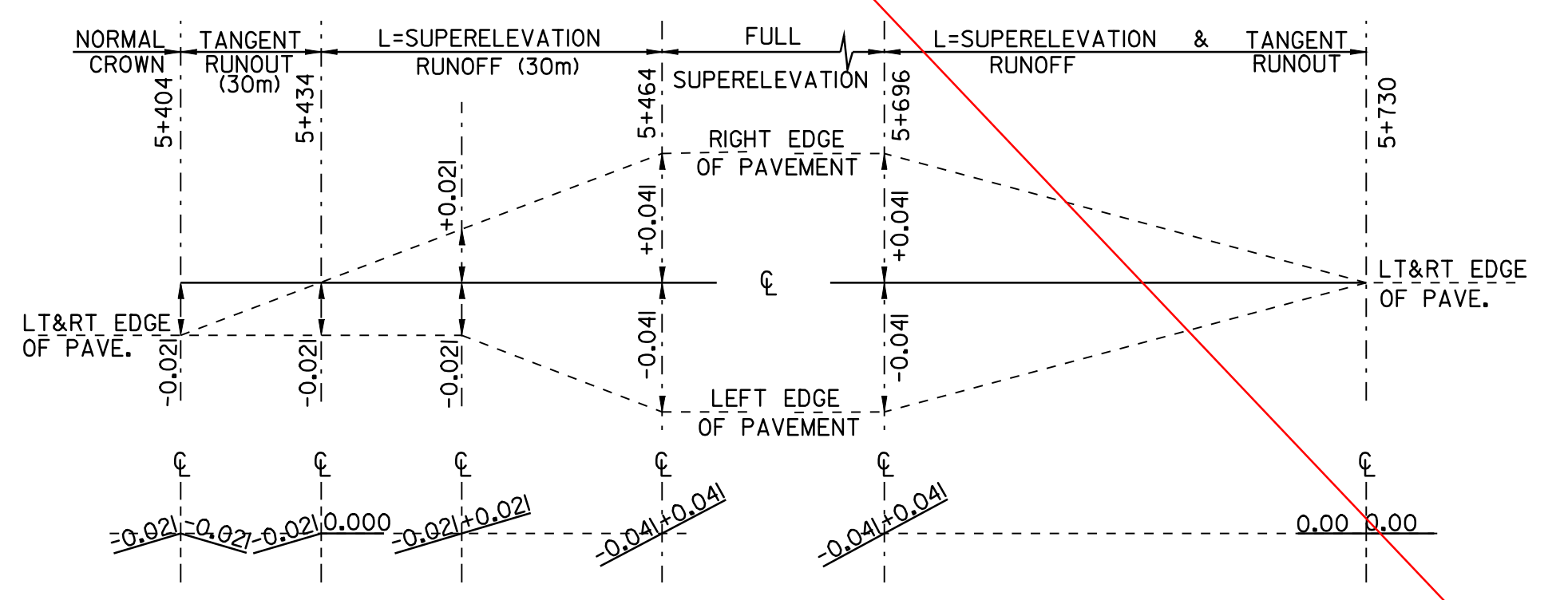
**SUPERELEVATION DIAGRAM**  
NTS  
**MARSHFIELD**  
PC=5+290 R=2,000m  
PT=5+370 V=80 km/h



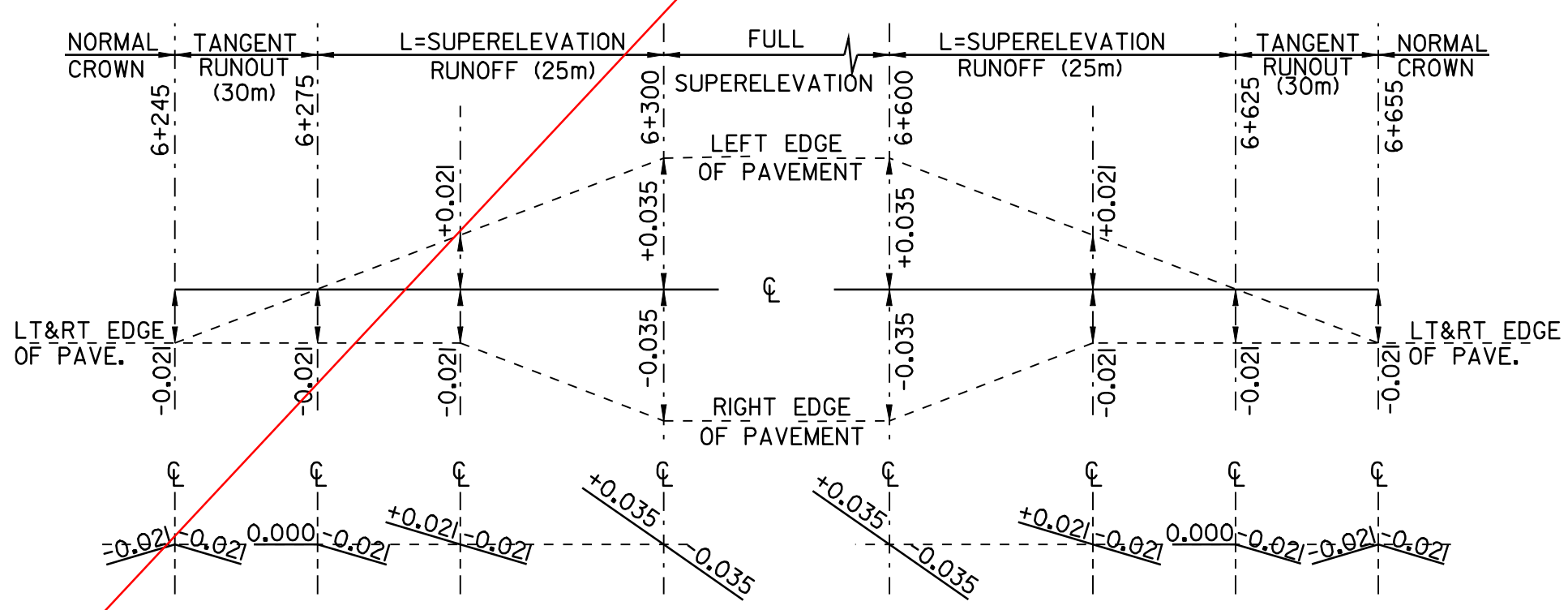
**SUPERELEVATION DIAGRAM**  
NTS  
**MARSHFIELD**  
PC=5+970 R=440m  
PT=6+140 V=80 km/h



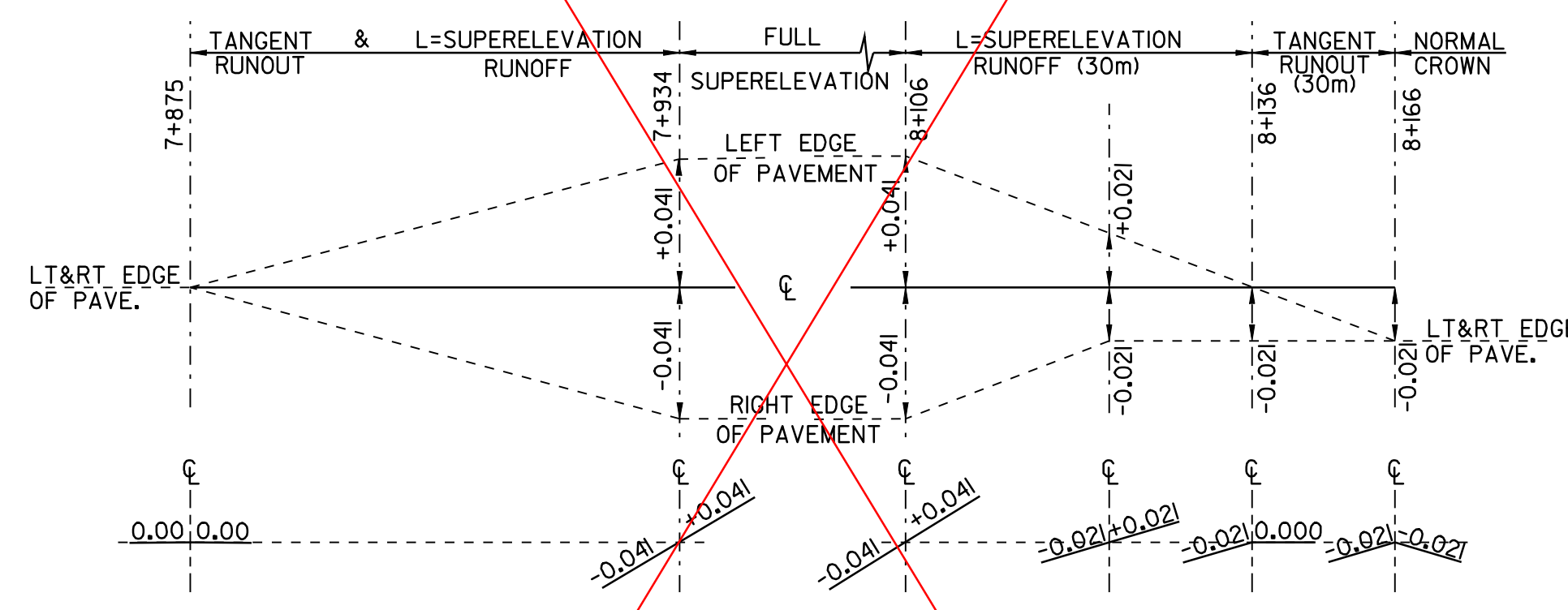
**SUPERELEVATION DIAGRAM**  
NTS  
**MARSHFIELD**  
PC=7+690 R=475m  
PT=7+840 V=80 km/h



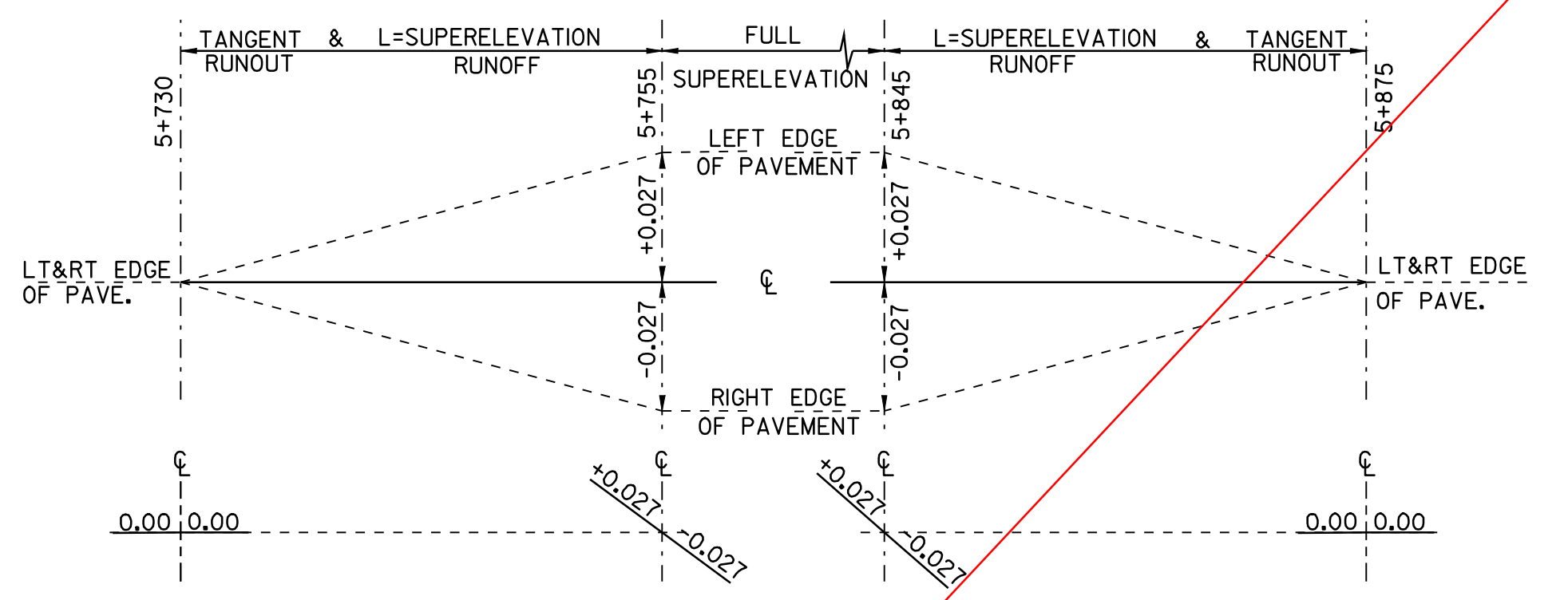
**SUPERELEVATION DIAGRAM**  
NTS  
**MARSHFIELD**  
PC=5+440 R=800m  
PT=5+720 V=80 km/h



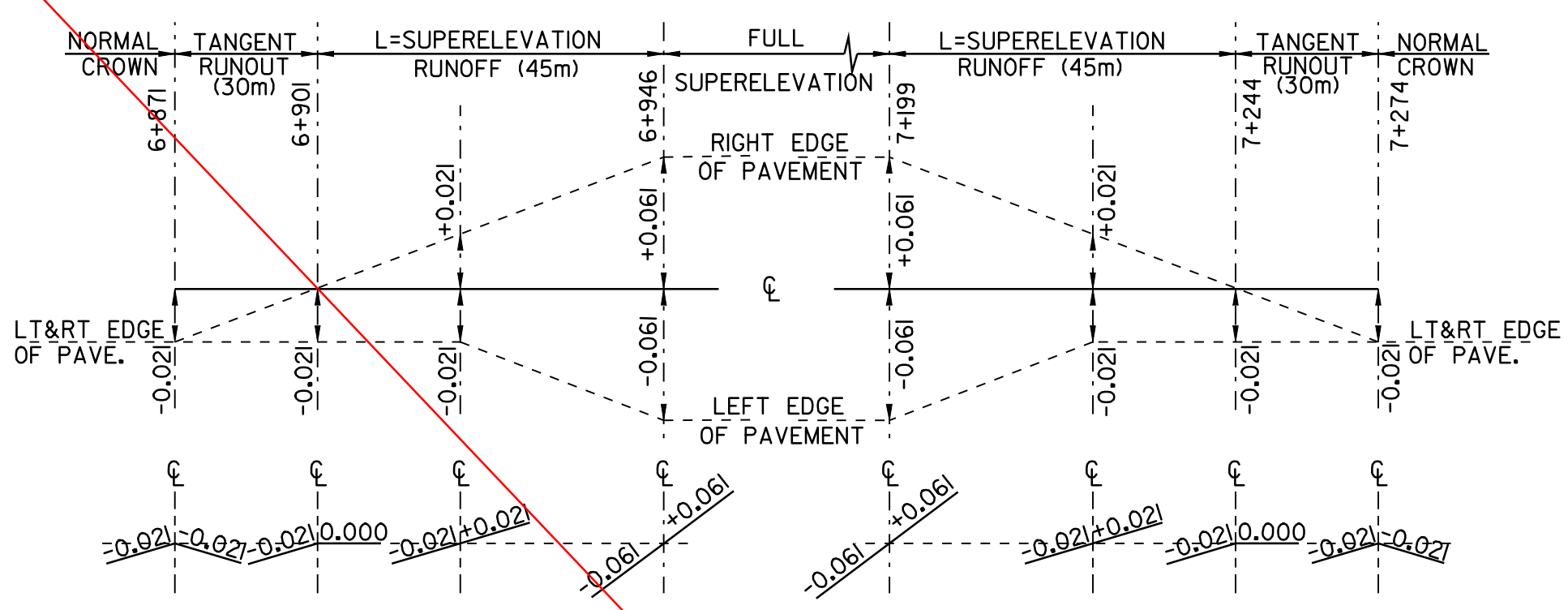
**SUPERELEVATION DIAGRAM**  
NTS  
**MARSHFIELD**  
PC=6+280 R=975m  
PT=6+620 V=80 km/h



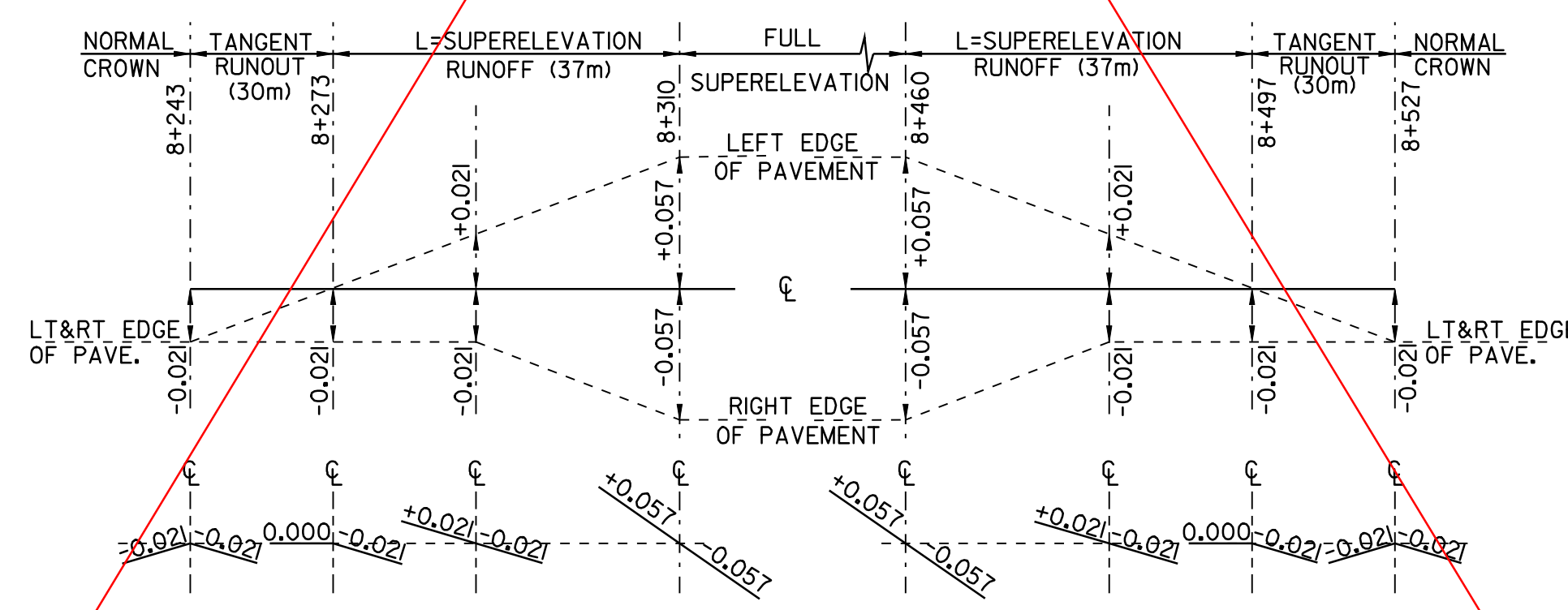
**SUPERELEVATION DIAGRAM**  
NTS  
**MARSHFIELD**  
PC=7+910 R=800m  
PT=8+130 V=80 km/h



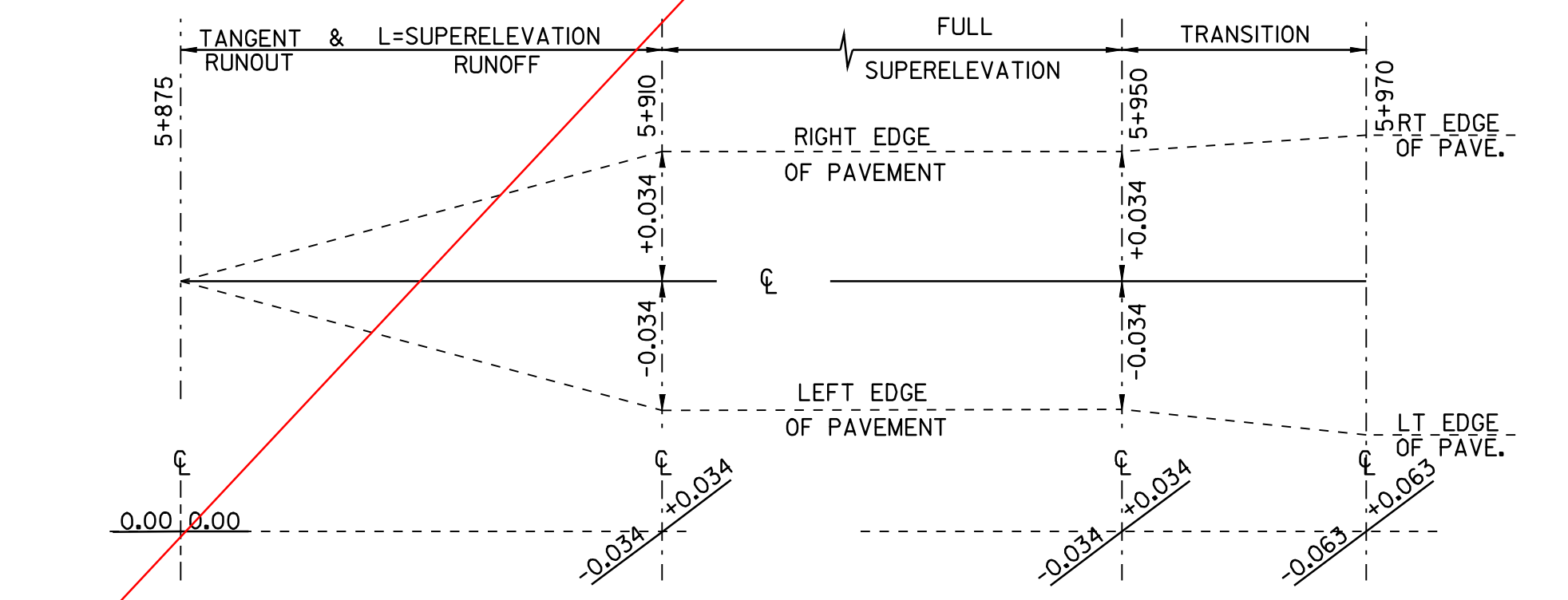
**SUPERELEVATION DIAGRAM**  
NTS  
**MARSHFIELD**  
PC=5+740 R=1,300m  
PT=5+860 V=80 km/h



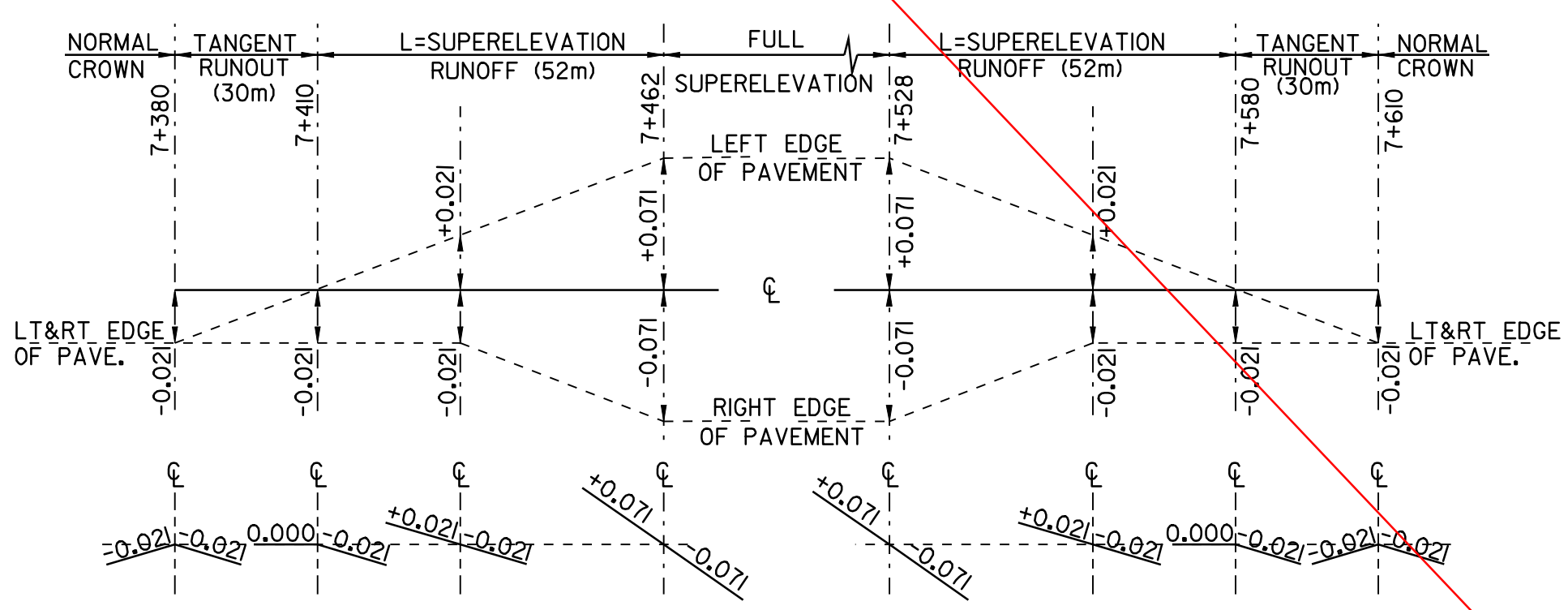
**SUPERELEVATION DIAGRAM**  
NTS  
**MARSHFIELD**  
PC=6+910 R=450m  
PT=7+220 V=80 km/h



**SUPERELEVATION DIAGRAM**  
NTS  
**MARSHFIELD**  
PC=8+280 R=600m  
PT=8+490 V=80 km/h



**SUPERELEVATION DIAGRAM**  
NTS  
**MARSHFIELD**  
PC=5+890 R=1,000m  
PT=5+950 V=80 km/h



**SUPERELEVATION DIAGRAM**  
NTS  
**MARSHFIELD**  
PC=7+420 R=350m  
PT=7+570 V=80 km/h

SEE REVISED HAND DRAWN BANKING DIAGRAMS

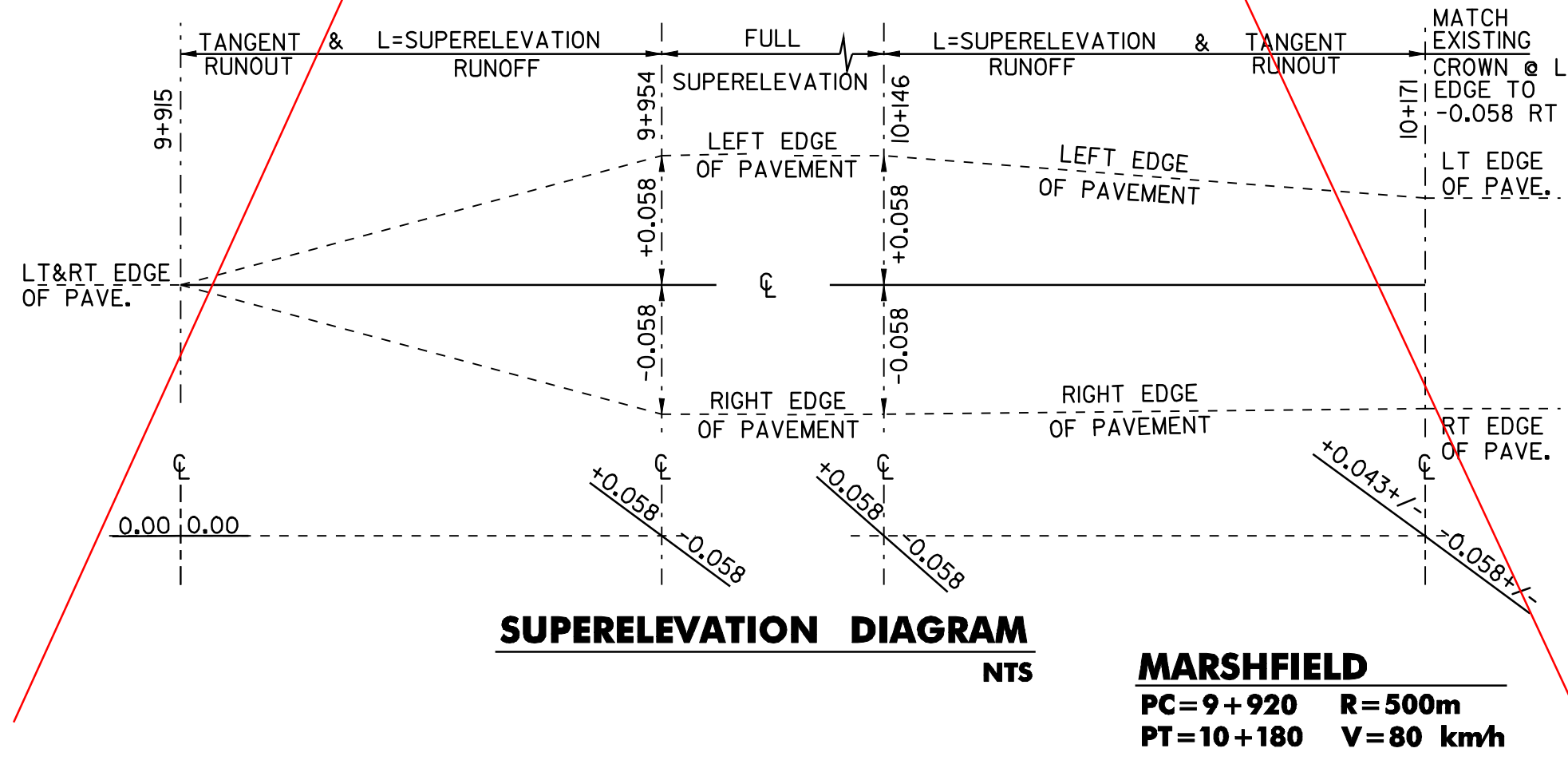
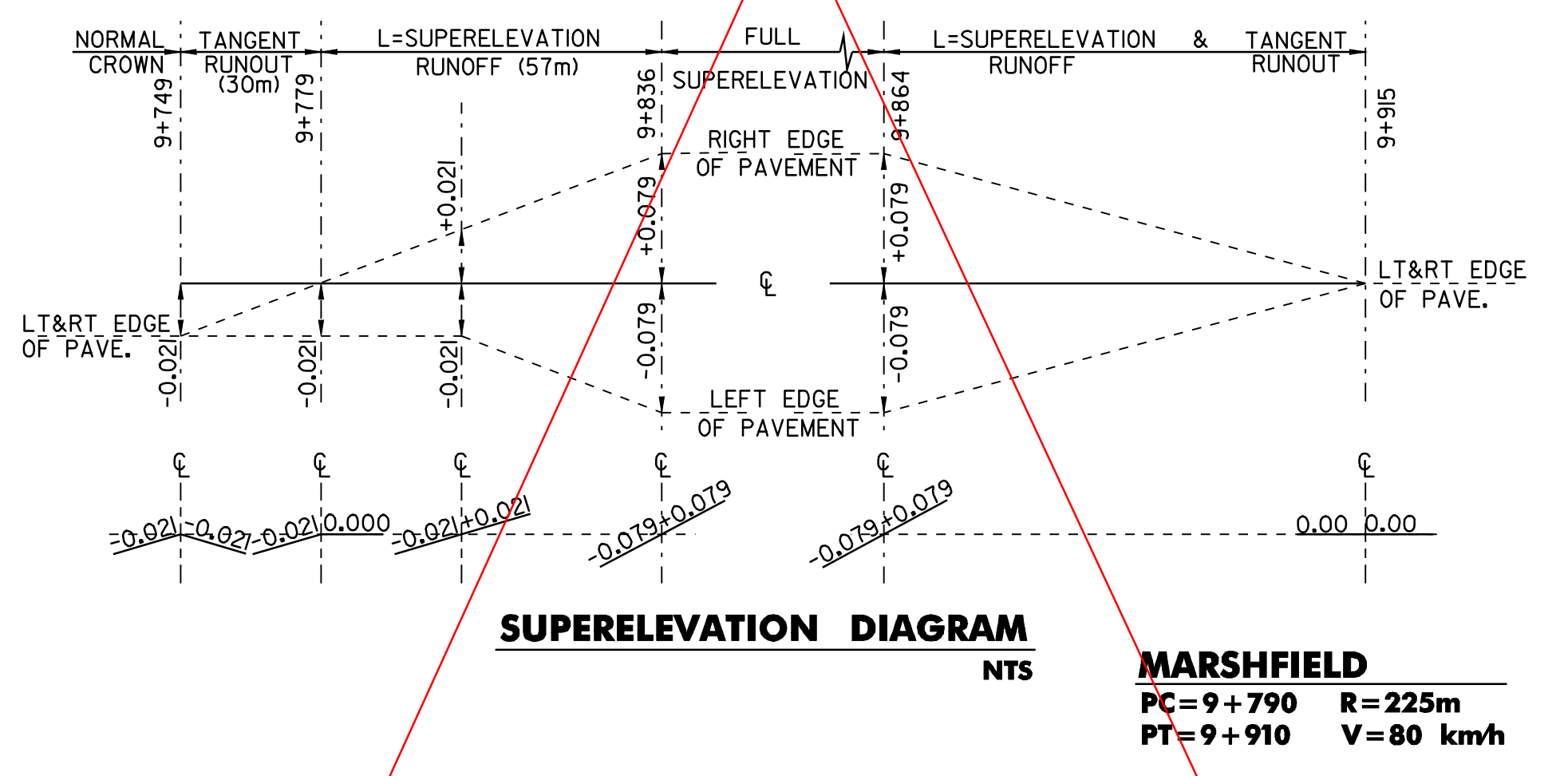
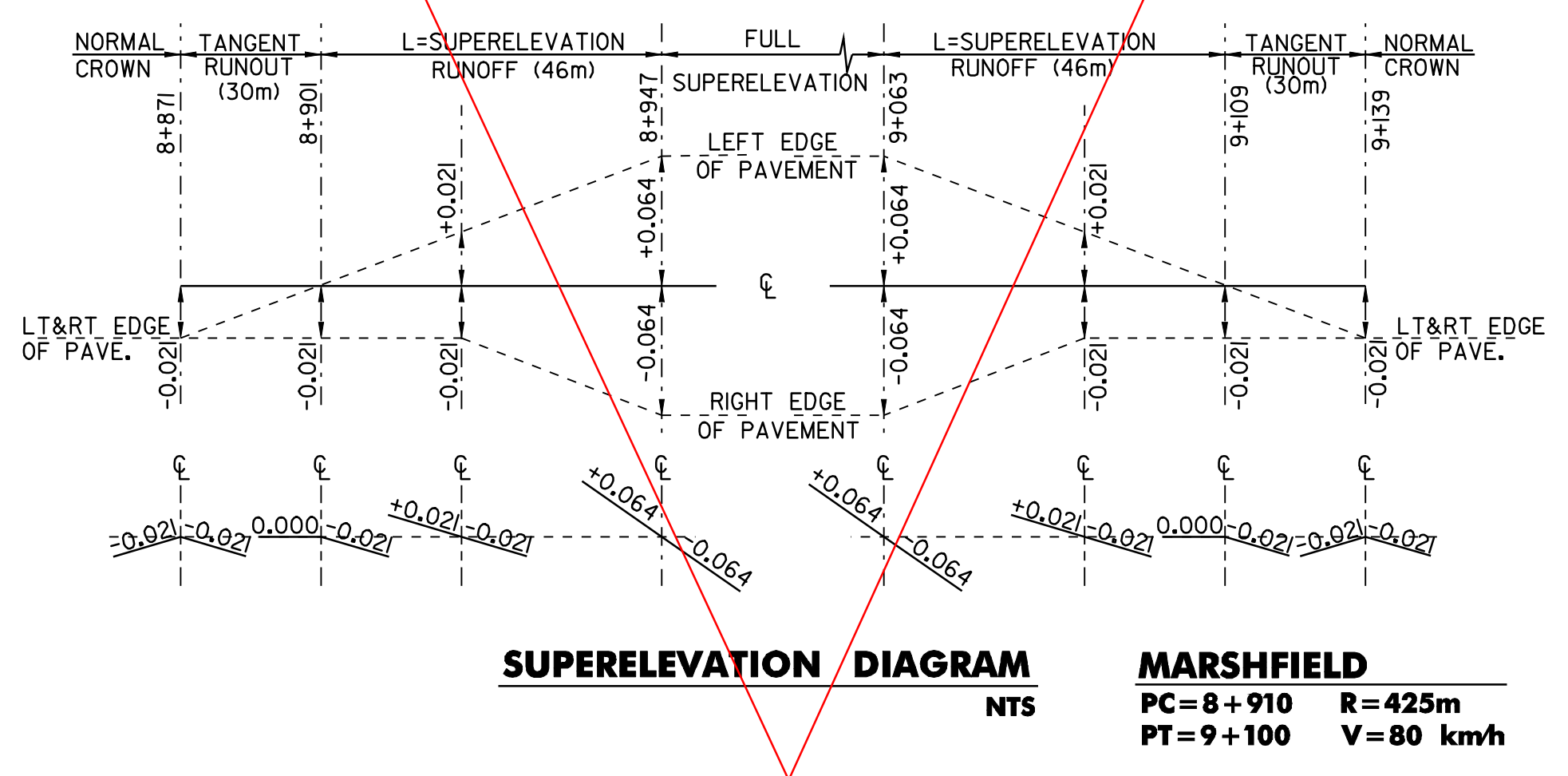
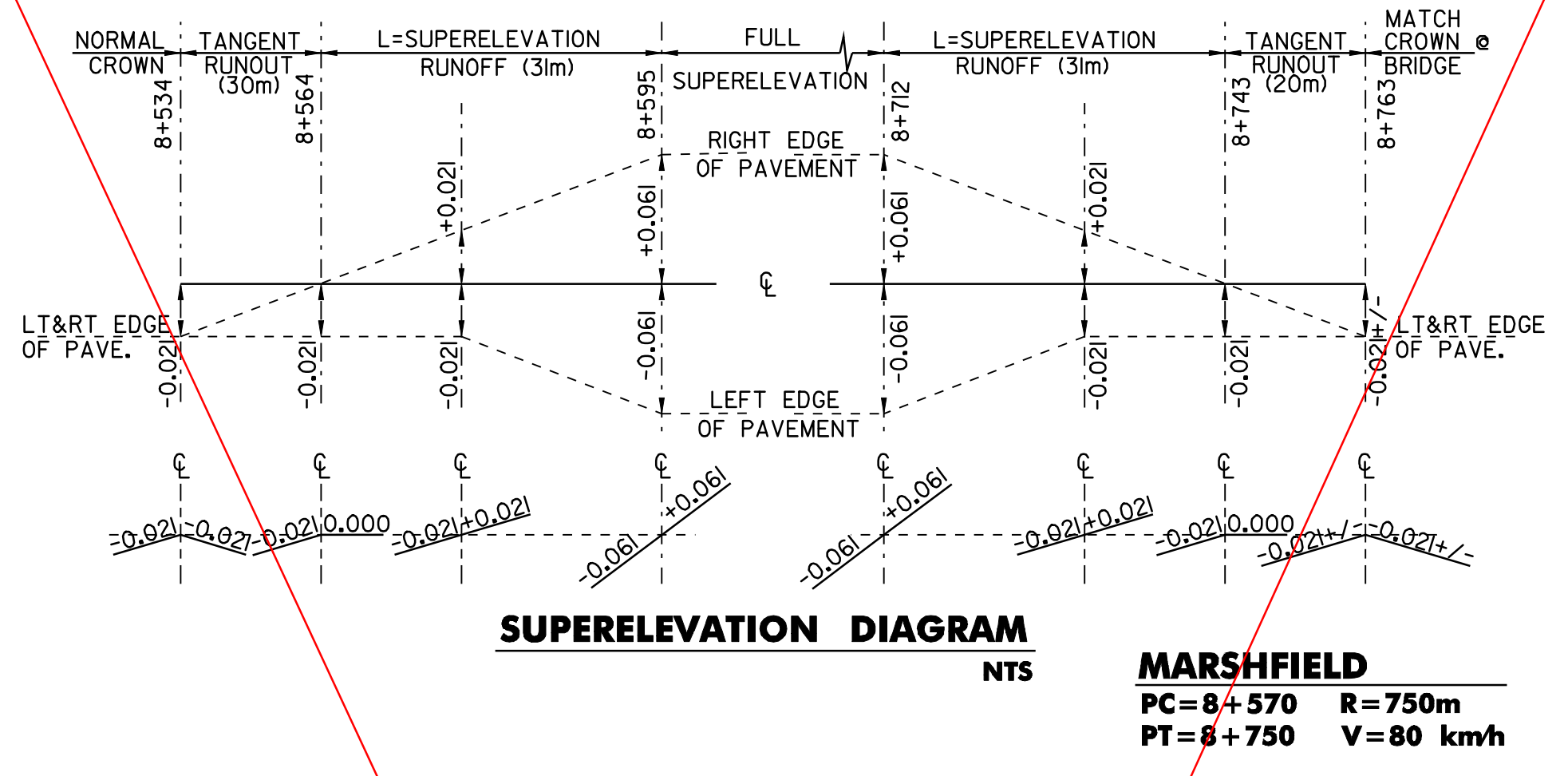
NOTE:  
THE CONTRACTOR IS RESPONSIBLE FOR THE ENGINEERING WORK  
REQUIRED TO LAYOUT AND MAINTAIN THE CROSS SLOPES IN THE  
REGRAVING OF THE RECLAIMED AREAS.



**SUPERELEVATION BANKING DIAGRAM SHEET #3**

DESIGNED BY	BCE/PJM	DATE	7-02
DRAWN BY	C.E.A., INC.	DATE	7-02
DESIGN FILE NO.	/pave/98b090/pb090.dgn		
PRF FILE	pb090bd3.i	DATE PLOTTED	09-MAY-2008
PROJ. NAME	MARSHFIELD - CABOT		
PROJ. NO.	NH 2104(1)S		
SHEET	29	OF	60 SHEETS





SEE REVISED HAND DRAWN BANKING DIAGRAMS

NOTE:  
THE CONTRACTOR IS RESPONSIBLE FOR THE ENGINEERING WORK  
REQUIRED TO LAYOUT AND MAINTAIN THE CROSS SLOPES IN THE  
REGRADING OF THE RECLAIMED AREAS.



**SUPERELEVATION  
BANKING DIAGRAM  
SHEET #4**

DESIGNED BY BCE/PJM DATE 7-02  
DRAWN BY C.E.A., INC. DATE 7-02  
DESIGN FILE NO. /pave/98b090/pb090.dgn  
PRF FILE pb090bd4.i DATE PLOTTED 09-MAY-2008  
PROJ. NAME **MARSHFIELD - CABOT**  
PROJ. NO. **NH 2104(1)S**  
SHEET **30** OF **60** SHEETS

KILOMETER MARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS		NEW & SALVAGED SIGNS				EXIST POST RETAIN	SALVAGE	NO. OF POSTS	NEW SIGN POSTS																REMARKS	SIGN DETAIL								
		EA	WIDTH (mm)	HEIGHT (mm)	"A"	"B"	SALV SIGN				SALV TIS	FLANGED CHANNEL			SQUARE STEEL (mm)			TUBULAR ALUMINUM Ø (mm)			TUBULAR STEEL Ø (mm)				W-SHAPE STEEL			FRAMING	REQUIRED	DETAIL ON SHEET NUMBER	STD. SHEET NUMBER					
												1.7	3.0	4.5	3.4	5.0	44	50	63	75	100	100 MOD	FOUND-ATION	75	89	100						125	FTG. SIZE		WEIGHT	POST SIZE
																																	kg/m	kg/m		
OPTION ITEMS																																				
MARSHFIELD 0+642 RT		1	150	200	0.03					1	X	X																				E-138M				
0+654 LT																															E-125M					
																															E-125M					
																															E-125M					
0+685 RT		1	150	200	0.03					1	X	X																			E-134M					
0+700 LT		1	150	200	0.03					1	X	X																			E-134M					
0+701 LT		1	750	750	0.56					1		X	X															50		E-153M						
0+773 LT																															E-125M					
0+844 RT		1	600	750	0.45					1		X	X																		REFER TO STANDARD E-121M FOR PLACEMENT.	E-141M				
0+854 RT		1	750	750	0.56					1		X	X																		E-143M					
		1	150	200	0.03																										E-138M					
0+966 RT		1	150	200	0.03					1	X	X																			E-138M					
1+287 LT		1	150	200	0.03					1	X	X																			E-138M					
1+609 RT		1	150	200	0.03					1	X	X																			E-138M					
1+931 LT		1	150	200	0.03					1	X	X																			E-138M					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."		m <sup>2</sup>	m <sup>2</sup>	EA.	m <sup>2</sup>		m	m	m	m	m	m	EA.	kg	kg	kg	EA.	kg	kg	kg	kg	EA.	EA.	kg							
	<b>SHEET TOTALS</b>	1.81			2.88			32.7			32.7																				

PROJECT: **MARSHFIELD - CABOT** PROJECT NO.: **NH 2104(1)S**  
 DATE: 7-02 SURVEY DATE:  
 DESIGN FILE NAME: /pave/98b090/pb090.dgn PLOT DATE: 09-MAY-2008 10:00  
 IPARM FILE NAME: pb090+01.I SURVEY DATE:  
 SURVEYED BY: DRAWN BY: C.E.A., INC.  
 SQUAD LEADER: SHEET: **31** OF **60**



KILOMETER MARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS		NEW & SALVAGED SIGNS				EXIST POST RETAIN SALVAGE	NO. OF POSTS	NEW SIGN POSTS																REMARKS	SIGN DETAIL				
		EA	WIDTH (mm)	HEIGHT (mm)	"A"	"B"	SALV SIGN			SALV TIS	FLANGED CHANNEL			SQUARE STEEL (mm)			TUBULAR ALUMINUM Ø (mm)			TUBULAR STEEL Ø (mm)				W-SHAPE STEEL			DETAIL ON SHEET NUMBER	STD. SHEET NUMBER			
											1.7	3.0	4.5	44	50	63	75	100	100 MOD	FOUND-ATION	75	89	100	125	FTG. SIZE				WEIGHT	POST SIZE	
																									kg/m						kg/m
OPTION ITEMS																															
2+130 RT		1	750	750	0.56				1			X		X															USE MIRROR IMAGE OF W1-4R.	49	
		1	450	450	0.20																									E-155M	
2+253 RT		1	150	200	0.03				1		X		X																	E-138M	
2+324 RT		1	1200	600	0.72				2			X		X																E-152M	
2+351 RT		1	1200	600	0.72				2			X		X																E-152M	
2+449 RT		1	750	750	0.56				1			X		X														W2-2		E-155M	
2+500 LT		1	750	750	0.56				1			X		X																E-151M	
		1	450	450	0.20																									E-155M	
2+575 LT		1	150	200	0.03				1		X		X																	E-138M	
2+601 RT		1	600	750	0.45				1			X		X														REFER TO STANDARD E-121M FOR PLACEMENT.		E-141M	
2+611 RT		1	750	750	0.56				1			X		X														BACK - TO - BACK		E-143M E-138M	
		1	150	200	0.03																										
2+773 LT		1	750	750	0.56				1			X		X														USE MIRROR IMAGE OF W2-2.		E-155M	
2+835 LT		1	750	750	0.56				1			X		X															49		

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."		m 2	m 2	EA.	m 2		m	m	m	m	m	m	EA.	kg	kg	kg	EA.	kg	kg	kg	kg	EA.	EA.	kg					
	<b>SHEET TOTALS</b>	5.74						56.0	56.0																				

PROJECT: <b>MARSHFIELD - CABOT</b>	PROJECT NO.: <b>NH 2104(1)S</b>
	DATE: 7-02
DESIGN FILE NAME: /pave/98b090/pb090.dgn	PLOT DATE: 09-MAY-2008 10:00
IPARM FILE NAME: pb090+02.I	SURVEY DATE:
SURVEYED BY:	DRAWN BY: C.E.A., INC.
SQUAD LEADER:	SHEET: <b>32</b> OF <b>60</b>





KILOMETER MARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS		NEW & SALVAGED SIGNS				EXIST POST SALVAGE RETAIN	NO. OF POSTS	NEW SIGN POSTS															REMARKS	SIGN DETAIL							
		EA	WIDTH (mm)	HEIGHT (mm)	"A"	"B"	SALV SIGN			SALV TIS	FLANGED CHANNEL			SQUARE STEEL (mm)			TUBULAR ALUMINUM Ø (mm)			TUBULAR STEEL Ø (mm)				W-SHAPE STEEL			FRAMING SIGN	REFURBISHED	DETAIL ON SHEET NUMBER	STD. SHEET NUMBER			
											1.7	3.0	4.5	44	50	63	75	100	100 MOD	FOUND-ACTION	75	89	100	125		FTG. SIZE					WEIGHT	POST SIZE	
																										kg/m							kg/m

OPTION ITEMS																															
3+500 RT		1	600	750	0.45					1		X		X														REFER TO STANDARD E-121M FOR PLACEMENT.	50	E-141M	
3+540 RT		1	150	200	0.03					1		X		X																E-138M	
3+860 LT		1	150	200	0.03					1		X		X																E-138M	
4+011 LT		1	750	750	0.56					1		X		X													BACK - TO - BACK		E-143M E-138M		
4+020 LT		1	600	750	0.45					1		X		X													REFER TO STANDARD E-121M FOR PLACEMENT.		E-141M		
4+184 RT		1	150	200	0.03					1		X		X																E-138M	
4+510 RT		1	150	200	0.03					1		X		X																E-138M	
4+824 RT		1	150	200	0.03					1		X		X																E-138M	
4+956 RT		1	750	750	0.56					1		X		X																50	E-153M
5+016 RT		1	750	750	0.56					1		X		X																50	
5+146 LT		1	150	200	0.03					1		X		X																	E-138M
5+472 RT		1	150	200	0.03					1		X		X																	E-138M
5+486 LT		1	750	750	0.56					1		X		X													VW-133			E-154M	
5+547 LT		1	750	750	0.56					1		X		X																50	E-153M

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."		m 2	m 2	EA.	m 2		m	m	m	m	m	m	EA.	kg	kg	kg	EA.	kg	kg	kg	kg	EA.	EA.	kg							
	<b>SHEET TOTALS</b>	3.94																													

PROJECT: <b>MARSHFIELD - CABOT</b>	PROJECT NO.: <b>NH 2104(1)S</b>
	DATE: 7-02
DESIGN FILE NAME: /pave/98b090/pb090.dgn	PLOT DATE: 09-MAY-2008 10:00
IPARM FILE NAME: pb090+04.i	SURVEY DATE:
SURVEYED BY:	DRAWN BY: C.E.A., INC.
SQUAD LEADER:	SHEET: <b>34</b> OF <b>60</b>





KILOMETER MARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS		NEW & SALVAGED SIGNS				EXIST POST SALVAGE RETAIN	NO. OF POSTS	NEW SIGN POSTS															REMARKS	SIGN DETAIL									
		EA	WIDTH (mm)	HEIGHT (mm)	"A"	"B"	SALV SIGN			SALV TIS	FLANGED CHANNEL			SQUARE STEEL (mm)			TUBULAR ALUMINUM Ø (mm)			TUBULAR STEEL Ø (mm)				W-SHAPE STEEL			DETAIL ON SHEET NUMBER	STD. SHEET NUMBER							
											1.7	3.0	4.5	3.4	3.9	5.0	75	100	100 MOD	FOUND- ATION	75	89	100	125		FTG. SIZE			WEIGHT	POST SIZE					
																										kg/m					kg/m	kg/m	600 mm	750 mm	
7+287 RT		1	750	750	0.56				1			X		X																				50	
		1	600	450	0.27																													E-152M	
7+298 LT		1	750	750	0.56				1			X		X																				E-143M E-138M	
7+308 LT		1	600	750	0.45				1			X		X																				E-141M	
																																		E-142M	
7+364 RT		1	150	200	0.03				1			X		X																				E-134M	
7+368 LT		1	150	200	0.03				1			X		X																				E-134M	
7+400 LT		1	150	200	0.03				1			X		X																				E-138M	
7+720 RT		1	150	200	0.03				1			X		X																				E-138M	
8+047 RT		1	150	200	0.03				1			X		X																				E-138M	
8+368 RT		1	150	200	0.03				1			X		X																				E-138M	
8+758 RT		1	150	200	0.03				1			X		X																				E-134M	
8+690 LT		1	150	200	0.03				1			X		X																				E-138M	
9+012 RT		1	150	200	0.03				1			X		X																				E-138M	
8+771 LT		1	150	200	0.03				1			X		X																				E-134M	

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."		m 2	m 2	EA.	m 2				m	m	m	m	m	m	EA.	kg	kg	kg	EA.	kg	kg	kg	kg	EA.	EA.	kg							
	<b>SHEET TOTALS</b>		2.17		1							40.8	40.8																				

PROJECT: <b>MARSHFIELD - CABOT</b>	PROJECT NO.: <b>NH 2104(1)S</b>
	DATE: 7-02
DESIGN FILE NAME: /pave/98b090/pb090.dgn	PLOT DATE: 09-MAY-2008 10:00
IPARM FILE NAME: pb090+06.I	SURVEY DATE:
SURVEYED BY:	DRAWN BY: C.E.A., INC.
SQUAD LEADER:	SHEET: <b>36</b> OF <b>60</b>

KILOMETER MARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS		NEW & SALVAGED SIGNS				EXIST. POST NO. OF POSTS	NEW SIGN POSTS															REMARKS	SIGN DETAIL												
		EA	WIDTH (mm)	HEIGHT (mm)	"A"	"B"	SALV SIGN		SALV TIS	FLANGED CHANNEL			SQUARE STEEL (mm)			TUBULAR ALUMINUM Ø (mm)			TUBULAR STEEL Ø (mm)				W-SHAPE STEEL			DETAIL ON SHEET NUMBER	STD. SHEET NUMBER										
										1.7	3.0	4.5	44	50	63	75	100	100 MOD	75	89	100	125	FTG. SIZE		WEIGHT			POST SIZE									
																							kg/m						kg/m	kg/m	600 mm	750 mm					
9+039 RT		1	600	750	0.45				1		X		X																							REFER TO STANDARD E-121 M FOR PLACEMENT.	E-141 M
9+049 RT		1	750	750	0.56				1		X		X																						BACK - TO - BACK	E-143 M E-138 M	
9+334 LT		1	150	200	0.03				1		X		X																							E-138 M	
9+656 RT		1	150	200	0.03				1		X		X																							E-138 M	
9+765 RT		1	900	900	0.81				2		X		X																						51		
9+762 LT		1	750	750	0.56				1		X		X																						50		
		1	600	450	0.27																															E-152 M	
9+870 RT		1	750	450	0.34				1		X		X																							E-128 M	
9+978 LT		1	600	750	0.45				1		X		X																							E-142 M	
		1	150	200	0.03																																E-138 M
9+978 RT		1	600	750	0.45				1		X		X																							E-142 M	
10+271 RT		1	750	750	0.56				1		X		X																							E-151 M	
		1	450	450	0.20																															E-155 M	

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."		m 2	m 2	EA.	m 2		m	m	m	m	m	m	EA.	kg	kg	kg	EA.	kg	kg	kg	kg	EA.	EA.	kg	PROJECT: <b>MARSHFIELD - CABOT</b>		PROJECT NO.: <b>NH 2104(1)S</b> DATE: 7-02	
							5.4	41.4	5.4	41.4															DESIGN FILE NAME: /pave/98b090/pb090.dgn		PLOT DATE: 09-MAY-2008 10:00	
																									IPARM FILE NAME: pb090+07.1		SURVEY DATE:	
																									SURVEYED BY:		DRAWN BY: C.E.A., INC.	
																									SQUAD LEADER:		SHEET: <b>37</b> OF <b>60</b>	
		<b>SHEET TOTALS</b>	4.77				46.8	46.8																				



KILOMETER MARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS		NEW & SALVAGED SIGNS				EXIST POST SALVAGE RETAIN	NO. OF POSTS	NEW SIGN POSTS															REMARKS	SIGN DETAIL						
		EA	WIDTH (mm)	HEIGHT (mm)	"A"	"B"	SALV SIGN			SALV TIS	FLANGED CHANNEL			SQUARE STEEL (mm)			TUBULAR ALUMINUM Ø (mm)			TUBULAR STEEL Ø (mm)				W-SHAPE STEEL			FRAMING	REFURBISHED	DETAIL ON SHEET NUMBER	STD. SHEET NUMBER		
											1.7	3.0	4.5	44	50	63	75	100	100 MOD	75	89	100	125	FTG. SIZE		WEIGHT					POST SIZE	
																								kg/m								kg/m
10+325 RT		1	750	750	0.56				1			X		X																	50	E-153M
10+338 LT		1	750	750	0.56				1			X		X																	E-143M E-138M	
10+340 LT		1	600	750	0.45				1			X		X																	E-141M	
10+355 RT		1	1800	250	0.45				2			X		X																	E-123M	
10+361 RT		1	150	200	0.03				1			X		X																	E-134M	
10+369 LT		1	150	200	0.03				1			X		X																	E-134M	
10+387 RT		1	600	900	0.54				1			X		X																49		
10+387 LT		1	750	750	0.56				1			X		X																	E-143M E-138M	
10+397 LT		1	600	750	0.45				1			X		X																	E-141M	
10+411 LT		1	600	900	0.54				1			X		X																49		
10+456 LT		1	1800	250	0.45				2			X		X																	E-123M	

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."		m 2	m 2	EA.	m 2		m	m	m	m	m	m	EA.	kg	kg	kg	EA.	kg	kg	kg	kg	EA.	EA.	kg							
	<b>SHEET TOTALS</b>	4.68									56.0	56.0																			

PROJECT: <b>MARSHFIELD - CABOT</b>	PROJECT NO.: <b>NH 2104(1)S</b>
	DATE: 7-02
DESIGN FILE NAME: /pave/98b090/pb090.dgn	PLOT DATE: 09-MAY-2008 10:00
IPARM FILE NAME: pb090+08.1	SURVEY DATE:
SURVEYED BY:	DRAWN BY: C.E.A., INC.
SQUAD LEADER:	SHEET: <b>38</b> OF <b>60</b>

KILOMETER MARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS		NEW & SALVAGED SIGNS				EXIST POST RETAIN	NO. OF POSTS	NEW SIGN POSTS																REMARKS	SIGN DETAIL	
		EA	WIDTH (mm)	HEIGHT (mm)	"A"	"B"	SALV SIGN			SALV TIS	FLANGED CHANNEL			SQUARE STEEL (mm)			TUBULAR ALUMINUM Ø (mm)			TUBULAR STEEL Ø (mm)				W-SHAPE STEEL			DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
											1.7	3.0	4.5	44	50	63	75	100	100 MOD	FOUND-ATION	75	89	100	125	FTG. SIZE			

OPTION ITEMS										75	100	100 MOD	75	89	100	125	600 mm	750 mm	WEIGHT	POST SIZE	REMARKS	DETAIL ON SHEET NUMBER	STD. SHEET NUMBER		
10+472 RT		1	600	750	0.45					1															
		1	600	750	0.45																				E-142 M
10+482 RT		1	750	750	0.56					1													BACK - TO - BACK		E-143 M E-138 M
10+498 LT		1	600	600	0.36					1															E-143 M
10+387 RT		1	600	900	0.54					1														49	
10+529 LT		1	750	750	0.56					1															E-151 M
		1	450	450	0.20																				E-155 M
10+575 LT		1	750	750	0.56					1															E-143 M
10+581 LT		1	600	750	0.45					1													REFER TO STANDARD E-121 M FOR PLACEMENT.		E-141 M
10+587 RT		1	600	750	0.45					1													REFER TO STANDARD E-121 M FOR PLACEMENT.		E-141 M
10+593 RT		1	750	750	0.56					1															E-143 M
10+613 RT		1	600	600	0.36					1															E-143 M
		1	600	300	0.18																				E-140 M
		1	150	200	0.03																				E-138 M

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."		m 2	m 2	EA.	m 2				m	m	m	m	m	m	EA.	kg	kg	kg	EA.	kg	kg	kg	kg	EA.	EA.	kg			
	<b>SHEET TOTALS</b>	5.74									46.0		46.0																

PROJECT: **MARSHFIELD - CABOT** PROJECT NO.: **NH 2104(1)S**  
 DATE: 7-02 SURVEY DATE:  
 DESIGN FILE NAME: /pave/98b090/pb090.dgn PLOT DATE: 09-MAY-2008 10:00  
 IPARM FILE NAME: pb090+09.1 SURVEY DATE:  
 SURVEYED BY: DRAWN BY: C.E.A., INC.  
 SQUAD LEADER: SHEET: **39** OF **60**





KILOMETER MARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS		NEW & SALVAGED SIGNS				EXIST POST SALVAGE RETAIN	NO. OF POSTS	NEW SIGN POSTS																REMARKS	SIGN DETAIL							
		EA	WIDTH (mm)	HEIGHT (mm)	"A"	"B"	SALV SIGN			SALV TIS	FLANGED CHANNEL			SQUARE STEEL (mm)			TUBULAR ALUMINUM Ø (mm)			TUBULAR STEEL Ø (mm)				W-SHAPE STEEL			DETAIL ON SHEET NUMBER	STD. SHEET NUMBER						
											1.7	3.0	4.5	44	50	63	75	100	100 MOD	FOUND-ATION	75	89	100	125	FTG. SIZE				WEIGHT	POST SIZE				
																									kg/m						kg/m	kg/m	600 mm	750 mm
10+805 LT		1	1800	250	0.45				2			X		X																				E-123M
10+805 RT																																	E-125M	
																																	E-125M	
																																	E-125M	
10+825 LT		1	600	900	0.54				1			X		X																			49	
10+830 LT		1	600	300	0.18				1			X		X																			E-136AM	
		1	600	600	0.36																												E-136AM	
10+835 RT		1	600	300	0.18				2			X		X																			E-136CM	
		1	750	600	0.45																												E-136CM	
		1	525	375	0.20																												E-136AM	
10+835 RT		1	600	600	0.36				1			X		X																			E-143M	
		1	600	300	0.18																													E-140M
10+844 RT		1	600	750	0.45				1			X		X																				REFER TO STANDARD E-121M FOR PLACEMENT.
		1	600	750	0.45																													E-142M

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."		m <sup>2</sup>	m <sup>2</sup>	EA.	m <sup>2</sup>																													
	<b>SHEET TOTALS</b>	4.54			2.16						36.8		36.8																					

PROJECT: **MARSHFIELD - CABOT** PROJECT NO.: **NH 2104(1)S**  
 DATE: 7-02  
 DESIGN FILE NAME: /pave/98b090/pb090.dgn PLOT DATE: 09-MAY-2008 10:00  
 IPARM FILE NAME: pb090t11.i SURVEY DATE:  
 SURVEYED BY: DRAWN BY: C.E.A., INC.  
 SQUAD LEADER: SHEET: **41** OF **60**



KILOMETER MARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST RETAIN SALVAGE	NO. OF POSTS	NEW SIGN POSTS															REMARKS	SIGN DETAIL				
		EA	WIDTH (mm)	HEIGHT (mm)	"A"	"B"	SALV SIGN	SALV TIS			FLANGED CHANNEL			SQUARE STEEL (mm)			TUBULAR ALUMINUM Ø (mm)			TUBULAR STEEL Ø (mm)				W-SHAPE STEEL			DETAIL ON SHEET NUMBER	STD. SHEET NUMBER			
											1.7	3.0	4.5	44	50	63	75	100	100 MOD	FOUND-ATION	75	89	100	125	FTG. SIZE				WEIGHT	POST SIZE	
																									kg/m						kg/m
OPTION ITEMS																															
10+854 RT		1	750	750	0.56					1			X	X														BACK - TO - BACK	E-143M		
		1	150	200	0.03																							E-138M			
10+860 LT		1	750	750	0.56					1			X	X														BACK - TO - BACK	E-143M		
		1	150	200	0.03																								E-138M		
10+872 LT		1	750	750	0.56					1			X	X															E-143M		
10+891 LT		1	750	750	0.56					1			X	X														BACK - TO - BACK	E-143M		
		1	150	200	0.03																								E-138M		
10+898 LT		1	750	750	0.56					1			X	X															E-143M		
10+898 LT		1	600	750	0.45					1			X	X														REFER TO STANDARD E-121M FOR PLACEMENT.	E-141M		
		1	600	750	0.45																								E-142M		
10+924 LT		1	600	300	0.18					2			X	X															E-136AM		
		1	600	300	0.18																								E-136CM		
		1	600	600	0.36																								E-136AM		
		1	750	600	0.45																								E-136CM		
		1	525	375	0.20																								E-136AM		
		1	525	375	0.20																								E-136CM		
10+973 LT		1	1800	250	0.45					2			X	X															E-123M		
		1	1800	250	0.45																								E-123M		
		1	1800	250	0.45																								E-123M		

KILOMETER MARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS		NEW & SALVAGED SIGNS				EXIST POST SALVAGE	NO. OF POSTS	NEW SIGN POSTS															REMARKS	SIGN DETAIL									
		EA	WIDTH (mm)	HEIGHT (mm)	"A"	"B"	SALV SIGN			SALV TIS	FLANGED CHANNEL			SQUARE STEEL (mm)			TUBULAR ALUMINUM Ø (mm)			TUBULAR STEEL Ø (mm)				W-SHAPE STEEL		DETAIL ON SHEET NUMBER	STD. SHEET NUMBER								
											1.7	3.0	4.5	44	50	63	75	100	100 MOD	FOUND-ATION	75	89	100	125				FTG. SIZE		WEIGHT	POST SIZE				
										OPTION ITEMS																									
11+008 RT		1	600	750	0.45				1			X		X																					E-142M
11+050 RT		1	1800	250	0.45				2			X		X																				E-123M	
		1	1800	250	0.45																													E-123M	
11+064 LT		1	525	375	0.20				1			X		X																				E-136CM	
		1	750	600	0.45																													E-136CM	
11+200 RT		1	600	750	0.45				1			X		X																				REFER TO STANDARD E-121 M FOR PLACEMENT.	E-141M
		1	600	750	0.45																													E-142M	
11+206 RT		1	750	750	0.56				1			X		X																				49	
11+206 RT		1	750	750	0.56				1			X		X																				E-143M	
		1	150	200	0.03																													E-138M	

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."	m 2		m 2		EA.	m 2		m	m	m	m	m	m		EA.	kg	kg	kg	EA.	kg	kg	kg	EA.	EA.	kg										
									32.2			32.2																							
	<b>SHEET TOTALS</b>		4.05						32.2			32.2																							

PROJECT: <b>MARSHFIELD - CABOT</b>	PROJECT NO.: <b>NH 2104(1)S</b>
	DATE: 7-02
DESIGN FILE NAME: /pave/98b090/pb090.dgn	PLOT DATE: 09-MAY-2008 10:00
IPARM FILE NAME: pb090t13.1	SURVEY DATE:
SURVEYED BY:	DRAWN BY: C.E.A., INC.
SQUAD LEADER:	SHEET: <b>43</b> OF <b>60</b>



KILOMETER MARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS		NEW & SALVAGED SIGNS				EXIST POST SALVAGE RETAIN	NO. OF POSTS	NEW SIGN POSTS																REMARKS	SIGN DETAIL								
		EA	WIDTH (mm)	HEIGHT (mm)	"A"	"B"	SALV SIGN			SALV TIS	FLANGED CHANNEL			SQUARE STEEL (mm)			TUBULAR ALUMINUM Ø (mm)			TUBULAR STEEL Ø (mm)				W-SHAPE STEEL			DETAIL ON SHEET NUMBER	STD. SHEET NUMBER							
											1.7	3.0	4.5	3.4	5.0	EA	kg	EA	kg	EA	kg	EA	kg	EA	kg				EA	kg	EA	kg			
																																	kg/m	kg/m	kg/m
11+425 RT		1	600	750	0.45				1		X		X																						E-141M
11+461 LT		1	600	750	0.45				1		X		X																					E-142M	
11+462 RT		1	600	750	0.45				1		X		X																					E-142M	
11+549 LT		1	750	450	0.34				1		X		X																					E-128M	
11+587 LT		1	150	200	0.03				1		X		X																					E-138M	
11+705 LT		1	900	900	0.81				2		X		X																		51				
11+709 LT		1	150	200	0.03				1		X		X																					E-134M	
11+709 RT		1	150	200	0.03				1		X		X																					E-134M	
11+756 RT		1	600	750	0.45				1		X		X																					E-141M	
11+909 RT		1	150	200	0.03				1		X		X																					E-138M	
12+150 RT		1	600	750	0.45				1		X		X																					E-141M	

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."		m <sup>2</sup>	m <sup>2</sup>	EA.	m <sup>2</sup>		m	m	m	m	m	m	EA.	kg	kg	kg	EA.	kg	kg	kg	kg	EA.	EA.	kg										
							10.8	36.8	10.8	36.8																								
	<b>SHEET TOTALS</b>	3.52						47.6		47.6																								

PROJECT: **MARSHFIELD - CABOT** PROJECT NO.: **NH 2104(1)S**  
 DATE: 7-02 SURVEY DATE:  
 DESIGN FILE NAME: /pave/98b090/pb090.dgn PLOT DATE: 09-MAY-2008 10:00  
 IPARM FILE NAME: pb090t14.1 SURVEY DATE:  
 SURVEYED BY: DRAWN BY: C.E.A., INC.  
 SQUAD LEADER: SHEET: **44** OF **60**

KILOMETER MARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS		NEW & SALVAGED SIGNS				EXIST POST SALVAGE	NO. OF POSTS	NEW SIGN POSTS																REMARKS	SIGN DETAIL							
		EA	WIDTH (mm)	HEIGHT (mm)	"A"	"B"	SALV SIGN			SALV TIS	FLANGED CHANNEL			SQUARE STEEL (mm)			TUBULAR ALUMINUM Ø (mm)			TUBULAR STEEL Ø (mm)				W-SHAPE STEEL			FRAMING	REQUIRE	DETAIL ON SHEET NUMBER	STD. SHEET NUMBER				
											1.7	3.0	4.5	44	50	63	75	100	100 MOD	FOUND-ATION	75	89	100	125	FTG. SIZE						WEIGHT	POST SIZE		
																									kg/m								kg/m	kg/m
12+210 RT		1	750	750	0.56				1		X		X																			50		
12+231 LT		1	150	200	0.03				1		X		X																			E-138M		
12+271 RT		1	750	750	0.56				1		X		X																			51		
12+342 RT		1	1200	1200	1.44				2		X		X																			51		
12+400 RT																																	E-125M	
																																	E-125M	
																																	E-125M	
12+485 RT		1	525	375	0.20				1		X		X																				E-136BM	
		1	750	600	0.45																													E-136BM
12+492 LT		1	750	750	0.56				1		X		X																					E-152M
12+546 RT		1	600	750	0.45				1		X		X																					E-141M
12+550 LT		1	600	750	0.45				1		X		X																					E-142M

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."		m <sup>2</sup>	m <sup>2</sup>	EA.	m <sup>2</sup>		m	m	m	m	m	m	EA.	kg	kg	kg	EA.	kg	kg	kg	kg	EA.	EA.	kg									
	<b>SHEET TOTALS</b>	4.70			2.16			39.5			39.5																						

PROJECT: <b>MARSHFIELD - CABOT</b>	PROJECT NO.: <b>NH 2104(1)S</b>
	DATE: 7-02
DESIGN FILE NAME: /pave/98b090/pb090.dgn	PLOT DATE: 09-MAY-2008 10:00
IPARM FILE NAME: pb090t15.1	SURVEY DATE:
SURVEYED BY:	DRAWN BY: C.E.A., INC.
SQUAD LEADER:	SHEET: <b>45</b> OF <b>60</b>



KILOMETER MARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS		NEW & SALVAGED SIGNS				EXIST POST RETAIN	SALVAGE	NO. OF POSTS	NEW SIGN POSTS																REMARKS	SIGN DETAIL						
		EA	WIDTH (mm)	HEIGHT (mm)	"A"	"B"	SALV SIGN				SALV TIS	FLANGED CHANNEL			SQUARE STEEL (mm)			TUBULAR ALUMINUM Ø (mm)			TUBULAR STEEL Ø (mm)				W-SHAPE STEEL			DETAIL ON SHEET NUMBER	STD. SHEET NUMBER					
												1.7	3.0	4.5	44	50	63	75	100	100 MOD	FOUND-ATION	75	89	100	125	FTG. SIZE				WEIGHT	POST SIZE			
																										kg/m						kg/m	kg/m	600 mm
12+553 RT		1	150	200	0.03					1		X		X																				E-138M
12+605 LT		1	1800	250	0.45					2			X		X																		E-123M	
		1	1800	250	0.45																												E-123M	
12+605 RT		1	1800	250	0.45					2			X		X																		E-123M	
		1	1800	250	0.45																												E-123M	
		1	1800	250	0.45																												E-123M	
		1	600	300	0.18																												E-136AM	
		1	600	600	0.36																												E-136AM	
		1	750	600	0.45																												E-136BM	
		1	525	375	0.20																												E-136AM	
		1	525	375	0.20																												E-136BM	
12+662 LT		1	600	300	0.18					1			X		X																			E-136AM
		1	600	600	0.36																													E-136AM
12+664 RT		1	750	750	0.56					1			X		X																			E-145AM
12+692 LT		1	1200	600	0.72					2			X		X																			E-152M
12+700 RT		1	750	750	0.56					1			X		X																			E-143M
		1	150	200	0.03																													E-138M

KILOMETER MARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST	NO. OF POSTS	NEW SIGN POSTS															REMARKS	SIGN DETAIL						
		EA	WIDTH (mm)	HEIGHT (mm)	"A"	"B"	SALV SIGN	SALV TIS	REMAIN		SALVAGE	FLANGED CHANNEL			SQUARE STEEL (mm)			TUBULAR ALUMINUM Ø (mm)			TUBULAR STEEL Ø (mm)				W-SHAPE STEEL		FRAMING	REFURBISHED	DETAIL ON SHEET NUMBER	STD. SHEET NUMBER			
												1.7	3.0	4.5	44	50	63	75	100	100 MOD	FOUND-ATION	75	89	100	125						600 mm	750 mm	WEIGHT
		kg/m			kg/m			kg/m							FTG. SIZE																		
12+715 LT		1 1	600 600	300 300	0.18 0.18					2		X	X																				E-136BM E-136AM
		1 1	750 600	600 600	0.45 0.36																												E-136BM E-136AM
		1 1	525 525	375 375	0.20 0.20																												E-136BM E-136AM
12+721 RT		1 1	600 600	300 600	0.18 0.36					1		X	X																				E-136AM E-136AM
12+787 RT		1 1	1800 1800	250 250	0.45 0.45					2		X	X																				E-123M E-123M
12+810 LT		1 1 1	1800 1800 1800	250 250 250	0.45 0.45 0.45					2		X	X																				E-123M E-123M E-123M
12+851 RT		1	600	750	0.45					1		X	X																				E-142M

OPTION ITEMS

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

**SHEET TOTALS**

m <sup>2</sup>	m <sup>2</sup>	EA.	m <sup>2</sup>		m	m	m	m	m	m	EA.	kg	kg	kg	EA.	kg	kg	kg	kg	EA.	EA.	kg
					36.8	36.8																
					36.8	36.8																

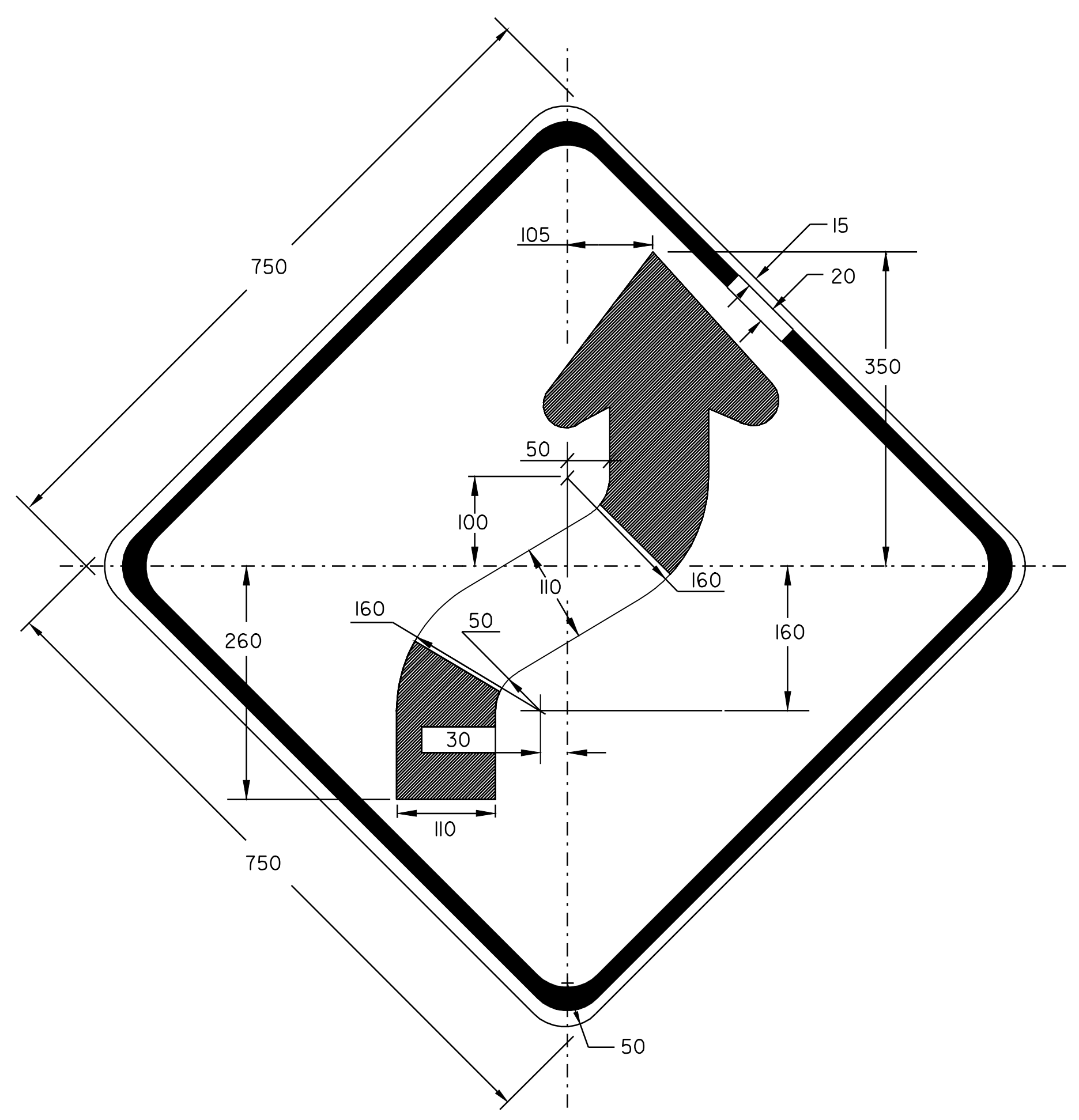
PROJECT: <b>MARSHFIELD - CABOT</b>	PROJECT NO.: <b>NH 2104(1)S</b>
	DATE: 7-02
DESIGN FILE NAME: /pave/98b090/pb090.dgn	PLOT DATE: 09-MAY-2008 10:00
IPARM FILE NAME: pb090t17.t	SURVEY DATE:
SURVEYED BY:	DRAWN BY: C.E.A., INC.
SQUAD LEADER:	SHEET: <b>47</b> OF <b>60</b>



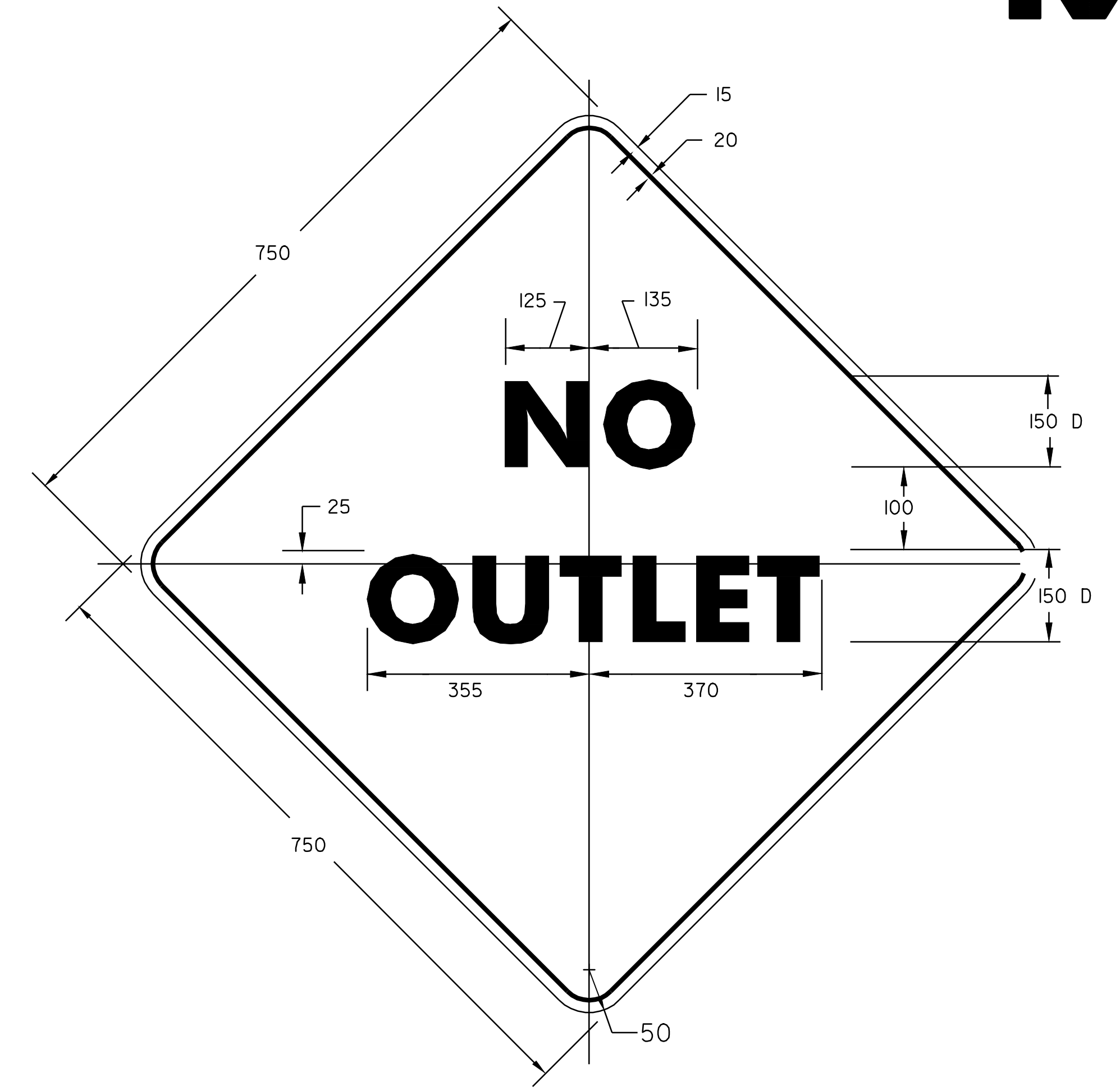
KILOMETER MARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS		NEW & SALVAGED SIGNS				EXIST POST RETAIN	NO. OF POSTS	FLANGED CHANNEL		SQUARE STEEL (mm)			TUBULAR ALUMINUM Ø (mm)			TUBULAR STEEL Ø (mm)				W-SHAPE STEEL			REQUIRE SIGN SAME	REMARKS	SIGN DETAIL					
		EA	WIDTH (mm)	HEIGHT (mm)	"A"	"B"	SALV SIGN			SALV TIS	1.7	3.0	4.5	44	50	63	75	100	100 MOD	FOUND-ATION	75	89	100	125			FTG. SIZE		WEIGHT	POST SIZE	DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
														kg/m			kg/m				kg/m						600 mm	750 mm				
														3.4	3.9	5.0	1.9	2.5	2.5		11.3	13.4	16.1	21.7								
OPTION ITEMS																																
12+866 LT	JCT	1	525	375	0.20				1		X	X																	E-136BM			
	VERMONT 232	1	750	600	0.45																							E-136BM				
12+915 LT		1	750	750	0.56				1		X	X																51				
13+120 LT		1	750	750	0.56				1		X	X																50				
13+168 RT	SHOULDER NARROWS	1	900	900	0.81				2		X	X																	E-151M			
CABOT 0+000 RT	CABOT MARSHFIELD	1	1500	200	0.30				2		X	X																	E-124M			
		1	150	200	0.03																								E-138M			
		1	150	200	0.03																								E-138M			
				m <sup>2</sup>	m <sup>2</sup>	EA.	m <sup>2</sup>					m	m	m	m	m	m	EA.	kg	kg	kg	EA.	kg	kg	kg	kg	EA.	EA.	kg			
				2.94																												

SHEET #31	1.81		2.88																										
SHEET #32	5.74																												
SHEET #33	6.60		0.72																										
SHEET #34	3.94																												
SHEET #35	3.32		1.44																										
SHEET #36	2.17		1																										
SHEET #37	4.77																												
SHEET #38	4.68																												
SHEET #39	5.74																												
SHEET #40	5.73																												
SHEET #41	4.54		2.16																										
SHEET #42	6.71																												
SHEET #43	4.05																												
SHEET #44	3.52																												
SHEET #45	4.70		2.16																										
SHEET #46	6.26																												
SHEET #47	4.81																												
SHEET #48	2.94																												
SUBTOTALS	82.03		1	9.36																									
ROUNDING	2.97		--	0.64																									
TOTALS	85.00		1	10.00																									

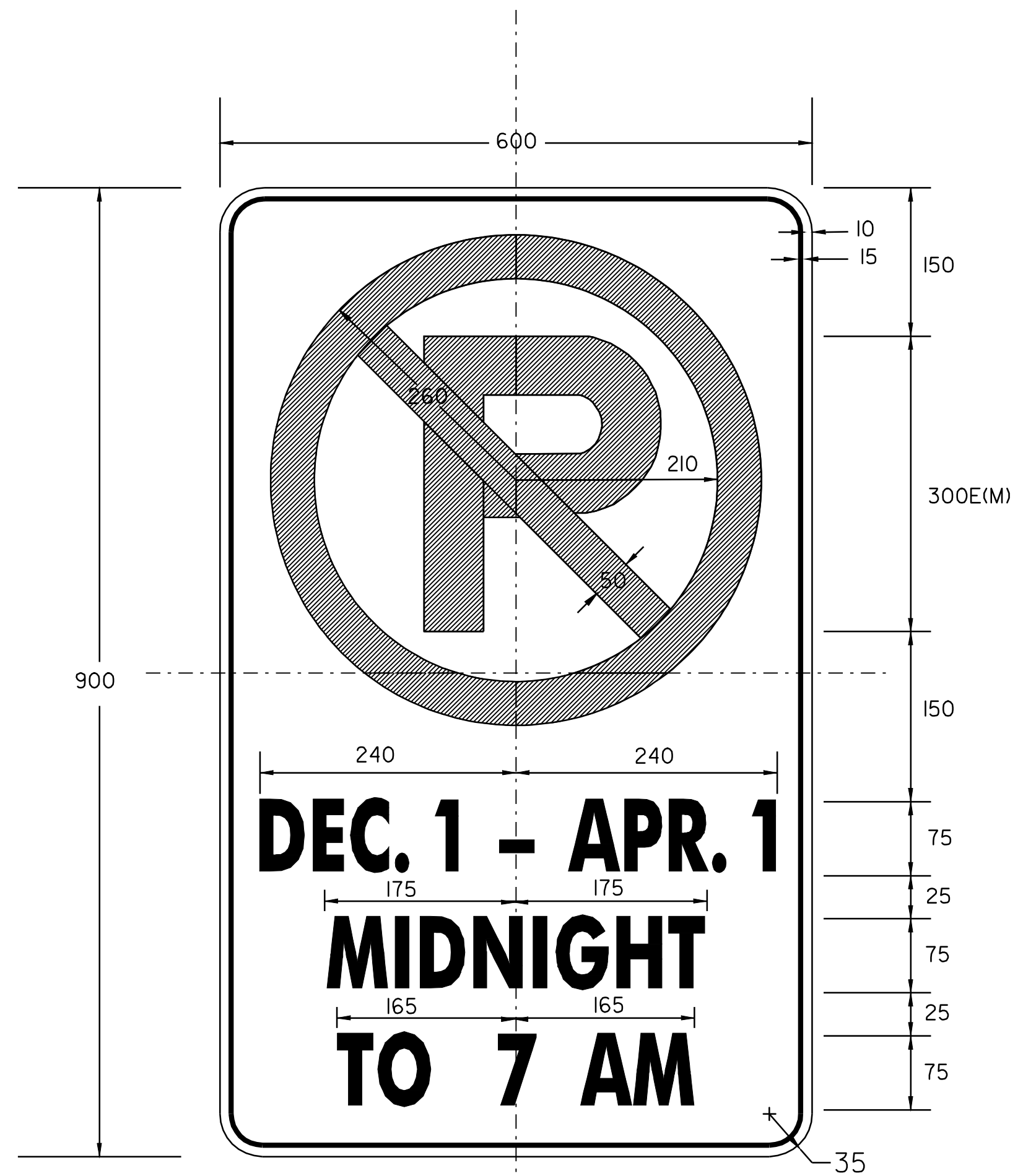
FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."



WI-4R  
MATERIALS & COLORS:  
PER VAOT STANDARD E-I55M



WI4-2  
MATERIALS & COLORS:  
PER VAOT STANDARD E-I54M

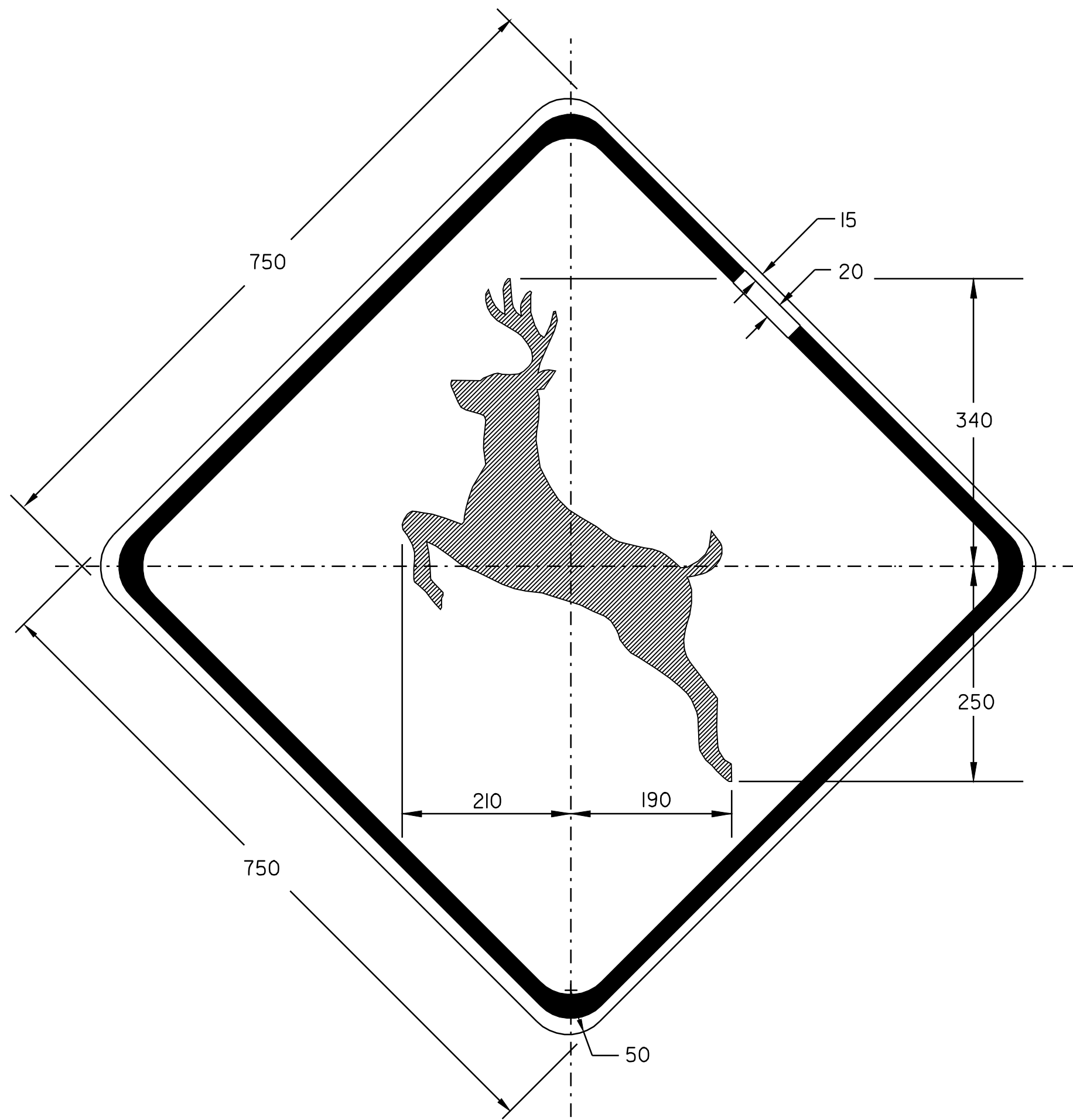


MATERIALS & COLORS:  
PER VAOT STANDARD E-I43M

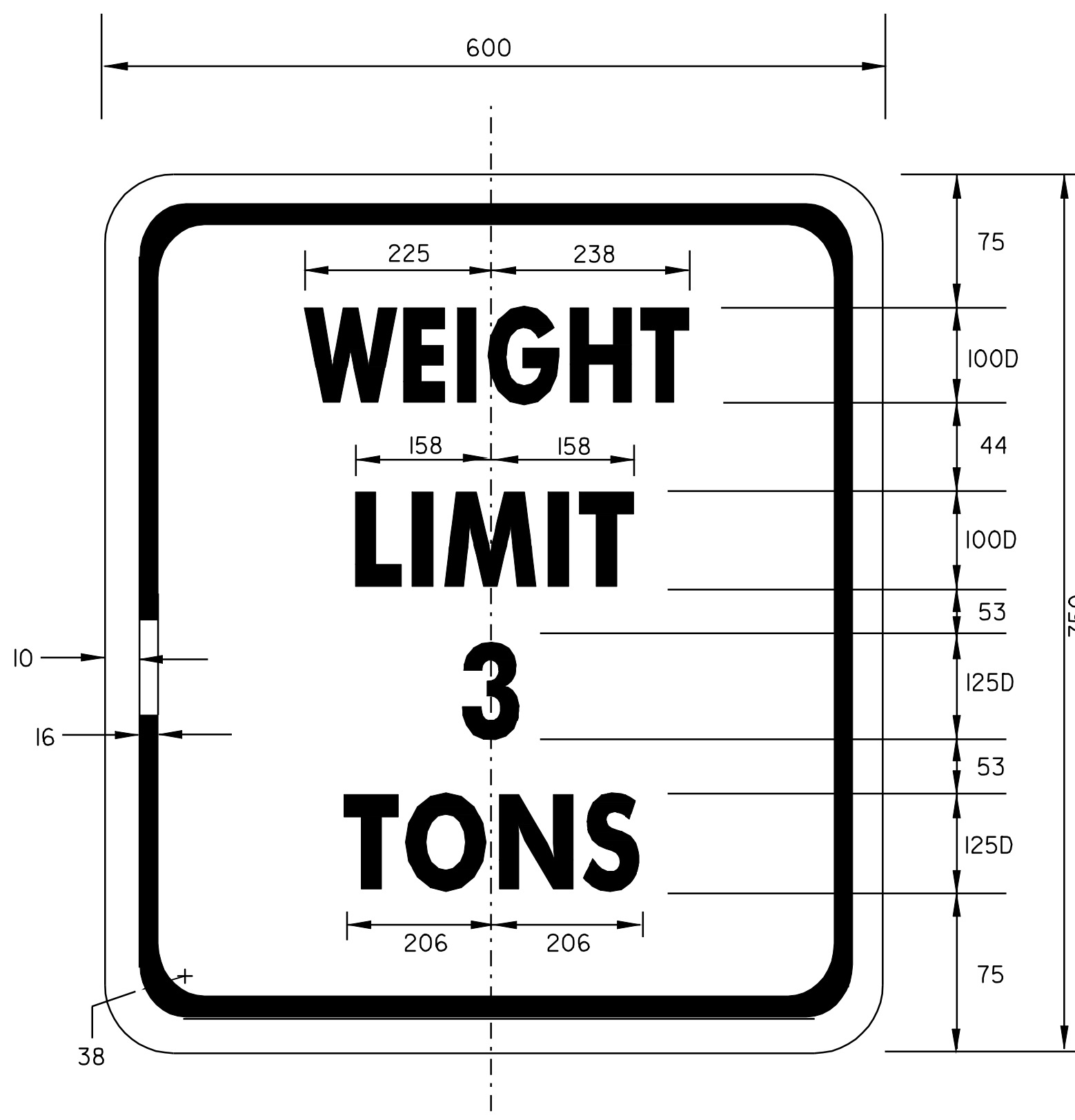
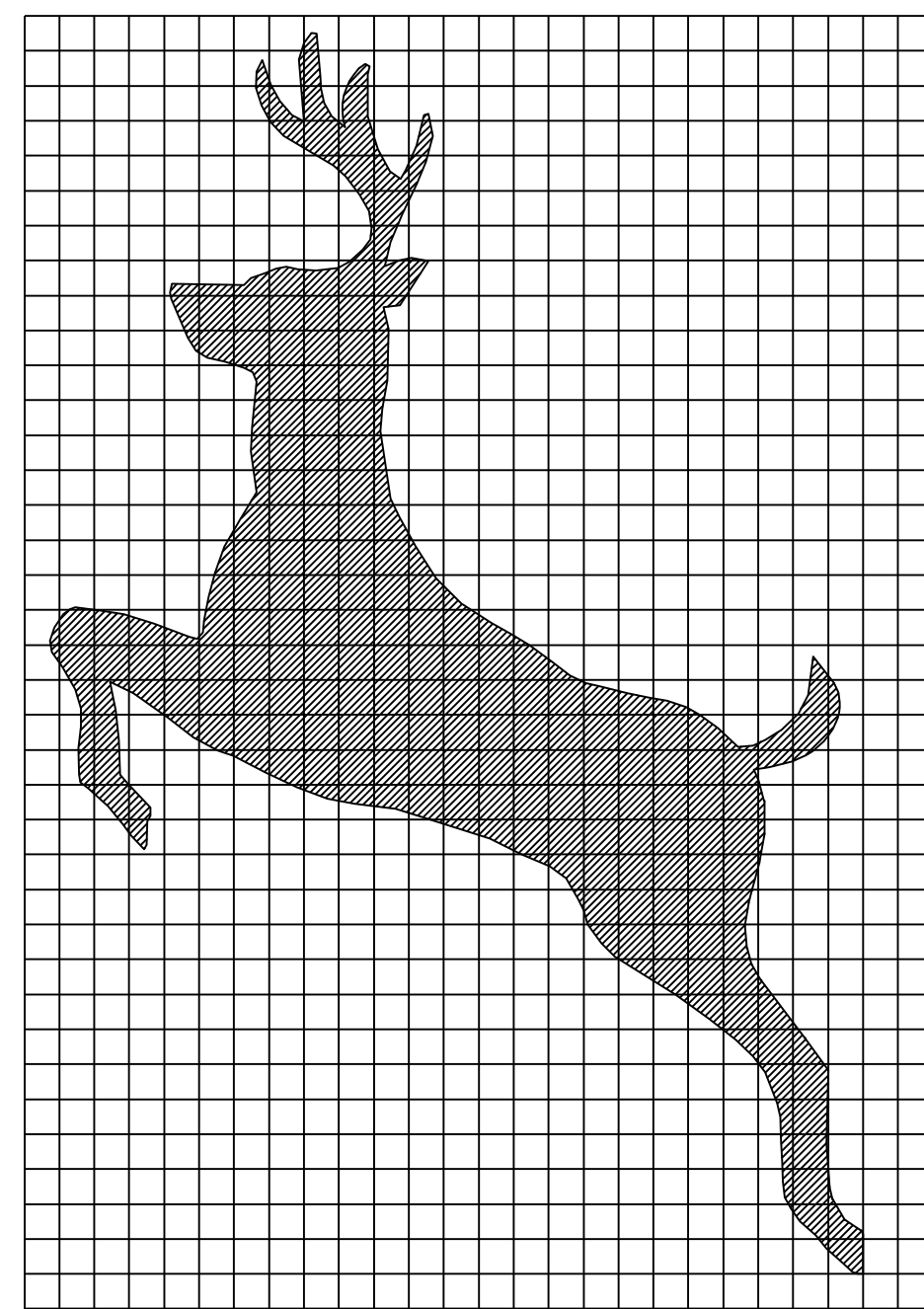
**TRAFFIC SIGN  
DETAIL SHEET #1**

DESIGNED BY	BCE/PJM	DATE	7-02
DRAWN BY	C.E.A., INC.	DATE	7-02
DESIGN FILE NO.	/pave/98b090/pb090.dgn		
PRF FILE	pb090+sl.i	DATE PLOTTED	09-MAY-2008
PROJ. NAME:	MARSHFIELD - CABOT		
PROJ. NO.:	NH 2104(1)S		
SHEET	49	OF	60 SHEETS

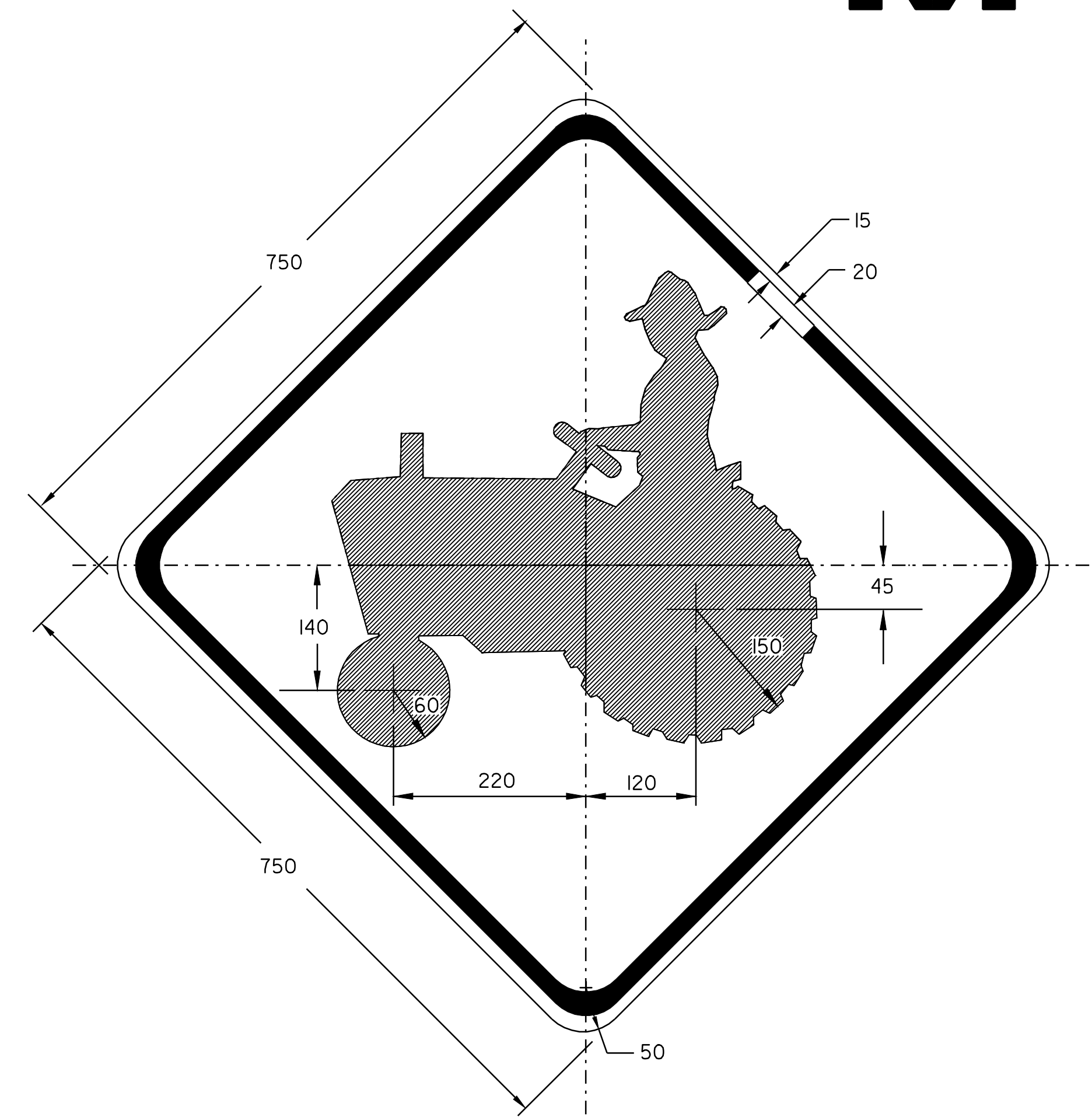




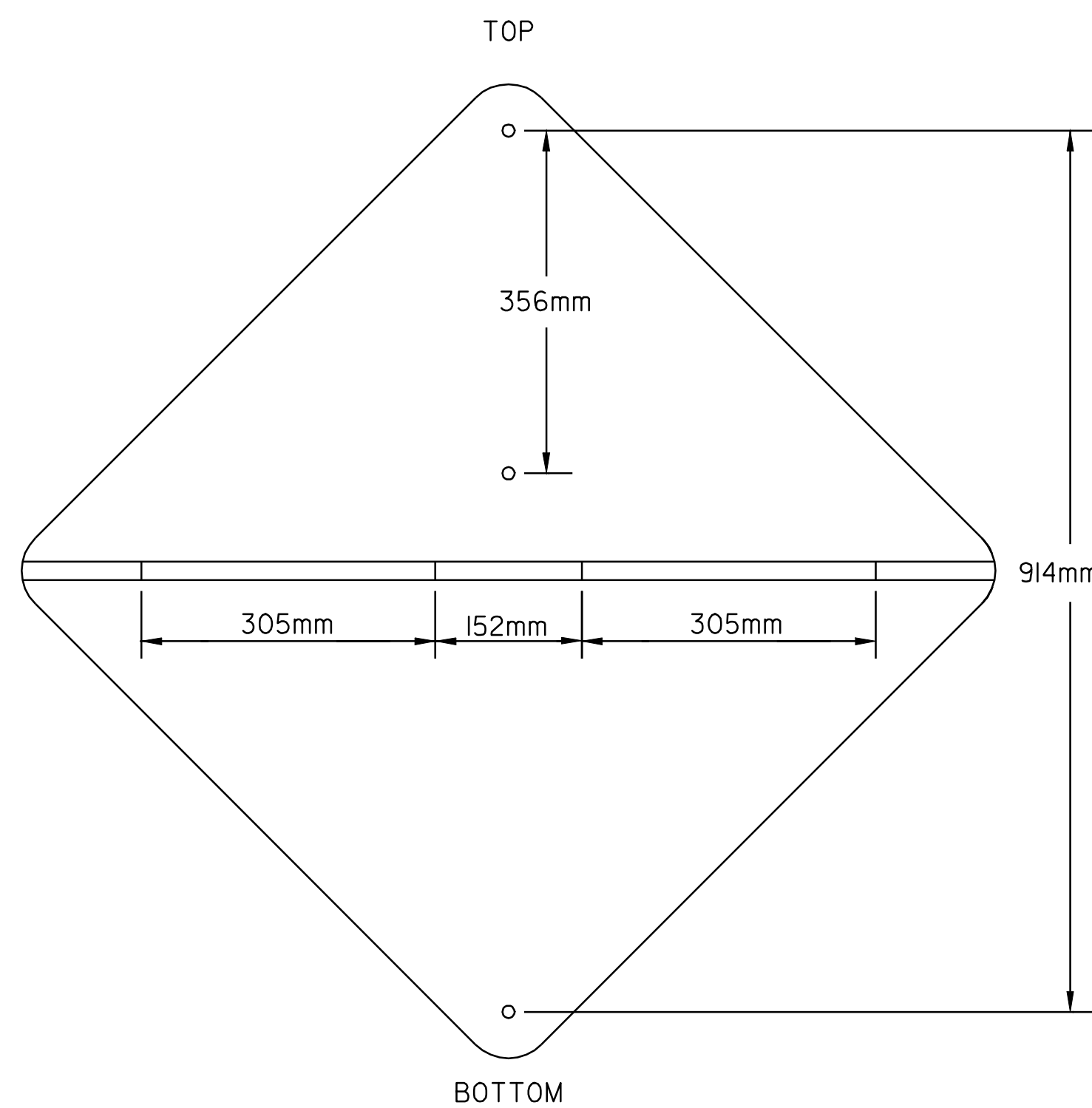
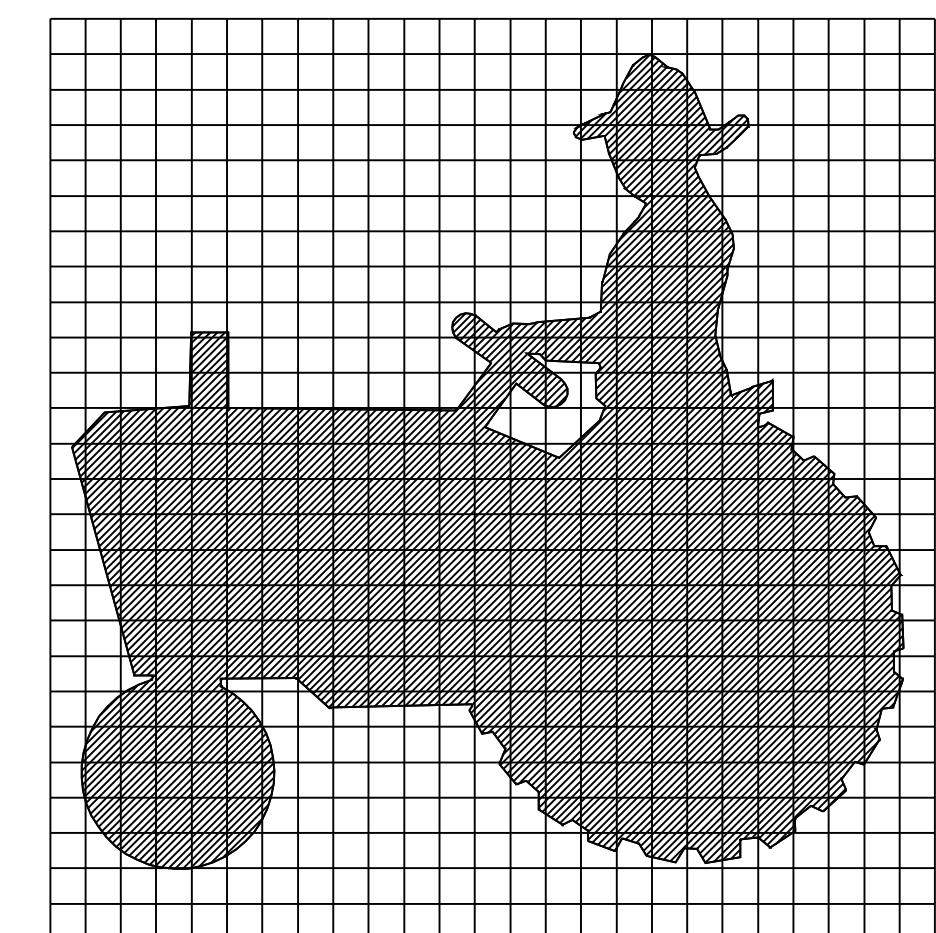
WI-4R  
MATERIALS & COLORS:  
PER VAOT STANDARD E-153M



R12-1  
MATERIALS & COLORS:  
PER VAOT STANDARD E-141M



WI-4R  
MATERIALS & COLORS:  
PER VAOT STANDARD E-153M

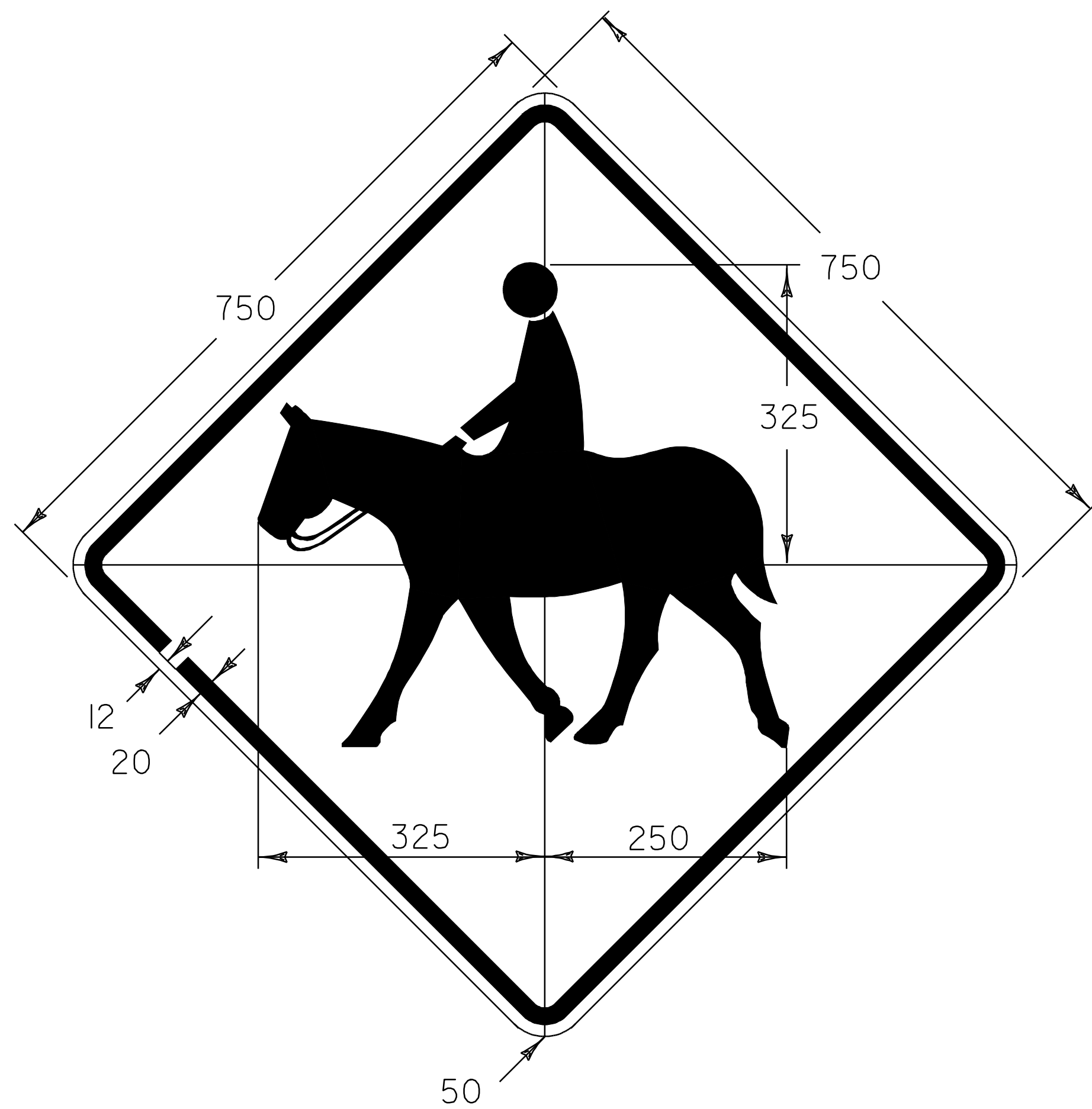


**SNOWMOBILE SIGN**  
NOT TO SCALE

**NOTE:**  
1. FOR THE OUTER HOLE SPACING TO BE EXACTLY 914.4mm, THE HOLES SHOULD BE DRILLED AT 906.5mm PRIOR TO THE SIGN BEING CUT OR DRILLED AFTER HINGES ARE INSTALLED. SAMPLE SIGN MEASURES 922.3mm HOLE TO HOLE.

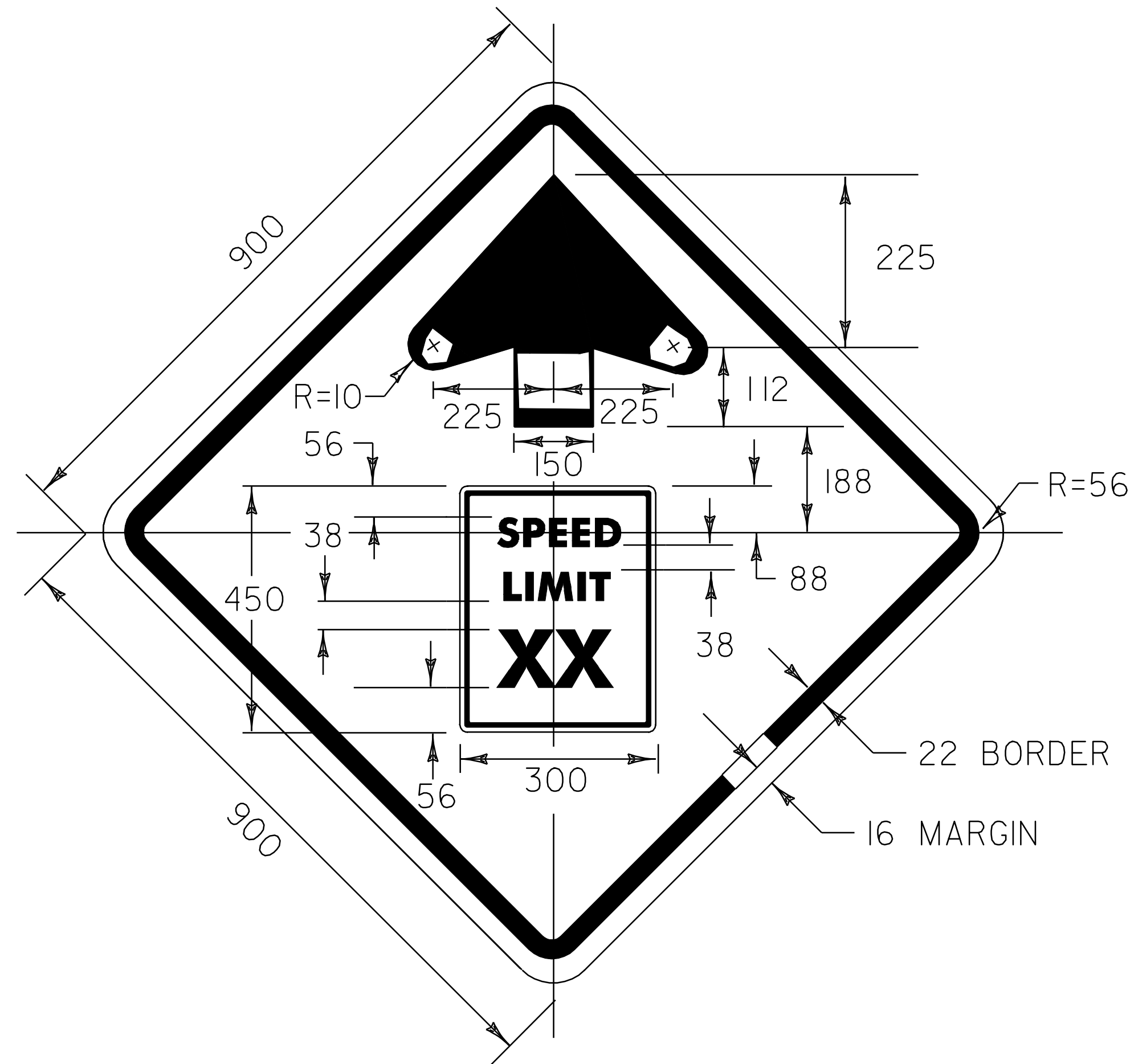
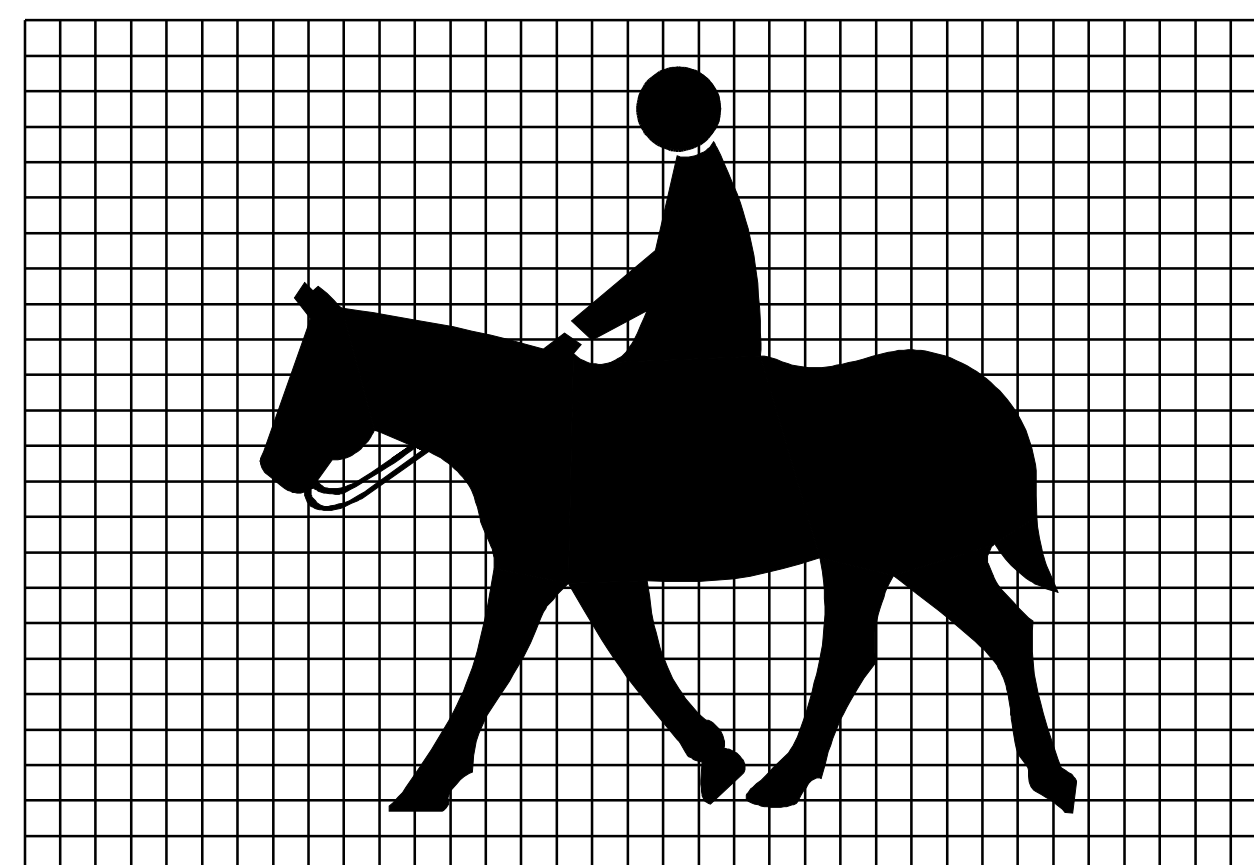
**TRAFFIC SIGN  
DETAIL SHEET #2**

DESIGNED BY BCE/PJM DATE 7-02  
 DRAWN BY C.E.A., INC. DATE 7-02  
 DESIGN FILE NO. /pave/98b090/pb090.dgn  
 PRF FILE pb090ts2.1 DATE 09-MAY-2008  
 PLOTTED  
 PROJ. NAME: **MARSHFIELD - CABOT**  
 PROJ. NO.: **NH 2104(1)S**  
 SHEET **50** OF **60** SHEETS



**W11-7**

COLORS:  
BLACK SYMBOL & BORDER  
WITH REFL. YELLOW BACKGROUND



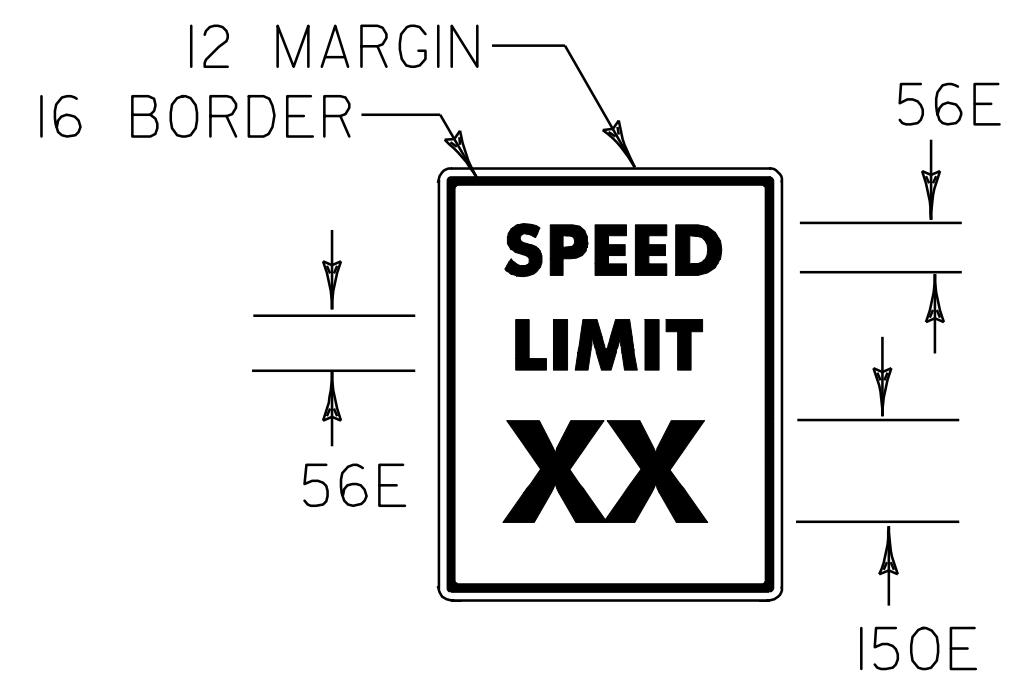
WARNING SIGN

COLORS: BORDER & SYMBOL - BLACK (NON-REFL.)  
BACKGROUND - YELLOW (REFL.).

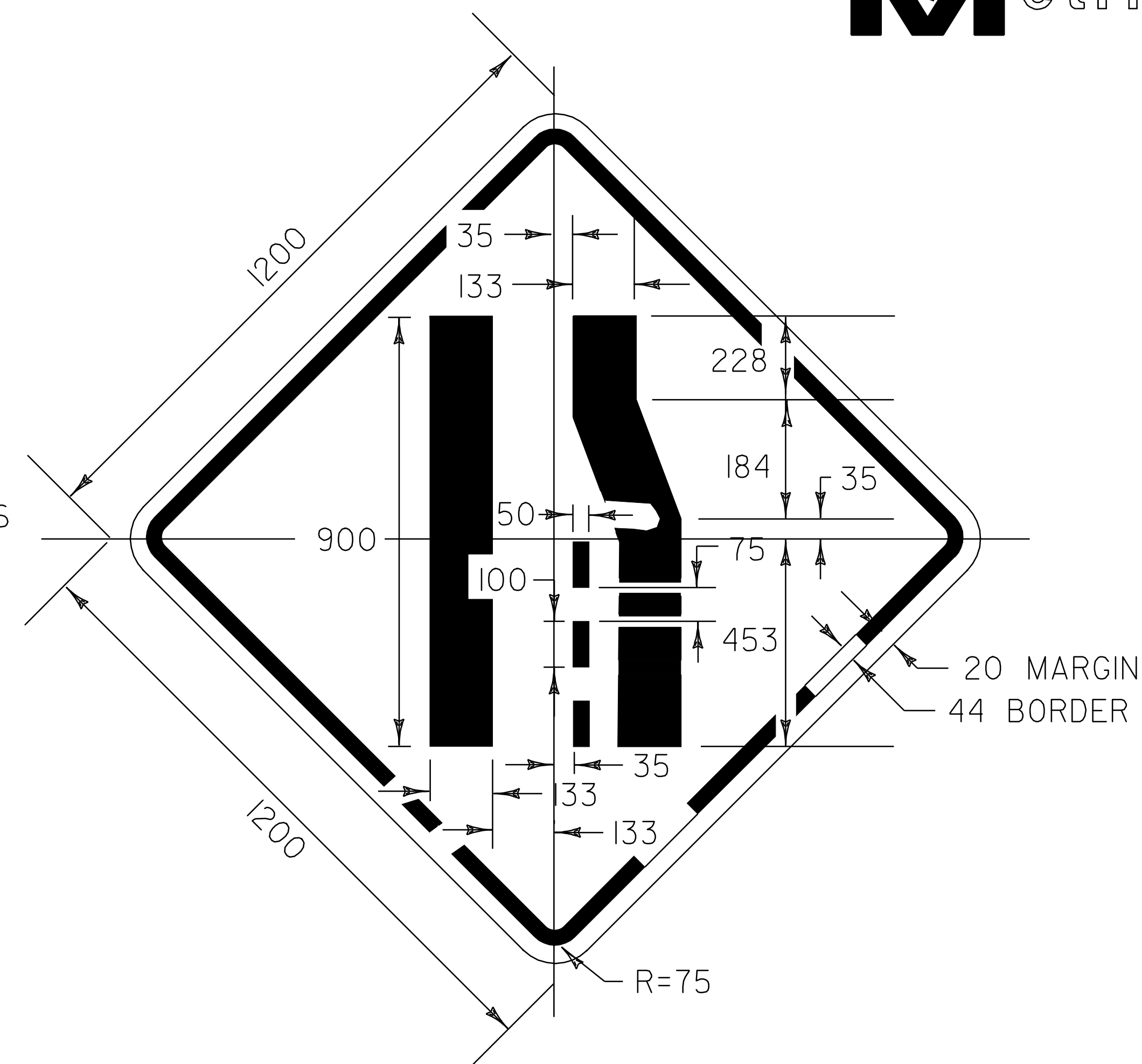
REFER TO STD. E-151M FOR MATERIALS

SPEED LIMIT INSERT

COLORS: BORDER & TEXT - BLACK (NON-REFL.)  
BACKGROUND - WHITE (REFL.).



FOR LETTER SPACING OF INSERT  
REFER TO DETAIL ABOVE



COLORS: BORDER & SYMBOL - BLACK (NON-REFL.)  
BACKGROUND - YELLOW (REFL.).

REFER TO STD. E-151M FOR MATERIALS

**TRAFFIC SIGN  
DETAIL SHEET #3**

DESIGNED BY BCE/PJM DATE 7-02

DRAWN BY C.E.A., INC. DATE 7-02

DESIGN FILE NO. /pave/98b090/pb090.dgn

PRF FILE pb090+s3.1 DATE 09-MAY-2008

PROJ. NAME: **MARSHFIELD - CABOT**

PROJ. NO.: **NH 2104(1)S**

SHEET **51** OF **60** SHEETS

## BRIDGE QUANTITY SHEET

STATION	POS.	BRIDGE NO.	OFFSET BLOCK MM	525.10 M	525.40 MOD 1 M	525.40 MOD 3 M	525.41 MOD 3 M								REMARKS
STA 0+688 TO 0+694	LT	76	200	5.7			5.7								
STA 0+686 TO 0+692	RT	76	200	5.7			5.7								
STA 10+360 TO 10+369	RT	80	200	9.5	9.5										
STA 10+360 TO 10+369	LT	80	200	9.5		9.5									
<b>PROJECT SUB-TOTALS</b>				<b>30.4</b>	<b>9.5</b>	<b>9.5</b>	<b>11.4</b>								
<b>ROUNDING</b>				<b>0.6</b>	<b>0.5</b>	<b>0.5</b>	<b>0.6</b>								
<b>PROJECT TOTALS</b>				<b>31.0</b>	<b>10.0</b>	<b>10.0</b>	<b>12.0</b>								

## NOTES

1. BRIDGE RAIL SHALL BE HEAVY DUTY STEEL BEAM RAIL.
2. BRIDGE APPROACH RAIL HEIGHT SHALL BE TRANSITIONED TO NORMAL ROADWAY RAIL HEIGHT IN 7.6 METERS.
3. APPROACH RAILING SHALL BE HEAVY DUTY STEEL BEAM FOR 7.6 METERS FROM THE ENDS OF THE BRIDGE.
4. FOR BRIDGE RAILING, THE TRANSITION POST SHALL HAVE AN OFFSET BLOCK AND BE LOCATED AS CLOSE AS PRACTICAL TO THE MID-POINT BETWEEN THE BRIDGE END POST AND APPROACH RAIL POST 1.
5. SPLICES SHALL LAP IN DIRECTION OF TRAFFIC FLOW.

ITEM 501.22 CONCRETE CLASS A                      2 CM (EST)  
 ITEM 507.15 REINFORCING STEEL                      200 KG (EST)

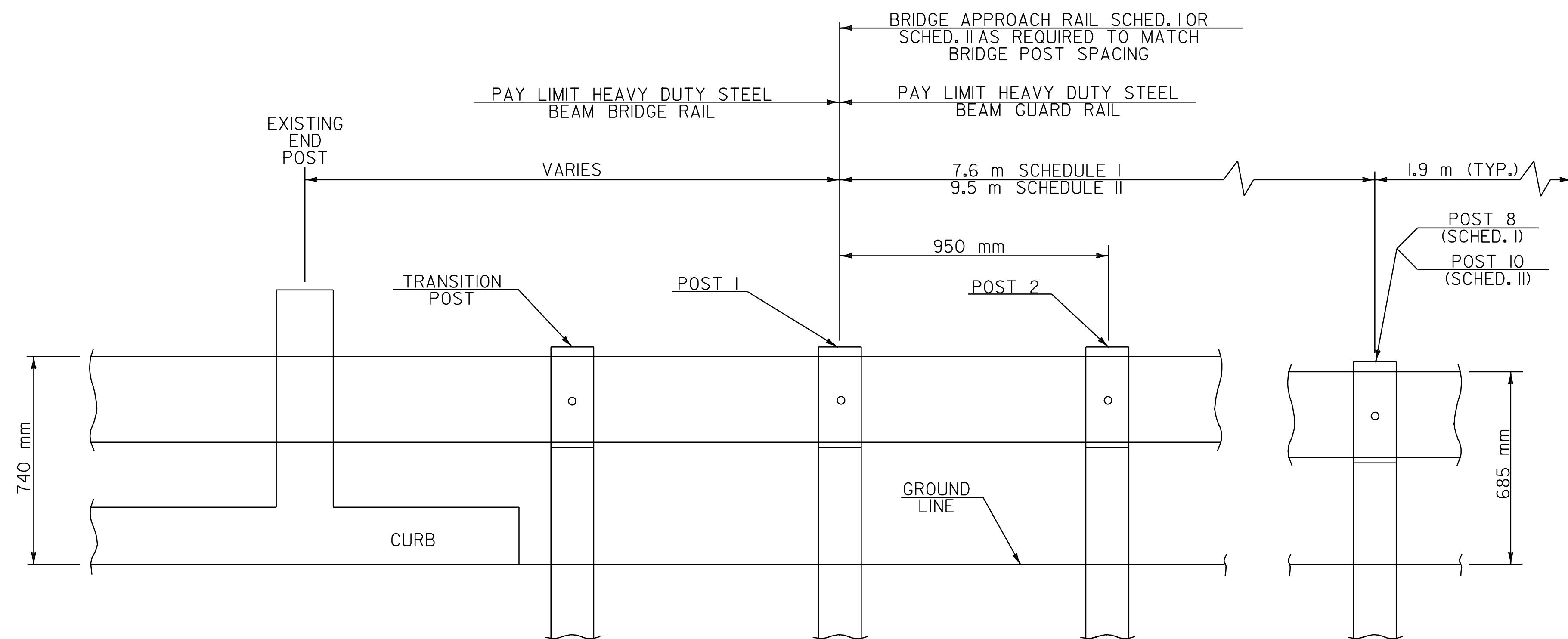
AN ESTIMATED QUANTITY OF ITEM 501.22, CONCRETE CLASS A, AND ITEM 507.15, REINFORCING STEEL, HAS BEEN ADDED TO REPAIR DAMAGED BRIDGE POSTS/DECK & POST ANCHOR BOLTS IF NECESSARY. REMOVAL OF EXISTING DAMAGED BRIDGE POSTS/DECK WILL BE AS DIRECTED BY THE ENGINEER AND WILL BE PAID FOR AS REMOVAL OF CONCRETE OR MASONRY, ITEM 529.25.

## BRIDGE APPROACH RAILING

WHEN A RAIL PANEL SPLICE OCCURS AT POST NO. 1  
 USE SCHEDULE I FOR APPROACH RAILING WHEN A RAIL  
 PANEL SPLICE OCCURS AT BRIDGE END POST USE  
 SCHEDULE II FOR APPROACH RAILING.

SCHEDULE I		
POST NO.	SPACING	PAYMENT FACTOR
1	950 mm	1.4 x 3.8 m
2	950 mm	
3	950 mm	
4	950 mm	
5	950 mm	
6	1270 mm	1.2 x 3.8 m
7	1270 mm	
8	1.9 m (TYP.)	1.0 (TYP.)
9	1.9 m (TYP.)	

SCHEDULE II		
POST NO.	SPACING	PAYMENT FACTOR
1	950 mm	1.4 X 5.7 m
2	950 mm	
3	950 mm	
4	950 mm	
5	950 mm	
6	950 mm	
7	1270 mm	1.2 x 3.8 m
8	1270 mm	
9	1270 mm	
10	1.9 m (TYP.)	1.0 (TYP.)
11	1.9 m (TYP.)	

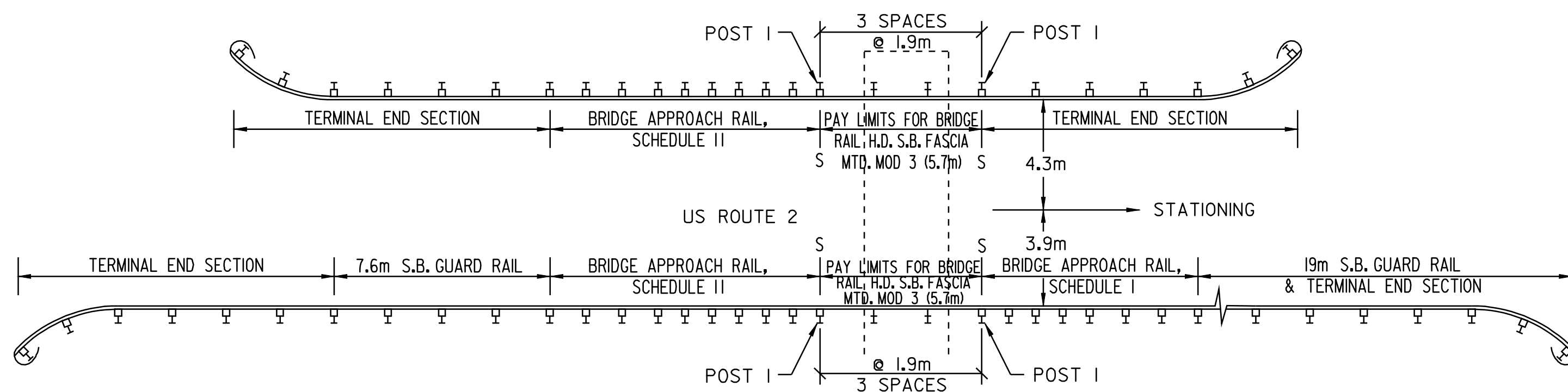


## BRIDGE APPROACH RAILING

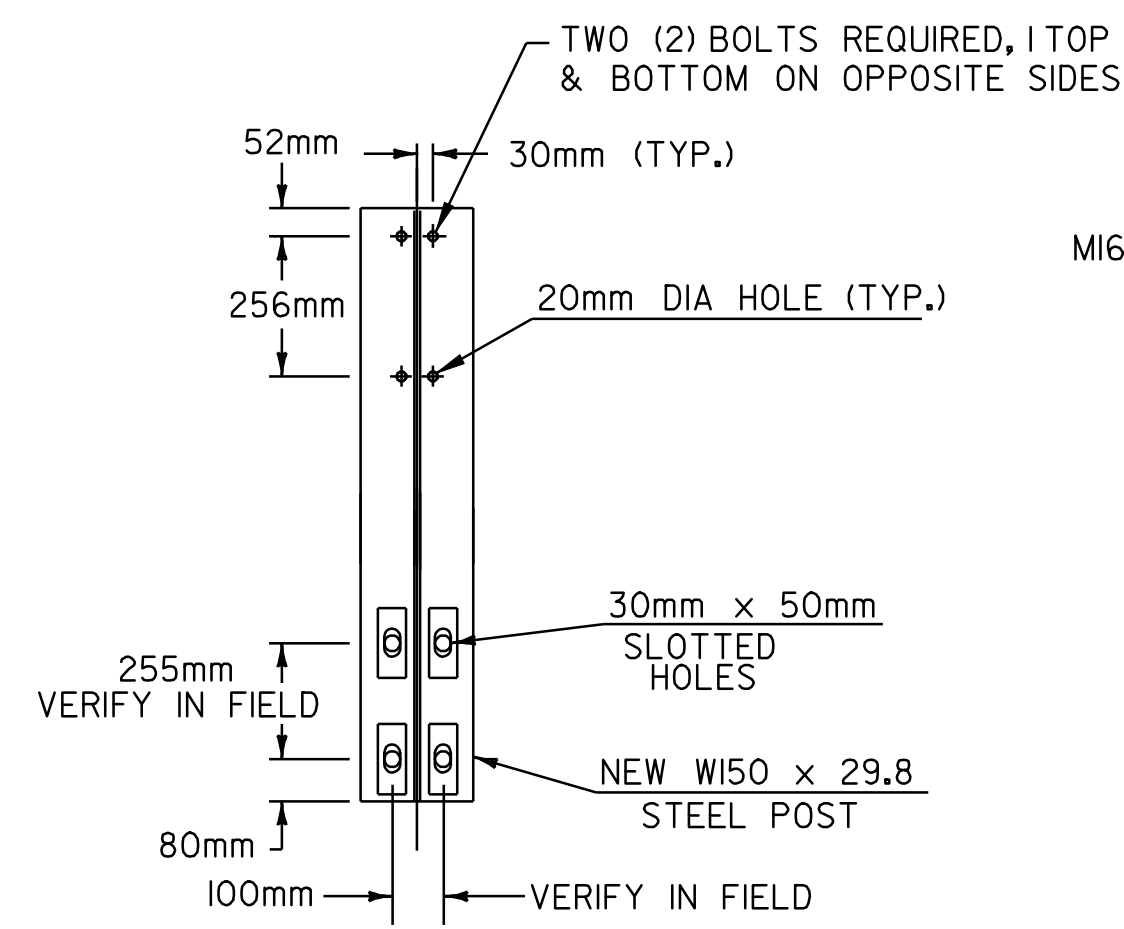
## BRIDGE DETAIL SHEET #1

DESIGNED BY BCE/PJM DATE 7-02  
 DRAWN BY C.E.A., INC. DATE 7-02  
 DESIGN FILE NO. /pave/98b090/pb090.dgn  
 PRF FILE pb090b01.i DATE PLOTTED 09-MAY-2008  
 PROJ. NAME: MARSHFIELD - CABOT  
 PROJ. NO.: NH 2104(1)S  
 SHEET **52** OF **60** SHEETS

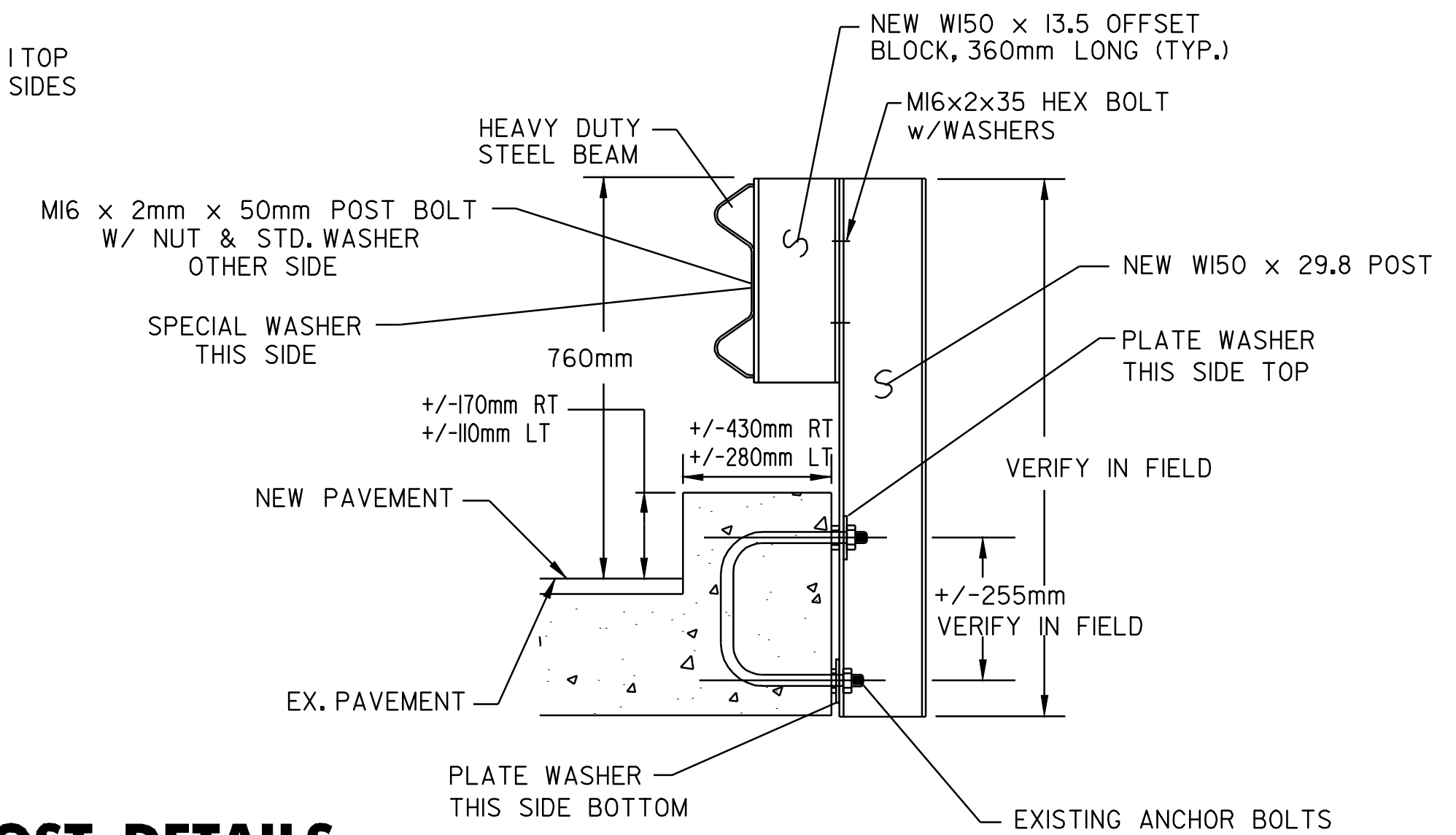




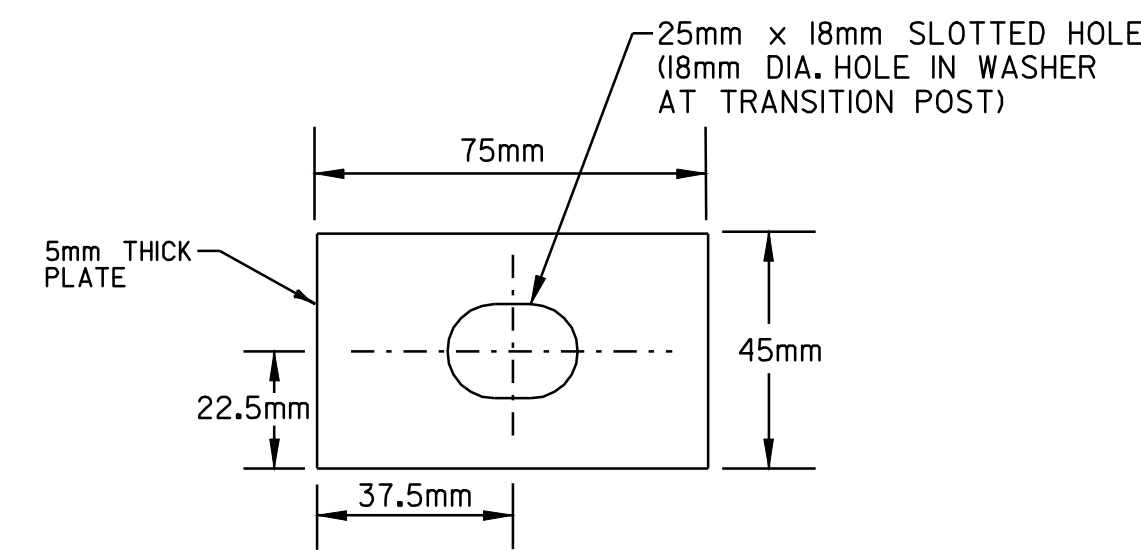
**MARSHFIELD - BRIDGE #76**  
**STA 0+690.1 = MM 0.429**



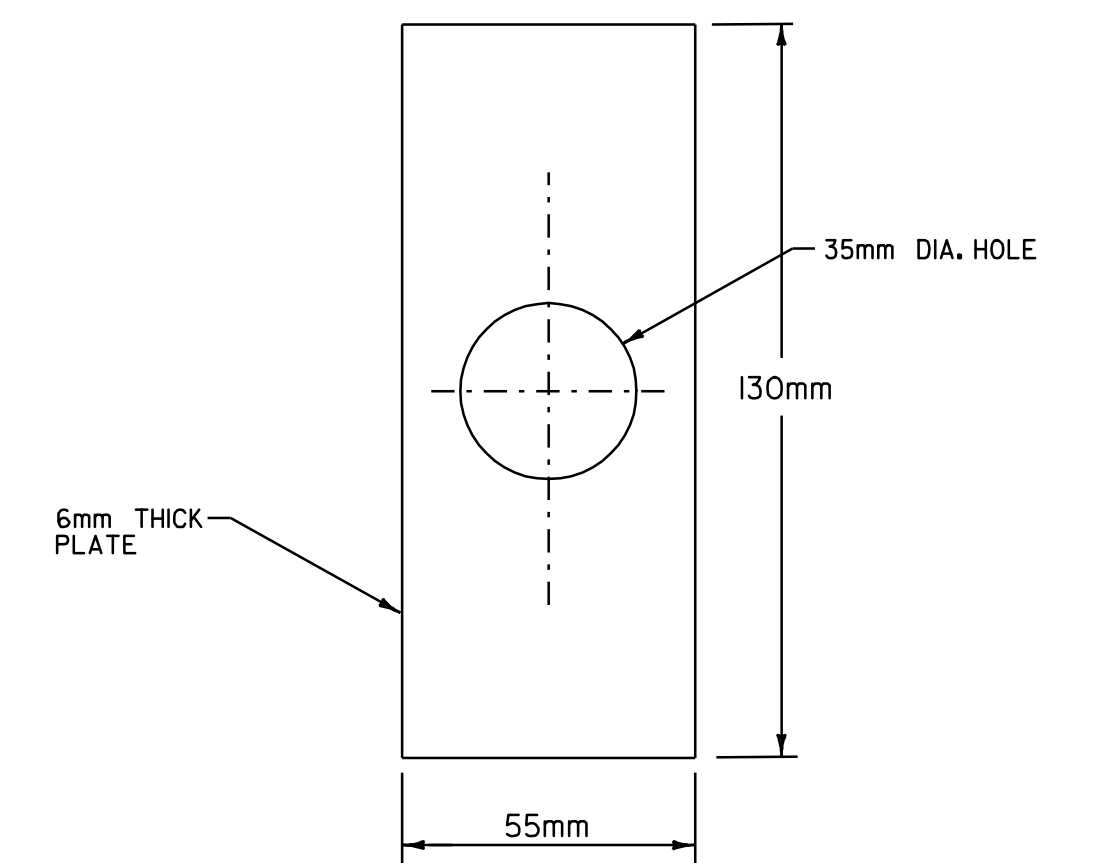
**POST DETAILS**



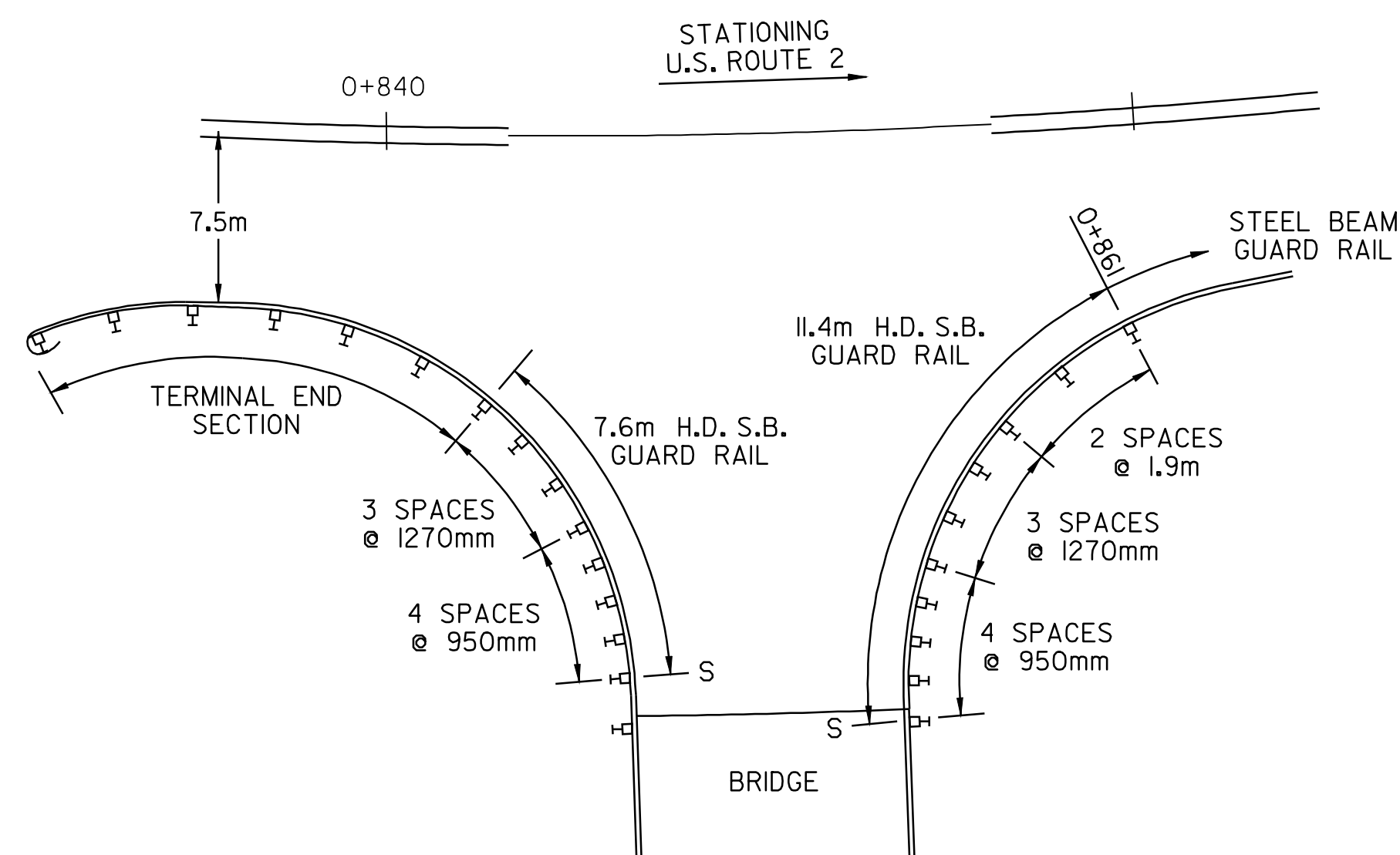
- NOTES:
1. BOLTS, NUTS & WASHERS SHALL BE GALVANIZED AND CONFORM TO SECTION 714.05, EXCEPT THAT POST BOLTS SHALL CONFORM TO STANDARD G-1M REQUIREMENTS AND BE CORROSION RESISTANT.
  2. POSTS, PLATE AND SPECIAL WASHER SHALL BE AASHTO M270/M270 GRADE 345W STEEL



**SPECIAL WASHER DETAIL**



**PLATE WASHER DETAIL**



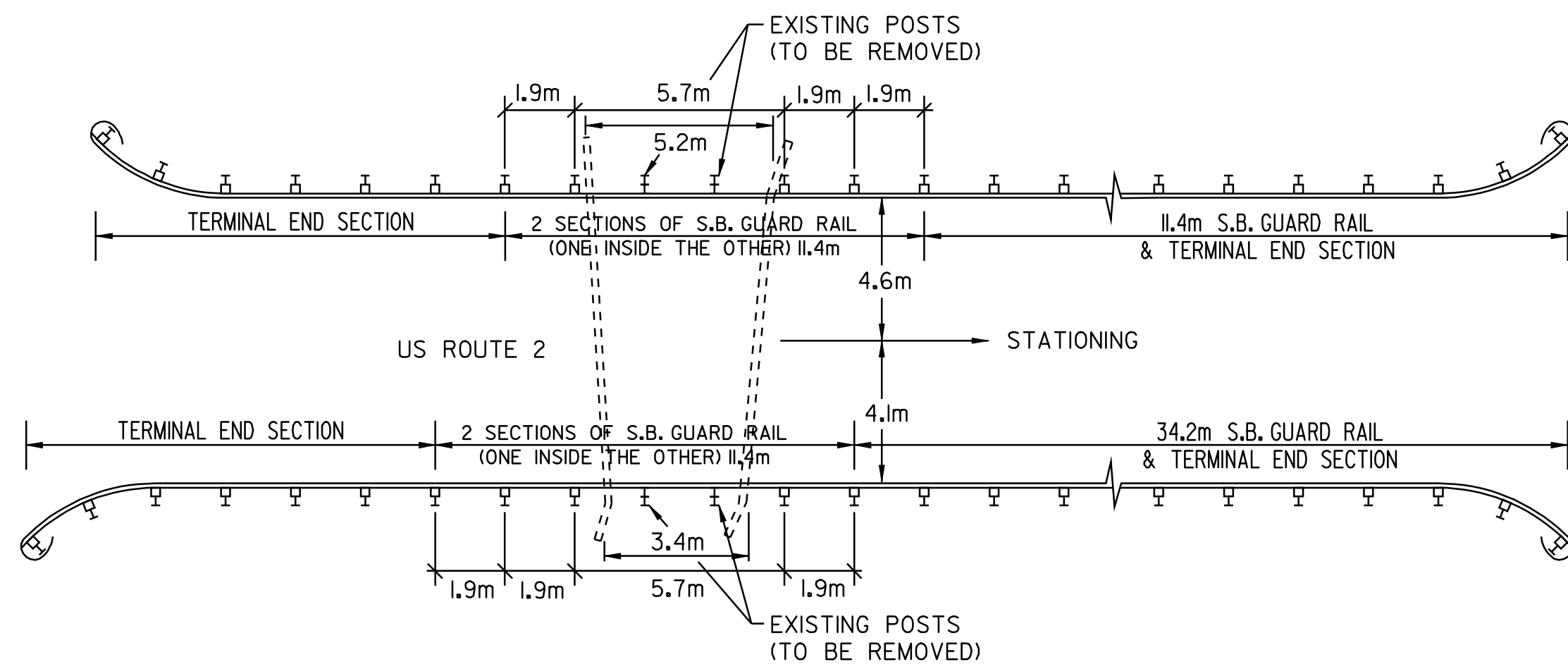
**MARSHFIELD - TH #60 BRIDGE**  
**STA 0+849 = MM 0.528**

NOTE: MAINTAIN EXISTING RADII ALONG TOWN HIGHWAY

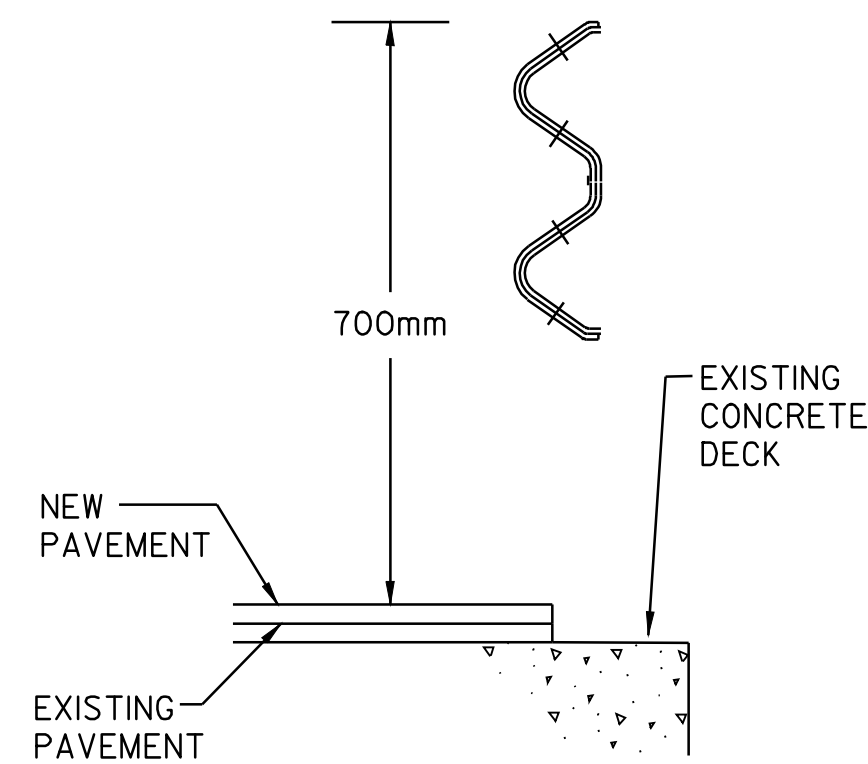


**BRIDGE  
 DETAIL  
 SHEET  
 #2**

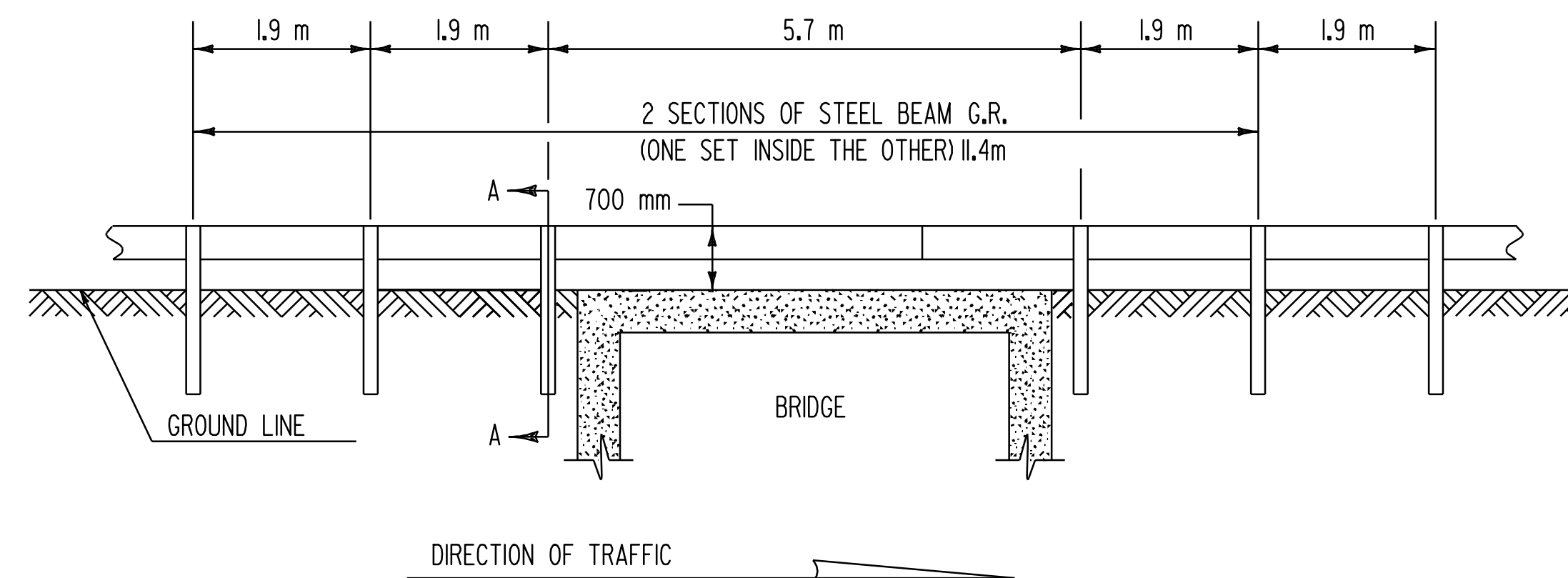
DESIGNED BY BCE/PJM DATE 7-02  
 DRAWN BY C.E.A., INC. DATE 7-02  
 DESIGN FILE NO. /pave/98b090/pb090.dgn  
 PRF FILE pb090b02.1 DATE PLOTTED 09-MAY-2008  
 PROJ. NAME: **MARSHFIELD - CABOT**  
 PROJ. NO.: **NH 2104(1)S**  
 SHEET **53** OF **60** SHEETS



**MARSHFIELD - BRIDGE #77**  
**STA 3+178.1 = MM 1.975**



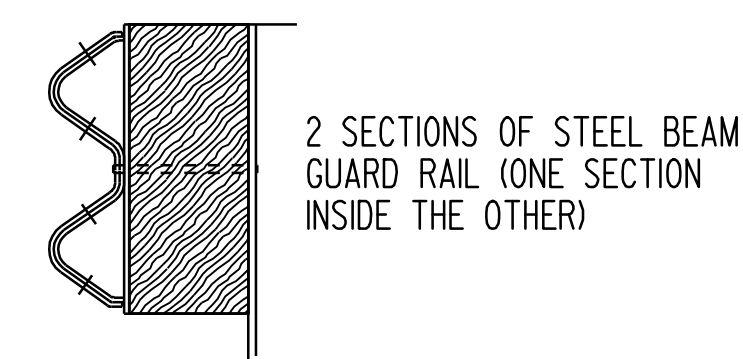
**SECTION @ EXISTING POST**



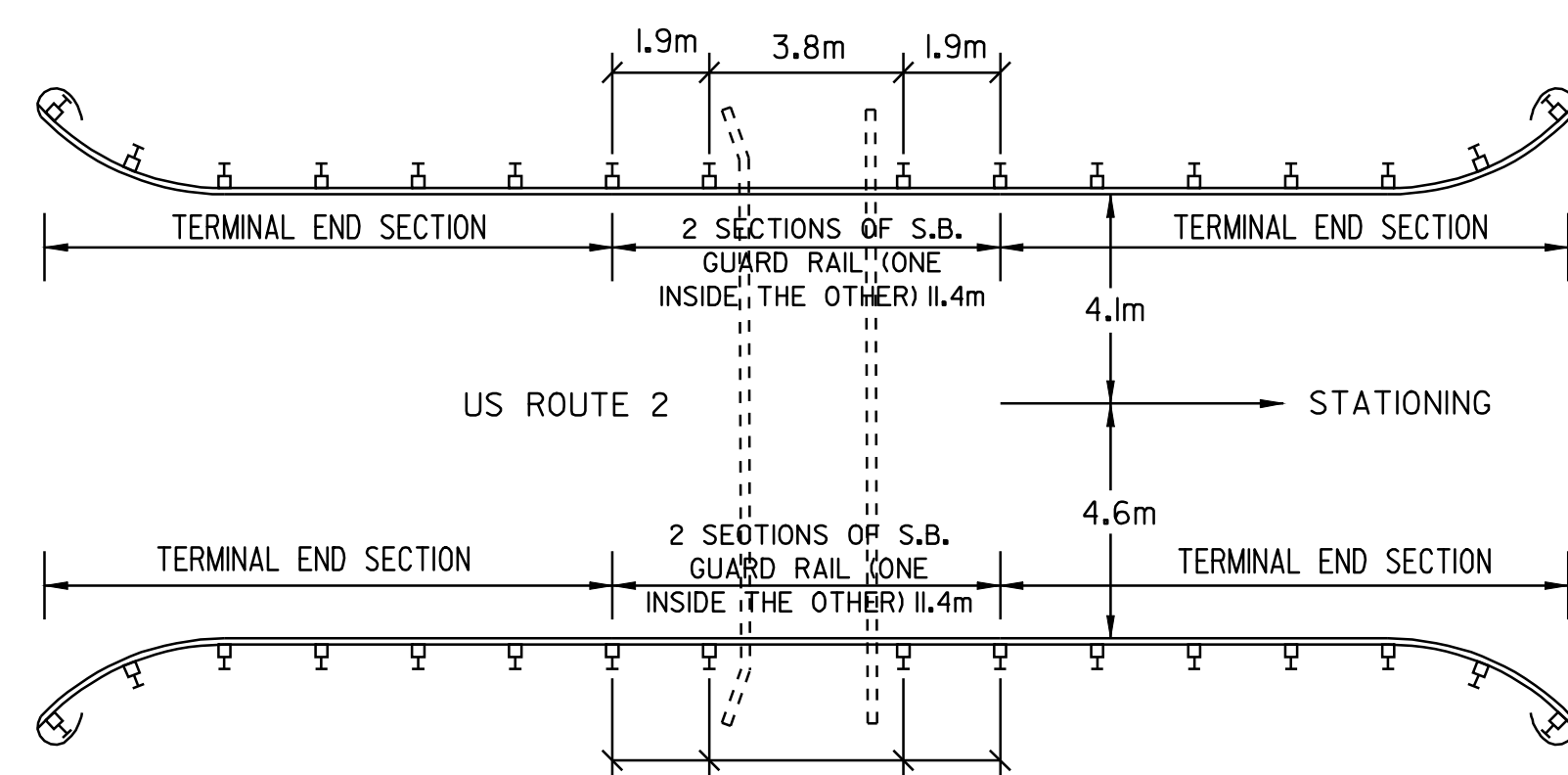
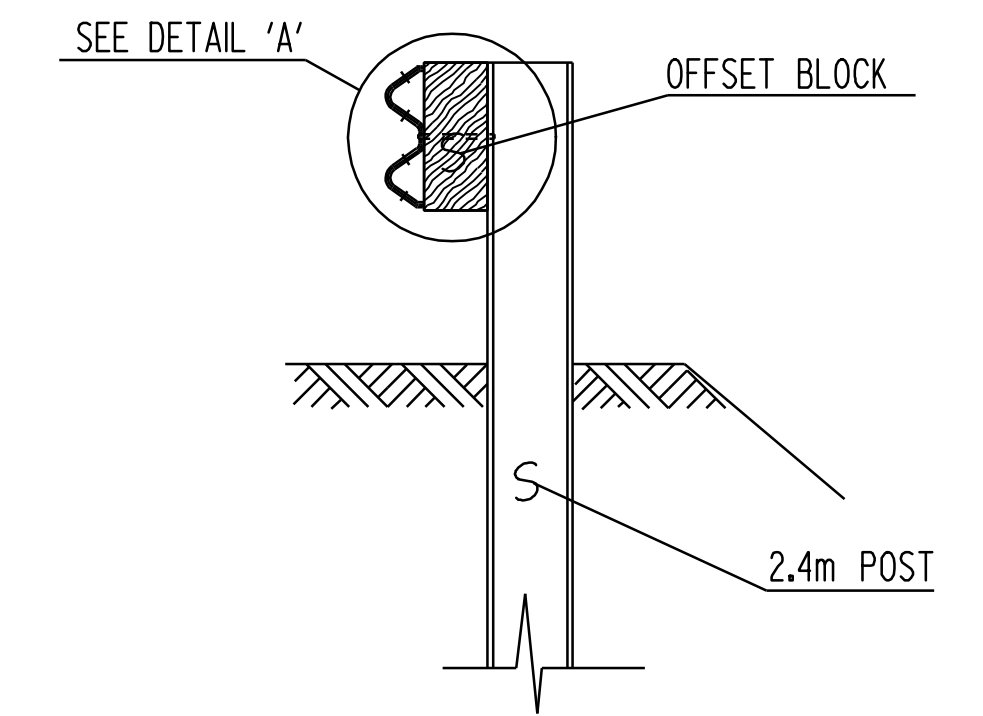
**DETAIL OF STEEL BEAM GUARD RAIL AT LARGE CULVERTS/BRIDGES**

**NOTES**

1. SEE STANDARD G-1M & G-1DM FOR STEEL BEAM GUARD RAIL DETAILS.
2. THIS WORK SHALL BE PAID UNDER ITEM 621.20, STEEL BEAM GUARD RAIL, OR 621.21 HEAVY DUTY STEEL BEAM GUARD RAIL AT A PAY FACTOR OF 1.0.



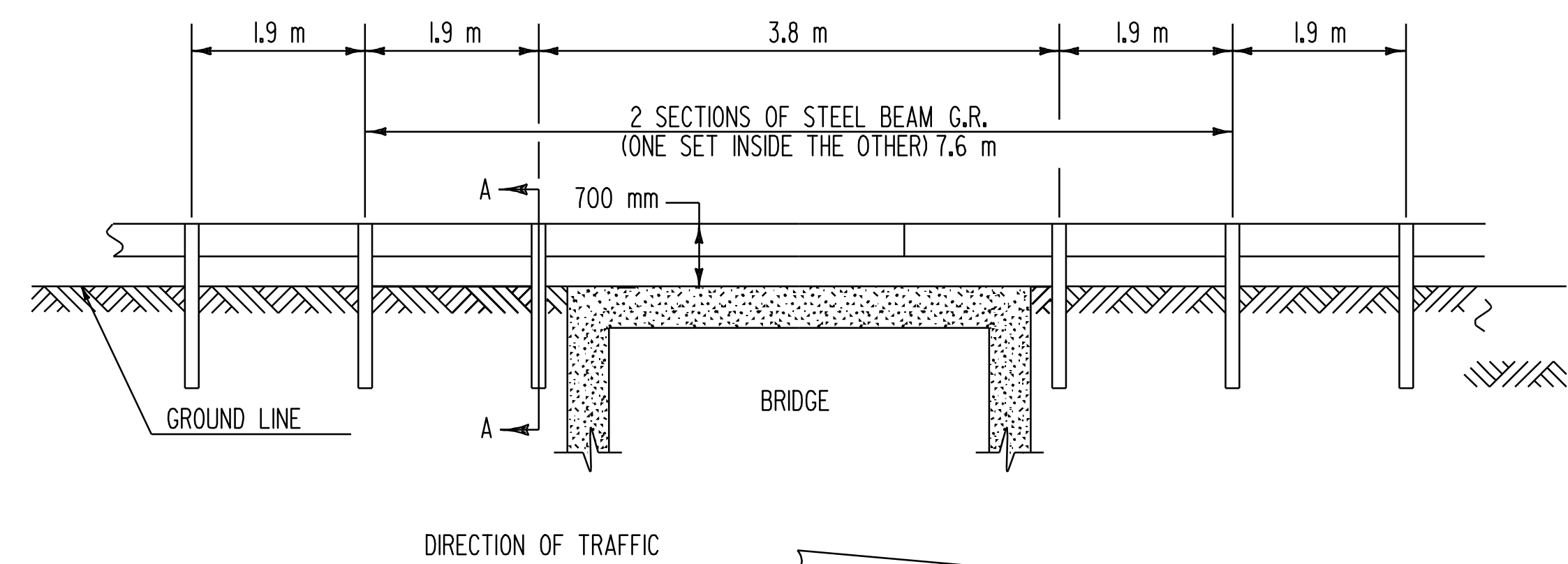
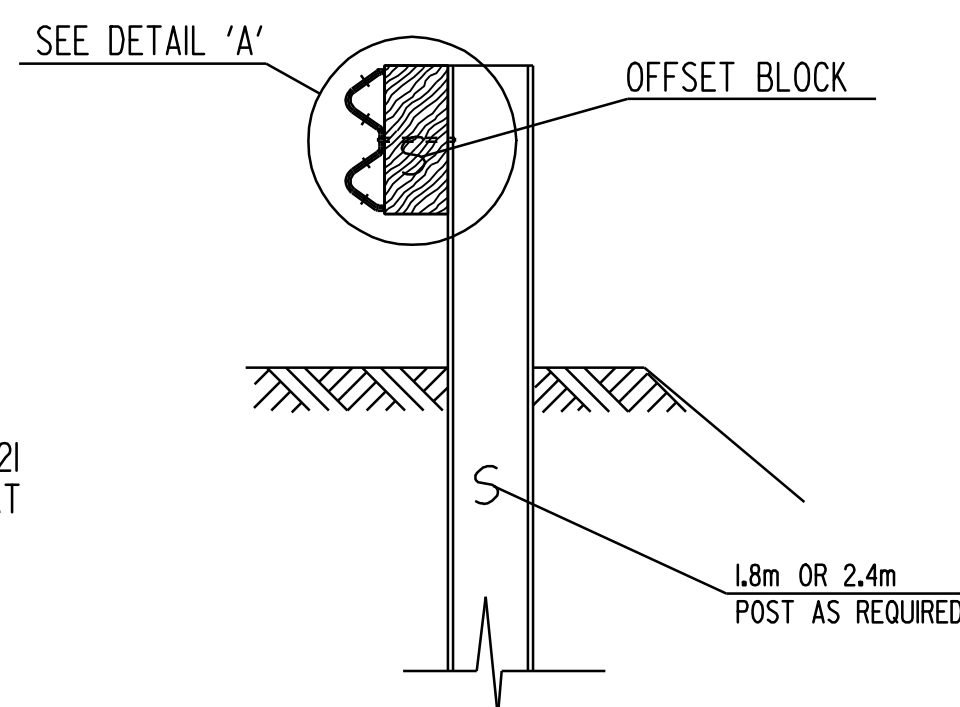
**DETAIL A**



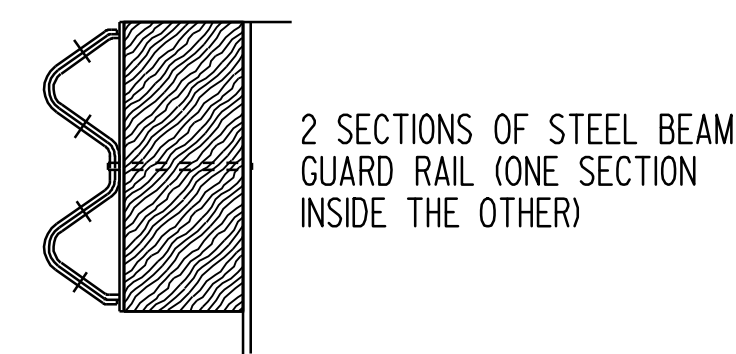
**MARSHFIELD - BRIDGE #78**  
**STA 7+365.8 = MM 4.577**

**NOTES**

1. SEE STANDARD G-1M & G-1DM FOR STEEL BEAM GUARD RAIL DETAILS.
2. THIS WORK SHALL BE PAID UNDER ITEM 621.20, STEEL BEAM GUARD RAIL, OR 621.21 HEAVY DUTY STEEL BEAM GUARD RAIL AT A PAY FACTOR OF 1.0.



**DETAIL OF STEEL BEAM GUARD RAIL AT LARGE CULVERTS/BRIDGES**

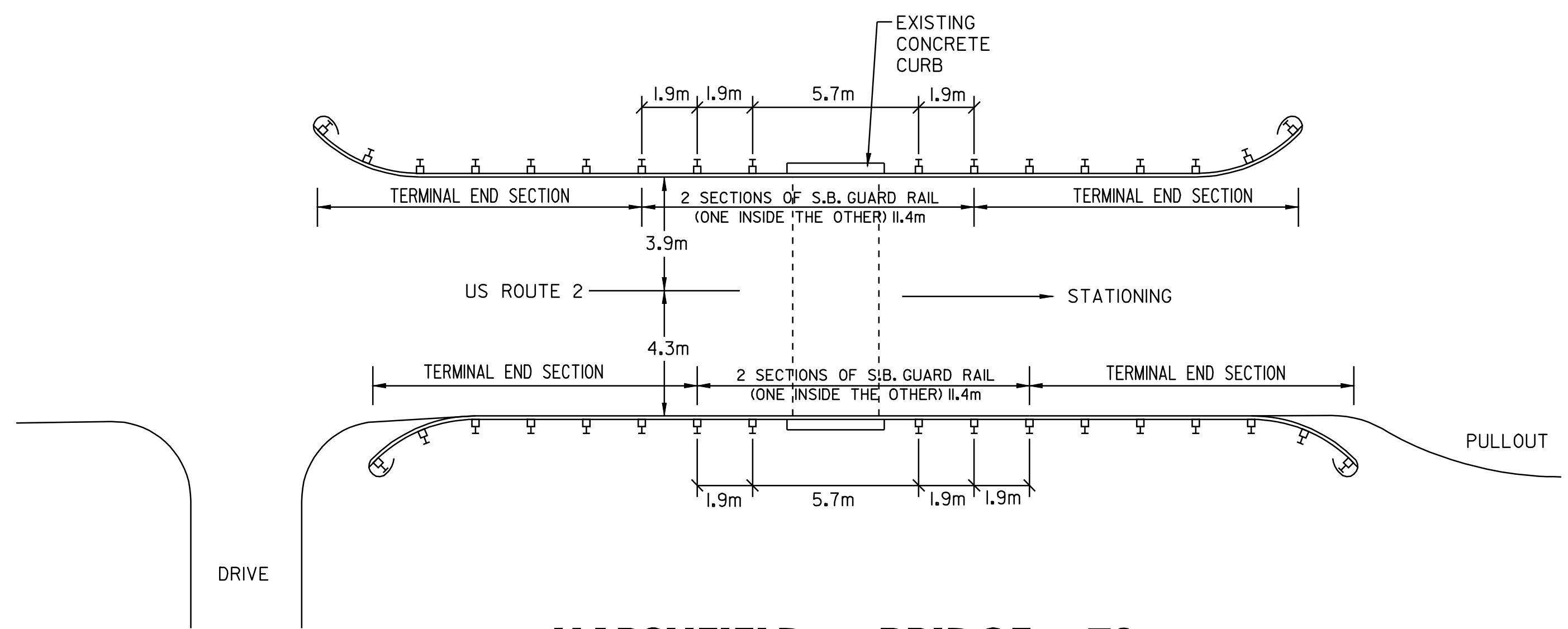


**DETAIL A**

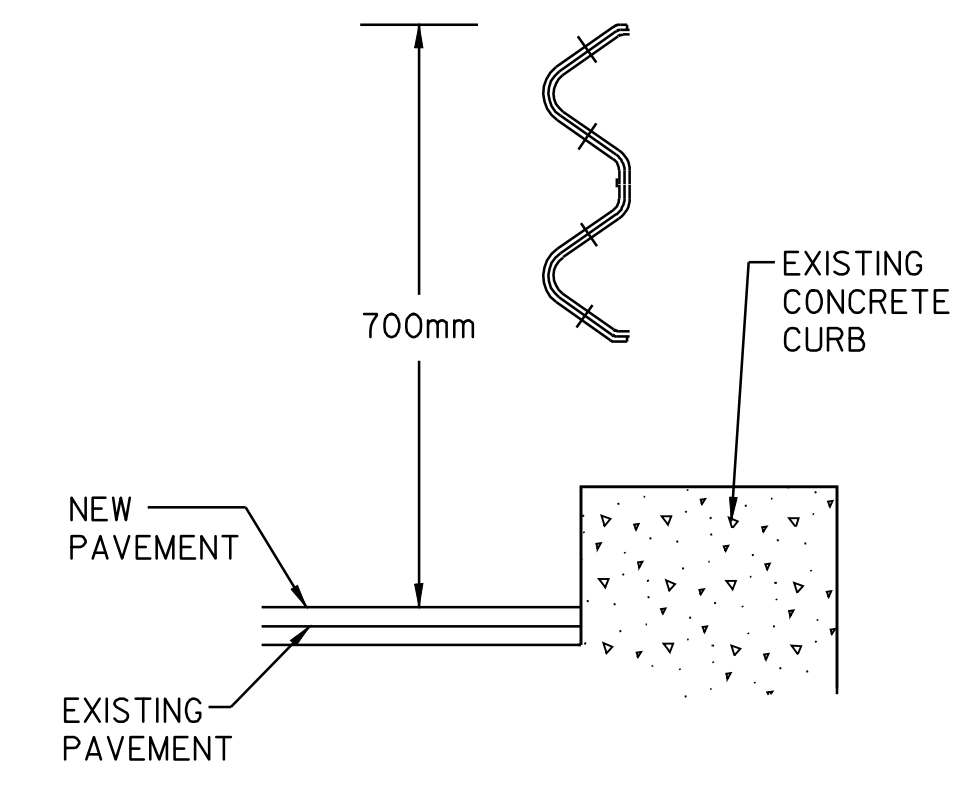


**BRIDGE  
 DETAIL  
 SHEET  
 #3**

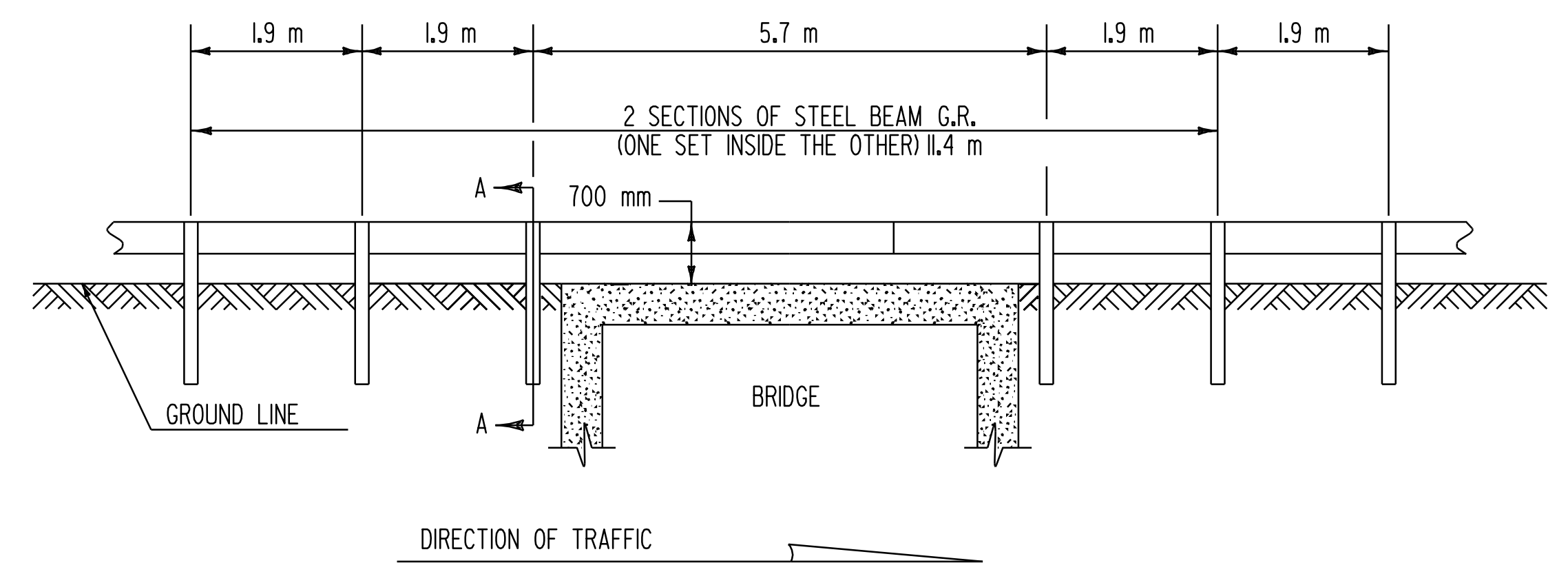
DESIGNED BY BCE/PJM DATE 7-02  
 DRAWN BY C.E.A., INC. DATE 7-02  
 DESIGN FILE NO. /pave/98b090/pb090.dgn  
 PRF FILE pb090b03.1 DATE 09-MAY-2008  
 PLOTTED  
 PROJ. NAME: **MARSHFIELD - CABOT**  
 PROJ. NO.: **NH 2104(1)S**  
 SHEET **54** OF **60** SHEETS



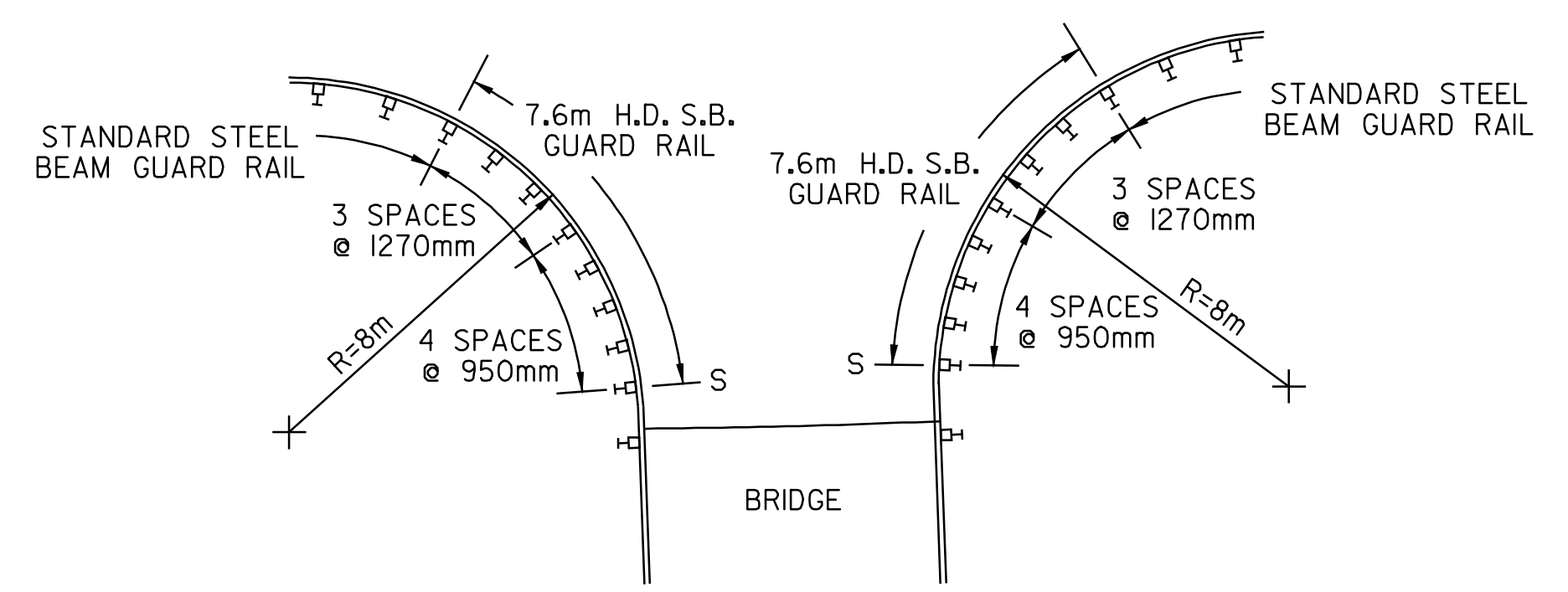
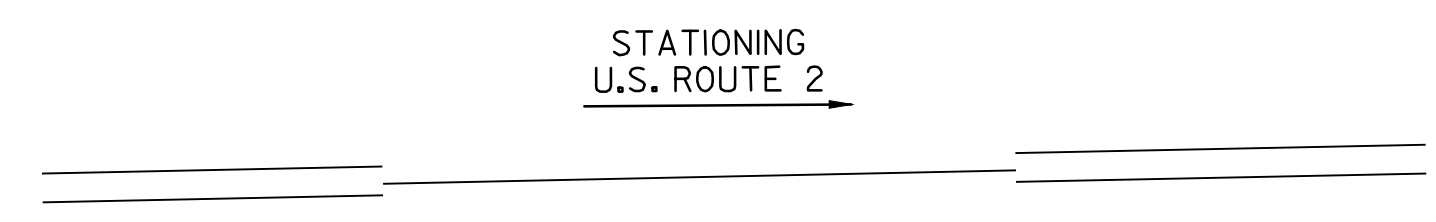
**MARSHFIELD - BRIDGE #79**  
**STA 8+767.6 = MM 5.448**



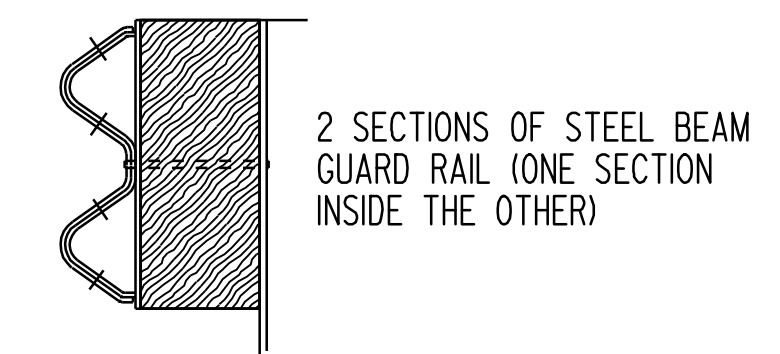
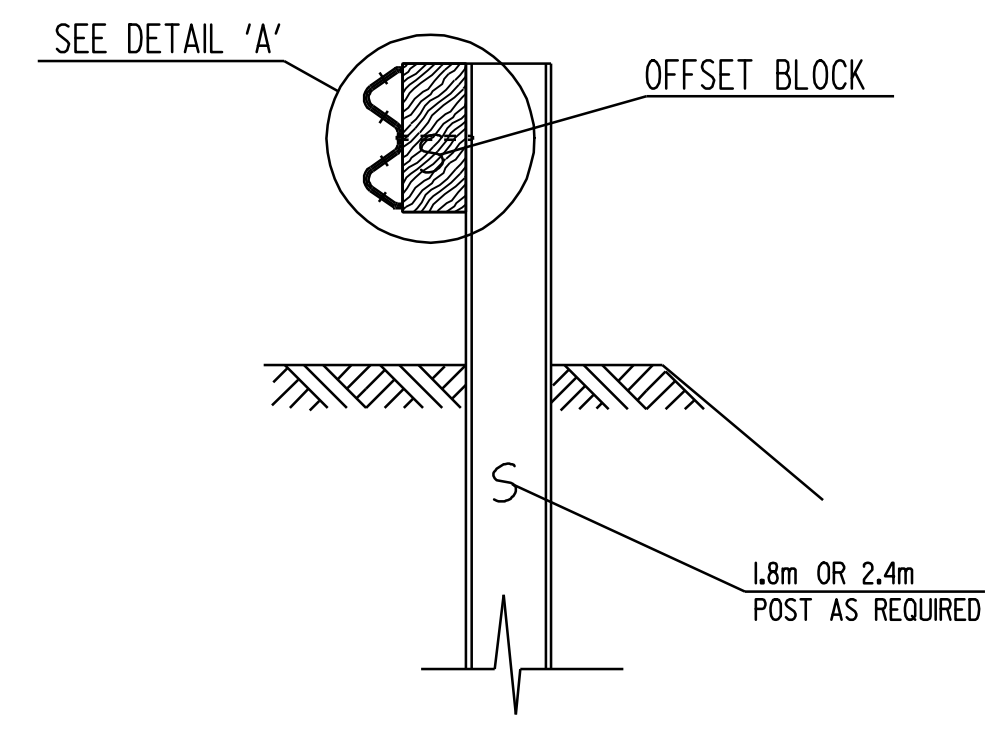
**SECTION @ EXISTING POST**



**DETAIL OF STEEL BEAM GUARD RAIL AT LARGE CULVERTS/BRIDGES**



**MARSHFIELD - TH #35 BRIDGE**  
**STA 9+049 = MM 5.61**



**DETAIL A**

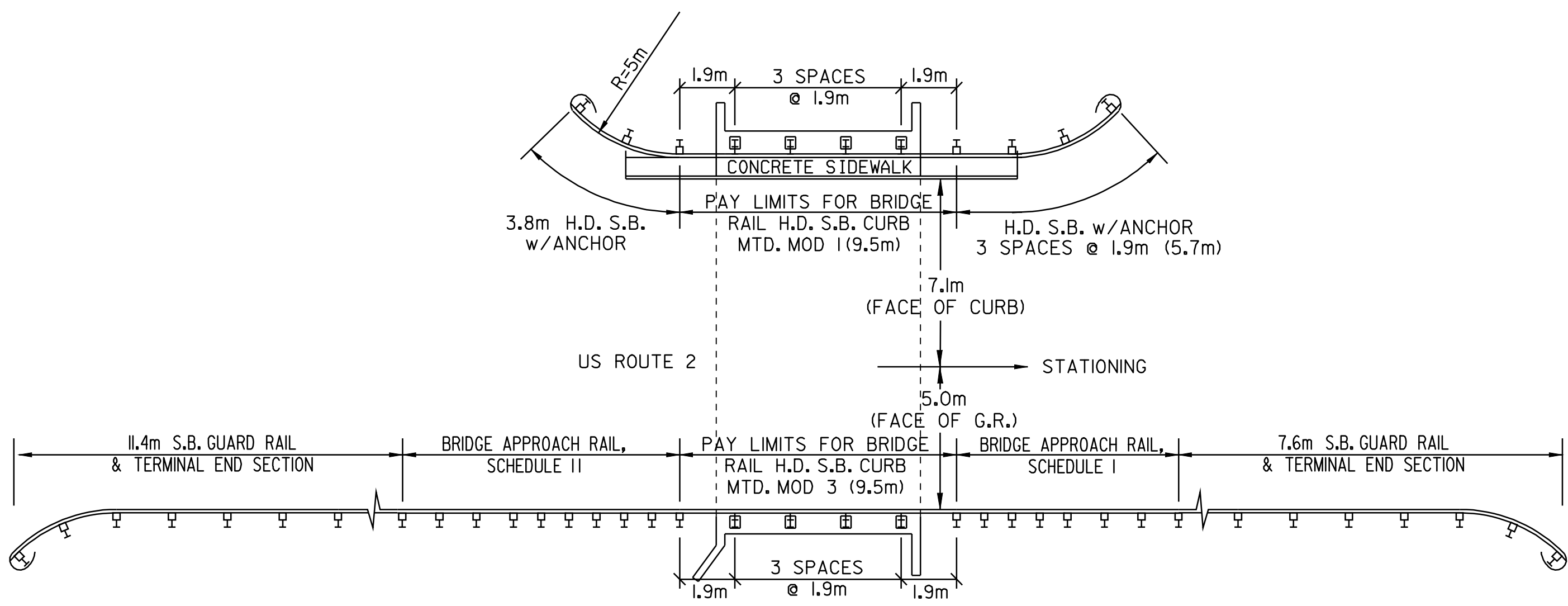
**NOTES**

1. SEE STANDARD G-1M & G-1DM FOR STEEL BEAM GUARD RAIL DETAILS.
2. THIS WORK SHALL BE PAID UNDER ITEM 621.20, STEEL BEAM GUARD RAIL, OR 621.21 HEAVY DUTY STEEL BEAM GUARD RAIL AT A PAY FACTOR OF 1.0.

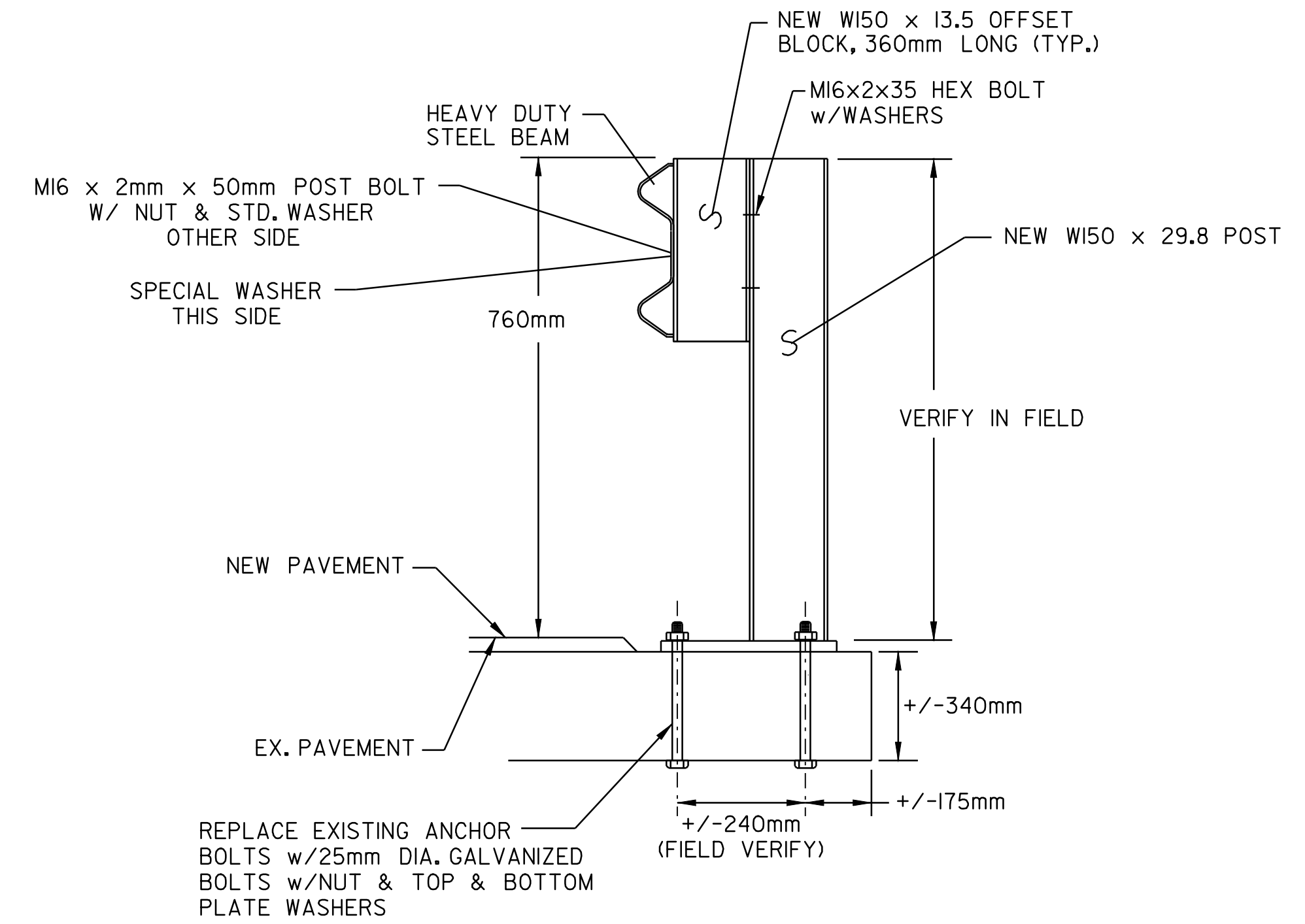
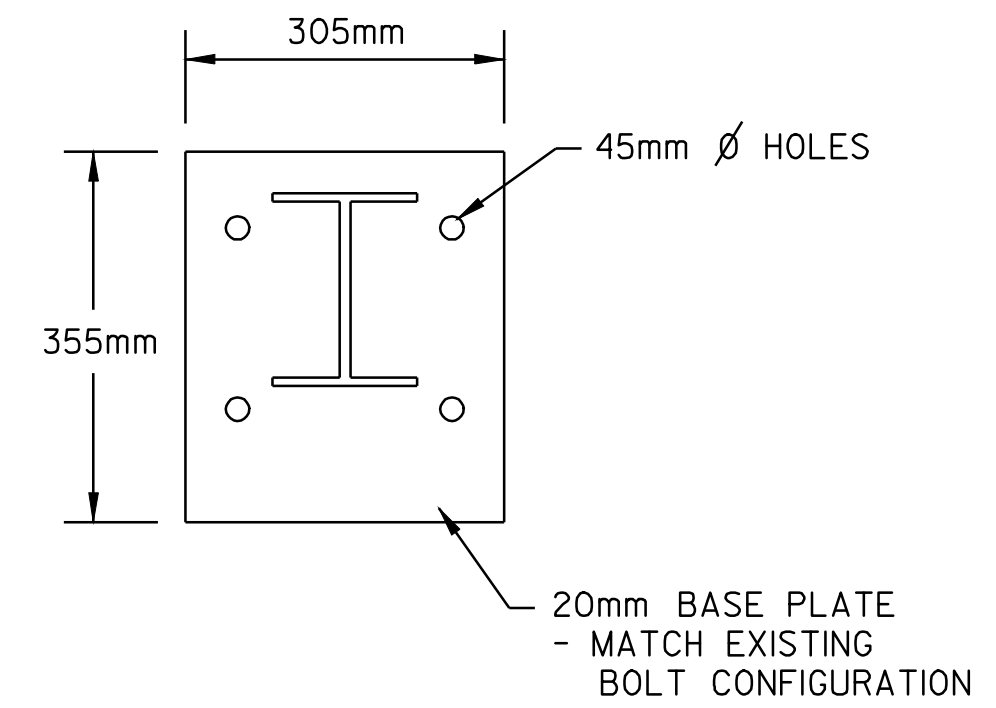
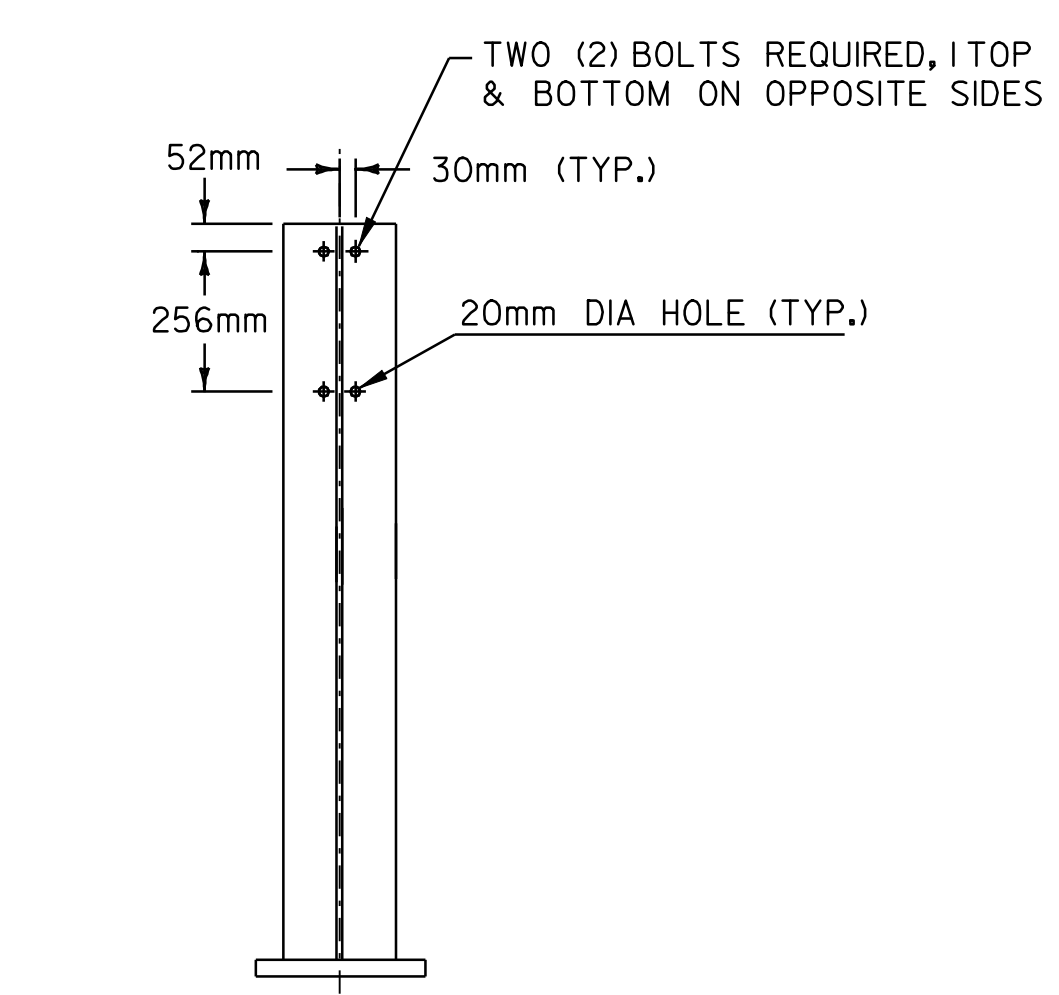


<b>BRIDGE DETAIL SHEET #4</b>	DESIGNED BY <u>BCE/PJM</u> DATE <u>7-02</u>
	DRAWN BY <u>C.E.A., INC.</u> DATE <u>7-02</u>
	DESIGN FILE NO. <u>/pave/98b090/pb090.dgn</u>
	PRF FILE <u>pb090b04.i</u> DATE <u>09-MAY-2008</u>
	PROJ. NAME: <b>MARSHFIELD - CABOT</b>
PROJ. NO.: <b>NH 2104(1)S</b>	
SHEET <b>55</b> OF <b>60</b> SHEETS	



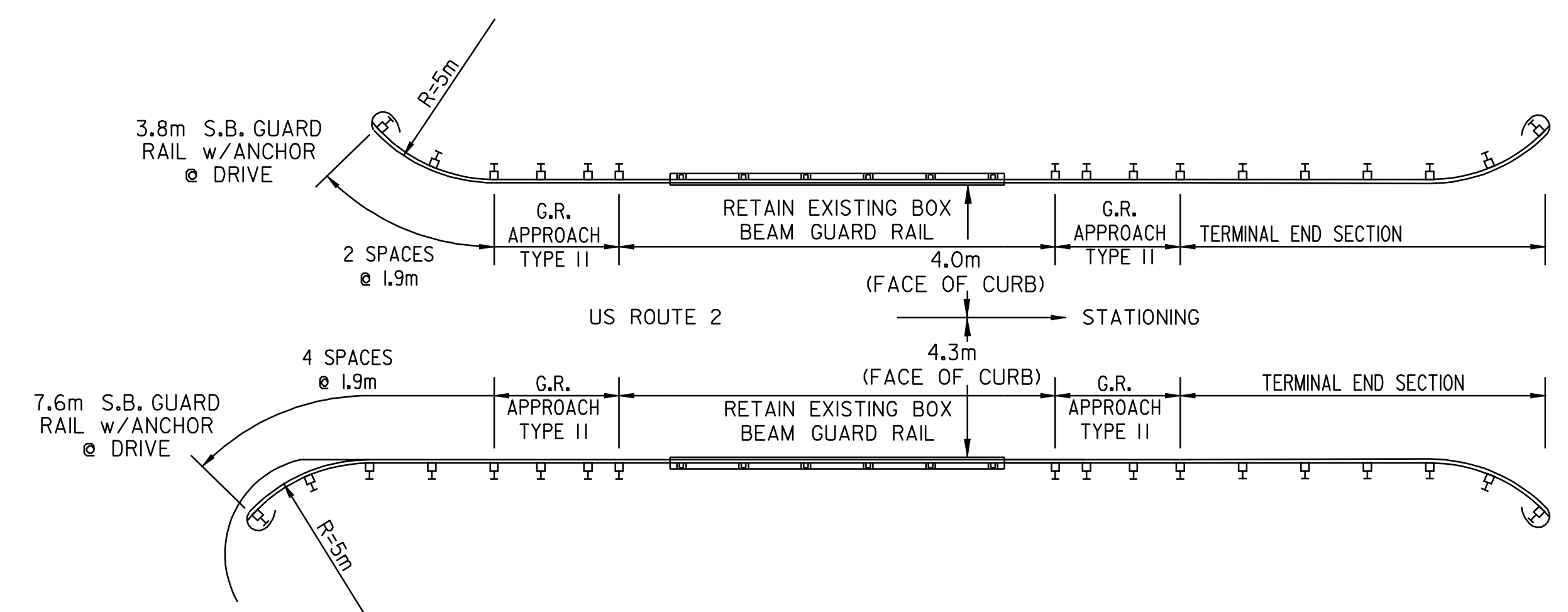


**MARSHFIELD - BRIDGE #80**  
**STA 10+365 = MM 6.441**



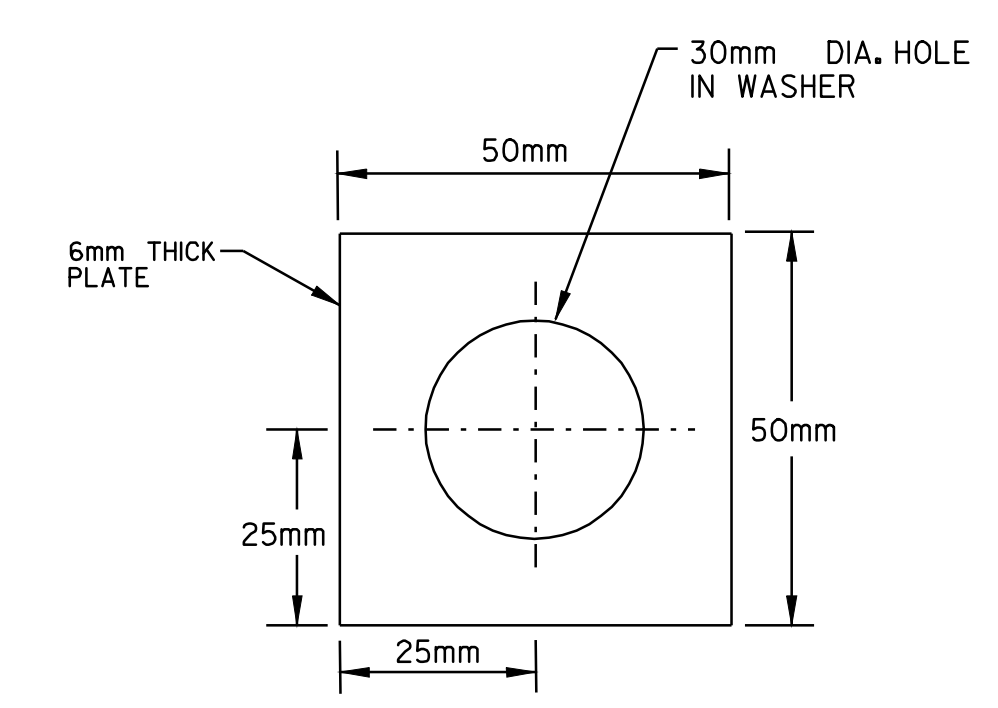
**POST DETAILS**

- NOTES:
1. BOLTS, NUTS & WASHERS SHALL BE GALVANIZED AND CONFORM TO SECTION 714.05, EXCEPT THAT POST BOLTS SHALL CONFORM TO STANDARD G-IM REQUIREMENTS AND BE CORROSION RESISTANT.
  2. POSTS, PLATE AND SPECIAL WASHER SHALL BE AASHTO M270/M270 GRADE 345W STEEL

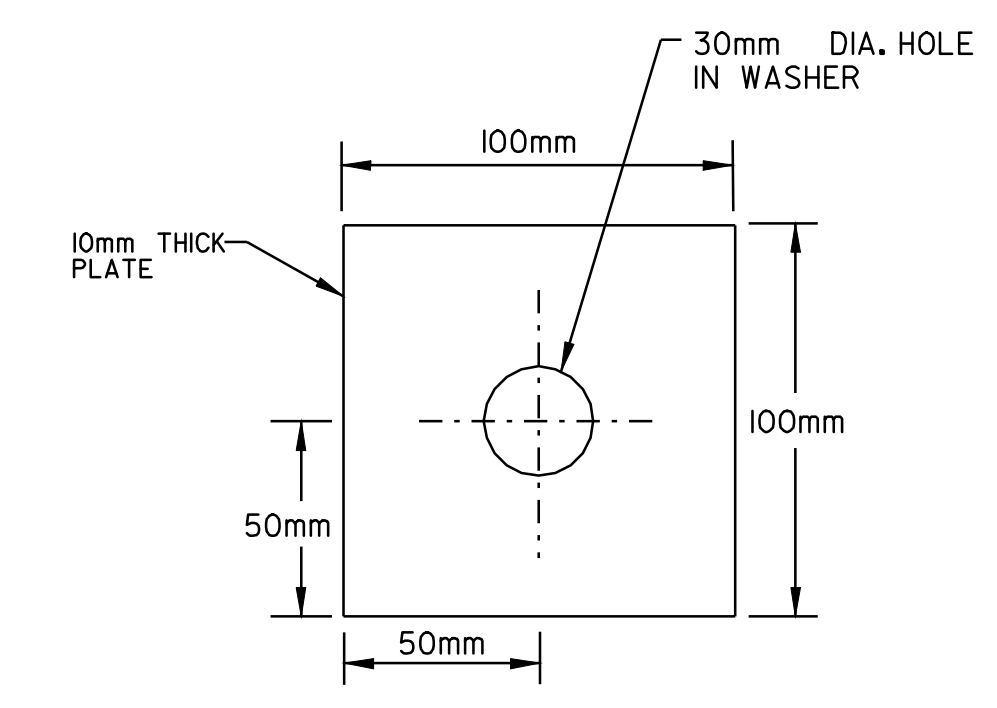


**MARSHFIELD - BRIDGE #81**  
**STA 11+018 = MM 6.85**

NOTE: SEE GUARD RAIL TRANSITION DETAILS, SHEETS 55 & 56.



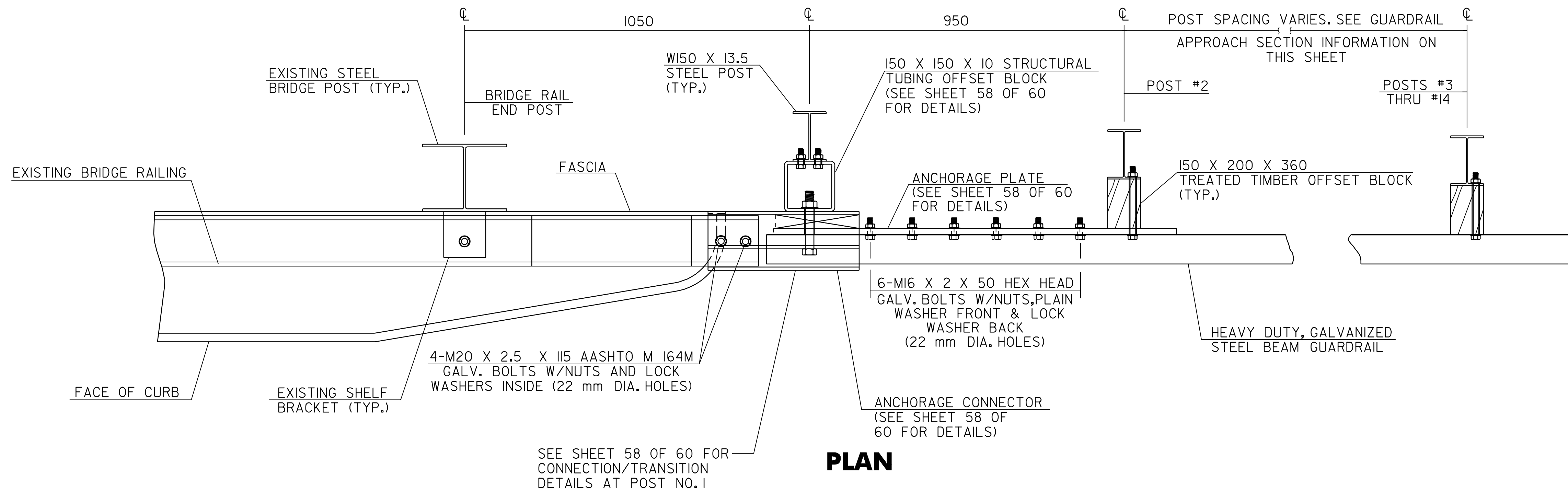
**WASHER DETAIL (TOP)**



**WASHER DETAIL (BOTTOM)**



<p><b>BRIDGE DETAIL SHEET #5</b></p>	DESIGNED BY <u>BCE/PJM</u> DATE <u>7-02</u>
	DRAWN BY <u>C.E.A., INC.</u> DATE <u>7-02</u>
	DESIGN FILE NO. <u>/pave/98b090/pb090.dgn</u>
	PRF FILE <u>pb090b05.1</u> DATE <u>PLOTTED 09-MAY-2008</u>
	PROJ. NAME: <b>MARSHFIELD - CABOT</b>
PROJ. NO.: <b>NH 2104(1)S</b>	
SHEET <b>56</b> OF <b>60</b> SHEETS	

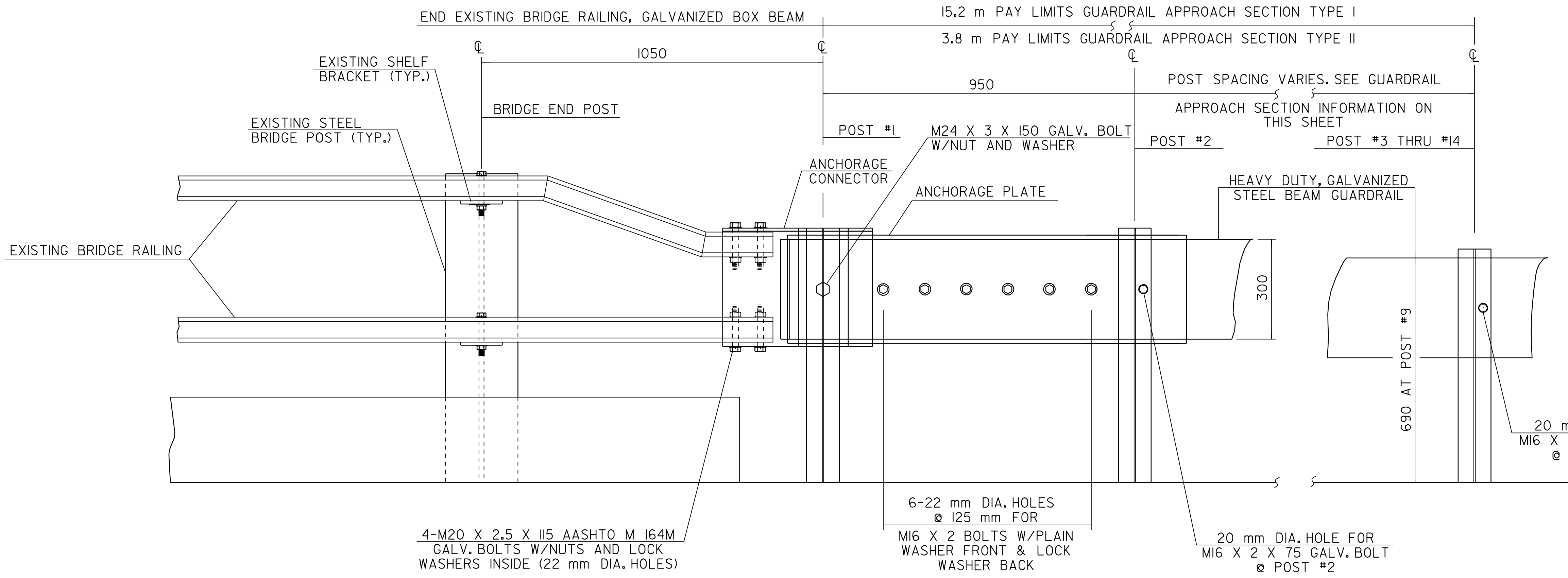


**PLAN**

**GUARDRAIL APPROACH SECTION TYPE I**

POST NO.	SPACING
1	950
2	950
3	950
4	950
5	950
6	950
7	950
8	950
9	950
10	1.27 m
11	1.27 m
12	1.27 m
13	1.9 m
14	1.9 m

15.2 m PAY LENGTH GUARDRAIL APPROACH SECTION, TYPE I



**ELEVATION**

**BRIDGE APPROACH DETAIL**  
NOT TO SCALE

**GUARDRAIL APPROACH SECTION TYPE II**

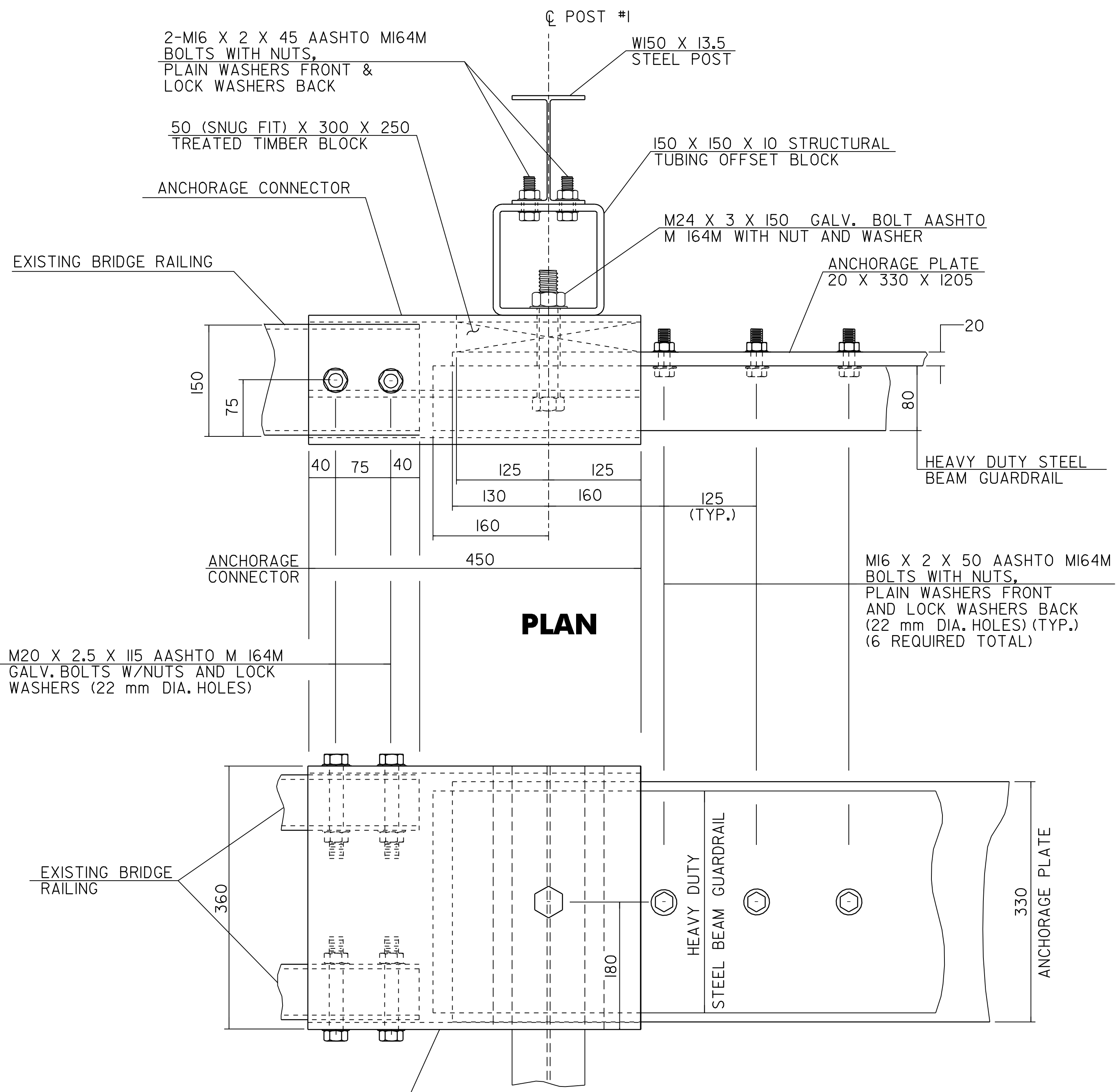
POST NO.	SPACING
1	950
2	1.43 m
3	1.43 m
4	

3.8 m PAY LENGTH GUARDRAIL APPROACH SECTION TYPE II



**BRIDGE APPROACH SECTION DETAILS SHEET #1**

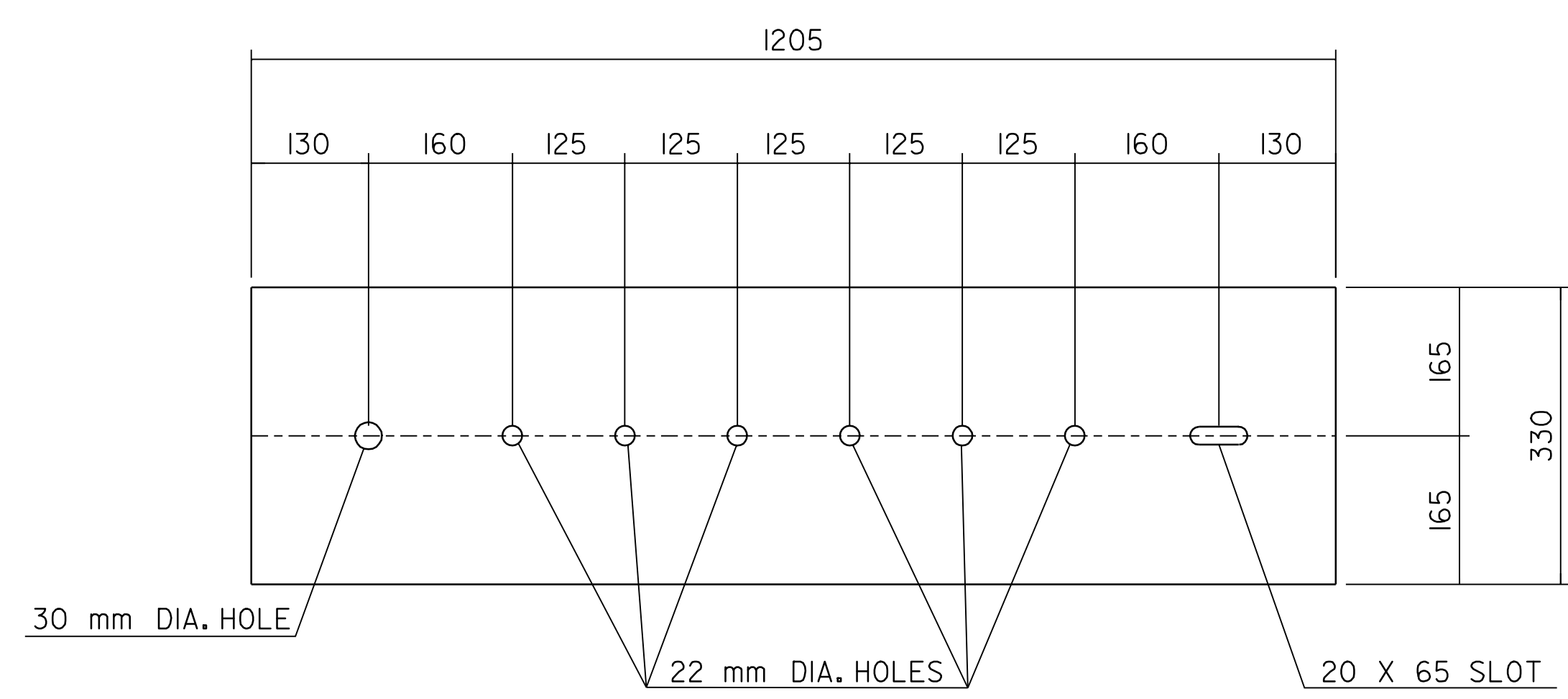
DESIGNED BY BCE/PJM DATE 7-02  
 DRAWN BY C.E.A., INC. DATE 7-02  
 DESIGN FILE NO. /pave/98b090/pb090.dgn  
 PRF FILE pb090b06.1 DATE 09-MAY-2008  
 PLOTTED  
 PROJ. NAME: **MARSHFIELD - CABOT**  
 PROJ. NO.: **NH 2104(1)S**  
 SHEET **57** OF **60** SHEETS



**ELEVATION**

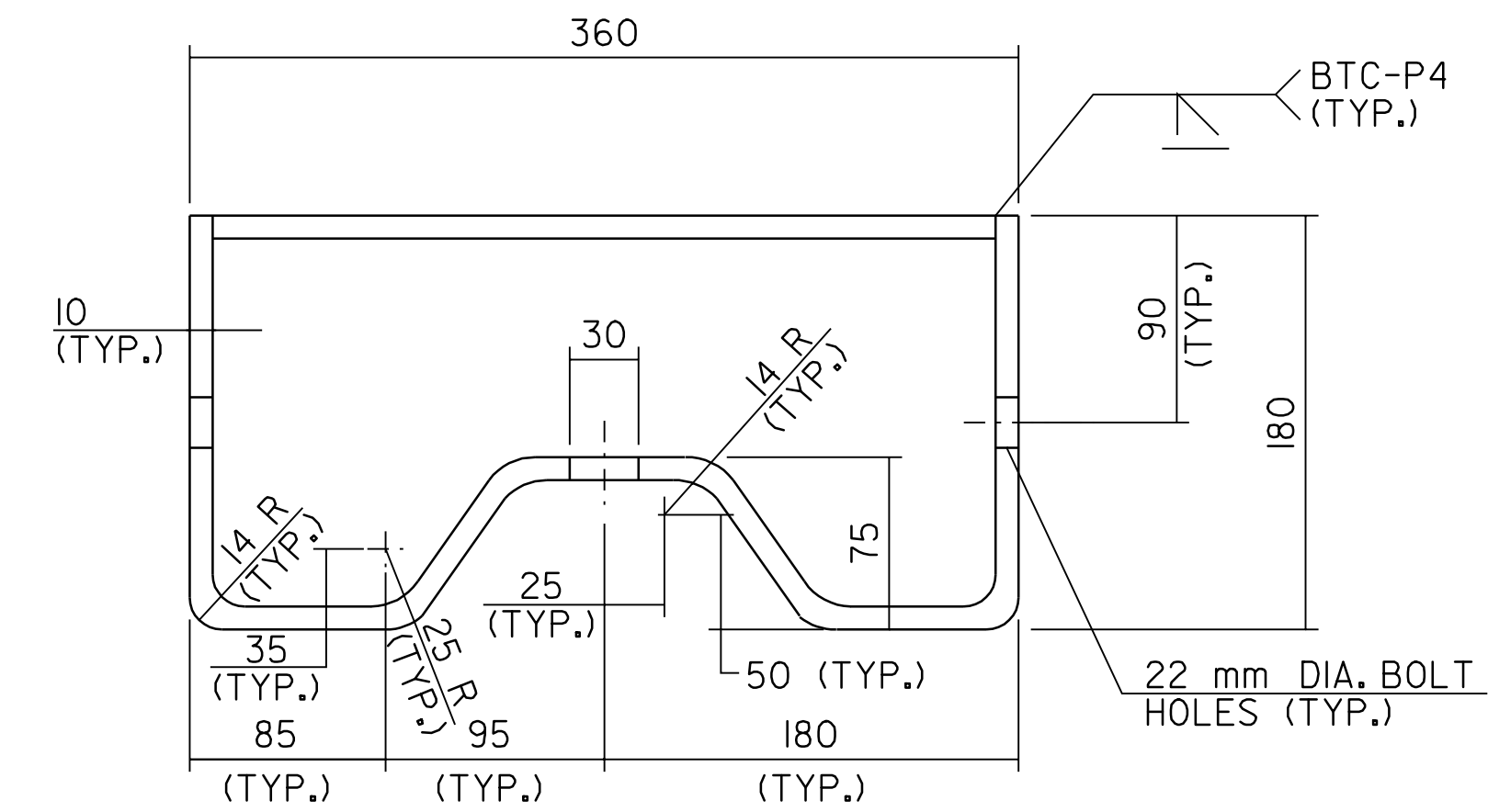
**CONNECTION/TRANSITION DETAILS AT POST NO. 1**

NOT TO SCALE



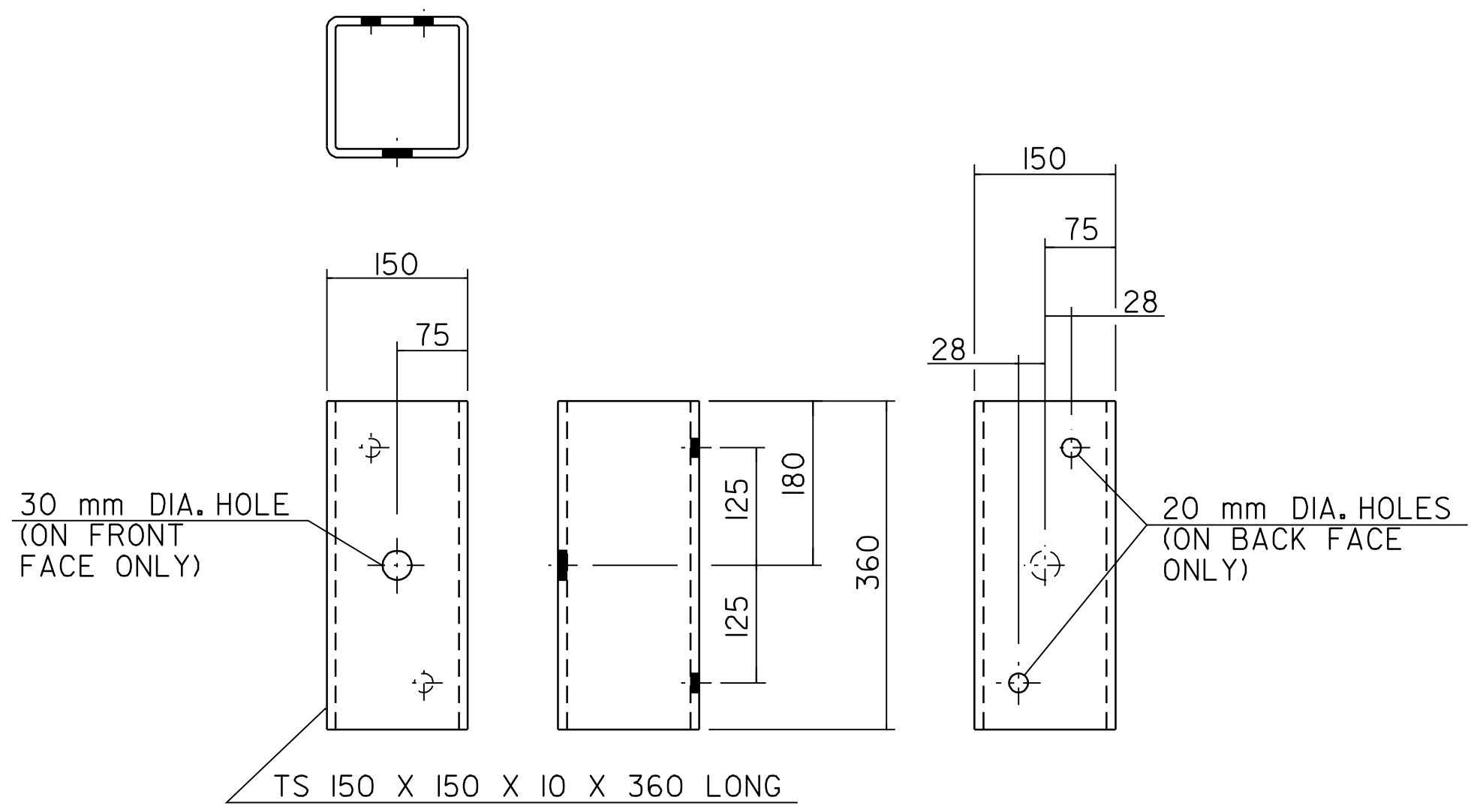
**NOTES**

1. REFER TO STANDARD G-IM FOR ADDITIONAL RAIL DETAILS.
2. ALL POSTS FOR HEAVY DUTY STEEL BEAM GUARDRAIL SHALL BE STEEL IN ACCORDANCE WITH SECTION 728 "GUARDRAIL, GUIDE POSTS AND BARRIERS" UNLESS OTHERWISE SPECIFIED IN THE CONTRACT.
3. APPROACH RAIL SPLICES SHALL LAP IN DIRECTION OF TRAFFIC FLOW.
4. ANCHORAGE CONNECTOR AND ANCHORAGE PLATE SHALL BE AASHTO M 270/M 270M, GRADE 250 GALVANIZED TO AASHTO M III AFTER FABRICATION.
5. ALL BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED TO AASHTO M 232 AFTER FABRICATION.
6. APPROACH RAILING SHALL BE HEAVY DUTY STEEL BEAM FOR EITHER TYPE OF GUARDRAIL APPROACH SECTION.
7. ALLOWABLE DIMENSIONAL TOLERANCE FOR BENT SECTIONS IS  $\pm 1.6$  mm.
8. THE UNIT PRICES BID FOR EITHER TYPE OF GUARDRAIL APPROACH SECTION SHALL INCLUDE ANCHORAGE CONNECTOR, ANCHORAGE PLATE, HEAVY DUTY STEEL BEAM GUARDRAIL, POSTS, OFFSET BLOCKS, BLOCKING, BOLTS, AND ALL NECESSARY HARDWARE.



**ANCHORAGE CONNECTOR DETAIL**

(SEE NOTE 7)  
NOT TO SCALE



**STRUCTURAL TUBING OFFSET BLOCK DETAILS**

(OCCURS AT POST NO. 1 WHEN USING APPROACH RAIL UTILIZING STEEL POSTS)  
NOT TO SCALE

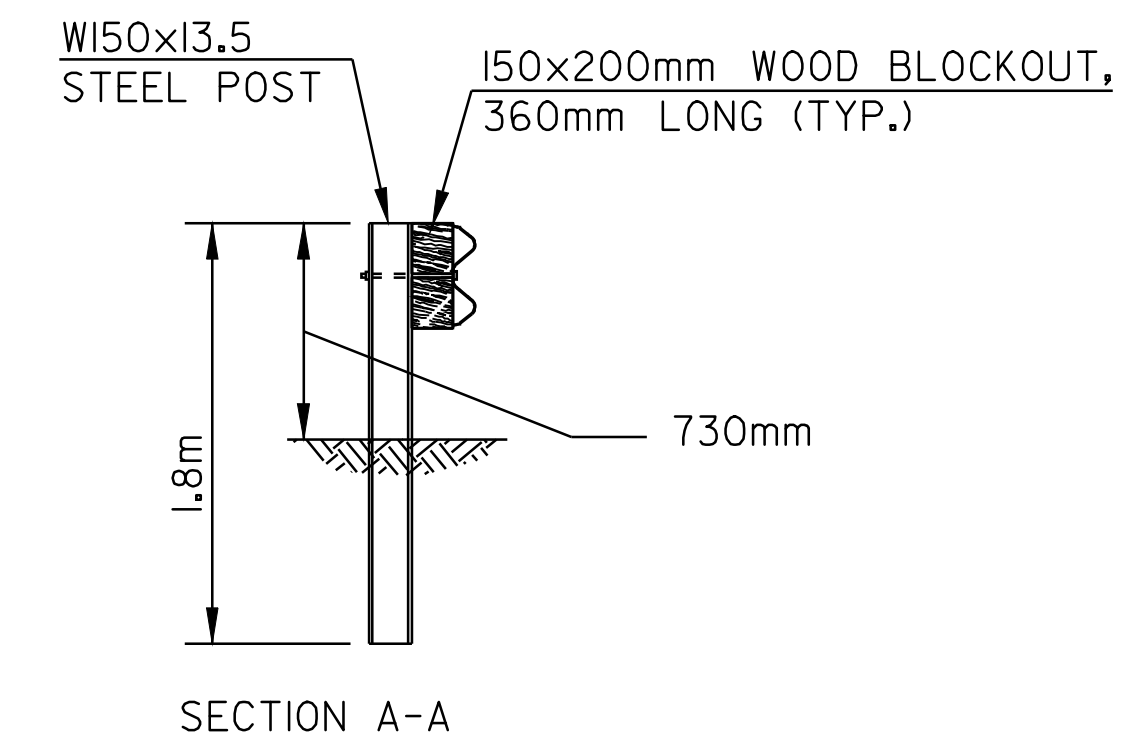
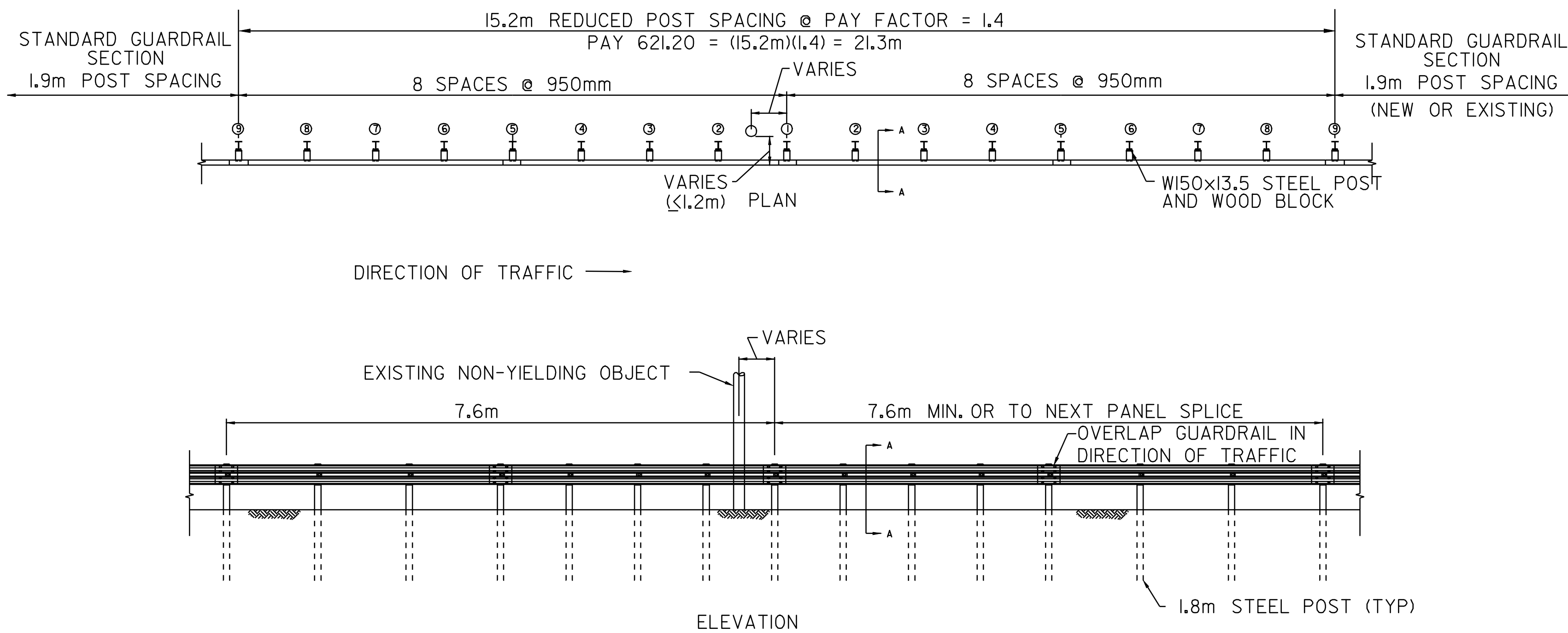


**BRIDGE APPROACH SECTION DETAILS SHEET #2**

DESIGNED BY	BCE/PJM	DATE	7-02
DRAWN BY	C.E.A., INC.	DATE	7-02
DESIGN FILE NO.	/pave/98b090/pb090.dgn		
PRF FILE	pb090b07.i	DATE PLOTTED	09-MAY-2008
PROJ. NAME:	MARSHFIELD - CABOT		
PROJ. NO.:	NH 2104(1)S		
SHEET	58	OF	60 SHEETS

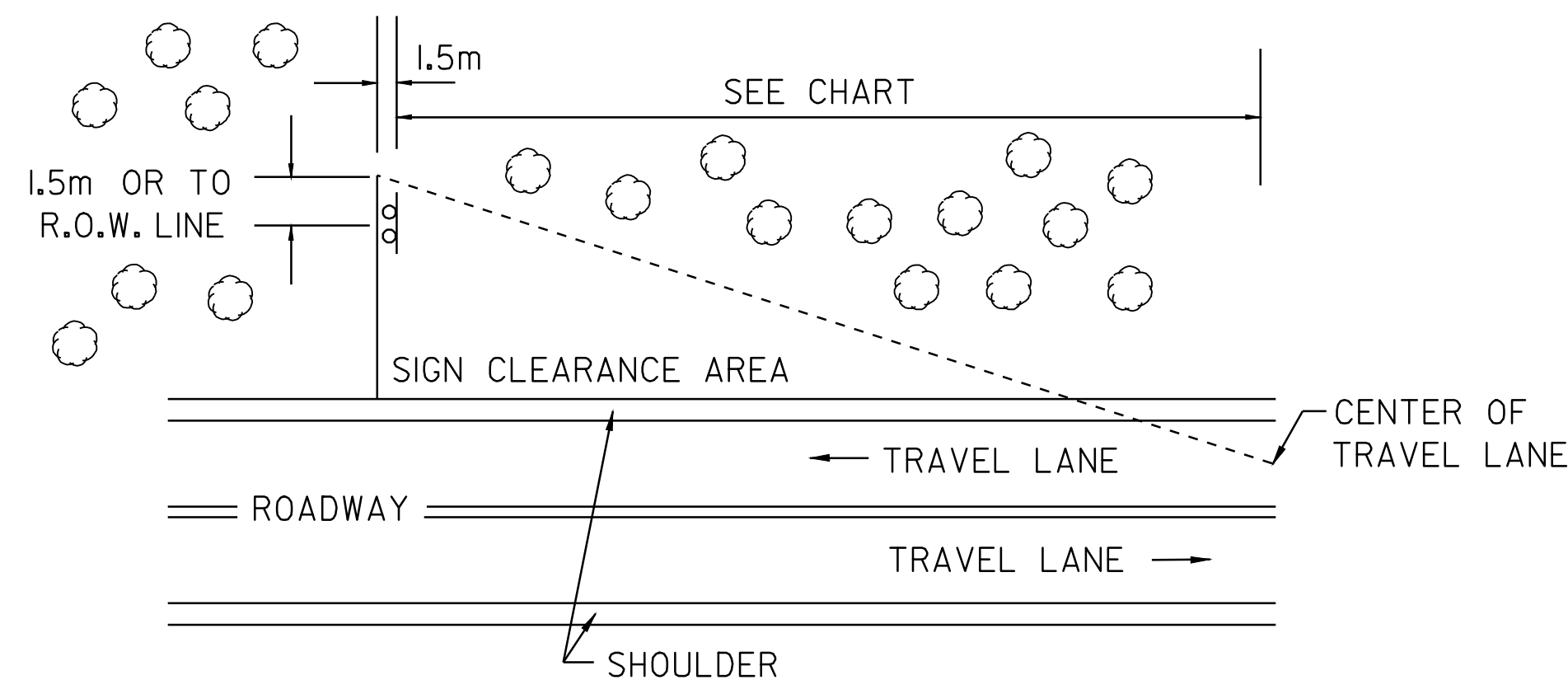
NOTE:  
ALL DIMENSIONS IN MILLIMETERS EXCEPT WHERE OTHERWISE INDICATED.





**NON-YIELDING OBJECT APPROACH DETAIL**

**MARSHFIELD**  
**STA 2+498 RT**  
**STA 2+532 RT**  
**STA 3+561 RT**  
**STA 4+107 RT**

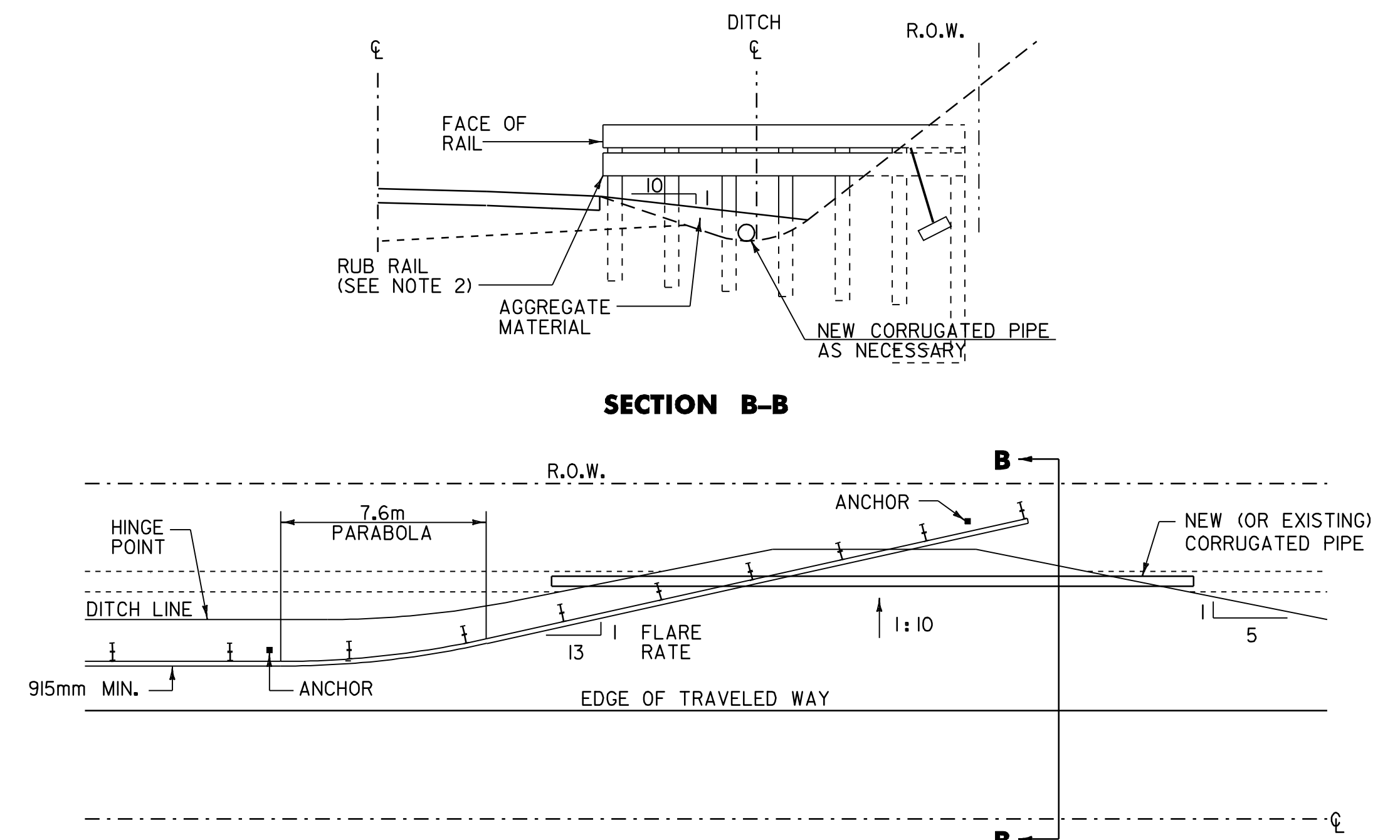


MINIMUM SIGN SIGHT DISTANCE CHART

APPROACH SPEED (mph)	SIGHT DISTANCE	
	(meters)	(feet)
30 OR LESS	90	300
35	105	350
40	120	400
45	135	450
50	150	500
55	165	550

THE CONTRACTOR SHALL REMOVE ALL WOODY STEMMED GROWTH INCLUDING BRUSH, SAPLINGS TREE LIMBS GROWING WITHIN OR PROJECTING INTO THE CLEARANCE AREA AND DOWN TO GROUND LEVEL. PAYMENT WILL BE FOR THINNING AND TRIMMING ITEM 201.31, AND PAID FOR PER EACH. (NO CHEMICALS, POISONS, OR DEFOLIANTS ALLOWED)

**CLEARING LIMITS FOR SIGNS ON CONVENTIONAL ROADS**



**DETAIL FOR BURIED GUARDRAIL ENDS INTO BACKSLOPES**

NOT TO SCALE  
 STA 7+673 RT MARSHFIELD

**NOTES:**

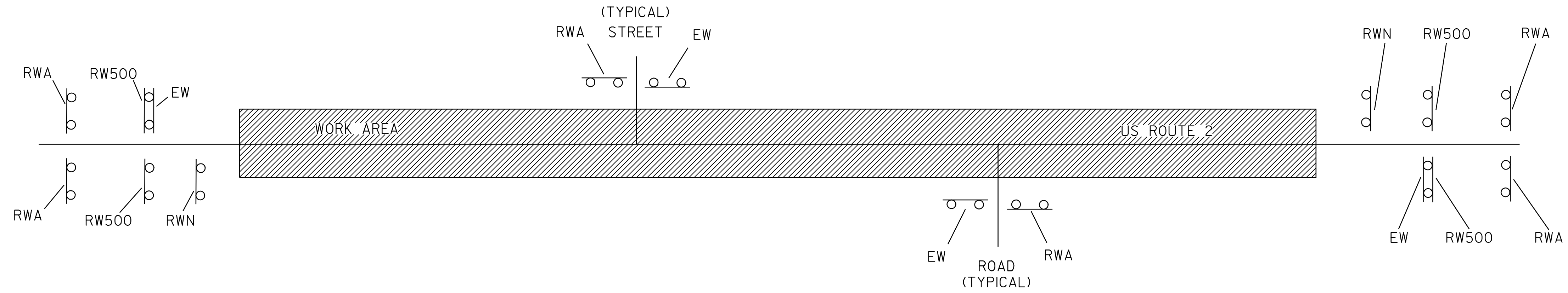
- PRIMARY RAIL SHALL REMAIN AT A CONSTANT HEIGHT (LEVEL) RELATIVE TO THE HEIGHT OF RAIL AT THE EDGE OF SHOULDER.
- ADDITION OF RUB RAIL IS REQUIRED WHEN OPENING BENEATH PRIMARY RAIL EXCEEDS 18 INCHES. RUB RAIL EXTENDS FROM THE EDGE OF SHOULDER TO THE BACK SLOPE.



**NON-YIELDING OBJECT, CLEARING LIMITS & BURIED END GUARDRAIL DETAILS**

DESIGNED BY BCE/PJM DATE 7-02  
 DRAWN BY C.E.A., INC. DATE 7-02  
 DESIGN FILE NO. /pave/98b090/pb090.dgn  
 PRF FILE pb090gr1.i DATE PLOTTED 09-MAY-2008 10  
 PROJ. NAME: MARSHFIELD - CABOT  
 PROJ. NO.: NH 2104(1)S  
 SHEET 59 OF 60 SHEETS

DATUM  
 VERTICAL N/A  
 HORIZONTAL N/A



## CONSTRUCTION APPROACH SIGNING

SEE STD. E-100M E-103M FOR SIGN PLACEMENT

**LEGEND**  
 RWA = ROAD WORK AHEAD  
 RW500 = ROAD WORK 500 FEET  
 EW = END WORK  
 RWN = ROAD WORK NEXT 8 MILES

THE RESIDENT ENGINEER, AT HIS OR HER DISCRETION,  
 MAY ELIMINATE CONSTRUCTION APPROACH SIGNING AT  
 DEAD END LOCATIONS

NOTE: TWO (2) PORTABLE CHANGEABLE MESSAGE SIGNS WILL BE PROVIDED FOR USE ALONG THIS PROJECT. THE PLACEMENT OF THESE MESSAGE SIGNS AS WELL AS THEIR MESSAGE WILL BE APPROVED BY THE RESIDENT ENGINEER. THIS QUANTITY IS PAID FOR AS ITEM 641.15, PORTABLE CHANGEABLE MESSAGE SIGN.

THE CONTRACTOR SHALL INCLUDE A CONSTRUCTION SIGN APPROACH PACKAGE FOR EXPECTED LANE CLOSURES AND WORK ZONE SPEED REDUCTIONS IN COMPLIANCE WITH STANDARD E-103M. PAYMENT FOR PROVIDING THIS PACKAGE SHALL BE INCIDENTAL TO ITEM 641.10, TRAFFIC CONTROL.

### LIST OF CONSTRUCTION SIGNS

TOWN HIGHWAY	RWA	RW500	EW	RWN
MARSHFIELD				
BEGIN PROJECT	2	2	1	1
TH #60	1		1	
TH #57	1		1	
TH #56	1		1	
TH #49	1		1	
TH #48	1		1	
TH #55	1		1	
TH #38	1		1	
TH #33	1		1	
TH #35	1		1	
TH #25	1		1	
TH #2	1		1	
TH #9	1		1	
TH #70	1		1	
TH #69	1		1	
TH #27	1		1	
VT ROUTE 215	1		1	
TH #28	1		1	
VT ROUTE 232	1		1	
CABOT				
END PROJECT	2	2	1	1
TOTALS	22	4	20	2

DATUM  
 VERTICAL N/A  
 HORIZONTAL N/A



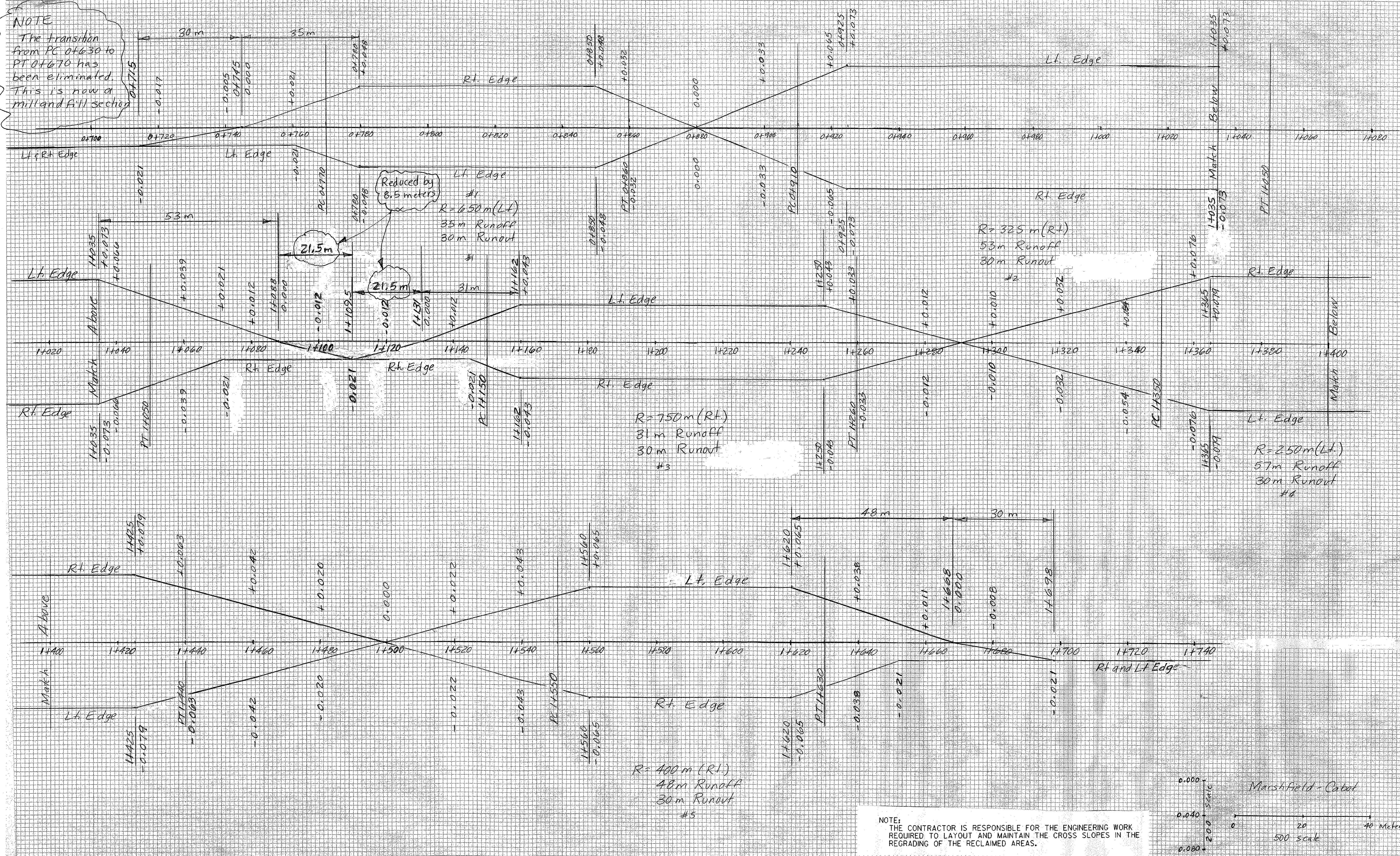
## CONSTRUCTION APPROACH SIGNING

DESIGNED BY BCE/PJM DATE 7-02  
 DRAWN BY C.E.A., INC. DATE 7-02  
 DESIGN FILE NO. /pave/98b090/pb090.dgn  
 PRF FILE pb090cas.1 DATE PLOTTED 09-MAY-2008 10  
 PROJ. NAME: **MARSHFIELD - CABOT**  
 PROJ. NO.: **NH 2104(1)S**  
 SHEET **60** OF **60** SHEETS

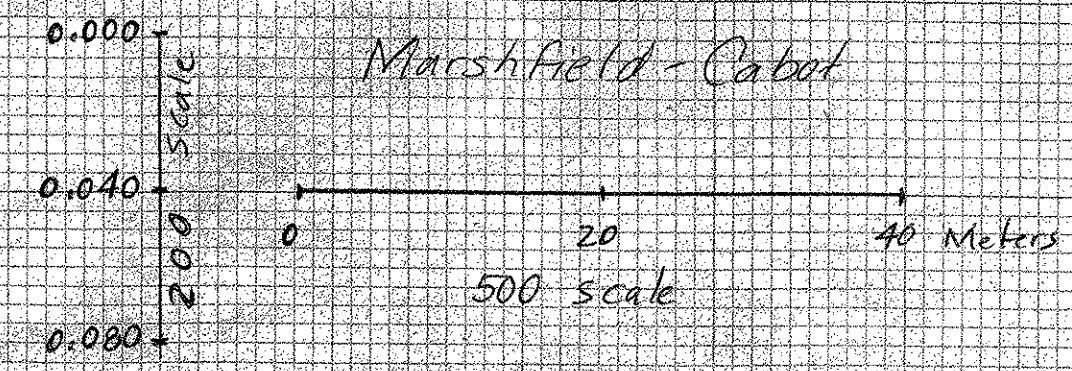


- RECORD PLANS -

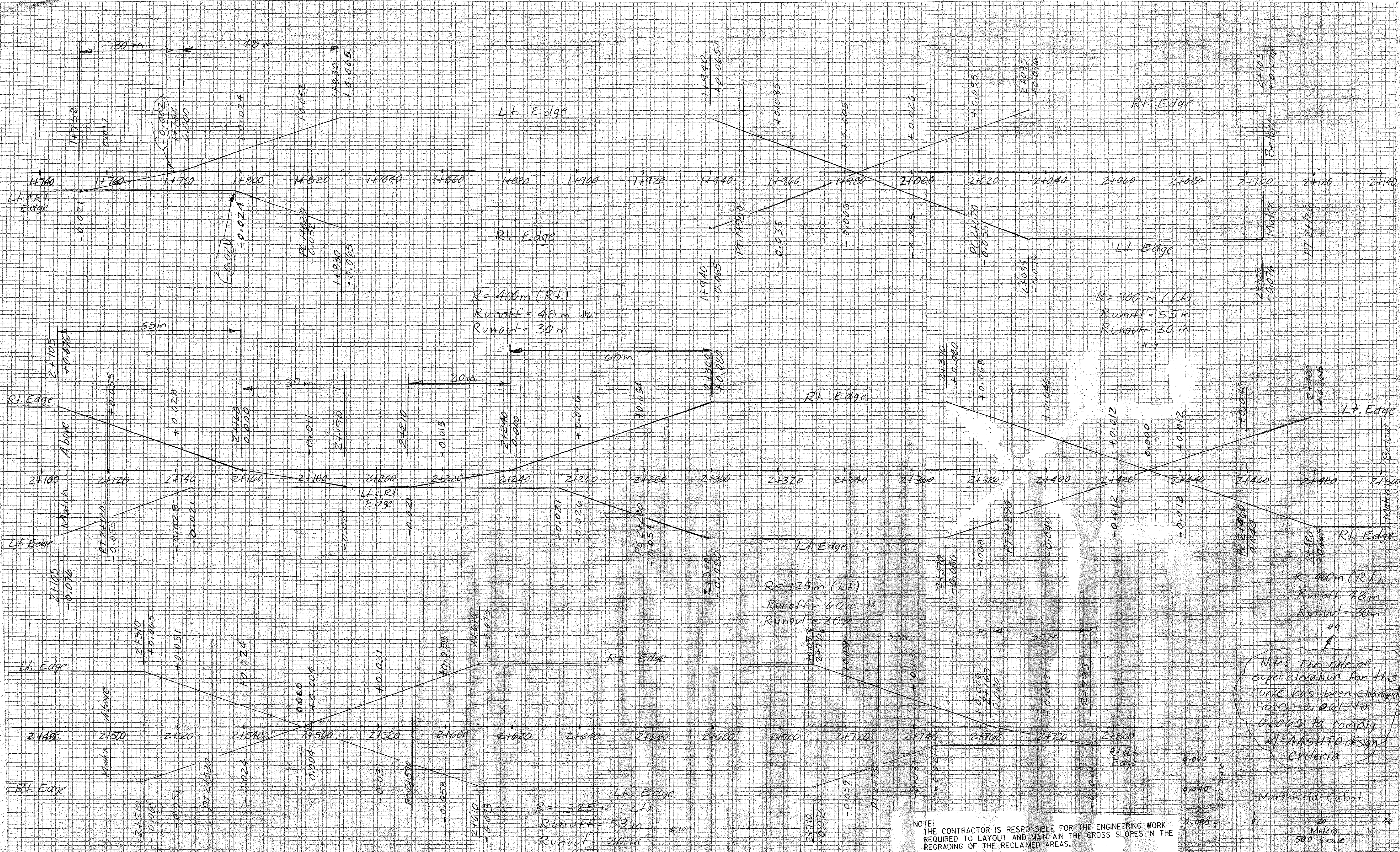
**NOTE**  
The transition from PC 01630 to PT 01670 has been eliminated. This is now a mill and fill section.



**NOTE:**  
THE CONTRACTOR IS RESPONSIBLE FOR THE ENGINEERING WORK REQUIRED TO LAYOUT AND MAINTAIN THE CROSS SLOPES IN THE REGRADING OF THE RECLAIMED AREAS.

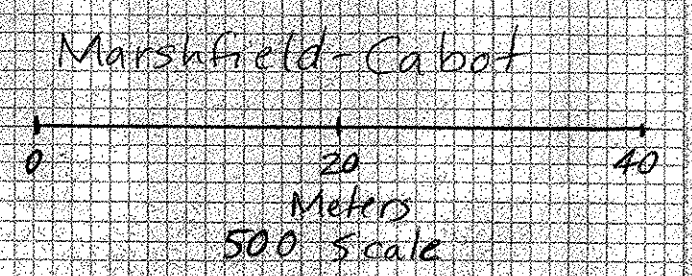




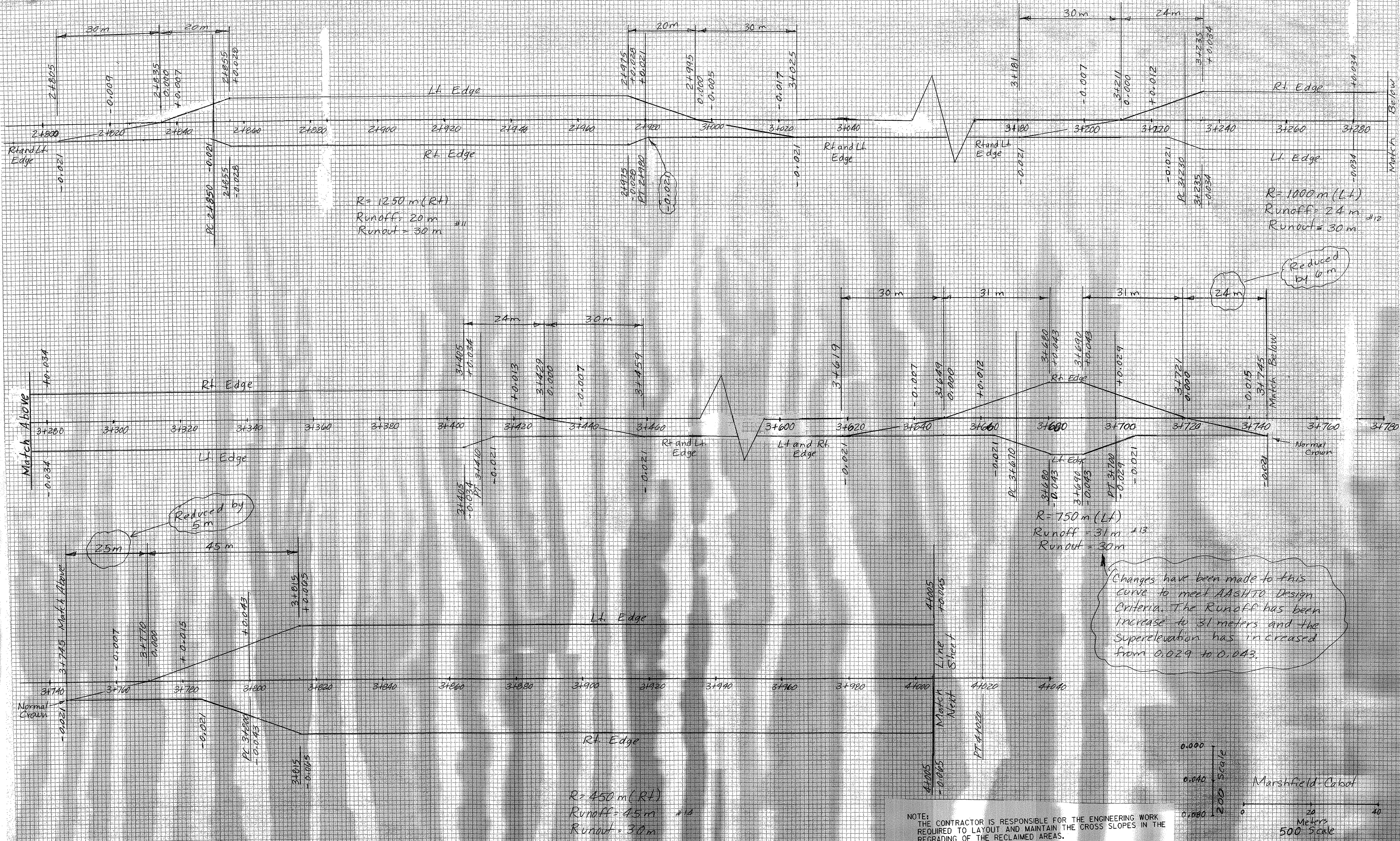


Note: The rate of superelevation for this curve has been changed from 0.001 to 0.005 to comply w/ AASHTO design Criteria

NOTE: THE CONTRACTOR IS RESPONSIBLE FOR THE ENGINEERING WORK REQUIRED TO LAYOUT AND MAINTAIN THE CROSS SLOPES IN THE REGRADING OF THE RECLAIMED AREAS.







R=1250 m (Rt)  
Runoff= 20 m #11  
Runout= 30 m

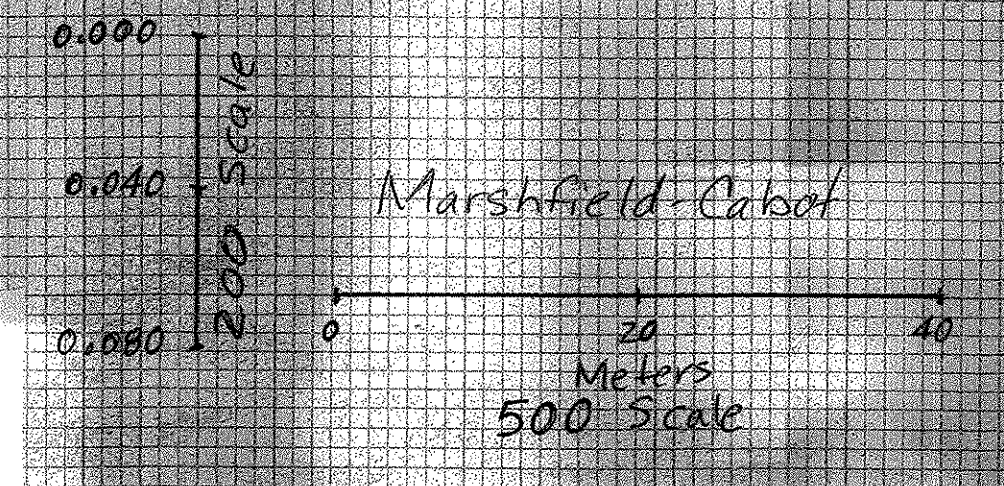
R=1000 m (Lt)  
Runoff= 24 m #12  
Runout= 30 m

R=750 m (Lt)  
Runoff= 31 m #13  
Runout= 30 m

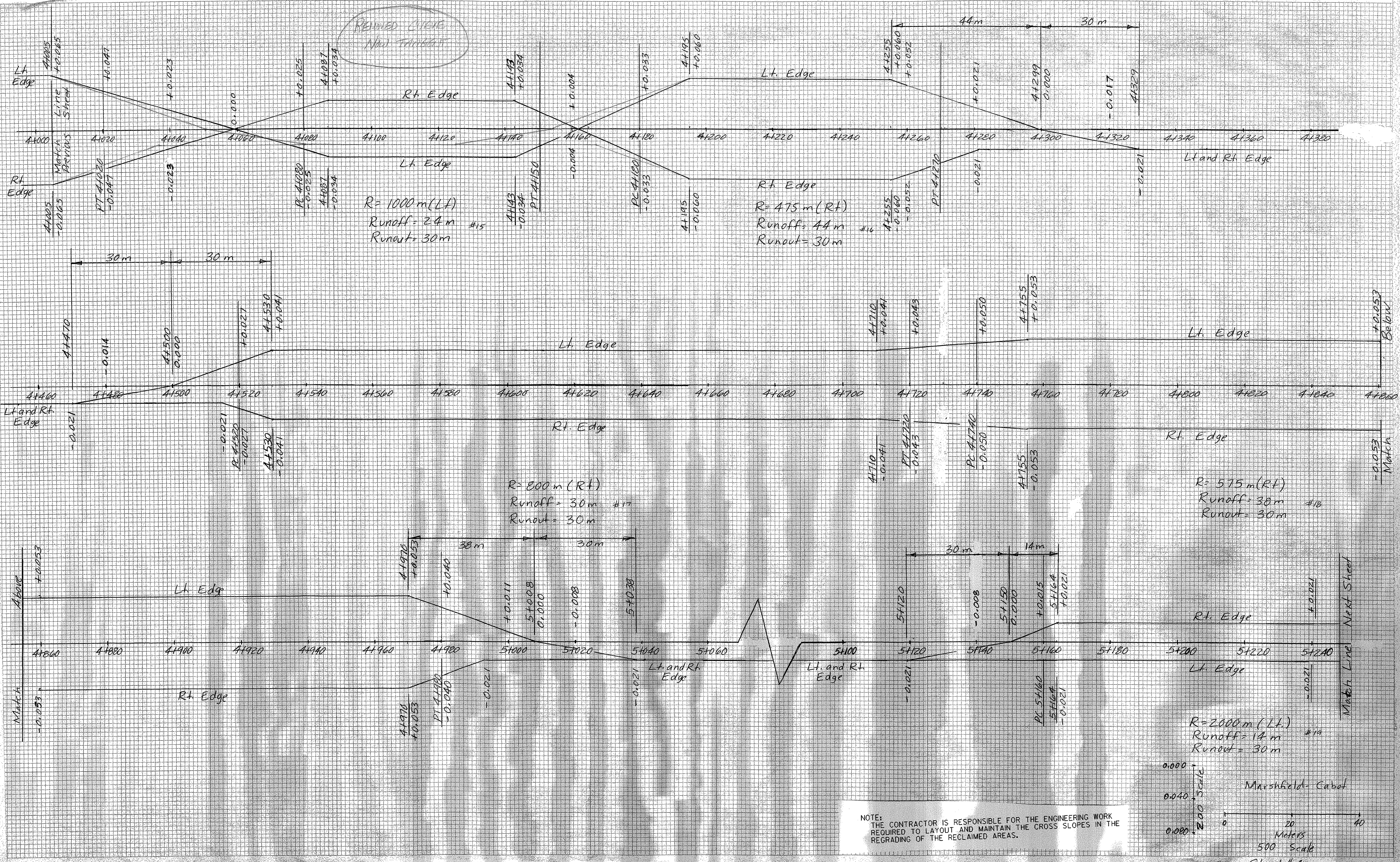
R=450 m (Rt)  
Runoff= 45 m #14  
Runout= 30 m

Changes have been made to this curve to meet AASHTO Design Criteria. The Runoff has been increase to 31 meters and the Superlevation has increased from 0.029 to 0.043.

NOTE:  
THE CONTRACTOR IS RESPONSIBLE FOR THE ENGINEERING WORK REQUIRED TO LAYOUT AND MAINTAIN THE CROSS SLOPES IN THE REGRADING OF THE RECLAIMED AREAS.







REMOVED CURVE  
New Trench

R=1000m (LH)  
Runoff=24m #15  
Runout=30m

R=475m (RH)  
Runoff=44m #16  
Runout=30m

R=800m (RT)  
Runoff=30m #17  
Runout=30m

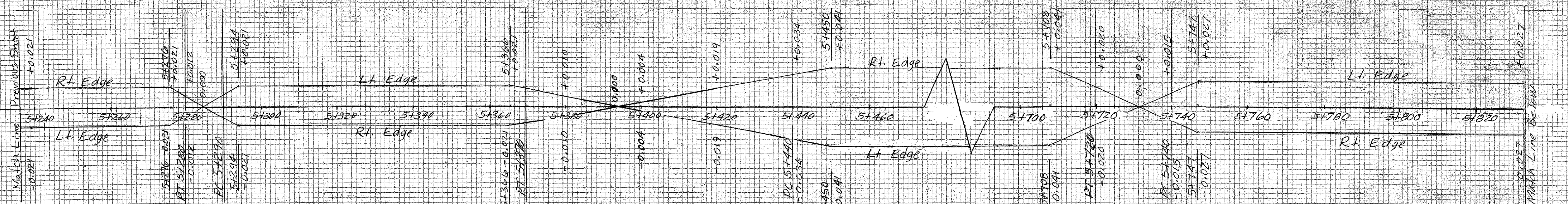
R=575m (RT)  
Runoff=38m #18  
Runout=30m

R=2000m (LT)  
Runoff=14m #19  
Runout=30m

NOTE:  
THE CONTRACTOR IS RESPONSIBLE FOR THE ENGINEERING WORK  
REQUIRED TO LAYOUT AND MAINTAIN THE CROSS SLOPES IN THE  
REGRAVING OF THE RECLAIMED AREAS.







R=2000m (Rt.)  
Runoff=14m #21  
Runout=30m

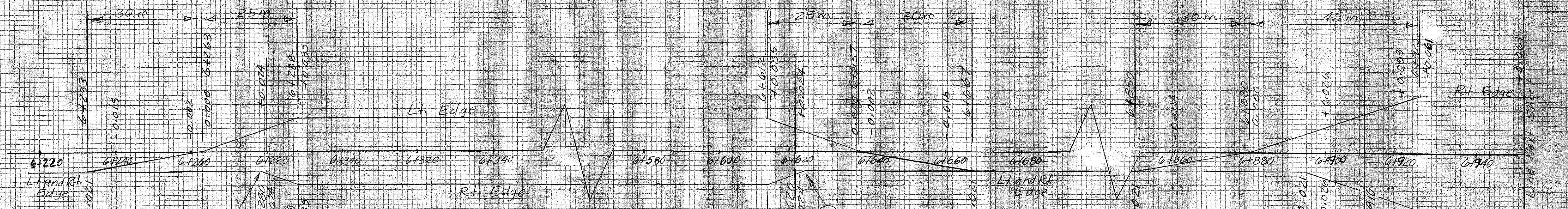
R=800m (Lt.)  
Runoff=30m  
Runout=30m #21

R=1300m (Rt.)  
Runoff=19m #22  
Runout=30m



R=1000m (Lt.)  
Runoff=24m  
Runout=30m #23

R=440m (Lt.)  
Runoff=45m  
Runout=30m #24



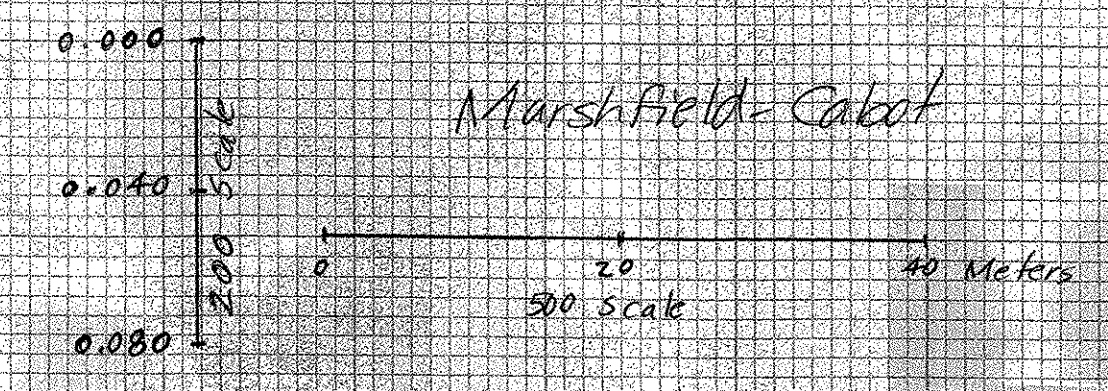
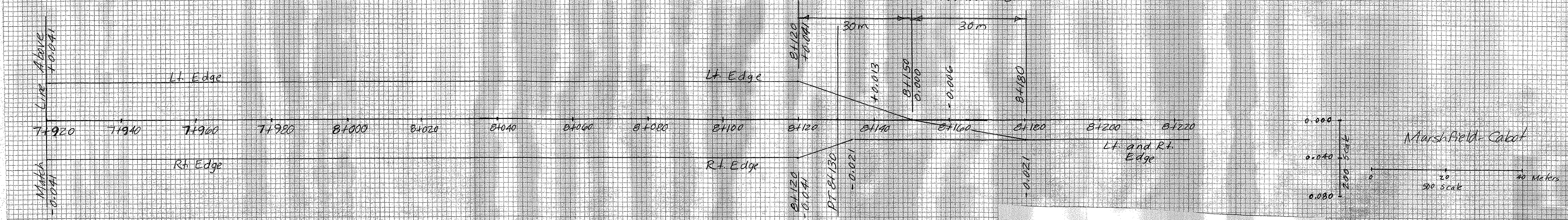
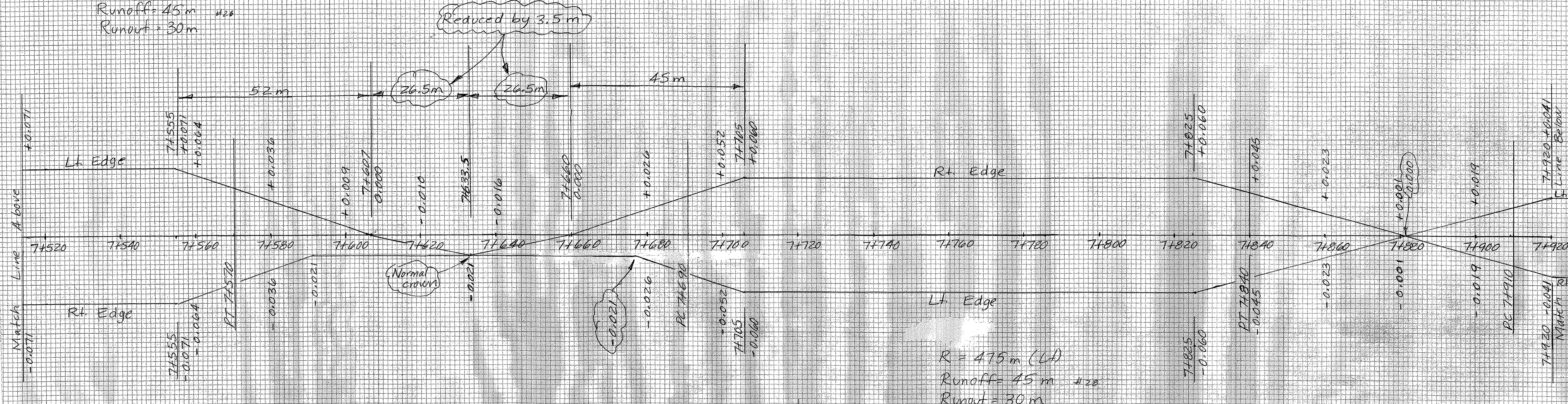
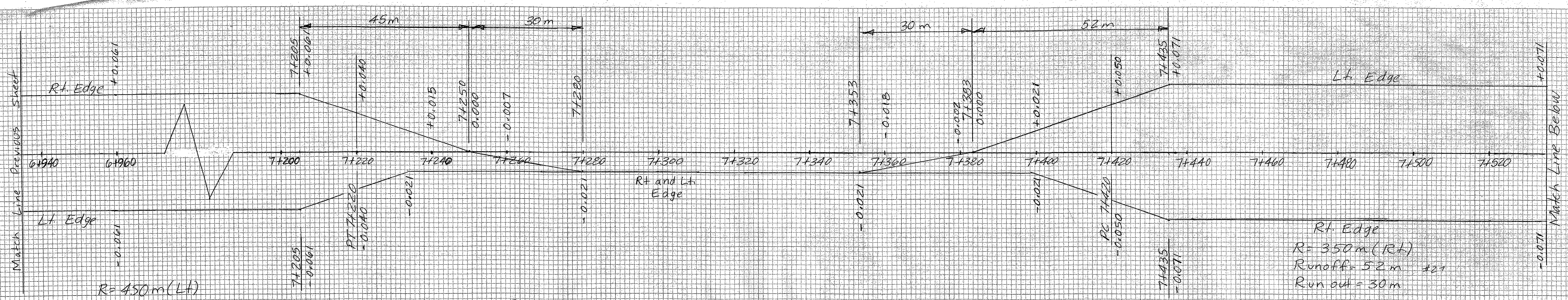
R=975m (Rt.)  
Runoff=25m  
Runout=30m #25

R=450m (Lt.)  
Runoff=45m  
Runout=30m #26

NOTE: THE CONTRACTOR IS RESPONSIBLE FOR THE ENGINEERING WORK REQUIRED TO LAYOUT AND MAINTAIN THE CROSS SLOPES IN THE REGRADING OF THE RECLAIMED AREAS.

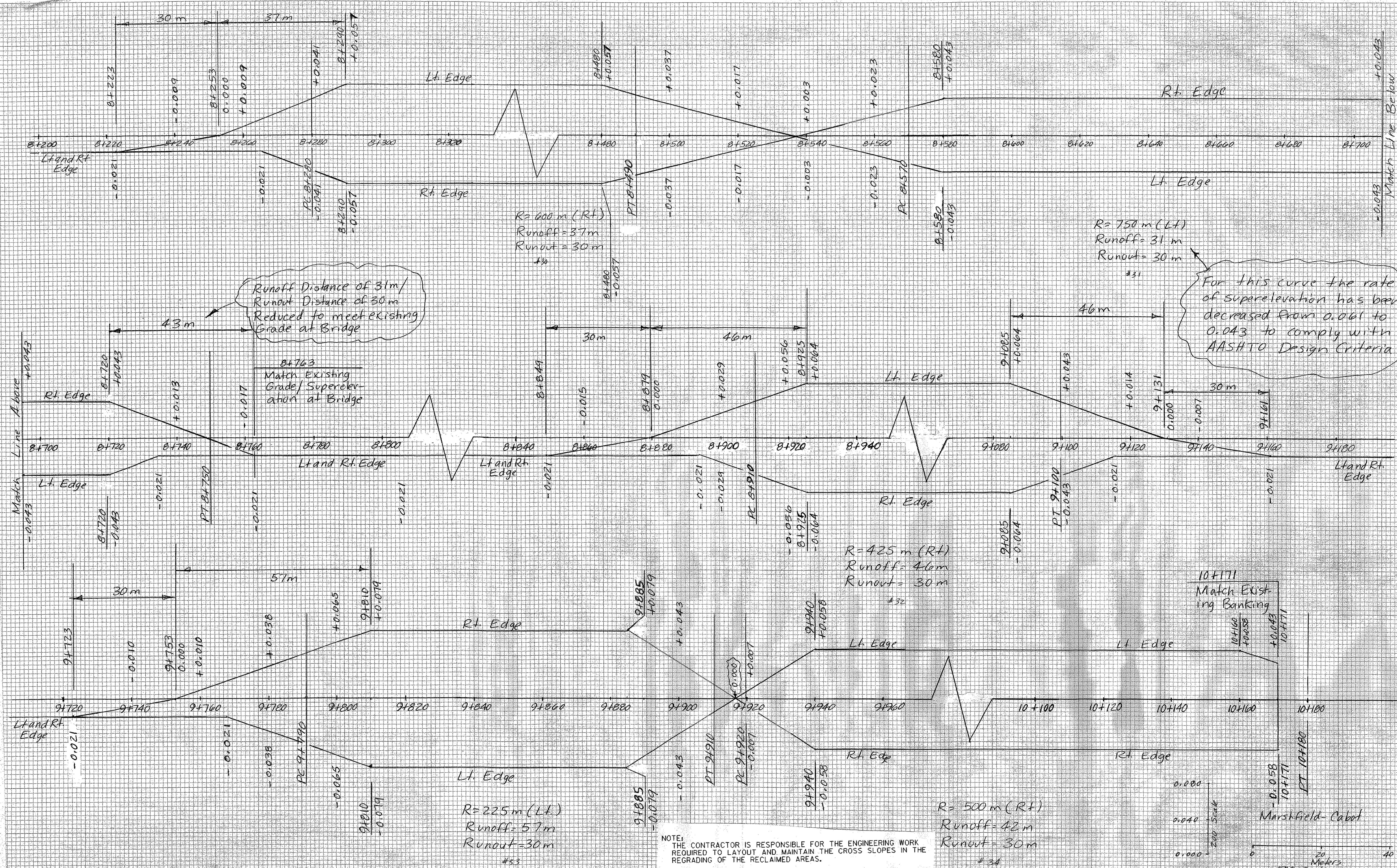
Marshfield-Cabot  
Meters  
500 scale





NOTE:  
 THE CONTRACTOR IS RESPONSIBLE FOR THE ENGINEERING WORK  
 REQUIRED TO LAYOUT AND MAINTAIN THE CROSS SLOPES IN THE  
 REGRADING OF THE RECLAIMED AREAS.





Runoff Distance of 31m/  
Runout Distance of 30m  
Reduced to meet existing  
Grade at Bridge

For this curve the rate  
of superelevation has been  
decreased from 0.061 to  
0.043 to comply with  
AASHTO Design Criteria

NOTE:  
THE CONTRACTOR IS RESPONSIBLE FOR THE ENGINEERING WORK  
REQUIRED TO LAYOUT AND MAINTAIN THE CROSS SLOPES IN THE  
REGRAVING OF THE RECLAIMED AREAS.

