SECTION 905 -- PROPOSAL (CONTINUED)

I (We) further propose to execute the attached contract agreement (Section 902) as soon as the work is awarded to me (us), and to begin and complete the work within the time limit(s) provided for in the Specifications and Advertisement. I (We) also propose to execute the attached contract bond (Section 903) in an amount not less than one hundred (100) percent of the total of my (our) part, but also to guarantee the excellence of both workmanship and materials until the work is finally accepted.

I (We) enclose a certified check, cashier's check or bid bond for **five percent (5%) of total bid** and hereby agree that in case of my (our) failure to execute the contract and furnish bond within Ten (10) days after notice of award, the amount of this check (bid bond) will be forfeited to the State of Mississippi as liquidated damages arising out of my (our) failure to execute the contract as proposed. It is understood that in case I am (we are) not awarded the work, the check will be returned as provided in the Specifications.

Bidder acknowledges receipt of and has added to and made a part of the proposal and contract documents the following addendum (addenda):

ADDENDUM NO.	**1**	DATED	**4/16/2014**	ADDENDUM NO.		DATED	
ADDENDUM NO		DATED		ADDENDUM NO.		DATED	

Number	Description
1	Revise NTB Nos. 4949 & 4950; Amendment EBS Download Required.

TOTAL ADDENDA: **1**
(Must agree with total addenda issued prior to opening of bids)

Respectfully Submitted,

DATE _____

_____
Contractor

BY _____
Signature

TITLE _____

ADDRESS _____

CITY, STATE, ZIP _____

PHONE _____

FAX _____

E-MAIL _____

(To be filled in if a corporation)

Our corporation is chartered under the Laws of the State of _____ and the names, titles and business addresses of the executives are as follows:

President	Address
Secretary	Address
Treasurer	Address

The following is my (our) itemized proposal.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 4949 **CODE: (SP)**

DATE: 04/16/2014

SUBJECT: Contract Time

PROJECT: MP-5021-62(010) / 305111301 – Scott County

The calendar date for completion of work to be performed by the Contractor for this project shall be **September 26, 2014** which date or extended date as provided in Subsection 907-108.06 shall be the end of contract time. It is anticipated that the Notice of Award will be issued no later than be **May 13, 2014** and the effective date of the Notice to Proceed / Beginning of Contract Time will be **July 1, 2014**.

AN EARLY NOTICE TO PROCEED / BEGINNING OF CONTRACT TIME WILL NOT BE ALLOWED ON THIS PROJECT.

The available productive days for this project are **60**.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 4950 **CODE: (SP)**

DATE: 03/26/2014

SUBJECT: Scope of Work

PROJECT: MP-5021-62(010) / 305111301 – Scott County

The contract documents do not include an official set of plans, but may by reference include some Standard Drawings or Special Drawings. All other references to plans in the contract documents and Standard Specifications for Road and Bridge Construction are to be disregarded.

Work on this project shall consist of the following:

Mill and overlay approximately 6.8 miles of existing asphalt pavement on SR 21 in Scott County beginning at station 535+97 (1.7 miles north of Hawkins Road) and ending at station 897+52.5 (0.15 miles south of Clyde B Road) in Sebastopol, MS.

Existing pavement management data shows the existing asphalt pavement structure to be 6¼" - 7¾" over four inches (4") of granular material. Verification asphalt cores samples taken showed the existing asphalt pavement thickness ranged from six to sixteen inches (6" - 16").

Construction signs shall be installed as per the detail sheets included prior to the beginning of work.

Failed pavement areas will be saw cut and the existing asphalt pavement removed.

All failed areas will be backfilled with 12.5-mm, MT, asphalt mix. Asphalt leveling quantities for this project were estimated using an 8-inch undercut depth. Maximum compacted lift thickness of the first undercut backfill lift shall be six inches (6").

After completion of the repair of failed areas, milling operations can begin. The existing asphalt roadway shall be cold milled two inches (2") and overlaid with two inches (2") of 12.5-mm, MT, asphalt mix.

Local roads shall be milled and overlaid to the end of the existing asphalt pavement, to right-of-way or as directed. Where a minimum of five feet (5') of shoulder width can be paved at the beginning of local road radii, a 100-foot asphalt pavement taper shall be constructed. Said taper shall be six inches (6") thick and shall conform to the detail drawings.

Asphalt guardrail pads on Bridges 12.3 and 12.6 shall be milled to the face of the guardrail. Existing asphalt guardrail pads on Bridges 13.2 and 13.7 shall be removed. Bridge 15.5 has no existing asphalt guardrail pads. Asphalt guardrail pads conforming to the dimensions shown in the detail sheets shall be constructed at all bridges.

Rub rail shall be added to the existing guardrails at Bridges 12.3 and 12.6. Block-outs only shall be removed and replaced on those posts where rub rail is to be added. Existing guardrails on Bridges 12.3 and 12.6 shall remain.

The existing concrete bridge approach slab on bridge 15.5 is overlaid with asphalt. After completion of asphalt overlay operations, sawing and sealing operations shall be performed at the joint between the end of the concrete bridge approach slab and the asphalt pavement.

Temporary pavement markings shall be constructed at the end of each day's paving operations. Permanent pavement markings shall be constructed after completion of all paving operations.

Raised pavement markers shall be installed on SR 21 and local roads.

The existing roadway ditch between stations 557+00 – 561+00 shall be deepened and graded to provide adequate drainage. The expected maximum depth to deepen the ditch is 12 inches. The expected maximum width of ditching is six foot (6'). After completion of ditching operations, solid sod is to be placed for permanent erosion control. Ditch liner is to be used as directed.

Class 5 Group E granular material shall be used to bring roadway shoulders to grade.

GENERAL NOTES

Asphalt backfill of failed areas should be placed at least 12 hours prior to overlay operations to prevent rutting of mix.

Milling and paving operations shall be performed such that a -2% slope from centerline is provided in normal crown roadway sections. Superelevation through curves shall be maintained as it currently exists or improved as directed.

Milling shall not begin until an **approved** asphalt mix design has been received, nor until such time that, in the opinion of the Engineer, weather conditions have been consistently suitable enough to allow placement of the HMA/WMA after the milling operations. Any areas milled shall be repaved the same day. Traffic shall not be allowed on milled main line surfaces. Milling shall be limited to an area established by the Engineer, which, in the Engineer's judgment, can be overlaid the same day. The Contractor shall not exceed that area.

Traffic will not be allowed on milled main line surfaces.

Temporary asphalt joints (aka paper joints) shall be constructed at the end of each day's milling operations where the milled surface joins the existing asphalt pavement surface. Paper joints shall be a minimum of nine feet (9') in length and for the full width of the milled surface. Paper joints shall be adequately maintained.

Any damage to the roadway that occurs as a result of the Contractor's failure to overlay the milled surface within the specified time shall be repaired at the Contractor's expense.

The Contractor is responsible for providing shoulder drainage outlets as applicable in milled areas. Payment for these outlets shall be included in the bid price for the milling of bituminous pavement.

The Reclaimed Asphalt Pavement (RAP) material removed by the mill operation shall become the property of the Contractor with the exception of 10,000 tons or 50% of the total anticipated RAP tonnage, whichever is less, to be delivered to the MDOT's milling stockpile located across from the MDOT Maintenance Building at 1115 Hwy 15 Bypass, Philadelphia, MS. The contractor is responsible for coordinating the delivery of asphalt milling with MDOT maintenance personnel.

Existing asphalt driveway connections shall be removed and replaced with new asphalt connections.

Potholes that may exist or occur in the existing pavement are to be patched in a timely manner. Patching of potholes shall be considered an absorbed item.

Shoulders will be brought to grade using Class 5, Group E, granular material as directed. Placement of the granular material on the finished asphalt course will not be permitted. All shoulders shall be bladed, rolled, and compacted to a finished slope of minus four percent (-4%).

Temporary stripe will be required immediately after milling and overlaying and prior to opening area to traffic. Temporary stripe is to be placed in the same location and layout as permanent stripe.

All permanent striping will be thermoplastic. The width of the permanent stripe will be six inches (6").

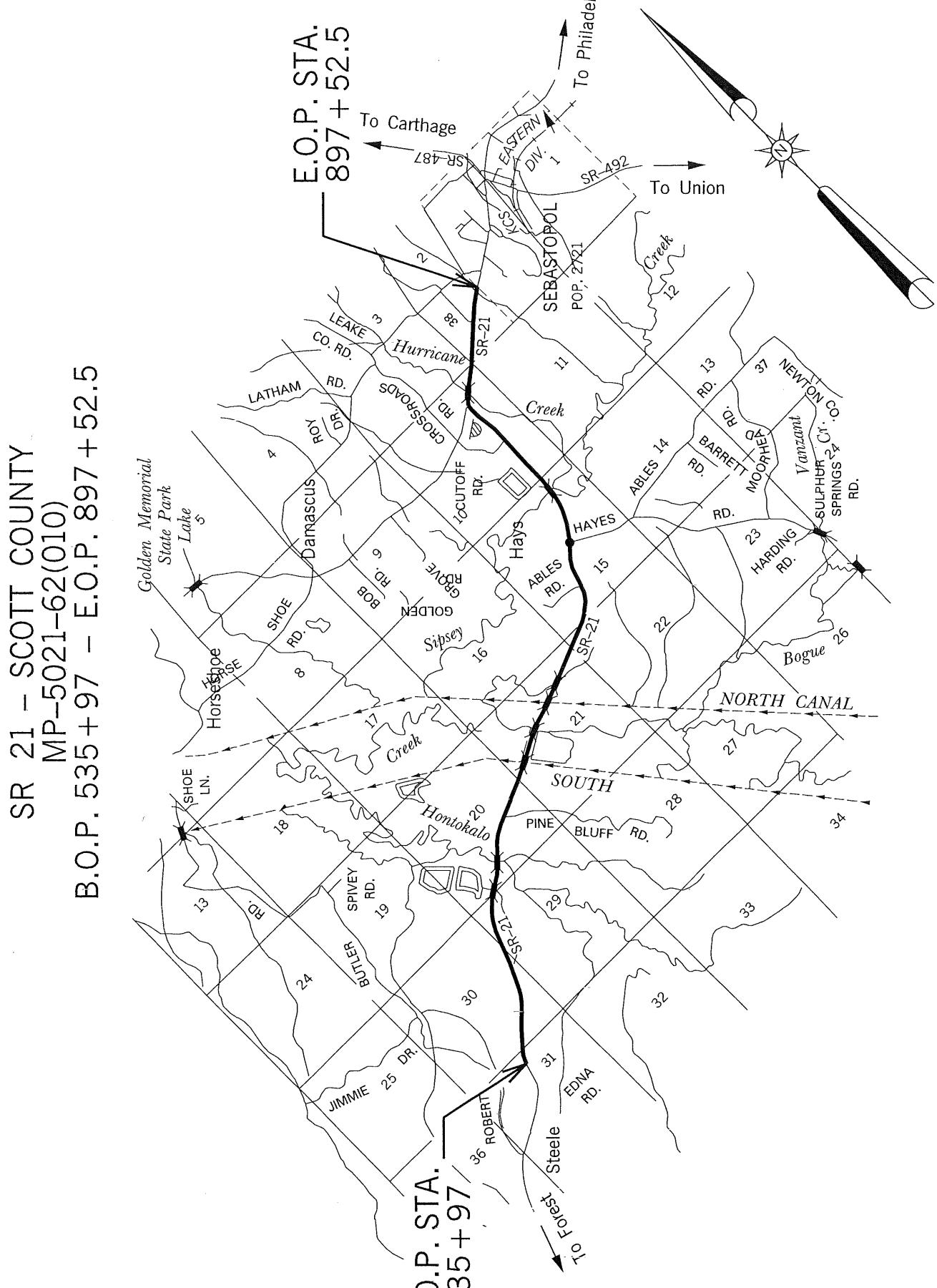
The Contractor shall erect and maintain construction signing, and provide and maintain all temporary signs and traffic control devices necessary to safely conduct traffic through the work area in accordance with the Traffic Control Plan and the MUTCD.

All traffic control devices shall meet current MDOT and MUTCD requirements.

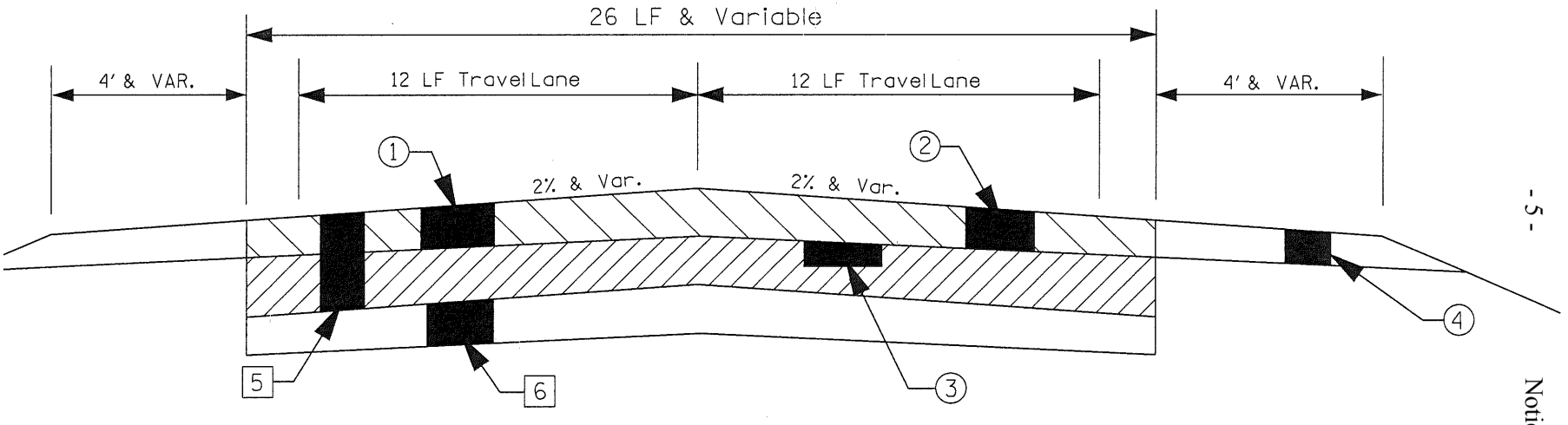
The Contractor shall on a daily basis, remove all debris from within the roadway and a 30-foot clear zone which, in the opinion of the Engineer, is a hazard to the traveling public. This activity shall begin with the beginning of work or the beginning of the contract time, whichever comes first. No direct payment will be made for the debris removal. The cost is to be included in the prices of items bid. Failure of the Contractor to remove debris as prescribed herein shall be just cause for withholding the monthly progress estimate payment or suspending active operations until the debris is satisfactorily removed by the Contractor. As described in the applicable Notice-To-Bidders, final project cleanup is required and will be completed prior to the scheduling of the final inspection.

It shall be the responsibility of the Contractor to protect existing structures such as pipes, aprons, signs, utilities, etc. from damage occurring as a result of construction activities. The Contractor shall replace or repair, as directed by the Engineer, any structures damaged during the life of the

contract. No payment will be made for replacements and or repairs resulting from such damages.


SR 21 – SCOTT COUNTY
MP–5021–62(010)
B.O.P. 535+97 – E.O.P. 897+52.5
E.O.P. STA. 897+52.5
B.O.P. STA. 535+97
To Carthage
To Philadelphia
To Union
To Forest
Steele
SR-487
SR-492
SR-21
EASTERN DIV. 1
KCS
SEBASTOPOL
POP. 2721
Hurricane Creek
Golden Memorial State Park Lake
Damascus
Hays
Sipsey
Bogue
Hontokalo
NORTH CANAL
SOUTH
Vanzant Cr.
LEAKE CO. RD.
LATHAM RD.
ROY DR.
CROSSROADS RD.
CUTOFF RD.
HAYES
ABLES RD.
ABLES
BARRETT RD.
MOORHEAD RD.
NEWTON CO.
SULPHUR SPRINGS RD.
HARDING RD.
GOLDEN GROVE RD.
BOB RD.
SHOE RD.
SHOE LN.
HORSESHOE
PINE BLUFF RD.
SPIVEY RD.
BUTLER RD.
JIMMIE DR.
ROBERT
EDNA RD.

SR 21 - SCOTT COUNTY
MP-5021-62(010)
TYPICAL SECTION
MILL & OVERLAY
B.O.P. 535+97 - E.O.P. 897+52.5



(1) 2" Cold Milling (Correct to 2% Normal Crown or SE)

(2) 2" HMA/WMA 12.5mm MT

(3) HMA/WMA 12.5mm MT (Failed Area Full Depth - See Failed Area Detail)

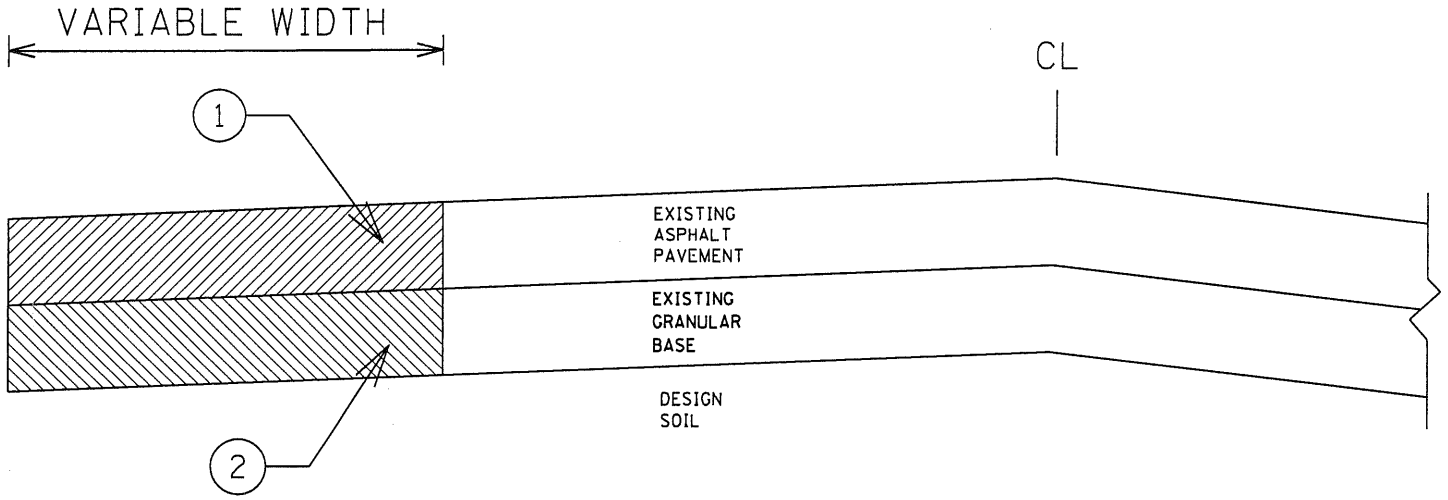
(4) Class 5 Group E Granular Material (As Directed)

EXISTING PAVEMENT

[5] 6¼"-7¾" HMA

[6] 4" Granular Material

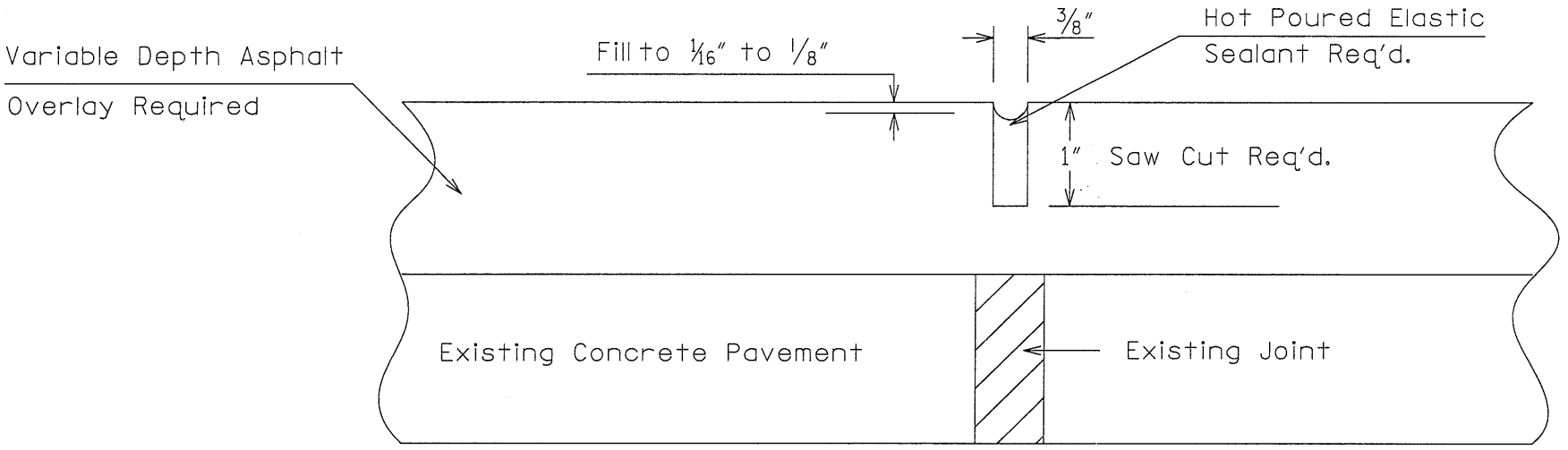
SR21-SCOTT COUNTY
MP-5021-62(010)
TYPICAL SECTION
FAILED AREA REPAIR



(1) REMOVE AND REPLACE WITH HMA/WMA 12.5 MM MT (VARIABLE DEPTH)

(2) UNDERCUT AND BACKFILL WITH HMA/WMA 12.5 MM MT (UNDERCUT DEPTH VARIABLE AS DIRECTED)

SR 21- SCOTT COUNTY
MP-5021-62(010)
TYPICAL SECTION
SAWING & SEALING TRANSVERSE JOINTS



MP-5021-62(010) 305111/301000 MILL AND OVERLAY FROM STEELE TO SEBASTOPOL

202-B006 REMOVAL OF ASPHALT PAVEMENT FAILED AREAS

FAILED AREA LOCATIONS

LOCATION	STA.	TO	STA.	LENGTH (ft)	WIDTH (ft)	AREA (SF)	AREA (SY)
RT LANE	553+20	--	557+00	380	7	2,660.00	296
RT LANE	560+62	--	562+59	197	7	1,379.00	153
RT LANE	573+09	--	575+95	286	7	2,002.00	222
LT LANE	600+82	--	601+58	76	7	532.00	59
LT LANE	602+90	--	603+87	97	7	679.00	75
RT LANE	605+82	--	607+89	207	14	2,898.00	322
LT LANE	608+02	--	609+10	108	7	756.00	84
RT LANE	613+24	--	617+16	392	14	5,488.00	610
RT LANE	643+48	--	644+00	52	7	364.00	40
RT LANE	644+07	--	646+00	193	7	1,351.00	150
LT LANE	724+07	--	727+44	337	7	2,359.00	262
RT LANE	735+49	--	736+78	129	7	903.00	100
RT LANE	739+28	--	740+64	136	7	952.00	106
RT LANE	743+38	--	744+37	99	7	693.00	77
LT LANE	744+40	--	746+04	164	7	1,148.00	128
RT LANE	744+85	--	745+66	81	7	567.00	63
RT LANE	746+51	--	747+48	97	7	679.00	75
RT LANE	751+41	--	751+69	28	7	196.00	22
LT LANE	751+99	--	753+11	112	7	784.00	87
LT LANE	771+35	--	773+48	213	7	1,491.00	166
RT LANE	773+80	--	775+00	120	7	840.00	93
RT LANE	775+38	--	776+28	90	7	630.00	70
RT LANE	777+73	--	778+51	78	7	546.00	61
LT LANE	786+74	--	786+99	25	7	175.00	19
LT LANE	787+06	--	787+22	16	7	112.00	12
						TOTAL	**3354**

MP-5021-62(010) 305111/301000 MILL AND OVERLAY FROM STEELE TO SEBASTOPOL							
202-B005 REMOVAL OF ASPHALT PAVEMENT ALL DEPTH							
DRIVEWAY PADS NO. 1							
Station	Location	Width 1	Width 2	Length	Total (SF)	Total (Tons)	Remarks
537+04	LT	18	12	5	75.00	8.33	
541+82	LT	23	16	6	117.00	13.00	
541+82	RT	45	27	5	180.00	20.00	
542+30	RT	25	16	5	102.50	11.39	
543+20	RT	23	17	6	120.00	13.33	
546+39	RT	28	22	6	150.00	16.67	
551+73	RT	30	22	6	156.00	17.33	
555+30	LT	38	28	6	198.00	22.00	
557+17	LT	38	28	6	198.00	22.00	
559+17	LT	40	24	6	192.00	21.33	
561+20	LT	25	16	5	102.50	11.39	
562+13	LT	20	16	6	108.00	12.00	
562+65	RT	35	22	5	142.50	15.83	
564+95	RT	21	13	5	85.00	9.44	
567+80	RT	28	23	5	127.50	14.17	
566+30	LT	18	15	5	82.50	9.17	
569+75	RT	27	18	5	112.50	12.50	
571+65	LT	30	22	5	130.00	14.44	
574+45	LT	43	38	6	243.00	27.00	
576+15	RT	40	35	6	225.00	25.00	
576+95	LT	23	15	5	95.00	10.56	
581+25	LT	28	20	6	144.00	16.00	
582+85	RT	37	20	6	171.00	19.00	
590+55	LT	24	21	6	135.00	15.00	
592+25	RT	46	25	6	213.00	23.67	
594+65	LT	23	15	5	95.00	10.56	
598+50	LT	22	15	5	92.50	10.28	
600+05	RT	26	20	5	5.00	0.56	
620+25	LT	37	24	5	152.50	16.94	
621+95	LT	37	24	5	152.50	16.94	
625+80	LT	63	45	10	540.00	60.00	
626+65	RT	40	27	11	368.50	40.94	
662+65	LT	73	37	22	1,210.00	134.44	
663+85	LT	22	19	12	246.00	27.33	
665+50	RT	50	35	10	425.00	47.22	
668+15	LT	40	30	9	315.00	35.00	
668+60	LT	25	20	6	135.00	15.00	
672+80	LT	25	16	5	102.50	11.39	
673+65	RT	25	20	5	112.50	12.50	
676+00	RT	50	40	13	585.00	65.00	
676+50	LT	50	32	9	369.00	41.00	
677+20	RT	21	16	6	111.00	12.33	
678+15	LT	36	28	5	160.00	17.78	
680+60	LT	50	40	6	270.00	30.00	
686+85	RT	50	37	11	478.50	53.17	
686+85	LT	50	37	11	478.50	53.17	
706+00	RT	80	75	9	697.50	77.50	
731+00	RT	20	15	5	87.50	9.72	
731+00	LT	22	15	5	92.50	10.28	
730+25	LT	32	22	7	189.00	21.00	
733+20	LT	32	26	4	116.00	12.89	
741+10	RT	20	15	5	87.50	9.72	
744+00	LT	37	26	6	189.00	21.00	
749+75	RT	63	36	7	346.50	38.50	
754+75	RT	40	26	6	198.00	22.00	
756+30	RT	30	20	5	125.00	13.89	
758+50	LT	34	22	9	252.00	28.00	
758+90	RT	26	17	5	107.50	11.94	
760+05	RT	44	20	6	192.00	21.33	
763+12	RT	40	24	5	160.00	17.78	
765+35	LT	82	58	8	560.00	62.22	
767+80	LT	30	16	6	138.00	15.33	
					Total	**1,505.22**	

*Area calculations collected by Field Mesurement

MP-5021-62(010) 305111/301000 MILL AND OVERLAY FROM STEELE TO SEBASTOPOL							
202-B005 REMOVAL OF ASPHALT PAVEMENT ALL DEPTH							
DRIVEWAY PADS NO. 2							
Station	Location	Width 1	Width 2	Length	Total (SF)	Total (SY)	Remarks
770+50	RT	21	11	6	96.00	10.67	
770+35	LT	60	30	10	450.00	50.00	
772+15	RT	35	28	5	157.50	17.50	
779+10	LT	32	20	5	130.00	14.44	
781+00	RT	43	22	6	195.00	21.67	
780+90	LT	21	12	5	82.50	9.17	
795+03	RT	63	50	7	395.50	43.94	
807+10	LT	46	36	5	205.00	22.78	
811+80	LT	110	55	19	1,567.50	174.17	CHICKEN PLANT
817+75	RT	23	18	5	102.50	11.39	
820+25	RT	29	16	5	112.50	12.50	
825+30	LT	130	102	14	1,624.00	180.44	CHICKEN PLANT
830+22	LT	55	40	6	285.00	31.67	
830+22	RT	33	2	5	87.50	9.72	
831+50	RT	37	22	10	295.00	32.78	
831+50	LT	52	30	8	328.00	36.44	
833+00	RT	30	14	6	132.00	14.67	
834+50	RT	24	12	14	252.00	28.00	
834+15	LT	32	21	5	132.50	14.72	
837+00	LT	27	18	5	112.50	12.50	
838+80	LT	32	26	4	116.00	12.89	
839+25	RT	30	25	5	137.50	15.28	
839+40	RT	24	16	5	100.00	11.11	
840+75	LT	30	24	3	81.00	9.00	
841+05	RT	28	14	5	105.00	11.67	
844+00	RT	58	46	6	312.00	34.67	
845+00	RT	34	20	5	135.00	15.00	
858+00	LT	60	35	12	5.00	0.56	
858+30	RT	57	37	9	423.00	47.00	
859+70	LT	53	35	7	308.00	34.22	
861+50	LT	36	18	5	135.00	15.00	
864+10	RT	34	18	5	130.00	14.44	
866+15	RT	24	13	5	92.50	10.28	
868+70	RT	37	18	6	165.00	18.33	
872+90	LT	35	28	6	189.00	21.00	
877+08	LT	40	30	9	315.00	35.00	
882+50	LT	54	35	6	267.00	29.67	
881+50	LT	27	14	6	123.00	13.67	
883+90	LT	47	20	25	837.50	93.06	
884+25	RT	20	14	6	102.00	11.33	
886+50	RT	88	48	22	1,496.00	166.22	
889+75	LT	46	20	11	363.00	40.33	
890+00	RT	40	35	3	112.50	12.50	
892+00	LT	24	14	5	95.00	10.56	
894+50	LT	32	24	6	168.00	18.67	
895+00	RT	55	38	6	279.00	31.00	
				PAGE TOTAL		1,481.61	
				TOTAL		2,986.83	

*Area calculations collected by Field Mesurement

MP-5021-62(010) 305111/301000 MILL AND OVERLAY FROM STEELE TO SEBASTOPOL							
202-B005 REMOVAL OF ASPHALT PAVEMENT ALL DEPTH							
GUARDRAIL PADS							
Bridege No.	**Location**	**Quadrant**	**Width 1**	**Width 2**	**Length 1**	**Total (SF)**	**Total (SY)**
13.2	RT	SE	6.5	6.5	182.0	1,183.00	131.44
13.2	LT	SW	7.5	8.0	80.0	620.00	68.89
13.2	RT	NE	8.0	10.0	250.0	2,250.00	250.00
13.2	LT	NW	7.0	7.0	200.0	1,400.00	155.56
13.7	RT	SE	8.0	7.0	215.0	1,612.50	179.17
13.7	LT	SW	10.0	6.0	215.0	1,720.00	191.11
13.7	RT	NE	6.5	9.0	186.0	1,441.50	160.17
13.7	LT	NW	6.5	7.5	211.0	1,477.00	164.11
						Total	**1,300.44**

150

*Area calculations collected by Field Mesurement

MP-5021-62(010) 305111/301000 MILL AND OVERLAY FROM STEELE TO SEBASTOPOL						
202-B006 REMOVAL OF TRAFFIC STRIPE						
BRIDGES						
STATION TO STATION			COLD PLASTIC			REMARKS
			CONTINUOUS		SKIP	
			WHITE	YELLOW	YELLOW	
640+63	--	642+54	382	382	0	Bridge 12.3
650+13	--	651+17	208	208	0	Bridge 12.6
682+98	--	684+58	320	320	0	Bridge 13.2
707+88	--	712+11	846	846	0	Bridge 13.7
799+77	--	804+57	960	960	0	Bridge 15.5
TOTAL			2716 LF	2716 LF	0 LF	
			5432 LF			

MP-5021-62(010) 305111/301000 MILL AND OVERLAY FROM STEELE TO SEBASTOPOL

406-A001 COLD MILLING OF BITUMINOUS PAVEMENT, ALL DEPTHS

GUARDRAIL PADS

Bridege No.	Location	Quadrant	Width 1	Width 2	Length 1	Length 2	Total (SF)	Total (Tons)	Remarks
12.3	RT	SE	--	--	--	--	3,433.00	381.44	GUARDRAIL PADS WILL BE MILLED UP TO GUARDRAIL
12.3	LT	SW	--	--	--	--	1,791.00	199.00	GUARDRAIL PADS WILL BE MILLED UP TO GUARDRAIL
12.3	RT	NE	--	--	--	--	1,878.00	208.67	GUARDRAIL PADS WILL BE MILLED UP TO GUARDRAIL
12.3	LT	NW	--	--	--	--	3,227.00	358.56	GUARDRAIL PADS WILL BE MILLED UP TO GUARDRAIL
12.6	RT	SE	--	--	--	--	3,576.00	397.33	GUARDRAIL PADS WILL BE MILLED UP TO GUARDRAIL
12.6	LT	SW	--	--	--	--	1,852.00	205.78	GUARDRAIL PADS WILL BE MILLED UP TO GUARDRAIL
12.6	RT	NE	--	--	--	--	2,005.00	222.78	GUARDRAIL PADS WILL BE MILLED UP TO GUARDRAIL
12.6	LT	NW	--	--	--	--	2,987.50	331.94	GUARDRAIL PADS WILL BE MILLED UP TO GUARDRAIL
							Total	**2,305.50**	

*Area calculations collected by Field Mesurement

MP-5021-62(010) 305111/301000 MILL AND OVERLAY FROM STEELE TO SEBASTOPOL

HMA/WMA MT, 12.5mm Mixture

Guardrail Pads

Bridege No.	Location	Quadrant	Width 1	Width 2	Length 1	Length 2	Total (SF)	Depth (in.)	Total (Tons)	Remarks
12.3	RT	SE	--	--	--	--	915.00	2.000	12.01	Additional aspalt will be added to increase taper areas field measured
12.3	LT	SW	--	--	--	--	837.00	2.000	10.99	Additional aspalt will be added to increase taper areas field measured
12.3	RT	NE	--	--	--	--	942.00	2.000	12.36	Additional aspalt will be added to increase taper areas field measured
12.3	LT	NW	--	--	--	--	1,050.00	2.000	13.78	Additional aspalt will be added to increase taper areas field measured
12.6	RT	SE	--	--	--	--	1,035.00	2.000	13.58	Additional aspalt will be added to increase taper areas field measured
12.6	LT	SW	--	--	--	--	815.00	2.000	10.70	Additional aspalt will be added to increase taper areas field measured
12.6	RT	NE	--	--	--	--	1,045.00	2.000	13.72	Additional aspalt will be added to increase taper areas field measured
12.6	LT	NW	--	--	--	--	915.00	2.000	12.01	Additional aspalt will be added to increase taper areas field measured
13.2	RT	SE	8	15	212.5	150	3,568.75	2.000	46.84	
13.2	LT	SW	10	12	125.0	150	2,275.00	2.000	29.86	
13.2	RT	NE	9	13	212.5	150	3,312.50	2.000	43.48	
13.2	LT	NW	8	15	125.0	150	2,562.50	2.000	33.63	
13.7	RT	SE	10	15	212.5	150	3,781.25	2.000	49.63	
13.7	LT	SW	8	13	125.0	150	2,287.50	2.000	30.02	
13.7	RT	NE	8	13	212.5	150	3,206.25	2.000	42.08	
13.7	LT	NW	8	15	125.0	150	2,562.50	2.000	33.63	
15.5	RT	SE	7	12	212.5	150	2,918.75	2.000	38.31	
15.5	LT	SW	6	12	125.0	150	2,025.00	2.000	26.58	
15.5	RT	NE	6	12	125.0	150	2,025.00	2.000	26.58	
15.5	LT	NW	7	12	212.5	150	2,918.75	2.000	38.31	
							Total		**538.10**	

PCF = **150**

*Area calculations collected by Field Mesurement

MP-5021-62(010) 305111/301000 MILL AND OVERLAY FROM STEELE TO SEBASTOPOL

HMA/WMA MT, 12.5mm Mixture, Leveling

FAILED AREA LOCATIONS

LOCATION	STA.	TO	STA.	LENGTH (ft)	WIDTH (ft)	AREA (SF)	ASPHALT LEVELING (tons)
RT LANE	553+20	--	557+00	380	7	2,660.00	266.00
RT LANE	560+62	--	562+59	197	7	1,379.00	137.90
RT LANE	573+09	--	575+95	286	7	2,002.00	200.20
LT LANE	600+82	--	601+58	76	7	532.00	53.20
LT LANE	602+90	--	603+87	97	7	679.00	67.90
RT LANE	605+82	--	607+89	207	14	2,898.00	289.80
LT LANE	608+02	--	609+10	108	7	756.00	75.60
RT LANE	613+24	--	617+16	392	14	5,488.00	548.80
RT LANE	643+48	--	644+00	52	7	364.00	36.40
RT LANE	644+07	--	646+00	193	7	1,351.00	135.10
LT LANE	724+07	--	727+44	337	7	2,359.00	235.90
RT LANE	735+49	--	736+78	129	7	903.00	90.30
RT LANE	739+28	--	740+64	136	7	952.00	95.20
RT LANE	743+38	--	744+37	99	7	693.00	69.30
LT LANE	744+40	--	746+04	164	7	1,148.00	114.80
RT LANE	744+85	--	745+66	81	7	567.00	56.70
RT LANE	746+51	--	747+48	97	7	679.00	67.90
RT LANE	751+41	--	751+69	28	7	196.00	19.60
LT LANE	751+99	--	753+11	112	7	784.00	78.40
LT LANE	771+35	--	773+48	213	7	1,491.00	149.10
RT LANE	773+80	--	775+00	120	7	840.00	84.00
RT LANE	775+38	--	776+28	90	7	630.00	63.00
RT LANE	777+73	--	778+51	78	7	546.00	54.60
LT LANE	786+74	--	786+99	25	7	175.00	17.50
LT LANE	787+06	--	787+22	16	7	112.00	11.20
						TOTAL	**3018.40**

ASPHALT
DEPTH = 16 in.
PCF = 150 PCF

MP-5021-62(010) 305111/301000 MILL AND OVERLAY FROM STEELE TO SEBASTOPOL							
Bridge Joint Items							
STA.	JOINT LENGTH (ft)	413-B001 CLEANING AND SEALING JOINTS (LF)	907-823-B001 SAW CUT, TYPE I (LF)	808-A001 JOINT PREPARATION (LF)	907-413-E001 SAWING AND SEALING TRANSVERSE JOINTS IN ASPHALT PAVEMENT (LF)	907-823-A001 PREFORMED JOINT SEAL, TYPE I (LF)	Remarks
640+82	47	49	--	--	--	--	BRIDGE 12.3 SOUTH END
640+83	47	--	94	47	--	49	BRIDGE 12.3 SOUTH END
641+32	44	--	88	44	--	46	BRIDGE 12.3 INTERMEDIATE JOINT
641+82	44	--	88	44	--	46	BRIDGE 12.3 INTERMEDIATE JOINT
642+34	47	--	94	47	--	49	BRIDGE 12.3 NORTH END
642+35	47	49	--	--	--	--	BRIDGE 12.3 NORTH END
650+32	47	49	--	--	--	--	BRIDGE 12.6 SOUTH END
650+33	47	--	94	47	--	49	BRIDGE 12.6 SOUTH END
650+73	44	--	88	44	--	46	BRIDGE 12.6 INTERMEDIATE JOINT
651+12	44	--	88	44	--	46	BRIDGE 12.6 INTERMEDIATE JOINT
651+51	47	--	94	47	--	49	BRIDGE 12.6 NORTH END
651+52	47	49	--	--	--	--	BRIDGE 12.6 NORTH END
683+17	41	43	--	--	--	--	BRIDGE 13.2 SOUTH END
683+18	41	--	82	41	--	43	BRIDGE 13.2 SOUTH END
684+38	41	--	82	41	--	43	BRIDGE 13.2 NORTH END
684+39	41	43	--	--	--	--	BRIDGE 13.2 NORTH END
708+29	48	50	--	--	--	--	BRIDGE 13.7 SOUTH END
708+30	48	--	96	48	--	50	BRIDGE 13.7 SOUTH END
709+45	48	--	96	48	--	50	BRIDGE 13.7 INTERMEDIATE JOINT
710+37	48	--	96	48	--	50	BRIDGE 13.7 INTERMEDIATE JOINT
711+91	48	--	96	48	--	50	BRIDGE 13.7 NORTH END
711+92	48	50	--	--	--	--	BRIDGE 13.7 NORTH END
799+77	26	--	--	--	28	--	BRIDGE 15.5 BRIDGE END PAVEMENT/ASPHALT JOINT SOUTH
799+97	37	39	--	--	--	--	BRIDGE 15.5 BRIDGE END SOUTH
804+37	37	39	--	--	--	--	BRIDGE 15.5 BRIDGE END NORTH
804+57	26	--	--	--	28	--	BRIDGE 15.5 BRIDGE END PAVEMENT/ASPHALT JOINT NORTH
	TOTAL	**460**	**1276**	**638**	**56**	**666**	

MP-5021-62(010) 305111/301000 SR 21 MILL & OVERLAY FROM STEELE TO SEBASTOPOL

GUARDRAIL

STATION	LOCATION	W-BEAM	TERMINAL END SECTION		BRIDGE END SECTIONS			GUARD DELINEATORS	Removal of Guardrail	REMARKS
			FLARED	NON-FLARED	TYPE I RUBRAIL ONLY	TYPE G MODIFIED	TYPE H	WHITE		
640+83	RT LANE				1					Bridge 12.3 SE
640+83	LT LANE				1					Bridge 12.3 SW
642+34	RT LANE				1					Bridge 12.3 NE
642+34	LT LANE				1					Bridge 12.3 NW
650+33	RT LANE				1					Bridge12.6 SE
650+33	LT LANE				1					Bridge12.6 SW
651+51	RT LANE		1		1				37.5	Bridge12.6 NE
651+51	LT LANE				1					Bridge12.6 NW
683+18	RT LANE	150.00	1				1	11	205	Bridge 13.2 SE
683+18	LT LANE	62.50	1				1	5	105	Bridge 13.2 SW
684+38	RT LANE	62.50	1				1	5	105	Bridge 13.2 NE
684+38	LT LANE	150.00	1				1	11	205	Bridge 13.2 NW
708+08	RT LANE	150.00	1				1	11	202	Bridge 13.7 SE
708+08	LT LANE	62.50	1				1	5	102	Bridge 13.7 SW
711+91	RT LANE	62.50	1				1	5	102	Bridge 13.7 NE
711+91	LT LANE	150.00	1				1	11	202	Bridge 13.7 NW
799+97	RT LANE	150.00	1			1		11		Bridge 15.5 SE
799+97	LT LANE	62.50	1			1		5		Bridge 15.5 SW
804+37	LT LANE	62.50	1			1		5		Bridge 15.5 NE
804+37	RT LANE	150.00	1			1		11		Bridge 15.5 NW
		LF	EACH	EACH	EACH	EACH	EACH	EACH	EACH	
		1275.00	13	0	8	4	8	96	1265.5	

MP-5021-62(010) 305111/301000 MILL AND OVERLAY FROM STEELE TO SEBASTOPOL					
619-D Standard Roadside Construction Signs (10 Sq. Ft. or More)					
Station	**Location**	**Description**	**Quantity**	**Unit**	**Remarks**
	RT	G20-1	10	SF	500' SOUTH of BOP SECTION 1
537+00	RT	R16-3	10	SF	NORTHBOUND
551+75	RT	W20-1	16	SF	WALTERS DR
579+74	LT	R16-3	10	SF	SOUTHBOUND
642+60	RT	R16-3	10	SF	NORTHBOUND
659+10	RT	W20-1	16	SF	PINEBLUFF RD
685+34	LT	R16-3	10	SF	SOUTHBOUND
748+20	LT	R16-3	10	SF	NORTHBOUND
760+75	RT	W20-1	16	SF	ANTHONY LN
760+84	LT	W20-1	16	SF	D. ABLE RD
777+70	LT	W20-1	16	SF	FISHER RD
779+40	RT	W20-1	16	SF	HAYS RD
790+94	LT	R16-3	10	SF	SOUTHBOUND
829+73	LT	W20-1	16	SF	CUTOFF RD
849+80	LT	W20-1	16	SF	DAMASCUS RD
884+00	LT	W20-1	16	SF	A.C. WALTERS RD
896+54	LT	R16-3	10	SF	SOUTHBOUND
	LT	G20-1	10	SF	500' NORTH of EOP
		Total	**234**	**SF**	

MP-5021-62(010) 305111/301000 MILL AND OVERLAY FROM STEELE TO SEBASTOPOL					
619-G Type III Barricades Double-Faced					
Location		**Station**	**Quantity**	**Unit**	**Description**
RT		500' SOUTH OF BOP	6	LF	
LT		500' SOUTH OF BOP	6	LF	
RT		500' NORTH OF EOP	6	LF	
LT		500' NORTH OF EOP	6	LF	
		Total	**24**	**LF**	

MP-5021-62(010) 305111/301000 MILL AND OVERLAY FROM STEELE TO SEBASTOPOL					
619-D Standard Roadside Construction Signs (Less than 10 Sq. Ft.) 1					
Station	**Location**	**Description**	**Quantity**	**Unit**	**Remarks**
	LT	G20-2A	8	SF	500' SOUTH OF BOP
536+00	RT	R4-1	5	SF	NORTHBOUND
826+97	LT	W14-3	5.56	SF	NORTHBOUND
543+50	RT	R4-1	5	SF	NORTHBOUND
551+00	RT	R4-1	5	SF	NORTHBOUND
558+50	RT	R4-1	5	SF	NORTHBOUND
566+00	RT	R4-1	5	SF	NORTHBOUND
573+50	RT	R4-1	5	SF	NORTHBOUND
581+00	RT	R4-1	5	SF	NORTHBOUND
588+50	RT	R4-1	5	SF	NORTHBOUND
596+00	RT	R4-1	5	SF	NORTHBOUND
603+50	RT	R4-1	5	SF	NORTHBOUND
611+00	RT	R4-1	5	SF	NORTHBOUND
618+50	RT	R4-1	5	SF	NORTHBOUND
626+00	RT	R4-1	5	SF	NORTHBOUND
633+50	RT	R4-1	5	SF	NORTHBOUND
641+00	RT	R4-1	5	SF	NORTHBOUND
648+50	RT	R4-1	5	SF	NORTHBOUND
656+00	RT	R4-1	5	SF	NORTHBOUND
663+50	RT	R4-1	5	SF	NORTHBOUND
671+00	RT	R4-1	5	SF	NORTHBOUND
675+02	RT	R4-2	5	SF	NORTHBOUND
693+30	RT	R4-1	5	SF	NORTHBOUND
693+30	LT	W14-3	5.56	SF	NORTHBOUND
700+80	RT	R4-1	5	SF	NORTHBOUND
708+30	RT	R4-1	5	SF	NORTHBOUND
713+50	RT	R4-2	5	SF	NORTHBOUND
726+72	RT	R4-1	5	SF	NORTHBOUND
726+72	LT	W14-3	5.56	SF	NORTHBOUND
734+22	RT	R4-1	5	SF	NORTHBOUND
741+72	RT	R4-1	5	SF	NORTHBOUND
749+22	RT	R4-1	5	SF	NORTHBOUND
756+72	RT	R4-1	5	SF	NORTHBOUND
764+22	RT	R4-1	5	SF	NORTHBOUND
771+72	RT	R4-1	5	SF	NORTHBOUND
779+22	RT	R4-1	5	SF	NORTHBOUND
786+72	RT	R4-1	5	SF	NORTHBOUND
792+48	RT	R4-2	5	SF	NORTHBOUND
818+15	RT	R4-1	5	SF	NORTHBOUND
818+15	LT	W14-3	5.56	SF	NORTHBOUND
825+65	RT	R4-1	5	SF	NORTHBOUND
833+15	RT	R4-1	5	SF	NORTHBOUND
840+65	RT	R4-1	5	SF	NORTHBOUND
848+15	RT	R4-1	5	SF	NORTHBOUND
852+29	RT	R4-2	5	SF	NORTHBOUND
868+60	RT	R4-1	5	SF	NORTHBOUND
868+60	LT	W14-3	5.56	SF	NORTHBOUND
876+10	RT	R4-1	5	SF	NORTHBOUND
883+60	RT	R4-1	5	SF	NORTHBOUND
891+10	RT	R4-1	5	SF	NORTHBOUND
898+60	RT	R4-1	5	SF	NORTHBOUND
898+60	LT	R4-1	5	SF	SOUTHBOUND
898+60	RT	W14-3	5.56	SF	SOUTHBOUND
891+10	LT	R4-1	5	SF	SOUTHBOUND
PAGE TOTAL			**276.360**		

MP-5021-62(010) 305111/301000 MILL AND OVERLAY FROM STEELE TO SEBASTOPOL					
619-D Standard Roadside Construction Signs (Less than 10 Sq. Ft.) 2					
Station	**Location**	**Description**	**Quantity**	**Unit**	**Remarks**
883+60	LT	R4-1	5	SF	SOUTHBOUND
876+10	LT	R4-1	5	SF	SOUTHBOUND
869+76	LT	R4-2	5	SF	SOUTHBOUND
862+37	LT	R4-1	5	SF	SOUTHBOUND
862+37	RT	W14-3	5.56	SF	SOUTHBOUND
854+87	LT	R4-1	5	SF	SOUTHBOUND
847+37	LT	R4-1	5	SF	SOUTHBOUND
839+87	LT	R4-1	5	SF	SOUTHBOUND
832+37	LT	R4-1	5	SF	SOUTHBOUND
828+12	LT	R4-2	5	SF	SOUTHBOUND
802+47	LT	R4-1	5	SF	SOUTHBOUND
802+47	RT	W14-3	5.56	SF	SOUTHBOUND
794+97	LT	R4-1	5	SF	SOUTHBOUND
787+47	LT	R4-1	5	SF	SOUTHBOUND
779+97	LT	R4-1	5	SF	SOUTHBOUND
772+47	LT	R4-1	5	SF	SOUTHBOUND
764+97	LT	R4-1	5	SF	SOUTHBOUND
757+47	LT	R4-1	5	SF	SOUTHBOUND
749+97	LT	R4-1	5	SF	SOUTHBOUND
742+47	LT	R4-1	5	SF	SOUTHBOUND
736+85	LT	R4-2	5	SF	SOUTHBOUND
721+80	LT	R4-1	5	SF	SOUTHBOUND
721+80	RT	W14-3	5.56	SF	SOUTHBOUND
714+30	LT	R4-1	5	SF	SOUTHBOUND
706+80	LT	R4-1	5	SF	SOUTHBOUND
703+46	LT	R4-2	5	SF	SOUTHBOUND
685+03	LT	R4-1	5	SF	SOUTHBOUND
685+03	RT	W14-3	5.56	SF	SOUTHBOUND
677+53	LT	R4-1	5	SF	SOUTHBOUND
670+03	LT	R4-1	5	SF	SOUTHBOUND
662+53	LT	R4-1	5	SF	SOUTHBOUND
655+03	LT	R4-1	5	SF	SOUTHBOUND
647+53	LT	R4-1	5	SF	SOUTHBOUND
640+03	LT	R4-1	5	SF	SOUTHBOUND
632+53	LT	R4-1	5	SF	SOUTHBOUND
625+03	LT	R4-1	5	SF	SOUTHBOUND
617+53	LT	R4-1	5	SF	SOUTHBOUND
610+03	LT	R4-1	5	SF	SOUTHBOUND
602+53	LT	R4-1	5	SF	SOUTHBOUND
595+03	LT	R4-1	5	SF	SOUTHBOUND
587+53	LT	R4-1	5	SF	SOUTHBOUND
580+03	LT	R4-1	5	SF	SOUTHBOUND
572+53	LT	R4-1	5	SF	SOUTHBOUND
565+03	LT	R4-1	5	SF	SOUTHBOUND
557+53	LT	R4-1	5	SF	SOUTHBOUND
550+03	LT	R4-1	5	SF	SOUTHBOUND
542+53	LT	R4-1	5	SF	SOUTHBOUND
535+03	LT	R4-1	5	SF	SOUTHBOUND
	RT	G20-2A	8	SF	500' East of EOP
PAGE TOTAL			**250.240**		
TOTAL			**526.600**		

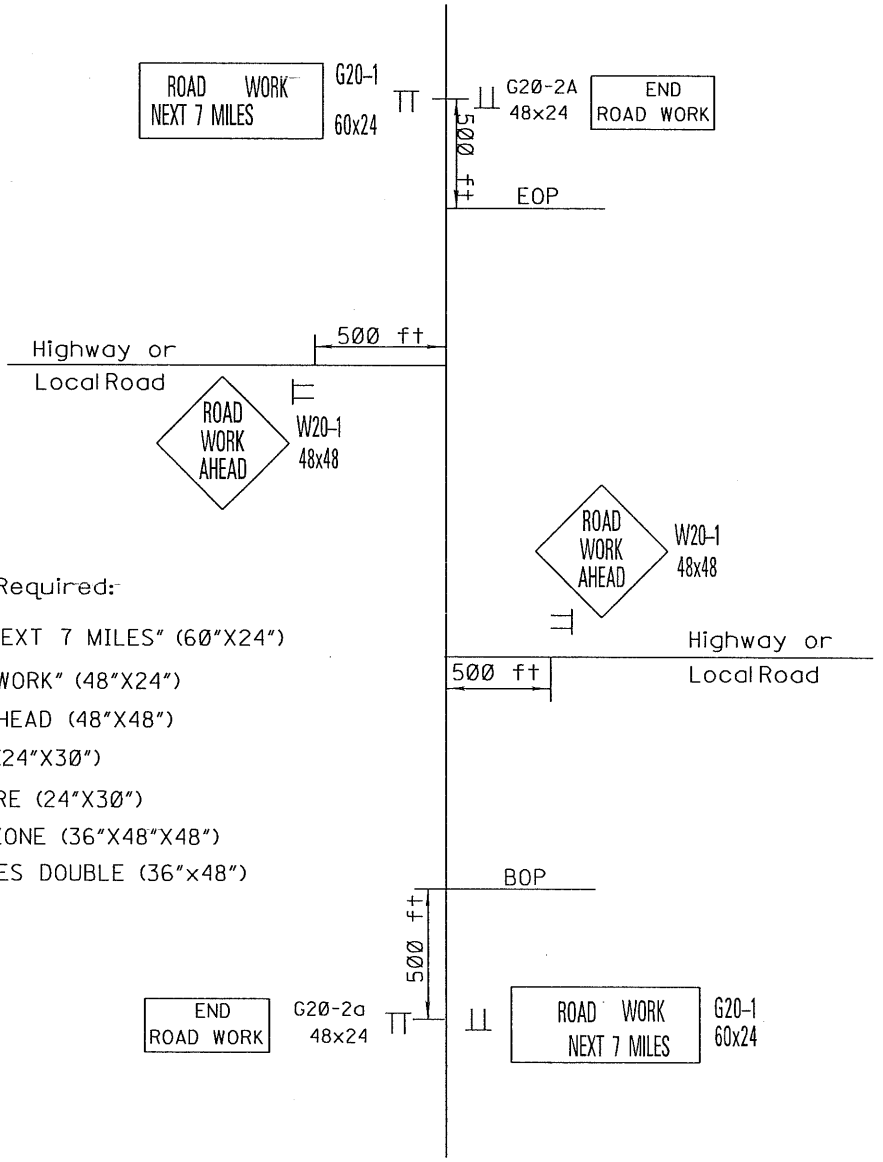
MP-5021-62(010) 30511/301000 MILL AND OVERLAY FROM STEELE TO SEBASTOPOL					
619-D Standard Roadside Construction Signs (10 Sq. Ft. or More)					
Station	**Location**	**Description**	**Quantity**	**Unit**	**Remarks**
	RT	G20-1	10	SF	500' SOUTH of BOP SECTION 1
537+00	RT	R16-3	10	SF	NORTHBOUND
551+75	RT	W20-1	16	SF	WALTERS DR
579+74	LT	R16-3	10	SF	SOUTHBOUND
642+60	RT	R16-3	10	SF	NORTHBOUND
659+10	RT	W20-1	16	SF	PINEBLUFF RD
685+34	LT	R16-3	10	SF	SOUTHBOUND
748+20	LT	R16-3	10	SF	NORTHBOUND
760+75	RT	W20-1	16	SF	ANTHONY LN
760+84	LT	W20-1	16	SF	D. ABLE RD
777+70	LT	W20-1	16	SF	FISHER RD
779+40	RT	W20-1	16	SF	HAYS RD
790+94	LT	R16-3	10	SF	SOUTHBOUND
829+73	LT	W20-1	16	SF	CUTOFF RD
849+80	LT	W20-1	16	SF	DAMASCUS RD
884+00	LT	W20-1	16	SF	A.C. WALTERS RD
896+54	LT	R16-3	10	SF	SOUTHBOUND
	LT	G20-1	10	SF	500' NORTH of EOP
		Total	**234**	**SF**	

MP-5021-62(010) 30511/301000 MILL AND OVERLAY FROM STEELE TO SEBASTOPOL					
619-G Type III Barricades Double-Faced					
Location		**Station**	**Quantity**	**Unit**	**Description**
RT		500' SOUTH OF BOP	6	LF	
LT		500' SOUTH OF BOP	6	LF	
RT		500' NORTH OF EOP	6	LF	
LT		500' NORTH OF EOP	6	LF	
		Total	**24**	**LF**	

MP-5021-62(010) 30511/301000 MILL AND OVERLAY FROM STEELE TO SEBASTOPOL					
619-D Standard Roadside Construction Signs (Less than 10 Sq. Ft.) 1					
Station	Location	Description	Quantity	Unit	Remarks
	LT	G20-2A	8	SF	500' SOUTH OF BOP
536+00	RT	R4-1	5	SF	NORTHBOUND
826+97	LT	W14-3	5.56	SF	NORTHBOUND
543+50	RT	R4-1	5	SF	NORTHBOUND
551+00	RT	R4-1	5	SF	NORTHBOUND
558+50	RT	R4-1	5	SF	NORTHBOUND
566+00	RT	R4-1	5	SF	NORTHBOUND
573+50	RT	R4-1	5	SF	NORTHBOUND
581+00	RT	R4-1	5	SF	NORTHBOUND
588+50	RT	R4-1	5	SF	NORTHBOUND
596+00	RT	R4-1	5	SF	NORTHBOUND
603+50	RT	R4-1	5	SF	NORTHBOUND
611+00	RT	R4-1	5	SF	NORTHBOUND
618+50	RT	R4-1	5	SF	NORTHBOUND
626+00	RT	R4-1	5	SF	NORTHBOUND
633+50	RT	R4-1	5	SF	NORTHBOUND
641+00	RT	R4-1	5	SF	NORTHBOUND
648+50	RT	R4-1	5	SF	NORTHBOUND
656+00	RT	R4-1	5	SF	NORTHBOUND
663+50	RT	R4-1	5	SF	NORTHBOUND
671+00	RT	R4-1	5	SF	NORTHBOUND
675+02	RT	R4-2	5	SF	NORTHBOUND
693+30	RT	R4-1	5	SF	NORTHBOUND
693+30	LT	W14-3	5.56	SF	NORTHBOUND
700+80	RT	R4-1	5	SF	NORTHBOUND
708+30	RT	R4-1	5	SF	NORTHBOUND
713+50	RT	R4-2	5	SF	NORTHBOUND
726+72	RT	R4-1	5	SF	NORTHBOUND
726+72	LT	W14-3	5.56	SF	NORTHBOUND
734+22	RT	R4-1	5	SF	NORTHBOUND
741+72	RT	R4-1	5	SF	NORTHBOUND
749+22	RT	R4-1	5	SF	NORTHBOUND
756+72	RT	R4-1	5	SF	NORTHBOUND
764+22	RT	R4-1	5	SF	NORTHBOUND
771+72	RT	R4-1	5	SF	NORTHBOUND
779+22	RT	R4-1	5	SF	NORTHBOUND
786+72	RT	R4-1	5	SF	NORTHBOUND
792+48	RT	R4-2	5	SF	NORTHBOUND
818+15	RT	R4-1	5	SF	NORTHBOUND
818+15	LT	W14-3	5.56	SF	NORTHBOUND
825+65	RT	R4-1	5	SF	NORTHBOUND
833+15	RT	R4-1	5	SF	NORTHBOUND
840+65	RT	R4-1	5	SF	NORTHBOUND
848+15	RT	R4-1	5	SF	NORTHBOUND
852+29	RT	R4-2	5	SF	NORTHBOUND
868+60	RT	R4-1	5	SF	NORTHBOUND
868+60	LT	W14-3	5.56	SF	NORTHBOUND
876+10	RT	R4-1	5	SF	NORTHBOUND
883+60	RT	R4-1	5	SF	NORTHBOUND
891+10	RT	R4-1	5	SF	NORTHBOUND
898+60	RT	R4-1	5	SF	NORTHBOUND
898+60	LT	R4-1	5	SF	SOUTHBOUND
898+60	RT	W14-3	5.56	SF	SOUTHBOUND
891+10	LT	R4-1	5	SF	SOUTHBOUND
PAGE TOTAL			276.360		

MP-5021-62(010) 30511/301000 MILL AND OVERLAY FROM STEELE TO SEBASTOPOL					
619-D Standard Roadside Construction Signs (Less than 10 Sq. Ft.) 2					
Station	Location	Description	Quantity	Unit	Remarks
883+60	LT	R4-1	5	SF	SOUTHBOUND
876+10	LT	R4-1	5	SF	SOUTHBOUND
869+76	LT	R4-2	5	SF	SOUTHBOUND
862+37	LT	R4-1	5	SF	SOUTHBOUND
862+37	RT	W14-3	5.56	SF	SOUTHBOUND
854+87	LT	R4-1	5	SF	SOUTHBOUND
847+37	LT	R4-1	5	SF	SOUTHBOUND
839+87	LT	R4-1	5	SF	SOUTHBOUND
832+37	LT	R4-1	5	SF	SOUTHBOUND
828+12	LT	R4-2	5	SF	SOUTHBOUND
802+47	LT	R4-1	5	SF	SOUTHBOUND
802+47	RT	W14-3	5.56	SF	SOUTHBOUND
794+97	LT	R4-1	5	SF	SOUTHBOUND
787+47	LT	R4-1	5	SF	SOUTHBOUND
779+97	LT	R4-1	5	SF	SOUTHBOUND
772+47	LT	R4-1	5	SF	SOUTHBOUND
764+97	LT	R4-1	5	SF	SOUTHBOUND
757+47	LT	R4-1	5	SF	SOUTHBOUND
749+97	LT	R4-1	5	SF	SOUTHBOUND
742+47	LT	R4-1	5	SF	SOUTHBOUND
736+85	LT	R4-2	5	SF	SOUTHBOUND
721+80	LT	R4-1	5	SF	SOUTHBOUND
721+80	RT	W14-3	5.56	SF	SOUTHBOUND
714+30	LT	R4-1	5	SF	SOUTHBOUND
706+80	LT	R4-1	5	SF	SOUTHBOUND
703+46	LT	R4-2	5	SF	SOUTHBOUND
685+03	LT	R4-1	5	SF	SOUTHBOUND
685+03	RT	W14-3	5.56	SF	SOUTHBOUND
677+53	LT	R4-1	5	SF	SOUTHBOUND
670+03	LT	R4-1	5	SF	SOUTHBOUND
662+53	LT	R4-1	5	SF	SOUTHBOUND
655+03	LT	R4-1	5	SF	SOUTHBOUND
647+53	LT	R4-1	5	SF	SOUTHBOUND
640+03	LT	R4-1	5	SF	SOUTHBOUND
632+53	LT	R4-1	5	SF	SOUTHBOUND
625+03	LT	R4-1	5	SF	SOUTHBOUND
617+53	LT	R4-1	5	SF	SOUTHBOUND
610+03	LT	R4-1	5	SF	SOUTHBOUND
602+53	LT	R4-1	5	SF	SOUTHBOUND
595+03	LT	R4-1	5	SF	SOUTHBOUND
587+53	LT	R4-1	5	SF	SOUTHBOUND
580+03	LT	R4-1	5	SF	SOUTHBOUND
572+53	LT	R4-1	5	SF	SOUTHBOUND
565+03	LT	R4-1	5	SF	SOUTHBOUND
557+53	LT	R4-1	5	SF	SOUTHBOUND
550+03	LT	R4-1	5	SF	SOUTHBOUND
542+53	LT	R4-1	5	SF	SOUTHBOUND
535+03	LT	R4-1	5	SF	SOUTHBOUND
	RT	G20-2A	8	SF	500' East of EOP
PAGE TOTAL			250.240		
TOTAL			526.600		

MP-5021-62(010)
SR 21 - SCOTT COUNTY
TYPICAL CONSTRUCTION SIGNING DETAIL



Traffic Control Signs Required:

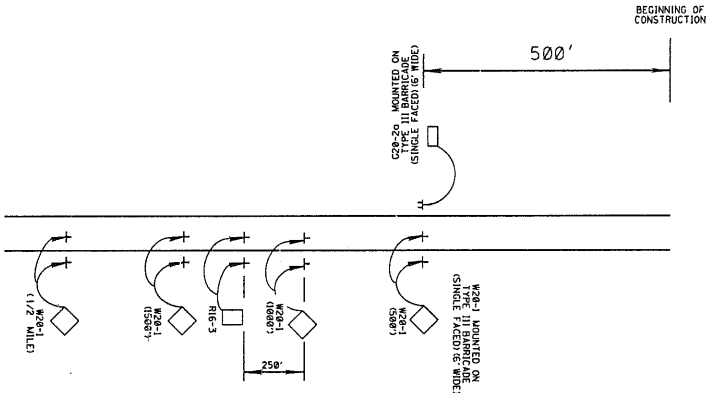
2 - G20-1 "ROAD WORK NEXT 7 MILES" (60"X24")
2 - G20-2a "END ROAD WORK" (48"X24")
9 - W20-1 ROAD WORK AHEAD (48"X48")
83 - R4-1 DO NOT PASS (24"X30")
8 - R4-2 PASS WITH CARE (24"X30")
10 - W14-3 NO PASSING ZONE (36"X48"X48")
7 - R16-3 SPEEDING FINES DOUBLE (36"x48")

NOTES: (1) One (1) W20-1 "ROAD WORK AHEAD" Sign is Required at each Local Road, Street or Highway Entering the Project.

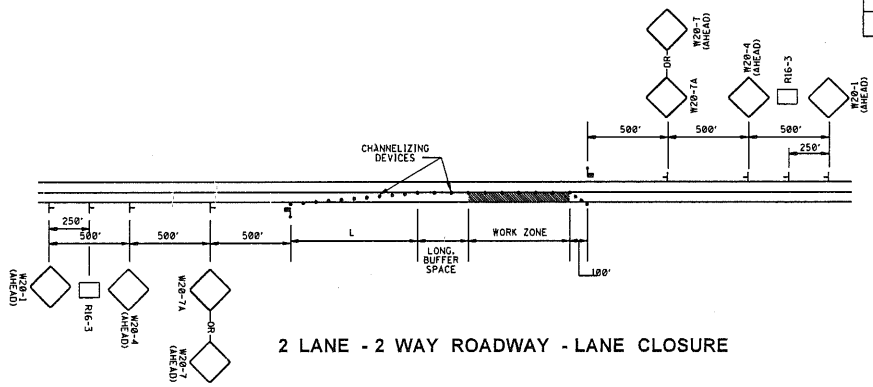
(2) G20-1 and G20-2a signs mounted on Type III Double Faced Barricade.

(3) R4-1 "DO NOT PASS", R4-2 "PASS WITH CARE", and W14-3 "NO PASSING ZONE" signs are required in accordance with Subsection 618.03.3 and as specified in the MUTCD. If No Passing zones are 1000 ft or more, install additional "DO NOT PASS" signs on maximum spacing of 750 ft. See Traffic Control Plan Detail Sheet.

STATE	PROJECT NO.
MISS.	



DIVIDED HIGHWAY
(PROJECTS LESS THAN 1 MILE LENGTH)

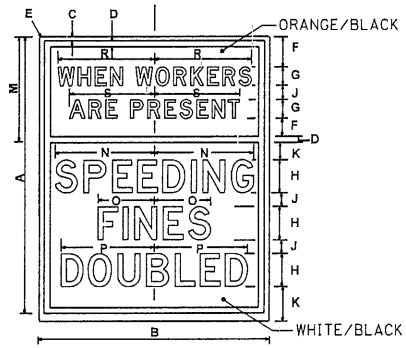


2 LANE - 2 WAY ROADWAY - LANE CLOSURE

NOTES

① R16-3 SIGN TO BE PLACED AS SHOWN OR AS DIRECTED BY THE ENGINEER.

② R16-3 SIGN SHALL BE SPACED AT A MAXIMUM OF 2 MILES THROUGHOUT LENGTH OF PROJECT.



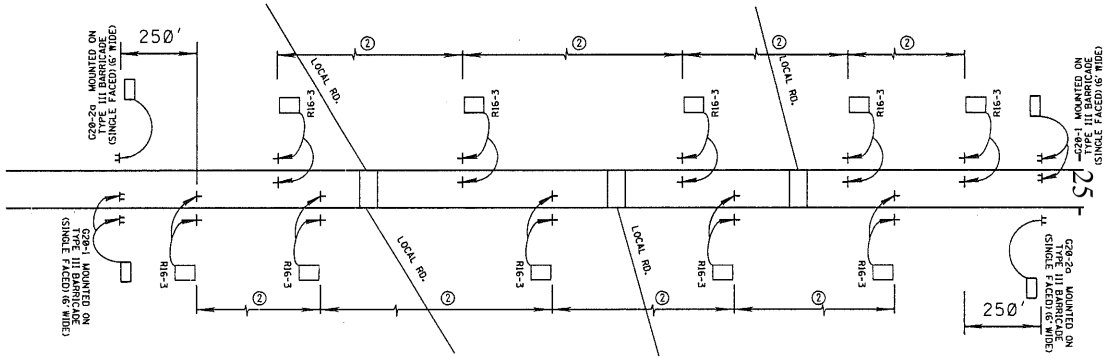
SIGN	DIMENSIONS (INCHES)							
	A	B	C	D	E	F	G	H
STD.	60	48	3/4	1 1/4	3	3/4	4 Dm	7 D
	J	K	M	N	O	P	R	S
STD.	3	6 5/8	22 1/8	21	11 1/8	19 7/8	20 7/8	18

48" x 60"
(INTERSTATE USE)

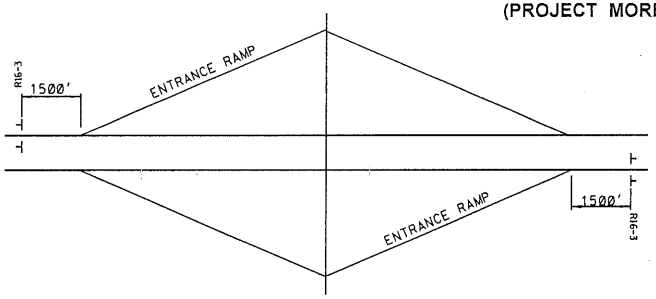
SIGN	DIMENSIONS (INCHES)							
	A	B	C	D	E	F	G	H
STD.	48	36	3/4	1 1/4	3	2 3/4	3 Dm	6 D
	J	K	M	N	O	P	R	S
STD.	3	4 1/8	14 3/4	14	7 1/8	13 1/8	13 3/8	12

36" x 48"
(ALL OTHER HIGHWAYS)

R16-3



DIVIDED HIGHWAY SHOWN
(2 LANE - 2 WAY ROADWAY SIMILAR)
(PROJECT MORE THAN 1 MILE LENGTH)



INTERSTATE DETAIL

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

LOCATION OF R16-3 SIGNS

BY	REVISION	DATE

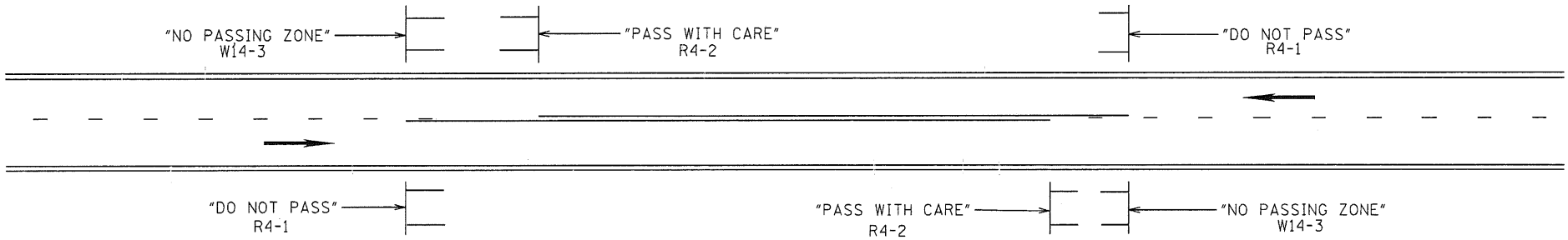
FILENAME: SPEED SIGN DETAIL.dgn
DESIGN TEAM _____ CHECKED _____ DATE 07-08-08

WORKING NUMBER

SHEET NUMBER

25 - Notice To Bidders No. 4950 - Cond.

STATE	PROJECT NO.
MISS.	



(1) THE R4-1, "DO NOT PASS", SHALL BE PLACED ON THE RIGHT SIDE OF THE TRAVELED LANE AT THE BEGINNING OF THE NO PASSING ZONE. ADDITIONAL R4-1 SIGNS SHALL BE PLACED RIGHT IN INCREMENTS OF 750' TO 1000' THROUGHOUT THE LENGTH OF THE NO PASSING ZONE.

(2) THE R4-2, "PASS WITH CARE", SHALL BE PLACED ON THE RIGHT SIDE OF THE TRAVELED LANE AT THE END OF THE NO PASSING ZONE & IN INCREMENTS OF 750' TO 1000' UNTIL THE NEXT NO PASSING ZONE.

(3) THE W14-3, "NO PASSING ZONE", SHALL BE PLACED ON THE LEFT SIDE OF THE ROAD AT THE BEGINNING OF EACH NO PASSING ZONE.

(4) THE R4-1, R4-2, AND W14-3 SIGNS ARE TO BE USED WHEN STANDARD PAVEMENT MARKINGS ARE NOT IN PLACE. SIGNS MAY ALSO BE USED TO EMPHASIZE PAVEMENT MARKINGS.

REVISION	BY	DATE

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

TRAFFIC CONTROL PLAN

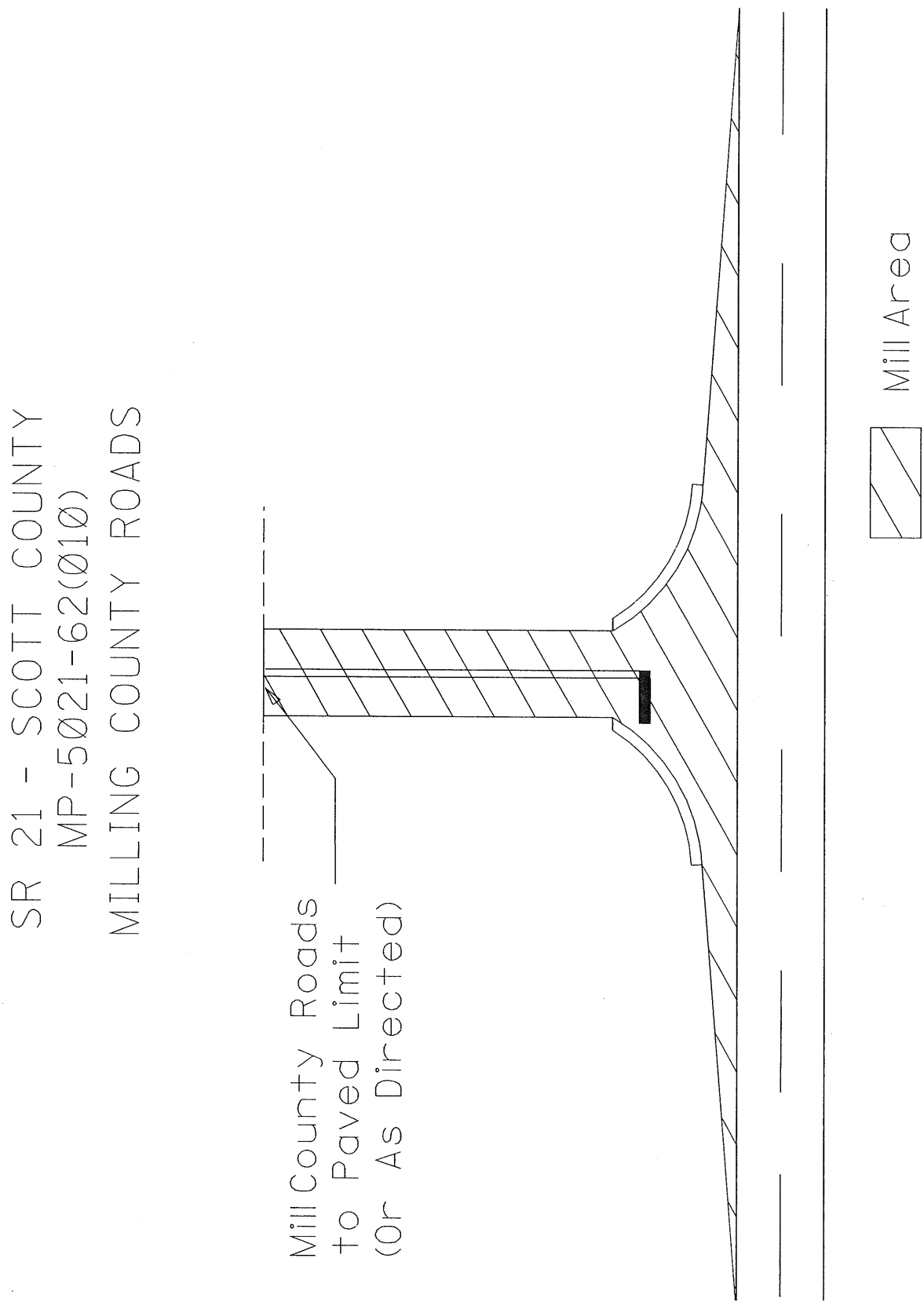
CONSTRUCITON SIGNAGE FOR PASSING/NO PASSING ZONES

ENGLISH

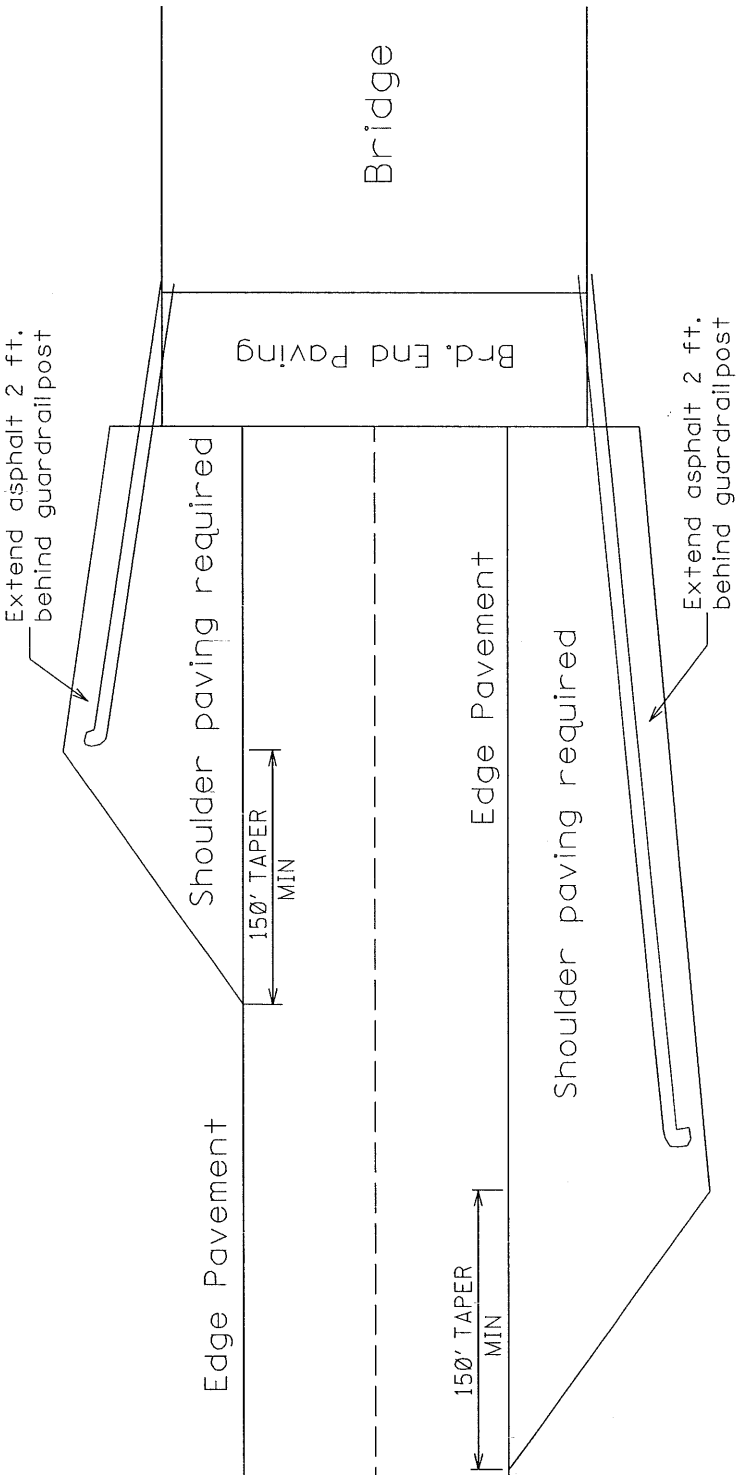
WORKING NUMBER TC-19

SHEET NUMBER

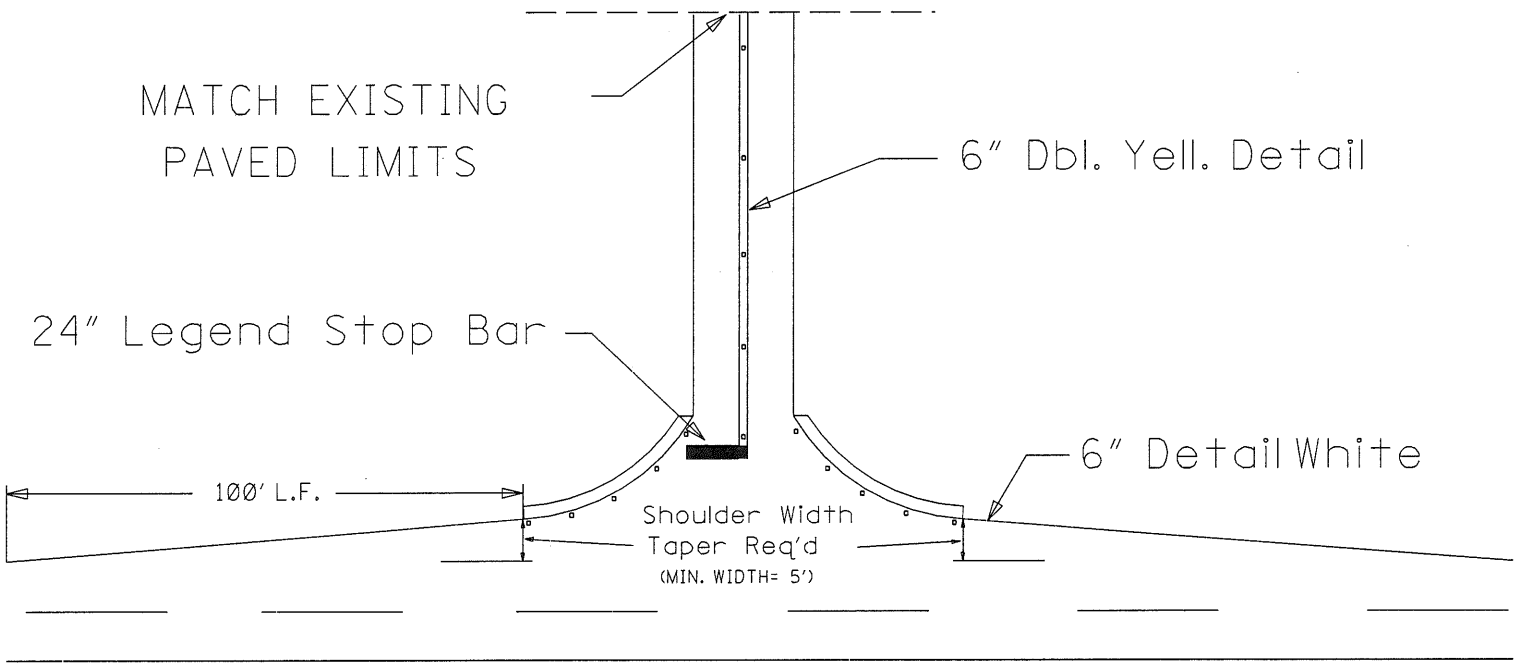
ISSUE DATE:


SR 21 - SCOTT COUNTY
MP-5021-62(010)
MILLING COUNTY ROADS
Mill County Roads
to Paved Limit
(Or As Directed)
Mill Area

SR 21 - SCOTT COUNTY
MP-5021-62(010)
SHOULDER PAVING AT BRIDGE GUARDRAIL



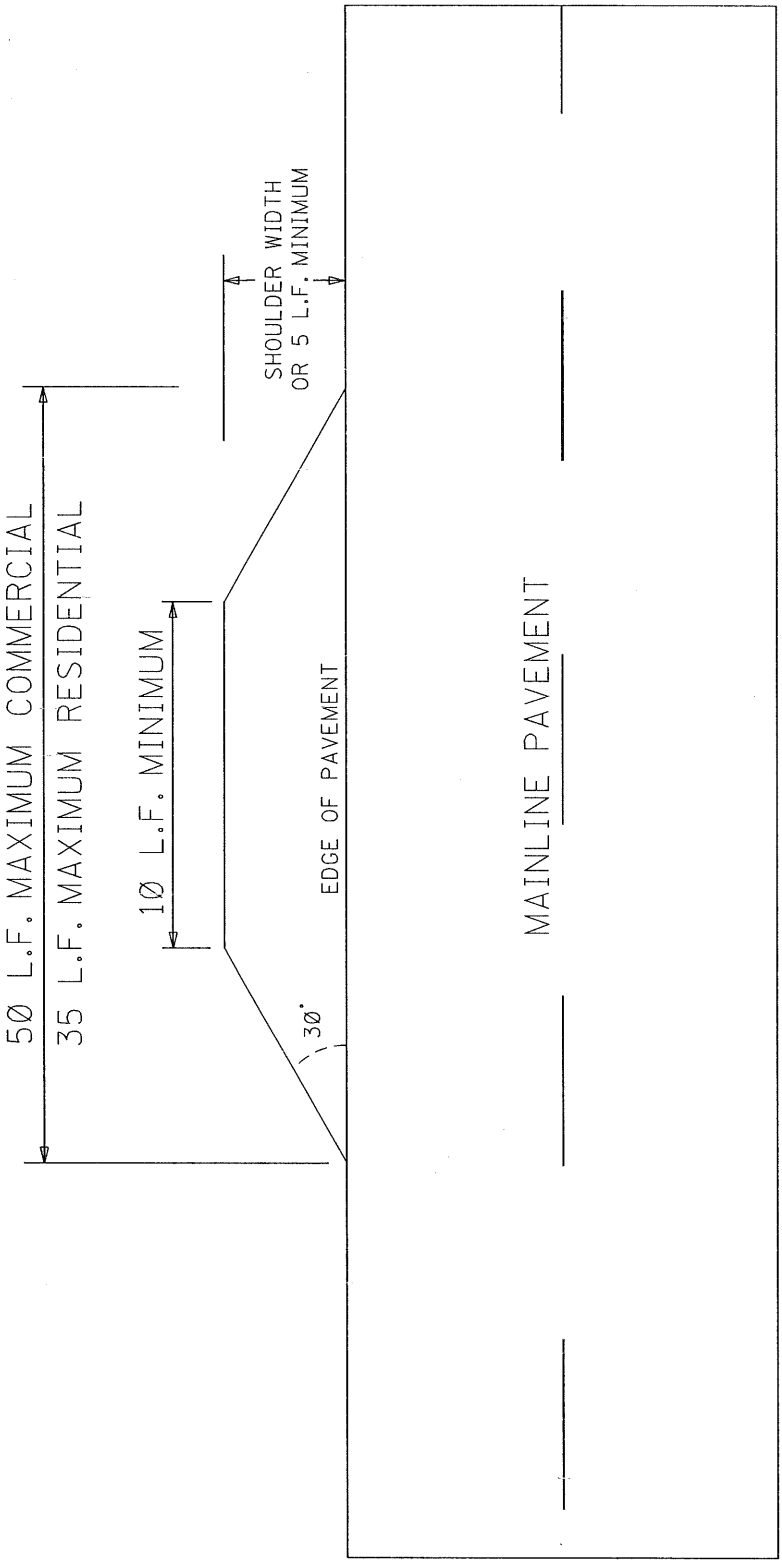
SR21-SCOTT COUNTY
MP-5021-62(010)
COUNTY ROAD PAVING/STRIPING DETAIL



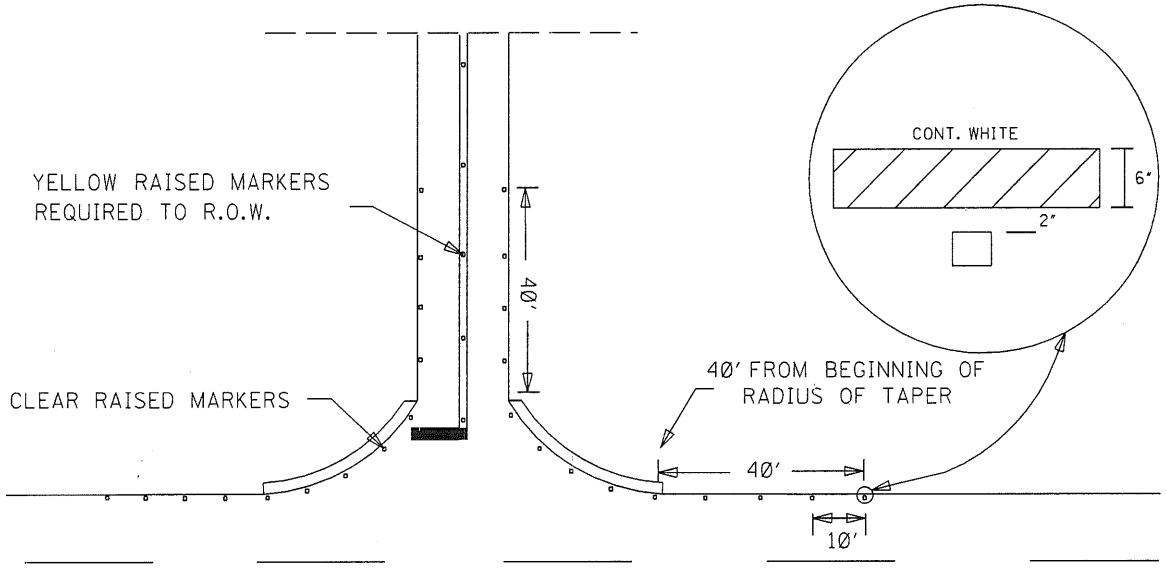
NOTE: 100' TAPERS TO BE CONSTRUCTED WHERE 5' SHOULDER WIDTH IS AVAILABLE AT THE BEGINNING OF LOCAL ROAD RADIUS.

NOTE: ASPHALT PAVEMENT THICKNESS IN TAPER SHALL BE 6".

SR 21 - SCOTT COUNTY
MP-5021-62(010)
DRIVEWAY APRONS



SR21-SCOTT COUNTY
MP-5021-62(010)
RAISED PAVEMENT MARKERS
LOCAL ROADS



NOTE 1. MARKERS SHALL BE PLACED AT 10 FEET INTERVALS.

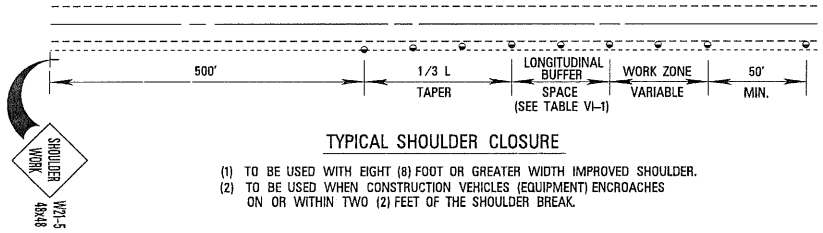
NOTE 2. MARKERS SHALL BE ORIENTED SO THEY ARE RETROREFLECTIVE TO MOTORISTS ON MAIN LINE.

NOTE 3. A MINIMUM OF FIVE (5) MARKERS SHALL BE PLACED ALONG MAINLINE EDGE STRIPE.

NOTE 4. MARKERS FOR COUNTY ROADS SHALL CONTINUE DOWN THE EDGE LINE A DISTANCE OF 40 FEET.

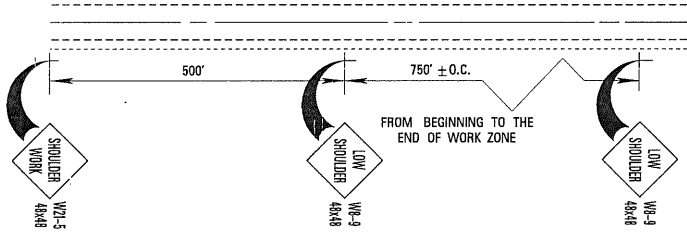
STATE	PROJECT NO.
MISS.	

PLASTIC DRUMS
(SEE NOTE FOR SPACING)



TYPICAL SHOULDER CLOSURE

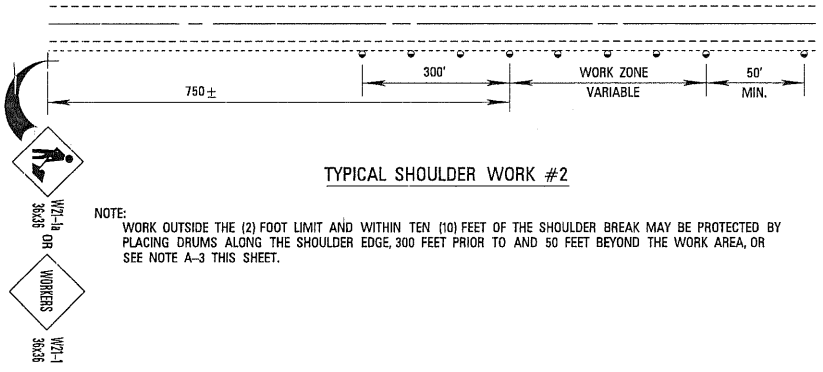
(1) TO BE USED WITH EIGHT (8) FOOT OR GREATER WIDTH IMPROVED SHOULDER.
(2) TO BE USED WHEN CONSTRUCTION VEHICLES (EQUIPMENT) ENCROACHES ON OR WITHIN TWO (2) FEET OF THE SHOULDER BREAK.



TYPICAL SHOULDER WORK #1

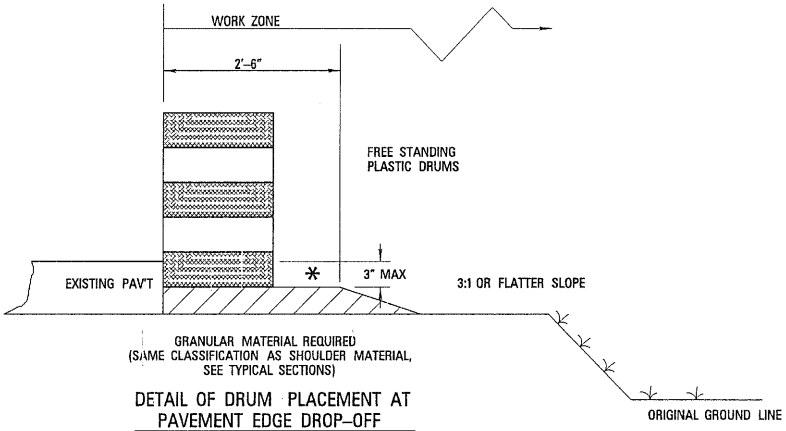
(SEE NOTE A-1 THIS SHEET)

PLASTIC DRUMS
(SEE NOTE FOR SPACING)



TYPICAL SHOULDER WORK #2

NOTE:
WORK OUTSIDE THE (2) FOOT LIMIT AND WITHIN TEN (10) FEET OF THE SHOULDER BREAK MAY BE PROTECTED BY PLACING DRUMS ALONG THE SHOULDER EDGE, 300 FEET PRIOR TO AND 50 FEET BEYOND THE WORK AREA, OR SEE NOTE A-3 THIS SHEET.



DETAIL OF DRUM PLACEMENT AT PAVEMENT EDGE DROP-OFF

NOTES

* A. PAVEMENT EDGE DROP-OFF

1. IF LESS THAN TWO AND ONE QUARTER (2.25) INCHES-NO PROTECTION REQUIRED. PLACE A SHOULDER WORK SIGN (W21-5) 500 FEET IN ADVANCE OF WORK ZONE SHOULDER AND A LOW SHOULDER SIGN (W8-9) AT THE BEGINNING AND THROUGHOUT THE WORK ZONE @ (750' ± O.C.).
2. TWO AND ONE QUARTER TO THREE INCHES-PLACE DRUMS, VERTICAL PANELS OR BARRICADES EVERY 100 FEET ON TANGENT SECTIONS FOR SPEEDS OF 50 MILES PER HOUR OR GREATER. CONES MAY BE USED IN PLACE OF DRUMS, PANELS, AND BARRICADES DURING DAYLIGHT HOURS. FOR TANGENT SECTIONS WITH SPEEDS LESS THAN 50 MILES PER HOUR AND FOR CURVES, DEVICES SHOULD BE PLACED EVERY 50 FEET. SPACING FOR TAPERS SHOULD BE IN ACCORDANCE WITH THE M.U.T.C.D. (1/3 L, WHERE L IS THE TAPER LENGTH IN FEET.)
3. GREATER THAN THREE (3) INCHES-POSITIVE SEPARATION OR WEDGE WITH 3:1 OR FLATTER SLOPE NEEDED. IF THERE IS EIGHT (8) FEET OR MORE DISTANCE BETWEEN THE EDGE OF TRAVEL LANE AND DROP-OFF, THEN DRUMS, PANELS OR BARRICADES MAY BE USED. IF CONCRETE BARRIERS ARE USED, SPECIAL REFLECTIVE DEVICES OR STEADY BURN LIGHTS SHOULD BE USED FOR OVERNIGHT INSTALLATIONS.
4. FOR TEMPORARY CONDITIONS, DROP-OFFS GREATER THAN THREE (3) INCHES MAY BE PROTECTED WITH DRUMS, VERTICAL PANELS OR BARRICADES FOR SHORT DISTANCES DURING DAYLIGHT HOURS WHILE WORK IS BEING DONE IN THE DROP-OFF AREA.
5. LESSER TREATMENTS THAN THOSE DESCRIBED ABOVE MAY BE CONSIDERED FOR LOW-VOLUME LOCAL STREETS.

B. DRUM SPACING

1. TANGENTS = 2 X S
2. TAPERS = L/3
   WHERE L = S X W
   L = TAPER LENGTH IN FEET
   S = SPEED IN MPH (POSTED OR 85 PERCENTILE)
   W = WIDTH OF OFFSET IN FEET

C. ALL TRAFFIC CONTROL ITEMS SHOWN ON THIS SHEET SHALL BE PAID FOR UNDER MAINTENANCE OF TRAFFIC.

TABLE VI-1, GUIDELINES FOR LENGTH OF LONGITUDINAL BUFFER SPACE

SPEED* (MPH)	LENGTH (FEET)
20	35
25	55
30	85
35	120
40	170
45	220
50	280
55	335
60	415
65	485

* POSTED SPEED, OFF-PEAK 85 PERCENTILE SPEED PRIOR TO WORK STARTING, OR THE ANTICIPATED OPERATING SPEED IN MPH.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

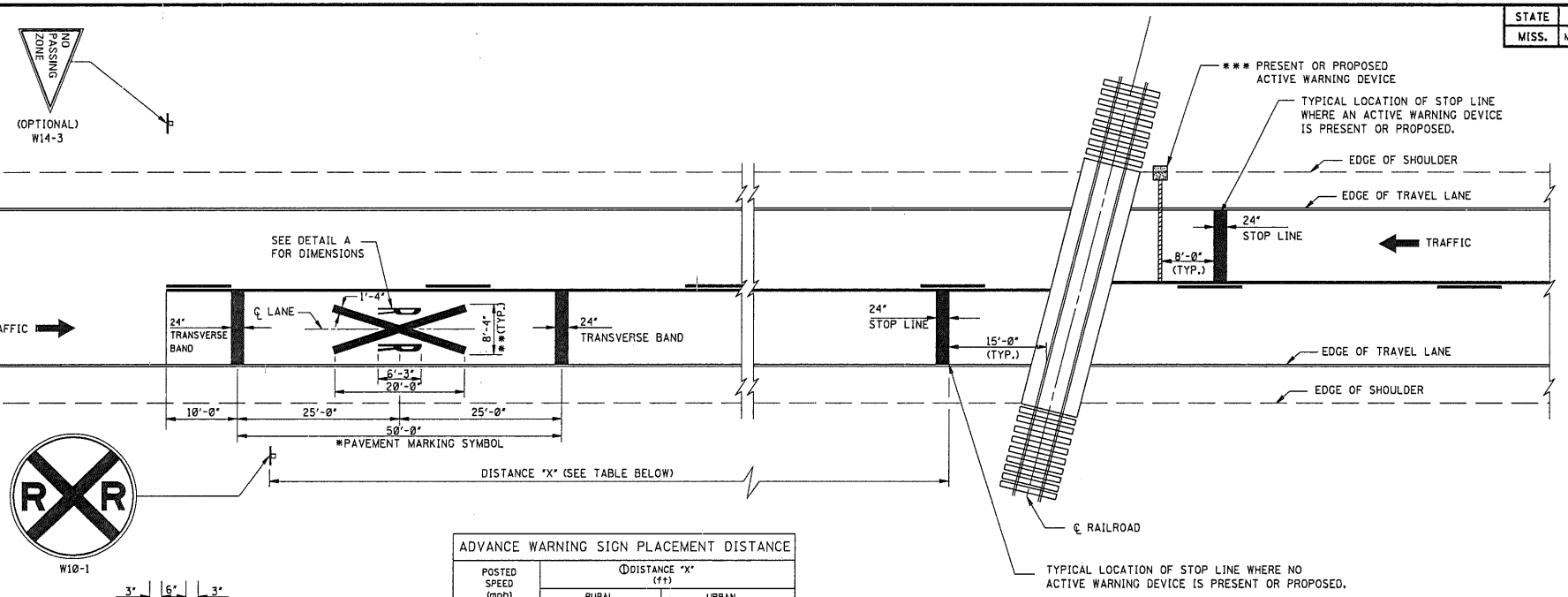
TRAFFIC CONTROL DETAILS
DRUM PLACEMENT
AND
SHOULDER CLOSURE

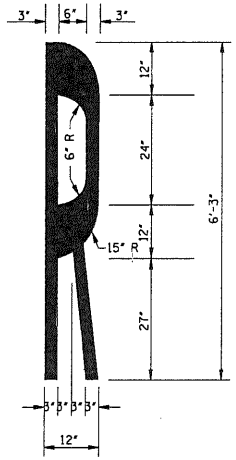
PROJECT NO.:
COUNTY:
FILENAME: dgns/shldclosure.dgn
DESIGN TEAM _____ CHECKED _____ DATE 12-08-08

WORKING NUMBER TCD-SC
SHEET NUMBER

REVISION | BY | DATE

STATE	PROJECT NO.
MISS.	MP-5021-62(010)





DETAIL A
STANDARD "R" PAVEMENT MARKING
FOR R X R SYMBOL

ADVANCE WARNING SIGN PLACEMENT DISTANCE		
POSTED SPEED (mph)	①DISTANCE "X" (ft)	
	RURAL	URBAN
20	175	100
25	250	100
30	325	100
35	400	② 150
40	475	② 225
45	550	300
50	625	375
55	700	450
60	775	550

NOTES:
① DISTANCE "X" MAY BE ADJUSTED IF PROHIBITIVE PHYSICAL CONDITIONS EXIST AT THE DESIGNATED DISTANCE.

② THESE DISTANCES MAY BE ADJUSTED TO A MINIMUM OF 100' IN RESIDENTIAL AREAS OR BUSINESS DISTRICTS WHERE LOW SPEEDS ARE PREVALENT.

GENERAL NOTES:

*1. A PORTION OF THE PAVEMENT MARKING SYMBOL SHOULD BE DIRECTLY OPPOSITE THE ADVANCE WARNING SIGN (W10-1).

**2. WIDTH OF R X R SYMBOL MAY VARY ACCORDING TO LANE WIDTH. HOWEVER, ON MULTI-LANE ROADS, THE TRANSVERSE BANDS AND STOP LINE SHOULD EXTEND ACROSS ALL APPROACH LANES, AND INDIVIDUAL R X R SYMBOLS SHOULD BE USED IN EACH APPROACH LANE.

⚠ 3. R X R SYMBOL (63.0 ft^2), TRANSVERSE BANDS AND STOP LINE SHALL BE PAID FOR AS LEGEND, WHITE (PLASTIC). (MATERIAL OPTIONAL FOR OTHER AGENCIES).

***4. REFER TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" FOR LOCATION OF PROPOSED WARNING DEVICES AT RAILROAD-HIGHWAY GRADE CROSSINGS.

REVISION	BY	DATE

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

TYPICAL PLACEMENT OF WARNING SIGNS AND PAVEMENT MARKINGS AT RAILROAD HIGHWAY GRADE CROSSINGS

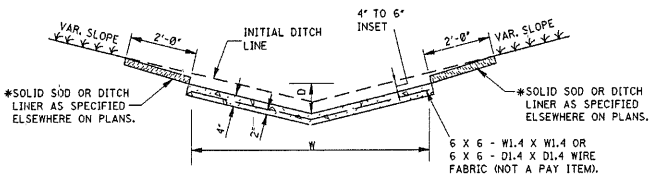
ENGLISH

WORKING NUMBER 2-7

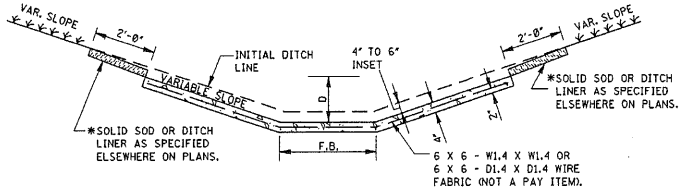
SHEET NUMBER

ISSUE DATE: OCTOBER 1, 1998

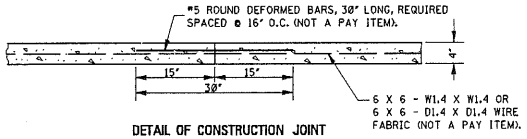
STATE	PROJECT NO.
MISS.	



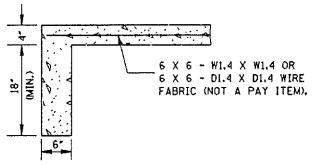
"V" TYPE SECTION



FLAT BOTTOM SECTION



DETAIL OF CONSTRUCTION JOINT



DETAIL OF TOE WALL

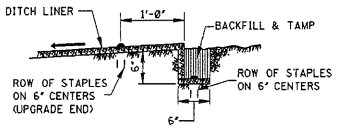
NOTE: TOE WALL REQUIRED UPSTREAM AND DOWNSTREAM.

CONCRETE PAVED DITCH

NOTES:

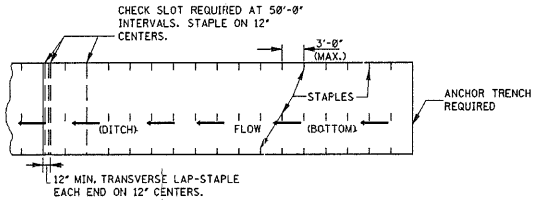
1. CONCRETE PAVED DITCHES SHALL BE GROOVED AT 20'-0" INTERVALS. THE GROOVES SHALL BE CUT TO A DEPTH OF NOT LESS THAN 1".
2. DIMENSIONS D & W ARE AS FOLLOWS:
   D(MINIMUM) = 6"
   D(NOMINAL) = 9"
   W(MINIMUM) = 24"
3. CHAIR SUPPORTS FOR THE WIRE MESH WILL NOT BE REQUIRED. HOWEVER, THE CONTRACTOR SHALL PLACE THE WIRE MESH IN A SATISFACTORY AND WORKMANLIKE MANNER TO ENSURE THAT THE FINAL POSITION IS REASONABLY NEAR THE POSITION INDICATED.

*4. CENTER ROW OF STAPLES MAY BE OMITTED ON DITCH LINER.

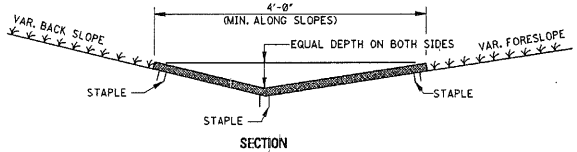


ANCHOR TRENCH DETAIL

NOTE: ANCHOR TRENCH REQUIRED AT THE BEGINNING AND ENDING OF EACH AREA TO BE COVERED, EXCEPT DOWNSTREAM END ADJOINING A STRUCTURE.



PLAN

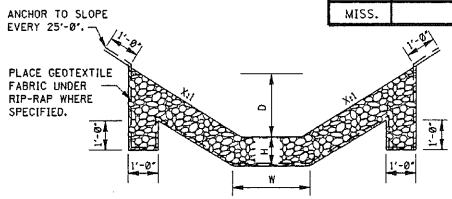


SECTION

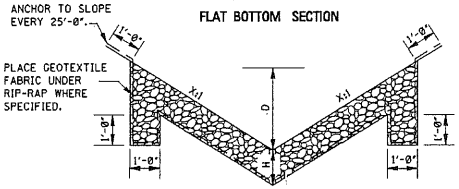
DITCH LINER TREATMENT

(EXCELSIOR BLANKET, JUTE MESH OR EROSION CONTROL FABRIC)

NOTE: DITCHES TREATED WITH DITCH LINER WILL BE VEGETATED PRIOR TO TREATMENT, UNLESS OTHERWISE INDICATED.



FLAT BOTTOM SECTION



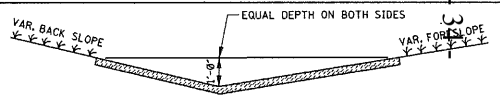
"V" TYPE SECTION

RIP-RAP TREATMENT

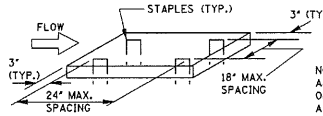
NOTES:

1. DIMENSIONS D, W AND X ARE VARIABLE AND ARE SHOWN ELSEWHERE ON THE PLANS.
2. THE RIP-RAP SIZE AND MINIMUM DEPTH "H" FOR RIP-RAP TREATMENT ARE AS FOLLOWS.

RIP-RAP SIZE & MINIMUM DEPTH "H"	
H (In)	RIP-RAP SIZE (lb.s)
12"	100
18"	300



SOLID SOD TREATMENT



NOTE: SOLID SOD (STRIPS OR BLOCKS) ARE TO BE STAPLED, PINNED, PEGGED OR STAKED AT THE FOUR CORNERS OR AT THE MAXIMUM SPECIFIED SPACING.

GENERAL NOTE:

1. FOR LOCATION OF APPROPRIATE DITCH TREATMENTS, SEE PLAN SHEETS AS DENOTED BY THE FOLLOWING LEGEND OR AS DIRECTED BY THE ENGINEER.

DITCH LINER
SOLID SOD
CONCRETE PAVED DITCH
RIP-RAP

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

DETAILS OF TYPICAL DITCH TREATMENTS

BY	REVISION	DATE

FILENAME: EROSION CONTROL\DT-1.DGN

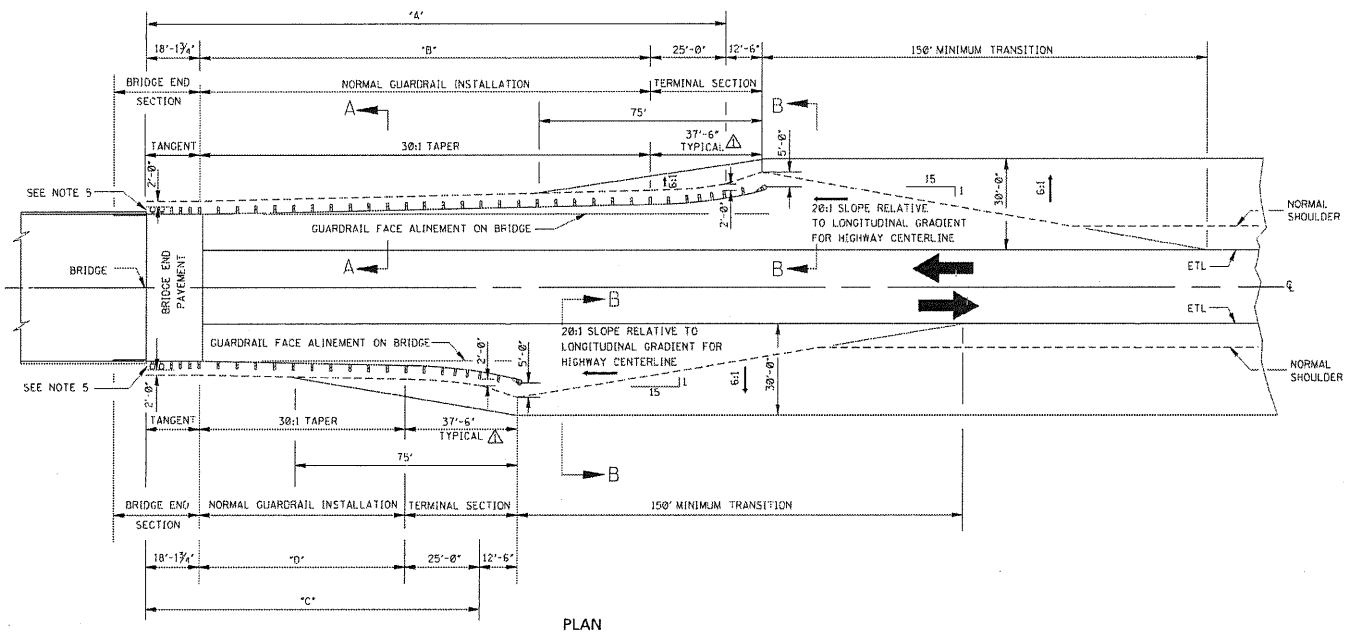
DESIGN TEAM _____ CHECKED _____ DATE _____

WORK ORD NUMBER 4950-00-1

SHEET NUMBER DT-1

Notice to Bidders No. 3 - dated

STATE	PROJECT NO.
MISS.	

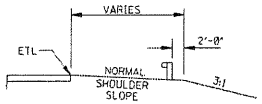


PLAN

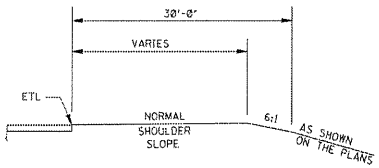
DETAIL OF GUARDRAIL SECTION LAPS

GENERAL NOTES:

1. VALUES FOR "A", "B", "C" AND "D" WILL BE SHOWN ELSEWHERE ON THE PLANS.
2. ⚠ FOR DETAILS PERTINENT TO INSTALLATION OF THE TERMINAL SECTION, SEE MANUFACTURER'S SPECIFICATIONS AND DRAWINGS OR ELSEWHERE ON PLANS
3. GUARDRAIL SECTIONS ARE TO BE LAPPED IN THE DIRECTION OF TRAFFIC APPROACHING THE BRIDGE.
4. THE OVERALL LENGTH OF GUARDRAIL IS MEASURED FROM THE CONNECTING END ON THE BRIDGE.
5. THE SHOULDER WIDTH AT THE BRIDGE END SHALL BE SUFFICIENTLY WIDE TO PROVIDE A MINIMUM OF 2'-0" BEHIND THE BACK OF POST BEFORE THE SLOPE BREAK (HINGE POINT).
6. TYPE, DETAILS AND LIMITS OF GUARDRAIL BRIDGE END SECTION WILL BE SHOWN ELSEWHERE ON THE PLANS.



SECTION A–A



SECTION B–B

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

GUARDRAIL: TYPICAL INSTALLATION AT BRIDGE APPROACHES FOR 2-LANE, 2-WAY HIGHWAY

DATE	REVISION	BY
2-21-08	REVISED NOTE & RAIL LENGTH	S.W.K.

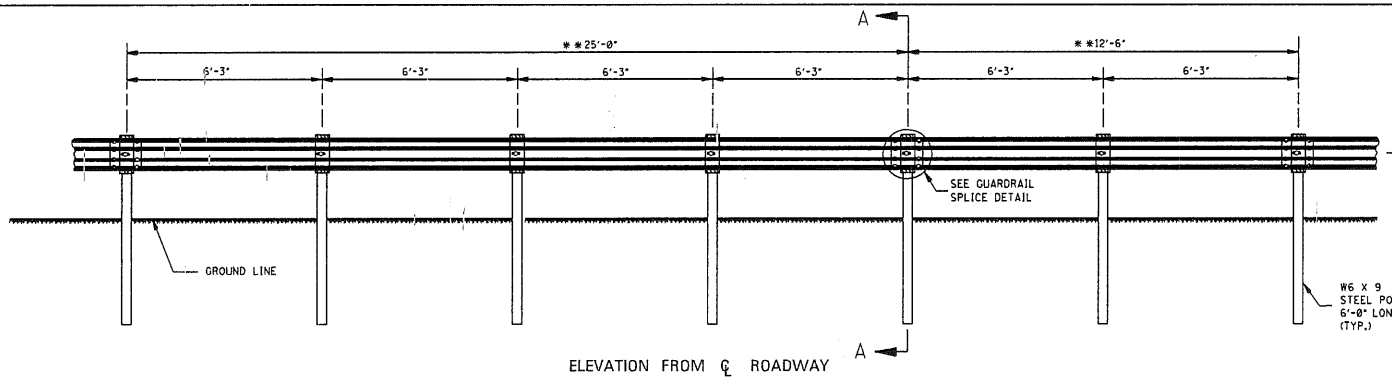
ENGLISH

WORKING NUMBER
GR-4A

SHEET NUMBER
6195

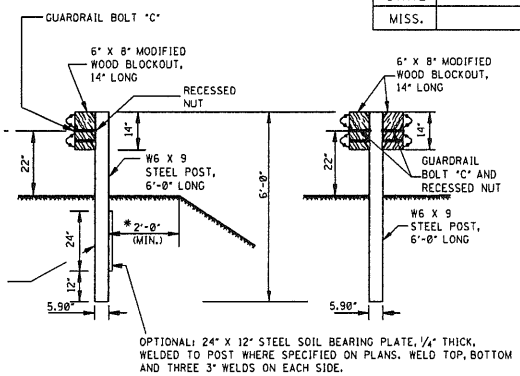
ISSUE DATE: OCTOBER 1, 1998

STATE	PROJECT NO.
MISS.	



ELEVATION FROM ℄ ROADWAY

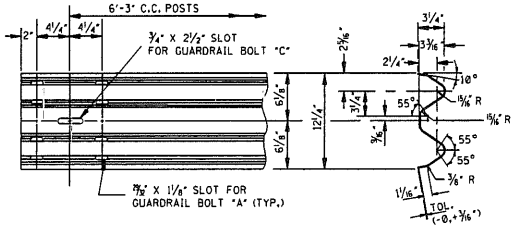
** NOTE: OPTIONAL BEAM LENGTHS.



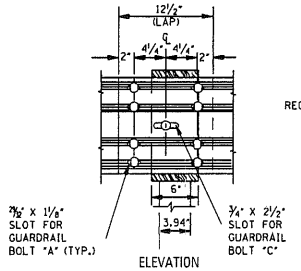
SINGLE-FACED BARRIER DOUBLE-FACED BARRIER

SECTION A-A

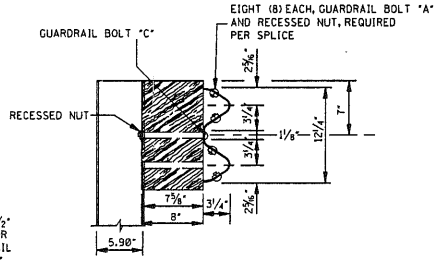
*NOTE: UNLESS SPECIFIED OTHERWISE ON THE PLANS.



TYPICAL GUARDRAIL SECTION

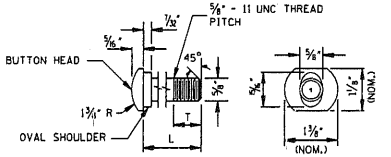


ELEVATION

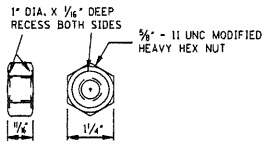


SECTION

GUARDRAIL SPLICE DETAIL



GUARDRAIL BOLT



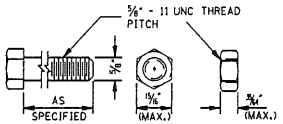
RECESSED NUT

GUARDRAIL BOLTS		
BOLT	L	T (MIN.)
"A"	1 1/4"	1"
"B"	2"	1 3/4"
"C"	10"	4"

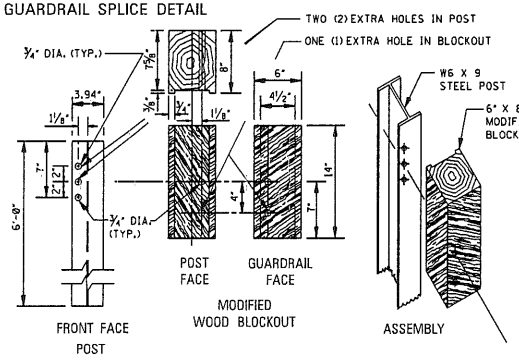
NOTES:

1. ALL GUARDRAIL BOLTS ARE 5/8" - 11 UNC THREAD PITCH.
2. IF ANY BOLT EXTENDS MORE THAN 1/4" FROM THE NUT, THE BOLT SHOULD BE TRIMMED BACK.

FASTENER DETAILS



HEX NUT AND BOLT "F"



DETAILS OF ADJUSTABLE HEIGHT BLOCKOUT ASSEMBLY

NOTES:

1. ON INITIAL INSTALLATION, THE MODIFIED WOOD BLOCKOUT SHALL BE FASTENED TO THE BOTTOM HOLE IN THE STEEL POST. OTHER HOLES IN THE STEEL POST AND THE MODIFIED WOOD BLOCKOUT ARE FOR FUTURE 2" HEIGHT ADJUSTMENTS WHEN THE ROADWAY IS RESURFACED.
2. AN ADDITIONAL GUARDRAIL BOLT "C" AND RECESSED NUT IS REQUIRED FOR THE SECOND HEIGHT ADJUSTMENT.
3. HOLE DETAILS ARE REQUIRED ON ALL STEEL POSTS AND MODIFIED WOOD BLOCKOUTS.
4. STEEL POSTS ARE FABRICATED FROM W6 X 9 STRUCTURAL STEEL SHAPES.
5. MODIFIED WOOD BLOCKOUTS ARE FABRICATED FROM 6" X 8" TREATED TIMBER UNLESS SPECIFIED OTHERWISE ON THE PLANS.
6. ALL HOLES IN BOTH STEEL POSTS AND MODIFIED WOOD BLOCKOUTS ARE 3/4" IN DIAMETER.

GENERAL NOTES:

1. GUARDRAIL SHALL MEET THE REQUIREMENTS OF AASHTO M 180, CLASS A, TYPE 1 UNLESS OTHERWISE DESIGNATED.
2. GUARDRAIL SHALL BE SINGLE FACED UNLESS OTHERWISE DESIGNATED.
3. GUARDRAIL SECTIONS SHALL BE LAPPED IN THE DIRECTION OF TRAFFIC FLOW FOR THE LANE NEAREST THE GUARDRAIL. THE ONLY EXCEPTION NOTED IS THAT GUARDRAIL IS TO BE LAPPED FOR APPROACHING TRAFFIC ON A BRIDGE WITH 2-WAY TRAFFIC.
4. STEEL POSTS SHALL CONFORM TO AASHTO M 183/M 183M OR ASTM A 769/A 769M (EXCEPT ULTRASONIC TESTING). THEY SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M 111 EXCEPT WHEN CORROSION RESISTANT STEEL IS REQUIRED IN WHICH CASE POSTS SHALL CONFORM TO AASHTO M 222/M 222M AND SHALL NOT BE PAINTED OR GALVANIZED. NO PUNCHING, DRILLING OR CUTTING WILL BE PERMITTED AFTER GALVANIZING EXCEPT FOR HOLES TO MOUNT GUARDRAIL DELINEATORS.
5. ALL MODIFIED WOOD BLOCKOUTS SHALL BE TREATED TIMBER IN ACCORDANCE WITH MISSISSIPPI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
6. FOR OTHER DETAILS OF POSTS, POST ACCESSORIES, FASTENERS & RAIL ELEMENTS, SEE AASHTO-AGC-ARTBA JOINT TASK FORCE NO. 13, TITLED "A GUIDE TO STANDARDIZED HIGHWAY BARRIER HARDWARE," LATEST EDITION.

△7. OTHER POSTS AND/OR BLOCKOUTS THAT HAVE MET THE REQUIREMENTS OF THE LATEST INDUSTRY GUIDELINES AND HAVE RECEIVED LETTERS OF APPROVAL FROM THE FEDERAL HIGHWAY ADMINISTRATION AND MISSISSIPPI DEPARTMENT OF TRANSPORTATION MAY BE USED IN LIEU OF THE POST AND BLOCKOUT SHOWN ON THIS STANDARD.

DATE	REVISION	BY
3-01-02	ADDED NOTE	S.M.R.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

GUARDRAIL: "W" BEAM (STEEL POSTS)

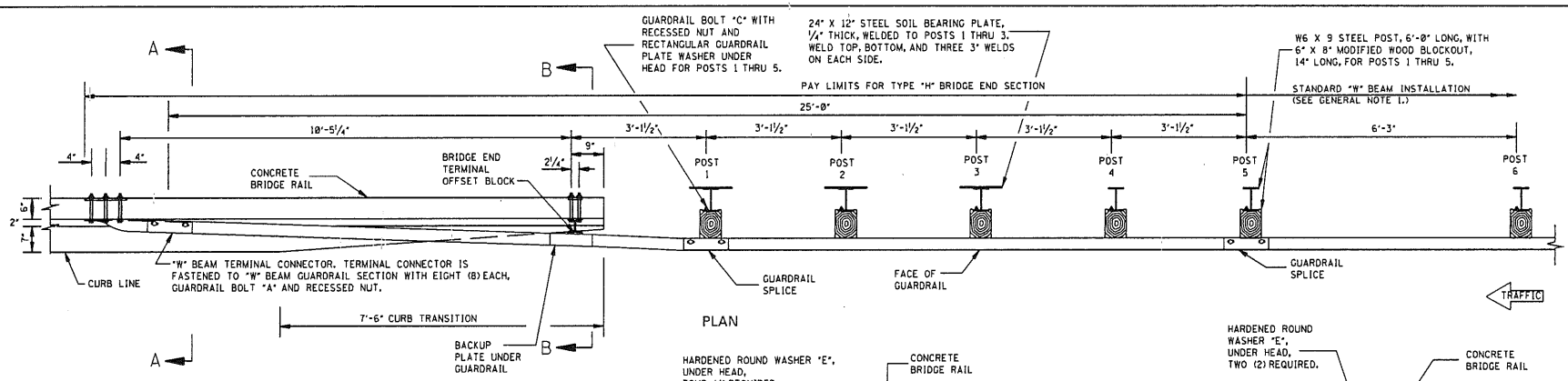
ENGLISH

WORKING NUMBER GR-1B

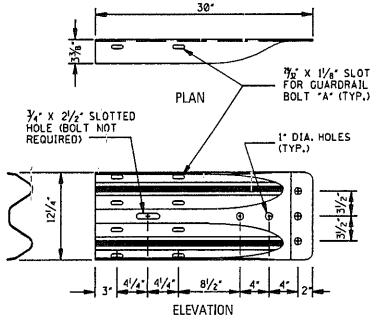
SHEET NUMBER 1 OF 2

ISSUE DATE: OCTOBER 1, 1998

STATE	PROJECT NO.
MISS.	



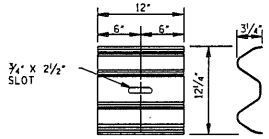
PLAN



ELEVATION

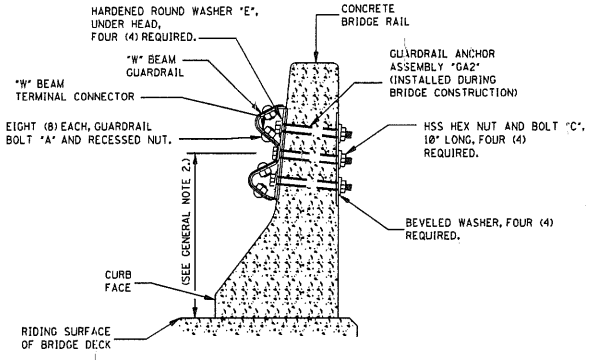
"W" BEAM TERMINAL CONNECTOR

NOTE: THE "W" BEAM TERMINAL CONNECTOR IS USED WITH THE TYPE "H" BRIDGE END SECTION. THE CROSS-SECTIONAL DIMENSIONS OF THIS PART ARE IDENTICAL TO THE STANDARD "W" BEAM SECTION (AASHTO M 180 CLASS B, TYPE II).

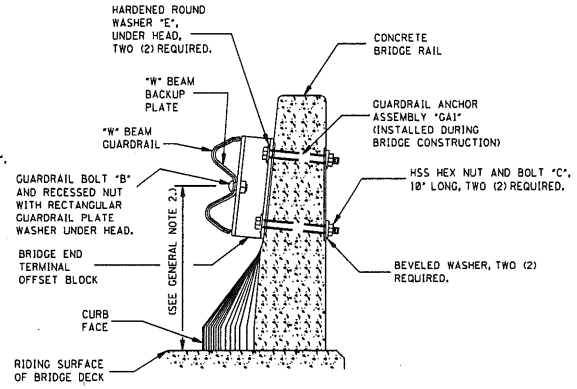


"W" BEAM BACKUP PLATE

NOTE: THE "W" BEAM BACK-UP PLATE IS USED UNDER THE "W" BEAM RAIL SECTION WHERE INDICATED ON THIS SHEET. THE CROSS-SECTIONAL DIMENSIONS OF THIS PART ARE IDENTICAL TO THOSE OF THE STANDARD "W" BEAM RAIL SECTION.



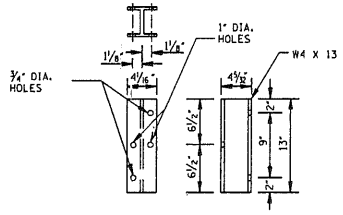
SECTION A–A



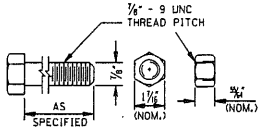
SECTION B–B

GENERAL NOTES:

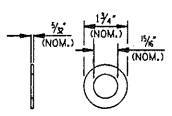
1. ALL NOTES AND DETAILS PERTAINING TO NORMAL "W" BEAM GUARDRAIL INSTALLATION NOT SPECIFICALLY MODIFIED ON THIS SHEET WILL BE FOUND ON SHEET GR-1B (STEEL POSTS).
2. THE HEIGHT OF RAIL AT THE BRIDGE END IS 21" AND WILL BE TRANSITIONED TO 22" AT POST 6. THIS TRANSITION WILL BE A LINEAR TRANSITION IN THE VERTICAL PLANE.
3. GUARDRAIL ELEMENTS SHALL BE LAPPED IN THE DIRECTION OF TRAFFIC. THE ONLY EXCEPTION NOTED IS THAT GUARDRAIL IS TO BE LAPPED FOR APPROACHING TRAFFIC ON A BRIDGE WITH 2-WAY TRAFFIC.



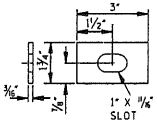
DETAIL OF BRIDGE END TERMINAL OFFSET BLOCK



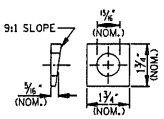
HIGH-STRENGTH STRUCTURAL HEX NUT AND BOLT "C" (ASTM A 325)



HARDENED ROUND WASHER "E"



RECTANGULAR GUARDRAIL PLATE WASHER



BEVELED WASHER

FASTENER DETAILS

BY	REVISION	DATE

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

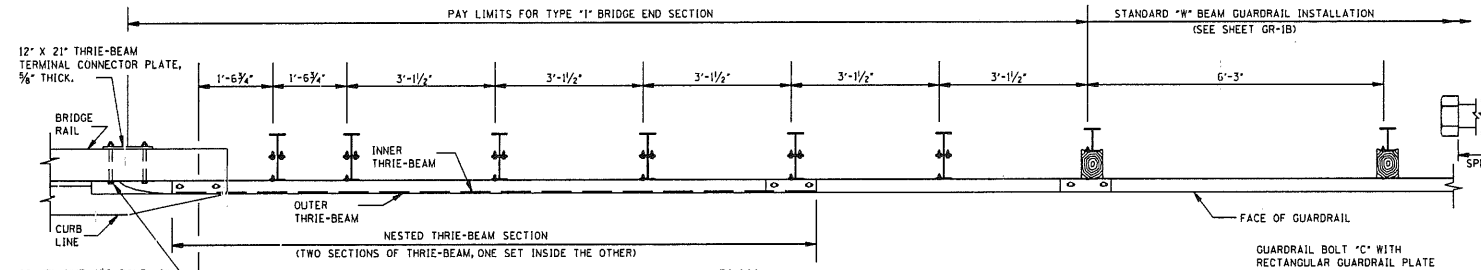
GUARDRAIL: BRIDGE END SECTION TYPE "H" (STEEL POSTS)

ENGLISH

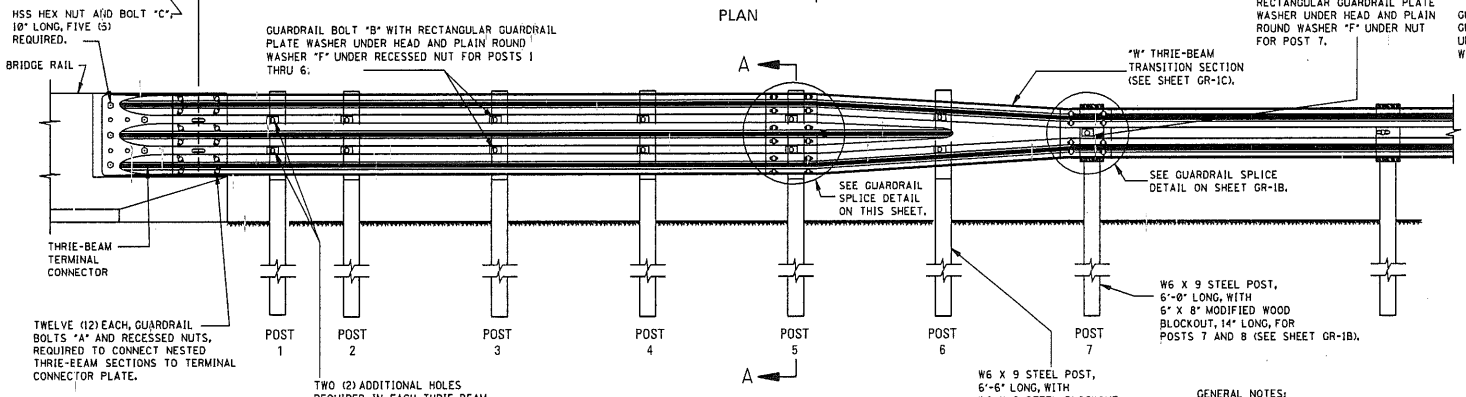
WORKING NUMBER GR-2D

SHEET NUMBER 188

ISSUE DATE: OCTOBER 1, 1998

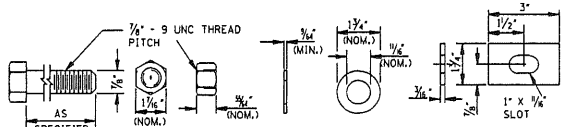


PLAN

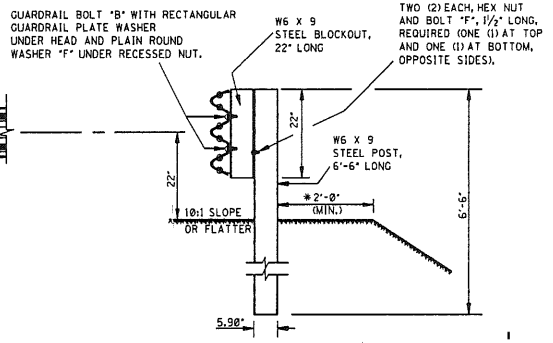


ELEVATION FROM ℄ ROADWAY

NOTE: BACKUP PLATES ARE NOT USED IN THIS TRANSITION.



FASTENER DETAILS



SECTION A–A

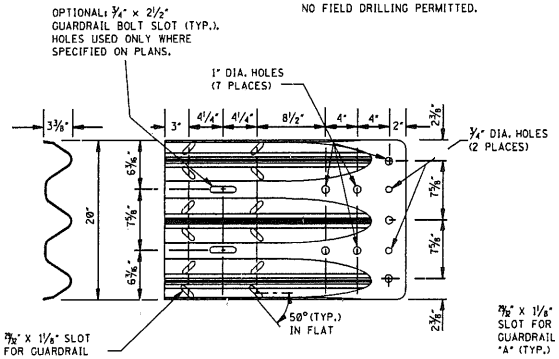
*NOTE: UNLESS SPECIFIED OTHERWISE ON THE PLANS.

GENERAL NOTES:

1. THIS GUARDRAIL TRANSITION IS APPROPRIATE FOR CONNECTION TO A MODIFIED RECEIVER CAST INTO A SAFETY SHAPE AND SHOULD NOT BE CONNECTED DIRECTLY TO A CONCRETE SAFETY SHAPE.
2. SEE RAILING DETAILS IN BRIDGE DRAWINGS FOR OTHER DETAILS.

GENERAL NOTES (CONTINUED):

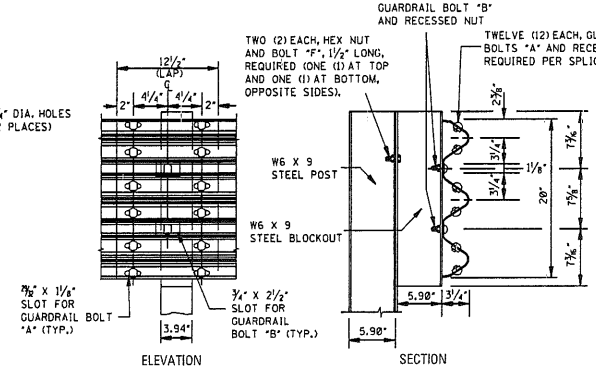
3. GUARDRAIL SHALL MEET THE REQUIREMENTS OF AASHTO M 180, CLASS A, TYPE 1 UNLESS OTHERWISE DESIGNATED.
4. THE TYPE "I" TRANSITION IS USED ON BOTH LEFT AND RIGHT SIDES OF EACH BRIDGE APPROACH WITH 2-WAY TRAFFIC AND THE GUARDRAIL SECTIONS SHALL BE LAPPED IN THE DIRECTION OF THE APPROACHING TRAFFIC.
5. POSTS AND BLOCKOUTS SHALL CONFORM TO AASHTO M 270/M 270M (ASTM A 709/A 709M) GRADE 250 STEEL UNLESS CORROSION RESISTANT STEEL IS REQUIRED IN WHICH CASE GRADE 50W STEEL SHALL BE USED. THE STRUCTURAL W6 X 9 DIMENSIONS ARE DEFINED IN AASHTO M 160M (ASTM A 6M). THE SECTION SHOULD BE ZINC-COATED PER AASHTO M 111 (ASTM A 123) AFTER CUTTING, DRILLING AND PUNCHING. CORROSION RESISTANT STEEL SHOULD NOT BE ZINC-COATED PAINTED OR OTHERWISE TREATED. GUARDRAIL IS EXEMPT FROM THE FRACTURE-CRITICAL TOUGHNESS IN AASHTO M 270/A 270 M.
6. FOR FASTENER DETAILS NOT FOUND ON THIS SHEET, SEE SHEET GR-1B.
7. DETAILS PERTINENT TO THE STANDARD INSTALLATION OF "W" AND THRIE-BEAM SECTIONS NOT SPECIFICALLY MODIFIED ON THIS SHEET WILL BE FOUND ON SHEETS GR-1B AND GR-1C, RESPECTIVELY.
8. FOR OTHER DETAILS OF POSTS, POST ACCESSORIES, FASTENERS & RAIL ELEMENTS, SEE AASHTO-AGC-ARTBA JOINT TASK FORCE NO. 13, TITLED "A GUIDE TO STANDARDIZED HIGHWAY BARRIER HARDWARE," LATEST EDITION.



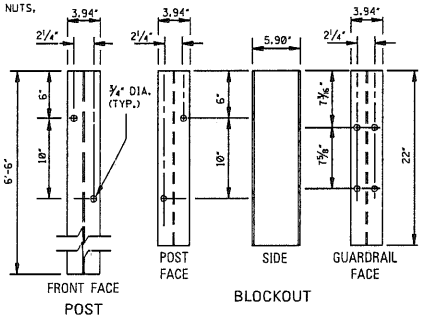
THRIE–BEAM TERMINAL CONNECTOR

NOTES:

1. THE THRIE-BEAM TERMINAL CONNECTOR IS TO BE AASHTO M 180 CORRUGATED SHEET STEEL, CLASS B, TYPE 1.
2. ALTERNATIVELY, THE SPLICE SLOTS CAN BE ORIENTED PARALLEL TO THE LONGITUDINAL AXIS OF THE TERMINAL CONNECTOR. HOWEVER, THE 50° SLOT VERSION IS EASIER TO INSTALL WHERE SEVERAL GUARDRAIL SECTIONS ARE NESTED TOGETHER.



GUARDRAIL SPLICE DETAIL
(POST 5)



DETAILS OF THRIE–BEAM POST AND BLOCKOUT
(POST 1 THRU POST 6)

NOTES:

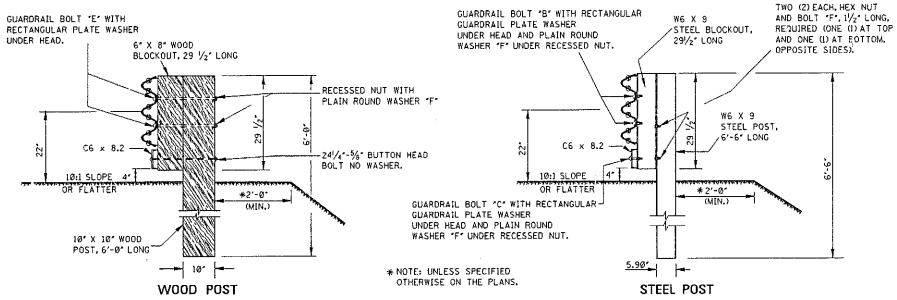
1. HOLE DETAILS ARE REQUIRED FOR POSTS AND BLOCKOUTS 1 THRU 6.
2. STEEL POSTS AND BLOCKOUTS ARE FABRICATED FROM W6 X 9 STRUCTURAL STEEL SHAPES.
3. ALL HOLES IN BOTH POSTS AND BLOCKOUTS ARE 3/4" IN DIAMETER.

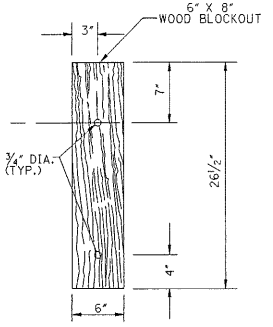
GUARDRAIL:
BRIDGE END SECTION
TYPE "I"
(STEEL POSTS)

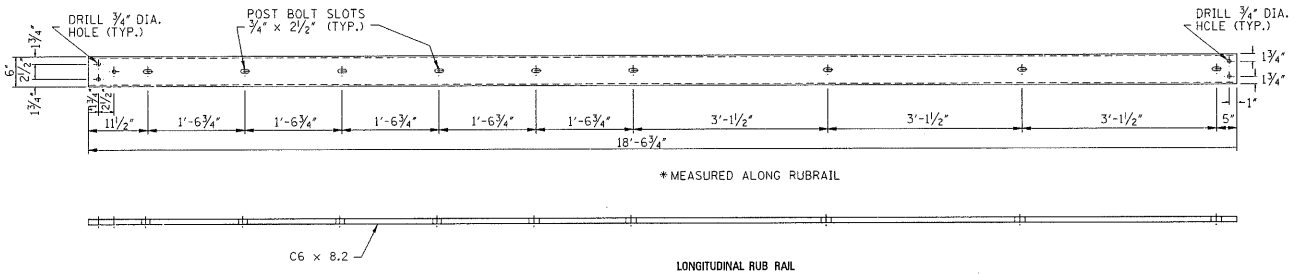
OCTOBER 1, 1998

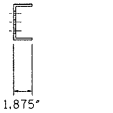
GR-2G
791

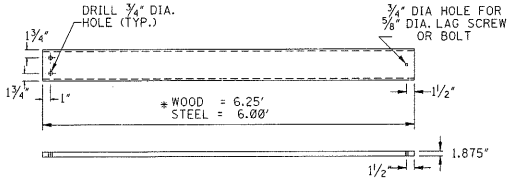
STATE	PROJECT NO.
MISS.	

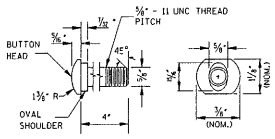


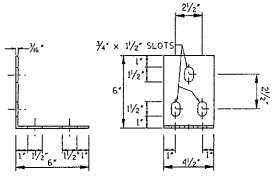


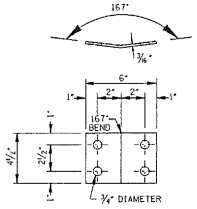












POSTS 1 THROUGH 9 REQUIRE AN ADDITIONAL HOLE TO ATTACH LOWER BLOCKOUTS. STEEL POST REQUIRE 2 HOLES ON EITHER SIDE OF THE POST.

RUBRAIL BLOCKOUTS ARE TO BE SECURED WITH ⅝" BUTTONHEAD BOLT FOR STEEL POST AND 20" BOLT FOR WOOD POST. (SEE PROFILE VIEW FOR LENGTHS)

RUBRAIL & LONG BLOCKOUT (POST 9) ARE NOT REQUIRED IN CURB & GUTTER SECTIONS OF ROADWAY.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

GUARDRAIL: RUB RAIL HARDWARE SHEET

BY	REVISION	DATE

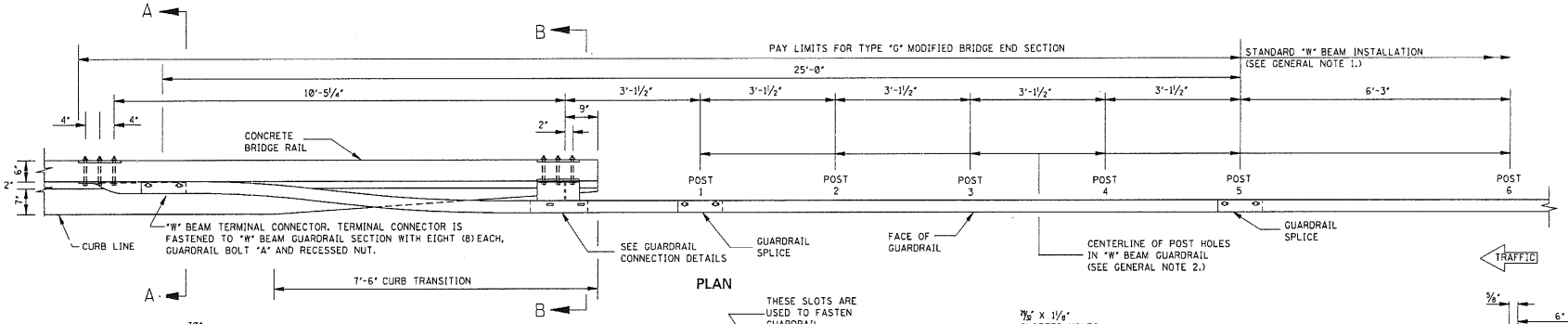
FILENAME:

DESIGN TEAM CHECKED DATE 04-01-07

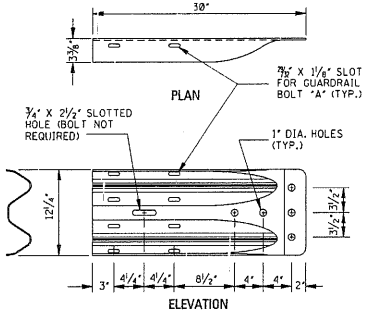
WORKING NUMBER GR-RR

SHEET NUMBER

STATE	PROJECT NO.
MISS.	



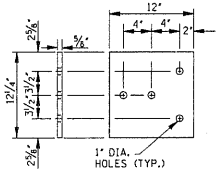
PLAN



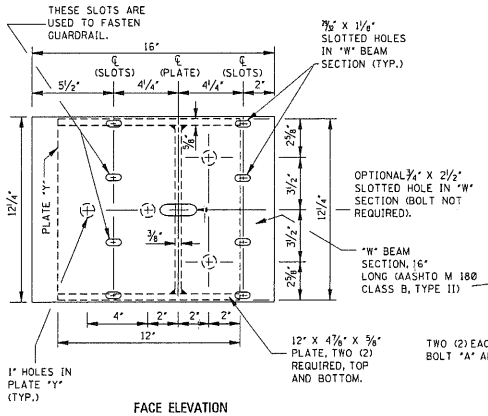
ELEVATION

"W" BEAM TERMINAL CONNECTOR

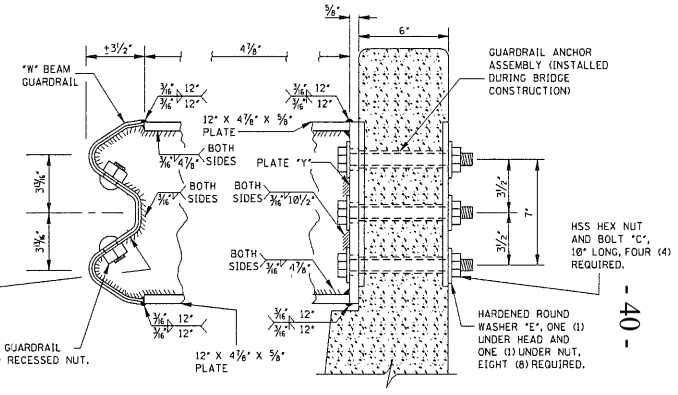
NOTE: THE "W" BEAM TERMINAL CONNECTOR IS USED WITH THE TYPE "G" MODIFIED BRIDGE END SECTION. THE CROSS-SECTIONAL DIMENSIONS OF THIS PART ARE IDENTICAL TO THE STANDARD "W" BEAM SECTION (AASHTO M 180 CLASS B, TYPE II).



DETAIL OF PLATE "Y"

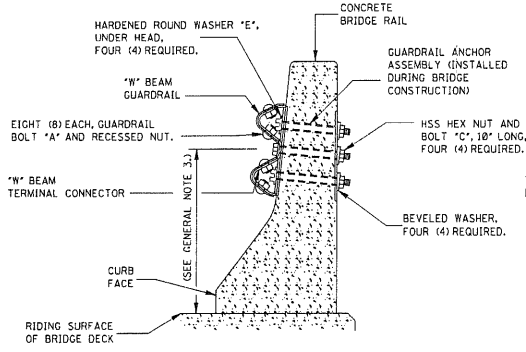


FACE ELEVATION

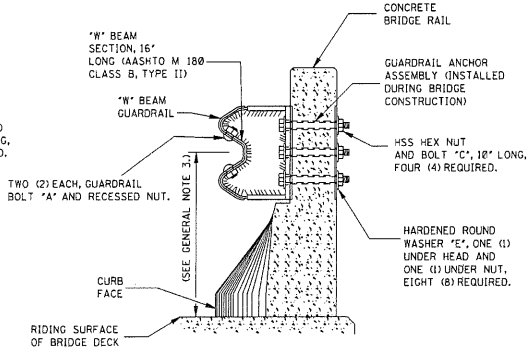


SECTION

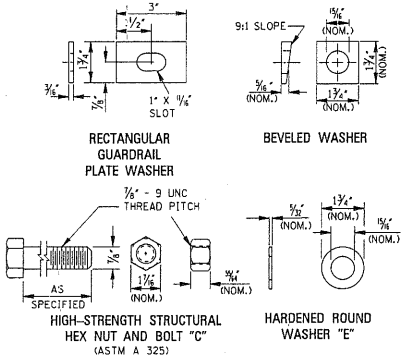
GUARDRAIL CONNECTION DETAILS



SECTION A–A



SECTION B–B



FASTENER DETAILS

GENERAL NOTES:

1. ALL NOTES AND DETAILS PERTAINING TO NORMAL "W" BEAM GUARDRAIL INSTALLATION NOT SPECIFICALLY MODIFIED ON THIS SHEET WILL BE FOUND ON EITHER SHEET GR-1 (WOOD POSTS) OR GR-1B (STEEL POSTS).
2. INSTALLATION DETAILS FOR BRIDGE END SECTION GUARDRAIL POSTS WILL BE FOUND ON EITHER SHEET GR-2C (WOOD POSTS) OR GR-2D (STEEL POSTS).
3. THE HEIGHT OF RAIL AT THE BRIDGE END IS 21" AND WILL BE TRANSITIONED TO 22" AT POST 6. THIS TRANSITION WILL BE A LINEAR TRANSITION IN THE VERTICAL PLANE.
4. GUARDRAIL ELEMENTS SHALL BE LAPPED IN THE DIRECTION OF TRAFFIC. THE ONLY EXCEPTION NOTED IS THAT GUARDRAIL IS TO BE LAPPED FOR APPROACHING TRAFFIC ON A BRIDGE WITH 2-WAY TRAFFIC.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
ROADWAY DESIGN DIVISION
STANDARD PLAN

GUARDRAIL: BRIDGE END SECTION TYPE "G" MODIFIED

ENGLISH

BY	REVISION	DATE

ISSUE DATE: OCTOBER 1, 1998

WORKING NUMBER GR-2E

SHEET NUMBER 6189